

## Supplementary Data S1: Search Terms for MEDLINE (Ovid)

1. rheumatoid arthritis.mp.
2. (rheumatoid adj arthriti4).tw.
3. ((caplan's or felty's or sjogren's) adj syndrome).tw.
4. ankylosing spondylitis.tw.
5. still's disease.tw.
6. rheumatoid arthrosis.mp.
7. early rheumatoid arthritis.mp.
8. RA.mp.
9. arthritis,rheumatoid.mp.
10. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9
11. corticosteroid.mp.
12. glucocorticoid.mp
13. glucocorticosteroid\$.mp.
14. steroid\$.mp.
15. Prednisone.mp.
16. Prednisolone.mp.
17. methylprednisolone.mp
18. betamethasone.mp.
19. hydrocortisone.mp
20. dexamethasone.mp.
21. triamcinolone.mp.
22. deflazacort.mp.
23. deltacortril.mp.
24. glucocorticoid.mp. or exp Glucocorticoids/
25. adrenocorticotrophic hormone.mp.
26. alcometasone dipropionate.mp.
27. beclomethasone.mp.
28. celestone soluspan.mp.
29. budesonide.mp.
30. entocort EC.mp.
31. Uceris.mp
32. ciclesonide.mp.
33. dexpak.mp.
34. taperpak.mp
35. hexadrol.mp.
36. Diflucortolone valerate.mp.
37. Fludrocortisone acetate.mp.
38. fluticasone.mp.
39. cortef.mp.
40. A-Hydrocort.mp.
41. depo-medrol.mp.
42. solu-medrol.mp.
43. medrol.mp.
44. methacort.mp.
45. depopred.mp.
46. predacorten.mp.
47. Prelone.mp.
48. Orapred.mp.
49. Millipred.mp.

50. Deltasone.mp.
51. Sterapred.mp.
52. Liquid Pred.mp.
53. Aristocort.mp.
54. Fosdagrocorat.mp.
55. NR3C1.mp.
56. Glucocorticoid receptor agonist.mp.
57. corticoid\*.tw,nm.
58. glucocorticoid\*.tw,nm.
59. glucocorticosteroid\*.tw,nm.
60. pregnenedione\*.tw,nm.
61. pregnenolone\*.tw,nm.
62. hydrocortisone.tw,nm.
63. hydroxypregnenolone.tw,nm.
64. hydroxycorticosteroid\*.tw,nm.
65. tetrahydrocortisol.tw,nm.
66. cortodoxone.tw,nm.
67. cortisone.tw,nm.
68. fludrocortisone.tw,nm.
69. corticosterone.tw,nm.
70. triamcinolone.tw,nm.
71. prednisone.tw,nm.
72. prednisolone.tw,nm.
73. paramethasone.tw,nm.
74. methylprednisolone.tw,nm.
75. dexamethasone.tw,nm.
76. clobetasol.tw,nm.
77. beclomethasone.tw,nm.
78. betamethasone.tw,nm.
79. budesonide.tw,nm.
80. "adrenal cortex hormone".mp.
81. deltacortril.mp.
82. deltastab.mp.
83. pevanti.mp.
84. lodotra.mp.
85. adcortyl.mp.
86. aureocort.mp.
87. adrenocortical steroids.mp.
88. 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85 or 85 or 86 or 87
89. random\*.mp.
90. rct\*.mp.
91. ((single\* or double\* or trebl\* or tripl\*) adj1 (blind\* or mask\*)).mp.
92. placebo\*.mp.
93. (clinical adj trial\*).mp.
94. (meta adj1 analy\*).mp.
95. meta-analy\*.mp.
96. (systematic\* adj3 (review\* or overview\* or litera\* or search\*)).mp.

97. randomized controlled trial.pt.
98. controlled clinical trial.pt.
99. randomi#ed.ti,ab.
100. placebo.ab.
101. Meta-analysis/
102. Meta-analysis as Topic/
103. ((systematic\* or evidence\*) adj3 (review\* or overview\*)).ti,ab.
104. randomized controlled trial.mp.
105. randomized.mp.
106. controlled.mp.
107. trial.mp.
108. clinical.mp.
109. trial.mp.
110. clinical trials.mp.
111. clinical trial.mp.
112. random\*.mp.
113. random allocation.mp.
114. randomised controlled trial.mp.
115. 105 and 106 and 107
116. 104 or 115
117. 108 and 109
118. 110 or 111 or 112 or 113 or 117
119. 10 and 88 and 118

Supplementary Table S1: All studies and their risk of bias assessment data

Author	Publication Year	Country	Total_N	Female Percent	Average Age	DrugName	Dose	Freq	DrugDur	StudyDur	QualRand	QualAll oc	QualPart Bli	QualPhys Bli	QualAss	QualAttrit	QualSpec	QualTT	QualReporting	
Alten(1, 2)	2015	Germany	350	84%	57	prednisolone	5mg	daily	12 weeks	12 weeks	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bakker(3)	2012	Netherlands	236	71%	54	prednisolone	10mg	daily	2 years	2 years	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Bengtsson(4)	1998	Sweden	21	75%	52	methylprednisolone	50mg	once	20 minutes	6 weeks	Unclear	Yes	Yes	No	Yes	Yes	Unclear	No	Yes	Yes
Boers(5)	2015	Germany	350	84%	57	prednisolone	5mg	daily	12 week	12 week	Yes	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Yes
Bohm(6, 7)	1967	Germany	40	75%	49	prednisolone	2.5mg	unknown	8 days	8 days	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear
Harris(8)	1983	USA	34	68%	55	prednisolone	5mg	daily	24 weeks	32 weeks	Unclear	Yes	Yes	Yes	Yes	No	Unclear	No	Yes	Yes
Iglehart(9)	1990	USA	36	97%	60	methylprednisolone	1000 v 100mg	daily	3 days	3 months	Unclear	Unclear	Yes	Unclear	Yes	Unclear	Yes	No	Yes	Yes
Jelinek(10)	1991	Australia	22	59%	22-77 yr range	methylprednisolone	40mg	once	1 day	8 weeks	Unclear	Yes	Yes	Yes	Yes	Unclear	Yes	No	Yes	Yes
Capell(11)	2004	UK	167	65%	56	prednisolone	7mg	daily	2 years	2 years	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Choy(12)	2005	UK	91	78%	57	depomedrone (methylpred)	120mg	not sure	2 years	2 years	Unclear	Unclear	Unclear	Unclear	Yes	No	Yes	Yes	Yes	Yes
Ciconelli(13)	1996	Brazil	38	100%	43	methylprednisolone	5mg/kg	monthly	2 months	6 months	Unclear	Unclear	Yes	Yes	Unclear	No	Unclear	No	Yes	Yes
Corkill(14)	1990	UK	59	64%	54	depot methylprednisolone	120mg	4 weeks	8 weeks	24 weeks	Yes	Yes	Unclear	Unclear	Yes	No	Yes	Yes	Yes	Yes
Fan(15)	1978	USA	12	17%	unknown	prednisolone	3x100mg vs 1x100mg	daily	3 or 1 days	unknown	No	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	No	Unclear	Unclear
Ferraz(16)	1992	Brazil	39	unknown	unknown	methylprednisolone	10 vs 5mg/kg	once	2 day	6 weeks	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear
Gjeddebaek(17)	1962	Denmark	40																	
Gough(18)	1994	UK	20	80%	54	methylprednisolone	120mg	0,4,12 weeks	12 weeks	52 weeks	Unclear	Unclear	Unclear	Unclear	Unclear	No	Unclear	Yes	Yes	Yes
Kazkaz(19)	1990	Syria	41	80%	49	methylprednisolone	1g	Once	1 day	8 weeks	Unclear	Unclear	Yes	Unclear	Unclear	Yes	Unclear	No	Yes	Yes
Kennedy(20)	1973	UK	24	83%	50	triamcinolone acetonide (kenalog)	80mg	once	1 day	4 weeks	No	Yes	Yes	Yes	Yes	Yes	No	Unclear	Yes	Yes

Kirwan(21)	1995	UK	128	64%	49	prednisolone	7.5mg	daily	2 years	2 years	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Kirwan(22)	2004	UK, Belgium, Sweden	143	71%	55	budesonide and prednisolone	bud 9mg, bud 3mg, pred 7.5mg	daily	12 weeks	16 weeks	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes	Yes	Yes
Hansen(23)	1990	Denmark	97	73%	60	methylprednisolone	15mg/kg	4 weeks	6 months	12 month	Yes	Yes	Unclear	Unclear	Yes	No	Unclear	No	Yes
Hansen(24)	1987	Denmark	30	63%	66	methylprednisolone	1g	daily	2 days	32 weeks	No	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	No	Yes
Laan(25)	1993	Netherlands	40	70%	55	prednison	10mg, then tapered after 12 weeks	daily	20 weeks	20 weeks	Unclear	Unclear	Unclear	No	Yes	No	Unclear	Yes	Yes
Lee(26)	1974	UK	21	unknown	unknown	prednisolone	2.5mg	4x daily	1 week		No	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	No	Unclear
Li(27)	1996	Canada	10	80%	57	dexamethasone	4mg/ml	2 days	5 days	20 days	Yes	Yes	Yes	Yes	Unclear	Yes	Yes	No	Yes
Liebling(28)	1981	USA	10	70%	55	methylprednisolone	1g	monthly	6 months	12 months	Unclear	Unclear	Yes	Yes	Unclear	No	No	No	Yes
Marwah(29)	1982	UK	20	unknown	unknown	pred vs betamethasone	8mg-P vs 1mg-B	daily	2 weeks		Unclear	Unclear	Yes	No	Yes	Unclear	Yes	No	Yes
Montecucco(30)	2012	Italy	220	64%	60	prednisolone	12.5mg to 6.25mg after 2 weeks	daily	52 weeks	1 year	Yes	No	No	No	Yes	No	Yes	Yes	Yes
Pavelka(31)	1992	Czech Republic	34	unknown	unknown	methylprednisolone	1g	3x		8 weeks	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear
Pincus(32)	2009	USA	31	63%	52	prednisolone	withdrawal	daily	12 weeks	12 weeks	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Buttgereit(33)	2008	Germany and Poland	288	86%	55	prednisolone	modified release	daily	12 weeks	12 weeks	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	No	Yes
Buttgereit(34)	2010	Germany and Poland	288	86%	55	prednisolone	modified release	daily	12 weeks	12 weeks	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	No	Yes
Buttgereit(2)	2013	Germany	350	84%	57	prednisolone	5mg	daily	12 weeks	12 weeks	Unclear	Unclear	Unclear	Unclear	Yes	Yes	Yes	Yes	Yes
Sheldon(35)	2003	UK	26	62%	56	budesonide	9mg	daily?	4 weeks	4 weeks	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	No	No	Yes
Stenberg(36)	1992	USA	36	61%	61	prednisolone	5mg	daily	6 months	1 year	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	Yes	No	Yes

Stock(37)	2017	USA	86	59%	56	Fosdagrocarat, prednisolone	F 10mg, F25mg, P 5mg	daily	2 weeks	2 weeks	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes	Yes	Yes
Taylor(38)	1999	New Zealand	36	75%	55	syncathen depot	0.5mg	daily	2 days	6 months	Unclear	Unclear	Unclear	Yes	Unclear	Yes	Unclear	No	Yes
van der Veen(39)	1993	Netherlands	30	80%	56	prednisolone	100mg(oral), 1g(i.v.)	2 days	5 days	1 year	Unclear	No	No	No	No	No	Unclear	No	Yes
van Everdingen(40-42)	2002	Netherlands	81	64%	62	prednisolone	10mg	daily	2 years	2 years	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
van Gestel(43)	1995	Netherlands	40	70%	57	prednisolone	10mg, tapering	daily	18 weeks	18 weeks	Unclear	Yes	Yes	Yes	Yes	No	Unclear	Yes	Yes
Vischer(44)	1986	Switzerland	37	unknown	unknown	methylprednisolone	1000mg, 250mg	once	1 day	6 weeks	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	No	Yes
Williams(45)	1982	UK	20	90%	56	methylprednisolone	1g	once	1 day	6 weeks	Unclear	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	Yes
Dick(46)	1970	UK	24	46%	48	prednisolone	10mg	daily	1 week	1 week	Unclear	Yes	Unclear	Unclear	Unclear	Unclear	Yes	No	Unclear
Berry(47)	1974	UK	12	50%	58	prednisolone	15mg	daily	1 week	3 weeks	Yes	Unclear	Yes	Unclear	Unclear	Yes	Yes	No	Yes
Jasani(48)	1968	UK	9	78%	50	prednisolone	15mg	daily	1 week	4 weeks?	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Unclear
Lee(49)	1973	UK	141	unknown	unknown	prednisolone	15mg	daily	2 weeks	2 weeks	Yes	Unclear	Unclear	Unclear	Unclear	No	Yes	No	Yes
Kaminska-Tcharzewska(50)	2001	Poland	50	76%	53	methylprednisolone		monthly	3 months	1 year	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	No	Yes
Kowanko(51)	1982	UK	12	58%	55	prednisolone	mean 5.6mg	daily	4 weeks	Unknown	Unclear	Yes	Yes	Unclear	Yes	Unclear	Unclear	No	Yes
Buttgereit(52)	2019	Germany	323	69%	55	Fosdagrocorat / prednisolone	F1,5,10,15 mg and P5,10mg	daily	8 weeks	14 weeks	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Yes
Alten(53)	2009	Germany	60	70%	53	prednisolone	40mg -> 5mg	daily	6 weeks	Unknown	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	No	Yes
Arvidson(54)	1997	Sweden	26	67%	62	prednisone	5 to 7.5mg	daily	4 days	5 days	Unclear	No	Unclear	No	No		Yes		Yes
Choy(55)	1993	UK	41	76%	58	methylprednisolone	120mg i.m. vs 500mg oral	4 weeks	8 weeks	16 weeks	Yes	Yes	Yes	Unclear	Unclear	No	Yes	Yes	Yes
Di Munno(56)	1999	Italy	18	89%	57	deflazacort	6mg	daily	3 weeks	9 weeks	Unclear	No	No	No	No	Unclear	Yes	No	Yes
Scudeletti(57)	1993	Italy	18	unknown	unknown	deflazacort vs pred	0.5mg/kg	daily	2 years	2 years	Unclear	Yes	Unclear	Unclear	Unclear	Unclear	Yes	No	Yes
Smith(58)	1988	Australia	24	60%	60	methylprednisolone	1000mg	daily	3 days	6 months	Unclear	Yes	Yes	Unclear	Unclear	Unclear	Yes	No	Yes
Radia(59)	1988	USA	29	63%	54	methylprednisolone	1000 or 320 mg	once	1 day	6 weeks	Unclear	Yes	Yes	Unclear	Unclear	Yes	Yes	No	Yes

Hayball(60)	1992	Australia	10	20%	65	methylprednisolone	1000mg iv or 1000mg oral	once	1 day	5 weeks	Unclear	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear	Yes
Scott(61-63)	2019	UK	467	76%	54	prednisolone	60mg, tapered to 7.5mg at 6 weeks, continued to 28 weeks	daily	28 weeks (up to 34 weeks)	34 weeks	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Burmester(64)	2020	Germany + others	259	77%	54	prednisolone	5mg, tapering to 0mg after 16 weeks	daily	24 weeks	24 weeks	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fleischmann(65)	2020	USA	235	88%	50	Repository corticotropin	80U	2x week	12 weeks	24 weeks	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Hua(66)	2020	China	59	78%	47	Prednisone	10mg daily for 12 weeks, 5mg daily for next 8 weeks.	daily	6 months	6 months	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
van der Elst(67)	2019	Belgium	91	79%	51	prednisone	30-20-12.5-10-7.5-5mg tapering	daily	2 years	2 years	Yes	No	No	No	No	Yes	No	Yes	Yes
Vershueren(68)	2017	belgium	91	79%	51	prednisone	30-20-12.5-10-7.5-5mg tapering	daily	2 years	2 years	Yes	No	No	No	No	Yes	No	Yes	Yes
Wang(69)	2017	China	112	Not known	Not known	prednisone	Not known	Not known	3 months	3 months	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear
Xiong(70)	2016	China	84	Not known	Not known	"glucocorticoids"	"High", "medium", "low"	Not known	3 months	3 months	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear

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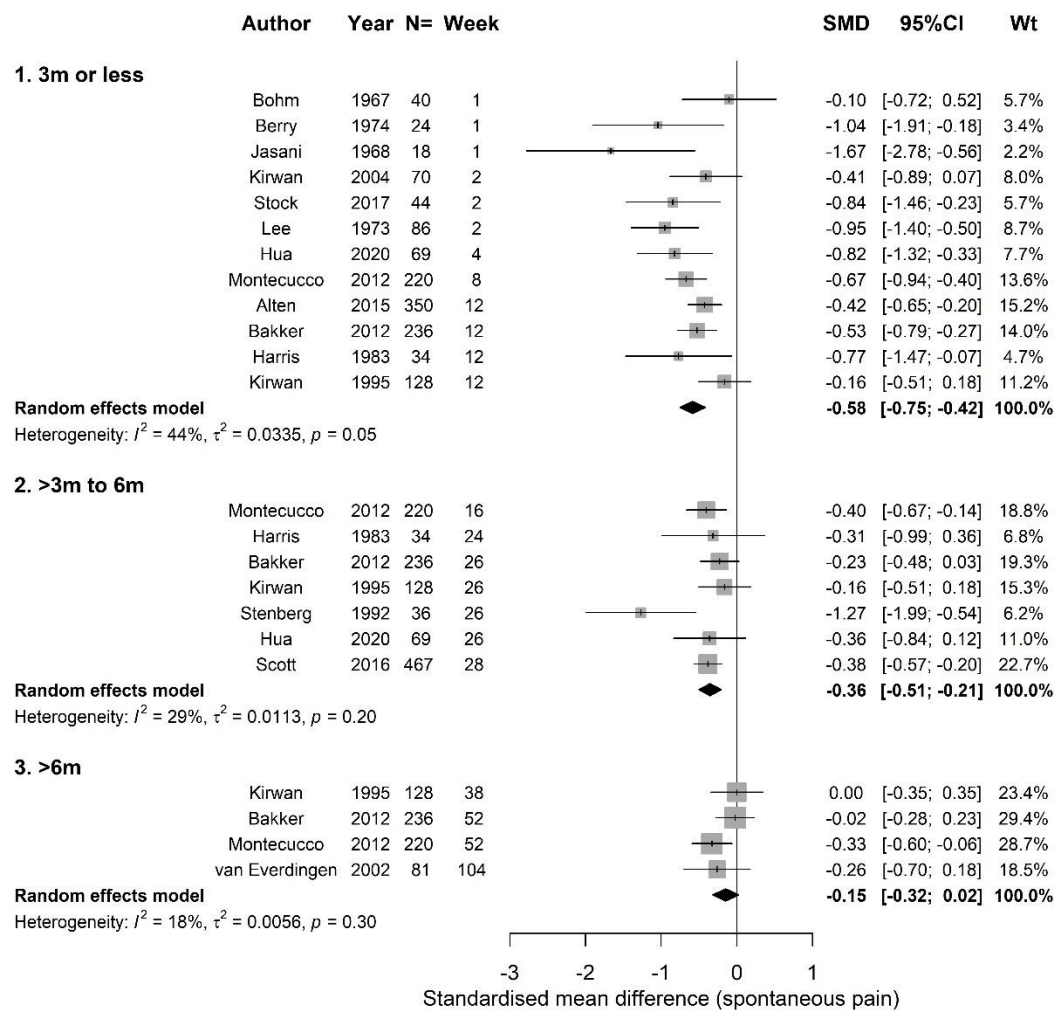
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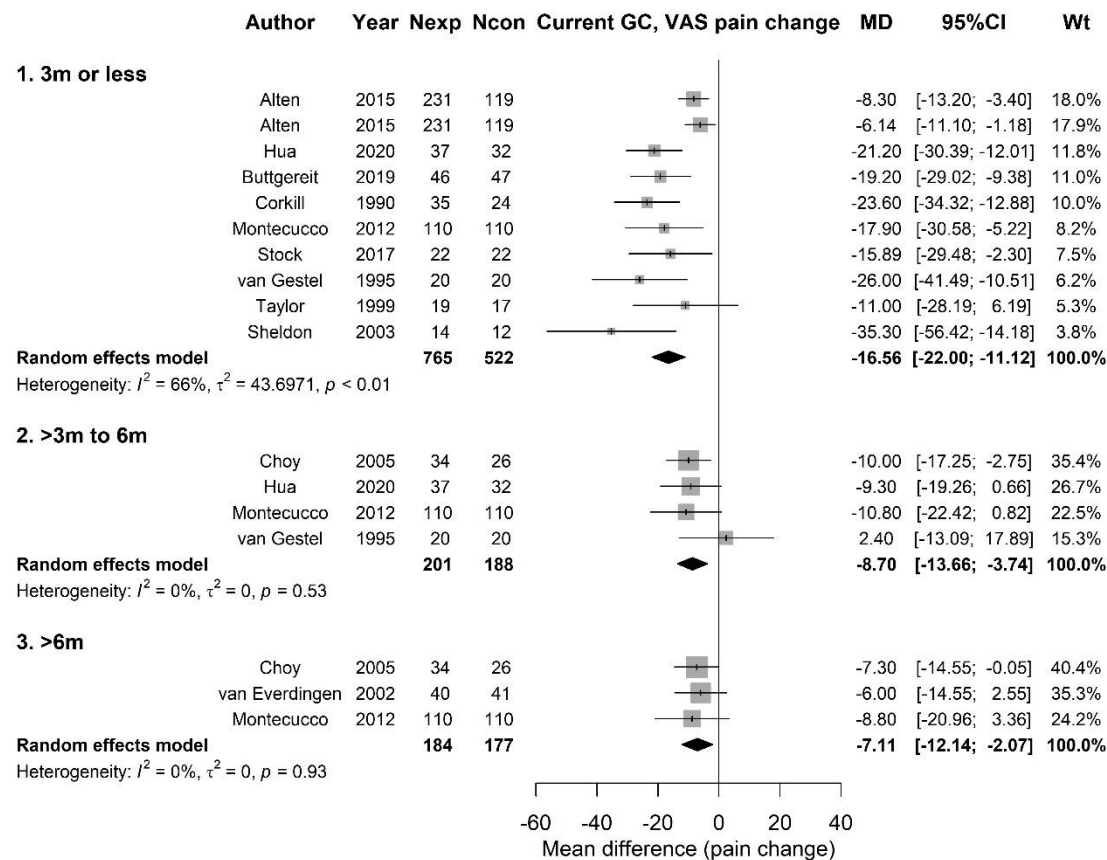
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Supplementary Figure S1. Subgroup analysis of duration of treatment and pain change score in response to oral glucocorticosteroids

A



B



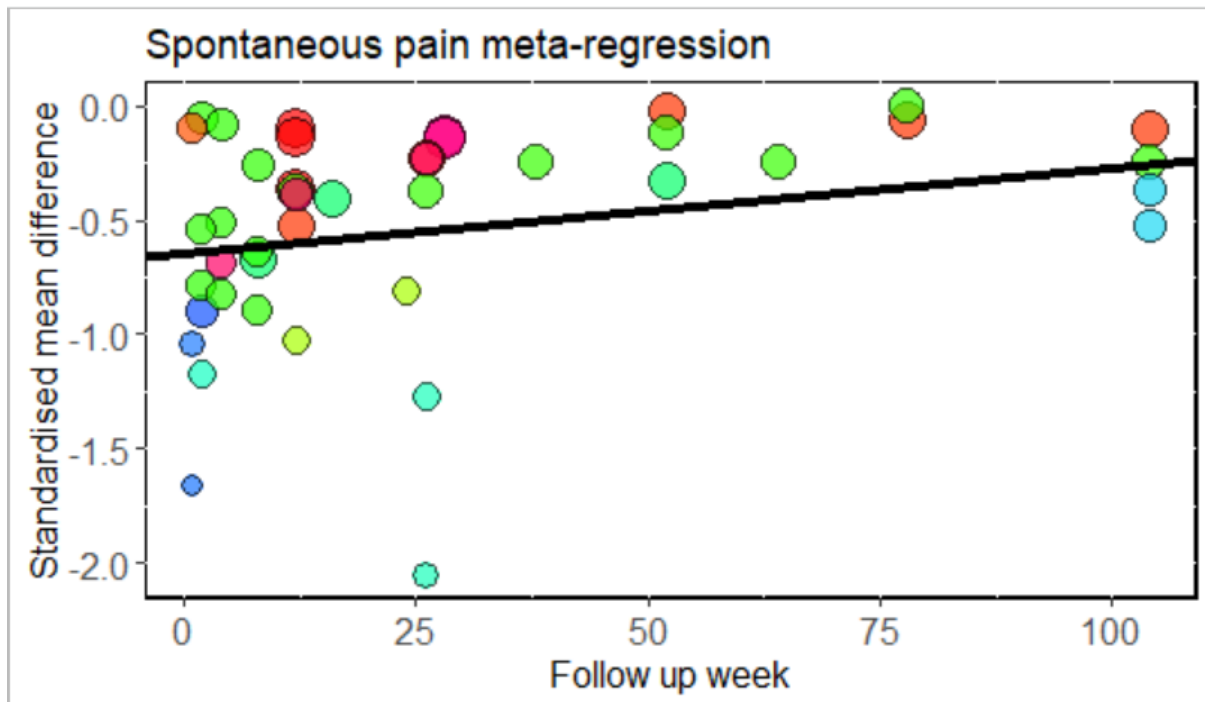
Forest plot of the pain change scores from baseline to follow up, stratified by duration of treatment. A – standardised mean differences of change, and B- mean differences of the change in 100mm VASpain. Each study may contribute to each of the time periods.

Supplementary Figure S2: Metaregression on trials using oral GCs to examine the association with duration of treatment

A. Multilevel meta-regression.

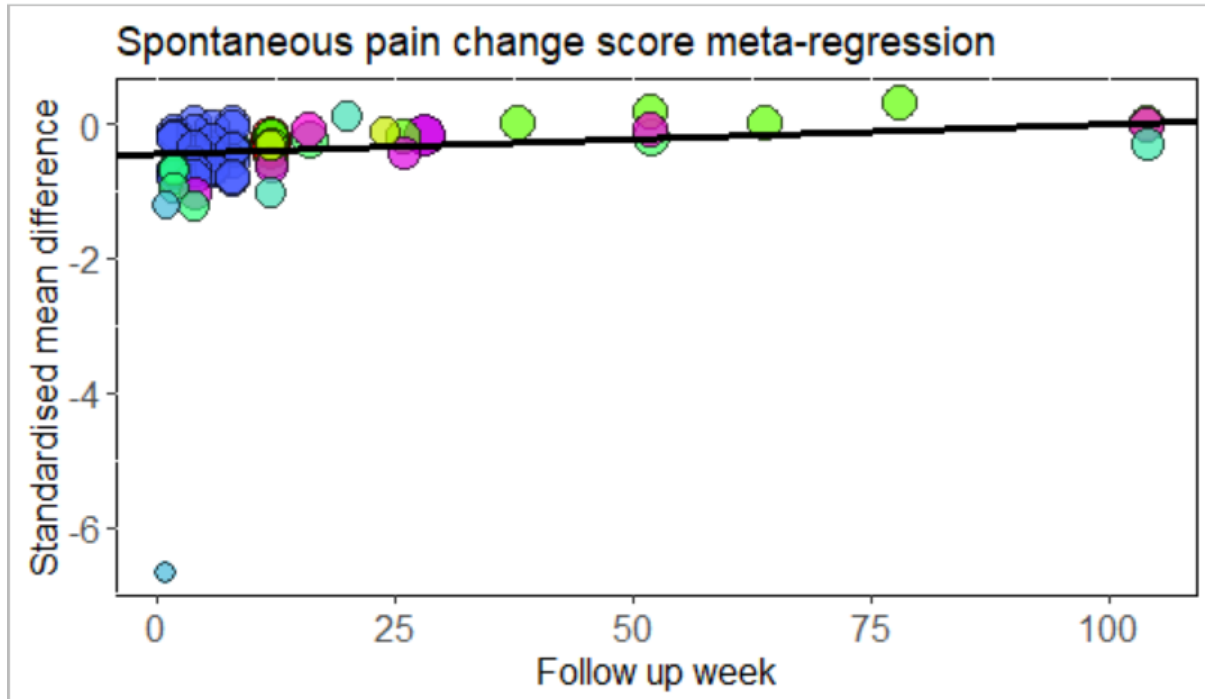
Panel	Outcome	Dependent variable	Beta (se)	p
B	Spontaneous pain	SMD	0.0038 (0.0012)	0.004
C		SMD change scores	0.0044 (0.0015)	

B.



Spontaneous pain SMD with size of bubble proportional to the inverse of the standard error of estimate. Line of meta-regression imposed upon data. Data from the same studies are presented in the same colour. Not to scale with other graphs in this Supplement, nor with the same colour codes as other graphs.

c.

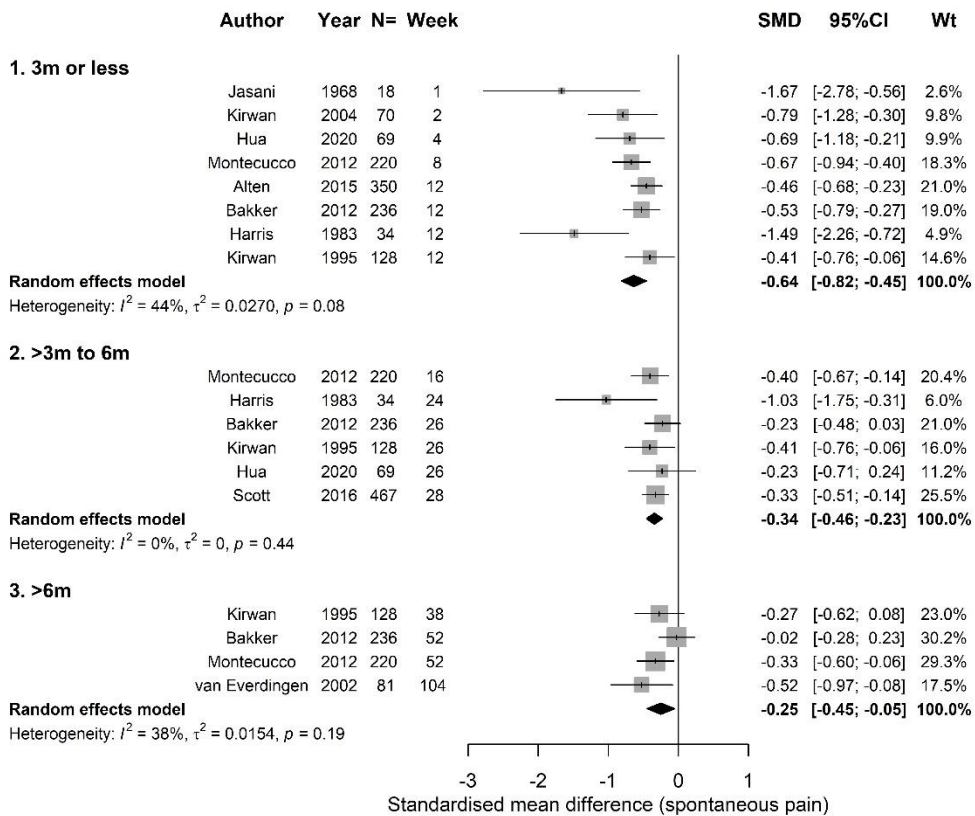


Spontaneous pain change score SMD with size of bubble proportional to the inverse of the standard error of estimate. Line of meta-regression imposed upon data. Data from the same studies are presented in the same colour. Not to scale with other graphs in this Supplement, nor with the same colour codes as other graphs.

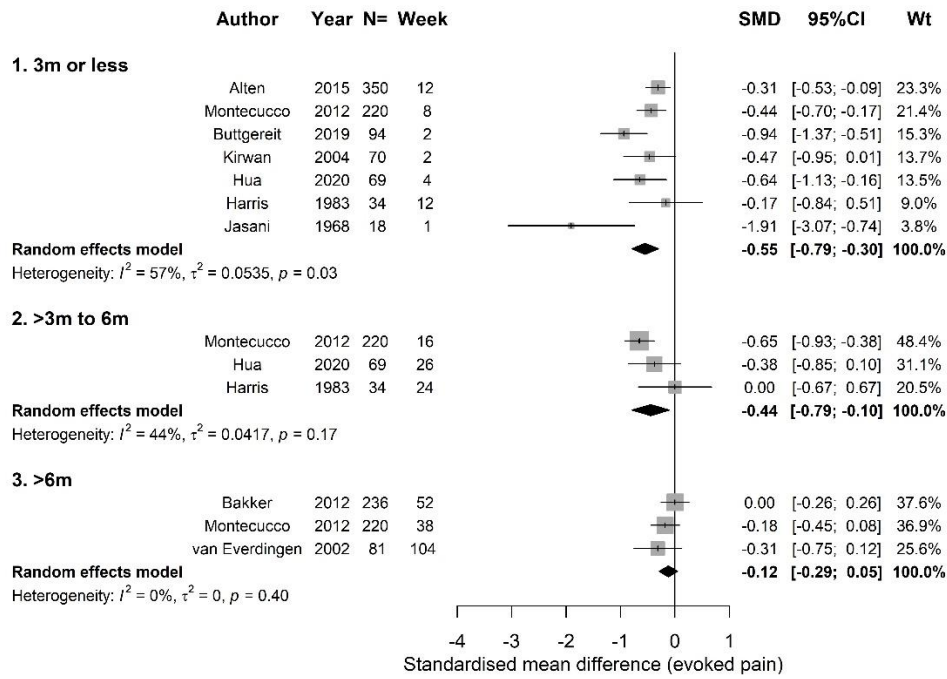


Supplementary Figure S3: Forest plot of high quality trials of GCs Subgroup analysis of duration of treatment in response to oral glucocorticosteroids in studies classified as high quality

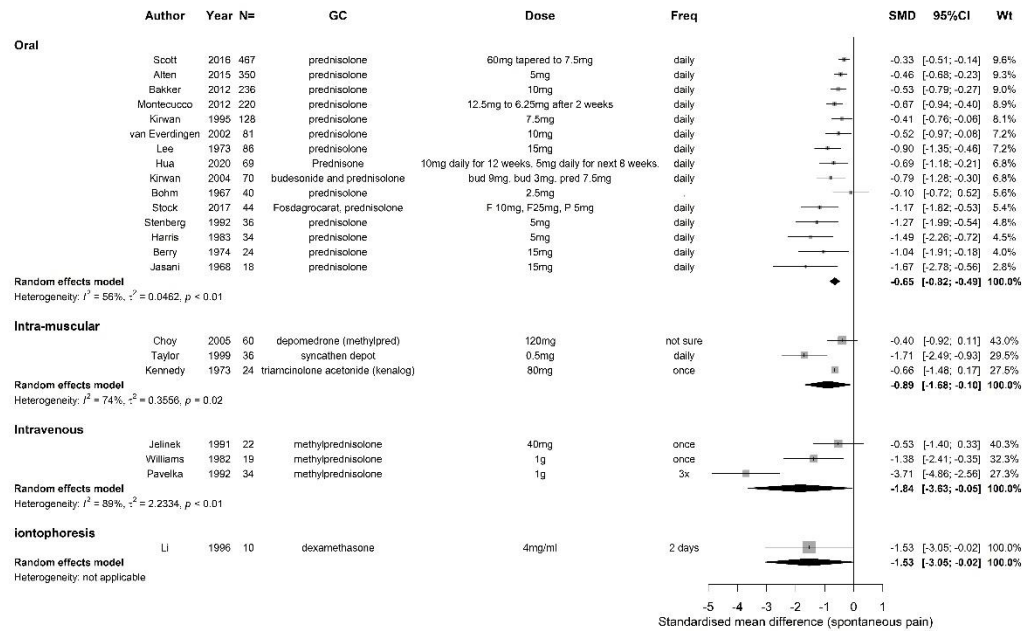
A Current oral GC effects on spontaneous pain in high quality studies



## B Current oral GCs effects on evoked pain in high quality studies



Supplementary Figure S4: Forest plot of subgroup analysis comparing different routes of administration of GCs and spontaneous pain



Standardised mean differences of pain in trials of systemic GCs, stratified by route of administration. Forest plot showing results of random effects meta-analyses for each different route. Negative values favour GC over comparator.

## Supplementary Data S2: Metaregression of trials using oral GCs to examine association between pain improvement and improvements in inflammation

Meta-regression of SMD for pain outcomes was analysed to examine its association with reported mean erythrocyte sedimentation rates (ESR) within each study.

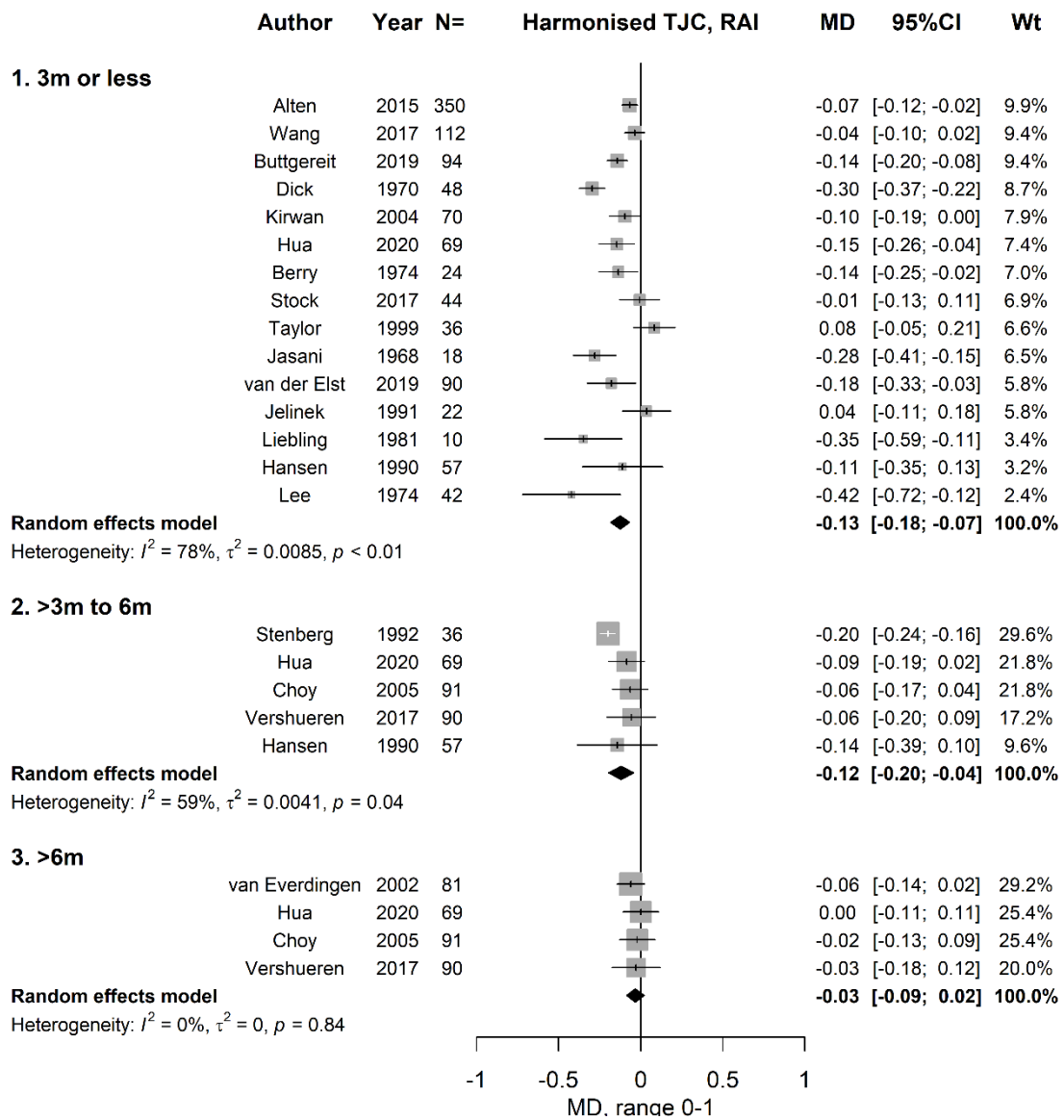
Meta-regressions were performed using identical methodology as reported in Supplement S4, but with the addition of an ESR-related variable as an independent covariable. Results are presented in the table. Individual meta-regression models were performed separately for baseline ESR, difference in ESR between groups at follow up and difference in change scores for ESR between groups. A greater therapeutic difference in ESR between GC and control groups was associated with better reductions in pain ( $\beta= 0.026$ ) meaning that 10mm difference of ESR between study arms was associated with 0.26 improvement of SMD effect size for pain. Similar findings were found when change in ESR from baseline to follow up was examined ( $\beta=0.035$ ) meaning that 10mm more improvement in ESR from baseline was associated with improvement of 0.35 in SMD effect size for pain. Among the trials analysed, the mean (sd) difference in ESR between GC and comparator groups at follow up was -19.8 (8.2).

Similar findings were also observed after meta-regression analysing the spontaneous pain change score SMD.

ESR variable	$\beta$ (95% CI)	p
<i>Spontaneous pain, SMD</i>		
Baseline ESR	-0.013 (-0.033 to 0.008)	0.206
Difference in ESR between groups at follow up	0.026 (0.011 to 0.041)	0.009
Difference between change score of ESR at groups at follow up	0.035 (0.013 to 0.056)	0.003
<i>Spontaneous pain change score, SMD</i>		
Baseline ESR	-0.009 (-0.026 to 0.009)	0.323
Difference in ESR between groups at follow up	0.029 (0.006 to 0.05)	0.015
Difference between change score of ESR at groups at follow up	0.027 (0.011 to 0.043)	0.002

Coefficients represent the change in SMD associated with each mm/hr of ESR

Supplementary Figure S5: Forest plot showing subgroup analysis of mean difference of harmonised (normed to the range -1 to 1) scores of evoked pain



Forest plot of harmonised tender joint counts between Ritchie Articular Index (RAI) and 28-joint tender joint count (TJC). Average improvements for each time subgroup.

Harmonised tender joint data, derived from re-scaling TJC and RAI to 0 to 1, expressed as a proportion of their maximum possible values. Mean differences represent the proportion of the harmonised score that is derived from oral GCs (ie. SMD of -0.13 is 13% improvement in tender joint score).

## Supplementary Table S2: Head-to-head comparisons of GCs and studies of withdrawal of GCs

Author	Date	Admin1	Drug1	Dose1	Timing1	Dur1	Admin2	Drug2	Dose2	Timing2
<b><u>Withdrawal of GCs</u></b>										
Pincus(1)	2009	Oral	prednisolone	1-4mg	withdrawal				Not applicable	
Kirwan(2)	2004	Oral	budesonide	9/3mg	withdrawal				Not applicable	
Kirwan(2)	2004	Oral	prednisolone	7.5mg	withdrawal				Not applicable	
Buttgereit(3)	2019	Oral	Fosdagrocarat	15/10/5mg	withdrawal				Not applicable	
Buttgereit(3)	2019	Oral	Prednisolone	10/5mg	withdrawal				Not applicable	
Harris(4)	1983	Oral	prednisolone	5mg	withdrawal				Not applicable	
Fleischmann(5)	2020	Subcut	corticotropin	80U	withdrawal				Not applicable	
Burmester(6)	2020	Oral	prednisolone	5mg	withdrawal				Not applicable	
<b><u>Head to head comparisons of doses of the same GC</u></b>										
Ferraz(7)	1992	iv	methylprednisolone	10mg/kg	daily	1 day	iv	methylprednisolone	5mg/kg	daily
Vischer(8)	1986	iv	methylprednisolone	1000mg	once	1 day	iv	methylprednisolone	250mg	once
Fan(9)	1978	iv	methylprednisolone	1000mg	8am	3 days	iv	methylprednisolone	1000mg	8am
Stock(10)	2017	Oral	Fosdagrocarat	25mg	daily	2 weeks	Oral	Fosdagrocarat	10mg	daily
Buttgereit(3)	2019	Oral	Fosdagrocarat	15mg	daily	8 weeks	Oral	Fosdagrocarat	10mg	daily
Buttgereit(3)	2019	Oral	Prednisolone	10mg	daily	8 weeks	Oral	prednisolone	5mg	daily
Iglehart(11)	1990	iv	methylprednisolone	1000mg	3 doses	3 days	iv	methylprednisolone	100mg	3 doses
Radia(12)	1988	iv	methylprednisolone	1000mg	once	1 day	iv	methylprednisolone	320mg	once
Kirwan(2)	2004	Oral	budesonide	9mg	daily	12 weeks	Oral	budesonide	3mg	daily
<b><u>Head to head comparison of prednisolone and another GC</u></b>										
Marwah(13)	1982	Oral	Betamethasone	1mg	daily	2 weeks	Oral	prednisolone	8mg	daily
Stock(10)	2017	Oral	Fosdagrocarat	25/10mg	daily	2 weeks	Oral	prednisolone	5mg	daily
Stock(10)	2017	Oral	Fosdagrocarat	10mg	daily	2 weeks	Oral	prednisolone	7.5/5mg	daily
Kirwan(2)	2004	Oral	budesonide	9/3mg	daily	12 weeks	Oral	prednisolone	7.5mg	daily

Buttgereit(3)	2019	Oral	Fosdagrocarat	15/10/5mg	daily	8 weeks	Oral	prednisolone	10/5mg	daily
Scudeletti(14)	1993	Oral	Deflazacort	0.5mg/kg	daily	2 years	Oral	prednisolone	0.5mg/kg	daily
<b><i>Head to head comparison of different routes of administration</i></b>										
Di Munno(15)	1999	Oral	deflazacort	tablet	daily	3 weeks	Oral	deflazacort	aqueous drops	daily
Choy(16)	1993	Intramuscular	methylprednisolone	120mg	4 weeks	8 weeks	Oral	methylprednisolone	500mg	4 week
Radia(12)	1988	iv	methylprednisolone	320mg	once	1 day	im	methylprednisolone	320mg	once
Hayball(17)	1993	iv	methylprednisolone	1000mg	once	1 day	Oral	methylprednisolone	1000mg	once
van der Veen(18)	1993	iv	prednisolone	1000mg	3 times	5 days	Oral	prednisolone	100mg	3 times
Smith(19)	1988	Intravenous	methylprednisolone	1000mg	daily	3 days	oral	methylprednisolone	1000mg	daily
<b><i>Head to head comparison of different timings of GC administration</i></b>										
Kowanko(20)	1982	Oral	prednisolone	5.6mg	morning/lunch/bedtime	4 weeks	Oral	prednisolone	5.6mg	morning/lunch/bedtime
CAPRA-1 / Buttgereit(21)	2008	Oral	prednisolone	3-10mg	delayed release	12 weeks	Oral	prednisolone	3-10mg	standard release
Alten(22)	2009	Oral	prednisolone	40mg tapering	ultradian	6 weeks	Oral	prednisolone	40mg tapering	circadian
Arvidson(31)	1997	Oral	prednisolone	7.5mg	morning	4 days	Oral	prednisolone	7.5mg	2am

Summary of studies examining withdrawal of GCs and head-to-head comparisons

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