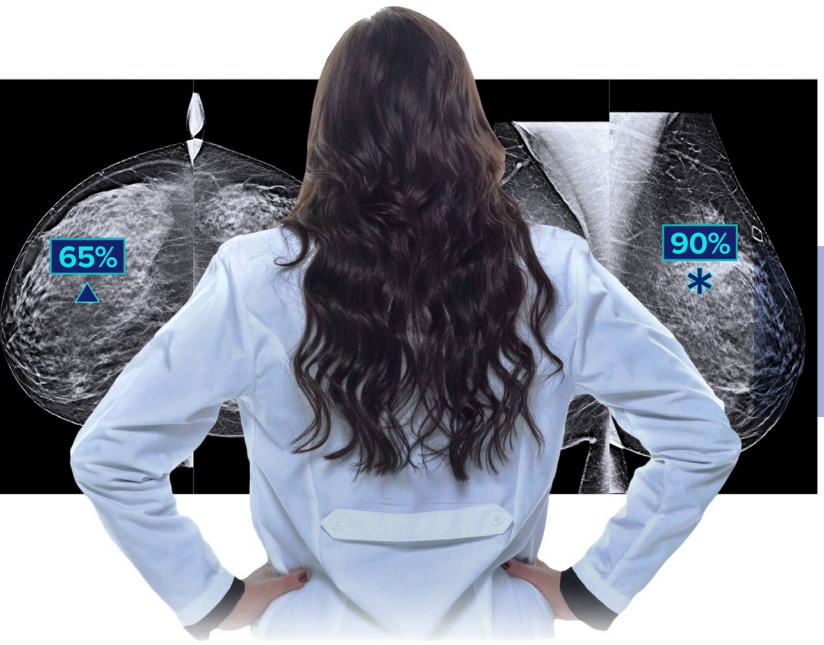


Addressing Reading Distractions

Feel Confident Reading Exams with Genius AI® Detection Solution

Fellowship-trained breast radiologist Chad Reihm, MD, was at first a skeptic of Hologic's Genius AI® Detection solution when Benefis Health System replaced its previous 2D Computer Aided Detection (CAD) system in 2022. Experience told him that the hospital's prior generation CAD system was unreliable in its readings and often marked too many lesions on the images, and he anticipated similar results from the new solution.

However, after using Genius AI Detection solution over the past year, Dr. Reihm's confidence in its artificial intelligence (AI) has continued to increase as he has seen the solution's accurate markings of suspicious lesions—those both subtle and obvious. He now trusts the AI technology as a first reviewer, which has helped reduce disruptions to his reading time and improved workflow.

Chad Reihm, MD
Benefis Health System
Great Falls, MT

"Trust is earned," said Dr. Reihm. "When we first implemented Genius AI Detection technology, I was skeptical about it being useful—but that's far from the case. Instead, I have found that it helped cut our distractions in half."

Enhanced Workflow with Less Disruptions

Many patients visiting Benefis Health System for their annual mammograms travel over 300 miles for their appointment. Prior to implementing the Genius AI Detection solution, radiologists would prioritize reading results for those patients who traveled over 50 miles for their mammograms before they departed the facility to respect this travel time and avoid an additional follow-up trip. This required radiologists to stop what they were working on to read the results at once.

"One of the top reasons that a radiologist misses a lesion is because they are interrupted," said Dr. Reihm. "Prior to Genius AI Detection technology, we would stop reading to address out-of-town patient results, which could have resulted in a missed diagnosis."

Now, with the AI-guided technology, he feels so confident in its initial results that out-of-town patients who have no findings as indicated by Genius AI Detection solution at the time of imaging, are sent home without immediate review by a radiologist. Dr. Reihm estimates that this constitutes more than half of the cases he would previously immediately review. This now enables him to better prioritize cases that are more complex, and review the no findings as indicated by Genius AI Detection solution cases later.

> "Prior to Genius AI Detection technology, we would stop reading to address out-of-town patient results, which could have resulted in a missed diagnosis."

For more information, contact your Hologic representative

hologic.com/geniusai-detection

> “The AI-guided technology can help get me off the fence on whether to call someone back or not. It gives me it's opinion, and I can choose to listen or not.”

Dr. Reihm’s trust in the deep learning technology was earned from his experience engaging with the Lesion and Case Score features, which have helped streamline readings without sacrificing results. Genius AI Detection solution, a deep learning-based cancer detection technology for breast tomosynthesis, can accurately identify Regions of Interest (ROI) containing malignancy features with greatly improved specificity compared to conventional CAD algorithms.[i,ii] Results can be seen in the exam room, so the technologist can identify any findings almost at once and triage according to their workflow.

“The technology makes smart calls and does not ‘cry wolf’ like other CAD systems I have used in the past,” said Dr. Reihm. “Our other hospital in Great Falls still has the prior Hologic CAD system, and I miss the Genius AI Detection solution when I assist there.”

By helping to cut down on distractions, Dr. Reihm can prioritize his patient readings based on case complexity and concerns, rather than geographic location.

Improved Patient Experience

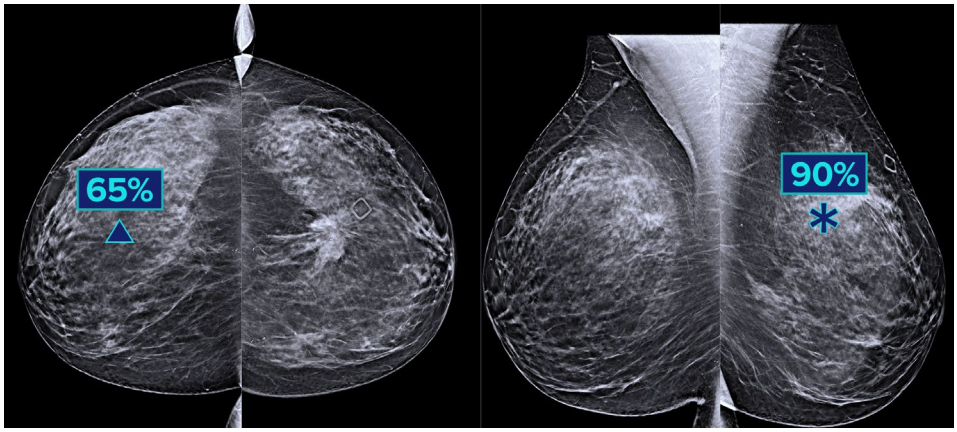
Dr. Reihm’s trust in the system not only assists with his immediate evaluation of results, but also in making decisions on more complex exams. He described Genius AI Detection solution as “a security net” to help inform his decisions when making patient callbacks.

“Every callback is a trauma, as it gives the patient anxiety,” said Dr. Reihm. “You need to balance that with not missing anything, and so the AI-guided technology can help get me off the fence on whether to call someone back or not. It gives me its opinion, and I can choose to listen or not.”

Genius AI Detection solution is designed to identify potential cancers in breast tomosynthesis images with high accuracy, and a false positive rate much lower than Hologic’s previous generations of 2D CAD software.[i] In fact, Genius AI Detection 2.0 solution has over 70% reduction in false positive markings per case compared to Hologic’s 2D CAD (ImageChecker CAD).[iii]

In Dr. Reihm’s opinion, the solution can also assist radiologists who do not specialize in breast care to provide more accurate readings and feel more confident in their decisions. As a fellowship-trained radiologist, Dr. Reihm believes this added layer of due diligence improved his workflow, resulting in an enhanced patient experience for those who do not need to go through the unnecessary anxiety of false callbacks.

Genius AI Detection solution is more than a deep learning-based software that detects potential cancers in breast tomosynthesis images[i], its workflow tools can also be utilized to help triage patients at the point of care, aid in diagnostic performance[iv], and potentially reduce patient anxiety through unnecessary callbacks. By building on Hologic’s history of technical innovation and commitment to improving the lives of women, this AI-guided solution can help radiologists identify breast cancers and future software releases will continue to improve on this capability.



genius AI® DETECTION

[i]FDA Clearance: K201019
[ii]DHM-10095_002 MAN-03682. Understanding R2 ImageChecker CAD 10.0. Image Checker PMA Approval P970058
[iii]Kshirsagar, A. (2023). Comparison between ImageChecker CAD and GAID algorithm on sequestered FDA database. Refer to Hologic document (DHM-14593).
[iv]Based on analyses that do not control type 1 error and therefore cannot be generalized to specific comparisons outside this particular study. In this study: The average observed AUC was 0.825 (95% CI: 0.783, 0.867) with CAD and 0.794 (94% CI: 0.748, 0.840) without CAD. The difference in observed AUC was +0.031 (95% CI: 0.012, 0.051). The average observed reader sensitivity for cancer cases was 75.9% with CAD and 66.8% without CAD. The difference in observed sensitivity was +9.0% (99% CI: 6.0%, 12.1%). The average observed recall rate for non-cancer cases was 25.8% with CAD and 23.4% without CAD. The observed difference in negative recall rate was +2.4% (99% CI: 0.7%, 4.2%). The average observed case read-time was 52.0s with CAD and 46.3s without CAD. The observed difference in read-time was 5.7s (95% CI: 4.9s to 6.4s).