Cancer 1

**CANCER INCIDENCE AMONG SWEDISH CHIMNEY SWEEPS: LONG-TERM FOLLOW UP OF AN EXTENDED COHORT**

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Objective and methods Male Swedish chimney sweeps who were members of the national trade union 1981–2006 were identified (n=1082) and added to a previously reported cohort of those employed 1918–1980 (n=5286). The total cohort was linked to nationwide registers of Cancer, Causes of Deaths and Total Population followed from 1958 through 2006. Standardised cancer incidence ratios (SIR) were estimated using the Swedish male population as reference. The number of years as an active chimney sweep was used as an indicator of exposure. Smoking and alcohol habits from a survey of more than 1000 chimney sweeps active in 1972 were compared to the national average.

**Results** The total number of cancers had more than doubled since the earlier follow up, 813 primary cancers were observed versus 626 expected (SIR 130; 95%CI 121 to 139).

The following sites showed significantly increased SIRs: oesophagus (16 cases; SIR 208), colon (55 cases; SIR 136), liver (18 cases; SIR 248), lung (119 cases; SIR 214, including adenocarcinoma 24 cases, SIR 188 and squamous cell carcinoma 36 cases; SIR 200), pleura (nine cases, SIR 350), bladder (70 cases; SIR 180), and all haematopoietic cancer (75 cases; SIR 129). The SIR of bladder cancer increased with duration of employment. The smoking related cancer types remained significantly increased after smoking adjustment based on group-level data.

**Conclusions** This follow-up continued to demonstrate massive cancer excesses. New sites with significant excesses were colon, liver, lung adenocarcinoma and pleura. Soot and asbestos exposure as well as lifestyle factors are the likely causes.