

Breast Cancer Treatment by Stage

Treatment for breast cancer depends on:

- the stage of your cancer (whether it is just in the breast or has spread to other places in the body),
- the type of breast cancer,
- certain characteristics of the cancer cells,
- your menopausal status, and
- the general state of your health.

What is "staging?"

Once breast cancer has been diagnosed, more tests will be done to find out if the cancer 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 (also known as intraductal carcinoma). The other type is lobular carcinoma in situ. Lobular carcinoma in situ is not cancer but is a marker for patients at higher risk for future development of breast cancer. For the purpose of classifying the disease, it is also called breast cancer in situ, carcinoma in situ or stage 0 breast cancer.
- **Stage I**
The cancer is no bigger than 2 centimeters (about 1 inch) and has not spread outside the breast, or the cancer is no bigger than 2 centimeters and there is lymph node involvement with cells measuring less than 2 millimeters (micrometastasis).
- **Stage II**
Stage II is divided into stages IIA and IIB.
 - Stage IIA is defined by one of the following:
 - The cancer is no bigger than 2 centimeters and has spread to the lymph nodes under the arm (the axillary lymph nodes).
 - The cancer is between 2 and 5 centimeters (from 1 to 2 inches) and has not spread to the lymph nodes under the arm.
 - There is cancer detected in the lymph nodes under the arm with no detectable cancer in the breast (unknown primary).

- Stage IIB is defined by either of the following:
 - The cancer is between 2 and 5 centimeters (from 1 to 2 inches) and has spread to the lymph nodes under the arm.
 - The cancer is bigger than 5 centimeters (larger than 2 inches) and has not spread to the lymph nodes under the arm.
- **Stage III**
 Stage III is divided into stages IIIA, IIIB and IIIC.
 - Stage IIIA is defined by either of the following:
 - The cancer is 5 centimeters or less in size and has spread to lymph nodes under the arm that have grown into each other or into other structures, or to lymph nodes near the breastbone.
 - The cancer is larger than 5 centimeters in size and has spread to the lymph nodes under the arm.
 - Stage IIIB is defined by the following:
 - The cancer has grown into the chest wall and/or the skin of the breast with or without evidence of spread to the lymph nodes.
 - The cancer may have spread to lymph nodes under the arm that have grown into each other or into other structures, or to lymph nodes near the breastbone.
 - Stage IIIC is defined by any tumor size with one of the following:
 - The cancer has spread to the lymph nodes above or below the collarbone.
 - There are more than 10 lymph nodes under the arm involved with cancer.
 - There is involvement of the lymph nodes near the breastbone.
- **Stage IV**
 The cancer has spread to other organs of the body. The sites where breast cancer is most likely to spread are the bones, lungs, liver or brain.

Inflammatory Breast Cancer

Inflammatory breast cancer is a special class of breast cancer that is rare. The breast looks as if it is inflamed because of its swollen and red appearance. Sometimes it may feel warm. The skin may show signs of ridges and wheals (raised areas) or it may look pitted like the skin of an orange. This type of cancer tends to be more aggressive. Inflammatory breast cancer may be stage IIIB, IIIC or stage IV.

Recurrence

Recurrent disease means that the cancer has come back (recurred) after it has been previously treated. It may come back in the breast, the lymph nodes, the soft tissues of the chest (the chest wall), or in another part of the body.

How is breast cancer treated?

- There are different treatments for each patient with breast cancer depending on the stage and type.
 - Surgery (an operation to remove the cancer)
 - Radiation therapy (using high-dose x-rays to kill cancer cells)
 - Chemotherapy (using drugs to kill cancer cells)

- Hormone therapy (using hormones to stop the cells from growing)
- Targeted therapy (using drugs targeting a unique marker on the breast cancer cells)
- New types of treatment are being tested in clinical trials.
- Therapy is considered adjuvant when it is given after surgery, when no cancer cells can be seen, to prevent cancer from recurring.
- Therapy is considered neoadjuvant when it is given before surgery to shrink the tumor and make it easier to remove, or to assess the response of the tumor to a specific type of treatment.

A Number of Different Therapies Are Used

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 taken out and looked at under the microscope to see if cancer cells are present.

Surgery to Conserve the Breast

- **Lumpectomy** (sometimes called segmental mastectomy, partial mastectomy or wide local excision) takes out the lump in the breast and some of the tissue around it. It may be followed by radiation therapy to the part of the breast that remains or to a portion of the breast around the surgical site. Doctors may also take out some of the lymph nodes under the arm.

Other Types of Surgery

- **Total or simple mastectomy** removes the whole breast. Sometimes lymph nodes under the arm are also taken out.
- **Modified radical mastectomy** removes the breast and some of the lymph nodes under the arm.

Sentinel Lymph Node Biopsy

Sentinel lymph node biopsy (SLNB) is the removal of the sentinel lymph node during surgery. The sentinel lymph node is the first lymph node to receive lymphatic drainage from a tumor. It is the first lymph node the cancer is likely to spread to from the tumor in the breast.

SLNB is a procedure that is 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 preferred as the first step since it removes fewer lymph nodes than a formal axillary dissection and has fewer long-term side effects. It can also provide the physician with the necessary information he or she needs to make further treatment decisions. Please ask your physician or nurse for further details about this procedure.

Breast Reconstruction

If you are going to have your whole breast removed, you may want to think about having 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 plans. 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 through thin plastic tubes into the area where the cancer cells are found (internal radiation therapy).

Chemotherapy

Chemotherapy is the use of special drugs to damage or kill cancer cells. Chemotherapy may be taken by mouth, or it may be put into the body by a needle in a vein. Chemotherapy drugs enter the bloodstream, travel through the body, and can kill cancer cells outside the breast area.

Hormone Therapy

If tests show that the breast cancer cells contain estrogen or progesterone receptors you may be given hormone therapy. Hormone therapy is used to block hormones in the body that might help cancers grow. This may be done by using drugs that block the action of hormones or by surgery that removes 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 the cells grow and survive. Other targeted therapies help the body's immune system, its natural defense, attack and fight the cancer. Monoclonal antibodies and tyrosine kinase inhibitors are two types of targeted therapies used in the treatment of breast cancer.

Treatment for Breast Cancer In Situ

Your treatment depends on whether you have ductal carcinoma in situ or lobular carcinoma in situ. It is important to have your biopsy preparations (slides) observed through the microscope by a breast pathologist to be certain of the diagnosis.

- If you have ductal carcinoma in situ (DCIS), your treatment may be 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.

- If you have lobular carcinoma in situ (LCIS), you have a marker for a higher risk of developing cancer in either breast. This gives you about a 10-15 percent chance of developing breast cancer in either breast over the next 30 years. Many women with LCIS never develop an 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 that women at high risk for developing breast cancer who were treated with the hormonal therapy drug 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).

Treatment by Stage

Treatment for breast cancer depends on the type and stage of your disease, your menopausal status and your overall health.

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 go into a clinical trial. 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 patients and are based on the most up-to-date information. Clinical trials are taking place in most parts of the country for all stages of breast cancer. If you want more information, call the Cancer Information Service toll-free at 1-800-4-CANCER (1-800-422-6237).

Stage I, Stage II, Stage IIIA, Stage IIIB and Operable Stage IIIC Breast Cancer

- **Your treatment may include the following:**
 - Surgery to remove the cancer and some surrounding breast tissue (lumpectomy or partial or segmental mastectomy). Some of the lymph nodes under the arm are also 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 the whole breast and some of the lymph nodes under the arm (modified radical mastectomy).
 - Adjuvant therapy (following surgery):
 - Radiation therapy
 - Chemotherapy, with or without hormone therapy
 - Hormone therapy
 - Targeted therapy combined with chemotherapy
 - Clinical trials

Stage III Inoperable Breast Cancer

- **Your treatment may include the following:**
 - Chemotherapy
 - Chemotherapy, followed by surgery with lymph node removal, followed by radiation therapy. Additional chemotherapy or hormone therapy may be given.
 - Clinical trials testing new drugs or drug combinations.

Stage IV Breast Cancer

- **Your treatment may include the following:**
 - Hormonal therapy and/or chemotherapy
 - Targeted therapy
 - Radiation therapy and/or surgery to reduce your pain or symptoms
 - Clinical trials testing new drugs or drug combinations

Inflammatory Breast Cancer

Your treatment will probably be a combination of chemotherapy, followed by surgery to remove the breast, then radiation therapy. Hormonal therapy also may be used.

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.

Your treatment may be one or more of the following:

- Hormonal 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.
- A clinical trial of new drugs or drug combinations.

To Learn More about Breast Cancer

“What Would I Do? - Breast Cancer Treatment Options” (Video)

To view this video, visit one of the Learning Center locations below.

The Learning Center

The Learning Center is a consumer health library with the latest information on cancer care, support, prevention and general health and wellness issues. Locations include:

- Law Learning Center, *Main Building, Floor 4, near Elevator A, Room R4.1100*
- Levit Learning Center, *Mays Clinic, Floor 2, near The Tree Sculpture, Room ACB2.1120*

The Nellie B. Connally Breast Center Web site

www.mdanderson.org/care_centers/breastcenter

Detailed information is provided on breast reconstruction.

National Cancer Institute's Cancer Information Service

1-800- 4-CANCER (1-800-422-6237)

By dialing this toll-free number, you can speak with someone who can answer your questions. The Cancer Information Service can also send you free booklets. Visit The Learning Center to find out how you can get copies of the following booklets:

- *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*