P77 JOB DURATION AS A SURROGATE MEASURE OF EXPOSURE TO SHIFTWORK IN RELATION TO MORTALITY

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Objectives Human evidence of carcinogenicity concerning shiftwork is inconsistent. In a previous study, we found no effect on mortality in relation to ever / never working

nightshift. The present analyses examined the dose-response-relationship between mortality outcomes and job duration as a surrogate of cumulative exposure.

Methods The cohort consisted of male production workers (14 037 shift and 17 095 day), employed for at least 1 year between 1995 and 2006. Vital status was followed from 2000 to 2009. Cause-specific mortality was obtained from death certificates. While lifetime job history was not available, job duration in the company was derived from personal data, which was then categorised at the quartiles. Cox proportional hazard model was used to adjust for potential confounders. The effect estimates were calculated as hazard ratio (HR) with 95% CI.

Results Comparing to never shiftwork, the lower quartile of shift exposure (<18 yrs) was not associated with all-cause mortality after adjustment for age at entry in the study, job level and smoking (HR=1.05, 95% CI 0.81-1.37). In the upper three quartiles (18–23; 24–29; ≥30 years) we found non-significantly lowered hazard ratios with no significant trend (P=0.24). Similar patterns were found regarding cancer (P=0.40) and non-cancer mortality (P=0.24).

Conclusions The present analyses did not suggest a positive dose-response-relationship between shift duration and the risk of cancer or non-cancer mortality. Potential sources of bias will be discussed.