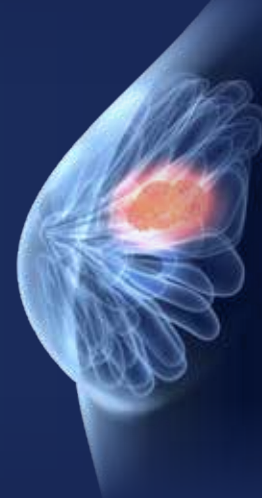# ProFound AI™

for 2D Mammography and Tomosynthesis

Precise, Powerful & Proven Technology

iCAD, the market leader in multi-vendor computer-aided detection of breast cancer with more than 4,000 installations worldwide, introduces the latest in artificial intelligence – **ProFound AI**. ProFound AI is a precise, powerful and proven deep learning, artificial intelligence platform that assists radiologists with reading 2D mammography and breast tomosynthesis. **A new era in breast AI is here!**

Challenge

Mammography reading can be complicated, especially in dense breasts. Tomosynthesis reading can be time consuming and radiologists are confronted by workload issues to read extensive amounts of data while maintaining high accuracy for detecting malignancies.

As incidence rates of breast cancer continue to rise, it is increasingly important to improve cancer detection while reducing unnecessary recalls resulting from false positives.

Solution

Designed for radiologists, **ProFound AI™ for 2D Mammography* and ProFound AI™ for Tomosynthesis** is revolutionizing reading paradigms and provides a transformative solution to address these challenges.

The high-performing cancer detection and workflow solution rapidly and accurately analyzes each image, detecting both malignant soft tissue densities and calcifications with unrivaled accuracy.

ProFound AI for Tomosynthesis is proven to assist radiologists in addressing the challenges of reading cases by improving cancer detection rates, while simultaneously reducing false positives and unnecessary patient recalls.

Workflow Benefits

For 2D mammography and tomosynthesis

- AI algorithm with superior performance for the detection of breast cancer and high specificity with low numbers of false positives

- Certainty of Findings and Case Scores to assist in clinical decision-making and prioritizing caseloads

- Workflow solution that renders quick results while analyzing each image for detections

- Deep Learning technology allows for continuously improved algorithm performance via updates

Clinical Performance Benefits

Based on FDA reader study results, ProFound AI for tomosynthesis offers radiologists:

- 8.0% average increase in sensitivity

- 6.9% average increase in specificity

- 7.2% average reduction in recalls

- 5.7% average improvement in radiologists AUC

- 52.7% reduction in reading time

*ProFound AI for 2D Mammography is CE Mark Approved. It is not available for sale in the U.S. ProFound AI for Tomosynthesis is FDA Cleared, CE Marked and Health Canada Licensed.
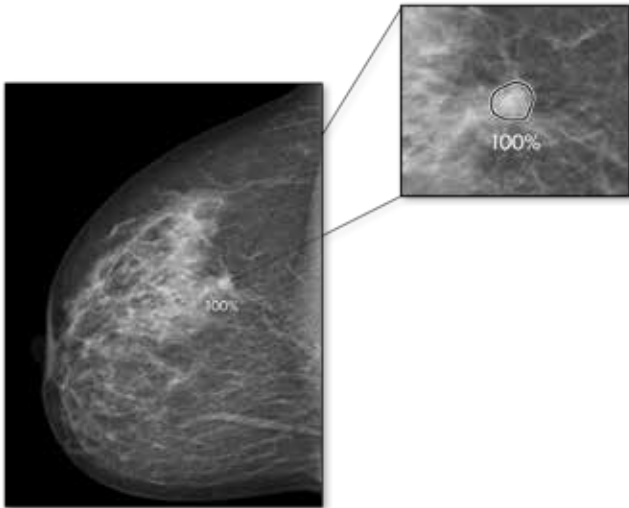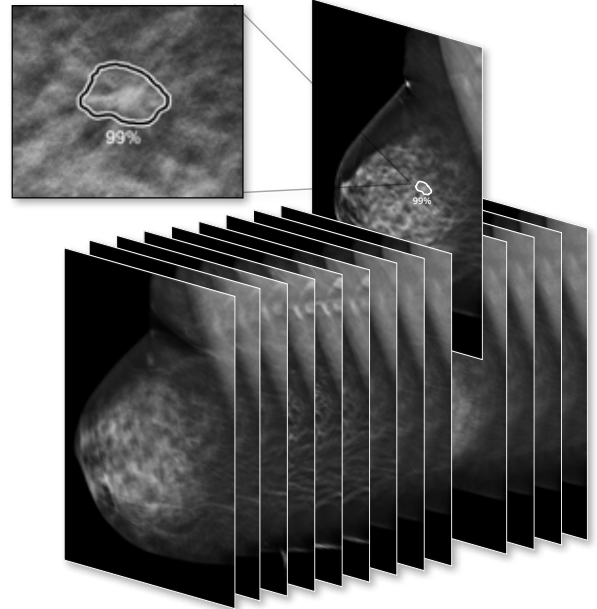
Certainty of Finding and Case Scores

The ProFound AI algorithm is trained to detect malignant soft tissue densities and calcifications for both mammography and tomosynthesis. Certainty of Finding and Case Scores are assigned to each detection and each case respectively. Certainty of Finding and Case Scores are relative scores computed by the ProFound AI algorithm and represent the algorithm's confidence that a detection or case is malignant. The scores are represented on a 0% to 100% scale. A higher score indicates a higher level of confidence in the malignancy of the detection or case. The Certainty of Finding and Case Scores serve as a guide to the interpreting radiologist to aid in determining if a suspicious finding or case needs further workup.
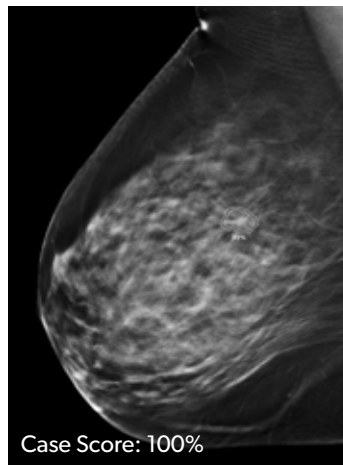
2D Mammography

Tomosynthesis

Case Score for 2D Mammography and Tomosynthesis

Case Score: 100%

Platform

The ProFound AI platform for breast imaging includes detection solutions for 2D mammography, tomosynthesis and density assessment. This powerful platform is scalable for future applications, including risk assessment.

ProFound AI runs on the industry-leading PowerLook server platform with NVIDIA Graphical Processing Units (GPU). PowerLook is a flexible and reliable DICOM platform that easily integrates with image modalities, mammography review workstations, PACS, and image storage systems. Leveraging the latest in GPU technology, the algorithm can rapidly process cases, ensuring results are available to radiologists in the most efficient manner.

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