SABCS: IOM Lists Breast Cancer Risks in Environment

By Kristina Fiore, Staff Writer, MedPage Today
Reviewed by
December 07, 2011

Review

SAN ANTONIO -- Women may be able to reduce their risk of breast cancer if they avoid a host of environmental exposures, including unnecessary ionizing radiation, combination hormone replacement therapy, and smoking, according to a new report from the Institute of Medicine.

Leading a healthy lifestyle -- eating right and getting enough exercise -- as well as lowering alcohol intake can also diminish that risk, the IOM said in a report entitled "Breast Cancer and the Environment," which was released here at the San Antonio Breast Cancer Symposium.

There's consistent epidemiologic evidence that modifying these factors can lower cancer risk, committee chair Irva Hertz-Picciotto, MD, of the University of California Davis, and colleagues wrote, adding that there were 230,480 new cases of invasive disease in 2011.

Exposure to ionizing radiation can be minimized by avoiding unnecessary medical tests, such as CT scans, they wrote.

Current use of oral contraceptives, estrogen-progesterone hormone replacement therapy, and overweight and obesity among postmenopausal women have also been clearly linked with an increased risk of breast cancer, they noted.

The committee also warned of a possible increased risk of breast cancer from exposure to benzene, 1.3-butadiene, and ethylene oxide -- chemicals found in the workplace, gasoline fumes, car exhaust, and cigarette smoke -- although the evidence for a link with breast cancer is more limited or contradictory for those substances, they noted.

On the plus side, the committee noted, there's good evidence that hair dyes and non-ionizing radiation from cell phones and other electronics have no impact on a woman's chances of developing breast cancer.

The "jury is still out" as to whether bisphenol A (BPA), pesticides, cosmetics, and dietary supplements, as well as overnight shift work, can dial up the risk.

Specifically for BPA, the researchers wrote, there are animal or mechanistic data that suggest biological plausibility, but there's not enough evidence of harm in human studies.

They acknowledged that there's no evidence as to the degree of risk reduction any of these avoidance measures might confer but suggested research along those lines.

They also offered several other research recommendations, such as more work on understanding the etiology of breast cancer and its development over a lifetime in order to provide phased prevention strategies.

"Breast cancer develops over many years, so we need better ways to study exposures throughout women's lives," Hertz-Picciotto said in a statement. "We also need improved methods to test for agents that may be contributing to breast cancer risk and to explore the effects of combined exposures."

The team also called for more research into the mechanisms of action for possible associations with cancer and studying populations that may have higher exposures, such as occupational cohorts.

The study was sponsored by Susan G. Komen for the Cure.
