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AN UPDATED INVESTIGATION OF CANCER INCIDENCE AND MORTALITY AT A SCOTTISH SEMICONDUCTOR MANUFACTURING FACILITY

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Objectives To describe an update of the cancer incidence and mortality of workers at a Scottish semiconductor manufacturing facility to assess potential workplace cancer risks.

Methods Company records had been used to identify a cohort of 4388 workers employed at the facility between 1970 and 1999. Subjects were flagged against National Health Service records for notification of cancer registrations and deaths. Standardised mortality (to end 2007) and cancer registration (to end 2006) ratios (SMRs and SRRs) were calculated for cancer site groups of a priori interest, comparing with Scottish rates adjusted for local deprivation status.

Results There was a substantial deficit of mortality overall, particularly among men, compatible, at least in part, with a healthy work effect: SMR% (males) 45, 95% CI 34 to 57; SMR% (females) 73, 95% CI 58 to 90. Total cancer registrations were consistent with expectation for men (SRR% 90, 95% CI 69 to 116) and women (SRR% 102, 95% CI 85 to 122). SRRs for four cancer sites highlighted in an earlier analysis (lung, stomach and breast cancer in women; and brain cancer in men) were not statistically significantly elevated overall; neither were those for any other cancer site group. Analyses of cohort subgroups (including a group more likely to have worked in areas using carcinogens) by time since first employment, and analyses by duration of employment did not reveal any associations suggestive of a workplace effect on cancer rates.

Conclusions This analysis does not support earlier concerns about a possible link between working at the facility and increased risks of cancer.