

3D Mammography Significantly Increases the Detection of Breast Cancer Concludes a Study that Reviewed Close to Half a Million Exams Published in the *Journal of the American Medical Association (JAMA)*

Study using Hologic 3D Mammography systems is the largest to date involving 139 doctors from 13 U.S. academic and community-based sites

BEDFORD, Mass., June 24, 2014 /PRNewswire/ -- Hologic, Inc. (NASDAQ:HOLX) today announced that a groundbreaking study published in the June 25, 2014 issue of the *Journal of the American Medical Association (JAMA)*, found that Hologic's 3D Mammography (breast tomosynthesis) screening technology finds significantly more invasive cancers than a traditional mammogram. The researchers also found that 3D mammography reduces the number of women called back for unnecessary testing due to false alarms. That reduces anxiety, as well as health care costs.

The study, "Breast Cancer Screening Using Tomosynthesis in Combination with Digital Mammography," was led by Sarah M. Friedewald, MD of the Caldwell Breast Center, Advocate Lutheran General Hospital in Park Ridge, Illinois.¹ A total of 454,850 examinations (281,187 conventional mammograms compared to 173,663 3D mammography exams) were included in the study.

Significant findings include:

- A 41% increase in the detection of invasive breast cancers. (p<.001)
- A 29% increase in the detection of all breast cancers. (p<.001)
- A 15% decrease in women recalled for additional imaging. (p<.001)
- A 49% increase in Positive Predictive Value (PPV) for a recall. (p<.001)
PPV for recall is a widely used measure of the proportion of women recalled from screening that are found to have breast cancer. The PPV for a recall increased from 4.3 to 6.4%.
- A 21% increase in PPV for biopsy. (p<.001)
PPV for biopsy is a widely used measure of the proportion of women having a breast biopsy that are found to have breast cancer. The PPV for a breast biopsy increased from 24.2 to 29.2%.
- No significant change in the detection of ductal carcinoma in situ (DCIS).
DCIS is a non-invasive cancer. It has not spread beyond the milk duct into any normal surrounding breast tissue.

"The JAMA 3D study validates the findings of previously published studies but on a much larger scale," said Peter J. Valenti III, Hologic Division President, Breast and Skeletal Health Solutions. "The study addresses the two most frequently cited concerns with breast cancer screening –

¹ Friedewald SM, Rafferty EA, Rose SL, Durand MA, Plecha DM, Greenberg JS, Hayes MK, Copit DS, Carlson KL, Cink TM, Barke LD, Greer LN, Miller DP, Conant EF. Breast Cancer Screening Using Tomosynthesis in Combination with Digital Mammography. *JAMA*. June 25, 2014

that we are finding too many cancers that don't need to be treated and that too many women are being called back for unnecessary additional testing. Each of the outcomes measured was statistically significant and reinforced the benefits of Hologic 3D Mammography in addressing these challenges.”

Five leading academic hospitals participated in the study: Massachusetts General Hospital; Yale University School of Medicine in Connecticut; University Hospitals Case Medical Center in Ohio; Albert Einstein Healthcare Network, and the Perelman School of Medicine of the University of Pennsylvania in Pennsylvania.

Eight community-based sites participated in the study: Caldwell Breast Center of Advocate Lutheran General Hospital in Illinois; TOPS Comprehensive Breast Center in Texas; Washington Radiology Associates, PC in Washington, DC; Radiology Associates of Hollywood and Memorial Healthcare System in Florida; Evergreen Health Breast Center and Radia Inc, PS in the state of Washington; Edith Sanford Breast Health Institute in South Dakota; Invision Sally Jobe Breast Centers and Radiology Imaging Associates in Colorado; and John C. Lincoln Breast Health and Research Center in Arizona.

About Hologic 3D Mammography:

While digital (2D) mammography is considered one of the most advanced breast cancer screening technologies available today, it provides only a two-dimensional picture of the breast. The breast is a three-dimensional object composed of different structures, such as blood vessels, milk ducts, fat, and ligaments. These structures, which are located at different heights within the breast, can overlap and cause confusion when viewed as a two-dimensional, flat image. This confusion of overlapping tissue is a leading reason why small breast cancers may be missed and normal tissue may appear abnormal, leading to unnecessary call backs.

Hologic 3D Mammography is the first and currently the only FDA approved 3D mammography system in the U.S. It has been shown in numerous clinical studies to significantly increase the detection of invasive breast cancers while simultaneously reducing recall rates across all patient populations and breast densities. This technology was approved for breast cancer screening and diagnosis in the U.S. in February, 2011 and has been available in countries recognizing the CE mark since 2008. Hologic's 3D mammography technology is in use in all 50 states and over 50 countries.

An estimated 6 million women in the U.S. will be screened with the technology in 2014. Hologic has over 1,100 3D mammography systems installed in the U.S. A Hologic 3D Mammography site finder is available at www.3Dmammography.com.

About Hologic, Inc.:

Hologic, Inc. is a leading developer, manufacturer and supplier of premium diagnostic products, medical imaging systems and surgical products. The Company operates four core business units focused on breast health, diagnostics, GYN surgical, and skeletal health. With a comprehensive suite of technologies and a robust research and development program, Hologic is committed to improving lives. The Company is headquartered in Massachusetts. For more information, visit www.hologic.com.

Forward-looking Statement Disclaimer:

This News Release may contain forward-looking information that involves risks and uncertainties, including statements about the use of Hologic's 3D Mammography (breast tomosynthesis) technology. There can be no assurance this product will achieve the benefits described herein and that such benefits will be replicated in any particular manner with respect to an individual patient as the actual effect of the use of the products can only be determined on a case-by-case basis depending on the particular circumstances and patient in question. Hologic expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any such statements presented herein to reflect any change in expectations or any change in events, conditions or circumstances on which any such data or statements are based.

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