

Antihormone therapy anastrozole may provide new option for breast cancer prevention

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Breast cancer incidence among postmenopausal women at high risk for developing the disease was significantly reduced by the antihormone therapy anastrozole, indicating that the drug may be an effective new option for breast cancer prevention for this group of women, according to initial results of a double-blind, randomized, placebo-controlled trial presented here at the 2013 San Antonio Breast Cancer Symposium, held Dec. 10-14. The study is being simultaneously published in the *The Lancet*.

About 80 percent of women diagnosed with [breast cancer](#) in the United States each year have tumors with high levels of hormone receptors. These tumors are fueled by the hormone estrogen. Anastrozole is a drug that prevents the body from making estrogen, and it has been used to treat [postmenopausal women](#) with hormone receptor-positive breast cancer for more than 10 years.

"We initiated the International Breast Cancer Intervention Study II (IBIS-II) Prevention trial to investigate whether anastrozole can be used effectively to prevent breast cancer," said Jack Cuzick, Ph.D., chairman of the IBIS-II Steering Committee. "Our initial results show that for postmenopausal women who do not have breast cancer, but are at high risk for developing the disease, anastrozole reduced breast cancer incidence by 53 percent with very few side effects.

"Two other antihormone therapies, tamoxifen and raloxifene, are used by some women to prevent breast cancer, but these drugs are not as effective and can have adverse side effects, which limit their use," explained Cuzick, who is also head of the Cancer Research U.K. Centre for Cancer Prevention and director of the Wolfson Institute of Preventive Medicine at Queen Mary University of London. "Hopefully, our findings will lead to an alternative prevention therapy with fewer side effects for postmenopausal women at high risk for developing breast cancer."

Cuzick and colleagues enrolled 3,864 postmenopausal women at increased risk for developing breast cancer in the IBIS-II Prevention study from 2003 to 2012. Women were considered to be at high risk for breast cancer if they fulfilled any one of a number of criteria, including having two or more blood relatives with breast cancer, having a mother or sister who developed breast cancer before the age of 50, and having a mother or sister who had breast cancer in both breasts. Among the participants, 1,920 were randomly assigned to anastrozole for five years and 1,944 to a placebo.

After a median follow-up of just more than five years, the researchers found that women assigned to anastrozole were 53 percent less likely to have developed breast cancer compared with women assigned to the placebo. In addition, very few side effects were reported, mostly small increases in muscle aches and pains, and hot flashes, according to Cuzick.

"We are planning to continue following the IBIS-II Prevention participants for at least 10 years, and hopefully much longer," said Cuzick. "We want to determine if anastrozole has a continued impact on [cancer incidence](#) even after stopping treatment, if it reduces deaths from breast cancer, and to ensure that there are no long-term adverse [side effects](#)."

Provided by American Association for Cancer Research

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