# susan G.

## WHAT IS BREAST CANCER?

Every day, cells in your body divide, grow and die in an orderly manner. Cancer occurs when cells in the breast tissue grow and divide quickly, without normal control. When there is more cell growth than death, a tumor can form.

The light circles in the pictures below show normal breast cells. The grey circles are breast cancer.





#### **Differences in breast cancer**



Breast cancer can start in the ducts or lobules. Ducts are canals that carry milk from the lobules to the nipple during breastfeeding. Lobules are sacs that produce milk.

Breast cancer is often referred to as one disease, but there are many types. All breast cancers start in the breast, but they can:

- Vary in location (ducts or lobules)
- Be non-invasive or invasive
- Have a different clinical appearance (such as IBC described below)
- Look different under a microscope (see more below)

These differences can affect prognosis (outcome).

#### Non-invasive breast cancer

Non-invasive breast cancer means the cancer has not spread beyond the breast.

Ductal carcinoma in situ (DCIS) is a non-invasive breast cancer. In situ means "in place." With DCIS the abnormal cells are contained in the ducts. They have not spread to nearby breast tissue or beyond.

#### **Invasive breast cancer**

Invasive breast cancer is cancer that has spread from the first site (the ducts or lobules) into nearby breast tissue.

**Invasive ductal carcinoma** is the most common type of breast cancer. It may also be called infiltrating ductal carcinoma.

**Invasive lobular carcinoma** is the second most common invasive breast cancer.

There are other less common invasive breast cancers, such as **tubular**, **mucinous** (colloid) and **invasive papillary carcinomas**.

Special forms of invasive breast cancer include:

- Inflammatory breast cancer (IBC): IBC is an aggressive breast cancer. Signs of IBC include swelling and redness of the breast, dimpling or puckering of the skin of the breast and pulling in of the nipple. These signs tend to occur quickly, over weeks or months.
- Paget disease of the breast (Paget disease of the nipple): Paget disease of the breast is a rare cancer in the skin of the nipple or in the skin around the nipple.
- Metaplastic breast cancer: Metaplastic breast cancer accounts for fewer than 1 percent of all invasive breast cancers. Compared to more common types of breast cancer, metaplastic tumors tend to be large and have a higher tumor grade.

Metastatic breast cancer (MBC) is the most advanced stage of invasive breast cancer (stage IV). MBC has spread to other parts of the body. The most common sites for MBC are the bones, lungs, liver and brain. Even though new tumors are growing in other parts of the body, it's still breast cancer and treated as breast cancer.

For more information, visit komen.org or call Susan G. Komen's breast care helpline at 1-877 GO KOMEN (1-877-465-6636) Monday through Friday, 9 AM to 10 PM ET.

### susan c. Komen.

### WHAT IS BREAST CANCER?

#### Resources

Susan G. Komen® 1-877 GO KOMEN (1-877-465-6636) komen.org

American Cancer Society 1-800-ACS-2345 cancer.org

National Cancer Institute 1-800-4-CANCER cancer.gov

#### Related educational resources:

- Questions to Ask Your Doctor When Breast Cancer is Diagnosed
- Support After a Breast Cancer Diagnosis
- Ductal Carcinoma in Situ
- Inflammatory Breast Cancer Video
- Triple Negative Breast
  Cancer Video
- Metastatic Breast
  Cancer
- Breast Cancer Prognosis



#### **Tumor characteristics**

#### Hormone receptor status

Some breast cancer cells need the hormones estrogen and/or progesterone to grow. These cancer cells have special proteins, called hormone receptors. All breast cancers are tested for hormone receptors.

- Hormone receptor-positive tumors have many hormone receptors. They are called estrogen receptor-positive or progesterone receptor-positive breast cancer.
- Hormone receptor-negative tumors have few or no hormone receptors. They are called estrogen receptor-negative or progesterone receptor-negative breast cancer.

Most breast cancers are hormone receptor-positive. They can be treated with hormone therapy such as tamoxifen or aromatase inhibitors.

#### **HER2** status

HER2 is a protein on the surface of some cancer cells that causes them to grow. All breast cancers are tested for HER2 protein. HER2-positive breast cancers have a lot of HER2 protein.

They can be treated with HER2-targeted drugs such as trastuzumab (Herceptin).

HER2-negative breast cancers have little or no HER2 protein.

#### Triple negative breast cancer

Triple negative breast cancer (TNBC) is estrogen and progesterone receptor-negative and HER2-negative. So TNBC can't be treated with hormone therapy or HER2-targeted therapies. While TNBC is aggressive, it can be treated with surgery, radiation and/or chemotherapy.

The list of resources is only a suggested resource and is not a complete listing of breast health and breast cancer materials or information. The information contained herein is not meant to be used for self-diagnosis or to replace the services of a medical professional. Komen does not endorse, recommend or make any warranties or representations regarding the accuracy, completeness, timeliness, quality or non-infringement of any of the materials, products or information provided by the organizations referenced herein.