

Mammograms: Breast Cancer Screening Explained

A mammogram is a low-dose X-ray of the breast used to screen for breast cancer, often finding tumors before they cause symptoms. Results are reported using BI-RADS categories. The USPSTF recommends women at average risk have screening mammograms every 2 years from ages 40 to 74.

The simple version

This page explains what a mammogram is, what it can show, how results are reported, and who should be screened.

A mammogram is an X-ray image of the breast. Screening mammograms look for breast cancer. They can find tumors at an earlier stage, **before they cause symptoms**. The same machine takes diagnostic mammograms too. Those check a lump or other change after it is found, using images from more angles.

What a mammogram can show

A radiologist studies the images for unusual changes. When possible, they compare them with your past mammograms. Mammograms can show:

- **A mass (breast lump).** Its size, shape, and edges matter. A smooth, round lump with clear edges is often a benign cyst. A jagged outline or irregular shape may need more tests.
- **Calcifications** are tiny calcium deposits. They have nothing to do with calcium in your diet. Larger ones (macrocalcifications) are usually benign. Tiny ones grouped together (microcalcifications) can sometimes signal DCIS or breast cancer.
- **Breast density** is the mix of dense and fatty tissue. Mammography is more likely to miss cancer in dense breasts.

If a symptom is why the mammogram was ordered, that symptom still matters. The deeper guides on breast pain, nipple discharge, and breast lumps can help you plan follow-up questions.

What to expect

Your breast is placed between two plates that press together. That pressure produces a clearer picture. Several images are taken from different angles. The compression can be uncomfortable or briefly painful. Ask your care team whether an over-the-counter pain reliever beforehand might help. It is best not to book the test right before or during your period. Skip deodorant, antiperspirant, powder, and perfume on the breasts and underarms that day.

How results are reported (BI-RADS)

You'll usually get the radiologist's report within about two weeks. It typically includes a BI-RADS category. That is a standard way of describing findings and the follow-up they call for.

- **0** — More imaging is needed before a category can be given.
- **1** — Negative; continue regular screening.
- **2** — Benign finding; continue regular screening.
- **3** — Probably benign; a 6-month follow-up mammogram.
- **4** — Suspicious; may require a biopsy.
- **5** — Highly suggestive of cancer; requires a biopsy.
- **6** — Known, biopsy-proven cancer.

Being called back for more testing can feel scary. But **most people who are called back are not found to have breast cancer.**

When to be screened

The U.S. Preventive Services Task Force recommends screening mammograms **every 2 years between ages 40 and 74** for women at average risk. Some people are at higher risk. Examples are those with harmful *BRCA1* or *BRCA2* gene changes, or who had chest radiation for a childhood cancer. They may be advised to begin earlier or screen more often. Your doctor can help you weigh your own personal and family history.

Cost and access

Mammograms are done at breast clinics, hospital radiology departments, mobile vans, and radiology and doctors' offices. You may be able to book a screening mammogram without a referral. Under the Affordable Care Act, most health plans must cover screening mammograms without copayments. NCI says Medicare covers annual screening mammograms for women 40 and older. The CDC's National Breast and Cervical Cancer Early Detection Program offers free or low-cost screening for women with low incomes who do not have adequate insurance. NCI's Cancer Information Service (1-800-4-CANCER) can help you find a certified facility.

Source: National Cancer Institute (cancer.gov/types/breast/screening/mammograms)

Last updated: 2026-10-02

Online: cancerexplained.org/screening/mammograms

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