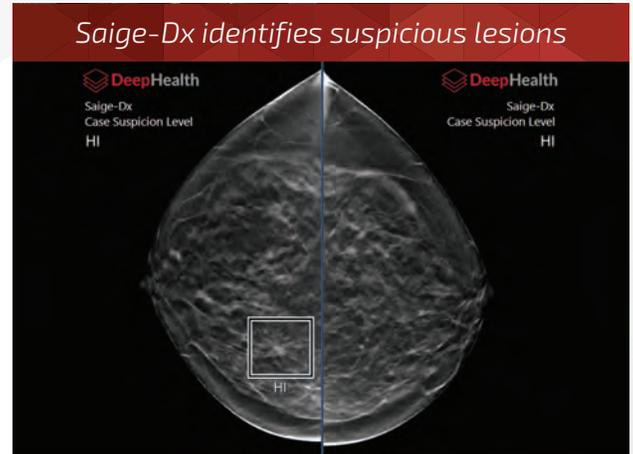# SAIGE-Dx

Mammography Diagnostic Aid Software

Identify the presence of potentially cancerous lesions in screening mammograms earlier, with more accuracy and efficiency.

Breast cancer screening saves lives, yet with advancing technologies and increasing demands on radiologists there is mounting pressure to deliver the highest quality of care in less time. DeepHealth's Saige-Dx™ is an innovative new AI tool that helps radiologists interpret screening mammograms with more efficiency and accuracy to aid in meeting these demands.

Saige-Dx identifies suspicious lesions

A Trusted Solution

Saige-Dx introduces one of the highest performing artificial intelligence algorithms to the breast cancer screening market. Saige-Dx was trained on more than a million images, 100,000 cases, and 8,000 biopsy-proven cancers, from diverse populations and a variety of mammography machines. The technology has been tested and proven using the largest network of freestanding outpatient imaging clinics in the nation.

Trusted Science

Saige-Dx's exceptional performance is featured in DeepHealth's recent *Nature Medicine* article exhibiting its potential to detect breast cancer one to two years earlier than current practice[1]. A subsequent pivotal study, used to support FDA clearance, exhibited improvements for every reader when using Saige-Dx with an average AUC increase from 0.865 without Saige-Dx to 0.925 with Saige-Dx[2].

Both generalists and breast imaging specialists improved while using Saige-Dx, with generalists reaching breast imaging specialist performance. The study showed that Saige-Dx enhances a radiologist's ability to detect cancer while decreasing the number of false positive recalls. On its own, Saige-Dx detected 98.5% of cancers in the study.
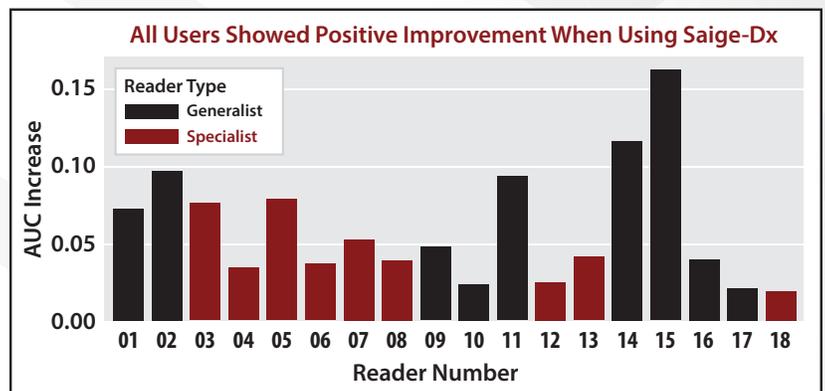
[1] Lotter, W., Diab, A.R., Haslam, B. et al. Robust breast cancer detection in mammography and digital breast tomosynthesis using an annotation-efficient deep learning approach. Nat Med 27, 244–249 (2021). https://doi.org/10.1038/s41591-020-01174-9

[2] Data on file.

Saige-Dx Benefits

- • All readers improve performance with Saige-Dx
- • Effective across soft tissue lesions and calcifications
- • Helps improve radiologist's ability to read dense breasts, reducing false negative rates
- • Generalists have the potential to achieve breast specialist level performance

Saige-Dx Benefits[2]

Catch More Cancers Earlier

Saige-Dx is designed to help radiologists detect cancer more accurately without increasing recall rate. In the Saige-Dx pivotal study, the readers detected 90% of cancers with the aid of Saige-Dx versus 81% of cancers without assistance. Saige-Dx saves lives by helping radiologists detect cancers that would have otherwise been missed (false negatives) sooner, enabling clinicians to treat earlier. Earlier treatment can lead to improved outcomes.

Reduce Unnecessary Callbacks

Saige-Dx improves patient care by reducing unnecessary recalls. With fewer callbacks, patients avoid the anxiety, stress and pain of returning for more diagnostic workup including potential biopsy.

Save Radiologists Time

Saige-Dx helps improve efficiency by automatically differentiating the cases that have a high likelihood of cancer from the cases that have a low likelihood of cancer. It enables faster reads by allowing radiologists to focus on the suspicious cases. Bounding boxes are not displayed for regions and cases identified as Minimal Suspicion, helping prevent distraction and speeding up the reading process.

### Read Confidently Across Races and Ethnicities

Saige-Dx performs consistently across patient race and ethnicity, helping readers across different patient populations.

Read More Consistently

Saige-Dx helps radiology groups as a whole read more consistently at a higher performance level. In the pivotal study, Saige-Dx decreased inter-reader variability that typically exists between radiologists.
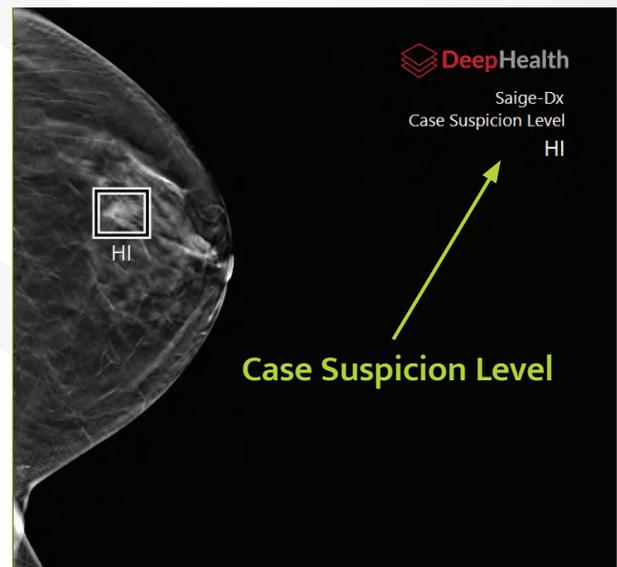
Saige-Dx Outputs

Saige-Dx is designed with the radiologist in mind to produce intuitive and actionable results that fit efficiently in the radiologist's workflow. Saige-Dx assigns a Suspicion Level to each detected finding and to the entire case. The Suspicion Level indicates the strength of suspicion of the presence of cancer, ranging from Minimal (MIN), to Low (LO), Intermediate (INT), and High (HI). The Suspicion Levels and findings fit seamlessly into a radiologist's viewer, displayed as an overlay over the original mammography images with the click of a button.
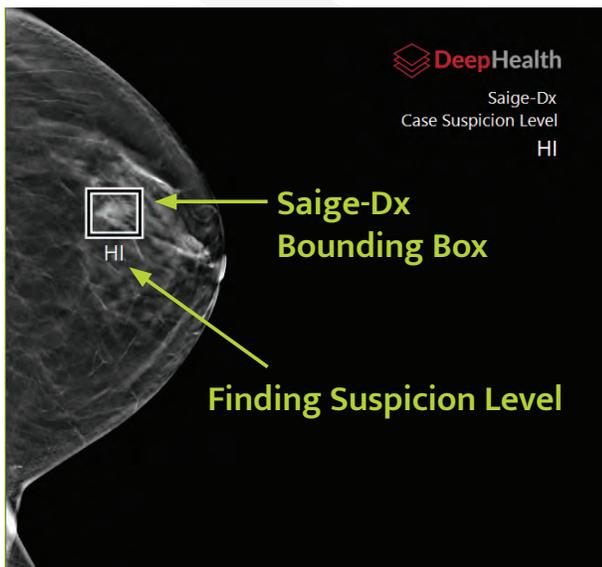
Saige-Dx provides Finding Suspicion Levels

Saige-Dx reports the Case Suspicion Level

Finding Suspicion Level:

The "Finding Suspicion Level" represents the strength of suspicion that a given region of interest outlined by a bounding box is malignant. Depending on the case, there may be no findings or there may be multiple. Each finding is assigned its own Suspicion Level.

Case Suspicion Level:

The "Case Suspicion Level" indicates the strength of suspicion that the overall case contains at least one malignant finding. The Saige-Dx AI algorithm combines information from all processed images and findings into a single Suspicion Level.

Find Out More To learn more about Saige-Dx and to set up a demonstration, please contact DeepHealth at (424) 832-1480.