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NEWS

MAMMOGRAPHIC DENSITY CHANGE AND SCREENING RECALL FOLLOWING GLP-1 RECEPTOR AGONIST THERAPY

PURPOSE

To evaluate within-subject changes in mammographic breast density following GLP-1 receptor agonist-associated weight loss, assess the relationship between magnitude of weight loss and density change, and characterize associated mammographic findings and screening recall outcomes.

METHODS AND MATERIALS

This retrospective longitudinal study included 107 women (mean age, 57.5 years; range, 34–79 years) who underwent screening mammography before and after at least 1 year of GLP-1 receptor agonist-associated weight loss. Mean weight loss was 39.7 lb (median, 31 lb; range, 6–107 lb). Three breast radiologists independently assessed BI-RADS density categories, subjective density change, breast size change, and skin thickening. Automated density assessment using Quantra was available for 104 patients. Associations between weight loss and automated density-category change were evaluated using Spearman correlation, Mann-Whitney U, and Kruskal-Wallis tests. Screening recalls and diagnostic outcomes were recorded.

RESULTS

Automated breast density increased by at least one category in 65/104 women (62.5%): 57 (54.8%) increased by one category and 8 (7.7%) by two categories; no automated density decreases were observed. Greater weight loss was modestly associated with greater automated density-category increase (Spearman $\rho = 0.205$, $p = 0.0366$). Median weight loss was 30 lb with no density change, 38 lb with a one-category increase, and 40 lb with a two-category increase. Visual density-change assessment varied among radiologists. Reader-specific rates of breast size decrease ranged from 57.9% to 78.5%, while increased skin thickening ranged from 9.3% to 17.8%. Twenty-four of 107 women (22.4%) underwent screening recall. Four patients underwent biopsy after BI-RADS 4 assessment; all biopsy results were benign.

CONCLUSIONS

GLP-1-associated weight loss was accompanied by increased automated mammographic density in approximately two-thirds of evaluated women, with greater weight loss modestly associated with greater density increase. Visual assessment varied among radiologists. Screening recall occurred in 22.4% of patients, with four BI-RADS 4 biopsies, all benign. Recognition of GLP-1-associated weight loss may help contextualize interval mammographic changes and subsequent diagnostic evaluation.

CLINICAL RELEVANCE/APPLICATIONS

Medication-related increases in breast density may influence screening interpretation and recall decisions, supporting consideration of GLP-1 receptor agonist history during breast imaging assessment.