

# **Patient Satisfaction with Breast Reconstruction at Hadassah Medical Center: Does It Correlate with Objective Outcomes?**

**Naomi Rabinowitz**

## ***Abstract:***

***Background:*** Quality control in surgical professions is a challenging issue since the success of the surgery is perceived by the public as being dependent primarily on the surgeon's proficiency, rather than on the rest of the care-giving team, the medical organization in which the operation is taking place, or the severity of the patient's preoperative status. The aim of this study was to assess the concordance between objective and subjective quality criteria in breast reconstruction using tissue expanders, as an example of a surgical treatment. Furthermore, the study sought to examine whether patient satisfaction with breast reconstruction, correlates with medical and objective outcomes. This way, we attempted to assess the quality of care given to patients undergoing breast reconstruction at the Plastic Surgery Department at Hadassah Medical Center.

***Methods:*** A survey was conducted, via telephone, among patients who had undergone breast reconstruction using tissue expanders, between 1.1.2000 and 1.4.2005 at the Ein Kerem and Mount Scopus Hadassah Medical Centers. Assessing patient satisfaction with

the reconstruction results was performed using three methods: a direct question, a question regarding the willingness to return to Hadassah for treatment, if necessary and a question inquiring whether the patient would recommend to a friend in a similar situation to undergo the treatment in Hadassah. These findings were examined against several objective parameters, such as postoperative complications, as recorded in the medical records, demographic and clinical data of the patient's preoperative medical status and data regarding the surgery itself. This data was retrieved from an existing database on the postoperative complications of these patients, which was gathered by researchers from the plastic surgery department. In addition, the patient's satisfaction findings were examined in conjunction with subjective outcomes such as postoperative complications, as reported by the patients in the survey and their sense of a gap in their understanding and knowledge regarding the procedure. A significant complication was defined as an event which required re-hospitalization or re-operation while a minor complication was defined as an adverse event which did not require hospitalization (pain, hematoma, infection requiring oral antibiotics).

**Results:** Of the 140 patients, 103 completed the survey. 43% of the responding patients were very much satisfied with the reconstruction results, a finding which was validated by the fact that most patients (63%) would highly recommend to a friend in a similar situation to undergo the treatment in Hadassah and would return for treatment in Hadassah, themselves (77%). A correlation was found between patient's dissatisfaction with breast reconstruction and the existence of significant postoperative complications, according to the patient's answers in the survey, but no correlation was found with these complications according to medical records. No correlation was found between patient's

satisfaction and the existence of minor postoperative complications, according to the survey and the medical records. A gap was found between the postoperative complications rate, as reported by the patients in the survey, versus those recorded in the medical records— particularly with mild complications (72% in the survey vs. 51% in the records) and to a lesser extent, the major ones (20% in the survey vs. 13% in the records). 75% patients felt there was a gap regarding their understanding and knowledge of the reconstruction process, before and after the procedure. This gap was attributed to insufficient explanation and a difficulty in absorbing the information. An inverse correlation was found between patient satisfaction and the existence of a gap in their understanding of the procedure and to the magnitude of this gap ( $p=0.03$ ). No correlation was found between patient satisfaction and preoperative medical status, smoking, radiotherapy or operative criteria. In addition, no correlation was found between demographic parameters, excluding, familial status, married women were more satisfied than unmarried women.

**Conclusions:** Patient dissatisfaction with breast reconstruction results is influenced by the existence of significant postoperative complications which required re-hospitalization or re-operation, and to a lesser extent, by a sense of gap in their understanding and knowledge of the procedure. The discrepancy between postoperative complications rate, as reported in the survey, versus those recorded in the medical records, implies that the medical team may have a difficulty in understanding the surgical experience as it is portrayed by the patient and tends to focus on objective outcomes. This fact may explain the sense of gap in understanding the procedure and its results. The extent of the correlation between patient satisfaction with the reconstruction results and objective

outcome, is in fact depending on who is being asked. From a formal-medical perspective, there is no correlation to postoperative complications. On the other hand, there is a correlation to these complications, from the patient's subjective perspective and to the existence of a gap in their understanding of the procedure. The way to overcome this sense of a gap in understanding is by thoroughly informing the patients in a clear language preoperatively, regarding possible aesthetical results, complications and the expanding procedure in the immediate postoperative period.

## Bibliography:

1. Abu-Nab Z, Grunfeld EA. Satisfaction with outcome and attitudes towards scarring among women undergoing breast reconstructive surgery. *Patient Educ Couns.* 2007 May;66(2):243-9. Epub 2007 Mar 6.
2. Agha-Mohammadi S, De La Cruz C, Hurwitz DJ. Breast reconstruction with alloplastic implants. *J Surg Oncol.* 2006 Nov 1;94(6):471-8. Review.
3. Alderman AK, Kuhn LE, Lowery JC, Wilkins EG. Does patient satisfaction with breast reconstruction change over time? Two-year results of the Michigan Breast Reconstruction Outcomes Study. *J Am Coll Surg.* 2007 Jan;204(1):7-12. Epub 2006 Nov 16.
4. Alderman AK, Wilkins EG, Lowery JC, Kim M, Davis JA. Determinants of patient satisfaction in postmastectomy breast reconstruction. *Plast Reconstr Surg.* 2000 Sep;106(4):769-76.
5. Al-Ghazal SK, Fallowfield L, Blamey RW. Comparison of psychological aspects and patient satisfaction following breast conserving surgery, simple mastectomy and breast reconstruction. *Eur J Cancer.* 2000 Oct;36(15):1938-43.
6. Al-Ghazal SK, Sully L, Fallowfield L, Blamey RW. The psychological impact of immediate rather than delayed breast reconstruction. *Eur J Surg Oncol.* 2000 Feb;26(1):17-9.
7. Andrade WN, Baxter N, Semple JL. Clinical determinants of patient satisfaction with breast reconstruction. *Plast Reconstr Surg.* 2001 Jan;107(1):46-54.
8. Andrade WN, Semple JL. Patient self-assessment of the cosmetic results of breast reconstruction. *Plast Reconstr Surg.* 2006 Jan;117(1):44-7; discussion 48-9.
9. Birido N, Geraghty JG. Quality control in breast cancer surgery. *Eur J Surg Oncol.* 2005 Aug;31(6):577-86.
10. Bresser PJ, Seynaeve C, Van Gool AR, Brekelmans CT, Meijers-Heijboer H, van Geel AN, Menke-Pluijmers MB, Duivenvoorden HJ, Klijn JG, Tibben A. Satisfaction with prophylactic mastectomy and breast reconstruction in genetically predisposed women. *Plast Reconstr Surg.* 2006 May;117(6):1675-82; discussion 1683-4.

11. Camilleri IG, Malata CM, Stavrianos S, McLean NR. A review of 120 Becker permanent tissue expanders in reconstruction of the breast. *Br J Plast Surg*. 1996 Sep;49(6):346-51.
12. Cicchetti S, Leone MS, Franchelli S, Santi PL. One-stage breast reconstruction using McGhan Style 150 biodimensional expanders: a review of 107 implants with six years experience. *J Plast Reconstr Aesthet Surg*. 2006;59(10):1037-42. Epub 2006 May 11.
13. Collis N, Sharpe DT. Breast reconstruction by tissue expansion. A retrospective technical review of 197 two-stage delayed reconstructions following mastectomy for malignant breast disease in 189 patients. *Br J Plast Surg*. 2000 Jan;53(1):37-41.
14. Contant CM, van Wersch AM, Wiggers T, Wai RT, van Geel AN. Motivations, satisfaction, and information of immediate breast reconstruction following mastectomy. *Patient Educ Couns*. 2000 Jun;40(3):201-8.
15. Edlich RF, Winters KL, Faulkner BC, Bill TJ, Lin KY. Advances in breast reconstruction after mastectomy. *J Long Term Eff Med Implants*. 2005;15(2):197-207. Review.
16. Edsander-Nord A, Brandberg Y, Wickman M. Quality of life, patients' satisfaction, and aesthetic outcome after pedicled or free TRAM flap breast surgery. *Plast Reconstr Surg*. 2001 Apr 15;107(5):1142-53; discussion 1154-5.
17. Elder EE, Brandberg Y, Björklund T, Rylander R, Lagergren J, Jurell G, Wickman M, Sandelin K. Quality of life and patient satisfaction in breast cancer patients after immediate breast reconstruction: a prospective study. *Breast*. 2005 Jun;14(3):201-8.
18. Franchelli S, Leone MS, Berrino P, Passarelli B, Capelli M, Baracco G, Alberisio A, Morasso G, Santi PL. Psychological evaluation of patients undergoing breast reconstruction using two different methods: autologous tissues versus prostheses. *Plast Reconstr Surg*. 1995 Jun;95(7):1213-8; discussion 1219-20.
19. Gui GP, Kadayaprath G, Tan SM. Long-term quality-of-life assessment following one-stage immediate breast reconstruction using biodimensional expander implants: the patient's perspective. *Plast Reconstr Surg*. 2008 Jan;121(1):17-24.
20. Gui GP, Tan SM, Faliakou EC, Choy C, A'Hern R, Ward A. Immediate breast reconstruction using biodimensional anatomical permanent expander implants: a prospective analysis of outcome and patient satisfaction. *Plast Reconstr Surg*. 2003 Jan;111(1):125-38; discussion 139-40.

21. Guyomard V, Leinster S, Wilkinson M. Systematic review of studies of patients' satisfaction with breast reconstruction after mastectomy. *Breast*. 2007 Dec;16(6):547-67. Epub 2007 Nov 19.
22. Harcourt D, Rumsey N. Mastectomy patients' decision-making for or against immediate breast reconstruction. *Psychooncology*. 2004 Feb;13(2):106-15.
23. Harcourt DM, Rumsey NJ, Ambler NR, Cawthorn SJ, Reid CD, Maddox PR, Kenealy JM, Rainsbury RM, Umpleby HC. The psychological effect of mastectomy with or without breast reconstruction: a prospective, multicenter study. *Plast Reconstr Surg*. 2003 Mar;111(3):1060-8.
24. Kovacs L, Papadopulos NA, Ammar SA, Klöppel M, Herschbach P, Heinrich G, Baumann A, Biemer E. Clinical outcome and patients' satisfaction after simultaneous bilateral breast reconstruction with free transverse rectus abdominis muscle (TRAM) flap. *Ann Plast Surg*. 2004 Sep;53(3):199-204.
25. Krueger EA, Wilkins EG, Strawderman M, Cederna P, Goldfarb S, Vicini FA, Pierce LJ. Complications and patient satisfaction following expander/implant breast reconstruction with and without radiotherapy. *Int J Radiat Oncol Biol Phys*. 2001 Mar 1;49(3):713-21.
26. Metcalfe KA, Semple JL, Narod SA. Satisfaction with breast reconstruction in women with bilateral prophylactic mastectomy: a descriptive study. *Plast Reconstr Surg*. 2004 Aug;114(2):360-6.
27. Moscona RA, Holander L, Or D, Fodor L. Patient satisfaction and aesthetic results after pedicled transverse rectus abdominis muscle flap for breast reconstruction. *Ann Surg Oncol*. 2006 Dec;13(12):1739-46. Epub 2006 Sep 29.
28. Nano MT, Gill PG, Kollias J, Bochner MA, Carter N, Winefield HR. Qualitative assessment of breast reconstruction in a specialist breast unit. *ANZ J Surg*. 2005 Jun;75(6):445-53; discussion 371-2.
29. Roth RS, Lowery JC, Davis J, Wilkins EG. Psychological factors predict patient satisfaction with postmastectomy breast reconstruction. *Plast Reconstr Surg*. 2007 Jun;119(7):2008-15; discussion 2016-7
30. Rowland JH, Holland JC, Chaglassian T, Kinne D. Psychological response to breast reconstruction. Expectations for and impact on postmastectomy functioning. *Psychosomatics*. 1993 May-Jun;34(3):241-50.
31. Salgarello M, Farallo E. Immediate breast reconstruction with definitive anatomical implants after skin-sparing mastectomy. *Br J Plast Surg*. 2005 Mar;58(2):216-22.

32. Salhab M, Al Sarakbi W, Joseph A, Sheards S, Travers J, Mokbel K. Skin-sparing mastectomy and immediate breast reconstruction: patient satisfaction and clinical outcome. *Int J Clin Oncol*. 2006 Feb;11(1):51-4.
33. Saulis AS, Mustoe TA, Fine NA. A retrospective analysis of patient satisfaction with immediate postmastectomy breast reconstruction: comparison of three common procedures. *Plast Reconstr Surg*. 2007 May;119(6):1669-76; discussion 1677-8.
34. Shaikh-Naidu N, Preminger BA, Rogers K, Messina P, Gayle LB. Determinants of aesthetic satisfaction following TRAM and implant breast reconstruction. *Ann Plast Surg*. 2004 May;52(5):465-70; discussion 470.
35. Spear SL, Pelletiere CV, Menon N. One-stage augmentation combined with mastopexy: aesthetic results and patient satisfaction. *Aesthetic Plast Surg*. 2004 Sep-Oct;28(5):259-67. Epub 2004 Nov 5.
36. Tykkä E, Asko-Seljavaara S, Hietanen H. Patient satisfaction with delayed breast reconstruction: a prospective study. *Ann Plast Surg*. 2002 Sep;49(3):258-63.
37. Tykkä E, Asko-Seljavaara S, Hietanen H. Patients' satisfaction with breast reconstruction and reduction mammoplasty. *Scand J Plast Reconstr Surg Hand Surg*. 2001 Dec;35(4):399-405.
38. Weissman J, Schneider E, Weingart S, Epstein A, et al. Comparing patient-reported hospital adverse events with medical record review: Do patients know something that hospitals do not? *Ann Intern Med*. 2008;149:100-108.
39. Wolf L. The information needs of women who have undergone breast reconstruction. Part I: decision-making and sources of information. *Eur J Oncol Nurs*. 2004 Sep;8(3):211-23.
40. Wolf L. The information needs of women who have undergone breast reconstruction. Part II: Information giving and content of information. *Eur J Oncol Nurs*. 2004 Dec;8(4):315-24.