

Targeted Nipple Areolar Complex Reinnervation In Implant Based And Autologous Breast Reconstruction Following Mastectomy

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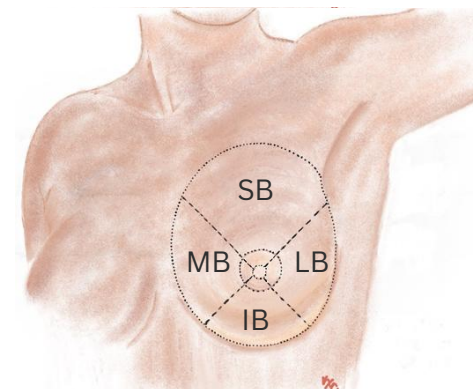
Introduction

- The focus of breast reconstruction has been the restoration of the aesthetics of the breast
- In recent years, there has been a push towards restoring the functional components of the breast via sensory restoration
- Despite this conversation shift, only 28 studies have examined post-operative sensation restoration in PMBR, and none have compared sensation results across breast reconstruction types²
- This is the only study to date to compare sensation outcomes between patients who underwent re-innervation during flap based, implant based, and hybrid reconstruction as well as gender affirming mastectomy

Methods

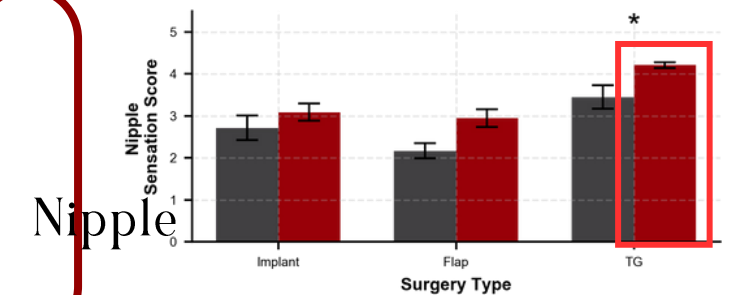
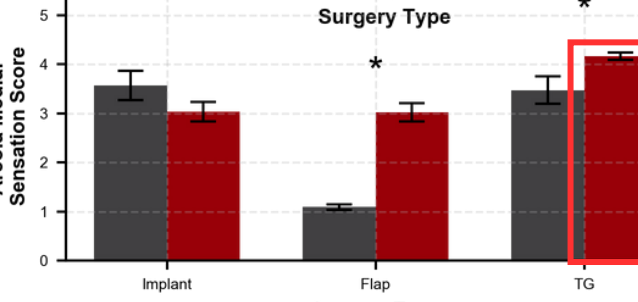
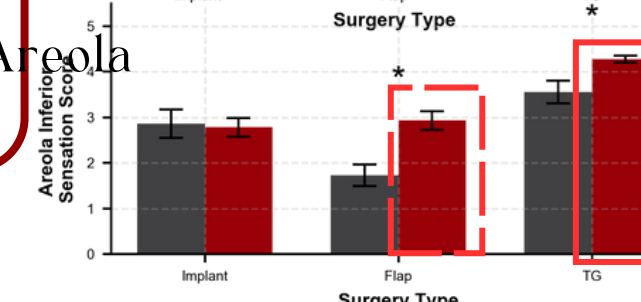
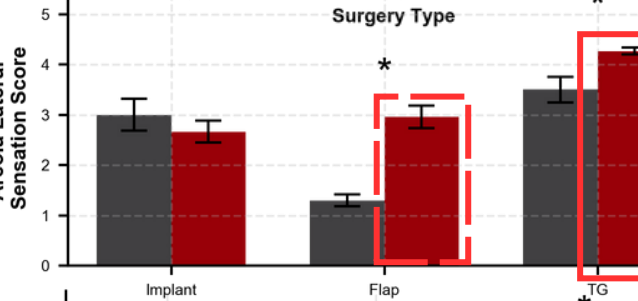
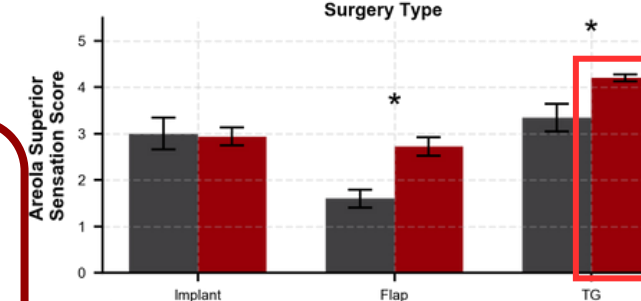
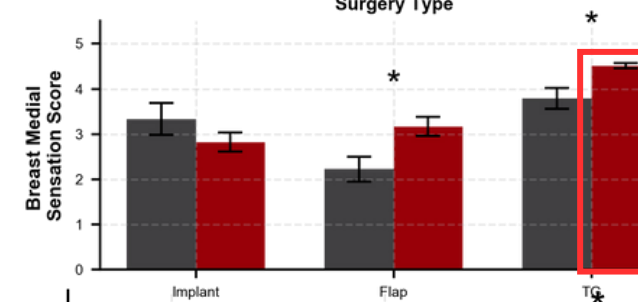
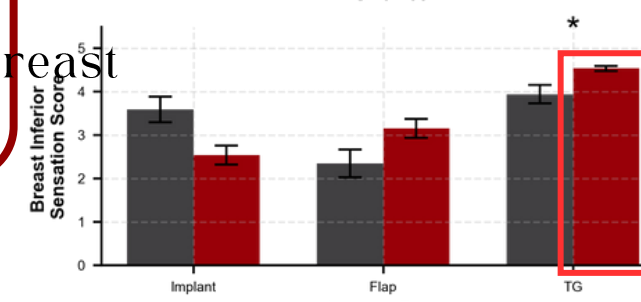
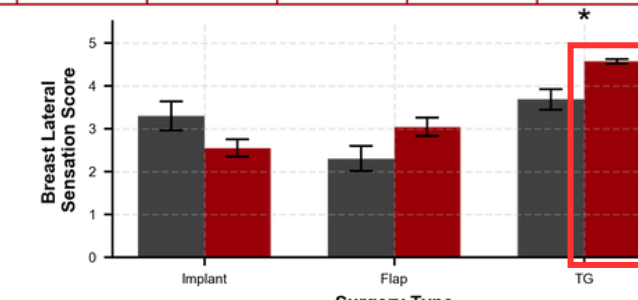
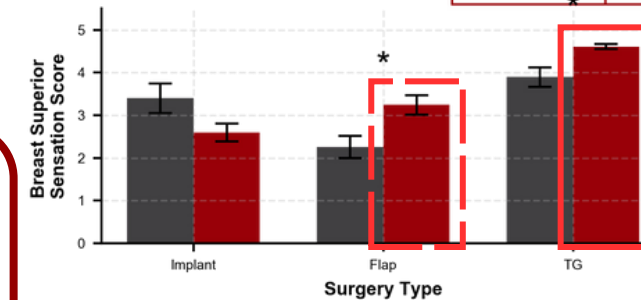
- A retrospective chart review was conducted on 122 patients who underwent FTM gender-affirming mastectomy, and breast reconstruction with and without targeted NAC innervation.
- Semmes-Weinstein monofilament testing was used to measure sensation. Score of 0 was assigned to patients with no sensation, 1 to 2.83, and 5 to 6.65.

	Flap		Implant		TG	
	Nerve	Control	Nerve	Control	Nerve	Control
Age (±SD)	50.3±9.4	51.2±7.9	47.7±10.7	45.2±9.3	22.0±9.5	19.2±1.4
BMI	27.7±4.9	28.4±4.7	22.6±2.9	23.3±3.9	25.5±5.3	24.8±5.4



Results

	Flap		Implant		TG	
	Nerve	Control	Nerve	Control	Nerve	Control
Total Number of Breasts	27	25	24	20	124	9
Average Grafted Nerves/Breast	2.7±1.0	N/A	3.3±1.2	N/A	2.7±1.35	N/A
Length of Grafted Nerves *	6.5±2.5	N/A	8.3±3.3	N/A	4.4±0.7	N/A
Mean Follow Up	22.8±23.4	18.9±20.9	17.0±22.8	46.2±32.4	9.6±11.2	5.6±15.2



Conclusion

- Our experience has shown superior sensation among TG patients than patients who underwent PMBR of all types in the breast, areolar, and nipple area.
- Patients who choose flat closure and no reconstruction may have a better opportunity for breast, nipple, and areola sensation post-operatively.
- Flap patients had significantly better sensation post-operatively than their control counterparts in 50% of breast quadrants, 100% of areolar quadrants, and this trend held in the nipple.
- Re-innervation did not significantly improve sensation for implant based reconstruction
- Future analysis will control for aspects that have been shown to affect healing time course such as radiation, BMI, and smoking history, in addition to potential protective effects (tamoxifen)
- Future Research should focus on whether engaging breast+NAC sensation post-operatively affects degree of sensation restoration