

Figure S1. Association between mRNA expression levels of MMP1/9/12/16 and different clinicopathological parameters (age and nodal status) of breast carcinoma according to bc-GenExMiner v4.1. $P < 0.05$ was considered as statistically significant. MMP, matrix metalloproteinase.

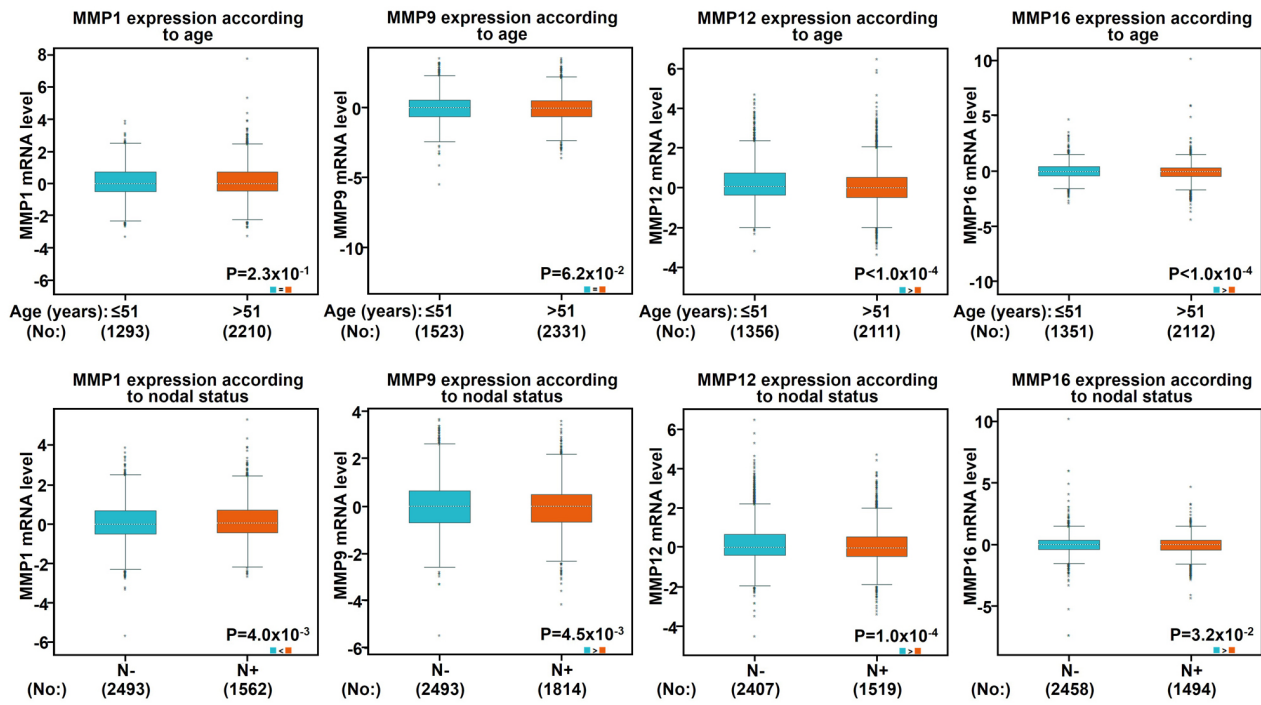


Table SI. Major differences of MMPs expression in transcription levels between different types of breast cancer and breast tissues (from ONCOMINE database).

MMPs	Type	Fold-change	P-value	T-test	(Refs.)
MMP1	Ductal BC	21.130	5.73×10^{-14}	10.813	Richardson Breast 2 (15)
	Invasive BC	11.611	6.48×10^{-21}	11.767	TCGA Breast
	Invasive Ductal BC	11.254	1.99×10^{-53}	21.477	TCGA Breast
	Invasive Lobular BC	3.972	2.14×10^{-8}	6.515	TCGA Breast
	Mixed Lobular and Ductal BC	3.278	6.84×10^{-5}	6.306	TCGA Breast
	Invasive Ductal BC Stroma	7.328	3.00×10^{-3}	3.660	Ma Breast 4 (63)
	Ductal BC in Situ Stroma	5.232	4.27×10^{-4}	4.565	Ma Breast 4 (63)
	Invasive Ductal BC Stroma	5.491	5.00×10^{-3}	3.003	Karnoub Breast (21)
	Ductal BC	2.963	1.50×10^{-2}	3.358	Sorlie Breast (16)
	Ductal BC	2.482	4.40×10^{-2}	2.873	Sorlie Breast 2 (17)
	Medullary BC	2.006	1.98×10^{-6}	5.581	Curtis Breast (18)
MMP3	Invasive Lobular BC	5.945	2.27×10^{-12}	8.436	TCGA Breast
	Invasive BC	5.671	3.72×10^{-19}	10.371	TCGA Breast
	Tubular BC	2.419	2.25×10^{-16}	9.520	Curtis Breast (18)
	Invasive Lobular BC	2.008	7.00×10^{-20}	9.757	Curtis Breast (18)
	Invasive Ductal BC Stroma	3.241	2.00×10^{-2}	2.192	Ma Breast 4 (63)
	Ductal BC <i>in situ</i> Stroma	2.508	2.40×10^{-2}	2.094	Ma Breast 4 (63)
	Invasive BC stroma	3.082	2.93×10^{-9}	6.849	Finak Breast (64)
	Invasive mixed BC	2.092	3.10×10^{-2}	2.238	Radvanyi Breast 19)
MMP9	Medullary BC	9.238	3.02×10^{-14}	11.125	Curtis Breast (18)
	Ductal BC <i>in situ</i>	6.629	5.23×10^{-7}	9.200	Curtis Breast (18)
	Invasive ductal BC	4.378	8.46×10^{-46}	19.204	Curtis Breast (18)
	Mucinous BC	3.508	1.43×10^{-10}	7.414	Curtis Breast (18)
	Intraductal cribriform BC	5.463	1.05×10^{-6}	10.679	TCGA Breast
	Mucinous BC	4.783	1.94×10^{-11}	9.399	TCGA Breast
	Invasive BC	3.245	2.97×10^{-16}	9.711	TCGA Breast
	Invasive lobular BC	2.477	1.34×10^{-8}	6.103	TCGA Breast
	Ductal BC	8.256	1.43×10^{-4}	5.637	Richardson Breast 2 (15)
	Invasive ductal BC	4.043	3.00×10^{-3}	3.389	Radvanyi Breast (19)
	Invasive mixed BC	3.465	7.00×10^{-3}	3.476	Radvanyi Breast (19)
	Invasive ductal BC	3.640	2.70×10^{-2}	2.577	Turashvili Breast (20)
	Invasive Ductal BC stroma	3.575	1.60×10^{-2}	2.471	Karnoub Breast (21)
	Invasive BC stroma	3.450	1.23×10^{-10}	10.463	Finak Breast 64)
	Ductal BC <i>in situ</i> stroma	3.033	1.00×10^{-3}	3.815	Ma Breast 4 (63)
	Invasive ductal BC stroma	2.426	3.30×10^{-2}	2.093	Ma Breast 4 (63)
	Lobular BC	2.929	2.20×10^{-2}	2.883	Perou Breast (65)
	MMP10	Invasive BC	2.631	9.75×10^{-4}	7.204
Invasive BC		6.767	1.08×10^{-15}	8.986	TCGA Breast
Invasive ductal BC		4.265	6.81×10^{-18}	10.220	TCGA Breast
Invasive lobular BC		4.130	7.11×10^{-8}	5.964	TCGA Breast
Ductal BC <i>in situ</i> stroma		3.904	8.00×10^{-3}	2.853	Ma Breast 4 (63)
Invasive BC stroma		2.749	4.38×10^{-8}	9.225	Finak Breast 64)
Invasive ductal BC		2.596	2.90×10^{-2}	2.202	Turashvili Breast (20)
MMP11	All types of BC	>2.000	$<5.00 \times 10^{-2}$	>2.000	Except Radvanyi Breast (19)
	Ductal BC <i>in situ</i>	2.639	8.50×10^{-2}	1.597	Radvanyi Breast (19)
	Invasive ductal BC stroma	188.233 (highest)	1.09×10^{-17}	9.766	Karnoub Breast (21)
MMP12	Ductal BC	5.563	4.39×10^{-6}	5.039	Richardson Breast 2 (15)
	Medullary BC	4.375	1.63×10^{-7}	6.451	Curtis Breast (18)
	Invasive BC	3.970	2.07×10^{-9}	6.336	TCGA Breast
	Invasive ductal BC	3.245	3.67×10^{-14}	8.405	TCGA Breast
	Invasive BC stroma	2.743	1.56×10^{-7}	5.822	Finak Breast (64)
	Ductal BC <i>in situ</i> stroma	2.306	1.20×10^{-2}	2.632	Ma Breast 4 (63)
	Invasive ductal BC	2.035	9.00×10^{-3}	2.857	Turashvili Breast (20)
MMP13	Invasive ductal BC	14.068	1.53×10^{-56}	23.706	TCGA Breast
	Invasive BC	23.549	2.57×10^{-34}	17.610	TCGA Breast
	Invasive lobular BC	10.617	1.98×10^{-13}	10.059	TCGA Breast
	Ductal BC	4.006	5.29×10^{-9}	7.519	Richardson Breast 2 (15)
	Invasive ductal BC Stroma	4.419	6.06×10^{-4}	4.047	Ma Breast 4 (63)

Table SI. Continued.

MMPs	Type	Fold-change	P-value	T-test	(Refs.)
	Invasive BC	3.714	5.00×10^{-3}	4.901	Gluck Breast (66)
	Invasive ductal BC Stroma	4.743	1.20×10^{-2}	2.811	Karnoub Breast (21)
	Fibro adenoma	11.766	1.50×10^{-2}	3.665	Sorlie Breast (16)
	Ductal BC	5.096	4.20×10^{-2}	2.400	Sorlie Breast (16)
	Fibro adenoma	7.336	2.30×10^{-2}	3.482	Sorlie Breast 2 (17)
	Lobular BC	4.045	3.90×10^{-2}	2.506	Perou Breast (65)

MMP, matrix metalloproteinases; BC, breast cancer.