# Neurotization of the Nipple-Areolar Complex during Implant-**Based Reconstruction: Evaluation of Early Sensation** Recovery



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# INTRODUCTION

 Patient's undergoing

have

Graph 1: First sensory test (4.2mo of follow up)



underwent sensate implant-Twelve patients

mastectomy decreased protective and erogenous sensation and low quality of life outcome measures. Reviews have focused mainly on sensate abdominally-based autologous breast reconstruction.

• Determine the sensation recovery of the breast after nipple sparing mastectomy (NSM) and implant-based reconstruction associated with our novel neurotization technique of the nipple areolar complex (NAC).



\* Superior, medial, inferior, lateral are static tests; UOQ, UIQ, LIQ, LOQ are moving tests

based breast reconstruction. Eight patients with fifteen breasts were monitored for sensory recovery (table 1).

breasts had Eleven direct implant to reconstruction and four had tissue expanders placed.

• Fifteen breasts underwent one post-operative sensation test (graph1), five of which underwent two post-operative sensation tests (graph 2). Two patients underwent bilateral reconstruction and unilateral neurotization, providing an inherent control breast (Graph 3).



AIM

**Graph 2: Progression of sensory recovery –** nipple areolar complex

# **Table 1: Patient's characteristics**

- A database was prospectively maintained for patients who underwent implant-based sensate breast reconstruction.
- Technique approach: anterior branch of the lateral fourth intercostal was identified and preserved during the mastectomy by the breast surgeon. A processed nerve graft is utilized as an interpositional graft connecting the donor 4<sup>th</sup> intercostal nerve to the targeted (NAC). A nerve connector was utilized (Figure 1).
- The sensory recovery process was objectively monitored using a pressure sensory device (PSD). A static and dynamic tests were performed at standardized post-operative time points.



### \* Superior, medial, inferior, lateral are static tests; UOQ, UIQ, LIQ, LOQ are moving tests

Graph 3: Comparison neurotized breast vs non-

Characteristics	
Age	38.12± 7.5
BMI	23.66± 4.19
Specimen weight	381.04± 149.5
Bilateral reconstruction	7 (47%)
Prophylactic mastectomy	11 (7.3%)
IMF incision	14 (93.3%)
Complication rate (minor)	5 (3.3%)

# CONCLUSIONS

• This is the first study to report on early results

## Figure 1: Technique approach





\* Superior, medial, inferior, lateral are static tests; UOQ, UIQ, LIQ, LOQ are moving tests

obtained after performing sensate implant-based breast reconstruction.

• It can be noticed a tendency of sensation restoration of the NAC after implant-based reconstruction with neurotization.

# **CONTACT INFORMATION**

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