

Breast Reconstruction

What You Should Know



 STONY BROOK
UNIVERSITY
MEDICAL CENTER

Mastectomy for treating breast cancer is the most common reason that women have breast reconstruction. In fact, the number of women undergoing this reconstructive surgery has increased dramatically over the past 30 years, and the trend for immediate breast reconstruction after a mastectomy has grown from 10 percent in the 1980s to about 90 percent today. At Stony Brook, our plastic surgeons have special expertise in reconstructive breast surgery. They use state-of-the-art reconstructive techniques, providing patients with a range of options for breast reconstruction.

The plastic surgeons in Stony Brook University Medical Center's Department of Surgery, Divisions of Breast Surgery and Plastic and Reconstructive Surgery, can create a breast that closely approximates the form, feel and appearance of a normal breast.

The information we provide here is intended to help you understand your options for having a mastectomy and breast reconstruction, and to help you make the decisions that are best for you.

MASTECTOMY

Mastectomy is the surgical removal of all or part of the breast and sometimes-related lymph nodes and muscles. It is performed to treat breast cancer—to remove harmful tumors and tumor cells.

In view of the complex feelings associated with breast cancer, it is important to know that a mastectomy can be a lifesaver, and not the end of your life. It can enable you to continue enjoying your life. Advances in surgery have led to the development of several new approaches to performing a mastectomy that now offer women a variety of options for treating different kinds of breast cancer, from early to late stages of the disease.

Any one of these options can be combined with simultaneous lymph node surgery as needed. This lymph node surgery sometimes, but not always, requires a separate armpit incision. Many times having a mastectomy eliminates the need for radiation. However, some patients who have a mastectomy still need radiation.

Having a mastectomy can be a lifesaver and enable you to continue enjoying life.

New York State law requires that every woman undergoing a mastectomy be offered reconstructive breast surgery. Breast reconstruction can be done at the time of the mastectomy or a later time, depending on your treatment plan. Immediate breast reconstruction should be discussed with all women who are having a mastectomy, although not all women will be candidates. Our plastic surgeons are specially trained in reconstructive surgery, and they can create a breast that closely approximates the form, feel and appearance of a normal breast.

Total or Simple Mastectomy

Total mastectomy is a procedure in which the surgeon removes the entire breast, including the nipple-areola complex. With this type of a mastectomy, most of the skin of the breast is removed, so the initial appearance is a scar and a mostly flat chest.

Lumpectomy

“Lumpectomy” and “partial mastectomy” are terms used interchangeably. They both refer to the same procedure. The term “partial mastectomy” is frequently used in place of “lumpectomy” for billing and coding purposes only, since it is a relatively more specific term. For the purpose of this brochure, the term lumpectomy will be used.

The primary goal of the procedure is to remove the cancer with a clear margin, which means that there is no evidence of cancer in the border area between the outer edge of the tissue and the tumor that has been biopsied or removed. This is accomplished while obtaining an acceptable cosmetic result. The scar heals nicely in the majority of cases. Generally, the cosmetic results are acceptable, and studies have shown that most women are satisfied with the results.

After having a lumpectomy, it is reasonable to expect some change in breast size and shape. For some women, the cosmetic appearance after having a lumpectomy is poor. These patients are encouraged to consult with our plastic surgery team to discuss options for reconstruction. Because a lumpectomy is almost always followed by radiation treatments, reconstruction procedures for this type of mastectomy are generally performed six to 12 months after completion of the initial surgery and radiation.

Risk-Reducing Mastectomy

In high-risk situations, some women will choose to have a risk-reducing mastectomy. This procedure removes an otherwise healthy breast so that cancer will not develop. However, there is no absolute guarantee in this regard. A woman can still get breast cancer after having a risk-reducing mastectomy, although the chances are very low (five percent or less).

Skin-Sparing Mastectomy

This kind of mastectomy is performed when your surgeon believes he or she can safely preserve some of the breast skin. A skin-sparing mastectomy is done in conjunction with immediate breast reconstruction. When combined with tissue expander reconstruction, which is explained later in this brochure, having a skin-sparing mastectomy enables the plastic surgeon to partially fill the expander, so there is some breast size and shape immediately after surgery.

The amount of skin that can be saved varies widely from patient to patient, and you should discuss this with your surgeon. Factors that influence this decision include cancer size, extent and location, previous breast scars, breast size and shape, patient size and weight, smoking history, radiation history and diabetes.

With a skin-sparing mastectomy, the goal is to preserve breast skin that remains healthy and viable. In some patients, the blood supply to the preserved skin is inadequate, and part of the skin becomes non-viable and turns black. Sometimes this dead skin needs to be trimmed as a separate minor procedure. (See the “Nipple and Areola Reconstruction” section for more information.)

Total Skin-Sparing Mastectomy

When a total skin-sparing mastectomy is performed, the nipple-areola complex is removed, but almost all of the surrounding breast skin is preserved. As is the case with a skin-sparing mastectomy, some patients who have a total skin-sparing mastectomy also experience an inadequate blood supply to the preserved skin. This causes part of the skin to become nonviable and turn black. The skin may need to be trimmed as a separate minor nipple and areola reconstruction procedure.

Total Skin-Sparing/Nipple-Sparing Mastectomy

This kind of mastectomy is performed when the surgeon believes that the nipple-areola complex as well as all of the breast skin can be preserved. This is the least common type of a mastectomy, and is only performed in highly selective cases.

Some patients may experience an inadequate blood supply, and part of the preserved skin or nipple may become nonviable and turn black. The skin may need to be trimmed as a separate minor nipple- and areola-reconstruction procedure, and there is a small chance of nipple loss as well.

While the presence of the preserved nipple enhances the cosmetic outcome of breast reconstruction, most women experience some dulling of the nipple. Current medical literature suggests that 20 to 30 percent of women will have near full sensation of the nipple, and 60 percent will have some nipple sensation. It is important to know, however, that even the perfectly preserved nipple may be insensate and have no feeling.

Patients with the best outcome have smaller breast size and are non-smokers, non-diabetics, not obese, and are highly motivated to preserve the nipple.

BREAST RECONSTRUCTION

Breast reconstruction is a procedure carried out to restore breast shape and replace breast tissue lost during a mastectomy or, occasionally, a lumpectomy. The goal is to match the opposite breast as closely as possible. Or, in some cases, to create a pair of breasts that are symmetrical and natural looking and, if possible, resemble the patient's original breasts.

There are many benefits to having breast reconstruction. These include restoration of a woman's feeling of being whole again, as well as her self-confidence and feelings of femininity. In clothes, the appearance of the reconstructed breast will be similar to the appearance prior to the mastectomy. Without clothes, the breast mound will restore the natural shape of the breast.

On a practical side, breast reconstruction eliminates the need for external artificial breasts (prostheses), which can be uncomfortable and awkward to wear.

It is important to know that breast reconstruction does not increase the risk of breast cancer recurrence.

It is important to know that reconstructive breast surgery does not interfere with future treatments such as radiotherapy, chemotherapy, or detection of breast cancer recurrence. Breast reconstruction does not increase the risk of breast cancer recurrence.

Although the goal of breast reconstruction is to match a woman's previous breast(s) as closely as possible, patients must bear in mind that the procedure will not precisely restore the original appearance and shape. The reconstructed breast will not have the same sensation, and lactation is not possible in the reconstructed breast.

Immediate Breast Reconstruction

The trend at major breast cancer centers has been to offer immediate reconstructive surgery for patients who have a mastectomy. In fact, New York State law now requires that all patients having a mastectomy should be offered immediate reconstruction. Of course, there are still some high-risk scenarios where breast reconstruction should be delayed or even avoided altogether.

Some women are uncomfortable weighing all of the reconstructive options while they are struggling to cope with the diagnosis of breast cancer. Breast reconstruction can certainly be performed at a later date. However, the advantages of immediate breast reconstruction are that not only is the patient spared a second major operation and hospitalization, but after the mastectomy, she wakes up with some breast shape, and is spared some of the psychological impact of having a mastectomy.

For most patients, breast reconstruction will require from one to three procedures to achieve the desired result. The first procedure is the most lengthy and complex, while the other procedures tend to be done on an outpatient basis, and are more focused on perfecting form.

The first procedure involves creation of the breast mound or breast shape. There are many ways this can be achieved.

Breast Reconstruction Options

TISSUE EXPANDER PLUS IMPLANT RECONSTRUCTION

The most common way to reconstruct a breast is to use a combination of a tissue expander and an implant. A tissue expander is a small “balloon” that is placed beneath the chest muscle (pectoralis muscle) at the time of the mastectomy. The muscle

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covers the upper portion of the tissue expander, and the lower portion is covered with what is called acellular dermal matrix. This bio-material, derived from human donor skin, has been washed to remove all cells. It acts as a sling or scaffolding that holds the expander and, eventually, the implant in place.

Over the ensuing weeks, the balloon is then filled with saline (sterile salt solution) through a small port-hole using a syringe and needle. This process allows for the creation and stretching of skin, much like what happens to a woman’s belly during pregnancy.

Remodeling of the skin requires about six weeks. Several months later, after sufficient skin has been created, a second procedure, in which the tissue expander is removed and a permanent breast implant placed, is performed. The current breast implants are filled with either silicone gel or saline solution.

Every effort is made to achieve the best possible result from the reconstruction. The results, however, can vary a great deal. Although it is impossible to achieve a perfect match, it is generally possible to achieve a close match that, even in a bathing suit or low-cut dress, looks similar to the opposite breast.

Most women are very satisfied with the final result of their reconstructive breast surgery and feel a significant improvement in their appearance and quality of life.

TISSUE-TRANSFER RECONSTRUCTION

The type of breast reconstruction chosen depends on the desires of the individual patient, as well as the factors that determine the reconstructive possibilities in each case.

The transverse rectus abdominis myocutaneous (TRAM) flap reconstruction is especially attractive to patients because the outcome is very natural, from materials to appearance.

This procedure entails using only the patient’s own tissue to build the new breast(s). A section of tissue is taken, generally from the belly area. This section of skin/fat and part or all of the rectus muscle are removed, similar to a “tummy tuck” procedure, then

brought to the mastectomy site, and shaped into a new breast closely matching the opposite breast. Sometimes, a similar procedure is done using tissue that has been removed from the patient's back.

The TRAM operation is lengthier than other reconstructive options and requires more time for recovery, but it yields the most natural-looking breast. Occasionally, skin and muscle from the back are used to reconstruct the missing breast; this is called a latissimus dorsi flap. With the latter technique, an implant is usually required if a larger breast needs to be made.

Our plastic surgeons at Stony Brook also have specialized training in microscopic techniques, which can be used to enhance the outcome in some patients who are having flap reconstruction. These procedures are called deep inferior epigastric perforator flap (DIEP) and superior gluteal artery perforator (SGAP) flap.

NIPPLE- AND AREOLA-RECONSTRUCTION — THE FINAL STEP

Creating the nipple-areola complex is the final step in completing a breast reconstruction. Some patients are comfortable without having a nipple, and do not wish further procedures. Others choose tattooing without reconstruction. This allows coloring to simulate the nipple-areola complex without the contours of the actual nipple.

The other approach is to create a nipple mound from skin taken as a local flap on the reconstructed breast. The areola can then be tattooed or reconstructed with a skin graft taken from elsewhere on the body. Common donor sites include abdominal scar from a flap reconstruction and the inner thigh.

Nipple-areola complex reconstruction is done in the plastic surgeon's office.

Stony Brook's Approach to Care

Our breast surgeons and plastic surgeons are highly experienced and specially trained to offer a range of options and techniques. We are committed to treating your cancer and also to optimizing the cosmetic outcome. While we are extremely confident in the care that we provide, the decisions about breast reconstruction are yours to make. They are important for you.

This is why we tell patients they should feel free to get opinions from other healthcare professionals to help them make the best decisions regarding breast reconstruction. Such opinions may help you decide whether reconstruction is what you want, and what kind of reconstruction you would prefer.

Our breast specialists and support staff, of course, are available to talk about this with you and your family, to answer your questions, and to provide you with the best possible care.

The following website is recommended as a good source for additional information regarding breast reconstruction: plasticsurgery.org.

For more information about breast reconstruction performed by our plastic surgeons at Stony Brook University Medical Center's Department of Surgery, Divisions of Breast Surgery and Plastic and Reconstructive Surgery, call (631) 444-4666.

For information about the Carol M. Baldwin Breast Care Center at Stony Brook University Medical Center, call (631) 638-1000.

Stony Brook University Cancer Center

Stony Brook University Cancer Center (SBUCC) is Suffolk County's cancer care leader and a leader in education and research. In the past year, SBUCC served more than 3,000 newly diagnosed adult patients with cancer and had 2,000 inpatient and 3,600 outpatient pediatric oncology visits.

The Center includes 12 multidisciplinary teams: Breast Cancer; Colorectal Cancer; Gynecologic Oncology; Head, Neck and Thyroid Oncology; Hematologic Malignancy and Stem Cell Transplantation; Lung Cancer; Melanoma; Neurologic Oncology; Pediatric Hematology/ Oncology; Sarcoma; Upper Gastrointestinal Oncology; and Urologic Oncology. The cancer program is accredited by the American College of Surgeons Commission on Cancer® as a Teaching Hospital-level-approved cancer program and received the Commission's Outstanding Achievement Award. The Carol M. Baldwin Breast Care Center was the first center in New York State to be accredited by the National Accreditation Program for Breast Centers. The Department of Radiation Oncology at Stony Brook University Medical Center is accredited by the American College of Radiology and the American Society for Radiation Oncology.



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