



BREAST CANCER

EDUCATION AND RESOURCES

Breast Cancer Education and Resources

Breast cancer develops in breast cells and leads to tumor growth in breast tissue. It can affect both men and women, however, breast cancer is the most common cancer in women in the United States aside from skin cancer, according to the American Cancer Society. Approximately 232,000 women were diagnosed with breast cancer and 40,000 women died from it in 2015. The risk of developing breast cancer as a woman in the United States is 13% or a 1 in 8 chance.

Types of Breast Cancer

Carcinomas are the most common form of breast cancer.

1.) **Ductal Carcinomas In Situ (DCIS)** is the presence of abnormal cells found inside a milk duct in the breast. This is the earliest stage of cancer and is non-invasive meaning it has not spread to the rest of the breast tissue. Nearly all women with this early stage of breast cancer can be cured. This type of breast cancer is also referred to as “stage 0 breast cancer.”

2.) **Invasive Breast Cancer** refers to the type of breast cancer that has spread into surrounding breast tissue. This can occur within the milk ducts of the breast or glands that make milk (lobules). The two most common invasive breast cancers are invasive ductal carcinoma (IDC) and Invasive lobular carcinoma, and together they make up approximately 70-80% of all breast cancer diagnoses.

- **Invasive ductal carcinoma (IDC)** - Similar to DCIS (Ductal Carcinoma in Situ), this form of cancer originates in the milk duct of the breast. However, unlike DCIS where the cancer cells are confined within the duct, Invasive Ductal Carcinoma (IDC) penetrates the duct wall and extends into the surrounding breast tissue. There is a risk of IDC spreading to nearby lymphatic tissue or other systems through the bloodstream. IDC is the most prevalent type of breast cancer and has the potential to metastasize to other parts of the body.
- **Invasive lobular carcinoma (ILC)** - This form of cancer originates in the lobules or glands that produce milk, within the breast, and has also spread to surround local tissue. Like IDC, it can spread more easily to other parts of the body (metastasize). This form of cancer makes up approximately 10% of invasive breast cancers.

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There are non-modifiable (inherent) and modifiable (can be altered) risk factors that increase the likelihood of developing breast cancer.

Non-Modifiable Risk Factors:

- **Gender:** Being female is considered the main risk factor for breast cancer as it is much more common in women compared to men.
- **Age:** Breast cancer is more commonly diagnosed in women who are 55 years and older.
- **Family History & Genetics:** Approximately 5-10% of breast cancer instances are believed to be hereditary
 - **BRCA1 and BRCA2:** The primary reason for hereditary breast cancer is the presence of an inherited mutation in the *BRCA1* or *BRCA2* gene. When these genes undergo mutations, it can result in abnormal cell growth ultimately leading to cancer development.

Modifiable Risk Factors:

- **Alcohol:** Consuming alcohol is strongly associated with a higher likelihood of developing breast cancer. The risk escalates as the quantity of alcohol consumed increases. Women who consume one alcoholic drink per day experience a modest rise in risk (about 7-10%) compared to those who abstain from drinking.
- **Being Overweight & Obese:** Being overweight or obese increases the risk of breast cancer compared to those who maintain a healthy body weight, especially after menopause. The relationship between breast cancer and weight is complex and generally recognized as multifactorial, and individually unique.
- **Lack of Physical Activity:** Increasing evidence suggests regular physical activity can lower the risk of breast cancer, particularly in women experiencing menopause. The American Cancer Society recommends that adults engage in 2.5 - 5 hours of moderate-intensity activity or 1 to 2.5 hours of vigorous-intensity activity per week.



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Two Ways to Catch Breast Cancer Fast

1. Breast Cancer Screenings

Breast cancer screenings play a crucial role in the early detection and treatment of breast cancer. Regular screenings including **mammograms, clinical breast exams, and self-examinations** allow healthcare providers to identify any abnormalities or potential signs of breast cancer at an early stage.

Mammography is a widely accepted method for breast cancer screening that involves a low-dose X-ray system to examine the breast area and capture variations in breast tissue density.

Mammography is not 100% accurate in the diagnosis of breast cancers and carries the risk of radiation exposure that can potentially be harmful. In addition, the mammography procedure involves manual breast compression and may contribute to the dissemination and metastasis of existing cancer cells within the breast tissue.

Although mammography carries certain risks, the advantages of having a mammogram significantly surpass the drawbacks, particularly for women ages 50-74.

- **Women in their 40s:** The choice to initiate screening mammography before the age of 50 should be made on an individual basis. Women who have a family history of breast cancer may derive more significant benefits from initiating breast cancer screenings in their 40s compared to women who are at average risk.
- **Women aged 50-74 years:** The United States Preventive Services Task Force (USPSTF) advises women between the ages of 50 to 74 to undergo mammography screenings every two years.
- **Women aged 60 to 69 years:** Women 60 to 69 have the highest likelihood of preventing breast cancer-related deaths through mammogram screening.
- **Women with dense breasts:** Mammography tends to have lower sensitivity and accuracy in detecting tumors in women with dense breasts. Therefore, additional screening methods such as MRI, ultrasound (US), and thermography are often necessary or recommended for this particular group. It is important to note that the United States Preventive Services Task Force (USPSTF) does not have specific guidelines for these women. To determine the most suitable screening approach for you, based on your individual medical history and family medical history, have a conversation with your healthcare provider.

2. Thermography

Thermography involves an infrared camera used to identify heat emission from the specific area of the body under examination. This method is highly accurate at detecting breast cancer, without exposure to radiation, and is cost-effective.

Benefits of Thermography:

- Research suggests that thermography has the potential to be valuable in identifying breast abnormalities at an early stage if done routinely and by a reliable technician.
- Thermography offers a benefit in reducing unnecessary biopsies for benign breast conditions. It's important to note that thermography is not currently recognized as a replacement for mammography, but is an FDA-approved tool for adjunctive screening for breast cancer and can be a reasonable consideration for those seeking an alternative or complimentary screening option.
- Additionally, thermography may serve as a useful tool by providing thermal indications of fibrocystic breast disease, infection, or vascular disease.
- Finally, with 2,400 men diagnosed with breast cancer in the United States, thermography may be used as a screening tool for men.

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