

## October is Breast Cancer Awareness Month

### What is breast cancer?

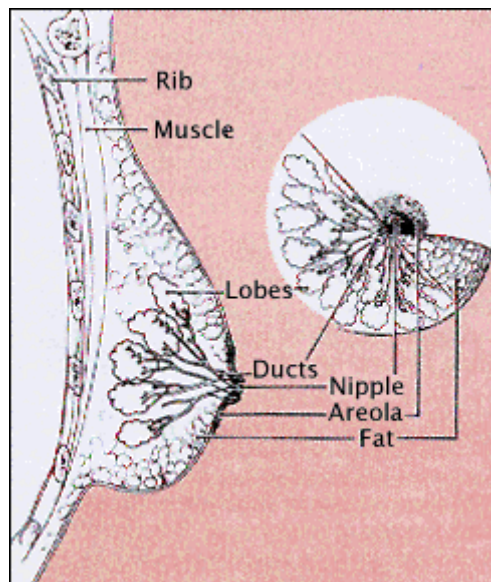
Breast cancer is the abnormal growth of cells in the breast tissue. When cancer arises in breast tissue and spreads (metastasizes) outside the breast, cancer cells are often found in the lymph nodes under the arm (axillary lymph nodes). If the cancer has reached these nodes, it means that cancer cells may have spread to other parts of the body such as the bones, liver, or lungs.

Breast cancer can occur in both women and men. This document focuses on breast cancer in women.

### What are the parts of the breast?

Each breast has 15 to 20 sections called lobes. Within each lobe are many smaller lobules. Lobules end in dozens of tiny bulbs that can produce milk. Thin tubes called ducts link all the lobes, lobules, and bulbs. These ducts lead to the nipple in the center of a dark area of skin called the areola. Fat surrounds the lobules and ducts. There are no muscles in the breast, but muscles lie under each breast and cover the ribs.

Each breast also contains blood vessels and lymph vessels. The lymph vessels carry colorless fluid called lymph, and lead to small bean-shaped organs called lymph nodes. Clusters of lymph nodes are found near the breast under the arm, above the collarbone, and in the chest. Lymph nodes are also found in many other parts of the body.



This diagram shows the breast.

## What are the key statistics about breast cancer?

Breast cancer is the most common type of cancer among women in the United States. In 2020, an estimated 276,480 women will be diagnosed with breast cancer. Additionally, 2,620 men will be diagnosed. Breast cancer remains second among cancer deaths in women.

## What are the risk factors?

The exact causes of breast cancer are not known. However, studies show that the risk of breast cancer increases as a woman gets older. Most breast cancers occur in women over the age of 50, and the risk is especially high for women over age 60.

Research has shown that the following can increase the chances of getting breast cancer:

- **Personal history of breast cancer.** Women who have had breast cancer face an increased risk of getting breast cancer in their other breast.
- **Family history.** A woman's risk for developing breast cancer increases if her mother, sister, or daughter had breast cancer, especially at a young age.
- **Certain breast changes.** Atypical hyperplasia is a benign (non-cancerous) condition in which cells look abnormal under a microscope and are increased in number. Lobular carcinoma in situ is when abnormal cells are found in the lobules of the breast. These changes in the breast may increase a woman's risk for developing cancer.
- **Genetic alterations.** Changes in certain genes (BRCA1, BRCA2, and others) increase the risk of breast cancer. In families in which many women have had the disease, gene testing can sometimes show the presence of specific genetic changes that increase the risk of breast cancer. Doctors may suggest ways to try to delay or prevent breast cancer, or to improve the detection of this disease in women who have these changes in their genes.
- **Estrogen.** Research suggests that the longer a woman is exposed to estrogen (estrogen made by the body, taken as a drug, or delivered by a patch), the more likely she is to develop breast cancer. For example, the risk is somewhat increased among women who began menstruation at an early age (before age 12), experienced menopause late (after age 55), never had children, or took hormone replacement therapy for long periods of time.
- **Late childbearing.** Women who have their first child after age 30 have a greater chance of developing breast cancer than women who have a child at a younger age.
- **Breast density.** Breasts that have high amounts of lobular and ductal tissue appear dense on mammograms. Breast cancers nearly always develop in lobular or ductal tissue (not fatty tissue). Dense breasts are more difficult for doctors to see abnormal areas on a mammogram.
- **Radiation therapy.** Women whose breasts were exposed to radiation during radiation therapy before age 30, especially those who were treated with radiation for Hodgkin's disease, are at an increased risk for developing breast cancer. Studies show that the younger a woman was when she received her treatment, the higher her risk for developing breast cancer later in life.
- **Alcohol.** Studies suggest an increased risk of breast cancer with increasing alcohol intake.

## What are signs and symptoms of breast cancer?

Early breast cancer usually does **not** cause pain. In fact, when breast cancer first develops, there may be no symptoms at all. As the cancer grows, the following changes may occur:

- A lump or thickening in or near the breast or in the underarm area

- A change in the size or shape of the breast
- Nipple discharge or tenderness, or the nipple pulled back (inverted) into the breast
- Ridges or pitting of the breast (the skin looks like the skin of an orange)
- A change in the way the skin of the breast, areola, or nipple looks or feels (warm, swollen, red, or scaly)

## **Can breast cancer be found early?**

A mammogram is an x-ray picture of the breast. It can find breast cancer that is too small for you or your doctor or nurse to feel. The following guidelines from the American Cancer Society may help to detect breast cancer early:

### Age 40-44:

- Women should have the opportunity to have a mammogram.

### Age 45-54:

- Have a mammogram every year.

### Age 55 and over:

- Women can have a mammogram every other year or continue yearly.
- Women should continue having a screening mammogram as long as their overall health is good and they have a life expectancy of 10 years or longer.

If you have a history of breast cancer in your family, talk with your healthcare team about how often and when you should have a mammogram.

## **Can breast cancer be prevented?**

Even if you do not have the risk factors listed above, you may still develop breast cancer. Scientists are trying to learn more about factors that increase the risk of developing this disease. For example, they are looking at whether the risk of breast cancer might be affected by environmental factors. So far, scientists do not have enough information to know whether any factors in the environment increase the risk of this disease.

Recent studies suggest that regular exercise may decrease the risk in younger women. Also, some evidence suggests a link between diet and breast cancer. Ongoing studies are looking at ways to prevent breast cancer through changes in diet or with dietary supplements. However, it is not yet known whether specific dietary changes will actually prevent breast cancer. These are active areas of research.

Research has led to the identification of changes (mutations) in certain genes that increase the risk of developing breast cancer. Women with a strong family history of breast cancer may choose to have a blood test to see if they have inherited a change in the BRCA1 or BRCA2 gene. Women who are concerned about an inherited risk for breast cancer should talk to their doctor. The doctor may suggest seeing a health professional trained in genetics. Genetic counseling can help a woman decide whether testing would be appropriate for her. Also, counseling before and after testing helps women understand and deal with the possible results of a genetic test. The LIFE Center at Rutgers Cancer Institute of New Jersey is a medical facility to which young women who are at increased risk for breast cancer can come for help, advice, and information in the fight against breast cancer.

## **Cancer prevention clinical trials**

If you would like further information about clinical trials for preventing cancer, please call Rutgers Cancer Institute of New Jersey's Office of Human Research Services at 732-235-8675. For additional information about nationwide cancer prevention trials, you can call the National Cancer Institute at 1-800-4 CANCER or visit their website at [www.cancer.gov](http://www.cancer.gov).

## **Expert advice from Rutgers Cancer Institute of New Jersey**

Dr. Deborah Toppmeyer is the Chief Medical Officer and Director of both the Stacy Goldstein Breast Cancer Center and the LIFE Center at the Cancer Institute of New Jersey. She is very active in the clinical (caring for patients) and research practice at the Center.

“We have made great strides in breast cancer detection, treatment, and prevention over the past decade. Essential for continued progress in our fight to eradicate breast cancer is early diagnosis. Therefore, we encourage all women 40 and older to obtain routine annual screening and mammography.”

## **Where Can I Find Further Information?**

The Resource and Learning Center

732-235-9639

[www.cinj.org/rlc](http://www.cinj.org/rlc)

Provides reliable, relevant and current information about all aspects of cancer.

The LIFE Center

732-235-7110

[www.cinj.org/patient-care/adult/GeneticCounseling](http://www.cinj.org/patient-care/adult/GeneticCounseling)

National Cancer Institute

1-800-4-CANCER

[www.cancer.gov](http://www.cancer.gov)

The American Cancer Society

1-800-ACS-2345

[www.cancer.org](http://www.cancer.org)

The Susan G. Komen Breast Cancer Foundation

1-800-465-6636

[ww5.komen.org](http://ww5.komen.org)



RLC breast cancer website QR code. Scan with smartphone / device.