

## MS NOCCA – Nordic Occupational Cancer Collaboration

### 57 OCCUPATIONAL VARIATION IN CANCER INCIDENCE: A 45 YEAR FOLLOW-UP OF FIVE WHOLE-POPULATION COHORTS IN THE NORDIC COUNTRIES

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**Objectives** The Nordic Occupational Cancer (NOCCA, <http://astra.cancer.fi/NOCCA>) study covers all 15 million working-aged persons who participated in population censuses between 1960 and 1990 in Denmark, Finland, Iceland, Norway and Sweden, and the subsequent 2.8 million incident cancer cases diagnosed in these people in a follow-up until 2005.

**Methods** The observed number of cancer cases in 70 diagnostic categories in each occupation was compared with the expected number calculated from the respective incidence rates for the national population. The result was presented as a standardised incidence ratio, SIR, defined as the observed number of cases divided by the expected number.

**Results** For all cancers combined, there was a wide variation among men from an SIR of 0.79 (95% CI 0.66 to 0.95)

in domestic assistants to 1.48 (1.43 to 1.54) in waiters. The occupations with the highest SIRs also included workers producing beverage and tobacco, seamen and chimney sweeps (E1). Among women, the SIRs varied from 0.58 (0.37 to 0.87) in seafarers to 1.27 (1.19 to 1.35) in tobacco workers. Low SIRs were found for farmers, gardeners and forestry workers in both genders. The variation in relative risk across occupational categories varied considerably between cancer types. For mesothelioma, there was a 20-fold variation in risk among plumbers as compared to farmers, while the variation between the lowest and highest occupation-specific incidence of cancers of colon or brain was not even twofold.

**Conclusions** The present study shows that the risk of cancer is highly dependent on the person's occupation, reflecting the position in the society.