Screening for Breast Cancer: Recommendations From the U.S. Preventive Services Task Force

Who developed these guidelines?
The U.S. Preventive Services Task Force (USPSTF) is a group of health experts that reviews published research and makes recommendations about preventive health care.

What is the problem and what is known about it so far?
The goal of screening for breast cancer is to find breast cancer at early, more treatable stages to reduce overall deaths. Mammography is the main way to screen for breast cancer. Mammography is an x-ray of the breast that can show breast tumors before they are large enough to feel. Types of mammography include traditional film mammography and newer digital mammography. Other radiology tests used to screen for breast cancer include digital breast tomosynthesis (DBT) and magnetic resonance imaging (MRI). The USPSTF issued breast cancer recommendations in 2009 and now updates them based on new information that has become available since then.

How did the USPSTF develop these recommendations?
The USPSTF evaluated published research on the effectiveness of breast cancer screening in reducing overall death, death from breast cancer, and advanced breast cancer; harms of breast cancer screening; DBT and MRI as screening tests; and supplemental screening tests for women with dense breasts. They also commissioned a group of researchers to use computer-simulation models to compare the expected health outcomes under policies that used different ages of starting and stopping mammography and different frequencies of screening. Other computer models estimated how breast density and the presence of health problems influences the balance of benefits and harms of breast cancer screening over the course of a woman's life.

What did the authors find?
The USPSTF found fair evidence that women who have screening mammography die of breast cancer less frequently than women who do not have it and the benefits are greatest and best defined for women aged 50 to 74 years. The benefits minus harms are smaller for women aged 40 to 49 years. Benefits increase as women age and their risk for breast cancer increases. However, there are relatively few studies of mammography for women aged 75 years or older. In addition to anxiety and additional procedures due to false-positive test results, the greatest potential harm of mammography is overdiagnosis. Overdiagnosis means receiving a diagnosis and treatment of cancer that never would have surfaced on its own within a woman’s natural lifetime. The USPSTF found that the benefit of mammography every 2 years is nearly the same as that of doing it every year, but the harms are likely to be half as common. They found that there is not enough information to assess the benefits and harms of supplemental screening for women with dense breasts or newer screening tests, such as DBT or MRI.

What does the USPSTF recommend that patients and doctors do?
The decision to start screening mammography in women aged 40 to 49 years should be an individual one. Women and their doctors should base the decision to start mammography before age 50 years on the risk for breast cancer and preferences about the benefits and harms.

Women aged 50 to 74 years should have mammography every 2 years.

More evidence is needed for the USPSTF to recommend for or against screening mammography after age 74 years.

There is not enough information to know whether newer types of breast cancer screening tests, such as DBT or MRI, are any better than regular mammography.

What are the cautions related to these recommendations?
These recommendations apply only to women at average risk for breast cancer.