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NON-DAYTIME WORK AND RISK OF CANCERS OF THE BREAST, PROSTATE, COLO-RECTUM, ENDOMETRIUM, AND SKIN, AND NON-HODGKIN LYMPHOMA IN THE NORDIC COUNTRIES – THE NOCCA STUDYJohnni Hansen *Danish Cancer Society, Copenhagen, Denmark*

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Objectives During the last decade, growing evidence has been provided that non-day time work (“shiftwork”) may increase the risk of female breast cancer. It has also been suggested that shiftwork may increase the risk of other cancers, for example, male breast, prostate, colo-rectal, skin, and corpus uteri and non-Hodgkin lymphoma. Only very few studies, however, have been published regarding these cancers. Since shiftwork affects 10–20% of the workforce, and since potentially affected cancers are frequent, it is important to further investigate the carcinogenic potential of this increasingly widespread exposure.

Methods Based on census data from Denmark, Finland, Iceland, Norway, and Sweden, a cohort of all 15 million persons aged 30–64 years, was established, including information on job title; follow-up for cancer morbidity was from census until 2005. A Job Exposure Matrix (JEM) on shiftwork was applied to the cohort. Standardised incidence ratios (SIR) based on 5-year age group and calendar periods were calculated.

Results Potential shiftwork exposure and SIRs for cancer of the breast (N-male=2336; N-female=373 361), prostate (N=339 973), colon (N-male=108 456; N-female=122 312), rectum (N-male=74 654; N-female: 59 585), corpus uteri (N=87 617), skinmelanoma(N-male=41 258;N-female=42 640), non-melanoma skin (N-male=50 290; N-female=37 329), and non-Hodgkin lymphoma (N-male=41 661; N-female=37 759), will be presented.

Conclusions Major benefits in the present study include absence of recall and selection bias, large numbers of cases and long-term follow-up, which may at least partly account for unavoidable misclassification of exposure and incomplete control of confounding in studies based on Job Exposure Matrices.