Study Links Cigarette Smoking, Breast Cancer Risk

Increased Risk Seen in Women Who Start Smoking Before Having First Child

Results from a new American Cancer Society study support the hypothesis that smoking is associated with increased breast cancer risk for women who initiate smoking before first birth. The study, which appears online in the Journal of the National Cancer Institute, suggests that smoking might play a role in initiating breast cancer.

The relationship between active cigarette smoking and breast cancer risk remains controversial. Despite about 130 epidemiologic studies and seven consensus reports examining the relationship, there is still no scientific consensus, due in part to the fact that any association could be confounded by alcohol consumption, and also to the fact that studies have not consistently shown an increase in risk with duration or intensity of smoking, what scientists call a dose response.

To investigate the issues further, researchers led by Mia Gaudet, PhD, American Cancer Society director of genetic epidemiology, analyzed data from 73,388 women in the American Cancer Society's Cancer Prevention Study II (CPS-II) Nutrition Cohort. During more than 13 years of follow up, there were 3721 invasive breast cancer cases identified. They found incidence of invasive breast cancer was 24 percent higher in current smokers and 13 percent higher in former smokers compared to never smokers.

Women who started smoking before their first menstrual cycle were at 61 percent higher risk, while those started smoking after their first cycle but 11 or more years before having a child were at 45 percent higher risk. While alcohol consumption did not affect these associations significantly, the elevated risk was limited to current or former alcohol drinkers, and was not seen in those who never drank.

"The most consistent evidence we found to support a causal relationship between cigarette smoking and breast cancer risk was the link identified for women who start smoking before having their first child," said Dr. Gaudet. "The relationship with early life smoking that we and others have found, together with the lack of a consistent relationship between breast cancer risk and smoking later in life, suggests that active cigarette smoking may play a greater role in the initiation than the progression of breast cancer."

Article: M. Gaudet, S. Gapstur, J. Sun, W. Diver, L. Hannan, M. Thun. Active Smoking and Breast Cancer Risk: Original Cohort Data and Meta-analysis [published online ahead of print February 28, 2013]. J Natl Cancer Inst. (doi: 10.1093/jnci/djt023).

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