Table 2.17 Case-control studies	on cancer of the larynx an	d coffee drinking (web only)

Reference, location enrolment/follow-up period, study design	Population size, description, exposure assessment method	Organ site	Exposure category or level	Exposed cases/deaths	Risk estimate (95% CI)	Covariates controlled	Comments
Restrepo et al. (1989) Medellin, Columbia	Cases: 137; cases identified from the	Larynx: incidence	Coffee (daily consu	imption)		Age, sex, smoking, alcohol consumption,	* Strong evidence of an exposure-response was seen in analyses that did not control for smoking and alcohol. Strengths: heavy consumption of coffee. Limitations: possible incomplete control for smoking since did not include duration of smoking or smoking status. Alcohol data lacking for 11.3% of cases and 12.7% of controls. A matched analysis was not performed and they did not control for all the matching variables
1978–1980 Case-control	Social Security Cancer Registry, 2 general hospitals and several private		0	0	1	socioeconomic level	
	physicians Controls:		1–3	0	0.93		
	249; controls matched to cases on sex, age (within 2 years), and SES.		4–6	0	1		
	One control selected from same hospital or clinic as the case from		>=7	0	2.87		
	patients with conditions unrelated to smoking and no history of cancer, CVD, chronic respiratory diseases, gastric ulcer or duodenal ulcers. A 2nd control group was chosen from the same neighbourhood or workplace. Exposure assessment method: Questionnaire; Personal interviews by a trained nurse		Trend-test p-value:	0.01			
La Vecchia et al. (1990)	Cases: 110; male incident cases under the	Larynx: incidence	Coffee cups per we	ek		Age	Strengths: complete information on smoking
Greater Milan, Italy January 1987 to April 1989 Case-control	age of 75 yr who had been admitted for histologically confirmed laryngeal cancer to the National Cancer Institute and the Ospedale Maggiore of Milan Controls:	incidence	Low	33	1		Limitation on smoking Limitations: multivariable models controlling for smoking and alcohol were not presented
			Intermediate	33	1.4		
		r	High	44	1.4		
	843; men below age 75, admitted to the same network of hospitals for acute conditions other than neoplastic, respiratory, or diseases		Trend-test p-value:	0.65			

related to alcohol or tobacco

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 Table 2.17 Case-control studies on cancer of the larynx and coffee drinking (web only)

Reference, location enrolment/follow-up period, study design	Population size, description, exposure assessment method	Organ site	Exposure category or level	Exposed cases/deaths	Risk estimate (95% CI)	Covariates controlled	Comments
	consumption. Exposure assessment method: questionnaire; trained interviews using a structured questionnaire						
Pintos et al. (1994)	Cases:	Larynx:	Cups per day			Age, sex, admission	Strengths: adjusted for
Southern Brazil 1987 to 1989	378; newly diagnosed cases referred to the only regional specialized	incidence	Never	41	1	period, tobacco, alcohol consumption, 10 dietary	alcohol and tobacco use Limitations: controls
Case-control	Case-control cancer centre Controls:		< = 1	17	1.3 (0.5–3.3)	variables	were other cancers some of which might be
756; randomly selected patients from the same hospital or another		2	19	4.29 (1.4–12.9)		associated with coffee use	
	nearby hospital. Matched to cases on sex, 5-year age group and		> = 3	20	2.87 (1-1.83)		
	trimester of hospital admission Exposure assessment method: questionnaire; standardized interviews by trained nurses		Trend-test p-value:	0.009			
Bosetti et al. (2002)	Cases:	Larynx:	Average weekly int	ake		Sex age centre	Strengths: large data set.
1992 to 2002carcinoma recruited from maCase-controlteaching and general hospita	confirmed cases of squamous cell	squamous cell carcinoma	0–7.4	NR	1	education tobacco smoking alcohol drinking non-alcohol energy intake	Tightly controlled for tobacco and alcohol consumption. Reportably high participation rate although data not shown.
	carcinoma recruited from major teaching and general hospitals in the areas. Age range 30–79, 478 men and 49 women. Controls:		7.5–14.4	NR	0.76 (0.52–1.11)		
			14.5–20.4	NR	0.81 (0.52–1.31)		
			20.5–26.9	NR	0.92 (0.63–1.34)		

Table 2.17 Case–control studies on	cancer of the larvnx and	l coffee drinking (web only)

Reference, location enrolment/follow-up period, study design	Population size, description, exposure assessment method	Organ site	Exposure category or level	Exposed cases/deaths	Risk estimate (95% CI)	Covariates controlled	Comments
	1297; frequency-matched with cases by 5-year age groups, sex and area of residence, selected among patients admitted to the same hospitals as cases for a wide spectrum of acute, non neoplastic conditions, not related to smoking, alcohol consumption and long-term modification of diet Exposure assessment method: questionnaire; study subjects were interviewed regarding their diet 2 years before cancer diagnosis or hospital admission using a structured questionnaire that included 78 food items and beverages		Trend-test p-value:	0.68			Limitations: small number of female cases. Possible recall bias
Zvrko et al. (2008) Montenegro January 2001 to June 2003 Case-control	Cases: 108; histologically confirmed cases treated at a Otorhinolaryngology and Maxillofacial Surgery in the Clinical Center of Montenegro Controls: 108; patients admitted to different Center clinics for a wide spectrum of acute, non-malignant conditions, unrelated to smoking and alcohol consumption. Exposure assessment method: questionnaire; interviewed using a structured questionnaire by one doctor	Larynx	More than 5 drinks/ Drinking more than 5 cups/day	/day 0	4.52 (1.01–20.12)	Hard liquor consumption (yes/no), drinking more than 2 alcoholic drinks/day, smoking for more than 40 years, smoking more than 30 cigarettes/day, soft drink consumption	Strengths: high response rate for cases and controls. Limitations: Small sample size. Smoking variables used were very crude (Smoking more than 40 years and smoking more than 30 cigarettes per day). Alcohol variables used were also crude. Thus this study has a high potential for residual confounding from smoking and alcohol

Table 2.17 Case-control studies on cancel	of the larynx and	d coffee drinking	(web only)

Reference, location enrolment/follow-up period, study design	Population size, description, exposure assessment method	Organ site	Exposure category or level	Exposed cases/deaths	Risk estimate (95% CI)	Covariates controlled	Comments
Galeone et al. (2010) Italy, France, Switzerland, USA,	Cases: 1224; pooled analysis of incident cases of laryngeal cancer from 7	Larynx: incidence	Non-drinkers of caffeinated coffee	144	1	Age, sex, race/ethnicity, education, study, cigarette smoking	Strengths: large sample size. Presentation of results for caffeinated
Puerto Ricostudies1984 to 2004 (varied by study)Controls:Case-control7239; patients in hospital for acute, non neoplastic diseases, not related to tobacco smoking and alcohol drinking in 7 studies or population controls in rest.	Controls: 7239; patients in hospital for acute,		Drank caffeinated coffee/day	1034	1.04 (0.8–1.36)	(pack-years), duration of cigar smoking, duration of pipe	and decaffeinated coffee. Limitations: quality of
		> 0 to < 3 Caffeinated cups/day	568	1.08 (1.12–0.96)	smoking, alcohol intake, weight, vegetable and fruit intake	coffee data varied by study. Two studies only had an open ended question	
	Exposure assessment method: questionnaire; face to face questionnaires		3 to 4 caffeinated cups/day	335	1.12 (0.81–1.55)		
			> 4 caffeinated cups/day	131	0.96 (0.64–1.45)		
			For an increment of one cup/day	1224	0.99		
			Non drinkers Decaffeinated coffee	945	1		
			Drank Decaffeinated coffee	78	0.96 (0.41–2.22)		
			> 0 to < 1 Decaffeinated cups/day	40	1.6 (0.37–6.85)		
			> = 1 Decaffeinated cups/day	47	0.84 (0.34–2.06)		

Table 2.17 Case-control studies on cancer	of the larvnx and	l coffee drinking	(web only)

Reference, location enrolment/follow-up period, study design	Population size, description, exposure assessment method	Organ site	Exposure category or level	Exposed cases/deaths	Risk estimate (95% CI)	Covariates controlled	Comments
Vassileiou et al. (2012) Greece Not reported Case-control	Cases: 70; incident histologically confirmed cases of squamous cell laryngeal cancer identified from two ENT departments. Controls: 70; selected from "same-period" from in-patients having non- neoplastic conditions not related to diet smoking or alcohol consumption matched to cases by sex and age. Exposure assessment method: questionnaire; interviewed by first author using a structured questionnaire	Larynx	Cups per day Greek/Turkish Coffee Consumption	NR	1.78 (1.24–2.55)	Alcohol (yes/no), Smoking (yes/no), Exposure to toxic agents (yes/no)	It is not very clear what variables were controlled for in this study. Strengths: analysis stratified by type of coffee consumption Limitations: small sample size, potential observer bias since interviews done by investigator who know their case/control status. Smoking and alcohol consumption were only crudely controlled for (yes/no) and there is a strong possibility of residual confounding by these factors

CI, confidence interval; NR, not reported

6 **References**

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