WHAT'S NEW
From the U.S. Preventive Services Task Force

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Breast Cancer Chemoprevention

What Is Breast Cancer Chemoprevention?

Breast cancer chemoprevention is the use of prescription medicines, such as tamoxifen and raloxifene, to prevent breast cancer.

Why Is Breast Cancer Chemoprevention Important?

Breast cancer is the most common non-skin cancer in women. It is estimated that 203,500 new cases of invasive breast cancer will be diagnosed in 2002, and that 39,600 women will die from the disease. Early detection of breast cancer through mammography has reduced the number of deaths from breast cancer; another approach to reducing breast cancer deaths among women at high risk for the disease is chemoprevention.

Does the USPSTF Recommend Breast Cancer Chemoprevention?

The U.S. Preventive Services Task Force (USPSTF) recommends against the routine use of the medications tamoxifen or raloxifene for the primary prevention of breast cancer in women at low or average risk for breast cancer. For women who are not at high risk for breast cancer, the potential harms of chemoprevention may outweigh the potential benefits.

The USPSTF recommends that clinicians discuss chemoprevention with women at high risk for breast cancer and at low risk for the adverse effects of chemoprevention, informing them of the potential benefits and harms. The balance of benefits and harms may be favorable for some women at high risk for breast cancer but depends on cancer risk, risk for adverse effects of chemoprevention, and individual patient preferences.

Chemoprevention of breast cancer is not recommended for women at low or average risk for the disease.

Who Is at Increased Risk for Breast Cancer and at Low Risk for Adverse Effects of Chemoprevention?

Older women; women with a family history of breast cancer in a mother, sister, or daughter; and women with a history of atypical hyperplasia on a breast biopsy are at increased risk for breast cancer. Younger women, women who have no predisposition to blood clots in the legs or lungs (thromboembolic events), and women who do not have a uterus are at decreased risk for the adverse effects of chemoprevention. A risk assessment instrument developed by the National Cancer Institute (http://www.cancer.gov/bcrisktool) can

What's New from the U.S. Preventive Services Task Force is a series of fact sheets based on recommendations of the U.S. Preventive Services Task Force (USPSTF). The USPSTF systematically reviews the evidence of effectiveness of a wide range of clinical preventive services—including screening, counseling, and chemoprevention (the use of medication to prevent disease)—to develop recommendations for preventive care in the primary care setting. **This fact sheet presents highlights of USPSTF recommendations on this topic and should not be used to make treatment or policy decisions.**

More detailed information on this subject is available in the Systematic Evidence Review, Summary of the Evidence, and USPSTF Recommendations and Rationale, which can be found on the Agency for Healthcare Research and Quality (AHRQ) Web site (http://www.preventiveservices.ahrq.gov) and through the National Guideline Clearinghouse (http://www.guideline.gov). The Summary of the Evidence and the Recommendations and Rationale are also available in print through the AHRQ Publications Clearinghouse (call 1-800-358-9295, or e-mail ahrqpubs@ahrq.gov) and in the *Annals of Internal Medicine* 2002;137:56-67.

help estimate cancer risk based on age, family history, and other risk factors.

In general, the balance of benefits and harms of chemoprevention is more favorable for women in their 40s who are at increased risk for breast cancer and have no predisposition to blood clots in the legs or lungs, and for women in their 50s who are at increased risk for breast cancer, have no predisposition to thromboembolic events, and do not have a uterus.

Clinicians should weigh a woman's risk for breast cancer against her risk for adverse effects of chemoprevention.

What Are the Potential Harms of Breast Cancer Chemoprevention?

Potential harms of tamoxifen and raloxifene are increased risk for blood clots in the legs or lungs and hot flashes. Tamoxifen increases the risk for endometrial cancer. The USPSTF found more evidence for the benefits of tamoxifen than for the benefits of raloxifene.

Tamoxifen is the only medication approved by the U.S. Food and Drug Administration (FDA) specifically for the chemoprevention of breast cancer. Raloxifene currently is approved by the FDA only for the prevention and treatment of osteoporosis. A large trial of raloxifene currently is underway in an effort to confirm early results indicating it may also protect against breast cancer. The STAR trial, an ongoing study, is recruiting women to compare tamoxifen to raloxifene for safety and efficacy in preventing breast cancer.

Was Breast Cancer Chemoprevention Considered by the Previous USPSTF?

Breast cancer chemoprevention was not considered by the previous USPSTF. Since the previous Task Force completed its work in 1996, several important trials of the efficacy of breast cancer chemoprevention in women who have never had the disease have been published. Researchers have known that tamoxifen medications can prevent a second breast cancer in women who have already had breast cancer—only recently have studies been done to see whether medications can prevent a first breast cancer in women at high risk for the disease.

For more information on breast cancer risk and chemoprevention, contact the following organizations:

healthfinder™
http://www.healthfinder.gov

National Cancer Institute
National Institutes of Health
National Cancer Institute Breast Cancer Risk Tool ("Gail Model")
http://www.cancer.gov/bcrisktool
or 1-800-4-CANCER

U.S. Department of Health and Human Services

Agency for Healthcare Research and Quality
www.ahrq.gov

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