

Supplementary Online Content

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eTable 1. Characteristics of Missing Data

eTable 2. Sensitivity Analyses

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

eTable 1. Characteristics of Missing Data

		Nonmissing	Missing
Age	18-39	6871 (5.1)	703 (5.3)
	40-64	89917 (66.8)	8679 (65.3)
	65-74	37722 (28)	3918 (29.5)
Race/ethnicity	Non-Hispanic White	98444 (73.2)	8807 (73.2)
	Non-Hispanic Other	9256 (6.9)	963 (8)
	Non-Hispanic Black	15952 (11.9)	1234 (10.3)
	Hispanic	10858 (8.1)	1025 (8.5)
Sex	Male	101142 (75.2)	9676 (72.8)
	Female	33368 (24.8)	3624 (27.2)
County-level Income	High	30426 (22.6)	3290 (24.8)
	Mid-high	33868 (25.2)	3374 (25.4)
	Mid-low	31612 (23.5)	2956 (22.3)
	Low	38604 (28.7)	3663 (27.6)
County-level Education	High	31400 (23.3)	3663 (27.6)
	Mid-high	31231 (23.2)	2999 (22.6)
	Mid-low	37531 (27.9)	3501 (26.4)
	Low	34348 (25.5)	3120 (23.5)
Residence	Metropolitan	116532 (86.6)	11147 (85.3)
	Urban	15710 (11.7)	1676 (12.8)
	Rural	2268 (1.7)	247 (1.9)
Cancer Site	Non-oro-pharynx	130707 (97.2)	12930 (97.2)
	oro-pharynx	3803 (2.8)	370 (2.8)
Stage at diagnosis	Distant	12953 (9.6)	796 (6)
	Localized	36119 (26.9)	4052 (30.5)
	Regional	28159 (20.9)	1726 (13)
	Unknown/Unstaged	57279 (42.6)	6726 (50.6)
Marital Status	Unmarried	57763 (42.9)	1491 (48.5)
	Married	76747 (57.1)	1581 (51.5)
Suicide	No suicide	134105 (99.7)	13262 (99.7)
	Death by suicide	405 (0.3)	38 (0.3)

eTable 2. Sensitivity Analyses

		County covariates, No insurance		No county covariates, insurance		County covariates, insurance	
		HR (95% CI)	P-value	HR (95% CI)	P-value	Estimate (95% CI)	P-value
Residence	Metropolitan	0.617 (0.348, 1.092)	0.097	0.547 (0.256, 1.17)	0.12	0.56 (0.247, 1.271)	0.165
	Urban	0.547 (0.3, 0.997)	0.049	0.522 (0.225, 1.213)	0.131	0.57 (0.243, 1.334)	0.195
	Rural	Reference		Reference		Reference	
Age	18-39	Strata		Strata	Strata	Strata	Strata
	40-64	Strata		Strata	Strata	Strata	Strata
	65-74	Strata		Strata	Strata	Strata	Strata
Race/ ethnicity	Non-Hispanic White	Reference		Reference		Reference	
	Non-Hispanic Other	0.549 (0.324, 0.93)	0.026	0.381 (0.155, 0.933)	0.035	0.359 (0.146, 0.886)	0.026
	Non-Hispanic Black	0.19 (0.107, 0.34)	0	0.185 (0.076, 0.454)	0	0.19 (0.077, 0.465)	0
	Hispanic	0.346 (0.198, 0.606)	0	0.338 (0.149, 0.767)	0.009	0.307 (0.134, 0.699)	0.005
Sex	Male	Reference		Reference		Reference	
	Female	0.225 (0.153, 0.331)	0	0.227 (0.129, 0.399)	0	0.227 (0.129, 0.4)	0
Marital	Unmarried	Strata		Strata	Strata	Strata	
	Married	Strata		Strata	Strata	Strata	Strata
County- level Income	High	Reference		NA	Strata	Reference	
	Mid-high	1.195 (0.889, 1.606)	0.238	NA	NA	0.917 (0.601, 1.401)	0.69
	Mid-low	1.128 (0.806, 1.578)	0.484	NA	NA	0.804 (0.495, 1.307)	0.379
	Low	1.204 (0.851, 1.704)	0.294	NA	NA	0.742 (0.444, 1.241)	0.256
County- level Education	High	Reference		NA	NA	Reference	
	Mid-high	1.016 (0.757, 1.364)	0.914	NA	NA	0.995 (0.638, 1.552)	0.984
	Mid-low	0.973 (0.719, 1.315)	0.856	NA	NA	1.13 (0.728, 1.754)	0.587
	Low	1.137 (0.826, 1.564)	0.431	NA	NA	1.571 (0.986, 2.504)	0.058
Stage at Diagnosis	Distant	Strata		Strata	Strata	Strata	Strata
	Localized	Strata		Strata	Strata	Strata	Strata

	Regional	Strata		Strata	Strata	Strata	Strata
	Unknown/unstaged	Strata		Strata	Strata	Strata	Strata
Cancer Site	Non-oro-pharynx	Reference		Reference		Reference	
	oro-pharynx	1.627 (0.996, 2.658)	0.052	1.408 (0.676, 2.933)	0.361	1.412 (0.677, 2.941)	0.357
Insurance	Private insurance	NA	NA	Reference		Reference	
	Medicaid	NA	NA	0.863 (0.547, 1.359)	0.524	0.85 (0.539, 1.341)	0.486
	Uninsured	NA	NA	1.881 (1.126, 3.144)	0.016	1.904 (1.136, 3.189)	0.014