

Occupational exposure to magnetic fields and breast cancer among women textile workers in Shanghai, China

Deskripsi Lengkap: <https://lib.fkm.ui.ac.id/detail.jsp?id=102867&lokasi=lokal>

Abstrak

Exposure to magnetic fields (MFs) is hypothesized to increase the risk of breast cancer by reducing production of melatonin by the pineal gland. A nested case-cohort study was conducted to investigate the association between occupational exposure to MFs and the risk of breast cancer within a cohort of 267,400 female textile workers in Shanghai, China. The study included 1,687 incident breast cancer cases diagnosed from 1989 to 2000 and 4,702 noncases selected from the cohort. Subjects' complete work histories were linked to a job-exposure matrix developed specifically for the present study to estimate cumulative MF exposure. Hazard ratios and 95% confidence intervals were calculated using Cox proportional hazards modeling that was adapted for the case-cohort design. Hazard ratios were estimated in relation to cumulative exposure during a woman's entire working years. No association was observed between cumulative exposure to MFs and overall risk of breast cancer. The hazard ratio for the highest compared with the lowest quartile of cumulative exposure was 1.03 (95% confidence interval: 0.87, 1.21). Similar null findings were observed when exposures were lagged and stratified by age at breast cancer diagnosis. The findings do not support the hypothesis that MF exposure increases the risk of breast cancer.