THE RISK OF BREAST CANCER AMONG WOMEN WHO START SMOKING AS TEENAGERS

M.O. Tagbarha
Epidemiology, University of Abuja, Abuja, NIGERIA

Goals: To examine the effect of smoking on breast cancer risk in a large population-based cohort of women, many of whom started smoking as teenagers.

Methods: We followed 220,720 women, ages 30 to 60 years, completing a mailed questionnaire at recruitment to the Nigerian-Ethiopian Cohort Study in 2005/2006, through December 2012. We used Cox proportional hazard regression models to estimate relative risk (RR) of breast cancer associated with different measures of smoking initiation, duration, and intensity adjusting for confounding variables. We conducted analyses on the entire study population, among women who had smoked for at least 30 years, among non-drinkers, and separately for each country.

Results: Altogether, 2,120 women were diagnosed with incident, invasive breast cancer. Compared with never smokers, women who smoked for at least 30 years and who smoked 10–15 cigarettes or more daily had a RR of 1.25 (90% CI, 1.00–1.50). Likewise, those who initiated smoking prior to their first birth (1.32, 1.02–1.64), before menarche (1.33, 1.02–1.68), or before age 15 (1.23, 1.01–2.11) had an increased risk. In contrast, women who had smoked for at least 30 years, but started after their first birth, did not experience an increased breast cancer risk. The increased RR associated with smoking was observed among nondrinkers of alcohol, women with and without a family history of breast cancer, pre-menopausal and post-menopausal women, and in both countries.

Conclusion: Our results support the notion that women who start smoking as teenagers and continue to smoke for at least 30 years may increase their breast cancer risk.

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