

Understanding Risks and Side Effects of Breast Reconstruction with Radiation Therapy

One of the most important goals of Moffitt Cancer Center is to provide you with quality patient care through education, research and service. Your breast surgeon may have mentioned the option of breast reconstruction. Before you decide if reconstruction is right for you, please review the following information. This sheet explains the risks and side effects of breast reconstruction with radiation therapy:

- when you already have a breast implant in place prior to your treatment for cancer.
- or when your doctor recommends radiation therapy after reconstruction.

Your breast surgeon may refer you to the Plastic Surgeon and the Radiation Oncologist to discuss your individual situation and to address questions and concerns regarding reconstruction and radiation therapy.

For most women, breast cancer involves surgery. One type, called **breast conservation therapy**, allows the woman to keep her natural or implanted breast by having only the portion of the breast affected with cancer removed. This type of breast conservation surgery is called lumpectomy or partial mastectomy. After a lumpectomy, radiation therapy is used to destroy any cancer cells left behind after surgery.

Women who have had **breast augmentation**, or implants placed to change the size and appearance of the breast, have the following risks to consider.

Breast Conservation Therapy: Risks with Existing Implants

Breast conservation therapy can cause scar tissue in the breast, resulting in a noticeable difference in the shape and size of the breasts in a large percentage of patients. This difference is called **asymmetry**. Many women have breasts that do not match in size or shape prior to surgery. When an implant is already in place from previous augmentation, the expected asymmetry after breast conservation therapy may be especially pronounced.

In most cases, plastic surgery should not be performed on an irradiated breast to correct asymmetry or the physical appearance. This is also referred to as the **cosmetic** appearance of the breast.

The following risks from the implant after radiation therapy are the same if they are located behind or in front of the muscle:

- Implant rupture
- The formation of scar tissue can tighten and squeeze around the implant. This is called **capsular contracture** and can occur immediately or after a delayed period of time.
- Pain

Another type of surgery for breast cancer involves the removal of the entire breast. This is called **mastectomy**. Some women have **breast reconstruction** to rebuild the breast. Breast reconstruction is when a surgeon uses an implant or the woman's own tissue to reform the shape of the breast.

Mastectomy: Risks with Breast Implant Reconstruction

If you and your surgeon decide that you are a good candidate for breast reconstruction, your need for radiation therapy after mastectomy will impact reconstruction options available to you. If there is question about whether radiation is indicated, you will be referred to the Radiation Oncologist prior to your surgery.

- If radiation therapy is **not** expected after mastectomy, reconstruction can be done at the time of surgery.
- If radiation therapy is required, your surgeon may recommend that reconstruction be done at a later date.
- Sometimes the final pathology shows unexpected findings. In these cases, radiation therapy may be recommended after mastectomy. Then the following can occur.
 - ⇒ The tissue expander/implant may be left in place or removed.
 - ⇒ The Radiation Oncologist may request that the expander be deflated prior to radiation if there is a possibility it may compromise treatment.
 - ⇒ Reconstruction using your own tissue may be required after radiation therapy is complete.

Mastectomy: Risks with Existing Implants

- If your implant is located in front of the muscle, it will need to be removed and a new one will be placed behind the muscle.
- If your implant is located behind the muscle:
 - ⇒ It may be left in place.
 - ⇒ Injury to implant may still occur (less likely).
 - ⇒ Radiation therapy may increase the chance of capsular contracture.

Contact Information

For more information on breast reconstruction and radiation therapy , please contact your primary nurse in the Center for Women's Oncology at: (813) 745-8410.

You can also call the Department of Radiation Therapy at (813) 745– 8424.

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Definition of Terms:

asymmetry– When two breasts do not match in shape or size.

breast augmentation– Breast implants are placed either behind or in front of the chest muscle to change the appearance or size of the breast. (This is done for appearance on women without breast cancer.)

breast conservation therapy– The treatment of breast cancer using lumpectomy followed by radiation therapy to the breast.

breast reconstruction- A breast implant or the women's own tissue is used to rebuild the shape of the breast after a mastectomy.

capsular contracture– When scar tissue forms around the implant, it tightens and squeezes the implant.

cosmesis or cosmetics- The look or appearance of the breast/s.

delayed reconstruction- Reconstruction done at a later date.

immediate reconstruction- Reconstruction done at the same time as the mastectomy.

lumpectomy– The removal of the part of the breast with cancer, plus a rim of non-cancerous breast tissue surrounding the lump (like a halo). This is also known as partial mastectomy or breast conservation.

mastectomy– The removal of the entire breast; not including the muscles.

radiation therapy– The treatment of cancer using high-energy rays or particles to kill or shrink cancer cells. After a lumpectomy, radiation therapy is used to destroy any cancer cells left behind after surgery.

tissue expander– A balloon-like material placed beneath the skin and the chest muscle. It is inflated with saline over a period of time until there is enough room to add an implant in place of the natural breast. The tissue expander is placed during a second reconstructive surgery.