Supplemental Table S1. Distributions of Ki67 by patient, tumor and treatment characteristics

Variable	Category	N	Mean (SD)	Median (min, max)	p-Value
Age at diagnosis	≤50	135	48.12 (25.72)	46 (4,100)	.92
	>50	122	47.96 (27.17)	47 (4,97)	
Ethnicity	BLACK	27	61.11 (25.14)	60 (5,91)	.02
	OTHER	39	46.82 (23.46)	48 (5,90)	
	WHITE	191	46.45 (26.7)	40 (4,100)	
Menopausal status	Missing	2	39 (49.5)	39 (4,74)	.77
	POST	139	48.59 (26.5)	48 (4,100)	.
	PRE	116	47.54 (26.11)	46 (4,99)	.
Grade	Missing	6	50.17 (32.9)	50 (5,90)	<.01
	I/II	46	32.2 (23.44)	25.5 (4,90)	
	III	205	51.54 (25.6)	50 (4,100)	
Clinical stage	IIIB	186	45.18 (26.26)	40.5 (4,100)	<.01
	IIIC	71	55.55 (25.32)	60 (5,99)	
HR	Missing	2	32.5 (10.61)	32.5 (25,40)	<.01
	Negative	116	53.69 (25.74)	51 (4,100)	
	Positive	139	43.55 (26.19)	40 (4,99)	
HER2	Missing	31	43.39 (24.25)	40 (4,80)	.21
	Negative	150	50.22 (26.5)	50 (4,99)	
	Positive	76	45.64 (26.8)	40 (4,100)	
Subtype	Missing	31	43.39 (24.25)	40 (4,80)	.01
	HR+/Her2-	96	45.51 (26.23)	40 (4,99)	
	Her2+/HR+	32	39 (25.89)	40 (4,95)	
	Her2+/HR-	44	50.48 (26.69)	49 (5,100)	
	Triple negative	54	58.59 (25.1)	61.5 (4,95)	
Definitive surgery	No	24	51.67 (26.13)	45 (5,97)	.49
	Yes	233	47.67 (26.42)	46 (4,100)	
Neoadjuvant chemotherapy	No	11	32.73 (16.18)	40 (10,60)	.06
	Yes	246	48.73 (26.55)	48 (4,100)	
Neoadjuvant hormone therapy	No	250	48.5 (26.23)	47 (4,100)	.11
	Yes	7	31.86 (28.28)	20 (4,80)	
Adjuvant chemotherapy	No	154	50.12 (26.85)	49.5 (4,100)	.16
	Yes	103	44.93 (25.43)	40 (4,97)	
Adjuvant hormone therapy	No	163	52.73 (26.07)	50 (4,100)	<.01
	Yes	94	39.91 (24.98)	40 (4,99)	
Neoadjuvant radiation therapy	No	244	48.23 (26.28)	47 (4,100)	.58
	Yes	13	44.54 (28.72)	40 (5,80)	
Adjuvant radiation therapy	No	59	52.98 (27.56)	50 (5,100)	.14
	Yes	198	46.57 (25.89)	40.5 (4,99)	
Trimodality treatment	No	191	47.23 (25.89)	41 (4,99)	.48
	Yes	66	50.39 (27.75)	50 (5,100)	

Supplemental Table S2. Patient and tumor characteristics by trimodality therapy

Covariate	Levels	Trimodality-treated	Non-trimodality-treated	P-Value
Ethnicity	Black	19(70.4%)	8(29.6%)	.79
	Other	28(71.8%)	11(28.2%)	
	White	144(75.4%)	47(24.6%)	
Menopausal status	Post	105(75.5%)	34(24.5%)	.68
	Pre	85(73.3%)	31(26.7%)	
Grade	I/II	35(76.1%)	11(23.9%)	.73
	III	151(73.7%)	54(26.3%)	
Clinical stage	IIIB	140(75.3%)	46(24.7%)	.58
	IIIC	51(71.8%)	20(28.2%)	
Ki-67	Low proliferative	30(73.2%)	11(26.8%)	.85
	High proliferative	161(74.5%)	55(25.5%)	
HR	Negative	81(69.8%)	35(30.2%)	.11
	Positive	109(78.4%)	30(21.6%)	
HER2	Negative	112(74.7%)	38(25.3%)	.96
	Positive	57(75%)	19(25%)	
Lymph vascular invasion	Negative	75(84.3%)	14(15.7%)	.13
	Positive	111(76%)	35(24%)	
Hematological disease	No	131(78%)	37(22%)	.34
	Yes	6(100%)	0 (0%)	
Cardiovascular disease	No	67(76.1%)	21(23.9%)	.40
	Yes	70(81.4%)	16(18.6%)	
Central nervous system disorders	No	133(78.2%)	37(21.8%)	.58
	Yes	4(100%)	0 (0%)	
Connective tissue disease	No	125(79.1%)	33(20.9%)	.75
	Yes	12(75%)	4(25%)	
Endocrine metabolic disease	No	89(81.7%)	20(18.3%)	.22
	Yes	48(73.8%)	17(26.2%)	
Hepatitis	No	133(79.2%)	35(20.8%)	.61
	Yes	4(66.7%)	2(33.3%)	
Infection/Pneumonia	No	129(78.7%)	35(21.3%)	1.0
	Yes	8(80%)	2(20%)	
Pulmonary disease	No	124(78.5%)	34(21.5%)	1.0
	Yes	13(81.3%)	3(18.8%)	
Neurologic disorder	No	133(78.2%)	37(21.8%)	.58
	Yes	4(100%)	0 (0%)	
GI issues	No	136(78.6%)	37(21.4%)	1.00
	Yes	1(100%)	0 (0%)	
Other diseases	No	72(77.4%)	21(22.6%)	.65
	Yes	65(80.2%)	16(19.8%)	
Lupus	No	136(78.6%)	37(21.4%)	1.00
	Yes	1(100%)	0 (0%)	
Kidney disease	No	132(78.1%)	37(21.9%)	.59
	Yes	5(100%)	0 (0%)	
Liver disease	No	191(74.6%)	65(25.4%)	.26
	Yes	0 (0%)	1(100%)	
Psychiatric problem	No	100(79.4%)	26(20.6%)	.74

		Yes	37(77.1%)	11(22.9%)	
Number of comorbidities		1	57(79.2%)	15(20.8%)	.81
		2	34(75.6%)	11(24.4%)	
		≥3	46(80.7%)	11(19.3%)	
Performance status		0	164(75.9%)	52(24.1%)	.36
		1	9(69.2%)	4(30.8%)	
		3	1(100%)	0 (0%)	
		5	16(61.5%)	10(38.5%)	

Supplemental Table S3. Univariate Cox PH models of OS or DMFS

	Parameter		Hazard Ratio	95% CI Lower Limit	95% CI Upper Limit	P-Value
OS	**Age at diagnosis**	Per year increase	1.01	0.99	1.03	0.49
	Ethnicity	Black vs White	1.15	0.63	2.10	0.66
		Other vs White	0.84	0.48	1.49	0.56
	Menopausal status	Post vs Pre	1.01	0.70	1.48	0.94
	Clinical stage	IIIC vs IIIB	1.07	0.68	1.67	0.77
	Grade	III vs I/II	1.49	0.88	2.50	0.14
	HR	Negative vs Positive	1.51	1.03	2.21	0.03
	HER2	Negative vs Positive	1.63	1.00	2.66	0.05
	Triple negative	TN vs Others	2.81	1.83	4.31	<.01
	Subtype	TN vs HR+/HER2-	0.37	0.23	0.59	<.01
		TN vs HER2+/HR+	0.38	0.19	0.78	0.01
		TN vs HER2+/HR-	0.28	0.14	0.56	0.00
	Ki-67	high proliferative vs low proliferative	1.65	0.97	2.81	0.07
	Trimodality treatment	Yes vs No	0.46	0.31	0.69	0.00
DMFS	**Age at diagnosis**	Per year increase	1.01	0.99	1.03	0.49
	Ethnicity	Black vs White	1.15	0.63	2.10	0.66
		Other vs White	0.84	0.48	1.49	0.56
	Menopausal status	Post vs Pre	1.01	0.70	1.48	0.94
	Clinical stage	IIIC vs IIIB	1.07	0.68	1.67	0.77
	Grade	III vs I/II	1.49	0.88	2.50	0.14
	HR	Negative vs Positive	1.51	1.03	2.21	0.03
	HER2	Negative vs Positive	1.63	1.00	2.66	0.05
	Triple negative	TN vs Others	2.81	1.83	4.31	<.01
	Subtype	TN vs HR+/HER2-	0.37	0.23	0.59	<.01
		TN vs HER2+/HR+	0.38	0.19	0.78	0.01
		TN vs HER2+/HR-	0.28	0.14	0.56	0.00
	Ki-67	high proliferative vs low proliferative	1.65	0.97	2.81	0.07
	Trimodality treatment	Yes vs No	0.46	0.31	0.69	0.00

Supplemental Table S4. Comparisons of patient's characteristics between IBC patients with and without Ki-67 measurements

Covariate		Patients with Ki-67 data	Patients without Ki-67 data	P-Value
Ethnicity	Black	27(10.5%)	60(9.9%)	.92
	Other	39(15.2%)	87(14.4%)	
	White	191(74.3%)	457(75.7%)	
Menopausal status	POST	139(54.5%)	315(52.9%)	.66
	PRE	116(45.5%)	281(47.1%)	
Grade	I/II	46(18.3%)	110(20.7%)	.44
	III	205(81.7%)	421(79.3%)	
Clinical stage	IIIB	186(72.4%)	467(77.3%)	.12
	IIIC	71(27.6%)	137(22.7%)	
HR	NEG	116(45.5%)	270(52.4%)	.07
	POS	139(54.5%)	245(47.6%)	
HER2	NEG	150(66.4%)	268(61%)	.18
	POS	76(33.6%)	171(39%)	