

Supplemental Tables for:
 Incorporating tumor characteristics to the AJCC breast cancer staging system
 Mariana Chavez-MacGregor et al.

Table S1. Five-year overall survival (OS) among 43,938 breast cancer patients identified in the California Cancer Registry (2005-2008)*.

		HR+/HER2-		HER2+/HR+		HER2+HR-		TNBC	
STAGE		N	5-year OS	N	5-year OS	N	5-year OS	N	5-year OS
Stage I	T1a N0 M0	1802	0.97 (0.96- 0.97)	264	0.97 (0.94- 0.99)	162	0.96 (0.91- 0.98)	148	0.93 (0.88- 0.96)
	T1b N0 M0	5447	0.96 (0.95- 0.96)	612	0.95 (0.93- 0.97)	204	0.95 (0.90- 0.97)	487	0.92 (0.89- 0.94)
	T1c, T1NOS N0 M0	9459	0.93 (0.93- 0.94)	1492	0.94 (0.93- 0.95)	559	0.91 (0.88- 0.93)	1392	0.89 (0.87- 0.90)
	T1 N1mi M0	1044	0.97 (0.95- 0.97)	145	0.94 (0.89- 0.97)	54	0.93 (0.81- 0.97)	88	0.78 (0.68- 0.86)
Stage IIA	T1 N1 M0	2429	0.93 (0.92- 0.94)	461	0.92 (0.90- 0.95)	191	0.89 (0.84- 0.93)	314	0.86 (0.81- 0.89)
	T2 N0 M0	4165	0.89 (0.88- 0.89)	824	0.89 (0.87- 0.91)	487	0.85 (0.82- 0.88)	1337	0.82 (0.80- 0.84)
Stage IIB	T2 N1 M0	2620	0.88 (0.87- 0.90)	600	0.90 (0.87- 0.92)	312	0.78 (0.73- 0.82)	587	0.71 (0.67- 0.75)
	T3 N0 M0	309	0.86 (0.82- 0.89)	47	0.83 (0.68- 0.91)	42	0.73 (0.57- 0.84)	91	0.72 (0.61- 0.80)
Stage IIIA	T1 N2 M0	463	0.91 (0.88- 0.93)	117	0.93 (0.87- 0.96)	70	0.77 (0.65- 0.85)	69	0.75 (0.62- 0.83)
	T2 N2 M0	859	0.83 (0.80- 0.85)	251	0.82 (0.76- 0.86)	128	0.72 (0.63- 0.79)	205	0.63 (0.56- 0.69)
	T3 N1 M0	346	0.84 (0.80- 0.87)	69	0.93 (0.83- 0.97)	37	0.81 (0.64- 0.90)	105	0.55 (0.45- 0.64)
	T3 N2 M0	236	0.81 (0.76- 0.86)	42	0.81 (0.66- 0.90)	39	0.69 (0.51- 0.81)	43	0.42 (0.27- 0.56)
Stage IIIB	T4 N0 M0	61	0.57 (0.43- 0.68)	0		8	0.50 (0.15- 0.77)	23	0.57 (0.34- 0.74)
	T4 N1 M0	86	0.71 (0.60- 0.80)	25	0.63 (0.41- 0.79)	17	0.70 (0.42- 0.86)	26	0.52 (0.31- 0.69)
	T4 N2 M0	79	0.68 (0.57- 0.77)	31	0.57 (0.37- 0.72)	30	0.62 (0.42- 0.77)	35	0.50 (0.32- 0.65)
Stage IIIC	Any T N3 M0	724	0.73 (0.70- 0.76)	215	0.75 (0.69- 0.80)	183	0.57 (0.50- 0.64)	167	0.40 (0.32- 0.47)
Stage IV	Any T Any N M1	520	0.35 (0.31- 0.39)	159	0.42 (0.34- 0.50)	126	0.20 (0.13- 0.27)	161	0.14 (0.09- 0.20)

*HR: Hormone receptor, HER2: Human Epidermal Growth Factor2, TNBC: Triple Negative Breast Cancer, positive (+), negative (-).

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Table S2. Hazard ratios for OS and BCSS according to stage and risk score ordered by increasing HR*.

Stage/risk group	BCSS		OS	
	Hazard Ratio	95% CI	Hazard Ratio	95% CI
I risk score 0	Reference		Reference	
I risk score 1	0.60	0.40-0.91	0.84	0.71-1.01
I risk score 2	2.85	1.89-4.23	1.36	1.12-1.65
I risk score 3	5.35	3.52-8.14	2.02	1.64-2.50
IIA risk score 0	4.00	2.47-6.47	1.66	1.29-2.18
IIA risk score 1	2.28	1.53-3.39	1.33	1.11-1.58
IIA risk score 2	6.31	4.23-9.39	2.31	1.92-2.79
IIA risk score 3	10.67	7.14-15.34	3.49	2.87-4.26
IIB risk score 0	5.45	3.15-9.75	2.15	1.50-3.07
IIB risk score 1	5.26	3.50-7.87	2.19	1.81-2.65
IIB risk score 2	10.44	6.96-15.67	3.42	2.79-4.19
IIB risk score 3	21.45	14.24-32.32	5.98	4.81-7.42
IIIA risk score 0	11.10	6.58-18.72	3.74	2.65-5.28
IIIA risk score 1	8.33	5.54-12.21	2.95	2.41-3.63
IIIA risk score 2	17.22	11.50-25.77	5.13	4.18-6.29
IIIA risk score 3	37.73	24.97-57.00	10.78	8.65-13.48
IIIB risk score 0	13.91	5.35-36.18	3.92	1.92-8.00
IIIB risk score 1	10.78	6.40-18.17	4.00	2.98-5.36
IIIB risk score 2	27.19	16.95-43.60	7.52	5.65-10.01
IIIB risk score 3	35.19	21.03-58.87	8.15	5.69-11.68
IIIC risk score 0	14.81	7.48-29.30	5.67	3.42-9.40
IIIC risk score 1	21.61	14.34-32.57	6.01	5.33-8.19
IIIC risk score 2	33.98	22.60-51.09	10.07	8.13-12.47
IIIC risk score 3	67.49	43.48-104.75	18.79	14.43-24.49
IV risk score 0	38.10	23.25-62.41	8.49	6.05-11.91
IV risk score 1	53.27	35.67-79.54	12.52	10.19-15.38
IV risk score 2	80.93	53.98-121.33	19.03	15.37-23.56
IV risk score 3	162.38	105.64-249.60	37.69	29.36-48.38

*OS= Overall Survival, BCSS= breast cancer specific survival, CI= confidence interval. Risk score was assigned according to a point system: 1 point if estrogen receptor (ER) negative, 1 point if HER2 negative and 1 point for grade 3. Model adjusted for age, radiation therapy use (yes/no), chemotherapy (yes/no) and surgery (yes/no).