1959 and 1978 at two boatbuilding plants. The a priori hypothesis: leukaemia and lymphoma excesses would be found.

**Method** Standardised mortality ratios (SMR), standardised rate ratios (SRR), and 95% confidence intervals (CI) were calculated using Washington State rates and a person-years analysis program, LTAS. NET, controlling for age, calendar period, race, and gender. The SRR analysis compared tertiles of estimated cumulative styrene exposure.

**Results** Overall, 484 cancer deaths occurred (SMR 1.20, CI 1.10–1.31), with excess mortality for respiratory cancers (n = 171, SMR 1.33, CI 1.14–1.55) and prostate cancer (n = 41, SMR 1.44, CI 1.03–1.96). Among 2063 workers highly exposed to styrene and fibreglass there were excesses of mesothelioma (n = 3, SMR 5.28, CI 1.09–15.4) and ovarian cancer (n = 6, SMR 2.94, CI 1.08–6.41). The SRR analysis did not find strong associations between tertiles of styrene exposure and cancer mortality.

**Conclusions** We found no excess leukaemia or lymphoma mortality. Unanticipated excess mesothelioma and ovarian cancer mortality are difficult to interpret and could be due to fibreglass exposure or employment elsewhere, or could be chance findings.

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**00118** LIFETIME OCCUPATIONAL EXPOSURE TO DIESEL EXHAUST AND BLADDER CANCER AMONG MEN IN NEW ENGLAND

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**Objectives** We examined the association between lifetime occupational diesel engine exhaust (DEE) exposure and risk of bladder cancer in 1171 cases and 1418 controls in a population-based case-control study.

**Method** Lifetime occupational histories combined with additional exposure-oriented questionnaires were administered to obtain detailed information on DEE. We estimated the probability, frequency and intensity of exposure to respirable elemental carbon (REC) (µg/m³), a primary surrogate for DEE. Unconditional logistic regression was used to calculate odds ratios (ORs) and 95% confidence intervals (CIs), adjusting for smoking and other risk factors.

**Results** DEE was associated with an increased risk of bladder cancer, with the highest level of cumulative REC (≥252.8 µg/m³ per year) having a 35% elevated risk (95% CI = 0.86–2.13) compared to those with no exposure. Among nonsmokers, we observed a significant trend in risk with increasing cumulative REC (p-trend = 0.03), with heavily exposed subjects having an OR = 2.80 (95% CI = 1.08–7.22). Time-period analyses by decade of first DEE-exposed job showed a statistically significant increased risk among men first exposed in the 1950s (heavily exposed: OR = 2.73, 95% CI = 1.29–5.79, p-trend = 0.009).

**Conclusions** The overall risk observed is modest, but similar in magnitude to those observed at comparable levels of exposure in previous studies of bladder and lung cancer. Greater risk for those first exposed in the 1950s may reflect secular trends in risk or a long latency for bladder cancer. Our results provide additional evidence that DEE is related to an increased bladder cancer risk.

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**00121** HOME CARE WORKER ERGONOMIC HAZARDS

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**Objectives** Home care workers (HCW) are at high risk of musculoskeletal disorders related to consumer care and housekeeping tasks and need of ergonomic interventions (Arlinghaus, et al., 2013; Baron and Habes, 2004; Hodsonet al., 2010). The goal of this project is to explore HCW experiences and perceptions to document potentially hazardous tasks to inform intervention and policy.

**Method** In 2012 researchers partnered with a labour union (SEIU) representing HCWs to recruit those with at least 3 years of experience with consumers needing moving assistance. Forty-six mostly African Americans participated in four focus groups and a validation session. Participants were asked to review a