

Biomedical Informatics Grand Rounds

Wednesday, March 29, 2023 3:00 pm – 4:00 pm

AI in Breast Imaging



Etta Driscoll Pisano, MD

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University of Pennsylvania*

Remote Access

Join Zoom Meeting <https://stonybrook.zoom.us/j/95617197636?pwd=KytzZ2pVRG9SZGpKZUtpNXJISjNjZz09>

Meeting ID: 956 1719 7636 Passcode: 924293

In-Person talk: Medical and Research Translation (MART) Building, Room location 7M-0602

Bio: Dr. Etta Pisano is the Principal Investigator for the Tomosynthesis Mammographic Imaging Screening Trial (TMIST) which will compare digital mammography to tomosynthesis for breast cancer screening and has recruited over 80,000 women at 124 centers in the US, Canada, Argentina, Peru, Italy and S Korea since it opened in July 2017. She also is Adjunct Professor of Radiology at the University of Pennsylvania and serves as the Chief Research Officer at the American College of Radiology. She also chairs both the Imaging and Screening and Surveillance Committees of the ECOG-ACRIN Research Base, funded by the National Cancer Institute.

After completing her undergraduate degree in Philosophy at Dartmouth College, Dr. Pisano received her MD from Duke University School of Medicine. She did her radiology residency at Beth Israel Hospital/Harvard Medical School. She next served on the faculty at the University of North Carolina Medical School where she was founding Chief of Breast Imaging for 16 years before becoming Vice Dean for Academic Affairs, overseeing the research and education missions of the medical school. After serving as Dean of the College of Medicine at the Medical University of South Carolina, she moved to Boston to join the faculty at Harvard Medical School serving as Professor in Residence at Beth Israel-Deaconess Health System. Her career has focused on breast imaging with a special focus on the development and testing of new technologies. She is a member of the National Academy of Medicine.

Abstract: There are many potential applications of Artificial Intelligence applied to screening mammography. Screening mammography involves searching for occult malignancy in women without signs or symptoms of breast cancer. There are many potential pitfalls in screening where AI could improve patient care. Goals for potential algorithms include improving sensitivity, specificity, and overall diagnostic accuracy of radiologist interpretation of the mammograms, but there are many other potential applications that could improve practice and patient outcomes. The speaker will discuss a framework for how to evaluate the effectiveness of algorithms and how the FDA is assessing breast imaging products for approval in the US.

Educational Objects:

- To understand how AI might improve the clinical practice of breast imaging
- To understand a framework for evaluating potential AI applications in breast imaging
- To understand the various parts of the screening mammography process where AI might have impact on patient outcomes

Disclosure Statement: The faculty and planners have no relevant financial relationship with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing health care products used by or on patients.

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