



Radiation and breast reconstruction.

Radiation therapy is often a very important part of breast cancer treatment. Radiation after lumpectomy reduces local recurrence so that a woman can keep her breast. Radiation therapy is now offered to any woman found to have cancer that has spread to the lymph nodes in the axilla (armpit area) at the time of mastectomy. Often, the spread to the nodes is not known until the surgery is performed. However, radiation can have a negative impact on breast reconstruction — it can increase the risk of poor cosmetic results. It is important to discuss the timing of breast reconstruction if radiation therapy is planned after mastectomy.

Immediate breast reconstruction refers to breast reconstruction performed at the same time as the mastectomy. Most common types of breast reconstruction include an implant based reconstruction (with either a tissue expander first or directly to implant) or autologous reconstruction, which uses a patient's own tissue taken from another part of the body. If a woman undergoes immediate reconstruction and she requires radiation, she will be at a higher risk for complications (immediate reconstruction with autologous flaps before radiation is generally not recommended). However, many women do choose immediate breast reconstruction and accept the increased risks. Psychologically, women often prefer immediate reconstruction because it offers an immediate breast mound. In addition, some women do not wish to have the more extensive surgery with tissue transfer from elsewhere in the body, which involves more surgery and longer recovery time. Many women are happy with the cosmetic results with mastectomy and implant-reconstruction after radiation. But if there is a

poor cosmetic result, it can always be corrected with an autologous reconstruction.

Delayed reconstruction refers to breast reconstruction after the mastectomy. This surgery can be carried out weeks, months, to years after the original mastectomy and can be performed after cancer therapy such as radiation. If a woman undergoes a mastectomy and radiation without reconstruction, she can have a delayed reconstruction. However, post radiation reconstruction will likely involve autologous reconstruction. It is unlikely that using a tissue expander to stretch out the chest muscle (pectoralis) after radiation will be successful; therefore, tissue from other parts of the body is recommended for reconstruction.

For women who undergo a lumpectomy for breast cancer, nearly all will require radiation as part of their cancer treatment. Lumpectomy and radiation usually have great cosmetic results with 80-90% good to excellent outcomes. Rarely, lumpectomy and radiation can result in breast contour deformity or size. In most of these cases, this can also be corrected with plastic surgery if the patient is unhappy with her results.

The decision to undergo breast reconstruction and the type of reconstruction should be individualized based on the patient's needs and desires. This involves a shared conversation between the patient and her physicians – including her medical oncologist, breast surgeon, and radiation oncologist.