



TRIPEDICLE NSM IN COMBINATION WITH EXTENDED TDAP FLAP FOR TOTAL BREAST RECONSTRUCTION

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INTRODUCTION

Background & Motivation:

- Breast cancer affects 2.3 million women annually.
- Nipple-sparing mastectomy (NSM) provides oncological safety with improved aesthetics
- Traditional TDAP flaps limited by flap dimensions and skin redundancy.
- Tripedicle configuration enhances vascular supply to NAC.

Clinical Gap:

- Large, ptotic breasts challenging to reconstruct with standard NSM techniques.
- Patients refused implant or Need for autologous reconstruction without implants, especially pre-radiotherapy patients
- Thin overlying skin <2CM (Rancati type 1 & 2)
- Unclear Intraoperative ICG
- Combination approach not extensively studied

Study Rationale:

- Extended TDAP flap with tripedicle configuration offers superior reconstruction for large breasts while maintaining NAC integrity and patient satisfaction.

MATERIALS & METHODS

Study Design:

- Prospective descriptive study
- Single-center experience
- Consecutive patient inclusion

Patient Population:

Parameter	Value
Sample Size	45 patients
Age Range	38-67 years (mean 52.3 ± 8.7)
BMI Range	21.5-34.8 kg/m² (mean 26.1 ± 3.2)

Surgical Technique:

- Tripedicle nipple-sparing skin-reducing mastectomy
- Immediate single-stage reconstruction
- Extended TDAP pedicle

RESULTS

Flap and NAC survival rates

Outcome	N	Percentage	Managment
Complete Flap Survival	44/45	97.8%	
Partial Flap Necrosis	1/45	2.2%	Managed with debridement
Complete Flap Loss	0/45	0%	
NAC Preservation (Intact)	43/45	95.6%	
NAC Necrosis	1/45	2.2%	Conservative management

Operative parameters (mean ± sd)

Parameter	Mean ± SD	Range
Operation Time (minutes)	182.8 ± 28.6	128-248
Intraoperative Bleeding (ml)	242.3 ± 36.5	165-328
Mean Daily Drainage (ml)	86.7 ± 24.2	42-145
Duration till Drain Removal (days)	4.18 ± 0.92	2.5-6.8
Number of Drains Used	2.2 ± 0.4	2-3

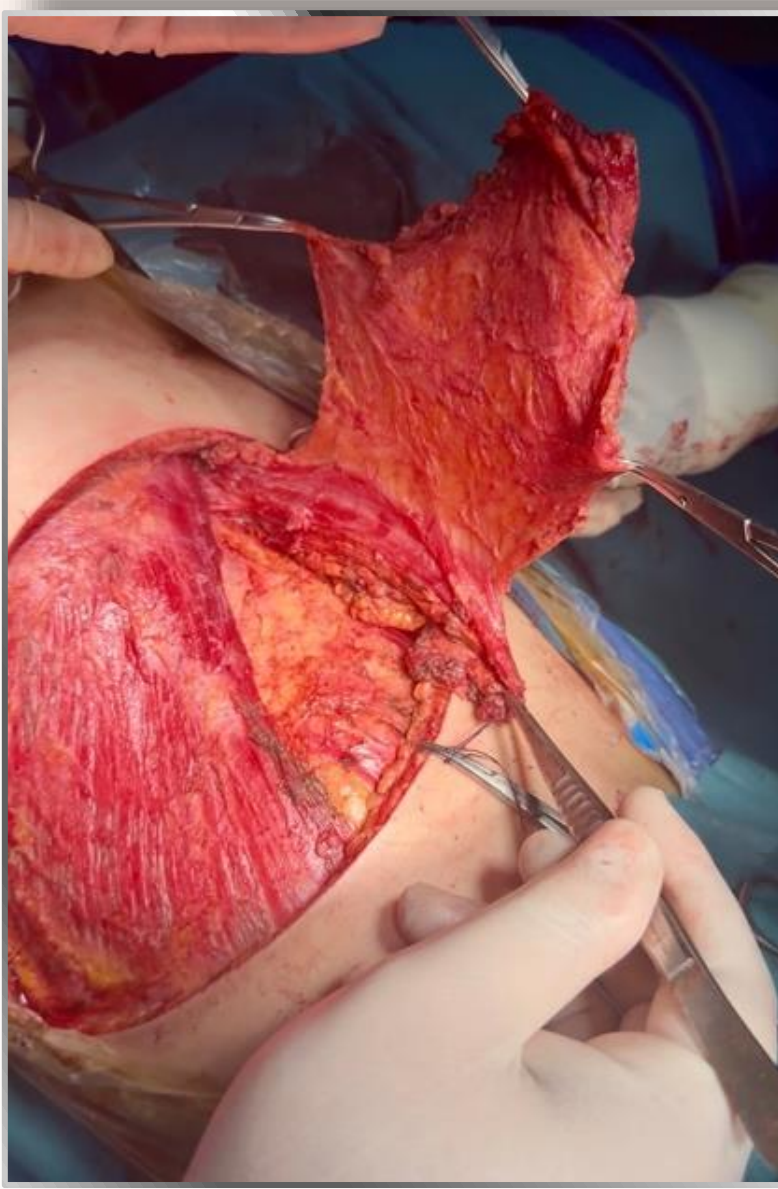
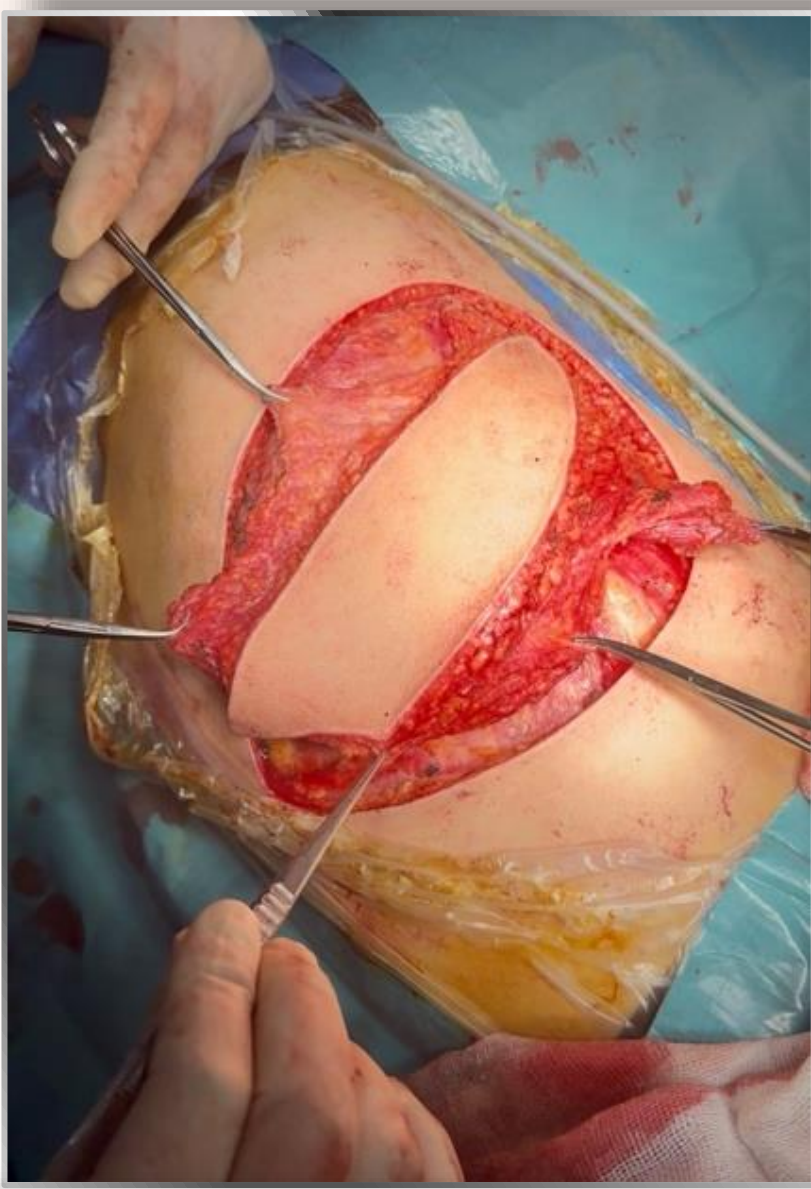
Complication profile

Complication Type	N	Percentage	Management
MAJOR COMPLICATIONS	1/45	2.2%	Debridement for partial necrosis
MINOR COMPLICATIONS	5/45	11.1%	See below
Seroma Formation	3/45	6.7%	Ultrasound-guided aspiration
Wound Dehiscence	0/45	0%	Secondary closure
NAC Necrosis	1/45	2.2%	Conservative (nipple tattooing)
Infection	1/45	2.2%	Antibiotic therapy
Hematoma (requiring reoperation)	0	0%	None
Complete Flap Loss	0	0%	None

Aesthetic outcomes:(6-month follow-up)

Satisfaction Category	N	Percentage
Excellent	38/45	84.4%
Good	6/45	13.3%
Fair	1/45	2.2%
Poor	0	0%
Overall Mean Satisfaction Score	—	9.2 ± 0.8
Excellent + Good Combined	44/45	97.7%

A case of tripedicle nipple-sparing skin-reducing mastectomy with immediate single-stage reconstruction by extended tdap pedicle



CONCLUSIONS

What This Study Shows:

- Safety: TP-NSSRM with extended TDAP is safe and reliable (97.8% success)
- Efficacy: Achieves excellent aesthetic outcomes (84.4% excellent satisfaction)
- Oncological Validity: 100% locoregional recurrence-free at follow-up
- Reproducibility: Low complication rate and minimal reoperation rate

Recommended Indications:

- Large, ptotic breasts (≥C cup)
- Adequate donor site
- Patients requiring or anticipated to require post-mastectomy radiotherapy
- Patients preferring autologous reconstruction
- Age 40-70 years

The tripedicle approach with extended TDAP flap should be considered a valuable addition to breast reconstruction techniques, particularly for carefully selected patients with large breasts.