



YOUR PATIENTS RELY ON **YOU**.
YOU CAN RELY ON **US**.

Vivid™ in the Echo Lab

U L T R A E D I T I O N





CARDIOLOGY STAFF WORKLOAD PRESSURE IS AT AN ALL TIME HIGH.

As the incidence of cardiac heart disease and global population's access to healthcare increases, there has never been a bigger demand of healthcare workers.

As a result of an increase in the number of echo exams performed and the limited available healthcare professionals, cardiology staff are having to work harder, increasing stress levels on team members.

TODAY'S CHALLENGES

 **17 MILLION**

people died from cardiovascular diseases (CVD) in 2019¹

 **1 in 4**

cardiologists state they are burned out²

 **>10%**

increase in Ischemic Heart Disease (IHD) alone by 2030³

 **20%**

of sonographers are leaving the profession or taking premature retirement⁴

 **~108 MILLION**

annual echo exams performed globally⁵

 **x2**

shortage of health workers is **set to double**⁶

DISCOVER THE IMAGE QUALITY AND AUTOMATION IMPROVEMENTS IN THE LATEST

Vivid Ultra Edition*



RELY ON US FOR BREAKTHROUGH IMAGE QUALITY DEVELOPMENT

With the renowned superb image quality from cSound™, now Vivid Ultra Edition goes a step further with the launch of cSound ADAPT for the 4Vc-D probe on the Vivid E95.



cSound Adapt optimizes **IMAGE QUALITY** OVER 100 TIMES PER SECOND

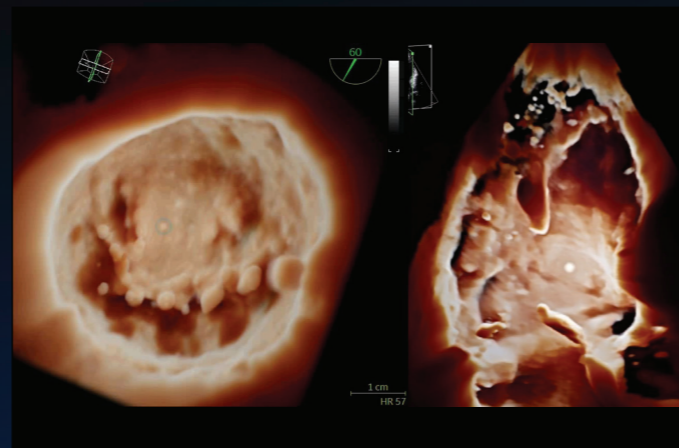
Ultrasound waves are distorted by different patients' habitus. Inhomogeneities in body structure (made of very different speed-of-sounds, such as bone or tissue) cause **image quality degradation.**

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

RELY ON US FOR RELENTLESS SEARCH FOR IMAGE QUALITY IMPROVEMENTS

3.5x

more graphics processing power⁹



FlexiLight

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

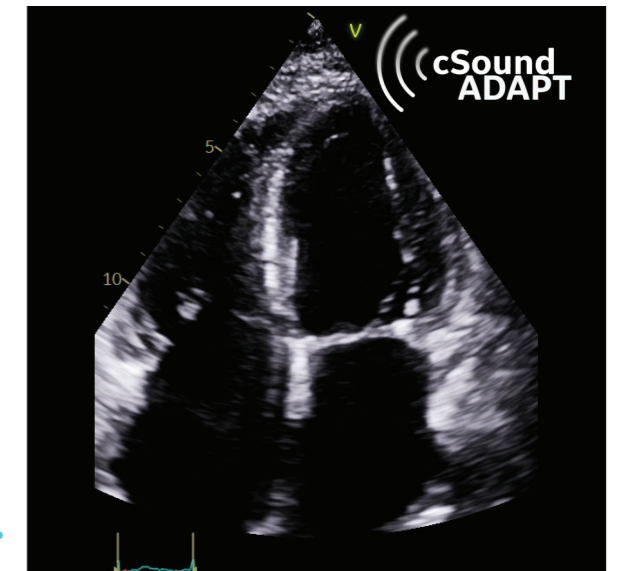
10-15% of echo exams result in sub-optimal images⁷

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 tackles the challenge of ultrasound wave distortions, you will enjoy improved image contrast and resolution – optimized in real time, at over 100 times per second, in every patient⁸.

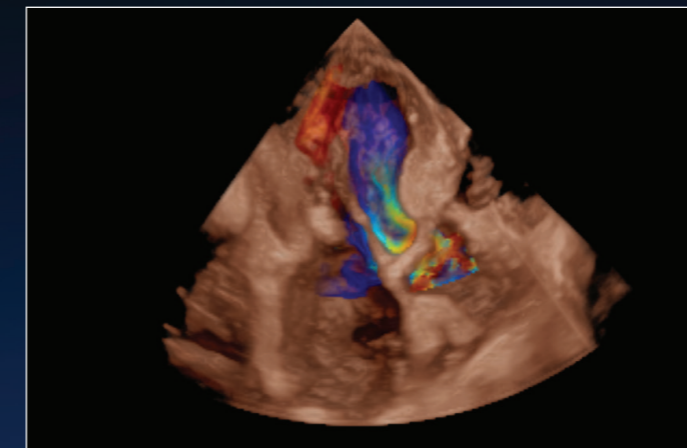
Image captured **without** cSound ADAPT



Image captured **with** cSound ADAPT

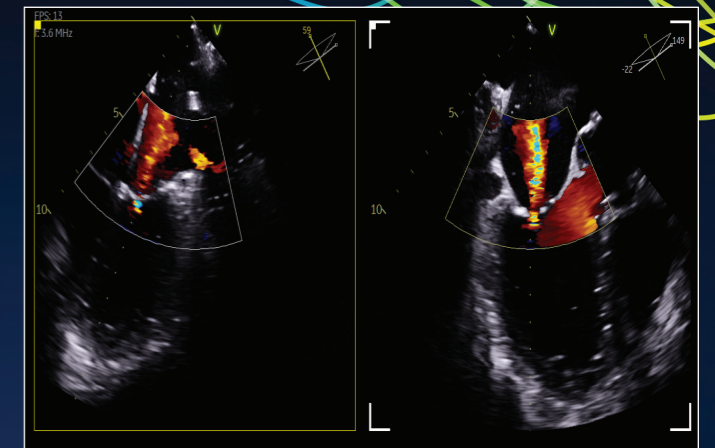


cSound rectifies image distortions for **enhanced image quality.**



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.

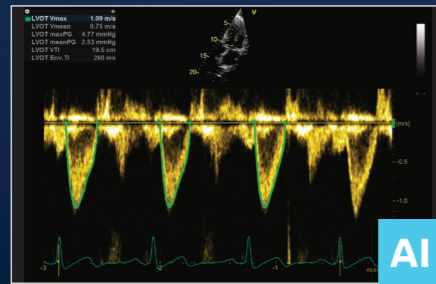


Color Flow

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

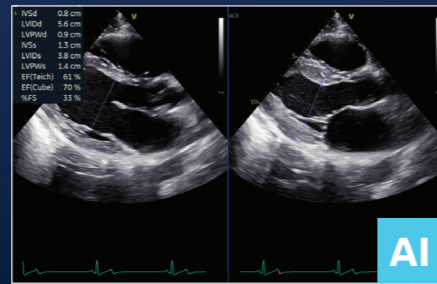
RELY ON ROBUST ARTIFICIAL INTELLIGENCE TO IMPROVE WORKFLOW

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).

RELY ON US TO SUPPORT YOUR TEAM'S TRAINING



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

In-person training

- Application Trainings (at installation)
- Vivid Live Instructor Led Class (2-day training)¹³

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 communication¹²

ECHOPAC™ – POST PROCESSING & REPORTING

Fast workflow

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

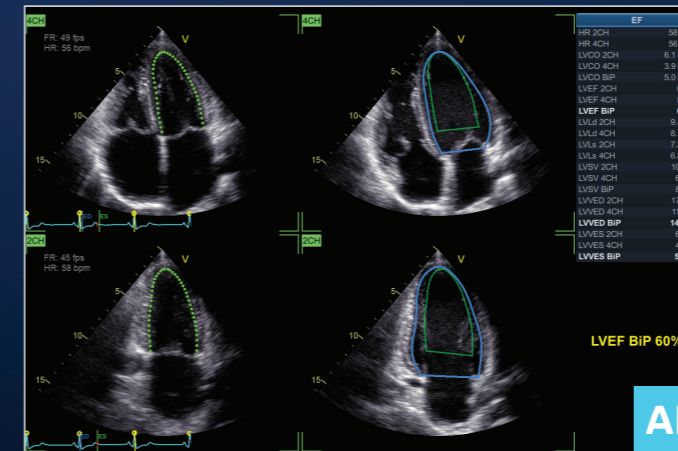
Comfortable experience

Familiar interface with ergonomic comfort

State-of-the-art accuracy

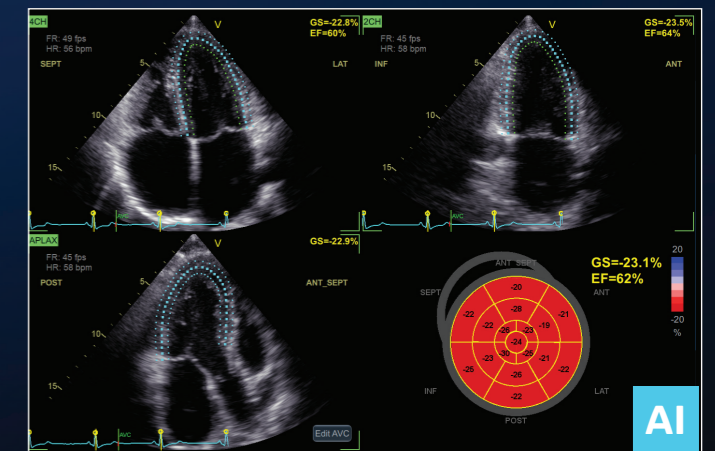
Full access to all Vivid tools – from AI-simplified routine measurements to the most advanced ones (Myocardial Work)

35% of cardiac sonographers miss work due to pain¹⁰



Easy AutoEF¹¹

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)¹²

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.¹⁵



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

About GE Healthcare:

GE Healthcare is the \$18 billion healthcare business of GE (NYSE: GE). As 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 for the latest news, or visit our website www.gehealthcare.com for more information.

References:

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

1. World Health Organisation | [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. Laxmi S. Mehta et.al. | Clinician Well-Being. Addressing Global Needs for Improvements in the Health Care Field | Journal Of The American College Of Cardiology Vol. 78, No. 7, 2021
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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. World Health Organization | A universal truth: no health without a workforce. Nov 2013. <https://www.bmj.com/content/347/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. cSound Adapt: Continuous beamforming optimization, adapting to patient anatomy and probe position whitepaper - JB20851XX. cSound Adapt is exclusively available for Vivid E95 and Vivid E90
9. 3.5 times more processing power claim refers to the 2022 release of the Vivid portfolio. This Graphic Processing Unit is exclusively available for Vivid E95.
10. Nicholas M. Orme et.al. | Echocardiography 2016 | <https://onlinelibrary.wiley.com/doi/10.1111/echo.13344>
12. Easy AutoEF is restricted for use with adult TTE on GE Healthcare raw B-mode data loops of the LV. Easy Auto EF does not support left ventricles with septal bulge.
13. 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)
14. Not available in all markets. Please refer to your GE sales representative
15. Digital Expert is only offered in the USA. Digital Expert is not a functionality provided by Vivid systems. Digital Expert is separate from Vivid systems and is for education and training purposed only
16. Whitepaper "AFI - strain imaging from research to clinical routine" - JB16411XX



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