

Stable but Not Static: Breast Density Changes After Bariatric Surgery

Rylee Barber MD, Mary Kate Bryant MD MSCR, Kelly Litts BA,
Kevin Hughes MD, Andrea Abbott MD MSCR
Medical University of South Carolina

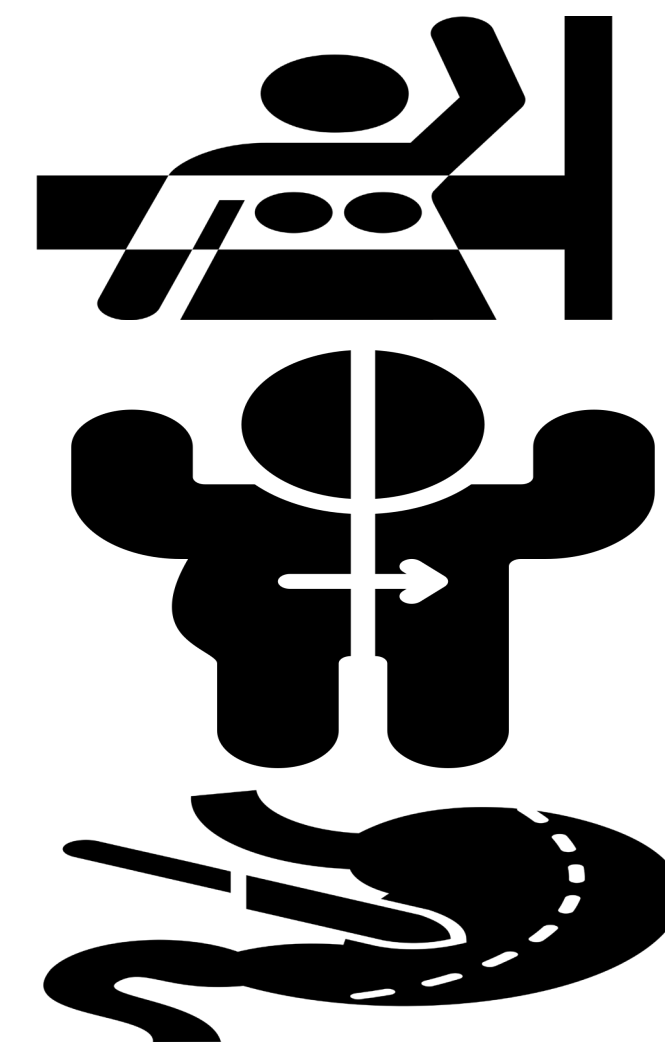
BACKGROUND

- Metabolic and bariatric surgery (MBS) reduces adipose tissue
- Reduction in adipose tissue has been shown to decrease breast cancer risk
- The effect of bariatric surgery on breast density remains unclear
- The aim of this retrospective study is to examine the relationship between weight loss and changes in breast density after MBS

METHODS

- Study Design: Single-center retrospective study of female MBS patients (age 40-70) undergoing MBS between January 2016 and February 2024 (n=1303)
- Inclusion Criteria: Patients (n=174) with mammography data within three years pre- and post-operatively.
- Primary Outcome: Breast Density Change after MBS

RESULTS



- Most patients (n=142, 81.6%) had stable breast density after MBS.
- Severe obesity (BMI ≥ 50) was associated with overall lower breast density, $p=0.006$.
- Surgery type and age were not predictive of change in breast density.

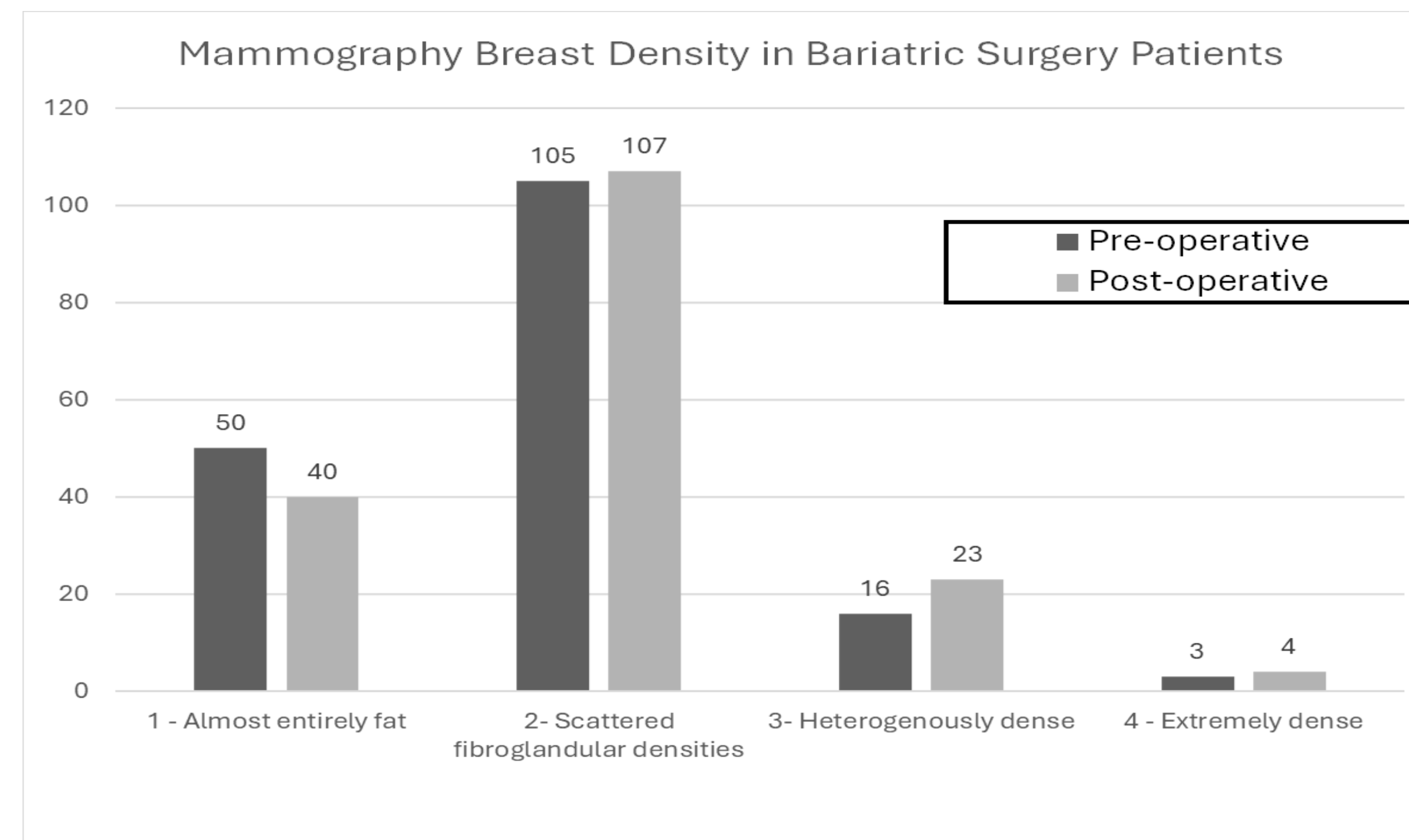


Figure 1. Mammography Breast Density in Bariatric Surgery Patients

RESULTS



Higher density post-operatively experienced greater reductions in BMI (15 [12,18] v 13 [9,16], $p=0.02$) despite having lower baseline BMI (43 [40,45] v 46 [41,52], $p=0.07$).

CONCLUSIONS

- Breast density remained stable for most women after MBS, though increases occurred in those with lower baseline BMI who achieved greater weight loss
- Future work should evaluate whether these density changes alter breast cancer incidence or detection patterns

IMPLICATIONS FOR PRACTICE

- Bariatric surgery patients may benefit from individualized screening strategies as breast density affects cancer risk and mammographic sensitivity,