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## **BREAST RECONSTRUCTION**

More women in the United States are diagnosed with breast cancer every year than with any other cancer except skin cancer according to the American Cancer Society. Early detection has become the cornerstone of improving outcomes, but we all hope that science can make even more dramatic inroads towards a cure. Currently general surgeons and medical oncologists are continuing their efforts to improve treatments available. It remains a fact that many patients undergo mastectomy procedures as a mainstay of their cancer therapy. These patients can be offered reconstructive surgery that can dramatically help restore, in part, that which the cancer has taken. This information sheet, alone, cannot answer all your questions about breast reconstruction after mastectomy, but, along with a consultation, it can help provide you with information that you can use to make the best decision for your own personal situation. Dr. Lundquist and his office staff are interested in working with you and helping where we can. Let us know.

### **BREAST CANCER**

This paper is not intended to talk in depth about breast cancer. There is a lot of information out there and many resources, and we encourage you to take advantage of as many of them as you wish. Dr. Lundquist is particularly concerned that you address the cancer and its treatment with the highest priority. Any questions of reconstruction are certainly secondary, and all aspects of the reconstructive side of this problem take a back seat to those of the primary treatment you receive from your primary care doctor, your surgeon, your oncologist, and the other people concerned with treating you. We will make our best efforts at your reconstruction when it is the proper place and time.

The treatments for breast cancer usually include surgery, pre- or post-operative chemotherapy, and, occasionally, radiation therapy. The details of these treatments will make a large impact on the options you will have for breast reconstruction. Dr. Lundquist will work with your other doctors to help plan and coordinate the schedule for plastic surgery.

### **RECONSTRUCTION**

The first option that a patient with breast cancer should consider is no reconstruction at all. In some cases the treatment for the breast cancer would require no reconstruction, anyway, but even in the most damaging circumstances the patient needs to understand

that breast reconstruction is elective. Only rarely would reconstructive surgery be absolutely necessary (non-healing wounds, for example).

Non-surgical methods of “reconstruction” are also available and can give a good result for many patients. These would mainly involve the use of post-mastectomy bras and/or external prostheses. There are many retail shops that specialize in just this product. The problems that we hear about are that these external devices can be hot or irritating to the skin, especially the scar tissue. They can move or fall out. They often can’t give a totally natural appearance with certain clothing, such as bathing suits or nightgowns. And some patients just don’t feel restored as much as they would like.

Prior to undertaking breast reconstruction surgery Dr. Lundquist is adamant that the patient must also understand that excellent reconstructions can be achieved, but they always require multiple procedures. Everything cannot be done at one time. A breast mound must be created. It might take several surgeries to get this “just right.” The nipple/areola complex can be reconstructed, but it is critical to position it correctly, and this has to wait for the mound to be right. Revisions are common in all these areas. Plus there is the question of the opposite breast. In some patients a prophylactic mastectomy is recommended for the other breast based on the facts of the breast cancer. In other patients the opposite breast must be made larger, made smaller, and/or lifted to help make the best match with the reconstructed breast. It will take time to work this all through. Fortunately federal law guarantees that all of this surgery, the revisions, and the procedures on the opposite breast must be covered by insurance companies. Reasonable expectations can usually be met, but it is impossible to totally recreate the normal, natural breast by any reconstructive surgery.

The first important question that must be asked when considering surgical breast reconstruction relates to timing. There are essentially two options. The first is ***immediate breast reconstruction***. By definition, this means that the reconstruction is at least started at the time of the mastectomy procedure. Dr. Lundquist works in cooperation with your surgeon. After the mastectomy portion of surgery is completed, and then only if your medical condition is appropriate, Dr. Lundquist can begin the reconstructive portion of your surgery. This adds time to the original surgery and is not always possible or recommended. Other possible negative concerns are that pain may be increased above that of just a mastectomy. Risks of infection, bleeding, fluid build up, side effects from the longer anesthesia time, and others may be higher than with mastectomy alone, and this needs to be understood as well. The advantage for many patients is that they can recover from just the one procedure rather than two separate ones. It can be more efficient to do two things at one time rather than just the breast removal. Psychologically, some patients gain great benefit by beginning their recovery in this manner.

The other option is called ***delayed breast reconstruction***. In these cases the original breast cancer surgery is performed and allowed to heal. This can be as short as a month or as long as many years after the mastectomy. Many patients aren’t interested in reconstruction immediately. Many patients don’t want to think about anything beyond the treatment of the cancer, and this is very normal. An additional advantage of this approach

is that the patient can experience just what it is like to have a mastectomy defect, and she can learn for herself whether surgical reconstruction is necessary. The minority of breast cancer patients actually has breast reconstruction. The same surgeries can be performed either immediately or delayed. All the same options remain available.

The next major question that must be asked relates to using a breast implant or the body's own tissue to restore the breast mound that has been removed. There are many details that can be discussed.

When planning to use a breast implant in either the immediate or the delayed breast reconstruction situation Dr. Lundquist usually recommends the use of a temporary tissue expander as the very first step. It is often very difficult to place a breast implant that will be the correct size, shape, and in the right position with one attempt. Rather than attempt surgery that is difficult, it can be a great advantage to use a temporary tissue expander instead. This device is initially placed under the chest muscle and skin in an under-inflated condition so that there is less strain and stress on the tissues of the chest. This will reduce the risks and complications of healing. The expander is designed to be "filled" by injecting saline gradually through a valve. This does require a small needle poke, but patients usually tolerate it very well; often the skin where the needle goes in is still numb from the original mastectomy surgery. In this manner the skin and muscles are slowly stretched until the desired size is reached – somewhat like an abdomen that stretches during pregnancy. The patient gets to watch the enlargement progress and can take a major role in deciding just how big to go. Injections are usually done on a weekly basis, and it might take 4 to 6 sessions or more to reach the final size in any one patient's case.

After the final size is reached, then it is time to consider placing a permanent implant in the space that has been created by the expander. These permanent implants can be saline filled or silicone. Dr. Lundquist and his staff will be very happy to discuss with you all that we know about these different implants. This information changes from time to time, and you will need to stay up-to-date if you are interested. There are other details such as whether the surface of the implant is smooth or textured, or whether it is best to use a round implant or a shaped implant. Again, Dr. Lundquist will discuss these options with you. The change from the tissue expander to the permanent implant can be a relatively simple procedure in most cases. This second stage is often scheduled 6 months or more after the original surgery, but its timing is variable, based on the needs and interests of the patient. The surgery is often out-patient, and the recovery can be much more rapid than it was after the mastectomy and tissue expander placement. In other situations, more adjustments to the breast mound reconstruction must be made than just simple implant exchange or surgery on the opposite breast might be undertaken. This can make for a little more surgery and recovery. Each case will be evaluated and treated individually.

Sometimes simple implant reconstruction with or without preliminary tissue expansion is impossible or contraindicated because the local tissues are inadequate. Another option to still using an implant is to provide additional tissue for reconstruction by moving tissue from the back to the front of the chest. This is called an LD muscle flap (Latissimus

Dorsi) procedure. The needed extra skin and fat can be cut from the back, brought through the armpit, and sewed to the front. An implant can then be placed under this new tissue to give the mound reconstruction. The temporary tissue expander may also be used at the first surgery and replaced with a permanent implant at a later surgery as described above. The majority of patients tolerate the use of this muscle from the back without any functional loss or problem.

The advantages of these implant reconstructions is that they can be quite satisfactory for many patients. Modern breast cancer surgery is often requiring that less native tissue (skin and fat, primarily) has to be removed, and that leaves it to help with the reconstruction. Implants of all sizes and shapes are available, and can be taken “right off the shelf,” not requiring any major surgery to the body. Implants can often be easily changed or modified if needed. Unfortunately, there are also complications peculiar to the use of breast implants. They can leak. With saline implants, this is medically “safe,” since saline is certainly a safe product used every day in medicine, but those implants will go flat and will need to be replaced. Silicone implants have been through a lot of controversy over the past 10 to 15 years. There is no medical evidence that silicone leaking causes any disease, but broken silicone implants definitely need replacement.

The primary problem with the use of breast implants is that the body is designed to not tolerate anything foreign inside it. There isn't “rejection” in the true sense of the word, but the body doesn't accept them, either. It will form scar tissue – in EVERY case- to surround and “wall off” the foreign device from the body. The nature of this scar tissue is the problem. If it stays soft, supple, loose, and thin there will be no problem. In other situations, however, it hardens, contracts, stiffens, thickens, calcifies, or many other descriptions and this can be a big problem. The reconstruction may not look, feel, or act very good. Most often things look round and unnatural. Surgery will be necessary to try and correct this. Capsular scar contracture, the term we use for this problem, remains a frustrating situation for both the doctor and the patient in some cases.

The other approach to breast reconstruction without the using implants is called ***autogenous tissue reconstruction***. This means that your own body tissue is used for the reconstruction and not a foreign implant. Dr. Lundquist uses the skin, fat, and muscle from the abdomen when this kind of surgery is performed, and it is called a TRAM flap procedure (Transverse Rectus Abdominis Muscle). In many cases a preliminary surgery will be done to tie off lower arteries and veins so the blood supply to the flap increases from above – similar to pruning back a plant to make the remaining plant healthier. Two weeks later the stomach skin, fat, and muscle can be lifted off the abdomen and rotated under the skin up to the chest. This tissue can make a good replacement for the breast mound without the use of an implant. Again, though, it is quite common that some additional surgery will be needed in the future to tailor, revise, or reshape this first attempt.

The results can be very good. A larger breast can be created in some cases. There are no problems with implant devices. There are other problems, however, that must be considered. Two parts of the body are being operated on. Some of the complications

involve the donor site at the abdomen. Some patients experience pain that can persist long after surgery. There will be weakness in the abdomen that can cause problems with mobility. The stomach area can bulge or protrude. There can be an actual hernia where the tissue is removed, and this will require additional surgery to repair. At the breast area, some of the tissue transferred from the abdomen might not be healthy. The skin and/or fat tissue can die, requiring surgical removal. In general, Dr. Lundquist feels the TRAM flap is often a more aggressive approach and should be limited to a smaller number of patients. It is almost always used in delayed reconstruction cases only, and it is often a back up to the few implant reconstruction cases that develop serious complications.

Nipple reconstruction can be added to the reconstruction of the breast after the mound is built. Many patients are not interested in this additional surgery, but it is available. The opposite nipple, if available, can be a donor. Most often the local skin and fat of the breast is “pinched up” to form a new nipple. It can be difficult for this tissue to really project, however, especially if there is a lot of scar from the mastectomy at the site of the new nipple. The areola tissue can be reconstructed with skin grafts or, more commonly lately, with a tattoo of the darker color. Again, these nipple/areola reconstructions should probably be done only after the patient is as satisfied with the mound reconstruction as possible.

The timing of the various breast reconstruction procedures is also affected by the adjuvant or additional treatments that are given for the original breast cancer. Chemotherapy can make patients feel weaker or tired, and this is not the time to be doing a lot of elective surgery. Dr. Lundquist can often work around the chemotherapy schedule and “do his thing” at the best times only. Radiation is a different story. When radiation therapy is planned or at least expected, the breast reconstruction process should NOT be started. There can be complications from the radiation treatments that severely alter the results of reconstruction in a negative way. It is best to allow the effects of radiation to heal and stabilize before the reconstruction begins. In some cases different procedures (most often the LD flap described above) will become necessary, but only time will tell. Again, Dr. Lundquist will work with your other doctors to try and make the best recommendation for your specific case.

## **SUMMARY**

Breast cancer is an all too common problem that often requires surgery as at least a part of its treatment. And the treatment of the cancer is, and should be, everyone’s prime concern. After the treatment for the cancer is decided, however, many patients are also concerned with trying to reconstruct what will be or was removed by the surgeon. This is where plastic surgery can offer very satisfactory results for most patients.

Whether the reconstructive surgery is done immediately or delayed; whether implants are used or whether other body tissues are used; whether the opposite breast must be operated on; and whether additional procedures are requested Dr. Lundquist can help patients restore what was lost to the disease. In all cases the reconstruction of a breast will require

multiple steps. The surgeries can vary from somewhat simple procedures to more extensive ones. It is all customized to each individual patient.