



**PHILIPS**

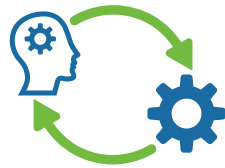
Ultrasound

**Philips EPIQ Elite and Affiniti**

# Redefining performance in ultrasound for interventional radiology

There's no longer the need to wait for imaging suite availability when it comes to performing interventional procedures with diagnostic confidence. Philips Fusion and Navigation can help you harness the power of multiple modalities by fusing PET/CT, MR or CT data sets to live ultrasound, allowing you to conduct procedures in the IR suite, or whichever procedure setting best supports your practice. This potentially allows for more predictable and high-volume scheduling.

In addition, reducing CT scans by 45% represents a total patient radiation dose-saving equivalent to three head CT scans or one full-body scan.<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> It can help clinicians plan complex cases where the lesion is not identifiable or is difficult to access.



## Intuitive experience

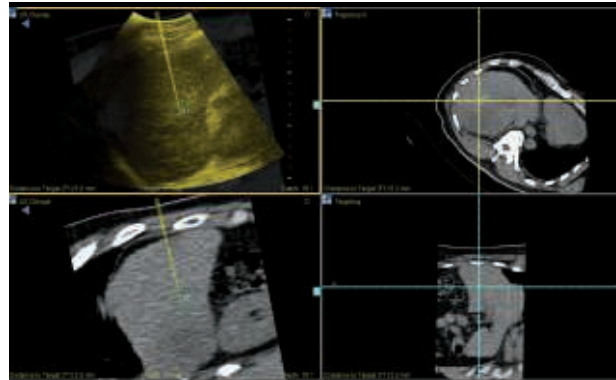
“The Philips image fusion and navigation system has been extremely valuable to us. Cases we normally perform with CT-fluoroscopic guidance are now routinely performed in the IR suite. This has improved workflow by reducing the need to find time on our busy CT scanner. It has also reduced radiation exposure for the patient, staff and operator.”\*

– Ezana M. Azene, MD, PhD  
Vascular and Interventional Radiologist,  
Gundersen Health System, La Crosse, WI

\* Customer experience, results may vary.

### Auto Registration

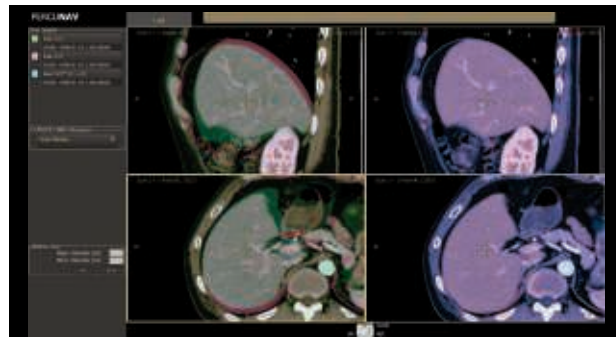
Anatomical Intelligence for Ultrasound helps **achieve successful alignment of CT or MR volumes to ultrasound in less than one minute<sup>3</sup>** for the effective characterization of lesions. Gain more time to focus on the procedure ahead and spend less time on performing the registration necessary for accurate fusion.



Multimodality fusion imaging

### User-assisted Co-registration

User-assisted Co-registration is a **one-button method** for co-registering CT images to ultrasound.



Enhance workflow and enhance confidence

“Auto Registration simplifies fusion imaging so that more time can be spent evaluating pathology while optimizing the patient experience.”\*

– Dr. Andrew McNeill, Consultant Radiologist  
Freeman Hospital NHS, Newcastle upon Tyne, UK

\* Customer experience, results may vary.



### Continuous patient tracking

**Needle location in relation to CT is tracked and updated in real time** for procedure visualization, so that once the registration step is complete, the patient can move and change position, and the field generator can be moved in or out of the procedure space without losing anatomical landmarks or diminishing tracking accuracy.

### CT-only workflow

Philips interventional workflow features CT-only needle navigation on the ultrasound system. The image fusion and needle navigation capability unlocks flexibility and opens up possibilities by making image fusion and the use of ultrasound imaging completely optional.

## HD MAX display\*

**40%** brighter  
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.⁵ **Multiple degrees of articulation for both control panel and monitor offer 720° of freedom for scanning comfort.**

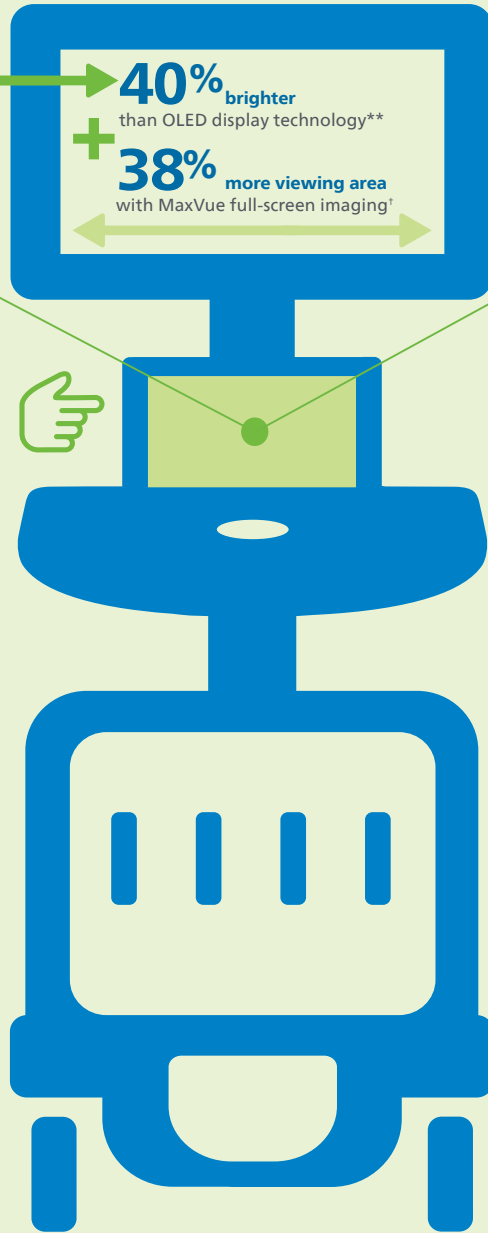
## Built-in sensors for fusion workflow

Versions of the eL18-4 and mC7-2 transducers are **designed especially for fusion.**



## 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<sup>§</sup>

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.



## Next Gen AutoSCAN

**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.**⁵⁵



## 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

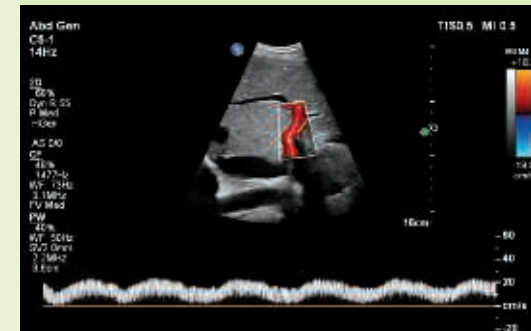
**Enables near-instantaneous boot-up** through a battery life of 45 minutes. One of the greenest systems we've ever designed, EPIQ consumes **25% less power** than our legacy premium ultrasound system.⁸

Uses **25%** less power



Reduces number of button pushes by

**68%**



Abdominal imaging with the C5-1 transducer

## Auto Doppler

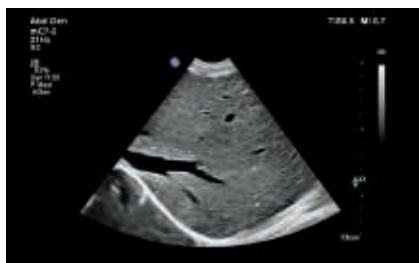
Adjusts optimal flow sensitivity and resolution, reducing **10 steps to 3 steps** and also reducing the number of repetitive button pushes by an average of **68%**.⁶

\* 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.



## Confident imaging

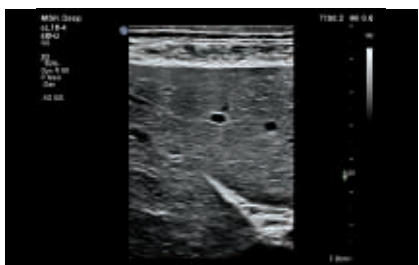
nSight Plus Imaging Architecture,\* a more powerful beamforming technology providing next-generation imaging performance.\*\*



Abdominal imaging with the mC7-2 transducer

### 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.



MSK imaging with the eL18-4 transducer

### eL18-4 transducer

High resolution and penetration with the eL18-4 PureWave transducer.



L12-5

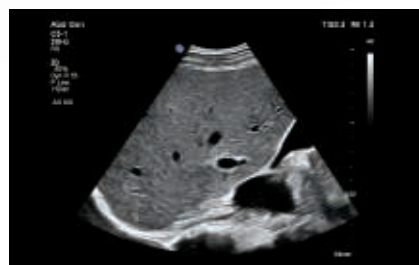
X6-1

C5-1

C9-2

eL18-4

mC7-2



Abdominal imaging with the C5-1 transducer

### C5-1 transducer

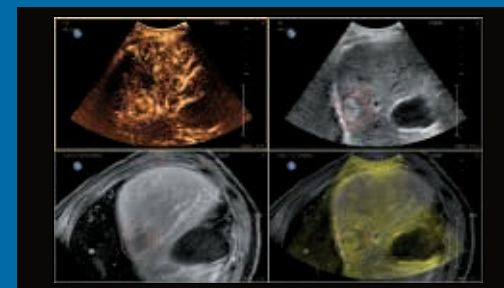
PureWave crystal transducer technology for **outstanding image quality even in technically difficult patients (TDP).**<sup>4</sup>



## Advanced insights

### Tumor contour

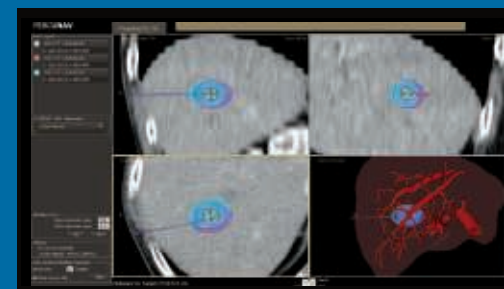
Visualize your target with a semi-automated tool that helps **outline a 3D contour around a structure of interest, rendering the lesion in 3D or 2D** via a complementary modality, overlaid on the live ultrasound or CT, helping visualize the location in relation to surrounding critical structures.



Enhance visualization in tumor contouring

### User-assisted Ablation Planning

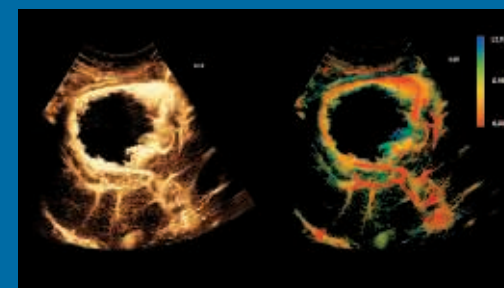
Generate a treatment plan based on a segmented tumor, designed to develop a **quick initial ablation plan**, which the user can then adjust.



Fast workflow in ablation planning

### Microvascular Imaging Super Resolution Contrast-enhanced Ultrasound (CEUS) and Time of Arrival

Super Resolution MVI improves resolution by **more than 200%.**\* Time of Arrival provides concise visualization of the temporal patterns of perfusion while maintaining the superb spatial resolution offered by Super Resolution MVI.\*\*



Advances in CEUS imaging

Image courtesy of Dr. Stephanie Wilson



Support accelerated decision-making and help reduce dependence on other imaging modalities by applying advanced ultrasound fusion and navigation tools.

\* Compared to previous MVI capability. \*\* Not available with the Affiniti ultrasound system.

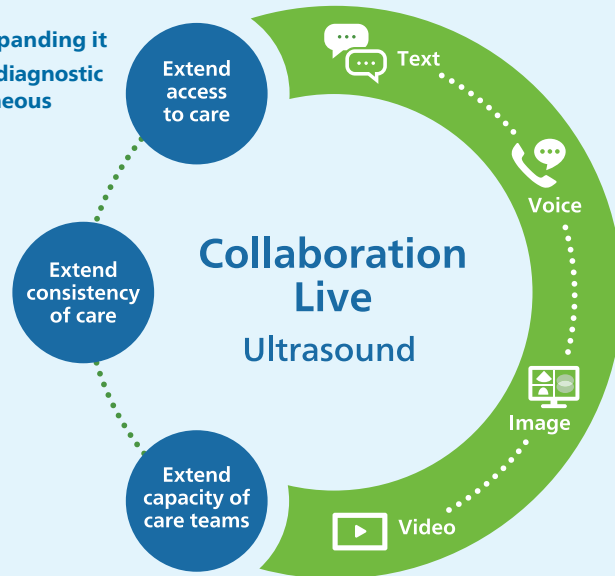


# Trusted partner

## 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.



### Comprehensive clinical education

To improve operational efficiency and support patient care.



### Defense-in-depth security

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



### A world leader in sustainability

Philips is committed to lifecycle circularity for its systems.‡



### Award-winning service

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

\* 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. Kim E, Ward TJ, Patel RS, Fischman AM, Nowakowski S, Lookstein RA. CT-guided liver biopsy with electromagnetic tracking: results from a single-center prospective randomized controlled trial. *AJR Am J Roentgenol.* 2014;203(6):W715-W723. doi:10.2214/AJR.13.12061.
2. RadiologyInfo.Org: <https://www.radiologyinfo.org/en/info/genus>.
3. Auto Registration Timing Study Report, 2015.
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. Society of Diagnostic Medical Sonography, Industry Standards for the Prevention of Musculoskeletal Disorders in Sonography, May 2003.
6. Philips Auto Doppler Clinical Study, Dec. 2011.
7. Philips EPIQ and Affiniti Security white paper, document number 452299180531, April 2023.

**Find out more at [www.philips.com/gi](http://www.philips.com/gi)**

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