





Supplementary Table 4: Biomarkers characterised in the Nottingham Tenovus Primary Series with antibodies used, source, dilutions and cut-offs for categorisation.

Antibody [clone]	Supplier	Dilution	Categorical cut points
ER [1D5]	DAKO	1:150	Negative (0), Positive (>1)
PgR[PgR 636]	DAKO	1:100	Negative (0), Positive (>1)
HER2 [cerbB-2]	DAKO	1:250	Negative (<10), Positive (≥10)
Ck5/6 [D5/16134]	Boehringer Biochemica	1:100	Negative (<10), Positive (≥10)
Ck17[E3]	Abcam	1:20	Negative (<10), Positive (≥10)
Trans-acting T-cell-specific transcription factor (GATA3) [HG3-31]	Santa Cruz Biotechnology	1:80	Negative/Low (<60), Positive (≥60)
Co-activator associated arginine methyl transferase (CARM1) [clone NB100 - 1817]	NOVUS	1:300	Negative/Low (<30), Moderate (30-149), High (150-300)
EGFR[31G7]	lone 31G7, Invitrogen	1/30	≥10%
STAT3	Abcam	1:150	0-30 Negative/Low and >30 High
Phosphatidylinositol-3 kinase [HPA009985]	Sigma	1:50	Negative (<30), Low (30-100), High (101-300)
Ki-67[MIB1]	Sigma	1:100	Negative (<14), Positive (>14)
N-Cadherin [C3865]	Abcam	4 ug/ml	Negative/Low (<100), High (>100)
Anti-Histone H4 acetyl K12 [H4K12ac]	Abcam	1:800	Negative/Low (<100), High (>100)
Anti-Histone H3 (di methyl K4 [H3K4Me2; [C3865]	Abcam	1:200	Negative/Low (<100), High (>100)
Anti-Histone H4 (di methyl R3) antibodyH4R3Me2	Abcam	1:200	Negative/Low (<100), High (>100)
RERG (Ras-like, oestrogen- regulated, growth-inhibitor	Proteintech	1:20	Negative (0), Positive (1)

Forkhead box protein A1 (FOXA1) [clone 2F83	ABCAM	1:2000	Negative (<10), Positive (≥10)
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Supplementary Table1: Summary of clinico-pathological characteristics for the METABRIC cohort.

Clinicopathological Parameter	Frequency (%)	Clinicopathological Parameter	Frequency (%)
Age at Diagnosis		Tumour Size	
≤50 years	424 (21.9)	≤2.0cm	858 (43.8)
>50 years	1511(78.1)	>2.0cm	1102 (56.2)
Menopausal Status		Grade	
Pre	436 (22.0)	1	170 (9.0)
Post	1533 (78.0)	2	770 (40.7)
		3	952 (50.3)
Stage		NPI	
1	1035 (49.1)	Good Prognostic Group	680 (34.3)
2	622 (34.9)	Moderate Prognostic Group	1101 (55.6)
3	316 (16.0)	Poor Prognostic Group	199 (10.1)
Tumour Type		Tumour Type	
Ductal	1643 (83.8)	Special-type	113 (5.8)
Lobular	147 (7.5)	Miscellaneous	25 (1.3)
Medullary-like	32 (1.6)		
ER status		HER2 Status	
Positive	1506 (76.1)	Positive	247 (12.5)
Negative	474 (23.9)	Negative	1733 (87.5)
PgR Status		Triple Negative Status	
Positive	1040 (52.5)	Triple Negative	276 (16.1)
Negative	940 (47.5)	Non-Triple Negative	1661 (83.9)

Supplementary Table2: Datasets (Study code and reference) included in the online analysis for MED7 on the BC-GenExMiner v4.0 (Breast Cancer Gene-Expression Miner v4.0 online dataset).

Study code	Reference
Rosetta2002	Van de Vijver <i>et al.</i>, 2002
GSE1378	Ma <i>et al.</i>, 2004
GSE2603	Minn <i>et al.</i>, 2005
GSE1456	Pawitan <i>et al.</i>, 2005
GSE2034	Wang <i>et al.</i>, 2005
GSE2741	Weigelt <i>et al.</i>, 2005
GSE3143	Bild <i>et al.</i>, 2006
E_TABM_158	Chin <i>et al.</i>, 2006
GSE4922	Ivshina <i>et al.</i>, 2006
GSE8757	Chin <i>et al.</i>, 2007
GSE7390	Desmedt <i>et al.</i>, 2007
GSE6532	Loi <i>et al.</i>, 2007
GSE5327	Minn <i>et al.</i>, 2007
E_UCON_1	Naderi <i>et al.</i>, 2007
GSE7378	Zhou <i>et al.</i>, 2007
GSE7849	Anders <i>et al.</i>, 2008
GSE9893	Chanrion <i>et al.</i>, 2008
GSE9195	Loi <i>et al.</i>, 2008
GSE11121	Schmidt <i>et al.</i>, 2008
GSE10510	Calabrò <i>et al.</i>, 2009
GSE16391	Desmedt <i>et al.</i>, 2009
GSE12093	Zhang <i>et al.</i>, 2009
GSE22133	Jönsson <i>et al.</i>, 2010
GSE19615	Li <i>et al.</i>, 2010
GSE17907	Sircoulomb <i>et al.</i>, 2010
GSE22219	Buffa <i>et al.</i>, 2011
GSE20711	Dedeurwaerder <i>et al.</i>, 2011
GSE26971	Filipits <i>et al.</i>, 2011
GSE25055	Hatzis <i>et al.</i>, 2011
GSE20685	Kao <i>et al.</i>, 2011
GSE21653	Sabatier <i>et al.</i>, 2011
GSE16987	Wang <i>et al.</i>, 2011
GSE33926	Kuo <i>et al.</i>, 2012
GSE45255	Nagalla <i>et al.</i>, 2013

Supplementary Table 3: Summary of clinicopathological data for the Nottingham Tenovus Primary Series

Clinicopathological Parameter	Frequency (%)	Clinicopathological Parameter	Frequency (%)
Age at Diagnosis		Tumour Size	
≤50 years	424 (21.9)	≤2.0cm	858 (43.8)
>50 years	1511(78.1)	>2.0cm	1102 (56.2)
Menopausal Status		Grade	
Pre	436 (22.0)	1	170 (9.0)
Post	1533 (78.0)	2	770 (40.7)
		3	952 (50.3)
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Ductal	1643 (83.8)	Special-type	113 (5.8)
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ER status		HER2 Status	
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PgR Status		Triple Negative Status	
Positive	1040 (52.5)	Triple Negative	276 (16.1)
Negative	940 (47.5)	Non-Triple Negative	1661 (83.9)