

Supplementary Online Content

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eTable 1. Patient characteristics according to time to adjuvant chemotherapy (TTC) category among breast cancer patients identified in the CCR (2005-2010.)

eTable 2. Multivariable cox proportional hazards model for breast cancer specific survival among breast cancer patients diagnosed in California and treated with adjuvant chemotherapy (2005-2010) according to breast cancer subtype*.

eFigure. Kaplan-Meier curves for overall survival according to time to chemotherapy (TTC) category by breast cancer subtype among breast cancer patients identified in the CCR (2005-2010).

This supplementary material has been provided by the authors to give readers additional information about their work.

Elements included in the supplement:

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eFigure-1: Kaplan-Meier curves for overall survival according to time to chemotherapy (TTC) category by breast cancer subtype among breast cancer patients identified in the CCR (2005-2010).

eTable-1. Patient characteristics according to time to adjuvant chemotherapy (TTC) category among breast cancer patients identified in the CCR (2005-2010.)

		Time to chemo N (Row %)					p value
		Total N= 2484 3	<31 days 5224 (21.03 %)	31-60 days 12432 (50.04 %)	61-90 days 4765 (19.18 %)	91+ days 2422 (9.75%)	
Age at diagnosis	<40	2832	747 (26.38)	1329 (46.93)	475 (16.77)	281 (9.92)	<.00 01
	41-59	1464 8	3092 (21.11)	7402 (50.53)	2794 (19.07)	1360 (9.28)	
	60-79	7131	1346 (18.88)	3581 (50.22)	1460 (20.47)	744 (10.43)	
	80+	232	39 (16.81)	120 (51.72)	36 (15.52)	37 (15.95)	
Race/ ethnicity	NH White	1421 1	3233 (22.75)	7110 (50.03)	2627 (18.49)	1241 (8.73)	<.00 01
	NH Black	1811	288 (15.90)	922 (50.91)	367 (20.27)	234 (12.92)	
	Hispanic	5228	928 (17.75)	2596 (49.66)	1096 (20.96)	608 (11.63)	
	Asian / PI	3351	713 (21.28)	1698 (50.67)	628 (18.74)	312 (9.31)	
	American Indian/other	242	62 (25.62)	106 (43.80)	47 (19.42)	27 (11.16)	
Year of diagnosis	2005	3543	827 (23.34)	1721 (48.57)	662 (18.68)	333 (9.40)	<.00 01
	2006	3935	890 (22.62)	1933 (49.12)	729 (18.53)	383 (9.73)	
	2007	4364	934 (21.40)	2125 (48.69)	846 (19.39)	459 (10.52)	
	2008	4419	911 (20.62)	2261 (51.17)	865 (19.57)	382 (8.64)	
	2009	4331	848	2169	884	430 (9.93)	

			(19.58)	(50.08)	(20.41)		
	2010	4251	814 (19.15)	2223 (52.29)	779 (18.33)	435 (10.23)	
Neighborhood SES	1 (lowest)	3051	482 (15.80)	1470 (48.18)	695 (22.78)	404 (13.24)	<.0001
	2	4252	771 (18.13)	2132 (50.14)	889 (20.91)	460 (10.82)	
	3	5158	1012 (19.62)	2627 (50.93)	1002 (19.43)	517 (10.02)	
	4	5813	1234 (21.23)	2984 (51.33)	1056 (18.17)	539 (9.27)	
	5 (highest)	6569	1725 (26.26)	3219 (49.00)	1123 (17.10)	502 (7.64)	
Grade	Grade I	2642	459 (17.37)	1302 (49.28)	569 (21.54)	312 (11.81)	<.0001
	Grade II	9678	1901 (19.64)	4847 (50.08)	1969 (20.35)	961 (9.93)	
	Grade III/ high	1204 6	2763 (22.94)	6059 (50.30)	2135 (17.72)	1089 (9.04)	
	Unknown	477	101 (21.17)	224 (46.96)	92 (19.29)	60 (12.58)	
AJCC stage	I	6816	1305 (19.15)	3362 (49.33)	1369 (20.09)	780 (11.44)	<.0001
	II	1302 0	2680 (20.58)	6646 (51.04)	2504 (19.23)	1190 (9.14)	
	III	5007	1239 (24.75)	2424 (48.41)	892 (17.82)	452 (9.03)	
Tumor subtype	HR+	1386 9	2718 (19.60)	6955 (50.15)	2839 (20.47)	1357 (9.78)	<.0001
	Her2 +	6276	1325 (21.11)	3147 (50.14)	1110 (17.69)	694 (11.06)	
	TNBC	4698	1181 (25.14)	2330 (49.60)	816 (17.37)	371 (7.90)	

Surgical procedure	Breast conserving surgery	1297 1	2782 (21.45)	6567 (50.63)	2428 (18.72)	1194 (9.21)	0.0015
	Mastectomy	1187 2	2442 (20.57)	5865 (49.40)	2337 (19.68)	1228 (10.34)	
Radiation	yes	1329 3	3133 (23.57)	6667 (50.15)	2338 (17.59)	1155 (8.69)	<.0001
	no	1155 0	2091 (18.10)	5765 (49.91)	2427 (21.01)	1267 (10.97)	
Reconstructive surgery	yes	2438	572 (23.46)	1155 (47.37)	422 (17.31)	289 (11.85)	<.0001
	no	2240 5	4652 (20.76)	11277 (50.33)	4343 (19.38)	2133 (9.52)	
Histology	ductal	2194 2	4676 (21.31)	11018 (50.21)	4132 (18.83)	2116 (9.64)	<.0001
	lobular	1879	344 (18.31)	929 (49.44)	427 (22.72)	179 (9.53)	
	other	1022	204 (19.96)	485 (47.46)	206 (20.16)	127 (12.43)	
NCI Cancer Center	yes	1661	294 (17.70)	809 (48.71)	365 (21.97)	193 (11.62)	<.0001
	no	2318 2	4930 (21.27)	11623 (50.14)	4400 (18.98)	2229 (9.62)	
Marital status	Married	1584 5	3517 (22.20)	7997 (50.47)	2971 (18.75)	1360 (8.58)	<.0001
	Not currently married	8475	1611 (19.01)	4171 (49.22)	1680 (19.82)	1013 (11.95)	
	unknown	523	96 (18.36)	264 (50.48)	114 (21.80)	49 (9.37)	
Primary payer at dx	Private	1777 2	4017 (22.60)	9184 (51.68)	3171 (17.84)	1400 (7.88)	<.0001
	Medicare	1651	315	816	323	197 (11.93)	

			(19.08)	(49.42)	(19.56)		
	Public/Medic aid	4259	700 (16.44)	1864 (43.77)	980 (23.01)	715 (16.79)	
	Military	223	42 (18.83)	100 (44.84)	58 (26.01)	23 (10.31)	
	Not insured/self-pay	208	36 (17.31)	86 (41.35)	59 (28.37)	27 (12.98)	
	Unknown	730	114 (15.62)	382 (52.33)	174 (23.84)	60 (8.22)	
Contralateral tumor*	yes	753	145 (19.26)	352 (46.75)	174 (23.11)	82 (10.89)	0.0175
	no	24090	5079 (21.08)	12080 (50.15)	4591 (19.06)	234071)	

*We identified patients with contralateral breast cancer diagnosed within 3 months of the first tumor. Of those, 279 had their second cancer diagnosed between the date of surgery and the first dose of adjuvant chemotherapy.

eTable-2. Multivariable cox proportional hazards model for breast cancer specific survival among breast cancer patients diagnosed in California and treated with adjuvant chemotherapy (2005-2010) according to breast cancer subtype*.

		Hazard of breast cancer specific death HR (95% CI)		
		Hormone Receptor Positive	HER2+	TNBC
Time to Chemotherapy	<31 days	1.0	1.0	1.0
	31-60 days	0.91 (0.74 - 1.13)	0.95 (0.72 - 1.25)	1.08 (0.87 - 1.33)
	61-90 days	0.96 (0.74 - 1.24)	0.94 (0.66 - 1.35)	1.10 (0.84 - 1.43)
	91+ days	1.23 (0.92 - 1.66)	1.02 (0.68 - 1.53)	1.53 (1.13 - 2.07)
Age at diagnosis	0-40	1.30 (0.98 - 1.71)	0.99 (0.69 - 1.42)	1.12 (0.84 - 1.47)
	41-59	0.76 (0.62 - 0.92)	0.79 (0.60 - 1.03)	0.89 (0.73 - 1.10)
	60-79	1.0	1.0	1.0
	80+	2.21 (1.13 - 4.32)	1.60 (0.77 - 3.34)	2.42 (1.52 - 3.86)
Gender	Female	1.0	1.0	1.0
	Male	1.11 (0.50 - 2.50)	1.41 (0.45 - 4.44)	0.00 (0.00 - ****)
Race/ethnicity	NH White	1.0	1.0	1.0
	NH Black	1.14 (0.83 - 1.57)	1.58 (1.08 - 2.31)	1.34 (1.05 - 1.71)
	Hispanic	0.73 (0.57 - 0.92)	0.81 (0.60 - 1.09)	0.97 (0.77 - 1.23)
	Asian / PI	0.79 (0.60 - 1.05)	0.82 (0.57 - 1.18)	0.77 (0.55 - 1.08)
	American Indian/other	1.09 (0.49 - 2.46)	0.46 (0.11 - 1.87)	1.13 (0.47 - 2.75)
AJCC Stage at diagnosis	I	1.0	1.0	1.0
	II	2.27 (1.64 - 3.14)	3.26 (2.04 - 5.21)	2.51 (1.94 - 3.25)

	III	7.17 (5.20 - 9.90)	13.8 (8.77 - 21.8)	7.01 (5.35 - 9.18)
Neighborhood SES	1 (lowest)	1.77 (1.30 - 2.42)	1.53 (1.03 - 2.28)	1.08 (0.80 - 1.45)
	2	1.66 (1.26 - 2.19)	1.34 (0.92 - 1.94)	1.07 (0.82 - 1.40)
	3	1.56 (1.20 - 2.02)	1.32 (0.93 - 1.88)	1.16 (0.90 - 1.50)
	4	1.60 (1.25 - 2.06)	1.16 (0.81 - 1.66)	1.01 (0.78 - 1.31)
	5 (highest)	1.0	1.0	1.0
Marital status	Married	1.0	1.0	1.0
	Not currently married	1.03 (0.86 - 1.22)	0.97 (0.77 - 1.24)	0.99 (0.83 - 1.19)
	unknown	1.09 (0.59 - 1.99)	2.31 (1.17 - 4.58)	1.04 (0.58 - 1.87)
Primary payer/ insurance status	Medicare	1.64 (1.22 - 2.22)	0.76 (0.44 - 1.29)	1.23 (0.89 - 1.69)
	Military	0.45 (0.11 - 1.82)	0.71 (0.17 - 2.88)	1.10 (0.35 - 3.45)
	Not insured/self-pay	2.13 (1.05 - 4.33)	0.96 (0.30 - 3.04)	0.88 (0.32 - 2.36)
	Private	1.0	1.0	1.0
	Public/Medicaid	1.64 (1.32 - 2.03)	1.34 (1.02 - 1.76)	1.20 (0.96 - 1.50)
	Unknown	0.98 (0.59 - 1.66)	0.72 (0.39 - 1.33)	0.76 (0.46 - 1.25)
NCI-designated Cancer Center	no	1.0	1.0	1.0
	yes	0.68 (0.46 - 1.00)	0.77 (0.47 - 1.29)	0.78 (0.54 - 1.14)

*Models also adjusted for individual year of diagnosis

eFigure-1: Kaplan-Meier curves for overall survival according to time to chemotherapy (TTC) category by breast cancer subtype among breast cancer patients identified in the CCR (2005-2010).

