



## **A Retrospective Study of Breast Reconstruction in Northern Ontario**

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**ABSTRACT:**

Introduction: For many women diagnosed with breast cancer, breast reconstruction is the final step in their journey to recovery. Breast reconstruction after mastectomy is associated with increased quality of life, increased self esteem, improved body image, and lower rates of depression/anxiety. Despite this, low rates of post-mastectomy breast reconstruction persist across Canada, especially in smaller centres.

The purpose of this study was to analyze modern approaches to breast reconstruction by a single surgeon in Northern Ontario.

Methods: Retrospective chart review over a period of 6yrs for all breast reconstruction procedures. Patients from Thunder Bay and the surrounding region were assessed, identifying the reconstruction techniques, use of adjunctive procedures and rates of complications.

Results: 56 patients were reviewed, with 87 total reconstructive procedures. The age range was 29-75yrs (median 54yrs), all had a history of breast cancer treated with radiation (n=25), chemotherapy (n=27) and/or mastectomy/lumpectomy (n=56). Reconstructive techniques included 1-step implant reconstruction (n=11), 2-step tissue expander/implant (n=36), autologous flap (n=11), resection-reduction (n=4), delayed balancing procedures (reduction, mastopexy, or fat grafting, n=13), other (n=12). Adjunctive procedures including fat grafting (n=31), nipple reconstruction (n=48) and nipple tattooing (n=33) were also performed. Use of an acellular dermal matrix (n=30) was also common. Complications were infection (n=4), seroma (n=8), hematoma (n=6), T-junction wound breakdown (n=1), flap necrosis (n=1), tissue expander exposure (n=2), implant failure (n=1), blocked drains (n=1), however most of these did not require further surgical intervention. All had follow-up for 1yr with pre- and postoperative photographs.

Conclusion: Breast reconstruction is a safe and reliable option for women in Northern Ontario. The most common reconstructive surgeries done in this area are implant-based procedures, primarily by a 2-step approach. There is a full range of locally available reconstructive options, and flexibility to adjust the timeline and procedures to best suit each patient.