

# Men and Breast Cancer: A Rare Diagnosis, A Vital Conversation

## *Shattering Myths, Raising Awareness, and Encouraging Early Action*

When we think of breast cancer, we often associate it with females, but males too have breast tissues and can develop this disease. The male breast consists of ducts, fibrous tissues and nearby lymph nodes. Male breast cancer originates in the underdeveloped breast tissues of males, mainly in the ducts. It starts with genetic mutations or hormonal imbalances that result in abnormal cells growing wildly. These cells can form tumors and invade surrounding tissues and eventually spread to distant organs through the lymphatic system or bloodstream.

The 5-year survival rate for males is around 84%, whereas it is 90% for females. Male breast cancer accounts for less than 1% of total cases in India, with an estimated 2,000 to 3,000 annual diagnoses. Additionally, around 1,000-1,500 men die from breast cancer annually. This disease is rare, but its effects are deep for those diagnosed and their loved ones. Early detection, greater awareness, and personalized treatment play a pivotal role in improving outcomes. [1] [2] [7] [8] [9]

Fig1. A diagram illustrating Anatomy of Male Breast

The above image is sourced from NBCAM under National Breast Cancer Foundation illustrates the anatomy of male breast marking the different parts and tumor which is more likely to develop near the duct areas.

**More information awaits you below, unpacking this topic in greater detail—let's get started.**

**Lets deep dive into the elements that make breast cancer different for a male and female**

Breast cancer in men differs from that in women not only in terms of frequency but also in many other key ways:

Out of many, some prominent parameters are mentioned below. Refer to the table to get an overview in one look.[2]

Sr.No	Key Differentiative Parameters	Clinical Overview
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1.	Incidence	This stark difference is due to the significant hormonal and biological factors that play a role in the development of breast cancer in women, particularly estrogen. Estrogen causes the growth of breast tissue, with a chance of mutation that leads to cancer. The incidence is much lower in men, who have much smaller amounts of estrogen.
2.	Age at diagnosis	While breast cancer in women usually presents at the age range of 50 to 60 years, male breast cancer tends to present later. At their averages, they are diagnosed when approximately 60 to 70 years of age.
3.	Tumor Size	When men are diagnosed with breast cancer, there tends to be a larger tumor compared to when a woman is diagnosed, simply because the size of breast tissue in males is typically smaller. In most instances, patients develop more invasive lumps that are challenging to deal with at the point of diagnosis.

### Risk Factors:Why Men are Vulnerable?

Risk factors are characteristics, conditions, or exposures that increase the risk of developing a disease, such as male breast cancer. They are common for both. The presence of these risk factors does not guarantee cancer but indicates individuals who may be at greater risk and thus focus more attention on early detection and prevention.

Risk factors particularly contributing to male breast cancer are:

- 1) **Klinefelter Syndrome:** This is one of the major risk factors when it comes to male breast cancer. Normally humans have 46 chromosomes. In this condition males have an extra X chromosome that is (47,XXY instead of 46,XY) ,here XY are sex chromosomes. Because of this extra X chromosome, estrogen levels are higher. Estrogen is a hormone that promotes development of breast tissues, thus making these men more susceptible to breast cancer.[10]
- 2) **Gynecomastia:** In this condition, due to hormonal changes male breast tissues get enlarged caused by an imbalance in the levels of estrogen and testosterone. These hormones, mainly estrogen, create a favourable environment for breast

tissues to enlarge. This enlargement is basically soft, symmetrical often involving both the breasts, which may further cause breast cancer if not treated.[10]

Some of the common risk factors are listed below.

- 1) **Hormonal Imbalances:** Elevated estrogen levels due to obesity, liver disease, or medications (e.g., prostate cancer treatments) increase breast cancer risk in men.
- 2) **Genetic Mutations:** BRCA1 and BRCA2 mutations, especially BRCA2, significantly raise the risk of breast cancer in men.
- 3) **Radiation Exposure:** Patients who have been exposed to chest radiation (for example, for Hodgkin lymphoma) have an increased risk of developing breast cancer later in life. [10]

### Identifying Symptoms of Male Breast Cancer:

Fig 2. Signs and Symptoms of Breast cancer in Men

Male breast cancer can mimic the signs of female breast cancer. Majorly there are two symptoms which only occur in males like painless lumps behind the nipple and ulceration of skin on the chest. But often, people do not know what to look for, and these signs are dismissed or misread. The most common signs of male breast cancer include:

- 1) **Painless Lump behind the nipple:** This is the most common sign found in males, being painless, smooth, and hard under the skin whereas females develop anywhere near the breast.
- 2) **Ulceration of skin on the chest:** This occurs more prominently in men due to less skin and tissue covering the tumor.
- 3) **Nipple discharge:** Usually clear or bloodstained; it is one of the red flags.
- 4) **Skin changes:** The skin might develop an orange-peel appearance, dimpled or puckered. This can be mistaken for irritation of the skin.
- 5) **Retraction of nipple:** Sometimes, the nipple may pull inward. This can signal the existence of a tumor.

Because most men are unlikely to ever see this disease, symptoms such as these usually pass unrecognized. Men may attribute them to more benign complaints, like hormonal imbalances or even injury. [4] [8]

Fig 3. Image illustrating changes seen near breast/nipple area

The above image depicts some unavoidable symptoms which can be seen near nipple areas like redness, formation of lump etc.[3]

## Stages of Male Breast Cancer

Male breast cancer is classified into stages on the basis of the tumor size, cancer spreading near lymph glands and metastasis which means spread to other parts of the body.[3]

Stage 0	Non Invasive Breast Cancer (cancer is restricted to the milk ducts without spreading)
Stage 1	Tumor size less than or equal to 2cm
Stage 2	Tumor size greater than 2 cm and spread to nearby lymph nodes.
Stage 3	Larger Tumor and widely spread to lymph node
Stage 4	Cancer has spread to distant organs which means it has become malignant

## Diagnosis

Due to several reasons like low awareness and smaller breast tissues in male the diagnosis is often delayed. Male breast cancer is diagnosed through a combination of physical exams, imaging tests and biopsy. Some of them are listed below: [2] [4]

- 1) **Clinical Exam:** Checking for lumps and changes in the breasts.
- 2) **Biopsy:** Confirmation of cancer through tissue analysis.
- 3) **Imaging:** Mammograms, ultrasounds, or MRI Scans.
- 4) **Genetic testing:** For BRCA mutation in such high-risk cases.

## Male Breast Cancer: Treatment Approaches

Male breast cancer treatment is largely similar to that of female breast cancer, there are some minor possible differences due to biological, anatomical and hormonal factors. They can be addressed using two major approaches:

1. Conventional Medicine : Targeted treatment, such as surgery, chemotherapy, and radiation therapy that aims to destroy the cancer cells.[5]

### a. Surgery

The most common treatment is mastectomy where every tissue and even sometimes lymph nodes in the breast is removed. This is the only difference since males have less breast tissues.

#### **b. Radiation Therapy**

High energy radiation is used to kill remaining cells after surgery. Common for both males and females.

#### **c. Hormone Therapy**

Since most male breast cancers are hormone-sensitive, drugs such as tamoxifen block hormones to slow or stop cancer growth.

#### **d. Chemotherapy**

Common for both based on the advanced stage of the cancer, chemotherapy or radiation might also be considered to minimize the risk of recurrence and ensure that all remaining cells are killed.[5] [1]

2. Ayurvedic Support : Ayurvedic herbs play an important role in modulating or preventing cancer cell growth and minimizing treatment toxicity. Herbs like Guduchi and Tulsi have potential applications in breast cancer care.[9]

Fig 4. Image showing all the aspects of Male breast cancer

### **Challenges**

Since male breast cancer is a rare disease, the studies and clinical trials conducted are usually on women. Many men who suffer from this condition do not find male-specific clinical trials, so instead, the treatment plans for them are usually general: about women.

### **References**

[1] [www.cancer.org](http://www.cancer.org) <https://www.cancer.org/cancer/breast-cancer-in-men.html>

[2] <https://pmc.ncbi.nlm.nih.gov/articles/PMC8233260/>

[3] <https://www.ej-med.org/index.php/ejmed/article/view/2191>

[4] [https://waocp.com/journal/index.php/apjcc/article/view/1040#:~:text=In%20my%20study%2C%20Male%20breast,the%20left%20side%20\(72.72%25\).](https://waocp.com/journal/index.php/apjcc/article/view/1040#:~:text=In%20my%20study%2C%20Male%20breast,the%20left%20side%20(72.72%25).)

[5] <https://www.sciencedirect.com/science/article/pii/S2210261216000493>

- [6] <https://onlinelibrary.wiley.com/doi/10.1155/2024/9003572>
- [7] <https://www.sciencedirect.com/science/article/pii/S0923753419373065>
- [8] <https://www.bcrf.org/blog/male-breast-cancer-statistics-research/>
- [9] <https://www.sciencedirect.com/science/article/abs/pii/S2210803321000701>
- [10] <https://pmc.ncbi.nlm.nih.gov/articles/PMC2720728/>

## Image Section:

Fig 1. Anatomy of Male Breast

<https://www.cancer.gov/types/breast/patient/male-breast-treatment-pdq#section/all>

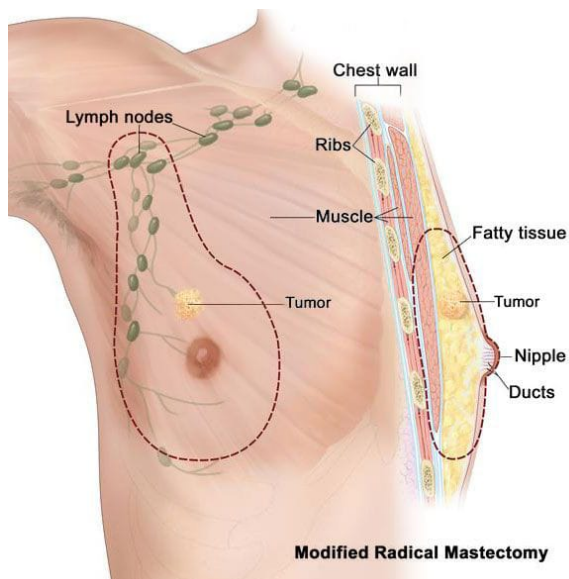


Fig 2. Signs and Symptoms of Breast cancer in Men

<https://www.radnet.com/>

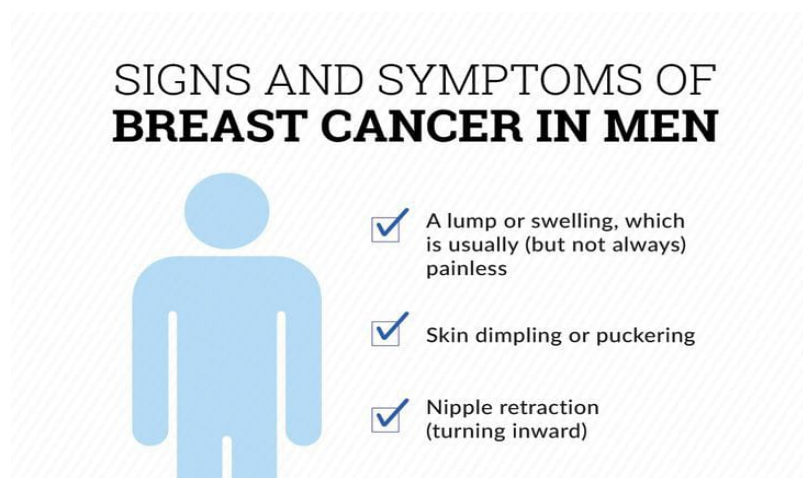


Fig 3. Image illustrating changes seen near breast/nipple area

<https://socialhealthandwellness.blogspot.com/2019/09/breast-cancer-definition.html?m=1>

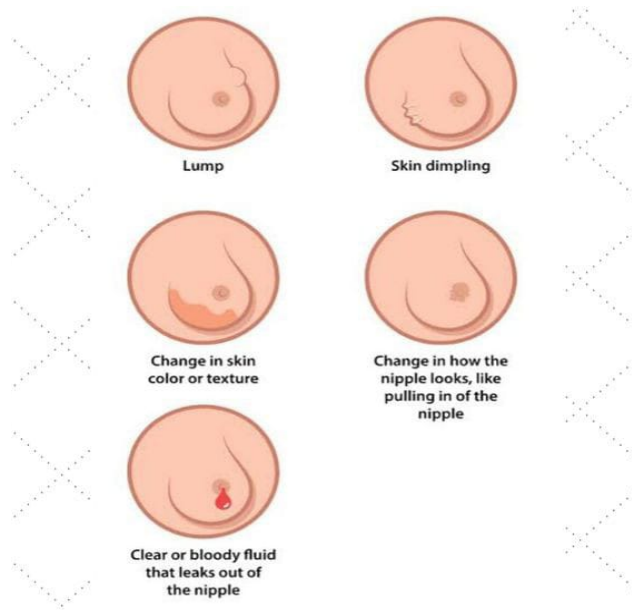


Fig 4. Image showing all aspects of male breast cancer

[https://www.vecteezy.com/vector-art/27953634-vector-medical-illustration-infographic-symptoms-of-male-breast-cancer-diagnosis-causes-and-risk-factors-for-breast-cancer-and-treatment-of-breast-cancer-isolated-on-white-background?utm\\_source=pinterest&utm\\_medium=social](https://www.vecteezy.com/vector-art/27953634-vector-medical-illustration-infographic-symptoms-of-male-breast-cancer-diagnosis-causes-and-risk-factors-for-breast-cancer-and-treatment-of-breast-cancer-isolated-on-white-background?utm_source=pinterest&utm_medium=social)

# Male Breast Cancer

## symptoms



discharge from nipple



changes to the skin  
covering your breast



dimpling



nipple begin to turn inward



thickening in breast tissue

## diagnosis



breast exam



ultrasound



biopsy



mammogram

## treatments



hormone therapy



surgery



targeted therapy



chemotherapy



radiotherapy

## causes and risk factors



liver disease



genetic mutations



getting older



obesity



hormone therapy



Klinefelter syndrome



radiation therapy



family history of breast cancer