

**Philips EPIQ Elite and Affiniti** 

# Redefining performance in contrast-enhanced ultrasound (CEUS)

Radiation exposure is of general concern in medical imaging, but is particularly important in pediatric patients, who are more sensitive to the effects of radiation and who have a longer lifespan during which long-term effects may become evident.<sup>1</sup>

Ultrasound is widely available, easy to use, more cost-effective than other imaging methods such as MR, and does not have the ionizing radiation of CT.<sup>2</sup> Ultrasound contrast agents can transform the role of ultrasound, for example, by allowing clinicians to study the enhancement patterns of liver lesions in real time, to help provide fast diagnoses. With Philips ultrasound, CEUS is integrated into the standard workflow, providing exceptional detail throughout arterial, portal and late-phase scanning.<sup>3</sup>



### **Intuitive experience**

**HD MAX display\*** 

than OLED display technology\*\*

38%
more viewing area
with MaxVue full-screen imaging

#### **Tablet-like interface**

Dramatically reduces reach and button pushes, with 40% to 80% less reach and 15% fewer steps.\*



#### **Superb ergonomics**

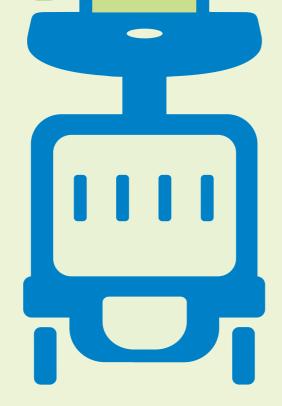
More than 80% of sonographers experience work-related pain, and more than 20% of them suffer a career-ending injury.<sup>6</sup>

Multiple degrees of articulation for both control panel and monitor offer 720° of freedom for scanning comfort.



#### **SmartExam**

Enhances user workflow with system-guided protocols that can be easily customized to suit your needs, and with Image Reorder, you can select and move images within thumbnail views.





#### CIVCO Verza biopsy guide§

Directly attaches to the transducer, allowing needle guidance with a minimal blind zone.

#### **Image duplication screen**

Displays a duplicate monitor image on the touchscreen for **enhanced workflow** during interventional procedures.



Improves image uniformity, adaptively adjusting image brightness at every pixel, reducing rib shadowing and the need for user adjustment while also improving transducer plunkability.

Reduces button pushes by up to 54% with pixel-by-pixel real-time optimization.

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#### **Post-processing controls**

Reduces the need for repeat scans. 84% of users reported that rescanning the patient due to unsatisfactory image quality resulting from inappropriate image settings could be avoided.#



#### **Battery backup**

Enables near-instantaneous boot-up through a battery life of 45 minutes. One of the greenest systems we've ever designed, EPIQ consumes 25% less power than our legacy premium ultrasound system. 55



Reduces number of button pushes by

68%



Abdominal imaging with the C5-1 transducer

#### **Auto Doppler**

Adjusts optimal flow sensitivity and resolution, reducing **10 steps to 3 steps** and also reducing the number of repetitive button pushes by an average of **68%.** 

- \* Not available with the Affiniti ultrasound system.
- \*\* Internal specification comparison of OLED on EPIQ CVx vs. EPIQ HD MAX.
- † Compared to our previous monitor without MaxVue.
- ‡ 2013 engineering study comparing Philips iU22 ultrasound system with EPIQ.
- § Not available on all transducers.
- ¶ When comparing release 10 performance to release 7 performance.
- # Based on a sample size of n=37 users.
- §§ Compared to its predecessor product, iU22.







#### **C5-1 transducer**

PureWave crystal transducer technology for outstanding image quality even in technically difficult patients (TDP).<sup>4</sup>

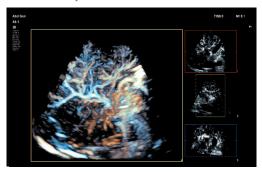


Liver CEUS imaging with the C5-1 transducer

nSight
Plus Imaging
Architecture,\* a more
powerful beamforming
technology providing
next-generation
imaging
performance.\*\*

#### X6-1 transducer

Fast 3D/4D start times with increase in acquisition rates for 4D volumes, in addition to the ability to use xPlane to scan two planes simultaneously in contrast mode.<sup>†</sup>



Liver vasculature with CEUS using the X6-1 transducer

#### mC12-3 transducer

**Designed for pediatric applications,** the mC12-3 transducer provides an additional 30% improvement in penetration compared to our previous generation of pediatric transducers.<sup>‡</sup>



Pediatric bladder micturation with the mC12-3 transducer



The EPIQ Elite and Affiniti platforms bring ultimate ultrasound solutions for abdominal assessment, with clinically tailored tools designed to help elevate diagnostic confidence.

<sup>\*</sup> Not available on all transducers.

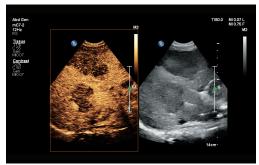
<sup>\*\*</sup> Compared to release 7.0.

<sup>†</sup> nSight Plus white paper, 452299171311, Nov. 2021

<sup>‡</sup> Internal measured comparison on calibrated tissue phantom between the mC12-3 and C8-5 transducers on the EPIQ Elite ultrasound system.

#### mC7-2 transducer

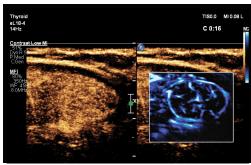
**Designed for procedure guidance,** this small-footprint ergonomic transducer allows imaging in tight intercostal spaces, helping reduce rib shadowing on images, as well as providing a more direct needle approach for procedures.<sup>5</sup>



Liver metastases with the mC7-2 transducer

#### eL18-4 transducer

Supports a **wide range of anatomies** for small parts imaging, with PureWave crystals for outstanding image quality and support for CEUS MicroFlow Imaging.



Thyroid lesion with the eL18-4 transducer

With Philips, ultrasound CEUS is integrated into the standard workflow.



#### Microvascular Imaging Super Resolution CEUS\*\*

Improves resolution by more than 200%.\*



Liver hemangioma with enhanced detail resolution

#### **CEUS MicroFlow Imaging (MFI)**

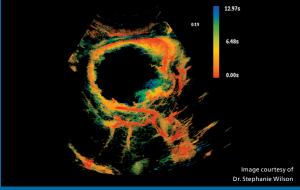
Provides **remarkable sensitivity and detail in assessing blood flow** during a CEUS examination without negatively affecting bubble destruction.



Isoechoic liver lesion demonstrated with CEUS MFI

#### **Time of Arrival**

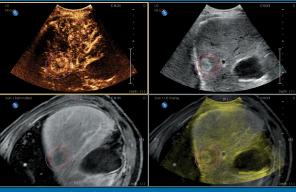
Provides concise visualization of the temporal patterns of perfusion while maintaining the superb spatial resolution offered by Super Resolution MVI. \*\*



Liver hemangioma with Time of Arrival mapping

## Fusion and Navigation with Contrast

**Advanced capabilities** such as Auto Registration, continuous patient tracking, user-assisted co-registration, tumor contour and ablation planning.



**CEUS Fusion with CT for ablation planning** 

<sup>\*</sup> Compared to previous MVI capability.

<sup>\*\*</sup> Not available with the Affiniti ultrasound system.



**Ultrasound Collaboration Live** with Multi-party\*

Extend your team without expanding it Remote access to help elevate diagnostic confidence, now with simultaneous multi-party communication

Up to six users can quickly and securely talk, text, screen share and video stream directly from the ultrasound system for access to multiple clinical resources at a distance.\*\*







#### Flexible financing

Innovative solutions tailored to you, with the financial flexibility to manage capital budgets and return on investment, supporting your continued growth.



#### **Defense-in-depth security**

Philips ultrasound is developed for security as well as clinical capability.8



#### **Award-winning service**

Philips has ranked #1 in ultrasound service for nearly 30 years in a row.



#### **Comprehensive clinical education**

To improve operational efficiency and support patient care.



#### A world leader in sustainability

Philips is committed to lifecycle circularity for its systems.<sup>‡</sup>

- \* EPIQ and Affiniti ultrasound systems release 10.0.
- \*\* Contract required. Collaboration Live is intended for remote diagnostic use on release 9.0 or higher.
- † Philips is rated number one in overall service performance for ultrasound for 28 consecutive years in the annual IMV ServiceTrak survey in the USA.
- ‡ Philips again achieved a #2 ranking in the leading sustainability benchmark in Dow Jones Sustainability Indices and achieved second place in 2020 on the Wall Street Journal's "100 Most Sustainably Managed Companies in the World" list.

- 1. Sidhu MK, Goske MJ, Coley BJ, et al. Image gently, step lightly: increasing radiation dose awareness in pediatric interventions through an international social marketing campaign. J Vasc Interv Radiol. 2009 Sep;20(9):1115-9. doi: 10.1016/j.jvir.2009.07.021. PMID: 19729131.
- $2. \ Radiology Info. Org: www.radiology info. org/en/info/genus.\\$
- 3. Barr R. Philips Expert Perspectives. Quantifying liver fat with ultrasound. Document number 452299273191, Nov 2021.
- 4. Chen J, Panda R, Savord B. Realizing dramatic improvements in the efficiency, sensitivity and bandwidth of ultrasound transducers: Philips PureWave crystal technology. Koninklijke Philips N.V. Aug 2006. 2014;203(6):W715-W723. doi:10.2214/AJR.13.12061.
- 5. Philips EPIQ Elite specification sheet, document number 452299179761, May 2023.
- 6. Society of Diagnostic Medical Sonography, Industry Standards for the Prevention of Musculoskeletal Disorders in Sonography, May 2003.
- 7. Philips Auto Doppler Clinical Study, Dec 2011.
- 8. Philips EPIQ and Affiniti Security white paper, document number 452299180531, April 2023.

#### Find out more at www.philips.com/gi



