

## Diagnosis and Treatment of Breast Cancer

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### Editorial Note

Breast cancer is diagnosed using the following tests and procedures:

**Breast exam:** Doctor will check both of your breasts and lymph nodes in your armpit, feeling for any lumps or other abnormalities.

**Mammogram:** A mammogram is a type of X-ray that is used to examine the breast. Breast cancer screening is usually done through mammograms. If a screening mammography reveals an anomaly, your doctor may prescribe a diagnostic mammogram to investigate further.

**Breast ultrasound:** Ultrasound uses sound waves to produce images of structures deep within the body. Ultrasound may be used to determine whether a new breast lump is a solid mass or a fluid-filled cyst.

**Removing a sample of breast cells for testing (biopsy):** Breast cancer can only be diagnosed definitively by a biopsy. A biopsy is a procedure in which your doctor extracts a core of tissue from a questionable region using a specialised needle instrument guided by an X-ray or another imaging test. A tiny metal marker is frequently left at the location within your breast so that subsequent imaging tests may easily identify the region.

**Biopsy samples** are submitted to a facility for testing, and specialists assess if the cells are malignant. A biopsy sample is also examined to establish the type of cells involved in breast cancer, the disease's aggressiveness (grade), and whether the cancer cells have hormone receptors or other receptors that might affect your treatment options.

**Breast magnetic resonance imaging (MRI):** An MRI machine creates images of the inside of your breast using a magnet and radio waves. You will be given a dye injection before to your breast MRI. An MRI does not utilise radiation to produce pictures, unlike other forms of imaging examinations.

### Treatment

The majority of women with breast cancer undergo surgery, and many of them also receive further treatment thereafter, such as chemotherapy, hormone therapy, or radiation. Chemotherapy may also be administered before to surgery in some cases. There are numerous treatment options for breast cancer, and you may feel overwhelmed as you make difficult treatment decisions. Consider consulting a breast

expert at a breast centre or clinic for a second opinion. Speak with other women who have made similar choices.

### Breast Cancer Surgery

The following operations are used to treat breast cancer:

**Removing the breast cancer (lumpectomy):** The surgeon eliminates the tumour plus a narrow margin of good tissue surrounding it during a lumpectomy, also known as breast-conserving surgery or broad local excision. For smaller tumours, a lumpectomy may be suggested. Chemotherapy may be used before surgery to reduce a tumour and allow it to be removed entirely using a lumpectomy operation in some patients with bigger tumours.

**Removing the entire breast (mastectomy):** A mastectomy is a procedure in which all of your breast tissue is removed. The lobules, ducts, fatty tissue, and some skin, including the nipple and areola, are all removed during most mastectomy procedures (total or simple mastectomy). In certain situations, newer surgical procedures to enhance the look of the breast may be a possibility. Breast cancer surgeries such as skin-sparing mastectomy and nipple-sparing mastectomy are becoming more prevalent.

**Removing a limited number of lymph nodes (sentinel node biopsy):** Surgeon will explain the importance of removing the lymph nodes that receive the lymph drainage from your tumour with you to assess whether cancer has progressed to your lymph nodes. If no cancer is found in those lymph nodes, there is a slim chance that cancer will be found in any of the remaining lymph nodes, and no additional lymph nodes will need to be removed.

**Removing several lymph nodes (axillary lymph node dissection):** If cancer is detected in the sentinel lymph nodes, your surgeon will consider whether more lymph nodes in your armpit should be removed.

**Removing both breasts:** If they have a very high risk of cancer in the other breast due to a genetic predisposition or a strong family history, some women with cancer in one breast may opt to have their second (healthy) breast removed (contralateral preventive mastectomy).

The majority of women who have breast cancer in one breast never acquire cancer in the other. Talk to your doctor about your breast cancer risk as well as the advantages and dangers of this surgery.