Surgery for Breast Cancer

Most women with breast cancer have some type of surgery as part of their treatment. There are different types of breast surgery, and it may be done for different reasons, depending on the situation. For example, surgery may be done to:

- Remove as much of the cancer as possible (breast-conserving surgery or mastectomy)
- Find out whether the cancer has spread to the lymph nodes under the arm (sentinel lymph node biopsy or axillary lymph node dissection)
- Restore the breast's shape after the cancer is removed (breast reconstruction)
- Relieve symptoms of advanced cancer

Your doctor may recommend a certain operation based on your breast cancer features and your medical history, or you may have a choice about which type of surgery to have. It's important to know your options so you can talk about them with your doctor and make the choice that is right for you.

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Surgery to remove breast cancer

There are two main types of surgery to remove breast cancer:

- Breast-conserving surgery is surgery to remove the cancer as well as some surrounding normal tissue. Only the part of the breast containing the cancer is removed. How much breast is removed depends on where and how big the tumor is, as well as other factors. This surgery is also called a lumpectomy, quadrantectomy, partial mastectomy, or segmental mastectomy.
- Mastectomy is a surgery in which the entire breast is removed, including all of the breast tissue and sometimes other nearby tissues. There are several different types of mastectomies. Some women may also have both breasts removed in a **double mastectomy**.

Choosing between breast-conserving surgery and mastectomy

Many women with early-stage cancers can choose between having breast-conserving surgery (BCS) and mastectomy. The main advantage of BCS is that a woman keeps most of her breast. But most often, she will also need radiation. Women who have mastectomy for early-stage cancers are less likely to need radiation.

For some women, mastectomy may be a better option or the only option, because of the type of breast cancer, the large size of the tumor, previous treatment with radiation, or certain other factors.

Some women might worry that having a less extensive surgery might raise the risk of the cancer coming back. But studies of thousands of women over more than 20 years show that when BCS is done with radiation, survival is the same as having a mastectomy, in people with early-stage cancer who are candidates for both types of surgery.

Surgery to remove nearby lymph nodes

To find out if the breast cancer has spread to underarm (axillary) lymph nodes, one or more of these lymph nodes will be removed and looked at in the lab. This is important to figuring out the stage (how big and where it has spread) of the cancer. Lymph nodes may be removed either as part of the surgery to remove the breast cancer or as a separate operation.

The two main types of surgery to remove lymph nodes are:

- **Sentinel lymph node biopsy (SLNB)** is a procedure in which the surgeon injects a dye and then removes only the lymph node(s) under the arm that have taken up the dye. These lymph nodes are where the cancer would likely spread first. Removing only one or a few lymph nodes lowers the risk of side effects that can happen after an axillary lymph node dissection (below), such as arm swelling that is also known as lymphedema.
- **Axillary lymph node dissection (ALND)** is a procedure that does not use a dye and in which the surgeon removes many (usually less than 20) underarm lymph nodes. ALND is not done as often as it was in the past, but it might still be the best way to look at the lymph nodes in some situations.

To learn more about these procedures, see Lymph Node Surgery for Breast Cancer.

Wire localization to guide surgery

Sometimes, if the cancer in your breast can't be felt, is hard to find, and/or is difficult to get to, the surgeon might use a mammogram or ultrasound to guide a wire to the right spot. This is called **wire localization** or **needle localization**. If a mammogram is used you may hear the term **stereotactic wire localization**. Rarely, an MRI might be used if using the mammogram or ultrasound is not successful.

After medicine is injected into your breast to numb the area, a mammogram or ultrasound is used to guide a thin hollow needle to the abnormal area. Once the tip of the needle is in the right spot, a thin wire is put in through the center of the needle. A small hook at the end of the wire keeps it in place. The needle is then taken out. Once in the operating room, the surgeon uses the wire as a guide to find the part of the breast to be removed.

The surgery done as part of the wire localization may be enough to count as breast-conserving surgery if all of the cancer is taken out and the margins are negative. If cancer cells are found at or near the edge of the removed tissue (also called a **positive or close margin**), more surgery may be needed.

It should be noted that a wire-localization procedure is sometimes used to perform a surgical biopsy of a suspicious area in the breast to find out if it is cancer or not.

There are other ways a surgeon can be guided to the tumor, but these techniques are newer and not used in every facility.

Breast reconstruction after surgery

Many woman having surgery for breast cancer might have the option of breast reconstruction. A woman having a mastectomy might want to consider having the breast mound rebuilt to restore the breast's appearance after surgery. In some breast-conserving surgeries, a woman may consider having fat grafted into the affected breast to correct any dimples left from the surgery. The options will depend on each woman's situation.

If you are thinking about having reconstructive surgery, it's a good idea to discuss it with your breast surgeon and a plastic surgeon **before** your mastectomy or BCS. This gives the surgical team time to plan out the treatment options that might be best for you, even if you wait and have the reconstructive surgery later.

To learn about different breast reconstruction options, see Breast Reconstruction Surgery.

Surgery for advanced breast cancer

Although surgery is very unlikely to cure breast cancer that has spread to other parts of the body, it can still be helpful in some situations, either as a way to slow the spread of the cancer, or to help prevent or relieve symptoms from it. For example, surgery might be used:

- When the breast tumor is causing an open wound in the breast (or chest)
- To treat a small number of areas of cancer metastases in a certain part of the body, such as the brain
- When an area of cancer is pressing on the spinal cord or in a bone that weakens it or causes it to break
- To treat a blockage in the liver
- To provide relief of pain or other symptoms

If your doctor recommends surgery for advanced breast cancer, it's important that you understand if it's to try to cure the cancer or to prevent or treat symptoms.

More information about surgery

For more general information about surgery as a treatment for cancer, see Cancer Surgery.

To learn about some of the side effects listed here and how to manage them, see Managing Cancer-related Side Effects.

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Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as editors and translators with extensive experience in medical writing.

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