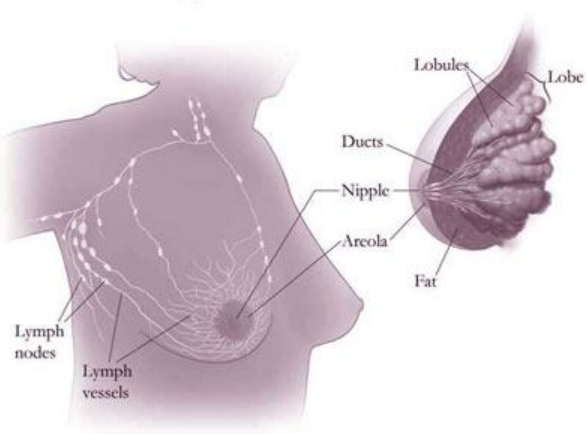
GENESEE SURGICAL ASSOCIATES

# Benign Breast Diseases

Most women have changes in their breasts during their lifetime. Many of these changes are caused by hormones. For example, your breasts may feel more lumpy or tender at different times in your menstrual cycle.
Other breast changes can be caused by the normal aging process. As you near menopause, your breasts may lose tissue and fat. They may become smaller and feel lumpy. Most of these changes are not cancer; they are called benign changes. However, if you notice a breast change, don't wait until your next mammogram. Make an appointment to get it checked.
Many breast changes are changes in how your breast or nipple looks or feels. Mammograms are tests to check for breast changes that are often too small for you or your doctor to feel. If you are 40 or older, having a mammogram every year could save your life.

## What are breasts made of?

Breasts are made of connective tissue, glandular tissue, and fatty tissue. Connective tissue and glandular tissue look dense, or white on a mammogram. Fatty tissue is non-dense, or black on a mammogram. Dense breasts can make mammograms harder to interpret.
Breasts have lobes, lobules, ducts, an areola, and a nipple.




- Lobes are sections of the glandular tissue. Lobes have smaller sections called lobules that end in tiny bulbs that can make milk.
- Ducts are thin tubes that connect the lobes and lobules. Milk flows from the lobules through the ducts to the nipple.
- The nipple is the small raised area at the tip of the breast. Milk flows through the nipple. The areola is the area of darker-colored skin around the nipple. Each breast also has lymph vessels.

## What is the lymphatic system made of?

The lymphatic system, which is a part of your body's defense system, contains lymph vessels and lymph nodes.

- Lymph vessels are thin tubes that carry a fluid called lymph and white blood cells.

- Lymph vessels lead to small, bean-shaped organs called lymph nodes. Lymph nodes are found near your breast, under your arm, above your collarbone, in your chest, and in other parts of your body.
- Lymph nodes filter substances in lymph to help fight infection and disease. They also store disease-fighting white blood cells called lymphocytes.

## Breast changes to see your health care provider about:

**A lump (mass) or a firm feeling**

A lump in or near your breast or under your arm
Thick or firm tissue in or near your breast or under your arm
A change in the size or shape of your breast
Lumps come in different shapes and sizes. Most lumps are not cancer.
If you notice a lump in one breast, check your other breast. If both breasts feel the same, it may be normal. Normal breast tissue can sometimes feel lumpy.
Some women do monthly breast self-exams (BSE). Doing a BSE can help you learn how your breast normally feels, and make it easier to notice and find any changes. Talk with your health care provider if you would like to learn more.
Remember—getting mammograms and having a clinical breast exam (an exam done by a health care provider) on a regular basis are the best ways to find breast cancer early in most women.

**Nipple discharge or changes**

Nipple discharge (fluid that is not breast milk)
Nipple changes, such as a nipple that points or faces inward (inverted) into the breast
Nipple discharge may be different colors or textures. Nipple discharge is not usually a sign of cancer. It can be caused by birth control pills, some medicines, and infections.

**Skin changes**

Itching, redness, scaling, dimples, or puckers on your breast

## Mammogram

A mammogram is an x-ray picture of your breast tissue.
Mammograms are used for screening as well as to help diagnose a breast finding. This test may find tumors that are too small to feel.
During a mammogram, each breast is pressed between two plastic plates. Some discomfort is normal, but if it's painful, tell the mammography technician.
The best time to get a mammogram is at the end of your menstrual period. This is when your breasts are less tender. Some women have less breast tenderness if they don't have any caffeine for a couple of days before the mammogram.
After the x-ray pictures are taken, they are sent to a radiologist, who studies them and sends a report to your health care provider.
Both film and digital mammography use x-rays to make a picture of the breast tissue. The actual procedure for getting the mammogram is the same. The difference is in how

the images are recorded and stored. It's like the difference between a film camera and a digital camera.

## Breast Ultrasound

Ultrasound uses high-frequency sound waves to look at organs and structures inside the body. Breast ultrasonography is used as an adjunct to mammography to distinguish if a mass found on mammogram is solid tissue or if it is a fluid-filled cyst. Use of ultrasonography may allow the radiologist to clarify the type of mass and avoid recommending biopsies or surgical procedures that may be unnecessarily. During an ultrasound, a special technician or doctor moves a device called a transducer over part of your body. The transducer sends out sound waves, which bounce off the tissues inside your body. The transducer also captures the waves that bounce back. Images are created from these sound waves.

Ultrasound has not been proven to be as accurate at finding small cancers as mammography, especially cancers that contain tiny calcifications. Ultrasound is also not a beneficial tool for screening patients. Ultrasound is used when it is medically necessary for a diagnosis of a mass or an area of concern that is seen on a mammogram or breast MRI.

## MRI

Magnetic resonance imaging, also called MRI, uses a powerful magnet, radio waves, and a computer to take detailed pictures of areas inside the breast. MRI is another tool that can be used to find breast cancer. However, MRIs don't replace mammograms. They are used in addition to mammograms in women who are at increased risk of breast cancer. MRIs have some limits. For example, they cannot find breast changes such as microcalcifications. MRIs are also less specific than other tests. This means that they may give false-positive test results—the test shows that there is cancer when there really is not.

Talk with your health care provider about having other screening tests, such as an MRI, in addition to mammograms. Ask your health care provider if you are at increased risk of breast cancer due to:

- Harmful changes (mutations) in the BRCA1 or BRCA2 gene
- A family history of breast cancer
- Your personal medical history places you at increased risk of developing breast cancer

## Common types of breast biopsies:

**Fine-needle aspiration biopsy**

A fine-needle aspiration biopsy is a simple procedure that takes only a few minutes. Your health care provider inserts a thin needle into the breast to take out fluid and cells.

**Core biopsy**

A core biopsy, also called a core needle biopsy, uses a needle to remove small pieces or cores of breast tissue. The samples are about the size of a grain of rice. You may have a bruise, but usually not a scar.

**Vacuum-assisted biopsy**
A vacuum-assisted biopsy uses a probe, connected to a vacuum device, to remove a small sample of breast tissue. The small cut made in the breast is much smaller than with surgical biopsy. This procedure causes very little scarring, and no stitches are needed.
**Surgical biopsy**
A surgical biopsy is an operation to remove part, or all, of a lump so it can be looked at under a microscope to check for signs of disease. Sometimes a doctor will do a surgical biopsy as the first step. Other times, a doctor may do a surgical biopsy if the results of a needle biopsy do not give enough information.
If the breast change cannot be felt, wire localization, also called needle localization, may be used to find the breast change. During wire localization, a thin, hollow needle is inserted into the breast. A mammogram is taken to make sure that the needle is in the right place. Then a fine wire is inserted through the hollow needle, to mark the area of tissue to be removed. Next, the needle is removed, and another mammogram is taken. You then go to the operating room where the surgeon removes the wire and surrounding breast tissue. The tissue is sent to the lab to be checked for signs of disease.

## Breast changes that are not cancer

These changes are not cancer and do not increase your risk of breast cancer. They are called benign changes.
Adenosis: Small, round lumps, or a lumpy feeling that are caused by enlarged breast lobules. Sometimes the lumps are too small to be felt. If there is scar-like tissue, the condition may be painful and is called sclerosing adenosis.
Cysts: Lumps filled with fluid. Breast cysts often get bigger and may be painful just before your menstrual period begins. Cysts are most common in premenopausal women and in women who are taking menopausal hormone therapy.
Fat necrosis: Round, firm lumps that usually don't hurt. The lumps most often appear after an injury to the breast, surgery, or radiation therapy.
Fibroadenomas: Hard, round lumps that may feel like a small marble and move around easily. They are usually painless and are most common in young women under 30 years old.
Intraductal papilloma: A wart-like growth in a milk duct of the breast. It's usually found close to the nipple and may cause clear, sticky, or bloody discharge from the nipple. It may also cause pain and a lump. It is most common in women 35-55 years old.
Microcalcifications: Calcium deposits in the breast that look like tiny white specks on a mammogram. Not usually a sign of cancer. However, if found in an area of rapidly dividing cells or grouped together in a certain way, they may be a sign of DCIS or invasive breast cancer.

## Breast changes that are not cancer, but increase your risk of cancer

These conditions are not cancer, but having them increases your risk of breast cancer. They are considered risk factors for breast cancer. Other risk factors include, for example, your age and a family history of breast cancer.
Atypical hyperplasia:

- Atypical lobular hyperplasia (ALH) is a condition in which abnormal cells are found in the breast lobules.

- Atypical ductal hyperplasia (ADH) is a condition in which abnormal cells are found in the breast ducts.

Lobular carcinoma in situ (LCIS) is a condition in which abnormal cells are found in the breast lobules. There are more abnormal cells in the lobule with LCIS than with ALH. Since these cells have not spread outside the breast lobules, it's called "in situ," which is a Latin term that means "in place."

The abnormal cells found in these conditions are not cancer cells. If you have ALH, ADH, or LCIS, talk with a doctor who specializes in breast health to make a plan that works best for you.

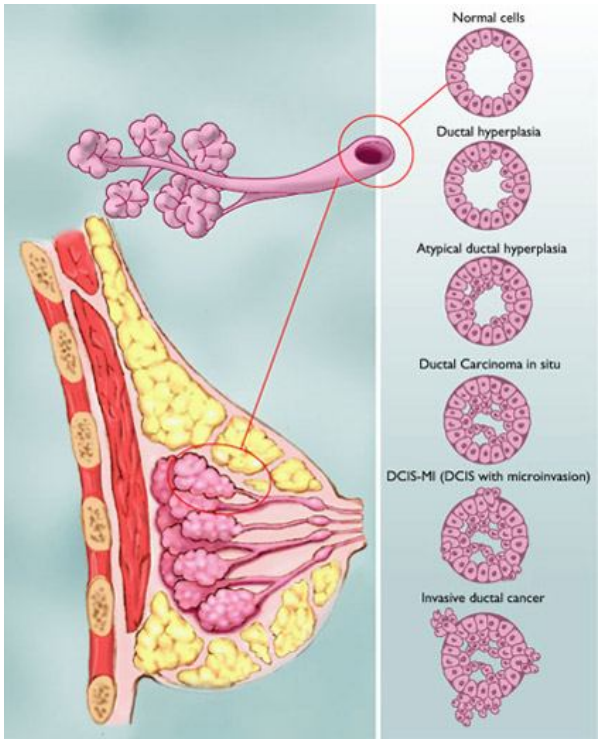


Image from breastcancer.org

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Information specialists at the NCI's Cancer Information Service at 1-800-4-CANCER can answer questions about melanoma and can send NCI materials. They can also send up-to-date treatment information from NCI's PDQ® database. In addition, many NCI publications and fact sheets are on the Internet at http://www.cancer.gov/publications. People in the United States and its territories may use this Web site to order publications. This Web site also explains how people outside the United States can mail or fax their requests for NCI publications.