

Breast Cancer Treatment by Stage

Treatment for breast cancer depends on:

- The stage of your cancer (whether it is only in the breast or has spread to other places in the body).
- The type of cancer.
- Certain characteristics of the cancer cells.
- Your menopausal status.
- The general state of your health.

What is Staging?

When breast cancer is diagnosed tests will be done to find out if it has spread from the breast to other parts of the body. This is called staging. Your doctor needs to know the stage of your disease to plan treatment. The following stages are used for breast cancer:

- *Breast cancer in situ (stage 0)*: About 30 percent of breast cancers are identified very early. They are sometimes called carcinoma in situ. There are two types of breast cancer in situ. One type is ductal carcinoma in situ (DCIS or intraductal carcinoma). The other type is lobular carcinoma in situ (LCIS). LCIS is not breast cancer but instead a marker for patients at higher risk for the development of the disease.
- *Stage I*: The cancer is either less than two centimeters and has not spread outside the breast or less than two centimeters and there is lymph node involvement with cells measuring less than two millimeters (micrometastasis).
- *Stage II*: The cancer is either less than two centimeters and has spread to the lymph nodes under the arm (axillary lymph nodes), is between two and five centimeters and has not spread to the lymph nodes under the arm or is in the lymph nodes under the arm with no detectable cancer in the breast (unknown primary).
- *Stage IIB*: The cancer is either between two and five centimeters and has spread to the lymph nodes under the arm or is larger than five centimeters and has not spread to the lymph nodes under the arm.
- *Stage IIIA*: The cancer is either five centimeters or less in size and has spread to lymph nodes under the arm that have grown into each other, into other structures or to lymph nodes near the breast bone or is larger than five centimeters in size and has spread to the lymph nodes under the arm.
- *Stage IIIB*: The cancer has grown into the chest wall and/or the skin of the breast with or without evidence of spread to lymph nodes under arm that have grown into each other or into other structures or to lymph nodes near the breast bone.
- *Stage IIIC*: The cancer may be any size and has spread to the lymph nodes above or below the collarbone, involves more than 10 lymph nodes under the arm or involves the lymph nodes near the breastbone.
- *Stage IV*: The cancer has spread to other organs in the body such as the bones, lungs, liver or brain.

What is Inflammatory Breast Cancer?

Inflammatory breast cancer (IBC) is a special class of breast cancer that is rare. With IBC, the breast may appear red and swollen and sometimes feel warm. The skin may show signs of ridges, wheals (raised areas) or have an orange-peel appearance. This type of cancer tends to be more aggressive and may be classified as stage IIIB, IIIC or IV.

What does Recurrence Mean?

Recurrent disease means the cancer has or may come back (recurred) after treatment. It may come back in the breast, the lymph nodes, the chest wall or in another part of the body.

How is Breast Cancer Treated?

There are several treatments or therapies available depending upon the person and the type and stage of cancer. A therapy is considered *adjuvant* when it is given after surgery and there is no sign of cancer recurrence. A therapy is considered *neoadjuvant* when it is given before surgery to shrink a tumor and make it easier to remove or to assess the tumor's response to a specific type of treatment. Types of treatment or therapy include:

- *Surgery* is an operation to remove the cancer.
- *Radiation therapy* uses high-dose x-rays to kill cancer cells.
- *Chemotherapy* uses drugs to kill cancer cells.
- *Hormone therapy* uses hormones to stop cancer cells from growing.
- *Targeted therapy* uses drugs to target a unique marker on the breast cancer cells.
- *Clinical trials* to test new drugs or drug combinations.

Surgery

Surgery has a role in the treatment of most patients with breast cancer. It is used to remove the cancer from the breast. Usually some of the lymph nodes under the arm also are removed and examined to see if cancer cells are present. Types of surgery include:

- *Lumpectomy (segmental mastectomy, partial mastectomy or wide local excision)*: This procedure is used to conserve the breast by removing the lump and some tissue around it. It may be followed by radiation therapy to the remaining breast or to a portion around the surgical site. Doctors may also remove some of the lymph nodes under the arm.
- *Total or simple mastectomy*: This procedure removes the whole breast. Sometimes lymph nodes under the arm are also removed.
- *Modified radical mastectomy*: This procedure removes the whole breast and some of the lymph nodes under the arm.

Sentinel Lymph Node Biopsy

Sentinel lymph node biopsy (SLNB) is the surgical removal of the sentinel lymph node. The sentinel lymph node is the first to receive lymphatic drainage from the tumor. It is also the place where the cancer will most likely spread to first from the breast.

SLNB is a procedure used to determine if your cancer has spread to your lymph system, requiring more extensive lymph node surgery. If the SLNB reveals cancer cells in the sentinel node, a formal axillary lymph node dissection may be necessary. SLNB is the preferred first step since it removes fewer lymph nodes than a formal axillary dissection and has fewer long term effects. It can also provide the physician with the necessary information needed to make further treatment decisions. Please ask your physician or nurse for further details about this procedure.

Breast Reconstruction

If you are having your whole breast removed, you may want to consider breast reconstruction (having a new breast made). Plans for breast reconstruction are often part of your cancer treatment plan. Reconstruction can be done at the time of the surgery or at some time in the future. The breast may be made with your own tissue or by using implants filled with saline or silicone. Breast reconstruction is not considered cosmetic surgery, so it is typically covered by health insurance. In some cases, reconstructive surgery may also be performed for patients that have a partial mastectomy.

Radiation Therapy

This treatment uses high-energy x-rays to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external radiation therapy) or from putting materials that produce radiation inside the body through thin plastic tubes (internal radiation therapy).

Chemotherapy

Chemotherapy uses special drugs that enter the bloodstream and travel through the body to damage or kill cancer cells. Chemotherapy may be taken by mouth or delivered into the body by a needle in a vein.

Hormone Therapy

If the breast cancer cells contain estrogen or progesterone receptors, you may be given hormone therapy to block hormones in the body that might help cancer grow. This may be done by using drugs or by surgery to remove organs that make hormones, such as the ovaries.

Hormone therapy with tamoxifen can act on cells all over the body and may increase your chance of getting cancer of the uterus. Therefore, you should be checked regularly for this type of cancer. You should immediately report any uterine bleeding other than your menstrual period to your doctor. For women who have gone through menopause, an aromatase inhibitor may be used instead of tamoxifen.

Targeted Therapy

Targeted therapy uses drugs to identify and attack specific markers on cancer cells. Some types of targeted therapy kill cancer cells directly by affecting how they grow and survive. Other targeted therapies help the body's immune system and attack the cancer. Monoclonal antibodies and tyrosine kinase inhibitors are two types of targeted therapies used in the treatment of breast cancer.

Clinical Trials

You may receive treatment that is considered standard based on its effectiveness in a number of patients in past studies or you may choose to participate in a clinical trial. Additionally, not all patients are cured with standard therapy and some standard treatments may have more side effects than are desired. For these reasons, clinical trials are designed to find better ways to treat cancer based on the latest information.

What is the Treatment for Breast Cancer In Situ?

Treatment depends on whether you have ductal carcinoma in situ (DCIS) or lobular carcinoma in situ (LCIS). This can be determined by a breast pathologist.

For DCIS, your treatment may include one of the following:

- Breast conserving surgery and radiation therapy, with or without tamoxifen.
- Total mastectomy with or without tamoxifen.
- Breast conserving surgery without radiation therapy.

For LCIS, you have a marker for a higher risk of developing cancer in either breast. This gives you about a 10 to 15 percent chance of developing breast cancer in either breast over the next 30 years. Many women with LCIS never develop invasive breast cancer. The treatment options for LCIS are varied and quite controversial. Your treatment may include:

- An excisional biopsy to diagnose the LCIS, followed by regular exams and mammograms to detect any abnormality.
- Tamoxifen to reduce the risk of developing breast cancer. A large clinical trial found women at high risk for developing breast cancer who were treated with tamoxifen were almost 50 percent less likely to develop cancer than women at high risk who did not receive the drug.
- Surgery to remove both breasts (prophylactic mastectomy).

What is the Treatment for Stage I, Stage II, Stage III, Stage IIIB and operable stage IIIC Breast Cancer?

Treatment for these stages may include:

- Surgery to remove the cancer and some surrounding breast tissue (lumpectomy or partial or segmental mastectomy). Some of the lymph nodes under the arm may also be removed. This type of breast conserving surgery is followed by radiation therapy. This treatment provides identical long-term cure rates to those from a mastectomy. Your doctor's recommendation on which procedure to have is based on tumor size and location.
- Surgery to remove the whole breast (total mastectomy) or whole breast and some of the lymph nodes under the arm (modified radical mastectomy).
- Neoadjuvant chemotherapy given before surgery.
- Adjuvant therapy (following surgery) given alone or in combination, such as radiation therapy, chemotherapy, hormone therapy, targeted therapy or participation in clinical trials.

What is the Treatment for Stage III Inoperable Cancer?

Treatment for this stage may include the following:

- Chemotherapy.
- Chemotherapy followed first by surgery with lymph node removal and then radiation therapy. Additional chemotherapy or hormonal therapy may also be given.
- Clinical trials to test new drugs or drug combinations.

What is the Treatment for Stage IV Breast Cancer?

Treatment for this stage may include the following:

- Hormone therapy and or/chemotherapy.
- Targeted therapy.
- Radiation therapy and/or surgery to reduce your pain or symptoms.
- Clinical trials to test new drugs or drug combinations.

What is the Treatment for Inflammatory Breast Cancer?

Treatment of inflammatory breast cancer may include chemotherapy, surgery and/or radiation therapy. Hormone therapy may also be used.

What is the Treatment for Recurrent Breast Cancer?

Breast cancer that comes back (recurs) in the breast or lymph nodes can often be treated but is sometimes associated with disease in another part of the body. The treatment depends on hormone receptor levels, the kind of treatment you had before it recurred, where the cancer recurred, whether you still have menstrual periods and other factors, but may include one or more of the following:

- Hormone therapy.
- Chemotherapy.
- Surgery and /or radiation therapy for patients whose cancer has come back in only one place.
- Radiation therapy to help relieve pain due to the spread of the cancer to the bones and other places.
- Clinical trials to test new drugs or drug combinations.

How Can I Learn More about Breast Cancer, Treatment and Clinical Trials?

By calling the National Cancer Institute's Cancer Information Service (CIS) at 1-800-4-CANCER (1-800-422-6237), you can speak with someone who can answer your questions. The CIS can also send you free booklets including:

- *Chemotherapy and You.*
- *Radiation Therapy and You.*
- *Eating Hints for Cancer Patients: Before, During and After Treatment.*
- *What You Need to Know about Cancer of the Breast.*
- *Coping with Advanced Cancer.*
- *When Cancer Returns: Support for People with Cancer.*