The power of ultrasound + artificial intelligence

GE HealthCare

AI-driven ultrasound is solving challenges and supporting clinicians

Advancements in artificial intelligence (AI) in ultrasound are helping healthcare providers make more informed decisions faster and manage increased demand.

It's as if clinicians have a new teammate.

This is critical during a time when staffing shortages are the norm and many experienced clinicians are leaving the profession.

One survey of radiology technologists indicates that heavy workload and burnout are key factors driving the departures.

From 2012-2021, open sonographer positions increased by over 36%, while the number of ultrasound exams rose by over 55%[1]

By 2030, it is anticipated that there will be a shortfall of 10 million healthcare workers globally[2]

81% of health systems surveyed in the US reported radiology technologist shortages[3]

At the forefront of AI

For more than 25 years, GE HealthCare has been defining the ultrasound category.

Today, the company is **redefining** this category by pairing its expertise in ultrasound with groundbreaking AI capabilities.

The recent launch of Verisound™ Digital & AI Ultrasound Solutions allows us to deliver optimal, simplified, and scalable clinical and operational workflows. It is designed to increase efficiencies that support higher scan volume and billing opportunities.

As of publication, the company has 72 AI-enabled device authorizations across all modalities in the US, more than any other medical technology company.[4]

Existing and emerging AI tools support not only diagnostic and clinical decision-making but also clinician well-being.

Improved workflows are driving efficiency, allowing clinicians to focus more on patient care. In addition, fewer repetitive clicks and manual manipulations aim to reduce operator musculoskeletal stress.

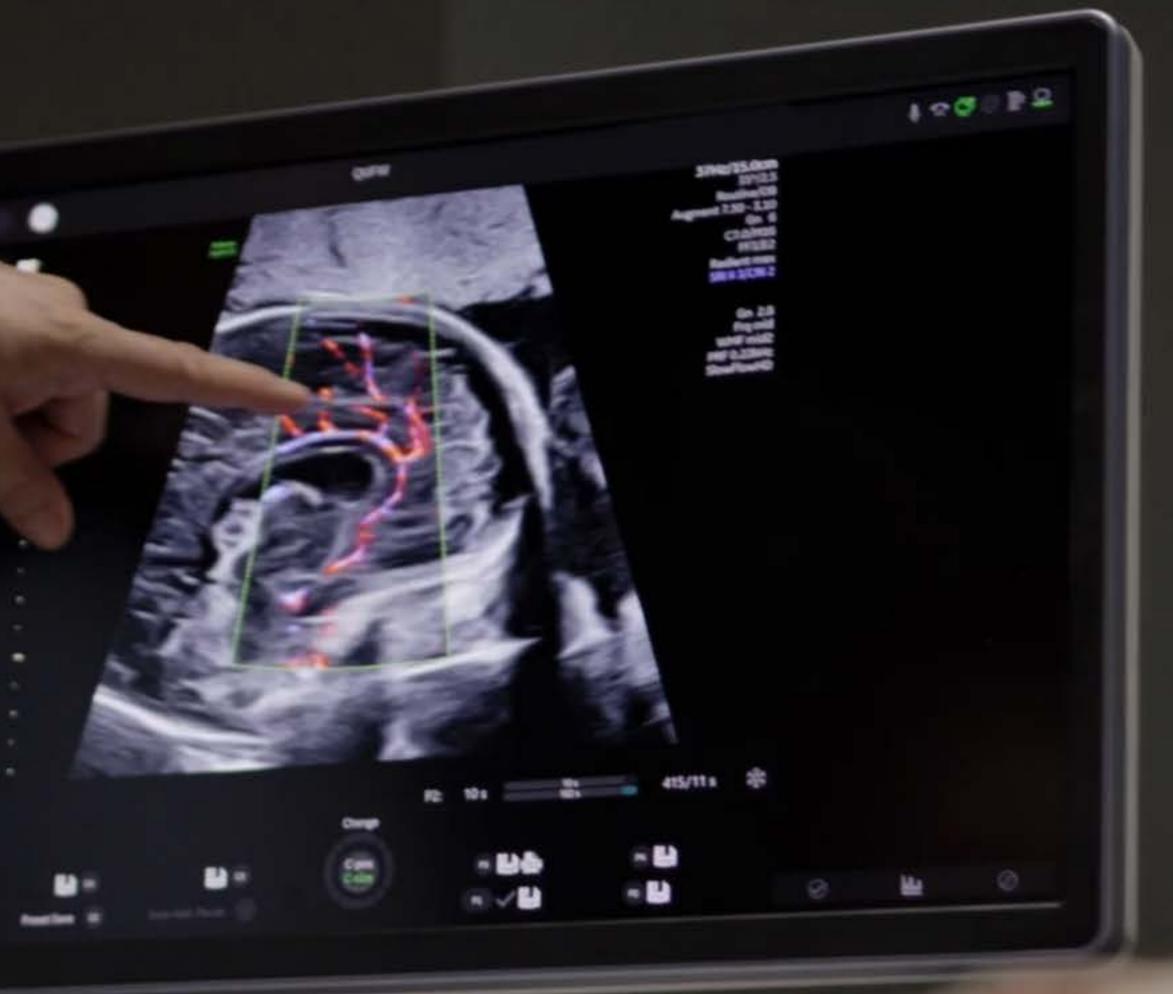# AI-powered ultrasound: Making an impact here and now

Advancements in AI-enabled ultrasound are helping reinvent care and unlock clinical challenges.

Every day, AI-powered ultrasound is supporting faster, more informed diagnoses; improved workflows; a better experience for staff and patients; and is driving positive outcomes.

"By using AI, we are pushing limits and enhancing diagnostic capabilities. At the same time, the functionality makes exams easier. The AI built into the Voluson™ Expert 22 is so far advanced compared to what we've seen before, and it's only a hint. It's our responsibility to push it even further by using it, by challenging it, and showing it makes a difference."

—Lawrence Platt, MD
  Center for Fetal Medicine & Women's Ultrasound
  Los Angeles, CA

Some of the tasks that are now AI-powered by GE HealthCare Ultrasound and the Verisound AI family include[5]:

Standardizing

SonoLyst*, a suite of AI tools offered on select Voluson women's health ultrasound devices, **standardizes obstetrical exams**, improving consistency and saving time by identifying fetal anatomy seen on standard 2nd trimester views and further adding annotations and measurements, improving efficiency by 65%.[6]

*SonoLyst incorporates the AI technology of Intelligent Ultrasound.

Guidance

Caption Guidance™ on the Venue family of point-of-care ultrasound and Caption AI™ on Vscan Air™ SL wireless handheld ultrasound provide **real-time, turn-by-turn, on-screen guidance that prompts probe movements** to help more medical professionals capture diagnostic-quality cardiac images.

Detecting

cNerve in the Venue™ family of point-of-care ultrasound devices helps anesthesiologists and other clinicians in 99% of cases **detect and track nerves** during scouting in nerve block procedures.[7]

Labeling

Whizz Label on Versana Premier™ and Versana Balance™ ultrasounds **automatically labels liver, gallbladder, and right kidney** on ultrasound images during abdomen scans of the right upper quadrant (RUQ), helping to save time and enhance workflow productivity for users across experience levels.

Measuring

On Vivid™ cardiovascular ultrasound, Easy AFI LV **ascertains measurement of the left ventricle** to measure strain in 15 seconds on average, and Easy AutoEF allows users to measure ejection fraction in just one click.[8]

Populating

In near-real time, LOGIQ's™ Thyroid Assistant, powered by Koios DS™, **automatically populates all TI-RADS® descriptors** and generates an AI-based thyroid cancer risk assessment using machine learning and proprietary algorithms, leading to a 57% reduction in benign biopsies.[9]

Assessing

Breast Assistant, powered by Koios DS on the LOGIQ family[10] and Invenia™ ABUS 2.0 ultrasound systems, **automatically provides a quantitative breast malignancy risk assessment** aligned to a BI-RADS ATLAS® category in as little as two seconds.

"With radiologists just doing a TI-RADS evaluation, I found I could move from about a 27% reduction to a 41% elimination of negative biopsies. And then if I added the AI modifier, I could move up to 57% reduction in negative biopsies. That means almost 60% of the biopsies that I was doing could have been avoided by following the recommendations from Thyroid Assistant."[9]
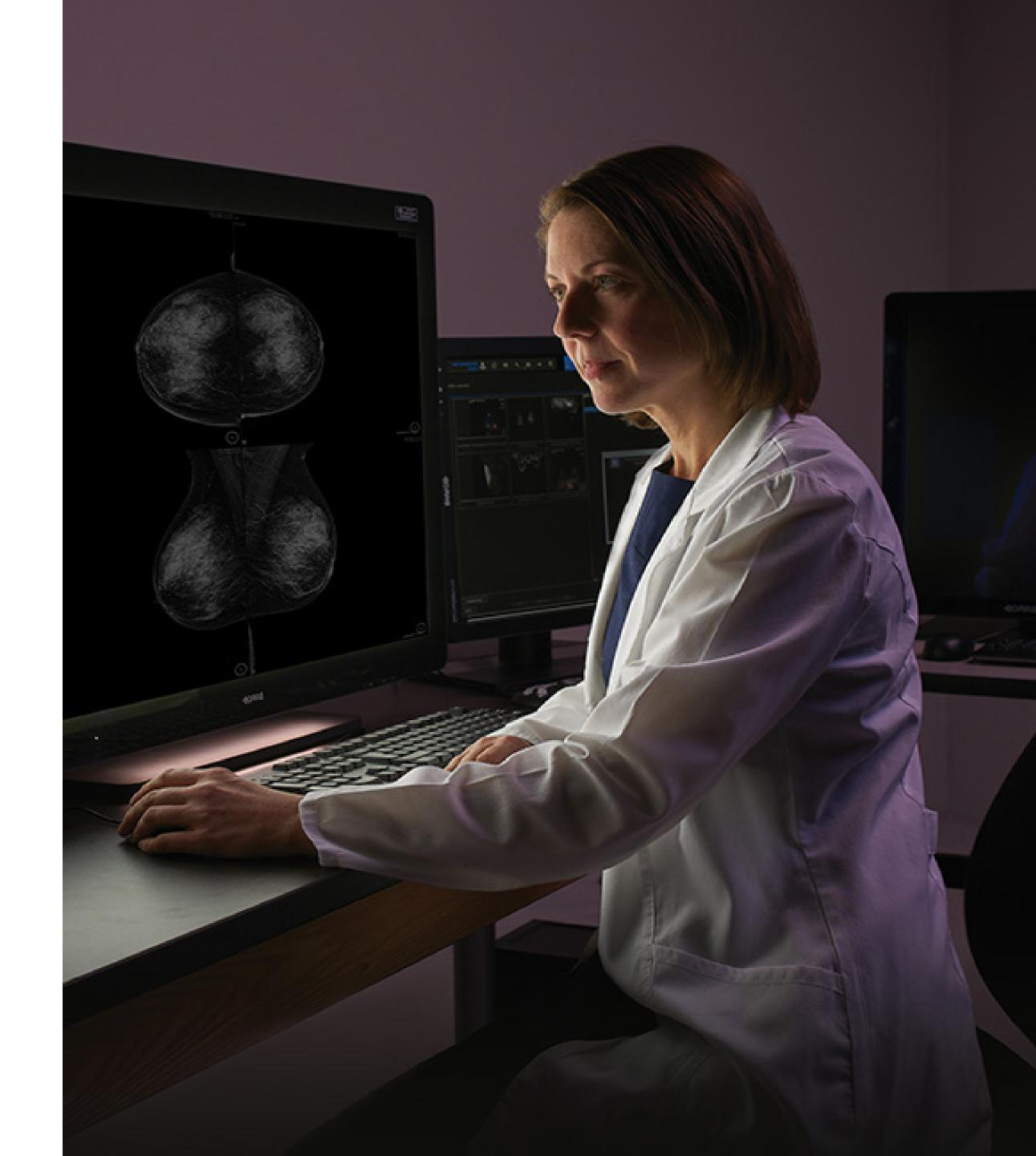
—Timothy W. Deyer, MD, MSE
Clinical Assistant Professor, Department of Radiology, Weill Cornell Medical Center, New York, NY
Chief Medical Information Officer, Head of Interventional Radiology, East River Medical Imaging, New York, NY

Ultrasound + AI has the power to help us know more and do more

Healthcare professionals are using the marriage of ultrasound and AI in three primary ways:

1

Guided ultrasound

2

Workflow productivity

3

Diagnostic & clinical decision support

1
Guided ultrasound

AI is helping users, from the most experienced to newer healthcare professionals, acquire quality diagnostic images.

The acquisition of Caption Health, an AI leader in healthcare, demonstrates our commitment to **providing AI-guided ultrasound to help clinicians:**

- Acquire reliable, consistent, diagnostic-quality ultrasound images
- Capture complex, complete ultrasound studies
- Improve patient outcomes

Caption Guidance on the Venue™ family can help providers address training and skill barriers to ultrasound usage, thereby expanding ultrasound access.

With this AI-driven software, even new ultrasound users can **capture cardiac images successfully.** Real-time, turn-by-turn, on-screen guidance helps users capture diagnostic-quality images.

2

Workflow productivity

With increased demand for imaging services showing no sign of slowing down and a continued tight labor market, healthcare organizations continue to look for ways to ensure that time is spent on the highest-value tasks.

AI is a critical tool when it comes to saving time and clicks during scans. This not only increases productivity but also provides a better patient experience, as well as easing the wear and tear on clinicians by reducing clicks and automating certain repetitive tasks.

87%
reduction in exam time

The SonoPelvicFloor AI-powered tool on the Voluson Expert Series and Voluson SWIFT ultrasound devices removes the complexity of assessing pelvic floor anatomy by **guiding the user through the exam, automating plane alignment and measurements**, so exam time is reduced by 87% over manual exams.[11]

33%
reduction in radiologist reading time

QVCAD™ on Invenia ABUS 2.0. Invenia ABUS 2.0 is the first FDA-approved ultrasound supplemental screening technology specifically **designed for detecting cancer in dense breast tissue**. Adding QVCAD can reduce radiologist reading time for ABUS by 33%.[12]
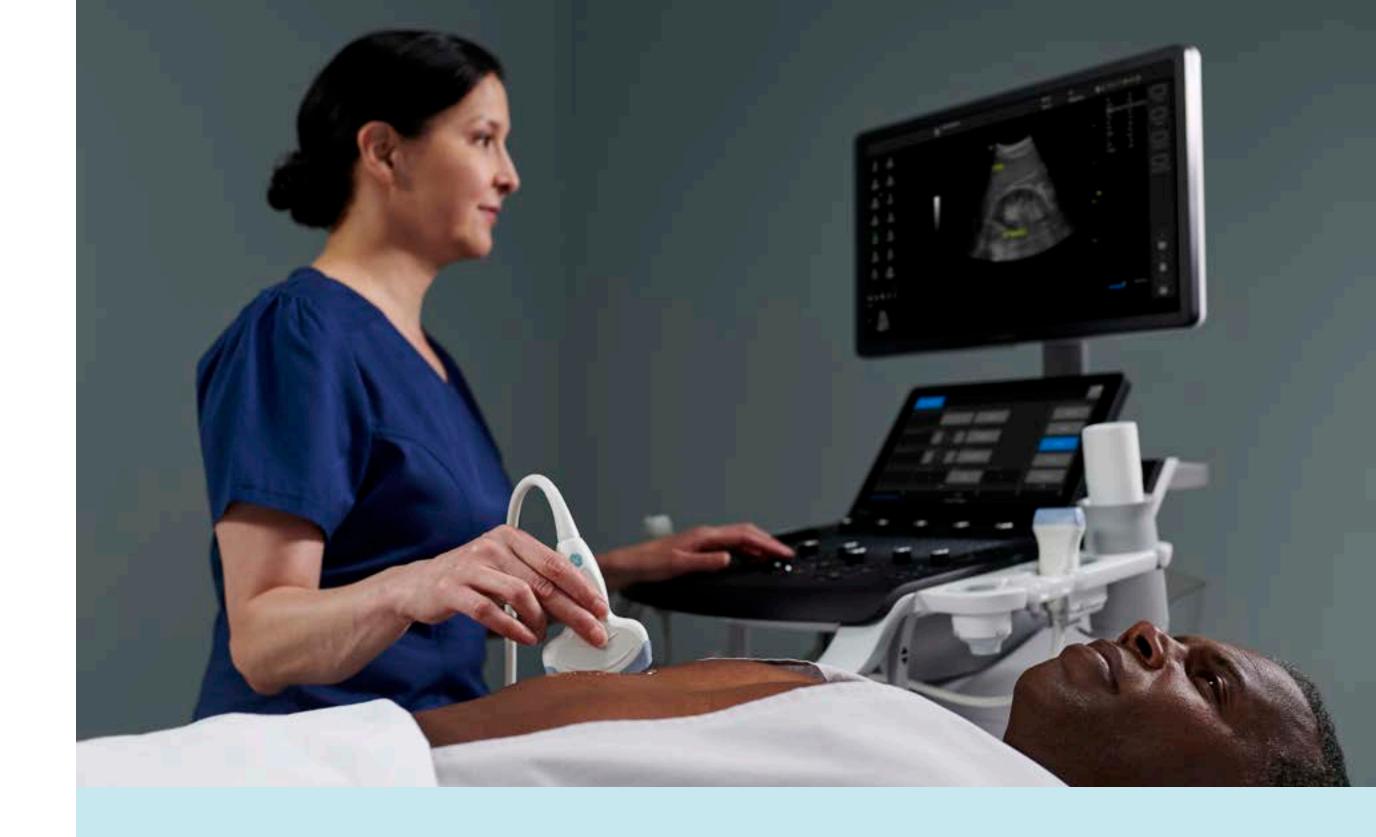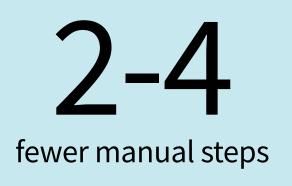
2
Workflow productivity

Reducing keystrokes and clicks helps drive efficiency.

90% of clinical sonographers experienced symptoms of work-related musculoskeletal disorders[13]

These injuries and related missed work time lead to up to **$120+ billion yearly** in direct and indirect costs for employers[14]

2-4
fewer manual steps

Whizz Label on Versana Premier and Versana Balance **automatically labels key organs** in scans of the right upper quadrant of the abdomen, removing 2-4 manual steps in the exam.

50%
reduction in keystrokes

Auto Doppler Assistant on the LOGIQ E10 Series, LOGIQ Fortis, and LOGIQ Totus can **reduce keystrokes** by more than 50%.[15]

3

Diagnostic & clinical decision support

The power of more knowledge to inform diagnosis and treatment is paramount, and adding AI to ultrasound exponentially adds to the clinician's knowledge.

Comparing over
900K
images

Tools such as Breast Assistant, powered by Koios DS, on the LOGIQ platform and Invenia ABUS 2.0 help physicians **confidently assess the malignancy of breast lesions**, knowing that AI has compared their patient's lesion to more than 900,000 other images.[16]

69%
reduction in benign biopsies

This diagnostic clarity can both help physicians **detect disease earlier and avoid unnecessary procedures** and treatments on non-malignant lesions. One study using Breast Assistant found a cancer identification rate of nearly 100%, with a 69% reduction in benign biopsies.[17]

3

Diagnostic & clinical decision support

Ultrasound is especially vulnerable to operator variability between exams.[18]

In addition to inter-operator variability, there are also challenges with inter-reader variability. For example, when evaluating a thyroid nodule to determine if a biopsy is needed, radiologists with comparable training and experience **disagree with each other 25% of the time** making their diagnosis. In fact, when presented the same case only a month later, physicians disagree with themselves, **changing their initial diagnosis nearly 20% of the time**.[18]

41%
reduction in inter-reader variablility

Thyroid Assistant, powered by Koios DS, helps reduce inter-reader variability by 41%.[16]

3

Diagnostic & clinical decision support

Verisound AI-powered tools can help, not only with inter-reader variability but also with inter-operator variability.

100%
reproducibility

AI Auto Measure – Spectrum Recognition on Vivid Ultra Edition* semi-automatically detects appropriate measurement of spectral Doppler images, enabling the system to fast-forward the path from scanning to measurements with 98% accuracy and 100% reproducibility.[19]

*Ultra Edition refers to the 2022 release of the Vivid portfolio and is not a product name.

1
click

Easy AFI LV, automated one-click LV strain analysis, delivers AI-based global and segmental strain measurements that require no manual interaction apart from initiating the tool and approving the results.

In hospitals and clinics around the world, AI is now elevating the power of many GE HealthCare ultrasound devices

Clinicians benefit with faster, more accurate results, increased diagnostic confidence, fewer musculoskeletal work-related injuries, and more efficient workflows.

Patients benefit from shorter exam times, fewer unnecessary procedures, and earlier diagnoses.

But this is only the beginning.

GE HealthCare envisions a future where data is connected, patients benefit from precision medicine, and artificial intelligence supports clinicians as it touches and improves every aspect of healthcare.

Verisound: Digital & AI ultrasound solutions

You want your clinicians to be able to focus on patient care, not tedious tasks. Verisound optimizes your team's clinical and operational ultrasound workflows to increase efficiency and profitability throughout your operation.

The future is one where healthcare has no limits.

A closer look

AI-driven innovations on GE HealthCare ultrasound devices

Today's reality:

90%
of sonographers experience work-related musculoskeletal disorders[13]

$120+ billion
yearly in direct and indirect costs for employers due to injuries, staffing shortage, and increased demand[14]

Experienced clinicians
leaving the profession

Inspired by these challenges, GE HealthCare is designing three primary types of AI solutions:

1
Guided ultrasound

2
Workflow productivity

3
Diagnostic & clinical decision support

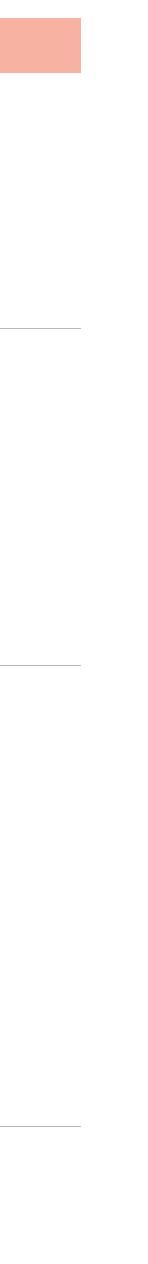| Technology	AI tool	Guided ultrasound	Workflow productivity	Diagnostic & clinical decision support
Voluson Women's Healthcare Ultrasound				
Voluson Expert Series **Voluson Signature 20** **Voluson SWIFT**	*fetal*HS		*fetal*HS offers users a time-saving of 48% with the introduction of automated view detection and automated cardiac axis measurements.[20]	A step-by-step guidance that helps identify fetal situs and normal fetal heart anatomy using the 4-Chamber Heart, 3-Vessel View/3-Vessels and Trachea View, and Cardiac Axis. By acquiring a series of cine loops, views are automatically identified using AI, and cardiac axis is calculated.
Voluson Expert Series **Voluson Signature 20** **Voluson Signature 18** **Voluson SWIFT**	SonoLyst		A suite of tools that leverage AI to identify fetal anatomy seen on standard views, then automatically annotates and measures where applicable. Can reduce the time to complete the 28 recommended 2nd trimester exam requirements by up to 40%.[21][*][†] **SonoLystX:** Your virtual onboard expert uses AI to ensure high-quality scans. **SonoLystIR:** (Image Recognition)—Simply scan, then freeze, and the system does the rest. **SonoLyst*live*:** Takes image recognition to the next level by capturing images as you scan in real time without stopping to freeze, annotate, or store. You can save approximately 31% of exam time vs manual exam (image review process not included).[22] *Vs manual exam time. †SonoLyst incorporates the AI technology of Intelligent Ultrasound.	
Voluson Expert Series **Voluson Signature 20** **Voluson Signature 18**	Fibroid Mapping		Fibroid Mapping is an AI reporting tool that maps fibroids in 3D with exact position in relationship to the uterus. Classify each fibroid according to FIGO© classification, while simplifying communication with colleagues, referring physicians, and patients.	Fibroid Mapping will successfully segment fibroids in 88% of the cases.[23]

Technology	AI tool	Guided ultrasound	Workflow productivity	Diagnostic & clinical decision support
Voluson Expert Series Voluson Signature 20 Voluson Signature 18 Voluson SWIFT	SonoPelvicFloor		By guiding you through the exam, and automating plane alignment and measurements, you can reduce pelvic floor exam time by up to 87% over manual examinations.[24]	Analysis of the pelvic floor anatomy can be complicated. Through AI, SonoPelvicFloor simplifies the exam process by automating plane alignment, live C-plane tracking, and measurements while offering workflow guidance to improve efficiency while eliminating uncertainty.
Voluson family of products	SonoCNS		Reduces exam time by 81% (57% for Voluson SWIFT).[21] Applying SonoCNS reduces the analysis time of datasets by 81.3%.[20] SonoCNS performance has been improved, with time to access planes reduced by 16% and calculating measurements reduced by 29%, making the tool faster and more efficient.*[25] *As compared to Voluson E10 BT19 version.	SonoCNS helps properly align and display recommended views and measurements of the fetal brain.
Voluson family of products	SonoL&D			Objectively measure and evaluate fetal head progression during the 2nd stage of labor with SonoL&D. SonoL&D provides measurements for both angle of progression (AoP) and head-perineum distance (HPD) to support clinical decision-making and identify the need for intervention. Objective measurement data with clinical assessment is combined into one report. Patient/partner communication is enhanced with online education video and graphics. Clinical video tutorials on AoP and HPD measurement provided on Voluson system.
Voluson family of products	SonoAVC™follicle		SonoAVC™follicle—automatically calculates the number, dimensions, and volume of hypoechoic structures in a volume sweep to help monitor patient follicles faster.	

Technology	AI tool	Guided ultrasound	Workflow productivity	Diagnostic & clinical decision support
Voluson family of products	Auto Caliper		Auto Caliper simplifies ovarian follicle measurement—just tap on the follicle and the system automatically measures it. Auto Caliper offers an 87% keystroke reduction and an 80% time savings when measuring follicles in 2D vs the traditional manual workflow.[25]	Auto Caliper will successfully place measurements in 96.4% of the cases.[26]
Voluson family of products	SonoAVC™ antral		SonoAVC™ antral automates ovarian reserve assessment by counting and categorizing antral follicles.	
Voluson family of products	SonoBiometry		SonoBiometry helps to reduce keystrokes (BPD, HC, AC, FL, HL, cisterna magna, lateral ventricle, and cerebellum).	
LOGIQ General Imaging Ultrasound				
LOGIQ E10 Series LOGIQ Fortis LOGIQ Totus	Anatomical Assistant		Enables the ultrasound machine to be aware of *what* is being scanned in order to provide anatomical-based assistance to the user.	
LOGIQ E10 Series LOGIQ Fortis LOGIQ Totus	Auto Doppler Assistant		Reduces time, keystrokes, and reach: >20% time savings >50% keystroke reduction[15]	
LOGIQ E10 Series LOGIQ Fortis LOGIQ Totus LOGIQ P Series	Auto Lesion Segmentation		Automatically traces nodule boundaries and generates two-dimensional measurements with just a few keystrokes.	

Technology	AI tool	Guided ultrasound	Workflow productivity	Diagnostic & clinical decision support
LOGIQ E10 Series LOGIQ Fortis LOGIQ Totus LOGIQ P Series	Breast Assistant, powered by Koios DS		Results in two seconds or less.	AI-based decision support tool for breast lesion segmentation and characterization. Sensitivity increased from 92%-97% to 97%-98%. Specificity increased from 38%-46% to 45%-52%. Benign biopsy rates were reduced by 34%-55% without a reduction in sensitivity.[27] A study by Dr. Susan Love and Dr. Wendie Berg found a cancer identification rate of 100%, with a 69% reduction in benign biopsies.[17] 6 additional cancers found per 100 cases presented. Reduced BI-RADS 3 follow-up recommendations. Improved consistency of interpretation, both inter- and intra-operator.[27]
LOGIQ E10 Series LOGIQ Fortis	OB Measure Assistant		Reduces keystrokes and enhances reproducibility by automating key fetal measurements.	
LOGIQ Fortis LOGIQ Totus LOGIQ E10 Series	Auto-Preset Assistant		Automatically activates the correct preset for the anatomy being scanned.	
LOGIQ E10 Series LOGIQ Fortis LOGIQ Totus	Auto Abdominal Color Assistant		Detects which abdominal organ is being scanned and automatically switches to optimal color flow parameters, such as gain and scale, for that organ.	
LOGIQ E10 Series LOGIQ Fortis	Auto-Renal Measure Assistant		Automatically detects the kidney and measures length, height, and width.	

Technology	AI tool	Guided ultrasound	Workflow productivity	Diagnostic & clinical decision support
LOGIQ E10/E10s **LOGIQ Fortis**	**Thyroid Assistant, powered by Koios DS**		Interpretation time fell by 24% compared to non-Koios-aided exams—enhancing the patient experience as well as department productivity.[28]	In research studies, the tool helped users across all levels of experience make more informed FNA decisions compared to their own interpretations alone.[29] **Variability** from reader to reader was reduced by 41%—enabling more classification consistency across the department. **Specificity** for FNA recommendations improved by 37%—contributing to fewer unnecessary biopsy orders. **Sensitivity** for FNA recommendations increased by 14%—reflecting the ability to detect more true positives.
LOGIQ E10/E10s	**Volume Navigation Image Based Registration (V Nav IBR)**		Research-only tool.	
Vivid Cardiovascular Ultrasound				
Vivid E95, E90, E80 **Vivid S70N, S60N** **Vivid T9, T8** **Vivid iq** **EchoPAC™**	**AI Auto Measure 2D**		Achieves fast measurements of left ventricle dimensions: Up to 84% fewer clicks.[30] Up to 85% time saved on LV caliper measurements in the EchoLab.[31]	100% reproducibility.[19,32]
Vivid E95, E90, E80 **Vivid S70N, S60N** **Vivid T9, T8** **Vivid iq** **EchoPAC**	**AI Auto Measure— Spectrum Recognition**		Semi-automatically detects appropriate measurement of spectral Doppler images, enabling the system to fast-forward the path from scanning to measurements with 98% accuracy and 100% reproducibility.[19,33] Enables fewer manual interactions by automatically opening the appropriate measurement tool.	100% reproducibility.[33]

Technology	AI tool	Guided ultrasound	Workflow productivity	Diagnostic & clinical decision support
Vivid E95, E90, E80 Vivid S70N, S60N Vivid T9, T8 Vivid iq EchoPAC	Easy AutoEF		Ejection fraction results in just one click.[8]	
Vivid E95, E90, E80 Vivid S70N, S60N Vivid T9, T8 Vivid iq EchoPAC	Easy AFI LV with AI View Recognition		Ejection fraction and strain results in 15 seconds on average.[8]	100% reproducibility.[19]
Vivid E95, E90, E80 Vivid S70N, S60N Vivid T9, T8 Vivid iq EchoPAC	Cardiac Auto Doppler with AI Spectrum Recognition		A wide range of Doppler measurements can be completed with 2 clicks. Up to 93% fewer keystrokes.[34]	
Vivid E95, E90, E80 Vivid S70N, S60N Vivid T9, T8 Vivid iq EchoPAC	AI View Recognition		Automatically detect which standard 2D scan plane is acquired and store this label in the image file to be used later for streamlining workflows.	
Venue Point of Care Ultrasound				
Venue family	Auto B-Lines		Highlight and count B-lines in real time with counts as reliable as visual counting performed by experts.[35] Just press "freeze" to display the frame with the highest B-line count.	
Venue family	Auto IVC			IVC measures were equivalent to those of an expert user 87% of the time for minimal diameters and 92% for maximal diameters.[35]

Technology	AI tool	Guided ultrasound	Workflow productivity	Diagnostic & clinical decision support
Venue family	Auto VTI		Experience up to 82% time savings[36] by quickly trending VTI over time and assessing the heart in a single step.	
Venue family	Caption Guidance™	Real-time, turn-by-turn, on-screen guidance prompts user probe movements to help new POCUS users capture diagnostic-quality cardiac images.		
Venue family	cNerve		Use cNerve to identify the nerve landmark and see it highlighted on the image. Helps detect and track the nerve during scouting in 99% of cases while scanning or reviewing a stored clip.[7]	
Venue family	Real Time EF			Continuously calculate the real-time ejection fraction during live scanning, with results within +/-10 points of experts in 86% of cases.[35]
Invenia ABUS Automated Breast Ultrasound				
Invenia ABUS 2.0	QVCAD™		Reduce reading time by 33%.[12]	Experience up to 93% sensitivity for lesion detection.[37]
Invenia ABUS 2.0	Breast Assistant, powered by Koios DS		Results in two seconds or less.	Up to 31% decrease in benign biopsies on Invenia ABUS 2.0.[28]
Versana Primary Care Ultrasound				
Versana Premier Versana Balance	Whizz Label		2-4 steps reduced to spend more time caring for patients.	
Vscan Air Handheld Ultrasound				
Vscan Air™ SL	Caption AI	Provides real-time guidance that shows users, step-by-step, how to maneuver the probe to capture diagnostic-quality standard echocardiographic views.		AutoEF Automatically calculates the LVEF from one or more of these three views: PLAX, AP2, and AP4. The calculation increases in accuracy as each view is acquired.

Endnotes

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3. "Radiology Staffing Shortages Nation Wide?" AHEC online, Sept 27, 2021.

4. https://www.gehealthcare.com/about/newsroom/press-releases/ge-healthcare-tops-list-for-third-year-in-a-row-with-highest-number-of-ai-enabled-medical-device-authorizations

5. Check local markets for availability. Not all products are available in all markets.

6. GE HealthCare Voluson internal claims document JB20479XX / DOC2727504

7. Venue Family R4 cNerve study DOC2725435.

8. Time to strain measurement result may vary with heart rate, frame rate and Vivid system. Verification of performance done by GE HealthCare clinical application specialists using Vivid system (DOC2739637).

9. 2023; The AI-enabled future of ultrasound in thyroid imaging: How artificial intelligence is assisting radiologists in thyroid nodule management. Author: Timothy W. Deyer, MD, MSE Clinical Assistant Professor, Dept. of Radiology, Weill Cornell Medical Center, New York, NY Chief Medical Information Officer, Head of Interventional Radiology, East River Medical Imaging, New York, NY (JB24312XX).

10. Not available on LOGIQ e.

11. GE HealthCare internal document DOC2173180 – PC410 Claims Voluson SWIFT BT23.

12. Interpretation Time Using a Concurrent-Read Computer-Aided Detection System for Automated Breast Ultrasound in Breast Cancer Screening of Women with Dense Breast Tissue (Yulei Jiang). Read More: https://www.ajronline.org/doi/10.2214/ AJR.18.19516.

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15. GE HealthCare Auto Doppler Assistant internal study JB08078XX.

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17. Love SM, Berg WA, Podilchuk C, Hovanessian-Larsen LJ, Dauphine C, Jairaj A, Barinov L, Hulbert W, Cen S, Eshraghi L, Mammone R. Automated, low-cost palpable breast lump triage for economically-developing countries [abstract]. In: Proceedings of the 2016 San Antonio Breast Cancer Symposium; 2016 Dec 6-10; San Antonio, TX. Philadelphia (PA): AACR; Cancer Res. 2017;77(4 Suppl):Abstract nr PD3-01.

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27. Barinov L, Jairaj A, Becker M, et al. Impact of data presentation on physician performance utilizing artificial intelligence-based computer-aided diagnosis and decision support systems. J Digit Imaging (2018). https://doi.org/10.1007/s10278-018-0132-5. Barinov L, Jairaj A, Paster L, Hulbert W, Mammone R, Podilchuk C: Decision quality support in diagnostic breast ultrasound through artificial intelligence. IEEE Signal Processing in Medicine and Biology Symposium (SPMB)., 2016.

28. Koios Medical internal data. Presented at Society for Imaging Informatics in Medicine annual meeting, 2021.

29. All Thyroid Assistant stats from Koios Medical internal data. Available upon request.

30. Applicable to the AI AutoMeasure-2D algorithm. Results based on GE internal data (DOC2361011).

31. Based on an internal GE study where three observers were doing both manual and automated caliper measurements of LV study parameters on 25 PLAX acquisitions. The achieved timing varied both for the automated and the manual measurements, but on average, over a total of 71 data points, the manual measurements took 76 seconds, while just 11 seconds with AI Auto Measure 2D.

32. Applicable to the AI Auto Measure – 2D algorithm. Results based on GE internal data (DOC2367624).

33. Applicable to AI Auto Measure – Spectrum Recognition. Results based on GE internal data (DOC2292732).

34. Based on results of time and motion study conducted by GE "JB49055XX – Cardiac Auto Doppler"; study results indicated time savings related productivity.

35. Supporting evidence for Venue and Venue Go is documented in DOC2391130. Supporting evidence for Venue Fit is documented in DOC2454794.

36. Supporting evidence is documented in¬DOC2254811Venue family- Auto tools.

37. Performance and Reading Time of Automated Breast US with or without Computer-aided Detection. Read More: https://pubs. rsna.org/doi/10.1148/radiol.2019181816)

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