



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

Vivid™ S70N with Dimension


ULTRA EDITION




gehealthcare.com


TODAY'S CHALLENGES

Increasing demand, coupled with limited cardiology staff, results in additional workload challenges for the entire medical community.

 **17 MILLION**
people died from CVDs
in 2019¹

 **1 in 4**
cardiologists state they
are burned out²

 **>10%**
increase in IHS 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 double⁶

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

Patient care isn't just a job for you. It's a calling. A mission.

Of late, that mission has changed. Increased workloads, fewer skilled staff and increased demands on your time, resources and expertise are now the norm.

Getting the right images under this pressure is challenging.

But this isn't just a job for you and you have no intention of sacrificing quality in your practice when so much is at stake.

The Vivid S70N Dimension cardiovascular ultrasound system has been further developed to meet today's challenges. To allow more diagnosis confidence and better workflows, Vivid S70N Dimension takes a leap forward in image quality with improved color flow, HD live capabilities and full 4D capabilities as well as further AI-enabled automation.

Because your patients rely on you, you can rely on us.

PIONEERING INNOVATION

YOUR EXPERTISE. OUR INNOVATIONS.

Building on a history of advancements of cardiac patient care, GE has been a true pioneer introducing breakthrough technologies, such as Color Doppler systems (1986) and 2D and AFI Speckle Tracking (2005).

Discover the latest leading innovative technologies that continue to push the technical capabilities of the Vivid Ultra Edition* system for the benefit of you and your patient.

2014	2017	2018	2020	2021
<ul style="list-style-type: none"> cSound software beamforming platform Advanced 4D tool Smart Standby 	<ul style="list-style-type: none"> Cardiac Auto Doppler 4D Auto MVQ View-X Micro TEE Probe (10T-D) Enhanced support for DICOM SR 	<ul style="list-style-type: none"> cSound™ 2.0 AutoEF 2.0 AFI 2.0 4D Markers Windows 10 	<ul style="list-style-type: none"> AFI RV AFI LA AI 2D Auto Measure AI Spectrum Recognition AFI 3.0 AutoEF 3.0 e-Delivery 	<ul style="list-style-type: none"> Biplane/Triplane on 4Vc 4D Auto RVQ 4D ICE**



VIVID S70N DIMENSION ULTRA EDITION*

Designed from the echo to the cathlab

Vivid S70N Dimension provides you with uncompromised image quality, advanced visualization capabilities and easy measurements – while helping reduce tedious tasks.

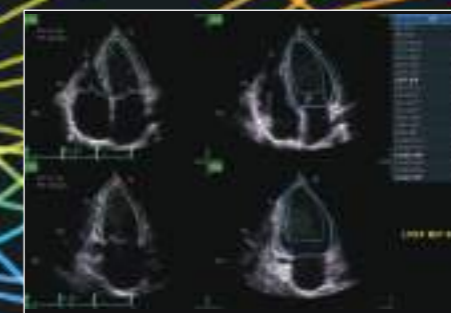
UPGRADE NOW!

LATEST INNOVATIONS



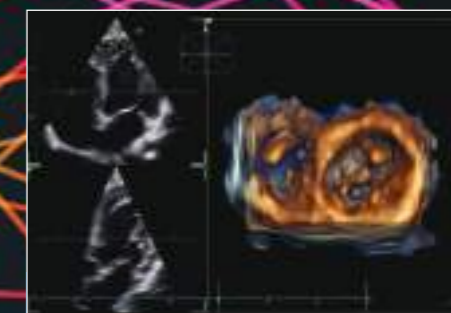
Strain measurements in just 15 seconds (on average) - with **Easy AFI LV**.

In 15 seconds
(on average)⁷



Ejection Fraction and Automatic Region of Interest definition with only 1 click – with **Easy AutoEF⁸**.

Only 1 Click



Full 4D capabilities in transthoracic, transesophageal, and even intracardiac** echo.

4D visualization

MODERN ERGONOMICS

Adjustable to each operator and each sitting position

- Articulating monitor arm
- Single-hand push for up/down and left-right adjustment

Excellent operator interface

- 21.5" adjustable monitor
- 12" LCD touch screen
- Alphanumeric keyboard
- Silent system (average 31dB noise level)

Compact & easy to maneuver

- Only 73Kg/ 161lbs
- With ergonomic, easy to push handle
- Battery powered "standby" function, up and running within few seconds

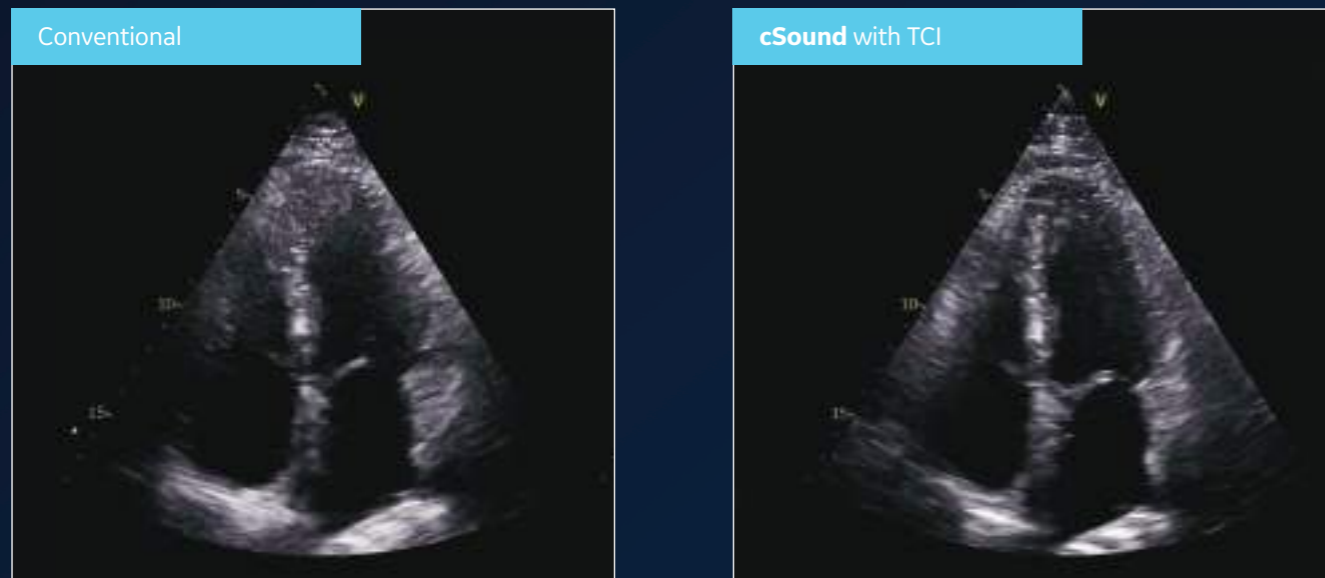
YOUR VISION. OUR SUPERB IMAGES.

The Vivid System was purpose-built to deliver the highest quality images possible so you can see clearly and diagnose with confidence.

cSound innovation

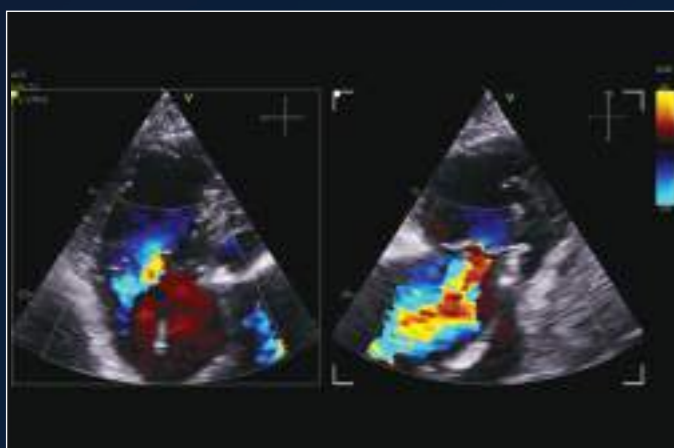
The key innovation of cSound is its extraordinary processing capacity where ultrasound channel data is received and temporarily stored in 'Local Big Data' memory before the image reconstruction is performed.

This enables the application of advanced beamformer algorithms, such as True Confocal Imaging (TCI) without the limitation of focal zones or sacrifice of frame rate and spatial resolution.



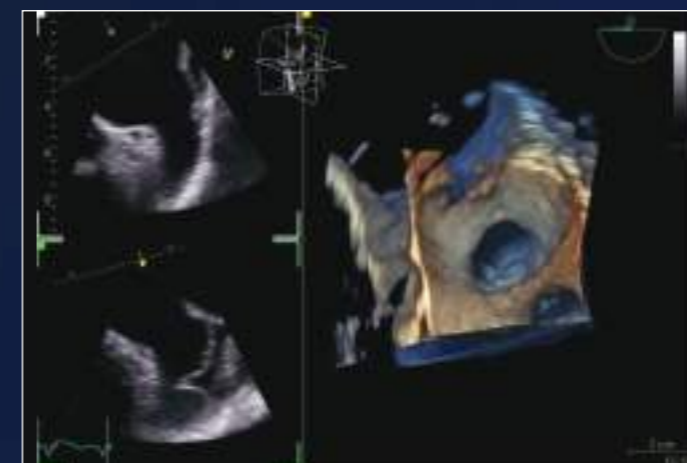
The combined effect of cSound and TCI compared to traditional (Vivid E9) Premium Beamforming.

Color Flow - Even better image quality!



10-15% of echo exams result in sub-optimal images⁹

LATEST INNOVATIONS



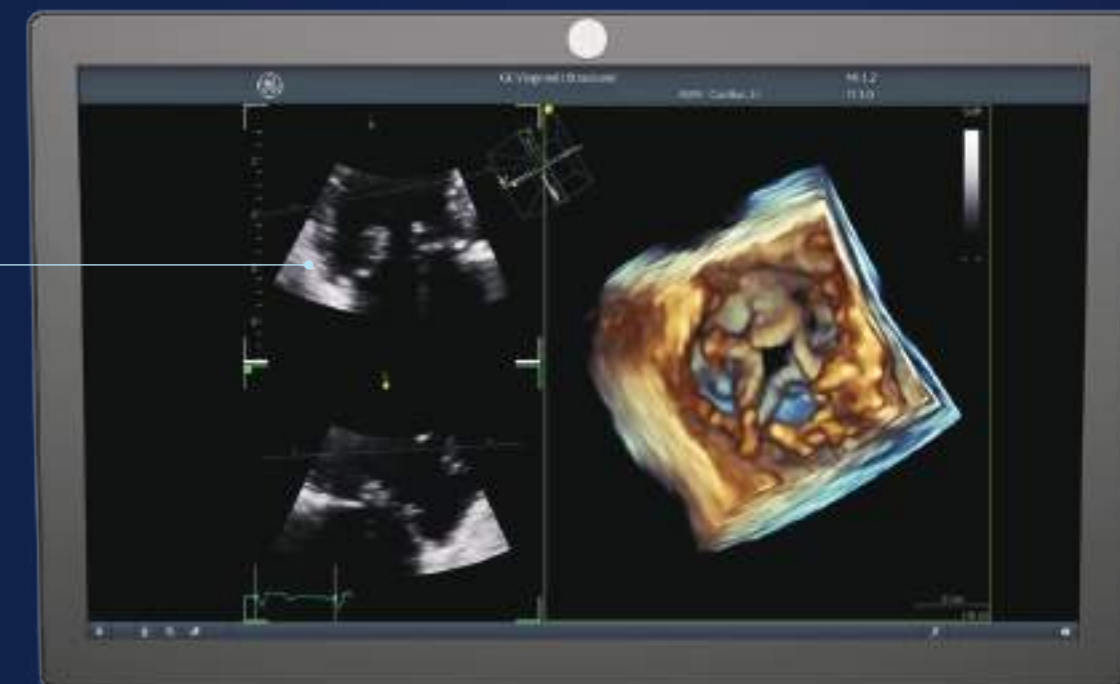
HDlive™

Enhanced 4D tissue render visualization

Enabled by cSound, HDLive, an advanced visualization tool that simulates light propagation and scattering through tissue, virtually illuminates 4D structures varying the source of light at will, making the understanding of complex 4D anatomy easier. It is available both in live and replay modes and in multiple color maps.

Full 4D capabilities

In transthoracic, transesophageal and even intracardiac Echo

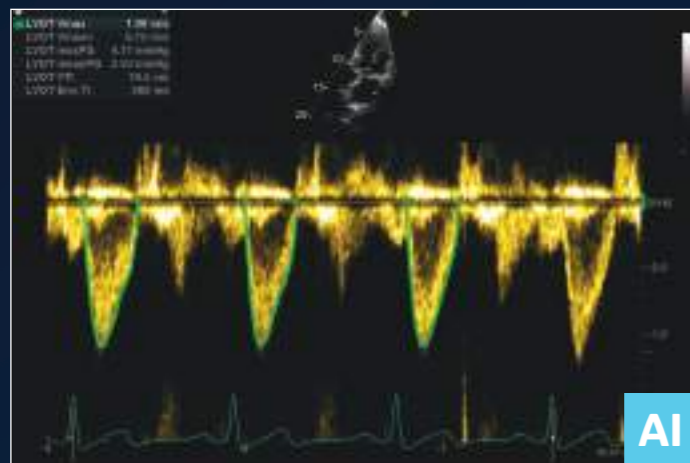


Vivid S70N Dimension Ultra Edition introduces the latest AI-based technology to help reduce tedious tasks and improve workflow efficiency.

AI Auto Measure 2D

With the power of AI, a full set of reproducible measurements will instantly appear on the screen.”


 **80%**
Less clicks¹⁰



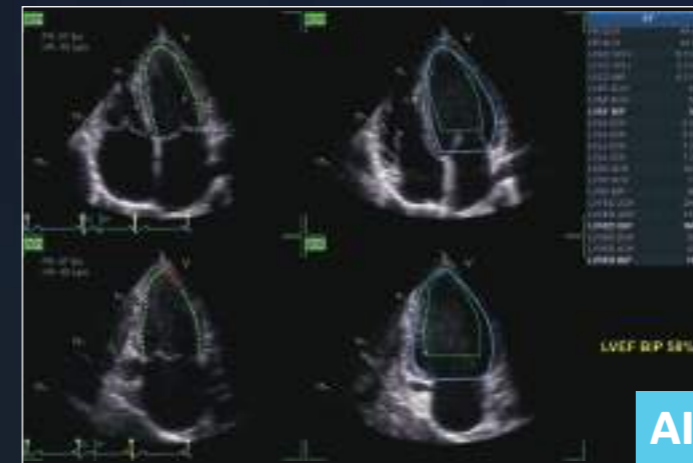
Cardiac Auto Doppler with AI Auto Measure Spectrum Recognition

With the power of AI, a wide range of Doppler measurements can be completed with 2 clicks: Freeze – Measure. A Doppler trace and full set of associated measurements will instantly appear on the screen.

 **Up to 93% fewer keystrokes¹¹**


 **35%** of cardiac sonographers miss work due to pain¹²

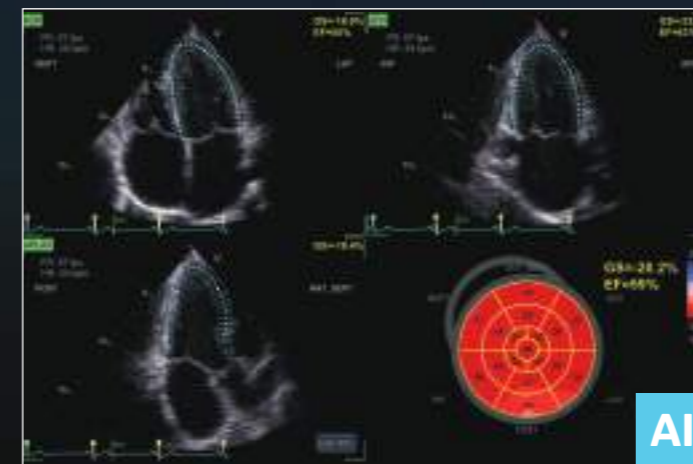
LATEST INNOVATIONS



Easy AutoEF


Our AI-based Auto ROI detection algorithm allows users to complete ejection fraction, with no manual interaction apart from initiating the tool and approving the results.

 **EF results in just 1 click**



Easy AFI LV with view recognition

Our AI-based global and segmental strain measurements require no manual interaction apart from initiating the tool and approving the results. Additionally, you will be able to view simultaneously EF measurements.

 **EF and strain results in 15 seconds (on average)**

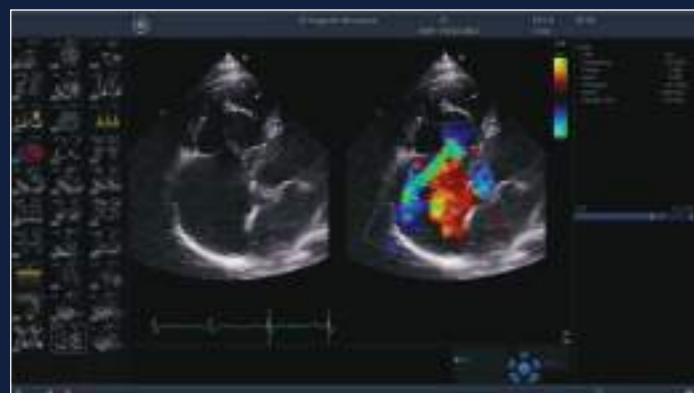
“The new Easy AFI LV expedites strain measurements and simultaneously provides an automated LV ejection fraction measurement.

Once required apical views are acquired, GE's algorithm provides incredibly robust strain measurements!

–Prof. Erwan Donal
Cardiologist
University Hospital Center, Rennes,
France

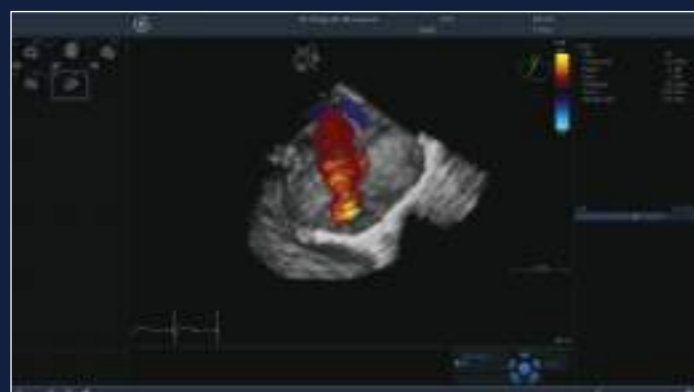
BEYOND ADULT ECHOLAB.

Demand for a complete ultrasound system - that is designed for both pediatric and adult patients and scan go from the echoLab to the cath lab - is growing. Be versatile with Vivid S70N Dimension.



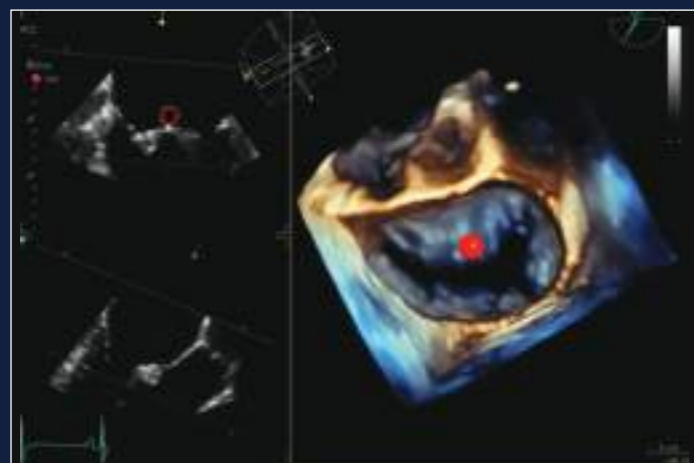
Pediatric imaging

Visualize small anatomies with speed, clarity and confidence thanks to Vivid S70N Dimension Ultra Edition's superb high-resolution imaging and dedicated pediatric probes.



HD Color for Interventional

HD Color is a 4D color flow rendering technique for volumetric flow perception and semi-transparent visualization of origin and size of high velocity jet.



4D Markers for Interventional

Make annotations that are viewable from all angles on 4D ultrasound volume data sets and their 2D views, facilitating communication in the echo lab, cath lab and OR.

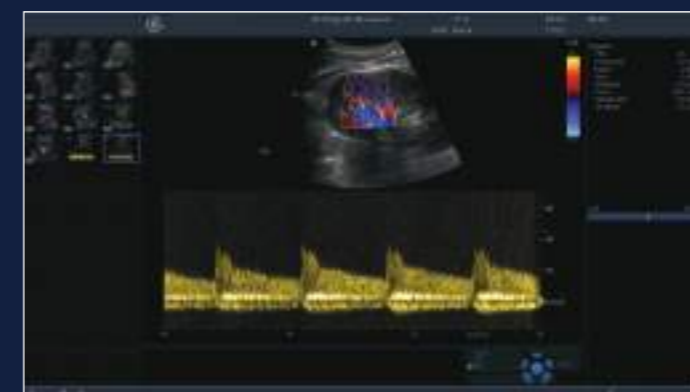
BEYOND CARDIOLOGY.

The demand for multi-purpose, cost efficient ultrasound systems with uncompromised image quality is growing. Your Vivid S70N Dimension Ultra Edition will exceed your expectations across a wide range of applications.



Vascular quantification

Develop fast and complete quantitative assessment of vascular anatomies, such as the Intima Media Thickness, with dedicated vascular measurement tools.



Abdominal diagnosis

Visualize tissues and flow patterns with greater details thanks to Vivid S70N Dimension Ultra Edition's high-resolution imaging.

INTUITIVE USER INTERFACE

YOUR NEEDS. OUR DESIGN.

More than ever, you need a powerful ultrasound system with advanced easy-to-use tools, that also is easy to maneuver. Vivid S70N Dimension has a familiar, yet modern and efficient design that is the lightest in its category. and is always ready with an “instant-on” transportation mode.



Modern Ergonomics

Long lasting mobility

- Battery powered “stand-by” function, up and running within few seconds

Adjustable to each operator and each sitting position

- Articulating monitor arm
- Single-hand push for up/down and left-right adjustment

Excellent operator interface

- 21.5” adjustable monitor
- 12” LCD touch screen
- Alphanumeric keyboard
- Silent system (average 31dB noise level)

Compact & Easy to Maneuver

- Only 73Kg/ 161lbs
- With ergonomic, easy to push handle



Only 73 kg



Silent System



Stand-by Function



21.5” monitor

YOUR FLEET. OUR SOLUTION.

Patient care doesn't end when the exam is over. Upgrade to EchoPAC™ to optimize your patient time and your post-processing time.



FAST WORKFLOW

- Fully integrated workflow with the EchoPAC Plug-in, DICOM® SR transfers to reporting systems, accelerated data transfers in clinical and research operations
- Featuring Open4D to assess & quantify 3D volumes from multivendor equipment fleets

For 3 dimensional system vendor agnostics analysis



Open 4D Multivendor

EchoPAC exists as **EchoPAC Software Only** and **EchoPAC Plug-in**

EchoPAC Plug-in is available for:

- GE Healthcare Centricity™ Cardio Enterprise with Intelligent Reporting (IR)
- GE Healthcare ViewPoint™ 6 with EchoPAC Suite¹³
- As a Plug-in to third party PACS.



STATE-OF-THE-ART ACCURACY

Full access to all Vivid scanner tools:

- From the most used AI-Powered ones on routine measurements: Easy AFI LV, Easy AutoEF and Auto Doppler Spectrum Recognition
- To the most advanced ones: Myocardial Work is a unique tool using less load dependent parameters than strain alone

Interested in Myocardial Work?

Learn more on the publicly available Webinar on the Vivid Club website

COMFORTABLE EXPERIENCE

- Familiar Vivid user interface, faster staff ramp-up
- Analyzing and reporting from the ergonomic comfort of a workstation
- More focus on patient at acquisition

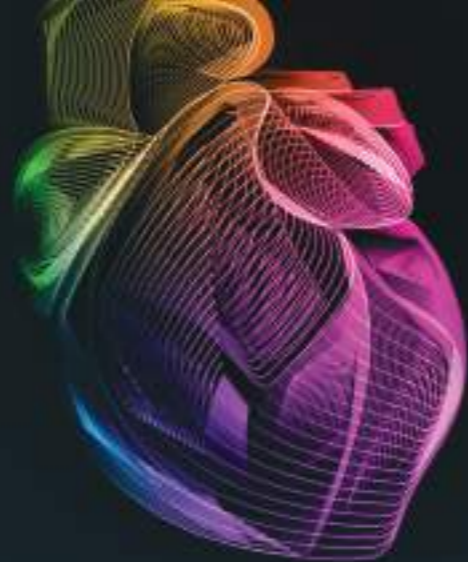
Maximize your entire fleet return on investment

- Transcend your machine performance: regardless of vendor, regardless of machine age, get all the latest Vivid tools
- Save time: get EchoPAC to free-up scanner time and perform your daily analysis off-line including LV quantifications doppler and function assessment

“I am amazed by the measurements you can perform on EchoPAC after the patient has left!”

- **Dr. Lamin E.S. Jaiteh**

Consultant Cardiologist & Lecturer in Cardiology
Department of Internal Medicine
Edward Francis Small Teaching Hospital/School of Medicine & Allied Health Sciences, University of the Gambia



YOUR SKILLS. OUR SUPPORT.

In the core echo lab and even beyond cardiology, smart applications support your know-how.

The Ultra Edition applications highlighted in **bold** are referent to our latest release.

VISUALIZATION AND NAVIGATION

4D Markers	FlexiViews	HDlive	Pre-Post Compare
View-X		FlexiSlice Extend	HD Color
		Dual Crop	

CHAMBER AND VALVE QUANTIFICATION

4D Auto LVQ	4D Auto AVQ	4D Auto RVQ	Easy AutoEF AI
4D Auto MVQ		AI Auto Measure 2D	AI

FLOW QUANTIFICATION

Cardiac Auto Doppler	AI Auto Measure Spectrum Recognition AI
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AFI FUNCTIONAL IMAGING

AFI Stress	Easy AFI LV AI
	AFI RV
	AFI LA

YOUR COMMUNITY. OUR COLLABORATION.

Vivid is much more than just a system. Make the most of your Vivid experience with our community resources and learning opportunities.

www.gehealthcare.com

On our website you will find content available to the general public with top industry Key Opinion Leaders, Learning Academy on Strain including Whitepapers and Case Studies.



Vivid Talks

Our "Meet the Expert" sessions (Vivid Talks) on wide-ranging subjects from EchoLab to interventional.



Strain Learning Academy

Our Learning Academy is dedicated to supporting the industry in advancing strain measurement adoption.

60% of all strain measurement clinical research publications has been done on a GE device.¹⁴



Whitepapers & Case Studies

The latest Whitepapers and Case Studies presented by the field experts.

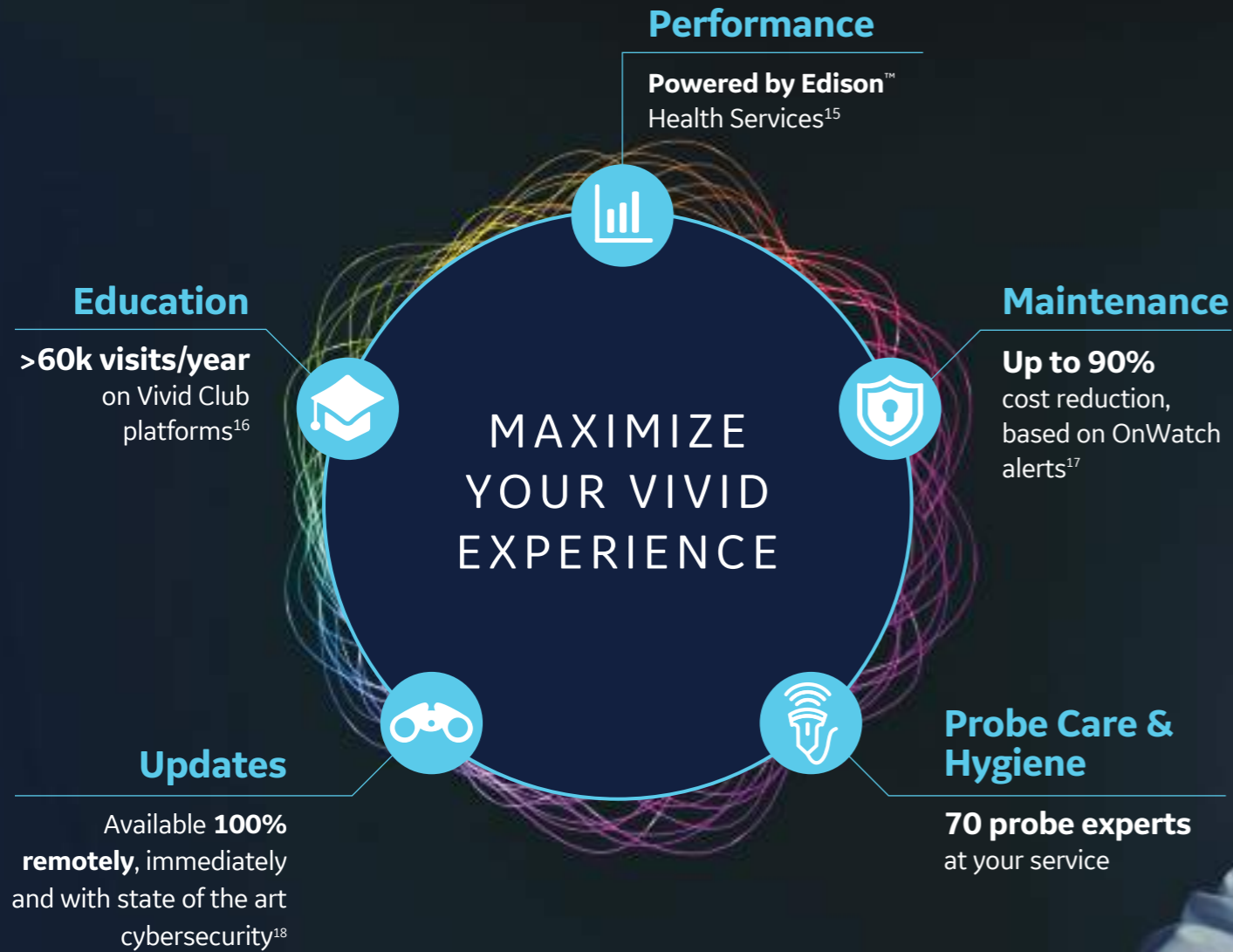
Vivid Club

In this exclusive online community of cardiologists, echocardiologists, sonographers you will have access to premium content only available to the Vivid Ultra Edition user.



OUTPERFORM TODAY. PREPARE FOR TOMORROW.

Maximize the Vivid lifecycle experience while minimizing your total cost of ownership.



“The implementation of Imaging Insights/Ultrasound Excellence in my biomedical unit for the cardiology and gynecology departments ultrasound equipment has opened the door to better utilization of my systems and distribution of activity, all of which has allowed me to improve our operational efficiencies, cost investment and service to patients.”

- Mrs Valérie Boissart
Head of Biomedical Engineering Department
Luxembourg Hospital Center



DIGITAL EXPERT/STAR**

Digital Expert (and STAR) provide an interactive, real-time, flexible & convenient way to get education and support.¹⁹

Live exchange with peers

SONODEFENSE

SonoDefense is GE Healthcare's six-layer strategic approach to cybersecurity and patient data privacy for ultrasound.

Advanced cybersecurity & data privacy protection

AUTOMATED, REMOTE SW DOWNLOADS

Get automated software updates along with safety patches enabled by remote software download. Your system stays up-to-date, making it more reliable.

Updates 24/7¹⁸

IMAGING INSIGHTS

Imaging Insights is an Edison™ application that combines analytics and coaching to help ultrasound management teams to optimize clinical and operational performance.

Operational Performance

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

** Only available in the US

1. World Health Organisation | <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
3. Moien AB Khan et.al. | Global Epidemiology of Ischemic Heart Disease: Results from the Global Burden of Disease Study | <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7384703/>
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. 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)
8. Easy AutoEF is restricted for use with adult TTE on GE Healthcare raw B-mode data loops of the LV. Easy AutoEF does not support left ventricles with septal bulge
9. 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
10. The Role of AI in Streamlining Echocardiography Quantification White Paper, Kristin McLeod and Jurica Sprem - JB20789XX
11. 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
12. Nicholas M. Orme et.al. | Occupational musculoskeletal pain in cardiac sonographers compared to peer employees: a multisite cross-sectional study | <https://onlinelibrary.wiley.com/doi/10.1111/echo.13344>
13. EchoPAC Suite is the marketing name for EchoPAC Plug-in
14. Whitepaper "AFI - strain imaging from research to clinical routine"- JB16411XX
15. Imaging Insights is an Edison™ application
16. GE internal data - Website analytics from January 2021 to December 2021
17. GE internal data
18. Based on Software eDelivery Software installed
19. 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

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