Background and aims: There are few identified risk factors for prostate cancer, and little is known about occupational risk factors for this disease.
Methods: We undertook a population based case-control study in Western Australia. Subjects were 606 males with a diagnosis of prostate cancer and 471 male controls randomly selected from the electoral roll. Occupational histories were collected from all subjects, and further information on selected jobs was obtained from a computer-assisted telephone interview. An expert reviewed all data to assess exposure to pesticides, fertilizers, metals, wood dust, oils, diesel exhaust and polyaromatic hydrocarbons. Multivariate logistic regression was used to compare occupations and exposures between cases and controls.
Results: With regard to occupations, miners were found to be at significantly decreased risk of developing prostate cancer. No statistically significant relationships were found between the occupations of fire fighter, farmer, railway worker and electrical power worker, and risk of prostate cancer. An increased prostate cancer risk was observed in men reporting they had been deployed with the military in Vietnam although this was not statistically significant (OR = 2.16; 95% CI = 0.91-5.14). With regard to specifc chemicals, non-significant excess risks were observed for prostate cancer following exposure to oils other than mineral oil (OR= 1.54, 95% CI: 0.95, 2.51) and for exposure to toxic metals at a non-substantial level (OR= 1.25, 95% CI: 0.96, 1.61). A non-statistically significant protective effect for prostate cancer was seen for exposure to organophosphate pesticides (OR= 0. 69, 95% CI: 0.43, 1.12). No dose-response relationships were seen.
Discussion and conclusions: The results of this study suggest that occupational factors are not major contributors to the risk of prostate cancer. The protective effect of mining has been seen in previous studies but it is difficult to imagine a causal mechanism.

Mo-P-6 OCCUPATIONAL EXPOSURE TO POLYCHLORINATED BIPHENYLS AND RISK OF BREAST CANCER

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Background and aims: Despite the endocrine system activity exhibited by polychlorinated biphenyls (PCBs), recent studies have shown little association between PCB exposure and breast cancer mortality. To evaluate the relation between PCB exposure and breast cancer incidence, a more sensitive endpoint than mortality, we studied women exposed to PCBs while employed in capacitor manufacturing facilities.
Methods: We followed 5,754 women employed at least a year in three facilities in the United States, identifying cases via questionnaire, cancer registries, and death certificates through 1998. We collected lifestyle and reproductive information via questionnaire from participants or next of kin and used semi-quantitative job exposure matrices (JEMs) for inhalation and dermal exposures combined. We generated standardized incidence ratios (SIRs) and standardized rate ratios (SRRs) and used Cox proportional hazards regression models to evaluate potential confounders and effect modifiers.
Results: Overall, the breast cancer SIR was 0.81 (95% CI 0.72, 0.92, n=257) and regression modeling showed little effect of duration or cumulative exposure. However, for the 362 women of questionnaire-identified races other than white, we observed positive, significant responses for duration and cumulative exposure; only smoking, birth cohort, and self or proxy questionnaire completion had significant explanatory power when added to models with exposure metrics.
Discussion and conclusions: Overall, we found no elevation in breast cancer risk following occupational exposure to PCBs, but observed significant exposure-related risk elevations among non-white workers. The small number of cases (twelve) limits interpretation, but the finding warrants additional investigation, as the usual reproductive risk factors accounted for little of the increased risk.

Mo-P-7 OCCUPATION AND RISK OF RENAL CELL CANCER IN CENTRAL AND EASTERN EUROPE

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Background and aims: Central and Eastern Europe is a region with a high incidence of renal cell cancer. Few studies have been conducted in these areas on the possible role of occupational exposures in this cancer.
Methods: From 1999-2003, we conducted a hospital-based case-control study in seven areas of the Czech Republic, Poland, Romania and Russia. A detailed occupational history was collected from cases and controls, together with information on potential confounders (tobacco smoking, body mass index, and hypertension). Odds ratios (OR) of renal cell cancer were calculated by comparing ever- vs. never-employment in selected jobs and industries, with follow-up analyses examining duration of employment.