Supplemental Table 1A. Frequency of SES and comorbid factors by race and age, Carolina Breast Cancer Study 3 (2008-2013)

Demographic characteristics[a]	All cases (n=2,998) Weighted %[b]	White <50 (n=751) Weighted %	White ≥50 (n=752) Weighted %	Black <50 (n=741) Weighted %	Black ≥50 (n=754) Weighted %	P[c]
Socioeconomic position factors						
Married	63.4	76.0	67.6	43.1	39.8	<.001
Income ($USD)						<.001
>50K	52.5	67.4	56.7	33.5	24.4	
>15-50K	35.3	26.9	34.2	44.2	47.6	
≤15K	12.2	5.7	9.2	22.3	28.1	
Education						<.001
Some college, technical school, college or higher	71.1	84.6	69.4	70.3	58.2	
HS graduate/GED	21.8	12.6	24.1	22.8	26.1	
0-12 years, but no HS degree	7.1	2.8	6.5	6.9	15.6	
Current Health insurance	95.8	94.9	97.6	91.2	92.3	<.001
Rural address	19.1	19.1	21.3	8.5	16.4	<.001
Comorbid factors						
Diabetes	13.8	2.8	13.8	8.8	33.2	<.001
Heart Disease	6.6	0.9	8.8	2.3	8.6	<.001
Current smoking status	16.0	19.6	12.9	22.6	19.2	<.001
BMI (kg/m^2)						<.001
≤25	27.5	40.9	28.0	17.0	11.6	
25-30	30.6	27.6	34.5	24.2	23.8	
>30	41.9	31.5	37.5	58.8	64.6	

Abbreviations: BMI, body mass index; HS, high school; GED, general education development

[a] All variables had <1% missing (married n=1; education n=1; current health insurance n=2; rural address n=1; diabetes n=0; heart disease n=0; current smoking status n=1; BMI n=12) except income which was missing n=24, 56, 26, 53 for younger black, older black, younger white, and older white women, respectively.

[b] Weighted percentages account for the different sampling probabilities for NC population estimates

[c] P values were calculated using two-sided chi-square test for all 4 groups (younger black, older black, younger white, and older white women)

Supplemental Table 1B. Frequency of SES and comorbid factors by race and age, women in the Behavioral Risk Factor Surveillance System (2010), by age and race

Demographic characteristics[a]	All cases (n=5,643)		White				Black				
			<50 (n=1,587)		≥50 (n=2,965)		<50 (n=501)		≥50 (n=590)		
	%	(SE)	%	(SE)	%	(SE)	%	(SE)	%	(SE)	P[b]
Socioeconomic position factors											
Married	65.3	0.95	73.8	1.60	70.4	1.07	41.4	3.19	40.0	2.93	<.001
Income ($USD)											<.001
>50K	47.9	1.06	59.3	1.78	46.9	1.36	29.7	3.03	25.2	2.66	
>15-50K	41.5	1.04	34.7	1.74	43.9	1.33	51.9	3.31	48.3	3.16	
≤15K	10.6	0.61	6.0	0.78	9.2	0.79	18.4	2.32	26.5	2.81	
Education											<.001
Some college, technical school, college or higher	65.4	0.92	74.3	1.50	59.9	1.21	65.8	2.98	44.0	2.65	
HS graduate/GED	26.9	0.87	21.0	1.40	30.8	1.15	28.6	2.86	37.4	2.80	
0-12 years, but no HS degree	7.6	0.50	4.7	0.74	9.3	0.75	5.6	1.41	18.6	2.31	
Current health insurance	84.5	0.79	83.0	1.34	91.2	0.78	74.6	2.92	79.9	2.45	<.001
Rural address	32.3	0.81	33.2	1.41	32.7	0.97	28.8	2.35	32.2	2.12	0.58
Comorbid factors											
Diabetes	11.7	0.58	5.8	0.76	14.4	0.85	10.5	1.79	31.3	2.81	<.001
Heart Disease	3.6	0.30	1.3	0.31	6.0	0.56	2.3	0.74	7.6	1.72	<.001
Current Smoking status	18.3	0.77	21.0	1.41	15.6	0.97	16.4	2.08	19.1	2.29	<.001
BMI (kg/m^2)											<.001
≤25	37.7	0.99	44.6	1.76	39.1	1.24	26.1	2.96	16.7	2.05	
25-30	31.7	0.99	31.8	1.76	33.8	1.21	25.7	3.04	32.5	2.85	
>30	30.5	0.93	23.6	1.44	27.0	1.12	48.2	3.35	50.8	2.96	

Abbreviations: HS; high school; BMI, body mass index; GED, general education development

[a]All variables had <1% missing (married n=12; education n=2; current health insurance n=6; rural address n=0; diabetes n=2; heart disease n=36; current smoking status n=19; BMI n=12) except income which was missing n=39, 96, 160, 505 and BMI which was missing n=37, 31, 88, 183 for younger black, older black, younger white, and older white women, respectively.

[b] P values were calculated using two-sided chi-square test for all 4 groups (younger black, older black, younger white, and older white women)

Supplemental Table 2. Distribution of barriers to medical care by race and age, Carolina Breast Cancer Study 3 (2008-2013)

Barriers to care[a]	All cases (n=2,998) Weighted %[b]	White		Black		P[c]
		<50 (n=751) Weighted %	≥50 (n=752) Weighted %	<50 (n=741) Weighted %	≥50 (n=754) Weighted %	
Current health insurance	95.8	94.9	97.6	91.2	92.3	<.05
Insurance type						
Private	57.6	84.7	51.7	57.7	41.0	<.001
Medicaid	7.3	6.8	3.5	26.9	12.1	<.001
Medicare	23.3	2.4	31.3	4.6	33.7	<.001
Other	7.4	0.9	11.2	1.9	5.6	<.001
Uninsured	4.3	5.2	2.4	8.9	7.7	<.05
Finance barrier to care	12.2	14.0	7.9	28.7	18.0	<.001
Transportation barrier to care	5.6	3.9	3.1	15.8	12.7	<.001
Rural address	19.1	19.1	21.3	8.5	16.4	<.001
Job loss as a result of cancer	3.1	3.9	2.3	6.1	3.6	<.001

[a] All variables had <1% missing (current health insurance n=5; insurance type n=2; rural address n=13; job loss n=25) except finance barrier and transportation barrier which were missing n=39 and n=40 for older white, n=50 and n=55 for younger white, n=64 and n=68 for older black and n=82 and n=83 for younger black women, respectively.

[b] Weighted percentages account for the different sampling probabilities for NC population estimates
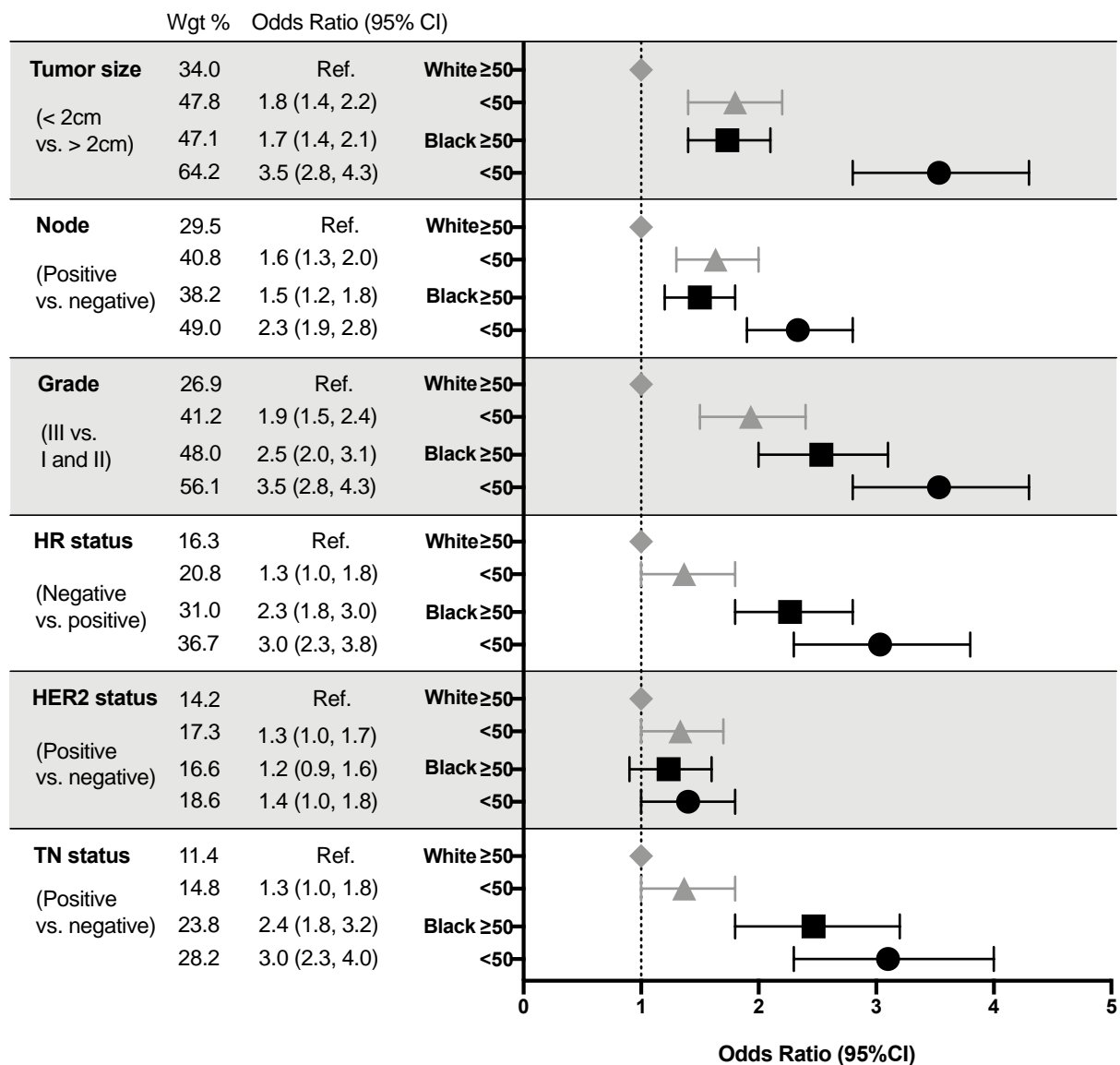
[c] P values were calculated using two-sided chi-square test for all 4 groups (younger black, older black, younger white, and older white women)

Supplemental Table 3. Distribution, odds ratios and 95% confidence intervals for tumor characteristics by race and age, Carolina Breast Cancer Study 3 (2008-2013)

	All cases (n=2998)		White ≥50 (n=752)		White <50 (n=751)		Black ≥50 (n=754)		Black <50 (n=741)	
					Race and age, y					
			White				Black			
Clinical characteristics	%	SE	%	SE (95% CI)	%	SE (95% CI)	%	SE (95% CI)	%	SE (95% CI)
Tumor size, cm[a]										
≤2	58.7	1.10	66.0	1.76	52.2	1.83	52.9	1.85	35.8	1.79
>2	41.3	1.10	34.0	1.76	47.8	1.83	47.1	1.85	64.2	1.79
Missing	75		25		8		22		20	
OR of >2 vs. ≤2			1.0	ref	**1.8**	**(1.4-2.2)**	**1.7**	**(1.4-2.1)**	**3.5**	**(2.8-4.3)**
Nodal status[a]										
Negative	65.3	1.06	70.5	1.67	59.2	1.8	61.8	1.78	51.0	1.85
Positive	34.7	1.06	29.5	1.67	40.8	1.8	38.2	1.78	49.0	1.85
Missing	29		6		3		10		10	
OR of Positive vs. Negative			1.0	ref	**1.6**	**(1.3-2.0)**	**1.5**	**(1.2-1.8)**	**2.3**	**(1.9-2.8)**
Histologic grade[a]										
I and II	64.6	1.04	73.1	1.64	58.8	1.81	52.0	1.84	43.9	1.84
III	35.4	1.04	26.9	1.64	41.2	1.81	48.0	1.84	56.1	1.84
Missing	64		20		10		19		15	
OR of III vs. I & II			1.0	ref	**1.9**	**(1.5-2.4)**	**2.5**	**(2.0-3.1)**	**3.5**	**(2.8-4.3)**
HR negative status[b]	21.1	0.88	16.3	1.37	20.8	1.49	31.0	1.70	36.7	1.79
Missing	65		24		7		16		18	
OR of Negative vs. Positive			1.0	ref	**1.3**	**(1.0-1.8)**	**2.3**	**(1.8-3.0)**	**3.0**	**(2.3-3.8)**
PR negative status[b]	31.2	1.03	26.7	1.64	28.0	1.65	45.0	1.83	46.4	1.86
Missing	72		25		8		18		21	
OR of Negative vs. Positive			1.0	ref	1.1	(0.8-1.3)	**2.2**	**(1.8-2.8)**	**2.4**	**(1.9-3.0)**
HER2 positive status[b]	15.6	0.82	14.2	1.29	17.3	1.39	16.6	1.37	18.6	1.45
Missing	67		25		7		18		17	

OR of Positive vs. Negative		1.0	ref	**1.3**	**(1.0-1.7)**	1.2	(0.9-1.6)	**1.4**	**(1.0-1.8)**
TN positive status[b]	15.3	0.76	11.4	1.18	14.8	1.30	23.8	1.57	28.2	1.67
Missing	64		24		7		16		17	
OR of TN vs. non-TN		1.0	ref	**1.3**	**(1.0-1.8)**	**2.4**	**(1.8-3.2)**	**3.0**	**(2.3-4.0)**

Abbreviations: OR, odds ratio; CI, confidence interval; ER, estrogen receptor; PR, progesterone receptor; HER2, human epidermal growth factor receptor 2; TN, triple negative. [a] From medical records abstraction [b] From pathology reports abstraction

	Wgt %	Odds Ratio (95% CI)		
Tumor size	34.0	Ref.	White ≥50	
	47.8	1.8 (1.4, 2.2)	<50	
(< 2cm	47.1	1.7 (1.4, 2.1)	Black ≥50	
vs. > 2cm)	64.2	3.5 (2.8, 4.3)	<50	
Node	29.5	Ref.	White ≥50	
	40.8	1.6 (1.3, 2.0)	<50	
(Positive	38.2	1.5 (1.2, 1.8)	Black ≥50	
vs. negative)	49.0	2.3 (1.9, 2.8)	<50	
Grade	26.9	Ref.	White ≥50	
	41.2	1.9 (1.5, 2.4)	<50	
(III vs.	48.0	2.5 (2.0, 3.1)	Black ≥50	
I and II)	56.1	3.5 (2.8, 4.3)	<50	
HR status	16.3	Ref.	White ≥50	
	20.8	1.3 (1.0, 1.8)	<50	
(Negative	31.0	2.3 (1.8, 3.0)	Black ≥50	
vs. positive)	36.7	3.0 (2.3, 3.8)	<50	
HER2 status	14.2	Ref.	White ≥50	
	17.3	1.3 (1.0, 1.7)	<50	
(Positive	16.6	1.2 (0.9, 1.6)	Black ≥50	
vs. negative)	18.6	1.4 (1.0, 1.8)	<50	
TN status	11.4	Ref.	White ≥50	
(Positive	14.8	1.3 (1.0, 1.8)	<50	
vs. negative)	23.8	2.4 (1.8, 3.2)	Black ≥50	
	28.2	3.0 (2.3, 4.0)	<50	

Odds Ratio (95%CI)

Supplemental Figure 1. Odds ratios and 95% confidence intervals for tumor characteristics by race and age in the Carolina Breast Cancer Study 3 (2008-2013), *N* = 2,998

Supplemental Table 4. Associations among latent classes of Access to Care by SES/Comorbidity latent classes (n=2997), Carolina Breast Cancer Study (2008-2013)

| | SES/Comorbidity latent classes | | | |
| | High | | Low | |
Access to Care latent classes	No.	(%)	No.	(%)
Less Barriers	1541	(55.8)	1220	(44.2)
More Barriers	26	(11.0)	210	(89.0)

Supplemental Table 5. Associations among latent classes of tumor characteristics and SES (n=2987), Carolina Breast Cancer Study, (2008-2013)

| | SES/Comorbidity latent classes | | | |
| | High | | Low | |
Tumor Characteristics latent classes	No.	(%)	No.	(%)
HR+/HER2-/Node-	448	(50.0)	448	(50.0)
HER2+/ Higher Grade	169	(51.2)	161	(48.8)
HR+/HER2-/Larger Tumor/Node+	293	(47.6)	322	(52.4)
TNBC/ Higher Grade	656	(57.2)	490	(42.8)

Supplemental Table 6. Associations among latent classes of tumor characteristics and access to care(n=2986), Carolina Breast Cancer Study (2008-2013)

| | Access to Care latent classes | | | |
| | Less Barriers | | More Barriers | |
Tumor Characteristics latent classes	No.	(%)	No.	(%)
HR+/HER2-/Node-	1085	(39.4)	61	(26.0)
HER2+/ Higher Grade	304	(11.1)	26	(11.1)
HR+/HER2-/Larger Tumor/Node+	799	(29.0)	96	(40.9)
TNBC/ Higher Grade	563	(20.5)	52	(22.1)