Using Transpara Breast AI to Reduce Radiologist Workload and Improve Diagnostic Confidence

Lake Medical Imaging : A Case Study

AT A GLANCE

Lake Medical Imaging, a full-service diagnostic imaging practice in Central Florida, was the nation's first independent outpatient imaging center to receive the **Diagnostic Imaging Center of Excellence designation** from the American College of Radiology (ACR). Performing more than 55,000 mammograms every year, Lake Medical provides customized breast imaging for all women, featuring 3D screening and diagnostic mammography, contrast enhanced mammography, breast MRI, screening ABUS, breast US and implemented Transpara breast AI in 2023 to help radiologists **more easily find cancers and recognize normal cases**, in order to **improve patient outcomes**.

Cathrine E. Keller, MD, Emeritus President and Managing Physician, discusses the workload challenges that led Lake Medical to adopt breast AI and emphasizes the role of radiologists in using AI as an assistant rather than a replacement.

Cathrine E. Keller
MD, Former President and Managing Physician at Lake Medical Imaging

Lake Medical Imaging

For more than 50 years, Lake Medical Imaging has been delivering state-of-the-art diagnostic and interventional radiology services to patients in Central Florida. An ACR Breast Imaging Center of Excellence, Lake Medical includes board-certified radiologists across six large imaging centers, one in Leesburg and five in The Villages.

Named #1 in breast cancer detection in the South U.S., Lake Medical received the national Imaging Innovation Award from the Radiological Society of North America, earned a designation as one of the "Top 100" diagnostic imaging practices in the nation by Radiology Today magazine.

FIND CANCER MORE EASILY

Lake Medical Imaging of Central Florida operates six large imaging centers, one in Leesburg and five in The Villages. As an ACR Breast Imaging Center of Excellence, Lake Medical provides a full range of breast imaging solutions and performs more than 55,000 mammograms each year.

Following the example of Cathrine E. Keller, MD, Former President and Managing Physician, over a dozen general and breast radiologists provide customized breast imaging for all women. In 2023, Dr Keller led the adoption of Transpara breast AI with the goal of helping radiologists find cancer and recognize normal cases more easily. Dr. Keller is focused on the best way to leverage new technology in order to improve patient outcomes and has been a consistent early adopter of new imaging techniques that create clinical benefits.

Transpara is **FDA cleared** and has European CE Marking (MDR) for both abnormality detection and density assessment for use with 2D and 3D mammography from multiple manufacturers.

It has been used to analyze more than 7 million mammograms – including 2 million tomosynthesis exams – at leading breast centers in more than 30 countries, delivering **consistent results across regions and demographics**.

"First and foremost, radiologists must be comfortable with AI and the potential benefits it brings to improving patient care," said Dr Keller. "However, it was workload challenges that led me to consider implementing breast AI. As the number of radiologists reading mammography in my group diminished, we had a hard time absorbing the growing exam volume and had to find a sustainable solution to improve workload and reduce burn-out."

REAL-WORLD TIME SAVINGS

As breast AI gained traction in the market, claims about **time savings and increased efficiency from using breast AI** caught Dr Keller's attention in hopes of achieving those same gains at Lake Medical.

"The time savings reported by some companies is often in relation to reader studies alone, which is not the real-world. They're not looking at prior mammograms, they're not analyzing the mammogram in the same way as when you're really reading," noted Dr Keller. "With Transpara, we have realized time savings, in part because the negative predictive value is so high. It really helps get through normal mammograms faster. At the same time, for more difficult cases, it is helpful to have potentially suspicious findings highlighted to give those areas that might have been overlooked, more scrutiny."

Several studies have proven the **workload benefits** associated with Transpara. This includes, "An Artificial Intelligence–based Mammography Screening Protocol for Breast Cancer: Outcome and Radiologist Workload," published in Radiology. The results showed that the use of Transpara reduced false positives and radiologists' workload by up to 62.6% in the largest Danish screening program. [1]

In another study, "Artificial intelligence-supported screen reading versus standard double reading in the Mammography Screening with Artificial Intelligence trial (MASAI): a clinical safety analysis of a randomized, controlled, non-inferiority, single-blind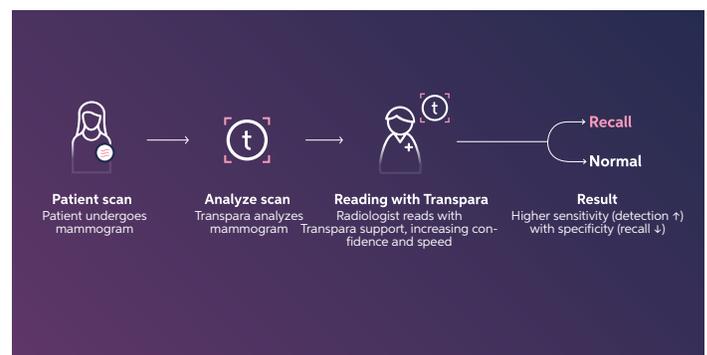ed, screening accuracy study," [2] published in Lancet Oncology, **Transpara-assisted workflow helped detect more cancers while safely reducing reading workload by 44%** with no change in recall rate. MASAI is the first time that a breast AI solution is featured in a randomized controlled trial.

"The Transpara breast AI helps speed up the identification of normal cases and provides greater confidence."

LOWER RECALLS AND GREATER DIAGNOSTIC CONFIDENCE

Lake Medical offers same-day results in an effort to eliminate potential weeks of worry. If a woman's mammogram detects something suspicious, follow-up imaging is performed immediately. Dr Keller and her team pride themselves on providing the best screening and diagnostic services available, and Lake Medical has a lower recall rate for several reasons. First, the vast majority of women have prior mammograms that are reviewed whenever possible, resulting in a significant impact on recall rates. Using contrast enhanced mammography enables radiologists to quickly resolve potential BI-RADS 3 findings that previously would have been recalled.

"Finally, the Transpara breast AI helps speed up the identification of normal cases and provides greater confidence," added Dr Keller. "When our radiologists, particularly the general radiologists who read mammograms, review a mammogram of a dense breast that Transpara has marked as low risk, they feel much more comfortable and confident in the decision-making process to not recall that patient."

Patient scan
Patient undergoes mammogram

Analyze scan
Transpara analyzes mammogram

Reading with Transpara
Radiologist reads with Transpara support, increasing confidence and speed

→ Recall
→ Normal

Result
Higher sensitivity (detection ↑) with specificity (recall ↓)

(1) Lauritzen, et al. Radiology (2022) 304:1, 41-49

(2) Lång, et al. Lancet Oncology (2023) 24:8, 936-944

HOW TO EVALUATE BREAST AI

"Lake Medical has always been dedicated to adopting leading-edge technology to improve patient care and reduce workload for our staff and this includes breast AI," noted Dr Keller. "I know that AI is relatively new, and clinicians and administrators don't want to make a mistake and adopt the wrong technology. However, not moving forward based on analysis paralysis does nothing to improve patient care. That's why I am sharing some of the questions that guided my due diligence process for selecting Transpara."

According to Dr Keller, breast AI providers must be committed to **improve accuracy and consistency**, and **reduce unnecessary recalls**, a common cause of anxiety, increased cost, and inconvenience for women undergoing mammography. This commitment must be demonstrated through evidence-based performance, clinically validated through reader studies and prospective and retrospective trials conducted by leading breast imaging researchers around the world. Other criteria Dr Keller reviewed include:

▶ Is it **FDA Cleared** for use with 2D and 3D mammography in the United States and available for clinical use.

▶ Has the tool's actual performance been validated? Is there **performance data** that has been evaluated by external third parties and been made public via peer-reviewed studies and conference presentations? Can these results be validated by studies involving mammograms and radiologists from both the United States and Europe that show that radiologists, regardless of their experience level, increased their accuracy?

▶ How **easy** is the company **to work with** on IT integration? On Training? How flexible are they on contracting? How committed is the company to ongoing and proactive algorithm improvements as well as continuous testing and validation to ensure accurate and consistent results?

"I chose Transpara, not only because of the strength of its published data, but also all of the company's dedication to technical and business support designed to ensure our success," said Dr Keller. "Once it was deployed at all of our sites, the Transpara team collaborated with us on training and ramp up and within six weeks or so, I saw a growing confidence with the system across the entire team."

> "Ultimately, AI is like the internet, you're not going to get rid of it. The main thing is for radiologists to learn to be comfortable with the entire concept of AI – it has never been about replacing radiologists. The only radiologists who should be concerned about getting replaced are the ones who do not use AI to improve cancer detection and patient care."

AI IS HERE TO STAY

Dr Keller emphasizes, "as the radiologist you are still responsible for the interpretation. Breast AI is a tool that can support your decision-making process if you use AI like an assistant that can speed up the process by highlighting potential abnormalities."

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Lake Medical Imaging is:

› Finding more cancers earlier and with better workflow delivered with Transpara

› Delivering outstanding patient care by combining their strong radiology skills and cutting edge imaging tools together with the confidence they get from Transpara

› Confident that their robust evaluation of Breast AI and selection of Transpara gave them a solution that will continue to grow with their practice