PHILIPS

Ultrasound

EPIQ Elite Elevate

Designed for a premium experience

Philips EPIQ Elite Elevate ultrasound for OB/GYN

What does it take to redefine **performance in OB/GYN?**

EPIQ Elite Elevate premium ultrasound for OB/GYN meets the needs of today's most demanding practices through important advances to help redefine performance in OB/GYN imaging.

- Powerful image processing
- Efficient workflow
- System intelligence

Designed for life

Early, accurate diagnosis is essential for peace of mind. Providing a confident evaluation for women throughout their lives rests on identifying issues early to guide the patient journey, whether during pregnancy, in the course of their regular gynecological care or when addressing fertility issues.

Exceptional imaging for confident decision-making

End-to-end workflow efficiency for clinicians and patients

Expanded imaging access and collaboration where and when needed

A trusted partner to rely on

Amazing **processing power**

Our most powerful architecture

EPIQ Elite Elevate ultrasound features nSight Plus Imaging Architecture,* a more powerful beamforming technology providing next-generation imaging performance.**

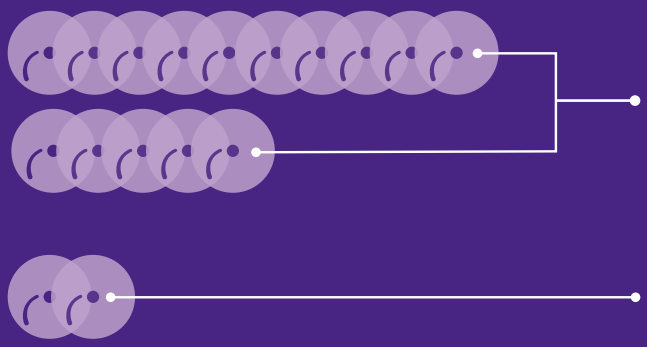
The key to extraordinary real-time images

Incorporating a custom multi-stage precision beamformer along with massive parallel processing, this proprietary architecture captures an enormous amount of acoustic data from each transmit operation and performs digital beam reconstruction along with mathematically optimized focal processing. This creates extraordinary real-time images with exceptional frame rate, uniformity and penetration.

Pushing the limits in processing power

EPIQ Elite Elevate ultrasound is uniquely designed to process acoustic data at stunning rates. nSight Plus Imaging touches all aspects of acoustic acquisition and image processing, allowing you to truly experience ultrasound's evolution to a more definitive modality. This architecture processes the equivalent of 15 DVDs/sec, while some software-based beamformer architectures struggle to process the equivalent of even 2 DVDs/sec.

*Not available on all transducers.
**Compared to release 7.0.



EPIQ Elite Elevate processing power
Equivalent to processing 15 DVDs/sec

Processing power of other beamformer architectures
Equivalent to processing 2 DVDs/sec

Quantifying breakthroughs

Advances in imaging performance, compared to conventional premium systems

- **Up to 76% increase** in penetration (penetration = ability to scan at depths and maintain resolution in order to complete the study)[1]
- **Up to 213% increase** in temporal resolution (ability to maintain resolution at high frame rates) [1]

Paradigm-changing **imaging architecture**

See why nSight Plus Imaging doesn't just improve ultrasound performance, it redefines expectations about what is possible.[2]

Frame rate

Conventional
Users must choose between frame rate and image quality.

nSight Plus Imaging
Increases the frame rate without impact to image quality. Creates focused images with fewer transmit operations so you can experience both highly detailed ultrasound images and extraordinary temporal resolution.

Uniformity

Conventional
Best resolution is limited to transmit focal zone.

nSight Plus Imaging
Corrects focus during beam reconstruction for superb uniformity. Achieves uniformity through coherent beam reconstruction algorithms that apply mathematical focal correction coefficients continually at all depths of the image.

Penetration

Conventional
Penetration limitations and poor sensitivity to weak signals.

nSight Plus Imaging
Superb penetration across full range of frequencies. Reinforces weak tissue signals with the ultra-wide dynamic range and unique beam reconstruction of the architecture, allowing enhanced penetration at higher frequencies, even on technically difficult patients.[2]

Fetal cerebellum with eL18-4 transducer

xRes Pro next-generation image processing

EPIQ Elite Elevate ultrasound features xRes Pro, our next-generation high-resolution image processing approach that elevates tissue definition and clarity to new levels in OB imaging.

At real-time frame rates, xRes Pro uses multi-parametric precision filters that subdivide image elements, analyze this data and then apply advanced algorithms to sharpen borders and interfaces and provide superb tissue imaging.

Capture remarkable detail in perfusion

MicroFlow Imaging High Definition

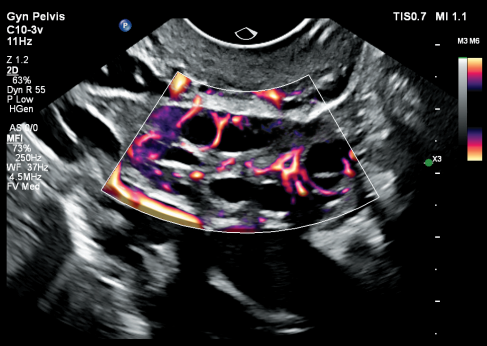
MicroFlow Imaging High Definition (MFI HD) is a proprietary enhancement to CPA mode, designed to detect low-volume, low-velocity blood flow found in fetal, placental, uterine and ovarian vasculature. MFI HD overcomes many of the technical barriers associated with conventional methods to detect small vessel blood flow with high resolution and minimal artifacts.

MFI HD maintains high frame rate and 2D image quality while applying advanced artifact reduction techniques. New 2D image subtraction, 2D blending and side-by-side display options offer excellent visualization versatility.

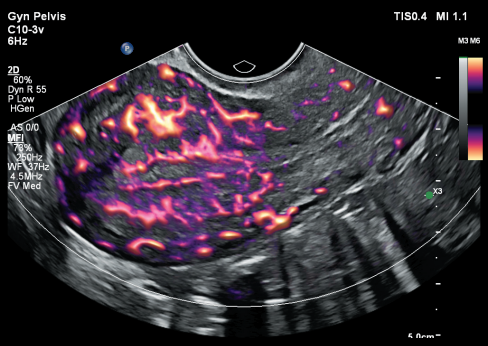
MFI HD enhanced ovarian perfusion visualization
on endocavitary transducers in

100% of OB/GYN users*

*Based on sample size n=21.

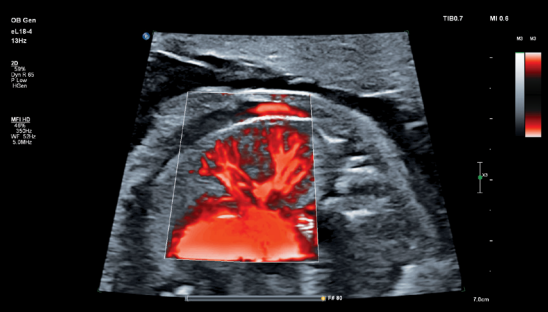


Ovarian blood flow MFI

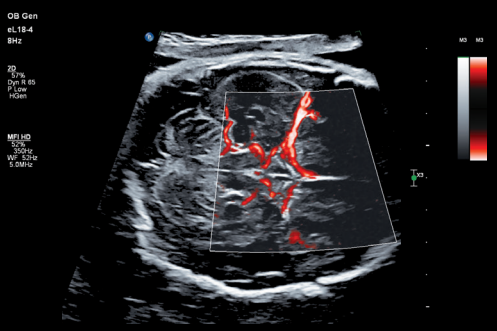


Uterine blood flow MFI

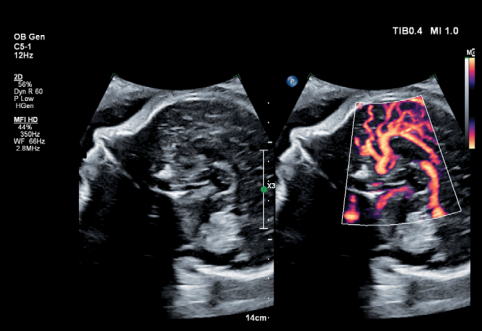
Fetal ductus venosus with MFI HD



Fetal lung perfusion with MFI HD



Fetal circle of Willis with MFI HD



Fetal brain pericallosal artery with MFI HD

Remarkable dimensionality in color modes

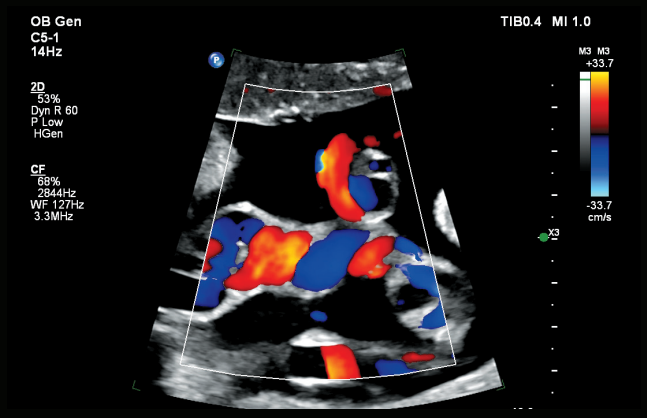
Flow Viewer provides a 3D-like rendering of flow imaging data (color, CPA/CPAd, MFI and MFI HD) to help better visualize fetal vessels and fetal heart structures and enhance the aesthetic appeal of all color imaging modes.

Flow Viewer's 3D appearance has its advantages in clarity and boundary definition over traditional color flow for vessel and fetal cardiac identification. This is achieved by creating a surface whose height depends on the color Doppler power or velocity magnitude and calculating light reflection at each point on the surface.

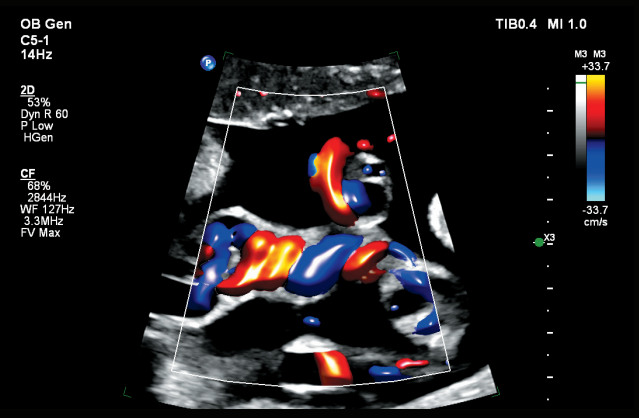
Enhanced visualization of complex hemodynamic flows

Better color containment within the vessel lumen

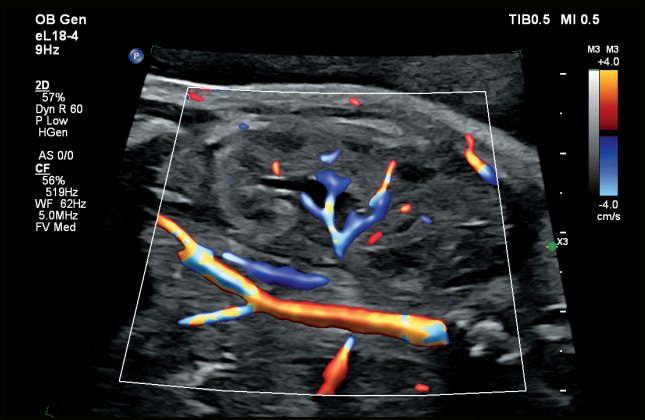
Better boundary demarcation between adjacent vessels and fetal heart chambers and outflow tracks



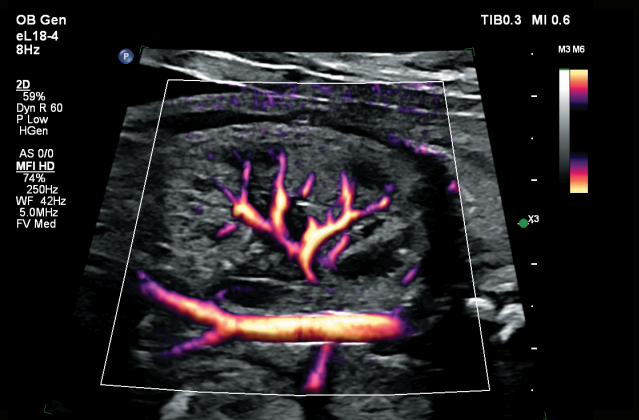
Three-vessel umbilical cord without Flow Viewer



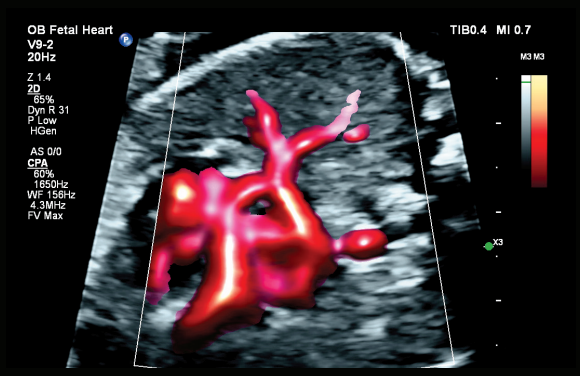
Three-vessel umbilical cord with Flow Viewer



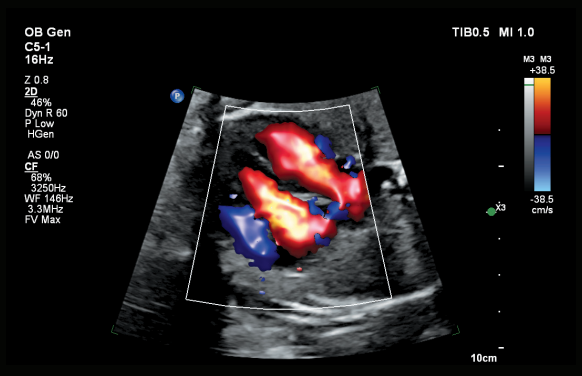
Fetal kidney with Flow Viewer applied to color flow with eL18-4 transducer



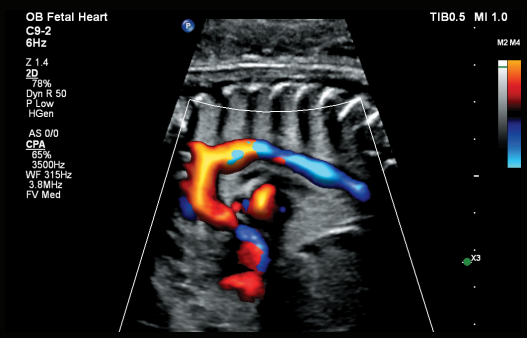
Fetal kidney with Flow Viewer applied to MFI HD with eL18-4 transducer



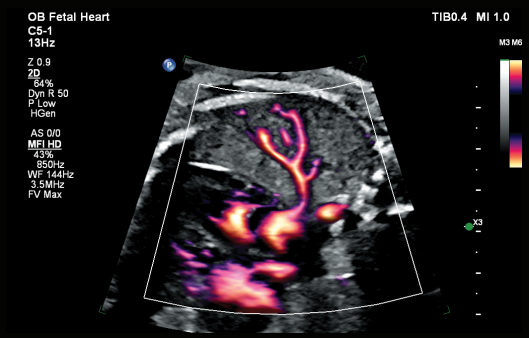
Fetal heart outflow tracks CPA with Flow Viewer



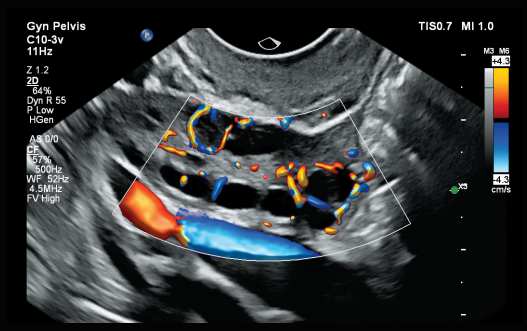
Fetal heart four-chamber color flow with Flow Viewer



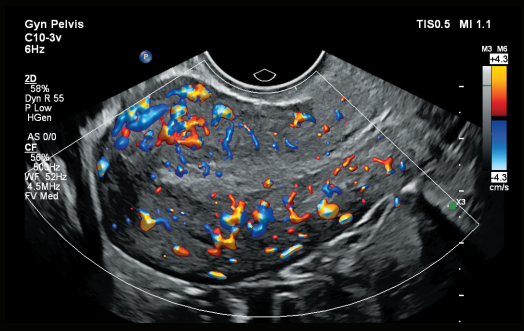
Aortic arch CPA with Flow Viewer



Pulmonary vein and fetal heart MFI with Flow Viewer



Ovary color flow with Flow Viewer



Uterus color flow with Flow Viewer

Flow Viewer enables ...

sharper delineation of vascular flow margins as compared to traditional color flow in **100% of cases***

more definitive fetal cardiac chamber and outflow tract identification in the second trimester as compared to traditional color flow in **100% of cases***

more definitive ductus venosus identification in the second trimester as compared to traditional color flow in **100% of cases***

more definitive umbilical cord three-vessel identification as compared to traditional color flow in **100% of cases***

*Based on sample size of n=20.

Expanding your **HD work environment**

Experience full high-definition viewing with the new immersive Philips HD MAX display.

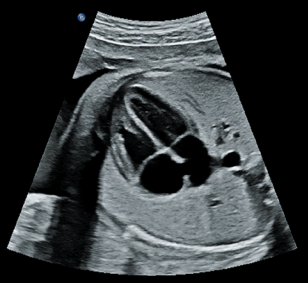
HD MAX uses high-contrast dynamic range and enhanced black levels for subtle delineation of grayscale values.

- 24-inch display
- 40% brighter than OLED technology[3]
- Meets ACR display standard for diagnostic imaging brightness levels
- Exceptional fit for the Philips MaxVue imaging mode
- Supported by an ergonomic arm

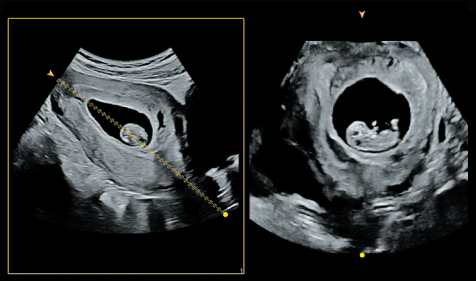
Philips HD MAX display is **40%** brighter than OLED technology[3]

HD MAX features superb off-angle viewing for visualization of clinical images throughout the scanning room.

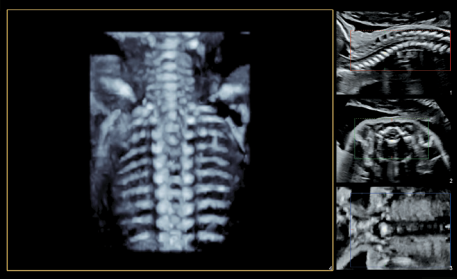
Experience the power of **PureWave**



Exceptional detail with the V9-2 transducer



First-trimester imaging using the V9-2 transducer with FlexVue feature



An expanded view of the fetal spine using the V9-2 transducer and TrueVue Pro

V9-2 transducer

Pairing the V9-2 transducer with the EPIQ Elite Elevate premium ultrasound system offers exceptional OB/GYN imaging.

- First PureWave mechanical volume transducer
- Lightest in its class
- Exceptional ergonomic design
- First-, second- and third-trimester applications

Supports additional technology

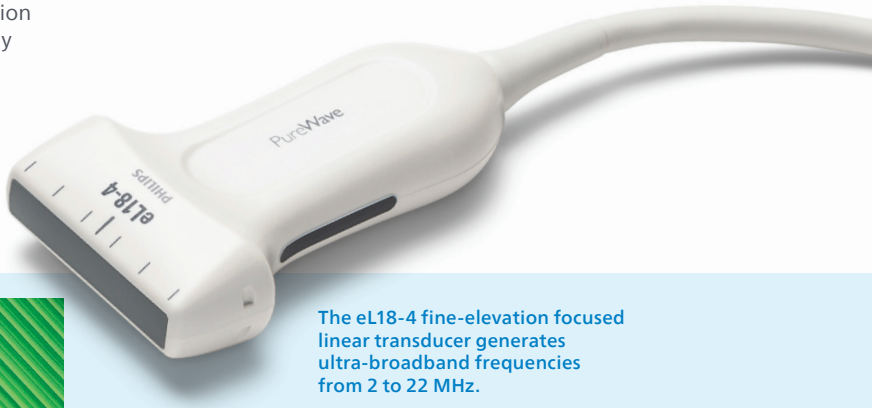
- **2D, 3D and 4D**
- **STIC**
- **xRes Pro**
- **TrueVue Pro/GlassVue**
- **TouchVue/MPR Touch**
- **Flow Viewer**
- **MicroFlow Imaging**
- **3D Auto Edit**
- **Biometry Assist**
- **FlexVue**

Discover ultra diagnostic confidence

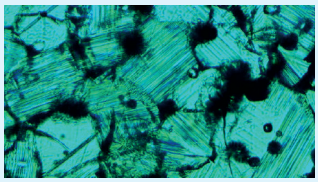
Ultra-broadband has never been seen in OB/GYN ultrasound before, not even at the premium level. The Philips eL18-4 ultra-broadband transducer provides superb 2D detail resolution, along with the penetration needed to help physicians elevate clinical confidence, especially in critical first- and second-trimester OB exams.

The combination of superb detail resolution and penetration is made possible by advanced PureWave crystal technology with fine-elevation focusing capability.

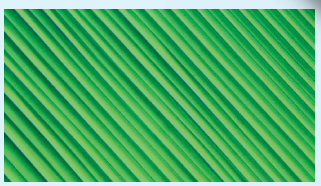
- Multi-row array configurations provide full electronic focusing of the elevation plane
- Elevation focusing works in conjunction with azimuthal focusing to provide thin-slice imaging



The eL18-4 fine-elevation focused linear transducer generates ultra-broadband frequencies from 2 to 22 MHz.



Conventional PZT (x800)

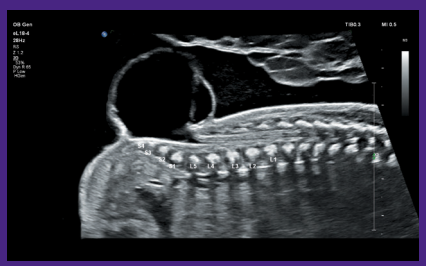


PureWave crystal (x800)

Power to scan the technically difficult patient

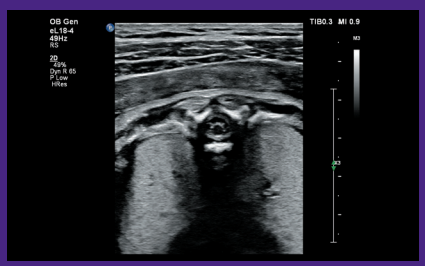
While superb image quality is essential in OB/GYN ultrasound, the increasing number of patients with high BMIs makes it crucial to find ways to enhance exam success on these technically difficult patients. PureWave is your answer.

PureWave crystals have enhanced uniformity for greater bandwidth and twice the efficiency of conventional ceramic materials.[4] The result is excellent imaging and Doppler performance.[5]

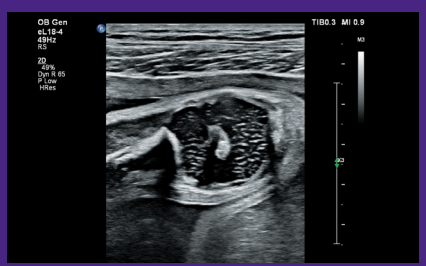


Myelomeningocele demonstrated using the eL18-4 transducer

Fetal profile shown using the eL18-4 transducer

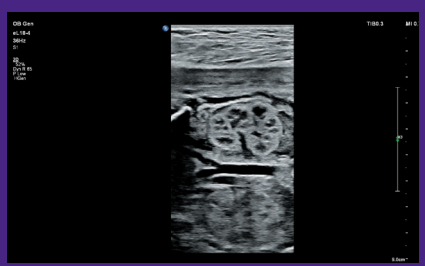


Imaging with the eL18-4 transducer reveals the fetal spinal cord



The eL18-4 transducer shows the fetal patella

Fetal brain as shown by the eL18-4 transducer



Fetal kidney detail using the eL18-4 transducer

The power of **PureWave**

When you're seeing more patients with high BMIs, finding ways to enhance exam success on these technically challenging patients becomes even more crucial. **PureWave is your answer.**

Image even technically difficult patients

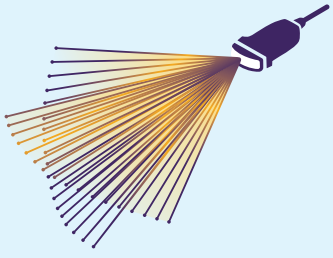
With a complete family of PureWave transducers, your most difficult diagnoses are now easier. PureWave crystal technology represents the biggest breakthrough in piezoelectric transducer material in 40 years. The pure, uniform crystals of PureWave are 85% more efficient than conventional piezoelectric material, resulting in exceptional performance. This technology allows for enhanced penetration in technically difficult patients and for excellent detailed resolution.[4]

PureWave transducers: C10-3v, V9-2, C5-1, eL18-4, X6-1 and C9-2.

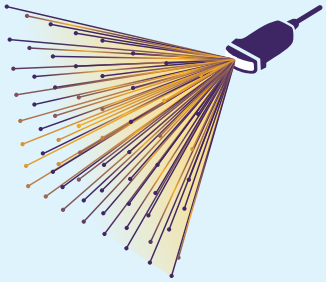
Overcome imaging challenges

xMatrix is our most leading-edge, versatile ultrasound transducer technology available.

With the touch of a button, xMatrix offers all available modes in a single transducer: 2D, 3D/4D, xPlane, Live MPR, MPR, pulsed wave Doppler, color Doppler and CPA.



xPlane imaging



Volume imaging

Visualize the challenging with ease

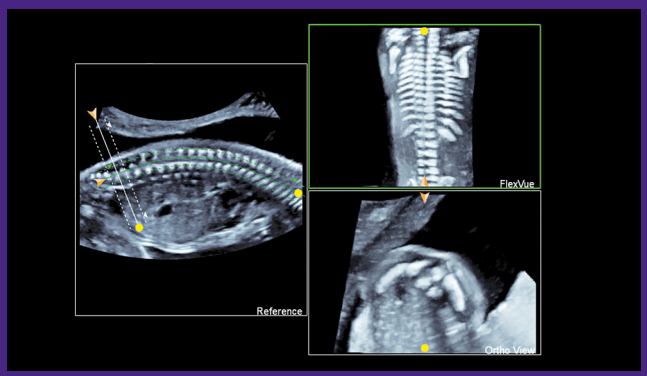
You need the ability to quickly visualize a wide variety of planes of section within 3D volumes. FlexVue with Orthogonal View with quantification allows for flexibility in plane acquisition from 3D datasets and provides a comprehensive measurement package.

Easily evaluate anatomy

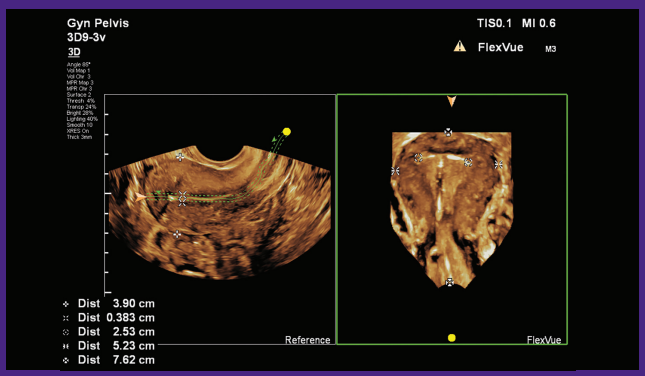
FlexVue with Orthogonal View with quanitification displays structures in their entirety in projected planar views. Even when a structure is curved, you can easily evaluate the anatomy in a wide variety of planes of section. This tool is particularly useful in assessing the uterine anomalies, where the cervix and uterine body are not always in the same plane due to their curvature. The coronal and transverse planes are imperative for diagnosing uterine malformations and IUD placement. It is also useful in assessing the fetal spine, where all portions of the spine are not always in the same plane due to their curvature.

Tissue Emphasis Control

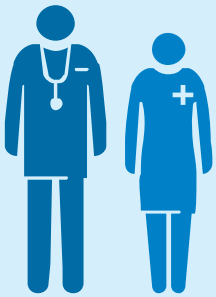
You now have the ability to change the image appearance of the projected view produced by FlexVue. FlexVue offers Tissue Emphasis Control, which allows you to change the range of intensity projections from maximum intensity projection to minimum intensity projection in just four stages.



FlexVue with Orthogonal View demonstrates a curved fetal spine in the sagittal, coronal, and transverse views



FlexVue with Orthogonal View with quantification produces a complete projected coronal view of the uterus



95% of OB/GYN users surveyed feel that FlexVue with Orthogonal View **may improve their workflow***[6]

85% of OB/GYN users surveyed feel that FlexVue with Orthogonal View **may enhance their diagnostic confidence***[6]

*Based on a sample size of 20 users.

Exceptional 3D/4D workflow

An intuitive touch

TouchVue and MPR Touch are easy, intuitive methods of 3D workflow. Simple finger gestures on the system's touch panel allow you to control 3D volume rotation in all axes, zoom and edit volume, and size and position MPR parameters.

When in TrueVue Pro 3D photorealistic rendering mode, TouchVue allows the flexible virtual light source to be positioned in all axes.

EPIQ Elite Elevate offers easy, intuitive workflow with the right touch to enhance detailed OB/GYN exams.

Bring clinicians and OB/GYN patients closer together with lifelike TrueVue Pro 3D imaging display with the intuitive TouchVue 3D volume workflow

Real life, illuminated

Philips TrueVue Pro virtual light sources can be placed anywhere within the acquired 3D volume, allowing manipulation of light and shadow on anatomical structures to enhance clinical confidence and promote maternal-fetal bonding.

Light source, umbilical cord

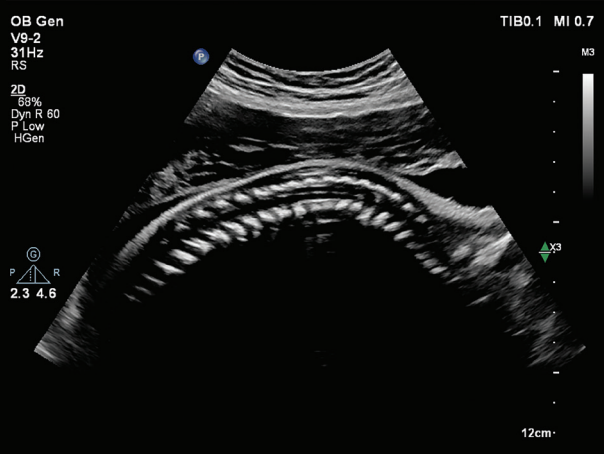
Light source, upper right

Light source, deep in gestational sac

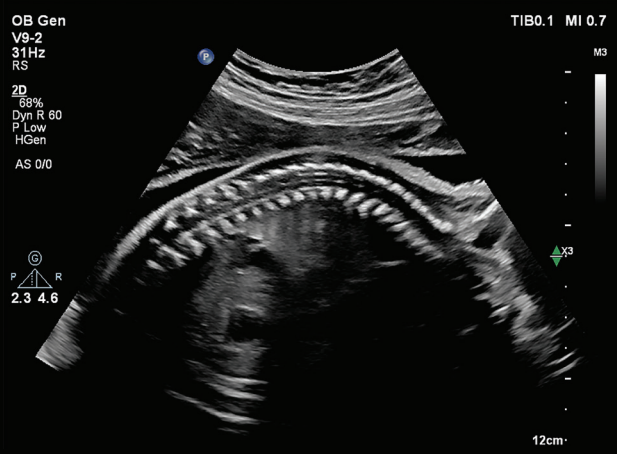
Light source, lower right

Enhance workflow with real-time image optimization

Next Gen Auto Scan enhances fetus image uniformity



Auto Scan off



Auto Scan on

Next Gen Auto Scan improves image uniformity

Adaptively adjusts image brightness at every pixel and reduces the need for user adjustment while also improving transducer plunkability. Compared with previous generations of Auto Scan, Next Gen Auto Scan offers significant advantages.

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

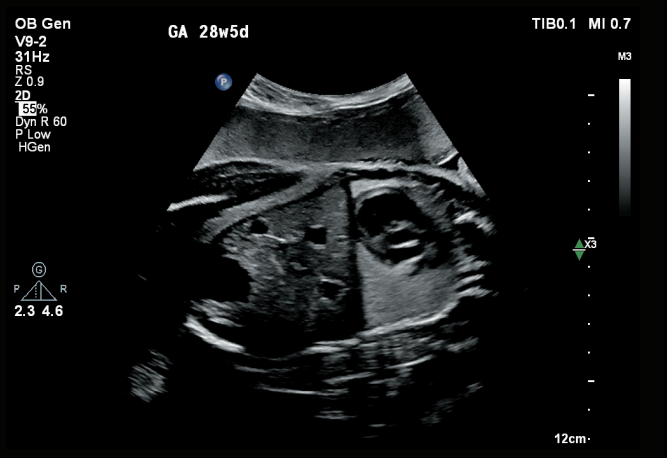
Requires fewer button pushes in 84% of exams*

Enhances image quality of reviewed images in 65% of cases through the use of post-processing controls**

Enables users to modify images to **meet clinical expectations in 70% of cases****

Reduces need for repeat scanning, with 84% of users reporting that rescanning the patient due to unsatisfactory image quality resulting from inappropriate image settings could be avoided with the use of post-processing controls**

Improves user satisfaction with Auto Scan in **100% of cases**†



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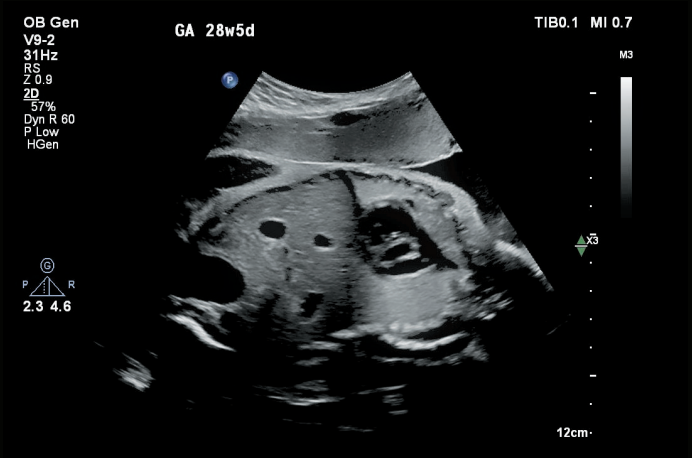


Auto Scan on

*When comparing release 10.0 performance to release 7.0 performance.
**Based on sample size of n=37.
†As demonstrated using the Philips image quality and image uniformity satisfaction questionnaire.

More reproducible **results**

Anatomical Intelligence Ultrasound

At the heart of the powerful EPIQ Elite Elevate architecture is our Philips exclusive Anatomical Intelligence Ultrasound (AIUS), designed to elevate the ultrasound system with advanced organ modeling, image slicing and proven quantification.

Before (above) and after (below) 3D Auto Edit

Biometry Assist

Quick launch presets touchscreen

One touch to reveal

3D Auto Edit uses a proprietary anatomical intelligence algorithm that automatically sculpts away data around the fetal face by recognizing the geometry of the skull.

A welcome assist during the obstetrical exam

Biometry Assist uses anatomical intelligence to automatically preplace measurement cursors on selected structures to assess fetal age and growth trends.

Easily and quickly optimize images during the OB exam

Quick launch presets offer a 60% decrease in button pushes and 55% decrease in image optimization time during an obstetric exam.[7]

A solution made for OB

The earlier, the better

The Philips OB solution for earlier diagnosis focuses on three main areas to enhance the experience of both physician and mother-to-be: image quality, lifelike imaging and efficient workflow.

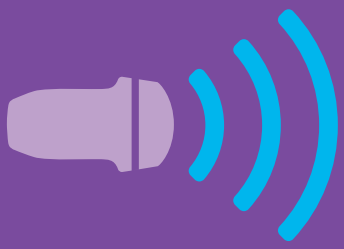
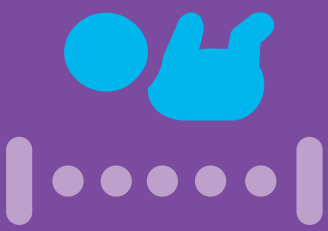


Image quality

Philips eL18-4 transducer with MicroFlow Imaging and V9-2 transducer offer outstanding imaging quality for evaluating fetal anatomy. Leading-edge image quality for confident fetal health assessments.

Lifelike imaging

TrueVue Pro, with its flexible virtual light source, provides innovative 3D/4D imaging, allowing for highly detailed images of the fetus.



Efficient workflow

TouchVue and MPR Touch are easy, intuitive methods of 3D workflow using simple finger gestures to control 3D volumes and MPR parameters. Biometry Assist combined with SmartExam uses anatomical intelligence to semi-automate fetal measurements, and FlexVue is a highly versatile tool that allows visualization of technically difficult anatomical views from 3D volumes that are essential for diagnosis.

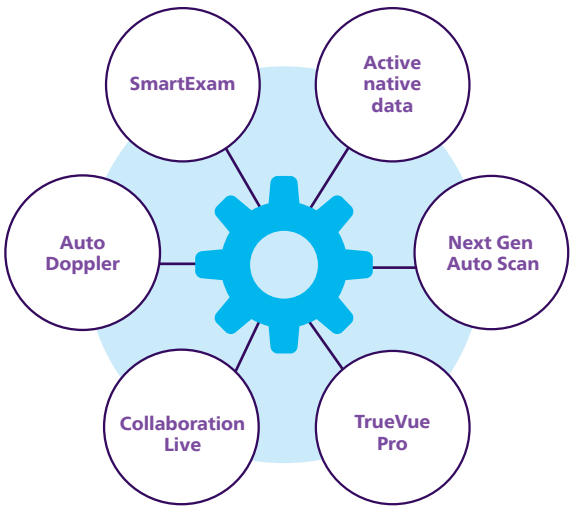
EPIQ Elite Elevate brings efficiency to premium ultrasound

SmartExam

Enhances user workflow with automatic 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.

Efficient from start to finish

- Tablet-like user interface results in **40% to 80% less reach** and **15% fewer steps**[1]
- SmartExam protocols facilitate exams with an onscreen menu guiding you through required views and modes while **automatically entering annotations and prompting for measurements**.
- High Q Auto Doppler takes ten steps from a conventional exam to three steps and **reduces button pushes by an average of 68%**[8]
- Improved satisfaction for Auto Scan **in 100% of cases**[6]



Value you can count on

Streamline your workflow and securely connect with patients and colleagues

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, allowing for fast time to diagnosis.

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.[9]

Comprehensive clinical education

To improve operational efficiency and support patient care.

A world leader in sustainability

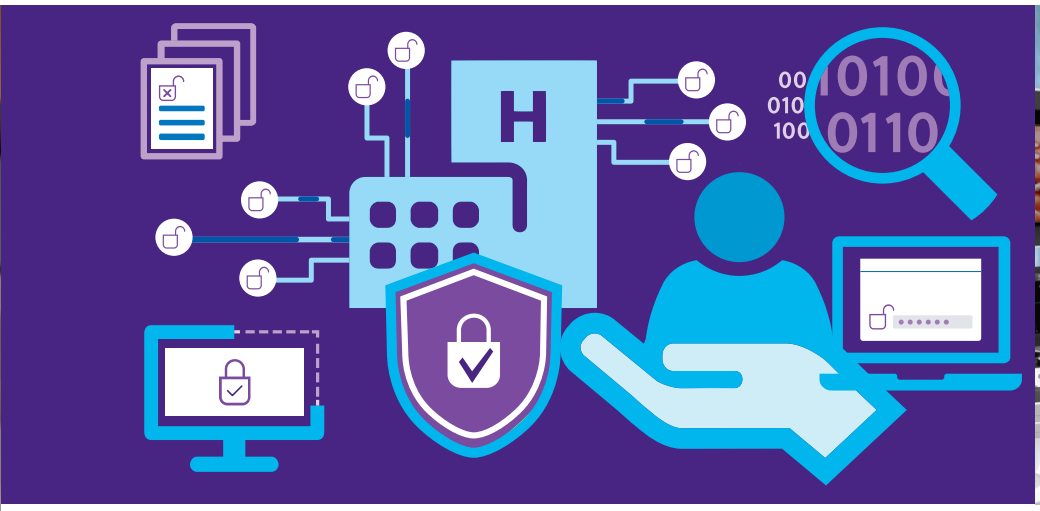
Philips is committed to lifecycle circularity for its systems.**

*Contract required. Requires release 7.0.5 or higher. Diagnostic use and remote access via mobile device or browser requires release 9.0 or higher. Multi-party and system-to-system connect require release 10.0 or higher.

**https://www.philips.com/a-w/about/environmental-social-governance/environmental.html

Protect your patients

Powerful system security protects sensitive patient data

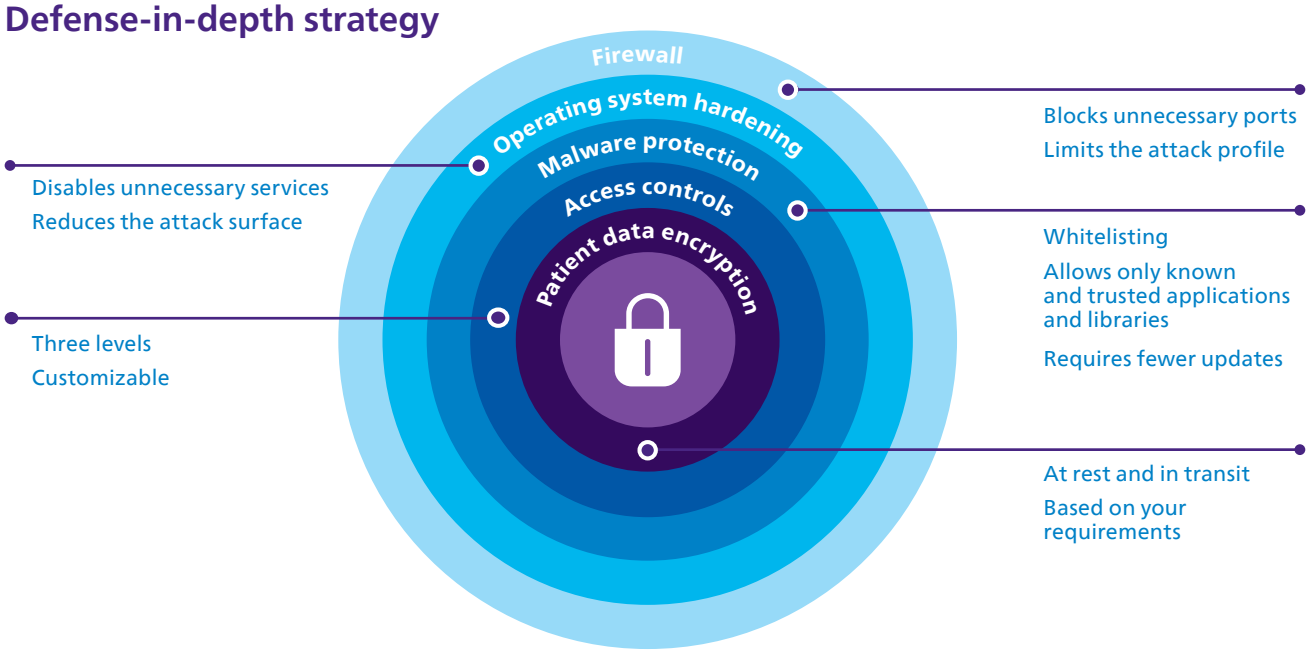


Hospitals and healthcare organizations are spending more to protect their systems and patient data from cyberattacks. Of healthcare providers, one third of large data security incidents occur in hospitals.[10] That is why healthcare cybersecurity spending is expected to reach $53.23 billion by 2030.[11]

Ultrasound devices are highly mobile and can exist in a wired or wireless environment. As a result, Philips has made security a high priority for ultrasound systems. The EPIQ Elite Elevate platform with Windows 10 is built around a powerful defense-in-depth principle and delivers an outstanding set of data security features comprising of five core layers.

Defense-in-depth strategy uses a multilayered defense that is more difficult to penetrate than a single barrier. This is a basis for best practices in medical device security. Philips recognizes the importance of securing your medical devices and protecting your patient data. Together we can maintain a secure environment by remaining vigilant and identifying the ever-changing cybersecurity threat landscape.

Defense-in-depth strategy



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Printed in the Netherlands.
00000714-00-01 * MAR 2025