

Outcomes of immediate tissue expander breast reconstruction followed by reconstruction of choice in the setting of post mastectomy radiation therapy

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Purpose: A common sequence for performing staged tissue expander breast reconstruction is to immediately insert a tissue expander, complete expansion prior to radiotherapy, and then perform the definitive reconstruction after radiotherapy is complete. This study evaluates the outcomes of this treatment regimen.

Methods: The charts of 237 patients who underwent immediate tissue expander breast reconstruction followed by radiotherapy and then definitive reconstruction at Northwestern Memorial Hospital between 7/1/1998-8/20/2008 were retrospectively reviewed. The average follow-up time was 33 months. Demographic, surgical, and oncologic factors were recorded, and only complications in radiated breasts were included in the final analysis.

Results: The average patient age in this study was 47 years and the average BMI was 25.8 kg/m². Overall, 62% of patients completed tissue expander/implant reconstruction, 22.3% of patients experienced major complications leading to explantations or conversions to flap, and 13.5% of patients completed tissue expander/elective autologous reconstruction. Of the patients who underwent second stage tissue expander to implant exchange, 87.5% successfully completed reconstruction without experiencing complications leading to explantation or conversion to autologous reconstruction.

Conclusions: This study indicates that immediate tissue expander followed by reconstruction of choice breast reconstruction in the setting of PMRT can be successfully performed in the majority of patients. Patients should be reassured that they can safely complete their cancer therapy and afterwards will be able to achieve an acceptable reconstruction, with implants alone approximately 62% of the time and with the addition of autologous tissue approximately 13.5% of the time.