



As a radiologist specializing in breast imaging, I am often asked questions regarding recommendations for breast cancer screening. In honor of "Breast Cancer Awareness Month", I would like to address some of these frequently asked questions. I have included links to sources that provide additional information.



Tracy H. Florant, MD

Breast Cancer Screening

Your Questions Answered

I hear different recommendations. When should I start getting mammograms? How often should I get them?

Yes, there are different guidelines for breast cancer screening from two organizations. In November 2009, the US Preventive Services Task Force (USPSTF) recommended screening mammography every two years for women aged 50 to 74 years at average risk of breast cancer. (They concluded that there is not enough evidence to assess screening mammography in women 75 years or older.) These guidelines differ from those of the American Cancer Society (ACS), which continues to recommend yearly screening mammography beginning at age 40 for average risk women.

Both organizations agree that a major *benefit* of screening mammography is that **women who have screening mammograms die of breast cancer less frequently than do women who don't get mammograms**. Indeed this is well understood by the international scientific community. So, why are the recommendations different? Well, the USPSTF weighed *risks* (harms) and *benefits* which can be very subjective. In addition, the choice of which scientific research to review will affect the conclusions.

Regarding beginning screening mammography at age 40 or at age 50, the USPSTF says the *benefits* of screening mammograms don't outweigh the *harms* for women ages 40 to 49. Potential *harms* considered were: 1. anxiety and distress (for example due to: false-positive results, breast biopsies, and treatment of slow growing breast cancers that might not be fatal.) 2. Discomfort during procedures and 3. Radiation exposure. (1) The effects of radiation exposure have already been taken into account in research that shows **mammography saves lives**. In short, the USPSTF has concluded that saving lives is not worth some degree of anxiety, distress and discomfort. Many women and health care professionals immediately disagreed with this conclusion. In a February 2011 American Journal of Roentgenology (AJR) article, a renowned medical physicist commented, "The USPSTF overemphasized potential harms of screening mammography, while ignoring the proven statistically significant benefit of annual screening mammography starting at age 40." (2)

Regarding screening every one year or every two years, the USPSTF did not consider important scientific research that was reviewed by the ACS and that supports screening every year. (3) In the end, re-analysis of current screening data has shown that yearly screening beginning at age 40 saves 71% more lives than the USPSTF-recommended regimen of every two year screening from ages 50–74.(4)

It is important that women know that the USPSTF recommendation weighs saving lives against "anxiety and distress". **If you want to reduce the chance that you will die of breast cancer, and you accept that this may involve some anxiety and stress, then having a screening mammogram every year beginning at age 40 is clearly your best option.**

Yearly screening mammography beginning at age 40 is recommended by the American College of Radiology (ACR), the Society of Breast Imaging (SBI), the American Society of Breast Disease (ASBD), the American Congress of Obstetricians and Gynecologists' (ACOG) and many other major medical associations with demonstrated expertise in breast cancer care. (5)

[Should I still do breast self-examination?](#)

The USPSTF recommends that health care providers should NOT teach their patients how to do breast self-examination (BSE). This is consistent with the USPSTF's goal of reducing anxiety related to screening tests. However, many women and health care providers question this. Should physicians STOP educating their patients about this simple, free technique because it may lead to stress? According to the American College of Surgeons, it is clear that some breast cancers continue to be detected as a lump rather than being found through mammographic screening. Research published in the Journal of the American College of Surgeons March 2010 suggested that clinical breast examination (CBE) and breast self-examination should continue to play a role in detecting breast cancer. (6)

Yes. Breast self-examination (BSE) is still a part of breast cancer screening. The following organizations continue to recommend breast self examination: American Cancer Society (starting at age 20, practitioner should review pros and cons of BSE with patient; it is the individual's choice), American Congress of Obstetricians and Gynecologists, American Medical Association, Susan G. Komen Foundation, and National Comprehensive Cancer Network (recommends "breast awareness," and indicates periodic consistent BSE may facilitate this awareness). (7) Information about breast self-examination technique is provided on the American Congress of Obstetricians and Gynecologists website. (8)

[What are the risk factors for breast cancer?](#)

The term "breast cancer risk factor" means anything that affects a woman's chance of getting breast cancer. There is ongoing research on this topic. So far scientists have learned that there are many factors that affect breast cancer risk that one cannot change, and there are also some factors that can be changed.

The factors that cannot be changed include: **genetics, menstrual history, health history, and aging.** Genetic factors that increase breast cancer risk include: being female, having certain gene defects called mutations (BRCA1, BRCA2 and other mutations), having a parent, sibling or child with breast cancer (one will double risk, two will increase risk 3-fold) and race. (White women are most likely to develop breast cancer and African American women are most likely to die from breast cancer.) Women who have had more menstrual cycles (early onset of menstruation or late menopause) have slightly higher risk. Health history is important: Women who have had breast cancer are at increased risk. Some non-cancerous breast conditions (proliferative conditions and atypia) and history of other very specific medical conditions / treatment increase risk. These are best discussed with your doctor. Finally and inevitably, breast cancer risk increases as women get older.

Lifestyle choices also affect breast cancer risk. The following factors increase risk: having no children at all or none before age 30, oral contraceptive use within the last 10 years, hormone replacement therapy with estrogen and progesterone within the last 5 years, more than one alcoholic drink per day, excessive weight gain during adulthood, and inactivity. Breast feeding appears to reduce breast cancer risk.

Many of these risk factors increase breast cancer risk only a small amount; however, some increase risk significantly. The American Cancer Society provides an excellent discussion of breast cancer risk on its website. (9) The National Cancer Institute provides an interactive cancer risk assessment tool. (10) This tool does not apply to everyone, but can help many women assess if their risk is low, moderate, or high. It is important to discuss the results with your health care provider.

[If I am at high risk for breast cancer, does that change the recommendations for breast cancer screening?](#)

Yes. According to the American Cancer Society, women at high risk (greater than 20% lifetime risk) should get an MRI and a mammogram every year. Women at moderately increased risk (15% to 20% lifetime risk) should talk with their doctors about the benefits and limitations of adding MRI screening to their yearly mammogram. Yearly MRI screening is not recommended for women whose lifetime risk of breast cancer is less than 15%.

[Does the radiation exposure from annual mammograms increase my risk of thyroid cancer?](#)

[Should I request a thyroid shield?](#)

According to the American College of Radiology (ACR) and the Society of Breast Imaging (SBI), “The amount of radiation women receive from annual mammograms does not increase their likelihood of developing thyroid cancer.” The breast itself receives a low radiation dose for the full digital screening exam. It is understood that the effects of this radiation to the breast are minimal compared to the life-saving potential of mammography. The thyroid gland is not in the area imaged by mammography and it does not receive *any* direct radiation. It receives only a very small amount of scattered radiation. This is the equivalent to about 30 minutes of average natural background radiation and so is negligible. **A thyroid shield is unnecessary.** In addition, a thyroid shield can get in the way, obscuring part of the breast and necessitating repeat imaging. (11)

[Is thermography an alternative to mammography?](#)

There is no accepted scientific data to show that thermography (heat sensing imaging) is an effective screening tool for the early detection of breast cancer.

Although thermography was approved by the Food and Drug Administration (FDA) in 1982 for research purposes, public health agencies and national medical and professional societies agree with FDA that mammography is still the most effective method of detecting breast cancer in its earliest, most treatable stages. These organizations include the American Cancer Society, the American College of Radiology, the Centers for Disease Control and Prevention, the National Cancer Institute, and the Society for Breast Imaging. (12)

[Where can I get information about low cost mammograms?](#)

The Women’s Resource Center connects women to mammograms, exams, diagnostic services and treatment through patient navigation services. Contact them at 424 Pine Street Suite 201 Fort Collins Colorado 80525, (970) 484-1902 and online at www.womens-resource.org. (13) Information is also available through the Women’s Wellness Connection 1(866)-951-WELL (9355) and online at www.WomensWellnessConnection.org. (14)

[Please summarize the message that I should take home to my mother, sisters, daughters and friends.](#)

Advanced Medical Imaging Consultants, PC supports the American Cancer Society Guidelines which I have included below:

[American Cancer Society Guidelines for the Early Detection of Breast Cancer](#)

- **Yearly mammograms** are recommended starting at age 40 and continuing for as long as a woman is in good health.
- **Clinical breast exam (CBE)** about every 3 years for women in their 20s and 30s and every year for women 40 and over.
- Women should know how their breasts normally look and feel and report any breast change promptly to their health care provider. **Breast self-exam (BSE)** is an option for women starting in their 20s.

The American Cancer Society recommends that some women -- because of their family history, a genetic tendency, or certain other factors -- be screened with MRI in addition to mammograms. (The number of women who fall into this category is small: less than 2% of all the women in the US.) **Talk with your doctor about your history** and whether you should have additional tests at an earlier age. (15)

Links to sources for more information:

- (1) <http://www.uspreventiveservicestaskforce.org/uspstf/uspsbrca.htm>
- (2) <http://www.ajronline.org/content/196/2/W112.full>
- (3) http://www.sbi-online.org/associations/8199/files/Latest%20Study%20Confirms%20That%20The%20Age%20of%2050_9_30_10.pdf
- (4) <http://www.ajronline.org/content/196/2/W112.full?sid=77b2100c-f4ee-4d56-a563-1aa264b581b1>
- (5) <http://mammographysaveslives.org>
- (6) <http://www.facs.org/news/jacs/breastcancer0310.html>
- (7) [http://www.npjournals.org/article/S1555-4155\(09\)00664-3/fulltext](http://www.npjournals.org/article/S1555-4155(09)00664-3/fulltext)
- (8) <http://www.acog.org/publications/faq/faq145.cfm#2>
- (9) <http://www.cancer.org/Cancer/BreastCancer/DetailedGuide/breast-cancer-risk-factors>
- (10) <http://understandingrisk.cancer.gov/learn/riskassessment.cfm>
- (11) <http://www.sbi-online.org/associations/8199/files/ACR%20SBI%20Statement%20on%20Radiation%20Received%20to%20the%20Thyroid%20from%20Mammography.pdf>
- (12) <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm257259.htm>
- (13) <http://www.womens-resource.org/>
- (14) <http://www.womenswellnessconnection.org/>
- (15) <http://www.cancer.org/Healthy/FindCancerEarly/CancerScreeningGuidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer>

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