

Another Look at the Medial and Lateral Rows

18-Month Follow-Up in over 200 DIEP Flaps

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Background

- Optimal choice between medial and lateral row perforators for deep inferior epigastric artery perforator (DIEP) flaps remains contested.
 - Medial row associated with lower abdominal wall morbidity
 - Lateral row associated with lower rates of fat necrosis
- These morbidities can take well over a year to declare themselves, and there are few studies with >12 months follow-up.

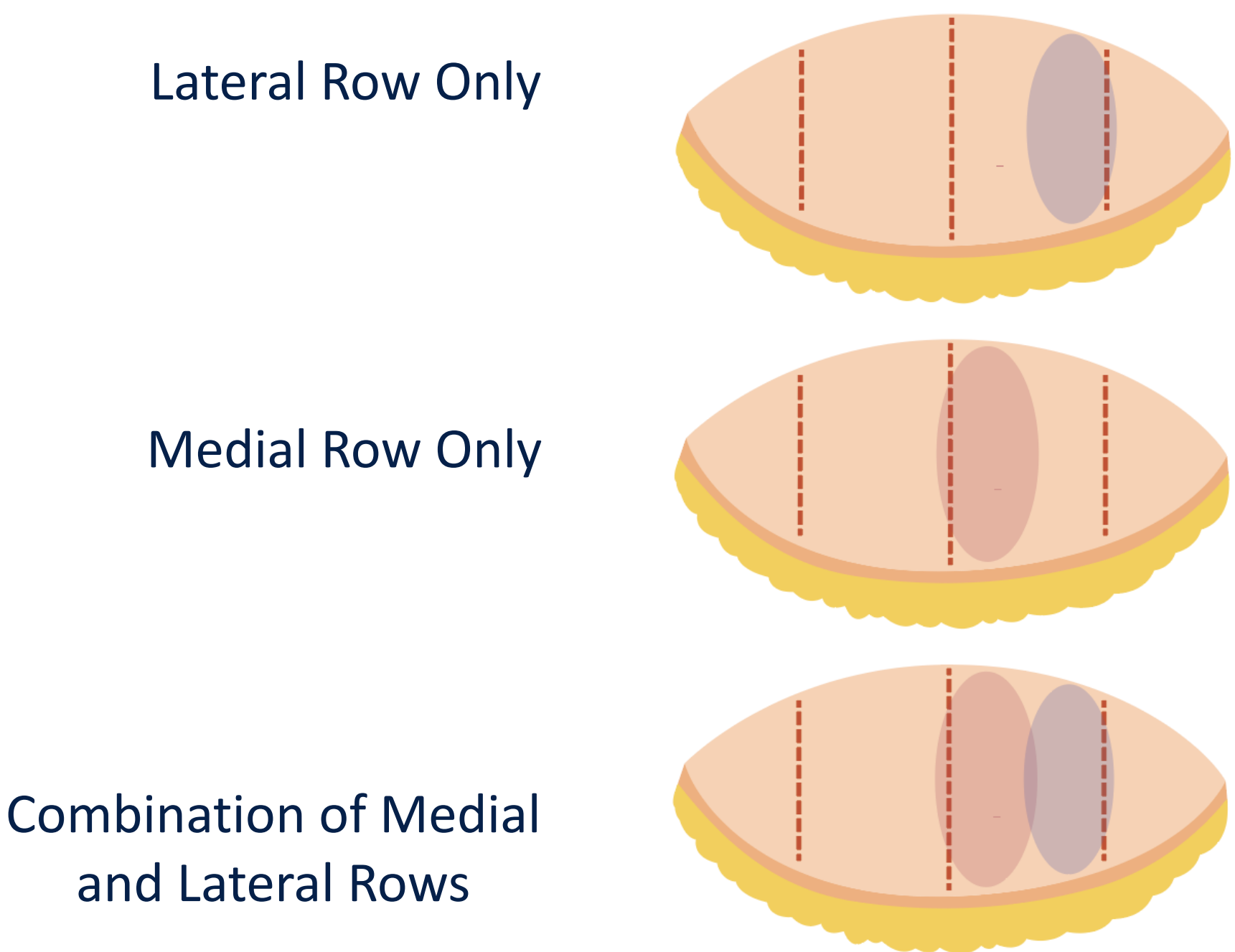
Aim

Compare long-term outcomes between DIEP flaps supplied by perforators from the medial row only, the lateral row only, and from a combination of both rows.

Methods

- Retrospective review of patients who underwent mastectomy with DIEP reconstruction between November 2004-December 2021
- > 18 months follow-up

Figure 1. Comparison groups:



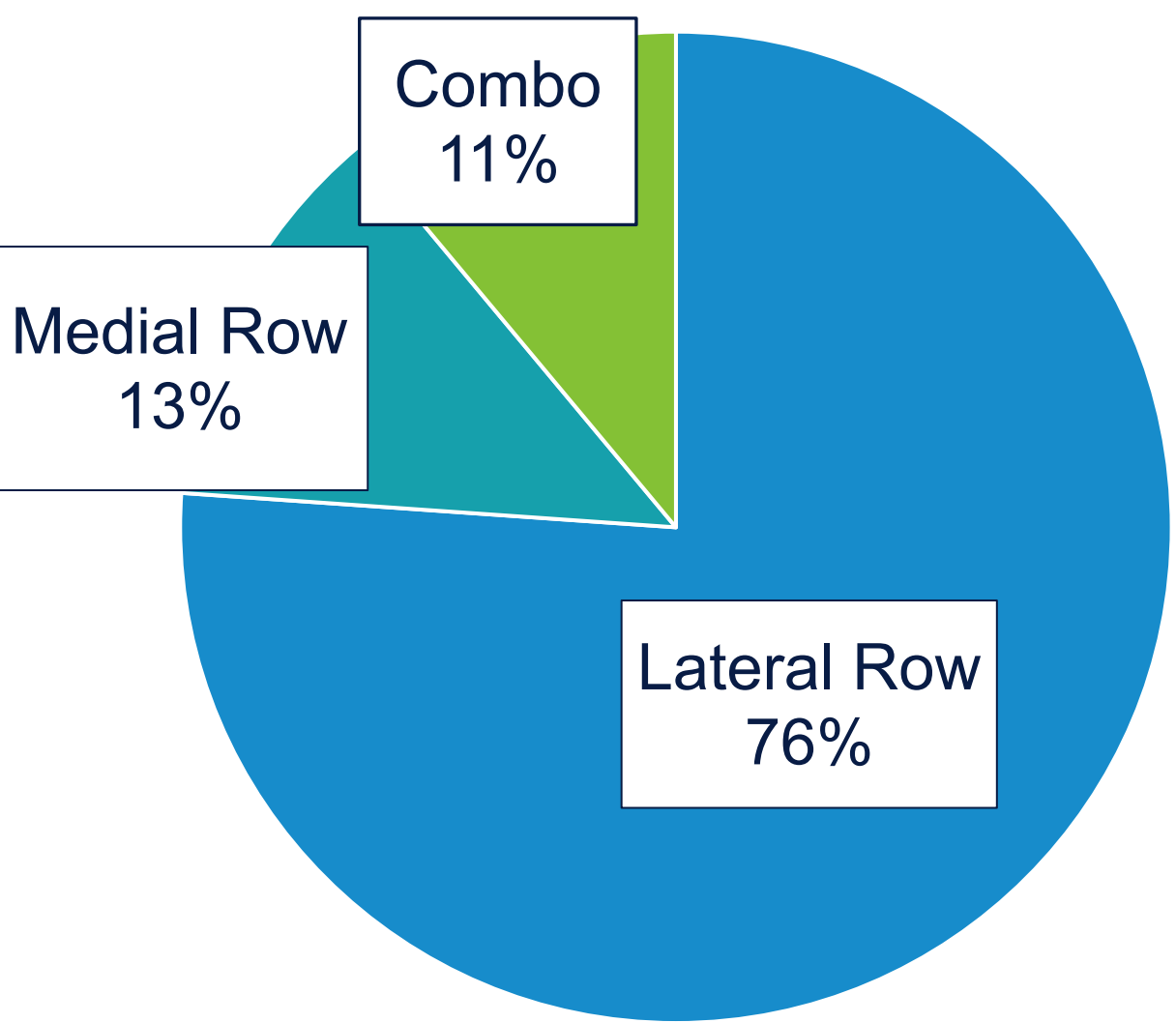
- Primary outcomes:** fat necrosis, flap loss, hernia, bulge
- Secondary outcomes:** hematoma, seroma, infection, vascular complications

Results

Demographics

- A total of 226 flaps were included: 172 lateral row, 29 medial row, and 25 with a combination of both the medial and lateral rows (Figure 1).
- Demographic factors including age, BMI and treatment history were similar between groups.

Figure 1. Flaps in Each Comparison Group



Surgical Characteristics

- All 3 groups used 3 perforators on average.
- Bilateral reconstruction significantly more common in the medial row group (Figure 2).
- Mesh use significantly higher in the lateral row group (Figure 3).

Figure 2. Bilateral Reconstruction

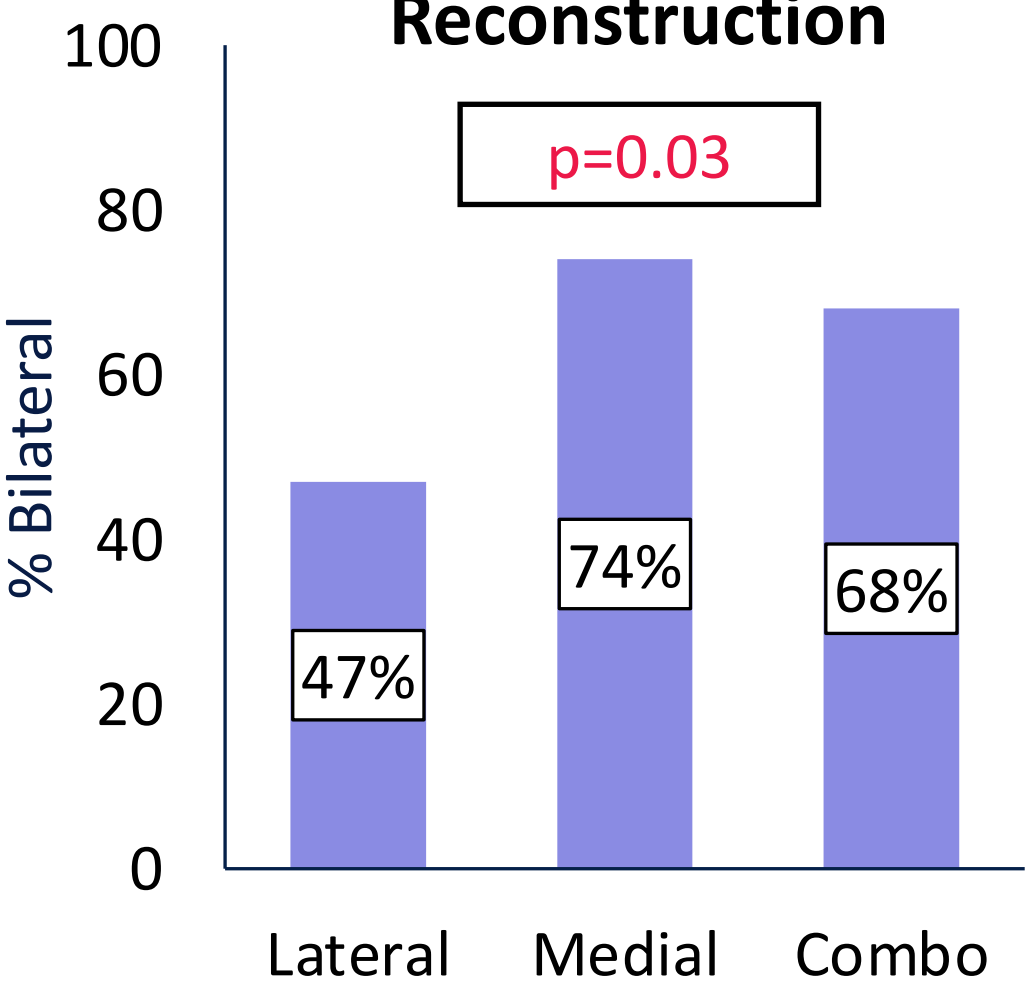


Figure 3. Mesh Use

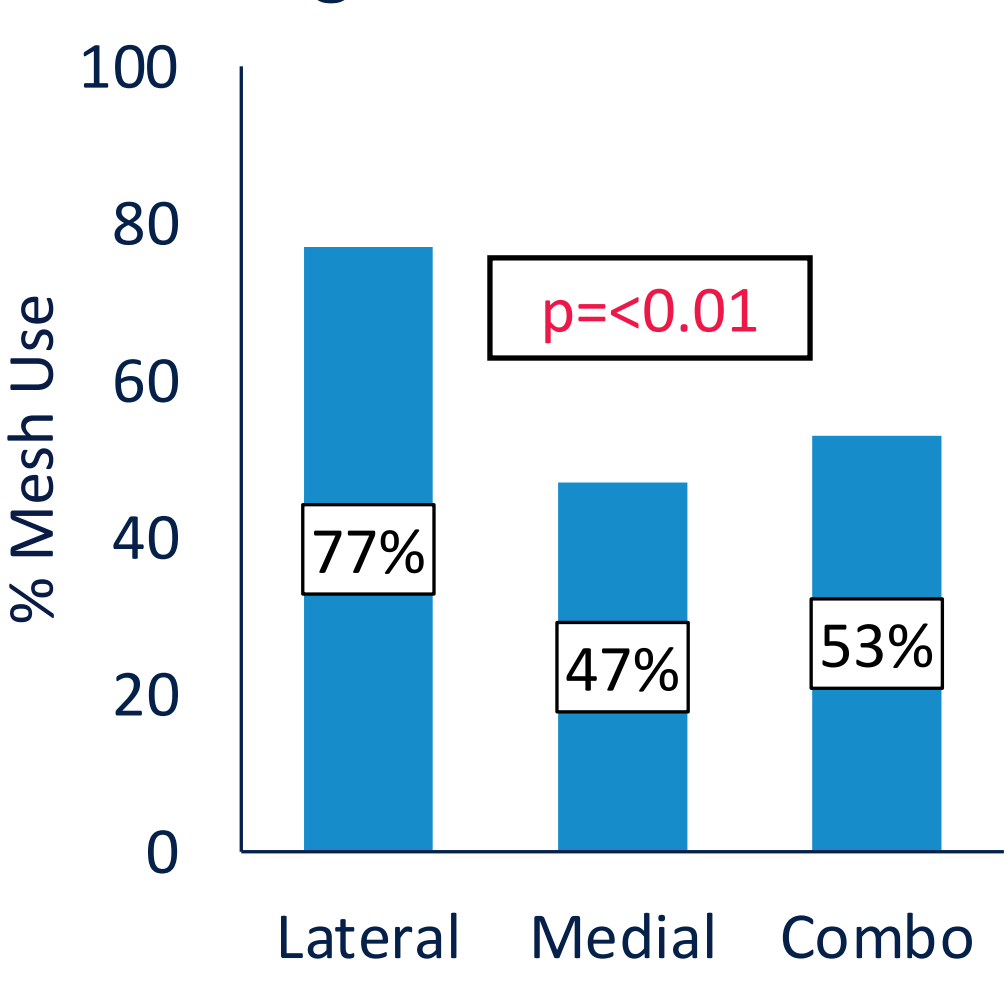
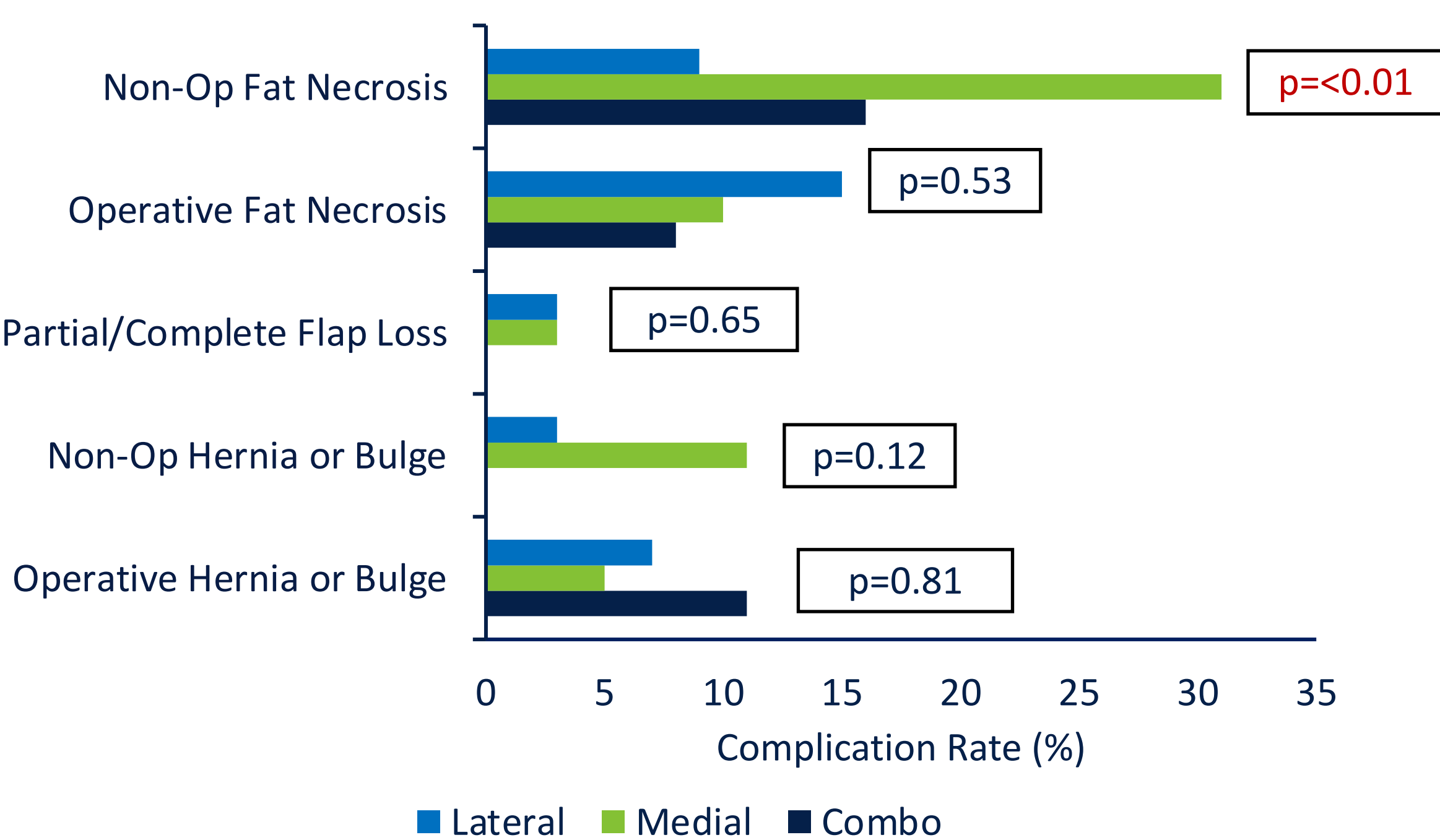


Figure 4. Primary Outcomes

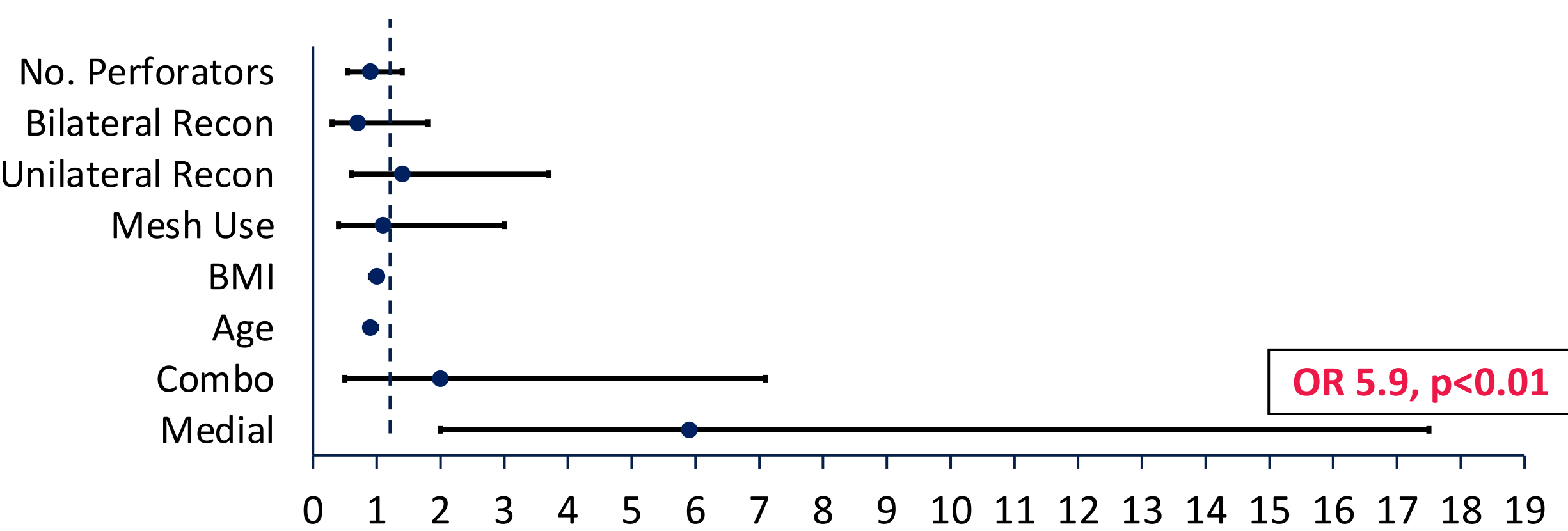


Post-operative Outcomes

- Clinical fat necrosis was significantly higher in the **medial row group** on both univariate and multivariate analysis (Figures 4 & 5).
 - Medial 31%, Lateral 9%, Combo 16% (p=<0.01)
- No significant differences in rate of partial or complete flap loss between groups.
- No significant difference in rates of hernia or bulge between groups.

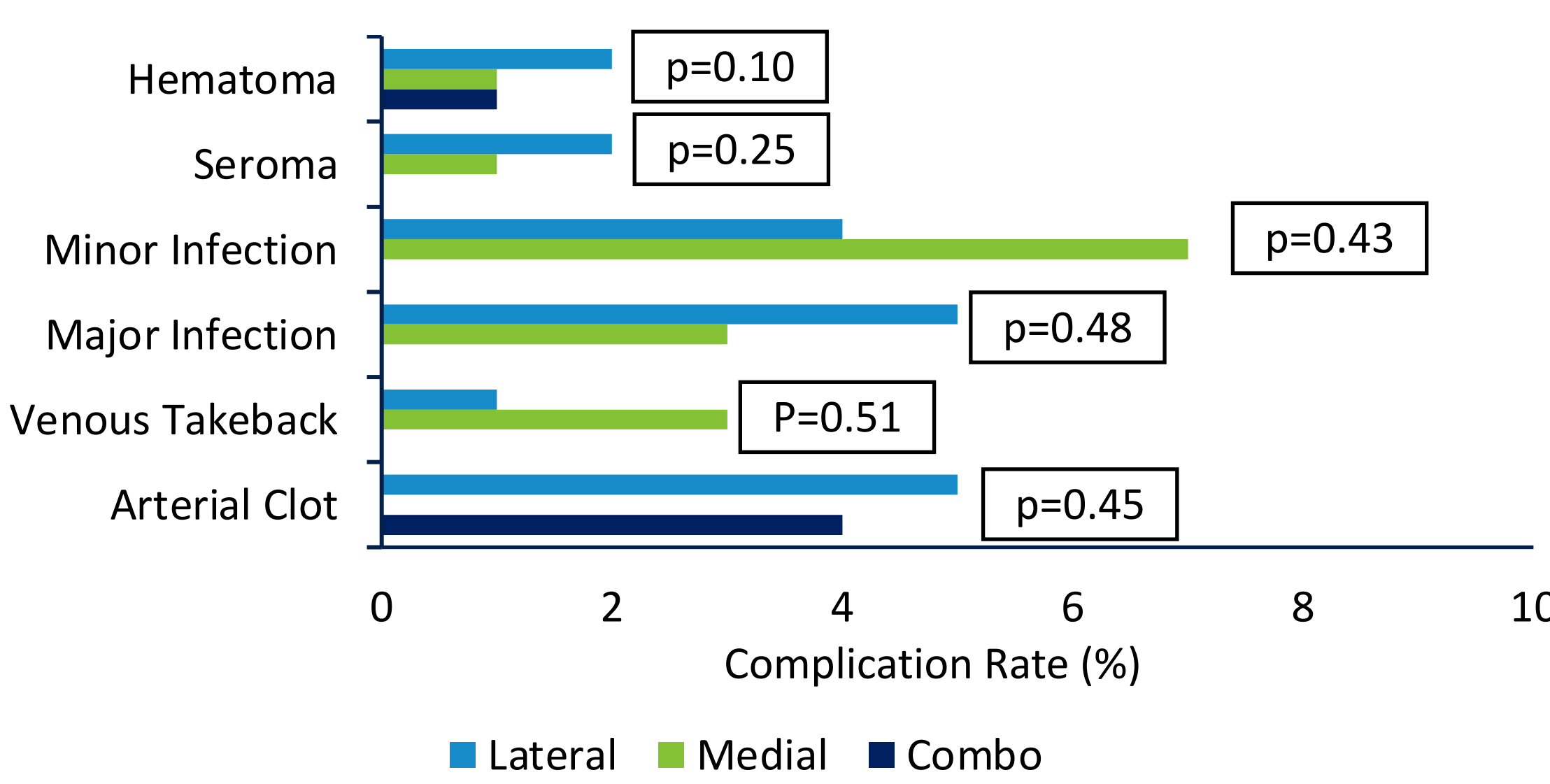
Post-Operative Outcomes

Figure 5. Predictors of Clinical Fat Necrosis



- Secondary outcomes including hematoma, seroma, infection and vascular complications were also similar between groups (Figure 6).

Figure 6. Secondary Post-operative Outcomes



- No significant differences in complication rates when looking at the number of perforators used.

Conclusions

- Medial row perforators → higher rate of fat necrosis.
- Perforator selection did not impact abdominal wall morbidity, even when controlling for potential confounders.

Acknowledgements

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