54 EVALUATION OF BREAST CANCER RISK IN RELATION TO NIGHT SHIFT WORK IN A CASE-CONTROL STUDY IN A SPANISH POPULATION

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Objectives Recent epidemiologic and animal data indicate that night work may increase the risk for breast cancer. We evaluated breast cancer risk in female night shift workers in a population based case-control study in Spain, the Multi Case-Control study (MCC-Spain).

Methods Incident breast cancer cases (n=795) and randomly selected population controls (n=849) were enrolled in 7 regions of Spain. Lifetime occupational history including questions on shift work and information on reproductive and lifestyle factors were assessed by face-to-face interviews. We estimated the risk of different shift profiles using unconditional logistic regression models adjusting for a wide range of potential confounders.

Results Among 1644 female subjects, 30 had ever worked in permanent and 101 in rotating night shift work for ≥1 year. Having ever worked permanently at night, was associated with

an increased risk for breast cancer (OR 1.36 (95% CI 0.62 to 2.97), compared to permanent day workers, after adjusting for confounders. The corresponding OR for rotating night workers was 1.17 (95% CI 0.71 to 1.92). Women who had worked in permanent or rotating night-work ≥10 years, had an OR=1.43, (95% CI 0.79 to 2.57).

Conclusions A moderate increased risk for breast cancer was associated with having ever worked in night shift, but results were not statistically significant. Risk estimates were higher among permanent night workers and after longer exposures. Estimates were based on small numbers due to the low night prevalence of shift in this population. The study is ongoing and, at the conference, results will be presented for a larger population sample.