

Mammography and Other Screening Tests for Breast Problems

- What is a screening test?

A screening test is used to detect diseases in persons who have no symptoms or indicators. This enables for early intervention.

- Why is breast screening important?

By the age of 75, one out of every eight women in the United States will be diagnosed with breast cancer. Breast screening on a regular basis can help detect cancer at an earlier and more treatable stage. Breast screening can also detect issues in the breasts that aren't cancerous.

- What is mammography?

Mammography is the most used method for detecting breast cancer and other issues. The breasts are analyzed using X-ray equipment in mammography. A mammogram is the name given to the images created.

Mammography is used as a screening test to look for breast cancer in women who have no signs or symptoms of the disease, and as a diagnostic test to look for lumps or other symptoms that you have discovered or that have been discovered by health care professional. This is the gold-standard test to screen for breast cancer for a low-risk patient.

If you have a mammogram scheduled, you should not use powders, lotions, or deodorants on the day of your test. The majority of these items include chemicals that can be seen on an X-ray. They can make it difficult to read your mammogram.

- What happens during a mammogram?

You'll need to undress entirely from the waist up and change into a gown. You will be required to stand in front of an X-ray machine. One of your breasts will be put between two flat plastic plates then a pressure will be applied to your breast. The plates will flatten your breast as much as possible, allowing you to see as much tissue as feasible. To take a side view of the breast, repeat these steps. The test is next repeated on the opposite breast.

This discomfort is only temporary. If you're still having menstrual periods, the test should be done the week following your period. After your period, your breasts are usually less painful.

- What do the results mean?

Breasts are shaped by fibrous tissue and fat. Breasts with dense tissue have less fat and more fibrous tissue. Although breast density is a normal and common result on a mammography, it can make it more difficult for a radiologist to detect cancer. If your mammogram shows that you have dense breasts, your ob-gyn or other health care provider may recommend further screening tests in addition to mammography.

To classify mammography data, radiologists use the BI-RADS method. A score will be assigned to your screening mammography result. The following is the meaning of the scores, which range from 0 to 5.

- 0—More details are required. Before a score may be given, you may need another mammogram.
 - 1—Nothing out of the ordinary is observed. You should continue to receive screenings on a regular basis.
 - 2—Benign conditions like cysts are visible. You should continue to receive screenings on a regular basis.
 - 3—Something is discovered that is most likely not cancer. Within 6 months, a second mammography should be performed.
 - 4—Something indicative of cancer is observed. It's possible that you'll need a biopsy.
 - 5—An observation is made that strongly suggests the presence of malignancy. A biopsy will be necessary.
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- What does it mean to have an average breast cancer risk?

If a woman has specific risk factors for breast cancer, she may be at a higher risk. A family history of breast cancer, ovarian cancer, or other inherited cancers; BRCA1 and BRCA2 mutations; chest radiation treatments as a child; and a history of high-risk breast biopsy results are among the risk factors. Women who do not have these risk factors are considered average risk.

- When should I start getting mammograms for screening?

Beginning at the age of 40, screening mammography is advised every 1–2 years for women at an average risk of breast cancer. If you haven't had a mammogram since your 40s, you should get one no later than the age of 50. The screening process should be continued until at least till you are 75 years of age.

- How accurate is screening mammography?

Mammography, like other screening techniques, isn't perfect. Even if cancer is present, mammography may miss it. A false-negative result occurs when the findings do not show malignancy, but you do have cancer. False-negative results can cause treatment to be delayed.

Mammography may also reveal something that appears to be cancer, but when the findings of follow-up testing are analyzed, they reveal that you are cancer-free. This is a false-positive result. Follow-up testing can be unpleasant, uncomfortable, and stressful.

- How is a clinical breast exam done?

During routine checkups, your ob-gyn or another health care expert may examine your breasts. This is referred to as a clinical breast physical exam. You can get the exam while lying down or sitting up. Any changes in size or shape, puckers, dimples, or skin redness are all looked for in the breasts. Changes in each breast and beneath each arm may be felt by your ob-gyn or another health care expert.

For those who are at average risk of breast cancer and who do not have symptoms, is suggested a clinical breast exam every 1-3 years (women aged 25-39) and every year for starting at the age of 40.

- What is breast self-awareness?

Breast self-awareness is having a sense of what is typical for your breasts so that you can detect changes, even if they are little, and report them to your ob-gyn or other health care provider. Breast cancer is frequently discovered by the woman herself. This occurs in about half of all breast cancer cases in women over the age of 50. More than 70% of breast cancer cases in women under the age of 50 are discovered by the women themselves.

- Talking to your doctor about mammography and breast health

If you're over 40, you can ask your doctor what are the odds of getting breast cancer, when should you start having mammograms on a regular basis and how frequently should you obtain them?

Depending on your age, you can ask more precise questions. If you're between the ages of 40 and 49, consider asking what are the benefits and drawbacks of receiving mammograms before turning 50? If you're between the ages of 50 and 75, talk about the possible advantages and disadvantages of obtaining mammograms every two years rather than every year and the need to continue receiving mammograms if over 75 years old.

You and your health care provider should share information and discuss how often you need to have a breast screening done.

- **Glossary**

Benign: Not cancer.

Biopsy: A minor surgical procedure to remove a small piece of tissue that is then examined under a microscope in a laboratory.

BRCA1 and BRCA2: Genes that function in the control of cell growth. Changes in these genes have been linked to an increased risk of breast cancer and ovarian cancer.

Cysts: Sacs or pouches filled with fluid.

Mammography: A procedure in which X-rays of the breast are used to detect breast cancer.

Mammogram: An imaging technique in which X-rays of the breast are used to detect breast cancer. The image that is created is called a mammogram.

Mutations: Permanent changes in genes that can be passed from parent to child.

Obstetrician–Gynecologist (Ob-Gyn): A physician with special skills, training, and education in women’s health.

SOURCE: [Mammography and Other Screening Tests for Breast Problems | ACOG](#)

Breast Ultrasound

What is breast ultrasound?

Breast ultrasonography creates images of the breast using sound waves. Sonograms are the names given to ultrasound images.

Breast ultrasonography is a painless and non-invasive procedure. It's frequently used as a follow-up test when a mammography, breast MRI, or clinical breast exam reveals something wrong. Breast ultrasound may be used to help guide a needle biopsy if one is required.



Image courtesy of [Lange Productions](#).

Breast cancer screening

An ultrasound of the entire breast is known as a whole breast ultrasound. Whole breast ultrasonography alone is not a good breast cancer screening technique, according to studies. There are frequent false positive and false negative outcomes with whole breast ultrasonography. A false positive result indicates that a person has breast cancer when they don't. A false negative result indicates that a person does not have breast cancer when they do.

The National Comprehensive Cancer Network (NCCN) and the American Cancer Society (ACS) do not suggest whole breast ultrasonography for breast cancer screening. However, after an abnormal finding on a mammography, breast MRI, or clinical breast exam, a focused breast ultrasound (of the questionable area only) is frequently utilized as a follow-up test.

Learn about [breast cancer screening recommendations for women at average risk](#).

Learn about [breast cancer screening recommendations for women at higher than average risk](#).

Learn more about [breast cancer screening recommendations](#).

Learn more about [breast density and mammography](#).

Learn more about [breast density and breast cancer risk](#).

SOURCE: [All About Breast Ultrasounds \(komen.org\)](#)

Breast MRI for Screening

Breast MRI is not suggested for all women as a routine screening tool. It is, however, suggested for screening women who are at high risk for breast cancer, usually due to a strong family history and/or a mutation in BRCA1 or BRCA2 genes. You'll undergo a breast MRI in addition to your regular mammograms (X-rays of the breast) if you're classified high-risk.

Breast MRI is generally thought to be more sensitive than mammography for detecting breast cancer, but it can also miss some tumors that would be found by mammography. As a result, breast MRI should only be used in conjunction with other procedures such as a mammography or ultrasound.

Who should have breast MRI for screening?

- For women who have a higher-than-average risk of breast cancer, yearly mammograms and breast MRI screening are usually suggested.
- Every year, the American Cancer Society (ACS) recommends that all high-risk women — those with a lifetime risk of breast cancer of more than 20% — get a breast MRI and a mammogram. These combination screenings should begin for most women at the age of 30 and continue as long as the lady is in good health. High-risk women, according to the American Cancer Society, are those who:
 - have a known BRCA1 or BRCA2 gene mutation
 - have a first-degree relative (mother, father, brother, sister, or child) who has a BRCA1 or BRCA2 gene mutation and has not had genetic testing
 - learn they have a lifetime risk of breast cancer of 20-25% or higher, based on risk assessment tools that are based primarily on family history
 - had chest radiation therapy while they were between the ages of 10 and 30 years old for another type of cancer, such as Hodgkin's illness
 - have Li-Fraumeni syndrome, Cowden syndrome, or Bannayan-Riley-Ruvalcaba syndrome, or have one of these syndromes in first-degree relatives.

The American Cancer Society also advises women at a moderately higher risk of breast cancer (15-20%) to discuss the potential of adding breast MRI screening to their annual mammography with their doctors. According to the American Cancer Society's standards, this includes women who:

- according to risk assessment systems based primarily on family history, they have a lifetime risk of breast cancer of 15-20%.
- have excessively dense breasts or unevenly dense breasts when evaluated by mammograms
- have a personal history of breast cancer, ductal carcinoma in situ (DCIS), lobular carcinoma in situ (LCIS), or abnormal breast cell alterations such as atypical ductal hyperplasia or atypical lobular hyperplasia.

Please talk your health care provider if you think you're a candidate for breast MRI screening.

For more information about breast cancer risk, visit [Lower Your Risk](#)

Why breast MRI is not recommended for screening all women

- Breast MRI is not suggested as a screening test for women with a low risk of breast cancer. Even though breast MRI has been found to be more sensitive than mammograms in detecting tumors, it produces more false positives — that is, the test detects something that initially appears to be suspicious but turns out not to be cancer. Many women would have unneeded biopsies and other testing if breast MRI were used as a screening technique for everyone, not to mention the anxiety and distress.
- As a result, current guidelines limit breast MRI screening to high-risk women alone. MRI is significantly more expensive than mammography, and the equipment is not easily available

SOURCE: [Breast MRI for Screening | Breastcancer.org](#)