



About GE Healthcare

GE Healthcare is a leading global medical technology and digital solutions innovator. GE Healthcare enables clinicians to make faster, more informed decisions through intelligent devices, data analytics, applications and services, supported by its Edison intelligence platform. With over 100 years of healthcare industry experience and around 50,000 employees globally, the company operates at the center of an ecosystem working toward precision health, digitizing healthcare, helping drive productivity and improve outcomes for patients, providers, health systems and researchers around the world.

Follow us on [Facebook](#), [LinkedIn](#), [Twitter](#) and [Insights](#), or visit our website www.gehealthcare.com for more information.

1. Forecasting the Future of Cardiovascular Disease in the United State, AHA Policy Statement, 2011, source: CIR.0b013e31820a55f5
2. Source: Healthcare Infrastructure and Procedural Volume for Ultrasound Imaging, Frost & Sullivan, 2018. Approx. 108.12 million echo exams are performed annually; Calculation based on 26% total global prevalence of CVD cases (422 million) undergoing echo exam; extrapolated from US study indicating roughly 26% of total prevalent CVD cases underwent echo exams percentage value validated from reports. https://www.prb.org/wp-content/uploads/2015/12/2015-world-population-data-sheet_eng.pdf
3. Kurt M, Shaikh K, Peterson L, et al. Impact on contrast echocardiography on evaluation of ventricular function & clinical management in a large prospective cohort. J Am Coll Cardiol. 2009; 53(9):802-810
4. Work Related Musculoskeletal Disorders In Sonography, Society Of Diagnostic Medical Sonography, 2018, Susan Murphey, BS, RDMS, RDCS, CECD <https://www.sdms.org/docs/default-source/Resources/work-related-musculoskeletal-disorders-in-sonography-white-paper.pdf?sfvrsn=8>
5. <https://doi.org/10.1016/j.amjcard.2011.01.006>
6. Average system noise level is 31 dB (min 28 dB, max 38 dB), depending on ambient temperature
7. The Role of AI in Streamlining Echocardiography White Paper, Kristin McLeod - JB80498XX
8. Based on results of time and motion study conducted by GE "JB49055XX - Cardiac Auto Doppler"; study results indicated time savings related productivity increase up to ~8 on an annual basis for a facility per sonographer
9. European Association of Echocardiography recommendations for standardization of performance, digital storage and reporting of echocardiographic studies (Eur Journal of Echo 2008 - Evangelista, Badano, Monaghan, Zamorano, Lancellotti).
10. Recommendations for Doppler Echocardiography: A Report From the Doppler Task Force of the Nomenclature and Standards Committee of the American Society of Echocardiography (JASE 2002)
11. Centricity Cardio W v7 Intelligent Reporting out-of-the-box compared to 2017 IAC guidelines excluding doppler. CCW Intelligent Reporting Outcome - JB74831XX
12. EchoPAC Suite is a marketing name for EchoPAC Plug-in
13. With the DICOM SR support, Measures & Analysis (M&A) for an exam can be sent at the end of the exam or when exported from local archive. The destination can be either a server on the network (Storage SCP) or a removable media (DICOM Media) depending on the DICOM Media type. Supported destinations supported only for Adult Echo (TID5200) and Pediatric Heart (TID5220).
14. <https://www.ncbi.nlm.nih.gov/pubmed/27689562>
15. Data Breaches Will Cost Healthcare \$4B in 2019, Threats Outpace Tech, healthitsecurity, source: t.ly/xrAA
16. 5 Tips for Controlling Costs in Hospitals and Biomed Shops, source: t.ly/l9n7
17. Errors in Sonography, DOI: 10.1007/978-88-470-2339-0_8.
18. e. a. M. Mårtensson, «High incidence of defective ultrasound transducers in use in routine clinical practice», European Journal of Echocardiography, vol. 10, no. 3, pp. 389-394, 2009. <https://academic.oup.com/ehjcardimaging/article/10/3/389/2396618> <https://probehunter.com/wp-content/uploads/FULLTEXT01.pdf>
19. A multicentre survey of the condition of ultrasound probes, Ultrasound. 2016 Nov, Published online 2016 Aug 1. doi: 10.1177/1742271X16662301. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5098704/>
20. GE internal data
21. View Recognition is only applicable to images acquired with TTE probe on GE systems
22. Digital Expert is only available in the USA

©2020 General Electric Company. All rights reserved. GE, the GE Monogram,

EchoPAC Suite is a marketing name for EchoPAC Plug-in. Vivid, cSound, XDclear, HDlive, EchoPAC, ViewPoint, Centricity, Edison and InSite are trademarks of General Electric Company. GE Healthcare, a division of General Electric Company.

DICOM is the registered trademark of the National Electrical Manufacturers Association for its standards publications relating to digital communications of medical information.

Third part trademarks are the property of their respective owners.

JB72914XX



POWERED BY AI ELEVATED BY YOU

Vivid™ T8 Ultra Edition



vivid

gehealthcare.com/vivid

Your time is precious.
Save it.

DETECTABILITY⁷
98%

AI AFI LV with AI View Recognition

Fully automatic recognition of the apical imaging views.
Measurements of GLS and segmental longitudinal Strain for LV.



POWERED BY AI

AI helps reduce tedious tasks and inter-observer variability.

Improve diagnostic speed and accuracy

Vivid T8 Ultra Edition introduces the latest AI-based technology to help reduce user fatigue and improve accuracy. Diagnose more and accelerate exams via automated (AI-driven) Cardiac Doppler.

Discover the many innovations brought by the Vivid T8 Ultra Edition, and more importantly, their contribution to your clinical practice.

Ultra Fast.
Ultra Precise.
Ultra E

AI Cardiac Auto Doppler with AI

REDUCED TIME
PER MEASUREMENT

UP TO
93%

Fewer Keystrokes⁸

LOWER INTER
OPERATOR VARIABILITY

REDUCE
VARIABILITY

~3x

Standardized exams with
greater reproducibility⁸

ACCELERATED
WORKFLOW



Productivity improvement



CLINICAL EXCELLENCE

for Pediatrics

The smallest cardiac patients can pose the biggest care challenges with difficult to diagnose, severe conditions.

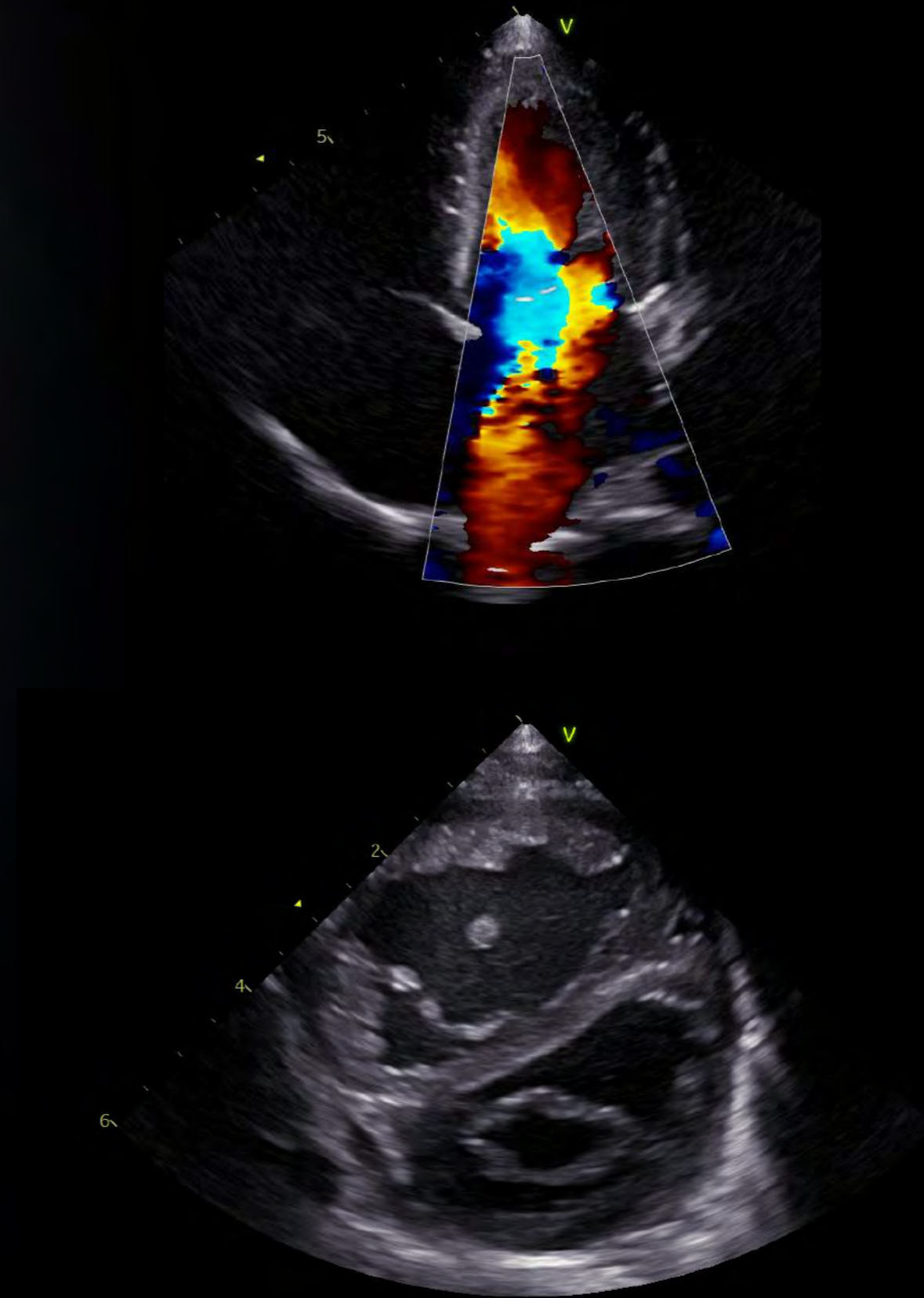
Pediatric echoes require speed and versatility. Accurate diagnostics and precise measurements are achievable with great image quality, dedicated presets and tools on your Vivid system.

Visualize small anatomies with speed, clarity and thanks to Vivid T8's great image quality, range of dable probes, and dedicated pediatric and neonatal presets.

Pediatric cardiology

Visualize small anatomies with speed, clarity high-resolution imaging and dedicated pediatric probes.

Vivid T8 Ultra Edition's





CLINICAL EXCELLENCE

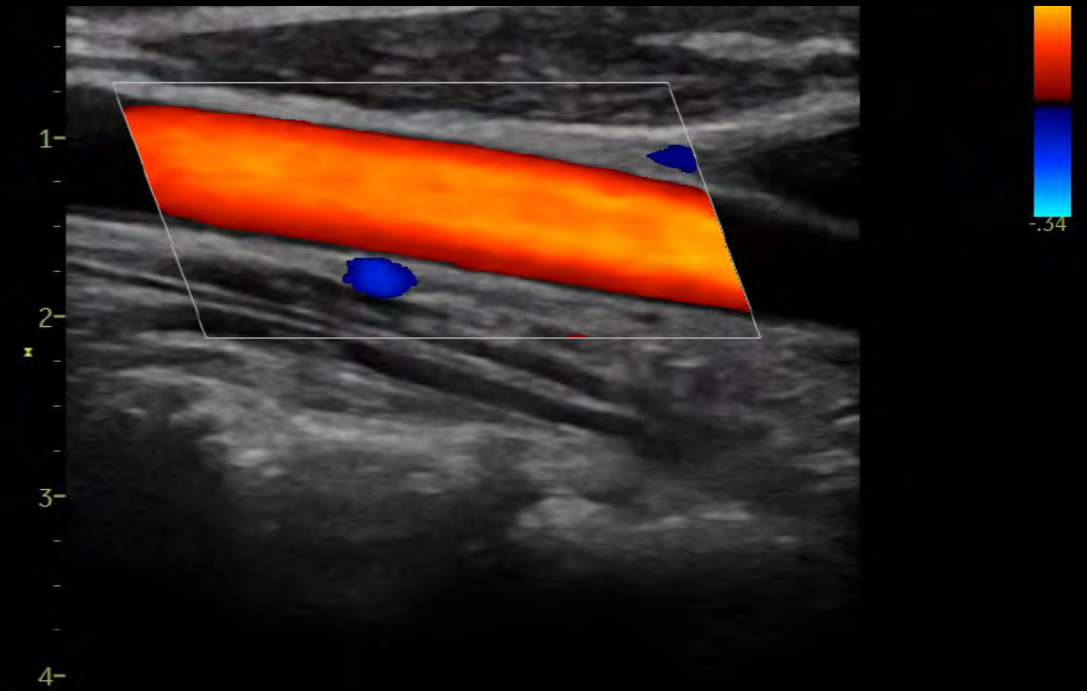
beyond Cardiology

The demand for multi-purpose, cost ultrasound systems with uncompromised image quality is growing. With the aging population, vascular and abdominal exams are increasingly challenging.

Vivid T8 Ultra Edition provides you great 2D and color imaging across applications. E, a wide range of linear and curved probes and dedicated tools ensure the you need for speedy and accurate diagnosis also under challenging conditions.

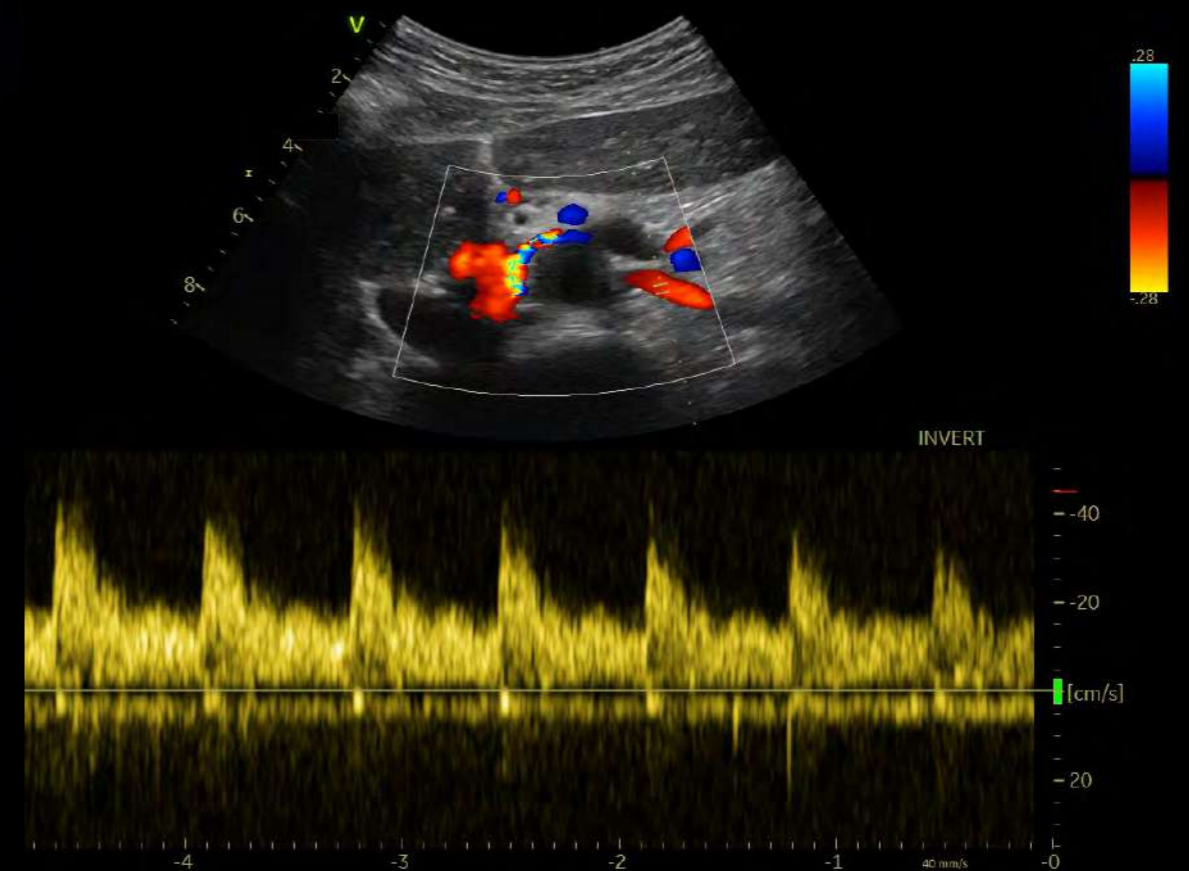
Vascular

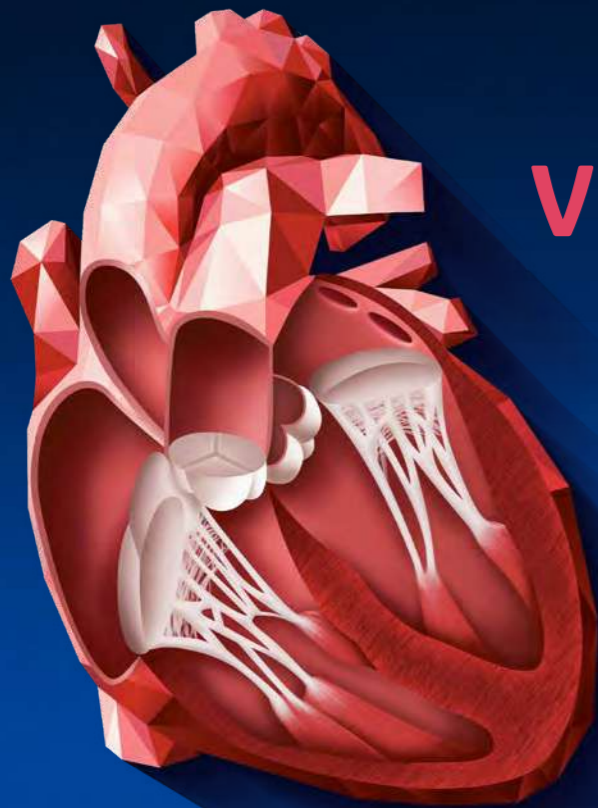
Develop fast and complete quantitative assessment of vascular anatomies with dedicated probes and presets.



Abdominal

Visualize abdominal tissue with clarity thanks to Vivid T8 Ultra Edition's high-resolution imaging and dedicated imaging presets.





VIVID HEART APPLICATIONS

A wide range of clinical applications for use in Core Echo and your cardiovascular practice.

VISUALIZATION AND NAVIGATION

Ultra Edition

Curved Anatomical M-Mode

LVO Contrast

Scan Coach

Smart Stress

Blood Flow Imaging

FLOW QUANTIFICATION

Ultra Edition

Cardiac Auto Doppler **AI**

AI Auto Measure Spectrum Recognition **AI**

CHAMBER QUANTIFICATION

Ultra Edition

Z-Scores

AFI FUNCTIONAL IMAGING

Ultra Edition

Auto EF **AI**

AFI LV with AI View Recognition **AI**

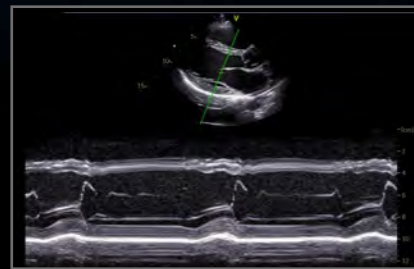


VIVID HEART APPLICATIONS

VISUALIZATION AND NAVIGATION

New in Ultra Edition

Why guess? When you can see.



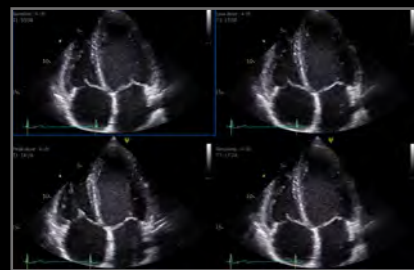
Curved Anatomical M-Mode

View Anatomical color and tissue velocity in M-mode. Adjust the cursor at any plane, in live imaging or with recalled images.



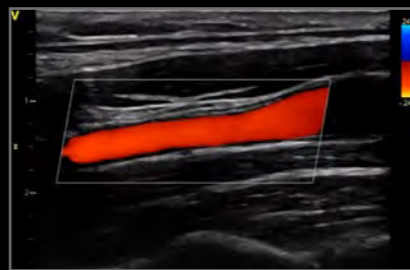
LVO Contrast

From high-resolution detection of contrast in the LV cavity with LVO Contrast and excellent suppression of myocardial tissue signals on the Vivid T8 Ultra Edition new Coded Phase Inversion (CPI).



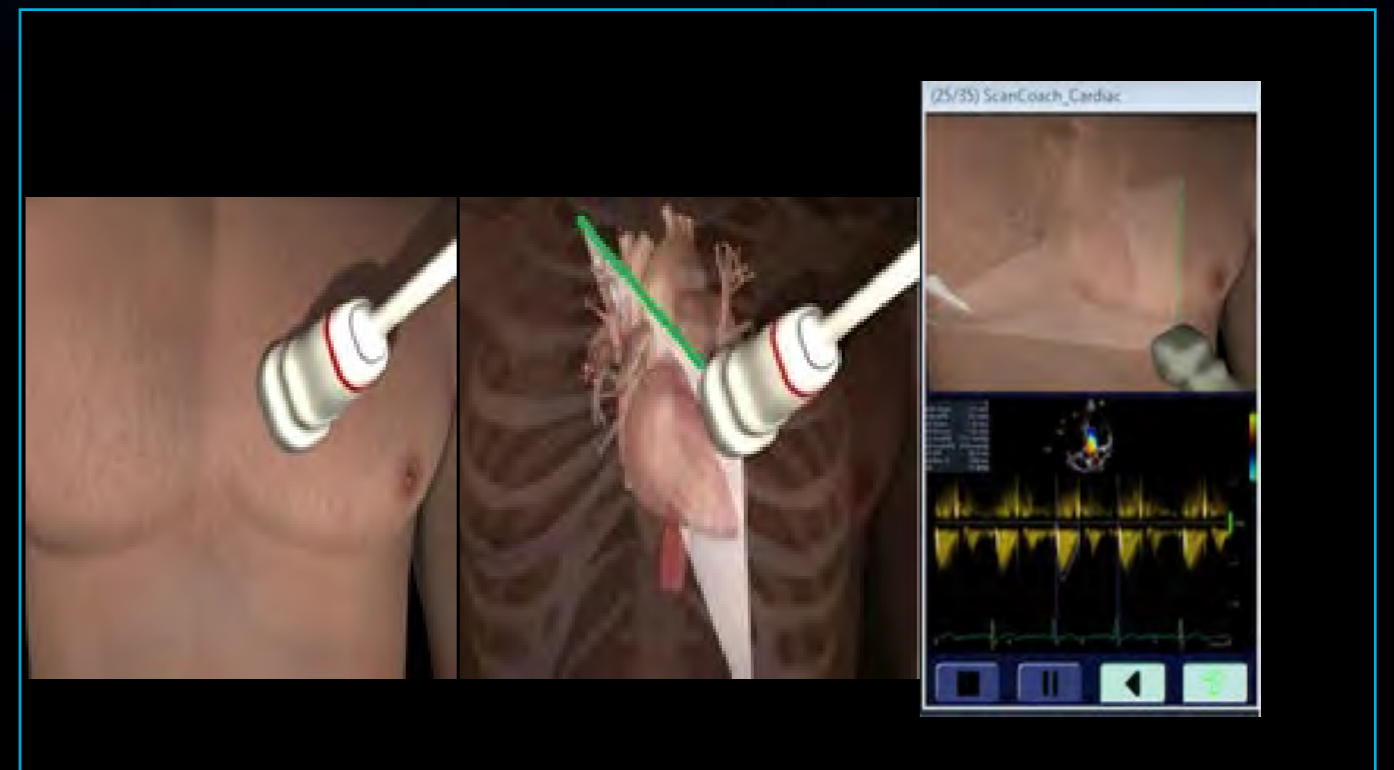
Smart Stress

Over 17 imaging parameters from each plane can be saved and recalled at each stress level, reducing system adjustments during acquisition.



Blood Flow Imaging

visualization using a signal-processing algorithm for



Ultra Edition

Scan Coach

A reference and education tool that provides modules depicting basic scanning techniques with animated graphics of probe position, schematic of anatomy and reference clinical image.

Benefits:

Guided scanning:

- Conveniently located onboard the console within the Scan Assist Pro feature
- Present views and measurements
- Helps inexperienced users performing echo scans

Education and reference tool:

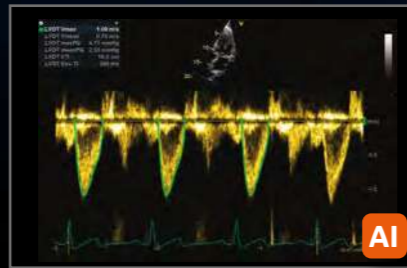
- Assists in positioning the probe and probe orientation
- Anatomical reference helps visualize where the scan plane is located inside the heart
- Scan Assist Pro exam protocols can be customized per local guidelines and help ensure exam completeness



VIVID HEART APPLICATIONS

FLOW QUANTIFICATION

Your time is precious. Save it.



Cardiac Auto Doppler

Semi-automatic Cardiac Doppler measurements.

- B
- Enhances reproducibility of follow-up studies when used in automated mode⁸
- Doppler measurement in multiple cardiac cycles as recommended by guidelines for irregular heart rhythms^{9,10}
- Supports less experienced users with advanced automation

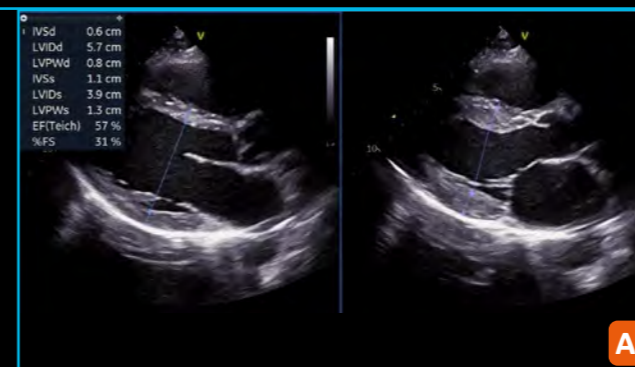
CHAMBER QUANTIFICATION

Precision at the heart



Z-Scores

Vivid T8 Ultra Edition Support for six sets of user selectable Z score publications covering the most common pediatric dimension measurements.



Ultra Edition

AI Auto Measure 2D

Semi-automated LV dimension measurements (2D calipers) in the parasternal long axis view, reducing manual interactions.

Benefits:

- Achieves fast measurements of left ventricle dimensions:
 - Up to 80% less clicks⁷
 - No need to scroll to look for ED and ES frames

diac images

- Improves reliability and repeatability of measurements – potentially increasing reproducibility for follow-up studies

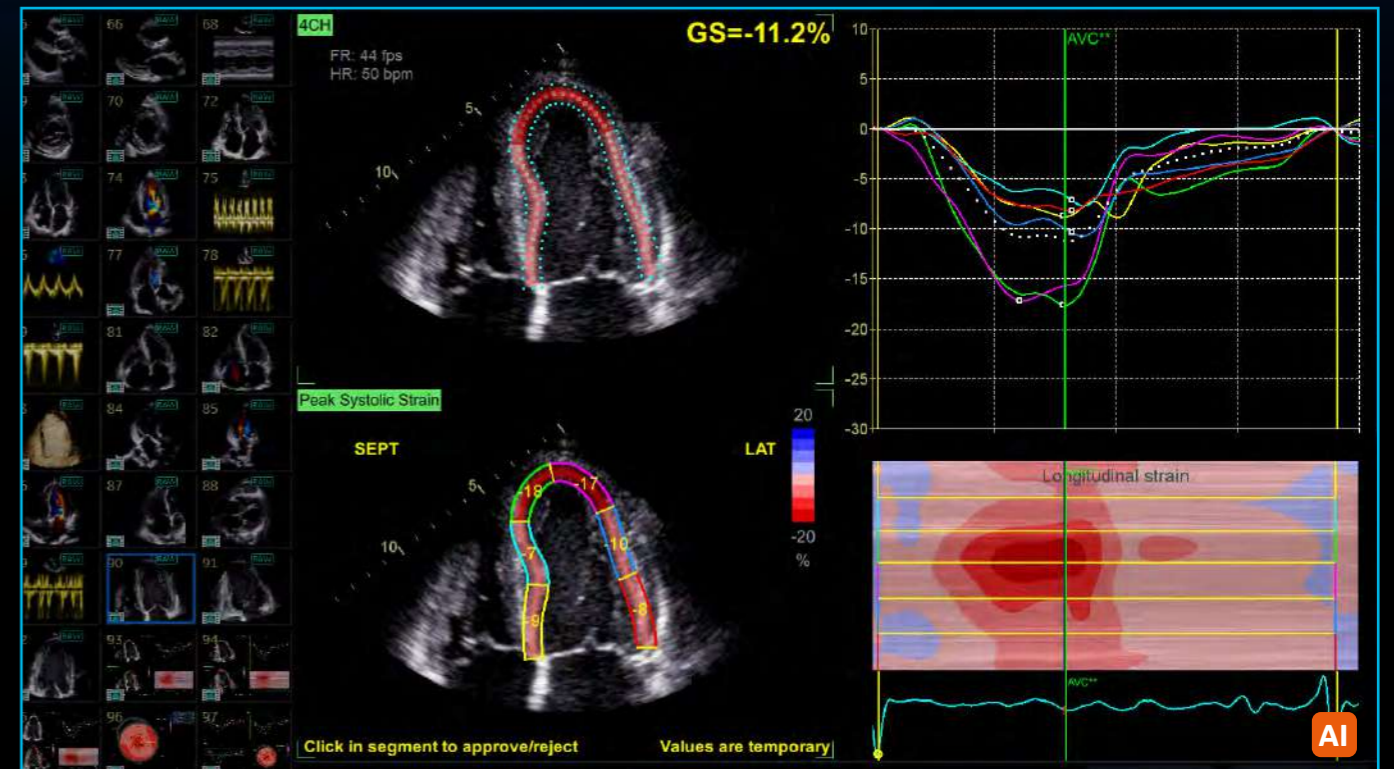


VIVID HEART APPLICATIONS

AFI FUNCTIONAL IMAGING

From diagnosis to prognosis.

New in Ultra Edition



Ultra Edition

AFI LV with AI View Recognition*

Powered by AI-based View Recognition, AFI LV pr

t ventricular global and segmental strain.

Benefits:

- y pioneered speckle tracking algorithm for quantifying myocardial deformation
- Works seamlessly - integrated ejection fraction calculation
- Supports Adult and Pediatric TTE and Adult TEE images
- Provides time savings via automatic selection of the appropriate 4-chamber, 2-chamber and APLAX images for analysis
- DICOM support. Assessment of the left ventricle ejection fraction also on data sets acquired on other vendors' systems

*View Recognition is only applicable to images acquired with TTE probe on GE systems



SEAMLESS WORKFLOW INTEGRATION

POST PROCESSING & REVIEW

OPEN STANDARDS

INTEGRATION WITH YOUR WORKFLOW

EchoPAC Software Only and EchoPAC Plug-in:

- Analyze and review data from GE Healthcare Vivid family of scanners, as well as DICOM images from other ultrasound systems.
- Access all Vivid measurement and review tools utilizing GE Healthcare Raw Data or industry standard DICOM data
- DICOM Image transfer with optional GE Healthcare Raw Data transfers images easily in your e
- DICOM SR Measurement Transfer including standard and custom measurement allows seamless integration with GE Healthcare and other industry reporting systems and EMRs¹³

EchoPAC Plug-in is available for:

- GE Healthcare Centricity™ Cardio Enterprise with Intelligent Reporting (IR).
- GE Healthcare ViewPoint™ 6 with EchoPAC Suite¹²
- As a plug-in to third party PACS

With Centricity Cardio Enterprise IR, routine adult echo reports are

83% complete before the physician opens the exam to review.¹¹



SonoDefense

ADVANCED CYBERSECURITY
AND DATA PRIVACY PROTECTION

Healthcare institutions are under growing threats of cyberattacks – and the implications for data security, patient privacy, and the quality and cost of care are staggering.

- FACILITY ECHOSYSTEM
- NETWORK FIREWALL
- WINDOWS 10 HARDENING
- MALWARE PROTECTION
- LOCAL/REMOTE ACCESS MANAGEMENT
- PHI ENCRYPTION

The SonoDefense strategy consists of SIX LAYERS, with each layer enhancing the overall security of the system and help protect patient data.

Protecting against these threats and safeguarding your patients and your institution requires more than anti-virus protection. SonoDefense is GE Healthcare’s multi-layer strategic approach to cybersecurity and patient data privacy for ultrasound..

SonoDefense is designed to:

- Keep the ultrasound machine safe and functional in the face of cyberthreats
- Protect patient data on the machine from unauthorized access
- Enable you to successfully implement patient data and security policies, while still managing product daily

SonoDefense strategy applies to Vivid portfolio:

- Windows® 10 IoT Secure Operating System provides multi-layered security
- Application whitelisting prevents malware execution
- Role-based user security provides user authentication and access control
- Data encryption protects stored data and during transmission
- Network firewall disables unneeded operating system services
- Integrates with existing facility security infrastructure



Healthcare is a soft-target for hacking and ransomware.¹⁴

\$4B cost added in 2019¹⁵



Ultrasound is especially vulnerable to operator-dependence leading to

VARIABILITY between exams¹⁷



Constrained budgets increase pressure to

DO MORE with less¹⁶ and to optimize assets



Probe mishandling can lead to damage which can cause faulty data and may lead to incorrect medical decisions^{18, 19}



[POP] PERFORMANCE OPTIMIZATION PARTNERSHIPS

Purchasing a GE Healthcare ultrasound is not only getting access to a high-technology or remarkable clinical applications. It's about enjoying a new user experience, at every step of ownership. We help you to outperform today, while preparing your department for tomorrow's challenges.

STAFF EXCELLENCE

A comprehensive portfolio of training for clinical and technical users.

Helping you and your team build customized development plans to foster excellence and increased confidence.

ASSET OPTIMIZATION

Customizable dashboards for asset utilization and consulting services to provide actionable insights.

Achieving more with your assets to improve patient care and realize department strategic plans.

PROACTIVE MANAGEMENT

Use digital technology and tools to minimize expensive and disruptive unplanned downtime.

Proactive monitoring to help reduce cost and revenue loss from unplanned failures and automated updates for peace of mind.

IMPROVED UPTIME

Best-in-class repair services to drive uptime. Fully scalable from full coverage to shared maintenance.

Thoroughly aligned with your own in-house capabilities, providing the right balance between staff autonomy and our expertise.

DEVICE PROTECTION

Keep your device state-of-the-art with software upgrades, new applications and security patches.

Optimizing your device to drive clinical and operational benefits and help you stay ahead of the game, without changing your equipment.

PROBE PERFORMANCE

Customizable portfolio of solutions for probe lifecycle needs to improve availability and performance.

Proactive probe care that may help you increase diagnostic quality, decrease cross-contamination risk and expand the life span of the transducers.

PARTNERSHIPS DRIVE RESULTS

GE Healthcare is by your side to overcome these risks, helping you to:

- ✓ Keep your systems up and running, safe from breaches and cyberattacks
- ✓ Achieve more with your existing systems, without changing your investment plan
- ✓ Improve your activity, e.g., **reducing unplanned downtime**, based on comprehensive data and reports
- ✓ Create comfort zone for your teams, reaching operational **efficiency** and clinical excellence
- ✓ Achieve high standard in probe-related cross-contamination and diagnostic errors

Ready to make your Vivid **POP**?

Complete lifecycle solution for clinical, oper

You take care of your patients, we'll take care of you.