At the Center of It All: Patient Preferences for Umbilical Reconstruction In DIEP Flap Breast Reconstruction

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Purpose

As our practice shifts toward umbilectomy and delayed neo-umbilicus creation following DIEP flap breast reconstruction, we aim to understand why some patients decline neo-umbilicus reconstruction. Our goal is to explore patient and societal views regarding the umbilicus to improve counseling.

Why opt for Delayed Neo-Umbilicus Reconstruction?

1. Donor site complications reduced by 40%[1]
2. 18% of Patients who underwent DIEP Flap surgery without Umbilectomy had umbilical complications [1-2]
3. Increased Aesthetic Control [2]

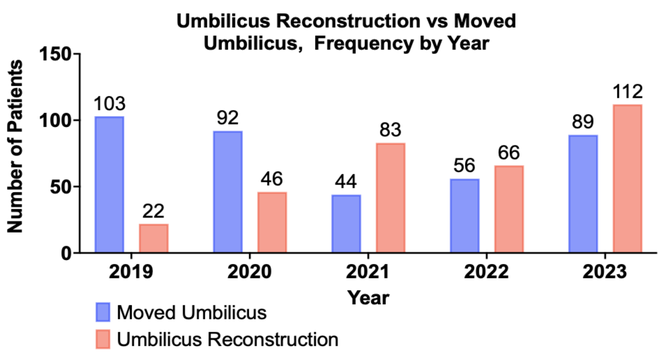
Methods

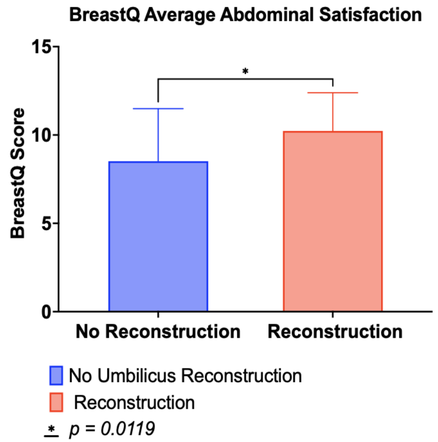
713 Patients

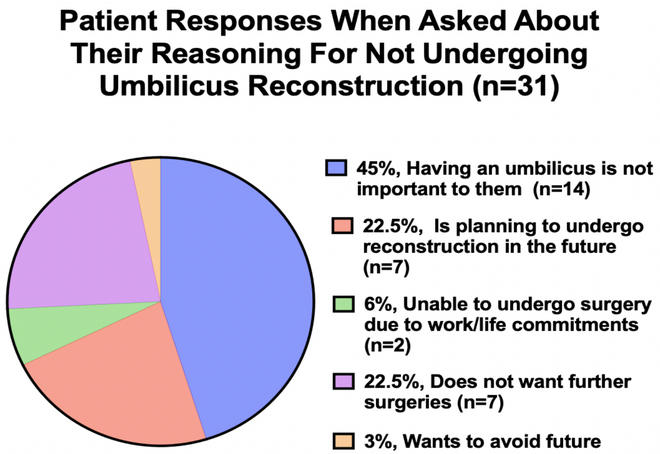
Included in our chart review from 2019 -- 2023

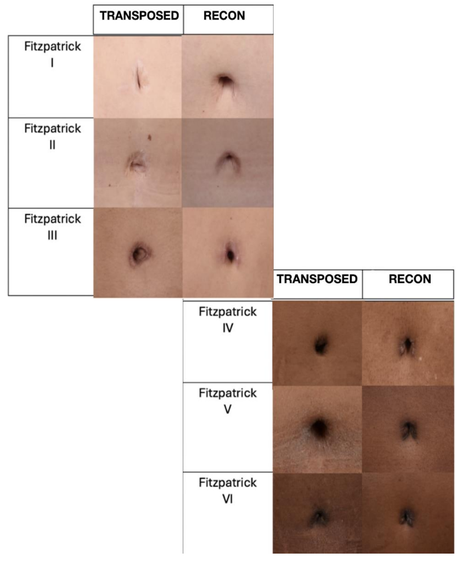
- BreastQ Rasch Scores assessed patient satisfaction.
- RedCap Surveys were sent out to patients
- Crowdsourcing distributed through AmazonTurk

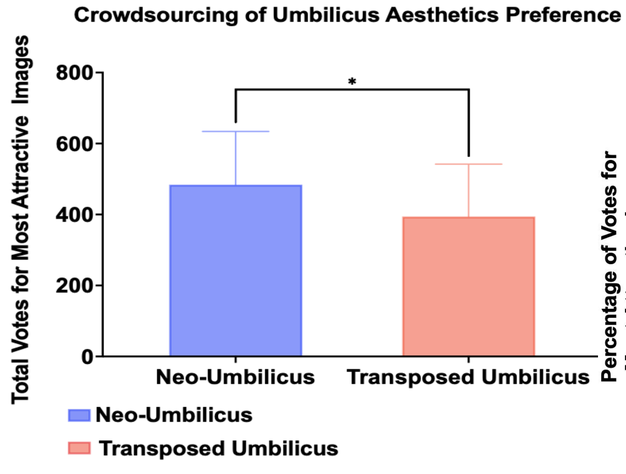
Statistical Tests Conducted:
- Unpaired T- Test
- One Sample Z Test
- Two-Way ANOVA

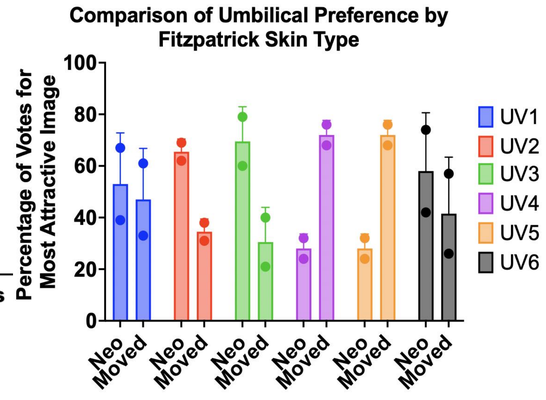












Results

- In 2021, we transitioned from moved umbilicus to delayed neo-umbilicus reconstruction (n = 83).
- By 2023, neo- umbilicus reconstruction cases out-numbered transposed umbilicus cases (112 vs. 89)
- Average abdominal satisfaction was significantly higher inpatients who underwent umbilicus reconstruction compared to those who did not (p = 0.0119).
- Among patients who declined neo-reconstruction after excision of the belly button (n=31), the most frequently cited reason was a lack of personal importance placed on having a belly button(45%).
- One-sample Z test showed a statistically significant preference for the appearance of neo-umbilicus reconstruction as well as a statistically significant disfavor of the moved umbilicus' appearance.
- A two-way ANOVA demonstrated a correlation between umbilicus type and image skin tone on perceived attractiveness (p = 0.0030), indicating that the preference for Neo- versus Moved Umbilicus varied by the skin tones of the displayed images

Conclusion

This study demonstrates that umbilectomy with secondary reconstruction yields a significantly higher aesthetic and satisfaction rating when compared to transposition of the native umbilicus without reconstruction.

Surgeons should consider the decreased rate of complications, improved aesthetic result, higher rate of satisfaction when discussing options for DIEP flap reconstruction with patient.

They should also discuss whether having an umbilicus is of high importance to the patience and if the patience shas a tendency for hypertrophic scarring or post-inflammatory hyperpigmentation when counseling their patients.