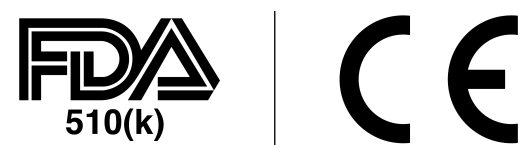




Application Note

Breast AI Suite
for cancer detection
and density



Fully integrated with
powerserver™

User BDRURYWorklist *AI REVIEWED

Worklist Search Advanced Emergency Access Patient Search

Status

Acce:	Date/Time	Facility	Patient ID	Accession #	Patient	Description	Images	Case Score	Density
CARPL REVIEWED (31)									
ICAD REVIEWED (10)									
	12/20/2018 8:56:30 AM	ICAD	EWBTH0000...	RAM1282	EWBTH0000663	B/L MLOS AND CCS + TOMO	9	99	b
	3/4/2015 10:04:24 AM	ICAD	FUJTJ0000137	RAM1280	FUJTJ0000137	SCREEN MAMMO AND BREAST TOMO W CAD	9	95	
	9/26/2019 11:16:32 AM	ICAD	BCA 0001624	5329249	BCA 0001624	IWC MAMMO+3D SCREEN	12		
	12/14/2018 12:27:02 PM	ICAD	SLSTH00030...	RAM1274	SLSTH0003014	3D MAMMOGRAM SCREENING DIGITAL W/CAD	9		
	2/17/2021 3:13:35 PM	ICAD	BCA 0001624	5752926	BCA 0001624	IWC MAMMO+3D SCREEN	14	85	
	2/8/2020 9:37:23 AM	ICAD	SLSTH00030...	RAM1273	SLSTH0003014	3D MAMMOGRAM SCREENING DIGITAL W/CAD	9	94	
	5/6/2025 1:10:00 PM	ICAD	ICAD01	IC1	DEMO^ICAD^1	SCREEN MAMMO AND BREAST TOMO W CAD	12	55	b
	5/6/2025 1:23:54 PM	ICAD	ICAD04	IC4	DEMO^ICAD^4	SCREEN MAMMO AND BREAST TOMO W CAD	17	83	a
	5/6/2025 4:08:45 PM	ICAD	ICAD02	IC2	DEMO^ICAD^2	SCREEN MAMMO AND BREAST TOMO W CAD	10	74	b
	5/6/2025 4:35:39 PM	ICAD	ICAD03	IC3	DEMO^ICAD^3	SCREEN MAMMO AND BREAST TOMO W CAD	11	7	b

EWBTH0000663 | F | @RSPS-INTEGRATIONS PowerReader+RIS

File Edit View Settings RIS Settings Window Help

MG 01 OV

EWBTH0000663 F
ID: EWBTH0000663 Acc: RAM1282

12/20/2018
Ser: 1 Img: 1

Patient Name: ewbth0000663
Patient ID: ewbth0000663
Patient DOB/Age: 053Y
Accession #:
Study Date: 12/20/2018 8:56:30 AM

ProFound Breast Health Suite
ProFound AI® Scorecard

ProFound AI Detection Case Score

02979100

99

PowerLook Density Assessment

1.02.03.04.0

2.2b-

ICAD, Inc. 2 Townsend West, Suite 6 Nashua, NH 03063

iCAD

LCC

EWBTH0000663-F
ID: EWBTH0000663 Acc: RAM1282
12/20/2018
Ser: 71300000 Img: 72

60%30%

AI
POWERED
INTEGRATED WITH
ramsoft

3 cm

ICAD, Inc.
ProFound AI 3D - 4.0 2.0-M
Case Score: 99
Summary of Detections: Succeeded
Density Findings: 3
kVp: 33 mA: 200 MGD(dGy):
Force(N): 97 Thickness(mm): 61.0 Rot: 0

ProFound iCAD's Breast AI Suite applies deep learning to identify cancer and evaluate breast density, providing scores for individual lesions and cases. ProFound Density addresses subjectivity in breast density reporting by categorizing breast density according to the BI-RADS® 5th edition density categories. ProFound AI Risk delivers a personalized 1–2-year Risk Score, is CE Marked and Health Canada Licensed, and is available in the US solely for investigational use.

How iCAD Enhances RamSoft's PowerServer Platform

Embedded AI displays a Case Score on the PowerServer worklist and helps Radiologists prioritize suspicious cases to be read before patients leave. AI-CAD on the 3D mammography (tomosynthesis) images and 2D CAD AI CAD and 2D CAD apply color coding to lesions, red being most suspicious and yellow being intermediate.

Tomosynthesis will identify the slices with suspicious findings for each view. The AI algorithm includes prior mammograms in its analysis. A ProFound Scorecard provides an overview of the Case Score, Density Assessment, and Risk Evaluation. Generation AI has twice the training datasets and more advanced

deep learning capabilities compared to the third generation AI.

KEY FEATURES

- **3D AI-CAD:** Artificial Intelligence (AI) for digital breast tomosynthesis (DBT) to detect the type of malignant soft tissue densities and calcifications to improve cancer detection, reduce false positives, and decrease reading time.
- **2D mammography CAD:** Detection aid of malignant soft-tissue densities and calcifications.
- **Density Score:** Unique two-part algorithm to assess the dispersion and localized concentration of breast density, to assess with BI-RADS breast density assessment.
- **Worklist Case Score** for prioritization: Alert the Radiologist of positive cases to read before the patient leaves.
- **Individual cancer finding:** Individual findings are marked and color-coded based on the lesion score level of suspicion.
- **3D Navigation:** AI navigation in 3D (tomosynthesis) will identifies the images with suspicious findings and displays a color-coded lesion score.
- **ProFound Scorecard:** Color-coded case score for detection and density score.

KEY BENEFITS

- "Smartest AI" 4th generation with deep learning AI has twice the training dataset compared to 3rd generation AI
- Priors incorporated into current AI analysis
- Replaces second reading
- AI learns and improves over time:
 - Increases Positive Predictive Values for biopsies
 - Raises cancer detection rates
 - Reduces rate of false positives
- AI navigation in 3D highlights suspicious images, reducing load for the Radiologist.
- Assists Radiologists who don't specialize in mammography

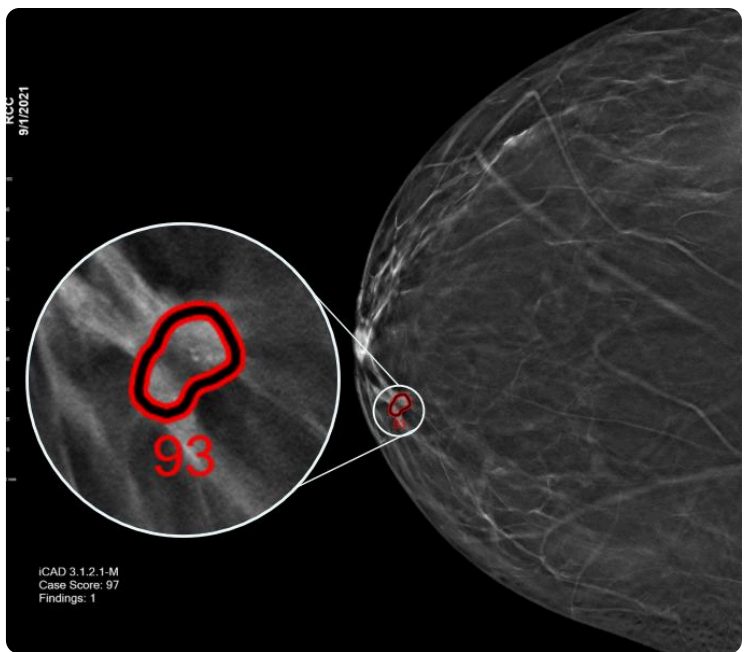
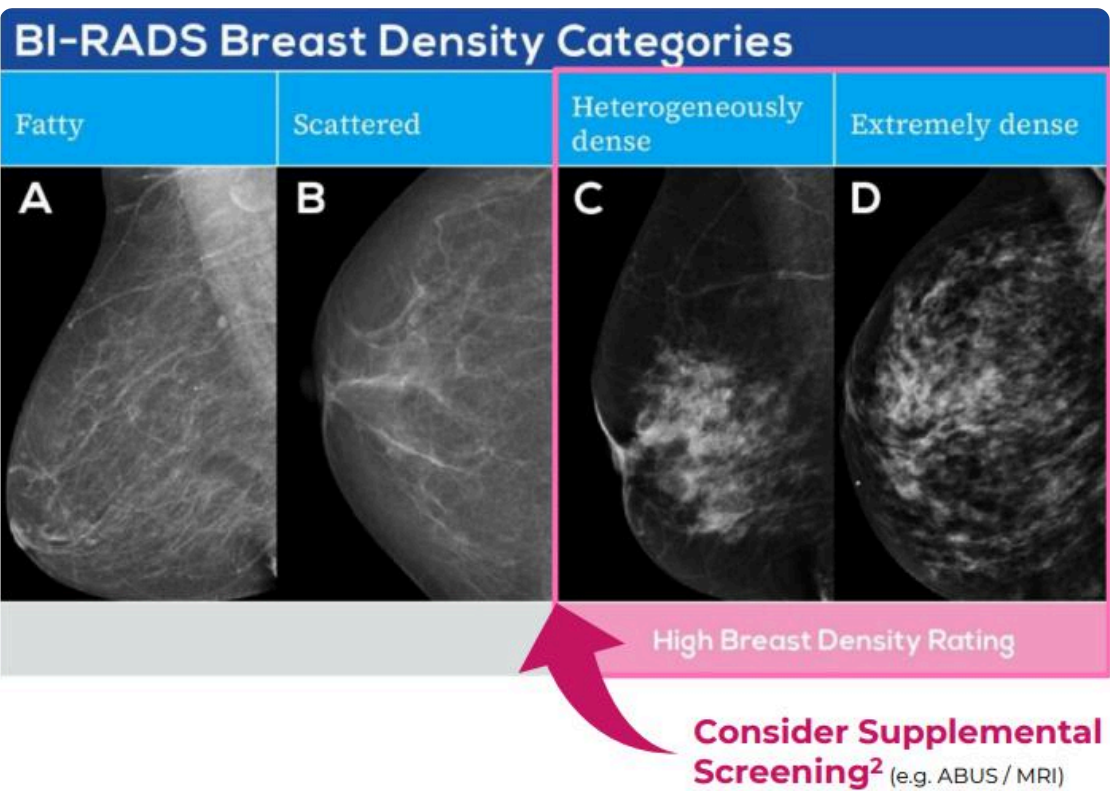
Improved Accuracy to ProFound Detection V4 improves and accuracy

- **50% improved** in dense breast detection
- **60% higher sensitivity** for invasive lobular cancers
- **21% better detection** of invasive cancers
- **38% improvement** for cancers under 1 cm

Reduces False Positives

- **20% fewer** vascular calcification marks
- **51% fewer** non-vascular calcifications

- Differentiate your center with advanced clinical technology
- Enhance patient satisfaction with improved screening service
- Aligns with quality improvement and accreditation programs
- Reduction in recall rate



Critical Insights at a Glance

PR

PowerWorklist

ramsoft

User BDRURY

Worklist *AI REVIEWED

Worklist

Search

Advanced

Emergency Access

Patient Search

Status

• Acces:	Date/Time	Facility	▲ Patient ID	Accession #	Patient	Description	Images	Case Score	Density
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Worklist Case Score and Density

Decrease recall rates and patient stress with high **Case Score on the worklist** alerting the facility to keep the patient for further imaging

High breast density rating to consider supplemental screening.



Individual Lesion Marks:

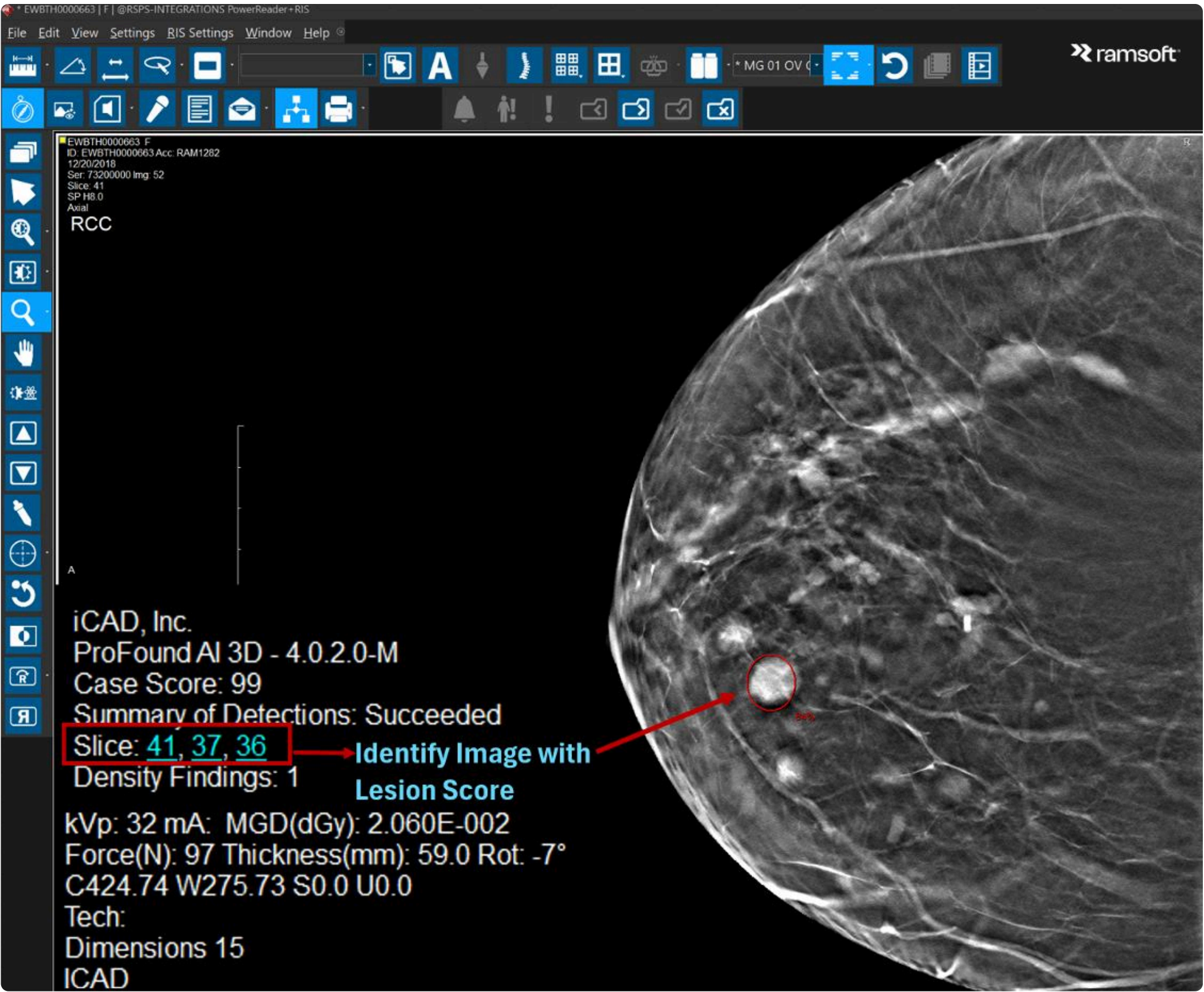
AI detection marks lesions on mammography 3D images using a color-coded system, with each mark representing a specific level of suspicion. Lesion marks are color scored as **Low** (0-19), **Intermediate** (20-69), or **High** (70-100) degree of suspicion of breast cancer.

3D Slice Navigation

The detection algorithm identifies malignant soft tissue densities and calcifications, and then identifies the slice in the 3D MLO and CC image stack with the findings.

As a Radiologist, it is mentally and visually demanding to view 30+ images for the CC and MLO, right and left. The repetitive strain and prolonged wrist flexion can lead to repetitive strain effects.

AI navigation in 3D can identify the slices with suspicious findings. With the navigation tool, there is a reduction in cognitive load and Radiologist fatigue to identify subtle abnormalities and lesions, leading to improved accuracy.





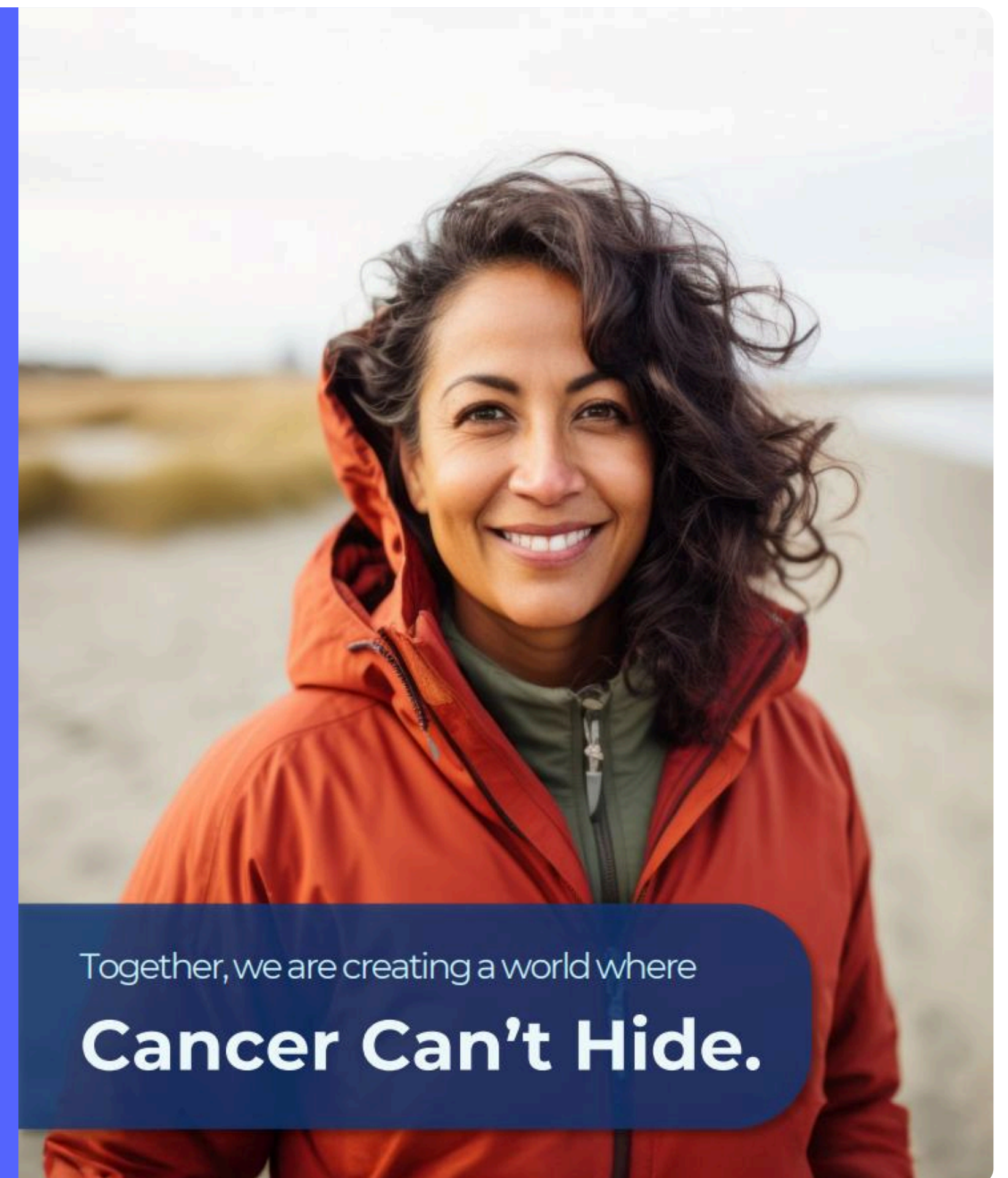
Improved Breast Cancer Detection with Artificial Intelligence in a Real-World Digital Breast Tomosynthesis Screening Program

The purpose of this study is to compare radiologists' breast cancer screening performance before and after the implementation of an artificial intelligence (AI) detection system for digital breast tomosynthesis (DBT).



Improving Reading Time of Digital Breast Tomosynthesis with Concurrent Computer Aided Detection

PowerLook® Tomo Detection by iCAD, Inc. was shown to reduce DBT reading time by 29.2% without compromising radiologist accuracy.



Together, we are creating a world where

Cancer Can't Hide.

RamSoft is pleased to have a wide variety of leading AI-based partners that are fully integrated into their PowerServer™ and/or OmegaAI® platforms. Some of these partners include:

Generative AI Reporting



Cloud fax and digital workflow



AI marketplace with testing and monitoring



AI-powered medical coding



Mammography CAD AI and Triage



Worklist orchestration



Automated workflows for front desk



Practice management and medical billing



Cloud-based medical billing





workflow accelerated
patient care accelerated
imaging accelerated

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