



Quantitative Sensory Outcomes in Direct-to-Implant Breast Reconstruction and Gender-Affirming Mastectomy

Lior Levy MD¹, Makayla Kochheiser BA¹, Kristyn Vicente BA¹, Katya Remy MD², Chase Alston BS¹, Lisa Newman MD¹, Alexander Swistel MD¹, Rachel Simmons MD¹, Vivian Bea MD¹, Katherine H. Carruthers MD², Eleanor Tomczyk MD², William G Austen Jr MD², Ian L Valerio MD², Lisa Gfrerer MD¹

1. Weill Cornell Medicine, New York City, NY, USA; 2. Harvard Medical School, Boston, MA, USA

INTRODUCTION

- Loss of sensation is commonly reported after mastectomy due to transection of intercostal nerves
- Sensory loss has been shown to have significant consequences on functional and psychological well-being
- Our group has described targeted nipple-areolar complex reinnervation (TNR), which is a technique used to preserve and reconstruct encountered intercostal nerves to maximize sensory recovery during chest surgery

Study Aim: Compare sensory outcomes in patients undergoing targeted NAC reinnervation with DTI breast reconstruction using nerve allografts and GAM utilizing direct coaptation

METHODS

- Prospective cohort study
 - DTI reconstruction: **32 subjects & 24 controls**
 - GAM: **37 subjects & 32 controls**
- Quantitative Sensory Testing (QST) was performed
 - Baseline
 - Postoperative: 3, 6, and 12 months
- Univariate analysis assessed differences between groups at each time point and to their respective controls

RESULTS

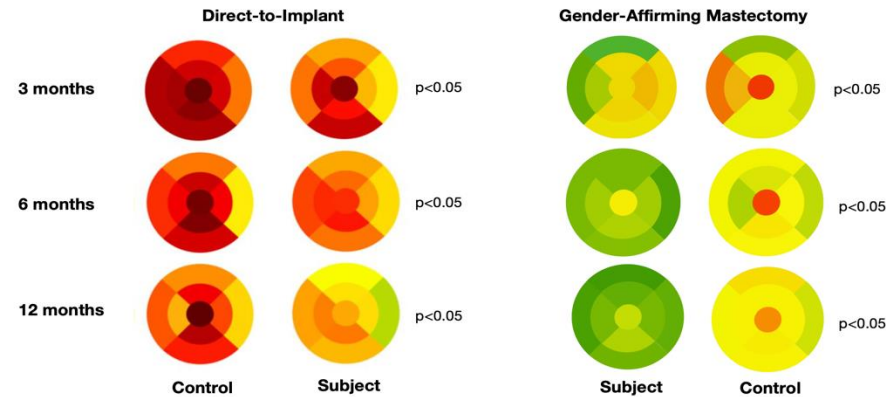


Figure 1. Semmes-Weinstein monofilament test following DTI reconstruction and GAM with and without TNR at 3, 6, and 12 months postoperative.

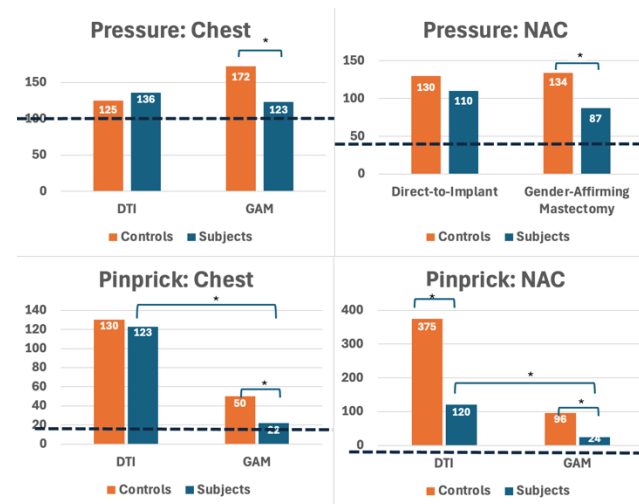


Figure 2. Chest and NAC pressure (top) and pinprick (bottom) results in subjects and controls with DTI reconstruction and GAM.

CONCLUSIONS

- TNR led to improved sensation in both DTI reconstruction and GAM patients
- These findings suggest that nerve reinnervation techniques facilitate sensory recovery
- While both groups demonstrated significant improvement, GAM patients experienced a more rapid recovery

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