



Revolutionizing premium performance ultrasound

Philips iU22 xMATRIX ultrasound system for women's healthcare

PHILIPS
sense and simplicity

Welcome to the future of ultrasound

At Philips, we strive for change that improves and simplifies the lives of patients and healthcare providers. Often, a series of innovations add up to make a real difference: Philips advances like PureWave crystal technology, SonoCT real time image compounding, and SmartExam guided workflow have made the iU22 the ultrasound system trusted by over 20,000 customers worldwide.

Occasionally, however, a single innovation elevates imaging to a new level. That's the case with xMATRIX technology – a true breakthrough that revolutionizes premium performance ultrasound.



Combine the strength of the iU22 ultrasound system with the power of xMATRIX, and you have an ultrasound system in a category of its own. The iU22 xMATRIX is an innovation that increases clinical confidence, reduces exam time, and brings more diagnostic information to every exam.

Leading-edge, redefined architecture. Unparalleled resolution. Easy-to-use volume imaging. Built on a remarkable legacy, yet unlike anything you've ever seen.

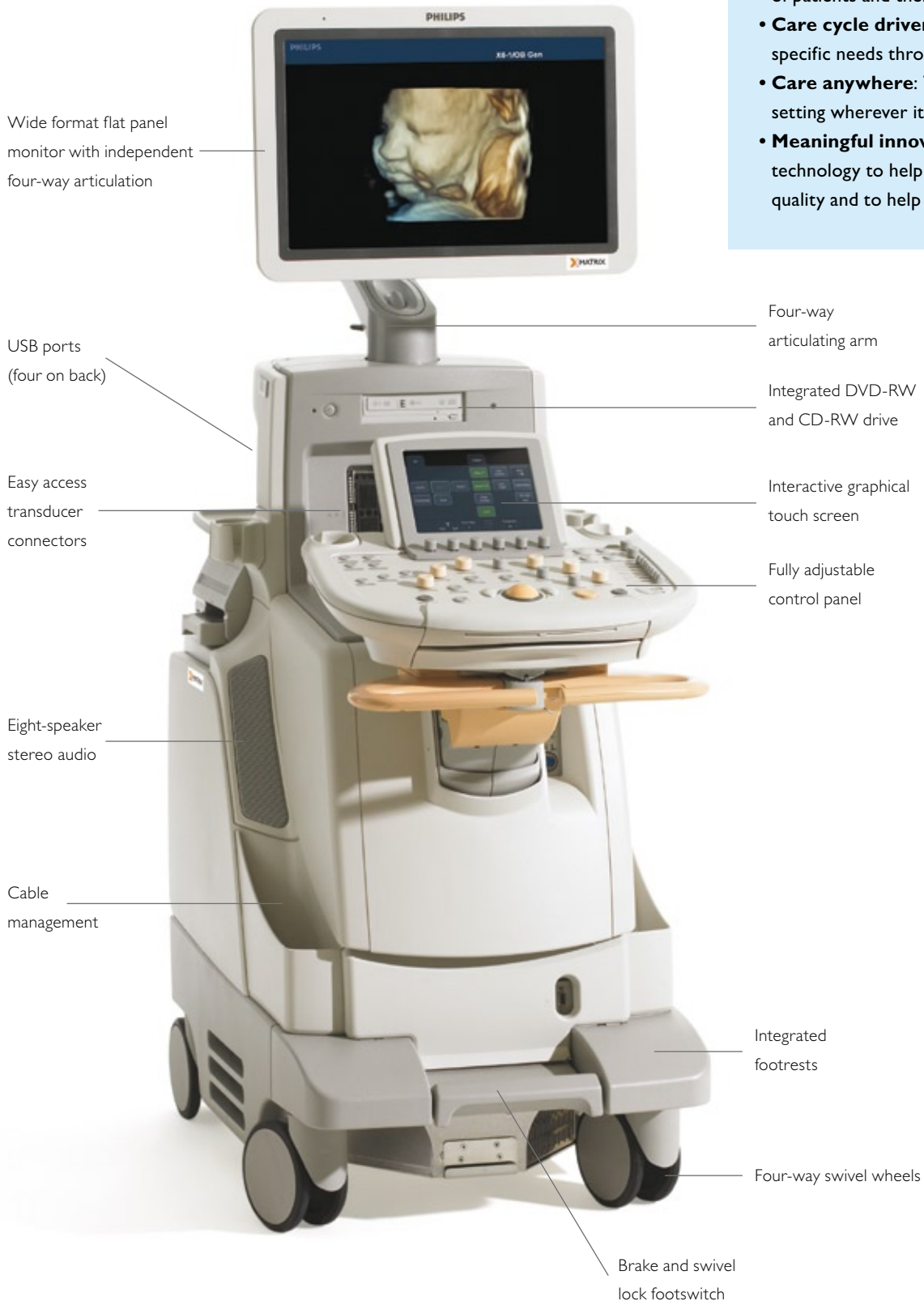
Key advantages

- View two imaging planes simultaneously, in real time
- Acquire volume data without changing transducers and disrupting workflow
- Acquire fetal cardiac volumes in as little as two seconds with iSTIC

Our promise to you

Philips brand promise to our customers is based on four pillars:

- **People-focused:** We listen to the needs of patients and their care providers.
- **Care cycle driven:** We focus on their specific needs throughout the care cycle.
- **Care anywhere:** We enable care in any setting wherever it occurs.
- **Meaningful innovation:** We apply technology to help improve healthcare quality and to help reduce costs.



Clinical confidence

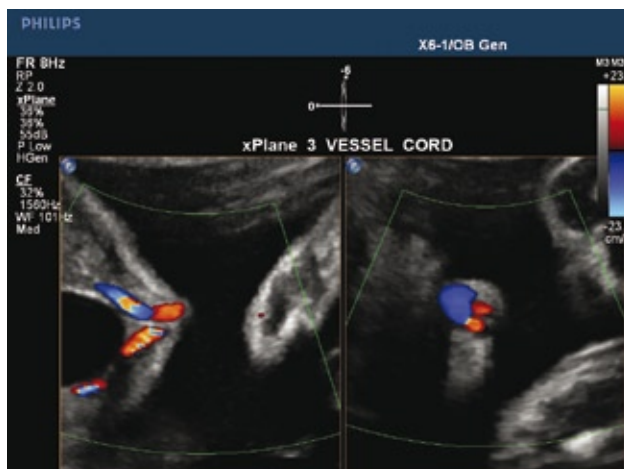
What if we changed your idea of premium performance ultrasound resolution?

Exceptional image quality

The exceptional PureWave image quality and unprecedented resolution you need for confident diagnoses can now be found with the new iU22 xMATRIX ultrasound system. The X6-1 PureWave xMATRIX transducer, features over 9,000 active elements, which is 35 times more elements than today's conventional transducers.

The X6-1's ultra-thin slice imaging redefines premium performance ultrasound by providing:

- Extraordinary tissue uniformity for improved textural pattern recognition
- Superb discrimination of micro-structures in near, mid, and far field
- Unprecedented image resolution



Available on the X6-1, X3-1, and X7-2 xMATRIX transducers, Live xPlane imaging supports the simultaneous display of two live imaging planes.

Workflow efficiencies

With the iU22 xMATRIX, you can acquire two high resolution images simultaneously without moving the transducer, improving imaging precision and saving time while reducing the potential for injury.

The X6-1 PureWave xMATRIX transducer features xPlane, which allows imaging in two planes without moving the transducer. You no longer have to rotate the transducer to see the second plane and you can maintain a reference point while surveying anatomy.

Clinical trials have shown that xPlane speeds workflow, improves imaging precision, and has the potential to minimize repetitive stress injuries.

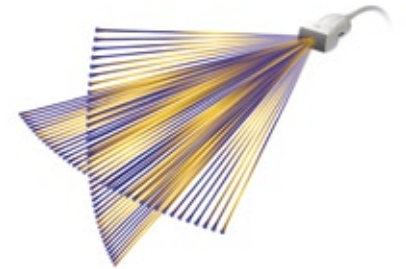
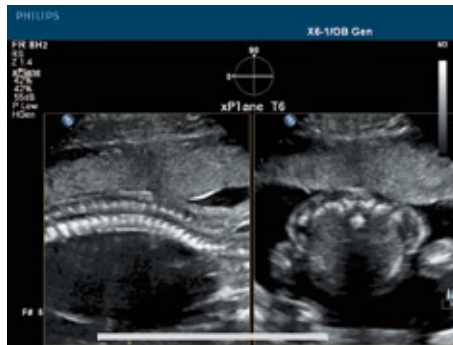
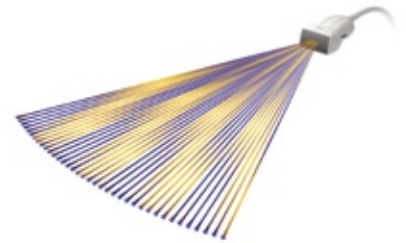
Unprecedented transducer versatility

What if one transducer could provide the ultimate versatility in clinical imaging?

The X6-1 offers all modes with one transducer – 2D, 3D/4D, Live xPlane, Live MPR, Doppler, color Doppler, and CPA – all at the touch of a button.

With xMATRIX technology, you can:

- Use Live xPlane imaging to create two full-resolution planes simultaneously, allowing you to capture twice as much clinical information in the same amount of time for simultaneous high resolution real time scanning in two planes
- Acquire near isovoxel resolution that reveals superb images from any plane within the volume
- Send 3D MPRs in the X, Y, and Z plane to any PACS system with MPR DICOM Export
- Present real-time 4D volume data in abdominal and obstetrical exams
- Acquire excellent 2D images



Simplifying your 3D workflow

What if we made it easy to add volume imaging to 2D exams without disrupting workflow?

The iU22 xMATRIX simplifies volume imaging by directly addressing three key workflow challenges.

Challenge – Obtaining volume data required changing transducers.

xMATRIX solution

The new X6-1 PureWave xMATRIX transducer provides the highest resolution for both 2D and 3D imaging. As a result, there is no need to change transducers to acquire volume images, so there is no disruption to the examination. In fact, workflow is improved.

Challenge – MPR images were of a lower quality than 2D images.

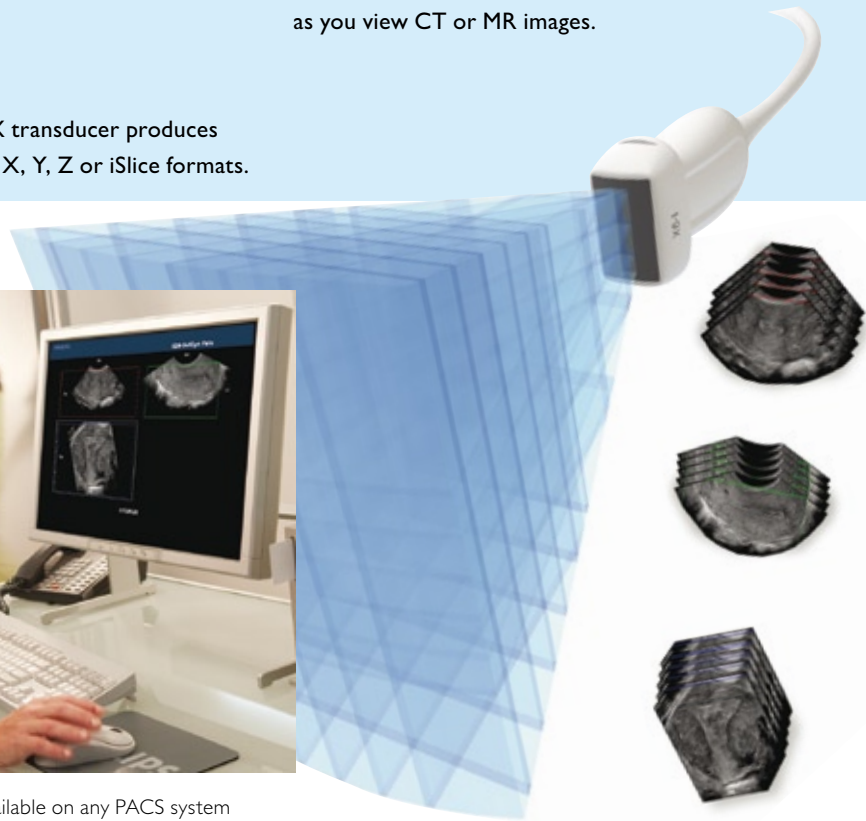
xMATRIX solution

The X6-1 PureWave xMATRIX transducer produces high resolution MPR images in X, Y, Z or iSlice formats.

Challenge – Volume ultrasound data could not be viewed on PACS.

xMATRIX solution

For the first time ever, ultrasound volume data from any volume transducer is available on any PACS (DICOM multi-frame object standard presently required for all cine loop information). Once the volume data is acquired, the iU22 will capture the X, Y, and Z MPR cineloops at the push of a button, and send them to your PACS. You can then view these ultrasound MPR images just as you view CT or MR images.



Ultrasound volume data (X,Y,Z) is available on any PACS system accepting DICOM Multi Frame Object standards

The iU22 xMATRIX makes it easy to bring significant new clinical information into the ultrasound exam. Since you no longer need to change transducers to switch from 2D to 3D imaging, your risk of missing views due to fetal movement is minimized.



Consistent fetal cardiac volumes

Developed in response to clinician feedback, iSTIC on the iU22 xMATRIX makes fetal cardiac exams faster and easier. By leveraging the temporal speed and spatial accuracy of xMATRIX, users can acquire a high resolution loop of volumes over a cardiac cycle in as little as two seconds (as opposed to 12 seconds with conventional STIC), making it possible to image even very active fetuses. The system estimates the fetal heart rate in advance, in real time, giving you live information before you acquire the volume.

Available for both echo and color flow exams, iSTIC with xMATRIX reduces the need for reacquiring the volume, shortens exam time, and saves patients the time and hassle of rescheduling exams due to the inability to get data because of fetal movement.

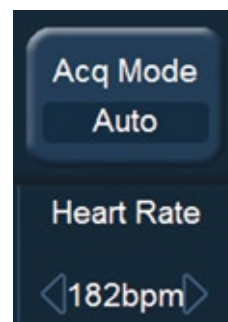
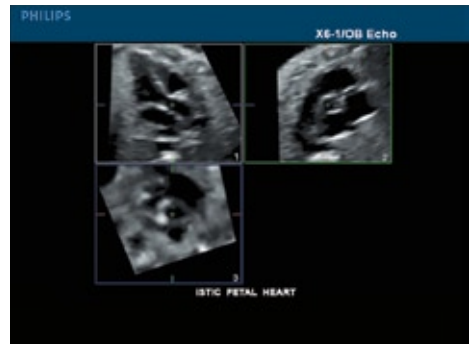
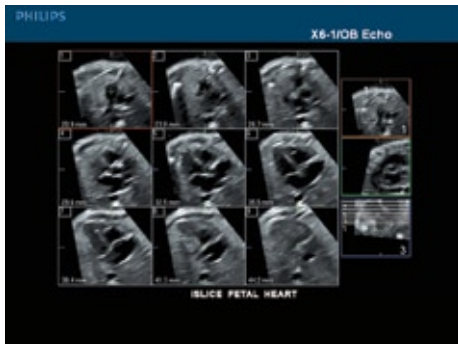
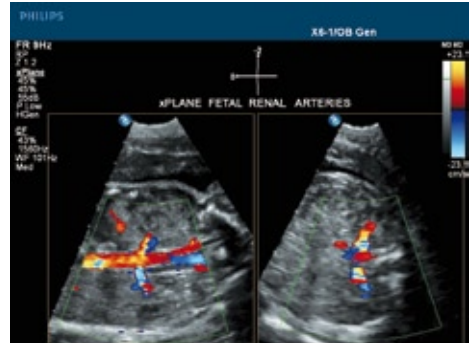


Image gallery



One-button solutions enhance ease of use

What if the operation of a premium performance ultrasound system was addressed with a few one-button controls?

Ease of use is one of the top three requirements for a premium performance ultrasound system. That is why the iU22 xMATRIX is designed to operate using a small number of one-button controls that assure that you are able to acquire the best images with the least amount of effort.



iSCAN one-button optimization quickly and automatically adjusts system parameters in both 2D and Doppler modes based on patient and exam types. It decreases keystrokes while ensuring the best image clarity possible in each exam.



iFOCUS Intelligent Focusing Technology automatically computes beam characteristics for a selected region of interest, and then provides the best detail resolution and tissue uniformity.



iOPTIMIZE Intelligent Optimization instantly adjusts system performance for different patient sizes, flow states, and clinical requirements.

A healthier workplace

Given that surveys indicate that 80% of sonographers are scanning in pain and 20% of them will suffer a career-ending injury, the iU22 was designed with the user's health in mind. In fact, the iU22 remains the only premium ultrasound system that permits independent movement of the monitor and keyboard, which allows the user to stay in a neutral scanning position. The flickerless flat panel monitor is easy on your eyes, while flexible transducer cables reduce tension and muscle strain.



Technically difficult patients are now less difficult

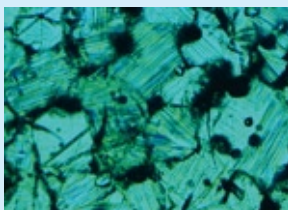
What if you could visualize the smallest anatomical structures with exquisite detail on even technically challenging patients?



Those familiar with the iU22 know that it is an excellent system for imaging technically difficult patients. Philips exclusive PureWave crystal technology is clinically proven to improve penetration in difficult-to-image patients. PureWave reduces clutter so clinicians can view fine structures in excellent detail. Now the iU22 system with PureWave technology makes obtaining those challenging images even easier, with three transducers for imaging technically challenging patients.

With a fully-sampled matrix phased array over 9,000 elements, the X6-1 PureWave xMATRIX transducer delivers the ultimate in clinical versatility – excellent 2D and 3D with one transducer – even on technically difficult patients.

The PureWave C5-1 transducer's size and shape facilitate access and improves comfort during scanning, and PureWave crystal technology supports unparalleled image clarity even on difficult patients.

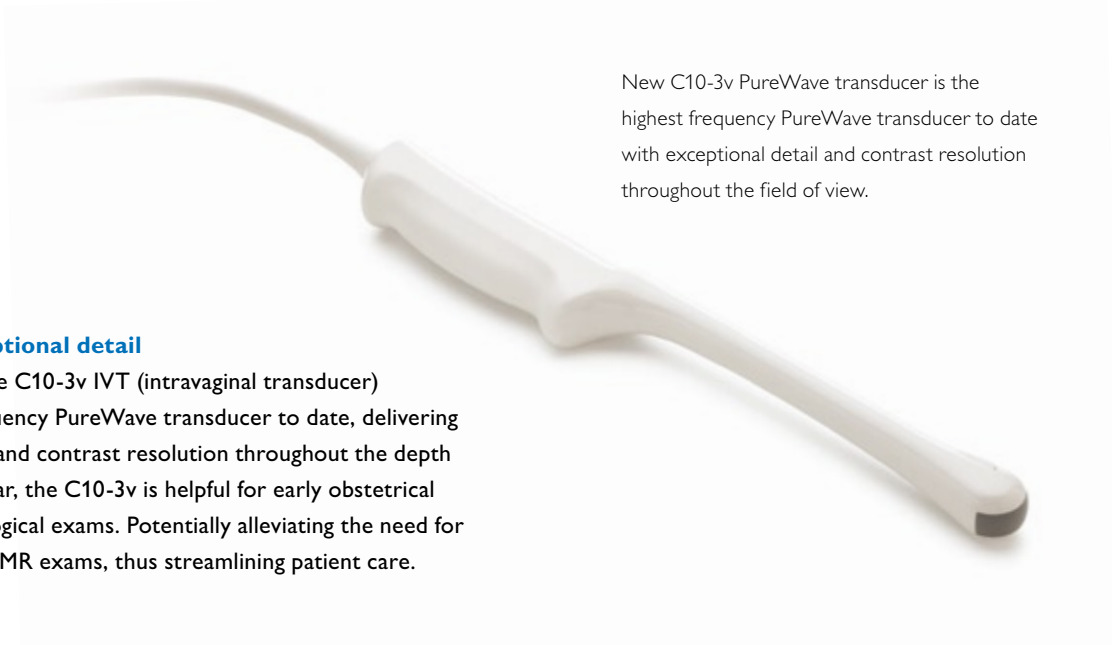


Conventional (x800)



PureWave (x800)

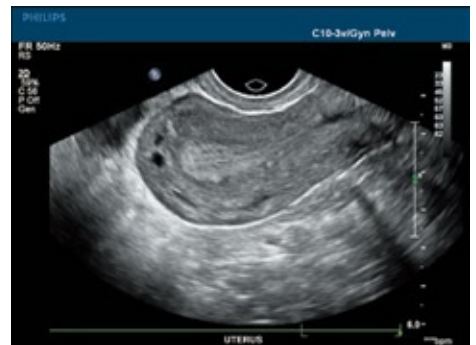
PureWave crystals have virtually perfect uniformity for greater bandwidth and twice the efficiency of conventional ceramic materials. The result is excellent imaging and Doppler performance.



New C10-3v PureWave transducer is the highest frequency PureWave transducer to date with exceptional detail and contrast resolution throughout the field of view.

Delivering exceptional detail

The new PureWave C10-3v IVT (intravaginal transducer) is the highest frequency PureWave transducer to date, delivering exceptional detail and contrast resolution throughout the depth of field. In particular, the C10-3v is helpful for early obstetrical exams or gynecological exams. Potentially alleviating the need for referral for CT or MR exams, thus streamlining patient care.



Workflow tools that deliver efficiency

What if you could easily program your personal protocols for any application into your premium performance ultrasound system and never again have to type in any annotation?



A recent study found that SmartExam

- Decreased examination time by 30-50%
- Reduced keystrokes by 300 per exam
- Improved consistency and quality of exams
- Assisted in department reimbursement and accreditation by increasing consistency

SmartExam Shuffle brings review consistency

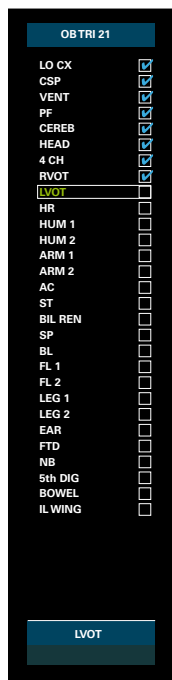
What if assigned views were transferred to your PACS in the order they were assigned, not acquired?

To respond to your needs for greater efficiency, the iU22 xMATRIX system is redefining workflow through built-in intelligence that automates many time-sapping activities.

SmartExam guided workflow increases consistency and speed by automatically planning and processing application protocols. With SmartExam, designing a new exam type is easy. When you perform the exam the iU22 remembers every step. The required views, annotation, body markers, mode changes, and quantification are automatically recorded into your protocol as you perform the exam. Once you save your new exam type you can begin using it immediately. Because it is so quick and easy, you can design a full range of exams to meet your lab's requirements.

SmartExam Shuffle brings review consistency
What if assigned views were transferred to your PACS in the order they were assigned, not acquired?

Now it's possible to send images to your PACS in the order they were assigned, even if it doesn't match the order in which they were acquired. This results in consistency of ultrasound image review on your PACS for all of your exams.



SmartExam provides key benefits

Department gains

- Consistency
- Easier accreditation and training
- Fewer missed views
- Reduced PACS space
- Shorter exams
- More patient focus

Elastography provides new tool for breast imaging

What if you could provide a new method of detecting breast abnormalities?

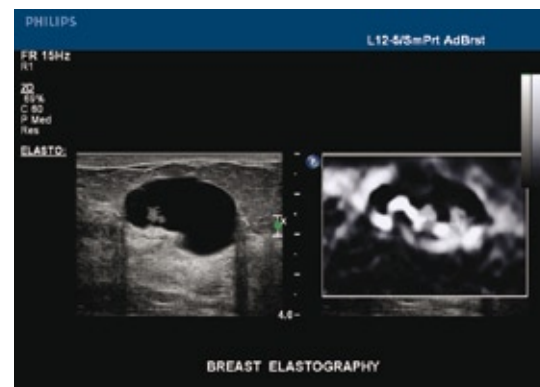
Studies have shown that a combination of sonography and ultrasound elastography, a technique that enables evaluation of tissue stiffness, could potentially reduce unnecessary biopsies.*

You can add this valuable diagnostic tool to your services by using the iU22's strain-based breast elastography on the L12-5 transducer, with the Advanced Breast Tissue Specific Imaging (TSI) preset.

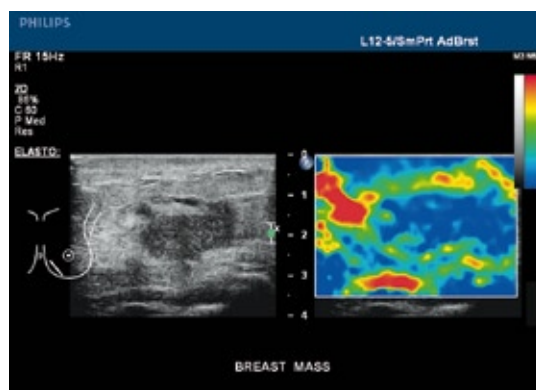
Philips elastography solution generates an elastogram triggered by patient movement, and then provides distance and area measurements, size comparison to validate the size and location of the lesion on the elastogram, and anechoic imaging that enhances the cystic structures on the elastogram.



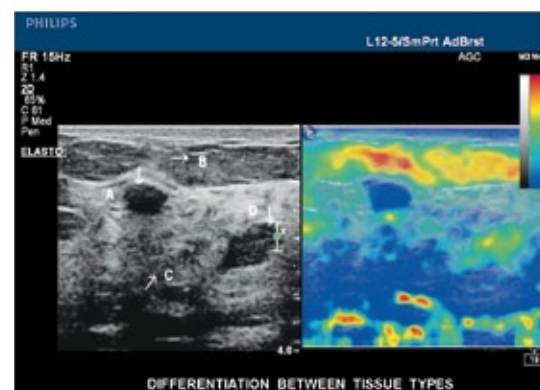
Breast elastography looks at mechanical properties of tissues (relative stiffness).



Stiffness is defined only for tissue. Fluid structures show characteristic noise patterns in elastography that may be used as key identifying markers.



Color elastography display showing the gradations of stiffness relative to the surrounding tissues in this mass with suspicious characteristics.



Note the distinct differences in tissue stiffness relative to the other areas of this image. Dark blue depicts the stiffest areas in this image.

* Tan SM, et al. Improving B mode ultrasound evaluation of breast lesions with real-time ultrasound elastography – A clinical approach. *The Breast* (2007), doi:10.1016/j.breast.2007.10.015

* Hui Zhi, MD, Bing Ou, MD, Bao-Ming Luo, MD, Xia Feng, MD, Yan-Ling Wen, MD, Hai-Yun Yang, MD. Comparison of Ultrasound Elastography, Mammography, and Sonography in the Diagnosis of Solid Breast Lesions. *J Ultrasound Med* 2007; 26:807–815.

Support that enhances productivity

What if Philips experts could remotely diagnose and fix a problem on your ultrasound system before you were even aware of the problem?

Philips support services are designed to maximize uptime. Our Remote Services connectivity allows for many advanced service features, including virtual on-site visits for both clinical and technical support to provide faster resolution to issues and questions, remote clinical education, and remote log file transfer to minimize downtime by allowing faster diagnosis of problems by call center personnel.

Remote services

Remote desktop

“Over the shoulder” system monitoring for faster technical and clinical troubleshooting and training options

iSSL technology

An easy and secure connection to Philips remote services using your existing internet connection

Online support request

Enter a support request right from your ultrasound system for faster, more convenient responses

Utilization reports

System and exam data analysis to help you manage ultrasound utilization and productivity in your practice

Pro-active monitoring

Continuous performance monitoring and alerts to help avoid system downtime

Award-winning service

Whether you encounter Philips personnel through remote services or at your site, you can be assured of our commitment to your satisfaction. In fact, for 17 years IMV Limited, a prestigious independent healthcare research company, has rated Philips number one out of thousands of customers surveyed in its ServiceTrak Imaging-All Systems report for customer service satisfaction.



Innovative financing solutions

Philips Medical Capital delivers financial solutions to help you place a new iU22 xMATRIX system in your facility or practice. Our financial experts understand your unique financial needs and provide flexible solutions that optimize asset utilization, reduce costs, and increase financial flexibility.

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Printed in The Netherlands.
4522 962 64301 * OCT 2010