

Table 2.6. Case-control studies of benzene and chronic myeloid leukemia

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
Bjork <i>et al.</i> , (2001), Sweden	255 adult patients with Philadelphia chromosome positive CML cytogenetically analysed 1976-93	3 population controls per case matched on sex, age and county by the Swedish bureau of statistics at the calendar year the case was diagnosed.	Telephone interviews of subject or proxy for lifelong occupational history with occupational hygienists assessment of exposures.	CML 205.1	Benzene Unexposed Exposed	190 24	1.2 (0.7-2.3)		Proxy (next of kin) interviews conducted for 81% of cases and 14% controls.

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Blair <i>et al.</i> , (2001), USA	All cases of leukemia in the cancer registry of Iowa between March 1981 and October 1983, and from a surveillance network of hospitals in Minnesota from October 1980 to September 1992. 578 of 669 men cases age 30 or more participated.	Population-based controls frequency-matched to cases by 5-year age group, vital status at the time of the interview, and state of residence. 474 controls for cases less than 65 years of age were selected by random digit dialing 519 controls for cases 65 years or older were selected from listings provided by the Health Care Financing Administration, and 550 controls for deceased cases were selected from state death certificate files. Response rates 77-79%	Personal interviews of 340 cases and 278 surrogates of cases and 1245 controls. Detailed occupational history, with job exposure matrix for specific exposures.	CML 205.1	Benzene Low High	11 0	0.9 (0.4-1.8) -		Referent for OR not specified.

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Adegoke <i>et al</i> , (2003) PR China	532 residents of Shanghai age 15 years or older reported with leukemia to the Shanghai cancer registry June 1987-August 1989. 486 (91%) interviewed (79 CML cases)	502 controls randomly selected from the General Population registry with the expected age and sex distribution of the cases. Response rate 94%.	Standardized personal interviews including occupational history and self-reported exposure to benzene.	CML 205.1	Benzene exposure Never Ever <15 years ≥15 years Trend	65 14 7 7	1.0 2.5 (1.3-4.9) 1.7 (0.7-4.0) 5.0 (1.8-13.9) P<0.01	Age, sex and income	