

Supplemental online content for:

Survival After Definitive Chemoradiotherapy With Concurrent Cisplatin or Carboplatin for Head and Neck Cancer

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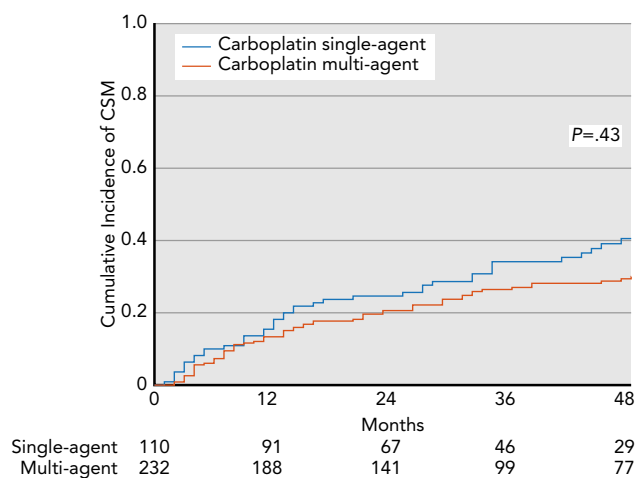


Figure 1. Cumulative incidence of CSM with single-agent carboplatin versus multiagent carboplatin-based chemotherapy. Abbreviation: CSM, cancer-specific mortality.

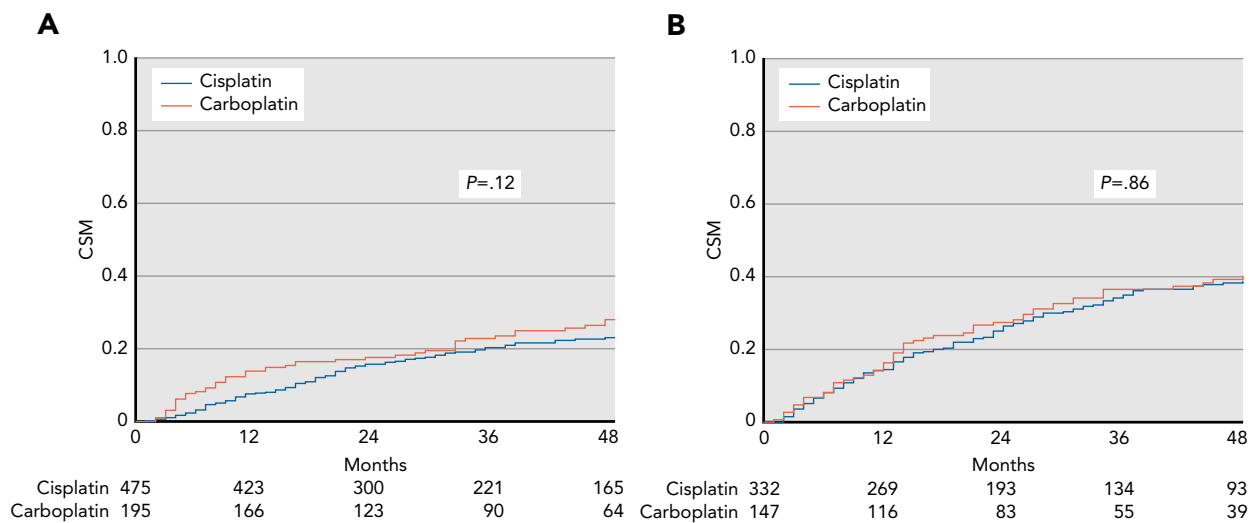
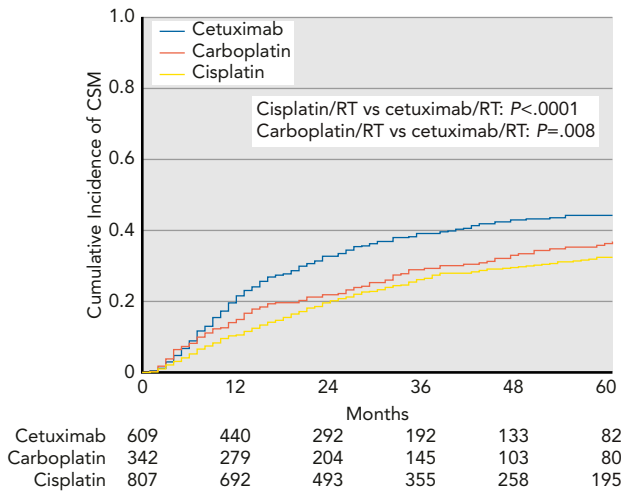
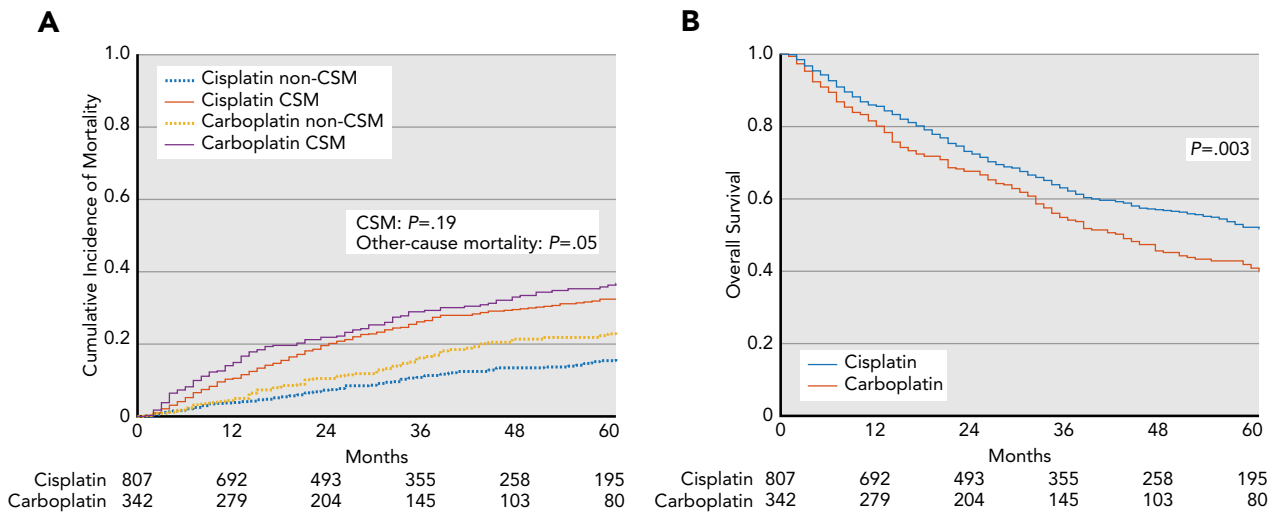


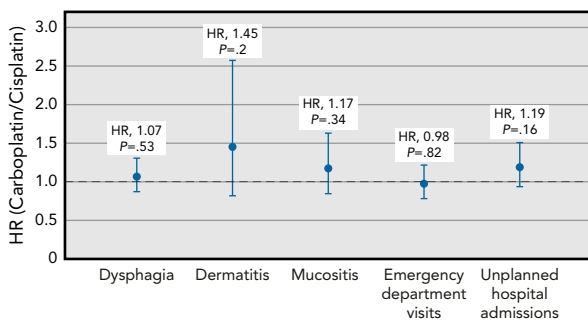
Figure 2. CSM in subgroup analysis of (A) oropharyngeal and (B) nonoropharyngeal (larynx and hypopharynx) disease sites. Abbreviation: CSM, cancer-specific mortality.



eFigure 3. CSM for patients who received definitive RT with concurrent cisplatin, carboplatin, or cetuximab. Abbreviations: CSM, cancer-specific mortality; RT, radiotherapy.



eFigure 4. Analysis of (A) CSM and other-cause mortality (non-CSM) and (B) overall survival in the total cisplatin and carboplatin cohorts. Abbreviation: CSM, cancer-specific mortality.



eFigure 5. Adjusted HR of acute toxicities (within 3 months of radiation completion) in the matched cisplatin and carboplatin cohorts. Abbreviation: HR, hazard ratio.

eTable 1. Characteristics of the Propensity Score–Matched Cisplatin and Carboplatin Cohorts

	Cisplatin n (%)	Carboplatin n (%)	P Value
Total	328	328	
Sex			.77
Male	258 (79%)	261 (80%)	
Female	70 (21%)	67 (20%)	
Charlson comorbidity score			.98
0	169 (52%)	167 (51%)	
1	71 (22%)	73 (22%)	
≥2	88 (27%)	88 (27%)	
Median age (SD), y	72 (5.3)	72 (5.4)	.94
Median diagnosis year (SD)	2009 (3)	2008 (3.1)	.58
Race			.90
White	289 (88%)	288 (88%)	
Nonwhite	39 (12%)	40 (12%)	
Region			.38
Northeast	63 (19%)	62 (19%)	
West and Midwest	68 (21%)	60 (22%)	
South	197 (60%)	196 (60%)	
Marital status			.94
Married	198 (60%)	199 (61%)	
Other	130 (40%)	129 (39%)	
Census tract poverty level			.82
<10%	156 (48%)	161 (49%)	
10%–20%	88 (27%)	90 (27%)	
>20%	84 (26%)	77 (23%)	
Smoking/Tobacco claims			.65
Absent	80 (24%)	75 (23%)	
Present	248 (76%)	253 (77%)	
T stage			.78
T1/TX	65 (20%)	58 (18%)	
T2	126 (38%)	121 (37%)	
T3	77 (23%)	81 (25%)	
T4	60 (18%)	68 (21%)	
N stage			.86
N0	54 (16%)	59 (18%)	
N1–2a	108 (33%)	104 (32%)	
N2b–3	166 (51%)	165 (50%)	
Site			.77
Oropharynx	199 (61%)	190 (58%)	
Larynx	85 (26%)	92 (28%)	
Hypopharynx	44 (13%)	46 (14%)	
IMRT claims			1.00
Absent	72 (22%)	72 (22%)	
Present	256 (78%)	256 (78%)	

Abbreviation: IMRT, intensity-modulated radiotherapy.

eTable 2. Multivariable Fine-Gray Regression for Predictors of Cancer-Specific Mortality in the Propensity Score–Matched Cohorts

	Adjusted HR (95% CI)	P Value ^a
Chemotherapy backbone		
Cisplatin	Ref	
Carboplatin	1.04 (0.80–1.36)	.76
Sex		
Male	Ref	
Female	1.07 (0.77–1.49)	.67
Charlson comorbidity score		
0	Ref	
1	1.29 (0.94–1.78)	.12
≥2	1.09 (0.78–1.52)	.63
Age, y	1.03 (1.00–1.06)	.03
Diagnosis year	0.95 (0.89–1.00)	.06
Race		
White	Ref	
Nonwhite	0.70 (0.43–1.15)	.16
Region		
Northeast	Ref	
West	1.31 (0.60–2.87)	.49
Midwest	1.06 (0.68–1.64)	.80
South	0.94 (0.65–1.37)	.74
Marital status		
Married	Ref	
Other	0.98 (0.74–1.30)	.89
Census tract poverty level		
<10%	Ref	
10%–20%	0.95 (0.68–1.33)	.77
>20%	1.06 (0.73–1.55)	.76
Smoking/Tobacco claims		
Absent	Ref	
Present	1.30 (0.90–1.87)	.17
T stage		
T1/TX	Ref	
T2	1.34 (0.86–2.10)	.20
T3	1.57 (0.96–2.56)	.07
T4	1.93 (1.20–3.10)	.007
N stage		
N0	Ref	
N1–2a	1.13 (0.74–1.74)	.57
N2b–3	1.41 (0.94–2.12)	.10

(continued)

Abbreviations: HR, hazard ratio; IMRT, intensity-modulated radiotherapy.
^aBold indicates statistically significant *P* value.

eTable 2. Multivariable Fine-Gray Regression for Predictors of Cancer-Specific Mortality in the Propensity Score–Matched Cohorts (cont.)

	Adjusted HR (95% CI)	P Value ^a
Site		
Oropharynx	Ref	
Larynx	1.59 (1.11–2.27)	.01
Hypopharynx	1.31 (0.86–1.99)	.21
IMRT claims		
Absent	Ref	
Present	1.01 (0.72–1.43)	.95

Abbreviations: HR, hazard ratio; IMRT, intensity-modulated radiotherapy.
^aBold indicates statistically significant *P* value.

Table 3. Frequency of Selected Inpatient Diagnoses in Unplanned Hospitalizations Within 3 Months of End of Radiation Completion in Matched Cohorts

Diagnosis	Frequency		Odds Ratio (95% CI)	P Value ^a
	Cisplatin Cohort	Carboplatin Cohort		
Pneumonia	9.6%	18.8%	2.19 (1.19–4.02)	.01
Neutropenia	10.1%	18.3%	1.99 (1.10–3.62)	.03
Acute renal failure	18.5%	10.8%	0.53 (0.30–0.94)	.04
Hypopotassemia	15.7%	8.5%	0.49 (0.26–0.93)	.03
Gastrostomy complication	6.2%	13.1%	2.30 (1.11–4.76)	.03
Sinoatrial node dysfunction	7.9%	1.9%	0.22 (0.07–0.69)	.007
Hyposmolality or hyponatremia	19.1%	13.6%	0.67 (0.39–1.15)	.17
Obstructive chronic bronchitis without exacerbation	1.7%	7.0%	4.42 (1.26–15.52)	.01
Volume depletion	37.6%	33.3%	0.83 (0.55–1.26)	.40
Thrombocytopenia	5.1%	1.4%	0.27 (0.07–1.01)	.04
Urinary tract infection	7.3%	10.8%	1.54 (0.75–3.13)	.29
Anemia	14.6%	11.3%	0.74 (0.41–1.35)	.36
Nausea with vomiting	8.4%	5.2%	0.59 (0.26–1.32)	.23

^aBold indicates statistically significant *P* value.