
RSNA Press Release

RSNA Announces Launch of Screening Mammography Breast Cancer Detection AI Challenge

Released: November 28, 2022

OAK BROOK, Ill. (Nov. 28, 2022) — The Radiological Society of North America (RSNA) has announced the launch of the [RSNA Screening Mammography Breast Cancer Detection AI Challenge](#). The latest in a series of such research competitions that RSNA has conducted since 2015, this challenge will evaluate competitors in their ability to develop artificial intelligence (AI) to aid in finding breast cancer on screening mammography images.

Breast cancer is the most commonly occurring cancer worldwide, according to the World Health Organization. In 2020 alone, there were 2.3 million new breast cancer diagnoses and 685,000 deaths.

Breast cancer screening of the most vulnerable population has been shown to reduce cancer fatalities. AI tools have the potential to make screening more efficient and effective.

"Although there is a worldwide shortage of radiologists to interpret screening mammograms, radiologists remain concerned about how well the AI systems will work in their patient population," said Dr. Linda Moy, a professor of radiology at the NYU Grossman School of Medicine and editor designate of the journal Radiology. "This diverse well-curated dataset may be used to assess the generalizability to diverse patient populations. This RSNA Mammography AI Challenge will catalyze collaboration to improve the diagnostic accuracy of screening mammography and save patients' lives."

The dataset to be used in the challenge was contributed by mammography screening programs in Australia and the United States. It includes detailed labels, with radiologists' evaluations and follow-up pathology results for suspected malignancies.

For the challenge competition, the accuracy of machine learning models developed by contestants to detect cancer will be evaluated against this ground truth dataset. At the conclusion of the challenge, the dataset will remain available for use in further research.

This challenge is part of broader research project that will examine how models generated in the competition perform against previously unseen data and compare their performance to that of expert human observers. These questions are critical in determining how AI tools will perform in clinical settings.

"Large, curated datasets that the RSNA assembles for AI Challenges are a key resource driving improvement in radiology AI," said Dr. John Mongan, a professor of radiology at the University of California, San Francisco and chair of the RSNA Machine Learning

Steering Committee. "We anticipate that we will see an acceleration in mammography AI activity after release of this dataset, as we have seen in other areas with release of previous datasets."

The RSNA Screening Mammography Breast Cancer Detection AI Challenge will be conducted on a platform provided by Kaggle, Inc. The competition runs through March 2023. Following validation of the results, winners will be announced in late April. The top performing competitors will be awarded a total of \$30,000 and will also be recognized in a presentation at the RSNA 2023 annual meeting, November 2023 in Chicago.

For more information on the challenge, visit [RSNA.org/AI-image-challenge](https://www.rsna.org/AI-image-challenge) or contact informatics@rsna.org.

#

RSNA is an association of radiologists, radiation oncologists, medical physicists and related scientists promoting excellence in patient care and health care delivery through education, research and technologic innovation. The Society is based in Oak Brook, Ill. ([RSNA.org](https://www.rsna.org))