RSNA Press Release

Popular Weight Loss Drug May Increase Breast Density

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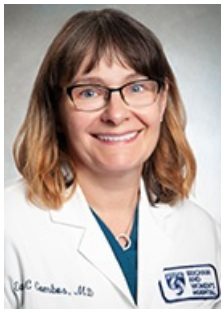
At A Glance

- GLP-1 associated weight loss drugs may increase breast density and mammography screening recall rates.
- In the study, 62.5% of women had increased breast density despite substantial weight loss, and the screening recall rate was 22.4%.
- About 11% of U.S. adults currently take GLP-1 medications for weight loss.

CHICAGO – GLP-1 receptor agonist associated weight loss may alter mammographic appearance through increased breast density, potentially influencing screening recall, according to a new study being presented next week at the annual meeting of the Radiological Society of North America (RSNA).



Eva C. Gombos, M.D.

The use of GLP-1 receptor agonists, such as Ozempic and Wegovy, for weight loss has dramatically increased over the past few years. According to Gallup, the percentage of U.S. adults currently taking GLP-1 medications for weight loss in 2026 is 11%, climbing sharply from 3% in 2024.

While these drugs are generally considered safe, they are not without side effects, and their effect on body composition extends beyond the scale.

Researchers set out to evaluate changes in mammographic breast density and screening recall following GLP-1 receptor agonist therapy. Increased breast density is an independent risk factor for breast cancer.

“To our knowledge, this is among the first studies to directly evaluate longitudinal changes in mammographic breast density using paired mammograms before and after GLP-1-associated weight loss,” said the study’s lead author, Eva C. Gombos, M.D., diagnostic radiologist at Brigham and Women’s Hospital in Boston, Massachusetts.

The retrospective, longitudinal study included 107 women, 34 to 79 years old (mean 57.5), who underwent GLP-1 receptor agonist therapy for weight loss for at least one year. Documented weight loss ranged from 6 to 107 pounds (mean 40 pounds). Each participant underwent two screening mammograms, one prior to GLP-1 therapy initiation and one after at least one year of GLP-1 therapy, for a total of 214 examinations.

Breast density was assessed by three breast radiologists. Automated breast-density assessment was also performed using a breast density software application and Breast Imaging Reporting and Data System (BI-RADS) density categories. The researchers evaluated “within-subject” changes—how each person responded relative to their own baseline or previous score—in breast density and additional mammographic findings, including subjective density change, skin and trabecular thickening and breast size reduction. Trabeculae are connective tissue strands and ligaments that maintain the breast’s structure and shape. Screening recall rates, technical recall rates and diagnostic outcomes were recorded.

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The results showed that breast density increased between baseline and post-treatment mammograms. Greater weight loss was associated with greater breast density increase. Automated breast density increased by at least one category in 65 of 104 women (62.5%).

“It was surprising that 62.5% of women had increased BI-RADS breast density despite substantial weight loss, with no decreases observed,” Dr. Gombos said. “This may reflect disproportionate loss of breast fat, causing a relative increase in mammographic density even as absolute fibroglandular volume decreases.”

Eight patients demonstrated a two-category BI-RADS increase from fatty to heterogeneously dense. Breast-size reduction was identified in 57.9% to 78.5% of patients across the three radiologists, while increased skin thickening was identified in 9.3% to 17.8% of patients. The screening recall rate was 22.4% (24 of 107 women). The average mammography screening recall rate in the U.S. is about 10%.

The technical recall rate was 1.9% (2 of 107). A technical recall rate is the percentage of screening exams that must be repeated because of a technical error rather than a suspicious finding. At diagnostic workup, four biopsies were recommended, all with benign results. All remaining recalled cases were assessed as negative or benign, including three simple cysts.

“The 22.4% screening recall rate is notable, because all recalled cases were ultimately benign or negative, and all four biopsies were benign concordant,” Dr. Gombos said. “This may indicate that marked interval changes in breast composition after weight loss can create new asymmetries or other findings that prompt additional workup.”

Dr. Gombos noted that the reason for the interval skin and trabecular thickening is uncertain, but substantial loss of breast fat and volume may result in redundant skin and increased skin folding, making the skin and underlying trabecular structures appear more prominent on mammography.

While higher mammographic density is generally associated with increased breast cancer risk, the increase observed after GLP-1-associated weight loss may reflect a different process. Substantial loss of breast fat can make the remaining fibroglandular tissue appear relatively more prominent without increasing the absolute amount of fibroglandular tissue.

“The findings do not suggest that patients should be concerned about taking GLP-1 medications,” Dr. Gombos said.

“An increase in mammographic density after substantial weight loss does not necessarily mean that the amount of fibroglandular tissue has increased or that breast cancer risk has increased. The long-term risk implications of these imaging changes remain uncertain and require further study. However, substantial weight loss may change the mammographic appearance of the breast, which could lead to additional imaging or a screening callback.”

The researchers advise that women who are taking GLP-1 medications should continue routine breast cancer screening according to existing recommendations.

“Because substantial weight loss may change breast density and mammographic appearance, patients should inform their breast imaging team about GLP-1 use and significant recent weight loss,” Dr. Gombos said. “Breast imaging technologists can help document this information at the time of screening, providing useful context when radiologists compare current mammograms with prior examinations.”

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Note: Copies of RSNA 2026 news releases and electronic images will be available online at *RSNA.org/press26*.

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Editor’s note: The data in these releases may differ from those in the published abstract and those actually presented at the meeting, as researchers continue to update their data right up until the meeting. To ensure you are using the most up-to-date information, please call the RSNA Newsroom at 1-312-791-6610.

For patient-friendly information on breast density, visit *RadiologyInfo.org*.

Video (MP4):

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Video 1. Woman with radiologic technologist during screening mammography exam.

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Video 2. Radiologic technologist capturing mammography images.
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Images (JPG, TIF):

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Infographic

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Figure 1. Marked density increase after GLP-1-associated weight loss in 59-year-old woman.

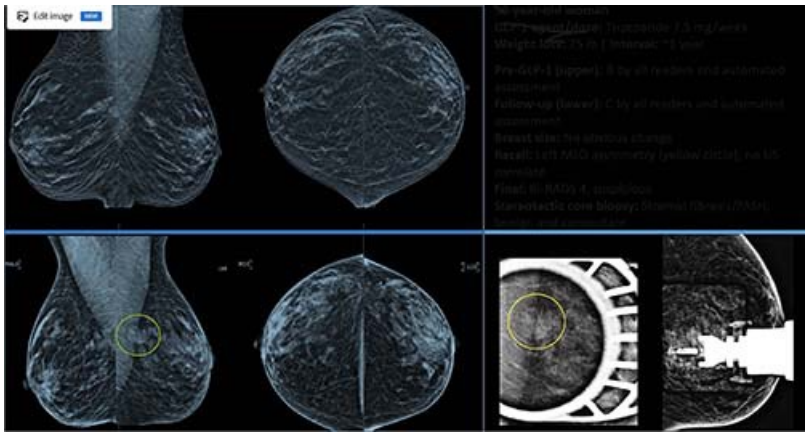

Figure 2. Density increase and asymmetry and biopsy after weight loss in 58-year-old woman.

Resources:

Abstract

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