

High expression of intratumoral stromal proteins is associated with chemotherapy resistance in breast cancer

Supplementary Materials

Supplementary Table S1: Dilutions, manufacturers for antibodies used and cut-offs for immunohistochemistry (IHC) staining

Antibodies	Clones, dilutions and Manufacturers	Cut-offs for low vs high expression
THBS1 ^a	1:200, R&D System	Intensity 0 and 1 vs 2 and 3 ^b
TNC ^a	1:1000, Abcam	Intensity 0 and 1 vs 2 and 3 ^b
FN ^a	1:300, R&D System	Intensity 0 and 1 vs 2 and 3 ^b
SPARC ^a	1:150, R&D System	Intensity 0 and 1 vs 2 and 3 ^b
α -SMA ^a	1:400, DAKO	Positive staining ≤ 50 vs ≥ 50 ^c

^aIHC scoring on cancer-associated stroma; ^bintensity 0 to 3, representing negative, mild, moderate and strong immunostaining; ^cdetermined by receiver-operating characteristic curve using SPSS software.

Supplementary Table S2: Relation between baseline expression of stromal proteins and estrogen receptor status, intrinsic response and pathological lymph node involvement

Stromal proteins		<i>N</i>	Mean \pm SD	<i>P</i> ^a
	Estrogen receptor status			
THBS1	Negative	21	1.38 \pm 0.97	0.155
	Positive	36	1.00 \pm 0.83	
TNC	Negative	31	2.52 \pm 0.68	0.065
	Positive	36	2.19 \pm 0.75	
FN	Negative	29	1.86 \pm 0.79	0.772
	Positive	37	1.81 \pm 0.81	
SPARC	Negative	11	1.05 \pm 0.86	0.159
	Positive	16	1.21 \pm 0.83	
α-SMA	Negative	27	35.74 \pm 33.50	0.52
	Positive	27	30.04 \pm 27.56	
	Intrinsic response			
THBS1	Resistant	30	1.30 \pm 0.75	0.73
	Sensitive	36	1.25 \pm 1.05	
TNC	Resistant	35	2.31 \pm 0.63	0.779
	Sensitive	44	2.32 \pm 0.77	
FN	Resistant	38	1.76 \pm 0.79	0.218
	Sensitive	42	1.98 \pm 0.78	
SPARC	Resistant	14	1.04 \pm 0.96	0.888
	Sensitive	14	1.17 \pm 0.78	
α-SMA	Resistant	31	29.68 \pm 27.96	0.454
	Sensitive	39	34.00 \pm 31.16	
	Pathological lymph node involvement			
THBS1	Negative	16	1.25 \pm 1.00	0.98
	Positive	28	1.25 \pm 0.93	
TNC	Negative	20	2.30 \pm 0.57	0.683
	Positive	34	2.18 \pm 0.80	
FN	Negative	20	2.10 \pm 0.72	0.036
	Positive	35	1.66 \pm 0.80	
SPARC	Negative	7	0.94 \pm 0.77	0.132
	Positive	9	1.23 \pm 0.86	
α-SMA	Negative	18	36.04 \pm 31.77	0.277
	Positive	32	25.78 \pm 27.42	

a: Mann-Whitney *U* test.

Supplementary Table S3: Association between changes of stromal proteins following chemotherapy and tumor estrogen receptor (ER) status in the primary cohort

	BL	C1	C2	<i>P</i> ^a (C1 vs BL)	<i>P</i> ^a (C2 vs BL)
	Mean ± S D				
ER positive (n = 37)					
THBS1	1.00 ± 0.82	1.60 ± 0.97	1.53 ± 0.88	0.001	0.012
TNC	2.19 ± 0.74	2.62 ± 0.56	2.62 ± 0.60	0.006	0.021
FN	1.81 ± 0.81	2.11 ± 0.80	2.23 ± 0.92	0.279	0.061
SPARC	1.21 ± 0.83	1.25 ± 1.00	1.38 ± 0.98	0.979	0.182
α-SMA	31.9 ± 26.8	34.17 ± 32.69	31.91 ± 26.82	0.574	0.172
ER negative (n = 31)					
THBS1	1.38 ± 0.97	1.52 ± 0.81	1.42 ± 0.81	0.248	0.623
TNC	2.51 ± 0.68	2.74 ± 0.68	2.54 ± 0.78	0.145	0.855
FN	1.86 ± 0.789	2.01 ± 0.74	2.00 ± 0.80	0.31	0.571
SPARC	1.05 ± 0.86	1.55 ± 0.95	1.49 ± 0.94	0.119	0.21
α-SMA	35.7 ± 33.5	42.39 ± 28.52	47.7 ± 29.0	0.735	0.649

^aWilcoxon Signed Ranks Test; ER: estrogen receptor; BL: baseline; C1: cycle 1; C2: cycle 2.