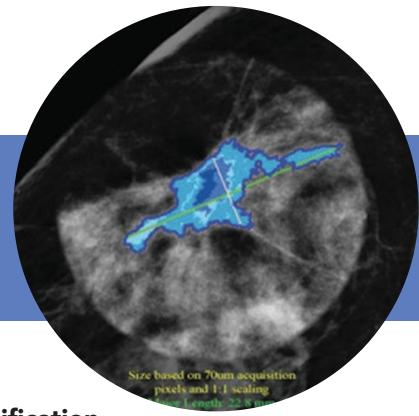


DL Precise™: Enhancing Confidence in Dense Breast Imaging



The Clinical Challenge

The “Density Gap” and Visual Constraints

Almost half of women over age 40 have dense breast tissue, which triples the risk of developing breast cancer. This creates a “masking” effect that standard mammography can miss in up to 50% of cases.¹ The challenge is compounded by human limitations: while computers process over 65,000 shades of gray, the human eye resolves only a few hundred at most. Furthermore, human contrast perception is significantly worse in the brightest and darkest areas of an image, making subtle luminance differences in lesion margins difficult to see.²

DL Precise™ solves this by helping radiologists “see” the hidden shades of gray that the human eye usually misses. This makes lesion borders much easier to assess in dense breasts, allowing clinicians to more confidently differentiate between benign and suspicious findings.

The Limitations of AI-CAD

Computer-Aided Detection (CAD) often hinders rather than helps, with research showing high false-positive rates that can increase patient recall by up to 11% and create a cognitive load that nearly doubles reading times.^{3,4,5} Most critically, these automated systems often fail to detect nuanced cancerous findings that radiologists correctly identify (particularly in dense breasts) which can degrade diagnostic accuracy and erode clinician trust.^{4,6}

DL Precise™ solves these issues by shifting away from automated detection and providing radiologist driven, real-time segmentation and measurements. This allows the clinician to focus their expertise on the deep analysis of suspicious regions, maintaining the radiologist as the central diagnostic authority.

Reader Experience Study

Three independent breast imagers read the same set of mammograms twice in their own reading rooms:

- **Phase 1:** Standard grayscale display only, with findings dictated into transcription software.
- **Phase 2:** After a short washout period, the same cases were re-read with DL Precise™ enabled, again dictating findings into transcription software.

Study Findings

Confidence in BI-RADS Classification

DL Precise™ increased confidence in BI-RADS assessments by improving visualization of lesion morphology in dense breast cases:

- **Confident BI-RADS 3 Downgrades:** Visualizing smooth, rounded opacities increased confidence in BI-RADS 2 classification, returning patients to routine screening instead of unnecessary short-interval follow-ups.
- **Confident BI-RADS 3 Upgrades:** Highlighting irregular margins increased confidence in upgrading to BI-RADS 4, ensuring suspicious findings in dense tissue are not overlooked.

Improved Visualization of Subtle Margin Irregularities

DL Precise™ enhanced visualization of subtle, irregular or spiculated lesion margins that are often obscured in dense fibroglandular tissue, supporting stronger recommendations for biopsy when concerning features were present.

Distinguishing Overlapping Tissue from True Lesions

In dense tissue where overlapping structures can mimic masses, DL Precise™ overlays helped one reader interpret smooth, low-density, ovoid opacities as composite tissue rather than true lesions, increasing confidence in BI-RADS assignment.

“DL™ Precise has been invoked and shows a smooth, rounded opacity, which makes me more comfortable grading this as BI-RADS 2 rather than BI-RADS 3.”

— Reader 1

“DL™ Precise has been invoked and shows more irregular margins, supporting my decision to call this BI-RADS 4.”

— Reader 1

“DL™ Precise is a great tool that can add value for breast radiologists to improve workflow efficiency. The detection can come in very helpful especially for the patient with dense breast tissue.”

— Reader 2



Visit [Deeplookmedical.com](https://www.deeplookmedical.com) or scan the QR code to learn more or to schedule a live demonstration.



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