Pushing the boundaries

Philips iU22 ultrasound system

PHILIPS

Conquer your challenges

Keeping pace with growing requirements within the medical community and responding to patient interests are key challenges for today's women's healthcare providers. Diverse needs, department schedules, and tight budgets require efficiency and simplicity.

The iU22 intelligent ultrasound system continues to push the boundaries of image quality, ease of use, automated quantification, and throughput to help you address these challenges.
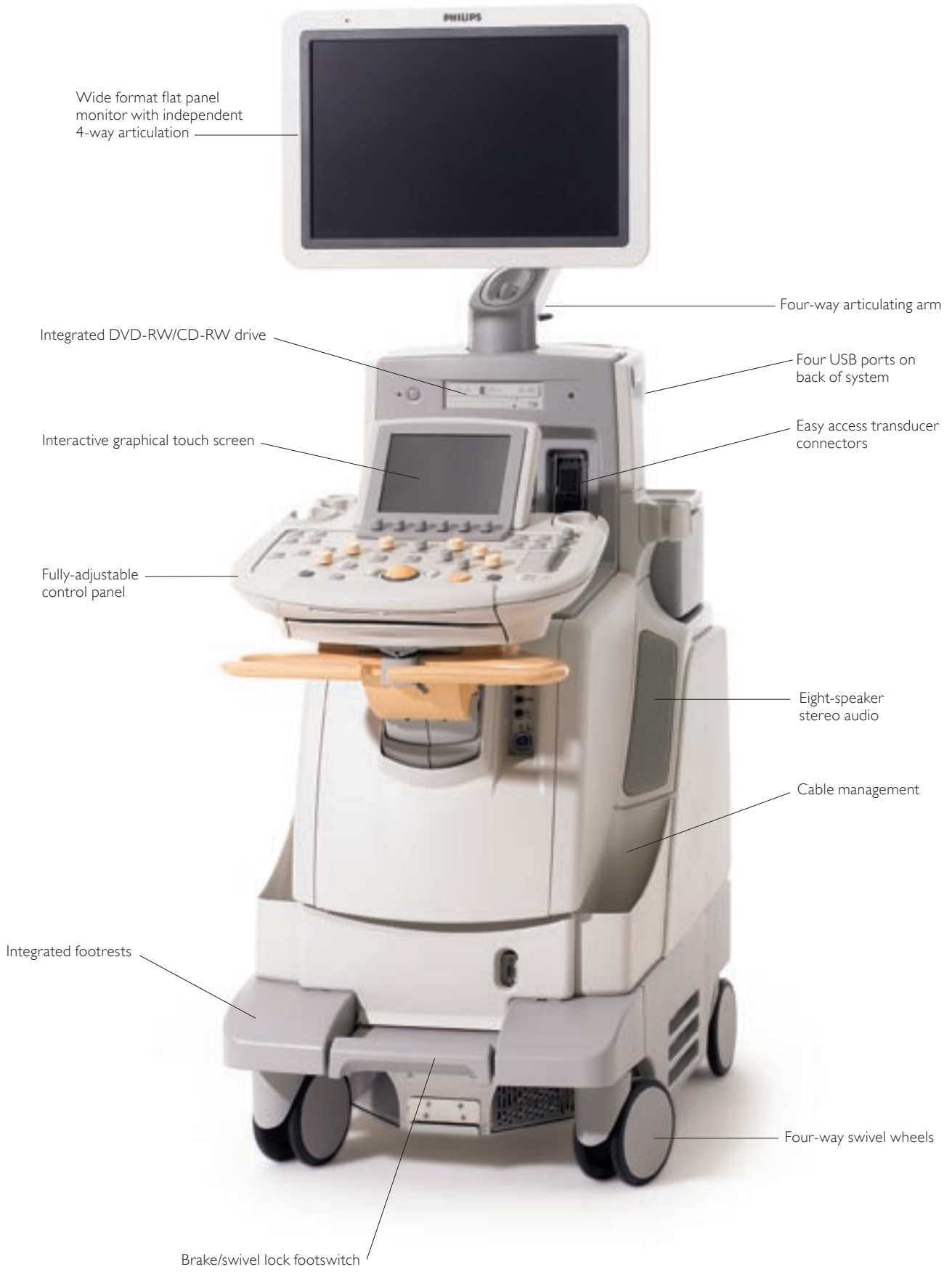
Wide format flat panel monitor with independent 4-way articulation

Integrated DVD-RW/CD-RW drive

Interactive graphical touch screen

Fully-adjustable control panel

Integrated footrests

Brake/swivel lock footswitch

Four-way articulating arm

Four USB ports on back of system

Easy access transducer connectors

Eight-speaker stereo audio

Cable management

Four-way swivel wheels

Experience efficiencies with volume imaging

In a short time, volume imaging has become a readily accepted and expected part of many exams. And the good news is that it's more than just a fetal face. Volume imaging provides you with new views and data that you could not acquire with conventional 2D imaging.

Volume imaging is also more than just 3D and 4D. All the information you need is available in volume data sets. With the iU22 system, you can immediately and easily integrate volume imaging into your exams.

How is it so simple? The iU22 system provides you with the ability to acquire volume data, interrogate it during the exam or later after your patient has been released, quantify it on-cart or off-cart, and easily transfer images and measurements to reports.

Easy acquisition

There are several methods of acquiring volume data. Freehand acquisition allows you to use virtually any transducer for advanced volumetric interrogation and display.

The VL13-5, V6-2 and 3D9-3v automated volume mechanically steered arrays are easy to use and provide you with volume data that is quantifiable. Clinical uses include breast, gynecologic endometrial evaluation, fetal surface structural assessment, and fetal cardiac examination.

The most advanced method of live volume acquisition is xMATRIX array. From one volume data set, you can generate an extraordinary number of images and anatomical views as well as perform advanced quantification.

Remarkable visualization

Because volume imaging has the potential to give you so much data, how are you sure you have the correct data? The iU22 system provides new tools to display and manipulate volume data sets.

34 - WEEK FACE

28 - WEEK HANDS

Interrogating data at a workstation or on the system provides you with workflow options for improved efficiencies.

Capture the moving target with STIC

Not all targets are still, especially in fetal cardiac imaging. The rapid movement of the fetal heart makes 3D imaging more challenging. That's where Spatio-Temporal Image Correlation (STIC) adds value. STIC is a technology that uses the system's ability to capture multiple volumes and synchronize them based on a calculated heart rate. The resulting volume image can be displayed and interrogated in real time. Using STIC, you can select various views for displaying the data to fully evaluate fetal heart anatomy and function.

STIC tames the fetal heart in image displays, providing excellent image quality of volume data for full evaluation including the outflow tract, normally a very difficult evaluation because of the fast heart rate.

Find your best images with iSlice

The QLAB iSlice feature was developed specifically for volume imaging. iSlice makes it easy for you to perform precision slicing of the volume to find the images with the best views and content for making your diagnoses. You can adjust the format to display 4, 9, 16 or 25 2D images based on slices from the volume set. You'll quickly find that iSlice augments your diagnostic, decision making, and patient management processes.
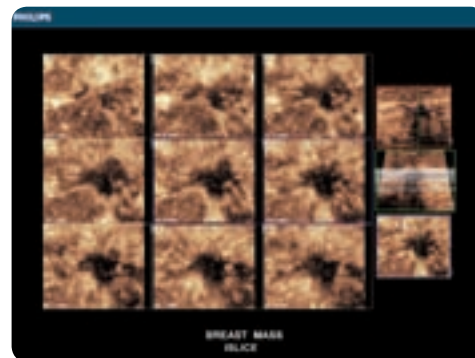
How will volumetric imaging impact your exams?

A new use model shows the potential to improve your exam efficiencies by changing the way you acquire and visualize ultrasound data. When you integrate advanced volume methods, you can decrease the acquisition time of the exam because you are acquiring a few volume sets to complete the study, instead of 30 or 40 images. Volume imaging provides you with more data in less time.

Achieve new levels of image quality

You continue to tell us that achieving the absolute best image quality is critical to addressing your diagnostic challenges—every exam, every day. That's why we've focused on transducer design and imaging technologies that increase the clarity and accuracy of data on all your patients.

Revolutionary architecture

How important is a system's architecture? As the core of everything a system can do, it's ultimately important. The iU22's xSTREAM architecture is all digital, which means it's ready for new developments when they become available. It's powerful, processing multiple data streams simultaneously—in real time—and supporting a broadband beamformer. And it's fast, performing over 250 billion operations per second, making real-time performance possible in all modes. It's designed for cutting-edge 2D, 3D, 4D, MPR and Live xPlane applications as well as new volume capabilities—including Live Volume imaging.

Transducers designed for practical use

The iU22's transducers are designed to help you acquire accurate data easily on all your patients. Volume acquisition is easy with the V6-2, 3D9-3v, and the new VL13-5 transducers. You can count on great image quality from each exam. Breast imaging is facilitated with the VL13-5, L17-5, and L12-5 linear arrays, and the L15-7io compact linear array.

The V6-2 transducer, an ergonomic form with excellent color doppler, performs double duty with great image quality in both 2D and 3D/4D modes. This means you can comfortably use this one transducer for the entire exam, eliminating the need to switch transducers when you transition into volume modes.

Your solution to scanning technically difficult patients

The C5-1 transducer is an ideal choice for your general purpose Ob/Gyn imaging needs including those patients who are clinically challenging. We've combined our exclusive, proven PureWave crystal technology with the iU22's new tissue aberration correction and coded beamforming for improved imaging results at extended depths. For the first time, you can achieve extraordinary clinical performance on your technically difficult patients.

Correction for superficial adipose layers
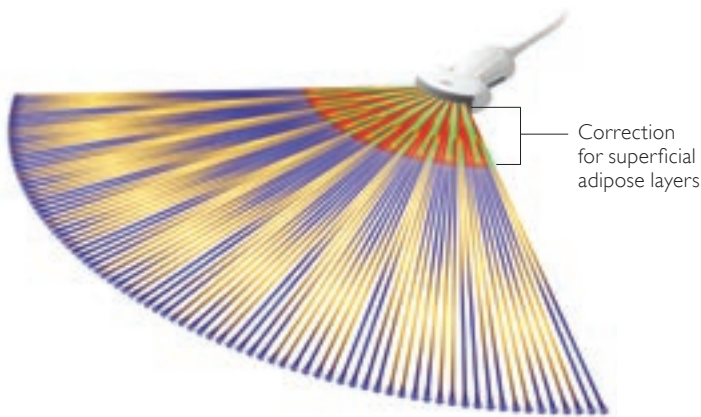
Tissue aberration correction

The C5-1 transducer was designed specifically to accommodate for the altered speed of high frequency sound waves through adipose layers versus other tissue. The result is increased penetration and clarity in image quality throughout the entire beam length.

The iU22 supports a range of transducers applicable for transabdominal, vaginal, and breast imaging with curved, linear and volume arrays, including the new VL13-5.

## SonoCT image compounding and advanced XRES for superb tissue definition

Philips SonoCT is the only clinically proven technology that acquires up to 9 lines of sight without any special transducer maneuvers and combines the individual images into one very clearly defined image. Images display striking levels of tissue differentiation that are virtually free from artifact.

An independent study* determined that SonoCT technology improved image quality in 96% of exams and, more importantly, changed patient management in 17% of the cases. With SonoCT imaging, you can be confident in the diagnostic quality of your data.

Advanced XRES takes image clarity to the next level. Philips XRES, a technology originally developed for MRI, was adapted for ultrasound to dramatically reduce artifacts and improve margin and border definition. The addition of new advanced XRES algorithms and tissue aberration correction technologyhelp provide greater clarity and definition when imaging patients with fatty breast tissue.

xMATRIX is the technology for the future

xMATRIX array technology uses a fully-sampled electronic transducer design with precise focusing and beam steering. With the xMATRIX's Live xPlane imaging, you can acquire and display two live full-resolution imaging planes simultaneously in 2D and color Doppler modes. And in real time, manipulate the secondary plane for views difficult to obtain

| Conventional | SonoCT | SonoCT and XRES |

Tissue Information
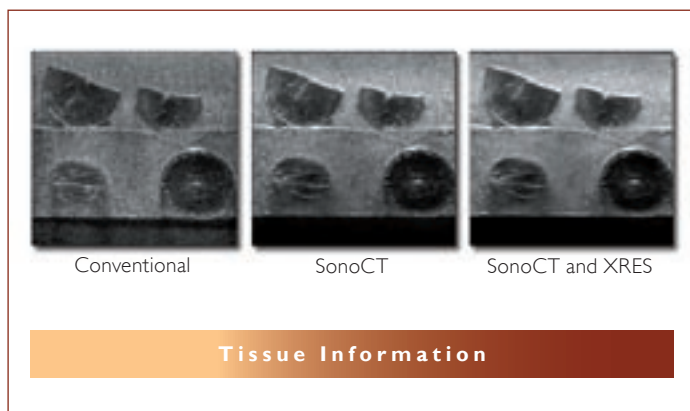
SonoCT and XRES working in tandem display images with excellent clarity and accuracy, adding to your diagnostic confidence.
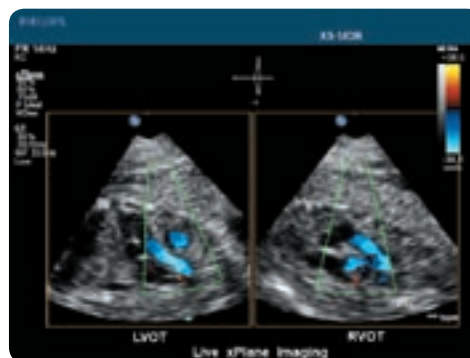
with conventional ultrasound. Now you have twice as much clinical data in the same amount of time, allowing you to make your diagnoses faster with increased confidence. xMATRIX is the platform for advanced live volume imaging.

* Scientifica study on image quality.

Redesign your workflow

We consulted with you to identify aspects of sonography for improvement. Workflow was your overwhelming response—make exams easy and consistent, help us keep staff healthy and able to meet busy schedules.

Being smart about your health

Surveys indicate that 80% of sonographers are scanning in pain and 20% of them will suffer a career-ending injury. These are alarming numbers that needed attention. You've experienced how challenging it can be to scan pregnant patients—that's why we designed the iU22 system for you.

Every user is unique, and every patient presents unique challenges when it comes to your comfort. You can easily and quickly customize the iU22 system just for you, for each exam, for each patient, and readjust during an exam. The monitor and control panel are independently mounted providing you with unparalleled positioning. The iU22 is the only system that offers nearly infinite adjustment options.

And we incorporated other features that improve your comfort while scanning. The virtually flickerless flat panel monitor is easy on your eyes. Cart mobility facilitates your portable exams. And flexible transducer cables reduce tension and muscle strain.

When using Protocols, the list of required views as well as thumbnails of the captured images are displayed.

Smarter exams

The increasing case load in busy departments is driving clinicians to find ways to increase productivity and improve efficiencies when performing ultrasound exams. The iU22 Protocol feature has already been clinically shown to reduce ultrasound exam time by 30 to 50 percent.

Now with the new SmartExam feature, designing a new exam type is easy. When you perform the exam, the iU22 system remembers every step you included. The required views for the study, annotation, body markers, mode changes, and quantification are automatically saved. The SmartExam feature also allows you to incorporate 3D data sets into your exam requirements. Once you save your new exam type, you can begin using it immediately and any time in the future. Because it's so quick and easy, you can design a full range of protocols to meet your routine and special exam requirements.

SmartExam automatically annotate images, consistently, every view. You can focus on imaging your patient. When you have the view you need, accept it and move on to the next view. It's that simple. Significantly fewer keystrokes are needed, and there is less repetitive motion and stress for you.

The iU22 supports SmartExam for OB, GYN, and breast exams to help you follow industry and accreditation guidelines. You can customize these SmartExam to suit your own lab requirements, and you can create customized SmartExam for any application. When using SmartExam, the list of required views as well as thumbnails of the captured images are displayed.

Smart automation

The iU22 is an intelligent system—it's embodied with advanced built-in automation and optimization.

iCOMMAND wireless voice recognition technology makes it possible for you to control most system functions without touching the control panel. This includes access and use of the new SmartExam capability. Your exams are streamlined and require minimal keystrokes and repeated moves.

Not needing to access the control panel means that you can perform some difficult exams from positions not possible before. Clinicians have experienced reduced strain and reach when scanning the left breast or a large patient from the opposite side of the bed from the system. This is easy to do by adjusting the monitor for your new position, and using iCOMMAND voice control.

Built-in optimization with one-button technologies reduces the effort for you to get your best image every time. iSCAN technology automatically optimizes 2D and Doppler data, so you can easily obtain the best possible clinical performance for each patient. Other built-in technologies automatically optimize thousands of system parameters to make sure you can get the best system performance, detail resolution and tissue uniformity possible during every exam.

Quantifying in new

Along with the need for increased clinical data to help you make your diagnoses and decisions quicker comes the need for increased quantification of that data. What is the volume of the mass seen on the ovary, or the size of the suspicious area in the breast? Now with the iU22 system's 2D and volumetric data and advanced quantification tools, you can interrogate that information and increase your diagnostic data and understanding of your patients' disease states.

In addition to iSlice, available on-cart on the iU22, QLAB has other display and manipulation capabilities developed for volumetric imaging that are also resident on the system:

Thick slice imaging allows you to select a slice of data, control the thickness, and manipulate it the same as any other volume. Thick slice increases detail resolution and is especially helpful when evaluating the endometrium, ovarian pathology, and fetal brain structures.

Slice plane imaging allows you to easily display multiplane intersections for improved spatial localization and assessment—all contained within one image.

Automated stacked contours enables you to quickly and easily calculate a volume based on the selected content, such as follicles and cystic structures.

dimensions

Philips QLAB quantification software provides you with the ability to analyze image data on the iU22 system and at a PC station. You will find that your workflow efficiencies are improved as your system can be dedicated to exams, while you perform extensive analysis of data acquired during exams at a separate/remote workstation.

Color flow quantification enables you to generate information about the flow characteristics of lesions. Flow, vascularity and vascularization flow indices quantify color flow using ROI and GI 3DQ plug-ins.

QLAB Plug-ins

GI 3DQ—open, view and quantify 3D data sets, and display, review and select 2D images from the iSlice volume display. The automated stacked contours feature enables you to quickly and easily calculate a volume based on the selected content.

ROI—increase the consistency and reliability of acoustic measurements while reducing the effort required to successfully perform motion-compensated Region of Interest analysis.
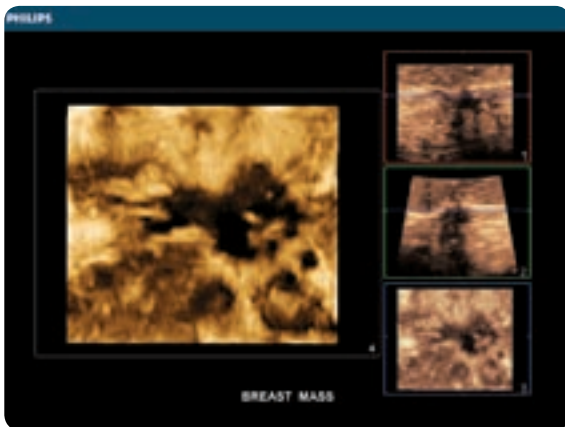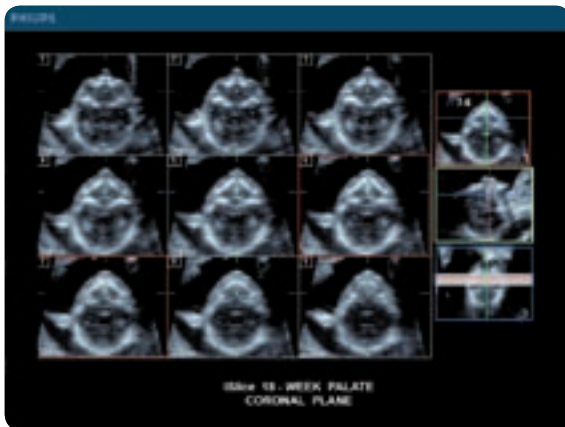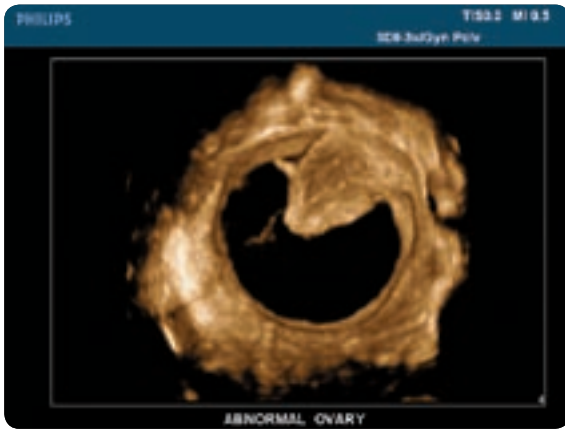
QLAB supports the iSlice and iSlice plane displays, so you can manipulate the volume data set, make your image selections, and append them to patient reports.

Imaging your patient

You can depend on the iU22 to capture clinical data that increases diagnostic confidence, and helps you focus on your patients. Check out these amazing images.

population

ABNORMAL OVARY

19 - WEEK YAWN

iSlice 19 - WEEK PALATE
CORONAL PLANE

24 - WEEK FETUS

BREAST MASS

3 - VESSEL CORD
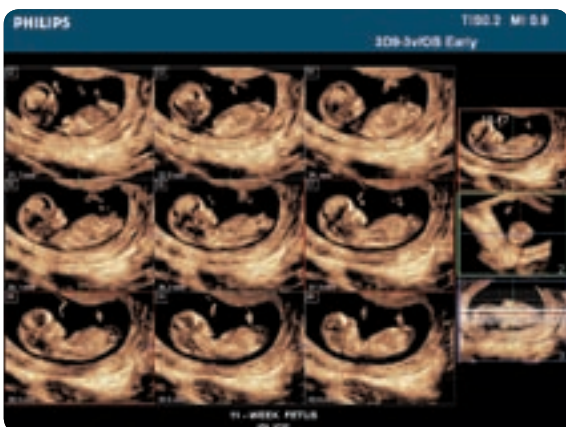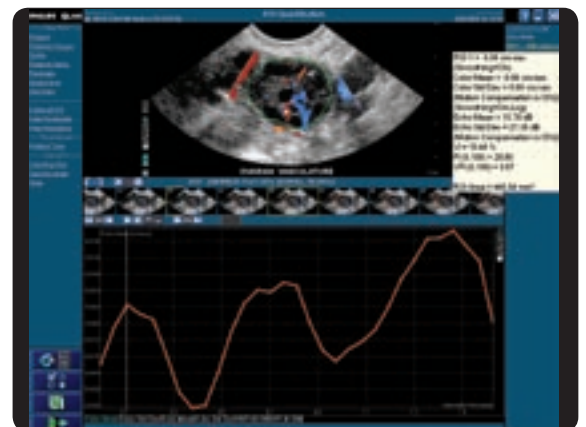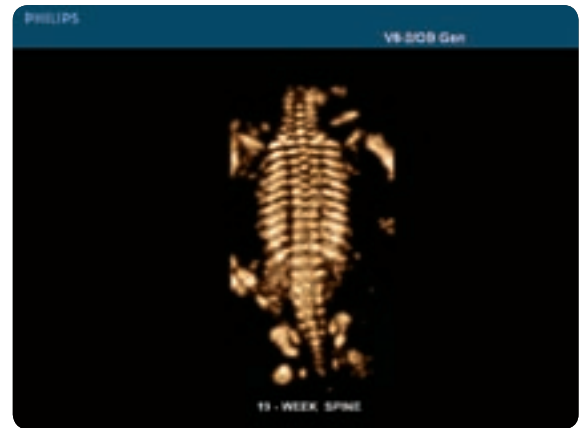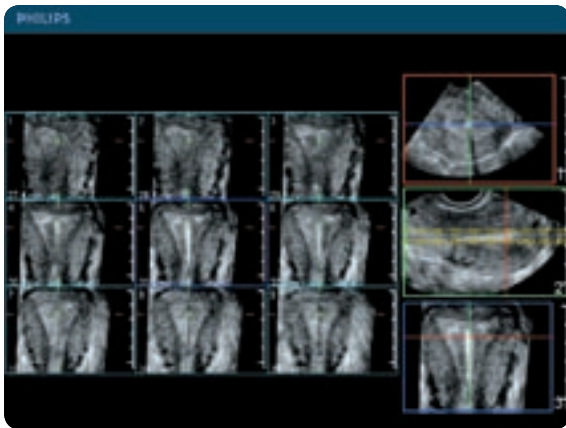
Delivering solutions with innovation and

Our portfolio of services is as innovative, flexible and comprehensive as your Philips system. From consulting in preparation, installation and networking, to providing clinical and biomedical engineering training, education and e-learning, to sourcing financial options, we have the expertise to assist you in finding the best solution for your specific needs.

commitment

Protecting your investment with award-winning Customer Services

Philips Customer Service agreements deliver the flexibility and choice you need to provide patient care based on the latest advances in system technology, successfully manage your financial performance, promote uptime, lower the cost of ownership, and increase your productivity. Philips delivers the full spectrum of services quickly through dedicated, highly trained clinical, and technical specialists focused on providing unparalleled customer service. Year after year, customers rank Philips ultrasound #1 in overall service performance in annual surveys—www.philips.com/ultrasound.

Bringing expertise and vision to your ultrasound education

Philips Ultrasound offers a wide array of clinical and technical education, online resources, and training courses to meet the increasingly complex needs of healthcare professionals and staff members. Whatever your need, there is a medical education course or resource available that is specifically tailored to fulfill the learning requirements of your organization.

Providing innovative financial solutions

Philips Medical Capital delivers flexible financial solutions to place state-of-the-art Philips Medical products in healthcare facilities around the world. Our financial experts understand your unique financial needs and provide flexible solutions that optimize asset utilization, reduce costs, and increase financial flexibility.

Partnering to provide security solutions

Philips is committed to addressing your privacy and security concerns. Your partner in prevention, response, and compliance, Philips Product Security provides online security resources, answers to security-related questions, and access to dedicated security professionals who can assist with your IT department's compliance efforts and risk assessments.

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