

SUPPLEMENTARY TABLES

Race/Ethnicity Data

Table. Race/Ethnicity Distribution (All Patients)

Race/Ethnicity	All Patients (N=1,236,130)	With OSA (N=593,429)	Without OSA (N=642,701)	*P- Value
White	53.5%	56.6%	50.6%	< 0.001
Black	10.1%	11.3%	8.9%	
Native American	1.4%	1.4%	1.4%	
Hispanic	1.0%	1.3%	0.8%	
Asian	0.9%	0.9%	0.8%	
Other	0.8%	0.8%	0.8%	
Unknown/Missing	32.3%	27.7%	36.6%	

*P-value comparing patients with and without OSA.

Table. Race/Ethnicity Distribution (Known Race/Ethnicity Data)

Race/Ethnicity	All Patients (N=836,468)	With OSA (N=429,288)	Without OSA (N=407,180)	*P- Value
White	79.0%	78.2%	79.9%	< 0.001
Black	14.9%	15.6%	14.1%	
Native American	2.1%	2.0%	2.3%	
Hispanic	1.5%	1.8%	1.2%	
Asian	1.3%	1.2%	1.3%	
Other	1.2%	1.2%	1.2%	

*P-value comparing patients with and without OSA.

Agent Orange Data

Table. Agent Orange Exposure (All Patients)

Agent Orange Exposure	All Patients (N=1,236,130)	With OSA (N=593,429)	Without OSA (N=642,701)
Yes	3.9%	5.3%	2.7%
No	65.5%	70.3%	61.1%
Missing	30.5%	24.3%	36.2%

Table. Agent Orange Exposure (Known Agent Orange Exposure Status)

Agent Orange Exposure	All Patients (N=858,773)	With OSA (N=449,020)	Without OSA (N=409,753)
Yes	5.7%	7.0%	4.2%
No	94.3%	93.0%	95.8%

Patient Characteristics of OSA Patients with Preceding Polysomnogram

Table. OSA Patients with Preceding Polysomnogram (n=145,228)

Characteristic	OSA with PSG (N=145,228)
Age, mean +/- SD (years)	58 +/- 12
Men (%)	96%
White [‡] (%)	75%
Smoking (%)	24%
Alcohol Use (%)	11%
Obesity (%)	52%
Comorbidity Index, mean +/- SD	1.2 +/- 1.6
Follow Up (years)	
Mean +/- SD	4.9 +/- 2.5
Median (Range)	4.0 (2.0-24.0)
% with Cancer Diagnosis	5.9%

[‡]Calculated from proportion of cohort with known race/ethnicity. Data on race/ethnicity missing for 25% of OSA patients with a preceding polysomnogram.

Abbreviations: OSA, obstructive sleep apnea; PSG, polysomnogram; SD, standard deviation.

Delayed Entry Sensitivity Analysis

Table. Cancer Diagnoses: Sensitivity Analysis for Delayed Entry

Delayed Entry (Years)		All Patients	With OSA	Without OSA	*P-Value
0 (No Delay)	% with Cancer Diagnosis	10.4%	13.6%	7.4%	< 0.001
	Total Sample Size	1,477,967	721,417	756,550	
1	% with Cancer Diagnosis	7.6%	11.0%	5.7%	< 0.001
	Total Sample Size	1,317,795	577,310	640,524	
2	% with Cancer Diagnosis	4.5%	6.2%	3.0%	< 0.001
	Total Sample Size	1,236,130	593,429	642,701	
3	% with Cancer Diagnosis	2.9%	3.9%	2.1%	< 0.001
	Total Sample Size	1,182,901	561,814	621,087	
5	% with Cancer Diagnosis	4.8%	5.9%	3.9%	< 0.001
	Total Sample Size	364,446	176,967	187,479	

*P-value comparing patients with and without OSA.

Table. Hazard of Cancer Diagnosis: Sensitivity Analysis for Delayed Entry

Delayed Entry (Years)	Variable	Reference	Unadjusted HR (95% CI)	*Adjusted HR (95% CI)	‡P-Value
0 (No Delay)	OSA	No OSA	1.89 (1.87-1.91)	1.73 (1.71-1.75)	< 0.001
1	OSA	No OSA	1.91 (1.89-1.94)	1.78 (1.75-1.80)	< 0.001
2	OSA	No OSA	2.14 (2.10-2.18)	2.02 (1.98-2.05)	< 0.001
3	OSA	No OSA	1.96 (1.92-2.01)	1.87 (1.83-1.91)	< 0.001
5	OSA	No OSA	1.86 (1.81-1.92)	1.76 (1.70-1.82)	< 0.001

* Adjusted for age at diagnosis (or matched inception), sex, year of diagnosis (or matched inception), smoking, alcohol, obesity, and comorbidity.

‡ Adjusted model.

Subgroup Analysis by Sex

Table. Cancer Diagnoses, by Sex

Characteristic	All Patients (N=1,236,123 [‡])	With OSA (N=593,429)	Without OSA (N=642,694 [‡])	*P- Value
% with Cancer Diagnosis, Women	3.1%	5.4%	1.8%	< 0.001
Total No., Women	75,246	27,421	47,825	
% with Cancer Diagnosis, Men	4.6%	6.3%	3.1%	< 0.001
Total No., Men	1,160,877	566,008	594,869	

[‡] 7 patients were missing data on sex

* P-value comparing patients with and without OSA.

Table. Hazard of Cancer Diagnosis in Women (Cox Regression)

Variable	Reference Group	Unadjusted HR (95% CI)	*Adjusted HR (95% CI)	[‡] P- Value
OSA	No OSA	2.82 (2.60-3.08)	2.44 (2.23-2.68)	< 0.001
Age (years)	One Year Younger		1.02 (1.02-1.02)	< 0.001
Year of Diagnosis	One Year Prior		0.90 (0.89-0.91)	< 0.001
Smoking	No Smoking		1.41 (1.28-1.56)	< 0.001
Alcohol Use	No Alcohol Use		1.30 (1.11-1.52)	0.001
Obesity	No Obesity		1.17 (1.07-1.29)	0.001
Comorbidity Index	One Less Index Score		1.10 (1.07-1.14)	< 0.001

* Adjusted for age at diagnosis (or matched inception), year of diagnosis (or matched inception), smoking, alcohol use, obesity, and comorbidity.

[‡] Adjusted model.

Table. Hazard of Cancer Diagnosis in Men (Cox Regression)

Variable	Reference Group	Unadjusted HR (95% CI)	*Adjusted HR (95% CI)	[‡] P- Value
OSA	No OSA	2.10 (2.06-2.13)	2.00 (1.96-2.04)	< 0.001
Age at Diagnosis (yr)	One Year Younger		1.03 (1.03-1.03)	< 0.001
Year of Diagnosis	One Year Prior		0.91 (0.91-0.91)	< 0.001
Smoking	No Smoking		1.49 (1.46-1.52)	< 0.001
Alcohol Use	No Alcohol Use		1.28 (1.24-1.31)	< 0.001
Obesity	No Obesity		1.03 (1.01-1.05)	0.008
Comorbidity Index	One Less Index Score		1.10 (1.09-1.10)	< 0.001

* Adjusted for age at diagnosis (or matched inception), year of diagnosis (or matched inception), smoking, alcohol use, obesity, and comorbidity.

[‡] Adjusted model.

Hazard of Cancer by OSA Treatment Status: Stratified Pre- and Post-2010

Table. Hazard of Cancer by OSA Treatment Status: Pre-2010 (N=120,887)

Variable	Reference Group	Unadjusted HR (95% CI)	*Adjusted HR (95% CI)	‡P- Value
CPAP	Untreated	1.05 (1.01-1.10)	1.13 (1.09-1.18)	< 0.001
Age (years)	One Year Younger		1.03 (1.03-1.03)	< 0.001
Male Sex	Female Sex		0.87 (0.81-0.93)	< 0.001
Year of Diagnosis	One Year Prior		0.95 (0.95-0.95)	< 0.001
Smoking	No Smoking		1.31 (1.26-1.35)	< 0.001
Alcohol Use	No Alcohol Use		1.15 (1.10-1.21)	< 0.001
Obesity	No Obesity		0.95 (0.93-0.98)	0.002
Comorbidity Index	One Less Index Score		1.05 (1.04-1.06)	< 0.001

* Adjusted for age at diagnosis (or matched inception), sex, year of diagnosis (or matched inception), smoking, alcohol use, obesity, and comorbidity.

‡ Adjusted model.

Table. Hazard of Cancer by OSA Treatment Status: Post-2010 (N=472,542)

Variable	Reference Group	Unadjusted HR (95% CI)	*Adjusted HR (95% CI)	‡P- Value
CPAP	Untreated	0.87 (0.84-0.91)	0.91 (0.87-0.94)	< 0.001
Age (years)	One Year Younger		1.03 (1.03-1.04)	< 0.001
Male Sex	Female Sex		0.88 (0.81-0.95)	0.001
Year of Diagnosis	One Year Prior		--	--
Smoking	No Smoking		1.29 (1.24-1.33)	< 0.001
Alcohol Use	No Alcohol Use		1.10 (1.04-1.16)	< 0.001
Obesity	No Obesity		1.00 (0.97-1.03)	0.839
Comorbidity Index	One Less Index Score		1.07 (1.06-1.08)	< 0.001

* Adjusted for age at diagnosis (or matched inception), sex, year of diagnosis (or matched inception), smoking, alcohol use, obesity, and comorbidity.

‡ Adjusted model.