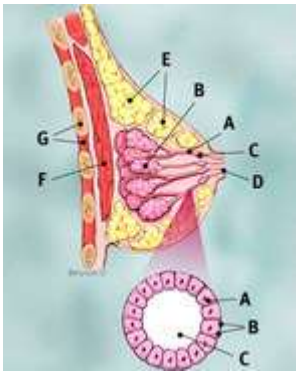
What Is Breast Cancer?

Breast cancer is an uncontrolled growth of breast cells. To better understand breast cancer, it helps to understand how any cancer can develop.

Cancer occurs as a result of mutations, or abnormal changes, in the genes responsible for regulating the growth of cells and keeping them healthy. The genes are in each cell's nucleus, which acts as the "control room" of each cell. Normally, the cells in our bodies replace themselves through an orderly process of cell growth: healthy new cells take over as old ones die out. But over time, mutations can "turn on" certain genes and "turn off" others in a cell. That changed cell gains the ability to keep dividing without control or order, producing more cells just like it and forming a tumor.

A tumor can be benign (not dangerous to health) or malignant (has the potential to be dangerous). Benign tumors are not considered cancerous: their cells are close to normal in appearance, they grow slowly, and they do not invade nearby tissues or spread to other parts of the body. Malignant tumors are cancerous. Left unchecked, malignant cells eventually can spread beyond the original tumor to other parts of the body.

The term "breast cancer" refers to a malignant tumor that has developed from cells in the breast. Usually breast cancer either begins in the cells of the lobules, which are the milk-producing glands, or the ducts, the passages that drain milk from the lobules to the nipple. Less commonly, breast cancer can begin in the stromal tissues, which include the fatty and fibrous connective tissues of the breast.



Breast Anatomy Larger Version

Over time, cancer cells can invade nearby healthy breast tissue and make their way into the underarm lymph nodes, small organs that filter out foreign substances in the body. If cancer cells get into the lymph nodes, they then have a pathway into other parts of the body. The breast cancer's stage refers to how far the cancer cells have spread beyond the original tumor (see the Stages of breast cancer table for more information).

Breast cancer is always caused by a genetic abnormality (a “mistake” in the genetic material). However, only 5-10% of cancers are due to an abnormality inherited from your mother or father. Instead, 85-90% of breast cancers are due to genetic abnormalities that happen as a result of the aging process and the “wear and tear” of life in general.

There are steps every person can take to help the body stay as healthy as possible, such as eating a balanced diet, maintaining a healthy weight, not smoking, limiting alcohol, and exercising regularly (learn what you can do to manage breast cancer risk factors). While these may have some impact on your risk of getting breast cancer, they cannot eliminate the risk.

Developing breast cancer is not your or anyone's fault. Feeling guilty, or telling yourself that breast cancer happened because of something you or anyone else did, is not productive.

Stages of breast cancer

Stage	**Definition**
Stage 0	Cancer cells remain inside the breast duct, without invasion into normal adjacent breast tissue.
Stage IA	The tumor measures up to 2 cm AND the cancer has not spread outside the breast; no lymph nodes are involved
Stage IB	There is no tumor in the breast; instead, small groups of cancer cells -- larger than 0.2 millimeter but not larger than 2 millimeters – are found in the lymph nodes OR there is a tumor in the breast that is no larger than 2 centimeters, and there are small groups of cancer cells – larger than 0.2 millimeter but not larger than 2 millimeters – in the lymph nodes.
Stage IIA	No tumor can be found in the breast, but cancer cells are found in the axillary lymph nodes (the lymph nodes under the arm) OR the tumor measures 2 centimeters or smaller and has spread to the axillary lymph nodes OR the tumor is larger than 2 but no larger than 5 centimeters and has not spread to the axillary lymph nodes.
Stage IIB	The tumor is larger than 2 but no larger than 5 centimeters and has spread to the axillary lymph nodes OR

	the tumor is larger than 5 centimeters but has not spread to the axillary lymph nodes.
Stage IIIA	No tumor is found in the breast. Cancer is found in axillary lymph nodes that are sticking together or to other structures, or cancer may be found in lymph nodes near the breastbone OR the tumor is any size. Cancer has spread to the axillary lymph nodes, which are sticking together or to other structures, or cancer may be found in lymph nodes near the breastbone.
Stage IIIB	The tumor may be any size and has spread to the chest wall and/or skin of the breast AND may have spread to axillary lymph nodes that are clumped together or sticking to other structures, or cancer may have spread to lymph nodes near the breastbone. Inflammatory breast cancer is considered at least stage IIIB.
Stage IIIC	There may either be no sign of cancer in the breast or a tumor may be any size and may have spread to the chest wall and/or the skin of the breast AND the cancer has spread to lymph nodes either above or below the collarbone AND the cancer may have spread to axillary lymph nodes or to lymph nodes near the breastbone.
Stage IV	The cancer has spread — or metastasized — to other parts of the body.

http://www.breastcancer.org/symptoms/understand_bc/what_is_bc