

OPTIMIZING AESTHETIC AND FUNCTIONAL OUTCOMES IN BREAST RECONSTRUCTION: THE ROLE OF THE LICAP FLAP

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BACKGROUND & AIMS

Breast reconstruction following oncologic surgery represents an essential component of comprehensive breast cancer management, aiming to restore both form and patient quality of life. The **lateral intercostal artery perforator (LICAP) flap** has emerged as a reliable and versatile option for **partial and total breast reconstruction**, offering well-vascularized tissue with minimal donor site morbidity.



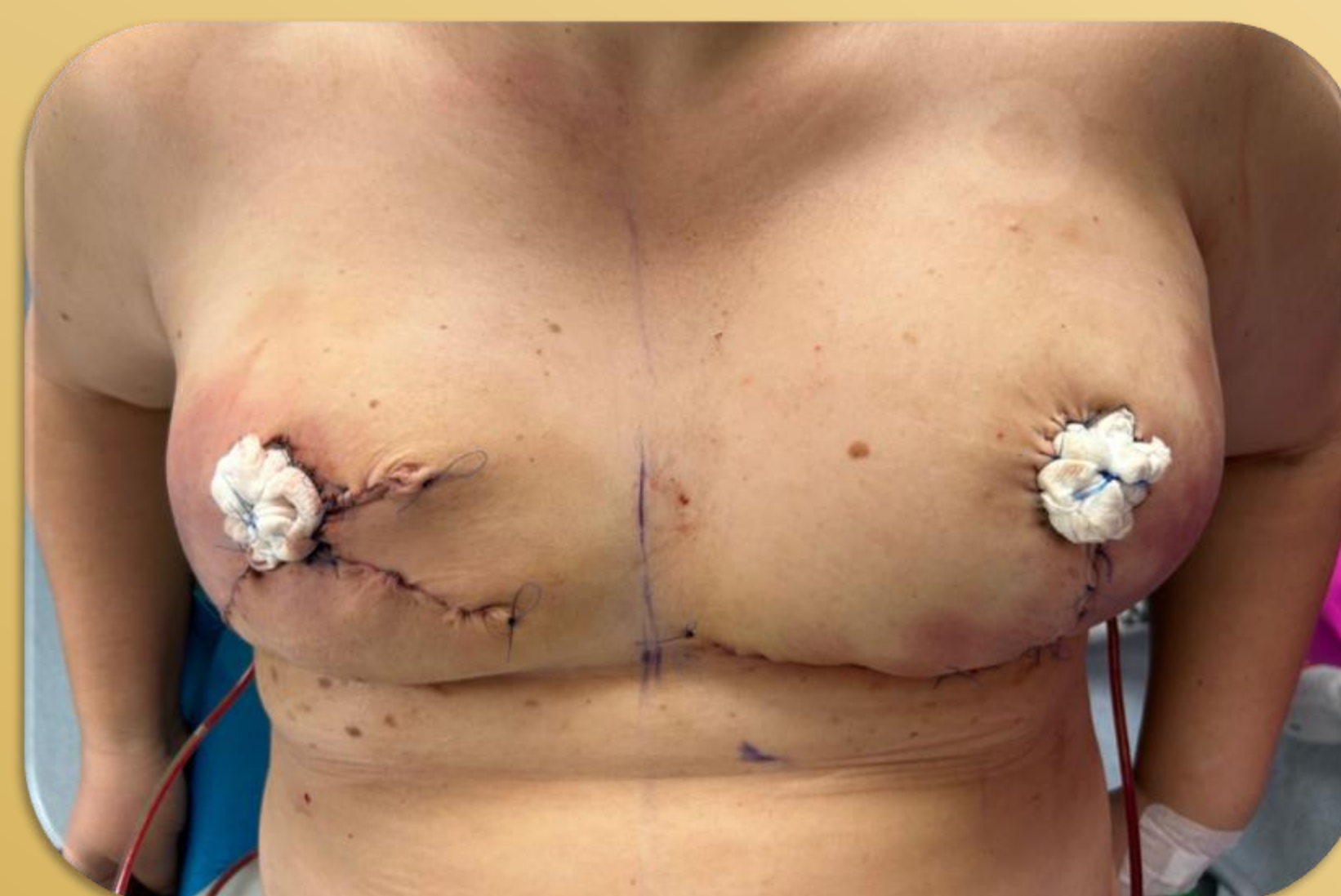
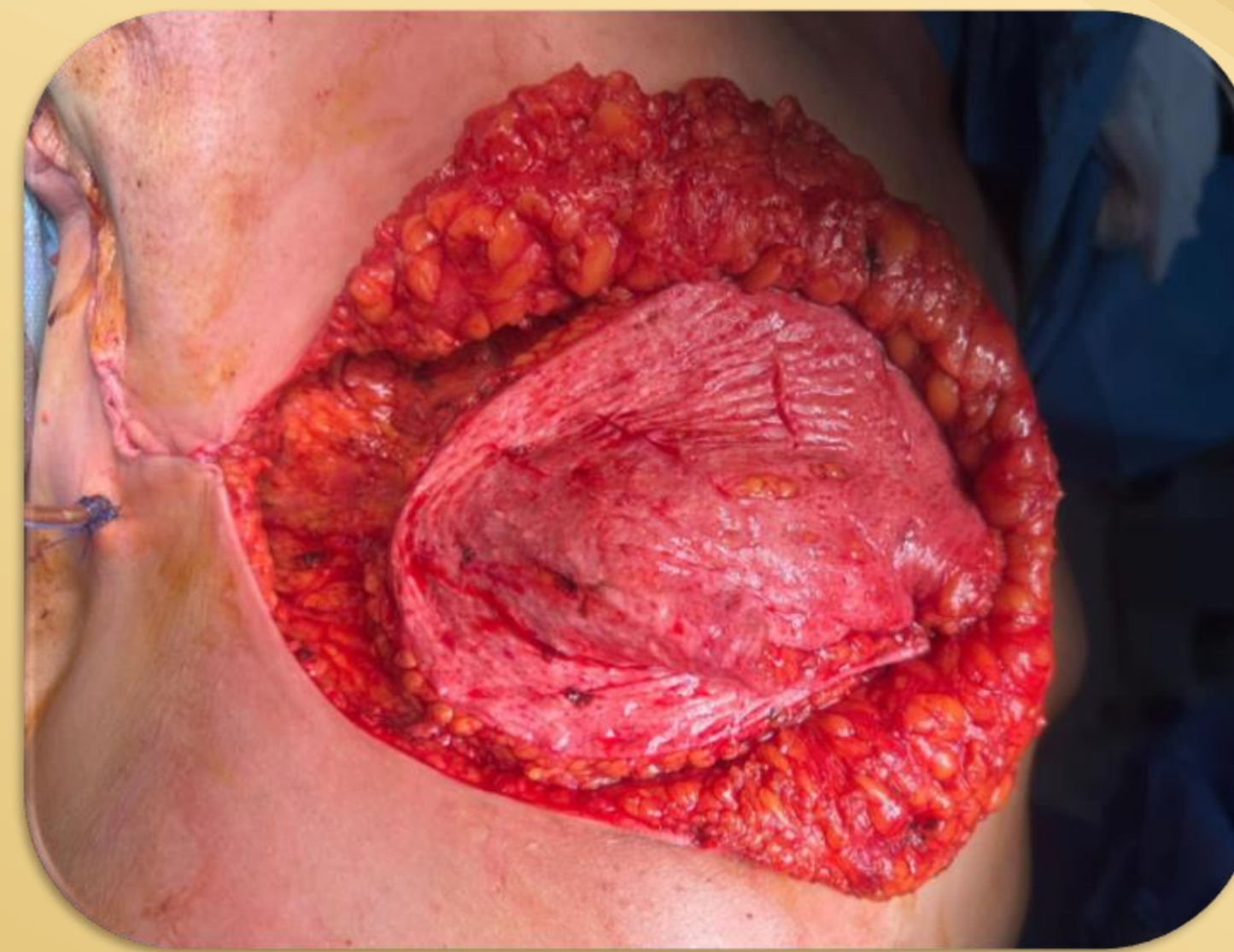
Figures 1 and 2. Preoperative markings and intraoperative view of LICAP for total left breast reconstruction



Figure 3. Postoperative aspect of LICAP for total left breast reconstruction at 1 year

METHODS

We present our two-year clinical experience with the LICAP flap in **75 patients** who underwent autologous breast reconstruction. Patient selection criteria, preoperative planning, surgical technique, and postoperative management are reviewed. Outcomes were assessed in terms of complication rates, aesthetic results, functional recovery, and patient-reported satisfaction.



Figures 4 and 5. Right breast reconstruction with completely buried LICAP and symmetrization

RESULTS

The LICAP flap consistently provided **robust perfusion** and favorable contour restoration, with low donor-site morbidity. The technique was particularly beneficial in patients with **small to medium-sized breasts** and those seeking autologous reconstruction while avoiding muscle-sacrificing procedures. Complication rates were low, and aesthetic and functional outcomes were rated highly. Quality of life, prospectively evaluated using the **BREAST-Q questionnaire**, demonstrated excellent post-operative satisfaction and psychosocial well-being.

KEY POINTS

- Use **handheld Doppler** to certify the location of the perforators
- Incise the fascia to avoid kinking of the pedicle and excessive traction during anterior advancement and rotation
- Anchor the flap to the thoracic wall to **redefine the upper pole**
- **Sensate** flap if the branches of the intercostal nerves can be preserved

Variations:

- partial/total flap de-epithelialization
- hybrid reconstruction: expander or implant coverage with LICAP

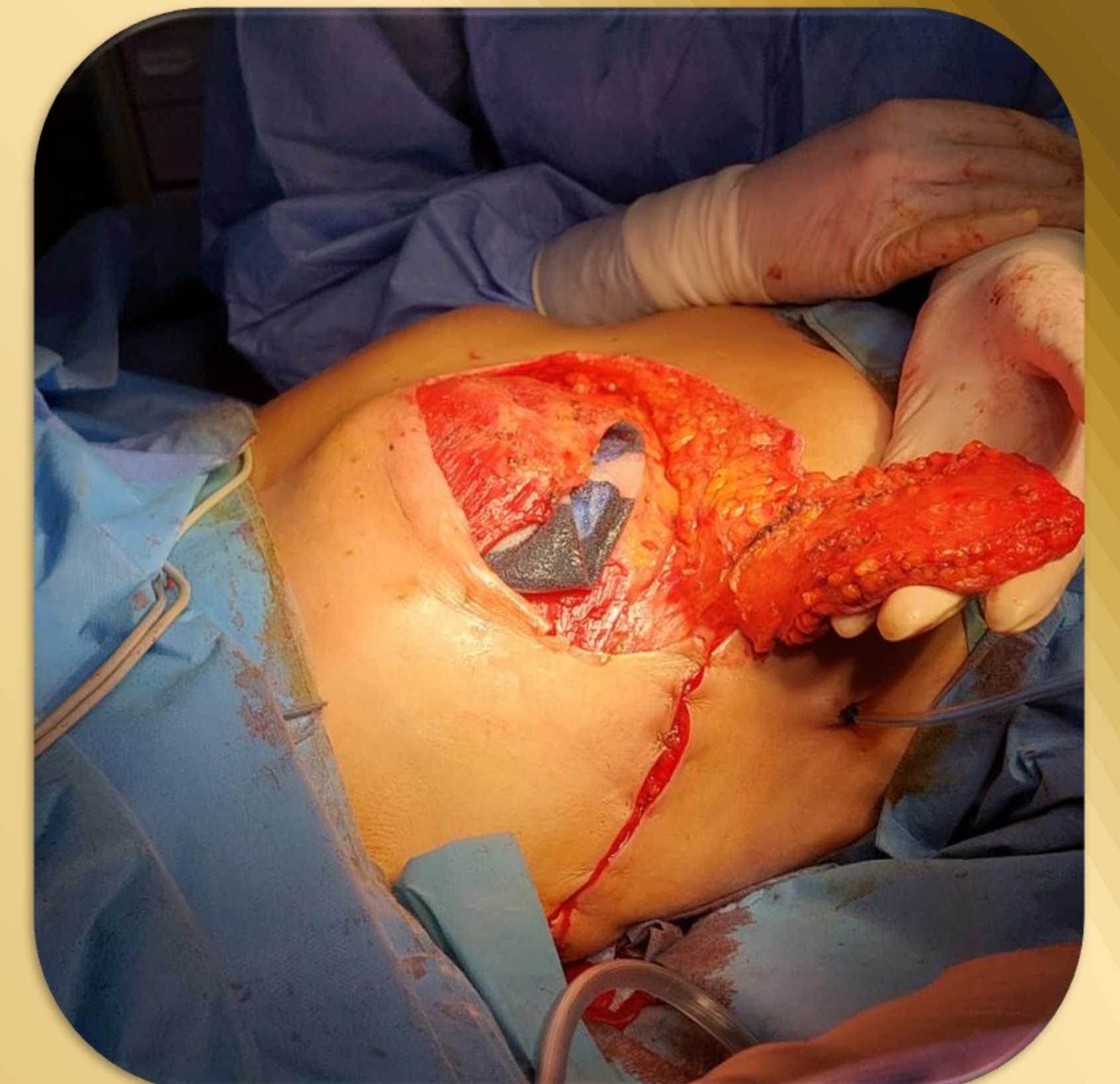


Figure 6. Tissue expander with lower pole covered by LICAP for hybrid left breast reconstruction (irradiated breast carcinoma with extensive skin involvement)

CONCLUSIONS

Our experience supports the LICAP flap as a safe, reproducible, and aesthetically rewarding option in modern breast reconstruction. It offers an optimal balance between **surgical reliability**, **low morbidity**, and **high patient satisfaction**, establishing the LICAP flap as an important option in modern reconstructive surgery.

