

Supplemental Online Content

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eReferences.

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

eMethods. Supplemental Methods

Pooled data from four clinical trials were included in this analysis:

Cancer and Leukemia Group B (CALGB) C9741, C49907, C40101, or North Central Cancer Treatment Group (NCCTG) N9831. Here we have included a short description of each of these clinical trials. Of note, all patients in these trials received chemotherapy. None of the patients with triple negative breast cancer in these trials received immunotherapy. Given the timing of these trials, administration of anti-HER2 therapy for patients with HER2-positive breast cancer was variable except in N9831 in which all patients received HER2-directed therapy. For additional details, please consult the full publications of these clinical trials.

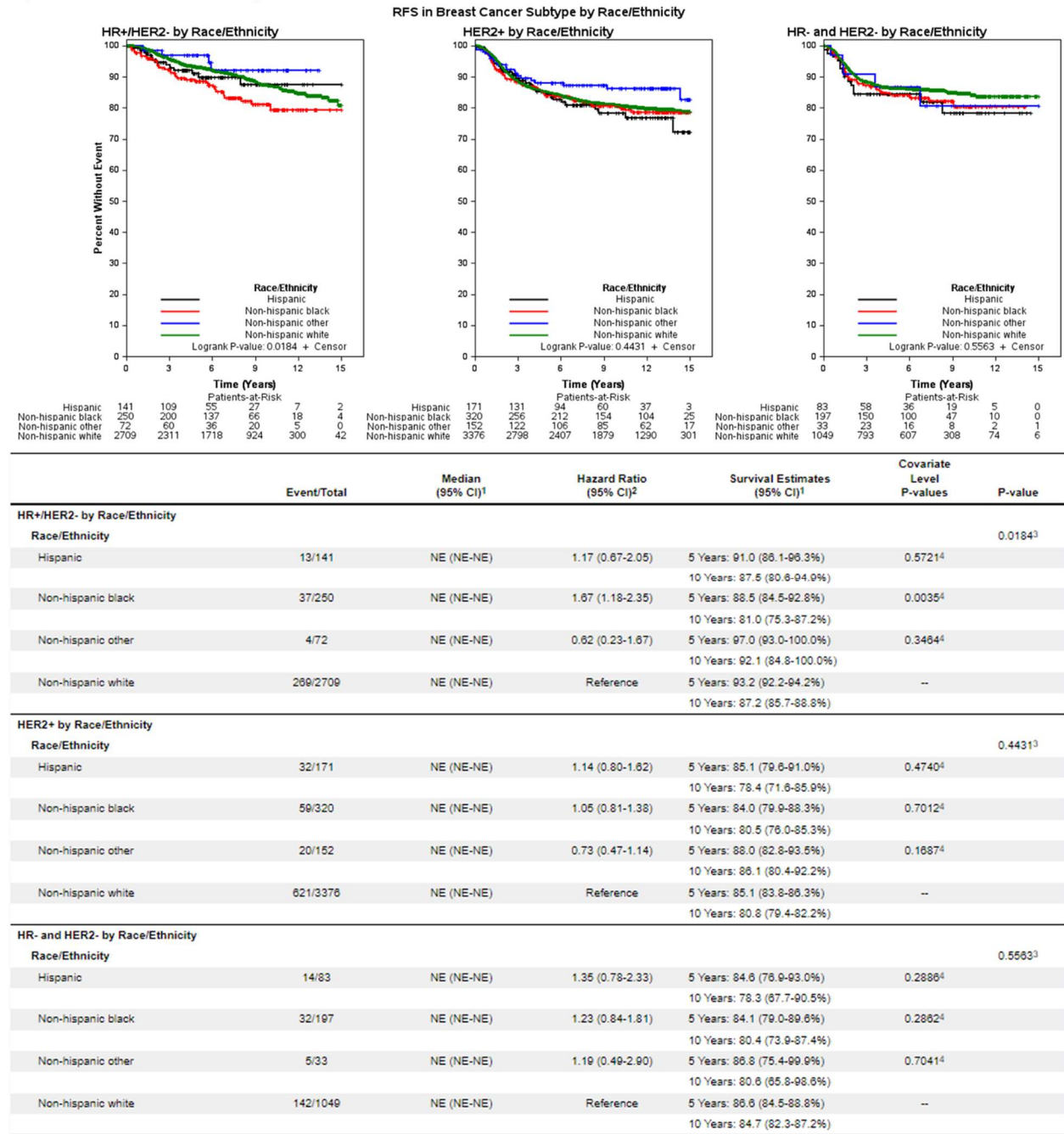
CALGB C9741: This trial studied the efficacy and safety of sequential versus concurrent combination chemotherapy as well as the safety and efficacy of dose density of chemotherapy. Specifically, the four arms of the study included 1) sequential doxorubicin then paclitaxel and then cyclophosphamide, administered every 3 weeks; 2) sequential doxorubicin then paclitaxel and then cyclophosphamide, administered every 2 weeks; 3) concurrent doxorubicin and cyclophosphamide followed by paclitaxel, administered every 3 weeks; and 4) concurrent doxorubicin and cyclophosphamide followed by paclitaxel, administered every 2 weeks. The trial found that dose density improved disease-free survival (DFS) and overall survival (OS), and that there was no difference in DFS or OS between sequential and concurrent chemotherapy schedules.

CALGB C49907: This trial studied standard adjuvant chemotherapy regimens versus capecitabine in women ages 65 years and older with early-stage breast cancer and found that recurrence-free survival was significantly longer for patients receiving standard adjuvant chemotherapy than for patients receiving capecitabine. Patients that received standard chemotherapy received either CMF (cyclophosphamide, methotrexate, and fluorouracil) or AC (doxorubicin and cyclophosphamide).

CALGB C40101: This trial studied whether treatment with paclitaxel alone was non-inferior to treatment with doxorubicin and cyclophosphamide (AC) in adjuvant treatment of patients with 0 to 3 positive axillary lymph nodes. The trial found that, while paclitaxel was better tolerated than AC, the efficacy of paclitaxel was not non-inferior to AC.

NCCTG N9831: This trial studied trastuzumab administered either sequentially or concurrently with chemotherapy in adjuvant treatment of patients with early-stage HER2+ breast cancer and found that trastuzumab given concurrently with taxane chemotherapy improved DFS. Chemotherapy included treatment with doxorubicin and cyclophosphamide (AC) followed by either paclitaxel alone or paclitaxel plus trastuzumab.

eFigure 1. Kaplan-Meier Estimates of Recurrence-Free Survival in Breast Cancer Subtype by Race and Ethnicity

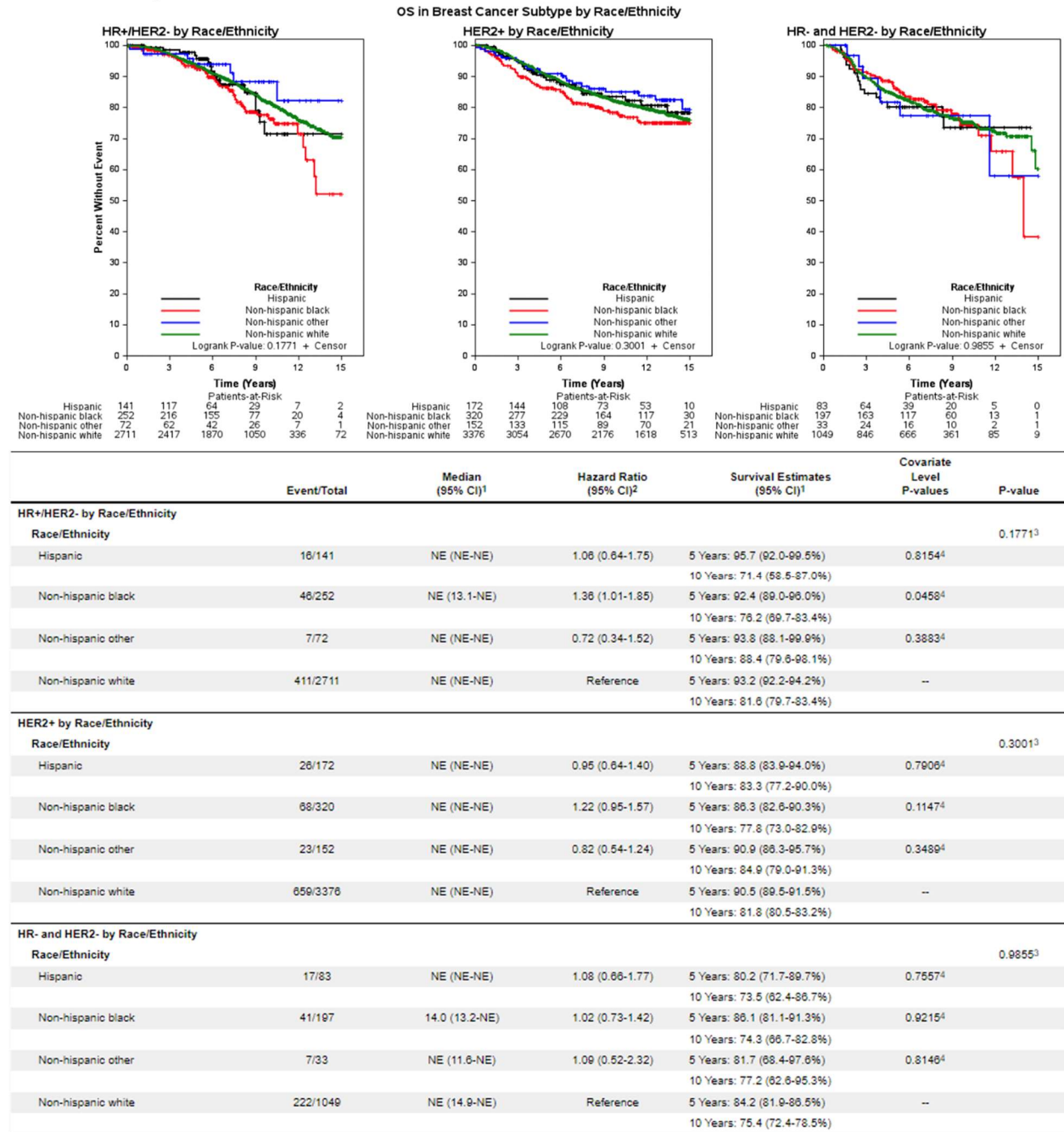


¹Kaplan-Meier method; ²Cox model; ³Logrank test; ⁴Wald Chi-Square test.

These supplemental Kaplan-Meier estimates show unadjusted survival by subgroup.

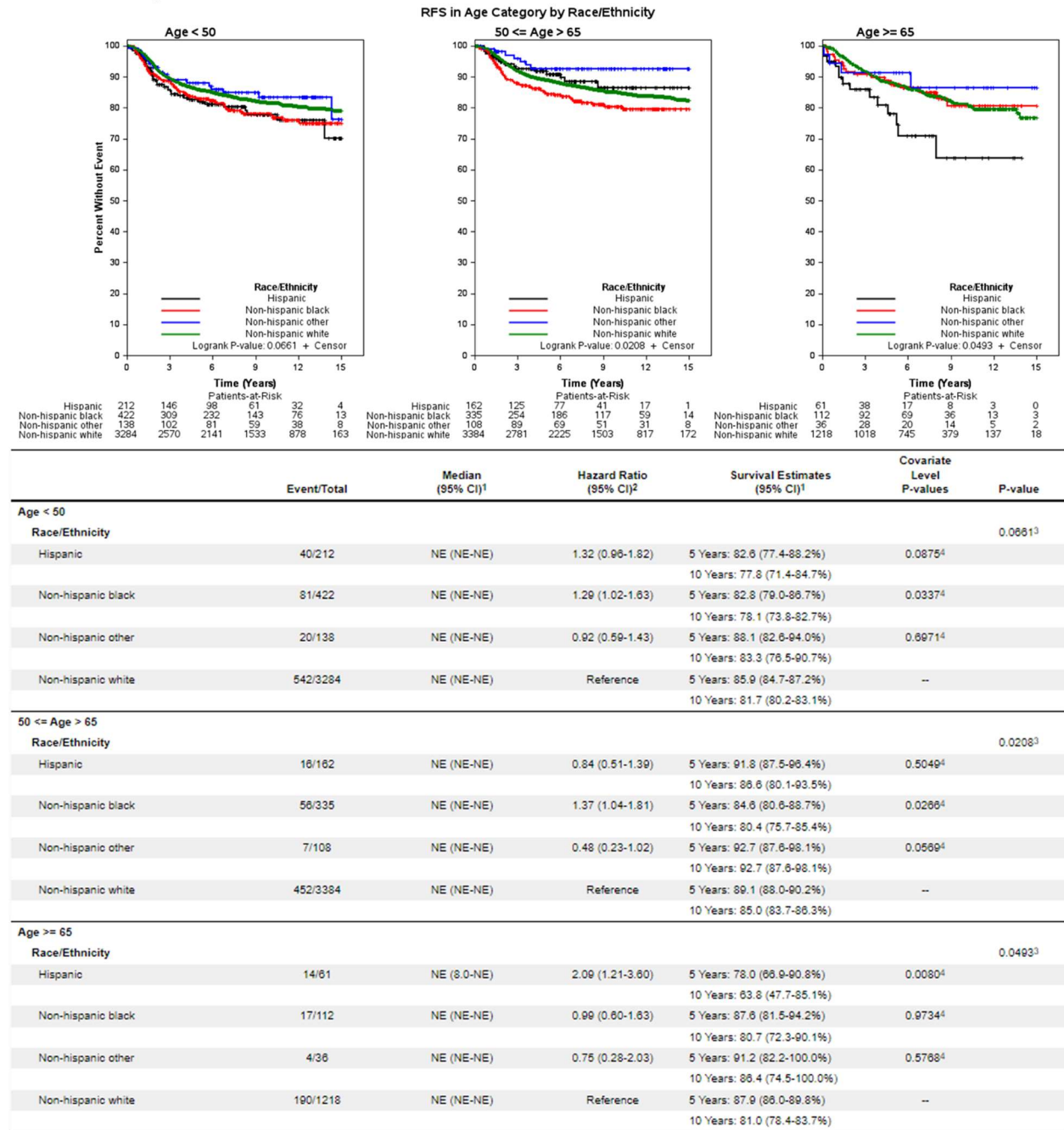
Abbreviations: RFS, recurrence-free survival; HR+, hormone receptor positive; HER2-, human epidermal growth factor receptor 2-negative; HER2+, human epidermal growth factor receptor 2-positive; HR-, hormone receptor negative.

eFigure 2. Kaplan-Meier Estimates of Overall Survival in Breast Cancer Subtype by Race and Ethnicity



These supplemental Kaplan-Meier estimates show unadjusted survival by subgroup.
Abbreviations: OS, overall survival; HR+, hormone receptor positive; HER2-, human epidermal growth factor receptor 2-negative; HER2+, human epidermal growth factor receptor 2-positive; HR-, hormone receptor negative.

eFigure 3. Kaplan-Meier Estimates of Recurrence-Free Survival in Age Category by Race and Ethnicity



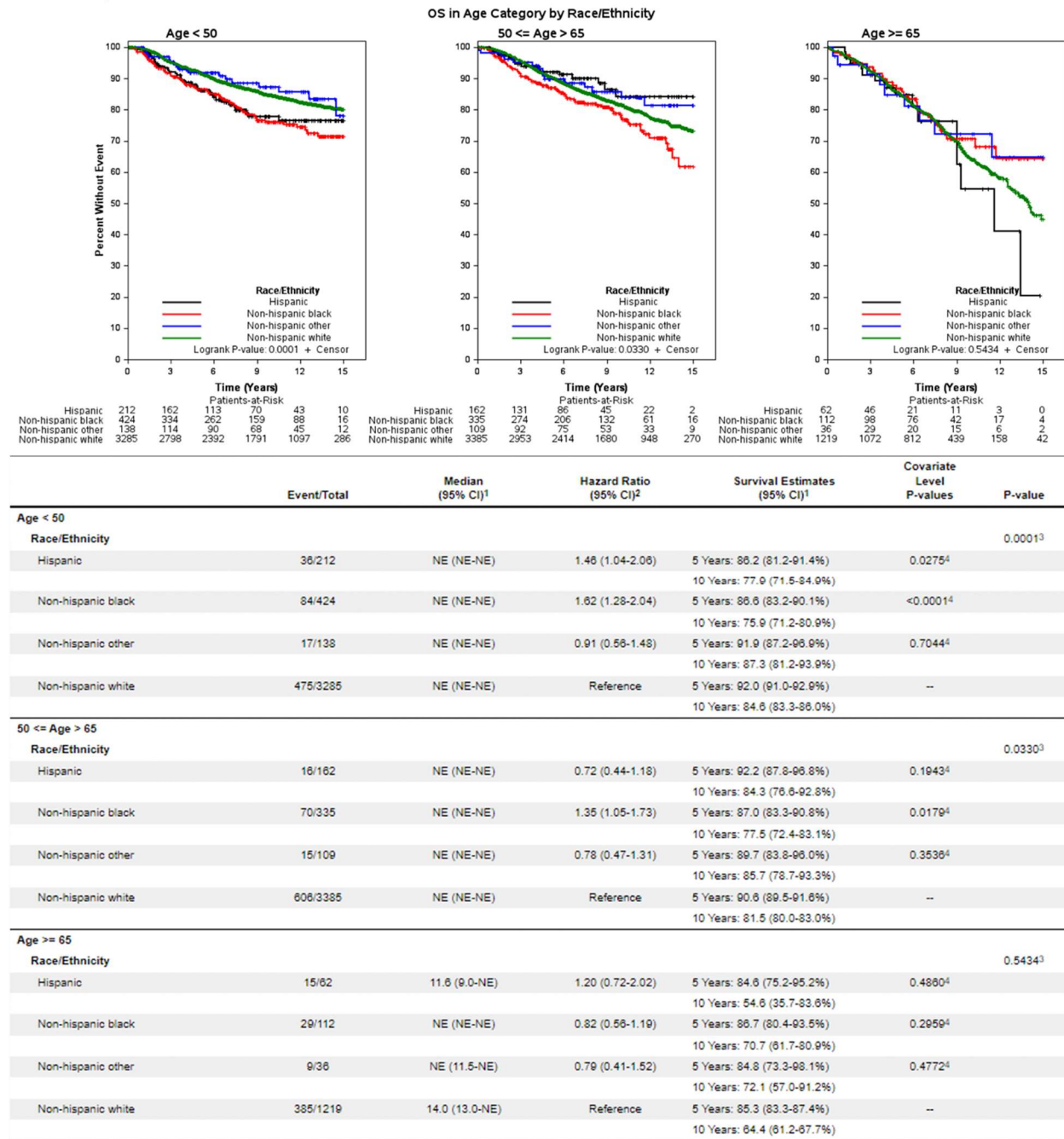
¹Kaplan-Meier method; ²Cox model; ³Logrank test; ⁴Wald Chi-Square test.

These supplemental Kaplan-Meier estimates show unadjusted survival by subgroup.

Age is represented in years.

Abbreviations: RFS, recurrence-free survival.

eFigure 4. Kaplan-Meier Estimates of Overall Survival in Age Category by Race and Ethnicity



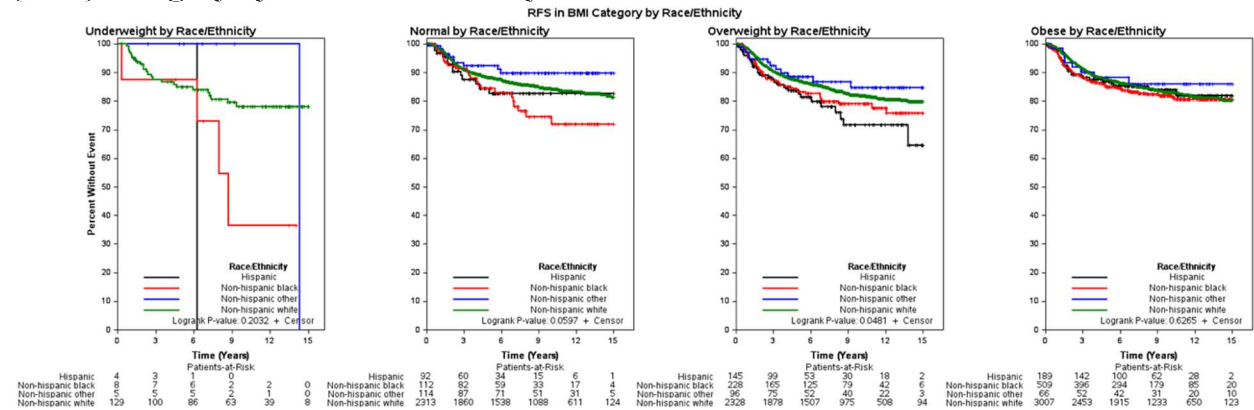
¹Kaplan-Meier method; ²Cox model; ³Logrank test; ⁴Wald Chi-Square test.

These supplemental Kaplan-Meier estimates show unadjusted survival by subgroup.

Age is represented in years.

Abbreviation: RFS, recurrence-free survival.

eFigure 5. Kaplan-Meier Estimates of Recurrence-Free Survival in Body Mass Index (BMI) Category by Race and Ethnicity



Body Mass Index (BMI) groups were determined based on National Institutes of Health definitions of underweight, normal weight, overweight, and obesity as follows: <18.5, 18.5 to <25, 25 to <30, ≥30 kg/m² respectively.²⁴

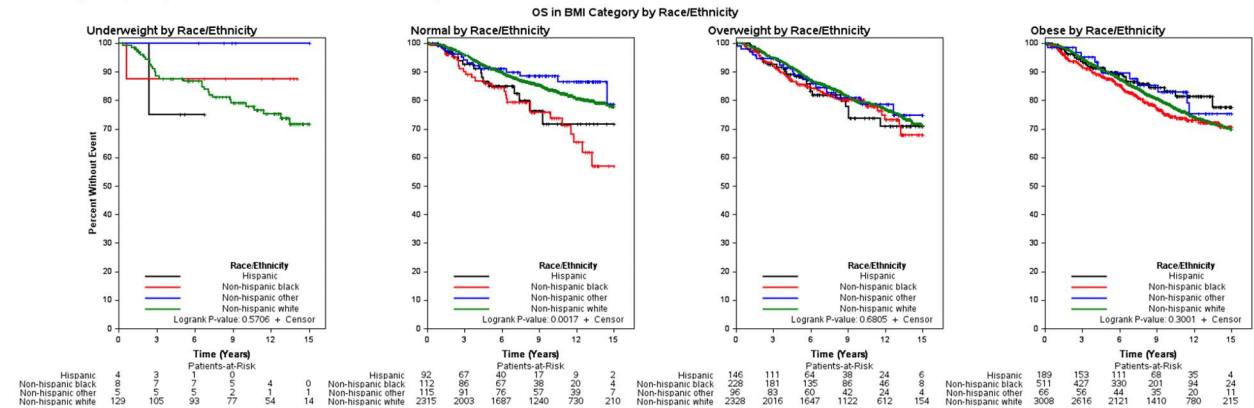
	Event/Total	Median (95% CI) ¹	Hazard Ratio (95% CI) ²	Survival Estimates (95% CI) ¹	Covariate Level P-values	P-value
Underweight by Race/Ethnicity						
Race/Ethnicity						0.2032 ³
Hispanic	1/4	6.3 (NE-NE)	1.93 (0.26-14.52)	5 Years: 100.0 (100.0-100.0%) 10 Years: 0.0 (NE-NE%)	0.5224 ⁴	
Non-hispanic black	4/8	8.7 (6.3-NE)	2.93 (1.01-8.50)	5 Years: 87.5 (67.3-100.0%) 10 Years: 36.5 (12.4-100.0%)	0.0471 ⁴	
Non-hispanic other	1/5	14.3 (NE-NE)	0.97 (0.13-7.21)	5 Years: 100.0 (100.0-100.0%) 10 Years: 100.0 (100.0-100.0%)	0.9787 ⁴	
Non-hispanic white	24/129	NE (NE-NE)	Reference	5 Years: 84.9 (78.7-91.6%) 10 Years: 78.2 (70.7-86.5%)	--	
Normal by Race/Ethnicity						
Race/Ethnicity						0.0597 ³
Hispanic	13/92	NE (NE-NE)	1.28 (0.74-2.24)	5 Years: 84.4 (76.5-93.0%) 10 Years: 82.5 (74.2-91.8%)	0.3784 ⁴	
Non-hispanic black	22/112	NE (NE-NE)	1.59 (1.03-2.45)	5 Years: 84.4 (77.3-92.0%) 10 Years: 74.4 (65.1-85.1%)	0.0355 ⁴	
Non-hispanic other	10/114	NE (NE-NE)	0.64 (0.34-1.20)	5 Years: 92.3 (87.3-97.6%) 10 Years: 89.8 (84.0-96.1%)	0.1672 ⁴	
Non-hispanic white	327/2313	NE (NE-NE)	Reference	5 Years: 88.3 (86.9-89.7%) 10 Years: 84.3 (82.7-85.9%)	--	
Overweight by Race/Ethnicity						
Race/Ethnicity						0.0481 ³
Hispanic	29/145	NE (NE-NE)	1.56 (1.07-2.28)	5 Years: 83.7 (77.5-90.4%) 10 Years: 71.6 (62.1-82.6%)	0.0212 ⁴	
Non-hispanic black	42/228	NE (NE-NE)	1.29 (0.94-1.77)	5 Years: 83.2 (78.1-88.6%) 10 Years: 79.0 (73.3-85.2%)	0.1215 ⁴	
Non-hispanic other	12/96	NE (NE-NE)	0.83 (0.47-1.48)	5 Years: 88.6 (82.1-95.5%) 10 Years: 84.6 (76.6-93.4%)	0.5312 ⁴	
Non-hispanic white	369/2328	NE (NE-NE)	Reference	5 Years: 87.3 (85.9-88.7%) 10 Years: 82.0 (80.2-83.7%)	--	
Obese by Race/Ethnicity						
Race/Ethnicity						0.6265 ³
Hispanic	27/189	NE (NE-NE)	1.06 (0.72-1.57)	5 Years: 86.8 (81.8-92.0%) 10 Years: 83.9 (78.2-90.0%)	0.7608 ⁴	
Non-hispanic black	82/509	NE (NE-NE)	1.15 (0.91-1.45)	5 Years: 84.9 (81.7-88.2%) 10 Years: 81.9 (78.3-85.7%)	0.2512 ⁴	
Non-hispanic other	8/66	NE (NE-NE)	0.82 (0.41-1.65)	5 Years: 88.2 (80.3-96.8%) 10 Years: 86.1 (77.5-95.6%)	0.5781 ⁴	
Non-hispanic white	449/3007	NE (NE-NE)	Reference	5 Years: 87.5 (86.2-88.7%) 10 Years: 83.2 (81.7-84.7%)	--	

¹Kaplan-Meier method; ²Cox model; ³Logrank test; ⁴Wald Chi-Square test.

These supplemental Kaplan-Meier estimates show unadjusted survival by subgroup.

Abbreviations: RFS, recurrence-free survival; BMI, body mass index.

eFigure 6. Kaplan-Meier Estimates of Overall Survival in Body Mass Index (BMI) Category by Race and Ethnicity



Body Mass Index (BMI) groups were determined based on National Institutes of Health definitions of underweight, normal weight, overweight, and obesity as follows: <18.5, 18.5 to <25, 25 to <30, ≥30 kg/m² respectively.²⁴

	Event/Total	Median (95% CI) ¹	Hazard Ratio (95% CI) ²	Survival Estimates (95% CI) ¹	Covariate Level P-values	P-value
Underweight by Race/Ethnicity						
Race/Ethnicity						
Hispanic	1/4	NE (2.4-NE)	1.89 (0.25-14.18)	5 Years: 75.0 (42.6-100.0%) 10 Years: NE (NE-NE%)	0.5342 ⁴	0.5706 ³
Non-hispanic black	1/8	NE (NE-NE)	0.53 (0.07-3.88)	5 Years: 87.5 (67.3-100.0%) 10 Years: 87.5 (67.3-100.0%)	0.5312 ⁴	
Non-hispanic other	0/5	NE (NE-NE)	0.00 (0.00-)	5 Years: 100.0 (100.0-100.0%) 10 Years: 100.0 (100.0-100.0%)	0.9895 ⁴	
Non-hispanic white	28/129	NE (NE-NE)	Reference	5 Years: 87.6 (81.9-93.7%) 10 Years: 79.0 (71.8-86.9%)	--	
Normal by Race/Ethnicity						
Race/Ethnicity						
Hispanic	15/92	NE (NE-NE)	1.00 (0.95-2.09)	5 Years: 85.0 (77.1-93.7%) 10 Years: 71.6 (58.5-87.6%)	0.0745 ⁴	0.0017 ³
Non-hispanic black	27/112	NE (12.5-NE)	1.93 (1.31-2.86)	5 Years: 85.7 (79.1-93.0%) 10 Years: 73.7 (64.4-84.4%)	0.0010 ⁴	
Non-hispanic other	13/115	NE (NE-NE)	0.78 (0.45-1.36)	5 Years: 91.1 (85.6-96.8%) 10 Years: 88.5 (82.3-95.2%)	0.3786 ⁴	
Non-hispanic white	359/2315	NE (NE-NE)	Reference	5 Years: 91.5 (90.3-92.7%) 10 Years: 83.6 (82.0-85.3%)	--	
Overweight by Race/Ethnicity						
Race/Ethnicity						
Hispanic	25/146	NE (NE-NE)	1.18 (0.79-1.77)	5 Years: 88.1 (82.7-94.0%) 10 Years: 73.8 (64.4-84.6%)	0.4115 ⁴	0.6805 ³
Non-hispanic black	44/228	NE (NE-NE)	1.16 (0.85-1.59)	5 Years: 85.4 (80.6-90.5%) 10 Years: 80.0 (74.4-86.1%)	0.3344 ⁴	
Non-hispanic other	17/96	NE (NE-NE)	1.01 (0.62-1.64)	5 Years: 88.7 (82.4-95.6%) 10 Years: 80.8 (72.2-90.3%)	0.9668 ⁴	
Non-hispanic white	447/2328	NE (NE-NE)	Reference	5 Years: 90.2 (88.9-91.4%) 10 Years: 79.3 (77.5-81.2%)	--	
Obese by Race/Ethnicity						
Race/Ethnicity						
Hispanic	26/189	NE (NE-NE)	0.80 (0.54-1.18)	5 Years: 89.8 (85.3-94.5%) 10 Years: 83.1 (76.8-89.9%)	0.2543 ⁴	0.3001 ³
Non-hispanic black	106/511	NE (NE-NE)	1.14 (0.93-1.40)	5 Years: 87.6 (84.7-90.6%) 10 Years: 74.7 (70.3-79.3%)	0.2141 ⁴	
Non-hispanic other	11/66	NE (NE-NE)	0.81 (0.44-1.46)	5 Years: 89.6 (82.0-97.9%) 10 Years: 82.8 (73.0-93.9%)	0.4763 ⁴	
Non-hispanic white	607/3008	NE (NE-NE)	Reference	5 Years: 89.8 (88.7-91.0%) 10 Years: 78.6 (76.9-80.3%)	--	

¹Kaplan-Meier method; ²Cox model; ³Logrank test; ⁴Wald Chi-Square test.

These supplemental Kaplan-Meier estimates show unadjusted survival by subgroup.

Abbreviations: RFS, recurrence-free survival; BMI, body mass index.

eReferences.

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