

UPMC

The patient's guide

to breast reconstruction

Magee-Womens Hospital
of UPMC

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Why have breast reconstruction?

There are many feelings and fears that women have after being diagnosed with breast cancer. One of the concerns that women may have is how the mastectomy will affect the way their bodies look. Some women also are concerned about how the physical changes will affect the way they feel about their bodies and the ways they can do everyday activities, like getting dressed.

Although breast reconstruction does not make a woman's body exactly the way it was before a mastectomy, reconstruction can make the body look more like it did. Breast reconstruction can be an important step in recovery. Some women feel that reconstruction helped them regain self-esteem, feel whole, and return to the lifestyles they had before breast cancer.

Breast reconstruction doesn't increase or reduce the risk that your cancer will come back. It also doesn't delay diagnosing a recurrence.

Not all patients who have a mastectomy have breast reconstruction. There is no medical need to replace a breast that has been removed. You do not have to have reconstruction if you do not want it.

Many women who do not have reconstruction choose to wear a breast prosthesis. This is a shaped soft form similar to a balloon that is worn outside of the body in the pocket of a special bra. Possible problems with a prosthesis is that it can be hot and heavy, difficult to wear with certain



types of clothing, difficult to wear when you do activities like exercising and swimming, and it usually needs to be removed before you go to bed. Women with large breasts may consider breast-reducing surgery to decrease the size of the prosthesis they need to balance their breasts.

Most patients who want reconstruction can have surgery, but some women who want reconstruction may not be able to have surgery. Speak with your breast surgeon and your plastic surgeon to decide if you can have reconstruction.



People who can help

You are not in this alone. Along with your family and friends, your health care team will be there with you each step of the way. With your doctors and their support staff, social workers and psychologists can help you address your concerns.

You may want to talk with someone even if you don't feel comfortable talking with your friends and family. Staff members are there to hear all of your concerns. They can arrange for you to speak with breast cancer survivors who have experiences similar to what you are going through. This also can be an opportunity to hear these patients' experiences with reconstruction and see the results of their surgeries. Your plastic surgeon may be willing to help you meet other patients.

Additional resources are available through support groups and educational meetings. Getting reassurance that other women have had the same feelings also may be comforting to you. You should keep in mind that others' experiences, needs, and goals may be different from yours.

When is breast reconstruction done?

When you will have reconstruction depends on many things. One factor is whether radiation therapy is needed after your mastectomy. Many doctors want patients to wait several months after radiation therapy before having reconstruction. You will need to discuss with your doctors when you should have reconstruction.

Immediate breast reconstruction happens when the plastic surgeon begins reconstruction the same day as the mastectomy. The benefits are that much of the patient's breast skin can be used for the reconstructed breast and typically results in the breast looking more natural. There are fewer surgeries and the total recovery time is less. The woman also does not have to spend as much time with a flat chest.

Delayed breast reconstruction happens when a woman has the mastectomy and the first part of reconstruction in two separate surgeries at two different times. A woman may have her chest flat on one or both sides for some time. Some women wait a year, and others may wait more than 10 years. There are many different reasons why a patient may choose to wait for reconstruction or why a doctor may want a patient to wait to have reconstruction.

Nipple reconstruction is done after the breast reconstruction is complete. Areolar tattooing is done to give color to the area around the nipple and the areola. Some patients think this makes the breast look more complete.

How is breast reconstruction done?

There are three main ways to do breast reconstruction:

- implant-based reconstruction
- tissue-based reconstruction to move tissue from one place on the body to the breast
- reconstruction with moving tissue and an implant

Women may want one type of reconstruction over another for many reasons. These may include:

- health
- goals
- history of breast surgery
- breast size and body type
- amount of time to commit to recovery

Your doctor and support team will help you decide what type of reconstruction would be best for you.

You usually will have many stages of surgery to recreate all parts of the breast. This includes balancing your new breast with your existing breast, nipple reconstruction, and restoring color to the nipple/areolar complex (the colored circle of skin around the nipple). The number of operations that you might need and the time between each operation is different for each woman. Creating equal breasts may involve having an operation on the other breast to adjust the size or shape of the breast. Reconstruction is a process that takes nine to 12 months.

Reconstruction is successful for most women, but a particular result can't be guaranteed. Your doctor will work with you to create the look that you want, but realize that a "perfect" result is not always possible.



Implant-based reconstruction

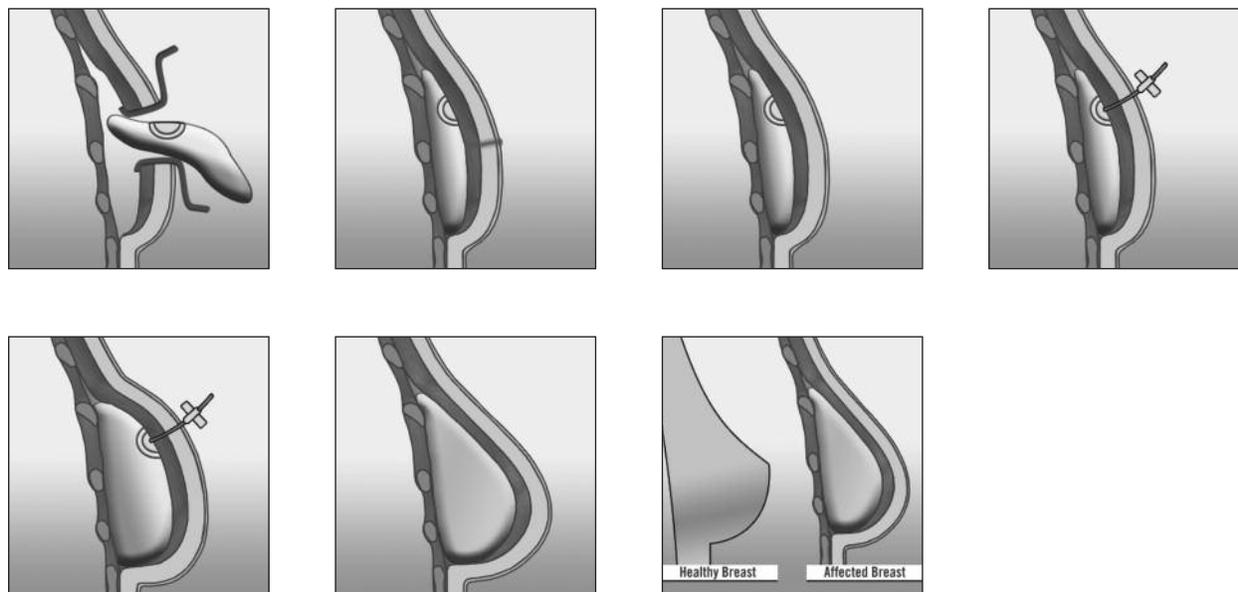
This type of reconstruction involves placing a breast implant into a pocket under the skin and chest muscle. The pocket is created by your plastic surgeon. Implant-based reconstruction is not the same as breast enlargement surgery done for cosmetic reasons.

This is the most common type of breast reconstructive surgery performed. It is especially popular in younger patients who request bilateral breast reconstruction and who do not want or may not have the available tissue for tissue-based reconstruction. The recovery is fast and there are no scars outside of the breast.

Implant-based reconstruction typically involves at least two stages of surgery.

At the first stage of reconstruction, your plastic surgeon may need to place a temporary, adjustable implant. This type of implant is called a tissue expander. It is a silicone shell with saline inside the shell. During many visits to your doctor, the tissue expander gradually is filled with saline. To fill the expander, a small needle is placed through your skin into the expander. After an expansion, the skin and muscle around the expander temporarily may feel tight and uncomfortable. The skin and muscle will become larger with each expansion.

At the second stage of implant-based reconstruction, the plastic surgeon removes the tissue expander and replaces it with either an implant filled with silicon or an implant filled with saline. This second surgery usually is done as an outpatient surgery.



Implant-based reconstruction

ADVANTAGES

- shorter hospital stay
- shorter recovery time
- shorter time in the operating room
- less complicated procedures without incisions somewhere else on the body
- no risk of a complication at the donor site

DISADVANTAGES

- requires expansion phase with frequent trips to the doctor's office
- may mean being flat or fairly flat until expansions get larger
- the implant does not move like, feel as soft as, or fill a bra cup the same way as a natural breast
- the implant may not last
- it may be difficult to match your opposite breast
- surgical procedures on your other breast may be needed or wanted to make your breasts equal

POTENTIAL COMPLICATIONS

- **Implant leakage:** An implant can wear out like all medical devices. The material inside the silicone shell can leak when the implant wears out. This means that your implant may need to be replaced in a future surgery. Your plastic surgeon will need to see you regularly and may ask you to have an imaging study like an ultrasound or MRI to evaluate the implant shell. Implant leakage does not pose any risk to your health.

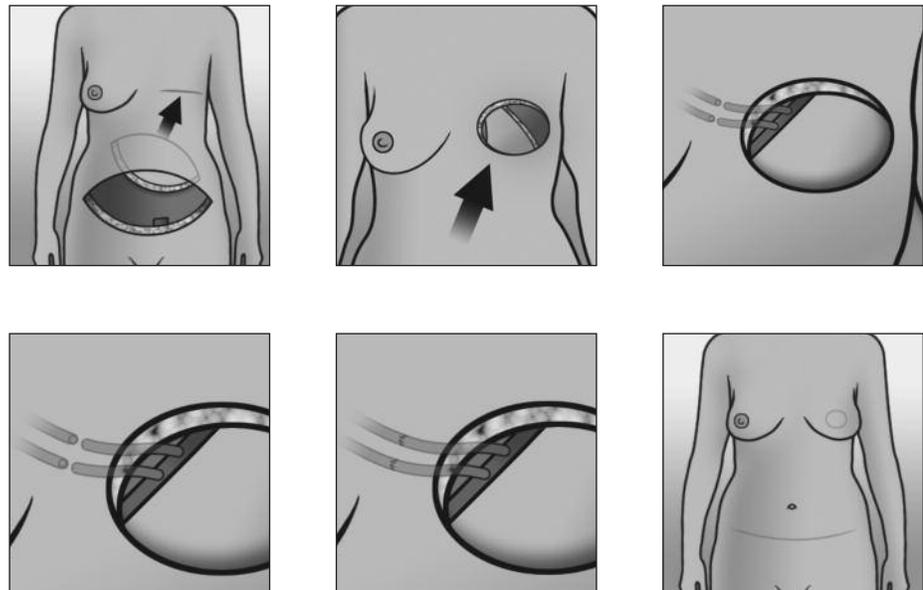
- **Capsular contracture:** Scar tissue around your implant can tighten over time, making your implant feel firm. In advanced capsular contracture, the round shape of the implant may be distorted. In severe capsular contracture, the implant may feel uncomfortable or tight.
- **Infection:** It is very uncommon to have an infection in your implant, but your implant will need to be removed if it gets infected. Often your body cannot completely clear the infection unless the implant is removed for several months. You may need to spend some time without the implant until your plastic surgeon feels it is safe to replace.
- **Additional unplanned surgery:** Patients with breast implants tend to need more breast surgery. This surgery may be done for many different reasons, such as to replace a leaking implant, to treat capsular contracture, to reposition an implant that has moved out of its intended position, or to improve symmetry. These repeat surgeries often can be done as outpatient surgery.

Tissue-based reconstruction

Women who have excess tissue in their lower abdomen may be willing to have that tissue removed so it can be used for breast reconstruction. Occasionally other parts of the body with extra tissue can be used for tissue-based reconstruction, but the abdomen is the most common location. The tissue does not come from another person.

There are different ways to move the “flap” of belly fat and skin up to the chest, depending on what blood supply the tissue will have in its new location. This type of reconstruction usually is successful. However, without good blood circulation, the flap of tissue may not be soft and healthy. In a few instances, some parts of the flap or the whole flap may need to be removed.

- A pedicled TRAM (transverse rectus abdominis myocutaneous) flap stays attached to the body and stays attached to the rectus abdominis muscle during the surgery to move the tissue. The muscle (the “six-pack” muscle) is moved with the abdominal skin and fat through a tunnel under the upper abdominal skin. Most women tolerate the loss of one muscle well, although some women notice a loss of strength. If both rectus abdominis muscles are used, the woman is more likely to notice changes in the way she performs her daily activities. Initial surgery may be done one to two weeks before your reconstructive surgery in order to prepare the belly tissue for transfer.
- A free flap happens when tissue is detached from the body and then reattached in its new location. A new blood supply is created with blood vessels being sewn together under



Free-flap reconstruction

a microscope during the procedure. This technique will improve the blood supply to the new breast, and may lessen the chances of having weakened abdominal muscles and abdominal bulges. Plastic surgeons may offer this type of reconstruction to spare the abdominal muscle, to give the tissue flap a better blood supply, to make a larger breast, or to give the abdomen more structural support.

ADVANTAGES

- results in comfortable and permanent construction
- the breast appears natural in the way it looks, feels, and moves
- patient leaves the hospital with a full breast reconstruction
- future surgeries are uncommon
- the abdomen is flatter
- the breast reconstruction is more like the opposite breast
- the new breast changes with you over time (with modest weight loss or gain and with aging)

DISADVANTAGES

- longer time in surgery (may be a very long surgery for a free flap)
- longer hospital stay
- long incision is placed on the abdomen and an incision is placed around the belly button
- longer recovery time
- possible problems with the abdominal incision healing
- risk of donor site complication

POTENTIAL COMPLICATIONS

There are possible complications that are specific to pedicled TRAM flaps and free flaps.

- Flap failure: If the blood supply to a free flap does not work, additional surgery may be needed to repair the blood vessels or the flap may need to be removed.
- Fat necrosis: If areas of fat necrosis happen in the reconstructed breast, the patient may feel firm spots that are lumps of scar tissue. The firm areas may be sore when you touch them. An open wound may develop if there is a large area of fat necrosis.
- Hernia or bulge: When there is a weakness in the abdominal wall where the flap was created, a bulge or hernia may appear on the abdomen instead of a flat abdomen. It may be possible to see this bulge in the abdomen through your clothing. You may need surgery if the bulge is uncomfortable or painful.

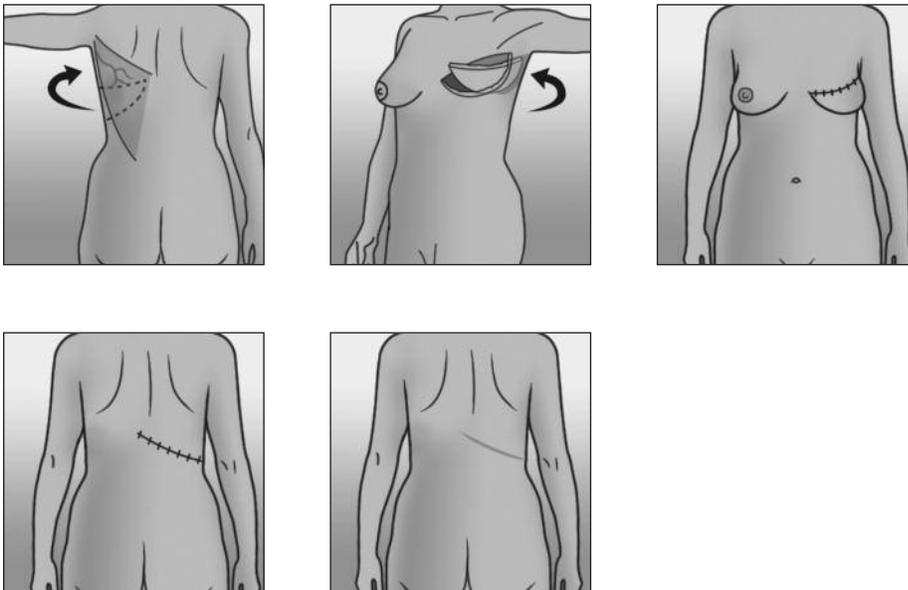
COMBINED RECONSTRUCTION WITH TISSUE AND IMPLANT

This type of reconstruction is used in special cases when tissue is needed, but there is not a suitable donor tissue site that allows the surgeon to create an entire breast. This reconstruction involves transferring a flap of muscle, fat, and skin from the midback to the chest area. This flap is called a latissimus dorsi flap (LD flap). Because the tissue stays attached to the muscle and the muscle stays attached to the woman, this flap is a type of pedicled flap. The tissue flap tunnels under the skin at the side of the chest or near the under arm area. The flap is used to replace radiated skin or to create a more natural looking breast.

A tissue expander usually is used under the flap of tissue; as with implant-based reconstruction the expander is filled gradually during multiple office visits and is exchanged for a final implant during a second operation.

Women typically tolerate losing the muscle and do not have changes in their everyday activities unless they do heavy labor or are active in certain sports.

The length of surgery, time spent in the hospital, and recovery is between that for implant-based reconstruction and tissue-based reconstruction.



Combined tissue and implant reconstruction

ADVANTAGES

- allows safe and reliable reconstruction for patients who are not candidates for another type of reconstruction
- creates a natural appearing breast

DISADVANTAGES

- the scar from the incision on the back may become wide or thick
- the back may become asymmetrical if the muscle flap is taken only from one side.
- implant requires expansion phase with frequent office visits
- implant may not last lifetime
- additional surgery may be needed to treat problems with the implant

POTENTIAL COMPLICATIONS

Possible complications of reconstruction with a latissimus dorsi flap and implant include all of the complications for implant-based and tissue-based reconstruction. The combined approach means that many of the risks of tissue transfer, including fat necrosis and partial flap failure, and the risks of implants, including implant leakage and capsular contracture, still are involved.

What to expect after surgery

Knowing what to expect after surgery can help you feel more relaxed and prepared for surgery. You may want to tell your family members what to expect so they also can be more relaxed and can know how to help you recover.

You should expect some pain, activity restrictions, and having to take care of the incision. Your plastic surgeon can provide you with more specific information about your care after surgery.

- **Drains:** The first part of breast reconstruction usually involves using small suction drains that stay in your body for a while after surgery. The surgeon puts these drains at the surgical site to prevent the accumulation of fluid under the skin. Small plastic tubes carry the fluid to a container outside your body. Your nurse will teach you how to care for the drains and your plastic surgeon will decide when the drains are ready to come out. The drains are removed in the office. Later stages of breast reconstruction also may need drains.
- **Pain:** It is normal to have pain that lasts for several days or weeks after surgery. In the hospital you probably will have a patient-controlled analgesic (PCA) pump, which allows you to push a button and deliver your own medicine for immediate pain relief. You must be awake and able to push the button yourself; no one else should push the button for you. As you improve and are able to take pain medicine by mouth, the PCA pump will be phased

out. Make sure you tell your nurse when you experience pain so that you can receive the pain medicines. You probably will be sent home with pain medicines. Once you are home, the pain should not be severe. If it is, contact your doctor immediately.

- **Close monitoring:** If you have reconstructive surgery that involves a tissue flap, the medical staff may be monitoring your reconstruction closely for to check blood flow. Your plastic surgeon may want you to keep warm, and to keep your room warm to prevent problems with blood flow. The medical staff will monitor the color and temperature of your flap reconstruction and may use Doppler equipment to check the flow of blood.



- **Activity:** Your doctor will send you home from the hospital when you are medically stable. You may be seen by a physical therapist before you go home. The exercises that you learn in physical therapy are important to your recovery. It will be your responsibility to do these exercises regularly at home. The nursing or medical staff will tell you about any activities that you cannot do. Your doctor usually will ask you not to lift more than 5 to 10 pounds for several weeks after surgery. You probably will be asked to avoid certain types of exercise and certain household chores such as vacuuming, lifting laundry baskets, and scrubbing floors. Because driving while taking narcotic pain medicines and driving with drains in place is not safe, you probably will be asked to stop driving while you are taking the medicines.
- **Clothing:** You do not need to buy a special type of bra to take to the hospital when you have surgery unless your plastic surgeon tells you to. In general, loose-fitting clothes and button-down shirts are the most comfortable immediately after surgery because they let you move easily and they make wound care easier. In addition, loose-fitting clothes are less likely to interfere with healing and are less likely to damage new tissue.

General potential complications

As with any surgical procedure, there may be some complications after reconstructive breast surgery. Patients who smoke and patients who are very overweight tend to have more complications; recovery may be slower and more difficult for these patients. For this reason, your plastic surgeon may suggest or request that you stop smoking or lose weight before breast reconstruction.

- **Skin necrosis:** Skin necrosis happens when there is poor blood flow to the remaining breast or the tissue flap. The skin that doesn't get enough blood turns purple, may blister, and eventually becomes a thick black scab. The wound may take longer to heal and you may require special dressings if this happens. Very rarely, large areas of skin are involved and your plastic surgeon may need to remove the necrotic skin or may need to do a skin graft to replace the damaged skin.
- **Seroma:** A seroma is a collection of fluid under the skin. Suction drains are used to try to prevent this complication. A seroma may need to be drained in the office by your surgeon, or your surgeon may decide to watch the area and see if your body absorbs the fluid. Occasionally a seroma needs a new drain tube, which will be left in place for days or weeks.

- **Hematoma:** A hematoma is a collection of blood under the skin. You may notice a hematoma if you have a sore area that has swelling. You also may have symptoms like weakness and dizziness. More surgery might be needed based on where the hematoma is and how big it is. It is important to stop certain medications (including herbal products and supplements, certain vitamins, and diet pills) before surgery so that this complication is less likely. Ask your doctor what medications you should avoid. If you are taking these medications because another doctor told you to, you must check with him or her before you stop taking them. Tell your plastic surgeon if you have ever had any bleeding problems.
- **Infection:** You may be given antibiotics to help prevent infection. Before you leave the hospital, you will be taught about how to take care of your incision; it is important to follow these instructions. You may be told to keep the area and dressings clean and dry. You should wash your hands often.
- **Breast asymmetry:** It usually isn't possible to make the new breast the exact same shape and size as the other breast. Women's breasts are naturally a little different even before surgery. Some differences in how the new breast fits in a bra should be expected. If breast asymmetry following reconstruction creates problems for you, you may have to have more surgery to improve symmetry. Immediately after your surgery, you probably will have some swelling that may make your breasts temporarily asymmetrical. Swelling and implant position tend to subside during the first one to three months after surgery. It may be several months before you can see the final result.

In summary

The successful treatment of your breast cancer is the top priority of everyone on your health care team. Because the decisions you make during this time will affect the rest of your life, you should consider long-term goals and priorities carefully, as well as your short-term goals for cancer treatment.

Women should try to keep an open mind when they have their first appointments with a plastic surgeon, and they may find it helpful to have a family member or friend come to that first appointment. Most patients are candidates for breast reconstruction if they want to have it. Your health care team can help you determine when, if, and what type of reconstruction is best for you.

Glossary

Asymmetry: Breasts that are unequal in shape and size. This is common immediately following surgery.

Breast prosthesis: A shaped, soft form similar to a balloon. This is worn outside of the body in the pocket of a special bra.

Capsular contracture: Scar tissue around the implant that can tighten over time, making the implant feel firm. In advanced capsular contracture, the round shape of the implant may be distorted. In severe capsular contracture, the implant may feel uncomfortable or tight.

Delayed breast reconstruction: When the mastectomy and first part of reconstruction happen in two separate surgeries at two different times.

Fat necrosis: When fat tissue does not receive adequate blood flow. This may feel like firm spots, and open wounds may develop.

Free flap: When tissue is detached from the body and reattached in a new location.

Flap failure: When blood supply to a free flap does not work sufficiently.

Hematoma: A collection of blood under the skin. This may appear as a sore area with swelling.

Hernia: A bulge where there is a weakness in the abdominal wall where the flap was created.

Immediate breast reconstruction: When the mastectomy and reconstruction process are on the same day, and typically in the same surgical experience.

Implant-based reconstruction: Reconstruction where a breast implant is inserted into a pocket under the skin and chest. This is not the same procedure as breast enlargement surgery done for cosmetic reasons.

Latissimus dorsi flap: Where tissue is needed, but there is not a suitable donor tissue site for an entire breast. The reconstruction moves a flap of muscle, fat, and skin from the midback to the chest.

Mastectomy: Where one or both breasts are removed.

Nipple/areolar complex: The colored circle of skin around the nipple.

Nipple reconstruction: Reconstruction to the nipple and areola after the breast reconstruction is complete. This may involve areolar tattooing to color the area around the nipple and areola.

Patient-controlled analgesic: A pump that allows the patient to deliver pain medication to herself with the push of a button.

Pedicled TRAM: A flap that stays attached to the body and stays attached to the rectus abdominis muscle.

Rectus abdominis: The “six-pack” muscle in the abdomen.

Seroma: A collection of fluid under the skin.

Skin necrosis: When there is poor blood flow to the remaining breast or the tissue flap. The skin turns purple, may blister, and eventually becomes a thick black scab.

Suction drains: Drains inserted to try to prevent seromas.

Tissue-based reconstruction: Reconstruction that moves tissue from one place in the body to the breast.

Tissue expander: A temporary and adjustable implant, gradually filled with saline during multiple doctors appointments.

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