

Male Breast Cancer: What Men Need to Know



Introduction



Our goal with this guide is to inform men about male breast cancer, from signs and symptoms to look for to what treatments are available if they receive a breast cancer diagnosis. This resource contains vital information that is not widely known, though it is potentially lifesaving. If you find this information helpful, we encourage you to share it with your family and friends so that they can also prioritize their breast health.

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About Male Breast Cancer

All people—female and male—are born with breast cells and tissue. This means that even though males do not develop milk-producing breasts, a man's breast cells and tissue can still develop cancer, leading to a <u>male breast cancer</u> diagnosis.

Male breast cancer is rare, accounting for less than 1% of all breast cancer diagnoses in the United States. However, men carry an approximately 25% higher breast cancer mortality rate than women, primarily because men are overall less aware of breast cancer and are less likely to assume a lump or other symptom is cancer, which can cause a delay in seeking diagnosis and treatment.

Men can be diagnosed with breast cancer at any age, though it is typically more common in older males between the ages of 60 and 70. The average age for a male breast cancer diagnosis is 67 years old.

Like female breast cancer, breast cancer in men begins as a growth of malignant (cancerous) cells in the breast tissue. If left undetected and/or untreated, the malignant cells can continue to grow and multiply, eventually spreading to other areas of the breast tissue or into other structures or parts of the body. The earlier breast cancer in men is diagnosed, the easier it is to treat, increasing male breast cancer survival rates.

Signs and Symptoms of Male Breast Cancer

Male breast cancer can exhibit the same <u>signs and symptoms</u> as breast cancer in women, including a lump. Anyone who notices anything unusual about their breasts, whether male or female, should contact their physician immediately.

The most common symptoms for male breast cancer include:

- A lump, with or without pain, that feels like a knot or hard pebble; lumps can be located right under or around the nipple or in the armpit area
- Pain in the nipple or breast area
- Changes to the breast skin, including dimpling, puckering, or redness
- Change in the breast shape or size
- Nipple discharge
- A rash or a sore on the nipple or areola
- Nipple turning inward (inverted nipple)

Breast cancer in men is usually detected as a <u>hard lump</u> underneath the nipple and areola, which is often found by men while in the shower.

It is common for men to delay reporting the lump to a physician, which can result in being diagnosed at a later stage when the cancer is harder to treat. It is essential to contact a healthcare professional immediately if you detect any of these changes or irregularities in the breast tissue or surrounding area.

Breast Self-Awareness in Men

Breast self-awareness means being aware of how your breast tissue normally looks and feels. When you are familiar with what normal looks and feels like for you, changes in the breast tissue become easier to detect.

Breast self-exam for men

Women are encouraged to perform a breast selfexam every month in order to look for any changes or abnormalities in their breast tissue. Likewise, men may choose to perform their own breast self-exams to stay vigilant about any changes they may experience.

The steps for a male breast self-exam are the same as the steps for females. When performing a male breast self-exam, you should:

- Use the pads/flats of your fingers to feel around the entire breast and armpit area, pressing down with enough pressure to feel for any lumps, hardened knots, or other irregularities under the skin. A <u>breast lump</u> may feel soft and moveable, or it may feel fixed and stationary. A lump may or may not cause pain.
- In front of a mirror, visually inspect your breasts, looking for any changes in the size or shape of the breasts. Also visually inspect the skin on and around the breast and nipple, looking for any changes in the skin texture, such as dimpling, redness, scaliness, or puckering.
- Gently squeeze the nipple to check for any discharge.

If you notice any lumps, bumps, skin abnormalities, or other irregularities, follow up with your doctor right away. Remember, the <u>early detection</u> of breast cancer can increase the effectiveness of treatment options and often reduces the risk of dying from breast cancer for men and women alike.

Types of Male Breast Cancer

Like breast cancer in women, men can develop different types of breast cancer. The treatment plan for male breast cancer will vary based on which type of cancer he is diagnosed with. It is important to remember that breast cancer in men is rare, though it is important to be informed about the disease.

The most common types of male breast cancer include:

- Invasive ductal carcinoma (IDC): Also known as
 infiltrative ductal carcinoma, this invasive type of breast
 cancer occurs when cancerous cells spread beyond the
 milk ducts into other parts of the breast tissue or other
 parts of the body. It is the most common type of breast
 cancer for both men and women.
- <u>Ductal carcinoma in situ</u> (DCIS): DCIS is a non-invasive type of breast cancer where abnormal cells are found in the lining of the milk duct. The earliest breast cancer stages are known as "carcinoma in situ," which means "cancer in the original place," or breast cancer that has not spread to other areas. This form of breast cancer is highly treatable in its early stages.

Male Breast Cancer Stages

Like female breast cancer, when male breast cancer is diagnosed, it will be given a stage. The stage of breast cancer indicates how far the cancer has spread and how much cancer exists in the body. This information informs male breast cancer treatment plans.

The stages of male breast cancer are:

- <u>Stage 0</u>: Breast cancer that is non-invasive and has not spread beyond the milk ducts. The cancer in this stage is called ductal carcinoma in situ (DCIS).
- <u>Stage 1</u>: Early-stage breast cancer that has not spread to the lymph nodes or other areas of the body.
- <u>Stage 2</u>: A more advanced form of breast cancer with either a relatively large tumor or cancerous cells that have spread to the lymph nodes in the armpit area.
- <u>Stage 3</u>: Locally advanced cancer that has spread out of the breast tissue into many nearby lymph nodes and is a more advanced stage.
- <u>Stage 4</u>: Also known as <u>metastatic breast cancer</u>, this advanced form of breast cancer involves spread to other parts of the body, often to the bones, brain, liver, or lungs.

These stages are based on factors including the size of the tumor, spread to the lymph nodes and other distant sites, whether it has a protein known as an estrogen receptor or a progesterone receptor, and more. Male breast cancer treatment will be based on factors including stage and type of cancer.

Risk Factors for Male Breast Cancer

Most research suggests the cause of male breast cancer is unclear. However, there are certain <u>risk factors for male breast cancer</u>. Some of these risk factors, such as obesity, are under a person's control and are avoidable through lifestyle changes. Other factors, like gene mutations, are not avoidable.

Factors that increase the risk of breast cancer in men include:

- Age: The risk of male breast cancer increases as you age, with most diagnoses happening between ages 60 and 70.
- Family history: If you have a first-degree blood relative—male or female—with breast cancer, your risk of breast cancer increases. About 1 in 5 men with breast cancer have a close relative who has also faced breast cancer.
- BRCA gene mutations: Men with a gene mutation (change or defect) in a BRCA gene have a higher risk of developing breast cancer. A male with a BRCA1 gene mutation carries a 1 in 11 lifetime risk of developing breast cancer. A male with a BRCA2 gene mutation carries a 1 in 6 lifetime risk. See Genetic Testing for Male Breast Cancer for more information.

- Lobular carcinoma in situ (LCIS): Despite having
 "carcinoma" in the name, LCIS is not breast cancer.
 Rather, it is a condition where abnormal cells are found
 in the breast lobules. LCIS is considered a risk factor
 for developing breast cancer. It is highly rare in men
 because they do not have much lobular tissue. This
 condition is very treatable and rarely becomes invasive
 cancer when found early.
- Estrogen-related treatment: Males who use hormone therapy to treat prostate cancer, take medicine containing estrogen, or have undergone hormone therapy for 5 years or more may have a greater risk of breast cancer. In general, individuals with higher estrogen levels have an increased risk of developing breast cancer.
- Klinefelter syndrome: This congenital condition affects about 1 in every 1,000 men. While most men have one X and one Y chromosome, men with Klinefelter syndrome have at least two X chromosomes. It reduces male hormones, or androgens, and increases estrogen (female hormones) in the body. This syndrome can increase the risk of breast cancer in men by 20 to 60%.
- Radiation exposure: Men who have been treated with radiation on the chest area have an increased risk of developing breast cancer.
- Liver disease: Severe liver disease, such as cirrhosis, creates imbalances in male hormone levels and increases the risk of male breast cancer.
- Testicular conditions: Having one or both testicles surgically removed, having undescended testicles, and adult cases of mumps can contribute to increased male breast cancer risk.

- Obesity: Excessive weight is linked with increased estrogen, which in turn increases the risk of breast cancer.
- **Smoking:** Smoking or being exposed to secondhand smoke can increase the risk of developing breast and other types of cancer.
- **Drinking alcohol:** Frequent consumption of alcohol can increase the risk of developing breast cancer. The greater the consumption, the greater the risk.

If you have one or more of these risk factors, talk with your doctor about monitoring for male breast cancer. Paying close attention to your breast health and overall health can help men manage risk factors.

Diagnosing Breast Cancer in Men

Breast cancer in men can be detected through a variety of diagnostic tests. These tests provide further information and can inform treatment plans as needed.

If you have family history or breast cancer symptoms, your doctor may recommend some of these diagnostic tests:

- Physical exam: A physical exam, including <u>family</u> medical <u>history</u> and a breast exam to look for lumps or other issues, is often the first step in assessing breast cancer in men.
- Mammogram: Low-dose x-rays of the breasts, mammograms are the best option for detecting male breast cancer in its early stages.
- <u>Ultrasound</u>: Often a follow-up to a mammogram, a breast ultrasound can be used for further evaluation of the breast and to determine the exact size and location of any lumps and surrounding tissue.
- Biopsy: A breast biopsy is the only diagnostic test that can officially determine if a suspicious area is cancerous or not. During a biopsy, tissue and/or fluid are removed from the suspicious area and examined under a microscope to look for breast cancer.

If you are diagnosed with breast cancer, you may undergo additional tests at your physician's recommendation, such as blood marker tests, a chest x-ray, or a bone scan.

Genetic Testing for Male Breast Cancer

A man diagnosed with breast cancer should consider genetic testing to determine if there is a mutation in a gene that can cause breast cancer. It is important for a man to know if he has a breast cancer gene mutation because that mutation can be passed down to his children—male or female—increasing their risk for also developing breast cancer. Not all men who carry a breast cancer gene mutation will develop breast cancer.

BRCA gene mutations

BRCA is an abbreviation for "BReast CAncer gene." BRCA1 and BRCA2 are two different genes that have been found to impact a person's chances of developing breast cancer. A mutation, or defect, in either of these genes increases a person's likelihood of developing breast cancer.

If a man tests positive for a gene mutation, most commonly BRCA1 or BRCA2, he has an increased risk of developing breast cancer in the future. Likewise, each child of a man with a BRCA1 or BRCA2 gene mutation has a 50% chance of also carrying the gene mutation.

Other gene mutations

While BRCA1 and BRCA2 are better known, there is some evidence to suggest that several additional gene mutations may play a role in male breast cancer, although further research is needed.

These genes include:

 CHEK2: The CHEK2 gene delivers instructions for a protein that inhibits the growth of tumors; abnormal genes have been shown to double the overall risk of breast cancer, although more studies in men are needed.

- PALB2: This gene provides instructions for making a protein that collaborates with the BRCA2 protein to inhibit tumor growth and repair damaged DNA. According to a recent study, men with a PALB2 gene mutation have a 1% chance of developing breast cancer. However, this number is significantly higher for women.
- ATM: This gene is also responsible for repairing damaged DNA, and abnormal ATM genes have been linked to a higher risk of breast cancer in some studies.

Since up to 10% of breast cancer is thought to be inherited, genetic testing for genes linked to breast cancer can be an important step for men who have a strong family history of cancer. Additional clinical studies continue to assess and evaluate the genetic components of male breast cancer.

Breast Cancer Treatment Options for Men

Treatment for male breast cancer varies based on the type and stage of cancer, with surgery being the main treatment for both women and men. Some treatments are localized, which means only the area around the cancerous tumor is treated, while others are systemic and treat the entire body.

If you are diagnosed with male breast cancer, your healthcare team will help you customize a treatment plan to address the cancer as well as strategies for <u>managing potential side effects</u>.

The primary treatments for male breast cancer are:

• <u>Surgery</u>: Typically, men with breast cancer will have a mastectomy to remove the cancer. A mastectomy may involve removing the breast, breast tissue, lymph nodes, and the lining of the chest wall, depending on the tumor's size, location, and progression.

- <u>Chemotherapy</u>: This treatment uses cancer-killing drugs to prevent cancer cells from growing. Some men with breast cancer have chemotherapy before surgery to shrink the tumor size, or after surgery to address any cells that may remain. Chemo can also treat cancer that has spread beyond the breast.
- Radiation: Often used after breast cancer surgery, radiation uses high-energy rays to kill remaining cancer cells. Typically, radiation is not needed for men who have early-stage breast cancer (Stage 0 or 1) and have had mastectomy surgery. But if cancer was found in the lymph nodes in the armpit, radiation would likely be administered.
- Hormonal therapy: Hormonal therapy treats male breast cancer with drugs or other treatments that can inhibit the growth of breast cancer cells. Sometimes the hormones estrogen and progesterone—which are often thought of as female hormones but are also present in men—can cause cancer to grow. Because almost all breast cancer in men is estrogen receptor positive (ER+), it may be treated with hormonal therapy, just as in 70% of female breast cancer cases. Like chemo and radiation, hormonal therapy for men can be used before or after breast cancer surgery. Men are usually placed on hormonal therapy for 5 years or more.
- Targeted therapy: A newer therapy for male breast cancer, targeted therapy involves drugs that can target specific cancer cells and block the growth of cancer without harming normal cells. These targeted drugs, which work differently than chemo drugs, are often used in combination with chemotherapy.

Many male breast cancer therapies are used in combination. It's likely that you will receive a combination of the treatments listed above to treat male breast cancer.

Prognosis for Male Breast Cancer

When detected in its earliest, localized stages, the 5-year relative survival rate of male breast cancer is 95%, according to the American Cancer Society. This means that at the end of 5 years, 95% of men diagnosed with early-stage breast cancer will still be living.

Each stage of male breast cancer carries its own survival rate. Five-year relative survival rates at the localized, regional, and distant stages of male breast cancer are below.

5-year relative survival rates for male breast cancer by SEER* stage

Breast cancer (SEER) stage	5-year relative survival rate
Localized (invasive cancer has not spread outside of the breast)	95%
Regional (cancer has spread outside of the breast into nearby structures or lymph nodes)	84%
Distant (cancer has spread to other parts of the body, such as the bones, liver, lungs, or brain)	20%
All SEER stages combined	83%

^{*}SEER is the Surveillance, Epidemiology, and End Results database, maintained by the National Cancer Institute (NCI). Chart source: <u>American Cancer Society</u>

Men diagnosed with breast cancer today may have a better outlook based on improved treatments and greater recognition of breast cancer in men.

How to Talk to Your Doctor About Male Breast Cancer

Because male breast cancer is rare, many people are not aware of the risk it poses to men's health. It can also be difficult for men to approach the topic with their doctor or other healthcare provider due to lack of disease awareness.

Questions to ask your doctor to advocate for your breast health

If you are having trouble knowing what to say to your doctor about male breast cancer, the following prompts may help you start the conversation.

To get the conversation started

"I recently learned that men can get breast cancer. Can you review my health history to determine if I have any risk factors for developing male breast cancer?"

If you have a family history of breast cancer

"My mother and her sister both had breast cancer, and I know that there is a genetic link for certain breast cancer gene mutations. Can you let me know what my family's options are for genetic testing?"

If you are experiencing signs or symptoms of breast cancer

"I noticed a lump in the tissue of my left breast while I was in the shower. I would like to investigate this symptom to determine if it is something serious or benign."

If you need a second opinion

"Thank you for your help, but I don't feel comfortable with that plan and would like to ask for a second opinion. Is there a male breast cancer specialist that you can refer me to?"

Support for Male Breast Cancer Patients & Survivors

Men with breast cancer can turn to a variety of resources for coping and support during breast cancer diagnosis, treatment, and survivorship.

Your local care team, <u>patient navigator</u>, or hospital social worker might recommend support groups or individual therapists as well as connect you to financial assistance programs for support during treatment.

Talking about breast cancer is not easy for many, but it is important to find valuable support—whether it is a support group, an individual therapist, or a reliable friend—during this challenging time.

How to support a loved one facing male breast cancer

No matter the gender of the patient or the type of cancer, all cancer patients need the care and support of their loved ones. But it can be hard to know what to say to a male facing breast cancer, and men especially may find it hard to ask for or accept help from their loved ones.

Below are some tips and phrases that may be helpful when you are trying to show care and support to someone facing cancer.

Lead with empathy and compassion while respecting their privacy

"Do you feel comfortable sharing what you're going through? I'm here to support you no matter what."

"This has to be very hard for you and your family, but you have my support, too."

Offer to complete specific tasks so that they are more likely to accept your offer to help

"What are some tasks I can do for you? Dinner delivery, lawn care, car maintenance? I'm here to help."

"I'm going to the grocery store for a few things. What can I pick up for you? I'll drop it on your porch later."

Check in on their physical health

"It's good to see you today! How are you feeling after surgery?"

"I know you had chemo earlier this week. How are the side effects after this round?"

Show them that your relationship hasn't changed because they have cancer

"It's been a while since we got together. If you're feeling up to it, can we meet up for dinner or an activity that sounds fun to you?"

"I saw this video today that reminded me of you. Check it out!"

Sources

American Cancer Society

National Cancer Institute

breastcancer.org

Johns Hopkins Medicine

Mayo Clinic

Cleveland Clinic

Mayo Clinic

Richmond University Medical Center