

SUPERSONIC™
MACH40

HOLOGIC®
The Science of Sure

Innovation and Integration, today and tomorrow

Introducing the SuperSonic™ MACH 40 Breast Ultrasound System



Introducing the SUPERSONIC™ MACH 40 Breast Ultrasound System

At Hologic, we believe that transforming your daily experience with an innovative, intuitive, integrated, and intelligent ultrasound system will help you increase efficiency and accuracy in your practice. SuperSonic MACH 40 system is fundamentally different from most hardware-based ultrasound systems and breaks 40 years of conventions with its exceptional image quality, standard-setting imaging modes, and ultimate usability.



**No compromise.
No comparison.
Now in ultrasound with
UltraFast™ imaging**

Innovative

The powerful architecture and unique UltraFast technology of the SuperSonic MACH 40 system allow for today's innovations and tomorrow's advancements. Our value-based imaging modes are designed to improve outcomes, optimize costs, and increase patient satisfaction.



**Full support every
step of the way**

Intuitive

Our teams went through a complex process to make user experience intuitive and improve overall comfort. Designed to help create a productive and pain-free environment with a large full HD screen, embedded SonicPad™ touchpad, ergonomic and lightweight transducers, and a low noise level system.



**Build your practice
with Hologic beyond
breast imaging**

Integrated

As part of the Hologic suite of solutions, we offer an optimized continuum of care to advance early detection and effective intervention. SuperSonic MACH 40 system has exceptional versatility across a large variety of clinical applications to further address the needs of general imaging and specialty imaging (abdominal/liver, musculoskeletal, small parts and vascular).



**The future is bright
with the SuperSonic
MACH 40 system**

Intelligent

At Hologic, we strive to make advances toward greater certainty for our customers and their patients. We believe that our "Unifi-certified" and "AI-compatible" ultrasound platform will make a difference and lead to more informed decision-making and help improve diagnostic confidence.

Exceptional Imaging

SuperSonic MACH 40 system is designed with image quality excellence in mind, offering smooth images with reduced speckle, regardless of tissue density, and improved lesion conspicuity for enhanced diagnostic confidence.

Powerful capabilities with unique UltraFast™ architecture, large FHD screen, innovative transducer conception and a portfolio of advanced features used in an unprecedented combination to:

- Provide incredible definition in both fundamental and harmonic imaging modes
- Visualize structures at variable depths with optimized penetration settings
- View both traditional and non-traditional scanning planes with 3D acquired volumetric data²

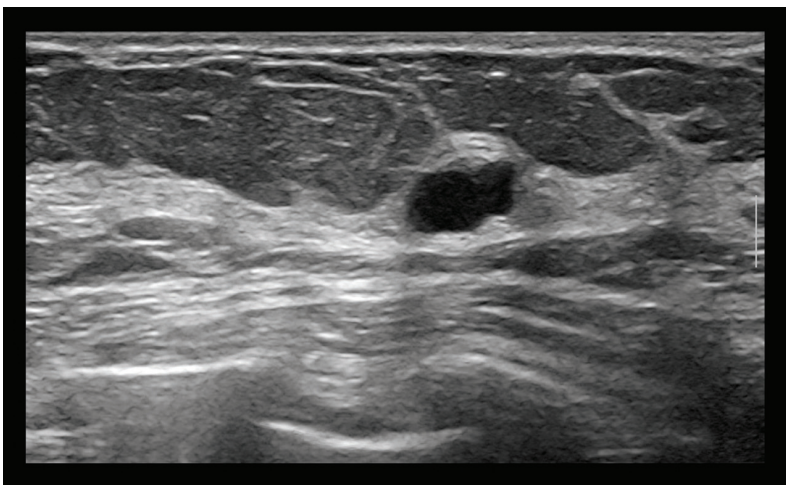
Up to
20,000
images per second



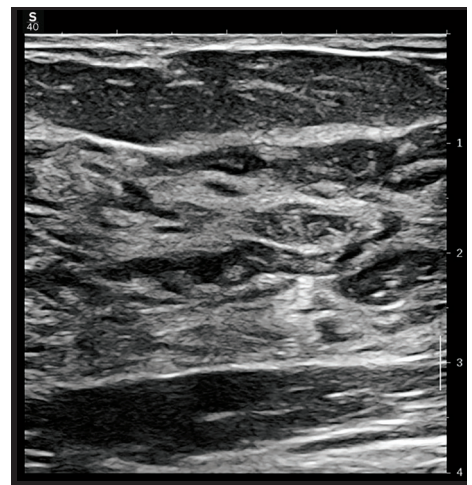
UltraFast™ Imaging The power behind the innovations

Deep inside is a powerful processor running on our exclusive UltraFast technology, inspired by the video gaming industry. The intelligent signal processing with image capture capacity of up to **20,000 frames per second**¹ bring unlimited possibilities into ultrasound imaging: excellent image quality, innovative imaging modes and future AI integration.

Excellent lesion conspicuity



Exceptional tissue differentiation



Optimized
and automated
experience

A set of advanced features is available to simplify and speed-up the image acquisition process. With SuperCompound, SuperRes, TissueTuner or AutoTGC, you can adjust the parameters you need, to obtain diagnostic information and image presentation based on your preferences.

Innovative Imaging Modes

ShearWave PLUS™ Elastography

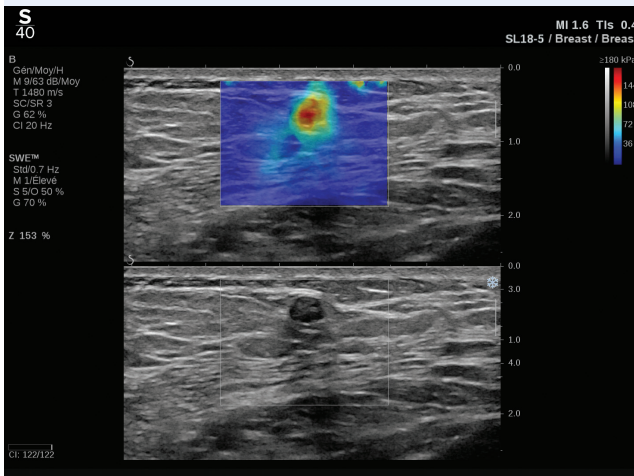
Added value of our ShearWave™ Elastography to medical imaging landscape is recognized by major scientific societies⁴ in ultrasound. It is also backed by a long track record of scientific research with nearly 200 breast imaging publications.

With the latest 3rd generation of shear wave-based technology **ShearWave PLUS** elastography, your ultrasound exams are about to benefit from a new kind of elastography experience:

- Real-time imaging frame rates⁵
- Enhanced spatial resolution⁶
- Increased penetration⁷
- Dynamic tissue stiffness evaluation with large color-coded map
- Dual quantification with measurement tools in kPa and m/s
- Preserved B-mode image quality



New! Further enhance breast lesion assessment with access to **3D ShearWave PLUS** elastography, volume in a single acquisition. Breast tissue can be visualized in any plane of 3D volume (ex. coronal or C-plane) and this large color coded map provides information on the elasticity distribution inside and around the lesion.²



Find out how
ShearWave PLUS
elastography may...

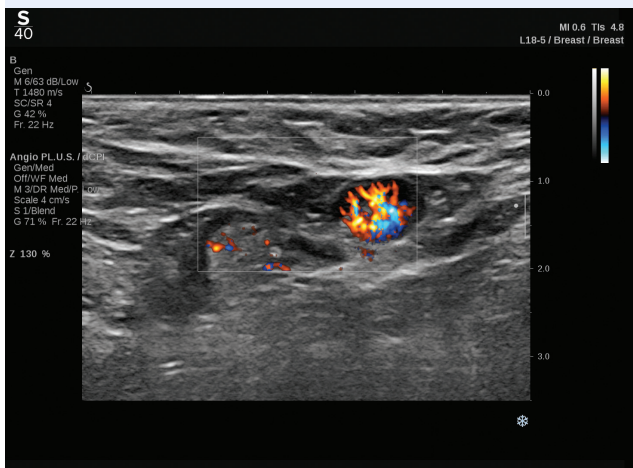


- Aid in the diagnostic work up of breast lesions and thus positively impact patient management⁸
- Help with targeting lesions during ultrasound-guided biopsy⁹
- Contribute to an accurate lesion size measurement¹⁰
- Play a role in prognostics and monitoring of breast cancer patients during and after neoadjuvant chemotherapy¹¹

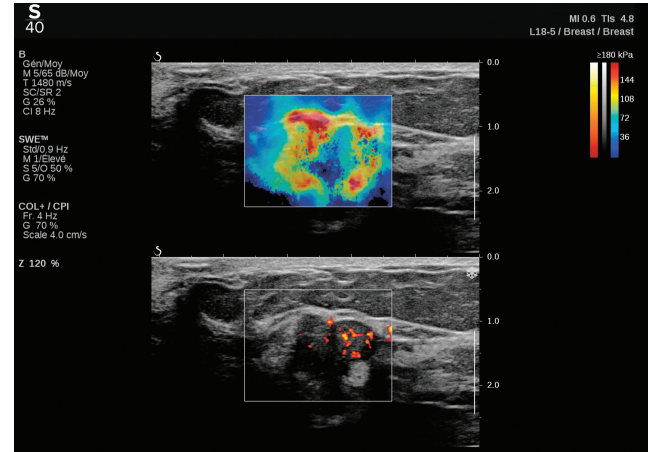
Angio PLUS Imaging

With ultrasensitive color mode – **Angio PLUS** imaging – microvasculature and low velocity flow states that are present within organ tissue can be assessed with astounding clarity. Real-time or prospective acquisitions provide very high sensitivity and frame rates (up to 160 Hz).

Angio PLUS imaging can be the solution for an advanced exploration of the axillary region and the evaluation of lymph nodes.



TriVu™ Imaging



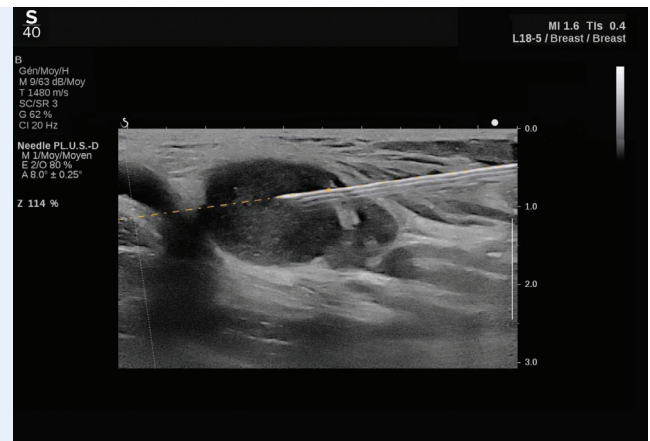
TriVu imaging allows you to simultaneously acquire morphologic (B-mode), stiffness (ShearWave PLUS elastography) and microvascular flow information (Angio PLUS imaging) and display them all in the same image.

TriVu imaging mode was designed to improve diagnostic confidence in work-up of lesions and further enhance workflow efficiency.

Needle PLUS™ Imaging

Needle PLUS imaging was developed to provide enhanced needle visibility and introduce unique functionality – needle trajectory prediction.

Optimizations for a large range of needles and automated enhancements may offer more control, and ultimately additional confidence when performing biopsies.



Supporting User Comfort for Improved Experience and Workflow

1. Widescreen 23" Full HD monitor



2. Intuitive control panel with revolutionary SonicPad™ touchpad

Widescreen reality with image uniformity

The 23" monitor delivers the resolution of Full HD, weaving 2 million pixels³ into an image for diagnostic clarity, offering deeper blacks and refined details.



SonicPad™ touchpad Focus on less to do more



SonicPad touchpad makes the SuperSonic MACH 40 system story more than just an intuitive user experience. Being able to **“focus on what you see, and not on what you do”**, helps to improve workflow by reducing user’s movements and examination time.

Function meets comfort

A comprehensive family of breast transducers, optimized for the level of performance a busy practice requires. Transducers were designed with user comfort in mind – they are lightweight and ergonomic.



SUPERSONIC™ MACH40

A Secure and Connected Experience

SuperSonic MACH 40 system facilitates exchanges and ensures that information is always available in the right place at the right time.

- Disk encryption at installation to protect patient's personal data
- Wireless connectivity and DICOM compatibility for more flexibility
- Seamless integration with the equipment infrastructure already in place at your facility

Personalized Support When You Need It

At Hologic, we take pride in our unyielding commitment to quality and the utmost customer satisfaction. Hologic Service and Support delivers proven expertise to improve your business results (higher system uptime resulting in fewer disruptions, increased staff productivity and greater throughput) and most importantly, patient outcomes.

- On-time intervention through remote system monitoring and diagnostics
- Access to new options and features with an online software update
- Clinical training as well as workflow and connectivity professional services



Introducing the SuperSonic™ MACH 40 system, Hologic's first cart-ultrasound system, designed to transform daily experience of breast radiologists and sonographers.

Look out for more product innovations powered by UltraFast™ technology and contact your local representative for a demo today!



References:

1. Ultrafast Ultrasound Imaging, by Jeremy Bercoff (Published: August 23rd 2011 DOI: 10.5772/19729)
2. 3D breast application will be available in December 2020 (as a part of SuperSonic MACH Version 3 release).
3. Full HD resolution is defined as having 1,920 x 1,080 pixels.
4. ACR BI RADS: Ultrasound (2015), KSUM Guidelines for breast elastography (2014), EFSUMB (2013) and WFUMB Guidelines
5. Real time image processing is related with typical frame rate. Current standard for capture is typically 30 frames per second and can go up to 120 frames per second for some conventional ultrasound equipment. The UltraFast™ technology allows for the image acquisition up to 20,000 frames per second.
6. SuperSonic MACH 40 technical specifications: SWE spatial resolution is 2mm for all transducers.
7. SuperSonic MACH 40 technical specifications: SWE Box depth at maximum 12 cm.
8. Shearwave elastography improves the specificity of breast US: the BE1 multinational study of 939 masses. Berg WA et al. Radiology. 2012 Feb;262(2):4 35 49.
9. Addition of shear wave elastography during second look MR imaging directed breast US: effect on lesion detection and biopsy targeting. Plecha DM, Pham RM, Klein N, Coffey A, Sattar A, Marshall H. Radiology. 2014 Sep;272(3):657 64.
10. 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.
11. 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.
I 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.

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