

# Preventive Periareolar SSM with Immediate DIEP and NAC Reconstruction Using a Modified Arrow Flap

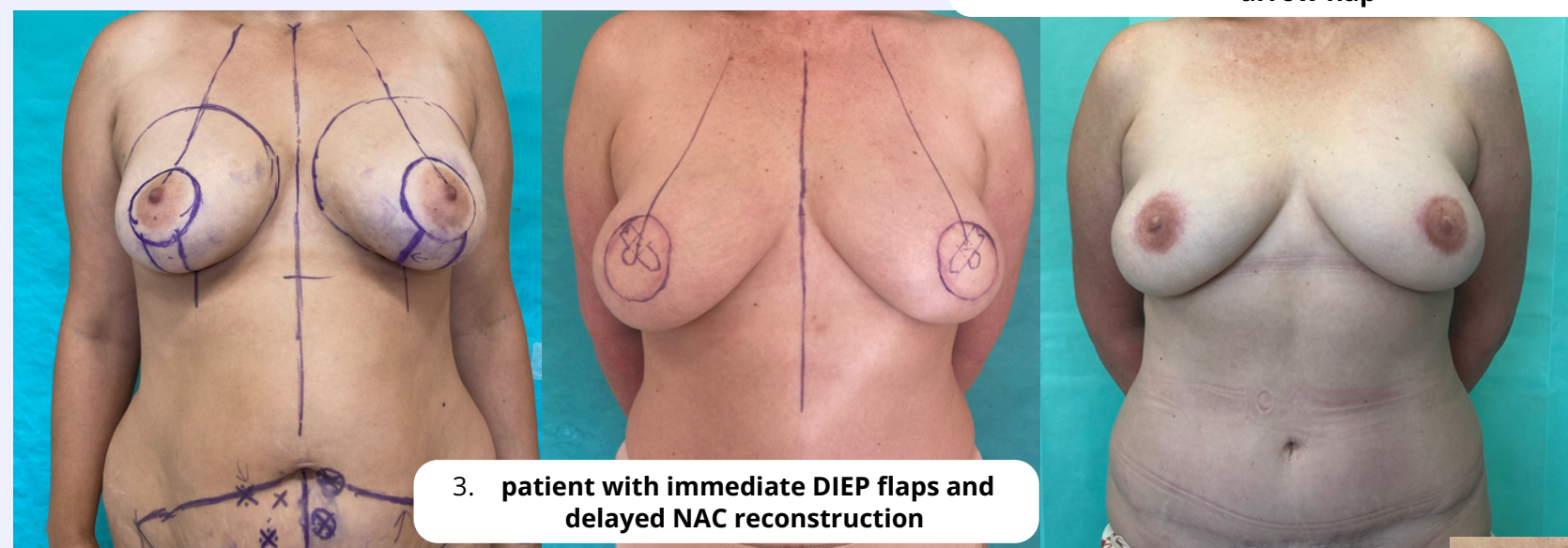
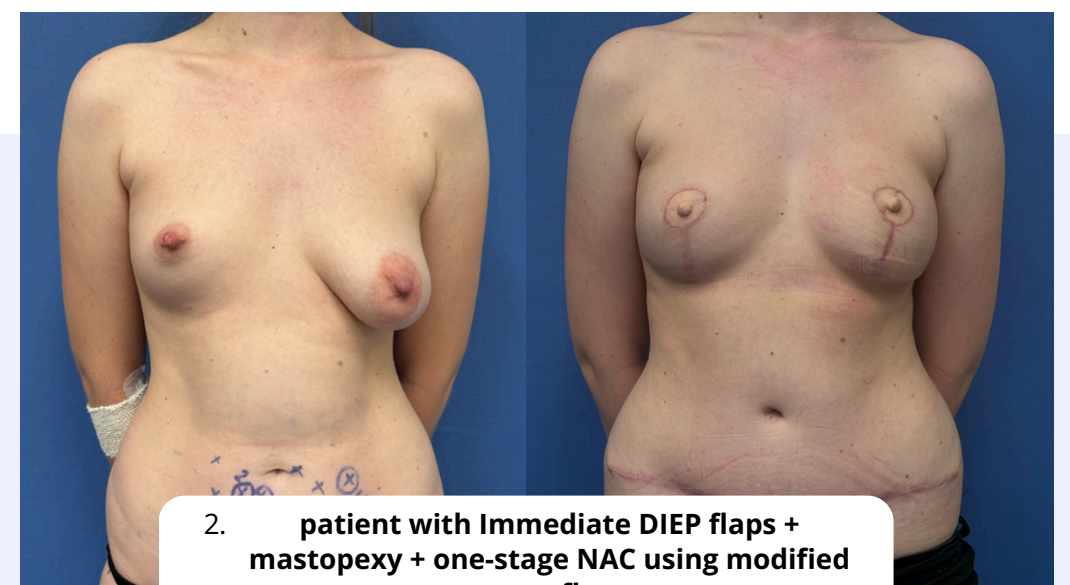
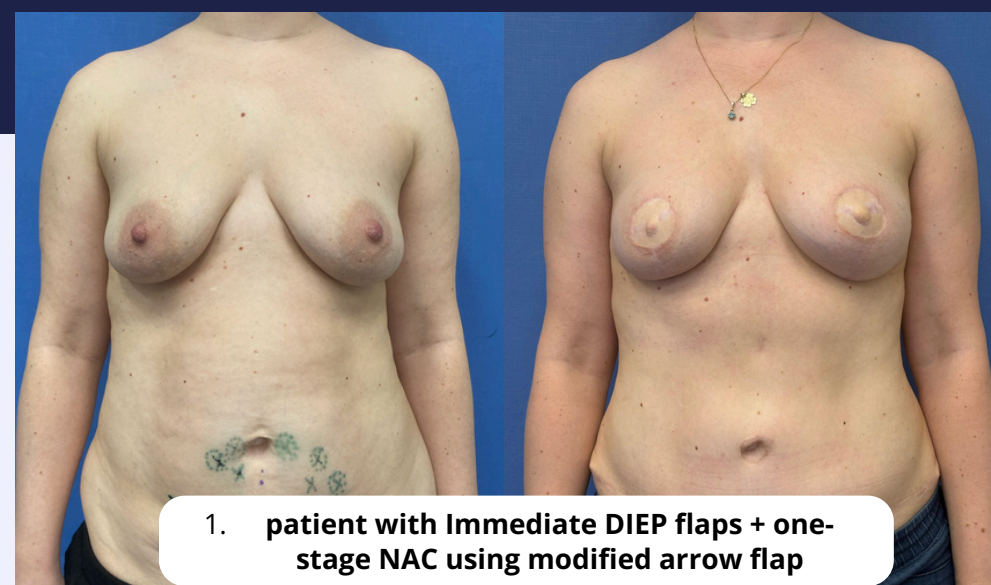
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## Introduction

Skin-sparing mastectomy (SSM) via periareolar access offers excellent aesthetic potential in genetically high-risk patients (BRCA, PALB2 etc.) undergoing preventive surgery. Immediate autologous reconstruction with DIEP flaps combined with one-stage nipple-areola complex (NAC) reconstruction may reduce the number of procedures and improve psychological recovery.

## Method

- Patients: 1 genetically high-risk women undergoing bilateral SSM
- **Periareolar incision** ± mastopexy
- **2 patients** with Immediate DIEP flaps + one-stage NAC using modified arrow flap and **1** with immediate DIEP flaps and delayed NAC reconstruction
- **Surgical steps:**
  - Periareolar gland removal with/without mastopexy
  - DIEP flap transfer, shaping and microanastomosis
  - Adaptation sutures for mound shaping
  - Semi-sitting positioning for new NAC determination
  - Creation of arrow flap and NAC on the DIEP skin marker
  - Preservation of dermis for long-term projection
- **Assessment** of early complications, NAC viability, symmetry, 3D contour

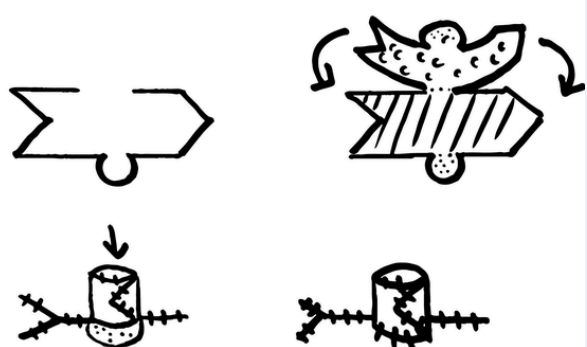


## Modified Arrow Flap

- **Aim:** Improve long-term nipple projection by creating a stable dermal foundation and controlled subcutaneous bulk.
- **Standard local flaps** often keep the reconstructed nipple connected to surrounding subcutaneous fat, which lacks structural support and contributes to progressive flattening.
- The modified arrow flap places the nipple cylinder onto a **deepithelialized dermal plate** prepared at the donor site, effectively isolating the nipple cavity from the loose subcutaneous fat underneath.
- The deepithelialized dermis acts as a firm **support platform**, **reducing tissue collapse** and improving projection **stability**.
- This modification results in more reliable **long-term projection**, **less flattening**, and **improved aesthetic contour**, without adding significant surgical complexity.



3. patient with immediate DIEP flaps and delayed NAC reconstruction



## Result

- All DIEP flaps survived (**100 % viability**).
- No intraoperative complications.
- **NAC vascularity preserved** in all cases.
- Achieved **stable projection**, **natural 3D contour** and satisfactory circularity.
- Only **minor postoperative issues** (mild asymmetry, delayed healing), **none requiring revision**.
- **No nipple necrosis** or major complications.
- **High early patient satisfaction** with breast shape and NAC aesthetics.



in our department we offer the patients as well 3D tattoo of NAC

## Discussion

- ✓ Immediate NAC reconstruction during periareolar SSM offers aesthetic benefits but increases technical demands
- ✓ Accurate NAC positioning is challenging due to postoperative tissue shifts, flap remodeling and inherent asymmetries.
- ✓ Long-term projection depends on dermal preservation and controlled flap thickness; inadequate support may result in early projection loss.
- ✓ Patient variability (breast size, ptosis, skin quality, flap characteristics) requires intraoperative adaptability and individualized adjustments.
- ✓ The modified arrow flap is a promising single-stage technique that may reduce the need for secondary procedures, though long-term follow-up is needed to confirm stability.

## Conclusion

- ✓ Periareolar SSM with immediate DIEP and single-stage NAC reconstruction using a modified arrow flap is a safe and effective method for genetically high-risk women undergoing preventive mastectomy.
- ✓ The modified arrow flap:
  - Preserves reliable vascularity
  - Enhances long-term NAC projection
  - Produces stable 3D contour
  - Reduces the need for secondary procedures
- ✓ Early results support its feasibility and aesthetic advantage as part of a comprehensive one-stage reconstructive strategy.