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Breast Cancer in Men Early Detection, Diagnosis, and Staging

Know the signs and symptoms of breast cancer in men. Find out how breast cancer in men is tested for, diagnosed, and staged.

Detection and Diagnosis

Catching cancer early often allows for more treatment options. Some early cancers may have signs and symptoms that can be noticed, but that is not always the case.

- [Can Breast Cancer in Men Be Found Early?](#)
- [Signs and Symptoms of Breast Cancer in Men](#)
- [Tests to Help Diagnose Breast Cancer in Men](#)

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and anticipated response to treatment.

- [Lab Tests to Help Classify Breast Cancer in Men](#)
 - [Tests to Look for Breast Cancer Spread in Men](#)
 - [Breast Cancer Stages in Men](#)
 - [Breast Cancer Survival Rates in Men](#)
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Can Breast Cancer in Men Be Found Early?

- [Differences in early detection of breast cancers in men and women](#)
- [For men who are or may be at high risk](#)

Finding breast cancer early improves the chances that male breast cancer can be treated successfully. However, because breast cancer is so uncommon in men, there is

<http://www.cancer.gov/cancertopics/pdq/genetics/breast-and-ovarian/HealthProfessional> on January 16, 2018.

Last Revised: April 27, 2018

Signs and Symptoms of Breast Cancer in Men

Possible symptoms of breast cancer to watch for include:

- A lump or swelling, which is often (but not always) painless
- Skin dimpling or puckering
- Nipple retraction (turning inward)
- Redness or scaling of the nipple or breast skin
- Discharge from the nipple

Sometimes a breast cancer can spread to lymph nodes under the arm or around the collar bone and cause a lump or swelling there, even before the original tumor in the breast is large enough to be felt.

These changes aren't always caused by cancer, but if you notice any breast changes, you should see a health care professional as soon as possible.

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Tests to Help Diagnose Breast Cancer in Men

- [Medical history and physical exam](#)
- [Imaging tests for breast cancer in men](#)

Medical history and physical exam

If there is a chance you have breast cancer, your doctor will want to get a complete personal and family medical history. This may give some clues about the cause of any symptoms you are having and if you might be at increased risk for breast cancer.

A complete breast exam will be done to find any lumps or suspicious areas and to feel their texture, size, and relationship to the skin and muscle. The doctor may also examine the rest of your body to look for any evidence of possible spread, such as enlarged lymph nodes (especially under the arm).

Imaging tests for breast cancer in men

If you have signs or symptoms that could mean breast cancer or another breast disease, your doctor might recommend one or more of the following imaging tests.

Diagnostic mammogram

A [mammogram](#)¹ is a low dose x-ray exam of the breast that allows doctors called radiologists to look for changes in breast tissue. It is called a *diagnostic* mammogram

few seconds and may be uncomfortable briefly, but it is necessary to get a better picture. In some cases, special images known as *cone* or *spot views with magnification* are taken to make a small area of abnormal breast tissue easier to evaluate.

The results of this test might suggest that a biopsy is needed to tell if the abnormal area is cancer. Mammography is often more accurate in men than women, since men do not have dense breasts or other common breast changes that might interfere with the test.

go to another doctor for a second opinion. A biopsy is the only sure way to diagnose breast cancer.

There are different types of breast biopsies. The type you have depends on your situation.

[Fine needle aspiration biopsy \(FNA\)](#)⁵: This type of biopsy is often used to look for cancer spread in the nearby lymph nodes. The doctor uses a very thin, hollow needle attached to a syringe to withdraw (aspirate) a small amount of tissue or fluid from a suspicious area. A local anesthetic (numbing medicine) may or may not be used. The biopsy sample is then checked to see if there are cancer cells in it.

If the area to be biopsied can be felt, the needle can be guided into it while the doctor is feeling it. If the lump can't be felt easily, the doctor might watch the needle on an ultrasound screen as it moves into the area. This is called an **ultrasound-guided biopsy**.

An FNA biopsy is the easiest type of biopsy to have, but it can sometimes miss a cancer if the needle does not go into the cancer cells.

If the results of the FNA biopsy do not give a clear diagnosis, or your doctor still has concerns, you might need to have a second biopsy or a different type of biopsy.

[Core needle biopsy \(CNB\)](#)⁶: This is the most common type of biopsy used to make a breast cancer diagnosis. The doctor uses a wide, hollow needle to take out pieces of breast tissue from a suspicious area. The needle used in this technique is larger than that used for FNA and allows the doctor to remove larger cylinders (cores) of tissue. Several cylinders are often removed. The biopsy is done with local numbing medicine and with the doctor either feeling the abnormal area or using an imaging test (like ultrasound or MRI) to find the spot to biopsy.

In addition to the standard CNB, there are two other types of CNBs:

- [Stereotactic core needle biopsy](#)⁷
- [Vacuum-assisted core biopsy](#)⁸

If the results of the CNB do not give a clear diagnosis, or your doctor still has concerns, you might need to have a second biopsy or a different type of biopsy.

Surgical (open) biopsy: Most breast cancer can be diagnosed with a needle biopsy. Rarely, surgery is needed to remove all or part of the lump for testing. Most often, the

surgeon removes the entire mass or abnormal area, as well as a surrounding margin of normal-appearing breast tissue.

Lab Tests to Help Classify Breast Cancer in Men

- [Breast cancer type](#)
- [Breast cancer grade](#)
- [Tests to classify breast cancers](#)
- [Other lab tests](#)

Breast cancer is classified in different ways, based on the results of lab tests after biopsy or surgery. Breast cancer is given a type, based on the type of cells it started from; a grade, based on how the cells look and how quickly they grow; and other classifications based on the results of tests for different hormone receptors or genes or proteins in the cancer cells.

- **Grade 3 or poorly differentiated:** The cancer cells look very different from normal cells and will probably grow and spread faster.

Our information about [pathology reports](#)² can help you understand details about your breast cancer.

Ductal carcinoma in situ (DCIS) is also graded, but the grade is based only on how abnormal the cancer cells look. Areas of **necrosis** (dead or dying cancer cells) are also noted. If there is necrosis, it means the tumor is growing quickly. See [Understanding Your Pathology Report: Ductal Carcinoma In Situ](#)³ for more on how DCIS is described.

Tests to classify breast cancers

Estrogen receptor (ER) and progesterone receptor (PR) status

Receptors are proteins in or on cells that can attach to certain substances in the blood. Normal breast cells and some breast cancer cells have receptors (proteins) that attach to the hormones estrogen and progesterone, and the cells depend on these hormones to grow. Cancers are called *hormone receptor-positive* or *hormone receptor-negative* based on if they have these receptors. Knowing the [hormone receptor status](#)⁴ is important in deciding treatment options. Keeping these receptors from attaching to the hormones can help keep the cancer from growing and spreading. There are [sp0 0.2qi0w0 0.28 0 0 rge](#)

Gene expression tests

Tests that look at the patterns of certain genes (sometimes referred to as *gene expression profiling*) can help predict if some early-stage (stage 1 or 2) breast cancer are likely to come back after initial treatment. Doctors can use this information to know who will most likely benefit from [chemotherapy](#)¹⁵ after [breast surgery](#)¹⁶.

Oncotype DX and **MammaPrint** are examples of tests that look at different sets of breast cancer genes. There are more tests in development. Tests like these are part of what's being called "personalized medicine" – learning more about your cancer to specifically tailor your treatment.

More information is needed to decide how useful this test is for breast cancer in men. But there is enough data that this test can help men with early stage breast cancer make decisions about chemotherapy after surgery. Ask your doctor if these tests might be appropriate.

Hyperlinks

1. www.cancer.org/cancer/types/breast-cancer-in-men/about/what-is-breast-cancer-in-men.html
2. www.cancer.org/cancer/diagnosis-staging/tests/biopsy-and-cytology-tests/understanding-your-pathology-report/breast-pathology.html
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Tests to Look for Breast Cancer Spread in Men

A [CT scan](#)¹ uses x-rays taken from different angles, which are combined by a computer to make detailed pictures of the organs. This test is most often used to look at the chest and/or belly (abdomen) to see if breast cancer has spread to other organs. It can also be used to guide a biopsy needle into an area of concern.

Magnetic resonance imaging (MRI) scan

A [MRI scan](#)² makes detailed pictures using radio waves and strong magnets instead of x-rays. This test can be helpful in looking at your brain and spinal cord. MRIs can be more uncomfortable than CT scans because they take longer and you often need to lie in a narrow tube while the test is done.

Ultrasound

For an [ultrasound](#)³, a wand that gives off sound waves is moved over the skin to take pictures of the inside of the body. A gel is often put on your skin first. This test can be used to diagnose breast cancer but it can also be used to look for cancer that has spread to other parts of the body.

Abdominal ultrasound can be used to look for tumors in the liver or other abdominal organs.

Bone scan

A [bone scan](#)⁴ can help show if a cancer has metastasized (spread) to the bones. It can show all of the bones in the body at the same time and can find small areas of cancer spread not seen on plain x-rays.

Bone changes show up as "hot spots" on your skeleton. They attract the radioactivity. These areas may suggest metastatic cancer, but arthritis or other bone diseases can also cause the same pattern. To distinguish between these conditions, your cancer care team may use other imaging tests such as simple x-rays or CT, MRI or PET scans to get a better look at the abnormal areas or they may even take biopsy samples of the bone.

Positron emission tomography (PET) scan

For this test, a form of radioactive sugar is put into a vein and travels throughout the body. Cancer cells absorb high amounts of this sugar. A special camera then takes pictures that show the areas where the sugar collected throughout the body.

Breast Cancer Stages in Men

- [How is the stage determined?](#)
- [Details of the TNM staging system](#)
- [Examples using the new staging system](#)

After someone is diagnosed with breast cancer, doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes how much cancer is in the body. It helps determine how serious the cancer is

[Oncotype Dx® Recurrence Score](#) results may also be considered in the stage in certain circumstances.

The most recent AJCC system, effective January 2018, has both clinical and pathologic staging systems for breast cancer. The **pathologic stage** (also called the **surgical stage**) is determined by examining tissue removed during an operation. Sometimes, if surgery is not possible right away or at all, the cancer will be given a **clinical stage** instead. This is based on the results of a physical exam, biopsy, and imaging tests. The clinical stage is used to help plan treatment. Sometimes, though, the cancer has spread further than the clinical stage estimates, and may not predict the patient's outlook as accurately as a pathologic stage.

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. Once a person's T, N, and M categories, as well as ER, PR, HER2 status and grade of the cancer have been determined, this information is combined in a process called **stage grouping** to assign an overall stage. For more information see [Cancer Staging](#).¹ Detailed explanations of the TNM categories are seen below. The addition of information about ER, PR, and HER2 status along with grade has made stage grouping complex, so, it is best to ask your doctor about your specific stage and what it means.

Details of the TNM staging system

T categories for breast cancer

T followed by a number from 0 to 4 describes the main (primary) tumor's size and if it has spread to the skin or to the chest wall under the breast. Higher T numbers mean a larger tumor and/or wider spread to tissues near the breast.

TX: Primary tumor cannot be assessed.

T0: No evidence of primary tumor.

Tis: Carcinoma in situ (DCIS, or Paget disease of the nipple with no associated tumor mass)

T3: Tumor is more than 5 cm across.

T4 (includes T4a, T4b, T4c, and T4d): Tumor of any size growing into the chest wall or skin. This includes inflammatory breast cancer.

N categories for breast cancer

N followed by a number from 0 to 3 indicates whether the cancer has spread to lymph nodes near the breast and, if so, how many lymph nodes are involved.

Lymph node staging for breast cancer is based on how the nodes look under the microscope, and has changed as technology has improved. Newer methods have made it possible to find smaller and smaller collections of cancer cells, but experts haven't been sure how much these tiny deposits of cancer cells affect outlook.

It's not yet clear how much cancer in the lymph node is needed to see a change in outlook or treatment. This is still being studied, but for now, a deposit of cancer cells must contain at least 200 cells or be at least 0.2 mm across (less than 1/100 of an inch) for it to change the N stage. An area of cancer spread that is smaller than 0.2 mm (or fewer than 200 cells) doesn't change the stage, but is recorded with abbreviations (i+ or mol+) that indicate the type of special test used to find the spread.

If the area of cancer spread is at least 0.2 mm (or 200 cells), but still not larger than 2 mm, it is called a **micrometastasis** (one mm is about the size of the width of a grain of rice). Micrometastases are counted only if there aren't any larger areas of cancer spread. Areas of cancer spread larger than 2 mm are known to affect outlook and do change the N stage. These larger areas are sometimes called **macrometastases**, but are more often just called metastases.

NX: Nearby lymph nodes cannot be assessed (for example, if they were removed previously).

N0: Cancer has not spread to nearby lymph nodes.

N0(i+): The area of cancer spread contains less than 200 cells and is smaller than 0.2 mm. The abbreviation "i+" means that a small number of cancer cells (called isolated tumor cells) were seen in routine stains or when a special type of staining technique, called immunohistochemistry, was used.

N0(mol+): Cancer cells cannot be seen in underarm lymph nodes (even using special stains), but traces of cancer cells were detected using a technique called *RT-PCR*. RT-PCR is a molecular test that can find very small numbers of cancer cells. (This test is

not often used to find breast cancer cells in lymph nodes because the results do not influence treatment decisions.)

N1: Cancer has spread to 1 to 3 axillary (underarm) lymph node(s), and/or tiny amounts of cancer are found in internal mammary lymph nodes (those near the breast bone) on sentinel lymph node biopsy.

N1mi: Micrometastases (tiny areas of cancer spread) in the lymph nodes under the arm. The areas of cancer spread in the lymph nodes are at least 0.2mm across, but not larger than 2mm.

N1a: Cancer has spread to 1 to 3 lymph nodes under the arm with at least one area of cancer spread greater than 2 mm across.

N1b: Cancer has spread to internal mammary lymph nodes on the same side as the cancer, but this spread could only be found on sentinel lymph node biopsy (it did not cause the lymph nodes to become enlarged).

N1c: Both N1a and N1b apply.

N2: Cancer has spread to 4 to 9 lymph nodes under the arm, or cancer has enlarged the internal mammary lymph nodes

N2a: Cancer has spread to 4 to 9 lymph nodes under the arm, with at least one area of cancer spread larger than 2 mm.

N2b: Cancer has spread to one or more internal mammary lymph nodes, causing them to become enlarged.

N3: Any of the following:

N3a: either:

Cancer has spread to 10 or more axillary lymph nodes, with at least one area of cancer spread greater than 2 mm,

OR

Cancer has spread to the lymph nodes under the collarbone (infraclavicular nodes), with at least one area of cancer spread greater than 2 mm.

N3b: either:

Cancer is found in at least one axillary lymph node (with at least one area of cancer spread greater than 2 mm) and has enlarged the internal mammary lymph nodes,

OR

Cancer has spread to 4 or more axillary lymph nodes (with at least one area of cancer spread greater than 2 mm), and tiny amounts of cancer are found in internal mammary lymph nodes on sentinel lymph node biopsy.

N3c: Cancer has spread to the lymph nodes above the collarbone (supraclavicular nodes) with at least one area of cancer spread greater than 2 mm.

M categories for breast cancer

M followed by a 0 or 1 indicates whether the cancer has spread to distant organs -- for example, the lungs, liver, or bones.

M0: No distant spread is found on x-rays (or other imaging tests) or by physical exam.

cM0(i+): Small numbers of cancer cells are found in blood or bone marrow (found only by special tests), or tiny areas of cancer spread (no larger than 0.2 mm) are found in lymph nodes away from the underarm, collarbone, or internal mammary areas.

M1: Cancer has spread to distant organs (most often to the bones, lungs, brain, or liver).

Examples using the new staging system

Example #1

If the cancer size is between 2 and 5 cm (T2) but it has not spread to the nearby lymph nodes (N0) or to distant organs (M0) **AND** is:

- Grade 3
- HER2 negative
- ER positive
- PR positive

The cancer stage is IB.

Example #2

If the cancer is larger than 5 cm (T3) and has spread to 4 to 9 lymph nodes under the arm or to any internal mammary lymph nodes (N2) but not to distant organs (M0) **AND** is:

- Grade 2
- HER2 positive
- ER positive
- PR positive

The cancer stage is IB.

Example #3

If the cancer is larger than 5 cm (T3) and has spread to 4 to 9 lymph nodes under the arm or to any internal mammary lymph nodes (N2) but not to distant organs (M0) **AND** is:

- Grade 2
- HER2 negative
- ER negative
- PR negative

The cancer stage is IIIB.

Hyperlinks

1. www.cancer.org/cancer/diagnosis-staging/staging.html

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Breast Cancer Survival Rates in Men

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Ask your doctor how these numbers might apply to you, as they are familiar with your situation.

What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of cancer to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of breast cancer in men is 80%, it means that men who have that cancer are, on average, about 80% as likely as men who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the Surveillance, Epidemiology, and End Results (SEER) database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for breast cancer in men in the

United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by [AJCC TNM stages](#) (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

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