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NEWS

RSNA Press Release

New Breast-Imaging Technology Could Save More Women's Lives

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At A Glance

- Unprecedented research is being made into digital mammography, ultrasound and magnetic resonance (MR) imaging as supplements to standard mammography.
- Supplemental breast screening techniques do not use radiation and could lower the age for women to be screened or increase the number of screenings in high-risk cases.
- Approximately 40,000 women die of breast cancer each year in the U.S., according to the American Cancer Society.

NEW YORK CITY - Using alternative imaging technologies to supplement mammography could help some 40,000 women dying of breast cancer each year, according to a researcher involved in an unprecedented number of studies investigating new screening techniques.

"Independent experts have confirmed that mammography is the best screening tool we have in the near-term, and one that will be difficult to replace," said Etta D. Pisano, M.D., professor of radiology and biomedical engineering and chief of breast imaging at the University of North Carolina School of Medicine at Chapel Hill. "But to save more lives, we need research to determine which technologies will be effective supplements to mammography, especially for high-risk women."

Dr. Pisano spoke today at a Radiological Society of North America (RSNA) media briefing on women's breast health.

Four clinical trials currently underway will determine whether digital mammography, ultrasound and magnetic resonance (MR) imaging can contribute to the early detection of breast cancer-and prevent deaths from the disease. Since ultrasound and MR imaging do not rely on radiation for imaging purposes, these two techniques could lead to a lowering of the screening age of women from 40 to years or increase the number of regular screenings for women at high risk for breast cancer, Dr. Pisano said.

"We're in the midst of a boom in testing additional modalities for the detection of breast cancer," Dr. Pisano said. "We are looking for increased sensitivity and increased specificity." The multi-center trials, sponsored by the American College of Radiology Imaging Network (ACRIN), a cooperative clinical trials group funded by the National

Cancer Institute, are:

Digital Mammographic Imaging Screening Trial (DMIST). In one of the largest cancer screening trials to compare digital mammography with screen-film mammography, nearly 50,000 women at 34 centers in the United States and Canada have undergone both standard screening mammography and digital mammography. The women are receiving follow-up mammography this year, and results are expected in spring 2005. Dr. Pisano is the study's chair.

Contralateral Breast Screening with MRI. MR imaging is being used on 1,000 women at high risk for breast cancer to determine the performance of the technology. Patients diagnosed with cancer in one breast received an MR exam of the other breast, determined to be cancer-free by standard mammography and physical exam. The patients are undergoing a year of follow-up. Results are expected in late 2005. Dr. Pisano is a principal investigator at one of 22 centers in the United State, Canada and Germany participating in this trial.

Screening Breast Ultrasound for High-Risk Women. Funded in part by the Avon Foundation, women are being enrolled at centers across the country to determine what role, if any, ultrasound has in detecting breast cancer in high-risk women. Participants will undergo an ultrasound screening and mammogram annually for three years. Dr. Pisano is a principal investigator at a participating site.

Treatment Monitoring with Dynamic MRI. Currently accepting enrollment, this trial is designed to yield new insights into breast cancer characteristics that determine a patient's response to treatment. Researchers will use MR imaging on women who received chemotherapy prior to surgery for locally advanced breast cancer. The researchers will measure tumor response to chemotherapy treatments in addition to examining tumor samples for biological markers. ACRIN and the National Surgical Adjuvant Breast and Bowel Project (NSABP) are co-sponsoring this study. Dr. Pisano is a co-investigator.

More information on these trials, including enrollment sites, is available at http://www.acrin.org. Dr. Pisano is also co-author of the Institute of Medicine report "Saving Lives: Strategy for Improving Breast Cancer Detection and Diagnosis" published in June.

RSNA is an association of more than 35,000 radiologists, radiation oncologists and related scientists committed to promoting excellence in radiology through education and by fostering research, with the ultimate goal of improving patient care. The Society is based in Oak Brook, Ill. (http://www.rsna.org)

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