



VividTM in the EchoLab

Ultra Edition

Your patients rely on you.
You can rely on us.



GE HealthCare



Cardiology staff workload pressure is at an all time high.

With the rising incidence of cardiac heart disease and the expanding global population's access to healthcare, there is an unprecedented demand for healthcare workers.

However, the surge in echo exams, coupled with repetitive scanning movements, has intensified the workload.

We see you – and we're listening.

Today's challenges



17 million
deaths from CVDs
in 2019¹



1 in 4
cardiologists feel
burned out²



>10%
increase in Ischemic Heart
Disease (IHD) alone by 2030³



~20%
of sonographers are leaving
the profession or taking
premature retirement⁴



~221 million
annual echo exams
performed globally⁵



x2
Shortage of health workers is
expected to double⁶

Discover the image quality and automation improvements in the latest

Vivid Ultra Edition*



Vivid E95

Vivid S70N

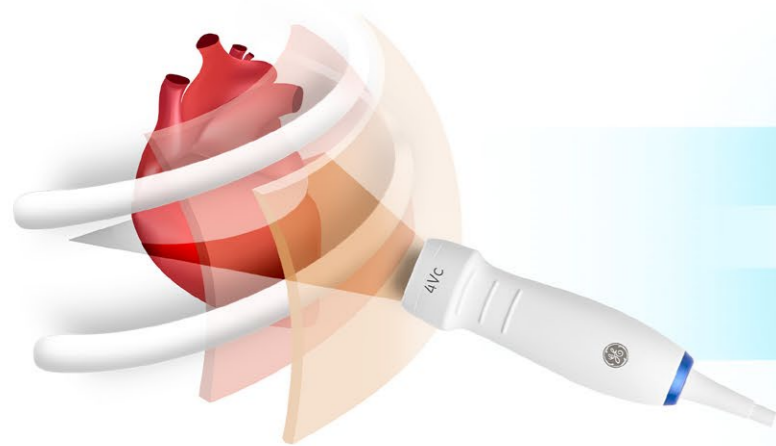
Vivid T9

Vivid iq

Rely on us for breakthrough image quality development

Our cSound™ superior image quality now goes a step further with the Vivid Ultra Edition's cSound™ ADAPT for the 4vC-D probe.

 **New internal design!**



cSound ADAPT optimizes image quality over 100 times per second

Ultrasound waves are distorted by different patients' habitus. Inhomogeneities in body structure (made of different speed-of-sounds, such as bone or tissue) cause **image quality degradation.**

cSound ADAPT was built and verified on **40,000** frames of channel data recordings.

 **10-15%** of echo exams result in sub-optimal images⁷

With the objective of improving the scanning experience on hard-to-scan patients, cSound ADAPT⁸ was developed to correct ultrasound aberrations that may degrade image quality. cSound ADAPT addresses ultrasound wave distortions, delivering enhanced image contrast and resolution in real time—optimized at a rate exceeding 100 times per second for each patient

Image captured without cSound ADAPT

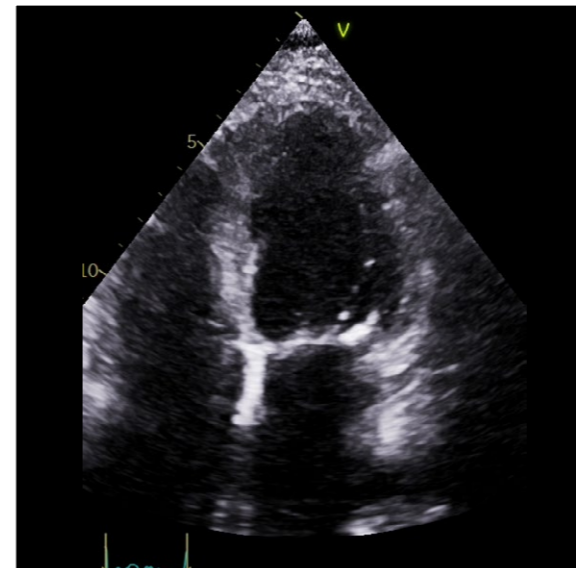
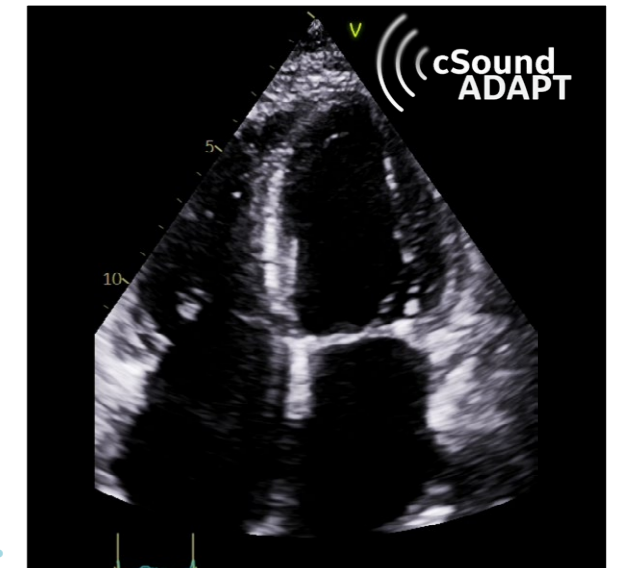
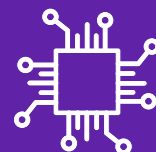


Image captured with cSound ADAPT

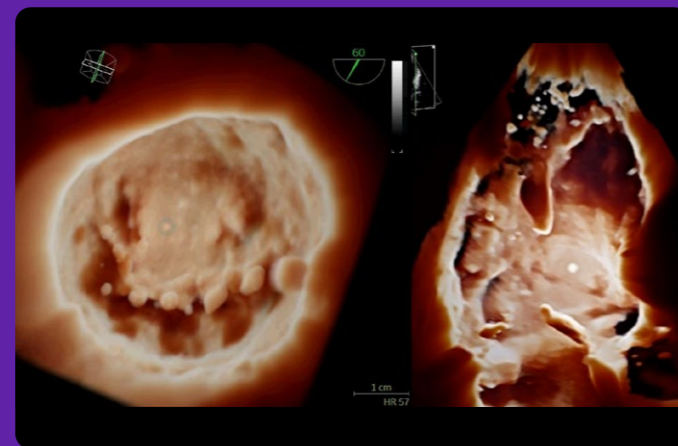


cSound rectifies image distortions for **enhanced image quality.**

Rely on us for relentless search for image quality improvements

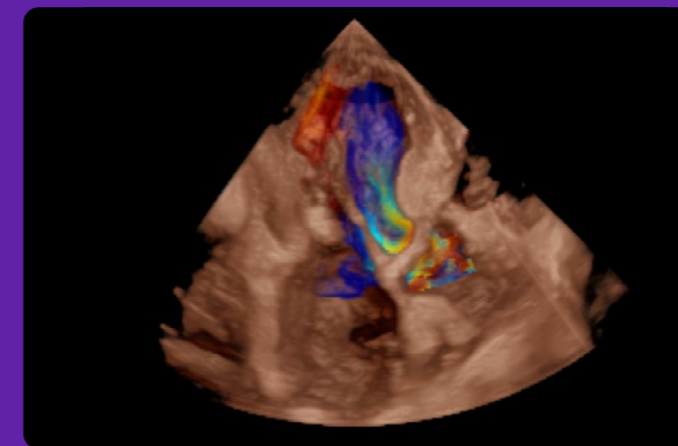
 **3.5x** more graphics processing power^{†,‡}

[†]3.5 times more processing power claim refers to the 2022 release of the Vivid portfolio. This Graphic Processing Unit is exclusively available for the Vivid E95 and Vivid E90.
[‡]Time to strain measurement result may vary with heart rate, frame rate, and Vivid system. Verification of performance done by GEHC clinical application specialists using Vivid system (DOC2739637).



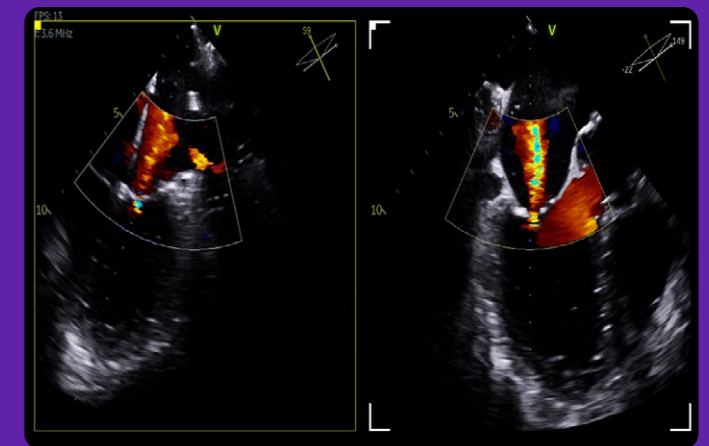
FlexiLight

Rendering technique for photo-realistic light-source based illumination of heart structures, providing comprehensive visualization of cardiac structures.



HD Color

New 4D color flow rendering technique for semi-transparent visualization of origin and size of high velocity jets, enhancing spatial resolution between flow and surrounding structures.

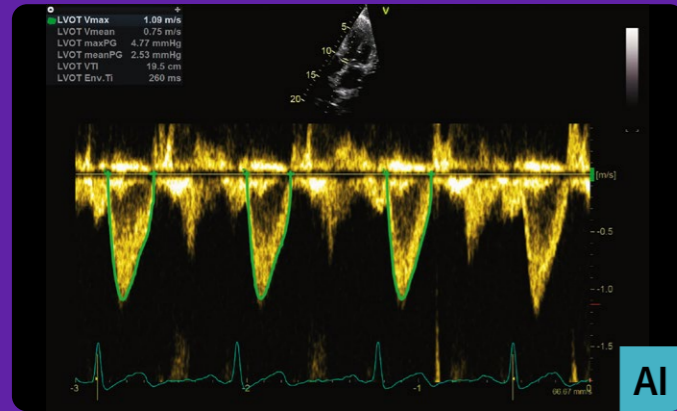


Color Flow

The improved graphics processing power enables improved spatial and temporal resolution for uncompromised color flow.

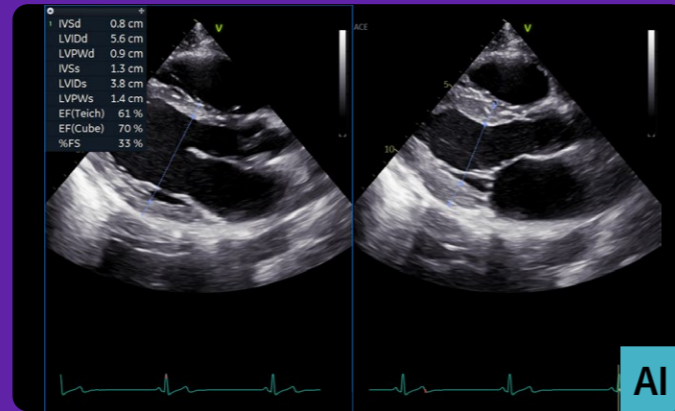
Rely on robust Artificial Intelligence to improve workflow

With a range of automated measurements including chamber, flow and strain quantification, the Vivid Ultra Edition brings you further automation to reduce cumbersome multi-click tasks.



Cardiac Auto Doppler

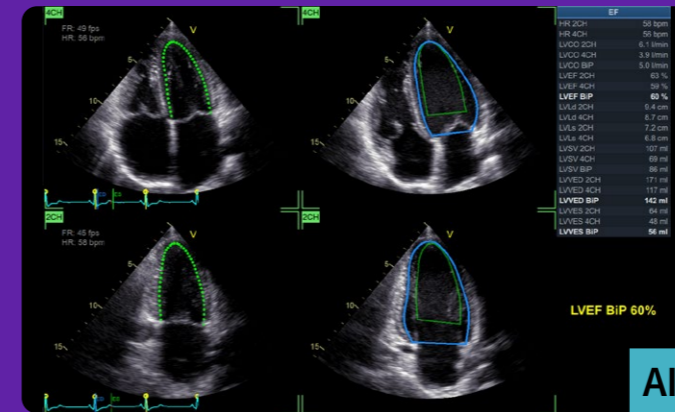
Semi-automatic cardiac auto doppler measurements. And with AI Auto Measure Spectrum Recognition[†] you can select the appropriate spectrum automation.



AI Auto Measure 2D

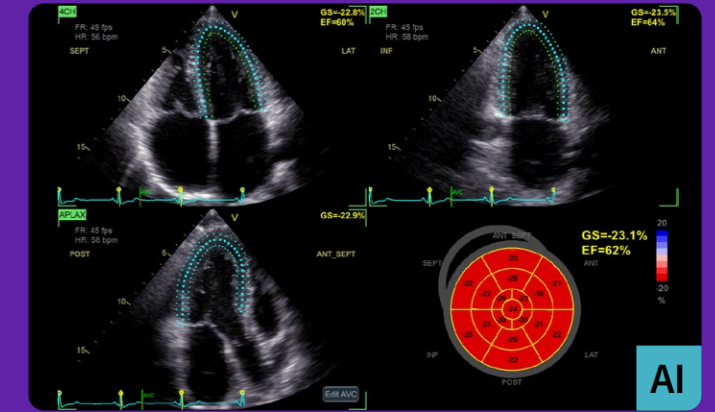
Semi-automatic LV dimension measurements (2D Calipers).

35% of cardiac sonographers miss work due to pain⁹



Easy AutoEF[†]

Biplane left ventricular ejection fraction, in one single click. With AI-based Auto ROI detection algorithm, Easy Auto EF saves time and decreases intra- and inter-observer variability. Also, if no ECG signal is available, requires minimal additional user interaction.



Easy AFI LV

AFI LV analysis in one single click. Our AI-based Auto ROI detection algorithm allows users to complete the AFI workflow with minimal manual interaction to save time and decrease intra- and inter-observer variability.



Strain and EF measurements results in 15 seconds (on average)[‡]

Rely on us to support your team's training



Vivid systems come with a variety of education offerings, including:

In-person training

- Onsite Application Trainings (at installation)
- Vivid Live Instructor Led Class (2-day training)[†]

Virtual learning at:

- Vivid Learning Academy – available to all on the Vivid website
- Vivid Club – exclusive digital content for Vivid users
- Digital Expert – an innovative platform providing interactive and real-time education and support, including clinician-to-clinician communication[†]

EchoPAC™ Connect – the flexibility you need for the unique way you work

Fast workflow

Fully integrated and featuring Open4D to assess & quantify 3D volumes from multivendor equipment fleets

Comfortable experience

Familiar interface with ergonomic comfort

State-of-the-art accuracy

Full access to all Vivid tools – from AI-simplified routine measurements to the most advanced ones (MyoCardial Work)

Rely on us to keep driving strain measurement adoption

The Vivid experience includes:

- Built-in continuous research findings in the field of strain
- Dedicated resources (such as the Strain Learning Academy) developed with Key Opinion Leaders to drive strain knowledge and adoption



60% of research publications in strain use GE Healthcare technology.¹⁰



Upgrade your ultrasound experience with **EchoPAC Connect** today.

[†]Easy AutoEF is restricted for use with adult TTE on GE Healthcare's raw B-mode data loops of the LV. Easy AutoEF does not support left ventricles with septal bulge.
[‡]Not available in all markets. Please refer to your GE Healthcare sales representative

References:

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

1. World Health Organization. Cardiovascular diseases (CVDs). World Health Organization. Published June 11, 2021. [https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))
2. Mehta LS, Elkind MSV, Achenbach S, Pinto FJ, Poppas A. Clinician Well-Being: Addressing Global Needs for Improvements in the Health Care Field A Joint Opinion From the American College of Cardiology, American Heart Association, European Society of Cardiology, and the World Heart Federation. *J Am Coll Cardiol.* 2021;78(7):752-756. doi:10.1016/j.jacc.2021.04.043
3. Khan MA, Hashim MJ, Mustafa H, et al. Global Epidemiology of Ischemic Heart Disease: Results from the Global Burden of Disease Study. *Cureus.* 2020;12(7):e9349. Published 2020 Jul 23. doi:10.7759/cureus.9349
4. Stephanie David | Importance of Sonographers Reporting Work-Related Musculoskeletal Injury: A Qualitative View | JDMS 21:234–237 May/June 2005 <https://journals.sagepub.com/doi/pdf/10.1177/8756479305274463>
5. 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
6. Gulland A. Shortage of health workers is set to double, says WHO. *BMJ.* 2013;347:f6804. Published 2013 Nov 12. doi:10.1136/bmj.f6804
7. 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
8. Dénarié B, Senior, Kristoffersen K, Rigby W. cSound ADAPT: Continuous Beamforming Optimization, Adapting to Patient Anatomy and Probe Position White Paper. Accessed December 19, 2023. https://www.gehealthcare.com/-/jssmedia/gehc/us/files/products/ultrasound/vivid/redesign/resources/whitepaper_csound-adapt_jb20851xx.pdf?rev=-1. cSound Adapt is exclusively available for Vivid E95 and Vivid E90
9. Nicholas M. Orme et.al. | Echocardiography 2016 | <https://onlinelibrary.wiley.com/doi/10.1111/echo.13344>
10. Whitepaper "AFI – strain imaging from research to clinical routine"– JB16411XX

About GE HealthCare

GE HealthCare is a leading global medical technology, pharmaceutical diagnostics, and digital solutions innovator, dedicated to providing integrated solutions, services, and data analytics to make hospitals more efficient, clinicians more effective, therapies more precise, and patients healthier and happier. Serving patients and providers for more than 100 years, GE HealthCare is advancing personalized, connected, and compassionate care, while simplifying the patient's journey across the care pathway. Together our Imaging, Ultrasound, Patient Care Solutions, and Pharmaceutical Diagnostics businesses help improve patient care from prevention and screening, to diagnosis, treatment, therapy, and monitoring. We are an \$18 billion business with 51,000 employees working to create a world where healthcare has no limits.

Follow us on [Facebook](#), [LinkedIn](#), [Twitter](#), [Instagram](#) and [Insights](#) for the latest news, or visit our website [gehealthcare.com](https://www.gehealthcare.com) for more information.

Products mentioned in the material may be subject to government regulations and may not be available in all countries. Shipment and effective sale can only occur after approval from the regulator. Please check with local GE HealthCare representative for details.

© 2024 GE HealthCare. Vivid, cSound, and EchoPAC are trademarks of GE HealthCare. GE is a trademark of General Electric Company used under trademark license.

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

Third party trademarks are the property of their respective owners.

April 2024

JB20772XX



GE HealthCare