
RSNA Press Release

RSNA Announces Screening Mammography AI Challenge Results

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OAK BROOK, Ill. — The Radiological Society of North America (RSNA) has announced the results 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 tasked participants with developing artificial intelligence (AI) models that can accurately detect breast cancer from mammography images, potentially assisting radiologists in making more accurate and timely diagnoses.

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 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 of the journal *Radiology*. "This well-curated data may be used to assess the generalizability [of varying] patient populations. This RSNA Mammography AI Challenge will catalyze collaboration to improve the diagnostic accuracy of screening mammography and save patients' lives."

The challenge, hosted on a platform provided by Kaggle, Inc. (an Alphabet company), attracted nearly 1,700 teams from around the world. The competition was launched November 28, 2022, and ran through February 2023. The prize-winning solutions were then reviewed by a team of volunteer AI experts to confirm the results. The eight teams submitting the highest-scoring algorithms shared in \$50,000 total prize money.

The winning teams in the RSNA Screening Mammography Breast Cancer Detection AI Challenge are:

1. mr.robot
2. cancerdetectman
3. H.B.M.F.
4. CDI
5. Racers
6. Chiral Mistrals
7. luddite&MT
8. BCC

The review committee also awarded the Educational Merit Award to the mr.robot team for the clarity of their solution and accompanying presentation materials.

The dataset 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. The dataset will remain available for use in further research.

This challenge is part of a 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.

"The number of participants we had in this competition was amazing and reflects the high levels of interest in using large, high-quality datasets to advance the state of the art in mammographic diagnosis," 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 expect that the dataset and the work of the contestants will provide an ideal foundation for rapid advance in breast imaging AI."

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

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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))