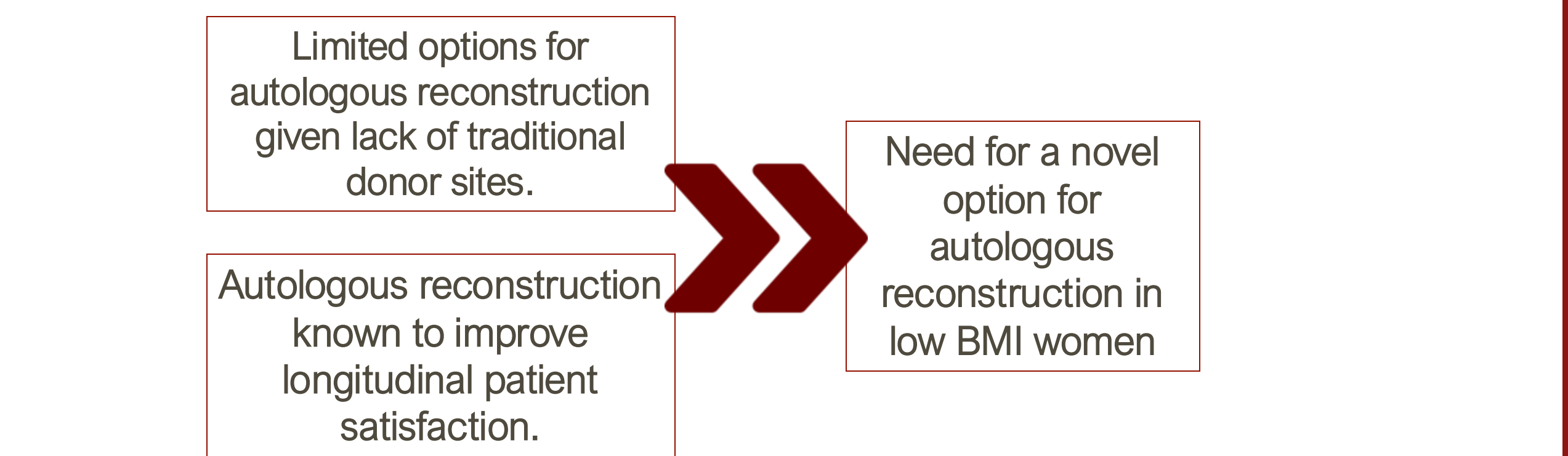


A NOVEL FAT-AUGMENTED OMENTAL CONSTRUCT IS A COST-EFFECTIVE ALTERNATIVE FOR AUTOLOGOUS RECONSTRUCTION IN LOW-BMI WOMEN

Pooja S. Yesantharao, MD MS; Kassandra Carrion, BS; Yulia Zak, MD; Monica Dua, MD; Irene Wapnir, MD; Dung H. Nguyen, MD PharmD

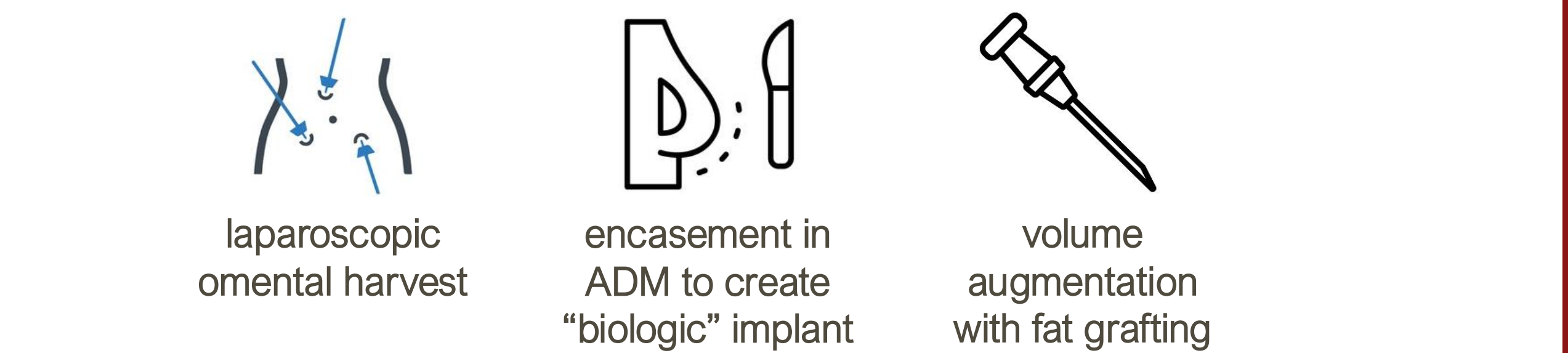
Introduction

Autologous reconstruction in low BMI women is a unique challenge.

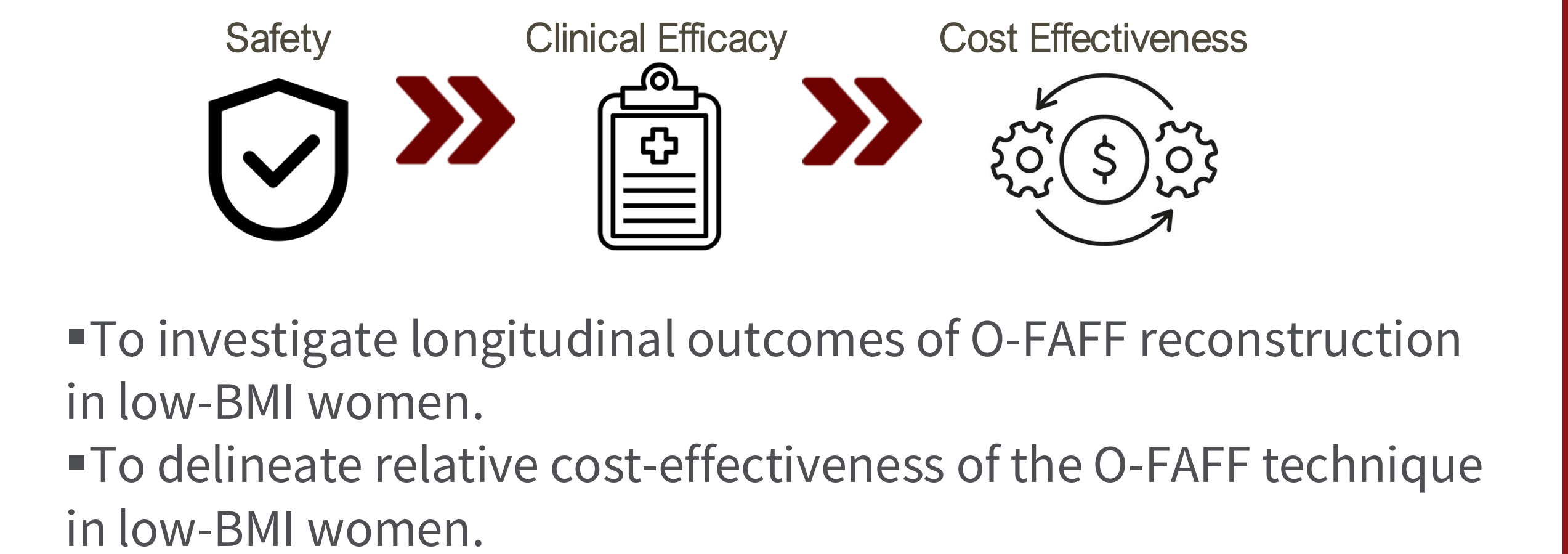


O-FAFF: Omental Fat Augmented Free Flap

A novel option for autologous breast reconstruction:



Objective

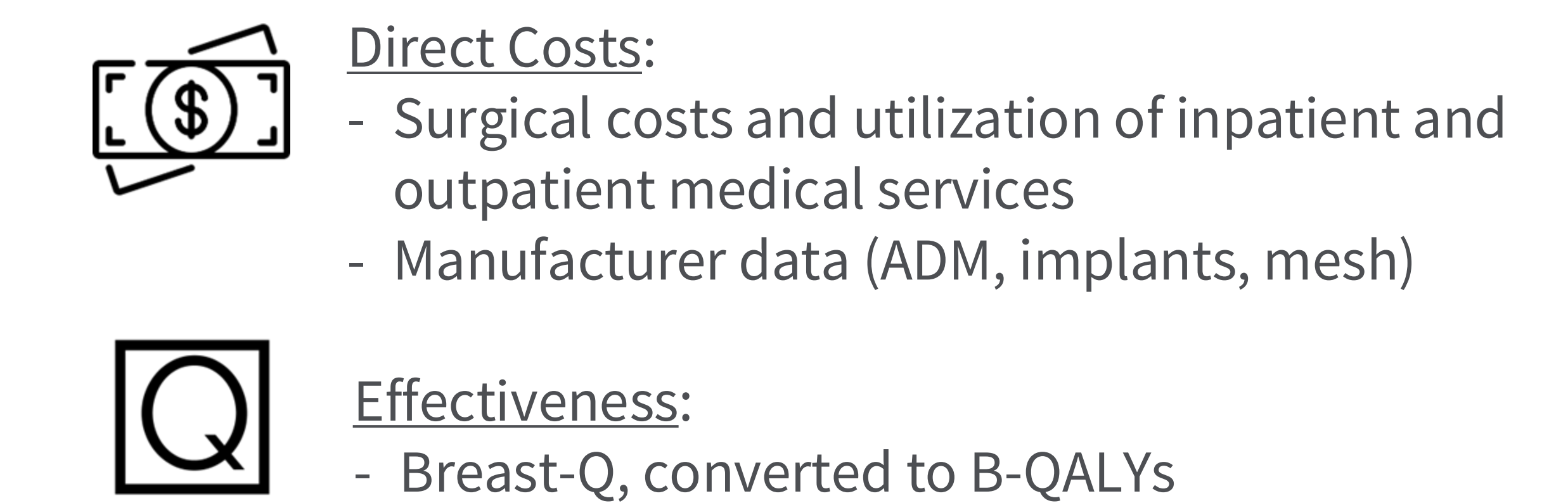


Novelty

The omental fat-augmented free flap expands the indications for autologous reconstruction in low BMI women.

Methods

This is a cost-effectiveness analysis comparing O-FAFF (+/- implant), abdominal flap reconstruction (+/- implant), and implant-based reconstruction.

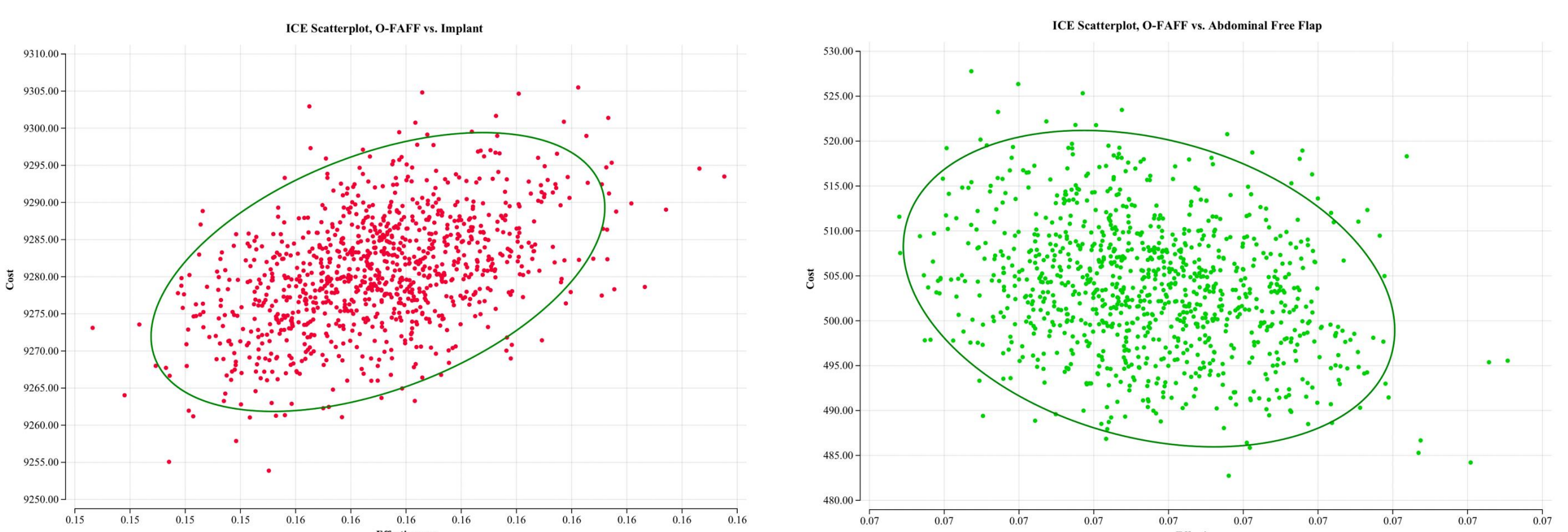


Results

Patient Demographics by Cohort

	OFAFF Reconstruction	Abdominal Flap Reconstruction	Implant Reconstruction
No. Patients	34	34	34
No. Breasts	50	58	61
Mean Age (Years)	48.2 (23-73)	47.1 (29-78)	49.2 (27-74)
Mean BMI	22.3 (17.6-32.4)	23.1 (20.1-31.4)	21.8 (19.1-30.2)
Mean Follow Up (Months)	15.9 (1-30)	20.8 (10-31)	24.2 (8-36)

Sensitivity Analyses



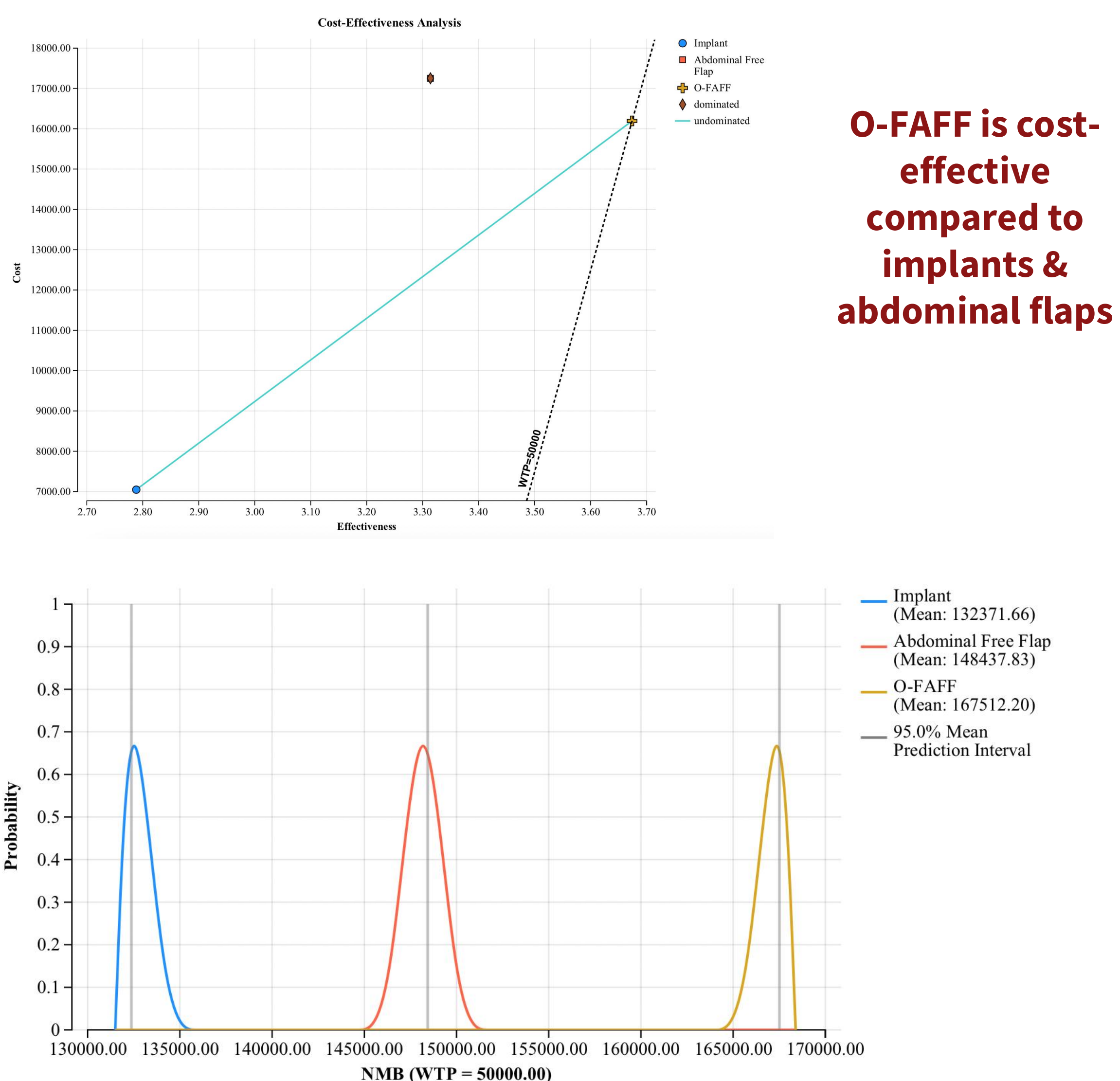
10,000 Monte Carlo microsimulation trials



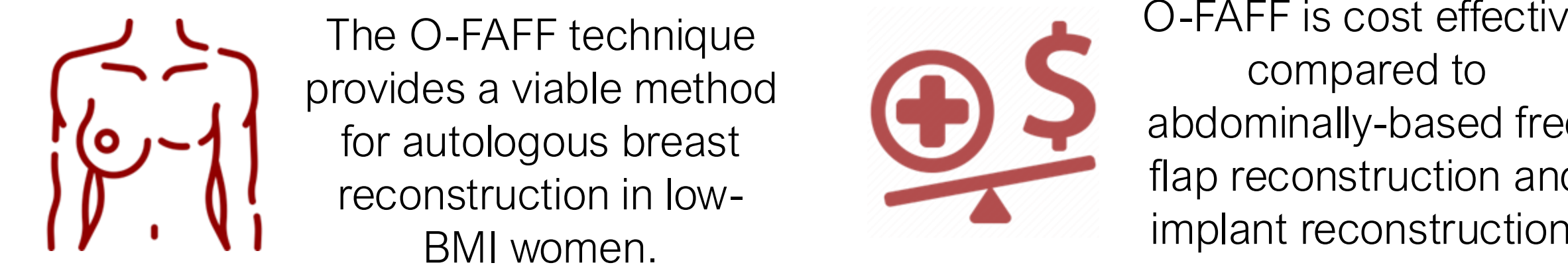
Model Assumptions:

- Staged reconstruction with immediate prepectoral TE with costs of expansion equal amongst study arms
- Propensity score matching of cohorts for BMI, history of radiation, smoking status, diabetes, etc.
- Any patient entering the base case model was assumed to have been an appropriate candidate for any of the three reconstructive procedures

Base Case Outcomes



Conclusions



Significance

- The O-FAFF technique represents cost-effective surgical innovation.
- » Biologically active donor site: fewer infections, greater fat retention
 - » Fewer takebacks and downstream operative revisions compared to abdominal flaps
 - » Shorter hospital length of stay

Limitations



Future Directions

- Multicenter Investigation
- Longitudinal Outcomes

References

1. Mazzaferro D, Song P, Massand S, Mirmanesh M, Jaiswal R, Pu LLQ. The omental free flap: a review of usage and physiology. J Reconstr Microsurg. 2018;34(3):151–69.
2. Hultman CS, Culbertson JH, Jones GE, et al. Thoracic reconstruction with the omentum: indications, complications, and results. Ann Plast Surg. 2001;46(3):242–9.
3. Nguyen AT, Suami H, Hanasono MM, Womack VA, Wong FC, Chang EI. Long-term outcomes of the minimally invasive free vascularized omental lymphatic flap for the treatment of lymphedema. J Surg Oncol. 2017;115(1):84–9.
4. Upton J, Mulliken JB, Hicks PD, Murray JE. Restoration of facial contour using free vascularized omental transfer. Plast Reconstr Surg. 1980;66(4):560–9.
5. Browning FS, Eastwood DS, Price DJ, Kester RC. Scalp and cranial substitution with autotransplanted greater omentum using microvascular anastomosis. Br J Surg. 1979;66(3):152–4.
6. Yagi S, Kamei Y, Fujimoto Y, Torii S. Use of the internal mammary vessels as recipient vessels for an omental flap in head and neck reconstruction. Ann Plast Surg. 2007;58(5):531–5.
7. Zaha H, Inamine S. Laparoscopically harvested omental flap: results for 96 patients. Surg Endosc. 2010;24(1):103–7.
8. Cothier-Savey I, Tamtawi B, Dohnt F, Raulo Y, Baruch J. Immediate breast reconstruction using a laparoscopically harvested omental flap. Plast Reconstr Surg. 2001;107(5):1156–63.