

Short-fascial Incision And Drainless Abdomen In DIEP Flap-Based Breast Reconstruction Decreases Postoperative Narcotic Use and Shortens Length of Stay

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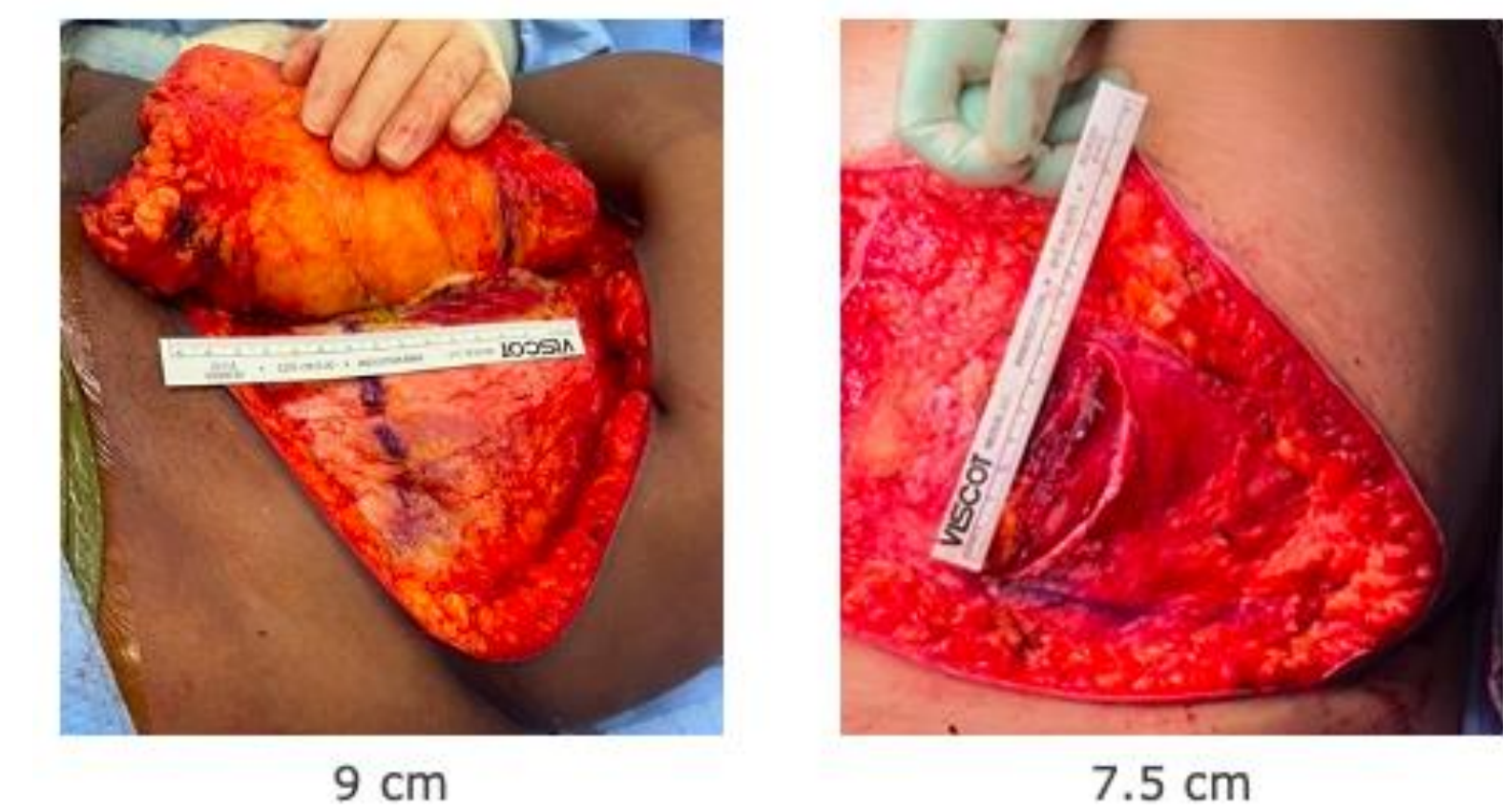
Background & Purpose

- DIEP flaps are a well-accepted option for autologous breast reconstruction, however, despite advances, there is a continued risk of abdominal laxity and bulge
- Extended dissection or complex perforator course can lead to denervation of the rectus muscle, placing patients at higher risk of complications
- Techniques to minimize the risk of bulge or abdominal wall weakness have been developed, including short fascial and pedicle lengths
- **Purpose:** Investigate postoperative outcomes associated with a short-fascial, short-pedicle DIEP flap technique with a drainless abdomen compared to traditional DIEP flap harvest

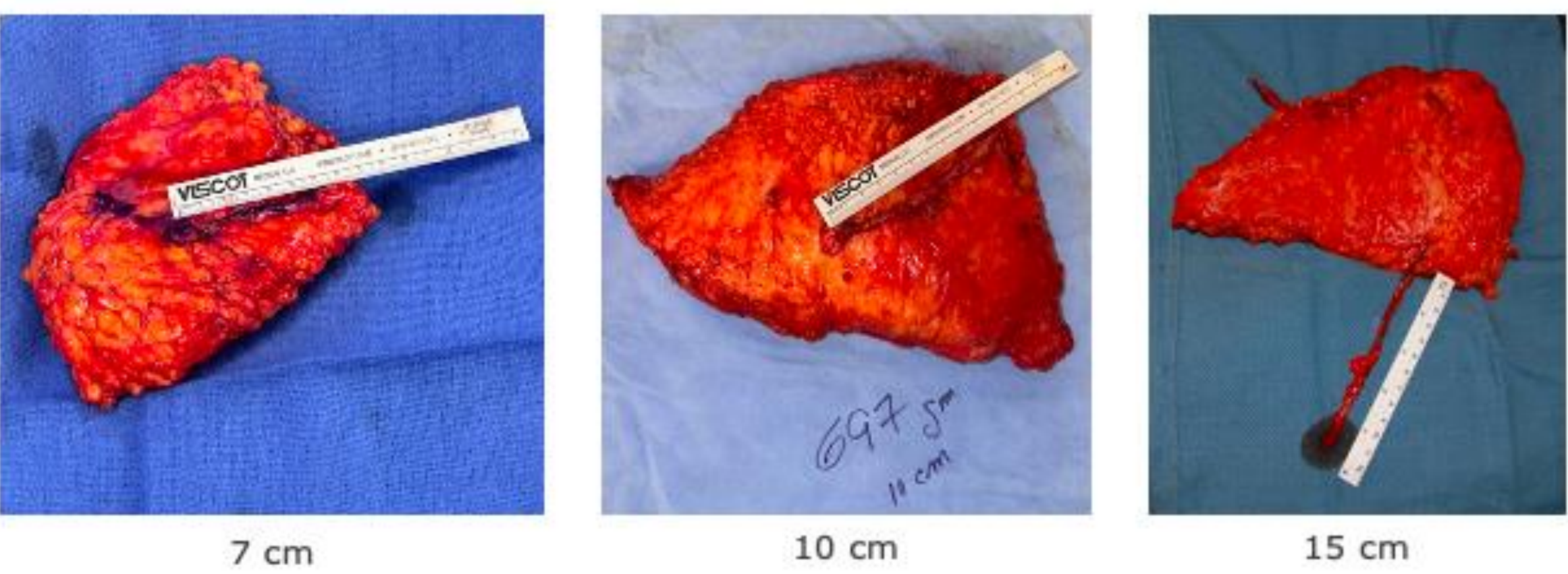
Methods

- 107 patients with 189 DIEP flaps by the senior author from 2021 to 2024 were included in this study
- 114 flaps (67 patients) with traditional DIEP harvest compared to 39 flaps (21 patients) with a short fascial incision and drainless abdomen
 - Ultra-short (≤ 8 cm, n=14)
 - Short (8.1-10 cm, n=15)
 - Moderate-short (10.1-12 cm, n=10)
- Drainless abdomens included progressive tension, quilting sutures and Prevena incisional wound vac
- **Outcomes:** operative time, total morphine equivalents (ME) during postoperative stay, length of postoperative stay, major and minor complications

Short & Ultra-Short Fascial Incisions

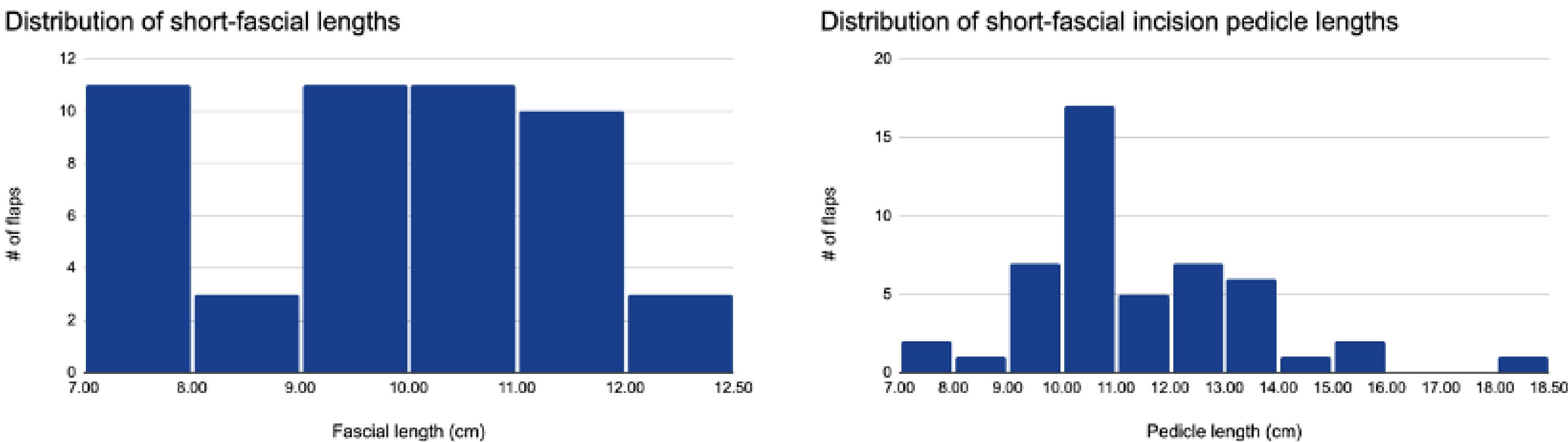


Ultra-Short & Short vs Traditional Pedicle



Results

Short Fascial and Pedicle Measurements



Fascial incision	Fascial Length	Avg Pedicle Length
Ultra-short (n=14)	≤ 8 cm	9.8cm
Short (n=15)	8.1 to 10cm	10.7cm
Moderate-short (n=10)	10.1 to 12cm	12.2cm

*Compared to traditional DIEP flap with a 12-15 cm fascial incision and 15 cm pedicle

Total MEs during postoperative stay (**p=0.017**)

Traditional: avg 104.15 MEs (SD 182.98)

Short-fascial: avg 50.00 MEs (SD 53.05)*

Length of postoperative stay (**p=0.002**)

Traditional: avg 2.74 days (SD 2.09)

Short-fascial: avg 1.79 days (SD 0.90)*

Operative time (bilateral) (**p=0.005**)

Traditional: avg 517 minutes (SD 92.07)

Short-fascial: avg 460 minutes (SD 66.72)*

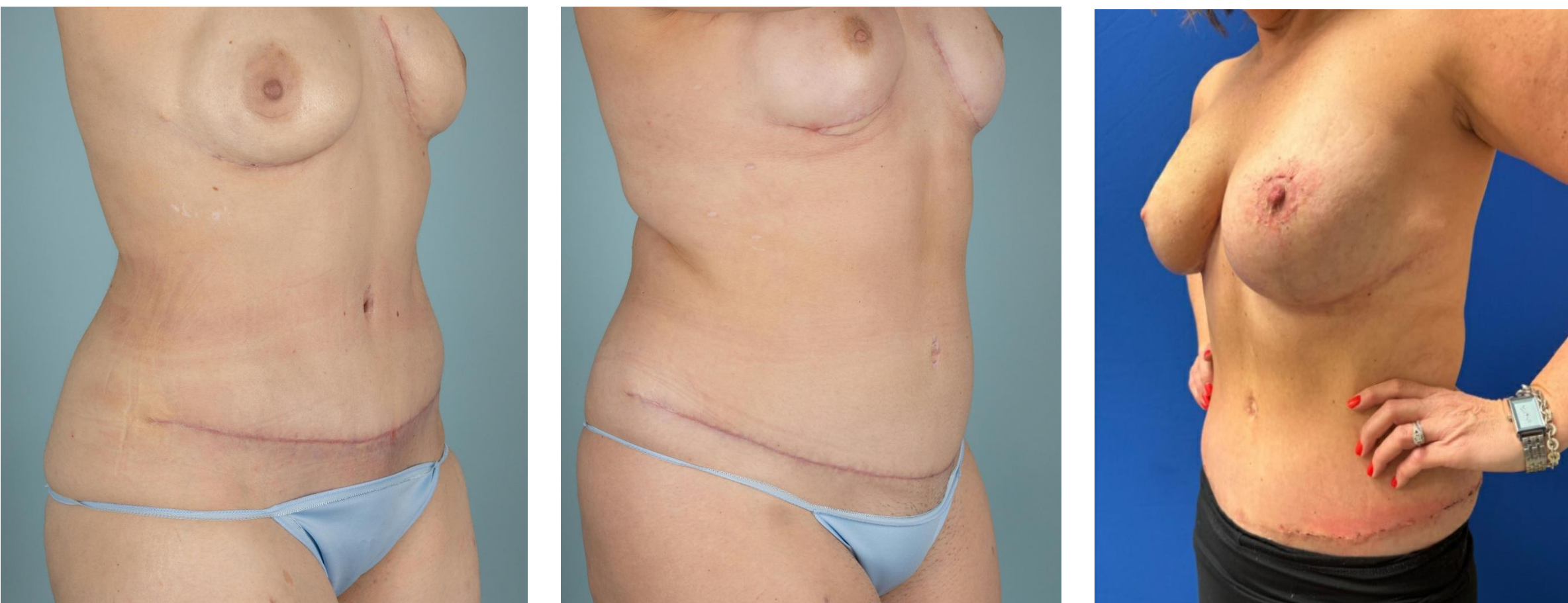
Coupler size (**p=0.038**)

Traditional: avg 2.53mm (SD 0.37)

Short-fascial: avg 2.40mm (SD 0.31)

No difference in major or minor complications

- 1 flap loss in traditional group (0.53%)
- 1 anastomotic revision in traditional group (0.53%)
- Seroma rate: 5.26% (traditional) vs 5.13% (modified)
- Abscess/infection requiring washout: 1.75% (traditional) vs 5.13% (modified), $p=0.335$
- No bulge or hernia at abdominal donor site



Conclusions

- A short fascial incision and a drainless abdomen in DIEP flap reconstruction yields a **significant reduction in:**
 - Total MEs during postoperative stay
 - Postoperative length of stay
 - Operative time for bilateral cases
- No compromise in flap viability
- The average pedicle length of 10.8 cm was adequate for comfortable microsurgery
- Placement of the fascial incision above the arcuate line lessens the risk of denervating the rectus muscle with less risk of abdominal bulge or weakness

Acknowledgements

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