

Stable but Not Static: Breast Density Changes After Bariatric Surgery

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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

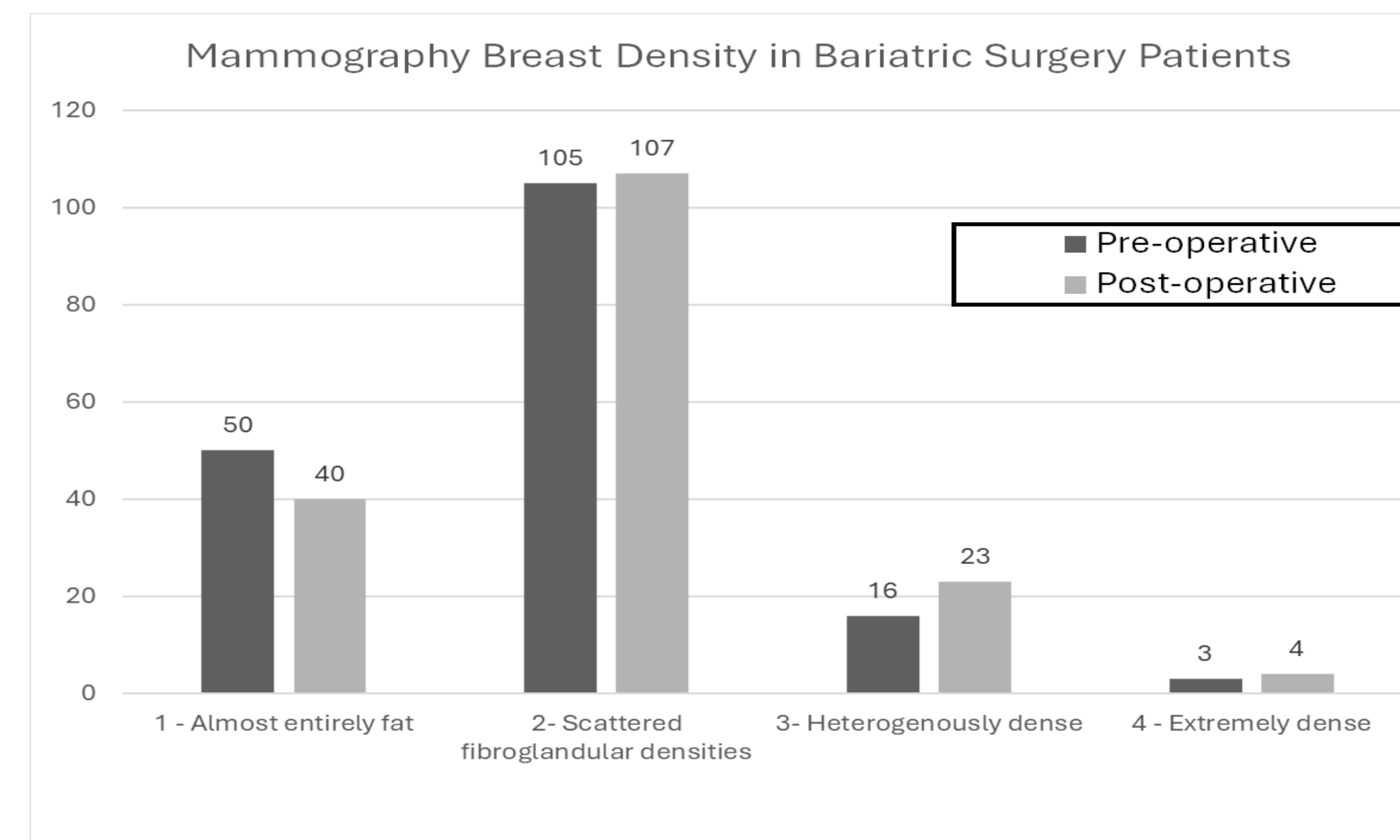


Figure 1. Mammography Breast Density in Bariatric Surgery Patients

RESULTS



Patients with higher breast 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 changes in density 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