

Clinical Experience with The Superthin Profunda Artery Perforator Free Flap for Extremity Reconstruction

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BACKGROUND

Profunda artery perforator flap

Disadvantages

- Thick flap

Advantages

- Concealed donor site scar
- Large perforators
- Long pedicle
- Straightforward pedicle dissection

Thin/ Superthin plane

- Allows thin flap
- Regardless of patient BMI
- Like for like reconstruction
- In extremities

METHODS

Radiological analysis

Consecutive series of patients (n=80) with CTA lower extremities

Preoperative planning

- CT to localise proximal-distal location of dominant perforator
- Color doppler ultrasound

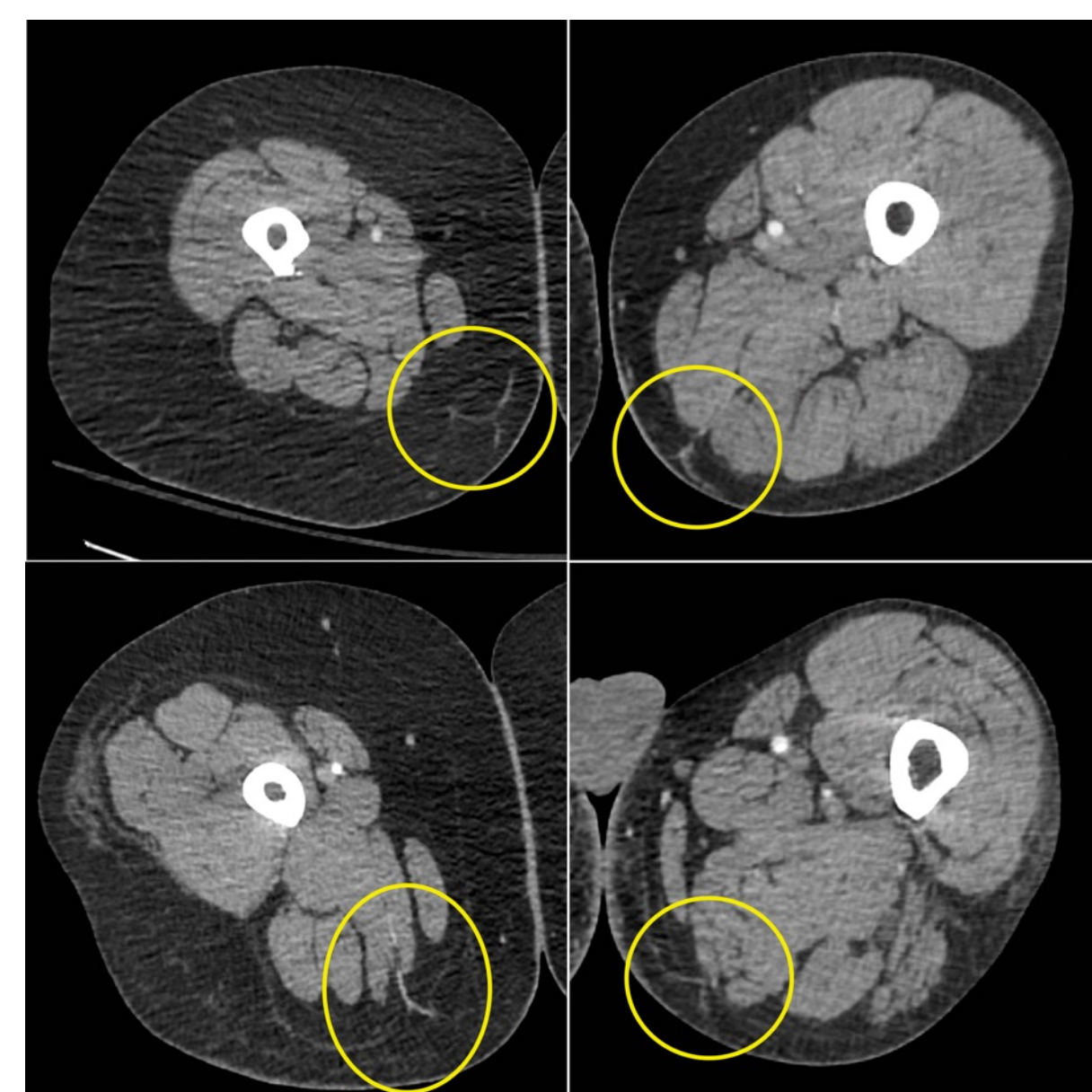
T perforator

Intraoperative design

- Flap centered on dominant perforator
- Flap thickness and dimensions customized depending on

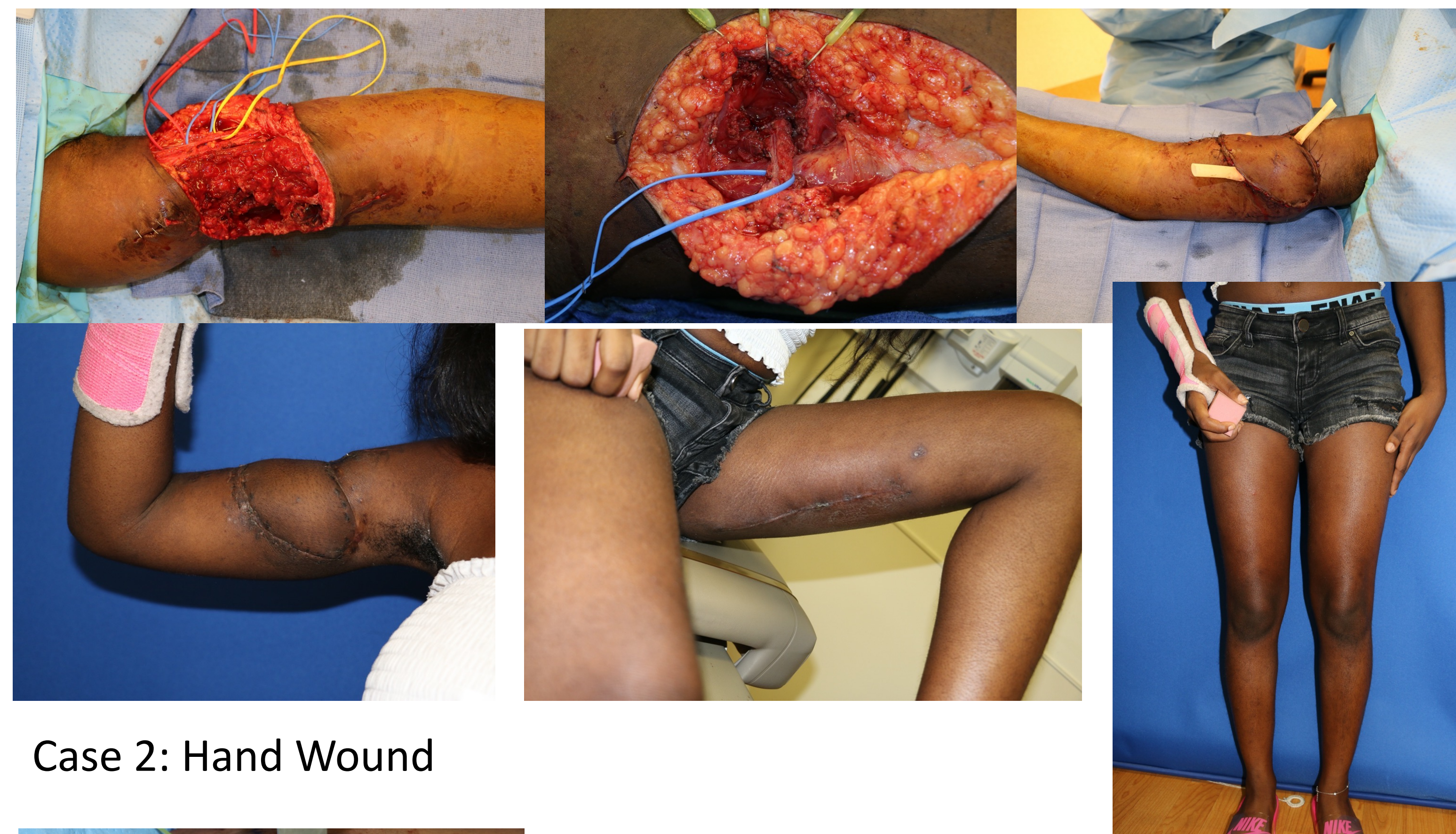
Y perforator

- Requirements of defect
- T or Y dominant perforator

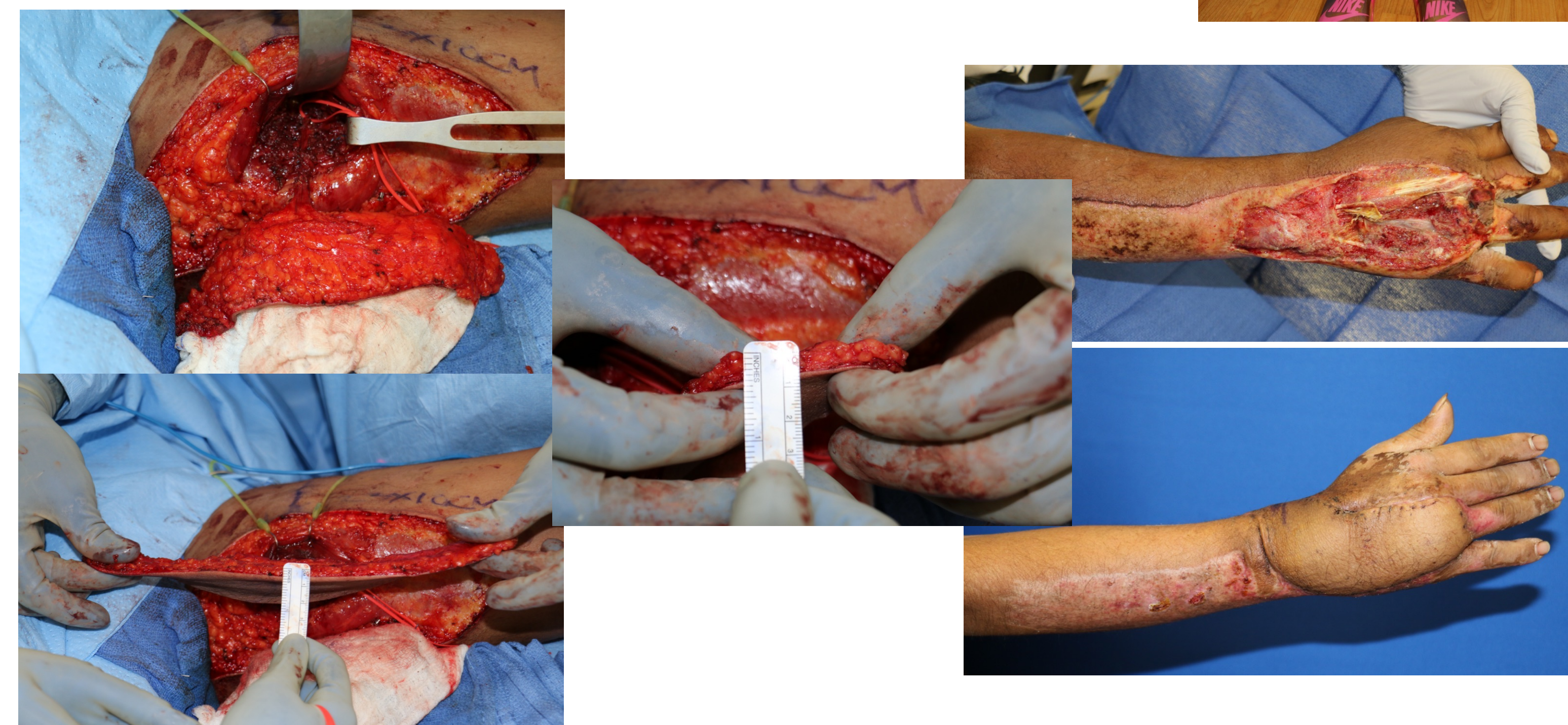


RESULTS

Case 1: Arm Wound

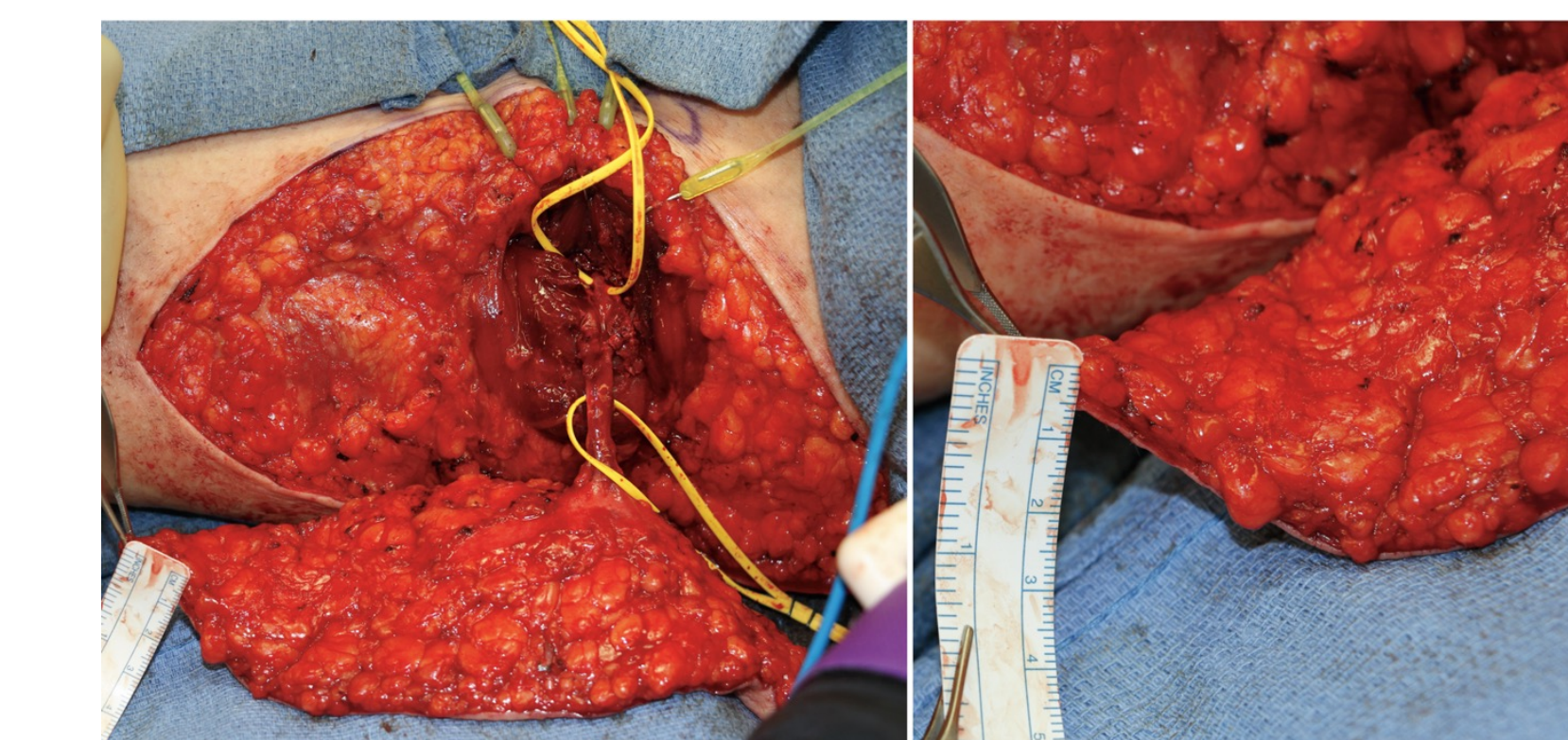


Case 2: Hand Wound

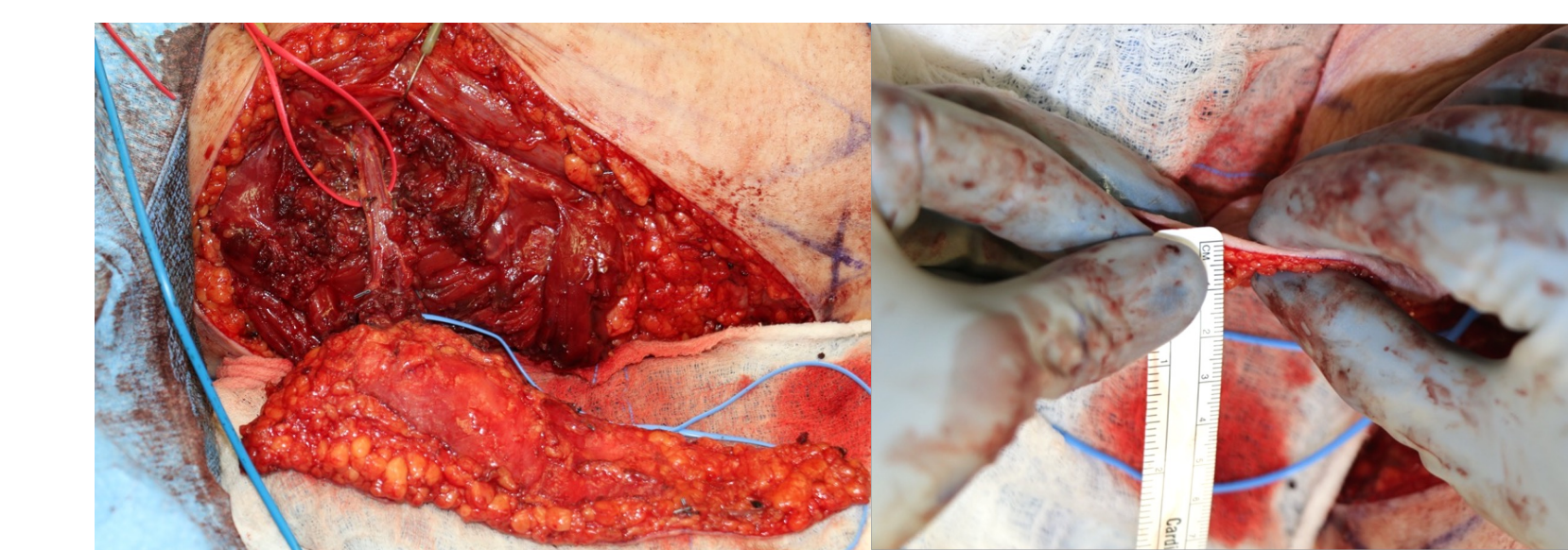


Case 3: Leg Wounds

Thin PAP Flap 1- Posterior leg



Thin PAP Flap 2- Anterior leg



37 consecutive thin/ superthin single perforator PAP flaps

Mean flap thickness 0.7 +/- 0.2 cm

Mean flap area 163.4 +/- 54.7 cm²

CONCLUSIONS

Thin/ Superthin PAP flap workhorse flap for extremity reconstruction

REFERENCES

1. Chim H. The superthin profunda artery perforator flap for extremity reconstruction: Clinical implications. *Plast Reconstr Surg*. 2022;150:915-918.
2. Chim H. Suprafascial radiological characteristics of the superthin profunda artery perforator flap. *JPRAS*. 2022;75:2064-2069.
3. Chim H. Perforator Mapping and Clinical Experience with the Superthin Profunda Artery Perforator Flap for Reconstruction in the Upper and Lower Extremity. Forthcoming: *JPRAS*.