



## **Hologic Adds 3D Breast Ultrasound Imaging to SuperSonic™ MACH™ 40 System**

3D software-based application helps clinicians visualize breast anatomy and provides detailed characterization of lesions

MARLBOROUGH, Mass. December 17, 2020 – Hologic, Inc. (Nasdaq: HOLX) announced today 3D ultrasound imaging is now available on the SuperSonic™ MACH™ 40 ultrasound system\*. Clinicians can now access high-resolution B-mode and ShearWave™ PLUS elastography 3D volumes, which are designed to enhance diagnostic certainty.

With the 3D volumetric data acquired on the SuperSonic MACH 40 system, clinicians can see areas of interest from a new perspective. Breast tissue can be visualized in any scanning plane of the 3D volume, including coronal or C-plane. MultiSlice display allows these 3D volumes to be viewed slice-by-slice, while MultiPlanar display virtually reconstructs the slices in any orientation using the acquired and stored volume. The system's volumetric transducer allows users to easily and rapidly acquire these 3D images with no resolution loss, regardless of where a lesion is located within the breast.

The additional diagnostic details provided by 3D imaging may assist clinicians in the workup of difficult lesions, including in patients with dense breast tissue.<sup>1</sup> Furthermore, pairing 3D imaging with the system's ShearWave PLUS elastography may also contribute to more accurate tumor size estimation<sup>2</sup> and clear margin definition in preoperative settings. In addition, it may play a role in monitoring and evaluation of breast cancer patients during and after neoadjuvant chemotherapy.<sup>3</sup>

“At Hologic, we relentlessly strive to advance the early detection of breast cancer. With each innovation across the breast care continuum, we're moving toward greater certainty for our customers, enabling them to provide better outcomes for their patients,” said Jennifer Meade, Hologic's Division President, Breast and Skeletal Health Solutions. “The addition of 3D breast ultrasound imaging to the SuperSonic MACH 40 system is yet another example of the steps we're taking to transform the daily experience of breast radiologists and sonographers with solutions designed to increase efficiency and accuracy, while also helping to improve diagnostic confidence.”

Thanks to exclusive UltraFast™ imaging technology, the SuperSonic MACH 40 system has an image capture capacity of up to 20,000 frames per second,<sup>4</sup> which ensures smooth images with reduced speckle and improved lesion conspicuity for enhanced diagnostic confidence. This technology not only powers the system's exceptional image quality but also many of its innovative imaging modes.

With ShearWave PLUS™ Elastography, radiologists can evaluate real-time tissue stiffness in 2D and 3D, while Angio PLUS imaging enables microvascular flow assessment. Both imaging modes come together in TriVu imaging, which allows for the simultaneous acquisition and display of ShearWave PLUS Elastography, Angio PLUS imaging and traditional morphologic information with B-mode imaging, all within the same image.

The system's control panel features the revolutionary SonicPad™ touchpad, which makes the user experience more intuitive and helps streamline workflow by reducing user movement and the overall examination time.

The SuperSonic MACH 40 system is part of a growing portfolio of ultrasound solutions resulting from Hologic's acquisition of SuperSonic Imagine, a pioneer in the field of ultrasound imaging. For more information about the SuperSonic MACH 40 ultrasound system and 3D breast ultrasound imaging, visit [hologic.com/ultrasound/MACH-40](http://hologic.com/ultrasound/MACH-40).

\* The SuperSonic MACH 40 ultrasound system is only available in the USA.

#### **About Hologic, Inc.**

Hologic, Inc. is an innovative medical technology company primarily focused on improving women's health and well-being through early detection and treatment. For more information on Hologic, visit [www.hologic.com](http://www.hologic.com).

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<sup>1</sup> Berg WA, Blume JD, Cormack JB, et al. Combined screening with ultrasound and mammography vs. mammography alone in women at elevated risk of breast cancer [published correction appears in *JAMA*. 2010 Apr 21;303(15):1482]. *JAMA*. 2008;299(18):2151-2163. doi:10.1001/jama.299.18.2151

<sup>2</sup> Accuracy of tumor size measurement: Comparison of B-mode ultrasound, strain elastography, and 2D and 3D shear wave elastography with histopathological lesion size. Farrokh A, Maass N, Treu L, et al. *Acta Radiol*. 2018;60(4):451-458. doi: 10.1177/0284185118787354. | Shear-wave elastography contributes to accurate tumour size estimation when assessing small breast cancers. Mullen R et al. *Clin Radiol*. 2014 Dec;69(12):1259-63.

<sup>3</sup> Feasibility of Imaging and Treatment Monitoring of Breast Lesions with Three-Dimensional Shear Wave Elastography. Athanasiou A, Latorre-Ossa H, Criton A, Tardivon A, Gennisson JL, Tanter M. *Ultraschall Med*. 2015 Mar 5. | Comparison of strain and shear-wave ultrasonic elastography in predicting the pathological response to neoadjuvant chemotherapy in breast cancers. Ma Y et al. *Eur Radiol*. 2017 Jun;27(6):2282-2291. | Shear-Wave Elastography for the Detection of Residual Breast Cancer After Neoadjuvant Chemotherapy. Lee SH et al. *Ann Surg Oncol*. 2015 Dec;22 Suppl 3:S376-84.

<sup>4</sup> Ultrafast Ultrasound Imaging, by Jeremy Bercoff (Published: August 23rd 2011 DOI: 10.5772/19729)