

## Web Tables

Web Table 1 shows that the increasing trend in the odds ratios (OR) by pack-years adjusted for cigarettes smoked per day (CPD) relative to never-smokers and by CPD adjusted for pack-years relative to the lowest CPD category was greater with leaner body mass index (BMI) for oral cavity/pharyngeal, while ORs by pack-years or by CPD were unrelated to BMI for laryngeal cancer. Figure 1 plots these ORs.

Web Table 2 shows that estimates of the excess odds ratio per pack-year (EOR/pack-year), i.e., the strength of the association between disease and pack-years, decreased in the higher CPD categories, as seen in Figure 2. In addition, the EOR/pack-year estimates for oral cavity/pharyngeal cancer were generally higher in the leaner categories of BMI, while the EOR/pack-year estimates for laryngeal cancer were unrelated to BMI.

Web Table 3 shows that except for light drinkers who were  $<18.5$  BMI, ORs for oral cavity/pharyngeal cancer by drink-years and by DPD were consistently greater with leaner BMI. In contrast, for laryngeal cancer, ORs by drink-years and by DPD were unrelated to BMI. Figure 3 plots these ORs.

Web Table 4 shows that estimates of EOR/drink-year generally increased with increasing DPD, particularly through five DPD, indicating an increased strength of the association of disease and drink-years with increasing DPD, as seen in Figure 4. In addition, the EOR/drink-year estimates for oral cavity/pharyngeal cancer were generally higher in leaner BMI, while the estimates for laryngeal cancer did not vary with BMI.

Web Table 1: Odds ratios<sup>a</sup> for head and neck cancers with 95 percent confidence interval by pack-years of smoking and by cigarettes smoked per day within categories of body mass index (BMI) used in Figure 1. Data from INHANCE consortium of case-control studies of head and neck cancer.

BMI	0 <sup>b</sup>	Pack-years of smoking					Cigarettes smoked per day			
		1-19	20-39	40-49	50-59	60+	<20 <sup>b</sup>	20-29	30-39	40+
<i>Oral cavity/pharyngeal cancer</i>										
<18.5	1.00	6.96 (3.70, 13.09)	6.45 (2.89, 14.38)	7.65 (3.01, 19.40)	21.6 (5.70, 81.90)	8.44 (3.69, 19.27)	1.00	1.53 (0.86, 2.73)	2.60 (0.91, 7.46)	0.74 (0.32, 1.70)
18.5-24.9	1.00	3.64 (3.00, 4.43)	5.87 (4.50, 7.67)	6.58 (4.81, 8.99)	6.82 (4.68, 9.94)	9.18 (6.19, 13.62)	1.00	1.39 (1.12, 1.72)	1.63 (1.13, 2.34)	1.54 (1.04, 2.28)
25.9-29.9	1.00	1.7 (1.33, 2.17)	3.01 (2.18, 4.16)	3.52 (2.45, 5.06)	4.09 (2.54, 6.58)	4.19 (2.75, 6.38)	1.00	0.97 (0.74, 1.27)	1.02 (0.67, 1.54)	1.00 (0.65, 1.55)
30+	1.00	1.42 (0.96, 2.09)	2.32 (1.36, 3.96)	2.15 (1.06, 4.36)	2.54 (1.23, 5.25)	4.25 (2.44, 7.39)	1.00	0.81 (0.53, 1.26)	0.77 (0.41, 1.46)	0.81 (0.45, 1.48)
<i>Laryngeal cancer</i>										
<18.5	1.00	7.25 (1.73, 30.43)	5.76 (1.26, 26.41)	15.80 (2.56, 97.72)	205.40 (12.0, 3,503)	4.93 (0.90, 27.00)	1.00	0.60 (0.21, 1.73)	1.12 (0.20, 6.15)	0.21 (0.04, 1.20)
18.5-24.9	1.00	8.69 (5.56, 13.59)	19.41 (11.84, 31.83)	19.30 (11.19, 33.29)	18.54 (9.73, 35.34)	32.76 (16.63, 64.52)	1.00	1.38 (0.99, 1.91)	1.86 (1.05, 3.31)	2.27 (1.22, 4.23)
25.9-29.9	1.00	6.86 (4.26, 11.02)	11.18 (6.47, 19.31)	14.48 (8.11, 25.86)	33.78 (16.34, 69.84)	15.74 (7.86, 31.50)	1.00	1.77 (1.20, 2.61)	1.26 (0.65, 2.47)	1.45 (0.73, 2.89)
30+	1.00	3.14 (1.30, 7.60)	13.28 (5.68, 31.07)	24.62 (9.77, 62.07)	20.38 (6.52, 63.74)	23.06 (9.13, 58.24)	1.00	2.90 (1.49, 5.68)	2.00 (0.75, 5.33)	3.82 (1.53, 9.51)

<sup>a</sup> Odds ratios adjusted for study/center, age, sex, education, drink-years, drinks per day and body mass index. Data included never smokers and current cigarette-only smokers.

<sup>b</sup> Referent category.

Web Table 2: Estimates of excess odds ratio <sup>a</sup> per pack-year with 95 percent confidence interval within categories of cigarettes smoked per day and body mass index (BMI) used in Figure 2. Data from INHANCE consortium of case-control studies of head and neck cancer.

BMI	Cigarettes smoked per day					
	<10	10-19	20-29	30-39	40-49	50+
<i>Oral cavity and pharyngeal cancer</i>						
<18.5	0.35 (0.11, 1.11)	0.56 (0.23, 1.34)	0.27 (0.13, 0.55)	0.42 (0.14, 1.30)	0.14 (0.05, 0.43)	0.02 (0.00, 0.13)
18.5-24.9	0.26 (0.17, 0.41)	0.17 (0.13, 0.22)	0.16 (0.13, 0.20)	0.17 (0.13, 0.24)	0.14 (0.10, 0.19)	0.09 (0.05, 0.17)
25.0-29.9	0.03 (0.00, 0.20)	0.07 (0.04, 0.10)	0.07 (0.05, 0.10)	0.07 (0.05, 0.11)	0.07 (0.05, 0.11)	0.02 (0.01, 0.04)
30.0+	0.00 <sup>b</sup>	0.04 (0.02, 0.10)	0.05 (0.03, 0.10)	0.05 (0.02, 0.11)	0.05 (0.02, 0.10)	0.02 (0.00, 0.08)
<i>Laryngeal cancer</i>						
<18.5	0.53 (0.07, 3.96)	0.4 (0.09, 1.87)	0.22 (0.05, 1.11)	0.38 (0.05, 2.89)	0.03 (0.00, 0.60)	0.08 (0.00, 3.62)
18.5-24.9	0.70 (0.35, 1.39)	0.54 (0.33, 0.88)	0.67 (0.42, 1.08)	0.82 (0.46, 1.47)	0.79 (0.44, 1.44)	0.67 (0.21, 2.16)
25.0-29.9	0.42 (0.17, 0.99)	0.34 (0.20, 0.58)	0.60 (0.38, 0.98)	0.38 (0.20, 0.75)	0.30 (0.15, 0.60)	0.45 (0.15, 1.37)
30.0+	0.00 <sup>b</sup>	0.19 (0.07, 0.52)	0.75 (0.35, 1.59)	0.44 (0.16, 1.21)	0.68 (0.26, 1.75)	0.47 (0.10, 2.18)

<sup>a</sup> Models adjusted for study/center, age, sex, education, drink-years and drinks per day. Data include never smokers and current cigarette-only smokers.

<sup>b</sup> Denotes zero or not estimable.

WebTable 3: Odds ratios <sup>a</sup> for head and neck cancers with 95 percent confidence interval by drink-years and by drinks per day within categories of body mass index (BMI) used in Figure 3. Data from INHANCE consortium of case-control studies of head and neck cancer.

BMI	0 <sup>b</sup>	Drink-years					<1 <sup>b</sup>	Drinks per day		
		1-49	50-99	100-149	150-199	200+		1-2.9	3.0-4.9	5.0-10.0
<i>Oral cavity/pharyngeal cancer</i>										
<18.5	1.00	0.69 (0.43, 1.11)	1.35 (0.69, 2.65)	3.14 (1.33, 7.46)	8.92 (2.40, 33.09)	5.01 (1.79, 14.03)	1.00	1.41 (0.86, 2.33)	2.63 (1.22, 5.66)	11.55 (4.36, 30.61)
18.5-24.9	1.00	1.18 (0.99, 1.39)	1.92 (1.50, 2.46)	2.12 (1.59, 2.83)	2.71 (1.94, 3.80)	3.26 (2.31, 4.59)	1.00	1.75 (1.47, 2.09)	2.32 (1.80, 2.99)	3.51 (2.60, 4.74)
25.9-29.9	1.00	1.16 (0.95, 1.40)	1.38 (1.06, 1.80)	1.47 (1.07, 2.01)	1.3 (0.89, 1.88)	1.88 (1.31, 2.68)	1.00	1.17 (0.96, 1.42)	1.35 (1.03, 1.77)	2.21 (1.62, 3.02)
30+	1.00	0.88 (0.68, 1.13)	0.90 (0.61, 1.33)	1.21 (0.77, 1.90)	0.63 (0.35, 1.14)	1.32 (0.82, 2.12)	1.00	1.10 (0.83, 1.45)	1.17 (0.79, 1.72)	1.44 (0.95, 2.19)
<i>Laryngeal cancer</i>										
<18.5	1.00	1.15 (0.38, 3.49)	4.18 (1.13, 15.37)	1.34 (0.33, 5.47)	2.17 (0.40, 11.65)	3.26 (0.75, 14.16)	1.00	1.35 (0.51, 3.55)	1.11 (0.35, 3.52)	4.43 (1.24, 15.91)
18.5-24.9	1.00	0.88 (0.64, 1.21)	0.93 (0.61, 1.42)	1.1 (0.69, 1.77)	1.33 (0.77, 2.29)	1.34 (0.78, 2.30)	1.00	1.16 (0.85, 1.59)	1.26 (0.82, 1.93)	1.76 (1.09, 2.83)
25.9-29.9	1.00	1.03 (0.72, 1.47)	0.82 (0.51, 1.33)	1.03 (0.61, 1.74)	1.28 (0.72, 2.27)	1.62 (0.92, 2.86)	1.00	0.94 (0.67, 1.33)	0.90 (0.57, 1.41)	1.97 (1.21, 3.20)
30+	1.00	1.09 (0.64, 1.85)	1.1 (0.55, 2.23)	1.77 (0.80, 3.90)	2.08 (0.91, 4.77)	2.27 (1.10, 4.69)	1.00	1.10 (0.66, 1.83)	1.58 (0.85, 2.94)	2.42 (1.32, 4.43)

<sup>a</sup> Odds ratios adjusted for study/center, age, sex, education, pack-years, cigarettes smoked per day and use of other tobacco products. Data include never drinkers and subjects consuming 10 drinks per day or less.

<sup>b</sup> Referent category.

Web Table 4: Estimates of the excess odds ratio per drink-year with 95 percent confidence interval within categories of drinks per day by categories of body mass index (BMI) used in Figure 4. Data from INHANCE consortium of case-control studies of head and neck cancer.

BMI	Drinks per day						
	<0.5	0.5-0.9	1.0-1.9	2.0-2.9	3.0-4.9	5.0-6.9	7.0-10.0
<i>Oral cavity and pharyngeal cancer</i>							
<18.5	0.000 <sup>b</sup>	0.000 <sup>b</sup>	0.007 (0.00, 0.16)	0.017 (0.01, 0.05)	0.021 (0.01, 0.06)	0.148 (0.04, 0.61)	0.122 (0.02, 0.64)
18.5-24.9	0.003 (0.00, 4.83)	0.020 (0.01, 0.04)	0.029 (0.02, 0.05)	0.022 (0.02, 0.03)	0.023 (0.02, 0.03)	0.019 (0.01, 0.03)	0.033 (0.02, 0.04)
25.0-29.9	0.006 (0.00, 0.32)	0.014 (0.01, 0.03)	0.012 (0.01, 0.03)	0.009 (0.00, 0.01)	0.010 (0.01, 0.02)	0.016 (0.01, 0.02)	0.016 (0.01, 0.02)
30.0+	0.000 <sup>b</sup>	0.004 (0.00, 0.14)	0.006 (0.00, 0.05)	0.007 (0.00, 0.02)	0.005 (0.00, 0.01)	0.009 (0.00, 0.02)	0.006 (0.00, 0.01)
<i>Laryngeal cancer</i>							
<18.5	0.000 <sup>b</sup>	0.000 <sup>b</sup>	0.000 <sup>b</sup>	0.013 (0.00, 0.11)	0.001 (0.00, 4.93)	0.016 (0.00, 0.17)	0.058 (0.01, 0.43)
18.5-24.9	0.000 <sup>b</sup>	0.000 <sup>b</sup>	0.010 (0.00, 0.04)	0.001 (0.00, 0.07)	0.004 (0.00, 0.01)	0.003 (0.00, 0.01)	0.009 (0.01, 0.01)
25.0-29.9	0.011 (0.00, 0.44)	0.001 (0.00, 56.12)	0.002 (0.00, 0.28)	0.001 (0.00, 0.19)	0.002 (0.00, 0.01)	0.008 (0.00, 0.01)	0.008 (0.00, 0.01)
30.0+	0.021 (0.00, 0.46)	0.000 <sup>b</sup>	0.000 <sup>b</sup>	0.004 (0.00, 0.05)	0.006 (0.00, 0.02)	0.014 (0.01, 0.03)	0.010 (0.00, 0.02)

<sup>a</sup> Models adjusted for study/center, age, sex, education, pack-years, cigarettes smoked per day and use of other tobacco products. Data include never drinkers and subjects consuming 10 drinks per day or less.

<sup>b</sup> Denotes zero or not estimable.