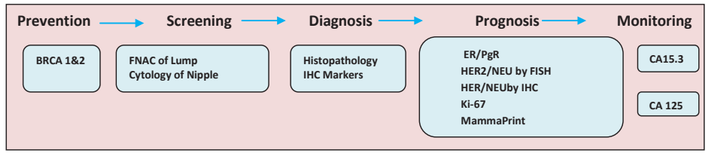
This test shows whether the tissue either has too much HER2/neu protein or too many copies of its gene. If the breast tumor has too much HER2/neu, then targeted therapy may be a treatment option.

BRCA 1 and BRCA 2: Most people who develop breast cancer have no family history of the disease. However, if you do have a family history of breast cancer, ovarian cancer, or both, heredity could have played a role in the cancer's development. Most inherited cases of breast cancer are associated with two abnormal genes: **BRCA1** (Breast Cancer gene 1) or **BRCA2** (Breast Cancer gene 2). Women who inherit a mutation, or abnormal change, in either of these genes have a much higher-than-average lifetime risk of developing breast cancer and ovarian cancer.

MammaPrint Test: - Is a genomic test that analyzes the activity of



certain genes in breast cancer, used to help make treatment decisions based on the cancer's risk of coming back (recurrence) within 5 years after diagnosis.

2. Mammogram

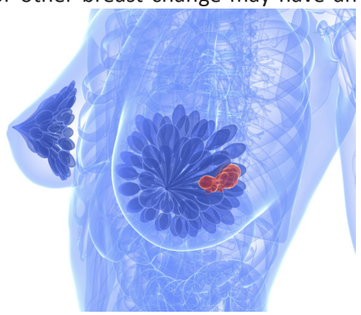
A mammogram is an x-ray picture of tissues inside the breast. Mammograms can often show a breast lump before it can be felt. Before they have symptoms, women should get regular screening mammograms to detect breast cancer early.

- Women in their 40s and older should have mammograms every 1 or 2 years.
- Women who are younger than 40 and have risk factors for breast cancer should ask their health care provider whether to have mammograms and how often to have them.

3. Other imaging tests

If an abnormal area is found during clinical breast exam or a mammogram, the doctor may order other imaging tests:

Ultrasound: A women with a lump or other breast change may have an ultrasound test.



MRI: MRI uses a powerful magnet linked to a computer. It creates detailed pictures of the breast tissue. These pictures can show the difference between normal and diseased tissue.

Q: How is the staging done in breast cancer?

A: If the biopsy shows that you have breast cancer, your doctor needs to learn the extent (state) of the disease to help you choose the best treatment. The stage is based on the size of the cancer, whether the cancer has invaded nearby tissues, and whether the cancer has spread to other parts of the body.

Q: What are the treatment options in breast cancer?

A: Women with breast cancer have many treatment options. The treatment that's best for a woman may not be best for another.

The options are surgery, radiation therapy, hormone therapy, chemotherapy, and targeted therapy. You may receive more than one type of treatment. Surgery and radiation therapy are types of local therapy. They remove or destroy cancer in the breast. Hormone therapy, chemotherapy, and targeted therapy are types of systemic therapy. The drug enters the bloodstream and destroys or controls cancer throughout the body. The treatment that's right for you depends mainly on the stage of the cancer, the results of the hormone receptor tests, the result of the HER2/neu test and your general health.

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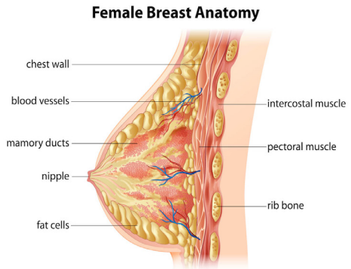
To know is to Beat

Breast cancer

Frequently Asked Questions

Q: What is breast cancer?



A: Breast cancer is the most common type of cancer among women in India. Breast cancer (malignant breast neoplasm) is cancer originating from breast tissue, usually from the inner lining of milk ducts or the lobules that supply the ducts with milk.

Cancers originating from ducts are known as ductal carcinomas & those originating from lobules are known as lobular carcinomas. The size, stage, rate of growth, and other characteristics of the tumor determine the kind of treatment. Breast cancer accounts for approximately 25% of all cancers diagnosed in women. The hereditary form of breast / ovarian cancer accounts for 5-10% of all cases and is clearly associated with mutations in BRCA1/2 genes.

Q: If I find a lump on my breast in a regular examination should I be worried?

A: Eighty percent of lumps are non-cancerous. Usually these lumps are a collection of normal or hyperactive breast gland cells or a cyst. However, if you detect a lump, you should see a doctor for definitive diagnosis. It is helpful to know what your breasts normally feel like. That is why monthly breast self-exams are so important. If you notice any changes in your breasts that last over a full month's cycle or seem to get worse or more obvious over time, tell your doctor.

Q: What are the risk factors for breast cancer?

Age: The chance of getting breast cancer increases as you get older. Most women are over 55years old when they are diagnosed, though it is being seen more often at a younger age too.

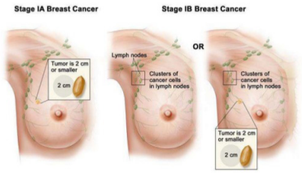
Family health history: Your risk of breast cancer is higher if your mother, father, sister, or daughter had breast cancer. The risk is even higher if your family member had breast cancer before age 50.

Certain genomic changes: Changes in certain genes, such as BRCA 1 or BRCA 2, substantially increase the risk of breast cancer. Tests can sometimes show the presence of these rare, specific gene changes in families with many women who have had breast cancer, and health care providers may suggest ways to try to reduce the risk of breast cancer or to improve the detection of this disease in women who have these genetic changes.

Reproductive and menstrual history:

- The older a woman is when she has her first child, the greater her chance of breast cancer.
- Women who never had children are at an increased risk of breast cancer.
- Women who had their first menstrual period before age 12 are at an increased risk of breast cancer
- Women who take menopausal hormone therapy for many years have an increased risk of breast cancer.

Stage I A and I B Groups



Being overweight or obese after menopause: The chance of getting breast cancer after menopause is higher in women who are overweight or obese.

Lack of physical activity: Women who are physically inactive throughout life may have an increased risk of breast cancer.

Drinking alcohol: Studies suggest that the more alcohol a woman drinks, the greater her risk of breast cancer.

Q; What are the early signs of breast cancer?

A: Early breast cancer usually doesn't cause symptoms. But as the tumor grows, it can change how the breast looks or feels.

The common changes include:

- A lump or thickening in or near the breast or in the underarm area.
- A change in the size or shape of the breast
- Dimpling or puckering in the skin of the breast
- A nipple turned inward into the breast.
- Discharge (fluid) from the nipple, especially if its bloody
- Scaly, red, or swollen skin on the breast, nipple, or areola (the dark area of skin at the center of the breast).
- The skin may have ridges or pitting so that it looks like the skin of an orange.

Q: How can we detect and diagnose breast cancer?

A: Your doctor can check for breast cancer before you have any symptoms. During your visit, the doctor will ask you about your personal and family medical history. You may have a physical examination at the same time.

1. Lab tests with breast tissue

If you are diagnosed with breast cancer, your doctor may suggest special lab tests on the breast tissue that was removed:

FNAC of Lump/Cytology of nipple discharge is a simple, inexpensive and easy to perform procedure which requires no advanced preparation, and can be carried out in the doctor's clinic. Basically it is done to check whether the lump or discharge from the nipple contains cancer cells or not.

Biopsy: A biopsy is the removal of tissue to look for cancer cells. A biopsy is the only way to tell for sure if cancer is present.

Hormone Receptor Test: Some breast tumors need hormones to grow. These tumors have receptors for the hormones estrogen, progesterone, or both. If the hormone receptor tests show that the breast tumor has these receptors, then hormone therapy is most often recommended as a treatment option.

HER2 /neu Test: HER2/neu protein is found on some types of cancer cells.