GE Healthcare

Voluson 730 Expert

Innovation in Volume Ultrasound

imagination at work

At the leading edge of healthcare

Clarity

Confidence

Simplicity

Speed

For more than a century, GE Healthcare has been inventing medical technologies. In Ultrasound, our continuous stream of breakthroughs have redefined the standards for image quality, accelerated the development of new applications and increased clinical efficiency for users worldwide.

As we see it, the future of ultrasound looks even more exciting.

GE Healthcare is evolving. A pioneer in diagnostic imaging and information technologies, we are now at the forefront of molecular and genetic medicine as well. These capabilities will help shape a new age of healthcare in which disease is detected earlier, diagnosed more precisely and treated less invasively.

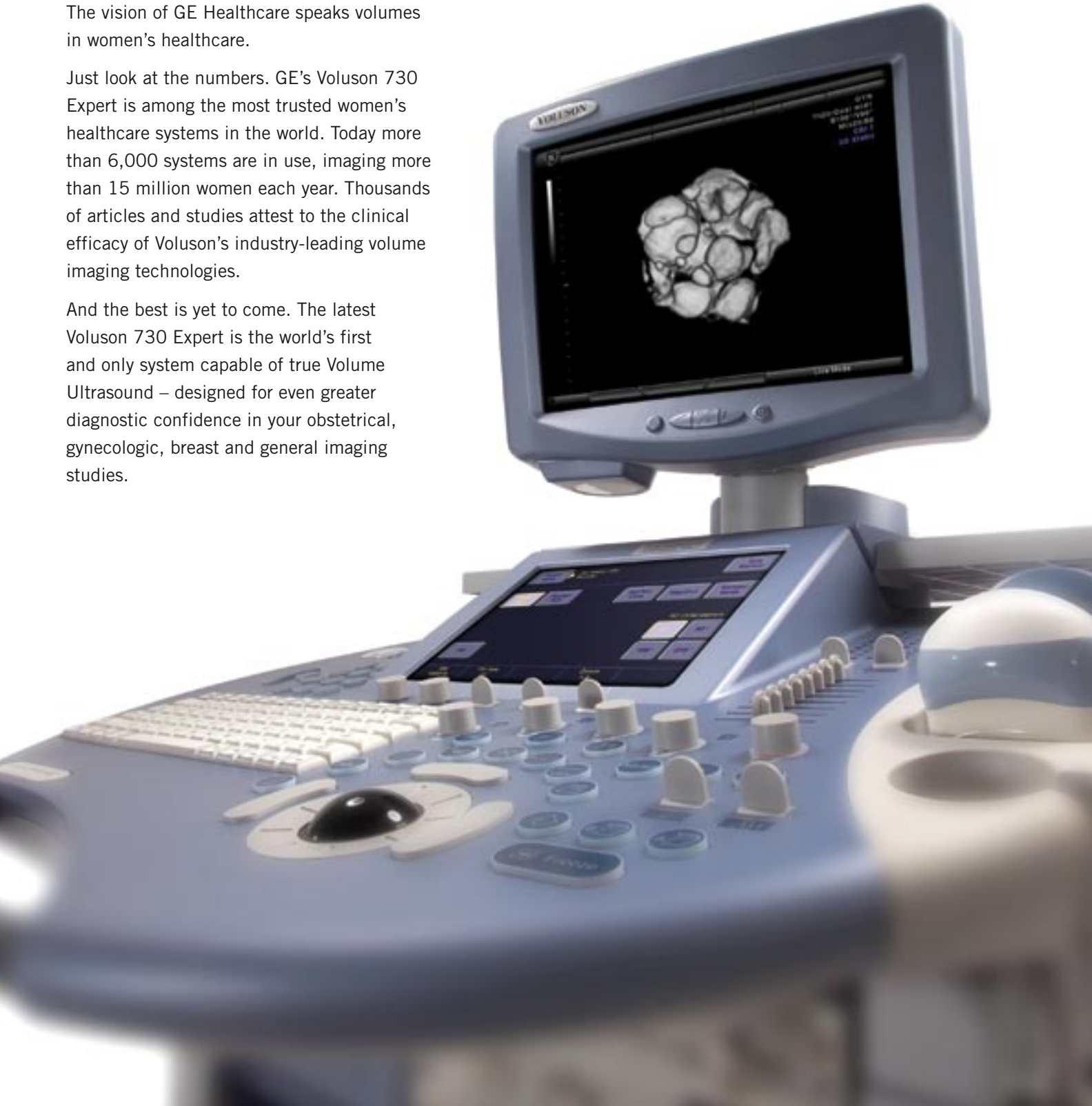
Ultrasound will be at the heart of this transformation. And so will you.

The system of choice for women's healthcare

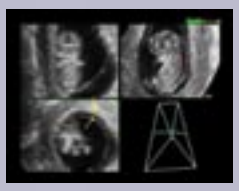
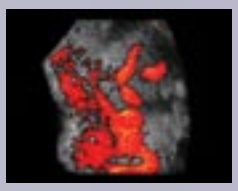
The vision of GE Healthcare speaks volumes in women's healthcare.

Just look at the numbers. GE's Voluson 730 Expert is among the most trusted women's healthcare systems in the world. Today more than 6,000 systems are in use, imaging more than 15 million women each year. Thousands of articles and studies attest to the clinical efficacy of Voluson's industry-leading volume imaging technologies.

And the best is yet to come. The latest Voluson 730 Expert is the world's first and only system capable of true Volume Ultrasound – designed for even greater diagnostic confidence in your obstetrical, gynecologic, breast and general imaging studies.



Technology timeline of Volume Ultrasound

	Static 3D	Multi-planar imaging	VOCAL 3D/4D Ultrasound Institute	Live 3D
	1990		1995	
				
Image acquisition time:	20 min	2-3 sec	4 vol/sec	

Turning up the volume in ultrasound

GE is defining a new age of ultrasound. We call it Volume Ultrasound. GE's Voluson 730 Expert is a powerful system that enables real-time techniques for acquiring, navigating and analyzing volumetric images so that you can make clinical decisions with unprecedented confidence.

With Voluson 730 Expert, you can now acquire and construct volumetric images in real-time – up to 33 volumes per second. The system allows you to explore images in any plane to reveal the smallest details with stunning clarity and apply sophisticated analytical tools to answer virtually any of your clinical questions.

An exponential difference in imaging

GE Healthcare continues to pioneer new technologies that optimize every step of the diagnostic process – from image acquisition and navigation to analytics. By integrating our volume ultrasound advancements with image optimization technologies like Volume Contrast Imaging (VCI), CrossBeam^{CRI} and B-Flow, clinicians can experience an exponential improvement in clinical confidence and performance.

RealTime 4D

2000

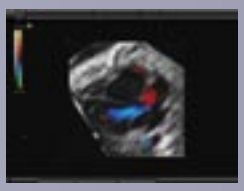
16 vol/sec

VCI-A
VCI-C
STIC

25 vol/sec

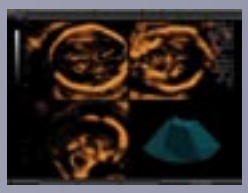
STIC Angio & Color
Micro 4D Transducers
4D View with STIC

2003



CrossBeam^{CRI} and VCI in 3D
Coded Contrast Imaging in 3D
B-Flow in 3D
Inversion Mode

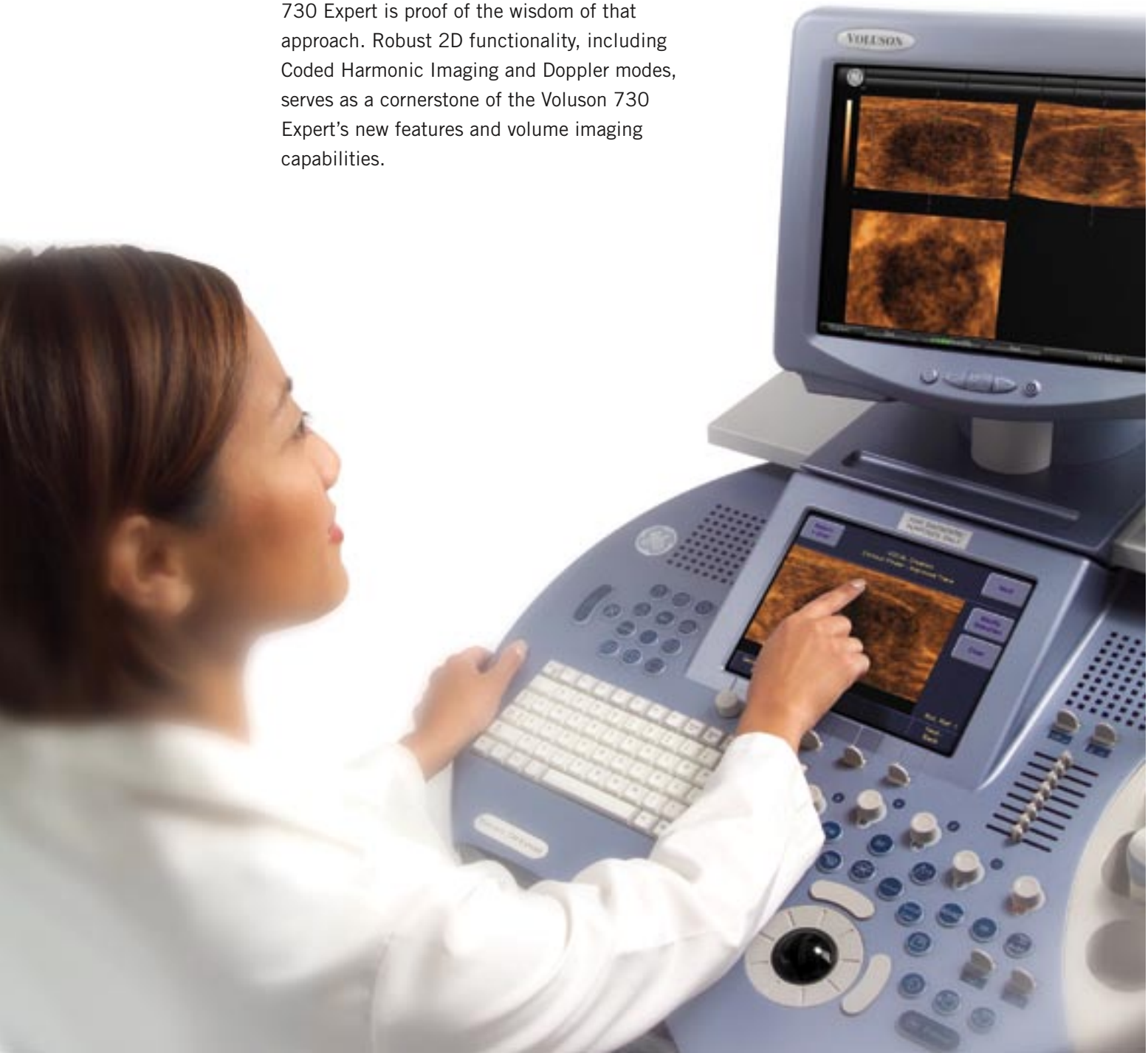
2004



33 vol/sec

Empowering you with diagnostic confidence

At GE Healthcare, we focus our research and development efforts on those technologies that offer the most relevant capabilities across a broad application spectrum. The exceptional clinical value of the tools in the Voluson 730 Expert is proof of the wisdom of that approach. Robust 2D functionality, including Coded Harmonic Imaging and Doppler modes, serves as a cornerstone of the Voluson 730 Expert's new features and volume imaging capabilities.



Inversion Mode

Inversion Mode improves your ability to visualize and assess hypoechoic structures, which are often difficult to display with traditional ultrasound techniques. Using intelligent rendering algorithms to analyze the target volume, Inversion Mode can assist in fetal assessments, the evaluation of cystic breast structures and pediatric studies.

Volume Calculation II (VOCAL II)

VOCAL II increases the speed and accuracy of volume assessments by automatically calculating volumes based on a quick fingertip tracing of the region of interest.

Speckle Reduction Imaging (SRI)

SRI is proven to heighten the visibility of organs and lesions by improving contrast resolution, border detection and reducing the artifact characteristic of ultrasound imaging.

Spatial Temporal Image Correlation (STIC)

STIC provides a multi-planar view of the fetal heart for a full cycle. The result is a RealTime 4D data set that gives the clinician exceptional flexibility to view, measure and analyze multi-planar images, including four-chamber views.

The answers you need are in sight

The Voluson 730 Expert provides a comprehensive range of techniques for the acquisition and analysis of volumetric data.

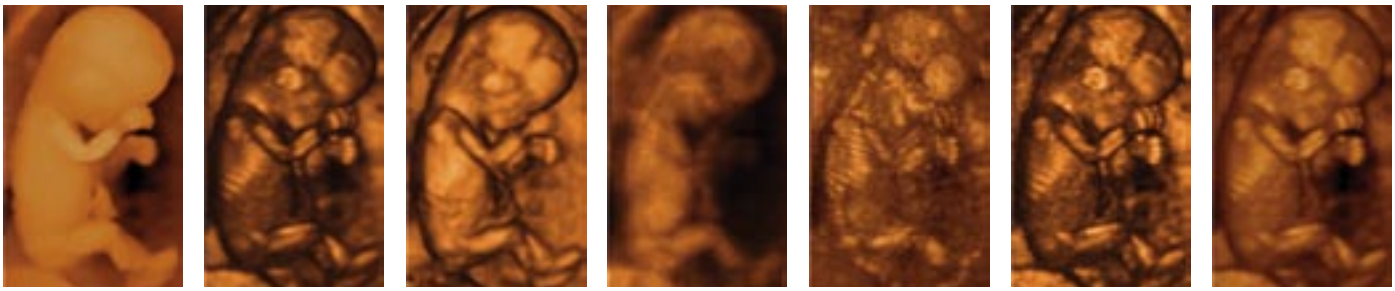
3D Imaging

- Multi-planar imaging, coronal and oblique
- Multi-slice imaging

4D Imaging

- 4D imaging with real-time acquisition and multi-planar display
- STIC for fetal heart imaging
- VCI
- 4D Biopsy
- Complete transducer and application coverage

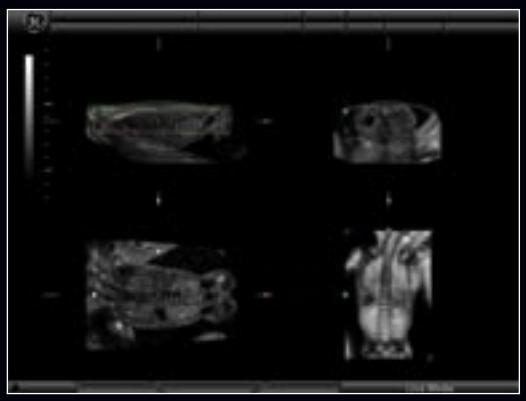
Multiple volume rendering modes revealing anatomical structure.



The picture of diagnostic confidence in ultrasound

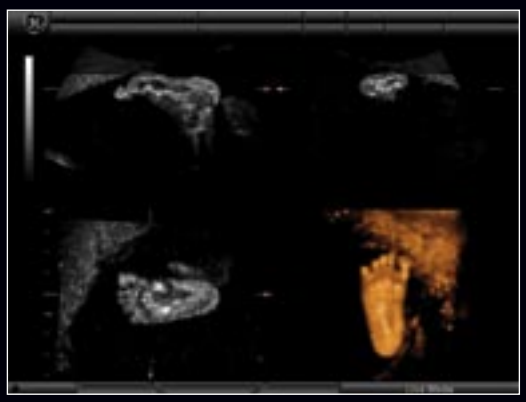
Obstetrics

Providing complete diagnostic coverage from preconception through labor & delivery

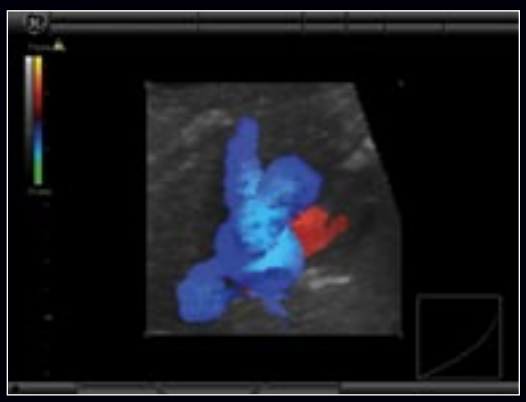


Curved rendering showing the anatomical alignment of the fetal spine

3D demonstration of cranial sutures and fetal structure anatomy



Volume image displaying fetal metatarsals



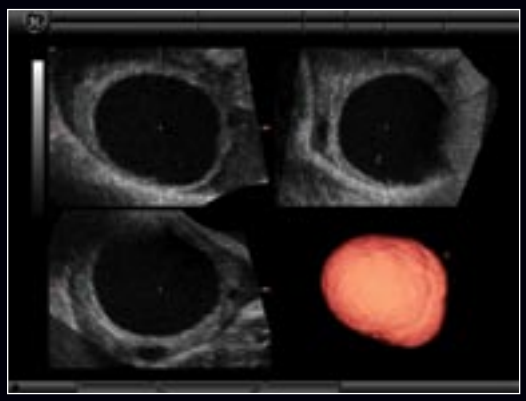
Assessment of fetal heart with STIC

Contrast resolution in this omphalocele using CrossBeam^{CRI}

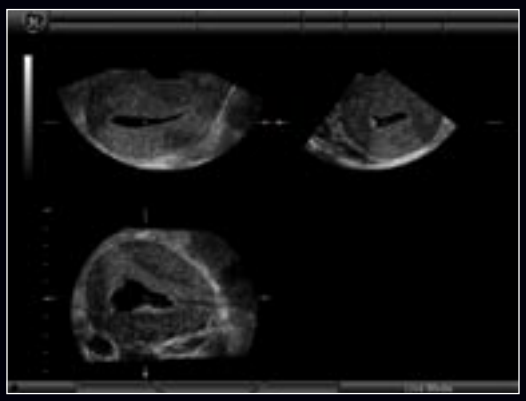
4D rendering of the omphalocele (shown at left in 2D)

Gynecology

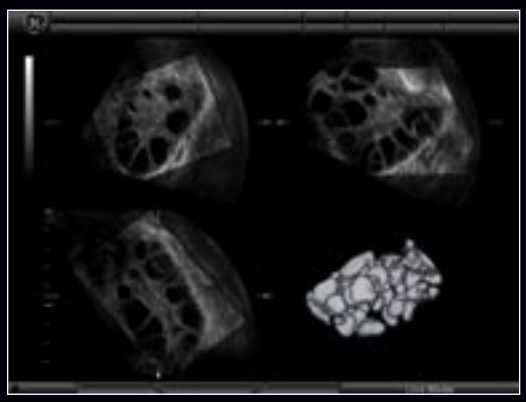
Enabling better healthcare for women
at every stage of their lives



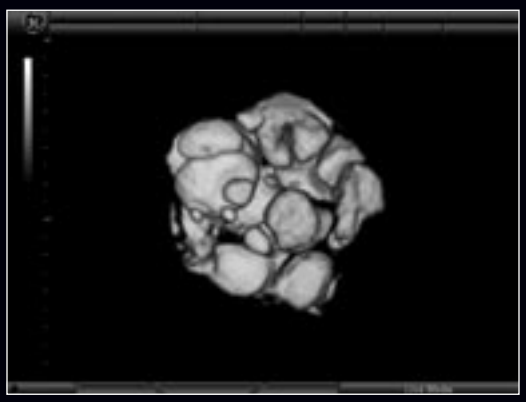
Inversion Mode rendering of an ovarian cyst



Multi-planar view of a fluid-filled endometrial cavity

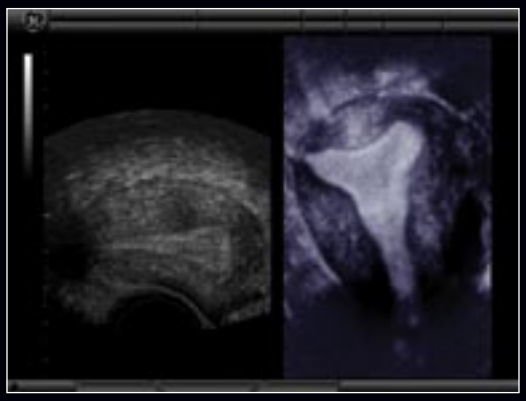


Rendering of a stimulated ovary using Inversion Mode



Stimulated ovary shown with Static 3D and Inversion Mode

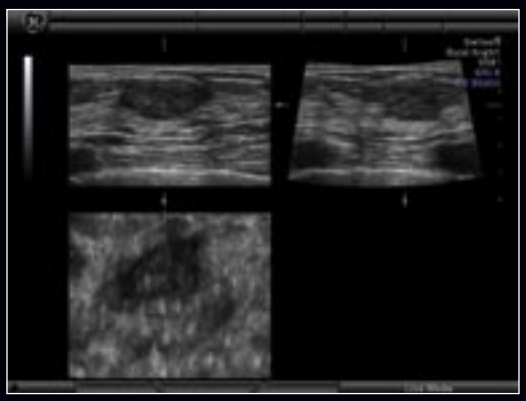
Multi-planar view of uterus with excellent demonstration of endometrial stripe



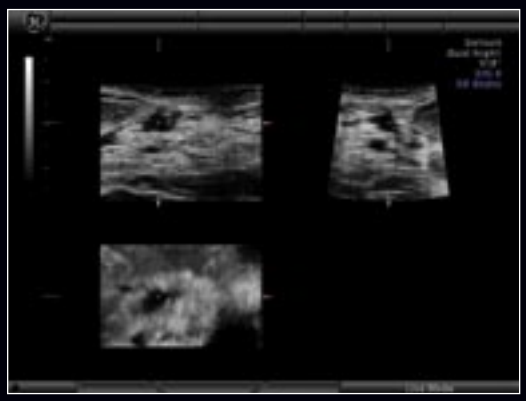
Analysis of uterine shape with VCI and 3D rendering

Breast Imaging

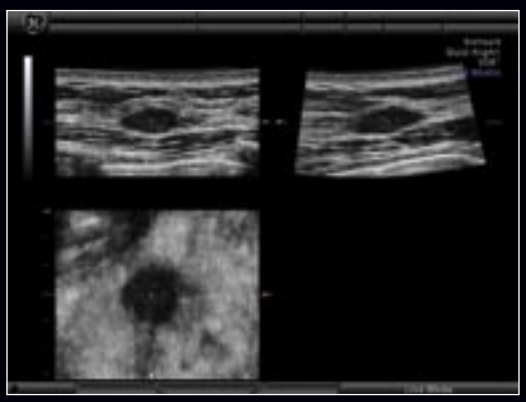
Delivering images and information for diagnosing and managing breast pathology and increasing clinical confidence



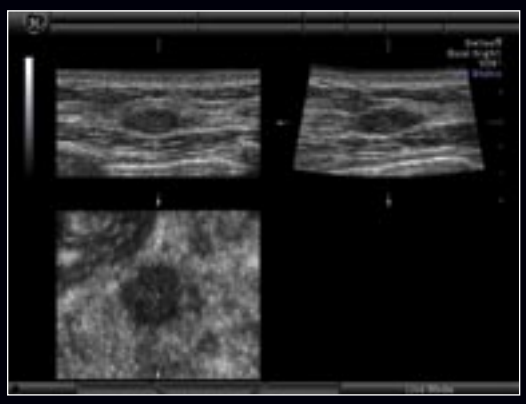
Superficial breast mass in multi-planar view using SRI



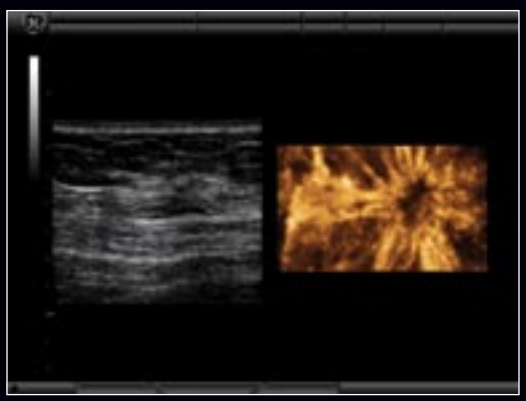
Irregular, superficial mass with VCI and CrossBeam^{CRI}



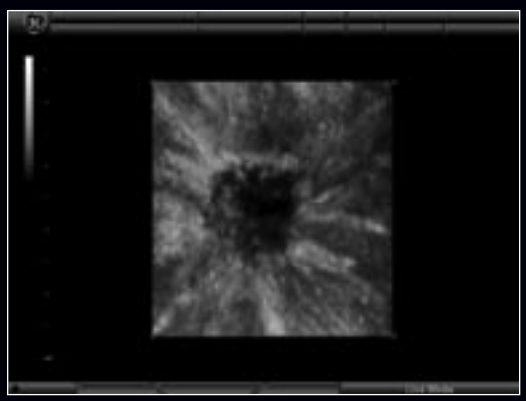
Hyperechoic breast lesion utilizing VCI in 3D



Multi-planar view of superficial breast mass with Static 3D



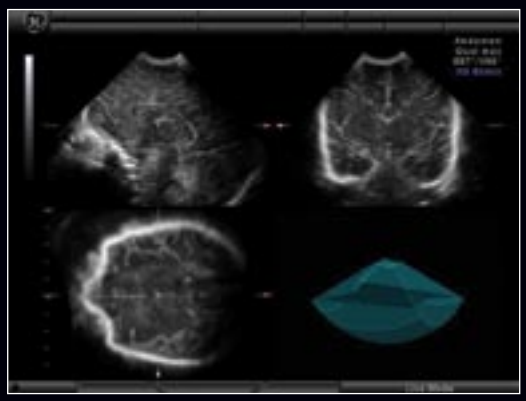
3D rendering of breast carcinoma clearly depicting the star pattern



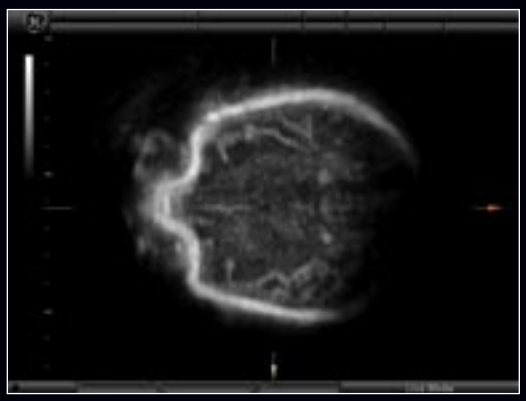
Global demonstration of a breast carcinoma showing spiculations from a tumor site

General Imaging

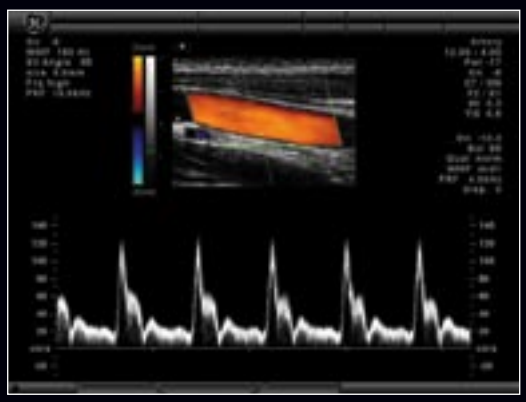
Diagnosing a breadth of applications with confidence including the challenging field of pediatrics



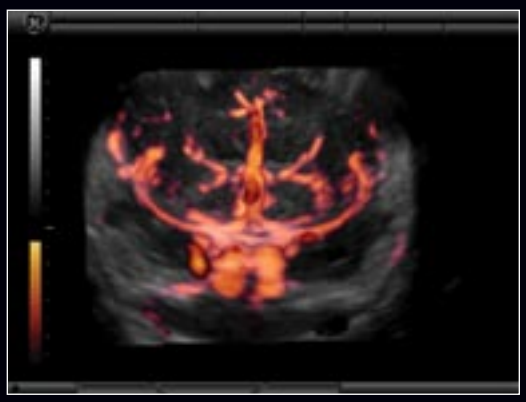
Multi-planar view of a neonatal brain



Rendered view of a neonatal brain

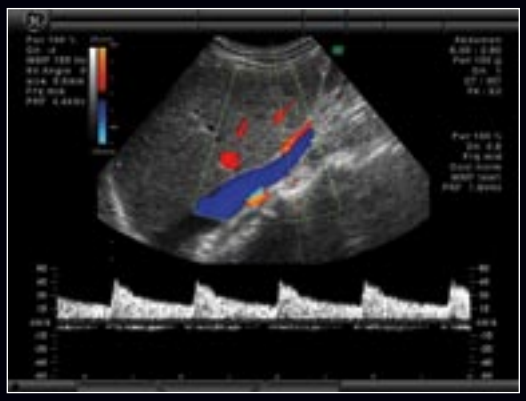


Excellent waveform in the carotid artery with pulsed wave Doppler



Pediatric vascular anatomy with Glass Body rendering

Vascular anatomy of liver with color Doppler



Color and spectral Doppler showing arterial flow in the liver

Higher productivity is right in your hands

In ultrasound, the clinician and the system function as one. That's why we pay so much attention to designing technologies that optimize user comfort, convenience and productivity.

Exceptional ergonomics

The Voluson 730 Expert offers ergonomic enhancements that make every exam easier on you and your patients, including a seamless and easily adjustable console and monitor, large integrated color touch screen with optimized menu selection, and smaller, lighter transducers.

Advanced 4D transducers

The outstanding performance of the Voluson system is enhanced through next-generation transducer technology. GE offers the broadest and most advanced portfolio of lightweight 4D transducers in the industry:

- Micro 4D transducers for transabdominal scanning
- Endocavitary 4D transducers for vaginal and rectal exams
- Linear 4D transducer for small parts applications
- Micro-convex 4D transducer for pediatric and first trimester obstetrics exams

Intuitive productivity

Clinicians can quickly become proficient using the Voluson 730 Expert. The system is highly intuitive with a programmable color touch screen, context-sensitive menus, one-touch image optimization and fast transitions between applications.

Maximizing your investment

Education drives efficiency. We offer a full range of technology and applications training including instructor-led courses, on-site applications training and self-guided tutorials. And we're with you around the clock with online help for any application through the touch of a button.

The right information, when and where you need it

From private practice to a fully networked healthcare system, our digital solutions allow you to increase clinical productivity while supporting a comprehensive electronic patient record.

Capture and share raw volume and measurement data

- Transmit images, volumes and cines via a powerful DICOM interface
- Export via CD/DVD, USB, network drive or MOD
- Transfer measurement data via network or serial connection
- Analyze with any OB/GYN reporting package

Powerful workstation solutions

4D View. This PC-based software allows clinicians to manipulate and analyze Voluson 730 volume data without interrupting patient flow. Its full functionality includes:

- Fetal heart analysis with STIC
- Data and image distribution capabilities

ViewPoint. A comprehensive reporting and image archive solution, ViewPoint provides powerful tools to consolidate and communicate patient information, helping you improve the accuracy and efficiency of data management in your practice.

- Provides structured OB/GYN reporting, patient scheduling, statistical analysis and interface to hospital information systems
- Enables capture and archive of images via DICOM

A new generation of performance

With this latest breakthrough in Voluson 730 Expert technology, GE Healthcare once again brings you innovations that improve image quality and help solve your most important clinical and workflow issues. For more information on everything that this remarkable system can bring to your practice, talk with your GE representative today.

For more than 100 years, scientists and industry leaders have relied on General Electric for technology services and productivity solutions.

So no matter what challenges your healthcare system faces – you can always count on GE to help you deliver the highest quality healthcare.

For details, please contact your GE representative today.

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imagination at work