My Breast Reconstruction Decision Workbook

CONSIDERING BREAST RECONSTRUCTION AFTER BREAST-CONSERVING SURGERY

(ALSO CALLED PARTIAL MASTECTOMY, SEGMENTAL MASTECTOMY, OR LUMPECTOMY)

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center
Making Cancer History®

Glossary

Adjuvant therapy – adjuvant means "adding help", and it means any extra treatments after your surgery that may help prevent cancer from coming back later (for example, radiation or chemotherapy)

Advancement flap - a type of tissue flap in which a piece of tissue is moved or "advanced" forward to fill in the defect while remaining attached to its nerves and blood supply

Areola – the darker circle of skin around the nipple

Autologous - "from the same person", for example, using a piece of tissue from your back or belly to reshape your breast

Balancing or symmetry surgery – surgery on the other breast so that both breasts are a similar shape and size

Breast-conserving Therapy (BCT) - the combination of breast-conserving surgery (partial/segmental mastectomy, etc.) plus radiation to treat a cancer in the breast

Breast implant – a round or breast-shaped (contoured) sac filled with silicone gel or salt water (called saline). Not recommended for reconstruction after partial mastectomy due to the high rate of capsular contracture after radiation therapy

Capsular contracture – when the "capsule" of scar tissue that forms around implants and tissue expanders contracts and changes the shape of the new breast mound

Contralateral – "from the opposite side of the body," for example, the breast without cancer

Immediate reconstruction – starting the reconstruction process during the mastectomy surgery, immediately after the cancer is removed

Defect - the dimple, divot, or gap left when the cancer plus the margins are removed.

Delayed reconstruction – waiting until recovery from the mastectomy to start the reconstruction process

DIEP flap – a common type of reconstruction after total mastectomy that moves a piece of skin, fat, and the diep inferioir epigastric perforator artery from the belly to the breast

Donor site – the place where the tissue was taken from, for example, the belly, back or thigh

External breast prosthesis – a plastic or foam insert that is shaped like a breast and can be worn in special bras and swimsuits to create the appearance of a breast

Fat grafting - reshaping the breast by adding fat to fill in the defect (the gap where the cancer and the margins were removed)

Free flap – when the tissue is fully removed from the donor site, moved to the breast, then reattached to the arteries and veins

LICAP flap - a type of reconstruction that moves skin, fat, and a piece of the lateral intercostal anterior perforator muscle to the breast

LD flap – a type of reconstruction that moves a piece of the latissimus dorsi muscle in the upper back to the breast

Lumpectomy- surgery to remove the cancer plus margins (similar to partial/segmental mastectomy or quadrantectomy)

Mammaplasty - reducing the size of the breast (often done to make both breasts similar in size and shape)

Margins - the layer of tissue surrounding the cancer, which is also removed and tested to confirm all cancer has been removed

Mastopexy - lifting the breast

Neoadjuvant therapy – chemotherapy or radiation done before surgery (Note: adjuvant therapy means treatments done after the surgery)

Nipple reconstruction – the process of rebuilding the shape of a nipple

Nipple-sparing surgery – a surgical procedure that removes the breast tissue without removing the breast skin and nipple

Nipple areola tattoo or 3D tattoo – a tattoo to create the appearance of a nipple and areola

Oncoplastic surgery - surgery that removes the cancer and reconstructs the breast (for example, breast-conserving surgery with immediate tissue rearrangement).

Out-of-pocket costs – the money, if any, you would pay "out of your pocket" after your insurance has paid their portion (for example, your co-payment)

Partial mastectomy - surgery to remove the cancer plus margins (for example, breast-conserving surgery, segmental mastectomy, quadrantectomy, and lumpectomy)

Pedicled flap – when the tissue flap is moved to the chest but stays connected to its original artery and vein; this happens more often with the back and some belly flaps (pedicled TRAM flaps)

Ptosis - sagging of the breast

Quadrantectomy - surgery to remove the cancer (plus margins and some surrounding tissue (similar to partial/segmental mastectomy or lumpectomy)

Resection - removing cancer using surgery

Revision surgery – a follow-up surgery to revise the shape or size of your breast (or the donor site, if you used a tissue flap)

Saline – sterile salt water

Segmental mastectomy - surgery to remove the cancer plus margins (similar to partial mastectomy, quadrantectomy, and lumpectomy)

TAP/TDAP flap - reconstruction after partial mastectomy that moves a piece skin and fat near the thoracodorsal anterior perforator artery in the upper back to the breast

Thoracoabdominal flap - reconstruction after partial mastectomy that moves skin and fat from the upper belly to the breast

Tissue expander - a temporary sac used after total mastectomies to recreate the space needed

Tissue flap - a piece of your tissue that is taken from one spot on your body (called the donor site) and moved to the breast to recreate the size and shape

Tissue rearrangement - reshaping the breast by rearranging the tissue to fill in the "defect" (the gap where the tumor plus the margins were removed)

TRAM flap - a common type of reconstruction after total mastectomy that moves a piece of skin, fat, and the transverse rectus abdominus muscle from the lower belly to the breast

Decisions about breast reconstruction are as unique as the women who make them.

The best decision is one that is:

- well-informed;
- works with your body type, cancer treatment plan, and overall health; and
- gives you the best opportunity to achieve your health, activity, and appearance goals.

What to expect at your appointment with your reconstructive surgery team

At your appointment, the reconstructive surgery team will:

- Review your health history and cancer treatment plan
- Ask about your health, activity, and appearance goals and preferences
- Explain which reconstructive options would be best for your cancer treatment plan and breast shape
- Answer your questions and confirm you are well-informed
- Discuss your options and key decisions

You and your surgeon will discuss which options might be best for you, considering:

- the plans for your breast-conserving surgery (partial/segmental mastectomy, lumpectomy)
- follow-up treatments such as radiation, which can shrink the breast and tighten the skin;
- your breast shape, stretchiness of your skin, location of your nipple, and overall health; and
- your personal preferences and goals for your health, activity, and appearance.

Who pays for reconstruction?

The 1998 Women's Health and Cancer Rights Act states that after mastectomy, health insurance plans should cover:

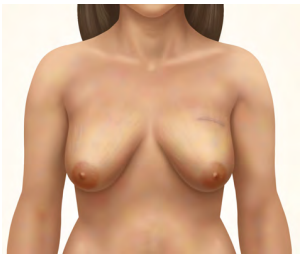
- reconstruction surgery on the breast with cancer,
- surgery on the other breast, if needed, to make both breasts look similar, or
- external breast prostheses (inserts you can wear in your bra that give the look of a full breast when clothed).

Call your insurance company to request pre-authorization and an estimate of what, if anything, you would pay as your out-of-pocket costs (see the number on the back of your insurance card. Our MD Anderson financial associates can also help you find this information; please call our Financial Clearance Center at 713-792-2991.

Note: When talking with your insurance company, it may be important to use the term "partial or segmental mastectomy", as a "lumpectomy" may be considered a biopsy and not fully covered by insurance.

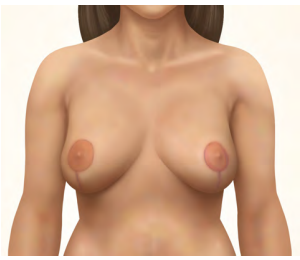
How is breast reconstruction done?

The goal of reconstruction is to rebuild the shape of your breast so that it appears normal when you are wearing clothes. This process may involve 1 to 2 surgeries over 1 to 6 months. For example, after your breast surgeon removes the cancer and a small rim of surrounding tissue (called the margins), your reconstructive plastic surgeon may reshape the breast by rearranging the remaining tissue (oncoplastic tissue rearrangement). Rearrangement can be "simple" or include lifting (mastopexy) and/or removing some tissue to recreate a more natural, round shape. If there isn't enough tissue for rearrangement, your surgeon can bring in a small piece of fat and sometimes muscle (autologous tissue flap) from your back, your side, or the top of your belly to fill in the gap. You can also do surgery on the other breast so that they are similar (balancing or contralateral surgery). After radiation, which may cause the skin to tighten and the tissue to shrink, you may also choose to touch up the breast shape (revision surgery) by adding some fat (fat grafting) to produce a nice round shape (called a good aesthetic or cosmetic outcome).



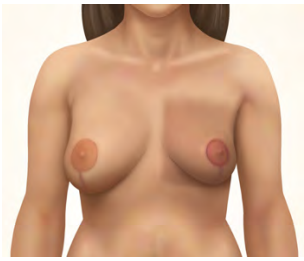
Simple Oncoplastic Tissue Rearrangement

Reshapes the breast by rearranging the remaining tissue to fill in the gap or "defect" where the cancer and margins were removed



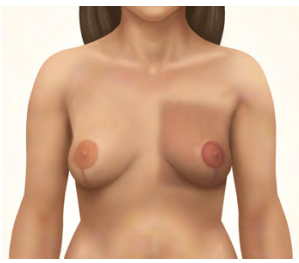
Tissue Rearrangement with Mastopexy and contralateral symmetry surgery

Lifts both breasts so they are the same shape and size, and nipples are at the same height and pointing the same direction



Radiation

Kills any remaining potentially-dangerous cells
May cause skin to darken and tighten, and the irradiated breast to swell or shrink



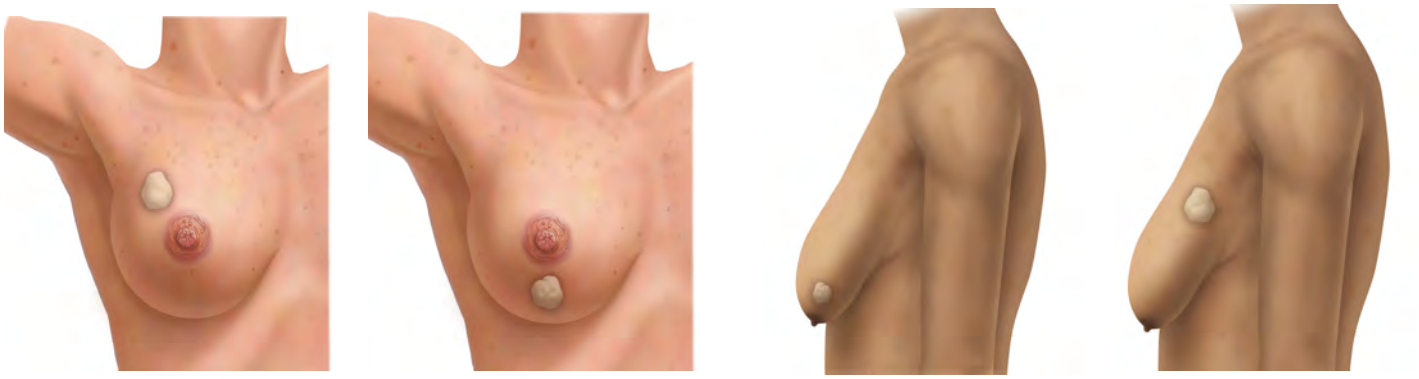
Revision surgery

Reshape or touch-up the breast, if desired
If the breast shrinks after radiation, the other (contralateral) breast can be reduced so that they are the same size and shape, and the nipples align (balancing or symmetry surgery)

Factors to consider when planning reconstruction

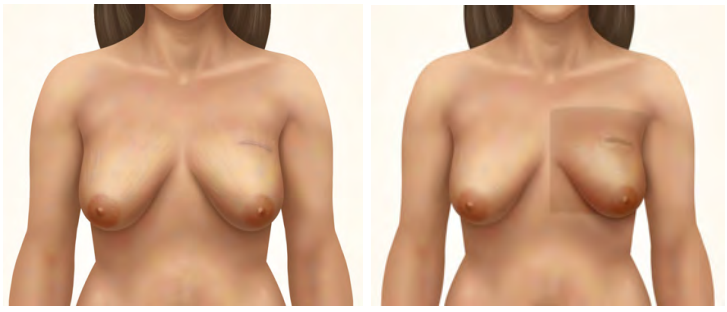
Cancer size and location

. Your breast surgeon will remove the cancer plus a small rim of surrounding tissue (called the margins). The gap left by removing the cancer and the margins is called the "defect". The purpose of reconstruction is to fill in the defect so you have the appearance of two similar breasts when wearing clothes. Depending on the size and location of the defect, your reconstructive surgeon will consider whether there is enough remaining tissue to reshape the breast (oncoplastic tissue rearrangement), with or without lifting the breast (mastopexy) to recreate a natural shape. If more tissue is needed, your surgeon may also bring in a piece of fat and muscle tissue (tissue flap) from your side (under your armpit) or your back. Your surgeon will also consider whether there is enough healthy blood flow to the skin and nipple, especially if the cancer was underneath the nipple area.

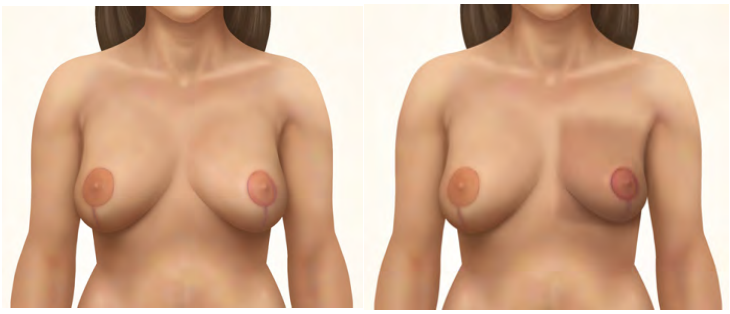


Cancer treatment plan, including radiation.

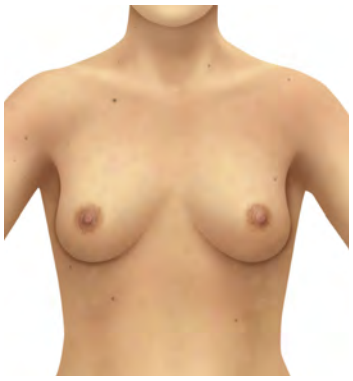
Many women will receive radiation after breast-conserving surgery to make sure there's no potentially-dangerous cells remaining in the breast. It is often better to do reconstruction before radiation, since delaying until after radiation increases the risk of complications, such as infection or the breast skin or tissue dying (called necrosis). Radiation also causes the skin to become tighter, less stretchy, drier, and darker, making it harder to do some types of reconstruction.

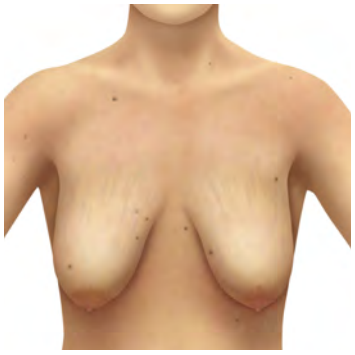


Implants are not recommended, because some breast tissue may shrink around the implant (capsular contraction), increasing the risk of infection and causing deformity. Also, if your radiation oncologist is recommending partial breast radiation, talk with your reconstructive surgeon about which reconstruction options might be best. If there are areas that need touching up after radiation, some reshaping and fat grafting may be possible.



Breast size, shape, sagging (ptosis) and nipple location





Generally, larger breasts are more likely to have enough healthy tissue to rearrange. Tissue rearrangement may be possible on smaller breasts if the cancer is also small, but otherwise, they are more likely to need a flap of tissue added. Similarly, how your breasts hang on your chest wall (called ptosis) is important. If you have no drooping or sagging (grade 0 to 1 ptosis), the surgeon may recommend using a tissue flap. If you have a lot of drooping (grade 2 to 3 ptosis) and larger breasts, the surgeon may recommend reshaping and lifting the breast (oncoplastic tissue rearrangement with mastopexy) because some of the scars can be tucked under the fold.

Your surgeon will then consider how best to ensure the nipples are the same height and direction, and have good blood flow. If the cancer was behind the nipple and it had to be removed, it may be possible to reconstruct the nipple or do a 3D tattoo which can create the appearance of a nipple. Nipple reconstruction and tattoo can be done in the clinic later, after you complete radiation and your breast has healed.

Healthy tissue. For the best long-term outcome, it is important that you have enough healthy tissue in your breast to create the size and shape you want. If your surgeon is considering a tissue flap, you will also need enough healthy tissue from your side or back to donate to the breast. The tissue flap needs to be strong enough to hold its shape (too much spongy fat may cause it to droop over time). Your surgeon will also consider which option is most likely to maintain a healthy blood flow to the skin.

Your appearance goals. It is important to discuss how you feel about the current appearance of your breasts, and whether you want to stay the same size, lift, or reduce your breasts. Simple tissue rearrangement and tissue flaps may be best if you want to stay the same size. Lifting can be best if you want your breasts to be smaller and higher. After breast-conserving surgery, enlarging breasts using implants is not recommended, since radiation can damage the breast tissue surrounding the implants (called capsular contraction).

Your health history, lifestyle, and activities. Talk with your doctor about any athletic activities involving your chest and arms, such as swimming or tennis. Discuss how best to return to physical activities after surgery. Women who want to breastfeed using their healthy breast may consider reconstruction on the breast with cancer now and balancing surgery on the other breast later. Also, it is very important to quit smoking, vaping, or using nicotine gum or patches as soon as you can. Nicotine blocks healing and reduces blood flow, which can cause the skin or tissue to die (necrosis) after the surgery. If the skin dies along the incisions, it can result in wide scars and deformity, and/or require additional surgery.

Reconstruction After Partial Mastectomy

At your plastic surgery consultation, your reconstructive team will discuss 2 key decisions with you:

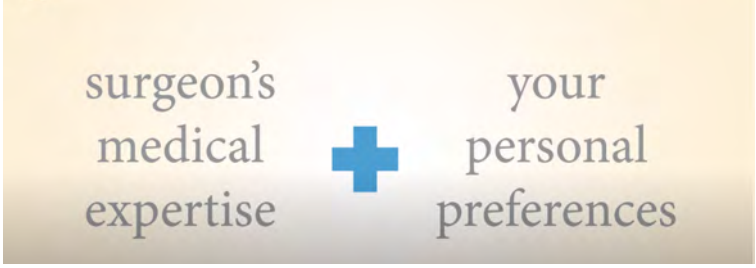
2

key decisions

1. **Have you and your breast surgeon decided on breast-conserving surgery versus total mastectomy?**
2. **After breast-conserving surgery, what is the best way to reshape your breast(s) to create the size and shape you prefer?**

Shared Medical Decisions

For many women, there are several options for reshaping the breast. Some women also consider reshaping or resizing the other breast. These are called shared medical decisions because the surgeon will provide the medical expertise about which options are available to you, and you can share your personal preferences and goals for your future appearance, activities, and health. Together, you'll identify a plan to give you the best long-term outcome.

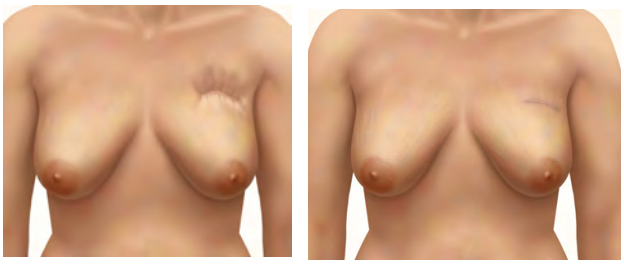


To help the reconstructive team understand what matters most to you, complete the worksheet at the end of this workbook and bring it to your appointment.

Decision #1: Have you and your breast surgeon decided on breast-conserving surgery versus total mastectomy?

If you are still discussing whether to have breast-conserving surgery or total mastectomy with your breast surgeon, the summary below explains how each surgery affects the breast reconstruction process:

Reconstruction After Breast-conserving Surgery



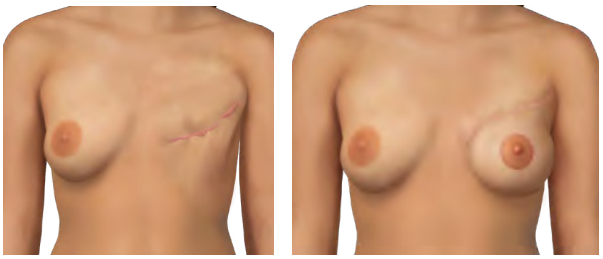
No reconstruction Reconstruction

Options
Simple (oncoplastic) tissue rearrangement
With lifting the breast (mastopexy)
Tissue flap (autologous reconstruction)
Balancing/symmetry surgery on the other (contralateral) breast
Nipple reconstruction or tattoo, if needed
No reconstruction (can wear an external breast prosthesis)

Good for Reconstruction if
Removed a smaller focused tumor
Want to stay the same size or lift the breast(s)

Considerations for Reconstruction
Can keep native breast & usually nipple
- Usually keep feeling/sensation
Usually need radiation therapy
- Harder to reconstruct or revise after radiation
- May cause irradiated breast to shrink
- Skin may become darker and less elastic
- May scar the muscles and chest wall (fibrosis)
- May make breasts appear different (asymmetric) in color and size
Can do surgery on the other breast, if desired
Usually 1 -2 surgeries

Reconstruction After Total Mastectomy



No reconstruction Reconstruction

Options
Tissue Flap (autologous reconstruction)
Breast implant
Balancing/symmetry surgery on the other (contralateral) breast
Nipple reconstruction or tattoo, if needed
No reconstruction (can wear an external breast prosthesis)

Good for Reconstruction if
Removed a larger or diffuse (multifocal) tumor
Want to stay the same size or make breast(s) bigger or smaller
Want to use implant(s)

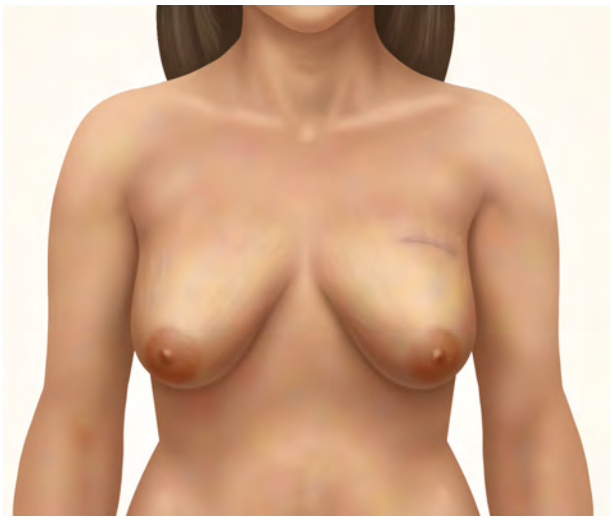
Considerations for Reconstruction
Can keep breast skin; may be able to keep nipple
- Can reconstruct the nipple or do a 3D tattoo
- May loose feeling/sensation
Might not need radiation therapy
- Reconstruction can be immediate or delayed
- No shrinkage or change in skin color or elasticity
- No muscle or chest wall scarring (fibrosis)
Can more easily enlarge one or both breasts
Can do surgery on the other breast, if desired
Usually 2 - 3 surgeries

Note: If you decide to do a total mastectomy, please see the Considering Breast Reconstruction After Total Mastectomy Workbook.

Decision #2: What is the best way to reshape your breast(s)

After breast-conserving surgery, there are several options for reconstruction. It is important for your plastic surgery team to know what size and shape of breast(s) you would like to create, and which reconstructive options you prefer, so that you can make the best decisions together.

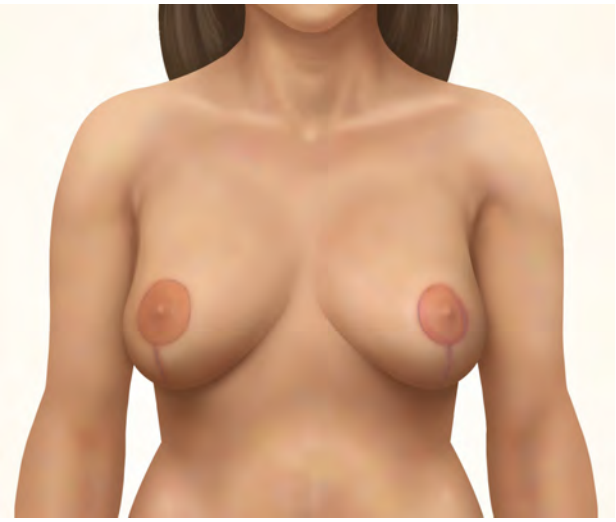
Simple tissue rearrangement (oncoplastic reconstruction)



If enough healthy tissue remains in the breast, it may be possible to rearrange the remaining tissue to recreate the shape of the breast. Simple tissue rearrangement works best for women who have a small cancer being removed from medium or large breasts, particularly when the cancer is in the middle part of the breast.

Tissue rearrangement and lifting the breast (mastopexy), with surgery on the other breast (contralateral, balancing, or symmetry surgery)

The process of reshaping the breast may also include lifting the breast to restore the round shape of the breast. Your surgeon may be able to hide some of the scar underneath the fold of the breast (you may still have a scar where the cancer was removed). If you have medium or large breasts, your surgeon may also recommend removing some tissue to create a nice round shape (reduction mammaplasty). You may also want to lift both breasts so that they are similar in size and shape, and the nipples are at the same height and point in the same direction.



Note: Reconstruction after breast-conserving surgery does not affect the risk of recurrence, or the ability to see a recurrence

to create the size and shape you prefer?

Adding a piece of nearby tissue (autologous tissue flap)

If there is not enough remaining breast tissue, your surgeon may recommend moving a piece of nearby tissue (flap) to the breast to rebuild the size of the breast. The surgeon moves/rotates the tissue to the breast so that it remains attached to its original blood vessels and nerves. There are several types of tissue flaps, including:

- Thoracodorsal Artery Perforator (TDAP) - uses tissue from your back (near the latissimus muscle)
- Lateral Thoracic Artery Perforator (LTAP) - uses tissue from your side, under your armpit area
- Lateral Inter-Costal Artery Perforator (LICAP) - uses tissue near the lower, outside edge of your breast
- Thoracoabdominal - uses tissue from the top of your tummy, just below the breast

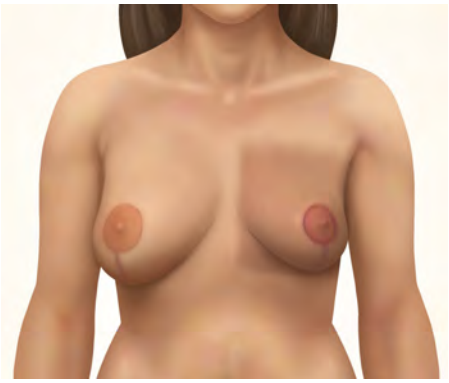
Adding a breast implant

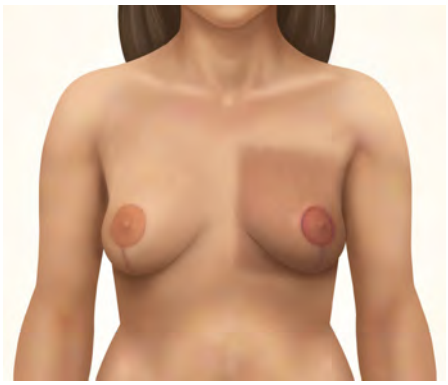
Breast implants are not recommended after breast conserving surgery, as radiation can make the tissue around the implant contract (capsular contracture) and increase the risk of complications and skin or tissue death (necrosis).

Revision surgery (fat grafting or contralateral balancing surgery)

Occasionally, the breast tissue will settle as it heals. Your surgeon may be able to add more fat tissue (fat grafting) to touch up the natural curve,

Sometimes radiation can cause the breast to shrink. You may chose to have surgery on the other (contralateral) breast so that they are both the same size and shape, and the nipples are aligned.





Note: Your reconstructive surgeon may use some words that are similar to the words used for cosmetic surgery (for example mastopexy, mammagraphy); however, these words may mean a different process when talking about reconstruction after cancer. If you have any questions, please talk with your reconstructive team.

Decision #2: What is the best way to reshape your

	Simple (oncoplastic) tissue rearrangement	With or without beast lift (mastopexy)
Best for women who	• Have a small cancer in the main body of the breast • Have enough healthy tissue to rearrange and fill in the "defect" (the gap where the tumor and margins were removed) • Prefer to stay the same size	• Have medium to large breasts • Prefer to lift breasts higher
Surgery	• Usually 1 to 2 surgeries • Usually 1 surgical site (the breast)	• Usually 1 to 2 reconstruction surgeries • Usually 1 surgical site (the breast)
Recovery	• 0 to 1 days at the hospital • 3 to 6 weeks at home • Varies, generally mild to moderate pain for 5 to 7 days after surgery	• 0 to 1 days at the hospital • 2 to 3 weeks at home • Varies, generally mild to moderate pain for 2 weeks after surgery
Risks	• Occasionally, tissue shifts or fat hardens (necrosis) • Radiation can shrink the irradiated breast • Surgical site infection (breast only)	• May need surgery on the other breast so that they are the same size, shape, and the nipples are aligned
Additional treatments	• Revision surgeries, such as fat grafting to add more volume/curve if tissues settled • Surgery on the other breast, if desired • Nipple tattoo or reconstruction	• Revision surgeries, such as fat grafting to add more volume/curve if tissues settled • Surgery on the other breast, if desired • Nipple tattoo or reconstruction
Out-of-pocket costs	• Given the differences in insurance, call your insurance company to get a pre-authorization estimate of your out-of-pocket costs, if any	• Given the differences in insurance, call your insurance company to get a pre-authorization estimate of your out-of-pocket costs, if any
Look and feel	• May feel more like the original breast • Scars on breast only	• May feel firmer and look more “perky” • Some scars may be hidden under the breast (may have other scars)

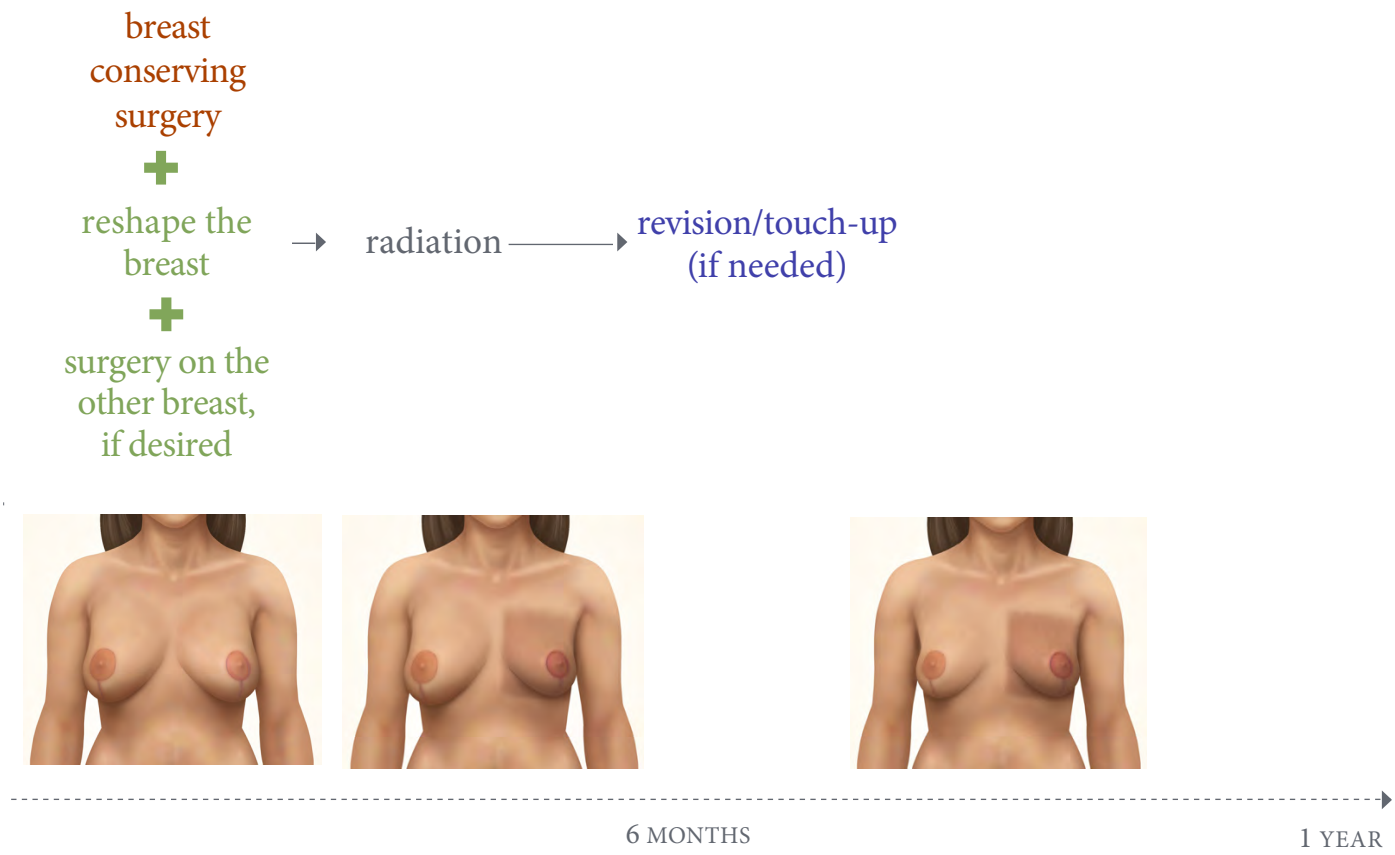
breast(s) to create the size and shape you prefer?

	Tissue flap (autologous reconstruction)	No Reconstruction
Best for women who	• Have a small cancer in the main body or outer edges of the breast • Have small or medium breasts • Have enough healthy tissue in the armpit or back to "donate" some to the breast • Prefer to stay the same size	• Do not mind the look of a "defect" (the dimple or divot in the breast where the cancer and the margins were removed) • Prefer to wear an external breast prosthesis
Surgery	• Usually 1 surgery • Can involve 2 surgical sites (the breast and the armpit or back)	• No reconstructive surgery, only the breast-conserving surgery
Recovery	• 1 to 2 days at the hospital • 2 to 3 weeks at home • Varies, generally mild to moderate pain for 7 to 10 days after surgery	• 0 to 1 days at the hospital • 2 to 3 weeks at home • Varies, generally mild to moderate pain for 5 to 7 days after surgery
Risks	• Sometimes, tissue shifts or fat hardens (necrosis) • Radiation can shrink the irradiated breast • Surgical site infection (breast or donor site)	• Breasts may not be the same size or shape. • Nipples may not point in the same direction
Additional treatments	• Revision surgeries, such as fat grafting to add more volume/curve if tissues settled • Surgery on the other breast, if desired • Nipple tattoo or reconstruction	• May be able to do some reconstruction later, if desired, but the options are more limited after radiation.
Out-of-pocket costs	• Given the differences in insurance, call your insurance company to get a pre-authorization estimate of your out-of-pocket costs, if any	• Given the differences in insurance, call your insurance company to get a pre-authorization estimate of your out-of-pocket costs, if any
Look and feel	• May feel similar to the original breast • Scars on the breast and where the tissue flap was taken from (donor site)	• May have dimple or divot • Breasts may not look the same • Scar on breast only

It is very important to understand that there are no differences in rates of breast cancer coming back (called recurrence) whether you do breast reconstruction or not.

How long does it take to finish breast reconstruction?

Each woman's breast reconstruction process is unique and depends on the type of breast-conserving surgery, reconstruction, and radiation plan. In most cases, the breast-conserving and reconstruction surgeries take about 3 to 6 hours. After the breast tissue heals for 2 to 6 weeks, you will undergo radiation for 3 to 6 weeks, followed by 2 to 6 weeks to heal again. After radiation, some women choose to do an optional revision surgery to touch up the final shape or resize the other breast.



Can I wait to do reconstruction until after radiation?

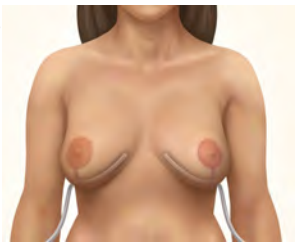
Delaying reconstruction is possible, but not recommended. Radiation may cause the breast skin and tissue to tighten, darken, and become less elastic. It can also cause some scarring in the muscle below. This limits the possible reconstruction options, increases the risk of the skin or tissue dying (necrosis), and makes it harder to achieve a good appearance (aesthetic outcome).

If reconstruction is delayed until after radiation, you will need to wait 3 to 6 months after radiation for the inflammation effects to resolve, during which time you will have the dimple or divot (called the "defect"). Your reconstructive surgeon may be able to add some fat to fill in the defect (fat grafting).

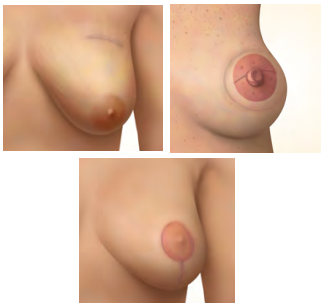
What should I expect after surgery?

Recovery. After the surgery, you will recover in the hospital for 1 to 3 days, then at home for 2 to 6 weeks. You will be tired and have some pain for the first few days, but will have pain medications. Most women can shower within 24 to 48 hours after surgery. The area around the wound may be tender for a few days and look bruised for 2 to 3 weeks, but then should lighten up. The breast may also feel firm or swollen for 1 to 6 months as you go through radiation and the tissue settles.

Drains. When you wake up, you may have a temporary surgical drain- a small tube sticking out near the fold at the bottom of your breast (the inframammary fold or IMF). If you used a tissue flap for reconstruction, you may also have a drain where the tissue was taken from (the donor site). These drains pull extra fluid out of the wound, decreasing pain and swelling and allowing you to move more freely. You will be able to shower with the drain, and the nurses will show how to take care of it before you go home. The drain will be removed in about 3 to 5 days, depending on what type of reconstruction you needed.



Scars. There are three main types of scars. After simple tissue rearrangement, there may be a 1 to 3 inch scar over the spot where the cancer was removed. If the cancer was under the nipple area, the scar may be a circle around the areola (the darker circle around the nipple). After mastopexy, the scar is often described as an anchor - a circle going around the nipple and a line straight down under the breast, extending in both directions in the breast the inframammary fold.



Follow-up Visits. In 1 to 2 weeks, you will have a postoperative appointment to check on how you are healing, remove sutures and drains (if needed), and discuss what activities you can begin. For the next 2 to 3 months, you will meet with your radiation oncologist to complete radiation therapy. About 3 to 6 months after you complete radiation, you will have a follow up appointment with your reconstructive team to see what effect, if any, radiation therapy may have had on the size of the breast. If the irradiated breast shrinks and appears smaller than the other breast (called breast asymmetry), you can add some fat to the smaller breast (fat grafting) or do balancing surgery on the other breast (symmetry surgery) so that they are the same size and shape. Both procedures can be done under general anesthesia as outpatient procedures in the clinic.

Physical Therapy and Exercise. While you have the drain in place, it is best to limit activity. At your post-operative visit, your reconstructive team may refer you to physical therapy and/or provide you with gentle exercises to do at home. It is important to begin to move the arm and shoulder joint to stimulate good blood flow, while taking care to avoid over-stretching the skin and wounds. You may be able to start light exercise in about 6 to 8 weeks. Talk with your surgeon before resuming strenuous activities that involve your arms or shoulder joint, such as swimming, tennis, weightlifting, or jogging.

Returning to Work and Household Activities. With simple oncoplastic tissue rearrangement, most women are able to begin daily activities and light work in about 2 to 3 weeks after the drains and sutures are removed. With mastopexy or tissue flaps, it may be best to wait about 4 weeks. Similarly, if your work involves heavy lifting, you may want to wait 4 to 5 weeks. For the best long-term results, it is important to not rush the healing, and to keep moving to encourage good blood flow.

What about the nipple?

With breast-conserving surgery, most women can keep their nipple. However, if your nipple needs to be removed, you may be able to reconstruct the shape and appearance of a nipple.

Nipple reconstruction

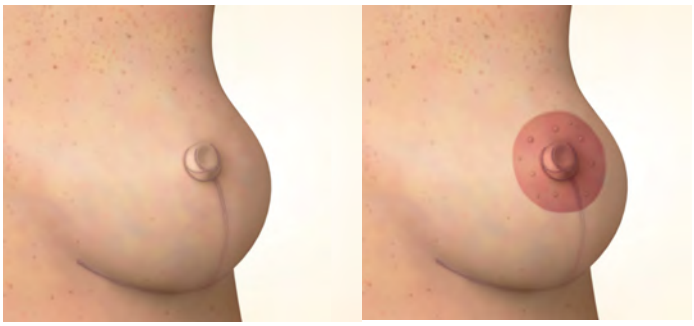
Your reconstructive surgeon can rebuild the shape of a nipple using a small flap of skin. This can be done at the same time as your reconstruction or during a revision surgery.

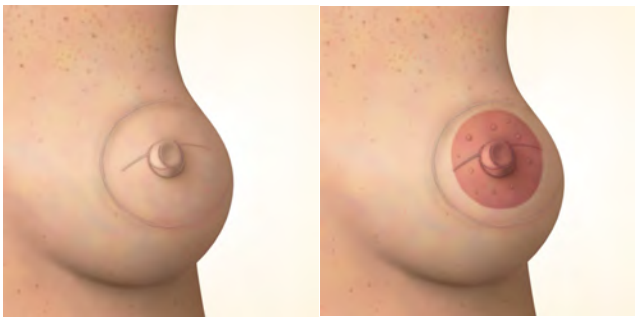
Tattoo the appearance of the areola

Additionally, many tattoo artists can tattoo the skin to create the appearance of the darker circle around the nipple (called the areola).

3D tattoo without nipple reconstruction

Alternatively, some women choose not to rebuild the shape of the nipple, and instead have a 3D tattoo, which gives an illusion of a nipple without surgery.





How will the new breast look and feel?

The look and feel of the new reconstructed breast is different for each woman, depending on your overall health, your breast shape, the stretchiness of your skin, and what types of cancer treatments and reconstruction you do. Generally, you will still have some sensation on the breast and the nipple (unless the nerves have been cut during the breast-conserving surgery).

Note: There are a lot of examples on the internet, and it is hard to know what to trust. Hours of searching can take valuable time and energy during your cancer treatment and recovery. Many websites offer idealized photos and quick reconstructions, but may not be realistic about average results or long-term quality. Not all plastic surgeons are familiar with cancer treatment or trained to do reconstructive surgery. MD Anderson plastic surgeons are board-certified, which means they are trained and skilled at breast reconstruction after cancer.

Common misconceptions

Myths	Facts
Breast reconstruction is too expensive.	**Most insurance companies cover breast reconstruction and surgery on the other breast,** if needed. Contact your insurance company to request an estimate of your out-of-pocket costs. **Note: We recommend using the terms "breast-conserving surgery or partial/segmental mastectomy and reconstruction", as some insurance companies consider "lumpectomy" a type of biopsy.*
Breast reconstruction will make my breast look just like it did before.	**The goal of breast reconstruction is to create the appearance of two normal breasts when you're wearing clothes.** You will still have scars. Radiation may cause that breast to shrink and the skin to tighten and darken. If you choose to lift or reduce your breast(s), they may be higher and more perky.
Using a tissue flap means I'll also get thin!	No. **Breast reconstruction is not a weight loss procedure.** Tissue flaps after breast-conserving surgery are usually taken from under the arm and back.
Now is a great time to put in breast implants	**Breast implants are not usually used after partial mastectomy** because the tissue around the implant can be damaged by radiation therapy, causing deformity (capsular contraction) and increased risk of infection.
It's best to start reconstruction immediately.	**Generally, yes.** Delaying reconstruction until after radiation increases the risk of poor blood flow (needed for good healing), infection, losing the nipple, or skin/tissue death (necrosis). There may also be scarring (fibrosis) and shrinkage, making it harder to create a good aesthetic appearance.
I can have breast reconstruction done in one surgery and be done.	**Sometimes. Each woman's reconstruction timeline is unique,** depending on what type of cancer treatments you have, what types of reconstruction you want, and how much you want to revise afterward. Most women have 1-2 surgeries to achieve their best health and appearance goals.
It's cosmetic surgery, so I can just pick what I want.	**It is reconstructive surgery and the best option for you depends on the results of the breast-conserving surgery and cancer treatment plan, as well as your overall health, body type, and preferences,** including whether you: • want to lift or reduce your breast(s); • have enough healthy, stretchy skin after the mastectomy; • your lifestyle, hobbies, and athletic activities; • can use tissue from your back, side, or upper belly tissue for a tissue flap; or • have any other health concerns. You and your surgery team will develop a reconstruction plan, which may change as you go through your cancer treatments. **The goal is to find the best match between what is possible after your breast-conserving surgery and your long-term health, activity, and appearance goals.**

Tips from breast cancer survivors and nurses

- **Recognize that you're coping with this diagnosis, and managing the appointments, and all the new information – you will NOT be able to remember everything perfectly the first time and your thinking will evolve as you learn more.** You may need to revisit the basics and ask questions repeatedly, and that's fine. View the video and workbook a couple times on different days, and you'll be surprised what "new" information sticks out to you.

- **Do not go searching the internet unless you want to scare yourself.** You will find gruesome images and horror stories.

- **Keep in mind that the surgeries that they use today are very different than they were five years ago.** Ask for up-to-date information and facts. Ignore the stories and rumors and gossip. Make sure you are really well-informed.

- **Understand that there are several decisions to make,** and it's normal to have multiple pros and cons that you're trading off in your head. Aim to make the best decision under the circumstances, so you're not anxious about making the "right" or "perfect" decision.

- **Acknowledge what is not a decision.** This is cancer. You will have months of appointments, treatments, and recovery. Some options won't be possible. Your breasts will look different. The insurance determines the costs.

- **Focus on what you can be thinking about in your decisions.** Among the options that make sense medically, which fits you best? What is most important to you short-term and long-term?

- **Decide who you want involved in your decisions, when and how.** Some people can help you get good information. Some can help you talk through your options (without pressuring you). A few may be able to help you make the actual decisions. And many people can help you go through the process of treatment, recovery, closure and survivorship.

- **Consider what matters to you.**

  - For me, I wanted to feel "normal" again and not have the reminder of being sick staring at me in the mirror. So reconstruction helped me feel "normal" again. But would that feel "normal" to you?

- **Ask about what appointments to expect.**

  - I was surprised there was only the 1 pre-op (appointment before the surgery) with the surgeon where we made decisions, and then the surgery was scheduled and I was "all on board."

- **You may want to cling to one thing for the feeling of control (e.g. having surgery immediately, small scar, keeping the nipple, etc.), but if it's unrealistic, it can get in the way of your best outcome long term.** You'll need to strike a balance between what strengthens your hope and endurance, and what is setting you up for disappointment if it doesn't happen "perfectly" like you imagined.

  – *For example, I was emotionally coping by expecting to get 21 year-old breasts again, but the reality with the tissue flaps is your tissue is whatever age you are and isn't magically going to turn back time. I found myself having to reckon with the disappointment that I had set myself up for, which was doable,* ***but decide up front which you prefer – a little less reality so you can cope now or a little more reality so you have less to cope with later. Both are valid approaches.***

- **If sensation is important to you (e.g. for sex), make sure you ask about what will/will not have sensation** after each type of mastectomy and reconstruction. Looking back, it seems obvious that the skin or nipple won't have sensation if the nerves were cut, but it surprised me at the time.

- **Before your surgery, ask what to expect "post-op" (when you wake up after the operation). This is very very important.**
  - *Drains. Looking back, I wasn't really aware what the drains would be like. Ask the PAs and nurses what it's like so you're not surprised.*
  - *Would be helpful to have someone say, "Oh yes, honey. It looks awful at first, but it will be better in a few months, and in a year you'll have a much more realistic idea of what your new breast and overall appearance really looks like."*

- **Find out how long your recovery will be with each option,** especially if you're out of town and will need to rent a condo for weeks, etc. This may impact your decision if you work, etc. **The non-treatment real-life costs are relevant.**

- **Side effects sometimes happen. Address them as soon as you can.**
  - *I did not understand the full implications of lymphedema on my arms or that there is a surgery can correct some of it.*

- **Ask, "Exactly what do you want me to do or not do post-reconstruction, post-revision, etc.?"**
  - *Ask up front AND at the post-op visit what the limitations/restrictions are* **AT EACH PHASE** *and for how long.*
  - *Exercise is very important to me, so my default is to get things stretched and moving as soon as possible. That seems healthy. I was sent home with a workbook of exercises from the breast surgery, but when I went to my reconstructive surgeon, he was surprised and concerned that I was exercising my arms.*
  - *When you go in for the mastectomy and later for reconstructive surgery, you are not able to use your arms to help you get out of chairs or into and out of bed. Perhaps preparing for surgery doing some sit and stand exercises without the use of your arms.*

- **Don't be afraid to acknowledge, "treat" and support your emotional and spiritual needs.**
  - You *may think you're overthinking or overly emotional about something, but your thoughts, anxieties, and experience dealing with how cancer fits in the grand scheme of life is a perfectly normal part of the process. Find out if your doctor or hospital has resources for your religion, and ask about whether what you're praying, thinking, and feeling are normal and helpful.*

- **Acknowledge that you are confronting an identity crisis with a lot of uncertainty and little control.**
  - *Cancer is life-changing and hard, but it can become freeing and surprisingly GOOD in your life. Don't waste this experience. (See the books: "Don't Waste Your Cancer" and "Just Get Me Through This!")*

Important resources

The University of Texas MD Anderson Cancer Center

Center for Reconstructive Surgery
Mays Clinic 5th Floor near Elevator U
713-563-8500
https://www.mdanderson.org/patients-family/diagnosis-treatment/care-centers-clinics/center-for-reconstructive-surgery.html

International Center and Language Translation Services
001-713-745-0450

MyCancerConnection Community
713-792-2553

Patient Financial Support Services
(long-term legal and financial impacts of cancer)
713-792-2991

Patient Travel and Housing Services
1-855-508-4467

Social Work
713-792-6195

American Cancer Society
1-800-227-2345
www.cancer.org

American Society of Plastic Surgeons
1-800-514-5058
www.plasticsurgery.org/reconstructive-procedures/breast-reconstruction

Susan G. Komen Foundation
1-877-GO-KOMEN
www.komen.org

Your personal decision worksheet

Bring this worksheet to your appointment.

The following questions will help you prepare to talk with your surgeon and make a well-informed decision.

What do you need to know? *Please circle*

The goal of breast reconstruction is to recreate the appearance of a natural breast when you are wearing clothes.	True	False
Most insurances cover reconstructive surgery on the breast with cancer, and surgery on the other breast, if needed.	True	False
Delaying reconstruction is not recommended because radiation tightens the breast/skin and increases the risk of complications.	True	False
Tissue rearrangement is best when the cancer is smaller, breasts are larger, and there is enough healthy tissue to fill in the gap where the cancer and margins were removed.	True	False
Using a tissue flap may be recommended when there is not enough healthy tissue in the breast to fill in the gap where the cancer and margins were removed. However, you need to have enough healthy tissue at the donor site (under the armpit, back or upper belly) and you may have 2 scars.	True	False
Breast lifting (mastopexy) may be recommended to restore the natural curve of the breast and make sure the nipples are aligned.	True	False
There are no differences in rates of cancer coming back (called recurrence) or the ability to detect a recurrence whether you have breast reconstruction or not.	True	False

Towards which options are you leaning? *Circle all options in which you are interested.*

Decision #1	Decision #2	Other options
Reconstruction after breast-conserving surgery	Tissue Rearrangement (oncoplastic)	Surgery on the other breast (contralateral surgery)
Reconstruction after total mastectomy	Breast lift (mastopexy)	Nipple tattoo or 3D tattoo
No reconstruction	Tissue Flap	Nipple reconstruction

Your personal decision worksheet

What matters most to you?

Breast cancer survivors say that the following items were very important in helping them make their personal decisions with their reconstruction team. Clarifying how important they are to you will help you and your surgeon consider which options may give you the best chance of achieving your goals.

Please rate each item on a scale of 0 to 10

How important is it to you to?	*Not Important*										*Important*
Look like you have 2 similar breasts in clothes	0	1	2	3	4	5	6	7	8	9	10
Minimize the number of surgeries	0	1	2	3	4	5	6	7	8	9	10
Minimize the number of scars	0	1	2	3	4	5	6	7	8	9	10
Minimize time away from work or family duties	0	1	2	3	4	5	6	7	8	9	10
Stay the same size	0	1	2	3	4	5	6	7	8	9	10
Focus your attention on cancer treatment	0	1	2	3	4	5	6	7	8	9	10
Take care of other health concerns	0	1	2	3	4	5	6	7	8	9	10
Use your own tissue	0	1	2	3	4	5	6	7	8	9	10
Have reconstruction on the other breast	0	1	2	3	4	5	6	7	8	9	10
Have the appearance of a nipple when naked	0	1	2	3	4	5	6	7	8	9	10

How are you feeling about these decisions? *Circle yes or no*

Do you feel sure about the best choice for you?	Yes	No
Do you know the risks and benefits of each option?	Yes	No
Are you clear about which benefits and risks matter most to you?	Yes	No
Do you have enough support and advice to make a choice?	Yes	No

Questions or notes you would like to share with your reconstructive surgery team:

My Breast Reconstruction Decision Workbook

Information and activities to help you talk with your doctors about which types of breast reconstruction may be best for your health and appearance goals.

- What do you need to know?
- How do the options compare?
- What, if anything, does it cost?
- What matters most to you?
- Which options are you leaning toward?
- What questions do you have?

For more information:

Center for Reconstructive Surgery
https://www.mdanderson.org/patients-family/diagnosis-treatment/care-centers-clinics/center-for-reconstructive-surgery.html

713-563-8500

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center
Making Cancer History®

Reviewed 06/2023

Citation: Hoffman AS, Hanson S, Reece GR. Considering breast reconstruction after partial mastectomy: workbook. The University of Texas MD Anderson Cancer Center, Houston, Texas. 2020