

Table 13. Case-Control Studies*

Citation	Study Location	Study Period	Study Sample	Pollutants	Health Outcomes	Summary of Published Findings
Chen Z, Chen C, Dong S, et al. 1995. Epidemiological studies on risk for adverse pregnancy outcomes in women neighboring a petrochemical works [in Chinese]. <i>Zhonghua Yu Fang Yi Xue Za Zhi</i> [Chinese Journal of Preventive Medicine] 29:209–212.	China Guangzhou	1985– 1992	7695 newborns (325 with adverse outcomes, 390 controls)	Petrochemical air pollution	Congenital malformation, stillbirth, low birth weight, preterm birth	Adverse pregnancy outcomes were significantly higher among women living near a petrochemical plant.
Chiu HF, Cheng MH, Tsai SS, et al. 2006. Outdoor air pollution and female lung cancer in Taiwan. <i>Inhal Toxicol</i> 18:1025–1031.	Taipei, China	1994– 2003	972 women with lung cancer (50–69 yr), 972 matched controls	Aggregate index for long-term air pollution (based on PM ₁₀ , SO ₂ , NO ₂ , CO, and O ₃)	Mortality (lung cancer)	Women living in municipalities with the highest air pollution exposure index were at increased risk for lung cancer compared with women living in municipalities with the lowest exposure index (adjusted OR, 1.28; 95% CI, 1.02–1.61).
Gupta D, Boffetta P, Gaborieau V, et al. 2001. Risk factors of lung cancer in Chandigarh, India. <i>Indian J Med Res</i> 113:142–150.	India Chandigarh	1995– 1997	235 cases, 525 controls matched by sex and age	Urban air pollution, indoor pollution, tobacco smoking, occupational exposure	Lung cancer	Questionnaire data on smoking and daily pollution concentrations indicated that exposure to urban air pollution did not increase the risk of developing lung cancer.
Ko YC, Lee CH, Chen MJ, et al. 1997. Risk factors for primary lung cancer among non-smoking women in Taiwan. <i>Int J Epidemiol</i> 26:24–31.	Taipei, China Kaohsiung	1992– 1993	117 women with lung cancer, 117 matched controls	Industrial air pollution, cooking fumes	Morbidity (lung cancer)	For nonsmoking women who cooked from age 20 to 40, the risk of lung cancer was associated with certain cooking practices, especially preparing meals in kitchens not equipped with a fume extractor.
Lin MC, Chiu HF, Yu HS, et al. 2001. Increased risk of preterm delivery in areas with air pollution from a petroleum refinery plant in Taiwan. <i>J Toxicol Environ Health A</i> 64:637–644.	Taipei, China Kaohsiung	1993– 1996	498,755 first-parity singleton live births	Petrochemical air pollution	Preterm delivery	Compared with controls, preterm births occurred significantly more frequently among mothers living in a petroleum-refinery area.

* Last updated September 2007. — = not provided.

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Pisani P, Srivatanakul P, Randerson-Moor J, et al. 2006. GSTM1 and CYP1A1 polymorphisms, tobacco, air pollution, and lung cancer: A study in rural Thailand. <i>Cancer Epidemiol Biomarkers Prev</i> 15:667–674.	Thailand Lampang province	1993–1995	211 lung cancer cases, 202 controls (set 1), 211 controls (set 2)	Power-plant emissions	Lung cancer	No significant association was found between cumulative air pollution indices and lung cancer, even in nonsmoking subjects.
Sung JH, Cho SH, Kang DH, 1997. Lung cancer, chronic obstructive pulmonary disease and air pollution. <i>Korean J Prev Med</i> 30:585–598.	South Korea	1991–1993	424 lung cancer cases, 89 COPD cases, 34,762 controls	TSP, SO _x , NO _x , CO, O ₃	Lung cancer, COPD	Lung cancer risk was strongly and significantly associated with increased O ₃ and CO concentrations. Weaker, inconsistent associations were found with SO ₂ and TSP. All pollutants failed to show significant associations with COPD.
Xu ZY, Blot WJ, Xiao HP, et al. 1989. Smoking, air pollution, and the high rates of lung cancer in Shenyang, China. <i>J Natl Cancer Inst</i> 81:1800–1806.	China Shenyang	1985–1987	1349 patients, 1345 controls	Industrial air pollution	Lung cancer	After adjustment for smoking (the principal cause of lung cancer in this cohort), lung cancer risk was significantly associated with several measures of exposure to air pollutants.
Xu ZY, Brown L, Pan GW, et al. 1996. Lifestyle, environmental pollution and lung cancer in cities of Liaoning in north-eastern China. <i>Lung Cancer</i> 14(Suppl 1): S149–S160.	China Shenyang	1985–1988	1249 lung cancer patients, 1345 controls	Industrial air pollution	Mortality from lung cancer	The risk of death from lung cancer was increased for all occupations in which there was exposure to dusts. The highest risk was seen among coke-oven workers and fire-resistant-brick makers. Significant dose-response patterns were observed between cumulative total dust and cumulative total BaP and lung cancer.
Yang CY, Cheng MF, Chiu JF, et al. 1999. Female lung cancer and petrochemical air pollution in Taiwan. <i>Arch Environ Health</i> 54:180–185.	Taipei, China	1990–1994	399 women with lung cancer, 399 controls (matched for sex, year of birth, year of death)	Petrochemical air pollution	Mortality (lung cancer)	Women living in areas with high concentrations of petrochemical air pollution had a significantly higher risk of developing lung cancer than a group living in an area with low concentrations of such pollution.

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