

Detailed Guide: Breast Cancer in Men

What Is Breast Cancer in Men?

Breast cancer is a malignant tumor that has developed from cells of the breast. The disease occurs primarily in women but occasionally occurs in men. Many people do not realize that men have breast tissue and that they can develop breast cancer.

Normal Breast Structure

The breast is made up mainly of **lobules** (milk-producing glands in women), **ducts** (tiny tubes that carry the milk from the lobules to the nipple in women), and **stroma** (fatty tissue and connective tissue surrounding the ducts and lobules, blood vessels, and lymphatic vessels).

Until puberty, young boys and girls have a small amount of breast tissue consisting of a few **ducts** located under the nipple and **areola** (area around the nipple). At puberty, a girl's ovaries produce female hormones, causing breast ducts to grow, **lobules** to form at the ends of ducts, and the amount of **stroma** to increase. On the other hand, male hormones produced by the testicles prevent further growth of breast tissue. Men's breast tissue contains ducts, but only a few if any lobules.

Like all cells of the body, a man's breast duct cells can undergo cancerous changes. Because women have many more breast cells than men do and perhaps because their breast cells are constantly exposed to the growth-promoting effects of female hormones, breast cancer is much more common in women.

Many types of breast disorders can affect both men and women. Most breast disorders are **benign** (not cancerous). Benign breast tumors do not spread outside of the breast and are not life threatening. Other tumors are **malignant** (cancerous) and may become life threatening. Benign tumors, such as **papillomas** and **fibroadenomas**, are common in women but are extremely rare in men.

As in most tissues of the body, fluids are circulated to and from the breast by 2 main forms of channels. **Blood vessels** carry blood to and from the breast. **Lymphatic vessels** carry lymph instead of blood. Lymph is a clear fluid that contains tissue fluid and waste products and immune system cells (cells that are important in fighting infections). **Lymph nodes** are small, bean-shaped collections of immune system cells that are found along lymphatic vessels. This is important in cancer, because cancer cells can enter lymphatic vessels and spread to lymph nodes. This becomes important when we talk about staging (see

”Staging” section).

Most lymphatic vessels in the breast connect to lymph nodes under the arm (**axillary lymph nodes**). Some lymphatic vessels connect to lymph nodes inside the chest (**internal mammary nodes**) and either above or below the collarbone (**supraclavicular** or **infraclavicular nodes**).

Knowing if the cancer cells have spread to lymph nodes is important because that lets us know that there is a higher chance that the cells could have gotten into the bloodstream and spread to other sites in the body. This is why it is important to find out if breast cancer has spread to your axillary lymph nodes when you are choosing a treatment. The more lymph nodes that are involved with the breast cancer, the more likely it is that the cancer will eventually be found in other organs as well. However, not all men with lymph node involvement develop metastases, and it is not unusual for a man to have negative lymph nodes and later develop metastases.

Benign Breast Conditions

Gynecomastia is the most common male breast disorder. It is not a tumor but rather an increase in the amount of a man's breast tissue. Usually, men have too little breast tissue to be felt or noticed. A man with gynecomastia has a button-like or disk-like growth under his nipple and areola, which can be felt and sometimes seen. Gynecomastia, common among teenage boys, is due to changes in hormone balance during adolescence. The same condition is also common in older men and is also due to changes in their hormone balance.

Rarely, gynecomastia occurs because tumors or diseases of certain **endocrine** (hormone-producing) glands cause a man's body to produce more **estrogen** (the main female hormone). Although men's glands normally produce some estrogen, it is not enough to cause breast growth. Diseases of the liver, which is an important organ in male and female hormone metabolism, can change a man's hormone balance and lead to gynecomastia. Obesity may be another cause of elevated estrogens in men.

Many commonly prescribed medicines can sometimes cause gynecomastia, too. These include some drugs used to treat ulcers and heartburn, high blood pressure, and heart failure. Men with gynecomastia should ask their doctors about whether any medicines they are taking might be causing this condition.

Klinefelter syndrome, a rare genetic condition, can lead to gynecomastia and

increase a man's risk of developing breast cancer. This condition is discussed further in the section on risk factors for male breast cancer.

Types of Breast Cancer

Adenocarcinoma: Nearly all breast cancers start in the ducts or lobules of the breast. Because this is glandular tissue, they are called adenocarcinomas, a term applied to cancers of glandular tissue anywhere in the body. The 2 main types of breast adenocarcinomas are **ductal carcinomas** and **lobular carcinomas**.

Ductal carcinoma in situ (DCIS): DCIS is an uncommon type of breast adenocarcinoma in men (about 10%). Cancer cells fill the ducts but do not invade through the walls of the ducts into the fatty tissue of the breast or spread outside the breast. It is almost always curable with surgery.

In situ is the term used for the early stage of cancer, when it is confined to the immediate area where it began. Specifically in breast cancer, in situ means that the cancer remains confined to ducts (ductal carcinoma in situ) or lobules (lobular carcinoma in situ). It has not invaded surrounding fatty tissues in the breast nor spread to other organs in the body.

Infiltrating (or invasive) ductal carcinoma (IDC): Starting in a duct of the breast, this type of adenocarcinoma breaks through the wall of the duct and invades the fatty tissue of the breast. At this point, it can metastasize (or spread) to other parts of the body. IDC (alone or mixed with other types of invasive or in situ breast cancer) accounts for 80% to 90% of male breast cancers.

Lobular breast cancers in men are very rare, accounting for only 2% of adenocarcinomas. This is because men do not usually have lobular tissue, the milk-producing glands.

Paget disease of the nipple: This type of breast cancer starts in the breast ducts and spreads to the skin of the nipple. It may also spread to the **areola** (the dark circle around the nipple). The skin of the nipple usually appears crusted, scaly, and red, with areas of itching, oozing, burning, or bleeding. Using the fingertips, a lump may be detected within the breast. If no lump can be felt, the **prognosis** (outlook for survival) is generally good. Paget disease may be associated with in situ carcinoma or with infiltrating breast carcinoma. It accounts for about 1% of female breast cancers and a higher percentage of male breast cancers. Because the male breast is much smaller than the female breast, all male breast cancers start relatively close to the nipple, so spread to the nipple is more likely.

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