

Title

New genetic signals for lung function highlight pathways and chronic obstructive pulmonary disease associations across multiple ancestries.

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1 **Abstract**

2 Reduced lung function predicts mortality and is key to the diagnosis of chronic obstructive
3 pulmonary disease (COPD). In a genome-wide association study in 400,102 individuals of
4 European ancestry, we define 279 lung function signals, 139 of which are new. In
5 combination, these variants strongly predict COPD in independent patient populations.
6 Furthermore, the combined effect of these variants showed generalizability across smokers
7 and never-smokers, and across ancestral groups. We highlight biological pathways, known
8 and potential drug targets for COPD and, in phenome-wide association studies, autoimmune-
9 related and other pleiotropic effects of lung function associated variants. This new genetic
10 evidence has potential to improve future preventive and therapeutic strategies for COPD.

11 **Introduction**

12 Impaired lung function is predictive of mortality¹ and is the key diagnostic criterion for
13 chronic obstructive pulmonary disease (COPD). Globally, COPD accounted for 2.9 million
14 deaths in 2016², being one of the key causes of both Years of Life Lost and Years Lived with
15 Disability worldwide³. Determinants of maximally attained lung function and of lung
16 function decline can influence the risk of developing COPD. Tobacco smoking is the single
17 largest risk factor for COPD, although other environmental exposures and genetic makeup
18 are important^{4,5}. Genetic variants associated with lung function and COPD susceptibility can
19 provide etiological insights, assisting with risk prediction, as well as drug target identification
20 and validation⁶. Whilst there has been considerable progress in identifying genetic markers
21 associated with lung function and risk of COPD^{4,7-19} seeking a high yield of associated
22 genetic variants is key to progressing knowledge because: (i) implication of multiple
23 molecules in each pathway will be needed to build an accurate picture of the pathways
24 underpinning development of COPD; (ii) not all proteins identified will be druggable and;
25 (iii) combining information across multiple variants can improve prediction of disease
26 susceptibility.

27 Through new detailed quality control and analyses of spirometric measures of lung function
28 in UK Biobank and expansion of the SpiroMeta Consortium, we undertook a large genome-
29 wide association study of lung function. Our study entailed a near seven-fold increase in
30 sample size over previous studies of similar ancestry to address the following aims: (i) to
31 generate a high yield of genetic markers associated with lung function; (ii) to confirm and
32 fine-map previously reported lung function signals; (iii) to investigate the putative causal
33 genes and biological pathways through which lung function associated variants act, and their
34 wider pleiotropic effects on other traits; and (iv) to generate a weighted genetic risk score for
35 lung function and test its association with COPD susceptibility in individuals of European
36 and other ancestries.

37 **Results**

38 **139 new signals for lung function**

39 We increased the sample size available for the study of quantitative measures of lung
40 function in UK Biobank by refining the quality control of spirometry based on
41 recommendations of the UK Biobank Outcomes Adjudication Working Group
42 (**Supplementary Note**). Genome-wide association analyses of forced expired volume in 1
43 second (FEV₁), forced vital capacity (FVC) and FEV₁/FVC were undertaken in 321,047
44 individuals in UK Biobank (**Supplementary Table 1**) and in 79,055 individuals from the
45 SpiroMeta Consortium (**Supplementary Tables 2 and 3**). A linear mixed model
46 implemented in BOLT-LMM²⁰ was used for UK Biobank to account for relatedness and fine-

47 scale population structure (**Online Methods**). A total of 19,819,130 autosomal variants
48 imputed in both UK Biobank and SpiroMeta were analyzed. Peak expiratory flow (PEF) was
49 also analyzed genome-wide in UK Biobank and up to 24,218 samples from SpiroMeta.
50 GWAS results in UK Biobank were adjusted for the intercept of LD score regression²¹, but
51 SpiroMeta and the meta-analysis were not, as intercepts were close to 1.00 (**Online**
52 **Methods**). All individuals included in the genome-wide analyses were of European ancestry
53 (**Supplementary Figure 1** and **Supplementary Note**).

54 To maximize statistical power for discovery of new signals, whilst maintaining stringent
55 significance thresholds to minimize reporting of false positives, we adopted a study design
56 incorporating both two-stage and one-stage approaches (**Figure 1**). In the two-stage analysis,
57 99 new distinct signals, defined using conditional analyses²², were associated with one or
58 more traits at $P < 5 \times 10^{-9}$ (23) in UK Biobank and showed association ($P < 10^{-3}$) with a consistent
59 direction of effect in SpiroMeta (“Tier 1” signals, **Supplementary Figure 2; Supplementary**
60 **Table 4**). In the one-stage analysis, we meta-analyzed UK Biobank and SpiroMeta (up to
61 400,102 individuals) and 40 additional new distinct signals associated with one or more lung
62 function traits reaching $P < 5 \times 10^{-9}$ were identified (**Supplementary Figure 2, Supplementary**
63 **Table 4**) that were also associated with $P < 10^{-3}$ separately in UK Biobank and in SpiroMeta,
64 with consistent direction of effect (“Tier 2” signals). An additional 323 autosomal signals
65 were significantly associated with one or more lung function traits in the meta-analysis of UK
66 Biobank and SpiroMeta ($P < 5 \times 10^{-9}$) and reached $P < 10^{-3}$ for association in only one of UK
67 Biobank or SpiroMeta (“Tier 3” signals, **Supplementary Table 5**). Analysis of chromosome
68 X variants in 359,226 individuals (321,027 UK Biobank and 38,199 SpiroMeta¹⁵) gave an
69 additional five Tier 3 signals. Only the 139 signals meeting Tier 1 and Tier 2 criteria were
70 followed up further. The strength and direction of association of the sentinel variant (the
71 variant in each signal with the lowest P value) for these 139 new signals across all 4 lung
72 function traits are shown in **Figure 2**. Of the 139 signals, 131 were associated with at least
73 two lung function traits at $P < 10^{-3}$, eight signals were unique to FEV₁/FVC and no signals
74 were unique to FEV₁, FVC or PEF at this threshold.

75 We assessed whether any of these 139 signals associated with lung function could be driven
76 via an underlying association with smoking behavior (**Online Methods**). Only rs193686
77 (**Supplementary Table 6**) was associated with smoking behavior. Whilst rs193686 was
78 associated with smoking initiation ($P = 9.18 \times 10^{-6}$), the allele associated with smoking
79 initiation was associated with increased lung function in never smokers (FEV₁/FVC
80 $P = 5.28 \times 10^{-10}$, **Supplementary Table 7**). Therefore, this signal was retained for further
81 analysis.

82 **A total of 279 signals of association for lung function**

83 Of 157 previously published autosomal signals of association with lung function and
84 COPD^{3,6-18}, 142 were associated at $P < 10^{-5}$ in UK Biobank (**Online Methods, Supplementary**
85 **Figure 3, Supplementary Table 8**). Two sentinel variants (rs1689510 and rs11134789) were
86 associated with smoking initiation (**Supplementary Table 6**), but were also associated with
87 lung function in never smokers (**Supplementary Table 7**). SNP rs17486278 at *CHRNA5* and
88 rs11667314 near *CYP2A6* were each associated with cigarettes per day (**Supplementary**
89 **Table 6**); neither were significantly associated with lung function among never smokers and
90 so were excluded from further analysis. This brings the total number of distinct signals of
91 association with lung function to 279 (**Supplementary Table 9**). None of these variants
92 showed interaction with ever-smoking status ($P > 1.8 \times 10^{-4}$, **Online Methods, Supplementary**
93 **Table 7**). Using the effect estimates, allele frequencies and assuming a total heritability of
94 40%^{24,25} (**Online Methods**), we calculated that the 140 previously reported lung function
95 signals showing association in this study (UK Biobank $P < 10^{-5}$) explained 5.0%, 3.4%, 9.2%
96 and 4.5% of the estimated heritability of FEV₁, FVC, FEV₁/FVC and PEF, respectively. The

97 139 new signals reported here, explain an additional 4.3%, 3.3%, 3.9% and 3.3% of the
98 estimated heritability, respectively.

99 **Identification of putative causal genes**

100 Bayesian refinement was undertaken for each signal, using the meta-analysis of UK Biobank
101 and SpiroMeta, to identify the set of variants that were 99% likely to contain the underlying
102 causal variant (assuming the causal variant has been analyzed, **Online Methods**,
103 **Supplementary Table 10, Supplementary Data 1 and Supplementary Data 2**).

104 To identify putative causal genes for each signal, we identified deleterious variants and
105 variants associated with gene expression (expression quantitative trait loci (eQTLs)) or
106 protein levels (protein quantitative trait loci (pQTLs)) within each 99% credible set for all
107 new and previously reported signals outside the HLA region (**Online Methods**).

108 There were 25 SNPs, located in 22 unique genes, which were annotated as potentially
109 deleterious (**Online Methods, Supplementary Table 11**). Amongst our new signals, there
110 were 10 variants annotated as deleterious in 9 different genes: *DOCK9* (rs117633128),
111 *CEP72* (rs12522955), *BCHE* (rs1799807), *DST* (rs11756977), *KIAA0753* (rs2304977,
112 rs9889363), *LRRC45* (rs72861736), *BTC* (rs11938093), *C2orf54* (rs6709469) and *IER5L*
113 (rs184457). Of these, the missense variant in *BCHE* (rs1799807) had the highest posterior
114 probability (0.996) in its respective credible set, was low frequency (minor allele frequency
115 (MAF)=1.95%) and results in an amino acid change from aspartic acid (D) to glycine (G),
116 known to affect the function of the encoded butyrylcholinesterase enzyme by altering
117 substrate binding²⁶. The two common missense variants in *KIAA0753* were within the
118 credible set of new signal rs4796334. *KIAA0753*, *CEP72* and *LRRC45* all encode proteins
119 with a role in ciliogenesis or cilia maintenance²⁷⁻³¹, and all are highly expressed in the airway
120 epithelium³².

121 Variants in the 99% credible sets were queried in three eQTL resources to identify
122 associations with gene expression in lung³³⁻³⁵ (n=1,111; **Supplementary Table 12**), blood³⁶
123 (n=4,896) and a subset of Genotype-tissue Expression (GTEx)³⁷ tissues (max n=388, **Online**
124 **Methods**). The tissues included from GTEx were lung and blood, plus nine tissues containing
125 smooth muscle (**Online Methods**). The latter were chosen based on previous reports of
126 enrichment of lung function GWAS signals in smooth muscle-containing tissues^{18,38}. We
127 identified 88 genes, implicated by 58 of the 279 signals, for which the most significant SNP
128 associated with expression of that gene in the respective eQTL resource was within one of the
129 99% credible sets (**Supplementary Table 13**).

130 We checked credible set variants for association with protein levels in a pQTL study³⁹
131 comprising SNP associations for 3,600 plasma proteins (**Online Methods**). We found five
132 proteins with a sentinel pQTL contained within our lung function credible set: *ECM1*,
133 *THBS4*, *NPNT*, *C1QTNF5* and *SCARF2* (**Supplementary Table 14**).

134 In total, 107 putative causal genes were identified (**Table 1**), amongst which, we highlight 75
135 for the first time as putative causal genes for lung function (43 implicated by a new signal
136 and 32 newly implicated by a previous signal¹⁸).

137 **Pathway analysis**

138 We tested whether these 107 putative causal genes were enriched in gene sets and biological
139 pathways (**Online Methods**), finding an enrichment of genes in elastic fiber and extracellular
140 matrix organization pathways, and a number of gene ontologies including gene sets relating
141 to the cytoskeleton and processes involved in ciliogenesis (**Supplementary Table 15**).

142 Whilst the enrichment in elastic fiber-related pathways is consistent with our previous
143 study¹⁸, enrichment in these pathways was further supported in this analysis by two new
144 genes, *ITGAV* (at a new signal) and *GDF5* (a newly implicated gene for a previously reported
145 signal), and by strengthened eQTL evidence for *TGFB2* and *MFAP2* at two previously

146 reported signals. The presence of *TGFB2*, *GDF5* and *SMAD3* in our list of 107 genes resulted
147 in enrichment of a TGF- β superfamily signalling pathway (TGF-Core) and related gene
148 ontology terms (**Supplementary Table 15**).

149 **Functional enrichment analyses**

150 Using stratified LD-score regression⁴⁰, we showed that FEV₁/FVC and FVC heritability is
151 significantly enriched at variants overlapping histone marks that are specific to lung, fetal
152 lung, and smooth muscle-containing cell lines. SNPs that overlap with H3K4me1 marks that
153 are specific to fetal lung correspond to 6.99% of the input SNPs yet explain 57.09%
154 ($P=2.85\times 10^{-25}$) and 35.84% ($P=4.19\times 10^{-21}$) of the SNP-chip heritability for FEV₁/FVC and
155 FVC, respectively (**Supplementary Table 16**).

156 We also tested enrichment of (i) FEV₁/FVC and (ii) FVC SNPs at DNase I hypersensitive site
157 (DHS) hotspots using GARFIELD⁴¹ (**Online Methods**). For FEV₁/FVC results, we see
158 significant enrichment across most cell lines with increased fold-enrichment in fetal and adult
159 lung, fetal muscle and fibroblasts (**Supplementary Figure 4a**). For FVC, we see similar
160 broad significant enrichment without evidence of increased enrichment in a subset of tissues
161 (**Supplementary Figure 4b**) suggesting that SNPs influencing FVC may act via more
162 complex and broader developmental pathways.

163 We used DeepSEA⁴² to identify whether our signals were predicted to have a chromatin
164 effect in lung-related cell lines. We identified 10 signals (including 5 new signals) for which
165 the SNP with the largest posterior probability of being causal also had a significant predicted
166 effect on a DHS in lung-related cells (**Supplementary Table 17**). This included a new signal
167 near *SMURF2* (rs11653958).

168 **Drug targets**

169 All 107 putative causal genes were investigated for known gene-drug interactions⁴³
170 (**Supplementary Table 18**). We highlight two examples of new genetic signals implicating
171 targets for drugs in development for indications other than COPD. One of our new signals is
172 an eQTL for *ITGAV*. *ITGAV* encodes a component of the $\alpha v\beta 6$ integrin heterodimer, which is
173 inhibited by a monoclonal antibody in development for pulmonary fibrosis (NCT01371305)
174 and for which the small molecule GSK3008348 (NCT03069989) is an antagonist⁴⁴. Integrins
175 have an emerging role as local activators of TGF β and specifically the $\alpha v\beta 6$ integrin
176 heterodimer can activate latent-TGF β ⁴⁵. In our study, the allele associated with reduced
177 expression of *ITGAV* (**Supplementary Table 13**) was associated with increased lung
178 function (**Supplementary Table 9**) suggesting that inhibitors of $\alpha v\beta 6$ integrin might also
179 have a beneficial effect in COPD. Another new signal is associated with expression of
180 *TNFSF13* (synonym *APRIL*), which encodes a cytokine of the TNF ligand family. Atacicept
181 blocks B cell stimulation by TNFSF13 (as well as by BLyS) and reduced systemic lupus
182 erythematosus disease activity in a recent Phase IIb trial⁴⁶. In our study, the allele associated
183 with decreased expression of *TNFSF13* was associated with reduced FEV₁, indicating that
184 vigilance for pulmonary consequences of atacicept may be warranted.

185 **Association with FEV₁/FVC and COPD in multiple ancestries**

186 We constructed a genetic risk score (GRS) weighted by FEV₁/FVC effect sizes comprising
187 all 279 sentinel variants, and tested for association with FEV₁/FVC and GOLD Stage 2-4
188 COPD (FEV₁/FVC < 0.7 and FEV₁ < 80% predicted) in different ancestry groups in UK
189 Biobank, and China Kadoorie Biobank (**Online Methods, Supplementary Table 19**). UK
190 Biobank participants of non-European ancestry were not included in the discovery analyses.
191 The GRS was associated with a significant decrease in lung function, and corresponding
192 significant increase in COPD risk in each of the independent ancestry groups (**Figure 3a**).

193 We tested for a GRS interaction with smoking in European ancestry individuals in UK
194 Biobank⁴⁷. No statistical interaction was seen for FEV₁/FVC (interaction term -0.002 per SD
195 change in GRS, 95% CI: [0.009, 0.005], P=0.532), whilst the findings for COPD were
196 consistent with a slightly smaller effect of the GRS in ever-smokers (odds ratio (OR) for
197 ever-smoking-GRS interaction term per SD change in GRS 0.96, 95% CI: [0.92, 0.99],
198 P=0.015).

199 The association of the GRS with COPD susceptibility was additionally tested in five
200 independent COPD case-control studies (**Supplementary Table 20, Online Methods**).
201 Similar effect size estimates were seen across each of the 5 European ancestry studies
202 (**Figure 3b**); in the meta-analysis of these studies (n=6,979 cases and 3,915 controls), the
203 odds ratio for COPD per standard deviation of the weighted GRS was 1.55 (95% CI: [1.48,
204 1.62]), P=2.87×10⁻⁷⁵ (**Supplementary Table 21**). The GRS was also associated with COPD
205 in individuals of African-American ancestry in COPDGene (P=8.36×10⁻⁷), albeit with a
206 smaller effect size estimate, odds ratio=1.26 (95% CI: [1.15, 1.37]).

207 To aid clinical interpretation, we divided individuals in each of the five European ancestry
208 COPD case-control studies into deciles, according to their value of the weighted GRS. The
209 odds ratio for COPD in members of the highest GRS decile compared to the lowest GRS
210 decile was 4.73 (95% CI: [3.79, 5.90]), P=3.00×10⁻⁴³ (**Figure 3c, Supplementary Table 22**).
211 We calculated the population attributable risk fraction (**Supplementary Note**) and estimated
212 that the proportion of COPD cases attributable to risk scores above the first GRS decile was
213 54.6% (95% CI: [50.6%, 58.4%]).

214 Incorporation of the GRS into a risk model already comprising available clinical information
215 (age, sex, height and pack-years of smoking in COPDGene non-Hispanic Whites) led to a
216 statistically significant (P=3.33×10⁻¹⁰), yet modest, increase in the area under the curve, from
217 0.751 to 0.771 (**Supplementary Note**). Based on our estimated GRS relative risk and
218 absolute risk estimates of COPD⁴⁸, one would expect the highest GRS risk decile group of
219 smokers to have an absolute risk of developing COPD by approximately 70 years of age of
220 82.4%, versus 17.4% for the lowest GRS decile (**Supplementary Note**).

221 **Pleiotropy and phenome-wide association studies**

222 As phenome-wide association studies (PheWAS) can provide evidence mimicking
223 pharmacological interventions of drug targets in humans and informing drug development⁴⁹,
224 we undertook a PheWAS of 2,411 phenotypes in UK Biobank (**Online Methods, Figure 4,**
225 **Supplementary Table 23**); 226 of the 279 sentinel variants were associated (false discovery
226 rate (FDR)<1%) with one or more traits and diseases (excluding quantitative lung function
227 traits). Eighty-five of the lung function signals were associated with standing height. In order
228 to investigate whether the genetic association signals for lung function were driven by
229 incomplete adjustment for height, we tested for correlation of effects on lung function in UK
230 Biobank and height in a meta-analysis of UK Biobank and the GIANT consortium for 246
231 of the 279 signals that had a proxy variant in GIANT⁵⁰; there was no significant correlation
232 (**Supplementary Figure 5**). Additionally, the PheWAS identified associations with body
233 composition measures such as fat free mass (54 SNPs) and hip circumference (40 SNPs), as
234 well as muscle strength (32 SNPs, grip strength). One hundred and fourteen of the 279 SNPs
235 were associated with several quantitative measures of blood count, including eosinophil
236 counts and percentages (25 SNPs). Twenty-five of our SNPs were also associated with
237 asthma including 12 SNPs associated both with asthma and eosinophil measures
238 (**Supplementary Table 24**). Eight of these SNPs were in linkage disequilibrium (LD, r²>0.1)
239 with a SNP reported for association with asthma in previously published genome-wide
240 association studies. We compared our observed effect sizes with those estimated after
241 exclusion of all self-reported asthma cases and observed similar estimates (**Supplementary**
242 **Figure 6**) suggesting that the lung function associations we report are not driven by asthma.

243 We examined the specificity of genetic associations, given the potential for this to predict
244 specificity of drug target modification, and found that 53 of the 279 signals were associated
245 only with lung function and COPD-related traits. In contrast, three of our 279 signals were
246 associated with over 100 traits across multiple categories – among these rs3844313, a known
247 intergenic signal near *HLA-DQB1* was associated with 163 traits, and also had the strongest
248 signal in the PheWAS, which was for association with intestinal malabsorption and celiac
249 disease.

250
251 In our 279-variant weighted GRS PheWAS analysis (**Supplementary Table 25**), we found
252 association with respiratory traits including COPD, chronic bronchitis, emphysema,
253 respiratory failure, corticosteroid use and both pediatric and adult-onset asthma (**Figure 5a**).
254 The GRS was also associated with non-respiratory traits including celiac disease, an intestinal
255 autoimmune disorder (**Figure 5b**). These pleiotropic effects on risk of autoimmune diseases
256 was further confirmed by analysis of previously reported GWAS (**Online Methods**,
257 **Supplementary Table 26**) which showed overlapping single variant associations with
258 Crohn's disease, ulcerative colitis, psoriasis, systemic lupus erythematosus, IgA nephropathy,
259 pediatric autoimmune disease and type 1 diabetes.

260 **Discussion**

261 The large sample size of our study, achieved by our refinement of the spirometry in UK
262 Biobank and inclusion of the substantially expanded SpiroMeta consortium data set, has
263 doubled the yield of lung function signals to 279. Fine-mapping of all new and previously
264 reported signals, together with gene and protein expression analyses with improved tissue
265 specificity and stringency, has implicated new genes and pathways, highlighting the
266 importance of cilia development, TGF- β signalling via SMAD3, and elastic fibers in the
267 etiology of airflow obstruction. Many of the genes and pathways reported here contain
268 druggable targets; we highlight examples where the genetic variants mimicking therapeutic
269 modulation of targets may have opposing effects on lung function. We have developed and
270 applied the first weighted GRS for lung function and tested it in independent COPD case-
271 control studies. Our GRS shows stronger association and larger effect size estimates than a
272 previous GRS in European ancestry populations¹⁸, as well as generalizability to other
273 ancestry groups. We undertook the first comprehensive PheWAS for lung function signals,
274 and report genetic variants with apparent specificity of effects and others with pleiotropic
275 effects that might indicate shared biological pathways between different diseases.

276 For the first time in a GWAS of lung function, we report an enrichment of genes involved in
277 ciliogenesis (including *KIAA0753*, *CDK2* and *CEP72*). Defects in primary cilia as a result of
278 highly deleterious mutations in essential genes result in ciliopathies known to affect multiple
279 organ systems. We found an enrichment of genes with a role in centriolar replication and
280 duplication, core processes in primary and motile cilia formation. Mutations in *KIAA0753*
281 cause the ciliopathies Joubert Syndrome and Orofaciodigital Syndrome²⁸. Reduced airway
282 motile cilia function impacting mucus clearance is a feature of COPD, but it has not been
283 clear whether this is causal or the consequence of damage by external factors such as
284 smoking or infection. Our findings suggest that impaired ciliary function might be a driver of
285 the disease process. We have previously shown enrichment of rare variants in cilia-related
286 genes in heavy smokers without airflow obstruction⁵¹.

287 New signals, implicating *ITGAV* and *GDF5*, as well as stronger support for *TGFB2* and
288 *MFAP2* as likely causal genes, provide new genetic support for the importance of elastic fiber
289 pathways in lung function and COPD¹⁸. The elastic fibers of the extracellular matrix are
290 known to be disrupted in COPD⁵². As the breakdown of elastic fibers by neutrophil elastase
291 leads to emphysema in individuals with alpha₁-antitrypsin deficiency, we also assessed the

292 association with the *SERPINA1* Z allele, which was not associated with FEV₁/FVC in our
293 study (rs28929474, P=0.109 in UK Biobank).

294 Smoking and genetic risk both have important effects on lung function and COPD. For lung
295 function, we found no interaction between smoking and individual variants, and for
296 FEV₁/FVC no interaction between smoking status and the weighted GRS. However, for
297 COPD a weak smoking-GRS interaction was observed. Whilst the weighted GRS showed a
298 strong association with COPD susceptibility, and a high attributable risk, we do not claim that
299 this would represent an appropriate method of screening for COPD risk. Importantly, our
300 findings demonstrate the high absolute risk among genetically susceptible smokers (82.4% by
301 approximately 70 years of age).

302 We used two complementary study designs to maximize sample size for discovery and ensure
303 robustness of findings by requiring independent support for association. Furthermore, through
304 additional analysis of the spirometry data in UK Biobank and substantial expansion of the
305 SpiroMeta consortium, we have markedly increased samples sizes to almost seven times
306 those included in previous studies. As no lower MAF threshold was applied in our analyses,
307 an overall threshold of $P < 5 \times 10^{-9}$, as recommended for re-sequencing analyses of European
308 ancestry individuals²³, was applied. We identified the largest number of new signals in our
309 more stringent two-stage design (“Tier 1”, 99 new signals). Amongst the signals that we
310 report as “Tier 3” (and did not include in further analyses), all reached $P < 10^{-3}$ in UK Biobank
311 and 183 met a less stringent threshold of $P < 0.05$ in SpiroMeta.

312 Our study is the first to investigate genome-wide associations with PEF. PEF is determined
313 by various physiological factors including lung volume, large airway caliber, elasticity of the
314 lung and expiratory muscle strength, is used for monitoring asthma, and was incorporated in a
315 recently evaluated clinical score for diagnosing COPD and predicting acute exacerbations of
316 COPD⁵³. Overall, 133 of the 279 signals were also associated with PEF ($P < 10^{-5}$) and for 15
317 signals (including 4 new signals), PEF was the most significantly associated trait. Of note, a
318 signal near *SLC26A9*, a known cystic fibrosis modifier gene⁵⁴, was highly significantly
319 associated with PEF in UK Biobank ($P = 3.97 \times 10^{-66}$) and nominally significant in SpiroMeta
320 ($P = 6.93 \times 10^{-3}$), with consistent direction of effect, but did not meet the Tier 2 criteria. This
321 could reflect the limited power for PEF in SpiroMeta (up to 24,218 for PEF compared to
322 79,055 for the other traits).

323 Examining associations of a given genetic variant with a wide range of human phenotypes is
324 a valuable tool in therapeutic target validation. As in our PheWAS, it can highlight variants
325 which show associations with one or more respiratory traits that might be expected to
326 demonstrate greater target specificity than variants associated with many traits. Additionally,
327 in some instances, association with multiple traits may indicate the relevance of drug
328 repurposing. Association of a given SNP with multiple traits does not necessarily imply
329 shared etiology, and further investigation is warranted. Our GRS PheWAS assesses broader
330 genetic overlap between lung function and other traits and supports the evidence for some
331 shared genetic determinants with autoimmune diseases.

332 In summary, our study has doubled the number of signals for lung function and provides new
333 understanding and resources of utility for the development of therapeutics. The 279-variant
334 GRS we constructed was associated with a 4.73-fold increased relative risk of moderate-
335 severe COPD between highest and lowest deciles, such that one would expect over 80% of
336 smokers in the highest genetic risk decile to develop COPD. The GRS was also predictive of
337 COPD across multiple ancestral groups. Our PheWAS highlights both expected and
338 unexpected associations relevant to respiratory and other systemic diseases. Investigating the
339 nature of the pleiotropic effects of some of these variants will be of benefit for drug target
340 identification and validation.

341 **URLs**

342 <http://www.ukbiobank.ac.uk>
343 <https://www.ensembl.org/vep>
344 <http://www.dgidb.org/downloads>
345 <https://www.ebi.ac.uk/chembl/drug/indications>
346 <https://www.ebi.ac.uk/gwas/>
347 <https://grasp.nhlbi.nih.gov/Overview.aspx>

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362 **Author contributions**

363 All authors critically reviewed the manuscript prior to submission.
364 Contributed to the conception and design of the study: K.S., U.S.S.G., S.K., S.M.K., T.L.,
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366 P.J., C.L., L. Li, N.L., J.C.M., H.R., I. Sayers, D.D.S., R.T-S., J.C.W., P.G.W., L.M.Y.,
367 O.T.R., M.K., O.P., U.G., I.R., I.J.D., N.M.P., H.S., A.L.J., J.F.W., E.Z., M.J., N.W., A.S.B.,
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374 M.D.T., L.V.W.
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376 C. Batini, K.A.F., K.S., P.S., Xingnan Li, N.F.R., M.O., M.W., K.A.K., B.B.S., S.K., M.I.,
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381 Drafted the manuscript: N.S., A.L.G., A.M.E., I.P.H., M.D.T., L.V.W.

382 **Competing Interests Statement**

383 The following authors report potential conflicts of interest:

384
385 K. Song: Kijoung Song is an employee of GlaxoSmithKline and may own company stock.

386
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393
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396
397 N. Locantore: Nicholas Locantore is an employee and shareholder of GSK.
398
399 J. Maranville: Joseph C. Maranville was a Merck employee during this study, and is now a
400 Celgene employee.
401
402 D. Nickle: David C Nickle has been a Merck & Co. employee during this study and is now an
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573 **Figures and Figure Legends**

574 **Figure 1: Study design**

575 Tier 1 signals had $P < 5 \times 10^{-9}$ in UK Biobank and $P < 10^{-3}$ in SpiroMeta with consistent direction of effect.

576 Tier 2 signals had $P < 5 \times 10^{-9}$ in the meta-analysis of UK Biobank and SpiroMeta with $P < 10^{-3}$ in UK Biobank and $P < 10^{-3}$ in SpiroMeta with consistent directions
577 of effect. Signals with $P < 5 \times 10^{-9}$ in the meta-analysis of UK Biobank and SpiroMeta, and that had consistent directions of effect but did not meet $P < 10^{-3}$ in both
578 cohorts were reported as Tier 3.

579

580 **Figure 2: Strength and direction of association across four lung function traits for 139 novel signals:**

581 Signals are in chromosome and genomic position order from top to bottom then left to right. Red indicates a decrease in the lung function trait; blue indicates an
582 increase. All effects are aligned to the allele associated with decreased FEV₁/FVC, hence the FEV₁/FVC column is only red or white. P-values are from the
583 meta-analysis of UK Biobank and SpiroMeta (n=400,102). The scale points are thresholds used for (i) confirmation in 2-stage analysis and 1-stage analysis
584 ($P < 10^{-3}$); (ii) confirmation of association of previous signals ($P < 10^{-5}$); (iii) signal selection in 2-stage and 1-stage analysis ($P < 5 \times 10^{-9}$); capped at ($P < 10^{-20}$).
585 FEV₁, forced expired volume in 1 second; FVC, forced vital capacity; PEF, peak expiratory flow

586

587 **Figure 3: Association of weighted genetic risk score (wGRS) with COPD and FEV₁/FVC.**

588 **a.** Association of the wGRS with FEV₁/FVC and COPD in UK Biobank (UKB) and China Kadoorie Biobank (CKB) (**Supplementary Table 19**). Left-
589 hand axis: standard deviation (SD) change in FEV₁/FVC per SD increase in wGRS (light grey bars, N=total sample size). Right-hand axis: the translation
590 of this effect to COPD (GOLD stage 2-4) odds ratio (OR) per SD increase in wGRS in the same individuals for UKB ancestries with >100 COPD cases
591 (dark grey bars, N=number of cases + number of controls. Whiskers represent 95% confidence intervals. Some variants in the wGRS were discovered in
592 UKB Europeans, therefore UKB Europeans are shown for reference only (far left, 'Discovery sample'). All other ancestral groups are independent to
593 UKB Europeans.

594 **b.** OR for COPD per SD increase in wGRS in six study groups. COPD was defined using GOLD 2-4 criteria (**Supplementary Table 21**: means and SDs of
595 risk scores). The vertical black line indicates the null effect (OR=1). The point estimate of each study is represented by a box proportional to study
596 weight; whiskers represent 95% confidence intervals. The diamond represents a fixed effect meta-analysis of the five European-ancestry groups, the
597 width of which represents the 95% confidence interval (I^2 statistic=0).

598 **c.** OR for COPD according to deciles of the wGRS, with decile 1 (the 10% of individuals with the lowest GRS) as the reference group. Each point
599 represents a meta-analysis of results for a given comparison (e.g. decile 2 vs reference, decile 3 vs reference, etc.) in five external European-ancestry
600 study groups (COPDGene, ECLIPSE, GenKOLS, SPIROMICS, NETT-NAS). Deciles were calculated and models were run in each group separately.
601 Error bars show 95% confidence intervals (**Supplementary Table 22**).

602

603 **Figure 4: Individual PheWAS with 279 variants (traits passing FDR 1% threshold)**

604 Separate association of 279 variants with 2,411 traits (FDR<1%) in UK Biobank (n up to 379,337). In each category, the trait with the strongest association, i.e.
605 highest $-\log_{10}(\text{FDR})$, is shown first, followed by other traits in that category in descending order of $-\log_{10}(\text{FDR})$. Categories are colour-coded, and outcomes

606 are denoted with a circular or triangular point, according to whether they were coded as binary or quantitative. The top association per-category is labelled with
607 its rsID number, and a plain English label describing the trait. The letter at the beginning of each label allows easy cross-reference with the categories labelled
608 in the legend. Zoomed in versions of each category with visible trait names and directionality are available in **Supplementary Figure 10**. These plots have
609 signed $\log_{10}(\text{FDR})$ values, where a positive values indicates that a positive SNP-trait association is concordant with the risk allele for reduced lung function (as
610 measured by lower FEV₁/FVC). Tabulated results of all SNP-trait PheWAS associations associated at an FDR of <1% are available in **Supplementary Table**
611 **23**.

612
613 **Figure 5: PheWAS with genetic risk score (traits passing FDR 1% threshold)**

614 Association of 279 variant weighted genetic risk score with 2,453 traits (FDR<1%) in UK Biobank (n up to 379,337). In each panel, the category with the
615 strongest association, i.e. highest $-\log_{10}(\text{FDR})$, is shown first, followed by all other associations in that category, ordered by descending order of $-\log_{10}(\text{FDR})$.
616 Sample sizes varied across traits and are available in **Supplementary Table 25**, along with the full summary statistics for each association, plus details of
617 categorisation and plain English labels for each trait. Trait categories are colour coded, and outcomes are denoted with a circular or triangular point, according
618 to whether they were coded as binary or quantitative. The sign of the $\log_{10}(\text{FDR})$ value is positive where an increase in the risk score (i.e. greater risk of COPD,
619 reduced lung function) is associated with a positive effect estimate for that trait. *QC refers to spirometry passing ERS/ATS criteria. SR=self-report;
620 HES=Hospital Episode Statistics.

- 621 a. Associations with respiratory traits.
622 b. Associations with all other traits. ENT=Ear, Nose and Throat; FBC=Full Blood Count.

624

Table 1: Genes implicated using gene expression data, protein level data and functional annotation

625

†Genes implicated by eQTL signals: Lung eQTL (n=1,111) and Blood eQTL (n=4,896) datasets and eleven GTEx (V7) tissues were screened: Artery Aorta (n=267), Artery Coronary (n=152), Artery Tibial (n=388), Colon Sigmoid (n=203), Colon Transverse (n=246), Esophagus Gastroesophageal Junction (n=213), Esophagus Muscularis (n=335), Lung (n=383), Small Intestine Terminal Ileum (n=122), Stomach (n=237), and Whole Blood (n=369); see **Supplementary Table 13** for direction of gene expression for the COPD risk (FEV₁/FVC reducing) allele.

627

628

‡Genes implicated by pQTL signals: pQTL look up in 3,600 plasma proteins (n up to 3,300).

629

*Genes implicated because they contain a deleterious variant (**Supplementary Table 11**).

630

“Other traits” column lists the other lung function traits for which the sentinel was associated at $P < 5 \times 10^{-9}$ in the meta-analysis of UK Biobank and SpiroMeta.

631

In total, 107 putative causal genes were identified: 8 by both a deleterious variant and an eQTL signal (including *KIAA0753* implicated by two deleterious variants), 1 (*NPNT*) by both an eQTL and a pQTL signal, 1 (*SCARF2*) by both a deleterious variant and a pQTL signal, 13 by a deleterious variant only, 81 by an eQTL signal only and 3 by a pQTL signal only

632

633

634

Gene	Phenotype	Other traits	Novel Tier/ Previous	Sentinel SNP	Position (b37)	COPD risk/alt	Functionally implicated genes
<i>DHDDS</i> (intron)	FVC	FEV ₁	Tier 2	rs9438626	1:26,775,367	G/C	<i>DHDDS</i> †
<i>DHDDS</i> (3'-UTR)	FEV ₁		Tier 1	rs12096239	1:26,796,922	C/G	<i>HMG2</i> †, <i>DHDDS</i> †
<i>NEXN</i> (intron)	FEV ₁ /FVC	FEV ₁	Tier 1	rs9661687	1:78,387,270	T/C	<i>NEXN</i> †
<i>DENND2D</i> (intron)	FEV ₁ /FVC		Tier 1	rs9970286	1:111,737,398	G/A	<i>CEPT1</i> †, <i>CHI3L2</i> †, <i>DRAM2</i> †
<i>C1orf54</i> (intron)	PEF	FVC	Tier 1	rs11205354	1:150,249,101	C/A	<i>MRPS21</i> †, <i>RPRD2</i> †, <i>ECM1</i> ‡
<i>KRTCAP2</i>	FEV ₁ /FVC		Tier 1	rs141942982	1:155,153,537	T/C	<i>THBS4</i> ‡
<i>RALGPS2</i> (intron)	FEV ₁		Tier 1	rs4651005	1:178,719,306	C/T	<i>ANGPTL1</i> †
<i>LMOD1</i> (intron)	FEV ₁ /FVC	FEV ₁	Tier 2	rs4309038	1:201,884,647	G/C	<i>SHISA4</i> †
<i>ATAD2B</i> (intron)	FVC	FEV ₁	Tier 2	rs13009582	2:24,018,480	G/A	<i>UBXN2A</i> †
<i>PKDCC</i>	FVC		Tier 1	rs4952564	2:42,243,850	A/G	<i>PKDCC</i> †
<i>ITGAV</i> (intron)	FEV ₁ /FVC		Tier 1	rs2084448	2:187,530,520	C/T	<i>ITGAV</i> †
<i>SPATS2L</i> (intron)	FEV ₁ /FVC		Tier 2	rs985256	2:201,208,692	C/A	<i>SPATS2L</i> †
<i>C2orf54</i>	FVC	FEV ₁	Tier 1	rs6437219	2:241,844,033	C/T	<i>C2orf54</i> †*
<i>MIR548G</i>	FVC		Tier 1	rs1610265	3:99,420,192	T/C	<i>FILIP1L</i> †
<i>BCHE</i> (exon)	FEV ₁ /FVC	FEV ₁	Tier 1	rs1799807	3:165,548,529	C/T	<i>BCHE</i> *†
<i>BTC</i> (intron)	FEV ₁ /FVC	FEV ₁ /FVC	Tier 1	rs62316310	4:75,676,529	G/A	<i>BTC</i> *†
<i>LOC100996325</i>	FEV ₁	FEV ₁ /FVC, PEF	Tier 1	rs11739847	5:609,661	A/G	<i>CEP72</i> *†
<i>RNU6-71P</i>	FEV ₁	FVC, PEF	Tier 1	rs2894837	6:56,336,406	G/A	<i>DST</i> *†
<i>JAZF1</i> (intron)	FEV ₁		Tier 1	rs1513272	7:28,200,097	C/T	<i>JAZF1</i> †
<i>MET</i> (intron)	FEV ₁ /FVC		Tier 2	rs193686	7:116,431,427	T/C	<i>MET</i> †
<i>IER5L</i>	FEV ₁		Tier 2	rs967497	9:131,943,843	G/A	<i>CRAT</i> †, <i>PPP2R4</i> †, <i>IER5L</i> *†

Gene	Phenotype	Other traits	Novel Tier/ Previous	Sentinel SNP	Position (b37)	COPD risk/alt	Functionally implicated genes
<i>DOCK9</i>	FEV ₁ /FVC		Tier 1	rs11620380	13:99,665,512	A/C	<i>DOCK9</i> *
<i>CHAC1</i>	FVC		Tier 1	rs4924525	15:41,255,396	A/C	<i>INO80</i> †, <i>CHP1</i> †, <i>RAD51</i> †
<i>ATP2A3</i>	FEV ₁ /FVC		Tier 1	rs8082036	17:3,882,613	G/C	<i>ATP2A3</i> †
<i>PITPNM3</i>	FEV ₁		Tier 2	rs4796334	17:6,469,793	A/G	<i>KIAA0753</i> †*, <i>TXNDC17</i> †, <i>PITPNM3</i> †
<i>TNFSF12-TNFSF13</i>	FEV ₁		Tier 2	rs4968200	17:7,448,457	C/G	<i>TNFSF13</i> †, <i>SEN3</i> †
<i>NCOR1 (intron)</i>	FVC	FEV ₁	Tier 2	rs34351630	17:16,030,520	C/T	<i>ADORA2B</i> †, <i>TTC19</i> †
<i>ASPSCR1 (intron)</i>	FVC	FEV ₁	Tier 1	rs59606152	17:79,952,944	C/T	<i>LRRC45</i> *
<i>C18orf8</i>	FVC		Tier 1	rs303752	18:21,074,255	A/G	<i>C18orf8</i> †
<i>ZFP82</i>	FVC	FVC, PEF	Tier 2	rs2967516	19:36,881,643	A/G	<i>ZFP14</i> †, <i>ZFP82</i> †
<i>MFAP2</i>	FEV ₁ /FVC	FEV ₁ , PEF	Previous	rs9435733	1:17,308,254	C/T	<i>MFAP2</i> †
<i>LOC101929516</i>	FEV ₁ /FVC		Previous	rs755249	1:39,995,074	T/C	<i>PABPC4</i> †
<i>TGFB2</i>	PEF	FEV ₁ /FVC	Previous	rs6604614	1:218,631,452	C/G	<i>TGFB2</i> †
<i>TRAF3IP1</i>	FEV ₁	FVC, FEV ₁ /FVC, PEF	Previous	rs6710301	2:239,441,308	C/A	<i>ASB1</i> *
<i>SLMAP (intron)</i>	FEV ₁	FEV ₁	Previous	rs6445932	3:57,879,611	T/G	<i>SLMAP</i> †
<i>RSRC1 (intron)</i>	FVC	FVC, FEV ₁ /FVC	Previous	rs12634907	3:158,226,886	G/A	<i>RSRC1</i> †
<i>GSTCD (intron)</i>	FEV ₁	FEV ₁ , FVC, PEF	Previous	rs11722225	4:106,766,430	T/C	<i>INTS12</i> †
<i>NPNT (intron)</i>	FEV ₁ /FVC		Previous	rs34712979	4:106,819,053	A/G	<i>NPNT</i> †‡
<i>AP3B1 (intron)</i>	FVC		Previous	rs425102	5:77,396,400	G/T	<i>AP3B1</i> †
<i>SPATA9</i>	FEV ₁ /FVC		Previous	rs987068	5:95,025,146	C/G	<i>RHOBTB3</i> †
<i>P4HA2-AS1</i>	FVC	FEV ₁ , PEF	Previous	rs3843503	5:131,466,629	A/T	<i>SLC22A5</i> †, <i>P4HA2</i> †, <i>CIQTNF5</i> ‡
<i>CYFIP2 (intron)</i>	FEV ₁ /FVC	FEV ₁ , PEF	Previous	rs11134766	5:156,908,317	T/C	<i>ADAM19</i> †
<i>ADAM19 (intron)</i>	FEV ₁ /FVC		Previous	rs11134789	5:156,944,199	A/C	<i>ADAM19</i> †*
<i>DSP (intron)</i>	FEV ₁ /FVC	FEV ₁	Previous	rs2076295	6:7,563,232	T/G	<i>DSP</i> †
<i>MIR588</i>	FVC	FVC, PEF	Previous	rs6918725	6:126,990,392	T/G	<i>CENPW</i> †
<i>GPR126 (exon)</i>	FEV ₁ /FVC		Previous	rs17280293	6:142,688,969	A/G	<i>GPR126</i> *
<i>C1GALT1 (intron)</i>	FEV ₁ /FVC	FEV ₁	Previous	rs4318980	7:7,256,490	A/G	<i>C1GALT1</i> †
<i>QSOX2 (3'-UTR)</i>	FVC		Previous	rs7024579	9:139,100,413	T/C	<i>QSOX2</i> †
<i>DNLZ (intron)</i>	FVC	FEV ₁ , FVC, PEF	Previous	rs4073153	9:139,259,349	G/A	<i>SNAPC4</i> †, <i>CARD9</i> †, <i>INPP5E</i> †
<i>CDC123 (intron)</i>	FEV ₁ /FVC	FEV ₁	Previous	rs7090277	10:12,278,021	T/A	<i>NUDT5</i> †
<i>MYPN (intron)</i>	FVC	FVC	Previous	rs10998018	10:69,962,954	A/G	<i>MYPN</i> *
<i>EML3 (intron)</i>	FEV ₁	FEV ₁	Previous	rs71490394	11:62,370,155	G/A	<i>EEF1G</i> †, <i>ROM1</i> †*, <i>EML3</i> †*
<i>ARHGEF17 (intron)</i>	FEV ₁ /FVC		Previous	rs2027761	11:73,036,179	C/T	<i>FAM168A</i> †, <i>ARHGEF17</i> †*
<i>RAB5B (intron)</i>	FEV ₁	PEF	Previous	rs1689510	12:56,396,768	C/G	<i>CDK2</i> †

Gene	Phenotype	Other traits	Novel Tier/ Previous	Sentinel SNP	Position (b37)	COPD risk/alt	Functionally implicated genes
<i>LRP1 (intron)</i>	FEV ₁ /FVC		Previous	rs11172113	12:57,527,283	T/C	<i>LRP1</i> †
<i>FGD6 (intron)</i>	FEV ₁ /FVC		Previous	rs113745635	12:95,554,771	T/C	<i>FGD6</i> †
<i>RPAP1</i>	FEV ₁ /FVC		Previous	rs2012453	15:41,840,238	G/A	<i>ITPKA</i> †, <i>LTK</i> †, <i>TYRO3</i> †, <i>RPAP1</i> †
<i>AAGAB</i>	FVC	FEV ₁ , PEF	Previous	rs12917612	15:67,491,274	A/C	<i>AAGAB</i> †, <i>SMAD3</i> †, <i>IQCH</i> †
<i>THSD4 (intron)</i>	FEV ₁ /FVC		Previous	rs1441358	15:71,612,514	G/T	<i>THSD4</i> †
<i>IL27</i>	FEV ₁		Previous	rs12446589	16:28,870,962	A/G	<i>SBK1</i> †, <i>TUFM</i> †, <i>CCDC101</i> †, <i>SULT1A1</i> †, <i>SULT1A2</i> †*, <i>SH2B1</i> †, <i>NPIPL1</i> †, <i>CLN3</i> †, <i>ATXN2L</i> †, <i>EIF3C</i> †
<i>MMP15 (intron)</i>	FEV ₁ /FVC	PEF	Previous	rs11648508	16:58,063,513	G/T	<i>MMP15</i> †
<i>SSH2 (intron)</i>	FEV ₁ /FVC	FEV ₁	Previous	rs2244592	17:28,072,327	A/G	<i>EFCAB5</i> †
<i>FBXL20 (intron)</i>	FVC	FVC, PEF	Previous	rs8069451	17:37,504,933	C/T	<i>CRKRS</i> †, <i>FBXL20</i> †
<i>MAPT-ASI</i>	FEV ₁		Previous	rs79412431	17:43,940,021	A/G	<i>LRR37A4</i> †, <i>MAPT</i> *
<i>TSEN54 (intron)</i>	FEV ₁	PEF	Previous	rs9892893	17:73,525,670	G/T	<i>CASKIN2</i> †, <i>TSEN54</i> *
<i>LTBP4 (exon)</i>	FEV ₁ /FVC		Previous	rs34093919	19:41,117,300	G/A	<i>LTBP4</i> *
<i>ABHD12 (intron)</i>	FEV ₁	FEV ₁ , PEF	Previous	rs2236180	20:25,282,608	C/T	<i>PYGB</i> †*
<i>UQCCI (5'-UTR)</i>	FVC	FEV ₁	Previous	rs143384	20:34,025,756	G/A	<i>UQCCI</i> †, <i>GDF5</i> †
<i>SLC2A4RG (intron)</i>	FVC	FEV ₁ /FVC	Previous	rs4809221	20:62,372,706	A/G	<i>LIME1</i> †
<i>SCARF2 (intron)</i>	FEV ₁	FEV ₁	Previous	rs9610955	22:20,790,723	C/G	<i>SCARF2</i> *‡

636 Online Methods

637 Study Design Overview and rationale

638 For the two-stage approach, we first selected distinct signals of association (defined using conditional
639 analyses) with one or more traits achieving $P < 5 \times 10^{-9}$ in UK Biobank only (maximum $n = 321,047$). A
640 threshold of $P < 5 \times 10^{-9}$ was selected to maximize stringency and for consistency with currently recommended
641 genome-wide significance thresholds for re-sequencing analyses of European ancestry individuals²³. We
642 reported as new those signals which additionally met $P < 10^{-3}$ in SpiroMeta ($N_{\text{effective}} > 70\%$ of n up to
643 79,055; see **Supplementary Note** and **Supplementary Figure 7** for power calculations), with consistent
644 directions of effect. We term these “Tier 1” signals, as they meet our highest level of stringency. Methods
645 for conditional analyses and determining novelty are described below.

646 For the one-stage approach, we selected distinct signals of association (defined using conditional analyses)
647 with one or more traits reaching $P < 5 \times 10^{-9}$ in the meta-analysis of UK Biobank and SpiroMeta (maximum
648 $n = 400,102$), reporting as new those with a consistent direction of effect that additionally met $P < 10^{-3}$ in both
649 UK Biobank and SpiroMeta. We term these signals “Tier 2”, as they meet our second-highest level of
650 stringency.

651 All signals meeting either set of criteria described above, and that had not been previously published, were
652 reported as new association signals for lung function. Signals that reached $P < 5 \times 10^{-9}$ in the meta-analysis of
653 UK Biobank and SpiroMeta, had a consistent direction of effect in UK Biobank and SpiroMeta, but that did
654 not reach $P < 10^{-3}$ in both UK Biobank and SpiroMeta are presented as “Tier 3”, and were not included in
655 further analyses.

656 Data for chromosome X were available for 321,027 European individuals in UK Biobank and 38,199
657 individuals from SpiroMeta (1000 Genomes Project Phase 1 imputation).⁵⁵

658 Please see the ‘**Life Sciences Reporting Summary**’.

659 UK Biobank

660 The UK Biobank resource is described elsewhere (see URLs). Individuals were selected for inclusion in this
661 study if they: (i) had complete data for age, sex, height and smoking status; (ii) had spirometry meeting
662 quality control requirements (based on analyses of acceptability, reproducibility and blow curve metrics;
663 **Supplementary Note**); (iii) had genome-wide imputed data and; (iv) were of European ancestry based on
664 genetic data (**Supplementary Note**; **Supplementary Figure 1**). Genotyping was undertaken using the
665 Affymetrix Axiom® UK BiLEVE and UK Biobank arrays¹³. Genotypes were imputed to the Haplotype
666 Reference Consortium panel⁵⁶ (**Supplementary Note**), and retained if minor allele count ≥ 3 and imputation
667 quality (info) > 0.5 . In total, 321,047 individuals were included in our analyses (**Supplementary Table 1**).
668 Residuals from linear regression of each trait (FEV₁, FVC, FEV₁/FVC and PEF) against age, age², sex,
669 height, smoking status (ever/never) and genotyping array were ranked and inverse-normal transformed,
670 giving normally distributed Z-scores. These Z-scores were used for genome-wide association testing under
671 an additive genetic model using BOLT-LMM v2.3²⁰. Principal components were not included as BOLT-
672 LMM uses a linear mixed model to account for relatedness and fine-scale population structure.
673 Linkage disequilibrium (LD) score regression implemented in LDSC²¹ was used to estimate test statistic
674 inflation due to confounding. Genomic control was applied, adjusting test statistics by LD score regression
675 intercepts: 1.12 for FEV₁, 1.14 for FVC, 1.19 for FEV₁/FVC and 1.13 for PEF (**Supplementary Figure 8**;
676 **Supplementary Table 27**), acknowledging that this might be over-conservative for UK Biobank.

677 SpiroMeta consortium

678 The SpiroMeta consortium meta-analysis comprised a total of 79,055 individuals from 22 studies. Thirteen
679 studies ($n = 21,436$) were imputed to the 1000 Genomes Project Phase 1 panel⁵⁵ (B58C, BHS1&2, three
680 Croatian studies [CROATIA-Korcula, CROATIA-Split and CROATIA-Vis], Health 2000, KORA F4,
681 KORA S3, LBC1936, NSPHS, ORCADES, SAPALDIA and YFS) and 9 studies ($n = 61,682$) were imputed
682 to the Haplotype Reference Consortium (HRC) panel⁵⁷ (EPIC [obese cases and population-based studies],
683 GS:SFHS, NFBC1966, NFBC1986, PIVUS, SHIP, SHIP-TREND, UKHLS and VIKING). See
684 **Supplementary Tables 2** and **3** for abbreviation definitions, study characteristics, and details of genotyping
685 platforms, imputation panels and methods). Measurements of spirometry for each study are described in the
686 **Supplementary Note**.

687 In each study, linear regression models were fitted for each trait (FEV₁, FEV₁/FVC, FVC and where
688 available, PEF), with adjustment for age, age², sex and height. For studies with unrelated individuals,
689 models were fitted separately in ever and never smokers, with additional adjustment for ancestral principal
690 components. Studies with related individuals fitted mixed models in all individuals to account for
691 relatedness, with ever smoking status as a covariate.

692 In all studies, residuals were rank-based inverse normal transformed and used as the phenotype for
693 association testing, under an additive genetic model (**Supplementary Table 3**).

694 In the study-level results, variants were excluded if they had a low minor allele count (MAC)
695 (**Supplementary Table 3**) or imputation quality (info)<0.3. In studies of unrelated individuals, ever and
696 never smokers' results were combined using inverse-variance weighted meta-analysis. Genomic control was
697 applied to all study-level results, before combining results across all studies using inverse-variance weighted
698 meta-analysis. LD score regression intercepts for the meta-analysis were close to 1.00 (**Supplementary**
699 **Figure 8; Supplementary Table 27**), therefore genomic control was not applied.

700 **Meta-analyses**

701 A total of 19,819,130 variants (imputed or genotyped) in both UK Biobank and SpiroMeta were meta-
702 analyzed, using inverse-variance weighted fixed effect meta-analysis. No further genomic control was
703 applied as LD score regression intercepts were close to 1.00 (**Supplementary Table 27**).

704 **Selection of new signals using conditional analyses**

705 All SNPs ±1 Mb were extracted around each sentinel variant. We performed stepwise conditional analysis to
706 select independently associated SNPs within each 2-Mb region, using GCTA⁵⁸. LD was estimated for UK
707 Biobank from the same individuals used in discovery, and for SpiroMeta, from an unrelated subset of 48,943
708 UK Biobank individuals¹⁸. Secondary signals identified within each 2-Mb region were required to meet Tier
709 1 or Tier 2 criteria (described above) after conditioning on the primary sentinel variant. A combined list of
710 distinct lung function signals was then made across the four phenotypes, FEV₁, FVC, FEV₁/FVC and PEF,
711 as follows: where sentinel variants for 2 signals for different phenotypes were in high LD ($r^2 > 0.5$), we
712 retained the most significant variant; where 2 signals were in moderate LD ($0.1 > r^2 > 0.5$), we retained
713 variants if, after conditional analysis, they still met the Tier 1 or Tier 2 threshold; for signals in low LD
714 ($r^2 < 0.1$) we retained both variants. We then used the same criteria to identify a subset of new signals which
715 were distinct from previously published independent signals (see below).

716 **Assessment of previously reported lung function signals**

717 We identified 184 autosomal signals from previous GWAS of lung function and COPD^{1,4,14}. After LD
718 pruning (only keeping signals with LD of $r^2 < 0.1$), we removed 24 non-independent SNPs, leaving 160
719 previously reported independent signals. Of 6 previously reported signals in the HLA region, we included
720 only the 3 independent lung function HLA signals reported from conditional analysis using all imputed HLA
721 genotypes¹⁸: *AGER* (rs2070600), *HLA-DQB1* (rs114544105) and near *ZNF184* (rs34864796), leaving 157
722 autosomal signals.

723 We confirmed association of previously reported signals in our data if they met any of three criteria: (i) the
724 previously reported sentinel was associated ($P < 10^{-5}$) with any lung function trait in UK Biobank; (ii) a proxy
725 for the previously reported sentinel with $r^2 > 0.5$ was associated ($P < 10^{-5}$) with any lung function trait in UK
726 Biobank; (iii) a proxy for the previously reported sentinel with $r^2 > 0.1$ was associated with any lung function
727 trait meeting tier 1 or tier 2 criteria (**Supplementary Figure 3**).

728 **Effect on COPD susceptibility – genetic risk score in multiple ancestries**

729 To test association of all lung function signals with COPD susceptibility, we constructed a 279-variant
730 weighted GRS comprising the 139 novel and 140 previously reported signals; we used the previously
731 reported sentinel SNP for published signals. Weights were derived using the FEV₁/FVC decreasing
732 (generally COPD risk *increasing*) alleles. For previously reported signals (n=140), effect sizes from UK
733 Biobank were used as weights for the 94 signals that were not discovered using UK Biobank data. Weights
734 were taken from SpiroMeta for 46 signals where UK Biobank was included in the discovery of those signals.
735 For novel signals, weights were taken from SpiroMeta for two-stage (tier 1) signals (n=99), and the smallest
736 absolute effect size from either UK Biobank or SpiroMeta was used for one-stage (tier 2) signals (n=40)
737 (**Supplementary Table 28**). This approach was taken in order to derive conservative weights, thus reducing

738 the likelihood of bias by winner's curse. For the weighted GRS the number of risk alleles at each variant was
739 multiplied by its weight.

740 The GRS was first calculated in unrelated individuals (KING kinship coefficient of <0.0884) within 6
741 ancestral groups of UK Biobank: Europeans, South Asians, Africans, Chinese, Mixed African and
742 Europeans, and Mixed Other (total sample of unrelated individuals across six ancestries: 323,001) using
743 PLINK. Weights and alleles were as described above. COPD was defined as $FEV_1/FVC < 0.7$ and
744 $FEV_1 < 80\%$ predicted, i.e. GOLD stage 2-4 categorization. Associations with the GRS were then tested
745 using COPD (in ancestral groups with at least 100 COPD cases) and FEV_1/FVC as the outcomes.

746 We also calculated the GRS in individuals from the China Kadoorie Biobank (CKB). Four of the 279 SNPs
747 were unavailable in CKB (rs1800888, rs56196860, rs72724130 and rs77672322), and for 12 SNPs, proxies
748 were used (minimum $r^2=0.3$). Analyses were undertaken in all COPD GOLD stage 2-4 cases
749 ($FEV_1/FVC < 0.7$ and $FEV_1 < 0.8$ of the predicted value: 6,013 cases and 69,567 controls), against an unbiased
750 set of population controls. The GRS was also tested for association with FEV_1/FVC in CKB ($n=72,796$).

751 Logistic regression of COPD case-control status with the GRS in UK Biobank and China Kadoorie Biobank
752 assumed an additive genetic effect and was adjusted for age, age², sex, height, and smoking
753 (**Supplementary Table 19**). Ten principal components were included in UK Biobank analyses. In China
754 Kadoorie Biobank, analyses were stratified by geographical regions, then meta-analyzed using an inverse-
755 variance fixed effect model. Linear models assessing the association with FEV_1/FVC were fitted using the
756 transformed outcome used in the main GWAS analysis.

757 We then tested association in 5 European-ancestry COPD case-control studies: COPDGene (Non-Hispanic
758 White Population) (3,068 cases, 2,110 controls), ECLIPSE (1,713 cases, 147 controls), GenKOLS (836
759 cases, 692 controls), NETT-NAS (374 cases, 429 controls) and SPIROMICS (988 cases, 537 controls)
760 (**Supplementary Table 20**). We also tested this GRS in the COPDGene African American population study
761 (910 cases, 1,556 controls). Logistic regression models using COPD as outcome and the GRS as exposure
762 were adjusted for age, age², sex, height, and principal components (**Supplementary Table 21**,
763 **Supplementary Figure 9**). Single variant associations of the 279 SNPs with COPD are in **Supplementary**
764 **Table 29**.

765 Next, we divided individuals in the external COPD case-control studies into deciles, according to their
766 values of the weighted GRS (undertaken separately by study group). For each decile, logistic models were
767 fitted, comparing the risk of COPD for members of the decile compared to those in the lowest decile (i.e.
768 those with lowest values of the weighted GRS). Covariates were as for COPD analyses. Results were
769 combined across European-ancestry study groups by fixed effect meta-analysis (**Supplementary Table 22**).
770 **Effects on smoking behavior**

771 As our discovery GWAS in UK Biobank was adjusted for ever smoking status, and not for pack years of
772 smoking (this information was missing for 32% of smokers), we evaluated whether any lung function
773 association signals might be driven by an association with smoking behavior, by testing for association with
774 smoking initiation (123,890 ever smokers vs. 151,706 never smokers) and cigarettes per day ($n=80,015$) in
775 UK Biobank (see **Supplementary Note**). We also tested for association with lung function in never smokers
776 only ($n=173,658$). We excluded signals associated with smoking behavior (**Supplementary Table 6**) but not
777 with lung function in never smokers.

778 **Smoking interaction**

779 For associated variants (new and previously reported), we repeated association testing for lung function
780 separately in UK Biobank and SpiroMeta (up to 176,701 ever smokers and 197,999 never smokers), and
781 tested for an interaction effect with smoking using the Welch test (**Supplementary Note**). A threshold of
782 $P < 1.79 \times 10^{-4}$ (Bonferroni corrected for 279 tests) indicated significance.

783 We also tested for interaction between the weighted GRS and smoking, within 303,619 unrelated individuals
784 of European ancestry in UK Biobank, using COPD and FEV_1/FVC as outcomes (FEV_1/FVC was pre-
785 adjusted for age, age², sex, and height, and the residuals transformed as per the main GWAS analysis). For
786 COPD (defined as $FEV_1/FVC < 0.7$, and $FEV_1 < 80\%$ predicted) a logistic model was fitted:

787 *COPD* ~ genotyping array + 10 principal components + age + age² + sex + height + smoking status +
788 weighted risk score + (smoking status × weighted risk score).

789 For FEV_1/FVC , a linear model was fitted:

790 $FEV_1/FVC \sim \text{genotyping array} + 10 \text{ principal components} + \text{smoking status} + \text{weighted risk score} +$
791 $(\text{smoking status} \times \text{weighted risk score}).$

792 **Proportion of variance explained**

793 We calculated the proportion of variance explained by the previously reported (n=140) and new variants
794 (n=139) associated with lung function using the formula:

$$795 \frac{\sum_{i=1}^n 2f_i(1 - f_i)\beta_i^2}{V}$$

796 where n is the number of variants, f_i and β_i are the frequency and effect estimate of the i'th variant, and V is
797 the phenotypic variance (always 1 as our phenotypes were inverse-normal transformed). We used the same
798 conservative effect estimates (β) used as GRS weights for the 279 GRS variants, derived from either UK
799 Biobank or SpiroMeta effect estimates (described above). Our previously published estimate of proportion
800 of variance explained¹⁸ used UK Biobank effect estimates. We assumed a heritability of 40%^{24,25} to estimate
801 the proportion of additive polygenic variance.

802 **Fine-mapping**

803 A Bayesian method⁵⁹ was used to fine-map lung-function-associated signals to the set of variants that were
804 99% likely to contain the underlying causal variant (assuming that the causal variant was analyzed). This
805 was undertaken for new signals and for previously reported signals reaching $P < 10^{-5}$ in UK Biobank. For
806 previously reported signals, the sentinel variant from the current UK Biobank analysis was used, instead of
807 the previously reported variant. We used a value of 0.04 for the prior W in the approximate Bayes factor
808 formula⁶⁰. Effect sizes and standard errors for fine-mapping were obtained from inverse-variance weighted
809 meta-analysis of UK Biobank and SpiroMeta (maximum n=400,102). Signals in the HLA region were not
810 included.

811 **Implication of potentially causal genes**

812 *Annotation of deleterious variants*

813 Variants in the 99% credible sets were checked for predicted functional effect if they were annotated as
814 "exonic", "splicing", "ncRNA_exonic", "5'-UTR" or "3'-UTR" (untranslated region) by ANNOVAR⁶¹. We
815 then used SIFT, PolyPhen-2 (implemented using the Ensembl GRCh37 Variant Effect Predictor, see URLs)
816 and FATHMM⁶² to annotate missense variants, and CADD (also implemented using VEP) to annotate non-
817 coding variation. Variants were annotated as deleterious if they were labelled 'deleterious' by SIFT,
818 'probably damaging' or 'possibly damaging' by PolyPhen-2, 'damaging' by FATHMM (specifying the
819 'Inherited Disease' option of the 'Coding Variants' method, and using the 'Unweighted' prediction
820 algorithm) or had a CADD scaled score $\geq 20^4$. The union of the four methods was taken to establish the
821 number of potentially deleterious variants and their unique genes.

822 *Gene expression and protein levels*

823 At 276 of 279 (3 HLA signals excluded) signals, the sentinel variant and 99% credible set⁵⁹ were used to
824 query three eQTL resources: lung eQTL (n=1,111)¹³, blood eQTL (n=4,896)⁶³ and GTEx (V7; with
825 maximum n=388, depending on tissue: 'Artery Aorta' (n=267), 'Artery Coronary' (n=152), 'Artery Tibial'
826 (n=388), 'Colon Sigmoid' (n=203), 'Colon Transverse' (n=246), 'Esophagus Gastroesophageal Junction'
827 (n=213), 'Esophagus Muscularis' (n=335), 'Lung' (n=383), 'Small Intestine Terminal Ileum' (n=122),
828 'Stomach' (n=237), and 'Whole Blood' (n=369))⁶⁴, and one blood pQTL resource (n=3,301)³⁹.

829 A gene was classified as a 'putative causal gene' if the sentinel SNP or any SNP in the respective 99%
830 credible set was associated with expression of this gene or its protein levels (FDR < 5% for eQTL,
831 $P < 5.03 \times 10^{-8}$ for pQTL [276 tests at 3,600 proteins]) and if the GWAS sentinel SNP or any SNP in the
832 respective 99% credible set was the variant most strongly associated with expression of the respective gene
833 or level of the respective protein (i.e. the sentinel eQTL/pQTL SNP) in one or more of the eQTL and pQTL
834 data sets.

835 **Pathway analysis**

836 We tested for enrichment of genes identified via functional annotation, gene expression or protein level
837 analyses in pathway and gene set ontology databases using ConsensusPathDB.⁶⁵ Pathways or gene sets

838 represented entirely by genes implicated by the same association signal were excluded. Gene sets and
839 pathways with FDR<5% are reported.

840 **Functional enrichment analyses**

841 We carried out stratified LD score regression to identify significant enrichment of heritability at variants
842 overlapping histone marks (e.g. H3K4me1, H3K4me3) specific to lung, foetal lung, and smooth muscle-
843 containing (e.g. colon, stomach) cell lines, using methods specified by Finucane *et al.*⁴⁰

844 We separately selected FEV₁/FVC and FVC associated SNPs passing two thresholds ($P<5\times 10^{-5}$ and
845 $P<5\times 10^{-9}$ in the meta-analysis) as input to GARFIELD⁴¹ to test for enrichment of our signals for 424 DHS
846 hotspot annotations derived from 55 different tissues in the RoadMap Epigenomics and ENCODE projects.
847 Using DeepSEA⁴², we analyzed all SNPs in the 99% credible set for predicted chromatin effects. We
848 reported effects for any chromatin effect and lung-related cell line with an E-value<0.05 (i.e. the expected
849 proportion of SNPs with a larger predicted effect based on empirical distributions of predicted effects for
850 1000 Genomes SNPs) and an absolute difference in probability of>0.1 (threshold for “high confidence”)
851 between the reference and alternative allele.

852 **Drug targets**

853 Genes identified as potentially causal using eQTL, pQTL or variant annotation were interrogated against the
854 gene-drug interactions table of the Drug-Gene Interactions Database (DGIDB) (see URLs). Drugs were
855 mapped to ChEMBL IDs (see URLs), and indications (MeSH headings) were added.

856 **Phenome-wide association studies**

857 To identify whether the 279 signals were associated with other traits and diseases, the weighted GRS was
858 calculated in up to 379,337 UK Biobank samples, and a phenome-wide association study (PheWAS) was
859 performed, with the GRS as the exposure. Traits included UK Biobank baseline measures (from
860 questionnaires and physical measures), self-reported medication usage, and operative procedures, as well as
861 those captured in Office of Population Censuses and Surveys codes from the electronic health record. We
862 also included self-reported disease variables and those from hospital episode statistics (ICD-10 codes
863 truncated to three-character codes and combined in block and chapter groups), combining these where
864 possible to maximize power. The GRS analysis included 2,453 traits, and the single-variant analysis
865 contained 2,411 traits (traits with>200 cases were included for the single-variant PheWAS, whereas traits
866 with>50 cases were included in the GRS PheWAS). Analyses were conducted in unrelated European-
867 ancestry individuals (KING kinship coefficient <0.0442), and were adjusted for age, sex, genotyping array,
868 and ten principal components. Logistic and linear models were fitted for binary and quantitative outcomes,
869 respectively. False discovery rates were calculated according to the number of traits in the GRS and single-
870 variant PheWAS (2,453 or 2,411, respectively).

871 In addition, the sentinel variants 99% credible set variants were queried against the GWAS catalog⁶⁶ (see
872 URLs) and GRASP⁶⁷ (see URLs) for associations at $P<5\times 10^{-8}$. Associations relating to methylation,
873 expression, metabolite or protein levels, as well as lung function and COPD, were not included.
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Data availability statement

SpiroMeta GWAS summary statistics and UK Biobank GWAS summary statistics are available online via LD-Hub (<http://ldsc.broadinstitute.org/ldhub/>). Single-variant PheWAS results are available by request to the corresponding authors. The newly derived spirometry variables are available from UK Biobank (<http://www.ukbiobank.ac.uk/>).

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Methods-only references

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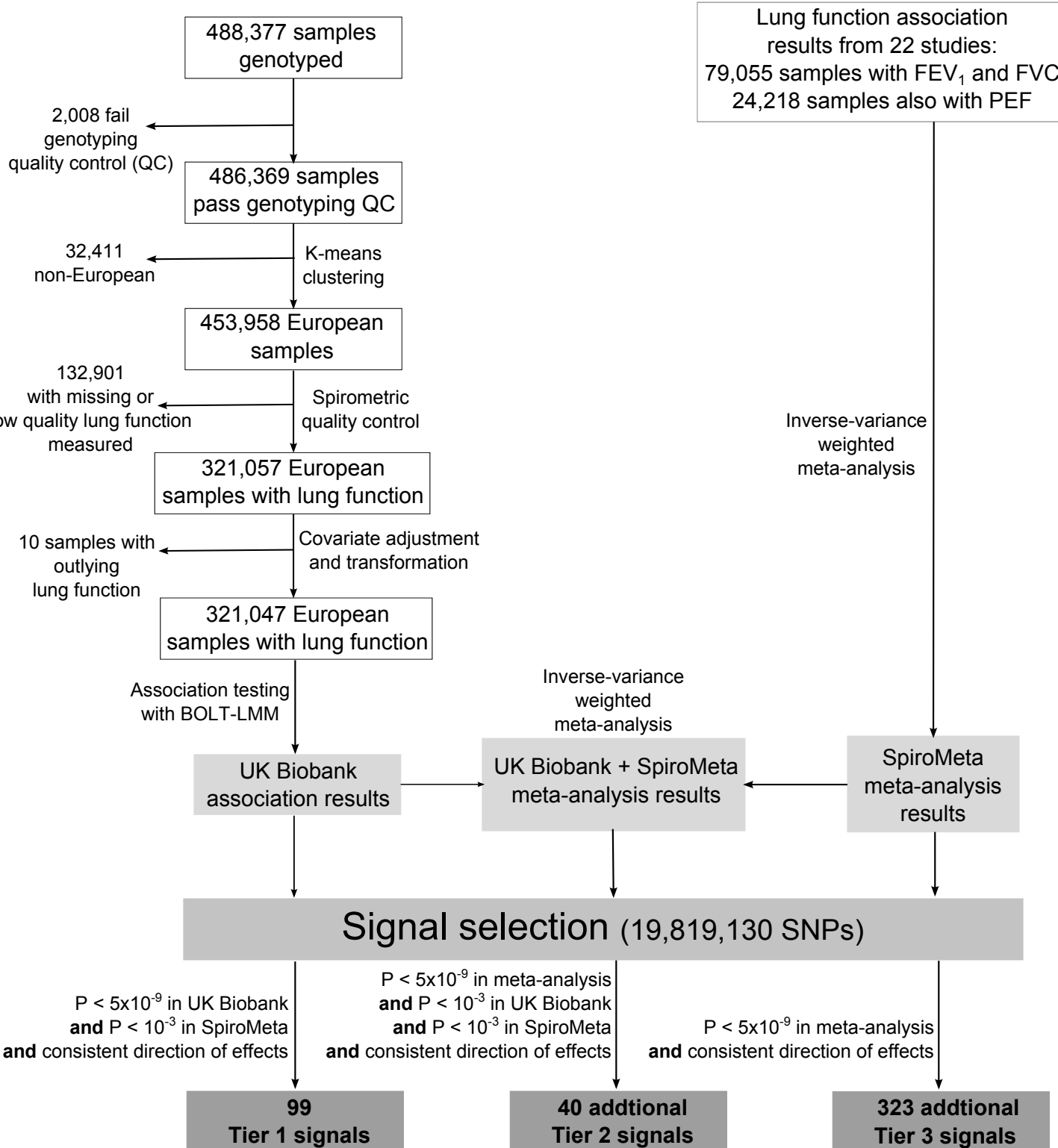
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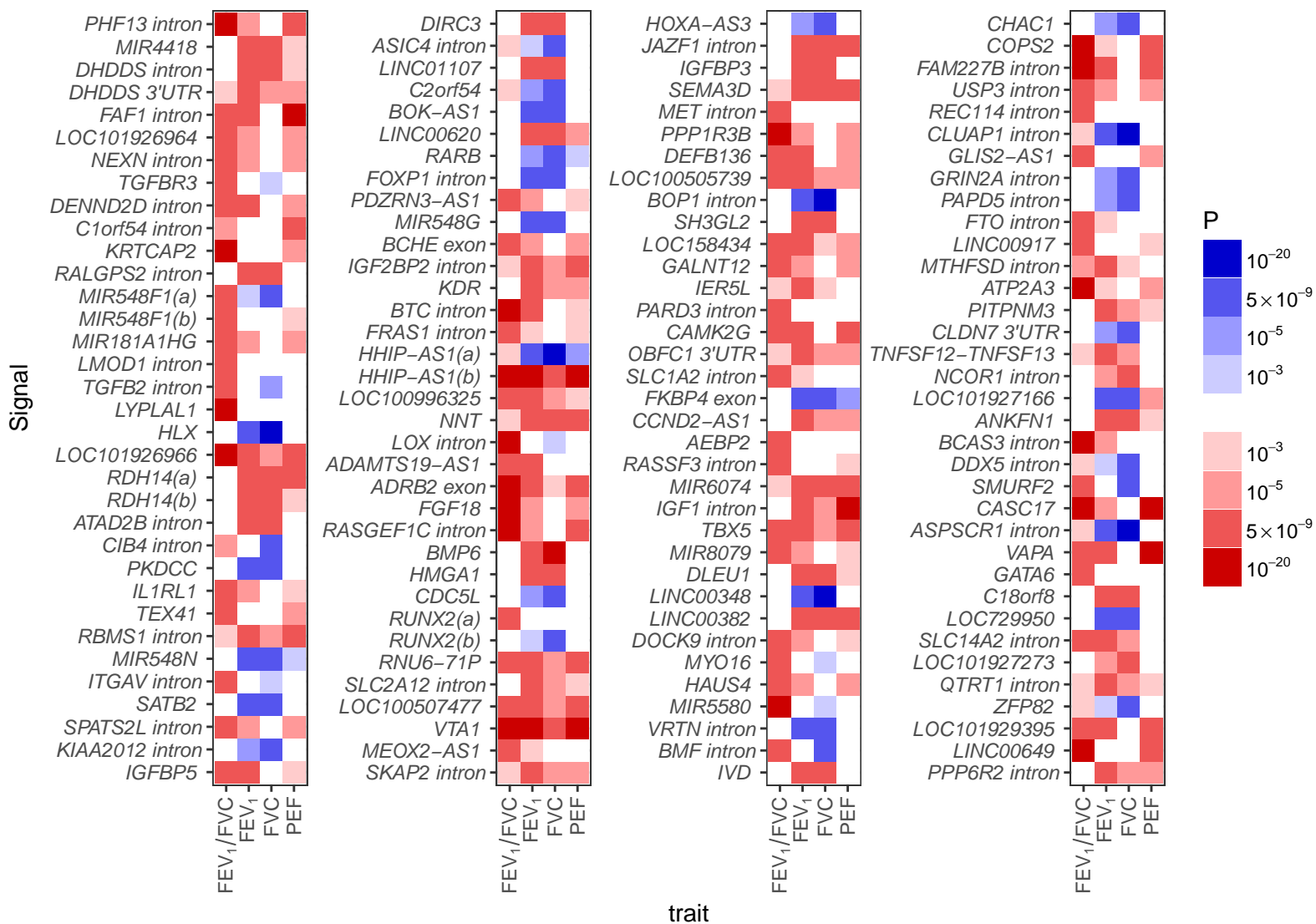
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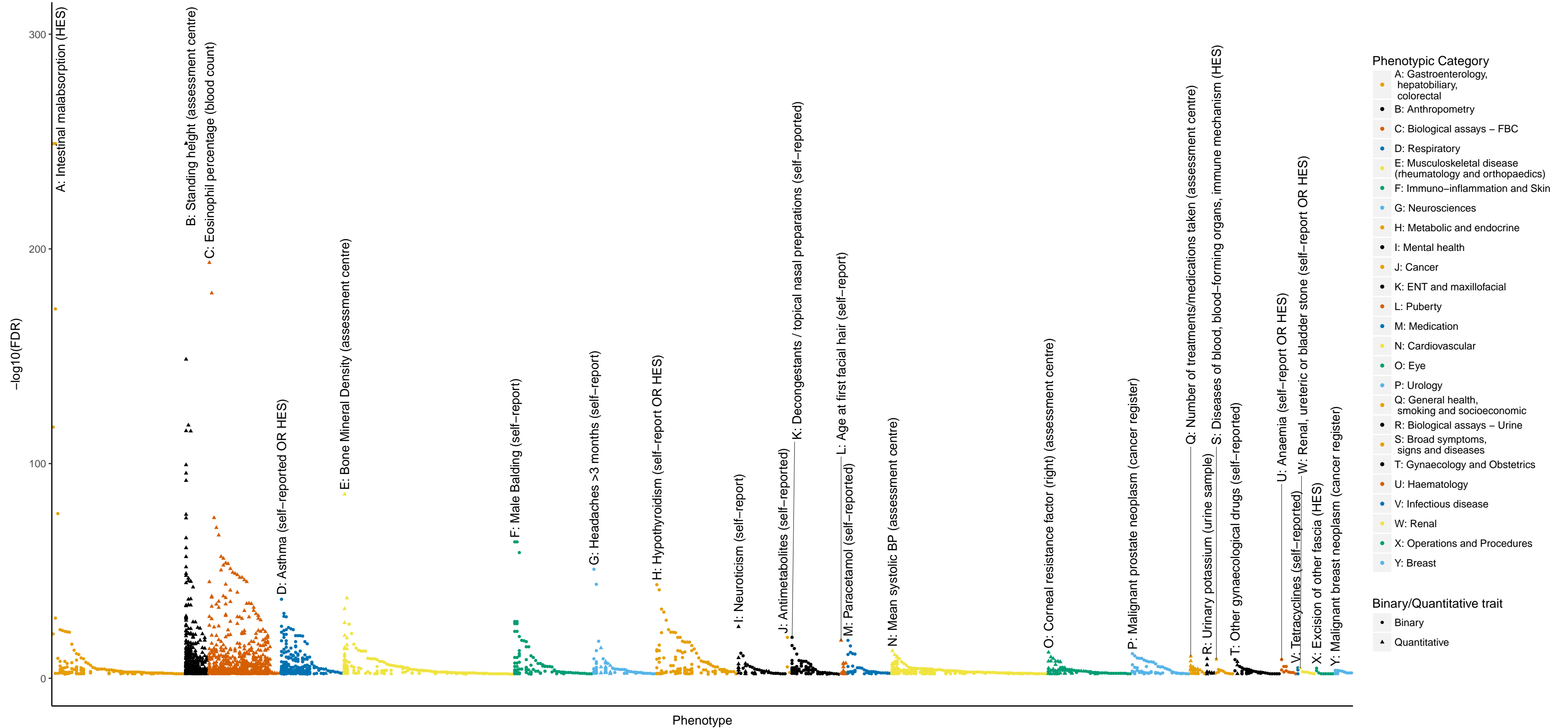
A genome-wide association study in over 400,000 individuals identifies 139 new signals for lung function. These variants can predict chronic obstructive pulmonary disease in independent, trans-ethnic cohorts.

UK Biobank

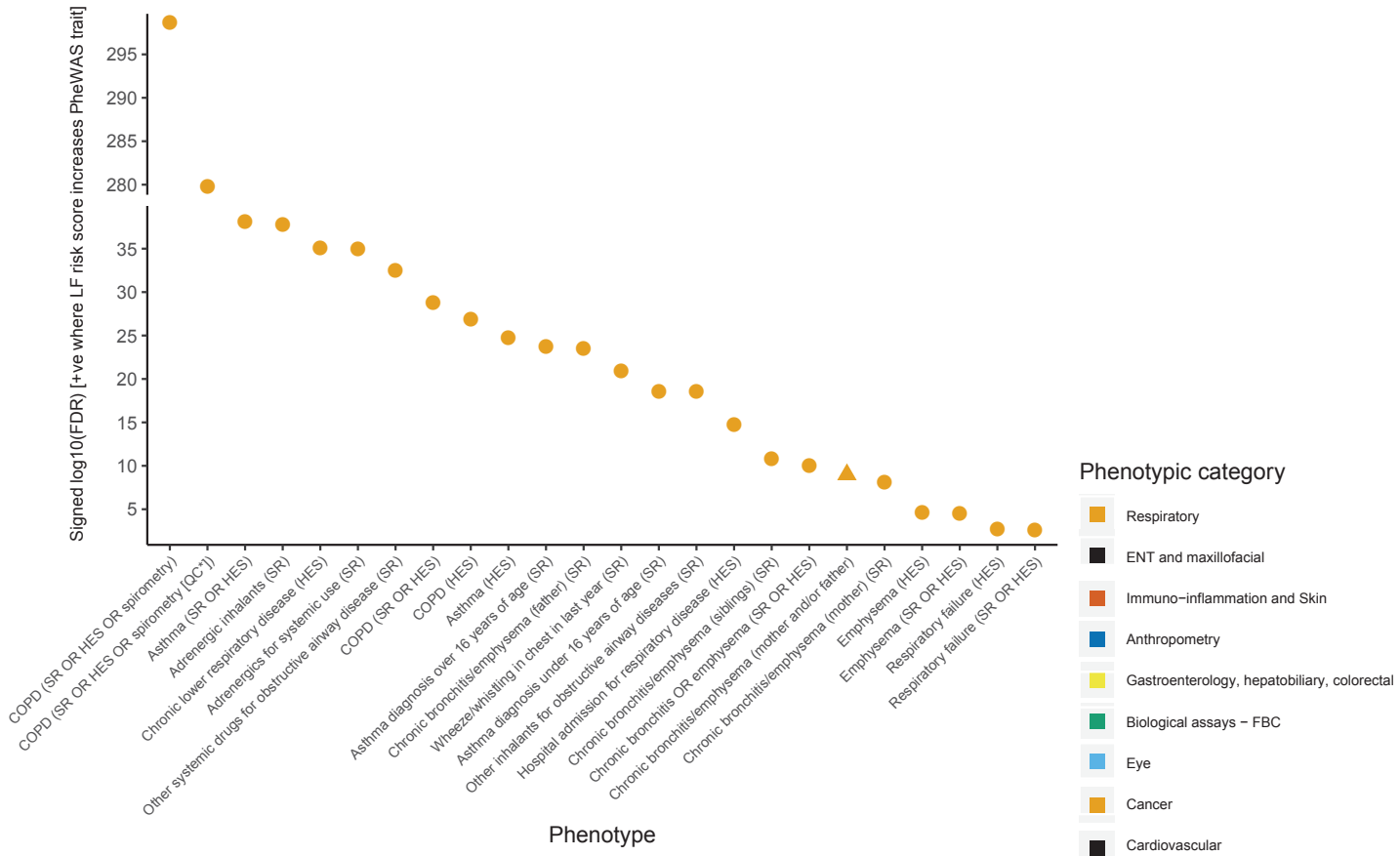
SpiroMeta



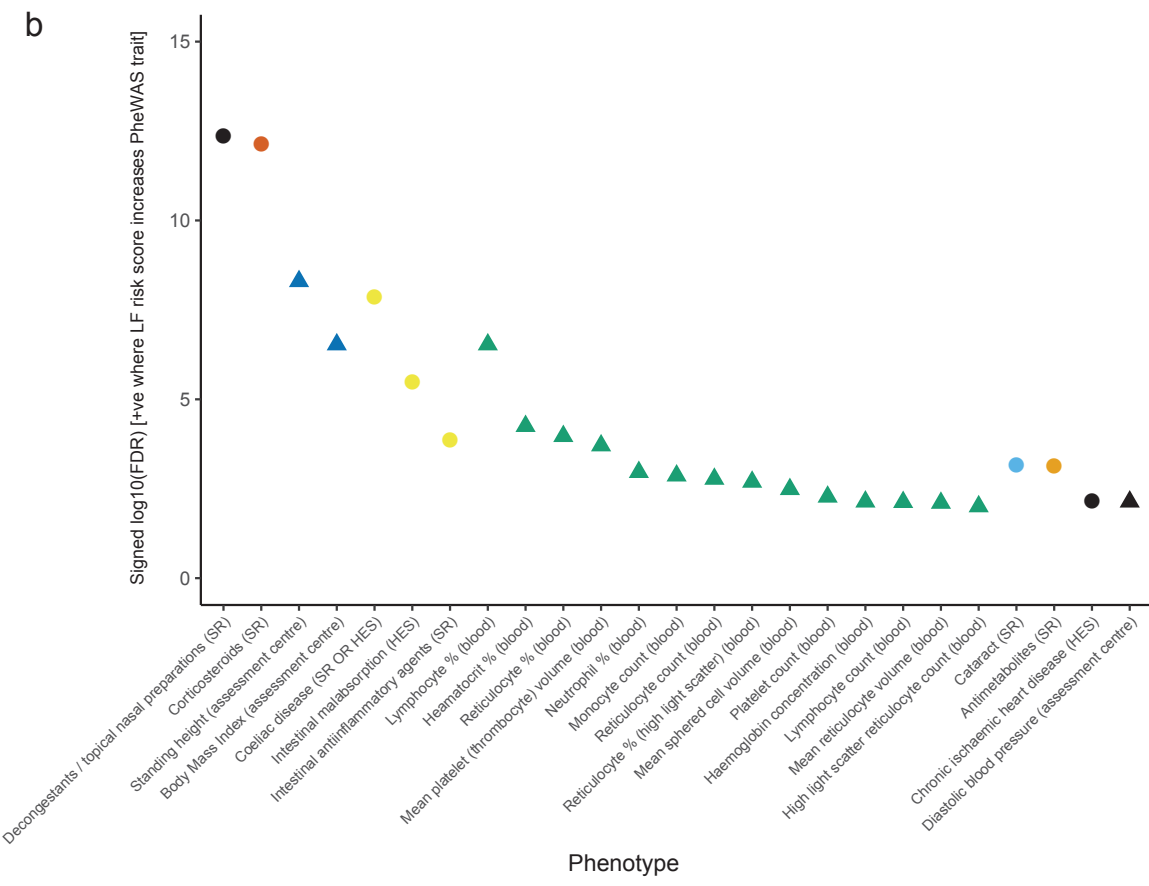




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Supplementary Information

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Selecting individuals from UK Biobank

Spirometry Quality Control

UK Biobank contains data for 502,682 individuals. Of these, 445,754 had at least two measures of FEV₁ (VariableID: 3063) and FVC (VariableID: 3062), complete information for spirometry method used (VariableID: 23), age (VariableID: 21022), sex (VariableID: 31) standing height (VariableID: 50), and for whom ever smoking status could be derived (derivation of ever smoking status described below). For quality control of spirometry, the pre-derived FEV₁, FVC and PEF measurements (VariableIDs: 3063, 3062 and 3064), the blow curve time series measurements (VariableID: 3066) and the Vitalograph spirometer blow quality metrics (VariableID: 20031) were used.

Acceptability of blows

To identify “acceptable” blows for inclusion in the analyses of FEV₁, FVC, FEV₁/FVC and PEF, the following quality control steps were undertaken;

- Blows were initially deemed to be acceptable if they contained the following values in the Vitalograph spirometer blow quality metrics; “blank”, “ACCEPT”, BELOW6SEC ACCEPT” and “BELOW6SEC”. A total of 777,676 blows from 387,430 participants were deemed acceptable.
- Next, start of blow quality was examined. Blows were excluded if the back-extrapolated volume (as defined using the blow curve time series measurements¹) was less than 5% of FVC or less than 150ml. Following this exclusion, a total of 776,927 blows from 387,277 participants remained.
- Finally, a comparison of the pre-derived FEV₁ and FVC measurements (VariableID: 3063 and VariableID: 3062) and FEV₁ and FVC newly derived from the blow curve time series measurements (VariableID: 3066) was undertaken. Blows where the pre-derived and newly-derived values differed by 5% were excluded. Following this exclusion, a total of 776,318 “acceptable” blows from 387,052 participants remained for further analysis of FEV₁, FVC, FEV₁/FVC and PEF. Whilst PEF was also pre-derived, we identified a subset of individuals had unusually low recorded values, which were inconsistent with the PEF values derived from the time series curves; the predefined PEF values were deemed to be erroneous, therefore no exclusions were undertaken based on comparisons of pre-derived and newly-derived PEF, and the newly-derived PEF values were used for association analyses.

Identification of best measures

The “best measure” per individual was defined as the highest measure from the “acceptable” blows for FEV₁, FVC. FEV₁/FVC was derived from the selected FEV₁ and FVC. For PEF, which is a measure of flow, the best measure was defined as the blow with the highest acceptable measure of the sum of FEV₁ and FVC. This definition meant that a participant’s “best measures” did not necessarily have to be derived from the same blow.

Reproducibility of measures

To meet the criterion for reproducibility in our analysis, the “best measures” of FEV₁ and FVC had to be within 250ml of those measures from any other blow. The other blow did not need to be acceptable. Where an individual’s best measures for FEV₁ and FVC were not both found to be reproducible, that individual was excluded. 348,936 individuals had acceptable and reproducible measures of both FEV₁ and FVC and were eligible for inclusion in analyses of FEV₁, FVC, FEV₁/FVC and PEF.

Differences in approach from previous analyses

The previous approach used for quality control of spirometry data was described in². This previous approach utilised the Vitalograph spirometer blow quality metrics to define acceptability only. In the present analysis, following recommendations based on work conducted for the UK Biobank Outcomes Adjudication Working Group [Strachan, personal communication], we have additionally included quality control steps based on the volume-time curves recorded (at 10ms intervals) for each spirogram. Metrics derived from these curve datasets allowed a more comprehensive and systematic assessment of: start of blow quality; end of blow quality; length of blow; and derivation of flow rates. They also permitted a comparison between FEV₁, FVC and PEF derived from the curve datasets and those pre-derived by the spirometer.

The quality control of spirometry data used in our previous publication² applied the ATS/ERS criteria for assessing reproducibility. These criteria, which are widely used in clinical practice, recommend that the best measures of FEV₁ and FVC are within 150ml of any other blow. However, within UK Biobank a subset of 20,347 participants were re-examined after an interval of 2-7 years, of whom 14,238 (70%) performed two or more spirograms with good start-of-blow and end-of blow quality on both occasions. Analysis of the within-subject between-occasion correlation (reliability coefficient) of FEV₁ and FVC in relation to the reproducibility of these measures at the entry examination suggested that the ATS/ERS reproducibility threshold was unduly conservative. For epidemiological studies, where spirometric comparisons are being made between groups rather than for monitoring of individual patients, a more relaxed reproducibility threshold of 250ml could be applied, increasing the available sample size without jeopardising the reliability of FEV₁ or FVC.

For illustration, among the participants with good start-of-blow and end-of-blow quality, using a reproducibility threshold of 250mL, FVC reliability was 0.9199, 0.9033, 0.8886, 0.9086 and 0.9071, respectively, for subjects with intervals of 2, 3, 4, 5 and 6-7 years between the two examinations. The corresponding figures for FEV₁ reliability were 0.9152, 0.9014, 0.8753, 0.8981 and 0.8992.

Definition of smoking status for covariate adjustment of association analyses

Smoking initiation (123,890 ever smoked vs 151,706 never smoked) was inferred using answers from questionnaire. Never smokers are those individuals who do not smoke at present and never smoked in the past [code 1239=0 & 1249=4] or do not smoke at present, smoked occasionally or just tried once or twice in the past, but had less than 100 smokes in their lifetime [1239=0 & 1249=2/3 & 2644=0]. Ever smokers include current smokers (who smoke at present, on most or all days or occasionally [1239=1/2]), previous smokers (who do not smoke at present and smoked on most or all days in the past [1239=0 & 1249=1] or do not smoke at present, smoked occasionally or just tried once or twice in the past, and had more than 100 smokes in their lifetime [1239=0 & 1249=2/3 & 2644=1]) and individuals who smoked on most/all days or occasionally in the past, and smoked more than 100 times in their life, but prefer not to answer about current smoking [1239=-3 & 1249=1 or 1239=-3 & 1249=2 & 2644=1].

Genotyping quality control

The genotyping procedure, genotype quality control and imputation of the UK Biobank individuals is described in detail elsewhere.³ 968 individuals with outlying heterozygosity or missingness were already excluded from the provided imputed genotypes. We further excluded 378 individuals for whom the submitted gender did not match the genetically inferred gender, 977 samples related to >200 other samples, 188 samples with >10 3rd degree relatives and 471 samples with putative sex chromosome aneuploidy, giving 2,008 excluded samples in total leaving 486,369 samples from which to select our discovery set.

Identification of individuals of European ancestry for inclusion in the genome-wide association analysis of lung function

K-means clustering was used to identify the set of European- ancestry individuals to include in the genome-wide association analysis of lung function. The steps taken to define the sets of non-European ancestry individuals to include in the analysis of heterogeneity of signals is described below.

Principal components (PCs) were provided with the UK Biobank genetic data. K-means clustering using the first two PCs was undertaken for between 3 and 8 clusters after excluding 2,008 samples failing genotyping quality control. The 6 cluster k-means model was selected as most appropriately clustering the 486,369 samples remaining after genotype quality control (QC) into broad ethnic groups giving 453,958 samples of “European ancestry” (**Supplementary Figure 1**). This resulted in an additional 45,865 individuals being eligible for inclusion in addition to the 408,093 passing genotype QC and defined as “white British” by UK Biobank³.

Selecting individuals passing spirometry and genotyping quality control for genome-wide association testing

There was an overlap of 341,102 individuals (321,057 European) between 348,936 passing spirometry quality control for FEV₁, FVC, FEV₁/FVC and PEF and 486,369 passing genotyping quality control.

Removal of outlying lung function measures in European samples for discovery GWAS

Adjustment for sex, age, age², height, and smoking status (ever/never) of each lung function measure was undertaken in each ancestry category. 10 European individuals were excluded that were obvious outliers in plots of the adjusted phenotype distributions and the adjustment was repeated. This left 321,047 European individuals for the discovery GWAS of FEV₁, FVC, FEV₁/FVC and PEF.

Power Calculations and between-trait correlations

Power calculations were performed with the GeneticsDesign R package (<https://bioconductor.org/packages/GeneticsDesign/>) (**Supplementary Figure 7**) to:

A) calculate the power to detect a signal passing Tier 1 or Tier 2 criteria i.e. $P < 10^{-3}$ in the SpiroMeta cohort of 79,055 samples. At this threshold, there would be 75% power to detect an effect size of 0.0325 standard deviations for a variant with MAF 10% and 95% power to detect an effect size of 0.122 standard deviations for a variant with MAF 1% in SpiroMeta.

B) calculate the power to confirm a previously reported lung function quantitative trait association in UK Biobank at $P < 10^{-5}$ ($n=321,047$).

Effect sizes for previously reported signals range from ~0.025 for MAF > 5% to 0.18 for MAF 2%.

The table below shows the phenotypic correlation between the four different traits in UK Biobank in the upper triangle (bold), with the genetic correlation in the lower triangle. We did not additionally correct for multiple testing of 4 phenotypes due to their correlation.

		Phenotypic correlation			
		FEV ₁	FEV ₁ /FVC	FVC	PEF
Genetic correlation	FEV ₁		0.288	0.950	0.846
	FEV ₁ /FVC	0.408		-0.013	0.316
	FVC	0.879	-0.076		0.780
	PEF	0.708	0.621	0.444	

Genetic correlations with height were calculated using LD-score regression (undertaken by the LD-Hub team). The datasets were the Height 2010 GIANT paper⁴ and the automated GWAS of UK Biobank variables undertaken by Neale *et al.*^{5,6}

Phenotypic correlations were undertaken in the Extended Cohort for E-Health, Environment and DNA (EXCEED cohort, see 'Cohort contributors'). Correlations are Pearson's correlations.

Trait	Genetic correlation between height (PMID 20881960) and UKB variable GWAS	Phenotypic correlation with height (EXCEED cohort)
FEV ₁ (UKB variable 20150)	0.501 [95% CI 0.464, 0.538], P=3.67x10 ⁻¹⁴⁶	0.64 [95% CI 0.617, 0.654], P<2.2x10 ⁻¹⁶
FVC (UKB variable 20151)	0.586 [95% CI 0.549, 0.623], P=1.75x10 ⁻²⁰³	0.70 [95% CI 0.682, 0.714], P<2.2x10 ⁻¹⁶

Overlap of samples and genetic correlation between UK Biobank and SpiroMeta.

Association test statistics were regressed against the LD score of each variant using LDSC⁵. The proportion of total inflation due to confounding is $(\text{Intercept}-1)/(\text{Mean } \chi^2 - 1)$, where χ^2 is the mean statistic from the association testing and the intercept is the intercept of the LD score regression (estimate of inflation due to confounding but not polygenicity). The proportion of inflation due to confounding in the meta-analysis was low (<4%) (**Supplementary Table 27**), hence we did not conclude overlap of samples between UK Biobank and SpiroMeta.

Genome-wide genetic correlation between UK Biobank and SpiroMeta was calculated using LDSC⁵ and was 0.993 for FEV₁, 0.979 for FVC, 0.946 for FEV₁/FVC and 0.964 for PEF.

There were 70 distinct signals of association ('distinct' as determined by distance >1Mb and linkage disequilibrium $r^2 < 0.1$) that met a threshold of $P < 5 \times 10^{-9}$ in UK Biobank but which did not meet Tier 1, Tier 2 or Tier 3 selection criteria. Of these of these 70, 12 had $P < 0.05$ in SpiroMeta with a consistent direction of effect. The remaining 58 had $P > 0.05$ in SpiroMeta and of these, 38 had a consistent direction of effect between UK Biobank and SpiroMeta.

Conditional analysis with GCTA

All SNPs $\pm 1\text{Mb}$ were extracted around each sentinel variant. GCTA⁷ was then used to perform stepwise conditional analysis in order to select independently associated SNPs within each 2Mb region using the single SNP association statistics combined with LD information from reference genotypes representative of the samples in the association testing. For UK Biobank the same genotype data as used for the initial discovery association testing was used as an LD reference; for SpiroMeta, genotypes from 48,943 unrelated participants² formed the LD reference set

Smoking behaviour association analyses in UKB.

Association analyses with smoking behaviour phenotypes were performed in the 335,641 UKB individuals out of the full 488,377 included in the final release of genetic data that were not in the 152,736 in the interim release (<http://www.ukbiobank.ac.uk/scientists-3/genetic-data/>), as part of an independent replication for the GSCAN study that included samples from the UK Biobank interim release.

Genotyping quality control was performed using the same criteria as for the lung function analysis (individuals excluded on the basis of sex mismatches, heterozygosity and missingness). Only individuals of European ancestry were included in the association analyses. These were identified by first calculating the minimum and maximum value of the first 4 PCs of the samples defined as white British in UK Biobank [ref to QC paper] and then we included any individual in this PC range regardless of their self-reported ancestry. Individuals who were related to UK Biobank

individuals included in previous releases with a kinship coefficient > 0.075 were excluded from the analyses. Only variants imputed on the HRC panel and with MAC >= 3 were included in the analyses.

Smoking initiation (123,890 ever smoked vs 151,706 never smoked) was inferred using answers from questionnaire as for the smoking covariate adjustment above.

The average number of cigarettes smoked per day (CPD) for all individuals who smoke, or smoked, on most or all days was binned as follows: 1 = 1-5, 2 = 6-15, 3 = 16-25, 4 = 26-35, 5 = 36+. Cigarettes per day was available for 80,015 samples.

All phenotypes used age, age squared, sex, and genetic principal components 1-15 as covariates. Residuals were calculated for each phenotype by linear regression, with the phenotype as the dependent variable and the corresponding covariates as the independent variables. These residuals were then inverse normalized, and the corresponding Z-scores were used as the input phenotype values for the association analysis.

BOLT-LMM version 2.3 was used to conduct association analysis on each chromosome. The variants included in the mixed model were extracted from the genotyped variants by applying the following filters: missingness < 5%, minor allele frequency > 1%, HWE p > 10⁻⁶, pruning for LD r² < 0.2. The hg19 reference map was used to interpolate genetic map coordinates. BOLT-LMM standard errors (and resulting P-values) were inflated by the LD-score intercept, which was calculated using LD-scores provided with LDSC,⁵ calculated from 1000 Genomes Project samples.

Smoking interaction testing

Association testing for lung function was calculated separately in ever and never smoker subgroups and meta-analysed across UK Biobank and SpiroMeta for up to 176,701 ever smokers and 197,999 never smokers. The Welch test was used to compare genetic effect between ever and never smokers:

$$t = \frac{\beta_1 - \beta_2}{\sqrt{se_1^2 + se_2^2}}$$

with degrees of freedom:

$$d.f. = \frac{(se_1^2 + se_2^2)^2}{\frac{se_1^2}{n_1 - 1} + \frac{se_2^2}{n_2 - 1}}$$

A deviation from equality (P < 1.8x10⁻⁴, i.e. 0.05/279 tests) was considered significant evidence of interaction. For these analyses, phenotypes were inverse normalised after regressing on sex, age, age², and height. Genotyping array was included as a covariate.

Using the *European only* sample as input for relatedness exclusion here resulted in a marginally bigger sample size than that produced when including all ancestries (N = 303,619 cf. N = 303,570).

Area Under the Curve and Population Attributable Risk Calculations

We calculated the area under the curve in the COPD Gene Non-Hispanic White population using the pROC package in R. Two models were compared: a baseline model with COPD as outcome and age, age², sex, height, smoking (pack-years) and principal components, and then another model with the addition of the weighted genetic risk score.

We calculated the population attributable risk fraction (PARF) as follows:

$$PARF = \frac{P(E)(OR - 1)}{1 + P(E)(OR - 1)}$$

where $P(E)$ is set to 0.9, i.e. the probability of possessing more risk alleles than those in the lowest decile of the risk score (the ‘probability of the exposure’). OR above refers to the odds of having COPD in individuals across deciles 2 to 10 of the risk score compared to the odds of having COPD for individuals in the lowest decile (decile 1) of the risk score.

Before calculating the PARF, we used the European meta-analysis OR of 1.546 (95CI: 1.476-1.620) per SD of the genetic risk score (GRS) to estimate the OR for COPD, comparing individuals in deciles 2-10 vs those in decile 1. We assume that the GRS is normally distributed so that $\log(1.546)$ is the additive effect on a standard normal variable.

The expected GRS, given that an individual is in decile j of the GRS, is

$$\frac{1}{0.1} \int_{\Phi^{-1}(\frac{j-1}{10})}^{\Phi^{-1}(\frac{j}{10})} x\phi(x)dx$$

The limits of the integral are the lower and upper values of the GRS for individuals in decile j , assuming the GRS is standard normal. The division by 0.1 ensures the expectation is conditional on the individual being in the decile, which is 1/10 by definition.

Then the expected log OR for decile j is

$$\frac{\log(1.546)}{0.1} \int_{\Phi^{-1}(\frac{j-1}{10})}^{\Phi^{-1}(\frac{j}{10})} x\phi(x)dx$$

and comparing with decile 1 gives

$$\frac{\log(1.546)}{0.1} \left[\int_{\Phi^{-1}(\frac{j-1}{10})}^{\Phi^{-1}(\frac{j}{10})} x\phi(x)dx - \int_{-\infty}^{\Phi^{-1}(\frac{1}{10})} x\phi(x)dx \right]$$

We can now proceed to estimate the log OR for deciles 2-10 vs decile 1 as

$$\log(1.546) \left[\frac{1}{0.9} \int_{\Phi^{-1}(\frac{1}{10})}^{\infty} x\phi(x)dx - \frac{1}{0.1} \int_{-\infty}^{\Phi^{-1}(\frac{1}{10})} x\phi(x)dx \right] = \log(2.339)$$

The estimated bounds of the 95% confidence interval around this new estimate are then calculated using the same method, and entered into the PARF equation, above.

[SpiroMeta consortium study details](#)

This section provides study descriptions for the cohorts contributing to the SpiroMeta consortium. All participants provided written informed consent and studies were approved by local Research Ethics Committees and/or Institutional Review boards.

Details of the **British 1958 Birth Cohort** biomedical follow-up have been previously reported⁸. Spirometry at age 44–45 years was done in the standing position without nose clips, using a Vitalograph handheld spirometer as previously described⁹. In the analysis, all readings with a best-test variation greater than 10% were excluded.

The **Busselton Health Study** (BHS) is a longitudinal survey of the town of Busselton in the south-western region of Western Australia that began in 1966. In 1994/1995 a cross-sectional community follow-up study was undertaken where blood was taken for DNA extraction. A sample of 1,168 European-ancestry individuals were genotyped using the Illumina 610-Quad BeadChip (BHS1), and subsequent genotyping was carried out on an independent group of 3,428 European-ancestry individuals using Illumina 660W-Quad (BHS2). Spirometric measures of forced expired volume in one second (FEV_1) and forced vital capacity (FVC) were assessed.

The CROATIA study was initiated to investigate the use of isolated rather than urban populations for the identification of genes associated with medically-relevant quantitative traits. Three cohorts have been recruited as part of the CROATIA study: **CROATIA-Vis**¹⁰, **CROATIA-Korcula**¹¹ and **CROATIA-Split**¹². CROATIA-Vis was the first to be collected when 1,008 Croatians aged 18-93 recruited from the villages of Komiza and Vis on the Dalmatian island of Vis. Recruitment occurred from 2003 to 2004 with participants donating blood for DNA extraction and biochemical measurements as well as undergoing some anthropometric measurements and physiological tests to measure traits such as height, weight and blood pressure, and finally completing several questionnaires relating to general health, medical history, diet and lifestyle. CROATIA-Korcula was recruited from 2007 to 2008 from the town of Korcula and the villages of Lumbarda, Zrnovo and Racisce on the island of Korcula, Croatia with 969 adults aged 18-98 agreeing to participate. This study followed the same recruitment procedures as CROATIA-Vis and the same samples and tests were collected with a few additions to reflect the research interests and expertise in Edinburgh. Volunteers were recruited to be part of the CROATIA-Split cohort in 2009-2010 from the Dalmatian mainland city of Split. This is the main ferry port to the islands and is the second largest city in Croatia and the largest along the Dalmatian coast. 1,012 adults aged 18-85 were recruited using the same methodology and with the same samples collected as in CROATIA-Korcula. Ethical approval was obtained from appropriate regulatory bodies in both Scotland and Croatia and participants gave informed consent prior to joining the study.

European Prospective Investigation of Cancer (EPIC)-Norfolk is an ongoing UK-based prospective cohort and part of the Europe-wide multi-centre EPIC study. Details of the study design were described previously.¹³ Briefly, 25,639 men and women aged 40-79 in eastern England were recruited through general practice registers and underwent baseline assessment between 1993 and 1997. Participants were further invited to the follow-up assessment (1998 to 2000), and were followed up by 2009 for incident outcomes and by 2013 for mortality.

The **Generation Scotland: Scottish Family Health Study** is a collaboration between the Scottish Universities and the NHS, funded by the Chief Scientist Office of the Scottish Government. GS:SFHS is a family-based genetic epidemiology cohort with DNA, other biological samples (serum, urine and cryopreserved whole blood) and socio-demographic and clinical data from ~24,000 volunteers, aged 18-98 years, in ~7,000 family groups. Participants were recruited across Scotland, with some family members from further afield, from 2006-2011. Most (87%) participants were born in Scotland and 96% in the UK or Ireland. The cohort profile has been published¹⁴. GS:SFHS operates under appropriate ethical approvals, and all participants gave written informed consent. Generation Scotland is a collaboration between the University Medical Schools and National Health Service in Aberdeen, Dundee, Edinburgh and Glasgow (UK).

The DNA archive established from the **Health 2000** Survey Cohort was used. Details of this study population and phenotyping procedures have been previously reported¹⁵. Genome-wide genotyping was available for 2124 individuals selected from the Health 2000 cohort as metabolic syndrome cases and their matched controls¹⁶. Spirometry was done in the standing position without nose clips, using a Vitalograph 2150 spirometer. In the analysis, the maximum permissible difference between the two highest FEV₁ and FVC values was 10%.

The KORA studies (Cooperative Health Research in the Region of Augsburg) are a series of independent population based studies from the general population living in the region of Augsburg, Southern Germany^{17,18}.

The **KORA S3** study including 4,856 individuals was conducted in 1994/95. Spirometry was measured during a follow up in 1997/98 for all participants younger than 60 years who did not smoke or use inhalers one hour before the test. All spirometric tests were performed strictly adhering to the ECRHS protocol^{20,21} using Biomedin Spirometers (Biomedin srl, Padova, Italy). Tests were accounted valid if at least two technically satisfactory manoeuvres could be obtained throughout a maximum of nine trials. FEV₁ and FVC were defined as the maximum value within all valid manoeuvres. For KORA S3 participants without spirometry measurements in 1997/98 we used measurements from the KORA-Age time point conducted in 2008/09. KORA Age contains subjects from all KORA studies born until 1943 (aged 65-90 years)¹⁹. Spirometry was measured in 935 randomly selected participants. Conditions including the

examiner were the same as in KORA F4 (see below) except that inhalation of salbutamol was not performed due to the high number of contraindications anticipated in this aged population.

KORA F4 including 3,080 individuals was conducted from 2006-2008 as a follow-up study to KORA S4 (1999-2001). Lung function tests were performed in a random subsample of subjects born between 1946 and 1965 (age range 41–63 years). Spirometry was performed in line with the ATS/ERS recommendations¹ using a pneumotachograph-type spirometer (Masterscreen PC, CardinalHealth, Würzburg, Germany) before and after inhalation of 200µg salbutamol. The present study is based on maximum values of FEV₁ and FVC measured before bronchodilation. The spirometer was calibrated daily using a calibration pump (CardinalHealth, Würzburg, Germany), and additionally, an internal control was used to ensure constant instrumental conditions. For KORA F4 participants without spirometry measurements in 2006-2008, we used measurements from the KORA-Age time point conducted in 2008/09. KORA Age contains subjects from all KORA studies born until 1943 (aged 65-90 years)¹⁹. Spirometry was measured in 935 randomly selected participants. Conditions including the examiner were the same as in 2008/09 except that inhalation of salbutamol was not performed due to the high number of contraindications anticipated in this aged population.

The **Lothian Birth Cohort 1936** consists of 1,091 relatively healthy individuals assessed on cognitive and medical traits at about 70 years of age. They were all born in 1936 and most took part in the Scottish Mental Survey of 1947. At baseline the sample of 548 men and 543 women had a mean age 69.6 years (s.d. = 0.8). They were all Caucasian, community-dwelling, and almost all lived in the Lothian region (Edinburgh city and surrounding area) of Scotland. A full description of participant recruitment and testing can be found elsewhere²². Genotyping was performed at the Wellcome Trust Clinical Research Facility, Edinburgh. Quality control measures were applied and 1,005 participants remained. Lung function assessing peak expiratory flow rate, forced expiratory volume in 1 second, and forced vital capacity (each the best of three), using a Micro Medical Spirometer was assessed, sitting down without nose clips, at age 70 years. The accuracy of the spirometer is ±3% (to ATS recommendations Standardisation of Spirometry 1994 update for flows and volumes).

The **Northern Finland Birth Cohort 1966 (NFBC1966)** is a prospective follow-up study of children from the two northernmost provinces of Finland born in 1966.²³ All individuals still living in northern Finland or the Helsinki area (n = 8,463) were contacted and invited for clinical examination. A total of 6007 participants attended the clinical examination at the participants' age of 31 years. DNA was extracted from blood samples given at the clinical examination (5,753 samples available).²⁴ The subset with DNA is representative of the original cohort in terms of major environmental and social factors. Informed consent was obtained from all subjects. After performing standard sample QC we included 5,402 NFBC1966 participants that were genotyped on an Illumina HumanCNV370DUO Analysis BeadChip. 329,401 variants were included in the imputation scaffold. Variants were imputed to the HRC reference r1.1 2016 on the Michigan Imputation Server. Prior to analysis we excluded variants monomorphic in this dataset. In NFBC1966, we used a Vitalograph P-model spirometer (Vitalograph Ltd., Buckingham, UK), with a volumetric accuracy of ±2% or ±50 mL whichever was greater. The spirometer was calibrated regularly using a 1-Litre precision syringe. The spirometric manoeuvre was performed three times but was repeated if the coefficient of variation between two maximal readings was >4%.

The **Northern Finland Birth Cohort 1986 (NFBC1986)** consists of 99% of all children, who were born in the provinces of Oulu and Lapland in Northern Finland between 1 July 1985 and 30 June 1986. 9,203 live-born individuals entered the study.²⁵ At the age of 16, the subjects living in the original target area or in the capital area (n=9,215) were invited to participate in a follow-up study including a clinical examination. 7,344 participants attend the study in year 2001/2002, of which 5,654 completed the postal questionnaire, the clinical examination and provided a blood sample.²⁶ DNA was extracted from all 5,654 blood samples. An informed consent for the use of the data including DNA was obtained from all subjects. After performing standard sample QC we included 3,743 NFBC1986 participants that were genotyped on an Illumina Human Omni Express Exome 8v1.2 BeadChip. 889,119 variants were included in the imputation scaffold. Variants were imputed to the HRC reference r1.1 2016 on the Michigan Imputation Server. For Spirometry measurements, we used a Vitalograph Gold Standard (Model 2150) (Vitalograph Ltd., Buckingham,

UK). The machines were calibrated every day the medical examination took place. The spirometric manoeuvre was performed in an upright sitting position while wearing a nose clip. At least three acceptable manoeuvres were performed. Acceptable manoeuvres did not exceed a difference between two maximal FEV₁ and FVC values of 4%. The results were recorded with a 0.05 litre accuracy.

The **Northern Sweden Population Health Study** (NSPHS) represents a cross-sectional study conducted in the communities of Karesuando (samples gathered in 2006) and Soppero (2009) in the subarctic region of the County of Norrbotten, Sweden. Spirometry was performed in sitting position without noseclips using a MicroMedicalSpida 5 spirometer (<http://www.medisave.co.uk>). Three consecutive 28 lung function measurements per participant were done and the maximum value per measured lung function parameter was used for further analysis. Relatedness was taken into account by applying the "polygenic" linear mixed effects model. Genome-wide association analysis was performed using a score test, a family-based association test²⁷ which uses the residuals and the variance-covariance matrix from the polygenic model and the SNP fixed effect coded under an additive model.

The **Orkney Complex Disease Study** (ORCADES) is an ongoing family-based, cross-sectional study in the isolated Scottish archipelago of Orkney. Spirometry was performed in the sitting position without nose clips, using a Spida handheld spirometer. Measurements were repeated once and the better reading was used for analysis.

The **Prospective Investigation of the Vasculature in Uppsala Seniors** (PIVUS)²⁸ is a population-based study of cardiovascular health in the elderly. Mailed invitations were sent to subjects who lived in Uppsala, Sweden, within 2 months after their 70th birthday. The subjects were randomly selected from the community register. A total of 1,016 men and women participated in the baseline investigation (participation rate, 50.1%). Spirometry was performed in 901 subjects at baseline in accordance with American Thoracic Society recommendations (α spirometer; Vitalograph Ltd; Buckingham, UK). The best value from three recordings was used. The Ethics Committee of the University of Uppsala approved the study, and the participants gave their informed consent. Genotyping of all samples was undertaken using the Illumina Omni Express and CardioMetaboChip. Genotypes were called using GENCALL. A total of 738,879 SNPs passed quality control (thresholds: call rate < 0.95, and call rate < 0.99 for MAF < 5%; HWE $P < 10^{-6}$). SNPs with MAF < 1% were removed from the imputation scaffold. Imputation was performed using IMPUTE up to haplotypes from the Haplotype Reference Consortium.

The **SAPALDIA** cohort is a population-based multi-center study in eight geographic areas representing the range of environmental, meteorological and socio-demographic conditions in Switzerland^{29,30}. It was initiated in 1991 (SAPALDIA 1) with a follow-up assessment in 2002 (SAPALDIA 2) and 2010 (SAPALDIA3). This study has specifically been designed to investigate longitudinally lung function, respiratory and cardiovascular health; to study and identify the associations of these health indicators with individual long term exposure to air pollution, other toxic inhalants, life style and molecular factors.

The **Study of Health In Pomerania (SHIP)**³¹ is a cross-sectional and prospective longitudinal population-based cohort study in Western Pomerania assessing the prevalence and incidence of common diseases and their risk factors. SHIP encompasses the two independent cohorts **SHIP** and **SHIP-TREND**. A total of 4,308 participants were recruited between 1997 and 2001 in the SHIP cohort. Between 2008 and 2012 a total of 4,420 participants were recruited in the SHIP-TREND cohort. Individuals were invited to the SHIP study centre for a computer-assisted personal interviews and extensive physical examinations.

The examinations for **SHIP** were conducted using a body plethysmograph equipped with a pneumotachograph (VIASYS Healthcare, JAEGER, Hoechberg, Germany) which meets the American Thoracic Society (ATS) criteria.³² The volume signal of the equipment was calibrated with a 3.0 litre syringe connected to the pneumotachograph in accordance with the manufacturer's recommendations and at least once on each day's testing. Barometric pressure, temperature and relative humidity were registered every morning. Calibration of reference gas and volume was examined under ATS-conditions (Ambient Temperature Pressure) and the integrated volumes were BTPS (Body Temperature Pressure Saturated) corrected.^{32,33} Lung function variables were measured continuously throughout the baseline breathing and the forced manoeuvres using a VIASYS HEALTHCARE system (MasterScreen Body/Diff.).

Spirometry flow volume loops were conducted in accordance with ATS recommendations³³ in a sitting position and with wearing nose clips. The participants performed at least three forced expiratory lung function manoeuvres in order to obtain a minimum of two acceptable and reproducible values.³⁴ Immediate on-screen error codes indicating the major acceptability (including start, duration and end of test) and reproducibility criteria supported the attempt for standardised procedures. The procedure was continuously monitored by a physician. The best results for FVC, FEV1, peak expiratory flow (PEF) and expiratory flow at 75%, 50%, 25% of FVC (MEF 75, MEF 50, MEF 25) were taken. The ratio of FEV1 to FVC was calculated from the largest FEV1 and FVC.

In terms of the pulmonary items the computer-assisted interview in **SHIP-TREND** was nearly identical to that of the SHIP. Of the 4,420 subjects who have been investigated in the study, 2,678 (60.6 %) of the subjects have undergone spirometry, body plethysmography, and measurements of diffusing capacity (CO and NO), IOS and respiratory muscle strength. In SHIP-TREND, the following additional methods that are of particular interest in terms of lung health and comorbidities have been applied: polysomnography, analysis of volatile compounds in the exhaled breath, and whole-body MRI. The following devices have been used for the pulmonary investigations in SHIP-TREND: a MasterScreen for body plethysmography, diffusing capacity measurements (single breath) and measurements of respiratory muscle strength (Viasys Healthcare, Hoechberg, Germany), an ABL 500 and later an ABL 80 for blood gas analyses (Radiometer, Copenhagen, Denmark), a MasterScreen PFT Pro CO-NO-Diffusion (CareFusion, Hoechberg, Germany), a MasterScreen IOS for Impuls-Oscillometry (CareFusion, Hoechberg, Germany), and a MicroCO carbon monoxide monitor (CareFusion, Hoechberg, Germany).

The **United Kingdom Household Longitudinal Study (UKHLS)**, also known as Understanding Society (<https://www.understandingsociety.ac.uk>) is a longitudinal panel survey of 40,000 UK households (England, Scotland, Wales and Northern Ireland) representative of the UK population. Participants are surveyed annually since 2009 and contribute information relating to their socioeconomic circumstances, attitudes, and behaviours via a computer assisted interview. The study includes phenotypical data for a representative sample of participants for a wide range of social and economic indicators as well as a biological sample collection encompassing biometric, physiological, biochemical, and haematological measurements and self-reported medical history and medication use. The United Kingdom Household Longitudinal Study has been approved by the University of Essex Ethics Committee and informed consent was obtained from every participant.

For a subset of individuals who took part in a nurse health assessment, blood samples were taken and genomic DNA extracted. Of these, 10,484 samples were genotyped at the Wellcome Trust Sanger Institute using the Illumina Infinium HumanCoreExome-12 v1.0BeadChip.

Lung function measures in samples from England and Wales were conducted with the NDD Easy On-PC spirometer (NDD Medical Technologies, Zurich, Switzerland). Participants were excluded in the following cases: pregnancy, having had abdominal or chest surgery (past 3 weeks), admitted to the hospital with a heart complaint (in the past 6 weeks), having had recent eye surgery (past 4 weeks), or in case of having a tracheostomy. Subjects were asked to perform up to 8 blows that ideally lasted at least 6 seconds, uninterrupted by coughing, glottis closure, laughing or leakage of air. Upon completion, the measurements were rated either acceptable or unacceptable by the NDD Easy On-PC software.

The Viking Health Study - Shetland (**VIKING**) is a family-based, cross-sectional study that seeks to identify genetic factors influencing cardiovascular and other disease risk in the population isolate of the Shetland Isles in northern Scotland. Genetic diversity in this population is decreased compared to Mainland Scotland, consistent with the high levels of endogamy historically. Participants were recruited between 2013 and 2015, each having at least three grandparents from Shetland. Fasting blood samples were collected and over 300 health-related phenotypes and environmental exposures were measured in each individual. All participants gave informed consent and the study was approved by the South East Scotland Research Ethics Committee.

The **Young Finns Study (YFS)** is a population-based follow up-study started in 1980³⁵. The main aim of the YFS is to determine the contribution made by childhood lifestyle, biological and psychological measures to the risk of

cardiovascular diseases in adulthood. In 1980, over 3,500 children and adolescents all around Finland participated in the baseline study. The follow-up studies have been conducted mainly with 3-year intervals. The latest 30-year follow-up study was conducted in 2010-2011 (ages 33-49 years) with 2,063 participants. The study was approved by the local ethics committees (University Hospitals of Helsinki, Turku, Tampere, Kuopio and Oulu) and was conducted following the guidelines of the Declaration of Helsinki. All participants gave their written informed consent.

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COPD case-control studies

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Study details

Details of the COPDGene Study (NCT00608764, www.copdgene.org) have been previously described.^{36,37} Eligible subjects were of non-Hispanic white or African-American ancestry, aged 45-80 years old, with a minimum of 10 pack-years of smoking and no lung disease (other than COPD or asthma). Moderate to severe COPD cases were defined using pre-bronchodilator % predicted FEV₁ < 80% predicted and FEV₁/FVC < 0.7. Genotyping was performed by Illumina (San Diego, CA) on the HumanOmniExpress array. Subjects were excluded for missingness, heterozygosity, chromosomal aberrations, sex check, population outliers, and cryptic relatedness. Genotyping at the Z and S alleles was performed in all subjects. Subjects known or found to have severe alpha-1 antitrypsin deficiency were excluded. Markers were excluded based on missingness, Hardy-Weinberg P-values, and low minor allele frequency. Imputation on the COPDGene cohorts was performed via the Michigan Imputation Server using minimac3 with the Haplotype Reference Consortium (HRC v1.1) reference panel.³⁸ Variants with an r² value of ≤ 0.3 were removed from further analysis.

Evaluation of COPD Longitudinally to Identify Predictive Surrogate End-points (ECLIPSE)

Evaluation of COPD Longitudinally to Identify Predictive Surrogate End-points (ECLIPSE; SCO104960, NCT00292552, www.eclipse-copd.com): Details of the ECLIPSE study and genome-wide association analysis have been described previously.^{36,37} ECLIPSE was an observational 3-year study of COPD. Both cases and controls were aged 40-75 with at least a 10 pack-year smoking history without other respiratory diseases; cases were defined using pre-bronchodilator % predicted FEV₁ < 80% predicted and FEV₁/FVC < 0.7, and controls had normal spirometry (% predicted FEV₁ > 85%). Genotyping was performed using the Illumina HumanHap 550 V3 (Illumina, San Diego, CA). Subjects and markers with a call rate of < 95% were excluded. Population stratification exclusion and adjustment on self-reported white subjects was performed using EIGENSTRAT (EIGENSOFT Version 2.0). Imputation was performed via the Michigan Imputation Server using minimac3 with the Haplotype Reference Consortium (HRC v1.1) reference panel.³⁸

National Emphysema Treatment Trial (NETT) and Normative Aging Study (NAS) (NETT/NAS)

Details of the National Emphysema Treatment Trial have been described previously.^{39,40} NETT (www.nhlbi.nih.gov/health/prof/lung/nett/) was a multicentre clinical trial to evaluate lung volume reduction surgery. Enrolled subjects had severe airflow obstruction by pre-bronchodilator spirometry (% predicted FEV₁ < 45%) and evidence of emphysema on computed tomography (CT) chest imaging; exclusion criteria included significant sputum production or bronchiectasis. A subset of 382 self-reported white subjects without severe alpha-1 antitrypsin deficiency were enrolled in the NETT Genetics Ancillary Study.

The Normative Aging Study is a longitudinal study of healthy men established in 1963 and conducted by the Veterans Administration (VA).^{39,41} Men aged 21 to 80 years from the greater Boston area, free of known chronic medical conditions, were enrolled. Smoking controls were of self-reported white ancestry and at least 10 pack-years of cigarette smoking with no evidence of airflow obstruction on spirometry on their most recent visit. Genotyping for NETT-NAS was performed using the Illumina Quad 610 array (Illumina, San Diego, CA), with quality control, population stratification adjustment, as described previously. Imputation was performed via the Michigan Imputation Server using minimac3 with the Haplotype Reference Consortium (HRC v1.1) reference panel.³⁸

NORWAY-GenKOLS

Details on the Norwegian GenKOLS (Genetics of Chronic Obstructive Lung Disease, GSK code RES11080) study have been described previously.⁴² Subjects with > 2.5 pack years of smoking history were recruited from Bergen, Norway; cases had pre-bronchodilator % predicted FEV₁ < 80% predicted and FEV₁/FVC < 0.7, while controls had normal spirometry; subjects with severe alpha-1 antitrypsin deficiency and other lung diseases (aside from asthma) were excluded. Genotyping was performed using Illumina HumanHap 550 arrays (Illumina, San Diego, CA), with quality control, population stratification adjustment as previously described. Imputation was performed via the Michigan Imputation Server using minimac3 with the Haplotype Reference Consortium (HRC v1.1) reference panel.³⁸

SPIROMICS

SPIROMICS is a prospective cohort study that enrolled 2,981 participants with the goals of identifying new COPD subgroups and intermediate markers of disease progression.^{43,44} SPIROMICS is a well-characterized longitudinal cohort with comprehensive phenotyping including measurements of lung function and quantitative CT scan. Spirometry was performed before and after four inhalations with 90 µg albuterol and 18 µg ipratropium per inhalation according to ATS recommendations. Participants were recruited at each center through physician referral, advertisement in clinical areas or self-referral using the SPIROMICS study website (www.spiromics.com). The research protocol was approved by the institutional review boards of all participating institutions with written informed consent from all participants. In this study, non-Hispanic White smokers (ever or current smoking ≥ 20 packs/year) with genotyping information available were included in this analysis. Smokers with COPD (n=988) were defined as smokers (smoking ≥ 20 packs/year) with post-bronchodilator FEV₁/FVC < 0.7 and FEV₁ < 0.8 (GOLD stage 2-4) and 'healthy' smoking controls (n=537) were defined as smokers (smoking ≥ 20 packs/year) with post-bronchodilator FEV₁/FVC ≥ 0.7 (GOLD stage 0). Details of genome-wide association analysis has been described previously.⁴⁵ In brief, DNA was isolated using standard protocols, and SNP genotyping performed using Illumina HumanOmniExpressExome BeadChip and BeadStudio (Illumina, Inc., San Diego, CA). Imputation was performed on the basis of reference panel of HRC r1.1 2016 using Michigan Imputation Server (<https://imputationserver.sph.umich.edu>). Genetic association analysis was performed using PLINK software (<http://zzz.bwh.harvard.edu/plink/>).

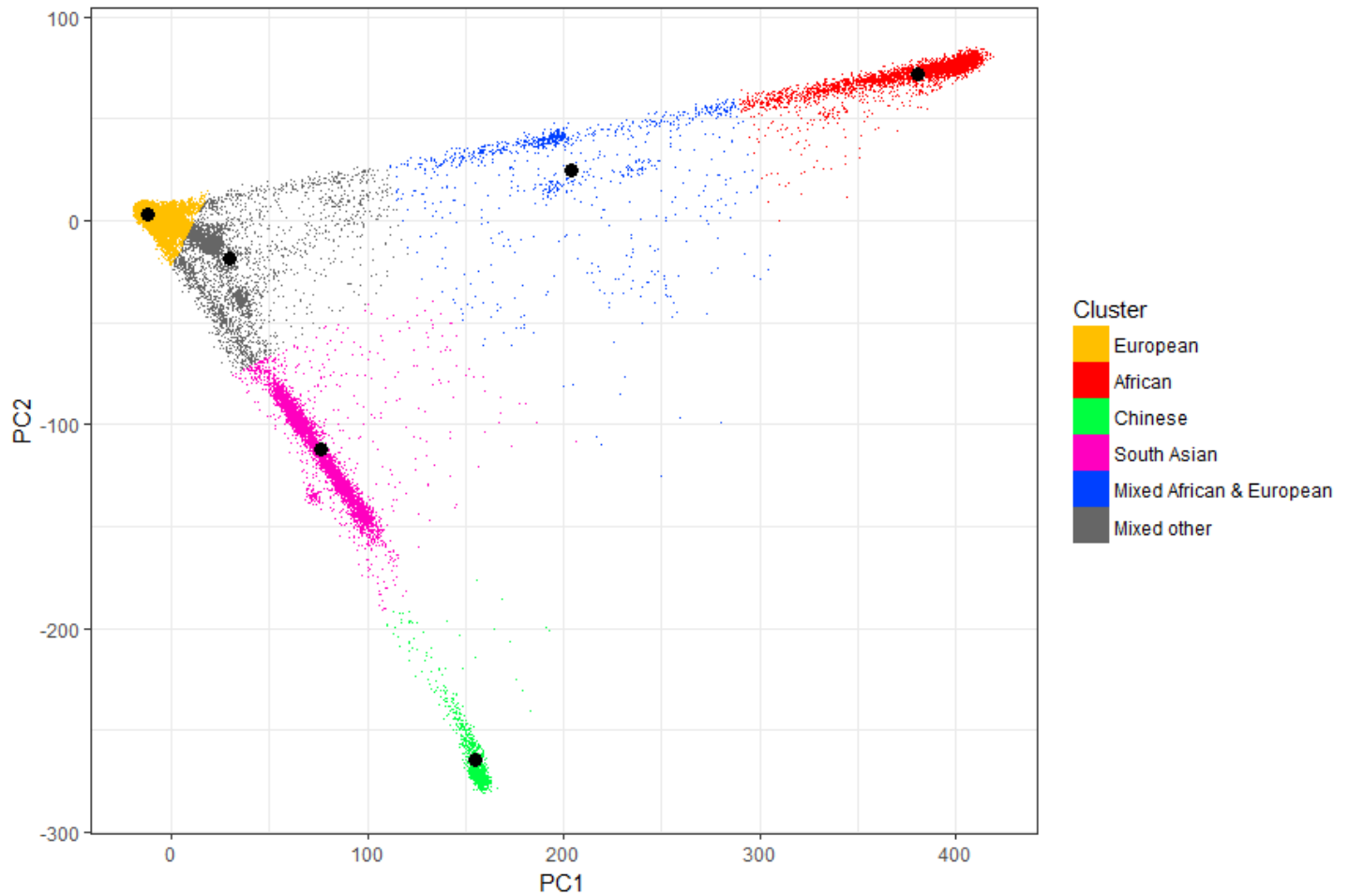
EXCEED Cohort

The Extended Cohort for E-health, Environment and DNA (EXCEED) is was set up to develop understanding of the genetic, environmental and lifestyle-related causes of health and disease (cohort profile currently in preparation). Participants were recruited primarily through local general practices in Leicester City, Leicestershire and Rutland, with 9,840 participants recruited to date. Baseline data collection included a lifestyle questionnaire, anthropometry measurements, and for approximately half of the participants, spirometry. The correlation between height and lung function (FEV₁, FVC and FEV₁/FVC) was calculated in R using Pearson's correlation.

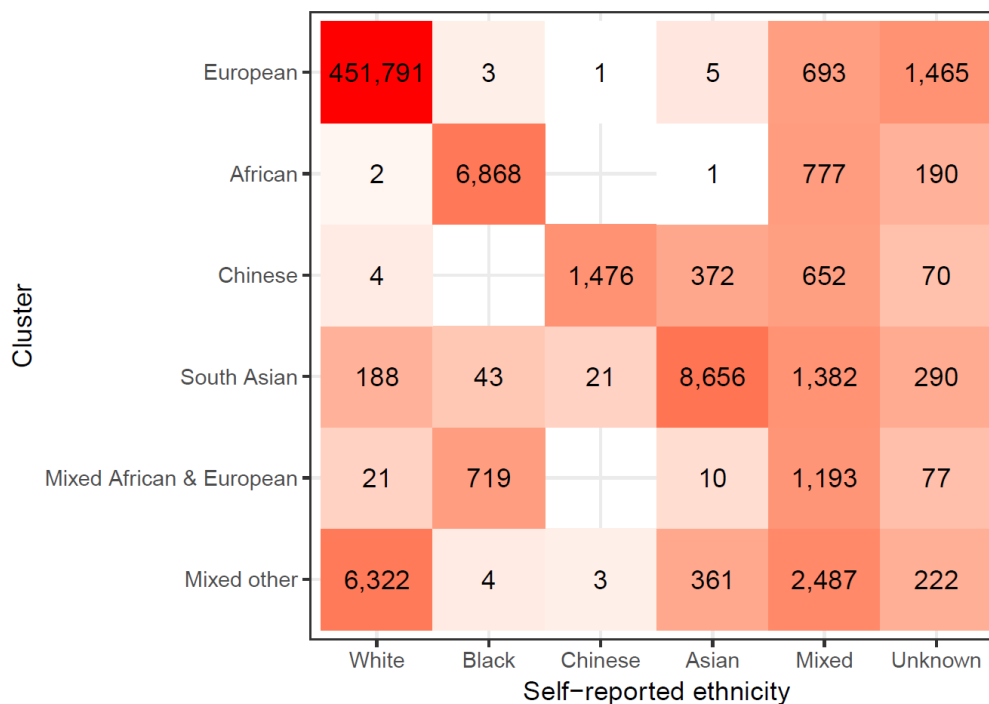
Supplementary Figures

Supplementary Figure 1: 6 ethnic grouping clusters chosen by K-means clustering

A) K-means clustering was performed on the first 2 principal components. 6 clusters were chosen to infer ancestry groupings. The black dots show the cluster centres.

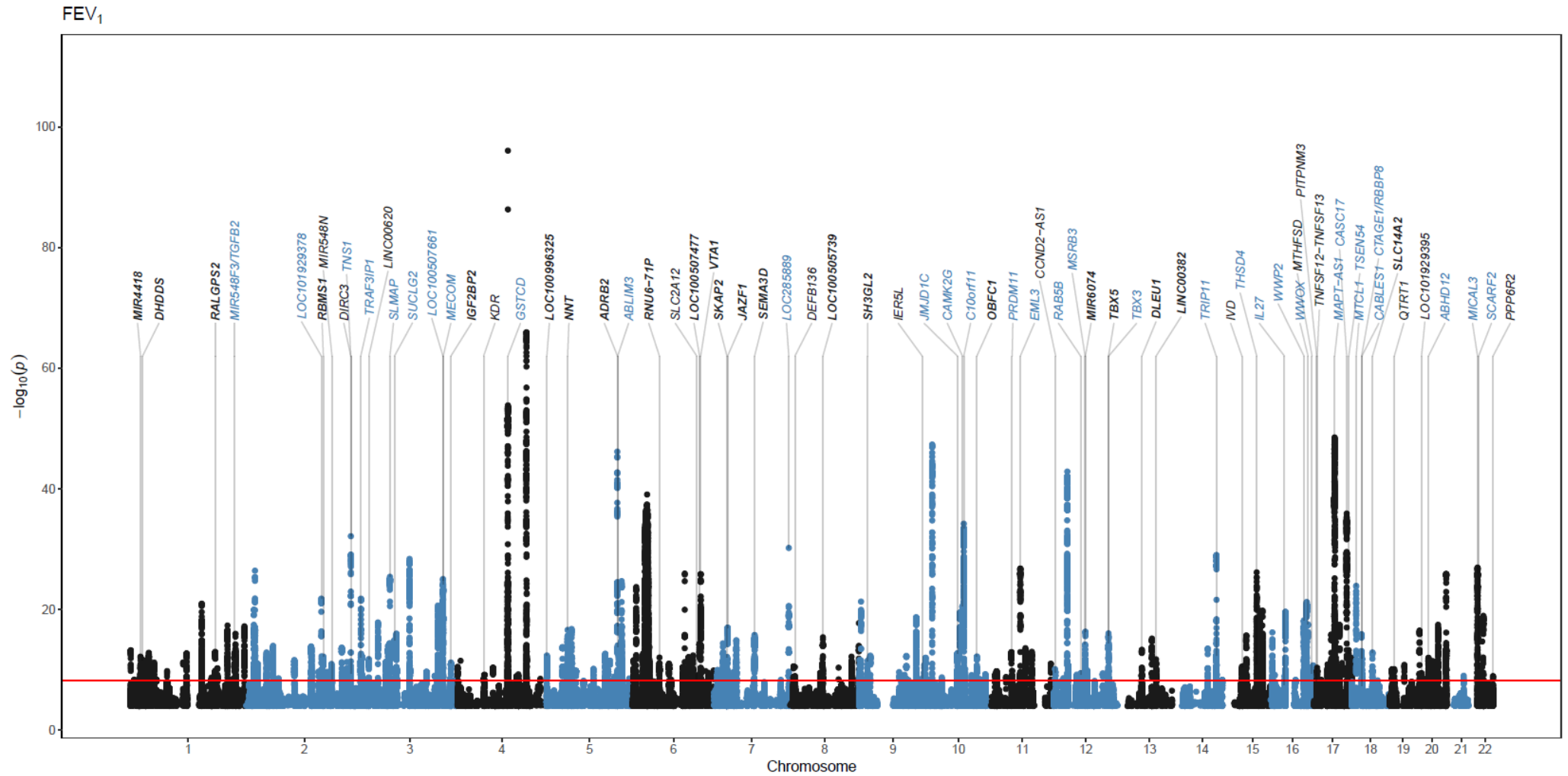


B) Correlation between ancestry groups derived from K-means clustering and self-reported ethnicity; the numbers of samples in each K-means cluster (y-axis) with each self-reported ethnicity (x-axis) are shown.

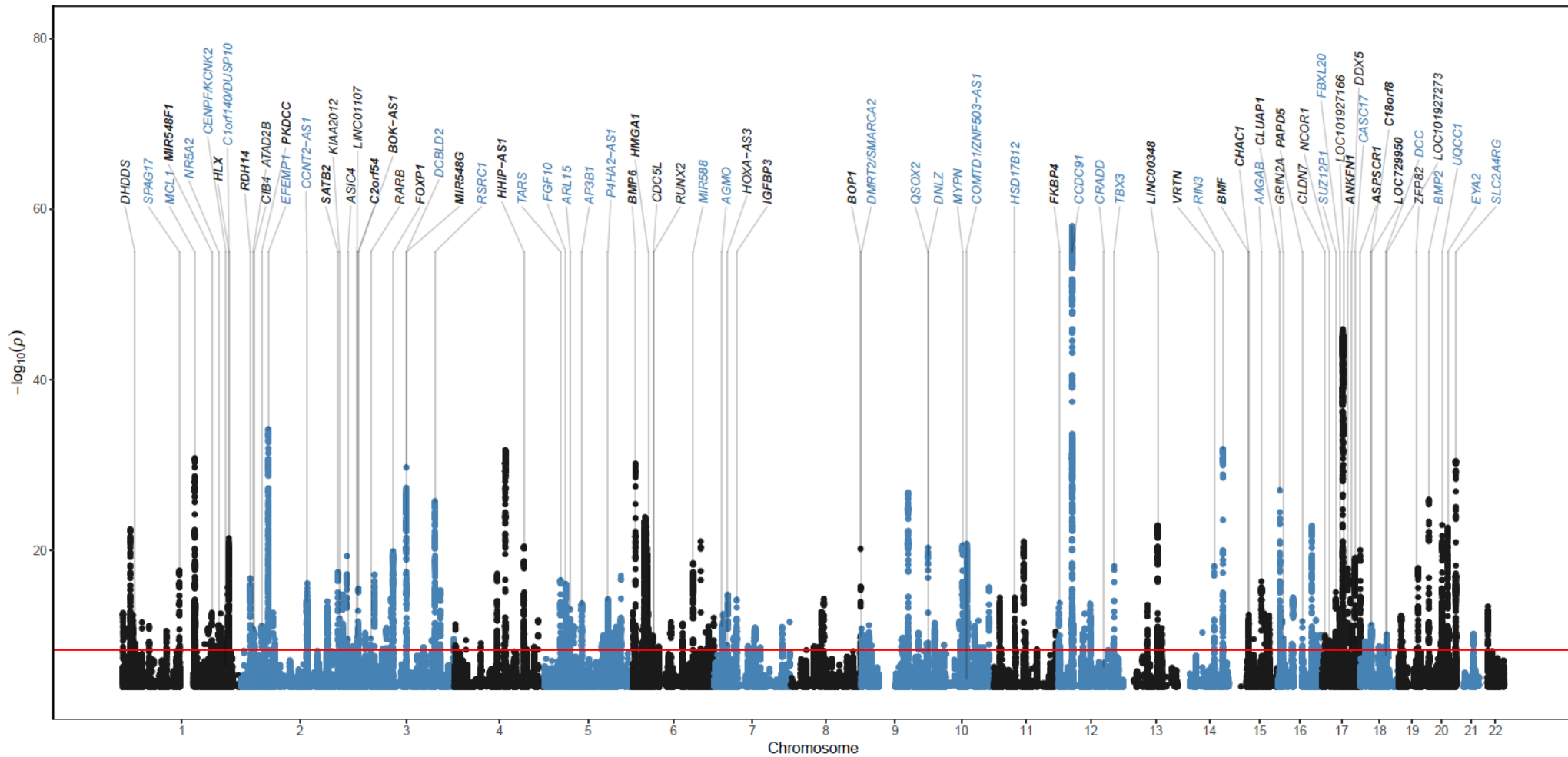


Supplementary Figure 2: Manhattan plots

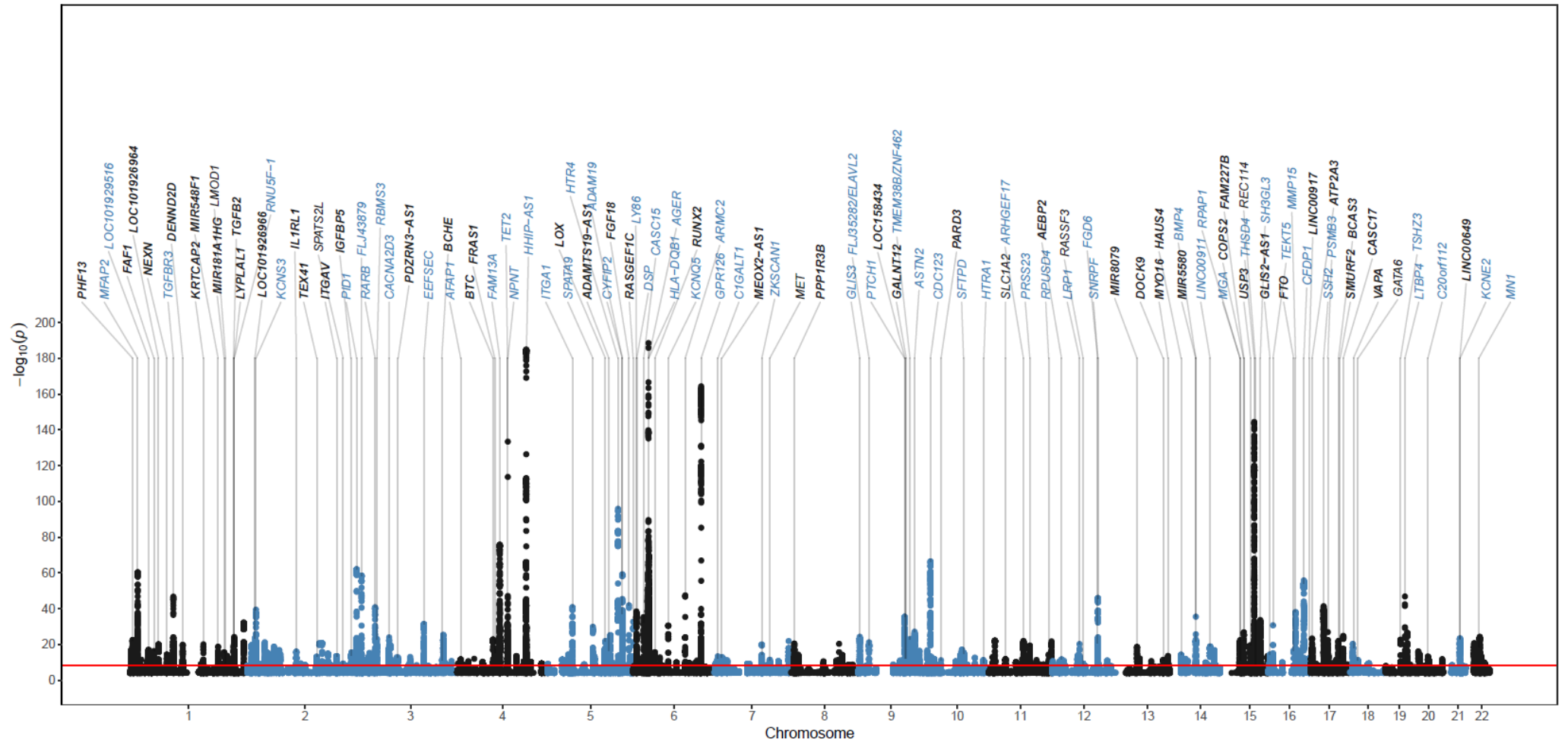
A) P values are from the meta-analysis of UK Biobank and SpiroMeta. Novel signals are labelled in black (Tier 1 in bold); previously reported signals are labelled in blue. The red line is $P=5 \times 10^{-9}$.



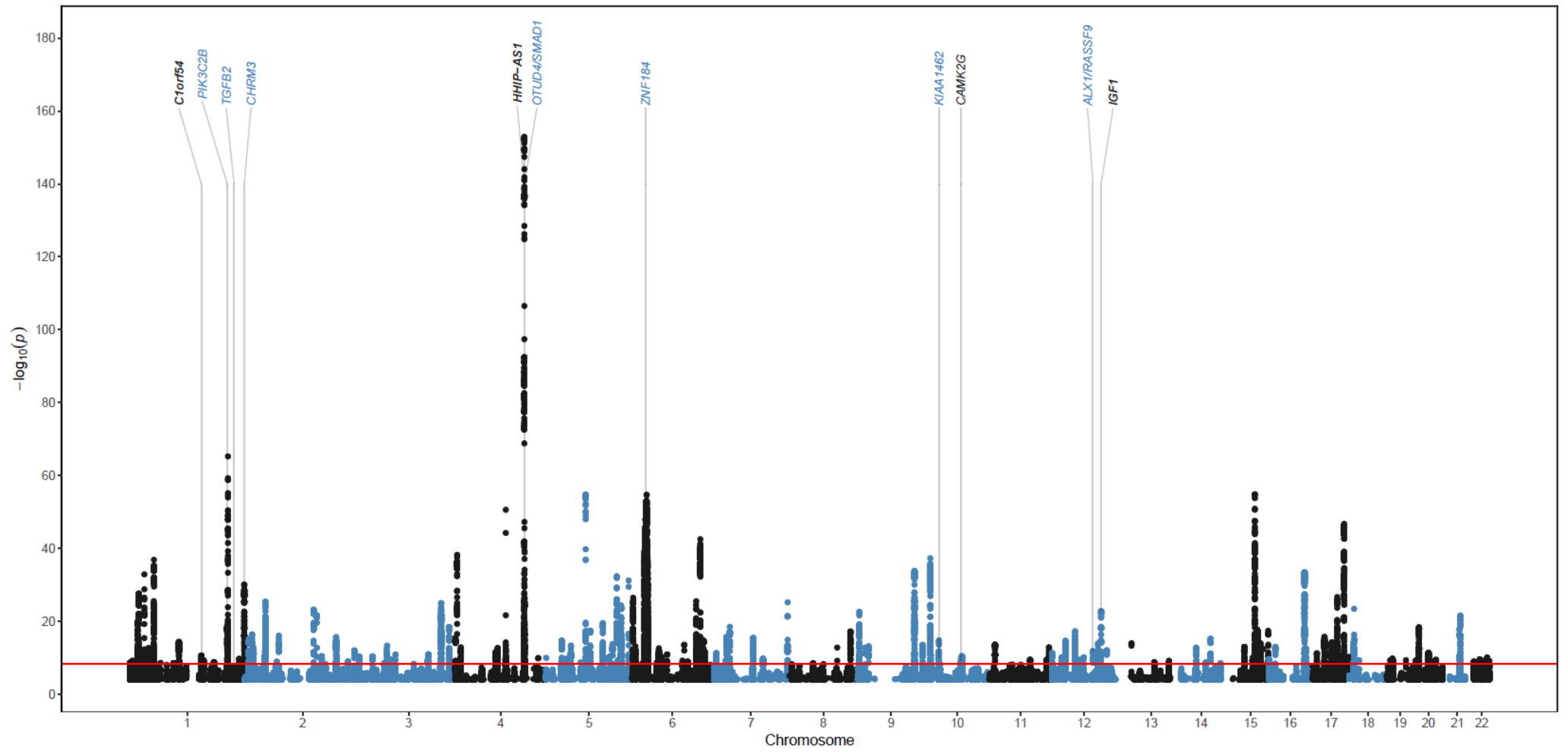
FVC



FEV₁/FVC



PEF



Supplementary Figure 3: Assessment of previously reported autosomal signals

Description of assessment of 184 autosomal signals for lung function or COPD previously reported in the literature. Signals were pruned for independence, leaving 157 autosomal signals. Corroboration of association was found for 142/157 signals. 2/142 signals were known to be associated with smoking behaviour, and in the current study, we replicated these findings, and also showed no association in non-smokers. After removing these signals, 140 remained. After combining the 140 previous signals with 139 novel signals, 279 signals entered downstream analyses. Whilst this Figure refers to autosomal signals only, for reference, a further previous signal in chromosome X was not corroborated.⁴⁶

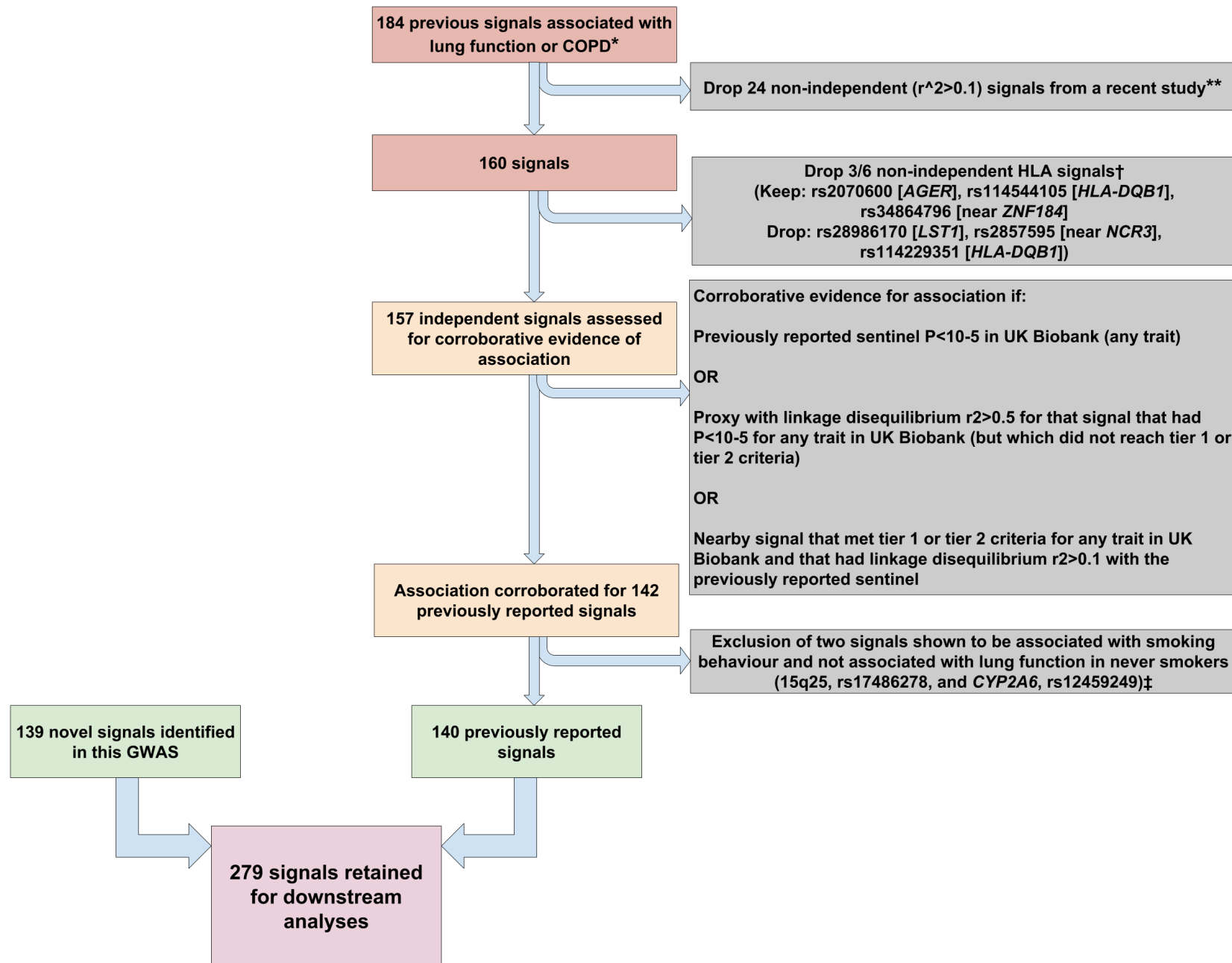
*=Wilk *et al.* 2009 [PMID: 19300500];⁴⁷ Hancock *et al.* 2010 [PMID: 20010835];⁴⁸ Repapi *et al.* 2010 [PMID: 20010834];⁴⁹ Soler Artigas *et al.* 2011 [PMID: 21946350];⁵⁰ Cho *et al.* 2012 [PMID: 22080838];⁵¹ Loth *et al.* 2014 [PMID: 24929828];⁵² Lutz *et al.* 2015 [PMID: 26634245];⁵³ Soler Artigas *et al.* 2015 [PMID: 21946350];⁴⁶ Wain *et al.* 2015 [PMID: 28166213];² Hobbs *et al.* 2016 [PMID: 26771213];⁵⁴ Hobbs *et al.* 2017 [PMID: 28166215];⁵⁵ Wain *et al.* 2017 [PMID: 26423011];⁵⁶ Wyss *et al.* 2017 [https://www.biorxiv.org/content/early/2017/10/05/196048]⁵⁷; Jackson *et al.* 2018 [https://wellcomeopenresearch.org/articles/3-4/v1];⁵⁸

**=Wyss *et al.* 2017 [https://www.biorxiv.org/content/early/2017/10/05/196048]⁵⁷

†=See Wain *et al.* 2017 [PMID: 28166213] for details of HLA independence analysis.⁵⁶

‡=Lutz *et al.* 2015 [PMID: 26634245];⁵³ Cho *et al.* 2012 [PMID: 22080838]⁵¹

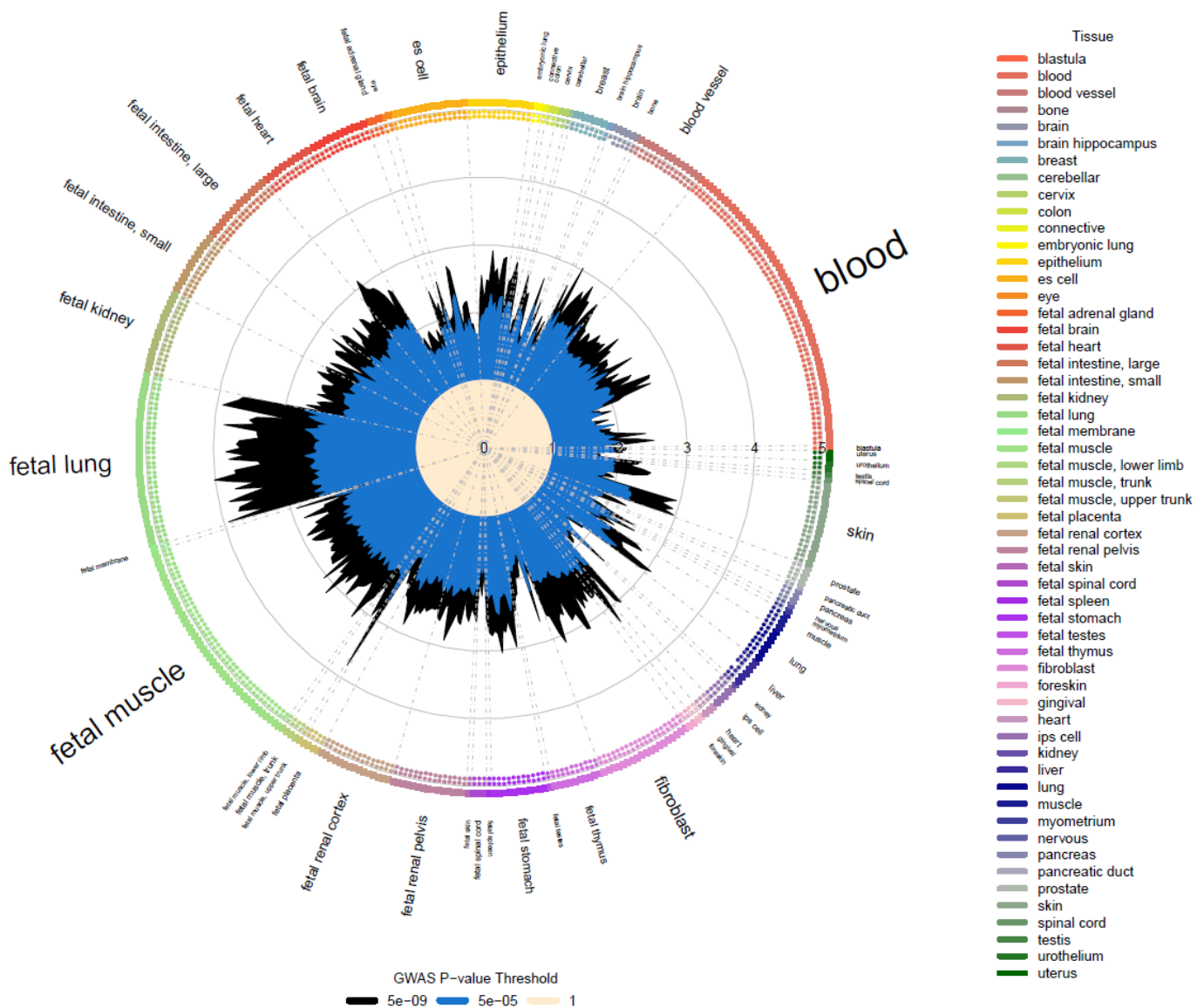
Figure on next page.



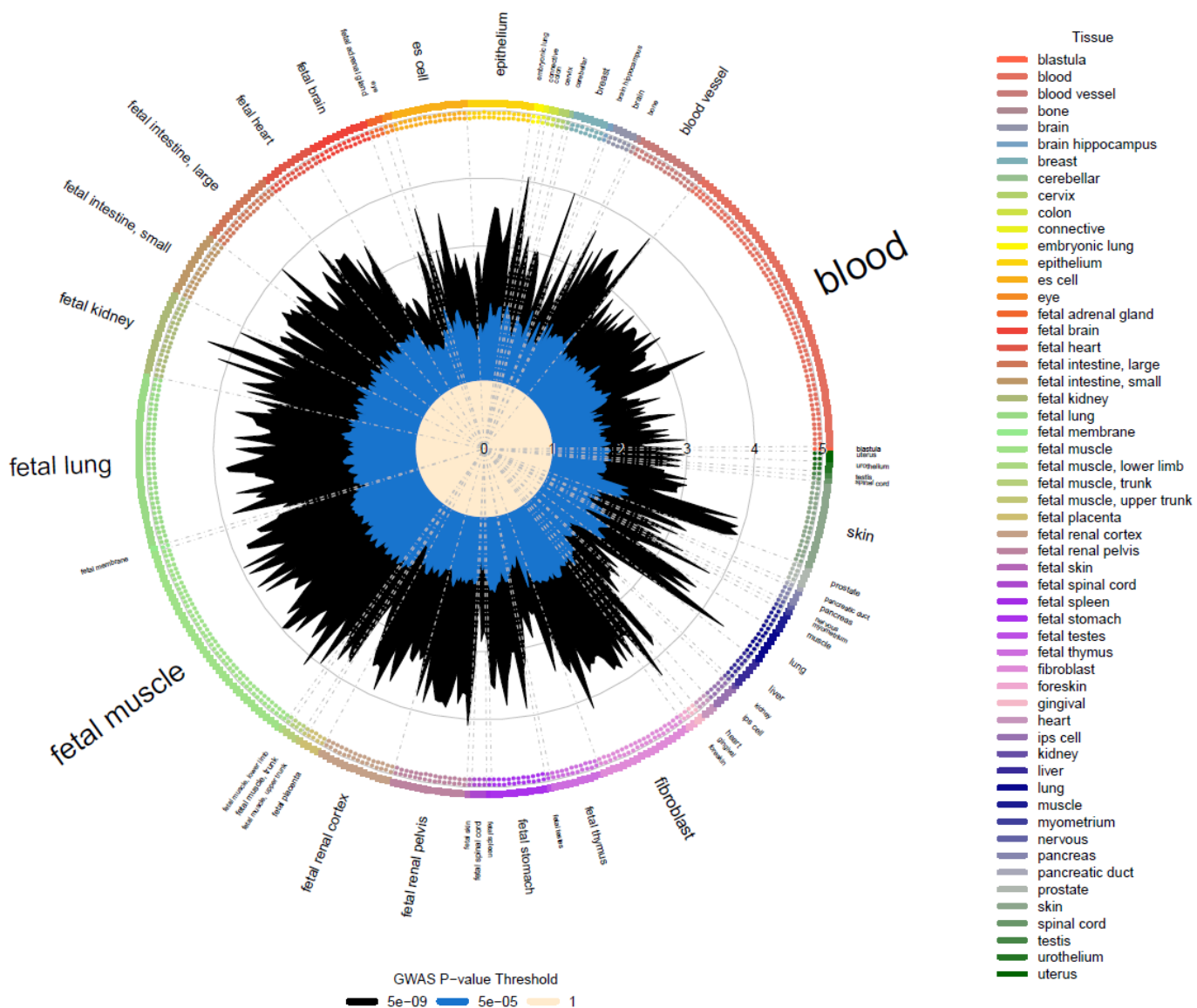
Supplementary Figure 4: Tissue-specific enrichment of overlap with DNase I hotspots with GARFIELD

The wheel plots display functional enrichment for associations with **A) FEV₁/FVC** and **B) FVC** within DNase I hypersensitivity site hotspot regions in the ENCODE and Roadmap Epigenomics project. The radial axis shows fold enrichment calculated at $P < 5 \times 10^{-5}$ and $P < 5 \times 10^{-9}$ for each of the 424 cell lines tested (derived from 55 different tissues). Cell lines are sorted by tissue, represented along the outside edge of the plot with font size proportional to the number of cell lines from that tissue. Fold enrichment values at the different thresholds are plotted with different colours inside the plot (e.g. values at $P < 5 \times 10^{-9}$ are in black). If present, the dots along the inside edge of the plot denote significant enrichment for a given cell line at Bonferroni-adjusted $P < 0.05$ (for 424 tests; $P \approx 1 \times 10^{-4}$), with the dot at the outer edge of plot corresponding to SNPs with GWAS $P < 5 \times 10^{-5}$ used as input, and the innermost dot corresponding to SNPs with GWAS $P < 5 \times 10^{-9}$.

A) Enrichment of overlap of SNPs associated with FEV₁/FVC with DNase I hotspots



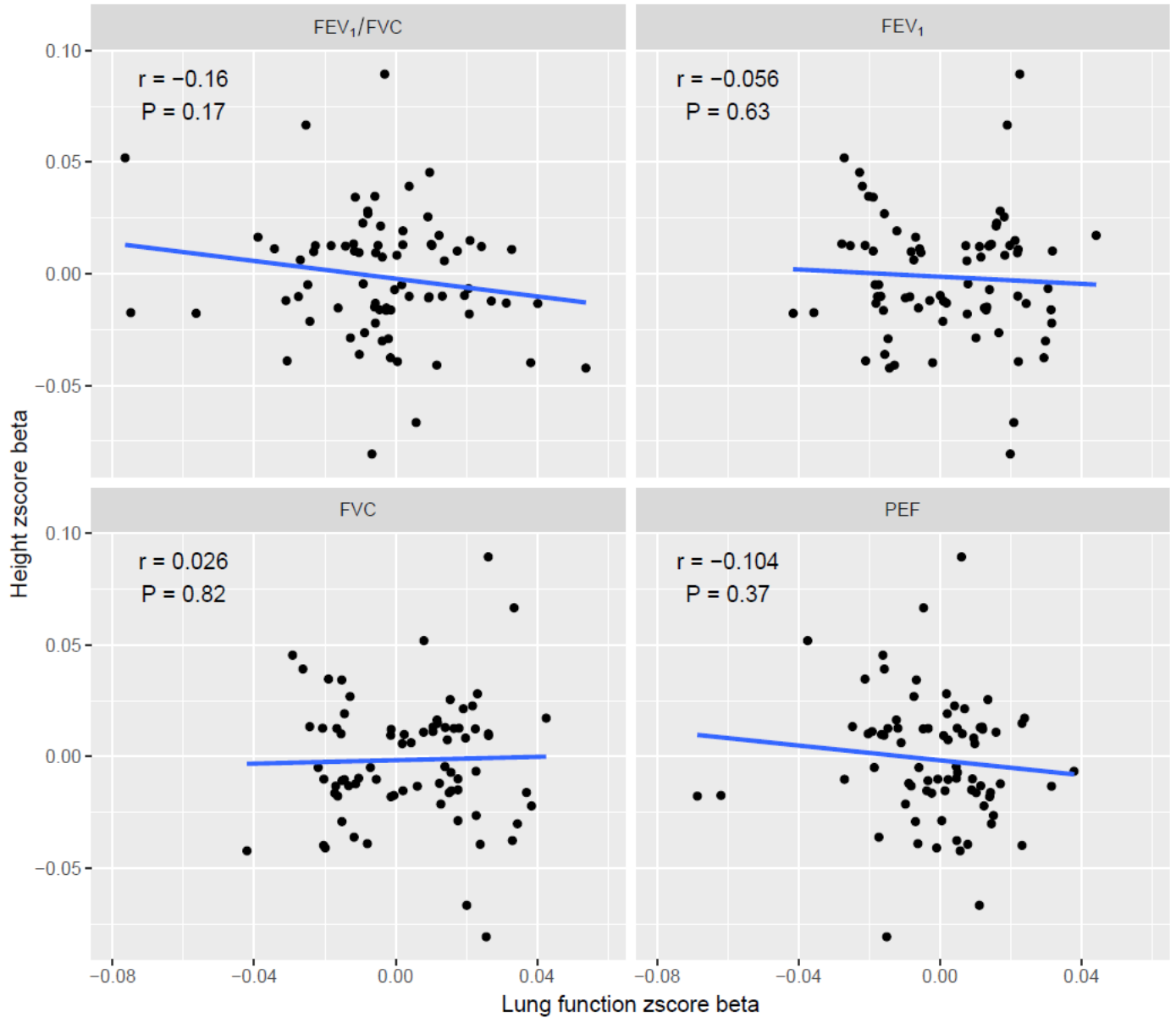
B) Enrichment of overlap of SNPs associated with FVC with DNase I hotspots



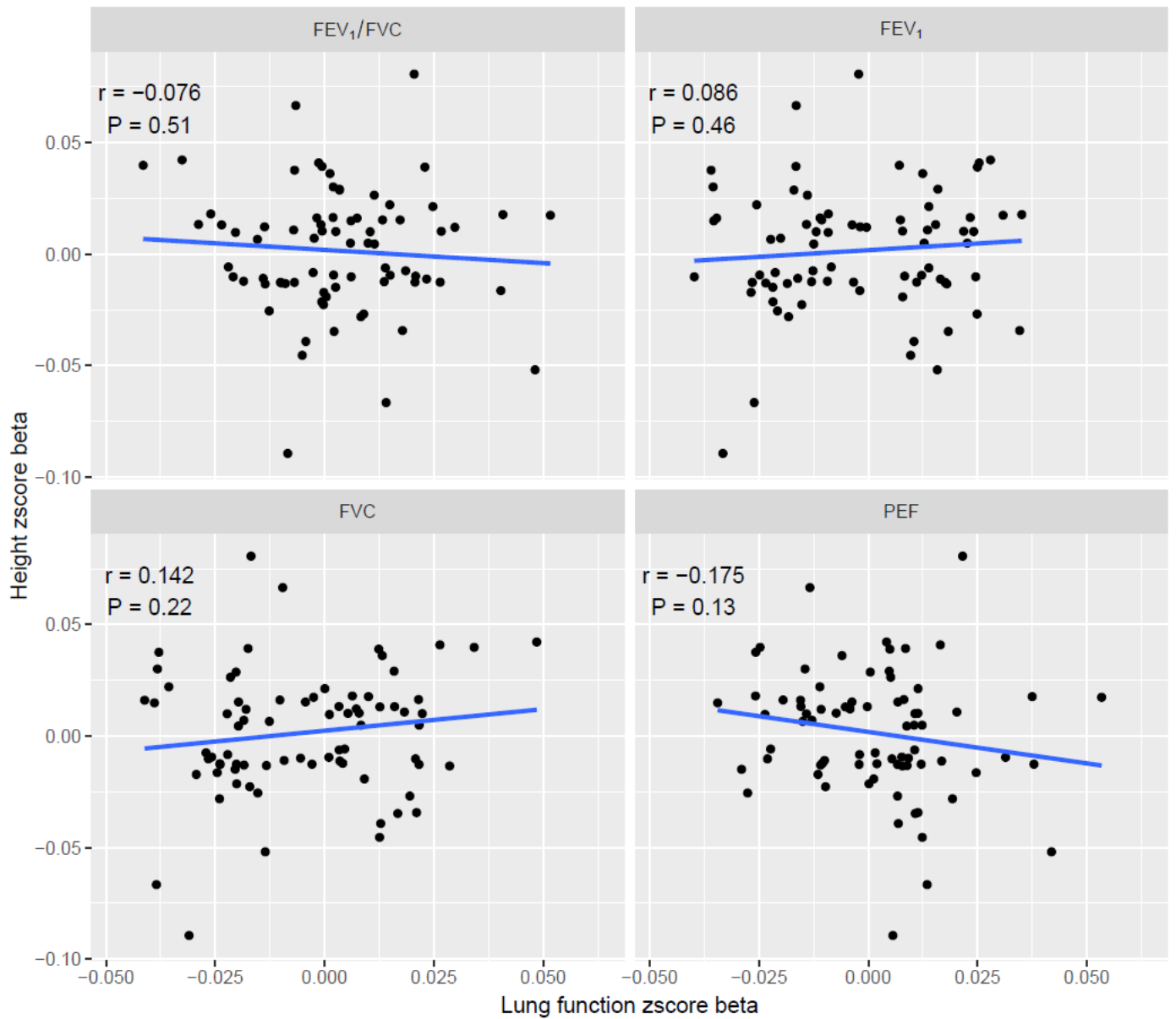
Supplementary Figure 5: Comparison of genetic effects for height and lung function.

Height effect look up in meta-analysis of GIANT⁵⁹ and UK Biobank for 76/85 signals associated with height in the PheWAS (9 had no proxies at $r^2 > 0.4$), plotted against lung function effect in **A)** UK Biobank and **B)** SpiroMeta. All traits are rank inverse-normal transformed (Z-score). The Pearson correlation r is shown with the P value for the null hypothesis $r = 0$.

A) GIANT + UK Biobank meta-analysis height effect vs. UK Biobank lung function effect



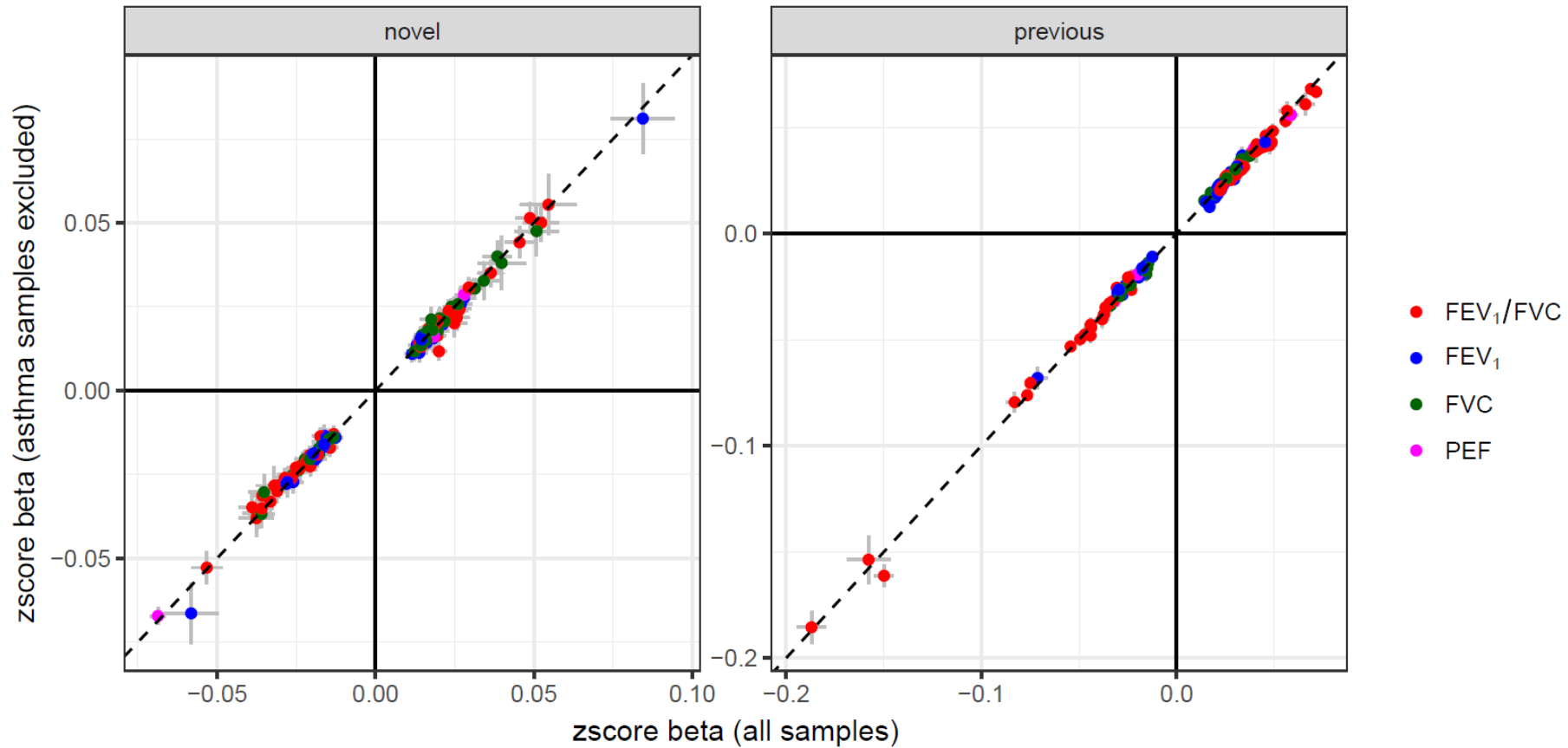
B) GIANT + UK Biobank meta-analysis height effect vs. SpiroMeta lung function effect



9/85 SNPs for which there was no proxy with $r^2 > 0.4$ in GIANT: rs141942982, rs7838717, rs10998018, rs2812208, rs56383987, rs62070648, rs77672322, rs34093919, rs9274247

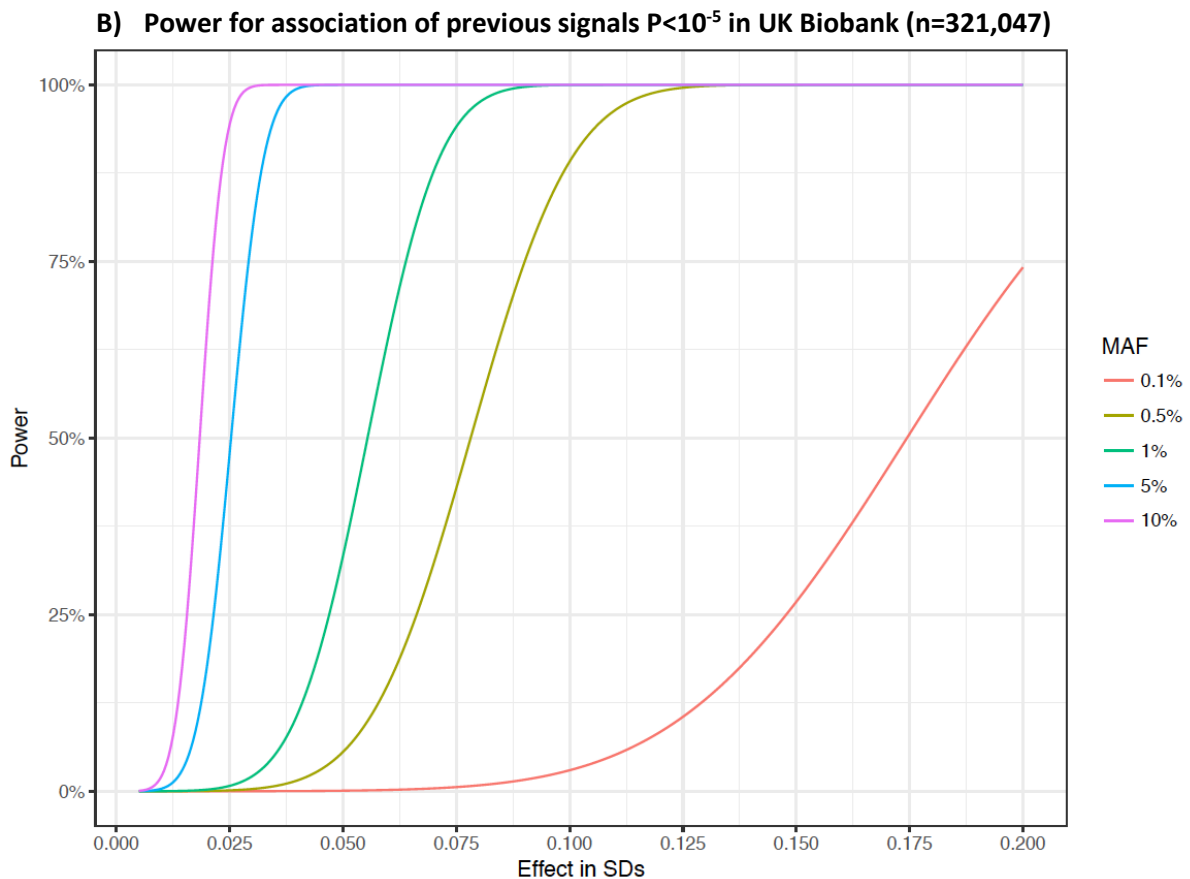
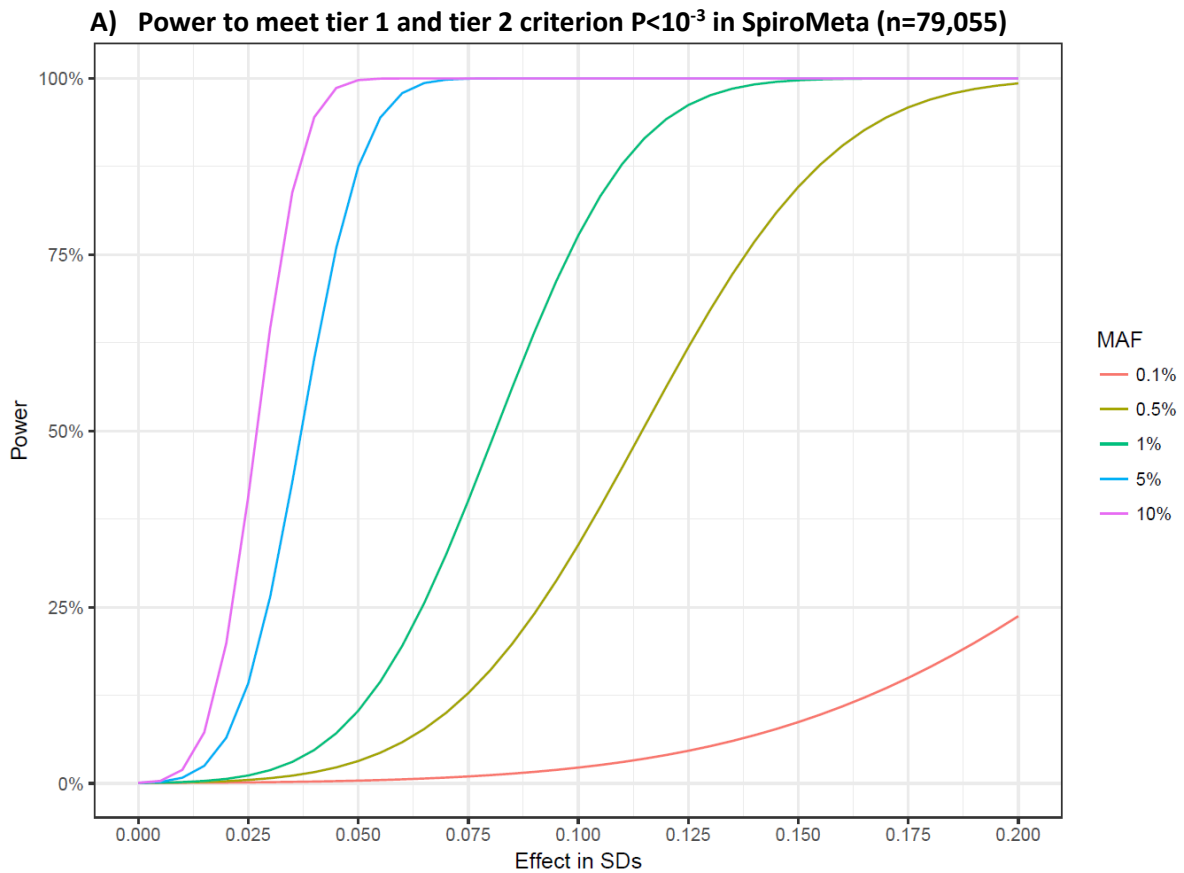
Supplementary Figure 6: Comparison of effect sizes after excluding asthma samples

Comparison of effects (inverse-normal rank-transformed Z-scores) in UK Biobank for 139 novel and 140 previously reported signals in all UK Biobank samples with lung function data (x-axis, N=321,047) and after excluding 37,868 samples with doctor diagnosed asthma (y-axis, N=283,179). Doctor diagnosed asthma is self-reported touchscreen answer (UK Biobank field ID: 6152).



Supplementary Figure 7: Power calculations

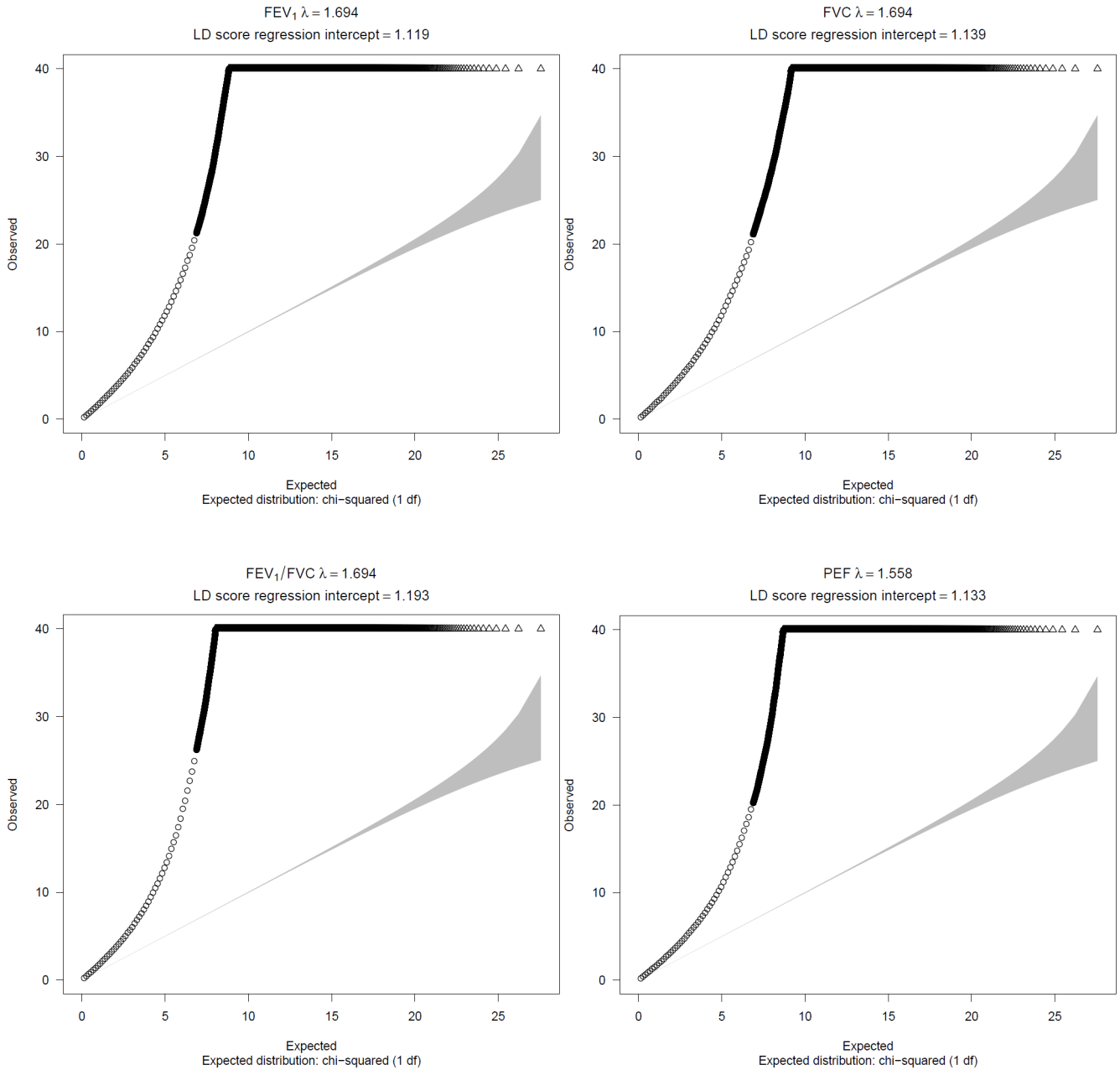
Power to detect a range of single variant effect sizes, as standard deviations (SDs) of the continuous lung function phenotypes (FEV₁, FVC, FEV₁/FVC or PEF), over a range of minor allele frequencies (MAF).



Supplementary Figure 8: QQ plots

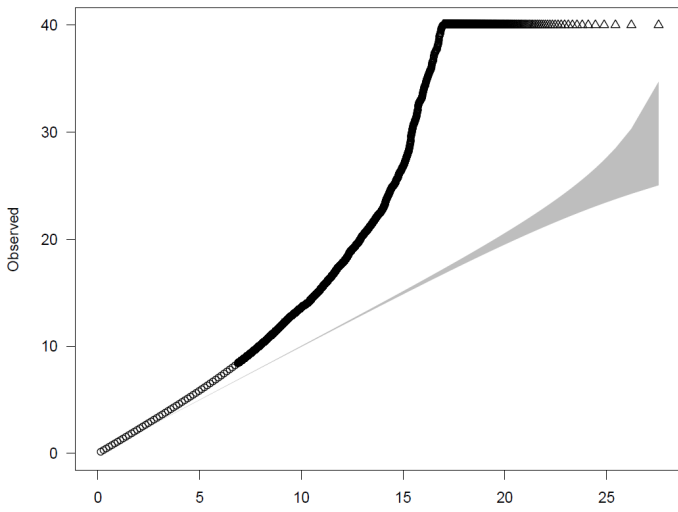
LD score regression implemented in LDSC^{5,60} was used to estimate inflation of test statistics due to confounding. The unadjusted genomic inflation factors λ are shown as well as the LD score regression intercept which is the inflation factor adjusted for polygenicity. Genomic control was applied if the LD score regression intercept was larger than 1.05 suggesting residual inflation. Accordingly, genomic control was applied to UK Biobank but not SpiroMeta.

UK Biobank



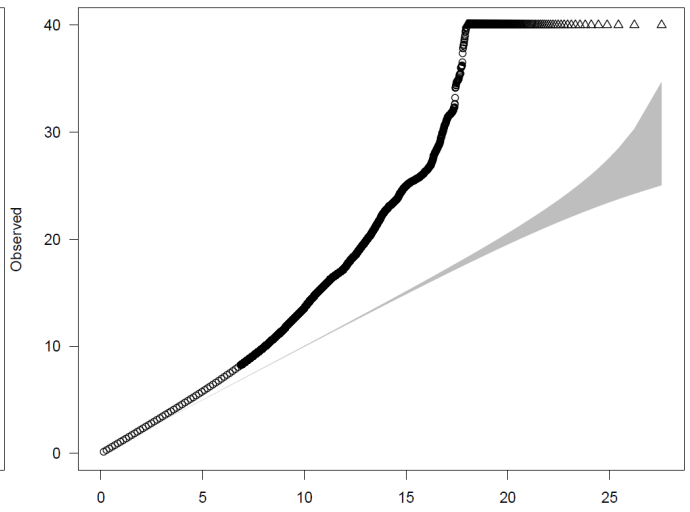
SpiroMeta

FEV₁ $\lambda = 1.121$
LD score regression intercept = 0.998



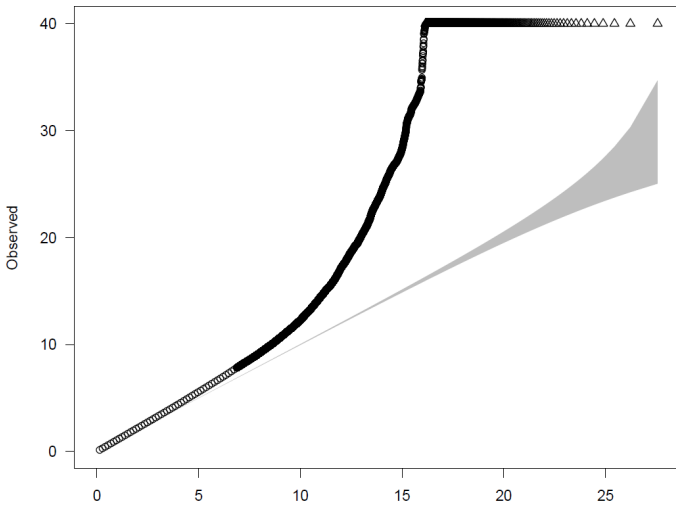
Expected
Expected distribution: chi-squared (1 df)

FVC $\lambda = 1.121$
LD score regression intercept = 1.002



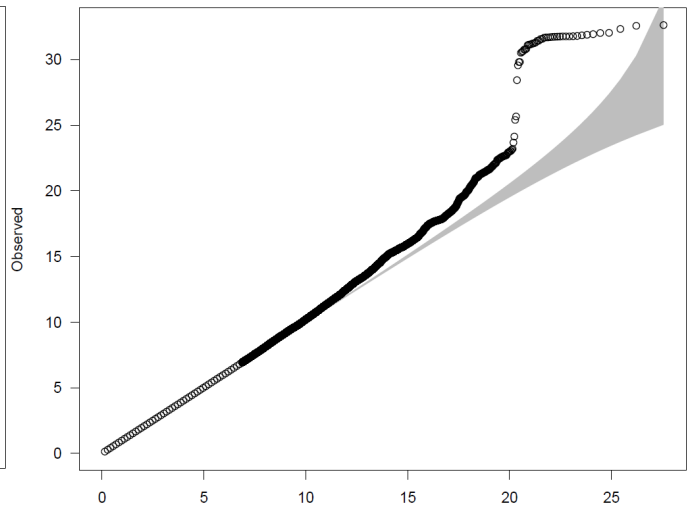
Expected
Expected distribution: chi-squared (1 df)

FEV₁/FVC $\lambda = 1.093$
LD score regression intercept = 0.993



Expected
Expected distribution: chi-squared (1 df)

PEF $\lambda = 1.01$
LD score regression intercept = 0.972

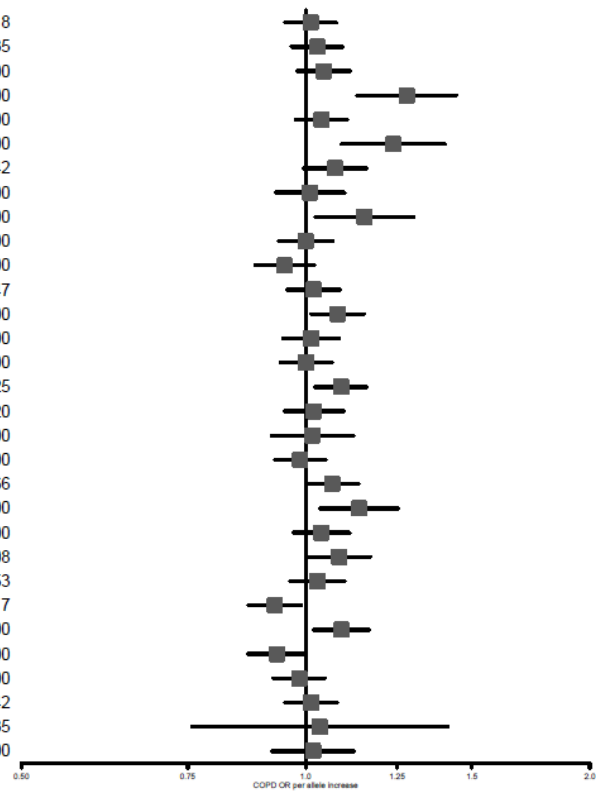


Expected
Expected distribution: chi-squared (1 df)

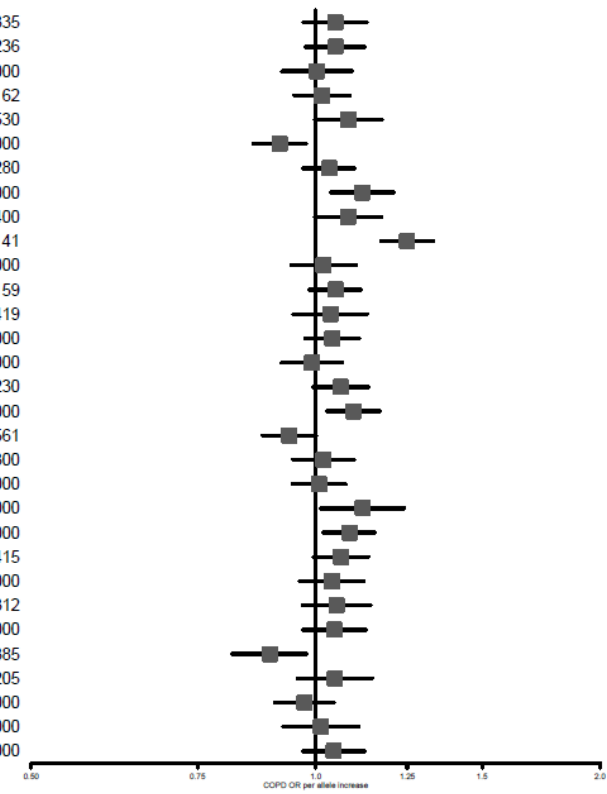
Supplementary Figure 9: Meta-analysis of 279 variants in five independent cohorts for association with COPD.

Single-variant results for all 279 variants included in the genetic risk score were obtained from five external study groups of European-descent (COPDGene, GenKOLS, ECLIPSE, NETT-NAS, and SPIROMICS). These results were meta-analysed using a fixed-effect model, and are presented in the follow panels (ordered in genomic order, from chromosomes 1-22). Abbreviations: LCI/UCI=lower/upper bound of 95% confidence interval, I²=value for I²-statistic for heterogeneity. Grey boxes represent odds ratios for COPD per 1-allele increase in the FEV₁/FVC lowering allele. Black horizontal bars denote the 95% confidence interval.

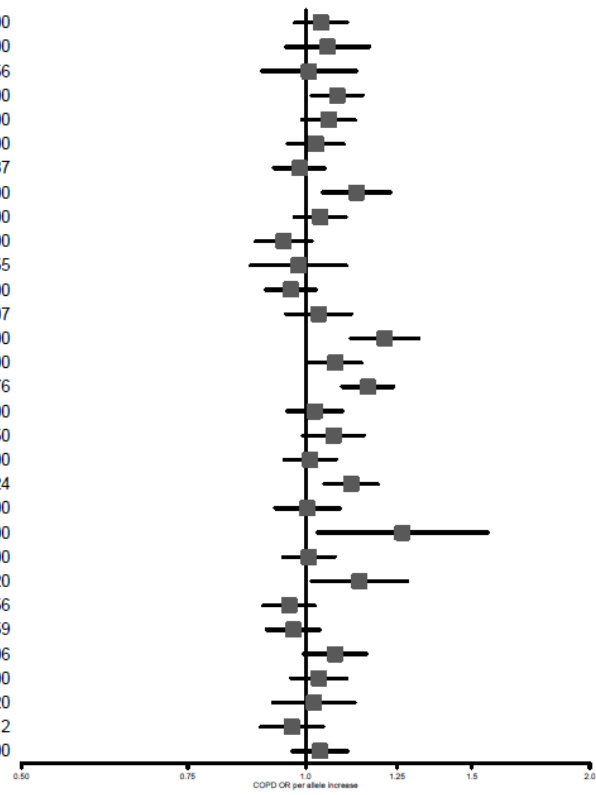
Marker	Beta	LCI	UCI	P	I ²
rs10874851	1.012	0.951	1.077	0.704	0.718
rs11205354	1.029	0.966	1.095	0.376	0.435
rs10919604	1.046	0.981	1.115	0.174	0.000
rs10498230	1.280	1.134	1.444	6.4e-05	0.000
rs11098196	1.039	0.976	1.107	0.225	0.000
rs10516526	1.238	1.091	1.405	9.01e-04	0.000
rs111898810	1.075	0.995	1.160	0.066	0.142
rs10059661	1.011	0.930	1.099	0.795	0.000
rs10515750	1.154	1.024	1.301	0.019	0.000
rs10059996	1.000	0.936	1.068	0.999	0.000
rs1102077	0.950	0.884	1.021	0.165	0.000
rs10246303	1.019	0.957	1.086	0.558	0.547
rs10965947	1.081	1.014	1.152	0.016	0.000
rs10858246	1.013	0.946	1.084	0.713	0.000
rs10870202	1.001	0.940	1.066	0.974	0.000
rs11191841	1.090	1.024	1.160	0.007	0.625
rs10836366	1.021	0.950	1.097	0.576	0.020
rs11235809	1.017	0.920	1.123	0.743	0.000
rs10841302	0.987	0.928	1.050	0.681	0.000
rs11172113	1.066	1.000	1.137	0.050	0.466
rs11176001	1.139	1.036	1.252	0.007	0.000
rs11107184	1.039	0.971	1.113	0.270	0.000
rs113745635	1.085	1.007	1.170	0.033	0.008
rs10850377	1.029	0.963	1.100	0.396	0.153
rs10141786	0.928	0.870	0.989	0.021	0.217
rs10851839	1.091	1.021	1.166	0.010	0.000
rs11074547	0.932	0.869	1.000	0.051	0.000
rs1079572	0.984	0.924	1.048	0.620	0.000
rs11085744	1.013	0.952	1.079	0.675	0.342
rs113473882	1.035	0.758	1.414	0.827	0.535
rs113111175	1.018	0.922	1.124	0.721	0.000



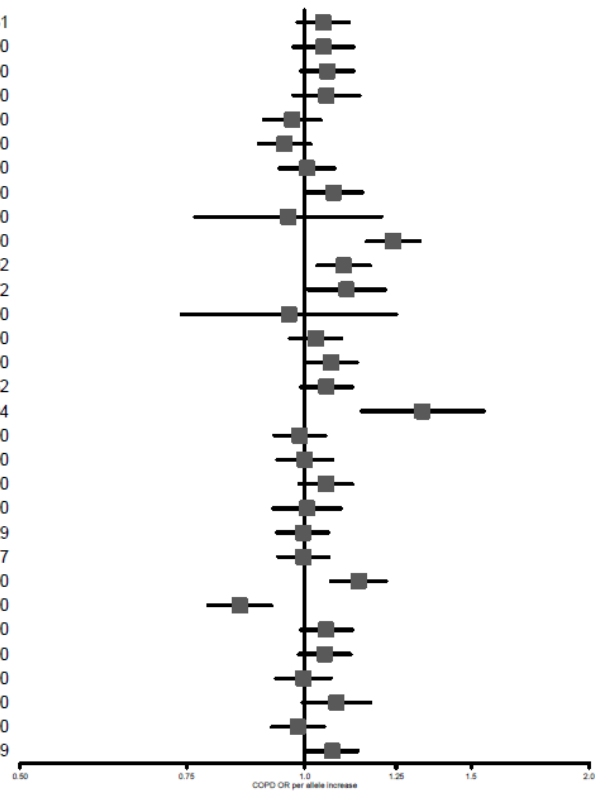
Marker	Beta	LCI	UCI	P	I ²
rs12737805	1.048	0.971	1.132	0.226	0.335
rs12096239	1.049	0.977	1.126	0.191	0.236
rs1192404	1.003	0.921	1.092	0.945	0.000
rs12140637	1.015	0.949	1.086	0.663	0.162
rs12092943	1.083	0.998	1.175	0.056	0.530
rs12470864	0.916	0.859	0.976	0.007	0.000
rs1249096	1.033	0.970	1.100	0.310	0.280
rs12477314	1.120	1.037	1.208	0.004	0.000
rs12331869	1.082	0.998	1.174	0.056	0.400
rs12504628	1.250	1.172	1.332	8.2e-12	0.141
rs11739847	1.019	0.942	1.103	0.635	0.000
rs12198986	1.049	0.986	1.117	0.132	0.159
rs114544105	1.036	0.947	1.134	0.436	0.419
rs12202314	1.041	0.975	1.112	0.228	0.000
rs11759026	0.991	0.920	1.067	0.808	0.000
rs12707691	1.062	0.993	1.136	0.079	0.230
rs12698403	1.095	1.027	1.168	0.005	0.000
rs1274475	0.938	0.878	1.001	0.054	0.561
rs1259524	1.019	0.946	1.099	0.613	0.300
rs1244869	1.008	0.945	1.075	0.808	0.000
rs11620380	1.121	1.013	1.241	0.027	0.000
rs1200345	1.085	1.019	1.155	0.010	0.000
rs12591467	1.064	0.995	1.138	0.070	0.415
rs12438269	1.040	0.962	1.124	0.323	0.000
rs12149593	1.052	0.969	1.142	0.226	0.312
rs12447804	1.047	0.969	1.131	0.245	0.000
rs1215	0.894	0.817	0.978	0.014	0.385
rs11658500	1.048	0.957	1.148	0.315	0.205
rs11653958	0.973	0.906	1.045	0.455	0.000
rs12627254	1.013	0.924	1.111	0.783	0.000
rs11704827	1.045	0.969	1.127	0.250	0.000



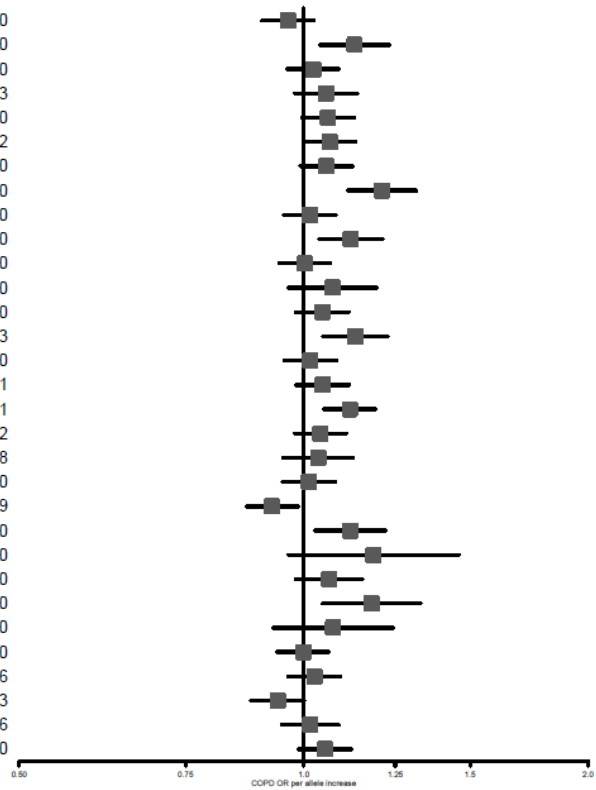
Marker	Beta	LCI	UCI	P	I2
rs1416685	1.038	0.974	1.106	0.250	0.000
rs141942982	1.056	0.954	1.169	0.295	0.000
rs13430465	1.009	0.898	1.133	0.885	0.656
rs13009582	1.080	1.015	1.150	0.015	0.000
rs1430193	1.057	0.991	1.128	0.091	0.000
rs1406225	1.025	0.957	1.098	0.478	0.000
rs12997625	0.985	0.926	1.049	0.642	0.387
rs1286664	1.131	1.042	1.229	0.003	0.000
rs1458979	1.036	0.973	1.103	0.266	0.000
rs1490265	0.948	0.885	1.016	0.129	0.000
rs1610265	0.983	0.875	1.105	0.777	0.455
rs1595029	0.964	0.907	1.026	0.250	0.000
rs1344555	1.032	0.953	1.118	0.440	0.207
rs13110699	1.213	1.117	1.317	4.56e-06	0.000
rs13109426	1.075	1.009	1.146	0.026	0.000
rs13116999	1.164	1.093	1.239	2.12e-06	0.176
rs1448044	1.022	0.955	1.093	0.532	0.000
rs1551943	1.070	0.993	1.153	0.074	0.550
rs153916	1.011	0.950	1.077	0.726	0.000
rs1294421	1.117	1.047	1.192	8.11e-04	0.124
rs16883089	1.005	0.928	1.088	0.904	0.000
rs148274477	1.267	1.030	1.558	0.025	0.000
rs1513272	1.008	0.946	1.074	0.804	0.000
rs16909859	1.140	1.015	1.281	0.027	0.620
rs12811814	0.960	0.902	1.023	0.207	0.256
rs1494502	0.970	0.909	1.034	0.349	0.159
rs12820313	1.075	0.996	1.160	0.064	0.206
rs1698268	1.033	0.965	1.106	0.345	0.000
rs12918140	1.021	0.924	1.127	0.688	0.420
rs12945803	0.967	0.896	1.043	0.383	0.312
rs1668091	1.036	0.969	1.108	0.297	0.000



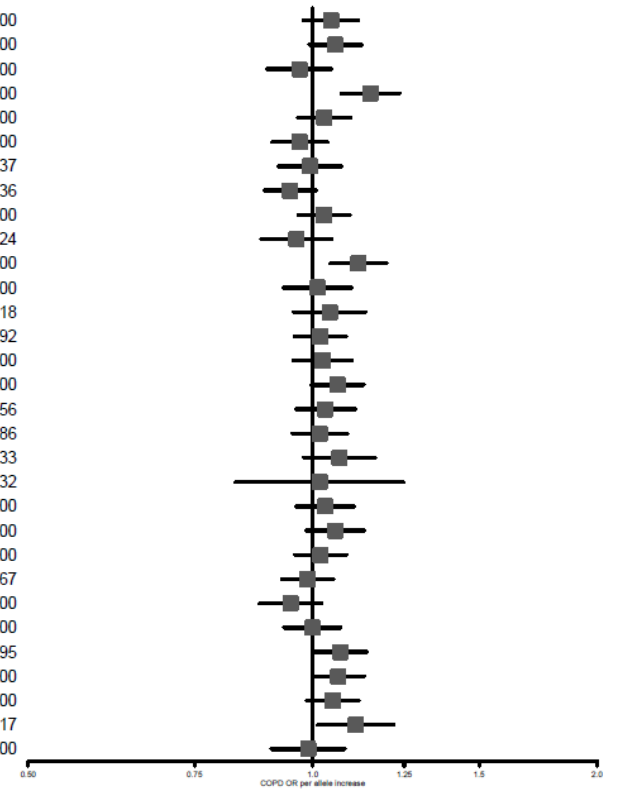
Marker	Beta	LCI	UCI	P	I2
rs2284746	1.046	0.983	1.114	0.156	0.251
rs17513135	1.047	0.973	1.127	0.222	0.000
rs2146098	1.057	0.990	1.128	0.098	0.000
rs17531405	1.054	0.973	1.143	0.199	0.000
rs17009288	0.970	0.905	1.040	0.390	0.000
rs2304340	0.952	0.894	1.014	0.127	0.000
rs2084448	1.006	0.940	1.077	0.862	0.000
rs17666332	1.073	1.001	1.150	0.046	0.000
rs1799807	0.961	0.766	1.205	0.729	0.000
rs2045517	1.240	1.163	1.323	5.3e-11	0.280
rs2007403	1.100	1.031	1.173	0.004	0.302
rs17163397	1.108	1.008	1.218	0.034	0.072
rs1800888	0.962	0.741	1.249	0.771	0.000
rs2014787	1.027	0.965	1.094	0.403	0.000
rs1990950	1.066	1.000	1.135	0.048	0.000
rs1928168	1.055	0.991	1.122	0.094	0.362
rs2070600	1.333	1.150	1.545	1.39e-04	0.304
rs17232687	0.988	0.928	1.051	0.702	0.000
rs193686	1.000	0.935	1.069	0.997	0.000
rs2256462	1.053	0.987	1.123	0.117	0.000
rs2293871	1.006	0.926	1.092	0.888	0.000
rs1951121	0.995	0.935	1.059	0.879	0.329
rs2304645	0.997	0.937	1.060	0.925	0.017
rs181206	1.140	1.066	1.220	1.26e-04	0.000
rs17577877	0.854	0.790	0.922	5.81e-05	0.000
rs1859962	1.054	0.990	1.122	0.098	0.000
rs1985511	1.050	0.986	1.118	0.128	0.000
rs2202572	0.997	0.933	1.066	0.926	0.000
rs1737889	1.081	0.995	1.174	0.065	0.000
rs2236519	0.983	0.923	1.048	0.605	0.000
rs2283847	1.070	1.005	1.139	0.033	0.169



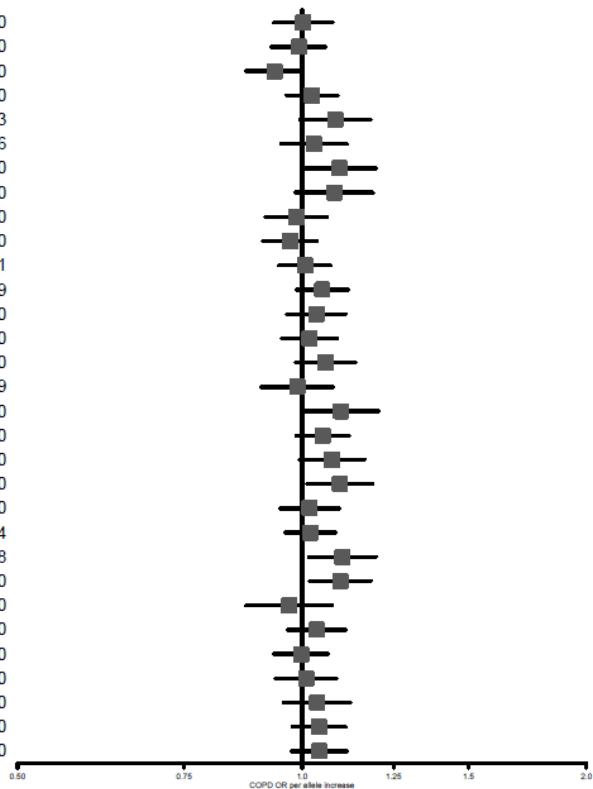
Marker	Beta	LCI	UCI	P	I2
rs2821332	0.963	0.904	1.025	0.234	0.000
rs2799098	1.132	1.042	1.230	0.003	0.000
rs2544536	1.023	0.961	1.089	0.479	0.000
rs2322659	1.056	0.979	1.139	0.158	0.343
rs2571445	1.061	0.996	1.131	0.066	0.000
rs2974389	1.065	1.000	1.135	0.050	0.232
rs35480566	1.057	0.992	1.126	0.085	0.000
rs2811415	1.210	1.113	1.316	8.02e-06	0.000
rs28520091	1.015	0.953	1.081	0.649	0.000
rs34712979	1.122	1.039	1.212	0.003	0.000
rs2441026	1.002	0.942	1.067	0.940	0.000
rs34864796	1.073	0.964	1.195	0.196	0.000
rs2894837	1.047	0.981	1.117	0.169	0.000
rs2768551	1.134	1.049	1.226	0.002	0.643
rs2627237	1.016	0.953	1.083	0.620	0.000
rs330939	1.048	0.982	1.118	0.159	0.271
rs2451951	1.119	1.051	1.190	4.05e-04	0.131
rs2637254	1.042	0.978	1.109	0.201	0.482
rs2863171	1.036	0.951	1.128	0.421	0.538
rs2509961	1.013	0.950	1.080	0.686	0.000
rs2348418	0.926	0.870	0.986	0.016	0.199
rs2701110	1.121	1.029	1.221	0.009	0.000
rs2812208	1.185	0.963	1.459	0.108	0.000
rs34245505	1.064	0.981	1.154	0.133	0.000
rs35251997	1.180	1.048	1.329	0.006	0.000
rs35420030	1.075	0.928	1.244	0.335	0.000
rs34351630	0.998	0.938	1.063	0.962	0.000
rs28519449	1.026	0.963	1.094	0.427	0.176
rs303752	0.938	0.879	1.002	0.056	0.683
rs2967516	1.016	0.948	1.089	0.649	0.326
rs2834440	1.054	0.989	1.124	0.106	0.000



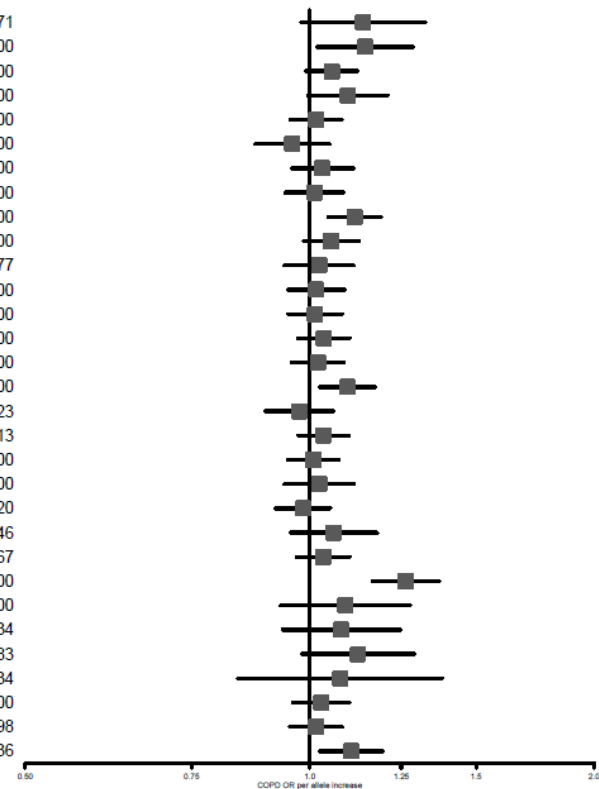
Marker	Beta	LCI	UCI	P	I2
rs4651005	1.046	0.978	1.118	0.191	0.000
rs4309038	1.057	0.992	1.125	0.086	0.000
rs512597	0.968	0.895	1.046	0.413	0.000
rs4846480	1.151	1.072	1.236	1.02e-04	0.000
rs4328080	1.028	0.964	1.097	0.394	0.000
rs4952564	0.969	0.906	1.036	0.356	0.000
rs4294980	0.993	0.920	1.071	0.847	0.137
rs4674407	0.947	0.889	1.008	0.087	0.236
rs56341938	1.028	0.966	1.094	0.389	0.000
rs4866846	0.961	0.882	1.047	0.365	0.324
rs55938083	1.118	1.044	1.197	0.001	0.000
rs55905169	1.012	0.931	1.099	0.783	0.000
rs4721457	1.042	0.956	1.137	0.351	0.418
rs559233	1.019	0.957	1.084	0.564	0.392
rs4128298	1.024	0.954	1.099	0.506	0.000
rs3847402	1.062	0.996	1.132	0.065	0.000
rs3849969	1.032	0.961	1.108	0.390	0.256
rs4237643	1.017	0.951	1.088	0.621	0.186
rs567508	1.068	0.979	1.164	0.140	0.333
rs56196860	1.017	0.829	1.247	0.874	0.732
rs35506	1.030	0.961	1.105	0.401	0.000
rs4885681	1.057	0.984	1.135	0.131	0.000
rs4444235	1.019	0.957	1.085	0.550	0.000
rs4924525	0.988	0.927	1.052	0.695	0.367
rs3751837	0.947	0.878	1.022	0.163	0.000
rs56104880	0.999	0.933	1.070	0.982	0.000
rs3973397	1.070	1.003	1.141	0.041	0.595
rs3743609	1.064	0.999	1.133	0.053	0.000
rs4796334	1.050	0.986	1.119	0.128	0.000
rs4968200	1.110	1.012	1.218	0.027	0.317
rs4820216	0.989	0.905	1.081	0.803	0.000



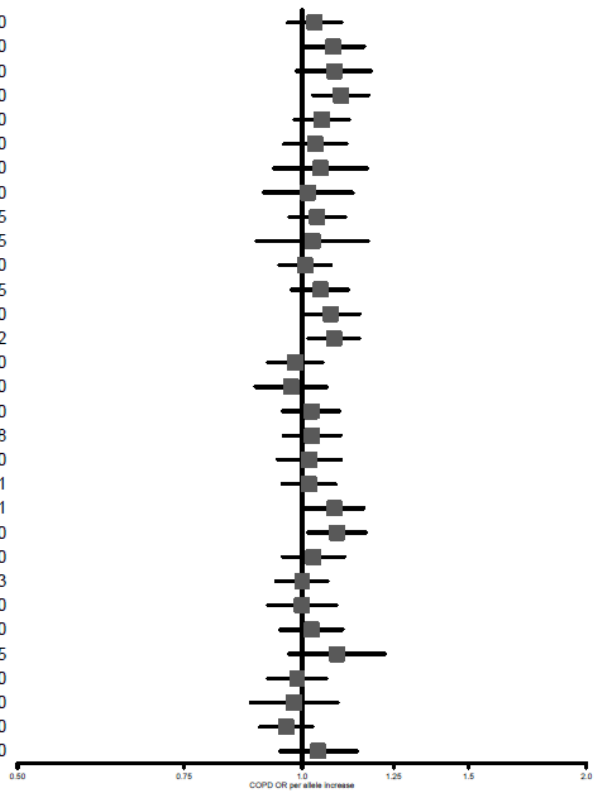
Marker	Beta	LCI	UCI	P	I2
rs60804050	1.002	0.933	1.077	0.946	0.000
rs6681426	0.992	0.929	1.058	0.797	0.000
rs6657854	0.935	0.872	1.003	0.059	0.000
rs6688537	1.025	0.963	1.090	0.443	0.000
rs62126408	1.085	0.995	1.182	0.065	0.383
rs6751968	1.029	0.950	1.115	0.479	0.336
rs6435952	1.096	1.003	1.199	0.044	0.000
rs61332075	1.082	0.984	1.188	0.103	0.380
rs6431620	0.986	0.915	1.063	0.716	0.000
rs6437219	0.971	0.909	1.037	0.381	0.000
rs6733504	1.007	0.946	1.072	0.825	0.111
rs586936	1.051	0.986	1.120	0.127	0.689
rs6778584	1.035	0.964	1.112	0.340	0.000
rs6780171	1.018	0.952	1.089	0.599	0.100
rs62316310	1.059	0.985	1.139	0.121	0.160
rs6924424	0.988	0.906	1.078	0.789	0.289
rs62454414	1.100	1.005	1.205	0.039	0.000
rs57649467	1.051	0.986	1.121	0.127	0.000
rs60820984	1.076	0.994	1.164	0.070	0.000
rs62012772	1.097	1.013	1.188	0.023	0.000
rs6539952	1.019	0.949	1.094	0.610	0.000
rs62070270	1.020	0.959	1.085	0.530	0.064
rs62070631	1.104	1.017	1.198	0.018	0.108
rs6501431	1.098	1.019	1.183	0.014	0.000
rs59606152	0.969	0.873	1.076	0.556	0.000
rs633286	1.037	0.967	1.112	0.310	0.000
rs6140050	0.997	0.934	1.065	0.936	0.000
rs6032942	1.010	0.938	1.087	0.797	0.000
rs6138639	1.037	0.956	1.125	0.381	0.000
rs6088813	1.042	0.977	1.112	0.210	0.000
rs6062304	1.044	0.975	1.117	0.216	0.000

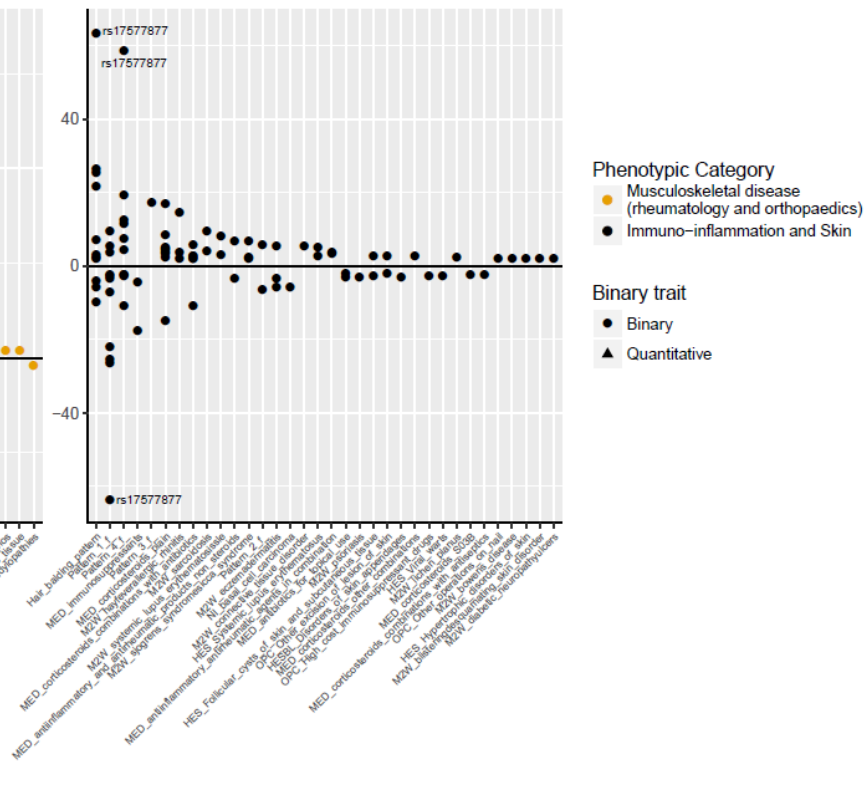
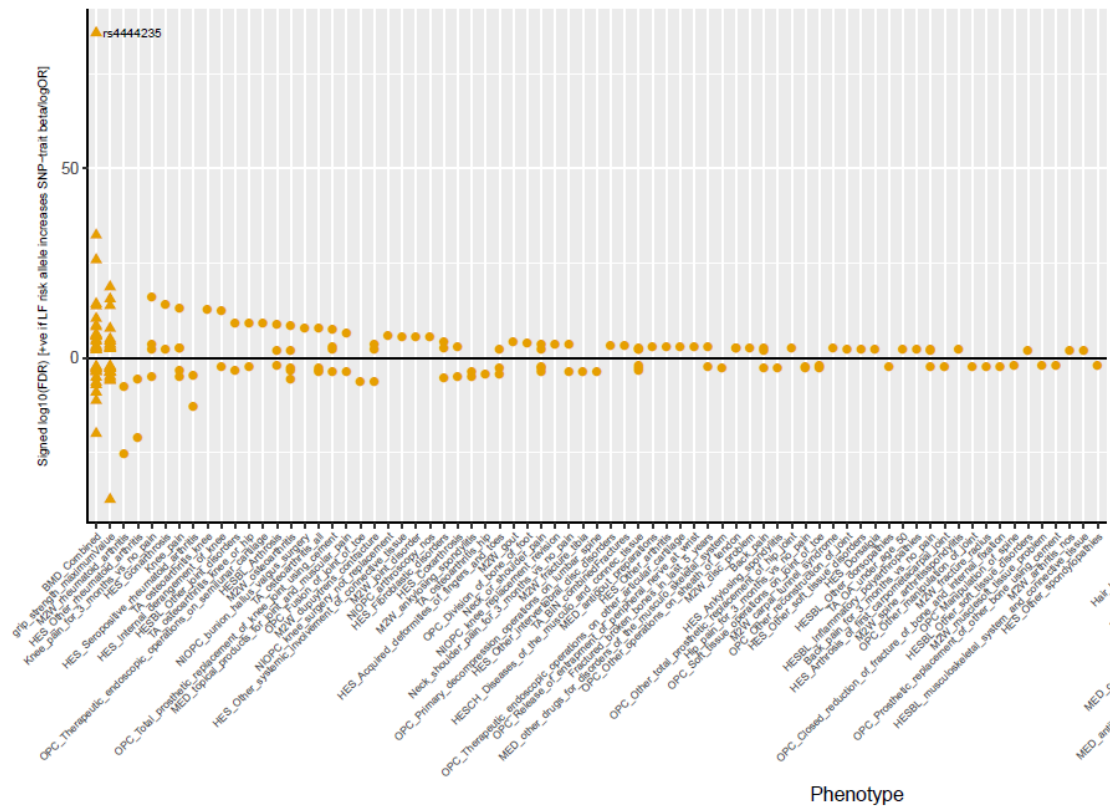


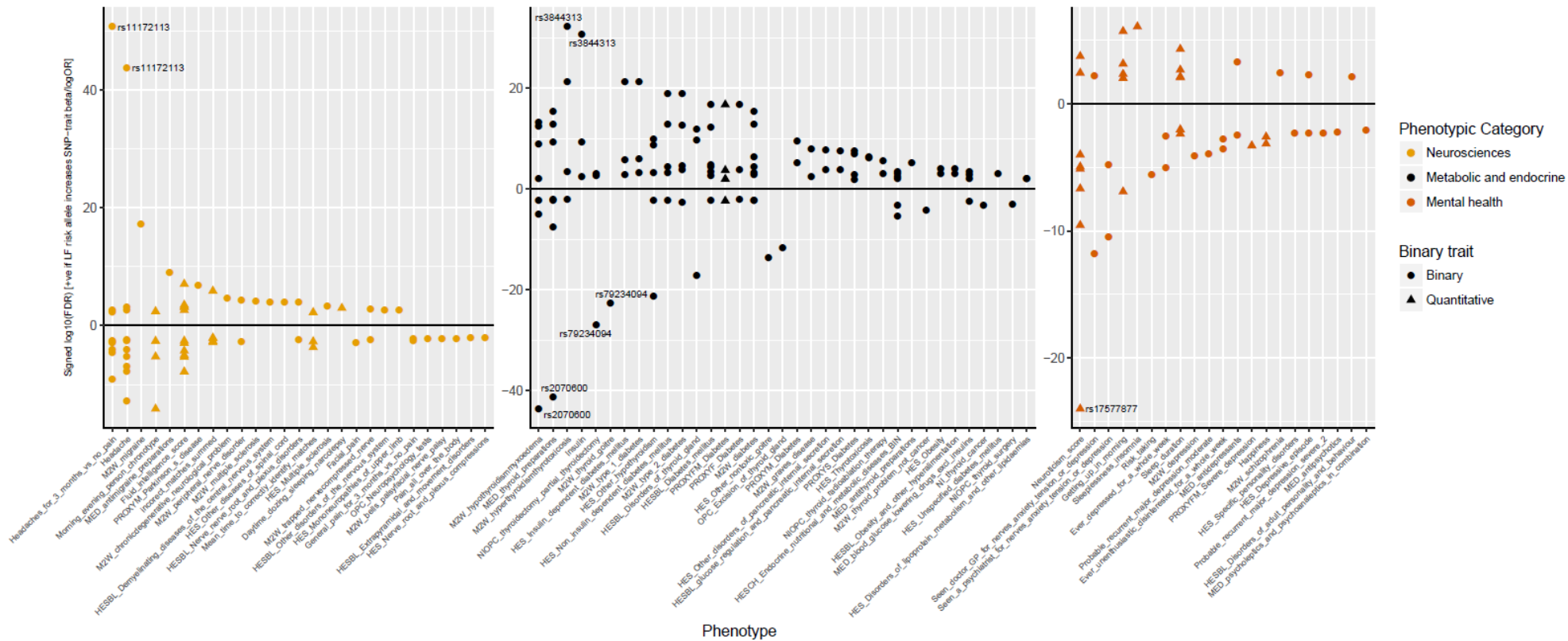
Marker	Beta	LCI	UCI	P	I2
rs72673461	1.139	0.979	1.324	0.091	0.571
rs75128958	1.145	1.020	1.287	0.022	0.000
rs732990	1.055	0.990	1.124	0.098	0.000
rs72904209	1.097	0.996	1.209	0.060	0.000
rs7424771	1.016	0.954	1.082	0.624	0.000
rs73048404	0.959	0.876	1.049	0.359	0.000
rs72776440	1.032	0.957	1.112	0.413	0.000
rs7713065	1.011	0.942	1.085	0.762	0.000
rs7715901	1.115	1.046	1.189	8.85e-04	0.000
rs7753012	1.054	0.985	1.127	0.129	0.000
rs72615157	1.023	0.941	1.113	0.592	0.077
rs7465401	1.016	0.948	1.090	0.648	0.000
rs7838717	1.013	0.950	1.081	0.688	0.000
rs771924	1.035	0.972	1.102	0.284	0.000
rs7872188	1.020	0.957	1.087	0.549	0.000
rs7041139	1.097	1.026	1.173	0.007	0.000
rs72743974	0.975	0.897	1.061	0.558	0.523
rs7090277	1.034	0.972	1.100	0.286	0.413
rs7095607	1.009	0.948	1.073	0.787	0.000
rs7108254	1.023	0.940	1.114	0.592	0.000
rs772920	0.984	0.920	1.051	0.625	0.120
rs74053129	1.060	0.954	1.178	0.275	0.446
rs7155279	1.033	0.969	1.102	0.318	0.367
rs72699866	1.264	1.165	1.371	1.55e-08	0.000
rs72724130	1.091	0.932	1.277	0.279	0.000
rs7176074	1.080	0.936	1.247	0.290	0.434
rs76219171	1.125	0.982	1.289	0.089	0.683
rs77672322	1.077	0.840	1.381	0.557	0.234
rs7218675	1.028	0.960	1.102	0.427	0.000
rs7243351	1.016	0.953	1.082	0.630	0.598
rs7238093	1.107	1.025	1.195	0.010	0.536

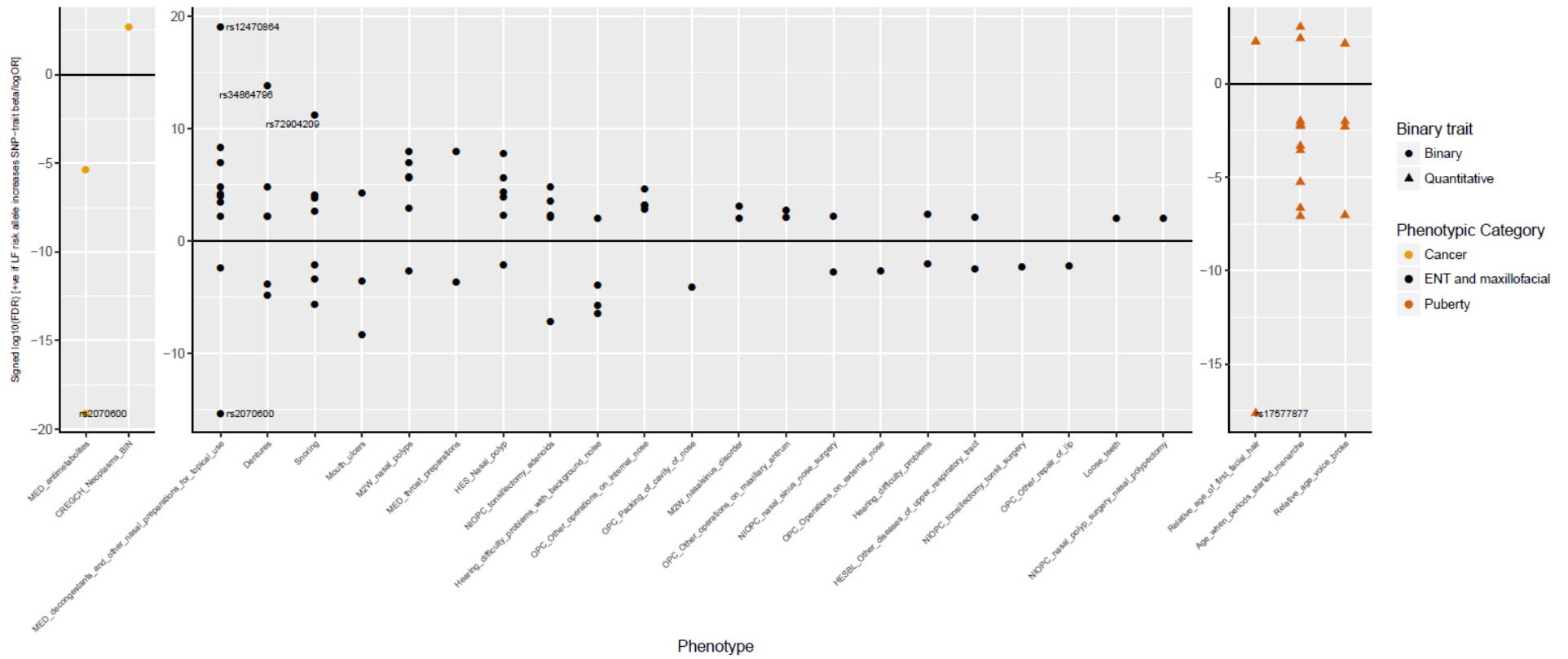


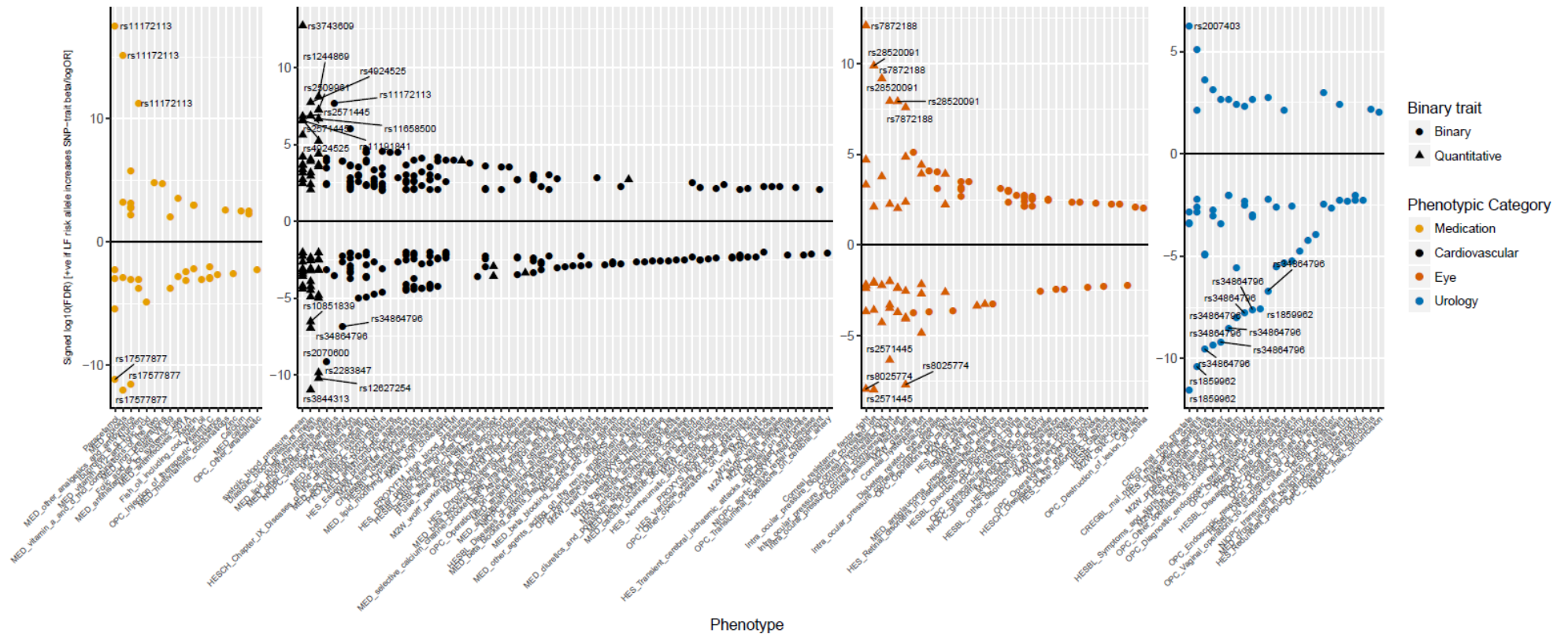
Marker	Beta	LCI	UCI	P	I2
rs9661802	1.031	0.966	1.101	0.356	0.000
rs9438626	1.078	0.999	1.163	0.055	0.000
rs9661687	1.081	0.987	1.183	0.093	0.000
rs9970286	1.099	1.027	1.176	0.006	0.000
rs993925	1.049	0.982	1.121	0.152	0.000
rs985256	1.033	0.958	1.114	0.403	0.000
rs79294353	1.046	0.933	1.173	0.442	0.000
rs91731	1.015	0.911	1.131	0.789	0.000
rs79898473	1.038	0.970	1.110	0.280	0.385
rs9689096	1.026	0.895	1.175	0.715	0.085
rs9357446	1.008	0.946	1.073	0.814	0.000
rs9472541	1.046	0.976	1.120	0.202	0.445
rs9385988	1.072	0.999	1.150	0.052	0.000
rs803923	1.080	1.015	1.150	0.014	0.552
rs967497	0.983	0.920	1.051	0.616	0.000
rs7899503	0.973	0.893	1.062	0.543	0.000
rs7971039	1.023	0.955	1.095	0.524	0.000
rs972936	1.025	0.956	1.099	0.488	0.018
rs9533803	1.018	0.942	1.099	0.655	0.000
rs803765	1.017	0.953	1.085	0.613	0.241
rs9634470	1.082	1.008	1.162	0.030	0.641
rs79234094	1.089	1.015	1.169	0.018	0.000
rs8025774	1.028	0.954	1.109	0.468	0.000
rs8082036	1.000	0.939	1.065	0.994	0.343
rs8067511	1.000	0.920	1.087	0.998	0.430
rs8068952	1.023	0.948	1.103	0.564	0.000
rs996865	1.088	0.968	1.222	0.157	0.135
rs8089099	0.988	0.920	1.061	0.739	0.000
rs9807668	0.981	0.882	1.090	0.721	0.000
rs8089865	0.962	0.903	1.025	0.233	0.000
rs9636166	1.040	0.948	1.142	0.406	0.000

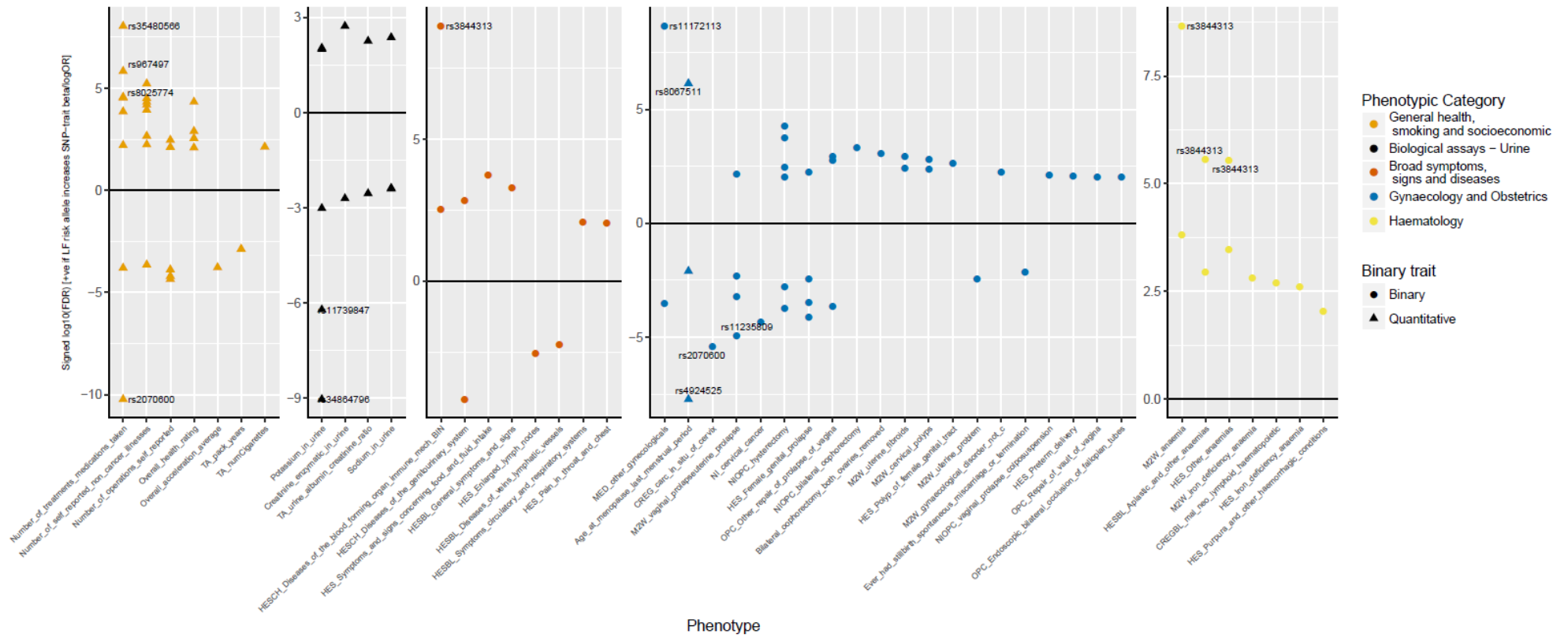












Supplementary Tables

Supplementary Table 1: UK Biobank demographics

Demographic information for UK Biobank samples of European ancestry used in discovery.

	All	Females	Males
N Total	321,047	178,489	142,558
Age range (y) at lung function measurement	39-72	39-71	39-72
Mean age, y (s.d.)	56.44 (8.02)	56.24 (7.92)	56.70 (8.12)
Mean height, cm (s.d.)	168.57 (9.13)	162.77 (6.18)	175.83 (6.70)
Mean FEV₁, L (s.d.)	2.84 (0.76)	2.44 (0.52)	3.34 (0.72)
Mean FVC, L (s.d.)	3.74 (0.96)	3.18 (0.62)	4.43 (0.86)
Mean FEV₁/FVC (s.d.)	0.76 (0.06)	0.77 (0.06)	0.75 (0.07)
Mean PEF, L/min (s.d.)	406.19 (117.55)	342.12 (74.96)	486.40 (111.84)
N never smokers	173,658	106,298	67,360
N ever smokers	147,389	72,191	75,198
UK BiLEVE array	49,107	24,566	24,541
UK Biobank array	271,940	153,923	118,017

Supplementary Table 2: SpiroMeta Studies

B58C (B58C-T1DGC, British 1958 Birth Cohort–Type 1 Diabetes Genetics Consortium; B58C-GABRIEL British 1958 Birth Cohort–GABRIEL consortium; B58C-WTCCC, British 1958 Birth Cohort–Wellcome Trust Case Control Consortium); BHS1&2, Busselton Health Study 1 and 2; the CROATIA- Korcula study; the CROATIA-Split study; the CROATIA-Vis study; EPIC population based, European Prospective Investigation into Cancer and Nutrition Cohort; GS:SFHS, Generation Scotland: Scottish Family Health Study; H2000, Finnish Health 2000 survey; KORA F4, Cooperative Health Research in the Region of Augsburg; KORA S3, Cooperative Health Research in the Region of Augsburg; LBC1936, Lothian Birth Cohort 1936; NFBC1966, Northern Finland Birth Cohort of 1966; NFBC1966, Northern Finland Birth Cohort of 1986; NSPHS, Northern Sweden Population Health Study; ORCADES, Orkney Complex Disease Study; PIVUS, Prospective Investigation of the Vasculature in Uppsala Seniors; SHIP, Study of Health in Pomerania; SHIP-TREND; UKHLS; VIKING; YFS, the Young Finish Study. The total size in this table is not exactly equal to the maximum sample size given in the main text, since some studies had subtly different subsets of individuals entering each of the four lung function trait GWAS.

Study name	N Total	N male	N female	Age range (y) at lung function measurement	Mean age, y (s.d.)	Mean height, cm (s.d.)	Mean FEV ₁ , L (s.d.)	Mean FVC, L (s.d.)	Mean FEV ₁ /FVC (s.d.)	Mean PEF, L/min (s.d.)	N never smokers	N ever smokers	Genotyping Platform	Imputation Panel
B58C	5934	2955	2979	44-45	45.12 (0.38)	169.43 (9.29)	3.30 (0.76)	4.19 (0.98)	0.79 (0.08)	--	1709	4225	Illumina 550k/610k	1000G
BHS1&2	4355	1922	2433	17-97	51.21 (17.00)	168.00 (9.39)	3.01 (0.96)	3.88 (1.16)	0.77 (0.07)	--	2301	2054	Illumina 610-Quad (N=1,168) & Illumina 660W-Quad (N=3,428)	1000G
CROATIA-Korcula	826	302	524	18-90	55.63 (13.50)	168.10 (9.20)	2.72 (0.83)	3.29 (0.96)	0.83 (0.1)	--	403	423	Illumina HumanHap370CNV duo chip	1000G
CROATIA-Split	493	210	283	18-85	49.08 (14.63)	172.60 (9.49)	3.19 (0.91)	3.80 (1.06)	0.84 (0.08)	--	239	254	Illumina HumanHap370CNV quad chip	1000G
CROATIA-Vis	925	390	535	18-88	55.90 (15.51)	167.80 (9.88)	3.42 (1.21)	4.41 (1.42)	0.77 (0.09)	--	388	537	Illumina Infinium HumanHap300 BeadChip	1000G
EPIC population based	20771	9664	11107	39-79	59.1 (9.27)	167.1 (9.08)	2.51 (0.74)	3.06 (0.93)	0.83 (0.11)	364.07 (123.16)	9532	11239	Affymetrix UKBioBank Axiom	HRC
GS:SFHS	16048	6633	10415	18-99	46.87 (14.6)	168.4 (9.50)	2.97 (0.88)	3.88 (1.00)	0.76 (0.11)	--	8581	7467	Illumina OmniExpress+Exome	HRC
H2000	821	394	427	30-75	50.47 (10.91)	169.10 (9.14)	3.29 (0.9)	4.16 (1.07)	0.79 (0.07)	--	249	572	Illumina HumanHap 610K	1000G
KORA F4	1474	717	757	41-84	55.08 (9.90)	169.15 (9.42)	3.23 (0.85)	4.19 (1.05)	0.77 (0.07)	--	556	918	Affymetrix Axiom	1000G
KORA S3	1147	551	596	28-89	50.82 (15.23)	169.22 (9.32)	3.34 (0.90)	4.10 (1.06)	0.81 (0.08)	--	520	627	Illumina Omni 2.5/ Illumina Omni Express	1000G
LBC1936	991	501	490	68-71	69.55 (0.84)	166.44 (8.93)	2.38 (0.67)	3.04 (0.87)	0.79 (0.10)	--	437	554	Illumina 610-Quadv1	1000G
NFBC1966	5078	2417	2661	30-32	31.15 (0.35)	171.24 (9.09)	3.95 (0.79)	4.72 (0.99)	0.84 (0.06)	--	2478	2600	Illumina HumanCNV-370DUO Analysis BeadChip	HRC

Study name	N Total	N male	N female	Age range (y) at lung function measurement	Mean age, y (s.d.)	Mean height, cm (s.d.)	Mean FEV ₁ , L (s.d.)	Mean FVC, L (s.d.)	Mean FEV ₁ /FVC (s.d.)	Mean PEF, L/min (s.d.)	N never smokers	N ever smokers	Genotyping Platform	Imputation Panel
NFBC1986	3210	1516	1694	14-16	16.01 (0.37)	169.34 (8.43)	3.78 (0.70)	4.31 (0.85)	0.88 (0.08)	--	2476	734	Illumina Human Omni Express Exome 8v1.2	HRC
NSPHS	871	400	471	14-91	49.20 (20.00)	164.00 (10.10)	2.92 (0.90)	3.53 (1.06)	0.83 (0.09)	--	750	121	Illumina Infinum HapMap 300 v2 & Illumina Human OmniExpress	1000G
ORCADES	1802	719	1083	16-91	54.00 (15.00)	166.00 (9.20)	2.89 (0.83)	3.61 (0.99)	0.79 (0.08)	--	1022	780	Illumina Hap300, Illumina Omni1 & Illumina OmniX	1000G
PIVUS	806	395	411	69-72	70.20 (0.176)	169.09 (9.208)	2.45 (0.680)	3.23 (0.869)	0.764 (0.103)	--	393	413	Illumina OmniExpress and Metabochip	HRC
SAPALDIA	1378	665	713	18-61	41.30 (11.20)	169.47 (9.12)	3.53 (0.86)	4.50 (1.04)	0.78 (0.08)	--	631	747	Illumina 610k quad	1000G
SHIP	1759	860	899	20-80	47.17 (13.67)	169.7 (9.13)	3.28 (0.89)	3.87 (1.03)	0.85 (0.06)	437.58 (125.17)	818	941	Affymetrix SNP 6.0	HRC
SHIP-TREND	804	363	441	21-81	51.24 (13.34)	169.9 (9.00)	3.29 (0.87)	4.14 (1.06)	0.80 (0.06)	392.82 (125.91)	342	462	Illumina Human Omni 2.5	HRC
UKHLS	7442	3290	4152	16-99	53.11 (15.94)	167.7 (9.45)	2.84 (0.90)	3.83 (1.09)	0.75 (0.09)	--	2938	4504	Illumina CoreExome v1.0	HRC
VIKING	1701	672	1029	18-91	50.72 (14.97)	168 (0.09)	3.07 (0.81)	4.02 (0.96)	0.76 (0.09)	450.08 (130.14)	943	757	Illumina OmniExpress Exome	HRC
YFS	419	198	221	30-47	38.88 (5.07)	172.25 (8.90)	3.73 (0.75)	4.68 (0.99)	0.8 (0.06)	--	233	186	Illumina 670k custom	1000G

Supplementary Table 3: SpiroMeta analysis method

Study name	Individual call rate filter (applied before imp'n)	SNP call rate filter (applied before imp'n)	SNP HWE <i>P</i> filter (applied before imp'n)	SNP MAF filter (applied before imp'n)	Other filters	No of SNPs after filtering (before imp'n)	Imputation software and version	Reference panel used for imp'n	Genotype-phenotype association software
B58C	None	>=95%	≥0.0001 (tested on females only for chromosome X)	≥1%	Consistent allele frequencies across data deposits ($P \geq 0.0001$ for pairwise comparisons) and for chrX SNPs, consistent allele frequencies between males and females ($P \geq 0.0001$).	500,521 (including 11,696 chrX)	MACH 1.0.18 & Minimac 2012-11-16	1000 Genomes Phase 1 March 2012	probABEL 0.1-9e
BHS1&2	0.95	0.95	1.00E-06	0.01	Individuals were removed if they had sex inconsistencies, had heterozygosity >5 s.d. from the mean, were PCA outliers, were 1 individual from a pair of duplicates or had IBD inconsistencies.	521,307	Minimac and MACH1 v1.0.18	b37; 1000 Genomes Phase 1 March 2012	ProbABEL
CROATIA-Korcula	97%	98%	1.00E-06	0.01		316,879	SHAPEIT2, IMPUTE2	b37; ALL (1000 Genomes Phase 1 integrated release v3, April 2012)	ProbABEL
CROATIA-Split	97%	98%	1.00E-06	0.01		321,727	SHAPEIT2, IMPUTE2	b37; ALL (1000 Genomes Phase 1 integrated release v3, April 2012)	ProbABEL
CROATIA-Vis	97%	98%	1.00E-06	0.01		273,671	SHAPEIT2, IMPUTE2	b37; ALL (1000 Genomes Phase 1 integrated release v3, April 2012)	ProbABEL
EPIC population based	None	95%	1.00E-08	Per-plate basis	Monomorphic SNPs; chr 23-26; INDELS; monomorphic; call rate<95%; chr-pos-allels duplicates; delta-AF > 0.2; delta_AF>0.1 if MAF<0.01. Oxford QC:) exclude SNPs if not in HRC ref (no INDEL in HRC ref); 2) exclude if don't match on chr-pos-allele; 3) strand check and flip; 4) exclude if delta-AF>0.2; 5) exclude A/T and G/C SNPs with MAF>0.4 in ref; 6) exclude if chr-pos duplicates	708,715	SHAPEIT v2.r790, Oxford	HRC v1.0, 1000 Genomes p3	BOLT-LMM v2.2
GS:SFHS	97%	98%	1.00E-06	0.01	Genetic ancestry outliers; monomorphic SNPs; high heterozygosity	602,451	SHAPEIT2 v2.r837, Sanger	HRC panel v1.1, European	REGSCAN

Study name	Individual call rate filter (applied before imp'n)	SNP call rate filter (applied before imp'n)	SNP HWE P filter (applied before imp'n)	SNP MAF filter (applied before imp'n)	Other filters	No of SNPs after filtering (before imp'n)	Imputation software and version	Reference panel used for imp'n	Genotype-phenotype association software
H2000	0.95	0.95 (0.99 for SNPs with MAF < 0.05)	1.00E-06	0.01		553,722	IMPUTE version 2.2.2	1,000 Genomes haplotypes -- Phase I integrated variant set release (v3) in NCBI build 37 (hg19) coordinates	SNPTest
KORA F4	0.97	0.98	5x10-6	0.01	-mismatch of phenotypic and genetic gender - 5s.d. from mean heterozygosity rate - check for European ancestry - check for population outlier	523,260 (chr 1-26) 508,532 (chr 1-22) 14,096(chrX-nonPAR) 444(chrX-PAR1) 58(chrX-PAR2)	SHAPEIT v2, IMPUTE v2.3.0	1000g phase1 all (ALL_1000G_phase1integrated_v3_impute_mac1)	SNPTEST v2.4.1
KORA S3	0.97	0.98	5x10-6	0.01	person wise: -mismatch of phenotypic and genetic gender - 5s.d. from mean heterozygosity rate - check for European ancestry - check for population outlier SNP wise: only SNPs that were genotyped with good quality on both chips	600641 (chr 1-26) 588307 (chr 1-22) 14625 (chrX-nonPAR)	SHAPEIT v2, IMPUTE v2.3.0	1000g phase1 all (ALL_1000G_phase1integrated_v3_impute_mac1)	SNPTEST v2.4.1
LBC1936	0.95	0.98	≥0.001	0.01		549,692	minimac 2012-11-16	1000 Genomes version 3, cosmopolitan	mach2qtl
NFBC1966	0.95	0.95	1.00E-04	0.01	Genetic ancestry outliers; monomorphic SNPs; high heterozygosity; Gender mismatch; 0 genetic sex; high heterozygosity; high relatedness	364,535	Eagle v2.3, Michigan	HRC r1.1 2016, European	rvtests
NFBC1986	0.99	0.99	1.00E-04	0.01	Genetic ancestry outliers; monomorphic SNPs; high heterozygosity; Gender mismatch; high heterozygosity; high relatedness	889,119	Eagle v2.3, Michigan	HRC r1.1 2016, European	rvtests
NSPHS	0.9	0.95	3.2E-08 (Infinum) & 1.4E-08 (OmniExpress)	0.01	FDR level of heterozygosity 0.01	306,086 (Infinum) & 631503 (OmniExpress)	Impute2 (v 2.2.2)	hg19, 1000 Genomes	ProbABEL
ORCADES	98%	97%	1.00E-06	1% (Hap300) & monomorphic (Omni & OmniX)	Subject Heterozygosity FDR<1%	287,208 (Hap300), 843723 (Omni) & 654651 (OmniX)	shapeit.v2.r644.+impute_v2.2.2_x86_64_static/impute2	1000G Phase I Integrated Release Version 3 Haplotypes (2010-11 data freeze, 2012-03-14 haplotypes).	probABEL v. 0.4.3

Study name	Individual call rate filter (applied before imp'n)	SNP call rate filter (applied before imp'n)	SNP HWE <i>P</i> filter (applied before imp'n)	SNP MAF filter (applied before imp'n)	Other filters	No of SNPs after filtering (before imp'n)	Imputation software and version	Reference panel used for imp'n	Genotype-phenotype association software
PIVUS	0.95	0.95 (0.99 if MAF<0.05)	1.00E-06	0.01	Genetic ancestry outliers; monomorphic SNPs; >3SD from mean for heterozygosity, pi-hat>0.125, gender discordance	738,583	SHAPEITv2, Oxford	HRC v1.1, all	SNPTEST v2.5
SAPALDIA	95%	95%	1.00E-06	0.01	none	545,131	Mach 1.0.16.a, minimac-omp RELEASE STAMP 2012-05-29 (autosomes) & MiniMac RELEASE STAMP 2012-11-16 (chr X)	build37, 1000 Genomes	probABEL
SHIP	0.92	0.95	1.00E-04	None	Genetic ancestry outliers; gender mismatch; pi-hat>0.25; monomorphic SNPS	760,787	Eagle v2.3, Michigan	HRC v1.1 reference, European	Rvtests
SHIP-TREND	0.94	0.95	1.00E-04	None	Genetic ancestry outliers; gender mismatch; pi-hat>0.25; monomorphic SNPS	1,691,610	Eagle v2.3, Michigan	HRC v1.1 reference, European	Rvtests
UKHLS	0.98	0.98	1.00E-04	None	Genetic ancestry, monomorphic SNPs, heterozygosity 3sd <>mean -visualised at 2 different MAF bins (≥1% and <1%); PI_HAT 0.2; Cluster separation score <0.4; sex check, ethnicity duplicates, withdrawn consent. Pre-imputation variants excluded that were: monomorphic, indels, differed to HRC in terms of strand, alleles, allele frequency (>0.2), A/T & G/C SNPs if MAF >0.4 and not in reference panel.	357,230	Autosomes: Eagle v2.3; ChrX: Shapeit v2.r790, Michigan	Autosomes: HRC r1.1 2016; ChrX: HRC r1.1 2017, European	SNPTEST v2.5
VIKING	0.97	0.98	1.00E-06	MAF>0.01 for OMNI markers; MAF>0.0001 for Exome Chip markers	Genetic ancestry outliers; monomorphic SNPs; Duplicates and siblings	668,762	shapeit2r837 + duohmm; PBWT Sanger	HRC v1.1, European	REGSCAN 0.4

Study name	Individual call rate filter (applied before imp'n)	SNP call rate filter (applied before imp'n)	SNP HWE <i>P</i> filter (applied before imp'n)	SNP MAF filter (applied before imp'n)	Other filters	No of SNPs after filtering (before imp'n)	Imputation software and version	Reference panel used for imp'n	Genotype-phenotype association software
YFS	0.95	0.95	1.00E-06	0.01	heterozygosity, relatedness	546,674	SHAPEIT v1 and IMPUTE v2.2.2	1000 Genomes Phase 1, release v3, March 2012 haplotypes	SNPTEST v.2.4.1

Supplementary Table 4: 139 novel signals

See Excel spreadsheet.

139 independent ($r^2 < 0.1$) novel signals of association with lung function (99 tier 1, 40 tier 2): tier 1 signals meet the criteria $P < 5 \times 10^{-9}$ in UK Biobank and $P < 10^{-3}$ in SpiroMeta; tier 2 signals meet the criteria $P < 5 \times 10^{-9}$ in the meta-analysis and $P < 10^{-3}$ in both UK Biobank and SpiroMeta. UK Biobank p values have genomic control applied using the LD score regression intercept as the inflation factor (**Supplementary Table 27**). No genomic control was applied to SpiroMeta and the meta-analysis as there was no significant inflation after LD score regression. The allele frequencies and individual variant sample sizes for SpiroMeta were calculated based on a working total sample size of 83,118. For two secondary signals (rs10874851 and rs4796334) the association results are from a conditional analysis (no genomic control) where the primary signal is shown in the “conditioned on” column. Direction of effect is consistent for all signals.

Supplementary Table 5: Tier 3 signals

See Excel spreadsheet.

Signals that reached $P < 5 \times 10^{-9}$ in UK Biobank or the meta-analysis of UK Biobank and SpiroMeta, with consistent directions of effect but did not meet $P < 10^{-3}$ in SpiroMeta required to qualify as a Tier 2 signal.

Supplementary Table 6: Association with smoking behaviour

See Excel spreadsheet.

Look up of smoking behaviour for 139 novel signals and 142 previously reported signals associated with lung function in this study. Also show are: lung function association results from the UK Biobank and SpiroMeta meta-analysis. Bold P value for Smoking initiation (SI) or Cigarettes per day (CPD) indicates association with smoking behaviour $P < 1.8 \times 10^{-4}$ (Bonferroni threshold for 281 tests).

Supplementary Table 7: Smoking interaction

See Excel spreadsheet.

Results from stratified analyses of ever / never smokers in UK Biobank, SpiroMeta and a fixed-effects meta-analysis of the two. Evidence of interaction between ever and never smokers was sought by conducting a Welch test on the results of the stratified meta-analysis. A Bonferroni threshold of 1.79×10^{-4} ($p = 0.05/279$ tests) was used.

Supplementary Table 8: Previously reported autosomal signals

See Excel spreadsheet.

184 signals previously reported for lung function or COPD. For inclusion with our 139 novel signals in downstream analyses we first removed 24 non-independent ($r^2 > 0.1$) signals from a recent GWAS of lung function. We also removed 3/6 HLA signals that were not independent, as established in one of our previous publications⁵⁶. We then selected a subset of 142 signals that showed evidence of association in this study (UK Biobank P in bold): $P < 5 \times 10^{-5}$ in 321,047 UK Biobank samples for any lung function phenotype, either for the reported sentinel or a proxy with $r^2 > 0.5$, or if one of our Tier 1 or 2 signals is in LD $r^2 > 0.1$ with the previously reported sentinel. In downstream analyses, we excluded two signals (15q25 and CYP2A6, which have previously been reported to be associated with smoking behaviour, but are not associated with lung function in never smokers in the present study. This left 140 previously reported signals for inclusion in our final set of signals for downstream analyses Where PubMed ID (PMID) is missing, the variants are currently reported on bioRxiv⁵⁷. Whilst this table refers to autosomal signals only, for reference, a further previous signal in chromosome X was not corroborated.⁴⁶

Supplementary Table 9: Results for 279 lung function signals for all 4 traits

See Excel spreadsheet.

Results from the meta-analysis of UK Biobank and SpiroMeta for all 279 reported lung function signals for each of the lung function quantitative traits FEV₁, FVC, FEV₁/FVC and PEF.

Supplementary Table 10: Bayesian 99% credible sets

See Excel spreadsheet.

Bayesian 99% credible sets calculated using Wakefield's method⁶¹ for 276 signals: 139 novel and 137 of 140 previously reported showing significant association in this study (3 HLA signals excluded; **Supplementary Table 8**). Effect sizes and standard errors for the credible set calculation are from the meta-analysis of UK Biobank and SpiroMeta; variants with $r^2 > 0.4$ with the sentinel and $P < 10^{-4}$ are included in the calculation the prior probability parameter W is 0.04. For previously reported signals we used the sentinel variant from the meta-analysis of UK Biobank and SpiroMeta in this study. 182 signals have the sentinel with the (joint) highest posterior probability (109 novel, 73 previous); 20 signals have only the sentinel in the credible set (12 novel, 8 previous); 8 signals do not contain the sentinel in the credible set. Individual regions for all of these 276 signals are available to download as a separate file.

Supplementary Table 11: Functional annotation of coding variants in the 99% credible sets

See Excel spreadsheet.

Variants that entered the functional annotation were those annotated as "exonic", "splicing", "ncRNA_exonic", "5' UTR" or "3' UTR" (untranslated region) by ANNOVAR. Annotation software used: SIFT, PolyPhen-2 and FATHMM all annotate missense variants, and CADD annotates non-coding variation. Variant annotated as deleterious (1) versus not (0) if the variant was labelled 'deleterious' by SIFT, 'probably damaging' or 'possibly damaging' by PolyPhen-2, if it had a CADD scaled score ≥ 20 , or was annotated as "damaging" by FATHMM. See also **Online Methods**. Column explanations: All=harmful according to at least one of CADD, SIFT, PolyPhen-2, FATHMM; Post Prob=posterior probability for sentinel variant; Highest PP SNP(s)=SNP(s) with highest posterior probabilities for a credible set; Highest PP=value of highest posterior probability for top SNP for a credible set; Highest Flag=annotated SNP is also top SNP for credible set

Supplementary Table 12: Z-scores and P values for eQTL look up in lung tissue resources

See Excel spreadsheet

Variants in the 99% credible sets that are associated with gene expression at $FDR < 5\%$ in an eQTL resource ($n=1,111$) of lung tissue from Laval University⁶², Canada, Groningen University⁶³, Netherlands and University of British Columbia (UBC)⁶⁴, Canada. The sentinel SNP out of our 279 lung function associated SNPs is given, the SNP most highly associated with expression in the 99% credible set of the lung function sentinel, the posterior probability of this SNP within the credible set, the gene expression Z-score and P value and the eQTL SNP most highly associated with gene expression for that gene (eQTL sentinel).

This table includes the eQTL data for all genes where there was a variant in the credible set with $FDR < 5\%$ for association with expression. Only genes where the eQTL sentinel is in the credible set were added to our list of putative causal genes for downstream analysis.

Supplementary Table 13: Genes implicated by eQTL or pQTL associations or deleterious variants

See Excel spreadsheet

(-): COPD risk allele (FEV_1/FVC decreasing allele) decreases gene expression or protein level. (+): COPD risk allele increases gene expression or protein level. Nine GTEx tissues were screened (n up to 388): Artery Aorta ($n=267$), Artery Coronary ($n=152$), Artery Tibial ($n=388$), Colon Sigmoid ($n=203$), Colon Transverse ($n=246$), Esophagus Gastroesophageal Junction ($n=213$), Esophagus Muscularis ($n=335$), Small Intestine Terminal Ileum ($n=122$), and Stomach ($n=237$) – note direction of gene expression not provided for the genes implicated by these tissues as >1 tissue is screened. 88 genes were implicated where the eQTL sentinel was in our lung function 99% credible set for 58 sentinel SNPs; 5 genes were implicated where the pQTL sentinel was in our lung function 99% credible set for 5 SNPs; 21 genes were implicated by a coding deleterious variant in the 99% credible set for 20 sentinels, giving a union across all 3 look ups of 107 unique putative causal genes. Z-scores and P values for the Lung eQTL look up are in **Supplementary Table 12**.

Footnote:

Genes implicated by a new signal: ADORA2B, ANGPTL1, ATP2A3, BCHE, BTC, C18ORF8, C2orf54, CEP72, CEPT1, CHI3L2, CHP1, CRAT, DHDDS, DRAM2, DST, ECM1, FILIP1L, HMGN2, IER5L, INO80, ITGAV, JAZF1, KIAA0753, LRRC45, MET, MRPS21, NEXN, PITPNM3, PKDCC, PPP2R4, RAD51, RPRD2, SENP3, SHISA4, SPATS2L, THBS4, TNFSF13, TTC19, TXNDC17, UBXN2A, ZFP14, ZFP82.

Genes implicated by a previously reported signal that were not previously implicated⁵⁶: AAGAB, AP3B1, ARHGEF17, ATXN2L, C1QTNF5, CCDC101, CDK2, CENPW, CLN3, CRKRS, DSP, EEF1G, EIF3C, FAM168A, FBXL20, GDF5, IQCH, ITPKA, LTK, NPIPL1, PYGB, RPAP1, SBK1, SCARF2, SH2B1, SLMAP, SMAD3, SULT1A1, SULT1A2, TUFM, TYRO3, UQCC1

Supplementary Table 14: Proteins implicated by pQTL analysis

Lung function sentinel SNPs where one of the SNPs in the 99% credible set is the most highly associated SNP for a protein (top pSNP) in Sun *et al.* protein expression dataset⁶⁵ and the association with protein levels is $P < 5.03 \times 10^{-8}$ (5% Bonferroni-adjusted threshold for 276 independent sentinel SNPs x 3,600 plasma protein levels tested).

Novelty	Nearest Gene	Trait	Sentinel SNP ID	Sentinel SNP chrom: Position (b37)	Sentinel SNP Coded/ Noncoded	Top pSNP	Top pSNP chrom: Position (b37)	Top pSNP Noncoded	Top pSNP Coded	Top pSNP Beta (SE)	P-value	Protein
Novel (Tier 1)	<i>C1orf54</i>	PEF	rs11205354	1:150,476,516	A/G	rs11205385	1:150,476,516	G	A	-0.3153 (0.0245)	8.91E-38	ECM1
Novel (Tier 1)	<i>KRTCAP2</i>	FEV ₁ /FVC	rs141942982	1:155,153,537	T/C	rs111508230	1:155,153,537	C	T	0.2170 (0.0388)	2.19E-08	THBS4
Previous	<i>NPNT</i>	FEV ₁	rs34712979	4:106,819,053	A/G	rs34712979	4:106,819,053	G	A	-0.2274 (0.0280)	4.57E-16	NPNT
Previous	<i>P4HA2-AS1</i>	FVC	rs3843503	5:131,567,924	A/G	rs11955347	5:131,567,924	G	A	-0.2464 (0.0245)	9.12E-24	C1QTNF5
Previous	<i>SCARF2</i>	FEV ₁ /FVC	rs9610955	22:20,775,556	T/G	rs738086	22:20,775,556	G	T	0.2997 (0.0318)	4.79E-21	SCARF2

Supplementary Table 15: Pathway analysis

Gene-based pathway enrichment analyses. Summary of gene-sets overrepresented in known biological pathways and gene ontology (GO) terms. GO term categories (m= molecular function, b= biological process, c= cellular component) and levels (1 to 5 with high level GO terms assigned to level 1) are indicated. The effective size is the number of genes present in that respective pathway or GO term. Pathways or gene sets represented by only 2 genes from the same association signal have been excluded. FDR: False discovery rate. Novel genes from novel and previous signals are marked with a dagger (†) and double dagger (‡), respectively.

Genes that contain an eQTL that is in our 99% credible sets (thirteen tissues/datasets) and/or 'deleterious' coding variant (n=104 genes)				
Enriched biological pathways				
P value	FDR	pathway	Genes associated with biological pathway	Total size of pathway gene-set
4.26E-07	9.33E-05	Molecules associated with elastic fibres	<i>ITGAV</i> †; <i>TGFB2</i> ; <i>LTBP4</i> ; <i>MFAP2</i> ; <i>GDF5</i> ‡	30
9.51E-07	0.000104	Elastic fibre formation	<i>ITGAV</i> †; <i>TGFB2</i> ; <i>LTBP4</i> ; <i>MFAP2</i> ; <i>GDF5</i> ‡	35
3.51E-05	0.00241	Extracellular matrix organization	<i>MMP15</i> ; <i>TGFB2</i> ; <i>LTBP4</i> ; <i>DST</i> †; <i>ITGAV</i> †; <i>P4HA2</i> ; <i>MFAP2</i> ; <i>GDF5</i> ‡; <i>ADAM19</i>	294
0.000158	0.00812	Malaria - Homo sapiens (human)	<i>MET</i> †; <i>TGFB2</i> ; <i>LRP1</i> ; <i>THBS4</i> †	49
0.000497	0.017	Extracellular vesicle-mediated signaling in recipient cells	<i>MET</i> †; <i>TGFB2</i> ; <i>SMAD3</i> ‡	30
0.00059	0.018468	Alpha6Beta4Integrin	<i>MET</i> †; <i>DST</i> †; <i>DSP</i> ‡; <i>SMAD3</i> ‡	74
0.001345	0.036822	TGF-Core	<i>TGFB2</i> ; <i>GDF5</i> †; <i>SMAD3</i> ‡	42
Enriched gene ontology terms				
P value	FDR	Name of GO term (GO term category/level)	Genes associated with GO term	Total size of pathway gene-set
2.39E-05	0.007332	cytoskeleton organization (b/4)	<i>TGFB2</i> ; <i>LRP1</i> ; <i>CEP72</i> †; <i>ARHGEF17</i> ‡; <i>DST</i> †; <i>CHP1</i> †; <i>INO80</i> †; <i>DSP</i> ‡; <i>SMAD3</i> ‡; <i>ITPKA</i> ‡; <i>PTPA</i> †; <i>CDK2</i> ‡; <i>FGD6</i> ; <i>MYPN</i> ; <i>NEXN</i> †; <i>MAPT</i> ; <i>KIAA0753</i> †	1075
0.000271	0.034539	regulation of cartilage development (b/5)	<i>TGFB2</i> ; <i>PKDC</i> †; <i>GDF5</i> ‡; <i>SMAD3</i> ‡	62
0.000319	0.025007	ammonium ion metabolic process (b/3)	<i>CRAT</i> †; <i>TGFB2</i> ; <i>CEPT1</i> †; <i>SLC22A5</i> ; <i>CLN3</i> ‡; <i>BCHE</i> †	182
0.00036	0.025007	organelle organization (b/3)	<i>TGFB2</i> ; <i>CHP1</i> †; <i>INO80</i> †; <i>BTC</i> †; <i>SMAD3</i> ‡; <i>AP3B1</i> ‡; <i>GDF5</i> ‡; <i>ITPKA</i> ‡; <i>CLN3</i> ‡; <i>RAD51</i> †; <i>UBXN2A</i> †; <i>MYPN</i> ; <i>NEXN</i> †; <i>FGD6</i> ; <i>CEP72</i> †; <i>ARHGEF17</i> ; <i>DST</i> †; <i>DSP</i> ‡; <i>SH2B1</i> ‡; <i>CENPW</i> ‡; <i>KIAA0753</i> †; <i>ATXN2L</i> ‡; <i>LRP1</i> ; <i>UQCC1</i> ‡; <i>MRPS21</i> †; <i>PTPA</i> †; <i>CDK2</i> ‡; <i>MAPT</i> ; <i>TTC19</i> †; <i>TUFM</i> ‡	3207
0.000371	0.025007	centriole replication (b/3)	<i>CDK2</i> ‡; <i>KIAA0753</i> †; <i>CEP72</i> †	28

0.000405	0.004661	protein kinase activity (m/5)	<i>TGFB2; LTBP4; CDK12‡; PKDCC‡; ITPKA‡; MET‡; CDK2‡; BTC‡; LTK‡; SBK1‡; TYRO3‡</i>	646
0.000413	0.034539	positive regulation of cartilage development (b/5)	<i>PKDCC‡; GDF5‡; SMAD3‡</i>	29
0.000691	0.034539	transforming growth factor beta2 production (b/5)	<i>TGFB2; SMAD3‡</i>	8
0.000691	0.034539	mitochondrial respiratory chain complex III assembly (b/5)	<i>UQCC1‡; TTC19‡</i>	8
0.000786	0.022497	transmembrane receptor protein kinase activity (m/4)	<i>LTK‡; MET‡; LTBP4; TYRO3‡</i>	82
0.000939	0.037577	positive regulation of ossification (b/5)	<i>NPNT; TGFB2; PKDCC‡; SMAD3‡</i>	86
0.001016	0.045883	microtubule-based process (b/3)	<i>AP3B1‡; CEP72‡; DST‡; CHP1‡; INO80‡; PTPA‡; CDK2‡; CLN3‡; MAPT; KIAA0753‡</i>	611
0.001136	0.045883	extracellular structure organization (b/3)	<i>MMP15; TGFB2; THSD4; ITGAV‡; SMAD3‡; NPNT; MFAP2</i>	318
0.001481	0.049872	phosphorus metabolic process (b/3)	<i>DHDDS‡; CHP1‡; TGFB2; BTC‡; SMAD3‡; PKDCC‡; ADORA2B‡; MET‡; CDK12‡; GDF5‡; ITPKA‡; CARD9; CLN3‡; RAD51‡; SULT1A1‡; NUDT5; SULT1A2‡; LTK‡; SBK1‡; TYRO3‡; INPP5E; RSRC1; CEPT1‡; ITGAV‡; NPNT; PTPA‡; CDK2‡; PITPNM3‡</i>	3164
0.00149	0.022497	phosphatase binding (m/4)	<i>AP3B1‡; MET‡; PTPA‡; MAPT; SMAD3‡</i>	165
0.001512	0.04837	regulation of chondrocyte differentiation (b/5)	<i>PKDCC‡; GDF5‡; SMAD3‡</i>	45
0.001824	0.022497	phosphotransferase activity, alcohol group as acceptor (m/4)	<i>TGFB2; LTBP4; CDK12‡; PKDCC‡; ITPKA‡; MET‡; CDK2‡; BTC‡; LTK‡; SBK1‡; TYRO3‡</i>	777
0.001846	0.04837	regulation of neuron death (b/5)	<i>TGFB2; LRP1; CHP1‡; GDF5‡; CLN3‡; TYRO3‡</i>	255
0.001935	0.04837	catechol-containing compound metabolic process (b/5)	<i>TGFB2; SULT1A1‡; SULT1A2‡</i>	49
0.002171	0.012484	transforming growth factor beta receptor binding (m/5)	<i>TGFB2; GDF5‡; SMAD3‡</i>	51
0.002884	0.026674	transforming growth factor beta binding (m/4)	<i>LTBP4; ITGAV‡</i>	16
0.003486	0.016037	protein phosphatase binding (m/5)	<i>AP3B1‡; MET‡; MAPT; PTPA‡</i>	123
0.004122	0.030499	kinase activity (m/4)	<i>TGFB2; LTBP4; CDK12‡; PKDCC‡; ITPKA‡; MET‡; CDK2‡; BTC‡; LTK‡; SBK1‡; TYRO3‡</i>	864
0.004328	0.016592	transmembrane receptor protein tyrosine kinase activity (m/5)	<i>LTK‡; MET‡; TYRO3‡</i>	65

Supplementary Table 16: Stratified LD score regression analysis of FEV₁/FVC and FVC heritability enrichment at lung and smooth-muscle specific histone marks

Cell type	Chromatin mark	Proportion of overlapping SNPs	Trait	Proportion of heritability [#]	Proportion of heritability standard error	Fold Enrichment	Enrichment standard error	Enrichment P-value
Fetal Lung	H3K4me3	1.07%	FEV1/FVC	14.80%	0.024	13.78	2.23	3.40E-08
	H3K4me3		FVC	9.20%	0.018	8.57	1.65	8.59E-06
	H3K4me1	6.99%	FEV1/FVC	57.09%	0.04	8.16	0.57	2.85E-25
	H3K4me1		FVC	35.84%	0.027	5.13	0.39	4.19E-21
	H3K9ac	1.30%	FEV1/FVC	18.72%	0.027	14.40	2.09	1.36E-10
	H3K9ac		FVC	11.74%	0.021	9.03	1.58	9.90E-07
Lung	H3K4me3	0.56%	FEV1/FVC	4.66%	0.016	8.29	2.82	0.009967
	H3K4me3		FVC	4.47%	0.016	7.95	2.83	0.015267
	H3K4me1	1.75%	FEV1/FVC	12.70%	0.024	7.24	1.39	1.32E-05
	H3K4me1		FVC	6.99%	0.017	3.99	0.94	0.001545
Colon Smooth Muscle	H3K4me3	1.44%	FEV1/FVC	14.39%	0.021	9.99	1.47	3.95E-09
	H3K4me3		FVC	10.67%	0.017	7.41	1.2	2.80E-07
	H3K4me1	3.52%	FEV1/FVC	26.77%	0.028	7.61	0.78	2.04E-15
	H3K4me1		FVC	18.02%	0.021	5.12	0.61	7.99E-11
	H3K9ac	0.57%	FEV1/FVC	5.29%	0.013	9.32	2.33	0.000339
	H3K9ac		FVC	3.14%	0.012	5.54	2.06	0.029484
	H3K27ac	2.54%	FEV1/FVC	15.53%	0.022	6.12	0.88	1.97E-08
	H3K27ac		FVC	11.02%	0.015	4.35	0.61	1.47E-07
Stomach Smooth Muscle	H3K4me3	2.00%	FEV1/FVC	20.39%	0.022	10.15	1.1	1.19E-14
	H3K4me3		FVC	13.79%	0.018	6.86	0.9	3.56E-10
	H3K4me1	2.39%	FEV1/FVC	21.13%	0.023	8.83	0.95	4.51E-14
	H3K4me1		FVC	14.85%	0.02	6.20	0.82	9.61E-10
	H3K9ac	1.40%	FEV1/FVC	14.55%	0.022	10.38	1.55	5.12E-09
	H3K9ac		FVC	9.27%	0.017	6.62	1.21	4.98E-06
	H3K27ac	2.67%	FEV1/FVC	17.72%	0.023	6.64	0.88	9.50E-10
	H3K27ac		FVC	10.22%	0.015	3.83	0.58	2.03E-06

[#]Proportion of SNP-chip heritability explained by overlapping SNPs

Supplementary Table 17: DeepSEA prediction of functional effect

See Excel spreadsheet.

DeepSEA predictions for the SNPs in the 99% credible sets (total n=9446 SNPs) in lung-related cell lines from the RoadMap Epigenome and ENCODE projects. We queried four lung-related cell lines (foetal lung, foetal lung fibroblasts [IMR90], human lung fibroblasts [NHLF] and adenocarcinomic human alveolar basal epithelial cells [A549]) for which 55 chromatin features and transcription factor binding sites were measured. The absolute difference between reference and alternative allele is shown. Only the results for the 161 SNPs with a predicted functional effect (i.e. absolute difference ≥ 0.1) in ≥ 1 cell line are presented. SNPs which have the highest posterior probability in their respective credible sets are coloured in red. Non-significant results (i.e. absolute difference between reference and alternative allele < 0.1) are replaced with a “-“ for clarity. E-values (i.e. the expected proportion of SNPs with larger predicted effect for this chromatin feature based on empirical distributions of predicted effects for 1000 Genomes SNPs) for each result are presented in brackets. E-values < 0.05 and < 0.01 are highlighted in red and green, respectively.

Supplementary Table 18: Druggability analysis

See Excel spreadsheet. Please note that it is possible to filter this table using the drop-down arrows at the top of each column.

Table showing drugs interacting with either high-priority genes that were identified in eQTL or pQTL analysis or annotated as deleterious (N=107) (**Supplementary Table 13**).

The 107 genes were queried against gene-drug interactions within the Drug-Gene Interactions Database (DGIDB) (<http://www.dgidb.org/data/>). The 68 drugs (identified from ChEMBL interactions) that mapped to these genes were mapped to ChEMBL IDs and indications (as Medical Subject Headings, or ‘MeSH’ terms, <https://www.ebi.ac.uk/chembl/drug/indications>). For each gene, the sentinel SNP that implicated this gene is given. Drug names associated with each gene, plus ChEMBL IDs, and drug indications (with maximum development phase in brackets) are also shown.

Column explanations:

- Drug=compound/drug name;
- ChEMBL_ID=compound identification number from ChEMBL;
- OriginalGeneAndSource=The name(s) of the gene (amongst the set of 107 high priority genes) interacting with the drug;
- IndicationPhase=Drug indication (Phase). Phase 1: Testing of drug on healthy volunteers for dose-ranging; Phase 2: Testing of drug on patients to assess efficacy and safety; Phase 3: Testing of drug on patients to assess efficacy, effectiveness and safety; and Phase 4: Approval of drug and post-marketing surveillance.
- MAB=Drug is a monoclonal antibody;
- OriginalGenesPathway=the gene given in the ‘Original Gene and Source’ column is a gene identified in the ‘Enriched Biological Pathways’ shown in **Supplementary Table 15**;
- Cancer=the drug is used to treat some form of cancer;
- Phase3or4=the drug has at least one indication annotated as Phase 3 or 4;
- AsthmaCOPD=the drug is already indicated as being used in asthma or COPD;
- Novelty=the drug is implicated for use by genes identified from novel signals in this GWAS.

Supplementary Table 19: UK Biobank and China Kadoorie Biobank COPD and FEV₁/FVC weighted genetic risk score association results (per-allele and per standard deviation) by ancestry

Individuals in UKB Biobank and China Kadoorie Biobank were included for this analysis, and UK Biobank individuals were divided into ancestry groups as described in **Supplementary Figure 1**. The weighted genetic risk score was tested for association with COPD and FEV₁/FVC. COPD was defined as FEV₁/FVC<0.7 and FEV₁<80% predicted (i.e. corresponding to GOLD 2-4 standards). The COPD model (a logistic regression, with COPD coded as COPD [1] vs. no COPD [0]) was adjusted as described in the **Online Methods**. The COPD model was only fitted in ancestral groups with >100 COPD cases. For the FEV₁/FVC model, linear regression was used. The phenotype was as prepared for the main GWAS described in this paper (see **Online Methods**).

Ancestry	per Allele			per Standard Deviation			P	Total N	N Control	N Case	Mean risk score	SD risk score
	Effect size* (OR/Beta)	95LCI	95UCI	Effect size* (OR/Beta)	95LCI	95UCI						
COPD												
UK Biobank African	1.033	1.015	1.050	1.348	1.152	1.577	1.92E-04	4225	4053	172	305.95	9.26
UK Biobank South Asian	1.030	1.020	1.041	1.414	1.254	1.594	1.42E-08	6358	6046	312	308.22	11.66
UK Biobank Chinese**								1607	1558	49	302.38	11.47
UK Biobank European***	1.030	1.029	1.032	1.436	1.411	1.461	<1e-300	303570	288467	15103	307.78	12.16
UK Biobank Mixed African & European								1208	1153	55	305.70	10.67
UK Biobank Mixed Other	1.035	1.024	1.046	1.506	1.325	1.712	3.65E-10	6033	5752	281	305.58	12.04
China Kadoorie Biobank**	1.017	1.014	1.019	1.219	1.182	1.256	3.31E-40	75580	69567	6013	298.22	11.84
FEV₁/FVC												
UK Biobank African	-0.009	-0.013	-0.006	-0.086	-0.116	-0.056	2.12E-08	4225			305.95	9.26
UK Biobank South Asian	-0.015	-0.018	-0.013	-0.181	-0.205	-0.156	3.72E-47	6358			308.22	11.66
UK Biobank Chinese**	-0.012	-0.017	-0.008	-0.142	-0.191	-0.093	1.44E-08	1607			302.38	11.47
UK Biobank European***	-0.018	-0.019	-0.018	-0.224	-0.227	-0.221	<1e-300	303570			307.78	12.16
UK Biobank Mixed African & European	-0.016	-0.022	-0.011	-0.176	-0.231	-0.120	7.01E-10	1208			305.70	10.67
UK Biobank Mixed Other	-0.015	-0.018	-0.013	-0.186	-0.211	-0.162	7.00E-48	6033			305.58	12.04
China Kadoorie Biobank**	-0.007	-0.007	-0.006	-0.078	-0.085	-0.071	2.51E-98	72796			298.22	11.84

*Effect sizes are odds ratios for COPD results, and change in Z-score units for FEV₁/FVC results

Four out of 279 SNPs in UKB Chinese monomorphic. For details on missing SNPs in China Kadoorie Biobank participants see **Online Methods.

***Europeans in UK Biobank were the discovery sample for many of the variants in the risk score, which explains the very low p-values in this subgroup.

Supplementary Table 20: Demographics of COPD case-control cohorts included in risk score analysis

Descriptive statistics for each cohort are given separately for cases and controls, for five cohorts: the COPD Gene study, the ECLIPSE study (Evaluation of COPD Longitudinally to Identify Predictive Surrogate End-points), GenKOLS (the Bergen, Norway COPD cohort), NETT/NAS (the National Emphysema Treatment Trial [NETT] and the Normative Aging Study [NAS]) and the SPIROMICS study. Abbreviation: SD=standard deviation; age is given in years, height in centimetres, FEV1 and FVC litres.

Cohort	Case-control status	Total N	% female	Age range	Mean age (SD)	Height range	Mean height (SD)	N with spirometry data	Mean FEV1 (SD)	Mean FVC (SD)	Mean FEV1/FVC (SD)	% ever smokers (N with ever smoking data available)	Pack-years range (N with pack-years data available)	Mean pack-years (SD)
COPDGene (African-American Population)	Cases	910	44.84	45-81	58.6 (8.15)	137-208	170.96 (10.1)	910	1.39 (0.63)	0.534 (0.121)	2.546 (0.879)	100 (910)	10 - 162 (910)	42.69 (23.48)
	Controls	1556	40.94	45-80	52.84 (6.01)	142-203	171.15 (9.33)	1556	2.768 (0.644)	0.785 (0.05)	3.535 (0.839)	100 (1556)	10 - 160.4 (1556)	36.11 (19.1)
COPDGene (Non-Hispanic White Population)	Cases	3068	45.14	45-81	64.38 (8.28)	134-196	169.72 (9.45)	3068	1.424 (0.659)	2.817 (0.908)	0.495 (0.134)	100 (3068)	10 - 237.6 (3068)	54.89 (27.12)
	Controls	2110	51.47	45-81	59.18 (8.64)	140-198	169.54 (9.38)	2110	2.924 (0.679)	3.817 (0.892)	0.768 (0.044)	100 (2110)	10 - 172.5 (2110)	37.34 (20.14)
ECLIPSE	Cases	1713	32.87	40-75	63.64 (7.1)	142-201	169.54 (9.02)	1713	1.213 (0.487)	2.766 (0.873)	0.441 (0.111)	100 (1713)	6 - 220 (1713)	50.5 (27.47)
	Controls	147	42.86	40-74	57.32 (9.55)	151-196	171.24 (9.69)	147	3.164 (0.779)	4.085 (1.03)	0.778 (0.054)	100 (147)	10 - 230 (147)	31.01 (25.94)
GenKOLS	Cases	836	39.23	40-90	65.44 (10.1)	146-197	170 (9.02)	836	1.477 (0.699)	2.863 (0.957)	0.502 (0.126)	100 (836)	3 - 130 (836)	31.88 (18.62)
	Controls	692	48.84	40-88	55.43 (9.74)	151-200	172.05 (8.79)	692	3.214 (0.722)	4.169 (0.935)	0.772 (0.041)	100 (692)	2.5 - 90 (692)	19.4 (13.61)
NETT/NAS	Cases	374	36.1	40-85	67.47 (5.76)	142-190	168.76 (9.53)	374	0.726 (0.236)	2.299 (0.775)	0.324 (0.064)	100 (374)	12 - 260 (371)	66.25 (30.66)
	Controls	429	0	48-89	69.86 (7.5)	156-192	174.46 (6.79)	429	3.032 (0.507)	3.83 (0.627)	0.793 (0.053)	100 (429)	10 - 185.5 (429)	40.69 (27.79)
SPIROMICS	Cases	988	44	41-89	65.74 (7.62)	141-197	170.05 (9.64)	988	1.539 (0.605)	3.194 (0.927)	0.48 (0.13)	100 (988)	20.0 - 450 (988)	56.11 (28.78)
	Controls	537	53	40-80	62.95 (9.0)	149-205	169.54 (9.62)	537	2.824 (0.705)	3.678 (0.913)	0.77 (0.04)	100 (537)	20.0 - 400 (537)	44.76 (26.36)

Supplementary Table 21: External case-control studies COPD risk score association results (per-allele and per standard deviation)

Results of the association between genetic risk scores and COPD risk are given for both weighted (top) and unweighted (bottom) risk scores (comprising 279 novel and previous signals), for five studies: the COPD Gene study, the ECLIPSE study (Evaluation of COPD Longitudinally to Identify Predictive Surrogate End-points), GenKOLS (the Bergen, Norway COPD cohort), NETT/NAS (the National Emphysema Treatment Trial [NETT] and the Normative Aging Study [NAS]) and the SPIROMICS study. COPD Gene is stratified into African-American and Non-hispanic white subgroups. Effect sizes and 95% confidence intervals are given on two scales: a per-Allele (i.e. raw) scale, and a per standard deviation (SD) scale. Standard deviations for the weighted and unweighted risk scores are given for each cohort separately. Abbreviations: AA=African-American; Nhw=Non-Hispanic white; OR=odds ratio; 95LCI/UCI=lower and upper bounds of 95% confidence intervals; P=p-value; N=sample size. A sensitivity analysis was also run, excluding SNP rs13116999 (see ‘Discussion’ of manuscript). The per-allele meta-analytic estimate was consistent after excluding this SNP. *The odd ratios per standard deviation increase in the risk score were estimated as: $\exp(\log OR \text{ on the per allele scale} \times \text{standard deviation of the weighted risk score})$. **Approximated in R as $\sqrt{\text{sum}(SD^2 \cdot (N-1)) / \text{sum}(N-1)}$, where N is a vector of sample sizes, and SD is a vector of standard deviations.

Ancestry	Study group	per Allele			P	per Standard Deviation*			P*	N			Mean risk score	SD risk score
		OR	95LCI	95UCI		OR	95LCI	95UCI		Total	Cases	Controls		
Weighted														
African	COPDGene (AA)	1.023	1.014	1.032	8.36E-07	1.255	1.147	1.374	8.36E-07	2466	910	1556	306.16	10.09
European	COPDGene (NHW)	1.036	1.03	1.041	1.97E-41	1.535	1.442	1.634	1.97E-41	5178	3068	2110	307.72	12.25
European	ECLIPSE	1.039	1.023	1.055	1.42E-06	1.585	1.314	1.912	1.42E-06	1860	1713	147	309.80	12.16
European	GenKOLS	1.042	1.031	1.052	8.99E-15	1.623	1.436	1.834	8.99E-15	1528	836	692	308.05	11.89
European	NETT/NAS	1.032	1.017	1.047	3.13E-05	1.464	1.223	1.751	3.13E-05	803	374	429	307.54	12.16
European	SPIROMICS	1.037	1.027	1.046	4.47E-14	1.539	1.376	1.721	4.47E-14	1525	988	537	307.90	11.95
Meta-analysis of 5 European-ancestry study groups		1.037	1.033	1.041	1.72E-75	1.546	1.476	1.620	1.48E-75	10894	6979	3915	308.13	12.14**
Unweighted														
African	COPDGene (AA)	1.015	1.005	1.025	0.00251	1.147	1.049	1.254	0.00251	2466	910	1556	298.62	9.33
European	COPDGene (NHW)	1.034	1.028	1.04	3.03E-28	1.413	1.329	1.503	3.03E-28	5178	3068	2110	294.74	10.36
European	ECLIPSE	1.037	1.02	1.055	2.45E-05	1.476	1.232	1.769	2.45E-05	1860	1713	147	296.41	10.63
European	GenKOLS	1.046	1.033	1.059	7.58E-13	1.561	1.382	1.764	7.58E-13	1528	836	692	295.60	9.96
European	NETT/NAS	1.019	1.002	1.035	2.73E-02	1.212	1.022	1.439	2.73E-02	803	374	429	294.69	10.48
European	SPIROMICS	1.036	1.025	1.047	1.62E-10	1.435	1.284	1.603	1.62E-10	1525	988	537	294.20	10.27
Meta-analysis of 5 European-ancestry study groups		1.035	1.030	1.039	6.71E-52	1.425	1.362	1.492	4.45e-52	10894	6979	3915	295.07	10.35**

Supplementary Table 22: COPD risk score association results in external case-control studies (per-decile)

Within each study group, individuals were divided according to their value of the weighted genetic risk score. Logistic models were then fitted for each decile, comparing odds of COPD between members of each decile (2-10) and the lowest decile (1, the reference decile). Results were meta-analysed by fixed-effects across the European-ancestry subjects of COPDGene (Non-hispanic white participants), ECLIPSE, GenKOLS, NETT/NAS, SPIROMICS. Results are presented separately for African-American participants of the COPDGene study

Decile	Meta-analysis of 5 European Cohorts*				COPDGene (African-American)			
	OR	LCI	UCI	P	OR	LCI	UCI	P
1	1.000				1.000			
2	1.470	1.207	1.790	1.26E-04	0.881	0.566	1.370	0.573
3	1.572	1.289	1.918	7.97E-06	1.407	0.927	2.135	0.109
4	2.092	1.712	2.555	4.94E-13	1.281	0.838	1.961	0.253
5	2.045	1.678	2.491	1.23E-12	1.639	1.083	2.481	0.020
6	2.033	1.666	2.481	2.93E-12	1.214	0.807	1.825	0.352
7	2.520	2.054	3.091	7.21E-19	1.215	0.784	1.882	0.383
8	2.800	2.282	3.435	5.76E-23	1.376	0.902	2.101	0.139
9	3.961	3.213	4.883	5.15E-38	1.895	1.255	2.863	2.38E-03
10	4.731	3.793	5.900	3.00E-43	2.660	1.753	4.036	4.25E-06

*COPDGene (Non-hispanic white participants), ECLIPSE, GenKOLS, NETT/NAS, SPIROMICS

Supplementary Table 23: Results for single-variant PheWAS

See Excel spreadsheet.

Results are given for 2,411 traits studied. Associations between each trait and each of the 279 SNPs entering the genetic risk score were carried out. Total sample sizes (N), as well as numbers of cases and controls are given. Odds ratios (OR) are given for binary traits, and beta coefficients are given for continuous traits. Confidence intervals (LCI95, UCI95) and P values are also provided, along with false discovery rates. 'FDR.Flag' denotes associations passing an FDR of <0.01 (only associations passing an FDR of 1% are included in this table). 'Quant.Resp.Trait' is a flag variable indicating PheWAS results for those SNPs featuring in the main GWAS. 'Figure.Name' denotes the short plain English label used in **Figure 4** in the main text, allowing for cross reference. Information on each SNP is also given (SNP name, chromosome (CHR), position (BP), effect and non-effect alleles, allele frequency, and imputation quality). Results of all 2,411*279 SNP-trait associations are available from the authors on request, but are not provided here due to their size.

To compare the effect directions in these PheWAS results with the effect direction on lung function, please cross-reference with **Supplementary Table 28**.

Supplementary Table 24: Lung function SNPs associated with asthma and eosinophil counts.

25 of 279 lung function SNPs that are associated with asthma in the UK Biobank PheWAS (FDR<1%) for the UK Biobank category M2W_asthma, except for *HES_asthma (rs9385988) and †TA_NI_pediatric_asthma_under16yo (rs2811415, rs1215 & rs17577877). 12 in bold are additionally associated in the UK Biobank PheWAS with eosinophil counts (FDR<%1 for Eosinophil_count or Eosinophil_percentage). 8 SNPs are in LD ($r^2>0.1$) with previously reported asthma SNPs. The directions, which correspond to the UKB+SpiroMeta lung function meta-analysis, the asthma PheWAS, and the published asthma association (if known) are + for worse lung function and increased asthma risk and - for better lung function and decreased asthma risk (• risk allele not reported for rs3001426).

Nearest gene	rsid	Position (b37)	Coded/ Noncoded	Coded Freq.	Lung function (meta-analysis of UK Biobank & SpiroMeta)				Asthma PheWAS		Asthma published		Directions
					Phenotype	Novel/ previous	Effect (se)	P	OR (95% CI)	P	rsid	r ²	
<i>IL1RL1</i>	rs12470864	2:102926362	A/G	38.5%	FEV ₁ /FVC	Tier 1	-0.02 (0.002)	1.04E-16	1.1 (1.08-1.11)	1.72E-40	rs1420101 ⁶⁶	0.952	+++
<i>EEFSEC</i>	rs2811415	3:127991527	A/G	16.0%	FEV ₁ /FVC	previous	0.031 (0.003)	2.84E-21	0.93 (0.9-0.96)†	3.42E-05†			--
<i>LOC100507661</i>	rs56341938	3:168715808	A/G	48.6%	FEV ₁	previous	-0.024 (0.002)	4.17E-25	1.03 (1.02-1.04)	3.39E-05			++
<i>NPNT</i>	rs34712979	4:106819053	A/G	25.6%	FEV ₁ /FVC	previous	-0.068 (0.003)	4.18E-134	1.04 (1.02-1.05)	9.31E-06			++
<i>HHIP-AS1</i>	rs12504628	4:145436324	T/C	60.4%	FEV ₁ /FVC	previous	-0.07 (0.002)	5.99E-180	1.03 (1.01-1.04)	6.38E-05			++
<i>P4HA2-AS1</i>	rs7713065	5:131788334	A/C	26.5%	FVC	previous	0.009 (0.003)	9.96E-04	1.09 (1.07-1.1)	7.88E-28	rs3749833 ⁶⁷	0.982	-++
<i>HTR4</i>	rs7715901	5:147856392	A/G	60.4%	FEV ₁ /FVC	previous	-0.05 (0.003)	2.44E-92	1.03 (1.02-1.04)	3.08E-05			++
<i>ADAM19</i>	rs10515750	5:156810072	T/C	7.0%	FEV ₁ /FVC	previous	-0.053 (0.005)	2.38E-30	1.07 (1.04-1.1)	6.58E-07			++
<i>ZSCAN31</i>	rs34864796	6:27459923	A/G	12.5%	PEF	previous	-0.053 (0.004)	1.02E-43	1.06 (1.03-1.08)	1.29E-07			++
<i>AGER</i>	rs2070600	6:32151443	T/C	6.3%	FEV ₁ /FVC	previous	0.145 (0.005)	3.00E-189	1.15 (1.12-1.18)	2.20E-24	rs404860 ⁶⁸	0.252	-+-
<i>HLA-DQB1</i>	rs3844313	6:32635629	A/G	25.5%	FEV ₁ /FVC	previous	-0.044 (0.003)	1.06E-54	1.08 (1.06-1.09)	4.06E-20	rs9273373 ⁶⁹	0.234	+++
<i>VTA1</i>	rs9385988	6:142560957	A/G	72.3%	FEV ₁	Tier 1	-0.028 (0.003)	1.40E-26	1.04 (1.02-1.07)*	8.02E-05*			++
<i>JAZF1</i>	rs1513272	7:28200097	T/C	50.0%	FEV ₁	Tier 1	0.02 (0.002)	1.11E-17	0.97 (0.95-0.98)	1.32E-06	rs6977955 ⁶⁷	0.255	---
<i>PPP1R3B</i>	rs330939	8:9018590	T/G	62.1%	FEV ₁ /FVC	Tier 1	0.023 (0.003)	4.46E-21	0.97 (0.96-0.98)	3.99E-05			--
<i>LOC101929563</i>	rs10965947	9:23588583	T/C	45.9%	FEV ₁ /FVC	previous	0.022 (0.002)	4.27E-20	0.97 (0.96-0.98)	1.57E-05			--
<i>IER5L</i>	rs967497	9:131943843	A/G	31.0%	FEV ₁	Tier 2	0.015 (0.003)	2.79E-09	0.97 (0.95-0.98)	2.56E-06			--
<i>SUOX</i>	rs772920	12:56390364	C/G	66.6%	FEV ₁	previous	0.015 (0.003)	6.76E-10	0.94 (0.93-0.96)	4.99E-16	rs1701704 ⁶⁸	0.888	---
<i>LRP1</i>	rs11172113	12:57527283	T/C	58.9%	FEV ₁ /FVC	previous	-0.023 (0.002)	7.04E-21	0.96 (0.95-0.98)	1.40E-07	rs3001426 ⁷⁰	0.578	+•-
<i>SMAD3</i>	rs8025774	15:67483276	T/C	22.4%	FVC	previous	-0.022 (0.003)	5.63E-15	0.94 (0.92-0.95)	6.89E-15			+•-
<i>SH3GL3</i>	rs12438269	15:84502549	T/C	20.7%	FEV ₁ /FVC	previous	0.031 (0.003)	5.97E-26	0.96 (0.94-0.97)	6.66E-07			--
<i>CLDN7</i>	rs1215	17:7163350	A/G	85.7%	FVC	Tier 2	0.022 (0.003)	9.64E-11	0.93 (0.9-0.96)†	2.77E-06†			--
<i>TNFSF12-TNFSF13</i>	rs4968200	17:7448457	C/G	14.2%	FEV ₁	Tier 2	-0.022 (0.003)	4.54E-11	1.05 (1.03-1.07)	1.90E-06			++
<i>FBXL20</i>	rs8067511	17:37611352	T/C	84.5%	FVC	previous	0.018 (0.003)	2.36E-08	0.94 (0.92-0.96)	7.00E-11			--
<i>MAPT-AS1</i>	rs17577877	17:44208218	A/G	77.9%	FEV ₁	previous	0.042 (0.003)	4.71E-48	1.05 (1.02-1.08)†	3.51E-04†			-+

					Lung function (meta-analysis of UK Biobank & SpiroMeta)				Asthma PheWAS		Asthma published		Directions
Nearest gene	rsid	Position (b37)	Coded/ Noncoded	Coded Freq.	Phenotype	Novel/ previous	Effect (se)	P	OR (95% CI)	P	rsid	r ²	
<i>SLC2A4RG</i>	rs6062304	20:62351539	A/T	32.4%	FVC	previous	0.029 (0.003)	4.04E-31	0.97 (0.96-0.99)	1.84E-04	rs6011033 ⁶⁷	0.480	- - -

Supplementary Table 25: Results for PheWAS of weighted genetic risk score

See Excel spreadsheet.

Results are given for 2,453 traits studied. The exposure was the 279-SNP weighted genetic risk score. Each trait was assigned a disease category='Final.Category'). Total sample sizes (N), as well as numbers of cases and controls are given. Odds ratios (OR) are given for binary traits, and beta coefficients are given for continuous traits. Confidence intervals (LCI95, UCI95) and P values are also provided, along with false discovery rates. 'FDR.Flag' denotes associations passing an FDR of <0.01. 'Quant.Resp.Trait' is a flag variable indicating PheWAS results for those SNPs featuring in the main GWAS. 'Figure.Name' denotes the short plain English label used in the Figure in the main text, allowing for cross reference.

Supplementary Table 26: Look-up of new and previously reported lung function signals in GRASP and GWAS catalog

See Excel spreadsheet.

Tabulated results of a lookup of sentinel variants and variants in their respective 99% credible sets against all associations $P < 5 \times 10^{-8}$ in the EBI GWAS catalog (<https://www.ebi.ac.uk/gwas/>) and GRASP (<https://grasp.nhlbi.nih.gov/Overview.aspx>). Associations relating to methylation, expression, metabolite or protein levels, as well as associations with lung function were removed. The table first shows the ID and genomic position of the sentinel variant that was associated with the trait in question (either the sentinel variant, or one of its 99% credible set variants was associated with the trait). Next, the details of the association with lung function for this variant in the current study are shown (trait, whether the signal identified in Tier 1 or Tier 2). If this signal is not a novel signal, details of the original sentinel variant and trait are given. For retrieved studies mapping to the sentinel (or its credible set variants), all reported genes across the studies of interest are given, along with all traits, and the PUBMED IDs of the papers from which associations were retrieved.

Supplementary Table 27: LD score regression results

Results for the regression of each trait FEV₁, FVC, FEV₁/FVC and PEF against the LD score of each variant are shown. Total Observed scale h²: Estimate of heritability, Lambda GC: Usual lambda used for genomic control: inflation due to both confounding and polygenicity, Mean χ^2 : Mean χ^2 statistic from the association testing, Intercept: Intercept of the LD score regression (estimate of inflation due to confounding but not polygenicity; suggested as a more appropriate genomic-control factor), Ratio: Proportion of total inflation due to confounding (Intercept-1)/(Mean χ^2 -1). 95% confidence intervals are shown in brackets.

UK Biobank (n=321,047)	FEV₁	FVC	FEV₁/FVC	PEF
Total Observed scale h²	0.185 (0.173, 0.198)	0.187 (0.175, 0.199)	0.211 (0.19, 0.232)	0.155 (0.14, 0.17)
Lambda GC	1.841	1.841	1.841	1.695
Mean Chi²	2.328	2.355	2.578	2.138
Intercept	1.119 (1.096, 1.142)	1.139 (1.113, 1.164)	1.193 (1.162, 1.225)	1.133 (1.106, 1.159)
Ratio	0.09 (0.072, 0.107)	0.102 (0.083, 0.121)	0.123 (0.103, 0.142)	0.117 (0.094, 0.139)

SpiroMeta (n=79,055)	FEV₁	FVC	FEV₁/FVC	PEF
Total Observed scale h²	0.126 (0.107, 0.145)	0.116 (0.097, 0.134)	0.095 (0.077, 0.113)	0.094 (0.055, 0.134)
Lambda GC	1.146	1.146	1.114	1.017
Mean Chi²	1.194	1.178	1.141	1.017
Intercept	0.998 (0.983, 1.013)	1.003 (0.986, 1.019)	0.993 (0.979, 1.007)	0.972 (0.959, 0.986)
Ratio	<0	0.014 (-0.078, 0.106)	<0	<0

Meta-analysis (n up to 400,102)	FEV₁	FVC	FEV₁/FVC	PEF
Total Observed scale h²	0.154 (0.144, 0.165)	0.152 (0.142, 0.161)	0.152 (0.137, 0.167)	0.131 (0.118, 0.143)
Lambda GC	1.757	1.781	1.581	1.489
Mean Chi²	2.291	2.261	2.272	1.919
Intercept	1.041 (1.018, 1.065)	1.04 (1.015, 1.065)	1.033 (1.006, 1.061)	1.006 (0.982, 1.031)
Ratio	0.032 (0.014, 0.05)	0.032 (0.012, 0.051)	0.026 (0.005, 0.048)	0.007 (-0.02, 0.034)

Supplementary Table 28: Weights for COPD risk score

See Excel spreadsheet.

Weights for COPD risk score. Weights for each the 279 variants were selected from the FEV₁/FVC ratio results for UK Biobank or SpiroMeta. The FEV₁/FVC ratio decreasing allele was chosen (generally this will be the COPD risk *increasing* allele, and that is how the term is used in this paper). To minimise the risk of winner's curse bias, the study which was not used in the discovery of a given signal was used as the source of the weight. For previously reported signals, this meant that most weights were taken from UK Biobank (if UK Biobank was used in signal discovery, SpiroMeta was used to derive weights). For novel signals identified in this study, the source of weight depended on whether the signal was identified in the two-stage (Tier 1) approach, or the joint, one-stage (Tier 2) approach. SpiroMeta was the source of weights for two-stage signals, and for one-stage signals, the smallest absolute effect size from UK Biobank or SpiroMeta was chosen. Betas are the FEV₁/FVC ratio effect size from the study defined in the column 'Source'. Weights were calculated as the beta for a given variant, divided by the sum of all 279 betas, multiplied by the number of variants (279), such that the sum of the weights added to 279.

Supplementary Table 29: Single-variant associations for 279 SNPs with COPD susceptibility in UK Biobank, China Kadoorie Biobank, and a fixed-effect meta-analysis of five European-ancestry cohorts

This table shows association results between the 279 variants and COPD susceptibility in ancestral groups of UK Biobank (unrelated individuals), China Kadoorie Biobank, COPDGene African Americans, and results from the fixed-effect meta analyses of five European-ancestry cohorts (see also **Supplementary Figure 9**). Case and control numbers for each group studied are given above the column headings.

In UK Biobank, single-variant associations with COPD susceptibility were calculated separately for the 279 SNPs using SNPTTEST v2.5. Associations were adjusted for age, age², sex, height, smoking status, 10 principal components and genotyping array.

Abbreviations: Chr=Chromosome; BP=position (GRCh37); Risk=FEV₁/FVC decreasing allele in GWAS; NonRisk=other allele; FreqRisk=allele frequency of risk allele in the 321,047 UK Biobank Europeans studied in the main GWAS; Beta=effect estimate; SE=standard error; P=P-value

Four variants were unavailable in China Kadoorie Biobank, and twelve additional variants required a proxy, given in the column 'CKB_Proxy_used', along with the corresponding risk allele for the proxy variant. Two variants were unavailable in UK Biobank Chinese subjects.

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Supplementary Table 4: 139 novel signals

Nearest gene	Genomic feature	Phenotype	tier	rsid	conditioned on
<i>PHF13</i>	intronic	FEV1/FVC	tier_1	rs9661802	
<i>MIR4418</i>	intergenic	FEV1	tier_1	rs12737805	
<i>DHDDS</i>	intronic	FVC	tier_2	rs9438626	
<i>DHDDS</i>	UTR3	FEV1	tier_1	rs12096239	
<i>FAF1</i>	intronic	FEV1/FVC	tier_1	rs1416685	
<i>LOC101926964</i>	intergenic	FEV1/FVC	tier_1	rs72673461	
<i>NEXN</i>	intronic	FEV1/FVC	tier_1	rs9661687	
<i>TGFBR3</i>	intergenic	FEV1/FVC	tier_1	rs10874851	rs1192415
<i>DENND2D</i>	intronic	FEV1/FVC	tier_1	rs9970286	
<i>C1orf54</i>	intronic	PEF	tier_1	rs11205354	
<i>KRTCAP2</i>	intergenic	FEV1/FVC	tier_1	rs141942982	
<i>RALGPS2</i>	intronic	FEV1	tier_1	rs4651005	
<i>MIR548F1</i>	ncRNA_intronic	FVC	tier_1	rs2146098	
<i>MIR548F1</i>	ncRNA_intronic	FEV1/FVC	tier_1	rs17531405	
<i>MIR181A1HG</i>	ncRNA_intronic	FEV1/FVC	tier_1	rs10919604	
<i>LMOD1</i>	intronic	FEV1/FVC	tier_2	rs4309038	
<i>TGFB2</i>	intronic	FEV1/FVC	tier_1	rs2799098	
<i>LYPLAL1</i>	intergenic	FEV1/FVC	tier_1	rs75128958	
<i>HLX</i>	intergenic	FVC	tier_1	rs17009288	
<i>LOC101926966</i>	intergenic	FEV1/FVC	tier_1	rs2544536	
<i>RDH14</i>	intergenic	FVC	tier_1	rs6751968	
<i>RDH14</i>	intergenic	FVC	tier_1	rs13430465	
<i>ATAD2B</i>	intronic	FVC	tier_2	rs13009582	
<i>CIB4</i>	intronic	FVC	tier_2	rs732990	
<i>PKDCC</i>	intergenic	FVC	tier_1	rs4952564	
<i>IL1RL1</i>	intergenic	FEV1/FVC	tier_1	rs12470864	
<i>TEX41</i>	ncRNA_intronic	FEV1/FVC	tier_1	rs1406225	
<i>RBMS1</i>	intronic	FEV1	tier_1	rs7424771	
<i>MIR548N</i>	ncRNA_intronic	FEV1	tier_2	rs2304340	
<i>ITGAV</i>	intronic	FEV1/FVC	tier_1	rs2084448	
<i>SATB2</i>	intergenic	FVC	tier_1	rs1249096	
<i>SPATS2L</i>	intronic	FEV1/FVC	tier_2	rs985256	
<i>KIAA2012</i>	intronic	FVC	tier_2	rs12997625	
<i>IGFBP5</i>	intergenic	FEV1/FVC	tier_1	rs6435952	
<i>DIRC3</i>	ncRNA_intronic	FEV1	tier_2	rs4294980	
<i>ASIC4</i>	intronic	FVC	tier_2	rs4674407	
<i>LINC01107</i>	intergenic	FVC	tier_2	rs6431620	
<i>C2orf54</i>	intergenic	FVC	tier_1	rs6437219	
<i>BOK-AS1</i>	ncRNA_intronic	FVC	tier_1	rs6733504	
<i>LINC00620</i>	ncRNA_intronic	FEV1	tier_2	rs2974389	
<i>RARB</i>	intergenic	FVC	tier_2	rs73048404	
<i>FOXP1</i>	intronic	FVC	tier_1	rs35480566	
<i>PDZRN3-AS1</i>	intergenic	FEV1/FVC	tier_1	rs586936	
<i>MIR548G</i>	ncRNA_intronic	FVC	tier_1	rs1610265	

<i>BCHE</i>	exonic	FEV1/FVC	tier_1	rs1799807
<i>IGF2BP2</i>	intronic	FEV1	tier_1	rs6780171
<i>KDR</i>	intergenic	FEV1	tier_2	rs12331869
<i>BTC</i>	intronic	FEV1/FVC	tier_1	rs62316310
<i>FRAS1</i>	intronic	FEV1/FVC	tier_1	rs11098196
<i>HHIP-AS1</i>	intergenic	FVC	tier_1	rs13109426
<i>HHIP-AS1</i>	intergenic	PEF	tier_1	rs13116999*
<i>LOC100996325</i>	ncRNA_intronic	FEV1	tier_1	rs11739847
<i>NNT</i>	intergenic	FEV1	tier_1	rs4866846
<i>LOX</i>	intronic	FEV1/FVC	tier_1	rs10059661
<i>ADAMTS19-AS1</i>	intergenic	FEV1/FVC	tier_1	rs17163397
<i>ADRB2</i>	exonic	FEV1	tier_1	rs1800888
<i>FGF18</i>	intergenic	FEV1/FVC	tier_1	rs10059996
<i>RASGEF1C</i>	intronic	FEV1/FVC	tier_1	rs79898473
<i>BMP6</i>	intergenic	FVC	tier_1	rs12198986
<i>HMGA1</i>	intergenic	FVC	tier_1	rs9689096
<i>CDC5L</i>	intergenic	FVC	tier_2	rs9357446
<i>RUNX2</i>	intergenic	FEV1/FVC	tier_1	rs12202314
<i>RUNX2</i>	intergenic	FVC	tier_2	rs9472541
<i>RNU6-71P</i>	ncRNA_intronic	FEV1	tier_1	rs2894837
<i>SLC2A12</i>	intronic	FEV1	tier_2	rs2627237
<i>LOC100507477</i>	intergenic	FEV1	tier_1	rs1102077
<i>VTA1</i>	intergenic	FEV1	tier_1	rs9385988
<i>MEOX2-AS1</i>	intergenic	FEV1/FVC	tier_1	rs4721457
<i>SKAP2</i>	intronic	FEV1	tier_1	rs559233
<i>HOXA-AS3</i>	ncRNA_intronic	FVC	tier_2	rs62454414
<i>JAZF1</i>	intronic	FEV1	tier_1	rs1513272
<i>IGFBP3</i>	intergenic	FVC	tier_1	rs17232687
<i>SEMA3D</i>	intergenic	FEV1	tier_1	rs12707691
<i>MET</i>	intronic	FEV1/FVC	tier_2	rs193686
<i>PPP1R3B</i>	intergenic	FEV1/FVC	tier_1	rs330939
<i>DEFB136</i>	intergenic	FEV1	tier_2	rs4128298
<i>LOC100505739</i>	intergenic	FEV1	tier_1	rs7465401
<i>BOP1</i>	intronic	FVC	tier_1	rs7838717
<i>SH3GL2</i>	intergenic	FEV1	tier_1	rs7041139
<i>LOC158434</i>	upstream	FEV1/FVC	tier_1	rs72743974
<i>GALNT12</i>	intergenic	FEV1/FVC	tier_1	rs57649467
<i>IER5L</i>	intergenic	FEV1	tier_2	rs967497
<i>PARD3</i>	intronic	FEV1/FVC	tier_1	rs1274475
<i>CAMK2G</i>	intergenic	PEF	tier_2	rs60820984
<i>OBFC1</i>	UTR3	FEV1	tier_1	rs11191841
<i>SLC1A2</i>	intronic	FEV1/FVC	tier_2	rs10836366
<i>FKBP4</i>	exonic	FVC	tier_1	rs56196860
<i>CCND2-AS1</i>	intergenic	FEV1	tier_2	rs12811814
<i>AEBP2</i>	intergenic	FEV1/FVC	tier_1	rs10841302
<i>RASSF3</i>	intronic	FEV1/FVC	tier_2	rs1244869
<i>MIR6074</i>	intergenic	FEV1	tier_1	rs11176001
<i>IGF1</i>	intronic	PEF	tier_1	rs972936
<i>TBX5</i>	intergenic	FEV1	tier_1	rs2701110
<i>MIR8079</i>	intergenic	FEV1/FVC	tier_1	rs9533803

DLEU1	ncRNA_intronic	FEV1	tier_1	rs2812208	
LINC00348	ncRNA_intronic	FVC	tier_1	rs803765	
LINC00382	ncRNA_intronic	FEV1	tier_1	rs4885681	
DOCK9	intronic	FEV1/FVC	tier_1	rs11620380	
MYO16	intergenic	FEV1/FVC	tier_1	rs9634470	
HAUS4	intergenic	FEV1/FVC	tier_1	rs1951121	
MIR5580	intergenic	FEV1/FVC	tier_1	rs74053129	
VRTN	intronic	FVC	tier_1	rs10141786	
BMF	intronic	FVC	tier_1	rs34245505	
IVD	intergenic	FEV1	tier_2	rs2304645	
CHAC1	intergenic	FVC	tier_1	rs4924525	
COPS2	intergenic	FEV1/FVC	tier_1	rs79234094	
FAM227B	intronic	FEV1/FVC	tier_1	rs35251997	
USP3	intronic	FEV1/FVC	tier_1	rs62012772	
REC114	intronic	FEV1/FVC	tier_2	rs7176074	
CLUAP1	intronic	FVC	tier_1	rs3751837	
GLIS2-AS1	intergenic	FEV1/FVC	tier_1	rs56104880	
GRIN2A	intronic	FVC	tier_2	rs11074547	
PAPD5	intronic	FVC	tier_1	rs76219171	
FTO	intronic	FEV1/FVC	tier_1	rs35420030	
LINC00917	intergenic	FEV1/FVC	tier_1	rs12918140	
MTHFSD	intronic	FEV1	tier_2	rs6539952	
ATP2A3	intergenic	FEV1/FVC	tier_1	rs8082036	
PITPNM3	intergenic	FEV1	tier_2	rs4796334	rs4968200
CLDN7	UTR3	FVC	tier_2	rs1215	
TNFSF12-TNFSF13	intergenic	FEV1	tier_2	rs4968200	
NCOR1	intronic	FVC	tier_2	rs34351630	
LOC101927166	intergenic	FVC	tier_2	rs12945803	
ANKFN1	intergenic	FVC	tier_1	rs28519449	
BCAS3	intronic	FEV1/FVC	tier_1	rs8068952	
DDX5	intronic	FVC	tier_2	rs77672322	
SMURF2	intergenic	FEV1/FVC	tier_1	rs11653958	
CASC17	intergenic	FEV1/FVC	tier_1	rs996865	
ASPSCR1	intronic	FVC	tier_1	rs59606152	
VAPA	intergenic	FEV1/FVC	tier_1	rs8089099	
GATA6	intergenic	FEV1/FVC	tier_2	rs1985511	
C18orf8	intergenic	FVC	tier_1	rs303752	
LOC729950	intergenic	FVC	tier_1	rs1668091	
SLC14A2	intronic	FEV1	tier_1	rs9807668	
LOC101927273	ncRNA_intronic	FVC	tier_2	rs2202572	
QTRT1	intronic	FEV1	tier_2	rs11085744	
ZFP82	intergenic	FVC	tier_2	rs2967516	
LOC101929395	intergenic	FEV1	tier_2	rs6032942	
LINC00649	intergenic	FEV1/FVC	tier_1	rs12627254	
PPP6R2	intronic	FEV1	tier_2	rs113111175	

* Note: rs13116999 remains significant ($P < 5 \times 10^{-9}$) for association with PEF when conditioned on previc

UK Biobank (n=321,047)

chrom	Position (b37)	Coded allele	Noncoded allele	Coded frequency	MAF
1	6,678,864	A	C	66.3%	33.7%
1	22,612,690	A	G	78.1%	21.9%
1	26,775,367	G	C	79.1%	21.0%
1	26,796,922	G	C	74.7%	25.3%
1	51,243,374	G	C	59.2%	40.8%
1	60,966,772	T	G	95.0%	5.0%
1	78,387,270	C	T	13.4%	13.4%
1	92,106,637	A	C	47.7%	47.7%
1	111,737,398	G	A	67.2%	32.8%
1	150,249,101	C	A	55.6%	44.4%
1	155,137,395	G	T	89.1%	10.9%
1	178,719,306	C	T	68.2%	31.8%
1	186,090,370	A	G	64.7%	35.3%
1	186,113,852	G	C	81.9%	18.1%
1	198,898,157	A	G	60.3%	39.7%
1	201,884,647	G	C	56.7%	43.3%
1	218,521,609	G	A	17.8%	17.8%
1	219,483,218	G	A	92.3%	7.7%
1	221,204,299	A	C	70.7%	29.3%
2	15,906,854	T	C	48.9%	48.9%
2	18,570,024	C	A	82.3%	17.7%
2	18,702,313	C	T	92.0%	8.0%
2	24,018,480	G	A	55.0%	45.0%
2	26,842,146	C	G	44.3%	44.3%
2	42,243,850	A	G	68.0%	32.0%
2	102,926,362	G	A	61.2%	38.8%
2	145,797,829	G	T	71.9%	28.1%
2	161,276,378	G	A	55.5%	44.5%
2	179,260,382	A	G	40.8%	40.8%
2	187,530,520	T	C	70.7%	29.3%
2	199,723,365	G	A	43.8%	43.8%
2	201,208,692	A	C	21.7%	21.7%
2	202,970,250	C	T	47.2%	47.2%
2	217,614,730	A	T	14.8%	14.8%
2	218,604,356	G	A	21.2%	21.2%
2	220,382,700	C	T	50.1%	49.9%
2	239,604,970	T	G	79.0%	21.0%
2	241,844,033	C	T	48.1%	48.1%
2	242,495,953	A	G	54.6%	45.4%
3	13,787,641	A	G	42.4%	42.4%
3	25,179,533	T	G	85.2%	14.8%
3	71,583,177	A	G	55.9%	44.1%
3	73,862,616	G	A	59.9%	40.1%
3	99,420,192	C	T	92.3%	7.7%

3	165,548,529	T	C	98.0%	2.0%
3	185,503,456	T	A	68.7%	31.3%
4	56,012,149	A	G	17.9%	17.9%
4	75,676,529	G	A	73.8%	26.2%
4	79,403,952	G	T	49.5%	49.5%
4	145,330,628	G	A	40.9%	40.9%
4	145,442,364	G	A	46.6%	46.6%
5	609,661	G	A	79.9%	20.1%
5	43,976,162	A	G	14.9%	14.9%
5	121,410,529	C	G	82.6%	17.4%
5	128,767,384	A	G	87.5%	12.5%
5	148,206,885	C	T	98.5%	1.5%
5	170,901,463	T	G	35.4%	35.4%
5	179,598,771	T	C	66.8%	33.2%
6	7,720,059	G	A	52.2%	47.8%
6	34,188,892	A	C	93.7%	6.3%
6	44,447,598	G	A	48.3%	48.3%
6	45,530,471	T	C	67.5%	32.5%
6	45,622,748	T	A	71.6%	28.4%
6	56,336,406	A	G	63.6%	36.4%
6	134,339,265	A	G	58.8%	41.2%
6	140,271,357	A	C	75.6%	24.4%
6	142,560,957	A	G	72.5%	27.5%
7	15,872,324	T	C	85.2%	14.8%
7	26,848,830	T	C	48.6%	48.6%
7	27,182,329	T	G	87.0%	13.0%
7	28,200,097	C	T	49.9%	49.9%
7	46,448,518	T	C	49.5%	49.5%
7	84,569,510	C	G	66.2%	33.8%
7	116,431,427	C	T	31.8%	31.8%
8	9,018,590	T	G	62.4%	37.6%
8	11,823,332	T	C	71.5%	28.5%
8	70,367,248	T	C	72.9%	27.1%
8	145,504,343	T	C	36.5%	36.5%
9	18,013,733	C	T	67.7%	32.3%
9	98,878,881	A	G	83.4%	16.6%
9	101,632,854	G	A	61.2%	38.8%
9	131,943,843	A	G	31.2%	31.2%
10	34,480,582	G	A	60.8%	39.2%
10	75,639,578	C	T	81.2%	18.8%
10	105,639,611	T	C	49.4%	49.4%
11	35,308,988	T	C	75.0%	25.0%
12	2,908,330	C	A	96.9%	3.1%
12	4,243,749	T	C	45.8%	45.8%
12	19,808,912	G	C	45.2%	45.2%
12	65,075,332	T	G	63.1%	36.9%
12	66,409,367	C	A	86.9%	13.1%
12	102,824,921	T	C	26.0%	26.0%
12	114,669,870	C	A	83.1%	16.9%
13	44,820,608	C	T	78.6%	21.4%

13	50,707,087	G	C	97.9%	2.1%
13	71,647,588	C	A	65.4%	34.6%
13	80,467,235	C	T	27.5%	27.5%
13	99,665,512	C	A	89.5%	10.5%
13	109,918,493	T	C	73.2%	26.8%
14	23,429,729	T	G	60.2%	39.8%
14	54,346,010	G	A	90.4%	9.6%
14	74,817,418	A	G	40.3%	40.3%
15	40,397,191	C	G	80.4%	19.6%
15	40,716,253	G	C	48.4%	48.4%
15	41,255,396	C	A	48.0%	48.0%
15	49,409,527	G	A	74.0%	26.0%
15	49,706,145	A	T	93.1%	6.9%
15	63,866,877	T	C	82.4%	17.6%
15	73,833,600	G	T	95.0%	5.0%
16	3,583,173	C	T	78.1%	21.9%
16	4,361,138	T	C	69.6%	30.4%
16	10,136,889	T	G	73.8%	26.2%
16	50,188,929	G	A	93.9%	6.1%
16	53,935,407	T	C	94.8%	5.2%
16	86,403,821	G	C	88.4%	11.6%
16	86,579,223	C	A	74.0%	26.0%
17	3,882,613	G	C	48.6%	48.6%
17	6,469,793	G	A	49.7%	49.7%
17	7,163,350	A	G	85.7%	14.3%
17	7,448,457	C	G	14.3%	14.3%
17	16,030,520	T	C	46.6%	46.6%
17	46,552,229	T	C	78.3%	21.7%
17	54,195,453	C	T	59.6%	40.4%
17	59,286,644	G	C	21.5%	21.5%
17	62,497,964	C	T	97.3%	2.7%
17	62,686,730	G	A	25.7%	25.7%
17	69,371,318	C	T	92.3%	7.7%
17	79,952,944	C	T	88.8%	11.2%
18	10,078,071	G	A	72.6%	27.4%
18	19,816,712	A	T	44.8%	44.8%
18	21,074,255	G	A	59.2%	40.8%
18	22,290,711	T	C	68.1%	31.9%
18	42,827,898	C	T	90.5%	9.5%
18	53,566,471	A	C	33.1%	33.1%
19	10,819,967	C	T	44.0%	44.0%
19	36,881,643	A	G	70.8%	29.2%
20	10,745,545	G	C	76.8%	23.2%
21	35,368,402	G	T	87.2%	12.8%
22	50,867,711	C	T	87.7%	12.3%

iously reported rs1314164:

SpiroMeta

INFO	beta	se_GC	P_GC	Coded frequency	MAF	N	beta	se
0.997	0.0255	0.0028	1.67E-19	67.0%	33.0%	83,081	0.0217	0.0056
0.969	0.0198	0.0032	7.25E-10	77.3%	22.7%	82,247	0.0220	0.0063
0.999	-0.0164	0.0032	2.03E-07	78.9%	21.1%	82,864	-0.0219	0.0064
0.998	0.0181	0.0030	1.23E-09	74.5%	25.5%	83,118	0.0209	0.0060
0.994	-0.0204	0.0027	3.10E-15	60.2%	39.8%	83,080	-0.0192	0.0053
0.989	0.0523	0.0061	7.75E-19	95.2%	4.8%	75,638	0.0439	0.0129
0.997	0.0266	0.0039	8.18E-12	14.4%	14.4%	75,639	0.0295	0.0078
1.000	-0.0158	0.0024	7.66E-11	48.1%	48.1%	75,639	-0.0185	0.0054
0.990	-0.0236	0.0028	7.42E-18	67.0%	33.0%	74,768	-0.0235	0.0059
0.984	-0.0159	0.0026	1.26E-09	55.6%	44.4%	24,218	-0.0314	0.0095
0.995	0.0364	0.0043	2.82E-18	90.1%	9.9%	75,639	0.0355	0.0094
0.998	-0.0183	0.0028	1.51E-11	66.9%	33.1%	75,676	-0.0195	0.0058
1.000	-0.0178	0.0027	5.71E-11	64.0%	36.0%	75,422	-0.0187	0.0056
0.985	-0.0287	0.0035	4.81E-17	82.0%	18.0%	75,638	-0.0252	0.0072
0.997	0.0192	0.0027	2.24E-12	60.2%	39.8%	75,639	0.0224	0.0056
0.995	-0.0144	0.0027	4.60E-08	56.1%	43.9%	75,639	-0.0191	0.0055
1.000	0.0294	0.0035	4.37E-19	18.7%	18.7%	75,637	0.0246	0.0072
0.993	0.0454	0.0050	4.97E-21	92.2%	7.8%	75,637	0.0404	0.0101
0.987	-0.0262	0.0029	9.59E-20	70.2%	29.8%	74,551	-0.0203	0.0061
0.995	-0.0242	0.0027	6.41E-20	48.5%	48.5%	83,081	-0.0227	0.0052
0.993	-0.0243	0.0034	1.62E-12	81.6%	18.4%	82,865	-0.0286	0.0068
0.973	-0.0374	0.0048	5.40E-15	91.9%	8.1%	82,863	-0.0345	0.0096
0.998	-0.0154	0.0026	5.56E-09	55.0%	45.0%	81,993	-0.0177	0.0053
0.994	-0.0148	0.0026	1.78E-08	44.4%	44.4%	82,864	-0.0185	0.0053
0.994	-0.0166	0.0028	1.70E-09	68.4%	31.6%	82,865	-0.0193	0.0057
0.998	0.0201	0.0027	5.53E-14	62.5%	37.5%	75,637	0.0215	0.0057
0.996	0.0194	0.0029	3.77E-11	70.9%	29.1%	75,638	0.0208	0.0060
0.997	0.0158	0.0026	2.18E-09	54.7%	45.3%	75,675	0.0217	0.0055
0.991	-0.0126	0.0026	1.26E-06	41.2%	41.2%	75,676	-0.0203	0.0056
0.999	0.0195	0.0029	2.08E-12	70.4%	29.6%	75,639	0.0205	0.0060
0.993	-0.0203	0.0026	1.99E-15	42.9%	42.9%	75,421	-0.0224	0.0056
0.993	0.0168	0.0032	5.83E-08	22.5%	22.5%	75,639	0.0225	0.0065
0.993	0.0146	0.0026	9.38E-09	47.3%	47.3%	75,421	0.0271	0.0056
0.994	0.0238	0.0037	9.19E-11	16.0%	16.0%	75,638	0.0335	0.0074
1.000	-0.0165	0.0032	9.49E-08	20.7%	20.7%	75,676	-0.0249	0.0069
0.984	0.0140	0.0026	7.67E-08	51.0%	49.0%	74,551	0.0197	0.0056
0.990	0.0176	0.0032	8.18E-08	78.4%	21.6%	75,423	0.0223	0.0067
0.896	-0.0179	0.0027	4.70E-11	46.9%	46.9%	74,551	-0.0214	0.0060
0.997	0.0192	0.0026	1.34E-13	54.9%	45.1%	74,550	0.0189	0.0057
0.997	0.0146	0.0026	6.51E-08	43.5%	43.5%	83,117	0.0244	0.0053
0.996	0.0170	0.0037	2.78E-06	85.5%	14.5%	82,865	0.0373	0.0075
0.992	-0.0223	0.0026	1.04E-17	56.3%	43.7%	75,421	-0.0216	0.0056
0.979	0.0178	0.0027	1.14E-10	59.4%	40.6%	74,766	0.0191	0.0057
0.993	0.0384	0.0049	1.97E-15	92.5%	7.5%	75,421	0.0356	0.0105

1.000	0.0546	0.0096	2.47E-09	98.3%	1.7%	75,219	0.0871	0.0218
0.997	0.0163	0.0028	4.46E-09	68.7%	31.3%	75,674	0.0221	0.0059
0.995	-0.0161	0.0034	1.34E-06	18.0%	18.0%	75,676	-0.0268	0.0071
0.993	-0.0286	0.0030	5.53E-21	74.6%	25.4%	75,637	-0.0209	0.0063
0.996	0.0199	0.0027	9.18E-14	47.7%	47.7%	75,639	0.0181	0.0055
0.997	0.0228	0.0026	3.75E-18	40.8%	40.8%	75,422	0.0215	0.0056
0.999	-0.0687	0.0026	3.03E-154	44.5%	44.5%	24,218	-0.0374	0.0094
0.999	0.0205	0.0032	1.08E-10	80.6%	19.4%	83,117	0.0232	0.0066
0.991	0.0270	0.0036	1.32E-13	15.3%	15.3%	82,247	0.0305	0.0074
0.994	-0.0310	0.0035	1.37E-19	82.8%	17.2%	75,637	-0.0298	0.0074
0.993	-0.0305	0.0040	5.53E-14	88.3%	11.7%	75,637	-0.0314	0.0085
1.000	0.0844	0.0106	9.73E-16	98.6%	1.4%	74,437	0.0843	0.0250
0.947	-0.0358	0.0028	7.35E-37	35.7%	35.7%	74,766	-0.0324	0.0061
0.987	-0.0331	0.0028	1.74E-32	68.1%	31.9%	74,766	-0.0203	0.0061
1.000	0.0239	0.0026	2.01E-19	52.5%	47.5%	82,865	0.0175	0.0052
0.976	-0.0352	0.0054	3.81E-11	94.1%	5.9%	82,864	-0.0396	0.0118
1.000	0.0134	0.0026	2.24E-07	48.1%	48.1%	82,864	0.0220	0.0053
0.980	-0.0207	0.0029	2.95E-13	67.6%	32.4%	82,210	-0.0214	0.0056
0.989	0.0145	0.0029	4.92E-07	71.1%	28.9%	82,863	0.0191	0.0058
0.990	0.0168	0.0027	2.26E-10	65.2%	34.8%	75,676	0.0205	0.0058
0.988	0.0130	0.0026	1.90E-06	59.7%	40.3%	75,676	0.0189	0.0056
0.984	0.0213	0.0030	1.92E-12	76.3%	23.7%	75,675	0.0226	0.0065
1.000	-0.0281	0.0029	7.67E-23	71.8%	28.2%	75,675	-0.0268	0.0061
0.995	0.0231	0.0037	2.64E-10	84.1%	15.9%	83,080	0.0290	0.0071
0.984	0.0156	0.0026	9.33E-10	48.6%	48.6%	82,246	0.0216	0.0054
1.000	0.0196	0.0039	3.37E-07	85.7%	14.3%	82,863	0.0254	0.0075
0.999	-0.0203	0.0026	6.42E-15	50.4%	49.6%	83,116	-0.0179	0.0052
0.995	-0.0183	0.0026	2.89E-13	49.6%	49.6%	75,422	-0.0184	0.0055
0.995	-0.0194	0.0027	8.20E-13	67.0%	33.0%	75,676	-0.0254	0.0059
0.995	0.0164	0.0029	1.45E-08	30.9%	30.9%	75,639	0.0240	0.0059
0.977	0.0246	0.0028	1.23E-18	61.6%	38.4%	82,209	0.0179	0.0054
0.989	-0.0166	0.0029	6.87E-09	72.6%	27.4%	82,247	-0.0199	0.0060
0.996	-0.0203	0.0029	5.49E-12	71.6%	28.4%	75,675	-0.0246	0.0061
0.961	-0.0226	0.0028	1.22E-16	35.4%	35.4%	75,423	-0.0269	0.0059
0.993	0.0161	0.0028	2.92E-09	68.0%	32.0%	83,116	0.0225	0.0056
0.999	-0.0218	0.0036	7.17E-10	82.8%	17.2%	75,638	-0.0287	0.0072
0.990	-0.0174	0.0027	3.69E-11	60.9%	39.1%	74,766	-0.0193	0.0057
1.000	0.0138	0.0028	1.02E-06	30.2%	30.2%	75,674	0.0207	0.0060
0.968	-0.0163	0.0028	4.71E-09	60.9%	39.1%	82,208	-0.0191	0.0055
0.985	0.0184	0.0034	8.48E-08	81.7%	18.3%	24,218	0.0412	0.0121
0.996	-0.0155	0.0026	2.62E-09	48.4%	48.4%	75,676	-0.0228	0.0055
0.997	0.0181	0.0031	5.51E-09	74.5%	25.5%	83,081	0.0230	0.0059
1.000	0.0509	0.0074	4.43E-12	96.9%	3.1%	73,122	0.0666	0.0184
0.974	0.0137	0.0026	1.86E-07	45.4%	45.4%	82,245	0.0204	0.0054
0.988	-0.0151	0.0027	2.99E-09	45.9%	45.9%	83,081	-0.0226	0.0052
0.993	0.0138	0.0028	4.19E-07	63.6%	36.4%	75,639	0.0220	0.0057
0.990	0.0279	0.0038	4.50E-13	87.0%	13.0%	75,675	0.0346	0.0082
0.998	0.0279	0.0030	4.86E-21	26.7%	26.7%	24,218	0.0378	0.0108
0.994	-0.0260	0.0035	1.24E-13	84.3%	15.7%	75,675	-0.0258	0.0077
0.984	0.0263	0.0033	3.47E-16	78.8%	21.2%	83,081	0.0252	0.0064

0.997	-0.0582	0.0091	1.06E-10	97.7%	2.3%	82,247	-0.0730	0.0181
0.998	0.0260	0.0027	2.98E-21	65.7%	34.3%	82,865	0.0182	0.0055
0.987	-0.0179	0.0029	8.57E-10	27.3%	27.3%	74,804	-0.0219	0.0063
0.999	0.0249	0.0043	2.16E-09	89.5%	10.5%	75,637	0.0363	0.0090
0.986	-0.0206	0.0030	4.06E-12	74.4%	25.6%	74,766	-0.0215	0.0064
0.992	0.0190	0.0027	5.84E-13	59.9%	40.1%	82,209	0.0185	0.0054
0.994	-0.0389	0.0045	1.52E-18	90.5%	9.5%	83,080	-0.0401	0.0089
0.986	0.0218	0.0027	4.39E-16	39.7%	39.7%	75,423	0.0192	0.0057
0.975	0.0202	0.0033	1.26E-09	80.7%	19.3%	81,993	0.0255	0.0070
0.997	0.0143	0.0026	4.61E-08	47.4%	47.4%	83,116	0.0200	0.0052
0.991	0.0164	0.0026	2.42E-10	47.2%	47.2%	81,992	0.0201	0.0054
0.990	-0.0252	0.0030	3.30E-17	73.0%	27.0%	82,210	-0.0330	0.0059
0.990	-0.0533	0.0052	2.59E-24	93.1%	6.9%	83,079	-0.0401	0.0103
0.996	-0.0265	0.0035	3.00E-14	81.7%	18.3%	77,146	-0.0381	0.0070
0.966	-0.0320	0.0062	5.64E-08	94.7%	5.3%	82,210	-0.0407	0.0118
0.992	0.0314	0.0032	1.09E-23	77.7%	22.3%	82,863	0.0286	0.0063
0.975	0.0196	0.0029	7.06E-11	69.0%	31.0%	82,208	0.0242	0.0059
0.995	-0.0147	0.0030	1.65E-06	73.9%	26.1%	82,865	-0.0259	0.0060
0.970	0.0342	0.0055	5.73E-10	94.2%	5.8%	82,863	0.0396	0.0118
1.000	-0.0376	0.0060	1.15E-10	94.1%	5.9%	82,208	-0.0732	0.0117
0.997	0.0257	0.0042	1.67E-09	88.9%	11.1%	75,638	0.0329	0.0088
0.975	0.0159	0.0030	2.43E-08	73.6%	26.4%	69,740	0.0220	0.0066
0.996	-0.0249	0.0027	1.43E-21	49.2%	49.2%	83,080	-0.0198	0.0052
0.982	0.0116	0.0025	2.25E-06	49.8%	49.8%	83,117	0.0217	0.0053
0.994	0.0176	0.0037	4.56E-06	85.5%	14.5%	81,994	0.0389	0.0077
1.000	-0.0189	0.0037	4.03E-07	14.0%	14.0%	83,116	-0.0346	0.0076
0.999	0.0124	0.0026	2.61E-06	46.2%	46.2%	81,992	0.0244	0.0053
0.993	0.0180	0.0032	1.42E-08	78.0%	22.0%	82,863	0.0280	0.0064
0.998	-0.0207	0.0027	7.89E-15	59.6%	40.4%	82,865	-0.0217	0.0053
1.000	0.0295	0.0032	4.02E-20	22.3%	22.3%	74,766	0.0244	0.0068
1.000	0.0398	0.0081	1.48E-06	97.6%	2.4%	61,473	0.0860	0.0225
0.994	-0.0182	0.0030	1.39E-09	26.1%	26.1%	75,639	-0.0264	0.0065
0.984	0.0488	0.0050	2.79E-22	93.0%	7.0%	75,639	0.0418	0.0109
0.950	-0.0360	0.0042	5.78E-18	89.1%	10.9%	63,270	-0.0405	0.0105
0.984	-0.0241	0.0030	2.36E-17	72.4%	27.6%	82,208	-0.0211	0.0059
0.989	0.0145	0.0027	1.27E-08	45.7%	45.7%	82,208	0.0244	0.0053
0.971	0.0159	0.0027	1.48E-09	58.6%	41.4%	81,992	0.0191	0.0055
0.990	-0.0169	0.0028	8.59E-10	68.2%	31.8%	82,865	-0.0189	0.0056
0.998	-0.0279	0.0044	1.27E-10	90.7%	9.3%	83,118	-0.0359	0.0091
0.995	0.0143	0.0028	1.38E-07	31.8%	31.8%	82,865	0.0239	0.0056
0.988	0.0145	0.0026	5.66E-08	43.9%	43.9%	82,245	0.0185	0.0054
1.000	-0.0133	0.0029	4.42E-06	71.2%	28.8%	82,864	-0.0226	0.0058
0.993	-0.0162	0.0031	9.50E-08	76.5%	23.5%	83,117	-0.0214	0.0062
0.995	-0.0359	0.0040	8.08E-20	87.2%	12.8%	83,081	-0.0352	0.0078
0.984	-0.0197	0.0040	5.28E-07	88.3%	11.7%	82,245	-0.0327	0.0086

Meta-analysis of UK Biobank and SpiroMeta

P	Coded frequency	MAF	meta N	beta	se	meta P
1.05E-04	66.4%	33.6%	404,128	0.0247	0.0025	5.56E-23
4.35E-04	77.9%	22.1%	403,294	0.0203	0.0028	6.57E-13
6.04E-04	79.0%	21.0%	403,911	-0.0175	0.0028	8.06E-10
4.89E-04	74.7%	25.3%	404,165	0.0187	0.0027	2.08E-12
3.19E-04	59.4%	40.6%	404,127	-0.0202	0.0024	5.62E-17
6.96E-04	95.1%	4.9%	396,685	0.0508	0.0055	3.12E-20
1.59E-04	13.6%	13.6%	396,686	0.0271	0.0035	6.11E-15
6.85E-04	47.7%	47.7%	396,686	-0.0162	0.0022	2.37E-13
5.74E-05	67.1%	32.9%	395,815	-0.0236	0.0025	1.92E-20
9.75E-04	55.6%	44.4%	345,265	-0.0170	0.0025	2.49E-11
1.46E-04	89.3%	10.7%	396,686	0.0362	0.0039	9.57E-21
7.88E-04	67.9%	32.1%	396,723	-0.0185	0.0025	1.38E-13
8.89E-04	64.6%	35.4%	396,469	-0.0180	0.0024	2.03E-13
4.68E-04	81.9%	18.1%	396,685	-0.0280	0.0031	2.80E-19
5.89E-05	60.3%	39.7%	396,686	0.0198	0.0024	4.48E-16
5.27E-04	56.6%	43.4%	396,686	-0.0153	0.0024	2.13E-10
6.08E-04	17.9%	17.9%	396,684	0.0285	0.0031	5.00E-20
6.09E-05	92.3%	7.7%	396,684	0.0445	0.0045	2.33E-23
8.69E-04	70.6%	29.4%	395,598	-0.0251	0.0026	3.68E-22
1.23E-05	48.8%	48.8%	404,128	-0.0239	0.0024	4.15E-24
2.27E-05	82.2%	17.8%	403,912	-0.0252	0.0030	1.27E-16
3.25E-04	92.0%	8.0%	403,910	-0.0368	0.0043	1.87E-17
8.66E-04	55.0%	45.0%	403,040	-0.0158	0.0023	1.52E-11
4.59E-04	44.3%	44.3%	403,911	-0.0155	0.0023	3.72E-11
7.05E-04	68.1%	31.9%	403,912	-0.0172	0.0025	6.97E-12
1.48E-04	61.4%	38.6%	396,684	0.0203	0.0024	1.04E-16
5.45E-04	71.7%	28.3%	396,685	0.0197	0.0026	8.73E-14
8.69E-05	55.4%	44.6%	396,722	0.0169	0.0024	6.57E-13
2.77E-04	40.8%	40.8%	396,723	-0.0140	0.0024	3.72E-09
6.46E-04	70.6%	29.4%	396,686	0.0197	0.0026	4.65E-14
6.98E-05	43.7%	43.7%	396,468	-0.0207	0.0024	3.94E-18
5.90E-04	21.8%	21.8%	396,686	0.0179	0.0029	5.86E-10
1.12E-06	47.2%	47.2%	396,468	0.0169	0.0024	8.88E-13
6.63E-06	15.0%	15.0%	396,685	0.0258	0.0033	1.06E-14
3.10E-04	21.1%	21.1%	396,723	-0.0179	0.0029	4.02E-10
4.62E-04	50.3%	49.7%	395,598	0.0150	0.0024	2.84E-10
8.41E-04	78.9%	21.1%	396,470	0.0185	0.0029	1.40E-10
3.79E-04	47.9%	47.9%	395,598	-0.0185	0.0025	1.19E-13
8.27E-04	54.6%	45.4%	395,597	0.0191	0.0024	7.39E-16
3.78E-06	42.6%	42.6%	404,164	0.0165	0.0023	1.70E-12
6.57E-07	85.3%	14.7%	403,912	0.0209	0.0033	2.10E-10
1.10E-04	56.0%	44.0%	396,468	-0.0221	0.0024	1.25E-20
7.82E-04	59.8%	40.2%	395,813	0.0180	0.0025	2.11E-13
6.71E-04	92.3%	7.7%	396,468	0.0379	0.0044	8.81E-18

6.34E-05	98.1%	1.9%	396,266	0.0598	0.0088	8.59E-12
2.07E-04	68.7%	31.3%	396,721	0.0174	0.0025	6.18E-12
1.82E-04	17.9%	17.9%	396,723	-0.0181	0.0031	3.17E-09
9.85E-04	74.0%	26.0%	396,684	-0.0272	0.0027	2.24E-23
9.71E-04	49.2%	49.2%	396,686	0.0196	0.0024	2.42E-16
1.20E-04	40.9%	40.9%	396,469	0.0226	0.0024	4.20E-21
7.01E-05	46.3%	46.3%	345,265	-0.0665	0.0025	2.54E-153
4.58E-04	80.1%	19.9%	404,164	0.0210	0.0029	4.30E-13
4.29E-05	15.0%	15.0%	403,294	0.0277	0.0033	2.47E-17
5.28E-05	82.6%	17.4%	396,684	-0.0308	0.0032	1.78E-22
2.30E-04	87.6%	12.4%	396,684	-0.0307	0.0036	3.30E-17
7.61E-04	98.5%	1.5%	395,484	0.0844	0.0098	6.45E-18
1.37E-07	35.5%	35.5%	395,813	-0.0352	0.0026	1.53E-42
8.22E-04	67.0%	33.0%	395,813	-0.0308	0.0026	2.31E-33
8.51E-04	52.2%	47.8%	403,912	0.0227	0.0023	2.17E-22
7.58E-04	93.7%	6.3%	403,911	-0.0360	0.0049	1.99E-13
2.94E-05	48.3%	48.3%	403,911	0.0151	0.0023	1.04E-10
1.35E-04	67.5%	32.5%	403,257	-0.0209	0.0025	2.17E-16
9.69E-04	71.5%	28.5%	403,910	0.0154	0.0026	2.47E-09
4.47E-04	63.9%	36.1%	396,723	0.0175	0.0024	9.22E-13
7.73E-04	58.9%	41.1%	396,723	0.0141	0.0024	3.50E-09
5.35E-04	75.7%	24.3%	396,722	0.0215	0.0027	4.21E-15
1.01E-05	72.4%	27.6%	396,722	-0.0279	0.0026	1.40E-26
4.53E-05	85.0%	15.0%	404,127	0.0244	0.0033	1.73E-13
5.37E-05	48.6%	48.6%	403,293	0.0168	0.0023	7.80E-13
7.38E-04	86.8%	13.3%	403,910	0.0208	0.0034	1.31E-09
6.05E-04	50.0%	50.0%	404,163	-0.0198	0.0023	1.11E-17
8.29E-04	49.6%	49.6%	396,469	-0.0183	0.0024	6.81E-15
1.65E-05	66.4%	33.6%	396,723	-0.0205	0.0025	1.67E-16
5.16E-05	31.7%	31.7%	396,686	0.0178	0.0026	4.07E-12
9.88E-04	62.2%	37.8%	403,256	0.0232	0.0025	4.46E-21
8.81E-04	71.7%	28.3%	403,294	-0.0172	0.0026	3.48E-11
5.62E-05	72.7%	27.3%	396,722	-0.0211	0.0026	9.09E-16
4.49E-06	36.4%	36.4%	396,470	-0.0234	0.0025	6.47E-21
6.73E-05	67.8%	32.2%	404,163	0.0173	0.0025	3.09E-12
6.82E-05	83.3%	16.7%	396,685	-0.0232	0.0032	3.98E-13
6.89E-04	61.2%	38.8%	395,813	-0.0178	0.0025	5.39E-13
5.88E-04	31.1%	31.1%	396,721	0.0150	0.0025	2.79E-09
5.19E-04	60.8%	39.2%	403,255	-0.0168	0.0025	8.30E-12
6.89E-04	81.3%	18.7%	345,265	0.0201	0.0032	6.38E-10
3.56E-05	49.2%	49.2%	396,723	-0.0168	0.0023	6.21E-13
1.10E-04	74.9%	25.1%	404,128	0.0191	0.0027	2.33E-12
2.95E-04	96.9%	3.1%	394,169	0.0531	0.0069	1.45E-14
1.76E-04	45.8%	45.8%	403,292	0.0149	0.0024	2.57E-10
1.39E-05	45.3%	45.3%	404,128	-0.0167	0.0024	2.29E-12
1.14E-04	63.2%	36.8%	396,686	0.0153	0.0025	6.16E-10
2.40E-05	86.9%	13.1%	396,722	0.0291	0.0035	4.88E-17
4.40E-04	26.2%	26.2%	345,265	0.0286	0.0029	1.85E-23
8.27E-04	83.3%	16.7%	396,722	-0.0259	0.0032	1.91E-16
8.03E-05	78.6%	21.4%	404,128	0.0261	0.0029	2.92E-19

5.72E-05	97.9%	2.1%	403,294	-0.0612	0.0081	4.95E-14
9.39E-04	65.5%	34.5%	403,912	0.0245	0.0025	1.74E-23
4.81E-04	27.5%	27.5%	395,851	-0.0186	0.0026	1.83E-12
6.02E-05	89.5%	10.5%	396,684	0.0270	0.0039	4.61E-12
8.55E-04	73.4%	26.6%	395,813	-0.0208	0.0027	2.73E-14
5.48E-04	60.1%	39.9%	403,256	0.0189	0.0024	7.55E-15
6.14E-06	90.4%	9.6%	404,127	-0.0392	0.0040	2.15E-22
7.28E-04	40.2%	40.2%	396,470	0.0213	0.0024	9.53E-19
2.65E-04	80.5%	19.5%	403,040	0.0212	0.0030	1.56E-12
1.26E-04	48.3%	48.3%	404,163	0.0154	0.0023	2.93E-11
1.77E-04	47.9%	47.9%	403,039	0.0171	0.0023	3.45E-13
2.41E-08	73.8%	26.2%	403,257	-0.0268	0.0027	3.18E-23
1.02E-04	93.1%	6.9%	404,126	-0.0506	0.0047	2.82E-27
4.64E-08	82.3%	17.8%	398,193	-0.0288	0.0031	2.42E-20
5.39E-04	94.9%	5.1%	403,257	-0.0339	0.0055	6.60E-10
6.22E-06	78.0%	22.0%	403,910	0.0308	0.0028	9.07E-28
4.20E-05	69.5%	30.5%	403,255	0.0205	0.0026	5.29E-15
1.45E-05	73.8%	26.2%	403,912	-0.0169	0.0027	1.99E-10
8.01E-04	94.0%	6.0%	403,910	0.0351	0.0050	2.09E-12
3.63E-10	94.7%	5.3%	403,255	-0.0450	0.0053	3.08E-17
1.68E-04	88.5%	11.5%	396,685	0.0270	0.0038	6.72E-13
8.00E-04	73.9%	26.1%	390,787	0.0170	0.0027	3.50E-10
1.38E-04	48.7%	48.7%	404,127	-0.0238	0.0024	7.31E-24
3.92E-05	49.7%	49.7%	404,164	0.0134	0.0022	1.70E-09
4.15E-07	85.7%	14.3%	403,041	0.0217	0.0033	9.64E-11
5.78E-06	14.2%	14.2%	404,163	-0.0219	0.0033	4.54E-11
4.51E-06	46.6%	46.6%	403,039	0.0147	0.0023	3.43E-10
1.11E-05	78.2%	21.8%	403,910	0.0200	0.0028	1.88E-12
4.85E-05	59.6%	40.4%	403,912	-0.0209	0.0024	1.27E-18
3.17E-04	21.6%	21.6%	395,813	0.0285	0.0029	1.21E-22
1.32E-04	97.4%	2.6%	382,520	0.0451	0.0076	3.02E-09
5.19E-05	25.7%	25.7%	396,686	-0.0197	0.0028	9.17E-13
1.36E-04	92.4%	7.6%	396,686	0.0475	0.0046	1.82E-25
1.06E-04	88.8%	11.2%	384,317	-0.0367	0.0039	9.16E-21
3.81E-04	72.5%	27.5%	403,255	-0.0235	0.0027	1.52E-18
4.12E-06	45.0%	45.0%	403,255	0.0165	0.0024	5.60E-12
5.19E-04	59.1%	40.9%	403,039	0.0165	0.0024	6.97E-12
7.45E-04	68.1%	31.9%	403,912	-0.0173	0.0025	5.24E-12
8.44E-05	90.5%	9.5%	404,165	-0.0294	0.0040	1.39E-13
2.27E-05	32.9%	32.9%	403,912	0.0162	0.0025	7.01E-11
5.47E-04	44.0%	44.0%	403,292	0.0153	0.0024	7.83E-11
9.45E-05	70.9%	29.1%	403,911	-0.0152	0.0026	3.72E-09
5.38E-04	76.8%	23.2%	404,164	-0.0173	0.0027	3.47E-10
6.07E-06	87.2%	12.8%	404,128	-0.0357	0.0035	6.85E-24
1.40E-04	87.8%	12.2%	403,292	-0.0220	0.0036	1.11E-09

Supplementary Table 5: Tier 3 signals

N		328	323 autosomal + 5 chromosome X signals			
Nearest gene	Genomic feature	Phenotype	rsid	chrom	Position (b37)	Coded allele
<i>SKI</i>	intronic	FEV1	rs1682493	1	2,182,650	A
<i>MEGF6</i>	intronic	FEV1/FVC	rs2794360	1	3,427,485	A
<i>SPSB1</i>	intergenic	FVC	rs1106370	1	9,443,340	A
<i>LOC100506022</i>	intergenic	FEV1/FVC	rs1207432	1	9,493,290	T
<i>CAPZB</i>	intronic	PEF	rs7265149	1	19,724,874	A
<i>WNT4</i>	intergenic	PEF	rs1274751	1	22,494,791	A
<i>MIR4418</i>	intergenic	FEV1/FVC	rs7163883	1	22,541,278	T
<i>LOC100506985</i>	ncRNA_intronic	PEF	rs6704018	1	24,882,015	T
<i>RUNX3</i>	intronic	FEV1/FVC	rs9438876	1	25,241,116	A
<i>LAPTM5</i>	intergenic	PEF	rs1091420	1	31,257,670	C
<i>EVA1B</i>	UTR3	FEV1/FVC	rs5897191	1	36,787,888	A
<i>SCMH1</i>	intronic	FVC	rs2885697	1	41,544,279	T
<i>AKR1A1</i>	intronic	FEV1/FVC	rs2993263	1	46,021,630	T
<i>MIR4422</i>	intergenic	FVC	rs1392140	1	56,101,822	A
<i>CACHD1</i>	exonic	PEF	rs6173112	1	65,098,309	A
<i>USP33</i>	intronic	FEV1	rs1968027	1	78,191,727	T
<i>FAM69A</i>	intronic	FEV1/FVC	rs1078294	1	93,304,272	T
<i>COL11A1</i>	intronic	PEF	rs1116465	1	103,448,242	T
<i>OTUD7B</i>	intergenic	FEV1/FVC	rs7269282	1	149,910,775	T
<i>ZBTB7B</i>	intronic	PEF	rs1870940	1	154,984,363	A
<i>PRRX1</i>	intergenic	FVC	rs6664881	1	170,805,627	A
<i>PAPPA2</i>	intronic	PEF	rs6671567	1	176,741,093	T
<i>NMNAT2</i>	intronic	FEV1	rs944190	1	183,314,293	T
<i>CFH</i>	intronic	FVC	rs1073768	1	196,679,455	A
<i>CNTN2</i>	UTR3	FEV1/FVC	rs1090044	1	205,044,416	A
<i>NUCKS1</i>	intergenic	FVC	rs3747973	1	205,677,148	A
<i>SLC26A9</i>	upstream	PEF	rs1342062	1	205,912,786	T
<i>SYT14</i>	intergenic	FVC	rs3539674	1	210,086,616	A
<i>KCNK2</i>	intergenic	FEV1	rs7273726	1	215,463,944	T
<i>ESRRG</i>	intronic	FEV1/FVC	rs2576261	1	217,053,815	T
<i>TGFB2</i>	intronic	FVC	rs6658835	1	218,520,995	A
<i>MIR4454</i>	intergenic	PEF	rs9283408	1	229,260,643	A
<i>ASAP2</i>	intergenic	FEV1/FVC	rs1169180	2	9,294,581	A
<i>ADCY3</i>	intronic	FEV1/FVC	rs1303524	2	25,134,009	T
<i>CRIM1</i>	intronic	FEV1/FVC	rs1188881	2	36,714,954	A
<i>THADA</i>	intronic	PEF	rs7797291	2	43,762,112	A
<i>FOXP2</i>	exonic	FVC	rs1785517	2	48,602,252	T
<i>XPO1</i>	intergenic	FEV1/FVC	rs2518933	2	61,797,030	A
<i>SERTAD2</i>	upstream	FEV1/FVC	rs2302643	2	64,881,229	A
<i>SPRED2</i>	intergenic	FVC	rs6672607	2	66,092,227	A
<i>LOC101060019</i>	intergenic	FEV1/FVC	rs3519558	2	67,078,619	T
<i>LOC101927661</i>	ncRNA_intronic	PEF	rs3458454	2	67,466,253	C
<i>ANTXR1</i>	intronic	FEV1/FVC	rs1017326	2	69,407,720	T
<i>GFPT1</i>	intergenic	FVC	rs1271367	2	69,521,831	T

<i>DYSF</i>	intronic	PEF	rs7566581	2	71,782,067	A
<i>AFF3</i>	intronic	FEV1	rs62147658	2	100,561,478	A
<i>MIR4435-1</i>	intergenic	FEV1/FVC	rs4637127	2	112,007,075	T
<i>TMEM185B</i>	intergenic	FEV1/FVC	rs4848578	2	120,965,567	T
<i>ARHGAP15</i>	intronic	PEF	rs4372823	2	144,325,926	A
<i>CERS6</i>	intronic	FEV1/FVC	rs6433079	2	169,496,652	A
<i>ZAK</i>	intronic	FEV1/FVC	rs13030866	2	174,037,397	T
<i>LOC100130691</i>	ncRNA_intronic	FVC	rs6740092	2	178,210,268	A
<i>TMEM194B</i>	intergenic	PEF	rs12478437	2	191,432,415	A
<i>MAP2</i>	intronic	FVC	rs62213409	2	210,298,717	T
<i>FN1</i>	intronic	PEF	rs1837121	2	216,292,331	A
<i>DNER</i>	intergenic	FVC	rs62193248	2	230,596,917	A
<i>COL6A3</i>	UTR3	FEV1/FVC	rs1050785	2	238,232,752	A
<i>HDLBP</i>	intronic	FEV1/FVC	rs6704615	2	242,228,733	A
<i>ITPR1</i>	intronic	FEV1/FVC	rs304023	3	4,566,033	T
<i>LMCD1</i>	intronic	FEV1/FVC	rs2197901	3	8,567,255	T
<i>VGLL4</i>	intronic	FEV1/FVC	rs1561073	3	11,642,114	A
<i>WNT7A</i>	intronic	FEV1/FVC	rs9874847	3	13,919,309	T
<i>CACNA1D</i>	intronic	FEV1/FVC	rs6809164	3	53,712,910	T
<i>ERC2</i>	intronic	PEF	rs1156513	3	55,929,848	A
<i>ERC2</i>	intronic	FEV1/FVC	rs17216573	3	56,282,978	T
<i>ADAMTS9</i>	intergenic	PEF	rs59110590	3	64,434,481	A
<i>FOXP1</i>	intergenic	FEV1/FVC	rs2687199	3	70,924,971	A
<i>LOC101927296</i>	ncRNA_intronic	FEV1	rs13069228	3	73,572,544	T
<i>MIR548G</i>	ncRNA_intronic	FEV1/FVC	rs17834373	3	99,403,730	T
<i>PHLDB2</i>	intronic	PEF	rs13064126	3	111,687,410	T
<i>BOC</i>	intronic	FEV1/FVC	rs6769798	3	112,951,348	A
<i>KY</i>	intronic	FVC	rs6775611	3	134,358,947	T
<i>XRN1</i>	intronic	PEF	rs73238163	3	142,081,981	A
<i>AADA2L2-AS1</i>	intergenic	FVC	rs1987989	3	151,731,717	A
<i>FNDC3B</i>	intronic	FEV1/FVC	rs62283815	3	171,824,260	T
<i>KLHL24</i>	intergenic	FEV1/FVC	rs74358338	3	183,321,406	A
<i>DGKG</i>	intergenic	FEV1/FVC	rs73182224	3	186,083,483	A
<i>DLG1</i>	intronic	FVC	rs10489880	3	196,961,186	A
<i>TACC3</i>	intergenic	PEF	rs7680647	4	1,750,487	T
<i>FGFR3</i>	intronic	FEV1/FVC	rs3135877	4	1,804,276	A
<i>DOK7</i>	UTR3	FVC	rs1054661	4	3,495,941	T
<i>CYTL1</i>	intergenic	PEF	rs28752137	4	5,030,854	A
<i>RAB28</i>	intergenic	PEF	rs13150673	4	12,838,159	T
<i>RAB28</i>	intergenic	FEV1/FVC	rs1566834	4	13,173,258	T
<i>PPARGC1A</i>	intergenic	FEV1/FVC	rs2324154	4	24,027,226	A
<i>ANAPC4</i>	exonic	FVC	rs34811474	4	25,408,838	A
<i>LOC439933</i>	ncRNA_intronic	FEV1/FVC	rs11550364	4	36,271,840	A
<i>SCFD2</i>	intronic	FEV1/FVC	rs301127	4	53,795,612	A
<i>PDGFRA</i>	intergenic	FEV1/FVC	rs7673984	4	55,088,761	T
<i>NOA1</i>	intergenic	FEV1	rs6830774	4	57,816,306	T
<i>LOC101928978</i>	intergenic	PEF	rs402672	4	85,301,481	T
<i>SLC39A8</i>	exonic	FVC	rs13107325	4	103,188,709	T
<i>LINC01091</i>	ncRNA_intronic	FEV1/FVC	rs62321845	4	124,819,607	A
<i>SLC25A31</i>	intronic	FEV1	rs4834214	4	128,652,227	A

<i>NAA15</i>	intronic	FEV1/FVC	rs7690253	4	140,288,233	A
<i>LRBA</i>	exonic	FVC	rs2290846	4	151,199,080	A
<i>SFRP2</i>	intergenic	FEV1/FVC	rs9992556	4	154,748,714	A
<i>CPE</i>	intronic	FVC	rs6765073	4	166,336,716	T
<i>HAND2</i>	intergenic	PEF	rs7655560	4	174,438,897	A
<i>HAND2-AS1</i>	intergenic	FVC	rs10005540	4	174,582,067	T
<i>VEGFC</i>	intergenic	FEV1/FVC	rs2333570	4	177,761,010	C
<i>CDH6</i>	intergenic	FEV1/FVC	rs6160368	5	30,908,355	A
<i>RAI14</i>	intergenic	FEV1/FVC	rs1218924	5	34,627,666	A
<i>C5orf28</i>	intronic	FEV1/FVC	rs1121260	5	43,473,543	A
<i>ITGA2</i>	intergenic	FEV1	rs3212656	5	52,283,027	T
<i>KIF2A</i>	intergenic	FVC	rs1423127	5	61,428,137	T
<i>TNPO1</i>	UTR5	PEF	rs34651	5	72,144,005	T
<i>WDR41</i>	intronic	FEV1/FVC	rs335651	5	76,767,564	T
<i>HAPLN1</i>	intronic	PEF	rs7735476	5	83,015,140	C
<i>NR2F1-AS1</i>	intergenic	PEF	rs4869412	5	92,455,655	A
<i>LOC100289230</i>	intergenic	FEV1/FVC	rs377731	5	98,332,239	A
<i>TNFAIP8</i>	intronic	PEF	rs1509141	5	118,692,218	C
<i>PRR16</i>	intergenic	FEV1/FVC	rs1251789	5	120,095,548	C
<i>LOC101927379</i>	intergenic	FVC	rs6595403	5	122,070,002	T
<i>CEP120</i>	intronic	FEV1	rs1124168	5	122,692,080	T
<i>MARCH3</i>	intronic	FEV1/FVC	rs9327428	5	126,347,544	A
<i>CHSY3</i>	intergenic	FVC	rs462891	5	129,173,894	T
<i>HSPA4</i>	intronic	FEV1	rs4367292	5	132,435,572	T
<i>CXXC5</i>	intronic	PEF	rs3822742	5	139,059,017	A
<i>PCDHA1</i>	intronic	FEV1	rs1901759	5	140,317,403	A
<i>LOC101926941</i>	ncRNA_intronic	FEV1	rs253438	5	141,801,216	A
<i>NR3C1</i>	intergenic	FVC	rs864354	5	142,634,708	T
<i>EBF1</i>	intronic	FVC	rs891903	5	158,279,638	A
<i>MIR8056</i>	intergenic	PEF	rs1174743	5	172,779,211	T
<i>BOD1</i>	intergenic	FEV1/FVC	rs1251824	5	173,081,460	T
<i>NSD1</i>	intronic	FEV1/FVC	rs2431502	5	176,597,252	T
<i>GMDS-AS1</i>	intergenic	PEF	rs1124277	6	2507901	T
<i>RREB1</i>	intronic	PEF	rs1285884	6	7,143,075	T
<i>ID4</i>	downstream	FEV1	rs9350191	6	19,842,661	T
<i>CASC15</i>	ncRNA_intronic	FEV1	rs196025	6	22,072,425	A
<i>ANKS1A</i>	intronic	FEV1/FVC	rs820077	6	35,033,854	A
<i>FKBP5</i>	intronic	FVC	rs1319851	6	35,689,832	A
<i>PAQR8</i>	UTR3	PEF	rs655113	6	52,269,151	T
<i>COL21A1</i>	intergenic	FVC	rs1485610	6	55,878,432	A
<i>RNU6-71P</i>	ncRNA_intronic	FEV1/FVC	rs1158304	6	56,239,955	A
<i>SENP6</i>	intergenic	FEV1	rs1221212	6	76,285,379	T
<i>BCKDHB</i>	downstream	FVC	rs723588	6	81,056,634	T
<i>BACH2</i>	intronic	FEV1/FVC	rs1751353	6	90,951,239	T
<i>LINC00577</i>	intergenic	FVC	rs314262	6	105,394,621	A
<i>NT5DC1</i>	intronic	PEF	rs1219397	6	116,542,500	T
<i>RFX6</i>	intergenic	FEV1	rs675495	6	117,257,199	T
<i>GJA1</i>	intronic	FEV1/FVC	rs5734737	6	121,762,088	T
<i>L3MBTL3</i>	intronic	FEV1/FVC	rs9321207	6	130,397,238	A
<i>TCF21</i>	UTR3	PEF	rs1219028	6	134,214,525	C

<i>PHACTR2</i>	intronic	FVC	rs10457750	6	144,026,097	A
<i>UST</i>	intronic	PEF	rs4336467	6	149,381,881	A
<i>ESR1</i>	intronic	PEF	rs75001459	6	152,151,566	A
<i>SYNE1</i>	intronic	FVC	rs6904757	6	152,593,102	A
<i>MIR1273C</i>	intergenic	FVC	rs2273898	6	155,284,317	C
<i>GTF2H5</i>	intergenic	FVC	rs661857	6	158,658,788	T
<i>THBS2</i>	UTR3	FVC	rs3253	6	169,616,112	T
<i>GNA12</i>	intergenic	FEV1/FVC	rs13230940	7	2,893,776	T
<i>DGKB</i>	intronic	FEV1/FVC	rs979499	7	14,799,692	C
<i>DGKB</i>	intergenic	FEV1	rs56751608	7	14,943,164	A
<i>HDAC9</i>	intronic	FEV1	rs7806296	7	18,344,095	A
<i>ITGB8</i>	intronic	FEV1/FVC	rs3779505	7	20,405,265	A
<i>IGF2BP3</i>	intronic	FEV1	rs56685741	7	23,484,228	A
<i>LOC401324</i>	intergenic	PEF	rs13234350	7	35,446,584	T
<i>SUGCT</i>	intronic	FVC	rs2329877	7	40,816,465	T
<i>CAMK2B</i>	intergenic	FVC	rs878521	7	44,255,643	A
<i>LOC100507468</i>	intergenic	FEV1/FVC	rs12698801	7	68,979,491	A
<i>AUTS2</i>	intronic	FVC	rs11767893	7	69,952,187	T
<i>ELN</i>	intergenic	FEV1/FVC	rs11333669	7	73,420,195	T
<i>PCLO</i>	intronic	FVC	rs11765159	7	82,533,663	A
<i>DYNC111</i>	intronic	FVC	rs10251089	7	95,560,659	A
<i>SRPK2</i>	intronic	PEF	rs10266871	7	104,812,129	A
<i>CALD1</i>	intronic	FEV1/FVC	rs1452909	7	134,566,071	A
<i>TBXAS1</i>	intronic	FEV1	rs4726715	7	139,488,790	T
<i>BRAF</i>	intronic	FVC	rs13227429	7	140,560,023	T
<i>DLC1</i>	intronic	FEV1/FVC	rs1528624	8	13,194,983	T
<i>MICU3</i>	intronic	FEV1/FVC	rs2285261	8	16,922,013	A
<i>ASAH1</i>	intronic	FEV1/FVC	rs2410447	8	17,923,147	T
<i>FUT10</i>	intronic	FVC	rs1516874	8	33,262,417	A
<i>LOC101929268</i>	intergenic	FVC	rs10089933	8	49,391,483	T
<i>PXDNL</i>	intronic	PEF	rs718251	8	52,714,523	A
<i>CHCHD7</i>	intergenic	FVC	rs56181001	8	57,158,384	A
<i>LINC01289</i>	intergenic	FVC	rs4737183	8	64,720,693	A
<i>C8orf34</i>	intronic	FVC	rs12543559	8	69,562,014	A
<i>SDC2</i>	intronic	FEV1/FVC	rs2437780	8	97,519,676	A
<i>RNF19A</i>	intronic	FEV1/FVC	rs6996156	8	101,344,514	T
<i>NCALD</i>	intronic	FEV1/FVC	rs659398	8	103,131,300	T
<i>EMC2</i>	intergenic	FEV1/FVC	rs4478547	8	109,389,370	T
<i>LINC01151</i>	intergenic	FEV1/FVC	rs6470085	8	123,405,077	A
<i>LINC00977</i>	intergenic	FEV1	rs6470697	8	130,130,604	A
<i>GSDMC</i>	intergenic	PEF	rs6998547	8	130,662,038	C
<i>ASAP1</i>	intronic	FEV1/FVC	rs5027392	8	131,421,581	A
<i>PTPRD</i>	intergenic	FVC	rs15117321	9	8,105,018	A
<i>C9orf92</i>	intergenic	PEF	rs11795150	9	16,105,961	T
<i>BNC2</i>	intergenic	FVC	rs7029491	9	16,986,112	C
<i>DMRTA1</i>	intergenic	FVC	rs62572328	9	22,540,580	T
<i>TMEM2</i>	intergenic	FEV1/FVC	rs970481	9	74,270,167	A
<i>TLE1</i>	intergenic	FEV1	rs62579839	9	83,755,208	T
<i>RMI1</i>	intergenic	FVC	rs4877815	9	86,623,268	A
<i>ZCCHC6</i>	intergenic	FEV1/FVC	rs1593438	9	88,978,867	A

ZCCHC6	intergenic	FEV1	rs750188	9	89,086,278	A
CENPP	intronic	FEV1	rs3118008	9	95,180,375	A
PHF2	intronic	FEV1/FVC	rs10156601	9	96,345,328	A
LMX1B	intronic	FEV1/FVC	rs10987386	9	129,416,317	T
ASB13	intergenic	FEV1/FVC	rs7093310	10	5,662,119	T
FRMD4A	intronic	PEF	rs1881586	10	13,919,625	T
ITGA8	upstream	FEV1/FVC	rs79878170	10	15,762,526	T
PLXDC2	intronic	FEV1/FVC	rs17758131	10	20,200,311	A
KIAA1462	intronic	PEF	rs55885169	10	30,313,663	T
ZNF438	intronic	FVC	rs1776634	10	31,295,827	T
KIF5B	intergenic	FEV1	rs211401	10	32,390,112	T
EPC1	intergenic	FEV1/FVC	rs58095591	10	32,669,119	A
ARID5B	intronic	FVC	rs2393728	10	63,837,255	A
ZNF503	intergenic	FEV1/FVC	rs10824301	10	77,140,469	C
ZMIZ1	intronic	FVC	rs7916441	10	80,925,577	C
DYDC2	intronic	FEV1/FVC	rs7909792	10	82,118,870	A
PTEN	intergenic	FEV1/FVC	rs1855971	10	89,824,247	A
CYP26A1	intergenic	FVC	rs10882161	10	94,916,264	A
PAX2	intergenic	FVC	rs41310284	10	102,447,647	A
SH3PXD2A	intronic	FEV1/FVC	rs10748841	10	105,530,086	T
RBM20	intronic	FVC	rs10787261	10	112,445,711	T
FGFR2	intergenic	FEV1/FVC	rs12781981	10	123,194,321	T
FGFR2	intergenic	FEV1	rs7906816	10	123,412,399	A
HTRA1	intergenic	FEV1/FVC	rs3793917	10	124,219,275	C
HTRA1	intronic	FVC	rs12571361	10	124,230,612	A
ST5	intronic	FEV1/FVC	rs10840131	11	8,844,356	T
SCUBE2	intronic	FEV1	rs68168871	11	9,079,092	A
TEAD1	intronic	FVC	rs7949010	11	12,728,643	A
ARNTL	intergenic	FEV1/FVC	rs10831984	11	13,168,598	A
SOX6	intronic	FVC	rs75491171	11	16,368,494	A
WT1-AS	intergenic	FEV1	rs14933391	11	32,494,375	A
SERPING1	intronic	FEV1/FVC	rs76525961	11	57,371,192	T
PC	intronic	FVC	rs11730380	11	66,650,531	A
FADD	intergenic	FEV1/FVC	rs78460761	11	70,044,451	A
GAB2	intronic	FEV1/FVC	rs11237480	11	78,126,162	A
NOX4	intronic	FVC	rs2118022	11	89,316,133	T
ARHGAP42	intergenic	FEV1/FVC	rs594476	11	100,498,196	C
ARHGAP20	intergenic	FEV1/FVC	rs56709121	11	110,417,648	A
CADM1	intergenic	FEV1/FVC	rs898614	11	115,408,679	T
SORL1	intergenic	PEF	rs949076	11	121,658,959	T
ETS1	intronic	FVC	rs7946009	11	128,387,422	T
ADAMTS15	intronic	FVC	rs11827011	11	130,322,464	A
NTM	intronic	FEV1/FVC	rs7118465	11	131,970,313	T
NINJ2	intronic	PEF	rs2535398	12	713,752	T
ERC1	intronic	FVC	rs3924361	12	1,216,632	A
REERG	intronic	FEV1/FVC	rs7306438	12	15,277,113	T
PDE3A	intergenic	FEV1	rs676274	12	20,402,467	A
PDE3A	intronic	PEF	rs73233951	12	20,703,895	A
SOX5	intronic	FEV1/FVC	rs4579999	12	24,439,661	T
COL2A1	intronic	PEF	rs4760608	12	48,368,989	A

<i>DIP2B</i>	UTR3	FVC	rs1047912	12	51,138,862 T
<i>ACVR1B</i>	intronic	FEV1/FVC	rs7962469	12	52,348,259 A
<i>HOXC4</i>	intronic	FEV1/FVC	rs2077177	12	54,418,857 T
<i>FRS2</i>	intronic	FEV1	rs1044458	12	69,868,410 A
<i>MED13L</i>	intergenic	FEV1/FVC	rs1106761	12	115,925,719 T
<i>FRY</i>	intronic	PEF	rs7331540	13	32,710,520 C
<i>KPNA3</i>	intronic	FEV1/FVC	rs1287500	13	50,284,701 T
<i>LINC00381</i>	intergenic	FEV1/FVC	rs9600261	13	74,899,633 A
<i>COL4A2</i>	intronic	FEV1/FVC	rs6196320	13	111,051,120 T
<i>COL4A2</i>	intronic	PEF	rs9670662	13	111,098,701 A
<i>MBIP</i>	intergenic	FEV1/FVC	rs7401714	14	36,718,441 A
<i>SOS2</i>	exonic	FVC	rs7268186	14	50,655,357 C
<i>ENTPD5</i>	intronic	PEF	rs1162111	14	74,460,126 T
<i>LTBP2</i>	intronic	FEV1/FVC	rs7155637	14	75,004,136 A
<i>GPATCH2L</i>	intergenic	FEV1/FVC	rs2543358	14	76,589,371 A
<i>ITPK1</i>	intronic	FEV1/FVC	rs1289478	14	93,503,386 T
<i>PRIMA1</i>	intergenic	FVC	rs736281	14	94,287,830 T
<i>ADSSL1</i>	UTR3	PEF	rs6644	14	105,213,343 A
<i>FBN1</i>	intergenic	FEV1/FVC	rs8032308	15	48,692,612 T
<i>SPPL2A</i>	intronic	FEV1/FVC	rs1040082	15	51,034,423 A
<i>GLDN</i>	intronic	FVC	rs2445772	15	51,641,996 C
<i>SMAD6</i>	intronic	PEF	rs1163825	15	67,041,110 A
<i>SMAD3</i>	intronic	FEV1/FVC	rs1729428	15	67,468,285 A
<i>LOXL1</i>	intronic	FVC	rs8027022	15	74,226,138 A
<i>CSK</i>	intronic	PEF	rs3493303	15	75,079,474 A
<i>TSPAN3</i>	exonic	FEV1/FVC	rs11737	15	77,344,793 A
<i>CHRNA4</i>	intronic	FEV1/FVC	rs4887072	15	78,925,435 A
<i>BTBD1</i>	intronic	PEF	rs4079029	15	83,727,830 T
<i>ZNF592</i>	intronic	FEV1/FVC	rs7263046	15	85,298,126 A
<i>ACAN</i>	exonic	PEF	rs3494918	15	89,386,652 A
<i>IGF1R</i>	UTR3	PEF	rs2684787	15	99,505,062 T
<i>TTC23</i>	intronic	FEV1/FVC	rs8039637	15	99,686,951 T
<i>LMF1</i>	intergenic	PEF	rs2729567	16	1,022,835 A
<i>PKD1</i>	intronic	PEF	rs7185040	16	2,145,787 A
<i>TMEM114</i>	UTR3	FVC	rs7198383	16	8,619,750 T
<i>MIR365A</i>	intergenic	PEF	rs1659129	16	14,404,700 A
<i>MAPK3</i>	upstream	FEV1/FVC	rs6176420	16	30,134,679 T
<i>LOC102467079</i>	intergenic	FEV1	rs6500126	16	52,192,998 A
<i>LOC100505942</i>	intergenic	FEV1/FVC	rs1333245	16	67,549,170 T
<i>ZFH3</i>	intergenic	FVC	rs3702406	16	73,095,266 T
<i>WWOX</i>	intronic	PEF	rs7139813	16	79,238,563 A
<i>LOC339059</i>	ncRNA_exonic	FVC	rs9927855	16	88,809,686 T
<i>PIEZO1</i>	intronic	FEV1	rs7857928	16	88,813,060 T
<i>SMG6</i>	intronic	FEV1/FVC	rs2760751	17	2,028,106 A
<i>LINC00670</i>	intergenic	PEF	rs2721844	17	12,267,533 T
<i>MSL1</i>	intronic	FEV1/FVC	rs1178272	17	38,279,036 C
<i>PHB</i>	downstream	FEV1/FVC	rs4987082	17	47,481,374 T
<i>C17orf67</i>	intergenic	PEF	rs227728	17	54,776,855 A
<i>C17orf82</i>	intergenic	FVC	rs2079795	17	59,496,649 T
<i>MRC2</i>	intronic	FEV1/FVC	rs1245259	17	60,720,058 T

<i>KPNA2</i>	intergenic	FEV1/FVC	rs6208690:	17	66,016,006 T
<i>RBFOX3</i>	intronic	FEV1/FVC	rs2703552	17	77,178,468 A
<i>NOTUM</i>	intergenic	FEV1	rs9897074	17	79,923,550 T
<i>CTAGE1</i>	intergenic	FEV1	rs4800410	18	20,032,854 A
<i>LINC01477</i>	intergenic	FVC	rs7233091	18	38,108,623 A
<i>RIT2</i>	intergenic	FEV1/FVC	rs1424393	18	40,737,681 C
<i>RANBP3</i>	intronic	FVC	rs274792	19	5,933,920 T
<i>FBN3</i>	intronic	PEF	rs1167203:	19	8,174,724 T
<i>ADAMTS10</i>	exonic	FVC	rs6262119:	19	8,670,147 T
<i>PIN1</i>	intronic	FVC	rs8104651	19	9,950,127 T
<i>NFIX</i>	intergenic	PEF	rs1188186:	19	13,098,993 C
<i>LTBP4</i>	intronic	FVC	rs1864078	19	41,104,758 C
<i>RSPH6A</i>	intronic	FEV1/FVC	rs7253302	19	46,314,894 A
<i>FPR3</i>	upstream	FEV1/FVC	rs1260937:	19	52,298,281 T
<i>RALY</i>	intronic	FVC	rs2268078	20	32,596,704 A
<i>JPH2</i>	intronic	FEV1	rs6103666	20	42,797,873 A
<i>ARFGEF2</i>	UTR5	FVC	rs2273101	20	47,538,333 T
<i>LINC01272</i>	intergenic	PEF	rs4811018	20	48,898,447 A
<i>GATA5</i>	intronic	FEV1/FVC	rs6421437	20	61,040,313 T
<i>GATA5</i>	exonic	FEV1	rs2003837:	20	61,050,522 C
<i>CXADR</i>	UTR3	FEV1/FVC	rs442217	21	18,941,975 C
<i>CLIC6</i>	intronic	FVC	rs1170225:	21	36,081,448 T
<i>MIR802</i>	upstream	PEF	rs9981293	21	37,092,980 A
<i>GNB1L</i>	intronic	FEV1/FVC	rs5748428	22	19,777,457 T
<i>SYN3</i>	intronic	FEV1/FVC	rs7315839:	22	33,335,386 C
<i>PDGFB</i>	intergenic	FEV1/FVC	rs7751611:	22	39,647,168 T
<i>MKL1</i>	intronic	PEF	rs2072857	22	40,816,841 A
<i>FBLN1</i>	intergenic	PEF	rs3937045	22	46,030,194 C
<i>PIM3</i>	intergenic	PEF	rs1117001:	22	50,343,919 T
<i>WWC3</i>	intergenic	FEV1/FVC	rs2007171	X	10,114,232 A
<i>RBBP7</i>	intronic	FEV1	rs5924560	X	16,866,741 G
<i>XIAP</i>	UTR3	FEV1	rs2838275:	X	123,045,109 C
<i>LOC100129520</i>	intergenic	FEV1	rs3444424:	X	124,769,347 G
<i>CTAG1B</i>	intergenic	FVC	rs7053878	X	153,834,100 T

Noncoded allele	UK Biobank					SpiroMeta
	Coded frequency	N	INFO	beta	P	Coded frequency
G	7.1%	321,047	1.000	-0.0356	1.10E-12	6.8%
G	10.5%	321,047	0.993	0.0364	5.66E-17	10.0%
G	41.8%	321,047	0.990	0.0160	7.12E-10	43.2%
C	7.3%	321,047	0.992	0.0361	8.01E-13	9.0%
G	26.6%	321,047	0.996	-0.0321	2.28E-27	26.3%
G	16.2%	321,047	0.976	0.0203	7.26E-09	15.9%
C	27.4%	321,047	0.981	-0.0168	6.73E-09	27.3%
G	52.4%	321,047	0.998	0.0160	3.48E-09	52.9%
G	51.5%	321,047	0.953	-0.0183	1.20E-11	51.6%
G	46.5%	321,047	0.939	-0.0318	1.54E-32	45.8%
G	38.3%	321,047	1.000	0.0154	2.53E-08	38.2%
G	66.5%	321,047	1.000	-0.0174	3.75E-10	67.1%
C	39.1%	321,047	0.996	0.0188	9.61E-12	40.0%
G	72.5%	321,047	0.991	-0.0193	3.05E-11	73.0%
G	3.0%	321,047	1.000	0.0421	3.62E-08	3.1%
C	79.0%	321,047	0.994	0.0179	1.76E-08	79.3%
C	62.4%	321,047	0.997	-0.0227	5.01E-17	62.9%
G	24.9%	321,047	1.000	-0.0234	5.29E-15	24.3%
C	14.7%	321,047	0.993	0.0196	1.13E-07	15.6%
G	27.2%	321,047	0.98278	-0.018007	1.42E-09	27.1%
G	28.1%	321,047	0.985	-0.0164	1.59E-08	28.6%
C	37.0%	321,047	0.998	0.0157	2.02E-09	36.6%
G	58.9%	321,047	0.997	-0.0158	4.75E-10	59.6%
C	40.3%	321,047	1.000	-0.0156	2.39E-09	40.0%
C	87.2%	321,047	0.998	0.0284	6.14E-13	87.5%
G	59.3%	321,047	0.994	0.0138	1.98E-07	59.4%
G	67.3%	321,047	0.955	0.0483	3.97E-66	68.0%
T	29.1%	321,047	0.993	0.0163	3.28E-08	29.9%
C	12.3%	321,047	0.997	0.0223	1.75E-08	12.1%
G	32.9%	321,047	0.981	-0.0172	1.91E-09	33.3%
G	26.9%	321,047	0.992	0.0222	2.01E-14	26.4%
C	66.1%	321,047	0.985	0.0180	8.07E-11	65.8%
T	61.7%	321,047	0.994	-0.0249	3.44E-20	61.0%
C	45.1%	321,047	0.995	0.0161	1.92E-09	44.2%
C	27.4%	321,047	0.986	0.0276	2.09E-19	27.3%
G	7.6%	321,047	0.995	0.0510	9.57E-26	7.9%
C	33.7%	321,047	0.995	0.0169	1.16E-09	33.9%
C	58.5%	321,047	0.996	0.0168	7.28E-11	59.1%
G	44.6%	321,047	0.983	-0.0213	1.76E-16	43.5%
G	13.7%	321,047	0.984	-0.0251	1.50E-11	13.6%
G	6.7%	321,047	0.997	-0.0464	9.90E-19	6.4%
G	19.9%	321,047	0.995	0.0204	9.35E-10	21.1%
G	46.2%	321,047	1.000	0.0203	2.88E-15	44.4%
C	65.5%	321,047	0.969	-0.0154	2.79E-08	65.9%

G	59.0%	321,047	0.992	-0.0225	1.02E-17	58.0%
G	12.4%	321,047	0.996	-0.0277	1.34E-12	13.7%
C	21.2%	321,047	0.998	-0.0194	2.63E-10	22.0%
C	78.9%	321,047	0.994	-0.0175	7.17E-08	78.3%
G	82.4%	321,047	0.996	0.0352	5.83E-26	82.7%
C	23.8%	321,047	0.997	0.0242	4.45E-16	24.1%
C	65.2%	321,047	0.999	0.0148	2.98E-08	63.5%
T	85.4%	321,047	0.992	0.0271	3.29E-13	85.8%
G	56.8%	321,047	0.996	0.0218	1.27E-16	56.7%
C	29.6%	321,047	0.996	-0.0209	1.69E-13	28.6%
G	72.8%	321,047	0.999	0.0180	5.78E-10	73.0%
T	33.9%	321,047	0.981	-0.0158	2.16E-08	34.1%
C	60.3%	321,047	0.957	-0.0181	2.20E-11	59.7%
G	56.3%	321,047	0.999	-0.0178	2.22E-11	55.6%
C	53.9%	321,047	0.994	-0.0185	1.83E-12	53.3%
G	52.1%	321,047	0.999	-0.0164	1.52E-09	50.8%
T	73.8%	321,047	0.992	0.0215	1.72E-12	71.9%
C	14.3%	321,047	0.963	0.0284	1.47E-13	14.4%
G	27.1%	321,047	0.997	-0.0265	1.09E-19	27.1%
G	20.3%	321,047	0.908	-0.0252	1.18E-13	20.3%
C	15.9%	321,047	0.984	0.0236	1.17E-11	14.9%
G	44.2%	321,047	0.990	0.0169	1.39E-10	44.0%
G	67.7%	321,047	0.986	-0.0214	1.14E-14	67.2%
C	36.4%	321,047	0.991	-0.0177	5.76E-11	34.9%
G	4.1%	321,047	0.953	0.0496	1.60E-12	4.5%
C	42.2%	321,047	0.986	0.0149	4.10E-09	41.7%
G	16.9%	321,047	0.932	-0.0192	1.19E-07	16.4%
C	33.9%	321,047	0.983	0.0183	4.30E-11	33.4%
C	13.3%	321,047	1.000	0.0253	3.92E-11	13.7%
G	57.7%	321,047	0.991	0.0154	8.80E-09	57.3%
C	5.2%	321,047	0.993	0.0373	1.15E-09	5.8%
C	15.6%	321,047	0.990	-0.0211	6.70E-09	15.4%
G	24.2%	321,047	0.916	-0.0205	2.22E-10	22.1%
G	27.8%	321,047	1.000	0.0186	6.52E-10	28.2%
C	35.7%	321,047	0.981	-0.0225	7.99E-16	36.5%
G	4.3%	321,047	0.935	0.0426	8.20E-11	5.0%
C	34.2%	321,047	0.999	0.0175	1.77E-10	36.7%
G	67.7%	321,047	0.994	0.0365	1.79E-39	67.9%
C	30.7%	321,047	0.988	0.0205	2.03E-12	30.2%
C	34.1%	321,047	0.994	-0.0173	1.03E-09	32.6%
C	50.9%	321,047	0.994	0.0167	7.11E-11	50.9%
G	23.2%	321,047	1.000	0.0180	4.35E-09	22.5%
G	5.3%	321,047	1.000	-0.0401	9.61E-12	5.2%
T	19.9%	321,047	0.998	0.0200	5.86E-10	20.8%
C	21.5%	321,047	0.999	0.0163	1.09E-06	21.4%
C	46.7%	321,047	0.999	-0.0169	2.17E-11	46.7%
G	87.7%	321,047	1.000	0.0287	2.75E-13	87.0%
C	7.4%	321,047	1.000	0.0318	1.38E-10	6.9%
G	19.6%	321,047	0.992	-0.0233	3.90E-12	18.5%
G	55.2%	321,047	0.996	-0.0139	1.21E-07	54.8%

T	26.2%	321,047	0.995	-0.0207	2.17E-12	25.8%
G	28.7%	321,047	1.000	0.0147	1.94E-07	27.0%
G	74.1%	321,047	0.999	0.0198	1.66E-10	73.9%
C	33.2%	321,047	0.997	0.0162	4.55E-09	32.5%
G	5.1%	321,047	1.000	-0.0370	3.15E-10	5.0%
C	61.4%	321,047	0.978	0.0181	1.53E-11	61.5%
G	75.0%	321,047	0.999	0.0178	3.30E-09	74.8%
T	35.0%	321,047	0.999	0.0190	6.27E-12	34.5%
C	24.8%	321,047	1.000	0.0184	9.63E-09	24.5%
T	9.5%	321,047	0.996	-0.0333	1.96E-13	10.4%
C	20.9%	321,047	1.000	0.0253	9.06E-16	21.8%
C	38.2%	321,047	0.997	0.0187	1.88E-12	38.3%
C	91.9%	321,047	0.979	0.0295	1.31E-09	91.8%
C	42.1%	321,047	0.999	-0.0154	6.17E-09	41.8%
G	77.9%	321,047	0.997	-0.0492	4.86E-56	76.7%
G	46.6%	321,047	0.999	0.0227	3.23E-18	46.4%
G	38.5%	321,047	0.996	-0.0199	1.68E-13	35.5%
G	70.0%	321,047	0.996	0.0255	2.16E-19	70.1%
G	55.8%	321,047	0.993	0.0237	9.50E-20	55.9%
C	42.2%	321,047	0.998	-0.0172	4.24E-11	43.5%
C	43.9%	321,047	0.999	-0.0178	4.73E-12	43.8%
G	46.1%	321,047	1.000	-0.0171	4.71E-11	47.1%
C	34.0%	321,047	0.997	-0.0159	5.02E-09	35.3%
C	25.8%	321,047	0.995	-0.0189	3.85E-11	26.9%
C	37.0%	321,047	0.993	-0.0212	2.39E-15	37.5%
T	4.2%	321,047	0.937	0.0388	3.96E-09	3.9%
G	43.7%	321,047	1.000	0.0147	2.28E-08	43.6%
G	56.8%	321,047	0.996	-0.0162	2.65E-10	56.2%
G	25.5%	321,047	0.993	-0.0252	2.28E-17	25.3%
C	27.8%	321,047	0.981	0.0348	8.07E-33	28.0%
C	41.5%	321,047	1.000	0.0197	2.28E-13	42.5%
C	65.1%	321,047	0.999	-0.0173	6.91E-11	66.2%
C	49.1%	321,047	0.99293	-0.027452	2.86E-26	49.7%
C	12.2%	321,047	0.988	-0.0309	1.41E-14	12.7%
C	84.6%	321,047	1.000	-0.0253	1.34E-12	85.5%
G	63.2%	321,047	0.985	0.0180	1.66E-11	64.4%
G	79.9%	321,047	0.998	0.0269	1.48E-16	81.6%
G	26.7%	321,047	0.984	-0.0171	4.13E-09	27.0%
C	30.1%	321,047	0.995	-0.0167	4.67E-09	30.6%
G	5.5%	321,047	0.990	-0.0355	3.50E-10	5.4%
G	2.4%	321,047	1.000	0.0627	1.94E-13	1.9%
C	10.4%	321,047	0.998	-0.0271	5.81E-11	10.5%
C	14.2%	321,047	1.000	0.0233	4.48E-10	14.5%
C	34.7%	321,047	0.998	0.0173	4.57E-10	33.3%
G	54.7%	321,047	0.999	0.0163	1.13E-10	54.5%
C	30.3%	321,047	0.995	-0.0167	4.26E-09	29.3%
C	31.9%	321,047	1.000	-0.0191	5.22E-12	32.1%
G	25.5%	321,047	0.987	0.0183	4.09E-09	26.3%
G	57.9%	321,047	0.994	0.0155	2.89E-09	59.0%
G	37.5%	321,047	1.000	-0.0275	1.97E-24	37.3%

G	47.8%	321,047	0.970	-0.0132	6.21E-07	48.3%
G	36.8%	321,047	0.998	-0.0210	1.89E-15	36.6%
G	8.7%	321,047	0.998	0.0331	3.35E-13	8.8%
G	36.4%	321,047	0.982	-0.0177	8.91E-11	37.3%
G	34.5%	321,047	0.986	0.0144	5.94E-08	34.6%
C	48.3%	321,047	0.998	0.0175	1.80E-11	49.3%
C	31.3%	321,047	0.998	0.0197	9.14E-13	31.8%
C	29.5%	321,047	0.989	0.0186	6.00E-11	29.8%
G	15.8%	321,047	0.998	0.0208	5.11E-09	15.4%
G	23.4%	321,047	0.970	-0.0177	1.06E-08	24.6%
G	36.1%	321,047	0.995	-0.0201	4.43E-14	35.5%
G	10.1%	321,047	0.995	0.0313	5.59E-13	10.3%
G	13.8%	321,047	0.990	0.0202	3.68E-08	12.6%
C	32.4%	321,047	0.998	0.0247	5.26E-19	32.6%
C	46.7%	321,047	0.985	-0.0146	1.64E-08	47.5%
G	25.5%	321,047	0.987	-0.0164	1.12E-07	25.1%
C	21.2%	321,047	0.999	0.0179	4.82E-08	21.9%
C	31.1%	321,047	0.878	0.0175	2.23E-09	32.9%
C	9.0%	321,047	0.987	0.0267	6.67E-09	8.1%
G	53.5%	321,047	0.993	-0.0165	7.41E-10	53.3%
G	24.3%	321,047	0.967	0.0168	7.00E-08	24.1%
G	35.1%	321,047	0.998	-0.0172	1.38E-10	35.4%
G	25.1%	321,047	0.991	-0.0219	2.52E-13	25.3%
G	52.0%	321,047	0.988	0.0137	7.90E-08	52.7%
C	56.4%	321,047	0.994	-0.0160	7.45E-10	54.6%
G	49.5%	321,047	0.990	-0.0169	1.89E-10	49.9%
C	38.1%	321,047	0.991	0.0218	3.12E-15	39.4%
C	64.7%	321,047	1.000	0.0161	4.08E-09	64.9%
C	75.1%	321,047	0.956	0.0167	3.68E-08	75.0%
C	24.2%	321,047	0.996	-0.0180	5.50E-09	24.4%
C	68.3%	321,047	0.999	-0.0151	8.61E-08	68.2%
G	13.0%	321,047	0.998	-0.0212	8.80E-09	13.4%
G	47.1%	321,047	0.991	0.0175	1.34E-11	48.7%
G	21.0%	321,047	0.983	-0.0238	1.62E-13	19.5%
T	65.5%	321,047	0.990	0.0176	1.17E-10	66.7%
C	40.3%	321,047	0.990	0.0153	2.25E-08	40.5%
C	73.1%	321,047	0.983	0.0269	3.45E-19	71.7%
G	64.7%	321,047	1.000	-0.0214	2.15E-15	64.8%
G	46.4%	321,047	0.998	0.0138	2.76E-07	46.0%
C	9.9%	321,047	0.995	0.0311	3.52E-13	9.8%
G	30.3%	321,047	0.994	-0.0243	7.25E-18	30.3%
G	39.2%	321,047	0.997	0.0148	3.10E-08	37.7%
T	16.5%	321,047	0.994	-0.0207	4.17E-09	16.4%
G	43.2%	321,047	1.000	-0.0186	2.74E-12	43.0%
G	33.4%	321,047	0.979	0.0191	1.23E-12	32.9%
C	45.5%	321,047	0.991	-0.0148	1.45E-08	44.6%
G	70.5%	321,047	0.996	-0.0177	1.53E-09	71.3%
C	28.5%	321,047	0.993	0.0163	5.97E-09	28.1%
G	47.3%	321,047	1.000	0.0152	1.59E-09	47.9%
C	34.5%	321,047	0.991	0.0180	2.72E-10	35.9%

T	50.2%	321,047	0.994	-0.0155	2.70E-09	51.2%
C	27.7%	321,047	0.995	0.0168	3.77E-09	27.5%
G	36.3%	321,047	0.985	-0.0149	4.11E-08	36.8%
C	18.7%	321,047	0.982	-0.0268	9.59E-15	18.7%
C	90.1%	321,047	0.980	0.0366	1.48E-15	90.7%
C	56.3%	321,047	0.991	0.0175	3.07E-11	55.9%
G	12.6%	321,047	0.995	-0.0279	1.09E-12	12.9%
G	6.6%	321,047	0.978	0.0378	1.93E-12	6.4%
C	41.2%	321,047	0.998	0.0199	2.13E-14	40.9%
G	73.2%	321,047	0.993	0.0170	7.87E-09	73.9%
C	63.4%	321,047	0.994	-0.0151	1.33E-08	63.8%
G	17.1%	321,047	0.943	0.0217	3.96E-09	17.4%
G	42.3%	321,047	0.996	-0.0169	2.02E-10	41.5%
G	58.2%	321,047	0.987	0.0155	1.35E-08	59.0%
G	43.4%	321,047	0.999	0.0180	3.37E-12	43.0%
T	47.7%	321,047	0.994	0.0206	1.63E-15	48.9%
G	83.5%	321,047	0.998	0.0197	2.43E-08	83.6%
G	39.3%	321,047	0.988	-0.0171	1.19E-10	38.7%
C	10.1%	321,047	0.983	0.0282	1.75E-10	9.8%
C	39.1%	321,047	0.997	0.0183	1.49E-11	40.2%
C	35.1%	321,047	0.984	0.0156	1.28E-08	35.1%
G	21.6%	321,047	0.980	-0.0202	2.76E-10	22.2%
G	5.8%	321,047	0.989	0.0304	6.65E-08	5.7%
G	21.5%	321,047	1.000	-0.0210	6.14E-11	21.9%
C	10.8%	321,047	0.995	-0.0341	4.77E-16	10.2%
C	24.7%	321,047	0.996	-0.0206	2.78E-11	24.2%
G	21.1%	321,047	0.994	0.0191	3.28E-09	21.1%
G	41.8%	321,047	0.975	-0.0199	2.75E-13	40.0%
G	45.4%	321,047	0.993	0.0252	7.03E-21	45.5%
G	5.5%	321,047	1.000	0.0328	6.70E-09	4.7%
G	4.1%	321,047	0.976	0.0366	3.80E-08	3.7%
G	26.7%	321,047	0.997	-0.0185	2.02E-10	27.2%
T	22.3%	321,047	0.972	0.0218	3.28E-12	21.6%
G	16.4%	321,047	0.981	0.0241	8.92E-12	16.0%
C	16.0%	321,047	0.991	-0.0244	1.86E-12	18.0%
C	36.1%	321,047	0.994	-0.0157	4.48E-09	34.3%
G	70.5%	321,047	0.978	0.0184	2.77E-10	71.2%
G	7.4%	321,047	0.996	-0.0329	4.08E-11	7.3%
C	64.9%	321,047	0.998	0.0152	1.20E-08	64.3%
C	76.4%	321,047	0.997	-0.0192	6.68E-10	76.2%
C	66.0%	321,047	0.994	-0.0164	2.36E-09	65.1%
G	48.2%	321,047	1.000	0.0144	2.30E-08	48.1%
C	68.2%	321,047	0.995	-0.0285	5.36E-23	67.7%
C	65.0%	321,047	0.994	-0.0193	7.57E-13	65.7%
G	55.2%	321,047	0.987	0.0191	1.13E-12	55.8%
C	54.7%	321,047	0.995	0.0195	2.12E-13	54.4%
G	41.5%	321,047	0.997	-0.0147	2.29E-08	42.9%
G	5.0%	321,047	0.989	0.0384	1.30E-10	5.1%
C	54.0%	321,047	0.988	-0.0159	3.62E-09	54.4%
C	21.5%	321,047	0.979	-0.0285	9.50E-20	20.3%

C	30.2%	321,047	1.000	0.0165	3.81E-09	28.6%
G	64.5%	321,047	0.982	-0.0200	7.59E-14	64.7%
C	40.5%	321,047	0.985	-0.0200	1.27E-13	42.2%
C	34.6%	321,047	0.990	-0.0156	3.94E-09	34.4%
G	51.1%	321,047	0.998	0.0176	2.07E-11	52.2%
G	41.5%	321,047	0.986	-0.0206	8.27E-15	41.6%
G	32.2%	321,047	0.998	0.0184	2.05E-11	31.1%
G	18.0%	321,047	0.999	0.0222	6.63E-11	19.7%
G	2.1%	321,047	0.946	0.0525	2.89E-08	2.3%
G	47.2%	321,047	0.994	0.0160	1.67E-09	47.3%
G	57.6%	321,047	0.999	-0.0160	5.69E-10	56.6%
G	1.1%	321,047	1.000	0.0744	5.88E-09	0.9%
C	63.2%	321,047	0.998	0.0147	1.82E-08	63.3%
C	77.3%	321,047	1.000	0.0185	1.65E-08	77.4%
T	16.9%	321,047	0.997	0.0216	1.80E-09	16.5%
C	12.6%	321,047	0.988	-0.0353	1.01E-18	12.5%
C	59.8%	321,047	0.993	-0.0158	5.15E-09	60.8%
G	44.6%	321,047	0.997	-0.0146	3.10E-08	44.6%
G	87.3%	321,047	0.981	0.0236	4.11E-09	87.0%
G	18.7%	321,047	0.999	-0.0211	1.72E-09	19.7%
G	69.4%	321,047	0.985	0.0159	1.25E-08	68.0%
C	35.1%	321,047	0.888	-0.0180	1.37E-10	35.4%
G	25.3%	321,047	0.930	-0.0221	4.72E-12	25.7%
G	49.5%	321,047	0.996	0.0185	5.03E-12	49.1%
G	15.3%	321,047	0.987	0.0288	1.78E-15	15.5%
T	67.1%	321,047	0.992	0.0268	9.60E-23	66.2%
G	22.6%	321,047	0.988	0.0187	4.29E-09	22.9%
C	33.8%	321,047	0.995	0.0219	2.69E-16	35.0%
G	15.8%	321,047	1.000	-0.0235	1.38E-10	15.6%
G	18.7%	321,047	1.000	0.0239	1.37E-12	18.8%
C	25.1%	321,047	0.997	-0.0255	9.61E-18	25.4%
C	13.6%	321,047	0.996	-0.0299	1.26E-15	13.8%
G	7.9%	321,047	0.998	-0.0295	7.76E-10	7.5%
C	17.7%	321,047	0.989	-0.0208	4.71E-10	18.3%
C	68.4%	321,047	0.986	0.0176	2.17E-10	67.6%
G	62.3%	321,047	0.994	0.0202	1.00E-13	62.2%
C	32.4%	321,047	0.991	0.0162	1.60E-08	33.9%
G	33.6%	321,047	0.998	0.0141	2.57E-07	35.2%
C	7.5%	321,047	0.995	0.0392	3.56E-15	7.2%
C	3.6%	321,047	0.963	-0.0383	6.93E-08	3.4%
C	13.9%	321,047	0.982	-0.0250	3.55E-11	14.5%
C	69.8%	321,047	0.994	-0.0161	4.33E-08	68.2%
C	18.3%	321,047	1.000	-0.0226	3.86E-12	17.9%
G	72.9%	321,047	0.997	-0.0219	5.72E-14	72.5%
C	41.6%	321,047	0.994	0.0169	9.50E-11	42.4%
G	15.1%	321,047	0.989	-0.0280	7.99E-14	14.8%
C	43.2%	321,047	1.000	-0.0176	3.85E-11	43.8%
T	33.1%	321,047	0.991	-0.0312	2.91E-30	33.0%
C	66.8%	321,047	1.000	0.0208	7.96E-15	68.5%
G	36.2%	321,047	0.974	-0.0217	1.19E-14	37.7%

C	23.0%	321,047	0.985	0.0193	1.56E-09	24.0%
G	83.5%	321,047	0.948	0.0215	6.80E-09	82.9%
C	64.7%	321,047	0.995	0.0193	1.63E-12	64.9%
C	40.3%	321,047	0.988	0.0219	6.35E-17	41.5%
G	45.5%	321,047	0.996	-0.0144	3.18E-08	45.0%
G	37.5%	321,047	0.997	-0.0171	9.21E-10	39.1%
C	69.2%	321,047	0.996	0.0206	7.55E-13	66.8%
C	38.4%	321,047	1.000	-0.0163	1.95E-09	37.8%
C	3.7%	321,047	0.924	-0.0391	2.85E-08	3.5%
C	43.7%	321,047	0.987	0.0148	6.30E-09	44.0%
G	3.8%	321,047	0.967	-0.0452	8.50E-11	3.5%
G	37.7%	321,047	0.997	0.0236	2.01E-18	39.1%
C	35.4%	321,047	0.997	0.0304	1.97E-27	35.0%
C	22.2%	321,047	1.000	-0.0196	8.46E-10	22.8%
G	64.0%	321,047	0.996	-0.0179	3.93E-11	65.8%
G	27.2%	321,047	0.984	-0.0186	5.98E-10	26.7%
C	24.7%	321,047	0.998	0.0187	4.70E-10	24.5%
G	66.2%	321,047	0.992	0.0169	3.74E-10	66.4%
G	36.4%	321,047	0.980	-0.0212	1.07E-14	36.3%
G	0.6%	321,047	0.882	-0.1308	6.86E-14	0.4%
G	33.2%	321,047	0.996	-0.0157	2.68E-08	33.1%
G	22.5%	321,047	0.993	-0.0197	2.07E-10	21.8%
G	42.2%	321,047	0.996	0.0255	4.89E-22	42.9%
G	22.2%	321,047	0.998	0.0194	1.45E-09	22.4%
G	25.8%	321,047	0.999	0.0243	1.79E-14	25.2%
C	25.5%	321,047	0.996	-0.0197	5.81E-11	25.5%
G	9.1%	321,047	0.996	-0.0261	4.02E-09	10.1%
G	57.4%	321,047	0.986	-0.0163	1.29E-09	56.9%
C	15.3%	321,047	1.000	0.0213	2.61E-09	15.1%
G	75.2%	321,027	0.993	0.0177	2.35E-03	76.3%
T	60.5%	321,027	1.000	-0.0170	2.09E-03	61.0%
A	80.8%	321,027	0.965	0.0195	2.61E-03	79.6%
T	66.0%	321,027	0.985	0.0131	2.16E-03	65.7%
A	71.4%	321,027	0.981	0.0145	2.26E-03	74.6%

P<0.05 183			Meta-analysis of UK Biobank and SpiroMeta				
N	beta	P	Coded frequency	MAF	beta	se	P
83,117	-0.0272	9.15E-03	7.0%	7.0%	-0.0341	0.0045	5.81E-14
82,209	0.0186	3.91E-02	10.4%	10.4%	0.0330	0.0039	2.27E-17
82,864	0.0159	2.86E-03	42.1%	42.1%	0.0160	0.0024	1.49E-11
83,079	0.0207	2.31E-02	7.7%	7.7%	0.0325	0.0044	2.43E-13
24,218	-0.0234	2.90E-02	26.6%	26.6%	-0.0315	0.0028	2.24E-28
24,218	0.0347	7.53E-03	16.1%	16.1%	0.0213	0.0035	7.08E-10
83,081	-0.0119	4.20E-02	27.4%	27.4%	-0.0158	0.0027	2.78E-09
24,218	0.0145	1.22E-01	47.5%	47.5%	-0.0159	0.0025	2.42E-10
82,209	-0.0103	5.48E-02	48.5%	48.5%	0.0167	0.0024	4.18E-12
24,218	-0.0258	7.86E-03	46.4%	46.4%	-0.0314	0.0026	1.27E-33
83,080	0.0172	1.31E-03	38.3%	38.3%	0.0158	0.0024	6.96E-11
82,865	-0.0166	2.75E-03	66.6%	33.4%	-0.0172	0.0025	2.67E-12
82,210	0.0053	3.23E-01	39.3%	39.3%	0.0160	0.0024	4.01E-11
75,423	-0.0124	4.61E-02	72.6%	27.4%	-0.0181	0.0026	7.02E-12
24,218	0.0684	1.30E-02	3.0%	3.0%	0.0440	0.0074	2.39E-09
75,675	0.0208	2.50E-03	20.9%	20.9%	-0.0184	0.0029	1.57E-10
75,637	-0.0151	7.68E-03	62.5%	37.5%	-0.0213	0.0025	5.26E-18
24,218	-0.0152	1.63E-01	75.2%	24.8%	0.0228	0.0029	4.23E-15
75,637	0.0244	1.30E-03	85.1%	14.9%	-0.0205	0.0034	9.35E-10
24218	-0.014437	1.78E-01	27.2%	27.2%	-0.0178	0.0028	4.57E-10
75,423	-0.0146	1.65E-02	71.8%	28.2%	0.0160	0.0026	9.72E-10
24,218	0.0158	1.05E-01	63.0%	37.0%	-0.0157	0.0026	1.51E-09
75,675	-0.0143	1.08E-02	59.1%	41.0%	-0.0156	0.0024	5.71E-11
75,423	-0.0091	1.06E-01	59.8%	40.2%	0.0145	0.0024	1.50E-09
75,639	0.0215	9.16E-03	87.3%	12.8%	0.0271	0.0036	2.60E-14
75,422	0.0153	6.52E-03	40.7%	40.7%	-0.0141	0.0024	3.88E-09
24,218	0.0275	6.93E-03	67.4%	32.6%	0.0468	0.0027	5.65E-66
54,238	0.0132	6.85E-02	29.2%	29.2%	0.0159	0.0027	2.21E-09
75,676	0.0155	6.71E-02	12.3%	12.3%	0.0211	0.0036	3.27E-09
74,768	-0.0070	2.37E-01	67.1%	33.0%	0.0153	0.0026	2.27E-09
75,421	0.0205	1.05E-03	73.2%	26.8%	-0.0219	0.0027	2.09E-16
24,218	0.0037	7.10E-01	33.9%	33.9%	-0.0170	0.0027	1.91E-10
83,081	-0.0129	1.48E-02	61.6%	38.4%	-0.0224	0.0024	2.70E-20
83,081	0.0080	1.25E-01	55.1%	44.9%	-0.0145	0.0024	1.10E-09
83,079	0.0173	2.99E-03	72.6%	27.4%	-0.0255	0.0027	6.87E-22
24,218	0.0390	2.58E-02	7.7%	7.7%	0.0501	0.0047	3.63E-26
75,423	0.0171	3.29E-03	33.7%	33.7%	0.0170	0.0025	9.49E-12
75,638	0.0129	2.06E-02	58.7%	41.3%	0.0161	0.0024	3.27E-11
74,766	-0.0103	7.18E-02	44.4%	44.4%	-0.0193	0.0024	1.89E-15
74,551	-0.0264	1.21E-03	86.3%	13.7%	0.0253	0.0034	2.01E-13
75,637	-0.0164	1.42E-01	6.6%	6.6%	-0.0408	0.0048	1.77E-17
24,218	0.0032	7.83E-01	20.0%	20.0%	0.0191	0.0031	1.19E-09
75,637	0.0127	2.14E-02	54.1%	45.9%	-0.0189	0.0024	2.91E-15
74,550	-0.0180	2.39E-03	65.6%	34.4%	-0.0159	0.0025	2.58E-10

24,218	-0.0057	5.49E-01	41.1%	41.1%	0.0213	0.0026	8.41E-17
75,676	-0.0119	1.35E-01	12.6%	12.6%	-0.0247	0.0035	2.42E-12
75,637	-0.0125	6.61E-02	21.3%	21.3%	-0.0182	0.0029	5.24E-10
75,637	-0.0165	1.29E-02	78.8%	21.2%	-0.0173	0.0029	2.83E-09
24,218	0.0092	4.59E-01	17.6%	17.6%	-0.0333	0.0033	5.82E-24
75,637	0.0141	2.78E-02	76.1%	23.9%	-0.0223	0.0028	1.50E-15
75,638	0.0158	5.45E-03	35.1%	35.1%	-0.0150	0.0025	1.95E-09
74,550	0.0207	1.05E-02	85.5%	14.5%	0.0260	0.0034	9.66E-15
24,218	0.0087	3.58E-01	43.2%	43.2%	-0.0209	0.0025	1.97E-16
75,423	-0.0193	1.69E-03	29.4%	29.4%	-0.0206	0.0026	1.48E-15
24,218	0.0074	4.90E-01	72.8%	27.2%	0.0172	0.0028	9.83E-10
75,422	-0.0121	4.01E-02	66.1%	34.0%	0.0151	0.0025	1.79E-09
74,766	-0.0190	1.29E-03	60.2%	39.8%	-0.0182	0.0025	3.00E-13
74,768	-0.0080	1.47E-01	56.2%	43.8%	-0.0160	0.0024	2.98E-11
82,208	-0.0080	1.30E-01	53.7%	46.3%	-0.0164	0.0024	6.14E-12
83,079	-0.0127	1.44E-02	48.2%	48.2%	0.0156	0.0024	3.32E-11
83,079	0.0148	1.04E-02	73.4%	26.6%	0.0201	0.0027	6.43E-14
82,209	0.0253	1.05E-03	14.4%	14.4%	0.0278	0.0034	6.04E-16
75,638	-0.0088	1.54E-01	72.9%	27.1%	0.0232	0.0027	5.26E-18
24,218	-0.0188	1.31E-01	79.7%	20.3%	0.0247	0.0033	4.64E-14
75,637	0.0032	6.77E-01	84.3%	15.7%	-0.0199	0.0033	1.73E-09
24,218	0.0035	7.13E-01	55.8%	44.2%	-0.0160	0.0025	3.22E-10
75,639	-0.0078	1.85E-01	67.6%	32.4%	-0.0188	0.0026	1.93E-13
75,675	-0.0072	2.19E-01	63.9%	36.1%	0.0158	0.0024	9.59E-11
75,637	0.0268	4.70E-02	4.2%	4.2%	0.0450	0.0061	1.13E-13
24,218	0.0164	8.57E-02	57.9%	42.1%	-0.0150	0.0026	4.53E-09
75,639	-0.0201	7.98E-03	83.2%	16.8%	0.0194	0.0033	4.20E-09
75,423	0.0001	9.89E-01	33.8%	33.8%	0.0150	0.0025	2.23E-09
24,218	0.0226	9.61E-02	86.7%	13.4%	-0.0251	0.0037	1.17E-11
75,422	0.0134	1.68E-02	42.3%	42.3%	-0.0150	0.0024	3.29E-10
75,639	0.0214	7.19E-02	5.3%	5.3%	0.0341	0.0053	1.86E-10
75,638	-0.0162	3.29E-02	84.5%	15.5%	0.0202	0.0033	1.05E-09
74,766	-0.0156	3.17E-02	23.9%	23.9%	-0.0197	0.0029	2.01E-11
74,552	0.0076	2.15E-01	72.1%	27.9%	-0.0166	0.0026	2.38E-10
24,218	-0.0101	3.03E-01	64.3%	35.8%	0.0216	0.0026	3.28E-16
69,559	0.0166	2.39E-01	4.4%	4.4%	0.0378	0.0061	5.41E-10
82,863	0.0146	7.77E-03	65.3%	34.7%	-0.0169	0.0024	4.61E-12
24,218	0.0179	7.71E-02	32.3%	32.3%	-0.0351	0.0027	5.52E-39
24,218	0.0170	9.86E-02	30.6%	30.6%	0.0203	0.0027	1.26E-13
83,080	-0.0057	3.04E-01	66.2%	33.8%	0.0150	0.0025	2.18E-09
83,081	0.0121	1.95E-02	50.9%	49.1%	0.0157	0.0024	2.52E-11
81,992	0.0159	1.98E-02	23.0%	23.0%	0.0176	0.0028	3.32E-10
82,209	-0.0286	2.24E-02	94.8%	5.3%	0.0380	0.0053	1.20E-12
75,639	0.0172	1.08E-02	79.9%	20.1%	-0.0195	0.0030	5.34E-11
75,639	0.0217	1.12E-03	21.5%	21.5%	0.0173	0.0029	2.54E-09
75,676	-0.0035	5.30E-01	53.3%	46.7%	0.0145	0.0023	6.76E-10
24,218	0.0037	7.93E-01	12.3%	12.3%	-0.0269	0.0038	2.29E-12
75,423	0.0070	5.29E-01	7.3%	7.3%	0.0276	0.0045	1.14E-09
75,639	-0.0213	2.52E-03	80.6%	19.4%	0.0229	0.0030	3.33E-14
75,676	-0.0177	1.35E-03	55.2%	44.9%	-0.0146	0.0024	5.64E-10

75,638	-0.0063	3.10E-01	73.9%	26.1%	0.0180	0.0027	3.64E-11
75,423	0.0187	2.65E-03	28.4%	28.4%	0.0154	0.0026	3.85E-09
74,766	0.0088	1.59E-01	26.0%	26.0%	-0.0177	0.0027	7.39E-11
75,422	0.0099	9.50E-02	66.9%	33.1%	-0.0150	0.0025	1.94E-09
24,218	-0.0357	1.01E-01	5.1%	5.1%	-0.0369	0.0057	1.11E-10
74,552	0.0133	2.13E-02	61.5%	38.6%	0.0173	0.0024	1.53E-12
75,639	0.0137	2.88E-02	25.0%	25.0%	-0.0170	0.0027	5.62E-10
83,081	0.0103	5.94E-02	34.9%	34.9%	0.0172	0.0025	3.18E-12
83,080	0.0192	1.60E-03	24.7%	24.7%	0.0185	0.0027	1.21E-11
82,208	-0.0255	4.99E-03	90.4%	9.7%	0.0318	0.0040	4.40E-15
75,675	0.0203	2.35E-03	78.9%	21.1%	-0.0244	0.0029	1.72E-17
75,423	0.0071	2.13E-01	38.2%	38.2%	0.0165	0.0024	8.39E-12
24,218	0.0057	7.42E-01	91.9%	8.1%	0.0278	0.0046	1.89E-09
75,637	-0.0109	5.01E-02	58.0%	42.0%	0.0146	0.0024	1.61E-09
24,218	-0.0263	1.81E-02	77.8%	22.2%	-0.0475	0.0030	1.56E-55
24,218	0.0121	1.96E-01	53.4%	46.6%	-0.0219	0.0025	3.52E-18
75,638	-0.0123	3.34E-02	37.9%	37.9%	-0.0185	0.0025	5.13E-14
24,218	0.0231	2.52E-02	70.0%	30.0%	0.0253	0.0027	2.94E-20
75,639	0.0091	1.01E-01	44.2%	44.2%	-0.0209	0.0024	3.42E-18
75,423	-0.0076	1.77E-01	57.6%	42.4%	0.0155	0.0024	8.79E-11
75,674	-0.0152	6.34E-03	43.9%	43.9%	-0.0173	0.0024	2.16E-13
72,429	-0.0089	1.15E-01	46.3%	46.3%	-0.0156	0.0024	7.76E-11
75,423	-0.0134	1.96E-02	65.8%	34.2%	0.0155	0.0025	4.12E-10
74,805	-0.0173	5.54E-03	26.0%	26.0%	-0.0186	0.0027	3.13E-12
24,218	-0.0042	6.68E-01	37.0%	37.0%	-0.0200	0.0026	1.69E-14
74,804	0.0188	2.41E-01	95.8%	4.2%	-0.0359	0.0061	4.48E-09
74,805	0.0125	2.55E-02	56.3%	43.7%	-0.0143	0.0024	1.33E-09
74,552	-0.0133	1.75E-02	43.4%	43.4%	0.0157	0.0024	4.40E-11
74,552	-0.0145	2.40E-02	25.4%	25.4%	-0.0233	0.0027	9.60E-18
24,218	0.0127	2.25E-01	72.2%	27.8%	-0.0332	0.0028	6.18E-32
75,639	0.0121	2.90E-02	58.3%	41.7%	-0.0182	0.0024	4.63E-14
75,638	-0.0187	1.49E-03	34.7%	34.7%	0.0175	0.0025	2.87E-12
24218	-0.024608	8.62E-03	50.9%	49.1%	0.0272	0.0025	3.24E-27
24,218	-0.0038	7.90E-01	87.8%	12.2%	0.0289	0.0039	6.92E-14
82,246	-0.0156	4.92E-02	84.8%	15.2%	-0.0236	0.0033	4.68E-13
83,116	0.0167	2.58E-03	36.6%	36.6%	-0.0178	0.0024	2.04E-13
83,081	0.0153	2.36E-02	80.3%	19.7%	0.0246	0.0030	1.12E-16
82,865	-0.0185	1.85E-03	73.2%	26.8%	0.0174	0.0026	4.71E-11
24,218	-0.0146	1.52E-01	69.8%	30.2%	0.0165	0.0027	1.59E-09
75,422	-0.0117	3.46E-01	5.5%	5.5%	-0.0313	0.0052	1.82E-09
73,529	0.0323	1.35E-01	2.4%	2.4%	0.0586	0.0080	1.93E-13
69,742	-0.0220	1.90E-02	89.6%	10.4%	0.0263	0.0039	9.42E-12
75,422	0.0244	1.89E-03	85.7%	14.3%	-0.0235	0.0034	2.63E-12
75,639	0.0110	5.80E-02	34.5%	34.5%	0.0162	0.0025	1.25E-10
74,552	0.0167	2.71E-03	54.7%	45.4%	0.0164	0.0024	3.84E-12
24,218	-0.0176	8.98E-02	69.8%	30.2%	0.0167	0.0027	1.05E-09
74,805	-0.0126	3.31E-02	31.9%	31.9%	-0.0180	0.0025	7.84E-13
75,637	0.0064	3.07E-01	25.7%	25.7%	0.0160	0.0027	4.97E-09
75,639	0.0146	8.53E-03	41.9%	41.9%	-0.0153	0.0024	2.40E-10
24,218	-0.0286	3.43E-03	62.6%	37.5%	0.0275	0.0026	2.84E-26

75,423	-0.0176	1.60E-03	47.9%	47.9%	-0.0140	0.0024	4.48E-09
24,218	-0.0163	9.47E-02	36.8%	36.8%	-0.0207	0.0026	2.00E-15
24,218	0.0073	6.62E-01	8.7%	8.7%	0.0312	0.0045	2.61E-12
75,422	-0.0099	8.84E-02	63.4%	36.6%	0.0163	0.0025	3.92E-11
74,550	0.0182	4.60E-03	65.5%	34.5%	-0.0150	0.0025	2.95E-09
75,421	0.0099	7.75E-02	51.6%	48.4%	-0.0161	0.0024	8.28E-12
75,422	0.0114	5.40E-02	31.4%	31.4%	0.0182	0.0025	7.83E-13
83,079	0.0074	1.96E-01	29.6%	29.6%	0.0162	0.0026	4.30E-10
83,081	0.0165	2.18E-02	15.7%	15.7%	0.0199	0.0032	8.36E-10
82,245	-0.0176	5.81E-03	76.4%	23.6%	0.0177	0.0028	2.04E-10
83,118	-0.0141	9.60E-03	36.0%	36.0%	-0.0190	0.0024	4.19E-15
82,210	0.0138	1.06E-01	10.1%	10.1%	0.0277	0.0039	1.73E-12
83,117	0.0204	1.02E-02	13.6%	13.6%	0.0202	0.0034	2.92E-09
24,218	0.0162	1.07E-01	67.6%	32.4%	-0.0241	0.0027	3.39E-19
82,863	-0.0169	1.36E-03	46.9%	46.9%	-0.0151	0.0023	1.39E-10
81,993	-0.0141	2.22E-02	25.4%	25.4%	-0.0160	0.0027	3.27E-09
75,639	0.0172	9.16E-03	21.4%	21.4%	0.0178	0.0029	9.89E-10
74,552	0.0111	7.77E-02	31.4%	31.4%	0.0163	0.0027	1.60E-09
75,637	0.0235	2.35E-02	8.9%	8.9%	0.0262	0.0042	7.01E-10
75,422	-0.0089	1.08E-01	46.5%	46.5%	0.0151	0.0024	1.71E-10
75,422	0.0159	1.53E-02	24.3%	24.3%	0.0166	0.0028	2.31E-09
24,218	-0.0130	1.84E-01	35.1%	35.1%	-0.0169	0.0026	1.46E-10
74,768	-0.0040	5.22E-01	25.1%	25.1%	-0.0185	0.0028	2.17E-11
75,675	0.0142	1.06E-02	47.9%	47.9%	-0.0138	0.0024	4.66E-09
74,551	-0.0177	1.96E-03	43.9%	43.9%	0.0163	0.0024	8.83E-12
83,081	-0.0087	9.35E-02	50.4%	49.6%	0.0152	0.0024	1.26E-10
83,081	0.0090	8.95E-02	38.4%	38.4%	0.0191	0.0024	4.90E-15
83,079	0.0120	2.72E-02	35.3%	35.3%	-0.0152	0.0025	7.56E-10
81,992	0.0145	2.87E-02	75.1%	24.9%	0.0163	0.0028	4.81E-09
75,423	-0.0097	1.30E-01	75.7%	24.3%	0.0165	0.0027	1.81E-09
24,218	-0.0275	6.12E-03	68.3%	31.7%	-0.0160	0.0027	3.36E-09
75,423	-0.0201	1.44E-02	13.1%	13.1%	-0.0210	0.0035	1.97E-09
75,422	0.0172	1.92E-03	52.6%	47.4%	-0.0174	0.0024	1.67E-13
75,422	-0.0187	8.09E-03	79.3%	20.7%	0.0229	0.0029	4.91E-15
75,638	0.0145	1.23E-02	65.7%	34.3%	0.0171	0.0025	1.33E-11
75,638	0.0120	3.23E-02	59.7%	40.3%	-0.0147	0.0024	1.91E-09
75,638	0.0195	1.45E-03	27.2%	27.2%	-0.0254	0.0027	5.08E-21
74,767	-0.0109	6.02E-02	35.3%	35.3%	0.0194	0.0025	8.00E-15
75,639	0.0161	3.35E-03	46.4%	46.4%	0.0142	0.0024	2.88E-09
74,805	0.0152	1.01E-01	90.1%	9.9%	-0.0283	0.0039	6.55E-13
24,218	-0.0168	9.98E-02	30.3%	30.3%	-0.0237	0.0027	5.77E-18
74,768	0.0142	1.21E-02	38.9%	38.9%	0.0147	0.0025	2.11E-09
82,864	-0.0190	7.61E-03	16.5%	16.5%	-0.0203	0.0031	1.01E-10
24,218	-0.0208	2.89E-02	56.8%	43.2%	0.0188	0.0025	1.55E-13
81,992	0.0092	1.13E-01	66.7%	33.3%	-0.0173	0.0025	5.79E-12
82,865	-0.0118	2.58E-02	54.7%	45.3%	0.0142	0.0023	1.39E-09
61,654	-0.0076	2.59E-01	70.7%	29.3%	-0.0161	0.0027	1.74E-09
75,675	0.0140	2.29E-02	71.6%	28.5%	-0.0159	0.0026	1.01E-09
75,423	0.0146	8.39E-03	52.6%	47.5%	-0.0151	0.0024	1.67E-10
74,767	0.0133	2.14E-02	65.2%	34.8%	-0.0171	0.0025	1.11E-11

75,676	-0.0092	9.35E-02	50.4%	49.7%	-0.0144	0.0023	8.67E-10
75,674	0.0133	3.24E-02	27.7%	27.7%	0.0162	0.0026	6.70E-10
74,768	-0.0139	1.50E-02	63.6%	36.4%	0.0148	0.0025	3.53E-09
75,639	-0.0222	1.58E-03	18.7%	18.7%	-0.0259	0.0031	4.52E-17
82,261	0.0234	9.70E-03	90.2%	9.8%	0.0340	0.0040	2.14E-17
24,218	0.0121	1.99E-01	56.3%	43.7%	0.0171	0.0025	1.76E-11
83,080	-0.0182	2.09E-02	87.3%	12.7%	0.0259	0.0036	4.32E-13
83,081	0.0196	6.76E-02	93.5%	6.5%	-0.0341	0.0048	1.58E-12
24,218	0.0265	5.57E-03	41.2%	41.2%	0.0204	0.0026	1.61E-15
82,864	0.0123	3.95E-02	73.3%	26.7%	0.0161	0.0026	1.17E-09
83,116	-0.0119	2.93E-02	63.4%	36.6%	-0.0145	0.0024	1.81E-09
83,080	0.0103	1.38E-01	17.2%	17.2%	0.0192	0.0032	2.11E-09
75,422	-0.0162	3.86E-03	42.1%	42.1%	-0.0168	0.0024	2.02E-12
75,637	0.0090	1.14E-01	41.7%	41.7%	-0.0143	0.0024	4.37E-09
75,423	0.0104	6.43E-02	43.3%	43.3%	0.0166	0.0024	2.83E-12
75,639	0.0138	1.16E-02	52.1%	48.0%	-0.0193	0.0024	5.57E-16
75,637	0.0167	2.41E-02	83.5%	16.5%	0.0191	0.0032	2.74E-09
75,423	-0.0145	1.04E-02	39.1%	39.1%	-0.0166	0.0024	6.91E-12
74,550	0.0265	6.02E-03	10.1%	10.1%	0.0279	0.0040	1.71E-12
75,638	0.0157	5.08E-03	39.3%	39.3%	0.0178	0.0024	2.88E-13
75,422	0.0115	4.69E-02	35.1%	35.1%	0.0148	0.0025	2.33E-09
75,637	-0.0197	2.87E-03	21.8%	21.8%	-0.0201	0.0029	5.88E-12
75,676	0.0349	3.42E-03	94.3%	5.7%	-0.0312	0.0050	5.74E-10
75,639	-0.0129	5.13E-02	78.5%	21.6%	0.0195	0.0029	1.85E-11
75,423	-0.0185	4.61E-02	10.7%	10.7%	-0.0314	0.0038	2.06E-16
83,079	-0.0198	1.16E-03	75.4%	24.6%	0.0204	0.0027	1.09E-13
83,117	0.0112	8.34E-02	21.1%	21.1%	0.0176	0.0029	7.11E-10
82,863	-0.0144	8.28E-03	41.5%	41.5%	-0.0189	0.0024	3.41E-15
83,080	0.0165	1.54E-03	54.6%	45.4%	-0.0234	0.0024	7.26E-23
81,992	0.0200	1.48E-01	5.4%	5.4%	0.0310	0.0053	3.93E-09
83,117	0.0330	2.35E-02	4.1%	4.1%	0.0360	0.0060	1.64E-09
74,766	-0.0134	2.97E-02	26.8%	26.8%	-0.0175	0.0027	8.03E-11
74,550	0.0055	4.30E-01	77.8%	22.2%	-0.0190	0.0029	4.01E-11
74,767	0.0183	1.69E-02	16.3%	16.3%	0.0230	0.0033	1.80E-12
54,212	-0.0168	4.87E-02	16.3%	16.3%	-0.0232	0.0033	3.58E-12
75,422	-0.0090	1.27E-01	64.3%	35.7%	0.0145	0.0025	3.81E-09
75,637	0.0173	4.35E-03	70.7%	29.3%	0.0182	0.0026	5.50E-12
75,638	-0.0039	7.13E-01	92.7%	7.4%	0.0274	0.0046	2.18E-09
75,637	0.0145	1.09E-02	64.8%	35.2%	0.0151	0.0025	1.56E-09
24,218	-0.0126	2.54E-01	23.6%	23.6%	0.0187	0.0030	2.62E-10
75,423	-0.0170	3.32E-03	34.1%	34.1%	0.0165	0.0025	3.20E-11
75,423	0.0141	1.06E-02	48.2%	48.2%	0.0144	0.0024	1.05E-09
75,638	-0.0100	8.77E-02	68.1%	31.9%	-0.0249	0.0026	2.09E-22
24,218	-0.0056	5.74E-01	34.9%	34.9%	0.0183	0.0026	4.91E-12
82,865	0.0121	2.32E-02	55.3%	44.7%	0.0177	0.0024	4.90E-14
83,080	0.0007	8.94E-01	45.3%	45.3%	-0.0156	0.0024	5.34E-11
83,118	-0.0112	3.52E-02	58.2%	41.8%	0.0140	0.0024	2.47E-09
24,218	0.0304	1.56E-01	95.0%	5.0%	-0.0378	0.0058	7.54E-11
83,080	-0.0169	1.23E-03	45.9%	45.9%	0.0161	0.0024	1.23E-11
24,218	-0.0028	8.11E-01	78.6%	21.4%	0.0268	0.0031	5.03E-18

82,865	0.0178	2.37E-03	29.9%	29.9%	0.0167	0.0025	4.85E-11
82,210	-0.0076	1.68E-01	35.5%	35.5%	0.0175	0.0025	2.49E-12
82,210	-0.0136	1.17E-02	59.1%	40.9%	0.0187	0.0024	1.21E-14
75,676	-0.0169	3.49E-03	65.5%	34.5%	0.0159	0.0025	1.25E-10
75,638	0.0102	6.35E-02	48.7%	48.7%	-0.0162	0.0024	1.15E-11
24,218	-0.0108	2.54E-01	41.5%	41.5%	-0.0199	0.0026	1.06E-14
83,080	0.0174	1.96E-03	68.1%	31.9%	-0.0182	0.0025	7.86E-13
75,639	0.0150	2.86E-02	18.4%	18.4%	0.0207	0.0031	2.11E-11
74,767	0.0484	9.90E-03	97.9%	2.2%	-0.0517	0.0084	9.46E-10
24,218	0.0109	2.42E-01	47.2%	47.2%	0.0156	0.0025	6.16E-10
83,079	-0.0164	1.78E-03	42.6%	42.6%	0.0161	0.0024	1.68E-11
61,846	0.1008	3.65E-03	1.1%	1.1%	0.0775	0.0117	4.13E-11
24,218	0.0282	3.80E-03	63.3%	36.8%	0.0157	0.0026	2.02E-09
75,638	0.0179	6.17E-03	77.3%	22.7%	0.0184	0.0029	1.20E-10
75,638	0.0135	6.64E-02	16.8%	16.8%	0.0201	0.0032	3.29E-10
75,637	-0.0113	1.73E-01	87.4%	12.6%	0.0307	0.0036	1.86E-17
75,421	-0.0083	1.44E-01	40.0%	40.0%	0.0144	0.0024	2.14E-09
24,218	-0.0208	2.72E-02	55.4%	44.6%	0.0151	0.0025	2.87E-09
83,079	0.0203	1.02E-02	12.7%	12.7%	-0.0230	0.0036	1.54E-10
83,080	-0.0123	6.09E-02	18.9%	18.9%	-0.0192	0.0030	1.92E-10
81,993	0.0173	2.79E-03	30.9%	30.9%	-0.0161	0.0025	2.52E-10
24,218	-0.0191	6.52E-02	64.9%	35.1%	0.0181	0.0028	9.47E-11
82,208	-0.0113	7.11E-02	74.6%	25.4%	0.0199	0.0028	1.70E-12
82,865	0.0111	3.40E-02	49.4%	49.4%	0.0170	0.0023	2.77E-13
24,218	0.0230	7.94E-02	15.3%	15.3%	0.0284	0.0035	5.91E-16
75,638	0.0186	1.37E-03	66.9%	33.1%	0.0253	0.0025	3.93E-23
74,767	0.0148	2.58E-02	77.4%	22.6%	-0.0180	0.0029	3.81E-10
24,218	0.0037	7.02E-01	33.9%	33.9%	0.0206	0.0027	1.06E-14
75,638	-0.0177	1.86E-02	15.8%	15.8%	-0.0224	0.0033	7.61E-12
24,218	0.0176	1.46E-01	18.7%	18.7%	0.0235	0.0032	3.87E-13
24,218	-0.0213	4.79E-02	25.1%	25.1%	-0.0252	0.0029	3.83E-18
75,639	-0.0118	1.37E-01	13.7%	13.7%	-0.0264	0.0035	2.99E-14
24,218	-0.0315	7.82E-02	7.9%	7.9%	-0.0297	0.0047	2.23E-10
24,218	-0.0120	3.30E-01	82.2%	17.8%	0.0202	0.0033	1.07E-09
81,992	0.0184	1.30E-03	68.3%	31.8%	0.0178	0.0025	1.73E-12
24,218	0.0089	3.58E-01	37.7%	37.7%	-0.0194	0.0026	9.37E-14
82,208	0.0169	2.58E-03	32.7%	32.7%	0.0164	0.0025	1.10E-10
82,246	0.0155	4.89E-03	33.9%	33.9%	0.0144	0.0025	4.91E-09
75,638	0.0356	1.05E-03	92.5%	7.5%	-0.0385	0.0046	3.56E-17
54,238	-0.0448	1.82E-02	96.4%	3.6%	0.0391	0.0066	3.52E-09
24,218	-0.0099	4.63E-01	86.1%	13.9%	0.0239	0.0037	6.72E-11
74,551	-0.0198	1.14E-03	30.5%	30.5%	0.0168	0.0026	7.69E-11
74,803	-0.0100	1.78E-01	18.2%	18.2%	-0.0205	0.0030	1.85E-11
83,081	-0.0084	1.50E-01	27.2%	27.2%	0.0191	0.0027	6.30E-13
24,218	0.0276	4.35E-03	41.6%	41.6%	0.0176	0.0026	5.53E-12
82,208	-0.0186	1.48E-02	85.0%	15.0%	0.0262	0.0033	4.92E-15
83,081	-0.0053	3.15E-01	56.6%	43.4%	0.0150	0.0024	2.99E-10
24,218	-0.0016	8.73E-01	33.1%	33.1%	-0.0291	0.0027	2.14E-27
75,423	0.0137	2.17E-02	32.9%	32.9%	-0.0195	0.0025	5.12E-15
74,766	-0.0122	4.31E-02	63.6%	36.5%	0.0200	0.0025	2.47E-15

73,775	0.0166	1.71E-02	76.8%	23.2%	-0.0188	0.0029	6.97E-11
74,766	0.0137	7.71E-02	83.4%	16.6%	0.0201	0.0033	1.25E-09
63,523	0.0092	1.58E-01	35.3%	35.3%	-0.0179	0.0025	1.03E-12
82,246	0.0106	4.81E-02	59.5%	40.6%	-0.0197	0.0024	1.25E-16
82,863	-0.0129	1.41E-02	45.4%	45.4%	-0.0141	0.0023	1.78E-09
83,081	-0.0069	1.92E-01	62.2%	37.8%	0.0150	0.0024	8.11E-10
82,864	0.0092	9.79E-02	68.7%	31.3%	0.0183	0.0025	4.19E-13
24,218	-0.0140	1.50E-01	38.3%	38.3%	-0.0161	0.0026	4.36E-10
69,334	-0.0541	1.91E-03	3.7%	3.7%	-0.0413	0.0066	4.85E-10
82,863	0.0099	6.34E-02	56.2%	43.8%	-0.0138	0.0024	4.91E-09
24,218	-0.0150	5.60E-01	3.7%	3.7%	-0.0431	0.0067	1.49E-10
82,863	0.0116	3.09E-02	38.0%	38.0%	0.0212	0.0024	1.19E-18
83,080	0.0127	2.04E-02	64.7%	35.3%	-0.0267	0.0025	3.50E-27
74,768	-0.0074	2.59E-01	77.7%	22.4%	0.0172	0.0029	1.83E-09
82,865	-0.0086	1.22E-01	64.3%	35.7%	-0.0161	0.0024	4.73E-11
83,117	-0.0162	6.31E-03	27.1%	27.1%	-0.0181	0.0026	4.83E-12
82,865	0.0163	7.47E-03	24.7%	24.7%	0.0182	0.0027	1.71E-11
24,218	0.0141	1.57E-01	33.8%	33.8%	-0.0167	0.0027	3.69E-10
74,766	-0.0019	7.63E-01	36.4%	36.4%	-0.0179	0.0025	1.73E-12
49,187	-0.0782	1.78E-01	0.6%	0.6%	-0.1263	0.0170	9.74E-14
83,079	-0.0113	4.37E-02	33.2%	33.2%	-0.0148	0.0025	4.54E-09
82,864	-0.0127	4.56E-02	22.3%	22.3%	-0.0184	0.0028	5.90E-11
24,218	0.0159	9.41E-02	42.3%	42.3%	0.0248	0.0026	2.41E-22
83,081	0.0119	5.57E-02	22.2%	22.2%	0.0178	0.0028	3.81E-10
83,079	0.0059	3.28E-01	74.3%	25.7%	-0.0205	0.0027	3.57E-14
82,208	-0.0089	1.49E-01	74.5%	25.5%	0.0176	0.0027	1.29E-10
24,218	-0.0389	1.23E-02	9.2%	9.2%	-0.0271	0.0044	5.76E-10
24,218	-0.0212	2.59E-02	42.6%	42.6%	0.0166	0.0026	8.49E-11
24,218	0.0264	4.71E-02	15.3%	15.3%	0.0216	0.0035	6.70E-10
30,191	0.0098	2.27E-01	75.3%	24.7%	0.0170	0.0024	3.74E-12
32,975	-0.0114	1.04E-01	60.5%	39.5%	-0.0165	0.0021	7.46E-15
32,916	0.0152	7.45E-02	80.7%	19.3%	0.0191	0.0026	3.98E-13
29,932	0.0140	6.48E-02	65.9%	34.1%	0.0132	0.0022	1.59E-09
28,887	0.0070	3.94E-01	71.7%	28.3%	0.0139	0.0023	1.92E-09

Direction	Total N
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++	404,127
--	403,912
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--	396,469
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++	395,815
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++	350,959
++	349,914

Supplementary Table 6: Association with smoking behaviour

LF_credible_sets_sentinels

N 281

novel	Nearest gene	phenotype	tier	rsid
novel	PHF13	FEV1/FVC	tier_1	rs9661802
novel	MIR4418	FEV1	tier_1	rs12737805
novel	DHDDS	FVC	tier_2	rs9438626
novel	DHDDS(NM_024887:c.*13000>0	FEV1	tier_1	rs12096239
novel	FAF1	FEV1/FVC	tier_1	rs1416685
novel	LOC101926964	FEV1/FVC	tier_1	rs72673461
novel	NEXN	FEV1/FVC	tier_1	rs9661687
novel	TGFBR3	FEV1/FVC	tier_1	rs10874851
novel	DENND2D	FEV1/FVC	tier_1	rs9970286
novel	C1orf54	PEF	tier_1	rs11205354
novel	KRTCAP2	FEV1/FVC	tier_1	rs141942982
novel	RALGPS2	FEV1	tier_1	rs4651005
novel	MIR548F1	FVC	tier_1	rs2146098
novel	MIR548F1	FEV1/FVC	tier_1	rs17531405
novel	MIR181A1HG	FEV1/FVC	tier_1	rs10919604
novel	LMOD1	FEV1/FVC	tier_2	rs4309038
novel	TGFB2	FEV1/FVC	tier_1	rs2799098
novel	LYPLAL1	FEV1/FVC	tier_1	rs75128958
novel	HLX	FVC	tier_1	rs17009288
novel	LOC101926966	FEV1/FVC	tier_1	rs2544536
novel	RDH14	FVC	tier_1	rs6751968
novel	RDH14	FVC	tier_1	rs13430465
novel	ATAD2B	FVC	tier_2	rs13009582
novel	CIB4	FVC	tier_2	rs732990
novel	PKDCC	FVC	tier_1	rs4952564
novel	IL1RL1	FEV1/FVC	tier_1	rs12470864
novel	TEX41	FEV1/FVC	tier_1	rs1406225
novel	RBMS1	FEV1	tier_1	rs7424771
novel	MIR548N	FEV1	tier_2	rs2304340
novel	ITGAV	FEV1/FVC	tier_1	rs2084448
novel	SATB2	FVC	tier_1	rs1249096
novel	SPATS2L	FEV1/FVC	tier_2	rs985256
novel	KIAA2012	FVC	tier_2	rs12997625
novel	IGFBP5	FEV1/FVC	tier_1	rs6435952
novel	DIRC3	FEV1	tier_2	rs4294980
novel	ASIC4	FVC	tier_2	rs4674407
novel	LINC01107	FVC	tier_2	rs6431620
novel	C2orf54	FVC	tier_1	rs6437219
novel	BOK-AS1	FVC	tier_1	rs6733504
novel	LINC00620	FEV1	tier_2	rs2974389
novel	RARB	FVC	tier_2	rs73048404

Supp. Table 6 Smoking behaviour

novel	FOXP1	FVC	tier_1	rs35480566
novel	PDZRN3-AS1	FEV1/FVC	tier_1	rs586936
novel	MIR548G	FVC	tier_1	rs1610265
novel	BCHE	FEV1/FVC	tier_1	rs1799807
novel	IGF2BP2	FEV1	tier_1	rs6780171
novel	KDR	FEV1	tier_2	rs12331869
novel	BTC	FEV1/FVC	tier_1	rs62316310
novel	FRAS1	FEV1/FVC	tier_1	rs11098196
novel	HHIP-AS1	FVC	tier_1	rs13109426
novel	HHIP-AS1	PEF	tier_1	rs13116999
novel	LOC100996325	FEV1	tier_1	rs11739847
novel	NNT	FEV1	tier_1	rs4866846
novel	LOX	FEV1/FVC	tier_1	rs10059661
novel	ADAMTS19-AS1	FEV1/FVC	tier_1	rs17163397
novel	ADRB2	FEV1	tier_1	rs1800888
novel	FGF18	FEV1/FVC	tier_1	rs10059996
novel	RASGEF1C	FEV1/FVC	tier_1	rs79898473
novel	BMP6	FVC	tier_1	rs12198986
novel	HMGA1	FVC	tier_1	rs9689096
novel	CDC5L	FVC	tier_2	rs9357446
novel	RUNX2	FEV1/FVC	tier_1	rs12202314
novel	RUNX2	FVC	tier_2	rs9472541
novel	RNU6-71P	FEV1	tier_1	rs2894837
novel	SLC2A12	FEV1	tier_2	rs2627237
novel	LOC100507477	FEV1	tier_1	rs1102077
novel	VTA1	FEV1	tier_1	rs9385988
novel	MEOX2-AS1	FEV1/FVC	tier_1	rs4721457
novel	SKAP2	FEV1	tier_1	rs559233
novel	HOXA-AS3	FVC	tier_2	rs62454414
novel	JAZF1	FEV1	tier_1	rs1513272
novel	IGFBP3	FVC	tier_1	rs17232687
novel	SEMA3D	FEV1	tier_1	rs12707691
novel	MET	FEV1/FVC	tier_2	rs193686
novel	PPP1R3B	FEV1/FVC	tier_1	rs330939
novel	DEFB136	FEV1	tier_2	rs4128298
novel	LOC100505739	FEV1	tier_1	rs7465401
novel	BOP1	FVC	tier_1	rs7838717
novel	SH3GL2	FEV1	tier_1	rs7041139
novel	LOC158434	FEV1/FVC	tier_1	rs72743974
novel	GALNT12	FEV1/FVC	tier_1	rs57649467
novel	IER5L	FEV1	tier_2	rs967497
novel	PARD3	FEV1/FVC	tier_1	rs1274475
novel	CAMK2G	PEF	tier_2	rs60820984
novel	OBFC1(NM_024928:c.*28310>0)	FEV1	tier_1	rs11191841
novel	SLC1A2	FEV1/FVC	tier_2	rs10836366
novel	FKBP4	FVC	tier_1	rs56196860
novel	CCND2-AS1	FEV1	tier_2	rs12811814

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novel	AEBP2	FEV1/FVC	tier_1	rs10841302
novel	RASSF3	FEV1/FVC	tier_2	rs1244869
novel	MIR6074	FEV1	tier_1	rs11176001
novel	IGF1	PEF	tier_1	rs972936
novel	TBX5	FEV1	tier_1	rs2701110
novel	MIR8079	FEV1/FVC	tier_1	rs9533803
novel	DLEU1	FEV1	tier_1	rs2812208
novel	LINC00348	FVC	tier_1	rs803765
novel	LINC00382	FEV1	tier_1	rs4885681
novel	DOCK9	FEV1/FVC	tier_1	rs11620380
novel	MYO16	FEV1/FVC	tier_1	rs9634470
novel	HAUS4	FEV1/FVC	tier_1	rs1951121
novel	MIR5580	FEV1/FVC	tier_1	rs74053129
novel	VRTN	FVC	tier_1	rs10141786
novel	BMF	FVC	tier_1	rs34245505
novel	IVD	FEV1	tier_2	rs2304645
novel	CHAC1	FVC	tier_1	rs4924525
novel	COPS2	FEV1/FVC	tier_1	rs79234094
novel	FAM227B	FEV1/FVC	tier_1	rs35251997
novel	USP3	FEV1/FVC	tier_1	rs62012772
novel	REC114	FEV1/FVC	tier_2	rs7176074
novel	CLUAP1	FVC	tier_1	rs3751837
novel	GLIS2-AS1	FEV1/FVC	tier_1	rs56104880
novel	GRIN2A	FVC	tier_2	rs11074547
novel	PAPD5	FVC	tier_1	rs76219171
novel	FTO	FEV1/FVC	tier_1	rs35420030
novel	LINC00917	FEV1/FVC	tier_1	rs12918140
novel	MTHFSD	FEV1	tier_2	rs6539952
novel	ATP2A3	FEV1/FVC	tier_1	rs8082036
novel	PITPNM3	FEV1	tier_2	rs4796334
novel	CLDN7(NM_001185023:c.*4560>0	FVC	tier_2	rs1215
novel	TNFSF12-TNFSF13	FEV1	tier_2	rs4968200
novel	NCOR1	FVC	tier_2	rs34351630
novel	LOC101927166	FVC	tier_2	rs12945803
novel	ANKFN1	FVC	tier_1	rs28519449
novel	BCAS3	FEV1/FVC	tier_1	rs8068952
novel	DDX5	FVC	tier_2	rs77672322
novel	SMURF2	FEV1/FVC	tier_1	rs11653958
novel	CASC17	FEV1/FVC	tier_1	rs996865
novel	ASPSCR1	FVC	tier_1	rs59606152
novel	VAPA	FEV1/FVC	tier_1	rs8089099
novel	GATA6	FEV1/FVC	tier_2	rs1985511
novel	C18orf8	FVC	tier_1	rs303752
novel	LOC729950	FVC	tier_1	rs1668091
novel	SLC14A2	FEV1	tier_1	rs9807668
novel	LOC101927273	FVC	tier_2	rs2202572
novel	QTRT1	FEV1	tier_2	rs11085744

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novel	ZFP82	FVC	tier_2	rs2967516
novel	LOC101929395	FEV1	tier_2	rs6032942
novel	LINC00649	FEV1/FVC	tier_1	rs12627254
novel	PPP6R2	FEV1	tier_2	rs113111175
previous	MFAP2	FEV1/FVC	tier_1	rs9435733
previous	LOC101929516	FEV1/FVC		rs755249
previous	TGFBR3	FEV1/FVC	tier_1	rs1192415
previous	TGFBR3	FEV1/FVC		rs11165787
previous	SPAG17	FVC		rs35043843
previous	MCL1(NM_182763:c.*20930>0	FVC	tier_1	rs878471
previous	NR5A2	FVC		rs2816992
previous	PIK3C2B	PEF		rs1008833
previous	CENPF/KCNK2	FVC		rs556648
previous	TGFB2	PEF		rs6604614
previous	MIR548F3/TGFB2	FEV1		rs28613267
previous	RNU5F-1	FEV1/FVC	tier_1	rs1338227
previous	C1orf140/DUSP10	FVC		rs12757436
previous	CHRM3	PEF	tier_1	rs2355237
previous	KCNS3	FEV1/FVC	tier_1	rs55884799
previous	EFEMP1	FVC	tier_1	rs3791679
previous	CCNT2-AS1	FVC	tier_1	rs62168891
previous	LOC101929378	FEV1	tier_1	rs72902177
previous	TNS1	FEV1	tier_1	rs2571445
previous	PID1	FEV1/FVC	tier_1	rs62201738
previous	TRAF3IP1	FEV1		rs6710301
previous	FLJ43879	FEV1/FVC	tier_1	rs4308141
previous	RARB	FEV1/FVC	tier_1	rs1529672
previous	RBMS3	FEV1/FVC		rs17666332
previous	CACNA2D3	FEV1/FVC		rs12715478
previous	SLMAP	FEV1	tier_1	rs6445932
previous	SUCLG2	FEV1	tier_1	rs4132748
previous	DCBLD2	FVC	tier_1	rs12497779
previous	EEFSEC	FEV1/FVC		rs2999090
previous	RSRC1	FVC	tier_1	rs12634907
previous	LOC100507661	FEV1	tier_1	rs879394
previous	MECOM	FEV1	tier_1	rs78101726
previous	AFAP1	FEV1/FVC	tier_1	rs62289340
previous	FAM13A	FEV1/FVC	tier_1	rs2609279
previous	FAM13A	FEV1/FVC		rs2869966
previous	TET2	FEV1/FVC		rs6533183
previous	GSTCD	FEV1	tier_1	rs11722225
previous	NPNT	FEV1/FVC	tier_1	rs34712979
previous	HHIP-AS1	FEV1/FVC	tier_1	rs13141641
previous	OTUD4/SMAD1	PEF		rs2353940
previous	TARS	FVC		rs268717
previous	FGF10	FVC	tier_1	rs6859730
previous	ITGA1	FEV1/FVC		rs12522114

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previous	ARL15	FVC	tier_1	rs2441026
previous	AP3B1	FVC		rs425102
previous	SPATA9	FEV1/FVC	tier_1	rs987068
previous	P4HA2-AS1	FVC	tier_1	rs3843503
previous	HTR4	FEV1/FVC	tier_1	rs7733410
previous	ABLIM3	FEV1		rs11952673
previous	CYFIP2	FEV1/FVC		rs11134766
previous	ADAM19	FEV1/FVC	tier_1	rs11134789
previous	LY86	FEV1/FVC	tier_1	rs1294417
previous	DSP	FEV1/FVC	tier_1	rs2076295
previous	BMP6	FVC	tier_1	rs10498672
previous	CASC15	FEV1/FVC	tier_1	rs13198081
previous	ZNF184	PEF		rs7752448
previous	AGER	FEV1/FVC		rs2070600
previous	HLA-DQB1	FEV1/FVC		rs9274247
previous	KCNQ5	FEV1/FVC	tier_1	rs13206405
previous	ARMC2	FEV1/FVC	tier_1	rs2798641
previous	MIR588	FVC	tier_1	rs6918725
previous	GPR126	FEV1/FVC	tier_1	rs17280293
previous	GPR126	FEV1/FVC	tier_1	rs7753012
previous	C1GALT1(NM_020156_c.*30870>0)	FEV1/FVC		rs4318980
previous	AGMO	FVC		rs4721442
previous	ZKSCAN1(NM_003439_c.*41470>0)	FEV1/FVC		rs2261360
previous	LOC285889	FEV1	tier_1	rs12698403
previous	DMRT2/SMARCA2	FVC		rs771662
previous	GLIS3	FEV1/FVC	tier_1	rs1570203
previous	FLJ35282/ELAVL2	FEV1/FVC		rs1107677
previous	PTCH1	FEV1/FVC	tier_1	rs28446321
previous	TMEM38B/ZNF462	FEV1/FVC		rs1491106
previous	ASTN2	FEV1/FVC	tier_1	rs10983184
previous	QSOX2(NM_181701:c.*1610>0)	FVC	tier_1	rs7024579
previous	DNLZ	FVC		rs4073153
previous	CDC123	FEV1/FVC	tier_1	rs7090277
previous	KIAA1462	PEF		rs7914842
previous	JMJD1C	FEV1		rs7082066
previous	MYPN	FVC		rs10998018
previous	CAMK2G	FEV1	tier_1	rs7098573
previous	COMTD1/ZNF503-AS1	FVC		rs1259605
previous	C10orf11	FEV1	tier_1	rs2637254
previous	SFTPD	FEV1/FVC		rs721917
previous	HTRA1	FEV1/FVC		rs4279944
previous	HSD17B12	FVC	tier_1	rs17596617
previous	PRDM11	FEV1	tier_2	rs10838435
previous	EML3	FEV1	tier_1	rs71490394
previous	ARHGEF17	FEV1/FVC	tier_1	rs2027761
previous	PRSS23	FEV1/FVC	tier_1	rs11234768
previous	RPUSD4	FEV1/FVC	tier_1	rs541601

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previous	CCDC91	FVC		rs7977418
previous	RAB5B	FEV1		rs1689510
previous	LRP1	FEV1/FVC	tier_1	rs11172113
previous	MSRB3	FEV1	tier_1	rs12825748
previous	ALX1/RASSF9	PEF		rs56390486
previous	CRADD	FVC		rs9788269
previous	FGD6	FEV1/FVC		rs113745635
previous	SNRPF	FEV1/FVC	tier_1	rs7970544
previous	TBX3	FEV1	tier_1	rs10850377
previous	TBX3	FVC		rs35505
previous	BMP4	FEV1/FVC	tier_1	rs35107139
previous	LINC00911	FEV1/FVC		rs1756281
previous	TRIP11	FEV1	tier_1	rs11160037
previous	RIN3	FVC	tier_1	rs11621587
previous	RPAP1	FEV1/FVC		rs2012453
previous	MGA	FEV1/FVC		rs56383987
previous	AAGAB	FVC	tier_1	rs12917612
previous	THSD4	FEV1/FVC	tier_1	rs1441358
previous	THSD4	FEV1	tier_1	rs62015883
previous	CHRNA5	FEV1/FVC		rs17486278
previous	SH3GL3	FEV1/FVC	tier_1	rs1896797
previous	TEKT5	FEV1/FVC	tier_1	rs78442819
previous	IL27	FEV1		rs12446589
previous	MMP15	FEV1/FVC	tier_1	rs11648508
previous	WWP2	FEV1	tier_1	rs8047194
previous	CFDP1	FEV1/FVC	tier_1	rs11858992
previous	WVOX	FEV1	tier_1	rs2345443
previous	SSH2	FEV1/FVC	tier_1	rs2244592
previous	SUZ12P1	FVC		rs62070648
previous	PSMB3	FEV1/FVC	tier_1	rs35246838
previous	FBXL20	FVC	tier_1	rs8069451
previous	MAPT-AS1	FEV1	tier_1	rs79412431
previous	CASC17	FVC		rs6501431
previous	CASC17	FEV1	tier_1	rs6501455
previous	TSEN54	FEV1		rs9892893
previous	MTCL1	FEV1		rs513953
previous	CTAGE1/RBBP8	FEV1		rs11082051
previous	CABLES1	FEV1		rs9947743
previous	DCC	FVC		rs12607758
previous	TSHZ3	FEV1/FVC		rs9636166
previous	LTBP4	FEV1/FVC	tier_1	rs34093919
previous	CYP2A6	FEV1		rs11667314
previous	BMP2	FVC		rs2145272
previous	ABHD12	FEV1	tier_1	rs2236180
previous	C20orf112	FEV1/FVC		rs4413223
previous	UQCC1	FVC		rs143384
previous	EYA2	FVC	tier_1	rs12481092

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previous	SLC2A4RG	FVC	tier_1	rs4809221
previous	KCNE2	FEV1/FVC	tier_1	rs62213732
previous	MICAL3	FEV1	tier_1	rs1978968
previous	SCARF2	FEV1	tier_2	rs9610955
previous	MN1	FEV1/FVC		rs2283847

Supp. Table 6 Smoking behaviour

Bonferroni				Meta-analysis of UK Biobank non-smokers)	
Chromosome	Position (b37)	1.78E-04		N	coded freq. LF
		coded	noncoded		
1	6,678,864	A	C	404,128	66.4%
1	22,612,690	A	G	403,294	77.9%
1	26,775,367	G	C	403,911	79.0%
1	26,796,922	G	C	404,165	74.7%
1	51,243,374	G	C	404,127	59.4%
1	60,966,772	T	G	396,685	95.1%
1	78,387,270	C	T	396,686	13.6%
1	92,106,637	A	C	396,686	47.7%
1	111,737,398	G	A	395,815	67.1%
1	150,249,101	C	A	345,265	55.6%
1	155,137,395	G	T	396,686	89.3%
1	178,719,306	C	T	396,723	67.9%
1	186,090,370	A	G	396,469	64.6%
1	186,113,852	G	C	396,685	81.9%
1	198,898,157	A	G	396,686	60.3%
1	201,884,647	G	C	396,686	56.6%
1	218,521,609	G	A	396,684	17.9%
1	219,483,218	G	A	396,684	92.3%
1	221,204,299	A	C	395,598	70.6%
2	15,906,854	T	C	404,128	48.8%
2	18,570,024	C	A	403,912	82.2%
2	18,702,313	C	T	403,910	92.0%
2	24,018,480	G	A	403,040	55.0%
2	26,842,146	C	G	403,911	44.3%
2	42,243,850	A	G	403,912	68.1%
2	102,926,362	G	A	396,684	61.4%
2	145,797,829	G	T	396,685	71.7%
2	161,276,378	G	A	396,722	55.4%
2	179,260,382	A	G	396,723	40.8%
2	187,530,520	T	C	396,686	70.6%
2	199,723,365	G	A	396,468	43.7%
2	201,208,692	A	C	396,686	21.8%
2	202,970,250	C	T	396,468	47.2%
2	217,614,730	A	T	396,685	15.0%
2	218,604,356	G	A	396,723	21.1%
2	220,382,700	C	T	395,598	50.3%
2	239,604,970	T	G	396,470	78.9%
2	241,844,033	C	T	395,598	47.9%
2	242,495,953	A	G	395,597	54.6%
3	13,787,641	A	G	404,164	42.6%
3	25,179,533	T	G	403,912	85.3%

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3	71,583,177	A	G	396,468	56.0%
3	73,862,616	G	A	395,813	59.8%
3	99,420,192	C	T	396,468	92.3%
3	165,548,529	T	C	396,266	98.1%
3	185,503,456	T	A	396,721	68.7%
4	56,012,149	A	G	396,723	17.9%
4	75,676,529	G	A	396,684	74.0%
4	79,403,952	G	T	396,686	49.2%
4	145,330,628	G	A	396,469	40.9%
4	145,442,364	G	A	345,265	46.3%
5	609,661	G	A	404,164	80.1%
5	43,976,162	A	G	403,294	15.0%
5	121,410,529	C	G	396,684	82.6%
5	128,767,384	A	G	396,684	87.6%
5	148,206,885	C	T	395,484	98.5%
5	170,901,463	T	G	395,813	35.5%
5	179,598,771	T	C	395,813	67.0%
6	7,720,059	G	A	403,912	52.2%
6	34,188,892	A	C	403,911	93.7%
6	44,447,598	G	A	403,911	48.3%
6	45,530,471	T	C	403,257	67.5%
6	45,622,748	T	A	403,910	71.5%
6	56,336,406	A	G	396,723	63.9%
6	134,339,265	A	G	396,723	58.9%
6	140,271,357	A	C	396,722	75.7%
6	142,560,957	A	G	396,722	72.4%
7	15,872,324	T	C	404,127	85.0%
7	26,848,830	T	C	403,293	48.6%
7	27,182,329	T	G	403,910	86.8%
7	28,200,097	C	T	404,163	50.0%
7	46,448,518	T	C	396,469	49.6%
7	84,569,510	C	G	396,723	66.4%
7	116,431,427	C	T	396,686	31.7%
8	9,018,590	T	G	403,256	62.2%
8	11,823,332	T	C	403,294	71.7%
8	70,367,248	T	C	396,722	72.7%
8	145,504,343	T	C	396,470	36.4%
9	18,013,733	C	T	404,163	67.8%
9	98,878,881	A	G	396,685	83.3%
9	101,632,854	G	A	395,813	61.2%
9	131,943,843	A	G	396,721	31.1%
10	34,480,582	G	A	403,255	60.8%
10	75,639,578	C	T	345,265	81.3%
10	105,639,611	T	C	396,723	49.2%
11	35,308,988	T	C	404,128	74.9%
12	2,908,330	C	A	394,169	96.9%
12	4,243,749	T	C	403,292	45.8%

Supp. Table 6 Smoking behaviour

12	19,808,912	G	C	404,128	45.3%
12	65,075,332	T	G	396,686	63.2%
12	66,409,367	C	A	396,722	86.9%
12	102,824,921	T	C	345,265	26.2%
12	114,669,870	C	A	396,722	83.3%
13	44,820,608	C	T	404,128	78.6%
13	50,707,087	G	C	403,294	97.9%
13	71,647,588	C	A	403,912	65.5%
13	80,467,235	C	T	395,851	27.5%
13	99,665,512	C	A	396,684	89.5%
13	109,918,493	T	C	395,813	73.4%
14	23,429,729	T	G	403,256	60.1%
14	54,346,010	G	A	404,127	90.4%
14	74,817,418	A	G	396,470	40.2%
15	40,397,191	C	G	403,040	80.5%
15	40,716,253	G	C	404,163	48.3%
15	41,255,396	C	A	403,039	47.9%
15	49,409,527	G	A	403,257	73.8%
15	49,706,145	A	T	404,126	93.1%
15	63,866,877	T	C	398,193	82.3%
15	73,833,600	G	T	403,257	94.9%
16	3,583,173	C	T	403,910	78.0%
16	4,361,138	T	C	403,255	69.5%
16	10,136,889	T	G	403,912	73.8%
16	50,188,929	G	A	403,910	94.0%
16	53,935,407	T	C	403,255	94.7%
16	86,403,821	G	C	396,685	88.5%
16	86,579,223	C	A	390,787	73.9%
17	3,882,613	G	C	404,127	48.7%
17	6,469,793	G	A	404,164	49.7%
17	7,163,350	A	G	403,041	85.7%
17	7,448,457	C	G	404,163	14.2%
17	16,030,520	T	C	403,039	46.6%
17	46,552,229	T	C	403,910	78.2%
17	54,195,453	C	T	403,912	59.6%
17	59,286,644	G	C	395,813	21.6%
17	62,497,964	C	T	382,520	97.4%
17	62,686,730	G	A	396,686	25.7%
17	69,371,318	C	T	396,686	92.4%
17	79,952,944	C	T	384,317	88.8%
18	10,078,071	G	A	403,255	72.5%
18	19,816,712	A	T	403,255	45.0%
18	21,074,255	G	A	403,039	59.1%
18	22,290,711	T	C	403,912	68.1%
18	42,827,898	C	T	404,165	90.5%
18	53,566,471	A	C	403,912	32.9%
19	10,819,967	C	T	403,292	44.0%

Supp. Table 6 Smoking behaviour

19	36,881,643	A	G	403,911	70.9%
20	10,745,545	G	C	404,164	76.8%
21	35,368,402	G	T	404,128	87.2%
22	50,867,711	C	T	403,292	87.8%
1	17,308,254	T	C	404,128	48.1%
1	39,995,074	T	C	404,128	23.3%
1	92,077,097	G	A	396,686	18.8%
1	92,381,483	A	G	396,684	68.8%
1	118,911,295	T	G	396,470	75.6%
1	150,547,747	G	A	396,468	42.0%
1	200,069,216	A	G	396,470	58.8%
1	204,426,295	A	G	345,265	85.6%
1	215,120,596	A	G	395,597	21.7%
1	218,631,452	C	G	345,265	71.6%
1	218,855,029	C	G	395,850	51.1%
1	219,853,742	G	T	396,685	42.2%
1	221,631,938	A	G	395,598	33.5%
1	239,857,524	A	G	345,265	51.2%
2	18,287,623	T	C	404,126	82.7%
2	56,096,892	A	G	396,470	77.2%
2	135,672,187	C	T	395,597	59.7%
2	157,016,257	C	T	395,850	86.5%
2	218,683,154	A	G	396,723	39.7%
2	229,502,197	A	C	396,684	92.2%
2	239,441,308	A	C	396,723	14.9%
2	239,881,309	C	G	396,686	80.1%
3	25,520,582	C	A	403,257	82.6%
3	29,469,675	T	G	404,128	72.4%
3	55,152,319	A	G	396,685	59.4%
3	57,879,611	T	G	396,723	75.2%
3	67,455,803	T	C	395,850	30.6%
3	98,822,050	G	T	396,468	76.7%
3	127,931,340	A	G	396,685	88.1%
3	158,226,886	A	G	396,470	65.6%
3	168,709,843	G	T	396,722	76.5%
3	169,295,436	A	G	395,851	84.6%
4	7,879,027	C	T	404,127	56.4%
4	89,855,495	T	C	396,686	21.4%
4	89,869,078	T	C	396,686	40.7%
4	106,133,184	T	C	396,686	65.4%
4	106,766,430	T	C	396,722	93.3%
4	106,819,053	G	A	395,813	74.3%
4	145,506,456	T	C	396,685	60.2%
4	145,740,898	T	C	345,265	74.5%
5	33,352,738	T	C	403,912	90.7%
5	44,367,221	A	T	403,041	32.8%
5	52,187,038	A	C	395,814	26.5%

Supp. Table 6 Smoking behaviour

5	53,444,498	C	T	396,470	53.8%
5	77,396,400	T	G	396,470	76.0%
5	95,025,146	G	C	396,685	31.2%
5	131,466,629	T	A	395,597	55.1%
5	147,856,522	G	A	395,813	55.9%
5	148,652,302	T	G	395,851	39.9%
5	156,908,317	T	C	395,815	6.4%
5	156,944,199	C	A	395,815	65.9%
6	6,741,932	T	C	404,128	45.8%
6	7,563,232	T	G	404,128	55.0%
6	7,797,840	C	G	403,912	82.3%
6	22,017,543	G	C	404,128	64.7%
6	28,301,099	A	G	345,265	87.3%
6	32,151,443	T	C	392,848	6.3%
6	32,631,295	A	G	383,776	32.0%
6	73,663,814	C	A	396,685	79.9%
6	109,268,050	C	T	396,686	81.7%
6	126,990,392	T	G	396,469	48.1%
6	142,688,969	A	G	396,686	97.3%
6	142,745,883	T	G	395,815	69.5%
7	7,256,490	A	G	404,128	41.5%
7	15,506,007	T	G	403,911	83.4%
7	99,692,993	T	G	396,686	23.2%
7	156,127,246	G	A	396,721	55.8%
9	1,568,941	T	C	403,912	34.9%
9	4,120,648	G	A	404,127	47.1%
9	23,587,027	T	C	404,126	48.5%
9	98,266,855	T	A	396,685	90.9%
9	109,483,517	T	G	396,686	37.6%
9	119,234,058	C	T	395,815	36.0%
9	139,100,413	C	T	396,470	68.5%
9	139,259,349	A	G	395,597	56.1%
10	12,278,021	T	A	404,128	48.3%
10	30,268,770	A	G	345,265	58.4%
10	64,998,971	A	G	396,722	18.5%
10	69,962,954	A	G	396,469	49.7%
10	75,580,014	G	A	396,721	28.2%
10	77,119,039	T	C	396,468	75.2%
10	78,312,002	G	A	396,723	48.9%
10	81,706,324	A	G	396,686	58.1%
10	124,297,637	T	C	395,813	15.1%
11	43,690,717	C	T	403,912	68.3%
11	45,244,903	C	G	404,163	14.4%
11	62,370,155	G	A	396,721	63.2%
11	73,036,179	C	T	396,684	88.7%
11	86,448,839	T	C	396,684	84.6%
11	126,009,500	T	C	396,686	18.3%

Supp. Table 6 Smoking behaviour

12	28,588,242	T	C	403,040	54.2%
12	56,396,768	C	G	396,721	33.7%
12	57,527,283	T	C	396,686	58.9%
12	65,793,153	G	C	396,721	69.2%
12	85,719,906	A	G	345,265	29.1%
12	94,194,890	A	G	396,469	73.2%
12	95,554,771	T	C	396,685	21.7%
12	96,242,109	T	G	396,686	18.7%
12	115,201,436	G	A	396,722	65.9%
12	115,501,127	A	G	396,468	68.6%
14	54,419,106	A	C	403,255	59.6%
14	84,338,431	A	G	396,685	69.9%
14	92,512,143	A	G	396,722	62.1%
14	93,098,339	G	C	396,469	81.8%
15	41,840,238	A	G	404,128	41.1%
15	41,953,211	T	C	403,257	5.5%
15	67,491,274	C	A	403,912	77.0%
15	71,612,514	T	G	404,126	66.4%
15	71,803,450	C	T	403,294	82.2%
15	78867482	A	C	396,721	66.9%
15	84,274,591	G	A	396,686	51.0%
16	10,740,982	G	C	403,255	80.1%
16	28,870,962	A	G	404,164	40.0%
16	58,063,513	G	T	404,128	31.7%
16	69,891,510	G	T	396,722	50.4%
16	75,411,445	A	C	396,685	40.4%
16	78,225,633	A	G	395,850	31.1%
17	28,072,327	A	G	403,256	45.3%
17	29,210,595	A	G	403,912	27.0%
17	36,915,540	T	C	404,127	86.8%
17	37,504,933	T	C	403,911	74.9%
17	43,940,021	G	A	391,506	78.3%
17	68,976,415	T	C	396,469	78.4%
17	69,201,811	A	G	396,723	50.1%
17	73,525,670	T	G	395,850	26.1%
18	8,801,351	A	G	404,164	25.4%
18	20,234,336	A	G	404,164	53.0%
18	20,708,321	A	G	404,163	78.7%
18	51,022,606	T	C	403,910	59.3%
19	31,829,613	A	C	403,256	87.4%
19	41,117,300	G	A	404,127	98.7%
19	41340983	T	C	403,294	33.4%
20	6,626,218	A	G	403,911	63.8%
20	25,282,608	T	C	404,165	81.5%
20	30,858,967	A	G	404,126	17.2%
20	34,025,756	A	G	403,039	59.6%
20	45,486,817	C	T	403,910	72.8%

Supp. Table 6 Smoking behaviour

20	62,372,706 G	A	396,470	32.5%
21	35,675,966 C	T	404,127	36.9%
22	18,448,113 C	T	404,163	76.3%
22	20,790,723 C	G	403,292	19.7%
22	28,181,399 T	C	404,128	55.7%

Supp. Table 6 Smoking behaviour

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Smoking lookup

Smoking Initiation

beta LF	se LF	P LF	coded freq. SMK	INFO	beta SI	se SI	P SI
0.0247	0.0025	5.56E-23	66.3%	0.997	-0.0023	0.0028	4.20E-01
0.0203	0.0028	6.57E-13	78.0%	0.969	-0.0005	0.0033	8.80E-01
-0.0175	0.0028	8.06E-10	79.2%	0.999	-0.0042	0.0033	2.00E-01
0.0187	0.0027	2.08E-12	74.8%	0.998	-0.0041	0.0031	1.80E-01
-0.0202	0.0024	5.62E-17	59.2%	0.994	-0.0016	0.0027	5.40E-01
0.0508	0.0055	3.12E-20	95.0%	0.989	-0.0028	0.0062	6.50E-01
0.0271	0.0035	6.11E-15	13.4%	0.997	0.0043	0.0039	2.70E-01
-0.0139	0.0024	5.07E-09	47.4%	1.000	0.0048	0.0027	7.30E-02
-0.0236	0.0025	1.92E-20	67.0%	0.990	0.0032	0.0028	2.60E-01
-0.0170	0.0025	2.49E-11	55.7%	0.984	-0.0029	0.0027	2.90E-01
0.0362	0.0039	9.57E-21	89.2%	0.995	-0.0068	0.0043	1.20E-01
-0.0185	0.0025	1.38E-13	68.1%	0.998	-0.0024	0.0029	3.90E-01
-0.0180	0.0024	2.03E-13	64.8%	1.000	0.0045	0.0028	1.00E-01
-0.0280	0.0031	2.80E-19	81.9%	0.985	-0.0083	0.0035	1.70E-02
0.0198	0.0024	4.48E-16	60.5%	0.997	-0.0048	0.0027	7.80E-02
-0.0153	0.0024	2.13E-10	56.8%	0.995	0.0005	0.0027	8.60E-01
0.0285	0.0031	5.00E-20	17.8%	1.000	-0.0049	0.0035	1.60E-01
0.0445	0.0045	2.33E-23	92.3%	0.993	0.0015	0.0050	7.70E-01
-0.0251	0.0026	3.68E-22	70.7%	0.987	0.0009	0.0029	7.60E-01
-0.0239	0.0024	4.15E-24	48.8%	0.995	-0.0051	0.0027	5.70E-02
-0.0252	0.0030	1.27E-16	82.3%	0.993	0.0036	0.0035	3.00E-01
-0.0368	0.0043	1.87E-17	92.0%	0.973	0.0004	0.0050	9.30E-01
-0.0158	0.0023	1.52E-11	54.9%	0.998	-0.0014	0.0027	6.10E-01
-0.0155	0.0023	3.72E-11	44.3%	0.994	0.0073	0.0027	6.30E-03
-0.0172	0.0025	6.97E-12	68.0%	0.994	-0.0070	0.0029	1.50E-02
0.0203	0.0024	1.04E-16	61.2%	0.998	-0.0005	0.0027	8.40E-01
0.0197	0.0026	8.73E-14	72.0%	0.996	-0.0085	0.0030	4.30E-03
0.0169	0.0024	6.57E-13	55.3%	0.997	-0.0030	0.0027	2.70E-01
-0.0140	0.0024	3.72E-09	40.8%	0.991	-0.0067	0.0027	1.40E-02
0.0197	0.0026	4.65E-14	70.8%	0.999	0.0033	0.0029	2.50E-01
-0.0207	0.0024	3.94E-18	43.6%	0.993	-0.0039	0.0027	1.50E-01
0.0179	0.0029	5.86E-10	21.8%	0.993	-0.0031	0.0032	3.40E-01
0.0169	0.0024	8.88E-13	47.1%	0.993	-0.0029	0.0027	2.80E-01
0.0258	0.0033	1.06E-14	14.9%	0.994	-0.0047	0.0038	2.10E-01
-0.0179	0.0029	4.02E-10	21.2%	1.000	-0.0080	0.0033	1.50E-02
0.0150	0.0024	2.84E-10	50.1%	0.984	0.0018	0.0027	5.00E-01
0.0185	0.0029	1.40E-10	79.2%	0.990	0.0023	0.0033	4.80E-01
-0.0185	0.0025	1.19E-13	47.9%	0.896	-0.0001	0.0028	9.70E-01
0.0191	0.0024	7.39E-16	54.6%	0.997	0.0019	0.0027	4.80E-01
0.0165	0.0023	1.70E-12	42.4%	0.997	-0.0042	0.0027	1.20E-01
0.0209	0.0033	2.10E-10	85.2%	0.996	0.0009	0.0038	8.20E-01

Supp. Table 6 Smoking behaviour

-0.0221	0.0024	1.25E-20	55.8%	0.992	0.0088	0.0027	1.10E-03
0.0180	0.0025	2.11E-13	59.9%	0.979	0.0041	0.0027	1.40E-01
0.0379	0.0044	8.81E-18	92.2%	0.993	-0.0032	0.0050	5.20E-01
0.0598	0.0088	8.59E-12	98.1%	1.000	-0.0176	0.0097	6.90E-02
0.0174	0.0025	6.18E-12	68.8%	0.997	0.0008	0.0029	7.70E-01
-0.0181	0.0031	3.17E-09	17.8%	0.995	-0.0009	0.0035	7.90E-01
-0.0272	0.0027	2.24E-23	73.9%	0.993	0.0036	0.0030	2.40E-01
0.0196	0.0024	2.42E-16	49.6%	0.996	-0.0017	0.0027	5.40E-01
0.0226	0.0024	4.20E-21	41.0%	0.997	-0.0008	0.0027	7.70E-01
-0.0665	0.0025	2.54E-153	46.4%	0.999	0.0013	0.0027	6.20E-01
0.0210	0.0029	4.30E-13	79.9%	0.999	-0.0010	0.0033	7.50E-01
0.0277	0.0033	2.47E-17	14.8%	0.991	0.0041	0.0038	2.70E-01
-0.0308	0.0032	1.78E-22	82.6%	0.994	0.0008	0.0035	8.10E-01
-0.0307	0.0036	3.30E-17	87.5%	0.993	0.0022	0.0040	5.80E-01
0.0844	0.0098	6.45E-18	98.5%	1.000	-0.0062	0.0111	5.80E-01
-0.0352	0.0026	1.53E-42	35.2%	0.947	0.0008	0.0029	7.90E-01
-0.0308	0.0026	2.31E-33	66.8%	0.987	-0.0053	0.0028	6.50E-02
0.0227	0.0023	2.17E-22	52.0%	1.000	-0.0024	0.0027	3.60E-01
-0.0360	0.0049	1.99E-13	93.6%	0.976	-0.0136	0.0055	1.40E-02
0.0151	0.0023	1.04E-10	48.4%	1.000	-0.0034	0.0027	2.10E-01
-0.0209	0.0025	2.17E-16	67.6%	0.980	-0.0019	0.0029	5.00E-01
0.0154	0.0026	2.47E-09	71.6%	0.989	-0.0012	0.0030	6.80E-01
0.0175	0.0024	9.22E-13	63.8%	0.990	0.0039	0.0028	1.60E-01
0.0141	0.0024	3.50E-09	58.9%	0.988	-0.0031	0.0027	2.50E-01
0.0215	0.0027	4.21E-15	75.8%	0.984	0.0061	0.0031	5.20E-02
-0.0279	0.0026	1.40E-26	72.4%	1.000	-0.0047	0.0030	1.10E-01
0.0244	0.0033	1.73E-13	85.2%	0.995	0.0102	0.0038	6.90E-03
0.0168	0.0023	7.80E-13	48.6%	0.984	-0.0021	0.0027	4.40E-01
0.0208	0.0034	1.31E-09	87.1%	1.000	-0.0022	0.0040	5.80E-01
-0.0198	0.0023	1.11E-17	50.0%	0.999	-0.0004	0.0027	8.70E-01
-0.0183	0.0024	6.81E-15	49.5%	0.995	-0.0024	0.0027	3.60E-01
-0.0205	0.0025	1.67E-16	66.0%	0.995	0.0030	0.0028	2.90E-01
0.0178	0.0026	4.07E-12	31.9%	0.995	0.0127	0.0029	9.20E-06
0.0232	0.0025	4.46E-21	62.4%	0.977	-0.0068	0.0028	1.40E-02
-0.0172	0.0026	3.48E-11	71.5%	0.989	0.0057	0.0030	5.40E-02
-0.0211	0.0026	9.09E-16	73.0%	0.996	0.0015	0.0030	6.10E-01
-0.0234	0.0025	6.47E-21	36.5%	0.961	0.0049	0.0028	8.40E-02
0.0173	0.0025	3.09E-12	67.6%	0.993	0.0046	0.0029	1.10E-01
-0.0232	0.0032	3.98E-13	83.4%	0.999	-0.0044	0.0036	2.20E-01
-0.0178	0.0025	5.39E-13	61.2%	0.990	0.0060	0.0028	2.90E-02
0.0150	0.0025	2.79E-09	31.4%	1.000	0.0030	0.0029	3.00E-01
-0.0168	0.0025	8.30E-12	60.8%	0.968	-0.0062	0.0028	2.50E-02
0.0201	0.0032	6.38E-10	81.3%	0.985	-0.0022	0.0035	5.30E-01
-0.0168	0.0023	6.21E-13	49.2%	0.996	0.0045	0.0027	9.10E-02
0.0191	0.0027	2.33E-12	75.0%	0.997	-0.0061	0.0031	4.80E-02
0.0531	0.0069	1.45E-14	96.8%	1.000	-0.0077	0.0076	3.10E-01
0.0149	0.0024	2.57E-10	45.8%	0.974	-0.0035	0.0027	2.00E-01

Supp. Table 6 Smoking behaviour

-0.0167	0.0024	2.29E-12	45.2%	0.988	0.0040	0.0027	1.40E-01
0.0153	0.0025	6.16E-10	63.1%	0.993	0.0002	0.0028	9.50E-01
0.0291	0.0035	4.88E-17	87.0%	0.990	-0.0025	0.0040	5.20E-01
0.0286	0.0029	1.85E-23	26.1%	0.998	0.0047	0.0030	1.20E-01
-0.0259	0.0032	1.91E-16	83.1%	0.994	-0.0049	0.0036	1.70E-01
0.0261	0.0029	2.92E-19	78.7%	0.984	-0.0024	0.0033	4.70E-01
-0.0612	0.0081	4.95E-14	97.9%	0.997	-0.0237	0.0092	1.00E-02
0.0245	0.0025	1.74E-23	65.5%	0.998	-0.0051	0.0028	6.80E-02
-0.0186	0.0026	1.83E-12	27.5%	0.987	-0.0027	0.0030	3.70E-01
0.0270	0.0039	4.61E-12	89.5%	0.999	-0.0017	0.0044	6.90E-01
-0.0208	0.0027	2.73E-14	73.2%	0.986	0.0009	0.0030	7.60E-01
0.0189	0.0024	7.55E-15	60.1%	0.992	0.0062	0.0027	2.40E-02
-0.0392	0.0040	2.15E-22	90.4%	0.994	0.0006	0.0045	8.90E-01
0.0213	0.0024	9.53E-19	40.2%	0.986	-0.0029	0.0027	2.90E-01
0.0212	0.0030	1.56E-12	80.4%	0.975	-0.0012	0.0034	7.30E-01
0.0154	0.0023	2.93E-11	48.4%	0.997	-0.0010	0.0027	7.10E-01
0.0171	0.0023	3.45E-13	48.0%	0.991	-0.0068	0.0027	1.10E-02
-0.0268	0.0027	3.18E-23	73.9%	0.990	-0.0016	0.0031	5.90E-01
-0.0506	0.0047	2.82E-27	93.0%	0.990	-0.0066	0.0053	2.10E-01
-0.0288	0.0031	2.42E-20	82.4%	0.996	-0.0076	0.0035	3.00E-02
-0.0339	0.0055	6.60E-10	95.0%	0.966	-0.0004	0.0062	9.50E-01
0.0308	0.0028	9.07E-28	78.1%	0.992	0.0038	0.0032	2.50E-01
0.0205	0.0026	5.29E-15	69.6%	0.975	-0.0051	0.0029	8.50E-02
-0.0169	0.0027	1.99E-10	73.8%	0.995	-0.0013	0.0030	6.60E-01
0.0351	0.0050	2.09E-12	93.9%	0.970	0.0062	0.0057	2.70E-01
-0.0450	0.0053	3.08E-17	94.8%	1.000	-0.0074	0.0060	2.20E-01
0.0270	0.0038	6.72E-13	88.5%	0.997	0.0004	0.0042	9.20E-01
0.0170	0.0027	3.50E-10	74.0%	0.975	-0.0045	0.0031	1.40E-01
-0.0238	0.0024	7.31E-24	48.5%	0.996	-0.0038	0.0027	1.50E-01
0.0135	0.0023	7.43E-09	49.6%	0.982	0.0040	0.0027	1.40E-01
0.0217	0.0033	9.64E-11	85.8%	0.994	-0.0021	0.0038	5.80E-01
-0.0219	0.0033	4.54E-11	14.3%	1.000	0.0036	0.0038	3.50E-01
0.0147	0.0023	3.43E-10	46.8%	0.999	0.0015	0.0027	5.80E-01
0.0200	0.0028	1.88E-12	78.3%	0.993	0.0017	0.0032	6.00E-01
-0.0209	0.0024	1.27E-18	59.5%	0.998	-0.0029	0.0027	2.90E-01
0.0285	0.0029	1.21E-22	21.4%	1.000	0.0003	0.0033	9.20E-01
0.0451	0.0076	3.02E-09	97.4%	1.000	-0.0053	0.0083	5.20E-01
-0.0197	0.0028	9.17E-13	25.8%	0.994	-0.0005	0.0031	8.70E-01
0.0475	0.0046	1.82E-25	92.4%	0.984	0.0060	0.0051	2.40E-01
-0.0367	0.0039	9.16E-21	88.7%	0.950	0.0069	0.0043	1.10E-01
-0.0235	0.0027	1.52E-18	72.3%	0.984	0.0035	0.0030	2.40E-01
0.0165	0.0024	5.60E-12	44.8%	0.989	-0.0016	0.0027	5.50E-01
0.0165	0.0024	6.97E-12	59.1%	0.971	0.0079	0.0028	4.40E-03
-0.0173	0.0025	5.24E-12	68.0%	0.990	-0.0049	0.0029	8.60E-02
-0.0294	0.0040	1.39E-13	90.5%	0.998	-0.0005	0.0046	9.20E-01
0.0162	0.0025	7.01E-11	33.2%	0.995	0.0008	0.0028	7.80E-01
0.0153	0.0024	7.83E-11	44.1%	0.988	-0.0019	0.0027	4.70E-01

Supp. Table 6 Smoking behaviour

-0.0152	0.0026	3.72E-09	70.8%	1.000	0.0004	0.0029	8.80E-01
-0.0173	0.0027	3.47E-10	76.7%	0.993	-0.0051	0.0032	1.10E-01
-0.0357	0.0035	6.85E-24	87.2%	0.995	0.0027	0.0040	5.10E-01
-0.0220	0.0036	1.11E-09	87.6%	0.984	0.0017	0.0041	6.80E-01
0.0389	0.0024	5.95E-61	47.8%	0.999	-0.0020	0.0027	4.40E-01
-0.0239	0.0028	9.82E-18	76.8%	0.998	0.0060	0.0032	5.70E-02
-0.0440	0.0030	2.28E-47	18.8%	1.000	0.0012	0.0034	7.20E-01
0.0245	0.0026	1.63E-21	68.9%	0.995	0.0052	0.0029	7.10E-02
-0.0238	0.0027	4.12E-18	75.7%	0.997	-0.0045	0.0031	1.50E-01
0.0278	0.0024	1.50E-31	42.1%	1.000	0.0020	0.0027	4.60E-01
-0.0164	0.0024	7.33E-12	58.7%	0.987	0.0056	0.0027	4.00E-02
-0.0324	0.0036	1.50E-19	85.6%	0.993	0.0018	0.0038	6.40E-01
0.0147	0.0029	3.12E-07	78.4%	0.991	0.0014	0.0033	6.70E-01
-0.0156	0.0028	2.13E-08	71.6%	0.994	0.0030	0.0030	3.00E-01
0.0168	0.0023	9.19E-13	48.5%	0.998	-0.0068	0.0027	1.10E-02
-0.0245	0.0024	3.92E-24	41.9%	0.993	-0.0006	0.0027	8.40E-01
0.0159	0.0025	1.76E-10	66.4%	0.997	-0.0009	0.0028	7.60E-01
0.0290	0.0025	9.42E-31	51.2%	0.996	-0.0031	0.0027	2.50E-01
-0.0415	0.0031	4.02E-40	82.6%	0.994	-0.0030	0.0035	3.90E-01
0.0344	0.0028	7.19E-35	77.4%	1.000	0.0039	0.0032	2.20E-01
-0.0186	0.0024	1.08E-14	60.7%	0.988	-0.0030	0.0027	2.70E-01
0.0335	0.0034	1.76E-22	86.5%	1.000	-0.0036	0.0039	3.60E-01
-0.0285	0.0024	7.24E-33	39.6%	1.000	-0.0027	0.0027	3.20E-01
-0.0743	0.0044	9.45E-63	92.0%	0.998	0.0036	0.0049	4.70E-01
0.0235	0.0033	8.51E-13	85.0%	0.992	0.0070	0.0037	6.10E-02
-0.0484	0.0030	3.58E-59	80.2%	0.998	0.0004	0.0034	9.00E-01
-0.0423	0.0031	1.73E-41	82.5%	0.986	-0.0015	0.0035	6.70E-01
0.0267	0.0027	9.22E-24	72.1%	0.989	-0.0017	0.0030	5.80E-01
0.0250	0.0024	1.35E-24	59.2%	0.990	-0.0013	0.0027	6.40E-01
-0.0287	0.0027	3.82E-26	75.4%	0.995	0.0060	0.0031	5.30E-02
-0.0205	0.0026	1.18E-15	30.4%	0.987	0.0005	0.0029	8.60E-01
0.0319	0.0028	1.85E-30	76.7%	0.994	0.0071	0.0032	2.50E-02
-0.0433	0.0037	6.76E-32	11.9%	0.998	-0.0005	0.0041	9.10E-01
0.0262	0.0025	2.83E-26	65.6%	0.999	0.0024	0.0028	3.90E-01
0.0289	0.0028	1.36E-25	76.6%	0.992	-0.0008	0.0032	7.90E-01
0.0334	0.0032	7.72E-25	84.7%	0.998	0.0081	0.0037	2.90E-02
-0.0167	0.0024	2.36E-12	56.3%	0.998	0.0001	0.0027	9.60E-01
0.0537	0.0029	2.08E-76	21.1%	0.999	0.0055	0.0033	9.40E-02
-0.0415	0.0024	5.78E-66	59.4%	1.000	0.0022	0.0027	4.20E-01
-0.0297	0.0025	2.60E-32	34.1%	0.998	-0.0019	0.0028	4.90E-01
-0.0729	0.0047	2.43E-54	93.2%	0.998	-0.0043	0.0053	4.20E-01
0.0682	0.0028	4.18E-134	74.3%	1.000	0.0037	0.0031	2.30E-01
-0.0704	0.0024	3.65E-184	60.5%	1.000	0.0029	0.0027	2.90E-01
0.0384	0.0029	5.11E-40	74.5%	0.989	-0.0076	0.0031	1.40E-02
-0.0340	0.0040	3.23E-17	9.3%	0.993	0.0023	0.0046	6.20E-01
0.0206	0.0025	8.76E-17	32.7%	1.000	-0.0025	0.0028	3.70E-01
-0.0367	0.0027	1.47E-41	73.6%	0.985	-0.0021	0.0030	4.90E-01

Supp. Table 6 Smoking behaviour

-0.0177	0.0024	7.79E-14	53.9%	0.993	0.0007	0.0027	7.80E-01
0.0209	0.0028	2.78E-14	75.8%	0.998	0.0012	0.0031	7.10E-01
0.0296	0.0026	1.46E-30	31.5%	0.999	-0.0013	0.0029	6.50E-01
0.0187	0.0024	7.02E-15	54.7%	0.979	-0.0002	0.0027	9.50E-01
-0.0505	0.0024	1.56E-96	55.5%	1.000	-0.0043	0.0027	1.10E-01
-0.0186	0.0024	1.35E-14	59.8%	0.985	-0.0050	0.0027	6.90E-02
-0.0628	0.0049	8.04E-38	93.7%	1.000	-0.0057	0.0055	3.10E-01
0.0408	0.0025	3.06E-59	66.1%	0.997	0.0120	0.0028	2.10E-05
-0.0311	0.0024	3.93E-39	45.8%	0.991	0.0015	0.0027	5.90E-01
-0.0234	0.0024	6.95E-23	54.9%	0.992	0.0005	0.0027	8.60E-01
0.0352	0.0030	7.50E-31	82.2%	0.999	0.0021	0.0035	5.60E-01
-0.0297	0.0025	3.07E-33	64.9%	0.996	-0.0007	0.0028	8.10E-01
0.0553	0.0038	1.21E-48	87.1%	0.999	0.0099	0.0040	1.30E-02
0.1452	0.0049	3.00E-189	93.5%	1.000	-0.0007	0.0054	9.00E-01
-0.0469	0.0030	9.79E-57	66.3%	0.800	-0.0008	0.0031	8.00E-01
-0.0344	0.0030	4.67E-31	80.0%	1.000	-0.0030	0.0033	3.70E-01
0.0450	0.0031	3.89E-48	81.8%	1.000	0.0037	0.0035	2.90E-01
-0.0211	0.0024	4.73E-19	48.2%	0.995	0.0037	0.0027	1.60E-01
-0.1803	0.0074	2.34E-131	97.2%	1.000	0.0088	0.0081	2.80E-01
-0.0712	0.0026	4.71E-165	69.5%	0.996	0.0043	0.0029	1.40E-01
-0.0172	0.0024	9.08E-13	58.8%	0.992	-0.0004	0.0027	8.80E-01
0.0215	0.0031	7.21E-12	83.9%	0.991	-0.0049	0.0036	1.80E-01
0.0219	0.0028	8.74E-15	77.0%	0.999	-0.0025	0.0032	4.40E-01
0.0274	0.0024	6.42E-31	55.8%	0.995	-0.0007	0.0027	7.90E-01
-0.0158	0.0025	1.08E-10	35.2%	0.991	0.0017	0.0028	5.40E-01
-0.0246	0.0024	5.78E-25	47.4%	0.981	-0.0010	0.0027	7.10E-01
0.0219	0.0024	3.88E-20	51.7%	0.991	-0.0083	0.0027	1.90E-03
0.0523	0.0042	4.72E-36	91.0%	0.989	-0.0029	0.0047	5.30E-01
0.0245	0.0025	2.81E-23	62.2%	1.000	0.0018	0.0027	5.00E-01
-0.0273	0.0025	9.05E-28	36.1%	0.988	-0.0080	0.0028	4.20E-03
0.0233	0.0025	4.48E-20	68.5%	0.996	0.0016	0.0029	5.80E-01
0.0138	0.0024	8.64E-09	55.9%	0.982	0.0067	0.0027	1.30E-02
-0.0409	0.0024	3.97E-67	48.3%	1.000	-0.0014	0.0027	6.00E-01
0.0165	0.0026	1.02E-10	58.3%	0.999	0.0002	0.0027	9.40E-01
0.0221	0.0030	2.20E-13	18.4%	0.999	0.0007	0.0034	8.40E-01
-0.0224	0.0024	2.43E-21	50.2%	0.999	-0.0042	0.0027	1.10E-01
0.0246	0.0026	2.75E-21	28.3%	0.997	-0.0040	0.0030	1.80E-01
-0.0119	0.0027	1.19E-05	24.7%	1.000	-0.0068	0.0031	2.80E-02
0.0285	0.0023	3.91E-34	49.1%	0.995	-0.0030	0.0027	2.70E-01
0.0193	0.0024	1.65E-15	58.0%	1.000	-0.0034	0.0027	2.10E-01
0.0218	0.0034	2.18E-10	85.0%	0.949	0.0057	0.0038	1.40E-01
0.0197	0.0025	3.58E-15	68.3%	0.994	0.0030	0.0029	2.90E-01
0.0211	0.0033	1.46E-10	14.2%	0.998	0.0060	0.0038	1.20E-01
-0.0264	0.0024	1.66E-27	62.8%	0.998	0.0023	0.0028	4.00E-01
-0.0369	0.0038	1.31E-22	88.8%	0.999	-0.0024	0.0042	5.70E-01
0.0303	0.0033	5.07E-20	84.6%	1.000	0.0000	0.0037	1.00E+00
-0.0241	0.0031	5.29E-15	18.0%	1.000	-0.0018	0.0035	6.10E-01

Supp. Table 6 Smoking behaviour

0.0379	0.0023	9.57E-59	54.0%	0.997	0.0034	0.0027	2.10E-01
-0.0153	0.0025	5.57E-10	65.9%	0.997	-0.0125	0.0028	9.70E-06
-0.0227	0.0024	7.04E-21	58.6%	1.000	-0.0038	0.0027	1.70E-01
-0.0198	0.0025	6.27E-15	69.3%	0.993	0.0002	0.0029	9.60E-01
0.0196	0.0028	1.72E-12	70.9%	0.991	-0.0024	0.0030	4.20E-01
-0.0135	0.0027	3.97E-07	73.2%	1.000	-0.0058	0.0030	5.50E-02
-0.0275	0.0029	2.36E-21	78.6%	0.998	-0.0003	0.0033	9.40E-01
0.0439	0.0031	1.45E-46	18.8%	1.000	-0.0032	0.0034	3.50E-01
-0.0195	0.0025	4.02E-15	65.8%	0.991	-0.0003	0.0028	9.20E-01
0.0223	0.0025	1.92E-18	31.6%	0.993	0.0045	0.0029	1.20E-01
0.0315	0.0025	3.40E-36	59.8%	0.932	-0.0011	0.0028	6.90E-01
0.0237	0.0026	1.38E-19	69.8%	0.992	0.0056	0.0029	5.40E-02
-0.0175	0.0024	4.69E-13	62.1%	0.998	-0.0027	0.0028	3.20E-01
-0.0363	0.0031	1.39E-32	81.6%	0.998	0.0058	0.0034	9.40E-02
0.0239	0.0024	4.26E-23	40.9%	0.988	-0.0011	0.0027	6.90E-01
-0.0364	0.0053	7.08E-12	94.5%	0.975	0.0011	0.0059	8.50E-01
0.0228	0.0028	2.04E-16	76.9%	0.997	0.0107	0.0032	7.30E-04
0.0642	0.0025	4.12E-145	66.5%	1.000	-0.0053	0.0028	6.30E-02
0.0206	0.0030	1.16E-11	82.2%	1.000	0.0010	0.0035	7.80E-01
0.0139	0.0025	3.96E-08	67.2%	1.000	0.0117	0.0028	3.60E-05
-0.0292	0.0024	2.48E-34	51.0%	0.994	0.0007	0.0027	7.90E-01
0.0355	0.0031	2.25E-31	80.2%	0.949	0.0031	0.0034	3.70E-01
-0.0131	0.0024	2.76E-08	59.9%	1.000	-0.0058	0.0027	3.30E-02
-0.0332	0.0026	9.86E-39	31.8%	0.988	0.0004	0.0029	8.90E-01
0.0208	0.0023	6.70E-19	50.5%	0.998	-0.0042	0.0027	1.20E-01
0.0380	0.0024	4.83E-55	40.3%	1.000	-0.0030	0.0027	2.70E-01
0.0221	0.0025	3.03E-18	31.0%	1.000	-0.0023	0.0029	4.20E-01
-0.0323	0.0024	4.60E-42	45.0%	1.000	0.0069	0.0027	1.00E-02
0.0206	0.0026	5.28E-15	73.1%	0.999	0.0062	0.0030	4.10E-02
0.0386	0.0036	1.41E-27	86.9%	0.970	0.0134	0.0040	8.30E-04
0.0202	0.0027	7.29E-14	75.1%	0.989	-0.0064	0.0031	4.00E-02
0.0426	0.0029	3.10E-49	78.0%	0.985	0.0067	0.0032	3.80E-02
0.0174	0.0029	1.12E-09	21.5%	0.997	0.0034	0.0033	2.90E-01
0.0296	0.0023	1.28E-36	49.5%	0.998	0.0039	0.0027	1.50E-01
0.0198	0.0027	2.08E-13	25.7%	0.994	0.0044	0.0031	1.50E-01
-0.0273	0.0027	1.24E-24	25.5%	0.992	-0.0008	0.0031	7.80E-01
0.0128	0.0023	3.66E-08	46.9%	0.993	-0.0073	0.0027	6.70E-03
-0.0202	0.0028	1.24E-12	21.4%	0.987	0.0003	0.0033	9.20E-01
0.0134	0.0024	1.78E-08	40.7%	0.995	0.0041	0.0027	1.40E-01
0.0355	0.0036	3.66E-23	87.4%	0.995	-0.0024	0.0040	5.50E-01
-0.1535	0.0106	1.69E-47	98.7%	1.000	-0.0140	0.0120	2.40E-01
0.0077	0.0025	0.001951	33.4%	0.998	-0.0075	0.0028	8.00E-03
0.0259	0.0024	1.42E-26	36.5%	1.000	0.0019	0.0028	4.90E-01
0.0213	0.0030	1.02E-12	81.6%	0.999	-0.0056	0.0034	1.00E-01
-0.0232	0.0031	1.30E-13	82.6%	0.997	-0.0017	0.0035	6.20E-01
0.0239	0.0024	1.03E-23	59.7%	1.000	0.0020	0.0027	4.60E-01
-0.0257	0.0026	1.56E-22	72.9%	0.982	0.0024	0.0030	4.40E-01

Supp. Table 6 Smoking behaviour

0.0291	0.0025	5.81E-31	32.8%	0.995	-0.0008	0.0028	7.90E-01
-0.0246	0.0025	9.34E-24	36.9%	1.000	0.0028	0.0028	3.20E-01
-0.0293	0.0027	9.09E-27	76.1%	0.999	0.0058	0.0031	6.40E-02
-0.0192	0.0029	6.94E-11	19.8%	0.986	-0.0083	0.0034	1.40E-02
-0.0219	0.0024	3.62E-19	44.6%	0.946	-0.0084	0.0028	2.30E-03

Supp. Table 6 Smoking behaviour

Cigarettes per day

consistent SI	beta CPD	se CPD	P CPD	consistent CPD
TRUE	0.0001	0.0053	9.80E-01	FALSE
TRUE	-0.0020	0.0060	7.50E-01	TRUE
FALSE	-0.0019	0.0061	7.50E-01	FALSE
TRUE	0.0130	0.0057	2.30E-02	FALSE
FALSE	-0.0132	0.0051	9.10E-03	FALSE
TRUE	-0.0102	0.0114	3.70E-01	TRUE
FALSE	0.0026	0.0073	7.20E-01	FALSE
TRUE	0.0007	0.0050	8.90E-01	TRUE
TRUE	0.0055	0.0053	3.00E-01	TRUE
FALSE	-0.0033	0.0050	5.10E-01	FALSE
TRUE	0.0034	0.0080	6.70E-01	FALSE
FALSE	-0.0008	0.0053	8.80E-01	FALSE
TRUE	-0.0066	0.0052	2.00E-01	FALSE
FALSE	-0.0049	0.0065	4.50E-01	FALSE
TRUE	-0.0008	0.0051	8.80E-01	TRUE
TRUE	-0.0001	0.0050	9.80E-01	FALSE
TRUE	0.0003	0.0065	9.70E-01	FALSE
FALSE	-0.0009	0.0094	9.30E-01	TRUE
TRUE	-0.0022	0.0055	6.80E-01	FALSE
FALSE	-0.0059	0.0050	2.30E-01	FALSE
TRUE	-0.0012	0.0065	8.60E-01	FALSE
TRUE	0.0119	0.0093	2.00E-01	TRUE
FALSE	-0.0025	0.0050	6.20E-01	FALSE
TRUE	0.0007	0.0050	8.80E-01	TRUE
FALSE	0.0055	0.0053	3.10E-01	TRUE
TRUE	0.0048	0.0051	3.40E-01	FALSE
TRUE	-0.0039	0.0055	4.80E-01	TRUE
TRUE	0.0012	0.0050	8.10E-01	FALSE
FALSE	0.0078	0.0051	1.30E-01	TRUE
FALSE	-0.0023	0.0055	6.70E-01	TRUE
FALSE	0.0020	0.0050	6.90E-01	TRUE
TRUE	0.0016	0.0061	8.00E-01	FALSE
TRUE	-0.0069	0.0050	1.70E-01	TRUE
TRUE	-0.0055	0.0070	4.40E-01	TRUE
FALSE	-0.0061	0.0061	3.20E-01	FALSE
FALSE	0.0076	0.0050	1.30E-01	FALSE
FALSE	-0.0033	0.0061	6.00E-01	TRUE
FALSE	0.0022	0.0053	6.80E-01	TRUE
FALSE	0.0007	0.0050	8.90E-01	FALSE
TRUE	0.0012	0.0050	8.10E-01	FALSE
FALSE	-0.0038	0.0070	5.90E-01	TRUE

Supp. Table 6 Smoking behaviour

TRUE	0.0114	0.0050	2.30E-02	TRUE
FALSE	0.0004	0.0051	9.40E-01	FALSE
TRUE	-0.0109	0.0093	2.40E-01	TRUE
TRUE	0.0215	0.0179	2.30E-01	FALSE
FALSE	0.0019	0.0054	7.30E-01	FALSE
FALSE	-0.0128	0.0065	5.00E-02	FALSE
TRUE	0.0134	0.0057	1.80E-02	TRUE
TRUE	-0.0045	0.0050	3.70E-01	TRUE
TRUE	0.0075	0.0051	1.40E-01	FALSE
TRUE	-0.0095	0.0050	5.80E-02	FALSE
TRUE	0.0068	0.0062	2.70E-01	FALSE
FALSE	-0.0029	0.0070	6.80E-01	TRUE
TRUE	0.0063	0.0066	3.40E-01	TRUE
TRUE	-0.0103	0.0075	1.70E-01	FALSE
TRUE	0.0200	0.0208	3.30E-01	FALSE
TRUE	-0.0031	0.0053	5.70E-01	FALSE
FALSE	0.0054	0.0053	3.10E-01	TRUE
TRUE	-0.0030	0.0050	5.40E-01	TRUE
FALSE	0.0000	0.0102	1.00E+00	FALSE
TRUE	0.0000	0.0050	1.00E+00	FALSE
FALSE	0.0028	0.0054	6.10E-01	TRUE
TRUE	0.0026	0.0055	6.40E-01	FALSE
FALSE	-0.0082	0.0052	1.10E-01	TRUE
TRUE	0.0023	0.0051	6.60E-01	FALSE
FALSE	0.0100	0.0059	8.80E-02	FALSE
FALSE	-0.0051	0.0056	3.60E-01	FALSE
FALSE	0.0010	0.0071	8.90E-01	FALSE
TRUE	-0.0120	0.0050	1.70E-02	TRUE
TRUE	-0.0014	0.0074	8.50E-01	TRUE
FALSE	0.0009	0.0050	8.50E-01	TRUE
FALSE	0.0053	0.0050	2.80E-01	TRUE
TRUE	0.0041	0.0053	4.40E-01	TRUE
FALSE	0.0133	0.0053	1.20E-02	FALSE
TRUE	-0.0050	0.0052	3.30E-01	TRUE
TRUE	0.0087	0.0055	1.20E-01	TRUE
TRUE	0.0038	0.0056	5.00E-01	TRUE
TRUE	0.0023	0.0052	6.60E-01	TRUE
FALSE	0.0088	0.0053	9.90E-02	FALSE
FALSE	-0.0040	0.0067	5.50E-01	FALSE
TRUE	0.0054	0.0051	2.90E-01	TRUE
FALSE	0.0031	0.0054	5.70E-01	FALSE
FALSE	-0.0066	0.0052	2.00E-01	FALSE
TRUE	-0.0072	0.0064	2.60E-01	TRUE
TRUE	-0.0032	0.0050	5.10E-01	FALSE
TRUE	-0.0054	0.0058	3.50E-01	TRUE
TRUE	0.0092	0.0140	5.10E-01	FALSE
TRUE	-0.0051	0.0051	3.10E-01	TRUE

Supp. Table 6 Smoking behaviour

TRUE	-0.0090	0.0050	7.10E-02	FALSE
FALSE	-0.0089	0.0052	8.40E-02	TRUE
TRUE	0.0016	0.0074	8.30E-01	FALSE
FALSE	0.0088	0.0056	1.20E-01	FALSE
FALSE	-0.0017	0.0067	8.00E-01	FALSE
TRUE	-0.0008	0.0061	8.90E-01	TRUE
FALSE	0.0075	0.0173	6.60E-01	TRUE
TRUE	-0.0047	0.0052	3.60E-01	TRUE
FALSE	-0.0047	0.0056	4.00E-01	FALSE
TRUE	0.0021	0.0081	7.90E-01	FALSE
TRUE	0.0027	0.0057	6.30E-01	TRUE
FALSE	-0.0022	0.0051	6.70E-01	TRUE
TRUE	-0.0017	0.0085	8.40E-01	FALSE
TRUE	0.0038	0.0051	4.50E-01	FALSE
TRUE	0.0057	0.0063	3.70E-01	FALSE
TRUE	-0.0068	0.0050	1.80E-01	TRUE
TRUE	-0.0034	0.0050	5.00E-01	TRUE
FALSE	-0.0075	0.0057	1.90E-01	FALSE
FALSE	0.0108	0.0098	2.70E-01	TRUE
FALSE	-0.0057	0.0065	3.90E-01	FALSE
FALSE	-0.0191	0.0116	1.00E-01	FALSE
FALSE	0.0042	0.0060	4.80E-01	FALSE
TRUE	0.0019	0.0055	7.30E-01	FALSE
FALSE	0.0121	0.0057	3.40E-02	TRUE
FALSE	-0.0067	0.0106	5.30E-01	TRUE
FALSE	0.0055	0.0112	6.20E-01	TRUE
FALSE	-0.0075	0.0078	3.40E-01	TRUE
TRUE	-0.0027	0.0057	6.40E-01	TRUE
FALSE	-0.0084	0.0050	9.10E-02	FALSE
FALSE	-0.0077	0.0050	1.30E-01	TRUE
TRUE	-0.0173	0.0071	1.50E-02	TRUE
TRUE	0.0025	0.0071	7.30E-01	TRUE
FALSE	-0.0061	0.0050	2.20E-01	TRUE
FALSE	0.0098	0.0061	1.10E-01	FALSE
FALSE	0.0040	0.0051	4.30E-01	TRUE
FALSE	-0.0077	0.0061	2.10E-01	TRUE
TRUE	-0.0038	0.0154	8.10E-01	TRUE
FALSE	-0.0134	0.0057	1.90E-02	FALSE
FALSE	0.0065	0.0095	4.90E-01	FALSE
TRUE	-0.0095	0.0081	2.40E-01	FALSE
TRUE	0.0012	0.0056	8.30E-01	TRUE
TRUE	-0.0001	0.0050	9.80E-01	TRUE
FALSE	-0.0021	0.0051	6.80E-01	TRUE
FALSE	0.0031	0.0054	5.70E-01	TRUE
FALSE	-0.0155	0.0085	6.80E-02	FALSE
FALSE	-0.0056	0.0053	2.90E-01	TRUE
TRUE	-0.0029	0.0050	5.60E-01	TRUE

Supp. Table 6 Smoking behaviour

TRUE	0.0018	0.0055	7.40E-01	TRUE
FALSE	0.0039	0.0059	5.10E-01	TRUE
TRUE	-0.0063	0.0075	4.00E-01	FALSE
TRUE	-0.0023	0.0076	7.60E-01	FALSE
TRUE	0.0056	0.0050	2.60E-01	FALSE
TRUE	0.0087	0.0059	1.40E-01	TRUE
TRUE	-0.0060	0.0064	3.50E-01	FALSE
FALSE	0.0012	0.0054	8.30E-01	FALSE
FALSE	0.0020	0.0058	7.30E-01	TRUE
FALSE	-0.0038	0.0050	4.50E-01	TRUE
TRUE	0.0008	0.0051	8.70E-01	TRUE
TRUE	0.0089	0.0071	2.10E-01	TRUE
FALSE	-0.0070	0.0061	2.50E-01	TRUE
TRUE	-0.0008	0.0055	8.80E-01	FALSE
TRUE	0.0016	0.0050	7.40E-01	FALSE
FALSE	-0.0162	0.0051	1.40E-03	FALSE
TRUE	-0.0047	0.0053	3.70E-01	TRUE
TRUE	-0.0024	0.0050	6.20E-01	TRUE
FALSE	0.0054	0.0066	4.10E-01	TRUE
FALSE	-0.0041	0.0060	4.90E-01	TRUE
FALSE	0.0145	0.0051	4.50E-03	TRUE
TRUE	0.0096	0.0073	1.90E-01	FALSE
FALSE	-0.0068	0.0051	1.80E-01	FALSE
TRUE	-0.0056	0.0092	5.40E-01	FALSE
FALSE	0.0013	0.0070	8.50E-01	FALSE
TRUE	-0.0045	0.0062	4.70E-01	FALSE
FALSE	-0.0027	0.0066	6.80E-01	FALSE
TRUE	-0.0124	0.0056	2.60E-02	TRUE
TRUE	0.0079	0.0051	1.20E-01	FALSE
TRUE	0.0048	0.0058	4.10E-01	TRUE
TRUE	0.0018	0.0054	7.40E-01	TRUE
FALSE	-0.0094	0.0059	1.10E-01	TRUE
FALSE	0.0041	0.0077	5.90E-01	TRUE
FALSE	0.0019	0.0052	7.10E-01	FALSE
TRUE	0.0046	0.0059	4.30E-01	FALSE
FALSE	-0.0019	0.0069	7.80E-01	TRUE
TRUE	-0.0023	0.0050	6.40E-01	FALSE
FALSE	0.0058	0.0061	3.40E-01	FALSE
TRUE	-0.0037	0.0050	4.70E-01	FALSE
FALSE	-0.0014	0.0053	7.90E-01	FALSE
FALSE	0.0113	0.0099	2.60E-01	TRUE
FALSE	0.0017	0.0057	7.60E-01	FALSE
TRUE	-0.0097	0.0051	5.70E-02	FALSE
TRUE	0.0146	0.0057	1.10E-02	FALSE
TRUE	0.0099	0.0086	2.50E-01	TRUE
TRUE	0.0009	0.0053	8.70E-01	FALSE
FALSE	0.0008	0.0057	8.80E-01	TRUE

Supp. Table 6 Smoking behaviour

TRUE	-0.0078	0.0050	1.20E-01	FALSE
FALSE	0.0154	0.0058	7.70E-03	FALSE
TRUE	0.0121	0.0053	2.30E-02	FALSE
TRUE	0.0054	0.0050	2.90E-01	FALSE
FALSE	0.0029	0.0050	5.60E-01	TRUE
FALSE	-0.0011	0.0051	8.30E-01	FALSE
FALSE	0.0002	0.0103	9.80E-01	TRUE
FALSE	0.0050	0.0053	3.40E-01	FALSE
TRUE	-0.0024	0.0050	6.30E-01	FALSE
TRUE	0.0058	0.0050	2.50E-01	TRUE
FALSE	-0.0008	0.0065	9.00E-01	TRUE
FALSE	0.0067	0.0052	2.00E-01	TRUE
FALSE	-0.0083	0.0075	2.70E-01	TRUE
TRUE	0.0027	0.0101	7.90E-01	FALSE
FALSE	0.0086	0.0059	1.40E-01	TRUE
FALSE	-0.0032	0.0062	6.00E-01	FALSE
FALSE	-0.0049	0.0064	4.50E-01	TRUE
TRUE	0.0042	0.0050	4.10E-01	TRUE
TRUE	-0.0087	0.0152	5.70E-01	FALSE
TRUE	-0.0046	0.0054	3.90E-01	FALSE
FALSE	-0.0109	0.0051	3.30E-02	FALSE
TRUE	-0.0024	0.0068	7.20E-01	TRUE
TRUE	-0.0031	0.0059	6.00E-01	TRUE
TRUE	0.0068	0.0050	1.80E-01	FALSE
TRUE	0.0040	0.0052	4.40E-01	TRUE
FALSE	0.0007	0.0050	9.00E-01	TRUE
TRUE	0.0040	0.0050	4.20E-01	FALSE
TRUE	-0.0266	0.0087	2.30E-03	TRUE
FALSE	-0.0007	0.0051	8.90E-01	TRUE
FALSE	0.0018	0.0052	7.20E-01	TRUE
FALSE	-0.0081	0.0054	1.30E-01	TRUE
FALSE	0.0016	0.0051	7.50E-01	FALSE
FALSE	0.0050	0.0050	3.20E-01	TRUE
FALSE	-0.0034	0.0050	5.00E-01	TRUE
FALSE	0.0186	0.0064	3.60E-03	FALSE
FALSE	-0.0074	0.0050	1.40E-01	FALSE
TRUE	-0.0061	0.0055	2.70E-01	TRUE
FALSE	-0.0045	0.0058	4.40E-01	FALSE
TRUE	0.0014	0.0050	7.80E-01	FALSE
TRUE	-0.0066	0.0050	1.90E-01	TRUE
FALSE	0.0005	0.0071	9.50E-01	FALSE
FALSE	-0.0028	0.0054	6.00E-01	TRUE
FALSE	0.0181	0.0071	1.10E-02	FALSE
TRUE	0.0024	0.0052	6.40E-01	TRUE
FALSE	0.0127	0.0079	1.10E-01	TRUE
TRUE	0.0041	0.0069	5.50E-01	FALSE
FALSE	-0.0045	0.0065	4.90E-01	FALSE

Supp. Table 6 Smoking behaviour

FALSE	0.0090	0.0050	7.20E-02	FALSE
FALSE	-0.0008	0.0053	8.90E-01	FALSE
FALSE	-0.0085	0.0051	9.40E-02	FALSE
TRUE	0.0067	0.0054	2.20E-01	TRUE
TRUE	0.0118	0.0055	3.20E-02	FALSE
FALSE	-0.0031	0.0056	5.80E-01	FALSE
FALSE	-0.0088	0.0061	1.50E-01	FALSE
TRUE	0.0000	0.0063	1.00E+00	TRUE
FALSE	-0.0008	0.0053	8.70E-01	FALSE
FALSE	0.0020	0.0054	7.10E-01	FALSE
TRUE	-0.0114	0.0053	3.00E-02	TRUE
FALSE	0.0064	0.0054	2.40E-01	FALSE
FALSE	-0.0059	0.0051	2.50E-01	FALSE
TRUE	-0.0060	0.0064	3.50E-01	FALSE
TRUE	-0.0002	0.0051	9.70E-01	TRUE
TRUE	-0.0277	0.0109	1.10E-02	FALSE
FALSE	0.0020	0.0059	7.30E-01	FALSE
TRUE	-0.0014	0.0053	7.90E-01	TRUE
FALSE	-0.0063	0.0065	3.30E-01	TRUE
FALSE	-0.0996	0.0053	1.30E-79	TRUE
TRUE	-0.0021	0.0050	6.80E-01	FALSE
FALSE	0.0065	0.0064	3.10E-01	FALSE
FALSE	0.0090	0.0051	7.70E-02	TRUE
TRUE	-0.0042	0.0054	4.30E-01	FALSE
TRUE	-0.0118	0.0050	1.80E-02	TRUE
TRUE	0.0112	0.0051	2.70E-02	FALSE
TRUE	0.0013	0.0054	8.00E-01	FALSE
TRUE	0.0025	0.0050	6.20E-01	TRUE
FALSE	0.0020	0.0056	7.20E-01	FALSE
FALSE	0.0133	0.0075	7.70E-02	FALSE
TRUE	-0.0070	0.0058	2.20E-01	TRUE
FALSE	0.0130	0.0061	3.30E-02	FALSE
FALSE	0.0031	0.0061	6.10E-01	FALSE
FALSE	0.0065	0.0050	1.90E-01	FALSE
FALSE	0.0029	0.0057	6.10E-01	FALSE
FALSE	0.0003	0.0057	9.60E-01	TRUE
TRUE	-0.0003	0.0050	9.50E-01	TRUE
TRUE	0.0080	0.0061	1.90E-01	TRUE
FALSE	0.0048	0.0051	3.40E-01	FALSE
TRUE	0.0160	0.0075	3.30E-02	FALSE
FALSE	-0.0320	0.0223	1.50E-01	FALSE
TRUE	-0.0532	0.0053	6.50E-24	TRUE
FALSE	0.0005	0.0052	9.20E-01	FALSE
TRUE	-0.0116	0.0064	7.10E-02	TRUE
FALSE	-0.0015	0.0066	8.20E-01	FALSE
FALSE	-0.0050	0.0051	3.20E-01	TRUE
TRUE	0.0065	0.0057	2.50E-01	TRUE

Supp. Table 6 Smoking behaviour

TRUE	-0.0127	0.0053	1.70E-02	TRUE
TRUE	-0.0049	0.0052	3.40E-01	FALSE
TRUE	0.0072	0.0059	2.20E-01	TRUE
FALSE	0.0082	0.0063	1.90E-01	TRUE
FALSE	-0.0097	0.0052	6.10E-02	FALSE

Supplementary Table 7: Smoking interaction

Signal information						
Trait	SNP	Chr	Pos	Coded	NonCoded	UKB.EverSmk.Beta
FEV1/FVC	rs9661802	1	6678864	A	C	0.027
FEV1/FVC	rs9435733	1	17308254	T	C	0.038
FEV1	rs12737805	1	22612690	A	G	0.012
FVC	rs9438626	1	26775367	G	C	-0.014
FEV1	rs12096239	1	26796922	G	C	0.022
FEV1/FVC	rs755249	1	39995074	T	C	-0.027
FEV1/FVC	rs1416685	1	51243374	G	C	-0.021
FEV1/FVC	rs72673461	1	60966772	T	G	0.048
FEV1/FVC	rs9661687	1	78387270	C	T	0.028
FEV1/FVC	rs1192415	1	92077097	G	A	-0.044
FEV1/FVC	rs10874851	1	92106637	A	C	-0.012
FEV1/FVC	rs11165787	1	92381483	A	G	0.027
FEV1/FVC	rs9970286	1	111737398	G	A	-0.021
FVC	rs35043843	1	118911295	T	G	-0.026
PEF	rs11205354	1	150249101	C	A	-0.014
FVC	rs878471	1	150547747	G	A	0.024
FEV1/FVC	rs141942982	1	155137395	G	T	0.025
FEV1	rs4651005	1	178719306	C	T	-0.015
FVC	rs2146098	1	186090370	A	G	-0.016
FEV1/FVC	rs17531405	1	186113852	G	C	-0.030
FEV1/FVC	rs10919604	1	198898157	A	G	0.015
FVC	rs2816992	1	200069216	A	G	-0.017
FEV1/FVC	rs4309038	1	201884647	G	C	-0.018
PEF	rs1008833	1	204426295	A	G	-0.023
FVC	rs556648	1	215120596	A	G	0.016
FEV1/FVC	rs2799098	1	218521609	G	A	0.035
PEF	rs6604614	1	218631452	C	G	-0.018
FEV1	rs28613267	1	218855029	C	G	0.016
FEV1/FVC	rs75128958	1	219483218	G	A	0.052
FEV1/FVC	rs1338227	1	219853742	G	T	-0.025
FVC	rs17009288	1	221204299	A	C	-0.026
FVC	rs12757436	1	221631938	A	G	0.025
PEF	rs2355237	1	239857524	A	G	0.029
FEV1/FVC	rs2544536	2	15906854	T	C	-0.019
FEV1/FVC	rs55884799	2	18287623	T	C	-0.037
FVC	rs6751968	2	18570024	C	A	-0.023
FVC	rs13430465	2	18702313	C	T	-0.040
FVC	rs13009582	2	24018480	G	A	-0.021
FVC	rs732990	2	26842146	C	G	-0.013
FVC	rs4952564	2	42243850	A	G	-0.017
FVC	rs3791679	2	56096892	A	G	0.038
FEV1/FVC	rs12470864	2	102926362	G	A	0.016
FVC	rs62168891	2	135672187	C	T	-0.020
FEV1/FVC	rs1406225	2	145797829	G	T	0.025
FEV1	rs72902177	2	157016257	C	T	0.032

FEV1	rs7424771	2	161276378	G	A	0.019
FEV1	rs2304340	2	179260382	A	G	-0.017
FEV1/FVC	rs2084448	2	187530520	T	C	0.017
FVC	rs1249096	2	199723365	G	A	-0.021
FEV1/FVC	rs985256	2	201208692	A	C	0.018
FVC	rs12997625	2	202970250	C	T	0.017
FEV1/FVC	rs6435952	2	217614730	A	T	0.018
FEV1	rs4294980	2	218604356	G	A	-0.013
FEV1	rs2571445	2	218683154	A	G	-0.030
FVC	rs4674407	2	220382700	C	T	0.007
FEV1/FVC	rs62201738	2	229502197	A	C	-0.081
FEV1	rs6710301	2	239441308	A	C	0.028
FVC	rs6431620	2	239604970	T	G	0.023
FEV1/FVC	rs4308141	2	239881309	C	G	-0.055
FVC	rs6437219	2	241844033	C	T	-0.017
FVC	rs6733504	2	242495953	A	G	0.021
FEV1	rs2974389	3	13787641	A	G	0.012
FVC	rs73048404	3	25179533	T	G	0.012
FEV1/FVC	rs1529672	3	25520582	C	A	-0.044
FEV1/FVC	rs17666332	3	29469675	T	G	0.034
FEV1/FVC	rs12715478	3	55152319	A	G	0.029
FEV1	rs6445932	3	57879611	T	G	-0.030
FEV1	rs4132748	3	67455803	T	C	-0.019
FVC	rs35480566	3	71583177	A	G	-0.025
FEV1/FVC	rs586936	3	73862616	G	A	0.013
FVC	rs12497779	3	98822050	G	T	0.036
FVC	rs1610265	3	99420192	C	T	0.047
FEV1/FVC	rs2999090	3	127931340	A	G	-0.042
FVC	rs12634907	3	158226886	A	G	0.026
FEV1/FVC	rs1799807	3	165548529	T	C	0.051
FEV1	rs879394	3	168709843	G	T	0.030
FEV1	rs78101726	3	169295436	A	G	0.031
FEV1	rs6780171	3	185503456	T	A	0.015
FEV1/FVC	rs62289340	4	7879027	C	T	-0.013
FEV1	rs12331869	4	56012149	A	G	-0.012
FEV1/FVC	rs62316310	4	75676529	G	A	-0.025
FEV1/FVC	rs11098196	4	79403952	G	T	0.015
FEV1/FVC	rs2609279	4	89855495	T	C	0.063
FEV1/FVC	rs2869966	4	89869078	T	C	-0.047
FEV1/FVC	rs6533183	4	106133184	T	C	-0.030
FEV1	rs11722225	4	106766430	T	C	-0.065
FEV1/FVC	rs34712979	4	106819053	G	A	0.070
FVC	rs13109426	4	145330628	G	A	0.024
PEF	rs13116999	4	145442364	G	A	-0.063
FEV1/FVC	rs13141641	4	145506456	T	C	-0.074
PEF	rs2353940	4	145740898	T	C	0.036
FEV1	rs11739847	5	609661	G	A	0.022
FVC	rs268717	5	33352738	T	C	-0.036
FEV1	rs4866846	5	43976162	A	G	0.028
FVC	rs6859730	5	44367221	A	T	0.017

FEV1/FVC	rs12522114	5	52187038	A	C	-0.038
FVC	rs2441026	5	53444498	C	T	-0.018
FVC	rs425102	5	77396400	T	G	0.020
FEV1/FVC	rs987068	5	95025146	G	C	0.032
FEV1/FVC	rs10059661	5	121410529	C	G	-0.026
FEV1/FVC	rs17163397	5	128767384	A	G	-0.034
FVC	rs3843503	5	131466629	T	A	0.020
FEV1/FVC	rs7733410	5	147856522	G	A	-0.058
FEV1	rs1800888	5	148206885	C	T	0.095
FEV1	rs11952673	5	148652302	T	G	-0.025
FEV1/FVC	rs11134766	5	156908317	T	C	-0.068
FEV1/FVC	rs11134789	5	156944199	C	A	0.035
FEV1/FVC	rs10059996	5	170901463	T	G	-0.029
FEV1/FVC	rs79898473	5	179598771	T	C	-0.033
FEV1/FVC	rs1294417	6	6741932	T	C	-0.028
FEV1/FVC	rs2076295	6	7563232	T	G	-0.021
FVC	rs12198986	6	7720059	G	A	0.025
FVC	rs10498672	6	7797840	C	G	0.032
FEV1/FVC	rs13198081	6	22017543	G	C	-0.028
PEF	rs7752448	6	28301099	A	G	0.055
FEV1/FVC	rs2070600	6	32151443	T	C	0.141
FEV1/FVC	rs9274247	6	32631295	A	G	-0.044
FVC	rs9689096	6	34188892	A	C	-0.037
FVC	rs9357446	6	44447598	G	A	0.012
FEV1/FVC	rs12202314	6	45530471	T	C	-0.017
FVC	rs9472541	6	45622748	T	A	0.015
FEV1	rs2894837	6	56336406	A	G	0.018
FEV1/FVC	rs13206405	6	73663814	C	A	-0.035
FEV1/FVC	rs2798641	6	109268050	C	T	0.042
FVC	rs6918725	6	126990392	T	G	-0.019
FEV1	rs2627237	6	134339265	A	G	0.013
FEV1	rs1102077	6	140271357	A	C	0.011
FEV1	rs9385988	6	142560957	A	G	-0.031
FEV1/FVC	rs17280293	6	142688969	A	G	-0.175
FEV1/FVC	rs7753012	6	142745883	T	G	-0.074
FEV1/FVC	rs4318980	7	7256490	A	G	-0.019
FVC	rs4721442	7	15506007	T	G	0.020
FEV1/FVC	rs4721457	7	15872324	T	C	0.018
FEV1	rs559233	7	26848830	T	C	0.015
FVC	rs62454414	7	27182329	T	G	0.016
FEV1	rs1513272	7	28200097	C	T	-0.018
FVC	rs17232687	7	46448518	T	C	-0.020
FEV1	rs12707691	7	84569510	C	G	-0.016
FEV1/FVC	rs2261360	7	99692993	T	G	0.023
FEV1/FVC	rs193686	7	116431427	C	T	0.012
FEV1	rs12698403	7	156127246	G	A	0.023
FEV1/FVC	rs330939	8	9018590	T	G	0.023
FEV1	rs4128298	8	11823332	T	C	-0.018
FEV1	rs7465401	8	70367248	T	C	-0.019
FVC	rs7838717	8	145504343	T	C	-0.022

FVC	rs771662	9	1568941	T	C	-0.019
FEV1/FVC	rs1570203	9	4120648	G	A	-0.026
FEV1	rs7041139	9	18013733	C	T	0.017
FEV1/FVC	rs1107677	9	23587027	T	C	0.026
FEV1/FVC	rs28446321	9	98266855	T	A	0.059
FEV1/FVC	rs72743974	9	98878881	A	G	-0.024
FEV1/FVC	rs57649467	9	101632854	G	A	-0.019
FEV1/FVC	rs1491106	9	109483517	T	G	0.025
FEV1/FVC	rs10983184	9	119234058	C	T	-0.023
FEV1	rs967497	9	131943843	A	G	0.018
FVC	rs7024579	9	139100413	C	T	0.023
FVC	rs4073153	9	139259349	A	G	0.016
FEV1/FVC	rs7090277	10	12278021	T	A	-0.036
PEF	rs7914842	10	30268770	A	G	0.016
FEV1/FVC	rs1274475	10	34480582	G	A	-0.020
FEV1	rs7082066	10	64998971	A	G	0.023
FVC	rs10998018	10	69962954	A	G	-0.018
FEV1	rs7098573	10	75580014	G	A	0.023
PEF	rs60820984	10	75639578	C	T	0.023
FVC	rs1259605	10	77119039	T	C	-0.012
FEV1	rs2637254	10	78312002	G	A	0.031
FEV1/FVC	rs721917	10	81706324	A	G	0.021
FEV1	rs11191841	10	105639611	T	C	-0.009
FEV1/FVC	rs4279944	10	124297637	T	C	0.027
FEV1/FVC	rs10836366	11	35308988	T	C	0.019
FVC	rs17596617	11	43690717	C	T	0.021
FEV1	rs10838435	11	45244903	C	G	0.017
FEV1	rs71490394	11	62370155	G	A	-0.030
FEV1/FVC	rs2027761	11	73036179	C	T	-0.038
FEV1/FVC	rs11234768	11	86448839	T	C	0.028
FEV1/FVC	rs541601	11	126009500	T	C	-0.020
FVC	rs56196860	12	2908330	C	A	0.038
FEV1	rs12811814	12	4243749	T	C	0.010
FEV1/FVC	rs10841302	12	19808912	G	C	-0.014
FVC	rs7977418	12	28588242	T	C	0.037
FEV1	rs1689510	12	56396768	C	G	-0.012
FEV1/FVC	rs11172113	12	57527283	T	C	-0.023
FEV1/FVC	rs1244869	12	65075332	T	G	0.016
FEV1	rs12825748	12	65793153	G	C	-0.018
FEV1	rs11176001	12	66409367	C	A	0.030
PEF	rs56390486	12	85719906	A	G	0.017
FVC	rs9788269	12	94194890	A	G	-0.021
FEV1/FVC	rs113745635	12	95554771	T	C	-0.030
FEV1/FVC	rs7970544	12	96242109	T	G	0.043
PEF	rs972936	12	102824921	T	C	0.025
FEV1	rs2701110	12	114669870	C	A	-0.025
FEV1	rs10850377	12	115201436	G	A	-0.019
FVC	rs35505	12	115501127	A	G	0.017
FEV1/FVC	rs9533803	13	44820608	C	T	0.025
FEV1	rs2812208	13	50707087	G	C	-0.065

FVC	rs803765	13	71647588	C	A	0.024
FEV1	rs4885681	13	80467235	C	T	-0.021
FEV1/FVC	rs11620380	13	99665512	C	A	0.034
FEV1/FVC	rs9634470	13	109918493	T	C	-0.025
FEV1/FVC	rs1951121	14	23429729	T	G	0.021
FEV1/FVC	rs74053129	14	54346010	G	A	-0.043
FEV1/FVC	rs35107139	14	54419106	A	C	0.030
FVC	rs10141786	14	74817418	A	G	0.025
FEV1/FVC	rs1756281	14	84338431	A	G	0.030
FEV1	rs11160037	14	92512143	A	G	-0.015
FVC	rs11621587	14	93098339	G	C	-0.030
FVC	rs34245505	15	40397191	C	G	0.015
FEV1	rs2304645	15	40716253	G	C	0.015
FVC	rs4924525	15	41255396	C	A	0.018
FEV1/FVC	rs2012453	15	41840238	A	G	0.025
FEV1/FVC	rs56383987	15	41953211	T	C	-0.042
FEV1/FVC	rs79234094	15	49409527	G	A	-0.020
FEV1/FVC	rs35251997	15	49706145	A	T	-0.040
FEV1/FVC	rs62012772	15	63866877	T	C	-0.015
FVC	rs12917612	15	67491274	C	A	0.023
FEV1/FVC	rs1441358	15	71612514	T	G	0.067
FEV1	rs62015883	15	71803450	C	T	0.020
FEV1/FVC	rs7176074	15	73833600	G	T	-0.025
FEV1/FVC	rs1896797	15	84274591	G	A	-0.029
FVC	rs3751837	16	3583173	C	T	0.028
FEV1/FVC	rs56104880	16	4361138	T	C	0.025
FVC	rs11074547	16	10136889	T	G	-0.019
FEV1/FVC	rs78442819	16	10740982	G	C	0.030
FEV1	rs12446589	16	28870962	A	G	-0.015
FVC	rs76219171	16	50188929	G	A	0.038
FEV1/FVC	rs35420030	16	53935407	T	C	-0.041
FEV1/FVC	rs11648508	16	58063513	G	T	-0.041
FEV1	rs8047194	16	69891510	G	T	0.022
FEV1/FVC	rs11858992	16	75411445	A	C	0.037
FEV1	rs2345443	16	78225633	A	G	0.022
FEV1/FVC	rs12918140	16	86403821	G	C	0.026
FEV1	rs6539952	16	86579223	C	A	0.015
FEV1/FVC	rs8082036	17	3882613	G	C	-0.027
FEV1	rs4796334	17	6469793	G	A	0.018
FVC	rs1215	17	7163350	A	G	0.014
FEV1	rs4968200	17	7448457	C	G	-0.023
FVC	rs34351630	17	16030520	T	C	0.007
FEV1/FVC	rs2244592	17	28072327	A	G	-0.033
FVC	rs62070648	17	29210595	A	G	0.029
FEV1/FVC	rs35246838	17	36915540	T	C	0.043
FVC	rs8069451	17	37504933	T	C	0.019
FEV1	rs79412431	17	43940021	G	A	0.043
FVC	rs12945803	17	46552229	T	C	0.018
FVC	rs28519449	17	54195453	C	T	-0.014
FEV1/FVC	rs8068952	17	59286644	G	C	0.035

FVC	rs77672322	17	62497964	C	T	0.037
FEV1/FVC	rs11653958	17	62686730	G	A	-0.013
FVC	rs6501431	17	68976415	T	C	0.021
FEV1	rs6501455	17	69201811	A	G	0.024
FEV1/FVC	rs996865	17	69371318	C	T	0.043
FEV1	rs9892893	17	73525670	T	G	0.017
FVC	rs59606152	17	79952944	C	T	-0.029
FEV1	rs513953	18	8801351	A	G	-0.021
FEV1/FVC	rs8089099	18	10078071	G	A	-0.022
FEV1/FVC	rs1985511	18	19816712	A	T	0.013
FEV1	rs11082051	18	20234336	A	G	0.010
FEV1	rs9947743	18	20708321	A	G	-0.022
FVC	rs303752	18	21074255	G	A	0.019
FVC	rs1668091	18	22290711	T	C	-0.016
FEV1	rs9807668	18	42827898	C	T	-0.033
FVC	rs12607758	18	51022606	T	C	0.012
FVC	rs2202572	18	53566471	A	C	0.015
FEV1	rs11085744	19	10819967	C	T	0.016
FEV1/FVC	rs9636166	19	31829613	A	C	0.035
FVC	rs2967516	19	36881643	A	G	-0.011
FEV1/FVC	rs34093919	19	41117300	G	A	-0.157
FVC	rs2145272	20	6626218	A	G	0.032
FEV1	rs6032942	20	10745545	G	C	-0.015
FEV1	rs2236180	20	25282608	T	C	0.029
FEV1/FVC	rs4413223	20	30858967	A	G	-0.027
FVC	rs143384	20	34025756	A	G	0.022
FVC	rs12481092	20	45486817	C	T	-0.027
FVC	rs4809221	20	62372706	G	A	0.030
FEV1/FVC	rs12627254	21	35368402	G	T	-0.030
FEV1/FVC	rs62213732	21	35675966	C	T	-0.017
FEV1	rs1978968	22	18448113	C	T	-0.024
FEV1	rs9610955	22	20790723	C	G	-0.012
FEV1/FVC	rs2283847	22	28181399	T	C	-0.026
FEV1	rs113111175	22	50867711	C	T	-0.018

UK Biobank Ever / Never Smoking

UKB.EverSmk.SE	UKB.EverSmk.P	UKB.NeverSmk.Beta	UKB.NeverSmk.SE
0.004	1.16E-11	0.024	0.004
0.004	1.10E-24	0.037	0.003
0.005	1.05E-02	0.027	0.004
0.005	1.91E-03	-0.018	0.004
0.004	4.08E-07	0.015	0.004
0.004	1.56E-09	-0.022	0.004
0.004	5.53E-08	-0.021	0.004
0.009	2.52E-08	0.065	0.008
0.005	4.03E-07	0.025	0.005
0.005	2.53E-20	-0.049	0.004
0.004	1.17E-03	-0.018	0.003
0.004	4.08E-11	0.028	0.004
0.004	2.05E-07	-0.027	0.004
0.004	1.63E-09	-0.024	0.004
0.004	1.98E-04	-0.017	0.004
0.004	3.00E-10	0.031	0.004
0.006	3.87E-05	0.052	0.006
0.004	1.60E-04	-0.023	0.004
0.004	3.05E-05	-0.018	0.004
0.005	4.11E-10	-0.032	0.005
0.004	5.00E-05	0.021	0.004
0.004	5.92E-06	-0.017	0.004
0.004	2.23E-06	-0.012	0.004
0.005	1.10E-05	-0.040	0.005
0.005	4.75E-04	0.016	0.004
0.005	3.54E-13	0.021	0.005
0.004	1.40E-05	-0.017	0.004
0.004	2.42E-05	0.019	0.003
0.007	1.63E-13	0.037	0.007
0.004	2.60E-11	-0.027	0.004
0.004	2.45E-10	-0.026	0.004
0.004	2.09E-10	0.013	0.004
0.004	1.20E-14	0.029	0.003
0.004	3.70E-07	-0.028	0.003
0.005	7.62E-14	-0.047	0.005
0.005	4.44E-06	-0.025	0.005
0.007	1.17E-08	-0.037	0.006
0.004	1.19E-08	-0.012	0.003
0.004	9.00E-04	-0.013	0.004
0.004	3.78E-05	-0.018	0.004
0.004	2.61E-17	0.031	0.004
0.004	3.82E-05	0.025	0.004
0.004	2.01E-07	-0.014	0.004
0.004	1.56E-09	0.012	0.004
0.005	4.23E-09	0.036	0.005

0.004	3.47E-07	0.015	0.003
0.004	4.66E-06	-0.008	0.004
0.004	2.66E-05	0.019	0.004
0.004	3.07E-08	-0.022	0.004
0.005	7.52E-05	0.017	0.004
0.004	5.05E-06	0.010	0.003
0.005	5.46E-04	0.032	0.005
0.005	5.40E-03	-0.018	0.004
0.004	7.57E-16	-0.026	0.004
0.004	7.68E-02	0.017	0.004
0.007	4.69E-32	-0.089	0.006
0.005	7.10E-08	0.027	0.005
0.005	4.41E-07	0.013	0.004
0.005	3.20E-32	-0.047	0.004
0.004	1.34E-05	-0.019	0.004
0.004	2.13E-08	0.019	0.003
0.004	1.01E-03	0.014	0.004
0.005	2.14E-02	0.021	0.005
0.005	1.35E-18	-0.044	0.005
0.004	6.98E-16	0.025	0.004
0.004	1.21E-14	0.026	0.004
0.004	1.67E-12	-0.024	0.004
0.004	2.54E-06	-0.020	0.004
0.004	3.69E-11	-0.021	0.004
0.004	6.15E-04	0.022	0.004
0.004	5.11E-16	0.029	0.004
0.007	2.17E-11	0.032	0.007
0.006	4.23E-13	-0.050	0.005
0.004	2.06E-11	0.027	0.004
0.013	1.43E-04	0.054	0.013
0.004	5.30E-12	0.024	0.004
0.005	3.20E-09	0.033	0.005
0.004	1.62E-04	0.018	0.004
0.004	5.80E-04	-0.019	0.004
0.005	1.27E-02	-0.017	0.005
0.004	7.26E-09	-0.035	0.004
0.004	3.46E-05	0.024	0.003
0.005	3.06E-43	0.045	0.004
0.004	4.47E-35	-0.040	0.004
0.004	1.41E-14	-0.037	0.004
0.007	1.45E-18	-0.077	0.007
0.004	6.46E-61	0.075	0.004
0.004	3.86E-10	0.022	0.004
0.004	2.01E-64	-0.072	0.003
0.004	1.06E-83	-0.076	0.004
0.004	1.93E-17	0.045	0.004
0.005	1.73E-06	0.017	0.004
0.006	1.85E-08	-0.031	0.006
0.005	1.26E-07	0.026	0.005
0.004	1.52E-05	0.024	0.004

0.004	1.10E-19	-0.044	0.004
0.004	1.53E-06	-0.018	0.003
0.004	3.46E-06	0.023	0.004
0.004	4.58E-16	0.031	0.004
0.005	1.67E-07	-0.039	0.005
0.006	2.54E-09	-0.030	0.005
0.004	1.60E-07	0.018	0.004
0.004	5.18E-54	-0.050	0.003
0.015	3.41E-10	0.075	0.014
0.004	1.06E-10	-0.019	0.004
0.008	8.36E-19	-0.070	0.007
0.004	3.34E-19	0.052	0.004
0.004	2.43E-13	-0.041	0.004
0.004	5.12E-17	-0.033	0.004
0.004	1.75E-13	-0.038	0.003
0.004	1.60E-08	-0.025	0.003
0.004	3.65E-11	0.024	0.003
0.005	7.02E-11	0.037	0.005
0.004	1.71E-12	-0.037	0.004
0.006	7.32E-23	0.064	0.005
0.008	2.27E-76	0.161	0.007
0.004	7.06E-24	-0.053	0.004
0.008	1.94E-06	-0.033	0.007
0.004	1.37E-03	0.013	0.003
0.004	3.42E-05	-0.024	0.004
0.004	2.87E-04	0.012	0.004
0.004	5.94E-06	0.016	0.004
0.005	6.74E-14	-0.041	0.004
0.005	4.28E-18	0.055	0.004
0.004	6.83E-07	-0.021	0.003
0.004	3.97E-04	0.013	0.004
0.004	1.22E-02	0.030	0.004
0.004	4.21E-14	-0.026	0.004
0.011	3.23E-53	-0.197	0.010
0.004	4.44E-75	-0.082	0.004
0.004	5.54E-07	-0.019	0.004
0.005	7.28E-05	0.022	0.005
0.005	6.28E-04	0.022	0.005
0.004	9.56E-05	0.015	0.003
0.006	3.74E-03	0.019	0.005
0.004	1.86E-06	-0.023	0.003
0.004	9.89E-08	-0.017	0.003
0.004	5.60E-05	-0.026	0.004
0.004	2.54E-07	0.027	0.004
0.004	3.86E-03	0.023	0.004
0.004	3.67E-10	0.029	0.003
0.004	4.05E-09	0.028	0.004
0.004	1.03E-05	-0.016	0.004
0.004	4.45E-06	-0.020	0.004
0.004	1.34E-08	-0.020	0.004

0.004	7.91E-07	-0.015	0.004
0.004	3.06E-12	-0.026	0.004
0.004	3.10E-05	0.019	0.004
0.004	2.86E-12	0.024	0.003
0.007	1.38E-19	0.050	0.006
0.005	2.06E-06	-0.019	0.005
0.004	9.22E-07	-0.014	0.004
0.004	5.38E-11	0.030	0.004
0.004	5.54E-09	-0.030	0.004
0.004	7.05E-06	0.008	0.004
0.004	7.08E-09	0.021	0.004
0.004	1.84E-05	0.014	0.004
0.004	1.15E-22	-0.047	0.003
0.004	3.28E-05	0.019	0.004
0.004	1.56E-07	-0.014	0.004
0.005	9.83E-07	0.021	0.004
0.004	1.01E-06	-0.027	0.003
0.004	1.29E-08	0.025	0.004
0.005	2.54E-06	0.018	0.004
0.004	6.10E-03	-0.015	0.004
0.004	3.36E-17	0.027	0.003
0.004	2.48E-08	0.020	0.004
0.004	1.64E-02	-0.020	0.003
0.005	4.22E-07	0.018	0.005
0.004	1.05E-05	0.015	0.004
0.004	1.74E-07	0.012	0.004
0.005	1.02E-03	0.022	0.005
0.004	6.94E-15	-0.026	0.004
0.006	6.22E-11	-0.036	0.005
0.005	8.76E-08	0.033	0.005
0.005	2.78E-05	-0.028	0.004
0.011	4.38E-04	0.063	0.010
0.004	9.36E-03	0.018	0.004
0.004	1.21E-04	-0.018	0.004
0.004	3.34E-23	0.036	0.003
0.004	1.68E-03	-0.020	0.004
0.004	8.25E-10	-0.023	0.004
0.004	5.76E-05	0.012	0.004
0.004	1.06E-05	-0.020	0.004
0.006	7.61E-08	0.025	0.005
0.004	5.04E-05	0.024	0.004
0.004	1.09E-06	-0.011	0.004
0.005	4.82E-11	-0.030	0.004
0.005	8.90E-20	0.048	0.004
0.004	6.28E-09	0.033	0.004
0.005	2.72E-07	-0.026	0.005
0.004	6.52E-07	-0.012	0.004
0.004	1.72E-05	0.027	0.004
0.005	6.68E-08	0.027	0.004
0.013	6.94E-07	-0.056	0.012

0.004	8.02E-10	0.028	0.004
0.004	4.15E-07	-0.016	0.004
0.006	3.68E-08	0.022	0.006
0.004	2.94E-09	-0.017	0.004
0.004	2.42E-08	0.016	0.004
0.006	1.85E-11	-0.036	0.006
0.004	3.38E-14	0.035	0.004
0.004	1.01E-10	0.022	0.004
0.004	1.51E-13	0.026	0.004
0.004	8.24E-05	-0.017	0.004
0.005	4.67E-10	-0.038	0.004
0.005	1.29E-03	0.026	0.004
0.004	5.99E-05	0.014	0.003
0.004	1.75E-06	0.018	0.003
0.004	4.21E-11	0.024	0.004
0.008	2.07E-07	-0.037	0.008
0.004	1.90E-06	-0.031	0.004
0.007	3.47E-08	-0.066	0.007
0.005	1.90E-03	-0.034	0.005
0.004	1.44E-07	0.022	0.004
0.004	3.98E-66	0.072	0.004
0.005	5.44E-05	0.017	0.005
0.009	4.04E-03	-0.039	0.008
0.004	1.38E-14	-0.030	0.003
0.005	1.18E-09	0.037	0.004
0.004	9.70E-10	0.019	0.004
0.004	6.80E-06	-0.009	0.004
0.005	2.18E-10	0.036	0.004
0.004	9.00E-05	-0.012	0.004
0.008	2.14E-06	0.032	0.007
0.008	7.28E-07	-0.036	0.008
0.004	5.91E-25	-0.033	0.004
0.004	4.87E-09	0.020	0.003
0.004	5.81E-23	0.044	0.004
0.004	2.08E-08	0.021	0.004
0.006	5.59E-06	0.019	0.005
0.004	3.34E-04	0.017	0.004
0.004	6.97E-13	-0.023	0.003
0.004	1.37E-06	0.008	0.003
0.005	8.10E-03	0.022	0.005
0.005	1.02E-05	-0.014	0.005
0.004	6.81E-02	0.017	0.003
0.004	1.59E-18	-0.035	0.003
0.004	3.70E-12	0.022	0.004
0.006	1.70E-14	0.037	0.005
0.004	1.44E-05	0.019	0.004
0.005	9.21E-22	0.045	0.004
0.005	5.64E-05	0.019	0.004
0.004	1.55E-04	-0.027	0.004
0.005	4.20E-15	0.025	0.004

0.012	1.22E-03	0.039	0.011
0.004	1.61E-03	-0.022	0.004
0.005	3.15E-06	0.009	0.004
0.004	7.78E-11	0.036	0.003
0.007	6.92E-10	0.055	0.007
0.004	4.13E-05	0.026	0.004
0.006	2.76E-06	-0.040	0.006
0.004	7.41E-07	-0.036	0.004
0.004	9.10E-08	-0.025	0.004
0.004	4.17E-04	0.013	0.004
0.004	5.25E-03	0.018	0.003
0.005	1.50E-06	-0.024	0.004
0.004	6.71E-07	0.014	0.004
0.004	4.91E-05	-0.018	0.004
0.006	1.72E-07	-0.025	0.006
0.004	1.39E-03	0.019	0.004
0.004	1.48E-04	0.012	0.004
0.004	1.74E-05	0.011	0.004
0.006	4.14E-10	0.045	0.005
0.004	8.86E-03	-0.016	0.004
0.017	1.37E-20	-0.157	0.016
0.004	3.59E-16	0.029	0.004
0.004	7.34E-04	-0.016	0.004
0.005	1.42E-09	0.011	0.004
0.005	5.73E-08	-0.018	0.005
0.004	3.51E-09	0.029	0.004
0.004	2.41E-10	-0.030	0.004
0.004	1.25E-13	0.032	0.004
0.006	4.23E-08	-0.042	0.005
0.004	6.64E-06	-0.030	0.004
0.004	4.72E-08	-0.033	0.004
0.005	9.18E-03	-0.022	0.004
0.004	7.85E-12	-0.020	0.004
0.006	2.03E-03	-0.021	0.005

	SpiroMeta Ever / Ne		
UKB.NeverSmk.P	SpM.EverSmk.Beta	SpM.EverSmk.SE	SpM.EverSmk.P
4.80E-11	0.015	0.008	6.05E-02
6.19E-27	0.043	0.008	1.49E-08
1.33E-10	0.014	0.009	1.14E-01
2.57E-05	-0.022	0.009	1.58E-02
1.29E-04	0.020	0.009	1.62E-02
7.47E-08	-0.030	0.009	5.65E-04
1.45E-09	-0.012	0.008	1.29E-01
2.63E-16	0.030	0.019	1.06E-01
1.15E-06	0.031	0.011	6.75E-03
7.49E-29	-0.028	0.010	6.39E-03
2.89E-07	-0.020	0.008	1.07E-02
4.15E-14	0.003	0.009	7.04E-01
3.10E-13	-0.029	0.008	5.46E-04
1.48E-09	-0.014	0.009	1.40E-01
8.53E-07	-0.033	0.013	1.02E-02
2.87E-18	0.036	0.008	8.96E-06
2.99E-20	0.016	0.013	2.26E-01
9.54E-10	-0.017	0.008	4.82E-02
7.34E-07	-0.007	0.008	3.93E-01
2.53E-12	-0.033	0.010	1.57E-03
3.40E-09	0.021	0.008	9.73E-03
1.49E-06	-0.013	0.008	1.21E-01
5.36E-04	-0.019	0.008	1.68E-02
1.41E-15	-0.036	0.018	4.19E-02
1.43E-04	0.017	0.010	9.05E-02
2.28E-06	0.022	0.011	3.30E-02
7.93E-06	0.001	0.014	9.63E-01
4.56E-08	0.012	0.008	1.41E-01
1.52E-08	0.046	0.015	1.64E-03
4.86E-14	-0.021	0.008	7.48E-03
6.79E-12	-0.027	0.009	2.37E-03
3.36E-04	0.012	0.008	1.47E-01
4.72E-17	0.033	0.013	8.95E-03
1.64E-15	-0.015	0.007	4.43E-02
1.12E-24	-0.029	0.010	3.61E-03
2.10E-08	-0.037	0.010	1.44E-04
1.22E-08	-0.036	0.014	9.28E-03
4.48E-04	-0.021	0.008	5.95E-03
1.78E-04	-0.023	0.008	2.78E-03
1.05E-06	-0.018	0.008	2.99E-02
9.04E-14	0.038	0.009	5.15E-05
2.72E-12	0.012	0.008	1.60E-01
5.96E-05	-0.024	0.008	4.28E-03
1.22E-03	0.025	0.009	3.65E-03
1.08E-12	0.023	0.012	5.25E-02

1.62E-05	0.024	0.008	2.89E-03
2.01E-02	-0.028	0.008	5.51E-04
3.09E-07	0.009	0.009	2.86E-01
5.30E-10	-0.026	0.008	1.31E-03
4.34E-05	0.027	0.009	5.10E-03
4.67E-03	0.030	0.008	1.70E-04
3.73E-11	0.026	0.011	1.86E-02
3.37E-05	-0.024	0.010	1.52E-02
1.61E-13	-0.032	0.008	8.76E-05
9.79E-07	0.008	0.008	3.06E-01
2.58E-43	-0.040	0.015	8.74E-03
4.39E-08	0.010	0.011	3.92E-01
1.98E-03	0.019	0.010	5.46E-02
7.81E-27	-0.064	0.010	6.35E-11
2.30E-07	-0.023	0.009	8.19E-03
4.57E-08	0.024	0.008	3.44E-03
5.46E-05	0.022	0.008	3.42E-03
1.68E-05	0.044	0.011	3.76E-05
5.70E-22	-0.042	0.010	2.48E-05
1.53E-10	0.019	0.008	2.26E-02
1.17E-13	0.006	0.008	4.72E-01
1.37E-09	-0.025	0.009	5.28E-03
9.20E-08	-0.021	0.009	1.60E-02
3.36E-09	-0.019	0.008	1.92E-02
5.65E-10	0.021	0.008	9.63E-03
1.00E-12	0.030	0.009	1.23E-03
1.25E-06	0.050	0.015	1.11E-03
6.33E-21	-0.027	0.012	2.53E-02
1.22E-13	0.017	0.008	4.07E-02
1.99E-05	0.090	0.032	5.16E-03
6.95E-09	0.015	0.009	1.20E-01
9.39E-12	0.038	0.011	6.04E-04
2.50E-06	0.027	0.009	1.52E-03
7.89E-08	-0.028	0.008	1.96E-04
1.82E-04	-0.021	0.010	4.20E-02
1.11E-18	-0.013	0.009	1.73E-01
3.31E-12	0.017	0.008	2.82E-02
1.05E-25	0.040	0.010	2.14E-05
7.21E-30	-0.029	0.008	3.03E-04
1.31E-24	-0.019	0.008	2.42E-02
8.57E-29	-0.097	0.016	2.65E-09
1.68E-79	0.030	0.010	3.56E-03
7.62E-10	0.022	0.008	6.20E-03
6.71E-95	-0.045	0.013	3.32E-04
2.85E-102	-0.053	0.008	5.01E-11
5.29E-29	0.036	0.015	1.44E-02
6.02E-05	0.018	0.009	4.97E-02
2.77E-07	-0.050	0.013	1.20E-04
7.30E-08	0.039	0.011	1.86E-04
6.55E-11	0.028	0.008	4.50E-04

1.38E-28	-0.020	0.009	2.39E-02
1.59E-07	-0.018	0.008	2.58E-02
2.30E-08	0.010	0.009	3.09E-01
2.55E-16	0.019	0.009	3.17E-02
2.55E-17	-0.033	0.011	1.86E-03
1.64E-08	-0.015	0.012	2.12E-01
2.48E-07	0.030	0.008	3.21E-04
8.44E-47	-0.042	0.008	5.79E-07
1.62E-07	0.082	0.036	2.18E-02
1.02E-07	-0.012	0.008	1.38E-01
1.51E-22	-0.053	0.016	7.91E-04
2.94E-45	0.031	0.008	2.02E-04
3.73E-28	-0.030	0.009	9.46E-04
1.77E-18	-0.017	0.009	5.87E-02
3.77E-27	-0.017	0.008	2.43E-02
7.83E-13	-0.021	0.008	6.17E-03
7.73E-12	0.007	0.007	3.19E-01
7.66E-16	0.031	0.010	1.66E-03
7.68E-24	-0.019	0.008	1.29E-02
7.80E-35	0.025	0.020	1.96E-01
8.68E-115	0.125	0.018	4.61E-12
2.19E-38	-0.030	0.012	1.25E-02
6.04E-06	-0.002	0.017	8.83E-01
1.30E-04	0.026	0.007	6.33E-04
8.99E-11	-0.019	0.008	1.83E-02
1.88E-03	0.022	0.008	7.07E-03
8.22E-06	0.021	0.008	1.21E-02
2.12E-21	-0.033	0.010	8.01E-04
2.87E-35	0.023	0.010	2.32E-02
3.33E-09	-0.010	0.008	1.96E-01
1.62E-04	0.028	0.008	6.12E-04
8.93E-14	0.009	0.009	3.24E-01
2.84E-11	-0.031	0.009	4.72E-04
1.47E-78	-0.174	0.027	6.91E-11
2.38E-104	-0.045	0.009	2.12E-07
1.12E-07	-0.017	0.008	2.30E-02
3.62E-06	0.026	0.010	7.41E-03
4.87E-06	0.017	0.010	9.30E-02
3.24E-05	0.024	0.008	1.96E-03
1.75E-04	0.032	0.011	2.95E-03
1.21E-11	-0.030	0.007	5.74E-05
6.64E-07	-0.026	0.008	1.10E-03
6.94E-13	-0.024	0.008	4.32E-03
5.89E-11	0.026	0.009	6.15E-03
5.28E-10	0.017	0.009	4.51E-02
3.14E-17	0.022	0.008	6.96E-03
1.44E-14	0.020	0.008	9.59E-03
3.72E-05	-0.035	0.008	3.41E-05
2.34E-07	-0.032	0.009	3.06E-04
6.87E-08	-0.033	0.008	1.07E-04

2.49E-05	-0.012	0.008	1.32E-01
1.08E-13	-0.011	0.007	1.47E-01
4.48E-07	0.024	0.008	2.48E-03
3.25E-12	0.009	0.008	2.27E-01
2.16E-16	0.039	0.014	4.13E-03
6.59E-05	-0.018	0.010	7.66E-02
8.37E-05	-0.009	0.008	2.69E-01
2.73E-17	0.015	0.008	7.23E-02
1.84E-16	-0.025	0.008	3.09E-03
2.48E-02	0.018	0.009	3.48E-02
4.38E-08	0.016	0.009	6.73E-02
1.03E-04	0.000	0.008	9.91E-01
9.05E-42	-0.033	0.007	6.83E-06
4.07E-08	0.014	0.013	2.65E-01
6.77E-05	-0.012	0.008	1.13E-01
2.04E-06	0.023	0.010	2.29E-02
8.99E-15	-0.017	0.008	3.68E-02
1.94E-10	0.030	0.009	6.34E-04
8.67E-05	0.038	0.016	2.19E-02
2.36E-04	0.001	0.009	8.73E-01
8.49E-15	0.018	0.008	2.79E-02
7.59E-09	0.011	0.008	1.78E-01
1.47E-08	-0.027	0.008	5.83E-04
2.98E-04	-0.007	0.012	5.64E-01
1.42E-04	0.017	0.009	4.40E-02
8.52E-04	0.040	0.008	5.69E-07
8.96E-06	0.029	0.010	4.97E-03
4.08E-13	-0.033	0.008	7.39E-05
4.67E-11	-0.047	0.012	1.51E-04
5.63E-12	0.022	0.011	4.97E-02
2.62E-10	-0.031	0.010	1.90E-03
3.10E-10	0.081	0.027	2.61E-03
1.92E-07	0.022	0.008	5.48E-03
2.58E-07	-0.032	0.007	1.52E-05
1.59E-25	0.035	0.008	3.77E-06
2.49E-08	-0.002	0.008	7.81E-01
3.51E-11	-0.017	0.008	3.86E-02
1.36E-03	0.028	0.008	7.61E-04
9.11E-08	-0.028	0.009	1.19E-03
1.68E-06	0.050	0.012	2.32E-05
2.20E-10	0.018	0.014	1.97E-01
5.65E-03	-0.022	0.009	1.70E-02
1.34E-12	-0.035	0.009	2.40E-04
2.91E-27	0.035	0.010	7.31E-04
5.64E-17	0.041	0.014	4.44E-03
2.61E-08	-0.023	0.011	3.64E-02
8.61E-04	-0.042	0.008	9.02E-07
1.11E-12	0.027	0.009	1.75E-03
1.11E-10	0.026	0.009	4.86E-03
3.73E-06	-0.046	0.025	6.71E-02

8.33E-15	0.013	0.008	9.63E-02
6.28E-05	-0.020	0.009	2.81E-02
1.37E-04	0.045	0.013	5.17E-04
1.10E-05	-0.021	0.009	2.86E-02
4.97E-06	0.023	0.008	2.82E-03
1.64E-09	-0.040	0.013	1.50E-03
2.43E-21	0.012	0.008	1.30E-01
1.29E-09	0.010	0.008	2.15E-01
1.47E-11	0.002	0.009	7.75E-01
2.34E-06	-0.035	0.008	1.49E-05
1.05E-17	-0.049	0.011	2.87E-06
5.68E-09	0.013	0.010	1.77E-01
2.95E-05	0.025	0.007	6.19E-04
4.43E-07	0.021	0.008	6.60E-03
1.28E-11	0.010	0.008	1.66E-01
1.40E-06	-0.028	0.018	1.28E-01
9.88E-15	-0.021	0.008	1.37E-02
4.75E-22	-0.044	0.015	2.81E-03
1.12E-13	-0.034	0.010	4.53E-04
1.30E-07	0.016	0.009	7.54E-02
1.24E-85	0.041	0.008	1.62E-07
1.40E-04	0.017	0.010	8.31E-02
1.97E-06	-0.030	0.017	7.36E-02
1.66E-18	-0.025	0.008	1.64E-03
6.29E-19	0.022	0.009	1.37E-02
9.23E-07	0.024	0.009	5.72E-03
1.99E-02	-0.027	0.009	1.39E-03
6.32E-16	0.035	0.010	4.09E-04
5.06E-04	-0.006	0.008	4.07E-01
1.25E-05	0.055	0.017	1.37E-03
3.69E-06	-0.080	0.017	4.19E-06
9.13E-19	-0.021	0.008	7.46E-03
1.23E-08	0.020	0.008	1.14E-02
4.02E-36	0.035	0.008	1.51E-05
2.79E-08	0.018	0.009	3.80E-02
3.99E-04	0.022	0.013	8.25E-02
2.32E-05	0.029	0.009	1.30E-03
5.65E-11	-0.019	0.007	1.22E-02
1.77E-02	0.031	0.008	3.59E-05
8.16E-06	0.028	0.011	9.74E-03
4.18E-03	-0.028	0.011	9.63E-03
1.07E-06	0.031	0.008	6.35E-05
4.58E-24	-0.023	0.008	2.15E-03
2.50E-08	0.009	0.009	2.91E-01
1.77E-12	0.030	0.011	8.45E-03
3.54E-06	0.017	0.009	5.77E-02
2.32E-27	0.017	0.011	1.18E-01
8.27E-06	0.014	0.009	1.12E-01
4.05E-14	-0.020	0.008	8.06E-03
1.71E-09	0.015	0.010	1.20E-01

2.85E-04	0.051	0.034	1.34E-01
2.73E-08	-0.020	0.010	3.66E-02
3.04E-02	0.035	0.010	3.62E-04
2.13E-25	0.027	0.008	8.39E-04
1.20E-16	0.011	0.016	4.67E-01
3.92E-11	0.006	0.009	5.41E-01
1.75E-12	-0.029	0.016	7.03E-02
6.69E-20	-0.017	0.009	4.54E-02
8.46E-11	-0.027	0.008	1.22E-03
1.62E-04	0.022	0.008	3.05E-03
2.01E-07	0.008	0.007	2.98E-01
2.39E-08	-0.008	0.009	3.69E-01
1.56E-04	0.021	0.008	7.28E-03
9.41E-07	-0.015	0.008	6.32E-02
2.50E-05	-0.026	0.013	4.54E-02
9.17E-08	0.016	0.008	4.20E-02
1.40E-03	0.023	0.008	4.37E-03
1.63E-03	0.023	0.008	2.65E-03
1.33E-17	0.017	0.011	1.45E-01
3.84E-05	-0.023	0.008	6.06E-03
1.22E-23	-0.169	0.032	1.68E-07
1.07E-15	0.018	0.008	1.99E-02
8.12E-05	-0.024	0.009	6.74E-03
1.11E-02	0.031	0.010	1.23E-03
6.79E-05	-0.019	0.010	5.12E-02
1.57E-16	0.025	0.008	1.38E-03
5.97E-14	-0.018	0.008	2.84E-02
1.52E-17	0.024	0.009	5.27E-03
1.44E-15	-0.035	0.011	1.53E-03
2.56E-17	-0.030	0.008	8.39E-05
6.97E-16	-0.030	0.009	7.16E-04
4.57E-07	-0.030	0.009	1.34E-03
1.84E-08	-0.014	0.008	6.76E-02
7.29E-05	-0.034	0.013	6.40E-03

ever Smokin				
SpM.NeverSmk.Beta	SpM.NeverSmk.SE	SpM.NeverSmk.P		Meta.EverSmk.Beta
0.021	0.009	1.56E-02		0.024
0.040	0.008	6.06E-07		0.039
0.033	0.009	5.15E-04		0.012
-0.023	0.009	1.75E-02		-0.016
0.020	0.009	2.66E-02		0.021
-0.017	0.009	6.41E-02		-0.027
-0.021	0.008	9.88E-03		-0.019
0.043	0.020	2.81E-02		0.045
0.026	0.012	2.72E-02		0.028
-0.031	0.011	3.66E-03		-0.041
-0.010	0.008	2.09E-01		-0.014
0.020	0.009	2.35E-02		0.022
-0.027	0.009	2.01E-03		-0.022
-0.022	0.010	2.29E-02		-0.024
-0.031	0.014	2.57E-02		-0.016
0.050	0.008	2.84E-09		0.026
0.037	0.014	1.10E-02		0.023
-0.022	0.009	1.04E-02		-0.015
-0.034	0.008	2.81E-05		-0.015
-0.018	0.011	8.91E-02		-0.031
0.022	0.008	9.30E-03		0.016
-0.016	0.008	5.06E-02		-0.016
-0.018	0.008	3.27E-02		-0.018
-0.041	0.019	3.29E-02		-0.024
0.011	0.010	2.95E-01		0.016
0.024	0.011	2.41E-02		0.033
0.011	0.015	4.56E-01		-0.017
0.020	0.008	1.81E-02		0.015
0.057	0.015	1.55E-04		0.051
-0.025	0.008	2.76E-03		-0.024
-0.014	0.009	1.27E-01		-0.026
0.003	0.009	7.00E-01		0.023
0.031	0.013	2.26E-02		0.029
-0.032	0.008	5.17E-05		-0.018
-0.045	0.011	2.70E-05		-0.035
-0.023	0.010	2.07E-02		-0.025
-0.047	0.014	1.10E-03		-0.039
-0.011	0.008	1.71E-01		-0.021
-0.020	0.008	1.05E-02		-0.015
-0.019	0.009	2.89E-02		-0.017
0.023	0.010	1.74E-02		0.038
0.023	0.009	8.39E-03		0.015
-0.026	0.009	2.01E-03		-0.021
0.018	0.009	4.58E-02		0.025
0.037	0.012	2.88E-03		0.030

0.020	0.008	1.34E-02	0.020
-0.013	0.008	1.25E-01	-0.019
0.026	0.009	4.63E-03	0.016
-0.020	0.008	1.65E-02	-0.022
0.023	0.010	1.85E-02	0.020
0.017	0.008	3.72E-02	0.020
0.042	0.011	1.70E-04	0.020
-0.025	0.010	1.61E-02	-0.015
-0.028	0.008	8.63E-04	-0.031
0.030	0.008	3.32E-04	0.007
-0.027	0.016	9.04E-02	-0.074
0.020	0.011	7.77E-02	0.025
0.026	0.010	9.17E-03	0.022
-0.033	0.010	1.17E-03	-0.057
-0.023	0.009	1.10E-02	-0.018
0.020	0.008	2.09E-02	0.022
0.029	0.008	2.49E-04	0.014
0.041	0.011	2.82E-04	0.018
-0.032	0.010	2.45E-03	-0.043
0.003	0.009	7.04E-01	0.031
0.014	0.009	9.39E-02	0.025
-0.037	0.009	9.49E-05	-0.030
-0.011	0.009	2.40E-01	-0.019
-0.017	0.008	4.33E-02	-0.024
0.020	0.009	1.99E-02	0.015
0.018	0.010	5.72E-02	0.035
0.035	0.015	2.31E-02	0.047
-0.017	0.013	1.81E-01	-0.039
0.027	0.009	1.63E-03	0.025
0.082	0.032	1.11E-02	0.057
0.039	0.010	4.52E-05	0.027
0.044	0.011	1.14E-04	0.032
0.024	0.009	6.72E-03	0.017
-0.007	0.008	3.53E-01	-0.016
-0.029	0.011	6.93E-03	-0.014
-0.024	0.010	1.22E-02	-0.022
0.014	0.008	9.16E-02	0.016
0.050	0.010	2.94E-07	0.059
-0.029	0.008	4.03E-04	-0.043
-0.004	0.009	6.21E-01	-0.028
-0.062	0.017	2.33E-04	-0.070
0.066	0.010	1.86E-10	0.064
0.026	0.008	1.65E-03	0.024
-0.026	0.014	5.28E-02	-0.062
-0.043	0.008	3.31E-07	-0.070
0.007	0.016	6.36E-01	0.036
0.031	0.010	1.96E-03	0.021
-0.027	0.014	4.97E-02	-0.039
0.019	0.011	1.00E-01	0.030
0.007	0.008	4.20E-01	0.019

-0.018	0.009	6.15E-02	-0.035
-0.022	0.008	8.84E-03	-0.018
0.020	0.010	4.16E-02	0.018
0.026	0.009	3.52E-03	0.030
-0.023	0.011	3.73E-02	-0.027
-0.030	0.013	2.29E-02	-0.031
0.009	0.009	3.18E-01	0.022
-0.025	0.009	4.40E-03	-0.055
0.107	0.038	5.01E-03	0.093
0.003	0.009	7.61E-01	-0.022
-0.047	0.017	5.35E-03	-0.065
0.033	0.009	1.93E-04	0.034
-0.037	0.009	8.27E-05	-0.029
-0.031	0.009	6.44E-04	-0.030
-0.036	0.008	4.61E-06	-0.025
-0.028	0.008	5.07E-04	-0.021
0.032	0.008	4.30E-05	0.021
0.045	0.010	8.34E-06	0.032
-0.018	0.008	3.19E-02	-0.026
-0.004	0.021	8.33E-01	0.053
0.125	0.019	3.63E-11	0.138
-0.028	0.012	2.66E-02	-0.043
-0.046	0.018	1.16E-02	-0.030
0.012	0.008	1.25E-01	0.015
-0.023	0.009	6.71E-03	-0.017
0.016	0.009	6.22E-02	0.017
0.016	0.009	6.91E-02	0.018
-0.021	0.010	3.82E-02	-0.034
0.027	0.011	1.37E-02	0.038
-0.028	0.008	6.41E-04	-0.017
0.015	0.008	7.93E-02	0.016
0.028	0.010	4.25E-03	0.011
-0.025	0.009	5.33E-03	-0.031
-0.117	0.027	1.84E-05	-0.175
-0.039	0.009	1.28E-05	-0.069
-0.013	0.008	1.11E-01	-0.019
0.011	0.010	2.69E-01	0.021
0.035	0.011	8.55E-04	0.018
0.029	0.008	3.95E-04	0.016
0.009	0.011	3.96E-01	0.019
-0.017	0.008	2.62E-02	-0.020
-0.009	0.008	2.52E-01	-0.021
-0.018	0.009	3.83E-02	-0.017
0.016	0.010	1.04E-01	0.023
0.029	0.009	1.35E-03	0.013
0.022	0.008	7.47E-03	0.023
0.020	0.008	1.46E-02	0.022
0.000	0.009	9.98E-01	-0.021
-0.021	0.009	2.13E-02	-0.021
-0.024	0.009	6.60E-03	-0.024

-0.003	0.008	7.44E-01	-0.018
-0.019	0.008	1.49E-02	-0.023
0.018	0.008	3.55E-02	0.018
0.013	0.008	1.01E-01	0.023
0.022	0.014	1.20E-01	0.055
-0.033	0.011	2.32E-03	-0.023
-0.025	0.009	4.22E-03	-0.017
0.019	0.008	2.23E-02	0.023
-0.027	0.009	1.93E-03	-0.023
0.020	0.009	3.00E-02	0.018
0.027	0.009	2.22E-03	0.022
0.013	0.009	1.38E-01	0.013
-0.031	0.008	6.66E-05	-0.036
0.009	0.014	5.02E-01	0.016
-0.023	0.008	5.96E-03	-0.019
0.008	0.011	4.71E-01	0.023
-0.017	0.008	4.63E-02	-0.018
0.026	0.009	3.65E-03	0.025
0.043	0.017	1.30E-02	0.024
-0.004	0.009	6.55E-01	-0.009
0.032	0.008	8.65E-05	0.029
0.018	0.008	2.72E-02	0.019
-0.023	0.008	5.91E-03	-0.012
0.028	0.012	2.42E-02	0.021
0.022	0.009	1.55E-02	0.019
0.028	0.008	1.11E-03	0.025
0.030	0.011	6.66E-03	0.020
-0.010	0.009	2.52E-01	-0.030
-0.016	0.013	2.27E-01	-0.040
0.028	0.011	1.45E-02	0.027
-0.026	0.011	1.23E-02	-0.022
0.070	0.028	1.08E-02	0.044
0.020	0.008	1.48E-02	0.012
-0.013	0.008	1.10E-01	-0.018
0.052	0.008	1.06E-10	0.037
-0.014	0.009	1.18E-01	-0.011
-0.026	0.008	1.62E-03	-0.022
0.021	0.009	1.28E-02	0.018
-0.015	0.009	9.99E-02	-0.020
0.025	0.012	3.80E-02	0.033
0.006	0.015	6.61E-01	0.017
0.001	0.009	8.95E-01	-0.021
-0.003	0.010	7.26E-01	-0.031
0.041	0.011	1.79E-04	0.042
0.034	0.016	2.75E-02	0.026
-0.038	0.012	1.07E-03	-0.025
-0.028	0.009	1.67E-03	-0.023
0.013	0.009	1.60E-01	0.019
0.032	0.010	9.60E-04	0.025
-0.079	0.027	3.22E-03	-0.061

0.032	0.008	1.05E-04	0.022
-0.025	0.009	7.60E-03	-0.021
0.018	0.014	1.87E-01	0.036
-0.034	0.010	5.45E-04	-0.024
0.013	0.008	9.84E-02	0.022
-0.039	0.014	4.01E-03	-0.042
0.037	0.009	2.33E-05	0.026
0.026	0.008	1.76E-03	0.022
0.013	0.009	1.46E-01	0.025
-0.027	0.008	1.28E-03	-0.019
-0.049	0.011	9.03E-06	-0.033
0.037	0.011	4.80E-04	0.015
0.012	0.008	1.25E-01	0.017
0.024	0.008	3.48E-03	0.018
0.031	0.008	9.71E-05	0.022
-0.017	0.020	3.76E-01	-0.040
-0.047	0.009	1.81E-07	-0.020
-0.034	0.016	2.90E-02	-0.041
-0.028	0.010	6.75E-03	-0.019
0.024	0.009	1.28E-02	0.022
0.053	0.008	3.21E-10	0.062
0.032	0.010	2.28E-03	0.019
-0.050	0.018	4.77E-03	-0.026
-0.021	0.008	9.02E-03	-0.028
0.039	0.009	3.76E-05	0.027
0.021	0.009	2.00E-02	0.025
-0.022	0.009	1.43E-02	-0.021
0.043	0.010	3.34E-05	0.031
-0.002	0.008	8.33E-01	-0.013
0.031	0.018	7.89E-02	0.041
-0.085	0.018	1.16E-06	-0.048
-0.015	0.008	7.15E-02	-0.037
0.032	0.008	8.72E-05	0.021
0.027	0.008	1.50E-03	0.037
0.023	0.009	8.65E-03	0.022
0.024	0.013	7.68E-02	0.026
0.023	0.010	1.73E-02	0.018
-0.016	0.008	4.29E-02	-0.025
0.017	0.008	3.33E-02	0.021
0.041	0.012	3.92E-04	0.017
-0.041	0.012	3.44E-04	-0.024
0.022	0.008	6.84E-03	0.011
-0.035	0.008	1.46E-05	-0.031
0.006	0.009	4.95E-01	0.025
0.023	0.012	5.73E-02	0.040
0.028	0.009	2.88E-03	0.018
0.034	0.011	2.02E-03	0.039
0.041	0.010	1.43E-05	0.018
-0.025	0.008	1.97E-03	-0.016
0.024	0.010	2.02E-02	0.032

0.105	0.034	2.12E-03	0.039
-0.024	0.010	1.31E-02	-0.015
0.024	0.010	1.39E-02	0.024
0.020	0.008	1.86E-02	0.025
0.066	0.017	9.12E-05	0.038
0.021	0.010	2.78E-02	0.015
-0.041	0.016	9.09E-03	-0.029
-0.013	0.009	1.58E-01	-0.020
-0.024	0.009	8.66E-03	-0.023
0.021	0.008	9.78E-03	0.015
0.032	0.008	5.20E-05	0.010
-0.033	0.010	5.21E-04	-0.019
0.013	0.008	1.13E-01	0.020
-0.031	0.008	2.30E-04	-0.016
-0.042	0.014	2.58E-03	-0.032
0.008	0.008	3.31E-01	0.013
0.024	0.008	5.01E-03	0.017
0.019	0.008	1.71E-02	0.017
0.019	0.012	1.24E-01	0.031
-0.017	0.009	5.68E-02	-0.013
-0.143	0.033	1.19E-05	-0.159
0.018	0.008	2.64E-02	0.029
-0.024	0.009	8.60E-03	-0.017
0.010	0.010	3.40E-01	0.029
-0.036	0.011	5.74E-04	-0.025
0.029	0.008	3.94E-04	0.023
-0.016	0.009	7.37E-02	-0.025
0.023	0.009	9.71E-03	0.029
-0.040	0.012	6.67E-04	-0.031
-0.019	0.008	1.98E-02	-0.020
-0.025	0.009	7.63E-03	-0.025
-0.018	0.010	7.47E-02	-0.016
-0.023	0.008	4.55E-03	-0.024
-0.024	0.013	6.81E-02	-0.020

UK Biobank & SpiroMeta Ever / Never Smoking Meta-Analysis and Welch P-Val

Meta.EverSmk.SE	Meta.EverSmk.P	Meta.NeverSmk.Beta	Meta.NeverSmk.SE
0.004	4.52E-12	0.024	0.003
0.003	1.23E-31	0.038	0.003
0.004	2.73E-03	0.028	0.004
0.004	1.16E-04	-0.019	0.004
0.004	2.08E-08	0.016	0.004
0.004	3.86E-12	-0.021	0.004
0.003	3.00E-08	-0.021	0.003
0.008	9.60E-09	0.062	0.007
0.005	9.38E-09	0.025	0.005
0.004	1.64E-21	-0.047	0.004
0.003	5.67E-05	-0.017	0.003
0.004	8.69E-10	0.027	0.003
0.004	6.76E-10	-0.027	0.003
0.004	1.12E-09	-0.024	0.004
0.004	1.73E-05	-0.018	0.003
0.003	3.31E-14	0.034	0.003
0.005	2.13E-05	0.050	0.005
0.004	2.07E-05	-0.023	0.003
0.004	3.52E-05	-0.021	0.003
0.004	2.56E-12	-0.030	0.004
0.003	1.85E-06	0.021	0.003
0.003	1.95E-06	-0.017	0.003
0.003	1.17E-07	-0.013	0.003
0.005	1.63E-06	-0.040	0.005
0.004	1.03E-04	0.015	0.004
0.004	6.63E-14	0.022	0.004
0.004	3.30E-05	-0.015	0.004
0.003	8.51E-06	0.019	0.003
0.006	1.11E-15	0.040	0.006
0.003	7.45E-13	-0.026	0.003
0.004	2.19E-12	-0.024	0.004
0.004	1.88E-10	0.012	0.003
0.004	3.94E-16	0.029	0.003
0.003	5.17E-08	-0.028	0.003
0.004	1.29E-15	-0.047	0.004
0.004	6.11E-09	-0.025	0.004
0.006	3.75E-10	-0.039	0.006
0.003	2.47E-10	-0.012	0.003
0.003	1.66E-05	-0.014	0.003
0.004	3.22E-06	-0.018	0.003
0.004	6.51E-21	0.030	0.004
0.003	1.51E-05	0.025	0.003
0.003	3.27E-09	-0.016	0.003
0.004	2.06E-11	0.013	0.004
0.005	7.77E-10	0.036	0.005

0.003	4.18E-09	0.016	0.003
0.003	2.00E-08	-0.009	0.003
0.004	2.08E-05	0.020	0.004
0.003	1.82E-10	-0.022	0.003
0.004	1.76E-06	0.018	0.004
0.003	1.04E-08	0.011	0.003
0.005	3.52E-05	0.034	0.004
0.004	4.04E-04	-0.019	0.004
0.003	3.16E-19	-0.026	0.003
0.003	4.17E-02	0.019	0.003
0.006	3.18E-32	-0.080	0.006
0.005	1.57E-07	0.026	0.004
0.004	7.20E-08	0.015	0.004
0.004	2.12E-41	-0.045	0.004
0.004	4.34E-07	-0.019	0.003
0.003	2.78E-10	0.019	0.003
0.003	2.15E-05	0.017	0.003
0.005	1.03E-04	0.024	0.004
0.004	1.71E-22	-0.042	0.004
0.004	1.62E-16	0.022	0.004
0.003	2.92E-13	0.025	0.003
0.004	3.60E-14	-0.026	0.004
0.004	1.28E-07	-0.019	0.003
0.003	2.85E-12	-0.020	0.003
0.003	2.72E-05	0.022	0.003
0.004	2.96E-18	0.028	0.004
0.006	9.75E-14	0.032	0.006
0.005	5.75E-14	-0.045	0.005
0.004	3.95E-12	0.027	0.003
0.012	4.53E-06	0.057	0.012
0.004	4.98E-12	0.026	0.004
0.005	9.38E-12	0.034	0.004
0.004	1.96E-06	0.019	0.003
0.003	2.11E-06	-0.017	0.003
0.004	1.80E-03	-0.019	0.004
0.004	5.74E-09	-0.033	0.004
0.003	2.86E-06	0.023	0.003
0.004	3.24E-46	0.045	0.004
0.003	4.93E-37	-0.038	0.003
0.004	2.41E-15	-0.032	0.003
0.007	1.18E-25	-0.075	0.006
0.004	6.65E-60	0.074	0.004
0.003	8.52E-12	0.022	0.003
0.004	8.06E-67	-0.069	0.003
0.003	6.33E-92	-0.071	0.003
0.004	9.29E-19	0.042	0.004
0.004	2.49E-07	0.019	0.004
0.006	1.52E-11	-0.030	0.005
0.005	1.62E-10	0.025	0.004
0.004	5.40E-08	0.021	0.003

0.004	4.23E-20	-0.040	0.004
0.003	1.17E-07	-0.019	0.003
0.004	3.49E-06	0.022	0.004
0.004	1.23E-16	0.030	0.003
0.004	1.42E-09	-0.037	0.004
0.005	2.83E-09	-0.030	0.005
0.003	3.82E-10	0.017	0.003
0.003	7.95E-59	-0.047	0.003
0.014	2.45E-11	0.079	0.013
0.003	8.84E-11	-0.016	0.003
0.007	3.93E-21	-0.066	0.007
0.004	3.41E-22	0.049	0.003
0.004	9.43E-16	-0.040	0.003
0.004	3.87E-17	-0.032	0.003
0.003	2.98E-14	-0.037	0.003
0.003	3.41E-10	-0.025	0.003
0.003	1.96E-10	0.025	0.003
0.004	4.53E-13	0.038	0.004
0.003	1.17E-13	-0.033	0.003
0.005	9.60E-23	0.060	0.005
0.007	1.17E-86	0.156	0.007
0.004	5.72E-25	-0.051	0.004
0.007	1.20E-05	-0.035	0.007
0.003	1.13E-05	0.013	0.003
0.004	1.92E-06	-0.024	0.003
0.004	8.54E-06	0.013	0.004
0.004	2.43E-07	0.016	0.003
0.004	2.28E-16	-0.038	0.004
0.004	1.17E-18	0.051	0.004
0.003	4.50E-07	-0.022	0.003
0.003	3.22E-06	0.014	0.003
0.004	7.19E-03	0.030	0.004
0.004	8.53E-17	-0.026	0.004
0.011	1.72E-62	-0.187	0.010
0.004	6.60E-79	-0.076	0.003
0.003	3.92E-08	-0.018	0.003
0.005	1.98E-06	0.020	0.004
0.005	1.40E-04	0.025	0.004
0.003	1.15E-06	0.017	0.003
0.005	8.44E-05	0.018	0.005
0.003	1.35E-09	-0.022	0.003
0.003	5.28E-10	-0.016	0.003
0.004	1.20E-06	-0.025	0.003
0.004	5.56E-09	0.025	0.004
0.004	5.30E-04	0.024	0.003
0.003	9.04E-12	0.028	0.003
0.003	1.36E-10	0.027	0.003
0.004	7.52E-09	-0.014	0.004
0.004	1.24E-08	-0.020	0.004
0.004	1.15E-11	-0.020	0.003

0.004	3.54E-07	-0.013	0.003
0.003	5.83E-12	-0.025	0.003
0.004	3.86E-07	0.019	0.003
0.003	9.90E-12	0.023	0.003
0.006	5.38E-21	0.046	0.006
0.005	4.50E-07	-0.021	0.004
0.003	8.81E-07	-0.016	0.003
0.003	2.04E-11	0.029	0.003
0.004	6.39E-11	-0.029	0.003
0.004	6.94E-07	0.010	0.003
0.004	1.74E-09	0.022	0.003
0.003	9.32E-05	0.014	0.003
0.003	4.49E-27	-0.044	0.003
0.004	1.72E-05	0.019	0.003
0.003	6.49E-08	-0.016	0.003
0.004	6.75E-08	0.019	0.004
0.003	1.07E-07	-0.025	0.003
0.004	4.19E-11	0.025	0.004
0.005	2.48E-07	0.019	0.004
0.004	1.56E-02	-0.013	0.004
0.003	9.88E-18	0.028	0.003
0.003	1.89E-08	0.020	0.003
0.003	2.89E-04	-0.020	0.003
0.005	1.14E-05	0.019	0.005
0.004	1.29E-06	0.016	0.004
0.004	4.95E-12	0.015	0.003
0.005	2.70E-05	0.023	0.005
0.003	2.57E-18	-0.024	0.003
0.005	5.00E-14	-0.033	0.005
0.005	1.35E-08	0.032	0.004
0.004	3.05E-07	-0.028	0.004
0.010	1.20E-05	0.063	0.009
0.003	3.86E-04	0.019	0.003
0.003	7.67E-08	-0.017	0.003
0.003	7.17E-28	0.039	0.003
0.004	2.99E-03	-0.019	0.003
0.003	1.20E-10	-0.024	0.003
0.004	4.03E-07	0.013	0.003
0.004	8.01E-08	-0.019	0.003
0.005	2.63E-11	0.025	0.005
0.004	2.11E-05	0.023	0.004
0.004	5.73E-08	-0.009	0.004
0.004	5.57E-14	-0.026	0.004
0.004	3.62E-22	0.047	0.004
0.004	1.83E-10	0.033	0.004
0.005	2.89E-08	-0.027	0.004
0.004	4.90E-11	-0.014	0.003
0.004	1.84E-07	0.025	0.003
0.004	1.14E-09	0.028	0.004
0.012	1.51E-07	-0.060	0.011

0.004	4.38E-10	0.029	0.003
0.004	3.47E-08	-0.017	0.004
0.006	1.05E-10	0.021	0.005
0.004	2.75E-10	-0.020	0.004
0.003	2.52E-10	0.016	0.003
0.006	1.10E-13	-0.036	0.005
0.004	6.67E-14	0.035	0.003
0.003	1.73E-10	0.022	0.003
0.004	9.58E-12	0.024	0.003
0.003	6.68E-08	-0.018	0.003
0.004	2.71E-14	-0.040	0.004
0.004	4.92E-04	0.027	0.004
0.003	3.05E-07	0.014	0.003
0.003	4.04E-08	0.019	0.003
0.003	7.32E-11	0.025	0.003
0.007	8.17E-08	-0.034	0.007
0.004	8.16E-08	-0.033	0.004
0.007	3.61E-10	-0.061	0.006
0.004	1.34E-05	-0.033	0.004
0.004	3.75E-08	0.022	0.004
0.004	3.84E-70	0.069	0.003
0.004	1.16E-05	0.020	0.004
0.008	7.40E-04	-0.041	0.007
0.003	9.91E-17	-0.029	0.003
0.004	6.01E-11	0.038	0.004
0.004	1.97E-11	0.019	0.004
0.004	4.90E-08	-0.011	0.004
0.004	4.04E-13	0.037	0.004
0.003	1.06E-04	-0.011	0.003
0.007	1.59E-08	0.032	0.007
0.007	1.06E-10	-0.045	0.007
0.004	1.93E-25	-0.030	0.003
0.003	1.87E-10	0.022	0.003
0.003	4.76E-27	0.042	0.003
0.004	2.57E-09	0.021	0.003
0.005	1.22E-06	0.020	0.005
0.004	3.90E-06	0.018	0.004
0.003	4.66E-14	-0.022	0.003
0.003	7.21E-10	0.010	0.003
0.005	4.30E-04	0.025	0.005
0.005	3.41E-07	-0.018	0.005
0.003	6.69E-04	0.018	0.003
0.003	2.57E-20	-0.035	0.003
0.004	2.06E-11	0.019	0.004
0.005	8.43E-16	0.034	0.005
0.004	2.25E-06	0.020	0.004
0.004	3.98E-21	0.044	0.004
0.004	1.61E-05	0.023	0.004
0.003	4.90E-06	-0.026	0.003
0.004	7.43E-15	0.025	0.004

0.011	3.94E-04	0.045	0.010
0.004	1.90E-04	-0.022	0.004
0.004	9.83E-09	0.011	0.004
0.003	2.75E-13	0.034	0.003
0.006	3.03E-09	0.056	0.006
0.004	6.82E-05	0.025	0.004
0.006	5.02E-07	-0.040	0.005
0.004	1.01E-07	-0.033	0.004
0.004	4.87E-10	-0.025	0.004
0.003	7.49E-06	0.014	0.003
0.003	3.06E-03	0.020	0.003
0.004	2.50E-06	-0.025	0.004
0.003	1.66E-08	0.013	0.003
0.004	8.12E-06	-0.020	0.003
0.006	2.44E-08	-0.027	0.005
0.003	1.65E-04	0.017	0.003
0.004	3.12E-06	0.014	0.003
0.003	2.22E-07	0.012	0.003
0.005	4.12E-10	0.041	0.005
0.004	3.65E-04	-0.016	0.003
0.015	1.44E-26	-0.155	0.014
0.003	7.34E-17	0.027	0.003
0.004	2.32E-05	-0.018	0.004
0.004	6.92E-12	0.011	0.004
0.004	1.01E-08	-0.021	0.004
0.003	1.94E-11	0.029	0.003
0.004	3.16E-11	-0.027	0.004
0.004	2.78E-15	0.030	0.003
0.005	2.60E-10	-0.041	0.005
0.003	7.20E-09	-0.029	0.003
0.004	1.62E-10	-0.032	0.004
0.004	1.73E-04	-0.021	0.004
0.003	3.77E-12	-0.021	0.003
0.005	8.24E-05	-0.021	0.005

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Meta.NeverSmk.P	Meta.Welch.Int.P	
2.61E-12	8.71E-01	
2.28E-32	7.93E-01	
3.29E-13	1.61E-02	
1.49E-06	6.16E-01	
1.10E-05	3.43E-01	
1.44E-08	2.96E-01	
4.82E-11	6.05E-01	
4.06E-17	1.12E-01	
9.20E-08	6.47E-01	
4.06E-30	3.60E-01	
1.85E-07	5.23E-01	
4.46E-15	3.71E-01	
2.43E-15	3.51E-01	
1.08E-10	9.99E-01	
1.03E-07	6.23E-01	
4.80E-25	1.53E-01	
1.79E-21	2.46E-03	
3.32E-11	1.79E-01	
4.81E-10	2.55E-01	
1.13E-12	8.81E-01	
1.07E-10	3.51E-01	
2.06E-07	9.11E-01	
5.81E-05	3.19E-01	
1.40E-16	4.69E-02	
9.12E-05	9.00E-01	
1.68E-07	8.73E-02	
3.51E-05	8.53E-01	
2.59E-09	4.13E-01	
2.12E-11	2.41E-01	
5.22E-16	7.11E-01	
4.68E-12	7.24E-01	
5.47E-04	5.48E-02	
3.41E-18	9.98E-01	
4.58E-19	6.04E-02	
1.58E-28	8.45E-02	
1.37E-09	9.63E-01	
6.33E-11	9.53E-01	
1.67E-04	8.56E-02	
8.04E-06	9.62E-01	
8.84E-08	7.68E-01	
6.92E-15	1.71E-01	
8.18E-14	7.97E-02	
9.98E-07	3.81E-01	
1.71E-04	5.16E-02	
1.19E-14	4.03E-01	

8.04E-07	4.22E-01
6.19E-03	6.43E-02
6.07E-09	3.80E-01
2.85E-11	9.46E-01
2.78E-06	8.10E-01
6.36E-04	1.10E-01
3.75E-14	4.67E-02
2.03E-06	5.00E-01
5.85E-16	3.84E-01
3.64E-09	3.60E-02
4.60E-41	5.02E-01
1.02E-08	8.91E-01
1.08E-04	2.34E-01
8.13E-29	5.79E-02
9.00E-09	8.06E-01
2.94E-09	6.23E-01
2.33E-07	6.31E-01
6.84E-08	3.93E-01
1.04E-23	8.96E-01
1.63E-09	1.08E-01
6.49E-14	9.11E-01
1.21E-12	5.52E-01
7.29E-08	9.08E-01
4.58E-10	4.45E-01
3.63E-11	1.72E-01
2.76E-13	2.17E-01
8.83E-08	9.49E-02
4.91E-20	4.05E-01
7.84E-16	6.34E-01
9.72E-07	9.60E-01
4.32E-12	8.27E-01
7.27E-15	6.99E-01
7.04E-08	7.97E-01
1.25E-07	8.32E-01
6.82E-06	4.17E-01
8.05E-20	6.87E-02
1.50E-12	1.80E-01
2.07E-31	4.08E-02
2.64E-32	3.26E-01
7.51E-22	4.03E-01
1.31E-31	6.35E-01
3.23E-88	1.06E-01
5.45E-12	8.10E-01
1.90E-93	1.95E-01
5.68E-105	8.09E-01
6.61E-28	3.18E-01
9.07E-07	7.46E-01
3.94E-08	2.76E-01
2.21E-08	4.69E-01
2.92E-10	6.94E-01

6.24E-28	3.98E-01
5.00E-09	8.79E-01
2.81E-09	4.98E-01
3.73E-18	9.86E-01
6.38E-18	1.44E-01
1.15E-09	9.14E-01
2.50E-07	3.49E-01
5.00E-47	1.11E-01
3.85E-09	4.74E-01
1.56E-06	2.06E-01
6.55E-24	9.08E-01
2.04E-47	1.93E-02
1.66E-31	5.68E-02
4.92E-21	6.87E-01
9.72E-32	3.47E-02
1.75E-15	3.70E-01
2.51E-15	4.30E-01
4.46E-20	3.06E-01
7.45E-24	1.52E-01
1.13E-32	3.84E-01
1.32E-123	7.11E-02
1.25E-38	1.88E-01
2.76E-07	6.78E-01
3.80E-05	7.31E-01
2.13E-12	1.93E-01
3.18E-04	4.69E-01
1.47E-06	6.80E-01
1.38E-21	5.45E-01
2.71E-35	5.51E-02
1.25E-11	3.57E-01
3.21E-05	6.36E-01
1.44E-15	5.66E-03
5.43E-13	3.18E-01
6.52E-81	4.29E-01
1.95E-104	2.25E-01
3.92E-08	8.62E-01
3.19E-06	8.07E-01
2.94E-08	3.14E-01
1.81E-07	9.31E-01
1.70E-04	7.86E-01
1.25E-12	6.21E-01
5.02E-07	3.21E-01
1.11E-13	1.49E-01
2.74E-11	7.25E-01
3.24E-12	5.04E-02
1.16E-18	3.00E-01
9.89E-16	3.80E-01
1.43E-04	1.57E-01
1.52E-08	8.24E-01
1.69E-09	4.51E-01

6.48E-05	3.73E-01
7.17E-15	7.06E-01
4.58E-08	9.26E-01
1.79E-12	9.57E-01
3.51E-16	2.50E-01
1.11E-06	7.66E-01
2.26E-06	7.63E-01
3.95E-18	3.02E-01
1.48E-18	2.27E-01
3.67E-03	1.49E-01
4.56E-10	9.26E-01
3.23E-05	9.93E-01
1.67E-44	1.01E-01
4.20E-08	5.52E-01
2.08E-06	5.45E-01
3.17E-06	5.10E-01
2.36E-15	1.56E-01
2.63E-12	9.71E-01
9.92E-06	4.76E-01
3.72E-04	5.08E-01
4.10E-18	8.21E-01
6.33E-10	8.52E-01
3.18E-10	1.31E-01
2.74E-05	7.70E-01
8.13E-06	6.87E-01
1.25E-05	7.79E-02
2.43E-07	5.89E-01
9.11E-13	1.97E-01
6.61E-11	3.58E-01
2.93E-13	3.87E-01
1.08E-11	3.46E-01
1.16E-11	1.52E-01
9.13E-09	2.02E-01
8.55E-08	8.61E-01
5.44E-34	6.68E-01
9.13E-09	1.12E-01
2.35E-13	7.25E-01
8.93E-05	3.58E-01
2.68E-08	9.53E-01
1.81E-07	2.31E-01
4.01E-10	2.63E-01
1.25E-02	5.27E-02
3.33E-11	3.94E-01
2.91E-30	3.95E-01
4.82E-18	2.32E-01
1.77E-10	7.04E-01
1.83E-05	1.09E-01
1.17E-12	3.08E-01
4.68E-13	5.69E-01
5.69E-08	9.66E-01

4.40E-18	1.83E-01
2.37E-06	4.86E-01
5.60E-05	6.95E-02
8.18E-08	3.93E-01
1.26E-06	2.59E-01
2.45E-11	4.60E-01
2.95E-25	1.19E-01
1.00E-11	9.58E-01
1.15E-11	8.04E-01
2.11E-08	9.60E-01
7.19E-22	3.07E-01
1.78E-11	5.90E-02
8.95E-06	5.48E-01
6.92E-09	9.95E-01
7.74E-15	5.38E-01
1.45E-06	5.93E-01
3.92E-20	3.46E-02
2.44E-22	3.70E-02
3.07E-15	3.64E-02
5.43E-09	9.97E-01
3.06E-93	2.05E-01
2.50E-06	9.35E-01
3.80E-08	1.76E-01
8.77E-20	8.16E-01
1.18E-22	7.39E-02
5.79E-08	2.98E-01
1.81E-03	1.04E-01
1.25E-19	3.43E-01
1.08E-03	5.98E-01
2.50E-06	3.61E-01
5.20E-10	7.10E-01
1.16E-18	1.83E-01
1.26E-11	9.58E-01
1.77E-37	3.55E-01
8.39E-10	9.33E-01
7.90E-05	4.33E-01
1.44E-06	9.89E-01
9.69E-12	4.79E-01
2.46E-03	4.97E-02
4.02E-08	2.42E-01
5.25E-05	3.82E-01
2.82E-08	2.16E-01
3.50E-28	3.84E-01
7.65E-08	2.76E-01
4.92E-13	4.08E-01
5.39E-08	7.54E-01
2.91E-29	4.18E-01
5.47E-09	3.91E-01
3.21E-16	5.28E-02
1.09E-10	2.58E-01

1.15E-05	6.71E-01
1.18E-09	1.76E-01
3.12E-03	5.66E-02
7.18E-26	9.10E-02
6.27E-20	5.11E-02
3.74E-12	8.87E-02
5.47E-14	1.63E-01
4.53E-19	4.51E-02
2.54E-12	7.43E-01
7.15E-06	8.93E-01
1.67E-10	5.69E-02
7.64E-11	3.02E-01
4.14E-05	2.40E-01
2.25E-09	4.06E-01
4.23E-07	5.92E-01
1.28E-07	3.96E-01
5.12E-05	5.70E-01
1.24E-04	3.10E-01
2.79E-17	2.03E-01
5.75E-06	6.03E-01
8.25E-28	8.15E-01
1.75E-16	7.02E-01
3.08E-06	8.73E-01
6.76E-03	9.91E-03
5.11E-07	5.07E-01
2.70E-19	2.29E-01
3.46E-14	6.93E-01
7.56E-19	7.53E-01
4.09E-18	1.70E-01
3.67E-18	1.11E-01
2.54E-17	2.46E-01
9.44E-08	3.54E-01
3.13E-10	5.17E-01
1.30E-05	8.80E-01

Supplementary Table 8: Previously reported autosomal signals

Previously reported autosomal signals

PMID|URL	Nearest gene	Genomic feature	Reported phenotype
21946350	MFAP2	intronic	FEV1/FVC
28166213	LOC101929516	ncRNA_intronic	FEV1/FVC
28166213	CDC7(dist=77646),TC	intergenic	FEV1/FVC
28166213	TGFBR3(dist=2958),B	intergenic	FEV1/FVC
28166213	SPAG17(dist=134222	intergenic	FVC
26635082	MCL1(dist=34757),E1	intergenic	FEV1
https://www.bio	NR5A2	intronic	FVC
https://www.bio	PIK3C2B	intronic	FEV1
24621683	TGFB2	intronic	COPD
21946350	MIR548F3/TGFB2	ncRNA_intronic	FEV1/FVC
26635082	LYPLAL1(dist=576881	intergenic	FEV1/FVC
https://www.bio	C1orf140/DUSP10	intergenic	FVC
28166213	CHRM3	intronic	FEV1/FVC
26635082	KCNS3(dist=194907),	intergenic	FEV1/FVC
24929828	EFEMP1	intronic	FVC
https://wellcom	LCT	exonic	FEV1
https://www.bio	KCNJ3/NR4A2	ncRNA_intronic	FEV1/FVC
20010834	TNS1	exonic	FEV1
20010835	SPHKAP(dist=456142	intergenic	FEV1/FVC
28166213	TRAF3IP1(dist=7019)	intergenic	FEV1/FVC
21946350	FLJ43879(dist=29183	intergenic	FEV1/FVC
21946350	RARB	intronic	FEV1/FVC
https://www.bio	RBMS3	intronic	FEV1/FVC
28166213	CACNA2D3(dist=420)	intergenic	FEV1/FVC
28166213	SUCLG2	intronic	FVC
https://www.bio	DCBLD2/MIR548G	intergenic	FEV1
28166213	EEFSEC	intronic	FEV1/FVC
26635082	RSRC1/RP11-538P18	intronic	FVC
28166213	LOC100507661(dist=	intergenic	FEV1/FVC
21946350	MECOM	intronic	FEV1
https://www.bio	AFAP1	intronic	FEV1/FVC
28166213	FAM13A	intronic	FEV1/FVC
20010835	FAM13A	intronic	FEV1/FVC
26423011	TET2	intergenic	FEV1
20010834	GSTCD	intronic	FEV1
26423011	NPNT	intronic	FEV1
19300500	GYP A(dist=383875),F	intergenic	FEV1
https://www.bio	OTUD4/SMAD1	intergenic	FEV1
28166213	LOC340113(dist=371	intergenic	FVC
https://wellcom	FGF10(dist=8111),RR	intergenic	FVC
28166213	ITGA1	intronic	FEV1/FVC
28166213	ARL15	intronic	FVC
https://www.bio	AP3B1	intronic	FVC

21946350 SPATA9(dist=17986), intergenic		FEV1/FVC
28166213 C5orf56	ncRNA_intronic	FEV1/FVC
20010834 HTR4	intronic	FEV1
28166213 ABLIM3	intronic	FEV1
28166213 CYFIP2	intronic	FEV1/FVC
20010835 ADAM19	intronic	FEV1/FVC
https://wellcome LY86(dist=87933),RR	intergenic	FEV1/FVC
28166215 DSP	exonic	COPD
24929828 BMP6	intronic	FVC
https://www.bio LINC00340	ncRNA_intronic	FEV1/FVC
21946350 ZNF184(dist=19026), intergenic		FEV1
20010834 AGER	exonic	FEV1/FVC
26423011 HLA-DQB1(dist=1163 intergenic		FEV1
28166213 KCNQ5	intronic	FEV1/FVC
21946350 ARMC2	intronic	FEV1/FVC
20010835 GPR126	intronic	FEV1/FVC
26635082 GPR126(dist=70770), intergenic		FEV1/FVC
28166213 C1GALT1(NM_02015 UTR3		FEV1/FVC
https://www.bio AGMO	intronic	FVC
28166213 ZKSCAN1(NM_00343 UTR3		FEV1/FVC
28166213 LOC389602(dist=368 intergenic		FEV1
https://www.bio DMRT2/SMARCA2	intergenic	FVC
28166213 GLIS3	intronic	FEV1
https://www.bio FLJ35282/ELAVL2	ncRNA_intronic	FEV1/FVC
20010835 PTCH1	downstream	FEV1/FVC
https://www.bio TMEM38B/ZNF462	intergenic	FEV1/FVC
26635082 ASTN2	intronic	FEV1/FVC
26635082 QSOX2/LHX3	intronic	FVC
28166213 DNLZ	intronic	FVC
21946350 CDC123	intronic	FEV1/FVC
28166213 SVIL(dist=243080),KI, intergenic		FEV1/FVC
https://www.bio JMJD1C	intronic	FEV1
28166213 MYPN	intronic	FVC
https://wellcome SEC24C	intronic	FEV1
21946350 C10orf11	intronic	FEV1
28166215 SFTPD	intergenic	COPD
https://www.bio HTRA1	intronic	FEV1/FVC
24929828 MIR129-2(dist=4533) intergenic		FVC
28166213 AHNAK	intronic	FEV1
https://www.bio FAM168A	intronic	FEV1/FVC
28166213 ME3(dist=59394),PR, intergenic		FEV1
28166213 CDON(dist=75723),R intergenic		FEV1
26635082 CCDC91	intronic	FVC
https://www.bio RAB5B	UTR3	FEV1
21946350 LRP1	intronic	FEV1/FVC
28166213 MSRB3	intronic	FEV1
https://www.bio ALX1/RASSF9	intergenic	FVC
28166213 FGD6	intronic	FEV1/FVC
21946350 SNRPF/CCDC38	intronic	FEV1/FVC
26635082 TBX3(dist=79467),MI intergenic		FEV1

28166213	TBX3(dist=378722),N	intergenic	FVC
https://www.bio	DDHD1/MIR5580	intergenic	FEV1/FVC
28166213	NONE(dist=NONE),LII	intergenic	FEV1/FVC
26635082	TRIP11	intronic	FEV1
26635082	RIN3	intergenic	FEV1
https://wellcom	RPAP1	exonic	FEV1/FVC
28166213	MGA	intronic	FEV1/FVC
https://www.bio	SMAD3	UTR3	FVC
20010834	THSD4	intronic	FEV1/FVC
28166213	THSD4	intronic	FEV1/FVC
28166213	SH3GL3	intronic	FEV1/FVC
26635082	EMP2(dist=31789),Tf	intergenic	FEV1/FVC
21946350	MMP15	intronic	FEV1/FVC
https://www.bio	PDXDC2P	ncRNA_intronic	FVC
21946350	CFDP1	intronic	FEV1/FVC
28166213	EFCAB5	intronic	FEV1/FVC
https://www.bio	SUZ12P1	ncRNA_intronic	FEV1
28166213	CISD3	intronic	FEV1/FVC
https://www.bio	MED1/CDK12	intergenic	FVC
26423011	KANSL1	intronic	FEV1
24929828	KCNJ2(dist=800232),	intergenic	FVC
https://wellcom	CASC17	ncRNA_intronic	FEV1
26423011	TSEN54	intronic	FEV1
28166215	MTCL1	intronic	COPD
https://www.bio	CABLES1	intronic	FVC
https://www.bio	DCC	intronic	FVC
https://www.bio	TSHZ3	intronic	FEV1/FVC
26635082	LTBP4	intronic	FEV1/FVC
28166213	CASC20(dist=123795)	intergenic	FVC
https://www.bio	ZNF337	intronic	FEV1
https://www.bio	C20orf112	intronic	FEV1
https://wellcom	UQCC1	intronic	FVC
https://www.bio	EYA2	intronic	FVC
28166213	ZGPAT	intronic	FEV1
21946350	LINC00310(dist=1282)	intergenic	FEV1/FVC
28166213	MICAL3	intronic	FEV1
https://www.bio	KLHL22/MED15	intergenic	FEV1/FVC
28166213	MN1	intronic	FEV1
https://www.bio	CENPF/KCNK2	intergenic	FVC
https://www.bio	DNAH12	intronic	FEV1
https://www.bio	CENPW/RSPO3	intergenic	FVC
https://www.bio	COMTD1/ZNF503-AS	intergenic	FVC
24929828	PRDM11(NM_00125)	UTR3	FVC
https://www.bio	CRADD	intronic	FVC
26771213	IL27	exonic	COPD
24929828	WVOX	intronic	FVC
https://www.bio	CTAGE1/RBBP8	intergenic	FEV1
26634245	CHRNA5	intronic	FEV1/FVC
22080838	CYP2A6	intronic	COPD
https://www.bio	LOC728989	ncRNA_intronic	FVC

https://www.bio DCAF8	intronic	FEV1/FVC
https://www.bio RYR2	intronic	FVC
https://www.bio PKDCC/EML4	intergenic	FEV1
https://www.bio EDAR	intronic	FVC
https://www.bio SLC25A51P1/BAI3	intergenic	FEV1/FVC
https://www.bio CNTNAP2	intronic	FEV1/FVC
24621683 MMP12	intergenic	COPD
https://www.bio KIRREL3-AS3/ETS1	intergenic	FVC
https://www.bio CCDC41	intronic	FVC
26423011 RBM19(dist=339357)	intergenic	FEV1
https://www.bio NCOR2/SCARB1	intergenic	FEV1
https://www.bio SQRD/SEMA6D	intergenic	FVC
https://www.bio PMFBP1/ZFH3	intergenic	FVC
26635082 LINC01422(dist=7397)	intergenic	FEV1
28166213 LST1	intronic	FEV1/FVC
21946350 NCR3(dist=7707),AIF	intergenic	FEV1/FVC
28166213 HLA-DQB1(dist=1395)	intergenic	FEV1
https://www.bio C1orf140/DUSP10	intergenic	FVC
https://www.bio C1orf140/DUSP10	intergenic	FEV1
https://www.bio RYR2	intronic	FEV1
https://www.bio C2orf48/HPCAL1	intergenic	FEV1/FVC
https://www.bio EN1/MARCO	intergenic	FVC
https://www.bio DKFZp686O1327/PAL	intergenic	FVC
https://www.bio RBMS3	intronic	FEV1/FVC
https://www.bio CADPS	intronic	FEV1/FVC
https://www.bio DCBLD2/MIR548G	intergenic	FVC
https://www.bio DCBLD2/MIR548G	ncRNA_intronic	FEV1/FVC
https://www.bio ANKRD55/MAP3K1	intergenic	FEV1
https://www.bio AP3B1	intronic	FEV1
https://www.bio AP3B1	intronic	FVC
https://www.bio LINC00340	ncRNA_intronic	FEV1/FVC
https://www.bio DMRT2/SMARCA2	intergenic	FVC
https://www.bio JMJD1C	intergenic	FEV1/FVC
https://www.bio ALX1/RASSF9	intergenic	FVC
https://www.bio HDC	intronic	FEV1/FVC
https://www.bio LOC283867/CDH5	intergenic	FEV1/FVC
https://www.bio WNT3	intronic	FEV1
https://www.bio WNT3	intronic	FEV1
https://www.bio SOGA2	intronic	FEV1
https://www.bio TSHZ3	intergenic	FEV1/FVC
https://www.bio CPT1C	intronic	FEV1/FVC

Look up in UK Biobank to confirm association in

Reported rsid	Chromosome	Position (b37)	UK Biobank proxy	Position (b37)	Proxy r2
rs2284746	1	17,306,675			
rs17513135	1	40,035,686			
rs1192404	1	92,068,967			
rs12140637	1	92,374,517			
rs200154334	1	118,862,070	rs60804050	118,870,373	0.943
rs6681426	1	150,586,971			
rs2821332	1	200,085,714			
rs12092943	1	204,434,927			
rs4846480	1	218,598,469			
rs993925	1	218,860,068			
rs4328080	1	219,963,088			
rs6657854	1	221,630,555			
rs6688537	1	239,850,588			
rs62126408	2	18,309,132			
rs1430193	2	56,120,853			
rs2322659	2	136,555,659			
rs72904209	2	157,046,432			
rs2571445	2	218,683,154			
rs10498230	2	229,502,503			
rs61332075	2	239,316,560			
rs12477314	2	239,877,148			
rs1529672	3	25,479,090	rs1286664	25,529,280	0.947
rs17666332	3	29,469,675			
rs1458979	3	55,150,677			
rs1490265	3	67,452,043			
rs6778584	3	98,815,640			
rs2811415	3	127,991,527			
rs1595029	3	158,241,767			
esv2660202	3	168,738,454	rs56341938	168,715,808	0.983
rs1344555	3	169,300,219			
rs28520091	4	7,846,240			
rs13110699	4	89,815,695			
rs2045517	4	89,870,964			
rs2047409	4	105,215,875	rs2007403	106,131,210	1.000
rs10516526	4	106,688,904			
rs34712979	4	106,819,053			
rs138641402	4	145,445,779	rs12504628	145,436,324	0.984
rs111898810	4	146,174,040			
rs91731	5	33,334,312			
rs1448044	5	44,296,986			
rs1551943	5	52,195,033			
rs2441026	5	53,444,498			
rs72776440	5	77,440,196			

rs153916	5	95,036,700			
rs7713065	5	131,788,334			
rs7715901	5	147,856,392			
rs3839234	5	148,596,693	rs2014787	148,611,675	1.000
rs10515750	5	156,810,072			
rs1990950	5	156,920,756			
rs1294421	6	6,743,149			
rs2076295	6	7,562,998	rs55938083	7,565,376	0.537
rs6924424	6	7,801,611			
rs1928168	6	22,017,738			
rs34864796	6	27,459,923			
rs2070600	6	32,151,443			
rs114544105	6	32,635,629	rs3844313	32,635,629	1.000
rs141651520	6	73,670,095	rs16883089	73,658,053	0.980
rs2768551	6	109,270,656			
rs7753012	6	142,745,883			
rs148274477	6	142,838,173			
rs10246303	7	7,286,445			
rs55905169	7	15,506,529			
rs72615157	7	99,635,967			
rs12698403	7	156,127,246			
rs771924	9	1,555,835			
rs7872188	9	4,124,377			
rs10965947	9	23,588,583			
rs16909859	9	98,204,792			
rs2451951	9	109,496,630			
rs803923	9	119,401,650			
rs10858246	9	139,102,831			
rs10870202	9	139,257,411			
rs7090277	10	12,278,021			
rs3847402	10	30,267,810			
rs7899503	10	65,087,468			
rs7095607	10	69,957,350			
rs3849969	10	75,525,999			
rs2637254	10	78,312,002			
rs721917	10	79,946,567	rs2256462	81,685,593	0.720
rs2293871	10	124,273,671			
rs4237643	11	43,648,368			
rs2509961	11	62,310,909			
11:73280955:GA:G	11	73,280,955	rs11235809	73,290,163	1.000
rs11234757	11	86,443,072	rs7108254	86,436,086	0.998
rs567508	11	126,008,910			
rs2348418	12	28,689,514			
rs772920	12	56,390,364			
rs11172113	12	57,527,283			
rs1494502	12	65,824,670			
rs7971039	12	85,724,305			
rs113745635	12	95,554,771			
rs12820313	12	96,255,704			
rs10850377	12	115,201,436			

rs35506	12	115,500,691			
rs4444235	14	54,410,919			
rs1698268	14	84,309,664			
rs7155279	14	92,485,881			
rs754388	14	92,649,064	rs72699866	93,114,787	0.980
rs1200345	15	41,819,716			
rs72724130	15	41,977,690			
rs8025774	15	67,483,276			
rs10851839	15	71,628,370			
rs12591467	15	71,788,387			
rs66650179	15	84,261,689	rs12438269	84,502,549	0.519
rs12149828	16	10,706,328	rs12149593	10,704,535	1.000
rs12447804	16	58,075,282			
rs3973397	16	70,040,398			
rs3743609	16	75,467,021			
rs59835752	17	28,265,330	rs62070270	28,263,980	0.999
rs62070631	17	29,087,285			
rs11658500	17	36,886,828			
rs8067511	17	37,611,352			
rs35524223	17	44,192,590	rs17577877	44,208,218	1.000
rs6501431	17	68,976,415			
rs1859962	17	69,108,753			
rs7218675	17	73,513,185			
rs647097	18	8,808,465	rs633286	8,809,273	0.975
rs7238093	18	20,728,158			
rs8089865	18	50,957,922			
rs9636166	19	31,829,613			
rs113473882	19	41,124,155			
rs6140050	20	6,632,901			
rs6138639	20	25,669,052			
rs1737889	20	31,042,176			
rs6088813	20	33,975,181			
rs2236519	20	45,529,571			
rs72448466	20	62,363,640	rs6062304	62,351,539	1.000
rs2834440	21	35,690,499			
rs11704827	22	18,450,287			
rs4820216	22	20,854,161			
rs2283847	22	28,181,399			
rs512597	1	215,095,003			
rs79294353	3	57,494,433			
rs11759026	6	126,792,095			
10:77002679:TC:T	10	77,002,679	rs1259524	77,004,644	1.000
rs2863171	11	45,250,732			
rs11107184	12	94,184,082			
rs181206	16	28,513,403			
rs1079572	16	78,187,138			
rs7243351	18	20,148,531			
rs17486278	15	78,867,482			
rs12459249	19	40,833,990	rs11667314	41,340,983	0.995
rs12724426	1	146,494,027	rs12753089	146,492,730	0.870

rs11591179	1	160,206,067	rs10732269	160,196,722	0.992
1:237929787:T:TCA	1	237,929,787	rs2253083	237,929,556	1.000
rs963406	2	42,355,947			
rs17034666	2	109,571,508			
rs9351637	6	67,863,782			
rs1404154	7	146,651,409			
rs626750	11	102,720,945			
rs73025192	11	127,995,904			
rs10859698	12	94,852,628			
chr12:114743533	12	114,743,533	rs569058293	114,743,533	1.000
rs11057793	12	125,230,287			
rs4775429	15	46,722,435			
rs55771535	16	72,252,097			
rs134041	22	28,056,338			
rs28986170	6	31,556,155	rs28732144	31,556,205	0.795
rs2857595	6	31,568,469			
rs114229351	6	32,648,418	rs9275205	32,657,560	0.811
rs12046746	1	221,635,207			
1:221765779:C:CA	1	221,765,779	rs11118767	221,765,928	1.000
rs3766889	1	237,941,781			
rs139215025	2	10,418,806			
rs114962105	2	119,660,943			
rs6746679	2	147,046,592			
rs28723417	3	29,431,565			
rs111793843	3	62,386,350			
rs1404098	3	98,806,782			
rs80217917	3	99,359,368			
rs11748173	5	55,922,145			
rs252746	5	77,392,117	rs414638	77,373,500	1.000
rs12513481	5	77,450,828			
rs9350408	6	22,021,373			
rs9407640	9	1,574,877	rs2153254	1,576,704	1.000
rs75159994	10	64,916,064	rs11814792	64,917,559	1.000
rs10779158	12	85,724,096			
rs180930492	15	50,555,681			
rs144296676	16	66,060,569			
rs199525	17	44,847,834			
rs916888	17	44,863,133			
rs513953	18	8,801,351			
rs1353531	19	31,846,907			
rs147472287	19	50,213,396			

n this stud

UK Biobank phenotype	UK Biobank P	Independent	Associated	Inclusion
FEV1/FVC	1.06E-47	TRUE	TRUE	Include
FEV1/FVC	4.79E-15	TRUE	TRUE	Include
FEV1/FVC	1.63E-36	TRUE	TRUE	Include
FEV1/FVC	2.84E-20	TRUE	TRUE	Include
FVC	1.64E-15	TRUE	TRUE	Include
FVC	1.89E-16	TRUE	TRUE	Include
FVC	3.95E-09	TRUE	TRUE	Include
PEF	1.41E-16	TRUE	TRUE	Include
PEF	1.38E-08	TRUE	TRUE	Include
FEV1/FVC	7.39E-07	TRUE	TRUE	Include
FEV1/FVC	5.54E-17	TRUE	TRUE	Include
FVC	2.70E-10	TRUE	TRUE	Include
FEV1/FVC	1.99E-31	TRUE	TRUE	Include
FEV1/FVC	5.88E-35	TRUE	TRUE	Include
FVC	2.35E-18	TRUE	TRUE	Include
FVC	8.21E-10	TRUE	TRUE	Include
FEV1	7.70E-19	TRUE	TRUE	Include
FEV1	2.94E-27	TRUE	TRUE	Include
FEV1/FVC	9.41E-65	TRUE	TRUE	Include
FEV1/FVC	1.66E-09	TRUE	TRUE	Include
FEV1/FVC	1.50E-49	TRUE	TRUE	Include
FEV1/FVC	2.30E-36	TRUE	TRUE	Include
FEV1/FVC	2.14E-23	TRUE	TRUE	Include
FEV1/FVC	1.28E-19	TRUE	TRUE	Include
FVC	1.16E-13	TRUE	TRUE	Include
FEV1	3.74E-22	TRUE	TRUE	Include
FEV1/FVC	9.54E-22	TRUE	TRUE	Include
FVC	2.46E-19	TRUE	TRUE	Include
FEV1/FVC	8.02E-25	TRUE	TRUE	Include
FEV1	4.27E-14	TRUE	TRUE	Include
FEV1/FVC	8.81E-09	TRUE	TRUE	Include
FEV1/FVC	1.21E-63	TRUE	TRUE	Include
FEV1/FVC	1.90E-62	TRUE	TRUE	Include
FEV1/FVC	2.28E-32	TRUE	TRUE	Include
FEV1	2.43E-41	TRUE	TRUE	Include
FEV1/FVC	7.12E-125	TRUE	TRUE	Include
FEV1/FVC	3.23E-167	TRUE	TRUE	Include
PEF	1.03E-39	TRUE	TRUE	Include
FVC	5.49E-14	TRUE	TRUE	Include
FVC	1.41E-13	TRUE	TRUE	Include
FEV1/FVC	8.85E-36	TRUE	TRUE	Include
FVC	8.49E-12	TRUE	TRUE	Include
FVC	1.30E-12	TRUE	TRUE	Include

FEV1/FVC	1.15E-27	TRUE	TRUE	Include
FEV1/FVC	2.35E-27	TRUE	TRUE	Include
FEV1/FVC	3.81E-90	TRUE	TRUE	Include
FEV1	3.02E-14	TRUE	TRUE	Include
FEV1/FVC	9.30E-28	TRUE	TRUE	Include
FEV1/FVC	1.77E-45	TRUE	TRUE	Include
FEV1/FVC	5.33E-34	TRUE	TRUE	Include
FEV1/FVC	2.14E-08	TRUE	TRUE	Include
FVC	1.53E-23	TRUE	TRUE	Include
FEV1/FVC	3.41E-32	TRUE	TRUE	Include
PEF	8.10E-45	TRUE	TRUE	Include
FEV1/FVC	8.91E-176	TRUE	TRUE	Include
FEV1/FVC	8.85E-53	TRUE	TRUE	Include
FEV1/FVC	4.27E-30	TRUE	TRUE	Include
FEV1/FVC	9.69E-47	TRUE	TRUE	Include
FEV1/FVC	8.96E-158	TRUE	TRUE	Include
FEV1/FVC	4.97E-115	TRUE	TRUE	Include
FEV1/FVC	3.66E-12	TRUE	TRUE	Include
FVC	6.14E-10	TRUE	TRUE	Include
FEV1/FVC	5.47E-10	TRUE	TRUE	Include
PEF	1.11E-26	TRUE	TRUE	Include
FVC	1.13E-09	TRUE	TRUE	Include
FEV1/FVC	9.12E-20	TRUE	TRUE	Include
FEV1/FVC	1.24E-20	TRUE	TRUE	Include
FEV1/FVC	1.86E-19	TRUE	TRUE	Include
FEV1/FVC	4.42E-20	TRUE	TRUE	Include
PEF	1.58E-25	TRUE	TRUE	Include
FVC	1.38E-16	TRUE	TRUE	Include
FVC	8.29E-09	TRUE	TRUE	Include
FEV1/FVC	1.18E-61	TRUE	TRUE	Include
PEF	6.70E-09	TRUE	TRUE	Include
FEV1	3.07E-06	TRUE	TRUE	Include
FVC	3.05E-20	TRUE	TRUE	Include
FEV1	1.82E-16	TRUE	TRUE	Include
FEV1	2.02E-30	TRUE	TRUE	Include
FEV1/FVC	3.07E-12	TRUE	TRUE	Include
FEV1/FVC	5.13E-09	TRUE	TRUE	Include
FVC	7.32E-10	TRUE	TRUE	Include
FEV1	6.42E-22	TRUE	TRUE	Include
FEV1/FVC	2.95E-15	TRUE	TRUE	Include
FEV1/FVC	3.33E-16	TRUE	TRUE	Include
PEF	4.04E-12	TRUE	TRUE	Include
FVC	5.15E-45	TRUE	TRUE	Include
FEV1	4.70E-10	TRUE	TRUE	Include
FEV1/FVC	2.06E-18	TRUE	TRUE	Include
FEV1	3.37E-11	TRUE	TRUE	Include
PEF	5.48E-13	TRUE	TRUE	Include
FEV1/FVC	1.52E-21	TRUE	TRUE	Include
FEV1/FVC	1.11E-39	TRUE	TRUE	Include
FEV1	3.20E-10	TRUE	TRUE	Include

FVC	1.85E-17	TRUE	TRUE	Include
FEV1/FVC	1.80E-22	TRUE	TRUE	Include
FEV1/FVC	7.17E-21	TRUE	TRUE	Include
FEV1	8.48E-09	TRUE	TRUE	Include
FEV1	1.89E-23	TRUE	TRUE	Include
FEV1/FVC	1.18E-18	TRUE	TRUE	Include
FEV1/FVC	3.66E-12	TRUE	TRUE	Include
FVC	9.94E-13	TRUE	TRUE	Include
FEV1/FVC	2.89E-131	TRUE	TRUE	Include
FEV1/FVC	2.49E-14	TRUE	TRUE	Include
FEV1/FVC	1.08E-26	TRUE	TRUE	Include
FEV1/FVC	4.56E-09	TRUE	TRUE	Include
FEV1/FVC	4.22E-33	TRUE	TRUE	Include
FEV1	9.41E-08	TRUE	TRUE	Include
FEV1/FVC	3.60E-50	TRUE	TRUE	Include
FEV1/FVC	4.77E-37	TRUE	TRUE	Include
FVC	1.45E-13	TRUE	TRUE	Include
FEV1/FVC	1.74E-23	TRUE	TRUE	Include
FVC	2.52E-06	TRUE	TRUE	Include
FEV1	1.99E-46	TRUE	TRUE	Include
FVC	3.60E-07	TRUE	TRUE	Include
FEV1	1.40E-21	TRUE	TRUE	Include
FEV1	2.80E-09	TRUE	TRUE	Include
FEV1	4.74E-22	TRUE	TRUE	Include
FEV1	1.19E-11	TRUE	TRUE	Include
FVC	1.69E-06	TRUE	TRUE	Include
FEV1/FVC	4.65E-25	TRUE	TRUE	Include
FEV1/FVC	2.66E-34	TRUE	TRUE	Include
FVC	4.09E-26	TRUE	TRUE	Include
FEV1	1.20E-10	TRUE	TRUE	Include
FEV1/FVC	4.06E-09	TRUE	TRUE	Include
FVC	1.42E-20	TRUE	TRUE	Include
FVC	1.59E-13	TRUE	TRUE	Include
FVC	3.86E-28	TRUE	TRUE	Include
FEV1/FVC	1.59E-19	TRUE	TRUE	Include
FEV1	1.94E-22	TRUE	TRUE	Include
FEV1/FVC	2.08E-07	TRUE	TRUE	Include
FEV1/FVC	6.82E-18	TRUE	TRUE	Include
FVC	9.80E-05	TRUE	TRUE	Include
FEV1/FVC	7.94E-05	TRUE	TRUE	Include
FVC	3.17E-05	TRUE	TRUE	Include
FEV1	2.67E-05	TRUE	TRUE	Include
FEV1	1.29E-05	TRUE	TRUE	Include
FVC	1.39E-04	TRUE	TRUE	Include
FEV1	1.34E-05	TRUE	TRUE	Include
FVC	3.25E-05	TRUE	TRUE	Include
FEV1	1.02E-05	TRUE	TRUE	Include
FEV1	4.10E-15	TRUE	TRUE	Exclude
FEV1	6.10E-04	TRUE	TRUE	Exclude
PEF	2.74E-02	TRUE	FALSE	Exclude

New sentinel for previously reported signal

Reason	Nearest gene	Genomic feature	Phenotype	rsid
directly associated	MFAP2	upstream	FEV1/FVC	rs9435733
directly associated	PPIEL	ncRNA_intronic	FEV1/FVC	rs755249
directly associated	CDC7(dist=85776),1	intergenic	FEV1/FVC	rs1192415
directly associated	TGFBR3(dist=9924)	intergenic	FEV1/FVC	rs11165787
directly associated	SPAG17(dist=18344)	intergenic	FVC	rs35043843
directly associated	MCL1(NM_182763):UTR3		FVC	rs878471
directly associated	NR5A2	intronic	FVC	rs2816992
directly associated	PIK3C2B	intronic	PEF	rs1008833
directly associated	MIR548F3	ncRNA_intronic	PEF	rs6604614
directly associated	MIR548F3	ncRNA_intronic	FEV1	rs28613267
directly associated	LYPLAL1(dist=4675)	intergenic	FEV1/FVC	rs1338227
directly associated	C1orf140(dist=122)	intergenic	FVC	rs12757436
directly associated	CHRM3	intronic	PEF	rs2355237
directly associated	KCNS3(dist=173398)	intergenic	FEV1/FVC	rs55884799
directly associated	EFEMP1	intronic	FVC	rs3791679
directly associated	CCNT2-AS1	ncRNA_intronic	FVC	rs62168891
directly associated	LOC101929378	ncRNA_intronic	FEV1	rs72902177
directly associated	TNS1	exonic	FEV1	rs2571445
directly associated	SPHKAP(dist=4558)	intergenic	FEV1/FVC	rs62201738
directly associated	LINC01107	ncRNA_intronic	FEV1	rs6710301
directly associated	FLJ43879(dist=333)	intergenic	FEV1/FVC	rs4308141
directly associated	RARB	intronic	FEV1/FVC	rs1529672
directly associated	RBMS3	intronic	FEV1/FVC	rs17666332
directly associated	CACNA2D3(dist=43)	intergenic	FEV1/FVC	rs12715478
directly associated	SUCLG2	intronic	FEV1	rs4132748
directly associated	DCBLD2(dist=2015)	intergenic	FVC	rs12497779
directly associated	EEFSEC	intronic	FEV1/FVC	rs2999090
directly associated	RSRC1	intronic	FVC	rs12634907
directly associated	LOC100507661(dist=)	intergenic	FEV1	rs879394
directly associated	MECOM	intronic	FEV1	rs78101726
directly associated	AFAP1	intronic	FEV1/FVC	rs62289340
directly associated	FAM13A	intronic	FEV1/FVC	rs2609279
directly associated	FAM13A	intronic	FEV1/FVC	rs2869966
directly associated	TET2-AS1	ncRNA_intronic	FEV1/FVC	rs6533183
directly associated	GSTCD	intronic	FEV1	rs11722225
directly associated	NPNT	intronic	FEV1/FVC	rs34712979
directly associated	GYP A(dist=444552)	intergenic	FEV1/FVC	rs13141641
directly associated	HHIP(dist=81017),A	intergenic	PEF	rs2353940
directly associated	LOC340113(dist=39)	intergenic	FVC	rs268717
directly associated	FGF10	intronic	FVC	rs6859730
directly associated	ITGA1	intronic	FEV1/FVC	rs12522114
directly associated	ARL15	intronic	FVC	rs2441026
directly associated	AP3B1	intronic	FVC	rs425102

directly associated	SPATA9(dist=6432), intergenic		FEV1/FVC	rs987068
directly associated	CSF2(dist=54766), P	intergenic	FVC	rs3843503
directly associated	HTR4	intronic	FEV1/FVC	rs7733410
directly associated	AFAP1L1	intronic	FEV1	rs11952673
directly associated	ADAM19	intronic	FEV1/FVC	rs11134766
directly associated	ADAM19	intronic	FEV1/FVC	rs11134789
directly associated	LY86(dist=86716), R	intergenic	FEV1/FVC	rs1294417
directly associated	DSP	intronic	FEV1/FVC	rs2076295
directly associated	BMP6	intronic	FVC	rs10498672
directly associated	CASC15	ncRNA_intronic	FEV1/FVC	rs13198081
directly associated	ZSCAN31	intronic	PEF	rs7752448
directly associated	AGER	exonic	FEV1/FVC	rs2070600
directly associated	HLA-DQB1	intronic	FEV1/FVC	rs9274247
directly associated	KCNQ5	intronic	FEV1/FVC	rs13206405
directly associated	ARMC2	intronic	FEV1/FVC	rs2798641
directly associated	GPR126	intronic	FEV1/FVC	rs7753012
directly associated	GPR126	exonic	FEV1/FVC	rs17280293
directly associated	C1GALT1	intronic	FEV1/FVC	rs4318980
directly associated	AGMO	intronic	FVC	rs4721442
directly associated	MCM7	intronic	FEV1/FVC	rs2261360
directly associated	LOC389602(dist=36)	intergenic	FEV1	rs12698403
directly associated	DMRT2(dist=51138)	intergenic	FVC	rs771662
directly associated	GLIS3	intronic	FEV1/FVC	rs1570203
directly associated	LOC101929563	ncRNA_intronic	FEV1/FVC	rs1107677
directly associated	PTCH1	intronic	FEV1/FVC	rs28446321
directly associated	LINC01505(dist=41)	intergenic	FEV1/FVC	rs1491106
directly associated	ASTN2	intronic	FEV1/FVC	rs10983184
directly associated	QSOX2(NM_18170: UTR3		FVC	rs7024579
directly associated	CARD9	intronic	FVC	rs4073153
directly associated	CDC123	intronic	FEV1/FVC	rs7090277
directly associated	SVIL(dist=244040), I	intergenic	PEF	rs7914842
directly associated	JMJD1C	intronic	FEV1	rs7082066
directly associated	MYPN	intronic	FVC	rs10998018
directly associated	CAMK2G	intronic	FEV1	rs7098573
directly associated	C10orf11	intronic	FEV1	rs2637254
directly associated	SFTPD	exonic	FEV1/FVC	rs721917
directly associated	HTRA1(dist=23213)	intergenic	FEV1/FVC	rs4279944
directly associated	MIR129-2(dist=876)	intergenic	FVC	rs17596617
directly associated	EML3	intronic	FEV1	rs71490394
directly associated	ARHGEF17	intronic	FEV1/FVC	rs2027761
directly associated	ME3(dist=65161), P	intergenic	FEV1/FVC	rs11234768
directly associated	CDON(dist=76313),	intergenic	FEV1/FVC	rs541601
directly associated	CCDC91	intronic	FVC	rs7977418
directly associated	SUOX	intronic	FEV1	rs1689510
directly associated	LRP1	intronic	FEV1/FVC	rs11172113
directly associated	MSRB3	intronic	FEV1	rs12825748
directly associated	ALX1(dist=24345), R	intergenic	PEF	rs56390486
directly associated	FGD6	intronic	FEV1/FVC	rs113745635
directly associated	NTN4(dist=57573), †	intergenic	FEV1/FVC	rs7970544
directly associated	TBX3(dist=79467), ‡	intergenic	FEV1	rs10850377

directly associated	TBX3(dist=379158), intergenic	FVC	rs35505
directly associated	BMP4 intronic	FEV1/FVC	rs35107139
directly associated	NONE(dist=NONE), intergenic	FEV1/FVC	rs1756281
directly associated	TRIP11(dist=5740), intergenic	FEV1	rs11160037
directly associated	RIN3 intronic	FVC	rs11621587
directly associated	RPAP1(dist=3763), intergenic	FEV1/FVC	rs2012453
directly associated	MGA intronic	FEV1/FVC	rs56383987
directly associated	SMAD3(dist=3741), intergenic	FVC	rs12917612
directly associated	THSD4 intronic	FEV1/FVC	rs1441358
directly associated	THSD4 intronic	FEV1	rs62015883
directly associated	SH3GL3 intronic	FEV1/FVC	rs1896797
directly associated	TEKT5 intronic	FEV1/FVC	rs78442819
directly associated	MMP15 intronic	FEV1/FVC	rs11648508
directly associated	WWP2 intronic	FEV1	rs8047194
directly associated	CFDP1 intronic	FEV1/FVC	rs11858992
directly associated	SSH2 intronic	FEV1/FVC	rs2244592
directly associated	ATAD5 intronic	FVC	rs62070648
directly associated	PSMB3 intronic	FEV1/FVC	rs35246838
directly associated	FBXL20 intronic	FVC	rs8069451
directly associated	MAPT-AS1 ncRNA_intronic	FEV1	rs79412431
directly associated	KCNJ2(dist=800232) intergenic	FVC	rs6501431
directly associated	CASC17(dist=3491), intergenic	FEV1	rs6501455
directly associated	LLGL2 intronic	FEV1	rs9892893
directly associated	MTCL1 intronic	FEV1	rs513953
directly associated	RBBP8(dist=101872) intergenic	FEV1	rs9947743
directly associated	DCC intronic	FVC	rs12607758
directly associated	TSHZ3 intronic	FEV1/FVC	rs9636166
directly associated	LTBP4 exonic	FEV1/FVC	rs34093919
directly associated	CASC20(dist=11711) intergenic	FVC	rs2145272
directly associated	ABHD12 intronic	FEV1	rs2236180
directly associated	POFUT1(dist=3250) intergenic	FEV1/FVC	rs4413223
directly associated	GDF5(NM_000557: UTR5	FVC	rs143384
directly associated	SLC2A10(dist=1218) intergenic	FVC	rs12481092
directly associated	SLC2A4RG intronic	FVC	rs4809221
directly associated	LINC00310(dist=11: intergenic	FEV1/FVC	rs62213732
directly associated	MICAL3 intronic	FEV1	rs1978968
directly associated	SCARF2 intronic	FEV1	rs9610955
directly associated	MN1 intronic	FEV1/FVC	rs2283847
associated proxy found	CENPF(dist=282682) intergenic	FVC	rs556648
associated proxy found	SLMAP intronic	FEV1	rs6445932
associated proxy found	MIR588(dist=18453) intergenic	FVC	rs6918725
associated proxy found	ZNF503-AS1 ncRNA_intronic	FVC	rs1259605
associated proxy found	PRDM11 intronic	FEV1	rs10838435
associated proxy found	CRADD intronic	FVC	rs9788269
associated proxy found	TUFM(dist=13233), intergenic	FEV1	rs12446589
associated proxy found	WVOX intronic	FEV1	rs2345443
associated proxy found	CTAGE1(dist=23645) intergenic	FEV1	rs11082051
smoking signal			
smoking signal			
no associated proxy			

Chromosome	Position (b37)	Prev.r2	coded	noncoded	meta.N	meta.coded.freq	meta.MAF
1	17,308,254	0.989	T	C	404,128	48.1%	48.1%
1	39,995,074	0.951	T	C	404,128	23.3%	23.3%
1	92,077,097	0.774	G	A	396,686	18.8%	18.8%
1	92,381,483	0.995	A	G	396,684	68.8%	31.2%
1	118,911,295	0.857	T	G	396,470	75.6%	24.4%
1	150,547,747	0.701	G	A	396,468	42.0%	42.0%
1	200,069,216	0.805	A	G	396,470	58.8%	41.2%
1	204,426,295	0.757	A	G	345,265	85.6%	14.4%
1	218,631,452	0.893	C	G	345,265	71.6%	28.4%
1	218,855,029	0.501	C	G	395,850	51.1%	48.9%
1	219,853,742	0.623	G	T	396,685	42.2%	42.2%
1	221,631,938	0.758	A	G	395,598	33.5%	33.5%
1	239,857,524	0.846	A	G	345,265	51.2%	48.8%
2	18,287,623	0.624	T	C	404,126	82.7%	17.3%
2	56,096,892	0.329	A	G	396,470	77.2%	22.8%
2	135,672,187	0.221	C	T	395,597	59.7%	40.3%
2	157,016,257	0.990	C	T	395,850	86.5%	13.5%
2	218,683,154	1.000	A	G	396,723	39.7%	39.7%
2	229,502,197	0.990	A	C	396,684	92.2%	7.8%
2	239,441,308	0.566	A	C	396,723	14.9%	14.9%
2	239,881,309	0.985	C	G	396,686	80.1%	19.9%
3	25,520,582	0.964	C	A	403,257	82.6%	17.4%
3	29,469,675	1.000	T	G	404,128	72.4%	27.6%
3	55,152,319	0.689	A	G	396,685	59.4%	40.6%
3	67,455,803	0.948	T	C	395,850	30.6%	30.6%
3	98,822,050	0.572	G	T	396,468	76.7%	23.3%
3	127,931,340	0.674	A	G	396,685	88.1%	11.9%
3	158,226,886	0.549	A	G	396,470	65.6%	34.4%
3	168,709,843	0.295	G	T	396,722	76.5%	23.5%
3	169,295,436	0.669	A	G	395,851	84.6%	15.4%
4	7,879,027	0.599	C	T	404,127	56.4%	43.6%
4	89,855,495	0.761	T	C	396,686	21.4%	21.4%
4	89,869,078	0.989	T	C	396,686	40.7%	40.7%
4	106,133,184	0.898	T	C	396,686	65.4%	34.6%
4	106,766,430	0.957	T	C	396,722	93.3%	6.7%
4	106,819,053	1.000	G	A	395,813	74.3%	25.7%
4	145,506,456	0.896	T	C	396,685	60.2%	39.8%
4	145,740,898	0.885	T	C	345,265	74.5%	25.5%
5	33,352,738	0.964	T	C	403,912	90.7%	9.3%
5	44,367,221	0.943	A	T	403,041	32.8%	32.8%
5	52,187,038	0.669	A	C	395,814	26.5%	26.5%
5	53,444,498	1.000	C	T	396,470	53.8%	46.2%
5	77,396,400	0.888	T	G	396,470	76.0%	24.0%

5	95,025,146	0.532	G	C	396,685	31.2%	31.2%
5	131,466,629	0.139	T	A	395,597	55.1%	44.9%
5	147,856,522	0.809	G	A	395,813	55.9%	44.1%
5	148,652,302	0.591	T	G	395,851	39.9%	39.9%
5	156,908,317	0.789	T	C	395,815	6.4%	6.4%
5	156,944,199	0.319	C	A	395,815	65.9%	34.1%
6	6,741,932	0.755	T	C	404,128	45.8%	45.8%
6	7,563,232	0.500	T	G	404,128	55.0%	45.1%
6	7,797,840	0.814	C	G	403,912	82.3%	17.7%
6	22,017,543	0.530	G	C	404,128	64.7%	35.3%
6	28,301,099	0.646	A	G	345,265	87.3%	12.7%
6	32,151,443	1.000	T	C	392,848	6.3%	6.3%
6	32,631,295	0.606	A	G	383,776	32.0%	32.0%
6	73,663,814	1.000	C	A	396,685	79.9%	20.1%
6	109,268,050	0.954	C	T	396,686	81.7%	18.3%
6	142,745,883	1.000	T	G	395,815	69.5%	30.5%
6	142,688,969	0.922	A	G	396,686	97.3%	2.7%
7	7,256,490	0.929	A	G	404,128	41.5%	41.5%
7	15,506,007	0.995	T	G	403,911	83.4%	16.6%
7	99,692,993	0.638	T	G	396,686	23.2%	23.2%
7	156,127,246	1.000	G	A	396,721	55.8%	44.2%
9	1,568,941	0.591	T	C	403,912	34.9%	34.9%
9	4,120,648	0.740	G	A	404,127	47.1%	47.1%
9	23,587,027	0.895	T	C	404,126	48.5%	48.5%
9	98,266,855	0.499	T	A	396,685	90.9%	9.1%
9	109,483,517	0.538	T	G	396,686	37.6%	37.6%
9	119,234,058	0.228	C	T	395,815	36.0%	36.0%
9	139,100,413	0.977	C	T	396,470	68.5%	31.5%
9	139,259,349	0.699	A	G	395,597	56.1%	43.9%
10	12,278,021	1.000	T	A	404,128	48.3%	48.3%
10	30,268,770	0.971	A	G	345,265	58.4%	41.6%
10	64,998,971	0.674	A	G	396,722	18.5%	18.5%
10	69,962,954	0.995	A	G	396,469	49.7%	49.7%
10	75,580,014	0.960	G	A	396,721	28.2%	28.2%
10	78,312,002	1.000	G	A	396,723	48.9%	48.9%
10	81,706,324	0.703	A	G	396,686	58.1%	41.9%
10	124,297,637	0.814	T	C	395,813	15.1%	15.1%
11	43,690,717	0.947	C	T	403,912	68.3%	31.7%
11	62,370,155	0.876	G	A	396,721	63.2%	36.8%
11	73,036,179	0.757	C	T	396,684	88.7%	11.3%
11	86,448,839	0.933	T	C	396,684	84.6%	15.4%
11	126,009,500	0.673	T	C	396,686	18.3%	18.3%
12	28,588,242	0.889	T	C	403,040	54.2%	45.9%
12	56,396,768	0.921	C	G	396,721	33.7%	33.7%
12	57,527,283	1.000	T	C	396,686	58.9%	41.1%
12	65,793,153	0.745	G	C	396,721	69.2%	30.8%
12	85,719,906	1.000	A	G	345,265	29.1%	29.1%
12	95,554,771	1.000	T	C	396,685	21.7%	21.7%
12	96,242,109	0.842	T	G	396,686	18.7%	18.7%
12	115,201,436	1.000	G	A	396,722	65.9%	34.1%

12	115,501,127	0.873	A	G	396,468	68.6%	31.4%
14	54,419,106	0.701	A	C	403,255	59.6%	40.4%
14	84,338,431	0.975	A	G	396,685	69.9%	30.1%
14	92,512,143	0.918	A	G	396,722	62.1%	37.9%
14	93,098,339	0.948	G	C	396,469	81.8%	18.2%
15	41,840,238	0.655	A	G	404,128	41.1%	41.1%
15	41,953,211	0.954	T	C	403,257	5.5%	5.5%
15	67,491,274	0.954	C	A	403,912	77.0%	23.0%
15	71,612,514	0.960	T	G	404,126	66.4%	33.6%
15	71,803,450	0.428	C	T	403,294	82.2%	17.8%
15	84,274,591	0.185	G	A	396,686	51.0%	49.0%
16	10,740,982	0.290	G	C	403,255	80.1%	19.9%
16	58,063,513	0.553	G	T	404,128	31.7%	31.7%
16	69,891,510	0.200	G	T	396,722	50.4%	49.6%
16	75,411,445	0.958	A	C	396,685	40.4%	40.4%
17	28,072,327	0.813	A	G	403,256	45.3%	45.3%
17	29,210,595	0.509	A	G	403,912	27.0%	27.0%
17	36,915,540	0.519	T	C	404,127	86.8%	13.2%
17	37,504,933	0.508	T	C	403,911	74.9%	25.1%
17	43,940,021	0.991	G	A	391,506	78.3%	21.7%
17	68,976,415	1.000	T	C	396,469	78.4%	21.6%
17	69,201,811	0.436	A	G	396,723	50.1%	49.8%
17	73,525,670	0.757	T	G	395,850	26.1%	26.1%
18	8,801,351	0.847	A	G	404,164	25.4%	25.4%
18	20,708,321	0.870	A	G	404,163	78.7%	21.3%
18	51,022,606	0.796	T	C	403,910	59.3%	40.7%
19	31,829,613	1.000	A	C	403,256	87.4%	12.6%
19	41,117,300	0.946	G	A	404,127	98.7%	1.3%
20	6,626,218	0.993	A	G	403,911	63.8%	36.2%
20	25,282,608	0.930	T	C	404,165	81.5%	18.5%
20	30,858,967	0.726	A	G	404,126	17.2%	17.2%
20	34,025,756	0.784	A	G	403,039	59.6%	40.4%
20	45,486,817	0.163	C	T	403,910	72.8%	27.2%
20	62,372,706	0.994	G	A	396,470	32.5%	32.5%
21	35,675,966	0.849	C	T	404,127	36.9%	36.9%
22	18,448,113	0.986	C	T	404,163	76.3%	23.7%
22	20,790,723	0.491	C	G	403,292	19.7%	19.7%
22	28,181,399	1.000	T	C	404,128	55.7%	44.3%
1	215,120,596	0.744	A	G	395,597	21.7%	21.7%
3	57,879,611	0.177	T	G	396,723	75.2%	24.8%
6	126,990,392	0.239	T	G	396,469	48.1%	48.1%
10	77,119,039	0.505	T	C	396,468	75.2%	24.8%
11	45,244,903	0.547	C	G	404,163	14.4%	14.4%
12	94,194,890	0.719	A	G	396,469	73.2%	26.8%
16	28,870,962	0.549	A	G	404,164	40.0%	40.0%
16	78,225,633	0.137	A	G	395,850	31.1%	31.1%
18	20,234,336	0.926	A	G	404,164	53.0%	47.0%

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meta.BETA	meta.SE	meta.P
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-0.0440	0.0030	2.28E-47
0.0245	0.0026	1.63E-21
-0.0238	0.0027	4.12E-18
0.0278	0.0024	1.50E-31
-0.0164	0.0024	7.33E-12
-0.0324	0.0036	1.50E-19
-0.0156	0.0028	2.13E-08
0.0168	0.0023	9.19E-13
-0.0245	0.0024	3.92E-24
0.0159	0.0025	1.76E-10
0.0290	0.0025	9.42E-31
-0.0415	0.0031	4.02E-40
0.0344	0.0028	7.19E-35
-0.0186	0.0024	1.08E-14
0.0335	0.0034	1.76E-22
-0.0285	0.0024	7.24E-33
-0.0743	0.0044	9.45E-63
0.0235	0.0033	8.51E-13
-0.0484	0.0030	3.58E-59
-0.0423	0.0031	1.73E-41
0.0267	0.0027	9.22E-24
0.0250	0.0024	1.35E-24
-0.0205	0.0026	1.18E-15
0.0319	0.0028	1.85E-30
-0.0433	0.0037	6.76E-32
0.0262	0.0025	2.83E-26
0.0289	0.0028	1.36E-25
0.0334	0.0032	7.72E-25
-0.0167	0.0024	2.36E-12
0.0537	0.0029	2.08E-76
-0.0415	0.0024	5.78E-66
-0.0297	0.0025	2.60E-32
-0.0729	0.0047	2.43E-54
0.0682	0.0028	4.18E-134
-0.0704	0.0024	3.65E-184
0.0384	0.0029	5.11E-40
-0.0340	0.0040	3.23E-17
0.0206	0.0025	8.76E-17
-0.0367	0.0027	1.47E-41
-0.0177	0.0024	7.79E-14
0.0209	0.0028	2.78E-14

0.0296	0.0026	1.46E-30
0.0187	0.0024	7.02E-15
-0.0505	0.0024	1.56E-96
-0.0186	0.0024	1.35E-14
-0.0628	0.0049	8.04E-38
0.0408	0.0025	3.06E-59
-0.0311	0.0024	3.93E-39
-0.0234	0.0024	6.95E-23
0.0352	0.0030	7.50E-31
-0.0297	0.0025	3.07E-33
0.0553	0.0038	1.21E-48
0.1452	0.0049	3.00E-189
-0.0469	0.0030	9.79E-57
-0.0344	0.0030	4.67E-31
0.0450	0.0031	3.89E-48
-0.0712	0.0026	4.71E-165
-0.1803	0.0074	2.34E-131
-0.0172	0.0024	9.08E-13
0.0215	0.0031	7.21E-12
0.0219	0.0028	8.74E-15
0.0274	0.0024	6.42E-31
-0.0158	0.0025	1.08E-10
-0.0246	0.0024	5.78E-25
0.0219	0.0024	3.88E-20
0.0523	0.0042	4.72E-36
0.0245	0.0025	2.81E-23
-0.0273	0.0025	9.05E-28
0.0233	0.0025	4.48E-20
0.0138	0.0024	8.64E-09
-0.0409	0.0024	3.97E-67
0.0165	0.0026	1.02E-10
0.0221	0.0030	2.20E-13
-0.0224	0.0024	2.43E-21
0.0246	0.0026	2.75E-21
0.0285	0.0023	3.91E-34
0.0193	0.0024	1.65E-15
0.0218	0.0034	2.18E-10
0.0197	0.0025	3.58E-15
-0.0264	0.0024	1.66E-27
-0.0369	0.0038	1.31E-22
0.0303	0.0033	5.07E-20
-0.0241	0.0031	5.29E-15
0.0379	0.0023	9.57E-59
-0.0153	0.0025	5.57E-10
-0.0227	0.0024	7.04E-21
-0.0198	0.0025	6.27E-15
0.0196	0.0028	1.72E-12
-0.0275	0.0029	2.36E-21
0.0439	0.0031	1.45E-46
-0.0195	0.0025	4.02E-15

0.0223	0.0025	1.92E-18
0.0315	0.0025	3.40E-36
0.0237	0.0026	1.38E-19
-0.0175	0.0024	4.69E-13
-0.0363	0.0031	1.39E-32
0.0239	0.0024	4.26E-23
-0.0364	0.0053	7.08E-12
0.0228	0.0028	2.04E-16
0.0642	0.0025	4.12E-145
0.0206	0.0030	1.16E-11
-0.0292	0.0024	2.48E-34
0.0355	0.0031	2.25E-31
-0.0332	0.0026	9.86E-39
0.0208	0.0023	6.70E-19
0.0380	0.0024	4.83E-55
-0.0323	0.0024	4.60E-42
0.0206	0.0026	5.28E-15
0.0386	0.0036	1.41E-27
0.0202	0.0027	7.29E-14
0.0426	0.0029	3.10E-49
0.0174	0.0029	1.12E-09
0.0296	0.0023	1.28E-36
0.0198	0.0027	2.08E-13
-0.0273	0.0027	1.24E-24
-0.0202	0.0028	1.24E-12
0.0134	0.0024	1.78E-08
0.0355	0.0036	3.66E-23
-0.1535	0.0106	1.69E-47
0.0259	0.0024	1.42E-26
0.0213	0.0030	1.02E-12
-0.0232	0.0031	1.30E-13
0.0239	0.0024	1.03E-23
-0.0257	0.0026	1.56E-22
0.0291	0.0025	5.81E-31
-0.0246	0.0025	9.34E-24
-0.0293	0.0027	9.09E-27
-0.0192	0.0029	6.94E-11
-0.0219	0.0024	3.62E-19
0.0147	0.0029	3.12E-07
-0.0287	0.0027	3.82E-26
-0.0211	0.0024	4.73E-19
-0.0119	0.0027	1.19E-05
0.0211	0.0033	1.46E-10
-0.0135	0.0027	3.97E-07
-0.0131	0.0024	2.76E-08
0.0221	0.0025	3.03E-18
0.0128	0.0023	3.66E-08

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Supplementary Table 9: Results for 279 lung function signals for all 4 traits

Green indicates the trait for which the signal is reported

Nearest gene	Location	Reported trait	Other traits	Novel tier/previous	rsid	Chrom.
<i>PHF13</i>	intronic	FEV1/FVC	PEF	tier 1	rs9661802	1
<i>MIR4418</i>	intergenic	FEV1	FVC	tier 1	rs12737805	1
<i>DHDDS</i>	intronic	FVC	FEV1	tier 2	rs9438626	1
<i>DHDDS</i>	UTR3	FEV1		tier 1	rs12096239	1
<i>FAF1</i>	intronic	FEV1/FVC	FEV1,PEF	tier 1	rs1416685	1
<i>LOC101926964</i>	intergenic	FEV1/FVC		tier 1	rs72673461	1
<i>NEXN</i>	intronic	FEV1/FVC		tier 1	rs9661687	1
<i>TGFBR3</i>	intergenic	FEV1/FVC		tier 1	rs10874851	1
<i>DENND2D</i>	intronic	FEV1/FVC	FEV1	tier 1	rs9970286	1
<i>C1orf54</i>	intronic	PEF		tier 1	rs11205354	1
<i>KRTCAP2</i>	intergenic	FEV1/FVC		tier 1	rs141942982	1
<i>RALGPS2</i>	intronic	FEV1	FVC	tier 1	rs4651005	1
<i>MIR548F1</i>	ncRNA_intronic	FVC	FEV1/FVC	tier 1	rs2146098	1
<i>MIR548F1</i>	ncRNA_intronic	FEV1/FVC		tier 1	rs17531405	1
<i>MIR181A1HG</i>	ncRNA_intronic	FEV1/FVC		tier 1	rs10919604	1
<i>LMOD1</i>	intronic	FEV1/FVC		tier 2	rs4309038	1
<i>TGFB2</i>	intronic	FEV1/FVC		tier 1	rs2799098	1
<i>LYPLAL1</i>	intergenic	FEV1/FVC		tier 1	rs75128958	1
<i>HLX</i>	intergenic	FVC	FEV1	tier 1	rs17009288	1
<i>LOC101926966</i>	intergenic	FEV1/FVC	FEV1,PEF	tier 1	rs2544536	2
<i>RDH14</i>	intergenic	FVC	FEV1,PEF	tier 1	rs6751968	2
<i>RDH14</i>	intergenic	FVC	FEV1	tier 1	rs13430465	2
<i>ATAD2B</i>	intronic	FVC	FEV1	tier 2	rs13009582	2
<i>CIB4</i>	intronic	FVC		tier 2	rs732990	2
<i>PKDCC</i>	intergenic	FVC	FEV1	tier 1	rs4952564	2
<i>IL1RL1</i>	intergenic	FEV1/FVC		tier 1	rs12470864	2
<i>TEX41</i>	ncRNA_intronic	FEV1/FVC		tier 1	rs1406225	2
<i>RBMS1</i>	intronic	FEV1	PEF	tier 1	rs7424771	2
<i>MIR548N</i>	ncRNA_intronic	FEV1	FVC	tier 2	rs2304340	2
<i>ITGAV</i>	intronic	FEV1/FVC		tier 1	rs2084448	2
<i>SATB2</i>	intergenic	FVC	FEV1	tier 1	rs1249096	2
<i>SPATS2L</i>	intronic	FEV1/FVC		tier 2	rs985256	2
<i>KIAA2012</i>	intronic	FVC		tier 2	rs12997625	2
<i>IGFBP5</i>	intergenic	FEV1/FVC	FEV1	tier 1	rs6435952	2
<i>DIRC3</i>	ncRNA_intronic	FEV1	FVC	tier 2	rs4294980	2
<i>ASIC4</i>	intronic	FVC		tier 2	rs4674407	2
<i>LINC01107</i>	intergenic	FVC	FEV1	tier 2	rs6431620	2
<i>C2orf54</i>	intergenic	FVC		tier 1	rs6437219	2
<i>BOK-AS1</i>	ncRNA_intronic	FVC	FEV1	tier 1	rs6733504	2
<i>LINC00620</i>	ncRNA_intronic	FEV1	FVC	tier 2	rs2974389	3
<i>RARB</i>	intergenic	FVC		tier 2	rs73048404	3
<i>FOXP1</i>	intronic	FVC	FEV1	tier 1	rs35480566	3
<i>PDZRN3-AS1</i>	intergenic	FEV1/FVC		tier 1	rs586936	3
<i>MIR548G</i>	ncRNA_intronic	FVC	FEV1	tier 1	rs1610265	3

<i>BCHE</i>	exonic	FEV1/FVC		tier 1	rs1799807	3
<i>IGF2BP2</i>	intronic	FEV1	PEF	tier 1	rs6780171	3
<i>KDR</i>	intergenic	FEV1		tier 2	rs12331869	4
<i>BTC</i>	intronic	FEV1/FVC	FEV1	tier 1	rs62316310	4
<i>FRAS1</i>	intronic	FEV1/FVC		tier 1	rs11098196	4
<i>HHIP-AS1</i>	intergenic	FVC	FEV1	tier 1	rs13109426	4
<i>HHIP-AS1</i>	intergenic	PEF	FEV1,FVC,	tier 1	rs13116999	4
<i>LOC100996325</i>	ncRNA_intronic	FEV1	FEV1/FVC	tier 1	rs11739847	5
<i>NNT</i>	intergenic	FEV1	FVC,PEF	tier 1	rs4866846	5
<i>LOX</i>	intronic	FEV1/FVC		tier 1	rs10059661	5
<i>ADAMTS19-AS1</i>	intergenic	FEV1/FVC	FEV1	tier 1	rs17163397	5
<i>ADRB2</i>	exonic	FEV1	FEV1/FVC,	tier 1	rs1800888	5
<i>FGF18</i>	intergenic	FEV1/FVC		tier 1	rs10059996	5
<i>RASGEF1C</i>	intronic	FEV1/FVC	PEF	tier 1	rs79898473	5
<i>BMP6</i>	intergenic	FVC	FEV1	tier 1	rs12198986	6
<i>HMGA1</i>	intergenic	FVC	FEV1	tier 1	rs9689096	6
<i>CDC5L</i>	intergenic	FVC		tier 2	rs9357446	6
<i>RUNX2</i>	intergenic	FEV1/FVC		tier 1	rs12202314	6
<i>RUNX2</i>	intergenic	FVC		tier 2	rs9472541	6
<i>RNU6-71P</i>	ncRNA_intronic	FEV1	FEV1/FVC,	tier 1	rs2894837	6
<i>SLC2A12</i>	intronic	FEV1		tier 2	rs2627237	6
<i>LOC100507477</i>	intergenic	FEV1	FEV1/FVC,	tier 1	rs1102077	6
<i>VTA1</i>	intergenic	FEV1	FVC,FEV1,	tier 1	rs9385988	6
<i>MEOX2-AS1</i>	intergenic	FEV1/FVC		tier 1	rs4721457	7
<i>SKAP2</i>	intronic	FEV1		tier 1	rs559233	7
<i>HOXA-AS3</i>	ncRNA_intronic	FVC		tier 2	rs62454414	7
<i>JAZF1</i>	intronic	FEV1	FVC,PEF	tier 1	rs1513272	7
<i>IGFBP3</i>	intergenic	FVC	FEV1	tier 1	rs17232687	7
<i>SEMA3D</i>	intergenic	FEV1	FVC,PEF	tier 1	rs12707691	7
<i>MET</i>	intronic	FEV1/FVC		tier 2	rs193686	7
<i>PPP1R3B</i>	intergenic	FEV1/FVC		tier 1	rs330939	8
<i>DEFB136</i>	intergenic	FEV1	FEV1/FVC	tier 2	rs4128298	8
<i>LOC100505739</i>	intergenic	FEV1	FEV1/FVC	tier 1	rs7465401	8
<i>BOP1</i>	intronic	FVC	FEV1	tier 1	rs7838717	8
<i>SH3GL2</i>	intergenic	FEV1	FVC	tier 1	rs7041139	9
<i>LOC158434</i>	upstream	FEV1/FVC	FEV1	tier 1	rs72743974	9
<i>GALNT12</i>	intergenic	FEV1/FVC		tier 1	rs57649467	9
<i>IER5L</i>	intergenic	FEV1		tier 2	rs967497	9
<i>PARD3</i>	intronic	FEV1/FVC		tier 1	rs1274475	10
<i>CAMK2G</i>	intergenic	PEF	FEV1,FEV1,	tier 2	rs60820984	10
<i>OBFC1</i>	UTR3	FEV1		tier 1	rs11191841	10
<i>SLC1A2</i>	intronic	FEV1/FVC		tier 2	rs10836366	11
<i>FKBP4</i>	exonic	FVC	FEV1	tier 1	rs56196860	12
<i>CCND2-AS1</i>	intergenic	FEV1		tier 2	rs12811814	12
<i>AEBP2</i>	intergenic	FEV1/FVC		tier 1	rs10841302	12
<i>RASSF3</i>	intronic	FEV1/FVC		tier 2	rs1244869	12
<i>MIR6074</i>	intergenic	FEV1	FVC,PEF	tier 1	rs11176001	12
<i>IGF1</i>	intronic	PEF	FEV1	tier 1	rs972936	12
<i>TBX5</i>	intergenic	FEV1	FEV1/FVC,	tier 1	rs2701110	12
<i>MIR8079</i>	intergenic	FEV1/FVC		tier 1	rs9533803	13

<i>DLEU1</i>	ncRNA_intronic	FEV1	FVC	tier 1	rs28122208	13
<i>LINC00348</i>	ncRNA_intronic	FVC	FEV1	tier 1	rs803765	13
<i>LINC00382</i>	ncRNA_intronic	FEV1	FVC,PEF	tier 1	rs4885681	13
<i>DOCK9</i>	intronic	FEV1/FVC		tier 1	rs11620380	13
<i>MYO16</i>	intergenic	FEV1/FVC		tier 1	rs9634470	13
<i>HAUS4</i>	intergenic	FEV1/FVC		tier 1	rs1951121	14
<i>MIR5580</i>	intergenic	FEV1/FVC		tier 1	rs74053129	14
<i>VRTN</i>	intronic	FVC	FEV1	tier 1	rs10141786	14
<i>BMF</i>	intronic	FVC	FEV1/FVC	tier 1	rs34245505	15
<i>IVD</i>	intergenic	FEV1	FVC	tier 2	rs2304645	15
<i>CHAC1</i>	intergenic	FVC		tier 1	rs4924525	15
<i>COPS2</i>	intergenic	FEV1/FVC	PEF	tier 1	rs79234094	15
<i>FAM227B</i>	intronic	FEV1/FVC	FEV1,PEF	tier 1	rs35251997	15
<i>USP3</i>	intronic	FEV1/FVC		tier 1	rs62012772	15
<i>REC114</i>	intronic	FEV1/FVC		tier 2	rs7176074	15
<i>CLUAP1</i>	intronic	FVC	FEV1	tier 1	rs3751837	16
<i>GLIS2-AS1</i>	intergenic	FEV1/FVC		tier 1	rs56104880	16
<i>GRIN2A</i>	intronic	FVC		tier 2	rs11074547	16
<i>PAPD5</i>	intronic	FVC		tier 1	rs76219171	16
<i>FTO</i>	intronic	FEV1/FVC		tier 1	rs35420030	16
<i>LINC00917</i>	intergenic	FEV1/FVC		tier 1	rs12918140	16
<i>MTHFSD</i>	intronic	FEV1		tier 2	rs6539952	16
<i>ATP2A3</i>	intergenic	FEV1/FVC		tier 1	rs8082036	17
<i>PITPNM3</i>	intergenic	FEV1		tier 2	rs4796334	17
<i>CLDN7</i>	UTR3	FVC		tier 2	rs1215	17
<i>TNFSF12-TNFSF13</i>	intergenic	FEV1		tier 2	rs4968200	17
<i>NCOR1</i>	intronic	FVC		tier 2	rs34351630	17
<i>LOC101927166</i>	intergenic	FVC	FEV1	tier 2	rs12945803	17
<i>ANKFN1</i>	intergenic	FVC	FEV1	tier 1	rs28519449	17
<i>BCAS3</i>	intronic	FEV1/FVC		tier 1	rs8068952	17
<i>DDX5</i>	intronic	FVC		tier 2	rs77672322	17
<i>SMURF2</i>	intergenic	FEV1/FVC	FVC	tier 1	rs11653958	17
<i>CASC17</i>	intergenic	FEV1/FVC	PEF	tier 1	rs996865	17
<i>ASPSCR1</i>	intronic	FVC	FEV1	tier 1	rs59606152	17
<i>VAPA</i>	intergenic	FEV1/FVC	FEV1,PEF	tier 1	rs8089099	18
<i>GATA6</i>	intergenic	FEV1/FVC		tier 2	rs1985511	18
<i>C18orf8</i>	intergenic	FVC	FEV1	tier 1	rs303752	18
<i>LOC729950</i>	intergenic	FVC	FEV1	tier 1	rs1668091	18
<i>SLC14A2</i>	intronic	FEV1	FEV1/FVC	tier 1	rs9807668	18
<i>LOC101927273</i>	ncRNA_intronic	FVC		tier 2	rs2202572	18
<i>QTRT1</i>	intronic	FEV1		tier 2	rs11085744	19
<i>ZFP82</i>	intergenic	FVC		tier 2	rs2967516	19
<i>LOC101929395</i>	intergenic	FEV1	FEV1/FVC,	tier 2	rs6032942	20
<i>LINC00649</i>	intergenic	FEV1/FVC	PEF	tier 1	rs12627254	21
<i>PPP6R2</i>	intronic	FEV1		tier 2	rs113111175	22
<i>MFAP2</i>	upstream	FEV1/FVC	FVC,PEF	previous	rs9435733	1
<i>LOC101929516</i>	ncRNA_intronic	FEV1/FVC	FEV1,PEF	previous	rs755249	1
<i>TGFBR3</i>	intergenic	FEV1/FVC	FVC	previous	rs1192415	1
<i>TGFBR3</i>	intergenic	FEV1/FVC	PEF	previous	rs11165787	1
<i>SPAG17</i>	intergenic	FVC	FEV1	previous	rs35043843	1

<i>MCL1</i>	UTR3	FVC	FEV1	previous	rs878471	1
<i>NR5A2</i>	intronic	FVC		previous	rs2816992	1
<i>PIK3C2B</i>	intronic	PEF	FEV1,FVC	previous	rs1008833	1
<i>CENPF/KCNK2</i>	intergenic	FVC		previous	rs556648	1
<i>TGFB2</i>	ncRNA_intronic	PEF		previous	rs6604614	1
<i>MIR548F3/TGFB2</i>	ncRNA_intronic	FEV1	FVC	previous	rs28613267	1
<i>RNU5F-1</i>	intergenic	FEV1/FVC		previous	rs1338227	1
<i>C1orf140/DUSP10</i>	intergenic	FVC		previous	rs12757436	1
<i>CHRM3</i>	intronic	PEF	FEV1,FEV1	previous	rs2355237	1
<i>KCNS3</i>	intergenic	FEV1/FVC	FEV1,PEF	previous	rs55884799	2
<i>EFEMP1</i>	intronic	FVC	FEV1,FEV1	previous	rs3791679	2
<i>CCNT2-AS1</i>	ncRNA_intronic	FVC	FEV1	previous	rs62168891	2
<i>LOC101929378</i>	ncRNA_intronic	FEV1	FEV1/FVC	previous	rs72902177	2
<i>TNS1</i>	exonic	FEV1	FVC,FEV1/l	previous	rs2571445	2
<i>PID1</i>	intergenic	FEV1/FVC	PEF	previous	rs62201738	2
<i>TRAF3IP1</i>	ncRNA_intronic	FEV1	FEV1/FVC	previous	rs6710301	2
<i>FLJ43879</i>	intergenic	FEV1/FVC	FEV1,PEF	previous	rs4308141	2
<i>RARB</i>	intronic	FEV1/FVC	PEF	previous	rs1529672	3
<i>RBMS3</i>	intronic	FEV1/FVC		previous	rs17666332	3
<i>CACNA2D3</i>	intergenic	FEV1/FVC	PEF	previous	rs12715478	3
<i>SLMAP</i>	intronic	FEV1	FVC,FEV1/l	previous	rs6445932	3
<i>SUCLG2</i>	intronic	FEV1	FVC	previous	rs4132748	3
<i>DCBLD2</i>	intergenic	FVC	FEV1	previous	rs12497779	3
<i>EEFSEC</i>	intronic	FEV1/FVC		previous	rs2999090	3
<i>RSRC1</i>	intronic	FVC	FEV1	previous	rs12634907	3
<i>LOC100507661</i>	intergenic	FEV1	FVC,FEV1/l	previous	rs879394	3
<i>MECOM</i>	intronic	FEV1	FVC	previous	rs78101726	3
<i>AFAP1</i>	intronic	FEV1/FVC		previous	rs62289340	4
<i>FAM13A</i>	intronic	FEV1/FVC	FVC,PEF	previous	rs2609279	4
<i>FAM13A</i>	intronic	FEV1/FVC	FVC,PEF	previous	rs2869966	4
<i>TET2</i>	ncRNA_intronic	FEV1/FVC	FEV1,PEF	previous	rs6533183	4
<i>GSTCD</i>	intronic	FEV1	FVC,FEV1/l	previous	rs11722225	4
<i>NPNT</i>	intronic	FEV1/FVC	FEV1,FVC,f	previous	rs34712979	4
<i>HHIP-AS1</i>	intergenic	FEV1/FVC	FEV1,PEF	previous	rs13141641	4
<i>OTUD4/SMAD1</i>	intergenic	PEF	FEV1,FVC,f	previous	rs2353940	4
<i>TARS</i>	intergenic	FVC	FEV1	previous	rs268717	5
<i>FGF10</i>	intronic	FVC	FEV1	previous	rs6859730	5
<i>ITGA1</i>	intronic	FEV1/FVC	PEF	previous	rs12522114	5
<i>ARL15</i>	intronic	FVC	FEV1	previous	rs2441026	5
<i>AP3B1</i>	intronic	FVC		previous	rs425102	5
<i>SPATA9</i>	intergenic	FEV1/FVC		previous	rs987068	5
<i>P4HA2-AS1</i>	intergenic	FVC		previous	rs3843503	5
<i>HTR4</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs7733410	5
<i>ABLIM3</i>	intronic	FEV1	FVC	previous	rs11952673	5
<i>CYFIP2</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs11134766	5
<i>ADAM19</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs11134789	5
<i>LY86</i>	intergenic	FEV1/FVC		previous	rs1294417	6
<i>DSP</i>	intronic	FEV1/FVC		previous	rs2076295	6
<i>BMP6</i>	intronic	FVC	FEV1	previous	rs10498672	6
<i>CASC15</i>	ncRNA_intronic	FEV1/FVC		previous	rs13198081	6

<i>ZNF184</i>	intronic	PEF	FEV1,FVC,f	previous	rs7752448	6
<i>AGER</i>	exonic	FEV1/FVC	FEV1,FVC,f	previous	rs2070600	6
<i>HLA-DQB1</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs9274247	6
<i>KCNQ5</i>	intronic	FEV1/FVC	PEF	previous	rs13206405	6
<i>ARMC2</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs2798641	6
<i>MIR588</i>	intergenic	FVC	FEV1	previous	rs6918725	6
<i>GPR126</i>	exonic	FEV1/FVC	FVC,PEF	previous	rs17280293	6
<i>GPR126</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs7753012	6
<i>C1GALT1</i>	intronic	FEV1/FVC		previous	rs4318980	7
<i>AGMO</i>	intronic	FVC	FEV1	previous	rs4721442	7
<i>ZKSCAN1</i>	intronic	FEV1/FVC		previous	rs2261360	7
<i>LOC285889</i>	intergenic	FEV1	FVC,FEV1/l	previous	rs12698403	7
<i>DMRT2/SMARCA2</i>	intergenic	FVC	FEV1	previous	rs771662	9
<i>GLIS3</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs1570203	9
<i>FLJ35282/ELAVL2</i>	ncRNA_intronic	FEV1/FVC	FEV1,PEF	previous	rs1107677	9
<i>PTCH1</i>	intronic	FEV1/FVC	FVC	previous	rs28446321	9
<i>TMEM38B/ZNF462</i>	intergenic	FEV1/FVC		previous	rs1491106	9
<i>ASTN2</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs10983184	9
<i>QSOX2</i>	UTR3	FVC	FEV1	previous	rs7024579	9
<i>DNLZ</i>	intronic	FVC		previous	rs4073153	9
<i>CDC123</i>	intronic	FEV1/FVC	FEV1,FVC,f	previous	rs7090277	10
<i>KIAA1462</i>	intergenic	PEF		previous	rs7914842	10
<i>JMJD1C</i>	intronic	FEV1	FVC	previous	rs7082066	10
<i>MYPN</i>	intronic	FVC	FEV1	previous	rs10998018	10
<i>CAMK2G</i>	intronic	FEV1	FVC,FEV1/l	previous	rs7098573	10
<i>COMTD1/ZNF503-AS1</i>	ncRNA_intronic	FVC		previous	rs1259605	10
<i>C10orf11</i>	intronic	FEV1	FVC,FEV1/l	previous	rs2637254	10
<i>SFTPD</i>	exonic	FEV1/FVC		previous	rs721917	10
<i>HTRA1</i>	intergenic	FEV1/FVC		previous	rs4279944	10
<i>HSD17B12</i>	intergenic	FVC	FEV1	previous	rs17596617	11
<i>PRDM11</i>	intronic	FEV1		previous	rs10838435	11
<i>EML3</i>	intronic	FEV1	FVC	previous	rs71490394	11
<i>ARHGEF17</i>	intronic	FEV1/FVC	FEV1	previous	rs2027761	11
<i>PRSS23</i>	intergenic	FEV1/FVC	FEV1,PEF	previous	rs11234768	11
<i>RPUSD4</i>	intergenic	FEV1/FVC	FEV1,PEF	previous	rs541601	11
<i>CCDC91</i>	intronic	FVC	FEV1,PEF	previous	rs7977418	12
<i>RAB5B</i>	intronic	FEV1		previous	rs1689510	12
<i>LRP1</i>	intronic	FEV1/FVC	PEF	previous	rs11172113	12
<i>MSRB3</i>	intronic	FEV1	FVC	previous	rs12825748	12
<i>ALX1/RASSF9</i>	intergenic	PEF		previous	rs56390486	12
<i>CRADD</i>	intronic	FVC		previous	rs9788269	12
<i>FGD6</i>	intronic	FEV1/FVC		previous	rs113745635	12
<i>SNRPF</i>	intergenic	FEV1/FVC	PEF	previous	rs7970544	12
<i>TBX3</i>	intergenic	FEV1	FVC	previous	rs10850377	12
<i>TBX3</i>	intergenic	FVC	FEV1	previous	rs35505	12
<i>BMP4</i>	intronic	FEV1/FVC	PEF	previous	rs35107139	14
<i>LINC00911</i>	intergenic	FEV1/FVC	PEF	previous	rs1756281	14
<i>TRIP11</i>	intergenic	FEV1	FVC	previous	rs11160037	14
<i>RIN3</i>	intronic	FVC	FEV1	previous	rs11621587	14
<i>RPAP1</i>	intergenic	FEV1/FVC		previous	rs2012453	15

<i>MGA</i>	intronic	FEV1/FVC		previous	rs56383987	15
<i>AAGAB</i>	intergenic	FVC		previous	rs12917612	15
<i>THSD4</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs1441358	15
<i>THSD4</i>	intronic	FEV1	FEV1/FVC	previous	rs62015883	15
<i>SH3GL3</i>	intronic	FEV1/FVC	FEV1	previous	rs1896797	15
<i>TEKT5</i>	intronic	FEV1/FVC		previous	rs78442819	16
<i>IL27</i>	intergenic	FEV1		previous	rs12446589	16
<i>MMP15</i>	intronic	FEV1/FVC		previous	rs11648508	16
<i>WWP2</i>	intronic	FEV1	FVC	previous	rs8047194	16
<i>CFDP1</i>	intronic	FEV1/FVC	FEV1,PEF	previous	rs11858992	16
<i>WWOX</i>	intronic	FEV1	FVC,PEF	previous	rs2345443	16
<i>SSH2</i>	intronic	FEV1/FVC	PEF	previous	rs2244592	17
<i>SUZ12P1</i>	intronic	FVC	FEV1	previous	rs62070648	17
<i>PSMB3</i>	intronic	FEV1/FVC	FEV1	previous	rs35246838	17
<i>FBXL20</i>	intronic	FVC	FEV1	previous	rs8069451	17
<i>MAPT-AS1</i>	ncRNA_intronic	FEV1	FVC,PEF	previous	rs79412431	17
<i>CASC17</i>	intergenic	FVC		previous	rs6501431	17
<i>CASC17</i>	intergenic	FEV1	FVC,FEV1/l	previous	rs6501455	17
<i>TSEN54</i>	intronic	FEV1		previous	rs9892893	17
<i>MTCL1</i>	intronic	FEV1	FVC,FEV1/l	previous	rs513953	18
<i>CTAGE1/RBBP8</i>	intergenic	FEV1		previous	rs11082051	18
<i>CABLES1</i>	intergenic	FEV1	FVC	previous	rs9947743	18
<i>DCC</i>	intronic	FVC		previous	rs12607758	18
<i>TSHZ3</i>	intronic	FEV1/FVC	FEV1	previous	rs9636166	19
<i>LTBP4</i>	exonic	FEV1/FVC	PEF	previous	rs34093919	19
<i>BMP2</i>	intergenic	FVC	FEV1,PEF	previous	rs2145272	20
<i>ABHD12</i>	intronic	FEV1		previous	rs2236180	20
<i>C20orf112</i>	intergenic	FEV1/FVC		previous	rs4413223	20
<i>UQCC1</i>	UTR5	FVC	FEV1,PEF	previous	rs143384	20
<i>EYA2</i>	intergenic	FVC	FEV1	previous	rs12481092	20
<i>SLC2A4RG</i>	intronic	FVC	FEV1	previous	rs4809221	20
<i>KCNE2</i>	intergenic	FEV1/FVC		previous	rs62213732	21
<i>MICAL3</i>	intronic	FEV1	FVC,FEV1/l	previous	rs1978968	22
<i>SCARF2</i>	intronic	FEV1	FEV1/FVC	previous	rs9610955	22
<i>MN1</i>	intronic	FEV1/FVC	FEV1	previous	rs2283847	22

Position (b37)	Coded	Noncoded	Coded freq.	Reported				
				beta	se	P	Direction	N
6,678,864	A	C	66.5%	0.0247	0.0025	5.56E-23	++	404,128
22,612,690	A	G	77.9%	0.0203	0.0028	6.57E-13	++	403,294
26,775,367	C	G	21.0%	0.0175	0.0028	8.06E-10	++	403,911
26,796,922	C	G	25.3%	-0.0187	0.0027	2.08E-12	--	404,165
51,243,374	C	G	40.5%	0.0202	0.0024	5.62E-17	++	404,127
60,966,772	T	G	95.1%	0.0508	0.0055	3.12E-20	++	396,685
78,387,270	T	C	86.3%	-0.0271	0.0035	6.11E-15	--	396,686
92,106,637	A	C	47.8%	-0.0139	0.0024	5.07E-09	--	396,686
111,737,398	A	G	32.9%	0.0236	0.0025	1.92E-20	++	395,815
150,249,101	A	C	44.4%	0.0170	0.0025	2.49E-11	++	345,265
155,137,395	T	G	10.7%	-0.0362	0.0039	9.57E-21	--	396,686
178,719,306	T	C	32.1%	0.0185	0.0025	1.38E-13	++	396,723
186,090,370	A	G	64.5%	-0.0180	0.0024	2.03E-13	--	396,469
186,113,852	C	G	18.0%	0.0280	0.0031	2.80E-19	++	396,685
198,898,157	A	G	60.3%	0.0198	0.0024	4.48E-16	++	396,686
201,884,647	C	G	43.5%	0.0153	0.0024	2.13E-10	++	396,686
218,521,609	A	G	82.0%	-0.0285	0.0031	5.00E-20	--	396,684
219,483,218	A	G	7.7%	-0.0445	0.0045	2.33E-23	--	396,684
221,204,299	A	C	70.6%	-0.0251	0.0026	3.68E-22	--	395,598
15,906,854	T	C	48.8%	-0.0239	0.0024	4.15E-24	--	404,128
18,570,024	A	C	17.9%	0.0252	0.0030	1.27E-16	++	403,912
18,702,313	T	C	8.0%	0.0368	0.0043	1.87E-17	++	403,910
24,018,480	A	G	45.1%	0.0158	0.0023	1.52E-11	++	403,040
26,842,146	C	G	44.3%	-0.0155	0.0023	3.72E-11	--	403,911
42,243,850	A	G	68.1%	-0.0172	0.0025	6.97E-12	--	403,912
102,926,362	A	G	38.5%	-0.0203	0.0024	1.04E-16	--	396,684
145,797,829	T	G	28.4%	-0.0197	0.0026	8.73E-14	--	396,685
161,276,378	A	G	44.7%	-0.0169	0.0024	6.57E-13	--	396,722
179,260,382	A	G	40.8%	-0.0140	0.0024	3.72E-09	--	396,723
187,530,520	T	C	70.6%	0.0197	0.0026	4.65E-14	++	396,686
199,723,365	A	G	56.3%	0.0207	0.0024	3.94E-18	++	396,468
201,208,692	A	C	21.9%	0.0179	0.0029	5.86E-10	++	396,686
202,970,250	T	C	52.8%	-0.0169	0.0024	8.88E-13	--	396,468
217,614,730	A	T	15.1%	0.0258	0.0033	1.06E-14	++	396,685
218,604,356	A	G	78.9%	0.0179	0.0029	4.02E-10	++	396,723
220,382,700	T	C	49.7%	-0.0150	0.0024	2.84E-10	--	395,598
239,604,970	T	G	78.9%	0.0185	0.0029	1.40E-10	++	396,470
241,844,033	T	C	52.2%	0.0185	0.0025	1.19E-13	++	395,598
242,495,953	A	G	54.6%	0.0191	0.0024	7.39E-16	++	395,597
13,787,641	A	G	42.7%	0.0165	0.0023	1.70E-12	++	404,164
25,179,533	T	G	85.3%	0.0209	0.0033	2.10E-10	++	403,912
71,583,177	A	G	56.0%	-0.0221	0.0024	1.25E-20	--	396,468
73,862,616	A	G	40.2%	-0.0180	0.0025	2.11E-13	--	395,813
99,420,192	T	C	7.7%	-0.0379	0.0044	8.81E-18	--	396,468

165,548,529	T	C	98.1%	0.0598	0.0088	8.59E-12	++	396,266
185,503,456	A	T	31.3%	-0.0174	0.0025	6.18E-12	--	396,721
56,012,149	A	G	17.9%	-0.0181	0.0031	3.17E-09	--	396,723
75,676,529	A	G	26.0%	0.0272	0.0027	2.24E-23	++	396,684
79,403,952	T	G	50.8%	-0.0196	0.0024	2.42E-16	--	396,686
145,330,628	A	G	59.2%	-0.0226	0.0024	4.20E-21	--	396,469
145,442,364	A	G	53.8%	0.0665	0.0025	2.54E-153	++	345,265
609,661	A	G	19.9%	-0.0210	0.0029	4.30E-13	--	404,164
43,976,162	A	G	15.0%	0.0277	0.0033	2.47E-17	++	403,294
121,410,529	C	G	82.6%	-0.0308	0.0032	1.78E-22	--	396,684
128,767,384	A	G	87.6%	-0.0307	0.0036	3.30E-17	--	396,684
148,206,885	T	C	1.5%	-0.0844	0.0098	6.45E-18	--	395,484
170,901,463	T	G	35.5%	-0.0352	0.0026	1.53E-42	--	395,813
179,598,771	T	C	67.1%	-0.0308	0.0026	2.31E-33	--	395,813
7,720,059	A	G	47.8%	-0.0227	0.0023	2.17E-22	--	403,912
34,188,892	A	C	93.7%	-0.0360	0.0049	1.99E-13	--	403,911
44,447,598	A	G	51.7%	-0.0151	0.0023	1.04E-10	--	403,911
45,530,471	T	C	67.5%	-0.0209	0.0025	2.17E-16	--	403,257
45,622,748	A	T	28.5%	-0.0154	0.0026	2.47E-09	--	403,910
56,336,406	A	G	64.0%	0.0175	0.0024	9.22E-13	++	396,723
134,339,265	A	G	58.9%	0.0141	0.0024	3.50E-09	++	396,723
140,271,357	A	C	75.7%	0.0215	0.0027	4.21E-15	++	396,722
142,560,957	A	G	72.3%	-0.0279	0.0026	1.40E-26	--	396,722
15,872,324	T	C	84.9%	0.0244	0.0033	1.73E-13	++	404,127
26,848,830	T	C	48.6%	0.0168	0.0023	7.80E-13	++	403,293
27,182,329	T	G	86.7%	0.0208	0.0034	1.31E-09	++	403,910
28,200,097	T	C	50.0%	0.0198	0.0023	1.11E-17	++	404,163
46,448,518	T	C	49.6%	-0.0183	0.0024	6.81E-15	--	396,469
84,569,510	C	G	66.4%	-0.0205	0.0025	1.67E-16	--	396,723
116,431,427	T	C	68.3%	-0.0178	0.0026	4.07E-12	--	396,686
9,018,590	T	G	62.2%	0.0232	0.0025	4.46E-21	++	403,256
11,823,332	T	C	71.8%	-0.0172	0.0026	3.48E-11	--	403,294
70,367,248	T	C	72.6%	-0.0211	0.0026	9.09E-16	--	396,722
145,504,343	T	C	36.3%	-0.0234	0.0025	6.47E-21	--	396,470
18,013,733	T	C	32.2%	-0.0173	0.0025	3.09E-12	--	404,163
98,878,881	A	G	83.3%	-0.0232	0.0032	3.98E-13	--	396,685
101,632,854	A	G	38.9%	0.0178	0.0025	5.39E-13	++	395,813
131,943,843	A	G	31.0%	0.0150	0.0025	2.79E-09	++	396,721
34,480,582	A	G	39.2%	0.0168	0.0025	8.30E-12	++	403,255
75,639,578	T	C	18.7%	-0.0201	0.0032	6.38E-10	--	345,265
105,639,611	T	C	49.1%	-0.0168	0.0023	6.21E-13	--	396,723
35,308,988	T	C	74.9%	0.0191	0.0027	2.33E-12	++	404,128
2,908,330	A	C	3.1%	-0.0531	0.0069	1.45E-14	--	394,169
4,243,749	T	C	45.8%	0.0149	0.0024	2.57E-10	++	403,292
19,808,912	C	G	54.6%	0.0167	0.0024	2.29E-12	++	404,128
65,075,332	T	G	63.2%	0.0153	0.0025	6.16E-10	++	396,686
66,409,367	A	C	13.1%	-0.0291	0.0035	4.88E-17	--	396,722
102,824,921	T	C	26.3%	0.0286	0.0029	1.85E-23	++	345,265
114,669,870	A	C	16.6%	0.0259	0.0032	1.91E-16	++	396,722
44,820,608	T	C	21.3%	-0.0261	0.0029	2.92E-19	--	404,128

50,707,087	C	G	2.1%	0.0612	0.0081	4.95E-14	++	403,294
71,647,588	A	C	34.5%	-0.0245	0.0025	1.74E-23	--	403,912
80,467,235	T	C	72.5%	0.0186	0.0026	1.83E-12	++	395,851
99,665,512	A	C	10.5%	-0.0270	0.0039	4.61E-12	--	396,684
109,918,493	T	C	73.5%	-0.0208	0.0027	2.73E-14	--	395,813
23,429,729	T	G	60.1%	0.0189	0.0024	7.55E-15	++	403,256
54,346,010	A	G	9.6%	0.0392	0.0040	2.15E-22	++	404,127
74,817,418	A	G	40.2%	0.0213	0.0024	9.53E-19	++	396,470
40,397,191	C	G	80.5%	0.0212	0.0030	1.56E-12	++	403,040
40,716,253	C	G	51.8%	-0.0154	0.0023	2.93E-11	--	404,163
41,255,396	A	C	52.2%	-0.0171	0.0023	3.45E-13	--	403,039
49,409,527	A	G	26.2%	0.0268	0.0027	3.18E-23	++	403,257
49,706,145	A	T	93.1%	-0.0506	0.0047	2.82E-27	--	404,126
63,866,877	T	C	82.2%	-0.0288	0.0031	2.42E-20	--	398,193
73,833,600	T	G	5.1%	0.0339	0.0055	6.60E-10	++	403,257
3,583,173	T	C	22.0%	-0.0308	0.0028	9.07E-28	--	403,910
4,361,138	T	C	69.5%	0.0205	0.0026	5.29E-15	++	403,255
10,136,889	T	G	73.8%	-0.0169	0.0027	1.99E-10	--	403,912
50,188,929	A	G	6.0%	-0.0351	0.0050	2.09E-12	--	403,910
53,935,407	T	C	94.7%	-0.0450	0.0053	3.08E-17	--	403,255
86,403,821	C	G	11.5%	-0.0270	0.0038	6.72E-13	--	396,685
86,579,223	A	C	26.2%	-0.0170	0.0027	3.50E-10	--	390,787
3,882,613	C	G	51.2%	0.0238	0.0024	7.31E-24	++	404,127
6,469,793	A	G	50.3%	-0.0135	0.0023	7.43E-09	--	404,164
7,163,350	A	G	85.7%	0.0217	0.0033	9.64E-11	++	403,041
7,448,457	C	G	14.2%	-0.0219	0.0033	4.54E-11	--	404,163
16,030,520	T	C	46.5%	0.0147	0.0023	3.43E-10	++	403,039
46,552,229	T	C	78.2%	0.0200	0.0028	1.88E-12	++	403,910
54,195,453	T	C	40.4%	0.0209	0.0024	1.27E-18	++	403,912
59,286,644	C	G	78.4%	-0.0285	0.0029	1.21E-22	--	395,813
62,497,964	T	C	2.6%	-0.0451	0.0076	3.02E-09	--	382,520
62,686,730	A	G	74.3%	0.0197	0.0028	9.17E-13	++	396,686
69,371,318	T	C	7.5%	-0.0475	0.0046	1.82E-25	--	396,686
79,952,944	T	C	11.2%	0.0367	0.0039	9.16E-21	++	384,317
10,078,071	A	G	27.5%	0.0235	0.0027	1.52E-18	++	403,255
19,816,712	A	T	45.0%	0.0165	0.0024	5.60E-12	++	403,255
21,074,255	A	G	40.9%	-0.0165	0.0024	6.97E-12	--	403,039
22,290,711	T	C	68.1%	-0.0173	0.0025	5.24E-12	--	403,912
42,827,898	T	C	9.5%	0.0294	0.0040	1.39E-13	++	404,165
53,566,471	A	C	32.9%	0.0162	0.0025	7.01E-11	++	403,912
10,819,967	T	C	56.0%	-0.0153	0.0024	7.83E-11	--	403,292
36,881,643	A	G	70.9%	-0.0152	0.0026	3.72E-09	--	403,911
10,745,545	C	G	23.3%	0.0173	0.0027	3.47E-10	++	404,164
35,368,402	T	G	12.8%	0.0357	0.0035	6.85E-24	++	404,128
50,867,711	T	C	12.2%	0.0220	0.0036	1.11E-09	++	403,292
17,308,254	T	C	48.2%	0.0389	0.0024	5.95E-61	++	404,128
39,995,074	T	C	23.3%	-0.0239	0.0028	9.82E-18	--	404,128
92,077,097	A	G	81.2%	0.0440	0.0030	2.28E-47	++	396,686
92,381,483	A	G	68.8%	0.0245	0.0026	1.63E-21	++	396,684
118,911,295	T	G	75.6%	-0.0238	0.0027	4.12E-18	--	396,470

150,547,747	A	G	58.0%	-0.0278	0.0024	1.50E-31	--	396,468
200,069,216	A	G	58.8%	-0.0164	0.0024	7.33E-12	--	396,470
204,426,295	A	G	85.4%	-0.0324	0.0036	1.50E-19	--	345,265
215,120,596	A	G	21.7%	0.0147	0.0029	3.12E-07	++	395,597
218,631,452	C	G	71.5%	-0.0156	0.0028	2.13E-08	+-	345,265
218,855,029	C	G	51.1%	0.0168	0.0023	9.19E-13	++	395,850
219,853,742	T	G	57.7%	0.0245	0.0024	3.92E-24	++	396,685
221,631,938	A	G	33.5%	0.0159	0.0025	1.76E-10	++	395,598
239,857,524	A	G	51.2%	0.0290	0.0025	9.42E-31	++	345,265
18,287,623	T	C	82.7%	-0.0415	0.0031	4.02E-40	--	404,126
56,096,892	A	G	77.1%	0.0344	0.0028	7.19E-35	++	396,470
135,672,187	T	C	40.3%	0.0186	0.0024	1.08E-14	++	395,597
157,016,257	T	C	13.5%	-0.0335	0.0034	1.76E-22	--	395,850
218,683,154	A	G	39.7%	-0.0285	0.0024	7.24E-33	--	396,723
229,502,197	A	C	92.2%	-0.0743	0.0044	9.45E-63	--	396,684
239,441,308	A	C	14.9%	0.0235	0.0033	8.51E-13	++	396,723
239,881,309	C	G	80.1%	-0.0484	0.0030	3.58E-59	--	396,686
25,520,582	A	C	17.4%	0.0423	0.0031	1.73E-41	++	403,257
29,469,675	T	G	72.4%	0.0267	0.0027	9.22E-24	++	404,128
55,152,319	A	G	59.4%	0.0250	0.0024	1.35E-24	++	396,685
57,879,611	T	G	75.2%	-0.0287	0.0027	3.82E-26	--	396,723
67,455,803	T	C	30.7%	-0.0205	0.0026	1.18E-15	--	395,850
98,822,050	T	G	23.3%	-0.0319	0.0028	1.85E-30	--	396,468
127,931,340	A	G	88.1%	-0.0433	0.0037	6.76E-32	--	396,685
158,226,886	A	G	65.6%	0.0262	0.0025	2.83E-26	++	396,470
168,709,843	T	G	23.5%	-0.0289	0.0028	1.36E-25	--	396,722
169,295,436	A	G	84.6%	0.0334	0.0032	7.72E-25	++	395,851
7,879,027	T	C	43.6%	0.0167	0.0024	2.36E-12	++	404,127
89,855,495	T	C	21.5%	0.0537	0.0029	2.08E-76	++	396,686
89,869,078	T	C	40.7%	-0.0415	0.0024	5.78E-66	--	396,686
106,133,184	T	C	65.5%	-0.0297	0.0025	2.60E-32	--	396,686
106,766,430	T	C	93.4%	-0.0729	0.0047	2.43E-54	--	396,722
106,819,053	A	G	25.6%	-0.0682	0.0028	4.18E-134	--	395,813
145,506,456	T	C	60.1%	-0.0704	0.0024	3.65E-184	--	396,685
145,740,898	T	C	74.6%	0.0384	0.0029	5.11E-40	++	345,265
33,352,738	T	C	90.7%	-0.0340	0.0040	3.23E-17	--	403,912
44,367,221	A	T	32.8%	0.0206	0.0025	8.76E-17	++	403,041
52,187,038	A	C	26.5%	-0.0367	0.0027	1.47E-41	--	395,814
53,444,498	T	C	46.3%	0.0177	0.0024	7.79E-14	++	396,470
77,396,400	T	G	76.0%	0.0209	0.0028	2.78E-14	++	396,470
95,025,146	C	G	68.9%	-0.0296	0.0026	1.46E-30	--	396,685
131,466,629	A	T	44.8%	-0.0187	0.0024	7.02E-15	--	395,597
147,856,522	A	G	44.1%	0.0505	0.0024	1.56E-96	++	395,813
148,652,302	T	G	39.9%	-0.0186	0.0024	1.35E-14	--	395,851
156,908,317	T	C	6.4%	-0.0628	0.0049	8.04E-38	--	395,815
156,944,199	A	C	34.1%	-0.0408	0.0025	3.06E-59	--	395,815
6,741,932	T	C	45.8%	-0.0311	0.0024	3.93E-39	--	404,128
7,563,232	T	G	55.0%	-0.0234	0.0024	6.95E-23	--	404,128
7,797,840	C	G	82.3%	0.0352	0.0030	7.50E-31	++	403,912
22,017,543	C	G	35.3%	0.0297	0.0025	3.07E-33	++	404,128

28,301,099	A	G	87.5%	0.0553	0.0038	1.21E-48	++	345,265
32,151,443	T	C	6.3%	0.1452	0.0049	3.00E-189	++	392,848
32,631,295	A	G	32.1%	-0.0469	0.0030	9.79E-57	--	383,776
73,663,814	A	C	20.2%	0.0344	0.0030	4.67E-31	++	396,685
109,268,050	T	C	18.3%	-0.0450	0.0031	3.89E-48	--	396,686
126,990,392	T	G	48.1%	-0.0211	0.0024	4.73E-19	--	396,469
142,688,969	A	G	97.3%	-0.1803	0.0074	2.34E-131	--	396,686
142,745,883	T	G	69.5%	-0.0712	0.0026	4.71E-165	--	395,815
7,256,490	A	G	41.5%	-0.0172	0.0024	9.08E-13	--	404,128
15,506,007	T	G	83.4%	0.0215	0.0031	7.21E-12	++	403,911
99,692,993	T	G	23.2%	0.0219	0.0028	8.74E-15	++	396,686
156,127,246	A	G	44.2%	-0.0274	0.0024	6.42E-31	--	396,721
1,568,941	T	C	34.9%	-0.0158	0.0025	1.08E-10	--	403,912
4,120,648	A	G	53.0%	0.0246	0.0024	5.78E-25	++	404,127
23,587,027	T	C	48.5%	0.0219	0.0024	3.88E-20	++	404,126
98,266,855	A	T	9.1%	-0.0523	0.0042	4.72E-36	--	396,685
109,483,517	T	G	37.6%	0.0245	0.0025	2.81E-23	++	396,686
119,234,058	T	C	64.0%	0.0273	0.0025	9.05E-28	++	395,815
139,100,413	T	C	31.5%	-0.0233	0.0025	4.48E-20	--	396,470
139,259,349	A	G	56.1%	0.0138	0.0024	8.64E-09	++	395,597
12,278,021	A	T	51.7%	0.0409	0.0024	3.97E-67	++	404,128
30,268,770	A	G	57.9%	0.0165	0.0026	1.02E-10	++	345,265
64,998,971	A	G	18.5%	0.0221	0.0030	2.20E-13	++	396,722
69,962,954	A	G	49.7%	-0.0224	0.0024	2.43E-21	--	396,469
75,580,014	A	G	71.8%	-0.0246	0.0026	2.75E-21	--	396,721
77,119,039	T	C	75.2%	-0.0119	0.0027	1.19E-05	--	396,468
78,312,002	A	G	51.1%	-0.0285	0.0023	3.91E-34	--	396,723
81,706,324	A	G	58.1%	0.0193	0.0024	1.65E-15	++	396,686
124,297,637	T	C	15.1%	0.0218	0.0034	2.18E-10	++	395,813
43,690,717	T	C	31.7%	-0.0197	0.0025	3.58E-15	--	403,912
45,244,903	C	G	14.4%	0.0211	0.0033	1.46E-10	++	404,163
62,370,155	A	G	36.7%	0.0264	0.0024	1.66E-27	++	396,721
73,036,179	T	C	11.3%	0.0369	0.0038	1.31E-22	++	396,684
86,448,839	T	C	84.6%	0.0303	0.0033	5.07E-20	++	396,684
126,009,500	T	C	18.3%	-0.0241	0.0031	5.29E-15	--	396,686
28,588,242	T	C	54.2%	0.0379	0.0023	9.57E-59	++	403,040
56,396,768	C	G	33.7%	-0.0153	0.0025	5.57E-10	--	396,721
57,527,283	T	C	58.9%	-0.0227	0.0024	7.04E-21	--	396,686
65,793,153	C	G	30.9%	0.0198	0.0025	6.27E-15	++	396,721
85,719,906	A	G	29.1%	0.0196	0.0028	1.72E-12	++	345,265
94,194,890	A	G	73.2%	-0.0135	0.0027	3.97E-07	--	396,469
95,554,771	T	C	21.6%	-0.0275	0.0029	2.36E-21	--	396,685
96,242,109	T	G	18.7%	0.0439	0.0031	1.45E-46	++	396,686
115,201,436	A	G	34.1%	0.0195	0.0025	4.02E-15	++	396,722
115,501,127	A	G	68.6%	0.0223	0.0025	1.92E-18	++	396,468
54,419,106	A	C	59.6%	0.0315	0.0025	3.40E-36	++	403,255
84,338,431	A	G	69.9%	0.0237	0.0026	1.38E-19	++	396,685
92,512,143	A	G	62.1%	-0.0175	0.0024	4.69E-13	--	396,722
93,098,339	C	G	18.2%	0.0363	0.0031	1.39E-32	++	396,469
41,840,238	A	G	41.1%	0.0239	0.0024	4.26E-23	++	404,128

41,953,211	T	C	5.5%	-0.0364	0.0053	7.08E-12	--	403,257
67,491,274	A	C	23.0%	-0.0228	0.0028	2.04E-16	--	403,912
71,612,514	T	G	66.4%	0.0642	0.0025	4.12E-145	++	404,126
71,803,450	T	C	17.8%	-0.0206	0.0030	1.16E-11	--	403,294
84,274,591	A	G	49.0%	0.0292	0.0024	2.48E-34	++	396,686
10,740,982	C	G	20.0%	-0.0355	0.0031	2.25E-31	--	403,255
28,870,962	A	G	40.0%	-0.0131	0.0024	2.76E-08	--	404,164
58,063,513	T	G	68.3%	0.0332	0.0026	9.86E-39	++	404,128
69,891,510	T	G	49.6%	-0.0208	0.0023	6.70E-19	--	396,722
75,411,445	A	C	40.4%	0.0380	0.0024	4.83E-55	++	396,685
78,225,633	A	G	31.1%	0.0221	0.0025	3.03E-18	++	395,850
28,072,327	A	G	45.3%	-0.0323	0.0024	4.60E-42	--	403,256
29,210,595	A	G	27.0%	0.0206	0.0026	5.28E-15	++	403,912
36,915,540	T	C	86.8%	0.0386	0.0036	1.41E-27	++	404,127
37,504,933	T	C	74.9%	0.0202	0.0027	7.29E-14	++	403,911
43,940,021	A	G	21.6%	-0.0426	0.0029	3.10E-49	--	391,506
68,976,415	T	C	78.4%	0.0174	0.0029	1.12E-09	++	396,469
69,201,811	A	G	50.2%	0.0296	0.0023	1.28E-36	++	396,723
73,525,670	T	G	26.1%	0.0198	0.0027	2.08E-13	++	395,850
8,801,351	A	G	25.4%	-0.0273	0.0027	1.24E-24	--	404,164
20,234,336	A	G	53.0%	0.0128	0.0023	3.66E-08	++	404,164
20,708,321	A	G	78.7%	-0.0202	0.0028	1.24E-12	--	404,163
51,022,606	T	C	59.3%	0.0134	0.0024	1.78E-08	++	403,910
31,829,613	A	C	87.4%	0.0355	0.0036	3.66E-23	++	403,256
41,117,300	A	G	1.3%	0.1535	0.0106	1.69E-47	++	404,127
6,626,218	A	G	63.8%	0.0259	0.0024	1.42E-26	++	403,911
25,282,608	T	C	81.5%	0.0213	0.0030	1.02E-12	++	404,165
30,858,967	A	G	17.2%	-0.0232	0.0031	1.30E-13	--	404,126
34,025,756	A	G	59.6%	0.0239	0.0024	1.03E-23	++	403,039
45,486,817	T	C	27.2%	0.0257	0.0026	1.56E-22	++	403,910
62,372,706	A	G	67.5%	-0.0291	0.0025	5.81E-31	--	396,470
35,675,966	T	C	63.2%	0.0246	0.0025	9.34E-24	++	404,127
18,448,113	T	C	23.7%	0.0293	0.0027	9.09E-27	++	404,163
20,790,723	C	G	19.7%	-0.0192	0.0029	6.94E-11	--	403,292
28,181,399	T	C	55.7%	-0.0219	0.0024	3.62E-19	--	404,128

FEV1					FVC				
beta	se	P	Direction	N	beta	se	P	Direction	N
0.0111	0.0025	6.88E-06	++	404,165	-0.0008	0.0025	7.43E-01	+-	403,911
0.0203	0.0028	6.57E-13	++	403,294	0.0206	0.0028	3.58E-13	++	403,041
0.0189	0.0028	2.66E-11	++	404,164	0.0175	0.0028	8.06E-10	++	403,911
-0.0187	0.0027	2.08E-12	--	404,165	-0.0154	0.0027	7.57E-09	--	403,912
0.0162	0.0024	6.12E-12	++	404,164	0.0064	0.0024	7.00E-03	++	403,911
0.0265	0.0054	9.14E-07	++	396,722	0.0008	0.0054	8.82E-01	+-	396,470
-0.0167	0.0034	9.34E-07	--	396,723	-0.0041	0.0034	2.36E-01	--	396,469
0.0010	0.0023	6.75E-01	+-	396,723	0.0090	0.0024	1.41E-04	++	396,470
0.0172	0.0025	5.91E-12	++	395,852	0.0067	0.0026	8.78E-03	++	375,471
0.0066	0.0024	5.10E-03	++	395,851	0.0013	0.0024	5.82E-01	++	395,598
-0.0106	0.0038	5.21E-03	--	396,723	0.0083	0.0038	2.94E-02	++	396,469
0.0185	0.0025	1.38E-13	++	396,723	0.0169	0.0025	1.67E-11	++	396,470
-0.0091	0.0024	2.05E-04	--	396,721	-0.0180	0.0024	2.03E-13	--	396,469
0.0086	0.0031	4.77E-03	++	396,722	-0.0041	0.0031	1.88E-01	--	396,470
0.0107	0.0024	7.29E-06	++	396,723	0.0007	0.0024	7.61E-01	+-	396,470
0.0064	0.0024	6.69E-03	++	396,723	-0.0008	0.0024	7.35E-01	+-	396,469
-0.0007	0.0031	8.12E-01	--	396,721	0.0141	0.0031	4.27E-06	++	396,468
-0.0098	0.0044	2.59E-02	--	396,721	0.0116	0.0044	8.39E-03	++	396,469
-0.0200	0.0026	7.78E-15	--	395,851	-0.0251	0.0026	3.68E-22	--	395,598
-0.0216	0.0023	1.26E-20	--	404,165	-0.0111	0.0023	1.89E-06	--	403,912
0.0258	0.0030	1.37E-17	++	404,164	0.0252	0.0030	1.27E-16	++	403,912
0.0363	0.0043	2.97E-17	++	404,163	0.0368	0.0043	1.87E-17	++	403,910
0.0154	0.0023	4.48E-11	++	403,293	0.0158	0.0023	1.52E-11	++	403,040
-0.0076	0.0023	1.18E-03	--	404,163	-0.0155	0.0023	3.72E-11	--	403,911
-0.0153	0.0025	7.95E-10	--	404,164	-0.0172	0.0025	6.97E-12	--	403,912
-0.0112	0.0024	3.16E-06	--	396,721	-0.0007	0.0024	7.87E-01	+-	396,468
-0.0081	0.0026	1.76E-03	--	396,722	0.0019	0.0026	4.69E-01	++	396,469
-0.0169	0.0024	6.57E-13	--	396,722	-0.0123	0.0024	1.87E-07	--	396,468
-0.0140	0.0024	3.72E-09	--	396,723	-0.0158	0.0024	4.06E-11	--	396,470
0.0017	0.0026	5.16E-01	+-	396,723	-0.0088	0.0026	6.34E-04	--	396,470
0.0181	0.0024	2.18E-14	++	396,721	0.0207	0.0024	3.94E-18	++	396,468
0.0147	0.0028	1.93E-07	++	396,723	0.0067	0.0028	1.85E-02	++	396,470
-0.0117	0.0023	5.80E-07	--	396,722	-0.0169	0.0024	8.88E-13	--	396,468
0.0208	0.0033	2.00E-10	++	396,722	0.0097	0.0033	3.24E-03	++	396,469
0.0179	0.0029	4.02E-10	++	396,723	0.0183	0.0029	2.08E-10	++	396,469
-0.0087	0.0024	2.32E-04	--	395,852	-0.0150	0.0024	2.84E-10	--	395,598
0.0201	0.0029	2.33E-12	++	396,723	0.0185	0.0029	1.40E-10	++	396,470
0.0121	0.0025	1.11E-06	++	395,850	0.0185	0.0025	1.19E-13	++	395,598
0.0167	0.0024	1.31E-12	++	395,850	0.0191	0.0024	7.39E-16	++	395,597
0.0165	0.0023	1.70E-12	++	404,164	0.0155	0.0024	4.73E-11	++	403,910
0.0183	0.0033	2.23E-08	++	404,164	0.0209	0.0033	2.10E-10	++	403,912
-0.0195	0.0024	1.79E-16	--	396,721	-0.0221	0.0024	1.25E-20	--	396,468
-0.0113	0.0024	2.76E-06	--	395,850	-0.0027	0.0024	2.71E-01	--	395,597
-0.0305	0.0044	3.86E-12	--	396,721	-0.0379	0.0044	8.81E-18	--	396,468

0.0429	0.0086	5.70E-07	++	396,303	0.0125	0.0086	1.49E-01	+-	396,050
-0.0174	0.0025	6.18E-12	--	396,721	-0.0130	0.0025	2.99E-07	--	396,468
-0.0181	0.0031	3.17E-09	--	396,723	-0.0151	0.0031	8.54E-07	--	396,470
0.0176	0.0027	4.53E-11	++	396,721	0.0049	0.0027	6.74E-02	++	396,469
-0.0079	0.0023	7.89E-04	--	396,723	0.0011	0.0024	6.33E-01	++	396,469
-0.0161	0.0024	1.26E-11	--	396,721	-0.0226	0.0024	4.20E-21	--	396,469
0.0404	0.0023	1.43E-66	++	396,723	0.0152	0.0024	1.06E-10	++	396,470
-0.0210	0.0029	4.30E-13	--	404,164	-0.0140	0.0029	1.64E-06	--	403,911
0.0277	0.0033	2.47E-17	++	403,294	0.0230	0.0033	2.59E-12	++	403,041
-0.0024	0.0031	4.47E-01	+-	396,721	0.0134	0.0031	1.82E-05	++	396,469
-0.0227	0.0036	2.09E-10	--	396,721	-0.0099	0.0036	5.77E-03	--	396,468
-0.0844	0.0098	6.45E-18	--	395,484	-0.0397	0.0098	5.39E-05	--	395,482
-0.0139	0.0025	3.73E-08	--	395,850	0.0036	0.0025	1.58E-01	++	395,597
-0.0140	0.0025	2.51E-08	--	395,850	0.0003	0.0025	9.13E-01	+-	395,597
-0.0210	0.0023	1.01E-19	--	404,165	-0.0227	0.0023	2.17E-22	--	403,912
-0.0359	0.0049	1.71E-13	--	404,163	-0.0360	0.0049	1.99E-13	--	403,911
-0.0134	0.0023	8.12E-09	--	404,164	-0.0151	0.0023	1.04E-10	--	403,911
-0.0049	0.0025	4.73E-02	--	403,294	0.0056	0.0025	2.44E-02	++	403,041
-0.0107	0.0026	3.22E-05	--	404,163	-0.0154	0.0026	2.47E-09	--	403,910
0.0175	0.0024	9.22E-13	++	396,723	0.0112	0.0025	5.65E-06	++	396,470
0.0141	0.0024	3.50E-09	++	396,723	0.0124	0.0024	2.26E-07	++	396,470
0.0215	0.0027	4.21E-15	++	396,722	0.0135	0.0028	9.99E-07	++	396,469
-0.0279	0.0026	1.40E-26	--	396,722	-0.0155	0.0026	3.37E-09	--	396,468
0.0118	0.0032	2.67E-04	++	404,164	0.0001	0.0033	9.74E-01	+-	403,910
0.0168	0.0023	7.80E-13	++	403,293	0.0132	0.0024	2.20E-08	++	403,041
0.0167	0.0034	1.00E-06	++	404,164	0.0208	0.0034	1.31E-09	++	403,910
0.0198	0.0023	1.11E-17	++	404,163	0.0185	0.0023	1.84E-15	++	403,910
-0.0187	0.0023	1.45E-15	--	396,722	-0.0183	0.0024	6.81E-15	--	396,469
-0.0205	0.0025	1.67E-16	--	396,723	-0.0168	0.0025	1.77E-11	--	396,470
-0.0048	0.0025	5.81E-02	--	396,723	0.0043	0.0025	9.21E-02	++	396,470
0.0109	0.0024	7.08E-06	++	403,293	-0.0017	0.0024	4.81E-01	--	403,039
-0.0172	0.0026	3.48E-11	--	403,294	-0.0085	0.0026	1.12E-03	--	403,041
-0.0211	0.0026	9.09E-16	--	396,722	-0.0140	0.0026	1.22E-07	--	396,469
-0.0217	0.0025	1.83E-18	--	396,723	-0.0234	0.0025	6.47E-21	--	396,470
-0.0173	0.0025	3.09E-12	--	404,163	-0.0150	0.0025	2.23E-09	--	403,911
-0.0225	0.0031	7.49E-13	--	396,722	-0.0120	0.0032	1.41E-04	--	396,468
0.0131	0.0024	5.67E-08	++	395,850	0.0047	0.0024	5.58E-02	+-	395,597
0.0150	0.0025	2.79E-09	++	396,721	0.0109	0.0025	1.81E-05	++	396,468
0.0011	0.0024	6.42E-01	++	403,292	-0.0079	0.0024	1.14E-03	--	403,039
-0.0186	0.0030	7.70E-10	--	396,722	-0.0083	0.0030	6.28E-03	--	396,469
-0.0168	0.0023	6.21E-13	--	396,723	-0.0136	0.0024	7.75E-09	--	396,469
0.0108	0.0027	5.14E-05	++	404,165	0.0024	0.0027	3.73E-01	++	403,912
-0.0446	0.0069	7.82E-11	--	394,989	-0.0531	0.0069	1.45E-14	--	394,169
0.0149	0.0024	2.57E-10	++	403,292	0.0126	0.0024	1.24E-07	++	403,039
0.0067	0.0023	3.94E-03	++	404,165	-0.0014	0.0023	5.52E-01	--	403,912
0.0077	0.0024	1.51E-03	++	396,723	0.0007	0.0024	7.72E-01	+-	396,469
-0.0291	0.0035	4.88E-17	--	396,722	-0.0244	0.0035	2.65E-12	--	396,470
0.0164	0.0027	7.09E-10	++	396,723	0.0154	0.0027	8.86E-09	++	396,469
0.0259	0.0032	1.91E-16	++	396,722	0.0179	0.0032	1.70E-08	++	396,469
-0.0132	0.0028	3.32E-06	--	404,165	-0.0008	0.0029	7.83E-01	+-	403,911

0.0612	0.0081	4.95E-14	++	403,294	0.0623	0.0082	2.30E-14	++	403,041
-0.0195	0.0024	1.38E-15	--	404,164	-0.0245	0.0025	1.74E-23	--	403,912
0.0186	0.0026	1.83E-12	++	395,851	0.0180	0.0027	1.31E-11	++	395,598
-0.0183	0.0038	1.70E-06	--	396,721	-0.0059	0.0039	1.23E-01	+-	396,469
0.0007	0.0027	8.06E-01	+-	395,850	0.0110	0.0027	4.54E-05	++	395,597
0.0105	0.0024	9.79E-06	++	403,293	0.0017	0.0024	4.71E-01	++	403,041
0.0052	0.0039	1.88E-01	+-	404,164	-0.0142	0.0040	3.41E-04	--	403,911
0.0182	0.0024	3.05E-14	++	396,723	0.0213	0.0024	9.53E-19	++	396,470
0.0078	0.0030	8.66E-03	++	403,292	0.0212	0.0030	1.56E-12	++	403,040
-0.0154	0.0023	2.93E-11	--	404,163	-0.0164	0.0023	2.39E-12	--	403,910
-0.0128	0.0023	4.52E-08	--	403,292	-0.0171	0.0023	3.45E-13	--	403,039
0.0101	0.0026	1.47E-04	++	403,294	-0.0030	0.0027	2.67E-01	+-	403,040
-0.0369	0.0046	9.45E-16	--	404,163	-0.0134	0.0046	3.59E-03	--	403,911
-0.0142	0.0030	3.03E-06	--	404,164	-0.0006	0.0031	8.47E-01	+-	403,910
0.0085	0.0054	1.16E-01	++	403,294	-0.0096	0.0054	7.63E-02	--	403,041
-0.0235	0.0028	6.35E-17	--	404,163	-0.0308	0.0028	9.07E-28	--	403,910
0.0072	0.0026	5.45E-03	++	400,082	-0.0023	0.0026	3.78E-01	--	403,039
-0.0122	0.0026	3.39E-06	--	404,165	-0.0169	0.0027	1.99E-10	--	403,912
-0.0283	0.0050	1.26E-08	--	404,164	-0.0351	0.0050	2.09E-12	--	403,910
-0.0187	0.0052	3.58E-04	--	403,292	0.0048	0.0053	3.57E-01	++	403,039
-0.0078	0.0037	3.31E-02	--	396,722	0.0045	0.0037	2.24E-01	++	396,470
-0.0170	0.0027	3.50E-10	--	390,787	-0.0105	0.0027	9.41E-05	--	396,468
0.0080	0.0024	7.04E-04	++	384,036	-0.0038	0.0023	1.03E-01	--	403,910
-0.0135	0.0023	7.43E-09	--	404,164	-0.0104	0.0023	9.61E-06	--	403,910
0.0174	0.0033	1.77E-07	++	403,294	0.0217	0.0033	9.64E-11	++	403,041
-0.0219	0.0033	4.54E-11	--	404,163	-0.0163	0.0033	1.03E-06	--	403,910
0.0135	0.0023	6.72E-09	++	403,292	0.0147	0.0023	3.43E-10	++	403,039
0.0175	0.0028	5.51E-10	++	404,163	0.0200	0.0028	1.88E-12	++	403,910
0.0205	0.0024	3.51E-18	++	404,165	0.0209	0.0024	1.27E-18	++	403,912
-0.0139	0.0029	1.10E-06	--	395,850	-0.0007	0.0029	8.10E-01	+-	395,597
-0.0290	0.0076	1.22E-04	--	382,774	-0.0451	0.0076	3.02E-09	--	382,520
-0.0066	0.0027	1.46E-02	--	396,723	-0.0171	0.0027	3.19E-10	--	396,470
-0.0210	0.0045	2.51E-06	--	396,723	0.0022	0.0045	6.24E-01	+-	396,470
0.0255	0.0039	6.43E-11	++	384,570	0.0367	0.0039	9.16E-21	++	384,317
0.0163	0.0026	4.35E-10	++	403,292	0.0057	0.0026	3.12E-02	++	403,039
0.0031	0.0023	1.85E-01	++	403,292	-0.0048	0.0024	4.03E-02	--	403,039
-0.0154	0.0024	1.29E-10	--	403,292	-0.0165	0.0024	6.97E-12	--	403,039
-0.0156	0.0025	4.87E-10	--	404,165	-0.0173	0.0025	5.24E-12	--	403,912
0.0294	0.0040	1.39E-13	++	404,165	0.0201	0.0040	5.02E-07	++	403,912
0.0144	0.0025	5.78E-09	++	404,165	0.0162	0.0025	7.01E-11	++	403,912
-0.0153	0.0024	7.83E-11	--	403,292	-0.0111	0.0024	2.74E-06	--	403,039
-0.0094	0.0026	2.26E-04	--	404,165	-0.0152	0.0026	3.72E-09	--	403,911
0.0173	0.0027	3.47E-10	++	404,164	0.0081	0.0028	3.57E-03	++	403,911
0.0076	0.0035	2.85E-02	++	404,165	-0.0112	0.0035	1.29E-03	--	403,912
0.0220	0.0036	1.11E-09	++	403,292	0.0183	0.0036	4.51E-07	++	403,039
-0.0032	0.0023	1.72E-01	--	404,165	-0.0231	0.0023	3.35E-23	--	403,912
-0.0202	0.0027	1.52E-13	--	404,165	-0.0100	0.0028	2.97E-04	--	403,911
0.0016	0.0030	5.87E-01	+-	396,723	-0.0193	0.0030	1.30E-10	--	396,470
0.0011	0.0025	6.59E-01	++	396,721	-0.0106	0.0025	3.15E-05	--	396,468
-0.0199	0.0027	2.80E-13	--	396,723	-0.0238	0.0027	4.12E-18	--	396,470

-0.0225	0.0024	2.16E-21	--	396,721	-0.0278	0.0024	1.50E-31	--	396,468
-0.0131	0.0024	3.38E-08	--	396,722	-0.0164	0.0024	7.33E-12	--	396,470
-0.0287	0.0033	4.55E-18	--	396,723	-0.0244	0.0033	2.41E-13	--	396,470
0.0132	0.0029	3.58E-06	++	395,850	0.0147	0.0029	3.12E-07	++	395,597
-0.0151	0.0026	6.19E-09	--	396,722	-0.0120	0.0026	4.05E-06	--	396,469
0.0168	0.0023	9.19E-13	++	395,850	0.0154	0.0024	7.27E-11	++	395,597
0.0052	0.0024	2.92E-02	+-	396,722	-0.0058	0.0024	1.43E-02	--	396,470
0.0107	0.0025	1.65E-05	++	395,851	0.0159	0.0025	1.76E-10	++	395,598
0.0200	0.0023	1.12E-17	++	396,723	0.0076	0.0024	1.28E-03	++	396,470
-0.0325	0.0031	4.07E-26	--	404,163	-0.0160	0.0031	2.19E-07	--	403,910
0.0203	0.0028	2.73E-13	++	396,723	0.0344	0.0028	7.19E-35	++	396,470
0.0181	0.0024	4.71E-14	++	395,850	0.0186	0.0024	1.08E-14	++	395,597
-0.0335	0.0034	1.76E-22	--	395,850	-0.0183	0.0035	1.17E-07	--	395,597
-0.0285	0.0024	7.24E-33	--	396,723	-0.0220	0.0024	4.53E-20	--	396,470
-0.0212	0.0044	1.15E-06	--	396,721	0.0146	0.0044	8.79E-04	++	396,469
0.0235	0.0033	8.51E-13	++	396,723	0.0138	0.0033	2.99E-05	+-	396,469
-0.0284	0.0029	2.86E-22	--	396,723	-0.0051	0.0029	8.43E-02	+	396,469
0.0160	0.0031	2.06E-07	++	403,294	-0.0047	0.0031	1.30E-01	--	403,041
0.0073	0.0026	5.02E-03	+-	404,165	-0.0055	0.0026	3.40E-02	--	403,912
0.0131	0.0024	4.82E-08	++	396,722	0.0017	0.0024	4.81E-01	++	396,470
-0.0287	0.0027	3.82E-26	--	396,723	-0.0184	0.0027	1.43E-11	--	396,470
-0.0205	0.0026	1.18E-15	--	395,850	-0.0200	0.0026	6.96E-15	--	395,597
-0.0298	0.0028	3.92E-27	--	396,721	-0.0319	0.0028	1.85E-30	--	396,468
-0.0203	0.0036	2.01E-08	--	396,722	-0.0011	0.0036	7.71E-01	+-	396,468
0.0223	0.0025	9.22E-20	++	396,723	0.0262	0.0025	2.83E-26	++	396,470
-0.0289	0.0028	1.36E-25	--	396,722	-0.0166	0.0028	2.48E-09	--	396,470
0.0334	0.0032	7.72E-25	++	395,851	0.0265	0.0033	4.61E-16	++	395,598
0.0062	0.0023	7.54E-03	++	404,164	-0.0028	0.0024	2.33E-01	--	403,912
0.0016	0.0028	5.64E-01	+-	396,723	-0.0245	0.0029	1.25E-17	--	396,470
-0.0033	0.0024	1.67E-01	--	396,723	0.0175	0.0024	2.26E-13	++	396,470
-0.0213	0.0025	5.28E-18	--	396,723	-0.0082	0.0025	9.46E-04	--	396,469
-0.0729	0.0047	2.43E-54	--	396,722	-0.0561	0.0047	1.78E-32	--	396,469
-0.0567	0.0027	9.32E-97	--	395,850	-0.0261	0.0027	1.15E-21	--	395,597
-0.0348	0.0024	4.20E-48	--	396,722	0.0001	0.0024	9.80E-01	+	396,469
0.0275	0.0027	2.40E-24	++	396,721	0.0169	0.0027	4.76E-10	++	396,469
-0.0307	0.0040	1.67E-14	--	404,165	-0.0340	0.0040	3.23E-17	--	403,912
0.0180	0.0025	3.27E-13	++	403,293	0.0206	0.0025	8.76E-17	++	403,041
-0.0154	0.0027	7.14E-09	--	395,851	0.0019	0.0027	4.76E-01	+-	395,598
0.0167	0.0023	1.23E-12	++	396,723	0.0177	0.0024	7.79E-14	++	396,470
0.0159	0.0027	6.55E-09	++	396,722	0.0209	0.0028	2.78E-14	++	396,470
-0.0036	0.0025	1.59E-01	+	396,722	0.0111	0.0025	1.23E-05	++	396,469
-0.0115	0.0024	1.39E-06	--	395,850	-0.0187	0.0024	7.02E-15	--	395,597
0.0342	0.0024	7.12E-47	++	395,850	0.0108	0.0024	6.36E-06	++	395,597
-0.0186	0.0024	1.35E-14	--	395,851	-0.0146	0.0024	1.71E-09	+	395,597
-0.0342	0.0048	9.83E-13	--	395,852	-0.0046	0.0048	3.37E-01	--	395,599
-0.0254	0.0025	6.23E-25	--	395,852	-0.0059	0.0025	1.76E-02	--	395,598
-0.0067	0.0023	4.11E-03	--	404,165	0.0085	0.0023	2.68E-04	++	403,911
0.0014	0.0023	5.60E-01	+-	404,165	0.0131	0.0023	2.24E-08	++	403,912
0.0309	0.0030	1.90E-24	++	404,164	0.0352	0.0030	7.50E-31	++	403,912
0.0098	0.0024	5.44E-05	++	404,165	-0.0053	0.0024	3.06E-02	+	403,911

0.0435	0.0035	2.50E-35	++	404,165	0.0346	0.0035	9.91E-23	++	403,912
0.0318	0.0048	5.16E-11	++	392,885	-0.0379	0.0049	7.50E-15	--	392,632
-0.0316	0.0029	6.72E-28	--	383,797	-0.0111	0.0029	1.28E-04	+	383,544
0.0048	0.0029	9.98E-02	++	396,722	-0.0134	0.0029	4.41E-06	--	396,470
-0.0322	0.0030	1.69E-26	--	396,723	-0.0116	0.0030	1.38E-04	--	396,470
-0.0151	0.0023	1.17E-10	--	396,723	-0.0211	0.0024	4.73E-19	--	396,469
-0.0204	0.0072	4.91E-03	+	396,723	0.0699	0.0073	8.58E-22	++	396,470
-0.0251	0.0025	7.09E-23	--	395,852	0.0090	0.0026	4.47E-04	++	395,599
-0.0129	0.0024	4.61E-08	--	404,165	-0.0047	0.0024	4.59E-02	--	403,911
0.0189	0.0031	1.40E-09	++	404,163	0.0215	0.0031	7.21E-12	++	403,911
0.0030	0.0028	2.81E-01	+	396,723	-0.0073	0.0028	8.59E-03	--	396,470
-0.0274	0.0024	6.42E-31	--	396,721	-0.0167	0.0024	2.37E-12	--	396,468
-0.0161	0.0024	4.40E-11	--	404,165	-0.0158	0.0025	1.08E-10	--	403,912
0.0214	0.0023	5.95E-20	++	404,164	0.0108	0.0024	4.52E-06	++	403,912
0.0165	0.0023	1.69E-12	++	404,163	0.0074	0.0024	1.75E-03	++	403,910
0.0167	0.0041	4.41E-05	++	396,722	0.0446	0.0041	2.77E-27	++	396,470
0.0086	0.0024	3.73E-04	++	396,723	-0.0030	0.0024	2.20E-01	+	396,470
0.0185	0.0025	5.11E-14	++	395,852	0.0054	0.0025	2.76E-02	++	395,599
-0.0172	0.0025	9.48E-12	--	396,723	-0.0233	0.0025	4.48E-20	--	396,470
0.0122	0.0024	3.53E-07	++	395,850	0.0138	0.0024	8.64E-09	++	395,597
0.0336	0.0023	1.13E-47	++	404,165	0.0152	0.0023	7.09E-11	++	403,912
0.0091	0.0024	1.11E-04	++	403,293	0.0024	0.0024	3.18E-01	+	403,039
0.0221	0.0030	2.20E-13	++	396,722	0.0188	0.0030	5.02E-10	++	396,469
-0.0215	0.0023	4.24E-20	--	396,723	-0.0224	0.0024	2.43E-21	--	396,469
-0.0246	0.0026	2.75E-21	--	396,721	-0.0179	0.0026	7.93E-12	--	396,469
-0.0104	0.0027	1.15E-04	--	396,721	-0.0119	0.0027	1.19E-05	--	396,468
-0.0285	0.0023	3.91E-34	--	396,723	-0.0224	0.0024	1.68E-21	--	396,470
0.0093	0.0024	8.76E-05	++	396,723	0.0002	0.0024	9.19E-01	+	396,470
0.0010	0.0034	7.64E-01	+	395,850	-0.0104	0.0034	2.24E-03	--	395,597
-0.0185	0.0025	1.40E-13	--	404,164	-0.0197	0.0025	3.58E-15	--	403,912
0.0211	0.0033	1.46E-10	++	404,163	0.0192	0.0033	7.11E-09	++	403,910
0.0264	0.0024	1.66E-27	++	396,721	0.0231	0.0024	4.33E-21	++	396,469
0.0282	0.0037	2.54E-14	++	396,721	0.0110	0.0037	3.20E-03	++	396,468
0.0239	0.0032	1.72E-13	++	396,721	0.0101	0.0033	1.83E-03	++	396,468
-0.0195	0.0030	1.19E-10	--	396,723	-0.0091	0.0030	2.80E-03	+	396,470
0.0322	0.0023	1.42E-43	++	403,292	0.0379	0.0023	9.57E-59	++	403,040
-0.0153	0.0025	5.57E-10	--	396,721	-0.0090	0.0025	2.97E-04	--	396,469
-0.0082	0.0024	5.51E-04	--	396,723	0.0030	0.0024	2.11E-01	++	396,470
0.0198	0.0025	6.27E-15	++	396,721	0.0196	0.0025	1.68E-14	++	396,468
0.0143	0.0026	3.39E-08	++	396,721	0.0114	0.0026	1.11E-05	++	396,469
-0.0114	0.0026	1.52E-05	--	396,722	-0.0135	0.0027	3.97E-07	--	396,469
-0.0096	0.0028	6.96E-04	--	396,722	0.0040	0.0029	1.59E-01	++	396,469
0.0103	0.0030	6.00E-04	++	396,723	-0.0107	0.0030	3.85E-04	--	396,470
0.0195	0.0025	4.02E-15	++	396,722	0.0159	0.0025	1.82E-10	++	396,468
0.0195	0.0025	1.32E-14	++	396,721	0.0223	0.0025	1.92E-18	++	396,468
0.0061	0.0025	1.34E-02	++	403,292	-0.0104	0.0025	2.87E-05	--	403,039
0.0125	0.0026	1.08E-06	++	396,722	0.0010	0.0026	7.01E-01	+	396,470
-0.0175	0.0024	4.69E-13	--	396,722	-0.0142	0.0024	4.68E-09	--	396,469
0.0343	0.0030	9.58E-30	++	396,722	0.0363	0.0031	1.39E-32	++	396,469
0.0095	0.0024	5.75E-05	+	404,165	-0.0017	0.0024	4.64E-01	+	403,912

-0.0030	0.0052	5.68E-01	+	403,294	0.0172	0.0052	9.87E-04	++	403,041
-0.0136	0.0028	7.89E-07	--	404,165	-0.0228	0.0028	2.04E-16	--	403,912
0.0232	0.0025	3.79E-21	++	404,163	-0.0085	0.0025	5.49E-04	--	403,910
-0.0206	0.0030	1.16E-11	--	403,294	-0.0063	0.0031	3.94E-02	--	403,041
0.0218	0.0023	1.59E-20	++	396,723	0.0088	0.0024	1.90E-04	++	396,470
-0.0064	0.0030	3.24E-02	--	403,292	0.0125	0.0030	3.06E-05	++	403,039
-0.0131	0.0024	2.76E-08	--	404,164	-0.0113	0.0024	2.17E-06	--	403,911
0.0107	0.0025	1.84E-05	++	404,165	-0.0057	0.0025	2.33E-02	--	403,912
-0.0208	0.0023	6.70E-19	--	396,722	-0.0208	0.0024	9.94E-19	--	396,468
0.0224	0.0024	5.13E-21	++	396,722	0.0044	0.0024	6.88E-02	+-	396,469
0.0221	0.0025	3.03E-18	++	395,850	0.0181	0.0025	1.36E-12	++	395,597
-0.0076	0.0023	1.11E-03	--	403,293	0.0083	0.0023	4.15E-04	+-	403,039
0.0167	0.0026	1.54E-10	++	404,164	0.0206	0.0026	5.28E-15	++	403,912
0.0228	0.0035	5.33E-11	++	404,164	0.0052	0.0035	1.40E-01	++	403,910
0.0189	0.0027	2.25E-12	++	404,164	0.0202	0.0027	7.29E-14	++	403,911
-0.0426	0.0029	3.10E-49	--	391,506	-0.0415	0.0029	2.82E-46	--	391,252
0.0106	0.0028	2.05E-04	++	396,723	0.0174	0.0029	1.12E-09	++	396,469
0.0296	0.0023	1.28E-36	++	396,723	0.0209	0.0024	6.96E-19	++	396,470
0.0198	0.0027	2.08E-13	++	395,850	0.0143	0.0027	1.21E-07	++	395,597
-0.0273	0.0027	1.24E-24	--	404,164	-0.0162	0.0027	1.71E-09	--	403,911
0.0128	0.0023	3.66E-08	++	404,164	0.0100	0.0023	2.12E-05	++	403,911
-0.0202	0.0028	1.24E-12	--	404,163	-0.0185	0.0029	1.13E-10	--	403,910
0.0085	0.0024	3.20E-04	++	404,163	0.0134	0.0024	1.78E-08	++	403,910
0.0234	0.0035	2.95E-11	++	403,293	0.0069	0.0035	4.94E-02	++	403,041
0.0232	0.0104	2.55E-02	+-	404,164	-0.0532	0.0105	3.78E-07	--	403,910
0.0203	0.0024	5.28E-17	++	404,164	0.0259	0.0024	1.42E-26	++	403,911
0.0213	0.0030	1.02E-12	++	404,165	0.0144	0.0030	1.64E-06	++	403,911
-0.0174	0.0031	1.48E-08	--	404,163	-0.0066	0.0031	3.20E-02	+-	403,911
0.0165	0.0024	3.50E-12	++	403,292	0.0239	0.0024	1.03E-23	++	403,039
0.0226	0.0026	7.65E-18	++	404,164	0.0257	0.0026	1.56E-22	++	403,910
-0.0266	0.0025	2.20E-26	--	396,722	-0.0291	0.0025	5.81E-31	--	396,470
0.0021	0.0024	3.82E-01	+	404,164	-0.0103	0.0024	2.07E-05	--	403,912
0.0293	0.0027	9.09E-27	++	404,163	0.0201	0.0027	2.52E-13	++	403,910
-0.0192	0.0029	6.94E-11	--	403,292	-0.0055	0.0030	6.22E-02	--	403,039
-0.0190	0.0024	2.00E-15	--	404,165	-0.0098	0.0024	4.64E-05	--	403,912

FEV1/FVC					PEF				
beta	se	P	Direction	N	beta	se	P	Direction	N
0.0247	0.0025	5.56E-23	++	404,128	0.0160	0.0027	2.05E-09	++	345,265
0.0022	0.0029	4.50E-01	++	403,257	0.0105	0.0031	6.04E-04	++	345,265
0.0067	0.0029	2.03E-02	++	404,127	0.0126	0.0031	4.58E-05	++	345,265
-0.0099	0.0027	2.68E-04	--	404,128	-0.0146	0.0029	4.00E-07	--	345,265
0.0202	0.0024	5.62E-17	++	404,127	0.0328	0.0026	1.28E-37	++	345,265
0.0508	0.0055	3.12E-20	++	396,685	0.0272	0.0058	2.64E-06	+-	345,265
-0.0271	0.0035	6.11E-15	--	396,686	-0.0179	0.0037	1.24E-06	--	345,265
-0.0139	0.0024	5.07E-09	--	396,686	-0.0023	0.0025	3.71E-01	--	345,265
0.0236	0.0025	1.92E-20	++	395,815	0.0137	0.0027	2.99E-07	++	345,265
0.0112	0.0024	3.46E-06	++	395,814	0.0170	0.0025	2.49E-11	++	345,265
-0.0362	0.0039	9.57E-21	--	396,686	-0.0233	0.0041	8.28E-09	--	345,265
0.0048	0.0025	6.13E-02	++	396,686	0.0043	0.0027	1.14E-01	++	345,265
0.0164	0.0025	4.15E-11	++	396,684	0.0022	0.0026	4.04E-01	++	345,265
0.0280	0.0031	2.80E-19	++	396,685	0.0133	0.0033	4.93E-05	++	345,265
0.0198	0.0024	4.48E-16	++	396,686	0.0126	0.0026	1.04E-06	++	345,265
0.0153	0.0024	2.13E-10	++	396,686	0.0066	0.0025	8.78E-03	++	345,265
-0.0285	0.0031	5.00E-20	--	396,684	-0.0078	0.0033	1.69E-02	--	345,265
-0.0445	0.0045	2.33E-23	--	396,684	-0.0086	0.0047	6.84E-02	--	345,265
0.0072	0.0026	6.08E-03	++	395,814	-0.0081	0.0028	3.42E-03	+	345,265
-0.0239	0.0024	4.15E-24	--	404,128	-0.0212	0.0025	3.86E-17	--	345,265
0.0065	0.0031	3.51E-02	+-	404,127	0.0236	0.0033	8.83E-13	++	345,265
0.0079	0.0044	7.10E-02	+-	404,126	0.0182	0.0047	1.06E-04	++	345,265
0.0022	0.0024	3.49E-01	++	403,256	0.0070	0.0025	5.69E-03	++	345,265
0.0122	0.0024	2.84E-07	++	404,126	-0.0025	0.0025	3.28E-01	+	345,265
0.0010	0.0025	7.01E-01	+	404,127	-0.0051	0.0027	6.04E-02	--	345,265
-0.0203	0.0024	1.04E-16	--	396,684	-0.0105	0.0026	4.37E-05	+	345,265
-0.0197	0.0026	8.73E-14	--	396,685	-0.0124	0.0028	8.83E-06	--	345,265
-0.0097	0.0024	5.34E-05	--	396,685	-0.0168	0.0025	3.15E-11	--	345,265
0.0007	0.0024	7.74E-01	+-	396,686	-0.0099	0.0026	1.14E-04	+	345,265
0.0197	0.0026	4.65E-14	++	396,686	0.0059	0.0028	3.15E-02	++	345,265
-0.0026	0.0024	2.76E-01	+-	396,684	0.0014	0.0025	5.90E-01	++	345,265
0.0179	0.0029	5.86E-10	++	396,686	0.0140	0.0030	4.50E-06	++	345,265
0.0065	0.0024	6.20E-03	++	396,685	-0.0020	0.0025	4.38E-01	+	345,265
0.0258	0.0033	1.06E-14	++	396,685	0.0147	0.0035	3.47E-05	++	345,265
0.0031	0.0029	2.95E-01	++	396,686	0.0033	0.0031	2.84E-01	++	345,265
0.0096	0.0024	6.80E-05	++	395,815	-0.0036	0.0025	1.56E-01	+	345,265
0.0086	0.0029	3.31E-03	+-	396,686	0.0095	0.0031	2.15E-03	++	345,265
-0.0108	0.0025	2.01E-05	--	395,813	0.0047	0.0027	7.36E-02	++	345,265
-0.0032	0.0024	1.84E-01	+	395,813	0.0064	0.0025	1.11E-02	+-	345,265
0.0037	0.0024	1.18E-01	++	404,127	0.0116	0.0025	5.74E-06	++	345,265
-0.0044	0.0033	1.86E-01	--	404,127	0.0138	0.0035	1.00E-04	++	345,265
0.0002	0.0024	9.22E-01	+-	396,684	-0.0064	0.0025	1.12E-02	--	345,265
-0.0180	0.0025	2.11E-13	--	395,813	-0.0088	0.0026	7.18E-04	--	345,265
0.0074	0.0045	9.74E-02	++	396,684	-0.0123	0.0047	9.07E-03	--	345,265

0.0598	0.0088	8.59E-12	++	396,266	0.0496	0.0091	4.97E-08	++	345,265
-0.0106	0.0026	3.65E-05	--	396,684	-0.0241	0.0027	6.26E-19	--	345,265
-0.0076	0.0031	1.41E-02	--	396,686	-0.0162	0.0033	8.02E-07	--	345,265
0.0272	0.0027	2.24E-23	++	396,684	0.0107	0.0029	2.01E-04	++	345,265
-0.0196	0.0024	2.42E-16	--	396,686	-0.0085	0.0025	7.69E-04	--	345,265
0.0093	0.0024	1.32E-04	++	396,684	-0.0136	0.0026	1.03E-07	+	345,265
0.0535	0.0024	6.63E-111	++	396,686	0.0665	0.0025	2.54E-153	++	345,265
-0.0179	0.0030	1.40E-09	--	404,127	-0.0138	0.0031	1.12E-05	+	345,265
0.0120	0.0033	3.22E-04	++	403,257	0.0218	0.0035	7.06E-10	++	345,265
-0.0308	0.0032	1.78E-22	--	396,684	-0.0075	0.0033	2.45E-02	+	345,265
-0.0307	0.0036	3.30E-17	--	396,684	-0.0123	0.0038	1.29E-03	+	345,265
-0.1081	0.0100	2.41E-27	--	395,447	-0.0849	0.0104	2.41E-16	--	345,265
-0.0352	0.0026	1.53E-42	--	395,813	-0.0129	0.0027	1.60E-06	--	345,265
-0.0308	0.0026	2.31E-33	--	395,813	-0.0192	0.0027	1.02E-12	--	345,265
-0.0005	0.0024	8.22E-01	--	404,128	-0.0066	0.0025	8.23E-03	+	345,265
-0.0085	0.0050	8.52E-02	--	404,126	-0.0148	0.0052	4.48E-03	+	345,265
0.0011	0.0024	6.38E-01	++	404,127	-0.0042	0.0025	9.80E-02	--	345,265
-0.0209	0.0025	2.17E-16	--	403,257	-0.0068	0.0027	1.24E-02	+	345,265
0.0068	0.0026	1.01E-02	++	404,126	-0.0058	0.0028	3.84E-02	--	345,265
0.0147	0.0025	3.78E-09	++	396,686	0.0192	0.0026	2.36E-13	++	345,265
0.0037	0.0024	1.29E-01	++	396,686	0.0098	0.0026	1.32E-04	++	345,265
0.0168	0.0028	2.02E-09	+	396,685	0.0237	0.0030	8.89E-16	++	345,265
-0.0315	0.0027	2.43E-32	--	396,685	-0.0264	0.0028	6.27E-21	--	345,265
0.0244	0.0033	1.73E-13	++	404,127	0.0114	0.0035	1.28E-03	++	345,265
0.0105	0.0024	1.19E-05	++	403,256	0.0135	0.0025	1.10E-07	++	345,265
-0.0046	0.0035	1.85E-01	--	404,127	0.0031	0.0037	4.03E-01	+-	345,265
0.0050	0.0024	3.29E-02	++	404,126	0.0206	0.0025	2.97E-16	++	345,265
-0.0036	0.0024	1.35E-01	+	396,685	-0.0073	0.0025	3.78E-03	--	345,265
-0.0110	0.0025	1.54E-05	--	396,686	-0.0194	0.0027	3.35E-13	--	345,265
-0.0178	0.0026	4.07E-12	--	396,686	-0.0086	0.0027	1.52E-03	--	345,265
0.0232	0.0025	4.46E-21	++	403,256	0.0117	0.0026	7.75E-06	++	345,265
-0.0199	0.0026	4.97E-14	--	403,257	-0.0131	0.0028	2.84E-06	--	345,265
-0.0175	0.0027	6.84E-11	--	396,685	-0.0153	0.0028	6.91E-08	--	345,265
0.0008	0.0025	7.60E-01	++	396,686	-0.0051	0.0027	5.31E-02	--	345,265
-0.0080	0.0025	1.54E-03	--	404,126	-0.0080	0.0027	3.02E-03	--	345,265
-0.0232	0.0032	3.98E-13	--	396,685	-0.0153	0.0034	5.91E-06	--	345,265
0.0178	0.0025	5.39E-13	++	395,813	0.0129	0.0026	6.36E-07	++	345,265
0.0101	0.0026	9.14E-05	++	396,684	0.0078	0.0027	4.22E-03	++	345,265
0.0168	0.0025	8.30E-12	++	403,255	0.0042	0.0026	1.09E-01	++	345,265
-0.0233	0.0031	4.32E-14	--	396,685	-0.0201	0.0032	6.38E-10	--	345,265
-0.0092	0.0024	1.14E-04	--	396,686	-0.0128	0.0025	3.53E-07	--	345,265
0.0191	0.0027	2.33E-12	++	404,128	0.0076	0.0029	8.99E-03	+-	345,265
0.0063	0.0070	3.65E-01	++	394,961	-0.0345	0.0072	1.59E-06	+	345,265
0.0061	0.0024	1.14E-02	+	403,255	0.0126	0.0026	7.63E-07	++	345,265
0.0167	0.0024	2.29E-12	++	404,128	0.0056	0.0025	2.72E-02	++	345,265
0.0153	0.0025	6.16E-10	++	396,686	0.0107	0.0026	4.37E-05	++	345,265
-0.0151	0.0035	2.04E-05	--	396,685	-0.0243	0.0037	8.33E-11	--	345,265
0.0030	0.0027	2.65E-01	++	396,686	0.0286	0.0029	1.85E-23	++	345,265
0.0189	0.0032	4.53E-09	++	396,685	0.0240	0.0034	9.33E-13	++	345,265
-0.0261	0.0029	2.92E-19	--	404,128	-0.0117	0.0031	1.56E-04	--	345,265

0.0048	0.0083	5.58E-01	+	403,257	0.0380	0.0088	1.57E-05	++	345,265
0.0079	0.0025	1.56E-03	++	404,127	-0.0086	0.0026	1.19E-03	--	345,265
0.0055	0.0027	4.05E-02	++	395,814	0.0171	0.0028	1.71E-09	++	345,265
-0.0270	0.0039	4.61E-12	--	396,684	-0.0157	0.0041	1.27E-04	--	345,265
-0.0208	0.0027	2.73E-14	--	395,813	-0.0067	0.0029	1.92E-02	--	345,265
0.0189	0.0024	7.55E-15	++	403,256	0.0117	0.0026	5.42E-06	++	345,265
0.0392	0.0040	2.15E-22	++	404,127	0.0133	0.0043	1.93E-03	++	345,265
-0.0041	0.0024	9.61E-02	--	396,686	0.0082	0.0026	1.41E-03	++	345,265
-0.0218	0.0030	6.83E-13	--	403,255	-0.0042	0.0032	1.95E-01	+	345,265
-0.0005	0.0024	8.40E-01	--	404,126	-0.0057	0.0025	2.31E-02	--	345,265
0.0047	0.0024	4.66E-02	++	403,255	-0.0018	0.0025	4.80E-01	--	345,265
0.0268	0.0027	3.18E-23	++	403,257	0.0209	0.0029	3.62E-13	++	345,265
-0.0506	0.0047	2.82E-27	--	404,126	-0.0303	0.0050	1.02E-09	--	345,265
-0.0288	0.0031	2.42E-20	--	398,193	-0.0147	0.0033	8.92E-06	--	345,265
0.0339	0.0055	6.60E-10	++	403,257	0.0047	0.0059	4.28E-01	++	345,265
0.0108	0.0029	1.66E-04	++	404,126	-0.0014	0.0030	6.46E-01	--	345,265
0.0205	0.0026	5.29E-15	++	403,255	0.0147	0.0028	1.04E-07	++	345,265
0.0059	0.0027	2.73E-02	++	404,128	-0.0042	0.0029	1.43E-01	--	345,265
0.0089	0.0051	7.95E-02	++	404,127	-0.0151	0.0053	4.67E-03	--	345,265
-0.0450	0.0053	3.08E-17	--	403,255	-0.0079	0.0057	1.63E-01	--	345,265
-0.0270	0.0038	6.72E-13	--	396,685	-0.0164	0.0039	3.15E-05	+	345,265
-0.0159	0.0027	6.84E-09	--	396,684	-0.0033	0.0029	2.59E-01	--	345,265
0.0238	0.0024	7.31E-24	++	404,127	0.0142	0.0025	1.87E-08	++	345,265
-0.0068	0.0024	4.03E-03	--	404,127	-0.0107	0.0025	2.62E-05	--	345,265
-0.0060	0.0034	7.95E-02	--	403,257	0.0108	0.0036	2.79E-03	++	345,265
-0.0127	0.0034	1.81E-04	--	404,126	-0.0070	0.0036	5.01E-02	--	345,265
0.0001	0.0024	9.55E-01	++	403,255	0.0024	0.0025	3.46E-01	++	345,265
-0.0021	0.0029	4.71E-01	--	404,126	-0.0155	0.0031	4.04E-07	--	345,265
0.0017	0.0024	4.82E-01	+	404,128	0.0109	0.0026	2.32E-05	+-	345,265
-0.0285	0.0029	1.21E-22	--	395,813	-0.0065	0.0031	3.38E-02	--	345,265
0.0279	0.0077	3.06E-04	++	382,746	0.0111	0.0079	1.59E-01	+-	345,265
0.0197	0.0028	9.17E-13	++	396,686	0.0058	0.0029	4.31E-02	++	345,265
-0.0475	0.0046	1.82E-25	--	396,686	-0.0591	0.0048	2.55E-35	--	345,265
-0.0175	0.0040	1.10E-05	--	384,533	0.0124	0.0041	2.40E-03	++	345,265
0.0235	0.0027	1.52E-18	++	403,255	0.0288	0.0028	3.50E-24	++	345,265
0.0165	0.0024	5.60E-12	++	403,255	0.0075	0.0025	3.11E-03	+-	345,265
-0.0011	0.0024	6.57E-01	+	403,255	-0.0066	0.0026	1.12E-02	--	345,265
0.0015	0.0025	5.44E-01	++	404,128	-0.0086	0.0027	1.49E-03	--	345,265
0.0252	0.0041	4.93E-10	++	404,128	0.0122	0.0043	4.50E-03	+-	345,265
0.0005	0.0025	8.37E-01	++	404,128	0.0078	0.0027	3.58E-03	++	345,265
-0.0098	0.0024	4.01E-05	--	403,255	-0.0104	0.0025	4.22E-05	+	345,265
0.0092	0.0026	4.18E-04	++	404,128	0.0002	0.0028	9.54E-01	+	345,265
0.0227	0.0028	5.19E-16	++	404,127	0.0176	0.0030	3.59E-09	++	345,265
0.0357	0.0035	6.85E-24	++	404,128	0.0331	0.0038	1.61E-18	++	345,265
0.0102	0.0037	5.72E-03	++	403,255	0.0172	0.0039	9.05E-06	+-	345,265
0.0389	0.0024	5.95E-61	++	404,128	0.0231	0.0025	3.57E-20	++	345,265
-0.0239	0.0028	9.82E-18	--	404,128	-0.0215	0.0030	4.67E-13	--	345,265
0.0440	0.0030	2.28E-47	++	396,686	0.0182	0.0032	1.51E-08	++	345,265
0.0245	0.0026	1.63E-21	++	396,684	0.0161	0.0027	3.03E-09	++	345,265
0.0039	0.0028	1.63E-01	++	396,686	-0.0151	0.0029	2.42E-07	--	345,265

0.0063	0.0024	9.02E-03	++	396,684	-0.0081	0.0025	1.42E-03	--	345,265
0.0042	0.0024	7.98E-02	++	396,685	-0.0051	0.0026	4.58E-02	--	345,265
-0.0129	0.0034	1.27E-04	--	396,686	-0.0324	0.0036	1.50E-19	--	345,265
-0.0018	0.0029	5.36E-01	-+	395,813	0.0040	0.0031	1.93E-01	++	345,265
-0.0085	0.0026	1.25E-03	--	396,685	-0.0156	0.0028	2.13E-08	-+	345,265
0.0062	0.0024	9.94E-03	++	395,813	0.0045	0.0025	7.61E-02	+-	345,265
0.0245	0.0024	3.92E-24	++	396,685	0.0057	0.0026	2.50E-02	+-	345,265
-0.0079	0.0025	1.64E-03	--	395,814	-0.0009	0.0027	7.22E-01	--	345,265
0.0278	0.0024	1.77E-31	++	396,686	0.0290	0.0025	9.42E-31	++	345,265
-0.0415	0.0031	4.02E-40	--	404,126	-0.0229	0.0033	5.32E-12	--	345,265
-0.0231	0.0028	3.02E-16	--	396,686	-0.0053	0.0030	7.55E-02	--	345,265
0.0023	0.0024	3.48E-01	+-	395,813	0.0103	0.0026	6.72E-05	++	345,265
-0.0332	0.0035	2.20E-21	--	395,813	-0.0196	0.0037	9.53E-08	--	345,265
-0.0199	0.0024	3.08E-16	--	396,686	-0.0109	0.0026	2.02E-05	--	345,265
-0.0743	0.0044	9.45E-63	--	396,684	-0.0325	0.0047	3.30E-12	--	345,265
0.0223	0.0033	2.71E-11	++	396,686	0.0151	0.0035	2.02E-05	++	345,265
-0.0484	0.0030	3.58E-59	--	396,686	-0.0206	0.0032	6.06E-11	--	345,265
0.0423	0.0031	1.73E-41	++	403,257	0.0216	0.0033	9.44E-11	++	345,265
0.0267	0.0027	9.22E-24	++	404,128	0.0061	0.0028	2.93E-02	+-	345,265
0.0250	0.0024	1.35E-24	++	396,685	0.0159	0.0026	5.53E-10	++	345,265
-0.0248	0.0028	2.38E-19	--	396,686	-0.0184	0.0029	3.25E-10	--	345,265
-0.0044	0.0026	9.11E-02	--	395,813	-0.0093	0.0027	7.54E-04	--	345,265
0.0003	0.0028	9.19E-01	+-	396,684	-0.0111	0.0030	1.97E-04	--	345,265
-0.0433	0.0037	6.76E-32	--	396,685	-0.0078	0.0039	4.53E-02	--	345,265
-0.0051	0.0025	4.29E-02	--	396,686	0.0005	0.0026	8.56E-01	+-	345,265
-0.0298	0.0028	4.71E-26	--	396,685	-0.0305	0.0030	1.50E-24	--	345,265
0.0182	0.0033	3.65E-08	++	395,814	0.0073	0.0035	3.74E-02	++	345,265
0.0167	0.0024	2.36E-12	++	404,127	0.0040	0.0025	1.18E-01	++	345,265
0.0537	0.0029	2.08E-76	++	396,686	0.0202	0.0031	5.64E-11	++	345,265
-0.0415	0.0024	5.78E-66	--	396,686	-0.0173	0.0026	1.47E-11	--	345,265
-0.0297	0.0025	2.60E-32	--	396,686	-0.0156	0.0027	4.44E-09	--	345,265
-0.0478	0.0048	1.68E-23	--	396,685	-0.0285	0.0050	1.42E-08	--	345,265
-0.0682	0.0028	4.18E-134	--	395,813	-0.0433	0.0029	2.45E-51	--	345,265
-0.0704	0.0024	3.65E-184	--	396,685	-0.0614	0.0026	6.76E-126	--	345,265
0.0246	0.0028	5.01E-19	++	396,684	0.0384	0.0029	5.11E-40	++	345,265
-0.0004	0.0041	9.18E-01	+-	404,128	-0.0065	0.0044	1.34E-01	--	345,265
-0.0040	0.0025	1.10E-01	-+	403,256	0.0067	0.0027	1.29E-02	+-	345,265
-0.0367	0.0027	1.47E-41	--	395,814	-0.0216	0.0029	4.12E-14	--	345,265
0.0030	0.0024	2.11E-01	++	396,686	0.0084	0.0025	9.10E-04	++	345,265
-0.0075	0.0028	7.13E-03	-+	396,685	0.0045	0.0029	1.26E-01	++	345,265
-0.0296	0.0026	1.46E-30	--	396,685	-0.0114	0.0027	2.68E-05	--	345,265
0.0118	0.0024	1.28E-06	++	395,813	-0.0002	0.0026	9.28E-01	-+	345,265
0.0505	0.0024	1.56E-96	++	395,813	0.0303	0.0025	5.60E-33	++	345,265
-0.0125	0.0025	3.35E-07	--	395,814	-0.0120	0.0026	3.41E-06	-+	345,265
-0.0628	0.0049	8.04E-38	--	395,815	-0.0425	0.0052	1.73E-16	--	345,265
-0.0408	0.0025	3.06E-59	--	395,815	-0.0274	0.0027	4.75E-25	--	345,265
-0.0311	0.0024	3.93E-39	--	404,128	-0.0122	0.0025	1.47E-06	--	345,265
-0.0234	0.0024	6.95E-23	--	404,128	-0.0079	0.0025	1.89E-03	--	345,265
-0.0034	0.0031	2.70E-01	--	404,127	0.0145	0.0033	1.10E-05	++	345,265
0.0297	0.0025	3.07E-33	++	404,128	0.0145	0.0026	3.72E-08	++	345,265

0.0288	0.0036	7.31E-16	++	404,128	0.0553	0.0038	1.21E-48	++	345,265
0.1452	0.0049	3.00E-189	++	392,848	0.0730	0.0052	2.22E-45	++	345,265
-0.0469	0.0030	9.79E-57	--	383,776	-0.0372	0.0030	2.67E-35	--	343,506
0.0344	0.0030	4.67E-31	++	396,685	0.0212	0.0031	1.28E-11	++	345,265
-0.0450	0.0031	3.89E-48	--	396,686	-0.0247	0.0032	2.96E-14	--	345,265
0.0097	0.0024	5.19E-05	++	396,686	-0.0021	0.0025	4.06E-01	--	345,265
-0.1803	0.0074	2.34E-131	--	396,686	-0.0999	0.0077	1.73E-38	--	345,265
-0.0712	0.0026	4.71E-165	--	395,815	-0.0378	0.0027	2.86E-43	--	345,265
-0.0172	0.0024	9.08E-13	--	404,128	-0.0136	0.0026	1.15E-07	--	345,265
-0.0048	0.0032	1.32E-01	--	404,126	0.0061	0.0034	7.49E-02	+-	345,265
0.0219	0.0028	8.74E-15	++	396,686	0.0077	0.0030	9.75E-03	+-	345,265
-0.0236	0.0024	1.48E-22	--	396,684	-0.0268	0.0025	5.92E-26	--	345,265
-0.0024	0.0025	3.39E-01	+	404,128	-0.0095	0.0026	3.35E-04	--	345,265
0.0246	0.0024	5.78E-25	++	404,127	0.0221	0.0025	4.30E-18	++	345,265
0.0219	0.0024	3.88E-20	++	404,126	0.0182	0.0025	6.12E-13	++	345,265
-0.0523	0.0042	4.72E-36	--	396,685	-0.0047	0.0044	2.83E-01	--	345,265
0.0245	0.0025	2.81E-23	++	396,686	0.0110	0.0026	2.28E-05	++	345,265
0.0273	0.0025	9.05E-28	++	395,815	0.0259	0.0026	8.27E-23	++	345,265
0.0080	0.0026	1.99E-03	++	396,686	-0.0003	0.0027	9.07E-01	+	345,265
-0.0013	0.0024	6.07E-01	+	395,813	0.0098	0.0026	1.29E-04	++	345,265
0.0409	0.0024	3.97E-67	++	404,128	0.0314	0.0025	8.66E-36	++	345,265
0.0134	0.0024	2.70E-08	++	403,256	0.0165	0.0026	1.02E-10	++	345,265
0.0087	0.0031	4.40E-03	+-	396,685	0.0126	0.0032	1.03E-04	+-	345,265
-0.0025	0.0024	2.94E-01	--	396,686	-0.0128	0.0025	3.80E-07	--	345,265
-0.0173	0.0027	6.12E-11	--	396,684	-0.0145	0.0028	2.36E-07	--	345,265
0.0009	0.0028	7.49E-01	++	396,684	-0.0077	0.0029	8.26E-03	+	345,265
-0.0188	0.0024	3.02E-15	--	396,686	-0.0158	0.0025	3.72E-10	--	345,265
0.0193	0.0024	1.65E-15	++	396,686	0.0093	0.0025	2.65E-04	++	345,265
0.0218	0.0034	2.18E-10	++	395,813	0.0094	0.0036	9.13E-03	+-	345,265
0.0002	0.0025	9.48E-01	++	404,127	-0.0084	0.0027	1.83E-03	--	345,265
0.0096	0.0034	4.45E-03	++	404,126	0.0042	0.0036	2.42E-01	+-	345,265
0.0108	0.0025	1.26E-05	++	396,684	0.0135	0.0026	2.06E-07	++	345,265
0.0369	0.0038	1.31E-22	++	396,684	0.0206	0.0040	2.22E-07	++	345,265
0.0303	0.0033	5.07E-20	++	396,684	0.0216	0.0035	5.04E-10	++	345,265
-0.0241	0.0031	5.29E-15	--	396,686	-0.0241	0.0033	1.31E-13	--	345,265
-0.0045	0.0024	5.67E-02	--	403,255	0.0155	0.0025	8.22E-10	++	345,265
-0.0145	0.0025	8.36E-09	--	396,684	-0.0093	0.0027	4.54E-04	--	345,265
-0.0227	0.0024	7.04E-21	--	396,686	-0.0161	0.0026	3.25E-10	--	345,265
0.0039	0.0026	1.34E-01	+-	396,684	0.0158	0.0027	7.44E-09	++	345,265
0.0051	0.0026	5.10E-02	++	396,684	0.0196	0.0028	1.72E-12	++	345,265
0.0016	0.0027	5.53E-01	+-	396,685	0.0018	0.0028	5.31E-01	+-	345,265
-0.0275	0.0029	2.36E-21	--	396,685	-0.0089	0.0031	3.88E-03	+	345,265
0.0439	0.0031	1.45E-46	++	396,686	0.0227	0.0032	1.50E-12	++	345,265
0.0098	0.0025	1.07E-04	++	396,685	0.0037	0.0027	1.70E-01	++	345,265
-0.0013	0.0026	6.11E-01	--	396,684	0.0099	0.0027	2.71E-04	++	345,265
0.0315	0.0025	3.40E-36	++	403,255	0.0196	0.0027	1.48E-13	++	345,265
0.0237	0.0026	1.38E-19	++	396,685	0.0222	0.0028	7.90E-16	++	345,265
-0.0079	0.0025	1.36E-03	--	396,685	-0.0073	0.0026	5.24E-03	--	345,265
0.0023	0.0031	4.56E-01	+-	396,685	0.0124	0.0033	1.41E-04	++	345,265
0.0239	0.0024	4.26E-23	++	404,128	0.0133	0.0026	2.60E-07	+-	345,265

-0.0364	0.0053	7.08E-12	--	403,257	-0.0203	0.0056	2.70E-04	--	345,265
0.0141	0.0028	5.82E-07	++	404,128	0.0046	0.0030	1.24E-01	++	345,265
0.0642	0.0025	4.12E-145	++	404,126	0.0417	0.0027	2.73E-55	++	345,265
-0.0310	0.0031	1.22E-23	--	403,257	-0.0136	0.0033	3.39E-05	--	345,265
0.0292	0.0024	2.48E-34	++	396,686	0.0062	0.0025	1.40E-02	++	345,265
-0.0355	0.0031	2.25E-31	--	403,255	-0.0157	0.0032	1.28E-06	--	345,265
-0.0059	0.0024	1.38E-02	--	404,127	-0.0051	0.0026	4.52E-02	--	345,265
0.0332	0.0026	9.86E-39	++	404,128	0.0132	0.0027	1.20E-06	++	345,265
-0.0028	0.0024	2.38E-01	--	396,685	-0.0102	0.0025	5.10E-05	--	345,265
0.0380	0.0024	4.83E-55	++	396,685	0.0303	0.0026	2.84E-32	++	345,265
0.0110	0.0026	2.11E-05	++	395,813	0.0199	0.0027	2.46E-13	++	345,265
-0.0323	0.0024	4.60E-42	--	403,256	-0.0193	0.0025	1.96E-14	--	345,265
-0.0027	0.0027	3.05E-01	+	404,127	0.0093	0.0028	9.73E-04	++	345,265
0.0386	0.0036	1.41E-27	++	404,127	0.0198	0.0038	1.42E-07	++	345,265
0.0008	0.0027	7.69E-01	++	404,127	0.0089	0.0029	2.09E-03	++	345,265
-0.0108	0.0029	2.44E-04	--	391,478	-0.0239	0.0031	6.17E-15	--	345,265
-0.0111	0.0029	1.32E-04	--	396,686	-0.0032	0.0031	2.90E-01	+	345,265
0.0206	0.0024	5.68E-18	++	396,686	0.0364	0.0025	1.88E-47	++	345,265
0.0124	0.0027	6.58E-06	++	395,813	0.0100	0.0029	5.56E-04	+-	345,265
-0.0255	0.0027	7.42E-21	--	404,127	-0.0214	0.0029	1.48E-13	--	345,265
0.0060	0.0024	1.10E-02	++	404,127	0.0045	0.0025	7.28E-02	++	345,265
-0.0060	0.0029	4.01E-02	--	404,126	-0.0123	0.0031	7.34E-05	--	345,265
-0.0078	0.0024	1.24E-03	--	404,126	-0.0024	0.0026	3.56E-01	--	345,265
0.0355	0.0036	3.66E-23	++	403,256	0.0179	0.0038	2.40E-06	++	345,265
0.1535	0.0106	1.69E-47	++	404,127	0.0714	0.0114	4.24E-10	++	345,265
-0.0087	0.0025	4.11E-04	--	404,127	0.0159	0.0026	1.23E-09	++	345,265
0.0160	0.0030	1.41E-07	++	404,128	0.0159	0.0033	9.61E-07	++	345,265
-0.0232	0.0031	1.30E-13	--	404,126	-0.0127	0.0033	1.34E-04	--	345,265
-0.0095	0.0024	9.19E-05	--	403,255	-0.0156	0.0026	1.26E-09	--	345,265
-0.0022	0.0027	4.21E-01	+	404,127	0.0153	0.0029	8.95E-08	++	345,265
0.0006	0.0026	8.04E-01	+-	390,751	-0.0097	0.0027	3.00E-04	--	345,265
0.0246	0.0025	9.34E-24	++	404,127	0.0104	0.0026	6.17E-05	++	345,265
0.0223	0.0028	1.25E-15	++	404,126	0.0177	0.0030	2.22E-09	++	345,265
-0.0269	0.0030	2.69E-19	--	403,255	-0.0158	0.0032	6.98E-07	--	345,265
-0.0219	0.0024	3.62E-19	--	404,128	-0.0144	0.0026	2.82E-08	--	345,265

Supplementary Table 10: Bayesian 99% credible sets

Novel	Nearest Gene	Sentinel	Position (b37)	Phenotype	N credible set
novel	<i>PHF13</i>	rs9661802	1:6678864	FEV1/FVC	11
novel	<i>MIR4418</i>	rs12737805	1:22612690	FEV1	12
novel	<i>DHDDS</i>	rs9438626	1:26775367	FVC	44
novel	<i>DHDDS</i>	rs12096239	1:26796922	FEV1	11
novel	<i>FAF1</i>	rs1416685	1:51243374	FEV1/FVC	43
novel	<i>LOC101926964</i>	rs72673461	1:60966772	FEV1/FVC	30
novel	<i>NEXN</i>	rs9661687	1:78387270	FEV1/FVC	48
novel	<i>TGFBR3</i>	rs10874851	1:92106637	FEV1/FVC	5
novel	<i>DENND2D</i>	rs9970286	1:111737398	FEV1/FVC	4
novel	<i>C1orf54</i>	rs11205354	1:150249101	PEF	128
novel	<i>KRTCAP2</i>	rs141942982	1:155137395	FEV1/FVC	3
novel	<i>RALGPS2</i>	rs4651005	1:178719306	FEV1	45
novel	<i>MIR548F1</i>	rs2146098	1:186090370	FVC	30
novel	<i>MIR548F1</i>	rs17531405	1:186113852	FEV1/FVC	1
novel	<i>MIR181A1HG</i>	rs10919604	1:198898157	FEV1/FVC	15
novel	<i>LMOD1</i>	rs4309038	1:201884647	FEV1/FVC	15
novel	<i>TGFB2</i>	rs2799098	1:218521609	FEV1/FVC	2
novel	<i>LYPLAL1</i>	rs75128958	1:219483218	FEV1/FVC	42
novel	<i>HLX</i>	rs17009288	1:221204299	FVC	16
novel	<i>LOC101926966</i>	rs2544536	2:15906854	FEV1/FVC	7
novel	<i>RDH14</i>	rs6751968	2:18570024	FVC	159
novel	<i>RDH14</i>	rs13430465	2:18702313	FVC	5
novel	<i>ATAD2B</i>	rs13009582	2:24018480	FVC	84
novel	<i>CIB4</i>	rs732990	2:26842146	FVC	27
novel	<i>PKDCC</i>	rs4952564	2:42243850	FVC	22
novel	<i>IL1RL1</i>	rs12470864	2:102926362	FEV1/FVC	8
novel	<i>TEX41</i>	rs1406225	2:145797829	FEV1/FVC	18
novel	<i>RBMS1</i>	rs7424771	2:161276378	FEV1	9
novel	<i>MIR548N</i>	rs2304340	2:179260382	FEV1	3
novel	<i>ITGAV</i>	rs2084448	2:187530520	FEV1/FVC	26
novel	<i>SATB2</i>	rs1249096	2:199723365	FVC	21
novel	<i>SPATS2L</i>	rs985256	2:201208692	FEV1/FVC	6
novel	<i>KIAA2012</i>	rs12997625	2:202970250	FVC	14
novel	<i>IGFBP5</i>	rs6435952	2:217614730	FEV1/FVC	17
novel	<i>DIRC3</i>	rs4294980	2:218604356	FEV1	24
novel	<i>ASIC4</i>	rs4674407	2:220382700	FVC	2
novel	<i>LINC01107</i>	rs6431620	2:239604970	FVC	37
novel	<i>C2orf54</i>	rs6437219	2:241844033	FVC	78
novel	<i>BOK-AS1</i>	rs6733504	2:242495953	FVC	7
novel	<i>LINC00620</i>	rs2974389	3:13787641	FEV1	30
novel	<i>RARB</i>	rs73048404	3:25179533	FVC	37
novel	<i>FOXP1</i>	rs35480566	3:71583177	FVC	40
novel	<i>PDZRN3-AS1</i>	rs586936	3:73862616	FEV1/FVC	5
novel	<i>MIR548G</i>	rs1610265	3:99420192	FVC	38
novel	<i>BCHE</i>	rs1799807	3:165548529	FEV1/FVC	1
novel	<i>IGF2BP2</i>	rs6780171	3:185503456	FEV1	45
novel	<i>KDR</i>	rs12331869	4:56012149	FEV1	8

novel	<i>BTC</i>	rs62316310	4:75676529	FEV1/FVC	42
novel	<i>FRAS1</i>	rs11098196	4:79403952	FEV1/FVC	13
novel	<i>HHIP-AS1</i>	rs13109426	4:145330628	FVC	30
novel	<i>HHIP-AS1</i>	rs13116999	4:145442364	PEF	11
novel	<i>LOC100996325</i>	rs11739847	5:609661	FEV1	91
novel	<i>NNT</i>	rs4866846	5:43976162	FEV1	3
novel	<i>LOX</i>	rs10059661	5:121410529	FEV1/FVC	10
novel	<i>ADAMTS19-AS1</i>	rs17163397	5:128767384	FEV1/FVC	37
novel	<i>ADRB2</i>	rs1800888	5:148206885	FEV1	1
novel	<i>FGF18</i>	rs10059996	5:170901463	FEV1/FVC	2
novel	<i>RASGEF1C</i>	rs79898473	5:179598771	FEV1/FVC	1
novel	<i>BMP6</i>	rs12198986	6:7720059	FVC	21
novel	<i>HMGA1</i>	rs9689096	6:34188892	FVC	39
novel	<i>CDC5L</i>	rs9357446	6:44447598	FVC	5
novel	<i>RUNX2</i>	rs12202314	6:45530471	FEV1/FVC	14
novel	<i>RUNX2</i>	rs9472541	6:45622748	FVC	62
novel	<i>RNU6-71P</i>	rs2894837	6:56336406	FEV1	50
novel	<i>SLC2A12</i>	rs2627237	6:134339265	FEV1	11
novel	<i>LOC100507477</i>	rs1102077	6:140271357	FEV1	15
novel	<i>VTA1</i>	rs9385988	6:142560957	FEV1	8
novel	<i>MEOX2-AS1</i>	rs4721457	7:15872324	FEV1/FVC	31
novel	<i>SKAP2</i>	rs559233	7:26848830	FEV1	71
novel	<i>HOXA-AS3</i>	rs62454414	7:27182329	FVC	3
novel	<i>JAZF1</i>	rs1513272	7:28200097	FEV1	12
novel	<i>IGFBP3</i>	rs17232687	7:46448518	FVC	9
novel	<i>SEMA3D</i>	rs12707691	7:84569510	FEV1	152
novel	<i>MET</i>	rs193686	7:116431427	FEV1/FVC	25
novel	<i>PPP1R3B</i>	rs330939	8:9018590	FEV1/FVC	8
novel	<i>DEFB136</i>	rs4128298	8:11823332	FEV1	10
novel	<i>LOC100505739</i>	rs7465401	8:70367248	FEV1	21
novel	<i>BOP1</i>	rs7838717	8:145504343	FVC	1
novel	<i>SH3GL2</i>	rs7041139	9:18013733	FEV1	7
novel	<i>LOC158434</i>	rs72743974	9:98878881	FEV1/FVC	16
novel	<i>GALNT12</i>	rs57649467	9:101632854	FEV1/FVC	2
novel	<i>IER5L</i>	rs967497	9:131943843	FEV1	65
novel	<i>PARD3</i>	rs1274475	10:34480582	FEV1/FVC	3
novel	<i>CAMK2G</i>	rs60820984	10:75639578	PEF	26
novel	<i>OBFC1</i>	rs11191841	10:105639611	FEV1	30
novel	<i>SLC1A2</i>	rs10836366	11:35308988	FEV1/FVC	36
novel	<i>FKBP4</i>	rs56196860	12:2908330	FVC	1
novel	<i>CCND2-AS1</i>	rs12811814	12:4243749	FEV1	23
novel	<i>AEBP2</i>	rs10841302	12:19808912	FEV1/FVC	6
novel	<i>RASSF3</i>	rs1244869	12:65075332	FEV1/FVC	51
novel	<i>MIR6074</i>	rs11176001	12:66409367	FEV1	6
novel	<i>IGF1</i>	rs972936	12:102824921	PEF	14
novel	<i>TBX5</i>	rs2701110	12:114669870	FEV1	10
novel	<i>MIR8079</i>	rs9533803	13:44820608	FEV1/FVC	8
novel	<i>DLEU1</i>	rs2812208	13:50707087	FEV1	7
novel	<i>LINC00348</i>	rs803765	13:71647588	FVC	42
novel	<i>LINC00382</i>	rs4885681	13:80467235	FEV1	28

novel	<i>DOCK9</i>	rs11620380	13:99665512	FEV1/FVC	8
novel	<i>MYO16</i>	rs9634470	13:109918493	FEV1/FVC	6
novel	<i>HAUS4</i>	rs1951121	14:23429729	FEV1/FVC	46
novel	<i>MIR5580</i>	rs74053129	14:54346010	FEV1/FVC	30
novel	<i>VRTN</i>	rs10141786	14:74817418	FVC	4
novel	<i>BMF</i>	rs34245505	15:40397191	FVC	5
novel	<i>IVD</i>	rs2304645	15:40716253	FEV1	22
novel	<i>CHAC1</i>	rs4924525	15:41255396	FVC	120
novel	<i>COPS2</i>	rs79234094	15:49409527	FEV1/FVC	9
novel	<i>FAM227B</i>	rs35251997	15:49706145	FEV1/FVC	11
novel	<i>USP3</i>	rs62012772	15:63866877	FEV1/FVC	37
novel	<i>REC114</i>	rs7176074	15:73833600	FEV1/FVC	114
novel	<i>CLUAP1</i>	rs3751837	16:3583173	FVC	1
novel	<i>GLIS2-AS1</i>	rs56104880	16:4361138	FEV1/FVC	7
novel	<i>GRIN2A</i>	rs11074547	16:10136889	FVC	25
novel	<i>PAPD5</i>	rs76219171	16:50188929	FVC	3
novel	<i>FTO</i>	rs35420030	16:53935407	FEV1/FVC	2
novel	<i>LINC00917</i>	rs12918140	16:86403821	FEV1/FVC	20
novel	<i>MTHFSD</i>	rs6539952	16:86579223	FEV1	17
novel	<i>ATP2A3</i>	rs8082036	17:3882613	FEV1/FVC	4
novel	<i>PITPNM3</i>	rs4796334	17:6469793	FEV1	104
novel	<i>CLDN7</i>	rs1215	17:7163350	FVC	3
novel	<i>TNFSF12-TNFSF13</i>	rs4968200	17:7448457	FEV1	24
novel	<i>NCOR1</i>	rs34351630	17:16030520	FVC	180
novel	<i>LOC101927166</i>	rs12945803	17:46552229	FVC	152
novel	<i>ANKFN1</i>	rs28519449	17:54195453	FVC	51
novel	<i>BCAS3</i>	rs8068952	17:59286644	FEV1/FVC	9
novel	<i>DDX5</i>	rs77672322	17:62497964	FVC	2
novel	<i>SMURF2</i>	rs11653958	17:62686730	FEV1/FVC	19
novel	<i>CASC17</i>	rs996865	17:69371318	FEV1/FVC	8
novel	<i>ASPSCR1</i>	rs59606152	17:79952944	FVC	6
novel	<i>VAPA</i>	rs8089099	18:10078071	FEV1/FVC	1
novel	<i>GATA6</i>	rs1985511	18:19816712	FEV1/FVC	9
novel	<i>C18orf8</i>	rs303752	18:21074255	FVC	19
novel	<i>LOC729950</i>	rs1668091	18:22290711	FVC	76
novel	<i>SLC14A2</i>	rs9807668	18:42827898	FEV1	16
novel	<i>LOC101927273</i>	rs2202572	18:53566471	FVC	10
novel	<i>QTRT1</i>	rs11085744	19:10819967	FEV1	30
novel	<i>ZFP82</i>	rs2967516	19:36881643	FVC	78
novel	<i>LOC101929395</i>	rs6032942	20:10745545	FEV1	8
novel	<i>LINC00649</i>	rs12627254	21:35368402	FEV1/FVC	3
novel	<i>PPP6R2</i>	rs113111175	22:50867711	FEV1	4
previous	<i>MFAP2</i>	rs9435733	1:17308254	FEV1/FVC	6
previous	<i>LOC101929516</i>	rs755249	1:39995074	FEV1/FVC	34
previous	<i>TGFBR3</i>	rs1192415	1:92077097	FEV1/FVC	2
previous	<i>TGFBR3</i>	rs11165787	1:92381483	FEV1/FVC	8
previous	<i>SPAG17</i>	rs35043843	1:118911295	FVC	16
previous	<i>MCL1</i>	rs878471	1:150547747	FVC	8
previous	<i>NR5A2</i>	rs2816992	1:200069216	FVC	31
previous	<i>PIK3C2B</i>	rs1008833	1:204426295	PEF	47

previous	<i>CENPF/KCNK2</i>	rs556648	1:215120596	FVC	22
previous	<i>TGFB2</i>	rs6604614	1:218631452	PEF	43
previous	<i>MIR548F3/TGFB2</i>	rs28613267	1:218855029	FEV1	13
previous	<i>RNU5F-1</i>	rs1338227	1:219853742	FEV1/FVC	5
previous	<i>C1orf140/DUSP10</i>	rs12757436	1:221631938	FVC	9
previous	<i>CHRM3</i>	rs2355237	1:239857524	PEF	38
previous	<i>KCNS3</i>	rs55884799	2:18287623	FEV1/FVC	2
previous	<i>EFEMP1</i>	rs3791679	2:56096892	FVC	15
previous	<i>CCNT2-AS1</i>	rs62168891	2:135672187	FVC	88
previous	<i>LOC101929378</i>	rs72902177	2:157016257	FEV1	11
previous	<i>TNS1</i>	rs2571445	2:218683154	FEV1	1
previous	<i>PID1</i>	rs62201738	2:229502197	FEV1/FVC	14
previous	<i>TRAF3IP1</i>	rs6710301	2:239441308	FEV1	110
previous	<i>FLJ43879</i>	rs4308141	2:239881309	FEV1/FVC	13
previous	<i>RARB</i>	rs1529672	3:25520582	FEV1/FVC	6
previous	<i>RBMS3</i>	rs17666332	3:29469675	FEV1/FVC	6
previous	<i>CACNA2D3</i>	rs12715478	3:55152319	FEV1/FVC	1
previous	<i>SLMAP</i>	rs6445932	3:57879611	FEV1	52
previous	<i>SUCLG2</i>	rs4132748	3:67455803	FEV1	13
previous	<i>DCBLD2</i>	rs12497779	3:98822050	FVC	36
previous	<i>EEFSEC</i>	rs2999090	3:127931340	FEV1/FVC	189
previous	<i>RSRC1</i>	rs12634907	3:158226886	FVC	40
previous	<i>LOC100507661</i>	rs879394	3:168709843	FEV1	11
previous	<i>MECOM</i>	rs78101726	3:169295436	FEV1	15
previous	<i>AFAP1</i>	rs62289340	4:7879027	FEV1/FVC	96
previous	<i>FAM13A</i>	rs2609279	4:89855495	FEV1/FVC	27
previous	<i>FAM13A</i>	rs2869966	4:89869078	FEV1/FVC	8
previous	<i>TET2</i>	rs6533183	4:106133184	FEV1/FVC	13
previous	<i>GSTCD</i>	rs11722225	4:106766430	FEV1	46
previous	<i>NPNT</i>	rs34712979	4:106819053	FEV1/FVC	1
previous	<i>HHIP-AS1</i>	rs13141641	4:145506456	FEV1/FVC	32
previous	<i>OTUD4/SMAD1</i>	rs2353940	4:145740898	PEF	2
previous	<i>TARS</i>	rs268717	5:33352738	FVC	15
previous	<i>FGF10</i>	rs6859730	5:44367221	FVC	47
previous	<i>ITGA1</i>	rs12522114	5:52187038	FEV1/FVC	3
previous	<i>ARL15</i>	rs2441026	5:53444498	FVC	9
previous	<i>AP3B1</i>	rs425102	5:77396400	FVC	84
previous	<i>SPATA9</i>	rs987068	5:95025146	FEV1/FVC	33
previous	<i>P4HA2-AS1</i>	rs3843503	5:131466629	FVC	65
previous	<i>HTR4</i>	rs7733410	5:147856522	FEV1/FVC	2
previous	<i>ABLIM3</i>	rs11952673	5:148652302	FEV1	46
previous	<i>CYFIP2</i>	rs11134766	5:156908317	FEV1/FVC	22
previous	<i>ADAM19</i>	rs11134789	5:156944199	FEV1/FVC	14
previous	<i>LY86</i>	rs1294417	6:6741932	FEV1/FVC	24
previous	<i>DSP</i>	rs2076295	6:7563232	FEV1/FVC	1
previous	<i>BMP6</i>	rs10498672	6:7797840	FVC	9
previous	<i>CASC15</i>	rs13198081	6:22017543	FEV1/FVC	8
previous	<i>KCNQ5</i>	rs13206405	6:73663814	FEV1/FVC	5
previous	<i>ARMC2</i>	rs2798641	6:109268050	FEV1/FVC	3
previous	<i>MIR588</i>	rs6918725	6:126990392	FVC	136

previous	<i>GPR126</i>	rs17280293	6:142688969	FEV1/FVC	3
previous	<i>GPR126</i>	rs7753012	6:142745883	FEV1/FVC	7
previous	<i>C1GALT1</i>	rs4318980	7:7256490	FEV1/FVC	14
previous	<i>AGMO</i>	rs4721442	7:15506007	FVC	28
previous	<i>ZKSCAN1</i>	rs2261360	7:99692993	FEV1/FVC	9
previous	<i>LOC285889</i>	rs12698403	7:156127246	FEV1	1
previous	<i>DMRT2/SMARCA2</i>	rs771662	9:1568941	FVC	72
previous	<i>GLIS3</i>	rs1570203	9:4120648	FEV1/FVC	26
previous	<i>FLJ35282/ELAVL2</i>	rs1107677	9:23587027	FEV1/FVC	17
previous	<i>PTCH1</i>	rs28446321	9:98266855	FEV1/FVC	13
previous	<i>TMEM38B/ZNF462</i>	rs1491106	9:109483517	FEV1/FVC	8
previous	<i>ASTN2</i>	rs10983184	9:119234058	FEV1/FVC	1
previous	<i>QSOX2</i>	rs7024579	9:139100413	FVC	10
previous	<i>DNLZ</i>	rs4073153	9:139259349	FVC	45
previous	<i>CDC123</i>	rs7090277	10:12278021	FEV1/FVC	4
previous	<i>KIAA1462</i>	rs7914842	10:30268770	PEF	66
previous	<i>JMJD1C</i>	rs7082066	10:64998971	FEV1	107
previous	<i>MYPN</i>	rs10998018	10:69962954	FVC	33
previous	<i>CAMK2G</i>	rs7098573	10:75580014	FEV1	19
previous	<i>COMTD1/ZNF503-AS1</i>	rs1259605	10:77119039	FVC	13
previous	<i>C10orf11</i>	rs2637254	10:78312002	FEV1	107
previous	<i>SFTPD</i>	rs721917	10:81706324	FEV1/FVC	3
previous	<i>HTRA1</i>	rs4279944	10:124297637	FEV1/FVC	29
previous	<i>HSD17B12</i>	rs17596617	11:43690717	FVC	28
previous	<i>PRDM11</i>	rs10838435	11:45244903	FEV1	14
previous	<i>EML3</i>	rs71490394	11:62370155	FEV1	29
previous	<i>ARHGEF17</i>	rs2027761	11:73036179	FEV1/FVC	46
previous	<i>PRSS23</i>	rs11234768	11:86448839	FEV1/FVC	15
previous	<i>RPUSD4</i>	rs541601	11:126009500	FEV1/FVC	3
previous	<i>CCDC91</i>	rs7977418	12:28588242	FVC	35
previous	<i>RAB5B</i>	rs1689510	12:56396768	FEV1	29
previous	<i>LRP1</i>	rs11172113	12:57527283	FEV1/FVC	1
previous	<i>MSRB3</i>	rs12825748	12:65793153	FEV1	23
previous	<i>ALX1/RASSF9</i>	rs56390486	12:85719906	PEF	120
previous	<i>CRADD</i>	rs9788269	12:94194890	FVC	13
previous	<i>FGD6</i>	rs113745635	12:95554771	FEV1/FVC	15
previous	<i>SNRPF</i>	rs7970544	12:96242109	FEV1/FVC	12
previous	<i>TBX3</i>	rs10850377	12:115201436	FEV1	9
previous	<i>TBX3</i>	rs35505	12:115501127	FVC	3
previous	<i>BMP4</i>	rs35107139	14:54419106	FEV1/FVC	1
previous	<i>LINC00911</i>	rs1756281	14:84338431	FEV1/FVC	38
previous	<i>TRIP11</i>	rs11160037	14:92512143	FEV1	27
previous	<i>RIN3</i>	rs11621587	14:93098339	FVC	22
previous	<i>RPAP1</i>	rs2012453	15:41840238	FEV1/FVC	11
previous	<i>MGA</i>	rs56383987	15:41953211	FEV1/FVC	3
previous	<i>AAGAB</i>	rs12917612	15:67491274	FVC	101
previous	<i>THSD4</i>	rs1441358	15:71612514	FEV1/FVC	4
previous	<i>THSD4</i>	rs62015883	15:71803450	FEV1	8
previous	<i>SH3GL3</i>	rs1896797	15:84274591	FEV1/FVC	3
previous	<i>TEKT5</i>	rs78442819	16:10740982	FEV1/FVC	1

previous	<i>IL27</i>	rs12446589	16:28870962	FEV1	213
previous	<i>MMP15</i>	rs11648508	16:58063513	FEV1/FVC	6
previous	<i>WWP2</i>	rs8047194	16:69891510	FEV1	76
previous	<i>CFDP1</i>	rs11858992	16:75411445	FEV1/FVC	161
previous	<i>WVOX</i>	rs2345443	16:78225633	FEV1	3
previous	<i>SSH2</i>	rs2244592	17:28072327	FEV1/FVC	41
previous	<i>SUZ12P1</i>	rs62070648	17:29210595	FVC	13
previous	<i>PSMB3</i>	rs35246838	17:36915540	FEV1/FVC	1
previous	<i>FBXL20</i>	rs8069451	17:37504933	FVC	239
previous	<i>MAPT-AS1</i>	rs79412431	17:43940021	FEV1	1448
previous	<i>CASC17</i>	rs6501431	17:68976415	FVC	7
previous	<i>CASC17</i>	rs6501455	17:69201811	FEV1	53
previous	<i>TSEN54</i>	rs9892893	17:73525670	FEV1	14
previous	<i>MTCL1</i>	rs513953	18:8801351	FEV1	8
previous	<i>CTAGE1/RBBP8</i>	rs11082051	18:20234336	FEV1	93
previous	<i>CABLES1</i>	rs9947743	18:20708321	FEV1	19
previous	<i>DCC</i>	rs12607758	18:51022606	FVC	281
previous	<i>TSHZ3</i>	rs9636166	19:31829613	FEV1/FVC	11
previous	<i>LTBP4</i>	rs34093919	19:41117300	FEV1/FVC	1
previous	<i>BMP2</i>	rs2145272	20:6626218	FVC	9
previous	<i>ABHD12</i>	rs2236180	20:25282608	FEV1	66
previous	<i>C20orf112</i>	rs4413223	20:30858967	FEV1/FVC	57
previous	<i>UQCC1</i>	rs143384	20:34025756	FVC	87
previous	<i>EYA2</i>	rs12481092	20:45486817	FVC	12
previous	<i>SLC2A4RG</i>	rs4809221	20:62372706	FVC	15
previous	<i>KCNE2</i>	rs62213732	21:35675966	FEV1/FVC	8
previous	<i>MICAL3</i>	rs1978968	22:18448113	FEV1	62
previous	<i>SCARF2</i>	rs9610955	22:20790723	FEV1	12
previous	<i>MN1</i>	rs2283847	22:28181399	FEV1/FVC	1

Variant(s) with (joint) highest posterior probability

rs2235566, rs12034227, rs10779795

sentinel

sentinel

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sentinel

rs72673442

sentinel, rs2296452, rs1749911

rs1555891

sentinel

sentinel

sentinel

rs6425501

sentinel

sentinel

rs12023835

sentinel

sentinel

sentinel

rs2808218

sentinel, rs2544535

sentinel, rs7581187, rs6722721, rs66693820, rs1352595, rs10187645

sentinel

sentinel, rs12475813

sentinel

rs7570390

sentinel

sentinel

rs10208158

sentinel

sentinel, rs3816386, rs17334303, rs13027560, rs13001028, rs12615659, rs11685758

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rs76993203, rs7572476

sentinel

sentinel

sentinel

sentinel

sentinel

sentinel

sentinel

sentinel, rs6818203, rs35389572, rs13126206, rs11725581, rs11722486

sentinel

sentinel, rs4975128

sentinel, rs34345254, rs17767210, rs1505769

sentinel, rs7698984, rs7677035, rs13107186

sentinel, rs72703079

sentinel

rs995689, rs864548

sentinel, rs7700595

sentinel

rs12519165

sentinel

rs9392172

sentinel

sentinel

sentinel

sentinel

sentinel

sentinel

sentinel

sentinel, rs9496302, rs7765914

sentinel

sentinel, rs609841

sentinel

sentinel, rs849135, rs849133, rs1708302, rs10274928

rs6968518

sentinel

rs11770163

rs330937

sentinel

sentinel

sentinel

sentinel

sentinel, rs72743972

sentinel

sentinel, rs7871824

sentinel

sentinel

sentinel, rs9325507

sentinel, rs41352148, rs11033053, rs1042113

sentinel

rs10848980

sentinel

rs1797679

rs11175997

rs11111274

rs2162319

sentinel

sentinel

rs803752, rs803751

sentinel

sentinel, rs17785077

sentinel

sentinel, rs4982712

rs74053152

sentinel

rs11637681

sentinel

sentinel

rs7169304

rs1429555

sentinel

sentinel

sentinel

sentinel

sentinel, rs11074546

sentinel

sentinel

rs12932235

sentinel

rs9912501

sentinel, rs1867236, rs12601636

sentinel

sentinel

sentinel

sentinel

sentinel, rs72829722

sentinel

sentinel

rs6504249

rs112990608

sentinel

sentinel

sentinel

sentinel

sentinel

sentinel, rs9807673

sentinel

rs8113618

sentinel

sentinel

sentinel, rs111783124, rs11088268

sentinel

rs3754512

rs61781370

sentinel

rs12021995, rs10430069

rs12727617

sentinel

sentinel, rs2816989

rs57367068, rs2137255, rs16853715, rs16853712

rs555520

sentinel, rs1797069, rs1318580

rs7517716, rs28646156

rs12134534

rs994606

sentinel, rs6429153, rs12403980

sentinel

rs7574127, rs732132

rs62168897, rs1947112

rs113707721

sentinel

sentinel

rs112559043

sentinel, rs62191107, rs62191106, rs11124197

sentinel

sentinel

sentinel

sentinel, rs9864975

rs4538392, rs4443190

sentinel

rs2999089

rs73154314, rs73154313

sentinel

sentinel

sentinel, rs62289338

sentinel, rs2704604, rs2609280

sentinel, rs2045517, rs1812329

sentinel

rs72673891, rs138454167

sentinel

rs13140176, rs13113591

sentinel

sentinel, rs155585

rs1482680

sentinel

sentinel

rs376416

sentinel

sentinel

sentinel

rs1465850

sentinel

rs13361953

rs1294436

sentinel

sentinel

rs2078482, rs1928160

rs9360621, rs9351958

sentinel

sentinel, rs1490384

rs73780221

rs7774095, rs6909857

sentinel

sentinel, rs4133185

rs4727444

sentinel

rs2095024

sentinel

rs201191

rs16909922

rs60568503

sentinel

rs11103381

rs3829110

sentinel, rs57062879

sentinel, rs7915224, rs4749516, rs4090359

rs10761781

sentinel

rs4691, rs12413039, rs1134777

rs1259607

rs2579762

sentinel

sentinel

rs59298872

sentinel, rs6416127

sentinel, rs35880596, rs35156678, rs1801144, rs11231156, rs11231154

rs57893472

sentinel

sentinel

sentinel

rs705704

sentinel

sentinel

sentinel, rs7971039, rs12820475

rs58899389

rs112992451

sentinel, rs7307510, rs7297403, rs1436120

sentinel, rs7979951

rs35506

sentinel

sentinel

sentinel, rs60165532, rs55951163, rs34185295

rs7143806, rs17184313, rs10498635

sentinel

sentinel

rs35688953

rs10851839

rs7183859

sentinel

sentinel

rs3743963

rs4784887

sentinel, rs7202233, rs11642008

rs12928722

sentinel

sentinel

rs8067252

sentinel

sentinel

rs79772576

rs11077539

sentinel

rs62091797

rs631126

sentinel, rs8088768

sentinel, rs8093542

rs12962464, rs11872815, rs11082999, rs11082998, rs10502977

rs2909

sentinel

rs979012, rs2206925

rs2281559

sentinel

sentinel

rs6066089

rs8125514, rs6062510, rs6062506, rs6062304, rs6011066, rs4809327, rs3761123, rs1056441

rs2834457

rs35972244

sentinel

sentinel

Highest posterior probability	Sentinel in credible set
0.164	TRUE
0.489	TRUE
0.100	TRUE
0.145	TRUE
0.458	TRUE
0.078	TRUE
0.062	TRUE
0.891	FALSE
0.403	TRUE
0.132	TRUE
0.776	TRUE
0.125	TRUE
0.448	TRUE
1.000	TRUE
0.413	TRUE
0.403	TRUE
0.803	TRUE
0.365	TRUE
0.310	TRUE
0.311	TRUE
0.040	TRUE
0.598	TRUE
0.063	TRUE
0.155	TRUE
0.117	TRUE
0.281	TRUE
0.196	TRUE
0.240	TRUE
0.535	TRUE
0.056	TRUE
0.127	TRUE
0.376	TRUE
0.272	TRUE
0.155	TRUE
0.505	TRUE
0.925	TRUE
0.515	TRUE
0.851	TRUE
0.186	TRUE
0.150	TRUE
0.568	TRUE
0.100	TRUE
0.781	TRUE
0.245	TRUE
0.996	TRUE
0.061	TRUE
0.153	TRUE

0.119	TRUE
0.427	TRUE
0.118	TRUE
0.161	TRUE
0.042	TRUE
0.681	TRUE
0.214	TRUE
0.065	TRUE
1.000	TRUE
0.793	TRUE
0.994	TRUE
0.225	TRUE
0.626	TRUE
0.417	TRUE
0.895	TRUE
0.115	TRUE
0.727	TRUE
0.235	TRUE
0.140	TRUE
0.236	TRUE
0.099	TRUE
0.119	TRUE
0.687	TRUE
0.140	TRUE
0.498	TRUE
0.073	TRUE
0.298	TRUE
0.257	TRUE
0.846	TRUE
0.424	TRUE
0.999	TRUE
0.644	TRUE
0.154	TRUE
0.985	TRUE
0.269	TRUE
0.977	TRUE
0.300	TRUE
0.051	TRUE
0.052	TRUE
1.000	TRUE
0.437	TRUE
0.322	TRUE
0.039	TRUE
0.428	TRUE
0.317	TRUE
0.352	TRUE
0.331	TRUE
0.271	TRUE
0.062	TRUE
0.470	TRUE

0.226	TRUE
0.509	TRUE
0.097	TRUE
0.074	TRUE
0.506	TRUE
0.350	TRUE
0.130	TRUE
0.220	TRUE
0.734	TRUE
0.230	TRUE
0.393	TRUE
0.576	TRUE
0.999	TRUE
0.424	TRUE
0.101	TRUE
0.843	TRUE
0.972	TRUE
0.176	TRUE
0.373	TRUE
0.393	TRUE
0.100	TRUE
0.598	TRUE
0.250	TRUE
0.032	TRUE
0.085	TRUE
0.165	TRUE
0.461	TRUE
0.982	TRUE
0.288	TRUE
0.296	TRUE
0.736	TRUE
1.000	TRUE
0.458	TRUE
0.913	TRUE
0.206	TRUE
0.288	TRUE
0.501	TRUE
0.259	TRUE
0.271	TRUE
0.341	TRUE
0.332	TRUE
0.522	TRUE
0.388	TRUE
0.101	TRUE
0.614	TRUE
0.178	TRUE
0.124	TRUE
0.302	TRUE
0.101	TRUE
0.050	TRUE

	0.798	FALSE
	0.050	TRUE
	0.252	TRUE
	0.649	TRUE
	0.563	FALSE
	0.282	TRUE
	0.990	TRUE
	0.186	TRUE
	0.043	TRUE
	0.211	TRUE
	0.995	TRUE
	0.161	TRUE
	0.153	TRUE
	0.170	TRUE
	0.692	TRUE
	0.646	TRUE
	0.995	TRUE
	0.060	TRUE
	0.234	TRUE
	0.788	TRUE
	0.053	TRUE
	0.072	TRUE
	0.714	TRUE
	0.886	TRUE
	0.059	TRUE
	0.108	TRUE
	0.184	TRUE
	0.396	TRUE
	0.070	TRUE
	1.000	TRUE
	0.359	FALSE
	0.626	TRUE
	0.093	TRUE
	0.096	TRUE
	0.782	TRUE
	0.910	TRUE
	0.020	TRUE
	0.369	TRUE
	0.125	TRUE
	0.928	TRUE
	0.069	TRUE
	0.166	TRUE
	0.501	TRUE
	0.282	TRUE
	1.000	TRUE
	0.398	TRUE
	0.291	FALSE
	0.247	TRUE
	0.863	TRUE
	0.195	TRUE

	0.970	FALSE
	0.339	FALSE
	0.218	TRUE
	0.162	TRUE
	0.227	FALSE
	1.000	TRUE
	0.146	TRUE
	0.233	TRUE
	0.163	TRUE
	0.349	TRUE
	0.229	TRUE
	1.000	TRUE
	0.516	TRUE
	0.053	TRUE
	0.422	TRUE
	0.117	TRUE
	0.031	TRUE
	0.082	TRUE
	0.229	TRUE
	0.283	TRUE
	0.470	TRUE
	0.401	TRUE
	0.368	TRUE
	0.162	TRUE
	0.360	TRUE
	0.105	TRUE
	0.161	TRUE
	0.384	TRUE
	0.418	TRUE
	0.193	TRUE
	0.076	TRUE
	0.998	TRUE
	0.446	TRUE
	0.075	TRUE
	0.487	TRUE
	0.128	TRUE
	0.145	TRUE
	0.311	TRUE
	0.508	TRUE
	1.000	TRUE
	0.137	TRUE
	0.071	TRUE
	0.214	TRUE
	0.805	TRUE
	0.520	TRUE
	0.120	TRUE
	0.568	TRUE
	0.341	TRUE
	0.575	TRUE
	1.000	TRUE

	0.050	TRUE
	0.316	TRUE
	0.121	TRUE
	0.184	TRUE
	0.575	TRUE
	0.527	TRUE
	0.156	TRUE
	0.999	TRUE
	0.026	TRUE
	0.010	TRUE
	0.216	TRUE
	0.346	TRUE
	0.742	TRUE
	0.377	TRUE
	0.024	TRUE
	0.129	TRUE
	0.036	TRUE
	0.391	TRUE
	1.000	TRUE
	0.160	TRUE
	0.065	TRUE
	0.108	TRUE
	0.349	TRUE
	0.337	TRUE
	0.093	TRUE
	0.800	TRUE
	0.087	TRUE
	0.171	TRUE
	1.000	TRUE

Supplementary Table 11: Functional annotation of coding variants in the 99% credible set

Format	Explanation
<i>SNP</i>	Possibly harmful according to any of SIFT, CADD, PolyPhen-2 or FATHMM
<i>SNP</i>	Possibly harmful according to any of SIFT, CADD, PolyPhen-2 or FATHMM, AND SNP is the (or a)
<i>SNP</i>	Possibly harmful according to any of SIFT, CADD, PolyPhen-2 or FATHMM, AND SNP is the (or a)

Sentinel	SNP	Location	Gene	Chrom.	Position (b37)
rs10059661	rs1800449	exonic	LOX	5	121413208
rs10059661	rs2288393	UTR5	LOX	5	121412890
rs1008833	rs3765156	exonic	PIK3C2B	1	204425028
rs10141786	rs2286425	UTR5	VRTN	14	74815239
rs10836366	rs1042113	exonic	SLC1A2	11	35308369
rs10836366	rs752949	exonic	SLC1A2	11	35327748
rs10998018	rs10997975	exonic	MYPN	10	69933921
<i>rs10998018</i>	<i>rs7079481</i>	<i>exonic</i>	<i>MYPN</i>	<i>10</i>	<i>69959242</i>
rs11085744	rs1053007	UTR3	SLC44A2	19	10754400
rs11085744	rs2229383	exonic	ILF3	19	10794630
rs11085744	rs4804514	ncRNA_exonic	ILF3-AS1	19	10764203
rs11134766	rs10476052	UTR3	NIPAL4	5	156900534
rs11134766	rs11739062	UTR3	NIPAL4	5	156901701
rs11134766	rs11749762	UTR3	NIPAL4	5	156901615
rs11134766	rs9313608	UTR3	NIPAL4	5	156900047
<i>rs11134789</i>	<i>rs1422795</i>	<i>exonic</i>	<i>ADAM19</i>	<i>5</i>	<i>156936364</i>
rs11160037	rs10151945	UTR3	ATXN3	14	92525613
rs11191841	rs11191841	UTR3	OBFC1	10	105639611
rs11191841	rs12573103	UTR3	OBFC1	10	105639241
rs11191841	rs7100920	UTR3	OBFC1	10	105640978
rs11205354	rs12040949	UTR3	RPRD2	1	150447462
rs11205354	rs12042229	UTR3	RPRD2	1	150447398
rs11205354	rs2147324	UTR5	CIART	1	150255587
rs11205354	rs45595332	UTR3	RPRD2	1	150446067
rs11205354	rs580060	UTR3	MRPS21	1	150281202
rs11205354	rs7002	UTR3	RPRD2	1	150445819
rs113111175	rs76275199	UTR3	SBF1	22	50883660
rs113745635	rs11829776	exonic	FGD6	12	95531442
<i>rs11620380</i>	<i>rs117633128</i>	<i>exonic</i>	<i>DOCK9</i>	<i>13</i>	<i>99738554</i>
rs11648508	rs11076213	UTR3	MMP15	16	58080009
rs11722225	rs150384021	UTR3	GSTCD	4	106768086
rs11722225	rs72673865	UTR3	GSTCD	4	106768598
rs11722225	rs75817507	UTR3	GSTCD	4	106767623
rs11739847	rs11738281	UTR3	TPPP	5	662547
<i>rs11739847</i>	<i>rs12522955</i>	<i>exonic</i>	<i>CEP72</i>	<i>5</i>	<i>639231</i>
rs11739847	rs28364691	UTR3	TPPP	5	664084

rs11739847	rs3749618	ncRNA_exonic	LOC100996325	5	602650
rs11739847	rs3762951	UTR3	TPPP	5	662613
rs11739847	rs61731455	exonic	TPPP	5	665295
rs11739847	rs72707007	UTR3	TPPP	5	661856
rs11739847	rs72707016	UTR3	TPPP	5	665148
rs11739847	rs7434	UTR3	TPPP	5	660804
rs11739847	rs7558	UTR3	TPPP	5	660491
rs12096239	rs12096239	UTR3	DHDDS	1	26796922
rs1215	rs1215	UTR3	CLDN7	17	7163350
rs1215	rs3744399	exonic	CTDNBP1	17	7154582
rs12446589	rs1042157	UTR3	SULT1A1	16	28617057
rs12446589	rs10499	UTR3	ATP2A1	16	28915527
rs12446589	rs1059491	exonic	SULT1A2	16	28603655
rs12446589	rs1126447	exonic	SULT1A1	16	28619911
rs12446589	rs11864750	UTR5	SH2B1	16	28875204
rs12446589	rs149271	exonic	APOBR	16	28506872
rs12446589	rs151174	exonic	APOBR	16	28508069
rs12446589	rs180743	exonic	APOBR	16	28507644
rs12446589	rs180744	exonic	APOBR	16	28508048
rs12446589	rs3088215	UTR3	TUFM	16	28853996
rs12446589	rs3176926	exonic	SULT1A1	16	28617552
rs12446589	rs40837	UTR3	IL27	16	28510845
rs12446589	rs4115668	UTR5	SULT1A2	16	28607532
rs12446589	rs6839	UTR3	SULT1A1	16	28617128
rs12446589	rs710410	UTR3	SULT1A2	16	28603342
rs12446589	rs7187776	UTR5	TUFM	16	28857645
rs12446589	rs7193733	UTR5	SH2B1	16	28875482
rs12446589	rs7198606	UTR5	SH2B1	16	28875122
rs12446589	rs7498665	exonic	SH2B1	16	28883241
rs12446589	rs750155	UTR5	SULT1A1	16	28620572
rs12446589	rs762633	UTR5	SULT1A2	16	28608341
rs12446589	rs762634	UTR3	SULT1A2	16	28603335
rs12607758	rs2229082	exonic	DCC	18	50936994
rs12634907	rs12491598	ncRNA_exonic	LOC100996447	3	158263154
rs12707691	rs10261725	UTR3	SEMA3D	7	84627231
rs12707691	rs17559084	exonic	SEMA3D	7	84644500
rs12707691	rs2040957	UTR3	SEMA3D	7	84626388
rs12707691	rs56039102	UTR3	SEMA3D	7	84625750
rs12707691	rs7800072	exonic	SEMA3D	7	84628989
rs12707691	rs7806400	UTR3	SEMA3D	7	84624924
rs12917612	rs10518716	UTR3	AAGAB	15	67494823
rs12917612	rs12148121	UTR3	AAGAB	15	67494922
rs12917612	rs12476	UTR3	AAGAB	15	67493726
rs12917612	rs8025774	UTR3	SMAD3	15	67483276
rs12945803	rs36057069	ncRNA_exonic	LOC101927166	17	46542911
rs13009582	rs3795942	exonic	KLHL29	2	23919375
rs13009582	rs3795948	exonic	KLHL29	2	23926659
rs13009582	rs6751857	UTR3	ATAD2B	2	23973799

rs13009582	rs9261	UTR3	KLHL29	2	23931036
rs143384	rs143384	UTR5	GDF5	20	34025756
rs143384	rs4911494	exonic	UQCC1	20	33971914
rs1668091	rs1450514	ncRNA_exonic	LOC729950	18	22241933
rs1668091	rs1668146	ncRNA_exonic	LOC729950	18	22241045
rs1689510	rs772920	UTR3	RAB5B	12	56390364
rs17280293	rs17280293	exonic	GPR126	6	142688969
rs1799807	rs1799807	exonic	BCHE	3	165548529
rs1800888	rs1800888	exonic	ADRB2	5	148206885
rs193686	rs1621	UTR3	MET	7	116437606
rs1951121	rs1951119	UTR5	RBM23	14	23388326
rs1951121	rs2295683	UTR5	RBM23	14	23388382
rs1951121	rs4981449	ncRNA_exonic	PRMT5-AS1	14	23388871
rs1951121	rs4982710	ncRNA_exonic	LOC101926933	14	23398902
rs2027761	rs3741149	exonic	ARHGEF17	11	73021084
rs2027761	rs3741151	exonic	ARHGEF17	11	73020846
rs2027761	rs3741152	UTR3	P2RY6	11	73008914
rs2027761	rs7125949	UTR3	P2RY6	11	73009084
rs2027761	rs75007932	UTR3	ARHGEF17	11	73080336
rs2027761	rs76764824	exonic	ARHGEF17	11	73073580
rs2084448	rs1839123	UTR3	ITGAV	2	187543374
rs2236180	rs2227891	exonic	PYGB	20	25262769
rs2236180	rs2228976	exonic	PYGB	20	25259006
rs2236180	rs6132851	UTR3	NANP	20	25595356
rs2304645	rs11630850	UTR3	IVD	15	40712039
rs2304645	rs11630878	UTR3	IVD	15	40712072
rs2304645	rs1898882	exonic	DISP2	15	40655873
rs2304645	rs2075625	UTR3	IVD	15	40711270
rs2304645	rs7207	UTR3	IVD	15	40713306
rs2571445	rs2571445	exonic	TNS1	2	218683154
rs2812208	rs34505073	exonic	EBPL	13	50237255
rs2894837	rs11756977	exonic	DST	6	56420538
rs2894837	rs4715631	exonic	DST	6	56417545
rs2967516	rs2857	UTR3	ZFP14	19	36825458
rs2967516	rs3098393	ncRNA_exonic	LINC00665	19	36821209
rs2967516	rs3111556	ncRNA_exonic	LINC00665	19	36821198
rs2967516	rs4806293	UTR3	ZNF146	19	36728290
rs2967516	rs62112567	UTR3	ZFP14	19	36826337
rs2967516	rs62112568	UTR3	ZFP14	19	36826427
rs2967516	rs62112569	UTR3	ZFP14	19	36828766
rs2999090	rs11711710	exonic	EEFSEC	3	127872506
rs2999090	rs11719546	exonic	EEFSEC	3	127872602
rs2999090	rs2811544	exonic	EEFSEC	3	127983495
rs303752	rs1788799	exonic	NPC1	18	21124945
rs34093919	rs34093919	exonic	LTBP4	19	41117300
rs34351630	rs2078050	UTR3	NCOR1	17	15994888
rs34351630	rs758853	UTR5	TTC19	17	15903602
rs34351630	rs9890012	UTR3	TTC19	17	15932627

rs3843503	rs113823725	UTR5	P4HA2	5	131563501
rs3843503	rs4705908	UTR5	ACSL6	5	131347520
rs3843503	rs72793280	UTR5	P4HA2	5	131562900
rs4073153	rs10781499	exonic	CARD9	9	139266405
rs4073153	rs10781507	exonic	SNAPC4	9	139272058
rs4073153	rs10781510	exonic	SNAPC4	9	139279173
rs4073153	rs1132005	UTR3	SDCCAG3	9	139296927
rs4073153	rs3088081	UTR3	SNAPC4	9	139270149
rs4073153	rs3812565	exonic	SNAPC4	9	139272502
rs4073153	rs3812570	exonic	SNAPC4	9	139275204
rs4073153	rs3812571	exonic	SNAPC4	9	139275294
rs4073153	rs4077515	exonic	CARD9	9	139266496
rs4073153	rs4266763	exonic	SNAPC4	9	139289825
rs4073153	rs4400498	UTR5	SDCCAG3	9	139305007
rs425102	rs42360	exonic	AP3B1	5	77412011
rs425102	rs4532349	exonic	AP3B1	5	77473165
rs4318980	rs10246303	UTR3	C1GALT1	7	7286445
rs4413223	rs1029116	UTR3	KIF3B	20	30919183
rs4413223	rs1129012	exonic	KIF3B	20	30915461
rs4413223	rs1737887	UTR3	NOL4L	20	31035129
rs4413223	rs28396287	UTR3	PLAGL2	20	30783919
rs4413223	rs3813921	UTR3	KIF3B	20	30921846
rs4651005	rs7366	UTR3	RALGPS2	1	178890785
rs4796334	rs1157900	UTR5	TXNDC17	17	6544248
rs4796334	rs1157901	UTR5	TXNDC17	17	6544275
rs4796334	rs1443417	exonic	KIAA0753	17	6493198
rs4796334	rs2009	UTR3	KIAA0753	17	6481776
rs4796334	rs2072149	exonic	KIAA0753	17	6531648
rs4796334	rs2240276	UTR3	MED31	17	6546921
rs4796334	rs2289642	exonic	KIAA0753	17	6515387
rs4796334	rs2289643	exonic	KIAA0753	17	6515454
rs4796334	rs2301873	exonic	KIAA0753	17	6538355
rs4796334	rs2304977	exonic	KIAA0753	17	6513329
rs4796334	rs3744720	UTR3	KIAA0753	17	6483046
rs4796334	rs4796519	exonic	KIAA0753	17	6511781
rs4796334	rs9751	UTR3	KIAA0753	17	6481933
rs4796334	rs9889363	exonic	KIAA0753	17	6524298

rs4809221	rs1056441	UTR3	LIME1	20	62370349
rs4924525	rs690733	exonic	EXD1	15	41476465
rs4952564	rs11897440	exonic	PKDCC	2	42275819
rs4952564	rs7439	UTR3	PKDCC	2	42285306
rs4968200	rs11552708	exonic	TNFSF13	17	7462555
rs4968200	rs28362665	UTR3	TNFSF12	17	7460758
rs4968200	rs34914463	exonic	ZBTB4	17	7366619
rs4968200	rs77711855	exonic	TNFSF12,TNFSF12-TNFSF13	17	7452542
rs4968200	rs9907657	UTR3	TNFSF12	17	7460957
rs56196860	rs56196860	exonic	FKBP4	12	2908330
rs56390486	rs17012533	exonic	LRRIQ1	12	85466723
rs56390486	rs3765044	exonic	LRRIQ1	12	85438499
rs59606152	rs72861736	exonic	LRRC45	17	79986156
rs62012772	rs80275182	ncRNA_exonic	USP3-AS1	15	63880305
rs62168891	rs1592	UTR3	MAP3K19	2	135722143
rs62168891	rs1947112	UTR3	CCNT2	2	135715957
rs62168891	rs3769023	UTR3	CCNT2	2	135713703
rs62168891	rs3814354	exonic	CCNT2	2	135711657
rs62168891	rs3814355	exonic	CCNT2	2	135711516
rs62289340	rs61742221	exonic	AFAP1	4	7857230
rs62316310	rs11938093	exonic	BTC	4	75675841
rs6437219	rs10171067	exonic	C2orf54	2	241830969
rs6437219	rs10195453	exonic	C2orf54	2	241831005
rs6437219	rs10206101	UTR5	C2orf54	2	241835543
rs6437219	rs10933514	UTR5	C2orf54	2	241835432
rs6437219	rs12105122	exonic	C2orf54	2	241835379
rs6437219	rs4468809	exonic	C2orf54	2	241834944
rs6437219	rs6708304	exonic	C2orf54	2	241828012
rs6437219	rs6709469	exonic	C2orf54	2	241831296
rs6445932	rs1043045	UTR3	SLMAP	3	57914178
rs6445932	rs1057719	UTR3	SLMAP	3	57913714
rs6445932	rs17058639	exonic	SLMAP	3	57882601
rs6539952	rs1046200	UTR3	MTHFSD	16	86564671
rs6604614	rs1046017	ncRNA_exonic	TGFB2-OT1	1	218617135
rs6710301	rs2340870	UTR3	ASB1	2	239356026
rs6710301	rs3191996	exonic	ASB1	2	239344412
rs6710301	rs55713398	ncRNA_exonic	LINC01107	2	239419933
rs6710301	rs6739251	ncRNA_exonic	LINC01107	2	239419603
rs6710301	rs72987327	UTR3	ASB1	2	239359833
rs6710301	rs72987328	UTR3	ASB1	2	239360097
rs6733504	rs76993203	ncRNA_exonic	BOK-AS1	2	242498497
rs6918725	rs9388486	UTR5	CENPW	6	126661154
rs7024579	rs12684650	exonic	QSOX2	9	139110654
rs7024579	rs7024579	UTR3	QSOX2	9	139100413
rs7024579	rs9696116	exonic	QSOX2	9	139100805

rs7082066	rs3211105	exonic	JMJD1C	10	64945364
rs7098573	rs2271271	exonic	ZSWIM8	10	75558867
rs7098573	rs4691	UTR3	NDST2	10	75561916
rs71490394	rs1061093	exonic	EEF1G	11	62334908
<u>rs71490394</u>	<u>rs1801144</u>	<u>exonic</u>	<u>ROM1</u>	<u>11</u>	<u>62381808</u>
rs71490394	rs35156678	exonic	EML3	11	62369881
<u>rs71490394</u>	<u>rs35880596</u>	<u>exonic</u>	<u>EML3</u>	<u>11</u>	<u>62369884</u>
rs7176074	rs11856313	ncRNA_exonic	NPTN-IT1	15	73860489
rs7176074	rs16958019	ncRNA_exonic	NPTN-IT1	15	73860318
rs7176074	rs75418437	ncRNA_exonic	NPTN-IT1	15	73860360
rs721917	rs721917	exonic	SFTPD	10	81706324
rs755249	rs17264866	ncRNA_exonic	PPIEL	1	40022777
rs755249	rs76207570	ncRNA_exonic	PPIEL	1	40022482
rs7733410	rs6580550	UTR3	HTR4	5	147856232
rs77672322	rs80215473	exonic	SMURF2	17	62589578
rs79234094	rs34895054	exonic	SECISBP2L	15	49285001
rs79412431	rs10445337	exonic	MAPT	17	44067400
rs79412431	rs1052551	exonic	MAPT	17	44068924
rs79412431	rs1052590	UTR3	MAPT	17	44102638
rs79412431	rs1052594	UTR3	MAPT	17	44102689
rs79412431	rs11079725	exonic	SPPL2C	17	43923934
rs79412431	rs113347741	ncRNA_exonic	MAPT-IT1	17	43973408
rs79412431	rs12185268	exonic	SPPL2C	17	43923683
rs79412431	rs16940799	UTR3	MAPT	17	44102933
rs79412431	rs17574040	UTR3	MAPT	17	44102865
rs79412431	rs17574228	UTR3	MAPT	17	44104509
rs79412431	rs17576165	exonic	KANSL1	17	44159849
rs79412431	rs17652748	UTR3	MAPT	17	44103616
rs79412431	rs17652961	UTR3	KANSL1	17	44108355
rs79412431	rs17687625	UTR5	MGC57346-CRHR1	17	43750238
rs79412431	rs2158257	UTR3	MAPT	17	44104343
rs79412431	rs241039	ncRNA_exonic	MGC57346	17	43714673
rs79412431	rs241041	ncRNA_exonic	MGC57346	17	43713925
rs79412431	rs2942167	ncRNA_exonic	MGC57346	17	43715018
rs79412431	rs2942168	ncRNA_exonic	MGC57346	17	43714850
rs79412431	rs34043286	exonic	KANSL1	17	44117119
rs79412431	rs3418	ncRNA_exonic	CRHR1-IT1	17	43723462
rs79412431	rs35833914	exonic	KANSL1	17	44110541
rs79412431	rs36076725	exonic	KANSL1	17	44110532
rs79412431	rs393152	ncRNA_exonic	CRHR1-IT1	17	43719143
rs79412431	rs413778	ncRNA_exonic;splicing	CRHR1-IT1;CRHR1-IT1	17	43716885
rs79412431	rs439558	ncRNA_exonic	CRHR1-IT1	17	43717803

rs79412431	rs62054815	exonic	SPPL2C	17	43923266
rs79412431	rs62056780	ncRNA_exonic	MAPT-IT1	17	43973652
rs79412431	rs62056781	ncRNA_exonic	MAPT-IT1	17	43973899
rs79412431	rs62056782	ncRNA_exonic	MAPT-IT1	17	43974230
rs79412431	rs62056783	ncRNA_exonic	MAPT-IT1	17	43974549
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rs79412431	rs62056790	ncRNA_exonic	MAPT-IT1	17	43975417
rs79412431	rs62056791	ncRNA_exonic	MAPT-IT1	17	43976064
rs79412431	rs62063786	exonic	MAPT	17	44061023
rs79412431	rs62063787	exonic	MAPT	17	44061036
rs79412431	rs62063845	exonic	MAPT	17	44071294
rs79412431	rs62063857	exonic	STH	17	44076665
rs79412431	rs63750417	exonic	MAPT	17	44060775
rs79412431	rs74496580	ncRNA_exonic	MAPT-IT1	17	43974065
rs79412431	rs76324150	ncRNA_exonic	MAPT-IT1	17	43973233
rs79412431	rs76632685	ncRNA_exonic	MAPT-IT1	17	43974477
rs79412431	rs7687	UTR3	MAPT	17	44103296
rs79412431	rs78720789	ncRNA_exonic	MAPT-IT1	17	43973413
rs79412431	rs80346216	ncRNA_exonic	MAPT-IT1	17	43974476
rs79412431	rs8712	UTR3	MAPT	17	44101871
rs79412431	rs9468	UTR3	MAPT	17	44101563
rs803765	rs9572667	ncRNA_exonic	LINC00348	13	71717347
rs8069451	rs11078896	UTR3	FBXL20	17	37415544
rs8069451	rs11078897	UTR3	FBXL20	17	37415870
rs8069451	rs3744348	UTR3	FBXL20	17	37417575
rs8069451	rs4325601	UTR3	FBXL20	17	37411429
rs8069451	rs752314	UTR3	FBXL20	17	37410700
rs8069451	rs755500	UTR3	FBXL20	17	37409865
rs878471	rs878471	UTR3	MCL1	1	150547747
rs9438626	rs2290588	UTR3	DHDDS	1	26797508
rs9438626	rs3816539	exonic	DHDDS	1	26786627
rs9438626	rs6656196	UTR5	DHDDS	1	26758773
rs9610955	rs361566	exonic	SCARF2	22	20785639
rs9661802	rs2232460	exonic	KLHL21	1	6659505
rs9661802	rs6674407	UTR5	KLHL21	1	6662913
rs967497	rs1075650	UTR3	IER5L	9	131938913
rs967497	rs184457	exonic	IER5L	9	131940019
rs967497	rs2229419	UTR3	CRAT	9	131857630
rs967497	rs746489	UTR3	PPP2R4	9	131910093
rs967497	rs913275	UTR3	PPP2R4	9	131910644
rs9892893	rs8064529	exonic	TSEN54	17	73519413
rs9892893	rs9911502	exonic	TSEN54	17	73518203

G	A	0.032	0	NA	NA	NA	0
G	C	0.020	0	NA	NA	NA	0
G	A	0.032	0	NA	NA	NA	0
C	T	0.012	0	NA	NA	NA	0
G	A	0.025	0	NA	NA	NA	0
C	T	0.015	0	NA	NA	NA	0
C	T	0.015	0	NA	NA	NA	0
G	C	0.145	0	NA	NA	NA	0
G	A	0.598	0	NA	NA	NA	0
C	T	0.070	0	0	0	0	0
G	A	0.008	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	T	0.001	1	1	1	0	1
C	T	0.002	0	NA	NA	NA	0
T	A	0.004	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	C	0.001	0	0	0	0	0
G	A	0.001	0	NA	NA	NA	0
C	A	0.004	0	NA	NA	NA	0
G	C	0.006	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.010	0	NA	NA	NA	0
G	A	0.004	0	NA	NA	NA	0
G	T	0.004	0	NA	NA	NA	0
G	A	0.003	0	0	0	0	0
C	T	0.003	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	A	0.048	0	NA	NA	NA	0
G	A	0.004	0	NA	NA	NA	0
C	T	0.008	0	NA	NA	NA	0
C	T	0.008	0	NA	NA	NA	0
G	T	0.006	0	NA	NA	NA	0
G	T	0.004	0	0	0	0	0
C	T	0.006	0	NA	NA	NA	0
G	C	0.009	0	NA	NA	NA	0
C	T	0.009	0	NA	NA	NA	0
C	T	0.011	0	NA	NA	NA	0
C	T	0.002	0	NA	NA	NA	0
G	A	0.051	0	NA	NA	NA	0
C	T	0.003	0	NA	NA	NA	0
C	T	0.019	0	NA	NA	NA	0
C	T	0.011	0	NA	NA	NA	0

C	T	0.019	0	NA	NA	NA	0
G	A	0.349	0	NA	NA	NA	0
C	T	0.004	0	0	0	0	0
C	T	0.003	0	NA	NA	NA	0
C	T	0.005	0	NA	NA	NA	0
G	C	0.047	0	NA	NA	NA	0
G	A	0.000	1	1	1	1	1
C	T	0.996	1	1	1	0	1
C	T	1.000	0	0	0	0	0
G	A	0.027	0	NA	NA	NA	0
C	A	0.014	0	NA	NA	NA	0
C	A	0.014	0	NA	NA	NA	0
G	C	0.014	0	NA	NA	NA	0
C	T	0.014	0	NA	NA	NA	0
C	T	0.007	0	NA	NA	NA	0
G	T	0.009	1	1	0	1	1
G	A	0.001	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.004	0	NA	NA	NA	0
C	T	0.004	0	NA	NA	NA	0
C	T	0.042	0	NA	NA	NA	0
G	A	0.016	1	0	0	0	1
G	T	0.016	1	1	1	1	1
G	A	0.016	0	NA	NA	NA	0
G	C	0.041	0	NA	NA	NA	0
C	T	0.055	0	NA	NA	NA	0
G	C	0.024	0	0	0	0	0
G	C	0.055	0	NA	NA	NA	0
C	T	0.055	0	NA	NA	NA	0
G	A	0.995	0	0	0	0	0
G	A	0.082	0	NA	NA	NA	0
C	T	0.002	1	0	0	0	1
C	T	0.003	0	0	0	0	0
C	T	0.007	0	NA	NA	NA	0
G	A	0.011	0	NA	NA	NA	0
G	T	0.011	0	NA	NA	NA	0
G	A	0.009	0	NA	NA	NA	0
G	T	0.011	0	NA	NA	NA	0
C	T	0.009	0	NA	NA	NA	0
G	C	0.011	0	NA	NA	NA	0
C	T	0.004	0	NA	NA	NA	0
G	A	0.004	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	C	0.004	0	0	0	0	0
G	A	1.000	1	1	1	1	1
C	T	0.002	0	NA	NA	NA	0
C	A	0.011	0	0	0	NA	0
C	T	0.014	0	NA	NA	NA	0

G	C	0.001	0	NA	NA	NA	0
G	A	0.002	0	NA	NA	NA	0
C	T	0.002	0	NA	NA	NA	0
G	A	0.012	0	NA	NA	NA	0
G	A	0.032	0	NA	NA	NA	0
G	A	0.009	0	NA	NA	NA	0
C	T	0.015	0	NA	NA	NA	0
G	A	0.007	0	NA	NA	NA	0
C	T	0.003	0	NA	NA	NA	0
C	A	0.009	0	NA	NA	NA	0
G	C	0.007	0	0	0	0	0
C	T	0.019	0	0	0	0	0
G	A	0.041	0	NA	NA	NA	0
C	T	0.002	0	NA	NA	NA	0
G	A	0.009	0	NA	NA	NA	0
G	A	0.010	0	NA	NA	NA	0
T	A	0.067	0	NA	NA	NA	0
G	A	0.010	0	NA	NA	NA	0
C	T	0.010	0	NA	NA	NA	0
G	A	0.016	0	NA	NA	NA	0
G	A	0.002	0	NA	NA	NA	0
G	A	0.016	0	NA	NA	NA	0
G	A	0.010	0	NA	NA	NA	0
G	A	0.004	0	NA	NA	NA	0
C	T	0.004	0	NA	NA	NA	0
C	T	0.004	0	0	0	0	0
C	T	0.005	0	NA	NA	NA	0
G	A	0.004	0	NA	NA	NA	0
G	C	0.008	0	NA	NA	NA	0
G	A	0.004	0	0	0	0	0
C	T	0.002	0	0	0	0	0
G	A	0.004	0	NA	NA	NA	0
G	A	0.004	1	1	1	1	1
C	T	0.004	0	NA	NA	NA	0
G	A	0.004	0	NA	NA	NA	0
G	A	0.005	0	NA	NA	NA	0
T	A	0.004	1	1	1	0	1

C	T	0.093	0	NA	NA	NA	0
G	A	0.002	0	NA	NA	NA	0
C	T	0.007	0	0	0	0	0
G	A	0.012	0	NA	NA	NA	0
G	A	0.013	0	0	0	0	0
G	A	0.006	0	NA	NA	NA	0
C	T	0.047	0	0	0	0	0
C	T	0.088	0	NA	NA	NA	0
G	T	0.021	0	NA	NA	NA	0
C	A	1.000	0	0	0	0	0
G	A	0.000	0	0	0	0	0
G	A	0.000	0	0	0	0	0
C	T	0.069	1	0	0	0	1
G	A	0.120	0	NA	NA	NA	0
C	A	0.016	0	NA	NA	NA	0
G	A	0.043	0	NA	NA	NA	0
G	A	0.031	0	NA	NA	NA	0
G	A	0.031	0	NA	NA	NA	0
C	T	0.022	0	NA	NA	NA	0
C	T	0.014	0	NA	NA	NA	0
T	A	0.027	1	1	1	0	1
G	A	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	A	0.003	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.002	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	C	0.001	0	1	1	0	1
C	T	0.006	0	NA	NA	NA	0
G	A	0.009	0	NA	NA	NA	0
C	T	0.027	0	NA	NA	NA	0
G	T	0.060	0	NA	NA	NA	0
G	C	0.019	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.001	0	0	0	0	1
G	A	0.005	0	NA	NA	NA	0
G	A	0.008	0	NA	NA	NA	0
G	T	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	A	0.186	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.114	0	NA	NA	NA	0
C	T	0.078	0	NA	NA	NA	0
C	T	0.026	0	NA	NA	NA	0

G	A	0.015	0	NA	NA	NA	0
G	A	0.009	0	NA	NA	NA	0
C	T	0.229	0	NA	NA	NA	0
G	C	0.017	0	NA	NA	NA	0
<u>G</u>	<u>C</u>	<u>0.105</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>
G	A	0.105	0	NA	NA	NA	0
<u>G</u>	<u>C</u>	<u>0.105</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>
G	A	0.001	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	A	0.401	0	0	0	0	0
G	C	0.041	0	NA	NA	NA	0
C	T	0.030	0	NA	NA	NA	0
C	T	0.067	0	NA	NA	NA	0
C	T	0.018	0	0	0	0	0
G	C	0.008	0	0	0	0	0
C	T	0.000	0	0	0	0	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.002	0	NA	NA	NA	0
G	C	0.001	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	A	0.000	0	0	0	0	0
C	T	0.001	0	NA	NA	NA	0
C	A	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.000	0	NA	NA	NA	0
C	A	0.001	0	NA	NA	NA	0
T	A	0.000	0	NA	NA	NA	0
G	A	0.000	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
G	A	0.000	0	NA	NA	NA	0
G	A	0.001	0	0	0	0	0
C	T	0.000	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	A	0.000	0	NA	NA	NA	0
G	A	0.000	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0

G	A	0.000	0	0	0	0	0
C	T	0.000	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
G	C	0.001	0	NA	NA	NA	0
G	C	0.001	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	A	0.000	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
G	A	0.000	0	0	0	0	0
C	T	0.001	0	0	0	0	0
C	T	0.001	0	NA	NA	NA	0
G	A	0.001	0	0	0	0	0
C	T	0.001	0	0	1	0	1
C	A	0.000	0	NA	NA	NA	0
C	T	0.000	0	NA	NA	NA	0
T	A	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
G	T	0.000	0	NA	NA	NA	0
G	A	0.001	0	NA	NA	NA	0
C	T	0.001	0	NA	NA	NA	0
C	T	0.016	0	NA	NA	NA	0
C	T	0.009	0	NA	NA	NA	0
C	T	0.005	0	NA	NA	NA	0
G	C	0.005	0	NA	NA	NA	0
G	A	0.005	0	NA	NA	NA	0
C	T	0.005	0	NA	NA	NA	0
G	A	0.005	0	NA	NA	NA	0
G	A	0.302	0	NA	NA	NA	0
C	T	0.022	0	NA	NA	NA	0
G	A	0.022	0	0	0	0	0
G	A	0.022	0	NA	NA	NA	0
G	A	0.087	1	1	1	0	1
G	A	0.050	0	NA	NA	NA	0
G	A	0.034	0	NA	NA	NA	0
C	T	0.007	0	NA	NA	NA	0
G	A	0.007	1	1	0	1	1
C	T	0.000	0	NA	NA	NA	0
G	T	0.000	0	NA	NA	NA	0
G	A	0.000	0	NA	NA	NA	0
C	T	0.013	1	1	1	0	1
G	C	0.008	1	1	1	1	1

signal is novel

Highest PP SNP(s)	Highest PP	Highest Flag	Novel
rs995689, rs864548	0.214	FALSE	novel
rs995689, rs864548	0.214	FALSE	novel
rs16853712, rs16853715, rs57367068, rs2137255	0.050	FALSE	previous
rs2286425	0.506	TRUE	novel
rs1042113, rs10836366, rs41352148, rs11033053	0.052	TRUE	novel
rs1042113, rs10836366, rs41352148, rs11033053	0.052	FALSE	novel
rs7913582	0.082	FALSE	previous
<i>rs7913582</i>	<i>0.082</i>	<i>FALSE</i>	<i>previous</i>
rs892087	0.259	FALSE	novel
rs892087	0.259	FALSE	novel
rs892087	0.259	FALSE	novel
rs9313608	0.166	FALSE	previous
rs9313608	0.166	FALSE	previous
rs9313608	0.166	FALSE	previous
rs9313608	0.166	TRUE	previous
<i>rs9313617</i>	<i>0.501</i>	<i>FALSE</i>	<i>previous</i>
rs60165532, rs34185295, rs55951163, rs11160037	0.071	FALSE	previous
rs11191841, rs9325507	0.051	TRUE	novel
rs11191841, rs9325507	0.051	FALSE	novel
rs11191841, rs9325507	0.051	FALSE	novel
rs9436119	0.132	FALSE	novel
rs9436119	0.132	FALSE	novel
rs9436119	0.132	FALSE	novel
rs9436119	0.132	FALSE	novel
rs9436119	0.132	FALSE	novel
rs9436119	0.132	FALSE	novel
rs9436119	0.132	FALSE	novel
rs76275199	0.522	TRUE	novel
rs80026193	0.128	FALSE	previous
<i>rs17785077, rs11620380</i>	<i>0.226</i>	<i>FALSE</i>	<i>novel</i>
rs4784887	0.316	FALSE	previous
rs138454167, rs72673891	0.070	FALSE	previous
rs138454167, rs72673891	0.070	FALSE	previous
rs138454167, rs72673891	0.070	FALSE	previous
rs72703079, rs11739847	0.042	FALSE	novel
<i>rs72703079, rs11739847</i>	<i>0.042</i>	<i>FALSE</i>	<i>novel</i>
rs72703079, rs11739847	0.042	FALSE	novel

rs13009582, rs12475813	0.063	FALSE	novel
rs981819	0.349	FALSE	previous
rs981819	0.349	FALSE	previous
rs967764	0.206	FALSE	novel
rs967764	0.206	FALSE	novel
rs773112	0.076	FALSE	previous
<i>rs73780221</i>	<i>0.970</i>	<i>FALSE</i>	<i>previous</i>
<i>rs1799807</i>	<i>0.996</i>	<i>TRUE</i>	<i>novel</i>
rs1800888	1.000	TRUE	novel
rs9791495	0.298	FALSE	novel
rs4982712, rs1951121	0.097	FALSE	novel
rs4982712, rs1951121	0.097	FALSE	novel
rs4982712, rs1951121	0.097	FALSE	novel
rs4982712, rs1951121	0.097	FALSE	novel
rs79794992	0.161	FALSE	previous
<i>rs79794992</i>	<i>0.161</i>	<i>FALSE</i>	<i>previous</i>
rs79794992	0.161	FALSE	previous
rs79794992	0.161	FALSE	previous
rs79794992	0.161	FALSE	previous
rs79794992	0.161	FALSE	previous
rs3816386, rs2084448, rs11685758, rs17334303, rs13001028, rs13027560, rs12615659	0.056	FALSE	novel
<i>rs878176</i>	<i>0.065</i>	<i>FALSE</i>	<i>previous</i>
<i>rs878176</i>	<i>0.065</i>	<i>FALSE</i>	<i>previous</i>
rs878176	0.065	FALSE	previous
rs8040128	0.130	FALSE	novel
rs8040128	0.130	FALSE	novel
rs8040128	0.130	FALSE	novel
rs8040128	0.130	FALSE	novel
rs8040128	0.130	FALSE	novel
rs2571445	0.995	TRUE	previous
rs78844280	0.271	FALSE	novel
<i>rs9475714</i>	<i>0.727</i>	<i>FALSE</i>	<i>novel</i>
rs9475714	0.727	FALSE	novel
rs8113088	0.271	FALSE	novel
rs8113088	0.271	FALSE	novel
rs8113088	0.271	FALSE	novel
rs8113088	0.271	FALSE	novel
rs8113088	0.271	FALSE	novel
rs8113088	0.271	FALSE	novel
rs8113088	0.271	FALSE	novel
rs7374952	0.053	FALSE	previous
rs7374952	0.053	FALSE	previous
rs7374952	0.053	FALSE	previous
rs891389	0.913	FALSE	novel
<i>rs34093919</i>	<i>1.000</i>	<i>TRUE</i>	<i>previous</i>
rs9916868	0.032	FALSE	novel
rs9916868	0.032	FALSE	novel
rs9916868	0.032	FALSE	novel

rs3761123, rs4809327, rs6062304, rs6062506, rs8125514, rs6011066, rs1056441, rs6062510	0.093	TRUE	previous
rs9972623	0.220	FALSE	novel
rs7570390	0.117	FALSE	novel
rs7570390	0.117	FALSE	novel
rs9907930	0.250	FALSE	novel
rs9907930	0.250	FALSE	novel
rs9907930	0.250	FALSE	novel
rs9907930	0.250	FALSE	novel
rs9907930	0.250	FALSE	novel
rs9907930	0.250	FALSE	novel
rs56196860	1.000	TRUE	novel
rs56390486, rs12820475, rs7971039	0.075	FALSE	previous
rs56390486, rs12820475, rs7971039	0.075	FALSE	previous
<i>rs72861739</i>	<i>0.736</i>	<i>FALSE</i>	<i>novel</i>
rs80275182	0.393	TRUE	novel
rs1947112, rs62168897	0.043	FALSE	previous
rs1947112, rs62168897	0.043	TRUE	previous
rs1947112, rs62168897	0.043	FALSE	previous
rs1947112, rs62168897	0.043	FALSE	previous
rs1947112, rs62168897	0.043	FALSE	previous
rs62289338, rs62289340	0.059	FALSE	previous
<i>rs7440630</i>	<i>0.119</i>	<i>FALSE</i>	<i>novel</i>
rs9973765	0.851	FALSE	novel
rs9973765	0.851	FALSE	novel
rs9973765	0.851	FALSE	novel
rs9973765	0.851	FALSE	novel
rs9973765	0.851	FALSE	novel
rs9973765	0.851	FALSE	novel
rs9973765	0.851	FALSE	novel
<i>rs9973765</i>	<i>0.851</i>	<i>FALSE</i>	<i>novel</i>
rs6445932, rs9864975	0.060	FALSE	previous
rs6445932, rs9864975	0.060	FALSE	previous
rs6445932, rs9864975	0.060	FALSE	previous
rs9674143	0.373	FALSE	novel
rs1318580, rs1797069, rs6604614	0.050	FALSE	previous
rs892839	0.153	FALSE	previous
<i>rs892839</i>	<i>0.153</i>	<i>FALSE</i>	<i>previous</i>
rs892839	0.153	FALSE	previous
rs892839	0.153	FALSE	previous
rs892839	0.153	FALSE	previous
rs892839	0.153	FALSE	previous
rs7572476, rs76993203	0.186	TRUE	novel
rs1490384, rs6918725	0.195	FALSE	previous
rs9696116	0.516	FALSE	previous
rs9696116	0.516	FALSE	previous
rs9696116	0.516	TRUE	previous

Supplementary Table 12: Z scores and P values for eQTL look up in lung tissue res

Novelty	Nearest Gene	Trait	Tier	Lung function sentinel SNP ID	Chr	Pos	Coded
eQTL signals <i>in cis</i>							
Novel	<i>PHF13</i>	FEV1/FVC		1 rs9661802	1	6,678,864	A
Previous	<i>MFAP2</i>	FEV1/FVC	Previous	rs9435733	1	17,308,254	T
Novel	<i>DHDDS</i>	FEV1		1 rs12096239	1	26,796,922	G
Previous	<i>LOC101929516</i>	FEV1/FVC	Previous	rs755249	1	39,995,074	T
Novel	<i>NEXN</i>	FEV1/FVC		1 rs9661687	1	78,387,270	C
Novel	<i>DENND2D</i>	FEV1/FVC		1 rs9970286	1	111,737,398	G
Novel	<i>C1orf54</i>	PEF		1 rs11205354	1	150,249,101	C
Previous	<i>MCL1</i>	FVC	Previous	rs878471	1	150,547,747	G
Novel	<i>KRTCAP2</i>	FEV1/FVC		1 rs141942982	1	155,137,395	G
Novel	<i>RALGPS2</i>	FEV1		1 rs4651005	1	178,719,306	C
Novel	<i>LMOD1</i>	FEV1/FVC		2 rs4309038	1	201,884,647	G
Previous	<i>PIK3C2B</i>	PEF	Previous	rs1008833	1	204,426,295	A
Previous	<i>TGFB2</i>	PEF	Previous	rs6604614	1	218,631,452	C
Novel	<i>IL1RL1</i>	FEV1/FVC		1 rs12470864	2	102,926,362	G
Previous	<i>CCNT2-AS1</i>	FVC	Previous	rs62168891	2	135,672,187	C
Novel	<i>RBMS1</i>	FEV1		1 rs7424771	2	161,276,378	G
Novel	<i>KIAA2012</i>	FVC		2 rs12997625	2	202,970,250	C
Novel	<i>C2orf54</i>	FVC		1 rs6437219	2	241,844,033	C
Previous	<i>RSRC1</i>	FVC	Previous	rs12634907	3	158,226,886	A
Novel	<i>KDR</i>	FEV1		2 rs12331869	4	56,012,149	A
Previous	<i>FAM13A</i>	FEV1/FVC	Previous	rs2609279	4	89,855,495	T
Previous	<i>SPATA9</i>	FEV1/FVC	Previous	rs987068	5	95,025,146	G
Previous	<i>P4HA2-AS1</i>	FVC	Previous	rs3843503	5	131,466,629	T

Previous	<i>HTR4</i>	FEV1/FVC	Previous	rs7733410	5	147,856,522	G
Previous	<i>ADAM19</i>	FEV1/FVC	Previous	rs11134789	5	156,944,199	C
Previous	<i>DSP</i>	FEV1/FVC	Previous	rs2076295	6	7,563,232	T
Novel	<i>RNU6-71P</i>	FEV1	1	rs2894837	6	56,336,406	A
Previous	<i>MIR588</i>	FVC	Previous	rs6918725	6	126,990,392	T
Novel	<i>VTA1</i>	FEV1	1	rs9385988	6	142,560,957	A
Previous	<i>C1GALT1</i>	FEV1/FVC	Previous	rs4318980	7	7,256,490	A
Previous	<i>ZKSCAN1</i>	FEV1/FVC	Previous	rs2261360	7	99,692,993	T
Novel	<i>DEFB136</i>	FEV1	2	rs4128298	8	11,823,332	T
Novel	<i>IER5L</i>	FEV1	2	rs967497	9	131,943,843	A
Previous	<i>QSOX2</i>	FVC	Previous	rs7024579	9	139,100,413	C
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139,259,349	A
Previous	<i>CDC123</i>	FEV1/FVC	Previous	rs7090277	10	12,278,021	T
Novel	<i>CAMK2G</i>	PEF	2	rs60820984	10	75,639,578	C
Previous	<i>COMTD1/ZNF503-AS1</i>	FVC	Previous	rs1259605	10	77,119,039	T
Previous	<i>C10orf11</i>	FEV1	Previous	rs2637254	10	78,312,002	G
Previous	<i>HSD17B12</i>	FVC	Previous	rs17596617	11	43,690,717	C
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62,370,155	G
Previous	<i>ARHGEF17</i>	FEV1/FVC	Previous	rs2027761	11	73,036,179	C
Previous	<i>RPUSD4</i>	FEV1/FVC	Previous	rs541601	11	126,009,500	T
Previous	<i>RAB5B</i>	FEV1	Previous	rs1689510	12	56,396,768	C
Previous	<i>LRP1</i>	FEV1/FVC	Previous	rs11172113	12	57,527,283	T
Previous	<i>FGD6</i>	FEV1/FVC	Previous	rs113745635	12	95,554,771	T
Previous	<i>SNRPF</i>	FEV1/FVC	Previous	rs7970544	12	96,242,109	T
Novel	<i>IGF1</i>	PEF	1	rs972936	12	102,824,921	T
Novel	<i>MYO16</i>	FEV1/FVC	1	rs9634470	13	109,918,493	T
Novel	<i>HAUS4</i>	FEV1/FVC	1	rs1951121	14	23,429,729	T
Previous	<i>TRIP11</i>	FEV1	Previous	rs11160037	14	92,512,143	A
Novel	<i>IVD</i>	FEV1	2	rs2304645	15	40,716,253	G
Previous	<i>RPAP1</i>	FEV1/FVC	Previous	rs2012453	15	41,840,238	A

Previous	<i>MGA</i>	FEV1/FVC	Previous	rs56383987	15	41,953,211	T
Novel	<i>COPS2</i>	FEV1/FVC	1	rs79234094	15	49,409,527	G
Previous	<i>AAGAB</i>	FVC	Previous	rs12917612	15	67,491,274	C
Previous	<i>THSD4</i>	FEV1/FVC	Previous	rs1441358	15	71,612,514	T
Novel	<i>CLUAP1</i>	FVC	1	rs3751837	16	3,583,173	C
Previous	<i>IL27</i>	FEV1	Previous	rs12446589	16	28,870,962	A
Novel	<i>PAPD5</i>	FVC	1	rs76219171	16	50,188,929	G
Previous	<i>MMP15</i>	FEV1/FVC	Previous	rs11648508	16	58,063,513	G
Previous	<i>WWP2</i>	FEV1	Previous	rs8047194	16	69,891,510	G
Novel	<i>MTHFSD</i>	FEV1	2	rs6539952	16	86,579,223	C
Novel	<i>ATP2A3</i>	FEV1/FVC	1	rs8082036	17	3,882,613	G
Novel	<i>PITPNM3</i>	FEV1	2	rs4796334	17	6,469,793	G
Novel	<i>CLDN7</i>	FVC	2	rs1215	17	7,163,350	A
Novel	<i>TNFSF12-TNFSF13</i>	FEV1	2	rs4968200	17	7,448,457	C
Novel	<i>NCOR1</i>	FVC	2	rs34351630	17	16,030,520	T
Previous	<i>SSH2</i>	FEV1/FVC	Previous	rs2244592	17	28,072,327	A
Previous	<i>SUZ12P1</i>	FVC	Previous	rs62070648	17	29,210,595	A
Previous	<i>PSMB3</i>	FEV1/FVC	Previous	rs35246838	17	36,915,540	T
Previous	<i>FBXL20</i>	FVC	Previous	rs8069451	17	37,504,933	T
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43,940,021	G
Novel	<i>LOC101927166</i>	FVC	2	rs12945803	17	46,552,229	T
Previous	<i>TSEN54</i>	FEV1	Previous	rs9892893	17	73,525,670	T
Novel	<i>ASPSCR1</i>	FVC	1	rs59606152	17	79,952,944	C
Previous	<i>MTCL1</i>	FEV1	Previous	rs513953	18	8,801,351	A
Novel	<i>C18orf8</i>	FVC	1	rs303752	18	21,074,255	G
Novel	<i>ZFP82</i>	FVC	2	rs2967516	19	36,881,643	A

Previous	<i>ABHD12</i>	FEV1	Previous	rs2236180	20	25,282,608	T
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Previous	<i>C20orf112</i>	FEV1/FVC	Previous	rs4413223	20	30,858,967	A
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Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34,025,756	A
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Previous	<i>KCNE2</i>	FEV1/FVC	Previous	rs62213732	21	35,675,966	C
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eQTL signals *in trans*

Previous	<i>CCNT2-AS1</i>	FVC	Previous	rs62168891	2	135,672,187	C
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Previous	<i>TMEM38B/ZNF462</i>	FEV1/FVC	Previous	rs1491106	9	109,483,517	T
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Previous	<i>SPATA9</i>	FEV1/FVC	Previous	rs987068	5	95,025,146	G
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Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43,940,021	G
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source:

eQTL SNP most highly associated with gene expression in the 99% Non credible set		Position		eQTL coded	eQTL non	eQTL Post. Prob.
Chr	(b37)					
C	rs12034227	1	6,681,275	A	C	0.16385671
C	rs2284746	1	17,306,675	C	G	0.19723868
	rs9435733	1	17,308,254	T	C	0.19723868
C	rs12096239	1	26,796,922	C	G	0.14450102
C	rs41270829	1	40,011,690	T	G	0.0021315
	rs3768321	1	40,035,928	T	G	0.00833455
T	rs11162400	1	78,416,262	A	G	0.00072503
A	rs10857859	1	111,733,724	C	G	0.27641809
A	rs2147324	1	150,255,587	T	C	0.07700655
	rs4926419	1	150,264,714	T	C	0.04513121
	rs4926419	1	150,264,714	T	C	0.04513121
	rs7512552	1	150,265,704	T	C	0.01580202
	rs1614039	1	150,272,007	T	C	0.00337163
	rs1631973	1	150,380,779	T	C	0.00265523
A	rs878471	1	150,547,747	A	G	0.30153124
	rs878471	1	150,547,747	A	G	0.30153124
	rs878471	1	150,547,747	A	G	0.30153124
	rs878471	1	150,547,747	A	G	0.30153124
	rs6697620	1	150,570,166	A	G	0.11526186
	rs12139563	1	150,578,241	A	G	0.07144849
T	rs111508230	1	155,153,537	T	C	0.14901047
T	rs6425501	1	178,718,536	A	G	0.12528608
C	rs2820290	1	201,783,682	A	G	0.01478647
	rs2820290	1	201,783,682	A	G	0.01478647
	rs2820290	1	201,783,682	A	G	0.01478647
G	rs16853781	1	204,437,680	A	G	0.00445273
G	rs11466399	1	218,591,623	A	G	0.01889347
A	rs13020553	2	102,931,826	C	G	0.19747126
	rs13020553	2	102,931,826	C	G	0.19747126
T	rs6758113	2	135,609,247	A	G	0.00457308
	rs62168871	2	135,661,678	A	G	0.0062558
	rs6708336	2	135,719,132	A	T	0.02229048
A	rs7424771	2	161,276,378	A	G	0.07153803
T	rs12997625	2	202,970,250	T	C	0.27166583
T	rs11685899	2	241,842,345	A	G	0.00206061
G	rs73154304	3	158,209,239	T	G	0.00237941
	rs62287884	3	158,229,160	A	G	0.00487047
G	rs34743464	4	56,026,914	T	C	0.07258547
C	rs6813090	4	89,827,071	A	C	0.05684983
C	rs153916	5	95,036,700	T	C	0.0183733
A	rs10074490	5	131,340,032	T	C	0.00288585

	rs721121	5	131,406,433	T	G	0.00213168
	rs4594848	5	131,586,598	A	C	0.00116918
	rs7705189	5	131,623,358	A	G	0.00723519
	rs11950562	5	131,652,529	A	C	0.00213168
A	rs7733410	5	147,856,522	A	G	0.92762821
A	rs13361953	5	156,926,442	T	C	0.50064581
G	rs2076295	6	7,563,232	T	G	1
G	rs9367688	6	56,379,422	A	C	0.00335554
G	rs9401876	6	126,669,479	A	C	0.00035316
G	rs1115045	6	142,561,553	A	G	0.00910103
G	rs10246303	7	7,286,445	A	T	0.06690427
G	rs73158411	7	99,610,127	A	G	0.10831106
	rs4727444	7	99,614,851	A	T	0.22680526
	rs2261360	7	99,692,993	T	G	0
	rs2261360	7	99,692,993	T	G	0
C	rs73195040	8	11,808,081	T	C	0.01745672
G	rs10819463	9	131,863,237	A	G	0.00017983
	rs10819463	9	131,863,237	A	G	0.00017983
T	rs12684650	9	139,110,654	T	C	0.11402495
G	rs4073153	9	139,259,349	A	G	0.00569395
	rs3812565	9	139,272,502	T	C	0.00279706
	rs3812565	9	139,272,502	T	C	0.00279706
A	rs57062879	10	12,278,525	A	G	0.42167428
	rs57062879	10	12,278,525	A	G	0.42167428
T	rs11000802	10	75,654,167	C	G	0.0039862
C	rs1149707	10	77,037,106	T	C	0.04264682
A	rs2637261	10	78,320,593	T	C	0.002194
T	rs1878767	11	43,729,987	A	G	0.01334969
A	rs11231150	11	62,351,802	A	G	0.01698137
	rs1801144	11	62,381,808	C	G	0.10472098
	rs1801144	11	62,381,808	C	G	0.10472098
T	rs3741151	11	73,020,846	T	G	0.00920374
	rs1002127	11	73,103,835	C	G	0.00068665
C	rs662265	11	126,010,971	A	G	0.32573347
G	rs773107	12	56,369,506	A	G	0.0110735
C	rs11172113	12	57,527,283	T	C	0.998376
C	rs113321785	12	95,534,192	A	G	0.06647425
	rs113745635	12	95,554,771	T	C	0.09212471
G	rs2887026	12	96,248,491	A	C	0.03713388
C	rs11111272	12	102,827,441	C	G	0.05407183
C	rs9521265	13	109,912,326	A	C	0.05432924
G	rs35085068	14	23,409,909	A	C	0.00063787
	rs35085068	14	23,409,909	A	C	0.00063787
G	rs7155279	14	92,485,881	T	G	0.02134673
	rs7148218	14	92,523,196	A	G	0.00044369
C	rs1898882	15	40,655,873	C	G	0.02354287
	rs10518693	15	40,700,022	T	C	0.00453603
	rs2304645	15	40,716,253	C	G	0.1304855
	rs10851395	15	40,718,534	T	C	0.05495624
G	rs2297379	15	41,819,283	A	G	0.04600892

	rs9944249	15	41,847,176	T	G	0.10331128
	rs9944249	15	41,847,176	T	G	0.10331128
	rs9944249	15	41,847,176	T	G	0.10331128
	rs9944249	15	41,847,176	T	G	0.10331128
C	rs56383987	15	41,953,211	T	C	0.51998143
	rs56383987	15	41,953,211	T	C	0.51998143
A	rs79539506	15	49,396,735	A	G	0.10938064
A	rs8025774	15	67,483,276	T	C	0.00208654
G	rs1441358	15	71,612,514	T	G	0.20310168
T	rs3751837	16	3,583,173	T	C	0.99864156
	rs3751837	16	3,583,173	T	C	0.99864156
G	rs75301646	16	28,617,885	A	G	0.00312467
	rs62036622	16	28,837,203	T	G	0.0051065
	rs8049439	16	28,837,515	T	C	0.01018095
A	rs76219171	16	50,188,929	A	G	0.84329162
T	rs4784887	16	58,065,624	A	G	0.31580995
T	rs2937124	16	69,862,109	T	C	0.00067527
	rs9936589	16	69,884,817	T	C	0.00811654
A	rs2059258	16	86,581,366	A	G	0.0171985
C	rs7215084	17	3,880,148	T	C	0.17208736
	rs7215084	17	3,880,148	T	C	0.17208736
A	rs6502963	17	6,522,473	T	C	0.0026794
G	rs77234976	17	7,141,140	C	G	0.33050862
G	rs34914463	17	7,366,619	T	C	0.04729725
	rs11552708	17	7,462,555	A	G	0.01349812
	rs62059821	17	7,469,591	A	G	0.05222509
C	rs2779208	17	15,871,208	T	C	0.00042214
	rs2535614	17	15,881,740	T	C	0.00026419
	rs3760298	17	15,905,190	A	G	0.00814874
	rs9905225	17	16,017,072	T	C	0.00130395
G	rs3098947	17	27,971,685	T	C	0.00122751
G	rs113934718	17	29,214,880	A	C	0.09718113
C	rs35246838	17	36,915,540	T	C	0.99947869
C	rs4375688	17	37,399,070	A	G	0.00295963
	rs2018026	17	37,659,606	A	G	0.00295963
	rs12940193	17	37,652,178	T	G	0.00174311
A	rs611351	17	43,692,935	A	G	0.00015038
	rs62056863	17	43,770,595	A	G	0.00015038
	rs62061705	17	44,006,252	T	C	0.00015038
	rs17652036	17	44,073,027	A	G	0.00123631
	rs733969	17	44,089,727	A	G	0.00123631
	rs733969	17	44,089,727	A	G	0.00123631
C	rs35713035	17	46,501,710	T	C	0.0397484
G	rs62091797	17	73,470,613	T	G	0.74163577
T	rs11659000	17	79,982,477	T	C	0.02679848
	rs72861739	17	79,990,728	T	C	0.01687221
G	rs631126	18	8,800,723	T	C	0.37714316
A	rs303762	18	21,082,317	T	C	0.00132065
	rs1623003	18	21,165,163	T	C	0.00211372
G	rs10403738	19	36,724,856	A	G	0.00612409

	rs62112624	19	36,835,066	A	G	0.00883262
	rs2967516	19	36,881,643	A	G	0.27099679
C	rs753009	20	25,268,661	T	C	0.00628323
	rs2258052	20	25,270,999	T	C	0.00540338
	rs6138625	20	25,622,769	T	C	0.01989371
G	rs6087374	20	30,960,487	T	G	0.01624916
G	rs6088799	20	33,934,301	T	C	0.00600845
	rs6142369	20	33,973,315	T	G	0.00404112
	rs143384	20	34,025,756	A	G	0.34900365
T	rs2834449	21	35,701,356	T	C	0.04152343
	rs2834457	21	35,712,214	A	T	0.8003372
	rs2834457	21	35,712,214	A	T	0.8003372
T	rs62168871	2	135,661,678	A	G	0.0062558
G	rs996856	9	109,487,910	A	G	0.15456886
C	rs153916	5	95,036,700	T	C	0.0183733
A	rs76171147	17	43,823,229	T	C	0.00025415

eQTL SNP most highly associated with gene expression for the gene (eQTL sentinel)

P-value	Laval Z-score	Groningen Z-score	UBC Z-score	Gene Symbol	eQTL SNP most highly associated with gene expression for the gene (eQTL sentinel)
1.29E-07	-3.5300	-2.8389	-2.7535	<i>DNAJC11</i>	rs12727844
4.27E-11	-3.7416	-3.7348	-3.9730	<i>PADI2</i>	rs2235913
3.40E-09	-5.2398	-2.8222	-1.7375	<i>MFAP2</i>	rs4920605
5.73E-68	-14.0378	-5.3537	-9.3543	<i>HMGN2</i>	rs12096239
4.92E-13	-4.7824	-4.4185	-3.1945	<i>OXCT2</i>	rs72663521
1.61E-09	5.4765	1.8705	3.1544	<i>PABPC4</i>	rs113879410
6.02E-08	3.9495	2.9475	2.5067	<i>NEXN</i>	rs11162400
7.69E-39	-5.3371	-8.2674	-8.9982	<i>TMEM77</i>	rs3762374
9.61E-08	3.3527	2.0767	3.9187	<i>C1orf54</i>	rs139708128
2.54E-06	-4.3524	-1.9340	-1.6648	<i>BNIP1</i>	rs6587553
8.13E-07	-2.5841	-2.4053	-3.6625	<i>ECM1</i>	rs11204662
3.34E-96	-13.4434	-10.5586	-11.9483	<i>MRPS21</i>	rs7512552
5.90E-14	4.3881	3.3854	5.2923	<i>RPRD2</i>	rs12126958
2.98E-06	-3.3577	-2.2926	-2.3238	<i>CDC42SE1</i>	rs4360524
8.32E-70	12.0823	7.3747	10.5929	<i>ARNT</i>	
3.52E-07	-4.1109	-2.2031	-2.2475	<i>FAM63A</i>	rs1673160
3.53E-09	4.1973	2.7136	3.1694	<i>HORMAD1</i>	
1.00E-08	5.0222	1.2000	3.2025	<i>LASS2</i>	
2.50E-06	-3.6862	-2.7684	-1.5709	<i>ENSA</i>	rs12034302
3.30E-09	5.4547	2.1258	2.1454	<i>GOLPH3L</i>	
1.07E-11	-4.6019	-3.0393	-4.1024	<i>PBXIP1</i>	rs2061690
8.79E-09	-3.3013	-3.2894	-3.4244	<i>ANGPTL1</i>	rs35810656
2.94E-08	4.8223	1.6421	2.8643	<i>IPO9</i>	rs41314545
3.27E-06	3.3014	2.5064	2.1923	<i>NAV1</i>	rs11803449
9.24E-08	3.9015	1.9255	3.3382	<i>SHISA4</i>	rs67531894
1.08E-17	-5.3712	-3.8899	-5.5092	<i>MDM4</i>	rs4252736
4.12E-14	-6.6876	-2.8246	-2.9139	<i>TGFB2</i>	rs11466399
2.46E-10	4.4513	3.2469	3.1793	<i>IL18R1</i>	
2.40E-35	9.0735	6.7809	5.1790	<i>IL1RL1</i>	rs1558620
3.98E-16	5.1827	2.8443	5.8813	<i>CCNT2</i>	rs17258458
1.69E-06	2.9475	1.9331	3.3659	<i>MCM6</i>	rs309180
1.11E-14	5.2212	1.9301	5.9264	<i>DARS</i>	rs309165
2.76E-09	4.9264	1.3420	3.9132	<i>RBMS1</i>	rs1020732
8.45E-09	-5.1373	-2.1625	-2.2795	<i>FZD7</i>	rs4675249
1.93E-55	12.4943	7.8639	5.7282	<i>C2orf54</i>	rs11685899
7.55E-12	-4.3466	-3.1014	-4.3293	<i>GFM1</i>	
4.49E-08	-3.0802	-1.6465	-4.5620	<i>MLF1</i>	rs9819631
1.45E-07	-4.0422	-3.0252	-1.8439	<i>CLOCK</i>	rs12507722
3.98E-12	4.4358	3.7899	3.7662	<i>FAM13A1</i>	rs2464520
1.19E-13	-5.2692	-2.5692	-5.0076	<i>RHOBTB3</i>	rs153916
6.02E-10	-2.9730	-4.2429	-3.5815	<i>CDC42SE2</i>	rs810078

1.33E-13	5.1252	4.3578	3.1465 <i>RAD50</i>	rs17772583
3.87E-06	3.1249	3.0277	1.7249 <i>PDLIM4</i>	rs12521097
2.05E-07	-4.9593	-2.0170	-1.6546 <i>P4HA2</i>	rs247294
3.27E-31	8.0249	5.5691	6.4060 <i>SLC22A5</i>	rs11950562
5.33E-08	-4.9626	-1.9721	-2.2745 <i>FBXO38</i>	rs10055430
7.92E-07	-2.4775	-1.8619	-4.3992 <i>ADAM19</i>	rs4368711
4.62E-124	21.1384	6.6574	8.5731 <i>DSP</i>	rs2076295
3.87E-07	-3.5031	-2.3576	-2.8686 <i>DST</i>	rs9475711
7.10E-12	-5.0106	-1.8012	-4.9136 <i>C6orf173</i>	
4.95E-07	3.4384	1.8011	3.4001 <i>VTA1</i>	rs147358968
1.49E-33	8.5856	5.8344	6.1978 <i>C1GALT1</i>	rs10952047
2.56E-29	8.4582	5.1745	5.5289 <i>TRIM4</i>	rs2527911
8.42E-08	-5.9371	-2.0706	-0.8079 <i>AZGP1</i>	rs2040787
2.17E-19	-7.8529	-3.0029	-4.3323 <i>PILRB</i>	rs3991498
3.34E-09	-6.0642	-2.2306	-1.6169 <i>ZKSCAN1</i>	rs7796006
4.12E-06	3.7278	2.7939	1.2997 <i>MTMR9</i>	rs56057779
1.69E-13	5.9216	2.6397	3.8926 <i>CRAT</i>	rs10819463
6.61E-11	5.1190	2.3112	3.6617 <i>PPP2R4</i>	rs10988198
3.16E-08	4.8245	2.1688	2.4300 <i>QSOX2</i>	rs12684650
6.40E-06	2.7235	0.8824	4.1713 <i>SNAPC4</i>	rs4073153
3.06E-06	-3.2027	-2.6336	-2.1967 <i>CARD9</i>	rs12555241
3.20E-07	3.0146	2.1557	3.6988 <i>DNLZ</i>	rs77813615
7.52E-18	6.0186	4.5617	4.1611 <i>CAMK1D</i>	rs11257655
7.99E-07	3.5602	3.2081	1.4903 <i>CDC123</i>	rs12779647
9.71E-19	5.7219	2.6244	6.5723 <i>NUDT13</i>	rs57918784
5.00E-09	4.0338	3.9048	1.9620 <i>VDAC2</i>	rs10762652
2.64E-07	4.2488	2.3304	2.2184 <i>C10orf11</i>	rs10824307
5.91E-115	13.3914	12.1970	14.2142 <i>HSD17B12</i>	rs6485469
1.55E-09	-2.9444	-3.0363	-4.4692 <i>INTS5</i>	rs7122950
1.30E-19	7.4351	3.0048	4.8407 <i>BSCL2</i>	rs55707677
1.04E-35	8.7662	5.1367	7.3624 <i>ROM1</i>	rs12808829
1.29E-07	1.9565	4.0904	3.0770 <i>FAM168A</i>	rs11823979
6.36E-23	-5.9486	-5.2068	-5.9753 <i>RELT</i>	
9.61E-14	-3.9482	-5.3363	-4.1016 <i>RPUSD4</i>	rs480153
1.27E-12	-2.7620	-3.8870	-5.7388 <i>CDK2</i>	rs773107
2.09E-11	-4.0442	-1.6194	-5.8657 <i>STAT6</i>	rs4559
2.54E-06	-2.6040	-2.4120	-3.2024 <i>FGD6</i>	rs113321785
1.33E-09	3.9362	3.7299	2.7400 <i>VEZT</i>	rs12298029
8.40E-14	-5.8021	-2.3853	-4.2971 <i>SNRPF</i>	rs17369927
4.91E-10	3.6401	3.5442	3.5924 <i>CCDC53</i>	rs11111197
1.63E-18	5.9955	2.2593	6.8884 <i>MYO16</i>	rs9521276
1.12E-60	-10.2214	-7.7361	-10.4995 <i>C14orf94</i>	rs4981455
6.24E-19	6.2310	3.3443	5.7778 <i>RBM23</i>	rs1043207
1.01E-10	-3.1690	-3.2838	-4.8121 <i>ATXN3</i>	rs73323710
6.11E-08	4.6538	2.2432	2.1806 <i>TRIP11</i>	
6.84E-26	7.6014	5.8692	4.3865 <i>C15orf23</i>	rs17671250
9.65E-28	-6.3108	-7.0804	-5.4759 <i>DISP2</i>	rs12913300
1.65E-14	5.4976	3.7961	3.8295 <i>IVD</i>	rs7164321
1.34E-06	-2.6174	-2.7426	-3.0918 <i>BAHD1</i>	rs2412554
5.47E-12	4.8034	3.7924	3.1988 <i>RPAP1</i>	rs7178957

2.61E-11	-4.5819	-2.3099	-4.4845 <i>ITPKA</i>	rs9944249
1.71E-07	-3.1995	-2.2165	-3.6574 <i>JMJD7-PLA2G4B</i>	rs12441300
3.26E-124	-17.0967	-10.3183	-12.8134 <i>LTK</i>	rs9944249
6.91E-53	-10.4621	-4.6574	-10.7119 <i>TYRO3</i>	rs9944249
1.08E-26	-8.1570	-5.4376	-4.4549 <i>MAPKBP1</i>	rs11632519
6.17E-08	3.3135	3.4058	2.6853 <i>SPTBN5</i>	rs11070353
3.45E-06	2.1691	2.3575	3.4648 <i>GALK2</i>	rs112792737
2.61E-13	5.6304	2.3654	4.5335 <i>SMAD3</i>	rs79783349
7.96E-12	-5.4130	-3.2491	-3.0596 <i>THSD4</i>	rs1441358
1.17E-25	7.0514	6.1064	4.7798 <i>CLUAP1</i>	
7.64E-20	5.8312	4.3682	5.6550 <i>NLRC3</i>	rs62037803
7.40E-06	2.6044	3.4636	1.5442 <i>SBK1</i>	rs75301646
2.75E-07	-3.3985	-2.8402	-2.6168 <i>EIF3C</i>	rs3924376
1.27E-15	-5.8735	-2.0470	-5.8899 <i>TUFM</i>	rs8049439
5.22E-06	2.5970	2.5909	2.8162 <i>HEATR3</i>	
8.70E-07	-2.8231	-1.9530	-3.8355 <i>MMP15</i>	rs4784887
5.43E-06	-4.4493	-2.4058	-0.5564 <i>WWP2</i>	rs4985451
4.65E-49	-10.7798	-7.3801	-6.9040 <i>PDXDC2</i>	rs8048883
4.12E-35	6.1302	7.3781	8.2857 <i>MTHFSD</i>	rs34602875
3.59E-11	-6.9938	-2.6904	-1.1266 <i>ATP2A3</i>	rs7215084
1.22E-09	-3.7954	-2.6205	-4.2782 <i>ZZEF1</i>	rs142930007
4.61E-07	-2.4251	-1.8392	-4.4308 <i>C17orf100</i>	rs7226265
4.10E-24	5.6986	6.5881	5.2724 <i>C17orf81</i>	rs414206
1.99E-10	-3.9516	-3.4053	-3.7093 <i>CHRNA1</i>	rs7209131
1.38E-07	4.5887	1.5104	2.5776 <i>CD68</i>	
2.34E-24	-5.1334	-5.1551	-7.8596 <i>SENP3</i>	rs62059821
4.49E-32	-8.4262	-4.9754	-6.8513 <i>ADORA2B</i>	
0	-34.9514	-27.3934	-28.2259 <i>ZSWIM7</i>	rs2286795
2.53E-11	-5.3160	-1.9730	-4.3049 <i>TTC19</i>	rs76529859
3.16E-11	4.1508	2.9104	4.5112 <i>PIGL</i>	rs74255324
4.76E-08	1.9745	3.5154	4.0407 <i>EFCAB5</i>	
2.03E-14	-5.1072	-2.0513	-5.7628 <i>C17orf42</i>	
4.35E-15	-3.8534	-5.1298	-4.8299 <i>PCGF2</i>	rs55716556
4.11E-06	-2.8376	-2.4974	-2.6684 <i>MED1</i>	rs72825175
3.48E-73	12.6556	6.6847	11.2715 <i>CRKRS</i>	rs2018026
6.53E-07	-4.2411	-0.5941	-3.2917 <i>PERLD1</i>	rs2952152
4.86E-210	-19.5789	-17.1822	-17.1026 <i>KIAA1267</i>	rs77616838
3.30E-38	-8.2367	-4.8462	-8.9089 <i>PLEKHM1</i>	rs62065436
0	30.7884	19.8852	23.2357 <i>LRRC37A4</i>	rs62061705
2.23E-23	-7.7418	-4.7057	-4.2245 <i>WNT3</i>	rs199526
1.74E-06	-3.5276	-3.1271	-1.5321 <i>LRRC37A</i>	rs13313562
1.95E-112	-18.2624	-8.0046	-10.5162 <i>MAPT</i>	rs7210219
2.45E-10	4.8793	3.2869	2.6437 <i>HOXB2</i>	rs8074125
4.16E-08	4.1910	3.0548	1.9876 <i>GRB2</i>	rs12945743
3.96E-11	5.5114	2.9698	3.3011 <i>STRA13</i>	rs3934983
6.83E-11	-4.8736	-2.4640	-4.4506 <i>DCXR</i>	rs60390379
3.13E-10	-5.3559	-2.8795	-2.7009 <i>KIAA0802</i>	rs563610
8.95E-08	3.9633	2.1228	3.1582 <i>C18orf8</i>	
1.39E-10	5.3176	1.8017	3.8339 <i>NPC1</i>	rs1805081
8.60E-08	-3.4769	-2.7360	-3.1229 <i>ZNF565</i>	rs4806283

9.39E-28	-6.2638	-5.7711	-6.8966 <i>ZFP14</i>	rs62112624
3.98E-18	6.9076	2.5991	5.2147 <i>ZFP82</i>	rs2967503
1.30E-20	-7.0422	-3.4729	-5.1216 <i>ABHD12</i>	rs2990512
2.99E-06	-4.1793	-3.3092	-0.3650 <i>PYGB</i>	rs4586698
1.07E-11	4.0197	2.9673	4.7661 <i>RP13-401N8.2</i>	rs6037264
1.56E-07	-4.5291	-2.9432	-1.3280 <i>TM9SF4</i>	rs4911552
2.04E-24	6.8737	5.1606	5.5168 <i>UQCC1</i>	rs6088799
1.60E-07	3.9747	2.2809	2.6540 <i>GDF5</i>	rs2425054
1.94E-09	2.5482	5.1594	2.6190 <i>GGT7</i>	rs35393655
7.99E-10	-5.1358	-2.7999	-2.5057 <i>MRPS6</i>	rs4817638
1.46E-09	-4.3911	-3.1913	-2.7356 <i>C21orf82</i>	rs2834463
9.38E-09	-4.4556	-3.1564	-2.0483 <i>KCNE2</i>	rs7282733
2.29E-15	4.9963	2.6274	5.8815 <i>DARS</i>	
1.60E-21	-6.8086	-4.7644	-4.7573 <i>RBP2</i>	
2.01E-16	-5.2164	-3.6342	-5.4698 <i>RHOBTB3</i>	
2.01E-22	-7.8040	-4.6312	-3.7522 <i>WNT3</i>	

eQTL sentinel P value	eQTL sentinel is in credible set	Gene for follow up
8.54E-09	FALSE	
1.66E-43	FALSE	
1.84E-09	FALSE	
5.73E-68	TRUE	<i>HMGN2</i>
4.39E-13	FALSE	
6.84E-11	FALSE	
6.02E-08	TRUE	<i>NEXN</i>
5.14E-50	FALSE	
1.88E-16	FALSE	
7.56E-65	FALSE	
2.01E-08	FALSE	
3.34E-96	TRUE	<i>MRPS21</i>
3.48E-24	FALSE	
3.52E-60	FALSE	
1.18E-162	FALSE	
4.13E-15	FALSE	
9.43E-19	FALSE	
1.50E-22	FALSE	
1.17E-14	FALSE	
9.67E-17	FALSE	
2.48E-212	FALSE	
6.25E-09	FALSE	
1.05E-20	FALSE	
2.77E-09	FALSE	
3.56E-19	FALSE	
2.22E-182	FALSE	
4.12E-14	TRUE	<i>TGFB2</i>
1.42E-24	FALSE	
3.03E-65	FALSE	
2.51E-54	FALSE	
4.93E-16	FALSE	
3.53E-81	FALSE	
4.19E-88	FALSE	
6.47E-28	FALSE	
1.93E-55	TRUE	<i>C2orf54</i>
1.13E-162	FALSE	
4.44E-26	FALSE	
1.48E-95	FALSE	
6.33E-13	FALSE	
1.19E-13	TRUE	<i>RHOBTB3</i>
9.61E-77	FALSE	

1.58E-68	FALSE	
2.41E-06	FALSE	
1.49E-07	FALSE	
3.27E-31	TRUE	<i>SLC22A5</i>
2.79E-36	FALSE	
2.62E-09	FALSE	
4.62E-124	TRUE	<i>DSP</i>
7.82E-08	FALSE	
2.00E-12	FALSE	
5.76E-20	FALSE	
1.77E-46	FALSE	
2.03E-161	FALSE	
1.16E-19	FALSE	
2.81E-197	FALSE	
3.16E-12	FALSE	
9.26E-09	FALSE	
1.69E-13	TRUE	<i>CRAT</i>
9.90E-12	FALSE	
3.16E-08	TRUE	<i>QSOX2</i>
6.40E-06	TRUE	<i>SNAPC4</i>
1.73E-07	FALSE	
1.98E-27	FALSE	
1.21E-48	FALSE	
1.38E-10	FALSE	
7.73E-53	FALSE	
1.18E-13	FALSE	
1.32E-20	FALSE	
4.83E-236	FALSE	
4.17E-15	FALSE	
3.38E-155	FALSE	
4.10E-36	FALSE	
1.71E-10	FALSE	
5.44E-26	FALSE	
1.53E-127	FALSE	
1.27E-12	TRUE	<i>CDK2</i>
3.59E-257	FALSE	
2.54E-06	TRUE	<i>FGD6</i>
2.65E-19	FALSE	
7.03E-72	FALSE	
8.37E-21	FALSE	
5.88E-19	FALSE	
1.02E-61	FALSE	
6.94E-28	FALSE	
1.30E-21	FALSE	
2.71E-10	FALSE	
1.18E-95	FALSE	
1.94E-77	FALSE	
3.78E-40	FALSE	
3.64E-09	FALSE	
5.40E-18	FALSE	

2.61E-11	TRUE	<i>ITPKA</i>
7.06E-24	FALSE	
3.26E-124	TRUE	<i>LTK</i>
6.91E-53	TRUE	<i>TYRO3</i>
3.87E-260	FALSE	
5.97E-88	FALSE	
3.45E-08	FALSE	
8.25E-14	FALSE	
7.96E-12	TRUE	<i>THSD4</i>
1.32E-57	FALSE	
5.61E-32	FALSE	
7.40E-06	TRUE	<i>SBK1</i>
1.90E-07	FALSE	
1.27E-15	TRUE	<i>TUFM</i>
1.19E-40	FALSE	
8.70E-07	TRUE	<i>MMP15</i>
1.44E-12	FALSE	
0.00E+00	FALSE	
9.23E-83	FALSE	
3.59E-11	TRUE	<i>ATP2A3</i>
7.79E-33	FALSE	
2.40E-09	FALSE	
0.00E+00	FALSE	
1.46E-18	FALSE	
2.54E-53	FALSE	
2.34E-24	TRUE	<i>SENP3</i>
3.56E-34	FALSE	
0.00E+00	FALSE	
3.73E-12	FALSE	
1.60E-21	FALSE	
5.70E-10	FALSE	
3.02E-30	FALSE	
6.01E-20	FALSE	
1.70E-06	FALSE	
3.48E-73	TRUE	<i>CRKRS</i>
1.09E-10	FALSE	
1.23E-228	FALSE	
1.15E-40	FALSE	
0.00E+00	TRUE	<i>LRRRC37A4</i>
2.17E-30	FALSE	
2.23E-12	FALSE	
1.10E-113	FALSE	
2.01E-19	FALSE	
9.84E-38	FALSE	
1.58E-27	FALSE	
2.53E-19	FALSE	
8.26E-12	FALSE	
1.35E-09	FALSE	
1.20E-13	FALSE	
1.90E-13	FALSE	

9.39E-28	TRUE	<i>ZFP14</i>
<u>3.75E-21</u>	FALSE	
1.20E-59	FALSE	
1.34E-06	FALSE	
<u>3.49E-24</u>	FALSE	
<u>1.08E-22</u>	FALSE	
2.04E-24	TRUE	<i>UQCC1</i>
8.18E-08	FALSE	
<u>9.49E-159</u>	FALSE	
1.54E-10	FALSE	
1.28E-09	FALSE	
<u>4.81E-09</u>	FALSE	

Supplementary Table 13: Genes implicated by eQTL or pQTL associations or (

Novelty	Nearest Gene	Phenotype	Tier	Sentinel SNP	Chr	Pos
Previous	<i>MFAP2</i>	FEV1/FVC	Previous	rs9435733	1	17308254
Novel	<i>DHDDS</i>	FVC	2	rs9438626	1	26775367
Novel	<i>DHDDS</i>	FVC	2	rs9438626	1	26775367
Novel	<i>DHDDS</i>	FEV1	1	rs12096239	1	26796922
Novel	<i>DHDDS</i>	FEV1	1	rs12096239	1	26796922
Previous	<i>LOC101929516</i>	FEV1/FVC	Previous	rs755249	1	39995074
Previous	<i>LOC101929516</i>	FEV1/FVC	Previous	rs755249	1	39995074
Novel	<i>NEXN</i>	FEV1/FVC	1	rs9661687	1	78387270
Novel	<i>DENND2D</i>	FEV1/FVC	1	rs9970286	1	111737398
Novel	<i>DENND2D</i>	FEV1/FVC	1	rs9970286	1	111737398
Novel	<i>DENND2D</i>	FEV1/FVC	1	rs9970286	1	111737398
Novel	<i>DENND2D</i>	FEV1/FVC	1	rs9970286	1	111737398
Novel	<i>C1orf54</i>	PEF	1	rs11205354	1	150249101
Novel	<i>C1orf54</i>	PEF	1	rs11205354	1	150249101
Novel	<i>C1orf54</i>	PEF	1	rs11205354	1	150249101
Novel	<i>C1orf54</i>	PEF	1	rs11205354	1	150249101
Novel	<i>KRTCAP2</i>	FEV1/FVC	1	rs141942982	1	155153537
Novel	<i>RALGPS2</i>	FEV1	1	rs4651005	1	178719306
Novel	<i>LMOD1</i>	FEV1/FVC	2	rs4309038	1	201884647
Previous	<i>TGFB2</i>	PEF	Previous	rs6604614	1	218631452
Novel	<i>ATAD2B</i>	FVC	2	rs13009582	2	24018480
Novel	<i>ATAD2B</i>	FVC	2	rs13009582	2	24018480
Novel	<i>ATAD2B</i>	FVC	2	rs13009582	2	24018480
Novel	<i>PKDCC</i>	FVC	1	rs4952564	2	42243850
Novel	<i>ITGAV</i>	FEV1/FVC	1	rs2084448	2	187530520
Novel	<i>SPATS2L</i>	FEV1/FVC	2	rs985256	2	201208692
Previous	<i>TRAF3IP1</i>	FEV1	Previous	rs6710301	2	239441308
Novel	<i>C2orf54</i>	FVC	1	rs6437219	2	241844033
Novel	<i>C2orf54</i>	FVC	1	rs6437219	2	241844033
Novel	<i>C2orf54</i>	FVC	1	rs6437219	2	241844033
Novel	<i>C2orf54</i>	FVC	1	rs6437219	2	241844033
Previous	<i>SLMAP</i>	FEV1	Previous	rs6445932	3	57879611
Novel	<i>MIR548G</i>	FVC	1	rs1610265	3	99420192
Previous	<i>RSRC1</i>	FVC	Previous	rs12634907	3	158226886
Novel	<i>BCHE</i>	FEV1/FVC	1	rs1799807	3	165548529
Novel	<i>BTC</i>	FEV1/FVC	1	rs62316310	4	75676529
Previous	<i>GSTCD</i>	FEV1	Previous	rs11722225	4	106766430
Previous	<i>GSTCD</i>	FEV1	Previous	rs11722225	4	106766430
Previous	<i>NPNT</i>	FEV1/FVC	Previous	rs34712979	4	106819053
Previous	<i>NPNT</i>	FEV1/FVC	Previous	rs34712979	4	106819053
Novel	<i>LOC100996325</i>	FEV1	1	rs11739847	5	609661
Previous	<i>AP3B1</i>	FVC	Previous	rs425102	5	77396400
Previous	<i>SPATA9</i>	FEV1/FVC	Previous	rs987068	5	95025146
Previous	<i>P4HA2-AS1</i>	FVC	Previous	rs3843503	5	131466629

Previous	<i>P4HA2-AS1</i>	FVC	Previous	rs3843503	5	131466629
Previous	<i>P4HA2-AS1</i>	FVC	Previous	rs3843503	5	131466629
Previous	<i>P4HA2-AS1</i>	FVC	Previous	rs3843503	5	131466629
Previous	<i>CYFIP2</i>	FEV1/FVC	Previous	rs11134766	5	156908317
Previous	<i>ADAM19</i>	FEV1/FVC	Previous	rs11134789	5	156944199
Previous	<i>ADAM19</i>	FEV1/FVC	Previous	rs11134789	5	156944199
Previous	<i>ADAM19</i>	FEV1/FVC	Previous	rs11134789	5	156944199
Previous	<i>DSP</i>	FEV1/FVC	Previous	rs2076295	6	7563232
Previous	<i>DSP</i>	FEV1/FVC	Previous	rs2076295	6	7563232
Novel	<i>RNU6-71P</i>	FEV1	1	rs2894837	6	56336406
Previous	<i>MIR588</i>	FVC	Previous	rs6918725	6	126990392
Previous	<i>GPR126</i>	FEV1/FVC	Previous	rs17280293	6	142688969
Previous	<i>C1GALT1</i>	FEV1/FVC	Previous	rs4318980	7	7256490
Novel	<i>JAZF1</i>	FEV1	1	rs1513272	7	28200097
Novel	<i>MET</i>	FEV1/FVC	2	rs193686	7	116431427
Novel	<i>IER5L</i>	FEV1	2	rs967497	9	131943843
Novel	<i>IER5L</i>	FEV1	2	rs967497	9	131943843
Novel	<i>IER5L</i>	FEV1	2	rs967497	9	131943843
Novel	<i>IER5L</i>	FEV1	2	rs967497	9	131943843
Novel	<i>IER5L</i>	FEV1	2	rs967497	9	131943843
Previous	<i>QSOX2</i>	FVC	Previous	rs7024579	9	139100413
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139259349
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139259349
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139259349
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139259349
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139259349
Previous	<i>CDC123</i>	FEV1/FVC	Previous	rs7090277	10	12278021
Previous	<i>MYPN</i>	FVC	Previous	rs10998018	10	69962954
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155
Previous	<i>ARHGEF17</i>	FEV1/FVC	Previous	rs2027761	11	73036179
Previous	<i>ARHGEF17</i>	FEV1/FVC	Previous	rs2027761	11	73036179
Previous	<i>ARHGEF17</i>	FEV1/FVC	Previous	rs2027761	11	73036179
Previous	<i>RAB5B</i>	FEV1	Previous	rs1689510	12	56396768
Previous	<i>LRP1</i>	FEV1/FVC	Previous	rs11172113	12	57527283
Previous	<i>FGD6</i>	FEV1/FVC	Previous	rs113745635	12	95554771
Novel	<i>DOCK9</i>	FEV1/FVC	1	rs11620380	13	99665512
Novel	<i>CHAC1</i>	FVC	1	rs4924525	15	41255396
Novel	<i>CHAC1</i>	FVC	1	rs4924525	15	41255396
Novel	<i>CHAC1</i>	FVC	1	rs4924525	15	41255396
Previous	<i>RPAP1</i>	FEV1/FVC	Previous	rs2012453	15	41840238
Previous	<i>RPAP1</i>	FEV1/FVC	Previous	rs2012453	15	41840238
Previous	<i>RPAP1</i>	FEV1/FVC	Previous	rs2012453	15	41840238

Previous	<i>TSEN54</i>	FEV1	Previous	rs9892893	17	73525670
Novel	<i>ASPSCR1</i>	FVC	1	rs59606152	17	79952944
Novel	<i>C18orf8</i>	FVC	1	rs303752	18	21074255
Novel	<i>ZFP82</i>	FVC	2	rs2967516	19	36881643
Novel	<i>ZFP82</i>	FVC	2	rs2967516	19	36881643
Novel	<i>ZFP82</i>	FVC	2	rs2967516	19	36881643
Previous	<i>LTBP4</i>	FEV1/FVC	Previous	rs34093919	19	41117300
Previous	<i>ABHD12</i>	FEV1	Previous	rs2236180	20	25282608
Previous	<i>ABHD12</i>	FEV1	Previous	rs2236180	20	25282608
Previous	<i>ABHD12</i>	FEV1	Previous	rs2236180	20	25282608
Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34025756
Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34025756
Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34025756
Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34025756
Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34025756
Previous	<i>SLC2A4RG</i>	FVC	Previous	rs4809221	20	62372706
Previous	<i>SLC2A4RG</i>	FVC	Previous	rs4809221	20	62372706
Previous	<i>SCARF2</i>	FEV1	Previous	rs9610955	22	20790723
Previous	<i>SCARF2</i>	FEV1	Previous	rs9610955	22	20790723

deleterious variant:

COPD risk allele (FEV1/FVC decreasing allele)				
	Alt allele	Top eQTL/pQTL	Top eQTL P value	r2 with sentinel
C	T	rs9435731	5.00E-31	0.99
G	C	rs12027388	4.98E-08	1
G	C	-	-	-
C	G	rs12096239	5.73E-68	Same
C	G	-	-	-
T	C	rs72663520	1.31E-10	0.97
T	C	-	-	-
T	C	rs11162400	6.02E-08	0.51
G	A	rs9970286	2.98E-13	Same
G	A	rs2209457	1.01E-07	1
G	A	rs2282248	1.33E-13	1
G	A	rs2282248	1.37E-14	1
C	A	rs7512552	3.34E-96	0.66
C	A	rs2794679	6.67E-11	0.54
C	A	rs2867894	8.70E-07	0.52
C	A	rs11205385	8.91E-38	0.46
T	G	rs111508230	2.19E-08	0.93
C	T	rs7366	4.79E-06	1
G	C	rs1032524	3.51E-13	0.72
C	G	rs11466399	4.12E-14	1
G	A	rs4665244	1.83E-08	0.51
G	A	rs7369458	1.55E-20	0.61
G	A	-	-	-
A	G	rs4952394	6.00E-06	0.94
C	T	rs13027560	5.83E-20	0.98
C	A	-	-	-
C	A	-	-	-
C	T	rs35885627	1.60E-30	0.57
C	T	rs6737966	2.72E-25	0.49
C	T	-	-	-
C	T	-	-	-
T	G	-	-	-
T	C	rs73860470	1.20E-05	0.94
G	A	rs62287897	8.58E-07	1
C	T	-	-	-
G	A	-	-	-
T	C	rs7660534	3.13E-11	0.92
T	C	-	-	-
A	G	-	-	-
A	G	rs34712979	4.57E-16	Same
A	G	-	-	-
G	T	rs425102	1.30E-06	Same
C	G	rs153916	5.24E-12	0.61
A	T	rs11950562	3.27E-31	0.6

A	T	rs10058074	2.56E-15	0.6
A	T	-	-	-
A	T	rs11955347	9.12E-24	0.75
T	C	rs78832945	9.84E-10	1
A	C	rs10476063	2.44E-09	0.93
A	C	-	-	-
A	C	-	-	-
T	G	rs2076295	2.72E-83	Same
T	G	rs2076295	8.17E-52	Same
G	A	-	-	-
T	G	-	-	-
A	G	-	-	-
A	G	-	-	-
C	T	-	-	-
T	C	-	-	-
G	A	rs10819463	1.69E-13	0.82
G	A	rs944072	4.34E-23	0.85
G	A	rs9696811	1.16E-12	0.78
G	A	-	-	-
G	A	-	-	-
T	C	rs12684650	3.16E-08	0.9
G	A	rs4073153	6.40E-06	Same
G	A	rs4075760	4.64E-23	0.79
G	A	rs10781499	7.18E-09	0.78
G	A	rs4498662	5.90E-06	0.72
G	A	rs4078099	1.25E-27	0.79
T	A	rs57062879	1.04E-05	0.96
A	G	-	-	-
G	A	rs1061093	2.43E-06	1
G	A	rs1801144	3.83E-18	0.94
G	A	rs11231152	7.50E-16	1
G	A	rs2849030	7.71E-24	0.95
G	A	-	-	-
G	A	-	-	-
G	A	-	-	-
G	A	-	-	-
G	A	-	-	-
C	T	rs7105681	2.76E-09	0.94
C	T	rs77127734	1.07E-26	0.94
C	T	-	-	-
C	G	rs773107	1.27E-12	0.95
T	C	-	-	-
T	C	rs113321785	2.54E-06	0.97
A	C	-	-	-
A	C	rs7162992	9.93E-76	0.9
A	C	rs6492994	2.37E-06	0.67
A	C	rs4924528	3.99E-06	1
G	A	rs9944249	6.91E-53	0.88
G	A	rs9944249	2.61E-11	0.88
G	A	rs9944249	3.26E-124	0.88

G	A	rs9944249	1.04E-22	0.88
G	A	rs9944249	1.55E-95	0.88
G	A	rs9944249	6.96E-34	0.88
G	A	rs2297379	4.31E-12	0.98
A	C	rs10518716	4.13E-07	1
A	C	rs72625777	3.08E-15	1
A	C	-	-	-
G	T	rs1441358	7.96E-12	Same
A	G	rs75301646	7.40E-06	0.7
A	G	rs8049439	1.27E-15	0.98
A	G	rs231977	6.18E-34	0.51
A	G	rs2925630	1.60E-16	0.7
A	G	rs8049439	8.03E-27	0.98
A	G	rs153109	1.03E-07	0.68
A	G	rs240704	5.05E-14	0.79
A	G	rs151226	5.28E-08	0.5
A	G	rs9926245	7.09E-67	0.76
A	G	rs8046545	1.82E-05	0.81
A	G	rs7187776	4.93E-75	0.98
A	G	-	-	-
A	G	-	-	-
A	G	-	-	-
A	G	-	-	-
A	G	-	-	-
A	G	-	-	-
A	G	-	-	-
G	T	rs4784887	8.70E-07	0.91
G	T	rs4784886	1.19E-06	0.98
G	C	rs9912501	3.43E-08	0.96
G	C	rs7215084	2.46E-16	1
A	G	rs7223918	3.63E-07	0.53
A	G	rs9901861	5.02E-09	0.53
A	G	rs9901861	7.10E-14	0.53
A	G	rs2165844	1.03E-05	0.6
A	G	rs9909670	6.48E-18	0.53
A	G	-	-	-
A	G	-	-	-
A	G	-	-	-
C	G	rs62059821	2.34E-24	0.61
C	G	rs9907930	5.12E-11	0.71
C	T	rs10491104	6.03E-11	0.95
C	T	rs12948361	4.15E-18	1
C	T	-	-	-
C	T	-	-	-
A	G	-	-	-
C	T	rs2018026	3.48E-73	0.95
C	T	rs2338797	7.30E-09	0.97
A	G	rs62061705	2.07E-287	1
A	G	-	-	-
G	T	rs9911502	1.61E-05	0.95

G	T	-	-	-
C	T	-	-	-
A	G	-	-	-
A	G	rs62112624	1.43E-24	0.52
A	G	rs56378871	9.94E-20	0.71
A	G	rs3830547	5.83E-08	0.72
G	A	-	-	-
C	T	rs6138639	5.82E-11	0.91
C	T	-	-	-
C	T	-	-	-
G	A	rs6088799	1.71E-19	0.73
G	A	rs6142378	8.54E-14	0.73
G	A	rs62210587	1.96E-08	0.73
G	A	rs6142378	3.08E-09	0.73
G	A	-	-	-
A	G	rs1056441	4.88E-07	1
A	G	-	-	-
C	G	rs738086	4.79E-21	0.98
C	G	-	-	-

Gene (direction of effect)

MFAP2(+)

DHDDS(+)

DHDDS

HMGN2(+)

DHDDS

PABPC4(-)

PABPC4

NEXN(+)

CEPT1(-)

CHI3L2(-)

CEPT1(-)

DRAM2(-)

MRPS21(+)

RPRD2(-)

RPRD2(-)

ECM1(+)

THBS4(+)

ANGPTL1(-)

SHISA4(-)

TGFB2(+)

UBXN2A(+)

UBXN2A(+)

UBXN2A

PKDCC(+)

ITGAV(+)

SPATS2L

ASB1

C2orf54(-)

C2orf54(-)

C2orf54

C2orf54

SLMAP

FILIP1L(-)

RSRC1(-)

BCHE

BTC

INTS12(+)

INTS12

NPNT

NPNT(-)

CEP72

AP3B1(+)

RHOBTB3(-)

SLC22A5(+)

SLC22A5(-)
P4HA2
C1QTNF5(-)
ADAM19(+)
ADAM19(+)
ADAM19
ADAM19
DSP(+)
DSP(+)
DST
CENPW
GPR126
C1GALT1
JAZF1
MET
CRAT(-)
CRAT(+)
PPP2R4(+)
CRAT
IER5L
QSOX2(+)
SNAPC4(-)
CARD9(+)
CARD9(+)
INPP5E(-)
CARD9(+)
NUDT5(+)
MYPN
EEF1G(+)
ROM1(+)
EML3(-)
EML3(-)
EEF1G
EML3
ROM1
EML3
ROM1
FAM168A(-)
ARHGEF17(-)
ARHGEF17
CDK2(-)
LRP1
FGD6(+)
DOCK9
INO80(+)
CHP1(+)
RAD51(-)
TYRO3(+)
ITPKA(+)
LTK(+)

ITPKA(-)
LTK(-)
TYRO3(-)
RPAP1(+)
AAGAB(-)
SMAD3(+)
IQCH
THSD4(+)
SBK1(+)
TUFM(-)
CCDC101(-)
SULT1A1(-)
TUFM(+)
SH2B1(-)
NPIPL1(-)
CLN3(+)
SULT1A2(+)
ATXN2L(-)
TUFM(+)
CCDC101
EIF3C
SH2B1
SULT1A1
SULT1A2
TUFM
SULT1A2
MMP15(+)
MMP15(-)
ATP2A3(-)
ATP2A3(-)
KIAA0753(-)
TXNDC17(-)
KIAA0753(-)
PITPNM3(+)
KIAA0753(-)
KIAA0753
PITPNM3
KIAA0753
SEN3(-)
TNFSF13(-)
ADORA2B(-)
TTC19(+)
ADORA2B
TTC19
EFCAB5
CRKRS(-)
FBXL20(-)
LRRC37A4(+)
MAPT
CASKIN2(-)

TSEN54

LRRC45

C18ORF8

ZFP14(-)

ZFP82(+)

ZFP82(+)

LTBP4

PYGB(+)

PYGB

PYGB

UQCC1(-)

UQCC1(-)

GDF5(-)

UQCC1(-)

UQCC1

LIME1(-)

LIME1

SCARF2(+)

SCARF2

Source

GTEx Lung

GTEx Whole Blood

>1 GTEx smooth muscle containing tissue

Lung eQTL

>1 GTEx smooth muscle containing tissue

GTEx Lung

>1 GTEx smooth muscle containing tissue

Lung eQTL

NESDA-NTR Blood eQTL

GTEx Lung

GTEx Whole Blood

GTEx Whole Blood

Lung eQTL

NESDA-NTR Blood eQTL

GTEx Lung

pQTL plasma proteins

pQTL plasma proteins

GTEx Lung

GTEx Lung

Lung eQTL

GTEx Lung

GTEx Whole Blood

>1 GTEx smooth muscle containing tissue

GTEx Lung

NESDA-NTR Blood eQTL

>1 GTEx smooth muscle containing tissue

Deleterious coding variant

Lung eQTL

GTEx Lung

>1 GTEx smooth muscle containing tissue

Deleterious coding variant

>1 GTEx smooth muscle containing tissue

GTEx Whole Blood

GTEx Lung

Deleterious coding variant

Deleterious coding variant

GTEx Lung

>1 GTEx smooth muscle containing tissue

>1 GTEx smooth muscle containing tissue

pQTL plasma proteins

Deleterious coding variant

GTEx Lung

Lung eQTL

Lung eQTL

NESDA-NTR Blood eQTL
>1 GTEx smooth muscle containing tissue
pQTL plasma proteins
GTEx Whole Blood
GTEx Lung
>1 GTEx smooth muscle containing tissue
Deleterious coding variant
Lung eQTL
GTEx Lung
Deleterious coding variant
>1 GTEx smooth muscle containing tissue
Deleterious coding variant
>1 GTEx smooth muscle containing tissue
>1 GTEx smooth muscle containing tissue
>1 GTEx smooth muscle containing tissue
Lung eQTL
NESDA-NTR Blood eQTL
NESDA-NTR Blood eQTL
>1 GTEx smooth muscle containing tissue
Deleterious coding variant
Lung eQTL
Lung eQTL
NESDA-NTR Blood eQTL
GTEx Lung
GTEx Lung
GTEx Whole Blood
GTEx Whole Blood
Deleterious coding variant
GTEx Lung
GTEx Lung
GTEx Lung
GTEx Whole Blood
>1 GTEx smooth muscle containing tissue
>1 GTEx smooth muscle containing tissue
>1 GTEx smooth muscle containing tissue
Deleterious coding variant
Deleterious coding variant
NESDA-NTR Blood eQTL
GTEx Whole Blood
Deleterious coding variant
Lung eQTL
>1 GTEx smooth muscle containing tissue
Lung eQTL
Deleterious coding variant
NESDA-NTR Blood eQTL
GTEx Lung
GTEx Whole Blood
Lung eQTL
Lung eQTL
Lung eQTL

GTEEx Lung
GTEEx Lung
GTEEx Lung
GTEEx Whole Blood
NESDA-NTR Blood eQTL
NESDA-NTR Blood eQTL
>1 GTEEx smooth muscle containing tissue
Lung eQTL
Lung eQTL
Lung eQTL
NESDA-NTR Blood eQTL
GTEEx Lung
GTEEx Lung
GTEEx Lung
GTEEx Whole Blood
GTEEx Whole Blood
GTEEx Whole Blood
GTEEx Whole Blood
GTEEx Whole Blood
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
Deleterious coding variant
Lung eQTL
GTEEx Lung
Lung eQTL
GTEEx Lung
NESDA-NTR Blood eQTL
NESDA-NTR Blood eQTL
GTEEx Lung
GTEEx Whole Blood
GTEEx Whole Blood
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
Deleterious coding variant
Lung eQTL
GTEEx Whole Blood
GTEEx Whole Blood
GTEEx Whole Blood
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
>1 GTEEx smooth muscle containing tissue
Lung eQTL
NESDA-NTR Blood eQTL
Lung eQTL
Deleterious coding variant
GTEEx Whole Blood

Deleterious coding variant
Deleterious coding variant
>1 GTEx smooth muscle containing tissue
Lung eQTL
NESDA-NTR Blood eQTL
GTEx Whole Blood
Deleterious coding variant
GTEx Lung
>1 GTEx smooth muscle containing tissue
Deleterious coding variant
Lung eQTL
GTEx Lung
GTEx Lung
GTEx Whole Blood
>1 GTEx smooth muscle containing tissue
GTEx Whole Blood
>1 GTEx smooth muscle containing tissue
pQTL plasma proteins
Deleterious coding variant

Supplementary Table 17: DeepSEA prediction of functional effect

General Information								
Novelty	Nearest Gene	Trait	Tier	Sentinel SNP ID	Sen	Sentinel SNP	Sen	Sen
Novel	<i>DHDDS</i>	FVC		2 rs9438626	1	26775367	G	C
Novel	<i>NEXN</i>	FEV1/FVC		1 rs9661687	1	78387270	C	T
Previous	<i>TGFBR3</i>	FEV1/FVC	Previous	rs1192415	1	92077097	G	A
Novel	<i>DENND2D</i>	FEV1/FVC		1 rs9970286	1	111737398	G	A
Novel	<i>C1orf54</i>	PEF		1 rs11205354	1	150249101	C	A
Previous	<i>TGFB2</i>	PEF	Previous	rs6604614	1	218631452	C	G
Previous	<i>TGFB2</i>	PEF	Previous	rs6604614	1	218631452	C	G
Novel	<i>LYPLAL1</i>	FEV1/FVC		1 rs75128958	1	219483218	G	A
Novel	<i>HLX</i>	FVC		1 rs17009288	1	221204299	A	C
Previous	<i>CHRM3</i>	PEF	Previous	rs2355237	1	239857524	A	G
Novel	<i>RDH14</i>	FVC		1 rs6751968	2	18570024	C	A
Novel	<i>RDH14</i>	FVC		1 rs6751968	2	18570024	C	A
Novel	<i>RDH14</i>	FVC		1 rs6751968	2	18570024	C	A
Novel	<i>ATAD2B</i>	FVC		2 rs13009582	2	24018480	G	A
Novel	<i>ATAD2B</i>	FVC		2 rs13009582	2	24018480	G	A
Novel	<i>PKDCC</i>	FVC		1 rs4952564	2	42243850	A	G
Previous	<i>EFEMP1</i>	FVC	Previous	rs3791679	2	56096892	A	G
Novel	<i>ITGAV</i>	FEV1/FVC		1 rs2084448	2	187530520	T	C
Novel	<i>SATB2</i>	FVC		1 rs1249096	2	199723365	G	A
Novel	<i>KIAA2012</i>	FVC		2 rs12997625	2	202970250	C	T
Previous	<i>PID1</i>	FEV1/FVC	Previous	rs62201738	2	229502197	A	C
Previous	<i>TRAF3IP1</i>	FEV1	Previous	rs6710301	2	239441308	A	C
Previous	<i>TRAF3IP1</i>	FEV1	Previous	rs6710301	2	239441308	A	C
Previous	<i>TRAF3IP1</i>	FEV1	Previous	rs6710301	2	239441308	A	C
Previous	<i>TRAF3IP1</i>	FEV1	Previous	rs6710301	2	239441308	A	C
Previous	<i>TRAF3IP1</i>	FEV1	Previous	rs6710301	2	239441308	A	C
Previous	<i>TRAF3IP1</i>	FEV1	Previous	rs6710301	2	239441308	A	C
Novel	<i>C2orf54</i>	FVC		1 rs6437219	2	241844033	C	T
Novel	<i>C2orf54</i>	FVC		1 rs6437219	2	241844033	C	T
Novel	<i>LINC00620</i>	FEV1		2 rs2974389	3	13787641	A	G
Previous	<i>SLMAP</i>	FEV1	Previous	rs6445932	3	57879611	T	G
Novel	<i>FOXP1</i>	FVC		1 rs35480566	3	71583177	A	G
Novel	<i>PDZRN3-AS1</i>	FEV1/FVC		1 rs586936	3	73862616	G	A
Previous	<i>EEFSEC</i>	FEV1/FVC	Previous	rs2999090	3	127931340	A	G
Previous	<i>EEFSEC</i>	FEV1/FVC	Previous	rs2999090	3	127931340	A	G
Previous	<i>EEFSEC</i>	FEV1/FVC	Previous	rs2999090	3	127931340	A	G
Previous	<i>EEFSEC</i>	FEV1/FVC	Previous	rs2999090	3	127931340	A	G
Previous	<i>AFAP1</i>	FEV1/FVC	Previous	rs62289340	4	7879027	C	T
Previous	<i>AFAP1</i>	FEV1/FVC	Previous	rs62289340	4	7879027	C	T
Previous	<i>AFAP1</i>	FEV1/FVC	Previous	rs62289340	4	7879027	C	T
Novel	<i>BTC</i>	FEV1/FVC		1 rs62316310	4	75676529	G	A
Previous	<i>GSTCD</i>	FEV1		1 rs11722225	4	106766430	T	C
Previous	<i>HHIP-AS1</i>	FEV1/FVC	Previous	rs13141641	4	145506456	T	C
Novel	<i>LOC100996325</i>	FEV1		1 rs11739847	5	609661	G	A

Previous	<i>ABLIM3</i>	FEV1	Previous	rs11952673	5	148652302	T	G
Previous	<i>CYFIP2</i>	FEV1/FVC	Previous	rs11134766	5	156908317	T	C
Novel	<i>RUNX2</i>	FVC		2 rs9472541	6	45622748	T	A
Novel	<i>RUNX2</i>	FVC		2 rs9472541	6	45622748	T	A
Previous	<i>KCNQ5</i>	FEV1/FVC	Previous	rs13206405	6	73663814	C	A
Previous	<i>MIR588</i>	FVC	Previous	rs6918725	6	126990392	T	G
Previous	<i>MIR588</i>	FVC	Previous	rs6918725	6	126990392	T	G
Novel	<i>SLC2A12</i>	FEV1		2 rs2627237	6	134339265	A	G
Novel	<i>LOC100507477</i>	FEV1		1 rs1102077	6	140271357	A	C
Novel	<i>VTA1</i>	FEV1		1 rs9385988	6	142560957	A	G
Previous	<i>GPR126</i>	FEV1/FVC	Previous	rs17280293	6	142688969	A	G
Previous	<i>AGMO</i>	FVC	Previous	rs4721442	7	15506007	T	G
Novel	<i>MEOX2-AS1</i>	FEV1/FVC		1 rs4721457	7	15872324	T	C
Novel	<i>SKAP2</i>	FEV1		1 rs559233	7	26848830	T	C
Novel	<i>SEMA3D</i>	FEV1		1 rs12707691	7	84569510	C	G
Novel	<i>DEFB136</i>	FEV1		2 rs4128298	8	11823332	T	C
Previous	<i>DMRT2/SMARCA4</i>	FVC	Previous	rs771662	9	1568941	T	C
Previous	<i>GLIS3</i>	FEV1/FVC	Previous	rs1570203	9	4120648	G	A
Novel	<i>IER5L</i>	FEV1		2 rs967497	9	131943843	A	G
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139259349	A	G
Previous	<i>DNLZ</i>	FVC	Previous	rs4073153	9	139259349	A	G
Previous	<i>KIAA1462</i>	PEF	Previous	rs7914842	10	30268770	A	G
Previous	<i>KIAA1462</i>	PEF	Previous	rs7914842	10	30268770	A	G
Previous	<i>JMJD1C</i>	FEV1	Previous	rs7082066	10	64998971	A	G
Previous	<i>JMJD1C</i>	FEV1	Previous	rs7082066	10	64998971	A	G
Previous	<i>JMJD1C</i>	FEV1	Previous	rs7082066	10	64998971	A	G
Previous	<i>MYPN</i>	FVC	Previous	rs10998018	10	69962954	A	G
Novel	<i>CAMK2G</i>	PEF		2 rs60820984	10	75639578	C	T
Previous	<i>C10orf11</i>	FEV1	Previous	rs2637254	10	78312002	G	A
Novel	<i>OBFC1</i>	FEV1		1 rs11191841	10	105639611	T	C
Novel	<i>OBFC1</i>	FEV1		1 rs11191841	10	105639611	T	C
Previous	<i>HTRA1</i>	FEV1/FVC	Previous	rs4279944	10	124297637	T	C
Previous	<i>EML3</i>	FEV1	Previous	rs71490394	11	62370155	G	A
Previous	<i>ARHGEF17</i>	FEV1/FVC	Previous	rs2027761	11	73036179	C	T
Previous	<i>PRSS23</i>	FEV1/FVC	Previous	rs11234768	11	86448839	T	C
Previous	<i>CCDC91</i>	FVC	Previous	rs7977418	12	28588242	T	C
Previous	<i>CCDC91</i>	FVC	Previous	rs7977418	12	28588242	T	C
Previous	<i>LRP1</i>	FEV1/FVC	Previous	rs11172113	12	57527283	T	C
Novel	<i>RASSF3</i>	FEV1/FVC		2 rs1244869	12	65075332	T	G
Novel	<i>RASSF3</i>	FEV1/FVC		2 rs1244869	12	65075332	T	G
Novel	<i>TBX5</i>	FEV1		1 rs2701110	12	114669870	C	A
Novel	<i>DLEU1</i>	FEV1		1 rs2812208	13	50707087	G	C
Novel	<i>LINC00348</i>	FVC		1 rs803765	13	71647588	C	A
Novel	<i>HAUS4</i>	FEV1/FVC		1 rs1951121	14	23429729	T	G
Novel	<i>HAUS4</i>	FEV1/FVC		1 rs1951121	14	23429729	T	G
Previous	<i>LINC00911</i>	FEV1/FVC	Previous	rs1756281	14	84338431	A	G
Previous	<i>RIN3</i>	FVC	Previous	rs11621587	14	93098339	G	C
Previous	<i>AAGAB</i>	FVC	Previous	rs12917612	15	67491274	C	A
Previous	<i>THSD4</i>	FEV1/FVC	Previous	rs1441358	15	71612514	T	G
Novel	<i>GRIN2A</i>	FVC		2 rs11074547	16	10136889	T	G

Previous	<i>IL27</i>	FEV1	Previous	rs12446589	16	28870962	A	G
Previous	<i>WWP2</i>	FEV1	Previous	rs8047194	16	69891510	G	T
Previous	<i>WWP2</i>	FEV1	Previous	rs8047194	16	69891510	G	T
Novel	<i>PITPNM3</i>	FEV1	2	rs4796334	17	6469793	G	A
Novel	<i>PITPNM3</i>	FEV1	2	rs4796334	17	6469793	G	A
Novel	<i>TNFSF12-TNFSF12</i>	FEV1	2	rs4968200	17	7448457	C	G
Novel	<i>NCOR1</i>	FVC	2	rs34351630	17	16030520	T	C
Novel	<i>NCOR1</i>	FVC	2	rs34351630	17	16030520	T	C
Novel	<i>NCOR1</i>	FVC	2	rs34351630	17	16030520	T	C
Previous	<i>SSH2</i>	FEV1/FVC	Previous	rs2244592	17	28072327	A	G
Previous	<i>FBXL20</i>	FVC	Previous	rs8069451	17	37504933	T	C
Previous	<i>FBXL20</i>	FVC	Previous	rs8069451	17	37504933	T	C
Previous	<i>FBXL20</i>	FVC	Previous	rs8069451	17	37504933	T	C
Previous	<i>FBXL20</i>	FVC	Previous	rs8069451	17	37504933	T	C
Previous	<i>FBXL20</i>	FVC	Previous	rs8069451	17	37504933	T	C
Previous	<i>FBXL20</i>	FVC	Previous	rs8069451	17	37504933	T	C
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Previous	<i>MAPT-AS1</i>	FEV1	Previous	rs79412431	17	43940021	G	A
Novel	<i>LOC101927166</i>	FVC	2	rs12945803	17	46552229	T	C
Novel	<i>LOC101927166</i>	FVC	2	rs12945803	17	46552229	T	C
Novel	<i>LOC101927166</i>	FVC	2	rs12945803	17	46552229	T	C
Novel	<i>ANKFN1</i>	FVC	1	rs28519449	17	54195453	C	T
Novel	<i>SMURF2</i>	FEV1/FVC	1	rs11653958	17	62686730	G	A
Novel	<i>SMURF2</i>	FEV1/FVC	1	rs11653958	17	62686730	G	A
Previous	<i>TSEN54</i>	FEV1	Previous	rs9892893	17	73525670	T	G

Previous	<i>MTCL1</i>	FEV1	Previous	rs513953	18	8801351	A	G
Previous	<i>CTAGE1/RBBP8</i>	FEV1	Previous	rs11082051	18	20234336	A	G
Novel	<i>LOC729950</i>	FVC	1	rs1668091	18	22290711	T	C
Previous	<i>DCC</i>	FVC	Previous	rs12607758	18	51022606	T	C
Previous	<i>DCC</i>	FVC	Previous	rs12607758	18	51022606	T	C
Previous	<i>DCC</i>	FVC	Previous	rs12607758	18	51022606	T	C
Previous	<i>DCC</i>	FVC	Previous	rs12607758	18	51022606	T	C
Previous	<i>DCC</i>	FVC	Previous	rs12607758	18	51022606	T	C
Previous	<i>DCC</i>	FVC	Previous	rs12607758	18	51022606	T	C
Previous	<i>DCC</i>	FVC	Previous	rs12607758	18	51022606	T	C
Novel	<i>ZFP82</i>	FVC	2	rs2967516	19	36881643	A	G
Novel	<i>ZFP82</i>	FVC	2	rs2967516	19	36881643	A	G
Previous	<i>ABHD12</i>	FEV1	Previous	rs2236180	20	25282608	T	C
Previous	<i>C20orf112</i>	FEV1/FVC	Previous	rs4413223	20	30858967	A	G
Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34025756	A	G
Previous	<i>UQCC1</i>	FVC	Previous	rs143384	20	34025756	A	G
Previous	<i>EYA2</i>	FVC	Previous	rs12481092	20	45486817	C	T
Previous	<i>SLC2A4RG</i>	FVC	Previous	rs4809221	20	62372706	G	A
Previous	<i>MN1</i>	FEV1/FVC	Previous	rs2283847	22	28181399	T	C

Credible Set SN Crei	Credible Set Crei	Credible Set Crei	Credible Set Crei	Credible Set High	A549	A549	Fetal Lung	Fetal Lung
					DNase	DNase	ase.all.pease.fdr0.01	No treatm No treatm
rs10458599	1	26847954	C	T	0.0149055	N	-	-
rs628451	1	78546703	G	A	0.013483	N	-	-
rs1192415	1	92077097	G	A	0.6136987	Y	-	1.36E-01 (2
rs10857859	1	111733724	G	C	0.2764181	N	1.05E-01 (	1.37E-01 (
rs11205357	1	150267798	T	C	0.0033716	N	-	-
rs1890995	1	218604678	G	A	0.0155941	N	-	-1.36E-01 (
rs10482792	1	218605461	G	A	0.0155941	N	-	-
rs80020429	1	219519489	A	C	0.0078852	N	-	-
rs1414512	1	221156329	G	C	0.009409	N	-	-1.03E-01 (
rs6694220	1	239883616	A	G	0.0046197	N	-	-
rs10192205	2	18586131	C	G	0.001155	N	-	-1.40E-01 (
rs10194326	2	18592014	C	T	0.0015071	N	-1.04E-01 (-
rs7573768	2	18607998	T	G	0.0019686	N	-	-
rs3795949	2	23926932	C	A	0.0193746	N	-	-
rs7572949	2	24162018	T	C	0.0193746	N	-	-
rs1440099	2	42291037	T	C	0.002465	N	-	-
rs3791679	2	56096892	A	G	0.1691006	N	-	-
rs11678190	2	187560308	A	C	0.042194	N	-	-
rs1852261	2	199701751	T	C	0.0151854	N	-	-
rs2882485	2	202980253	A	C	0.2027716	N	-	1.35E-01 (2
rs4972871	2	229518728	C	A	0.0747548	N	-	1.17E-01 (2
rs72983834	2	239319895	G	A	0.0006445	N	6.57E-01 (	5.48E-01 (
rs56198112	2	239348887	A	G	0.000673	N	-1.02E-01 (-
rs66636130	2	239405748	G	A	0.00158	N	-	-
rs1123472	2	239414355	T	C	0.0052811	N	-	-
rs112649209	2	239422814	C	G	0.0094228	N	-	-
rs59039294	2	239470654	G	A	0.0005608	N	-	-
rs10933517	2	241836338	T	C	0.0020606	N	-	1.91E-01 (4
rs34125162	2	241845027	G	A	0.0020606	N	-	-
rs7615332	3	13805578	A	G	0.0238541	N	-	-
rs17058639	3	57882601	C	T	0.0273986	N	-	-
rs6803008	3	71571345	C	T	0.0465577	N	-	1.02E-01 (3
rs586936	3	73862616	G	A	0.7814049	Y	-	1.82E-01 (5
rs34817706	3	127861058	G	A	0.0108988	N	-	2.45E-01 (3
rs67575175	3	127880226	T	C	0.0042723	N	-	-
rs2955099	3	127979654	G	C	0.0006696	N	-	-1.02E-01 (
rs2811381	3	127997912	A	G	0.0016858	N	-	-
rs28495790	4	7847664	G	A	0.0061865	N	-1.37E-01 (	-1.05E-01 (
rs7655918	4	7889301	A	G	0.0061865	N	-	1.09E-01 (6
rs56411722	4	7892425	T	C	0.0015905	N	1.51E-01 (4	1.02E-01 (4
rs62316270	4	75663307	G	A	0.0062869	N	-	-
rs10516529	4	106799316	T	G	0.0026238	N	-	-
rs12509311	4	145478662	C	T	0.0090197	N	-	-
rs72705017	5	623733	G	A	0.0154707	N	-	-

rs3797315	5	148620224	T	G	0.0092441	N	-	-	-	-
rs10476050	5	156898874	C	A	0.0534039	N	-	1.06E-01 (-	-
rs6458457	6	45631551	A	G	0.0373594	N	-	-	-	-
rs4714864	6	45671069	C	A	0.0126441	N	-	-	-	-
rs13206405	6	73663814	C	A	0	N	-	-	-	-
rs9388486	6	126661154	T	C	0.0009724	N	-1.59E-01 (	-	-2.20E-01 (-
rs4621656	6	126896168	G	C	0.0109811	N	-	-	-	-
rs2627237	6	134339265	A	G	0.2350594	Y	-	-	-	-
rs1361248	6	140295358	A	G	0.0245013	N	-	-	-	1.23E-01 (
rs1115045	6	142561553	G	A	0.009101	N	-	-	1.72E-01 (	1.95E-01 (
rs17280293	6	142688969	A	G	0	N	-	-	-	-
rs10233575	7	15501400	C	T	0.0307981	N	-	-	-	-
rs12532826	7	15866901	C	T	0.0505209	N	-	-	-	-
rs3801806	7	26897553	C	A	0.0340615	N	-	-	-	-
rs10486845	7	84639132	G	A	0.0040886	N	-	-	-	-
rs28893272	8	11791411	G	A	0.0174567	N	-	-	-	-
rs702154	9	1602415	G	A	0.002022	N	-	-	-	-
rs10974344	9	4140608	C	T	0.0080754	N	-	-	-	-
rs10819474	9	131930494	T	C	0.0057256	N	1.37E-01 (	1.34E-01 (-	-
rs4078099	9	139267533	G	A	0.0150516	N	-	-	-	-1.72E-01 (
rs10448340	9	139320069	T	A	0.0417485	N	-	-	-	-
rs1774211	10	30240882	T	C	0.0002832	N	-	-	-	-
rs3847398	10	30265480	A	G	0.001306	N	-	-	-	-
rs1579045	10	64970448	G	A	0.014775	N	-	-	-	-1.89E-01 (
rs7092539	10	65066509	C	T	0.0241415	N	-	-	-	-
rs10761747	10	65108156	G	C	0.0020934	N	-	-	-	-
rs7081213	10	69954290	G	A	0.0174589	N	-	-	-	-
rs60820984	10	75639578	C	T	0.2995346	Y	1.25E-01 (	1.47E-01 (	-	1.59E-01 (
rs2395386	10	78341623	G	A	0.0004549	N	-	-	-1.54E-01 (	-3.19E-01 (
rs4918067	10	105644636	A	C	0.0374622	N	-	-	-1.45E-01 (	-1.18E-01 (
rs9325507	10	105645622	C	T	0.0514148	Y	-	-	-	-
rs10887155	10	124255686	G	T	0.0120215	N	1.38E-01 (	1.14E-01 (-	-
rs35880596	11	62369884	C	G	0.104721	Y	-	-1.03E-01 (	-1.21E-01 (-
rs77127734	11	73018413	T	A	0.0349544	N	-	-	-	-
rs11234768	11	86448839	T	C	0.3843053	Y	-	-	-1.00E-01 (	-1.45E-01 (
rs11049486	12	28406157	C	T	0.0054952	N	-	-	-	-
rs10506031	12	28531994	C	G	0.0054952	N	-	-	-	-
rs11172113	12	57527283	T	C	0.998376	Y	-	-	-	-
rs1797678	12	65050154	G	A	0.0188637	N	-	-	-	-
rs1268914	12	65065191	T	C	0.0188637	N	-	-	-	-
rs1247939	12	114683516	G	T	0.1223725	N	-	-	-	-
rs41284816	13	50655989	G	T	0.2164584	N	2.41E-01 (	-	1.96E-01 (-
rs803773	13	71651378	T	C	0.0369916	N	-	-	-	-
rs4982710	14	23398902	C	T	0.0140162	N	-	-	-1.17E-01 (-
rs3811183	14	23452128	C	G	0.0054469	N	-1.61E-01 (	-1.39E-01 (	-1.23E-01 (-
rs1705634	14	84321766	C	T	0.0061811	N	-	-	-	-
rs72697299	14	93070367	C	T	0.0031672	N	-	-	-	1.48E-01 (
rs10152973	15	67647218	T	C	0.0153429	N	-	-	-	-
rs11853359	15	71621524	G	A	0.2031017	N	-	-	1.17E-01 (-
rs7184748	16	10125512	A	G	0.040252	N	-1.18E-01 (-	-	-

rs11864107	16	28885931	T	C	0.0032517	N	-	-	-	-
rs1566453	16	69899787	C	T	0.0005328	N	-	-	-	-
rs10852461	16	69928846	T	C	0.001078	N	-	-	-	-
rs2240276	17	6546921	C	G	0.0080638	N	-	-	-	-1.11E-01 (
rs11657031	17	6548278	C	T	0.0033156	N	-	-	-	-
rs77713305	17	7446043	C	T	0.031245	N	-	-	-	-
rs7207463	17	16004259	A	G	0.001304	N	-2.11E-01 (	-2.11E-01 (-	-
rs178838	17	16075901	A	T	0.0010112	N	-	-	-	-
rs178825	17	16085830	A	G	0.0004221	N	-	-	-	-
rs2628179	17	28071796	G	C	0.1723603	N	-	-	-	-
rs2338795	17	37399364	T	G	0.0050528	N	-	-	-	-
rs602282	17	37433021	C	T	0.0050528	N	-	-	-	-
rs9905432	17	37555918	C	A	0.0022698	N	-	-	-	-
rs12948560	17	37570986	A	G	0.0017431	N	-	-	-	-
rs7503705	17	37669704	A	G	0.0022698	N	-	-	-	-
rs35335692	17	37710006	A	G	0.0017431	N	-	-	-	-
rs413778	17	43716885	A	G	0.0001504	N	-	-	-	-
rs647483	17	43729432	C	T	0.0001504	N	-	-	-	-
rs241032	17	43734145	T	C	0.0001504	N	-	-	-	-
rs62055708	17	43761974	C	A	0.0001504	N	-	-	-	-
rs76667867	17	43799810	G	C	0.0004301	N	-	-1.16E-01 (-	-
rs4390635	17	43809016	C	T	0.0002542	N	-	-	-	-
rs2004260	17	43822398	T	C	0.0002542	N	-	-	-	-
rs75715199	17	43825478	G	A	0.0002542	N	-	-	-1.79E-01 (	-1.35E-01 (
rs62055932	17	43848412	A	G	0.0004301	N	-	-	-	-
rs56036719	17	43943974	C	T	0.0007287	N	-	-	-	-
rs62055500	17	43954134	G	A	0.0007287	N	-	-	-	-
rs17691466	17	43968219	A	G	0.0004301	N	-	-	-	-
rs11575895	17	43971785	A	G	0.0004301	N	-	-	-	-
rs111972148	17	43973121	G	C	0.0004301	N	-	-	-	-
rs62056782	17	43974230	C	T	0.0004301	N	-	-	-	-
rs62056801	17	43979504	G	A	0.0007287	N	-	-	-	-
rs62061716	17	44012096	A	G	0.0002542	N	1.57E-01 (	1.67E-01 (-	-
rs62062784	17	44024552	C	G	0.0004301	N	-	-1.02E-01 (-	-
rs62062785	17	44024562	G	A	0.0002542	N	-	-	-	-
rs242561	17	44026548	T	A	0.0001504	N	-	-	-	-
rs1078269	17	44075837	T	C	0.0007287	N	-	-	-	-
rs79065019	17	44124535	T	C	0.0002542	N	-	-	-	-
rs3912060	17	44165435	C	T	0.0007287	N	-	-	-	-
rs17660132	17	44165803	T	C	0.0007287	N	-	-	-	-
rs17660294	17	44167101	T	C	0.0007287	N	-	-	-	-
rs17660398	17	44170612	C	T	0.0007287	N	-	-	-	-
rs62063172	17	44203366	T	C	0.0035721	N	-	-	-	-
rs6504145	17	46340591	C	T	0.0055487	N	-1.46E-01 (	-1.67E-01 (	-1.08E-01 (	-1.59E-01 (
rs12948128	17	46354673	A	G	0.0055487	N	-	-	-	-
rs8076655	17	46363787	T	C	0.0055487	N	-	-	-	-
rs11079214	17	54290675	C	T	0.0095849	N	-	-	-	-
rs6504249	17	62676149	A	G	0.288477	Y	-4.25E-01 (	-3.63E-01 (-	-
rs2676307	17	62690713	C	G	0.062685	N	-	-	-	-
rs55786842	17	73515237	A	G	0.0013097	N	-3.12E-01 (	-2.68E-01 (	-	-1.52E-01 (

rs513953	18	8801351	A	G	0.2591797	N	-	-	-	-
rs2222394	18	20248288	T	C	0.0145703	N	-	-	-	-
rs1668111	18	22307889	G	A	0.0182394	N	-1.91E-01	(-1.58E-01	(-	-
rs12607674	18	50906642	C	T	0.0008817	N	-	-	-	-
rs11662271	18	50907365	T	C	0.0008817	N	-	-	-	-
rs3794918	18	50914414	G	A	0.0013669	N	-	-	-	-
rs62099977	18	50915179	G	A	0.0013669	N	-	-	-	-
rs3794915	18	50916385	C	A	0.0013669	N	-	-	-	1.27E-01 (8
rs11876922	18	50916702	G	A	0.0017068	N	-	-	-	-
rs62098269	18	50949787	A	G	0.0007101	N	-	-	-	-
rs73038028	19	36696295	G	A	0.0228497	N	-	-	-	-
rs62113146	19	36735140	T	C	0.0061241	N	-	-	-	-
rs6132851	20	25595356	G	A	0.0157632	N	-	-	-	-
rs2145245	20	30904777	G	A	0.020524	N	-	-	-	-
rs6088791	20	33907909	T	C	0.0027227	N	-	-	-	-
rs6088802	20	33942263	A	G	0.0040411	N	-	-	-	-
rs73622688	20	45523702	C	A	0.094626	N	-	-	-	-
rs4809221	20	62372706	G	A	0.0586097	N	-	-	-	-
rs2283847	22	28181399	C	A	0.9996631	Y	-	-	-	-1.18E-01 (

-	-	-	-2.05E-01	(-2.12E-01	(-2.07E-01	(-1.79E-01	(-2.09E-01	(-
-	-	-	-	-	-	-	1.11E-01	(-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	1.04E-01	(-	-	-
-	-	-	-	-	-	-	1.02E-01	(-
-	-	-	-	-	-	-	-	-
1.12E-01	(1.45E-01	(1.14E-01	(-	-	-	-	-	-
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-	-	-	1.33E-01	(1.72E-01	(1.73E-01	(1.77E-01	(1.62E-01	(1.55E-01
-	-	-	-	-	-	-	-	-
-	-	-	-	1.04E-01	(-	-	1.40E-01	(-
-	-	-	-	-	-	-	-1.15E-01	(-
-	-	-	-	-	-1.01E-01	(-	-	-
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-	1.02E-01	(1.03E-01	(-	-	-	-	-	-
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-	-	-	-	-	-	-	-1.12E-01	(-
-1.11E-01	(-1.06E-01	(-1.29E-01	(-	-	-	-	-	-

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2.43E-01	-	-	-	-	-	-	-
1.09E-01	-	-	-	-	-	-	-
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1.19E-01	-	-	-	-	-	-	-
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1.01E-01	-	-	-	-	1.22E-01	1.10E-01	1.39E-01
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-1.76E-01	-	-	-	-	-	-	-
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-1.03E-01	-	-	-	-	-	-	-
-1.10E-01	-	-	-	-	-	-	-
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1.28E-01	-	-	-	-	-	-	-
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-	-1.33E-01	-1.71E-01	-1.18E-01	-1.14E-01	-1.32E-01	-1.09E-01	-

-	2.30E-01	-	-	-	-	-	-	-	-
1.08E-01	-	-	-	-	-	-	-	-	-
-1.49E-01	-	-	-	-	-	-	-	-	-
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-	1.24E-01	-	-	-	-	-	-	-	-
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1.50E-01	-	-	-	-	-	-	-	-	-
1.37E-01	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-2.55E-01	-	-	-	-	-	-	-	-	-
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-1.48E-01	-	-	-	-	-	-	-	-	-
1.68E-01	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	1.43E-01	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	2.51E-01	(1.42E-01	(1.26E-01	-	-	-	-	-	-
-	-2.83E-01	(-1.31E-01	-	-	-	-	-	-	-
-	-2.40E-01	(-1.03E-01	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	4.14E-01	(1.40E-01	-	-	-	-	-	-	-
-	-	-	-	-	1.07E-01	-	-	-	-
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-1.05E-01	-	-	-	-	-	-	-	-	-
-	-	-1.55E-01	-	-	-	-1.47E-01	(-1.52E-01	-	-
1.03E-01	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
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1.87E-01	-	-	-	-	-	-	-	-	-
-	-4.49E-01	(-4.65E-01	(-3.36E-01	(-2.85E-01	(-2.50E-01	(-2.43E-01	(-1.58E-01	-	-

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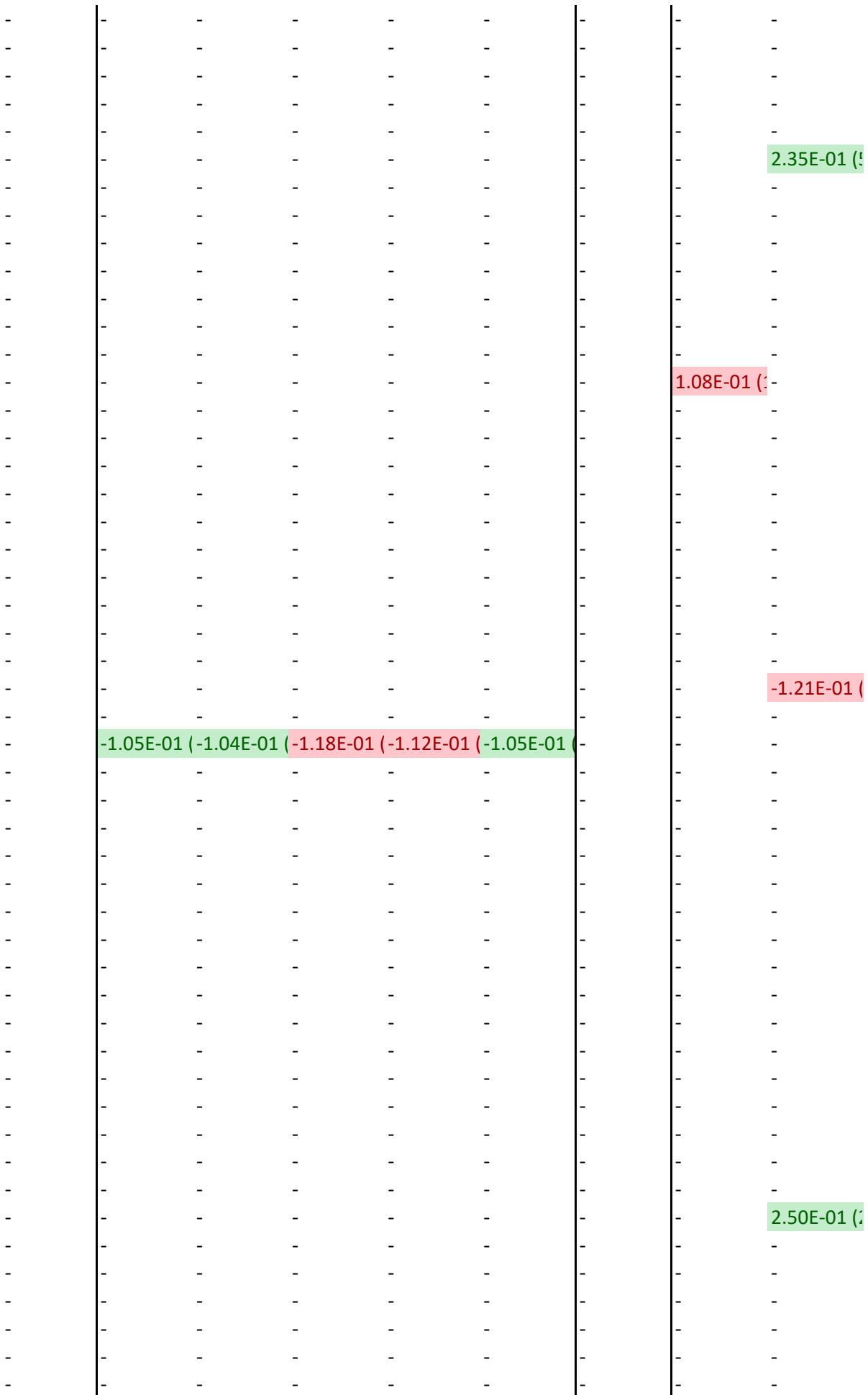
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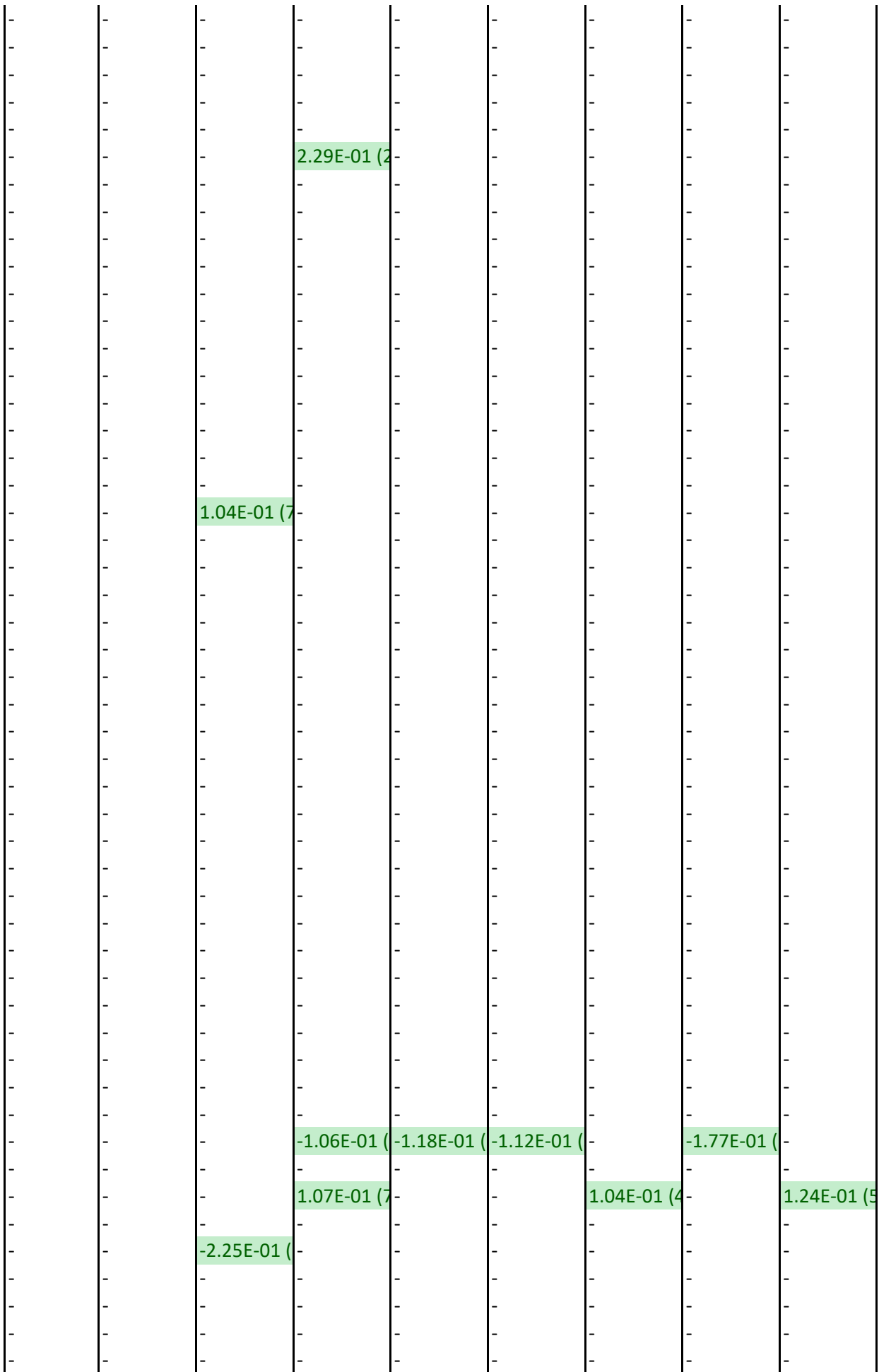
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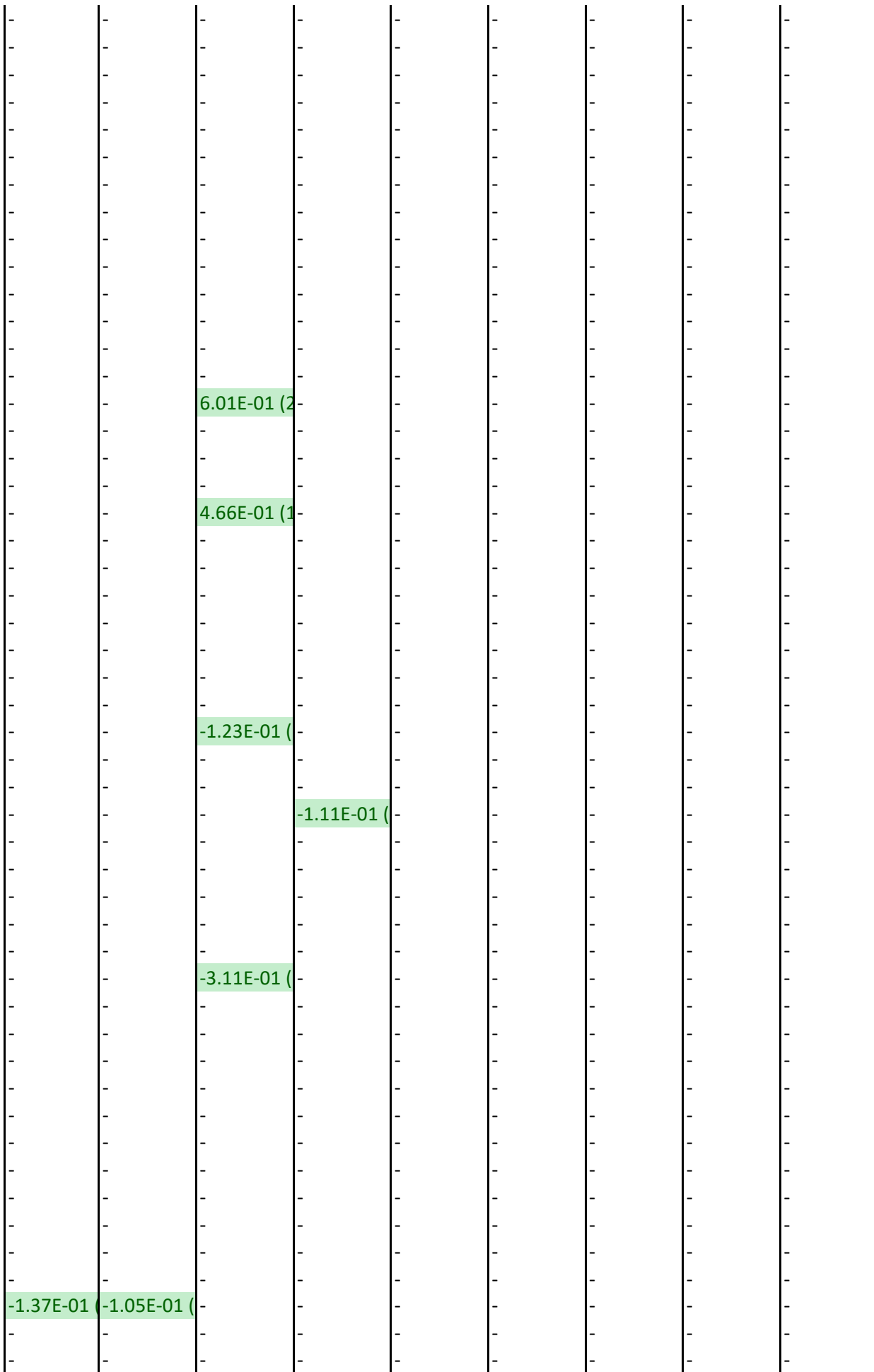
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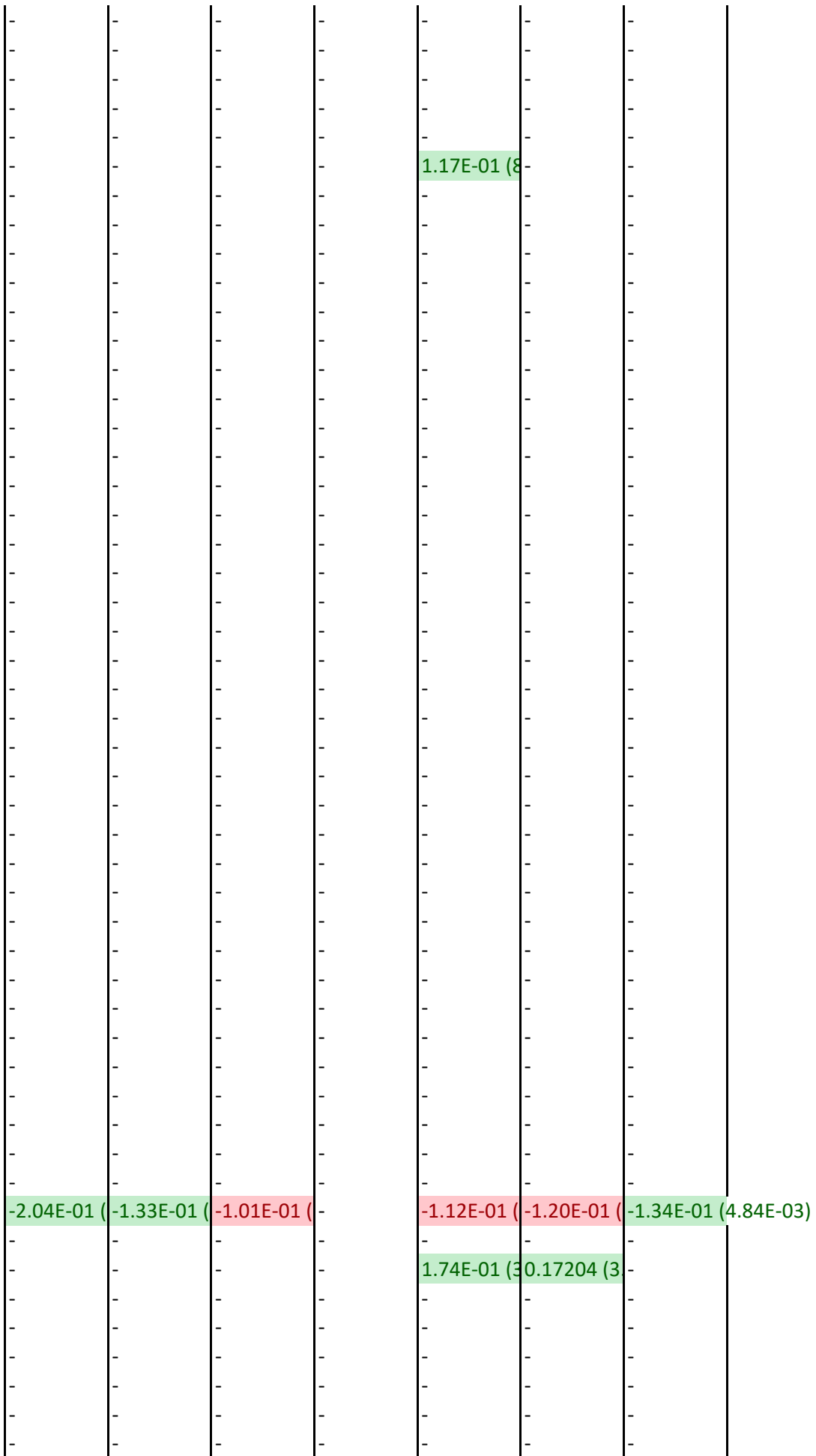
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1.15E-01 (1

Supplementary Table 18: Druggability analysis

Drug	CHEMBL_ID
(7S)-HYDROXYL-STAUROSPORINE	CHEMBL574737
ABCIXIMAB	CHEMBL1201584
ABT-700	CHEMBL3545419
ADENOSINE	CHEMBL477
AG-24322	CHEMBL3545420
ALTIRATINIB	CHEMBL3545365
ALVOCIDIB	CHEMBL428690
AMG-208	CHEMBL496102
AMG-337	CHEMBL3545212
AMINOPHYLLINE	CHEMBL1370561
AMUVATINIB	CHEMBL2103851
ARRY-300	CHEMBL3545359
AT-7519	CHEMBL445813
ATACICEPT	CHEMBL1742986
AZD-5438	CHEMBL488436
BMS-387032	CHEMBL296468
BMS-698769	CHEMBL3545299
BMS-777607	CHEMBL460702
BMS-794833	CHEMBL3545119
BMS-817378	CHEMBL3545050
BPI-9016	CHEMBL3545236
CABOZANTINIB S-MALATE	CHEMBL2103868
CAFFEINE	CHEMBL113
CAFFEINE, CITRATED	CHEMBL1200569
CAPMATINIB	CHEMBL3188267

CILENGITIDE	CHEMBL429876
CRIZOTINIB	CHEMBL601719
DI17E6	CHEMBL2109621
DINACICLIB	CHEMBL2103840
EMD-1204831	CHEMBL3545053
ETARACIZUMAB	CHEMBL1743014
FORETINIB	CHEMBL1230609
FRESOLIMUMAB	CHEMBL1743022
GOLVATINIB	CHEMBL3039525
GS 6201	CHEMBL260933
INDIRUBIN SULFATE	CHEMBL258805
INTETUMUMAB	CHEMBL1743032
JNJ-38877605	CHEMBL2133806
LAS101057	CHEMBL1672627
LERDELIMUMAB	CHEMBL2108967
MERESTINIB	CHEMBL3545307
MGCD-265	CHEMBL254760
MILCICLIB	CHEMBL564829
MK-2461	CHEMBL1822792
MK-8033	CHEMBL2323775
ONARTUZUMAB	CHEMBL1743051
OXTRIPHYLLINE	CHEMBL1200434
PENTOXIFYLLINE	CHEMBL628
PF-04217903	CHEMBL2001019
PHA-793887	CHEMBL1230607
QAF805	CHEMBL3545204
RG-547	CHEMBL384304

RGB-286638	CHEMBL3545083
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RIVASTIGMINE	CHEMBL636
RIVASTIGMINE TARTRATE	CHEMBL215645
Roniciclib	CHEMBL3544942
SAR-125844	CHEMBL3545325
Savolitinib	CHEMBL3545336
SELICICLIB	CHEMBL14762
SGX-523	CHEMBL1236107
STX-100	CHEMBL2109623
TACRINE HYDROCHLORIDE	CHEMBL1677
TAS-115	CHEMBL3545144
Tepotinib	CHEMBL3402762
TG-02	CHEMBL1944698

THEOPHYLLINE	CHEMBL190
THEOPHYLLINE SODIUM GLYCINATE	CHEMBL1200578

TIVANTINIB	CHEMBL2103882
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OriginalGeneAndSource

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

ITGAV (rs2084448, FEV1/FVC, Novel, Tier 1 Source(s)=NESDA-NTR.Blood)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

TNFSF13 (rs4968200, FEV1, Novel, Tier 2 Source(s)=GTEX.WholeBlood)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ITGAV (rs2084448, FEV1/FVC, Novel, Tier 1 Source(s)=NESDA-NTR.Blood)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ITGAV (rs2084448, FEV1/FVC, Novel, Tier 1 Source(s)=NESDA-NTR.Blood)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ITGAV (rs2084448, FEV1/FVC, Novel, Tier 1 Source(s)=NESDA-NTR.Blood)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

TGFB2 (rs6604614, PEF, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

ITGAV (rs2084448, FEV1/FVC, Novel, Tier 1 Source(s)=NESDA-NTR.Blood)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

TGFB2 (rs6604614, PEF, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

BCHE (rs1799807, FEV1/FVC, Novel, Tier 1 Source(s)=Annot.Del)

BCHE (rs1799807, FEV1/FVC, Novel, Tier 1 Source(s)=Annot.Del)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

ITGAV (rs2084448, FEV1/FVC, Novel, Tier 1 Source(s)=NESDA-NTR.Blood)

BCHE (rs1799807, FEV1/FVC, Novel, Tier 1 Source(s)=Annot.Del)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

CDK2 (rs1689510, FEV1, Previous, - Source(s)=UBC-L-G.Lung)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

ADORA2B (rs34351630, FVC, Novel, Tier 2 Source(s)=GTEX.WholeBlood, GTEX.SM)

MET (rs193686, FEV1/FVC, Novel, Tier 2 Source(s)=GTEX.SM)

IndicationPhase	MAB	OriginalGenesPathway
MELANOMA (2)	FALSE	FALSE
ANGINA, UNSTABLE (4); MYOCARDIAL INFARCTION (3); THROMBOSIS (4)	TRUE	TRUE
NEOPLASMS (1)	FALSE	TRUE
ANGINA, STABLE (3); ATRIAL FIBRILLATION (3); CARDIOMYOPATHIES (2); CARDIOVASCULAR DISEASES (4); CORONARY ARTERY DISEASE (3); CORONARY STENOSIS (3); LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (1); LEUKEMIA, MYELOID, ACUTE (1); MYOCARDIAL INFARCTION (2); NEOPLASMS (1); PAIN (2); TACHYCARDIA, PAROXYSMAL (4); WOLFF- PARKINSON-WHITE SYNDROME (4)	FALSE	FALSE
	FALSE	FALSE
	FALSE	TRUE
HEMATOLOGIC NEOPLASMS (1); LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (2); LYMPHOMA (2); MULTIPLE MYELOMA (2); NEOPLASMS (1); PROSTATIC NEOPLASMS (2)	FALSE	FALSE
NEOPLASMS (1); PROSTATIC NEOPLASMS (2)	FALSE	TRUE
NEOPLASMS (1); STOMACH NEOPLASMS (2)	FALSE	TRUE
	FALSE	FALSE
SMALL CELL LUNG CARCINOMA (2)	FALSE	TRUE
	FALSE	TRUE
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (2); LYMPHOMA (1); LYMPHOMA, MANTLE-CELL (2)	FALSE	FALSE
ARTHRITIS, RHEUMATOID (2); GLOMERULONEPHRITIS, IGA (2); LUPUS ERYTHEMATOSUS, SYSTEMIC (2); MULTIPLE SCLEROSIS (2); OPTIC NEURITIS (2)	FALSE	FALSE
	FALSE	FALSE
	FALSE	FALSE
	FALSE	TRUE
NEOPLASMS (1)	FALSE	TRUE
	FALSE	TRUE
NEOPLASMS (1)	FALSE	TRUE
NEOPLASMS (1)	FALSE	TRUE
	FALSE	TRUE
AMBLYOPIA (1); ATRIAL FIBRILLATION (3); ATTENTION DEFICIT DISORDER WITH HYPERACTIVITY (4); COCAINE-RELATED DISORDERS (2); CORONARY ARTERY DISEASE (3); DYSPNEA (2); LIVER DISEASES (1); MIGRAINE DISORDERS (3); PAIN (1); PARKINSON DISEASE (3); PREMATURE BIRTH (3); RETINOPATHY OF PREMATURITY (2)	FALSE	FALSE
	FALSE	FALSE
CARCINOMA, NON-SMALL-CELL LUNG (2)	FALSE	TRUE

GLIOBLASTOMA (2); GLIOSARCOMA (2); MELANOMA (2); NEOPLASMS (1); PROSTATIC NEOPLASMS (2); SARCOMA (1)	FALSE	TRUE
CARCINOMA, NON-SMALL-CELL LUNG (4); CARCINOMA, RENAL CELL (2); GLIOBLASTOMA (1); LYMPHOMA (2); NEOPLASMS (4)	FALSE	TRUE
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (3); MELANOMA (2); MULTIPLE MYELOMA (2)	FALSE	FALSE
NEOPLASMS (1)	FALSE	TRUE
ARTHRITIS, RHEUMATOID (2); MELANOMA (2); NEOPLASMS (1); PROSTATIC NEOPLASMS (2); PSORIASIS (2)	TRUE	TRUE
BREAST NEOPLASMS (2); CARCINOMA, HEPATOCELLULAR (1); NEOPLASMS (2)	FALSE	TRUE
BRAIN NEOPLASMS (2); BREAST NEOPLASMS (2); CARCINOMA, NON-SMALL-CELL LUNG (1); GLOMERULOSCLEROSIS, FOCAL SEGMENTAL (2); IDIOPATHIC PULMONARY FIBROSIS (1); SCLERODERMA, DIFFUSE (1)	TRUE	TRUE
NEOPLASMS (1); STOMACH NEOPLASMS (1)	FALSE	TRUE
	FALSE	FALSE
	FALSE	FALSE
MELANOMA (1)	TRUE	TRUE
NEOPLASMS (1)	FALSE	TRUE
	FALSE	FALSE
	TRUE	TRUE
CARCINOMA, NON-SMALL-CELL LUNG (2); NEOPLASMS (1)	FALSE	TRUE
CARCINOMA, NON-SMALL-CELL LUNG (2); NEOPLASMS (1)	FALSE	TRUE
CARCINOMA (2)	FALSE	FALSE
	FALSE	TRUE
NEOPLASMS (1)	FALSE	TRUE
CARCINOMA, HEPATOCELLULAR (1); GLIOBLASTOMA (2); NEOPLASMS (3)	TRUE	TRUE
	FALSE	FALSE
ACUTE KIDNEY INJURY (2); BILIARY ATRESIA (2); CARCINOMA, NON-SMALL-CELL LUNG (2); CARDIOVASCULAR DISEASES (4); DUCTUS ARTERIOSUS, PATENT (2); ENDOMETRIOSIS (3); ENTEROCOLITIS, NECROTIZING (2); FATTY LIVER (2); HEPATITIS, ALCOHOLIC (3); LEISHMANIASIS, CUTANEOUS (2); MUSCULAR DYSTROPHY, DUCHENNE (1)	FALSE	FALSE
NEOPLASMS (1)	FALSE	TRUE
NEOPLASMS (1)	FALSE	FALSE
	FALSE	FALSE
NEOPLASMS (1)	FALSE	FALSE

	FALSE	FALSE
ALZHEIMER DISEASE (3); AMPHETAMINE-RELATED DISORDERS (1); COCAINE-RELATED DISORDERS (1); DEMENTIA (4); DOWN SYNDROME (1); PARKINSON DISEASE (4); SUPRANUCLEAR PALSY, PROGRESSIVE (3)	FALSE	FALSE
	FALSE	FALSE
NEOPLASMS (2); SMALL CELL LUNG CARCINOMA (2)	FALSE	FALSE
NEOPLASMS (2)	FALSE	TRUE
CARCINOMA, RENAL CELL (2)	FALSE	TRUE
	FALSE	FALSE
CARCINOMA, NON-SMALL-CELL LUNG (2); CYSTIC FIBROSIS (2)	FALSE	FALSE
NEOPLASMS (1)	FALSE	TRUE
IDIOPATHIC PULMONARY FIBROSIS (2)	FALSE	TRUE
	FALSE	FALSE
	FALSE	TRUE
	FALSE	TRUE
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (1)	FALSE	FALSE
	FALSE	FALSE
ALTITUDE SICKNESS (1); ASTHMA (4); BRONCHITIS, CHRONIC (4); EMPHYSEMA (4); HYPERTENSION, PULMONARY (1); LUNG DISEASES, OBSTRUCTIVE (4); PREMATURE BIRTH (2); PULMONARY DISEASE, CHRONIC OBSTRUCTIVE (3); RENAL INSUFFICIENCY, CHRONIC (2); URINARY BLADDER NEOPLASMS (0)	FALSE	FALSE
	FALSE	FALSE
BREAST NEOPLASMS (2); CARCINOMA, HEPATOCELLULAR (3); CARCINOMA, NON-SMALL-CELL LUNG (2); CARCINOMA, RENAL CELL (2); MESOTHELIOMA (2); MULTIPLE MYELOMA (2); NEOPLASMS (1); NEOPLASMS, GERM CELL AND EMBRYONAL (2); PANCREATIC NEOPLASMS (2); PROSTATIC NEOPLASMS (2); SMALL CELL LUNG CARCINOMA (2); STOMACH NEOPLASMS (2)	FALSE	TRUE

Cancer	Phase3or4	AsthmaCOPD	Novelty
TRUE	FALSE	FALSE	FALSE

FALSE	TRUE	FALSE	TRUE
TRUE	FALSE	FALSE	TRUE

TRUE	TRUE	FALSE	TRUE
FALSE	FALSE	FALSE	FALSE
FALSE	FALSE	FALSE	TRUE

TRUE	FALSE	FALSE	FALSE
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FALSE	FALSE	FALSE	TRUE

TRUE	TRUE	FALSE	TRUE
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Supplementary Table 23: Results for single-variant PheWAS (associations passing

Final.Category	ShortPheno	LongPheno	SNP	CHR	BP	OtherAllele
Gastroenterology, h	HES_Intestinal_r	HES_p_K90_BIN	rs3844313	6	32635629	G
Gastroenterology, h	M2W_malabsor|	map2way_NI_c	rs3844313	6	32635629	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs6088813	20	33975181	C
Biological assays - FE	Eosinophill_perc	f_30210_0_0_f_rs	1247086	2	102926362	G
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f_rs	1247086	2	102926362	G
Gastroenterology, h	M2W_malabsor|	map2way_NI_c	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7753012	6	142745883	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2070600	6	32151443	C
Anthropometry	Standing_height	f_50_0_0_f_QU	rs7238093	18	20728158	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1311699	4	145442364	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7753012	6	142745883	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1311699	4	145442364	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1085183	15	71628370	T
Anthropometry	Whole_body_fat	f_23101_0_0_f_rs	6088813	20	33975181	C
Gastroenterology, h	HES_Intestinal_r	HES_p_K90_BIN	rs3486479	6	27459923	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs7753012	6	142745883	T
Anthropometry	Whole_body_wa	f_23102_0_0_f_rs	6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1085183	15	71628370	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3471297	4	106819053	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1482744	6	142838173	C
Anthropometry	Standing_height	f_50_0_0_f_QU	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3471297	4	106819053	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1250462	4	145436324	T
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1219898	6	7720059	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7753012	6	142745883	T
Anthropometry	Standing_height	f_50_0_0_f_QU	rs6140050	20	6632901	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1482744	6	142838173	C
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs4444235	14	54410919	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7715901	5	147856392	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7753012	6	142745883	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2070600	6	32151443	C
Gastroenterology, h	HESBL_Other_di	HES_block_p_K	rs3844313	6	32635629	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs2284746	1	17306675	C
Biological assays - FE	Red_blood_cell	f_30010_0_0_f_rs	1757787	17	44208218	A
Anthropometry	Standing_height	f_50_0_0_f_QU	rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1311699	4	145442364	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3471297	4	106819053	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1085183	15	71628370	T
Biological assays - FE	Mean_sphered	f_30270_0_0_f_rs	1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3471297	4	106819053	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7715901	5	147856392	A

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1085183	15	71628370	T	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7753012	6	142745883	T	
Biological assays - FE	Mean_reticulocyt	f_30260_0_0_f_rs1757787	17	44208218	A	
Anthropometry	Standing_height	f_50_0_0_f_QU	rs6080405	1	118870373	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1250462	4	145436324	T	
Immuno-inflammati	Hair_balding_pa	f_2395_0_0_f_F	rs1757787	17	44208218	A
Immuno-inflammati	Pattern_1_f_	f_2395_0_code:	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1311699	4	145442364	G	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3471297	4	106819053	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2070600	6	32151443	C	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs3471297	4	106819053	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1513272	7	28200097	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3471297	4	106819053	G	
Immuno-inflammati	Pattern_4_f_	f_2395_0_code:	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1049823	2	229502503	C	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1311699	4	145442364	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1482744	6	142838173	C	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7753012	6	142745883	T	
Biological assays - FE	Haemoglobin_cc	f_30020_0_0_f_rs3486479	6	27459923	G	
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1430193	2	56120853	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2070600	6	32151443	C	
Biological assays - FE	White_blood_ce	f_30000_0_0_f_rs2070600	6	32151443	C	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2284746	1	17306675	C	
Biological assays - FE	Mean_platelet_1	f_30100_0_0_f_rs7899503	10	65087468	C	
Biological assays - FE	Mean_platelet_1	f_30100_0_0_f_rs1244869	12	65075332	T	
Biological assays - FE	Lymphocyte_cou	f_30120_0_0_f_rs3486479	6	27459923	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1250462	4	145436324	T	
Biological assays - FE	White_blood_ce	f_30000_0_0_f_rs3486479	6	27459923	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7090277	10	12278021	T	
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1175902	6	126792095	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1085183	15	71628370	T	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7715901	5	147856392	A	
Biological assays - FE	Red_blood_cell	f_30070_0_0_f_rs1757787	17	44208218	A	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs3471297	4	106819053	G
Neurosciences	Headaches_for	f_3799_0_0_f_F	rs1117211	12	57527283	T
Biological assays - FE	Haemoglobin_cc	f_30020_0_0_f_rs1757787	17	44208218	A	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3844313	6	32635629	G	
Biological assays - FE	Immature_retic	f_30280_0_0_f_rs2571445	2	218683154	A	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2045517	4	89870964	C	
Anthropometry	Standing_height	f_50_0_0_f_QU	rs9689096	6	34188892	A
Biological assays - FE	Monocyte_perce	f_30190_0_0_f_rs6681426	1	150586971	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1049823	2	229502503	C	
Biological assays - FE	Monocyte_coun	f_30130_0_0_f_rs6681426	1	150586971	G	
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1300958	2	24018480	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1311699	4	145442364	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1311069	4	89815695	T	
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f_rs3435163	17	16030520	T	
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_rs3435163	17	16030520	T	
Respiratory	FVC_maximum	V_f_3062_0_f_QU	rs1757787	17	44208218	A
Anthropometry	Whole_body_fat	f_23101_0_0_f_rs7238093	18	20728158	A	

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3844313	6	32635629	G	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1311699	4	145442364	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2284746	1	17306675	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3743609	16	75467021	G	
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f_	rs2070600	6	32151443	C
Anthropometry	Whole_body_fat	f_23101_0_0_f_	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1482744	6	142838173	C	
Anthropometry	Whole_body_wat	f_23102_0_0_f_	rs7238093	18	20728158	A
Anthropometry	Whole_body_wat	f_23102_0_0_f_	rs2812208	13	50707087	G
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f_	rs1757787	17	44208218	A
Biological assays - FE	Eosinophill_perc	f_30210_0_0_f_	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1311069	4	89815695	T	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3471297	4	106819053	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2045517	4	89870964	C	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1482744	6	142838173	C	
Anthropometry	Standing_height	f_50_0_0_f_QU	rs4846480	1	218598469	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1085183	15	71628370	T	
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7715901	5	147856392	A	
Neurosciences	Headache	f_6159_code1_	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1250462	4	145436324	T	
Biological assays - FE	Mean_platelet_1	f_30100_0_0_f_	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7090277	10	12278021	T	
Metabolic and endo	M2W_hypothyrc	map2way_NI_c	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1311699	4	145442364	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2284746	1	17306675	C	
Anthropometry	Weight	f_21002_0_0_f_	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3471297	4	106819053	G	
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1311699	4	145442364	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2768551	6	109270656	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1247731	2	239877148	C	
Metabolic and endo	MED_thyroid_pr	H03A_thyroid_f	rs2070600	6	32151443	C
Biological assays - FE	Red_blood_cell	f_30070_0_0_f_	rs3486479	6	27459923	G
Biological assays - FE	Monocyte_coun	f_30130_0_0_f_	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1311699	4	145442364	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3743609	16	75467021	G	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1482744	6	142838173	C	
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2768551	6	109270656	G	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1311699	4	145442364	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1430193	2	56120853	A
Biological assays - FE	White_blood_ce	f_30000_0_0_f_	rs3844313	6	32635629	G
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f_	rs3486479	6	27459923	G
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f_	rs7713065	5	131788334	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs3471297	4	106819053	G
Biological assays - FE	Mean_platelet_1	f_30100_0_0_f_	rs7238093	18	20728158	A
Musculoskeletal dis	grip_strength_m	f_47_46_QUAN	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1990950	5	156920756	G	
Anthropometry	Whole_body_wat	f_23102_0_0_f_	rs1219898	6	7720059	G

Respiratory	M2W_asthma	map2way_NI_cr	rs1247086	2	102926362	G
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs1219898	6	7720059	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1990950	5	156920756	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs3471297	4	106819053	G
Biological assays - FE	Mean_reticulocy	f_30260_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1551943	5	52195033	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1757787	17	44208218	A
Biological assays - FE	Red_blood_cell	f_30070_0_0_f	rs967497	9	131943843	A
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1757787	17	44208218	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1250462	4	145436324	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1757787	17	44208218	A
Biological assays - FE	High_light_scatt	f_30300_0_0_f	rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6207027	17	28263980	A
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f	rs3486479	6	27459923	G
Biological assays - FE	High_light_scatt	f_30290_0_0_f	rs2571445	2	218683154	A
Biological assays - FE	Mean_platelet	f_30100_0_0_f	rs9970286	1	111737398	G
Biological assays - FE	Mean_sphered	f_30270_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1134738	19	41124155	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1250462	4	145436324	T
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs6207063	17	29087285	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2812208	13	50707087	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1085183	15	71628370	T
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs6207063	17	29087285	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs7155279	14	92485881	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2284746	1	17306675	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6088813	20	33975181	C
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1310942	4	145330628	G
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f	rs1757787	17	44208218	A
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs7238093	18	20728158	A
Biological assays - FE	Mean_reticulocy	f_30260_0_0_f	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1282031	12	96255704	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1311069	4	89815695	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2045517	4	89870964	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2284746	1	17306675	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1049823	2	229502503	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs2070600	6	32151443	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1311069	4	89815695	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1311699	4	145442364	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1051652	4	106688904	A
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs330939	8	9018590	T
Metabolic and endo	M2W_hyperthyr	map2way_NI_cr	rs3844313	6	32635629	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs2070600	6	32151443	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1250462	4	145436324	T
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs3844313	6	32635629	G
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f	rs3435163	17	16030520	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1085183	15	71628370	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1247731	2	239877148	C

Respiratory	PEF_maximumV f_3064_0_f_QU	rs3471297	4	106819053	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1286664	3	25529280	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1286664	3	25529280	C
Metabolic and endo	Insulin f_6153_6177_0	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7090277	10	12278021	T
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1430193	2	56120853	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1311699	4	145442364	G
Respiratory	TA_copdMappin BIN_copdMappi	rs3471297	4	106819053	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs3471297	4	106819053	G
Biological assays - FE	Platelet_distribuf_30110_0_0_f	rs7261515	7	99635967	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1005999	5	170901463	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1282031	12	96255704	T
Biological assays - FE	Mean_platelet_1f_30100_0_0_f	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7090277	10	12278021	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7715901	5	147856392	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1416685	1	51243374	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs6207027	17	28263980	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1294421	6	6743149	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1244780	16	58075282	C
Biological assays - FE	Mean_platelet_1f_30100_0_0_f	rs7713065	5	131788334	A
Biological assays - FE	Reticulocyte_coif_30250_0_0_f	rs1757787	17	44208218	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs7095607	10	69957350	G
Respiratory	TA_copdMappin BIN_copdMappi	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1192404	1	92068967	A
Biological assays - FE	Eosinophill_perc f_30210_0_0_f	rs772920	12	56390364	C
Biological assays - FE	Monocyte_coun f_30130_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_copdMappin BIN_copdMappi	rs3471297	4	106819053	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs7090277	10	12278021	T
Biological assays - FE	High_light_scatt f_30300_0_0_f	rs1757787	17	44208218	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs1209623	1	26796922	G
Biological assays - FE	Lymphocyte_peif_30180_0_0_f	rs2007403	4	106131210	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1085824	9	139102831	G
Anthropometry	Standing_height f_50_0_0_f_QU	rs1085824	9	139102831	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7715901	5	147856392	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2348418	12	28689514	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1049823	2	229502503	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1757787	17	44208218	A
Gastroenterology, h	M2W_malabsor|map2way_NI_c	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3844313	6	32635629	G
Biological assays - FE	Reticulocyte_coif_30250_0_0_f	rs3486479	6	27459923	G
Biological assays - FE	Neutrophill_per f_30200_0_0_f	rs6681426	1	150586971	G
Anthropometry	Standing_height f_50_0_0_f_QU	rs4968200	17	7448457	C
Biological assays - FE	Eosinophill_cour f_30150_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1051652	4	106688904	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1757787	17	44208218	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1134738	19	41124155	T

Respiratory	FEV1_maximumV f_3063_0_f_QU	rs1051652	4	106688904	A
Respiratory	FEV1_maximumV f_3063_0_f_QU	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2045517	4	89870964	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7090277	10	12278021	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1250462	4	145436324	T
Biological assays - FE	Mean_corpuscul f_30050_0_0_f	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1551943	5	52195033	G
Metabolic and endo	NIOPC_thyroide f_20004_dxCod	rs7923409	15	49409527	G
Anthropometry	Standing_height f_50_0_0_f_QU	rs6924424	6	7801611	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1416685	1	51243374	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1049823	2	229502503	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs7753012	6	142745883	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7715901	5	147856392	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs803923	9	119401650	G
Immuno-inflammati	Hair_balding_pa f_2395_0_0_f_E	rs2637254	10	78312002	G
Immuno-inflammati	Pattern_1_f_ f_2395_0_code:	rs2637254	10	78312002	G
Biological assays - FE	Red_blood_cell f_30070_0_0_f	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1688308	6	73658053	T
Anthropometry	Weight f_21002_0_0_f	rs7238093	18	20728158	A
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs181206	16	28513403	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1192404	1	92068967	A
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs2851944	17	54195453	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7090277	10	12278021	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7715901	5	147856392	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1482744	6	142838173	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1482744	6	142838173	C
Biological assays - FE	Monocyte_coun f_30130_0_0_f	rs6207027	17	28263980	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1244780	16	58075282	C
Immuno-inflammati	Hair_balding_pa f_2395_0_0_f_E	rs6080405	1	118870373	G
Immuno-inflammati	Pattern_1_f_ f_2395_0_code:	rs6080405	1	118870373	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1688308	6	73658053	T
Musculoskeletal dise	M2W_rheumatc map2way_NI_c	rs2070600	6	32151443	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7090277	10	12278021	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1928168	6	22017738	T
Respiratory	FVC_maximumV f_3062_0_f_QU	rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1005999	5	170901463	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs3743609	16	75467021	G
Anthropometry	Standing_height f_50_0_0_f_QU	rs7277644	5	77440196	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1311699	4	145442364	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7989847	5	179598771	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6212640	2	18309132	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1049823	2	229502503	C
Biological assays - FE	Eosinophill_perc f_30210_0_0_f	rs7713065	5	131788334	A
Respiratory	FEV1_maximumV f_3063_0_f_QU	rs7715901	5	147856392	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs3844313	6	32635629	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs803923	9	119401650	G
Respiratory	M2W_asthma map2way_NI_c	rs7713065	5	131788334	A
Biological assays - FE	Mean_reticuloc f_30260_0_0_f	rs8067511	17	37611352	C

Respiratory	FEV1_maximumV f_3063_0_f_QU	rs7715901	5	147856392	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2284746	1	17306675	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1247731	2	239877148	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs7753012	6	142745883	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs9385988	6	142560957	A
Mental health	Neuroticism_sccf_20127_0_0_f	rs1757787	17	44208218	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1085824	9	139102831	G
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs3471297	4	106819053	G
Biological assays - FE	Red_blood_cell_f_30010_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_NI_adult_on BIN_NI_adult_o	rs1247086	2	102926362	G
Anthropometry	Body_fat_perce f_23099_0_0_f	rs181206	16	28513403	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs9636166	19	31829613	A
Anthropometry	Whole_body_fat f_23100_0_0_f	rs181206	16	28513403	A
Anthropometry	Whole_body_fat f_23101_0_0_f	rs7277644	5	77440196	G
Anthropometry	Whole_body_wat f_23102_0_0_f	rs7277644	5	77440196	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs7277644	5	77440196	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1051575	5	156810072	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1051575	5	156810072	C
Respiratory	MED_other_drug R03B_other_drug	rs1247086	2	102926362	G
Respiratory	FEV1_maximumV f_3063_0_f_QU	rs7090277	10	12278021	T
Biological assays - FE	Reticulocyte_per f_30240_0_0_f	rs3486479	6	27459923	G
Gastroenterology, h	M2W_inguinal_map2way_NI_c	rs1430193	2	56120853	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs153916	5	95036700	C
Respiratory	MED_adrenergic R03A_adrenergic	rs1247086	2	102926362	G
Metabolic and endo	M2W_thyroid_g map2way_NI_c	rs7923409	15	49409527	G
Respiratory	TA_copdMappin BIN_copdMappi	rs1250462	4	145436324	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7090277	10	12278021	T
Biological assays - FE	Lymphocyte_cou f_30120_0_0_f	rs2070600	6	32151443	C
Anthropometry	Standing_height f_50_0_0_f_QU	rs1243826	15	84502549	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs996865	17	69371318	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs996865	17	69371318	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2637254	10	78312002	G
Gastroenterology, h	M2W_abdomina map2way_NI_c	rs1430193	2	56120853	A
Biological assays - FE	Reticulocyte_cou f_30250_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_copdMappin BIN_copdMappi	rs7715901	5	147856392	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2768551	6	109270656	G
Biological assays - FE	Neutrophill_cou f_30140_0_0_f	rs3844313	6	32635629	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1300958	2	24018480	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1294421	6	6743149	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2284746	1	17306675	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6733504	2	242495953	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs6733504	2	242495953	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6212640	2	18309132	T
Immuno-inflammati	Hair_balding_pa f_2395_0_0_f	rs1416685	1	51243374	G
Immuno-inflammati	Pattern_1_f f_2395_0_code	rs1416685	1	51243374	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs2812208	13	50707087	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2571445	2	218683154	A
Gastroenterology, h	HES_Inguinal_he HES_p_K40_BIN	rs1430193	2	56120853	A

Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2348418	12	28689514	T
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f	rs3486479	6	27459923	G
Biological assays - FE	Platelet_crit	f_30090_0_0_f	rs5634193	3	168715808	A
Gastroenterology, h	OPC_Primary_re	f_41210_41200	rs1430193	2	56120853	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3844313	6	32635629	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1051652	4	106688904	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs3486479	6	27459923	G
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs3471297	4	106819053	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs7090277	10	12278021	T
Respiratory	M2W_asthma	map2way_NI_c	rs2070600	6	32151443	C
Gastroenterology, h	NIOPC_inguinal	f_20004_dxCod	rs1430193	2	56120853	A
Metabolic and endo	HES_Insulin_dep	HES_p_E10_BIN	rs3844313	6	32635629	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1430193	2	56120853	A
Metabolic and endo	M2W_type_1_d	map2way_NI_c	rs3844313	6	32635629	G
Metabolic and endo	M2W_hyperthyr	map2way_NI_c	rs3486479	6	27459923	G
Biological assays - FE	Neutrophill_per	f_30200_0_0_f	rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2768551	6	109270656	G
Metabolic and endo	HES_Other_hypc	HES_p_E03_BIN	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6688537	1	239850588	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1117211	12	57527283	T
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs1300958	2	24018480	G
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs1300958	2	24018480	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6688537	1	239850588	C
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f	rs3486479	6	27459923	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1118988	4	146174040	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs9689096	6	34188892	A
Musculoskeletal dise	HES_Other_rheu	HES_p_M06_BII	rs2070600	6	32151443	C
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs1175902	6	126792095	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3743609	16	75467021	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3743609	16	75467021	G
Biological assays - FE	Platelet_distrib	f_30110_0_0_f	rs7238093	18	20728158	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1990950	5	156920756	G
Gastroenterology, h	HES_Intestinal_r	HES_p_K90_BIN	rs2070600	6	32151443	C
Biological assays - FE	Neutrophill_per	f_30200_0_0_f	rs1757787	17	44208218	A
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs181206	16	28513403	A
Anthropometry	Standing_height	f_50_0_0_f_QU	rs91731	5	33334312	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2768551	6	109270656	G
Respiratory	TA_copdMappin	BIN_copdMappi	rs7715901	5	147856392	A
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs1175902	6	126792095	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs7753012	6	142745883	T
Anthropometry	Weight	f_21002_0_0_f	rs181206	16	28513403	A
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1286664	3	25529280	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6688537	1	239850588	C
Biological assays - FE	Red_blood_cell	f_30070_0_0_f	rs1951121	14	23429729	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1928168	6	22017738	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1214063	1	92374517	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7277644	5	77440196	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1262725	21	35368402	G

Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs3844313	6	32635629	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6207027	17	28263980	A	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs3844313	6	32635629	G	
Biological assays - FE	Lymphocyte_cof_30120_0_0_f	rs3844313	6	32635629	G	
Biological assays - FE	Eosinophil_courf_30150_0_0_f	rs772920	12	56390364	C	
Respiratory	FVC_maximumVf_3062_0_f_QU	rs6733504	2	242495953	A	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2007403	4	106131210	C	
Musculoskeletal dise	BMD_Combinedf_3148_4105_4	rs8068952	17	59286644	G	
Biological assays - FE	Mean_corpusculf_30040_0_0_f	rs8067511	17	37611352	C	
Respiratory	TA_NI_pediatric_BIN_NI_pediatri	rs1247086	2	102926362	G	
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1118988	4	146174040	C	
Respiratory	MED_adrenergicR03C_adrenergi	rs1247086	2	102926362	G	
Respiratory	Wheeze_or_whif_2316_0_0_f_F	rs1247086	2	102926362	G	
Biological assays - FE	Mean_sphered_f_30270_0_0_f	rs9438626	1	26775367	G	
Respiratory	FEV1_maximumf_3063_0_f_QU	rs3486479	6	27459923	G	
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1300958	2	24018480	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7267346	1	60966772	T	
Anthropometry	Standing_heightf_50_0_0_f_QU	rs1690985	9	98204792	G	
Respiratory	FEV1_maximumf_3063_0_f_QU	rs1300958	2	24018480	G	
Respiratory	PEF_maximumVf_3064_0_f_QU	rs3844313	6	32635629	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7989847	5	179598771	T	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1286664	3	25529280	C	
Respiratory	MED_other_systR03D_other_sy:	rs1247086	2	102926362	G	
Immuno-inflammati	Pattern_4_f_f_2395_0_code:	rs6080405	1	118870373	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1244780	16	58075282	C	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1690985	9	98204792	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2768551	6	109270656	G	
Anthropometry	Weightf_21002_0_0_f	rs7277644	5	77440196	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7405312	14	54346010	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1282031	12	96255704	T	
Biological assays - FE	Mean_platelet_1f_30100_0_0_f	rs6207063	17	29087285	G	
Respiratory	FEV1_maximumf_3063_0_f_QU	rs1085824	9	139102831	G	
Respiratory	FEV1_maximumf_3063_0_f_QU	rs4846480	1	218598469	A	
Respiratory	TA_copdMappinBIN_copdMappi	rs1311699	4	145442364	G	
Cancer	MED_antimetabL01B_antimetat	rs2070600	6	32151443	C	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs3743609	16	75467021	G	
Metabolic and endo	HES_Non_insulirHES_p_E11_BIN	rs6780171	3	185503456	T	
Metabolic and endo	M2W_type_2_dmap2way_NI_c:	rs6780171	3	185503456	T	
ENT and maxillofaci	MED_decongestR01A_deconges	rs1247086	2	102926362	G	
Biological assays - FE	Mean_corpusculf_30040_0_0_f	rs1757787	17	44208218	A	
Anthropometry	Weightf_21002_0_0_f	rs2812208	13	50707087	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1294421	6	6743149	T	
Anthropometry	Body_mass_indef_21001_0_0_f	rs181206	16	28513403	A	
Respiratory	PEF_maximumVf_3064_0_f_QU	rs7715901	5	147856392	A	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs996865	17	69371318	C	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs4444235	14	54410919	T	
Biological assays - FE	Platelet_distribuf_30110_0_0_f	rs7269986	14	93114787	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6231631	4	75676529	G	
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1551943	5	52195033	G	

Respiratory	FEV1_maximumV f_3063_0_f_QUANT	rs1243826	15	84502549	C
Respiratory	TA_FEV1_perce QUANT	FEV1_p rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs7872188	9	4124377	C
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs9636166	19	31829613	A
Musculoskeletal disease	grip_strength_m f_47_46_QUANT	rs7238093	18	20728158	A
Respiratory	TA_FEV1_perce QUANT	FEV1_p rs9385988	6	142560957	A
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs1005999	5	170901463	T
Respiratory	FVC_maximumV f_3062_0_f_QUANT	rs1175902	6	126792095	A
Respiratory	TA_FEV1_perce QUANT	FEV1_p rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs996865	17	69371318	C
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs803923	9	119401650	G
Biological assays - FE	Platelet_crit f_30090_0_0_f_QUANT	rs7269986	14	93114787	G
Respiratory	FEV1_maximumV f_3063_0_f_QUANT	rs7269986	14	93114787	G
Respiratory	FEV1_maximumV f_3063_0_f_QUANT	rs1209623	1	26796922	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs1688308	6	73658053	T
Respiratory	TA_FEV1_perce QUANT	FEV1_p rs1269840	7	156127246	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs7713065	5	131788334	A
Respiratory	TA_FEV1_perce QUANT	FEV1_p rs9385988	6	142560957	A
Respiratory	FEV1_maximumV f_3063_0_f_QUANT	rs7269986	14	93114787	G
Respiratory	FVC_maximumV f_3062_0_f_QUANT	rs1311699	4	145442364	G
Respiratory	FEV1_maximumV f_3063_0_f_QUANT	rs1243826	15	84502549	C
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs7090277	10	12278021	T
Respiratory	PEF_maximumV f_3064_0_f_QUANT	rs3743609	16	75467021	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs1214063	1	92374517	C
Biological assays - FE	Mean_reticulocyt f_30260_0_0_f_QUANT	rs1131111	22	50867711	C
Biological assays - FE	Reticulocyte_per f_30240_0_0_f_QUANT	rs330939	8	9018590	T
Respiratory	PEF_maximumV f_3064_0_f_QUANT	rs3743609	16	75467021	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs1247731	2	239877148	C
Immuno-inflammatory	MED_immunosu L04A_immunos	rs2070600	6	32151443	C
Respiratory	PEF_maximumV f_3064_0_f_QUANT	rs6688537	1	239850588	C
Anthropometry	Body_mass_index f_21001_0_0_f_QUANT	rs4237643	11	43648368	T
Anthropometry	Whole_body_fat f_23100_0_0_f_QUANT	rs4237643	11	43648368	T
Puberty	Relative_age_of f_2375_0_0_f_QUANT	rs1757787	17	44208218	A
Respiratory	FVC_maximumV f_3062_0_f_QUANT	rs1595029	3	158241767	A
Medication	Paracetamol f_6154_0_code	rs1117211	12	57527283	T
Anthropometry	Standing_height f_50_0_0_f_QUANT	rs2834440	21	35690499	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs1688308	6	73658053	T
Immuno-inflammatory	Pattern_3_f f_2395_0_code	rs1757787	17	44208218	A
Respiratory	FVC_maximumV f_3062_0_f_QUANT	rs7269986	14	93114787	G
Respiratory	TA_FEV1_perce QUANT	FEV1_p rs7269986	14	93114787	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs7989847	5	179598771	T
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs2284746	1	17306675	C
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs1244780	16	58075282	C
Respiratory	M2W_asthma map2way_NI	rs3844313	6	32635629	G
Respiratory	TA_copdMappin BIN_copdMappi	rs7753012	6	142745883	T
Respiratory	FVC_maximumV f_3062_0_f_QUANT	rs7269986	14	93114787	G
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_r QUANT	FEV1_F rs6231631	4	75676529	G
Respiratory	TA_FEV1_perce QUANT	FEV1_p rs2637254	10	78312002	G
Respiratory	FEV1_maximumV f_3063_0_f_QUANT	rs1300958	2	24018480	G

Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2811415	3	127991527	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1990950	5	156920756	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs8089099	18	10078071	G
Biological assays - FE	Mean_corpusculf_30040_0_0_f_	rs1751313	1	40035686	C
Neurosciences	M2W_migraine_map2way_NI_cr	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1134738	19	41124155	T
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs2007403	4	106131210	C
Metabolic and endo	HESBL_Disorder:HES_block_p_E	rs2070600	6	32151443	C
Respiratory	TA_NI_pediatric_BIN_NI_pediatri	rs7713065	5	131788334	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7269986	14	93114787	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs2007403	4	106131210	C
Biological assays - FE	High_light_scatt f_30290_0_0_f_	rs1757787	17	44208218	A
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f_	rs3844313	6	32635629	G
Respiratory	HES_Asthma HES_p_J45_BIN	rs1247086	2	102926362	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7713065	5	131788334	A
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs1757787	17	44208218	A
Immuno-inflammati	MED_corticosteID07A_corticost	rs1247086	2	102926362	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs6733504	2	242495953	A
Biological assays - FE	Platelet_count f_30080_0_0_f_	rs1244869	12	65075332	T
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1209623	1	26796922	G
Anthropometry	Whole_body_fatf_23101_0_0_f_	rs1311699	4	145442364	G
Metabolic and endo	HESBL_Diabetes HES_block_p_E	rs6780171	3	185503456	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs3525199	15	49706145	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs3525199	15	49706145	A
Biological assays - FE	Platelet_crit f_30090_0_0_f_	rs6062304	20	62351539	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1165850	17	36886828	G
Metabolic and endo	PROXYF_Diabetef_20107_0_cod	rs6780171	3	185503456	T
Metabolic and endo	PROXYFM_Diabetef_20107_20110	rs6780171	3	185503456	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs633286	18	8809273	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs9385988	6	142560957	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1990950	5	156920756	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs6778584	3	98815640	T
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs6733504	2	242495953	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7715901	5	147856392	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_e	rs7715901	5	147856392	A
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs1085824	9	139102831	G
Anthropometry	Standing_height f_50_0_0_f_QU	rs1311699	4	145442364	G
Anthropometry	Body_fat_perce f_23099_0_0_f_	rs4237643	11	43648368	T
Anthropometry	Whole_body_waf_23102_0_0_f_	rs1311699	4	145442364	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7872188	9	4124377	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7872188	9	4124377	C
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs1430193	2	56120853	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1800888	5	148206885	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1800888	5	148206885	C
Biological assays - FE	Mean_corpusculf_30040_0_0_f_	rs9438626	1	26775367	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1698268	14	84309664	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1282031	12	96255704	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1170482	22	18450287	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1170482	22	18450287	A

Respiratory	PEF_maximumV f_3064_0_f_QU	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1165850	17	36886828	G
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs4237643	11	43648368	T
Biological assays - FE	Monocyte_coun f_30130_0_0_f_	rs7269986	14	93114787	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2799098	1	218521609	G
Anthropometry	Standing_height f_50_0_0_f_QU	rs1110718	12	94184082	C
Biological assays - FE	Eosinophill_cour f_30150_0_0_f_	rs2070600	6	32151443	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6212640	2	18309132	T
Respiratory	HESBL_Chronic_HES_block_p_J4	rs1247086	2	102926362	G
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1311699	4	145442364	G
Respiratory	TA_copdMappin BIN_copdMappi	rs1311699	4	145442364	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7872188	9	4124377	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs7715901	5	147856392	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6778584	3	98815640	T
Biological assays - FE	Lymphocyte_pef f_30180_0_0_f_	rs1757787	17	44208218	A
Anthropometry	Weight f_21002_0_0_f_	rs4237643	11	43648368	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1766633	3	29469675	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1766633	3	29469675	T
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs7277644	5	77440196	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1192404	1	92068967	A
Biological assays - FE	High_light_scatt f_30300_0_0_f_	rs3486479	6	27459923	G
Musculoskeletal dise	Knee_pain_for_ f_3773_0_0_f_	rs6088813	20	33975181	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7872188	9	4124377	C
Anthropometry	Weight f_21002_0_0_f_	rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1690985	9	98204792	G
Gastroenterology, h	MED_intestinal_A07E_intestinal	rs2070600	6	32151443	C
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1269840	7	156127246	G
Biological assays - FE	Reticulocyte_co f_30250_0_0_f_	rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1247731	2	239877148	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6062304	20	62351539	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1051652	4	106688904	A
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1311699	4	145442364	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs8068952	17	59286644	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs9970286	1	111737398	G
Musculoskeletal dise	grip_strength_m f_47_46_QUAN	rs1757787	17	44208218	A
Biological assays - FE	Platelet_crit f_30090_0_0_f_	rs6780171	3	185503456	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs3743609	16	75467021	G
Biological assays - FE	White_blood_ce f_30000_0_0_f_	rs7713065	5	131788334	A
Metabolic and endo	MED_thyroid_pr H03A_thyroid_r	rs3486479	6	27459923	G
Anthropometry	Whole_body_fat f_23101_0_0_f_	rs7753012	6	142745883	T
Biological assays - FE	Mean_sphered_ f_30270_0_0_f_	rs8067511	17	37611352	C
Metabolic and endo	M2W_diabetes map2way_NI_c	rs6780171	3	185503456	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1005999	5	170901463	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7512895	1	219483218	G
ENT and maxillofaci	MED_decongest R01A_deconges	rs2070600	6	32151443	C
Anthropometry	Whole_body_wa f_23102_0_0_f_	rs7753012	6	142745883	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7753012	6	142745883	T
Biological assays - FE	Reticulocyte_pe f_30240_0_0_f_	rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1766633	3	29469675	T

Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs7405312	14	54346010	G
Biological assays - FE	Reticulocyte_peif_30240_0_0_f	rs1757787	17	44208218	A
Medication	MED_opioids N02A_opioids_f	rs1117211	12	57527283	T
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1175902	6	126792095	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1243826	15	84502549	C
Biological assays - FE	Reticulocyte_peif_30240_0_0_f	rs3844313	6	32635629	G
Biological assays - FE	Mean_corpusculf_30050_0_0_f	rs8067511	17	37611352	C
Respiratory	FEV1_maximumf_3063_0_f_QU	rs7872188	9	4124377	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs3743609	16	75467021	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1134738	19	41124155	T
Respiratory	FEV1_maximumf_3063_0_f_QU	rs633286	18	8809273	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs803923	9	119401650	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7095607	10	69957350	G
Biological assays - FE	Neutrophill_couf_30140_0_0_f	rs7713065	5	131788334	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs7267346	1	60966772	T
Respiratory	TA_NI_pediatric BIN_NI_pediatri	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs6207027	17	28263980	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs4846480	1	218598469	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs2451951	9	109496630	T
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs2045517	4	89870964	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1269840	7	156127246	G
Respiratory	FEV1_maximumf_3063_0_f_QU	rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1551943	5	52195033	G
Respiratory	TA_NI_pediatric BIN_NI_pediatri	rs8067511	17	37611352	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs5634193	3	168715808	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs5634193	3	168715808	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1595029	3	158241767	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1551943	5	52195033	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1137456	12	95554771	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1698268	14	84309664	A
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs7090277	10	12278021	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1209623	1	26796922	G
Immuno-inflammati	M2W_hayfevera map2way_NI_c	rs1247086	2	102926362	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1249096	2	199723365	G
Immuno-inflammati	MED_corticoste D07A_corticost	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1766633	3	29469675	T
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1269840	7	156127246	G
Biological assays - FE	Mean_corpusculf_30060_0_0_f	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs2045517	4	89870964	C
Respiratory	FEV1_maximumf_3063_0_f_QU	rs1344555	3	169300219	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs2544536	2	15906854	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1269840	7	156127246	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1269840	7	156127246	G
Respiratory	TA_copdMappin BIN_copdMappi	rs1085183	15	71628370	T
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1214063	1	92374517	C
Respiratory	FEV1_maximumf_3063_0_f_QU	rs6778584	3	98815640	T
Biological assays - FE	Lymphocyte_peif_30180_0_0_f	rs1513272	7	28200097	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1134738	19	41124155	T

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs8082036	17	3882613	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs8082036	17	3882613	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs4846480	1	218598469	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs1757787	17	44208218	A
Anthropometry	Whole_body_fat f_23101_0_0_f_rs	rs3844313	6	32635629	G
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs1757787	17	44208218	A
Biological assays - FE	Haemoglobin_cc f_30020_0_0_f_rs	rs8068952	17	59286644	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs7277644	5	77440196	G
Anthropometry	Weight f_21002_0_0_f_rs	rs1219898	6	7720059	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs972936	12	102824921	T
Anthropometry	Waist_circumfer f_48_0_0_f_QU	rs4237643	11	43648368	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1311069	4	89815695	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs153916	5	95036700	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7872188	9	4124377	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1698268	14	84309664	A
Biological assays - FE	High_light_scatt f_30290_0_0_f_rs	rs330939	8	9018590	T
Neurosciences	Morning_evenin f_1180_0_0_f (rs	rs6133207	2	239316560	G
Musculoskeletal dise	HES_Gonarthros HES_p_M17_BII	rs6088813	20	33975181	C
Anthropometry	Whole_body_wa f_23102_0_0_f_rs	rs3844313	6	32635629	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs803923	9	119401650	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1243826	15	84502549	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6681426	1	150586971	G
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs153916	5	95036700	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6778584	3	98815640	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6062304	20	62351539	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2348418	12	28689514	T
Respiratory	MED_other_dru;R03B_other_dru	rs2070600	6	32151443	C
Biological assays - FE	Mean_platelet_1f_30100_0_0_f_rs	rs6207027	17	28263980	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1096594	9	23588583	C
Biological assays - FE	Red_blood_cell_f_30010_0_0_f_rs	rs9689096	6	34188892	A
Anthropometry	Body_mass_inde f_21001_0_0_f_rs	rs6140050	20	6632901	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1262725	21	35368402	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1262725	21	35368402	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs5634193	3	168715808	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1990950	5	156920756	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2509961	11	62310909	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs9689096	6	34188892	A
ENT and maxillofaci	Dentures f_6149_0_code	rs3486479	6	27459923	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1247731	2	239877148	C
Anthropometry	Standing_height f_50_0_0_f_QU	rs1087020	9	139257411	T
Musculoskeletal dise	grip_strength_mf_47_46_QUAN	rs1219898	6	7720059	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6778584	3	98815640	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1928168	6	22017738	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1051652	4	106688904	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs6207027	17	28263980	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7989847	5	179598771	T

Respiratory	FVC_maximumVf_3062_0_f_QU	rs1014178	14	74817418	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	7090277	10	12278021	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	9661802	1	6678864	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2637254	10	78312002	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	6207027	17	28263980	A
Biological assays - FE	Eosinophill_percf_30210_0_0_f_rs	3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	3486479	6	27459923	G
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	1051652	4	106688904	A
Biological assays - FE	Red_blood_cell_f_30070_0_0_f_rs	4128298	8	11823332	T
Musculoskeletal dise	BMD_Combined f_3148_4105_4 rs	4128298	8	11823332	T
Metabolic and endo	HES_Other_noniHES_p_E04_BINrs	7923409	15	49409527	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	9636166	19	31829613	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	9970286	1	111737398	G
Anthropometry	Whole_body_fatf_23101_0_0_f_rs	4968200	17	7448457	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1311699	4	145442364	G
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_rs	7269986	14	93114787	G
Biological assays - FE	Monocyte_perc;f_30190_0_0_f_rs	2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	2451951	9	109496630	T
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2768551	6	109270656	G
Biological assays - FE	Mean_corpusculf_30040_0_0_f_rs	3844313	6	32635629	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	7269986	14	93114787	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1344555	3	169300219	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	9689096	6	34188892	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs4846480	1	218598469	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	4846480	1	218598469	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	7512895	1	219483218	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	2834440	21	35690499	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	2768551	6	109270656	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	1247731	2	239877148	C
Respiratory	TA_copdMappin BIN_copdMappirs	1085183	15	71628370	T
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs7872188	9	4124377	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2812208	13	50707087	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs803923	9	119401650	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	2509961	11	62310909	T
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	7290420	2	157046432	T
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs7290420	2	157046432	T
Biological assays - FE	Platelet_crit f_30090_0_0_f_rs	1131111	22	50867711	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	2811415	3	127991527	A
Anthropometry	Whole_body_fatf_23101_0_0_f_rs	4846480	1	218598469	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	7090277	10	12278021	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	9385988	6	142560957	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs9385988	6	142560957	A
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	5634193	3	168715808	A
Anthropometry	Whole_body_w;f_23102_0_0_f_rs	4968200	17	7448457	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1269840	7	156127246	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs9385988	6	142560957	A
Biological assays - FE	Reticulocyte_coif_30250_0_0_f_rs	330939	8	9018590	T
Biological assays - FE	Red_blood_cell_f_30070_0_0_f_rs	1108574	19	10819967	C
Biological assays - FE	High_light_scattf_30290_0_0_f_rs	1108574	19	10819967	C
Metabolic and endo	M2W_hypothyr;map2way_NI_cr	rs3486479	6	27459923	G

Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs803923	9	119401650	G
Biological assays - FE	Mean_sphered_f_30270_0_0_f_	rs9689096		6	34188892	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1249096		2	199723365	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1259146		15	71788387	C
Gastroenterology, h	NIOPC_haemorr_f_20004_dxCod	rs1117600		12	66409367	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1430193		2	56120853	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2571445		2	218683154	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs9634470		13	109918493	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2834440		21	35690499	G
Biological assays - FE	White_blood_cel_f_30000_0_0_f_	rs6207027		17	28263980	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1005966		5	121410529	C
Musculoskeletal dise	Knee_pain_f_6159_code7_lrs	rs6088813		20	33975181	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs9661802		1	6678864	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs6212640		2	18309132	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6212640	2	18309132	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1458979		3	55150677	A
Biological assays - FE	High_light_scatt_f_30300_0_0_f_	rs1108574		19	10819967	C
Biological assays - FE	Platelet_crit_f_30090_0_0_f_	rs3743609		16	75467021	G
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f_	rs7872188		9	4124377	C
Biological assays - FE	Platelet_crit_f_30090_0_0_f_	rs2283847		22	28181399	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1294421		6	6743149	T
Biological assays - FE	Eosinophil_courf_30150_0_0_f_	rs7269986		14	93114787	G
Metabolic and endo	HES_Non_insulir	HES_p_E11_BIN	rs1513272	7	28200097	C
Metabolic and endo	M2W_diabetes_map2way_NI_c	rs1513272		7	28200097	C
Metabolic and endo	MED_thyroid_p	H03A_thyroid_f	rs3844313	6	32635629	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2768551		6	109270656	G
Biological assays - FE	Mean_corpusculf_30050_0_0_f_	rs1757787		17	44208218	A
Anthropometry	Whole_body_waf_23102_0_0_f_	rs4846480		1	218598469	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1209623		1	26796922	G
Biological assays - FE	High_light_scatt_f_30290_0_0_f_	rs3486479		6	27459923	G
Anthropometry	Standing_height_f_50_0_0_f_QU	rs7713065		5	131788334	A
Neurosciences	Headache_f_6159_code1_lrs	rs1757787		17	44208218	A
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1096594		9	23588583	C
Immuno-inflammati	Pattern_4_f_f_2395_0_code	rs2637254		10	78312002	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1096594		9	23588583	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs633286	18	8809273	C
Anthropometry	Hip_circumferenf_49_0_0_f_QU	rs2812208		13	50707087	G
Respiratory	PEF_maximumVf_3064_0_f_QU	rs8089099		18	10078071	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1753140		1	186113852	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1214063		1	92374517	C
Biological assays - FE	Red_blood_cell_f_30010_0_0_f_	rs8067511		17	37611352	C
Metabolic and endo	M2W_type_2_d_map2way_NI_c	rs1513272		7	28200097	C
Cardiovascular	systolic_blood_f_4080_0_f_QU	rs3743609		16	75467021	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs803923	9	119401650	G
Respiratory	TA_NI_adult_on	BIN_NI_adult_o	rs7713065	5	131788334	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs4444235		14	54410919	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1118988		4	146174040	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1051652		4	106688904	A
Musculoskeletal dise	HES_Seropositiv	HES_p_M05_BII	rs2070600	6	32151443	C

Musculoskeletal disease	TA_osteoarthritis	BIN_osteoarthritis	rs6088813	20	33975181	C
Respiratory	PEF_maximum	Vf_3064_0_f_QUANT	rs7989847	5	179598771	T
Biological assays - FEV1	White_blood_cell	f_30000_0_0_f_QUANT	rs7269986	14	93114787	G
Respiratory	FEV1_maximum	f_3063_0_f_QUANT	rs1990950	5	156920756	G
Respiratory	Wheeze_or_who	f_2316_0_0_f_QUANT	rs2070600	6	32151443	C
Biological assays - FEV1	Monocyte_percentage	f_30190_0_0_f_QUANT	rs2322659	2	136555659	T
Respiratory	TA_FEV1_percent	QUANT_FEV1_percent	rs2768551	6	109270656	G
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1051652	4	106688904	A
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1282031	12	96255704	T
Musculoskeletal disease	HES_Internal_depression	HES_p_M23_BI	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1170482	22	18450287	A
Respiratory	TA_FEV1_percent	QUANT_FEV1_percent	rs2544536	2	15906854	T
Respiratory	FVC_maximum	Vf_3062_0_f_QUANT	rs3471297	4	106819053	G
Metabolic and endocrine	M2W_hypothyroidism	map2way_NI_cross	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs2544536	2	15906854	T
Respiratory	FEV1_maximum	f_3063_0_f_QUANT	rs1102077	6	140271357	A
Respiratory	FVC_maximum	Vf_3062_0_f_QUANT	rs1344555	3	169300219	C
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1051575	5	156810072	C
Respiratory	M2W_asthma	map2way_NI_cross	rs772920	12	56390364	C
Respiratory	TA_FEV1_ever_susceptible	QUANT_FEV1_ever_susceptible	rs6778584	3	98815640	T
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1051575	5	156810072	C
Respiratory	TA_FEV1_percent	QUANT_FEV1_percent	rs7753012	6	142745883	T
Respiratory	FEV1_maximum	f_3063_0_f_QUANT	rs1175902	6	126792095	A
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs7290420	2	157046432	T
Respiratory	TA_FEV1_percent	QUANT_FEV1_percent	rs2007403	4	106131210	C
Respiratory	TA_FEV1_never	QUANT_FEV1_never	rs1250462	4	145436324	T
Anthropometry	Standing_height	f_50_0_0_f_QUANT	rs2348418	12	28689514	T
Respiratory	TA_copdMapping	BIN_copdMapping	rs3844313	6	32635629	G
Respiratory	PEF_maximum	Vf_3064_0_f_QUANT	rs1096594	9	23588583	C
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1419429	1	155137395	G
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1282031	12	96255704	T
Metabolic and endocrine	HESBL_Diabetes	HES_block_p_E	rs1513272	7	28200097	C
Respiratory	FVC_maximum	Vf_3062_0_f_QUANT	rs3486479	6	27459923	G
Respiratory	FVC_maximum	Vf_3062_0_f_QUANT	rs1165395	17	62686730	G
Biological assays - FEV1	Mean_sphered	f_30270_0_0_f_QUANT	rs1131111	22	50867711	C
Respiratory	FVC_maximum	Vf_3062_0_f_QUANT	rs1051652	4	106688904	A
Respiratory	TA_FEV1_ever_susceptible	QUANT_FEV1_ever_susceptible	rs1300958	2	24018480	G
Respiratory	TA_FEV1_percent	QUANT_FEV1_percent	rs803765	13	71647588	C
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs330939	8	9018590	T
Respiratory	TA_FEV1_percent	QUANT_FEV1_percent	rs6924424	6	7801611	T
Respiratory	TA_NI_pediatric	BIN_NI_pediatric	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1247731	2	239877148	C
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs633286	18	8809273	C
Eye	Corneal_resistance	f_5257_0_0_f_QUANT	rs7872188	9	4124377	C
Biological assays - FEV1	Lymphocyte_percentage	f_30180_0_0_f_QUANT	rs6062304	20	62351539	A
Biological assays - FEV1	Lymphocyte_percentage	f_30180_0_0_f_QUANT	rs7269986	14	93114787	G
Biological assays - FEV1	Haematocrit_percentage	f_30030_0_0_f_QUANT	rs8068952	17	59286644	G
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs8068952	17	59286644	G
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio	rs1928168	6	22017738	T
Anthropometry	Whole_body_fat	f_23101_0_0_f_QUANT	rs1690985	9	98204792	G

Anthropometry	Whole_body_waif_23102_0_0_f_rs1690985	9	98204792	G
Respiratory	FVC_maximumVf_3062_0_f_QU rs1690985	9	98204792	G
Respiratory	FVC_maximumVf_3062_0_f_QU rs4846480	1	218598469	A
Respiratory	PEF_maximumVf_3064_0_f_QU rs1209623	1	26796922	G
Respiratory	FEV1_maximumf_3063_0_f_QU rs1247731	2	239877148	C
Medication	MED_opioids N02A_opioids_f rs1757787	17	44208218	A
Respiratory	PEF_maximumVf_3064_0_f_QU rs1757787	17	44208218	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1859962	17	69108753	G
Anthropometry	Waist_circumferf_48_0_0_f_QU rs7238093	18	20728158	A
Respiratory	TA_copdMappin BIN_copdMappi rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1716339	5	128767384	A
Respiratory	FEV1_maximumf_3063_0_f_QU rs1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1192404	1	92068967	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e rs1430193	2	56120853	A
Respiratory	PEF_maximumVf_3064_0_f_QU rs4444235	14	54410919	T
Anthropometry	Whole_body_faif_23101_0_0_f_rs1102077	6	140271357	A
Biological assays - FE	Eosinophill_courf_30150_0_0_f_rs6681426	1	150586971	G
Respiratory	FVC_maximumVf_3062_0_f_QU rs6681426	1	150586971	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1751313	1	40035686	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1085183	15	71628370	T
Biological assays - FE	Platelet_distribuf_30110_0_0_f_rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs7267346	1	60966772	T
Metabolic and endo	HESBL_Disorder:HES_block_p_E(rs3486479	6	27459923	G
Biological assays - FE	Lymphocyte_couf_30120_0_0_f_rs6681426	1	150586971	G
Anthropometry	Whole_body_waif_23102_0_0_f_rs1102077	6	140271357	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e rs7269986	14	93114787	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs8068952	17	59286644	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1170482	22	18450287	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs2007403	4	106131210	C
Respiratory	PEF_maximumVf_3064_0_f_QU rs2812208	13	50707087	G
Mental health	Seen_doctor_GFf_2090_0_0_f_E rs3486479	6	27459923	G
Biological assays - FE	Platelet_count f_30080_0_0_f_rs7899503	10	65087468	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs6212640	2	18309132	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1192404	1	92068967	A
Respiratory	FVC_maximumVf_3062_0_f_QU rs3548056	3	71583177	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1247731	2	239877148	C
Biological assays - FE	Platelet_count f_30080_0_0_f_rs7261515	7	99635967	G
Respiratory	PEF_maximumVf_3064_0_f_QU rs972936	12	102824921	T
Respiratory	PEF_maximumVf_3064_0_f_QU rs1698268	14	84309664	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1165850	17	36886828	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1165850	17	36886828	G
Biological assays - FE	Neutrophill_couf_30140_0_0_f_rs6062304	20	62351539	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1137456	12	95554771	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs7872188	9	4124377	C
Anthropometry	Hip_circumferenf_49_0_0_f_QU rs2236519	20	45529571	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1192404	1	92068967	A
Biological assays - FE	Haematocrit_pef_30030_0_0_f_rs7872188	9	4124377	C
Metabolic and endo	OPC_Excision_of41210_41200 rs7923409	15	49409527	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs2799098	1	218521609	G

Gastroenterology, h	HESBL_Hernia	HES_block_p_K	rs1430193	2	56120853	A
Medication	MED_other_ana	N02B_other_an	rs1757787	17	44208218	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs6778584	3	98815640	T
Urology	CREG_mal_neo_f	40006_0_p_C	rs1859962	17	69108753	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1311069	4	89815695	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs3751837	16	3583173	C
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1250462	4	145436324	T
Immuno-inflammati	Pattern_4_f	f_2395_0_code	rs1416685	1	51243374	G
Biological assays - FE	Eosinophill_perc	f_30210_0_0_f	rs1800888	5	148206885	C
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f	rs1215	17	7163350	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1247086	2	102926362	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6212640	2	18309132	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1096594	9	23588583	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1096594	9	23588583	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1165395	17	62686730	G
Biological assays - FE	High_light_scatt	f_30300_0_0_f	rs3844313	6	32635629	G
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs1108574	19	10819967	C
Anthropometry	Whole_body_w	f_23102_0_0_f	rs1108574	19	10819967	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6032942	20	10745545	G
Biological assays - FE	Red_blood_cell	f_30010_0_0_f	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1085183	15	71628370	T
Respiratory	MED_adrenergic	R03C_adrenergi	rs3844313	6	32635629	G
Medication	Ibuprofen_e_g	I_f_6154_0_code	rs1117211	12	57527283	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1219898	6	7720059	G
Biological assays - FE	High_light_scatt	f_30300_0_0_f	rs330939	8	9018590	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs633286	18	8809273	C
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs9661802	1	6678864	A
ENT and maxillofaci	Snoring	f_1210_0_0_f	rs7290420	2	157046432	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1800888	5	148206885	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2348418	12	28689514	T
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs7269986	14	93114787	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs633286	18	8809273	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2571445	2	218683154	A
Medication	Paracetamol	f_6154_0_code	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7713065	5	131788334	A
Anthropometry	Whole_body_w	f_23102_0_0_f	rs7269986	14	93114787	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1209623	1	26796922	G
Gastroenterology, h	OPC_examinatio	f_41210_41200	rs3844313	6	32635629	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs7989847	5	179598771	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1051575	5	156810072	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1051575	5	156810072	C
Respiratory	MED_other_dru	R03B_other_dru	rs772920	12	56390364	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs330939	8	9018590	T
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f	rs2007403	4	106131210	C
Anthropometry	Weight	f_21002_0_0_f	rs4309038	1	201884647	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1269840	7	156127246	G
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs1294421	6	6743149	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1928168	6	22017738	T

Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6688537	1	239850588	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1005966	5	121410529	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs2974389	3	13787641	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_e	rs1300958	2	24018480	G
Respiratory	HES_Asthma HES_p_J45_BIN	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2283847	22	28181399	C
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1859962	17	69108753	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1262725	21	35368402	G
Respiratory	PEF_maximumVf_3064_0_f_QU	rs2544536	2	15906854	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1051652	4	106688904	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1137456	12	95554771	C
Respiratory	FEV1_maximumf_3063_0_f_QU	rs2544536	2	15906854	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7713065	5	131788334	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2007403	4	106131210	C
Biological assays - FE	Reticulocyte_peif_30240_0_0_f	rs1108574	19	10819967	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1800888	5	148206885	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6751968	2	18570024	C
Respiratory	FEV1_maximumf_3063_0_f_QU	rs1723268	7	46448518	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs4444235	14	54410919	T
Biological assays - FE	Mean_platelet_1f_30100_0_0_f	rs181206	16	28513403	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs6062304	20	62351539	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1416685	1	51243374	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs9634470	13	109918493	T
Respiratory	M2W_asthma map2way_NI_cr	rs8025774	15	67483276	C
Respiratory	MED_adrenergicR03C_adrenergi	rs2070600	6	32151443	C
Respiratory	FEV1_maximumf_3063_0_f_QU	rs7277644	5	77440196	G
Respiratory	MED_adrenergicR03A_adrenergi	rs3844313	6	32635629	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs6437219	2	241844033	C
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1051575	5	156810072	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs3525199	15	49706145	A
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2544536	2	15906854	T
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6212640	2	18309132	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1751313	1	40035686	C
Biological assays - FE	Red_blood_cell_f_30010_0_0_f	rs1294580	17	46552229	T
Respiratory	FEV1_maximumf_3063_0_f_QU	rs1175902	6	126792095	A
Respiratory	FEV1_maximumf_3063_0_f_QU	rs1723268	7	46448518	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1005999	5	170901463	T
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1250462	4	145436324	T
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1102077	6	140271357	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1416685	1	51243374	G
Immuno-inflammati	MED_corticosteD07C_corticoste	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs9385988	6	142560957	A
Immuno-inflammati	Pattern_4_f_ f_2395_0_code	rs1175902	6	126792095	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs2852009	4	7846240	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs3751837	16	3583173	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_e	rs3486479	6	27459923	G

Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2283847	22	28181399	C
Respiratory	FVC_maximumV f_3062_0_f_	QU rs3486479	6	27459923	G
Respiratory	FVC_maximumV f_3062_0_f_	QU rs1344555	3	169300219	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1551943	5	52195033	G
Respiratory	PEF_maximumV f_3064_0_f_	QU rs9385988	6	142560957	A
Biological assays - FE	Mean_reticuloc f_30260_0_0_f_	rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6082098	10	75639578	C
Respiratory	FEV1_maximum f_3063_0_f_	QU rs1249096	2	199723365	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs803765	13	71647588	C
Mental health	Seen_a_psychiat f_2100_0_0_f_	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2701110	12	114669870	C
Anthropometry	Body_mass_inde f_21001_0_0_f_	rs4309038	1	201884647	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs153916	5	95036700	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1698268	14	84309664	A
Biological assays - FE	Platelet_count f_30080_0_0_f_	rs6681426	1	150586971	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs9385988	6	142560957	A
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs1286664	3	25529280	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6688537	1	239850588	C
Respiratory	FEV1_maximum f_3063_0_f_	QU rs1595029	3	158241767	A
Respiratory	MED_adrenergic R03A_adrenergic	rs772920	12	56390364	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs772920	12	56390364	C
Urology	CREGBL_mal_ne f_40006_block_	rs1859962	17	69108753	G
Respiratory	FEV1_maximum f_3063_0_f_	QU rs2283847	22	28181399	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1118988	4	146174040	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs9533803	13	44820608	C
Respiratory	FEV1_maximum f_3063_0_f_	QU rs2637254	10	78312002	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs2637254	10	78312002	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2851944	17	54195453	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs1247731	2	239877148	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1134738	19	41124155	T
Respiratory	PEF_maximumV f_3064_0_f_	QU rs1102077	6	140271357	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs4328080	1	219963088	G
Biological assays - FE	Lymphocyte_pe f_30180_0_0_f_	rs6681426	1	150586971	G
Biological assays - FE	Red_blood_cell f_30010_0_0_f_	rs8068952	17	59286644	G
Biological assays - FE	Eosinophill_per f_30210_0_0_f_	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1219898	6	7720059	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6688537	1	239850588	C
Respiratory	FEV1_maximum f_3063_0_f_	QU rs2284746	1	17306675	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2799098	1	218521609	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6688537	1	239850588	C
Biological assays - FE	Neutrophill_per f_30200_0_0_f_	rs6207063	17	29087285	G
Anthropometry	Hip_circumferen f_49_0_0_f_	QU rs7238093	18	20728158	A
Anthropometry	Whole_body_wa f_23102_0_0_f_	rs6733504	2	242495953	A
Anthropometry	Hip_circumferen f_49_0_0_f_	QU rs1311699	4	145442364	G
Respiratory	PEF_maximumV f_3064_0_f_	QU rs9385988	6	142560957	A
General health, smo	Number_of_trea f_137_0_0_f_	QU rs2070600	6	32151443	C
Cardiovascular	pulse_minimum f_102_0_f_	QUA rs1262725	21	35368402	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1343046	2	18702313	C
Biological assays - FE	White_blood_ce f_30000_0_0_f_	rs7424771	2	161276378	G

Anthropometry	Whole_body_fatf_23101_0_0_f_rs6733504	2	242495953	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers1243826	15	84502549	C
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_rs1757787	17	44208218	A
Anthropometry	Hip_circumferenf_49_0_0_f_QU rs303752	18	21074255	G
Respiratory	FEV1_maximum'f_3063_0_f_QU rs1014178	14	74817418	A
Respiratory	FEV1_maximum'f_3063_0_f_QU rs2974389	3	13787641	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs1753140	1	186113852	G
Respiratory	TA_FEV1_perceQUANT_FEV1_prs1700928	1	221204299	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs9636166	19	31829613	A
Biological assays - FE	Lymphocyte_coif_30120_0_0_f_rs1209623	1	26796922	G
Respiratory	TA_FEV1_perceQUANT_FEV1_prs1859962	17	69108753	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs2256462	10	81685593	C
Respiratory	TA_FEV1_perceQUANT_FEV1_prs6778584	3	98815640	T
Respiratory	FVC_maximumVf_3062_0_f_QU rs1723268	7	46448518	T
Biological assays - FE	Immature_retic f_30280_0_0_f_rs1108574	19	10819967	C
Respiratory	TA_FEV1_perceQUANT_FEV1_prs6431620	2	239604970	T
Biological assays - FE	Reticulocyte_coif_30250_0_0_f_rs1108574	19	10819967	C
Biological assays - FE	Mean_corpusculf_30050_0_0_f_rs9438626	1	26775367	G
Biological assays - FE	Mean_reticulocyf_30260_0_0_f_rs9438626	1	26775367	G
Biological assays - FE	Lymphocyte_perf_30180_0_0_f_rs7713065	5	131788334	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs1200345	15	41819716	C
Anthropometry	Whole_body_fatf_23100_0_0_f_rs303752	18	21074255	G
Biological assays - FE	White_blood_cef_30000_0_0_f_rs3435163	17	16030520	T
Respiratory	TA_FEV1_perceQUANT_FEV1_prs1270769	7	84569510	C
Anthropometry	Standing_height f_50_0_0_f_QU rs2007403	4	106131210	C
Respiratory	TA_NI_adult_on BIN_NI_adult_o rs2070600	6	32151443	C
Anthropometry	Whole_body_fatf_23101_0_0_f_rs2974389	3	13787641	A
Biological assays - FE	Mean_platelet_1f_30100_0_0_f_rs7929435	3	57494433	A
Respiratory	FEV1_maximum'f_3063_0_f_QU rs1108574	19	10819967	C
Metabolic and endo	HES_Other_hypcHES_p_E03_BINrs3486479	6	27459923	G
Respiratory	FEV1_maximum'f_3063_0_f_QU rs1170482	22	18450287	A
Respiratory	FEV1_maximum'f_3063_0_f_QU rs1170482	22	18450287	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers4846480	1	218598469	A
Anthropometry	Whole_body_waf_23102_0_0_f_rs2974389	3	13787641	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs9385988	6	142560957	A
Eye	Intra_ocular_pre f_5263_0_0_f_(rs2852009	4	7846240	C
Respiratory	FVC_maximumVf_3062_0_f_QU rs2348418	12	28689514	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs996865	17	69371318	C
Respiratory	TA_copdMappin BIN_copdMappirs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs7108254	11	86436086	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs7405312	14	54346010	G
Respiratory	HESCH_Diseases HES_chapter_p rs1247086	2	102926362	G
Cardiovascular	pulse_minimum'f_102_0_f_QUA rs2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs7290420	2	157046432	T
Respiratory	FEV1_maximum'f_3063_0_f_QU rs1595029	3	158241767	A
Anthropometry	Whole_body_fatf_23101_0_0_f_rs1250462	4	145436324	T
Biological assays - FE	Platelet_crit f_30090_0_0_f_rs1120535	1	150249101	C
Respiratory	PEF_maximumVf_3064_0_f_QU rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs4128298	8	11823332	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers2007403	4	106131210	C

Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6140050	20	6632901	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6231631	4	75676529	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6231631	4	75676529	G
Anthropometry	Birth_weight	f_20022_0_0_f	rs2007403	4	106131210	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1458979	3	55150677	A
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs5634193	3	168715808	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1096594	9	23588583	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1690985	9	98204792	G
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs6780171	3	185503456	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs4846480	1	218598469	A
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs7713065	5	131788334	A
Immuno-inflammati	M2W_sarcoidos	map2way_NI_c	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1419429	1	155137395	G
Anthropometry	Whole_body_fat	f_23100_0_0_f	rs7238093	18	20728158	A
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs9970286	1	111737398	G
Respiratory	HESBL_Chronic_	HES_block_p_J	rs2070600	6	32151443	C
Metabolic and endo	HESBL_Disorder:	HES_block_p_E	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1085824	9	139102831	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1690985	9	98204792	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1344555	3	169300219	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6780171	3	185503456	T
Anthropometry	Whole_body_fat	f_23100_0_0_f	rs7277644	5	77440196	G
Anthropometry	Body_fat_perce	f_23099_0_0_f	rs8025774	15	67483276	C
Biological assays - FE	Eosinophill_perc	f_30210_0_0_f	rs8025774	15	67483276	C
Immuno-inflammati	Hair_balding_pa	f_2395_0_0_f_E	rs1175902	6	126792095	A
Immuno-inflammati	Pattern_1_f_	f_2395_0_code:	rs1175902	6	126792095	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4866846	5	43976162	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4866846	5	43976162	A
Anthropometry	Weight	f_21002_0_0_f	rs4846480	1	218598469	A
Respiratory	FEV1_maximum'	f_3063_0_f_QU	rs1249096	2	199723365	G
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs4309038	1	201884647	G
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs4309038	1	201884647	G
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs1250462	4	145436324	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs6062304	20	62351539	A
Biological assays - FE	Mean_sphered_f	f_30270_0_0_f	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1286664	3	25529280	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3486479	6	27459923	G
Respiratory	FEV1_maximum'	f_3063_0_f_QU	rs3548056	3	71583177	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1259146	15	71788387	C
Gastroenterology, h	M2W_hiatus_he	map2way_NI_c	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2007403	4	106131210	C
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f	rs8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9533803	13	44820608	C
Anthropometry	Weight	f_21002_0_0_f	rs303752	18	21074255	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs2974389	3	13787641	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7465401	8	70367248	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7465401	8	70367248	T
Metabolic and endo	PROXYM_Diabet	f_20110_0_cod	rs6780171	3	185503456	T
Mental health	Neuroticism_scc	f_20127_0_0_f	rs330939	8	9018590	T

Urology	HES_Unspecific	HES_p_R31_BIN	rs3486479	6	27459923	G
Respiratory	MED_other_syst	R03D_other_sy	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs8082036	17	3882613	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1344555	3	169300219	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1096594	9	23588583	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7095607	10	69957350	G
Respiratory	MED_other_dru	R03B_other_dru	rs7713065	5	131788334	A
Biological assays - FE	Neutrophill_per	f_30200_0_0_f	rs6062304	20	62351539	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6212640	2	18309132	T
Respiratory	TA_NI_pediatic	BIN_NI_pediatri	rs772920	12	56390364	C
Anthropometry	Birth_weight	f_20022_0_0_f	rs9689096	6	34188892	A
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs3751837	16	3583173	C
Biological assays - FE	Platelet_distrib	f_30110_0_0_f	rs4128298	8	11823332	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs803923	9	119401650	G
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs5634193	3	168715808	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2571445	2	218683154	A
Metabolic and endo	Insulin	f_6153_6177_0	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1286664	3	25529280	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3525199	15	49706145	A
Metabolic and endo	MED_thyroid_pr	H03A_thyroid_f	rs772920	12	56390364	C
Gastroenterology, h	HESBL_Other_di	HES_block_p_K	rs3486479	6	27459923	G
Urology	M2W_enlarged_map	2way_NI_c	rs3486479	6	27459923	G
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs1209623	1	26796922	G
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs1723268	7	46448518	T
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs1209623	1	26796922	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1175902	6	126792095	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1200345	15	41819716	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2544536	2	15906854	T
Biological assays - FE	Monocyte_perce	f_30190_0_0_f	rs7424771	2	161276378	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1096594	9	23588583	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6080405	1	118870373	G
Respiratory	MED_other_syst	R03D_other_sy	rs3844313	6	32635629	G
Respiratory	TA_NI_adult_on	BIN_NI_adult_o	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7290420	2	157046432	T
Biological assays - FE	Mean_corpuscul	f_30040_0_0_f	rs181206	16	28513403	A
Anthropometry	Body_fat_perce	f_23099_0_0_f	rs303752	18	21074255	G
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs303752	18	21074255	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9636166	19	31829613	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1243826	15	84502549	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3849969	10	75525999	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9970286	1	111737398	G
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs6062304	20	62351539	A
Anthropometry	Standing_height	f_50_0_0_f_QU	rs5610488	16	4361138	T
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs7753012	6	142745883	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1102077	6	140271357	A
Biological assays - FE	Red_blood_cell	f_30070_0_0_f	rs1219898	6	7720059	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs9385988	6	142560957	A
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs1014178	14	74817418	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs803923	9	119401650	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7872188	9	4124377	C

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1928168	6	22017738	T
Respiratory	TA_FEV1_perce;QUANT_FEV1_prs	3548056	3	71583177	A
Respiratory	TA_FEV1_perce;QUANT_FEV1_prs	6924424	6	7801611	T
Respiratory	TA_FEV1_perce;QUANT_FEV1_prs	2701110	12	114669870	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs35506	12	115500691	T
Urology	M2W_prostate_map2way_NI_cr	rs3486479	6	27459923	G
Musculoskeletal dis	HESBL_Other_jo;HES_block_p_Mrs	6088813	20	33975181	C
Eye	Corneal_hystere;f_5256_0_0_f_(rs	7872188	9	4124377	C
Anthropometry	Standing_height;f_50_0_0_f_QU	rs1134738	19	41124155	T
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1051575	5	156810072	C
Musculoskeletal dis	TA_osteoarthritis;BIN_osteoarthri	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	3424550	15	40397191	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	3424550	15	40397191	C
Respiratory	TA_FEV1_never;QUANT_FEV1_nrs	2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	2084448	2	187530520	T
Respiratory	TA_FEV1_ever_s;QUANT_FEV1_ers	1209623	1	26796922	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1299762	2	202970250	C
Biological assays - FE	Mean_reticulocy;f_30260_0_0_f_rs	2283847	22	28181399	C
Respiratory	TA_FEV1_perce;QUANT_FEV1_prs	2283847	22	28181399	C
Cardiovascular	MED_lipid_modi;C10A_lipid_mocrs	2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1118988	4	146174040	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1096594	9	23588583	C
Musculoskeletal dis	OPC_Therapeuti;f_41210_41200_rs	6088813	20	33975181	C
Biological assays - FE	Mean_corpuscul;f_30050_0_0_f_rs	1131111	22	50867711	C
Biological assays - FE	Platelet_count;f_30080_0_0_f_rs	1131111	22	50867711	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1108574	19	10819967	C
Biological assays - FE	Platelet_count;f_30080_0_0_f_rs	3743609	16	75467021	G
Respiratory	TA_FEV1_ever_s;QUANT_FEV1_ers	1243826	15	84502549	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs6437219	2	241844033	C
Respiratory	TA_FEV1_ever_s;QUANT_FEV1_ers	803923	9	119401650	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1024630	7	7286445	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	996865	17	69371318	C
Respiratory	TA_FEV1_ever_s;QUANT_FEV1_ers	2007403	4	106131210	C
Respiratory	TA_FEV1_perce;QUANT_FEV1_prs	6080405	1	118870373	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1458979	3	55150677	A
Biological assays - U	Potassium_in_ur;f_30520_0_0_f_rs	3486479	6	27459923	G
Gastroenterology, h	HES_Diaphragm;HES_p_K44_BINrs	6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	9970286	1	111737398	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs7290420	2	157046432	T
Musculoskeletal dis	BMD_Combined;f_3148_4105_4_rs	6245441	7	27182329	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1294421	6	6743149	T
Neurosciences	Headaches_for;f_3799_0_0_f_(rs	1757787	17	44208218	A
Musculoskeletal dis	HESBL_Arthrosis;HES_block_p_Mrs	6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1262725	21	35368402	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1005999	5	170901463	T
Biological assays - FE	Mean_corpuscul;f_30040_0_0_f_rs	3486479	6	27459923	G
Neurosciences	MED_antimigrai;N02C_antimigra	rs1117211	12	57527283	T
Respiratory	HESBL_Chronic;HES_block_p_J4	rs3844313	6	32635629	G
Broad symptoms, sig	HESCH_Diseases;HES_chapter_p_rs	3844313	6	32635629	G
Respiratory	TA_FEV1_perce;QUANT_FEV1_prs	6688537	1	239850588	C

Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs	4128298	8	11823332	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs	7108254	11	86436086	T
Respiratory	MED_adrenergic R03C_adrenergi	rs7713065	5	131788334	A
Biological assays - FE	Mean_platelet_f_30100_0_0_f_	rs2045517	4	89870964	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs3548056	3	71583177	A
Respiratory	HES_Asthma HES_p_J45_BIN_	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1096594	9	23588583	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs8082036	17	3882613	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1096594	9	23588583	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs3471297	4	106819053	G
Metabolic and endo	M2W_hypothyrc map2way_NI_	crs772920	12	56390364	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs8089099	18	10078071	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7465401	8	70367248	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2811415	3	127991527	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1698268	14	84309664	A
Biological assays - FE	Eosinophill_cour f_30150_0_0_f_	rs1800888	5	148206885	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6431620	2	239604970	T
Anthropometry	Birth_weight f_20022_0_0_f_	rs1690985	9	98204792	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2236519	20	45529571	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs5634193	3	168715808	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs5634193	3	168715808	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs5634193	3	168715808	A
Respiratory	TA_FEV1_never_ QUANT_FEV1_n	rs1085824	9	139102831	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs6780171	3	185503456	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6688537	1	239850588	C
Biological assays - FE	Mean_reticulocf_30260_0_0_f_	rs1118988	4	146174040	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1118988	4	146174040	C
Biological assays - FE	Neutrophill_perf_30200_0_0_f_	rs1247086	2	102926362	G
Biological assays - FE	Mean_corpusculf_30060_0_0_f_	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1137456	12	95554771	C
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1259146	15	71788387	C
Metabolic and endo	HES_Other_hypc HES_p_E03_BIN	rs3844313	6	32635629	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1209623	1	26796922	G
Respiratory	MED_adrenergic R03A_adrenergi	rs2070600	6	32151443	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs6733504	2	242495953	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs803923	9	119401650	G
Respiratory	TA_FEV1_never_ QUANT_FEV1_n	rs1051652	4	106688904	A
Biological assays - FE	Eosinophill_percf_30210_0_0_f_	rs6681426	1	150586971	G
Gynaecology and Ok	MED_other_gyn G02C_other_gy	rs1117211	12	57527283	T
Respiratory	MED_other_syst R03D_other_sy	rs7713065	5	131788334	A
Haematology	M2W_anaemia map2way_NI_	crs3844313	6	32635629	G
Respiratory	TA_FEV1_never_ QUANT_FEV1_n	rs7090277	10	12278021	T
Immuno-inflammati	MED_corticoste D07A_corticost	rs772920	12	56390364	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2544536	2	15906854	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2451951	9	109496630	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1344555	3	169300219	C
Biological assays - FE	Platelet_crit f_30090_0_0_f_	rs7238093	18	20728158	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1723268	7	46448518	T
Musculoskeletal dise	M2W_osteorth map2way_NI_	crs6088813	20	33975181	C

Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1247086	2	102926362	G
Biological assays - FE	Mean_corpusculf_30040_0_0_f	rs1131111	22	50867711	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs8089099	18	10078071	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1723268	7	46448518	T
Gastroenterology, h	HESBL_Hernia HES_block_p_K:	rs2799098	1	218521609	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1243826	15	84502549	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1243826	15	84502549	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7512895	1	219483218	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs9661802	1	6678864	A
Anthropometry	Whole_body_fatf_23101_0_0_f	rs9689096	6	34188892	A
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs6207027	17	28263980	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1014178	14	74817418	A
Respiratory	MED_adrenergic R03A_adrenergi	rs7713065	5	131788334	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2509961	11	62310909	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs2509961	11	62310909	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs5634193	3	168715808	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1085183	15	71628370	T
Urology	HES_Hyperplasiæ HES_p_N40_BIN	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6082098	10	75639578	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs6733504	2	242495953	A
Biological assays - FE	Platelet_distribuf_30110_0_0_f	rs4968200	17	7448457	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs8068952	17	59286644	G
Biological assays - FE	Mean_corpusculf_30050_0_0_f	rs2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7108254	11	86436086	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2544536	2	15906854	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1723268	7	46448518	T
Biological assays - FE	White_blood_cef_30000_0_0_f	rs1209623	1	26796922	G
Biological assays - FE	Platelet_count f_30080_0_0_f	rs2283847	22	28181399	C
Anthropometry	Body_fat_percef_23099_0_0_f	rs6062304	20	62351539	A
Anthropometry	Weight f_21002_0_0_f	rs1311699	4	145442364	G
Biological assays - FE	Lymphocyte_cof_30120_0_0_f	rs1513272	7	28200097	C
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs1085824	9	139102831	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs8025774	15	67483276	C
ENT and maxillofaci:	Mouth_ulcers f_6149_0_code:	rs1757787	17	44208218	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1262725	21	35368402	G
Biological assays - FE	Lymphocyte_cof_30120_0_0_f	rs7424771	2	161276378	G
ENT and maxillofaci:	MED_decongest R01A_deconges	rs772920	12	56390364	C
Biological assays - FE	Neutrophill_cou f_30140_0_0_f	rs3751837	16	3583173	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs5764946	9	101632854	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7971039	12	85724305	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1859962	17	69108753	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs2799098	1	218521609	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1269840	7	156127246	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs803765	13	71647588	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs2236519	20	45529571	G
Anthropometry	Whole_body_fatf_23100_0_0_f	rs6062304	20	62351539	A
Immuno-inflammati	M2W_systemic_map2way_NI_c	rs3486479	6	27459923	G

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	6231631	4	75676529	G
Biological assays - FE	Mean_platelet_1f_30100_0_0_f_rs	2070600	6	32151443	C
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_rs	6207027	17	28263980	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1109819	4	79403952	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	633286	18	8809273	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2348418	12	28689514	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	2768551	6	109270656	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1209294	1	204434927	T
Anthropometry	Birth_weight f_20022_0_0_f_rs	7753012	6	142745883	T
Anthropometry	Hip_circumferenf_49_0_0_f_QU	rs7753012	6	142745883	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	7290420	2	157046432	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	7290420	2	157046432	T
Biological assays - FE	Monocyte_perccf_30190_0_0_f_rs	3424550	15	40397191	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs3424550	15	40397191	C
Biological assays - FE	Lymphocyte_cou f_30120_0_0_f_rs	2007403	4	106131210	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	1344555	3	169300219	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs6062304	20	62351539	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs633286	18	8809273	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs5634193	3	168715808	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	996865	17	69371318	C
Musculoskeletal dise	BMD_Combined f_3148_4105_4 rs	2236519	20	45529571	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	6435952	2	217614730	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1262725	21	35368402	G
Respiratory	TA_FEV1_perccer QUANT_FEV1_prs	1117600	12	66409367	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1109819	4	79403952	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	2007403	4	106131210	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2509961	11	62310909	T
Anthropometry	Whole_body_waf_23102_0_0_f_rs	9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	2256462	10	81685593	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2799098	1	218521609	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	1085824	9	139102831	G
Anthropometry	Whole_body_fatf_23100_0_0_f_rs	4309038	1	201884647	G
Cardiovascular	pulse_minimum'f_102_0_f_QU	rs1244869	12	65075332	T
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_rs	7899503	10	65087468	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1244780	16	58075282	C
Respiratory	TA_FEV1_perccer QUANT_FEV1_prs	1118988	4	146174040	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1716339	5	128767384	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1269840	7	156127246	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	9661802	1	6678864	A
Biological assays - FE	Platelet_crit f_30090_0_0_f_rs	7261515	7	99635967	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	1990950	5	156920756	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1800888	5	148206885	C
Anthropometry	Waist_circumfer f_48_0_0_f_QU	rs9689096	6	34188892	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2974389	3	13787641	A
General health, smo	Number_of_treat f_137_0_0_f_Ql	rs3548056	3	71583177	A
Respiratory	TA_NI_pediatric BIN_NI_pediatri	rs8025774	15	67483276	C
Respiratory	TA_FEV1_perccer QUANT_FEV1_prs	1209294	1	204434927	T
Metabolic and endo	M2W_graves_di map2way_NI_cr	rs3844313	6	32635629	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs3849969	10	75525999	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs6681426	1	150586971	G

Anthropometry	Whole_body_fatf_23101_0_0_f_rs1085824	9	139102831	G
ENT and maxillofacia	M2W_nasal_pol map2way_NI_cr rs1247086	2	102926362	G
Urology	HESBL_Symptom HES_block_p_R:rs3486479	6	27459923	G
Anthropometry	Standing_height f_50_0_0_f_QU rs1102077	6	140271357	A
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs6032942	20	10745545	G
Gastroenterology, h	M2W_inguinal_l map2way_NI_cr rs1294421	6	6743149	T
Eye	Intra_ocular_pre f_5263_0_0_f_(rs2571445	2	218683154	A
Biological assays - FE	Mean_corpusculf_30040_0_0_f_rs1091960	1	198898157	A
Musculoskeletal dise	NIOPC_bunion_l f_20004_dxCod rs6088813	20	33975181	C
Respiratory	FEV1_maximum f_3063_0_f_QU rs6062304	20	62351539	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1800888	5	148206885	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1085824	9	139102831	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs4328080	1	219963088	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs2084448	2	187530520	T
ENT and maxillofacia	MED_throat_pre R02A_throat_p rs1117211	12	57527283	T
Anthropometry	Whole_body_fatf_23100_0_0_f_rs8025774	15	67483276	C
Eye	Corneal_resistar f_5257_0_0_f_(rs8025774	15	67483276	C
Biological assays - FE	Haematocrit_pe f_30030_0_0_f_rs3844313	6	32635629	G
Eye	Intra_ocular_pre f_5255_0_0_f_(rs2852009	4	7846240	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs7512895	1	219483218	G
Respiratory	FVC_maximumV f_3062_0_f_QU rs35506	12	115500691	T
Eye	Intra_ocular_pre f_5262_0_0_f_(rs2852009	4	7846240	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1688308	6	73658053	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs772920	12	56390364	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs7108254	11	86436086	T
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1690985	9	98204792	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers7872188	9	4124377	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1243826	15	84502549	C
Respiratory	FVC_maximumV f_3062_0_f_QU rs5960615	17	79952944	C
Gastroenterology, h	HES_Inguinal_he HES_p_K40_BIN rs1294421	6	6743149	T
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs7267346	1	60966772	T
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs5634193	3	168715808	A
Anthropometry	Whole_body_waf_23102_0_0_f_rs1085824	9	139102831	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs9636166	19	31829613	A
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1123580	11	73290163	A
Musculoskeletal dise	TA_osteoarthri BIN_osteoarthri rs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1243826	15	84502549	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1690985	9	98204792	G
ENT and maxillofacia	HES_Nasal_poly| HES_p_J33_BIN_ rs1247086	2	102926362	G
Respiratory	MED_adrenergic R03C_adrenergi rs772920	12	56390364	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers1247731	2	239877148	C
Biological assays - FE	Mean_corpusculf_30040_0_0_f_rs2283847	22	28181399	C
Anthropometry	Hip_circumferen f_49_0_0_f_QU rs1108574	19	10819967	C
Neurosciences	Fluid_intelligenc f_20016_20191_ rs8089865	18	50957922	G
Musculoskeletal dise	grip_strength_mf_47_46_QUAN rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs9634470	13	109918493	T
Anthropometry	Body_mass_inde f_21001_0_0_f_rs772920	12	56390364	C
Neurosciences	Headache f_6159_code1_l rs3743609	16	75467021	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs2571445	2	218683154	A

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1102077	6	140271357	A
Biological assays - FE	Lymphocyte_coif_30120_0_0_f_rs	2812208	13	50707087	G
Urology	M2W_bph_beni;map2way_NI_cr	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1419429	1	155137395	G
Biological assays - FE	Reticulocyte_coif_30250_0_0_f_rs	7424771	2	161276378	G
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	2812208	13	50707087	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	6138639	20	25669052	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	2637254	10	78312002	G
Anthropometry	Standing_height_f_50_0_0_f_QU	rs1595029	3	158241767	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	1249096	2	199723365	G
Anthropometry	Hip_circumferenf_49_0_0_f_QU	rs4309038	1	201884647	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	2768551	6	109270656	G
Gynaecology and Ok	Age_at_menopa f_3581_0_0_f_(rs	4924525	15	41255396	C
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs4924525	15	41255396	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	7989847	5	179598771	T
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	6733504	2	242495953	A
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	633286	18	8809273	C
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	9689096	6	34188892	A
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	1102077	6	140271357	A
Metabolic and endo	HES_Other_diso HES_p_E16_BINrs	3844313	6	32635629	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs3751837	16	3583173	C
Eye	Corneal_resistar f_5265_0_0_f_(rs	8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	586936	3	73862616	G
Cardiovascular	MED_other_car(C01E_other_car	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1951121	14	23429729	T
Anthropometry	Weight f_21002_0_0_f_rs	7753012	6	142745883	T
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs772920	12	56390364	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1716339	5	128767384	A
Biological assays - FE	Haematocrit_pe f_30030_0_0_f_rs	2070600	6	32151443	C
Respiratory	MED_other_systR03D_other_sy:rs	772920	12	56390364	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	7923409	15	49409527	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	1117600	12	66409367	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	7713065	5	131788334	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1800888	5	148206885	C
Respiratory	TA_FEV1_perce QUANT_FEV1_prs	1800888	5	148206885	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1458979	3	55150677	A
Biological assays - FE	Monocyte_coun f_30130_0_0_f_rs	1737889	20	31042176	C
Respiratory	M2W_asthma map2way_NI_cr	rs8067511	17	37611352	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	3542003	16	53935407	T
Eye	Corneal_resistar f_5265_0_0_f_(rs	7872188	9	4124377	C
Urology	OPC_Other_ope f_41210_41200	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	4128298	8	11823332	T
Respiratory	TA_copdMappin BIN_copdMappi	rs7872188	9	4124377	C
Respiratory	TA_copdMappin BIN_copdMappi	rs7872188	9	4124377	C
Respiratory	M2W_chronic_c map2way_NI_cr	rs1250462	4	145436324	T
Biological assays - FE	Mean_corpuscul f_30040_0_0_f_rs	9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	7405312	14	54346010	G

Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6681426	1	150586971	G
Biological assays - FE	Mean_sphered_f	_30270_0_0_f	rs6780171	3	185503456	T
Urology	NI_prostate_can	f_20001_0_DX	rs1859962	17	69108753	G
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f	rs6207063	17	29087285	G
Metabolic and endo	HESBL_glucose_	HES_block_p_E	rs3844313	6	32635629	G
Metabolic and endo	PROXYS_Diabet	f_20111_0_cod	rs3844313	6	32635629	G
Musculoskeletal dis	OPC_Total_pros	f_41210_41200	rs6088813	20	33975181	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1049823	2	229502503	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs803923	9	119401650	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs7753012	6	142745883	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs5764946	9	101632854	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7405312	14	54346010	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1170482	22	18450287	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2701110	12	114669870	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs4128298	8	11823332	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1243826	15	84502549	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1243826	15	84502549	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2571445	2	218683154	A
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1102077	6	140271357	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs2768551	6	109270656	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2637254	10	78312002	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1091960	1	198898157	A
Metabolic and endo	MED_thyroid_pr	H03A_thyroid_f	rs1083636	11	35308988	T
Musculoskeletal dis	M2W_rheumatc	map2way_NI_c	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7923409	15	49409527	G
Biological assays - FE	Immature_retic	f_30280_0_0_f	rs1757787	17	44208218	A
Immuno-inflammati	Pattern_4_f_	f_2395_0_code	rs9807668	18	42827898	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1209294	1	204434927	T
Gastroenterology, h	M2W_haemochi	map2way_NI_c	rs3486479	6	27459923	G
Respiratory	TA_copdMappin	BIN_copdMappi	rs2811415	3	127991527	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1294421	6	6743149	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs4444235	14	54410919	T
Anthropometry	Body_fat_perce	f_23099_0_0_f	rs1668091	18	22290711	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1668091	18	22290711	T
Biological assays - FE	Neutrophill_per	f_30200_0_0_f	rs1215	17	7163350	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs6733504	2	242495953	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs153916	5	95036700	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2571445	2	218683154	A
Anthropometry	Body_mass_inde	f_21001_0_0_f	rs303752	18	21074255	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4128298	8	11823332	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1024630	7	7286445	A
Gastroenterology, h	MED_intestinal_	A07E_intestinal	rs1247086	2	102926362	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2441026	5	53444498	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2544536	2	15906854	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs4128298	8	11823332	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2322659	2	136555659	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3751837	16	3583173	C

Anthropometry	Standing_height f_50_0_0_f_QU	rs3743609	16	75467021	G	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1343046	2	18702313	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs9970286	1	111737398	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1249096	2	199723365	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1108574	19	10819967	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1051652	4	106688904	A
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1482744	6	142838173	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9634470	13	109918493	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1220231	6	45530471	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1051575	5	156810072	C
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f_rs	rs1087020	9	139257411	T
Respiratory	FEV1_maximum'f	_3063_0_f_QU	rs6688537	1	239850588	C
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs4309038	1	201884647	G
Respiratory	FEV1_maximum'f	_3063_0_f_QU	rs1085183	15	71628370	T
Cardiovascular	pulse_minimum'f	_102_0_f_QUA	rs2509961	11	62310909	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1175902	6	126792095	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs7989847	5	179598771	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2637254	10	78312002	G
Biological assays - FE	White_blood_ce	f_30000_0_0_f_rs	rs6062304	20	62351539	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1085824	9	139102831	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6733504	2	242495953	A
Respiratory	FEV1_maximum'f	_3063_0_f_QU	rs2284746	1	17306675	C
Respiratory	FEV1_maximum'f	_3063_0_f_QU	rs4866846	5	43976162	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6201277	15	63866877	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1951121	14	23429729	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1700928	1	221204299	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1024630	7	7286445	A
Immuno-inflammati	Hair_balding_pa	f_2395_0_0_f_F	rs9807668	18	42827898	C
Immuno-inflammati	Pattern_1_f_	f_2395_0_code:	rs9807668	18	42827898	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7267346	1	60966772	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs7713065	5	131788334	A
ENT and maxillofaci	NIOPC_tonsillec	t_f_20004_dxCod	rs2007403	4	106131210	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1270769	7	84569510	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2451951	9	109496630	T
Anthropometry	Body_fat_perce	f_23099_0_0_f_rs	rs9661802	1	6678864	A
Respiratory	FEV1_maximum'f	_3063_0_f_QU	rs2974389	3	13787641	A
Respiratory	TA_FEV1_never_	QUANT_FEV1_n	rs2284746	1	17306675	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6207027	17	28263980	A
Respiratory	FEV1_maximum'f	_3063_0_f_QU	rs2014787	5	148611675	G
Respiratory	FEV1_maximum'f	_3063_0_f_QU	rs2014787	5	148611675	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2014787	5	148611675	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2014787	5	148611675	G
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs803923	9	119401650	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs2768551	6	109270656	G
Puberty	Age_when_peric	f_2714_0_0_f_(	rs1757787	17	44208218	A
Biological assays - FE	Red_blood_cell_	f_30010_0_0_f_rs	rs7872188	9	4124377	C
Neurosciences	Fluid_intelligenc	f_20016_20191.	rs3486479	6	27459923	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2974389	3	13787641	A

Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs4328080	1	219963088	G	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1123580	11	73290163	A
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f	rs4968200	17	7448457	C	
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs1102077	6	140271357	A	
Puberty	Relative_age_vof_2385_0_0_f	(rs1757787	17	44208218	A	
Respiratory	FEV1_maximum f_3063_0_f_QU	rs2701110	12	114669870	C	
Respiratory	PEF_maximumV f_3064_0_f_QU	rs567508	11	126008910	G	
Biological assays - FE	Lymphocyte_cof_30120_0_0_f	rs3435163	17	16030520	T	
Biological assays - FE	Platelet_distribuf_30110_0_0_f	rs2070600	6	32151443	C	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs996865	17	69371318	C
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs7715901	5	147856392	A	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7261515	7	99635967	G
Biological assays - FE	High_light_scattf_30290_0_0_f	rs3844313	6	32635629	G	
Respiratory	FEV1_maximum f_3063_0_f_QU	rs6212640	2	18309132	T	
Gastroenterology, h	NIOPC_inguinal_f_20004_dxCod	rs1430193	2	56120853	A	
ENT and maxillofaci	M2W_nasal_pol map2way_NI_c	rs3548056	3	71583177	A	
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs633286	18	8809273	C
Biological assays - FE	Mean_corpusculf_30050_0_0_f	rs330939	8	9018590	T	
Respiratory	TA_copdMappin BIN_copdMappi	rs330939	8	9018590	T	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1244780	16	58075282	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1300958	2	24018480	G	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs5610488	16	4361138	T
Immuno-inflammati	MED_antiinflam M01A_antiinfla	rs1117211	12	57527283	T	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1249096	2	199723365	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1723268	7	46448518	T
Anthropometry	Standing_height f_50_0_0_f_QU	rs1344555	3	169300219	C	
Biological assays - FE	Eosinophill_percf_30210_0_0_f	rs330939	8	9018590	T	
Neurosciences	Headache f_6159_code1_l	rs3486479	6	27459923	G	
ENT and maxillofaci	MED_decongest R01A_deconges	rs7713065	5	131788334	A	
Metabolic and endo	PROXYS_Diabetef_20111_0_cod	rs6780171	3	185503456	T	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1690985	9	98204792	G
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs3486479	6	27459923	G	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3486479	6	27459923	G
Immuno-inflammati	M2W_sjogrens_ map2way_NI_c	rs3486479	6	27459923	G	
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f	rs1294580	17	46552229	T	
Respiratory	FEV1_maximum f_3063_0_f_QU	rs6688537	1	239850588	C	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2283847	22	28181399	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2851944	17	54195453	C
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs1430193	2	56120853	A	
Biological assays - FE	Mean_platelet_1f_30100_0_0_f	rs7269986	14	93114787	G	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6138639	20	25669052	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1005966	5	121410529	C
Mental health	Getting_up_in_r f_1170_0_0_f	(rs1757787	17	44208218	A	
Neurosciences	PROXYM_Parkin f_20110_0_cod	rs1757787	17	44208218	A	
Respiratory	FVC_maximumV f_3062_0_f_QU	rs7767232	17	62497964	C	
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2070600	6	32151443	C	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6133207	2	239316560	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6133207	2	239316560	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7713065	5	131788334	A	
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs2571445	2	218683154	A	

Respiratory	PEF_maximumV f_3064_0_f_QU	rs9661802	1	6678864	A
Cardiovascular	NIOPC_varicose_f_20004_dxCod	rs3486479	6	27459923	G
Biological assays - FE	Monocyte_coun f_30130_0_0_f_rs	1757787	17	44208218	A
Biological assays - FE	Haematocrit_pe f_30030_0_0_f_rs	1294580	17	46552229	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1200345	15	41819716	C
Biological assays - FE	Red_blood_cell_f_30070_0_0_f_rs	330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2799098	1	218521609	G
Biological assays - FE	Platelet_crit f_30090_0_0_f_rs	3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs3849969	10	75525999	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1700928	1	221204299	A
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_rs	7424771	2	161276378	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs5593808	6	7565376	C
Cardiovascular	systolic_blood_p f_4080_0_f_QU	rs2571445	2	218683154	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1024630	7	7286445	A
Gastroenterology, h	OPC_Primary_ref_41210_41200	rs1294421	6	6743149	T
Anthropometry	Waist_circumfer f_48_0_0_f_QU	rs6062304	20	62351539	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2571445	2	218683154	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs6681426	1	150586971	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1688308	6	73658053	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1688308	6	73658053	T
Anthropometry	Whole_body_faif_23101_0_0_f_rs	1419429	1	155137395	G
Anthropometry	Whole_body_waif_23102_0_0_f_rs	1419429	1	155137395	G
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1243826	15	84502549	C
Anthropometry	Whole_body_faif_23101_0_0_f_rs	1430193	2	56120853	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1170482	22	18450287	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7872188	9	4124377	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs4444235	14	54410919	T
Biological assays - FE	Platelet_crit f_30090_0_0_f_rs	1091960	1	198898157	A
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1269840	7	156127246	G
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs9689096	6	34188892	A
Respiratory	TA_copdMappin BIN_copdMappi	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1209294	1	204434927	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6681426	1	150586971	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2007403	4	106131210	C
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1269840	7	156127246	G
Biological assays - FE	Reticulocyte_peif_30240_0_0_f_rs	7424771	2	161276378	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1170482	22	18450287	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6032942	20	10745545	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1343046	2	18702313	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1165850	17	36886828	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2637254	10	78312002	G
Biological assays - FE	Neutrophill_per f_30200_0_0_f_rs	3751837	16	3583173	C
Musculoskeletal dis	MED_topical_pr M02A_topical_p	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs9385988	6	142560957	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs2509961	11	62310909	T
Respiratory	FEV1_maximum f_3063_0_f_QU	rs3844313	6	32635629	G
Biological assays - FE	Mean_corpuscul f_30040_0_0_f_rs	330939	8	9018590	T
Urology	OPC_Diagnostic_f_41210_41200	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7218675	17	73513185	C
Respiratory	FEV1_maximum f_3063_0_f_QU	rs4866846	5	43976162	A

Respiratory	TA_FEV1_never_QUANT_FEV1_nrs7715901	5	147856392	A
Respiratory	PEF_maximumV f_3064_0_f_QU rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs2811415	3	127991527	A
Cardiovascular	pulse_minimum' f_102_0_f_QUA rs1165850	17	36886828	G
Anthropometry	Whole_body_fat f_23101_0_0_f_ rs772920	12	56390364	C
Mental health	Neuroticism_sccf_20127_0_0_f_ rs3486479	6	27459923	G
Anthropometry	Whole_body_wa f_23102_0_0_f_ rs772920	12	56390364	C
Puberty	Age_when_peric f_2714_0_0_f_ (rs4924525	15	41255396	C
Respiratory	FEV1_maximum' f_3063_0_f_QU rs4651005	1	178719306	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs4651005	1	178719306	C
Biological assays - FE	Reticulocyte_pe f_30240_0_0_f_ rs6201277	15	63866877	T
Biological assays - FE	Reticulocyte_co f_30250_0_0_f_ rs6201277	15	63866877	T
Biological assays - FE	High_light_scatt f_30290_0_0_f_ rs6201277	15	63866877	T
Biological assays - FE	High_light_scatt f_30300_0_0_f_ rs6201277	15	63866877	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs6201277	15	63866877	T
Anthropometry	Body_fat_perce f_23099_0_0_f_ rs7269986	14	93114787	G
Biological assays - FE	Lymphocyte_co f_30120_0_0_f_ rs6207063	17	29087285	G
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs7277644	5	77440196	G
Respiratory	M2W_chronic_c map2way_NI_ c rs1311699	4	145442364	G
Respiratory	PEF_maximumV f_3064_0_f_QU rs1286664	3	25529280	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs4820216	22	20854161	T
Anthropometry	Weight f_21002_0_0_f_ rs772920	12	56390364	C
Cardiovascular	systolic_blood_ p f_4080_0_f_QU rs4924525	15	41255396	C
Biological assays - FE	Mean_platelet_1 f_30100_0_0_f_ rs6681426	1	150586971	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers1170482	22	18450287	A
Respiratory	TA_copdMappin BIN_copdMappi rs1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs7989847	5	179598771	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1209623	1	26796922	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs6231631	4	75676529	G
Biological assays - FE	Red_blood_cell_ f_30070_0_0_f_ rs181206	16	28513403	A
Respiratory	FEV1_maximum' f_3063_0_f_QU rs6088813	20	33975181	C
Respiratory	FVC_maximumV f_3062_0_f_QU rs8089865	18	50957922	G
Anthropometry	Standing_height f_50_0_0_f_QU rs6133207	2	239316560	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs6133207	2	239316560	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers5634193	3	168715808	A
Cardiovascular	systolic_blood_ p f_4080_0_f_QU rs1119184	10	105639611	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs7465401	8	70367248	T
Biological assays - FE	High_light_scatt f_30300_0_0_f_ rs7424771	2	161276378	G
Respiratory	TA_copdMappin BIN_copdMappi rs1751313	1	40035686	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs6733504	2	242495953	A
Cardiovascular	Diastolic_blood_ f_4079_0_f_QU rs1085183	15	71628370	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs2811415	3	127991527	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs2283847	22	28181399	C
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs9689096	6	34188892	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs9689096	6	34188892	A
Respiratory	TA_copdMappin BIN_copdMappi rs7090277	10	12278021	T
Respiratory	PEF_maximumV f_3064_0_f_QU rs6207027	17	28263980	A
Respiratory	FEV1_maximum' f_3063_0_f_QU rs1165850	17	36886828	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs6207063	17	29087285	G
Respiratory	FVC_maximumV f_3062_0_f_QU rs1214063	1	92374517	C

Respiratory	FVC_maximumV	f_3062_0_0_f_QU	rs1214063	1	92374517	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1024630	7	7286445	A
Biological assays - FE	Platelet_distrib	f_30110_0_0_f_rs	9689096	6	34188892	A
Anthropometry	Weight	f_21002_0_0_f_rs	1108574	19	10819967	C
Respiratory	FVC_maximumV	f_3062_0_0_f_QU	rs1108574	19	10819967	C
Anthropometry	Whole_body_wa	f_23102_0_0_f_rs	1430193	2	56120853	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6082098	10	75639578	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs3743609	16	75467021	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1108574	19	10819967	C
Metabolic and endo	HES_Thyrotoxic	HES_p_E05_BIN	rs3486479	6	27459923	G
Respiratory	PEF_maximumV	f_3064_0_0_f_QU	rs4866846	5	43976162	A
Respiratory	FVC_maximumV	f_3062_0_0_f_QU	rs803765	13	71647588	C
Respiratory	TA_NI_adult_on	BIN_NI_adult_o	rs8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1430193	2	56120853	A
Respiratory	FVC_maximumV	f_3062_0_0_f_QU	rs1102077	6	140271357	A
ENT and maxillofaci	Hearing_difficul	f_2257_0_0_f_E	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7274397	9	98878881	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7274397	9	98878881	A
Anthropometry	Whole_body_wa	f_23102_0_0_f_rs	4237643	11	43648368	T
Anthropometry	Standing_height	f_50_0_0_f_QU	rs2799098	1	218521609	G
Metabolic and endo	M2W_diabetes	map2way_NI_c	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7872188	9	4124377	C
Biological assays - FE	Red_blood_cell	f_30070_0_0_f_rs	8067511	17	37611352	C
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs7238093	18	20728158	A
Immuno-inflammati	Pattern_2_f	f_2395_0_code:	rs1757787	17	44208218	A
Respiratory	PEF_maximumV	f_3064_0_0_f_QU	rs1311069	4	89815695	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs1482744	6	142838173	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs633286	18	8809273	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7108254	11	86436086	T
Biological assays - FE	Platelet_count	f_30080_0_0_f_rs	8068952	17	59286644	G
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs8025774	15	67483276	C
Respiratory	FEV1_maximum	f_3063_0_0_f_QU	rs7108254	11	86436086	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1430193	2	56120853	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs330939	8	9018590	T
Eye	Intra_ocular_pre	f_5255_0_0_f_(	rs2571445	2	218683154	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1051575	5	156810072	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7838717	8	145504343	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1490265	3	67452043	C
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs2799098	1	218521609	G
Metabolic and endo	HES_Thyrotoxic	HES_p_E05_BIN	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1448044	5	44296986	G
Respiratory	PEF_maximumV	f_3064_0_0_f_QU	rs1165850	17	36886828	G
Respiratory	FEV1_maximum	f_3063_0_0_f_QU	rs772920	12	56390364	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6231631	4	75676529	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1494502	12	65824670	A
Musculoskeletal dise	OPC_Fusion_of	f_41210_41200	rs1757787	17	44208218	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs2070600	6	32151443	C
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1117211	12	57527283	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs9636166	19	31829613	A
Urology	CREG_mal_neo	f_40006_0_p_C	rs2007403	4	106131210	C

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs1005966	5	121410529	C
Respiratory	TA_copdMappin BIN_copdMappirs7090277	10	12278021	T
Respiratory	PEF_maximumV f_3064_0_f_QU rs2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs1200345	15	41819716	C
Respiratory	PEF_maximumV f_3064_0_f_QU rs2701110	12	114669870	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs7290420	2	157046432	T
Respiratory	PEF_maximumV f_3064_0_f_QU rs1165850	17	36886828	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs1165850	17	36886828	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs2451951	9	109496630	T
Respiratory	FVC_maximumV f_3062_0_f_QU rs3424550	15	40397191	C
Respiratory	TA_FEV1_perce QUANT_FEV1_prs1310942	4	145330628	G
Biological assays - FE	Haematocrit_pe f_30030_0_0_f_rs803765	13	71647588	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs1753140	1	186113852	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs1753140	1	186113852	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs1753140	1	186113852	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers7872188	9	4124377	C
Respiratory	TA_FEV1_never_ QUANT_FEV1_nrs7872188	9	4124377	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs1162038	13	99665512	C
Respiratory	PEF_maximumV f_3064_0_f_QU rs1294580	17	46552229	T
Anthropometry	Body_fat_perce f_23099_0_0_f_rs6681426	1	150586971	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs2834440	21	35690499	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs2834440	21	35690499	G
Respiratory	PEF_maximumV f_3064_0_f_QU rs567508	11	126008910	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs7238093	18	20728158	A
Biological assays - U	Potassium_in_urf_30520_0_0_f_rs1173984	5	609661	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs772920	12	56390364	C
Musculoskeletal dise	M2W_dupuytrei map2way_NI_cr rs7838717	8	145504343	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers4128298	8	11823332	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers7989847	5	179598771	T
Biological assays - FE	Red_blood_cell_f_30070_0_0_f_rs3844313	6	32635629	G
Biological assays - FE	Mean_corpusculf_30060_0_0_f_rs1751313	1	40035686	C
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f_rs9689096	6	34188892	A
Anthropometry	Whole_body_fatf_23101_0_0_f_rs6080405	1	118870373	G
Respiratory	TA_copdMappin BIN_copdMappirs2768551	6	109270656	G
Biological assays - FE	Monocyte_coun f_30130_0_0_f_rs2322659	2	136555659	T
Respiratory	TA_FEV1_perce QUANT_FEV1_prs6140050	20	6632901	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs3525199	15	49706145	A
Respiratory	HESBL_Chronic_ HES_block_p_J4rs7713065	5	131788334	A
Respiratory	FEV1_maximum' f_3063_0_f_QU rs7713065	5	131788334	A
Gynaecology and Ok	Age_at_menopa f_3581_0_0_f_(rs8067511	17	37611352	C
Respiratory	TA_FEV1_never_ QUANT_FEV1_nrs7872188	9	4124377	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs5610488	16	4361138	T
Anthropometry	Whole_body_fatf_23101_0_0_f_rs4237643	11	43648368	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs2544536	2	15906854	T
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f_rs2284746	1	17306675	C
Respiratory	TA_FEV1_perce QUANT_FEV1_prs1085037	12	115201436	G
Respiratory	FEV1_maximum' f_3063_0_f_QU rs6437219	2	241844033	C
Respiratory	FEV1_maximum' f_3063_0_f_QU rs35506	12	115500691	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs1951121	14	23429729	T
Musculoskeletal dise	BMD_Combined f_3148_4105_4 rs3486479	6	27459923	G

Respiratory	FEV1_maximumV f_3063_0_f_QU	rs9970286	1	111737398	G
Respiratory	HESBL_Chronic_HES_block_p_J4	rs1250462	4	145436324	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2283847	22	28181399	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6088813	20	33975181	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs4885681	13	80467235	C
Anthropometry	Standing_height f_50_0_0_f_QU	rs4924525	15	41255396	C
Mental health	Sleeplessness_inf_1200_0_0_f_(	rs4309038	1	201884647	G
Gastroenterology, h	HES_Haemorrh HES_p_l84_BIN_	rs1117600	12	66409367	C
Anthropometry	Body_fat_perce f_23099_0_0_f_	rs1299762	2	202970250	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1299762	2	202970250	C
Anthropometry	Weight f_21002_0_0_f_	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1751313	1	40035686	C
Respiratory	FEV1_maximumV f_3063_0_f_QU	rs35506	12	115500691	T
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2701110	12	114669870	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs4328080	1	219963088	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1249096	2	199723365	G
Biological assays - FE	Mean_sphered_f_30270_0_0_f_	rs181206	16	28513403	A
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1102077	6	140271357	A
Cardiovascular	M2W_hypertens map2way_NI_c	rs4924525	15	41255396	C
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1005966	5	121410529	C
Biological assays - FE	Monocyte_perce f_30190_0_0_f_	rs6207027	17	28263980	A
Immuno-inflammati	MED_corticoste D07C_corticoste	rs1247086	2	102926362	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2834440	21	35690499	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs5634193	3	168715808	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2834440	21	35690499	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1259146	15	71788387	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1220231	6	45530471	T
Anthropometry	Whole_body_fat f_23101_0_0_f_	rs7095607	10	69957350	G
Musculoskeletal dise	grip_strength_m f_47_46_QUAN	rs967497	9	131943843	A
Anthropometry	Whole_body_wa f_23102_0_0_f_	rs6080405	1	118870373	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2451951	9	109496630	T
Biological assays - FE	Neutrophill_perce f_30200_0_0_f_	rs1087020	9	139257411	T
Musculoskeletal dise	NIOPC_knee_sur f_20004_dxCod	rs6088813	20	33975181	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6088813	20	33975181	C
Respiratory	TA_copdMappin BIN_copdMappi	rs1170482	22	18450287	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs7277644	5	77440196	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs7090277	10	12278021	T
Respiratory	FVC_maximumV f_3062_0_f_QU	rs4294980	2	218604356	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7465401	8	70367248	T
Metabolic and endo	M2W_type_1_d map2way_NI_c	rs3486479	6	27459923	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1286664	3	25529280	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2007403	4	106131210	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1269840	7	156127246	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs4444235	14	54410919	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7713065	5	131788334	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs633286	18	8809273	C

Biological assays - FE	Platelet_distribu	f_30110_0_0_f_rs6780171	3	185503456	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs1051652	4	106688904	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs1951121	14	23429729	T
Anthropometry	Standing_height	f_50_0_0_f_QUrs1165395	17	62686730	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs1247086	2	102926362	G
Biological assays - FE	High_light_scatt	f_30290_0_0_f_rs1951121	14	23429729	T
Anthropometry	Whole_body_w	f_23102_0_0_f_rs7095607	10	69957350	G
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f_rs2284746	1	17306675	C
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f_rs303752	18	21074255	G
Respiratory	PEF_maximumV	f_3064_0_f_QUrs1270769	7	84569510	C
Respiratory	FEV1_maximum	f_3063_0_f_QUrs1416685	1	51243374	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_prs1310942	4	145330628	G
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_rs3486479	6	27459923	G
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs2283847	22	28181399	C
Anthropometry	Weight	f_21002_0_0_f_rs4968200	17	7448457	C
Biological assays - FE	Eosinophill_per	f_30210_0_0_f_rs4968200	17	7448457	C
Anthropometry	Whole_body_fat	f_23101_0_0_f_rs181206	16	28513403	A
Neurosciences	incorect_match	e_f_399_0_f_QUAr6207027	17	28263980	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs1688308	6	73658053	T
Respiratory	FEV1_maximum	f_3063_0_f_QUrs4651005	1	178719306	C
Respiratory	HES_Asthma	HES_p_J45_BINrs772920	12	56390364	C
Respiratory	PEF_maximumV	f_3064_0_f_QUrs6032942	20	10745545	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers2544536	2	15906854	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs3542003	16	53935407	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_prs91731	5	33334312	C
Metabolic and endo	HES_Insulin_dep	HES_p_E10_BINrs3486479	6	27459923	G
Respiratory	PEF_maximumV	f_3064_0_f_QUrs1243826	15	84502549	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs1737889	20	31042176	C
Biological assays - FE	Mean_sphered	f_30270_0_0_f_rs1247086	2	102926362	G
General health, smo	Number_of_trea	f_137_0_0_f_Qlrs967497	9	131943843	A
Respiratory	FEV1_maximum	f_3063_0_f_QUrs803765	13	71647588	C
Anthropometry	Standing_height	f_50_0_0_f_QUrs6437219	2	241844033	C
Respiratory	PEF_maximumV	f_3064_0_f_QUrs1192404	1	92068967	A
Respiratory	TA_NI_adult_on	BIN_NI_adult_or772920	12	56390364	C
Biological assays - FE	Platelet_distribu	f_30110_0_0_f_rs8082036	17	3882613	G
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs2284746	1	17306675	C
Musculoskeletal dise	BMD_Combined	f_3148_4105_4rs2834440	21	35690499	G
Respiratory	PEF_maximumV	f_3064_0_f_QUrs1192404	1	92068967	A
Biological assays - FE	Red_blood_cell	f_30010_0_0_f_rs181206	16	28513403	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_prs9636166	19	31829613	A
Biological assays - FE	Monocyte_perce	f_30190_0_0_f_rs303752	18	21074255	G
Immuno-inflammati	Pattern_2_f	f_2395_0_code:rs2637254	10	78312002	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs4444235	14	54410919	T
Respiratory	FVC_maximumV	f_3062_0_f_QUrs2014787	5	148611675	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_prs2812208	13	50707087	G
Respiratory	FVC_maximumV	f_3062_0_f_QUrs7238093	18	20728158	A
Musculoskeletal dise	grip_strength_m	f_47_46_QUANrs2812208	13	50707087	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers6088813	20	33975181	C
Respiratory	FEV1_maximum	f_3063_0_f_QUrs2236519	20	45529571	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_prs2236519	20	45529571	G

Respiratory	PEF_maximumV f_3064_0_f_QU	rs1458979	3	55150677	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1102077	6	140271357	A
Respiratory	TA_copdMappin BIN_copdMappi	rs9385988	6	142560957	A
Medication	MED_other_ana N02B_other_an	rs1117211	12	57527283	T
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_	rs8067511	17	37611352	C
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs1118988	4	146174040	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1118988	4	146174040	C
Respiratory	TA_copdMappin BIN_copdMappi	rs1311069	4	89815695	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7108254	11	86436086	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1311069	4	89815695	T
Anthropometry	Standing_height f_50_0_0_f_QU	rs6207027	17	28263980	A
Biological assays - FE	Platelet_distribuf_30110_0_0_f_	rs6138639	20	25669052	C
ENT and maxillofaci	Hearing_difficult f_2257_0_0_f_	rs3486479	6	27459923	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs3973397	16	70040398	G
Respiratory	TA_FEV1_perce QUANT_FEV1_pr	rs3973397	16	70040398	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1282031	12	96255704	T
Biological assays - FE	Monocyte_perce f_30190_0_0_f_	rs1737889	20	31042176	C
Musculoskeletal dise	HES_Other_syst HES_p_M35_BII	rs3486479	6	27459923	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs7713065	5	131788334	A
Mental health	Getting_up_in_r f_1170_0_0_f_	rs6133207	2	239316560	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2014787	5	148611675	G
Respiratory	TA_NI_pediatric BIN_NI_pediatri	rs1096594	9	23588583	C
Respiratory	TA_FEV1_perce QUANT_FEV1_pr	rs4651005	1	178719306	C
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs2283847	22	28181399	C
Respiratory	TA_FEV1_perce QUANT_FEV1_pr	rs35506	12	115500691	T
Respiratory	TA_FEV1_perce QUANT_FEV1_pr	rs35506	12	115500691	T
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs4952564	2	42243850	A
ENT and maxillofaci	M2W_nasal_pol map2way_NI_c	rs7713065	5	131788334	A
Biological assays - FE	Eosinophill_perce f_30210_0_0_f_	rs1951121	14	23429729	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7261515	7	99635967	G
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs6062304	20	62351539	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2256462	10	81685593	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7267346	1	60966772	T
Gastroenterology, h	M2W_inguinal_t map2way_NI_c	rs3486479	6	27459923	G
Biological assays - FE	White_blood_cel f_30000_0_0_f_	rs8067511	17	37611352	C
Biological assays - FE	Platelet_distribuf_30110_0_0_f_	rs1300958	2	24018480	G
Respiratory	TA_copdMappin BIN_copdMappi	rs1247731	2	239877148	C
Metabolic and endo	NIOPC_thyroid_ f_20004_dxCod	rs3486479	6	27459923	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs2348418	12	28689514	T
Immuno-inflammati	M2W_eczemad map2way_NI_c	rs6062304	20	62351539	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1269840	7	156127246	G
Biological assays - FE	Reticulocyte_pe f_30240_0_0_f_	rs1951121	14	23429729	T
Respiratory	TA_copdMappin BIN_copdMappi	rs1751313	1	40035686	C
Respiratory	TA_FEV1_perce QUANT_FEV1_pr	rs1751313	1	40035686	C
Musculoskeletal dise	HES_Other_rhe HES_p_M06_BII	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_pr	rs1513272	7	28200097	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1247731	2	239877148	C
Respiratory	TA_FEV1_perce QUANT_FEV1_pr	rs1513272	7	28200097	C
Anthropometry	Whole_body_fat f_23101_0_0_f_	rs1751313	1	40035686	C
Biological assays - FE	High_light_scatt f_30300_0_0_f_	rs1951121	14	23429729	T

Respiratory	TA_copdMappin	BIN_copdMappi	rs1247086	2	102926362	G
ENT and maxillofacia	M2W_nasal_pol	map2way_NI_c	rs772920	12	56390364	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs6437219	2	241844033	C
Biological assays - FE	Platelet_crit	f_30090_0_0_f	rs3847402	10	30267810	G
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f	rs2070600	6	32151443	C
Cardiovascular	systolic_blood_p	f_4080_0_f_QU	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7405312	14	54346010	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1490265	3	67452043	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1490265	3	67452043	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1490265	3	67452043	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs7269986	14	93114787	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1494502	12	65824670	A
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2045517	4	89870964	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1014178	14	74817418	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1014178	14	74817418	A
ENT and maxillofacia	HES_Nasal_poly	HES_p_J33_BIN	rs3548056	3	71583177	A
Immuno-inflammati	M2W_eczemade	map2way_NI_c	rs3844313	6	32635629	G
Respiratory	HES_Other_chro	HES_p_J44_BIN	rs1250462	4	145436324	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2236519	20	45529571	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2863171	11	45250732	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1458979	3	55150677	A
ENT and maxillofacia	Snoring	f_1210_0_0_f_E	rs1757787	17	44208218	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6751968	2	18570024	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs633286	18	8809273	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1118988	4	146174040	C
Urology	HESBL_Sympton	HES_block_p_R	rs1085183	15	71628370	T
Haematology	HESBL_Aplastic	HES_block_p_D	rs3844313	6	32635629	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1800888	5	148206885	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2146098	1	186090370	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs7290420	2	157046432	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1859962	17	69108753	G
Biological assays - FE	High_light_scatt	f_30290_0_0_f	rs7424771	2	161276378	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9661687	1	78387270	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs2045517	4	89870964	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1448044	5	44296986	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1416685	1	51243374	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs7923409	15	49409527	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs8025774	15	67483276	C
Immuno-inflammati	NI_basal_cell_caf	20001_0_DX	rs3548056	3	71583177	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3548056	3	71583177	A
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs7713065	5	131788334	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1085183	15	71628370	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1214063	1	92374517	C
Haematology	HES_Other_anae	HES_p_D64_BIN	rs3844313	6	32635629	G
Mental health	Risk_taking	f_2040_0_0_f_E	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2293871	10	124273671	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7767232	17	62497964	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs9689096	6	34188892	A
Immuno-inflammati	Hair_balding_pa	f_2395_0_0_f_E	rs4328080	1	219963088	G
Immuno-inflammati	Pattern_1_f	f_2395_0_code	rs4328080	1	219963088	G

Anthropometry	Standing_height f_50_0_0_f_QU	rs1214063	1	92374517	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1751313	1	40035686	C
Anthropometry	Whole_body_wa f_23102_0_0_f_rs	rs181206	16	28513403	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1700928	1	221204299	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1269840	7	156127246	G
Urology	OPC_Open_excif_41210_41200	rs1859962	17	69108753	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2701110	12	114669870	C
Anthropometry	Standing_height f_50_0_0_f_QU	rs330939	8	9018590	T
Biological assays - FE	Haemoglobin_cc f_30020_0_0_f_rs	rs803765	13	71647588	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1049823	2	229502503	C
Anthropometry	Whole_body_faif_23101_0_0_f_rs	rs2284746	1	17306675	C
Musculoskeletal dise	M2W_joint_disc map2way_NI_c	rs6088813	20	33975181	C
Respiratory	TA_copdMappin BIN_copdMappi	rs1051575	5	156810072	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6435952	2	217614730	A
Biological assays - FE	Haemoglobin_cc f_30020_0_0_f_rs	rs6207027	17	28263980	A
Biological assays - FE	Haematocrit_pe f_30030_0_0_f_rs	rs6207027	17	28263980	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs967497	9	131943843	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6207027	17	28263980	A
Respiratory	HES_Asthma HES_p_J45_BIN	rs7713065	5	131788334	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1299762	2	202970250	C
Musculoskeletal dise	NIOPC_arthroscf_20004_dxCod	rs6088813	20	33975181	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2974389	3	13787641	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs7108254	11	86436086	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7108254	11	86436086	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs4885681	13	80467235	C
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs4846480	1	218598469	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1091960	1	198898157	A
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs7277644	5	77440196	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs4128298	8	11823332	T
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1448044	5	44296986	G
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs5610488	16	4361138	T
Anthropometry	Whole_body_faif_23101_0_0_f_rs	rs7713065	5	131788334	A
Musculoskeletal dise	M2W_osteearth map2way_NI_c	rs1108574	19	10819967	C
Immuno-inflammati	M2W_connectiv map2way_NI_c	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs967497	9	131943843	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1165850	17	36886828	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs4237643	11	43648368	T
Respiratory	HESCH_Diseases HES_chapter_p	rs2070600	6	32151443	C
Gynaecology and O	CREG_carc_in_sif_40006_0_p_D	rs2070600	6	32151443	C
Anthropometry	Weight f_21002_0_0_f_rs	rs3844313	6	32635629	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs5960615	17	79952944	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2834440	21	35690499	G
Respiratory	M2W_asthma map2way_NI_c	rs3486479	6	27459923	G
Medication	Paracetamol f_6154_0_code	rs3486479	6	27459923	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs6062304	20	62351539	A
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs1300958	2	24018480	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs771924	9	1555835	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs3548056	3	71583177	A
Gastroenterology, h	OPC_Primary_ref_41210_41200	rs3486479	6	27459923	G
Cancer	MED_antimetab L01B_antimetab	rs3844313	6	32635629	G

Anthropometry	Weight	f_21002_0_0_f_rs1102077	6	140271357	A
Respiratory	FVC_maximumV	f_3062_0_f_QU rs1700928	1	221204299	A
Musculoskeletal dise	grip_strength_mf_47_46_QUAN	rs3548056	3	71583177	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs7512895	1	219483218	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1406225	2	145797829	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1406225	2	145797829	G
Anthropometry	Standing_height	f_50_0_0_f_QU rs2851944	17	54195453	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1419429	1	155137395	G
Respiratory	FEV1_maximum	f_3063_0_f_QU rs1209294	1	204434927	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n rs1344555	3	169300219	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs3847402	10	30267810	G
Anthropometry	Whole_body_w	f_23102_0_0_f_rs2284746	1	17306675	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs6088813	20	33975181	C
Biological assays - FE	Platelet_count	f_30080_0_0_f_rs6207063	17	29087285	G
Urology	PROXYF_Prostat	f_20107_0_cod rs1859962	17	69108753	G
Gastroenterology, h	HESBL_Hernia	HES_block_p_K rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs7424771	2	161276378	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1262725	21	35368402	G
Biological assays - FE	Platelet_count	f_30080_0_0_f_rs7269986	14	93114787	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs1595029	3	158241767	A
Neurosciences	Fluid_intelligenc	f_20016_20191 rs2007403	4	106131210	C
Anthropometry	Whole_body_fat	f_23101_0_0_f_rs803923	9	119401650	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs2544536	2	15906854	T
Respiratory	FVC_maximumV	f_3062_0_f_QU rs2509961	11	62310909	T
Respiratory	FVC_maximumV	f_3062_0_f_QU rs4651005	1	178719306	C
Biological assays - FE	Red_blood_cell	f_30010_0_0_f_rs6062304	20	62351539	A
Respiratory	FEV1_maximum	f_3063_0_f_QU rs2236519	20	45529571	G
Metabolic and endo	HESCH_Endocrin	HES_chapter_p rs2070600	6	32151443	C
Respiratory	FVC_maximumV	f_3062_0_f_QU rs1343046	2	18702313	C
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f_rs1219898	6	7720059	G
Respiratory	PEF_maximumV	f_3064_0_f_QU rs3847402	10	30267810	G
Puberty	Age_when_peric	f_2714_0_0_f_(rs1249096	2	199723365	G
Neurosciences	Morning_evenin	f_1180_0_0_f_(rs1120535	1	150249101	C
Respiratory	PEF_maximumV	f_3064_0_f_QU rs1120535	1	150249101	C
Respiratory	TA_copdMappin	BIN_copdMappi rs1482744	6	142838173	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e rs1108574	19	10819967	C
Musculoskeletal dise	HES_Fibroblastic	HES_p_M72_BII rs7838717	8	145504343	T
Metabolic and endo	MED_antithyroi	H03B_antithyro rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1102077	6	140271357	A
Respiratory	PEF_maximumV	f_3064_0_f_QU rs1243826	15	84502549	C
Respiratory	TA_copdMappin	BIN_copdMappi rs1990950	5	156920756	G
Respiratory	FEV1_maximum	f_3063_0_f_QU rs3751837	16	3583173	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e rs2544536	2	15906854	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs7155279	14	92485881	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs2701110	12	114669870	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1269840	7	156127246	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs91731	5	33334312	C
Respiratory	PEF_maximumV	f_3064_0_f_QU rs6212640	2	18309132	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1737889	20	31042176	C
Respiratory	MED_other_syst	R03D_other_sy: rs8025774	15	67483276	C

General health, smo	Number_of_self	f_135_0_0_f_Q	rs8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3424550	15	40397191	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs1049823	2	229502503	C
Cardiovascular	pulse_minimum	f_102_0_f_QUA	rs1513272	7	28200097	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1165395	17	62686730	G
Urology	HESBL_Diseases	HES_block_p_N	rs3486479	6	27459923	G
Immuno-inflammati	HES_Systemic_l	HES_p_M32_BII	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2441026	5	53444498	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6082098	10	75639578	C
Metabolic and endo	PROXYM_Diabet	f_20110_0_cod	rs1513272	7	28200097	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1084130	12	19808912	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7272413	15	41977690	A
Immuno-inflammati	MED_corticoste	D07A_corticost	rs7713065	5	131788334	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs3743609	16	75467021	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2637254	10	78312002	G
Biological assays - FE	Red_blood_cell	f_30010_0_0_f	rs6207027	17	28263980	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs7989847	5	179598771	T
Biological assays - FE	Haemoglobin_cc	f_30020_0_0_f	rs1262725	21	35368402	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1698268	14	84309664	A
Biological assays - FE	Monocyte_perce	f_30190_0_0_f	rs7899503	10	65087468	C
Anthropometry	Weight	f_21002_0_0_f	rs6733504	2	242495953	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs3849969	10	75525999	A
Biological assays - FE	Red_blood_cell	f_30010_0_0_f	rs6138639	20	25669052	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs5634193	3	168715808	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2863171	11	45250732	A
Anthropometry	Body_fat_perce	f_23099_0_0_f	rs4309038	1	201884647	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1300958	2	24018480	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs7465401	8	70367248	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs9807668	18	42827898	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1551943	5	52195033	G
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f	rs9689096	6	34188892	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs7989847	5	179598771	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1595029	3	158241767	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1165850	17	36886828	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs4294980	2	218604356	G
Neurosciences	Headache	f_6159_code1_l	rs772920	12	56390364	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1051652	4	106688904	A
Biological assays - FE	Reticulocyte_co	f_30250_0_0_f	rs1951121	14	23429729	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1668091	18	22290711	T
Respiratory	MED_other_dru	R03B_other_dru	rs1051575	5	156810072	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6437219	2	241844033	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3973397	16	70040398	G
Anthropometry	Whole_body_w	f_23102_0_0_f	rs1751313	1	40035686	C
Mental health	Neuroticism_scc	f_20127_0_0_f	rs4128298	8	11823332	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4128298	8	11823332	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs3743609	16	75467021	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs3973397	16	70040398	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9807668	18	42827898	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs9807668	18	42827898	C
Eye	M2W_glaucoma	map2way_NI_c	rs2852009	4	7846240	C

Urology	CREGBL_mal_ne f_40006_block_rs2007403	4	106131210	C
Biological assays - FE	Mean_corpusculf_30040_0_0_f_rs1247086	2	102926362	G
Respiratory	FEV1_maximum f_3063_0_f_QU rs1416685	1	51243374	G
Respiratory	TA_copdMappin BIN_copdMappi rs1170482	22	18450287	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs4846480	1	218598469	A
Respiratory	TA_FEV1_never_QUANT_FEV1_n rs6212640	2	18309132	T
Anthropometry	Whole_body_wa f_23102_0_0_f_rs2007403	4	106131210	C
Biological assays - FE	Eosinophill_perce f_30210_0_0_f_rs7269986	14	93114787	G
Gastroenterology, h	HES_Femoral_hε HES_p_K41_BIN rs1430193	2	56120853	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1108574	19	10819967	C
Respiratory	FVC_maximumV f_3062_0_f_QU rs8089865	18	50957922	G
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs4328080	1	219963088	G
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs3525199	15	49706145	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs3525199	15	49706145	A
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs7272413	15	41977690	A
Respiratory	PROXYF_Chronic f_20107_0_cod rs1250462	4	145436324	T
Respiratory	TA_FEV1_never_QUANT_FEV1_n rs633286	18	8809273	C
Respiratory	TA_copdMappin BIN_copdMappi rs1051652	4	106688904	A
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs1698268	14	84309664	A
Respiratory	PEF_maximumV f_3064_0_f_QU rs4128298	8	11823332	T
Respiratory	MED_adrenergic R03A_adrenergi rs8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs7465401	8	70367248	T
Anthropometry	Whole_body_wa f_23102_0_0_f_rs803923	9	119401650	G
Respiratory	PEF_maximumV f_3064_0_f_QU rs3847402	10	30267810	G
Respiratory	MED_adrenergic R03C_adrenergi rs8025774	15	67483276	C
Musculoskeletal dise	BMD_Combined f_3148_4105_4 rs8025774	15	67483276	C
Biological assays - FE	Mean_corpusculf_30050_0_0_f_rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs1751313	1	40035686	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1751313	1	40035686	C
Mental health	Ever_depressed_f_4598_0_0_f_ε rs3486479	6	27459923	G
Biological assays - FE	Neutrophill_perce f_30200_0_0_f_rs7899503	10	65087468	C
Musculoskeletal dise	Knee_pain_for_ε f_3773_0_0_f_ε rs1108574	19	10819967	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1551943	5	52195033	G
Respiratory	MED_adrenergic R03C_adrenergi rs9385988	6	142560957	A
Anthropometry	Whole_body_fat f_23101_0_0_f_rs2007403	4	106131210	C
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs6032942	20	10745545	G
Respiratory	FVC_maximumV f_3062_0_f_QU rs1134738	19	41124155	T
Musculoskeletal dise	grip_strength_m f_47_46_QUAN rs1419429	1	155137395	G
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs1117211	12	57527283	T
Respiratory	PEF_maximumV f_3064_0_f_QU rs1300958	2	24018480	G
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs8089099	18	10078071	G
Gastroenterology, h	HESBL_Hernia HES_block_p_Kε rs8025774	15	67483276	C
Respiratory	TA_copdMappin BIN_copdMappi rs3486479	6	27459923	G
Respiratory	FVC_maximumV f_3062_0_f_QU rs7872188	9	4124377	C
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs1269840	7	156127246	G
Respiratory	FEV1_maximum f_3063_0_f_QU rs1551943	5	52195033	G
Respiratory	TA_FEV1_FVC_rε QUANT_FEV1_F rs2811415	3	127991527	A
Neurosciences	Fluid_intelligenc f_20016_20191 rs181206	16	28513403	A
Respiratory	TA_FEV1_never_QUANT_FEV1_n rs3751837	16	3583173	C
Respiratory	TA_FEV1_never_QUANT_FEV1_n rs2768551	6	109270656	G

Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1259146	15	71788387	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs4866846	5	43976162	A
Cardiovascular	pulse_minimum	f_102_0_f_QUA	rs6201277	15	63866877	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6201277	15	63866877	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9533803	13	44820608	C
Cardiovascular	MED_ace_inhibi	C09A_ace_inhib	rs9661802	1	6678864	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs1311069	4	89815695	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6201277	15	63866877	T
Musculoskeletal dise	Knee_pain	f_6159_code7_l	rs1108574	19	10819967	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1416685	1	51243374	G
Biological assays - FE	Eosinophill_per	f_30210_0_0_f_	rs1091960	1	198898157	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs996865	17	69371318	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1051575	5	156810072	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9533803	13	44820608	C
Gastroenterology, h	HES_Inguinal_he	HES_p_K40_BIN	rs3486479	6	27459923	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs4294980	2	218604356	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2084448	2	187530520	T
Anthropometry	Body_mass_inde	f_21001_0_0_f_	rs1310942	4	145330628	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2894837	6	56336406	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4237643	11	43648368	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs1118988	4	146174040	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs586936	3	73862616	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs586936	3	73862616	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1024630	7	7286445	A
Urology	HES_Unspecifie	HES_p_R31_BIN	rs3844313	6	32635629	G
Mental health	Neuroticism_scc	f_20127_0_0_f_	rs1175902	6	126792095	A
Biological assays - FE	White_blood_cep	f_30000_0_0_f_	rs1175902	6	126792095	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1300958	2	24018480	G
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs4651005	1	178719306	C
Infectious disease	MED_tetracyclin	J01A_tetracycli	rs3844313	6	32635629	G
Cardiovascular	Blood_pressure	f_6153_6177_0	rs9661802	1	6678864	A
Gynaecology and Ot	M2W_vaginal_p	map2way_NI_c	rs1123580	11	73290163	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs4128298	8	11823332	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs4128298	8	11823332	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1430193	2	56120853	A
Anthropometry	Weight	f_21002_0_0_f_	rs6062304	20	62351539	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1108574	19	10819967	C
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f_	rs1209623	1	26796922	G
Metabolic and endo	M2W_hypothyrc	map2way_NI_c	rs1083636	11	35308988	T
Biological assays - FE	Monocyte_perce	f_30190_0_0_f_	rs1209623	1	26796922	G
Cardiovascular	Diastolic_blood	f_4079_0_f_QU	rs1170482	22	18450287	A
Anthropometry	Body_fat_perce	f_23099_0_0_f_	rs6207027	17	28263980	A
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs1751313	1	40035686	C
Musculoskeletal dise	HES_Coxarthrosi	HES_p_M16_BI	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs3424550	15	40397191	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs803765	13	71647588	C
Gastroenterology, h	M2W_hiatus_he	map2way_NI_c	rs1173984	5	609661	G
Metabolic and endo	HESBL_Diabetes	HES_block_p_E	rs1751313	1	40035686	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1751313	1	40035686	C

Urology	HES_Unspecif	HES_p_R31_BIN	rs1085183	15	71628370	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2070600	6	32151443	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2811415	3	127991527	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1247086	2	102926362	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs3849969	10	75525999	A
Eye	Corneal_resist	f_5265_0_0_f_(	rs3548056	3	71583177	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs3548056	3	71583177	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs5593808	6	7565376	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1102077	6	140271357	A
Respiratory	MED_adrenergic	R03C_adrenergi	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1595029	3	158241767	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2348418	12	28689514	T
Medication	MED_vitamin_b	B03B_vitamin_t	rs2070600	6	32151443	C
Anthropometry	Body_fat_perce	f_23099_0_0_f_	rs2322659	2	136555659	T
Anthropometry	Whole_body_fat	f_23100_0_0_f_	rs2322659	2	136555659	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1595029	3	158241767	A
ENT and maxillofaci	MED_decongest	R01A_deconges	rs1051575	5	156810072	C
Respiratory	Wheeze_or_whi	f_2316_0_0_f_	rs8025774	15	67483276	C
Eye	Corneal_hystere	f_5264_0_0_f_(	rs8025774	15	67483276	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2863171	11	45250732	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2863171	11	45250732	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4968200	17	7448457	C
ENT and maxillofaci	Dentures	f_6149_0_codel	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs5960615	17	79952944	C
Medication	MED_vitamin_a	A11C_vitamin_	rs3844313	6	32635629	G
Respiratory	TA_copdMappin	BIN_copdMappi	rs803923	9	119401650	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1051652	4	106688904	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2834440	21	35690499	G
Biological assays - FE	Mean_corpuscul	f_30040_0_0_f_	rs6780171	3	185503456	T
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs2974389	3	13787641	A
ENT and maxillofaci	Dentures	f_6149_0_codel	rs6201277	15	63866877	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6201277	15	63866877	T
Biological assays - FE	White_blood_ce	f_30000_0_0_f_	rs1300958	2	24018480	G
Musculoskeletal dise	M2W_ankylosin	map2way_NI_c	rs3844313	6	32635629	G
Cardiovascular	pulse_minimum	f_102_0_f_QUA	rs193686	7	116431427	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs8082036	17	3882613	G
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_	rs1513272	7	28200097	C
ENT and maxillofaci	NIOPC_tonsille	f_20004_dxCod	rs6681426	1	150586971	G
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs6780171	3	185503456	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs4820216	22	20854161	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs8067511	17	37611352	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1595029	3	158241767	A
Respiratory	HES_Other_chro	HES_p_J44_BIN	rs1311699	4	145442364	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1448044	5	44296986	G
Respiratory	M2W_asthma	map2way_NI_c	rs1117211	12	57527283	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs3743609	16	75467021	G
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2768551	6	109270656	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7290420	2	157046432	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1024630	7	7286445	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3525199	15	49706145	A

Respiratory	PEF_maximumV f_3064_0_f_QU	rs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1091960	1	198898157	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2146098	1	186090370	A
Respiratory	MED_other_drug R03B_other_drug	rs8025774	15	67483276	C
Respiratory	Wheeze_or_who f_2316_0_0_f_F	rs1250462	4	145436324	T
Cardiovascular	HESCH_Chapter_HES_chapter_p	rs9689096	6	34188892	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs6088813	20	33975181	C
Gastroenterology, h	M2W_abdomina map2way_NI_c	rs8025774	15	67483276	C
Medication	MED_iron_prep B03A_iron_prep	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs3542003	16	53935407	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs1595029	3	158241767	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6133207	2	239316560	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1716339	5	128767384	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2812208	13	50707087	G
Immuno-inflammati	MED_corticoste D07A_corticoste	rs3548056	3	71583177	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs5619686	12	2908330	C
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs2571445	2	218683154	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1716339	5	128767384	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7277644	5	77440196	G
Mental health	Seen_a_psychiat f_2100_0_0_f_F	rs3844313	6	32635629	G
Urology	NIOPC_radical_p f_20004_dxCod	rs1859962	17	69108753	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1799807	3	165548529	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs1085183	15	71628370	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs9533803	13	44820608	C
Anthropometry	Whole_body_fat f_23101_0_0_f_rs	rs6924424	6	7801611	T
Anthropometry	Whole_body_wat f_23102_0_0_f_rs	rs6924424	6	7801611	T
Gastroenterology, h	OPC_Primary_ref_41210_41200	rs1430193	2	56120853	A
Renal	M2W_kidney_st map2way_NI_c	rs1757787	17	44208218	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1698268	14	84309664	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs1051575	5	156810072	C
Operations and Proc	OPC_Excision_of_41210_41200	rs7838717	8	145504343	T
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1269840	7	156127246	G
Biological assays - FE	White_blood_ce f_30000_0_0_f_rs	rs7899503	10	65087468	C
Respiratory	FEV1_maximum f_3063_0_f_QU	rs3849969	10	75525999	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6780171	3	185503456	T
Anthropometry	Weight f_21002_0_0_f_rs	rs1430193	2	56120853	A
Eye	Corneal_resista f_5257_0_0_f_C	rs3548056	3	71583177	A
Biological assays - FE	Red_blood_cell f_30070_0_0_f_rs	rs2070600	6	32151443	C
Anthropometry	Whole_body_wat f_23102_0_0_f_rs	rs1723268	7	46448518	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1108574	19	10819967	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs7971039	12	85724305	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7971039	12	85724305	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs803923	9	119401650	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs1051575	5	156810072	C
Respiratory	MED_other_syst R03D_other_sy	rs9385988	6	142560957	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1416685	1	51243374	G
Gastroenterology, h	M2W_abdomina map2way_NI_c	rs1294421	6	6743149	T
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs2571445	2	218683154	A
Respiratory	TA_copdMappin BIN_copdMappi	rs1757787	17	44208218	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1108574	19	10819967	C

ENT and maxillofacial	OPC_Other_ope f_41210_41200	rs1247086	2	102926362	G	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs5764946	9	101632854	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs5764946	9	101632854	G
Anthropometry	Body_mass_inde	f_21001_0_0_f	rs330939	8	9018590	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs633286	18	8809273	C
Cardiovascular	Blood_pressure_f	_6153_6177_0	rs3743609	16	75467021	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1214063	1	92374517	C
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs2863171	11	45250732	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2544536	2	15906854	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1243826	15	84502549	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1430193	2	56120853	A
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs2974389	3	13787641	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1990950	5	156920756	G
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs7108254	11	86436086	T
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs1282031	12	96255704	T
Anthropometry	Body_mass_inde	f_21001_0_0_f	rs2322659	2	136555659	T
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs3973397	16	70040398	G
Respiratory	TA_FEV1_ever	sQUANT_FEV1_ers	rs1108574	19	10819967	C
Biological assays - FE	Lymphocyte_co	f_30120_0_0_f	rs772920	12	56390364	C
Biological assays - FE	Mean_reticuloc	yf_30260_0_0_f	rs6780171	3	185503456	T
Anthropometry	Weight	f_21002_0_0_f	rs2322659	2	136555659	T
Biological assays - FE	White_blood_ce	f_30000_0_0_f	rs3751837	16	3583173	C
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f	rs3751837	16	3583173	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs4237643	11	43648368	T
Cardiovascular	MED_ace_inhibi	C09B_ace_inhib	rs8068952	17	59286644	G
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs7267346	1	60966772	T
Neurosciences	M2W_chronic	de map2way_NI	crs2070600	6	32151443	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1494502	12	65824670	A
Respiratory	MED_other_syst	R03D_other_sy	rs3486479	6	27459923	G
Anthropometry	Weight	f_21002_0_0_f	rs1175902	6	126792095	A
Metabolic and endo	M2W_type_2_d	map2way_NI	crs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2283847	22	28181399	C
Biological assays - FE	Immature_retic	f_30280_0_0_f	rs181206	16	28513403	A
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs3486479	6	27459923	G
Musculoskeletal dis	HES_Seropositiv	HES_p_M05_BII	rs3844313	6	32635629	G
Respiratory	HESBL_Chronic	_HES_block_p_J	rs772920	12	56390364	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1343046	2	18702313	C
Cardiovascular	MED_ace_inhibi	C09B_ace_inhib	rs1513272	7	28200097	C
General health, smo	Number_of_trea	f_137_0_0_f_Q	rs1513272	7	28200097	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs2811415	3	127991527	A
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f	rs7753012	6	142745883	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1458979	3	55150677	A
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs3424550	15	40397191	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7155279	14	92485881	G
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1344555	3	169300219	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2146098	1	186090370	A
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs1482744	6	142838173	C

Metabolic and endo	HESBL_Diabetes_HES_block_p_E	rs3844313	6	32635629	G	
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs7269986	14	93114787	G	
Anthropometry	Standing_height_f_50_0_0_f_QU	rs2863171	11	45250732	A	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1014178	14	74817418	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs8025774	15	67483276	C
General health, smo	Number_of_trea	f_137_0_0_f_Q	rs1751313	1	40035686	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs633286	18	8809273	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1494502	12	65824670	A
Anthropometry	Body_mass_inde	f_21001_0_0_f_	rs1751313	1	40035686	C
Immuno-inflammati	MED_corticoste	D07A_corticost	rs8025774	15	67483276	C
Cardiovascular	PROXYM_High_t	f_20110_0_cod	rs3743609	16	75467021	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1085037	12	115201436	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1085037	12	115201436	G
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs1595029	3	158241767	A
Cardiovascular	Blood_pressure_f_6153_6177_0	rs4924525	15	41255396	C	
Biological assays - FE	Mean_platelet_f	_f_30100_0_0_f_	rs1300958	2	24018480	G
Cardiovascular	MED_antithrom	B01A_antithron	rs1513272	7	28200097	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2894837	6	56336406	A
Neurosciences	Headaches_for_f_3799_0_0_f_	rs3743609	16	75467021	G	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1024630	7	7286445	A
General health, smo	Number_of_self	f_135_0_0_f_Q	rs1513272	7	28200097	C
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_	rs303752	18	21074255	G
Anthropometry	Whole_body_fa	f_23100_0_0_f_	rs9661802	1	6678864	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1173984	5	609661	G
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs8082036	17	3882613	G	
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs6088813	20	33975181	C
Cardiovascular	Blood_pressure_f_6153_6177_0	rs1513272	7	28200097	C	
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7424771	2	161276378	G
Biological assays - FE	Mean_reticuloc	f_30260_0_0_f_	rs4128298	8	11823332	T
Metabolic and endo	M2W_diabetes_map2way_NI	crs3844313	6	32635629	G	
Respiratory	TA_copdMappin	BIN_copdMappi	rs2768551	6	109270656	G
Respiratory	M2W_emphyse	map2way_NI	crs1250462	4	145436324	T
Biological assays - FE	Platelet_distrib	f_30110_0_0_f_	rs2304645	15	40716253	G
Respiratory	HESCH_Diseases	HES_chapter_p	rs8067511	17	37611352	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs8082036	17	3882613	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1737889	20	31042176	C
Cardiovascular	HES_Essential_p	HES_p_l10_BIN	rs9689096	6	34188892	A
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs1406225	2	145797829	G
Respiratory	TA_copdMappin	BIN_copdMappi	rs1049823	2	229502503	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1294580	17	46552229	T
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs1294580	17	46552229	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs4885681	13	80467235	C
Biological assays - FE	Mean_sphered_f_30270_0_0_f_	rs1209623	1	26796922	G	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1209294	1	204434927	T
Biological assays - FE	Platelet_count	f_30080_0_0_f_	rs2202572	18	53566471	A
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7621917	16	50188929	G
Biological assays - FE	Red_blood_cell_f_30010_0_0_f_	rs1119184	10	105639611	T	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs567508	11	126008910	G
Biological assays - FE	Haemoglobin_cc	f_30020_0_0_f_	rs1085183	15	71628370	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1751313	1	40035686	C

Anthropometry	Standing_height f_50_0_0_f_QU	rs1299762	2	202970250	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1737889	20	31042176	C
Respiratory	HESBL_Chronic_HES_block_p_J4	rs3471297	4	106819053	G
Musculoskeletal dise	HES_Fibroblastic_HES_p_M72_BI	rs7713065	5	131788334	A
Eye	Corneal_hystere f_5264_0_0_f_(	rs7872188	9	4124377	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs9385988	6	142560957	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs967497	9	131943843	A
Respiratory	M2W_emphyser map2way_NI_c	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs5593808	6	7565376	C
Respiratory	HESBL_Chronic_HES_block_p_J4	rs8025774	15	67483276	C
Respiratory	TA_FEV1_perceer QUANT_FEV1_p	rs1123580	11	73290163	A
Biological assays - FE	Reticulocyte_coif_30250_0_0_f_	rs9689096	6	34188892	A
Gastroenterology, h	MED_intestinal_A07E_intestinal_	rs772920	12	56390364	C
ENT and maxillofaci	HES_Nasal_poly|HES_p_J33_BIN_	rs772920	12	56390364	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs772920	12	56390364	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs772920	12	56390364	C
Respiratory	TA_FEV1_perceer QUANT_FEV1_p	rs1737889	20	31042176	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2852009	4	7846240	C
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1117600	12	66409367	C
Cardiovascular	M2W_essential_map2way_NI_c	rs9689096	6	34188892	A
Gastroenterology, h	MED_drugs_for_A02B_drugs_for	rs1173984	5	609661	G
Gastroenterology, h	HES_Diaphragm;HES_p_K44_BIN	rs1173984	5	609661	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1173984	5	609661	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1173984	5	609661	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1173984	5	609661	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1343046	2	18702313	C
Anthropometry	Body_mass_inde f_21001_0_0_f_	rs6207027	17	28263980	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs2070600	6	32151443	C
Cardiovascular	systolic_blood_ p f_4080_0_f_QU	rs9661802	1	6678864	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs9661802	1	6678864	A
Cardiovascular	Cholesterol_low f_6153_6177_0_	rs6207027	17	28263980	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs7238093	18	20728158	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs5610488	16	4361138	T
Anthropometry	Body_mass_inde f_21001_0_0_f_	rs3435163	17	16030520	T
Cardiovascular	pulse_minimum'f_102_0_f_QUA	rs1751313	1	40035686	C
Respiratory	TA_FEV1_never_ QUANT_FEV1_n	rs6778584	3	98815640	T
Immuno-inflammati	Pattern_4_f_ f_2395_0_code_	rs1343046	2	18702313	C
Respiratory	TA_copdMappin BIN_copdMappi	rs2045517	4	89870964	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs6032942	20	10745545	G
Respiratory	TA_FEV1_perceer QUANT_FEV1_p	rs6539952	16	86579223	C
Metabolic and endo	HES_Non_insulir HES_p_E11_BIN	rs1751313	1	40035686	C
Cardiovascular	Cholesterol_low f_6153_6177_0_	rs9661802	1	6678864	A
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1800888	5	148206885	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1800888	5	148206885	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1165850	17	36886828	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1123580	11	73290163	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1247086	2	102926362	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1766633	3	29469675	T
Respiratory	TA_copdMappin BIN_copdMappi	rs1102077	6	140271357	A
Gastroenterology, h	M2W_femoral_ t map2way_NI_c	rs1430193	2	56120853	A

Cardiovascular	HESBL_Hyperter	HES_block_p_l1	rs1175902	6	126792095	A
Cardiovascular	HES_Essential_p	HES_p_l10_BIN	rs1175902	6	126792095	A
General health, smo	Number_of_ope	f_136_0_0_f_Q	rs1951121	14	23429729	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs9970286	1	111737398	G
Musculoskeletal dise	TA_osteoarthri	BIN_osteoarthri	rs1757787	17	44208218	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2348418	12	28689514	T
Biological assays - FE	Platelet_crit	f_30090_0_0_f	rs8068952	17	59286644	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6751968	2	18570024	C
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f	rs6062304	20	62351539	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6733504	2	242495953	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs2045517	4	89870964	C
General health, smo	Number_of_self	f_135_0_0_f_Q	rs1751313	1	40035686	C
General health, smo	Overall_health	_f_2178_0_0_f	(rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1751313	1	40035686	C
Gastroenterology, h	NIOPC_endosco	f_20004_dxCod	rs3844313	6	32635629	G
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs1723268	7	46448518	T
Biological assays - FE	Red_blood_cell	f_30010_0_0_f	rs330939	8	9018590	T
Gynaecology and Ok	NI_cervical_canc	f_20001_0_DX	rs2070600	6	32151443	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1165395	17	62686730	G
Respiratory	HESCH_Diseases	HES_chapter_p	rs7713065	5	131788334	A
Mental health	Sleep_duration	f_1160_0_0_f	(rs1757787	17	44208218	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs772920	12	56390364	C
Anthropometry	Whole_body_fat	f_23100_0_0_f	rs6088813	20	33975181	C
Anthropometry	Whole_body_fat	f_23100_0_0_f	rs1751313	1	40035686	C
Biological assays - FE	Platelet_crit	f_30090_0_0_f	rs6681426	1	150586971	G
Anthropometry	Body_fat_perce	f_23099_0_0_f	rs1117211	12	57527283	T
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs3751837	16	3583173	C
Gastroenterology, h	MED_drugs_for	A02B_drugs_for	rs772920	12	56390364	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7838717	8	145504343	T
Neurosciences	M2W_periphera	map2way_NI_c	rs3844313	6	32635629	G
Anthropometry	Whole_body_fat	f_23100_0_0_f	rs1668091	18	22290711	T
Anthropometry	Birth_weight	f_20022_0_0_f	rs1215	17	7163350	A
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f	rs1175902	6	126792095	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs7290420	2	157046432	T
Gastroenterology, h	HESBL_Hernia	HES_block_p_K	rs6088813	20	33975181	C
Biological assays - FE	Monocyte_perce	f_30190_0_0_f	rs181206	16	28513403	A
Eye	Corneal_hystere	f_5256_0_0_f	(rs8025774	15	67483276	C
Gynaecology and Ok	NIOPC_hysterec	f_20004_dxCod	rs6780171	3	185503456	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs772920	12	56390364	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1668091	18	22290711	T
Respiratory	MED_other_dru	R03B_other_dru	rs3548056	3	71583177	A
Neurosciences	Fluid_intelligenc	f_20016_20191	rs3548056	3	71583177	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs303752	18	21074255	G
Biological assays - FE	Red_blood_cell	f_30070_0_0_f	rs1087020	9	139257411	T
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f	rs1087020	9	139257411	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9970286	1	111737398	G
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1270769	7	84569510	C
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs1120535	1	150249101	C
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs1120535	1	150249101	C
Cardiovascular	M2W_essential	map2way_NI_c	rs1175902	6	126792095	A

Immuno-inflammation	MED_immunosuL04A_immunos	rs3844313	6	32635629	G
Anthropometry	Body_mass_index	f_21001_0_0_f_rs2284746	1	17306675	C
Cardiovascular	Diastolic_blood_pressure	f_4079_0_f_QU rs5634193	3	168715808	A
Respiratory	TA_FEV1_percentile	QUANT_FEV1_percentile rs4968200	17	7448457	C
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio rs1102077	6	140271357	A
ENT and maxillofacial	Mouth_ulcers	f_6149_0_code rs6681426	1	150586971	G
Cardiovascular	HESBL_Hyperthermia	HES_block_p1 rs9689096	6	34188892	A
Respiratory	FVC_maximum	V_f_3062_0_f_QU rs2509961	11	62310909	T
Respiratory	FEV1_maximum	f_3063_0_f_QU rs1117600	12	66409367	C
Urology	OPC_Operations	f_41210_41200 rs2070600	6	32151443	C
Neurosciences	M2W_multiple_map2way_NI	chr2070600	6	32151443	C
Respiratory	TA_FEV1_percentile	QUANT_FEV1_percentile rs2070600	6	32151443	C
Respiratory	TA_FEV1 EVER score	QUANT_FEV1 EVER score rs6062304	20	62351539	A
Anthropometry	Standing_height	f_50_0_0_f_QU rs6431620	2	239604970	T
Cardiovascular	MED_lipid_modifier	C10B_lipid_modifier rs9661802	1	6678864	A
Anthropometry	Hip_circumference	f_49_0_0_f_QU rs4846480	1	218598469	A
Respiratory	TA_FEV1_percentile	QUANT_FEV1_percentile rs2974389	3	13787641	A
Anthropometry	Body_fat_percentile	f_23099_0_0_f_rs7277644	5	77440196	G
Anthropometry	Body_fat_percentile	f_23099_0_0_f_rs3486479	6	27459923	G
Gastroenterology, hepatology	OPC_Excision_of	f_41210_41200 rs1117600	12	66409367	C
Respiratory	HES_Empysem	:HES_p_J43_BIN rs1250462	4	145436324	T
Biological assays - FE	Monocyte_count	f_30130_0_0_f_rs7713065	5	131788334	A
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio rs633286	18	8809273	C
Respiratory	TA_FEV1 NEVER	QUANT_FEV1 NEVER rs6681426	1	150586971	G
Cardiovascular	systolic_blood_pressure	f_4080_0_f_QU rs1175902	6	126792095	A
Respiratory	FEV1_maximum	f_3063_0_f_QU rs2070600	6	32151443	C
Anthropometry	Whole_body_fat	f_23101_0_0_f_rs1110718	12	94184082	C
Anthropometry	Whole_body_weight	f_23102_0_0_f_rs1110718	12	94184082	C
Respiratory	FEV1_maximum	f_3063_0_f_QU rs1165395	17	62686730	G
Anthropometry	Whole_body_weight	f_23102_0_0_f_rs3751837	16	3583173	C
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio rs1799807	3	165548529	T
Respiratory	PROXYFM_Chromatin	f_20107_20110 rs1250462	4	145436324	T
Cardiovascular	systolic_blood_pressure	f_4080_0_f_QU rs330939	8	9018590	T
Respiratory	PEF_maximum	V_f_3064_0_f_QU rs9970286	1	111737398	G
General health, smoking	Number_of_opens	f_136_0_0_f_Q rs1300958	2	24018480	G
Biological assays - FE	Red_blood_cell	f_30010_0_0_f_rs1085183	15	71628370	T
Biological assays - FE	Haematocrit_percentage	f_30030_0_0_f_rs1085183	15	71628370	T
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio rs9661687	1	78387270	C
Biological assays - FE	Monocyte_percentage	f_30190_0_0_f_rs1087020	9	139257411	T
Respiratory	FEV1_maximum	f_3063_0_f_QU rs6138639	20	25669052	C
Biological assays - FE	Mean_platelet	f_30100_0_0_f_rs1990950	5	156920756	G
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio rs1096594	9	23588583	C
Respiratory	FEV1_maximum	f_3063_0_f_QU rs1118988	4	146174040	C
Respiratory	TA_copdMapping	BIN_copdMapping rs1118988	4	146174040	C
General health, smoking	Number_of_self	f_135_0_0_f_Q rs1024630	7	7286445	A
Anthropometry	Weight	f_21002_0_0_f_rs3435163	17	16030520	T
Anthropometry	Hip_circumference	f_49_0_0_f_QU rs3435163	17	16030520	T
Respiratory	TA_FEV1_FVC_ratio	QUANT_FEV1_FVC_ratio rs1416685	1	51243374	G
Respiratory	FEV1_maximum	f_3063_0_f_QU rs2627237	6	134339265	A
Musculoskeletal disorders	HES_Acquired_dyslipidemia	HES_p_M20_BIN rs1757787	17	44208218	A

Respiratory	TA_FEV1_never_QUANT_FEV1_nrs1300958	2	24018480	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers7713065	5	131788334	A
Respiratory	FEV1_maximum_f_3063_0_f_QU rs1299762	2	202970250	C
Biological assays - FE	Lymphocyte_cof_30120_0_0_f_rs6207027	17	28263980	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs7267346	1	60966772	T
Respiratory	TA_copdMappin BIN_copdMappirs5764946	9	101632854	G
Anthropometry	Waist_circumfer f_48_0_0_f_QU rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs7176074	15	73833600	G
Metabolic and endo	M2W_thyroid_p map2way_NI_c rs7923409	15	49409527	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs6133207	2	239316560	G
ENT and maxillofaci	MED_decongest R01A_deconges rs8025774	15	67483276	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1458979	3	55150677	A
Biological assays - FE	Mean_sphered_f_30270_0_0_f_rs1091960	1	198898157	A
Anthropometry	Standing_height f_50_0_0_f_QU rs1859962	17	69108753	G
Broad symptoms, sig	HESCH_Diseases HES_chapter_p rs3486479	6	27459923	G
Musculoskeletal disc	M2W_gout map2way_NI_c rs3486479	6	27459923	G
Biological assays - FE	Lymphocyte_cof_30120_0_0_f_rs1215	17	7163350	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs2863171	11	45250732	A
Cardiovascular	MED_lipid_modi C10B_lipid_moc rs1513272	7	28200097	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p rs1610265	3	99420192	C
Biological assays - FE	Monocyte_coun f_30130_0_0_f_rs559233	7	26848830	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_e rs6688537	1	239850588	C
Respiratory	FVC_maximumV f_3062_0_f_QU rs4651005	1	178719306	C
Metabolic and endo	HES_Obesity HES_p_E66_BIN rs181206	16	28513403	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1859962	17	69108753	G
Respiratory	FEV1_maximum_f_3063_0_f_QU rs1490265	3	67452043	C
Respiratory	FEV1_maximum_f_3063_0_f_QU rs4294980	2	218604356	G
Anthropometry	Standing_height f_50_0_0_f_QU rs4294980	2	218604356	G
Gynaecology and Ok	HES_Female_gei HES_p_N81_BIN rs1123580	11	73290163	A
Respiratory	FEV1_maximum_f_3063_0_f_QU rs1448044	5	44296986	G
Cardiovascular	MED_lipid_modi C10A_lipid_moc rs1108574	19	10819967	C
Respiratory	TA_copdMappin BIN_copdMappirs2007403	4	106131210	C
Biological assays - FE	Platelet_count f_30080_0_0_f_rs1250462	4	145436324	T
Respiratory	MED_adrenergic R03C_adrenergi rs330939	8	9018590	T
Neurosciences	Headache f_6159_code1_l rs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs3847402	10	30267810	G
Respiratory	FEV1_maximum_f_3063_0_f_QU rs2441026	5	53444498	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs7512895	1	219483218	G
Anthropometry	Whole_body_waf_23102_0_0_f_rs1215	17	7163350	A
Biological assays - FE	Monocyte_perce f_30190_0_0_f_rs1300958	2	24018480	G
Respiratory	TA_copdMappin BIN_copdMappirs7713065	5	131788334	A
Respiratory	FEV1_maximum_f_3063_0_f_QU rs7971039	12	85724305	G
Metabolic and endo	HESBL_Obesity_ HES_block_p_E rs181206	16	28513403	A
Respiratory	TA_NI_adult_on BIN_NI_adult_o rs3486479	6	27459923	G
Cardiovascular	Cholesterol_low f_6153_6177_0 rs1513272	7	28200097	C
ENT and maxillofaci	OPC_Packing_of f_41210_41200 rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F rs1123580	11	73290163	A
Biological assays - FE	Platelet_crit f_30090_0_0_f_rs1108574	19	10819967	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers4444235	14	54410919	T
Respiratory	M2W_asthma map2way_NI_c rs1243826	15	84502549	C

Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1243826	15	84502549	C
ENT and maxillofaci	Snoring	f_1210_0_0_f	rs6140050	20	6632901	C
Immuno-inflammati	M2W_sarcoidos	map2way_NI_c	rs3844313	6	32635629	G
Gastroenterology, h	M2W_inguinal_t	map2way_NI_c	rs993925	1	218860068	C
Cardiovascular	HESBL_Hyperter	HES_block_p_l1	rs303752	18	21074255	G
Cardiovascular	HES_Essential_p	HES_p_l10_BIN	rs303752	18	21074255	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1109819	4	79403952	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1799807	3	165548529	T
Neurosciences	HESBL_Demyelir	HES_block_p_G	rs2070600	6	32151443	C
Biological assays - FE	Haemoglobin_cc	f_30020_0_0_f	rs1482744	6	142838173	C
Eye	Glaucoma	f_6148_0_code	rs2852009	4	7846240	C
Anthropometry	Weight	f_21002_0_0_f	rs1250462	4	145436324	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6201277	15	63866877	T
Eye	Corneal_resistar	f_5265_0_0_f	(rs1766633	3	29469675	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs9438626	1	26775367	G
Eye	Diabetes_relate	f_6148_0_code	rs6780171	3	185503456	T
Biological assays - FE	Mean_corpuscul	f_30040_0_0_f	rs1209623	1	26796922	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1209623	1	26796922	G
Biological assays - FE	Mean_platelet_1	f_30100_0_0_f	rs303752	18	21074255	G
Biological assays - FE	Eosinophill_per	f_30210_0_0_f	rs1513272	7	28200097	C
Gastroenterology, h	MED_drugs_for_A	O2B_drugs_for	rs3486479	6	27459923	G
Mental health	M2W_depressio	map2way_NI_c	rs3486479	6	27459923	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1051575	5	156810072	C
Respiratory	M2W_asthma	map2way_NI_c	rs1051575	5	156810072	C
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs303752	18	21074255	G
Anthropometry	Whole_body_wa	f_23102_0_0_f	rs303752	18	21074255	G
Gastroenterology, h	NIOPC_haemorr	f_20004_dxCod	rs2007403	4	106131210	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs803923	9	119401650	G
Neurosciences	Headaches_for	f_3799_0_0_f	rs803923	9	119401650	G
ENT and maxillofaci	MED_decongest	R01A_deconges	rs3548056	3	71583177	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs567508	11	126008910	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs567508	11	126008910	G
Respiratory	TA_NI_pediatric	BIN_NI_pediatri	rs1117211	12	57527283	T
Neurosciences	HES_Other_dise	HES_p_G95_BIN	rs1799807	3	165548529	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs7108254	11	86436086	T
Cardiovascular	Diastolic_blood	f_4079_0_f_QU	rs4309038	1	201884647	G
Gastroenterology, h	M2W_hiatus_he	map2way_NI_c	rs2799098	1	218521609	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs2014787	5	148611675	G
Neurosciences	HESBL_Nerve_n	HES_block_p_G	rs3844313	6	32635629	G
Respiratory	MED_other_dru	R03B_other_dru	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1165395	17	62686730	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7424771	2	161276378	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6032942	20	10745545	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6032942	20	10745545	G
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1990950	5	156920756	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs9807668	18	42827898	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1173984	5	609661	G
Cardiovascular	M2W_essential	map2way_NI_c	rs1513272	7	28200097	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs2007403	4	106131210	C
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs3424550	15	40397191	C

Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs7261515	7	99635967	G
Eye	Corneal_resistar	f_5265_0_0_f_(rs2571445	2	218683154	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs2974389	3	13787641	A
Respiratory	FEV1_maximum	f_3063_0_f_QU rs8067511	17	37611352	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs2863171	11	45250732	A
Mental health	Neuroticism_sccf_20127_0_0_f_	rs7872188	9	4124377	C
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f_ rs1262725	21	35368402	G
Respiratory	PEF_maximum	V f_3064_0_f_QU rs6751968	2	18570024	C
Infectious disease	MED_tetracyclin	J01A_tetracyclir rs7713065	5	131788334	A
Respiratory	PEF_maximum	V f_3064_0_f_QU rs2894837	6	56336406	A
Respiratory	PEF_maximum	V f_3064_0_f_QU rs2894837	6	56336406	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs2894837	6	56336406	A
Cardiovascular	Blood_pressure_f_6153_6177_0_	rs1751313	1	40035686	C
Cardiovascular	M2W_high_chol	map2way_NI_c rs9438626	1	26775367	G
Respiratory	FEV1_maximum	f_3063_0_f_QU rs6138639	20	25669052	C
Anthropometry	Weight	f_21002_0_0_f_ rs3751837	16	3583173	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs2146098	1	186090370	A
Respiratory	MED_other_syst	R03D_other_sy: rs967497	9	131943843	A
Biological assays - FE	Monocyte_coun	f_30130_0_0_f_ rs2070600	6	32151443	C
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_ rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs1800888	5	148206885	C
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_ rs7269986	14	93114787	G
Musculoskeletal disc	OPC_Division_of	f_41210_41200_ rs6088813	20	33975181	C
Metabolic and endo	HES_Other_diso	HES_p_E16_BIN rs3486479	6	27459923	G
Respiratory	TA_copd	Mappin BIN_copdMappi rs2045517	4	89870964	C
Gastroenterology, h	MED_hemorrhoi	C05A_agents_fc rs6681426	1	150586971	G
Cardiovascular	STEMI	f_42002_0_0_B rs3849969	10	75525999	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs4924525	15	41255396	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1165850	17	36886828	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs7274397	9	98878881	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F	rs2894837	6	56336406	A
Respiratory	TA_copd	Mappin BIN_copdMappi rs5764946	9	101632854	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs5764946	9	101632854	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs7277644	5	77440196	G
Respiratory	FVC_maximum	V f_3062_0_f_QU rs7090277	10	12278021	T
Anthropometry	Weight	f_21002_0_0_f_ rs8025774	15	67483276	C
Respiratory	FVC_maximum	V f_3062_0_f_QU rs4885681	13	80467235	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs4885681	13	80467235	C
Respiratory	FVC_maximum	V f_3062_0_f_QU rs2821332	1	200085714	T
Cardiovascular	PROXYFM_High_f_20107_20110_	rs3743609	16	75467021	G
Respiratory	PEF_maximum	V f_3064_0_f_QU rs7923409	15	49409527	G
Biological assays - FE	Mean_corpuscul	f_30040_0_0_f_ rs2070600	6	32151443	C
Biological assays - FE	Mean_platelet_1	f_30100_0_0_f_ rs7424771	2	161276378	G
Biological assays - FE	Platelet_count	f_30080_0_0_f_ rs1120535	1	150249101	C
Respiratory	PEF_maximum	V f_3064_0_f_QU rs1120535	1	150249101	C
Anthropometry	Weight	f_21002_0_0_f_ rs1215	17	7163350	A
ENT and maxillofaci	HES_Nasal_poly	| HES_p_J33_BIN rs7713065	5	131788334	A
General health, smo	Number_of_self	f_135_0_0_f_Q| rs7713065	5	131788334	A
Cardiovascular	MED_lipid_modi	C10A_lipid_moc rs3486479	6	27459923	G
Immuno-inflammati	MED_corticoste	i D07A_corticost: rs1051575	5	156810072	C

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs586936	3	73862616	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_e	rs1700928	1	221204299	A
Cardiovascular	NIOPC_varicose_f_20004_dxCod	rs1757787	17	44208218	A
ENT and maxillofaci	Hearing_difficult_f_2257_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs3844313	6	32635629	G
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs772920	12	56390364	C
Respiratory	TA_copdMappin BIN_copdMappi	rs1243826	15	84502549	C
Eye	Corneal_hystere f_5264_0_0_f_(	rs3548056	3	71583177	A
Respiratory	TA_copdMappin BIN_copdMappi	rs5634193	3	168715808	A
Anthropometry	Whole_body_fatf_23101_0_0_f_	rs1215	17	7163350	A
Eye	Intra_ocular_pref_5254_0_0_f_(	rs2852009	4	7846240	C
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs9807668	18	42827898	C
Cardiovascular	MED_lipid_modi C10B_lipid_moc	rs6780171	3	185503456	T
Anthropometry	Whole_body_wæf_23102_0_0_f_	rs3424550	15	40397191	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3424550	15	40397191	C
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f_	rs7753012	6	142745883	T
Urology	OPC_Endoscopicf_41210_41200	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1173984	5	609661	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_e	rs3849969	10	75525999	A
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs330939	8	9018590	T
Mental health	Probable_recurr f_20124_0_0_f_	rs3486479	6	27459923	G
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs330939	8	9018590	T
Metabolic and endo	HESBL_glucose_HES_block_p_E'	rs3486479	6	27459923	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2045517	4	89870964	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7267346	1	60966772	T
Cardiovascular	NIOPC_varicose_f_20004_dxCod	rs2284746	1	17306675	C
Biological assays - FE	Neutrophill_perçf_30200_0_0_f_	rs1800888	5	148206885	C
Respiratory	TA_copdMappin BIN_copdMappi	rs1757787	17	44208218	A
General health, smo	Number_of_opef_136_0_0_f_Q|	rs2007403	4	106131210	C
Immuno-inflammati	MED_antiinflam M01B_antiinflar	rs1513272	7	28200097	C
Biological assays - FE	Eosinophill_courf_30150_0_0_f_	rs1513272	7	28200097	C
Respiratory	M2W_asthma map2way_NI_c|rs	rs1513272	7	28200097	C
Anthropometry	Hip_circumferenf_49_0_0_f_QU	rs1250462	4	145436324	T
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs5764946	9	101632854	G
Gastroenterology, h	Omeprazole_e_çf_6154_0_code'	rs3486479	6	27459923	G
Gastroenterology, h	Stomach_or_abçf_6159_code5_|	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perçer QUANT_FEV1_p	rs1049823	2	229502503	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs4721457	7	15872324	T
Anthropometry	Standing_height f_50_0_0_f_QU	rs1723268	7	46448518	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3424550	15	40397191	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7424771	2	161276378	G
Anthropometry	Body_mass_indeçf_21001_0_0_f_	rs7277644	5	77440196	G
Anthropometry	Waist_circumfer f_48_0_0_f_QU	rs7277644	5	77440196	G
General health, smo	Number_of_treçf_137_0_0_f_Q|	rs1024630	7	7286445	A
Cardiovascular	Blood_pressure_f_6153_6177_0	rs1024630	7	7286445	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_e	rs1766633	3	29469675	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1799807	3	165548529	T
ENT and maxillofaci	Snoring f_1210_0_0_f_	rs1294580	17	46552229	T
Anthropometry	Weight f_21002_0_0_f_	rs1690985	9	98204792	G
Respiratory	TA_copdMappin BIN_copdMappi	rs9970286	1	111737398	G

Respiratory	TA_copdMappin BIN_copdMappi	rs633286	18	8809273	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs2701110	12	114669870	C
Immuno-inflammati	Hair_balding_pa f_2395_0_0_f_	rs8025774	15	67483276	C
Immuno-inflammati	Pattern_1_f_ f_2395_0_code:	rs8025774	15	67483276	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1134738	19	41124155	T
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs1259146	15	71788387	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1120535	1	150249101	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1281181	12	4243749	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs9438626	1	26775367	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs9438626	1	26775367	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7218675	17	73513185	C
Musculoskeletal dise	grip_strength_mf_47_46_QUAN	rs4846480	1	218598469	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs2863171	11	45250732	A
Immuno-inflammati	M2W_hayfeveræ map2way_NI_ç	rs772920	12	56390364	C
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_	rs1250462	4	145436324	T
Anthropometry	Standing_height f_50_0_0_f_QU	rs1005966	5	121410529	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1005966	5	121410529	C
Metabolic and endo	PROXYF_Diabetef_20107_0_cod	rs1513272	7	28200097	C
Biological assays - FE	Monocyte_coun f_30130_0_0_f_	rs1513272	7	28200097	C
Biological assays - FE	Monocyte_perce f_30190_0_0_f_	rs1513272	7	28200097	C
Respiratory	TA_copdMappin BIN_copdMappi	rs1096594	9	23588583	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1259146	15	71788387	C
Biological assays - FE	Mean_reticulocy f_30260_0_0_f_	rs181206	16	28513403	A
Biological assays - FE	Platelet_count f_30080_0_0_f_	rs1928168	6	22017738	T
Metabolic and endo	M2W_type_2_d map2way_NI_ç	rs1175902	6	126792095	A
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1430193	2	56120853	A
Cardiovascular	HES_Other_perij HES_p_l73_BIN_	rs3486479	6	27459923	G
Haematology	M2W_anaemia map2way_NI_ç	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs567508	11	126008910	G
Gastroenterology, h	M2W_abdominæ map2way_NI_ç	rs2799098	1	218521609	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1551943	5	52195033	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs7923409	15	49409527	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs9636166	19	31829613	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6780171	3	185503456	T
General health, smo	Number_of_treæ f_137_0_0_f_Q	rs303752	18	21074255	G
Biological assays - FE	Monocyte_perce f_30190_0_0_f_	rs3435163	17	16030520	T
Medication	Folic_acid_or_Fc f_6155_0_code	rs2070600	6	32151443	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs3844313	6	32635629	G
ENT and maxillofaci	Dentures f_6149_0_code	rs1448044	5	44296986	G
Musculoskeletal dise	Neck_or_should f_6159_code3_|	rs1751313	1	40035686	C
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs3751837	16	3583173	C
Eye	Corneal_hystere f_5256_0_0_f_ç	rs3548056	3	71583177	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7041139	9	18013733	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7041139	9	18013733	C
Musculoskeletal dise	NIOPC_knee_re f_20004_dxCod	rs6088813	20	33975181	C
Biological assays - FE	White_blood_ce f_30000_0_0_f_	rs1299762	2	202970250	C
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_	rs1299762	2	202970250	C
Biological assays - FE	High_light_scatt f_30290_0_0_f_	rs1299762	2	202970250	C
General health, smo	Overall_accelera f_90012_0_0_f_	rs1757787	17	44208218	A
Respiratory	M2W_emphyser map2way_NI_ç	rs1247086	2	102926362	G

Respiratory	PEF_maximumV f_3064_0_f_QU	rs1270769	7	84569510	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1084130	12	19808912	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs4866846	5	43976162	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1024630	7	7286445	A
Metabolic and endo	PROXYFM_Diabef_20107_20110	rs1513272	7	28200097	C
Mental health	Neuroticism_sccf_20127_0_0_f	rs8089865	18	50957922	G
Biological assays - FE	Mean_corpusculf_30050_0_0_f	rs1091960	1	198898157	A
Gynaecology and O	NIOPC_hysterec f_20004_dxCod	rs1119184	10	105639611	T
Biological assays - FE	Mean_corpusculf_30040_0_0_f	rs1119184	10	105639611	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1119184	10	105639611	T
Broad symptoms, sig	HES_Symptoms_HES_p_R63_BIN	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7274397	9	98878881	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7274397	9	98878881	A
Medication	Ibuprofen_e_g_l f_6154_0_code	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs4820216	22	20854161	T
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs803923	9	119401650	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs5764946	9	101632854	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs5764946	9	101632854	G
Biological assays - FE	Eosinophill_cour f_30150_0_0_f	rs1117211	12	57527283	T
Eye	M2W_glaucoma map2way_NI_c	rs1757787	17	44208218	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1494502	12	65824670	A
Gastroenterology, h	HES_Diaphragm: HES_p_K44_BIN	rs2799098	1	218521609	G
Anthropometry	Whole_body_faif_23100_0_0_f	rs772920	12	56390364	C
Respiratory	TA_copdMappin BIN_copdMappi	rs772920	12	56390364	C
Gynaecology and O	NIOPC_hysterec f_20004_dxCod	rs9689096	6	34188892	A
Cardiovascular	M2W_essential_map2way_NI_c	rs303752	18	21074255	G
Gastroenterology, h	M2W_hiatus_he map2way_NI_c	rs3486479	6	27459923	G
Musculoskeletal dis	Knee_pain_for_ f_3773_0_0_f	rs1751313	1	40035686	C
Anthropometry	Body_fat_perce f_23099_0_0_f	rs1419429	1	155137395	G
Musculoskeletal dis	BMD_Combined f_3148_4105_4	rs4294980	2	218604356	G
Musculoskeletal dis	Neck_shoulder_ f_3404_0_0_f	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1419429	1	155137395	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1247086	2	102926362	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs9438626	1	26775367	G
Eye	Intra_ocular_pref_5262_0_0_f	rs2571445	2	218683154	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2571445	2	218683154	A
Biological assays - FE	White_blood_cef_30000_0_0_f	rs1311069	4	89815695	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs8082036	17	3882613	G
Cardiovascular	M2W_hypertens map2way_NI_c	rs772920	12	56390364	C
Biological assays - FE	Platelet_distribuf_30110_0_0_f	rs3847402	10	30267810	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1170482	22	18450287	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2283847	22	28181399	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7989847	5	179598771	T
Cardiovascular	systolic_blood_ f_4080_0_f_QU	rs1951121	14	23429729	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7989847	5	179598771	T
Cardiovascular	Blood_pressure_f_6153_6177_0	rs303752	18	21074255	G
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs3548056	3	71583177	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs9661802	1	6678864	A
Neurosciences	Mean_time_to_ f_20023_0_0_f	rs772920	12	56390364	C
Musculoskeletal dis	MED_topical_pr M02A_topical_	rs1757787	17	44208218	A

Cardiovascular	HES_Essential_p	HES_p_I10_BIN	rs1513272	7	28200097	C
Cardiovascular	pulse_minimum	f_102_0_f_QUA	rs6062304	20	62351539	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1281181	12	4243749	T
Respiratory	PEF_maximum	V_f_3064_0_f_QU	rs1281181	12	4243749	T
Eye	Corneal_resista	f_5257_0_0_f_(r	rs2571445	2	218683154	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1173984	5	609661	G
Breast	CREG_mal_neo	f_40006_0_p_C	rs7713065	5	131788334	A
Breast	CREGBL_mal_ne	f_40006_block	rs7713065	5	131788334	A
Musculoskeletal dis	grip_strength	_mf_47_46_QUAN	rs7713065	5	131788334	A
Musculoskeletal dis	M2W_dupuytrei	map2way_NI_c	rs7713065	5	131788334	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs7713065	5	131788334	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs7713065	5	131788334	A
Anthropometry	Body_fat_perce	r_f_23099_0_0_f	rs1757787	17	44208218	A
Eye	Glaucoma	_f_6148_0_code	rs1757787	17	44208218	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2322659	2	136555659	T
Respiratory	TA_FEV1_perce	r_QUANT_FEV1_pr	rs1259146	15	71788387	C
Respiratory	PEF_maximum	V_f_3064_0_f_QU	rs1117600	12	66409367	C
Respiratory	FVC_maximum	V_f_3062_0_f_QU	rs1343046	2	18702313	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1766633	3	29469675	T
Musculoskeletal dis	grip_strength	_mf_47_46_QUAN	rs4968200	17	7448457	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs9970286	1	111737398	G
Immuno-inflammati	MED_corticoste	D07A_corticost	rs3486479	6	27459923	G
Biological assays - FE	Lymphocyte_co	f_30120_0_0_f	rs1300958	2	24018480	G
Musculoskeletal dis	grip_strength	_mf_47_46_QUAN	rs1300958	2	24018480	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2627237	6	134339265	A
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f	rs4968200	17	7448457	C
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f	rs1406225	2	145797829	G
General health, smo	Number_of_self	f_135_0_0_f_Q	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1083636	11	35308988	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs4237643	11	43648368	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6780171	3	185503456	T
Biological assays - FE	Lymphocyte_co	f_30120_0_0_f	rs1091960	1	198898157	A
Respiratory	TA_FEV1_never	_QUANT_FEV1_nrs	rs6437219	2	241844033	C
Cardiovascular	systolic_blood	_p_f_4080_0_f_QU	rs6082098	10	75639578	C
Respiratory	TA_FEV1_perce	r_QUANT_FEV1_pr	rs2322659	2	136555659	T
Gastroenterology, h	MED_stomatolo	A01A_stomatol	rs1513272	7	28200097	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1859962	17	69108753	G
Anthropometry	Body_mass_ind	e_f_21001_0_0_f	rs1668091	18	22290711	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1668091	18	22290711	T
Respiratory	TA_FEV1_perce	r_QUANT_FEV1_pr	rs1668091	18	22290711	T
Anthropometry	Body_mass_ind	e_f_21001_0_0_f	rs3751837	16	3583173	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6431620	2	239604970	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs6431620	2	239604970	T
Cardiovascular	M2W_hyperten	s_map2way_NI_c	rs1024630	7	7286445	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs6431620	2	239604970	T
Gynaecology and O	OPC_Other_rep	e_f_41210_41200	rs1123580	11	73290163	A
Respiratory	TA_FEV1_perce	r_QUANT_FEV1_pr	rs2070600	6	32151443	C
Cardiovascular	Blood_pressure	_f_6153_6177_0	rs9689096	6	34188892	A
Respiratory	FVC_maximum	V_f_3062_0_f_QU	rs1096594	9	23588583	C
Biological assays - FE	Platelet_crit	_f_30090_0_0_f	rs9689096	6	34188892	A

Cardiovascular	HESBL_Other_foHES_block_p_I3	rs9689096	6	34188892	A	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9807668	18	42827898	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1173984	5	609661	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1173984	5	609661	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs2627237	6	134339265	A
Musculoskeletal dise	OPC_Total_pros	f_41210_41200	rs2236519	20	45529571	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1119184	10	105639611	T
Musculoskeletal dise	grip_strength_mf_47_46	QUAN	rs1243826	15	84502549	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs4866846	5	43976162	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs7290420	2	157046432	T
Biological assays - FE	Platelet_count	f_30080_0_0_f_	rs6140050	20	6632901	C
ENT and maxillofaci	MED_throat_pre	R02A_throat_pr	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1170482	22	18450287	A
Musculoskeletal dise	grip_strength_mf_47_46	QUAN	rs1723268	7	46448518	T
Musculoskeletal dise	Neck_or_should	f_6159_code3_l	rs1108574	19	10819967	C
Urology	HES_Unspecifec	HES_p_R31_BIN	rs1244780	16	58075282	C
Cardiovascular	Blood_pressure_f_6153_6177_0	rs8068952	17	59286644	G	
Eye	OPC_Operations	f_41210_41200	rs3844313	6	32635629	G
Cardiovascular	HESBL_Ischaemi	HES_block_p_I2	rs7090277	10	12278021	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs567508	11	126008910	G
Musculoskeletal dise	TA_osteoarthritis	BIN_osteoarthri	rs1108574	19	10819967	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7923409	15	49409527	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs8082036	17	3882613	G
Eye	Intra_ocular_pre	f_5263_0_0_f_(	rs2284746	1	17306675	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1117600	12	66409367	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7872188	9	4124377	C
Anthropometry	Whole_body_fat	f_23100_0_0_f_	rs3486479	6	27459923	G
Musculoskeletal dise	M2W_ankylosin	map2way_NI_c	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1162038	13	99665512	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1162038	13	99665512	C
Immuno-inflammati	MED_antiinflam	M01B_antiinflar	rs6780171	3	185503456	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1490265	3	67452043	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs7290420	2	157046432	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs6231631	4	75676529	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6231631	4	75676529	G
Cardiovascular	Pulse_wave_Art	f_21021_0_0_f_	rs1311699	4	145442364	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1448044	5	44296986	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs6212640	2	18309132	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1049823	2	229502503	C
Cardiovascular	M2W_hypertens	map2way_NI_c	rs3743609	16	75467021	G
Respiratory	TA_copdMappin	BIN_copdMappi	rs1247731	2	239877148	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2544536	2	15906854	T
Cardiovascular	MED_other_car	C01E_other_car	rs1757787	17	44208218	A
Mental health	Ever_unenthusia	f_4631_0_0_f_	rs1757787	17	44208218	A
Puberty	Age_when_peric	f_2714_0_0_f_(	rs4237643	11	43648368	T
Cardiovascular	MED_ace_inhibi	C09A_ace_inhib	rs1513272	7	28200097	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1494502	12	65824670	A
Cardiovascular	systolic_blood_p	f_4080_0_f_QU	rs5634193	3	168715808	A
Respiratory	MED_adrenergic	R03C_adrenergi	rs967497	9	131943843	A
Biological assays - FE	Mean_reticulocy	f_30260_0_0_f_	rs967497	9	131943843	A

Cardiovascular	pulse_minimum'f_102_0_f_QUA	rs2322659	2	136555659	T
Respiratory	FVC_maximumVf_3062_0_f_QU	rs2322659	2	136555659	T
Cardiovascular	Chest_pain_or_cf_2335_0_0_f_E	rs1247086	2	102926362	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6138639	20	25669052	C
Anthropometry	Waist_circumferf_48_0_0_f_QU	rs772920	12	56390364	C
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	1698268	14	84309664	A
Metabolic and endo	MED_blood_gluA10B_blood_glu	rs1513272	7	28200097	C
Cardiovascular	HESBL_HyperterHES_block_p_l1	rs1513272	7	28200097	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	1165850	17	36886828	G
Metabolic and endo	M2W_hyperthyrmap2way_NI_cr	rs2070600	6	32151443	C
Biological assays - FE	Platelet_critf_30090_0_0_f_r	rs1751313	1	40035686	C
Respiratory	FVC_maximumVf_3062_0_f_QU	rs967497	9	131943843	A
Cardiovascular	M2W_wolff_par map2way_NI_cr	rs1990950	5	156920756	G
Musculoskeletal dise	Neck_shoulder_f_3404_0_0_f_E	rs1108574	19	10819967	C
Respiratory	TA_copdMappinBIN_copdMappi	rs6231631	4	75676529	G
Anthropometry	Body_mass_inde f_21001_0_0_f_r	rs6080405	1	118870373	G
ENT and maxillofaci	NIOPC_tonsillecf_20004_dxCod	rs1162038	13	99665512	C
Respiratory	FEV1_maximumf_3063_0_f_QU	rs2851944	17	54195453	C
ENT and maxillofaci	Mouth_ulcersf_6149_0_code:rs	3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs8089099	18	10078071	G
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	8089099	18	10078071	G
Biological assays - FE	Monocyte_counf_30130_0_0_f_r	rs6245441	7	27182329	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	2701110	12	114669870	C
Gastroenterology, h	HESBL_HerniaHES_block_p_Kr	rs1416685	1	51243374	G
Respiratory	HESBL_Chronic_HES_block_p_J4	rs9385988	6	142560957	A
Neurosciences	Fluid_intelligencf_20016_20191	rs1757787	17	44208218	A
Medication	MED_antihistamR06A_antihistar	rs7713065	5	131788334	A
Biological assays - FE	White_blood_celf_30000_0_0_f_r	rs1087020	9	139257411	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	2283847	22	28181399	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs9533803	13	44820608	C
Gynaecology and Ok	MED_other_gynG02C_other_gyr	rs1757787	17	44208218	A
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	2811415	3	127991527	A
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	1085037	12	115201436	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6133207	2	239316560	G
Biological assays - FE	Red_blood_cellf_30070_0_0_f_r	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1458979	3	55150677	A
Metabolic and endo	HESCH_EndocrinHES_chapter_p_r	rs1513272	7	28200097	C
Respiratory	HES_AsthmaHES_p_J45_BINr	rs7715901	5	147856392	A
Musculoskeletal dise	M2W_fracture_tmap2way_NI_cr	rs9385988	6	142560957	A
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	6688537	1	239850588	C
Cardiovascular	MED_ace_inhibiC09B_ace_inhibr	rs3743609	16	75467021	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	3743609	16	75467021	G
Biological assays - FE	Mean_sphered_f_30270_0_0_f_r	rs6201277	15	63866877	T
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	1551943	5	52195033	G
Breast	OPC_Other_excif_41210_41200	rs7713065	5	131788334	A
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	967497	9	131943843	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1165395	17	62686730	G
Haematology	HES_Other_anaeHES_p_D64_BINr	rs3486479	6	27459923	G
Gynaecology and Ok	HES_Female_geiHES_p_N81_BINr	rs3486479	6	27459923	G
Eye	M2W_cataract map2way_NI_cr	rs3486479	6	27459923	G

Eye	HES_Other_cata	HES_p_H26_BIN	rs3486479	6	27459923	G
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f	rs4924525	15	41255396	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2637254	10	78312002	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2637254	10	78312002	G
Cardiovascular	MED_lipid_modi	C10A_lipid_moc	rs1513272	7	28200097	C
Respiratory	HESBL_Chronic_	HES_block_p_J4	rs1311699	4	145442364	G
Biological assays - FE	Mean_corpuscul	f_30060_0_0_f	rs1219898	6	7720059	G
Eye	Intra_ocular_pre	f_5255_0_0_f	rs8068952	17	59286644	G
Cardiovascular	M2W_heartcard	map2way_NI_c	rs8068952	17	59286644	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs8068952	17	59286644	G
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs6140050	20	6632901	C
Respiratory	TA_NI_adult_on	BIN_NI_adult_o	rs1051575	5	156810072	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1123580	11	73290163	A
Biological assays - FE	Platelet_crit	f_30090_0_0_f	rs181206	16	28513403	A
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1102077	6	140271357	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1102077	6	140271357	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1102077	6	140271357	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1091960	1	198898157	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3435163	17	16030520	T
Metabolic and endo	HESBL_Diabetes	HES_block_p_E	rs1175902	6	126792095	A
Biological assays - FE	Platelet_count	f_30080_0_0_f	rs2070600	6	32151443	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1406225	2	145797829	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1406225	2	145797829	G
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f	rs9472541	6	45622748	T
Respiratory	TA_FEV1_never_	QUANT_FEV1_n	rs2014787	5	148611675	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2256462	10	81685593	C
Respiratory	TA_FEV1_never_	QUANT_FEV1_n	rs772920	12	56390364	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2441026	5	53444498	C
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1249096	2	199723365	G
ENT and maxillofaci	MED_decongest	R01A_deconges	rs3486479	6	27459923	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2627237	6	134339265	A
Biological assays - FE	Platelet_crit	f_30090_0_0_f	rs2571445	2	218683154	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs2571445	2	218683154	A
Anthropometry	Whole_body_fat	f_23100_0_0_f	rs4846480	1	218598469	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1014178	14	74817418	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1737889	20	31042176	C
Respiratory	MED_adrenergic	R03A_adrenergi	rs9385988	6	142560957	A
Musculoskeletal dise	OPC_Primary_d	f_41210_41200	rs9357446	6	44447598	G
Anthropometry	Weight	f_21002_0_0_f	rs1300958	2	24018480	G
Gastroenterology, h	HESBL_Nutrition	HES_block_p_D	rs3844313	6	32635629	G
Respiratory	TA_FEV1_never_	QUANT_FEV1_n	rs4866846	5	43976162	A
Anthropometry	Standing_height	f_50_0_0_f_QU	rs2451951	9	109496630	T
Respiratory	MED_adrenergic	R03A_adrenergi	rs8067511	17	37611352	C
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f	rs1951121	14	23429729	T
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f	rs1951121	14	23429729	T
Cardiovascular	systolic_blood	f_4080_0_f_QU	rs1688308	6	73658053	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6539952	16	86579223	C
Operations and Proc	OPC_Excision_o	f_41210_41200	rs7713065	5	131788334	A
Anthropometry	Standing_height	f_50_0_0_f_QU	rs6751968	2	18570024	C

Respiratory	TA_copdMappin BIN_copdMappi	rs1247086	2	102926362	G
Respiratory	M2W_asthma map2way_NI_c	rs4968200	17	7448457	C
Anthropometry	Body_mass_index_21001_0_0_f	rs9661802	1	6678864	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1800888	5	148206885	C
Biological assays - FE	Mean_sphered_f_30270_0_0_f	rs4128298	8	11823332	T
Respiratory	HES_Haemorrha HES_p_R04_BIN	rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6082098	10	75639578	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs6539952	16	86579223	C
Respiratory	MED_adrenergic R03A_adrenergi	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2627237	6	134339265	A
Urology	M2W_prostate_map2way_NI_c	rs9689096	6	34188892	A
Urology	CREG_mal_neo_f_40006_0_p_C	rs3844313	6	32635629	G
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs1219898	6	7720059	G
Respiratory	Wheeze_or_whi f_2316_0_0_f	rs1311699	4	145442364	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs8089099	18	10078071	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs771924	9	1555835	A
Biological assays - FE	Red_blood_cell_f_30010_0_0_f	rs4924525	15	41255396	C
Biological assays - FE	Eosinophill_cour f_30150_0_0_f	rs1091960	1	198898157	A
Musculoskeletal dis	Knee_pain f_6159_code7_l	rs2070600	6	32151443	C
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1270769	7	84569510	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7238093	18	20728158	A
Cardiovascular	systolic_blood_p f_4080_0_f_QU	rs2007403	4	106131210	C
Biological assays - FE	Mean_corpuscul f_30040_0_0_f	rs6062304	20	62351539	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs5960615	17	79952944	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs3973397	16	70040398	G
Respiratory	FEV1_maximum f_3063_0_f_QU	rs2627237	6	134339265	A
Cardiovascular	PROXYFM_Heart f_20107_20110	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1096594	9	23588583	C
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs3751837	16	3583173	C
Cardiovascular	M2W_hypertens map2way_NI_c	rs9689096	6	34188892	A
Respiratory	MED_adrenergic R03C_adrenergi	rs7715901	5	147856392	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs7267346	1	60966772	T
Biological assays - FE	Immature_retic f_30280_0_0_f	rs1102077	6	140271357	A
Biological assays - FE	White_blood_ce f_30000_0_0_f	rs303752	18	21074255	G
Urology	CREG_mal_neo_f_40006_0_p_C	rs3486479	6	27459923	G
Respiratory	TA_copdMappin BIN_copdMappi	rs633286	18	8809273	C
Cardiovascular	HES_Chronic_isc HES_p_I25_BIN	rs8068952	17	59286644	G
Eye	logMAR_final_rif_5201_0_0_f	(rs1757787	17	44208218	A
Respiratory	MED_adrenergic R03C_adrenergi	rs8067511	17	37611352	C
Metabolic and endo	M2W_diabetes map2way_NI_c	rs1175902	6	126792095	A
Cardiovascular	HESCH_Chapter_HES_chapter_p	rs6062304	20	62351539	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1299762	2	202970250	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1419429	1	155137395	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7108254	11	86436086	T
Biological assays - FE	Red_blood_cell_f_30010_0_0_f	rs2007403	4	106131210	C
Puberty	Age_when_peric f_2714_0_0_f	(rs8025774	15	67483276	C
Respiratory	TA_copdMappin BIN_copdMappi	rs1800888	5	148206885	C
Musculoskeletal dis	HES_Other_intei HES_p_M51_BII	rs3844313	6	32635629	G
Biological assays - FE	Monocyte_coun f_30130_0_0_f	rs4968200	17	7448457	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7424771	2	161276378	G

Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs7424771	2	161276378	G
Respiratory	TA_FEV1_perce	r QUANT_FEV1_p	rs6032942	20	10745545	G
ENT and maxillofaci	Snoring	f_1210_0_0_f_E	rs1416685	1	51243374	G
Respiratory	TA_FEV1_perce	r QUANT_FEV1_p	rs1416685	1	51243374	G
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f_	rs1209623	1	26796922	G
Anthropometry	Whole_body_fat	f_23101_0_0_f_	rs6140050	20	6632901	C
Respiratory	TA_FEV1_FVC_r	r QUANT_FEV1_F	rs5610488	16	4361138	T
Biological assays - FE	Mean_sphered	f_30270_0_0_f_	rs1215	17	7163350	A
Biological assays - FE	Eosinophill_per	c f_30210_0_0_f_	rs7899503	10	65087468	C
Eye	Corneal_resista	r f_5257_0_0_f_	(rs2852009	4	7846240	C
Respiratory	TA_FEV1_FVC_r	r QUANT_FEV1_F	rs6435952	2	217614730	A
Respiratory	TA_FEV1_FVC_r	r QUANT_FEV1_F	rs6435952	2	217614730	A
Respiratory	TA_FEV1_never	_QUANT_FEV1_n	rs6212640	2	18309132	T
Respiratory	TA_FEV1_FVC_r	r QUANT_FEV1_F	rs1109819	4	79403952	G
Gynaecology and Ob	NIOPC_bilateral	_f_20004_dxCod	rs1119184	10	105639611	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1119184	10	105639611	T
Respiratory	TA_FEV1_perce	r QUANT_FEV1_p	rs7267346	1	60966772	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1490265	3	67452043	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1247731	2	239877148	C
Cardiovascular	M2W_hypertens	map2way_NI_c	rs1595029	3	158241767	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs2284746	1	17306675	C
Eye	Intra_ocular_pre	f_5255_0_0_f_	(rs8025774	15	67483276	C
Biological assays - FE	Red_blood_cell	f_30010_0_0_f_	rs2284746	1	17306675	C
Respiratory	TA_FEV1_FVC_r	r QUANT_FEV1_F	rs2084448	2	187530520	T
Respiratory	PROXYM_Chronif	_20110_0_cod	rs1250462	4	145436324	T
Respiratory	HESBL_Chronic	_HES_block_p_	J4rs6062304	20	62351539	A
Gastroenterology, h	HES_Other_dise	.HES_p_K92_BI	rs6062304	20	62351539	A
Respiratory	Wheeze_or_whi	f_2316_0_0_f_E	rs6062304	20	62351539	A
Mental health	MED_antidepres	N06A_antidepre	rs3548056	3	71583177	A
Anthropometry	Body_fat_perce	r f_23099_0_0_f_	rs3548056	3	71583177	A
Respiratory	PROXYF_Lung_c	i f_20107_0_cod	rs3486479	6	27459923	G
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs5619686	12	2908330	C
Biological assays - FE	Mean_platelet	_1f_30100_0_0_f_	rs2007403	4	106131210	C
Biological assays - FE	Platelet_count	f_30080_0_0_f_	rs2811415	3	127991527	A
Respiratory	TA_FEV1_perce	r QUANT_FEV1_p	rs181206	16	28513403	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1490265	3	67452043	C
Gastroenterology, h	M2W_diverticul	map2way_NI_c	rs3743609	16	75467021	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1716339	5	128767384	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs1096594	9	23588583	C
Biological assays - FE	Eosinophill_per	c f_30210_0_0_f_	rs567508	11	126008910	G
Immuno-inflammati	Hair_balding_pa	f_2395_0_0_f_E	rs1300958	2	24018480	G
Immuno-inflammati	Pattern_1_f	f_2395_0_code	rs1300958	2	24018480	G
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f_	rs1300958	2	24018480	G
Respiratory	M2W_asthma	map2way_NI_c	rs967497	9	131943843	A
Musculoskeletal dise	M2W_osteorth	map2way_NI_c	rs9357446	6	44447598	G
Respiratory	MED_adrenergic	R03C_adrenergi	rs1051575	5	156810072	C
Respiratory	TA_FEV1_FVC_r	r QUANT_FEV1_F	rs1430193	2	56120853	A
Respiratory	TA_FEV1_perce	r QUANT_FEV1_p	rs1799807	3	165548529	T
Respiratory	TA_FEV1_FVC_r	r QUANT_FEV1_F	rs7277644	5	77440196	G
Respiratory	TA_FEV1_perce	r QUANT_FEV1_p	rs7277644	5	77440196	G

Respiratory	Wheeze_or_whi f_2316_0_0_f_Ers1751313	1	40035686	C
Respiratory	TA_copdMappin BIN_copdMappi rs1688308	6	73658053	T
Broad symptoms, sig	HESBL_General_HES_block_p_R! rs6062304	20	62351539	A
Anthropometry	Hip_circumferen f_49_0_0_f_QU rs1690985	9	98204792	G
Mental health	PROXYFM_Severf_20107_20110. rs3486479	6	27459923	G
Musculoskeletal dise	TA_osteoarthritis BIN_osteoarthritis rs9357446	6	44447598	G
Neurosciences	HES_Multiple_sc HES_p_G35_BIN rs2070600	6	32151443	C
Cardiovascular	systolic_blood_p f_4080_0_f_QU rs1430193	2	56120853	A
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs4968200	17	7448457	C
Anthropometry	Standing_height f_50_0_0_f_QU rs8089865	18	50957922	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1274475	10	34480582	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1274475	10	34480582	G
Immuno-inflammatory	MED_antiinflam M01A_antiinfla rs1757787	17	44208218	A
Immuno-inflammatory	M2W_systemic_map2way_NI_c rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs6780171	3	185503456	T
Eye	logMAR_final_le f_5208_0_0_f_(rs1757787	17	44208218	A
Respiratory	PEF_maximumV f_3064_0_f_QU rs1170482	22	18450287	A
Respiratory	HES_Asthma HES_p_J45_BIN rs8067511	17	37611352	C
Respiratory	FEV1_maximum' f_3063_0_f_QU rs1551943	5	52195033	G
Immuno-inflammatory	M2W_eczema: map2way_NI_c rs2070600	6	32151443	C
Anthropometry	Whole_body_w: f_23102_0_0_f_ rs6140050	20	6632901	C
Anthropometry	Hip_circumferen f_49_0_0_f_QU rs4885681	13	80467235	C
Respiratory	TA_copdMappin BIN_copdMappi rs1137456	12	95554771	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs1137456	12	95554771	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs7424771	2	161276378	G
Anthropometry	Whole_body_fa f_23101_0_0_f_ rs2851944	17	54195453	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F rs6201277	15	63866877	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers3743609	16	75467021	G
Respiratory	TA_copdMappin BIN_copdMappi rs7405312	14	54346010	G
Respiratory	FEV1_maximum' f_3063_0_f_QU rs1698268	14	84309664	A
Breast	NIOPC_lumpect: f_20004_dxCod rs1416685	1	51243374	G
Respiratory	TA_FEV1_perce: QUANT_FEV1_p rs1416685	1	51243374	G
Eye	MED_antiglauco S01E_antiglaucc rs1757787	17	44208218	A
Respiratory	FEV1_maximum' f_3063_0_f_QU rs9636166	19	31829613	A
Anthropometry	Standing_height f_50_0_0_f_QU rs1610265	3	99420192	C
Respiratory	TA_FEV1_perce: QUANT_FEV1_p rs1610265	3	99420192	C
Musculoskeletal dise	BMD_Combined f_3148_4105_4 rs803923	9	119401650	G
Gynaecology and Ot	M2W_vaginal_p map2way_NI_c rs3486479	6	27459923	G
Gastroenterology, h	M2W_abdomin: map2way_NI_c rs3486479	6	27459923	G
Cardiovascular	Cholesterol_low f_6153_6177_0_ rs6780171	3	185503456	T
ENT and maxillofaci	OPC_Other_ope f_41210_41200 rs7713065	5	131788334	A
Cardiovascular	Diastolic_blood_f_4079_0_f_QU rs8068952	17	59286644	G
Neurosciences	Fluid_intelligenc f_20016_20191 rs1175902	6	126792095	A
Respiratory	MED_adrenergic R03A_adrenergi rs1051575	5	156810072	C
Respiratory	TA_copdMappin BIN_copdMappi rs1051575	5	156810072	C
Biological assays - FE	Haemoglobin_cc f_30020_0_0_f_ rs1751313	1	40035686	C
Metabolic and endo	M2W_type_1_d map2way_NI_c rs1175902	6	126792095	A
Respiratory	TA_FEV1_never_ QUANT_FEV1_n rs1209623	1	26796922	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers1716339	5	128767384	A
Respiratory	TA_FEV1_never_ QUANT_FEV1_n rs1014178	14	74817418	A

Biological assays - FE	Platelet_count	f_30080_0_0_f_rs1294580	17	46552229	T
Metabolic and endo	HES_Non_insulin	HES_p_E11_BIN_rs1175902	6	126792095	A
Respiratory	Wheeze_or_who	f_2316_0_0_f_rs7713065	5	131788334	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers6681426	1	150586971	G
Biological assays - FE	Neutrophil_count	f_30140_0_0_f_rs330939	8	9018590	T
Respiratory	PEF_maximumV	f_3064_0_f_QU_rs330939	8	9018590	T
Biological assays - FE	Haematocrit_percent	f_30030_0_0_f_rs4968200	17	7448457	C
Biological assays - FE	Red_blood_cell	f_30010_0_0_f_rs1131111	22	50867711	C
Musculoskeletal diso	HESBL_Other_jo	HES_block_p_Mrs1757787	17	44208218	A
Respiratory	PEF_maximumV	f_3064_0_f_QU_rs9661802	1	6678864	A
Respiratory	MED_adrenergic	R03A_adrenergic_rs967497	9	131943843	A
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs7108254	11	86436086	T
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs4846480	1	218598469	A
Respiratory	PEF_maximumV	f_3064_0_f_QU_rs4885681	13	80467235	C
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs1085183	15	71628370	T
Medication	MED_opioids	N02A_opioids_rs3751837	16	3583173	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers4885681	13	80467235	C
Metabolic and endo	HES_Other_hypert	HES_p_E03_BIN_rs772920	12	56390364	C
Gastroenterology, h	HES_Haemorrhoid	HES_p_I84_BIN_rs1757787	17	44208218	A
Cardiovascular	pulse_minimum	f_102_0_f_QU_rs6082098	10	75639578	C
Anthropometry	Whole_body_wat	f_23102_0_0_f_rs2851944	17	54195453	C
Anthropometry	Whole_body_fat	f_23100_0_0_f_rs3435163	17	16030520	T
Respiratory	FVC_maximumV	f_3062_0_f_QU_rs3435163	17	16030520	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs1083636	11	35308988	T
Anthropometry	Weight	f_21002_0_0_f_rs3486479	6	27459923	G
Respiratory	PEF_maximumV	f_3064_0_f_QU_rs1294421	6	6743149	T
Respiratory	TA_copdMappin	BIN_copdMappirs3847402	10	30267810	G
Respiratory	TA_copdMappin	BIN_copdMappirs3847402	10	30267810	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs6431620	2	239604970	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_prs4796334	17	6469793	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs7261515	7	99635967	G
Biological assays - FE	Monocyte_percent	f_30190_0_0_f_rs9438626	1	26775367	G
Anthropometry	Hip_circumferen	f_49_0_0_f_QU_rs772920	12	56390364	C
Respiratory	TA_copdMappin	BIN_copdMappirs1551943	5	52195033	G
ENT and maxillofaci	OPC_Other_ope	f_41210_41200_rs3548056	3	71583177	A
Neurosciences	Headache	f_6159_code1_rs3548056	3	71583177	A
Biological assays - FE	Mean_sphered	f_30270_0_0_f_rs1119184	10	105639611	T
Mental health	Getting_up_in_r	f_1170_0_0_f_rs1120535	1	150249101	C
Respiratory	HES_Asthma	HES_p_J45_BIN_rs3471297	4	106819053	G
Cardiovascular	Diastolic_blood	f_4079_0_f_QU_rs4128298	8	11823332	T
Cardiovascular	pulse_minimum	f_102_0_f_QU_rs2571445	2	218683154	A
Biological assays - FE	Haemoglobin_cc	f_30020_0_0_f_rs6138639	20	25669052	C
Biological assays - FE	Lymphocyte_co	f_30120_0_0_f_rs6138639	20	25669052	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs6138639	20	25669052	C
Cardiovascular	MED_beta_bloc	C07F_beta_bloc_rs3844313	6	32635629	G
Eye	M2W_cataract	map2way_NI_cr_rs3844313	6	32635629	G
Anthropometry	Waist_circumfer	f_48_0_0_f_QU_rs9661802	1	6678864	A
Musculoskeletal diso	TA_BIN_combin	map2way_BIN_rs8025774	15	67483276	C
Biological assays - FE	Platelet_crit	f_30090_0_0_f_rs6245441	7	27182329	T
Respiratory	FVC_maximumV	f_3062_0_f_QU_rs6245441	7	27182329	T

Cardiovascular	systolic_blood_p_f_4080_0_f_QU	rs2863171	11	45250732	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1799807	3	165548529	T
Biological assays - FE	Eosinophill_perc f_30210_0_0_f	rs1117211	12	57527283	T
Metabolic and endo	HESCH_Endocrin HES_chapter_p	rs303752	18	21074255	G
Biological assays - FE	Platelet_crit f_30090_0_0_f	rs1219898	6	7720059	G
Medication	MED_antiinfecti S01A_antiinfect	rs3844313	6	32635629	G
Renal	HES_Glomerular HES_p_N08_BIN	rs3844313	6	32635629	G
Anthropometry	Whole_body_fat f_23100_0_0_f	rs6207063	17	29087285	G
Metabolic and endo	NI_thyroid_canc f_20001_0_DX	rs6688537	1	239850588	C
Respiratory	TA_copdMappin BIN_copdMappi	rs6688537	1	239850588	C
ENT and maxillofaci	M2W_nasalsinu: map2way_NI_c	rs1247086	2	102926362	G
Biological assays - FE	Haemoglobin_cc f_30020_0_0_f	rs1219898	6	7720059	G
Biological assays - FE	Haematocrit_pe f_30030_0_0_f	rs1482744	6	142838173	C
Anthropometry	Weight f_21002_0_0_f	rs7713065	5	131788334	A
Mental health	Happiness f_4526_0_0_f	(rs3486479	6	27459923	G
Urology	M2W_enlarged_map2way_NI_c	rs5619686	12	2908330	C
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs5619686	12	2908330	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs5619686	12	2908330	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2293871	10	124273671	C
Biological assays - FE	Eosinophill_perc f_30210_0_0_f	rs4128298	8	11823332	T
Cardiovascular	systolic_blood_p_f_4080_0_f_QU	rs6088813	20	33975181	C
Respiratory	TA_NI_pediatric BIN_NI_pediatri	rs1215	17	7163350	A
Biological assays - FE	Platelet_distrib f_30110_0_0_f	rs1085824	9	139102831	G
Medication	MED_other_ana N02B_other_an	rs6780171	3	185503456	T
Musculoskeletal dise	HESCH_Diseases HES_chapter_p	rs1757787	17	44208218	A
Cardiovascular	MED_lipid_modi C10A_lipid_moc	rs6207027	17	28263980	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs559233	7	26848830	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs559233	7	26848830	T
Gastroenterology, h	M2W_ulcerative map2way_NI_c	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1165395	17	62686730	G
Biological assays - FE	Platelet_count f_30080_0_0_f	rs9689096	6	34188892	A
Metabolic and endo	HESCH_Endocrin HES_chapter_p	rs6780171	3	185503456	T
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1123580	11	73290163	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs4721457	7	15872324	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1723268	7	46448518	T
Cardiovascular	systolic_blood_p_f_4080_0_f_QU	rs772920	12	56390364	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs3847402	10	30267810	G
Neurosciences	Fluid_intelligenc f_20016_20191	rs7899503	10	65087468	C
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1799807	3	165548529	T
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1281181	12	4243749	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1494502	12	65824670	A
Biological assays - FE	White_blood_cel f_30000_0_0_f	rs1250462	4	145436324	T
Respiratory	MED_other_syst R03D_other_sy	rs1051575	5	156810072	C
Eye	HES_Retinal_dis HES_p_H36_BIN	rs3844313	6	32635629	G
Eye	Diabetes_relate f_6148_0_code	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1859962	17	69108753	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7176074	15	73833600	G
Metabolic and endo	HES_Obesity HES_p_E66_BIN	rs8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1220231	6	45530471	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7274397	9	98878881	A

Anthropometry	Standing_height f_50_0_0_f_QU	rs803923	9	119401650	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1024630	7	7286445	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs633286	18	8809273	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6431620	2	239604970	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs6431620	2	239604970	T
Respiratory	MED_other_dru; R03B_other_dru	rs6231631	4	75676529	G
Metabolic and endo	HES_Unspecifec HES_p_E14_BIN	rs3844313	6	32635629	G
Anthropometry	Body_fat_perce f_23099_0_0_f_r	rs7424771	2	161276378	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs6681426	1	150586971	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1220231	6	45530471	T
Medication	Ibuprofen_e_g_l f_6154_0_code.	rs3486479	6	27459923	G
Biological assays - FE	Platelet_distribu f_30110_0_0_f_r	rs4924525	15	41255396	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1096594	9	23588583	C
Urology	OPC_Other_ope f_41210_41200.	rs9689096	6	34188892	A
Respiratory	HES_Asthma HES_p_J45_BIN	rs8025774	15	67483276	C
Respiratory	TA_copdMappin BIN_copdMappi	rs2284746	1	17306675	C
Eye	M2W_cataract map2way_NI_c	rs7715901	5	147856392	A
Biological assays - FE	Lymphocyte_cof f_30120_0_0_f_r	rs1757787	17	44208218	A
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs1595029	3	158241767	A
Gynaecology and Ot	Bilateral_oopho f_2834_0_0_f_r	rs1119184	10	105639611	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1119184	10	105639611	T
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs1247731	2	239877148	C
Anthropometry	Birth_weight f_20022_0_0_f_r	rs1723268	7	46448518	T
Metabolic and endo	NIOPC_thyroid_ f_20004_dxCod	rs7923409	15	49409527	G
Respiratory	TA_copdMappin BIN_copdMappi	rs1024630	7	7286445	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1024630	7	7286445	A
Cardiovascular	MED_ace_inhibi C09B_ace_inhib	rs9661802	1	6678864	A
Cardiovascular	M2W_hypertens map2way_NI_c	rs9661802	1	6678864	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs8067511	17	37611352	C
Respiratory	TA_NI_pediatric BIN_NI_pediatri	rs330939	8	9018590	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs6733504	2	242495953	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs8089099	18	10078071	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs2701110	12	114669870	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2701110	12	114669870	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2701110	12	114669870	C
Medication	MED_other_ana N02B_other_an	rs2070600	6	32151443	C
Immuno-inflammati	MED_antibiotics D06A_antibiotic	rs7713065	5	131788334	A
Biological assays - FE	Mean_sphered_f_30270_0_0_f_r	rs1294580	17	46552229	T
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1109819	4	79403952	G
Biological assays - FE	Monocyte_coun f_30130_0_0_f_r	rs6780171	3	185503456	T
Metabolic and endo	HESBL_Obesity_ HES_block_p_E	rs8025774	15	67483276	C
Cardiovascular	MED_ace_inhibi C09B_ace_inhib	rs4924525	15	41255396	C
Cardiovascular	HES_Essential_p HES_p_I10_BIN	rs4924525	15	41255396	C
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs6140050	20	6632901	C
Cardiovascular	MED_ace_inhibi C09A_ace_inhib	rs4924525	15	41255396	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs9533803	13	44820608	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1170482	22	18450287	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2799098	1	218521609	G
Biological assays - FE	White_blood_ce f_30000_0_0_f_r	rs1162038	13	99665512	C
Cardiovascular	HES_Chronic_isc HES_p_I25_BIN	rs3743609	16	75467021	G

Metabolic and endo	NIOPC_thyroid_e f_20004_dxCod	rs3486479	6	27459923	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2284746	1	17306675	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs2284746	1	17306675	C
Respiratory	FEV1_maximum f_3063_0_f_QU	rs7465401	8	70367248	T
Cardiovascular	MED_selective_ C08C_selective_	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6539952	16	86579223	C
Immuno-inflammati	M2W_psooriasis map2way_NI_c	rs3486479	6	27459923	G
Biological assays - FE	Platelet_count f_30080_0_0_f_	rs3847402	10	30267810	G
Respiratory	TA_copdMappin BIN_copdMappi	rs6688537	1	239850588	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs5619686	12	2908330	C
Puberty	Age_when_peric f_2714_0_0_f_	rs772920	12	56390364	C
Medication	Aspirin f_6154_0_code:	rs6780171	3	185503456	T
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs9661802	1	6678864	A
Respiratory	FVC_maximumV f_3062_0_f_QU	rs1250462	4	145436324	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1419429	1	155137395	G
Cardiovascular	HESBL_Hyperter HES_block_p_l1	rs4924525	15	41255396	C
Biological assays - FE	Eosinophill_perc f_30210_0_0_f_	rs1192404	1	92068967	A
Respiratory	TA_copdMappin BIN_copdMappi	rs6212640	2	18309132	T
Gastroenterology, h	MED_stomatolo A01A_stomatol	rs6780171	3	185503456	T
Respiratory	FEV1_maximum f_3063_0_f_QU	rs4885681	13	80467235	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1416685	1	51243374	G
Gastroenterology, h	M2W_gastrointe map2way_NI_c	rs6062304	20	62351539	A
Biological assays - U	Potassium_in_urf_30520_0_0_f_	rs3844313	6	32635629	G
Medication	Fish_oil_includin f_6179_0_code:	rs1209294	1	204434927	T
Urology	M2W_enlarged_map2way_NI_c	rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs7108254	11	86436086	T
Respiratory	M2W_asthma map2way_NI_c	rs3471297	4	106819053	G
Biological assays - FE	Eosinophill_cour f_30150_0_0_f_	rs1737889	20	31042176	C
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs303752	18	21074255	G
Biological assays - FE	Reticulocyte_pe f_30240_0_0_f_	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2637254	10	78312002	G
Urology	HESBL_Other_di HES_block_p_N	rs8025774	15	67483276	C
Biological assays - FE	Red_blood_cell_ f_30010_0_0_f_	rs4968200	17	7448457	C
Cardiovascular	HES_Atrial_fibril HES_p_l48_BIN	rs1757787	17	44208218	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs6138639	20	25669052	C
Metabolic and endo	NIOPC_thyroid_ f_20004_dxCod	rs3844313	6	32635629	G
Eye	HESBL_Disorder: HES_block_p_H	rs7715901	5	147856392	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs2304645	15	40716253	G
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs2304645	15	40716253	G
Musculoskeletal dise	grip_strength_mf_47_46_QUAN	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2894837	6	56336406	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs1416685	1	51243374	G
Cardiovascular	MED_ace_inhibi C09A_ace_inhib	rs2571445	2	218683154	A
Gastroenterology, h	MED_intestinal_ A07E_intestinal	rs3486479	6	27459923	G
Eye	HESBL_Disorder: HES_block_p_H	rs3486479	6	27459923	G
Urology	OPC_Other_ope f_41210_41200	rs3844313	6	32635629	G
Musculoskeletal dise	MED_antigout_ M04A_antigout	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs8068952	17	59286644	G
Medication	Aspirin f_6154_0_code:	rs1513272	7	28200097	C
Metabolic and endo	PROXYS_Diabet f_20111_0_cod	rs3486479	6	27459923	G

Neurosciences	Daytime_dozing f_1220_0_0_f_(rs1757787	17	44208218	A
Anthropometry	Standing_height f_50_0_0_f_QU rs1419429	1	155137395	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs1274475	10	34480582	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs8089865	18	50957922	G
Biological assays - FE	Platelet_count f_30080_0_0_f_ rs303752	18	21074255	G
Respiratory	TA_copdMappin BIN_copdMappi rs1051652	4	106688904	A
Respiratory	FEV1_maximum f_3063_0_f_QU rs1131111	22	50867711	C
Cardiovascular	M2W_essential_map2way_NI_c rs4924525	15	41255396	C
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs2256462	10	81685593	C
Respiratory	FEV1_maximum f_3063_0_f_QU rs1737889	20	31042176	C
Respiratory	FEV1_maximum f_3063_0_f_QU rs967497	9	131943843	A
Neurosciences	Fluid_intelligenc f_20016_20191_ rs967497	9	131943843	A
Eye	HESBL_Disorder: HES_block_p_H: rs3844313	6	32635629	G
Medication	Vitamin_C f_6155_0_code: rs1757787	17	44208218	A
Medication	Paracetamol f_6154_0_code: rs3844313	6	32635629	G
Respiratory	TA_FEV1_perce QUANT_FEV1_prs1281181	12	4243749	T
Respiratory	PEF_maximumV f_3064_0_f_QU rs1051652	4	106688904	A
Respiratory	MED_other_dru; R03B_other_dru rs8067511	17	37611352	C
Biological assays - FE	Mean_platelet_1f_30100_0_0_f_ rs8067511	17	37611352	C
Haematology	HESBL_Aplastic_HES_block_p_D: rs3486479	6	27459923	G
Musculoskeletal dise	OPC_Total_pros f_41210_41200_ rs3486479	6	27459923	G
Respiratory	MED_adrenergic R03A_adrenergi rs3471297	4	106819053	G
Cardiovascular	HESBL_Ischaemi HES_block_p_I2 rs1119184	10	105639611	T
Musculoskeletal dise	HES_Other_arth HES_p_M13_BII rs330939	8	9018590	T
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs9661687	1	78387270	C
Breast	NI_breast_cance f_20001_0_DX_ rs1757787	17	44208218	A
Musculoskeletal dise	OPC_Therapeuti f_41210_41200_ rs4237643	11	43648368	T
Respiratory	MED_other_dru; R03B_other_dru rs3486479	6	27459923	G
Gynaecology and Ok	OPC_Other_rep: f_41210_41200_ rs8025774	15	67483276	C
Respiratory	TA_copdMappin BIN_copdMappi rs1005999	5	170901463	T
Respiratory	MED_other_syst R03D_other_sy: rs330939	8	9018590	T
Anthropometry	Waist_circumfer f_48_0_0_f_QU rs4846480	1	218598469	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs4846480	1	218598469	A
Biological assays - FE	Lymphocyte_per f_30180_0_0_f_ rs1220231	6	45530471	T
Cardiovascular	OPC_Operations f_41210_41200_ rs3743609	16	75467021	G
Respiratory	TA_copdMappin BIN_copdMappi rs7989847	5	179598771	T
Anthropometry	Whole_body_fat f_23100_0_0_f_ rs6207027	17	28263980	A
Gastroenterology, h	NIOPC_inguinal_f_20004_dxCod rs1294421	6	6743149	T
Cardiovascular	MED_ace_inhibi C09A_ace_inhibrs3743609	16	75467021	G
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs4651005	1	178719306	C
Respiratory	TA_FEV1_perce QUANT_FEV1_prs1430193	2	56120853	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs1091960	1	198898157	A
Gynaecology and Ok	M2W_uterine_fi map2way_NI_c rs6207063	17	29087285	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers2014787	5	148611675	G
Musculoskeletal dise	grip_strength_mf_47_46_QUAN rs1085824	9	139102831	G
Cardiovascular	Pulse_wave_Art f_21021_0_0_f_ rs9689096	6	34188892	A
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs5764946	9	101632854	G
Respiratory	TA_FEV1_FVC_r; QUANT_FEV1_F rs5764946	9	101632854	G
Respiratory	TA_NI_pediatric BIN_NI_pediatri rs1513272	7	28200097	C

Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs1951121	14	23429729	T	
Gastroenterology, h	HESCH_Diseases	HES_chapter_p_rs8025774	15	67483276	C	
Respiratory	HESCH_Diseases	HES_chapter_p_rs3844313	6	32635629	G	
Gastroenterology, h	HES_Inguinal_he	HES_p_K40_BINrs2799098	1	218521609	G	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs1118988	4	146174040	C	
Cardiovascular	MED_lipid_modi	C10B_lipid_mocrs4924525	15	41255396	C	
Respiratory	HESBL_Chronic_HES_block_p_J4	rs7715901	5	147856392	A	
Renal	M2W_polycystic	map2way_NI_cr	rs3743609	16	75467021	G
Cardiovascular	HES_Chronic_isc	HES_p_I25_BIN_rs7090277	10	12278021	T	
Immuno-inflammati	HES_Follicular_c	HES_p_L72_BINrs6133207	2	239316560	G	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs6133207	2	239316560	G	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs7218675	17	73513185	C
Biological assays - FE	Platelet_count	f_30080_0_0_f_rs1215	17	7163350	A	
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs1170482	22	18450287	A
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs1170482	22	18450287	A
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs1108574	19	10819967	C	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs6082098	10	75639578	C	
Gastroenterology, h	HES_Inguinal_he	HES_p_K40_BINrs993925	1	218860068	C	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_Frs993925	1	218860068	C	
Respiratory	TA_copd	MappinBIN_copdMappirs1137456	12	95554771	C	
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_rs1951121	14	23429729	T	
Respiratory	TA_copd	MappinBIN_copdMappirs1551943	5	52195033	G	
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs1551943	5	52195033	G	
Respiratory	MED_adrenergic	R03A_adrenergi	rs330939	8	9018590	T
Respiratory	TA_FEV1_per	cerQUANT_FEV1_prs1005999	5	170901463	T	
Gastroenterology, h	NIOPC_cholecys	f_20004_dxCod	rs7899503	10	65087468	C
Gastroenterology, h	NIOPC_hernia_s	f_20004_dxCod	rs1430193	2	56120853	A
Immuno-inflammati	OPC_Other_exc	f_41210_41200	rs1119184	10	105639611	T
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f_rs5619686	12	2908330	C	
Respiratory	TA_FEV1_ever	sQUANT_FEV1_ers6688537	1	239850588	C	
Respiratory	TA_copd	MappinBIN_copdMappirs1416685	1	51243374	G	
Respiratory	PROXYM_Chroni	f_20110_0_cod	rs8025774	15	67483276	C
Anthropometry	Standing_height	f_50_0_0_f_QU	rs8025774	15	67483276	C
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs2701110	12	114669870	C	
Biological assays - FE	Reticulocyte_co	f_30250_0_0_f_rs1737889	20	31042176	C	
Respiratory	TA_FEV1_per	cerQUANT_FEV1_prs567508	11	126008910	G	
Respiratory	M2W_interstitia	map2way_NI_cr	rs1757787	17	44208218	A
Immuno-inflammati	HES_Systemic_lt	HES_p_M32_BII	rs3844313	6	32635629	G
Anthropometry	Weight	f_21002_0_0_f_rs5610488	16	4361138	T	
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs5610488	16	4361138	T
Respiratory	FVC_maximum	Vf_3062_0_f_QU	rs2821332	1	200085714	T
Respiratory	PEF_maximum	Vf_3064_0_f_QU	rs6201277	15	63866877	T
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs1108574	19	10819967	C	
Musculoskeletal dise	HES_Coxarthrosi	HES_p_M16_BII	rs4128298	8	11823332	T
Respiratory	TA_copd	MappinBIN_copdMappirs9385988	6	142560957	A	
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1458979	3	55150677	A
General health, smo	Overall_health_	f_2178_0_0_f_(rs2202572	18	53566471	A
Renal	M2W_diabetic_	map2way_NI_cr	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever	sQUANT_FEV1_ers1751313	1	40035686	C	
Medication	MED_opioids	N02A_opioids_F	rs3486479	6	27459923	G

Medication	Vitamin_C	f_6155_0_code:rs3486479	6	27459923	G
ENT and maxillofaci	M2W_nasal_pol	map2way_NI_cr	5	33334312	C
Gastroenterology, h	HES_Ulcerative_HES_p_K51_BIN	rs3844313	6	32635629	G
Biological assays - FE	Monocyte_coun	f_30130_0_0_f_rs	4	106131210	C
Cardiovascular	MED_angiotensi	C09C_angiotens	17	28263980	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	6	56336406	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	1	111737398	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	10	75639578	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	10	75639578	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	10	75639578	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	15	49409527	G
Biological assays - FE	Reticulocyte_pe	f_30240_0_0_f_rs	2	202970250	C
Gastroenterology, h	M2W_inguinal_t	map2way_NI_cr	1	218521609	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	2	187530520	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	2	187530520	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	1	198898157	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	22	50867711	C
Musculoskeletal disc	OPC_Release_of	f_41210_41200	6	32635629	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	7	7286445	A
Respiratory	TA_copdMappin	BIN_copdMappi	9	119401650	G
Biological assays - FE	High_light_scatt	f_30300_0_0_f_rs	2	202970250	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	3	185503456	T
Biological assays - FE	Platelet_count	f_30080_0_0_f_rs	1	198898157	A
Gastroenterology, h	M2W_inflamma	map2way_NI_cr	6	32635629	G
Anthropometry	Standing_height	f_50_0_0_f_QU	1	150249101	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	1	150249101	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	15	49706145	A
Cardiovascular	M2W_hypertens	map2way_NI_cr	17	59286644	G
Cardiovascular	MED_angiotensi	C09D_angiotens	17	28263980	A
Biological assays - FE	Mean_platelet_1	f_30100_0_0_f_rs	6	134339265	A
General health, smo	TA_pack_years	QUANT_pack_y	10	65087468	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	5	148206885	C
Breast	NI_breast_cance	f_20001_0_DX_rs	1	51243374	G
Biological assays - FE	Lymphocyte_co	f_30120_0_0_f_rs	16	70040398	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	16	70040398	G
Respiratory	TA_copdMappin	BIN_copdMappi	6	6743149	T
Cardiovascular	Blood_pressure	f_6153_6177_0	6	126792095	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	5	95036700	C
Respiratory	MED_adrenergic	R03A_adrenergi	5	147856392	A
Biological assays - FE	Neutrophill_per	f_30200_0_0_f_rs	5	131788334	A
Gastroenterology, h	OPC_Destructio	f_41210_41200	12	66409367	C
Cardiovascular	NIOPC_coronary	f_20004_dxCod	10	105639611	T
Metabolic and endo	M2W_diabetes	map2way_NI_cr	3	71583177	A
Respiratory	HESCH_Diseases	HES_chapter_p	5	147856392	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	11	73290163	A
Respiratory	FEV1_maximum	f_3063_0_f_QU	1	40035686	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	9	1555835	A
Biological assays - FE	Eosinophill_per	f_30210_0_0_f_rs	8	145504343	T
Neurosciences	incorect_match	f_399_0_f_QUA	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	17	69371318	C

Gastroenterology, h	M2W_diverticul:map2way_NI_c	rs6231631	4	75676529	G	
Respiratory	FEV1_maximumV	f_3063_0_f_QU	rs5960615	17	79952944	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1247731	2	239877148	C
Cardiovascular	MED_antithrom	B01A_antithron	rs6780171	3	185503456	T
Medication	MED_other_ana	N02B_other_an	rs4309038	1	201884647	G
Metabolic and endo	HES_Insulin_dep	HES_p_E10_BIN	rs1175902	6	126792095	A
Cardiovascular	HESBL_Diseases	HES_block_p_17	rs3486479	6	27459923	G
Cardiovascular	MED_beta_block	C07D_beta_blo	rs193686	7	116431427	C
Cardiovascular	M2W_hypertens	map2way_NI_c	rs4237643	11	43648368	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs4651005	1	178719306	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs4651005	1	178719306	C
Neurosciences	Facial_pain	f_6159_code2_l	rs3844313	6	32635629	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7923409	15	49409527	G
Urology	CREG_mal_neo_f	40006_0_p_C	rs2811415	3	127991527	A
Urology	CREGBL_mal_ne	f_40006_block_	rs2811415	3	127991527	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs2811415	3	127991527	A
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7290420	2	157046432	T
Metabolic and endo	MED_blood_glu	A10B_blood_glu	rs6780171	3	185503456	T
Gynaecology and Ot	M2W_cervical_r	map2way_NI_c	rs6780171	3	185503456	T
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f_	rs3844313	6	32635629	G
Broad symptoms, sig	HESCH_Diseases	HES_chapter_p_	rs8025774	15	67483276	C
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f_	rs9807668	18	42827898	C
Biological assays - FE	Mean_sphered_f	30270_0_0_f_	rs1118988	4	146174040	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1118988	4	146174040	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs985256	2	201208692	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1220231	6	45530471	T
Neurosciences	M2W_trapped_i	map2way_NI_c	rs3844313	6	32635629	G
Neurosciences	Headaches_for	f_3799_0_0_f_	rs772920	12	56390364	C
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	rs772920	12	56390364	C
Anthropometry	Body_fat_perce	r_f_23099_0_0_f_	rs7989847	5	179598771	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1259146	15	71788387	C
Anthropometry	Body_mass_inde	f_21001_0_0_f_	rs4128298	8	11823332	T
Biological assays - FE	Monocyte_coun	f_30130_0_0_f_	rs4128298	8	11823332	T
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs2852009	4	7846240	C
Musculoskeletal dise	Fractured_broke	f_2463_0_0_f_	rs8025774	15	67483276	C
Respiratory	FEV1_maximumV	f_3063_0_f_QU	rs8025774	15	67483276	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1209623	1	26796922	G
Biological assays - FE	Platelet_distrib	f_30110_0_0_f_	rs6201277	15	63866877	T
Immuno-inflammati	MED_corticoste	D07C_corticoste	rs772920	12	56390364	C
Haematology	M2W_iron_defic	map2way_NI_c	rs3844313	6	32635629	G
Respiratory	PROXYS_Chronic	f_20111_0_cod	rs1250462	4	145436324	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs7267346	1	60966772	T
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f_	rs7838717	8	145504343	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2256462	10	81685593	C
Biological assays - FE	Monocyte_perce	f_30190_0_0_f_	rs1299762	2	202970250	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1299762	2	202970250	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1716339	5	128767384	A
Respiratory	HESCH_Diseases	HES_chapter_p_	rs8025774	15	67483276	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7621917	16	50188929	G
Respiratory	FEV1_maximumV	f_3063_0_f_QU	rs7621917	16	50188929	G

Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7621917	16	50188929	G
Cardiovascular	HES_Atrial_fibril	HES_p_l48_BIN	rs7899503	10	65087468	C
Musculoskeletal dise	Knee_pain	f_6159_code7_l	rs1751313	1	40035686	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9970286	1	111737398	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs9970286	1	111737398	G
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs2322659	2	136555659	T
Immuno-inflammati	HESBL_Disorder	HES_block_p_L	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4846480	1	218598469	A
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6212640	2	18309132	T
Immuno-inflammati	MED_corticoste	D07X_corticoste	rs3548056	3	71583177	A
Medication	MED_other_ana	N02B_other_an	rs3548056	3	71583177	A
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs1102077	6	140271357	A
Biological assays - FE	Red_blood_cell	f_30010_0_0_f	rs9438626	1	26775367	G
Mental health	Ever_unenthusia	f_4631_0_0_f	rs3486479	6	27459923	G
Neurosciences	Headaches_for	f_3799_0_0_f	rs1416685	1	51243374	G
Gynaecology and Ok	NIOPC_hysterec	f_20004_dxCod	rs1300958	2	24018480	G
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs803923	9	119401650	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs6138639	20	25669052	C
Medication	MED_antihistam	R06A_antihistar	rs1117211	12	57527283	T
Cardiovascular	HESCH_Chapter	HES_chapter_p	rs4924525	15	41255396	C
Gastroenterology, h	OPC_Primary_ref	_41210_41200	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2852009	4	7846240	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs7767232	17	62497964	C
Respiratory	TA_NI_adult_on	BIN_NI_adult_o	rs1243826	15	84502549	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs7465401	8	70367248	T
Cardiovascular	MED_beta_blocl	C07A_beta_bloc	rs3844313	6	32635629	G
Cardiovascular	MED_beta_blocl	C07C_beta_bloc	rs193686	7	116431427	C
Cardiovascular	MED_beta_blocl	C07F_beta_bloc	rs193686	7	116431427	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2441026	5	53444498	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs2441026	5	53444498	C
Biological assays - FE	Mean_platelet	f_30100_0_0_f	rs1282031	12	96255704	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1233186	4	56012149	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1233186	4	56012149	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs7108254	11	86436086	T
Immuno-inflammati	MED_corticoste	D07C_corticoste	rs6062304	20	62351539	A
Gastroenterology, h	HES_Diverticular	HES_p_K57_BIN	rs6062304	20	62351539	A
Gastroenterology, h	M2W_diverticul	map2way_NI_c	rs6062304	20	62351539	A
Biological assays - FE	Monocyte_coun	f_30130_0_0_f	rs1250462	4	145436324	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1700928	1	221204299	A
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs1085183	15	71628370	T
Gastroenterology, h	HES_Diverticular	HES_p_K57_BIN	rs7269986	14	93114787	G
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f	rs6138639	20	25669052	C
Gynaecology and Ok	OPC_Other_rep	f_41210_41200	rs1430193	2	56120853	A
Respiratory	MED_other_syst	R03D_other_sy	rs8067511	17	37611352	C
Urology	M2W_enlarged	map2way_NI_c	rs3844313	6	32635629	G
Cardiovascular	Cholesterol_low	f_6153_6177_0	rs1299762	2	202970250	C
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs1215	17	7163350	A
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2509961	11	62310909	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs2637254	10	78312002	G

Respiratory	FEV1_maximum' f_3063_0_ f_QU	rs9357446	6	44447598	G
Biological assays - FE	Reticulocyte_co' f_30250_0_0_ f_	rs9438626	1	26775367	G
Respiratory	TA_copdMappin BIN_copdMappi	rs7269986	14	93114787	G
Urology	OPC_Diagnostic_ f_41210_41200_	rs1244780	16	58075282	C
Eye	HESBL_Disorder: HES_block_p_H:	rs3844313	6	32635629	G
Metabolic and endo	NIOPC_thyroid: f_20004_dxCod	rs3844313	6	32635629	G
Respiratory	TA_copdMappin BIN_copdMappi	rs4866846	5	43976162	A
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs4866846	5	43976162	A
Anthropometry	Whole_body_w: f_23102_0_0_ f_	rs3435163	17	16030520	T
Biological assays - FE	Platelet_crit f_30090_0_0_ f_	rs3435163	17	16030520	T
Biological assays - FE	Eosinophill_perc' f_30210_0_0_ f_	rs9472541	6	45622748	T
Respiratory	FEV1_maximum' f_3063_0_ f_QU	rs2894837	6	56336406	A
Cardiovascular	HES_Chronic_isc HES_p_I25_BIN_	rs4309038	1	201884647	G
Biological assays - FE	Haemoglobin_cc' f_30020_0_0_ f_	rs4309038	1	201884647	G
Cardiovascular	M2W_heartcard map2way_NI_c	rs4309038	1	201884647	G
Musculoskeletal dise	MED_other_dru: M09A_other_dr	rs8068952	17	59286644	G
Gastroenterology, h	M2W_inguinal_ lmap2way_NI_c	rs3751837	16	3583173	C
Eye	OPC_Prosthesis_ f_41210_41200_	rs3844313	6	32635629	G
Respiratory	FVC_maximumV f_3062_0_ f_QU	rs5619686	12	2908330	C
Neurosciences	HESBL_Other_di HES_block_p_G:	rs6062304	20	62351539	A
Gastroenterology, h	NIOPC_colonosc' f_20004_dxCod	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs2894837	6	56336406	A
Biological assays - U	Creatinine_ enzy: f_30510_0_0_ f_	rs4237643	11	43648368	T
Respiratory	PEF_maximumV f_3064_0_ f_QU	rs2014787	5	148611675	G
Respiratory	M2W_asthma map2way_NI_c	rs1096594	9	23588583	C
ENT and maxillofaci:	OPC_Other_ope' f_41210_41200_	rs3548056	3	71583177	A
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs1250462	4	145436324	T
Cardiovascular	QRS_duration f_12340_2_0_ f_	rs4128298	8	11823332	T
Respiratory	TA_FEV1_perce' QUANT_FEV1_p	rs2974389	3	13787641	A
Respiratory	TA_FEV1_perce' QUANT_FEV1_p	rs9533803	13	44820608	C
Cardiovascular	M2W_heartcard map2way_NI_c	rs3743609	16	75467021	G
Cardiovascular	systolic_blood_ f_4080_0_ f_QU	rs7090277	10	12278021	T
ENT and maxillofaci:	NIOPC_nasal_sir' f_20004_dxCod	rs3844313	6	32635629	G
Anthropometry	Birth_weight f_20022_0_0_ f_	rs4721457	7	15872324	T
Respiratory	FEV1_maximum' f_3063_0_ f_QU	rs1458979	3	55150677	A
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F	rs567508	11	126008910	G
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs6212640	2	18309132	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_e	rs4866846	5	43976162	A
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F	rs1118988	4	146174040	C
ENT and maxillofaci:	Snoring f_1210_0_0_ f_ F	rs1173984	5	609661	G
Haematology	CREGBL_mal_ne' f_40006_block_	rs3844313	6	32635629	G
Biological assays - U	Creatinine_ enzy: f_30510_0_0_ f_	rs772920	12	56390364	C
Biological assays - FE	Red_blood_cell_ f_30070_0_0_ f_	rs3424550	15	40397191	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F	rs772920	12	56390364	C
Gastroenterology, h	MED_intestinal_ A07E_intestinal_	rs1051575	5	156810072	C
Respiratory	FEV1_maximum' f_3063_0_ f_QU	rs6231631	4	75676529	G
Cardiovascular	HESBL_Hyperter HES_block_p_I1	rs1751313	1	40035686	C
Eye	OPC_Extracapsu' f_41210_41200_	rs3844313	6	32635629	G
Neurosciences	Mean_time_to_ f_20023_0_0_ f_	rs1300958	2	24018480	G
Neurosciences	HES_Mononeurc HES_p_G56_BIN	rs3844313	6	32635629	G

Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	1175902	6	126792095	A
Musculoskeletal disease	grip_strength_mf_47_46_QUANT	rs1209294	1	204434927	T
Anthropometry	Standing_height_f_50_0_0_f_QUANT	rs7272413	15	41977690	A
Biological assays - FE	Platelet_count_f_30080_0_0_f_QUANT	rs2571445	2	218683154	A
Respiratory	FVC_maximumVf_3062_0_f_QUANT	rs1610265	3	99420192	C
Respiratory	TA_FEV1_FVC_ratio_QUANT_FEV1_F	rs4309038	1	201884647	G
Respiratory	PEF_maximumVf_3064_0_f_QUANT	rs6778584	3	98815640	T
Biological assays - FE	White_blood_cell_f_30000_0_0_f_QUANT	rs2812208	13	50707087	G
Respiratory	TA_FEV1_FVC_ratio_QUANT_FEV1_F	rs7272413	15	41977690	A
Anthropometry	Whole_body_fat_f_23101_0_0_f_QUANT	rs3435163	17	16030520	T
Biological assays - FE	Reticulocyte_percent_f_30240_0_0_f_QUANT	rs1416685	1	51243374	G
Respiratory	TA_FEV1_percent_QUANT_FEV1_p	rs7899503	10	65087468	C
Respiratory	PEF_maximumVf_3064_0_f_QUANT	rs153916	5	95036700	C
Anthropometry	Body_mass_index_f_21001_0_0_f_QUANT	rs1513272	7	28200097	C
Mental health	Sleep_duration_f_1160_0_0_f_QUANT	rs7872188	9	4124377	C
Immuno-inflammatory	OPC_High_cost_f_41210_41200	rs2070600	6	32151443	C
ENT and maxillofacial	M2W_nasal_polymap2way_NI_cross	rs2070600	6	32151443	C
Eye	Corneal_hysteresis_f_5264_0_0_f_QUANT	rs5960615	17	79952944	C
Respiratory	TA_FEV1_FVC_ratio_QUANT_FEV1_F	rs7465401	8	70367248	T
Respiratory	TA_FEV1_FVC_ratio_QUANT_FEV1_F	rs1084130	12	19808912	G
Eye	M2W_cataract_map2way_NI_cross	rs1416685	1	51243374	G
Biological assays - FE	Eosinophil_percent_f_30210_0_0_f_QUANT	rs7238093	18	20728158	A
Cardiovascular	HESBL_Hypertension_HES_block_p_l1	rs1595029	3	158241767	A
Cardiovascular	HESBL_Hypertension_HES_block_p_l1	rs4237643	11	43648368	T
Musculoskeletal disease	BMD_Combined_f_3148_4105_4	rs993925	1	218860068	C
Respiratory	TA_FEV1_FVC_ratio_QUANT_FEV1_F	rs993925	1	218860068	C
ENT and maxillofacial	OPC_Operations_f_41210_41200	rs3548056	3	71583177	A
Biological assays - FE	Platelet_count_f_30080_0_0_f_QUANT	rs1757787	17	44208218	A
Cancer	CREGCH_Neoplasia_f_40006_chapter	rs1757787	17	44208218	A
Urology	OPC_Other_operations_f_41210_41200	rs5619686	12	2908330	C
Urology	M2W_prostate_map2way_NI_cross	rs5619686	12	2908330	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs3751837	16	3583173	C
Respiratory	FVC_maximumVf_3062_0_f_QUANT	rs772920	12	56390364	C
Cardiovascular	M2W_essential_map2way_NI_cross	rs1751313	1	40035686	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1751313	1	40035686	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1737889	20	31042176	C
Respiratory	TA_FEV1_percent_QUANT_FEV1_p	rs2304645	15	40716253	G
General health, smoking	Number_of_self_f_135_0_0_f_QUANT	rs967497	9	131943843	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1494502	12	65824670	A
Metabolic and endocrine	HESBL_Diabetes_HES_block_p_E	rs3548056	3	71583177	A
Neurosciences	Headaches_for_f_3799_0_0_f_QUANT	rs7243351	18	20148531	C
Neurosciences	Headache_f_6159_code1_QUANT	rs7243351	18	20148531	C
Respiratory	TA_FEV1_percent_QUANT_FEV1_p	rs7243351	18	20148531	C
Anthropometry	Hip_circumference_f_49_0_0_f_QUANT	rs2509961	11	62310909	T
Biological assays - FE	Eosinophil_percent_f_30210_0_0_f_QUANT	rs1406225	2	145797829	G
Anthropometry	Body_mass_index_f_21001_0_0_f_QUANT	rs6062304	20	62351539	A
Cardiovascular	MED_other_age_C09X_other_age	rs8068952	17	59286644	G
Cardiovascular	systolic_blood_pressure_f_4080_0_f_QUANT	rs8068952	17	59286644	G
Urology	OPC_Vaginal_operations_f_41210_41200	rs8068952	17	59286644	G
Respiratory	TA_copdMapping_BIN_copdMapping	rs1024630	7	7286445	A

Musculoskeletal disease	grip_strength_mf_47_46_QUANT	rs1800888	5	148206885	C
Respiratory	FVC_maximumVf_3062_0_f_QUANT	rs2544536	2	15906854	T
Medication	OPC_Injection_cf_41210_41200	rs181206	16	28513403	A
Cardiovascular	NIOPC_varicose_f_20004_dxCod	rs3844313	6	32635629	G
Anthropometry	Hip_circumferenf_49_0_0_f_QUANT	rs3844313	6	32635629	G
Gastroenterology, hepatology	HES_DiverticularHES_p_K57_BIN	rs3743609	16	75467021	G
Urology	HES_HyperplasiaHES_p_N40_BIN	rs5619686	12	2908330	C
Respiratory	FEV1_maximumf_3063_0_f_QUANT	rs5619686	12	2908330	C
Cardiovascular	MED_beta_blockC07A_beta_block	rs193686	7	116431427	C
Musculoskeletal disease	OPC_Other_openf_41210_41200	rs3486479	6	27459923	G
Musculoskeletal disease	M2W_disc_probmap2way_NI_cross	rs3844313	6	32635629	G
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	rs3548056	3	71583177	A
Respiratory	MED_other_systR03D_other_syst	rs7715901	5	147856392	A
Eye	OPC_Prosthesis_f_41210_41200	rs7715901	5	147856392	A
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	rs6435952	2	217614730	A
Musculoskeletal disease	HES_FibroblasticHES_p_M72_BIN	rs3486479	6	27459923	G
Biological assays - FET	Platelet_distributionf_30110_0_0_f	rs1108574	19	10819967	C
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	rs2637254	10	78312002	G
Cardiovascular	HES_Essential_pHES_p_I10_BIN	rs1751313	1	40035686	C
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	rs1448044	5	44296986	G
Anthropometry	Waist_circumferf_48_0_0_f_QUANT	rs2322659	2	136555659	T
Anthropometry	Whole_body_fatf_23100_0_0_f	rs1757787	17	44208218	A
Cardiovascular	OPC_Percutaneef_41210_41200	rs1119184	10	105639611	T
Respiratory	TA_copdMappingBIN_copdMapping	rs1766633	3	29469675	T
Respiratory	FEV1_maximumf_3063_0_f_QUANT	rs7424771	2	161276378	G
Cardiovascular	MED_beta_blockC07F_beta_block	rs8068952	17	59286644	G
Respiratory	TA_FEV1_FVC_rQUANT_FEV1_Frs	rs1109819	4	79403952	G
Biological assays - FET	Basophil_countf_30160_0_0_f	rs3844313	6	32635629	G
Respiratory	TA_copdMappingBIN_copdMapping	rs2571445	2	218683154	A
Immuno-inflammatory	MED_corticosterD07A_corticoster	rs6062304	20	62351539	A
Neurosciences	incorrect_matchef_399_0_f_QUANT	rs6062304	20	62351539	A
Respiratory	FEV1_maximumf_3063_0_f_QUANT	rs6201277	15	63866877	T
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	rs6201277	15	63866877	T
Respiratory	PEF_maximumVf_3064_0_f_QUANT	rs1430193	2	56120853	A
Neurosciences	Fluid_intelligencef_20016_20191	rs1107454	16	10136889	T
Musculoskeletal disease	grip_strength_mf_47_46_QUANT	rs9357446	6	44447598	G
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	rs9357446	6	44447598	G
Respiratory	FVC_maximumVf_3062_0_f_QUANT	rs9385988	6	142560957	A
Cardiovascular	HESCH_Chapter_HES_chapter_p	rs303752	18	21074255	G
Neurosciences	M2W_periphera map2way_NI_cross	rs303752	18	21074255	G
Respiratory	FVC_maximumVf_3062_0_f_QUANT	rs1117600	12	66409367	C
Gastroenterology, hepatology	HES_Inguinal_hesHES_p_K40_BIN	rs1757787	17	44208218	A
Respiratory	FEV1_maximumf_3063_0_f_QUANT	rs8067511	17	37611352	C
Cardiovascular	MED_antithromB01A_antithrom	rs8068952	17	59286644	G
Respiratory	FVC_maximumVf_3062_0_f_QUANT	rs9357446	6	44447598	G
Gastroenterology, hepatology	HES_DiaphragmHES_p_K44_BIN	rs3486479	6	27459923	G
Urology	CREGBL_mal_nef_40006_block	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perceQUANT_FEV1_prs	rs6032942	20	10745545	G
Respiratory	FEV1_maximumf_3063_0_f_QUANT	rs1259146	15	71788387	C
Gynaecology and Obstetrics	HES_Polyp_of_fHES_p_N84_BIN	rs6780171	3	185503456	T

Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1668091	18	22290711	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs9807668	18	42827898	C
Musculoskeletal dise	BMD_Combined	f_3148_4105_4	rs4968200	17	7448457	C
Musculoskeletal dise	HESCH_Diseases	HES_chapter_p	rs1751313	1	40035686	C
Cardiovascular	MED_ace_inhibi	C09A_ace_inhib	rs1751313	1	40035686	C
Neurosciences	Morning_evenin	f_1180_0_0_f_	(rs1087020	9	139257411	T
Cardiovascular	M2W_heart_att	map2way_NI_c	rs1087020	9	139257411	T
Gastroenterology, h	NIOPC_appendic	f_20004_dxCod	rs3486479	6	27459923	G
Cardiovascular	HESCH_Chapter	HES_chapter_p	rs4309038	1	201884647	G
Gastroenterology, h	Omeprazole_e_	f_6154_0_code	rs6062304	20	62351539	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs2637254	10	78312002	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2637254	10	78312002	G
Biological assays - FE	Reticulocyte_co	f_30250_0_0_f_	rs2812208	13	50707087	G
Gastroenterology, h	OPC_Primary_re	f_41210_41200	rs993925	1	218860068	C
Gastroenterology, h	M2W_abdominæ	map2way_NI_c	rs993925	1	218860068	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs993925	1	218860068	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs7989847	5	179598771	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3847402	10	30267810	G
Musculoskeletal dise	Back_pain	f_6159_code4_	rs8089865	18	50957922	G
Haematology	HES_Iron_defici	æ_HES_p_D50_BI	rs3844313	6	32635629	G
Gastroenterology, h	M2W_oesophag	map2way_NI_c	rs6088813	20	33975181	C
Respiratory	Wheeze_or_whi	f_2316_0_0_f_	rs1513272	7	28200097	C
Cardiovascular	M2W_high_chol	map2way_NI_c	rs1513272	7	28200097	C
Eye	Intra_ocular_p	ref_5254_0_0_f_	(rs2571445	2	218683154	A
Cardiovascular	M2W_essential	map2way_NI_c	rs4237643	11	43648368	T
Anthropometry	Body_fat_perce	r_f_23099_0_0_f_	rs2509961	11	62310909	T
Musculoskeletal dise	HES_Ankylosin	g_HES_p_M45_BI	rs3844313	6	32635629	G
Medication	MED_multivitar	A11A_multivita	rs3844313	6	32635629	G
Cardiovascular	HES_Chronic_isc	HES_p_I25_BIN	rs1119184	10	105639611	T
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1119184	10	105639611	T
Cardiovascular	PROXYS_Heart_	(f_20111_0_cod	rs6207027	17	28263980	A
Immuno-inflammati	HES_Follicular_c	HES_p_L72_BIN	rs3486479	6	27459923	G
Eye	OPC_Extracapsu	f_41210_41200	rs7715901	5	147856392	A
Respiratory	M2W_asthma	map2way_NI_c	rs7715901	5	147856392	A
Gastroenterology, h	HES_Diverticular	HES_p_K57_BIN	rs6231631	4	75676529	G
Anthropometry	Whole_body_fat	f_23101_0_0_f_	rs1087020	9	139257411	T
Anthropometry	Whole_body_wæ	f_23102_0_0_f_	rs1087020	9	139257411	T
Mental health	Happiness	f_4526_0_0_f_	(rs3844313	6	32635629	G
Respiratory	TA_copdMappin	BIN_copdMappi	rs1282031	12	96255704	T
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f_	rs3486479	6	27459923	G
Neurosciences	Headaches_for	f_3799_0_0_f_	rs3486479	6	27459923	G
Urology	OPC_Open_excit	f_41210_41200	rs3486479	6	27459923	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1343046	2	18702313	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1274475	10	34480582	G
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs1430193	2	56120853	A
Metabolic and endo	HESCH_Endocrin	HES_chapter_p	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs4721457	7	15872324	T
Neurosciences	Fluid_intelligenc	f_20016_20191	rs1300958	2	24018480	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7405312	14	54346010	G
Respiratory	Wheeze_or_whi	f_2316_0_0_f_	rs7715901	5	147856392	A

Biological assays - FE	High_light_scatt	f_30290_0_0_f_rs2821332	1	200085714	T
Respiratory	FEV1_maximum	f_3063_0_f_QU rs2821332	1	200085714	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p rs2821332	1	200085714	T
Musculoskeletal disc	HES_Acquired_d	HES_p_M20_BI rs3486479	6	27459923	G
Gastroenterology, h	NIOPC_inguinal_f_20004_dxCod	rs3486479	6	27459923	G
Metabolic and endo	M2W_graves_di	map2way_NI_c rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs330939	8	9018590	T
Cardiovascular	M2W_hypertens	map2way_NI_c rs330939	8	9018590	T
Respiratory	M2W_asthma	map2way_NI_c rs330939	8	9018590	T
Respiratory	PEF_maximum	V_f_3064_0_f_QU rs2284746	1	17306675	C
Cardiovascular	M2W_hypertens	map2way_NI_c rs1751313	1	40035686	C
Biological assays - FE	High_light_scatt	f_30300_0_0_f_rs2821332	1	200085714	T
Medication	Zinc	f_6179_0_code rs3486479	6	27459923	G
Musculoskeletal disc	OPC_Other_tot	f_41210_41200 rs1513272	7	28200097	C
Musculoskeletal disc	Hip_pain_for_3_f_3414_0_0_f_E	rs2768551	6	109270656	G
Breast	OPC_Other_plas	f_41210_41200 rs803923	9	119401650	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1209294	1	204434927	T
Biological assays - FE	Monocyte_perce	f_30190_0_0_f_rs6207063	17	29087285	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1753140	1	186113852	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs1766633	3	29469675	T
Respiratory	TA_copd	Mappin BIN_copdMappi rs1005999	5	170901463	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs7218675	17	73513185	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs7218675	17	73513185	C
Gastroenterology, h	NIOPC_inguinal_f_20004_dxCod	rs2799098	1	218521609	G
Respiratory	FVC_maximum	V_f_3062_0_f_QU rs771924	9	1555835	A
Cardiovascular	M2W_transient	map2way_NI_c rs3542003	16	53935407	T
Respiratory	FEV1_maximum	f_3063_0_f_QU rs7267346	1	60966772	T
Immuno-inflammati	HES_Viral_warts	HES_p_B07_BIN rs1269840	7	156127246	G
Anthropometry	Standing_height	f_50_0_0_f_QU rs4674407	2	220382700	C
Gastroenterology, h	M2W_abdominæ	map2way_NI_c rs1757787	17	44208218	A
Mental health	Ever_depressed_f_4598_0_0_f_E	rs1757787	17	44208218	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n rs6681426	1	150586971	G
Broad symptoms, sig	HES_Enlarged_ly	HES_p_R59_BIN rs6088813	20	33975181	C
Anthropometry	Body_fat_perce	f_23099_0_0_f_rs4885681	13	80467235	C
Anthropometry	Whole_body_fat	f_23100_0_0_f_rs4885681	13	80467235	C
Respiratory	FVC_maximum	V_f_3062_0_f_QU rs4885681	13	80467235	C
Respiratory	FEV1_maximum	f_3063_0_f_QU rs3435163	17	16030520	T
Metabolic and endo	M2W_type_2_d	map2way_NI_c rs303752	18	21074255	G
Cardiovascular	Diastolic_blood_f_4079_0_0_f_QU	rs6201277	15	63866877	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs6201277	15	63866877	T
Immuno-inflammati	Hair_balding_pa	f_2395_0_0_f_E rs8089099	18	10078071	G
Immuno-inflammati	Pattern_1_f	f_2395_0_code rs8089099	18	10078071	G
Respiratory	FEV1_maximum	f_3063_0_f_QU rs8089099	18	10078071	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F rs8089099	18	10078071	G
Eye	NIOPC_glaucom	f_20004_dxCod rs8068952	17	59286644	G
General health, smo	Overall_health_f_2178_0_0_f_C	rs4309038	1	201884647	G
Operations and Proc	MED_other_dia	gV09X_other_dia rs3844313	6	32635629	G
Neurosciences	Headache	f_6159_code1_l rs3844313	6	32635629	G
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f_rs7713065	5	131788334	A
Immuno-inflammati	Pattern_4_f	f_2395_0_code rs8025774	15	67483276	C

Biological assays - U	TA_urine_album QUANT_urine_a	rs3844313	6	32635629	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6207027	17	28263980	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2084448	2	187530520	T
Eye	Corneal_resistar f_5265_0_0_f_(	rs5960615	17	79952944	C
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs6780171	3	185503456	T
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs1494502	12	65824670	A
Gastroenterology, h	M2W_gastrooes map2way_NI_c	rs3486479	6	27459923	G
Biological assays - FE	Red_blood_cell_f_30070_0_0_f_rs	rs1173984	5	609661	G
Cardiovascular	HES_Phlebitis_ai HES_p_l80_BIN_	rs6088813	20	33975181	C
Cardiovascular	M2W_venous_tl map2way_NI_c	rs6088813	20	33975181	C
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs8025774	15	67483276	C
Eye	OPC_Extracapsu f_41210_41200_	rs3486479	6	27459923	G
Gastroenterology, h	NIOPC_inguinal_f_20004_dxCod	rs8025774	15	67483276	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs6138639	20	25669052	C
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs6032942	20	10745545	G
Renal	M2W_kidney_n map2way_NI_c	rs3844313	6	32635629	G
Respiratory	FEV1_maximum' f_3063_0_f_QU	rs559233	7	26848830	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs559233	7	26848830	T
Urology	HESBL_Diseases_HES_block_p_N	rs9689096	6	34188892	A
Respiratory	TA_FEV1_never QUANT_FEV1_nrs	rs1281181	12	4243749	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs9661687	1	78387270	C
Musculoskeletal dise	M2W_osteoarth map2way_NI_c	rs1120535	1	150249101	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1117211	12	57527283	T
Musculoskeletal dise	HESCH_Diseases_HES_chapter_p_	rs303752	18	21074255	G
Biological assays - FE	Lymphocyte_peif_30180_0_0_f_rs	rs1250462	4	145436324	T
Cardiovascular	HES_Essential_p HES_p_l10_BIN_	rs1595029	3	158241767	A
Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs1751313	1	40035686	C
Cardiovascular	pulse_minimum' f_102_0_f_QUA	rs1300958	2	24018480	G
Anthropometry	Birth_weight f_20022_0_0_f_rs	rs1300958	2	24018480	G
Anthropometry	Whole_body_fatf_23100_0_0_f_rs	rs1299762	2	202970250	C
Biological assays - FE	Red_blood_cell_f_30070_0_0_f_rs	rs1120535	1	150249101	C
Musculoskeletal dise	TA_osteoarthriti BIN_osteoarthri	rs1120535	1	150249101	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs4866846	5	43976162	A
Musculoskeletal dise	OPC_Soft_tissue f_41210_41200_	rs3486479	6	27459923	G
Broad symptoms, sig	HESCH_Diseases_HES_chapter_p_	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs2293871	10	124273671	C
Biological assays - FE	Monocyte_coun f_30130_0_0_f_rs	rs1985511	18	19816712	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs1985511	18	19816712	A
Respiratory	TA_FEV1_FVC_r QUANT_FEV1_F	rs4820216	22	20854161	T
Respiratory	TA_FEV1_never QUANT_FEV1_nrs	rs6062304	20	62351539	A
Biological assays - FE	Monocyte_percf_30190_0_0_f_rs	rs2967516	19	36881643	A
Musculoskeletal dise	OPC_Other_ope f_41210_41200_	rs6088813	20	33975181	C
Cardiovascular	MED_diuretics_ C03E_diuretics_	rs330939	8	9018590	T
Biological assays - FE	White_blood_cef_30000_0_0_f_rs	rs2863171	11	45250732	A
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs1799807	3	165548529	T
Eye	M2W_diabetic_ (map2way_NI_c	rs1175902	6	126792095	A
Respiratory	TA_FEV1_never QUANT_FEV1_nrs	rs1175902	6	126792095	A
Musculoskeletal dise	grip_strength_m f_47_46_QUAN	rs2304340	2	179260382	A
Musculoskeletal dise	Knee_pain f_6159_code7_|rs	rs1513272	7	28200097	C
Cardiovascular	HES_Essential_p HES_p_l10_BIN_	rs4237643	11	43648368	T

Gastroenterology, h	Other_diseases_HES_p_K22_BIN	rs3486479	6	27459923	G
Musculoskeletal dise	grip_strength_mf_47_46_QUAN	rs2284746	1	17306675	C
Respiratory	TA_copdMappin	rs1766633	3	29469675	T
Immuno-inflammati	M2W_sjogrens_map2way_NI_c	rs3844313	6	32635629	G
Biological assays - FE	Red_blood_cell_f_30010_0_0_f	rs967497	9	131943843	A
Respiratory	FEV1_maximum_f_3063_0_f_QU	rs6032942	20	10745545	G
Respiratory	PEF_maximumV_f_3064_0_f_QU	rs4820216	22	20854161	T
Respiratory	TA_FEV1_perce	rs4820216	22	20854161	T
Respiratory	TA_FEV1_perce	rs1281181	12	4243749	T
Anthropometry	Body_fat_perce	rs1751313	1	40035686	C
Respiratory	TA_FEV1_never	rs2014787	5	148611675	G
Immuno-inflammati	M2W_lichen_pl	rs3486479	6	27459923	G
Biological assays - FE	Mean_corpusculf_30060_0_0_f	rs181206	16	28513403	A
Medication	MED_calcium_A12A_calcium_l	rs3844313	6	32635629	G
Cardiovascular	MED_beta_block	rs3844313	6	32635629	G
Medication	Calcium_f_6179_0_code	rs3844313	6	32635629	G
Urology	M2W_bph_beni	rs3844313	6	32635629	G
Musculoskeletal dise	M2W_carpal_tu	rs3844313	6	32635629	G
Cardiovascular	MED_beta_block	rs193686	7	116431427	C
Biological assays - FE	Monocyte_perce	rs559233	7	26848830	T
Respiratory	TA_FEV1_ever_s	rs559233	7	26848830	T
Respiratory	TA_FEV1_FVC_r	rs586936	3	73862616	G
Respiratory	PEF_maximumV_f_3064_0_f_QU	rs1005966	5	121410529	C
Respiratory	FVC_maximumV_f_3062_0_f_QU	rs7838717	8	145504343	T
Anthropometry	Standing_height_f_50_0_0_f_QU	rs7838717	8	145504343	T
Gastroenterology, h	M2W_inguinal_t	rs8025774	15	67483276	C
Respiratory	TA_FEV1_perce	rs6435952	2	217614730	A
Musculoskeletal dise	Back_pain_f_6159_code4_l	rs1416685	1	51243374	G
Respiratory	TA_FEV1_never	rs1416685	1	51243374	G
Gastroenterology, h	M2W_abdomina	rs3751837	16	3583173	C
Gastroenterology, h	OPC_Endoscopic_f_41210_41200	rs4444235	14	54410919	T
Biological assays - FE	Reticulocyte_co	rs6780171	3	185503456	T
Respiratory	FEV1_maximum_f_3063_0_f_QU	rs3525199	15	49706145	A
Respiratory	PEF_maximumV_f_3064_0_f_QU	rs3525199	15	49706145	A
Respiratory	TA_FEV1_FVC_r	rs8025774	15	67483276	C
Biological assays - FE	Monocyte_coun	rs2967516	19	36881643	A
Respiratory	MED_adrenergic	rs3471297	4	106819053	G
Cardiovascular	MED_calcium_cl	rs8068952	17	59286644	G
Biological assays - FE	Haemoglobin_cc	rs9807668	18	42827898	C
Respiratory	TA_FEV1_ever_s	rs9807668	18	42827898	C
Respiratory	TA_FEV1_ever_s	rs9807668	18	42827898	C
Mental health	MED_antidepres	rs3486479	6	27459923	G
Gastroenterology, h	Stomach_abdon	rs3486479	6	27459923	G
Gastroenterology, h	HESCH_Diseases	rs2799098	1	218521609	G
Musculoskeletal dise	Neck_or_should	rs772920	12	56390364	C
Cardiovascular	MED_lipid_modi	rs4924525	15	41255396	C
Anthropometry	Weight_f_21002_0_0_f	rs9689096	6	34188892	A
Cardiovascular	pulse_minimum_f_102_0_f_QUA	rs772920	12	56390364	C
Gynaecology and Ot	NIOPC_hysterec	rs330939	8	9018590	T
Gastroenterology, h	OPC_Minimal_a	rs1430193	2	56120853	A

Respiratory	FEV1_maximum	f_3063_0_0_f_QU	rs2894837	6	56336406	A
Musculoskeletal diso	Knee_pain_for	f_3773_0_0_f_E	rs1513272	7	28200097	C
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f_	rs1215	17	7163350	A
Biological assays - FE	Platelet_crit	f_30090_0_0_f_	rs1215	17	7163350	A
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs6733504	2	242495953	A
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs6437219	2	241844033	C
Anthropometry	Whole_body_fat	f_23101_0_0_f_	rs2852009	4	7846240	C
Anthropometry	Body_fat_perce	f_23099_0_0_f_	rs1294421	6	6743149	T
Biological assays - FE	Basophil_perce	f_30220_0_0_f_	rs1108574	19	10819967	C
Metabolic and endo	Insulin	f_6153_6177_0_	rs1175902	6	126792095	A
Respiratory	FEV1_maximum	f_3063_0_0_f_QU	rs1698268	14	84309664	A
Eye	M2W_diabetic	map2way_NI_c	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever	s_QUANT_FEV1_	ers3844313	6	32635629	G
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_f_	rs772920	12	56390364	C
Respiratory	FEV1_maximum	f_3063_0_0_f_QU	rs7238093	18	20728158	A
Cardiovascular	MED_ace_inhibi	C09B_ace_inhib	rs1024630	7	7286445	A
General health, smo	Number_of_ope	f_136_0_0_f_Q	rs3435163	17	16030520	T
Anthropometry	Body_fat_perce	f_23099_0_0_f_	rs3435163	17	16030520	T
Gastroenterology, h	HES_Haemorrh	HES_p_I84_BIN_	rs1700928	1	221204299	A
Cardiovascular	systolic_blood	p_f_4080_0_0_f_QU	rs1700928	1	221204299	A
Respiratory	FEV1_maximum	f_3063_0_0_f_QU	rs8089865	18	50957922	G
Neurosciences	General_pain	fcf_2956_0_0_f_	rs3844313	6	32635629	G
Eye	HES_Hordeolum	HES_p_H00_BIN	rs3844313	6	32635629	G
Gynaecology and O	M2W_uterine_p	map2way_NI_c	rs3486479	6	27459923	G
Musculoskeletal diso	OPC_Other_recc	f_41210_41200_	rs1419429	1	155137395	G
Musculoskeletal diso	HES_Other_soft	HES_p_M79_BII	rs1751313	1	40035686	C
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs1668091	18	22290711	T
Biological assays - FE	Mean_platelet	f_30100_0_0_f_	rs3849969	10	75525999	A
Respiratory	FVC_maximum	Vf_3062_0_0_f_QU	rs3849969	10	75525999	A
Respiratory	PEF_maximum	Vf_3064_0_0_f_QU	rs3849969	10	75525999	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1723268	7	46448518	T
Biological assays - FE	Neutrophill_cou	f_30140_0_0_f_	rs5619686	12	2908330	C
Cardiovascular	MED_lipid_modi	C10B_lipid_moc	rs8068952	17	59286644	G
Gastroenterology, h	M2W_diverticul	map2way_NI_c	rs1119184	10	105639611	T
Anthropometry	Standing_height	f_50_0_0_f_QU	rs7767232	17	62497964	C
Mental health	M2W_schizophr	map2way_NI_c	rs1165850	17	36886828	G
Biological assays - FE	Reticulocyte_pe	f_30240_0_0_f_	rs193686	7	116431427	C
Urology	HESBL_Other_di	HES_block_p_N	rs3486479	6	27459923	G
Mental health	Neuroticism_scc	f_20127_0_0_f_	rs1690985	9	98204792	G
Musculoskeletal diso	HES_Dorsalgia	HES_p_M54_BII	rs7290420	2	157046432	T
Gastroenterology, h	HES_Diverticular	HES_p_K57_BIN	rs1119184	10	105639611	T
Gynaecology and O	M2W_uterine_fi	map2way_NI_c	rs1119184	10	105639611	T
Respiratory	PEF_maximum	Vf_3064_0_0_f_QU	rs1051652	4	106688904	A
Biological assays - FE	Mean_corpuscul	f_30040_0_0_f_	rs1215	17	7163350	A
Respiratory	TA_copd	Mappin_BIN_copd	Mappirs1243826	15	84502549	C
ENT and maxillofaci	Hearing_difficult	f_2247_0_0_f_	rs2014787	5	148611675	G
Respiratory	M2W_asthma	map2way_NI_c	rs1250462	4	145436324	T
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f_	rs181206	16	28513403	A
Eye	OPC_Prosthesis	f_41210_41200_	rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7176074	15	73833600	G

Gastroenterology, h	M2W_oesophag map2way_NI_c	rs4237643	11	43648368	T	
Immuno-inflammati	Pattern_4_f_	f_2395_0_code	rs2146098	1	186090370	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2146098	1	186090370	A
Breast	OPC_Reconstruc	f_41210_41200	rs1005999	5	170901463	T
Biological assays - FE	Monocyte_coun	f_30130_0_0_f	rs3849969	10	75525999	A
Immuno-inflammati	MED_corticoste	S03B_corticoste	rs3844313	6	32635629	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs1859962	17	69108753	G
Cardiovascular	HESBL_Ischaemi	HES_block_p_I2	rs8068952	17	59286644	G
Respiratory	HES_Other_inte	HES_p_J84_BIN	rs1757787	17	44208218	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1049823	2	229502503	C
Cardiovascular	M2W_essential	map2way_NI_c	rs1595029	3	158241767	A
ENT and maxillofaci	HESBL_Other_di	HES_block_p_J3	rs1134738	19	41124155	T
Gynaecology and O	HES_Female_ge	HES_p_N81_BIN	rs2571445	2	218683154	A
Biological assays - FE	Monocyte_perce	f_30190_0_0_f	rs1757787	17	44208218	A
Eye	HESBL_Other_di	HES_block_p_H	rs7269986	14	93114787	G
Breast	PROXYS_Breast	f_20111_0_cod	rs7269986	14	93114787	G
Puberty	Age_when_peric	f_2714_0_0_f	(rs2007403	4	106131210	C
Musculoskeletal dise	HESCH_Diseases	HES_chapter_p	rs6088813	20	33975181	C
Neurosciences	Morning_evenin	f_1180_0_0_f	(rs967497	9	131943843	A
Cardiovascular	HES_Chronic_isc	HES_p_I25_BIN	rs303752	18	21074255	G
Urology	HESBL_Sympton	HES_block_p_R	rs1244780	16	58075282	C
Breast	CREG_mal_neo_f	40006_0_p_C	rs6207063	17	29087285	G
Breast	CREGBL_mal_ne	f_40006_block	rs6207063	17	29087285	G
Biological assays - FE	Red_blood_cell	f_30070_0_0_f	rs2322659	2	136555659	T
Biological assays - FE	Neutrophill_per	f_30200_0_0_f	rs2322659	2	136555659	T
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs2322659	2	136555659	T
Biological assays - FE	Red_blood_cell	f_30010_0_0_f	rs803765	13	71647588	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs803765	13	71647588	C
Biological assays - FE	Eosinophill_per	f_30210_0_0_f	rs1737889	20	31042176	C
Musculoskeletal dise	grip_strength_m	f_47_46_QUAN	rs3973397	16	70040398	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	rs3973397	16	70040398	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs9661802	1	6678864	A
Gastroenterology, h	HESBL_Diseases	HES_block_p_K	rs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7424771	2	161276378	G
Gastroenterology, h	Omeprazole_e	f_6154_0_code	rs1173984	5	609661	G
Urology	HESBL_Urolithia	HES_block_p_N	rs1751313	1	40035686	C
Cardiovascular	M2W_hypertens	map2way_NI_c	rs4309038	1	201884647	G
Cardiovascular	M2W_varicose	map2way_NI_c	rs3486479	6	27459923	G
Respiratory	TA_copdMappin	BIN_copdMappi	rs6431620	2	239604970	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs9636166	19	31829613	A
Biological assays - U	Sodium_in_urine	f_30530_0_0_f	rs1085824	9	139102831	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1751313	1	40035686	C
Biological assays - FE	Platelet_crit	f_30090_0_0_f	rs1250462	4	145436324	T
Cardiovascular	Diastolic_blood	f_4079_0_f_QU	rs6062304	20	62351539	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs1108574	19	10819967	C
ENT and maxillofaci	MED_decongest	R01A_deconges	rs8067511	17	37611352	C
Metabolic and endo	MED_blood_glu	A10B_blood_glu	rs9661802	1	6678864	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs6133207	2	239316560	G
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2851944	17	54195453	C
Eye	Corneal_resistar	f_5257_0_0_f	(rs5960615	17	79952944	C

Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	5960615	17	79952944	C	
Respiratory	M2W_asthma_map2way_NI_c	rs5634193	3	168715808	A	
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	9385988	6	142560957	A	
Medication	MED_antiinfecti_S01A_antiinfect	rs7713065	5	131788334	A	
Cardiovascular	MED_lipid_modiC10B_lipid_moc	rs303752	18	21074255	G	
Neurosciences	HESBL_Nerve_nHES_block_p_G	rs303752	18	21074255	G	
Musculoskeletal disease	HESBL_Other_dcHES_block_p_M	rs303752	18	21074255	G	
Cardiovascular	M2W_hypertens_map2way_NI_c	rs303752	18	21074255	G	
Cardiovascular	HES_NonrheumHES_p_I35_BIN	rs3743609	16	75467021	G	
Biological assays - FE	Reticulocyte_perf_30240_0_0_f	rs1737889	20	31042176	C	
Biological assays - FE	High_light_scattf_30300_0_0_f	rs1737889	20	31042176	C	
Cardiovascular	Blood_pressure_f_6153_6177_0	rs1737889	20	31042176	C	
Cardiovascular	MED_lipid_modiC10A_lipid_moc	rs3743609	16	75467021	G	
Cardiovascular	M2W_high_chol_map2way_NI_c	rs3844313	6	32635629	G	
Biological assays - U	Sodium_in_urinef_30530_0_0_f	rs3486479	6	27459923	G	
Eye	Intra_ocular_preff_5262_0_0_f	(rs2146098)	1	186090370	A	
Respiratory	FVC_maximumVf_3062_0_f_QU	rs772920	12	56390364	C	
Eye	Corneal_resistarf_5265_0_0_f	(rs7269986)	14	93114787	G	
Eye	Intra_ocular_preff_5262_0_0_f	(rs2284746)	1	17306675	C	
Anthropometry	Weight	f_21002_0_0_f	rs803765	13	71647588	C
Cardiovascular	myocardial_infainf_42000_0_0_B	rs8068952	17	59286644	G	
Cardiovascular	M2W_heartcard_map2way_NI_c	rs303752	18	21074255	G	
Respiratory	FVC_maximumVf_3062_0_f_QU	rs2701110	12	114669870	C	
Respiratory	TA_FEV1_FVC_rQUANT_FEV1_F	rs2701110	12	114669870	C	
Respiratory	FEV1_maximumf_3063_0_f_QU	rs2852009	4	7846240	C	
Respiratory	TA_FEV1_FVC_rQUANT_FEV1_F	rs6431620	2	239604970	T	
Anthropometry	Body_mass_indef_21001_0_0_f	rs7753012	6	142745883	T	
Neurosciences	M2W_trapped_map2way_NI_c	rs303752	18	21074255	G	
Biological assays - U	Sodium_in_urinef_30530_0_0_f	rs1102077	6	140271357	A	
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs9689096	6	34188892	A	
Gynaecology and O	M2W_cervical_r_map2way_NI_c	rs1162038	13	99665512	C	
Musculoskeletal disease	OPC_Soft_tissuef_41210_41200	rs3844313	6	32635629	G	
Biological assays - FE	Monocyte_counf_30130_0_0_f	rs6207063	17	29087285	G	
Eye	Intra_ocular_preff_5262_0_0_f	(rs3844313)	6	32635629	G	
Eye	M2W_retinal_pr_map2way_NI_c	rs3844313	6	32635629	G	
Cardiovascular	PROXYS_High_blf_20111_0_cod	rs1175902	6	126792095	A	
Musculoskeletal disease	Neck_or_shouldf_6159_code3_l	rs1175902	6	126792095	A	
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1311069	4	89815695	T	
Eye	HESBL_Disorder:HES_block_p_H	rs1416685	1	51243374	G	
Neurosciences	Headache	f_6159_code1_l	rs1416685	1	51243374	G
Respiratory	TA_copdMappinBIN_copdMappi	rs2544536	2	15906854	T	
Gastroenterology, h	HESBL_Hernia	HES_block_p_K	rs3751837	16	3583173	C
Gastroenterology, h	HES_Inguinal_he	HES_p_K40_BIN	rs3751837	16	3583173	C
Cardiovascular	HESCH_Chapter_HES_chapter_p	rs1751313	1	40035686	C	
Mental health	Getting_up_in_rf_1170_0_0_f	(rs1108574)	19	10819967	C	
Gastroenterology, h	M2W_hiatus_hemap2way_NI_c	rs1416685	1	51243374	G	
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1343046	2	18702313	C	
Respiratory	TA_FEV1_perceQUANT_FEV1_p	rs1005999	5	170901463	T	
Musculoskeletal disease	HES_Gonarthros	HES_p_M17_BII	rs3486479	6	27459923	G
Respiratory	PEF_maximumVf_3064_0_f_QU	rs1291814	16	86403821	G	

Musculoskeletal disease	TA_OA_under_aBIN_OA_under_rs6088813	20	33975181	C
Cardiovascular	HES_Varicose_veHES_p_I83_BIN_rs3486479	6	27459923	G
Anthropometry	Standing_height_f_50_0_0_f_QU rs1244869	12	65075332	T
Anthropometry	Whole_body_faif_23100_0_0_f_rs7989847	5	179598771	T
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs4952564	2	42243850	A
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs4952564	2	42243850	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers1085037	12	115201436	G
Gastroenterology, h	HES_Fissure_ancHES_p_K60_BINrs1757787	17	44208218	A
Anthropometry	Waist_circumfer_f_48_0_0_f_QU rs1215	17	7163350	A
Mental health	Sleep_duration_f_1160_0_0_f_(rs4309038	1	201884647	G
Cardiovascular	Blood_pressure_f_6153_6177_0_rs330939	8	9018590	T
Eye	Other_eye_probf_2227_0_0_f_(rs9661802	1	6678864	A
Respiratory	MED_adrenergicR03A_adrenergirs6231631	4	75676529	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs3542003	16	53935407	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs3542003	16	53935407	T
Respiratory	HESCH_DiseasesHES_chapter_p_rs9636166	19	31829613	A
Musculoskeletal disease	HESBL_Inflamm: HES_block_p_Mrs330939	8	9018590	T
Respiratory	MED_adrenergicR03A_adrenergirs1250462	4	145436324	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs2852009	4	7846240	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers771924	9	1555835	A
Respiratory	FEV1_maximum_f_3063_0_f_QU rs1799807	3	165548529	T
Musculoskeletal disease	HES_Acquired_dHES_p_M20_BIIrs6088813	20	33975181	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs3849969	10	75525999	A
Musculoskeletal disease	BMD_Combined_f_3148_4105_4 rs1165850	17	36886828	G
Respiratory	TA_FEV1_perce:QUANT_FEV1_prs1273780	1	22612690	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers2627237	6	134339265	A
Eye	OPC_Operationsf_41210_41200_rs1757787	17	44208218	A
Eye	HESCH_DiseasesHES_chapter_p_rs7715901	5	147856392	A
Mental health	HES_Specific_peHES_p_F60_BINrs193686	7	116431427	C
Anthropometry	Standing_height_f_50_0_0_f_QU rs1096594	9	23588583	C
Anthropometry	Whole_body_w: f_23102_0_0_f_rs2852009	4	7846240	C
Cardiovascular	MED_diuretics_c: C03E_diuretics_rs303752	18	21074255	G
Respiratory	TA_copdMappinBIN_copdMappirs772920	12	56390364	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers1299762	2	202970250	C
Biological assays - FE	Red_blood_cell_f_30010_0_0_f_rs1262725	21	35368402	G
Cardiovascular	OPC_Other_opef_41210_41200_rs1262725	21	35368402	G
Respiratory	PEF_maximumVf_3064_0_f_QU rs1244780	16	58075282	C
Urology	M2W_bph_beni: map2way_NI_crs5619686	12	2908330	C
Gastroenterology, h	NIOPC_inguinal_f_20004_dxCod rs993925	1	218860068	C
Metabolic and endo	PROXYFM_Diab: f_20107_20110_rs993925	1	218860068	C
Respiratory	FVC_maximumVf_3062_0_f_QU rs1085037	12	115201436	G
Cardiovascular	M2W_heartcard map2way_NI_crs1119184	10	105639611	T
Mental health	HES_Depressive_HES_p_F32_BINrs1175902	6	126792095	A
Biological assays - FE	Haematocrit_pef_30030_0_0_f_rs967497	9	131943843	A
Cardiovascular	myocardial_infai: f_42000_0_0_B rs1087020	9	139257411	T
Biological assays - FE	High_light_scattf_30290_0_0_f_rs1416685	1	51243374	G
Urology	NIOPC_transure:f_20004_dxCod rs3486479	6	27459923	G
Respiratory	TA_NI_pediatric_BIN_NI_pediatri rs3486479	6	27459923	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_Frs193686	7	116431427	C
Cardiovascular	Cholesterol_lowf_6153_6177_0_rs9438626	1	26775367	G

Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	9438626	1	26775367	G
Respiratory	TA_copdMappin BIN_copdMappirs	6082098	10	75639578	C
Mental health	HES_Depressive_HES_p_F32_BIN	rs1250462	4	145436324	T
Biological assays - FE	Nucleated_red_lf_30170_0_0_f_rs	1051652	4	106688904	A
Mental health	Probable_recurr f_20125_0_0_f_rs	3486479	6	27459923	G
Medication	MED_calcium A12A_calcium_lrs	8025774	15	67483276	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	8025774	15	67483276	C
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	7095607	10	69957350	G
Immuno-inflammati	MED_corticosteID07B_corticoste	rs6681426	1	150586971	G
Respiratory	TA_FEV1_perceer QUANT_FEV1_p	rs1247086	2	102926362	G
Respiratory	FEV1_maximum'f_3063_0_f_QU	rs1270769	7	84569510	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1270769	7	84569510	C
Puberty	Relative_age_vof_2385_0_0_f_(rs	5610488	16	4361138	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs4846480	1	218598469	A
Immuno-inflammati	MED_corticosteID07C_corticoste	rs1051575	5	156810072	C
Gynaecology and Ok	M2W_vaginal_p map2way_NI_c	rs2571445	2	218683154	A
Gastroenterology, h	M2W_oesophag map2way_NI_c	rs3486479	6	27459923	G
Urology	M2W_bph_beni map2way_NI_c	rs9689096	6	34188892	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	4651005	1	178719306	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1083636	11	35308988	T
Biological assays - FE	Nucleated_red_lf_30230_0_0_f_rs	1051652	4	106688904	A
Anthropometry	Whole_body_fatf_23101_0_0_f_rs	1214063	1	92374517	C
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs2894837	6	56336406	A
Anthropometry	Whole_body_fatf_23100_0_0_f_rs	3751837	16	3583173	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	2070600	6	32151443	C
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	6751968	2	18570024	C
Metabolic and endo	HESBL_Diabetes_HES_block_p_E:	rs303752	18	21074255	G
Cardiovascular	MED_ace_inhibi C09A_ace_inhibrs	8068952	17	59286644	G
Cardiovascular	systolic_blood_uf_4080_0_f_QU	rs1595029	3	158241767	A
Cardiovascular	M2W_hypertens map2way_NI_c	rs1513272	7	28200097	C
Urology	MED_drugs_use G04C_drugs_us	rs3486479	6	27459923	G
Urology	HES_Redundant_HES_p_N47_BIN	rs2070600	6	32151443	C
Gastroenterology, h	M2W_ulcerative map2way_NI_c	rs6062304	20	62351539	A
Gastroenterology, h	HESBL_Hernia HES_block_p_K:	rs993925	1	218860068	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1119184	10	105639611	T
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs6133207	2	239316560	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs9438626	1	26775367	G
Gastroenterology, h	HESBL_Other_di HES_block_p_K:	rs2070600	6	32151443	C
Cardiovascular	MED_beta_blocl C07C_beta_bloc	rs3743609	16	75467021	G
Cardiovascular	MED_beta_blocl C07F_beta_bloc	rs3743609	16	75467021	G
Cardiovascular	PROXYS_High_blf_20111_0_cod	rs6207027	17	28263980	A
Musculoskeletal dise	Fractured_broke f_2463_0_0_f_F	rs1416685	1	51243374	G
Biological assays - FE	Eosinophill_cour f_30150_0_0_f_rs	3973397	16	70040398	G
Biological assays - FE	Monocyte_coun f_30130_0_0_f_rs	2863171	11	45250732	A
Metabolic and endo	M2W_hypothyrc map2way_NI_c	rs330939	8	9018590	T
Cardiovascular	HESCH_Chapter_HES_chapter_p	rs1513272	7	28200097	C
Anthropometry	Standing_height f_50_0_0_f_QU	rs7405312	14	54346010	G
Gastroenterology, h	M2W_malabsor map2way_NI_c	rs1119184	10	105639611	T
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	1119184	10	105639611	T
Renal	HES_Unspecifiec HES_p_N05_BIN	rs3844313	6	32635629	G

Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs7838717	8	145504343	T
Biological assays - FE	Platelet_distribuf_30110_0_0_f	rs193686	7	116431427	C
Puberty	Age_when_pericf_2714_0_0_f	(rs7277644	5	77440196	G
Biological assays - FE	Lymphocyte_cof_30120_0_0_f	rs2863171	11	45250732	A
ENT and maxillofaci	NIOPC_tonsillecf_20004_dxCod	rs3435163	17	16030520	T
Biological assays - FE	Haematocrit_pe f_30030_0_0_f	rs4309038	1	201884647	G
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	35506	12	115500691	T
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	35506	12	115500691	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1859962	17	69108753	G
Gynaecology and Ok	HES_Female_gei HES_p_N81_BIN	rs1430193	2	56120853	A
Respiratory	PROXYF_Chronicf_20107_0_cod	rs2799098	1	218521609	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs4952564	2	42243850	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs4952564	2	42243850	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1281181	12	4243749	T
Respiratory	TA_FEV1_never_QUANT_FEV1_nrs	9438626	1	26775367	G
Anthropometry	Weight f_21002_0_0_f	rs6437219	2	241844033	C
Musculoskeletal dise	HES_Internal_de HES_p_M23_BII	rs1110718	12	94184082	C
Immuno-inflammati	OPC_Other_ope f_41210_41200	rs1110718	12	94184082	C
Neurosciences	OPC_Neuropsychf_41210_41200	rs1110718	12	94184082	C
Respiratory	TA_NI_adult_on BIN_NI_adult_o	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	1859962	17	69108753	G
ENT and maxillofaci	NIOPC_tonsillecf_20004_dxCod	rs2007403	4	106131210	C
Biological assays - FE	White_blood_cef_30000_0_0_f	rs2007403	4	106131210	C
Biological assays - FE	Platelet_crit f_30090_0_0_f	rs2007403	4	106131210	C
Musculoskeletal dise	Back_pain_for_3f_3571_0_0_f	rs8089865	18	50957922	G
Musculoskeletal dise	Neck_or_should f_6159_code3_l	rs8089865	18	50957922	G
Metabolic and endo	HES_Non_insulir HES_p_E11_BIN	rs303752	18	21074255	G
Eye	HES_Other_diso HES_p_H02_BIN	rs303752	18	21074255	G
ENT and maxillofaci	HES_Nasal_poly|HES_p_J33_BIN	rs1513272	7	28200097	C
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	1173984	5	609661	G
Immuno-inflammati	M2W_bowens_cmap2way_NI_cr	rs3486479	6	27459923	G
Respiratory	Wheeze_or_whi f_2316_0_0_f	rs967497	9	131943843	A
Respiratory	HESCH_Diseases HES_chapter_p	rs967497	9	131943843	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_Frs	7277644	5	77440196	G
Respiratory	TA_NI_pediatric BIN_NI_pediatri	rs2811415	3	127991527	A
Cardiovascular	M2W_angina map2way_NI_cr	rs6780171	3	185503456	T
Gynaecology and Ok	M2W_gynaecolc map2way_NI_cr	rs6780171	3	185503456	T
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	4294980	2	218604356	G
Biological assays - U	TA_urine_album QUANT_urine_a	rs1294580	17	46552229	T
Cardiovascular	HESBL_Hyperter HES_block_p_l1	rs772920	12	56390364	C
Respiratory	PROXYFM_Lung_f_20107_20110	rs772920	12	56390364	C
Metabolic and endo	M2W_diabetes map2way_NI_cr	rs1595029	3	158241767	A
Eye	Intra_ocular_pre f_5255_0_0_f	(rs7872188	9	4124377	C
Mental health	Seen_doctor_GFf_2090_0_0_f	rs7424771	2	161276378	G
Neurosciences	Mean_time_to_f_20023_0_0_f	rs3548056	3	71583177	A
Eye	HESBL_Glaucom HES_block_p_H	rs2852009	4	7846240	C
Eye	HES_Glaucoma HES_p_H40_BIN	rs2852009	4	7846240	C
Cardiovascular	MED_angiotensi C09D_angioten	rs8068952	17	59286644	G
Neurosciences	M2W_bells_pals map2way_NI_cr	rs9357446	6	44447598	G
Neurosciences	Headaches_for_f_3799_0_0_f	rs1250462	4	145436324	T

Respiratory	FVC_maximumV f_3062_0_0_f_QU	rs2544536	2	15906854	T
Anthropometry	Whole_body_fat f_23101_0_0_f_rs	972936	12	102824921	T
Anthropometry	Whole_body_wat f_23102_0_0_f_rs	972936	12	102824921	T
Puberty	Relative_age_of f_2375_0_0_f_(rs	972936	12	102824921	T
Biological assays - FE	High_light_scatt f_30290_0_0_f_rs	193686	7	116431427	C
Cardiovascular	MED_ace_inhibi C09B_ace_inhibrs	1757787	17	44208218	A
Metabolic and endo	MED_thyroid_pr H03A_thyroid_f_rs	1757787	17	44208218	A
Urology	HESBL_Urolithia: HES_block_p_N	rs1757787	17	44208218	A
Immuno-inflammati	M2W_sjogrens_map2way_NI_c(rs	1757787	17	44208218	A
Musculoskeletal dise	HES_Arthrosis_o HES_p_M18_BI	rs1757787	17	44208218	A
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F	rs3542003	16	53935407	T
Respiratory	TA_FEV1_perce QUANT_FEV1_p	rs7899503	10	65087468	C
Gastroenterology, h	M2W_cholelithi: map2way_NI_c(rs	2070600	6	32151443	C
Respiratory	PROXYFM_Chro: f_20107_20110	rs1751313	1	40035686	C
Respiratory	PEF_maximumV f_3064_0_0_f_QU	rs1123580	11	73290163	A
Eye	M2W_optic_neu map2way_NI_c(rs	1123580	11	73290163	A
Cardiovascular	M2W_aortic_ste map2way_NI_c(rs	3743609	16	75467021	G
Cardiovascular	M2W_aortic_val map2way_NI_c(rs	3743609	16	75467021	G
General health, smo	Number_of_self f_135_0_0_f_Q(rs	6062304	20	62351539	A
Medication	Paracetamol f_6154_0_code:rs	2070600	6	32151443	C
Eye	Corneal_resistar f_5257_0_0_f_(rs	7405312	14	54346010	G
Gastroenterology, h	OPC_Other_exte f_41210_41200	rs2571445	2	218683154	A
Respiratory	TA_FEV1_never_ QUANT_FEV1_n	rs1551943	5	52195033	G
Respiratory	HES_Asthma HES_p_J45_BIN	rs1250462	4	145436324	T
Cardiovascular	NIOPC_varicose_f_20004_dxCod	rs2812208	13	50707087	G
Musculoskeletal dise	TA_osteoarthri BIN_osteoarthri	rs2637254	10	78312002	G
Respiratory	TA_copdMappin BIN_copdMappi	rs1698268	14	84309664	A
Neurosciences	Pain_all_over_th f_6159_code8_|rs	2070600	6	32151443	C
ENT and maxillofaci	Dentures f_6149_0_code:rs	5960615	17	79952944	C
Eye	Intra_ocular_pre f_5254_0_0_f_(rs	1170482	22	18450287	A
Biological assays - FE	Platelet_crit f_30090_0_0_f_rs	1928168	6	22017738	T
Cardiovascular	MED_selective_(C08C_selective_rs	8068952	17	59286644	G
Respiratory	FEV1_maximum f_3063_0_0_f_QU	rs1766633	3	29469675	T
Respiratory	PEF_maximumV f_3064_0_0_f_QU	rs1951121	14	23429729	T
Biological assays - FE	Eosinophill_cour f_30150_0_0_f_rs	2863171	11	45250732	A
Cardiovascular	HESBL_Ischaemi HES_block_p_I2	rs303752	18	21074255	G
Urology	CREGBL_mal_ne f_40006_block_rs	3844313	6	32635629	G
Gastroenterology, h	Stomach_abdor f_3741_0_0_f_E	rs3548056	3	71583177	A
Biological assays - FE	Immature_retic f_30280_0_0_f_rs	303752	18	21074255	G
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F	rs6082098	10	75639578	C
Medication	OPC_Other_ana f_41210_41200	rs1416685	1	51243374	G
Broad symptoms, sig	HESBL_Diseases_ HES_block_p_I8	rs2863171	11	45250732	A
Respiratory	HES_Emphysem: HES_p_J43_BIN	rs1311699	4	145442364	G
Anthropometry	Whole_body_fat f_23101_0_0_f_rs	6681426	1	150586971	G
Biological assays - FE	Lymphocyte_pe f_30180_0_0_f_rs	1091960	1	198898157	A
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F	rs1091960	1	198898157	A
Biological assays - FE	Monocyte_coun f_30130_0_0_f_rs	9438626	1	26775367	G
Eye	Corneal_hystere f_5256_0_0_f_(rs	5960615	17	79952944	C
Respiratory	TA_FEV1_FVC_r: QUANT_FEV1_F	rs5960615	17	79952944	C
Musculoskeletal dise	HESCH_Diseases HES_chapter_p	rs3548056	3	71583177	A

Musculoskeletal dise	BMD_Combined f_3148_4105_4	rs1220231	6	45530471	T	
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1220231	6	45530471	T
Respiratory	HESCH_Diseases	HES_chapter_p	rs6062304	20	62351539	A
ENT and maxillofaci	MED_decongest	R01A_deconges	rs6062304	20	62351539	A
Neurosciences	General_pain_fc	f_2956_0_0_f	rs2070600	6	32151443	C
Musculoskeletal dise	grip_strength_mf	_47_46_QUAN	rs7971039	12	85724305	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs7971039	12	85724305	G
Cardiovascular	M2W_hypertens	map2way_NI_c	rs181206	16	28513403	A
Immuno-inflammati	M2W_hayfevera	map2way_NI_c	rs3844313	6	32635629	G
Cardiovascular	Blood_pressure_f	_6153_6177_0	rs6207027	17	28263980	A
Metabolic and endo	M2W_diabetes	map2way_NI_c	rs3751837	16	3583173	C
Gastroenterology, h	M2W_gastrooes	map2way_NI_c	rs1757787	17	44208218	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1119184	10	105639611	T
Musculoskeletal dise	M2W_spine_art	map2way_NI_c	rs7238093	18	20728158	A
ENT and maxillofaci	Dentures	f_6149_0_code	rs330939	8	9018590	T
General health, smo	Number_of_trea	f_137_0_0_f_Q	rs8025774	15	67483276	C
Gastroenterology, h	M2W_haemorrh	map2way_NI_c	rs1117600	12	66409367	C
Biological assays - FE	Reticulocyte_pe	f_30240_0_0_f	rs2821332	1	200085714	T
Biological assays - FE	Red_blood_cell_f	_30010_0_0_f	rs9807668	18	42827898	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs7405312	14	54346010	G
Cardiovascular	HES_Essential_p	HES_p_I10_BIN	rs772920	12	56390364	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs8068952	17	59286644	G
Urology	OPC_Diagnostic_f	_41210_41200	rs1085183	15	71628370	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs1117600	12	66409367	C
Biological assays - FE	Monocyte_coun	f_30130_0_0_f	rs3424550	15	40397191	C
Respiratory	HES_Asthma	HES_p_J45_BIN	rs3486479	6	27459923	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs6437219	2	241844033	C
Cardiovascular	MED_beta_bloc	C07B_beta_bloc	rs7090277	10	12278021	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1005966	5	121410529	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6751968	2	18570024	C
Respiratory	M2W_emphyser	map2way_NI_c	rs1311699	4	145442364	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs4820216	22	20854161	T
ENT and maxillofaci	NIOPC_nasal_sir	f_20004_dxCod	rs1247086	2	102926362	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs8025774	15	67483276	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7290420	2	157046432	T
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs7290420	2	157046432	T
ENT and maxillofaci	OPC_Other_rep	f_41210_41200	rs1243826	15	84502549	C
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2283847	22	28181399	C
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2348418	12	28689514	T
Eye	Corneal_resistar	f_5257_0_0_f	rs2799098	1	218521609	G
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f	rs330939	8	9018590	T
Anthropometry	Standing_height	f_50_0_0_f_QU	rs2084448	2	187530520	T
Anthropometry	Standing_height	f_50_0_0_f_QU	rs1215	17	7163350	A
Biological assays - FE	White_blood_cel	f_30000_0_0_f	rs1757787	17	44208218	A
Biological assays - FE	Neutrophill_per	f_30200_0_0_f	rs3973397	16	70040398	G
Musculoskeletal dise	M2W_dupuytre	map2way_NI_c	rs3486479	6	27459923	G
Cardiovascular	M2W_high_chol	map2way_NI_c	rs9661802	1	6678864	A
Cardiovascular	M2W_heart_arr	map2way_NI_c	rs9689096	6	34188892	A
Biological assays - FE	Lymphocyte_coi	f_30120_0_0_f	rs1311069	4	89815695	T
Biological assays - FE	Basophill_count	f_30160_0_0_f	rs1311069	4	89815695	T

Musculoskeletal disease	OPC_Other_mar f_41210_41200	rs2834440	21	35690499	G	
Gastroenterology, h	M2W_hiatus_he	map2way_NI_c	rs7095607	10	69957350	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7424771	2	161276378	G
Renal	HES_Calculus_of	HES_p_N20_BIN	rs1751313	1	40035686	C
Cardiovascular	PROXYS_High_blf_20111_0_cod	rs772920	12	56390364	C	
Biological assays - FE	Monocyte_perce	f_30190_0_0_f	rs772920	12	56390364	C
Gastroenterology, h	M2W_gastrooes	map2way_NI_c	rs772920	12	56390364	C
Medication	Aspirin	f_6154_0_code	rs6207027	17	28263980	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1118988	4	146174040	C
Cardiovascular	Leg_pain_on_wa	f_4728_0_0_f	rs3849969	10	75525999	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs8068952	17	59286644	G
Medication	MED_other_ana	N02B_other_an	rs1513272	7	28200097	C
Puberty	Age_when_peric	f_2714_0_0_f	(rs181206	16	28513403	A
Cardiovascular	M2W_essential_map2way_NI_c	rs1215	17	7163350	A	
Infectious disease	MED_tetracyclin	J01A_tetracyclir	rs2509961	11	62310909	T
Neurosciences	incorect_matche	f_399_0_f_QUA	rs2322659	2	136555659	T
Cardiovascular	HES_Transient_c	HES_p_G45_BIN	rs3542003	16	53935407	T
Gastroenterology, h	HESBL_Hernia	HES_block_p_K	rs1294421	6	6743149	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1294421	6	6743149	T
Respiratory	MED_adrenergic	R03A_adrenergir	rs5634193	3	168715808	A
Mental health	MED_antipsych	N05A_antipsych	rs3844313	6	32635629	G
Urology	OPC_Operations	f_41210_41200	rs3844313	6	32635629	G
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs7767232	17	62497964	C
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs1668091	18	22290711	T
Anthropometry	Standing_height	f_50_0_0_f_QU	rs8067511	17	37611352	C
Anthropometry	Whole_body_fat	f_23101_0_0_f	rs2799098	1	218521609	G
Gastroenterology, h	OPC_Primary_ref	41210_41200	rs2799098	1	218521609	G
Musculoskeletal disease	grip_strength_m	f_47_46_QUAN	rs1165850	17	36886828	G
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs7269986	14	93114787	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6435952	2	217614730	A
Gastroenterology, h	Omeprazole_e	f_6154_0_code	rs772920	12	56390364	C
Respiratory	TA_copdMappin	BIN_copdMappir	rs1294421	6	6743149	T
Immuno-inflammatory	Hair_balding_pa	f_2395_0_0_f	rs6431620	2	239604970	T
Immuno-inflammatory	Pattern_1_f	f_2395_0_code	rs6431620	2	239604970	T
Eye	Corneal_hystere	f_5264_0_0_f	(rs1766633	3	29469675	T
Musculoskeletal disease	OPC_Total_pros	f_41210_41200	rs3844313	6	32635629	G
Eye	OPC_Prosthesis	f_41210_41200	rs3435163	17	16030520	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs3435163	17	16030520	T
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1951121	14	23429729	T
Respiratory	MED_other_syst	R03D_other_sy	rs1117211	12	57527283	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs7218675	17	73513185	C
Operations and Proc	OPC_Connector	f_41210_41200	rs7715901	5	147856392	A
Gynaecology and Ot	M2W_vaginal_p	map2way_NI_c	rs1430193	2	56120853	A
Metabolic and endo	M2W_hypothyrc	map2way_NI_c	rs7269986	14	93114787	G
Cardiovascular	PROXYF_Heart	(f_20107_0_cod	rs1757787	17	44208218	A
Anthropometry	Waist_circumfer	f_48_0_0_f_QU	rs4968200	17	7448457	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1716339	5	128767384	A
Eye	OPC_Prosthesis	f_41210_41200	rs1416685	1	51243374	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs1117211	12	57527283	T
Musculoskeletal disease	BMD_Combined	f_3148_4105_4	rs3548056	3	71583177	A

Respiratory	TA_copdMappin	BIN_copdMappi	rs1698268	14	84309664	A
Musculoskeletal dise	M2W_fracture_	map2way_NI_	crs1416685	1	51243374	G
Urology	PROXYF_Prostat	f_20107_0_	codrs2007403	4	106131210	C
Immuno-inflammati	HES_Hypertroph	HES_p_L91_	BINrs2637254	10	78312002	G
Gynaecology and Ob	Ever_had_stillbir	f_2774_0_0_	f_rs1416685	1	51243374	G
Eye	OPC_Extracapsu	f_41210_41200_	rs1416685	1	51243374	G
Cardiovascular	M2W_high_chol	map2way_NI_	crs1299762	2	202970250	C
Urology	CREGBL_mal_ne	f_40006_block_	rs6062304	20	62351539	A
Puberty	Relative_age_vo	f_2385_0_0_	f_(rs972936	12	102824921	T
Gastroenterology, h	M2W_diverticul	map2way_NI_	crs4968200	17	7448457	C
Respiratory	PEF_maximumV	f_3064_0_	f_QUrs1175902	6	126792095	A
Immuno-inflammati	M2W_blistering	map2way_NI_	crs1175902	6	126792095	A
Respiratory	PEF_maximumV	f_3064_0_	f_QUrs1951121	14	23429729	T
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_	Frs1123580	11	73290163	A
Anthropometry	Whole_body_wa	f_23102_0_0_	f_rs1214063	1	92374517	C
Respiratory	PEF_maximumV	f_3064_0_	f_QUrs1214063	1	92374517	C
Mental health	Sleep_duration	f_1160_0_0_	f_(rs2322659	2	136555659	T
Respiratory	FEV1_maximum	f_3063_0_	f_QUrs1244869	12	65075332	T
Anthropometry	Whole_body_wa	f_23102_0_0_	f_rs6681426	1	150586971	G
Cardiovascular	HES_Varicose_v	HES_p_l83_	BINrs181206	16	28513403	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_	prs181206	16	28513403	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_	Frs1430193	2	56120853	A
Anthropometry	Body_mass_ind	f_21001_0_0_	f_rs7290420	2	157046432	T
Biological assays - FE	Platelet_distrib	f_30110_0_0_	f_rs1250462	4	145436324	T
Musculoskeletal dise	OPC_Closed_red	f_41210_41200_	rs1250462	4	145436324	T
General health, smo	TA_numCigarett	QUANT_numCig	rs3486479	6	27459923	G
Mental health	HESBL_Disorder	HES_block_p_	Frs1595029	3	158241767	A
Biological assays - FE	Platelet_count	f_30080_0_0_	f_rs1751313	1	40035686	C
Respiratory	TA_FEV1_never_	QUANT_FEV1_	nrs7713065	5	131788334	A
Gastroenterology, h	OPC_Excision_o	f_41210_41200_	rs772920	12	56390364	C
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_	Frs1270769	7	84569510	C
ENT and maxillofaci	OPC_Other_ope	f_41210_41200_	rs1247086	2	102926362	G
Operations and Proc	OPC_Minimal_a	f_41210_41200_	rs1247086	2	102926362	G
Musculoskeletal dise	Hip_pain_for_3_	f_3414_0_0_	f_rs1120535	1	150249101	C
Respiratory	HESBL_Chronic_	HES_block_p_	J4rs1751313	1	40035686	C
Respiratory	FEV1_maximum	f_3063_0_	f_QUrs1049823	2	229502503	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_	ers803765	13	71647588	C
Gynaecology and Ob	NIOPC_vaginal_	f_20004_dxCod	rs1430193	2	56120853	A
Anthropometry	Whole_body_fat	f_23100_0_0_	f_rs2812208	13	50707087	G
Musculoskeletal dise	Back_pain_for_3	f_3571_0_0_	f_rs1416685	1	51243374	G
Biological assays - FE	White_blood_ce	f_30000_0_0_	f_rs4924525	15	41255396	C
Gastroenterology, h	NIOPC_hernia_s	f_20004_dxCod	rs3486479	6	27459923	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_	ers2146098	1	186090370	A
Metabolic and endo	HES_Other_hyp	HES_p_E03_	BINrs1083636	11	35308988	T
Biological assays - FE	Red_blood_cell	f_30070_0_0_	f_rs6780171	3	185503456	T
Operations and Proc	NIOPC_biopsy	f_20004_dxCod	rs1448044	5	44296986	G
Biological assays - FE	Lymphocyte_pe	f_30180_0_0_	f_rs303752	18	21074255	G
Biological assays - FE	Reticulocyte_pe	f_30240_0_0_	f_rs4237643	11	43648368	T
Biological assays - FE	Mean_reticuloc	f_30260_0_0_	f_rs1209623	1	26796922	G
Respiratory	FEV1_maximum	f_3063_0_	f_QUrs7838717	8	145504343	T

General health, smo	Number_of_opef_136_0_0_f_Q	rs967497	9	131943843	A
Biological assays - FE	Haemoglobin_ccf_30020_0_0_f_rs	rs967497	9	131943843	A
Respiratory	FEV1_maximum_f_3063_0_f_QU	rs567508	11	126008910	G
Respiratory	TA_NI_pediatric_BIN_NI_pediatri	rs1757787	17	44208218	A
Cardiovascular	HESBL_Ischaemi_HES_block_p_I2	rs4309038	1	201884647	G
Biological assays - FE	Platelet_crit_f_30090_0_0_f_rs	rs4309038	1	201884647	G
Cardiovascular	M2W_essential_map2way_NI_cr	rs4309038	1	201884647	G
Immuno-inflammati	Pattern_4_f_f_2395_0_code	rs4328080	1	219963088	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs9661687	1	78387270	C
Respiratory	TA_FEV1_perce:QUANT_FEV1_p	rs9661687	1	78387270	C
Eye	Intra_ocular_pre:f_5263_0_0_f_(	rs7872188	9	4124377	C
Respiratory	HES_Asthma_HES_p_J45_BIN	rs9385988	6	142560957	A
Gastroenterology, h	OPC_examinatiof_41210_41200	rs6062304	20	62351539	A
Respiratory	FVC_maximumVf_3062_0_f_QU	rs4128298	8	11823332	T
Musculoskeletal dise	OPC_Manipulati f_41210_41200	rs1294421	6	6743149	T
Cardiovascular	M2W_varicose_map2way_NI_cr	rs181206	16	28513403	A
Respiratory	PEF_maximumV f_3064_0_f_QU	rs5764946	9	101632854	G
Musculoskeletal dise	Back_pain_for_3f_3571_0_0_f_E	rs1751313	1	40035686	C
Respiratory	Wheeze_or_whi f_2316_0_0_f_E	rs3471297	4	106819053	G
Respiratory	MED_other_systR03D_other_sy:	rs5634193	3	168715808	A
ENT and maxillofaci:	NIOPC_tonsillecf_20004_dxCod	rs5634193	3	168715808	A
Respiratory	FEV1_maximum_f_3063_0_f_QU	rs7971039	12	85724305	G
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs1249096	2	199723365	G
Biological assays - FE	Mean_platelet_1f_30100_0_0_f_rs	rs2202572	18	53566471	A
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs8089865	18	50957922	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs1250462	4	145436324	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1723268	7	46448518	T
Respiratory	TA_FEV1_never_QUANT_FEV1_n	rs7971039	12	85724305	G
ENT and maxillofaci:	HESBL_Other_di HES_block_p_J3	rs1247086	2	102926362	G
Cardiovascular	NIOPC_aortic_v:f_20004_dxCod	rs1247086	2	102926362	G
Biological assays - FE	Mean_reticulocyf_30260_0_0_f_rs	rs1247086	2	102926362	G
Respiratory	FVC_maximumVf_3062_0_f_QU	rs2967516	19	36881643	A
Gynaecology and O	Age_at_menopa f_3581_0_0_f_(	rs3743609	16	75467021	G
Cardiovascular	M2W_essential_map2way_NI_cr	rs772920	12	56390364	C
Biological assays - FE	Basophil_perce:f_30220_0_0_f_rs	rs967497	9	131943843	A
Cardiovascular	MED_ace_inhibi C09B_ace_inhib	rs1751313	1	40035686	C
Cardiovascular	Chest_pain_or_c:f_2335_0_0_f_E	rs1751313	1	40035686	C
Musculoskeletal dise	HESBL_Other_sc HES_block_p_M	rs1751313	1	40035686	C
Respiratory	PEF_maximumV f_3064_0_f_QU	rs2637254	10	78312002	G
Respiratory	TA_FEV1_FVC_r:QUANT_FEV1_F	rs1087485	1	92106637	A
Cardiovascular	OPC_Transluminf_41210_41200	rs8067511	17	37611352	C
Eye	Intra_ocular_pre:f_5263_0_0_f_(	rs6088813	20	33975181	C
Anthropometry	Whole_body_fa:f_23101_0_0_f_rs	rs7155279	14	92485881	G
Respiratory	TA_FEV1_perce:QUANT_FEV1_p	rs3847402	10	30267810	G
Respiratory	Wheeze_or_whi f_2316_0_0_f_E	rs2811415	3	127991527	A
Cardiovascular	M2W_hypertens:map2way_NI_cr	rs1119184	10	105639611	T
Cardiovascular	MED_lipid_modi C10B_lipid_moc	rs1024630	7	7286445	A
Cardiovascular	HESBL_Hyperter HES_block_p_I1	rs1024630	7	7286445	A
Cardiovascular	HES_Essential_p HES_p_I10_BIN	rs1024630	7	7286445	A
Mental health	MED_psycholep: N06C_psychole	rs772920	12	56390364	C

Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs559233	7	26848830	T
Cardiovascular	PROXYS_High_b	f_20111_0_cod	rs1249096	2	199723365	G
Anthropometry	Whole_body_fat	f_23100_0_0_f	rs7753012	6	142745883	T
Operations and Proc	OPC_Other_lym	f_41210_41200	rs1300958	2	24018480	G
General health, smo	Overall_health	f_2178_0_0_f	rs3548056	3	71583177	A
ENT and maxillofaci	Snoring	f_1210_0_0_f	rs1270769	7	84569510	C
Biological assays - FE	Lymphocyte_co	f_30120_0_0_f	rs1270769	7	84569510	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs1220231	6	45530471	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs1220231	6	45530471	T
Biological assays - FE	Haemoglobin_cc	f_30020_0_0_f	rs5960615	17	79952944	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1107454	16	10136889	T
Musculoskeletal dise	Back_pain	f_6159_code4	rs3849969	10	75525999	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs2509961	11	62310909	T
Anthropometry	Body_fat_perce	f_23099_0_0_f	rs1300958	2	24018480	G
Gastroenterology, h	HES_Diaphragm	HES_p_K44_BIN	rs1416685	1	51243374	G
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs972936	12	102824921	T
Mental health	Sleep_duration	f_1160_0_0_f	rs4128298	8	11823332	T
Respiratory	TA_copdMappin	BIN_copdMappi	rs4128298	8	11823332	T
Metabolic and endo	M2W_hyperthyr	map2way_NI_c	rs7923409	15	49409527	G
Gastroenterology, h	MED_drugs_for	A06A_drugs_for	rs1757787	17	44208218	A
Neurosciences	incorect_match	f_399_0_f_QUA	rs1757787	17	44208218	A
Broad symptoms, sig	HESBL_Symptom	HES_block_p_R	rs7713065	5	131788334	A
Biological assays - FE	Haematocrit_pe	f_30030_0_0_f	rs2007403	4	106131210	C
Cardiovascular	M2W_essential	map2way_NI_c	rs6062304	20	62351539	A
Gastroenterology, h	OPC_Diagnostic	f_41210_41200	rs7753012	6	142745883	T
Cardiovascular	HES_Essential_p	HES_p_l10_BIN	rs3743609	16	75467021	G
Musculoskeletal dise	M2W_musclesoi	map2way_NI_c	rs3743609	16	75467021	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs4968200	17	7448457	C
Musculoskeletal dise	OPC_Prosthetic	f_41210_41200	rs1300958	2	24018480	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1102077	6	140271357	A
Cardiovascular	M2W_hypertens	map2way_NI_c	rs6207027	17	28263980	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs6207027	17	28263980	A
Gastroenterology, h	Other_diseases	HES_p_K22_BIN	rs4237643	11	43648368	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1117211	12	57527283	T
Eye	Cataract	f_6148_0_code	rs3844313	6	32635629	G
ENT and maxillofaci	HES_Nasal_poly	HES_p_J33_BIN	rs2070600	6	32151443	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2070600	6	32151443	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs1800888	5	148206885	C
Biological assays - FE	Neutrophill_per	f_30200_0_0_f	rs1700928	1	221204299	A
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs1700928	1	221204299	A
Respiratory	MED_other_dru	R03B_other_dru	rs2811415	3	127991527	A
Respiratory	TA_copdMappin	BIN_copdMappi	rs7269986	14	93114787	G
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs6435952	2	217614730	A
Cardiovascular	MED_selective	C08C_selective	rs1119184	10	105639611	T
Biological assays - FE	Mean_corpuscul	f_30050_0_0_f	rs1119184	10	105639611	T
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs9357446	6	44447598	G
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs6138639	20	25669052	C
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_ers	rs2146098	1	186090370	A
Anthropometry	Hip_circumferen	f_49_0_0_f_QU	rs2014787	5	148611675	G
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs2701110	12	114669870	C

Anthropometry	Birth_weight	f_20022_0_0_f_rs7424771	2	161276378	G
Anthropometry	Whole_body_fat	f_23100_0_0_f_rs1430193	2	56120853	A
Gastroenterology, h	HES_Ulcerative_HES_p_K51_BIN	rs6062304	20	62351539	A
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1165395	17	62686730	G
Respiratory	TA_FEV1_ever_sQUANT_FEV1_ers	rs1117600	12	66409367	C
Neurosciences	HESBL_Extapyræ	HES_block_p_G.rs1102077	6	140271357	A
Gynaecology and O	HES_Preterm_dæ	HES_p_O60_BIN.rs4846480	1	218598469	A
Metabolic and endo	HESCH_Endocrin	HES_chapter_p_rs3844313	6	32635629	G
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	rs1123580	11	73290163	A
Biological assays - FE	Mean_sphered_f_30270_0_0_f_rs	4328080	1	219963088	G
Gynaecology and O	NIOPC_hysterec	f_20004_dxCod.rs803923	9	119401650	G
Biological assays - FE	Platelet_crit	f_30090_0_0_f_rs2812208	13	50707087	G
Biological assays - FE	High_light_scatt	f_30290_0_0_f_rs2812208	13	50707087	G
Anthropometry	Hip_circumferen	f_49_0_0_f_QU.rs8025774	15	67483276	C
Musculoskeletal dise	HESCH_Diseases	HES_chapter_p_rs1175902	6	126792095	A
Cardiovascular	M2W_hypertens	map2way_NI_çrs1175902	6	126792095	A
Neurosciences	HES_Nerve_root	HES_p_G55_BIN.rs9357446	6	44447598	G
Broad symptoms, sig	HES_Pain_in_thr	HES_p_R07_BIN.rs985256	2	201208692	A
Respiratory	TA_FEV1_FVC_ræ	QUANT_FEV1_F.rs772920	12	56390364	C
Immuno-inflammati	M2W_diabetic_i	map2way_NI_çrs1175902	6	126792095	A
Biological assays - FE	Mean_corpusculf_30040_0_0_f_rs	1085824	9	139102831	G
Respiratory	TA_FEV1_FVC_ræ	QUANT_FEV1_F.rs1137456	12	95554771	C
Respiratory	FEV1_maximum	f_3063_0_f_QU.rs7095607	10	69957350	G
Respiratory	HES_Asthma	HES_p_J45_BIN.rs967497	9	131943843	A
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs1123580	11	73290163	A
Respiratory	TA_FEV1_perce	QUANT_FEV1_prs8067511	17	37611352	C
Cardiovascular	pulse_minimum	f_102_0_f_QUA.rs1416685	1	51243374	G
Respiratory	M2W_asthma	map2way_NI_çrs6062304	20	62351539	A
Urology	NIOPC_male_cir	f_20004_dxCod.rs3471297	4	106819053	G
Eye	Intra_ocular_pref_5263_0_0_f_ç	rs1757787	17	44208218	A
Eye	OPC_Destructio	f_41210_41200.rs3844313	6	32635629	G
Cardiovascular	HESBL_Ischaemi	HES_block_p_I2.rs6780171	3	185503456	T
Respiratory	TA_FEV1_never	QUANT_FEV1_nrs6780171	3	185503456	T
Breast	CREG_mal_neo_f_40006_0_p_C	rs803923	9	119401650	G
Breast	CREGBL_mal_ne	f_40006_block_rs803923	9	119401650	G
Metabolic and endo	MED_blood_gluA10B_blood_glu	rs1751313	1	40035686	C
Biological assays - FE	Red_blood_cell_f_30010_0_0_f_rs	1751313	1	40035686	C
Haematology	HES_Purpura_ar	HES_p_D69_BIN.rs3844313	6	32635629	G
Urology	HES_Hyperplasiæ	HES_p_N40_BIN.rs3844313	6	32635629	G
Urology	MED_drugs_use	G04C_drugs_usrs3844313	6	32635629	G
ENT and maxillofaciæ	Loose_teeth	f_6149_0_code.rs2348418	12	28689514	T
Respiratory	TA_copdMappin	BIN_copdMappirs1282031	12	96255704	T
Biological assays - FE	Eosinophill_cour	f_30150_0_0_f_rs1192404	1	92068967	A
Biological assays - U	Potassium_in_urf_30520_0_0_f_rs	6201277	15	63866877	T
Biological assays - FE	Reticulocyte_co	f_30250_0_0_f_rs4237643	11	43648368	T
Mental health	Getting_up_in_r	f_1170_0_0_f_çrs3844313	6	32635629	G
Immuno-inflammati	MED_antibiotics	D06A_antibiotic.rs3844313	6	32635629	G
Metabolic and endo	MED_thyroid_pr	H03A_thyroid_çrs330939	8	9018590	T
Musculoskeletal dise	HESBL_Arthrosis	HES_block_p_M.rs330939	8	9018590	T
Musculoskeletal dise	M2W_arthritis_i	map2way_NI_çrs330939	8	9018590	T

Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs7272413	15	41977690	A
Biological assays - FE	Monocyte_coun f_30130_0_0_f_	rs1294421	6	6743149	T
Cardiovascular	M2W_angina map2way_NI_c	rs6681426	1	150586971	G
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs6681426	1	150586971	G
Urology	HES_Hyperplasi;HES_p_N40_BIN	rs9689096	6	34188892	A
Biological assays - FE	High_light_scatt f_30300_0_0_f_	rs9689096	6	34188892	A
Cardiovascular	systolic_blood_r f_4080_0_f_QU	rs9689096	6	34188892	A
Operations and Proc	OPC_Approach_f_41210_41200	rs9689096	6	34188892	A
Cardiovascular	HES_Essential_p HES_p_l10_BIN_	rs1215	17	7163350	A
Biological assays - FE	Neutrophill_cou f_30140_0_0_f_	rs1215	17	7163350	A
Biological assays - FE	Neutrophill_per f_30200_0_0_f_	rs2967516	19	36881643	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2967516	19	36881643	A
Respiratory	FEV1_maximum f_3063_0_f_QU	rs1085037	12	115201436	G
Musculoskeletal dis	HESBL_Arthrosis HES_block_p_M	rs1108574	19	10819967	C
ENT and maxillofaci	Hearing_difficult f_2257_0_0_f_	rs3548056	3	71583177	A
Metabolic and endo	HES_Disorders_c HES_p_E78_BIN	rs9438626	1	26775367	G
Respiratory	FVC_maximumV f_3062_0_f_QU	rs9438626	1	26775367	G
Biological assays - FE	Red_blood_cell_f_30010_0_0_f_	rs2322659	2	136555659	T
Respiratory	TA_FEV1_never QUANT_FEV1_n	rs2974389	3	13787641	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs1344555	3	169300219	C
Gynaecology and Ok	OPC_Repair_of_f_41210_41200	rs1430193	2	56120853	A
Anthropometry	Standing_height f_50_0_0_f_QU	rs3548056	3	71583177	A
Gastroenterology, h	HESCH_Diseases HES_chapter_p_	rs3844313	6	32635629	G
Respiratory	TA_copdMappin BIN_copdMappi	rs4866846	5	43976162	A
Gastroenterology, h	M2W_gastricsto map2way_NI_c	rs8089099	18	10078071	G
Respiratory	HES_Other_chro HES_p_J44_BIN_	rs9385988	6	142560957	A
Eye	Intra_ocular_pre f_5262_0_0_f_	rs772920	12	56390364	C
Anthropometry	Hip_circumferen f_49_0_0_f_QU	rs1757787	17	44208218	A
ENT and maxillofaci	M2W_nasalsinu: map2way_NI_c	rs3548056	3	71583177	A
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs35506	12	115500691	T
Metabolic and endo	HES_Disorders_c HES_p_E78_BIN	rs1513272	7	28200097	C
Puberty	Relative_age_vo f_2385_0_0_f_	rs4237643	11	43648368	T
Respiratory	HESCH_Diseases HES_chapter_p_	rs7269986	14	93114787	G
Gastroenterology, h	OPC_Excision_of f_41210_41200	rs3548056	3	71583177	A
Cardiovascular	M2W_high_chol map2way_NI_c	rs193686	7	116431427	C
Respiratory	TA_FEV1_ever_s QUANT_FEV1_ers	rs35506	12	115500691	T
Respiratory	HES_Emphysem; HES_p_J43_BIN_	rs2070600	6	32151443	C
Immuno-inflammati	OPC_Other_excif_41210_41200	rs2007403	4	106131210	C
Respiratory	FVC_maximumV f_3062_0_f_QU	rs6657854	1	221630555	A
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs6657854	1	221630555	A
Biological assays - FE	Lymphocyte_cou f_30120_0_0_f_	rs3424550	15	40397191	C
Biological assays - FE	Neutrophill_per f_30200_0_0_f_	rs4924525	15	41255396	C
Biological assays - FE	White_blood_ce f_30000_0_0_f_	rs330939	8	9018590	T
Respiratory	TA_FEV1_FVC_r;QUANT_FEV1_F	rs2146098	1	186090370	A
Anthropometry	Whole_body_fai f_23100_0_0_f_	rs1215	17	7163350	A
Respiratory	MED_other_syst R03D_other_sy:	rs3471297	4	106819053	G
Respiratory	PEF_maximumV f_3064_0_f_QU	rs7290420	2	157046432	T
Respiratory	PEF_maximumV f_3064_0_f_QU	rs1014178	14	74817418	A
Respiratory	TA_copdMappin BIN_copdMappi	rs2256462	10	81685593	C
Gynaecology and Ok	OPC_Endoscopic f_41210_41200	rs3844313	6	32635629	G

Cardiovascular	HESBL_Hyperter	HES_block_p_I1	rs1215	17	7163350	A
Metabolic and endo	PROXYFM_Diabet	f_20107_20110	rs7715901	5	147856392	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs772920	12	56390364	C
Gastroenterology, h	HES_Inguinal_he	HES_p_K40_BIN	rs8025774	15	67483276	C
Metabolic and endo	PROXYF_Diabet	f_20107_0_cod	rs993925	1	218860068	C
Cardiovascular	Blood_pressure	f_6153_6177_0	rs1595029	3	158241767	A
Anthropometry	Body_mass_inde	f_21001_0_0_f	rs1117211	12	57527283	T
Operations and Proc	OPC_Diagnostic	f_41210_41200	rs3844313	6	32635629	G
Musculoskeletal dise	M2W_osteorth	map2way_NI_c	rs1430193	2	56120853	A
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	rs1458979	3	55150677	A
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs7405312	14	54346010	G
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs2202572	18	53566471	A
Mental health	Sleep_duration	f_1160_0_0_f	(rs7715901	5	147856392	A
ENT and maxillofaci	NIOPC_nasal_po	f_20004_dxCod	rs3548056	3	71583177	A
Medication	Folic_acid_or	Fcf_6155_0_code	rs1137456	12	95554771	C
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs1131111	22	50867711	C
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	rs4924525	15	41255396	C
Respiratory	FEV1_maximum	f_3063_0_f_QU	rs1137456	12	95554771	C
Musculoskeletal dise	HESBL_musculos	HES_block_p_M	rs330939	8	9018590	T
Respiratory	PEF_maximumV	f_3064_0_f_QU	rs2627237	6	134339265	A
Respiratory	TA_FEV1_never	QUANT_FEV1_n	rs1281181	12	4243749	T
Musculoskeletal dise	OPC_Soft_tissue	f_41210_41200	rs2070600	6	32151443	C
ENT and maxillofaci	Hearing_difficu	f_2247_0_0_f	rs1757787	17	44208218	A
Musculoskeletal dise	HES_Other_spor	HES_p_M48_BII	rs1175902	6	126792095	A
Puberty	Age_when_peric	f_2714_0_0_f	(rs1175902	6	126792095	A
Cardiovascular	MED_ace_inhibi	C09B_ace_inhib	rs4237643	11	43648368	T
Biological assays - U	Potassium_in_u	r_f_30520_0_0_f	rs4237643	11	43648368	T
Respiratory	FVC_maximumV	f_3062_0_f_QU	rs4237643	11	43648368	T
Gastroenterology, h	HES_Diverticular	HES_p_K57_BIN	rs4968200	17	7448457	C
Respiratory	TA_copdMappin	BIN_copdMappi	rs5634193	3	168715808	A
Medication	Vitamin_C	f_6155_0_code	rs193686	7	116431427	C
Eye	Intra_ocular_pre	f_5255_0_0_f	(rs2284746	1	17306675	C
Metabolic and endo	PROXYS_Diabet	f_20111_0_cod	rs1513272	7	28200097	C
Anthropometry	Weight	f_21002_0_0_f	rs1513272	7	28200097	C
Respiratory	HESBL_Chronic	HES_block_p_J4	rs3486479	6	27459923	G
Immuno-inflammati	MED_corticoste	D07C_corticost	rs8025774	15	67483276	C

3 an FDR of <1%

EffectAllele	AnalysedFreq1	R2	N	Cases	Controls	OR	Beta	SE
A	0.259	0.959	379337	1888	377449	4.64	1.535	0.034
A	0.259	0.959	379337	2524	376813	4.78	1.564	0.030
A	0.631	1.001	378482				-0.080	0.002
A	0.388	0.997	367440				0.072	0.002
A	0.388	0.997	367434				0.069	0.002
A	0.125	1.000	379337	2524	376813	2.5	0.917	0.032
G	0.305	0.995	286327				0.078	0.003
T	0.065	1.001	286327				0.145	0.005
T	0.787	1.002	378482				0.073	0.003
A	0.536	0.999	286327				0.066	0.003
T	0.065	1.001	221786				0.153	0.006
C	0.392	0.997	286327				0.067	0.003
G	0.305	0.995	221786				0.081	0.003
A	0.536	0.999	221786				0.072	0.003
A	0.669	0.996	286327				0.067	0.003
A	0.631	1.001	372673				-0.056	0.002
A	0.125	1.000	379337	1888	377449	2.41	0.880	0.038
G	0.305	0.995	378482				-0.058	0.002
A	0.631	1.001	372703				-0.055	0.002
A	0.669	0.996	221786				0.073	0.003
C	0.392	0.997	286327				0.062	0.003
A	0.257	1.001	286327				-0.069	0.003
C	0.392	0.997	221786				0.069	0.003
T	0.028	0.989	286327				0.178	0.008
C	0.021	0.999	378482				0.172	0.008
A	0.257	1.001	221786				-0.074	0.003
C	0.392	0.997	221786				0.066	0.003
A	0.479	1.001	378482				0.048	0.002
T	0.065	1.001	175392				0.145	0.007
G	0.305	0.995	175392				0.076	0.004
A	0.635	0.997	378482				-0.049	0.002
T	0.028	0.989	221786				0.185	0.009
C	0.463	1.001	338402				0.049	0.002
C	0.392	0.997	175392				0.067	0.003
G	0.399	1.000	286327				0.052	0.003
G	0.305	0.995	136810				0.079	0.004
T	0.065	1.001	136810				0.149	0.008
A	0.259	0.959	379337	11484	367853	1.32	0.281	0.015
G	0.522	1.001	378482				0.043	0.002
G	0.226	1.000	368090				0.052	0.003
A	0.176	0.997	378482				-0.056	0.003
A	0.536	0.999	286327				0.049	0.003
A	0.257	1.001	286096				-0.055	0.003
A	0.669	0.996	175392				0.066	0.004
G	0.226	1.000	361993				-0.051	0.003
A	0.257	1.001	175392				-0.070	0.004
G	0.399	1.000	221786				0.055	0.003

A	0.669	0.996	136810					0.073	0.004
G	0.305	0.995	109888					0.082	0.005
G	0.226	1.000	361992					-0.050	0.003
A	0.255	1.001	378482					-0.046	0.003
C	0.392	0.997	136810					0.068	0.004
G	0.226	1.000	173485	117954	55531	0.861		-0.150	0.009
G	0.226	1.000	173485	55531	117954	1.16		0.150	0.009
A	0.536	0.999	221786					0.052	0.003
A	0.257	1.001	221786					-0.059	0.003
T	0.065	1.001	109888					0.147	0.009
A	0.257	1.001	286327					-0.051	0.003
T	0.501	0.998	378482					-0.039	0.002
A	0.257	1.001	136810					-0.073	0.004
G	0.226	1.000	173485	31618	141867	0.834		-0.182	0.011
T	0.080	1.000	286327					0.082	0.005
A	0.536	0.999	286327					0.044	0.003
T	0.028	0.989	175392					0.170	0.010
G	0.305	0.995	84308					0.087	0.005
A	0.125	1.000	368090					-0.058	0.004
T	0.347	0.995	378482					-0.039	0.002
T	0.065	1.001	84308					0.161	0.010
T	0.065	1.001	368085					0.077	0.005
G	0.522	1.001	286327					-0.043	0.003
G	0.857	0.998	368084					-0.053	0.003
G	0.369	0.995	368084					0.039	0.002
A	0.125	1.000	367434					-0.056	0.004
C	0.392	0.997	109888					0.069	0.004
A	0.125	1.000	368085					-0.056	0.004
A	0.517	0.999	286327					0.042	0.003
G	0.228	0.990	378482					0.043	0.003
A	0.669	0.996	109888					0.071	0.005
G	0.399	1.000	175392					0.054	0.003
G	0.226	1.000	368088					0.043	0.003
A	0.257	1.001	221786					-0.053	0.003
C	0.412	0.999	330745	33898	296847	0.877		-0.132	0.008
G	0.226	1.000	368090					0.043	0.003
A	0.259	0.959	286327					-0.047	0.003
G	0.605	1.001	361992					0.037	0.002
T	0.405	1.000	286327					-0.041	0.003
C	0.064	0.980	378482					0.072	0.005
A	0.649	0.999	367440					-0.037	0.002
T	0.080	1.000	221786					0.085	0.006
A	0.649	0.999	367434					-0.037	0.002
A	0.451	0.997	378482					0.035	0.002
A	0.536	0.999	221786					0.045	0.003
G	0.824	0.995	286327					-0.053	0.003
C	0.534	0.999	367440					0.035	0.002
C	0.534	0.999	367440					-0.035	0.002
G	0.226	1.000	286327					-0.047	0.003
T	0.787	1.002	372673					0.042	0.003

A	0.259	0.959	221786					-0.052	0.003
A	0.536	0.999	286096					0.039	0.003
G	0.522	1.001	286327					0.039	0.003
C	0.588	0.996	286327					-0.040	0.003
T	0.065	1.001	367434					0.070	0.005
C	0.021	0.999	372673					0.118	0.008
T	0.028	0.989	136810					0.172	0.012
T	0.787	1.002	372703					0.041	0.003
C	0.021	0.999	372703					0.118	0.008
G	0.226	1.000	368090					0.041	0.003
G	0.226	1.000	367440					-0.041	0.003
G	0.824	0.995	221786					-0.058	0.004
A	0.257	1.001	109888					-0.071	0.005
T	0.405	1.000	221786					-0.045	0.003
C	0.392	0.997	286327					0.039	0.003
T	0.028	0.989	109888					0.190	0.013
T	0.270	1.000	378482					0.038	0.003
G	0.226	1.000	286327					-0.046	0.003
A	0.669	0.996	84308					0.075	0.005
C	0.021	0.999	286327					0.133	0.009
G	0.399	1.000	136810					0.056	0.004
C	0.412	0.999	378466	81619	296847	0.919		-0.084	0.006
C	0.392	0.997	84308					0.072	0.005
A	0.259	0.959	368084					0.039	0.003
A	0.517	0.999	221786					0.043	0.003
T	0.065	1.001	379337	22553	356784	1.3		0.262	0.018
A	0.536	0.999	175392					0.049	0.003
G	0.522	1.001	221786					-0.043	0.003
A	0.631	1.001	378214					-0.034	0.002
A	0.257	1.001	84308					-0.079	0.006
A	0.536	0.999	175392					0.048	0.003
A	0.187	0.999	286327					-0.048	0.003
T	0.197	1.001	286327					0.047	0.003
T	0.065	1.001	379337	21502	357835	1.3		0.260	0.019
A	0.125	1.000	368088					0.049	0.004
A	0.125	1.000	367434					-0.049	0.004
A	0.536	0.999	136810					0.052	0.004
C	0.588	0.996	221786					-0.042	0.003
T	0.028	0.989	84308					0.203	0.015
A	0.187	0.999	221786					-0.052	0.004
A	0.536	0.999	221786					0.041	0.003
T	0.347	0.995	286327					-0.038	0.003
A	0.259	0.959	368085					-0.037	0.003
A	0.125	1.000	367434					-0.047	0.004
C	0.738	0.996	367434					-0.036	0.003
A	0.257	1.001	175392					-0.051	0.004
T	0.787	1.002	368084					0.038	0.003
A	0.631	1.001	378556					-0.032	0.002
T	0.395	1.002	221786					0.041	0.003
A	0.479	1.001	372703					0.031	0.002

A	0.388	0.997	379337	48586	330751	1.1	0.094	0.007
A	0.479	1.001	372673				0.031	0.002
T	0.395	1.002	286327				0.036	0.003
A	0.257	1.001	286327				-0.039	0.003
A	0.259	0.959	361992				0.036	0.003
A	0.228	1.000	286327				-0.042	0.003
G	0.226	1.000	221786				-0.047	0.004
G	0.687	1.000	368088				0.033	0.003
G	0.226	1.000	221786				-0.046	0.004
C	0.392	0.997	221786				0.040	0.003
G	0.226	1.000	286096				-0.041	0.003
G	0.605	1.001	361992				0.031	0.002
G	0.453	1.002	286327				-0.035	0.003
A	0.125	1.000	368090				-0.045	0.004
G	0.605	1.001	361993				0.031	0.002
A	0.329	0.994	368084				0.032	0.002
A	0.259	0.959	361993				0.035	0.003
C	0.011	0.969	286327				0.165	0.013
C	0.392	0.997	286096				0.035	0.003
A	0.176	0.997	372673				-0.039	0.003
C	0.021	0.999	221786				0.135	0.011
A	0.669	0.996	286327				0.036	0.003
A	0.176	0.997	372703				-0.039	0.003
T	0.364	0.998	378482				-0.031	0.002
G	0.522	1.001	221786				0.038	0.003
A	0.631	1.001	286327				-0.035	0.003
A	0.591	0.998	378482				0.030	0.002
G	0.226	1.000	367434				-0.035	0.003
T	0.787	1.002	368088				-0.036	0.003
A	0.125	1.000	361992				0.045	0.004
C	0.794	0.999	286327				-0.041	0.003
G	0.824	0.995	175392				-0.056	0.004
T	0.405	1.000	175392				-0.043	0.003
G	0.522	1.001	175392				-0.042	0.003
T	0.080	1.000	175392				0.079	0.006
T	0.065	1.001	286327				0.067	0.005
A	0.125	1.000	286327				-0.050	0.004
G	0.824	0.995	136810				-0.063	0.005
A	0.536	0.999	136810				0.048	0.004
G	0.065	0.999	286096				0.067	0.005
G	0.377	0.981	338402				0.032	0.003
A	0.259	0.959	379337	4023	375314	1.36	0.306	0.025
T	0.065	1.001	221786				0.076	0.006
C	0.021	0.999	286327				0.114	0.009
A	0.259	0.959	175392				-0.049	0.004
C	0.392	0.997	175392				0.043	0.003
A	0.259	0.959	368088				-0.033	0.003
C	0.534	0.999	367434				-0.029	0.002
A	0.669	0.996	221786				0.039	0.003
T	0.197	1.001	221786				0.047	0.004

A	0.257	1.001	221786					-0.042	0.003
T	0.178	0.997	286327					0.043	0.003
T	0.178	0.997	221786					0.048	0.004
A	0.259	0.959	376456	3936	372520	1.35		0.302	0.025
A	0.517	0.999	286096					0.032	0.003
T	0.347	0.995	221786					-0.038	0.003
A	0.125	1.000	286096					-0.048	0.004
A	0.536	0.999	109888					0.051	0.004
A	0.257	1.001	244666	25949	218717	1.14		0.131	0.011
A	0.257	1.001	136810					-0.052	0.004
A	0.166	0.985	368084					-0.038	0.003
G	0.646	0.954	286327					0.034	0.003
C	0.794	0.999	221786					-0.045	0.004
G	0.226	1.000	368084					-0.033	0.003
A	0.517	0.999	175392					0.040	0.003
G	0.399	1.000	221786					0.037	0.003
C	0.409	0.995	286327					0.033	0.003
A	0.631	1.001	221786					-0.037	0.003
G	0.453	1.002	221786					-0.036	0.003
A	0.125	1.000	221786					-0.054	0.005
G	0.607	1.003	286327					0.032	0.003
T	0.221	0.998	286327					-0.038	0.003
C	0.738	0.996	368084					0.032	0.003
G	0.226	1.000	361992					0.033	0.003
A	0.497	0.998	378482					0.027	0.002
C	0.392	0.997	244666	25949	218717	0.889		-0.118	0.010
G	0.160	0.992	286327					-0.043	0.004
G	0.337	0.999	367440					0.029	0.002
A	0.259	0.959	367434					-0.032	0.003
A	0.257	1.001	190114	16789	173325	1.17		0.158	0.014
A	0.517	0.999	286327					0.031	0.003
G	0.226	1.000	361992					0.033	0.003
C	0.253	1.001	378482					-0.031	0.003
T	0.645	0.999	367440					-0.029	0.002
C	0.319	0.998	286327					-0.033	0.003
C	0.319	0.998	378482					-0.029	0.002
G	0.399	1.000	286096					0.032	0.003
C	0.458	0.996	286096					-0.031	0.003
T	0.080	1.000	109888					0.093	0.008
G	0.226	1.000	221786					-0.042	0.004
T	0.065	1.001	379337	2524	376813	0.335		-1.093	0.094
A	0.259	0.959	136810					-0.052	0.004
A	0.125	1.000	361992					-0.041	0.004
A	0.649	0.999	367440					0.029	0.002
G	0.856	0.999	378482					-0.038	0.003
A	0.259	0.959	367434					-0.031	0.003
G	0.065	0.999	221786					0.071	0.006
G	0.226	1.000	175392					-0.046	0.004
A	0.125	1.000	221786					-0.052	0.005
C	0.011	0.969	221786					0.167	0.014

G	0.065	0.999	286327					0.062	0.005
C	0.021	0.999	221786					0.121	0.011
T	0.405	1.000	136810					-0.045	0.004
A	0.517	0.999	286327					0.030	0.003
C	0.392	0.997	221786					0.035	0.003
T	0.227	0.999	368087					-0.032	0.003
A	0.228	1.000	221786					-0.041	0.004
A	0.261	0.990	379337	3581	375756	1.35		0.298	0.026
G	0.157	1.000	378482					0.036	0.003
C	0.409	0.995	221786					0.035	0.003
T	0.080	1.000	136810					0.081	0.007
G	0.305	0.995	286327					-0.033	0.003
G	0.399	1.000	109888					0.050	0.004
A	0.537	1.001	221786					-0.035	0.003
A	0.509	0.998	173485	117954	55531	1.09		0.084	0.007
A	0.509	0.998	173485	55531	117954	0.919		-0.084	0.007
T	0.227	0.999	368088					0.032	0.003
C	0.200	1.000	286327					0.038	0.003
T	0.787	1.002	378214					0.032	0.003
G	0.333	0.991	378624					0.028	0.002
C	0.064	0.980	221786					0.071	0.006
G	0.160	0.992	221786					-0.046	0.004
T	0.404	0.998	338402					0.028	0.002
A	0.517	0.999	136810					0.043	0.004
G	0.399	1.000	84308					0.055	0.005
T	0.028	0.989	221786					0.102	0.009
T	0.028	0.989	286327					0.090	0.008
G	0.453	1.002	367434					0.026	0.002
T	0.221	0.998	221786					-0.041	0.004
A	0.255	1.001	173485	117954	55531	1.1		0.095	0.008
A	0.255	1.001	173485	55531	117954	0.91		-0.095	0.008
C	0.200	1.000	221786					0.042	0.004
T	0.065	1.001	379337	6233	373104	1.42		0.351	0.032
A	0.517	0.999	221786					0.033	0.003
C	0.516	1.000	286327					-0.030	0.003
C	0.064	0.980	286327					0.061	0.005
G	0.646	0.954	221786					0.036	0.003
C	0.588	0.996	175392					-0.038	0.003
C	0.235	1.004	378482					-0.030	0.003
A	0.536	0.999	84308					0.053	0.005
C	0.392	0.997	136810					0.043	0.004
C	0.332	0.990	286327					0.031	0.003
C	0.142	0.995	286327					0.042	0.004
T	0.080	1.000	84308					0.100	0.009
C	0.738	0.996	367440					-0.029	0.003
G	0.399	1.000	286327					0.029	0.003
A	0.259	0.959	378482					0.029	0.003
A	0.537	1.001	286327					-0.029	0.003
C	0.738	0.996	379337	48586	330751	0.919		-0.085	0.008
T	0.845	1.001	361992					0.036	0.003

G	0.399	1.000	221786					0.033	0.003
G	0.522	1.001	136810					-0.041	0.004
T	0.197	1.001	175392					0.046	0.004
G	0.305	0.995	221786					-0.035	0.003
G	0.276	0.998	286327					0.033	0.003
G	0.226	1.000	307461					0.033	0.003
C	0.319	0.998	221786					-0.035	0.003
A	0.257	1.001	109888					-0.052	0.005
A	0.259	0.959	368090					-0.029	0.003
A	0.388	0.997	367417	31940	335477	1.1		0.091	0.008
G	0.333	0.991	372489					0.027	0.002
C	0.126	0.998	286327					-0.043	0.004
G	0.333	0.991	372085					0.026	0.002
C	0.235	1.004	372673					-0.029	0.003
C	0.235	1.004	372703					-0.029	0.003
C	0.235	1.004	286327					-0.033	0.003
T	0.395	1.002	84308					0.053	0.005
T	0.069	1.000	286327					-0.056	0.005
T	0.069	1.000	221786					-0.063	0.006
A	0.388	0.997	379337	29738	349599	1.1		0.093	0.009
A	0.517	0.999	221786					0.032	0.003
A	0.125	1.000	361992					-0.037	0.004
T	0.347	0.995	379337	15380	363957	0.873		-0.136	0.013
T	0.548	0.996	286327					-0.028	0.003
A	0.388	0.997	379337	26314	353023	1.1		0.097	0.009
A	0.261	0.990	379337	1794	377543	1.46		0.378	0.036
C	0.392	0.997	190114	16789	173325	0.877		-0.131	0.013
G	0.226	1.000	136810					-0.048	0.005
A	0.517	0.999	109888					0.045	0.004
T	0.065	1.001	367434					0.049	0.005
T	0.207	0.997	378482					0.030	0.003
T	0.076	0.987	286327					-0.053	0.005
T	0.076	0.987	221786					-0.060	0.006
A	0.509	0.998	286096					-0.028	0.003
T	0.347	0.995	379337	20677	358660	0.891		-0.116	0.011
A	0.259	0.959	361992					-0.028	0.003
G	0.399	1.000	244666	25949	218717	0.902		-0.104	0.010
A	0.187	0.999	175392					-0.045	0.004
A	0.259	0.959	367434					-0.028	0.003
A	0.451	0.997	286327					0.028	0.003
G	0.607	1.003	221786					0.032	0.003
G	0.522	1.001	109888					-0.044	0.004
G	0.454	0.997	286327					-0.028	0.003
G	0.454	0.997	378482					-0.024	0.002
C	0.142	0.995	221786					0.045	0.004
C	0.409	0.995	173485	117954	55531	0.925		-0.078	0.007
C	0.409	0.995	173485	55531	117954	1.08		0.078	0.007
C	0.021	0.999	175392					0.122	0.012
G	0.605	1.001	286096					0.028	0.003
T	0.347	0.995	379337	14418	364919	0.872		-0.137	0.013

C	0.458	0.996	221786					-0.032	0.003
A	0.125	1.000	368087					-0.036	0.004
G	0.515	0.997	368085					-0.024	0.002
T	0.347	0.995	379337	13750	365587	0.87		-0.139	0.014
A	0.259	0.959	286096					-0.031	0.003
G	0.065	0.999	221786					0.063	0.006
A	0.125	1.000	286327					-0.041	0.004
A	0.257	1.001	84308					-0.056	0.006
A	0.517	0.999	221786					0.031	0.003
T	0.065	1.001	379337	48586	330751	1.15		0.137	0.013
T	0.347	0.995	379337	12632	366705	0.867		-0.143	0.014
A	0.259	0.959	379337	2572	376765	1.36		0.311	0.031
T	0.347	0.995	286327					-0.028	0.003
A	0.259	0.959	379337	2663	376674	1.36		0.306	0.030
A	0.125	1.000	379337	4023	375314	1.36		0.309	0.031
T	0.645	0.999	367440					0.025	0.002
A	0.187	0.999	84308					-0.064	0.006
T	0.065	1.001	379337	12877	366460	1.27		0.240	0.024
A	0.498	0.991	286327					-0.028	0.003
C	0.064	0.980	221786					0.064	0.006
C	0.412	0.999	286327					0.027	0.003
A	0.451	0.997	372673					0.024	0.002
A	0.451	0.997	372703					0.024	0.002
A	0.498	0.991	221786					-0.031	0.003
A	0.125	1.000	367434					-0.035	0.004
A	0.237	0.968	286327					-0.033	0.003
C	0.064	0.980	286327					0.055	0.005
T	0.065	1.001	379337	3989	375348	1.48		0.391	0.039
G	0.228	0.990	372673					0.028	0.003
C	0.588	0.996	136810					-0.040	0.004
C	0.588	0.996	109888					-0.044	0.004
T	0.787	1.002	368084					0.029	0.003
T	0.395	1.002	109888					0.044	0.004
T	0.065	1.001	379337	1888	377449	0.335		-1.092	0.109
G	0.226	1.000	367440					0.028	0.003
G	0.333	0.991	378667					0.025	0.002
A	0.907	0.996	378482					0.040	0.004
A	0.187	0.999	109888					-0.055	0.005
G	0.399	1.000	190114	16789	173325	0.883		-0.125	0.012
G	0.228	0.990	372703					0.028	0.003
G	0.305	0.995	244666	25949	218717	0.899		-0.107	0.011
G	0.333	0.991	378214					0.025	0.002
A	0.631	1.001	378624					-0.024	0.002
T	0.178	0.997	175392					0.045	0.004
A	0.498	0.991	286327					-0.027	0.003
G	0.398	0.992	368088					0.024	0.002
C	0.516	1.000	221786					-0.030	0.003
T	0.315	0.988	286327					-0.029	0.003
C	0.235	1.004	221786					-0.035	0.004
T	0.128	0.993	286327					0.040	0.004

A	0.259	0.959	84308					-0.056	0.006
G	0.453	1.002	175392					-0.034	0.003
A	0.259	0.959	109888					-0.049	0.005
A	0.259	0.959	367434					-0.027	0.003
G	0.337	0.999	367434					0.025	0.002
G	0.454	0.997	221786					-0.030	0.003
T	0.645	0.999	286327					-0.028	0.003
C	0.785	1.000	338402					-0.030	0.003
T	0.845	1.001	368088					0.032	0.003
A	0.388	0.997	350792	15315	335477	1.13		0.118	0.012
A	0.237	0.968	221786					-0.036	0.004
A	0.388	0.997	379337	22354	356983	1.1		0.098	0.010
A	0.388	0.997	372213	77265	294948	1.06		0.058	0.006
C	0.209	1.001	361993					0.029	0.003
A	0.125	1.000	221786					-0.044	0.005
A	0.451	0.997	221786					0.030	0.003
G	0.050	0.993	286327					-0.061	0.006
A	0.081	1.002	378482					0.042	0.004
A	0.451	0.997	286327					0.026	0.003
A	0.259	0.959	286327					-0.030	0.003
C	0.332	0.990	221786					0.032	0.003
T	0.178	0.997	136810					0.050	0.005
A	0.388	0.997	379337	21438	357899	1.1		0.099	0.010
A	0.255	1.001	173485	31618	141867	1.1		0.099	0.010
T	0.221	0.998	175392					-0.040	0.004
A	0.081	1.002	286327					-0.048	0.005
A	0.187	0.999	136810					-0.048	0.005
C	0.235	1.004	378214					-0.027	0.003
A	0.096	0.995	286327					0.045	0.004
C	0.794	0.999	175392					-0.041	0.004
A	0.176	0.997	368084					-0.030	0.003
C	0.319	0.998	286327					-0.028	0.003
T	0.270	1.000	286327					0.029	0.003
A	0.536	0.999	244666	25949	218717	0.911		-0.094	0.010
T	0.065	1.001	379337	2406	376931	1.59		0.466	0.048
A	0.259	0.959	221786					-0.033	0.003
C	0.588	0.996	84308					-0.048	0.005
A	0.313	0.997	379337	16613	362724	1.13		0.118	0.012
A	0.313	0.997	379337	17363	361974	1.12		0.116	0.012
A	0.388	0.997	379337	33807	345530	1.08		0.080	0.008
G	0.226	1.000	368088					-0.027	0.003
C	0.021	0.999	378214					0.077	0.008
G	0.607	1.003	175392					0.034	0.003
G	0.333	0.991	378070					0.024	0.002
G	0.399	1.000	286327					0.026	0.003
T	0.076	0.987	221786					-0.055	0.006
C	0.463	1.001	286327					-0.026	0.003
A	0.191	0.994	368084					0.029	0.003
A	0.262	0.993	286327					0.030	0.003
A	0.228	1.000	175392					-0.039	0.004

T	0.207	0.997	221786					0.036	0.004
C	0.021	0.999	136810					0.129	0.013
T	0.400	0.985	286327					-0.027	0.003
C	0.126	0.998	221786					-0.044	0.005
T	0.787	1.002	378556					0.027	0.003
G	0.276	0.998	221786					0.033	0.003
G	0.646	0.954	175392					0.035	0.004
G	0.228	0.990	286327					0.031	0.003
G	0.605	1.001	221786					0.030	0.003
T	0.076	0.987	286327					-0.048	0.005
A	0.537	1.001	221786					-0.029	0.003
A	0.191	0.994	368085					-0.029	0.003
A	0.191	0.994	221786					0.037	0.004
C	0.253	1.001	286327					-0.029	0.003
C	0.200	1.000	136810					0.046	0.005
A	0.441	0.992	286096					-0.026	0.003
C	0.738	0.996	286327					0.029	0.003
G	0.276	0.998	286096					0.028	0.003
A	0.191	0.994	286327					0.032	0.003
A	0.536	0.999	286327					0.025	0.003
T	0.207	0.997	286327					0.031	0.003
A	0.517	0.999	84308					0.046	0.005
C	0.588	0.996	286327					-0.025	0.003
T	0.315	0.988	221786					-0.031	0.003
T	0.124	0.983	361992					0.035	0.004
G	0.377	0.981	361992					-0.023	0.002
C	0.588	0.996	221786					-0.029	0.003
T	0.197	1.001	136810					0.045	0.005
T	0.065	1.001	379337	3724	375613	1.46		0.376	0.041
A	0.498	0.991	221786					-0.028	0.003
G	0.690	0.997	378070					-0.024	0.002
G	0.690	0.997	372085					-0.024	0.003
G	0.226	1.000	169057					0.038	0.004
C	0.478	1.001	286327					-0.025	0.003
C	0.412	0.999	375001	81876	293125	0.947		-0.054	0.006
A	0.619	1.000	378482					0.022	0.002
C	0.200	1.000	175392					0.040	0.004
G	0.226	1.000	173485	46337	127148	0.917		-0.086	0.009
A	0.191	0.994	221786					0.036	0.004
A	0.191	0.994	286096					0.032	0.003
C	0.332	0.990	175392					0.034	0.004
G	0.522	1.001	84308					-0.045	0.005
T	0.221	0.998	136810					-0.043	0.005
A	0.259	0.959	379337	48586	330751	1.08		0.073	0.008
G	0.305	0.995	190114	16789	173325	0.883		-0.124	0.013
A	0.191	0.994	286327					0.031	0.003
T	0.645	0.999	221786					-0.029	0.003
A	0.262	0.993	221786					0.032	0.003
A	0.509	0.998	221786					-0.028	0.003
A	0.451	0.997	221786					0.028	0.003

G	0.840	0.994	286327					-0.034	0.004
T	0.395	1.002	175392					0.032	0.003
A	0.275	0.990	286327					0.028	0.003
T	0.227	0.999	368088					-0.026	0.003
C	0.412	0.999	379337	12907	366430	0.885		-0.122	0.013
C	0.011	0.969	175392					0.153	0.016
T	0.645	0.999	221786					-0.029	0.003
T	0.065	1.001	379337	15449	363888	1.22		0.202	0.022
C	0.738	0.996	350792	15315	335477	0.886		-0.121	0.013
A	0.191	0.994	221786					0.035	0.004
T	0.645	0.999	286327					-0.026	0.003
G	0.226	1.000	361993					0.026	0.003
A	0.259	0.959	368090					-0.025	0.003
A	0.388	0.997	379337	23861	355476	1.09		0.089	0.010
C	0.738	0.996	221786					0.032	0.003
G	0.226	1.000	109888					-0.046	0.005
A	0.388	0.997	379337	35012	344325	1.08		0.074	0.008
G	0.454	0.997	286327					-0.025	0.003
G	0.369	0.995	368088					-0.023	0.002
C	0.253	1.001	286327					-0.028	0.003
A	0.536	0.999	372673					0.021	0.002
A	0.313	0.997	379337	17994	361343	1.11		0.108	0.012
T	0.070	0.994	286327					0.049	0.005
T	0.070	0.994	221786					0.056	0.006
T	0.674	1.001	368085					0.023	0.002
A	0.139	1.002	286327					-0.036	0.004
A	0.313	0.997	343797	31646	312151	1.09		0.082	0.009
A	0.313	0.997	379337					0.023	0.002
T	0.272	0.991	286096					-0.028	0.003
G	0.276	0.998	221786					0.031	0.003
T	0.395	1.002	136810					0.036	0.004
C	0.251	0.996	286327					-0.029	0.003
G	0.454	0.997	221786					-0.028	0.003
G	0.399	1.000	221786					0.028	0.003
G	0.399	1.000	175392					0.031	0.003
C	0.319	0.998	221786					-0.029	0.003
A	0.536	0.999	378482					0.021	0.002
G	0.690	0.997	372489					-0.023	0.003
A	0.536	0.999	372703					0.021	0.002
T	0.400	0.985	286327					-0.025	0.003
T	0.400	0.985	221786					-0.028	0.003
T	0.347	0.995	221786					-0.029	0.003
T	0.015	1.002	286327					-0.100	0.011
T	0.015	1.002	221786					-0.114	0.012
C	0.209	1.001	368088					0.026	0.003
T	0.299	0.997	286327					-0.027	0.003
C	0.412	0.999	221786					0.028	0.003
C	0.794	0.999	136810					-0.043	0.005
T	0.239	0.996	286096					0.029	0.003
T	0.239	0.996	221786					0.032	0.004

A	0.259	0.959	221786					-0.031	0.003
A	0.139	1.002	221786					-0.040	0.004
G	0.690	0.997	378624					-0.023	0.002
A	0.191	0.994	367434					-0.027	0.003
A	0.822	1.002	286327					-0.032	0.003
T	0.316	0.975	378482					-0.023	0.002
T	0.065	1.001	367434					0.042	0.005
C	0.142	0.995	286096					0.035	0.004
A	0.388	0.997	379337	30391	348946	1.08		0.077	0.009
A	0.536	0.999	109888					0.038	0.004
A	0.536	0.999	190114	16789	173325	0.898		-0.108	0.012
T	0.400	0.985	221786					-0.028	0.003
G	0.399	1.000	136810					0.035	0.004
C	0.251	0.996	286327					-0.028	0.003
G	0.226	1.000	367440					-0.025	0.003
G	0.690	0.997	378214					-0.022	0.002
G	0.279	0.988	286327					-0.027	0.003
G	0.279	0.988	221786					-0.031	0.003
C	0.235	1.004	378624					-0.024	0.003
G	0.160	0.992	109888					-0.053	0.006
A	0.125	1.000	361992					-0.031	0.004
A	0.631	1.001	354922	62560	292362	1.06		0.058	0.007
T	0.400	0.985	286096					-0.024	0.003
A	0.176	0.997	378214					-0.027	0.003
G	0.377	0.981	286327					-0.025	0.003
A	0.081	1.002	221786					-0.050	0.006
T	0.065	1.001	379337	25534	353803	1.17		0.155	0.018
A	0.441	0.992	286327					-0.024	0.003
G	0.605	1.001	361992					0.021	0.002
T	0.197	1.001	109888					0.048	0.005
T	0.674	1.001	286096					-0.025	0.003
G	0.065	0.999	286327					0.048	0.005
A	0.536	0.999	84308					0.043	0.005
C	0.785	1.000	286327					-0.029	0.003
A	0.329	0.994	286327					0.025	0.003
G	0.226	1.000	378556					-0.024	0.003
A	0.313	0.997	368085					-0.022	0.003
C	0.588	0.996	286096					-0.024	0.003
C	0.738	0.996	368085					-0.023	0.003
A	0.125	1.000	379337	21502	357835	1.14		0.127	0.015
G	0.305	0.995	372673					-0.022	0.003
T	0.845	1.001	361993					0.029	0.003
A	0.313	0.997	379337	15919	363418	1.11		0.108	0.012
G	0.646	0.954	136810					0.036	0.004
A	0.077	0.997	286327					-0.045	0.005
T	0.065	1.001	379337	33807	345530	1.14		0.135	0.016
G	0.305	0.995	372703					-0.022	0.003
G	0.305	0.995	286096					0.025	0.003
G	0.605	1.001	361992					0.021	0.002
G	0.279	0.988	175392					-0.034	0.004

A	0.096	0.995	221786					0.045	0.005
G	0.226	1.000	361992					0.024	0.003
C	0.412	0.999	379337	102298	277039	0.955		-0.046	0.005
G	0.228	0.990	221786					0.032	0.004
T	0.207	0.997	221786					0.033	0.004
A	0.259	0.959	361992					-0.023	0.003
T	0.845	1.001	368087					0.028	0.003
T	0.400	0.985	221786					-0.027	0.003
C	0.588	0.996	221786					-0.027	0.003
C	0.011	0.969	109888					0.179	0.020
T	0.272	0.991	286327					-0.026	0.003
A	0.537	1.001	286327					-0.023	0.003
A	0.497	0.998	286096					-0.023	0.003
C	0.738	0.996	367434					-0.023	0.003
G	0.050	0.993	221786					-0.061	0.007
T	0.065	1.001	350792	15315	335477	1.21		0.190	0.022
G	0.453	1.002	84308					-0.043	0.005
T	0.270	1.000	286327					0.026	0.003
C	0.492	0.992	286327					-0.024	0.003
C	0.412	0.999	175392					0.030	0.003
T	0.405	1.000	109888					-0.038	0.004
A	0.441	0.992	221786					-0.027	0.003
G	0.605	1.001	286327					0.023	0.003
A	0.228	1.000	136810					-0.040	0.005
T	0.845	1.001	350792	15315	335477	0.874		-0.135	0.015
G	0.515	0.997	286327					0.023	0.003
G	0.515	0.997	221786					0.026	0.003
C	0.478	1.001	221786					-0.026	0.003
A	0.228	1.000	109888					-0.044	0.005
T	0.213	1.001	286327					-0.029	0.003
T	0.299	0.997	221786					-0.029	0.003
A	0.517	0.999	109888					0.036	0.004
C	0.253	1.001	175392					-0.034	0.004
A	0.388	0.997	379337	22266	357071	1.09		0.085	0.010
A	0.563	0.992	286327					0.024	0.003
T	0.065	1.001	379337	35012	344325	1.14		0.131	0.015
G	0.279	0.988	136810					-0.037	0.004
A	0.441	0.992	286327					-0.023	0.003
A	0.125	1.000	368083					-0.030	0.004
A	0.125	1.000	221786					-0.038	0.005
T	0.405	1.000	84308					-0.043	0.005
T	0.203	1.000	286327					-0.029	0.003
C	0.512	0.997	286327					0.023	0.003
A	0.441	0.992	286327					-0.023	0.003
A	0.441	0.992	221786					-0.026	0.003
A	0.669	0.996	190114	16789	173325	0.896		-0.109	0.013
T	0.315	0.988	175392					-0.032	0.004
C	0.251	0.996	221786					-0.030	0.003
T	0.501	0.998	367440					0.020	0.002
C	0.011	0.969	136810					0.159	0.018

C	0.515	0.996	286327				0.023	0.003
C	0.515	0.996	221786				0.026	0.003
T	0.270	1.000	286327				0.026	0.003
G	0.226	1.000	378482				-0.023	0.003
A	0.259	0.959	372673				0.023	0.003
G	0.226	1.000	338402				-0.024	0.003
C	0.785	1.000	368090				0.024	0.003
C	0.235	1.004	286327				-0.026	0.003
A	0.479	1.001	378214				0.020	0.002
C	0.739	1.003	286327				-0.026	0.003
G	0.690	0.997	378667				-0.021	0.002
G	0.824	0.995	109888				-0.048	0.006
T	0.395	1.002	221786				0.026	0.003
T	0.548	0.996	175392				-0.029	0.003
T	0.400	0.985	221786				-0.026	0.003
T	0.299	0.997	286327				-0.025	0.003
G	0.377	0.981	361993				-0.021	0.002
C	0.124	0.997	338821				0.032	0.004
A	0.631	1.001	379337	18234	361103	1.1	0.096	0.011
A	0.259	0.959	372703				0.022	0.003
A	0.537	1.001	221786				-0.026	0.003
T	0.395	1.002	286327				0.023	0.003
T	0.207	0.997	286327				0.028	0.003
A	0.649	0.999	286327				-0.024	0.003
G	0.226	1.000	84308				-0.048	0.006
T	0.548	0.996	221786				-0.026	0.003
C	0.251	0.996	221786				-0.029	0.003
T	0.674	1.001	221786				-0.027	0.003
C	0.458	0.996	286327				-0.023	0.003
T	0.065	1.001	379337	29738	349599	1.15	0.137	0.017
G	0.453	1.002	368084				0.020	0.002
T	0.458	0.998	286327				0.023	0.003
C	0.064	0.980	368090				0.041	0.005
A	0.635	0.997	378070				0.021	0.002
T	0.128	0.993	286327				0.034	0.004
T	0.128	0.993	221786				0.038	0.005
G	0.515	0.997	286096				0.022	0.003
T	0.395	1.002	286096				0.023	0.003
C	0.384	0.990	286096				0.024	0.003
C	0.064	0.980	136810				0.066	0.008
A	0.125	1.000	377882	63217	314665	1.08	0.079	0.010
T	0.197	1.001	286327				0.028	0.003
C	0.501	0.990	378482				0.020	0.002
A	0.479	1.001	378556				0.019	0.002
C	0.251	0.996	286096				-0.026	0.003
C	0.516	1.000	175392				-0.029	0.003
G	0.065	0.999	175392				0.057	0.007
G	0.453	1.002	136810				-0.032	0.004
G	0.605	1.001	286327				0.023	0.003
C	0.332	0.990	136810				0.034	0.004

G	0.597	0.989	286327					-0.023	0.003
A	0.517	0.999	175392					0.028	0.003
C	0.338	0.995	286327					-0.024	0.003
A	0.509	0.998	286327					-0.022	0.003
G	0.453	1.002	109888					-0.036	0.004
A	0.125	1.000	367440					-0.029	0.004
A	0.125	1.000	286327					-0.033	0.004
G	0.065	0.999	109888					0.072	0.009
C	0.285	0.989	368088					-0.022	0.003
C	0.285	0.989	338402					-0.023	0.003
A	0.261	0.990	379337	1509	377828	1.39		0.331	0.039
C	0.126	0.998	109888					-0.054	0.006
A	0.329	0.994	221786					0.027	0.003
G	0.856	0.999	372673					-0.028	0.003
A	0.536	0.999	221786					0.025	0.003
A	0.191	0.994	367434					-0.025	0.003
T	0.065	1.001	367440					-0.039	0.005
C	0.492	0.992	221786					-0.026	0.003
A	0.187	0.999	286327					-0.028	0.003
A	0.259	0.959	368088					0.022	0.003
A	0.191	0.994	136810					0.040	0.005
T	0.203	1.000	221786					-0.032	0.004
C	0.064	0.980	175392					0.058	0.007
T	0.270	1.000	221786					0.028	0.003
T	0.270	1.000	175392					0.032	0.004
A	0.077	0.997	221786					-0.048	0.006
A	0.619	1.000	221786					0.026	0.003
A	0.187	0.999	286096					-0.028	0.003
T	0.197	1.001	286096					0.028	0.003
A	0.669	0.996	244666	25949	218717	0.919		-0.085	0.010
T	0.400	0.985	286327					-0.022	0.003
C	0.021	0.999	286327					0.076	0.009
A	0.537	1.001	286327					-0.022	0.003
C	0.384	0.990	221786					0.026	0.003
C	0.135	0.995	286096					-0.033	0.004
C	0.135	0.995	286327					-0.033	0.004
T	0.124	0.983	368085					-0.030	0.004
G	0.840	0.994	221786					-0.035	0.004
T	0.270	1.000	372673					0.021	0.003
A	0.517	0.999	136810					0.031	0.004
G	0.276	0.998	109888					0.040	0.005
G	0.276	0.998	221786					0.028	0.003
G	0.515	0.997	221786					0.025	0.003
G	0.856	0.999	372703					-0.028	0.003
A	0.441	0.992	221786					-0.025	0.003
G	0.276	0.998	286327					0.024	0.003
G	0.377	0.981	361992					-0.020	0.002
T	0.559	0.990	368088					-0.020	0.002
T	0.559	0.990	361993					0.020	0.002
A	0.125	1.000	379337	22553	356784	1.12		0.116	0.014

A	0.537	1.001	221786					-0.025	0.003
C	0.064	0.980	361993					-0.040	0.005
A	0.563	0.992	221786					0.025	0.003
T	0.685	0.992	286327					0.024	0.003
A	0.131	0.993	379337	6721	372616	0.787		-0.240	0.028
T	0.347	0.995	175392					-0.029	0.004
G	0.605	1.001	221786					0.025	0.003
C	0.267	0.989	286327					0.025	0.003
A	0.619	1.000	286327					0.023	0.003
G	0.453	1.002	368085					0.019	0.002
G	0.174	0.996	286327					0.029	0.003
A	0.631	1.001	378466	86104	292362	1.05		0.047	0.006
C	0.338	0.995	221786					-0.027	0.003
C	0.142	0.995	175392					0.040	0.005
C	0.142	0.995	221786					0.035	0.004
G	0.500	0.988	286327					-0.022	0.003
T	0.559	0.990	361992					0.020	0.002
C	0.588	0.996	368085					0.019	0.002
T	0.400	0.985	368090					0.020	0.002
T	0.555	0.950	368085					-0.020	0.002
G	0.607	1.003	136810					0.032	0.004
A	0.191	0.994	367434					-0.024	0.003
T	0.501	0.998	379337	16613	362724	0.911		-0.093	0.011
T	0.501	0.998	379337	15919	363418	0.909		-0.095	0.012
A	0.259	0.959	379337	21502	357835	1.1		0.092	0.012
A	0.187	0.999	221786					-0.031	0.004
G	0.226	1.000	368087					-0.022	0.003
T	0.270	1.000	372703					0.021	0.003
C	0.253	1.001	221786					-0.028	0.003
A	0.125	1.000	361993					-0.028	0.004
C	0.738	0.996	378482					0.021	0.003
G	0.226	1.000	378466	81619	296847	1.05		0.053	0.007
T	0.458	0.998	221786					0.025	0.003
A	0.509	0.998	173485	31618	141867	1.07		0.072	0.009
T	0.458	0.998	221786					0.025	0.003
T	0.272	0.991	221786					-0.028	0.003
C	0.021	0.999	378624					0.064	0.008
A	0.275	0.990	221786					0.028	0.003
C	0.181	0.986	286327					0.029	0.003
T	0.315	0.988	136810					-0.034	0.004
T	0.845	1.001	368090					-0.026	0.003
T	0.501	0.998	379337	17363	361974	0.913		-0.090	0.011
C	0.588	0.996	357465					0.019	0.002
A	0.537	1.001	286096					-0.021	0.003
C	0.738	0.996	367417	31940	335477	0.928		-0.075	0.009
T	0.395	1.002	221786					0.025	0.003
C	0.463	1.001	221786					-0.025	0.003
A	0.237	0.968	286327					-0.026	0.003
G	0.065	0.999	136810					0.062	0.008
T	0.065	1.001	379337	529	378808	2.08		0.732	0.093

A	0.631	1.001	327381	14995	312386	1.11	0.100	0.012
C	0.332	0.990	286327				0.023	0.003
A	0.191	0.994	368085				-0.024	0.003
T	0.395	1.002	286327				0.022	0.003
T	0.065	1.001	372213	77265	294948	1.09	0.090	0.011
C	0.810	1.005	367440				0.025	0.003
A	0.187	0.999	221786				-0.031	0.004
G	0.065	0.999	286327				0.043	0.005
C	0.794	0.999	109888				-0.043	0.005
A	0.631	1.001	379337	13928	365409	1.11	0.103	0.013
T	0.239	0.996	286327				0.025	0.003
C	0.512	0.997	286096				0.022	0.003
A	0.257	1.001	286327				-0.024	0.003
A	0.259	0.959	379337	22553	356784	1.09	0.089	0.011
C	0.512	0.997	221786				0.025	0.003
C	0.243	0.988	286327				-0.026	0.003
T	0.203	1.000	286327				-0.027	0.003
T	0.069	1.000	109888				-0.068	0.008
G	0.337	0.999	379337	48586	330751	1.06	0.059	0.007
C	0.251	0.996	136810				-0.035	0.004
T	0.069	1.000	136810				-0.061	0.007
G	0.305	0.995	221786				0.026	0.003
G	0.228	0.990	286327				0.025	0.003
C	0.135	0.995	286327				-0.031	0.004
T	0.645	0.999	221786				-0.025	0.003
C	0.392	0.997	109888				0.034	0.004
C	0.458	0.996	378482				0.018	0.002
A	0.259	0.959	190114	16789	173325	1.11	0.108	0.014
T	0.458	0.998	286327				0.021	0.003
T	0.109	0.994	286327				-0.035	0.004
C	0.794	0.999	84308				-0.048	0.006
T	0.501	0.998	379337	17994	361343	0.917	-0.087	0.011
A	0.125	1.000	286327				-0.031	0.004
A	0.743	0.996	286327				-0.025	0.003
T	0.124	0.983	361993				0.029	0.004
G	0.065	0.999	221786				0.048	0.006
A	0.451	0.997	175392				0.027	0.003
A	0.346	1.000	286096				-0.023	0.003
G	0.377	0.981	221786				-0.025	0.003
G	0.157	1.000	286096				-0.029	0.004
A	0.259	0.959	350792	15315	335477	1.11	0.103	0.013
T	0.197	1.001	84308				0.048	0.006
T	0.272	0.991	286327				-0.024	0.003
T	0.400	0.985	81222				0.040	0.005
T	0.674	1.001	367440				-0.020	0.002
A	0.191	0.994	367440				0.023	0.003
C	0.785	1.000	368090				0.023	0.003
C	0.785	1.000	221786				-0.029	0.004
C	0.516	1.000	109888				-0.034	0.004
A	0.081	1.002	372673				0.034	0.004

A	0.081	1.002	372703				0.034	0.004
A	0.081	1.002	286327				0.038	0.005
T	0.270	1.000	221786				0.027	0.003
C	0.253	1.001	286327				-0.024	0.003
T	0.197	1.001	221786				0.030	0.004
G	0.226	1.000	379337	102298	277039	1.05	0.048	0.006
G	0.226	1.000	286327				-0.024	0.003
T	0.533	1.003	286096				-0.021	0.003
T	0.787	1.002	378667				0.022	0.003
A	0.259	0.959	244666	25949	218717	1.09	0.085	0.011
G	0.125	0.994	286327				0.033	0.004
T	0.395	1.002	221786				0.024	0.003
G	0.160	0.992	136810				-0.041	0.005
T	0.347	0.995	136810				-0.031	0.004
C	0.463	1.001	286327				-0.021	0.003
C	0.243	0.988	372673				-0.022	0.003
A	0.649	0.999	367434				-0.019	0.002
A	0.649	0.999	221786				-0.025	0.003
T	0.227	0.999	286327				-0.025	0.003
A	0.669	0.996	286096				0.022	0.003
A	0.176	0.997	368084				0.024	0.003
G	0.050	0.993	109888				-0.078	0.010
A	0.125	1.000	379337	15449	363888	1.14	0.130	0.017
A	0.649	0.999	367434				-0.019	0.002
C	0.243	0.988	372703				-0.022	0.003
A	0.191	0.994	175392				0.033	0.004
C	0.785	1.000	175392				-0.032	0.004
T	0.239	0.996	221786				0.028	0.004
T	0.645	0.999	286096				-0.022	0.003
C	0.021	0.999	221786				0.082	0.011
A	0.125	1.000	376671	129864	246807	0.945	-0.057	0.007
G	0.857	0.998	368088				0.027	0.003
A	0.125	1.000	175392				-0.039	0.005
C	0.142	0.995	109888				0.048	0.006
G	0.160	0.992	84308				-0.052	0.007
G	0.441	0.992	286327				0.021	0.003
T	0.197	1.001	221786				0.029	0.004
A	0.166	0.985	368088				0.025	0.003
C	0.739	1.003	221786				-0.027	0.003
T	0.299	0.997	221786				-0.026	0.003
A	0.139	1.002	175392				-0.038	0.005
A	0.139	1.002	136810				-0.044	0.006
T	0.674	1.001	367434				0.019	0.002
T	0.213	1.001	221786				-0.029	0.004
T	0.400	0.985	175392				-0.027	0.003
A	0.377	0.995	378624				-0.019	0.002
G	0.160	0.992	175392				-0.036	0.005
T	0.400	0.985	368090				0.018	0.002
A	0.261	0.990	379337	1899	377438	1.32	0.276	0.035
A	0.822	1.002	175392				-0.035	0.004

T	0.347	0.995	379337	42753	336584	0.942	-0.060	0.008
G	0.226	1.000	379337	121144	258193	1.05	0.045	0.006
C	0.251	0.996	175392				-0.030	0.004
T	0.533	1.003	379337	6557	372780	0.867	-0.143	0.018
G	0.824	0.995	84308				-0.050	0.006
T	0.219	0.993	286327				-0.026	0.003
C	0.392	0.997	378482				0.018	0.002
C	0.409	0.995	173485	31618	141867	0.932	-0.070	0.009
T	0.015	1.002	367440				0.076	0.010
G	0.143	0.996	367440				-0.027	0.003
T	0.555	0.950	286096				-0.022	0.003
A	0.388	0.997	286327				-0.021	0.003
C	0.142	0.995	136810				0.042	0.005
T	0.458	0.998	221786				0.023	0.003
T	0.458	0.998	286327				0.021	0.003
A	0.743	0.996	221786				-0.027	0.003
A	0.259	0.959	361992				-0.021	0.003
T	0.559	0.990	372673				-0.018	0.002
T	0.559	0.990	372703				-0.018	0.002
C	0.233	0.994	286327				0.025	0.003
A	0.125	1.000	368090				-0.026	0.004
A	0.669	0.996	221786				0.024	0.003
A	0.259	0.959	379337	22354	356983	1.09	0.083	0.011
C	0.412	0.999	375001	55917	319084	0.95	-0.051	0.007
A	0.479	1.001	221786				-0.023	0.003
G	0.377	0.981	361992				-0.019	0.002
T	0.272	0.991	221786				-0.026	0.003
C	0.338	0.995	338402				-0.020	0.003
C	0.135	0.995	352973	131484	221489	1.06	0.057	0.007
A	0.125	1.000	109888				-0.047	0.006
T	0.015	1.002	175392				-0.107	0.014
C	0.458	0.996	286327				-0.020	0.003
A	0.191	0.994	372673				0.022	0.003
T	0.272	0.991	286327				-0.023	0.003
G	0.605	1.001	221786				0.023	0.003
G	0.226	1.000	375001	81876	293125	1.05	0.050	0.007
C	0.738	0.996	136810				0.033	0.004
A	0.191	0.994	372703				0.022	0.003
C	0.253	1.001	221786				-0.026	0.003
A	0.259	0.959	379337	65317	314020	1.05	0.052	0.007
C	0.332	0.990	221786				0.024	0.003
T	0.069	1.000	175392				-0.051	0.007
T	0.069	1.000	84308				-0.073	0.009
G	0.337	0.999	379337	29738	349599	1.07	0.069	0.009
G	0.377	0.981	175392				-0.027	0.004
T	0.645	0.999	367434				0.019	0.002
C	0.433	0.998	378214				-0.018	0.002
A	0.441	0.992	221786				-0.023	0.003
G	0.607	1.003	378624				-0.018	0.002
C	0.516	1.000	136810				-0.029	0.004

A	0.259	0.959	357468					-0.020	0.003
A	0.498	0.991	175392					-0.026	0.003
G	0.174	0.996	221786					0.031	0.004
G	0.575	0.997	286327					-0.021	0.003
A	0.451	0.997	136810					0.029	0.004
T	0.065	1.001	379337	23861	355476	1.14		0.135	0.018
T	0.555	0.950	286327					-0.021	0.003
T	0.533	1.003	286327					-0.020	0.003
T	0.128	0.993	175392					0.039	0.005
C	0.512	0.997	286327					0.020	0.003
G	0.065	0.999	221786					0.046	0.006
T	0.213	1.001	175392					-0.032	0.004
C	0.512	0.997	286327					0.020	0.003
C	0.738	0.996	175392					0.029	0.004
T	0.645	0.999	175392					-0.026	0.004
T	0.559	0.990	361992					0.018	0.002
T	0.015	1.002	136810					-0.119	0.016
A	0.177	0.998	286096					0.027	0.003
C	0.505	0.999	221786					0.023	0.003
C	0.463	1.001	175392					-0.026	0.003
G	0.333	0.991	368084					0.019	0.002
T	0.674	1.001	286327					-0.021	0.003
C	0.409	0.995	286327					0.020	0.003
C	0.267	0.989	175392					0.030	0.004
T	0.224	0.993	379337	48586	330751	0.937		-0.065	0.008
T	0.065	1.001	379337	22354	356983	1.15		0.138	0.019
C	0.235	1.004	221786					-0.026	0.004
A	0.259	0.959	379337	26314	353023	1.08		0.076	0.010
T	0.519	0.899	286327					0.022	0.003
T	0.069	1.000	221786					-0.044	0.006
T	0.645	0.999	84308					-0.038	0.005
T	0.070	0.994	136810					0.058	0.008
A	0.125	1.000	84308					-0.053	0.007
C	0.512	0.997	221786					0.023	0.003
T	0.065	1.001	368090					-0.035	0.005
C	0.142	0.995	84308					0.053	0.007
T	0.227	0.999	221786					-0.027	0.004
C	0.217	0.994	368090					-0.022	0.003
G	0.228	0.990	221786					0.027	0.004
C	0.505	0.999	286327					0.020	0.003
G	0.646	0.954	109888					0.034	0.005
C	0.392	0.997	84308					0.037	0.005
C	0.243	0.988	286327					-0.023	0.003
C	0.409	0.995	221786					0.023	0.003
T	0.065	1.001	379337	20871	358466	1.15		0.141	0.019
G	0.276	0.998	175392					0.028	0.004
G	0.228	0.990	173485	31618	141867	0.923		-0.080	0.011
T	0.465	0.987	378482					0.018	0.002
T	0.219	0.993	286096					-0.024	0.003
A	0.125	1.000	136810					-0.042	0.006

T	0.555	0.950	221786					-0.023	0.003
A	0.125	1.000	221786					-0.033	0.005
T	0.203	1.000	221786					-0.028	0.004
A	0.228	1.000	84308					-0.043	0.006
G	0.276	0.998	286327					0.022	0.003
C	0.064	0.980	361992					-0.036	0.005
T	0.187	0.987	286327					-0.026	0.003
A	0.563	0.992	286327					0.020	0.003
A	0.346	1.000	221786					-0.024	0.003
A	0.125	1.000	377554	43655	333899	0.923		-0.080	0.011
A	0.169	0.996	286096					0.027	0.004
C	0.433	0.998	378070					-0.018	0.002
T	0.548	0.996	136810					-0.029	0.004
T	0.299	0.997	175392					-0.028	0.004
A	0.649	0.999	368088					-0.018	0.002
G	0.276	0.998	136810					0.032	0.004
T	0.178	0.997	338402					-0.024	0.003
A	0.498	0.991	84308					-0.036	0.005
C	0.478	1.001	286327					-0.020	0.003
G	0.337	0.999	379337	26314	353023	1.07		0.071	0.009
G	0.337	0.999	286096					-0.021	0.003
T	0.533	1.003	379337	7058	372279	0.878		-0.130	0.017
T	0.555	0.950	286327					-0.020	0.003
A	0.237	0.968	286096					-0.024	0.003
C	0.412	0.999	136810					0.029	0.004
T	0.214	0.985	286327					-0.025	0.003
A	0.509	0.998	221786					-0.022	0.003
A	0.509	0.998	175392					-0.025	0.003
T	0.404	0.998	286096					0.020	0.003
T	0.197	1.001	175392					0.031	0.004
C	0.011	0.969	84308					0.171	0.023
C	0.243	0.988	221786					-0.026	0.004
A	0.625	0.995	286327					0.021	0.003
A	0.649	0.999	367440					-0.018	0.002
C	0.785	1.000	368090					0.021	0.003
A	0.259	0.959	367440					-0.019	0.003
A	0.479	1.001	286096					-0.020	0.003
A	0.498	0.991	136810					-0.028	0.004
G	0.522	1.001	286327					0.019	0.003
A	0.822	1.002	221786					-0.029	0.004
A	0.498	0.991	109888					-0.032	0.004
A	0.176	0.997	367440					-0.023	0.003
T	0.787	1.002	378624					0.021	0.003
G	0.454	0.997	372703					-0.017	0.002
A	0.536	0.999	378624					0.017	0.002
G	0.276	0.998	221786					0.025	0.003
T	0.065	1.001	379276					0.033	0.005
T	0.128	0.993	357468					0.026	0.004
T	0.080	0.976	286096					0.038	0.005
A	0.446	0.999	368085					0.018	0.002

G	0.454	0.997	372673					-0.017	0.002
T	0.207	0.997	136810					0.035	0.005
G	0.226	1.000	367434					0.020	0.003
A	0.409	0.973	378624					0.018	0.002
G	0.597	0.989	286327					-0.020	0.003
G	0.575	0.997	286327					-0.020	0.003
C	0.181	0.986	221786					0.029	0.004
C	0.293	0.993	286096					0.022	0.003
C	0.126	0.998	84308					-0.054	0.007
C	0.253	1.001	367434					0.020	0.003
T	0.533	1.003	221786					-0.022	0.003
T	0.362	0.990	286327					-0.021	0.003
C	0.251	0.996	221786					-0.025	0.003
C	0.505	0.999	221786					0.022	0.003
T	0.559	0.990	361992					0.017	0.002
G	0.210	0.996	286096					-0.025	0.003
T	0.559	0.990	361992					0.017	0.002
C	0.209	1.001	368087					0.021	0.003
C	0.209	1.001	361992					0.021	0.003
C	0.738	0.996	367440					0.019	0.003
T	0.506	0.999	221786					0.023	0.003
A	0.409	0.973	372085					0.018	0.002
C	0.534	0.999	368085					-0.017	0.002
G	0.338	0.994	286096					0.021	0.003
T	0.645	0.999	378482					-0.017	0.002
T	0.065	1.001	367417	31940	335477	1.12		0.114	0.016
G	0.575	0.997	372673					-0.017	0.002
C	0.085	1.002	368084					0.031	0.004
T	0.559	0.990	286327					-0.019	0.003
A	0.125	1.000	379337	12877	366460	1.14		0.130	0.018
T	0.239	0.996	286327					0.023	0.003
T	0.239	0.996	221786					0.026	0.004
T	0.270	1.000	136810					0.031	0.004
G	0.575	0.997	372703					-0.017	0.002
G	0.276	0.998	84308					0.039	0.005
T	0.465	0.987	81101					-0.037	0.005
C	0.458	0.996	221786					-0.022	0.003
T	0.076	0.987	136810					-0.053	0.007
T	0.065	1.001	190114	16789	173325	0.832		-0.184	0.026
G	0.164	0.994	286327					-0.027	0.004
A	0.096	0.995	175392					0.042	0.006
A	0.388	0.997	379337	55476	323861	1.05		0.048	0.007
T	0.555	0.950	357468					-0.018	0.002
C	0.135	0.995	175392					-0.036	0.005
C	0.478	1.001	221786					-0.022	0.003
C	0.392	0.997	372673					0.017	0.002
A	0.444	0.987	368085					-0.018	0.002
G	0.226	1.000	221786					-0.025	0.004
C	0.285	0.989	286327					0.022	0.003
T	0.645	0.999	175392					-0.025	0.004

A	0.635	0.997	286096				0.020	0.003
A	0.262	0.993	175392				0.028	0.004
A	0.262	0.993	136810				0.032	0.004
T	0.645	0.999	215636				-0.023	0.003
A	0.176	0.997	286096				0.025	0.003
G	0.500	0.988	221786				-0.022	0.003
G	0.515	0.997	368088				-0.017	0.002
T	0.458	0.998	286096				0.019	0.003
A	0.081	1.002	221786				0.040	0.005
A	0.313	0.997	368088				-0.018	0.003
T	0.270	1.000	221786				0.024	0.003
C	0.738	0.996	368088				-0.019	0.003
A	0.125	1.000	379337	932	378405	1.53	0.423	0.061
T	0.109	0.994	221786				-0.036	0.005
T	0.787	1.002	372085				0.020	0.003
A	0.329	0.994	368088				-0.018	0.002
T	0.065	1.001	379337	30391	348946	1.12	0.115	0.017
A	0.259	0.959	379337	15449	363888	1.1	0.093	0.013
C	0.319	0.998	175392				-0.026	0.004
A	0.081	1.002	175392				-0.044	0.006
T	0.203	1.000	286096				-0.024	0.003
A	0.313	0.997	286327				-0.020	0.003
C	0.235	1.004	372085				-0.019	0.003
T	0.224	0.993	372489				-0.020	0.003
T	0.224	0.993	367440				-0.021	0.003
G	0.228	0.990	173485	117954	55531	0.94	-0.062	0.009
G	0.228	0.990	173485	55531	117954	1.06	0.062	0.009
G	0.851	0.995	286096				-0.027	0.004
G	0.851	0.995	221786				-0.031	0.004
T	0.270	1.000	378214				0.018	0.003
A	0.563	0.992	221786				0.022	0.003
C	0.433	0.998	372673				-0.017	0.002
C	0.433	0.998	372703				-0.017	0.002
C	0.392	0.997	372703				0.017	0.002
T	0.674	1.001	221786				-0.023	0.003
T	0.065	1.001	361993				-0.033	0.005
T	0.178	0.997	84308				0.046	0.006
A	0.125	1.000	84308				-0.050	0.007
G	0.441	0.992	286327				0.020	0.003
T	0.685	0.992	221786				0.024	0.003
A	0.631	1.001	379337	27695	351642	1.07	0.066	0.009
T	0.645	0.999	109888				-0.031	0.004
T	0.224	0.993	367434				-0.020	0.003
T	0.214	0.985	221786				-0.027	0.004
A	0.409	0.973	378214				0.017	0.002
G	0.575	0.997	378482				-0.017	0.002
C	0.271	0.996	286327				0.022	0.003
C	0.271	0.996	221786				0.025	0.003
A	0.313	0.997	357740	32399	325341	1.06	0.063	0.009
G	0.377	0.981	307461				-0.019	0.003

A	0.125	1.000	379337	14256	365081	0.876	-0.132	0.019
T	0.065	1.001	379337	21438	357899	1.14	0.133	0.019
C	0.515	0.996	136810				0.028	0.004
T	0.203	1.000	221786				-0.027	0.004
T	0.458	0.998	175392				0.024	0.003
A	0.497	0.998	221786				-0.022	0.003
C	0.738	0.996	379337	29738	349599	0.935	-0.068	0.010
T	0.674	1.001	367440				0.018	0.002
C	0.142	0.995	286327				0.027	0.004
G	0.337	0.999	350792	15315	335477	1.09	0.088	0.012
C	0.064	0.980	215636				0.044	0.006
T	0.219	0.993	221786				-0.026	0.004
C	0.285	0.989	368084				-0.019	0.003
A	0.537	1.001	175392				-0.024	0.003
G	0.515	0.997	221786				0.021	0.003
G	0.605	1.001	175392				0.024	0.003
A	0.125	1.000	376456	3936	372520	1.24	0.218	0.032
T	0.178	0.997	109888				0.040	0.006
T	0.070	0.994	175392				0.048	0.007
G	0.337	0.999	379337	21502	357835	1.08	0.075	0.011
A	0.125	1.000	379337	11484	367853	1.14	0.132	0.019
A	0.125	1.000	379337	13090	366247	0.867	-0.142	0.021
C	0.253	1.001	372703				-0.019	0.003
C	0.505	0.999	286327				0.019	0.003
C	0.253	1.001	372673				-0.019	0.003
G	0.228	0.990	175392				0.028	0.004
T	0.506	0.999	286327				0.019	0.003
C	0.512	0.997	221786				0.021	0.003
A	0.446	0.999	367440				-0.017	0.002
T	0.458	0.998	136810				0.027	0.004
A	0.255	1.001	221786				0.025	0.003
A	0.259	0.959	379337	21438	357899	1.08	0.078	0.011
A	0.259	0.959	367417	31940	335477	1.07	0.065	0.010
C	0.135	0.995	221786				-0.031	0.004
G	0.333	0.991	368088				0.017	0.002
A	0.409	0.973	372489				0.017	0.002
A	0.409	0.973	378667				0.017	0.002
C	0.126	0.998	175392				-0.036	0.005
T	0.207	0.997	136810				0.033	0.005
G	0.718	1.001	286096				-0.022	0.003
A	0.329	0.994	175392				0.026	0.004
T	0.674	1.001	368088				0.017	0.002
C	0.304	0.977	378482				0.018	0.003
G	0.305	0.995	286327				0.020	0.003
C	0.243	0.988	221786				-0.025	0.004
A	0.479	1.001	368088				0.016	0.002
G	0.276	0.998	175392				0.026	0.004
G	0.597	0.989	221786				-0.022	0.003
A	0.537	1.001	136810				-0.027	0.004
T	0.400	0.985	136810				-0.027	0.004

C	0.516	1.000	84308					-0.035	0.005
G	0.441	0.992	286096					0.019	0.003
G	0.157	1.000	221786					-0.030	0.004
A	0.169	0.996	221786					0.029	0.004
A	0.715	0.994	221786					0.024	0.003
A	0.125	1.000	379337	11938	367399	0.864		-0.147	0.022
A	0.631	1.001	379337	35566	343771	1.06		0.057	0.008
T	0.400	0.985	81222					0.035	0.005
C	0.011	0.969	378482					-0.077	0.011
T	0.069	1.000	286327					-0.036	0.005
A	0.631	1.001	335404	23018	312386	1.07		0.071	0.010
G	0.196	0.981	286327					0.024	0.003
G	0.196	0.981	221786					0.028	0.004
C	0.021	0.999	109888					0.103	0.015
C	0.293	1.001	286327					-0.021	0.003
C	0.253	1.001	136810					-0.031	0.004
T	0.529	0.994	286327					-0.019	0.003
T	0.555	0.950	361992					0.017	0.002
T	0.555	0.950	221786					-0.022	0.003
T	0.065	1.001	379337	93276	286061	1.08		0.075	0.011
A	0.237	0.968	221786					-0.025	0.004
T	0.458	0.998	136810					0.027	0.004
A	0.631	1.001	379337	12495	366842	1.1		0.093	0.014
T	0.124	0.983	368087					0.025	0.004
T	0.124	0.983	368088					-0.025	0.004
T	0.559	0.990	221786					-0.021	0.003
C	0.588	0.996	368088					0.016	0.002
T	0.207	0.997	175392					0.029	0.004
T	0.519	0.899	221786					0.023	0.003
A	0.537	1.001	136810					-0.027	0.004
T	0.415	0.984	286327					-0.020	0.003
T	0.076	0.987	175392					-0.045	0.006
T	0.645	0.999	136810					-0.027	0.004
A	0.255	1.001	286096					0.021	0.003
G	0.500	0.988	175392					-0.024	0.003
A	0.125	1.000	367668					-0.024	0.004
A	0.631	1.001	379337	24466	354871	1.07		0.067	0.010
A	0.329	0.994	136810					0.029	0.004
C	0.135	0.995	221786					-0.031	0.004
G	0.129	1.001	338402					0.026	0.004
G	0.607	1.003	109888					0.030	0.004
G	0.226	1.000	330745	33898	296847	1.07		0.065	0.010
A	0.631	1.001	379337	40335	339002	1.06		0.054	0.008
T	0.128	0.993	109888					0.045	0.006
G	0.646	0.954	84308					0.036	0.005
A	0.125	1.000	368088					-0.024	0.004
C	0.412	0.999	379337	5449	373888	0.871		-0.138	0.020
A	0.259	0.959	379337	30391	348946	1.07		0.065	0.010
A	0.259	0.959	379337	22370	356967	1.08		0.075	0.011
A	0.498	0.991	286096					-0.018	0.003

C	0.285	0.989	175392					0.026	0.004
G	0.164	0.994	221786					-0.029	0.004
C	0.738	0.996	379337	22354	356983	0.928		-0.075	0.011
T	0.405	1.000	368084					-0.017	0.002
G	0.441	0.992	221786					0.021	0.003
A	0.259	0.959	379337	23861	355476	1.08		0.073	0.011
T	0.458	0.998	221786					0.021	0.003
C	0.515	0.996	175392					0.024	0.003
T	0.458	0.998	175392					0.023	0.003
A	0.257	1.001	221786					-0.023	0.003
G	0.337	0.999	379337	22553	356784	1.07		0.071	0.010
A	0.275	0.990	221786					0.024	0.003
C	0.271	0.996	286096					0.021	0.003
G	0.840	0.994	175392					-0.033	0.005
T	0.299	0.997	136810					-0.029	0.004
T	0.015	1.002	367434					0.067	0.010
G	0.210	0.996	221786					-0.026	0.004
A	0.081	1.002	215636					0.038	0.006
A	0.377	0.995	286327					-0.019	0.003
G	0.515	0.997	286327					0.018	0.003
G	0.515	0.997	286327					0.018	0.003
G	0.515	0.997	175392					0.023	0.003
C	0.319	0.998	109888					-0.032	0.005
A	0.313	0.997	221786					-0.022	0.003
A	0.498	0.991	221786					-0.021	0.003
A	0.237	0.968	361992					0.019	0.003
A	0.237	0.968	175392					-0.028	0.004
A	0.388	0.997	367440					-0.016	0.002
A	0.259	0.959	368083					-0.018	0.003
T	0.213	1.001	136810					-0.033	0.005
T	0.555	0.950	221786					-0.021	0.003
T	0.685	0.992	175392					0.026	0.004
A	0.259	0.959	379337	12877	366460	1.1		0.096	0.015
C	0.253	1.001	221786					-0.024	0.003
T	0.065	1.001	379337	26314	353023	1.12		0.117	0.018
G	0.454	0.997	175392					-0.023	0.003
A	0.537	1.001	84308					-0.033	0.005
G	0.065	0.999	84308					0.067	0.010
A	0.649	0.999	367440					-0.017	0.002
C	0.412	0.999	379337	52481	326856	0.955		-0.046	0.007
C	0.738	0.996	379337	21438	357899	0.928		-0.075	0.011
A	0.259	0.959	379337	17287	362050	1.09		0.083	0.013
A	0.517	0.999	84308					0.033	0.005
G	0.337	0.999	379337	35012	344325	1.06		0.057	0.008
C	0.512	0.997	175392					0.023	0.003
C	0.492	0.992	109888					-0.030	0.004
T	0.203	1.000	175392					-0.029	0.004
T	0.787	1.002	368085					-0.019	0.003
C	0.505	0.999	286096					0.018	0.003
A	0.631	1.001	379337	58564	320773	1.05		0.045	0.007

A	0.388	0.997	221786					-0.021	0.003
T	0.124	0.983	368088					0.024	0.004
A	0.275	0.990	286327					0.021	0.003
C	0.505	0.999	136810					0.026	0.004
A	0.822	1.002	379337	42753	336584	1.07		0.068	0.010
T	0.207	0.997	286327					0.022	0.003
T	0.207	0.997	221786					0.025	0.004
A	0.077	0.997	175392					-0.044	0.006
C	0.338	0.995	175392					-0.025	0.004
C	0.064	0.980	372673					0.032	0.005
G	0.453	1.002	338402					0.017	0.002
G	0.597	0.989	286096					-0.019	0.003
C	0.738	0.996	379337	26314	353023	0.934		-0.068	0.010
C	0.384	0.990	286327					0.019	0.003
C	0.384	0.990	175392					0.024	0.003
G	0.515	0.997	175392					0.023	0.003
A	0.669	0.996	286327					0.019	0.003
A	0.125	1.000	379337	10266	369071	0.859		-0.152	0.023
T	0.187	0.987	221786					-0.027	0.004
G	0.454	0.997	136810					-0.026	0.004
G	0.856	0.999	368084					0.023	0.003
A	0.631	1.001	286327					-0.018	0.003
C	0.785	1.000	136810					-0.032	0.005
T	0.555	0.950	368087					0.016	0.002
A	0.125	1.000	109888					-0.041	0.006
G	0.164	0.994	221786					-0.028	0.004
C	0.512	0.997	221786					0.020	0.003
C	0.505	0.999	221786					0.020	0.003
C	0.253	1.001	368085					0.018	0.003
T	0.555	0.950	368088					-0.016	0.002
T	0.674	1.001	372489					0.017	0.002
A	0.536	0.999	378214					0.015	0.002
T	0.501	0.998	367434					0.016	0.002
C	0.319	0.998	84308					-0.035	0.005
T	0.224	0.993	221786					-0.025	0.004
G	0.226	1.000	377882	38495	339387	1.06		0.058	0.009
T	0.128	0.993	221786					0.030	0.004
A	0.446	0.999	367434					0.016	0.002
G	0.337	0.999	379337	33807	345530	1.06		0.057	0.008
T	0.219	0.993	367434					-0.019	0.003
T	0.224	0.993	286327					-0.022	0.003
A	0.387	0.991	221786					0.022	0.003
A	0.291	0.991	286327					0.021	0.003
T	0.533	1.003	221786					-0.020	0.003
A	0.822	1.002	286327					0.023	0.003
A	0.441	0.992	175392					-0.023	0.003
A	0.346	1.000	286327					-0.019	0.003
A	0.377	0.995	221786					-0.021	0.003
T	0.674	1.001	372085					0.017	0.002
A	0.125	1.000	379337	547	378790	1.64		0.498	0.077

A	0.262	0.993	109888					0.033	0.005
T	0.065	1.001	368084					0.031	0.005
G	0.453	1.002	367434					0.016	0.002
T	0.504	0.995	286327					-0.019	0.003
T	0.272	0.991	221786					-0.023	0.003
C	0.458	0.996	221786					-0.020	0.003
A	0.187	0.999	175392					-0.029	0.004
G	0.176	0.999	286327					0.024	0.003
G	0.305	0.995	215636					-0.022	0.003
G	0.305	0.995	378624					-0.016	0.003
C	0.135	0.995	221786					-0.029	0.004
C	0.135	0.995	175392					-0.033	0.005
G	0.196	0.981	367440					-0.020	0.003
G	0.196	0.981	286327					-0.023	0.003
T	0.645	0.999	367434					-0.016	0.002
T	0.203	1.000	136810					-0.032	0.005
T	0.674	1.001	221786					-0.021	0.003
T	0.272	0.991	221786					-0.023	0.003
G	0.515	0.997	221786					0.020	0.003
T	0.076	0.987	109888					-0.054	0.008
A	0.377	0.995	338402					-0.017	0.003
T	0.852	0.998	286327					-0.026	0.004
T	0.128	0.993	136810					0.038	0.006
A	0.131	0.993	221786					-0.031	0.004
T	0.504	0.995	221786					-0.021	0.003
T	0.645	0.999	136810					-0.026	0.004
C	0.384	0.990	221786					0.021	0.003
C	0.064	0.980	372703					0.032	0.005
T	0.362	0.990	221786					-0.022	0.003
A	0.822	1.002	221786					0.026	0.004
C	0.319	0.998	136810					-0.027	0.004
C	0.433	0.998	372085					-0.016	0.002
G	0.369	0.995	357468					0.017	0.002
G	0.857	0.998	367434					-0.023	0.003
T	0.221	0.998	109888					-0.035	0.005
A	0.237	0.968	221786					-0.024	0.004
G	0.125	0.994	175392					0.035	0.005
A	0.441	0.992	175392					-0.023	0.003
C	0.338	0.995	136810					-0.027	0.004
A	0.166	0.985	368085					0.021	0.003
T	0.395	1.002	175392					0.023	0.003
T	0.015	1.002	221786					-0.082	0.012
C	0.064	0.980	378667					0.031	0.005
G	0.575	0.997	221786					-0.020	0.003
G	0.441	0.992	379276					-0.016	0.002
T	0.224	0.993	350792	15315	335477	0.908		-0.096	0.014
G	0.176	0.999	286096					0.024	0.003
A	0.259	0.959	379337	476	378861	1.55		0.441	0.069
G	0.718	1.001	286327					-0.020	0.003
A	0.649	0.999	286327					-0.018	0.003

C	0.319	0.998	372673					-0.016	0.002
A	0.388	0.997	379337	4021	375316	1.16		0.148	0.023
A	0.125	1.000	379337	26564	352773	0.914		-0.090	0.014
C	0.243	0.988	378482					-0.018	0.003
C	0.233	0.994	221786					0.024	0.004
G	0.607	1.003	379337	15380	363957	0.923		-0.081	0.012
G	0.605	1.001	81101					0.033	0.005
G	0.396	0.995	368088					0.016	0.002
A	0.631	1.001	379337	4997	374340	1.15		0.138	0.021
T	0.674	1.001	286327					-0.018	0.003
T	0.015	1.002	221786					-0.082	0.012
C	0.319	0.998	286096					-0.019	0.003
A	0.625	0.995	175392					0.024	0.003
C	0.293	1.001	221786					-0.022	0.003
C	0.412	0.999	379337	49839	329498	0.955		-0.046	0.007
T	0.224	0.993	372085					-0.018	0.003
T	0.224	0.993	81222					0.039	0.006
A	0.259	0.959	368090					-0.017	0.003
T	0.465	0.987	81222					-0.034	0.005
A	0.077	0.997	136810					-0.048	0.007
A	0.715	0.994	286327					0.020	0.003
T	0.465	0.987	81101					-0.034	0.005
G	0.377	0.981	136810					-0.026	0.004
C	0.200	1.000	109888					0.036	0.005
G	0.337	0.999	221786					-0.021	0.003
G	0.164	0.994	286096					-0.024	0.004
A	0.081	1.002	109888					-0.051	0.008
T	0.400	0.985	136810					-0.026	0.004
T	0.207	0.997	221786					0.024	0.004
T	0.112	0.949	286327					0.030	0.004
G	0.607	1.003	379337	14418	364919	0.921		-0.082	0.012
G	0.050	0.993	84308					-0.075	0.011
G	0.515	0.997	136810					0.025	0.004
C	0.319	0.998	372703					-0.016	0.002
C	0.126	0.998	136810					-0.038	0.006
G	0.114	0.999	286327					0.029	0.004
A	0.631	1.001	361988	49602	312386	1.05		0.047	0.007
T	0.207	0.997	175392					0.027	0.004
A	0.081	1.002	136810					-0.046	0.007
A	0.388	0.997	379337	2943	376394	1.19		0.171	0.027
G	0.337	0.999	379337	22354	356983	1.07		0.067	0.010
T	0.197	1.001	136810					0.031	0.005
T	0.555	0.950	368088					0.016	0.002
T	0.559	0.990	378624					-0.015	0.002
A	0.579	0.996	184629					-0.023	0.003
T	0.065	1.001	378556					-0.029	0.005
C	0.267	0.989	221786					0.023	0.003
G	0.337	0.999	378070					-0.016	0.002
C	0.588	0.996	378466	81619	296847	0.963		-0.037	0.006
G	0.605	1.001	84308					0.032	0.005

C	0.243	0.988	286327					-0.020	0.003
C	0.021	0.999	367434					-0.052	0.008
A	0.125	1.000	379337	10641	368696	0.867		-0.143	0.023
T	0.109	0.994	109888					-0.046	0.007
A	0.446	0.999	361992					0.016	0.002
C	0.021	0.999	84308					0.110	0.017
G	0.180	0.995	286096					-0.024	0.003
A	0.509	0.998	286327					-0.017	0.003
C	0.478	1.001	378482					-0.015	0.002
A	0.563	0.992	136810					0.026	0.004
C	0.433	0.998	378624					-0.015	0.002
A	0.187	0.999	136810					-0.032	0.005
A	0.520	0.994	116972					0.028	0.004
A	0.520	0.994	357468					-0.016	0.002
C	0.332	0.990	109888					0.030	0.005
G	0.454	0.997	84308					-0.032	0.005
T	0.272	0.991	109888					-0.031	0.005
C	0.064	0.980	221786					0.040	0.006
C	0.243	0.988	286096					-0.020	0.003
A	0.259	0.959	379337	829	378508	1.4		0.333	0.054
T	0.219	0.993	286327					-0.021	0.003
T	0.224	0.993	81101					0.039	0.006
A	0.402	0.981	286327					-0.019	0.003
C	0.412	0.999	379337	50267	329070	0.956		-0.045	0.007
G	0.398	0.992	221786					-0.021	0.003
G	0.305	0.995	378214					-0.016	0.003
G	0.337	0.999	286327					-0.018	0.003
T	0.395	1.002	136810					0.025	0.004
G	0.125	0.994	221786					0.030	0.005
T	0.065	1.001	368090					-0.030	0.005
G	0.337	0.999	379337	21438	357899	1.07		0.067	0.010
A	0.259	0.959	286327					-0.019	0.003
G	0.605	1.001	136810					0.025	0.004
A	0.261	0.990	221786					0.023	0.003
A	0.131	0.993	286096					-0.026	0.004
C	0.738	0.996	109888					0.031	0.005
T	0.015	1.002	286327					-0.070	0.011
T	0.015	1.002	286096					-0.070	0.011
G	0.500	0.988	136810					-0.025	0.004
T	0.204	0.971	367434					0.020	0.003
T	0.845	1.001	379337	48586	330751	0.941		-0.061	0.009
C	0.052	1.001	286327					0.041	0.006
T	0.400	0.985	81101					0.033	0.005
A	0.125	1.000	379337	6427	372910	0.834		-0.181	0.029
C	0.285	0.989	136810					0.028	0.004
T	0.400	0.985	244666	25949	218717	1.07		0.063	0.010
T	0.400	0.985	190114	16789	173325	1.08		0.079	0.012
C	0.392	0.997	379337	8821	370516	0.904		-0.101	0.016
C	0.064	0.980	368088					-0.031	0.005
A	0.096	0.995	136810					0.043	0.006

A	0.649	0.999	286096					-0.018	0.003
A	0.313	0.997	361993					-0.016	0.003
T	0.533	1.003	379337	2729	376608	0.836		-0.179	0.027
A	0.176	0.997	367440					0.020	0.003
A	0.259	0.959	379337	831	378506	1.39		0.330	0.053
A	0.259	0.959	301198	24505	276693	1.07		0.067	0.011
A	0.631	1.001	379337	7808	371529	1.11		0.108	0.017
T	0.080	1.000	286327					0.032	0.005
A	0.537	1.001	175392					-0.022	0.003
G	0.305	0.995	221786					0.021	0.003
A	0.387	0.991	286327					0.018	0.003
A	0.096	0.995	109888					0.047	0.007
T	0.239	0.996	175392					0.026	0.004
A	0.169	0.996	286327					0.023	0.004
C	0.285	0.989	221786					0.022	0.003
T	0.207	0.997	109888					0.033	0.005
T	0.207	0.997	286096					0.021	0.003
G	0.605	1.001	109888					0.028	0.004
T	0.227	0.999	378667					0.018	0.003
C	0.243	0.988	221786					-0.023	0.004
A	0.187	0.999	286327					-0.022	0.003
A	0.509	0.998	286327					-0.017	0.003
C	0.064	0.980	221786					0.039	0.006
G	0.396	0.995	286327					-0.018	0.003
C	0.250	0.996	379337	21502	357835	0.923		-0.080	0.012
A	0.259	0.959	379337	6233	373104	0.875		-0.133	0.022
A	0.261	0.990	286327					0.020	0.003
G	0.226	1.000	361992					0.017	0.003
T	0.095	0.999	173485	31618	141867	0.901		-0.104	0.015
G	0.176	0.999	221786					0.026	0.004
A	0.125	1.000	379337	637	378700	0.508		-0.677	0.111
G	0.840	0.994	244666	25949	218717	1.09		0.088	0.014
G	0.607	1.003	84308					0.032	0.005
C	0.463	1.001	221786					-0.019	0.003
C	0.319	0.989	372489					-0.017	0.002
C	0.319	0.989	286327					0.019	0.003
G	0.143	0.996	367440					0.022	0.003
G	0.454	0.997	109888					-0.027	0.004
T	0.548	0.996	109888					-0.028	0.004
G	0.605	1.001	286327					0.017	0.003
A	0.409	0.973	378070					0.015	0.002
C	0.285	0.989	221786					0.021	0.003
T	0.415	0.984	175392					-0.023	0.003
A	0.388	0.997	379337	25534	353803	1.06		0.059	0.009
T	0.461	0.995	286096					0.018	0.003
C	0.512	0.997	136810					0.024	0.004
T	0.645	0.999	84308					-0.032	0.005
C	0.285	0.989	221786					0.021	0.003
C	0.810	1.005	286096					-0.022	0.003
T	0.219	0.993	221786					-0.023	0.004

C	0.588	0.996	378482					0.015	0.002
T	0.080	0.976	221786					0.037	0.006
A	0.329	0.994	286096					0.018	0.003
A	0.563	0.992	175392					0.022	0.003
T	0.559	0.990	286327					-0.017	0.003
G	0.065	0.999	109888					0.055	0.009
T	0.028	0.989	286327					-0.052	0.008
C	0.267	0.989	136810					0.028	0.004
C	0.325	0.983	286327					0.019	0.003
T	0.069	1.000	221786					-0.037	0.006
C	0.501	0.990	367434					0.015	0.002
A	0.498	0.991	286327					-0.017	0.003
C	0.433	0.998	378667					-0.015	0.002
A	0.669	0.996	221786					0.020	0.003
C	0.384	0.990	357468					-0.016	0.002
G	0.228	0.990	136810					0.029	0.005
C	0.332	0.990	175392					0.023	0.004
A	0.509	0.998	136810					-0.024	0.004
T	0.674	1.001	368085					0.016	0.002
A	0.125	1.000	136810					-0.035	0.006
C	0.319	0.998	221786					-0.020	0.003
G	0.454	0.997	286096					-0.017	0.003
G	0.522	1.001	221786					0.019	0.003
G	0.851	0.995	286327					-0.024	0.004
C	0.176	0.998	286327					0.023	0.003
G	0.398	0.992	286327					-0.018	0.003
C	0.293	0.993	286327					0.019	0.003
T	0.415	0.984	221786					-0.020	0.003
T	0.095	0.999	173485	117954	55531	0.923		-0.080	0.012
T	0.095	0.999	173485	55531	117954	1.08		0.080	0.012
G	0.050	0.993	175392					-0.050	0.008
C	0.738	0.996	286327					0.019	0.003
T	0.645	0.999	379337	59359	319978	0.96		-0.041	0.007
G	0.338	0.994	221786					0.021	0.003
C	0.492	0.992	84308					-0.031	0.005
C	0.338	0.995	372489					-0.016	0.002
G	0.575	0.997	221786					-0.019	0.003
G	0.522	1.001	109888					0.027	0.004
G	0.453	1.002	286327					-0.017	0.003
C	0.470	0.997	286327					-0.017	0.003
C	0.470	0.997	221786					-0.020	0.003
C	0.470	0.997	286096					-0.017	0.003
C	0.470	0.997	221786					-0.019	0.003
A	0.176	0.997	378624					-0.019	0.003
A	0.537	1.001	109888					-0.027	0.004
A	0.187	0.999	221786					-0.024	0.004
G	0.226	1.000	198514					0.023	0.004
T	0.400	0.985	368090					0.015	0.002
A	0.125	1.000	184629					0.030	0.005
G	0.575	0.997	175392					-0.022	0.003

A	0.625	0.995	338402					0.016	0.003
G	0.114	0.999	221786					0.031	0.005
G	0.856	0.999	368090					0.021	0.003
C	0.243	0.988	109888					-0.031	0.005
G	0.226	1.000	161810					0.025	0.004
A	0.169	0.996	221786					0.026	0.004
A	0.845	0.970	286327					0.024	0.004
C	0.534	0.999	367434					0.015	0.002
T	0.065	1.001	368084					0.028	0.005
T	0.076	0.987	84308					-0.058	0.009
G	0.399	1.000	84308					0.031	0.005
A	0.166	0.985	286327					0.023	0.004
A	0.259	0.959	361993					-0.016	0.003
C	0.142	0.995	221786					0.027	0.004
T	0.347	0.995	379337	5542	373795	0.88		-0.128	0.021
G	0.441	0.992	379337	4021	375316	0.865		-0.145	0.023
T	0.272	0.991	175392					-0.024	0.004
G	0.377	0.981	368087					-0.015	0.002
G	0.377	0.981	190114	16789	173325	1.08		0.078	0.013
T	0.221	0.998	84308					-0.037	0.006
A	0.451	0.997	286327					0.017	0.003
C	0.304	0.977	286327					-0.019	0.003
C	0.412	0.999	379337	86340	292997	0.966		-0.035	0.006
A	0.563	0.992	286096					0.017	0.003
C	0.505	0.999	175392					0.021	0.003
T	0.203	1.000	378482					-0.018	0.003
G	0.377	0.981	367440					0.015	0.002
A	0.125	1.000	378466	81619	296847	0.95		-0.052	0.009
C	0.738	0.996	379337	33807	345530	0.946		-0.056	0.009
A	0.313	0.997	301198	24505	276693	1.06		0.063	0.010
A	0.081	1.002	84308					-0.055	0.009
A	0.125	1.000	357468					-0.021	0.004
A	0.125	1.000	175392					-0.030	0.005
A	0.125	1.000	379337	614	378723	1.55		0.440	0.074
C	0.217	0.994	368090					-0.018	0.003
A	0.498	0.991	221786					-0.019	0.003
T	0.555	0.950	175392					-0.021	0.003
T	0.404	0.998	221786					0.020	0.003
T	0.347	0.995	109888					-0.028	0.004
A	0.191	0.994	368084					-0.018	0.003
G	0.180	0.995	221786					-0.025	0.004
G	0.174	0.996	84308					0.041	0.006
G	0.226	1.000	378298					0.016	0.003
G	0.226	1.000	354392	5729	348663	0.87		-0.140	0.023
T	0.026	0.999	286327					-0.054	0.008
T	0.065	1.001	286327					-0.032	0.005
C	0.124	0.997	286327					0.026	0.004
C	0.124	0.997	221786					0.029	0.005
C	0.738	0.996	221786					0.021	0.003
G	0.605	1.001	357468					-0.015	0.002

C	0.338	0.995	286327					-0.018	0.003
A	0.125	1.000	379337	15396	363941	0.897		-0.108	0.018
G	0.226	1.000	367434					0.017	0.003
C	0.217	0.994	368090					-0.018	0.003
T	0.506	0.999	136810					0.024	0.004
G	0.377	0.981	368088					0.015	0.002
A	0.822	1.002	136810					-0.031	0.005
A	0.259	0.959	368085					-0.016	0.003
G	0.718	1.001	221786					-0.021	0.003
C	0.293	0.993	221786					0.021	0.003
A	0.446	0.999	367434					0.015	0.002
T	0.290	0.999	286327					0.019	0.003
G	0.605	1.001	357465					-0.015	0.002
T	0.415	0.984	286096					-0.017	0.003
G	0.607	1.003	379337	13750	365587	0.924		-0.079	0.013
T	0.674	1.001	378667					0.015	0.002
G	0.605	1.001	221786					0.019	0.003
A	0.649	0.999	221786					-0.019	0.003
C	0.200	1.000	286327					0.021	0.003
C	0.200	1.000	221786					0.023	0.004
T	0.109	0.994	372673					0.023	0.004
T	0.109	0.994	372703					0.023	0.004
T	0.207	0.997	84308					0.037	0.006
T	0.347	0.995	372673					-0.015	0.002
T	0.239	0.996	136810					0.028	0.004
T	0.400	0.985	109888					-0.027	0.004
C	0.463	1.001	109888					-0.027	0.004
G	0.396	0.995	368085					0.015	0.002
A	0.441	0.992	84308					-0.030	0.005
C	0.064	0.980	84308					0.062	0.010
A	0.125	1.000	190114	16789	173325	1.11		0.104	0.018
G	0.176	0.999	221786					0.025	0.004
A	0.649	0.999	221786					-0.019	0.003
T	0.645	0.999	286327					-0.017	0.003
A	0.441	0.992	109888					-0.026	0.004
A	0.446	0.999	361992					0.015	0.002
T	0.239	0.996	136810					0.028	0.004
C	0.233	0.994	175392					0.025	0.004
T	0.080	0.976	286327					0.031	0.005
A	0.139	1.002	286096					-0.024	0.004
A	0.509	0.998	221786					-0.018	0.003
T	0.219	0.993	367440					-0.018	0.003
C	0.412	0.999	379337	62156	317181	0.962		-0.039	0.006
G	0.276	0.998	136810					0.026	0.004
C	0.384	0.990	136810					0.024	0.004
A	0.259	0.959	221786					-0.020	0.003
G	0.377	0.981	368088					-0.015	0.002
A	0.125	1.000	379337	30146	349191	0.926		-0.077	0.013
A	0.749	0.927	221786					-0.023	0.004
G	0.851	0.995	221786					-0.026	0.004

G	0.399	1.000	109888					0.026	0.004
T	0.645	0.999	221786					-0.019	0.003
G	0.840	0.994	136810					-0.033	0.005
A	0.139	1.002	357468					0.021	0.003
G	0.337	0.999	372673					-0.015	0.002
A	0.125	1.000	307461					-0.022	0.004
G	0.337	0.999	372703					-0.015	0.002
A	0.520	0.994	198514					0.020	0.003
T	0.319	0.999	286327					0.018	0.003
T	0.319	0.999	286096					0.018	0.003
C	0.176	0.998	361992					0.019	0.003
C	0.176	0.998	361992					0.019	0.003
C	0.176	0.998	361993					0.019	0.003
C	0.176	0.998	361992					0.019	0.003
C	0.176	0.998	221786					0.025	0.004
A	0.191	0.994	372489					-0.018	0.003
A	0.176	0.997	367434					0.019	0.003
C	0.235	1.004	109888					-0.031	0.005
A	0.536	0.999	379337	8821	370516	0.912		-0.092	0.015
T	0.178	0.997	221786					0.024	0.004
C	0.850	0.984	286327					0.024	0.004
G	0.337	0.999	378214					-0.015	0.002
A	0.520	0.994	357465					-0.015	0.002
A	0.649	0.999	368084					0.015	0.002
T	0.239	0.996	175392					0.024	0.004
T	0.395	1.002	190114	16789	173325	0.928		-0.075	0.012
C	0.332	0.990	84308					0.032	0.005
C	0.253	1.001	286096					-0.018	0.003
A	0.262	0.993	84308					0.034	0.006
G	0.333	0.991	368088					0.015	0.002
A	0.631	1.001	286327					-0.016	0.003
A	0.579	0.996	286327					0.017	0.003
C	0.124	0.997	378482					-0.022	0.003
C	0.124	0.997	286096					0.025	0.004
G	0.515	0.997	136810					0.023	0.004
C	0.507	0.997	357465					-0.015	0.002
C	0.271	0.996	221786					0.021	0.003
A	0.446	0.999	361992					0.015	0.002
T	0.227	0.999	190114	16789	173325	1.09		0.087	0.014
G	0.454	0.997	221786					-0.018	0.003
A	0.669	0.996	357468					0.015	0.003
G	0.840	0.994	109888					-0.036	0.006
T	0.555	0.950	136810					-0.024	0.004
C	0.064	0.980	109888					0.053	0.009
C	0.064	0.980	286096					0.033	0.005
A	0.517	0.999	244666	25949	218717	0.944		-0.058	0.010
G	0.453	1.002	221786					-0.018	0.003
A	0.139	1.002	286327					-0.023	0.004
A	0.176	0.997	221786					0.024	0.004
T	0.315	0.988	286327					0.018	0.003

T	0.315	0.988	221786				0.020	0.003
T	0.415	0.984	221786				-0.019	0.003
C	0.064	0.980	368084				0.029	0.005
T	0.559	0.990	378214				-0.014	0.002
T	0.559	0.990	221786				-0.018	0.003
T	0.347	0.995	372703				-0.015	0.002
T	0.187	0.987	175392				-0.027	0.004
C	0.588	0.996	244666	25949	218717	1.06	0.059	0.010
T	0.559	0.990	378482				-0.014	0.002
A	0.125	1.000	379337	1663	377674	1.31	0.273	0.048
G	0.851	0.995	286327				-0.023	0.004
A	0.346	1.000	221786				-0.019	0.003
T	0.224	0.993	367417	31940	335477	0.941	-0.061	0.010
T	0.347	0.995	286327				0.017	0.003
C	0.243	0.988	286327				-0.019	0.003
G	0.226	1.000	371714	140736	230978	1.03	0.033	0.006
G	0.166	1.000	286327				0.022	0.004
G	0.166	1.000	221786				0.025	0.004
G	0.690	0.997	372703				-0.015	0.003
A	0.822	1.002	378482				0.018	0.003
T	0.227	0.999	379337	15919	363418	1.09	0.082	0.014
T	0.400	0.985	84308				-0.030	0.005
T	0.845	1.001	368088				-0.020	0.003
T	0.787	1.002	338402				-0.018	0.003
G	0.226	1.000	173485	39999	133486	1.06	0.055	0.010
G	0.824	0.995	221786				-0.024	0.004
T	0.028	0.989	244666	25949	218717	0.828	-0.189	0.031
T	0.272	0.991	175392				-0.023	0.004
G	0.164	0.994	175392				-0.028	0.005
C	0.785	1.000	368088				-0.017	0.003
T	0.224	0.993	378667				-0.017	0.003
G	0.164	0.994	221786				-0.025	0.004
T	0.347	0.995	221786				0.019	0.003
G	0.377	0.981	244666	25949	218717	1.06	0.060	0.010
G	0.605	1.001	81222				0.030	0.005
T	0.069	1.000	286096				-0.031	0.005
C	0.635	0.966	286096				0.018	0.003
A	0.707	0.999	286096				0.018	0.003
A	0.822	1.002	338402				0.019	0.003
A	0.259	0.959	379337	1663	377674	1.25	0.220	0.039
A	0.324	0.998	221786				0.020	0.003
A	0.139	1.002	286327				-0.023	0.004
G	0.337	0.999	221786				-0.019	0.003
A	0.262	0.993	286096				0.018	0.003
G	0.364	0.997	286096				0.017	0.003
G	0.226	1.000	379337	3194	376143	1.18	0.165	0.029
T	0.065	1.001	244666	25949	218717	0.89	-0.117	0.020
C	0.412	0.999	378482				-0.014	0.002
C	0.126	0.998	286096				-0.024	0.004
T	0.645	0.999	379337	6557	372780	1.12	0.112	0.019

G	0.174	0.996	109888					0.035	0.006
A	0.517	0.999	190114	16789	173325	0.931		-0.071	0.012
T	0.555	0.950	286327					-0.016	0.003
T	0.506	0.999	175392					0.021	0.003
A	0.169	0.996	286327					0.021	0.004
C	0.135	0.995	136810					-0.033	0.006
A	0.139	1.002	221786					-0.026	0.004
A	0.139	1.002	221786					-0.026	0.004
C	0.492	0.992	175392					-0.021	0.003
G	0.196	0.981	221786					-0.023	0.004
A	0.591	0.998	221786					-0.019	0.003
A	0.346	1.000	368090					-0.015	0.002
C	0.181	0.986	175392					0.027	0.004
C	0.181	0.986	136810					0.031	0.005
C	0.181	0.986	109888					0.034	0.006
T	0.400	0.985	175392					-0.020	0.003
T	0.400	0.985	84308					-0.029	0.005
A	0.105	1.001	221786					-0.031	0.005
C	0.217	0.994	286327					0.020	0.003
A	0.649	0.999	372489					0.014	0.002
A	0.619	1.000	109888					0.027	0.004
A	0.619	1.000	84308					0.030	0.005
A	0.845	0.970	221786					0.026	0.004
T	0.787	1.002	286096					-0.019	0.003
A	0.201	1.001	367668					-0.018	0.003
G	0.337	0.999	286327					-0.016	0.003
C	0.635	0.966	379337	3305	376032	0.852		-0.160	0.026
C	0.285	0.989	136810					0.025	0.004
C	0.332	0.990	136810					0.024	0.004
A	0.259	0.959	368088					0.015	0.003
T	0.227	0.999	368083					-0.017	0.003
C	0.064	0.980	368090					0.028	0.005
A	0.255	1.001	372673					-0.016	0.003
A	0.187	0.999	244666	25949	218717	1.07		0.072	0.012
C	0.810	1.005	367434					0.018	0.003
A	0.635	0.997	221786					0.019	0.003
T	0.070	0.994	109888					0.051	0.008
C	0.738	0.996	379337	30391	348946	0.946		-0.055	0.010
C	0.738	0.996	221786					0.020	0.003
T	0.845	1.001	116972					0.034	0.006
T	0.400	0.985	109888					-0.025	0.004
C	0.304	0.977	221786					-0.020	0.003
G	0.690	0.997	372673					-0.015	0.003
C	0.512	0.997	109888					0.025	0.004
G	0.522	1.001	368090					0.014	0.002
A	0.343	0.991	286096					0.018	0.003
T	0.519	0.899	286327					0.017	0.003
A	0.715	0.994	221786					0.020	0.003
G	0.398	0.992	175392					-0.021	0.003
A	0.125	1.000	338402					0.021	0.004

A	0.329	0.994	286327					0.017	0.003
C	0.392	0.997	379337	30391	348946	0.951		-0.051	0.009
T	0.555	0.950	221786					-0.018	0.003
A	0.631	1.001	221786					-0.018	0.003
T	0.725	0.988	286096					0.019	0.003
A	0.520	0.994	378482					0.014	0.002
C	0.433	0.998	378837					-0.014	0.002
A	0.131	0.993	379337	21524	357813	0.912		-0.093	0.015
T	0.529	0.994	372489					0.014	0.002
T	0.529	0.994	221786					-0.018	0.003
T	0.227	0.999	378214					0.016	0.003
T	0.227	0.999	175392					-0.024	0.004
A	0.715	0.994	286327					0.018	0.003
T	0.645	0.999	221786					-0.018	0.003
A	0.169	0.996	221786					0.024	0.004
A	0.625	0.995	221786					0.019	0.003
A	0.563	0.992	221786					0.018	0.003
G	0.333	0.991	361993					0.015	0.003
C	0.243	0.988	84308					-0.033	0.006
A	0.520	0.994	379337	98116	281221	0.968		-0.032	0.005
T	0.645	0.999	109888					-0.026	0.004
G	0.174	0.996	175392					0.027	0.004
G	0.453	1.002	367440					0.014	0.002
A	0.388	0.997	379337	20871	358466	1.06		0.059	0.010
A	0.619	1.000	286327					0.016	0.003
G	0.515	0.997	84308					0.028	0.005
A	0.619	1.000	221786					0.018	0.003
T	0.685	0.992	136810					0.025	0.004
C	0.325	0.983	221786					0.020	0.003
A	0.497	0.998	372673					0.014	0.002
G	0.687	1.000	378556					-0.015	0.002
A	0.255	1.001	372703					-0.016	0.003
C	0.492	0.992	136810					-0.023	0.004
C	0.501	0.990	367440					0.014	0.002
A	0.631	1.001	379337	12568	366769	1.08		0.077	0.013
A	0.631	1.001	286096					0.016	0.003
T	0.239	0.996	244666	25949	218717	0.935		-0.067	0.012
C	0.235	1.004	175392					-0.023	0.004
A	0.517	0.999	286327					0.015	0.003
A	0.788	1.001	286327					0.020	0.003
C	0.271	0.996	136810					0.026	0.004
A	0.125	1.000	379337	2663	376674	1.24		0.214	0.039
T	0.178	0.997	286327					0.020	0.003
T	0.645	0.999	286327					-0.016	0.003
A	0.441	0.992	286327					-0.016	0.003
C	0.412	0.999	109888					0.025	0.004
C	0.463	1.001	136810					-0.023	0.004
G	0.605	1.001	175392					0.020	0.003
C	0.738	0.996	84308					0.032	0.006
T	0.272	0.991	286327					-0.017	0.003

A	0.313	0.997	368084				0.015	0.003
G	0.065	0.999	84308				0.058	0.010
G	0.398	0.992	136810				-0.023	0.004
A	0.743	0.996	378482				-0.016	0.003
A	0.388	0.997	175392				-0.020	0.003
G	0.398	0.992	361993				-0.014	0.002
A	0.497	0.998	372703				0.014	0.002
G	0.522	1.001	368090				0.013	0.002
A	0.409	0.973	367434				-0.014	0.002
G	0.338	0.994	286327				0.017	0.003
C	0.409	0.995	221786				0.018	0.003
A	0.591	0.998	286096				-0.016	0.003
A	0.125	1.000	367440				0.019	0.004
T	0.555	0.950	84308				-0.029	0.005
G	0.856	0.999	378214				-0.019	0.003
G	0.856	0.999	367440				0.020	0.003
G	0.333	0.991	372673				0.014	0.002
G	0.453	1.002	379337				0.013	0.002
C	0.200	1.000	84308				0.036	0.006
T	0.319	0.999	221786				0.019	0.003
G	0.337	0.999	379337	23861	355476	1.06	0.057	0.010
C	0.233	0.994	286327				0.019	0.003
C	0.512	0.997	175392				0.020	0.003
C	0.052	1.001	221786				0.041	0.007
A	0.907	0.996	286096				-0.028	0.005
A	0.125	1.000	379337	2572	376765	1.24	0.215	0.039
T	0.207	0.997	221786				0.021	0.004
T	0.204	0.971	175392				-0.026	0.004
A	0.388	0.997	361993				0.014	0.002
G	0.687	1.000	379276				0.015	0.002
A	0.346	1.000	286327				-0.016	0.003
T	0.519	0.899	378482				0.014	0.002
G	0.160	0.992	286327				-0.021	0.004
G	0.337	0.999	367417	31940	335477	1.05	0.050	0.009
C	0.515	0.996	368084				0.014	0.002
G	0.522	1.001	84308				0.028	0.005
A	0.619	1.000	338402				-0.015	0.003
G	0.160	0.992	221786				-0.024	0.004
G	0.333	0.991	368090				-0.014	0.002
C	0.126	0.998	221786				-0.026	0.005
A	0.409	0.973	367440				0.014	0.002
A	0.509	0.998	173485	39999	133486	1.05	0.047	0.008
C	0.463	1.001	84308				-0.028	0.005
C	0.470	0.997	286327				-0.016	0.003
C	0.021	0.999	286096				0.053	0.009
T	0.787	1.002	221786				0.021	0.004
C	0.021	0.999	378556				0.045	0.008
A	0.631	1.001	175392				-0.020	0.003
A	0.377	0.995	286327				-0.016	0.003
A	0.377	0.995	286096				-0.016	0.003

G	0.500	0.988	221786					-0.018	0.003
C	0.243	0.988	175392					-0.023	0.004
G	0.276	0.998	244666	25949	218717	0.939		-0.063	0.011
C	0.412	0.999	379337	121144	258193	0.972		-0.029	0.005
T	0.845	1.001	367434					-0.019	0.003
A	0.237	0.968	338402					0.017	0.003
A	0.237	0.968	136810					-0.026	0.005
G	0.824	0.995	190114	16789	173325	1.1		0.095	0.016
G	0.164	0.994	136810					-0.030	0.005
G	0.824	0.995	286327					-0.020	0.003
G	0.453	1.002	378482					0.013	0.002
G	0.180	0.995	368084					-0.018	0.003
A	0.125	1.000	371714	140736	230978	0.961		-0.040	0.007
A	0.399	1.001	286327					-0.016	0.003
A	0.399	1.001	286096					-0.016	0.003
C	0.794	0.999	286327					-0.019	0.003
T	0.204	0.971	367440					0.018	0.003
A	0.125	1.000	379337	1712	377625	1.29		0.257	0.047
C	0.738	0.996	286327					0.017	0.003
C	0.124	0.997	378298					-0.021	0.003
C	0.470	0.997	221786					-0.018	0.003
T	0.458	0.998	350792	15315	335477	0.935		-0.068	0.012
T	0.319	0.999	221786					0.019	0.003
T	0.555	0.950	109888					-0.025	0.004
A	0.715	0.994	286096					0.017	0.003
A	0.715	0.994	221786					0.020	0.003
G	0.321	0.998	338402					0.016	0.003
C	0.738	0.996	379337	4021	375316	0.871		-0.138	0.025
G	0.398	0.992	367440					-0.014	0.002
A	0.166	0.985	221786					0.024	0.004
T	0.674	1.001	378624					0.014	0.002
T	0.362	0.990	175392					-0.021	0.004
G	0.050	0.993	136810					-0.051	0.009
A	0.125	1.000	379337	15380	363957	0.904		-0.101	0.019
T	0.845	1.001	368085					-0.018	0.003
A	0.451	0.997	368084					0.013	0.002
T	0.197	1.001	244666	25949	218717	0.932		-0.070	0.012
A	0.125	1.000	379337	362	378975	1.67		0.510	0.095
C	0.458	0.996	175392					-0.020	0.003
T	0.674	1.001	379337	11303	368034	1.09		0.083	0.015
A	0.441	0.992	136810					-0.022	0.004
G	0.398	0.992	361992					-0.014	0.002
T	0.227	0.999	244666	25949	218717	1.07		0.065	0.011
T	0.227	0.999	221786					-0.020	0.004
A	0.259	0.959	379337	3989	375348	0.863		-0.147	0.027
T	0.501	0.998	221786					0.017	0.003
T	0.197	1.001	286327					0.019	0.003
T	0.501	0.998	286096					0.015	0.003
T	0.227	0.999	372673					0.016	0.003
G	0.398	0.992	361992					-0.014	0.002

A	0.388	0.997	244666	25949	218717	1.06	0.055	0.010
G	0.337	0.999	379337	4021	375316	1.14	0.130	0.023
T	0.519	0.899	109888				0.026	0.004
A	0.405	0.991	368085				0.015	0.002
T	0.065	1.001	368087				-0.026	0.005
G	0.226	1.000	357465				-0.015	0.003
A	0.096	0.995	84308				0.048	0.008
A	0.707	0.999	286327				0.017	0.003
A	0.707	0.999	286327				0.017	0.003
A	0.707	0.999	221786				0.019	0.003
A	0.191	0.994	109888				0.030	0.005
G	0.364	0.997	221786				0.019	0.003
T	0.405	1.000	286327				0.015	0.003
G	0.597	0.989	221786				-0.018	0.003
G	0.597	0.989	175392				-0.020	0.003
G	0.441	0.992	379337	2943	376394	0.856	-0.155	0.027
A	0.259	0.959	379337	11303	368034	0.917	-0.087	0.016
C	0.392	0.997	379337	7629	371708	0.909	-0.095	0.017
A	0.377	0.995	221786				-0.018	0.003
C	0.156	1.001	286327				0.022	0.004
G	0.500	0.988	286327				-0.015	0.003
G	0.226	1.000	352973	131484	221489	1.03	0.033	0.006
A	0.177	0.998	221786				0.024	0.004
T	0.272	0.991	136810				-0.024	0.004
A	0.237	0.968	286327				-0.018	0.003
A	0.669	0.996	379337	26564	352773	1.06	0.055	0.010
A	0.259	0.959	379337	11333	368004	1.09	0.083	0.015
T	0.015	1.002	221786				-0.070	0.012
G	0.353	1.001	221786				0.019	0.003
C	0.135	0.995	136810				-0.032	0.006
T	0.533	1.003	286327				-0.015	0.003
A	0.446	0.999	361993				0.014	0.002
T	0.866	0.998	286327				-0.024	0.004
T	0.405	1.000	221786				-0.018	0.003
A	0.324	0.998	286096				0.017	0.003
C	0.409	0.995	84308				0.028	0.005
A	0.261	0.990	221786				0.020	0.003
T	0.224	0.993	286327				0.018	0.003
G	0.441	0.992	379337	3555	375782	1.15	0.138	0.024
G	0.441	0.992	221786				0.017	0.003
C	0.738	0.996	372703				0.015	0.003
A	0.669	0.996	136810				0.023	0.004
T	0.315	0.988	109888				-0.027	0.005
A	0.259	0.959	379337	10491	368846	1.09	0.086	0.016
A	0.125	1.000	365877	96203	269674	0.957	-0.044	0.008
T	0.173	0.997	286327				0.021	0.003
T	0.026	0.999	221786				-0.055	0.009
C	0.064	0.980	286327				0.030	0.005
A	0.625	0.995	173485	117954	55531	1.04	0.044	0.008
A	0.625	0.995	173485	55531	117954	0.957	-0.044	0.008

T	0.315	0.988	378482					0.014	0.002
T	0.227	0.999	286327					-0.018	0.003
G	0.333	0.991	372703					0.014	0.002
C	0.293	0.993	286327					0.017	0.003
A	0.441	0.992	109888					-0.024	0.004
T	0.533	1.003	379337	2048	377289	0.835		-0.180	0.032
A	0.169	0.996	221786					0.023	0.004
G	0.377	0.981	378482					-0.013	0.002
A	0.346	1.000	368090					-0.014	0.002
T	0.080	1.000	221786					0.032	0.006
G	0.522	1.001	372673					0.013	0.002
A	0.631	1.001	379337	27289	352048	1.05		0.051	0.009
T	0.069	1.000	190114	16789	173325	1.14		0.129	0.023
T	0.852	0.998	221786					-0.025	0.004
G	0.453	1.002	368090					-0.013	0.002
G	0.453	1.002	368090					-0.013	0.002
G	0.687	1.000	286327					-0.017	0.003
G	0.453	1.002	286327					0.015	0.003
C	0.738	0.996	379337	23861	355476	0.943		-0.059	0.011
T	0.529	0.994	286327					-0.015	0.003
A	0.631	1.001	379337	8380	370957	1.09		0.090	0.016
G	0.575	0.997	286327					-0.015	0.003
G	0.164	0.994	286327					-0.020	0.004
G	0.164	0.994	221786					-0.023	0.004
T	0.725	0.988	286327					0.018	0.003
T	0.270	1.000	109888					0.027	0.005
G	0.396	0.995	221786					-0.018	0.003
C	0.235	1.004	84308					-0.032	0.006
C	0.285	0.989	286327					0.017	0.003
A	0.324	0.998	221786					0.019	0.003
C	0.304	0.977	378624					0.015	0.003
C	0.738	0.996	372673					0.014	0.003
T	0.559	0.990	379337	58564	320773	0.964		-0.037	0.007
A	0.125	1.000	379337	2306	377031	1.24		0.218	0.041
G	0.687	1.000	286096					-0.016	0.003
A	0.139	1.002	221786					-0.024	0.004
G	0.690	0.997	286327					0.016	0.003
T	0.065	1.001	379337	55476	323861	1.07		0.070	0.013
T	0.065	1.001	379337	2991	376346	1.29		0.257	0.048
A	0.259	0.959	378214					0.014	0.003
T	0.112	0.949	221786					0.029	0.005
A	0.619	1.000	136810					0.022	0.004
A	0.125	1.000	379337	48586	330751	1.06		0.054	0.010
A	0.125	1.000	375001	81876	293125	0.956		-0.045	0.009
T	0.674	1.001	136810					-0.023	0.004
A	0.451	0.997	109888					0.024	0.004
T	0.576	0.991	286096					0.016	0.003
G	0.441	0.992	221786					0.017	0.003
A	0.125	1.000	379337	13750	365587	0.901		-0.104	0.020
A	0.259	0.959	379337	2406	376931	0.83		-0.186	0.035

C	0.243	0.988	378214					-0.015	0.003
C	0.293	0.993	221786					0.019	0.003
G	0.441	0.992	378556					0.013	0.002
A	0.077	0.997	109888					-0.046	0.008
T	0.281	1.001	286327					-0.018	0.003
T	0.281	1.001	221786					-0.020	0.003
T	0.404	0.998	378482					-0.013	0.002
T	0.109	0.994	84308					-0.045	0.008
G	0.176	0.999	286327					0.020	0.003
T	0.203	1.000	109888					-0.030	0.005
A	0.405	0.991	286327					-0.016	0.003
G	0.522	1.001	372703					0.013	0.002
A	0.631	1.001	221786					0.017	0.003
A	0.176	0.997	368088					0.017	0.003
T	0.533	1.003	338931	25460	313471	0.949		-0.052	0.009
A	0.125	1.000	379337	42753	336584	0.942		-0.059	0.011
A	0.446	0.999	286096					-0.015	0.003
T	0.128	0.993	84308					0.041	0.007
A	0.191	0.994	368088					-0.016	0.003
C	0.478	1.001	286096					-0.015	0.003
T	0.645	0.999	184629					-0.019	0.003
A	0.537	1.001	372673					-0.013	0.002
C	0.512	0.997	84308					0.027	0.005
C	0.384	0.990	286327					0.015	0.003
T	0.319	0.999	286327					0.016	0.003
T	0.674	1.001	368090					0.014	0.002
A	0.377	0.995	221786					-0.017	0.003
T	0.065	1.001	379337	66837	312500	1.07		0.065	0.012
T	0.080	0.976	286327					0.028	0.005
A	0.479	1.001	368087					-0.013	0.002
A	0.405	0.991	221786					-0.018	0.003
A	0.563	0.992	198514					0.018	0.003
A	0.444	0.987	338821					0.014	0.002
A	0.444	0.987	221786					0.018	0.003
T	0.028	0.989	190114	16789	173325	0.802		-0.221	0.040
T	0.559	0.990	175392					-0.019	0.003
C	0.635	0.966	379337	3618	375719	0.867		-0.143	0.025
A	0.259	0.959	379337	335	379002	1.54		0.433	0.083
C	0.243	0.988	136810					-0.025	0.004
T	0.207	0.997	286327					0.018	0.003
T	0.395	1.002	244666	25949	218717	0.947		-0.055	0.010
T	0.219	0.993	221786					-0.020	0.004
C	0.512	0.997	136810					0.021	0.004
T	0.364	0.998	286096					0.016	0.003
A	0.169	0.996	286327					0.020	0.004
A	0.441	0.992	84308					-0.027	0.005
A	0.907	0.996	221786					-0.030	0.005
C	0.142	0.995	286327					0.021	0.004
T	0.204	0.971	136810					-0.028	0.005
T	0.224	0.993	379337	21438	357899	0.935		-0.067	0.012

T	0.224	0.993	379276					-0.015	0.003
G	0.196	0.981	84308					0.035	0.006
T	0.080	1.000	244666	25949	218717	0.902		-0.103	0.018
T	0.501	0.998	357468					-0.013	0.002
A	0.743	0.996	286327					0.017	0.003
A	0.125	1.000	379337	17851	361486	0.913		-0.091	0.018
A	0.125	1.000	379337	324	379013	1.68		0.517	0.100
T	0.461	0.995	221786					0.018	0.003
T	0.187	0.987	136810					-0.028	0.005
T	0.501	0.998	357740	32399	325341	0.955		-0.046	0.008
C	0.548	0.994	286327					0.016	0.003
T	0.052	0.948	221786					-0.041	0.007
C	0.738	0.996	379337	35012	344325	0.953		-0.048	0.009
C	0.588	0.996	286327					-0.015	0.003
A	0.509	0.998	221786					-0.017	0.003
G	0.453	1.002	368090					-0.013	0.002
C	0.332	0.990	286327					0.016	0.003
T	0.128	0.993	368090					0.019	0.003
T	0.299	0.997	109888					-0.026	0.005
G	0.857	0.998	367440					0.019	0.003
G	0.454	0.997	378214					-0.013	0.002
G	0.718	1.001	175392					-0.021	0.004
G	0.180	0.995	368090					-0.017	0.003
G	0.515	0.997	109888					0.023	0.004
C	0.156	1.001	221786					0.024	0.004
C	0.433	0.998	372489					-0.013	0.002
A	0.451	0.997	221786					0.017	0.003
C	0.271	0.996	286327					0.017	0.003
T	0.095	0.999	221786					0.029	0.005
A	0.228	1.000	286327					-0.018	0.003
C	0.064	0.980	368090					0.026	0.005
C	0.332	0.990	221786					0.018	0.003
C	0.478	1.001	175392					-0.019	0.003
A	0.139	1.002	109888					-0.034	0.006
A	0.788	1.001	286327					0.019	0.003
G	0.337	0.999	378466	81619	296847	0.968		-0.032	0.006
G	0.065	0.999	175392					0.037	0.007
G	0.398	0.992	361992					-0.013	0.002
C	0.319	0.989	286327					0.016	0.003
T	0.069	1.000	379337	29738	349599	1.09		0.090	0.016
T	0.519	0.899	221786					0.018	0.003
A	0.399	1.001	221786					-0.018	0.003
T	0.227	0.999	372703					0.015	0.003
C	0.285	0.989	307461					0.016	0.003
C	0.285	0.989	286096					0.016	0.003
C	0.588	0.996	221786					-0.017	0.003
A	0.399	1.001	221786					-0.017	0.003
T	0.095	0.999	286327					0.025	0.005
T	0.095	0.999	286096					0.025	0.005
T	0.465	0.987	379337	6272	373065	0.902		-0.104	0.018

T	0.645	0.999	379337	7058	372279	1.1	0.099	0.018
A	0.388	0.997	368088				0.013	0.002
C	0.409	0.995	286327				0.015	0.003
T	0.239	0.996	190114	16789	173325	0.924	-0.079	0.014
T	0.270	1.000	286096				0.016	0.003
C	0.142	0.995	109888				0.034	0.006
T	0.645	0.999	372703				-0.013	0.002
A	0.191	0.994	367440				-0.016	0.003
T	0.347	0.995	379337	558	378779	0.694	-0.365	0.068
T	0.559	0.990	286096				-0.014	0.003
A	0.579	0.996	221786				0.017	0.003
A	0.625	0.995	136810				0.022	0.004
T	0.070	0.994	84308				0.054	0.010
T	0.070	0.994	286096				0.029	0.005
T	0.052	0.948	286327				-0.035	0.006
C	0.392	0.997	343797	37597	306200	0.958	-0.043	0.008
T	0.272	0.991	84308				-0.030	0.005
G	0.065	0.999	244666	25949	218717	0.896	-0.110	0.020
T	0.299	0.997	84308				-0.030	0.005
C	0.285	0.989	221786				0.018	0.003
T	0.224	0.993	379337	26314	353023	0.942	-0.060	0.011
C	0.271	0.996	175392				0.021	0.004
A	0.537	1.001	372703				-0.013	0.002
A	0.405	0.991	286327				-0.015	0.003
T	0.224	0.993	379337	22354	356983	0.937	-0.065	0.012
T	0.224	0.993	338402				0.016	0.003
C	0.064	0.980	368087				-0.026	0.005
T	0.227	0.999	136810				-0.025	0.005
T	0.227	0.999	286096				-0.017	0.003
A	0.125	1.000	124141	66791	57350	0.939	-0.063	0.012
G	0.857	0.998	367440				-0.019	0.003
T	0.559	0.990	354922	62560	292362	0.967	-0.034	0.006
A	0.228	1.000	286096				-0.017	0.003
G	0.276	0.998	379337	22354	356983	0.942	-0.060	0.011
T	0.645	0.999	372673				-0.013	0.002
C	0.233	0.994	136810				0.026	0.005
C	0.011	0.969	286327				-0.070	0.013
T	0.109	0.994	378556				0.021	0.004
C	0.412	0.999	84308				0.027	0.005
A	0.451	0.997	221786				0.016	0.003
A	0.275	0.990	84308				0.031	0.005
T	0.224	0.993	379337	42753	336584	0.953	-0.048	0.009
A	0.125	1.000	244666	25949	218717	1.08	0.073	0.014
T	0.400	0.985	221786				-0.016	0.003
A	0.441	0.992	136810				-0.021	0.004
A	0.228	1.000	286327				-0.017	0.003
G	0.840	0.994	84308				-0.037	0.007
G	0.333	0.991	184629				-0.019	0.004
T	0.219	0.993	109888				-0.028	0.005
A	0.187	0.999	84308				-0.034	0.006

T	0.685	0.992	286096					0.016	0.003
G	0.851	0.995	221786					-0.024	0.004
C	0.176	0.998	357468					0.017	0.003
C	0.176	0.998	221786					0.022	0.004
T	0.214	0.985	136810					-0.027	0.005
C	0.338	0.995	379337	38614	340723	0.955		-0.046	0.008
G	0.824	0.995	244666	25949	218717	1.07		0.071	0.013
T	0.555	0.950	175392					-0.019	0.003
C	0.176	0.998	84308					0.035	0.006
T	0.559	0.990	378466	86104	292362	0.971		-0.030	0.006
C	0.409	0.995	109888					0.024	0.004
G	0.396	0.995	367440					-0.013	0.002
T	0.076	0.987	221786					-0.031	0.006
T	0.069	1.000	221786					-0.032	0.006
T	0.214	0.985	109888					-0.029	0.005
A	0.125	1.000	379337	14418	364919	0.907		-0.098	0.019
A	0.788	1.001	221786					0.021	0.004
C	0.293	1.001	175392					-0.021	0.004
A	0.591	0.998	378070					-0.013	0.002
G	0.363	0.990	286096					-0.016	0.003
G	0.690	0.997	286096					0.016	0.003
A	0.237	0.968	244666	25949	218717	1.06		0.062	0.011
A	0.402	0.981	109888					-0.025	0.004
A	0.402	0.981	221786					-0.018	0.003
T	0.415	0.984	286327					-0.015	0.003
A	0.259	0.959	379337	14256	365081	0.93		-0.073	0.014
G	0.228	0.990	307461					-0.017	0.003
G	0.228	0.990	368085					-0.015	0.003
A	0.451	0.997	286096					0.014	0.003
T	0.319	0.999	378556					0.014	0.002
A	0.259	0.959	379337	2227	377110	0.83		-0.186	0.037
C	0.338	0.995	376456	77693	298763	0.966		-0.035	0.006
G	0.114	0.999	379337	11478	367859	1.12		0.118	0.021
C	0.285	0.989	286327					0.016	0.003
C	0.285	0.989	175392					0.020	0.004
T	0.347	0.995	286096					-0.015	0.003
T	0.674	1.001	378214					0.013	0.002
T	0.559	0.990	221786					-0.016	0.003
C	0.253	1.001	367434					0.014	0.003
C	0.250	0.996	379337	22553	356784	0.936		-0.066	0.012
C	0.253	1.001	367440					-0.014	0.003
T	0.239	0.996	357468					0.015	0.003
G	0.453	1.002	372489					-0.012	0.002
T	0.227	0.999	378624					0.015	0.003
G	0.226	1.000	379337	10787	368550	1.09		0.084	0.016
G	0.196	0.981	175392					0.024	0.004
A	0.346	1.000	221786					-0.017	0.003
A	0.201	1.001	379337	27695	351642	1.06		0.062	0.011
T	0.227	0.999	379337	17994	361343	1.07		0.068	0.013
T	0.227	0.999	221786					-0.019	0.004

A	0.669	0.996	379337	14256	365081	1.07	0.070	0.013
T	0.065	1.001	221786				-0.031	0.006
G	0.840	0.994	286327				-0.020	0.004
A	0.388	0.997	109888				-0.023	0.004
G	0.718	1.001	286327				-0.016	0.003
G	0.441	0.992	81101				-0.027	0.005
G	0.441	0.992	175392				0.018	0.003
T	0.290	0.999	221786				0.019	0.003
C	0.243	0.988	221786				-0.019	0.004
A	0.125	1.000	379337	22354	356983	1.08	0.072	0.014
C	0.478	1.001	221786				-0.016	0.003
C	0.458	0.996	136810				-0.021	0.004
T	0.065	1.001	379337	8268	371069	1.17	0.153	0.030
C	0.810	1.005	372489				0.017	0.003
C	0.810	1.005	372085				0.017	0.003
C	0.478	1.001	109888				-0.023	0.004
T	0.069	1.000	379337	33807	345530	1.09	0.083	0.015
T	0.224	0.993	372213	77265	294948	0.964	-0.037	0.007
T	0.224	0.993	81101				0.032	0.006
C	0.156	1.001	286327				0.020	0.004
C	0.156	1.001	175392				0.026	0.005
G	0.856	0.999	221786				0.023	0.004
A	0.259	0.959	377882	63217	314665	1.04	0.038	0.007
T	0.112	0.949	286096				0.024	0.004
A	0.259	0.959	379337	10921	368416	1.08	0.080	0.016
A	0.537	1.001	190114	16789	173325	1.07	0.065	0.012
G	0.065	0.999	136810				0.041	0.008
A	0.619	1.000	175392				0.019	0.003
A	0.313	0.997	368088				-0.013	0.003
G	0.575	0.997	378556				-0.013	0.002
C	0.176	0.998	377882	63217	314665	1.05	0.046	0.008
C	0.176	0.998	109888				0.030	0.006
A	0.451	0.997	368085				-0.012	0.002
A	0.259	0.959	379337	1308	378029	0.783	-0.245	0.049
T	0.681	0.995	357468				-0.015	0.003
C	0.515	0.996	109888				0.024	0.004
T	0.501	0.998	367440				-0.013	0.002
A	0.649	0.999	379337	59359	319978	0.965	-0.035	0.007
A	0.313	0.997	338402				0.014	0.003
C	0.850	0.984	221786				0.024	0.004
T	0.845	1.001	221786				0.022	0.004
C	0.478	1.001	84308				-0.026	0.005
A	0.536	0.999	379337	7629	371708	0.917	-0.086	0.017
A	0.324	0.998	286327				0.016	0.003
C	0.412	0.999	379337	48586	330751	1.04	0.037	0.007
C	0.588	0.996	190114	16789	173325	1.07	0.065	0.012
A	0.187	0.999	109888				-0.029	0.005
C	0.135	0.995	286327				-0.021	0.004
T	0.415	0.984	136810				-0.021	0.004
T	0.070	0.994	221786				0.032	0.006

G	0.377	0.981	286327					-0.015	0.003
G	0.396	0.995	109888					-0.024	0.004
G	0.353	1.001	286327					0.016	0.003
T	0.224	0.993	379337	29738	349599	0.947		-0.055	0.010
C	0.392	0.997	372213	77265	294948	0.97		-0.031	0.006
C	0.064	0.980	379337	117149	262188	1.06		0.055	0.011
A	0.631	1.001	221786					-0.016	0.003
T	0.224	0.993	379337	20677	358660	0.936		-0.066	0.013
A	0.259	0.959	379337	19989	359348	1.06		0.059	0.012
C	0.052	1.001	109888					0.054	0.010
C	0.478	1.001	136810					-0.020	0.004
C	0.124	0.997	221786					0.025	0.005
G	0.125	0.994	136810					0.032	0.006
C	0.021	0.999	221786					0.056	0.011
G	0.441	0.992	379337	35012	344325	0.958		-0.043	0.008
A	0.031	1.002	286096					-0.044	0.008
G	0.605	1.001	109888					0.023	0.004
G	0.125	0.994	286096					0.022	0.004
C	0.235	1.004	286096					-0.017	0.003
A	0.259	0.959	377554	43655	333899	0.959		-0.042	0.008
T	0.533	1.003	379337	1240	378097	0.805		-0.217	0.040
C	0.020	1.000	286327					-0.055	0.010
A	0.669	0.996	175392					0.019	0.004
T	0.214	0.985	175392					-0.023	0.004
G	0.157	1.000	372673					0.017	0.003
G	0.157	1.000	372703					0.017	0.003
T	0.347	0.995	379337	527	378810	0.695		-0.364	0.070
G	0.226	1.000	379337	6699	372638	1.11		0.103	0.020
T	0.299	0.997	286096					-0.016	0.003
T	0.069	1.000	136810					-0.040	0.007
C	0.635	0.966	379337	2953	376384	0.86		-0.151	0.027
A	0.441	0.992	221786					-0.016	0.003
G	0.857	0.998	368085					-0.018	0.003
G	0.718	1.001	221786					-0.018	0.003
A	0.313	0.997	286096					-0.015	0.003
T	0.347	0.995	378214					-0.013	0.002
G	0.441	0.992	81222					-0.027	0.005
T	0.065	1.001	368088					0.024	0.005
C	0.505	0.999	372703					0.012	0.002
T	0.559	0.990	286327					-0.014	0.003
A	0.291	0.991	286327					0.016	0.003
A	0.291	0.991	221786					0.018	0.003
A	0.537	1.001	286327					-0.014	0.003
T	0.069	1.000	175392					-0.035	0.007
G	0.276	0.998	379337	21438	357899	0.942		-0.059	0.011
C	0.409	0.995	175392					0.018	0.003
G	0.607	1.003	379337	20677	358660	0.946		-0.056	0.011
G	0.605	1.001	84308					0.026	0.005
G	0.226	1.000	244666	25949	218717	1.06		0.058	0.011
T	0.559	0.990	221786					-0.016	0.003

A	0.388	0.997	379337	2845	376492	1.15	0.139	0.027
A	0.387	0.991	136810				0.022	0.004
A	0.387	0.991	221786				0.017	0.003
G	0.377	0.981	378070				0.013	0.002
G	0.377	0.981	286327				-0.014	0.003
T	0.272	0.991	109888				-0.025	0.005
C	0.588	0.996	376456	77693	298763	1.03	0.032	0.006
T	0.315	0.988	84308				-0.028	0.005
C	0.156	1.001	221786				0.023	0.004
C	0.512	0.997	109888				0.022	0.004
A	0.259	0.959	84308				-0.028	0.006
T	0.555	0.950	84308				-0.026	0.005
T	0.207	0.997	109888				0.028	0.005
T	0.347	0.995	175392				0.018	0.004
G	0.575	0.997	221786				-0.016	0.003
T	0.395	1.002	109888				0.023	0.004
G	0.164	0.994	286327				-0.019	0.004
C	0.794	0.999	221786				-0.020	0.004
C	0.810	1.005	378070				0.016	0.003
A	0.399	1.001	286327				-0.015	0.003
T	0.559	0.990	136810				-0.020	0.004
G	0.337	0.999	367434				-0.013	0.002
A	0.313	0.997	361992				-0.013	0.003
C	0.810	1.005	378214				0.016	0.003
T	0.219	0.993	368085				-0.015	0.003
T	0.219	0.993	367440				0.015	0.003
G	0.690	0.997	286327				0.015	0.003
C	0.785	1.000	379337	54604	324733	0.957	-0.043	0.008
G	0.050	0.993	286327				-0.033	0.006
T	0.065	1.001	379337	4093	375244	0.778	-0.251	0.050
G	0.364	0.997	286327				0.015	0.003
A	0.125	1.000	379337	21438	357899	1.07	0.072	0.015
G	0.228	0.990	378214				0.014	0.003
T	0.227	0.999	379337	17363	361974	1.07	0.067	0.013
T	0.555	0.950	109888				-0.023	0.004
G	0.333	0.991	361992				0.013	0.003
A	0.125	1.000	378624				0.017	0.003
A	0.259	0.959	379337	529	378808	0.677	-0.390	0.079
G	0.337	0.999	379337	30391	348946	1.05	0.046	0.009
T	0.080	0.976	221786				0.030	0.006
T	0.501	0.998	379337	54604	324733	0.965	-0.035	0.007
T	0.501	0.998	379276				-0.012	0.002
G	0.840	0.994	190114	16789	173325	1.09	0.090	0.017
G	0.305	0.995	368090				-0.013	0.003
G	0.500	0.988	221786				-0.016	0.003
G	0.196	0.981	378624				-0.016	0.003
T	0.364	0.998	221786				0.017	0.003
T	0.203	1.000	84308				-0.032	0.006
G	0.353	1.001	221786				-0.017	0.003
T	0.028	0.989	221786				-0.048	0.009

A	0.259	0.959	379337	17994	361343	1.06	0.061	0.013
A	0.191	0.994	84308				0.032	0.006
C	0.156	1.001	378482				0.017	0.003
G	0.597	0.989	221786				-0.016	0.003
T	0.224	0.993	221786				0.019	0.004
T	0.227	0.999	379276				0.014	0.003
T	0.272	0.991	221786				-0.018	0.003
G	0.364	0.997	221786				0.017	0.003
T	0.227	0.999	378070				0.014	0.003
T	0.224	0.993	379337	35012	344325	0.952	-0.049	0.010
C	0.588	0.996	357740	107024	250716	1.03	0.027	0.005
A	0.343	0.991	286327				0.015	0.003
A	0.343	0.991	175392				0.020	0.004
C	0.478	1.001	378556				-0.012	0.002
A	0.520	0.994	376456	77693	298763	0.969	-0.032	0.006
A	0.451	0.997	368084				0.012	0.002
T	0.501	0.998	379337	59218	320119	0.966	-0.034	0.007
G	0.363	0.990	286327				-0.015	0.003
C	0.588	0.996	330745	33898	296847	0.958	-0.043	0.008
T	0.415	0.984	221786				-0.016	0.003
T	0.501	0.998	379276				-0.012	0.002
A	0.409	0.973	367440				-0.013	0.002
C	0.338	0.995	372085				-0.013	0.002
A	0.201	1.001	221786				-0.021	0.004
C	0.515	0.996	357468				0.013	0.002
A	0.631	1.001	136810				-0.020	0.004
T	0.501	0.998	376456	77693	298763	0.97	-0.031	0.006
A	0.446	0.999	221786				-0.016	0.003
C	0.285	0.989	361992				-0.014	0.003
A	0.259	0.959	379337	15919	363418	1.07	0.065	0.013
A	0.187	0.999	190114	16789	173325	1.08	0.079	0.015
C	0.392	0.997	379337	6352	372985	0.91	-0.095	0.019
C	0.515	0.998	368084				0.013	0.002
T	0.845	1.001	379337	55476	323861	0.954	-0.047	0.009
C	0.515	0.996	84308				0.026	0.005
T	0.204	0.971	221786				-0.020	0.004
C	0.064	0.980	379337	70458	308879	1.07	0.064	0.013
T	0.281	1.001	338402				0.015	0.003
T	0.080	1.000	190114	16789	173325	0.885	-0.122	0.023
C	0.217	0.994	221786				0.020	0.004
C	0.217	0.994	378556				-0.015	0.003
T	0.725	0.988	286327				0.016	0.003
C	0.253	1.001	361993				-0.014	0.003
G	0.176	0.999	221786				0.021	0.004
C	0.669	0.999	368088				0.014	0.002
A	0.061	0.974	286327				-0.032	0.006
C	0.507	0.997	368090				-0.013	0.002
A	0.845	0.970	286327				0.020	0.004
A	0.669	0.996	368090				-0.013	0.002
T	0.227	0.999	84308				-0.030	0.006

T	0.529	0.994	378482					-0.012	0.002
T	0.204	0.971	286327					-0.018	0.003
A	0.257	1.001	379337	30391	348946	1.05		0.049	0.010
C	0.738	0.996	379337	3618	375719	0.877		-0.132	0.026
T	0.400	0.985	81101					0.026	0.005
G	0.276	0.998	221786					0.017	0.003
G	0.687	1.000	175392					-0.019	0.004
C	0.392	0.997	379337	1668	377669	0.831		-0.185	0.037
T	0.290	0.999	175392					0.020	0.004
T	0.224	0.993	379337	30391	348946	0.949		-0.052	0.010
G	0.114	0.999	286096					0.023	0.004
C	0.064	0.980	361992					0.025	0.005
G	0.337	0.999	379337	25534	353803	1.05		0.049	0.010
G	0.337	0.999	379337	2943	376394	1.15		0.137	0.027
G	0.337	0.999	221786					-0.016	0.003
G	0.337	0.999	136810					-0.020	0.004
T	0.204	0.971	286096					-0.018	0.003
T	0.465	0.987	221786					0.016	0.003
A	0.131	0.993	286327					-0.021	0.004
C	0.064	0.980	379337	71154	308183	1.06		0.063	0.012
A	0.201	1.001	379337	45660	333677	1.05		0.047	0.009
A	0.201	1.001	379337	24466	354871	1.06		0.061	0.012
A	0.201	1.001	221786					-0.020	0.004
A	0.201	1.001	286327					-0.017	0.003
A	0.201	1.001	175392					-0.022	0.004
T	0.080	0.976	175392					0.033	0.006
G	0.453	1.002	378070					-0.012	0.002
T	0.065	1.001	221786					0.030	0.006
C	0.338	0.995	357465					-0.013	0.003
C	0.338	0.995	109888					-0.024	0.005
G	0.453	1.002	376456	65004	311452	0.968		-0.033	0.006
T	0.787	1.002	286327					0.017	0.003
C	0.304	0.977	175392					-0.020	0.004
C	0.534	0.999	378070					0.012	0.002
T	0.227	0.999	357468					0.014	0.003
C	0.251	0.996	109888					-0.026	0.005
T	0.080	0.976	173485	31618	141867	1.09		0.086	0.016
T	0.405	1.000	244666	25949	218717	1.05		0.051	0.010
C	0.233	0.994	109888					0.027	0.005
A	0.260	0.983	221786					-0.019	0.003
T	0.227	0.999	379337	16613	362724	1.07		0.067	0.013
C	0.338	0.995	376456	65004	311452	0.965		-0.035	0.007
T	0.015	1.002	286327					-0.056	0.011
T	0.015	1.002	84308					-0.104	0.020
A	0.139	1.002	84308					-0.036	0.007
G	0.114	0.999	136810					0.032	0.006
A	0.388	0.997	136810					-0.020	0.004
G	0.279	0.988	175392					-0.020	0.004
C	0.243	0.988	190114	16789	173325	1.07		0.072	0.014
T	0.347	0.995	379337	643	378694	0.73		-0.314	0.062

G	0.228	0.990	379337	70680	308657	0.963	-0.038	0.007
G	0.228	0.990	379337	70458	308879	0.963	-0.038	0.007
G	0.398	0.992	379276				-0.012	0.002
A	0.329	0.994	221786				0.017	0.003
G	0.226	1.000	321580	9194	312386	1.09	0.086	0.018
C	0.458	0.996	109888				-0.022	0.004
C	0.785	1.000	368085				-0.015	0.003
A	0.177	0.998	286327				0.019	0.003
T	0.674	1.001	368087				-0.013	0.002
G	0.454	0.997	286327				-0.014	0.003
T	0.405	1.000	286327				-0.014	0.003
T	0.227	0.999	379276				0.014	0.003
T	0.227	0.999	377675				0.014	0.003
T	0.227	0.999	109888				-0.025	0.005
A	0.259	0.959	379337	7555	371782	1.09	0.090	0.019
C	0.505	0.999	372673				0.012	0.002
G	0.377	0.981	368090				0.012	0.002
T	0.065	1.001	379337	1534	377803	1.37	0.314	0.065
A	0.743	0.996	286327				-0.016	0.003
C	0.738	0.996	379337	55476	323861	0.964	-0.037	0.007
G	0.226	1.000	377028				-0.013	0.003
G	0.337	0.999	175392				-0.018	0.004
A	0.631	1.001	372085				-0.012	0.002
T	0.227	0.999	372085				0.014	0.003
A	0.649	0.999	368085				-0.012	0.002
C	0.412	0.999	372489				0.012	0.002
T	0.219	0.993	372673				0.014	0.003
G	0.337	0.999	379337	45660	333677	0.963	-0.038	0.008
C	0.635	0.966	221786				0.017	0.003
A	0.259	0.959	379337	16740	362597	1.06	0.062	0.013
C	0.319	0.989	372085				-0.013	0.002
G	0.143	0.996	215636				0.024	0.004
G	0.228	0.990	367434				-0.014	0.003
C	0.135	0.995	109888				-0.032	0.006
A	0.631	1.001	379337	42753	336584	1.04	0.038	0.008
G	0.333	0.991	367440				-0.013	0.002
T	0.224	0.993	81222				0.030	0.006
A	0.313	0.997	379337	37555	341782	1.05	0.045	0.009
G	0.337	0.999	175392				-0.018	0.004
C	0.319	0.989	221786				0.017	0.003
G	0.441	0.992	379337	29738	349599	0.957	-0.044	0.009
G	0.441	0.992	184629				0.017	0.003
A	0.409	0.973	286096				-0.014	0.003
C	0.501	0.990	368088				0.013	0.002
C	0.501	0.990	367440				-0.012	0.002
A	0.329	0.994	109888				0.024	0.005
G	0.338	0.994	378482				-0.013	0.002
A	0.444	0.987	372673				-0.012	0.002
A	0.444	0.987	372703				-0.012	0.002
G	0.228	0.990	379337	71154	308183	0.963	-0.037	0.007

A	0.259	0.959	379337	3724	375613	0.875	-0.133	0.028
G	0.522	1.001	378070				-0.012	0.002
G	0.515	0.997	357468				0.012	0.002
G	0.856	0.999	286096				0.020	0.004
C	0.243	0.988	175392				-0.020	0.004
A	0.649	0.999	377882	38495	339387	0.961	-0.040	0.008
C	0.064	0.980	379337	70680	308657	1.06	0.062	0.012
C	0.384	0.990	221786				0.016	0.003
A	0.131	0.993	221786				-0.023	0.004
T	0.065	1.001	379337	2328	377009	1.3	0.259	0.054
T	0.065	1.001	379337	1635	377702	0.663	-0.411	0.085
T	0.065	1.001	286096				0.026	0.005
T	0.674	1.001	175392				-0.018	0.004
G	0.210	0.996	378482				0.015	0.003
C	0.338	0.995	379337	73015	306322	0.967	-0.033	0.007
T	0.270	1.000	378624				0.013	0.003
G	0.575	0.997	286096				-0.014	0.003
C	0.235	1.004	372489				-0.014	0.003
A	0.125	1.000	372489				0.017	0.003
A	0.131	0.993	379337	2723	376614	0.794	-0.231	0.044
C	0.392	0.997	379337	1577	377760	0.83	-0.186	0.038
C	0.738	0.996	367434				-0.013	0.003
T	0.272	0.991	136810				-0.022	0.004
A	0.649	0.999	109888				-0.022	0.004
G	0.228	0.990	357465				-0.014	0.003
T	0.065	1.001	286327				0.026	0.005
T	0.316	0.975	372673				-0.014	0.003
T	0.316	0.975	372703				-0.014	0.003
A	0.743	0.996	221786				-0.018	0.003
T	0.219	0.993	372703				0.014	0.003
C	0.020	1.000	221786				-0.059	0.011
C	0.392	0.997	379337				-0.012	0.002
G	0.377	0.981	357465				0.012	0.002
A	0.329	0.994	286327				0.014	0.003
A	0.451	0.997	379276				0.012	0.002
A	0.669	0.996	368090				-0.012	0.002
A	0.669	0.996	368090				-0.012	0.002
T	0.866	0.998	221786				-0.024	0.004
C	0.501	0.990	367440				-0.012	0.002
G	0.180	0.995	286327				-0.018	0.003
T	0.395	1.002	368084				-0.012	0.002
T	0.458	0.998	109888				0.022	0.004
A	0.237	0.968	221786				-0.018	0.004
A	0.237	0.968	190114	16789	173325	1.08	0.072	0.014
T	0.415	0.984	379276				0.012	0.002
C	0.534	0.999	378214				0.012	0.002
C	0.534	0.999	378624				0.012	0.002
C	0.409	0.995	136810				0.020	0.004
G	0.411	0.988	286327				-0.015	0.003
G	0.226	1.000	379337	8764	370573	1.09	0.086	0.018

A	0.451	0.997	84308					0.025	0.005
C	0.738	0.996	175392					0.019	0.004
T	0.529	0.994	221786					-0.016	0.003
G	0.453	1.002	367434					0.012	0.002
G	0.050	0.993	286096					-0.032	0.006
A	0.387	0.991	190114	16789	173325	0.936		-0.066	0.013
A	0.176	0.997	378667					-0.015	0.003
T	0.050	0.963	286327					0.034	0.006
A	0.261	0.990	379337	1330	378007	1.25		0.220	0.042
C	0.124	0.997	136810					0.030	0.006
T	0.224	0.993	379337	33807	345530	0.953		-0.049	0.010
G	0.500	0.988	286096					-0.014	0.003
G	0.396	0.995	361993					0.013	0.002
T	0.533	1.003	378482					0.012	0.002
A	0.125	1.000	379337	91380	287957	0.962		-0.039	0.008
A	0.125	1.000	379337	6862	372475	1.13		0.119	0.025
G	0.143	0.996	367434					-0.018	0.003
C	0.156	1.001	221786					0.022	0.004
T	0.501	0.998	379337	73015	306322	0.97		-0.031	0.006
T	0.077	0.997	286096					-0.027	0.005
C	0.514	0.985	367434					-0.013	0.002
A	0.498	0.991	136810					-0.019	0.004
T	0.319	0.999	221786					0.017	0.003
G	0.333	0.991	379337	9870	369467	1.08		0.076	0.015
T	0.533	1.003	286327					-0.013	0.003
A	0.707	0.999	221786					0.017	0.003
A	0.788	1.001	221786					0.019	0.004
A	0.788	1.001	378482					0.015	0.003
G	0.114	0.999	379337	10412	368925	1.12		0.113	0.022
A	0.324	0.998	221786					0.017	0.003
T	0.559	0.990	379337	93276	286061	1.03		0.028	0.006
T	0.645	0.999	190114	16789	173325	1.06		0.062	0.013
C	0.392	0.997	368088					-0.012	0.002
G	0.377	0.981	379337	22354	356983	1.05		0.050	0.010
G	0.377	0.981	378466	81619	296847	0.971		-0.029	0.006
A	0.405	0.991	221786					-0.016	0.003
T	0.461	0.995	286327					0.014	0.003
A	0.077	0.997	84308					-0.048	0.009
G	0.143	0.996	372703					0.017	0.003
A	0.451	0.997	367440					0.012	0.002
C	0.738	0.996	190114	16789	173325	0.936		-0.066	0.014
A	0.291	0.991	286327					0.015	0.003
G	0.333	0.991	379337	9927	369410	1.08		0.076	0.015
A	0.125	1.000	367417	31940	335477	1.06		0.057	0.012
T	0.501	0.998	376456	65004	311452	0.968		-0.032	0.006
A	0.259	0.959	379337	1018	378319	0.772		-0.258	0.055
G	0.114	0.999	175392					0.027	0.005
T	0.559	0.990	368085					-0.012	0.002
C	0.463	1.001	175392					-0.017	0.003
T	0.207	0.997	379337	48586	330751	0.958		-0.043	0.009

T	0.207	0.997	84308				0.030	0.006
A	0.635	0.997	352973	131484	221489	1.03	0.027	0.005
A	0.259	0.959	379337	932	378405	1.27	0.240	0.051
T	0.348	1.001	379337	15380	363957	0.933	-0.070	0.013
A	0.409	0.973	379337	70680	308657	1.03	0.032	0.006
A	0.409	0.973	379337	70458	308879	1.03	0.032	0.006
T	0.504	0.995	175392				-0.018	0.003
C	0.020	1.000	286327				-0.051	0.010
T	0.065	1.001	379337	1406	377931	0.643	-0.442	0.093
T	0.028	0.989	368090				-0.036	0.007
T	0.465	0.987	124452	5311	119141	0.901	-0.105	0.020
C	0.392	0.997	378214				0.011	0.002
C	0.176	0.998	221786				0.020	0.004
G	0.279	0.988	81101				-0.029	0.006
C	0.209	1.001	221786				0.019	0.004
A	0.313	0.997	124452	2370	122082	1.17	0.154	0.031
C	0.253	1.001	368088				-0.013	0.003
C	0.253	1.001	221786				-0.017	0.003
A	0.409	0.973	368084				0.012	0.002
T	0.501	0.998	367440				-0.012	0.002
A	0.125	1.000	379337	45660	333677	0.951	-0.051	0.011
A	0.125	1.000	379337	27899	351438	0.939	-0.063	0.014
T	0.069	1.000	286327				-0.026	0.005
T	0.069	1.000	379337	48586	330751	1.07	0.066	0.013
A	0.409	0.973	372673				0.012	0.002
A	0.409	0.973	372703				0.012	0.002
T	0.645	0.999	379337	6721	372616	0.916	-0.088	0.018
A	0.537	1.001	221786				-0.015	0.003
A	0.537	1.001	330745	33898	296847	0.96	-0.041	0.008
G	0.441	0.992	379337	33807	345530	0.96	-0.041	0.008
A	0.845	0.970	286327				0.019	0.004
A	0.845	0.970	286096				0.019	0.004
C	0.412	0.999	350792	15315	335477	1.06	0.058	0.012
C	0.020	1.000	379337	529	378808	2.23	0.803	0.153
G	0.164	0.994	84308				-0.033	0.007
C	0.433	0.998	357468				-0.012	0.002
A	0.822	1.002	379337	27695	351642	1.06	0.060	0.012
C	0.470	0.997	136810				-0.020	0.004
A	0.259	0.959	379337	16108	363229	1.06	0.061	0.013
A	0.259	0.959	379337	29738	349599	1.05	0.046	0.010
A	0.743	0.996	221786				0.018	0.003
A	0.446	0.999	286327				-0.013	0.003
C	0.233	0.994	286327				0.016	0.003
C	0.233	0.994	221786				0.018	0.004
T	0.395	1.002	84308				0.025	0.005
T	0.095	0.999	286327				0.023	0.004
A	0.201	1.001	286096				-0.017	0.003
T	0.501	0.998	379337	71154	308183	0.97	-0.030	0.006
T	0.645	0.999	244666	25949	218717	1.05	0.049	0.010
G	0.196	0.981	372673				-0.015	0.003

A	0.166	0.985	175392				0.024	0.005
G	0.605	1.001	81101				0.025	0.005
G	0.575	0.997	136810				-0.019	0.004
T	0.845	1.001	221786				0.021	0.004
C	0.156	1.001	286096				0.019	0.004
T	0.400	0.985	307461				-0.013	0.003
T	0.128	0.993	368090				0.018	0.003
A	0.177	0.998	286327				0.018	0.003
C	0.738	0.996	379337	2227	377110	1.19	0.171	0.036
G	0.363	0.990	286327				-0.014	0.003
G	0.363	0.990	221786				-0.016	0.003
G	0.363	0.990	221786				-0.016	0.003
T	0.227	0.999	376456	77693	298763	1.03	0.034	0.007
C	0.209	1.001	379337	62481	316856	0.96	-0.041	0.008
G	0.180	0.995	221786				-0.020	0.004
T	0.219	0.993	378214				0.014	0.003
G	0.353	1.001	286327				-0.014	0.003
G	0.687	1.000	379337	21438	357899	1.06	0.056	0.011
T	0.065	1.001	367434				0.022	0.005
T	0.065	1.001	367440				0.022	0.005
T	0.015	1.002	109888				-0.088	0.018
A	0.191	0.994	367440				-0.015	0.003
A	0.631	1.001	379337	4769	374568	1.11	0.104	0.022
A	0.125	1.000	379337	829	378508	1.36	0.306	0.067
T	0.405	1.000	190114	16789	173325	1.06	0.062	0.012
A	0.649	0.999	379337	11727	367610	1.07	0.069	0.014
G	0.718	1.001	379337	3818	375519	1.15	0.136	0.027
A	0.520	0.994	286096				-0.013	0.003
A	0.139	1.002	175392				-0.024	0.005
G	0.166	1.000	136810				0.027	0.005
G	0.363	0.990	221786				-0.016	0.003
A	0.387	0.991	244666	25949	218717	0.95	-0.051	0.010
A	0.387	0.991	286096				0.014	0.003
C	0.235	1.004	136810				-0.022	0.004
A	0.517	0.999	221786				0.015	0.003
T	0.224	0.993	378214				-0.013	0.003
T	0.725	0.988	286327				0.015	0.003
T	0.725	0.988	221786				0.017	0.003
A	0.433	0.999	286327				0.015	0.003
C	0.588	0.996	379337				0.011	0.002
A	0.261	0.990	286327				0.015	0.003
T	0.065	1.001	368088				-0.022	0.005
A	0.446	0.999	368084				-0.012	0.002
A	0.444	0.987	368088				-0.012	0.002
A	0.444	0.987	286327				0.014	0.003
G	0.143	0.996	378214				0.017	0.003
C	0.738	0.996	379337	2943	376394	0.871	-0.138	0.029
C	0.738	0.996	379276				-0.012	0.003
A	0.125	1.000	379337	93276	286061	1.04	0.038	0.008
T	0.069	1.000	379337	35012	344325	1.08	0.075	0.015

A	0.402	0.981	84308					-0.026	0.005
C	0.293	0.993	175392					0.019	0.004
G	0.226	1.000	379337	15396	363941	0.936		-0.067	0.014
A	0.259	0.959	371714	140736	230978	0.974		-0.026	0.006
A	0.259	0.959	109888					-0.023	0.005
G	0.337	0.999	357468					-0.012	0.003
T	0.207	0.997	190114	16789	173325	0.928		-0.074	0.015
G	0.441	0.992	81101					-0.025	0.005
G	0.515	0.997	190114	16789	173325	0.942		-0.060	0.012
G	0.143	0.996	372673					0.017	0.003
T	0.465	0.987	81222					-0.025	0.005
T	0.095	0.999	221786					0.026	0.005
A	0.313	0.997	379337	73015	306322	1.03		0.032	0.007
G	0.196	0.981	372703					-0.015	0.003
G	0.196	0.981	136810					0.024	0.005
G	0.305	0.995	368090					-0.012	0.003
A	0.125	1.000	379337	3912	375425	0.844		-0.170	0.037
A	0.201	1.001	136810					-0.024	0.005
G	0.718	1.001	136810					-0.021	0.004
G	0.377	0.981	221786					-0.015	0.003
A	0.125	1.000	58884	11705	47179	0.901		-0.104	0.023
G	0.377	0.981	357468					0.012	0.002
A	0.125	1.000	379337	831	378506	1.35		0.303	0.067
T	0.405	1.000	221786					0.015	0.003
G	0.050	0.993	221786					-0.035	0.007
G	0.522	1.001	379337	15396	363941	1.06		0.057	0.012
T	0.015	1.002	367440					-0.048	0.010
G	0.226	1.000	190114	16789	173325	1.07		0.067	0.014
T	0.645	0.999	379276					-0.011	0.002
T	0.501	0.998	379337	53747	325590	0.968		-0.033	0.007
T	0.501	0.998	367434					-0.011	0.002
T	0.501	0.998	379337	48586	330751	0.967		-0.033	0.007
C	0.392	0.997	378624					0.011	0.002
A	0.387	0.991	221786					0.016	0.003
A	0.125	1.000	375001	22431	352570	0.934		-0.068	0.015
A	0.125	1.000	378466	37982	340484	0.948		-0.053	0.012
T	0.080	1.000	286096					0.024	0.005
C	0.148	0.998	286327					-0.020	0.004
C	0.505	0.999	378482					0.011	0.002
G	0.196	0.981	109888					0.027	0.005
A	0.446	0.999	286327					-0.013	0.003
C	0.235	1.004	378070					-0.013	0.003
C	0.235	1.004	378667					-0.013	0.003
T	0.415	0.984	379276					0.012	0.002
T	0.415	0.984	376456	77693	298763	1.03		0.030	0.006
G	0.279	0.988	136810					-0.022	0.004
C	0.020	1.000	221786					-0.055	0.011
C	0.217	0.994	352973	131484	221489	0.969		-0.031	0.006
A	0.081	1.002	378214					0.021	0.004
A	0.329	0.994	190114	16789	173325	0.938		-0.064	0.013

T	0.272	0.991	244666	25949	218717	1.05	0.053	0.011
A	0.169	0.996	136810				0.026	0.005
T	0.224	0.993	173485	117954	55531	1.04	0.042	0.009
T	0.224	0.993	173485	55531	117954	0.959	-0.042	0.009
C	0.011	0.969	221786				-0.072	0.014
T	0.685	0.992	286327				0.015	0.003
A	0.444	0.987	221786				0.015	0.003
C	0.541	0.977	286327				-0.015	0.003
C	0.209	1.001	286096				0.016	0.003
C	0.209	1.001	221786				0.019	0.004
A	0.749	0.927	286096				-0.017	0.003
T	0.270	1.000	378556				0.013	0.003
C	0.156	1.001	136810				0.026	0.005
G	0.337	0.999	379337	22266	357071	1.05	0.049	0.010
C	0.392	0.997	367434				-0.011	0.002
G	0.174	0.996	378482				0.015	0.003
G	0.174	0.996	136810				0.026	0.005
T	0.501	0.998	343797	31646	312151	0.961	-0.040	0.008
T	0.501	0.998	367434				-0.011	0.002
T	0.501	0.998	367440				-0.011	0.002
T	0.458	0.998	244666	25949	218717	0.953	-0.048	0.010
T	0.685	0.992	109888				0.023	0.005
G	0.333	0.991	361992				0.012	0.003
C	0.516	1.000	368088				-0.012	0.002
G	0.228	0.990	379337	17363	361974	1.07	0.063	0.013
T	0.347	0.995	84308				-0.024	0.005
A	0.125	1.000	379337	3311	376026	1.17	0.159	0.035
A	0.125	1.000	379337	17287	362050	1.08	0.073	0.016
A	0.845	0.970	221786				0.021	0.004
A	0.822	1.002	379337	20677	358660	1.07	0.068	0.014
A	0.228	1.000	221786				-0.018	0.004
A	0.261	0.990	136810				0.022	0.004
C	0.126	0.998	286327				-0.020	0.004
A	0.313	0.997	221786				-0.016	0.003
A	0.409	0.973	379276				0.012	0.002
C	0.534	0.999	367440				0.012	0.002
T	0.065	1.001	377270	8178	369092	1.15	0.140	0.030
A	0.259	0.959	175392				-0.018	0.004
A	0.324	0.998	377882	63217	314665	0.965	-0.035	0.007
T	0.227	0.999	378466	92348	286118	1.03	0.030	0.006
T	0.219	0.993	378624				0.014	0.003
G	0.441	0.992	81222				-0.024	0.005
T	0.323	0.997	286096				-0.015	0.003
T	0.323	0.997	221786				-0.017	0.003
A	0.631	1.001	379337	4623	374714	1.11	0.104	0.022
T	0.529	0.994	368085				0.012	0.002
T	0.529	0.994	367434				0.012	0.002
T	0.529	0.994	361993				0.012	0.002
G	0.226	1.000	81504				0.027	0.006
A	0.388	0.997	379337	6352	372985	1.09	0.087	0.018

G	0.338	0.994	221786				0.016	0.003
C	0.548	0.994	221786				0.016	0.003
G	0.851	0.995	221786				-0.021	0.004
T	0.415	0.984	286327				-0.013	0.003
T	0.501	0.998	379337				-0.011	0.002
A	0.579	0.996	307461				0.013	0.003
G	0.396	0.995	368087				0.012	0.002
C	0.507	0.997	379337	37555	341782	0.958	-0.043	0.008
C	0.507	0.997	368088				0.012	0.002
C	0.507	0.997	221786				0.015	0.003
T	0.227	0.999	379337	5856	373481	1.11	0.102	0.022
G	0.166	1.000	175392				0.023	0.005
G	0.166	1.000	286096				0.018	0.004
G	0.226	1.000	375001	55917	319084	1.04	0.036	0.008
C	0.850	0.984	109888				0.031	0.006
A	0.537	1.001	84308				-0.023	0.005
A	0.387	0.991	286327				0.013	0.003
A	0.387	0.991	175392				0.017	0.003
C	0.412	0.999	367434				0.011	0.002
G	0.226	1.000	379337	6272	373065	1.1	0.096	0.021
G	0.364	0.997	286327				0.014	0.003
A	0.822	1.002	379337	24466	354871	1.06	0.061	0.013
G	0.337	0.999	372085				-0.011	0.002
G	0.337	0.999	244666	25949	218717	1.05	0.048	0.010
C	0.064	0.980	379337	37555	341782	1.08	0.079	0.017
A	0.409	0.973	379337	71154	308183	1.03	0.030	0.006
A	0.125	1.000	379337	27695	351642	0.941	-0.061	0.014
T	0.227	0.999	354922	62560	292362	1.04	0.035	0.007
T	0.109	0.994	372489				-0.019	0.004
A	0.788	1.001	338402				0.015	0.003
T	0.227	0.999	345138	59020	286118	1.04	0.036	0.008
T	0.109	0.994	175392				-0.027	0.005
A	0.388	0.997	84308				-0.024	0.005
C	0.209	1.001	286327				0.016	0.003
G	0.605	1.001	81101				0.024	0.005
G	0.605	1.001	136810				0.018	0.004
G	0.824	0.995	368085				0.015	0.003
C	0.515	0.996	221786				0.015	0.003
G	0.337	0.999	379337	98116	281221	0.974	-0.027	0.006
A	0.405	0.991	368084				-0.012	0.002
T	0.239	0.996	109888				0.024	0.005
T	0.555	0.950	286327				-0.013	0.003
C	0.332	0.990	221786				0.016	0.003
G	0.398	0.992	357465				0.012	0.002
C	0.332	0.990	286096				0.014	0.003
A	0.409	0.973	376456	77693	298763	1.03	0.029	0.006
G	0.441	0.992	109888				0.021	0.004
C	0.338	0.995	84308				-0.025	0.005
G	0.337	0.999	376688				-0.011	0.002
G	0.226	1.000	379337	62156	317181	1.03	0.034	0.007

T	0.501	0.998	379337	70458	308879	0.972	-0.029	0.006
T	0.674	1.001	357468				0.012	0.003
C	0.541	0.977	286327				-0.014	0.003
C	0.541	0.977	221786				-0.016	0.003
G	0.605	1.001	81222				0.024	0.005
A	0.201	1.001	286327				-0.016	0.003
C	0.738	0.996	379337	10158	369179	1.08	0.077	0.017
C	0.738	0.996	379337	10158	369179	1.08	0.077	0.017
C	0.738	0.996	378556				0.012	0.003
C	0.738	0.996	379337	3305	376032	0.881	-0.127	0.027
C	0.738	0.996	244666	25949	218717	0.951	-0.051	0.011
C	0.738	0.996	136810				0.020	0.004
G	0.226	1.000	372489				-0.013	0.003
G	0.226	1.000	124452	5311	119141	1.11	0.105	0.023
C	0.810	1.005	286327				-0.017	0.003
T	0.685	0.992	221786				0.016	0.003
A	0.131	0.993	286327				-0.019	0.004
T	0.080	0.976	221786				0.028	0.006
G	0.279	0.988	286327				-0.015	0.003
G	0.856	0.999	378556				-0.016	0.003
A	0.329	0.994	244666	25949	218717	0.951	-0.050	0.010
A	0.125	1.000	379337	35012	344325	1.05	0.052	0.012
A	0.451	0.997	367434				-0.011	0.002
A	0.451	0.997	378556				0.011	0.002
G	0.411	0.988	175392				-0.018	0.003
G	0.856	0.999	367434				0.016	0.003
T	0.281	1.001	367434				-0.013	0.003
T	0.065	1.001	379276				0.021	0.005
C	0.250	0.996	221786				-0.018	0.003
G	0.690	0.997	175392				0.018	0.004
A	0.313	0.997	286327				-0.013	0.003
G	0.396	0.995	367434				0.012	0.002
T	0.519	0.899	84308				0.025	0.005
T	0.187	0.987	357465				0.015	0.003
C	0.810	1.005	221786				-0.019	0.004
T	0.501	0.998	379337	59697	319640	0.97	-0.030	0.007
T	0.533	1.003	221786				-0.014	0.003
C	0.319	0.989	378070				-0.012	0.002
C	0.319	0.989	175392				0.018	0.004
C	0.319	0.989	286096				0.014	0.003
T	0.219	0.993	378070				0.013	0.003
G	0.210	0.996	286327				-0.016	0.003
G	0.210	0.996	221786				-0.019	0.004
T	0.415	0.984	379337	98116	281221	1.03	0.027	0.006
G	0.210	0.996	136810				-0.023	0.005
G	0.114	0.999	379337	7298	372039	1.13	0.126	0.026
T	0.065	1.001	221786				0.028	0.006
C	0.064	0.980	376456	77693	298763	1.06	0.057	0.012
T	0.458	0.998	221786				0.014	0.003
C	0.064	0.980	368085				-0.022	0.005

C	0.064	0.980	379337	26071	353266	1.09	0.086	0.019
T	0.095	0.999	221786				0.025	0.005
A	0.201	1.001	221786				-0.018	0.004
A	0.201	1.001	136810				-0.023	0.005
G	0.411	0.988	286096				-0.014	0.003
A	0.377	0.995	379337	7808	371529	1.09	0.082	0.017
C	0.507	0.997	286096				0.013	0.003
T	0.207	0.997	378556				0.013	0.003
G	0.851	0.995	286327				-0.018	0.004
C	0.135	0.995	244666	25949	218717	1.07	0.068	0.014
A	0.635	0.997	368088				-0.012	0.002
G	0.226	1.000	379337	49839	329498	1.04	0.037	0.008
T	0.239	0.996	84308				0.028	0.006
C	0.505	0.999	378556				0.011	0.002
T	0.559	0.990	378466	92348	286118	0.975	-0.025	0.005
T	0.221	0.998	379337	14256	365081	1.07	0.071	0.014
C	0.785	1.000	376456	77693	298763	0.966	-0.035	0.007
A	0.259	0.959	379337	1131	378206	0.795	-0.230	0.052
A	0.517	0.999	379337	27686	351651	0.958	-0.043	0.009
A	0.845	0.970	109888				0.030	0.006
T	0.559	0.990	361988	49602	312386	0.968	-0.033	0.007
A	0.261	0.990	175392				0.019	0.004
C	0.515	0.996	286327				0.013	0.003
G	0.522	1.001	81101				-0.024	0.005
A	0.131	0.993	221786				-0.022	0.004
T	0.400	0.985	286327				-0.013	0.003
A	0.125	1.000	372085				0.015	0.004
A	0.125	1.000	379337	1308	378029	0.748	-0.291	0.066
A	0.105	1.001	286327				-0.022	0.004
A	0.105	1.001	136810				-0.032	0.006
A	0.313	0.997	379337	53747	325590	1.04	0.034	0.007
A	0.707	0.999	221786				0.016	0.003
C	0.135	0.995	286327				-0.019	0.004
A	0.262	0.993	190114	16789	173325	0.934	-0.068	0.014
A	0.262	0.993	221786				0.017	0.003
A	0.536	0.999	125040				0.019	0.004
A	0.324	0.998	286327				0.014	0.003
C	0.142	0.995	175392				0.023	0.005
T	0.080	1.000	286327				0.024	0.005
C	0.588	0.996	379337	98116	281221	1.03	0.026	0.006
T	0.197	1.001	190114	16789	173325	0.929	-0.074	0.015
C	0.512	0.997	84308				0.023	0.005
G	0.226	1.000	379337	50267	329070	1.04	0.036	0.008
G	0.226	1.000	121482	44887	76595	1.05	0.045	0.010
G	0.690	0.997	198514				0.017	0.003
T	0.501	0.998	379337	38614	340723	0.965	-0.036	0.008
G	0.364	0.997	221786				0.015	0.003
G	0.515	0.997	357465				0.011	0.002
G	0.687	1.000	379337	22354	356983	1.05	0.052	0.011
G	0.687	1.000	361992				0.012	0.003

C	0.810	1.005	357468				0.015	0.003
C	0.810	1.005	286327				-0.016	0.003
A	0.388	0.997	375426	59277	316149	1.03	0.030	0.007
G	0.180	0.995	221786				-0.019	0.004
G	0.337	0.999	378667				-0.011	0.002
T	0.299	0.997	221786				-0.016	0.003
T	0.501	0.998	379337	49571	329766	0.968	-0.033	0.007
T	0.501	0.998	379337	70680	308657	0.972	-0.028	0.006
A	0.139	1.002	136810				-0.026	0.006
T	0.065	1.001	379337	4023	375314	0.8	-0.224	0.050
T	0.227	0.999	368085				0.013	0.003
G	0.687	1.000	286327				-0.014	0.003
T	0.395	1.002	379337	228	379109	0.613	-0.489	0.104
T	0.559	0.990	345138	59020	286118	0.97	-0.030	0.006
A	0.262	0.993	244666	25949	218717	0.947	-0.054	0.011
A	0.255	1.001	378070				0.013	0.003
A	0.105	1.001	379337	59359	319978	1.05	0.051	0.010
T	0.404	0.998	286327				0.013	0.003
A	0.125	1.000	377882	38495	339387	0.95	-0.051	0.012
A	0.275	0.990	109888				0.024	0.005
A	0.275	0.990	286096				0.015	0.003
G	0.129	1.001	367434				-0.018	0.003
A	0.169	0.996	175392				0.022	0.004
C	0.409	0.995	379337	42753	336584	1.04	0.036	0.007
G	0.276	0.998	379337	30391	348946	0.956	-0.045	0.010
G	0.226	1.000	184629				-0.017	0.004
C	0.738	0.996	379337	13327	366010	0.938	-0.064	0.014
C	0.501	0.990	368085				0.012	0.002
T	0.555	0.950	136810				-0.018	0.004
T	0.214	0.985	84308				-0.029	0.006
G	0.226	1.000	379337	52481	326856	1.04	0.035	0.008
G	0.840	0.994	286096				-0.018	0.004
A	0.343	0.991	221786				0.016	0.003
C	0.124	0.997	175392				0.025	0.005
C	0.021	0.999	368088				0.038	0.008
G	0.500	0.988	109888				-0.021	0.004
T	0.501	0.998	379337	66837	312500	0.972	-0.028	0.006
G	0.399	1.000	379337	23861	355476	0.955	-0.046	0.010
G	0.276	0.998	379337	1944	377393	1.18	0.164	0.035
A	0.498	0.991	109888				-0.020	0.004
C	0.588	0.996	379337	54604	324733	1.03	0.032	0.007
C	0.588	0.996	136810				-0.018	0.004
C	0.176	0.998	361993				-0.015	0.003
A	0.228	1.000	221786				-0.017	0.004
C	0.738	0.996	379337	9524	369813	1.08	0.078	0.017
G	0.687	1.000	221786				-0.016	0.003
A	0.743	0.996	109888				0.024	0.005
A	0.125	1.000	379337	10491	368846	1.09	0.089	0.021
A	0.125	1.000	379337	10412	368925	0.908	-0.096	0.022
A	0.125	1.000	379337	20803	358534	1.07	0.066	0.015

A	0.125	1.000	379337	13100	366237	1.08	0.081	0.019
A	0.520	0.994	367434				0.011	0.002
A	0.509	0.998	175392				-0.016	0.003
A	0.509	0.998	109888				-0.020	0.004
T	0.501	0.998	379337	93276	286061	0.975	-0.025	0.006
A	0.536	0.999	379337	30391	348946	0.961	-0.039	0.009
A	0.479	1.001	368083				-0.011	0.002
C	0.785	1.000	81222				-0.029	0.006
C	0.785	1.000	379337	25708	353629	0.948	-0.054	0.011
C	0.785	1.000	109888				-0.025	0.005
A	0.635	0.997	338402				-0.012	0.003
T	0.069	1.000	367417	31940	335477	1.08	0.075	0.016
G	0.377	0.981	109888				-0.021	0.004
G	0.114	0.999	109888				0.033	0.007
G	0.333	0.991	368085				0.012	0.002
C	0.243	0.988	221786				-0.016	0.004
C	0.243	0.988	109888				-0.023	0.005
C	0.243	0.988	136810				-0.021	0.004
G	0.396	0.995	84308				-0.024	0.005
C	0.534	0.999	286096				-0.013	0.003
G	0.228	0.990	379337	17994	361343	1.06	0.060	0.013
T	0.065	1.001	368088				-0.021	0.005
T	0.281	1.001	175392				-0.018	0.004
T	0.281	1.001	136810				-0.021	0.004
A	0.284	0.989	367434				0.014	0.003
C	0.470	0.997	109888				-0.021	0.004
T	0.362	0.990	136810				-0.020	0.004
G	0.337	0.999	109888				-0.020	0.005
T	0.461	0.995	286327				0.013	0.003
A	0.563	0.992	378482				0.011	0.002
A	0.125	1.000	379337	33807	345530	1.05	0.052	0.012
G	0.411	0.988	286327				-0.013	0.003
G	0.605	1.001	368085				0.011	0.002
G	0.605	1.001	244666	25949	218717	0.956	-0.045	0.010
T	0.270	1.000	372085				0.012	0.003
G	0.597	0.989	136810				-0.019	0.004
T	0.204	0.971	221786				-0.018	0.004
G	0.276	0.998	379337	26314	353023	0.953	-0.048	0.010
A	0.517	1.000	379337	2462	376875	1.16	0.151	0.029
A	0.451	0.997	378214				0.011	0.002
A	0.259	0.959	379337	7763	371574	1.08	0.080	0.019
G	0.851	0.995	109888				-0.029	0.006
C	0.492	0.992	378482				0.011	0.002
T	0.845	1.001	379337	26314	353023	0.944	-0.058	0.012
G	0.398	0.992	367434				-0.011	0.002
G	0.398	0.992	367440				-0.011	0.002
C	0.200	1.000	357465				0.014	0.003
A	0.260	0.983	286327				-0.016	0.003
C	0.738	0.996	379337	2953	376384	0.878	-0.130	0.029
A	0.177	0.998	378482				-0.015	0.003

A	0.388	0.997	190114	16789	173325	1.06	0.056	0.012
G	0.856	0.999	379337	48586	330751	0.955	-0.046	0.010
C	0.338	0.995	378070				-0.011	0.002
T	0.015	1.002	136810				-0.073	0.016
C	0.285	0.989	361993				-0.012	0.003
A	0.259	0.959	379337	4007	375330	0.89	-0.116	0.027
T	0.187	0.987	221786				-0.019	0.004
A	0.260	0.983	286096				-0.015	0.003
A	0.125	1.000	379337	26314	353023	1.06	0.057	0.013
G	0.411	0.988	221786				-0.015	0.003
C	0.064	0.980	379337	11938	367399	1.13	0.123	0.027
A	0.259	0.959	379337	6557	372780	0.912	-0.092	0.021
A	0.479	1.001	378624				0.011	0.002
A	0.536	0.999	372213	77265	294948	0.974	-0.026	0.006
A	0.275	0.990	221786				0.016	0.003
T	0.576	0.991	221786				0.016	0.003
A	0.520	0.994	368090				0.011	0.002
G	0.396	0.995	367434				-0.011	0.002
T	0.065	1.001	378466	86104	292362	1.05	0.048	0.011
G	0.338	0.994	286327				0.014	0.003
T	0.787	1.002	221786				-0.017	0.004
T	0.645	0.999	357465				0.011	0.002
T	0.674	1.001	368088				-0.011	0.002
T	0.112	0.949	221786				0.024	0.005
A	0.399	1.001	221786				-0.015	0.003
G	0.411	0.988	221786				-0.015	0.003
G	0.226	1.000	379337				0.012	0.003
T	0.458	0.998	84308				0.023	0.005
T	0.219	0.993	84308				-0.028	0.006
C	0.064	0.980	379337	98116	281221	1.05	0.050	0.011
G	0.399	1.000	379337	22354	356983	0.955	-0.046	0.010
G	0.050	0.993	286327				-0.029	0.006
C	0.243	0.988	361992				-0.013	0.003
A	0.409	0.973	368085				-0.011	0.002
A	0.125	1.000	379337	6557	372780	0.886	-0.121	0.028
T	0.272	0.991	190114	16789	173325	1.06	0.063	0.014
C	0.785	1.000	379337	22982	356355	0.946	-0.056	0.012
G	0.226	1.000	84052				0.025	0.006
T	0.845	1.001	379337	22354	356983	0.94	-0.062	0.013
G	0.228	0.990	379337	15919	363418	1.06	0.063	0.014
T	0.674	1.001	379337	117149	262188	1.03	0.025	0.006
T	0.529	0.994	286096				-0.013	0.003
T	0.109	0.994	136810				-0.029	0.006
G	0.164	0.994	109888				-0.027	0.006
T	0.645	0.999	368090				0.011	0.002
T	0.224	0.993	198514				0.017	0.004
T	0.015	1.002	190114	16789	173325	1.24	0.217	0.047
A	0.259	0.959	379337	6636	372701	1.09	0.086	0.020
G	0.856	0.999	367434				-0.016	0.003
A	0.446	0.999	221786				-0.014	0.003

A	0.446	0.999	378667					0.011	0.002
C	0.233	0.994	286096					0.015	0.003
C	0.409	0.995	352973	131484	221489	1.02		0.024	0.005
C	0.409	0.995	221786					0.014	0.003
C	0.253	1.001	368087					-0.012	0.003
A	0.635	0.997	372673					-0.012	0.002
C	0.304	0.977	136810					-0.020	0.004
G	0.143	0.996	361993					-0.016	0.003
G	0.857	0.998	367440					0.016	0.003
T	0.465	0.987	81222					-0.024	0.005
T	0.852	0.998	175392					-0.024	0.005
T	0.852	0.998	109888					-0.030	0.006
C	0.142	0.995	84308					0.033	0.007
T	0.504	0.995	136810					-0.019	0.004
C	0.507	0.997	379337	15866	363471	0.945		-0.057	0.012
C	0.507	0.997	221786					0.014	0.003
G	0.050	0.993	221786					-0.033	0.007
A	0.707	0.999	175392					0.018	0.004
T	0.197	1.001	221786					0.018	0.004
C	0.478	1.001	379337	98116	281221	1.03		0.025	0.005
G	0.522	1.001	244666	25949	218717	1.05		0.045	0.010
T	0.224	0.993	81222					0.027	0.006
G	0.522	1.001	368090					0.011	0.002
C	0.293	1.001	136810					-0.021	0.004
C	0.392	0.997	357740	20574	337166	0.954		-0.047	0.010
T	0.674	1.001	379337	30391	348946	1.04		0.041	0.009
T	0.674	1.001	379337	8438	370899	1.08		0.076	0.017
T	0.674	1.001	372213	77265	294948	1.03		0.028	0.006
G	0.441	0.992	379337	29226	350111	0.961		-0.040	0.009
G	0.441	0.992	372489					-0.011	0.002
A	0.125	1.000	338931	30486	308445	1.05		0.053	0.013
A	0.031	1.002	338402					0.035	0.007
T	0.645	0.999	368084					0.011	0.002
G	0.840	0.994	368088					0.015	0.003
G	0.333	0.991	286096					-0.013	0.003
A	0.707	0.999	136810					0.020	0.004
C	0.588	0.996	379337	26549	352788	0.959		-0.042	0.009
G	0.125	0.994	286327					0.019	0.004
T	0.458	0.998	190114	16789	173325	0.945		-0.056	0.012
A	0.845	0.970	367440					0.016	0.003
A	0.451	0.997	173485	117954	55531	0.967		-0.033	0.007
A	0.451	0.997	173485	55531	117954	1.03		0.033	0.007
A	0.451	0.997	367434					-0.011	0.002
G	0.687	1.000	379337	48586	330751	1.04		0.035	0.007
A	0.517	1.000	379337	58564	320773	1.03		0.033	0.007
T	0.069	1.000	379337	22354	356983	1.09		0.086	0.019
T	0.347	0.995	136810					0.018	0.004
C	0.020	1.000	286096					-0.046	0.010
C	0.235	1.004	221786					0.016	0.004
C	0.235	1.004	221786					-0.016	0.004

T	0.227	0.999	372213	77265	294948	1.03	0.030	0.007
C	0.200	1.000	190114	16789	173325	0.93	-0.073	0.015
T	0.674	1.001	379337	41593	337744	1.04	0.036	0.008
A	0.081	1.002	378624				0.020	0.004
A	0.125	1.000	379337				-0.015	0.003
A	0.517	1.000	361988	49602	312386	1.04	0.035	0.007
T	0.065	1.001	379337	1215	378122	0.65	-0.431	0.100
T	0.347	0.995	357465				0.011	0.002
G	0.856	0.999	221786				0.020	0.004
A	0.579	0.996	378482				0.011	0.002
A	0.392	0.970	286327				0.014	0.003
A	0.392	0.970	175392				0.018	0.004
G	0.226	1.000	379337	86340	292997	1.03	0.028	0.007
A	0.259	0.959	379337	547	378790	1.33	0.282	0.066
A	0.313	0.997	286327				-0.013	0.003
G	0.226	1.000	84016				0.025	0.006
T	0.239	0.996	286327				0.014	0.003
T	0.845	1.001	379337	23861	355476	0.942	-0.059	0.013
A	0.228	1.000	221786				-0.017	0.004
T	0.065	1.001	379337	11303	368034	1.12	0.113	0.026
A	0.635	0.997	372703				-0.011	0.002
T	0.725	0.988	378624				-0.012	0.003
T	0.213	1.001	190114	16789	173325	1.07	0.071	0.015
T	0.213	1.001	109888				-0.025	0.005
A	0.446	0.999	221786				-0.014	0.003
T	0.404	0.998	372673				-0.011	0.002
C	0.176	0.998	175392				0.021	0.004
C	0.588	0.996	175392				-0.015	0.003
A	0.096	0.995	244666	25949	218717	0.922	-0.081	0.017
T	0.299	0.997	286327				-0.014	0.003
C	0.409	0.995	379337	12749	366588	1.06	0.061	0.013
C	0.409	0.995	286096				0.012	0.003
G	0.226	1.000	379337	4855	374482	1.11	0.102	0.024
C	0.126	0.998	221786				-0.021	0.005
T	0.077	0.997	378482				0.021	0.004
T	0.077	0.997	221786				-0.028	0.006
A	0.537	1.001	338402				0.011	0.002
A	0.125	1.000	379337	11478	367859	0.915	-0.089	0.021
A	0.125	1.000	379337	20677	358660	0.935	-0.067	0.016
A	0.313	0.997	376456	65004	311452	1.03	0.031	0.007
C	0.738	0.996	379337	2845	376492	0.879	-0.129	0.029
C	0.785	1.000	357468				-0.013	0.003
G	0.228	0.990	184629				0.018	0.004
T	0.069	1.000	379337	26314	353023	1.08	0.079	0.017
T	0.069	1.000	244666	25949	218717	1.09	0.084	0.019
T	0.227	0.999	368090				-0.012	0.003
G	0.228	0.990	379337	2663	376674	1.15	0.144	0.032
C	0.253	1.001	109888				-0.022	0.005
G	0.125	0.994	175392				0.024	0.005
G	0.597	0.989	109888				-0.021	0.004

C	0.217	0.994	368088				0.013	0.003
G	0.228	0.990	379337	16613	362724	1.06	0.060	0.013
C	0.738	0.996	372213	77265	294948	0.972	-0.028	0.007
A	0.649	0.999	136810				-0.018	0.004
G	0.377	0.981	367434				-0.011	0.002
G	0.377	0.981	221786				-0.014	0.003
G	0.856	0.999	368090				0.015	0.003
T	0.124	0.983	368090				-0.017	0.004
G	0.226	1.000	379337	35566	343771	1.04	0.040	0.009
C	0.338	0.995	221786				-0.015	0.003
G	0.687	1.000	379337	26314	353023	1.05	0.046	0.010
G	0.164	0.994	109888				-0.027	0.006
T	0.270	1.000	84308				0.025	0.005
T	0.725	0.988	221786				0.016	0.003
A	0.669	0.996	109888				0.021	0.005
T	0.219	0.993	379337	102298	277039	0.971	-0.029	0.006
T	0.725	0.988	175392				0.018	0.004
G	0.337	0.999	379337	12877	366460	1.06	0.059	0.013
G	0.226	1.000	379337	21524	357813	1.05	0.050	0.012
T	0.187	0.987	357468				-0.015	0.003
T	0.404	0.998	372703				-0.011	0.002
C	0.534	0.999	372085				0.011	0.002
C	0.534	0.999	286327				-0.012	0.003
C	0.250	0.996	286327				-0.015	0.003
A	0.125	1.000	378214				0.014	0.003
G	0.607	1.003	286327				0.013	0.003
A	0.405	0.991	244666	25949	218717	1.05	0.047	0.010
A	0.405	0.991	190114	16789	173325	1.06	0.059	0.012
G	0.210	0.996	286327				-0.015	0.003
A	0.503	0.985	286096				-0.014	0.003
A	0.166	0.985	136810				0.025	0.005
C	0.209	1.001	367440				0.013	0.003
G	0.337	0.999	378624				-0.011	0.002
A	0.228	1.000	244666	25949	218717	1.05	0.053	0.011
G	0.441	0.992	379337	2845	376492	0.885	-0.122	0.027
G	0.441	0.992	378466	81619	296847	0.975	-0.026	0.006
C	0.507	0.997	361993				0.011	0.002
A	0.444	0.987	378298				-0.011	0.002
A	0.257	1.001	379337	23861	355476	1.05	0.048	0.011
C	0.285	0.989	357468				-0.012	0.003
G	0.605	1.001	357468				0.011	0.002
G	0.180	0.995	368090				-0.014	0.003
G	0.180	0.995	367434				0.014	0.003
G	0.180	0.995	286327				-0.016	0.003
A	0.259	0.959	379337	42349	336988	0.964	-0.037	0.009
A	0.259	0.959	379337	20803	358534	1.05	0.050	0.012
C	0.338	0.995	378667				-0.011	0.002
T	0.224	0.993	379337	28042	351295	0.954	-0.047	0.011
G	0.129	1.001	368085				-0.017	0.003
G	0.129	1.001	286327				-0.019	0.004

C	0.156	1.001	357465					-0.015	0.003
C	0.020	1.000	175392					-0.058	0.012
C	0.412	0.999	367440					0.011	0.002
A	0.409	0.973	379337	66837	312500	1.03		0.029	0.006
A	0.479	1.001	368085					0.011	0.002
A	0.259	0.959	379337	4010	375327	0.894		-0.112	0.027
A	0.259	0.959	379337	293	379044	1.45		0.372	0.089
A	0.176	0.997	372085					-0.014	0.003
A	0.498	0.991	379337	362	378975	0.707		-0.347	0.076
A	0.498	0.991	244666	25949	218717	1.05		0.045	0.010
A	0.388	0.997	379337	11334	368003	1.06		0.061	0.014
A	0.479	1.001	368090					-0.011	0.002
T	0.028	0.989	368090					-0.033	0.007
C	0.738	0.996	378214					0.011	0.003
A	0.125	1.000	126132					-0.025	0.006
A	0.031	1.002	379337	13090	366247	0.823		-0.195	0.041
A	0.031	1.002	109888					-0.059	0.012
A	0.031	1.002	221786					-0.042	0.009
T	0.173	0.997	175392					0.022	0.004
C	0.285	0.989	367440					-0.012	0.003
A	0.631	1.001	357465					-0.011	0.002
G	0.143	0.996	350792	15315	335477	1.08		0.077	0.016
C	0.319	0.998	368084					-0.012	0.003
A	0.313	0.997	379337	121144	258193	1.02		0.024	0.005
G	0.226	1.000	379337	100835	278502	1.03		0.026	0.006
G	0.453	1.002	379337	93276	286061	0.975		-0.025	0.006
C	0.514	0.985	286327					-0.013	0.003
C	0.514	0.985	286096					-0.013	0.003
A	0.259	0.959	379337	3556	375781	0.888		-0.119	0.029
A	0.743	0.996	84308					0.026	0.006
C	0.064	0.980	368088					-0.021	0.005
A	0.313	0.997	379337	66837	312500	1.03		0.029	0.007
G	0.114	0.999	286327					0.019	0.004
C	0.148	0.998	221786					-0.021	0.004
C	0.505	0.999	221786					0.014	0.003
G	0.337	0.999	357465					-0.011	0.003
A	0.405	0.991	109888					-0.020	0.004
G	0.857	0.998	184629					0.022	0.005
C	0.020	1.000	286327					-0.045	0.010
C	0.541	0.977	221786					-0.015	0.003
G	0.364	0.997	221786					0.015	0.003
C	0.392	0.997	368085					-0.010	0.002
T	0.069	1.000	379337	21438	357899	1.09		0.085	0.019
A	0.259	0.959	379337	1229	378108	1.21		0.188	0.045
A	0.259	0.959	124452	2370	122082	1.15		0.138	0.033
T	0.533	1.003	175392					-0.015	0.003
T	0.050	0.963	109888					0.050	0.010
T	0.224	0.993	379337	9870	369467	0.925		-0.078	0.018
C	0.325	0.983	109888					0.023	0.005
G	0.166	1.000	221786					0.019	0.004

A	0.537	1.001	378482					-0.010	0.002
T	0.415	0.984	221786					-0.014	0.003
T	0.272	0.991	84308					-0.025	0.005
G	0.210	0.996	175392					-0.019	0.004
G	0.210	0.996	175392					-0.019	0.004
A	0.262	0.993	379337	29738	349599	0.955		-0.046	0.010
A	0.259	0.959	379337	2120	377217	1.15		0.143	0.035
A	0.446	0.999	372489					0.011	0.002
A	0.649	0.999	175392					-0.016	0.004
C	0.325	0.983	175392					0.018	0.004
A	0.125	1.000	375001	55917	319084	0.96		-0.041	0.010
A	0.520	0.994	368084					0.011	0.002
T	0.458	0.998	286327					0.012	0.003
C	0.064	0.980	379337	6427	372910	1.17		0.154	0.035
T	0.224	0.993	379337	23861	355476	0.951		-0.050	0.012
G	0.522	1.001	190114	16789	173325	1.06		0.054	0.012
G	0.399	1.000	379337	20803	358534	0.954		-0.047	0.011
G	0.226	1.000	367434					-0.012	0.003
C	0.478	1.001	357468					0.011	0.002
C	0.507	0.997	201611	16366	185245	0.948		-0.054	0.012
C	0.507	0.997	221786					0.014	0.003
T	0.197	1.001	84308					0.028	0.006
C	0.505	0.999	215636					0.014	0.003
A	0.261	0.990	379337	586	378751	1.34		0.290	0.063
T	0.415	0.984	190114	16789	173325	1.06		0.056	0.012
T	0.415	0.984	175392					-0.016	0.003
C	0.338	0.995	379337	54604	324733	0.968		-0.032	0.007
C	0.338	0.995	379337	98116	281221	0.975		-0.026	0.006
T	0.845	1.001	286327					0.016	0.004
G	0.377	0.981	350792	15315	335477	1.05		0.053	0.012
G	0.454	0.997	221786					-0.014	0.003
A	0.275	0.990	175392					0.018	0.004
A	0.169	0.996	286327					0.016	0.004
A	0.169	0.996	175392					0.021	0.005
A	0.169	0.996	136810					0.023	0.005
T	0.065	1.001	379337	121144	258193	1.04		0.042	0.010
C	0.738	0.996	379337	1434	377903	1.21		0.191	0.045
C	0.217	0.994	361993					0.013	0.003
T	0.504	0.995	84308					-0.023	0.005
A	0.313	0.997	367434					-0.011	0.003
T	0.224	0.993	379337	9927	369410	0.926		-0.077	0.018
A	0.520	0.994	379337	54604	324733	0.969		-0.031	0.007
A	0.520	0.994	379337	70458	308879	0.972		-0.028	0.006
A	0.635	0.997	378624					0.011	0.002
A	0.520	0.994	379337	38614	340723	0.965		-0.035	0.008
T	0.214	0.985	286096					-0.015	0.003
T	0.239	0.996	221786					0.016	0.004
A	0.822	1.002	109888					-0.025	0.006
A	0.105	1.001	368085					0.018	0.004
C	0.588	0.996	379337	22982	356355	1.05		0.044	0.010

A	0.125	1.000	379337	3581	375756	1.15	0.139	0.034
G	0.522	1.001	286327				-0.012	0.003
G	0.522	1.001	175392				0.015	0.003
C	0.271	0.996	221786				0.016	0.003
G	0.226	1.000	379337	24177	355160	0.953	-0.048	0.012
A	0.260	0.983	221786				-0.017	0.003
A	0.125	1.000	379337	5589	373748	0.885	-0.122	0.030
A	0.405	0.991	368088				0.011	0.002
A	0.498	0.991	190114	16789	173325	1.06	0.055	0.012
A	0.031	1.002	221786				-0.040	0.009
G	0.337	0.999	198514				0.014	0.003
A	0.313	0.997	375001	52680	322321	1.03	0.032	0.007
C	0.338	0.995	378624				-0.011	0.002
C	0.392	0.997	286327				0.012	0.003
T	0.109	0.994	286327				-0.020	0.004
A	0.520	0.994	379337	70680	308657	0.973	-0.028	0.006
G	0.160	0.992	367440				-0.015	0.003
C	0.142	0.995	190114	16789	173325	0.923	-0.080	0.018
A	0.313	0.997	379337	59697	319640	1.03	0.031	0.007
T	0.725	0.988	221786				0.016	0.003
C	0.409	0.995	136810				0.017	0.004
T	0.674	1.001	379337	8303	371034	1.08	0.074	0.017
A	0.259	0.959	367668				-0.011	0.003
G	0.176	0.999	378085	119703	258382	1.03	0.031	0.007
C	0.064	0.980	379337	13090	366247	1.12	0.113	0.026
G	0.164	0.994	84308				-0.030	0.007
A	0.257	1.001	379337	48586	330751	1.04	0.035	0.008
T	0.204	0.971	367434				0.014	0.003
A	0.409	0.973	221786				-0.014	0.003
C	0.021	0.999	361992				-0.036	0.008
A	0.509	0.998	84308				-0.022	0.005
T	0.224	0.993	379337	26787	352550	0.954	-0.047	0.011
G	0.856	0.999	368090				0.015	0.003
G	0.226	1.000	379337	13505	365832	1.06	0.061	0.015
G	0.180	0.995	175392				-0.020	0.004
A	0.259	0.959	379337	362	378975	1.39	0.330	0.081
G	0.399	1.000	379337	18494	360843	0.952	-0.049	0.011
C	0.515	0.998	378482				0.011	0.002
C	0.515	0.998	286096				-0.013	0.003
A	0.259	0.959	378556				0.011	0.003
G	0.363	0.990	175392				-0.016	0.004
C	0.409	0.995	175392				0.015	0.003
G	0.605	1.001	379337	38614	340723	0.966	-0.034	0.008
A	0.125	1.000	379337	25534	353803	1.06	0.055	0.014
A	0.125	1.000	379337	18494	360843	1.07	0.065	0.016
A	0.259	0.959	379337	6427	372910	0.916	-0.088	0.022
A	0.125	1.000	379337	4578	374759	1.13	0.124	0.031
C	0.785	1.000	84308				-0.027	0.006
T	0.501	0.998	375001	52680	322321	0.971	-0.030	0.007
A	0.125	1.000	301198	24505	276693	1.06	0.057	0.014

G	0.226	1.000	377786					-0.011	0.003
T	0.109	0.994	378482					0.017	0.004
A	0.392	0.970	136810					0.019	0.004
A	0.579	0.996	221786					-0.014	0.003
A	0.409	0.973	368088					-0.011	0.002
G	0.065	0.999	190114	16789	173325	0.893		-0.114	0.025
T	0.124	0.983	221786					0.021	0.005
A	0.520	0.994	379337	71154	308183	0.973		-0.028	0.006
T	0.362	0.990	109888					-0.021	0.004
T	0.204	0.971	286327					-0.015	0.003
G	0.687	1.000	221786					-0.015	0.003
G	0.687	1.000	184629					-0.016	0.004
A	0.259	0.959	379337	18494	360843	1.05		0.051	0.013
G	0.226	1.000	377270	32766	344504	1.04		0.040	0.010
A	0.259	0.959	375001	81876	293125	0.974		-0.027	0.007
C	0.541	0.977	286096					-0.013	0.003
G	0.065	0.999	286327					0.024	0.005
T	0.845	1.001	379337	29738	349599	0.95		-0.052	0.012
T	0.845	1.001	368084					-0.014	0.003
A	0.125	1.000	379337	11333	368004	1.08		0.080	0.020
A	0.125	1.000	379337	7808	371529	1.1		0.095	0.024
A	0.257	1.001	379337	26314	353023	1.05		0.045	0.010
C	0.507	0.997	379337	27686	351651	1.04		0.041	0.009
G	0.377	0.981	379337	10543	368794	1.06		0.063	0.015
G	0.377	0.981	109888					-0.019	0.004
T	0.866	0.998	175392					-0.024	0.005
G	0.226	1.000	379337	8390	370947	0.924		-0.079	0.019
G	0.690	0.997	379337	3095	376242	0.885		-0.122	0.027
A	0.125	1.000	379337	29738	349599	1.05		0.051	0.013
T	0.224	0.993	379337	7298	372039	0.915		-0.089	0.021
G	0.646	0.954	244666	25949	218717	0.953		-0.048	0.010
G	0.377	0.981	379337	21438	357899	1.05		0.045	0.010
T	0.270	1.000	378667					0.011	0.003
T	0.270	1.000	175392					0.017	0.004
C	0.325	0.983	367440					0.012	0.003
C	0.588	0.996	379337	201	379136	0.648		-0.434	0.100
C	0.332	0.990	190114	16789	173325	0.943		-0.058	0.013
G	0.453	1.002	372085					-0.010	0.002
G	0.607	1.003	379337	12632	366705	0.942		-0.060	0.013
C	0.588	0.996	379337	38614	340723	1.03		0.034	0.008
T	0.319	0.999	109888					0.021	0.005
T	0.347	0.995	221786					-0.014	0.003
G	0.396	0.995	175392					-0.016	0.003
A	0.176	0.997	379337	13674	365663	0.927		-0.075	0.017
C	0.470	0.997	175392					-0.016	0.003
C	0.319	0.998	378556					-0.011	0.002
C	0.064	0.980	125040					0.035	0.008
A	0.387	0.991	109888					0.020	0.004
A	0.387	0.991	84308					0.023	0.005
T	0.501	0.998	350792	15315	335477	0.951		-0.050	0.012

G	0.398	0.992	357468				0.011	0.002
T	0.224	0.993	379337	138035	241302	0.975	-0.025	0.006
A	0.259	0.959	379337	55476	323861	1.03	0.031	0.008
A	0.822	1.002	379337	14418	364919	1.08	0.074	0.016
A	0.237	0.968	109888				-0.023	0.005
A	0.520	0.994	379337	73015	306322	0.973	-0.028	0.006
G	0.399	1.000	379337	30391	348946	0.962	-0.038	0.009
C	0.588	0.996	379337	1632	377705	0.858	-0.153	0.035
A	0.517	0.999	379337	22982	356355	0.957	-0.044	0.010
C	0.124	0.997	379337	7591	371746	0.888	-0.119	0.026
C	0.124	0.997	109888				0.030	0.006
A	0.749	0.927	221786				-0.017	0.004
G	0.143	0.996	368088				0.015	0.003
T	0.239	0.996	286327				0.014	0.003
T	0.239	0.996	221786				0.016	0.004
T	0.559	0.990	84308				-0.021	0.005
T	0.187	0.987	109888				-0.025	0.005
T	0.348	1.001	379337	14418	364919	0.939	-0.063	0.013
T	0.348	1.001	286327				0.013	0.003
T	0.213	1.001	244666	25949	218717	1.06	0.054	0.012
G	0.398	0.992	367440				0.011	0.002
A	0.228	1.000	190114	16789	173325	1.07	0.064	0.014
A	0.228	1.000	84308				-0.026	0.006
G	0.377	0.981	379337	26314	353023	1.04	0.040	0.009
G	0.646	0.954	286096				0.013	0.003
G	0.857	0.998	379337	14877	364460	1.08	0.080	0.018
T	0.347	0.995	379337	2431	376906	0.874	-0.134	0.031
C	0.507	0.997	379337	31466	347871	0.963	-0.038	0.008
A	0.031	1.002	368090				-0.031	0.007
A	0.498	0.991	175392				-0.015	0.003
C	0.409	0.995	190114	16789	173325	0.947	-0.055	0.012
T	0.224	0.993	357740	20574	337166	0.949	-0.053	0.012
T	0.224	0.993	378482				-0.012	0.003
A	0.169	0.996	109888				0.026	0.006
T	0.204	0.971	361992				0.013	0.003
A	0.845	0.970	221786				0.019	0.004
G	0.226	1.000	379337	1087	378250	0.799	-0.224	0.055
A	0.259	0.959	379337	324	379013	1.41	0.342	0.085
C	0.304	0.977	378214				0.012	0.003
C	0.304	0.977	338402				-0.012	0.003
A	0.433	0.999	221786				0.015	0.003
C	0.176	0.998	286327				0.016	0.003
T	0.559	0.990	109888				-0.019	0.004
C	0.285	0.989	379337	10787	368550	0.933	-0.069	0.016
G	0.276	0.998	190114	16789	173325	0.942	-0.060	0.014
G	0.500	0.988	286327				-0.012	0.003
C	0.669	0.999	377675				0.012	0.002
A	0.259	0.959	379337	242	379095	1.48	0.392	0.098
T	0.227	0.999	136810				-0.019	0.005
A	0.125	1.000	379337	102298	277039	0.969	-0.031	0.008

A	0.125	1.000	377270	32766	344504	0.951	-0.050	0.013
A	0.907	0.996	379337	4021	375316	1.22	0.198	0.042
A	0.259	0.959	379337	2941	376396	0.882	-0.126	0.031
T	0.645	0.999	367434				0.010	0.002
G	0.453	1.002	379337	16119	363218	0.951	-0.050	0.012
G	0.363	0.990	175392				-0.016	0.004
A	0.329	0.994	221786				0.014	0.003
T	0.187	0.987	286327				-0.015	0.003
T	0.187	0.987	221786				-0.018	0.004
T	0.187	0.987	286096				-0.016	0.003
A	0.261	0.990	84308				0.025	0.006
T	0.529	0.994	361992				0.011	0.002
A	0.822	1.002	379337	15380	363957	1.07	0.071	0.016
C	0.293	1.001	286327				0.013	0.003
C	0.293	1.001	84308				-0.025	0.005
G	0.396	0.995	221786				-0.014	0.003
T	0.124	0.983	221786				0.021	0.005
A	0.259	0.959	379337	8746	370591	1.07	0.070	0.018
T	0.415	0.984	136810				-0.017	0.004
A	0.537	1.001	244666	25949	218717	1.04	0.042	0.010
T	0.529	0.994	361992				0.011	0.002
A	0.313	0.997	221786				-0.014	0.003
G	0.396	0.995	368088				0.011	0.002
A	0.259	0.959	379337	4249	375088	0.901	-0.104	0.026
A	0.444	0.987	378482				-0.010	0.002
A	0.444	0.987	286327				0.012	0.003
T	0.070	0.994	286327				0.024	0.005
C	0.785	1.000	379337	98116	281221	0.972	-0.029	0.007
G	0.453	1.002	379337	30629	348708	0.963	-0.037	0.009
G	0.411	0.988	368084				0.011	0.002
G	0.857	0.998	111030				-0.027	0.006
T	0.015	1.002	175392				-0.061	0.014
C	0.409	0.995	379337	8390	370947	1.07	0.070	0.016
A	0.399	1.001	367434				0.011	0.002
A	0.399	1.001	175392				-0.016	0.003
G	0.607	1.003	244666	25949	218717	0.957	-0.044	0.010
G	0.228	0.990	376456	77693	298763	0.969	-0.031	0.007
T	0.548	0.996	84308				-0.023	0.005
G	0.399	1.000	379337	26314	353023	0.96	-0.040	0.009
C	0.738	0.996	367440				-0.011	0.003
A	0.131	0.993	379337	5388	373949	0.871	-0.138	0.030
C	0.507	0.997	379337	3930	375407	1.11	0.102	0.023
G	0.441	0.992	379337	15919	363418	0.951	-0.051	0.012
G	0.399	1.000	379337	55476	323861	0.971	-0.029	0.007
G	0.114	0.999	221786				0.021	0.005
T	0.227	0.999	221786				-0.015	0.004
T	0.576	0.991	286327				0.013	0.003
C	0.635	0.966	367440				-0.011	0.002
A	0.125	1.000	379337				-0.014	0.003
T	0.076	0.987	286096				-0.023	0.005

A	0.262	0.993	379337	26549	352788	1.05	0.046	0.010
T	0.112	0.949	286327				0.020	0.004
T	0.197	1.001	109888				0.023	0.005
A	0.313	0.997	379337	59218	320119	1.03	0.030	0.007
C	0.433	0.998	379337	121144	258193	0.978	-0.023	0.005
G	0.228	0.990	379337	2572	376765	1.15	0.139	0.032
A	0.125	1.000	379337	6769	372568	1.11	0.100	0.025
T	0.681	0.995	379337	15328	364009	0.941	-0.061	0.013
G	0.690	0.997	379337	98116	281221	0.974	-0.026	0.006
T	0.319	0.999	175392				0.016	0.004
T	0.319	0.999	84308				0.024	0.005
A	0.259	0.959	378466	12850	365616	0.942	-0.059	0.015
A	0.261	0.990	109888				0.022	0.005
G	0.840	0.994	379337	6557	372780	0.898	-0.107	0.024
G	0.840	0.994	379337	7058	372279	0.902	-0.103	0.023
G	0.840	0.994	175392				-0.021	0.005
C	0.135	0.995	221786				-0.019	0.004
A	0.313	0.997	379337	49571	329766	1.03	0.032	0.008
A	0.313	0.997	379337	3066	376271	1.12	0.116	0.027
A	0.259	0.959	368087				0.011	0.003
T	0.224	0.993	379337	91380	287957	0.973	-0.028	0.007
T	0.095	0.999	368090				0.018	0.004
A	0.237	0.968	361993				0.012	0.003
A	0.237	0.968	175392				-0.018	0.004
C	0.782	0.996	286327				-0.016	0.003
C	0.325	0.983	84308				0.024	0.005
A	0.259	0.959	379337	15827	363510	1.05	0.052	0.013
G	0.337	0.999	330745	33898	296847	0.964	-0.036	0.009
G	0.337	0.999	379337	2845	376492	1.12	0.116	0.028
C	0.332	0.990	372489				0.011	0.002
T	0.685	0.992	84308				0.024	0.005
C	0.285	0.989	378070				-0.011	0.003
C	0.285	0.989	367434				0.011	0.003
T	0.465	0.987	378556				0.010	0.002
T	0.224	0.993	377264	36479	340785	0.961	-0.040	0.009
T	0.224	0.993	221786				-0.015	0.004
C	0.253	1.001	84308				-0.024	0.006
C	0.176	0.998	368084				0.014	0.003
G	0.337	0.999	379337	20871	358466	1.05	0.044	0.011
A	0.259	0.959	379337	8603	370734	1.07	0.070	0.018
C	0.392	0.997	301198	8231	292967	0.933	-0.069	0.016
G	0.050	0.993	244666	25949	218717	1.1	0.097	0.022
C	0.635	0.966	367434				-0.011	0.002
T	0.362	0.990	84308				-0.024	0.005
T	0.529	0.994	367440				-0.010	0.002
T	0.529	0.994	175392				-0.015	0.003
G	0.125	0.994	109888				0.029	0.006
T	0.224	0.993	379337	55476	323861	0.968	-0.033	0.008
A	0.061	0.974	221786				-0.031	0.006
A	0.061	0.974	286327				-0.026	0.006

A	0.061	0.974	286096					-0.027	0.006
G	0.857	0.998	379337	13505	365832	1.09		0.083	0.018
T	0.227	0.999	378466	86104	292362	1.03		0.027	0.007
A	0.329	0.994	84308					0.023	0.005
A	0.329	0.994	175392					0.016	0.004
C	0.810	1.005	378556					-0.013	0.003
A	0.125	1.000	379337	9398	369939	0.914		-0.090	0.023
T	0.270	1.000	221786					0.015	0.003
C	0.142	0.995	221786					0.019	0.004
G	0.441	0.992	379337	9701	369636	0.939		-0.063	0.015
G	0.441	0.992	379337	121144	258193	0.979		-0.021	0.005
C	0.243	0.988	378667					-0.012	0.003
C	0.209	1.001	368090					-0.013	0.003
A	0.125	1.000	121482	44887	76595	0.951		-0.050	0.013
C	0.409	0.995	330745	33898	296847	1.04		0.036	0.008
A	0.451	0.997	379337	37555	341782	1.04		0.036	0.008
A	0.537	1.001	109888					-0.018	0.004
G	0.180	0.995	286327					-0.015	0.003
C	0.412	0.999	379337	13327	366010	1.06		0.054	0.013
A	0.520	0.994	379337	117149	262188	0.978		-0.023	0.005
G	0.226	1.000	379337	13750	365587	1.06		0.059	0.015
T	0.465	0.987	136810					0.017	0.004
T	0.026	0.999	286327					-0.039	0.008
T	0.207	0.997	367417	31940	335477	0.956		-0.045	0.010
C	0.271	0.996	175392					0.017	0.004
A	0.259	0.959	379337	27228	352109	0.959		-0.042	0.011
T	0.681	0.995	379337	15572	363765	0.943		-0.059	0.012
T	0.681	0.995	379337	42349	336988	0.963		-0.037	0.008
T	0.461	0.995	221786					0.014	0.003
T	0.461	0.995	221786					0.014	0.003
C	0.794	0.999	368084					-0.013	0.003
G	0.821	0.999	286327					0.017	0.003
G	0.821	0.999	286096					0.017	0.003
G	0.164	0.994	190114	16789	173325	1.07		0.071	0.016
T	0.674	1.001	379337	20871	358466	1.05		0.046	0.011
T	0.674	1.001	379337	24948	354389	0.959		-0.042	0.010
T	0.674	1.001	379337	26549	352788	0.96		-0.041	0.010
C	0.392	0.997	367434					-0.010	0.002
C	0.293	0.993	221786					0.015	0.003
A	0.669	0.996	338402					-0.011	0.003
A	0.191	0.994	379337	24948	354389	1.05		0.051	0.012
G	0.180	0.995	368090					-0.014	0.003
T	0.347	0.995	379337	7298	372039	0.926		-0.077	0.018
T	0.845	1.001	379337	21438	357899	0.943		-0.058	0.014
A	0.259	0.959	379337	13090	366247	0.941		-0.061	0.016
T	0.529	0.994	376456	65004	311452	1.03		0.028	0.006
G	0.143	0.996	378624					0.015	0.003
A	0.176	0.997	378556					-0.013	0.003
C	0.384	0.990	221786					0.014	0.003
A	0.509	0.998	244666	25949	218717	1.04		0.042	0.010

A	0.517	1.000	286327					-0.012	0.003
C	0.209	1.001	361992					-0.013	0.003
A	0.191	0.994	244666	25949	218717	0.948		-0.053	0.012
T	0.221	0.998	379337	30146	349191	1.05		0.046	0.010
A	0.259	0.959	379337	6763	372574	1.08		0.078	0.020
A	0.259	0.959	379337	3581	375756	1.11		0.106	0.027
G	0.851	0.995	190114	16789	173325	1.08		0.078	0.017
G	0.851	0.995	84308					-0.031	0.007
C	0.534	0.999	372703					0.010	0.002
C	0.534	0.999	368085					-0.010	0.002
A	0.284	0.989	367440					0.013	0.003
G	0.363	0.990	286327					-0.012	0.003
C	0.433	0.998	379337	22982	356355	0.957		-0.044	0.010
C	0.433	0.998	368090					-0.010	0.002
C	0.433	0.998	379337	25708	353629	0.959		-0.042	0.010
C	0.785	1.000	379337	2684	376653	0.87		-0.139	0.032
T	0.219	0.993	379337	15380	363957	0.938		-0.064	0.015
A	0.259	0.959	379337	17919	361418	1.05		0.050	0.013
A	0.031	1.002	286327					-0.034	0.008
T	0.674	1.001	379337	3750	375587	1.11		0.106	0.025
A	0.259	0.959	379337	7511	371826	1.08		0.074	0.019
G	0.363	0.990	136810					-0.018	0.004
G	0.690	0.997	368464					-0.011	0.003
C	0.470	0.997	221786					-0.013	0.003
T	0.458	0.998	379337	48586	330751	0.971		-0.030	0.007
G	0.441	0.992	379337	2874	376463	0.892		-0.114	0.027
C	0.392	0.997	338402					-0.010	0.002
C	0.285	0.989	8941					-0.070	0.016
G	0.575	0.997	221786					-0.013	0.003
T	0.214	0.985	221786					-0.017	0.004
C	0.588	0.996	379337	25708	353629	1.04		0.040	0.010
A	0.517	0.999	357465					-0.010	0.002
A	0.259	0.959	379337	13240	366097	0.944		-0.057	0.015
C	0.148	0.998	215636					0.020	0.004
G	0.500	0.988	221786					-0.013	0.003
A	0.845	0.970	84308					0.030	0.007
C	0.142	0.995	136810					0.024	0.005
G	0.851	0.995	136810					-0.024	0.005
A	0.237	0.968	84308					-0.025	0.006
A	0.201	1.001	352973	131484	221489	1.03		0.028	0.006
A	0.259	0.959	379337	3150	376187	1.12		0.112	0.029
G	0.337	0.999	368464					-0.010	0.002
G	0.196	0.981	368088					-0.013	0.003
G	0.337	0.999	136810					-0.017	0.004
T	0.069	1.000	379337	25534	353803	1.08		0.075	0.018
A	0.262	0.993	286327					0.013	0.003
T	0.227	0.999	379337	70680	308657	1.03		0.030	0.007
A	0.259	0.959	379337	17923	361414	1.05		0.049	0.013
A	0.451	0.997	376688					0.010	0.002
A	0.259	0.959	379337	9666	369671	1.07		0.065	0.017

G	0.228	0.990	84308					0.025	0.006
G	0.176	0.999	378556					0.014	0.003
T	0.052	0.948	378482					-0.025	0.005
G	0.605	1.001	368088					0.010	0.002
T	0.077	0.997	286327					-0.023	0.005
C	0.433	0.998	286327					0.012	0.003
C	0.251	0.996	286327					-0.014	0.003
C	0.021	0.999	368085					-0.035	0.008
T	0.052	0.948	109888					-0.046	0.010
C	0.534	0.999	372673					0.010	0.002
C	0.409	0.995	361992					-0.010	0.002
G	0.857	0.998	221786					-0.019	0.004
T	0.548	0.996	286327					-0.012	0.003
T	0.501	0.998	378070					0.010	0.002
T	0.400	0.985	377028					0.010	0.002
T	0.065	1.001	379337	602	378735	1.49		0.396	0.099
T	0.065	1.001	379337	4021	375316	1.18		0.169	0.042
T	0.112	0.949	81101					-0.037	0.008
C	0.271	0.996	109888					0.021	0.005
C	0.548	0.994	175392					0.016	0.003
C	0.409	0.995	379337	20803	358534	0.956		-0.045	0.011
T	0.787	1.002	367440					0.012	0.003
C	0.478	1.001	379337	70680	308657	1.03		0.027	0.006
G	0.690	0.997	379337	70680	308657	0.972		-0.029	0.007
T	0.348	1.001	338402					0.012	0.003
T	0.348	1.001	221786					0.015	0.003
G	0.441	0.992	379337	3312	376025	1.11		0.104	0.025
G	0.226	1.000	368088					0.011	0.003
G	0.226	1.000	379337	45269	334068	0.967		-0.034	0.009
A	0.031	1.002	379337	6427	372910	0.773		-0.258	0.058
A	0.031	1.002	379337	11938	367399	0.83		-0.187	0.042
T	0.219	0.993	175392					-0.018	0.004
G	0.337	0.999	286327					-0.011	0.003
T	0.227	0.999	379337	71154	308183	1.03		0.030	0.007
T	0.227	0.999	175392					-0.016	0.004
T	0.204	0.971	175392					-0.019	0.004
C	0.515	0.998	221786					-0.014	0.003
G	0.687	1.000	379276					0.011	0.002
G	0.364	0.997	175392					0.016	0.004
G	0.441	0.992	379337	17994	361343	0.955		-0.046	0.011
T	0.528	0.979	330745	33898	296847	0.96		-0.041	0.008
T	0.528	0.979	378466	81619	296847	0.973		-0.027	0.006
T	0.528	0.979	286096					0.013	0.003
C	0.384	0.990	378624					-0.010	0.002
T	0.281	1.001	367440					-0.012	0.003
T	0.674	1.001	378070					0.010	0.002
C	0.785	1.000	379337	16244	363093	0.943		-0.059	0.014
C	0.785	1.000	357465					-0.012	0.003
C	0.785	1.000	379337	3234	376103	0.881		-0.126	0.030
T	0.415	0.984	244666	25949	218717	1.04		0.043	0.010

T	0.015	1.002	378556					-0.041	0.009
C	0.512	0.997	286327					0.011	0.003
G	0.333	0.991	379337	1288	378049	0.831		-0.186	0.044
A	0.259	0.959	379337	15396	363941	0.949		-0.053	0.014
A	0.259	0.959	378624					0.010	0.003
C	0.588	0.996	379337	24948	354389	0.961		-0.040	0.010
A	0.031	1.002	379337	10266	369071	0.819		-0.199	0.045
A	0.031	1.002	286327					-0.033	0.008
T	0.681	0.995	379337	27228	352109	0.957		-0.044	0.010
A	0.125	1.000	379337	2909	376428	1.16		0.145	0.038
A	0.259	0.959	379337	8041	371296	1.07		0.070	0.018
G	0.441	0.992	84308					0.020	0.005
G	0.399	1.000	379337	21438	357899	0.958		-0.043	0.010
G	0.399	1.000	379337	17919	361418	0.954		-0.048	0.011
T	0.852	0.998	286096					-0.017	0.004
A	0.125	1.000	379337	3618	375719	1.14		0.131	0.034
T	0.559	0.990	368084					0.010	0.002
A	0.509	0.998	109888					-0.018	0.004
T	0.227	0.999	379337	70458	308879	1.03		0.030	0.007
A	0.324	0.998	84308					0.023	0.005
C	0.810	1.005	378667					0.013	0.003
G	0.226	1.000	372085					-0.011	0.003
C	0.507	0.997	379337	5599	373738	1.09		0.083	0.019
G	0.279	0.988	190114	16789	173325	1.06		0.060	0.013
A	0.446	0.999	286327					-0.011	0.003
C	0.785	1.000	379337	42349	336988	0.962		-0.038	0.009
T	0.504	0.995	109888					-0.019	0.004
A	0.259	0.959	367434					-0.010	0.003
G	0.605	1.001	190114	16789	173325	0.95		-0.051	0.012
T	0.674	1.001	379337	35012	344325	1.04		0.035	0.009
T	0.674	1.001	379337					-0.010	0.002
C	0.176	0.998	286327					0.015	0.003
C	0.176	0.998	84308					0.028	0.006
T	0.347	0.995	286327					-0.012	0.003
G	0.262	0.998	184629					0.018	0.004
A	0.517	1.000	378556					-0.010	0.002
A	0.517	1.000	286096					-0.012	0.003
G	0.276	0.998	286327					0.013	0.003
A	0.409	0.973	379337	117149	262188	1.02		0.023	0.005
A	0.409	0.973	379337	16740	362597	1.05		0.049	0.012
A	0.131	0.993	286327					-0.017	0.004
G	0.226	1.000	379337	14418	364919	1.06		0.057	0.015
T	0.845	1.001	286327					0.015	0.004
C	0.785	1.000	379337	59218	320119	0.967		-0.034	0.008
A	0.517	1.000	286327					-0.012	0.003
A	0.125	1.000	379337	24466	354871	0.947		-0.055	0.014
A	0.125	1.000	379337	7058	372279	0.902		-0.104	0.027
C	0.233	0.994	221786					0.016	0.004
T	0.685	0.992	221786					0.014	0.003
A	0.313	0.997	379337	9793	369544	1.07		0.065	0.016

C	0.319	0.989	221786				0.014	0.003
T	0.095	0.999	175392				0.025	0.006
G	0.856	0.999	338402				0.015	0.003
T	0.227	0.999	379337	100835	278502	1.03	0.025	0.006
T	0.227	0.999	379337	38614	340723	1.04	0.037	0.009
C	0.501	0.990	338821				-0.011	0.002
C	0.501	0.990	379337	12089	367248	0.942	-0.060	0.013
A	0.125	1.000	379337	45453	333884	1.04	0.040	0.011
C	0.433	0.998	379337	117149	262188	0.978	-0.023	0.005
T	0.674	1.001	375001	22431	352570	1.04	0.043	0.011
A	0.509	0.998	190114	16789	173325	1.05	0.052	0.012
A	0.509	0.998	136810				-0.016	0.004
C	0.021	0.999	361992				-0.035	0.008
T	0.348	1.001	379337	13750	365587	0.942	-0.059	0.013
T	0.348	1.001	379337	20677	358660	0.952	-0.049	0.011
T	0.348	1.001	109888				0.020	0.004
C	0.332	0.990	244666	25949	218717	0.956	-0.045	0.010
A	0.405	0.991	221786				-0.013	0.003
A	0.579	0.996	378466	102077	276389	1.02	0.024	0.005
A	0.259	0.959	379337	6921	372416	1.08	0.075	0.020
A	0.631	1.001	379337	10532	368805	1.06	0.060	0.015
T	0.501	0.998	372213	77265	294948	0.977	-0.024	0.006
T	0.501	0.998	379337	62481	316856	0.974	-0.026	0.006
G	0.605	1.001	81222				0.021	0.005
G	0.690	0.997	379337	71154	308183	0.972	-0.028	0.007
C	0.384	0.990	372489				-0.010	0.002
A	0.259	0.959	379337	573	378764	0.755	-0.282	0.074
A	0.259	0.959	379337	19008	360329	1.05	0.046	0.012
C	0.507	0.997	379337	22982	356355	1.04	0.043	0.010
C	0.507	0.997	286327				0.011	0.003
G	0.453	1.002	301198	29896	271302	0.964	-0.037	0.009
A	0.125	1.000	379337	7591	371746	0.907	-0.097	0.026
G	0.399	1.000	379337	17923	361414	0.954	-0.047	0.011
G	0.399	1.000	379337	48586	330751	0.971	-0.029	0.007
A	0.262	0.993	379337	24948	354389	1.05	0.046	0.011
C	0.501	0.990	372673				0.010	0.002
C	0.501	0.990	372703				0.010	0.002
A	0.259	0.959	126132				-0.018	0.005
C	0.794	0.999	190114	16789	173325	1.07	0.067	0.015
A	0.125	1.000	367440				-0.013	0.004
A	0.125	1.000	330745	33898	296847	0.954	-0.048	0.013
A	0.125	1.000	379337	2048	377289	0.823	-0.194	0.051
T	0.080	0.976	136810				0.031	0.007
A	0.392	0.970	221786				0.014	0.003
T	0.347	0.995	378624				-0.010	0.002
A	0.125	1.000	379337	66837	312500	1.04	0.035	0.009
C	0.148	0.998	175392				-0.022	0.005
A	0.451	0.997	184629				0.014	0.003
A	0.096	0.995	286327				-0.020	0.004
G	0.399	1.000	372213	77265	294948	0.976	-0.024	0.006

A	0.433	0.999	361993					-0.011	0.002
A	0.433	0.999	286327					0.012	0.003
A	0.433	0.999	286096					0.012	0.003
A	0.125	1.000	379337	8764	370573	0.914		-0.090	0.024
A	0.125	1.000	379337	12632	366705	0.927		-0.076	0.020
A	0.125	1.000	379337	476	378861	1.39		0.329	0.087
G	0.377	0.981	84308					-0.021	0.005
G	0.377	0.981	379337	98116	281221	1.02		0.023	0.006
G	0.377	0.981	379337	48586	330751	1.03		0.029	0.007
G	0.522	1.001	221786					-0.013	0.003
T	0.227	0.999	379337	98116	281221	1.03		0.026	0.006
A	0.433	0.999	361992					-0.011	0.002
A	0.125	1.000	378085	15466	362619	0.934		-0.068	0.018
T	0.501	0.998	379337	1064	378273	0.837		-0.178	0.044
A	0.187	0.999	362904	32716	330188	0.956		-0.046	0.011
A	0.537	1.001	379337	1690	377647	1.16		0.146	0.035
G	0.176	0.999	286327					0.015	0.003
A	0.176	0.997	367440					0.013	0.003
C	0.181	0.986	84308					0.029	0.006
G	0.279	0.988	84308					-0.024	0.005
G	0.646	0.954	190114	16789	173325	0.945		-0.057	0.013
A	0.749	0.927	286327					-0.014	0.003
A	0.749	0.927	221786					-0.016	0.004
A	0.822	1.002	379337	12632	366705	1.08		0.075	0.017
T	0.576	0.991	286327					0.012	0.003
C	0.052	1.001	379337	3574	375763	1.25		0.224	0.049
G	0.050	0.993	221786					-0.030	0.007
A	0.441	0.992	379337	644	378693	0.783		-0.245	0.058
T	0.499	0.981	378482					0.011	0.002
G	0.226	1.000	379337	20677	358660	1.05		0.047	0.012
G	0.226	1.000	124141	66791	57350	1.04		0.038	0.010
A	0.649	0.999	84308					-0.021	0.005
A	0.631	1.001	379337	2202	377135	0.882		-0.126	0.031
T	0.725	0.988	372489					-0.011	0.003
T	0.725	0.988	372085					-0.011	0.003
T	0.725	0.988	221786					0.015	0.003
C	0.534	0.999	286327					-0.011	0.003
A	0.409	0.973	379337	17363	361974	1.05		0.048	0.011
C	0.176	0.998	357468					0.013	0.003
C	0.176	0.998	136810					0.021	0.005
A	0.275	0.990	173485	117954	55531	0.965		-0.036	0.008
A	0.275	0.990	173485	55531	117954	1.04		0.036	0.008
A	0.275	0.990	286327					0.013	0.003
A	0.275	0.990	136810					0.019	0.004
C	0.785	1.000	379337	536	378801	0.75		-0.288	0.069
C	0.433	0.998	377675					-0.010	0.002
A	0.259	0.959	379337	3825	375512	1.1		0.099	0.026
A	0.259	0.959	378466	81619	296847	0.975		-0.025	0.007
C	0.738	0.996	368087					0.011	0.003
T	0.224	0.993	173485	31618	141867	1.04		0.043	0.011

A	0.259	0.959	114395					-0.018	0.005
G	0.453	1.002	221786					0.012	0.003
C	0.293	1.001	109888					-0.021	0.005
T	0.112	0.949	81101					-0.036	0.008
A	0.313	0.997	221786					-0.013	0.003
G	0.364	0.997	136810					0.017	0.004
A	0.125	1.000	379337	32628	346709	0.954		-0.047	0.013
A	0.201	1.001	368088					-0.012	0.003
A	0.631	1.001	379337	3506	375831	0.905		-0.100	0.025
A	0.631	1.001	379337	3987	375350	0.911		-0.094	0.023
T	0.224	0.993	286327					-0.013	0.003
A	0.125	1.000	379337	17923	361414	1.06		0.061	0.016
T	0.224	0.993	379337	12632	366705	0.938		-0.064	0.016
G	0.180	0.995	221786					-0.017	0.004
C	0.233	0.994	84308					0.025	0.006
A	0.259	0.959	379337	417	378920	1.33		0.285	0.076
C	0.514	0.985	221786					-0.014	0.003
C	0.514	0.985	286327					-0.012	0.003
C	0.064	0.980	379337	17851	361486	1.1		0.092	0.023
C	0.541	0.977	109888					-0.019	0.004
T	0.866	0.998	286327					-0.018	0.004
A	0.444	0.987	379337	58564	320773	1.03		0.029	0.007
C	0.412	0.999	286327					0.011	0.003
A	0.409	0.973	379337	100835	278502	1.02		0.023	0.005
C	0.392	0.997	367440					0.010	0.002
C	0.478	1.001	379337	70458	308879	1.03		0.026	0.006
T	0.227	0.999	338402					0.012	0.003
A	0.451	0.997	357468					0.010	0.002
A	0.451	0.997	215636					0.013	0.003
T	0.529	0.994	372085					0.010	0.002
A	0.444	0.987	368088					-0.010	0.002
A	0.444	0.987	361988	49602	312386	1.03		0.030	0.007
G	0.851	0.995	175392					-0.020	0.005
A	0.125	1.000	379337	2722	376615	0.85		-0.163	0.044
A	0.125	1.000	379337	22370	356967	1.06		0.054	0.014
T	0.173	0.997	221786					0.018	0.004
T	0.552	0.991	367434					0.011	0.002
T	0.552	0.991	286327					-0.013	0.003
C	0.850	0.984	84308					0.031	0.007
T	0.674	1.001	109888					-0.018	0.005
G	0.291	0.999	367440					-0.012	0.003
A	0.631	1.001	379337	2909	376428	1.12		0.112	0.028
G	0.377	0.981	379337	27983	351354	1.04		0.038	0.009
C	0.156	1.001	368085					-0.014	0.003
C	0.020	1.000	221786					-0.047	0.011
G	0.228	0.990	379337	1737	377600	1.18		0.161	0.039
G	0.228	0.990	109888					0.021	0.005
G	0.592	0.994	378556					0.011	0.002
T	0.501	0.998	378466	86104	292362	0.978		-0.022	0.006
G	0.690	0.997	379337	70458	308879	0.972		-0.028	0.007

A	0.125	1.000	379337	8946	370391	0.916	-0.088	0.024
G	0.522	1.001	378556				0.009	0.002
G	0.279	0.988	244666	25949	218717	1.05	0.047	0.011
A	0.259	0.959	379337	614	378723	1.27	0.236	0.063
G	0.687	1.000	368090				0.011	0.003
C	0.233	0.994	221786				0.015	0.004
C	0.850	0.984	286327				0.017	0.004
C	0.850	0.984	286096				0.017	0.004
C	0.541	0.977	221786				-0.014	0.003
T	0.227	0.999	372489				0.011	0.003
C	0.470	0.997	84308				-0.021	0.005
A	0.125	1.000	379337	627	378710	1.33	0.287	0.077
G	0.333	0.991	368083				-0.010	0.002
A	0.259	0.959	379337	6055	373282	1.08	0.079	0.021
A	0.259	0.959	379337	27227	352110	0.961	-0.039	0.011
A	0.259	0.959	378085	25595	352490	1.04	0.040	0.011
A	0.259	0.959	379337	10641	368696	0.939	-0.063	0.017
A	0.259	0.959	379337	9101	370236	1.07	0.064	0.017
T	0.681	0.995	379337	27227	352110	0.958	-0.043	0.010
C	0.514	0.985	367440				-0.010	0.002
C	0.514	0.985	175392				-0.015	0.003
A	0.402	0.981	175392				-0.016	0.003
G	0.174	0.996	286327				0.015	0.003
C	0.635	0.966	286327				0.012	0.003
C	0.635	0.966	378482				-0.011	0.002
T	0.224	0.993	379337	15380	363957	0.944	-0.058	0.015
T	0.852	0.998	221786				-0.019	0.004
C	0.409	0.995	378466	102077	276389	1.02	0.022	0.005
C	0.409	0.995	84308				0.020	0.005
T	0.219	0.993	379337	20677	358660	0.948	-0.053	0.013
C	0.463	1.001	379337	14485	364852	1.05	0.052	0.012
A	0.313	0.997	361992				0.010	0.003
T	0.070	0.994	221786				0.026	0.006
T	0.070	0.994	221786				0.026	0.006
T	0.224	0.993	175392				0.016	0.004
G	0.291	0.999	367434				-0.012	0.003
A	0.257	1.001	379337	22354	356983	1.05	0.046	0.011
C	0.785	1.000	379337	18803	360534	0.948	-0.053	0.013
T	0.095	0.999	368090				0.017	0.004
T	0.095	0.999	175392				0.025	0.006
T	0.095	0.999	136810				0.028	0.007
A	0.125	1.000	379337	29226	350111	0.952	-0.049	0.013
A	0.125	1.000	358027	17543	340484	0.939	-0.062	0.017
A	0.822	1.002	379337	138035	241302	1.03	0.027	0.006
G	0.337	0.999	378466	92348	286118	0.978	-0.023	0.006
A	0.520	0.994	379337	93276	286061	0.977	-0.023	0.006
C	0.064	0.980	378214				0.019	0.005
G	0.337	0.999	357468				-0.010	0.003
G	0.377	0.981	379337	37555	341782	1.04	0.035	0.009
T	0.347	0.995	379337	14875	364462	0.95	-0.051	0.013

G	0.363	0.990	221786					-0.014	0.003
T	0.501	0.998	354922	62560	292362	0.975		-0.025	0.006
G	0.143	0.996	368087					-0.014	0.003
G	0.143	0.996	368085					0.014	0.003
G	0.454	0.997	378624					-0.010	0.002
T	0.519	0.899	378624					0.011	0.002
T	0.465	0.987	372673					0.010	0.002
G	0.607	1.003	372489					-0.010	0.002
T	0.559	0.990	367440					-0.010	0.002
G	0.228	0.990	376456	3936	372520	1.11		0.108	0.026
T	0.299	0.997	221786					-0.014	0.003
A	0.259	0.959	379337	1737	377600	1.15		0.142	0.039
A	0.259	0.959	136810					-0.016	0.004
G	0.337	0.999	367440					-0.010	0.002
T	0.787	1.002	221786					0.015	0.004
T	0.415	0.984	379337	54604	324733	1.03		0.029	0.007
C	0.534	0.999	379276					0.010	0.002
C	0.534	0.999	372489					0.010	0.002
C	0.293	0.993	379337	21524	357813	0.953		-0.048	0.011
C	0.293	0.993	357465					0.011	0.003
A	0.579	0.996	286327					0.012	0.003
A	0.259	0.959	377437	4825	372612	0.914		-0.090	0.024
A	0.259	0.959	379337	1666	377671	0.856		-0.155	0.042
A	0.125	1.000	379337	29690	349647	0.951		-0.050	0.014
T	0.109	0.994	379337	2375	376962	1.21		0.187	0.044
T	0.227	0.999	379337	11228	368109	1.07		0.063	0.016
C	0.319	0.989	378667					-0.011	0.002
G	0.718	1.001	368084					0.011	0.003
G	0.718	1.001	221786					-0.014	0.003
G	0.718	1.001	286327					-0.013	0.003
C	0.505	0.999	109888					0.018	0.004
A	0.031	1.002	367434					-0.029	0.007
C	0.785	1.000	379337	73015	306322	0.97		-0.031	0.007
C	0.507	0.997	379337	26549	352788	0.962		-0.038	0.009
T	0.026	0.999	378482					-0.032	0.007
A	0.139	1.002	379337	686	378651	1.35		0.297	0.070
T	0.681	0.995	361992					-0.011	0.003
A	0.125	1.000	379337	26787	352550	0.951		-0.051	0.014
A	0.081	1.002	307461					0.020	0.005
C	0.135	0.995	379337	13020	366317	1.08		0.076	0.018
C	0.507	0.997	379337	24948	354389	0.962		-0.039	0.009
C	0.507	0.997	379337	13674	365663	0.949		-0.053	0.013
G	0.065	0.999	221786					0.025	0.006
G	0.143	0.996	368088					-0.014	0.003
T	0.207	0.997	244666	25949	218717	0.951		-0.050	0.012
C	0.470	0.997	363873	94865	269008	1.02		0.023	0.005
C	0.392	0.997	379337	48586	330751	0.972		-0.028	0.007
G	0.333	0.991	368087					0.010	0.002
A	0.125	1.000	379337	17919	361418	1.06		0.060	0.016
T	0.050	0.963	221786					0.032	0.007

G	0.690	0.997	379337	9088	370249	0.935	-0.067	0.016
G	0.353	1.001	173485	31618	141867	0.96	-0.041	0.009
G	0.353	1.001	109888				-0.020	0.004
G	0.646	0.954	379337	275	379062	1.53	0.428	0.099
G	0.718	1.001	367434				0.011	0.003
A	0.259	0.959	379337	4116	375221	0.908	-0.097	0.026
T	0.533	1.003	136810				-0.016	0.004
C	0.785	1.000	379337	27686	351651	0.956	-0.045	0.011
G	0.226	1.000	379337	933	378404	0.799	-0.225	0.059
T	0.080	1.000	221786				0.024	0.006
C	0.478	1.001	379337	71154	308183	1.03	0.026	0.006
C	0.011	0.969	379337	13151	366186	1.27	0.236	0.055
G	0.605	1.001	379337	10412	368925	1.06	0.059	0.015
G	0.226	1.000	367440				0.011	0.003
A	0.191	0.994	379337	876	378461	1.26	0.234	0.057
A	0.191	0.994	298821	4869	293952	0.895	-0.110	0.027
T	0.645	0.999	198514				0.013	0.003
A	0.631	1.001	379337	100835	278502	1.02	0.022	0.005
G	0.687	1.000	338821				0.011	0.003
A	0.409	0.973	379337	22982	356355	1.04	0.042	0.010
T	0.221	0.998	379337	26564	352773	1.05	0.047	0.011
A	0.176	0.997	379337	10158	369179	0.922	-0.081	0.019
A	0.176	0.997	379337	10158	369179	0.922	-0.081	0.019
C	0.810	1.005	368088				-0.013	0.003
C	0.810	1.005	367440				-0.013	0.003
C	0.810	1.005	378624				0.012	0.003
A	0.346	1.000	368090				-0.011	0.002
A	0.346	1.000	175392				-0.015	0.004
T	0.204	0.971	367440				0.013	0.003
A	0.399	1.001	378556				-0.010	0.002
A	0.399	1.001	136810				-0.017	0.004
C	0.338	0.995	286096				-0.012	0.003
C	0.392	0.997	379337	55440	323897	0.974	-0.027	0.007
A	0.446	0.999	175392				-0.014	0.003
A	0.201	1.001	375001	22431	352570	1.05	0.051	0.012
T	0.227	0.999	379337	5990	373347	1.09	0.085	0.022
C	0.433	0.998	379337	98116	281221	0.977	-0.023	0.005
A	0.125	1.000	379337	11807	367530	0.928	-0.075	0.021
G	0.210	0.996	244666	25949	218717	1.05	0.051	0.012
C	0.126	0.998	244666	25949	218717	1.06	0.062	0.014
C	0.319	0.998	367689				0.011	0.003
T	0.227	0.999	286327				-0.012	0.003
C	0.392	0.997	368085				-0.009	0.002
T	0.674	1.001	357468				0.010	0.003
T	0.559	0.990	190114	16789	173325	1.05	0.049	0.012
T	0.845	1.001	379337	33807	345530	0.956	-0.045	0.011
C	0.338	0.995	379337	49571	329766	0.97	-0.031	0.008
C	0.124	0.997	190114	16789	173325	0.923	-0.080	0.019
T	0.404	0.998	109888				0.019	0.004
T	0.112	0.949	81222				-0.035	0.008

T	0.112	0.949	109888				0.030	0.007
G	0.515	0.997	379337	48586	330751	0.972	-0.029	0.007
G	0.276	0.998	109888				0.020	0.005
C	0.738	0.996	379337	4010	375327	1.11	0.102	0.026
A	0.409	0.973	379337	73015	306322	1.03	0.026	0.006
A	0.409	0.973	379337	16108	363229	1.05	0.047	0.012
A	0.409	0.973	379337	18111	361226	1.05	0.045	0.011
A	0.409	0.973	379337	98116	281221	1.02	0.023	0.006
C	0.588	0.996	379337	2316	377021	1.13	0.122	0.030
T	0.204	0.971	361992				0.012	0.003
T	0.204	0.971	361992				0.012	0.003
T	0.204	0.971	376456	77693	298763	1.03	0.031	0.007
C	0.588	0.996	379337	93276	286061	1.02	0.023	0.006
A	0.259	0.959	379337	62481	316856	0.973	-0.027	0.008
A	0.125	1.000	367689				-0.013	0.004
G	0.353	1.001	81101				-0.023	0.005
G	0.337	0.999	221786				-0.012	0.003
A	0.191	0.994	81101				-0.026	0.006
G	0.522	1.001	81101				-0.020	0.005
A	0.346	1.000	378214				0.010	0.002
C	0.785	1.000	379337	13512	365825	0.941	-0.061	0.015
A	0.409	0.973	379337	25708	353629	1.04	0.039	0.010
A	0.169	0.996	221786				0.017	0.004
A	0.169	0.996	84308				0.027	0.007
T	0.465	0.987	221786				0.013	0.003
G	0.210	0.996	136810				-0.020	0.005
G	0.305	0.995	378070				0.010	0.003
A	0.409	0.973	379337	15827	363510	1.05	0.048	0.012
C	0.243	0.988	367689				-0.011	0.003
C	0.064	0.980	357468				0.019	0.005
A	0.105	1.001	379337	3066	376271	1.19	0.173	0.039
A	0.259	0.959	379337	2722	376615	0.888	-0.119	0.033
A	0.176	0.997	367434				0.013	0.003
A	0.259	0.959	81101				-0.021	0.006
A	0.259	0.959	379337	7227	372110	1.07	0.070	0.019
G	0.228	0.990	301198	61082	240116	0.969	-0.031	0.008
G	0.228	0.990	378466	92348	286118	0.974	-0.026	0.006
G	0.824	0.995	286327				0.015	0.003
C	0.409	0.995	379337	18494	360843	0.956	-0.045	0.011
C	0.409	0.995	378466	81619	296847	1.02	0.023	0.006
C	0.512	0.997	244666	25949	218717	0.96	-0.040	0.010
T	0.219	0.993	379337	42753	336584	0.964	-0.037	0.009
T	0.219	0.993	379337	14418	364919	0.94	-0.062	0.015
T	0.227	0.999	379337	117149	262188	1.02	0.024	0.006
T	0.559	0.990	378298				0.009	0.002
C	0.409	0.995	379337	27695	351642	1.04	0.036	0.009
T	0.080	0.976	286327				0.021	0.005
G	0.646	0.954	221786				0.014	0.003
A	0.125	1.000	379337	18234	361103	1.06	0.058	0.016
C	0.115	0.995	286327				-0.020	0.004

A	0.631	1.001	324798	12412	312386	1.05	0.053	0.014
A	0.125	1.000	379337	9992	369345	0.923	-0.080	0.022
G	0.369	0.995	378482				-0.011	0.002
C	0.332	0.990	372085				0.010	0.002
G	0.321	0.998	109888				0.021	0.005
G	0.321	0.998	84308				0.024	0.005
A	0.343	0.991	136810				0.018	0.004
G	0.226	1.000	379337	2865	376472	1.12	0.115	0.031
G	0.143	0.996	378667				0.014	0.003
C	0.433	0.998	377028				0.010	0.002
G	0.377	0.981	376456	77693	298763	1.02	0.025	0.006
C	0.338	0.995	378193	54345	323848	1.03	0.028	0.007
A	0.262	0.993	379337	26314	353023	0.957	-0.044	0.010
C	0.052	1.001	175392				0.033	0.008
C	0.052	1.001	136810				0.038	0.009
C	0.126	0.998	379337	55476	323861	1.04	0.041	0.010
G	0.377	0.981	379337	17349	361988	1.05	0.045	0.011
C	0.392	0.997	379337	26314	353023	0.964	-0.037	0.009
T	0.465	0.987	286327				0.011	0.003
T	0.576	0.991	175392				0.015	0.003
C	0.020	1.000	221786				-0.046	0.011
A	0.631	1.001	379337	8764	370573	1.06	0.063	0.016
G	0.718	1.001	286327				-0.012	0.003
A	0.139	1.002	338402				-0.015	0.004
G	0.219	0.979	286096				-0.015	0.003
G	0.411	0.988	136810				-0.017	0.004
G	0.226	1.000	379337	3858	375479	1.1	0.100	0.027
G	0.399	1.000	379337	35608	343729	0.968	-0.033	0.008
T	0.681	0.995	379337	293	379044	0.694	-0.365	0.085
T	0.458	0.998	378482				0.009	0.002
T	0.465	0.987	372703				0.010	0.002
A	0.409	0.973	379337	27983	351354	1.04	0.037	0.009
G	0.337	0.999	190114	16789	173325	1.05	0.049	0.013
T	0.529	0.994	136810				-0.016	0.004
T	0.128	0.993	368090				0.015	0.003
T	0.128	0.993	379337	301	379036	1.56	0.445	0.105
T	0.221	0.998	286327				-0.014	0.003
A	0.031	1.002	379337	10641	368696	0.83	-0.186	0.044
T	0.348	1.001	379337	12632	366705	0.943	-0.059	0.014
T	0.348	1.001	379337				0.010	0.002
A	0.343	0.991	286327				0.012	0.003
C	0.507	0.997	379337	25708	353629	1.04	0.039	0.009
G	0.228	0.990	379337	10671	368666	0.935	-0.067	0.017
G	0.687	1.000	368090				0.010	0.003
C	0.501	0.990	379337	13512	365825	0.948	-0.054	0.013
C	0.409	0.995	361993				-0.010	0.002
A	0.125	1.000	379337	1935	377402	0.827	-0.190	0.053
A	0.125	1.000	350792	15315	335477	1.06	0.062	0.017
T	0.681	0.995	221786				-0.014	0.003
C	0.209	1.001	376456	65004	311452	0.967	-0.033	0.008

C	0.209	1.001	175392				0.017	0.004
T	0.187	0.987	190114	16789	173325	1.07	0.065	0.015
C	0.392	0.997	379337	10671	368666	0.946	-0.056	0.014
G	0.065	0.999	367425				-0.019	0.005
A	0.125	1.000	54254	7075	47179	0.905	-0.100	0.028
T	0.224	0.993	379337	6055	373282	0.916	-0.088	0.023
T	0.224	0.993	136810				-0.018	0.005
A	0.497	0.998	109888				-0.019	0.004
A	0.649	0.999	379337	6123	373214	1.08	0.078	0.019
A	0.388	0.997	286096				-0.011	0.003
G	0.338	0.994	221786				0.014	0.003
G	0.338	0.994	221786				0.014	0.003
C	0.304	0.977	161810				-0.017	0.004
T	0.270	1.000	136810				0.018	0.004
T	0.069	1.000	379337	20871	358466	1.08	0.078	0.019
G	0.605	1.001	379337	11478	367859	1.06	0.056	0.014
A	0.125	1.000	379337	9088	370249	0.92	-0.083	0.023
C	0.064	0.980	379337	10641	368696	1.12	0.112	0.029
T	0.319	0.999	136810				0.017	0.004
C	0.250	0.996	84308				-0.025	0.006
G	0.065	0.999	367422				-0.019	0.005
T	0.315	0.988	372673				0.011	0.003
G	0.363	0.990	136810				-0.017	0.004
T	0.219	0.993	372085				0.011	0.003
T	0.065	1.001	175392				0.026	0.007
A	0.177	0.998	109888				0.024	0.006
A	0.409	0.973	379337	17994	361343	1.05	0.044	0.011
C	0.785	1.000	379337	38614	340723	0.963	-0.037	0.009
C	0.478	1.001	357465				0.010	0.002
T	0.501	0.998	379337	98116	281221	0.979	-0.021	0.005
A	0.125	1.000	379337	6807	372530	0.907	-0.098	0.028
T	0.065	1.001	379337	1895	377442	1.25	0.227	0.060
T	0.674	1.001	379337	3556	375781	1.11	0.101	0.026
T	0.348	1.001	379337	42753	336584	0.968	-0.033	0.008
C	0.507	0.997	286327				0.011	0.003
C	0.124	0.997	84308				0.031	0.007
C	0.209	1.001	221786				0.015	0.004
T	0.065	1.001	379337	11484	367853	0.899	-0.107	0.028
C	0.588	0.996	379337	15572	363765	1.05	0.047	0.012
C	0.588	0.996	379337	42349	336988	1.03	0.030	0.008
G	0.453	1.002	301198	61082	240116	0.974	-0.026	0.007
C	0.409	0.995	377264	36479	340785	1.03	0.032	0.008
A	0.399	1.001	367434				0.010	0.002
C	0.156	1.001	367434				-0.014	0.003
G	0.377	0.981	379337	22553	356784	0.96	-0.040	0.010
T	0.501	0.998	379337	117149	262188	0.98	-0.020	0.005
A	0.096	0.995	378482				-0.017	0.004
C	0.507	0.997	379337	2524	376813	1.12	0.115	0.028
C	0.507	0.997	109888				0.017	0.004
A	0.259	0.959	379337	244	379093	1.42	0.350	0.098

C	0.635	0.966	338402					-0.011	0.003
T	0.681	0.995	368084					0.011	0.003
C	0.235	1.004	198514					0.015	0.004
C	0.156	1.001	367434					-0.013	0.003
C	0.534	0.999	379337	59359	319978	1.03		0.026	0.006
C	0.433	0.998	368090					-0.010	0.002
A	0.715	0.994	84308					0.023	0.005
A	0.715	0.994	109888					0.020	0.005
T	0.533	1.003	109888					-0.018	0.004
T	0.347	0.995	379337	10412	368925	0.942		-0.060	0.015
A	0.822	1.002	343797	37597	306200	1.04		0.042	0.010
G	0.321	0.998	286327					0.012	0.003
G	0.321	0.998	221786					0.014	0.003
C	0.541	0.977	286327					-0.011	0.003
C	0.209	1.001	84308					0.025	0.006
T	0.519	0.899	378214					0.010	0.002
T	0.316	0.975	379337	13928	365409	1.06		0.057	0.013
T	0.316	0.975	379337	396	378941	0.694		-0.365	0.084
T	0.316	0.975	379337	256	379081	1.49		0.398	0.091
C	0.412	0.999	367417	31940	335477	1.03		0.034	0.008
T	0.533	1.003	221786					-0.012	0.003
T	0.645	0.999	379337	17468	361869	0.956		-0.045	0.011
T	0.645	0.999	368085					0.010	0.002
T	0.645	0.999	368085					0.010	0.002
A	0.579	0.996	341738	65349	276389	1.03		0.027	0.006
A	0.579	0.996	378466	92348	286118	1.02		0.023	0.005
A	0.409	0.973	379337	16613	362724	1.05		0.046	0.012
A	0.409	0.973	379337	5176	374161	1.08		0.080	0.020
T	0.501	0.998	379337	2943	376394	0.903		-0.102	0.026
A	0.201	1.001	175392					-0.017	0.004
A	0.125	1.000	379337	617	378720	1.32		0.276	0.078
G	0.687	1.000	372213	77265	294948	1.03		0.025	0.006
G	0.687	1.000	379337	55476	323861	1.03		0.029	0.007
C	0.235	1.004	286327					0.013	0.003
G	0.840	0.994	350792	15315	335477	1.07		0.068	0.016
A	0.313	0.997	379337	20453	358884	1.04		0.044	0.011
A	0.313	0.997	379337	16832	362505	1.05		0.048	0.012
A	0.788	1.001	175392					0.018	0.004
C	0.217	0.994	114395					-0.022	0.005
G	0.337	0.999	379337	70680	308657	0.975		-0.025	0.007
G	0.337	0.999	379337					-0.009	0.002
C	0.478	1.001	379337	15919	363418	1.05		0.047	0.012
T	0.400	0.985	81222					0.020	0.005
A	0.446	0.999	376671	129864	246807	1.02		0.020	0.005
G	0.441	0.992	376688					-0.009	0.002
T	0.465	0.987	379337	4056	375281	0.911		-0.093	0.023
T	0.465	0.987	379337	4055	375282	0.911		-0.093	0.023
C	0.785	1.000	379337	30629	348708	0.96		-0.041	0.010
A	0.517	1.000	379337	924	378413	1.22		0.201	0.047
C	0.392	0.997	330745	33898	296847	0.968		-0.033	0.008

C	0.512	0.997	221786				0.012	0.003
C	0.739	1.003	372673				-0.012	0.003
C	0.739	1.003	372703				-0.012	0.003
C	0.739	1.003	169057				0.017	0.004
T	0.681	0.995	361993				-0.011	0.003
G	0.226	1.000	379337	54604	324733	0.971	-0.030	0.008
G	0.226	1.000	379337	21502	357835	1.04	0.044	0.012
G	0.226	1.000	379337	5990	373347	1.08	0.079	0.022
G	0.226	1.000	379337	614	378723	0.761	-0.273	0.074
G	0.226	1.000	379337	1182	378155	1.19	0.173	0.047
C	0.052	1.001	84308				0.047	0.011
G	0.857	0.998	286096				-0.016	0.004
T	0.065	1.001	379337	16565	362772	1.09	0.083	0.022
T	0.227	0.999	379337				0.010	0.003
G	0.114	0.999	286327				0.017	0.004
G	0.114	0.999	379337	206	379131	1.71	0.535	0.128
C	0.588	0.996	379337	1730	377607	1.15	0.138	0.035
C	0.588	0.996	379337	2407	376930	1.12	0.117	0.030
T	0.674	1.001	379276				0.010	0.002
T	0.065	1.001	375001	81876	293125	1.04	0.042	0.011
A	0.096	0.995	81222				0.036	0.008
G	0.605	1.001	379337	934	378403	0.833	-0.183	0.047
A	0.228	1.000	109888				-0.021	0.005
C	0.392	0.997	379337	23861	355476	0.963	-0.038	0.010
C	0.021	0.999	379337	15396	363941	1.17	0.154	0.038
A	0.509	0.998	335404	23018	312386	0.961	-0.040	0.010
T	0.299	0.997	190114	16789	173325	1.06	0.055	0.013
T	0.065	1.001	378466	5854	372612	1.14	0.133	0.036
T	0.112	0.949	377882	63217	314665	1.04	0.044	0.010
T	0.239	0.996	81222				-0.024	0.006
C	0.516	1.000	368085				-0.010	0.002
C	0.785	1.000	379337	24177	355160	0.956	-0.045	0.012
G	0.279	0.988	221786				-0.014	0.003
G	0.398	0.992	286327				-0.011	0.003
C	0.156	1.001	367434				-0.013	0.003
A	0.409	0.973	379337	27686	351651	1.04	0.036	0.009
A	0.259	0.959	379337	7058	372279	0.93	-0.073	0.021
G	0.441	0.992	358027	17543	340484	0.957	-0.044	0.011
A	0.409	0.973	361992				0.009	0.002
T	0.187	0.987	84308				-0.026	0.006
C	0.409	0.995	379337	5949	373388	1.08	0.074	0.019
C	0.156	1.001	379337	35426	343911	1.05	0.044	0.011
A	0.536	0.999	379337	1577	377760	0.868	-0.142	0.036
A	0.649	0.999	372673				-0.010	0.002
G	0.396	0.995	367440				0.010	0.002
G	0.396	0.995	136810				-0.016	0.004
C	0.209	1.001	367434				0.012	0.003
T	0.112	0.949	81222				-0.034	0.008
T	0.112	0.949	286327				-0.018	0.004
G	0.441	0.992	379337	100835	278502	0.979	-0.021	0.005

C	0.325	0.983	338402					-0.011	0.003
C	0.325	0.983	136810					0.018	0.004
T	0.674	1.001	379337	55476	323861	1.03		0.027	0.007
T	0.674	1.001	379337	33807	345530	1.03		0.033	0.009
T	0.065	1.001	377437	4825	372612	1.16		0.145	0.039
A	0.291	0.991	378556					0.011	0.003
A	0.291	0.991	286096					0.013	0.003
G	0.333	0.991	379337	98116	281221	1.02		0.023	0.006
A	0.259	0.959	379337	22266	357071	1.04		0.040	0.011
G	0.453	1.002	376456	77693	298763	0.977		-0.024	0.006
T	0.219	0.993	379337	15919	363418	1.06		0.055	0.014
G	0.226	1.000	379337	32628	346709	0.964		-0.036	0.010
C	0.507	0.997	84308					0.019	0.005
T	0.787	1.002	379337	10408	368929	1.07		0.071	0.018
G	0.377	0.981	377882	63217	314665	1.03		0.026	0.007
T	0.224	0.993	379276					-0.011	0.003
A	0.131	0.993	379337	1014	378323	0.733		-0.311	0.075
A	0.433	0.999	361992					-0.010	0.002
T	0.095	0.999	368090					0.016	0.004
A	0.096	0.995	190114	16789	173325	0.915		-0.088	0.021
G	0.337	0.999	379337	70458	308879	0.976		-0.025	0.007
C	0.785	1.000	221786					-0.014	0.004
A	0.669	0.996	379337	30146	349191	1.04		0.037	0.009
A	0.131	0.993	221786					-0.018	0.004
G	0.196	0.981	367434					-0.012	0.003
A	0.125	1.000	379337	23861	355476	1.05		0.049	0.014
T	0.519	0.899	286096					0.012	0.003
A	0.517	0.999	379337	27227	352110	0.964		-0.036	0.009
G	0.174	0.996	221786					0.017	0.004
A	0.177	0.998	286327					0.015	0.003
A	0.536	0.999	379337	1668	377669	0.872		-0.137	0.035
C	0.850	0.984	286327					0.016	0.004
A	0.388	0.997	379337	13240	366097	1.05		0.050	0.013
T	0.224	0.993	221786					-0.014	0.004
C	0.135	0.995	109888					-0.025	0.006
C	0.135	0.995	84308					-0.029	0.007
T	0.207	0.997	379337	211	379126	1.54		0.430	0.108
T	0.555	0.950	221786					-0.012	0.003
C	0.458	0.996	84308					-0.020	0.005
A	0.822	1.002	81222					-0.026	0.007
G	0.377	0.981	367434					0.009	0.002
C	0.293	1.001	378482					0.011	0.003
G	0.143	0.996	378482					0.013	0.003
G	0.226	1.000	368085					0.010	0.003
A	0.399	1.001	367440					-0.010	0.002
A	0.125	1.000	379337	3305	376032	1.13		0.125	0.036
C	0.338	0.995	379337	62481	316856	0.973		-0.027	0.007
C	0.064	0.980	379337	21215	358122	1.08		0.078	0.020
G	0.824	0.995	367434					0.013	0.003
G	0.824	0.995	367434					0.013	0.003

A	0.619	1.000	379337	2051	377286	1.15	0.137	0.033
A	0.497	0.998	379337	27695	351642	0.963	-0.038	0.009
A	0.446	0.999	136810				-0.015	0.004
T	0.227	0.999	379337	4407	374930	1.1	0.095	0.025
G	0.337	0.999	301198	61082	240116	0.974	-0.026	0.007
G	0.337	0.999	367440				0.009	0.002
G	0.337	0.999	379337	32628	346709	0.968	-0.033	0.009
G	0.453	1.002	375001	52680	322321	0.973	-0.027	0.007
A	0.237	0.968	136810				-0.018	0.005
G	0.718	1.001	125495	27312	98183	1.05	0.045	0.011
C	0.785	1.000	175392				-0.016	0.004
T	0.501	0.998	379337	121144	258193	0.981	-0.019	0.005
G	0.333	0.991	198514				-0.013	0.003
G	0.143	0.996	379337	71154	308183	1.04	0.035	0.009
C	0.384	0.990	379337	2227	377110	0.878	-0.131	0.032
C	0.810	1.005	379337				-0.012	0.003
C	0.052	1.001	379337	2352	376985	1.29	0.252	0.059
G	0.607	1.003	379337	42753	336584	0.97	-0.031	0.008
G	0.607	1.003	221786				0.013	0.003
G	0.515	0.997	379337	26314	353023	0.964	-0.036	0.009
A	0.259	0.959	379337	2921	376416	0.896	-0.110	0.031
A	0.259	0.959	379337	1070	378267	1.19	0.171	0.049
T	0.026	0.999	221786				-0.040	0.009
C	0.319	0.989	378624				-0.010	0.002
T	0.845	1.001	378482				0.013	0.003
A	0.822	1.002	372673				0.012	0.003
A	0.822	1.002	379337	13750	365587	1.07	0.068	0.017
A	0.139	1.002	378556				-0.013	0.003
A	0.191	0.994	221786				0.015	0.004
T	0.852	0.998	84308				-0.029	0.007
G	0.337	0.999	375001	22431	352570	0.962	-0.039	0.010
G	0.607	1.003	190114	16789	173325	0.951	-0.050	0.012
G	0.210	0.996	173485	117954	55531	0.964	-0.037	0.009
G	0.210	0.996	173485	55531	117954	1.04	0.037	0.009
G	0.279	0.988	81101				-0.023	0.006
A	0.259	0.959	379337	7808	371529	1.07	0.065	0.019
C	0.534	0.999	379337	17919	361418	1.05	0.045	0.011
C	0.534	0.999	221786				-0.012	0.003
G	0.398	0.992	136810				-0.016	0.004
C	0.412	0.999	379337	21438	357899	1.04	0.040	0.010
A	0.749	0.927	175392				-0.017	0.004
G	0.399	1.000	379337	355	378982	0.731	-0.314	0.080
T	0.347	0.995	379337	11478	367859	0.945	-0.056	0.014
A	0.191	0.994	379337	22553	356784	0.951	-0.050	0.013
G	0.226	1.000	343797	109193	234604	1.02	0.022	0.006
G	0.856	0.999	378667				-0.013	0.003
G	0.125	0.994	221786				0.019	0.005
C	0.409	0.995	379337	17919	361418	0.957	-0.044	0.011
C	0.412	0.999	221786				0.012	0.003
G	0.441	0.992	338402				-0.010	0.002

T	0.299	0.997	244666	25949	218717	1.04	0.043	0.011
C	0.409	0.995	379337	5082	374255	1.08	0.079	0.020
T	0.645	0.999	338931	25460	313471	1.04	0.037	0.010
A	0.509	0.998	379337	1003	378334	1.2	0.179	0.045
C	0.409	0.995	201272	64159	137113	1.03	0.027	0.007
C	0.409	0.995	379337	17923	361414	0.957	-0.044	0.011
T	0.529	0.994	379337	62481	316856	1.03	0.026	0.006
T	0.674	1.001	379337	7058	372279	1.07	0.071	0.019
C	0.739	1.003	161810				0.017	0.004
G	0.856	0.999	379337	26549	352788	1.05	0.053	0.013
G	0.228	0.990	286327				0.012	0.003
G	0.228	0.990	379337	748	378589	1.26	0.227	0.059
G	0.398	0.992	221786				-0.012	0.003
G	0.114	0.999	84308				0.031	0.008
T	0.315	0.988	372703				0.010	0.003
T	0.315	0.988	221786				-0.013	0.003
C	0.810	1.005	377028				0.012	0.003
G	0.369	0.995	286327				-0.012	0.003
A	0.649	0.999	372703				-0.010	0.002
G	0.333	0.991	379337	9992	369345	1.06	0.060	0.015
G	0.333	0.991	221786				-0.013	0.003
T	0.347	0.995	84308				0.020	0.005
C	0.135	0.995	378070				0.014	0.003
C	0.392	0.997	368084				0.009	0.002
C	0.392	0.997	379337	2840	376497	1.11	0.103	0.027
A	0.125	1.000	111987				0.022	0.006
C	0.478	1.001	379337	350	378987	0.734	-0.309	0.077
T	0.227	0.999	368088				0.010	0.003
C	0.738	0.996	84308				0.021	0.006
G	0.337	0.999	379337	12088	367249	0.949	-0.052	0.014
G	0.338	0.994	286327				0.012	0.003
A	0.388	0.997	379337	2874	376463	1.11	0.104	0.027
A	0.388	0.997	379337	8905	370432	1.06	0.060	0.016
A	0.444	0.987	362904	32716	330188	1.03	0.034	0.008
T	0.227	0.999	379337	30391	348946	1.04	0.038	0.010
T	0.080	1.000	221786				0.023	0.006
A	0.346	1.000	136810				-0.017	0.004
T	0.347	0.995	379337	3480	375857	0.905	-0.100	0.026
C	0.021	0.999	372085				0.032	0.008
C	0.409	0.995	341738	65349	276389	1.02	0.024	0.006
A	0.520	0.994	368085				0.009	0.002
A	0.125	1.000	379337	2431	376906	0.852	-0.160	0.046
G	0.353	1.001	136810				0.017	0.004
C	0.250	0.996	379337	12877	366460	0.938	-0.064	0.015
A	0.313	0.997	368088				-0.010	0.003
A	0.324	0.998	379337	275	379062	1.44	0.364	0.087
A	0.409	0.973	367440				0.009	0.002
G	0.690	0.997	361992				-0.010	0.003
C	0.253	1.001	361992				-0.011	0.003
C	0.635	0.966	286327				0.012	0.003

G	0.687	1.000	379276				0.010	0.002
G	0.687	1.000	368090				0.010	0.003
A	0.845	0.970	221786				0.017	0.004
G	0.226	1.000	350792	15315	335477	0.951	-0.051	0.014
C	0.433	0.998	379337	27686	351651	0.964	-0.036	0.009
C	0.433	0.998	368085				0.009	0.002
C	0.433	0.998	379337	71154	308183	0.976	-0.025	0.006
A	0.625	0.995	173485	31618	141867	1.04	0.039	0.009
T	0.866	0.998	136810				-0.024	0.006
T	0.866	0.998	286096				-0.017	0.004
T	0.400	0.985	81101				0.020	0.005
G	0.276	0.998	379337	23861	355476	0.959	-0.042	0.011
T	0.674	1.001	379337	65317	314020	1.03	0.025	0.007
C	0.285	0.989	221786				0.013	0.003
G	0.607	1.003	379337	218	379119	1.52	0.419	0.105
G	0.333	0.991	379337	11807	367530	1.06	0.055	0.014
A	0.387	0.991	286327				0.011	0.003
T	0.227	0.999	341738	65349	276389	1.03	0.027	0.007
A	0.257	1.001	372213	77265	294948	1.03	0.026	0.007
G	0.515	0.997	379337	21438	357899	0.961	-0.040	0.010
G	0.515	0.997	379337	59359	319978	0.975	-0.025	0.006
A	0.291	0.991	221786				0.014	0.003
A	0.563	0.992	109888				0.018	0.004
C	0.669	0.999	368084				-0.011	0.002
A	0.579	0.996	286327				-0.011	0.003
C	0.392	0.997	221786				0.012	0.003
C	0.505	0.999	286327				0.011	0.003
A	0.291	0.991	109888				0.020	0.005
A	0.388	0.997	379337	13151	366186	1.05	0.049	0.013
A	0.388	0.997	379337	562	378775	1.26	0.230	0.060
A	0.388	0.997	361992				0.009	0.002
G	0.291	0.999	286327				0.013	0.003
C	0.588	0.996	116972				-0.016	0.004
G	0.337	0.999	379337	71154	308183	0.976	-0.024	0.006
G	0.687	1.000	367440				-0.010	0.003
T	0.227	0.999	379337	54604	324733	1.03	0.030	0.008
T	0.227	0.999	375426	59277	316149	1.03	0.028	0.008
T	0.227	0.999	379337	25121	354216	1.04	0.041	0.011
A	0.509	0.998	286327				-0.010	0.003
C	0.524	0.997	286327				0.012	0.003
T	0.845	1.001	379337	1001	378336	0.798	-0.226	0.057
A	0.631	1.001	81101				-0.019	0.005
T	0.364	0.998	372673				-0.010	0.002
A	0.405	0.991	286096				-0.011	0.003
G	0.840	0.994	372213	77265	294948	1.03	0.032	0.008
C	0.507	0.997	379337	98116	281221	0.979	-0.021	0.005
T	0.415	0.984	379337	73015	306322	1.03	0.025	0.006
T	0.415	0.984	379337	70680	308657	1.03	0.025	0.006
T	0.415	0.984	379337	70458	308879	1.03	0.025	0.006
G	0.337	0.999	379337	12231	367106	0.95	-0.051	0.014

C	0.514	0.985	221786					-0.013	0.003
A	0.563	0.992	301198	61082	240116	0.973		-0.027	0.007
G	0.305	0.995	372085					-0.010	0.003
A	0.451	0.997	379337	2931	376406	1.11		0.102	0.026
G	0.441	0.992	377675					-0.009	0.002
G	0.338	0.994	352973	131484	221489	1.02		0.022	0.005
G	0.338	0.994	367434					0.010	0.002
C	0.325	0.983	244666	25949	218717	0.957		-0.043	0.010
C	0.325	0.983	190114	16789	173325	0.947		-0.055	0.013
T	0.112	0.949	368090					0.015	0.004
G	0.262	0.998	175392					0.017	0.004
G	0.718	1.001	378466	102077	276389	1.02		0.023	0.006
C	0.384	0.990	286327					0.011	0.003
A	0.451	0.997	372489					-0.009	0.002
C	0.409	0.995	379337	24466	354871	1.04		0.037	0.010
C	0.739	1.003	286096					-0.013	0.003
C	0.285	0.989	377028					-0.010	0.003
C	0.285	0.989	190114	16789	173325	0.948		-0.053	0.014
A	0.261	0.990	379337	4023	375314	1.11		0.102	0.025
G	0.226	1.000	379337	6112	373225	0.924		-0.080	0.022
G	0.226	1.000	379337					0.010	0.003
C	0.738	0.996	379337	45691	333646	0.971		-0.030	0.008
T	0.645	0.999	368090					0.009	0.002
T	0.674	1.001	379337	71154	308183	1.02		0.025	0.007
G	0.305	0.995	379337	29471	349866	1.04		0.037	0.009
C	0.588	0.996	379337	70458	308879	1.02		0.024	0.006
C	0.588	0.996	379337	32480	346857	0.969		-0.032	0.008
G	0.856	0.999	286327					0.015	0.004
A	0.451	0.997	379337	559	378778	1.26		0.231	0.060
C	0.243	0.988	84308					-0.022	0.006
G	0.453	1.002	379337	98116	281221	0.979		-0.021	0.005
G	0.453	1.002	190114	16789	173325	1.05		0.047	0.012
G	0.690	0.997	379337	8946	370391	0.938		-0.064	0.016
C	0.412	0.999	221786					0.012	0.003
A	0.259	0.959	124452	11730	112722	1.06		0.056	0.016
T	0.065	1.001	379337	2943	376394	1.19		0.178	0.049
T	0.065	1.001	136810					0.028	0.008
T	0.015	1.002	244666	25949	218717	1.16		0.152	0.038
C	0.293	0.993	367440					0.011	0.003
C	0.293	0.993	136810					0.017	0.004
G	0.840	0.994	379337	29738	349599	1.05		0.048	0.012
A	0.191	0.994	190114	16789	173325	0.942		-0.060	0.016
T	0.852	0.998	136810					-0.023	0.005
C	0.507	0.997	379337	24177	355160	0.963		-0.037	0.010
C	0.507	0.997	368087					0.009	0.002
A	0.517	1.000	221786					-0.012	0.003
G	0.180	0.995	136810					-0.020	0.005
G	0.353	1.001	175392					0.015	0.004
C	0.470	0.997	378624					-0.009	0.002
A	0.169	0.996	84308					0.026	0.007

A	0.446	0.999	215636					-0.012	0.003
T	0.347	0.995	372085					-0.009	0.002
T	0.674	1.001	379337	2941	376396	1.11		0.107	0.028
A	0.743	0.996	136810					-0.018	0.004
A	0.131	0.993	175392					-0.020	0.005
C	0.243	0.988	379337	1816	377521	1.16		0.147	0.038
T	0.270	1.000	379337	602	378735	0.759		-0.275	0.070
A	0.259	0.959	379337	66837	312500	1.02		0.024	0.007
G	0.114	0.999	357468					-0.015	0.004
A	0.625	0.995	361993					-0.010	0.002
A	0.537	1.001	379337	37555	341782	1.03		0.032	0.008
C	0.021	0.999	368085					-0.032	0.008
C	0.021	0.999	361993					-0.032	0.008
T	0.224	0.993	378624					-0.010	0.003
G	0.228	0.990	379337	100835	278502	0.976		-0.024	0.006
G	0.228	0.990	379337	98116	281221	0.976		-0.025	0.007
A	0.517	1.000	379337	3582	375755	1.1		0.098	0.024
C	0.782	0.996	379337	28985	350352	1.05		0.048	0.011
G	0.337	0.999	109888					-0.017	0.005
G	0.228	0.990	379337	546	378791	1.3		0.259	0.068
C	0.319	0.998	368088					-0.010	0.002
T	0.213	1.001	84308					-0.025	0.006
A	0.497	0.998	286327					-0.011	0.003
G	0.687	1.000	379337	23861	355476	1.04		0.040	0.010
G	0.114	0.999	109888					0.027	0.007
T	0.845	1.001	221786					0.016	0.004
C	0.409	0.995	357468					0.009	0.002
T	0.674	1.001	379337	48586	330751	1.03		0.028	0.007
A	0.257	1.001	379337	3502	375835	1.11		0.105	0.027
G	0.226	1.000	81101					0.021	0.006
A	0.259	0.959	379337	2272	377065	1.12		0.116	0.034
A	0.313	0.997	379337	27686	351651	1.04		0.037	0.010
A	0.313	0.997	109888					-0.017	0.005
A	0.537	1.001	379337	10158	369179	1.06		0.056	0.014
A	0.537	1.001	379337	10158	369179	1.06		0.056	0.014
T	0.227	0.999	379337	49571	329766	1.03		0.031	0.008
T	0.227	0.999	368090					0.010	0.003
A	0.259	0.959	379337	1532	377805	1.15		0.140	0.041
A	0.259	0.959	379337	10266	369071	0.943		-0.059	0.017
A	0.259	0.959	379337	6807	372530	0.932		-0.071	0.021
C	0.458	0.996	377882	15108	362774	0.953		-0.048	0.012
C	0.794	0.999	244666	25949	218717	1.05		0.050	0.012
G	0.160	0.992	367434					-0.013	0.003
C	0.176	0.998	367668					-0.012	0.003
G	0.690	0.997	361992					-0.010	0.003
A	0.259	0.959	378298					0.009	0.003
A	0.259	0.959	379337	1434	377903	0.858		-0.154	0.045
G	0.377	0.981	379337	21502	357835	0.961		-0.039	0.011
G	0.377	0.981	379337	40335	339002	1.03		0.030	0.008
G	0.377	0.981	379337	13150	366187	1.05		0.049	0.013

T	0.052	0.948	84308					-0.049	0.011
G	0.607	1.003	367434					-0.009	0.002
A	0.649	0.999	379337	20453	358884	1.04		0.042	0.011
A	0.649	0.999	286327					0.011	0.003
C	0.064	0.980	379337	10266	369071	1.12		0.109	0.029
C	0.064	0.980	361992					0.018	0.005
C	0.064	0.980	357465					0.018	0.005
C	0.064	0.980	379337	45114	334223	1.06		0.055	0.015
G	0.143	0.996	379337	70458	308879	1.04		0.035	0.009
G	0.143	0.996	367434					0.013	0.003
G	0.291	0.999	367440					0.011	0.003
G	0.291	0.999	286327					-0.012	0.003
A	0.343	0.991	221786					0.013	0.003
T	0.559	0.990	379337	40335	339002	0.971		-0.029	0.008
G	0.441	0.992	371714	140736	230978	0.982		-0.019	0.005
C	0.209	1.001	379337	32685	346652	0.959		-0.041	0.010
C	0.209	1.001	286327					0.013	0.003
C	0.810	1.005	368090					0.012	0.003
G	0.575	0.997	84308					-0.020	0.005
T	0.203	1.000	221786					-0.015	0.004
T	0.347	0.995	379337	1152	378185	0.842		-0.172	0.045
G	0.441	0.992	378482					0.009	0.002
A	0.259	0.959	379337	138035	241302	1.02		0.019	0.006
G	0.851	0.995	244666	25949	218717	1.06		0.056	0.014
A	0.275	0.990	379337	6134	373203	0.919		-0.084	0.021
G	0.276	0.998	379337	7629	371708	0.93		-0.073	0.019
G	0.337	0.999	81101					0.019	0.005
G	0.226	1.000	378624					-0.010	0.003
G	0.441	0.992	379337	11334	368003	0.95		-0.052	0.014
A	0.715	0.994	136810					0.018	0.004
T	0.501	0.998	379337	32685	346652	0.969		-0.031	0.008
G	0.690	0.997	161810					0.015	0.004
A	0.191	0.994	379337	55476	323861	0.968		-0.032	0.008
G	0.441	0.992	379337	12088	367249	0.951		-0.050	0.013
T	0.681	0.995	379337	62481	316856	0.972		-0.028	0.007
A	0.715	0.994	175392					0.015	0.004
T	0.065	1.001	379337	1577	377760	1.26		0.235	0.066
T	0.645	0.999	379337	31466	347871	0.968		-0.033	0.009
C	0.278	0.998	286327					0.013	0.003
C	0.278	0.998	221786					-0.015	0.003
G	0.196	0.981	367434					0.012	0.003
A	0.520	0.994	367440					0.009	0.002
G	0.377	0.981	368085					-0.009	0.002
G	0.353	1.001	84308					-0.021	0.005
G	0.143	0.996	372085					0.013	0.003
A	0.257	1.001	379337	21438	357899	1.04		0.044	0.011
C	0.135	0.995	221786					-0.017	0.004
G	0.597	0.989	286327					-0.011	0.003
T	0.362	0.990	190114	16789	173325	1.05		0.053	0.013
A	0.259	0.959	379337	2687	376650	1.11		0.107	0.032

G	0.143	0.996	379337	70680	308657	1.03	0.034	0.009
G	0.399	1.000	379337				-0.009	0.002
G	0.337	0.999	84308				-0.019	0.005
T	0.224	0.993	379337	14418	364919	0.946	-0.055	0.015
T	0.348	1.001	343797	31646	312151	1.04	0.036	0.009
C	0.478	1.001	376456	77693	298763	1.02	0.023	0.006
C	0.412	0.999	378070				0.009	0.002
A	0.259	0.959	379337	589	378748	1.24	0.219	0.065
T	0.347	0.995	379337	58564	320773	0.974	-0.026	0.007
G	0.500	0.988	84308				-0.020	0.005
A	0.096	0.995	221786				-0.021	0.005
C	0.669	0.999	286327				-0.012	0.003
G	0.399	1.000	377028				0.009	0.002
G	0.441	0.992	379337	1139	378198	0.851	-0.162	0.043
T	0.213	1.001	377270	8178	369092	1.08	0.078	0.019
T	0.124	0.983	221786				0.019	0.005
A	0.520	0.994	221786				-0.012	0.003
T	0.213	1.001	286327				-0.013	0.003
G	0.377	0.981	379337	845	378492	1.2	0.185	0.050
G	0.411	0.988	286327				-0.011	0.003
C	0.541	0.977	84308				-0.020	0.005
T	0.065	1.001	379337	2722	376615	1.2	0.182	0.051
G	0.226	1.000	363873	94865	269008	1.02	0.023	0.006
G	0.228	0.990	379337	3687	375650	0.897	-0.109	0.029
G	0.228	0.990	198514				-0.014	0.004
G	0.690	0.997	379337	54604	324733	0.972	-0.028	0.007
G	0.690	0.997	367668				-0.010	0.003
G	0.690	0.997	221786				0.013	0.003
G	0.856	0.999	379337	24948	354389	1.05	0.053	0.014
G	0.515	0.997	244666	25949	218717	0.963	-0.038	0.010
T	0.681	0.995	377270	32766	344504	0.965	-0.035	0.009
G	0.522	1.001	81222				-0.019	0.005
T	0.501	0.998	301198	24505	276693	0.965	-0.035	0.009
T	0.501	0.998	378214				-0.009	0.002
A	0.125	1.000	379337	30391	348946	1.04	0.043	0.013
T	0.224	0.993	379337	20871	358466	0.956	-0.045	0.012

LCI95	UCI95	P	FDR	FDR.Flag	Quant.Resp.Trait
4.340	4.970	0	0	TRUE	0
4.500	5.060	0	0	TRUE	0
-0.085	-0.076	3.53E-253	8.50E-250	TRUE	0
0.067	0.077	1.09E-197	2.63E-194	TRUE	0
0.064	0.074	3.23E-183	3.90E-180	TRUE	0
2.350	2.670	3.63E-176	8.76E-173	TRUE	0
0.072	0.083	1.65E-160	3.98E-157	TRUE	1
0.134	0.156	1.62E-158	3.91E-155	TRUE	1
0.068	0.079	1.15E-152	2.78E-149	TRUE	0
0.061	0.072	3.38E-139	8.15E-136	TRUE	1
0.141	0.165	1.46E-136	1.77E-133	TRUE	1
0.062	0.073	8.81E-137	2.12E-133	TRUE	1
0.075	0.087	1.08E-135	1.30E-132	TRUE	1
0.066	0.078	1.68E-127	2.03E-124	TRUE	1
0.061	0.072	4.35E-125	1.05E-121	TRUE	1
-0.061	-0.051	1.09E-121	1.32E-118	TRUE	0
2.240	2.600	8.19E-121	9.87E-118	TRUE	0
-0.062	-0.053	7.23E-119	5.81E-116	TRUE	0
-0.060	-0.051	9.58E-119	7.70E-116	TRUE	0
0.066	0.079	7.06E-115	8.51E-112	TRUE	1
0.056	0.067	1.09E-114	1.32E-111	TRUE	1
-0.075	-0.063	7.37E-115	1.78E-111	TRUE	1
0.063	0.075	4.31E-110	3.46E-107	TRUE	1
0.162	0.194	3.81E-107	9.18E-104	TRUE	1
0.156	0.187	1.68E-103	4.04E-100	TRUE	0
-0.080	-0.067	5.13E-103	6.19E-100	TRUE	1
0.060	0.072	1.24E-102	7.46E-100	TRUE	1
0.044	0.053	1.31E-99	3.16E-96	TRUE	0
0.131	0.158	4.92E-97	3.96E-94	TRUE	1
0.069	0.084	4.16E-96	2.51E-93	TRUE	1
-0.054	-0.045	3.43E-96	8.28E-93	TRUE	0
0.167	0.203	9.74E-90	1.17E-86	TRUE	1
0.044	0.054	7.62E-90	1.84E-86	TRUE	0
0.060	0.074	6.25E-84	3.01E-81	TRUE	1
0.047	0.057	2.87E-82	6.92E-79	TRUE	1
0.071	0.087	1.33E-80	6.41E-78	TRUE	1
0.133	0.164	2.29E-80	1.38E-77	TRUE	1
1.290	1.360	2.12E-80	1.70E-77	TRUE	0
0.039	0.048	2.08E-80	5.01E-77	TRUE	0
0.047	0.058	7.29E-79	1.76E-75	TRUE	0
-0.062	-0.051	9.84E-79	2.37E-75	TRUE	0
0.044	0.054	2.28E-76	1.83E-73	TRUE	1
-0.061	-0.049	3.28E-75	2.64E-72	TRUE	1
0.058	0.073	1.86E-74	1.50E-71	TRUE	1
-0.057	-0.046	5.92E-74	7.14E-71	TRUE	0
-0.077	-0.062	9.74E-73	5.87E-70	TRUE	1
0.049	0.061	6.57E-73	7.92E-70	TRUE	1

0.065	0.081	2.21E-71	1.33E-68	TRUE	1
0.073	0.091	2.46E-70	9.90E-68	TRUE	1
-0.055	-0.044	2.77E-70	2.23E-67	TRUE	0
-0.051	-0.041	1.86E-69	4.48E-66	TRUE	0
0.061	0.076	5.73E-68	2.30E-65	TRUE	1
0.847	0.876	5.97E-67	2.88E-64	TRUE	0
1.140	1.180	5.97E-67	2.88E-64	TRUE	0
0.046	0.058	3.40E-66	2.05E-63	TRUE	1
-0.065	-0.052	1.01E-65	4.88E-63	TRUE	1
0.130	0.164	1.84E-64	8.85E-62	TRUE	1
-0.057	-0.045	3.47E-64	1.40E-61	TRUE	1
-0.043	-0.034	7.85E-65	1.89E-61	TRUE	0
-0.082	-0.065	3.36E-63	1.16E-60	TRUE	1
0.816	0.852	6.70E-62	2.69E-59	TRUE	0
0.072	0.091	1.59E-62	3.84E-59	TRUE	1
0.038	0.049	2.41E-61	1.16E-58	TRUE	1
0.150	0.191	1.12E-60	8.99E-58	TRUE	1
0.076	0.097	3.54E-60	1.22E-57	TRUE	1
-0.065	-0.051	2.69E-60	2.16E-57	TRUE	0
-0.044	-0.035	1.06E-60	2.57E-57	TRUE	0
0.142	0.181	1.64E-59	6.60E-57	TRUE	1
0.067	0.086	4.44E-59	1.53E-56	TRUE	0
-0.048	-0.038	4.19E-59	5.05E-56	TRUE	1
-0.060	-0.047	9.28E-58	2.24E-54	TRUE	0
0.034	0.044	1.02E-57	2.46E-54	TRUE	0
-0.063	-0.049	7.65E-57	4.61E-54	TRUE	0
0.060	0.078	2.81E-56	9.68E-54	TRUE	1
-0.062	-0.049	4.80E-56	2.32E-53	TRUE	0
0.037	0.047	1.56E-56	3.76E-53	TRUE	1
0.038	0.048	6.17E-56	1.49E-52	TRUE	0
0.062	0.080	8.94E-55	4.31E-52	TRUE	1
0.047	0.061	5.50E-55	4.42E-52	TRUE	1
0.038	0.049	2.86E-54	9.86E-52	TRUE	0
-0.060	-0.046	4.05E-54	1.22E-51	TRUE	1
0.862	0.891	7.79E-55	1.88E-51	TRUE	0
0.038	0.048	1.44E-53	4.33E-51	TRUE	0
-0.053	-0.041	1.74E-53	1.05E-50	TRUE	1
0.032	0.042	2.16E-53	5.21E-50	TRUE	0
-0.047	-0.036	3.47E-53	8.37E-50	TRUE	1
0.063	0.081	6.70E-53	1.62E-49	TRUE	0
-0.042	-0.033	6.94E-53	1.67E-49	TRUE	0
0.074	0.096	3.06E-52	3.69E-49	TRUE	1
-0.042	-0.032	5.72E-52	6.90E-49	TRUE	0
0.030	0.039	6.01E-52	1.45E-48	TRUE	0
0.039	0.051	4.27E-51	1.71E-48	TRUE	1
-0.059	-0.046	1.68E-51	4.05E-48	TRUE	1
0.030	0.040	7.32E-51	1.15E-47	TRUE	0
-0.040	-0.030	9.55E-51	1.15E-47	TRUE	0
-0.053	-0.041	7.27E-50	1.95E-47	TRUE	1
0.037	0.048	2.11E-50	2.55E-47	TRUE	0

-0.059	-0.045	9.36E-50	4.51E-47	TRUE	1
0.034	0.044	1.60E-49	5.50E-47	TRUE	1
0.034	0.044	1.02E-49	8.22E-47	TRUE	1
-0.045	-0.035	4.86E-50	1.17E-46	TRUE	1
0.060	0.079	5.31E-49	1.60E-46	TRUE	0
0.103	0.134	3.53E-49	4.26E-46	TRUE	0
0.149	0.195	1.01E-48	6.07E-46	TRUE	1
0.036	0.047	8.99E-49	7.22E-46	TRUE	0
0.102	0.134	1.12E-48	9.01E-46	TRUE	0
0.035	0.046	4.62E-48	1.11E-45	TRUE	0
-0.046	-0.035	5.79E-48	1.27E-45	TRUE	0
-0.066	-0.050	1.66E-48	2.00E-45	TRUE	1
-0.080	-0.061	7.82E-48	2.10E-45	TRUE	1
-0.051	-0.039	2.04E-48	2.45E-45	TRUE	1
0.034	0.045	9.42E-48	2.84E-45	TRUE	1
0.164	0.216	5.92E-48	2.85E-45	TRUE	1
0.033	0.043	1.56E-48	3.76E-45	TRUE	0
-0.052	-0.040	1.94E-47	3.90E-45	TRUE	1
0.065	0.085	1.65E-47	6.62E-45	TRUE	1
0.115	0.151	1.86E-47	1.12E-44	TRUE	1
0.049	0.064	2.20E-47	1.33E-44	TRUE	1
0.909	0.930	1.27E-47	1.53E-44	TRUE	0
0.062	0.082	6.27E-47	1.68E-44	TRUE	1
0.034	0.044	4.51E-47	1.81E-44	TRUE	0
0.038	0.049	1.85E-47	2.23E-44	TRUE	1
1.250	1.350	8.37E-47	2.24E-44	TRUE	0
0.042	0.055	1.19E-46	3.59E-44	TRUE	1
-0.049	-0.037	5.12E-46	3.08E-43	TRUE	1
-0.039	-0.029	6.01E-46	3.62E-43	TRUE	0
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0.041	0.054	4.07E-45	1.09E-42	TRUE	1
-0.055	-0.041	1.03E-45	2.48E-42	TRUE	1
0.040	0.053	2.09E-45	5.04E-42	TRUE	1
1.250	1.350	2.79E-44	6.73E-42	TRUE	0
0.042	0.056	2.68E-44	1.08E-41	TRUE	0
-0.056	-0.042	2.96E-43	1.02E-40	TRUE	0
0.045	0.060	2.01E-42	4.84E-40	TRUE	1
-0.048	-0.036	4.46E-43	5.38E-40	TRUE	1
0.174	0.233	3.00E-42	1.21E-39	TRUE	1
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-0.059	-0.044	1.43E-40	3.14E-38	TRUE	1
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0.026	0.035	9.09E-41	1.10E-37	TRUE	0

1.080	1.110	1.72E-40	1.38E-37	TRUE	0
0.026	0.035	2.14E-40	1.72E-37	TRUE	0
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0.030	0.041	5.20E-39	1.57E-36	TRUE	0
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-0.054	-0.040	1.16E-38	2.15E-36	TRUE	1
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-0.054	-0.039	1.60E-38	2.76E-36	TRUE	1
0.034	0.046	1.39E-38	3.36E-36	TRUE	1
-0.047	-0.035	3.01E-38	4.84E-36	TRUE	1
0.027	0.036	9.68E-39	1.17E-35	TRUE	0
-0.040	-0.029	5.54E-39	1.33E-35	TRUE	1
-0.052	-0.038	6.25E-38	1.67E-35	TRUE	0
0.026	0.036	2.57E-38	2.06E-35	TRUE	0
0.027	0.037	1.24E-38	3.00E-35	TRUE	0
0.030	0.040	1.31E-37	3.52E-35	TRUE	0
0.140	0.190	1.47E-38	3.53E-35	TRUE	1
0.029	0.040	1.99E-37	4.37E-35	TRUE	1
-0.045	-0.033	4.80E-38	5.78E-35	TRUE	0
0.114	0.156	1.42E-37	6.83E-35	TRUE	1
0.030	0.041	2.41E-37	8.29E-35	TRUE	1
-0.045	-0.033	1.14E-37	9.17E-35	TRUE	0
-0.035	-0.026	4.01E-38	9.66E-35	TRUE	0
0.032	0.044	2.87E-37	1.39E-34	TRUE	1
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0.025	0.034	7.91E-38	1.91E-34	TRUE	0
-0.041	-0.030	2.28E-36	3.43E-34	TRUE	0
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-0.048	-0.035	7.63E-37	1.84E-33	TRUE	1
-0.065	-0.047	2.53E-36	2.04E-33	TRUE	1
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-0.049	-0.036	7.28E-36	2.92E-33	TRUE	1
0.066	0.091	4.05E-36	3.25E-33	TRUE	1
0.057	0.078	1.49E-35	3.26E-33	TRUE	1
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-0.073	-0.053	5.95E-36	3.59E-33	TRUE	1
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0.057	0.078	1.73E-36	4.17E-33	TRUE	1
0.027	0.037	1.76E-36	4.24E-33	TRUE	0
1.290	1.420	2.24E-35	5.40E-33	TRUE	0
0.064	0.088	3.53E-35	7.09E-33	TRUE	1
0.096	0.133	2.00E-35	8.03E-33	TRUE	1
-0.056	-0.041	4.36E-35	9.56E-33	TRUE	1
0.036	0.049	6.58E-35	1.32E-32	TRUE	1
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-0.033	-0.024	4.42E-35	3.55E-32	TRUE	0
0.033	0.045	1.38E-34	4.16E-32	TRUE	1
0.039	0.054	4.05E-35	4.88E-32	TRUE	1

-0.048	-0.035	3.01E-34	5.59E-32	TRUE	1
0.036	0.050	3.25E-35	7.83E-32	TRUE	1
0.041	0.056	1.17E-34	1.41E-31	TRUE	1
1.290	1.420	8.69E-34	1.61E-31	TRUE	0
0.027	0.037	3.13E-34	2.51E-31	TRUE	1
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-0.056	-0.040	1.77E-33	3.57E-31	TRUE	1
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1.120	1.160	3.10E-33	5.33E-31	TRUE	0
-0.061	-0.044	4.06E-33	6.52E-31	TRUE	1
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-0.052	-0.038	1.37E-33	1.66E-30	TRUE	1
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0.034	0.047	3.81E-33	2.29E-30	TRUE	1
0.031	0.043	5.76E-33	2.78E-30	TRUE	1
0.027	0.038	1.31E-33	3.15E-30	TRUE	1
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0.027	0.038	2.15E-33	5.18E-30	TRUE	1
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0.028	0.039	5.23E-32	7.00E-30	TRUE	0
0.023	0.032	4.49E-33	1.08E-29	TRUE	0
0.871	0.906	6.97E-32	1.29E-29	TRUE	0
-0.050	-0.036	6.94E-33	1.67E-29	TRUE	1
0.025	0.034	8.00E-33	1.93E-29	TRUE	0
-0.037	-0.026	1.38E-31	2.38E-29	TRUE	0
1.140	1.200	1.77E-31	2.66E-29	TRUE	0
0.026	0.036	5.86E-32	2.82E-29	TRUE	1
0.027	0.038	2.29E-31	2.90E-29	TRUE	0
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0.077	0.108	1.02E-31	6.13E-29	TRUE	1
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0.279	0.403	5.51E-31	1.02E-28	TRUE	0
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0.051	0.072	5.01E-31	4.03E-28	TRUE	1
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0.029	0.041	4.00E-30	6.89E-28	TRUE	1
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1.280	1.420	3.85E-31	9.28E-28	TRUE	0
0.030	0.042	4.41E-31	1.06E-27	TRUE	0
0.029	0.041	8.87E-31	1.07E-27	TRUE	1
0.067	0.095	2.26E-30	1.09E-27	TRUE	1
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1.070	1.100	2.73E-30	3.29E-27	TRUE	0
0.906	0.933	2.73E-30	3.29E-27	TRUE	0
0.026	0.037	3.02E-30	3.64E-27	TRUE	0
0.031	0.044	1.75E-30	4.23E-27	TRUE	1
0.026	0.037	1.46E-29	5.88E-27	TRUE	0
0.023	0.033	2.74E-30	6.62E-27	TRUE	0
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0.023	0.033	5.63E-30	1.36E-26	TRUE	0
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0.084	0.120	9.54E-29	3.29E-26	TRUE	1
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1.080	1.120	5.40E-29	4.34E-26	TRUE	0
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0.035	0.049	3.80E-29	4.58E-26	TRUE	1
1.330	1.510	3.18E-28	5.48E-26	TRUE	0
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0.029	0.042	2.08E-28	5.02E-25	TRUE	0

0.027	0.039	2.65E-27	6.38E-25	TRUE	1
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-0.062	-0.042	1.02E-26	1.45E-24	TRUE	1
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1.080	1.110	3.75E-27	2.26E-24	TRUE	0
0.022	0.032	2.06E-27	2.48E-24	TRUE	0
-0.051	-0.035	2.35E-27	5.67E-24	TRUE	1
0.022	0.031	7.34E-27	5.90E-24	TRUE	0
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0.043	0.063	1.09E-26	8.79E-24	TRUE	1
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1.080	1.120	1.95E-26	9.40E-24	TRUE	0
0.026	0.037	6.19E-26	1.66E-23	TRUE	1
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1.080	1.120	6.45E-26	2.59E-23	TRUE	0
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0.856	0.899	1.84E-25	2.77E-23	TRUE	0
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0.040	0.059	2.19E-25	3.51E-23	TRUE	0
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0.026	0.038	6.32E-26	7.62E-23	TRUE	1
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0.037	0.054	9.32E-26	1.12E-22	TRUE	1
0.912	0.939	2.00E-25	1.21E-22	TRUE	0
1.070	1.100	2.00E-25	1.21E-22	TRUE	0
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-0.037	-0.025	2.01E-24	2.30E-22	TRUE	1
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1.120	1.180	2.20E-24	3.31E-22	TRUE	0
0.843	0.891	1.21E-24	3.65E-22	TRUE	0
1.290	1.450	3.66E-24	4.01E-22	TRUE	0
-0.034	-0.023	1.51E-24	4.04E-22	TRUE	1
1.280	1.440	4.14E-24	4.34E-22	TRUE	0
1.280	1.450	3.55E-24	4.50E-22	TRUE	0
0.020	0.030	3.94E-25	4.75E-22	TRUE	0
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0.052	0.076	8.57E-25	5.17E-22	TRUE	1
0.022	0.033	1.19E-24	9.59E-22	TRUE	1
0.019	0.028	1.38E-24	9.73E-22	TRUE	0
0.019	0.028	1.61E-24	9.73E-22	TRUE	0
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0.045	0.066	2.71E-24	1.31E-21	TRUE	1
1.370	1.600	9.87E-24	1.32E-21	TRUE	0
0.023	0.034	1.21E-24	1.45E-21	TRUE	0
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0.036	0.053	3.07E-24	1.85E-21	TRUE	1
0.271	0.415	1.47E-23	1.87E-21	TRUE	0
0.022	0.033	1.99E-23	2.00E-21	TRUE	0
0.020	0.030	3.59E-24	2.17E-21	TRUE	0
0.033	0.048	9.09E-25	2.19E-21	TRUE	0
-0.066	-0.044	5.24E-24	2.52E-21	TRUE	1
0.861	0.904	1.58E-23	3.17E-21	TRUE	0
0.023	0.033	4.14E-24	3.33E-21	TRUE	0
0.880	0.918	1.47E-23	3.55E-21	TRUE	0
0.020	0.029	8.55E-24	4.12E-21	TRUE	0
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0.036	0.053	5.66E-24	4.55E-21	TRUE	1
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0.020	0.029	2.03E-24	4.90E-21	TRUE	0
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-0.035	-0.023	2.78E-24	6.71E-21	TRUE	1
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0.033	0.048	2.86E-24	6.90E-21	TRUE	1

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-0.036	-0.024	1.27E-23	1.02E-20	TRUE	1
-0.033	-0.022	1.31E-23	1.05E-20	TRUE	1
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1.100	1.150	3.53E-23	1.22E-20	TRUE	0
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1.050	1.070	5.46E-23	1.49E-20	TRUE	0
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0.026	0.038	2.11E-23	2.55E-20	TRUE	1
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1.080	1.130	1.15E-22	2.77E-20	TRUE	0
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0.027	0.040	1.59E-22	1.27E-19	TRUE	1
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0.026	0.039	1.82E-22	2.19E-19	TRUE	1
0.028	0.042	2.78E-22	2.23E-19	TRUE	1
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0.023	0.034	8.03E-22	6.45E-19	TRUE	1
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-0.030	-0.020	1.02E-21	2.47E-18	TRUE	1
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0.018	0.027	1.17E-21	2.82E-18	TRUE	0
0.031	0.048	4.75E-21	2.86E-18	TRUE	1
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0.121	0.185	8.19E-21	6.58E-18	TRUE	1
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1.170	1.280	6.08E-20	6.66E-18	TRUE	0
0.864	0.909	1.75E-20	7.03E-18	TRUE	0
0.028	0.043	2.45E-20	7.38E-18	TRUE	1
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1.070	1.110	4.37E-20	8.79E-18	TRUE	0
0.025	0.038	2.82E-20	9.70E-18	TRUE	1
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1.090	1.140	1.70E-20	1.37E-17	TRUE	0
0.038	0.059	1.22E-20	1.47E-17	TRUE	1
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0.027	0.042	8.41E-20	6.76E-17	TRUE	1
1.060	1.100	4.30E-19	7.40E-17	TRUE	0
0.029	0.046	6.25E-19	7.53E-17	TRUE	1
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0.037	0.058	4.12E-19	1.99E-16	TRUE	1
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0.018	0.028	1.74E-18	1.91E-15	TRUE	1
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0.123	0.195	7.20E-18	3.47E-15	TRUE	1

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0.022	0.037	1.36E-14	1.63E-11	TRUE	1
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1.050	1.090	7.29E-10	2.88E-08	TRUE	0
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0.010	0.021	1.63E-08	4.92E-06	TRUE	1
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0.012	0.024	6.81E-09	5.48E-06	TRUE	1
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1.040	1.090	1.02E-07	1.45E-05	TRUE	0
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1.040	1.090	1.27E-07	1.61E-05	TRUE	0
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1.040	1.090	5.64E-07	1.70E-05	TRUE	0
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0.016	0.034	5.01E-08	1.72E-05	TRUE	1
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0.012	0.025	1.03E-07	2.06E-05	TRUE	1
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0.010	0.021	1.11E-07	2.43E-05	TRUE	1
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0.010	0.021	3.09E-08	2.48E-05	TRUE	1
1.040	1.110	9.17E-07	2.48E-05	TRUE	0
0.009	0.020	1.56E-07	2.51E-05	TRUE	0
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0.010	0.024	9.88E-07	2.65E-05	TRUE	0
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1.030	1.070	3.01E-07	2.69E-05	TRUE	0
0.019	0.041	5.59E-08	2.70E-05	TRUE	1
0.952	0.978	1.58E-07	2.72E-05	TRUE	0
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0.009	0.019	2.95E-07	2.96E-05	TRUE	0
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1.020	1.040	2.61E-07	2.99E-05	TRUE	0
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1.050	1.110	2.45E-07	3.29E-05	TRUE	0
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0.012	0.027	8.04E-08	3.43E-05	TRUE	1
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1.030	1.070	4.70E-07	3.88E-05	TRUE	0
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1.030	1.070	7.90E-08	3.98E-05	TRUE	0
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0.008	0.017	1.02E-07	4.08E-05	TRUE	0
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1.030	1.070	1.73E-07	4.17E-05	TRUE	0
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1.050	1.130	1.13E-06	4.53E-05	TRUE	0
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1.050	1.140	1.68E-06	4.72E-05	TRUE	0
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1.210	1.550	1.16E-06	4.75E-05	TRUE	0
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0.009	0.020	2.44E-07	4.90E-05	TRUE	0
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0.011	0.023	1.05E-07	5.08E-05	TRUE	1
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1.020	1.050	7.84E-07	5.25E-05	TRUE	0
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1.030	1.060	4.18E-07	5.30E-05	TRUE	0
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0.010	0.023	3.59E-07	5.39E-05	TRUE	0
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1.040	1.090	7.02E-07	5.64E-05	TRUE	0
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0.015	0.037	1.46E-06	5.74E-05	TRUE	1
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0.010	0.021	7.24E-08	5.82E-05	TRUE	0
0.955	0.980	3.39E-07	5.83E-05	TRUE	0
0.008	0.018	3.67E-07	5.89E-05	TRUE	0
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0.771	0.893	7.21E-07	5.99E-05	TRUE	0
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0.019	0.041	2.22E-07	6.68E-05	TRUE	1
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0.007	0.016	3.41E-07	6.86E-05	TRUE	0
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1.070	1.180	2.65E-06	6.87E-05	TRUE	0
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0.013	0.030	2.02E-07	6.94E-05	TRUE	1
0.958	0.981	5.19E-07	6.95E-05	TRUE	0
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1.070	1.170	1.80E-07	7.22E-05	TRUE	0
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1.050	1.110	5.85E-07	7.84E-05	TRUE	0
1.030	1.090	3.07E-06	7.87E-05	TRUE	0
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0.588	0.819	1.56E-05	0.004712	TRUE	0
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1.270	1.920	2.43E-05	0.004798	TRUE	0
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0.925	0.972	2.41E-05	0.00485	TRUE	0
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1.080	1.300	0.000248	0.005639	TRUE	0
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0.007	0.019	3.64E-05	0.006479	TRUE	0

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0.860	0.952	0.000118	0.007515	TRUE	0
0.016	0.048	7.80E-05	0.007526	TRUE	0
1.010	1.040	0.000119	0.007529	TRUE	0
0.005	0.014	6.25E-05	0.00753	TRUE	0
0.778	0.933	0.000557	0.00754	TRUE	0
0.009	0.025	2.50E-05	0.007546	TRUE	1
0.911	0.966	1.88E-05	0.007549	TRUE	0
-0.015	-0.005	0.000128	0.007556	TRUE	0
1.210	1.710	2.82E-05	0.007556	TRUE	0
0.005	0.014	0.000126	0.007591	TRUE	0
-0.015	-0.005	6.61E-05	0.007592	TRUE	0
-0.016	-0.005	7.28E-05	0.007631	TRUE	0
0.006	0.017	3.49E-05	0.007649	TRUE	1

0.005	0.015	7.30E-05	0.007655	TRUE	0
0.005	0.015	7.00E-05	0.007655	TRUE	0
0.009	0.026	3.50E-05	0.007675	TRUE	1
0.925	0.977	0.000351	0.007686	TRUE	0
0.947	0.982	7.34E-05	0.00769	TRUE	0
0.005	0.014	7.01E-05	0.00769	TRUE	0
0.964	0.988	7.22E-05	0.00769	TRUE	0
1.020	1.060	2.55E-05	0.007699	TRUE	0
-0.035	-0.013	1.61E-05	0.007703	TRUE	1
-0.024	-0.009	1.92E-05	0.007703	TRUE	1
0.010	0.030	9.93E-05	0.007722	TRUE	0
0.939	0.979	8.02E-05	0.007731	TRUE	0
1.010	1.040	0.000148	0.007742	TRUE	0
0.007	0.020	8.03E-05	0.007747	TRUE	1
1.240	1.870	6.11E-05	0.007756	TRUE	0
1.030	1.090	9.35E-05	0.007775	TRUE	0
0.006	0.016	4.20E-05	0.007787	TRUE	1
1.010	1.040	0.000194	0.007814	TRUE	0
1.010	1.040	8.43E-05	0.007821	TRUE	0
0.943	0.980	7.35E-05	0.007822	TRUE	0
0.963	0.987	7.46E-05	0.007822	TRUE	0
0.008	0.021	2.27E-05	0.007827	TRUE	1
0.009	0.026	3.58E-05	0.00784	TRUE	1
-0.016	-0.006	9.77E-06	0.007851	TRUE	0
-0.016	-0.006	3.58E-05	0.007856	TRUE	1
0.006	0.018	0.000167	0.007872	TRUE	1
0.006	0.016	5.24E-05	0.007903	TRUE	1
0.011	0.029	2.63E-05	0.007932	TRUE	1
1.020	1.080	0.000138	0.007941	TRUE	0
1.120	1.420	0.000137	0.007941	TRUE	0
0.004	0.014	0.000133	0.007941	TRUE	0
0.007	0.019	9.89E-06	0.007948	TRUE	1
-0.024	-0.008	0.000135	0.007958	TRUE	0
0.964	0.989	0.000218	0.007959	TRUE	0
-0.015	-0.005	7.95E-05	0.007983	TRUE	0
1.010	1.050	0.000205	0.007991	TRUE	0
1.010	1.040	0.000205	0.007991	TRUE	0
1.020	1.060	0.000209	0.007999	TRUE	0
-0.016	-0.005	7.97E-05	0.008004	TRUE	1
0.007	0.018	3.32E-06	0.008006	TRUE	1
0.713	0.893	8.31E-05	0.008015	TRUE	0
-0.030	-0.009	0.00016	0.008033	TRUE	0
-0.015	-0.006	1.34E-05	0.008075	TRUE	0
-0.016	-0.006	4.02E-05	0.008085	TRUE	1
1.020	1.050	5.37E-05	0.008086	TRUE	0
0.969	0.989	8.73E-05	0.008095	TRUE	0
1.010	1.040	7.40E-05	0.008107	TRUE	0
1.010	1.040	7.31E-05	0.008107	TRUE	0
1.010	1.040	6.86E-05	0.008107	TRUE	0
0.924	0.976	0.000225	0.00811	TRUE	0

-0.019	-0.007	2.69E-05	0.008111	TRUE	1
0.961	0.986	4.04E-05	0.008122	TRUE	0
-0.015	-0.005	8.09E-05	0.008129	TRUE	0
1.050	1.170	0.000108	0.008137	TRUE	0
-0.013	-0.004	0.000125	0.008166	TRUE	0
1.010	1.030	3.73E-05	0.008168	TRUE	0
0.005	0.015	3.48E-05	0.008168	TRUE	0
0.938	0.977	3.39E-05	0.008173	TRUE	0
0.923	0.971	3.13E-05	0.008173	TRUE	0
0.008	0.023	4.41E-05	0.008178	TRUE	0
0.010	0.025	6.79E-06	0.008186	TRUE	1
1.010	1.040	5.09E-05	0.008187	TRUE	0
0.006	0.016	4.75E-05	0.008187	TRUE	1
-0.014	-0.004	0.000112	0.008188	TRUE	0
1.020	1.060	0.000133	0.008245	TRUE	0
-0.019	-0.007	2.40E-05	0.008261	TRUE	1
-0.015	-0.005	9.25E-05	0.008262	TRUE	0
0.923	0.974	9.00E-05	0.008262	TRUE	0
1.050	1.160	5.15E-05	0.008271	TRUE	0
0.884	0.965	0.000383	0.008272	TRUE	0
0.004	0.015	0.000384	0.008272	TRUE	0
0.955	0.986	0.000199	0.00829	TRUE	0
0.004	0.014	0.000152	0.008314	TRUE	0
1.010	1.040	0.000162	0.008314	TRUE	0
1.020	1.060	8.62E-05	0.008317	TRUE	0
1.010	1.040	0.000148	0.00832	TRUE	0
0.953	0.985	0.000148	0.00832	TRUE	0
0.008	0.022	6.93E-05	0.008352	TRUE	1
1.120	1.420	0.000118	0.008357	TRUE	0
-0.033	-0.011	9.03E-05	0.008375	TRUE	1
0.969	0.990	0.00012	0.008377	TRUE	0
1.020	1.070	0.000122	0.008377	TRUE	0
0.908	0.968	7.67E-05	0.008401	TRUE	0
0.006	0.018	0.000108	0.008406	TRUE	1
1.020	1.090	0.00059	0.00842	TRUE	0
1.080	1.320	0.000303	0.008423	TRUE	0
0.013	0.044	0.000304	0.008423	TRUE	1
1.080	1.250	7.03E-05	0.008475	TRUE	0
0.006	0.016	3.87E-05	0.00849	TRUE	0
0.009	0.026	3.82E-05	0.00849	TRUE	1
1.020	1.070	5.99E-05	0.008492	TRUE	0
0.913	0.971	0.000113	0.008503	TRUE	0
-0.033	-0.012	2.83E-05	0.00853	TRUE	1
0.945	0.982	9.93E-05	0.008552	TRUE	0
0.004	0.014	9.90E-05	0.008552	TRUE	0
-0.018	-0.007	3.20E-05	0.008565	TRUE	1
-0.030	-0.010	5.34E-05	0.00859	TRUE	1
0.008	0.022	3.21E-05	0.00859	TRUE	1
-0.014	-0.005	4.63E-05	0.008594	TRUE	0
0.013	0.039	6.07E-05	0.008613	TRUE	1

-0.018	-0.006	7.88E-05	0.008639	TRUE	0
-0.014	-0.005	0.00014	0.008656	TRUE	0
1.050	1.180	0.000172	0.008658	TRUE	0
-0.027	-0.010	3.61E-05	0.008699	TRUE	1
-0.030	-0.010	5.09E-05	0.008758	TRUE	1
1.080	1.250	9.81E-05	0.008759	TRUE	0
0.662	0.871	8.36E-05	0.008763	TRUE	0
1.010	1.040	0.00062	0.008786	TRUE	0
-0.022	-0.008	5.48E-05	0.008806	TRUE	0
-0.015	-0.005	3.29E-05	0.008814	TRUE	0
1.020	1.050	9.88E-05	0.008825	TRUE	0
-0.048	-0.016	9.61E-05	0.008831	TRUE	0
-0.048	-0.016	9.89E-05	0.008831	TRUE	0
-0.016	-0.005	0.000206	0.008866	TRUE	0
0.964	0.988	0.000143	0.008882	TRUE	0
0.963	0.988	0.000144	0.008882	TRUE	0
1.050	1.160	3.69E-05	0.008885	TRUE	0
1.030	1.070	7.38E-06	0.008895	TRUE	0
-0.025	-0.008	0.000251	0.008902	TRUE	1
1.130	1.480	0.000148	0.008908	TRUE	0
-0.015	-0.005	6.31E-05	0.008951	TRUE	0
-0.037	-0.013	2.97E-05	0.008954	TRUE	1
-0.016	-0.006	2.97E-05	0.008957	TRUE	1
1.020	1.060	9.32E-05	0.008985	TRUE	0
0.014	0.040	5.97E-05	0.008989	TRUE	1
0.008	0.024	9.77E-05	0.009057	TRUE	1
0.004	0.014	0.00015	0.009062	TRUE	0
1.010	1.040	0.000184	0.009063	TRUE	0
1.050	1.170	0.000102	0.009067	TRUE	0
0.009	0.033	0.000426	0.009082	TRUE	0
1.050	1.200	0.000645	0.009092	TRUE	0
1.020	1.060	0.000161	0.009105	TRUE	0
-0.026	-0.008	0.000162	0.009105	TRUE	1
1.030	1.090	0.00011	0.009109	TRUE	0
1.030	1.090	0.00011	0.009109	TRUE	0
1.010	1.050	0.000244	0.009121	TRUE	0
0.005	0.016	0.000246	0.009121	TRUE	0
1.060	1.250	0.000653	0.009121	TRUE	0
0.911	0.975	0.000654	0.009121	TRUE	0
0.894	0.970	0.000658	0.009122	TRUE	0
0.931	0.975	4.54E-05	0.009123	TRUE	0
1.030	1.080	4.17E-05	0.009133	TRUE	0
-0.019	-0.007	3.79E-05	0.009144	TRUE	0
-0.018	-0.006	8.00E-05	0.009189	TRUE	0
-0.015	-0.005	8.77E-05	0.009192	TRUE	0
0.004	0.014	0.000668	0.009206	TRUE	0
0.785	0.937	0.000673	0.009214	TRUE	0
0.942	0.981	0.000179	0.009216	TRUE	0
1.010	1.050	0.000173	0.009216	TRUE	0
1.020	1.080	0.00018	0.009216	TRUE	0

-0.071	-0.026	1.91E-05	0.009217	TRUE	1
-0.014	-0.005	7.65E-05	0.009222	TRUE	0
1.020	1.070	0.000109	0.009232	TRUE	0
0.005	0.016	0.000111	0.009232	TRUE	1
1.050	1.180	0.000181	0.009238	TRUE	0
0.009	0.028	0.000188	0.009238	TRUE	0
0.009	0.028	0.000186	0.009238	TRUE	0
1.030	1.090	0.000185	0.009238	TRUE	0
1.020	1.050	7.09E-05	0.009253	TRUE	0
0.007	0.020	7.29E-05	0.009253	TRUE	0
0.006	0.016	1.54E-05	0.009254	TRUE	0
-0.018	-0.007	1.92E-05	0.009254	TRUE	1
0.007	0.020	2.69E-05	0.00926	TRUE	1
0.957	0.986	0.000138	0.009274	TRUE	0
0.972	0.991	0.000146	0.009287	TRUE	0
0.940	0.979	6.95E-05	0.009289	TRUE	0
0.006	0.019	7.32E-05	0.009289	TRUE	1
0.006	0.018	7.32E-05	0.009291	TRUE	0
-0.029	-0.010	5.80E-05	0.009316	TRUE	1
-0.023	-0.008	4.64E-05	0.009328	TRUE	1
0.770	0.921	0.000155	0.009337	TRUE	0
0.004	0.013	0.000151	0.00936	TRUE	0
1.010	1.030	0.000688	0.009371	TRUE	0
1.030	1.090	5.44E-05	0.009372	TRUE	0
0.882	0.958	5.45E-05	0.009378	TRUE	0
0.896	0.964	0.000101	0.009384	TRUE	0
0.009	0.029	0.00027	0.009438	TRUE	0
-0.015	-0.004	0.000447	0.009443	TRUE	0
0.924	0.975	0.000157	0.009474	TRUE	0
0.009	0.026	3.54E-05	0.009486	TRUE	1
0.953	0.985	0.000189	0.009493	TRUE	0
0.007	0.022	9.45E-05	0.009496	TRUE	0
0.953	0.984	0.00013	0.009501	TRUE	0
0.927	0.976	0.000162	0.009506	TRUE	0
0.959	0.986	4.74E-05	0.00952	TRUE	0
0.008	0.023	3.95E-05	0.009529	TRUE	1
1.110	1.440	0.000348	0.009536	TRUE	0
0.952	0.985	0.000178	0.009545	TRUE	0
0.007	0.019	7.93E-06	0.009561	TRUE	1
-0.022	-0.008	7.91E-06	0.009561	TRUE	1
0.006	0.018	5.95E-05	0.009562	TRUE	0
0.005	0.014	8.33E-05	0.009563	TRUE	0
-0.014	-0.004	0.000191	0.009578	TRUE	0
-0.031	-0.011	3.98E-05	0.009593	TRUE	1
0.007	0.020	7.97E-05	0.009603	TRUE	0
1.020	1.070	0.000112	0.009623	TRUE	0
-0.026	-0.009	8.38E-05	0.009627	TRUE	1
-0.016	-0.006	3.99E-05	0.009628	TRUE	1
1.030	1.080	2.80E-05	0.009634	TRUE	0
1.050	1.180	0.000713	0.009653	TRUE	0

1.020	1.050	8.41E-05	0.009654	TRUE	0
-0.014	-0.004	0.000132	0.009673	TRUE	0
-0.029	-0.009	0.000281	0.009685	TRUE	1
0.919	0.974	0.000229	0.00969	TRUE	0
1.020	1.050	4.82E-05	0.009694	TRUE	0
1.010	1.040	8.45E-05	0.009698	TRUE	0
0.004	0.014	0.000129	0.009712	TRUE	0
1.100	1.410	0.000722	0.009727	TRUE	0
0.961	0.988	0.000166	0.009737	TRUE	0
-0.029	-0.010	4.85E-05	0.009753	TRUE	1
-0.031	-0.011	4.87E-05	0.009789	TRUE	1
-0.018	-0.007	1.63E-05	0.009797	TRUE	1
0.004	0.014	0.000138	0.009798	TRUE	0
0.782	0.926	0.000171	0.009826	TRUE	0
1.040	1.120	3.68E-05	0.00986	TRUE	0
0.010	0.028	4.09E-05	0.009861	TRUE	1
-0.018	-0.006	9.00E-05	0.009866	TRUE	1
-0.020	-0.007	4.09E-05	0.009869	TRUE	1
1.090	1.330	0.000201	0.009875	TRUE	0
-0.016	-0.006	3.69E-05	0.009881	TRUE	1
-0.030	-0.011	3.69E-05	0.009882	TRUE	1
1.090	1.330	0.000365	0.009897	TRUE	0
1.010	1.040	0.000472	0.009897	TRUE	0
0.847	0.949	0.000172	0.009899	TRUE	0
-0.022	-0.007	0.000171	0.009899	TRUE	0
0.958	0.986	0.000107	0.009905	TRUE	0
-0.015	-0.005	0.000103	0.009905	TRUE	0
0.006	0.019	0.000111	0.009905	TRUE	1
1.030	1.080	8.64E-05	0.009924	TRUE	0
0.945	0.981	9.88E-05	0.009925	TRUE	0
0.949	0.982	5.36E-05	0.009943	TRUE	0
-0.029	-0.009	0.00012	0.009947	TRUE	0
0.948	0.983	0.000203	0.009964	TRUE	0
-0.013	-0.004	0.000207	0.009964	TRUE	0
1.020	1.070	0.000741	0.009975	TRUE	0
0.933	0.979	0.00024	0.009985	TRUE	0

Figure.Name

Intestinal malabsorption (HES)

Standing height (assessment centre)

Eosinophil percentage (blood count)

Standing height (assessment centre)

Intestinal malabsorption (HES)

Standing height (assessment centre)

Standing height (assessment centre)

Standing height (assessment centre)

Standing height (assessment centre)

Bone Mineral Density (assessment centre)

Standing height (assessment centre)

Standing height (assessment centre)

[Redacted]

Standing height (assessment centre)

Male Balding (self-report)

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

Headaches >3 months (self-report)

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Hypothyroidism (self-report OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)
[Redacted]

Eosinophil percentage (blood count)
[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)
[Redacted]

Standing height (assessment centre)
[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)
[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

Male Balding (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

[Redacted]

Male Balding (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

[Redacted]

Standing height (assessment centre)

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

Neuroticism (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

Male Balding (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Intestinal malabsorption (HES)

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Antimetabolites (self-reported)

[Redacted]

[Redacted]

Decongestants / topical nasal preparations (self-reported)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Age at first facial hair (self-report)

[Redacted]

Paracetamol (self-reported)

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

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Decongestants / topical nasal preparations (self-reported)

[Redacted]

[Redacted]



[Redacted]

Standing height (assessment centre)

Bone Mineral Density (assessment centre)

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Standing height (assessment centre)

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Eosinophil percentage (blood count)

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Bone Mineral Density (assessment centre)

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Hypothyroidism (self-report OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Hypothyroidism (self-report OR HES)

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

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Standing height (assessment centre)

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Corneal resistance factor (right) (assessment centre)

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Malignant prostate neoplasm (cancer register)

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Standing height (assessment centre)

[Redacted]

Eosinophil percentage (blood count)

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Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

[Redacted]

Paracetamol (self-reported)

[Redacted]

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[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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Standing height (assessment centre)

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Bone Mineral Density (assessment centre)

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Eosinophil percentage (blood count)

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Number of treatments/medications taken (assessment centre)

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

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[Redacted]

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

Male Balding (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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[Redacted]

Standing height (assessment centre)

[Redacted]

Neuroticism (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

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Urinary potassium (urine sample)

[Redacted]

Bone Mineral Density (assessment centre)

Headaches >3 months (self-report)

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Diseases of blood, blood-forming organs, immune mechanism (HES)

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Hypothyroidism (self-report OR HES)

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Eosinophil percentage (blood count)

Other gynaecological drugs (self-reported)

Anaemia (self-report OR HES)

[Redacted]

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Bone Mineral Density (assessment centre)

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Decongestants / topical nasal preparations (self-reported)

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Bone Mineral Density (assessment centre)

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Number of treatments/medications taken (assessment centre)

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Standing height (assessment centre)

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Corneal resistance factor (right) (assessment centre)

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Standing height (assessment centre)

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Asthma (self-reported OR HES)

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Mean systolic BP (assessment centre)

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Neuroticism (self-report)

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Mean systolic BP (assessment centre)

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Standing height (assessment centre)

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Standing height (assessment centre)

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Bone Mineral Density (assessment centre)

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Bone Mineral Density (assessment centre)

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Standing height (assessment centre)

Malignant prostate neoplasm (cancer register)

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[Redacted]

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Urinary potassium (urine sample)

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Bone Mineral Density (assessment centre)

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Standing height (assessment centre)

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Standing height (assessment centre)

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Eosinophil percentage (blood count)

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Number of treatments/medications taken (assessment centre)

Standing height (assessment centre)

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Bone Mineral Density (assessment centre)

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Bone Mineral Density (assessment centre)

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Standing height (assessment centre)

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Bone Mineral Density (assessment centre)

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Eosinophil percentage (blood count)

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Mean systolic BP (assessment centre)

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Male Balding (self-report)

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

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Asthma (self-reported OR HES)

Paracetamol (self-reported)

[Redacted]

[Redacted]

Antimetabolites (self-reported)

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Standing height (assessment centre)

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Neuroticism (self-report)

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[Redacted]

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[Redacted]

[Redacted]

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Eosinophil percentage (blood count)

[Redacted]

[Redacted]

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Bone Mineral Density (assessment centre)

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Eosinophil percentage (blood count)

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Neuroticism (self-report)

[Redacted]

[Redacted]

Tetracyclines (self-reported)

[Redacted]

[Redacted]

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Hypothyroidism (self-report OR HES)

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Decongestants / topical nasal preparations (self-reported)

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

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Bone Mineral Density (assessment centre)

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[Redacted]

Asthma (self-reported OR HES)

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Renal, ureteric or bladder stone (self-report OR HES)

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Excision of other fascia (HES)

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Corneal resistance factor (right) (assessment centre)

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Standing height (assessment centre)

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Number of treatments/medications taken (assessment centre)

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Headaches >3 months (self-report)

[Redacted]

[Redacted]

[Redacted]

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Bone Mineral Density (assessment centre)

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Standing height (assessment centre)

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Mean systolic BP (assessment centre)

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Mean systolic BP (assessment centre)

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[Redacted]

Decongestants / topical nasal preparations (self-reported)

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Standing height (assessment centre)

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Standing height (assessment centre)

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Asthma (self-reported OR HES)

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Eosinophil percentage (blood count)

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Asthma (self-reported OR HES)

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Headaches >3 months (self-report)

Decongestants / topical nasal preparations (self-reported)

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[Redacted]

[Redacted]

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Neuroticism (self-report)

[Redacted]

Tetracyclines (self-reported)

[Redacted]

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Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

Number of treatments/medications taken (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Male Balding (self-report)

[Redacted]

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[Redacted]

[Redacted]

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Standing height (assessment centre)

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

Anaemia (self-report OR HES)

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[Redacted]

[Redacted]

Number of treatments/medications taken (assessment centre)

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[Redacted]

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Neuroticism (self-report)

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Bone Mineral Density (assessment centre)

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Mean systolic BP (assessment centre)

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[Redacted]

Corneal resistance factor (right) (assessment centre)

[Redacted]

Malignant breast neoplasm (cancer register)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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Mean systolic BP (assessment centre)

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Mean systolic BP (assessment centre)

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Other gynaecological drugs (self-reported)

[Redacted text block]

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Bone Mineral Density (assessment centre)

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Standing height (assessment centre)

Decongestants / topical nasal preparations (self-reported)

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Standing height (assessment centre)

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Mean systolic BP (assessment centre)

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Excision of other fascia (HES)

Standing height (assessment centre)

Asthma (self-reported OR HES)

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Malignant prostate neoplasm (cancer register)

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Mean systolic BP (assessment centre)

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Malignant prostate neoplasm (cancer register)

[Redacted]

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[Redacted]

Eosinophil percentage (blood count)

Corneal resistance factor (right) (assessment centre)

[Redacted]

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Bone Mineral Density (assessment centre)

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Eosinophil percentage (blood count)

Male Balding (self-report)

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Asthma (self-reported OR HES)

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Mean systolic BP (assessment centre)

Standing height (assessment centre)

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Mean systolic BP (assessment centre)

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Eosinophil percentage (blood count)

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Eosinophil percentage (blood count)

Mean systolic BP (assessment centre)

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Eosinophil percentage (blood count)

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Urinary potassium (urine sample)

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[Redacted]

Asthma (self-reported OR HES)

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Standing height (assessment centre)

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Standing height (assessment centre)

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Paracetamol (self-reported)

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Standing height (assessment centre)

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Bone Mineral Density (assessment centre)

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Malignant prostate neoplasm (cancer register)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Headaches >3 months (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Headaches >3 months (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

Mean systolic BP (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Headaches >3 months (self-report)

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

[Redacted]

Mean systolic BP (assessment centre)

[Redacted]



[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

Headaches >3 months (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Male Balding (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]



Bone Mineral Density (assessment centre)



Diseases of blood, blood-forming organs, immune mechanism (HES)



[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Mean systolic BP (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

Neuroticism (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Malignant breast neoplasm (cancer register)

[Redacted]

[Redacted]

[Redacted]

Eosinophil percentage (blood count)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Decongestants / topical nasal preparations (self-reported)

[Redacted]

Corneal resistance factor (right) (assessment centre)

Asthma (self-reported OR HES)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Mean systolic BP (assessment centre)

[Redacted]

Hypothyroidism (self-report OR HES)

Standing height (assessment centre)

Bone Mineral Density (assessment centre)

[Redacted area containing 25 horizontal bars]

Headaches >3 months (self-report)

[Redacted]

Age at first facial hair (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Paracetamol (self-reported)

Corneal resistance factor (right) (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Bone Mineral Density (assessment centre)

[Redacted]

Decongestants / topical nasal preparations (self-reported)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Number of treatments/medications taken (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Corneal resistance factor (right) (assessment centre)

Standing height (assessment centre)

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Tetracyclines (self-reported)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Male Balding (self-report)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Hypothyroidism (self-report OR HES)

[Redacted]

[Redacted]

Bone Mineral Density (assessment centre)







[Redacted]

Asthma (self-reported OR HES)

[Redacted]

Malignant breast neoplasm (cancer register)

[Redacted]

Urinary potassium (urine sample)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Mean systolic BP (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Standing height (assessment centre)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Urinary potassium (urine sample)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Supplementary Table 25: Results for PheWAS of weighted genetic risk score

Final.Category	ShortPheno	LongPheno	N	Cases	Controls	OR	Beta
Respiratory	PEF_maximumV	f_3064_0_f_QU	286327				-0.008
Respiratory	PEF_maximumV	f_3064_0_f_QU	221786				-0.008
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	286327				-0.014
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	175392				-0.014
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	136810				-0.015
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	109888				-0.015
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	84308				-0.016
Respiratory	TA_FEV1_FVC_r	QUANT_FEV1_F	221786				-0.015
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	286096				-0.006
Respiratory	TA_FEV1_perce	QUANT_FEV1_p	221786				-0.007
Respiratory	TA_copdMappin	BIN_copdMappi	244666	25949	218717	1.020	0.021
Respiratory	FEV1_maximum	f_3063_0_f_QU	286327				-0.006
Respiratory	TA_copdMappin	BIN_copdMappi	190114	16789	173325	1.030	0.026
Respiratory	FEV1_maximum	f_3063_0_f_QU	221786				-0.006
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	175392				-0.006
Respiratory	TA_FEV1_ever_s	QUANT_FEV1_e	136810				-0.006
Respiratory	TA_FEV1_never	QUANT_FEV1_n	84308				-0.006
Respiratory	TA_FEV1_never	QUANT_FEV1_n	109888				-0.005
Respiratory	M2W_asthma	map2way_NI_c	379337	48586	330751	1.010	0.005
Respiratory	MED_adrenergic	R03A_adrenergi	379337	26314	353023	1.010	0.007
Respiratory	HESBL_Chronic	HES_block_p_J4	379337	30391	348946	1.010	0.006
Respiratory	MED_adrenergic	R03C_adrenergi	379337	22354	356983	1.010	0.007
Respiratory	MED_other_syst	R03D_other_sys	379337	21438	357899	1.010	0.007
Respiratory	M2W_chronic_c	map2way_NI_c	379337	8821	370516	1.010	0.010
Respiratory	HES_Other_chro	HES_p_J44_BIN	379337	7629	371708	1.010	0.011
Respiratory	HES_Asthma	HES_p_J45_BIN	379337	23861	355476	1.010	0.006
Respiratory	TA_NI_adult_on	BIN_NI_adult_o	367417	31940	335477	1.010	0.005
Respiratory	PROXYF_Chronic	f_20107_0_cod	343797	37597	306200	1.000	0.005
Respiratory	Wheeze_or_whi	f_2316_0_0_f_E	372213	77265	294948	1.000	0.003
Respiratory	TA_NI_pediatic	BIN_NI_pediatri	350792	15315	335477	1.010	0.006
Respiratory	MED_other_dru	R03B_other_dru	379337	29738	349599	1.000	0.005
Respiratory	HESCH_Diseases	HES_chapter_p	379337	55476	323861	1.000	0.003
ENT and maxillofaci	MED_decongest	R01A_deconges	379337	33807	345530	1.000	0.004
Immuno-inflammat	MED_corticoste	D07A_corticoste	379337	35012	344325	1.000	0.004
Respiratory	PROXYS_Chronic	f_20111_0_cod	301198	8231	292967	1.010	0.007
Respiratory	M2W_emphyse	map2way_NI_c	379337	6352	372985	1.010	0.007
Respiratory	PROXYFM_Chroi	f_20107_20110	379337				0.001
Anthropometry	Standing_height	f_50_0_0_f_QU	378482				0.001
Respiratory	PROXYM_Chroni	f_20110_0_cod	357740	20574	337166	1.000	0.004
Gastroenterology, I	M2W_malabsor	map2way_NI_c	379337	2524	376813	1.010	0.010
Anthropometry	Body_mass_inde	f_21001_0_0_f	378070				-0.001
Biological assays - F	Lymphocyte_pe	f_30180_0_0_f	367440				-0.001
Gastroenterology, I	HES_Intestinal_r	HES_p_K90_BIN	379337	1888	377449	1.010	0.010
Respiratory	HES_Empysem	HES_p_J43_BIN	379337	1577	377760	1.010	0.011
Respiratory	M2W_emphyse	map2way_NI_c	379337	1668	377669	1.010	0.010
Biological assays - F	Haematocrit_pe	f_30030_0_0_f	368090				0.001
Biological assays - F	Reticulocyte_pe	f_30240_0_0_f	361992				-0.001

Gastroenterology, I	MED_intestinal_A07E_intestinal	379337	25534	353803	1.000	0.003
Biological assays - F	Mean_platelet_f_30100_0_0_f	368084				-0.001
Eye	Cataract_f_6148_0_code	124452	11730	112722	1.000	0.004
Cancer	MED_antimetab_L01B_antimetab	379337	2406	376931	0.993	-0.007
Biological assays - F	Neutrophill_perct_f_30200_0_0_f	367440				0.001
Biological assays - F	Monocyte_coun_f_30130_0_0_f	367434				0.001
Biological assays - F	Reticulocyte_coif_30250_0_0_f	361992				-0.001
Biological assays - F	High_light_scatt_f_30290_0_0_f	361993				-0.001
Respiratory	HES_Respiratory_HES_p_J96_BIN	379337	1849	377488	1.010	0.008
Respiratory	M2W_respirator_map2way_NI_co	379337	1955	377382	1.010	0.008
Biological assays - F	Mean_sphered_f_30270_0_0_f	361993				0.001
Biological assays - F	Platelet_count_f_30080_0_0_f	368088				0.001
Cardiovascular	HES_Chronic_isc_HES_p_I25_BIN	379337	22982	356355	0.998	-0.002
Biological assays - F	Haemoglobin_ccf_30020_0_0_f	368090				0.001
Cardiovascular	Diastolic_blood_f_4079_0_f_QU	357468				0.001
Biological assays - F	Lymphocyte_coif_30120_0_0_f	367434				-0.001
Biological assays - F	Mean_reticulocy_f_30260_0_0_f	361992				0.001
Biological assays - F	High_light_scatt_f_30300_0_0_f	361992				0.000
Eye	M2W_cataract_map2way_NI_co	379337	20803	358534	1.000	0.002
Cardiovascular	M2W_heartcard_map2way_NI_co	379337	25708	353629	0.998	-0.002
Gynaecology and O	HESBL_Oed_pro_HES_block_p_O	379337	1200	378137	1.010	0.009
Eye	OPC_Prosthesis_f_41210_41200	379337	17919	361418	1.000	0.002
Respiratory	PROXYFM_Lung_f_20107_20110	379337				0.000
Gynaecology and O	M2W_gestation_map2way_NI_co	379337	2536	376801	1.010	0.006
Cardiovascular	pulse_minimum_f_102_0_f_QUA	357468				0.000
Anthropometry	Body_fat_perceif_23099_0_0_f	372489				0.000
Eye	Corneal_resistar_f_5265_0_0_f_C	81101				-0.001
Eye	HESBL_Disorder:HES_block_p_H	379337	18494	360843	1.000	0.002
Metabolic and endc	MED_thyroid_pr_H03A_thyroid_p	379337	21502	357835	0.998	-0.002
Eye	M2W_retinal_dκ_map2way_NI_co	379337	3634	375703	1.000	0.005
Anthropometry	Whole_body_fatf_23100_0_0_f	372085				0.000
Eye	OPC_Extracapsu_f_41210_41200	379337	17923	361414	1.000	0.002
Eye	Corneal_hystere_f_5264_0_0_f_C	81101				-0.001
Musculoskeletal dis	HES_Other_arth_HES_p_M13_BII	379337	10543	368794	1.000	0.003
Eye	M2W_retinal_pr_map2way_NI_co	379337	7227	372110	1.000	0.003
Cardiovascular	Chest_pain_or_cf_2335_0_0_f_E	375426	59277	316149	1.000	0.001
Biological assays - F	Monocyte_perct_f_30190_0_0_f	367440				0.000
Biological assays - F	Mean_corpusculf_30060_0_0_f	368083				0.000
ENT and maxillofaci	NIOPC_wisdom_f_20004_dxCod	379337	15034	364303	1.000	0.002
Cardiovascular	HESBL_Ischaemi_HES_block_p_I2	379337	27686	351651	0.998	-0.002
Infectious disease	HESBL_Other_vi_HES_block_p_Bi	379337	1782	377555	0.994	-0.006
Biological assays - F	Neutrophill_cou_f_30140_0_0_f	367434				0.000
Respiratory	HESBL_Other_di_HES_block_p_J9	379337	4861	374476	1.000	0.004
Gynaecology and O	HES_Unspecifiec_HES_p_O16_BIM	379337	541	378796	1.010	0.011
Immuno-inflammat	MED_immunosu_L04A_immunosu	379337	3724	375613	0.996	-0.004
General health, smc	Number_of_self_f_135_0_0_f_QI	379276				0.000
Immuno-inflammat	MED_corticosteI_D07C_corticoste	379337	20871	358466	1.000	0.002
Eye	HESBL_Disorder:HES_block_p_H	379337	6763	372574	1.000	0.003
Gynaecology and O	NIOPC_colposco_f_20004_dxCod	379337	1641	377696	1.010	0.006
Operations and Pro	OPC_Re_exploraf_41210_41200	379337	217	379120	1.020	0.017

Musculoskeletal dis	M2W_osteopor	map2way_NI_co	379337	10115	369222	1.000	0.002
Musculoskeletal dis	HESBL_Disorder	HES_block_p_M	379337	8193	371144	1.000	0.003
Neurosciences	HESBL_Demyelin	HES_block_p_G	379337	1406	377931	1.010	0.006
Musculoskeletal dis	HES_Osteoporos	HES_p_M81_BI	379337	5400	373937	1.000	0.003
Infectious disease	HES_Viral_infect	HES_p_B34_BIN	379337	1591	377746	0.994	-0.006
Urology	OPC_Operations	f_41210_41200	379337	2328	377009	0.995	-0.005
Biological assays - F	Red_blood_cell	f_30010_0_0_f	368090				0.000
Broad symptoms, si	HESBL_Diseases	HES_block_p_I8	379337	35426	343911	0.999	-0.001
Biological assays - F	Platelet_distribu	f_30110_0_0_f	368084				0.000
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	379337	2845	376492	1.000	0.004
Eye	HESCH_Diseases	HES_chapter_p_	379337	35608	343729	1.000	0.001
Gastroenterology, I	HES_Other_dise	HES_p_K92_BIN	379337	8438	370899	0.998	-0.002
Urology	OPC_Other_ther	f_41210_41200	379337	1934	377403	0.995	-0.005
Gynaecology and O	OPC_Other_rep	f_41210_41200	379337	332	379005	0.988	-0.012
Immuno-inflammat	HES_Systemic_lt	HES_p_M32_BI	379337	324	379013	1.010	0.012
Biological assays - F	Nucleated_red_lf	f_30230_0_0_f	367422				0.000
Neurosciences	OPC_Diagnostic	f_41210_41200	379337	13700	365637	1.000	0.002
Gastroenterology, I	M2W_gastrointe	map2way_NI_co	379337	8303	371034	0.998	-0.002
Respiratory	TA_GOLD_tobin	QUANT_GOLD_t	18338				0.002
Biological assays - F	Nucleated_red_lf	f_30170_0_0_f	367425				0.000
Musculoskeletal dis	CREG_mal_neo	f_40006_0_p_C	379337	247	379090	1.010	0.014
Musculoskeletal dis	M2W_rheumatc	map2way_NI_co	379337	6233	373104	0.997	-0.003
Mental health	Ever_manic_hyp	f_4642_0_0_f_E	123574	7035	116539	0.997	-0.003
Immuno-inflammat	M2W_allergy_o	map2way_NI_co	379337	4200	375137	1.000	0.003
Broad symptoms, si	HES_Symptoms	HES_p_R63_BIN	379337	5856	373481	1.000	0.003
Cardiovascular	NIOPC_carotid_	f_20004_dxCod	379337	226	379111	0.986	-0.014
Cardiovascular	Leg_pain_on_w	f_4728_0_0_f_E	125495	27312	98183	0.999	-0.001
Cardiovascular	NIOPC_coronary	f_20004_dxCod	379337	3930	375407	0.997	-0.003
Eye	Corneal_resistar	f_5257_0_0_f_C	81222				-0.001
Gastroenterology, I	M2W_diverticul	map2way_NI_co	379337	26549	352788	0.999	-0.001
Neurosciences	HES_Alzheimer	HES_p_G30_BIN	379337	361	378976	0.989	-0.011
Cardiovascular	PROXYF_Heart_	f_20107_0_cod	343797	109193	234604	0.999	-0.001
Cardiovascular	M2W_angina	map2way_NI_co	379337	20453	358884	0.998	-0.002
Respiratory	M2W_spontane	map2way_NI_co	379337	1037	378300	1.010	0.007
Anthropometry	Weight	f_21002_0_0_f	378214				0.000
Neurosciences	Pain_all_over_t	f_6159_code8_l	378466	5854	372612	0.997	-0.003
Gastroenterology, I	HES_Peritonitis	HES_p_K65_BIN	379337	723	378614	1.010	0.008
Broad symptoms, si	HESBL_Behav_s	HES_block_p_F5	379337	424	378913	1.010	0.010
Neurosciences	M2W_other_dei	map2way_NI_co	379337	1326	378011	1.010	0.006
Mental health	HESCH_Mental	HES_chapter_p_	379337	29146	350191	1.000	0.001
Neurosciences	HES_Multiple_sc	HES_p_G35_BIN	379337	1215	378122	1.010	0.006
Metabolic and endc	M2W_hypothyrc	map2way_NI_co	379337	22553	356784	0.999	-0.001
Eye	HES_Other_cata	HES_p_H26_BIN	379337	13100	366237	1.000	0.002
Urology	NIOPC_ureteric	f_20004_dxCod	379337	605	378732	0.992	-0.008
Eye	NIOPC_cataract	f_20004_dxCod	379337	4098	375239	1.000	0.003
Musculoskeletal dis	HES_Other_diso	HES_p_M85_BI	379337	998	378339	1.010	0.006
Cardiovascular	OPC_Other_vein	f_41210_41200	379337	4299	375038	1.000	0.003
Musculoskeletal dis	HES_Other_acqu	HES_p_M21_BI	379337	1540	377797	1.010	0.005
Broad symptoms, si	HES_Volume_de	HES_p_E86_BIN	379337	2597	376740	0.996	-0.004
Cardiovascular	NIOPC_coronary	f_20004_dxCod	379337	2806	376531	0.996	-0.004

Cardiovascular	HES_Complicatio	HES_p_I51_BIN	379337	3775	375562	0.997	-0.003
Gastroenterology, I	HES_Diverticular	HES_p_K57_BIN	379337	24948	354389	0.999	-0.001
Neurosciences	HES_Disturbanc	HES_p_R20_BIN	379337	2619	376718	1.000	0.004
Eye	NIOPC_retinal_c	f_20004_dxCod	379337	2253	377084	1.000	0.004
Eye	Other_serious_e	f_6148_0_code	124452	6934	117518	1.000	0.002
Musculoskeletal dis	OPC_Primary_of	f_41210_41200	379337	347	378990	1.010	0.011
Immuno-inflammat	HESBL_Sympton	HES_block_p_R	379337	6514	372823	1.000	0.002
Musculoskeletal dis	HES_Other_defc	HES_p_M43_BI	379337	1559	377778	1.010	0.005
Operations and Pro	NIOPC_ct_scan	f_20004_dxCod	379337	307	379030	0.989	-0.011
Immuno-inflammat	CREGBL_mal_ne	f_40006_block	379337	539	378798	1.010	0.009
Operations and Pro	OPC_Injection_c	f_41210_41200	379337	1840	377497	1.000	0.005
Musculoskeletal dis	M2W_arthritis_	map2way_NI_c	379337	13150	366187	1.000	0.002
Eye	HES_Retinal_det	HES_p_H33_BIN	379337	2999	376338	1.000	0.004
Cancer	MED_chemothe	D06B_chemoth	379337	1020	378317	0.994	-0.006
Respiratory	TA_copdExacerb	BIN_copdExacer	25157	2323	22834	0.996	-0.004
Urology	CREG_mal_neo_f	40006_0_p_C	379337	6557	372780	0.998	-0.002
Neurosciences	M2W_multiple_	map2way_NI_c	379337	1635	377702	1.000	0.005
Gynaecology and O	HES_Single_deliv	HES_p_O82_BIN	379337	504	378833	0.991	-0.009
Urology	HES_Redundant	HES_p_N47_BIN	379337	1895	377442	0.996	-0.004
Urology	PROXYFM_Prost	f_20107_20110	174929				0.000
Musculoskeletal dis	BMD_Combined	f_3148_4105_4	338402				0.000
Metabolic and endc	HES_Disorders_	HES_p_E78_BIN	379337	32685	346652	0.999	-0.001
Mental health	HES_Depressive	HES_p_F32_BIN	379337	10671	368666	1.000	0.002
Neurosciences	OPC_Destruction	f_41210_41200	379337	243	379094	1.010	0.012
Cardiovascular	HES_Gangrene	HES_p_R02_BIN	379337	510	378827	1.010	0.009
Cardiovascular	OPC_Other_autc	f_41210_41200	379337	497	378840	0.991	-0.009
Operations and Pro	OPC_Division_of	f_41210_41200	379337	394	378943	1.010	0.010
Immuno-inflammat	M2W_alopecia_	map2way_NI_c	379337	180	379157	0.986	-0.014
Gastroenterology, I	HESBL_Diseases	HES_block_p_K	379337	3418	375919	1.000	0.003
Medication	MED_surgical_ai	S01K_surgical_a	379337	1057	378280	0.994	-0.006
Cancer	CREGBL_mal_ne	f_40006_block	379337	433	378904	0.991	-0.009
Gastroenterology, I	PROXYS_Bowel	f_20111_0_cod	301409	7009	294400	1.000	0.002
Medication	Folic_acid_or_F	c_f_6155_0_code	377270	8178	369092	0.998	-0.002
Biological assays - F	Mean_corpuscul	f_30040_0_0_f	368088				0.000
Gastroenterology, I	OPC_Diagnostic	f_41210_41200	379337	29471	349866	0.999	-0.001
Gastroenterology, I	M2W_rectal_pro	map2way_NI_c	379337	1031	378306	0.994	-0.006
Eye	HES_Senile_cata	HES_p_H25_BIN	379337	7536	371801	1.000	0.002
Gastroenterology, I	HES_Haemorrh	HES_p_I84_BIN	379337	21524	357813	0.999	-0.001
Immuno-inflammat	M2W_sjogrens_	map2way_NI_c	379337	614	378723	1.010	0.008
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	379337	1262	378075	1.010	0.005
Musculoskeletal dis	OPC_Other_recc	f_41210_41200	379337	2375	376962	1.000	0.004
Neurosciences	M2W_chronicde	map2way_NI_c	379337	4093	375244	1.000	0.003
Musculoskeletal dis	OPC_Total_pros	f_41210_41200	379337	4095	375242	1.000	0.003
Respiratory	HES_Status_asth	HES_p_J46_BIN	379337	233	379104	1.010	0.012
Neurosciences	General_pain_fc	f_2956_0_0_f_E	377437	4825	372612	0.997	-0.003
Metabolic and endc	M2W_hyperthyr	map2way_NI_c	379337	4023	375314	1.000	0.003
Cardiovascular	OPC_Ligation_of	f_41210_41200	379337	5770	373567	0.998	-0.002
Operations and Pro	OPC_Drainage_c	f_41210_41200	379337	2630	376707	1.000	0.004
Cardiovascular	MED_beta_block	C07B_beta_bloc	379337	27227	352110	0.999	-0.001
Metabolic and endc	HESBL_Metaboli	HES_block_p_E	379337	39970	339367	0.999	-0.001

Mental health	HESBL_Mood_af	HES_block_p_F3	379337	11555	367782	1.000	0.002
Mental health	HES_Sexual_dys	HES_p_F52_BIN	379337	264	379073	1.010	0.011
Mental health	M2W_anxiety	map2way_NI_co	379337	10398	368939	1.000	0.002
General health, sm	Number_of_tre	f_137_0_0_f_Q	379276				0.000
Musculoskeletal dis	HESBL_Disorder	HES_block_p_M	379337	1027	378310	0.994	-0.006
Urology	NI_prostate_can	f_20001_0_DX_	379337	2729	376608	0.996	-0.004
ENT and maxillofaci	Hearing_difficult	f_2257_0_0_f_E	371714	140736	230978	0.999	-0.001
Neurosciences	M2W_dementia	map2way_NI_co	379337	909	378428	0.994	-0.006
Musculoskeletal dis	Total_BMD_bon	f_23236_2_0_f_	4101				-0.003
Neurosciences	HES_Dementia_i	HES_p_F00_BIN	379337	225	379112	0.988	-0.012
Musculoskeletal dis	Trunk_BMD_bor	f_23241_2_0_f_	4101				-0.003
ENT and maxillofaci	OPC_Operations	f_41210_41200	379337	3312	376025	0.997	-0.003
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	379337	504	378833	0.992	-0.008
Immuno-inflammat	M2W_systemic_map	2way_NI_co	379337	547	378790	1.010	0.008
Cardiovascular	OPC_Other_ope	f_41210_41200	379337	207	379130	0.988	-0.012
Musculoskeletal dis	OPC_Primary_cl	f_41210_41200	379337	776	378561	1.010	0.006
Immuno-inflammat	HES_Other_derr	HES_p_L30_BIN	379337	1380	377957	1.000	0.005
Immuno-inflammat	HES_Other_eryt	HES_p_L53_BIN	379337	482	378855	1.010	0.008
Medication	MED_anesthetic	N01A_anestheti	379337	221	379116	1.010	0.012
Operations and Pro	OPC_General_ar	f_41210_41200	379337	13549	365788	0.998	-0.002
Neurosciences	HES_Other_dem	HES_p_G37_BIN	379337	283	379054	1.010	0.010
Eye	HES_Other_diso	HES_p_H47_BIN	379337	285	379052	1.010	0.010
Respiratory	HES_Pneumonia	HES_p_J18_BIN	379337	8217	371120	1.000	0.002
Cardiovascular	TA_LVEDVi	QUANT_LVEDVi	3760				-0.003
Gastroenterology, I	NIOPC_anal_sur	f_20004_dxCod	379337	2360	376977	1.000	0.004
Cardiovascular	myocardial_infa	f_42000_0_0_B	379337	13512	365825	0.998	-0.002
Eye	Corneal_hystere	f_5256_0_0_f_C	81222				-0.001
Metabolic and endc	HES_Other_diso	HES_p_E16_BIN	379337	829	378508	1.010	0.006
Metabolic and endc	HESBL_glucose_	HES_block_p_E	379337	831	378506	1.010	0.006
Mental health	Risk_taking	f_2040_0_0_f_E	365877	96203	269674	0.999	-0.001
Eye	OPC_Operations	f_41210_41200	379337	3858	375479	1.000	0.003
Medication	MED_calcium	A12A_calcium_I	379337	6055	373282	1.000	0.002
Gastroenterology, I	NIOPC_cholecys	f_20004_dxCod	379337	14877	364460	0.999	-0.001
Operations and Pro	OPC_Radiothera	f_41210_41200	379337	2125	377212	0.996	-0.004
Musculoskeletal dis	HESBL_Chondro	HES_block_p_M	379337	1094	378243	1.010	0.005
Cardiovascular	PROXYS_Heart_	(f_20111_0_cod	301198	29896	271302	0.999	-0.001
Urology	CREGBL_mal_ne	f_40006_block_	379337	7058	372279	0.998	-0.002
Musculoskeletal dis	OPC_Other_ope	f_41210_41200	379337	606	378731	1.010	0.007
Medication	Calcium	f_6179_0_code	378085	25595	352490	1.000	0.001
Infectious disease	M2W_chickenpc	map2way_NI_co	379337	1558	377779	1.000	0.004
Cardiovascular	PROXYFM_Heart	f_20107_20110	379337				0.000
Gynaecology and O	OPC_Normal_de	f_41210_41200	379337	6517	372820	0.998	-0.002
Mental health	M2W_psycholog	map2way_NI_co	379337	2226	377111	1.000	0.004
Musculoskeletal dis	HESBL_Deformir	HES_block_p_M	379337	2541	376796	1.000	0.003
Cardiovascular	HES_Phlebitis_a	HES_p_I80_BIN	379337	3506	375831	0.997	-0.003
Metabolic and endc	Insulin	f_6153_6177_0	376456	3936	372520	1.000	0.003
Gynaecology and O	M2W_vaginal_p	map2way_NI_co	379337	11478	367859	0.998	-0.002
Musculoskeletal dis	Legs_BMD_bone	f_23231_2_0_f_	4101				-0.003
ENT and maxillofaci	HES_Other_diso	HES_p_H74_BIN	379337	400	378937	0.992	-0.008
Gynaecology and O	HES_Polyp_of_f	HES_p_N84_BIN	379337	9793	369544	0.998	-0.002

Gynaecology and O	HES_Inflammatc	HES_p_N72_BIN	379337	1044	378293	0.995	-0.005
Immuno-inflammat	OPC_Other_desif	f_41210_41200	379337	325	379012	0.991	-0.009
Eye	HES_Other_stral	HES_p_H50_BIN	379337	825	378512	1.010	0.006
Operations and Pro	OPC_Introductio	f_41210_41200	379337	610	378727	1.010	0.007
Cardiovascular	MED_beta_block	C07A_beta_bloc	379337	27228	352109	0.999	-0.001
Immuno-inflammat	HES_Dermatoph	HES_p_B35_BIN	379337	227	379110	1.010	0.011
ENT and maxillofaci	HES_Nasal_poly	HES_p_J33_BIN	379337	2943	376394	1.000	0.003
Respiratory	HES_Pneumothc	HES_p_J93_BIN	379337	764	378573	1.010	0.006
Neurosciences	MED_anti_deme	N06D_anti_derr	379337	2265	377072	0.997	-0.003
Musculoskeletal dis	Pelvis_BMD_bor	f_23232_2_0_f	4101				-0.003
Gastroenterology, †	OPC_Excision_of	f_41210_41200	379337	2723	376614	0.997	-0.003
Urology	OPC_Other_end	f_41210_41200	379337	242	379095	0.990	-0.010
Operations and Pro	OPC_Excision_of	f_41210_41200	379337	2953	376384	1.000	0.003
Gastroenterology, †	Stomach_or_abx	f_6159_code5_	378466	37982	340484	0.999	-0.001
Gastroenterology, †	M2W_primary_†	map2way_NI_cc	379337	237	379100	0.989	-0.011
Neurosciences	HES_Facial_nerv	HES_p_G51_BIN	379337	779	378558	1.010	0.006
Gastroenterology, †	HES_Nausea_an	HES_p_R11_BIN	379337	10638	368699	1.000	0.002
Musculoskeletal dis	HES_Other_diso	HES_p_M62_BII	379337	808	378529	0.994	-0.006
Gynaecology and O	CREG_mal_neo_f	40006_0_p_C	379337	384	378953	0.992	-0.008
Immuno-inflammat	M2W_monoclor	map2way_NI_cc	379337	190	379147	1.010	0.012
Gastroenterology, †	M2W_haemochi	map2way_NI_cc	379337	637	378700	0.994	-0.006
Eye	NIOPC_eye_surg	f_20004_dxCod	379337	3496	375841	0.997	-0.003
Puberty	Relative_age_vo	f_2385_0_0_f	161810				0.000
Immuno-inflammat	Hair_balding_pa	f_2395_0_0_f_E	173485	117954	55531	0.999	-0.001
Immuno-inflammat	Pattern_1_f	f_2395_0_code	173485	55531	117954	1.000	0.001
Musculoskeletal dis	OPC_bone_and	f_41210_41200	379337	2524	376813	1.000	0.003
Infectious disease	M2W_rubella_g	map2way_NI_cc	379337	452	378885	1.010	0.008
Eye	M2W_eye_infec	map2way_NI_cc	379337	2803	376534	0.997	-0.003
Mental health	Single_episode	f_20123_0_0_f	54689	7510	47179	1.000	0.002
Musculoskeletal dis	HES_Kyphosis_a	HES_p_M40_BII	379337	202	379135	1.010	0.011
Infectious disease	MED_sulfonami	J01E_sulfonami	379337	595	378742	1.010	0.007
Musculoskeletal dis	NIOPC_foot_sur	f_20004_dxCod	379337	7432	371905	0.998	-0.002
Biological assays - F	Basophil_count	f_30160_0_0_f	367434				0.000
Musculoskeletal dis	Neck_shoulder	f_3404_0_0_f_E	345138	59020	286118	1.000	0.001
Gynaecology and O	CREG_carc_in_si	f_40006_0_p_D	379337	2991	376346	0.997	-0.003
Gastroenterology, †	OPC_Excision_of	f_41210_41200	379337	195	379142	1.010	0.011
Cardiovascular	OPC_Translumin	f_41210_41200	379337	2919	376418	0.997	-0.003
Gynaecology and O	HES_Salpingitis	HES_p_N70_BIN	379337	472	378865	0.993	-0.007
Gynaecology and O	HES_Female_gei	HES_p_N81_BIN	379337	10412	368925	0.998	-0.002
Cardiovascular	M2W_high_chol	map2way_NI_cc	379337	62481	316856	0.999	-0.001
Gastroenterology, †	NIOPC_anal_fiss	f_20004_dxCod	379337	527	378810	0.993	-0.007
Musculoskeletal dis	Spine_BMD_bor	f_23234_2_0_f	4101				-0.003
Eye	OPC_Excision_of	f_41210_41200	379337	1123	378214	0.995	-0.005
Gynaecology and O	M2W_uterine_p	map2way_NI_cc	379337	8016	371321	0.998	-0.002
Cardiovascular	OPC_Translumin	f_41210_41200	379337	1001	378336	0.995	-0.005
Gynaecology and O	HES_Labour_anc	HES_p_O69_BIN	379337	570	378767	0.993	-0.007
Immuno-inflammat	MED_emollients	D02A_emollient	379337	1288	378049	1.000	0.004
Cardiovascular	OPC_Other_ther	f_41210_41200	379337	1372	377965	1.000	0.004
Gastroenterology, †	MED_antipropul	A07D_antipropu	379337	2041	377296	1.000	0.003
Cardiovascular	MED_beta_block	C07F_beta_bloc	379337	42349	336988	0.999	-0.001

Musculoskeletal dis	Back_pain_for_3f_3571_0_0_f_E	341738	65349	276389	1.000	0.001
Operations and Pro	OPC_Approach_f_41210_41200	379337	605	378732	0.994	-0.006
General health, sm	TA_pack_years QUANT_pack_y	111030				0.000
Cardiovascular	M2W_venous_tmap2way_NI_co	379337	3987	375350	0.998	-0.002
ENT and maxillofaci	M2W_nasal_pol map2way_NI_co	379337	4021	375316	1.000	0.002
Cardiovascular	HES_Aortic_aneHES_p_I71_BIN	379337	1207	378130	0.996	-0.004
Respiratory	HES_Bronchitis_HES_p_J40_BIN	379337	571	378766	0.994	-0.006
Immuno-inflammat	HES_Other_abnrHES_p_R76_BIN	379337	247	379090	1.010	0.010
Gastroenterology, †	NIOPC_haemorr f_20004_dxCod	379337	6721	372616	0.998	-0.002
Cardiovascular	systolic_blood_f_4080_0_f_QU	357465				0.000
Musculoskeletal dis	OPC_Puncture_c_f_41210_41200	379337	10128	369209	0.998	-0.002
Musculoskeletal dis	OPC_Other_mar f_41210_41200	379337	2051	377286	0.997	-0.003
Eye	HES_Retinal_disHES_p_H36_BIN	379337	1229	378108	1.000	0.004
Cardiovascular	Cardiac_index f_22425_2_0_f_	3764				-0.003
Musculoskeletal dis	M2W_dupuytrei map2way_NI_co	379337	3305	376032	1.000	0.003
Cardiovascular	MED_cardiac_st C01C_cardiac_s	379337	304	379033	1.010	0.009
Respiratory	HESBL_InfluenzaHES_block_p_JC	379337	9029	370308	1.000	0.002
Infectious disease	HES_Viral_agentHES_p_B97_BIN	379337	505	378832	1.010	0.007
Gastroenterology, †	NIOPC_hernia_s f_20004_dxCod	379337	2431	376906	1.000	0.003
Neurosciences	Mean_time_to_f_20023_0_0_f_	376688				0.000
Cardiovascular	OPC_Translumin f_41210_41200	379337	586	378751	0.994	-0.006
Operations and Pro	OPC_External_b f_41210_41200	379337	1376	377961	0.996	-0.004
Haematology	M2W_low_plate map2way_NI_co	379337	1621	377716	0.996	-0.004
Cardiovascular	M2W_aortic_an map2way_NI_co	379337	1228	378109	0.996	-0.004
Neurosciences	NIOPC_intracran f_20004_dxCod	379337	205	379132	0.990	-0.010
Gynaecology and O	NIOPC_ovarian_f_20004_dxCod	379337	1138	378199	1.000	0.004
Infectious disease	M2W_infectious map2way_NI_co	379337	517	378820	0.993	-0.007
Neurosciences	PROXYFM_Parki f_20107_20110	379337				0.000
Gastroenterology, †	HES_Ulcerative_HES_p_K51_BIN	379337	2941	376396	0.997	-0.003
Gynaecology and O	HES_Long_labouHES_p_O63_BIN	379337	1773	377564	0.996	-0.004
Gastroenterology, †	NIOPC_incisiona f_20004_dxCod	379337	1463	377874	0.996	-0.004
Operations and Pro	OPC_Excision_of_41210_41200	379337	6162	373175	0.998	-0.002
Musculoskeletal dis	OPC_Other_exte f_41210_41200	379337	667	378670	0.994	-0.006
Cardiovascular	M2W_heart_att map2way_NI_co	379337	12089	367248	0.999	-0.001
Cardiovascular	M2W_deep_ven map2way_NI_co	379337	8927	370410	0.998	-0.002
Mental health	M2W_schizophr map2way_NI_co	379337	686	378651	1.010	0.006
Cardiovascular	HES_SubsequenHES_p_I22_BIN	379337	665	378672	0.994	-0.006
Cardiovascular	OPC_Cardioverti f_41210_41200	379337	601	378736	0.994	-0.006
Urology	OPC_Other_ope f_41210_41200	379337	6427	372910	0.998	-0.002
Musculoskeletal dis	OPC_Other_ope f_41210_41200	379337	4624	374713	0.998	-0.002
Haematology	OPC_High_cost_f_41210_41200	379337	609	378728	1.010	0.006
Neurosciences	M2W_polio_pol map2way_NI_co	379337	280	379057	0.991	-0.009
Gastroenterology, †	MED_antispasm A03D_antispasn	379337	607	378730	0.994	-0.006
Gynaecology and O	HES_Other_pueHES_p_O86_BIN	379337	174	379163	0.989	-0.011
Cardiovascular	HES_Poisoning_ HES_p_T46_BIN	379337	196	379141	1.010	0.011
Cardiovascular	HESBL_HyperterHES_block_p_I1	379337	70680	308657	1.000	0.001
Cancer	CREG_carc_in_sif_40006_0_p_D	379337	562	378775	1.010	0.006
Infectious disease	M2W_whooping map2way_NI_co	379337	416	378921	1.010	0.007
Gastroenterology, †	MED_intestinal_A07A_intestinal	379337	693	378644	1.010	0.006
Gastroenterology, †	HES_Dyspepsia HES_p_K30_BIN	379337	10748	368589	1.000	0.001

Musculoskeletal dis	OPC_Other_graf	f_41210_41200	379337	696	378641	1.010	0.006
Cardiovascular	HES_Essential_p	HES_p_I10_BIN	379337	70458	308879	1.000	0.001
Gastroenterology, †	NIOPC_colectom	f_20004_dxCod	379337	1637	377700	0.996	-0.004
Gastroenterology, †	OPC_Artificial_o	f_41210_41200	379337	294	379043	1.010	0.009
Gastroenterology, †	OPC_Opening_o	f_41210_41200	379337	941	378396	1.000	0.005
Operations and Pro	OPC_Laser_ther	f_41210_41200	379337	2990	376347	1.000	0.003
Gastroenterology, †	MED_propulsive	A03F_propulsive	379337	1385	377952	1.000	0.004
Neurosciences	PROXYS_Alzheim	f_20111_0_cod	301198	1678	299520	0.996	-0.004
Musculoskeletal dis	L1_L4_BMD_bor	f_23204_2_0_f	4084				-0.002
Eye	OPC_Extirpation	f_41210_41200	379337	171	379166	0.989	-0.011
Immuno-inflammat	NI_squamous_c	f_20001_0_DX	379337	470	378867	0.993	-0.007
Musculoskeletal dis	NI_sarcoma_fibr	f_20001_0_DX	379337	200	379137	1.010	0.010
Metabolic and endc	NIOPC_thyroid_	f_20004_dxCod	379337	362	378975	1.010	0.008
Eye	OPC_Other_ope	f_41210_41200	379337	940	378397	0.995	-0.005
Urology	OPC_Vaginal_op	f_41210_41200	379337	3234	376103	0.997	-0.003
Eye	Intra_ocular_pre	f_5263_0_0_f	81101				-0.001
Neurosciences	HESBL_Extrapyr	HES_block_p_G	379337	1816	377521	1.000	0.003
Gastroenterology, †	MED_bile_thera	A05A_bile_ther	379337	233	379104	0.991	-0.009
Musculoskeletal dis	HES_Polyarthros	HES_p_M15_BII	379337	3572	375765	0.998	-0.002
Gastroenterology, †	HES_Paralytic_il	HES_p_K56_BIN	379337	3593	375744	1.000	0.002
Gastroenterology, †	HES_Other_diso	HES_p_K66_BIN	379337	2826	376511	1.000	0.003
Immuno-inflammat	HES_Ulcer_of_lc	HES_p_L97_BIN	379337	989	378348	1.000	0.005
Neurosciences	NIOPC_brain_su	f_20004_dxCod	379337	1561	377776	0.996	-0.004
Operations and Pro	NIOPC_ultrasou	f_20004_dxCod	379337	230	379107	0.991	-0.009
Biological assays - F	Platelet_crit	f_30090_0_0_f	368085				0.000
Haematology	CREG_Lymphoid	f_40006_0_p_C	379337	521	378816	1.010	0.006
Gastroenterology, †	CREG_carc_in_sif	f_40006_0_p_D	379337	262	379075	1.010	0.009
Eye	OPC_Incision_of	f_41210_41200	379337	241	379096	0.991	-0.009
Gynaecology and O	OPC_Repair_of	f_41210_41200	379337	3618	375719	0.998	-0.002
Operations and Pro	OPC_Blood_wit	f_41210_41200	379337	3034	376303	0.997	-0.003
Operations and Pro	OPC_Radiopharr	f_41210_41200	379337	249	379088	0.991	-0.009
Cardiovascular	Blood_pressure	f_6153_6177_0	376456	77693	298763	1.000	0.001
Musculoskeletal dis	M2W_fracture_†	map2way_NI_c	379337	1193	378144	1.000	0.004
Cardiovascular	MED_diuretics_	C03E_diuretics_	379337	27983	351354	1.000	0.001
Neurosciences	HES_Parkinson_	HES_p_G20_BIN	379337	1056	378281	1.000	0.004
Urology	NIOPC_prostate	f_20004_dxCod	379337	862	378475	1.000	0.005
Gastroenterology, †	NIOPC_inguinal	f_20004_dxCod	379337	12632	366705	1.000	0.001
Cardiovascular	LV_stroke_volur	f_22423_2_0_f	3764				-0.002
Biological assays - F	White_blood_ce	f_30000_0_0_f	368085				0.000
Operations and Pro	OPC_Diagnostic	f_41210_41200	379337	1273	378064	0.996	-0.004
Gastroenterology, †	M2W_dyspepsia	map2way_NI_c	379337	11171	368166	1.000	0.001
Eye	Intra_ocular_pre	f_5255_0_0_f	81222				0.000
Anthropometry	Abdominal_subc	f_22408_0_0_f	801				-0.005
Eye	OPC_Combined	f_41210_41200	379337	371	378966	1.010	0.007
Gastroenterology, †	MED_antacids	A02A_antacids_	379337	6188	373149	1.000	0.002
Immuno-inflammat	MED_antipsoria	D05A_antipsori	379337	1197	378140	0.996	-0.004
Broad symptoms, si	HESBL_Other_di	HES_block_p_N	379337	1063	378274	0.996	-0.004
Gynaecology and O	HES_Other_infla	HES_p_N76_BIN	379337	690	378647	1.010	0.005
Broad symptoms, si	HES_Postproced	HES_p_N99_BIN	379337	1063	378274	0.996	-0.004
Musculoskeletal dis	NIOPC_dissecto	f_20004_dxCod	379337	1382	377955	0.996	-0.004

Cardiovascular	LV_end_diastolic_f_22421_2_0_f_	3764					-0.002
Gastroenterology, I	OPC_Other_ope_f_41210_41200	379337	895	378442	1.000	0.005	
Musculoskeletal dis	OPC_Other_ope_f_41210_41200	379337	420	378917	1.010	0.007	
Medication	OPC_Local_anae_f_41210_41200	379337	23589	355748	0.999	-0.001	
Haematology	HES_Purpura_ar_HES_p_D69_BIN	379337	1532	377805	0.996	-0.004	
Gynaecology and O	HES_Haemorrha_HES_p_O20_BIN	379337	836	378501	1.000	0.005	
ENT and maxillofaci	Hearing_difficult_f_2247_0_0_f_E	363873	94865	269008	0.999	-0.001	
Musculoskeletal dis	OPC_Revisional_f_41210_41200	379337	287	379050	1.010	0.008	
Cardiovascular	M2W_essential_map2way_NI_cc	379337	71154	308183	1.000	0.001	
ENT and maxillofaci	HES_Conductive_HES_p_H90_BIN	379337	866	378471	1.000	0.005	
Infectious disease	MED_direct_acti_J05A_direct_act	379337	824	378513	0.995	-0.005	
Eye	HESBL_Disorder:HES_block_p_H	379337	383	378954	1.010	0.007	
Gynaecology and O	HESCH_Pregnan_HES_chapter_p_	379337	12813	366524	0.999	-0.001	
ENT and maxillofaci	HES_Other_dise_HES_p_H83_BIN	379337	734	378603	1.010	0.005	
Cardiovascular	HES_Atrial_fibril_HES_p_I48_BIN	379337	13505	365832	0.999	-0.001	
Cardiovascular	HES_Atheroscler_HES_p_I70_BIN	379337	1132	378205	0.996	-0.004	
Cardiovascular	NIOPC_triple_he_f_20004_dxCod	379337	526	378811	1.010	0.006	
Urology	NIOPC_urethral_f_20004_dxCod	379337	205	379132	1.010	0.010	
Mental health	Single_Probable_f_20126_0_cod	91576	6111	85465	1.000	0.002	
Eye	Other_eye_prob_f_2227_0_0_f_E	378193	54345	323848	1.000	0.001	
Anthropometry	Total_trunk_fat_f_22410_0_0_f_	801					-0.005
Cardiovascular	Mean_carotid_IIf_22674_0_0_f_	1843					-0.003
Biological assays - F	Immature_reticu_f_30280_0_0_f_	361992					0.000
Gastroenterology, I	CREG_mal_neo_f_40006_0_p_C	379337	379	378958	0.993	-0.007	
Gastroenterology, I	CREG_mal_neo_f_40006_0_p_C	379337	2577	376760	1.000	0.003	
Eye	OPC_Destruction_f_41210_41200	379337	2272	377065	1.000	0.003	
Gastroenterology, I	OPC_Partial_exc_f_41210_41200	379337	179	379158	0.990	-0.010	
Musculoskeletal dis	OPC_Excision_of_f_41210_41200	379337	3655	375682	1.000	0.002	
Gynaecology and O	OPC_Other_indt_f_41210_41200	379337	2733	376604	0.997	-0.003	
Immuno-inflammat	OPC_High_cost_f_41210_41200	379337	602	378735	0.994	-0.006	
Respiratory	M2W_pleurisy_map2way_NI_cc	379337	1688	377649	0.997	-0.003	
Metabolic and endc	M2W_thyroid_r:map2way_NI_cc	379337	2508	376829	0.997	-0.003	
Metabolic and endc	M2W_adrenoco_map2way_NI_cc	379337	349	378988	1.010	0.007	
Musculoskeletal dis	M2W_plantar_f:map2way_NI_cc	379337	448	378889	0.994	-0.006	
Cardiovascular	TA_LVESVi QUANT_LVESVi	3760					-0.002
Haematology	HES_Other_diso_HES_p_D72_BIN	379337	309	379028	1.010	0.008	
Broad symptoms, si	HES_Other_men_HES_p_F06_BIN	379337	212	379125	1.010	0.009	
Cardiovascular	HES_Other_noni_HES_p_I62_BIN	379337	337	379000	1.010	0.007	
Cancer	CREG_neo_of_o_f_40006_0_p_D	379337	206	379131	0.991	-0.009	
Operations and Pro	OPC_Anaestheti_f_41210_41200	379337	300	379037	0.992	-0.008	
Respiratory	M2W_other_res_map2way_NI_cc	379337	5687	373650	1.000	0.002	
Gastroenterology, I	M2W_peritoniti:map2way_NI_cc	379337	1992	377345	1.000	0.003	
ENT and maxillofaci	M2W_labyrinthe_map2way_NI_cc	379337	839	378498	1.000	0.005	
Eye	HESBL_Visual_di_HES_block_p_H	379337	3430	375907	1.000	0.002	
Congenital malform	HESBL_Other_cc_HES_block_p_Q	379337	615	378722	0.995	-0.005	
Neurosciences	M2W_myasthen_map2way_NI_cc	379337	206	379131	1.010	0.009	
Cardiovascular	OPC_Saphenous_f_41210_41200	379337	3231	376106	0.998	-0.002	
Musculoskeletal dis	M2W_fracture_f:map2way_NI_cc	379337	477	378860	1.010	0.006	
Musculoskeletal dis	HESBL_Inflammat:HES_block_p_M	379337	17349	361988	1.000	0.001	
Cardiovascular	HES_Angina_pec_HES_p_I20_BIN	379337	16516	362821	0.999	-0.001	

Neurosciences	Facial_pain	f_6159_code2_	378466	12850	365616	0.999	-0.001
Gastroenterology, I	HES_Other_dise	HES_p_K62_BIN	379337	21234	358103	0.999	-0.001
Musculoskeletal dis	HES_Other_rheu	HES_p_M06_BI	379337	3989	375348	0.998	-0.002
Gynaecology and O	HES_Dysplasia_c	HES_p_N87_BIN	379337	1404	377933	1.000	0.004
Gastroenterology, I	NIOPC_umbilical	f_20004_dxCod	379337	3359	375978	1.000	0.002
Haematology	HES_Other_anae	HES_p_D64_BIN	379337	10491	368846	1.000	0.001
Neurosciences	HES_Epilepsy	HES_p_G40_BIN	379337	3391	375946	0.998	-0.002
Gastroenterology, I	M2W_bowel_inl	map2way_NI_cc	379337	3940	375397	1.000	0.002
Gastroenterology, I	OPC_Fixation_of	f_41210_41200	379337	294	379043	0.992	-0.008
Medication	Vitamin_D	f_6155_0_code	377270	14610	362660	1.000	0.001
Urology	HES_Hyperplasia	HES_p_N40_BIN	379337	10266	369071	1.000	0.001
Metabolic and endc	HES_Other_met	HES_p_E88_BIN	379337	309	379028	1.010	0.008
Mental health	MED_antidepress	N06A_antidepress	379337	29226	350111	1.000	0.001
Gastroenterology, I	OPC_Endoscopic	f_41210_41200	379337	562	378775	0.994	-0.006
Gastroenterology, I	M2W_stomach_map	2way_NI_cc	379337	7353	371984	1.000	0.002
Medication	Multivitamins_n	f_6155_0_code	377270	81775	295495	0.999	-0.001
Cardiovascular	MED_low_ceilin	C03A_low_ceilir	379337	23582	355755	1.000	0.001
Eye	OPC_Other_ope	f_41210_41200	379337	498	378839	1.010	0.006
Neurosciences	HESBL_Episodic	HES_block_p_G	379337	13003	366334	0.999	-0.001
Cardiovascular	HES_Other_card	HES_p_I49_BIN	379337	2383	376954	0.997	-0.003
Immuno-inflammat	Pattern_3_f_	f_2395_0_code	173485	46337	127148	0.999	-0.001
Respiratory	HES_Postproced	HES_p_J95_BIN	379337	335	379002	1.010	0.007
Mortality	Father_s_age_at	f_1807_0_0_f_C	278754				0.000
Gynaecology and O	NIOPC_intrauter	f_20004_dxCod	379337	624	378713	1.010	0.005
Gynaecology and O	Age_started_hoi	f_3536_0_0_f_C	71398				0.000
Gynaecology and O	M2W_gynaecolc	map2way_NI_cc	379337	16832	362505	0.999	-0.001
Immuno-inflammat	M2W_eczemad	map2way_NI_cc	379337	11303	368034	1.000	0.001
Respiratory	M2W_bronchiec	map2way_NI_cc	379337	2113	377224	0.997	-0.003
Metabolic and endc	CREGBL_mal_ne	f_40006_block_	379337	468	378869	0.994	-0.006
Gastroenterology, I	HES_Other_dise	HES_p_K31_BIN	379337	6606	372731	1.000	0.002
Musculoskeletal dis	HES_Fibroblastic	HES_p_M72_BI	379337	3618	375719	1.000	0.002
Haematology	NI_hodgkins_lyn	f_20001_0_DX_	379337	352	378985	1.010	0.007
Cardiovascular	Cardiac_output	f_22424_2_0_f_	3764				-0.002
Gynaecology and O	OPC_Other_ope	f_41210_41200	379337	887	378450	0.996	-0.004
Gastroenterology, I	NIOPC_splenect	f_20004_dxCod	379337	792	378545	0.995	-0.005
Gastroenterology, I	NIOPC_laparoto	f_20004_dxCod	379337	2107	377230	0.997	-0.003
Gastroenterology, I	OPC_Other_ope	f_41210_41200	379337	201	379136	1.010	0.009
Gynaecology and O	HESBL_Maternal	HES_block_p_O	379337	6060	373277	0.998	-0.002
Breast	NIOPC_breast_s	f_20004_dxCod	379337	1320	378017	0.997	-0.003
Gastroenterology, I	HESBL_Sympton	HES_block_p_R	379337	52119	327218	1.000	0.001
Musculoskeletal dis	MED_antigout_r	M04A_antigout	379337	4578	374759	1.000	0.002
ENT and maxillofaci	HESBL_Diseases	HES_block_p_H	379337	1849	377488	1.000	0.003
Gastroenterology, I	PROXYM_Bowel	f_20110_0_cod	354392	17925	336467	0.999	-0.001
Infectious disease	HESBL_Mycoses	HES_block_p_B	379337	2471	376866	1.000	0.003
Gastroenterology, I	HES_Other_dise	HES_p_K83_BIN	379337	1754	377583	1.000	0.003
Anthropometry	Visceral_adipose	f_22407_0_0_f_	801				-0.004
Respiratory	Bring_up_phlegr	f_22504_0_0_f_	95748	8134	87614	0.999	-0.001
Urology	OPC_Extracorpo	f_41210_41200	379337	563	378774	0.995	-0.005
Eye	HESBL_Disorder	HES_block_p_H	379337	1466	377871	0.997	-0.003
Gastroenterology, I	NI_large_bowel	f_20001_0_DX_	379337	527	378810	1.010	0.006

Cardiovascular	OPC_Therapeuti f_41210_41200	379337	775	378562	0.995	-0.005
Eye	Current_eye_inf f_5183_0_0_f_E	85228	899	84329	1.000	0.004
Mental health	M2W_anorexiat map2way_NI_co	379337	336	379001	1.010	0.007
Immuno-inflammat	HESBL_Disorder: HES_block_p_L6	379337	9398	369939	0.999	-0.001
Medication	MED_hypnotics_N05C_hypnotics	379337	3009	376328	0.998	-0.002
ENT and maxillofaci	NIOPC_tonsillect f_20004_dxCod	379337	59359	319978	1.000	0.001
Immuno-inflammat	OPC_Removal_c f_41210_41200	379337	431	378906	1.010	0.006
Musculoskeletal dis	OPC_Rehabilitat f_41210_41200	379337	364	378973	1.010	0.007
Gynaecology and O	HES_Inflammatc HES_p_N71_BIN	379337	260	379077	0.992	-0.008
Medication	MED_other_ana N02B_other_an	379337	121144	258193	1.000	0.000
Cardiovascular	OPC_Contrast_r: f_41210_41200	379337	21404	357933	0.999	-0.001
Operations and Pro	OPC_Other_leg_ f_41210_41200	379337	287	379050	0.993	-0.007
Medication	MED_androgens G03B_androgen	379337	556	378781	1.010	0.005
Medication	OPC_Injection_c f_41210_41200	379337	1288	378049	0.997	-0.003
Urology	NIOPC_cystectoif_20004_dxCod	379337	1987	377350	0.997	-0.003
Mental health	HESBL_Schizoph HES_block_p_F2	379337	900	378437	1.000	0.004
Eye	HES_Other_retir HES_p_H35_BIN	379337	3112	376225	1.000	0.002
ENT and maxillofaci	HES_Otitis_extei HES_p_H60_BIN	379337	489	378848	0.994	-0.006
Gastroenterology, †	HES_Peptic_ulce HES_p_K27_BIN	379337	370	378967	1.010	0.006
Cardiovascular	NIOPC_other_ar f_20004_dxCod	379337	269	379068	0.993	-0.007
Gastroenterology, †	OPC_Other_excif_41210_41200	379337	1270	378067	1.000	0.003
Gynaecology and O	OPC_Surgical_in f_41210_41200	379337	2296	377041	0.997	-0.003
Musculoskeletal dis	grip_strength_m f_47_46_QUAN	378556				0.000
Musculoskeletal dis	M2W_gout map2way_NI_co	379337	6862	372475	1.000	0.002
Gynaecology and O	M2W_uterine_p map2way_NI_co	379337	29690	349647	0.999	-0.001
Neurosciences	Fluid_intelligenc f_20016_20191	184629				0.000
Infectious disease	M2W_scarlet_fe map2way_NI_co	379337	435	378902	1.010	0.006
Gastroenterology, †	OPC_examinatio f_41210_41200	379337	2693	376644	0.998	-0.002
Gastroenterology, †	OPC_Therapeuti f_41210_41200	379337	1599	377738	1.000	0.003
Cardiovascular	OPC_Therapeuti f_41210_41200	379337	315	379022	0.993	-0.007
Gynaecology and O	M2W_abnormal map2way_NI_co	379337	1903	377434	1.000	0.003
Cardiovascular	MED_ace_inhibi C09A_ace_inhib	379337	38614	340723	1.000	0.001
ENT and maxillofaci	HESBL_Other_di HES_block_p_H1	379337	4116	375221	1.000	0.002
Gastroenterology, †	HES_Diarrhoea_ HES_p_A09_BIN	379337	5082	374255	1.000	0.002
Eye	HES_Disorders_c HES_p_H05_BIN	379337	250	379087	0.992	-0.008
Eye	HES_Visual_disti HES_p_H53_BIN	379337	2695	376642	1.000	0.002
Cardiovascular	HES_Subarachnc HES_p_I60_BIN	379337	743	378594	0.996	-0.004
Respiratory	HES_Abnormalit HES_p_R06_BIN	379337	8420	370917	1.000	0.001
Musculoskeletal dis	MED_drugs_affe M05B_drugs_af	379337	7221	372116	1.000	0.001
Operations and Pro	MED_magnetic_V08C_magnetic	379337	1523	377814	0.997	-0.003
Musculoskeletal dis	NIOPC_arthrosct f_20004_dxCod	379337	8380	370957	0.999	-0.001
ENT and maxillofaci	Hearing_aid_use f_3393_0_0_f_E	230720	11366	219354	1.000	0.001
Cardiovascular	Chest_pain_or_c f_3751_0_0_f_E	47283	12518	34765	1.000	0.001
ENT and maxillofaci	CREGBL_mal_ne f_40006_block_	379337	801	378536	0.996	-0.004
Cardiovascular	OPC_Cardiac_pa f_41210_41200	379337	2288	377049	1.000	0.003
Urology	OPC_Therapeuti f_41210_41200	379337	1339	377998	0.997	-0.003
Immuno-inflammat	OPC_Plastic_exc f_41210_41200	379337	208	379129	1.010	0.008
Immuno-inflammat	OPC_Suture_of_ f_41210_41200	379337	2266	377071	0.997	-0.003
Operations and Pro	OPC_Harvest_of f_41210_41200	379337	786	378551	0.996	-0.004
Cardiovascular	M2W_heart_arr map2way_NI_co	379337	21215	358122	0.999	-0.001

Gastroenterology, I	M2W_oesophag	map2way_NI_c	379337	1782	377555	1.000	0.003
Metabolic and endc	M2W_pituitary_	map2way_NI_c	379337	466	378871	1.010	0.006
Mental health	M2W_obsessive	map2way_NI_c	379337	208	379129	1.010	0.008
Musculoskeletal dis	M2W_fracture_	map2way_NI_c	379337	379	378958	0.994	-0.006
Gastroenterology, I	HES_Gastritis_ar	HES_p_K29_BIN	379337	26209	353128	1.000	0.001
Musculoskeletal dis	NIOPC_bone_su	f_20004_dxCod	379337	3138	376199	1.000	0.002
Cardiovascular	NIOPC_coronary	f_20004_dxCod	379337	2521	376816	0.998	-0.002
ENT and maxillofaci	OPC_Operations	f_41210_41200	379337	1946	377391	1.000	0.003
Gynaecology and O	HESBL_Delivery	HES_block_p_O	379337	2450	376887	0.998	-0.002
Cardiovascular	HES_Endocarditi	HES_p_I38_BIN	379337	363	378974	0.994	-0.006
Gynaecology and O	NIOPC_ectopic_	f_20004_dxCod	379337	2219	377118	1.000	0.003
Eye	OPC_Incision_of	f_41210_41200	379337	1498	377839	1.000	0.003
ENT and maxillofaci	OPC_Other_ther	f_41210_41200	379337	206	379131	0.992	-0.008
Gastroenterology, I	OPC_Drainage_t	f_41210_41200	379337	1053	378284	1.000	0.004
Gastroenterology, I	Laxatives_e_g_C	f_6154_0_code	375001	10824	364177	0.999	-0.001
Musculoskeletal dis	M2W_pagets_di	map2way_NI_c	379337	272	379065	0.993	-0.007
Neurosciences	Morning_evenin	f_1180_0_0_f_C	338821				0.000
Gastroenterology, I	OPC_Other_drai	f_41210_41200	379337	2011	377326	1.000	0.003
Cardiovascular	ischaemic_strok	f_42008_0_0_B	379337	3661	375676	1.000	0.002
Cardiovascular	M2W_subarachn	map2way_NI_c	379337	936	378401	0.996	-0.004
Mental health	HESBL_Neurotic	HES_block_p_F4	379337	6754	372583	1.000	0.001
Urology	HESBL_Symptom	HES_block_p_R3	379337	26564	352773	1.000	0.001
Breast	CREG_carc_in_si	f_40006_0_p_D	379337	1901	377436	1.000	0.003
Respiratory	M2W_alpha1_ai	map2way_NI_c	379337	223	379114	1.010	0.008
Gastroenterology, I	HES_Faecal_incc	HES_p_R15_BIN	379337	1638	377699	1.000	0.003
Haematology	NI_non_hodgkin	f_20001_0_DX_	379337	719	378618	0.996	-0.004
Medication	Paracetamol	f_6154_0_code	375001	81876	293125	1.000	0.000
ENT and maxillofaci	NIOPC_mouth_s	f_20004_dxCod	379337	2334	377003	1.000	0.002
Mental health	Probable_recurr	f_20125_0_0_f_	54254	7075	47179	0.998	-0.002
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	379337	295	379042	1.010	0.007
Urology	OPC_Endoscopic	f_41210_41200	379337	3912	375425	1.000	0.002
Renal	M2W_other_rer	map2way_NI_c	379337	5432	373905	0.998	-0.002
Urology	M2W_enlarged_	map2way_NI_c	379337	13090	366247	1.000	0.001
Musculoskeletal dis	M2W_muscleso	map2way_NI_c	379337	32480	346857	1.000	0.001
Cardiovascular	NSTEMI	f_42004_0_0_B	379337	4425	374912	0.998	-0.002
Immuno-inflammat	HESBL_Viral_inf	HES_block_p_B0	379337	1423	377914	1.000	0.003
Gastroenterology, I	HES_Stomatitis	HES_p_K12_BIN	379337	745	378592	0.996	-0.004
Haematology	HES_Poisoning_	HES_p_T45_BIN	379337	198	379139	1.010	0.008
Metabolic and endc	CREG_mal_neo	f_40006_0_p_C	379337	431	378906	0.994	-0.006
Eye	OPC_Other_ope	f_41210_41200	379337	237	379100	0.993	-0.008
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	379337	289	379048	1.010	0.007
Gastroenterology, I	M2W_inflamma	map2way_NI_c	379337	4249	375088	0.998	-0.002
Musculoskeletal dis	M2W_fracture_	map2way_NI_c	379337	436	378901	1.010	0.006
Cardiovascular	HESBL_Other_fo	HES_block_p_I3	379337	26071	353266	0.999	-0.001
Musculoskeletal dis	M2W_fracture_	map2way_NI_c	379337	1044	378293	0.996	-0.004
Immuno-inflammat	OPC_Introductio	f_41210_41200	379337	217	379120	0.992	-0.008
Gynaecology and O	M2W_cervical_f	map2way_NI_c	379337	3066	376271	0.998	-0.002
ENT and maxillofaci	NIOPC_adenoid	f_20004_dxCod	379337	2207	377130	0.998	-0.002
Immuno-inflammat	M2W_giant_cell	map2way_NI_c	379337	395	378942	0.994	-0.006
Eye	HES_Other_diso	HES_p_H18_BIN	379337	583	378754	0.995	-0.005

Musculoskeletal dis	OPC_Primary_dx	f_41210_41200	379337	557	378780	1.000	0.005
Musculoskeletal dis	TA_OA_under_a	BIN_OA_under	324798	12412	312386	0.999	-0.001
Neurosciences	M2W_parkinson	map2way_NI_co	379337	1193	378144	1.000	0.003
Haematology	HESBL_Aplastic	HES_block_p_Di	379337	11333	368004	1.000	0.001
Gastroenterology, I	M2W_other_abi	map2way_NI_co	379337	39923	339414	0.999	-0.001
General health, sm	TA_numCigaret	QUANT_numCig	111987				0.000
Gynaecology and O	M2W_cervical_i	map2way_NI_co	379337	1670	377667	1.000	0.003
Neurosciences	M2W_bells_pals	map2way_NI_co	379337	924	378413	1.000	0.004
Respiratory	M2W_pneumon	map2way_NI_co	379337	13468	365869	1.000	0.001
ENT and maxillofaci	NIOPC_tympani	f_20004_dxCod	379337	603	378734	1.000	0.005
Respiratory	HESBL_Suppurat	HES_block_p_J8	379337	346	378991	1.010	0.006
Gastroenterology, I	HES_Other_dise	HES_p_K38_BIN	379337	242	379095	0.993	-0.007
Gynaecology and O	HES_Placental_c	HES_p_O43_BIN	379337	225	379112	1.010	0.007
Cardiovascular	LV_end_systolic	f_22422_2_0_f	3764				-0.002
Cardiovascular	OPC_Other_ope	f_41210_41200	379337	320	379017	0.994	-0.006
Urology	OPC_Diagnostic	f_41210_41200	379337	369	378968	1.010	0.006
Operations and Pro	OPC_Obliteratio	f_41210_41200	379337	638	378699	1.000	0.004
Neurosciences	M2W_epilepsy	map2way_NI_co	379337	4623	374714	0.998	-0.002
Anthropometry	Whole_body_w	f_23102_0_0_f	372703				0.000
Gastroenterology, I	OPC_Other_pun	f_41210_41200	379337	403	378934	0.994	-0.006
Renal	OPC_Transplant	f_41210_41200	379337	266	379071	0.993	-0.007
Immuno-inflammat	M2W_lichen_pl	map2way_NI_co	379337	627	378710	1.000	0.004
Cancer	CREGCH_Neopla	f_40006_chapte	379337	45269	334068	0.999	-0.001
Immuno-inflammat	Pattern_4_f	f_2395_0_code	173485	31618	141867	0.999	-0.001
Cardiovascular	HES_Other_puln	HES_p_I27_BIN	379337	746	378591	1.000	0.004
Cardiovascular	HES_Sequelae_c	HES_p_I69_BIN	379337	1165	378172	0.997	-0.003
Gynaecology and O	NI_cervical_canc	f_20001_0_DX	379337	1534	377803	0.997	-0.003
Anthropometry	Whole_body_fat	f_23101_0_0_f	372673				0.000
Urology	M2W_prostate	map2way_NI_co	379337	11938	367399	1.000	0.001
Neurosciences	M2W_other_nei	map2way_NI_co	379337	8388	370949	1.000	0.001
Haematology	M2W_hereditar	map2way_NI_co	379337	463	378874	0.995	-0.005
Gastroenterology, I	M2W_hepatitis	map2way_NI_co	379337	331	379006	1.010	0.006
Infectious disease	M2W_septicaen	map2way_NI_co	379337	3846	375491	0.998	-0.002
Gastroenterology, I	NIOPC_laparosci	f_20004_dxCod	379337	6735	372602	0.999	-0.001
Cardiovascular	M2W_varicose	map2way_NI_co	379337	11807	367530	0.999	-0.001
Immuno-inflammat	M2W_chronic_s	map2way_NI_co	379337	1331	378006	1.000	0.003
Medication	MED_i_v_soluti	B05X_i_v_soluti	379337	936	378401	0.996	-0.004
Breast	NIOPC_breast_c	f_20004_dxCod	379337	3621	375716	0.998	-0.002
Operations and Pro	OPC_Introductio	f_41210_41200	379337	376	378961	1.010	0.006
Musculoskeletal dis	Knee_pain	f_6159_code7	378466	86104	292362	1.000	0.000
Gastroenterology, I	M2W_gastroent	map2way_NI_co	379337	8130	371207	1.000	0.001
Gastroenterology, I	HESBL_Viral_he	HES_block_p_B:	379337	525	378812	1.000	0.005
Gynaecology and O	NI_uterine_end	f_20001_0_DX	379337	936	378401	0.996	-0.004
Respiratory	M2W_pneumotl	map2way_NI_co	379337	908	378429	1.000	0.004
Gastroenterology, I	HES_Unspecific	HES_p_K37_BIN	379337	412	378925	1.010	0.005
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	379337	2874	376463	1.000	0.002
Gynaecology and O	OPC_Other_ope	f_41210_41200	379337	285	379052	0.994	-0.006
Cardiovascular	MED_vasodilato	C01D_vasodilato	379337	5400	373937	0.999	-0.001
Metabolic and endc	M2W_thyroid_p	map2way_NI_co	379337	1330	378007	1.000	0.003
Respiratory	M2W_asbestosi	map2way_NI_co	379337	272	379065	0.993	-0.007

Urology	OPC_Diagnostic_f_41210_41200	379337	1629	377708	0.997	-0.003
Respiratory	HES_Bronchiect: HES_p_J47_BIN	379337	1711	377626	0.997	-0.003
Cardiovascular	Chest_pain_or_cf_3606_0_0_f_E	58772	10179	48593	1.000	0.001
Operations and Pro	OPC_Breath_tes f_41210_41200	379337	412	378925	0.995	-0.005
Gastroenterology, †	M2W_bowel_inl map2way_NI_cc	379337	388	378949	1.010	0.006
Gastroenterology, †	HESBL_Intestina HES_block_p_A	379337	8031	371306	1.000	0.001
Immuno-inflammat	HES_Follicular_c HES_p_L72_BIN	379337	7591	371746	0.999	-0.001
ENT and maxillofaci	MED_decongest S01G_deconges	379337	421	378916	1.010	0.005
Musculoskeletal dis	NIOPC_muscle_:f_20004_dxCod	379337	10931	368406	1.000	0.001
Gastroenterology, †	OPC_Excision_of_f_41210_41200	379337	253	379084	0.993	-0.007
Musculoskeletal dis	OPC_operations_f_41210_41200	379337	1114	378223	0.997	-0.003
Medication	MED_ascorbic_a A11G_ascorbic_	379337	6197	373140	1.000	0.001
Cardiovascular	MED_lipid_modi C10A_lipid_moc	379337	93276	286061	1.000	0.000
Congenital malform	HESBL_Congenit HES_block_p_Q	379337	249	379088	0.993	-0.007
Infectious disease	HES_Zoster HES_p_B02_BIN	379337	425	378912	1.010	0.005
Gastroenterology, †	HES_Chronic_vir HES_p_B18_BIN	379337	343	378994	1.010	0.006
Eye	HES_Disorders_c HES_p_H04_BIN	379337	1951	377386	0.998	-0.002
Eye	HES_Other_diso HES_p_H11_BIN	379337	674	378663	1.000	0.004
ENT and maxillofaci	HES_Other_diso HES_p_H73_BIN	379337	333	379004	1.010	0.006
Respiratory	HES_Other_resp HES_p_J98_BIN	379337	2908	376429	1.000	0.002
Musculoskeletal dis	HES_Coxarthrosi HES_p_M16_BII	379337	10787	368550	1.000	0.001
Musculoskeletal dis	HES_Other_diso HES_p_M94_BII	379337	677	378660	1.000	0.004
Neurosciences	MED_dopamine N04B_dopamin	379337	1190	378147	1.000	0.003
ENT and maxillofaci	Snoring f_1210_0_0_f_E	352973	131484	221489	1.000	0.000
Musculoskeletal dis	NIOPC_reductiof_20004_dxCod	379337	17484	361853	1.000	0.001
Gastroenterology, †	NIOPC_oesphagi f_20004_dxCod	379337	908	378429	1.000	0.004
Urology	NIOPC_prostate_f_20004_dxCod	379337	258	379079	0.993	-0.007
Eye	OPC_Incision_of_f_41210_41200	379337	600	378737	0.996	-0.004
Eye	OPC_Local_anae f_41210_41200	379337	5570	373767	1.000	0.001
ENT and maxillofaci	OPC_Extirpation f_41210_41200	379337	690	378647	0.996	-0.004
Gastroenterology, †	OPC_Other_ther f_41210_41200	379337	284	379053	0.994	-0.006
Operations and Pro	OPC_Opening_o f_41210_41200	379337	257	379080	1.010	0.007
Gastroenterology, †	OPC_Repair_of_f_41210_41200	379337	1346	377991	1.000	0.003
Operations and Pro	OPC_Other_diag f_41210_41200	379337	994	378343	1.000	0.003
Neurosciences	OPC_Rehabilitat f_41210_41200	379337	315	379022	1.010	0.006
Musculoskeletal dis	OPC_Other_clos f_41210_41200	379337	1498	377839	1.000	0.003
Operations and Pro	OPC_Suture_of_f_41210_41200	379337	640	378697	0.996	-0.004
Eye	logMAR_final_ri f_5201_0_0_f_C	84052				0.000
Eye	Macular_degene f_6148_0_code!	124452	2873	121579	1.000	0.002
Eye	M2W_diabetic_(map2way_NI_cc	379337	1737	377600	1.000	0.003
Haematology	M2W_thalassaem map2way_NI_cc	379337	91	379246	0.989	-0.011
Mental health	M2W_postnatal map2way_NI_cc	379337	312	379025	1.010	0.006
Biological assays -	TA_urine_album QUANT_urine_a	114395				0.000
Cardiovascular	OPC_Connector f_41210_41200	379337	3420	375917	0.998	-0.002
Respiratory	HESBL_Other_di HES_block_p_J9	379337	6054	373283	1.000	0.001
Gynaecology and O	HESBL_Complica HES_block_p_O	379337	557	378780	0.996	-0.004
Mental health	HES_Phobic_anx HES_p_F40_BIN	379337	528	378809	1.000	0.005
ENT and maxillofaci	HES_Otosclerosi HES_p_H80_BIN	379337	275	379062	1.010	0.006
Musculoskeletal dis	HES_Other_dors HES_p_M53_BII	379337	482	378855	0.995	-0.005
Infectious disease	MED_agents_ag P01A_agents_ag	379337	660	378677	0.996	-0.004

Musculoskeletal dis	NIOPC_hand_fin_f_20004_dxCod	379337	1666	377671	0.997	-0.003
Gynaecology and O	Ever_had_hyster_f_3591_0_0_f_E	180565	14620	165945	0.999	-0.001
Breast	OPC_Reconstruc_f_41210_41200	379337	275	379062	0.994	-0.006
Musculoskeletal dis	OPC_Revisional_f_41210_41200	379337	190	379147	1.010	0.008
Operations and Pro	OPC_Intramuscu_f_41210_41200	379337	1309	378028	0.997	-0.003
Anthropometry	Waist_circumfer_f_48_0_0_f_QU	378667				0.000
ENT and maxillofaci	Dentures_f_6149_0_code	377882	63217	314665	1.000	0.000
Gastroenterology, †	M2W_cholelithi:map2way_NI_cc	379337	16565	362772	0.999	-0.001
ENT and maxillofaci	M2W_menieres.map2way_NI_cc	379337	1305	378032	1.000	0.003
Gastroenterology, †	M2W_haemorrh:map2way_NI_cc	379337	1014	378323	0.997	-0.003
Gynaecology and O	M2W_miscarria:map2way_NI_cc	379337	1976	377361	1.000	0.002
Urology	M2W_undescen:map2way_NI_cc	379337	211	379126	0.993	-0.007
Mental health	Probable_Recuri_f_20126_0_cod	91576	6718	84858	0.999	-0.001
Gastroenterology, †	OPC_Other_ope_f_41210_41200	379337	206	379131	0.993	-0.007
Gastroenterology, †	M2W_umbilical:map2way_NI_cc	379337	3648	375689	1.000	0.002
Neurosciences	HESBL_Diseases_HES_block_p_G	379337	482	378855	1.000	0.005
Gastroenterology, †	HES_Other_sym_HES_p_R19_BIN	379337	13812	365525	1.000	0.001
Gastroenterology, †	HES_Other_dise_HES_p_K13_BIN	379337	2608	376729	1.000	0.002
Gastroenterology, †	MED_antibesit:A08A_antibesi	379337	960	378377	0.997	-0.003
Immuno-inflammat	OPC_Attention_f_41210_41200	379337	431	378906	1.000	0.005
Gastroenterology, †	OPC_Primary_re_f_41210_41200	379337	3102	376235	1.000	0.002
Gastroenterology, †	HESBL_Diseases_HES_block_p_K	379337	3250	376087	1.000	0.002
Gastroenterology, †	OPC_Endoscopic_f_41210_41200	379337	14485	364852	1.000	0.001
Gastroenterology, †	HES_Ascites_HES_p_R18_BIN	379337	1447	377890	1.000	0.003
Musculoskeletal dis	NIOPC_knee_ref_20004_dxCod	379337	4623	374714	0.998	-0.002
Eye	OPC_Closure_of_f_41210_41200	379337	204	379133	0.993	-0.007
Gynaecology and O	NIOPC_ovarian_f_20004_dxCod	379337	4519	374818	1.000	0.002
Cardiovascular	OPC_Diagnostic_f_41210_41200	379337	999	378338	0.997	-0.003
Musculoskeletal dis	OPC_Closed_red_f_41210_41200	379337	2840	376497	0.998	-0.002
Infectious disease	HES_Herpessviral_HES_p_B00_BIN	379337	232	379105	0.993	-0.007
Cardiovascular	OPC_Other_carc_f_41210_41200	379337	1142	378195	0.997	-0.003
Gastroenterology, †	M2W_ulcerative:map2way_NI_cc	379337	3556	375781	0.998	-0.002
Broad symptoms, si	HES_Other_diso_HES_p_E87_BIN	379337	4798	374539	1.000	0.001
Operations and Pro	OPC_Radiology_f_41210_41200	379337	30445	348892	1.000	0.001
Urology	M2W_bph_beni:map2way_NI_cc	379337	10641	368696	1.000	0.001
Breast	HES_Benign_ma_HES_p_N60_BIN	379337	1624	377713	0.998	-0.002
Operations and Pro	NIOPC_lymph_n_f_20004_dxCod	379337	763	378574	0.996	-0.004
Musculoskeletal dis	Falls_in_the_last_f_2296_0_0_f_C	378405				0.000
Musculoskeletal dis	OPC_Denervatio_f_41210_41200	379337	676	378661	1.000	0.004
Gastroenterology, †	HES_Gastric_ulc_HES_p_K25_BIN	379337	3868	375469	1.000	0.002
Infectious disease	MED_antifungal:D01A_antifunga	379337	3715	375622	0.998	-0.002
Neurosciences	HES_Nerve_root_HES_p_G54_BIN	379337	316	379021	1.010	0.006
Neurosciences	HES_Mononeurc_HES_p_G56_BIN	379337	9666	369671	0.999	-0.001
Gastroenterology, †	HES_Abscess_of_HES_p_K61_BIN	379337	1209	378128	1.000	0.003
Urology	HES_Urethral_st_HES_p_N35_BIN	379337	2973	376364	1.000	0.002
Gynaecology and O	HES_Gestational_HES_p_O14_BIN	379337	289	379048	1.010	0.006
Gynaecology and O	HES_Other_obst_HES_p_O71_BIN	379337	190	379147	0.993	-0.007
Gynaecology and O	NIOPC_endomeif_20004_dxCod	379337	1925	377412	1.000	0.002
General health, sm	Overall_health_f_2178_0_0_f_C	377675				0.000
Eye	OPC_Photocoag_f_41210_41200	379337	972	378365	1.000	0.003

ENT and maxillofaci	OPC_Excision_of_f_41210_41200	379337	936	378401	1.000	0.003
Musculoskeletal dis	OPC_Immobilisa f_41210_41200	379337	694	378643	1.000	0.004
ENT and maxillofaci	Loose_teeth f_6149_0_code	377882	15108	362774	0.999	-0.001
Musculoskeletal dis	M2W_bone_dis map2way_NI_c	379337	5041	374296	1.000	0.001
Immuno-inflammat	OPC_Plastic_exc f_41210_41200	379337	228	379109	0.994	-0.006
Urology	HES_Retention_ HES_p_R33_BIN	379337	6162	373175	1.000	0.001
Eye	Diabetes_relate f_6148_0_code	124452	2370	122082	1.000	0.002
Gastroenterology, †	OPC_Other_ope f_41210_41200	379337	1842	377495	1.000	0.002
Gastroenterology, †	MED_stomatolo A01A_stomatolo	379337	59697	319640	1.000	0.000
Gynaecology and O	HES_Abnormalit HES_p_O62_BIN	379337	405	378932	1.000	0.005
Neurosciences	MED_antimigrai N02C_antimigra	379337	5449	373888	1.000	0.001
Gynaecology and O	NI_cin_pre_canc f_20001_0_DX_	379337	1313	378024	0.997	-0.003
Urology	NIOPC_removal_f_20004_dxCod	379337	1214	378123	1.000	0.003
Musculoskeletal dis	OPC_Stabilisatio f_41210_41200	379337	284	379053	1.010	0.006
Gastroenterology, †	M2W_abdomin map2way_NI_c	379337	20677	358660	1.000	0.001
Musculoskeletal dis	M2W_osteopen map2way_NI_c	379337	992	378345	1.000	0.003
Medication	MED_vitamin_a A11C_vitamin_a	379337	10921	368416	1.000	0.001
Urology	NIOPC_other_ur f_20004_dxCod	379337	991	378346	0.997	-0.003
Gynaecology and O	HESBL_Complica HES_block_p_O	379337	8514	370823	0.999	-0.001
ENT and maxillofaci	OPC_Other_ope f_41210_41200	379337	415	378922	0.995	-0.005
Operations and Pro	OPC_Sampling_c f_41210_41200	379337	2953	376384	1.000	0.002
Operations and Pro	OPC_Chemical_c f_41210_41200	379337	229	379108	1.010	0.006
Neurosciences	M2W_cranial_n map2way_NI_c	379337	1919	377418	1.000	0.002
Immuno-inflammat	M2W_raynauds_map2way_NI_c	379337	1316	378021	1.000	0.003
Cardiovascular	subarachnoid_h: f_42012_0_0_B	379337	982	378355	0.997	-0.003
Gastroenterology, †	HES_Hepatic_fai HES_p_K72_BIN	379337	298	379039	1.010	0.006
Urology	NIOPC_testicula f_20004_dxCod	379337	2434	376903	1.000	0.002
Eye	OPC_Other_ope f_41210_41200	379337	771	378566	1.000	0.003
Gastroenterology, †	OPC_Other_ope f_41210_41200	379337	600	378737	0.996	-0.004
Cardiovascular	OPC_Other_ope f_41210_41200	379337	301	379036	0.994	-0.006
Cardiovascular	PROXYM_High_l f_20110_0_cod	357740	107024	250716	1.000	0.000
ENT and maxillofaci	Mouth_ulcers f_6149_0_code	377882	38495	339387	0.999	-0.001
Gynaecology and O	HES_Other_noni HES_p_N85_BIN	379337	4717	374620	1.000	0.001
Infectious disease	MED_macrolide: J01F_macrolide:	379337	736	378601	1.000	0.004
Cardiovascular	OPC_Other_ope f_41210_41200	379337	320	379017	0.995	-0.005
Operations and Pro	OPC_Radiology_f_41210_41200	379337	12467	366870	1.000	0.001
Gastroenterology, †	HESBL_Nutrition HES_block_p_D	379337	7763	371574	0.999	-0.001
Cardiovascular	Mean_carotid_IIf_22677_0_0_f_	1850				-0.002
Renal	OPC_Other_ope f_41210_41200	379337	282	379055	0.994	-0.006
Infectious disease	MED_antifungal: D01B_antifunga	379337	847	378490	0.997	-0.003
Infectious disease	HESBL_Bacterial HES_block_p_B	379337	11839	367498	1.000	0.001
Musculoskeletal dis	HESBL_Infectiou HES_block_p_M	379337	428	378909	0.995	-0.005
Metabolic and endc	HES_Insulin_dep HES_p_E10_BIN	379337	2572	376765	1.000	0.002
Gastroenterology, †	HES_Other_infla HES_p_K75_BIN	379337	623	378714	0.996	-0.004
Urology	HES_Pain_associ HES_p_R30_BIN	379337	1069	378268	1.000	0.003
Gynaecology and O	NIOPC_bilateral_f_20004_dxCod	379337	15866	363471	0.999	-0.001
Urology	NIOPC_testicula f_20004_dxCod	379337	1141	378196	0.997	-0.003
Urology	NIOPC_cystosco f_20004_dxCod	379337	347	378990	0.995	-0.005
Musculoskeletal dis	NIOPC_spinal_fu f_20004_dxCod	379337	517	378820	1.000	0.004
Mortality	DIED f_40000_f_BIN_	379337	10950	368387	1.000	0.001

Eye	OPC_Extirpation_f_41210_41200	379337	351	378986	0.995	-0.005
ENT and maxillofaci	OPC_Plastic_opc_f_41210_41200	379337	781	378556	0.997	-0.003
ENT and maxillofaci	OPC_Excision_of_f_41210_41200	379337	624	378713	1.000	0.004
Gastroenterology, I	OPC_Excision_of_f_41210_41200	379337	733	378604	1.000	0.003
Gastroenterology, I	OPC_Emergency_f_41210_41200	379337	2575	376762	1.000	0.002
Cardiovascular	OPC_Diagnostic_f_41210_41200	379337	398	378939	0.995	-0.005
Gynaecology and O	OPC_Other_rep:f_41210_41200	379337	7298	372039	0.999	-0.001
Musculoskeletal dis	OPC_Closed_recf_41210_41200	379337	392	378945	1.000	0.005
Operations and Pro	OPC_Placement_f_41210_41200	379337	3168	376169	0.998	-0.002
Operations and Pro	OPC_Excision_of_f_41210_41200	379337	2108	377229	1.000	0.002
Respiratory	M2W_pulmonar map2way_NI_co	379337	792	378545	0.997	-0.003
Gastroenterology, I	M2W_gastritisg: map2way_NI_co	379337	21143	358194	1.000	0.001
Neurosciences	M2W_benign_e: map2way_NI_co	379337	270	379067	1.010	0.006
Gynaecology and O	M2W_pelvic_inf map2way_NI_co	379337	4037	375300	0.999	-0.001
Musculoskeletal dis	TA_osteoarthriti BIN_osteoarthri	321580	9194	312386	1.000	0.001
Musculoskeletal dis	M2W_fracture_ j map2way_NI_co	379337	515	378822	0.996	-0.004
Gynaecology and O	HES_Perineal_la HES_p_O70_BIN	379337	4946	374391	0.999	-0.001
Immuno-inflammat	HESBL_Urticaria HES_block_p_L5	379337	949	378388	1.000	0.003
Broad symptoms, si	HESBL_Sympton HES_block_p_R:	379337	4769	374568	1.000	0.001
Neurosciences	HES_Other_mon HES_p_G58_BIN	379337	306	379031	1.010	0.005
Cardiovascular	HES_Varicose_v: HES_p_I83_BIN	379337	9992	369345	0.999	-0.001
Respiratory	HES_Pneumonia HES_p_J13_BIN	379337	236	379101	0.994	-0.006
Respiratory	HES_Other_intel HES_p_J84_BIN	379337	933	378404	0.997	-0.003
Immuno-inflammat	HES_Rosacea HES_p_L71_BIN	379337	277	379060	0.995	-0.005
Musculoskeletal dis	HES_Paget_s_di: HES_p_M88_BII	379337	243	379094	0.994	-0.006
Gynaecology and O	HES_Spontaneoi HES_p_O03_BIN	379337	1258	378079	1.000	0.003
Urology	HES_Unspecifec HES_p_R31_BIN	379337	14256	365081	1.000	0.001
Breast	NIOPC_mastectc f_20004_dxCod	379337	3845	375492	0.999	-0.001
Musculoskeletal dis	NIOPC_bone_sci: f_20004_dxCod	379337	213	379124	0.994	-0.006
Cardiovascular	PROXYS_High_blf_20111_0_cod	301198	61082	240116	1.000	0.000
Neurosciences	OPC_Other_ope f_41210_41200	379337	218	379119	1.010	0.006
Gastroenterology, I	OPC_Repair_of_f_41210_41200	379337	276	379061	1.010	0.006
Cardiovascular	OPC_Other_repl f_41210_41200	379337	297	379040	1.010	0.005
Operations and Pro	OPC_Dilation_of_f_41210_41200	379337	512	378825	1.000	0.004
Medication	Iron f_6179_0_code!	378085	11437	366648	1.000	0.001
Cardiovascular	M2W_hyperten: map2way_NI_co	379337	98116	281221	1.000	0.000
Musculoskeletal dis	M2W_polymyalg map2way_NI_co	379337	1542	377795	0.998	-0.002
ENT and maxillofaci	M2W_chronic_k: map2way_NI_co	379337	1017	378320	1.000	0.003
Respiratory	M2W_emyem: map2way_NI_co	379337	299	379038	1.010	0.005
Musculoskeletal dis	M2W_carpal_tu map2way_NI_co	379337	9101	370236	0.999	-0.001
Congenital malform	HESBL_Congenit HES_block_p_Q	379337	822	378515	0.997	-0.003
Gynaecology and O	HES_Prolonged_ HES_p_O48_BIN	379337	1102	378235	0.997	-0.003
Musculoskeletal dis	HES_Ankylosing_ HES_p_M45_BII	379337	573	378764	1.000	0.004
Immuno-inflammat	OPC_Operations f_41210_41200	379337	613	378724	0.996	-0.004
Musculoskeletal dis	HESCH_Diseases HES_chapter_p_	379337	100835	278502	1.000	0.000
Renal	HES_Glomerular HES_p_N08_BIN	379337	293	379044	1.010	0.005
ENT and maxillofaci	CREG_mal_neo_f_40006_0_p_C	379337	224	379113	0.994	-0.006
Gastroenterology, I	M2W_anal_prol map2way_NI_co	379337	23907	355430	0.999	-0.001
Cardiovascular	OPC_Autonomic f_41210_41200	379337	235	379102	0.994	-0.006
Musculoskeletal dis	OPC_Flap_operaf_41210_41200	379337	657	378680	1.000	0.004

Cardiovascular	MED_peripheral	C04A_periphera	379337	335	379002	1.000	0.005
Gynaecology and O	MED_progestog	G03D_progesto	379337	2010	377327	1.000	0.002
Haematology	HESBL_Coagulat	HES_block_p_D	379337	2429	376908	0.998	-0.002
Gastroenterology, †	HESBL_Hernia	HES_block_p_K	379337	42753	336584	1.000	0.000
Musculoskeletal dis	HESBL_Other_sc	HES_block_p_M	379337	25121	354216	1.000	0.001
Gynaecology and O	HESBL_Pregnanc	HES_block_p_O	379337	3363	375974	1.000	0.002
Mental health	HES_Schizophre	HES_p_F20_BIN	379337	496	378841	1.000	0.004
Eye	HES_Paralytic_st	HES_p_H49_BIN	379337	258	379079	0.994	-0.006
Eye	HES_Blindness_ε	HES_p_H54_BIN	379337	807	378530	1.000	0.003
ENT and maxillofaci	HES_Other_diso	HES_p_H61_BIN	379337	886	378451	1.000	0.003
ENT and maxillofaci	HES_Nonsuppur	HES_p_H65_BIN	379337	961	378376	1.000	0.003
Cardiovascular	HES_Acute_myo	HES_p_I21_BIN	379337	7315	372022	0.999	-0.001
Cardiovascular	HES_disorders_c	HES_p_I98_BIN	379337	257	379080	0.994	-0.006
Gastroenterology, †	HES_Duodenal_ι	HES_p_K26_BIN	379337	2819	376518	0.998	-0.002
Gastroenterology, †	HES_Inguinal_he	HES_p_K40_BIN	379337	14418	364919	1.000	0.001
Renal	HES_Tubulo_intε	HES_p_N12_BIN	379337	837	378500	0.997	-0.003
Broad symptoms, si	HES_Abnormalit	HES_p_R26_BIN	379337	1679	377658	1.000	0.002
Respiratory	HES_Abnormal_ι	HES_p_R91_BIN	379337	2268	377069	1.000	0.002
Infectious disease	MED_antiinfecti	S03A_antiinfect	379337	956	378381	1.000	0.003
Urology	NI_testicular_ca	f_20001_0_DX_	379337	671	378666	1.000	0.003
Metabolic and endc	NIOPC_thyroidε	f_20004_dxCod	379337	3581	375756	1.000	0.001
Gynaecology and O	NIOPC_caesarea	f_20004_dxCod	379337	19344	359993	0.999	-0.001
Musculoskeletal dis	NIOPC_elbow_si	f_20004_dxCod	379337	2248	377089	0.998	-0.002
Cardiovascular	OPC_Injection_ι	f_41210_41200	379337	824	378513	0.997	-0.003
Immuno-inflammat	OPC_Removal_c	f_41210_41200	379337	434	378903	0.996	-0.004
Gastroenterology, †	OPC_Primary_re	f_41210_41200	379337	13750	365587	1.000	0.001
Operations and Pro	OPC_Block_dissε	f_41210_41200	379337	5158	374179	0.999	-0.001
Musculoskeletal dis	OPC_Therapeuti	f_41210_41200	379337	12495	366842	0.999	-0.001
Operations and Pro	OPC_Subcutaneι	f_41210_41200	379337	2581	376756	0.998	-0.002
Operations and Pro	OPC_Biopsy_of_	f_41210_41200	379337	7166	372171	1.000	0.001
Cardiovascular	OPC_Approach_	f_41210_41200	379337	284	379053	0.995	-0.005
Mental health	Ever_depressed_	f_4598_0_0_f_ε	124141	66791	57350	0.999	-0.001
Mental health	Ever_unenthusiε	f_4631_0_0_f_ε	121482	44887	76595	0.999	-0.001
Respiratory	M2W_respirator	map2way_NI_cc	379337	9665	369672	1.000	0.001
Gynaecology and O	HES_Maternal_c	HES_p_O26_BIN	379337	1641	377696	1.000	0.002
Gynaecology and O	OPC_Bilateral_e	f_41210_41200	379337	8745	370592	1.000	0.001
Cardiovascular	NIOPC_mitral_vr	f_20004_dxCod	379337	354	378983	0.995	-0.005
Gynaecology and O	OPC_Repair_of_	f_41210_41200	379337	1152	378185	0.997	-0.003
Haematology	HES_Thalassaem	HES_p_D56_BIN	379337	59	379278	0.989	-0.011
Eye	OPC_Other_ope	f_41210_41200	379337	714	378623	1.000	0.003
Musculoskeletal dis	OPC_Manipulati	f_41210_41200	379337	218	379119	1.010	0.006
Immuno-inflammat	M2W_allergy_tc	map2way_NI_cc	379337	279	379058	1.010	0.005
Neurosciences	Headache	f_6159_code1_ι	378466	81619	296847	1.000	0.000
Gastroenterology, †	OPC_Other_ope	f_41210_41200	379337	276	379061	0.995	-0.005
Renal	M2W_kidney_nε	map2way_NI_cc	379337	417	378920	1.000	0.004
Immuno-inflammat	HES_Other_skin	HES_p_R23_BIN	379337	565	378772	1.000	0.004
Respiratory	HES_Cough	HES_p_R05_BIN	379337	2614	376723	0.998	-0.002
Immuno-inflammat	HES_Localized_s	HES_p_R22_BIN	379337	1921	377416	1.000	0.002
Gastroenterology, †	NIOPC_colonosc	f_20004_dxCod	379337	7511	371826	1.000	0.001
Respiratory	HES_Pyothorax	HES_p_J86_BIN	379337	288	379049	1.010	0.005

Immuno-inflammat NIOPC_removal_f_20004_dxCod	379337	717	378620	1.000	0.003
Gastroenterology, I OPC_Extended_f_41210_41200	379337	250	379087	1.010	0.005
Operations and Pro OPC_Body_regic_f_41210_41200	379337	6419	372918	1.000	0.001
Immuno-inflammat OPC_Other_ope_f_41210_41200	379337	396	378941	0.996	-0.004
Musculoskeletal dis OPC_Diagnostic_f_41210_41200	379337	3803	375534	0.999	-0.001
Operations and Pro OPC_Approach_f_41210_41200	379337	45114	334223	1.000	0.000
Musculoskeletal dis Neck_or_should_f_6159_code3_	378466	92348	286118	1.000	0.000
Cardiovascular HES_Stroke_not HES_p_l64_BIN	379337	969	378368	1.000	0.003
Urology OPC_Open_drai f_41210_41200	379337	606	378731	1.000	0.003
Immuno-inflammat MED_antiinflam M01A_antiinflai	379337	86340	292997	1.000	0.000
Metabolic and endc HESCH_Endocrin HES_chapter_p_	379337	66837	312500	1.000	0.000
Neurosciences HES_Delirium_n HES_p_F05_BIN	379337	541	378796	1.000	0.004
Gynaecology and O OPC_Extirpation f_41210_41200	379337	675	378662	0.997	-0.003
Operations and Pro OPC_Attention_f_41210_41200	379337	2932	376405	1.000	0.002
Urology CREG_mal_neo_f_40006_0_p_C	379337	452	378885	1.000	0.004
Gynaecology and O Ever_had_stillbi f_2774_0_0_f_E	201272	64159	137113	1.000	0.000
Haematology CREG_Hodgkin_f_40006_0_p_C	379337	245	379092	1.010	0.005
Gynaecology and O OPC_Operations f_41210_41200	379337	599	378738	0.997	-0.003
Renal HES_Unspecifec HES_p_N05_BIN	379337	244	379093	1.010	0.005
Musculoskeletal dis HES_Other_oste HES_p_M93_BII	379337	239	379098	1.010	0.005
Infectious disease MED_antiinfecti S02A_antiinfect	379337	1041	378296	1.000	0.003
ENT and maxillofaci OPC_Restoratio f_41210_41200	379337	188	379149	1.010	0.006
Musculoskeletal dis OPC_bone_and_f_41210_41200	379337	5793	373544	0.999	-0.001
Neurosciences HES_Headache HES_p_R51_BIN	379337	6991	372346	1.000	0.001
Neurosciences OPC_Drainage_c f_41210_41200	379337	236	379101	0.995	-0.005
Eye OPC_Connector f_41210_41200	379337	711	378626	0.997	-0.003
Haematology M2W_essential_map2way_NI_cc	379337	192	379145	0.994	-0.006
Gynaecology and O CREGBL_mal_ne f_40006_block_	379337	2734	376603	0.998	-0.002
Medication Selenium f_6179_0_code	378085	9076	369009	1.000	0.001
Cardiovascular MED_antiadren C02A_antiadren	379337	1115	378222	1.000	0.003
Gynaecology and O HES_Retained_p HES_p_O73_BIN	379337	203	379134	0.994	-0.006
Renal HESBL_Glomeru HES_block_p_N	379337	1944	377393	1.000	0.002
Immuno-inflammat HESBL_Dermatit HES_block_p_L2	379337	2864	376473	1.000	0.002
Renal HES_Unspecifec HES_p_N19_BIN	379337	1278	378059	0.998	-0.002
ENT and maxillofaci NIOPC_sinus_su f_20004_dxCod	379337	1302	378035	0.998	-0.002
Eye OPC_Incision_of f_41210_41200	379337	217	379120	0.994	-0.006
Breast M2W_fibrocysti map2way_NI_cc	379337	1743	377594	0.998	-0.002
Cardiovascular M2W_wolff_par map2way_NI_cc	379337	228	379109	1.010	0.006
Metabolic and endc HESBL_Disorder HES_block_p_E2	379337	2356	376981	0.998	-0.002
Broad symptoms, si HESBL_General_HES_block_p_R!	379337	41593	337744	1.000	0.000
Neurosciences HES_Spinal_mus HES_p_G12_BIN	379337	214	379123	1.010	0.006
Neurosciences HES_Mononeurc HES_p_G59_BIN	379337	205	379132	1.010	0.006
Gynaecology and O HES_Endometric HES_p_N80_BIN	379337	3557	375780	1.000	0.001
Gynaecology and O HES_Other_obst HES_p_O66_BIN	379337	309	379028	0.995	-0.005
Broad symptoms, si HES_Speech_dis HES_p_R47_BIN	379337	1367	377970	1.000	0.002
Cardiovascular Ventricular_rate f_12336_2_0_f_	8943				0.001
Renal NIOPC_nephrect f_20004_dxCod	379337	1356	377981	1.000	0.002
Neurosciences PROXYF_Parkins f_20107_0_cod	338931	8349	330582	1.000	0.001
Metabolic and endc PROXYFM_Diabe f_20107_20110	379337				0.000
Neurosciences OPC_Other_ope f_41210_41200	379337	471	378866	0.996	-0.004

Urology	OPC_Other_ope	f_41210_41200	379337	1641	377696	1.000	0.002
Gastroenterology, I	OPC_Other_larg	f_41210_41200	379337	3469	375868	0.999	-0.001
Gynaecology and O	OPC_Explorator	f_41210_41200	379337	1868	377469	1.000	0.002
Immuno-inflammat	OPC_High_cost	f_41210_41200	379337	340	378997	1.000	0.005
Operations and Pro	OPC_Harvest_of	f_41210_41200	379337	281	379056	0.995	-0.005
ENT and maxillofaci	Toothache	f_6149_0_code	377882	15339	362543	1.000	0.001
Medication	Glucosamine	f_6179_0_code	378085	73589	304496	1.000	0.000
Neurosciences	M2W_motor_ne	map2way_NI_co	379337	232	379105	1.010	0.005
Infectious disease	M2W_tuberculo	map2way_NI_co	379337	1906	377431	0.998	-0.002
Metabolic and endc	M2W_thyroid_g	map2way_NI_co	379337	1794	377543	0.998	-0.002
Anthropometry	TA_appendicula	QUANT_append	4101				-0.001
Gynaecology and O	NIOPC_pelvic_fl	f_20004_dxCod	379337	271	379066	1.000	0.005
Biological assays - F	Basophil_perce	f_30220_0_0_f	367440				0.000
Gynaecology and O	OPC_Other_ope	f_41210_41200	379337	2120	377217	0.998	-0.002
Musculoskeletal dis	OPC_Skeletal_tr	f_41210_41200	379337	210	379127	1.010	0.006
Metabolic and endc	M2W_diabetes	map2way_NI_co	379337	15919	363418	1.000	0.001
Cardiovascular	MED_selective_i	C08C_selective_	379337	24177	355160	1.000	0.001
Metabolic and endc	HESBL_Diabetes	HES_block_p_E	379337	17994	361343	1.000	0.001
Respiratory	HES_Unspecifec	HES_p_J42_BIN	379337	243	379094	1.010	0.005
Respiratory	HES_Other_pleu	HES_p_J94_BIN	379337	242	379095	0.995	-0.005
Immuno-inflammat	HES_Other_necr	HES_p_M31_BI	379337	542	378795	0.997	-0.003
Broad symptoms, si	HES_Malaise_an	HES_p_R53_BIN	379337	2617	376720	1.000	0.002
Infectious disease	MED_other_anti	J01X_other_ant	379337	1343	377994	1.000	0.002
Musculoskeletal dis	OPC_Other_peri	f_41210_41200	379337	263	379074	1.010	0.005
Musculoskeletal dis	OPC_Stabilising	f_41210_41200	379337	716	378621	1.000	0.003
Gastroenterology, I	OPC_Destruction	f_41210_41200	379337	5388	373949	0.999	-0.001
Musculoskeletal dis	OPC_Primary_ex	f_41210_41200	379337	1796	377541	1.000	0.002
Musculoskeletal dis	M2W_muscle_o	map2way_NI_co	379337	9393	369944	1.000	0.001
Haematology	M2W_clotting_c	map2way_NI_co	379337	2709	376628	0.998	-0.002
Gastroenterology, I	OPC_extirpation	f_41210_41200	379337	1018	378319	1.000	0.003
Medication	Aspirin	f_6154_0_code	375001	52680	322321	1.000	0.000
Musculoskeletal dis	M2W_neck_pro	map2way_NI_co	379337	521	378816	1.000	0.004
Medication	MED_vitamin_b	B03B_vitamin_k	379337	8268	371069	0.999	-0.001
Gastroenterology, I	MED_hemorrhoi	C05A_agents_fc	379337	11727	367610	0.999	-0.001
Gynaecology and O	HES_Ovarian_dy	HES_p_E28_BIN	379337	239	379098	0.995	-0.005
Immuno-inflammat	HES_Hyperhidro	HES_p_R61_BIN	379337	545	378792	1.000	0.003
Mental health	Getting_up_in_r	f_1170_0_0_f	378298				0.000
Urology	PROXYS_Prostat	f_20111_0_cod	301409	4741	296668	0.999	-0.001
Gastroenterology, I	CREG_mal_neo	f_40006_0_p_C	379337	1206	378131	0.998	-0.002
Cardiovascular	OPC_Translumin	f_41210_41200	379337	186	379151	0.994	-0.006
Operations and Pro	OPC_Minimal_a	f_41210_41200	379337	8905	370432	1.000	0.001
Gastroenterology, I	M2W_gastricsto	map2way_NI_co	379337	6134	373203	1.000	0.001
Metabolic and endc	M2W_type_1_d	map2way_NI_co	379337	2663	376674	1.000	0.002
Breast	M2W_breast_fik	map2way_NI_co	379337	1450	377887	0.998	-0.002
Urology	OPC_Other_ope	f_41210_41200	379337	599	378738	0.997	-0.003
Gastroenterology, I	M2W_oesophag	map2way_NI_co	379337	10532	368805	0.999	-0.001
Cardiovascular	OPC_Other_ope	f_41210_41200	379337	6976	372361	0.999	-0.001
Gastroenterology, I	HESBL_Other_di	HES_block_p_K	379337	59691	319646	1.000	0.000
Musculoskeletal dis	HES_Myositis	HES_p_M60_BI	379337	207	379130	0.995	-0.005
Musculoskeletal dis	HES_Other_burs	HES_p_M71_BI	379337	729	378608	1.000	0.003

Gynaecology and O	HES_Other_diso	HES_p_O41_BIN	379337	236	379101	0.995	-0.005
Cardiovascular	HES_Other_peri	HES_p_I73_BIN	379337	3311	376026	1.000	0.001
Gynaecology and O	NIOPC_terminat	f_20004_dxCod	379337	945	378392	1.000	0.003
Respiratory	OPC_Diagnostic	f_41210_41200	379337	4814	374523	1.000	0.001
Operations and Pro	OPC_Diagnostic	f_41210_41200	379337	589	378748	1.000	0.003
ENT and maxillofaci	OPC_Operations	f_41210_41200	379337	429	378908	1.000	0.004
Infectious disease	M2W_shingles	map2way_NI_co	379337	734	378603	1.000	0.003
Musculoskeletal dis	M2W_fracture	map2way_NI_co	379337	1944	377393	0.998	-0.002
Broad symptoms, si	HES_Pain_in_thr	HES_p_R07_BIN	379337	28985	350352	1.000	0.000
Cardiovascular	Cardiac_index	df_12702_2_0_f	8001				0.001
Musculoskeletal dis	OPC_Other_divi	f_41210_41200	379337	1162	378175	1.000	0.002
Metabolic and endc	HES_Other_diso	HES_p_E27_BIN	379337	431	378906	1.000	0.004
Gastroenterology, †	HES_Acute_appr	HES_p_K35_BIN	379337	2634	376703	1.000	0.002
Gynaecology and O	HES_Complicati	HES_p_O90_BIN	379337	183	379154	1.010	0.006
ENT and maxillofaci	Speech_recepti	f_20019_0_0_f	114775				0.000
Musculoskeletal dis	OPC_Therapeuti	f_41210_41200	379337	4755	374582	1.000	0.001
Mental health	HES_Toxic_effec	HES_p_T51_BIN	379337	912	378425	0.997	-0.003
Gastroenterology, †	OPC_Endoscopic	f_41210_41200	379337	228	379109	1.010	0.005
Metabolic and endc	PROXYF_Diabet	f_20107_0_codi	343797	31646	312151	1.000	0.000
Neurosciences	OPC_Microsurgi	f_41210_41200	379337	223	379114	1.010	0.005
Eye	HESBL_Disorder	HES_block_p_H	379337	910	378427	1.000	0.003
Congenital malform	HESBL_Congenit	HES_block_p_Q	379337	1083	378254	1.000	0.002
Immuno-inflammat	HESCH_Diseases	HES_chapter_p_	379337	37183	342154	1.000	0.000
Infectious disease	HES_bacterial_a	HES_p_B96_BIN	379337	7943	371394	1.000	0.001
ENT and maxillofaci	HES_Chronic_dis	HES_p_J35_BIN	379337	907	378430	1.000	0.003
Respiratory	HES_Pulmonary	HES_p_J81_BIN	379337	428	378909	1.000	0.004
Gastroenterology, †	HES_Other_dise	HES_p_K86_BIN	379337	1004	378333	1.000	0.002
Gastroenterology, †	HES_Postproced	HES_p_K91_BIN	379337	1430	377907	1.000	0.002
Urology	HES_Other_diso	HES_p_N42_BIN	379337	1238	378099	0.998	-0.002
Urology	HES_Other_abnr	HES_p_R82_BIN	379337	298	379039	1.000	0.004
Medication	HES_Poisoning	HES_p_T43_BIN	379337	1062	378275	1.000	0.002
Cardiovascular	NIOPC_carotid	f_20004_dxCod	379337	334	379003	1.000	0.004
Cardiovascular	PROXYF_Stroke	f_20107_0_codi	343797	51326	292471	1.000	0.000
Respiratory	OPC_Excision_of	f_41210_41200	379337	812	378525	0.997	-0.003
Cardiovascular	OPC_Other_diag	f_41210_41200	379337	2960	376377	1.000	0.001
Musculoskeletal dis	OPC_Primary_de	f_41210_41200	379337	2462	376875	1.000	0.002
Gynaecology and O	OPC_Gestationa	f_41210_41200	379337	395	378942	0.996	-0.004
Cardiovascular	M2W_stroke	map2way_NI_co	379337	8582	370755	1.000	0.001
Gastroenterology, †	M2W_oesophag	map2way_NI_co	379337	502	378835	0.997	-0.003
Urology	M2W_urinary_fi	map2way_NI_co	379337	11747	367590	1.000	0.001
Gastroenterology, †	M2W_incisional	map2way_NI_co	379337	307	379030	0.996	-0.004
Gastroenterology, †	HES_Oesophage	HES_p_I85_BIN	379337	489	378848	0.997	-0.003
Musculoskeletal dis	Hip_pain_for_3	f_3414_0_0_f_E	362904	32716	330188	1.000	0.000
Gynaecology and O	MED_androgens	G03E_androgen	379337	422	378915	1.000	0.004
ENT and maxillofaci	HESBL_Diseases	HES_block_p_H	379337	2906	376431	0.999	-0.001
Immuno-inflammat	HESBL_Infection	HES_block_p_L	379337	9704	369633	0.999	-0.001
Renal	HESBL_Other_di	HES_block_p_N	379337	2381	376956	0.998	-0.002
Congenital malform	HESBL_Congenit	HES_block_p_Q	379337	628	378709	1.000	0.003
Broad symptoms, si	HESBL_Symptom	HES_block_p_R	379337	2294	377043	1.000	0.002
Broad symptoms, si	HESCH_Diseases	HES_chapter_p_	379337	91380	287957	1.000	0.000

Metabolic and endocrine	HES_Hyperparathyroidism	HES_p_E21_BIN	379337	752	378585	0.997	-0.003
Neurosciences	HES_Unspecific	HES_p_F03_BIN	379337	432	378905	0.996	-0.004
Neurosciences	HES_Disorders_of	HES_p_G90_BIN	379337	241	379096	1.000	0.005
Cardiovascular	HES_Atrioventricular	HES_p_I44_BIN	379337	3289	376048	1.000	0.001
Cardiovascular	HES_Other_cerebellar	HES_p_I67_BIN	379337	2195	377142	0.998	-0.002
Gastroenterology, hepatology	HES_Other_functional	HES_p_K59_BIN	379337	10180	369157	0.999	-0.001
Immuno-inflammatory	HES_Cutaneous	HES_p_L02_BIN	379337	2146	377191	0.998	-0.002
Immuno-inflammatory	HES_Other_disorders	HES_p_L98_BIN	379337	5076	374261	0.999	-0.001
Musculoskeletal disorders	HES_Spontaneous	HES_p_M66_BIN	379337	488	378849	1.000	0.003
Urology	HES_Hydrocele	HES_p_N43_BIN	379337	1224	378113	0.998	-0.002
Gynaecology and Obstetrics	HES_Ectopic_pregnancy	HES_p_O00_BIN	379337	264	379073	0.996	-0.004
Gynaecology and Obstetrics	HES_Gestational	HES_p_O13_BIN	379337	427	378910	1.000	0.004
Congenital malformations	HES_Other_congenital	HES_p_Q63_BIN	379337	215	379122	0.995	-0.005
Haematology	HES_Other_abnormalities	HES_p_R79_BIN	379337	5821	373516	0.999	-0.001
Musculoskeletal disorders	MED_other_drugs	M09A_other_drugs	379337	2684	376653	1.000	0.001
Haematology	NI_chronic_lymphoma	f_20001_0_DX	379337	245	379092	1.000	0.005
Gastroenterology, hepatology	NIOPC_large_bowel	f_20004_dxCodes	379337	1042	378295	1.000	0.002
Neurosciences	NIOPC_peripheral	f_20004_dxCodes	379337	795	378542	1.000	0.003
Immuno-inflammatory	NIOPC_skin_operations	f_20004_dxCodes	379337	3217	376120	0.999	-0.001
Urology	PROXYF_Prostate	f_20107_0_codes	338931	25460	313471	1.000	0.000
Neurosciences	Headaches_for	f_3799_0_0_f_E	330745	33898	296847	1.000	0.000
Breast	CREG_malignant_neoplasm	f_40006_0_p_C	379337	10158	369179	0.999	-0.001
Urology	CREG_malignant_neoplasm	f_40006_0_p_C	379337	921	378416	0.998	-0.002
Breast	CREGBL_malignant_neoplasm	f_40006_block	379337	10158	369179	0.999	-0.001
Breast	OPC_Operations	f_41210_41200	379337	610	378727	0.997	-0.003
ENT and maxillofacial	OPC_Other_operations	f_41210_41200	379337	342	378995	1.000	0.004
Respiratory	OPC_Other_operations	f_41210_41200	379337	805	378532	0.997	-0.003
ENT and maxillofacial	OPC_Other_operations	f_41210_41200	379337	464	378873	1.000	0.004
Gastroenterology, hepatology	OPC_Other_congenital	f_41210_41200	379337	256	379081	0.995	-0.005
Cardiovascular	OPC_Other_therapeutic	f_41210_41200	379337	860	378477	0.997	-0.003
Cardiovascular	OPC_Reconstruction	f_41210_41200	379337	234	379103	0.995	-0.005
Gynaecology and Obstetrics	OPC_Destruction	f_41210_41200	379337	2136	377201	1.000	0.002
Gynaecology and Obstetrics	OPC_Endoscopic	f_41210_41200	379337	2687	376650	0.999	-0.001
Immuno-inflammatory	OPC_Other_descriptive	f_41210_41200	379337	282	379055	0.996	-0.004
Gastroenterology, hepatology	OPC_Other_operations	f_41210_41200	379337	2184	377153	1.000	0.002
Operations and Procedures	OPC_Diagnostic	f_41210_41200	379337	294	379043	0.996	-0.004
Musculoskeletal disorders	OPC_Diagnostic	f_41210_41200	379337	820	378517	1.000	0.003
Musculoskeletal disorders	OPC_Total_prosthetic	f_41210_41200	379337	695	378642	0.997	-0.003
Cancer	OPC_Procurement	f_41210_41200	379337	4084	375253	0.999	-0.001
Urology	M2W_scrotal_pain	map2way_NI_codes	379337	1385	377952	0.998	-0.002
ENT and maxillofacial	M2W_otosclerosis	map2way_NI_codes	379337	416	378921	1.000	0.004
Immuno-inflammatory	M2W_blistering	map2way_NI_codes	379337	748	378589	0.997	-0.003
Respiratory	M2W_pleural_effusion	map2way_NI_codes	379337	4897	374440	1.000	0.001
ENT and maxillofacial	M2W_tonsillitis	map2way_NI_codes	379337	3539	375798	0.999	-0.001
Musculoskeletal disorders	M2W_bursitis	map2way_NI_codes	379337	2172	377165	0.998	-0.002
Breast	M2W_benign_breast	map2way_NI_codes	379337	2336	377001	0.998	-0.002
Operations and Procedures	NIOPC_upper_limb	f_20004_dxCodes	379337	2148	377189	0.998	-0.002
Metabolic and endocrine	MED_antithyroid	H03B_antithyroid	379337	335	379002	1.000	0.004
Infectious disease	HESBL_Other_block	HES_block_p_A	379337	4400	374937	0.999	-0.001
Urology	HESBL_Other_block	HES_block_p_N	379337	26787	352550	1.000	0.000

Gastroenterology, I	HES_Diseases_o	HES_p_K11_BIN	379337	910	378427	0.998	-0.002
Musculoskeletal dis	HES_Acquired_d	HES_p_M20_BIN	379337	8764	370573	0.999	-0.001
Renal	HES_Other_diso	HES_p_N28_BIN	379337	2181	377156	0.998	-0.002
Neurosciences	HES_Convulsion:	HES_p_R56_BIN	379337	1803	377534	0.998	-0.002
Eye	MED_antiglauco	S01E_antiglaucc	379337	4855	374482	1.000	0.001
Gastroenterology, I	OPC_Diagnostic_f	41210_41200	379337	309	379028	1.000	0.004
Cardiovascular	Cholesterol_low	f_6153_6177_0	376456	65004	311452	1.000	0.000
Gastroenterology, I	Omeprazole_e_	f_6154_0_code!	375001	22431	352570	0.999	-0.001
Musculoskeletal dis	M2W_back_prol	map2way_NI_co	379337	11530	367807	1.000	0.001
Gastroenterology, I	M2W_peptic_ul	map2way_NI_co	379337	771	378566	1.000	0.003
Gastroenterology, I	M2W_appendici	map2way_NI_co	379337	6314	373023	1.000	0.001
Gynaecology and O	M2W_cervical_ε	map2way_NI_co	379337	898	378439	0.998	-0.002
Immuno-inflammat	MED_antibiotics	D06A_antibiotic	379337	1434	377903	0.998	-0.002
Immuno-inflammat	HESBL_Radiator	HES_block_p_L5	379337	2289	377048	1.000	0.002
Cardiovascular	HES_Hypotensio	HES_p_I95_BIN	379337	4421	374916	1.000	0.001
ENT and maxillofaci	NIOPC_maxillo_	f_20004_dxCod	379337	2825	376512	1.000	0.001
ENT and maxillofaci	OPC_Extirpation	f_41210_41200	379337	1565	377772	0.998	-0.002
Cardiovascular	intracerebral_ha	f_42010_0_0_B	379337	794	378543	0.997	-0.003
Gynaecology and O	M2W_endometri	map2way_NI_co	379337	5961	373376	1.000	0.001
Gynaecology and O	NIOPC_unilatera	f_20004_dxCod	379337	2254	377083	1.000	0.002
Anthropometry	Total_lean_mas:	f_23280_2_0_f	4101				-0.001
Musculoskeletal dis	OPC_Other_ope	f_41210_41200	379337	1474	377863	0.998	-0.002
Musculoskeletal dis	OPC_Approach_	f_41210_41200	379337	309	379028	0.996	-0.004
Neurosciences	HESBL_Other_dε	HES_block_p_G	379337	910	378427	0.998	-0.002
Gastroenterology, I	HES_Heartburn	HES_p_R12_BIN	379337	1828	377509	0.998	-0.002
Biological assays - L	Microalbumin_ir	f_30500_0_0_f	114396				0.000
Immuno-inflammat	CREG_Melanom	f_40006_0_p_D	379337	1027	378310	0.998	-0.002
Operations and Pro	OPC_Preparatio	f_41210_41200	379337	655	378682	0.997	-0.003
Operations and Pro	OPC_Attention_	f_41210_41200	379337	391	378946	1.000	0.004
Cardiovascular	HES_Varicose_v	HES_p_I86_BIN	379337	461	378876	0.997	-0.003
Cardiovascular	PROXYFM_Strok	f_20107_20110	379337				0.000
Gastroenterology, I	Stomach_abdom	f_3741_0_0_f_E	358027	17543	340484	0.999	-0.001
Metabolic and endc	M2W_hyperpar:	map2way_NI_co	379337	788	378549	0.997	-0.003
Gynaecology and O	HES_Other_fem:	HES_p_N73_BIN	379337	2493	376844	1.000	0.001
Immuno-inflammat	HES_Decubitus_	HES_p_L89_BIN	379337	844	378493	1.000	0.002
Musculoskeletal dis	NIOPC_hip_surg	f_20004_dxCod	379337	1523	377814	0.998	-0.002
Gynaecology and O	OPC_Curettage_	f_41210_41200	379337	6842	372495	1.000	0.001
Neurosciences	HES_Other_extr:	HES_p_G25_BIN	379337	562	378775	1.000	0.003
Gynaecology and O	HES_Excessive_	HES_p_O21_BIN	379337	202	379135	0.995	-0.005
Broad symptoms, si	HES_general_sei	HES_p_R44_BIN	379337	472	378865	1.000	0.003
Neurosciences	OPC_Diagnostic_f	41210_41200	379337	4840	374497	0.999	-0.001
Urology	OPC_Other_ther	f_41210_41200	379337	557	378780	0.997	-0.003
Cardiovascular	MED_antithrom	B01A_antithron	379337	59218	320119	1.000	0.000
Metabolic and endc	PROXYS_Diabetε	f_20111_0_cod	301198	24505	276693	1.000	0.000
Musculoskeletal dis	M2W_fracture_:	map2way_NI_co	379337	596	378741	0.997	-0.003
Cardiovascular	HESBL_Other_ar	HES_block_p_I9	379337	4946	374391	1.000	0.001
Respiratory	HES_Pneumoniti	HES_p_J69_BIN	379337	561	378776	1.000	0.003
Neurosciences	HES_Other_lack	HES_p_R27_BIN	379337	322	379015	1.000	0.004
Renal	NIOPC_percutan	f_20004_dxCod	379337	2178	377159	0.999	-0.001
Eye	OPC_Recession_	f_41210_41200	379337	270	379067	1.000	0.004

Musculoskeletal dis	OPC_Other_totaf_41210_41200	379337	1064	378273	1.000	0.002
Musculoskeletal dis	OPC_Other_opef_41210_41200	379337	1273	378064	0.998	-0.002
Gastroenterology, I	M2W_gall_bladr map2way_NI_co	379337	13970	365367	0.999	-0.001
Neurosciences	M2W_meningiti map2way_NI_co	379337	1714	377623	0.998	-0.002
Operations and Pro	OPC_Early_operf_41210_41200	379337	2991	376346	1.000	0.001
Mental health	Ever_highly_irritf_4653_0_0_f_E	123837	22272	101565	1.000	0.001
Respiratory	TA_copdExacerb BIN_copdExacer	8848	488	8360	0.997	-0.003
Gynaecology and O	HES_Erosion_an HES_p_N86_BIN	379337	830	378507	0.998	-0.002
Immuno-inflammat	MED_anti_acne_D10A_anti_acne	379337	1610	377727	1.000	0.002
Haematology	HESBL_Other_di HES_block_p_D	379337	4196	375141	1.000	0.001
Eye	HES_Other_diso HES_p_H57_BIN	379337	430	378907	0.997	-0.003
Gastroenterology, I	HES_Gastro_oes HES_p_K21_BIN	379337	20909	358428	1.000	0.000
Eye	MED_mydriatics S01F_mydriatics	379337	287	379050	1.000	0.004
Gastroenterology, I	NIOPC_other_bcf_20004_dxCod	379337	2285	377052	1.000	0.001
Gynaecology and O	NIOPC_anterior_f_20004_dxCod	379337	3520	375817	1.000	0.001
ENT and maxillofaci	NIOPC_rhinopla: f_20004_dxCod	379337	2193	377144	1.000	0.001
Operations and Pro	NIOPC_biopsy f_20004_dxCod	379337	275	379062	1.000	0.004
Respiratory	PROXYF_Lung_c: f_20107_0_cod	338931	30486	308445	1.000	0.000
Gynaecology and O	CREG_mal_neo_f_40006_0_p_C	379337	1276	378061	0.998	-0.002
Broad symptoms, si	CREGBL_Benign_f_40006_block_	379337	784	378553	1.000	0.002
ENT and maxillofaci	OPC_Diagnostic_f_41210_41200	379337	246	379091	1.000	0.004
Gastroenterology, I	OPC_Total_excisf_41210_41200	379337	212	379125	1.000	0.005
Cardiovascular	OPC_Diagnostic_f_41210_41200	379337	1108	378229	1.000	0.002
Urology	OPC_Diagnostic_f_41210_41200	379337	30146	349191	1.000	0.000
Urology	OPC_Open_excif_41210_41200	379337	2048	377289	0.998	-0.002
Gynaecology and O	OPC_Other_opef_41210_41200	379337	1300	378037	0.998	-0.002
Musculoskeletal dis	OPC_Other_totaf_41210_41200	379337	332	379005	1.000	0.004
Cardiovascular	stroke f_42006_0_0_B	379337	8713	370624	1.000	0.001
Mental health	Happiness f_4526_0_0_f_C	126132				0.000
ENT and maxillofaci	Painful_gums f_6149_0_code:	377882	10722	367160	1.000	0.001
Infectious disease	M2W_hivaidr map2way_NI_co	379337	309	379028	0.996	-0.004
Gastroenterology, I	M2W_hepatitis_map2way_NI_co	379337	197	379140	0.995	-0.005
Respiratory	HES_Pleural_effi HES_p_J90_BIN	379337	4735	374602	1.000	0.001
Gastroenterology, I	OPC_Diagnostic_f_41210_41200	379337	1470	377867	1.000	0.002
Cardiovascular	MED_ace_inhibi C09B_ace_inhib	379337	54604	324733	1.000	0.000
Gynaecology and O	Bilateral_oophoi f_2834_0_0_f_E	201611	16366	185245	0.999	-0.001
Operations and Pro	OPC_Other_repr: f_41210_41200	379337	894	378443	0.998	-0.002
Musculoskeletal dis	M2W_fracture_ map2way_NI_co	379337	345	378992	0.996	-0.004
Infectious disease	HES_Other_sept HES_p_A41_BIN	379337	3391	375946	0.999	-0.001
Metabolic and endc	NIOPC_parathyr f_20004_dxCod	379337	531	378806	0.997	-0.003
Gastroenterology, I	OPC_Excision_of f_41210_41200	379337	2710	376627	1.000	0.001
Gynaecology and O	OPC_Other_opef_41210_41200	379337	308	379029	0.996	-0.004
Eye	HES_Retinal_vas HES_p_H34_BIN	379337	466	378871	0.997	-0.003
Cardiovascular	OPC_Reconstruc f_41210_41200	379337	508	378829	0.997	-0.003
Urology	OPC_Endoscopic f_41210_41200	379337	1067	378270	1.000	0.002
Haematology	HES_Iron_defici HES_p_D50_BIN	379337	6921	372416	0.999	-0.001
Gastroenterology, I	HES_Cholelithias HES_p_K80_BIN	379337	12996	366341	0.999	-0.001
Gynaecology and O	NIOPC_uterine_ :f_20004_dxCod	379337	1594	377743	0.998	-0.002
Cardiovascular	HESCH_Chapter_ HES_chapter_p_	379337	117149	262188	1.000	0.000
Mental health	HESBL_Disorder: HES_block_p_F	379337	287	379050	0.996	-0.004

Immuno-inflammat	OPC_Other_excif_41210_41200	379337	31466	347871	1.000	0.000
Cardiovascular	M2W_cerebral_map2way_NI_co	379337	545	378792	0.997	-0.003
Eye	M2W_dry_eyes_map2way_NI_co	379337	847	378490	1.000	0.002
Breast	OPC_Operationsf_41210_41200	379337	761	378576	0.998	-0.002
Eye	M2W_glaucoma_map2way_NI_co	379337	6272	373065	1.000	0.001
Musculoskeletal dis	M2W_tendoniti:map2way_NI_co	379337	5616	373721	0.999	-0.001
Eye	HESBL_Disorder:HES_block_p_Hi	379337	8758	370579	0.999	-0.001
Congenital malform	HES_Maternal_cHES_p_O35_BIN	379337	239	379098	1.000	0.004
Cardiovascular	Mean_carotid_IIf_22680_0_0_f_	1843				0.002
Immuno-inflammat	CREG_carc_in_sif_40006_0_p_D	379337	1157	378180	1.000	0.002
ENT and maxillofaci	OPC_Other_ope f_41210_41200	379337	277	379060	0.996	-0.004
Gynaecology and O	MED_progestogG03F_progestog	379337	8667	370670	1.000	0.001
Musculoskeletal dis	HES_acquired_d HES_p_M95_BII	379337	330	379007	0.996	-0.004
Operations and Pro	OPC_Approach_ f_41210_41200	379337	1441	377896	1.000	0.002
Renal	OPC_Therapeuti f_41210_41200	379337	417	378920	0.997	-0.003
ENT and maxillofaci	HES_Gingivitis_aHES_p_K05_BIN	379337	767	378570	0.998	-0.002
Gynaecology and O	OPC_Introductiof_41210_41200	379337	623	378714	1.000	0.003
Cardiovascular	OPC_High_cost_ f_41210_41200	379337	535	378802	1.000	0.003
Gastroenterology, †	M2W_hiatus_he map2way_NI_co	379337	27695	351642	1.000	0.000
Neurosciences	HES_Nerve_rootHES_p_G55_BIN	379337	3582	375755	1.000	0.001
Haematology	CREG_Multiple_ f_40006_0_p_C	379337	460	378877	0.997	-0.003
Musculoskeletal dis	OPC_Complex_r f_41210_41200	379337	800	378537	1.000	0.002
Eye	OPC_Other_adjf_41210_41200	379337	213	379124	1.000	0.004
Immuno-inflammat	MED_antipruritiD04A_antiprurit	379337	592	378745	0.997	-0.003
Biological assays - F	Red_blood_cell_ f_30070_0_0_f_	368088				0.000
Urology	MED_drugs_useG04C_drugs_usi	379337	6807	372530	0.999	-0.001
Gastroenterology, †	OPC_Attention_ f_41210_41200	379337	998	378339	1.000	0.002
Musculoskeletal dis	M2W_myositism map2way_NI_co	379337	338	378999	0.997	-0.003
Renal	M2W_diabetic_ map2way_NI_co	379337	242	379095	1.000	0.004
Mental health	M2W_stress map2way_NI_co	379337	662	378675	0.998	-0.002
Gastroenterology, †	NIOPC_gallstonef_20004_dxCod	379337	315	379022	0.996	-0.004
Broad symptoms, si	HES_signs_involHES_p_R29_BIN	379337	2614	376723	1.000	0.001
ENT and maxillofaci	MED_expectoraR05C_expectora	379337	1120	378217	0.998	-0.002
Cardiovascular	NIOPC_venous_ f_20004_dxCod	379337	246	379091	0.996	-0.004
Biological assays - L	Potassium_in_uf_30520_0_0_f_	367668				0.000
Urology	OPC_Extirpation f_41210_41200	379337	222	379115	0.996	-0.004
Musculoskeletal dis	OPC_Excision_of f_41210_41200	379337	254	379083	0.996	-0.004
Immuno-inflammat	OPC_Harvest_of f_41210_41200	379337	233	379104	0.996	-0.004
Cardiovascular	OPC_Other_byp f_41210_41200	379337	275	379062	0.996	-0.004
Musculoskeletal dis	HESBL_ArthrosisHES_block_p_M	379337	40335	339002	1.000	0.000
ENT and maxillofaci	OPC_Diagnostic_ f_41210_41200	379337	3127	376210	0.999	-0.001
Neurosciences	HESBL_Viral_infHES_block_p_A	379337	233	379104	0.996	-0.004
Haematology	HES_Vitamin_B1HES_p_D51_BIN	379337	809	378528	1.000	0.002
Neurosciences	HES_HydrocephHES_p_G91_BIN	379337	402	378935	1.000	0.003
Gastroenterology, †	HES_Umbilical_†HES_p_K42_BIN	379337	3441	375896	1.000	0.001
Musculoskeletal dis	HES_Spondylosi:HES_p_M47_BII	379337	6894	372443	0.999	-0.001
Gastroenterology, †	NIOPC_endoscoj f_20004_dxCod	379337	7555	371782	1.000	0.001
Mental health	Bipolar_II_Disorif_20126_0_cod	91576	531	91045	1.000	0.003
Immuno-inflammat	Pattern_2_ f_ f_2395_0_code:	173485	39999	133486	1.000	0.000
Gynaecology and O	OPC_Other_ope f_41210_41200	379337	950	378387	0.998	-0.002

Musculoskeletal dis	OPC_Excision_re f_41210_41200	379337	1874	377463	0.999	-0.001
Neurosciences	M2W_encephali map2way_NI_cc	379337	415	378922	0.997	-0.003
Mental health	M2W_nervous_l map2way_NI_cc	379337	630	378707	1.000	0.002
Immuno-inflammat	M2W_chronic_f map2way_NI_cc	379337	1922	377415	1.000	0.001
Urology	M2W_cystitis map2way_NI_cc	379337	2923	376414	0.999	-0.001
Neurosciences	M2W_trigemmi map2way_NI_cc	379337	465	378872	1.000	0.003
Musculoskeletal dis	M2W_fracture_j map2way_NI_cc	379337	791	378546	1.000	0.002
Neurosciences	HESBL_atrophie HES_block_p_G	379337	369	378968	1.000	0.003
Respiratory	HESBL_Other_ac HES_block_p_J2	379337	7030	372307	1.000	0.001
Gynaecology and O	HESBL_Other_m HES_block_p_O	379337	2789	376548	1.000	0.001
Mental health	HES_Other_anxi HES_p_F41_BIN	379337	5417	373920	1.000	0.001
Cardiovascular	HES_Other_conc HES_p_I45_BIN	379337	1983	377354	1.000	0.001
Urology	HES_Other_diso HES_p_N36_BIN	379337	693	378644	0.998	-0.002
ENT and maxillofaci	NI_larynx_throa f_20001_0_DX_	379337	290	379047	0.996	-0.004
Immuno-inflammat	NI_basal_cell_ca f_20001_0_DX_	379337	3555	375782	1.000	0.001
Neurosciences	PROXYM_Alzhei f_20110_0_cod	357740	29841	327899	1.000	0.000
Gastroenterology, †	CREG_mal_neo_f_40006_0_p_C	379337	218	379119	0.996	-0.004
Cancer	CREG_neo_of_o f_40006_0_p_D	379337	343	378994	1.000	0.003
Breast	OPC_Reconstruc f_41210_41200	379337	1391	377946	0.998	-0.002
Breast	OPC_Incision_of f_41210_41200	379337	615	378722	0.998	-0.002
Eye	OPC_Operations f_41210_41200	379337	418	378919	1.000	0.003
Gastroenterology, †	OPC_Other_ope f_41210_41200	379337	1644	377693	1.000	0.001
Gynaecology and O	OPC_Other_ope f_41210_41200	379337	1103	378234	0.998	-0.002
Immuno-inflammat	OPC_Removal_c f_41210_41200	379337	460	378877	1.000	0.003
Musculoskeletal dis	OPC_Biopsy_of f_41210_41200	379337	421	378916	1.000	0.003
Cardiovascular	OPC_Diagnostic f_41210_41200	379337	1244	378093	0.998	-0.002
Musculoskeletal dis	OPC_Other_ope f_41210_41200	379337	298	379039	1.000	0.004
Operations and Pro	OPC_Injection_c f_41210_41200	379337	609	378728	0.998	-0.002
Gastroenterology, †	M2W_rectal_or map2way_NI_cc	379337	28291	351046	1.000	0.000
Musculoskeletal dis	M2W_sciatica map2way_NI_cc	379337	5461	373876	0.999	-0.001
Renal	M2W_pyelonepl map2way_NI_cc	379337	1141	378196	0.998	-0.002
Musculoskeletal dis	M2W_disc_dege map2way_NI_cc	379337	2914	376423	0.999	-0.001
ENT and maxillofaci	HES_Suppurativ HES_p_H66_BIN	379337	702	378635	0.998	-0.002
Gastroenterology, †	OPC_Manipulati f_41210_41200	379337	1761	377576	1.000	0.001
Operations and Pro	OPC_Introductio f_41210_41200	379337	612	378725	0.998	-0.002
Gastroenterology, †	NIOPC_rectal_si f_20004_dxCod	379337	534	378803	1.000	0.003
Haematology	HES_Other_dise HES_p_D75_BIN	379337	563	378774	1.000	0.003
Operations and Pro	HES_Abnormal_ HES_p_R94_BIN	379337	3861	375476	0.999	-0.001
ENT and maxillofaci	OPC_Exteriorisa f_41210_41200	379337	819	378518	1.000	0.002
Musculoskeletal dis	M2W_fracture_j map2way_NI_cc	379337	555	378782	0.997	-0.003
Metabolic and endc	HES_Hyperfunct HES_p_E22_BIN	379337	292	379045	0.997	-0.003
Gastroenterology, †	M2W_liver_failu map2way_NI_cc	379337	1527	377810	1.000	0.002
Infectious disease	HESCH_Certain_ HES_chapter_p_	379337	26738	352599	1.000	0.000
Immuno-inflammat	HES_Dermatitis_ HES_p_L27_BIN	379337	436	378901	0.997	-0.003
Gastroenterology, †	OPC_Perineal_o f_41210_41200	379337	257	379080	0.996	-0.004
Gynaecology and O	OPC_Other_vagi f_41210_41200	379337	1553	377784	0.998	-0.002
Operations and Pro	OPC_Diagnostic f_41210_41200	379337	2158	377179	0.999	-0.001
Operations and Pro	OPC_Placement_ f_41210_41200	379337	1321	378016	0.998	-0.002
Mental health	HES_Mental_an HES_p_F17_BIN	379337	10160	369177	1.000	0.001
Cardiovascular	NIOPC_pacemak f_20004_dxCod	379337	680	378657	0.998	-0.002

Cardiovascular	HES_Multiple_v	HES_p_I08_BIN	379337	1494	377843	0.998	-0.002
Musculoskeletal dis	NIOPC_achilles_f	20004_dxCod	379337	613	378724	1.000	0.002
Medication	MED_iron_prep	B03A_iron_prep	379337	19989	359348	1.000	0.000
Cardiovascular	MED_lipid_modi	C10B_lipid_modi	379337	73015	306322	1.000	0.000
Mental health	HESBL_Unspecifi	HES_block_p_F9	379337	184	379153	0.996	-0.004
Urology	HESBL_Diseases	HES_block_p_N	379337	17851	361486	1.000	0.000
Mental health	HES_Mental_an	HES_p_F10_BIN	379337	4916	374421	0.999	-0.001
Mental health	HES_Mental_dis	HES_p_F99_BIN	379337	184	379153	0.996	-0.004
Eye	HES_Hordeolum	HES_p_H00_BIN	379337	1666	377671	0.999	-0.001
ENT and maxillofaci	HES_Other_hear	HES_p_H91_BIN	379337	2566	376771	1.000	0.001
Cardiovascular	HES_Cerebral_in	HES_p_I63_BIN	379337	2922	376415	1.000	0.001
ENT and maxillofaci	HES_Other_diso	HES_p_K06_BIN	379337	284	379053	1.000	0.003
Urology	HES_Other_sym	HES_p_R39_BIN	379337	4614	374723	1.000	0.001
Metabolic and endc	NI_thyroid_canc	f_20001_0_DX	379337	362	378975	1.000	0.003
Gastroenterology, I	NIOPC_bowel_r	f_20004_dxCod	379337	707	378630	0.998	-0.002
Eye	NIOPC_eyelid_si	f_20004_dxCod	379337	269	379068	1.000	0.004
Anthropometry	VAT_visceral_ad	f_23288_2_0_f	4052				0.001
Biological assays - F	Eosinophill_perc	f_30210_0_0_f	367440				0.000
Urology	CREGBL_mal_ne	f_40006_block	379337	1924	377413	0.999	-0.001
Cancer	CREGBL_neo_of	f_40006_block	379337	2124	377213	1.000	0.001
ENT and maxillofaci	OPC_Reconstruc	f_41210_41200	379337	220	379117	1.000	0.004
Operations and Pro	OPC_Ventilation	f_41210_41200	379337	2969	376368	1.000	0.001
Gastroenterology, I	OPC_Excision_of	f_41210_41200	379337	219	379118	0.996	-0.004
Cardiovascular	OPC_Other_ope	f_41210_41200	379337	733	378604	1.000	0.002
Operations and Pro	OPC_Other_lym	f_41210_41200	379337	2931	376406	0.999	-0.001
Immuno-inflammat	OPC_Curettage	f_41210_41200	379337	1790	377547	0.999	-0.001
Cardiovascular	M2W_periphera	map2way_NI_co	379337	1865	377472	0.999	-0.001
Metabolic and endc	M2W_parathyro	map2way_NI_co	379337	274	379063	0.996	-0.004
Haematology	M2W_anaemia	map2way_NI_co	379337	17287	362050	1.000	0.000
Cardiovascular	M2W_aortic_ste	map2way_NI_co	379337	1730	377607	0.999	-0.001
Cardiovascular	TA_primary_hyp	BIN_primary_hy	379337	416	378921	1.000	0.003
Musculoskeletal dis	M2W_epicondyl	map2way_NI_co	379337	745	378592	1.000	0.002
Haematology	M2W_iron_defic	map2way_NI_co	379337	8603	370734	0.999	-0.001
Operations and Pro	MED_other_dia	V09X_other_dia	379337	3825	375512	1.000	0.001
Infectious disease	MED_tetracyclin	J01A_tetracyclir	379337	2227	377110	0.999	-0.001
Immuno-inflammat	MED_antiinflam	M01B_antiinflar	379337	53747	325590	1.000	0.000
Eye	NIOPC_squint_c	f_20004_dxCod	379337	5065	374272	1.000	0.001
Neurosciences	incorect_match	f_399_0_f_QUA	379337				0.000
Breast	OPC_Other_exc	f_41210_41200	379337	9524	369813	0.999	-0.001
ENT and maxillofaci	OPC_Extirpation	f_41210_41200	379337	1687	377650	0.999	-0.001
Respiratory	OPC_Diagnostic	f_41210_41200	379337	452	378885	1.000	0.003
Cardiovascular	OPC_Catheteris	f_41210_41200	379337	776	378561	0.998	-0.002
Urology	OPC_Therapeuti	f_41210_41200	379337	299	379038	0.997	-0.003
Gynaecology and O	OPC_Other_evar	f_41210_41200	379337	2583	376754	1.000	0.001
Musculoskeletal dis	OPC_Primary_re	f_41210_41200	379337	2577	376760	0.999	-0.001
Immuno-inflammat	OPC_Harvest_of	f_41210_41200	379337	2281	377056	1.000	0.001
Metabolic and endc	M2W_disorder	map2way_NI_co	379337	470	378867	1.000	0.003
Immuno-inflammat	M2W_scleroder	map2way_NI_co	379337	202	379135	1.000	0.004
Cardiovascular	M2W_sick_sinus	map2way_NI_co	379337	373	378964	0.997	-0.003
Gastroenterology, I	M2Winguinal_I	map2way_NI_co	379337	15380	363957	1.000	0.000

Gynaecology and O	M2W_menorrhæ	map2way_NI_cc	379337	12818	366519	1.000	0.001
Cardiovascular	MED_antiadren	C02C_antiadren	379337	4733	374604	0.999	-0.001
Cardiovascular	HES_Other_acut	HES_p_I24_BIN	379337	1279	378058	0.998	-0.002
ENT and maxillofaci	HES_Embedded	HES_p_K01_BIN	379337	1710	377627	0.999	-0.001
Immuno-inflammat	HES_Other_follic	HES_p_L73_BIN	379337	374	378963	1.000	0.003
Immuno-inflammat	HES_Atrophic_d	HES_p_L90_BIN	379337	2543	376794	0.999	-0.001
Musculoskeletal dis	HES_Postproced	HES_p_M96_BI	379337	412	378925	1.000	0.003
Gynaecology and O	HES_Maternal_c	HES_p_O34_BIN	379337	1384	377953	0.998	-0.002
Neurosciences	HES_Pain	HES_p_R52_BIN	379337	1294	378043	0.998	-0.002
Neurosciences	MED_antiepilep	N03A_antiepilep	379337	6900	372437	0.999	-0.001
Gastroenterology, I	NI_colon_cancer	f_20001_0_DX	379337	1222	378115	1.000	0.002
Musculoskeletal dis	NIOPC_bunion	_f_20004_dxCod	379337	4997	374340	0.999	-0.001
Gynaecology and O	NIOPC_uterine	_f_20004_dxCod	379337	529	378808	0.998	-0.002
Mental health	PROXYS_Severe	_f_20111_0_cod	301409	21293	280116	1.000	0.000
Mental health	Bipolar_I_Disord	_f_20126_0_cod	91576	595	90981	1.000	0.002
Neurosciences	CREG_Benign_n	_f_40006_0_p_D	379337	350	378987	1.000	0.003
Breast	OPC_Other_ope	_f_41210_41200	379337	910	378427	0.998	-0.002
Eye	OPC_Fixation_of	_f_41210_41200	379337	1035	378302	1.000	0.002
Gastroenterology, I	OPC_Diagnostic	_f_41210_41200	379337	48916	330421	1.000	0.000
Cardiovascular	OPC_Combined	_f_41210_41200	379337	1624	377713	1.000	0.001
Urology	OPC_Other_rep	_f_41210_41200	379337	216	379121	0.996	-0.004
Musculoskeletal dis	OPC_Primary_ex	_f_41210_41200	379337	805	378532	1.000	0.002
Musculoskeletal dis	OPC_Therapeuti	_f_41210_41200	379337	3095	376242	1.000	0.001
Operations and Pro	OPC_Facilitating	_f_41210_41200	379337	2538	376799	0.999	-0.001
Renal	M2W_renal_fail	map2way_NI_cc	379337	664	378673	0.998	-0.002
Breast	HES_Hypertroph	HES_p_N62_BIN	379337	719	378618	0.998	-0.002
Musculoskeletal dis	M2W_psoiatic	_map2way_NI_cc	379337	1089	378248	1.000	0.002
Respiratory	HES_Respiratory	HES_p_J99_BIN	379337	201	379136	1.000	0.004
Urology	HES_Other_diso	HES_p_N48_BIN	379337	1899	377438	0.999	-0.001
ENT and maxillofaci	MED_cough_su	R05D_cough_su	379337	2403	376934	1.000	0.001
Cardiovascular	NIOPC_fem_pop	_f_20004_dxCod	379337	221	379116	1.000	0.004
Gastroenterology, I	NIOPC_abdomin	_f_20004_dxCod	379337	1192	378145	1.000	0.002
Gynaecology and O	NIOPC_hyteros	_f_20004_dxCod	379337	1325	378012	0.999	-0.001
Musculoskeletal dis	NIOPC_dupuytre	_f_20004_dxCod	379337	410	378927	1.000	0.003
ENT and maxillofaci	OPC_Packing_of	_f_41210_41200	379337	1018	378319	0.998	-0.002
Respiratory	OPC_operations	_f_41210_41200	379337	211	379126	1.000	0.004
ENT and maxillofaci	OPC_Extirpation	_f_41210_41200	379337	297	379040	1.000	0.003
Operations and Pro	OPC_Diagnostic	_f_41210_41200	379337	15487	363850	1.000	0.000
Operations and Pro	OPC_Connectior	_f_41210_41200	379337	355	378982	1.000	0.003
Immuno-inflammat	OPC_Harvest_of	_f_41210_41200	379337	546	378791	0.998	-0.002
Musculoskeletal dis	Back_pain	_f_6159_code4	378466	102077	276389	1.000	0.000
Gastroenterology, I	M2W_irritable	_I_map2way_NI_cc	379337	12381	366956	1.000	0.000
Musculoskeletal dis	TA_osteoarthri	BIN_osteoarthri	327381	14995	312386	1.000	0.000
Metabolic and endc	HES_Other_nonl	HES_p_E04_BIN	379337	1509	377828	0.999	-0.001
Neurosciences	OPC_Other_ope	_f_41210_41200	379337	227	379110	0.996	-0.004
Cardiovascular	OPC_Percutanec	_f_41210_41200	379337	5599	373738	0.999	-0.001
Medication	HES_Poisoning	_I_HES_p_T39_BIN	379337	1567	377770	0.999	-0.001
Gastroenterology, I	OPC_Diagnostic	_f_41210_41200	379337	2459	376878	1.000	0.001
Metabolic and endc	M2W_graves_di	map2way_NI_cc	379337	476	378861	0.998	-0.002
Cardiovascular	OPC_Branch_of	_f_41210_41200	379337	271	379066	1.000	0.003

Musculoskeletal dis	M2W_fracture_	map2way_NI_co	379337	5082	374255	1.000	0.001
Medication	MED_antiemetic	A04A_antiemeti	379337	234	379103	1.000	0.003
Cardiovascular	M2W_subdural_	map2way_NI_co	379337	381	378956	1.000	0.003
Neurosciences	M2W_spinal_co	map2way_NI_co	379337	1888	377449	0.999	-0.001
Musculoskeletal dis	M2W_fibromyal	map2way_NI_co	379337	1223	378114	1.000	0.002
Cardiovascular	M2W_aortic_val	map2way_NI_co	379337	2407	376930	0.999	-0.001
Gynaecology and O	HES_Antepartun	HES_p_O46_BIN	379337	588	378749	0.998	-0.002
Gynaecology and O	HES_Postparturr	HES_p_O72_BIN	379337	1204	378133	0.998	-0.002
ENT and maxillofaci	HES_Voice_distu	HES_p_R49_BIN	379337	934	378403	1.000	0.002
Metabolic and endc	OPC_Diagnostic_f	41210_41200	379337	1212	378125	0.998	-0.002
Urology	M2W_erectile_c	map2way_NI_co	379337	498	378839	1.000	0.002
Gynaecology and O	HESBL_Noninflai	HES_block_p_N	379337	43959	335378	1.000	0.000
Neurosciences	PROXYM_Parkin	f_20110_0_cod	354392	5729	348663	1.000	0.001
Immuno-inflammat	HES_Skin_chang	HES_p_L57_BIN	379337	2180	377157	1.000	0.001
Eye	Intra_ocular_pre	f_5262_0_0_f_C	81101				0.000
Gastroenterology, †	MED_drugs_for_	A02B_drugs_for	379337	45660	333677	1.000	0.000
ENT and maxillofaci	HES_Chronic_sir	HES_p_J32_BIN	379337	2227	377110	1.000	0.001
ENT and maxillofaci	HES_Diseases_o	HES_p_K14_BIN	379337	1107	378230	1.000	0.002
Gastroenterology, †	HES_Diaphragm:	HES_p_K44_BIN	379337	24466	354871	1.000	0.000
Gastroenterology, †	HES_Other_noni	HES_p_K52_BIN	379337	14800	364537	1.000	0.000
Renal	HES_Cystic_kidn	HES_p_Q61_BIN	379337	414	378923	0.997	-0.003
Musculoskeletal dis	MED_topical_pr	M02A_topical_p	379337	62156	317181	1.000	0.000
ENT and maxillofaci	NIOPC_nasal_sir	f_20004_dxCod	379337	13240	366097	1.000	0.000
Gynaecology and O	NIOPC_myomec	f_20004_dxCod	379337	2071	377266	0.999	-0.001
Cardiovascular	PROXYF_High_blf	20107_0_cod	343797	74736	269061	1.000	0.000
Breast	OPC_Total_excis	f_41210_41200	379337	4061	375276	1.000	0.001
Musculoskeletal dis	OPC_Other_inte	f_41210_41200	379337	307	379030	0.997	-0.003
Operations and Pro	OPC_Other_ope	f_41210_41200	379337	2198	377139	1.000	0.001
Operations and Pro	OPC_Minimal_af	f_41210_41200	379337	727	378610	0.998	-0.002
Metabolic and endc	M2W_parathyrc	map2way_NI_co	379337	419	378918	1.000	0.003
Gastroenterology, †	M2W_anal_fissu	map2way_NI_co	379337	270	379067	0.997	-0.003
Immuno-inflammat	M2W_food_into	map2way_NI_co	379337	306	379031	0.997	-0.003
Gastroenterology, †	M2W_constipati	map2way_NI_co	379337	9740	369597	0.999	-0.001
Gynaecology and O	M2W_dysmenoi	map2way_NI_co	379337	1606	377731	1.000	0.001
Operations and Pro	OPC_Other_diag	f_41210_41200	379337	209	379128	0.996	-0.004
Eye	HESBL_Other_di	HES_block_p_H	379337	876	378461	0.998	-0.002
Renal	HESBL_Renal_fa	HES_block_p_N	379337	7755	371582	0.999	-0.001
Cardiovascular	HES_Abnormal_	HES_p_R03_BIN	379337	2292	377045	0.999	-0.001
Gynaecology and O	NIOPC_vaginal_	f_20004_dxCod	379337	3480	375857	0.999	-0.001
Musculoskeletal dis	NIOPC_cruciate	f_20004_dxCod	379337	1888	377449	0.999	-0.001
Breast	OPC_Other_plas	f_41210_41200	379337	1690	377647	1.000	0.001
Urology	OPC_Operations	f_41210_41200	379337	1032	378305	0.998	-0.002
Operations and Pro	OPC_Other_intr:	f_41210_41200	379337	5054	374283	1.000	0.001
Neurosciences	OPC_Burrhole_af	f_41210_41200	379337	411	378926	0.998	-0.002
Respiratory	M2W_interstitia	map2way_NI_co	379337	1087	378250	0.998	-0.002
Cardiovascular	M2W_pericardit	map2way_NI_co	379337	1194	378143	1.000	0.001
Immuno-inflammat	HES_Viral_warts	HES_p_B07_BIN	379337	644	378693	1.000	0.002
Eye	HES_Other_diso	HES_p_H27_BIN	379337	203	379134	0.996	-0.004
Cardiovascular	MED_cardiac_gl	C01A_cardiac_g	379337	1042	378295	1.000	0.002
Cardiovascular	MED_angiotensi	C09D_angiotens	379337	30629	348708	1.000	0.000

Medication	MED_other_sex_G03X_other_se	379337	368	378969	1.000	0.003
Eye	HESBL_ocular_r HES_block_p_H	379337	2675	376662	1.000	0.001
Breast	HESBL_Disorder: HES_block_p_N	379337	4857	374480	0.999	-0.001
Gastroenterology, I	HES_Other_bact HES_p_A04_BIN	379337	2318	377019	0.999	-0.001
Mental health	HES_Bipolar_aff: HES_p_F31_BIN	379337	888	378449	1.000	0.002
Cardiovascular	HES_Other_dise HES_p_I31_BIN	379337	974	378363	1.000	0.002
Respiratory	HES_Unspecifec HES_p_J22_BIN	379337	6884	372453	1.000	0.001
Gastroenterology, I	HES_Oesophagit HES_p_K20_BIN	379337	8260	371077	0.999	-0.001
Immuno-inflammat	HES_Other_diso HES_p_L81_BIN	379337	706	378631	1.000	0.002
Musculoskeletal dis	HES_Pyogenic_a HES_p_M00_BII	379337	335	379002	0.997	-0.003
Musculoskeletal dis	HES_Internal_de HES_p_M23_BII	379337	13928	365409	1.000	0.000
Musculoskeletal dis	HES_Osteonecrc HES_p_M87_BII	379337	512	378825	1.000	0.002
Gynaecology and O	HES_Vulvovagin: HES_p_N77_BIN	379337	202	379135	0.997	-0.003
Gynaecology and O	HES_Other_noni HES_p_N88_BIN	379337	1621	377716	1.000	0.001
Congenital malform	HES_Congenital_ HES_p_Q21_BIN	379337	521	378816	1.000	0.002
Broad symptoms, si	HES_Senility HES_p_R54_BIN	379337	417	378920	1.000	0.002
Cardiovascular	NIOPC_leg_arteri f_20004_dxCod	379337	445	378892	0.998	-0.002
Urology	NIOPC_urethral_f_20004_dxCod	379337	686	378651	1.000	0.002
ENT and maxillofaci	NIOPC_nasal_po f_20004_dxCod	379337	1139	378198	1.000	0.001
ENT and maxillofaci	NIOPC_tonsillect f_20004_dxCod	379337	17468	361869	1.000	0.000
Neurosciences	OPC_Other_ope f_41210_41200	379337	2064	377273	0.999	-0.001
Gastroenterology, I	OPC_Excision_of f_41210_41200	379337	330	379007	0.997	-0.003
Gastroenterology, I	OPC_Partial_exc f_41210_41200	379337	335	379002	0.997	-0.003
Gastroenterology, I	OPC_Excision_of f_41210_41200	379337	12088	367249	1.000	0.000
Musculoskeletal dis	OPC_Instrument f_41210_41200	379337	342	378995	0.997	-0.003
Operations and Pro	OPC_Puncture_c f_41210_41200	379337	316	379021	1.000	0.003
Anthropometry	Hip_circumferen f_49_0_0_f_QU	378624				0.000
Cardiovascular	M2W_heart_fail map2way_NI_cc	379337	5230	374107	0.999	-0.001
Gastroenterology, I	M2W_bile_duct map2way_NI_cc	379337	936	378401	1.000	0.002
Renal	M2W_renal_fail map2way_NI_cc	379337	483	378854	1.000	0.002
Immuno-inflammat	M2W_connectiv map2way_NI_cc	379337	2306	377031	0.999	-0.001
Cardiovascular	M2W_brain_hae map2way_NI_cc	379337	1060	378277	1.000	0.002
ENT and maxillofaci	M2W_vertigo map2way_NI_cc	379337	698	378639	0.998	-0.002
Eye	M2W_macular_ map2way_NI_cc	379337	2136	377201	1.000	0.001
Immuno-inflammat	M2W_lichen_scl map2way_NI_cc	379337	543	378794	0.998	-0.002
Cardiovascular	M2W_aortic_re map2way_NI_cc	379337	711	378626	1.000	0.002
Cardiovascular	MED_beta_block C07C_beta_bloc	379337	15572	363765	1.000	0.000
Breast	NI_breast_cance f_20001_0_DX_	379337	8390	370947	1.000	0.001
Cardiovascular	MED_antihypert C02L_antihyper	379337	1142	378195	1.000	0.001
Cardiovascular	MED_angiotensi C09C_angiotens	379337	16119	363218	1.000	0.000
Immuno-inflammat	MED_corticoste: D07B_corticoste	379337	6123	373214	0.999	-0.001
ENT and maxillofaci	HESBL_Acute_u: HES_block_p_JC	379337	2656	376681	1.000	0.001
Respiratory	HESBL_respirato HES_block_p_J8	379337	1504	377833	0.999	-0.001
Broad symptoms, si	HESBL_Symptom HES_block_p_RI	379337	45691	333646	1.000	0.000
Metabolic and endc	HES_Thyrotoxicc HES_p_E05_BIN	379337	1663	377674	1.000	0.001
Metabolic and endc	HES_Unspecifec HES_p_E14_BIN	379337	2120	377217	1.000	0.001
Metabolic and endc	HES_Postproced HES_p_E89_BIN	379337	1206	378131	1.000	0.001
Neurosciences	HES_Other_diso HES_p_G96_BIN	379337	223	379114	0.997	-0.003
Cardiovascular	HES_Other_anei HES_p_I72_BIN	379337	438	378899	0.998	-0.002
Gastroenterology, I	HES_Pilonidal_c: HES_p_L05_BIN	379337	452	378885	0.998	-0.002

Immuno-inflammat	HES_Other_epid	HES_p_L85_BIN	379337	609	378728	1.000	0.002
Renal	HES_Calculus_of	HES_p_N20_BIN	379337	4407	374930	0.999	-0.001
Urology	HES_Orchitis_an	HES_p_N45_BIN	379337	771	378566	1.000	0.002
Gynaecology and O	HES_Other_noni	HES_p_N90_BIN	379337	1719	377618	0.999	-0.001
Gynaecology and O	HES_Medical_at	HES_p_O04_BIN	379337	998	378339	1.000	0.001
Gynaecology and O	HES_False_labou	HES_p_O47_BIN	379337	973	378364	0.999	-0.001
Gastroenterology, †	HES_Hepatomeg	HES_p_R16_BIN	379337	592	378745	0.998	-0.002
Broad symptoms, si	HES_Syncope_ar	HES_p_R55_BIN	379337	8275	371062	0.999	-0.001
Medication	HES_Poisoning_	HES_p_T40_BIN	379337	598	378739	1.000	0.002
Infectious disease	MED_other_bet	J01D_other_bet	379337	374	378963	1.000	0.002
Medication	MED_opioids	N02A_opioids_	379337	102298	277039	1.000	0.000
General health, sm	Townsend_depr	f_189_0_0_f_Q	378885				0.000
Urology	NIOPC_transure	f_20004_dxCod	379337	458	378879	0.998	-0.002
Musculoskeletal dis	NIOPC_knee_sui	f_20004_dxCod	379337	12568	366769	1.000	0.000
Gynaecology and O	NIOPC_cervix_st	f_20004_dxCod	379337	1570	377767	0.999	-0.001
Breast	PROXYM_Breast	f_20110_0_cod	350821	12125	338696	1.000	0.000
Mental health	Probable_Recur	f_20126_0_cod	91576	11536	80040	1.000	0.000
Cancer	CREG_car_in_sit	f_40006_0_p_D	379337	466	378871	0.998	-0.002
Neurosciences	OPC_Therapeuti	f_41210_41200	379337	253	379084	0.997	-0.003
Neurosciences	OPC_Release_of	f_41210_41200	379337	779	378558	0.998	-0.002
ENT and maxillofaci	OPC_Preprosthe	f_41210_41200	379337	274	379063	0.997	-0.003
Gastroenterology, †	OPC_Dilation_of	f_41210_41200	379337	445	378892	0.998	-0.002
Gastroenterology, †	OPC_Other_upp	f_41210_41200	379337	489	378848	0.998	-0.002
Immuno-inflammat	OPC_Insertion_c	f_41210_41200	379337	446	378891	1.000	0.002
Musculoskeletal dis	OPC_Other_ope	f_41210_41200	379337	780	378557	0.998	-0.002
Cardiovascular	OPC_Diagnostic	f_41210_41200	379337	1075	378262	0.999	-0.001
Musculoskeletal dis	OPC_Therapeuti	f_41210_41200	379337	583	378754	0.998	-0.002
Eye	OPC_High_cost	f_41210_41200	379337	347	378990	1.000	0.003
Operations and Pro	OPC_Late_oper	f_41210_41200	379337	5412	373925	0.999	-0.001
Neurosciences	M2W_paraplegi	map2way_NI_cc	379337	312	379025	0.997	-0.003
Neurosciences	M2W_acute_inf	map2way_NI_cc	379337	290	379047	0.997	-0.003
Gynaecology and O	M2W_uterine_fi	map2way_NI_cc	379337	13674	365663	1.000	0.000
Renal	M2W_polycystic	map2way_NI_cc	379337	1632	377705	0.999	-0.001
ENT and maxillofaci	M2W_thyroiditi	map2way_NI_cc	379337	443	378894	0.998	-0.002
Musculoskeletal dis	M2W_back_pair	map2way_NI_cc	379337	14818	364519	1.000	0.000
Gynaecology and O	M2W_ovarian_f	map2way_NI_cc	379337	4958	374379	0.999	-0.001
Musculoskeletal dis	M2W_fracture_	map2way_NI_cc	379337	1094	378243	1.000	0.001
Musculoskeletal dis	M2W_fracture_	map2way_NI_cc	379337	1039	378298	1.000	0.001
Musculoskeletal dis	M2W_fracture_	map2way_NI_cc	379337	240	379097	1.000	0.003
Metabolic and endc	HES_Other_hyp	HES_p_E03_BIN	379337	12877	366460	1.000	0.000
Immuno-inflammat	HES_Other_loca	HES_p_L08_BIN	379337	1107	378230	0.999	-0.001
Respiratory	HES_chapter_p	S01X_other_opl	379337	9057	370280	1.000	0.000
Immuno-inflammat	MED_corticoste	S02B_corticoste	379337	6278	373059	0.999	-0.001
Cancer	OPC_Procureme	f_41210_41200	379337	5740	373597	1.000	0.001
Cardiovascular	M2W_pericardi	map2way_NI_cc	379337	1269	378068	1.000	0.001
Immuno-inflammat	M2W_acneacne	map2way_NI_cc	379337	277	379060	0.997	-0.003
Neurosciences	HES_Myastheni	HES_p_G70_BIN	379337	194	379143	1.000	0.003
Gastroenterology, †	HES_Fissure_anc	HES_p_K60_BIN	379337	2865	376472	1.000	0.001
Immuno-inflammat	MED_corticoste	S03B_corticoste	379337	4116	375221	0.999	-0.001
Neurosciences	OPC_Extirpation	f_41210_41200	379337	289	379048	1.000	0.003

Cardiovascular	NIOPC_cardiac_	f_20004_dxCod	379337	269	379068	0.997	-0.003
Gastroenterology, I	OPC_Diagnostic_	f_41210_41200	379337	208	379129	0.997	-0.003
Operations and Pro	OPC_Other_intr	f_41210_41200	379337	223	379114	1.000	0.003
Gynaecology and O	OPC_Therapeuti	f_41210_41200	379337	6827	372510	0.999	-0.001
Gynaecology and O	HES_Single_spor	HES_p_O80_BIN	379337	1836	377501	0.999	-0.001
Mortality	Mother_s_age_	f_3526_0_0_f_C	223255				0.000
Musculoskeletal dis	OPC_Primary_fu	f_41210_41200	379337	465	378872	1.000	0.002
Mental health	M2W_other_suk	map2way_NI_cc	379337	10354	368983	1.000	0.000
Mental health	HES_Somatoforr	HES_p_F45_BIN	379337	381	378956	1.000	0.002
Cardiovascular	HES_Pulmonary_	HES_p_I26_BIN	379337	3297	376040	0.999	-0.001
Cardiovascular	HES_Nonrheum	HES_p_I35_BIN	379337	2316	377021	0.999	-0.001
Immuno-inflammat	HES_Lichen_plar	HES_p_L43_BIN	379337	501	378836	1.000	0.002
Urology	HES_Neuromusc	HES_p_N31_BIN	379337	1508	377829	1.000	0.001
Broad symptoms, si	HES_Other_gen	HES_p_R68_BIN	379337	358	378979	0.998	-0.002
Neurosciences	Daytime_dozing	f_1220_0_0_f_C	377786				0.000
Gynaecology and O	NIOPC_gynaecol	f_20004_dxCod	379337	2168	377169	0.999	-0.001
Urology	NIOPC_male_cir	f_20004_dxCod	379337	3502	375835	1.000	0.001
Gastroenterology, I	OPC_Other_ther	f_41210_41200	379337	331	379006	1.000	0.002
Gastroenterology, I	OPC_Other_exc	f_41210_41200	379337	1421	377916	1.000	0.001
Musculoskeletal dis	OPC_Other_exc	f_41210_41200	379337	3702	375635	1.000	0.001
Musculoskeletal dis	OPC_Secondary_	f_41210_41200	379337	235	379102	0.997	-0.003
Musculoskeletal dis	OPC_Other_ope	f_41210_41200	379337	255	379082	1.000	0.003
Gastroenterology, I	M2Woduodenal	map2way_NI_cc	379337	4068	375269	0.999	-0.001
Renal	M2W_iga_neph	map2way_NI_cc	379337	667	378670	1.000	0.002
ENT and maxillofaci	TA_hear_loss_B	QUANT_hear_lc	121114				0.000
Cardiovascular	M2W_hypertro	map2way_NI_cc	379337	265	379072	1.000	0.003
Metabolic and endc	HES_Vitamin_D_	HES_p_E55_BIN	379337	359	378978	1.000	0.002
Urology	HES_Unspecific	HES_p_R32_BIN	379337	2165	377172	1.000	0.001
Infectious disease	MED_antimycot	J02A_antimycot	379337	389	378948	1.000	0.002
Neurosciences	HES_Mononeurc	HES_p_G57_BIN	379337	1479	377858	0.999	-0.001
Medication	MED_antiinflam	S01B_antiinflar	379337	18181	361156	1.000	0.000
Gynaecology and O	HESBL_Inflamm	HES_block_p_N	379337	5417	373920	0.999	-0.001
Renal	HES_Obstructive	HES_p_N13_BIN	379337	2418	376919	1.000	0.001
Renal	HES_Acute_rena	HES_p_N17_BIN	379337	4124	375213	0.999	-0.001
Urology	NI_bladder_canc	f_20001_0_DX_	379337	893	378444	1.000	0.001
Neurosciences	OPC_Operations	f_41210_41200	379337	2307	377030	0.999	-0.001
Operations and Pro	OPC_Rehabilitat	f_41210_41200	379337	726	378611	0.998	-0.002
Neurosciences	OPC_Open_appr	f_41210_41200	379337	801	378536	0.998	-0.002
Urology	OPC_Urinary_dif	f_41210_41200	379337	328	379009	0.998	-0.002
Eye	OPC_Other_ope	f_41210_41200	379337	197	379140	1.000	0.003
Gastroenterology, I	OPC_Endoscopic	f_41210_41200	379337	3540	375797	1.000	0.001
Cardiovascular	OPC_Plastic_rep	f_41210_41200	379337	1076	378261	0.999	-0.001
Neurosciences	HES_Other_deg	HES_p_G31_BIN	379337	568	378769	1.000	0.002
Respiratory	OPC_Therapeuti	f_41210_41200	379337	310	379027	1.000	0.002
Cardiovascular	MED_other_age	C09X_other_age	379337	16244	363093	1.000	0.000
Mental health	HESBL_Mental_	HES_block_p_F1	379337	14056	365281	1.000	0.000
ENT and maxillofaci	OPC_Simple_ext	f_41210_41200	379337	2338	376999	1.000	0.001
Gynaecology and O	OPC_Other_ope	f_41210_41200	379337	225	379112	0.997	-0.003
Musculoskeletal dis	OPC_Adjustmen	f_41210_41200	379337	2143	377194	1.000	0.001
Metabolic and endc	M2W_gestation:	map2way_NI_cc	379337	363	378974	0.998	-0.002

Infectious disease	M2W_measles_map2way_NI_c	379337	1297	378040	1.000	0.001
Mental health	M2W_depressio map2way_NI_c	379337	27899	351438	1.000	0.000
Broad symptoms, si	HESCH_Diseases HES_chapter_p	379337	22370	356967	1.000	0.000
Haematology	HES_Diseases_o HES_p_D73_BIN	379337	464	378873	1.000	0.002
Musculoskeletal dis	HES_Arthrosis_o HES_p_M18_BII	379337	1182	378155	1.000	0.001
Breast	PROXYS_Breast_f_20111_0_cod	298821	4869	293952	1.000	0.001
Musculoskeletal dis	Knee_pain_for_f_3773_0_0_f_E	354922	62560	292362	1.000	0.000
Respiratory	CREG_mal_neo_f_40006_0_p_C	379337	1750	377587	1.000	0.001
Musculoskeletal dis	OPC_Prosthetic_f_41210_41200	379337	559	378778	1.000	0.002
Cardiovascular	MED_selective_c08D_selective_	379337	3559	375778	1.000	0.001
Gastroenterology, †	HES_Cholecystiti HES_p_K81_BIN	379337	2447	376890	0.999	-0.001
ENT and maxillofaci	OPC_Other_ope f_41210_41200	379337	505	378832	1.000	0.002
ENT and maxillofaci	OPC_Fixation_of f_41210_41200	379337	258	379079	1.000	0.003
Cardiovascular	MED_potassium C03D_potassiun	379337	952	378385	0.999	-0.001
Gynaecology and O	MED_antiinf_an G01A_antiinfect	379337	8530	370807	1.000	0.000
Urology	MED_urological: G04B_urologica	379337	6035	373302	0.999	-0.001
Immuno-inflammat	HESBL_Certain_(HES_block_p_Di	379337	979	378358	1.000	0.001
Gastroenterology, †	HESBL_Disorder: HES_block_p_K8	379337	16380	362957	1.000	0.000
Renal	HESBL_Renal_tu HES_block_p_N	379337	3459	375878	0.999	-0.001
Haematology	HESBL_Abnormæ HES_block_p_R	379337	7302	372035	1.000	0.000
Metabolic and endc	HES_Thyroiditis HES_p_E06_BIN	379337	275	379062	0.998	-0.002
Neurosciences	HES_Other_para HES_p_G83_BIN	379337	334	379003	1.000	0.002
Renal	HES_Hypertensi HES_p_I12_BIN	379337	1398	377939	0.999	-0.001
Cardiovascular	HES_Occlusion_ HES_p_I65_BIN	379337	931	378406	0.999	-0.001
ENT and maxillofaci	HES_Acute_tons HES_p_J03_BIN	379337	513	378824	1.000	0.002
ENT and maxillofaci	HES_Other_diso HES_p_J34_BIN	379337	5997	373340	0.999	-0.001
Gastroenterology, †	HES_Crohn_s_di HES_p_K50_BIN	379337	1549	377788	0.999	-0.001
Immuno-inflammat	HES_Pruritus HES_p_L29_BIN	379337	705	378632	0.999	-0.001
Immuno-inflammat	HES_Seborrhoei HES_p_L82_BIN	379337	2814	376523	0.999	-0.001
Musculoskeletal dis	HES_Seropositiv HES_p_M05_BII	379337	529	378808	1.000	0.002
Musculoskeletal dis	HES_Cervical_di: HES_p_M50_BII	379337	1357	377980	1.000	0.001
Gynaecology and O	HES_Diseases_o HES_p_N75_BIN	379337	665	378672	0.998	-0.002
Gynaecology and O	HES_Menopausæ HES_p_N95_BIN	379337	9413	369924	1.000	0.000
Gynaecology and O	HES_Female_inf HES_p_N97_BIN	379337	924	378413	0.999	-0.001
Respiratory	HES_Haemorrha HES_p_R04_BIN	379337	4007	375330	0.999	-0.001
Haematology	HES_Abnormalit HES_p_R72_BIN	379337	237	379100	0.997	-0.003
Gynaecology and O	HES_Abnormal_ HES_p_R87_BIN	379337	1312	378025	1.000	0.001
Medication	MED_quinolone J01M_quinolone	379337	197	379140	0.997	-0.003
Medication	MED_parasymp: N07A_parasymp	379337	183	379154	0.997	-0.003
Infectious disease	MED_antimalari P01B_antimalar	379337	3451	375886	1.000	0.001
Medication	MED_all_other_ V03A_all_other_	379337	3560	375777	1.000	0.001
Renal	NIOPC_renal_kic f_20004_dxCod	379337	252	379085	1.000	0.002
Gastroenterology, †	NIOPC_appendic f_20004_dxCod	379337	45453	333884	1.000	0.000
Breast	NIOPC_breast_b f_20004_dxCod	379337	375	378962	0.998	-0.002
Respiratory	PROXYM_Lung_f_20110_0_cod	354392	14292	340100	1.000	0.000
Haematology	CREG_Diffuse_n f_40006_0_p_C	379337	731	378606	0.998	-0.002
Cancer	Reported_occuri f_40009_0_0_f_	61163				0.000
Gastroenterology, †	OPC_Other_ope f_41210_41200	379337	648	378689	0.998	-0.002
Cardiovascular	OPC_Translumin f_41210_41200	379337	275	379062	0.998	-0.002
Gynaecology and O	OPC_Partial_exc f_41210_41200	379337	433	378904	0.998	-0.002

Immuno-inflammat	OPC_Other_bio	f_41210_41200	379337	1597	377740	0.999	-0.001
Immuno-inflammat	OPC_Other_ope	f_41210_41200	379337	1061	378276	0.999	-0.001
Immuno-inflammat	OPC_Extirpation	f_41210_41200	379337	679	378658	0.998	-0.002
Gastroenterology, †	OPC_Repair_of	f_41210_41200	379337	1175	378162	1.000	0.001
Gastroenterology, †	OPC_Primary_re	f_41210_41200	379337	1622	377715	0.999	-0.001
Musculoskeletal dis	OPC_Levels_of	f_41210_41200	379337	6830	372507	1.000	0.000
Musculoskeletal dis	OPC_Other_recc	f_41210_41200	379337	749	378588	1.000	0.001
Cancer	OPC_Delivery_o	f_41210_41200	379337	562	378775	1.000	0.002
Operations and Pro	OPC_Cytology_c	f_41210_41200	379337	2559	376778	1.000	0.001
Gastroenterology, †	OPC_Minimal_a	f_41210_41200	379337	14875	364462	1.000	0.000
Eye	Ever_had_eye_s	f_5181_0_0_f_E	84722	6220	78502	1.000	0.001
Gastroenterology, †	Ranitidine_e_g	f_6154_0_code	375001	7210	367791	1.000	0.000
Cardiovascular	M2W_leg_claud	map2way_NI_co	379337	2475	376862	0.999	-0.001
Gastroenterology, †	M2W_liverbiliar	map2way_NI_co	379337	4288	375049	0.999	-0.001
Gastroenterology, †	M2W_bile_duct	map2way_NI_co	379337	13865	365472	1.000	0.000
Urology	M2W_bladder_	map2way_NI_co	379337	10765	368572	1.000	0.000
Immuno-inflammat	M2W_vasculitis	map2way_NI_co	379337	1758	377579	0.999	-0.001
Infectious disease	M2W_helicobac	map2way_NI_co	379337	1774	377563	1.000	0.001
Gastroenterology, †	M2W_sclerosing	map2way_NI_co	379337	456	378881	0.998	-0.002
Cardiovascular	M2W_irregular	map2way_NI_co	379337	1396	377941	0.999	-0.001
Cardiovascular	M2W_svt_supra	map2way_NI_co	379337	2283	377054	1.000	0.001
Gastroenterology, †	M2W_hepatitis	map2way_NI_co	379337	185	379152	1.000	0.003
Neurosciences	HES_Migraine	HES_p_G43_BIN	379337	2516	376821	0.999	-0.001
Gastroenterology, †	HES_Flatulence	HES_p_R14_BIN	379337	1546	377791	1.000	0.001
Metabolic and endc	NIOPC_pituitary	f_20004_dxCod	379337	215	379122	1.000	0.003
Cardiovascular	M2W_mitral_va	map2way_NI_co	379337	545	378792	1.000	0.002
Gastroenterology, †	HES_Deficiency	HES_p_E61_BIN	379337	216	379121	0.997	-0.003
Neurosciences	HES_Other_dise	HES_p_G95_BIN	379337	529	378808	0.998	-0.002
Neurosciences	CREGBL_mal_ne	f_40006_block	379337	562	378775	1.000	0.002
Gastroenterology, †	OPC_Diagnostic	f_41210_41200	379337	4727	374610	1.000	0.001
Immuno-inflammat	NI_rodent_ulcer	f_20001_0_DX	379337	541	378796	0.998	-0.002
Renal	OPC_Extracorpo	f_41210_41200	379337	1422	377915	0.999	-0.001
Gastroenterology, †	OPC_Endoscopic	f_41210_41200	379337	1803	377534	1.000	0.001
Medication	MED_other_min	A12C_other_mi	379337	878	378459	0.999	-0.001
Eye	HES_Other_diso	HES_p_H02_BIN	379337	5176	374161	1.000	0.001
Eye	HES_Keratitis	HES_p_H16_BIN	379337	237	379100	0.998	-0.002
ENT and maxillofaci	HES_Disorders_	HES_p_H81_BIN	379337	872	378465	0.999	-0.001
ENT and maxillofaci	HES_Dental_cari	HES_p_K02_BIN	379337	2861	376476	1.000	0.001
Gastroenterology, †	HES_Acute_pan	HES_p_K85_BIN	379337	1766	377571	0.999	-0.001
Gynaecology and O	HES_Other_com	HES_p_O75_BIN	379337	696	378641	1.000	0.001
Broad symptoms, si	HES_symptoms	HES_p_R09_BIN	379337	1000	378337	1.000	0.001
Gynaecology and O	NI_ovarian_canc	f_20001_0_DX	379337	645	378692	0.999	-0.001
Biological assays - L	Sodium_in_urin	f_30530_0_0_f	367689				0.000
Eye	OPC_Operations	f_41210_41200	379337	984	378353	1.000	0.001
Gastroenterology, †	OPC_Other_exte	f_41210_41200	379337	934	378403	0.999	-0.001
Gynaecology and O	OPC_Forceps_ce	f_41210_41200	379337	705	378632	0.999	-0.001
Eye	Intra_ocular_pre	f_5254_0_0_f_C	81222				0.000
Cardiovascular	MED_beta_block	C07D_beta_bloc	379337	15328	364009	1.000	0.000
Congenital malform	HESBL_Congenit	HES_block_p_Q	379337	711	378626	1.000	0.001
Cardiovascular	HES_Acute_and	HES_p_I33_BIN	379337	189	379148	1.000	0.003

Gynaecology and O	HES_Other_abn	HES_p_O02_BIN	379337	1191	378146	1.000	0.001
Medication	MED_antihistam	R06A_antihistar	379337	13327	366010	1.000	0.000
Urology	NIOPC_transure	f_20004_dxCod	379337	1935	377402	0.999	-0.001
Musculoskeletal dis	NIOPC_shoulder	f_20004_dxCod	379337	5682	373655	1.000	0.000
Gastroenterology, I	NIOPC_femoral	f_20004_dxCod	379337	326	379011	0.998	-0.002
Gastroenterology, I	OPC_examinatio	f_41210_41200	379337	65317	314020	1.000	0.000
Urology	OPC_Total_excis	f_41210_41200	379337	316	379021	0.998	-0.002
Gastroenterology, I	OPC_Image_con	f_41210_41200	379337	419	378918	1.000	0.002
Musculoskeletal dis	OPC_Freeing_of	f_41210_41200	379337	652	378685	0.999	-0.001
Operations and Pro	OPC_Release_of	f_41210_41200	379337	896	378441	1.000	0.001
Cardiovascular	M2W_pulmonar	map2way_NI_co	379337	5242	374095	0.999	-0.001
Gynaecology and O	M2W_polycystic	map2way_NI_co	379337	580	378757	0.998	-0.002
Musculoskeletal dis	M2W_scoliosis	map2way_NI_co	379337	1135	378202	0.999	-0.001
Infectious disease	M2W_mumps_e	map2way_NI_co	379337	830	378507	1.000	0.001
Musculoskeletal dis	HES_Other_joint	HES_p_M25_BIN	379337	11938	367399	1.000	0.000
Gynaecology and O	HES_Other_abn	HES_p_N93_BIN	379337	3736	375601	1.000	0.001
ENT and maxillofaci	OPC_Microthera	f_41210_41200	379337	579	378758	0.999	-0.001
Musculoskeletal dis	OPC_Hybrid_prc	f_41210_41200	379337	286	379051	1.000	0.002
Cardiovascular	M2W_arterial_e	map2way_NI_co	379337	766	378571	0.999	-0.001
Renal	M2W_urinary_ti	map2way_NI_co	379337	12666	366671	1.000	0.000
Gynaecology and O	OPC_Other_cae	f_41210_41200	379337	1946	377391	0.999	-0.001
Respiratory	NIOPC_lung_ren	f_20004_dxCod	379337	616	378721	1.000	0.001
Operations and Pro	OPC_Diagnostic	f_41210_41200	379337	579	378758	0.999	-0.001
ENT and maxillofaci	HESCH_Diseases	HES_chapter_p	379337	8818	370519	1.000	0.000
Mental health	HES_Recurrent	HES_p_F33_BIN	379337	679	378658	0.999	-0.001
Gynaecology and O	HES_Premature	HES_p_O42_BIN	379337	1011	378326	0.999	-0.001
Musculoskeletal dis	NIOPC_ankle_su	f_20004_dxCod	379337	1004	378333	0.999	-0.001
Urology	NIOPC_orchidop	f_20004_dxCod	379337	294	379043	0.998	-0.002
Gastroenterology, I	PROXYF_Bowel	f_20107_0_cod	338931	19594	319337	1.000	0.000
Cardiovascular	PROXYFM_High	f_20107_20110	379337				0.000
Cardiovascular	PROXYM_Stroke	f_20110_0_cod	357740	49720	308020	1.000	0.000
Urology	OPC_Endoscopic	f_41210_41200	379337	2394	376943	0.999	-0.001
Musculoskeletal dis	OPC_Excision_of	f_41210_41200	379337	2429	376908	0.999	-0.001
Operations and Pro	OPC_Diagnostic	f_41210_41200	379337	378	378959	1.000	0.002
Medication	Zinc	f_6179_0_code	378085	15466	362619	1.000	0.000
Renal	M2W_glomerulr	map2way_NI_co	379337	1748	377589	1.000	0.001
Musculoskeletal dis	OPC_Release_of	f_41210_41200	379337	8746	370591	1.000	0.000
Urology	HES_Cystitis	HES_p_N30_BIN	379337	2652	376685	0.999	-0.001
Urology	HES_Other_diso	HES_p_N32_BIN	379337	8103	371234	1.000	0.000
Urology	HESBL_Abnorm	HES_block_p_R	379337	653	378684	1.000	0.001
Metabolic and endc	HES_Non_insulir	HES_p_E11_BIN	379337	16613	362724	1.000	0.000
Cardiovascular	HES_Other_diso	HES_p_I77_BIN	379337	1301	378036	1.000	0.001
Gastroenterology, I	HES_Dysphagia	HES_p_R13_BIN	379337	5770	373567	1.000	0.000
Immuno-inflammat	NI_skin_cancer	f_20001_0_DX	379337	1189	378148	0.999	-0.001
Cancer	OPC_Delivery_o	f_41210_41200	379337	7591	371746	1.000	0.000
Gynaecology and O	NIOPC_hysterec	f_20004_dxCod	379337	37555	341782	1.000	0.000
Medication	MED_irrigating	B05C_irrigating	379337	1449	377888	0.999	-0.001
Gastroenterology, I	HESBL_Other_ni	HES_block_p_E	379337	1251	378086	0.999	-0.001
Infectious disease	HES_Bacterial_ir	HES_p_A49_BIN	379337	697	378640	0.999	-0.001
Cardiovascular	HES_Arterial_en	HES_p_I74_BIN	379337	843	378494	0.999	-0.001

Urology	NIOPC_radical_r f_20004_dxCod	379337	1240	378097	0.999	-0.001
Gynaecology and O	NIOPC_sterilisa f_20004_dxCod	379337	16087	363250	1.000	0.000
Respiratory	FVC_maximumV f_3062_0_f_QU	286327				0.000
Neurosciences	OPC_Neurostim f_41210_41200	379337	545	378792	1.000	0.001
Gastroenterology, I	OPC_therapeuti f_41210_41200	379337	1244	378093	0.999	-0.001
Gastroenterology, I	OPC_Endoscopic f_41210_41200	379337	605	378732	1.000	0.001
Cardiovascular	OPC_Translumin f_41210_41200	379337	1082	378255	0.999	-0.001
Cardiovascular	OPC_Endovascul f_41210_41200	379337	375	378962	0.998	-0.002
Urology	OPC_Abdominal f_41210_41200	379337	1021	378316	0.999	-0.001
Musculoskeletal dis	OPC_Operations f_41210_41200	379337	1826	377511	1.000	0.001
Immuno-inflammat	M2W_burns map2way_NI_cc	379337	765	378572	1.000	0.001
Immuno-inflammat	M2W_bowens_c map2way_NI_cc	379337	617	378720	1.000	0.001
Musculoskeletal dis	TA_osteoarthriti BIN_osteoarthri	361988	49602	312386	1.000	0.000
Cardiovascular	HES_Transient_c HES_p_G45_BIN	379337	2352	376985	0.999	-0.001
Urology	HES_Polyuria HES_p_R35_BIN	379337	3512	375825	1.000	0.001
Medication	Vitamin_E f_6155_0_code!	377270	11061	366209	1.000	0.000
ENT and maxillofaci	M2W_earvestibi map2way_NI_cc	379337	12088	367249	1.000	0.000
Haematology	HES_Other_apla HES_p_D61_BIN	379337	410	378927	0.998	-0.002
Immuno-inflammat	MED_corticoste! D07X_corticoste	379337	9701	369636	1.000	0.000
Congenital malform	HESBL_Congenit HES_block_p_Q	379337	307	379030	0.998	-0.002
Gastroenterology, I	Other_diseases_HES_p_K22_BIN	379337	8946	370391	1.000	0.000
Immuno-inflammat	HES_Corns_and_HES_p_L84_BIN	379337	257	379080	1.000	0.002
Musculoskeletal dis	HES_Osteoporos HES_p_M80_BI!	379337	836	378501	1.000	0.001
Gynaecology and O	HES_Maternal_c HES_p_O36_BIN	379337	1716	377621	1.000	0.001
Gastroenterology, I	HES_Unspecific HES_p_R17_BIN	379337	839	378498	1.000	0.001
Mental health	MED_psycholep N06C_psycholep	379337	12231	367106	1.000	0.000
Gastroenterology, I	NIOPC_rectal_or f_20004_dxCod	379337	1569	377768	0.999	-0.001
Mental health	Probable_recurr f_20124_0_0_f_	58884	11705	47179	1.000	0.000
Mental health	Neuroticism_scc f_20127_0_0_f_	307461				0.000
Cardiovascular	OPC_Other_ther f_41210_41200	379337	1374	377963	1.000	0.001
Gynaecology and O	OPC_Vacuum_d f_41210_41200	379337	1205	378132	1.000	0.001
Immuno-inflammat	OPC_Other_loca f_41210_41200	379337	1963	377374	0.999	-0.001
ENT and maxillofaci	OPC_Reduction_f_41210_41200	379337	687	378650	0.999	-0.001
Musculoskeletal dis	OPC_Extirpation f_41210_41200	379337	466	378871	1.000	0.002
Musculoskeletal dis	OPC_Total_pros f_41210_41200	379337	4906	374431	1.000	0.000
Musculoskeletal dis	OPC_Release_of f_41210_41200	379337	1613	377724	0.999	-0.001
Neurosciences	M2W_periphera map2way_NI_cc	379337	2014	377323	1.000	0.001
Gynaecology and O	M2W_female_ir map2way_NI_cc	379337	1329	378008	0.999	-0.001
Eye	M2W_optic_ne! map2way_NI_cc	379337	206	379131	0.998	-0.002
Immuno-inflammat	MED_corticoste! H02A_corticoste	379337	6951	372386	1.000	0.000
Cardiovascular	NIOPC_aortic_v: f_20004_dxCod	379337	562	378775	0.999	-0.001
Eye	OPC_Plastic_ope f_41210_41200	379337	258	379079	0.998	-0.002
Musculoskeletal dis	OPC_Diaphyseal f_41210_41200	379337	396	378941	1.000	0.002
Musculoskeletal dis	OPC_Debrideme f_41210_41200	379337	1527	377810	0.999	-0.001
Gynaecology and O	M2W_menopau map2way_NI_cc	379337	9705	369632	1.000	0.000
Neurosciences	OPC_Excision_of f_41210_41200	379337	435	378902	0.998	-0.002
Urology	OPC_Other_ope f_41210_41200	379337	1490	377847	1.000	0.001
Anthropometry	Total_thigh_mu: f_22409_0_0_f_	758				-0.001
Musculoskeletal dis	HESBL_Other_jo HES_block_p_M	379337	35566	343771	1.000	0.000
Breast	HES_Other_diso HES_p_N64_BIN	379337	1110	378227	1.000	0.001

Immuno-inflammat	NI_non_melanof_20001_0_DX_	379337	552	378785	1.000	0.001
Urology	CREG_neo_of_u f_40006_0_p_D	379337	724	378613	1.000	0.001
Gastroenterology, †	OPC_examinatio f_41210_41200	379337	1296	378041	0.999	-0.001
Gastroenterology, †	M2W_pancreati map2way_NI_cc	379337	2308	377029	0.999	-0.001
ENT and maxillofaci	M2W_throat_or map2way_NI_cc	379337	3488	375849	1.000	0.001
Musculoskeletal dis	M2W_housemai map2way_NI_cc	379337	300	379037	1.000	0.002
Anthropometry	Total_tissue_fat_f_23281_2_0_f_	4101				0.000
Biological assays - F	Mean_corpuscul f_30050_0_0_f_	368087				0.000
Gynaecology and O	CREG_mal_neo_f_40006_0_p_C	379337	893	378444	1.000	0.001
ENT and maxillofaci	OPC_Plastic_ope f_41210_41200	379337	299	379038	0.998	-0.002
ENT and maxillofaci	OPC_Operations f_41210_41200	379337	718	378619	0.999	-0.001
Cardiovascular	M2W_transient_ map2way_NI_cc	379337	3574	375763	0.999	-0.001
Urology	HES_Calculus_of HES_p_N21_BIN	379337	726	378611	0.999	-0.001
Cardiovascular	NIOPC_echocarc f_20004_dxCod	379337	455	378882	0.999	-0.001
ENT and maxillofaci	HES_Chronic_rhi HES_p_J31_BIN	379337	771	378566	0.999	-0.001
Urology	HES_Recurrent_ HES_p_N02_BIN	379337	661	378676	1.000	0.001
Operations and Pro	OPC_Other_desif_41210_41200	379337	2178	377159	1.000	0.001
Cardiovascular	M2W_mitral_va map2way_NI_cc	379337	3389	375948	0.999	-0.001
Gynaecology and O	MED_other_gyn G02C_other_gyn	379337	52481	326856	1.000	0.000
Infectious disease	HESBL_Protozoa HES_block_p_B!	379337	122	379215	0.997	-0.003
Haematology	HES_Other_coag HES_p_D68_BIN	379337	875	378462	0.999	-0.001
Cardiovascular	HES_Heart_failu HES_p_I50_BIN	379337	4863	374474	1.000	0.000
Metabolic and endc	MED_hormone_ L02B_hormone_	379337	2999	376338	1.000	0.001
Cardiovascular	PROXYM_Heart_f_20110_0_cod	357740	69525	288215	1.000	0.000
Gastroenterology, †	M2W_colitisnot_ map2way_NI_cc	379337	15442	363895	1.000	0.000
Neurosciences	M2W_benign_ni map2way_NI_cc	379337	590	378747	1.000	0.001
Gastroenterology, †	OPC_Total_excis f_41210_41200	379337	281	379056	0.998	-0.002
Musculoskeletal dis	M2W_osteearth map2way_NI_cc	379337	58564	320773	1.000	0.000
Metabolic and endc	MED_blood_glu A10B_blood_glu	379337	49571	329766	1.000	0.000
Eye	HESBL_Disorder: HES_block_p_H	379337	1567	377770	1.000	0.001
Broad symptoms, si	HESBL_Sympton HES_block_p_R	379337	8141	371196	1.000	0.000
Mental health	HES_Specific_pe HES_p_F60_BIN	379337	293	379044	1.000	0.002
Neurosciences	HES_Abnormal_ HES_p_R25_BIN	379337	821	378516	1.000	0.001
Medication	MED_muscle_re M03B_muscle_i	379337	555	378782	0.999	-0.001
Urology	NIOPC_bladder_f_20004_dxCod	379337	2401	376936	1.000	0.001
Eye	NIOPC_glaucom: f_20004_dxCod	379337	536	378801	0.999	-0.001
Urology	NIOPC_removal_f_20004_dxCod	379337	269	379068	1.000	0.002
Gynaecology and O	OPC_Elective_ca f_41210_41200	379337	1697	377640	0.999	-0.001
Operations and Pro	OPC_Opening_o f_41210_41200	379337	3650	375687	1.000	0.000
Gastroenterology, †	OPC_Primary_re f_41210_41200	379337	527	378810	0.999	-0.001
Gastroenterology, †	OPC_Operations f_41210_41200	379337	1950	377387	1.000	0.001
Operations and Pro	OPC_Excision_of f_41210_41200	379337	1833	377504	0.999	-0.001
Renal	M2W_ureteric_ (map2way_NI_cc	379337	2632	376705	1.000	0.001
Haematology	M2W_aplastic_ e map2way_NI_cc	379337	430	378907	0.999	-0.001
Gynaecology and O	M2W_ovarian_c map2way_NI_cc	379337	6136	373201	1.000	0.000
Operations and Pro	NIOPC_mri_mag f_20004_dxCod	379337	522	378815	1.000	0.001
Neurosciences	NIOPC_spinal_ c f_20004_dxCod	379337	508	378829	1.000	0.001
ENT and maxillofaci	OPC_Repair_of_ f_41210_41200	379337	1054	378283	1.000	0.001
Immuno-inflammat	OPC_Other_ope f_41210_41200	379337	494	378843	0.999	-0.001
Renal	HES_Isolated_pr HES_p_R80_BIN	379337	277	379060	1.000	0.002

Musculoskeletal dis	OPC_Harvest_of_f_41210_41200	379337	532	378805	0.999	-0.001
Eye	OPC_Repair_of_f_41210_41200	379337	167	379170	0.998	-0.002
Medication	MED_i_v_solutic B05B_i_v_soluti	379337	200	379137	1.000	0.002
Cardiovascular	MED_calcium_cl C08G_calcium_c	379337	18803	360534	1.000	0.000
Neurosciences	HESBL_Inflamm: HES_block_p_Gl	379337	536	378801	0.999	-0.001
Gastroenterology, †	HESBL_Diseases_HES_block_p_K	379337	55440	323897	1.000	0.000
Operations and Pro	HESBL_Abn_exrn HES_block_p_R	379337	1857	377480	1.000	0.001
Neurosciences	HESCH_Diseases_HES_chapter_p_	379337	36227	343110	1.000	0.000
Immuno-inflammat	HES_Candidiasis_HES_p_B37_BIN	379337	1986	377351	1.000	0.001
Gastroenterology, †	HES_Helicobacte HES_p_B98_BIN	379337	748	378589	0.999	-0.001
Haematology	HES_Acute_post HES_p_D62_BIN	379337	227	379110	0.998	-0.002
Cardiovascular	HES_Nonrheum: HES_p_I34_BIN	379337	2170	377167	1.000	0.001
Cardiovascular	HES_Cardiomyo| HES_p_I42_BIN	379337	1163	378174	1.000	0.001
Cardiovascular	HES_Cardiac_arr HES_p_I46_BIN	379337	864	378473	0.999	-0.001
Gastroenterology, †	HES_Irritable_bc HES_p_K58_BIN	379337	5023	374314	1.000	0.000
Musculoskeletal dis	HES_Disorders_c HES_p_M22_BI	379337	841	378496	0.999	-0.001
Musculoskeletal dis	HES_Scoliosis HES_p_M41_BI	379337	942	378395	0.999	-0.001
Gynaecology and O	HES_Excessive_f HES_p_N92_BIN	379337	11976	367361	1.000	0.000
Respiratory	NI_lung_cancer_f_20001_0_DX_	379337	206	379131	1.000	0.002
ENT and maxillofaci	NIOPC_ent_surg_f_20004_dxCod	379337	283	379054	1.000	0.002
Gynaecology and O	NIOPC_fertility_f_20004_dxCod	379337	966	378371	0.999	-0.001
Gynaecology and O	NIOPC_salpinger_f_20004_dxCod	379337	258	379079	1.000	0.002
Gastroenterology, †	NIOPC_inguinal_f_20004_dxCod	379337	5542	373795	1.000	0.000
Gastroenterology, †	NIOPC_barium_f_20004_dxCod	379337	221	379116	1.000	0.002
Neurosciences	OPC_Therapeuti f_41210_41200	379337	4697	374640	1.000	0.000
Eye	OPC_Reconstruc f_41210_41200	379337	382	378955	1.000	0.001
Eye	OPC_Other_ope f_41210_41200	379337	932	378405	1.000	0.001
Gastroenterology, †	OPC_Creation_o f_41210_41200	379337	1023	378314	1.000	0.001
Gastroenterology, †	OPC_Excision_of f_41210_41200	379337	638	378699	1.000	0.001
Cardiovascular	OPC_Therapeuti f_41210_41200	379337	862	378475	1.000	0.001
Cardiovascular	OPC_Translumin f_41210_41200	379337	241	379096	0.998	-0.002
Gynaecology and O	OPC_Excision_of f_41210_41200	379337	1147	378190	0.999	-0.001
Gynaecology and O	OPC_Excision_of f_41210_41200	379337	3167	376170	1.000	0.000
Gynaecology and O	OPC_Other_ope f_41210_41200	379337	247	379090	1.000	0.002
Immuno-inflammat	OPC_Excision_of f_41210_41200	379337	608	378729	0.999	-0.001
Gastroenterology, †	OPC_Repair_of_f_41210_41200	379337	225	379112	0.998	-0.002
Musculoskeletal dis	OPC_Transpositi f_41210_41200	379337	795	378542	1.000	0.001
Operations and Pro	OPC_Operations_f_41210_41200	379337	1143	378194	1.000	0.001
Gastroenterology, †	OPC_Diagnostic_f_41210_41200	379337	861	378476	1.000	0.001
Musculoskeletal dis	OPC_Secondary_f_41210_41200	379337	1014	378323	1.000	0.001
Musculoskeletal dis	OPC_Other_tota f_41210_41200	379337	846	378491	0.999	-0.001
Musculoskeletal dis	OPC_Other_prin f_41210_41200	379337	1463	377874	0.999	-0.001
Breast	M2W_breast_cy map2way_NI_cc	379337	1673	377664	1.000	0.001
Mental health	M2W_alcohol_d map2way_NI_cc	379337	5195	374142	1.000	0.000
Haematology	M2W_polycytha map2way_NI_cc	379337	393	378944	1.000	0.001
Haematology	M2W_myelopro map2way_NI_cc	379337	455	378882	1.000	0.001
Gynaecology and O	M2W_cervical_f map2way_NI_cc	379337	6385	372952	1.000	0.000
Cardiovascular	M2W_ischaemic map2way_NI_cc	379337	2973	376364	1.000	0.001
Renal	M2W_nephritis map2way_NI_cc	379337	1826	377511	1.000	0.001
Musculoskeletal dis	TA_BIN_combin map2way_BIN_	379337	28042	351295	1.000	0.000

Medication	MED_corticoste	S03C_corticoste	379337	6229	373108	1.000	0.000
Neurosciences	HES_Polyneurop	HES_p_G63_BIN	379337	353	378984	1.000	0.001
Gastroenterology, I	HES_Femoral_h	HES_p_K41_BIN	379337	558	378779	0.999	-0.001
Cardiovascular	NIOPC_ecg_elec	f_20004_dxCod	379337	201	379136	1.000	0.002
Anthropometry	Gynoid_tissue_f	f_23264_2_0_f	4101				0.000
Cardiovascular	OPC_Translumina	f_41210_41200	379337	859	378478	0.999	-0.001
Operations and Pro	OPC_Graft_to_o	f_41210_41200	379337	625	378712	1.000	0.001
Cardiovascular	M2W_atrial_fibr	map2way_NI_co	379337	2929	376408	1.000	0.000
Musculoskeletal dis	M2W_spinal_ste	map2way_NI_co	379337	3421	375916	1.000	0.000
Mental health	M2W_insomnia	map2way_NI_co	379337	5229	374108	1.000	0.000
Musculoskeletal dis	TA_osteoarthriti	BIN_osteoarthri	316180	3794	312386	1.000	0.000
ENT and maxillofaci	OPC_Clearance_f	f_41210_41200	379337	325	379012	0.999	-0.001
Infectious disease	HESBL_Sequelae	HES_block_p_B!	379337	165	379172	1.000	0.002
ENT and maxillofaci	HES_Other_diso	HES_p_H93_BIN	379337	567	378770	1.000	0.001
Infectious disease	M2W_malaria	map2way_NI_co	379337	480	378857	1.000	0.001
Musculoskeletal dis	OPC_Harvest_of	f_41210_41200	379337	1453	377884	0.999	-0.001
Eye	M2W_retinal_ar	map2way_NI_co	379337	614	378723	0.999	-0.001
Gastroenterology, I	M2W_crohns_di	map2way_NI_co	379337	1820	377517	0.999	-0.001
Operations and Pro	HESBL_Abnorma	HES_block_p_R!	379337	8923	370414	1.000	0.000
Infectious disease	HES_Streptococ	HES_p_B95_BIN	379337	3738	375599	1.000	0.000
Metabolic and endc	HES_Deficiency_	HES_p_E53_BIN	379337	666	378671	0.999	-0.001
Renal	HES_Chronic_rei	HES_p_N18_BIN	379337	4076	375261	1.000	0.000
Immuno-inflammat	NIOPC_removal_f	f_20004_dxCod	379337	960	378377	0.999	-0.001
Cardiovascular	Pulse_wave_Art	f_21021_0_0_f	125040				0.000
Gynaecology and O	OPC_Biopsy_of_f	f_41210_41200	379337	1749	377588	0.999	-0.001
Musculoskeletal dis	OPC_Diagnostic_f	f_41210_41200	379337	3018	376319	1.000	0.000
Haematology	M2W_pancytop	map2way_NI_co	379337	407	378930	0.999	-0.001
Infectious disease	M2W_herpes_si	map2way_NI_co	379337	373	378964	0.999	-0.001
Eye	OPC_Correction_f	f_41210_41200	379337	749	378588	1.000	0.001
Musculoskeletal dis	NIOPC_hip_repl	f_20004_dxCod	379337	6039	373298	1.000	0.000
Gynaecology and O	MED_estrogens	G03C_estrogens	379337	10093	369244	1.000	0.000
Mental health	HESBL_Disorder	HES_block_p_F!	379337	350	378987	1.000	0.001
Broad symptoms, si	HES_Other_lym	HES_p_I89_BIN	379337	601	378736	1.000	0.001
Musculoskeletal dis	HES_Osteomyeli	HES_p_M86_BII	379337	486	378851	1.000	0.001
ENT and maxillofaci	OPC_Other_ope	f_41210_41200	379337	327	379010	1.000	0.001
Operations and Pro	OPC_Other_non	f_41210_41200	379337	2981	376356	1.000	0.000
Musculoskeletal dis	M2W_other_fra	map2way_NI_co	379337	5314	374023	1.000	0.000
Respiratory	HES_Pleural_effi	HES_p_J91_BIN	379337	225	379112	0.998	-0.002
Gynaecology and O	HES_Obstructed	HES_p_O64_BIN	379337	382	378955	0.999	-0.001
Musculoskeletal dis	NIOPC_carpal_ti	f_20004_dxCod	379337	3954	375383	1.000	0.000
Gynaecology and O	NIOPC_cone_bic	f_20004_dxCod	379337	3152	376185	1.000	0.000
Neurosciences	CREG_mal_neo_f	40006_0_p_C	379337	407	378930	0.999	-0.001
Neurosciences	OPC_High_cost_f	f_41210_41200	379337	1209	378128	0.999	-0.001
Metabolic and endc	HES_Disorders_	HES_p_E80_BIN	379337	368	378969	1.000	0.001
Renal	M2W_kidney_st	map2way_NI_co	379337	6699	372638	1.000	0.000
Neurosciences	HESBL_Other_di	HES_block_p_G!	379337	3750	375587	1.000	0.000
ENT and maxillofaci	HES_Acute_nasc	HES_p_J00_BIN	379337	356	378981	1.000	0.001
Breast	HES_Inflammatc	HES_p_N61_BIN	379337	430	378907	1.000	0.001
Gynaecology and O	HES_Labour_anc	HES_p_O68_BIN	379337	3031	376306	1.000	0.000
Mental health	MED_antipsychc	N05A_antipsych	379337	2921	376416	1.000	0.000

General health, smc	Number_of_ope	f_136_0_0_f_Q	379276				0.000
Immuno-inflammat	CREG_mal_mela	f_40006_0_p_C	379337	2614	376723	1.000	0.000
Immuno-inflammat	CREGBL_Melanc	f_40006_block_	379337	2614	376723	1.000	0.000
Gastroenterology, †	OPC_Other_ope	f_41210_41200	379337	1260	378077	0.999	-0.001
Gynaecology and O	OPC_Intrauterin	f_41210_41200	379337	5122	374215	1.000	0.000
Medication	Vitamin_C	f_6155_0_code:	377270	32766	344504	1.000	0.000
Mental health	M2W_deliberat	map2way_NI_cc	379337	2635	376702	1.000	0.000
Gastroenterology, †	HESBL_Noninfec	HES_block_p_K!	379337	17555	361782	1.000	0.000
Metabolic and endc	HES_Disorders_c	HES_p_E83_BIN	379337	1979	377358	0.999	-0.001
Mental health	HES_Symptoms_	HES_p_R45_BIN	379337	584	378753	0.999	-0.001
Infectious disease	MED_beta_lacta	J01C_beta_lacta	379337	1105	378232	1.000	0.001
Gastroenterology, †	NIOPC_stomach	f_20004_dxCod	379337	2202	377135	1.000	0.000
Gastroenterology, †	CREG_mal_neo	f_40006_0_p_C	379337	516	378821	0.999	-0.001
Cardiovascular	OPC_Diagnostic	f_41210_41200	379337	8864	370473	1.000	0.000
Cardiovascular	M2W_heart_val	map2way_NI_cc	379337	7537	371800	1.000	0.000
General health, smc	HES_Unknown_;	HES_p_R69_BIN	379337	14569	364768	1.000	0.000
Infectious disease	HESBL_Tubercul	HES_block_p_A:	379337	126	379211	1.000	0.002
Immuno-inflammat	NIOPC_removal	f_20004_dxCod	379337	5310	374027	1.000	0.000
Immuno-inflammat	M2W_diabetic_;	map2way_NI_cc	379337	546	378791	1.000	0.001
Neurosciences	HES_Abnormal_	HES_p_R90_BIN	379337	319	379018	1.000	0.001
Cardiovascular	OPC_Operations	f_41210_41200	379337	201	379136	0.998	-0.002
Musculoskeletal dis	OPC_Other_ope	f_41210_41200	379337	521	378816	1.000	0.001
Immuno-inflammat	MED_cicatrizant	D03A_cicatrizar	379337	2971	376366	1.000	0.000
Cardiovascular	HESBL_Chronic_	HES_block_p_I0	379337	1971	377366	0.999	-0.001
Metabolic and endc	HES_Elevated_b	HES_p_R73_BIN	379337	625	378712	0.999	-0.001
ENT and maxillofaci	HES_Cholesteat	HES_p_H71_BIN	379337	393	378944	1.000	0.001
Cancer	MED_other_anti	L01X_other_ant	379337	1117	378220	0.999	-0.001
Medication	MED_vitamin_b	A11D_vitamin_l	379337	3172	376165	1.000	0.000
Operations and Pro	HES_Abnormal_	HES_p_R74_BIN	379337	226	379111	1.000	0.001
Immuno-inflammat	NIOPC_removal	f_20004_dxCod	379337	629	378708	0.999	-0.001
Eye	OPC_Extirpation	f_41210_41200	379337	165	379172	1.000	0.002
Musculoskeletal dis	OPC_Soft_tissue	f_41210_41200	379337	2722	376615	1.000	0.000
Musculoskeletal dis	OPC_Diagnostic	f_41210_41200	379337	560	378777	1.000	0.001
Neurosciences	M2W_trapped_;	map2way_NI_cc	379337	15827	363510	1.000	0.000
Immuno-inflammat	M2W_allergy_oi	map2way_NI_cc	379337	1834	377503	0.999	-0.001
Respiratory	M2W_bronchitis	map2way_NI_cc	379337	3361	375976	1.000	0.000
ENT and maxillofaci	M2W_nasalsinu:	map2way_NI_cc	379337	11334	368003	1.000	0.000
Eye	Wears_glasses_c	f_2207_0_0_f_E	378764	337429	41335	1.000	0.000
Neurosciences	HES_Somnolenc	HES_p_R40_BIN	379337	636	378701	0.999	-0.001
Renal	CREG_mal_neo	f_40006_0_p_C	379337	921	378416	0.999	-0.001
Cardiovascular	OPC_Diagnostic	f_41210_41200	379337	931	378406	0.999	-0.001
Gastroenterology, †	OPC_Diagnostic	f_41210_41200	379337	243	379094	0.999	-0.001
ENT and maxillofaci	Bleeding_gums	f_6149_0_code:	377882	49327	328555	1.000	0.000
Gynaecology and O	HES_Other_noni	HES_p_N89_BIN	379337	1392	377945	1.000	0.001
Cancer	CREGBL_mal_ne	f_40006_block_	379337	2034	377303	1.000	0.000
Musculoskeletal dis	M2W_osteomye	map2way_NI_cc	379337	1063	378274	1.000	0.001
Cardiovascular	MED_antiarrhytl	C01B_antiarrhytl	379337	1297	378040	0.999	-0.001
ENT and maxillofaci	HESBL_Other_di	HES_block_p_J3	379337	13151	366186	1.000	0.000
Immuno-inflammat	OPC_Explorator	f_41210_41200	379337	4468	374869	1.000	0.000
Cardiovascular	M2W_pericardi	map2way_NI_cc	379337	601	378736	0.999	-0.001

Eye	HESBL_Glaucom	HES_block_p_H	379337	4056	375281	1.000	0.000
Cardiovascular	HES_Other_ven	HES_p_I82_BIN	379337	367	378970	0.999	-0.001
ENT and maxillofaci	HES_Peritonsilla	HES_p_J36_BIN	379337	377	378960	0.999	-0.001
Operations and Pro	NIOPC_other_th	f_20004_dxCod	379337	1195	378142	0.999	-0.001
Medication	Vitamin_B	f_6155_0_code	377270	15822	361448	1.000	0.000
Gynaecology and O	NIOPC_laser_tre	f_20004_dxCod	379337	611	378726	1.000	0.001
Mental health	PROXYM_Severe	f_20110_0_cod	354392	23303	331089	1.000	0.000
ENT and maxillofaci	HES_Dentofacial	HES_p_K07_BIN	379337	538	378799	0.999	-0.001
Metabolic and endc	MED_hormones	L02A_hormones	379337	757	378580	1.000	0.001
Cardiovascular	M2W_rheumatia	map2way_NI_cc	379337	3029	376308	1.000	0.000
Neurosciences	HES_Inflammatc	HES_p_G61_BIN	379337	268	379069	1.000	0.001
Eye	HES_Glaucoma	HES_p_H40_BIN	379337	4055	375282	1.000	0.000
ENT and maxillofaci	HES_Acute_phar	HES_p_J02_BIN	379337	757	378580	1.000	0.001
Musculoskeletal dis	HES_Other_entr	HES_p_M77_BII	379337	1541	377796	1.000	0.001
Broad symptoms, si	HES_Abdominal	HES_p_R10_BIN	379337	28312	351025	1.000	0.000
Cardiovascular	NIOPC_aortic_ar	f_20004_dxCod	379337	279	379058	0.999	-0.001
Puberty	Age_when_peric	f_2714_0_0_f_C	198514				0.000
Neurosciences	Facial_pains_for	f_4067_0_0_f_E	368904	3288	365616	1.000	0.000
Cardiovascular	OPC_Diagnostic	f_41210_41200	379337	809	378528	0.999	-0.001
Urology	OPC_Operations	f_41210_41200	379337	465	378872	0.999	-0.001
Immuno-inflammat	OPC_Other_autc	f_41210_41200	379337	1822	377515	1.000	0.000
Operations and Pro	OPC_opening_in	f_41210_41200	379337	207	379130	1.000	0.001
Metabolic and endc	HES_Other_diso	HES_p_E07_BIN	379337	357	378980	1.000	0.001
Neurosciences	HES_Other_diso	HES_p_G93_BIN	379337	1444	377893	1.000	0.001
Eye	HES_Other_diso	HES_p_H21_BIN	379337	272	379065	0.999	-0.001
Cardiovascular	HES_Diseases_o	HES_p_I78_BIN	379337	604	378733	0.999	-0.001
ENT and maxillofaci	HES_Other_dise	HES_p_J39_BIN	379337	651	378686	0.999	-0.001
Gynaecology and O	HES_Noninflamr	HES_p_N83_BIN	379337	4668	374669	1.000	0.000
Metabolic and endc	NIOPC_thyroid_	f_20004_dxCod	379337	586	378751	0.999	-0.001
Biological assays - F	Eosinophill_cour	f_30150_0_0_f	367434				0.000
Eye	OPC_Buckling_o	f_41210_41200	379337	659	378678	1.000	0.001
Renal	OPC_Percutanec	f_41210_41200	379337	1439	377898	0.999	-0.001
Immuno-inflammat	OPC_Suture_of	f_41210_41200	379337	776	378561	1.000	0.001
Musculoskeletal dis	OPC_Total_pros	f_41210_41200	379337	305	379032	1.000	0.001
Operations and Pro	OPC_External_re	f_41210_41200	379337	3501	375836	1.000	0.000
Gastroenterology, †	M2W_gastrooes	map2way_NI_cc	379337	32628	346709	1.000	0.000
Gastroenterology, †	M2W_cholecyst	map2way_NI_cc	379337	2796	376541	1.000	0.000
Broad symptoms, si	M2W_other_ver	map2way_NI_cc	379337	1108	378229	1.000	0.001
Musculoskeletal dis	M2W_fracture_	map2way_NI_cc	379337	8379	370958	1.000	0.000
Immuno-inflammat	NI_malignant_m	f_20001_0_DX_	379337	2997	376340	1.000	0.000
Eye	M2W_eyeyelid	map2way_NI_cc	379337	17861	361476	1.000	0.000
Metabolic and endc	HES_Obesity	HES_p_E66_BIN	379337	9870	369467	1.000	0.000
Musculoskeletal dis	OPC_Other_inte	f_41210_41200	379337	6000	373337	1.000	0.000
Musculoskeletal dis	OPC_Open_oper	f_41210_41200	379337	854	378483	0.999	-0.001
Infectious disease	HES_Streptococ	HES_p_A40_BIN	379337	237	379100	0.999	-0.001
Gastroenterology, †	HES_Alcoholic_li	HES_p_K70_BIN	379337	801	378536	0.999	-0.001
Musculoskeletal dis	HES_Other_diso	HES_p_M89_BII	379337	1394	377943	1.000	0.001
Gastroenterology, †	OPC_Excision_of	f_41210_41200	379337	2292	377045	1.000	0.000
Urology	OPC_Urethral_c	f_41210_41200	379337	10323	369014	1.000	0.000
Urology	OPC_Other_ope	f_41210_41200	379337	453	378884	1.000	0.001

Musculoskeletal dis	OPC_Therapeuti	f_41210_41200	379337	4115	375222	1.000	0.000
Operations and Pro	OPC_Other_desi	f_41210_41200	379337	2554	376783	1.000	0.000
Urology	M2W_prostatiti	s_map2way_NI_co	379337	1557	377780	1.000	0.000
Musculoskeletal dis	M2W_disc_prob	map2way_NI_co	379337	8041	371296	1.000	0.000
Immuno-inflammat	M2W_varicose_	map2way_NI_co	379337	232	379105	1.000	0.001
Metabolic and endc	M2W_disorder_	map2way_NI_co	379337	410	378927	0.999	-0.001
Gynaecology and O	HES_Diabetes_n	HES_p_O24_BIN	379337	194	379143	0.999	-0.001
Breast	NIOPC_lumpectr	f_20004_dxCod	379337	12749	366588	1.000	0.000
Mental health	Seen_a_psychiat	f_2100_0_0_f_E	377554	43655	333899	1.000	0.000
Haematology	CREG_other_typ	f_40006_0_p_C	379337	408	378929	0.999	-0.001
Cardiovascular	MED_other_carc	C01E_other_car	379337	50267	329070	1.000	0.000
Gynaecology and O	MED_hormonal_	G03A_hormona	379337	5577	373760	1.000	0.000
Gastroenterology, †	HESCH_Diseases	HES_chapter_p_	379337	138035	241302	1.000	0.000
Neurosciences	HES_Dystonia	HES_p_G24_BIN	379337	231	379106	0.999	-0.001
ENT and maxillofaci	HES_Other_diso	HES_p_K08_BIN	379337	2414	376923	1.000	0.000
ENT and maxillofaci	HES_Cysts_of_o	HES_p_K09_BIN	379337	377	378960	1.000	0.001
Immuno-inflammat	HES_Hypertroph	HES_p_L91_BIN	379337	1003	378334	0.999	-0.001
Musculoskeletal dis	HES_Other_soft	HES_p_M79_BII	379337	11228	368109	1.000	0.000
Urology	HES_Inflammatc	HES_p_N41_BIN	379337	1438	377899	1.000	0.000
Immuno-inflammat	NIOPC_lipoma_r	f_20004_dxCod	379337	602	378735	0.999	-0.001
Metabolic and endc	OPC_Excision_of	f_41210_41200	379337	1899	377438	1.000	0.000
Breast	OPC_Prosthesis	f_41210_41200	379337	1450	377887	1.000	0.000
ENT and maxillofaci	OPC_Extirpation	f_41210_41200	379337	689	378648	0.999	-0.001
Gastroenterology, †	OPC_Antireflux	f_41210_41200	379337	820	378517	0.999	-0.001
Gastroenterology, †	OPC_Intubation	f_41210_41200	379337	329	379008	0.999	-0.001
Gastroenterology, †	OPC_Percutanec	f_41210_41200	379337	260	379077	0.999	-0.001
Cardiovascular	OPC_Translumin	f_41210_41200	379337	1199	378138	1.000	0.001
Gynaecology and O	OPC_Diagnostic	f_41210_41200	379337	293	379044	0.999	-0.001
Musculoskeletal dis	OPC_Excision_of	f_41210_41200	379337	477	378860	1.000	0.001
Musculoskeletal dis	OPC_Repair_of	f_41210_41200	379337	2259	377078	1.000	0.000
Operations and Pro	OPC_Other_rout	f_41210_41200	379337	241	379096	1.000	0.001
Metabolic and endc	M2W_hypopitui	map2way_NI_co	379337	446	378891	1.000	0.001
Musculoskeletal dis	M2W_cervical_s	map2way_NI_co	379337	4867	374470	1.000	0.000
Haematology	HES_Anaemia_ir	HES_p_D63_BIN	379337	657	378680	1.000	0.001
Gynaecology and O	HES_Pain_with	HES_p_N94_BIN	379337	3073	376264	1.000	0.000
Broad symptoms, si	HES_Fever_of_u	HES_p_R50_BIN	379337	3734	375603	1.000	0.000
Broad symptoms, si	HES_Oedema	HES_p_R60_BIN	379337	1492	377845	1.000	0.000
ENT and maxillofaci	MED_throat_pre	R02A_throat_pr	379337	49839	329498	1.000	0.000
Respiratory	FVC_maximumV	f_3062_0_f_QU	221786				0.000
Gastroenterology, †	CREGBL_mal_ne	f_40006_block_	379337	5966	373371	1.000	0.000
Musculoskeletal dis	OPC_Fusion_of	f_41210_41200	379337	3194	376143	1.000	0.000
Musculoskeletal dis	HESBL_Spondylc	HES_block_p_M	379337	10712	368625	1.000	0.000
Urology	OPC_Therapeuti	f_41210_41200	379337	2239	377098	1.000	0.000
Musculoskeletal dis	HES_Shoulder_l	HES_p_M75_BII	379337	8342	370995	1.000	0.000
Cardiovascular	PROXYS_Stroke	f_20111_0_codi	301198	9525	291673	1.000	0.000
Gastroenterology, †	MED_drugs_for	A06A_drugs_for	379337	6112	373225	1.000	0.000
Cardiovascular	HESBL_Cerebrov	HES_block_p_I6	379337	7448	371889	1.000	0.000
Infectious disease	MED_combinati	J01R_combinati	379337	595	378742	0.999	-0.001
Operations and Pro	OPC_Spinal_ana	f_41210_41200	379337	6628	372709	1.000	0.000
Gastroenterology, †	M2W_oesophag	map2way_NI_co	379337	9088	370249	1.000	0.000

Renal	M2W_renalkidn	map2way_NI_cc	379337	8368	370969	1.000	0.000
Gastroenterology, I	MED_digestives	A09A_digestive	379337	256	379081	1.000	0.001
Medication	MED_multivitar	A11A_multivita	379337	19008	360329	1.000	0.000
Medication	MED_other_plai	A11H_other_pla	379337	4844	374493	1.000	0.000
Cardiovascular	MED_antifibrino	B02A_antifibrin	379337	502	378835	1.000	0.000
Cardiovascular	MED_low_ceilir	C03B_low_ceilir	379337	1450	377887	1.000	0.000
Cardiovascular	MED_high_ceilir	C03C_high_ceili	379337	3934	375403	1.000	0.000
Immuno-inflammat	MED_antiseptic	D08A_antiseptic	379337	239	379098	1.000	0.001
Immuno-inflammat	MED_other_der	D11A_other_de	379337	20941	358396	1.000	0.000
Infectious disease	HESBL_Infection	HES_block_p_A	379337	253	379084	0.999	-0.001
Haematology	HESBL_Haemoly	HES_block_p_D	379337	276	379061	1.000	0.001
Metabolic and endc	HESBL_Disorder	HES_block_p_E	379337	15449	363888	1.000	0.000
Metabolic and endc	HESBL_Obesity	HES_block_p_E	379337	9927	369410	1.000	0.000
Mental health	HESBL_Organic	HES_block_p_F	379337	1452	377885	1.000	0.000
Neurosciences	HESBL_Nerve_n	HES_block_p_G	379337	16108	363229	1.000	0.000
Neurosciences	HESBL_Cerebral	HES_block_p_G	379337	2039	377298	1.000	0.000
ENT and maxillofaci	HESBL_Diseases	HES_block_p_H	379337	1327	378010	1.000	0.000
Cardiovascular	HESBL_Pulmona	HES_block_p_I2	379337	3994	375343	1.000	0.000
Cardiovascular	HESBL_Diseases	HES_block_p_I7	379337	6769	372568	1.000	0.000
ENT and maxillofaci	HESBL_Diseases	HES_block_p_K	379337	14240	365097	1.000	0.000
Gastroenterology, I	HESBL_Diseases	HES_block_p_K	379337	4608	374729	1.000	0.000
Immuno-inflammat	HESBL_Papulosq	HES_block_p_L4	379337	2609	376728	1.000	0.000
Immuno-inflammat	HESBL_Other_di	HES_block_p_L8	379337	14576	364761	1.000	0.000
Musculoskeletal dis	HESBL_Disorder	HES_block_p_M	379337	8364	370973	1.000	0.000
Musculoskeletal dis	HESBL_Other_o	HES_block_p_M	379337	2867	376470	1.000	0.000
Musculoskeletal dis	HESBL_musculo	HES_block_p_M	379337	845	378492	1.000	0.000
Urology	HESBL_Urolithia	HES_block_p_N	379337	5990	373347	1.000	0.000
Gynaecology and O	HESBL_Other_ot	HES_block_p_O	379337	1624	377713	1.000	0.000
Congenital malform	HESBL_Other_cc	HES_block_p_Q	379337	632	378705	1.000	0.000
Congenital malform	HESCH_Congen	HES_chapter_p	379337	4983	374354	1.000	0.000
Gastroenterology, I	HES_Viral_and_c	HES_p_A08_BIN	379337	770	378567	1.000	0.001
Broad symptoms, si	HES_Other_sexu	HES_p_A63_BIN	379337	191	379146	1.000	0.001
Haematology	HES_Agranulocy	HES_p_D70_BIN	379337	2910	376427	1.000	0.000
Immuno-inflammat	HES_Sarcoidosis	HES_p_D86_BIN	379337	490	378847	1.000	0.000
Immuno-inflammat	HES_Other_diso	HES_p_D89_BIN	379337	292	379045	1.000	0.000
Metabolic and endc	HES_Hypofuncti	HES_p_E23_BIN	379337	359	378978	1.000	0.000
Mental health	HES_Reaction_tr	HES_p_F43_BIN	379337	482	378855	1.000	0.000
Neurosciences	HES_Other_heac	HES_p_G44_BIN	379337	459	378878	1.000	0.000
Neurosciences	HES_Sleep_disor	HES_p_G47_BIN	379337	4845	374492	1.000	0.000
Neurosciences	HES_Disorders_c	HES_p_G50_BIN	379337	420	378917	1.000	0.000
Neurosciences	HES_Other_poly	HES_p_G62_BIN	379337	1097	378240	1.000	0.000
Neurosciences	HES_Hemiplegia	HES_p_G81_BIN	379337	1366	377971	1.000	0.000
Neurosciences	HES_Paraplegia	HES_p_G82_BIN	379337	297	379040	1.000	0.000
Neurosciences	HES_Other_nerv	HES_p_G99_BIN	379337	961	378376	1.000	0.000
Eye	HES_Disorders_c	HES_p_H44_BIN	379337	390	378947	1.000	0.001
Eye	HES_Disorders_c	HES_p_H52_BIN	379337	1640	377697	1.000	0.000
Eye	HES_Nystagmus	HES_p_H55_BIN	379337	196	379141	0.999	-0.001
ENT and maxillofaci	HES_Perforation	HES_p_H72_BIN	379337	870	378467	1.000	0.000
ENT and maxillofaci	HES_Otalgia_anc	HES_p_H92_BIN	379337	479	378858	1.000	0.000
Cardiovascular	HES_Rheumatic	HES_p_I05_BIN	379337	286	379051	1.000	0.000

Cardiovascular	HES_Paroxysmal	HES_p_I47_BIN_	379337	2981	376356	1.000	0.000
Cardiovascular	HES_Intracerebr	HES_p_I61_BIN_	379337	662	378675	0.999	-0.001
Cardiovascular	HES_Other_diso	HES_p_I87_BIN_	379337	416	378921	1.000	0.001
Cardiovascular	HES_Postproced	HES_p_I97_BIN_	379337	195	379142	0.999	-0.001
ENT and maxillofaci	HES_Acute_uppr	HES_p_J06_BIN_	379337	730	378607	0.999	-0.001
Respiratory	HES_Pleural_pla	HES_p_J92_BIN_	379337	648	378689	1.000	0.000
ENT and maxillofaci	HES_Diseases_o	HES_p_K04_BIN	379337	2107	377230	1.000	0.000
ENT and maxillofaci	HES_Other_dise	HES_p_K10_BIN	379337	302	379035	1.000	0.001
Gastroenterology, †	HES_Ventral_he	HES_p_K43_BIN	379337	3097	376240	1.000	0.000
Gastroenterology, †	HES_Unspecifec	HES_p_K46_BIN	379337	276	379061	1.000	0.000
Gastroenterology, †	HES_Other_dise	HES_p_K63_BIN	379337	13099	366238	1.000	0.000
Gastroenterology, †	HES_Fibrosis_an	HES_p_K74_BIN	379337	758	378579	1.000	0.000
Gastroenterology, †	HES_Other_dise	HES_p_K76_BIN	379337	3126	376211	1.000	0.000
Gastroenterology, †	HES_Other_dise	HES_p_K82_BIN	379337	1620	377717	1.000	0.000
Immuno-inflammat	HES_Cellulitis	HES_p_L03_BIN	379337	6576	372761	1.000	0.000
Immuno-inflammat	HES_Urticaria	HES_p_L50_BIN	379337	328	379009	1.000	0.000
Immuno-inflammat	HES_Granuloma	HES_p_L92_BIN	379337	534	378803	1.000	0.000
Musculoskeletal dis	HES_Psoriatic_a	HES_p_M07_BII	379337	651	378686	1.000	0.000
Musculoskeletal dis	HES_Gout	HES_p_M10_BII	379337	2922	376415	1.000	0.000
Musculoskeletal dis	HES_Other_crys	HES_p_M11_BII	379337	369	378968	0.999	-0.001
Musculoskeletal dis	HES_Other_spec	HES_p_M24_BII	379337	2364	376973	1.000	0.000
Musculoskeletal dis	HES_Other_syst	HES_p_M35_BII	379337	1712	377625	1.000	0.000
Musculoskeletal dis	HES_Other_infla	HES_p_M46_BII	379337	1157	378180	1.000	0.000
Musculoskeletal dis	HES_Other_spor	HES_p_M48_BII	379337	3687	375650	1.000	0.000
Musculoskeletal dis	HES_Other_intel	HES_p_M51_BII	379337	6636	372701	1.000	0.000
Musculoskeletal dis	HES_Dorsalgia	HES_p_M54_BII	379337	13020	366317	1.000	0.000
Musculoskeletal dis	HES_Synovitis_a	HES_p_M65_BII	379337	4731	374606	1.000	0.000
Musculoskeletal dis	HES_Other_diso	HES_p_M67_BII	379337	3447	375890	1.000	0.000
Musculoskeletal dis	HES_Enthesopat	HES_p_M76_BII	379337	393	378944	0.999	-0.001
Musculoskeletal dis	HES_Disorders_c	HES_p_M84_BII	379337	1398	377939	1.000	0.000
Musculoskeletal dis	HES_Osteopathi	HES_p_M90_BII	379337	293	379044	0.999	-0.001
Renal	HES_Chronic_ne	HES_p_N03_BIN	379337	792	378545	1.000	0.000
Urology	HES_Other_diso	HES_p_N39_BIN	379337	17531	361806	1.000	0.000
Breast	HES_Unspecifec	HES_p_N63_BIN	379337	1403	377934	1.000	0.000
Gynaecology and O	HES_Multiple_gr	HES_p_O30_BIN	379337	258	379079	1.000	0.000
Gynaecology and O	HES_Maternal_c	HES_p_O32_BIN	379337	990	378347	1.000	0.000
Gynaecology and O	HES_Preterm_d	HES_p_O60_BIN	379337	602	378735	1.000	0.000
Gynaecology and O	HES_Other_mat	HES_p_O99_BIN	379337	1582	377755	1.000	0.000
Cardiovascular	HES_Abnormalit	HES_p_R00_BIN	379337	7723	371614	1.000	0.000
Cardiovascular	HES_Cardiac_mi	HES_p_R01_BIN	379337	965	378372	1.000	0.000
Immuno-inflammat	HES_Rash_and_i	HES_p_R21_BIN	379337	1637	377700	1.000	0.000
Broad symptoms, si	HES_symptoms	HES_p_R41_BIN	379337	2891	376446	1.000	0.000
Broad symptoms, si	HES_Dizziness_a	HES_p_R42_BIN	379337	4148	375189	1.000	0.000
Cardiovascular	HES_Shock	HES_p_R57_BIN	379337	252	379085	1.000	0.001
Gastroenterology, †	HES_Abnormal_	HES_p_R85_BIN	379337	194	379143	1.000	0.001
Operations and Pro	HES_Abnormal_	HES_p_R93_BIN	379337	2810	376527	1.000	0.000
Infectious disease	MED_aminoglyc	J01G_aminoglyc	379337	624	378713	1.000	0.000
Medication	MED_anticholin	N04A_anticholir	379337	240	379097	0.999	-0.001
Mental health	MED_anxiolytics	N05B_anxiolytic	379337	1664	377673	1.000	0.000
Mental health	MED_drugs_use	N07B_drugs_us	379337	648	378689	1.000	0.000

Medication	MED_antiinfecti	S01A_antiinfect	379337	4010	375327	1.000	0.000
Respiratory	MED_antiinflam	S01C_antiinflam	379337	17363	361974	1.000	0.000
Medication	MED_other_dia	V04C_other_dia	379337	392	378945	1.000	0.001
Gastroenterology, I	MED_hepatic_a	V09D_hepatic_a	379337	1729	377608	1.000	0.000
Mental health	Sleep_duration	f_1160_0_0_f_C	377028				0.000
Mental health	Sleeplessness_in	f_1200_0_0_f_C	378837				0.000
Cardiovascular	P_duration	f_12338_2_0_f_C	8941				0.000
Cardiovascular	QRS_duration	f_12340_2_0_f_C	8941				0.000
Gastroenterology, I	NI_rectal_cance	f_20001_0_DX_C	379337	274	379063	0.999	-0.001
Renal	NI_kidney_renal	f_20001_0_DX_C	379337	494	378843	1.000	0.000
Neurosciences	NI_headaches_n	f_20002_0_dx_C	379337	3224	376113	1.000	0.000
Cardiovascular	NIOPC_heart_su	f_20004_dxCod	379337	749	378588	1.000	0.000
Cardiovascular	NIOPC_cerebral	f_20004_dxCod	379337	222	379115	1.000	0.001
ENT and maxillofaci	NIOPC_ear_surg	f_20004_dxCod	379337	6014	373323	1.000	0.000
ENT and maxillofaci	NIOPC_throat_l	f_20004_dxCod	379337	2254	377083	1.000	0.000
Urology	NIOPC_vasectom	f_20004_dxCod	379337	9434	369903	1.000	0.000
Musculoskeletal dis	NIOPC_spine_or	f_20004_dxCod	379337	4641	374696	1.000	0.000
Gastroenterology, I	NIOPC_liver_sur	f_20004_dxCod	379337	301	379036	1.000	0.000
Gastroenterology, I	NIOPC_pancreas	f_20004_dxCod	379337	206	379131	1.000	0.000
Gastroenterology, I	NIOPC_small_bc	f_20004_dxCod	379337	657	378680	1.000	0.000
Cardiovascular	NIOPC_varicose	f_20004_dxCod	379337	15396	363941	1.000	0.000
Gastroenterology, I	NIOPC_pilonidal	f_20004_dxCod	379337	2176	377161	1.000	0.000
Gynaecology and O	NIOPC_dilatatio	f_20004_dxCod	379337	21386	357951	1.000	0.000
Cardiovascular	NIOPC_angiogra	f_20004_dxCod	379337	345	378992	0.999	-0.001
Gastroenterology, I	NIOPC_ercp_enc	f_20004_dxCod	379337	341	378996	1.000	0.001
ENT and maxillofaci	NIOPC_mastoid	f_20004_dxCod	379337	700	378637	1.000	0.000
ENT and maxillofaci	NIOPC_dental_t	f_20004_dxCod	379337	1001	378336	1.000	0.000
Gynaecology and O	NIOPC_cervical	f_20004_dxCod	379337	370	378967	1.000	0.000
Cardiovascular	NIOPC_pacemak	f_20004_dxCod	379337	287	379050	0.999	-0.001
Immuno-inflammat	NIOPC_skin_graf	f_20004_dxCod	379337	649	378688	1.000	0.000
Neurosciences	Prospective_me	f_20018_0_0_f_C	126357				0.000
ENT and maxillofaci	Speech_receptic	f_20021_0_0_f_C	114885				0.000
Anthropometry	Birth_weight	f_20022_0_0_f_C	215636				0.000
Neurosciences	PROXYF_Alzheim	f_20107_0_cod	343797	15778	328019	1.000	0.000
Mental health	PROXYF_Severe	f_20107_0_cod	338931	12641	326290	1.000	0.000
Neurosciences	PROXYFM_Alzhe	f_20107_20110	379337				0.000
Gastroenterology, I	PROXYFM_Bow	f_20107_20110	379337				0.000
Metabolic and endc	PROXYM_Diabet	f_20110_0_cod	357740	32399	325341	1.000	0.000
Neurosciences	PROXYS_Parkins	f_20111_0_cod	301409	1577	299832	1.000	0.000
Respiratory	PROXYS_Lung_c	f_20111_0_cod	301409	6402	295007	1.000	0.000
Neurosciences	Number_of_incc	f_20132_0_0_f_C	93638				0.000
Mental health	Seen_doctor_GF	f_2090_0_0_f_E	376671	129864	246807	1.000	0.000
Respiratory	Cough_on_most	f_22502_0_0_f_C	95748	13060	82688	1.000	0.000
Cardiovascular	Mean_carotid_I	f_22671_0_0_f_C	1871				0.000
Puberty	Relative_age_of	f_2375_0_0_f_C	169057				0.000
General health, sm	Had_major_ope	f_2415_0_0_f_E	173576	111512	62064	1.000	0.000
Biological assays - L	Creatinine_enz	f_30510_0_0_f_C	368464				0.000
Gastroenterology, I	CREG_mal_neo	f_40006_0_p_C	379337	463	378874	1.000	0.000
Haematology	CREG_Follicular	f_40006_0_p_C	379337	389	378948	0.999	-0.001
Haematology	CREG_Myeloid_l	f_40006_0_p_C	379337	322	379015	1.000	0.000

Haematology	CREG_neo_of_lyf_40006_0_p_D	379337	295	379042	1.000	0.001
Haematology	CREGBL_mal_nef_40006_block_	379337	3150	376187	1.000	0.000
Cancer	CREGBL_In_situ_f_40006_block_	379337	8361	370976	1.000	0.000
Neurosciences	OPC_Extirpation_f_41210_41200	379337	1390	377947	1.000	0.000
Neurosciences	OPC_Neurophys_f_41210_41200	379337	2166	377171	1.000	0.000
Metabolic and endocrine	OPC_Excision_of_f_41210_41200	379337	695	378642	1.000	0.000
Breast	OPC_Biopsy_of_f_41210_41200	379337	1567	377770	1.000	0.000
Breast	OPC_Reconstruction_f_41210_41200	379337	637	378700	0.999	-0.001
Eye	OPC_Operations_f_41210_41200	379337	1131	378206	1.000	0.000
Eye	OPC_Extirpation_f_41210_41200	379337	5521	373816	1.000	0.000
Eye	OPC_Correction_f_41210_41200	379337	816	378521	1.000	0.000
Eye	OPC_Filtering_of_f_41210_41200	379337	835	378502	1.000	0.000
Eye	OPC_Other_operations_f_41210_41200	379337	406	378931	0.999	-0.001
ENT and maxillofacial	OPC_Other_operations_f_41210_41200	379337	435	378902	1.000	0.000
ENT and maxillofacial	OPC_Exenteratic_f_41210_41200	379337	445	378892	1.000	0.000
ENT and maxillofacial	OPC_Drainage_of_f_41210_41200	379337	1753	377584	1.000	0.000
ENT and maxillofacial	OPC_Operations_f_41210_41200	379337	2987	376350	1.000	0.000
ENT and maxillofacial	OPC_Surgical_approach_f_41210_41200	379337	783	378554	1.000	0.000
ENT and maxillofacial	OPC_Operations_f_41210_41200	379337	194	379143	0.999	-0.001
ENT and maxillofacial	OPC_Diagnostic_f_41210_41200	379337	3296	376041	1.000	0.000
ENT and maxillofacial	OPC_Other_repair_f_41210_41200	379337	211	379126	1.000	0.000
ENT and maxillofacial	OPC_Surgical_repair_f_41210_41200	379337	5411	373926	1.000	0.000
ENT and maxillofacial	OPC_Surgery_or_f_41210_41200	379337	1149	378188	1.000	0.000
ENT and maxillofacial	OPC_Incision_of_f_41210_41200	379337	995	378342	1.000	0.000
ENT and maxillofacial	OPC_Other_operations_f_41210_41200	379337	1052	378285	1.000	0.000
Gastroenterology, hepatology	OPC_Artificial_orificial_f_41210_41200	379337	358	378979	1.000	0.001
Gastroenterology, hepatology	OPC_Diagnostic_f_41210_41200	379337	590	378747	1.000	0.001
Gastroenterology, hepatology	OPC_Other_operations_f_41210_41200	379337	379	378958	1.000	0.000
Gastroenterology, hepatology	OPC_Diagnostic_f_41210_41200	379337	1756	377581	1.000	0.000
Gastroenterology, hepatology	OPC_examination_f_41210_41200	379337	2195	377142	1.000	0.000
Cardiovascular	OPC_Plastic_repair_f_41210_41200	379337	528	378809	0.999	-0.001
Cardiovascular	OPC_Transluminal_f_41210_41200	379337	411	378926	1.000	0.000
Cardiovascular	OPC_Excision_of_f_41210_41200	379337	498	378839	1.000	0.000
Renal	OPC_Total_excision_f_41210_41200	379337	1065	378272	1.000	0.000
Urology	OPC_Other_therapy_f_41210_41200	379337	851	378486	1.000	0.000
Urology	OPC_Extirpation_f_41210_41200	379337	241	379096	1.000	0.001
Urology	OPC_Other_operations_f_41210_41200	379337	203	379134	0.999	-0.001
Urology	OPC_Other_excision_f_41210_41200	379337	509	378828	1.000	0.000
Urology	OPC_Operations_f_41210_41200	379337	1070	378267	1.000	0.000
Urology	OPC_Excision_of_f_41210_41200	379337	4287	375050	1.000	0.000
Cardiovascular	OPC_Transluminal_f_41210_41200	379337	194	379143	1.000	0.000
Gynaecology and Obstetrics	OPC_Other_operations_f_41210_41200	379337	544	378793	0.999	-0.001
Gynaecology and Obstetrics	OPC_Diagnostic_f_41210_41200	379337	20331	359006	1.000	0.000
Gynaecology and Obstetrics	OPC_Unilateral_f_41210_41200	379337	1863	377474	1.000	0.000
Gynaecology and Obstetrics	OPC_Other_excision_f_41210_41200	379337	225	379112	1.000	0.000
Gynaecology and Obstetrics	OPC_Therapeutic_f_41210_41200	379337	717	378620	0.999	-0.001
Gynaecology and Obstetrics	OPC_Other_exam_f_41210_41200	379337	3998	375339	1.000	0.000
Gynaecology and Obstetrics	OPC_removal_of_f_41210_41200	379337	339	378998	1.000	0.000
Immuno-inflammatory	OPC_Other_excision_f_41210_41200	379337	205	379132	0.999	-0.001
Immuno-inflammatory	OPC_Microscopic_f_41210_41200	379337	921	378416	1.000	0.000

Immuno-inflammat	OPC_Punch_bioj	f_41210_41200	379337	3329	376008	1.000	0.000
Immuno-inflammat	OPC_Shave_bioj	f_41210_41200	379337	626	378711	1.000	0.001
Immuno-inflammat	OPC_Split_autog	f_41210_41200	379337	1318	378019	1.000	0.000
Immuno-inflammat	OPC_Explorator	f_41210_41200	379337	445	378892	1.000	0.000
Immuno-inflammat	OPC_Other_ope	f_41210_41200	379337	686	378651	1.000	0.000
Respiratory	OPC_Puncture_c	f_41210_41200	379337	2586	376751	1.000	0.000
Gastroenterology, †	OPC_Open_drai	f_41210_41200	379337	297	379040	1.000	0.001
Musculoskeletal dis	OPC_Other_ope	f_41210_41200	379337	2909	376428	1.000	0.000
Musculoskeletal dis	OPC_Other_ope	f_41210_41200	379337	238	379099	1.000	0.000
Immuno-inflammat	OPC_Other_ope	f_41210_41200	379337	1280	378057	1.000	0.000
Neurosciences	OPC_Neuropsych	f_41210_41200	379337	256	379081	1.000	0.000
ENT and maxillofaci	OPC_Fixation_of	f_41210_41200	379337	219	379118	0.999	-0.001
Musculoskeletal dis	OPC_Total_excis	f_41210_41200	379337	1188	378149	1.000	0.000
Musculoskeletal dis	OPC_Division_of	f_41210_41200	379337	4769	374568	1.000	0.000
Musculoskeletal dis	OPC_Other_autc	f_41210_41200	379337	1078	378259	1.000	0.000
Musculoskeletal dis	OPC_Total_pros	f_41210_41200	379337	7808	371529	1.000	0.000
Musculoskeletal dis	OPC_Prosthetic_f	f_41210_41200	379337	222	379115	1.000	0.001
Musculoskeletal dis	OPC_Other_pros	f_41210_41200	379337	198	379139	1.000	0.000
Musculoskeletal dis	OPC_replaceme	f_41210_41200	379337	1139	378198	1.000	0.000
Operations and Pro	OPC_Continuou	f_41210_41200	379337	8398	370939	1.000	0.000
Operations and Pro	OPC_Injection_c	f_41210_41200	379337	1645	377692	1.000	0.000
Operations and Pro	OPC_Other_bloc	f_41210_41200	379337	4637	374700	1.000	0.000
Renal	OPC_compensat	f_41210_41200	379337	190	379147	0.999	-0.001
Musculoskeletal dis	OPC_High_cost_f	f_41210_41200	379337	571	378766	1.000	0.000
Operations and Pro	OPC_Examinatio	f_41210_41200	379337	582	378755	1.000	0.000
Operations and Pro	OPC_Other_met	f_41210_41200	379337	1832	377505	1.000	0.000
Operations and Pro	OPC_Approach_f	f_41210_41200	379337	6492	372845	1.000	0.000
Cardiovascular	OPC_Arteriotom	f_41210_41200	379337	430	378907	1.000	0.000
Medication	OPC_Other_ana	f_41210_41200	379337	5949	373388	1.000	0.000
Cardiovascular	STEMI	f_42002_0_0_B	379337	3818	375519	1.000	0.000
Neurosciences	Maximum_digits	f_4282_20240_	116717				0.000
Eye	logMAR_final_le	f_5208_0_0_f_C	84016				0.000
Eye	Glaucoma	f_6148_0_code:	124452	5311	119141	1.000	0.000
Medication	Ibuprofen_e_g	f_6154_0_code:	375001	55917	319084	1.000	0.000
Medication	Vitamin_A	f_6155_0_code:	377270	7196	370074	1.000	0.000
Musculoskeletal dis	Hip_pain	f_6159_code6_	378466	48278	330188	1.000	0.000
Respiratory	M2W_sleep_apr	map2way_NI_cc	379337	4562	374775	1.000	0.000
Gastroenterology, †	M2W_hepatitis	map2way_NI_cc	379337	1662	377675	1.000	0.000
Gastroenterology, †	M2W_noninfect	map2way_NI_cc	379337	1195	378142	1.000	0.000
Urology	M2W_testicular	map2way_NI_cc	379337	1285	378052	1.000	0.000
Metabolic and endc	M2W_type_2_d	map2way_NI_cc	379337	17363	361974	1.000	0.000
Neurosciences	M2W_infection	map2way_NI_cc	379337	529	378808	0.999	-0.001
Neurosciences	M2W_periphera	map2way_NI_cc	379337	16740	362597	1.000	0.000
Neurosciences	M2W_migraine	map2way_NI_cc	379337	12907	366430	1.000	0.000
Eye	M2W_eye_traur	map2way_NI_cc	379337	816	378521	1.000	0.000
Mental health	M2W_maniabip	map2way_NI_cc	379337	1595	377742	1.000	0.000
Musculoskeletal dis	M2W_spine_art	map2way_NI_cc	379337	10408	368929	1.000	0.000
Musculoskeletal dis	M2W_prolapsec	map2way_NI_cc	379337	8228	371109	1.000	0.000
Musculoskeletal dis	M2W_ankylosin	map2way_NI_cc	379337	1308	378029	1.000	0.000
Haematology	M2W_perniciou	map2way_NI_cc	379337	1499	377838	1.000	0.000

Breast	M2W_breast_di	map2way_NI_cc	379337	3704	375633	1.000	0.000
Immuno-inflammat	M2W_sarcoidos	map2way_NI_cc	379337	932	378405	1.000	0.000
Immuno-inflammat	M2W_hayfever	map2way_NI_cc	379337	22266	357071	1.000	0.000
ENT and maxillofaci	M2W_chronic_s	map2way_NI_cc	379337	4364	374973	1.000	0.000
ENT and maxillofaci	M2W_vocal_cor	map2way_NI_cc	379337	392	378945	1.000	0.001
Haematology	M2W_neutropen	map2way_NI_cc	379337	2976	376361	1.000	0.000
Immuno-inflammat	M2W_pсориаis	map2way_NI_cc	379337	5589	373748	1.000	0.000
Musculoskeletal dis	M2W_other_joi	map2way_NI_cc	379337	9816	369521	1.000	0.000
Broad symptoms, si	M2W_lymphoec	map2way_NI_cc	379337	527	378810	1.000	0.000
Gastroenterology, †	M2W_pyloric_st	map2way_NI_cc	379337	250	379087	1.000	0.000
Gastroenterology, †	M2W_jaundice	map2way_NI_cc	379337	1143	378194	1.000	0.000
Musculoskeletal dis	M2W_joint_pair	map2way_NI_cc	379337	8349	370988	1.000	0.000
Gynaecology and O	M2W_ectopic_p	map2way_NI_cc	379337	539	378798	1.000	0.000
Cardiovascular	M2W_mitral_rel	map2way_NI_cc	379337	2025	377312	1.000	0.000
Respiratory	M2W_pleural_p	map2way_NI_cc	379337	693	378644	1.000	0.000
Gastroenterology, †	M2W_bowel_infl	map2way_NI_cc	379337	264	379073	1.000	0.001
Gastroenterology, †	M2W_alcoholic	map2way_NI_cc	379337	826	378511	1.000	0.000
Gastroenterology, †	M2W_femoral_†	map2way_NI_cc	379337	643	378694	1.000	0.001
Musculoskeletal dis	M2W_soft_tissu	map2way_NI_cc	379337	9323	370014	1.000	0.000
Musculoskeletal dis	M2W_tennis_ell	map2way_NI_cc	379337	797	378540	1.000	0.000
Immuno-inflammat	M2W_cellulitis	map2way_NI_cc	379337	6674	372663	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	2139	377198	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	3366	375971	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	8704	370633	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	3200	376137	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	1149	378188	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	1578	377759	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	2090	377247	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	2222	377115	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	6614	372723	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	749	378588	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	416	378921	1.000	0.000
Neurosciences	M2W_meningio	map2way_NI_cc	379337	499	378838	1.000	0.000
Immuno-inflammat	M2W_contact_c	map2way_NI_cc	379337	201	379136	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	2135	377202	1.000	0.000
Musculoskeletal dis	M2W_fracture_†	map2way_NI_cc	379337	10521	368816	1.000	0.000
Musculoskeletal dis	TA_osteoarthri	BIN_osteoarthri	335404	23018	312386	1.000	0.000
Gastroenterology, †	MED_drugs_for_	A03A_drugs_for	379337	3771	375566	1.000	0.000
Neurosciences	HESBL_Polyneur	HES_block_p_G	379337	1669	377668	1.000	0.000
Gastroenterology, †	HESBL_Other_di	HES_block_p_K	379337	11484	367853	1.000	0.000
Eye	HES_Disorders_	HES_p_H43_BIN	379337	1247	378090	1.000	0.000
Cardiovascular	HES_Rheumatic	HES_p_I07_BIN	379337	262	379075	1.000	0.000
ENT and maxillofaci	HES_Diseases_o	HES_p_J38_BIN	379337	1561	377776	1.000	0.000
Gastroenterology, †	HES_Vascular_di	HES_p_K55_BIN	379337	937	378400	1.000	0.000
Musculoskeletal dis	HES_Gonarthros	HES_p_M17_BI	379337	18234	361103	1.000	0.000
Musculoskeletal dis	HES_Other_arth	HES_p_M19_BI	379337	14999	364338	1.000	0.000
Urology	HES_Other_diso	HES_p_N50_BIN	379337	2590	376747	1.000	0.000
Neurosciences	HES_Poisoning_	HES_p_T42_BIN	379337	851	378486	1.000	0.000
ENT and maxillofaci	MED_antivertig	N07C_antivertig	379337	1505	377832	1.000	0.000
ENT and maxillofaci	MED_corticoste	S02C_corticoste	379337	5813	373524	1.000	0.000

Breast	NIOPC_mammo|f_20004_dxCod	379337	2699	376638	1.000	0.000
Operations and Pro	NIOPC_lower_lir f_20004_dxCod	379337	1771	377566	1.000	0.000
Mental health	PROXYFM_Sever f_20107_20110	379337				0.000
Cardiovascular	LV_ejection_frac f_22420_2_0_f_	3764				0.000
Anthropometry	Legs_tissue_fat_f_23276_2_0_f_	4101				0.000
Musculoskeletal dis	Fractured_broke f_2463_0_0_f_	377264	36479	340785	1.000	0.000
Gynaecology and O	Age_at_menopa f_3581_0_0_f_	116972				0.000
Cardiovascular	OPC_Arterioven f_41210_41200	379337	298	379039	1.000	0.000
Urology	OPC_Plastic_ope f_41210_41200	379337	395	378942	1.000	0.000
Gynaecology and O	OPC_Vaginal_ex f_41210_41200	379337	4716	374621	1.000	0.000
Immuno-inflammat	OPC_Photodestr f_41210_41200	379337	418	378919	1.000	0.000
Musculoskeletal dis	OPC_Complex_r f_41210_41200	379337	342	378995	1.000	0.000
Musculoskeletal dis	OPC_Primary_of f_41210_41200	379337	292	379045	1.000	0.000
Medication	Fish_oil_includin f_6179_0_code	378085	119703	258382	1.000	0.000
Cardiovascular	M2W_cardiomyo map2way_NI_cc	379337	1272	378065	1.000	0.000
Mental health	M2W_posttraun map2way_NI_cc	379337	724	378613	1.000	0.000
Eye	M2W_iritis map2way_NI_cc	379337	479	378858	1.000	0.000
Eye	M2W_blephariti map2way_NI_cc	379337	654	378683	1.000	0.000
Immuno-inflammat	M2W_rosacea map2way_NI_cc	379337	850	378487	1.000	0.000
Musculoskeletal dis	M2W_fracture_ map2way_NI_cc	379337	1643	377694	1.000	0.000
Immuno-inflammat	M2W_urticaria map2way_NI_cc	379337	530	378807	1.000	0.000
Immuno-inflammat	HES_Psoriasis HES_p_L40_BIN	379337	2063	377274	1.000	0.000
Broad symptoms, si	HES_Enlarged_ly HES_p_R59_BIN	379337	2202	377135	1.000	0.000
Musculoskeletal dis	HES_Soft_tissue HES_p_M70_BIN	379337	1502	377835	1.000	0.000
Renal	HES_Unspecific HES_p_N23_BIN	379337	1755	377582	1.000	0.000
ENT and maxillofaci	OPC_Operations f_41210_41200	379337	4416	374921	1.000	0.000
Gynaecology and O	HES_Infections_ HES_p_O23_BIN	379337	212	379125	1.000	0.000
Gynaecology and O	NIOPC_hysterec f_20004_dxCod	379337	668	378669	1.000	0.000
Gastroenterology, †	OPC_Other_excif_41210_41200	379337	242	379095	1.000	0.000
Musculoskeletal dis	NIOPC_spinal_la f_20004_dxCod	379337	3224	376113	1.000	0.000
Gastroenterology, †	NIOPC_oesopha f_20004_dxCod	379337	447	378890	1.000	0.000
Gastroenterology, †	CREG_mal_neo_f_40006_0_p_C	379337	343	378994	1.000	0.000
Gynaecology and O	OPC_Abdominal f_41210_41200	379337	9232	370105	1.000	0.000
Operations and Pro	OPC_Release_of f_41210_41200	379337	204	379133	1.000	0.000
Musculoskeletal dis	M2W_joint_disc map2way_NI_cc	379337	27289	352048	1.000	0.000
Musculoskeletal dis	M2W_fracture_ map2way_NI_cc	379337	2726	376611	1.000	0.000
Gastroenterology, †	M2W_pancreati map2way_NI_cc	379337	2417	376920	1.000	0.000
Immuno-inflammat	M2W_allergyhy map2way_NI_cc	379337	3102	376235	1.000	0.000
Musculoskeletal dis	HESBL_Other_dc HES_block_p_M	379337	18111	361226	1.000	0.000
Cardiovascular	HES_Acute_peri HES_p_I30_BIN	379337	195	379142	1.000	0.000
Renal	OPC_Compensa f_41210_41200	379337	704	378633	1.000	0.000
Gastroenterology, †	M2W_infectivev map2way_NI_cc	379337	1242	378095	1.000	0.000
ENT and maxillofaci	M2W_tinnitus_t map2way_NI_cc	379337	1089	378248	1.000	0.000
Eye	HES_Conjunctivi HES_p_H10_BIN	379337	221	379116	1.000	0.000
ENT and maxillofaci	OPC_Excision_of f_41210_41200	379337	1171	378166	1.000	0.000
Respiratory	HES_Bacterial_p HES_p_J15_BIN	379337	433	378904	1.000	0.000
Gastroenterology, †	OPC_Other_ope f_41210_41200	379337	1153	378184	1.000	0.000
Neurosciences	OPC_Other_rele f_41210_41200	379337	324	379013	1.000	0.000
Respiratory	HESBL_Lung_dis HES_block_p_J6	379337	899	378438	1.000	0.000
Medication	HES_Poisoning_ HES_p_T50_BIN	379337	335	379002	1.000	0.000

Neurosciences	OPC_Other_rep:f_41210_41200	379337	526	378811	1.000	0.000
ENT and maxillofaci	HES_Vasomotor_HES_p_J30_BIN	379337	952	378385	1.000	0.000
Eye	HES_Iridocyclitis_HES_p_H20_BIN	379337	333	379004	1.000	0.000
Eye	HES_Other_infla_HES_p_H01_BIN	379337	539	378798	1.000	0.000
General health, sm	Overall_accelera_f_90012_0_0_f	81504				0.000
Immuno-inflammat	HES_Nail_disord_HES_p_L60_BIN	379337	1050	378287	1.000	0.000

SE	LCI95	UCI95	P	FDR	FDR.Flag	Quant.Resp.Trait	
0.000	-0.008	-0.007		0	0	TRUE	TRUE
0.000	-0.009	-0.008		0	0	TRUE	TRUE
0.000	-0.014	-0.014		0	0	TRUE	TRUE
0.000	-0.014	-0.014		0	0	TRUE	TRUE
0.000	-0.015	-0.014		0	0	TRUE	TRUE
0.000	-0.015	-0.014		0	0	TRUE	TRUE
0.000	-0.016	-0.015		0	0	TRUE	TRUE
0.000	-0.015	-0.015		0	0	TRUE	TRUE
0.000	-0.007	-0.006		0	0	TRUE	TRUE
0.000	-0.007	-0.006		0	0	TRUE	TRUE
0.001	1.020	1.020	8.53E-302	1.90E-299	TRUE	FALSE	
0.000	-0.006	-0.005	4.17E-291	8.53E-289	TRUE	TRUE	
0.001	1.020	1.030	8.71E-283	1.64E-280	TRUE	FALSE	
0.000	-0.006	-0.006	3.16E-256	5.54E-254	TRUE	TRUE	
0.000	-0.006	-0.006	6.63E-207	1.08E-204	TRUE	TRUE	
0.000	-0.007	-0.006	2.67E-169	4.10E-167	TRUE	TRUE	
0.000	-0.006	-0.005	1.16E-93	1.67E-91	TRUE	TRUE	
0.000	-0.005	-0.005	1.22E-91	1.67E-89	TRUE	TRUE	
0.000	1.000	1.010	5.56E-41	7.18E-39	TRUE	FALSE	
0.001	1.010	1.010	1.36E-40	1.67E-38	TRUE	FALSE	
0.000	1.010	1.010	6.68E-38	7.81E-36	TRUE	FALSE	
0.001	1.010	1.010	9.11E-38	1.02E-35	TRUE	FALSE	
0.001	1.010	1.010	2.76E-35	2.95E-33	TRUE	FALSE	
0.001	1.010	1.010	1.62E-31	1.66E-29	TRUE	FALSE	
0.001	1.010	1.010	1.18E-29	1.16E-27	TRUE	FALSE	
0.001	1.000	1.010	2.02E-27	1.90E-25	TRUE	FALSE	
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0.000	1.000	1.000	1.44E-23	1.22E-21	TRUE	FALSE	
0.001	1.010	1.010	3.18E-21	2.60E-19	TRUE	FALSE	
0.000	1.000	1.010	3.38E-21	2.68E-19	TRUE	FALSE	
0.000	1.000	1.000	2.41E-17	1.85E-15	TRUE	FALSE	
0.000	1.000	1.000	5.72E-15	4.25E-13	TRUE	FALSE	
0.000	1.000	1.000	9.73E-15	7.02E-13	TRUE	FALSE	
0.001	1.000	1.010	1.98E-13	1.39E-11	TRUE	FALSE	
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0.000	0.001	0.001	7.77E-11	5.02E-09	TRUE	FALSE	
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0.002	1.010	1.010	5.63E-08	3.22E-06	TRUE	FALSE	
0.002	1.010	1.010	3.66E-07	2.04E-05	TRUE	FALSE	
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0.001	0.997	0.999	0.000376942	0.013806204	FALSE	FALSE
0.002	1.000	1.010	0.000396097	0.014294442	FALSE	FALSE
0.001	1.000	1.000	0.000430587	0.01531392	FALSE	FALSE
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0.000	-0.002	0.000	0.000578553	0.019186068	FALSE	FALSE
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0.001	0.997	0.999	0.000660083	0.021313733	FALSE	FALSE
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0.002	0.992	0.999	0.0167903	0.254341952	FALSE	FALSE
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0.001	0.999	1.000	0.8783	0.991180375	FALSE	FALSE
0.001	0.999	1.000	0.867269	0.991180375	FALSE	FALSE
0.001	0.997	1.000	0.975552	0.991581495	FALSE	FALSE
0.002	0.996	1.000	0.970587	0.991581495	FALSE	FALSE
0.001	0.999	1.000	0.969295	0.991581495	FALSE	FALSE
0.002	0.996	1.000	0.972214	0.991581495	FALSE	FALSE
0.005	0.990	1.010	0.973174	0.991581495	FALSE	FALSE
0.002	0.996	1.000	0.969659	0.991581495	FALSE	FALSE
0.003	0.995	1.010	0.967169	0.991581495	FALSE	FALSE
0.001	0.999	1.000	0.975931	0.991581495	FALSE	FALSE
0.001	0.999	1.000	0.976594	0.991581495	FALSE	FALSE
0.002	0.997	1.000	0.975346	0.991581495	FALSE	FALSE
0.003	0.994	1.010	0.970856	0.991581495	FALSE	FALSE
0.002	0.996	1.000	0.975667	0.991581495	FALSE	FALSE
0.001	0.998	1.000	0.971998	0.991581495	FALSE	FALSE

0.002	0.997	1.000	0.967784	0.991581495	FALSE	FALSE
0.002	0.996	1.000	0.976565	0.991581495	FALSE	FALSE
0.000	0.000	0.000	0.971358	0.991581495	FALSE	FALSE
0.001	-0.003	0.003	0.966214	0.991581495	FALSE	FALSE
0.001	-0.003	0.003	0.974261	0.991581495	FALSE	FALSE
0.000	0.999	1.000	0.96914	0.991581495	FALSE	FALSE
0.000	0.000	0.000	0.976303	0.991581495	FALSE	FALSE
0.005	0.991	1.010	0.97476	0.991581495	FALSE	FALSE
0.004	0.992	1.010	0.971901	0.991581495	FALSE	FALSE
0.001	0.998	1.000	0.976631	0.991581495	FALSE	FALSE
0.004	0.992	1.010	0.965385	0.991581495	FALSE	FALSE
0.004	0.991	1.010	0.973608	0.991581495	FALSE	FALSE
0.005	0.991	1.010	0.974665	0.991581495	FALSE	FALSE
0.000	0.999	1.000	0.970939	0.991581495	FALSE	FALSE
0.002	0.995	1.000	0.9644	0.991581495	FALSE	FALSE
0.003	0.994	1.010	0.964605	0.991581495	FALSE	FALSE
0.004	0.993	1.010	0.975812	0.991581495	FALSE	FALSE
0.003	0.994	1.010	0.976095	0.991581495	FALSE	FALSE
0.003	0.995	1.010	0.967725	0.991581495	FALSE	FALSE
0.002	0.996	1.000	0.977368	0.991919385	FALSE	FALSE
0.004	0.993	1.010	0.978001	0.99215149	FALSE	FALSE
0.002	0.997	1.000	0.979085	0.992430644	FALSE	FALSE
0.002	0.997	1.000	0.978937	0.992430644	FALSE	FALSE
0.002	0.996	1.000	0.980431	0.992572134	FALSE	FALSE
0.002	0.996	1.000	0.980131	0.992572134	FALSE	FALSE
0.001	0.998	1.000	0.980438	0.992572134	FALSE	FALSE
0.006	0.989	1.010	0.982411	0.993340171	FALSE	FALSE
0.003	0.994	1.010	0.982199	0.993340171	FALSE	FALSE
0.005	0.990	1.010	0.982305	0.993340171	FALSE	FALSE
0.001	0.997	1.000	0.984269	0.994808948	FALSE	FALSE
0.004	0.992	1.010	0.985596	0.995063729	FALSE	FALSE
0.004	0.991	1.010	0.986336	0.995063729	FALSE	FALSE
0.001	0.998	1.000	0.985115	0.995063729	FALSE	FALSE
0.006	0.989	1.010	0.986247	0.995063729	FALSE	FALSE
0.001	0.999	1.000	0.986954	0.995063729	FALSE	FALSE
0.002	0.997	1.000	0.986669	0.995063729	FALSE	FALSE
0.002	0.997	1.000	0.988443	0.995753818	FALSE	FALSE
0.001	0.997	1.000	0.98845	0.995753818	FALSE	FALSE
0.001	0.999	1.000	0.989447	0.995918854	FALSE	FALSE
0.006	0.988	1.010	0.990643	0.995918854	FALSE	FALSE
0.003	0.994	1.010	0.989574	0.995918854	FALSE	FALSE
0.002	0.995	1.000	0.990358	0.995918854	FALSE	FALSE
0.002	0.995	1.000	0.989833	0.995918854	FALSE	FALSE
0.006	0.989	1.010	0.991077	0.995947157	FALSE	FALSE
0.002	0.995	1.000	0.991519	0.995983474	FALSE	FALSE
0.004	0.992	1.010	0.992341	0.995993789	FALSE	FALSE
0.002	0.995	1.000	0.992162	0.995993789	FALSE	FALSE
0.005	0.991	1.010	0.993324	0.996572811	FALSE	FALSE
0.003	0.995	1.010	0.995277	0.997309007	FALSE	FALSE
0.004	0.991	1.010	0.995185	0.997309007	FALSE	FALSE

0.004	0.993	1.010	0.994809	0.997309007	FALSE	FALSE
0.003	0.995	1.010	0.995765	0.997390739	FALSE	FALSE
0.004	0.991	1.010	0.997814	0.999035315	FALSE	FALSE
0.004	0.993	1.010	0.998964	0.999371242	FALSE	FALSE
0.000	-0.001	0.001	0.998958	0.999371242	FALSE	FALSE
0.003	0.995	1.000	0.999533	0.999533	FALSE	FALSE

Figure.Name

COPD (self-report OR HES OR spirometry)

COPD (self-report OR HES OR spirometry [QC*])

Asthma (self-reported OR HES)

Adrenergic inhalants (self-reported)

Chronic lower respiratory disease (HES)

Adrenergics for systemic use (self-reported)

Other systemic drugs for obstructive airway disease (self-reported)

COPD (self-reported OR HES)

COPD (HES)

Asthma (HES)

Asthma diagnosis over 16 years of age (self-reported)

Family history (father) of chronic bronchitis/emphysema (self-reported)

Wheeze/whistling in chest in last year (self-reported)

Asthma diagnosis under 16 years of age (self-reported)

Other inhalants for obstructive airway diseases (self-reported)

Hospital admission for any disease of the respiratory system (HES)

Decongestants / topical nasal preparations (self-reported)

Corticosteroids (self-reported)

Family history (siblings) of chronic bronchitis/emphysema (self-reported)

Chronic bronchitis OR emphysema (self-reported OR HES)

Family history (mother and/or father) of chronic bronchitis/emphysema

Standing height (assessment centre)

Family history (mother) of chronic bronchitis/emphysema (self-reported)

Coeliac disease (self-report OR HES)

Body Mass Index (assessment centre)

Lymphocyte percentage (blood count)

Intestinal malabsorption (HES)

Emphysema (HES)

Emphysema (self-reported OR HES)

Heamatocrit percentage (blood count)

Reticulocyte percentage (blood count)

Intestinal antiinflammatory agents (self-reported)

Mean platelet (thrombocyte) volume (blood count)

Cataract (self-reported)

Antimetabolites (self-reported)

Neutrophil percentage (blood count)

Monocyte count (blood count)

Reticulocyte count (blood count)

Reticulocyte percentage (high light scatter,blood count)

Respiratory failure (HES)

Respiratory failure (self-reported OR HES)

Mean spheroid cell volume (blood count)

Platelet count (blood count)

Chronic ischaemic heart disease (HES)

Haemoglobin concentration (blood count)

Diastolic blood pressure (assessment centre)

Lymphocyte count (blood count)

Mean reticulocyte volume (blood count)

High light scatter reticulocyte count (blood count)































































































[Redacted]

[Redacted]

[Redacted]

Supplementary Table 26: Look-up of new and previously reported lung fur

Sentinel	Nearest.Gene	Chr:Pos (b37)	Phenotype	Tier
Novel				
rs9970286	<i>DENND2D</i>	1:111737398	FF	Tier 1
rs11205354	<i>C1orf54</i>	1:150249101	PEF	Tier 1
rs12470864	<i>IL1RL1</i>	2:102926362	FF	Tier 1
rs7424771	<i>RBMS1</i>	2:161276378	FEV1	Tier 1
rs6437219	<i>C2orf54</i>	2:241844033	FVC	Tier 1
rs35480566	<i>FOXP1</i>	3:71583177	FVC	Tier 1
rs6780171	<i>IGF2BP2</i>	3:185503456	FEV1	Tier 1
rs13109426	<i>HHIP-AS1</i>	4:145330628	FVC	Tier 1
rs11739847	<i>LOC100996325</i>	5:609661	FEV1	Tier 1
rs12198986	<i>BMP6</i>	6:7720059	FVC	Tier 1
rs9689096	<i>HMGA1</i>	6:34188892	FVC	Tier 1
rs1513272	<i>JAZF1</i>	7:28200097	FEV1	Tier 1
rs7838717	<i>BOP1</i>	8:145504343	FVC	Tier 1
rs11191841	<i>OBFC1(NM_024928:c.*28310>0)</i>	10:105639611	FEV1	Tier 1
rs9533803	<i>MIR8079</i>	13:44820608	FF	Tier 1
rs1951121	<i>HAUS4</i>	14:23429729	FF	Tier 1
rs79234094	<i>COPS2</i>	15:49409527	FF	Tier 1
rs8068952	<i>BCAS3</i>	17:59286644	FF	Tier 1
rs11653958	<i>SMURF2</i>	17:62686730	FF	Tier 1

rs303752	<i>C18orf8</i>	18:21074255	FVC	Tier 1
rs9438626	<i>DHDDS</i>	1:26775367	FVC	Tier 2
rs4309038	<i>LMOD1</i>	1:201884647	FF	Tier 2
rs4294980	<i>DIRC3</i>	2:218604356	FEV1	Tier 2
rs2304645	<i>IVD</i>	15:40716253	FEV1	Tier 2
rs4968200	<i>TNFSF12-TNFSF13</i>	17:7448457	FEV1	Tier 2
rs12945803	<i>LOC101927166</i>	17:46552229	FVC	Tier 2
rs11085744	<i>QTRT1</i>	19:10819967	FEV1	Tier 2
Previous				
rs755249	<i>LOC101929516</i>	1:39995074	FF	-
rs35043843	<i>SPAG17</i>	1:118911295	FVC	-
rs1008833	<i>PIK3C2B</i>	1:204426295	PEF	-
rs6604614	<i>TGFB2</i>	1:218631452	PEF	-
rs6710301	<i>TRAF3IP1</i>	2:239441308	FEV1	-
rs2869966	<i>FAM13A</i>	4:89869078	FF	-
rs6533183	<i>TET2</i>	4:106133184	FF	-
rs2261360	<i>ZKSCAN1(NM_003439_c.*41470>0</i>	7:99692993	FF	-
rs4073153	<i>DNLZ</i>	9:139259349	FVC	-
rs7082066	<i>JMJD1C</i>	10:64998971	FEV1	-
rs10998018	<i>MYPN</i>	10:69962954	FVC	-

rs1689510	<i>RAB5B</i>	12:56396768	FEV1	-
rs12446589	<i>IL27</i>	16:28870962	FEV1	-
rs62070648	<i>SUZ12P1</i>	17:29210595	FVC	-
rs11082051	<i>CTAGE1/RBBP8</i>	18:20234336	FEV1	-
rs9947743	<i>CABLES1</i>	18:20708321	FEV1	-
rs2145272	<i>BMP2</i>	20:6626218	FVC	-
rs143384	<i>UQCC1</i>	20:34025756	FVC	-
rs2283847	<i>MN1</i>	22:28181399	FF	-
rs9435733	<i>MFAP2</i>	1:17308254	FF	Tier 1
rs1192415	<i>TGFBR3</i>	1:92077097	FF	Tier 1
rs3791679	<i>EFEMP1</i>	2:56096892	FVC	Tier 1
rs62168891	<i>CCNT2-AS1</i>	2:135672187	FVC	Tier 1
rs2571445	<i>TNS1</i>	2:218683154	FEV1	Tier 1
rs62289340	<i>AFAP1</i>	4:7879027	FF	Tier 1
rs13141641	<i>HHIP-AS1</i>	4:145506456	FF	Tier 1
rs6859730	<i>FGF10</i>	5:44367221	FVC	Tier 1

rs3843503	<i>P4HA2-AS1</i>	5:131466629	FVC	Tier 1
rs1294417	<i>LY86</i>	6:6741932	FF	Tier 1
rs2076295	<i>DSP</i>	6:7563232	FF	Tier 1
rs10498672	<i>BMP6</i>	6:7797840	FVC	Tier 1
rs6918725	<i>MIR588</i>	6:126990392	FVC	Tier 1
rs7753012	<i>GPR126</i>	6:142745883	FF	Tier 1
rs71490394	<i>EML3</i>	11:62370155	FEV1	Tier 1
rs2027761	<i>ARHGEF17</i>	11:73036179	FF	Tier 1
rs11172113	<i>LRP1</i>	12:57527283	FF	Tier 1
rs11160037	<i>TRIP11</i>	14:92512143	FEV1	Tier 1
rs11621587	<i>RIN3</i>	14:93098339	FVC	Tier 1
rs12917612	<i>AAGAB</i>	15:67491274	FVC	Tier 1
rs1896797	<i>SH3GL3</i>	15:84274591	FF	Tier 1
rs11858992	<i>CFDP1</i>	16:75411445	FF	Tier 1
rs8069451	<i>FBXL20</i>	17:37504933	FVC	Tier 1
rs79412431	<i>MAPT-AS1</i>	17:43940021	FEV1	Tier 1

rs4809221	<i>SLC2A4RG</i>	20:62372706	FVC	Tier 1
rs1978968	<i>MICAL3</i>	22:18448113	FEV1	Tier 1

Interaction signals in GRASP and GWAS catalog

Prev.Sentinel	Prev.LF.Trait	Genes (associations)
-	-	<i>DENND2D</i>
-	-	<i>C1orf54, MRPS21, C1orf51</i>
-	-	<i>IL1RL2, IL18R1, IL1RL1, IL18RAP, SLC9A4, IL1R2, IL1R1</i>
-	-	<i>RBMS1</i>
-	-	<i>C2orf54, SNED1</i>
-	-	<i>FOXP1, MIR1284</i>
-	-	<i>IGF2BP2, IGFBP2, IG2BP2</i>
-	-	-
-	-	<i>SLC9A3, EXOC3</i>
-	-	<i>BMP6</i>
-	-	<i>HMGA1, C6orf106, LBH, CYCSL1</i>
-	-	<i>JAZF1, CREB5</i>
-	-	<i>BOP1, HSF1, DGAT1</i>
-	-	<i>OBFC1</i>
-	-	<i>MIR8079, SMIM2, SERP2</i>
-	-	<i>RBM23</i>
-	-	<i>GALK2</i>
-	-	<i>BCAS3</i>
-	-	<i>SMURF2, PLEKHM1P</i>

-	-	<i>C18orf8</i>
-	-	<i>DHDDS</i>
-	-	<i>NAV1</i>
-	-	<i>DIRC3</i>
-	-	<i>IVD, intergenic</i>
-	-	<i>TNFSF13</i>
-	-	<i>SKAP1</i>
-	-	<i>ILF3, QTRT1</i>

rs17513135	FF	<i>PPIEL, PABPC4, MACF1, RP11-69E11.8, BMP8A</i>
rs60804050	FVC	<i>SPAG17</i>
rs12092943	FEV1	<i>PIK3C2B</i>

rs4846480	COPD	<i>TGFB2, LYPLAL1</i>
rs61332075	FF	-
rs2045517	FF	<i>FAM13A</i>

rs2007403	FEV1	<i>AC004069.2, TET2, Intergenic</i>
rs72615157	FF	<i>ZKSCAN1</i>

rs10870202	FVC	<i>C9orf69, LHX3, DKFZP434A062, DNLZ, UBAC1, QSOX2, GPSM1, CARD9, SNAPC4, SDCCAG3, PMPCA, SEC16A, C9orf163, NOTCH1, NACC2, INPP5E</i>
rs7899503	FEV1	<i>JMJD1C</i>
rs7095607	FVC	<i>MYPN</i>

rs772920	FEV1	<i>SUOX, CDK2, RAB5B, IKZF4, ERBB3RPS26, intergenic</i>
rs181206	COPD	<i>SH2B1, ATXN2L, NPIPL1, TUFM, ATP2A1, IL27, EIF3C, LAT, CD19, CLN3, SULT1A1RABEP2, SULT1A2, NUPR1, ATP2A1-AS1, SBK1, APOB48R, AC138894.2, CCDC101</i>
rs62070631	FEV1	-
rs7243351	FEV1	<i>RBBP8</i>
rs7238093	FVC	<i>CABLES1, RBBP8, C18orf45</i>
rs6140050	FVC	<i>BMP2, LOC149844</i>
rs6088813	FVC	<i>GDF5, UQCC, intergenic</i>
rs2283847	FEV1	<i>MN1</i>
rs2284746	FF	<i>MFAP2</i>
rs1192404	FF	<i>TGFBR3, CDC7</i>
rs1430193	FVC	<i>EFEMP1, PNPT1</i>
rs2322659	FEV1	<i>TMEM163, ACMSD</i>
rs2571445	FEV1	<i>TNS1</i>
rs28520091	FF	<i>AFAP1</i>
rs12504628	FEV1	<i>HHIP</i>
rs1448044	FVC	<i>FGF10</i>

rs7713065	FF	<i>LOC553103, AC034220.3, FLJ44796, SLC22A4, IL3, ACSL6, P4HA2, PDLIM4, Intergenic</i>
rs1294421	FF	<i>LY86</i>
rs55938083	COPD	<i>DSP</i>
rs6924424	FVC	<i>BMP6</i>
rs11759026	FVC	<i>C6orf173, TRMT11, intergenic, CENPW, RSPO3LOC387103</i>
rs7753012	FF	<i>GPR126</i>
rs2509961	FEV1	<i>EEF1G</i>
rs11235809	FF	<i>P2RY6</i>
rs11172113	FF	<i>LRP1, STAT6, SDR9C7</i>
rs7155279	FEV1	<i>ATXN3, TRIP11</i>
rs72699866	FEV1	<i>RIN3</i>
rs8025774	FVC	<i>SMAD3</i>
rs12438269	FF	<i>SH3GL3</i>
rs3743609	FF	<i>CFDP1</i>
rs8067511	FVC	<i>MED1, FBXL20, CDK12</i>
rs17577877	FEV1	<i>LOC100128977, MAPT, CRHR1, KIAA1267, IMP5, LOC100130148RP11-105N13.4, RP11-293E1.1, ARHGAP27, KANSL1, SPPL2C, STH, MGC57346, C17orf69, LOC644246, WNT3, PLEKHM1</i>

		<i>LIME1, TNFRSF6B, SLC2A4RG, ZGPAT, STMN3, ZBTB46, ABHD16B, ARFRP1, C20orf195, DNAJC5, EEF1A2, GMEB2, LOC100505815, MIR1914, MIR647, MIR941-1, MIR941- 2, MIR941-3, MIR941-4, PPDPF, PRIC285, PRPF6, PTK6, RTEL1, RTEL1-TN, RTEL1-TNFRSF6B, SAMD10, SRMS, TPD52L2, UCKL1, UCKL1-AS1, ZNF512B</i>
<i>rs6062304</i>	<i>FEV1</i>	
<i>rs11704827</i>	<i>FEV1</i>	<i>MICAL3</i>

Traits	PMID
mean platelet volume	27863252
chronotype, asthma, atopic dermatitis	28604731, 29083406, 26482879
asthma, crohn's disease, inflammatory bowel disease, eosinophil counts	29083406, 28067908, 19198610
white blood cell count, idiopathic membranous nephropathy	27863252, 21323541
joint mobility (beighton score)	27182965
vitiligo, cognitive ability, autism spectrum disorder or schizophrenia, educational attainment	27723757, 29186694, 28540026, 27225129
	22158537, 27189021, 21874001, 20581827, 17463246, 22885922, 28869590, 22325160, 23300278, 26818947, 23945395, 18711366, 17463249, 22693455, 24509480,
type 2 diabetes, fasting blood glucose, 2-hour glucose tolerance test	17463248, 19401414, 21347282, 22885924
height	20881960
ulcerative colitis	23128233, 21297633
	20881960, 18391951, 23704328,
height	25282103
	19343178, 28443625, 25673412, 25429064, 18391951, 19396169,
height, waist circumference, body mass index	19893584, 20881960, 20189936, 28448500, 23704328
	20881960, 22885922, 27189021, 20581827, 24509480, 26502338, 19838195, 20694011, 21347282,
height, type 2 diabetes, systemic lupus erythematosus, selective immunoglobulin a deficiency (igad), crohn's disease	22325160, 23128233, 21194676, 19401414, 23300278, 28869590, 18372903
dupuytren's disease	28886342
interstitial lung disease, non-glioblastoma glioma, fibrotic idiopathic interstitial pneumonias (pulmonary fibrosis), bipolar disorder, combined control dataset	23583980, 28346443, 17554300
dupuytren's disease	28886342
educational attainment, cognitive ability	27225129, 29186694
lung adenocarcinoma	28604730
optic cup area, coronary artery disease, vertical cup-disc ratio	25631615, 28073927, 28714975, 20548946
joint mobility (beighton score)	27182965

body mass index	28892062
mean corpuscular volume (mcv)	23222517
body mass index, waist circumference	25673413, 25673412, 28443625
optic disc parameters	28073927, 25631615
fibrotic idiopathic interstitial pneumonias (pulmonary fibrosis), interstitial lung disease	23583980
igm levels	23118916
ovarian cancer	28346442, 23535730, 25581431
height, psoriasis	25429064, 23143594
hdl cholesterol, c-reactive protein (crp), type 2 diabetes, red cell distribution width, oxct2 trancript levels in human subcutaneous fat, triglycerides, peripheral arterial disease (traffic-related air pollution interaction)	20686565, 21300955, 27189021, 27863252, 24097068, 27082954
height, waist circumference	20881960, 28448500, 18391952
differential splicing of th1l [probeset 3891303] in lymphoblastoid cell lines	19052777
waist circumference, height, hip circumference	28448500, 20881960, 25673412, 28443625, 25429064, 23704328, 21194676, 25282103
morning vs. evening chronotype	26835600
fibrotic idiopathic interstitial pneumonias (pulmonary fibrosis)	23583980
educational attainment, sum basophil neutrophil counts, myeloid white cell count, sum neutrophil eosinophil counts, prostate cancer, neutrophil count, granulocyte count, cancer (pleiotropy)	27225129, 27863252, 25939597, 27197191, 19767753
fibrotic idiopathic interstitial pneumonias (pulmonary fibrosis)	23583980
crohn's disease, inflammatory bowel disease, ulcerative colitis, pediatric autoimmune diseases, granulocyte percentage of myeloid white cells, iga nephropathy	26192919, 28067908, 21297633, 23128233, 26301688, 27863252, 21102463, 25305756
platelet count	22423221
height	25282103

pediatric autoimmune diseases, type 1 diabetes, generalized vitiligo, alopecia areata, asthma, educational attainment, vitiligo, cognitive ability, type 1 diabetes, combined control dataset, polycystic ovary syndrome, nonsyndromic cleft lip with cleft palate, eosinophil counts	26301688, 18198356, 21829393, 22561518, 18840781, 20596022, 21129726, 21804548, 21980299, 27225129, 29186694, 17554300, 22885925, 28232668, 27863252
body mass index, red blood cell count, intelligence, crohn's disease, inflammatory bowel disease, hip circumference, type 1 diabetes, selective immunoglobulin a deficiency (igad), body fat percentage, weight, obesity, waist circumference, inflammatory bowel disease (early onset), educational attainment, cognitive ability	28448500, 20935630, 27863252, 28530673, 21102463, 21297633, 26192919, 23128233, 28443625, 25673412, 25673413, 28892062, 21829393, 19430480, 20694011, 26833246, 23001569, 19079260, 23563607, 23563609, 19079261, 19915574, 27225129, 29186694
breast cancer	29059683
intracranial aneurysm	20364137
waist circumference, height, hip circumference	28443625, 28448500, 25673412, 20881960, 25429064, 25282103, 18391951, 23704328
height, body mass index, waist circumference	20881960, 23704328, 28448500, 25429064, 25673412
hip osteoarthritis, height, hip circumference, infant length, joint mobility (beighton score), body mass index, waist-to-hip ratio	21177295, 18193045, 20881960, 25282103, 25673412, 23704328, 25281659, 27182965, 25429064, 28448500, 23563607, 19343178, 19396169, 18391952, 28270201
platelet count, mean corpuscular hemoglobin, mean corpuscular volume	27863252
height	20881960, 23704328, 21194676, 23563607, 25429064, 25282103
optic disc parameters, vertical cup-disc ratio	20548946, 21307088, 22058429, 28073927, 25241763
height, waist circumference, hip circumference	20881960, 26785701, 25673412, 18391951, 28448500, 28443625, 25282103, 20189936, 23563607
hematocrit	28017375
immature fraction of reticulocytes, high light scatter reticulocyte count, high light scatter reticulocyte percentage of red cells	27863252
glaucoma (primary open-angle)	25173105
emphysema distribution in smoking, emphysema imaging phenotypes	27669027, 26030696
prostate cancer	21743467

height, platelet count, mean platelet volume, crohn's disease, itch intensity from mosquito bite adjusted by bite size, crohn's disease, combined control dataset	20881960, 23563607, 27863252, 22412388, 28199695, 17554300
waist-to-hip ratio, body mass index, hip circumference, visceral adipose tissue/subcutaneous adipose tissue ratio	28443625, 25673412, 23563607, 20935629, 27918534
fibrotic idiopathic interstitial pneumonias (pulmonary fibrosis), interstitial lung disease, idiopathic pulmonary fibrosis	23583980, 29066090
hip circumference	25673412
height, age at menarche, menarche (age at onset), age at first tooth, hip circumference, hematocrit, type 2 diabetes, infant length, selective immunoglobulin a deficiency (igad), type 1 diabetes, primary tooth eruption (age)	20881960, 25282103, 21102462, 23563607, 28270201, 23704328, 27182965, 25673412, 27863252, 18391952, 19396169, 28869590, 25281659, 20694011, 19430480
height, hip circumference	20881960, 25673412, 28270201
body mass index	28448500
hemoglobin (hb)	23222517
migraine	21666692, 23793025, 22683712, 27322543, 27182965
height	20881960, 23704328
paget's disease, plateletcrit, white blood cell count, myeloid white cell count, sum eosinophil basophil counts, granulocyte count	21623375, 27863252
waist circumference	25673412, 28443625
height	20881960, 25282103
aortic root size	28394258
hdl cholesterol	20686565
intracranial volume, red blood cell count (rbc), hemoglobin (hb), parkinson's disease, primary biliary cirrhosis, androgenetic alopecia early age of onset, hematocrit (hct), red blood cell count, corticobasal degeneration, hemoglobin concentration, hematocrit, cognitive ability, fibrotic idiopathic interstitial pneumonias (pulmonary fibrosis), bone mineral density, progressive supranuclear palsy, differential splicing of kiaa1267 [probeset 3760212] in lymphoblastoid cell lines, male-pattern baldness	22504418, 23222517, 22451204, 22438815, 20711177, 22961000, 22693459, 28017375, 21084426, 21738487, 26077951, 27863252, 19915575, 21248740, 29186694, 23583980, 24842889, 28892059, 25064009, 22504420, 23437003, 21292315, 21685912, 21044948, 19052777, 29146897

ulcerative colitis, crohn's disease, inflammatory bowel disease, prostate cancer	26192919, 23128233, 23535732
liver enzyme levels (gamma-glutamyl transferase)	22001757

Supplementary Table 28: Weights for COPD risk score

Novel	Marker Name	Chrom.	Position (b37)	Risk allele	Non-risk allele
Novel	rs9661802	1	6,678,864	C	A
Novel	rs12737805	1	22,612,690	G	A
Novel	rs9438626	1	26,775,367	G	C
Novel	rs12096239	1	26,796,922	C	G
Novel	rs1416685	1	51,243,374	G	C
Novel	rs72673461	1	60,966,772	G	T
Novel	rs9661687	1	78,387,270	T	C
Novel	rs10874851	1	92,106,637	A	C
Novel	rs9970286	1	111,737,398	G	A
Novel	rs11205354	1	150,249,101	C	A
Novel	rs141942982	1	155,137,395	T	G
Novel	rs4651005	1	178,719,306	C	T
Novel	rs2146098	1	186,090,370	G	A
Novel	rs17531405	1	186,113,852	G	C
Novel	rs10919604	1	198,898,157	G	A
Novel	rs4309038	1	201,884,647	G	C
Novel	rs2799098	1	218,521,609	A	G
Novel	rs75128958	1	219,483,218	A	G
Novel	rs17009288	1	221,204,299	C	A
Novel	rs2544536	2	15,906,854	T	C
Novel	rs6751968	2	18,570,024	A	C
Novel	rs13430465	2	18,702,313	T	C
Novel	rs13009582	2	24,018,480	G	A
Novel	rs732990	2	26,842,146	G	C
Novel	rs4952564	2	42,243,850	G	A
Novel	rs12470864	2	102,926,362	A	G
Novel	rs1406225	2	145,797,829	T	G
Novel	rs7424771	2	161,276,378	A	G
Novel	rs2304340	2	179,260,382	G	A
Novel	rs2084448	2	187,530,520	C	T
Novel	rs1249096	2	199,723,365	G	A
Novel	rs985256	2	201,208,692	C	A
Novel	rs12997625	2	202,970,250	C	T
Novel	rs6435952	2	217,614,730	T	A
Novel	rs4294980	2	218,604,356	G	A
Novel	rs4674407	2	220,382,700	C	T
Novel	rs6431620	2	239,604,970	T	G
Novel	rs6437219	2	241,844,033	T	C
Novel	rs6733504	2	242,495,953	G	A
Novel	rs2974389	3	13,787,641	G	A
Novel	rs73048404	3	25,179,533	T	G
Novel	rs35480566	3	71,583,177	A	G
Novel	rs586936	3	73,862,616	A	G
Novel	rs1610265	3	99,420,192	C	T
Novel	rs1799807	3	165,548,529	C	T
Novel	rs6780171	3	185,503,456	A	T
Novel	rs12331869	4	56,012,149	A	G

Novel	rs62316310	4	75,676,529	G	A
Novel	rs11098196	4	79,403,952	T	G
Novel	rs13109426	4	145,330,628	G	A
Novel	rs13116999	4	145,442,364	G	A
Novel	rs11739847	5	609,661	A	G
Novel	rs4866846	5	43,976,162	G	A
Novel	rs10059661	5	121,410,529	C	G
Novel	rs17163397	5	128,767,384	A	G
Novel	rs1800888	5	148,206,885	T	C
Novel	rs10059996	5	170,901,463	T	G
Novel	rs79898473	5	179,598,771	T	C
Novel	rs12198986	6	7,720,059	A	G
Novel	rs9689096	6	34,188,892	A	C
Novel	rs9357446	6	44,447,598	G	A
Novel	rs12202314	6	45,530,471	T	C
Novel	rs9472541	6	45,622,748	T	A
Novel	rs2894837	6	56,336,406	G	A
Novel	rs2627237	6	134,339,265	G	A
Novel	rs1102077	6	140,271,357	A	C
Novel	rs9385988	6	142,560,957	A	G
Novel	rs4721457	7	15,872,324	C	T
Novel	rs559233	7	26,848,830	C	T
Novel	rs62454414	7	27,182,329	T	G
Novel	rs1513272	7	28,200,097	C	T
Novel	rs17232687	7	46,448,518	C	T
Novel	rs12707691	7	84,569,510	C	G
Novel	rs193686	7	116,431,427	T	C
Novel	rs330939	8	9,018,590	G	T
Novel	rs4128298	8	11,823,332	T	C
Novel	rs7465401	8	70,367,248	T	C
Novel	rs7838717	8	145,504,343	C	T
Novel	rs7041139	9	18,013,733	T	C
Novel	rs72743974	9	98,878,881	A	G
Novel	rs57649467	9	101,632,854	G	A
Novel	rs967497	9	131,943,843	G	A
Novel	rs1274475	10	34,480,582	G	A
Novel	rs60820984	10	75,639,578	T	C
Novel	rs11191841	10	105,639,611	T	C
Novel	rs10836366	11	35,308,988	C	T
Novel	rs56196860	12	2,908,330	C	A
Novel	rs12811814	12	4,243,749	T	C
Novel	rs10841302	12	19,808,912	G	C
Novel	rs1244869	12	65,075,332	G	T
Novel	rs11176001	12	66,409,367	A	C
Novel	rs972936	12	102,824,921	C	T
Novel	rs2701110	12	114,669,870	C	A
Novel	rs9533803	13	44,820,608	T	C
Novel	rs2812208	13	50,707,087	G	C
Novel	rs803765	13	71,647,588	C	A
Novel	rs4885681	13	80,467,235	C	T

Novel	rs11620380	13	99,665,512	A	C
Novel	rs9634470	13	109,918,493	T	C
Novel	rs1951121	14	23,429,729	G	T
Novel	rs74053129	14	54,346,010	G	A
Novel	rs10141786	14	74,817,418	A	G
Novel	rs34245505	15	40,397,191	C	G
Novel	rs2304645	15	40,716,253	C	G
Novel	rs4924525	15	41,255,396	C	A
Novel	rs79234094	15	49,409,527	G	A
Novel	rs35251997	15	49,706,145	A	T
Novel	rs62012772	15	63,866,877	T	C
Novel	rs7176074	15	73,833,600	G	T
Novel	rs3751837	16	3,583,173	C	T
Novel	rs56104880	16	4,361,138	C	T
Novel	rs11074547	16	10,136,889	G	T
Novel	rs76219171	16	50,188,929	G	A
Novel	rs35420030	16	53,935,407	T	C
Novel	rs12918140	16	86,403,821	C	G
Novel	rs6539952	16	86,579,223	A	C
Novel	rs8082036	17	3,882,613	G	C
Novel	rs4796334	17	6,469,793	A	G
Novel	rs1215	17	7,163,350	A	G
Novel	rs4968200	17	7,448,457	C	G
Novel	rs34351630	17	16,030,520	C	T
Novel	rs12945803	17	46,552,229	T	C
Novel	rs28519449	17	54,195,453	T	C
Novel	rs8068952	17	59,286,644	C	G
Novel	rs77672322	17	62,497,964	C	T
Novel	rs11653958	17	62,686,730	G	A
Novel	rs996865	17	69,371,318	T	C
Novel	rs59606152	17	79,952,944	T	C
Novel	rs8089099	18	10,078,071	G	A
Novel	rs1985511	18	19,816,712	T	A
Novel	rs303752	18	21,074,255	G	A
Novel	rs1668091	18	22,290,711	C	T
Novel	rs9807668	18	42,827,898	C	T
Novel	rs2202572	18	53,566,471	C	A
Novel	rs11085744	19	10,819,967	T	C
Novel	rs2967516	19	36,881,643	G	A
Novel	rs6032942	20	10,745,545	G	C
Novel	rs12627254	21	35,368,402	G	T
Novel	rs113111175	22	50,867,711	C	T
Previous	rs2284746	1	17,306,675	G	C
Previous	rs17513135	1	40,035,686	T	C
Previous	rs1192404	1	92,068,967	G	A
Previous	rs12140637	1	92,374,517	T	C
Previous	rs60804050	1	118,870,373	A	G
Previous	rs6681426	1	150,586,971	G	A
Previous	rs2821332	1	200,085,714	A	T
Previous	rs12092943	1	204,434,927	T	G

Previous	rs512597	1	215,095,003	C	T
Previous	rs4846480	1	218,598,469	A	T
Previous	rs993925	1	218,860,068	C	T
Previous	rs4328080	1	219,963,088	G	A
Previous	rs6657854	1	221,630,555	C	A
Previous	rs6688537	1	239,850,588	A	C
Previous	rs62126408	2	18,309,132	T	C
Previous	rs1430193	2	56,120,853	A	T
Previous	rs2322659	2	136,555,659	C	T
Previous	rs72904209	2	157,046,432	C	T
Previous	rs2571445	2	218,683,154	A	G
Previous	rs10498230	2	229,502,503	C	T
Previous	rs61332075	2	239,316,560	G	C
Previous	rs12477314	2	239,877,148	C	T
Previous	rs1286664	3	25,529,280	C	T
Previous	rs17666332	3	29,469,675	G	T
Previous	rs1458979	3	55,150,677	G	A
Previous	rs79294353	3	57,494,433	A	C
Previous	rs1490265	3	67,452,043	C	A
Previous	rs6778584	3	98,815,640	C	T
Previous	rs2811415	3	127,991,527	G	A
Previous	rs1595029	3	158,241,767	A	C
Previous	rs56341938	3	168,715,808	A	G
Previous	rs1344555	3	169,300,219	T	C
Previous	rs28520091	4	7,846,240	C	T
Previous	rs13110699	4	89,815,695	G	T
Previous	rs2045517	4	89,870,964	T	C
Previous	rs2007403	4	106,131,210	T	C
Previous	rs10516526	4	106,688,904	A	G
Previous	rs34712979	4	106,819,053	A	G
Previous	rs12504628	4	145,436,324	T	C
Previous	rs111898810	4	146,174,040	A	C
Previous	rs91731	5	33,334,312	A	C
Previous	rs1448044	5	44,296,986	A	G
Previous	rs1551943	5	52,195,033	A	G
Previous	rs2441026	5	53,444,498	C	T
Previous	rs72776440	5	77,440,196	G	C
Previous	rs153916	5	95,036,700	T	C
Previous	rs7713065	5	131,788,334	A	C
Previous	rs7715901	5	147,856,392	A	G
Previous	rs2014787	5	148,611,675	C	G
Previous	rs10515750	5	156,810,072	T	C
Previous	rs1990950	5	156,920,756	G	T
Previous	rs1294421	6	6,743,149	T	G
Previous	rs55938083	6	7,565,376	C	T
Previous	rs6924424	6	7,801,611	T	G
Previous	rs1928168	6	22,017,738	C	T
Previous	rs34864796	6	27,459,923	A	G
Previous	rs2070600	6	32,151,443	C	T
Previous	rs114544105	6	32,635,629	A	G

Previous	rs16883089	6	73,658,053	T	C
Previous	rs2768551	6	109,270,656	A	G
Previous	rs11759026	6	126,792,095	G	A
Previous	rs7753012	6	142,745,883	T	G
Previous	rs148274477	6	142,838,173	C	T
Previous	rs10246303	7	7,286,445	T	A
Previous	rs55905169	7	15,506,529	G	C
Previous	rs72615157	7	99,635,967	G	A
Previous	rs12698403	7	156,127,246	A	G
Previous	rs771924	9	1,555,835	A	T
Previous	rs7872188	9	4,124,377	T	C
Previous	rs10965947	9	23,588,583	C	T
Previous	rs16909859	9	98,204,792	A	G
Previous	rs2451951	9	109,496,630	C	T
Previous	rs803923	9	119,401,650	A	G
Previous	rs10858246	9	139,102,831	G	C
Previous	rs10870202	9	139,257,411	C	T
Previous	rs7090277	10	12,278,021	T	A
Previous	rs3847402	10	30,267,810	A	G
Previous	rs7899503	10	65,087,468	G	C
Previous	rs7095607	10	69,957,350	A	G
Previous	rs3849969	10	75,525,999	C	T
Previous	rs1259524	10	77,004,644	G	T
Previous	rs2637254	10	78,312,002	A	G
Previous	rs2256462	10	81,685,593	T	C
Previous	rs2293871	10	124,273,671	C	T
Previous	rs4237643	11	43,648,368	T	G
Previous	rs2863171	11	45,250,732	A	C
Previous	rs2509961	11	62,310,909	T	C
Previous	rs11235809	11	73,290,163	A	G
Previous	rs7108254	11	86,436,086	G	T
Previous	rs567508	11	126,008,910	G	A
Previous	rs2348418	12	28,689,514	T	C
Previous	rs772920	12	56,390,364	G	C
Previous	rs11172113	12	57,527,283	T	C
Previous	rs1494502	12	65,824,670	G	A
Previous	rs7971039	12	85,724,305	G	A
Previous	rs11107184	12	94,184,082	C	T
Previous	rs113745635	12	95,554,771	T	C
Previous	rs12820313	12	96,255,704	C	T
Previous	rs10850377	12	115,201,436	G	A
Previous	rs35506	12	115,500,691	A	T
Previous	rs4444235	14	54,410,919	C	T
Previous	rs1698268	14	84,309,664	T	A
Previous	rs7155279	14	92,485,881	G	T
Previous	rs72699866	14	93,114,787	G	A
Previous	rs1200345	15	41,819,716	C	T
Previous	rs72724130	15	41,977,690	T	A
Previous	rs8025774	15	67,483,276	C	T
Previous	rs10851839	15	71,628,370	T	A

Previous	rs12591467	15	71,788,387	C	T
Previous	rs12438269	15	84,502,549	C	T
Previous	rs12149593	16	10,704,535	A	C
Previous	rs181206	16	28,513,403	G	A
Previous	rs12447804	16	58,075,282	T	C
Previous	rs3973397	16	70,040,398	A	G
Previous	rs3743609	16	75,467,021	C	G
Previous	rs1079572	16	78,187,138	G	A
Previous	rs62070270	17	28,263,980	G	A
Previous	rs62070631	17	29,087,285	G	A
Previous	rs11658500	17	36,886,828	A	G
Previous	rs8067511	17	37,611,352	T	C
Previous	rs17577877	17	44,208,218	A	G
Previous	rs6501431	17	68,976,415	T	C
Previous	rs1859962	17	69,108,753	T	G
Previous	rs7218675	17	73,513,185	A	C
Previous	rs633286	18	8,809,273	T	C
Previous	rs7243351	18	20,148,531	C	T
Previous	rs7238093	18	20,728,158	T	A
Previous	rs8089865	18	50,957,922	A	G
Previous	rs9636166	19	31,829,613	C	A
Previous	rs113473882	19	41,124,155	T	C
Previous	rs6140050	20	6,632,901	A	C
Previous	rs6138639	20	25,669,052	G	C
Previous	rs1737889	20	31,042,176	T	C
Previous	rs6088813	20	33,975,181	A	C
Previous	rs2236519	20	45,529,571	G	A
Previous	rs6062304	20	62,351,539	T	A
Previous	rs2834440	21	35,690,499	G	A
Previous	rs11704827	22	18,450,287	A	T
Previous	rs4820216	22	20,854,161	T	C
Previous	rs2283847	22	28,181,399	T	C

Source	Beta	Weight
SpiroMeta	-0.022	1.102
SpiroMeta	-0.004	0.203
SpiroMeta	-0.002	0.127
SpiroMeta	-0.013	0.652
SpiroMeta	-0.019	0.975
SpiroMeta	-0.044	2.227
SpiroMeta	-0.029	1.495
SpiroMeta	-0.017	0.855
SpiroMeta	-0.024	1.195
SpiroMeta	-0.015	0.761
SpiroMeta	-0.036	1.804
SpiroMeta	-0.003	0.137
SpiroMeta	-0.015	0.76
SpiroMeta	-0.025	1.276
SpiroMeta	-0.022	1.137
UK Biobank	-0.014	0.729
SpiroMeta	-0.025	1.246
SpiroMeta	-0.04	2.051
SpiroMeta	-0.01	0.514
SpiroMeta	-0.023	1.152
SpiroMeta	-0.014	0.689
SpiroMeta	-0.007	0.36
UK Biobank	-0.002	0.106
UK Biobank	-0.012	0.596
SpiroMeta	-0.007	0.36
SpiroMeta	-0.021	1.089
SpiroMeta	-0.021	1.054
SpiroMeta	-0.002	0.095
UK Biobank	-0.003	0.174
SpiroMeta	-0.02	1.04
SpiroMeta	-0.003	0.131
UK Biobank	-0.017	0.85
UK Biobank	-0.004	0.191
SpiroMeta	-0.034	1.702
SpiroMeta	-0.003	0.13
UK Biobank	-0.009	0.465
SpiroMeta	-0.01	0.53
SpiroMeta	-0.009	0.456
SpiroMeta	-0.001	0.072
UK Biobank	-0.002	0.113
UK Biobank	-0.004	0.192
SpiroMeta	-0.006	0.294
SpiroMeta	-0.019	0.968
SpiroMeta	-0.015	0.757
SpiroMeta	-0.087	4.419
SpiroMeta	-0.008	0.386
SpiroMeta	-0.007	0.377

SpiroMeta	-0.021	1.061
SpiroMeta	-0.018	0.917
SpiroMeta	-0.011	0.577
SpiroMeta	-0.041	2.075
SpiroMeta	-0.008	0.422
SpiroMeta	-0.018	0.93
SpiroMeta	-0.03	1.513
SpiroMeta	-0.031	1.596
SpiroMeta	-0.068	3.446
SpiroMeta	-0.032	1.644
SpiroMeta	-0.02	1.028
SpiroMeta	-0.00058	0.03
SpiroMeta	-0.011	0.574
UK Biobank	-0.0004	0.02
SpiroMeta	-0.021	1.087
UK Biobank	-0.007	0.342
SpiroMeta	-0.007	0.331
SpiroMeta	-6.7E-05	0.003
SpiroMeta	-0.002	0.126
SpiroMeta	-0.017	0.84
SpiroMeta	-0.029	1.472
SpiroMeta	-0.016	0.796
UK Biobank	-0.004	0.224
SpiroMeta	-0.002	0.115
SpiroMeta	-0.002	0.099
SpiroMeta	-0.006	0.316
UK Biobank	-0.016	0.832
SpiroMeta	-0.018	0.909
SpiroMeta	-0.017	0.865
SpiroMeta	-0.007	0.354
SpiroMeta	-0.00067	0.034
SpiroMeta	-0.006	0.327
SpiroMeta	-0.029	1.455
SpiroMeta	-0.019	0.981
UK Biobank	-0.01	0.494
SpiroMeta	-0.019	0.969
SpiroMeta	-0.015	0.749
SpiroMeta	-0.005	0.266
UK Biobank	-0.018	0.918
SpiroMeta	-0.019	0.965
SpiroMeta	-0.003	0.158
SpiroMeta	-0.023	1.146
UK Biobank	-0.014	0.7
SpiroMeta	-0.021	1.052
SpiroMeta	-0.015	0.772
SpiroMeta	-0.026	1.298
SpiroMeta	-0.025	1.28
SpiroMeta	-0.034	1.73
SpiroMeta	-0.013	0.651
SpiroMeta	-0.003	0.175

SpiroMeta	-0.036	1.841
SpiroMeta	-0.021	1.091
SpiroMeta	-0.018	0.939
SpiroMeta	-0.04	2.037
SpiroMeta	-0.003	0.177
SpiroMeta	-0.016	0.788
UK Biobank	-3.9E-05	0.002
SpiroMeta	-0.011	0.568
SpiroMeta	-0.033	1.676
SpiroMeta	-0.04	2.038
SpiroMeta	-0.038	1.934
UK Biobank	-0.032	1.622
SpiroMeta	-0.006	0.281
SpiroMeta	-0.024	1.23
UK Biobank	-0.003	0.139
SpiroMeta	-0.006	0.293
SpiroMeta	-0.073	3.718
SpiroMeta	-0.033	1.671
UK Biobank	-0.016	0.794
SpiroMeta	-0.02	1.005
UK Biobank	-0.007	0.343
UK Biobank	-0.006	0.301
UK Biobank	-0.011	0.579
UK Biobank	-6.3E-05	0.003
UK Biobank	-0.00034	0.017
SpiroMeta	-0.01	0.516
SpiroMeta	-0.024	1.238
UK Biobank	-0.027	1.37
SpiroMeta	-0.026	1.342
SpiroMeta	-0.042	2.12
SpiroMeta	-0.024	1.241
SpiroMeta	-0.021	1.071
UK Biobank	-0.014	0.734
SpiroMeta	-0.00092	0.047
SpiroMeta	-0.003	0.131
SpiroMeta	-0.012	0.61
UK Biobank	-0.00017	0.009
SpiroMeta	-0.009	0.455
SpiroMeta	-0.003	0.135
SpiroMeta	-0.017	0.879
SpiroMeta	-0.035	1.786
UK Biobank	-0.008	0.404
UK Biobank	-0.038	1.94
SpiroMeta	-0.021	1.077
SpiroMeta	-0.036	1.85
SpiroMeta	-0.014	0.733
SpiroMeta	-0.003	0.156
UK Biobank	-0.009	0.444
UK Biobank	-0.004	0.198
UK Biobank	-0.014	0.688

UK Biobank	-0.002	0.116
UK Biobank	-0.014	0.704
UK Biobank	-0.013	0.64
UK Biobank	-0.022	1.132
UK Biobank	-0.014	0.711
SpiroMeta	-0.014	0.696
UK Biobank	-0.047	2.369
UK Biobank	-0.016	0.789
UK Biobank	-0.002	0.125
UK Biobank	-0.033	1.666
UK Biobank	-0.022	1.121
UK Biobank	-0.082	4.166
SpiroMeta	-0.018	0.889
UK Biobank	-0.049	2.496
UK Biobank	-0.043	2.192
UK Biobank	-0.03	1.506
SpiroMeta	-0.015	0.741
UK Biobank	-0.018	0.901
SpiroMeta	-0.005	0.233
UK Biobank	-0.006	0.287
SpiroMeta	-0.015	0.762
UK Biobank	-0.006	0.291
SpiroMeta	-0.013	0.644
UK Biobank	-0.012	0.591
UK Biobank	-0.015	0.781
SpiroMeta	-0.046	2.349
UK Biobank	-0.045	2.275
SpiroMeta	-0.016	0.796
UK Biobank	-0.047	2.367
SpiroMeta	-0.052	2.639
UK Biobank	-0.074	3.742
UK Biobank	-0.027	1.377
SpiroMeta	-0.007	0.363
UK Biobank	-0.005	0.269
SpiroMeta	-0.02	1.023
SpiroMeta	-0.001	0.068
UK Biobank	-0.011	0.574
UK Biobank	-0.028	1.423
SpiroMeta	-0.009	0.452
UK Biobank	-0.054	2.717
SpiroMeta	-0.011	0.553
SpiroMeta	-0.041	2.062
UK Biobank	-0.037	1.897
UK Biobank	-0.032	1.644
UK Biobank	-0.016	0.826
UK Biobank	-0.006	0.282
UK Biobank	-0.031	1.554
UK Biobank	-0.034	1.713
UK Biobank	-0.15	7.604
SpiroMeta	-0.025	1.273

SpiroMeta	-0.023	1.177
UK Biobank	-0.048	2.455
UK Biobank	-0.004	0.183
UK Biobank	-0.076	3.882
UK Biobank	-0.182	9.253
SpiroMeta	-0.01	0.492
UK Biobank	-0.006	0.281
SpiroMeta	-0.013	0.635
SpiroMeta	-0.021	1.067
UK Biobank	-0.003	0.133
SpiroMeta	-0.019	0.989
UK Biobank	-0.024	1.231
UK Biobank	-0.044	2.238
UK Biobank	-0.024	1.234
UK Biobank	-0.023	1.187
UK Biobank	-0.007	0.372
SpiroMeta	-0.006	0.314
UK Biobank	-0.044	2.224
SpiroMeta	-0.015	0.782
UK Biobank	-0.009	0.48
SpiroMeta	-0.005	0.239
UK Biobank	-0.014	0.721
UK Biobank	-0.005	0.238
UK Biobank	-0.021	1.057
UK Biobank	-0.019	0.969
UK Biobank	-0.021	1.054
UK Biobank	-0.00076	0.039
UK Biobank	-0.011	0.558
SpiroMeta	-0.004	0.203
UK Biobank	-0.033	1.666
SpiroMeta	-0.026	1.324
SpiroMeta	-0.028	1.44
UK Biobank	-0.003	0.14
UK Biobank	-0.016	0.802
UK Biobank	-0.023	1.175
SpiroMeta	-0.006	0.305
UK Biobank	-0.004	0.181
UK Biobank	-0.001	0.075
SpiroMeta	-0.017	0.859
UK Biobank	-0.043	2.169
UK Biobank	-0.01	0.509
SpiroMeta	-0.002	0.103
UK Biobank	-0.026	1.312
SpiroMeta	-0.002	0.08
UK Biobank	-0.007	0.372
UK Biobank	-0.007	0.35
UK Biobank	-0.023	1.146
SpiroMeta	-0.019	0.948
UK Biobank	-0.014	0.725
UK Biobank	-0.069	3.481

SpiroMeta	-0.029	1.466
SpiroMeta	-0.016	0.829
UK Biobank	-0.02	1.024
UK Biobank	-0.004	0.22
UK Biobank	-0.037	1.9
UK Biobank	-0.006	0.283
UK Biobank	-0.04	2.01
UK Biobank	-0.002	0.117
SpiroMeta	-0.02	1.004
UK Biobank	-0.004	0.221
SpiroMeta	-0.018	0.904
UK Biobank	-0.001	0.051
SpiroMeta	-0.00045	0.023
UK Biobank	-0.011	0.581
UK Biobank	-0.013	0.652
SpiroMeta	-0.011	0.538
UK Biobank	-0.026	1.326
UK Biobank	-0.003	0.149
UK Biobank	-0.006	0.303
UK Biobank	-0.009	0.456
UK Biobank	-0.04	2.027
UK Biobank	-0.157	7.964
SpiroMeta	-0.005	0.241
UK Biobank	-0.016	0.828
UK Biobank	-0.019	0.962
UK Biobank	-0.006	0.29
UK Biobank	-0.006	0.289
SpiroMeta	-0.003	0.131
UK Biobank	-0.024	1.234
SpiroMeta	-0.019	0.975
UK Biobank	-0.019	0.984
SpiroMeta	-0.017	0.868

Supplementary Table 29: Associations of 279 variants with COPD in all ancestral groups of UK Bi

All UK Biobank individuals are unrelated. COPD defined as FEV1<80% predicted and FEV1/FVC<0.7. Analyse Chr=Chromosome; BP=position (GRCh37); Risk=FEV1/FVC decreasing allele in GWAS; NonRisk=other allele; Four variants were unavailable in China Kadoorie Biobank; twelve variants required a proxy - this is given in

SNP	General signal info (frequencies from UKB Europeans)					Africans (Cases=172; C		
	Alias	Chr	BP	Risk	NonRisk	FreqRisk	Beta	SE
rs9661802		1	6678864	C	A	0.337	0.089	0.118
rs2284746		1	17306675	G	C	0.522	0.176	0.158
rs12737805		1	22612690	G	A	0.219	0.041	0.160
rs9438626		1	26775367	G	C	0.791	0.121	0.115
rs12096239		1	26796922	C	G	0.253	0.139	0.177
rs17513135		1	40035686	T	C	0.226	0.209	0.504
rs1416685		1	51243374	G	C	0.592	0.017	0.116
rs72673461		1	60966772	G	T	0.050	0.158	0.205
rs9661687		1	78387270	T	C	0.866	0.085	0.121
rs1192404		1	92068967	G	A	0.154	0.179	0.123
rs10874851		1	92106637	A	C	0.477	-0.088	0.204
rs12140637		1	92374517	T	C	0.319	0.042	0.253
rs9970286		1	111737398	G	A	0.672	-0.050	0.126
rs60804050		1	118870373	A	G	0.257	-0.108	0.124
rs11205354		1	150249101	C	A	0.556	0.260	0.187
rs6681426		1	150586971	G	A	0.351	0.012	0.124
rs141942982		1	155137395	T	G	0.109	0.004	0.118
rs4651005		1	178719306	C	T	0.682	-0.020	0.213
rs2146098		1	186090370	G	A	0.353	0.035	0.132
rs17531405		1	186113852	G	C	0.819	-0.478	0.526
rs10919604		1	198898157	G	A	0.397	0.092	0.122
rs2821332		1	200085714	A	T	0.434	0.039	0.119
rs4309038		1	201884647	G	C	0.567	0.158	0.137
rs12092943		1	204434927	T	G	0.824	0.067	0.127
rs512597		1	215095003	C	T	0.188	0.086	0.117
rs2799098		1	218521609	A	G	0.822	0.194	0.263
rs4846480		1	218598469	A	T	0.730	0.105	0.117
rs993925		1	218860068	C	T	0.652	0.042	0.120
rs75128958		1	219483218	A	G	0.077	-0.072	0.996
rs4328080		1	219963088	G	A	0.375	-0.179	0.120
rs17009288		1	221204299	C	A	0.293	-0.009	0.128
rs6657854		1	221630555	C	A	0.277	-0.012	0.324
rs6688537		1	239850588	A	C	0.485	0.119	0.121
rs2544536		2	15906854	T	C	0.489	0.138	0.117
rs62126408		2	18309132	T	C	0.858	0.213	0.213
rs6751968		2	18570024	A	C	0.177	0.156	0.114
rs13430465		2	18702313	T	C	0.080	0.306	0.202
rs13009582		2	24018480	G	A	0.550	0.022	0.124
rs732990		2	26842146	G	C	0.557	-0.004	0.126
rs4952564		2	42243850	G	A	0.320	-0.030	0.119
rs1430193		2	56120853	A	T	0.652	-0.004	0.136
rs12470864		2	102926362	A	G	0.388	0.033	0.173
rs2322659		2	136555659	C	T	0.808	0.161	0.119

rs1406225	2	145797829	T	G	0.281	0.246	0.116
rs72904209	2	157046432	C	T	0.135	-0.139	0.464
rs7424771	2	161276378	A	G	0.445	-0.171	0.115
rs2304340	2	179260382	G	A	0.592	-0.243	0.134
rs2084448	2	187530520	C	T	0.293	-0.113	0.144
rs1249096	2	199723365	G	A	0.438	-0.117	0.120
rs985256	2	201208692	C	A	0.783	-0.147	0.149
rs12997625	2	202970250	C	T	0.472	0.130	0.139
rs6435952	2	217614730	T	A	0.852	0.084	0.134
rs4294980	2	218604356	G	A	0.212	0.040	0.115
rs2571445	2	218683154	A	G	0.396	-0.134	0.148
rs4674407	2	220382700	C	T	0.501	-0.117	0.116
rs10498230	2	229502503	C	T	0.921	0.442	0.227
rs61332075	2	239316560	G	C	0.874	-0.567	0.738
rs6431620	2	239604970	T	G	0.790	0.037	0.125
rs12477314	2	239877148	C	T	0.803	-0.151	0.498
rs6437219	2	241844033	T	C	0.519	-0.340	0.131
rs6733504	2	242495953	G	A	0.454	0.044	0.113
rs2974389	3	13787641	G	A	0.576	-0.057	0.114
rs73048404	3	25179533	T	G	0.852	0.695	0.595
rs1286664	3	25529280	C	T	0.823	0.234	0.143
rs17666332	3	29469675	G	T	0.280	-0.233	0.318
rs1458979	3	55150677	G	A	0.482	0.103	0.115
rs79294353	3	57494433	A	C	0.915	-0.592	0.528
rs1490265	3	67452043	C	A	0.303	-0.108	0.144
rs35480566	3	71583177	A	G	0.559	-0.003	0.151
rs586936	3	73862616	A	G	0.401	0.043	0.114
rs6778584	3	98815640	C	T	0.251	0.202	0.115
rs1610265	3	99420192	C	T	0.923	0.096	0.149
rs2811415	3	127991527	G	A	0.836	-0.144	0.120
rs1595029	3	158241767	A	C	0.522	-0.033	0.118
rs1799807	3	165548529	C	T	0.020	-1.056	1.617
rs56341938	3	168715808	A	G	0.489	0.296	0.228
rs1344555	3	169300219	T	C	0.203	-0.095	0.142
rs6780171	3	185503456	A	T	0.313	0.159	0.116
rs28520091	4	7846240	C	T	0.535	-0.017	0.164
rs12331869	4	56012149	A	G	0.179	-0.069	0.114
rs62316310	4	75676529	G	A	0.738	-0.101	0.128
rs11098196	4	79403952	T	G	0.505	0.196	0.137
rs13110699	4	89815695	G	T	0.813	0.054	0.179
rs2045517	4	89870964	T	C	0.405	0.020	0.125
rs2007403	4	106131210	T	C	0.619	0.070	0.125
rs10516526	4	106688904	A	G	0.935	0.284	0.289
rs34712979	4	106819053	A	G	0.246	0.072	0.544
rs13109426	4	145330628	G	A	0.409	-0.075	0.165
rs12504628	4	145436324	T	C	0.609	0.066	0.192
rs13116999	4	145442364	G	A	0.466	0.160	0.157
rs111898810	4	146174040	A	C	0.238	0.864	0.506
rs11739847	5	609661	A	G	0.201	0.122	0.487
rs91731	5	33334312	A	C	0.908	0.120	0.153

rs4866846	5	43976162	G	A	0.851	0.087	0.116
rs1448044	5	44296986	A	G	0.324	0.068	0.121
rs1551943	5	52195033	A	G	0.224	0.616	0.320
rs2441026	5	53444498	C	T	0.531	0.028	0.116
rs72776440	5	77440196	G	C	0.765	0.246	0.342
rs153916	5	95036700	T	C	0.548	-0.011	0.112
rs10059661	5	121410529	C	G	0.826	0.138	0.207
rs17163397	5	128767384	A	G	0.875	-0.229	0.172
rs7713065	5	131788334	A	C	0.273	0.272	0.133
rs7715901	5	147856392	A	G	0.603	0.197	0.126
rs1800888	5	148206885	T	C	0.015	-1.061	2.112
rs2014787	5	148611675	C	G	0.454	0.023	0.121
rs10515750	5	156810072	T	C	0.070	0.335	0.198
rs1990950	5	156920756	G	T	0.605	0.218	0.124
rs10059996	5	170901463	T	G	0.354	-0.020	0.151
rs79898473	5	179598771	T	C	0.668	-0.025	0.185
rs1294421	6	6743149	T	G	0.393	0.028	0.136
rs55938083	6	7565376	C	T	0.710	0.148	0.131
rs12198986	6	7720059	A	G	0.478	-0.232	0.140
rs6924424	6	7801611	T	G	0.843	-0.044	0.117
rs1928168	6	22017738	C	T	0.516	-0.026	0.205
rs34864796	6	27459923	A	G	0.126	0.016	0.151
rs2070600	6	32151443	C	T	0.936	-0.005	1.048
rs114544105 rs3844313	6	32635629	A	G	0.226	0.120	0.150
rs9689096	6	34188892	A	C	0.937	-0.152	0.128
rs9357446	6	44447598	G	A	0.483	0.143	0.164
rs12202314	6	45530471	T	C	0.675	-0.044	0.124
rs9472541	6	45622748	T	A	0.716	-0.220	0.179
rs2894837	6	56336406	G	A	0.364	0.150	0.123
rs16883089	6	73658053	T	C	0.790	0.239	0.179
rs2768551	6	109270656	A	G	0.188	0.123	0.158
rs11759026	6	126792095	G	A	0.227	-0.123	0.231
rs2627237	6	134339265	G	A	0.412	0.099	0.112
rs1102077	6	140271357	A	C	0.756	-0.104	0.176
rs9385988	6	142560957	A	G	0.725	0.144	0.138
rs7753012	6	142745883	T	G	0.695	-0.055	0.296
rs148274477	6	142838173	C	T	0.972	-1.279	0.526
rs10246303	7	7286445	T	A	0.433	0.106	0.180
rs55905169	7	15506529	G	C	0.839	0.014	0.202
rs4721457	7	15872324	C	T	0.148	0.238	0.166
rs559233	7	26848830	C	T	0.514	-0.106	0.118
rs62454414	7	27182329	T	G	0.870	1.139	0.592
rs1513272	7	28200097	C	T	0.499	-0.320	0.137
rs17232687	7	46448518	C	T	0.505	-0.097	0.161
rs12707691	7	84569510	C	G	0.662	-0.114	0.188
rs72615157	7	99635967	G	A	0.825	0.244	0.497
rs193686	7	116431427	T	C	0.682	-0.079	0.116
rs12698403	7	156127246	A	G	0.442	-0.143	0.127
rs330939	8	9018590	G	T	0.376	-0.218	0.145
rs4128298	8	11823332	T	C	0.715	0.026	0.139

rs7465401	8	70367248	T	C	0.729	0.076	0.132
rs7838717	8	145504343	C	T	0.635	0.012	0.244
rs771924	9	1555835	A	T	0.425	-0.168	0.125
rs7872188	9	4124377	T	C	0.382	-0.167	0.118
rs7041139	9	18013733	T	C	0.323	-0.202	0.114
rs10965947	9	23588583	C	T	0.541	0.082	0.132
rs16909859	9	98204792	A	G	0.081	-0.181	0.120
rs72743974	9	98878881	A	G	0.834	0.212	0.158
rs57649467	9	101632854	G	A	0.612	-0.063	0.116
rs2451951	9	109496630	C	T	0.493	-0.763	0.285
rs803923	9	119401650	A	G	0.536	-0.012	0.121
rs967497	9	131943843	G	A	0.688	0.065	0.123
rs10858246	9	139102831	G	C	0.680	-0.387	0.345
rs10870202	9	139257411	C	T	0.497	-0.012	0.116
rs7090277	10	12278021	T	A	0.484	0.028	0.151
rs3847402	10	30267810	A	G	0.425	-0.125	0.143
rs1274475	10	34480582	G	A	0.608	0.128	0.272
rs7899503	10	65087468	G	C	0.857	0.420	0.476
rs7095607	10	69957350	A	G	0.495	0.143	0.124
rs3849969	10	75525999	G	A	0.719	0.054	0.112
rs60820984	10	75639578	T	C	0.188	0.161	0.180
rs1259524	10	77004644	G	T	0.766	-0.027	0.217
rs2637254	10	78312002	A	G	0.510	0.164	0.139
rs2256462	10	81685593	T	C	0.362	-0.118	0.167
rs11191841	10	105639611	T	C	0.494	-0.028	0.120
rs2293871	10	124273671	C	T	0.827	-0.074	0.163
rs10836366	11	35308988	C	T	0.250	0.175	0.125
rs4237643	11	43648368	T	G	0.310	0.129	0.115
rs2863171	11	45250732	A	C	0.844	0.052	0.116
rs2509961	11	62310909	T	C	0.638	0.202	0.128
rs11235809	11	73290163	A	G	0.886	-0.069	0.111
rs7108254	11	86436086	G	T	0.160	0.804	0.671
rs567508	11	126008910	G	A	0.168	0.026	0.121
rs56196860	12	2908330	C	A	0.969	-0.426	1.222
rs12811814	12	4243749	T	C	0.458	0.239	0.130
rs10841302	12	19808912	G	C	0.452	-0.027	0.152
rs2348418	12	28689514	T	C	0.542	-0.049	0.129
rs772920	12	56390364	G	C	0.337	0.169	0.255
rs11172113	12	57527283	T	C	0.587	0.000	0.113
rs1244869	12	65075332	G	T	0.369	0.174	0.139
rs1494502	12	65824670	G	A	0.385	0.014	0.134
rs11176001	12	66409367	A	C	0.131	-0.656	0.321
rs7971039	12	85724305	G	A	0.710	0.135	0.160
rs11107184	12	94184082	C	T	0.684	0.084	0.129
rs113745635	12	95554771	T	C	0.232	-0.002	0.147
rs12820313	12	96255704	C	T	0.794	0.475	0.157
rs972936	12	102824921	C	T	0.740	0.167	0.118
rs2701110	12	114669870	C	A	0.831	-0.067	0.175
rs10850377	12	115201436	G	A	0.657	0.256	0.164
rs35506	12	115500691	A	T	0.722	0.067	0.179

rs9533803	13	44820608	T	C	0.214	-0.387	0.255
rs2812208	13	50707087	G	C	0.979	1.073	1.169
rs803765	13	71647588	C	A	0.654	0.285	0.168
rs4885681	13	80467235	C	T	0.275	-0.060	0.137
rs11620380	13	99665512	A	C	0.105	0.450	0.373
rs9634470	13	109918493	T	C	0.732	0.099	0.149
rs1951121	14	23429729	G	T	0.398	-0.084	0.114
rs74053129	14	54346010	G	A	0.904	0.303	0.517
rs4444235	14	54410919	C	T	0.464	-0.216	0.122
rs10141786	14	74817418	A	G	0.403	-0.039	0.189
rs1698268	14	84309664	T	A	0.271	-0.088	0.118
rs7155279	14	92485881	G	T	0.636	-0.150	0.115
rs72699866	14	93114787	G	A	0.810	0.028	0.222
rs34245505	15	40397191	C	G	0.804	0.725	0.478
rs2304645	15	40716253	C	G	0.516	-0.211	0.147
rs4924525	15	41255396	C	A	0.480	-0.010	0.121
rs1200345	15	41819716	C	T	0.495	-0.052	0.118
rs72724130	15	41977690	T	A	0.049	0.677	1.014
rs79234094	15	49409527	G	A	0.740	-0.371	0.287
rs35251997	15	49706145	A	T	0.931	0.469	0.309
rs62012772	15	63866877	T	C	0.824	0.178	0.675
rs8025774	15	67483276	C	T	0.775	0.174	0.256
rs10851839	15	71628370	T	A	0.332	0.193	0.114
rs12591467	15	71788387	C	T	0.319	0.109	0.224
rs7176074	15	73833600	G	T	0.950	-0.207	0.114
rs12438269	15	84502549	C	T	0.792	0.029	0.134
rs3751837	16	3583173	C	T	0.781	-0.033	0.131
rs56104880	16	4361138	C	T	0.304	0.074	0.135
rs11074547	16	10136889	G	T	0.262	0.042	0.114
rs12149593	16	10704535	A	C	0.176	0.056	0.279
rs181206	16	28513403	G	A	0.333	0.222	0.475
rs76219171	16	50188929	G	A	0.939	-0.823	0.842
rs35420030	16	53935407	T	C	0.948	1.062	1.169
rs12447804	16	58075282	T	C	0.222	-0.228	0.353
rs3973397	16	70040398	A	G	0.399	0.289	0.210
rs3743609	16	75467021	C	G	0.589	-0.039	0.134
rs1079572	16	78187138	G	A	0.419	0.038	0.114
rs12918140	16	86403821	C	G	0.116	-0.662	0.782
rs6539952	16	86579223	A	C	0.260	-0.020	0.130
rs8082036	17	3882613	G	C	0.486	-0.131	0.150
rs4796334	17	6469793	A	G	0.503	0.193	0.125
rs1215	17	7163350	A	G	0.857	-0.973	0.606
rs4968200	17	7448457	C	G	0.143	0.066	0.115
rs34351630	17	16030520	C	T	0.534	0.089	0.128
rs62070270	17	28263980	G	A	0.453	-0.152	0.155
rs62070631	17	29087285	G	A	0.825	0.520	0.267
rs11658500	17	36886828	A	G	0.137	0.187	0.647
rs8067511	17	37611352	T	C	0.843	-0.029	0.125
rs17577877	17	44208218	A	G	0.799	0.220	0.544
rs12945803	17	46552229	T	C	0.783	-0.080	0.161

rs28519449	17	54195453	T	C	0.404	0.069	0.158
rs8068952	17	59286644	C	G	0.785	0.126	0.219
rs77672322	17	62497964	C	T	0.973	1.047	1.626
rs11653958	17	62686730	G	A	0.257	0.502	0.403
rs6501431	17	68976415	T	C	0.784	0.174	0.156
rs1859962	17	69108753	T	G	0.533	0.006	0.125
rs996865	17	69371318	T	C	0.077	0.106	0.130
rs7218675	17	73513185	A	C	0.720	0.065	0.180
rs59606152	17	79952944	T	C	0.112	-0.107	0.316
rs633286	18	8809273	T	C	0.272	-0.082	0.119
rs8089099	18	10078071	G	A	0.726	0.005	0.190
rs1985511	18	19816712	T	A	0.552	-0.074	0.115
rs7243351	18	20148531	C	T	0.473	0.144	0.254
rs7238093	18	20728158	T	A	0.787	-0.069	0.204
rs303752	18	21074255	G	A	0.592	-0.108	0.240
rs1668091	18	22290711	C	T	0.319	0.046	0.122
rs9807668	18	42827898	C	T	0.905	-0.765	0.678
rs8089865	18	50957922	A	G	0.579	-0.002	0.121
rs2202572	18	53566471	C	A	0.669	-0.148	0.118
rs11085744	19	10819967	T	C	0.560	-0.029	0.121
rs9636166	19	31829613	C	A	0.126	-0.012	0.214
rs2967516	19	36881643	G	A	0.292	0.419	0.122
rs113473882	19	41124155	T	C	0.989	1.058	2.376
rs6140050	20	6632901	A	C	0.645	-0.004	0.117
rs6032942	20	10745545	G	C	0.768	0.131	0.154
rs6138639	20	25669052	G	C	0.179	0.290	0.219
rs1737889	20	31042176	T	C	0.204	0.148	0.121
rs6088813	20	33975181	A	C	0.632	-0.045	0.119
rs2236519	20	45529571	G	A	0.622	0.050	0.228
rs6062304	20	62351539	T	A	0.687	-0.050	0.125
rs12627254	21	35368402	G	T	0.872	0.540	0.520
rs2834440	21	35690499	G	A	0.382	-0.101	0.120
rs11704827	22	18450287	A	T	0.768	0.364	0.149
rs4820216	22	20854161	T	C	0.149	0.043	0.336
rs2283847	22	28181399	T	C	0.567	-0.227	0.134
rs113111175	22	50867711	C	T	0.877	-0.809	0.672

obank, plus China Kadoorie Biobank, and a fixed-effect meta-analysis of 5 additional Europea
 es in UK Biobank were run using SNPTEST v2.5, in unrelated individuals, with covariates age, age², sex,
 e; FreqRisk=allele frequency of risk allele in 321,047 UK Biobank Europeans in main GWAS; Beta=effect e
 in the column 'CKB_Proxy_used', along with the corresponding risk allele for the proxy varian

Controls=4B Asians (Cases=312; Controls=6,00eans (Cases=15,103; Controls=21ixed Other (Cases=281									
P	Beta	SE	P	Beta	SE	P	Beta	SE	
4.522E-01	0.205	0.084	1.435E-02	0.026	0.013	4.642E-02	0.124	0.092	
2.660E-01	0.077	0.083	3.528E-01	0.047	0.012	1.231E-04	0.076	0.088	
7.963E-01	0.256	0.103	1.289E-02	0.005	0.015	7.549E-01	-0.179	0.112	
2.901E-01	0.143	0.084	8.794E-02	0.027	0.015	7.248E-02	0.083	0.102	
4.334E-01	0.156	0.090	8.285E-02	0.021	0.014	1.308E-01	0.076	0.098	
6.789E-01	0.365	0.161	2.329E-02	0.064	0.014	8.832E-06	0.209	0.112	
8.813E-01	-0.154	0.088	7.809E-02	0.030	0.012	1.544E-02	0.051	0.089	
4.418E-01	0.123	0.257	6.328E-01	0.100	0.028	3.467E-04	0.441	0.275	
4.828E-01	0.038	0.095	6.910E-01	0.054	0.018	2.300E-03	0.069	0.123	
1.467E-01	0.047	0.096	6.243E-01	0.024	0.017	1.441E-01	-0.031	0.114	
6.649E-01	0.146	0.083	7.767E-02	0.018	0.012	1.346E-01	-0.017	0.090	
8.693E-01	0.136	0.088	1.198E-01	0.035	0.013	8.423E-03	0.071	0.095	
6.897E-01	0.115	0.096	2.288E-01	0.049	0.013	1.362E-04	-0.045	0.105	
3.806E-01	-0.093	0.090	3.030E-01	-0.019	0.014	1.644E-01	-0.088	0.099	
1.649E-01	0.024	0.087	7.794E-01	0.017	0.012	1.637E-01	0.085	0.089	
9.198E-01	0.089	0.083	2.855E-01	-0.009	0.013	4.558E-01	-0.010	0.090	
9.701E-01	-0.114	0.160	4.754E-01	0.034	0.020	8.356E-02	0.238	0.142	
9.265E-01	-0.207	0.113	6.664E-02	0.006	0.013	6.715E-01	0.144	0.102	
7.885E-01	-0.084	0.083	3.117E-01	0.024	0.013	6.359E-02	-0.018	0.090	
3.636E-01	0.200	0.157	2.014E-01	0.043	0.016	7.372E-03	0.131	0.111	
4.513E-01	0.020	0.090	8.292E-01	0.010	0.012	4.285E-01	-0.097	0.090	
7.453E-01	0.081	0.082	3.250E-01	-0.017	0.012	1.673E-01	-0.120	0.090	
2.491E-01	-0.011	0.086	9.012E-01	0.011	0.012	3.667E-01	-0.009	0.089	
5.969E-01	0.127	0.091	1.616E-01	0.020	0.016	2.149E-01	-0.173	0.113	
4.595E-01	-0.106	0.088	2.289E-01	-0.003	0.016	8.382E-01	-0.098	0.099	
4.597E-01	-0.055	0.091	5.413E-01	0.053	0.016	8.839E-04	0.087	0.108	
3.703E-01	0.031	0.087	7.207E-01	0.042	0.014	2.091E-03	0.017	0.095	
7.269E-01	0.022	0.091	8.119E-01	0.013	0.013	3.261E-01	-0.109	0.097	
9.423E-01	0.038	0.150	7.983E-01	0.068	0.023	2.980E-03	-0.004	0.166	
1.368E-01	-0.015	0.083	8.577E-01	0.047	0.013	2.188E-04	0.196	0.090	
9.464E-01	-0.046	0.103	6.519E-01	-0.005	0.013	7.293E-01	-0.092	0.099	
9.697E-01	0.266	0.099	6.900E-03	0.004	0.014	7.736E-01	0.025	0.104	
3.235E-01	-0.126	0.084	1.337E-01	0.043	0.012	4.527E-04	-0.077	0.088	
2.388E-01	-0.012	0.083	8.839E-01	0.039	0.012	1.185E-03	0.136	0.090	
3.185E-01	0.013	0.124	9.158E-01	0.076	0.017	1.538E-05	0.008	0.118	
1.724E-01	0.041	0.089	6.473E-01	-0.054	0.016	7.108E-04	0.014	0.102	
1.308E-01	-0.295	0.157	6.009E-02	-0.054	0.023	1.754E-02	-0.070	0.171	
8.623E-01	-0.012	0.084	8.864E-01	0.034	0.012	5.092E-03	0.036	0.089	
9.768E-01	-0.053	0.085	5.353E-01	0.006	0.012	5.985E-01	-0.097	0.089	
8.011E-01	-0.026	0.085	7.584E-01	-0.029	0.013	2.379E-02	-0.052	0.093	
9.767E-01	0.026	0.084	7.583E-01	0.005	0.013	6.831E-01	0.022	0.091	
8.467E-01	0.171	0.085	4.555E-02	0.046	0.012	2.271E-04	0.109	0.093	
1.782E-01	-0.067	0.084	4.275E-01	0.029	0.016	6.198E-02	-0.030	0.095	

3.412E-02	-0.063	0.099	5.262E-01	0.032	0.013	1.898E-02	0.031	0.100
7.642E-01	0.116	0.118	3.264E-01	0.062	0.018	4.675E-04	0.035	0.139
1.380E-01	0.163	0.086	5.884E-02	0.038	0.012	1.799E-03	0.055	0.095
6.984E-02	-0.110	0.089	2.161E-01	-0.013	0.012	3.015E-01	-0.009	0.089
4.307E-01	-0.006	0.086	9.450E-01	0.018	0.013	1.803E-01	0.152	0.094
3.299E-01	0.124	0.088	1.589E-01	0.011	0.012	3.769E-01	-0.108	0.090
3.231E-01	0.174	0.134	1.922E-01	0.026	0.015	7.528E-02	0.115	0.110
3.492E-01	0.141	0.084	9.517E-02	-0.018	0.012	1.308E-01	-0.074	0.090
5.301E-01	-0.092	0.121	4.452E-01	0.025	0.017	1.477E-01	0.036	0.147
7.278E-01	0.065	0.091	4.766E-01	0.022	0.015	1.415E-01	0.059	0.102
3.651E-01	0.135	0.083	1.040E-01	0.064	0.012	2.500E-07	0.032	0.091
3.163E-01	-0.126	0.086	1.428E-01	-0.022	0.012	7.847E-02	-0.026	0.090
5.159E-02	0.130	0.119	2.735E-01	0.119	0.022	1.117E-07	0.092	0.171
4.421E-01	0.253	0.205	2.158E-01	0.060	0.019	1.132E-03	0.232	0.168
7.685E-01	0.184	0.100	6.421E-02	-0.055	0.015	2.368E-04	-0.130	0.102
7.617E-01	-0.025	0.126	8.421E-01	0.079	0.015	2.762E-07	0.175	0.113
9.292E-03	-0.002	0.090	9.845E-01	-0.006	0.013	6.491E-01	-0.088	0.094
6.954E-01	0.018	0.084	8.276E-01	0.008	0.012	5.232E-01	-0.043	0.089
6.198E-01	0.168	0.088	5.553E-02	0.018	0.012	1.526E-01	-0.064	0.088
2.427E-01	-0.038	0.150	8.005E-01	-0.004	0.017	8.126E-01	0.330	0.147
1.017E-01	0.159	0.121	1.904E-01	0.072	0.016	6.066E-06	0.061	0.127
4.640E-01	0.013	0.097	8.950E-01	0.071	0.014	2.073E-07	0.050	0.099
3.686E-01	0.148	0.085	8.164E-02	0.046	0.012	1.484E-04	0.062	0.090
2.627E-01	0.173	0.147	2.384E-01	0.024	0.022	2.788E-01	-0.062	0.132
4.542E-01	0.049	0.089	5.791E-01	0.030	0.013	2.491E-02	0.093	0.108
9.840E-01	0.089	0.101	3.809E-01	0.018	0.012	1.440E-01	0.085	0.092
7.065E-01	0.133	0.088	1.330E-01	0.034	0.013	7.144E-03	-0.210	0.091
8.093E-02	-0.122	0.096	2.019E-01	0.047	0.014	7.395E-04	-0.061	0.100
5.207E-01	-0.027	0.115	8.125E-01	-0.048	0.023	3.498E-02	-0.151	0.176
2.313E-01	0.157	0.107	1.413E-01	0.067	0.017	5.547E-05	-0.044	0.115
7.807E-01	0.121	0.085	1.549E-01	-0.002	0.012	8.587E-01	0.139	0.089
5.134E-01	-0.573	0.711	4.204E-01	0.168	0.043	1.049E-04	-0.068	0.340
1.935E-01	0.031	0.090	7.268E-01	0.055	0.012	5.417E-06	0.128	0.088
5.035E-01	-0.035	0.088	6.929E-01	0.040	0.015	8.000E-03	0.149	0.111
1.722E-01	-0.071	0.085	4.045E-01	0.007	0.013	6.142E-01	0.025	0.092
9.179E-01	0.110	0.086	1.975E-01	-0.009	0.012	4.689E-01	0.039	0.090
5.424E-01	-0.037	0.096	7.021E-01	0.051	0.016	1.344E-03	0.039	0.114
4.295E-01	0.037	0.094	6.967E-01	0.048	0.014	5.121E-04	-0.084	0.098
1.520E-01	-0.030	0.086	7.237E-01	0.017	0.012	1.652E-01	0.023	0.088
7.625E-01	-0.047	0.110	6.706E-01	0.088	0.016	3.995E-08	-0.121	0.115
8.736E-01	0.062	0.086	4.713E-01	0.061	0.012	1.036E-06	0.119	0.094
5.759E-01	0.118	0.085	1.656E-01	0.067	0.013	1.276E-07	0.069	0.089
3.248E-01	0.074	0.252	7.693E-01	0.118	0.025	1.743E-06	0.363	0.174
8.943E-01	0.148	0.157	3.455E-01	0.149	0.014	6.457E-27	0.108	0.118
6.477E-01	0.013	0.085	8.824E-01	-0.018	0.012	1.420E-01	0.088	0.089
7.321E-01	0.194	0.082	1.867E-02	0.116	0.012	1.102E-20	0.122	0.091
3.086E-01	0.002	0.111	9.837E-01	0.093	0.012	2.488E-14	0.052	0.090
8.753E-02	0.115	0.184	5.324E-01	0.084	0.014	6.437E-09	0.026	0.119
8.015E-01	0.020	0.109	8.550E-01	0.032	0.015	3.314E-02	0.176	0.120
4.346E-01	0.072	0.139	6.050E-01	0.023	0.021	2.724E-01	-0.145	0.151

4.543E-01	0.159	0.104	1.269E-01	0.058	0.017	7.321E-04	0.020	0.112
5.746E-01	-0.018	0.086	8.371E-01	-0.027	0.013	3.926E-02	0.021	0.095
5.404E-02	0.024	0.092	7.973E-01	0.044	0.014	2.137E-03	0.081	0.106
8.058E-01	-0.125	0.086	1.461E-01	0.018	0.012	1.413E-01	-0.086	0.090
4.733E-01	-0.169	0.124	1.714E-01	0.015	0.014	3.086E-01	0.043	0.115
9.199E-01	0.166	0.084	4.824E-02	0.059	0.012	1.393E-06	0.169	0.089
5.058E-01	0.117	0.115	3.070E-01	0.045	0.016	4.651E-03	0.041	0.115
1.830E-01	-0.105	0.107	3.236E-01	0.071	0.018	1.066E-04	0.219	0.128
4.078E-02	-0.021	0.085	8.010E-01	0.044	0.014	1.344E-03	0.083	0.110
1.168E-01	0.046	0.085	5.900E-01	0.117	0.012	4.058E-21	0.158	0.092
6.152E-01	1.355	0.587	2.088E-02	0.211	0.050	2.315E-05	0.592	0.412
8.485E-01	0.113	0.084	1.749E-01	0.061	0.012	4.583E-07	0.163	0.092
9.150E-02	-0.458	0.281	1.029E-01	0.120	0.024	3.822E-07	0.354	0.172
7.991E-02	0.026	0.086	7.667E-01	0.067	0.012	7.870E-08	0.204	0.090
8.933E-01	-0.007	0.092	9.377E-01	0.055	0.013	2.300E-05	0.035	0.093
8.939E-01	-0.045	0.089	6.172E-01	0.048	0.013	2.016E-04	0.094	0.097
8.363E-01	0.119	0.083	1.536E-01	0.041	0.012	9.853E-04	0.224	0.090
2.584E-01	0.094	0.094	3.177E-01	0.027	0.013	4.265E-02	0.113	0.102
9.810E-02	0.033	0.083	6.938E-01	0.018	0.012	1.282E-01	0.058	0.089
7.084E-01	0.032	0.131	8.080E-01	-0.020	0.017	2.422E-01	-0.057	0.128
8.995E-01	0.069	0.083	4.050E-01	0.039	0.012	1.408E-03	0.000	0.092
9.141E-01	0.193	0.663	7.704E-01	0.092	0.018	5.106E-07	0.065	0.193
9.964E-01	0.362	0.184	4.980E-02	0.164	0.025	3.538E-11	0.522	0.270
4.230E-01	-0.046	0.105	6.627E-01	0.102	0.014	6.420E-13	0.008	0.112
2.374E-01	-0.188	0.271	4.868E-01	0.061	0.025	1.533E-02	0.223	0.176
3.854E-01	0.100	0.099	3.133E-01	0.016	0.012	1.954E-01	-0.006	0.092
7.222E-01	0.152	0.103	1.419E-01	0.030	0.013	2.168E-02	-0.165	0.095
2.175E-01	0.004	0.088	9.663E-01	0.001	0.014	9.525E-01	-0.131	0.095
2.245E-01	0.058	0.086	5.011E-01	0.047	0.013	2.353E-04	-0.117	0.090
1.806E-01	0.221	0.105	3.532E-02	0.049	0.015	1.200E-03	0.042	0.128
4.371E-01	0.144	0.107	1.798E-01	0.054	0.016	5.360E-04	0.121	0.111
5.943E-01	-0.063	0.089	4.787E-01	-0.010	0.015	4.788E-01	0.114	0.099
3.773E-01	0.113	0.086	1.895E-01	0.019	0.012	1.250E-01	-0.056	0.090
5.550E-01	0.012	0.088	8.903E-01	-0.060	0.014	2.408E-05	0.013	0.097
2.971E-01	-0.037	0.102	7.132E-01	0.050	0.014	2.683E-04	0.006	0.109
8.539E-01	0.186	0.088	3.430E-02	0.110	0.013	1.119E-16	-0.053	0.094
1.514E-02	0.127	0.211	5.466E-01	0.184	0.037	9.241E-07	0.201	0.286
5.580E-01	0.014	0.086	8.704E-01	0.036	0.012	4.028E-03	0.070	0.090
9.433E-01	0.012	0.091	8.997E-01	-0.011	0.017	5.074E-01	-0.008	0.109
1.531E-01	0.242	0.175	1.674E-01	0.040	0.017	1.892E-02	-0.063	0.136
3.713E-01	0.227	0.087	9.374E-03	0.021	0.012	9.213E-02	0.011	0.089
5.452E-02	-0.196	0.156	2.088E-01	-0.020	0.018	2.773E-01	0.087	0.141
1.959E-02	-0.077	0.094	4.131E-01	0.023	0.012	6.281E-02	-0.027	0.089
5.459E-01	-0.004	0.090	9.638E-01	-0.020	0.012	1.030E-01	-0.088	0.091
5.455E-01	0.019	0.105	8.573E-01	0.019	0.013	1.455E-01	0.131	0.098
6.237E-01	0.173	0.099	8.173E-02	0.056	0.016	6.806E-04	-0.131	0.106
4.960E-01	0.115	0.112	3.034E-01	0.015	0.013	2.514E-01	0.249	0.099
2.606E-01	0.080	0.083	3.322E-01	0.036	0.012	3.024E-03	0.229	0.091
1.340E-01	0.154	0.084	6.656E-02	0.069	0.013	6.259E-08	-0.012	0.093
8.487E-01	0.194	0.115	9.264E-02	0.045	0.014	8.241E-04	0.110	0.101

5.657E-01	0.024	0.090	7.891E-01	0.047	0.014	5.416E-04	0.071	0.093
9.605E-01	-0.133	0.094	1.561E-01	-0.030	0.013	1.934E-02	-0.028	0.095
1.784E-01	-0.011	0.083	8.903E-01	0.017	0.012	1.759E-01	0.012	0.091
1.587E-01	-0.083	0.087	3.416E-01	0.052	0.012	2.635E-05	0.055	0.094
7.618E-02	-0.004	0.088	9.666E-01	0.023	0.013	7.386E-02	-0.040	0.096
5.380E-01	0.092	0.086	2.827E-01	0.058	0.012	1.592E-06	-0.088	0.088
1.312E-01	-0.160	0.154	2.978E-01	0.051	0.022	2.126E-02	0.168	0.182
1.799E-01	0.083	0.100	4.095E-01	0.060	0.016	2.567E-04	-0.248	0.120
5.891E-01	0.036	0.101	7.238E-01	0.061	0.013	1.181E-06	0.149	0.094
7.348E-03	0.040	0.087	6.402E-01	0.015	0.012	2.053E-01	0.096	0.090
9.235E-01	-0.002	0.095	9.839E-01	0.034	0.012	4.934E-03	0.078	0.088
5.989E-01	0.097	0.087	2.645E-01	0.029	0.013	2.736E-02	0.009	0.096
2.622E-01	-0.049	0.098	6.210E-01	-0.019	0.013	1.434E-01	0.021	0.105
9.204E-01	-0.081	0.086	3.471E-01	0.000	0.012	9.933E-01	-0.123	0.091
8.504E-01	0.040	0.083	6.322E-01	0.070	0.012	7.840E-09	0.050	0.088
3.809E-01	0.207	0.085	1.525E-02	0.051	0.012	4.461E-05	0.128	0.091
6.378E-01	-0.097	0.109	3.749E-01	0.013	0.013	2.991E-01	0.104	0.098
3.786E-01	0.046	0.100	6.490E-01	0.023	0.017	1.912E-01	0.075	0.118
2.487E-01	0.018	0.083	8.304E-01	0.026	0.012	2.966E-02	0.136	0.091
6.271E-01	-0.036	0.084	6.680E-01	0.027	0.014	4.561E-02	-0.011	0.112
3.722E-01	0.005	0.097	9.626E-01	0.046	0.016	3.401E-03	0.074	0.106
9.016E-01	-0.056	0.098	5.686E-01	0.020	0.014	1.601E-01	-0.108	0.116
2.369E-01	-0.062	0.085	4.615E-01	0.058	0.012	2.187E-06	0.103	0.089
4.804E-01	0.046	0.087	6.008E-01	0.043	0.013	7.313E-04	0.092	0.092
8.181E-01	0.041	0.086	6.360E-01	0.035	0.012	3.523E-03	-0.079	0.088
6.507E-01	-0.010	0.086	9.095E-01	0.019	0.016	2.298E-01	-0.163	0.105
1.625E-01	0.226	0.131	8.402E-02	0.029	0.014	3.745E-02	0.097	0.106
2.650E-01	0.006	0.092	9.446E-01	0.018	0.013	1.793E-01	0.166	0.094
6.512E-01	-0.057	0.120	6.349E-01	0.041	0.017	1.521E-02	0.040	0.112
1.142E-01	-0.036	0.098	7.174E-01	0.034	0.013	5.951E-03	-0.041	0.093
5.343E-01	0.047	0.147	7.496E-01	0.049	0.019	1.095E-02	0.192	0.143
2.311E-01	-0.125	0.139	3.661E-01	0.071	0.016	1.433E-05	0.071	0.133
8.283E-01	-0.063	0.091	4.907E-01	0.041	0.017	1.493E-02	0.029	0.112
7.277E-01	-0.023	0.607	9.699E-01	-0.018	0.035	6.099E-01	-0.439	0.331
6.560E-02	-0.210	0.096	2.949E-02	-0.029	0.012	1.711E-02	-0.045	0.091
8.590E-01	-0.054	0.085	5.284E-01	0.041	0.012	7.840E-04	0.118	0.089
7.025E-01	-0.127	0.084	1.296E-01	-0.025	0.012	3.850E-02	-0.031	0.089
5.074E-01	-0.010	0.100	9.198E-01	0.052	0.013	4.418E-05	0.138	0.097
9.988E-01	-0.069	0.085	4.170E-01	0.031	0.012	1.228E-02	-0.124	0.092
2.096E-01	-0.051	0.089	5.663E-01	0.032	0.013	1.167E-02	-0.070	0.093
9.189E-01	-0.106	0.084	2.024E-01	-0.019	0.013	1.252E-01	-0.063	0.089
4.080E-02	-0.064	0.185	7.303E-01	0.058	0.018	1.294E-03	0.004	0.135
4.003E-01	0.093	0.097	3.360E-01	0.033	0.013	1.416E-02	0.129	0.098
5.144E-01	0.220	0.090	1.473E-02	0.018	0.013	1.713E-01	0.017	0.096
9.879E-01	0.074	0.120	5.399E-01	0.066	0.015	9.215E-06	0.064	0.126
2.431E-03	-0.141	0.093	1.300E-01	0.049	0.015	1.038E-03	-0.075	0.098
1.583E-01	0.088	0.088	3.172E-01	0.011	0.014	4.400E-01	-0.022	0.098
7.025E-01	0.168	0.098	8.672E-02	0.049	0.016	2.765E-03	0.034	0.117
1.196E-01	0.120	0.108	2.674E-01	0.028	0.013	3.092E-02	0.027	0.093
7.091E-01	-0.052	0.089	5.618E-01	-0.025	0.013	6.656E-02	-0.088	0.101

1.287E-01	0.056	0.108	6.056E-01	0.043	0.015	4.102E-03	0.168	0.108
3.586E-01	0.204	0.660	7.575E-01	0.064	0.043	1.327E-01	0.646	0.399
9.038E-02	-0.113	0.083	1.726E-01	-0.018	0.013	1.549E-01	0.025	0.091
6.610E-01	-0.166	0.106	1.161E-01	0.032	0.014	1.880E-02	0.043	0.098
2.280E-01	-0.009	0.132	9.449E-01	0.070	0.020	4.511E-04	0.016	0.135
5.046E-01	0.075	0.086	3.853E-01	0.019	0.014	1.693E-01	0.204	0.107
4.593E-01	-0.290	0.098	2.925E-03	0.040	0.012	1.303E-03	0.011	0.093
5.577E-01	0.205	0.103	4.537E-02	0.071	0.021	6.528E-04	0.018	0.133
7.665E-02	0.153	0.084	6.851E-02	0.024	0.012	4.800E-02	0.112	0.088
8.386E-01	0.194	0.084	2.082E-02	-0.010	0.012	4.026E-01	0.084	0.090
4.557E-01	0.005	0.087	9.546E-01	0.045	0.013	7.783E-04	-0.001	0.092
1.948E-01	0.082	0.084	3.319E-01	0.024	0.013	5.565E-02	0.038	0.091
8.997E-01	0.285	0.122	1.971E-02	0.035	0.015	2.176E-02	0.141	0.114
1.291E-01	-0.062	0.121	6.084E-01	0.029	0.015	5.718E-02	0.021	0.118
1.495E-01	0.163	0.087	6.168E-02	0.005	0.012	7.072E-01	0.035	0.088
9.342E-01	-0.106	0.085	2.113E-01	-0.008	0.012	5.060E-01	-0.005	0.089
6.611E-01	-0.004	0.084	9.590E-01	0.037	0.012	2.436E-03	0.094	0.088
5.046E-01	-0.199	0.207	3.355E-01	0.063	0.028	2.565E-02	-0.327	0.244
1.969E-01	-0.074	0.091	4.172E-01	0.037	0.014	8.559E-03	-0.023	0.100
1.295E-01	-0.134	0.154	3.824E-01	0.073	0.024	2.374E-03	0.172	0.180
7.920E-01	0.102	0.106	3.386E-01	0.041	0.016	9.419E-03	-0.006	0.116
4.966E-01	0.095	0.093	3.039E-01	0.025	0.015	9.008E-02	0.119	0.099
8.964E-02	-0.082	0.084	3.252E-01	0.089	0.013	7.222E-12	0.148	0.092
6.246E-01	0.021	0.090	8.140E-01	0.057	0.013	1.588E-05	0.027	0.096
7.086E-02	0.143	0.150	3.428E-01	0.051	0.028	7.036E-02	-0.333	0.191
8.283E-01	0.099	0.087	2.560E-01	0.081	0.015	6.900E-08	-0.042	0.104
8.033E-01	-0.058	0.102	5.673E-01	-0.013	0.015	3.955E-01	-0.021	0.107
5.836E-01	0.017	0.089	8.481E-01	0.021	0.013	1.191E-01	-0.001	0.093
7.135E-01	-0.039	0.087	6.547E-01	0.006	0.014	6.851E-01	0.041	0.100
8.410E-01	-0.111	0.162	4.960E-01	0.063	0.016	8.827E-05	0.376	0.136
6.401E-01	0.053	0.105	6.130E-01	0.019	0.013	1.407E-01	0.082	0.104
3.284E-01	0.702	0.403	8.156E-02	-0.019	0.026	4.718E-01	-0.180	0.205
3.637E-01	0.244	0.201	2.247E-01	0.060	0.027	2.748E-02	-0.098	0.181
5.190E-01	-0.091	0.111	4.129E-01	0.058	0.015	7.162E-05	0.160	0.123
1.688E-01	0.057	0.085	5.049E-01	0.010	0.012	4.015E-01	-0.057	0.089
7.737E-01	0.213	0.085	1.241E-02	0.072	0.012	4.696E-09	0.127	0.090
7.386E-01	0.024	0.084	7.710E-01	-0.003	0.012	7.997E-01	0.034	0.090
3.970E-01	-0.023	0.231	9.214E-01	0.034	0.019	7.702E-02	0.114	0.146
8.773E-01	0.032	0.086	7.150E-01	0.029	0.014	3.729E-02	-0.073	0.100
3.814E-01	0.199	0.084	1.738E-02	0.042	0.012	5.948E-04	0.025	0.089
1.220E-01	-0.138	0.085	1.019E-01	0.021	0.012	8.109E-02	0.004	0.090
1.085E-01	0.159	0.105	1.281E-01	-0.027	0.017	1.145E-01	-0.191	0.123
5.658E-01	-0.205	0.127	1.071E-01	0.023	0.017	1.782E-01	-0.029	0.124
4.864E-01	0.116	0.086	1.814E-01	0.002	0.012	8.985E-01	0.045	0.090
3.257E-01	0.076	0.083	3.582E-01	0.037	0.012	2.458E-03	0.092	0.090
5.170E-02	0.041	0.167	8.039E-01	0.055	0.016	6.016E-04	-0.031	0.141
7.729E-01	0.009	0.194	9.632E-01	0.054	0.017	2.087E-03	0.282	0.133
8.185E-01	-0.001	0.154	9.965E-01	-0.008	0.017	6.428E-01	-0.241	0.114
6.865E-01	-0.123	0.155	4.288E-01	-0.064	0.015	1.001E-05	-0.188	0.109
6.201E-01	0.019	0.112	8.680E-01	-0.021	0.015	1.580E-01	0.038	0.111

6.628E-01	-0.027	0.083	7.434E-01	-0.032	0.012	1.011E-02	0.001	0.092
5.651E-01	0.063	0.112	5.737E-01	0.026	0.015	8.195E-02	-0.109	0.099
5.197E-01	-0.223	0.264	3.972E-01	-0.007	0.038	8.583E-01	0.383	0.327
2.126E-01	0.047	0.132	7.185E-01	-0.019	0.014	1.753E-01	0.015	0.105
2.635E-01	-0.026	0.098	7.891E-01	-0.001	0.015	9.705E-01	-0.036	0.108
9.618E-01	0.084	0.083	3.118E-01	0.025	0.012	3.985E-02	0.109	0.089
4.147E-01	-0.131	0.146	3.692E-01	0.046	0.023	4.373E-02	-0.074	0.143
7.185E-01	-0.044	0.092	6.307E-01	0.048	0.015	9.567E-04	0.015	0.095
7.349E-01	0.001	0.283	9.967E-01	0.002	0.020	9.173E-01	-0.091	0.192
4.928E-01	-0.015	0.086	8.651E-01	0.058	0.014	2.141E-05	0.167	0.098
9.794E-01	0.058	0.109	5.925E-01	0.037	0.014	6.362E-03	-0.004	0.107
5.212E-01	0.037	0.084	6.561E-01	0.021	0.012	9.117E-02	0.156	0.090
5.705E-01	0.144	0.085	9.096E-02	0.015	0.012	2.384E-01	0.022	0.090
7.344E-01	-0.013	0.110	9.082E-01	0.028	0.015	6.085E-02	0.173	0.119
6.540E-01	-0.017	0.098	8.634E-01	-0.016	0.013	2.115E-01	-0.101	0.092
7.082E-01	0.113	0.103	2.726E-01	-0.030	0.013	2.236E-02	0.060	0.108
2.592E-01	-0.119	0.148	4.198E-01	0.056	0.021	6.352E-03	0.149	0.148
9.850E-01	-0.030	0.085	7.276E-01	0.012	0.012	3.356E-01	0.132	0.088
2.086E-01	0.172	0.102	9.107E-02	0.016	0.013	2.111E-01	0.093	0.095
8.103E-01	-0.045	0.087	6.029E-01	0.028	0.012	2.344E-02	0.001	0.091
9.555E-01	0.075	0.092	4.158E-01	0.048	0.018	9.192E-03	-0.003	0.126
6.158E-04	0.160	0.107	1.343E-01	0.015	0.013	2.608E-01	-0.110	0.102
6.561E-01	1.077	0.812	1.846E-01	0.126	0.059	3.211E-02	0.025	0.726
9.749E-01	0.014	0.084	8.711E-01	-0.011	0.013	3.862E-01	0.008	0.091
3.938E-01	-0.009	0.114	9.383E-01	0.034	0.014	2.002E-02	-0.010	0.111
1.857E-01	-0.099	0.125	4.267E-01	0.029	0.016	6.792E-02	0.045	0.129
2.200E-01	-0.043	0.150	7.763E-01	0.021	0.015	1.694E-01	-0.060	0.120
7.058E-01	-0.104	0.083	2.095E-01	-0.025	0.013	5.116E-02	0.045	0.092
8.272E-01	-0.158	0.085	6.398E-02	-0.029	0.013	1.921E-02	0.076	0.091
6.904E-01	0.059	0.095	5.346E-01	0.034	0.013	8.522E-03	-0.026	0.099
2.995E-01	0.047	0.117	6.864E-01	0.038	0.018	3.876E-02	0.020	0.122
4.033E-01	0.169	0.087	5.128E-02	0.051	0.013	4.397E-05	0.136	0.090
1.465E-02	-0.025	0.110	8.232E-01	0.061	0.014	1.981E-05	0.048	0.109
8.985E-01	0.266	0.110	1.582E-02	0.032	0.017	6.413E-02	0.045	0.146
9.050E-02	-0.004	0.089	9.603E-01	0.040	0.013	1.288E-03	-0.017	0.092
2.284E-01	0.117	0.191	5.392E-01	0.049	0.019	8.147E-03	0.047	0.159

in ancestry cohorts (COPDGene, ECLIPSE, GenKOLS, NETT-NAS and SPIROMICS)

height, smoking status, 10 principal components and ancestry

estimate; SE=standard error; P=P-value

31; Controlshina Kadoorie Biobank (Cases=6,013; Controls=69,567) European-ancestry COPD cohorts (C

P	CKB_Proxy_Used	Beta	SE	P	Beta	SE	P
1.767E-01		0.014	0.021	5.240E-01	0.031	0.033	3.564E-01
3.835E-01		0.012	0.023	6.190E-01	0.045	0.032	1.562E-01
1.114E-01		-0.035	0.028	2.210E-01	0.047	0.039	2.263E-01
4.178E-01		-0.022	0.023	3.560E-01	0.075	0.039	5.464E-02
4.366E-01		-0.012	0.031	6.960E-01	0.047	0.036	1.907E-01
6.220E-02		0.028	0.032	3.890E-01	0.046	0.038	2.218E-01
5.634E-01		0.012	0.028	6.790E-01	0.037	0.032	2.498E-01
1.087E-01		0.093	0.062	1.340E-01	0.130	0.077	9.122E-02
5.786E-01		0.013	0.027	6.160E-01	0.078	0.046	9.255E-02
7.853E-01		0.007	0.031	8.180E-01	0.003	0.043	9.447E-01
8.517E-01		0.013	0.040	7.450E-01	0.012	0.032	7.036E-01
4.532E-01		0.005	0.027	8.550E-01	0.015	0.035	6.634E-01
6.700E-01		0.015	0.022	4.870E-01	0.094	0.034	5.962E-03
3.731E-01		-0.008	0.022	7.220E-01	0.002	0.036	9.460E-01
3.400E-01		0.014	0.022	5.210E-01	0.028	0.032	3.759E-01
9.106E-01		0.000	0.022	9.950E-01	-0.009	0.033	7.973E-01
9.402E-02		0.067	0.069	3.360E-01	0.054	0.052	2.953E-01
1.596E-01		-0.044	0.032	1.690E-01	0.045	0.034	1.914E-01
8.448E-01		-0.023	0.022	2.880E-01	0.055	0.033	9.790E-02
2.374E-01		0.060	0.076	4.320E-01	0.053	0.041	1.989E-01
2.819E-01		0.023	0.025	3.560E-01	0.045	0.033	1.739E-01
1.793E-01		-0.025	0.023	2.720E-01	-0.038	0.032	2.345E-01
9.239E-01		-0.023	0.021	2.760E-01	0.055	0.032	8.636E-02
1.255E-01		-0.029	0.021	1.770E-01	0.080	0.042	5.615E-02
3.229E-01		0.037	0.022	9.930E-02	-0.033	0.040	4.128E-01
4.198E-01		0.036	0.026	1.680E-01	0.124	0.042	3.437E-03
8.575E-01		0.045	0.023	5.050E-02	0.141	0.036	1.020E-04
2.584E-01		0.071	0.021	6.400E-04	0.048	0.034	1.523E-01
9.828E-01		0.913	0.306	2.800E-03	0.136	0.059	2.220E-02
3.016E-02		0.035	0.022	1.130E-01	0.028	0.033	3.944E-01
3.517E-01		0.003	0.022	8.830E-01	-0.030	0.035	3.897E-01
8.088E-01		-0.003	0.023	9.080E-01	-0.067	0.036	5.890E-02
3.849E-01		0.045	0.021	3.200E-02	0.024	0.032	4.434E-01
1.314E-01		-0.008	0.022	7.070E-01	0.023	0.032	4.785E-01
9.487E-01		0.063	0.046	1.700E-01	0.081	0.044	6.484E-02
8.929E-01		-0.008	0.021	7.110E-01	0.029	0.041	4.794E-01
6.823E-01		0.046	0.023	4.880E-02	0.009	0.059	8.849E-01
6.879E-01		0.015	0.026	5.600E-01	0.077	0.032	1.534E-02
2.799E-01		-0.018	0.034	5.970E-01	0.054	0.032	9.840E-02
5.785E-01		-0.022	0.022	3.130E-01	-0.032	0.034	3.557E-01
8.060E-01		-0.014	0.036	6.940E-01	0.056	0.033	9.088E-02
2.395E-01		0.042	0.022	5.170E-02	-0.088	0.033	7.121E-03
7.531E-01		0.020	0.021	3.410E-01	0.054	0.039	1.578E-01

7.529E-01		0.046	0.036	1.980E-01	0.025	0.035	4.780E-01
7.988E-01		-0.081	0.067	2.270E-01	0.093	0.049	5.951E-02
5.612E-01		0.047	0.030	1.170E-01	0.016	0.032	6.241E-01
9.206E-01		0.000	0.022	9.990E-01	-0.049	0.032	1.269E-01
1.078E-01		0.029	0.029	3.090E-01	0.006	0.035	8.624E-01
2.302E-01		0.001	0.028	9.750E-01	0.033	0.032	3.098E-01
2.956E-01		0.043	0.029	1.380E-01	0.032	0.039	4.029E-01
4.134E-01		-0.052	0.026	4.200E-02	-0.015	0.032	6.420E-01
8.043E-01		-0.005	0.027	8.560E-01	0.092	0.046	4.390E-02
5.642E-01		-0.032	0.025	2.130E-01	-0.008	0.039	8.470E-01
7.227E-01		0.022	0.021	3.060E-01	0.060	0.032	6.581E-02
7.746E-01		0.008	0.026	7.640E-01	-0.055	0.032	8.684E-02
5.897E-01		0.035	0.029	2.310E-01	0.246	0.062	6.399E-05
1.673E-01		-0.017	0.050	7.330E-01	0.078	0.048	1.034E-01
2.043E-01		0.025	0.035	4.840E-01	-0.014	0.038	7.162E-01
1.213E-01		0.035	0.024	1.370E-01	0.113	0.039	3.656E-03
3.486E-01	rs34125162_A	0.002	0.022	9.310E-01	-0.029	0.033	3.814E-01
6.258E-01		-0.051	0.021	1.500E-02	0.007	0.032	8.250E-01
4.634E-01		0.026	0.021	2.150E-01	0.063	0.032	5.021E-02
2.507E-02	rs80141288_G	-0.262	0.273	3.380E-01	-0.042	0.046	3.586E-01
6.350E-01		0.066	0.023	3.390E-03	0.123	0.042	3.354E-03
6.117E-01		0.030	0.030	3.230E-01	0.071	0.035	4.622E-02
4.894E-01		0.021	0.035	5.550E-01	0.036	0.032	2.665E-01
6.371E-01	rs11707088_G	0.082	0.196	6.770E-01	0.045	0.059	4.421E-01
3.899E-01		0.049	0.022	2.330E-02	-0.053	0.035	1.290E-01
3.565E-01	rs62244884_G	-0.041	0.161	7.990E-01	0.055	0.032	8.510E-02
2.053E-02		0.048	0.023	3.680E-02	0.050	0.032	1.267E-01
5.427E-01		0.021	0.025	4.030E-01	0.035	0.036	3.399E-01
3.913E-01		-0.096	0.033	3.010E-03	-0.017	0.059	7.767E-01
7.001E-01		-0.021	0.135	8.760E-01	0.191	0.043	8.020E-06
1.190E-01		0.030	0.022	1.730E-01	-0.036	0.031	2.496E-01
8.408E-01	rs144475434_A	0.075	0.406	8.530E-01	-0.040	0.116	7.293E-01
1.479E-01		0.004	0.025	8.870E-01	0.027	0.032	3.889E-01
1.798E-01		0.008	0.023	7.240E-01	0.032	0.041	4.400E-01
7.851E-01		-0.028	0.025	2.600E-01	0.018	0.034	5.995E-01
6.623E-01		0.037	0.023	1.050E-01	0.015	0.032	6.494E-01
7.337E-01		-0.031	0.028	2.660E-01	0.079	0.041	5.584E-02
3.921E-01		-0.057	0.053	2.800E-01	0.058	0.037	1.209E-01
7.899E-01		0.015	0.021	4.880E-01	0.039	0.032	2.254E-01
2.927E-01		0.085	0.022	8.460E-05	0.193	0.042	4.556E-06
2.042E-01		0.078	0.021	1.820E-04	0.215	0.033	5.297E-11
4.379E-01		0.048	0.025	5.720E-02	0.095	0.033	3.751E-03
3.640E-02		-0.651	1.299	6.160E-01	0.214	0.064	9.010E-04
3.570E-01		0.516	0.342	1.320E-01	0.115	0.039	3.468E-03
3.242E-01		0.004	0.021	8.530E-01	0.072	0.032	2.572E-02
1.817E-01		0.101	0.023	1.200E-05	0.223	0.033	8.204E-12
5.636E-01		0.028	0.021	1.810E-01	0.151	0.032	2.124E-06
8.240E-01		-0.117	0.213	5.830E-01	0.072	0.039	6.556E-02
1.434E-01		0.068	0.145	6.360E-01	0.019	0.040	6.349E-01
3.359E-01		0.006	0.021	7.760E-01	0.015	0.055	7.887E-01

8.580E-01	-0.007	0.025	7.800E-01	-0.040	0.044	3.649E-01
8.252E-01	-0.069	0.021	1.080E-03	0.021	0.034	5.319E-01
4.463E-01	0.031	0.028	2.650E-01	0.068	0.038	7.378E-02
3.402E-01	-0.019	0.028	5.040E-01	0.002	0.032	9.396E-01
7.059E-01	-0.017	0.050	7.250E-01	0.031	0.038	4.131E-01
5.640E-02	0.036	0.027	1.900E-01	0.011	0.032	7.259E-01
7.223E-01	0.040	0.029	1.610E-01	0.011	0.043	7.954E-01
8.615E-02	0.036	0.027	1.860E-01	0.102	0.048	3.389E-02
4.515E-01	0.031	0.022	1.480E-01	0.011	0.036	7.621E-01
8.633E-02	0.053	0.021	1.330E-02	0.109	0.033	8.851E-04
1.512E-01				-0.039	0.133	7.710E-01
7.425E-02	0.049	0.022	2.490E-02	0.027	0.032	4.034E-01
3.965E-02	0.786	0.437	7.220E-02	0.144	0.061	1.889E-02
2.307E-02	0.060	0.023	1.010E-02	0.064	0.032	4.822E-02
7.049E-01	-0.017	0.023	4.700E-01	0.000	0.034	9.991E-01
3.311E-01	0.027	0.028	3.490E-01	0.037	0.034	2.797E-01
1.302E-02	0.092	0.025	2.030E-04	0.111	0.033	8.105E-04
2.677E-01	0.044	0.021	3.480E-02	0.111	0.035	1.374E-03
5.162E-01	-0.003	0.025	8.950E-01	0.048	0.032	1.320E-01
6.574E-01	-0.021	0.244	9.300E-01	-0.012	0.045	7.893E-01
9.988E-01	0.011	0.027	6.970E-01	0.053	0.032	9.407E-02
7.345E-01 AX-15348868_C	0.713	0.298	1.660E-02	0.071	0.055	1.963E-01
5.356E-02	0.144	0.026	2.030E-08	0.287	0.075	1.389E-04
9.443E-01	-0.001	0.033	9.680E-01	0.036	0.046	4.360E-01
2.062E-01	-0.029	0.067	6.680E-01	0.025	0.069	7.149E-01
9.497E-01	-0.028	0.032	3.740E-01	0.008	0.032	8.136E-01
8.280E-02	0.030	0.026	2.500E-01	0.040	0.034	2.285E-01
1.682E-01	-0.003	0.022	8.910E-01	0.045	0.035	2.020E-01
1.910E-01	-0.030	0.024	2.150E-01	0.046	0.033	1.695E-01
7.446E-01	0.015	0.025	5.660E-01	0.005	0.040	9.037E-01
2.740E-01	0.013	0.024	5.880E-01	0.126	0.040	1.631E-03
2.530E-01	-0.035	0.021	9.770E-02	-0.009	0.038	8.079E-01
5.358E-01	0.035	0.021	1.030E-01	0.016	0.033	6.198E-01
8.891E-01	-0.042	0.021	5.070E-02	-0.051	0.037	1.652E-01
9.527E-01	0.034	0.023	1.450E-01	0.070	0.036	5.175E-02
5.713E-01	0.063	0.025	1.140E-02	0.052	0.034	1.289E-01
4.808E-01	0.160	0.076	3.410E-02	0.236	0.105	2.497E-02
4.333E-01	-0.008	0.050	8.760E-01	0.019	0.032	5.585E-01
9.414E-01	0.032	0.022	1.430E-01	0.012	0.042	7.831E-01
6.454E-01	0.029	0.042	4.940E-01	0.041	0.044	3.509E-01
9.050E-01	0.014	0.031	6.500E-01	0.018	0.032	5.639E-01
5.389E-01	0.006	0.023	7.910E-01	0.095	0.046	3.931E-02
7.628E-01	0.070	0.104	5.030E-01	0.008	0.032	8.036E-01
3.365E-01	0.002	0.024	9.220E-01	-0.012	0.032	7.020E-01
1.816E-01	-0.017	0.042	6.910E-01	0.060	0.034	7.915E-02
2.154E-01	0.045	0.022	3.680E-02	0.023	0.043	5.922E-01
1.164E-02	0.050	0.036	1.590E-01	0.000	0.034	9.968E-01
1.162E-02	0.033	0.022	1.430E-01	0.091	0.033	5.309E-03
8.992E-01	0.011	0.027	6.910E-01	0.047	0.033	1.588E-01
2.790E-01	-0.003	0.069	9.660E-01	0.024	0.036	5.058E-01

4.490E-01	0.020	0.021	3.380E-01	0.016	0.036	6.481E-01
7.699E-01	0.008	0.023	7.340E-01	0.013	0.033	6.881E-01
8.954E-01	-0.007	0.024	7.800E-01	0.034	0.032	2.837E-01
5.571E-01	0.036	0.031	2.430E-01	0.019	0.033	5.495E-01
6.762E-01	0.054	0.022	1.300E-02	0.092	0.034	6.806E-03
3.198E-01	0.040	0.030	1.780E-01	0.078	0.032	1.624E-02
3.547E-01	0.027	0.026	3.060E-01	0.131	0.059	2.695E-02
3.765E-02	-0.033	0.029	2.590E-01	-0.025	0.043	5.581E-01
1.130E-01	0.009	0.021	6.790E-01	0.050	0.033	1.270E-01
2.841E-01	-0.017	0.021	4.340E-01	0.112	0.032	4.047E-04
3.711E-01	0.007	0.029	8.120E-01	0.077	0.032	1.445E-02
9.237E-01	-0.013	0.022	5.420E-01	-0.017	0.034	6.157E-01
8.413E-01	-0.033	0.029	2.550E-01	0.013	0.035	7.130E-01
1.769E-01	-0.017	0.023	4.670E-01	0.001	0.032	9.741E-01
5.726E-01	0.010	0.023	6.460E-01	0.034	0.032	2.860E-01
1.594E-01	0.015	0.028	5.750E-01	0.060	0.033	6.483E-02
2.896E-01	-0.005	0.047	9.100E-01	-0.064	0.033	5.410E-02
5.232E-01	0.019	0.021	3.760E-01	-0.027	0.044	5.430E-01
1.366E-01	-0.023	0.026	3.610E-01	0.009	0.032	7.866E-01
9.215E-01	0.037	0.024	1.280E-01	0.031	0.036	3.897E-01
4.829E-01	0.008	0.025	7.580E-01	0.073	0.040	7.013E-02
3.542E-01	0.024	0.021	2.580E-01	0.019	0.038	6.131E-01
2.471E-01	-0.014	0.021	5.230E-01	0.041	0.032	2.015E-01
3.199E-01	0.024	0.025	3.510E-01	0.051	0.033	1.171E-01
3.708E-01	0.050	0.023	2.730E-02	0.086	0.032	6.863E-03
1.210E-01	0.012	0.021	5.710E-01	0.006	0.042	8.878E-01
3.576E-01	0.004	0.025	8.650E-01	0.021	0.037	5.757E-01
7.566E-02	0.056	0.028	4.330E-02	0.017	0.034	6.213E-01
7.195E-01	-0.155	0.181	3.910E-01	0.035	0.043	4.205E-01
6.597E-01	0.005	0.044	9.080E-01	0.013	0.033	6.862E-01
1.809E-01	0.047	0.055	3.960E-01	0.017	0.051	7.435E-01
5.913E-01	0.032	0.128	8.000E-01	0.023	0.043	5.916E-01
7.986E-01	0.027	0.023	2.310E-01	0.065	0.044	1.395E-01
1.849E-01				0.016	0.104	8.743E-01
6.240E-01	0.067	0.041	9.730E-02	-0.040	0.032	2.075E-01
1.847E-01	0.037	0.027	1.650E-01	-0.013	0.032	6.812E-01
7.274E-01	0.015	0.022	4.880E-01	-0.077	0.032	1.634E-02
1.539E-01	-0.013	0.024	6.050E-01	-0.017	0.034	6.251E-01
1.746E-01	0.045	0.025	6.800E-02	0.064	0.033	4.969E-02
4.532E-01	0.044	0.025	8.270E-02	0.008	0.033	8.083E-01
4.804E-01	-0.024	0.021	2.550E-01	-0.031	0.033	3.487E-01
9.762E-01 rs975917_G	-0.049	0.221	8.240E-01	0.130	0.048	6.927E-03
1.877E-01	-0.027	0.030	3.750E-01	0.022	0.035	5.244E-01
8.558E-01	0.007	0.022	7.430E-01	0.038	0.035	2.705E-01
6.128E-01	0.032	0.029	2.850E-01	0.082	0.038	3.258E-02
4.437E-01	0.020	0.021	3.620E-01	0.072	0.039	6.417E-02
8.189E-01	0.001	0.021	9.580E-01	0.025	0.036	4.884E-01
7.745E-01	-0.023	0.039	5.520E-01	0.114	0.044	8.759E-03
7.739E-01	0.103	0.059	8.230E-02	0.029	0.034	3.963E-01
3.805E-01	-0.011	0.021	5.940E-01	0.030	0.036	4.007E-01

1.200E-01		0.000	0.022	9.950E-01	0.018	0.039	6.547E-01
1.054E-01	rs78844280_G	-0.012	0.096	9.040E-01	0.170	0.106	1.081E-01
7.886E-01		0.008	0.025	7.500E-01	0.017	0.033	6.132E-01
6.595E-01		0.012	0.022	6.050E-01	0.055	0.036	1.311E-01
9.058E-01		0.021	0.075	7.800E-01	0.115	0.052	2.654E-02
5.698E-02		-0.014	0.032	6.670E-01	0.079	0.036	2.980E-02
9.045E-01		0.017	0.025	5.010E-01	-0.005	0.032	8.786E-01
8.941E-01		0.057	0.025	2.110E-02	0.059	0.054	2.753E-01
2.043E-01		-0.002	0.021	9.430E-01	0.019	0.032	5.504E-01
3.524E-01		0.006	0.023	8.100E-01	-0.075	0.033	2.135E-02
9.938E-01		0.012	0.022	5.710E-01	0.033	0.035	3.452E-01
6.794E-01		0.014	0.022	5.170E-01	0.033	0.033	3.181E-01
2.161E-01		-0.127	0.223	5.690E-01	0.234	0.041	1.551E-08
8.576E-01		0.006	0.031	8.420E-01	0.062	0.041	1.333E-01
6.915E-01		-0.006	0.024	8.070E-01	-0.003	0.031	9.250E-01
9.539E-01		0.023	0.023	3.230E-01	-0.013	0.032	6.948E-01
2.869E-01		-0.010	0.022	6.610E-01	0.082	0.032	1.039E-02
1.810E-01					0.087	0.080	2.786E-01
8.176E-01		0.062	0.026	1.810E-02	0.086	0.036	1.787E-02
3.388E-01		0.072	0.028	8.780E-03	0.165	0.061	6.414E-03
9.565E-01		0.025	0.239	9.180E-01	0.092	0.041	2.298E-02
2.285E-01		0.063	0.021	3.030E-03	0.028	0.038	4.676E-01
1.071E-01		0.052	0.023	2.790E-02	0.087	0.034	1.008E-02
7.810E-01		0.013	0.032	6.780E-01	0.062	0.034	6.987E-02
8.124E-02		0.035	0.033	2.990E-01	0.077	0.073	2.901E-01
6.874E-01		-0.023	0.022	2.870E-01	0.039	0.040	3.226E-01
8.412E-01		0.062	0.025	1.220E-02	-0.054	0.039	1.626E-01
9.945E-01		0.026	0.024	2.720E-01	-0.001	0.035	9.817E-01
6.791E-01		0.016	0.021	4.430E-01	-0.070	0.036	5.110E-02
5.647E-03		0.057	0.024	1.910E-02	0.051	0.042	2.262E-01
4.297E-01		0.033	0.037	3.690E-01	0.131	0.034	1.265E-04
3.787E-01	rs75346353_C	0.035	0.039	3.770E-01	0.118	0.069	8.908E-02
5.885E-01	rs71390222_T	0.085	0.063	1.750E-01	0.072	0.075	3.354E-01
1.927E-01		0.029	0.022	1.860E-01	0.046	0.039	2.453E-01
5.220E-01		-0.030	0.032	3.470E-01	0.068	0.033	4.081E-02
1.591E-01		0.046	0.021	2.640E-02	0.062	0.032	5.304E-02
7.089E-01		-0.005	0.021	8.140E-01	-0.016	0.032	6.203E-01
4.329E-01		0.022	0.031	4.790E-01	0.020	0.051	6.881E-01
4.623E-01		0.011	0.022	6.130E-01	0.019	0.036	6.099E-01
7.761E-01		-0.003	0.024	9.120E-01	0.000	0.032	9.945E-01
9.667E-01		-0.008	0.022	7.360E-01	0.049	0.032	1.276E-01
1.207E-01		-0.025	0.035	4.720E-01	-0.112	0.046	1.424E-02
8.154E-01		0.031	0.022	1.560E-01	0.104	0.047	2.661E-02
6.178E-01		0.021	0.029	4.650E-01	-0.002	0.032	9.617E-01
3.042E-01		0.019	0.022	3.990E-01	0.020	0.032	5.304E-01
8.265E-01		0.035	0.033	2.980E-01	0.099	0.042	1.826E-02
3.432E-02		0.280	0.308	3.630E-01	0.047	0.046	3.154E-01
3.393E-02		-0.024	0.024	3.220E-01	0.000	0.043	9.985E-01
8.592E-02		-0.294	0.262	2.620E-01	-0.158	0.039	5.806E-05
7.342E-01		-0.069	0.033	3.450E-02	-0.034	0.039	3.833E-01

9.872E-01	-0.005	0.021	8.190E-01	0.026	0.032	4.270E-01
2.718E-01	0.042	0.035	2.280E-01	0.022	0.039	5.638E-01
2.413E-01				0.074	0.127	5.572E-01
8.849E-01	0.024	0.031	4.440E-01	-0.027	0.037	4.554E-01
7.377E-01	-0.061	0.082	4.580E-01	0.093	0.038	1.439E-02
2.176E-01	-0.005	0.021	8.280E-01	0.053	0.032	9.844E-02
6.049E-01 rs9911815_A	-0.034	0.024	1.590E-01	0.084	0.059	1.569E-01
8.735E-01	-0.001	0.021	9.700E-01	0.028	0.035	4.272E-01
6.365E-01	-0.505	0.474	2.860E-01	-0.031	0.053	5.565E-01
8.762E-02	0.049	0.022	2.510E-02	0.036	0.036	3.097E-01
9.709E-01	0.033	0.023	1.540E-01	-0.012	0.036	7.388E-01
8.157E-02	-0.013	0.021	5.550E-01	0.049	0.032	1.278E-01
8.045E-01	-0.001	0.021	9.780E-01	0.016	0.032	6.299E-01
1.476E-01	0.032	0.027	2.370E-01	0.102	0.039	9.634E-03
2.723E-01	-0.014	0.042	7.500E-01	-0.064	0.033	5.625E-02
5.828E-01	0.003	0.022	8.830E-01	0.036	0.034	2.968E-01
3.141E-01	-0.056	0.056	3.220E-01	-0.019	0.054	7.207E-01
1.365E-01	-0.010	0.023	6.630E-01	-0.039	0.032	2.330E-01
3.272E-01	-0.007	0.138	9.600E-01	-0.003	0.034	9.255E-01
9.870E-01	0.040	0.023	7.520E-02	0.013	0.032	6.755E-01
9.794E-01	0.016	0.021	4.470E-01	0.040	0.048	4.063E-01
2.799E-01	-0.005	0.025	8.520E-01	0.016	0.035	6.491E-01
9.723E-01	-0.316	1.348	8.150E-01	0.035	0.159	8.275E-01
9.298E-01	-0.004	0.031	8.990E-01	-0.003	0.033	9.363E-01
9.286E-01	0.010	0.025	6.780E-01	0.010	0.038	7.971E-01
7.285E-01	0.041	0.022	6.530E-02	0.036	0.042	3.810E-01
6.169E-01	0.015	0.029	5.940E-01	0.078	0.042	6.507E-02
6.206E-01	-0.024	0.023	3.030E-01	0.041	0.033	2.102E-01
4.006E-01	0.003	0.023	9.070E-01	-0.017	0.033	6.053E-01
7.957E-01	0.004	0.022	8.410E-01	0.043	0.035	2.158E-01
8.677E-01	0.084	0.027	1.770E-03	0.013	0.047	7.828E-01
1.311E-01	0.040	0.021	6.080E-02	0.053	0.033	1.059E-01
6.606E-01	0.056	0.058	3.370E-01	0.044	0.038	2.497E-01
7.562E-01	0.078	0.031	1.320E-02	-0.011	0.045	8.034E-01
8.539E-01	0.049	0.021	2.330E-02	0.068	0.032	3.305E-02
7.674E-01 rs112430043_G	-0.421	0.221	5.620E-02	0.018	0.050	7.214E-01

African Americans (Cases=910; Co

Beta	SE	P
0.077	0.067	2.464E-01
-0.036	0.084	6.665E-01
0.021	0.085	7.998E-01
-0.047	0.064	4.583E-01
-0.092	0.096	3.357E-01
-0.006	0.161	9.690E-01
-0.002	0.065	9.708E-01
0.292	0.120	1.474E-02
0.092	0.072	2.020E-01
-0.001	0.069	9.867E-01
0.057	0.093	5.375E-01
0.080	0.109	4.659E-01
0.089	0.069	1.996E-01
-0.060	0.071	3.997E-01
-0.057	0.090	5.296E-01
0.021	0.072	7.679E-01
-0.067	0.073	3.587E-01
-0.025	0.109	8.159E-01
0.011	0.071	8.719E-01
0.010	0.181	9.570E-01
0.057	0.067	3.934E-01
-0.022	0.069	7.462E-01
-0.072	0.075	3.352E-01
0.052	0.074	4.786E-01
0.100	0.067	1.352E-01
0.173	0.142	2.238E-01
0.071	0.068	2.954E-01
0.064	0.069	3.510E-01
-0.024	0.231	9.170E-01
0.080	0.067	2.279E-01
0.011	0.075	8.801E-01
0.077	0.129	5.534E-01
-0.053	0.069	4.437E-01
0.086	0.064	1.790E-01
0.120	0.116	2.999E-01
-0.031	0.065	6.312E-01
-0.121	0.106	2.522E-01
-0.122	0.070	8.062E-02
0.068	0.071	3.404E-01
-0.070	0.068	2.973E-01
0.110	0.074	1.351E-01
0.024	0.085	7.820E-01
-0.096	0.067	1.514E-01

0.003	0.065	9.671E-01
-0.317	0.196	1.063E-01
0.142	0.066	3.054E-02
0.007	0.072	9.272E-01
0.101	0.079	2.011E-01
0.014	0.068	8.305E-01
0.059	0.072	4.145E-01
-0.045	0.075	5.463E-01
-0.035	0.073	6.320E-01
0.039	0.068	5.634E-01
-0.053	0.080	5.135E-01
0.001	0.067	9.902E-01
0.020	0.131	8.765E-01
0.512	0.234	2.879E-02
0.096	0.069	1.627E-01
0.028	0.166	8.676E-01
0.080	0.075	2.839E-01
-0.040	0.064	5.285E-01
0.039	0.065	5.446E-01
-0.203	0.189	2.813E-01
0.092	0.083	2.666E-01
-0.114	0.132	3.877E-01
0.158	0.066	1.670E-02
0.331	0.262	2.066E-01
-0.146	0.082	7.485E-02
-0.018	0.082	8.209E-01
0.025	0.065	6.976E-01
-0.085	0.064	1.823E-01
0.159	0.089	7.325E-02
-0.006	0.069	9.324E-01
-0.094	0.067	1.615E-01
0.119	0.677	8.599E-01
-0.005	0.097	9.576E-01
-0.091	0.087	2.922E-01
-0.051	0.065	4.346E-01
0.044	0.087	6.114E-01
0.120	0.066	7.022E-02
0.060	0.075	4.204E-01
-0.029	0.074	6.964E-01
-0.006	0.095	9.505E-01
0.087	0.069	2.047E-01
-0.004	0.069	9.541E-01
-0.044	0.157	7.807E-01
-0.064	0.188	7.332E-01
0.036	0.079	6.492E-01
0.118	0.092	2.001E-01
0.221	0.082	6.649E-03
0.013	0.170	9.378E-01
-0.043	0.171	8.018E-01
-0.038	0.086	6.581E-01

-0.045	0.067	5.049E-01
-0.125	0.067	5.987E-02
-0.212	0.142	1.356E-01
-0.046	0.066	4.794E-01
-0.134	0.149	3.692E-01
0.007	0.066	9.104E-01
0.028	0.118	8.129E-01
0.065	0.100	5.151E-01
0.043	0.074	5.669E-01
0.015	0.068	8.272E-01
0.343	0.679	6.134E-01
-0.006	0.068	9.302E-01
-0.112	0.122	3.581E-01
0.013	0.069	8.530E-01
0.087	0.074	2.413E-01
0.003	0.091	9.711E-01
-0.013	0.074	8.641E-01
0.032	0.074	6.668E-01
-0.017	0.078	8.291E-01
0.032	0.072	6.587E-01
0.054	0.094	5.666E-01
-0.106	0.091	2.464E-01
0.043	0.347	9.021E-01
0.025	0.101	8.010E-01
-0.158	0.076	3.811E-02
-0.068	0.089	4.445E-01
0.074	0.065	2.537E-01
0.107	0.088	2.214E-01
-0.039	0.067	5.640E-01
0.200	0.102	4.971E-02
-0.101	0.093	2.750E-01
0.101	0.117	3.883E-01
0.009	0.065	8.872E-01
-0.060	0.091	5.106E-01
0.072	0.075	3.369E-01
0.101	0.101	3.180E-01
0.312	0.323	3.347E-01
0.119	0.085	1.614E-01
-0.117	0.105	2.637E-01
-0.052	0.097	5.918E-01
0.037	0.066	5.731E-01
-0.088	0.207	6.725E-01
0.066	0.077	3.956E-01
0.101	0.081	2.148E-01
0.011	0.092	9.057E-01
0.081	0.168	6.308E-01
0.015	0.067	8.223E-01
-0.042	0.075	5.764E-01
0.025	0.077	7.458E-01
-0.023	0.080	7.764E-01

-0.141	0.075	5.889E-02
-0.076	0.103	4.599E-01
-0.047	0.067	4.883E-01
0.059	0.066	3.702E-01
0.007	0.064	9.187E-01
0.197	0.081	1.498E-02
0.015	0.069	8.271E-01
0.051	0.091	5.756E-01
0.116	0.068	8.561E-02
0.098	0.106	3.534E-01
0.061	0.068	3.650E-01
-0.023	0.070	7.375E-01
-0.266	0.127	3.666E-02
0.093	0.064	1.458E-01
0.168	0.079	3.455E-02
0.129	0.079	1.024E-01
-0.020	0.113	8.627E-01
0.064	0.156	6.828E-01
0.040	0.071	5.698E-01
0.075	0.065	2.429E-01
0.186	0.099	6.019E-02
0.057	0.117	6.254E-01
-0.071	0.076	3.482E-01
0.057	0.080	4.774E-01
-0.077	0.066	2.442E-01
0.089	0.092	3.325E-01
-0.034	0.070	6.281E-01
-0.031	0.066	6.356E-01
-0.033	0.068	6.242E-01
-0.099	0.070	1.565E-01
0.081	0.068	2.371E-01
0.156	0.182	3.932E-01
0.003	0.070	9.616E-01
-0.097	0.463	8.333E-01
0.008	0.070	9.042E-01
0.006	0.077	9.344E-01
0.014	0.070	8.410E-01
0.044	0.115	6.984E-01
0.118	0.067	7.832E-02
-0.014	0.081	8.604E-01
0.010	0.071	8.925E-01
0.359	0.152	1.801E-02
0.011	0.088	9.002E-01
-0.034	0.072	6.403E-01
0.034	0.082	6.783E-01
-0.023	0.086	7.873E-01
0.026	0.067	6.955E-01
-0.217	0.096	2.343E-02
-0.016	0.090	8.577E-01
0.040	0.094	6.714E-01

-0.161	0.117	1.689E-01
0.948	0.687	1.672E-01
0.094	0.088	2.842E-01
-0.028	0.073	7.049E-01
0.183	0.165	2.663E-01
-0.063	0.085	4.543E-01
0.018	0.066	7.832E-01
0.159	0.190	4.034E-01
-0.071	0.069	3.027E-01
0.018	0.089	8.404E-01
0.066	0.068	3.279E-01
0.114	0.065	7.957E-02
0.173	0.118	1.434E-01
0.170	0.181	3.484E-01
-0.113	0.077	1.411E-01
-0.028	0.067	6.789E-01
0.070	0.066	2.869E-01
-0.221	0.428	6.049E-01
0.111	0.128	3.850E-01
0.248	0.152	1.030E-01
0.223	0.197	2.564E-01
0.136	0.125	2.797E-01
0.231	0.066	4.215E-04
0.015	0.093	8.718E-01
-0.109	0.068	1.078E-01
0.039	0.073	5.911E-01
0.020	0.074	7.892E-01
-0.032	0.075	6.731E-01
0.004	0.067	9.513E-01
-0.136	0.149	3.622E-01
0.045	0.138	7.462E-01
-0.058	0.268	8.298E-01
0.373	0.356	2.953E-01
-0.146	0.144	3.093E-01
-0.203	0.095	3.276E-02
0.210	0.073	4.030E-03
0.044	0.066	5.106E-01
-0.001	0.214	9.974E-01
-0.086	0.069	2.086E-01
-0.028	0.079	7.173E-01
0.129	0.070	6.437E-02
-0.242	0.173	1.612E-01
0.016	0.068	8.163E-01
0.140	0.070	4.699E-02
-0.107	0.081	1.851E-01
-0.041	0.143	7.724E-01
0.287	0.200	1.516E-01
-0.080	0.074	2.782E-01
-0.284	0.162	7.960E-02
0.081	0.093	3.843E-01

-0.135	0.083	1.027E-01
-0.150	0.093	1.068E-01
1.487	1.478	3.142E-01
-0.097	0.134	4.690E-01
0.071	0.088	4.174E-01
0.036	0.069	6.040E-01
0.036	0.079	6.431E-01
0.127	0.084	1.296E-01
-0.160	0.175	3.587E-01
0.057	0.066	3.846E-01
-0.044	0.095	6.445E-01
0.059	0.067	3.830E-01
0.018	0.096	8.499E-01
-0.186	0.106	8.046E-02
0.178	0.108	9.839E-02
0.132	0.067	5.015E-02
-0.206	0.212	3.331E-01
0.033	0.068	6.259E-01
-0.161	0.065	1.388E-02
-0.046	0.067	4.995E-01
0.020	0.119	8.653E-01
0.127	0.070	7.085E-02
-0.010	0.763	9.893E-01
-0.057	0.067	3.975E-01
0.174	0.091	5.432E-02
0.095	0.120	4.279E-01
0.015	0.074	8.355E-01
-0.081	0.068	2.334E-01
-0.175	0.108	1.058E-01
0.081	0.071	2.565E-01
0.106	0.189	5.734E-01
-0.037	0.066	5.797E-01
-0.021	0.084	8.003E-01
-0.143	0.163	3.794E-01
0.122	0.068	7.272E-02
0.036	0.201	8.576E-01