BREAST CANCER TYPES

Quick Summary of Section

Ductal carcinoma in situ (DCIS)

• DCIS is considered a precursor lesion for the subsequent development of invasive carcinoma with a high-risk index factor than that expected in women without DCIS

Lobular carcinoma in situ (LCIS)

 Lobular carcinoma in situ (LCIS) is an uncommon condition in which abnormal cells form in the milk glands (lobules) in the breast. LCIS isn't cancer, but being diagnosed with LCIS indicates that you have an increased risk of developing breast cancer.

Invasive ductal carcinoma (IDC)

• The most common type of invasive breast cancer. It begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple) and spreads outside the ducts to surrounding normal tissue. Invasive ductal carcinoma can also spread through the blood and lymph systems to other parts of the body.

Invasive lobular carcinoma (ILC)

 A type of invasive breast cancer that begins in the lobules (milk glands) of the breast and spreads to surrounding normal tissue. It can also spread through the blood and lymph systems to other parts of the body.

Rare cancers

• For example, male breast cancer, medullary breast cancer, lymphoma of the breast

Inflammatory breast cancer

• Inflammatory breast cancer is a rare and very aggressive disease in which cancer cells block lymph vessels in the skin of the breast. This type of breast cancer is called "inflammatory" because the breast often looks swollen and red, or inflamed.

Paget Disease of the Breast

 Paget disease of the breast (also known as Paget disease of the nipple and mammary Paget disease) is a rare type of cancer involving the skin of the nipple and, usually, the darker circle of skin around it, which is called the areola

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Ductal carcinoma in situ (DCIS)

DCIS is considered a precursor lesion for the subsequent development of invasive carcinoma with a high-risk index factor than that expected in women without DCIS

Death due to DCIS is extremely rare, but death occurring after initial diagnosis of DCIS is either because of undetected invasive component or due to recurrence of invasive lesion after the treatment.

NCBI - Diversity of Breast Carcinoma

- 85% of breast cancer originates in the ducts
- These cancers are considered benign, but eventually will become invasive with time.

Symptoms:

DCIS doesn't typically have any signs or symptoms. However, DCIS can sometimes cause signs such as:

- A breast lump
- Bloody nipple discharge

Mayo Clinic: Ductal carcinoma in situ (DCIS)

Lobular carcinoma in situ (LCIS)

Lobular carcinoma in situ (LCIS) is an uncommon condition in which abnormal cells form in the milk glands (lobules) in the breast. LCIS isn't cancer, but being diagnosed with LCIS indicates that you have an increased risk of developing breast cancer.

Women with LCIS have an increased risk of developing invasive breast cancer in either breast.

- 15% of breast cancer originates in the lobules
- These cancers are considered benign, but eventually will become invasive with time.

Symptoms:

LCIS usually doesn't show up on mammograms. The condition is most often discovered as a result of a breast biopsy done for another reason, such as a suspicious breast lump or an abnormal mammogram.

Mayo Clinic: Lobular carcinoma in situ (LCIS)

Invasive Ductal Carcinoma (IDC)

The most common type of invasive breast cancer. It begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple) and spreads outside the ducts to surrounding normal tissue. Invasive ductal carcinoma can also spread through the blood and lymph systems to other parts of the body. Also called infiltrating ductal carcinoma. NIH – NCI – IDC definition

- The cancer cells grow outside the ducts into other parts of the breast tissue.
- Invasive cancer cells can also spread, or metastasize, to other parts of the body.

Symptoms:

- A lump in your breast.
- Thickened breast skin.
- Rash or redness on your breast.
- Swelling in your breast.
- New pain in your breast.
- Dimpling on your breast or the skin of your nipple.
- Nipple pain.
- Inverted nipple.

Invasive Lobular Carcinoma (ILC)

A type of invasive breast cancer that begins in the lobules (milk glands) of the breast and spreads to surrounding normal tissue. It can also spread through the blood and lymph systems to other parts of the body. Also called infiltrating lobular carcinoma.

NIH- NCI – ILC definition

- Begins in the milk-producing glands (lobules) of the breast.
- Cancer cells have broken out of the lobule where they began and have the potential to spread to the lymph nodes and other areas of the body.
- Invasive lobular carcinoma makes up a small portion of all breast cancers.
- Invasive lobular carcinoma is less likely than other forms of breast cancer to cause a firm or distinct breast lump.

Symptoms:

At its earliest stages, invasive lobular carcinoma may cause no signs and symptoms. As it grows larger, invasive lobular carcinoma may cause:

- An area of thickening in part of the breast
- A new area of fullness or swelling in the breast
- A change in the texture or appearance of the skin over the breast, such as dimpling or thickening
- A newly inverted nipple

Mayo Clinic: Invasive lobular carcinoma

Rare Cancers – not limited to:

- Male Breast Cancer Cancer that forms in tissues of the breast in men. Most male breast cancer begins in cells lining the ducts. It is very rare and usually affects older men.
- Medullary breast cancer
- Mucinous (mucoid or colloid) breast cancer
- Tubular breast cancer
- Adenoid cystic carcinoma of the breast
- Metaplastic breast cancer
- Lymphoma of the breast
- Basal type breast cancer
- Phyllodes or cystosarcoma phyllodes
- Papillary breast cancer

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Inflammatory breast cancer

Inflammatory breast cancer is a rare and very aggressive disease in which cancer cells block lymph vessels in the skin of the breast. This type of breast cancer is called "inflammatory" because the breast often looks swollen and red, or inflamed.

- Inflammatory breast cancer is rare, accounting for 1 to 5 percent of all breast cancers
 diagnosed in the United States. Most inflammatory breast cancers are invasive ductal
 carcinomas, which means they developed from cells that line the milk ducts of the
 breast and then spread beyond the ducts.
- Inflammatory breast cancer progresses rapidly, often in a matter of weeks or months.
 At diagnosis, inflammatory breast cancer is either stage III or IV disease, depending on whether cancer cells have spread only to nearby lymph nodes or to other tissues as well.
- Compared with other types of breast cancer, inflammatory breast cancer tends to be diagnosed at younger ages.
- More common and diagnosed at younger ages in African American women than in white women
- Inflammatory breast tumors are frequently hormone receptor negative, which means they cannot be treated with hormone therapies, such as tamoxifen, that interfere with the growth of cancer cells fueled by estrogen.
- More common in obese women than in women of normal weight.

NIH – NCI – Inflammatory Breast

Paget Disease of the Breast

- Paget disease of the breast (also known as Paget disease of the nipple and mammary Paget disease) is a rare type of cancer involving the skin of the nipple and, usually, the darker circle of skin around it, which is called the areola.
- Most people with Paget disease of the breast also have one or more tumors inside the same breast. These breast tumors are either ductal carcinoma in situ or invasive breast cancer.
- Paget disease of the breast occurs in both women and men, but most cases occur in women. Approximately 1 to 4 percent of all cases of breast cancer also involve Paget disease of the breast.
- The average age at diagnosis is 57 years, but the disease has been found in adolescents and in people in their late 80s
- Studies have shown that breast-conserving surgery that includes removal of the nipple and areola, followed by whole-breast radiation therapy, is a safe option for people with Paget disease of the breast who do not have a palpable lump in their breast and whose mammograms do not reveal a tumor

The symptoms of Paget disease of the breast are often mistaken for those of some benign skin conditions, such as dermatitis or eczema. These symptoms may include the following:

- Itching, tingling, or redness in the nipple and/or areola
- Flaking, crusty, or thickened skin on or around the nipple
- A flattened nipple
- Discharge from the nipple that may be yellowish or bloody
- Because the early symptoms of Paget disease of the breast may suggest a benign skin condition, and because the disease is rare, it may be misdiagnosed at first.
- People with Paget disease of the breast have often had symptoms for several months before being correctly diagnosed.

NIH NCI – Paget

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CDC - Center of Disease Control and Prevention

CDC (1) – What is Breast Cancer? https://www.cdc.gov/cancer/breast/basic_info/what-is-breast-cancer.htm

Mayo Clinic: Mayoclinic.org

Mayo Clinic: Ductal carcinoma in situ (DCIS) https://www.mayoclinic.org/diseases-conditions/dcis/symptoms-causes/syc-20371889

Mayo Clinic: Invasive lobular carcinoma https://www.mayoclinic.org/diseases-conditions/invasive-lobular-carcinoma/symptoms-causes/syc-20373973

Mayo Clinic: Lobular carcinoma in situ (LCIS) https://www.mayoclinic.org/diseases-conditions/lobular-carcinoma-in-situ/symptoms-causes/syc-20374529

NCBI - Diversity of Breast Carcinoma https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4689326/

NIH – NCI – National Cancer Institute

NIH – NCI - IDC definition https://www.cancer.gov/publications/dictionaries/cancer-terms/def/invasive-ductal-carcinoma

NIH – NCI (1) - Breast Treatment (professional) https://www.cancer.gov/types/breast/hp/breast-treatment-pdq

NIH - NCI (2) Treatment (patient) https://www.cancer.gov/types/breast/patient/breast-treatment-pdq#_181

NIH- NCI - ILC definition- https://www.cancer.gov/publications/dictionaries/cancer-terms/def/invasive-lobular-carcinoma

NIH NCI - Paget https://www.cancer.gov/types/breast/paget-breast-fact-sheet

NIH – NCI – Inflammatory Breast Cancer https://www.cancer.gov/types/breast/ibc-fact-sheet