

Supplementary Table 1: Odds of SCCHN Related to Tobacco Use and Alcohol Consumption Within the Carolina Head and Neck Cancer Study (CHANCE), 2002-2006, Stratified by Tumor Site, Total Population

Risk Factor	Controls				Oral Cavity (N=192)			Oropharynx (N=361)					Hypopharynx (N=67)				
	N	%	N	%	Crude	Adjusted	95% CI	N	%	Crude	Adjusted	95% CI	N	%	Crude	Adjusted	95% CI
					OR	OR				OR	OR				OR	OR	
<b>Current Cigarette Use</b>																	
Never smoked	525	38.1	21	11.2	1	1		71	19.7	1	1		5	7.6	1	1	
Ex-smoker	583	42.3	45	23.7	2.35	1.96	1.05, 3.68	127	35.2	1.77	1.35	0.92, 1.98	14	21.2	2.37	1.72	0.44, 6.74 <sup>b</sup>
Current Smoker	269	19.5	124	65.3	14.5	7.07	3.83, 13.0	163	45.2	3.64	1.63	1.08, 2.45	47	71.2	16.7	5.87	1.59, 21.7 <sup>b</sup>
<b>Cigarettes Per Day</b>																	
None	525	38.2	21	10.9	1	1		71	19.7	1	1		5	7.7	1	1	
1-19	338	24.6	31	16.2	2.49	2.21	1.13, 4.31	67	18.6	1.43	1.14	0.74, 1.76	15	23.1	3.84	2.63	0.65, 10.6
20+	512	37.2	140	72.9	9.57	4.95	2.73, 8.96	222	61.7	3.24	1.69	1.15, 2.47	45	69.2	9.87	4.04	1.10, 14.9
<b>Years Smoking Cigarettes</b>																	
None	525	38.2	21	11.1	1	1		71	19.8	1	1		5	7.94	1	1	
1-19	294	21.4	12	6.32	1.14	1.36	0.60, 3.05	47	13.1	0.98	0.93	0.59, 1.47	3	4.76	0.96	0.42	0.042, 4.20 <sup>b</sup>
20+	554	40.4	157	82.6	9.06	4.9	2.74, 8.77	240	67	3.66	1.88	1.27, 2.77	55	87.3	10.4	5.07	1.40, 18.3 <sup>b</sup>
<b>Ever Beer</b>																	
No	499	36.2	37	19.4	1	1		59	16.4	1	1		5	7.7	1	1	
Yes	878	63.8	154	80.6	3.28	2.28	1.29, 4.05	301	83.6	2.02	1.19	0.78, 1.82	301	83.6	6.62	4.56	1.13, 18.5
<b>Ever Wine</b>																	
No	597	43.4	96	50.5	1	1		143	39.7	1	1		24	39.7	1	1	
Yes	778	56.6	94	49.5	0.77	0.65	0.44, 0.96	217	60.3	1	1.01	0.73, 1.38	40	62.5	1.21	1	0.48, 2.09
<b>Ever Liquor</b>																	
No	491	35.7	51	26.6	1	1		63	17.5	1	1		10	15.4	1	1	
Yes	886	64.3	141	73.4	1.77	1.05	0.65, 1.69	298	82.6	2.05	1.65	1.12, 2.41	55	84.6	2.55	1.23	0.49, 3.08

Supplementary Table 1 (con.)

Risk Factor	Controls		Oral cavity-Oropharynx-Hypopharynx NOS (N=247)						Larynx (N=473)							
	N	%	N	%	Crude			Adjusted			N	%	Crude		Adjusted	
					OR	OR	95% CI	OR	OR	95% CI			OR	OR	95% CI	
<b>Current Cigarette Use</b>																
Never smoked	525	38.1	57	23.1	1	1				19	4	1	1			
Ex-smoker	583	42.3	67	27.1	1.22	0.8	0.51, 1.27			141	35.8	6.08	5.44	3.08, 9.61		
Current Smoker	269	19.5	123	49.8	4.05	1.77	1.13, 2.77			313	66.2	34	19.5	11.1, 34.5		
<b>Cigarettes Per Day</b>																
None	525	38.2	57	23.3	1	1				19	4	1	1			
1-19	338	24.6	46	18.8	1.25	0.87	0.53, 1.42			72	15.2	5.27	4.9	2.68, 8.95		
20+	512	37.2	142	58	3.03	1.45	0.94, 2.24			382	80.8	22.5	14.2	8.19, 24.7		
<b>Years Smoking Cigarettes</b>																
None	525	38.2	57	23.2	1	1				19	4.03	1	1			
1-19	294	21.4	31	12.6	0.87	0.73	0.43, 1.23			26	5.51	2.18	2.57	1.31, 5.04		
20+	554	40.4	158	64.2	2.88	1.55	1.00, 2.40			427	90.5	22.9	14.8	8.50, 25.9		
<b>Ever Beer</b>																
No	499	36.2	50	20.3	1	1				92	19.5	1	1			
Yes	878	63.8	196	79.7	2.44	1.62	1.00, 2.62			380	80.5	2.19	1.1	0.75, 1.61		
<b>Ever Wine</b>																
No	597	43.4	105	42.5	1	1				266	56.6	1	1			
Yes	778	56.6	142	57.5	0.97	1	0.69, 1.43			204	43.4	0.54	0.53	0.39, 0.71		
<b>Ever Liquor</b>																
No	491	35.7	58	23.5	1	1				94	19.9	1	1			
Yes	886	64.3	189	76.5	1.76	1.21	0.79, 1.85			378	80.1	1.96	1.56	1.10, 2.23		

CI: confidence interval; OR: odds ratio

<sup>a</sup>All models exclude missing data; Crude models adjust for matching factors and their interactions; Adjusted models include matching factors, their interactions, education, and fruit and vegetable consumption; Cigarette models adjusted for alcohol consumption and use of other tobacco; Alcohol models adjusted for duration of cigarette smoking, use of other tobacco and other types of alcohol

<sup>b</sup>Estimates obtained from models fit using conditional logistic regression due to convergence issues when using unconditional logistic regression

Supplementary Table 2: Odds of SCCHN Related to Tobacco and Alcohol Consumption among African-Americans Within the Carolina Head and Neck Cancer Study (CHANCE), 2002-2006, Stratified by Tumor Site

Risk Factor	Controls		Oral Cavity (N=52; 14.8% of cases)					Oropharynx (N=84; 23.9% of cases)					Hypopharynx (N=28; 7.98% of cases)				
	N	%	N	%	Crude	Adjusted	95% CI	N	%	Crude	Adjusted	95% CI	N	%	Crude	Adjusted	95% CI
					OR	OR				OR	OR				OR	OR	
<b>Ever Cigarette Use</b>																	
No	103	39	2	3.85	1	1	--	1	1.19	1	1	--	3	10.7	1	1	--
Yes	161	61	50	96.2	20.3	4.05E+10	2.26e10,7.29 e10	83	98.8	53.5	25.8	3.42, 194	25	89.3	4.56	2.9	0.33, 25.3
<b>Current Cigarette Use</b>																	
Never smoked	103	39	2	3.92	1	1	--	1	1.19	1	1	--	3	11.1	1	1	--
Ex-smoker	97	36.7	8	15.7	5.82	1.36E+10	4.03e9,4.60e10	16	19.1	18.6	11.5	1.43, 92.6	6	22.2	1.94	2	0.19, 20.9 <sup>b</sup>
Current Smoker	64	24.2	41	80.4	39.4	7.34E+10	3.86e10,1.4e11	67	79.8	102	43	5.56, 333	18	66.7	7.97	3.5	0.38, 31.9 <sup>b</sup>
<b>Cigarettes Per Day</b>																	
None	103	39	2	3.85	1	1	--	1	1.19	1	1	--	3	11.1	1	1	--
1-19	95	36	14	26.9	9.67	2.36E+10	7.79e9, 7.15e10	28	33.3	31.5	18.6	2.38, 145	11	40.7	3.56	3.57	0.37, 34.6
20+	66	25	36	69.2	36.1	6.64E+10	3.58e10, 1.23e11	55	65.5	84.7	35.3	4.56, 272	13	48.2	5.65	2.55	0.27, 23.8
<b>Years Smoking Cigarettes</b>																	
None	103	39	2	4	1	1	--	1	1.22	1	1	--	3	12	1	1	--
1-19	55	20.8	0	0				3	3.66	5.27	5.48	0.53, 56.5	1	4	0.57	1.60E-06	0,infinity <sup>b</sup>
20+	106	40.2	48	96	44.4	6.35E+10	3.48e10, 1.16e11	78	95.1	83.6	35.5	4.66, 271	21	84	5.92	3.63	0.42, 31.6 <sup>b</sup>
<b>Pack-years</b>																	
None	103	39	2	4	1	1	--	1	1.22	1	1	--	3	12	1	1	--
Less than 20	94	35.6	8	16	5.24	1.51E+10	4.31e9,5.27e10	17	20.7	18.2	10.6	1.31, 85.4	7	28	2.34	3.07	0.32, 29.7 <sup>b</sup>
20+	67	25.4	40	80	51.5	9.98E+10	5.37e10, 1.85e11	64	78.1	130	53.8	6.88, 421	15	60	6.84	2.67	0.29, 24.5 <sup>b</sup>
<b>Ever Beer</b>																	
No	38	10.9	5	9.62	1	1	--	6	7.14	1	1	--	3	11.5	1	1	--
Yes	310	89.1	47	90.4	5.06	3.8	0.97, 14.9	78	92.9	5.08	2.06	0.79, 5.37	23	88.5	2.77	3.87	0.31, 48.3
<b>Ever Wine</b>																	
No	110	31.6	20	39.2	1	1	--	19	22.6	1	1	--	5	18.5	1	1	--
Yes	238	68.4	31	60.8	1.49	0.88	0.41, 1.90	65	77.4	2.8	1.83	0.95, 3.51	22	81.5	4.19	2.63	0.60, 11.6
<b>Ever Liquor</b>																	
No	40	11.4	9	17.3	1	1	--	7	8.33	1	1	--	3	11.1	1	1	--
Yes	310	88.6	43	82.7	2.96	1.89	0.67, 5.32	77	91.7	5.12	2.9	1.14, 7.36	24	88.9	2.99	1.02	0.15, 6.72

Supplementary Table 2 (con.)

Controls			Oral cavity-Oropharynx-Hypopharynx NOS (N=59 16.8% of cases)					Larynx (N=128; 36.5% of cases)				
Risk Factor	N	%	N	%	Crude OR	Adjusted OR	95% CI	N	%	Crude OR	Adjusted OR	95% CI
Ever Cigarette Use												
No	103	39	7	11.9	1	1	--	3	2.34	1	1	--
Yes	161	61	52	88.1	5.07	2.67	1.02, 7.05	125	97.7	26.3	21.3	4.94, 92.2
Current Cigarette Use												
Never smoked	103	39	7	11.9	1	1	--	3	2.34	1	1	--
Ex-smoker	97	36.7	12	20.3	2.12	1.55	0.51, 4.76	38	29.7	12.4	14	3.11, 62.8
Current Smoker	64	24.2	40	67.8	9.27	4	1.45, 11.1	87	68	51.4	32	7.20, 142
Cigarettes Per Day												
None	103	39	7	11.9	1	1	--	3	2.34	1	1	--
1-19	95	36	16	27.1	2.66	1.75	0.60, 5.13	38	29.7	13.4	13.5	3.03, 60.5
20+	66	25	36	61	8.9	4.09	1.45, 11.5	87	68	46.8	35	7.85, 156
Years Smoking Cigarettes												
None	103	39	7	11.9	1	1	--	3	2.36	1	1	--
1-19	55	20.8	7	11.9	1.65	1.71	0.49, 5.97	8	6.3	4.39	6.3	1.20, 33.0
20+	106	40.2	45	76.3	7.38	3.31	1.22, 8.99	116	91.3	42.2	31.6	7.20, 139
Pack-years												
None	103	39	7	11.9	1	1	--	3	2.36	1	1	--
Less than 20	94	35.6	15	25.4	2.28	1.7	0.58, 4.94	34	26.8	12.3	12.9	2.86, 58.1
20+	67	25.4	37	62.7	11.4	5.12	1.77, 14.8	90	70.9	52.7	41.8	9.29, 188
Ever Beer												
No	38	10.9	8	13.6	1	1	--	16	12.6	1	1	--
Yes	310	89.1	51	86.4	2.79	1.83	0.69, 4.86	111	87.4	3.34	1.08	0.49, 2.36
Ever Wine												
No	110	31.6	16	27.1	1	1	--	50	39.4	1	1	--
Yes	238	68.4	43	72.9	2.3	1.79	0.85, 3.76	77	60.6	1.39	0.75	0.42, 1.34
Ever Liquor												
No	40	11.4	6	10.2	1	1	--	15	11.7	1	1	--
Yes	310	88.6	53	89.8	4.77	2.31	0.81, 6.61	113	88.3	3.44	2.77	1.21, 6.38

OR: odds ratio; CI: confidence interval

<sup>a</sup>All models exclude missing data; Crude models adjust for matching factors and their interactions; Adjusted models include matching factors, their interactions, education, and fruit and vegetable consumption; Cigarette models adjusted for alcohol consumption and use of other tobacco; Alcohol models adjusted for duration of cigarette smoking, use of other tobacco and other types of alcohol

<sup>b</sup>Estimates obtained from models fit using conditional logistic regression due to convergence issues when using unconditional logistic regression

Supplementary Table 3: Odds of SCCHN Related to Tobacco Use and Alcohol Consumption among Whites Within the Carolina Head and Neck Cancer Study (CHANCE), 2002-2006, Stratified by Tumor Site

Risk Factor	Controls		Oral Cavity (N=140; 14.2% of cases)					Oropharynx (N=277; 28% of cases)					Hypopharynx (N=39; 3.9% of cases)				
	N	%	N	%	Crude			N	%	Crude			N	%	Crude		
					OR	OR	95% CI			OR	OR	95% CI			OR	OR	95% CI
Ever Cigarette Use																	
No	422	37.9	19	13.6	1	1	--	70	25.3	1	1	--	2	5.13	1	1	--
Yes	691	62.1	121	86.4	4.7	2.77	1.54, 4.98	207	74.7	1.79	1.08	0.74, 1.58	37	94.9	10.6	3.74	0.81, 17.2
Current Cigarette Use																	
Never smoked	422	37.9	19	13.7	1	1	--	70	25.3	1	1	--	2	5.13	1	1	--
Ex-smoker	486	43.7	37	26.6	2	1.65	0.86, 3.16	111	40.1	1.52	1.18	0.78, 1.77	8	20.5	3.12	1.6	0.31, 8.44 <sup>b</sup>
Current Smoker	205	18.4	83	59.7	11.8	5.15	2.70, 9.79	96	34.7	2.23	0.99	0.63, 1.55	29	47.4	29.7	7.29	1.53, 34.6 <sup>b</sup>
Cigarettes Per Day																	
None	422	37.9	19	13.6	1	1	--	70	25.4	1	1	--	2	5.26	1	1	--
1-19	243	21.9	17	12.1	1.73	1.68	0.80, 3.50	39	14.1	0.99	0.84	0.51, 1.38	4	10.5	3.51	1.56	0.23, 10.4
20+	446	40.1	104	74.3	7.12	3.57	1.93, 6.63	167	60.5	2.27	1.23	0.82, 1.84	32	84.2	15.3	5.21	1.08, 25.2
Years Smoking Cigarettes																	
None	422	38.1	19	13.6	1	1	--	70	25.4	1	1	--	2	5.26	1	1	--
1-19	239	21.6	12	8.57	1.25	1.32	0.59, 2.99	44	15.9	0.9	0.83	0.52, 1.33	2	5.26	1.53	0.61	0.05, 7.01 <sup>b</sup>
20+	448	40.4	109	77.9	6.84	3.61	1.98, 6.61	162	58.7	2.5	1.31	0.86, 1.98	34	89.5	16.9	5.85	1.25, 27.3 <sup>b</sup>
Pack-years																	
None	422	38.1	19	13.6	1	1	--	70	25.5	1	1	--	2	5.41	1	1	--
1-19	279	25.2	13	9.29	1.17	1.25	0.57, 2.74	43	15.6	0.83	0.74	0.46, 1.19	3	8.11	2.14	0.98	0.13, 7.54 <sup>b</sup>
20+	406	36.7	108	77.1	8.14	4.08	2.20, 7.58	162	58.9	2.71	1.43	0.94, 2.18	32	86.5	18.5	5.81	1.22, 27.8 <sup>b</sup>
Ever Beer																	
No	411	36.9	32	23	1	1	--	53	19.2	1	1	--	2	5.13	1	1	--
Yes	703	63.1	107	77	2.92	2.07	1.12, 3.82	223	80.8	1.64	1.07	0.68, 1.68	37	94.9	13.1	4.85	0.95, 24.6
Ever Wine																	
No	469	42.2	76	54.7	1	1	--	124	44.9	1	1	--	19	51.4	1	1	--
Yes	642	57.8	63	45.3	0.63	0.58	0.37, 0.91	152	55.1	0.78	0.85	0.60, 1.21	18	48.7	0.65	0.71	0.30, 1.65
Ever Liquor																	
No	404	36.3	42	30	1	1	--	56	20.2	1	1	--	7	18.4	1	1	--
Yes	709	63.7	98	70	1.53	1.09	0.64, 1.85	221	79.8	1.71	1.47	0.96, 2.25	31	81.6	2.37	1.68	0.55, 5.11

Supplementary Table 3 (con.)

Risk Factor	Controls		Oral cavity-Oropharynx-Hypopharynx NOS (N=188; 19% of cases)					Larynx (N=345; 34.9% of cases)				
	N	%	N	%	Crude	Adjusted		N	%	Crude	Adjusted	
					OR	OR	95% CI			OR	OR	95% CI
Ever Cigarette Use												
No	422	37.9	50	26.6	1	1	--	16	4.64	1	1	--
Yes	691	62.1	138	73.4	1.84	0.99	0.64, 1.52	329	95.4	12.3	8.55	4.78, 15.3
Current Cigarette Use												
Never smoked	422	37.9	50	26.6	1	1	--	16	4.64	1	1	--
Ex-smoker	486	43.7	55	29.3	1.09	0.71	0.43, 1.16	103	29.9	5.02	4.39	2.38, 8.09
Current Smoker	205	18.4	83	44.2	3.31	1.46	0.90, 2.39	226	65.5	30.9	18	9.78, 33.2
Cigarettes Per Day												
None	422	37.9	50	26.9	1	1	--	16	4.64	1	1	--
1-19	243	21.9	30	16.1	1.06	0.76	0.44, 1.34	34	9.86	3.66	3.6	1.82, 7.13
20+	446	40.1	106	57	2.37	1.16	0.72, 1.86	295	85.5	18.1	11.5	6.35, 20.7
Pack-years												
None	422	38.1	50	26.9	1	1	--	16	4.64	1	1	--
Less than 20	279	25.2	26	14	0.76	0.61	0.34, 1.10	28	8.12	1.79	2.07	0.98, 4.37
20+	406	36.7	110	59.1	2.67	1.32	0.82, 2.11	301	87.3	19.5	12.6	6.96, 22.8
Years Smoking Cigarettes												
None	422	38.1	50	26.7	1	1	--	16	4.64	1	1	--
1-19	239	21.6	24	12.8	0.74	0.59	0.33, 1.04	18	5.22	2.56	2.86	1.43, 5.72
20+	448	40.4	113	60.4	2.96	1.45	0.89, 2.36	311	90.1	21	13.3	7.28, 24.1
Ever Beer												
No	411	36.9	42	22.5	1	1	--	76	22	1	1	--
Yes	703	63.1	145	77.5	2.36	1.57	0.94, 2.65	269	78	1.94	1.1	0.72, 1.68
Ever Wine												
No	469	42.2	89	47.3	1	1	--	216	63	1	1	--
Yes	642	57.8	99	52.7	0.78	0.85	0.57, 1.27	127	37	0.41	0.47	0.34, 0.66
Ever Liquor												
No	404	36.3	52	27.7	1	1	--	79	23	1	1	--
Yes	709	63.7	136	72.3	1.46	1.09	0.68, 1.73	265	77	1.71	1.76	1.19, 2.62

OR: odds ratio; CI: confidence interval

<sup>a</sup>All models exclude missing data; Crude models adjust for matching factors and their interactions; Adjusted models include matching factors, their interactions, education, and fruit and vegetable consumption; Cigarette models adjusted for alcohol consumption and use of other tobacco; Alcohol models adjusted for duration of cigarette smoking, use of other tobacco and other types of alcohol

<sup>b</sup>Estimates obtained from models fit using conditional logistic regression due to convergence issues when using unconditional logistic regression



Supplementary Table 4: Odds of SCCHN Related to Tobacco Use and Alcohol Consumption Within the Carolina Head and Neck Cancer Study (CHANCE), 2002-2006, Stratified by Site With Potential Relationship to HPV Infection, Total Population

Risk Factor	Controls				HPV-Related (N=338)			Non-HPV Related (N=1002)				
	N	%	N	%	Crude OR	Adjusted OR	95% CI	N	%	Crude OR	Adjusted OR	95% CI
<b>Current Cigarette Use</b>												
Never smoked	525	38.1	70	20.7	1	1		103	10.3	1	1	
Ex-smoker	583	42.3	121	35.8	1.72	1.31	0.89, 1.95	273	27.3	2.45	1.89	1.39, 2.57
Current Smoker	269	19.5	147	43.5	3.24	1.46	0.96, 2.22	623	62.4	12.1	5.89	4.32, 8.03
<b>Cigarettes Per Day</b>												
None	525	38.2	70	20.8	1	1		103	10.3	1	1	
1-19	338	24.6	61	18.1	1.31	1.05	0.67, 1.64	170	17	2.41	1.85	1.33, 2.58
20+	512	37.2	206	61.1	3.02	1.6	1.08, 2.37	725	72.7	8.14	4.38	3.26, 5.90
<b>Years Smoked</b>												
None	525	38.2	70	20.9	1	1		103	10.4	1	1	
1-19	294	21.4	46	13.7	0.96	0.92	0.58, 1.45	73	7.34	1.19	1.15	0.79, 1.68
20+	554	40.4	219	65.4	3.36	1.73	1.16, 2.58	818	82.3	8.3	4.67	3.48, 6.26
<b>Ever Beer</b>												
No	499	36.2	57	16.9	1	1		186	18.7	1	1	
Yes	878	63.8	280	83.1	1.87	1.12	0.73, 1.72	811	81.3	2.59	1.51	1.12, 2.03
<b>Ever Wine</b>												
No	597	43.4	130	38.6	1	1		504	50.7	1	1	
Yes	778	56.6	207	61.4	1.04	1.05	0.76, 1.46	490	49.3	0.68	0.67	0.53, 0.85
<b>Ever Liquor</b>												
No	491	35.7	58	17.2	1	1		218	21.8	1	1	
Yes	886	64.3	280	82.8	2.02	1.71	1.15, 2.54	781	78.2	1.88	1.3	0.99, 1.70

CI: confidence interval; OR: odds ratio

<sup>a</sup>All models exclude missing data; Crude models adjust for matching factors and their interactions; Adjusted models include matching factors, their interactions, education, and fruit and vegetable consumption; Cigarette models adjusted for alcohol consumption and use of other tobacco; Alcohol models adjusted for duration of cigarette smoking, use of other tobacco and other types of alcohol

Supplementary Table 5: Odds of SCCHN Related to Tobacco Use and Alcohol Consumption among African-Americans Within the Carolina Head and Neck Cancer Study (CHANCE), 2002-2006, Stratified by Site With Potential Relationship to HPV Infection

Risk Factor	Controls		HPV-Related (N=76; 21.6% of cases)					Non-HPV Related (N=275; 78.4% of cases)				
	N	%	N	%	Crude	Adjusted		N	%	Crude	Adjusted	
					OR	OR	95% CI			OR	OR	95% CI
Ever Cigarette Use												
No	103	39	1	1.32	1	1	--	15	5.45	1	1	--
Yes	161	61	75	98.7	45	22.6	2.99, 170	260	94.6	11.5	8.56	3.99, 18.4
Current Cigarette Use												
Never smoked	103	39	1	1.32	1	1	--	15	5.49	1	1	--
Ex-smoker	97	36.7	15	19.7	16.4	10.3	1.28, 83.6	65	23.8	4.9	5.2	2.30, 11.8
Current Smoker	64	24.2	60	79	84.2	36.3	4.69, 280	193	70.7	22	12.9	5.83, 28.5
Cigarettes Per Day												
None	103	39	1	1.32	1	1	--	15	5.47	1	1	--
1-19	95	36	24	31.6	25	15.5	1.98, 122	83	30.3	6.26	5.63	2.52, 12.6
20+	66	25	51	67.1	73.7	31.9	4.13, 247	176	64.2	19.4	13.4	6.01, 30.0
Years Smoking Cigarettes												
None	103	39	1	1.35	1	1	--	15	5.58	1	1	--
1-19	55	20.8	3	4.05	5.03	5.38	0.52, 55.4	16	5.95	1.81	2.5	0.95, 6.61
20+	106	40.2	70	94.6	69	30.4	3.99, 232	238	88.5	17.2	12.4	5.67, 27.0
Pack-years												
None	103	39	1	1.35	1	1	--	15	5.58	1	1	--
1-19	94	35.6	15	20.3	15.5	9.61	1.18, 77.9	66	24.5	4.75	4.81	2.14, 10.8
20+	67	25.4	58	78.4	104	44.6	5.71, 349	188	70	22.6	16.5	7.34, 37.1
Ever Beer												
No	38	10.9	6	7.89	1	1	--	32	11.8	1	1	--
Yes	310	89.1	70	92.1	4.28	1.79	0.68, 4.70	240	88.2	3.52	1.84	1.02, 3.32
Ever Wine												
No	110	31.6	16	21.1	1	1	--	94	34.6	1	1	--
Yes	238	68.4	60	78.9	2.88	1.99	0.99, 3.99	178	65.4	1.65	1.06	0.67, 1.66
Ever Liquor												
No	40	11.4	58	17.2	1	1	--	218	21.8	1	1	--
Yes	310	88.6	280	82.8	4.09	2.45	0.96, 6.26	781	78.2	3.67	2.35	1.28, 4.33

OR: odds ratio; CI: confidence interval

<sup>a</sup>All models exclude missing data; Crude models adjust for matching factors and their interactions; Adjusted models include matching factors, their interactions, education, and fruit and vegetable consumption; Cigarette models adjusted for alcohol consumption and use of other tobacco; Alcohol models adjusted for duration of cigarette smoking, use of other tobacco and other types of alcohol

Supplementary Table 6: Odds of SCCHN Related to Tobacco Use and Alcohol Consumption among Whites Within the Carolina Head and Neck Cancer Study (CHANCE), 2002-2006, Stratified by Site With Potential Relationship to HPV Infection

Risk Factor	Controls		HPV-Related (N=262; 26.5% of cases)					Non-HPV Related (N=727; 73.5% of cases)				
	N	%	N	%	Crude OR	Adjusted OR	95% CI	N	%	Crude OR	Adjusted OR	95% CI
Ever Cigarette Use												
No	422	37.9	69	26.3	1	1	--	88	12.1	1	1	--
Yes	691	62.1	193	73.7	1.69	1.03	0.70, 1.50	639	87.9	4.66	2.69	1.99, 3.63
Current Cigarette Use												
Never smoked	422	37.9	69	26.3	1	1	--	88	12.1	1	1	--
Ex-smoker	486	43.7	106	40.5	1.5	1.15	0.76, 1.75	208	28.7	2.11	1.57	1.13, 2.18
Current Smoker	205	18.4	87	33.2	2	0.88	0.56, 1.40	430	59.2	10.5	5.14	3.68, 7.19
Cigarettes Per Day												
None	422	37.9	69	26.4	1	1	--	88	12.2	1	1	--
1-19	243	21.9	37	14.2	0.95	0.8	0.48, 1.33	87	12	1.78	1.43	0.98, 2.10
20+	446	40.1	155	59.4	2.13	1.17	0.77, 1.77	549	75.8	6.61	3.59	2.62, 4.93
Years Smoking Cigarettes												
None	422	38.1	69	26.4	1	1	--	88	12.1	1	1	--
1-19	239	21.6	43	16.5	0.88	0.82	0.51, 1.32	57	7.86	1.09	1.01	0.67, 1.53
20+	448	40.4	149	57.1	2.33	1.21	0.79, 1.85	580	80	6.96	3.89	2.84, 5.32
Pack-years												
None	422	38.1	69	26.5	1	1	--	88	12.2	1	1	--
1-19	279	25.2	42	16.2	0.82	0.73	0.45, 1.18	71	9.82	1.22	1.11	0.75, 1.64
20+	406	36.7	149	57.3	2.51	1.32	0.86, 2.04	564	78	7.65	4.18	3.04, 5.76
Ever Beer												
No	411	36.9	51	19.5	1	1	--	154	21.2	1	1	--
Yes	703	63.1	210	80.5	1.56	1.01	0.64, 1.61	571	78.8	2.37	1.44	1.04, 1.99
Ever Wine												
No	469	42.2	114	43.7	1	1	--	410	56.8	1	1	--
Yes	642	57.8	147	56.3	0.82	0.89	0.62, 1.28	312	43.2	0.54	0.59	0.45, 0.76
Ever Liquor												
No	404	36.3	51	19.5	1	1	--	185	25.5	1	1	--
Yes	709	63.7	211	80.5	1.76	1.55	1.00, 2.41	540	74.5	1.61	1.36	1.00, 1.83

OR: odds ratio; CI: confidence interval

<sup>a</sup>All models exclude missing data; Crude models adjust for matching factors and their interactions; Adjusted models include matching factors, their interactions, education, and fruit and vegetable consumption; Cigarette models adjusted for alcohol consumption and use of other tobacco; Alcohol models adjusted for duration of cigarette smoking, use of other tobacco and other types of alcohol