

DIAGNOSIS OF BREAST CANCER

Benign Breast Lumps

Benign lumps are not cancerous. Most lumps are caused by *fibrocystic* changes. Cysts are fluid-filled sacs, and fibrosis refers to connective tissue or scar tissue formation. Breast swelling and pain can be associated with fibrocystic changes. The breasts may feel nodular, or lumpy, and, sometimes, a clear or slightly cloudy nipple discharge is present. Benign breast tumors such as *fibroadenomas* or *papillomas* are abnormal growths, but they cannot spread outside of the breast to other organs. They are not life-threatening.

Types of Breast Cancers

Understanding some of the key words used to describe different types of breast cancer is important because these types vary in their prognosis (outlook for survival or cure) and their treatment options.

Adenocarcinoma

This is a general type of cancer that starts in glandular tissues anywhere in the body. There are several subtypes of adenocarcinoma, which account for nearly all breast cancers. They include:

- **Ductal Carcinoma In Situ (DCIS)**

Ductal carcinoma in situ is the most common type of noninvasive breast cancer. In DCIS, there are cancer cells inside the ducts but they do not spread through the walls of the ducts into the fatty tissue of the breast. Nearly 100% of women diagnosed at this early stage of breast cancer can be cured. The best way to find DCIS is with a mammogram. With more women getting mammograms each year, a diagnosis of DCIS is becoming more common. The grade of DCIS (how aggressive cancer cells appear under a microscope) helps predict how likely it is to turn into an invasive cancer. *Comedocarcinoma* is a type of DCIS. It is more likely than other types of DCIS to come back in the same area after lumpectomy. It is more closely linked to eventual development of invasive ductal carcinoma than other forms of DCIS.

- **Infiltrating (or Invasive) Ductal Carcinoma (IDC)**

Starting in a milk passage, or duct, of the breast, this cancer breaks through the wall of the duct and invades the fatty tissue of the breast. At this point, it has the potential to metastasize, or spread, to other parts of the body through the lymphatic system and bloodstream. Infiltrating ductal carcinoma accounts for about 80% of breast cancers.

- **Infiltrating (or Invasive) Lobular Carcinoma (ILC)**

ILC starts in the milk-producing glands. Similar to IDC, this cancer has the potential to spread (metastasize) elsewhere in the body. About 10% to 15% of invasive breast cancers are invasive lobular carcinomas. ILC may be more difficult to detect by mammogram than IDC.

- **Inflammatory Breast Cancer**

This rare type of invasive breast cancer accounts for about 1% of all breast cancers. Inflammatory breast cancer makes the skin of the breast look red and feel warm, as if it were infected. The skin has a thick, pitted appearance that doctors often describe as resembling an orange peel. Sometimes the breast develops ridges and small bumps that look like hives. These symptoms are caused by cancer cells blocking lymph vessels or channels in the skin over the breast.

- **In Situ**

This term is used for an early stage of cancer in which a tumor is confined to the immediate area where it began. Specifically in breast cancer, *in situ* means that the cancer remains confined to ducts or lobules. It has not invaded surrounding fatty tissues in the breast nor spread to other organs in the body.

- **Lobular Carcinoma In Situ (LCIS)**

While not a true cancer, LCIS (also called lobular neoplasia) is sometimes classified as a type of

noninvasive breast cancer. It begins in the milk-producing glands, but does not penetrate through the wall of the lobules. Most researchers think that LCIS does not usually become an invasive cancer, but women with this condition have a higher risk of developing an invasive breast cancer in the same breast, or in the opposite breast. For this reason, it's important for women with LCIS to have a physical exam two or three times a year, as well as an annual mammogram.

- **Medullary Carcinoma**

This special type of infiltrating breast cancer has a relatively well-defined, distinct boundary between tumor tissue and normal tissue. It accounts for about 5% of breast cancers. The outlook, or prognosis, for this kind of breast cancer is better than for other types of invasive breast cancer.

- **Mucinous Carcinoma**

This rare type of invasive breast cancer is formed by mucus-producing cancer cells. The prognosis for mucinous carcinoma is better than for the more common types of invasive breast cancer.

- **Paget's Disease Of The Nipple**

This type of breast cancer starts in the breast ducts and spreads to the skin of the nipple and the areola, the dark circle around the nipple. It is a rare type of breast cancer, occurring in only 1% of all cases. The skin of the nipple and areola often appears crusted, scaly, and red, with areas of bleeding or oozing. The woman may notice burning or itching. Paget's disease may be associated with in situ carcinoma, or with infiltrating breast carcinoma. If no lump can be felt in the breast tissue, and the biopsy shows DCIS but no invasive cancer, the prognosis is excellent.

- **Phyllodes Tumor**

This very rare type of breast tumor forms from the *stroma* (connective tissue) of the breast, in contrast to carcinomas which develop in the ducts or lobules. Phyllodes tumors are usually benign but on rare occasions may be malignant (having the potential to metastasize). Nevertheless, malignant phyllodes tumors are very rare and less than 10 women per year in the US die of this disease. Benign phyllodes tumors are successfully treated by removing the mass and a narrow margin of normal breast tissue. A malignant phyllodes tumor is treated by removing it along with a wider margin of normal tissue, or by mastectomy. These cancers do not respond to hormonal therapy and are less likely than most breast cancers to respond to chemotherapy or radiation therapy.

- **Tubular Carcinoma**

Accounting for about 2% of all breast cancers, tubular carcinomas are a special type of infiltrating breast carcinoma. They have a better prognosis than usual infiltrating ductal or lobular carcinomas.