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This Article

ARTICLE

Cellular Telephone Use and Cancer Risk: Update of a Nationwide Danish Cohort

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Background: The widespread use of cellular telephones has heightened concerns about possible adverse health effects.

The objective of this study was to investigate cancer risk among Danish cellular telephone users who were followed for up to 21 years. *Methods:* This study is an extended follow-up of a large nationwide cohort of 420 095 persons whose first cellular telephone subscription was between 1982 and 1995 and who were followed through 2002 for cancer incidence. Standardized incidence ratios (SIRs) were calculated by dividing the number of observed cancer cases in the cohort by the number expected in the Danish population. *Results:* A total of 14 249 cancers were observed (SIR = 0.95; 95% confidence interval [CI] = 0.93 to 0.97) for men and women combined. Cellular telephone use was not associated with increased risk for brain tumors (SIR = 0.97), acoustic neuromas (SIR = 0.73), salivary gland tumors

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(SIR = 0.77), eye tumors (SIR = 0.96), or leukemias (SIR = 1.00). Among long-term subscribers of 10 years or more, cellular telephone use was not associated with increased risk for brain tumors (SIR = 0.66, 95% CI = 0.44 to 0.95), and there was no trend with time since first subscription. The risk for smoking-related cancers was decreased among men (SIR = 0.88, 95% CI = 0.86 to 0.91) but increased among women (SIR = 1.11, 95% CI = 1.02 to 1.21). Additional data on income and smoking prevalence, primarily among men, indicated that cellular telephone users who started subscriptions in the mid-1980s appeared to have a higher income and to smoke less than the general population. *Conclusions:* We found no evidence for an association between tumor risk and cellular telephone use among either short-term or long-term users. Moreover, the narrow confidence intervals provide evidence that any large association of risk of cancer and cellular telephone use can be excluded.

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