

**Table 2.16. Case-control study of benzene and lung cancer**

Reference, study location and period	Characteristics of cases	Characteristics of controls	Exposure assessment	Organ site (ICD code)	Exposure categories	No. of exposed cases	Odds ratio (95% CI)*	Adjustment for potential confounders	Comments
Gérin <i>et al.</i> , (1998) Canada	Between 1979 and 1986, 4,576 eligible men cases of 19 cancer sites (857 LC) ascertained from all the large hospitals in Montreal 3,730 (82%) agreed to participate; 82% of responses were obtained from the subject and the rest from a next-of-kin.	Men selected from electoral lists of the Montreal area, age-stratified to the age distribution of cancer patients. Of 740 selected, 533 (71%) were interviewed. For each case series, a pooled control group was formed by the addition of an additional 533 cancer controls selected randomly from eligible cancer cases to the 533 population controls.	Interviewers obtain a detailed description of each job the subject had in his working lifetime; chemists noted their confidence that the exposure occurred (possible, probable, definite), the frequency of exposure (less than 5% of the time, 5–30%, more than 30%), and the concentration of the agent in the environment (low, medium, high). These were then combined into exposure categories.	LC 162	Benzene			1.0	Age, family income, ethnic group, cigarette smoking, and respondent status.
					All LC		683		
					Unexposed		127	1.1 (0.8-1.5)	
					Low		34	0.8 (0.5-1.3)	
					Medium		13	0.7 (0.3-1.7)	
					High				
					Oat cell LC				
					Unexposed		130	1.0	
					Low		24	1.1 (0.6-1.9)	
					Medium/high		5	0.3 (0.1-0.9)	
					Squamous cell LC				
					Unexposed		272	1.0	
					Low		61	1.3 (0.9-1.9)	
Medium/high		26	1.2 (0.7-2.1)						
Adenocarcinoma LC									
Unexposed		133	1.0						
Low		23	1.1 (0.6-1.8)						
Medium/high		11	0.9 (0.4-1.9)						