

The Third Postmastectomy Reconstruction Option—Autologous Fat Transfer

Kimberly S. Khouri, BS; Roger K. Khouri Jr, MD; Roger K. Khouri, MD

Krastev and colleagues¹ should be commended for their carefully matched cohort study that supports the long-term oncological safety of postmastectomy autologous fat transfer (AFT). It is currently recommended that, before undergoing a mastectomy, patients should have the opportunity to meet with a plastic surgeon to discuss their reconstructive options. Patients are then offered the standard implant-based or tissue flap-based reconstructions. Autologous fat transfer is rarely mentioned.

Widespread adoption of AFT-based reconstruction has been limited by the lack of evidence on its efficacy and oncological safety. Several recent studies have demonstrated excellent outcomes and a clear efficacy.²⁻⁴ However, the theoretical oncological risk remained. The important work of Krastev et al and others has cleared this potential risk.^{5,6}

The advantages of AFT include autologous tissue, a natural appearance, the preservation of sensation, and a minimally invasive procedure. The disadvantages include the need for multiple grafting sessions, the inconvenience associated with wearing an external vacuum expander device, the EVE bra (Lipocosm), for a few weeks, and the occasional fat necrosis nodules recognized as benign by modern imaging studies.

While implants provide an immediate breast mound and less operative time, they have significant contracture and extrusion rates. A 2018 study confirms that long-term patient satisfaction with implants is less than with autologous tissue.⁷

Flaps provide reliable natural tissue replacement, but they require extensive surgery and have higher rates of early complications.⁸ They also leave a donor site defect and a

“patchwork” appearance. Flap-based reconstruction has the highest health care costs and often requires intensive care unit hospitalization. A survey of female plastic surgeons found that very few would select flap reconstruction for themselves or their loved ones.⁹ The disconnect between women surgeons’ preferences and clinical practices likely stems from the inability of the patient to conceive of the extent and invasiveness of the surgery.

As in much of medicine, there is no one superior option. The 2 standard options have notable drawbacks, and a substantial percentage of mastectomy patients forgo reconstruction altogether. Now that AFT has been proven safe and effective, the standard of care should reflect this latest addition. Patients with breast cancer have a third reconstructive option, and plastic surgeons should present all 3 and discuss the advantages and disadvantages of each. Patients will then be able to choose the option that aligns most closely with their values and goals.

Autologous fat transfer is a less-invasive breast reconstruction alternative that challenges the well-entrenched standards. More modern, it is based on tissue engineering principles; a scaffold is created by EVE, then, through a series of minimally invasive fat injections, the scaffold is seeded with cells to gradually build a new breast mound.¹⁰ Women who initially decide to receive tissue expanders or implants can still be offered AFT because these act like internal expanders to create the necessary scaffold for engraftment. Therefore, AFT to the breast is also a salvage procedure for women who desire a different course of care. Having patients regrow their lost breasts in situ may well be the most cost-effective, least invasive, and most satisfactory option.

ARTICLE INFORMATION

Author Affiliations: New York University School of Medicine, New York (K. S. Khouri); University of Texas Southwestern Medical Center, Dallas (Roger K. Khouri Jr); Miami Breast Center, Key Biscayne, Florida (Roger K. Khouri); Department of Surgery, Florida International University, Miami (Roger K. Khouri).

Corresponding Author: Roger K. Khouri, MD, Miami Breast Center, 580 Crandon Blvd, Ste 102, Key Biscayne, FL 33149 (rogerkhour@mac.com).

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