



GE HealthCare

Vivid™ iq


Ultra Edition




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

Today's challenges

The perfect storm of increased demand and limited cardiology staff resources results in additional pressure and workload challenges on you and your team.

 **17 million**
people died from CVDs
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 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 iq cardiovascular ultrasound has been updated to meet today's challenges. To allow full portability to execute your echo exams with superb image quality away from the echolab.

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

Your expertise. Our innovations.

Building on a history of advancements of cardiac patient care, GE HealthCare 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.

2015

- Industry first touch screen cardiovascular ultrasound
- AI-based Cardiac Auto Doppler
- AFI & AutoEF
- 2D Intracardiac Echo (ICE)

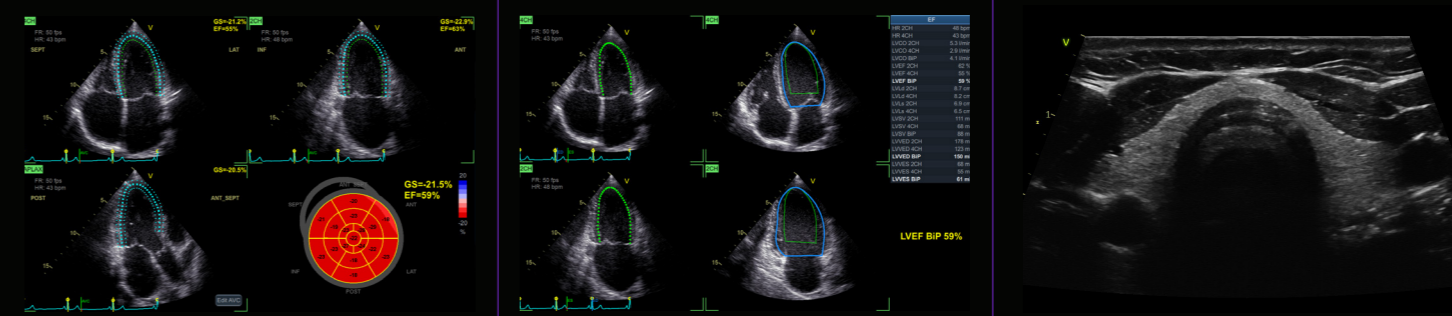
2018

- AFI 2.0 & AutoEF 2.0
- Windows™ 10
- 4D Markers
- Easy to use High-Resolution ICE video solution

2020

- Improved UX (expanded trackpad functionality)
- AI Auto Measure (2D & Spectrum Recognition)
- AFI 3.0 & AutoEF 3.0
- AFI RV
- AFI LA
- Remote software updates with eDelivery

Latest innovations



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



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



L4-20t-RS Single Crystal[®] wide band linear probe with configurable button control functionality.



Vivid iq Ultra Edition

Let a portable exceed your expectations

Vivid iq Ultra Edition* is a sleek, ultra portable system that enables you to take exceptional 2D and 4D image quality where you need it.

With advanced echo quantification tools and an automated streamlined scanning, Vivid iq is the perfect companion around the hospital, in medical offices or in outreach clinics.

Great things do come in small packages.

Upgrade now!



Your vision. Our superb images.

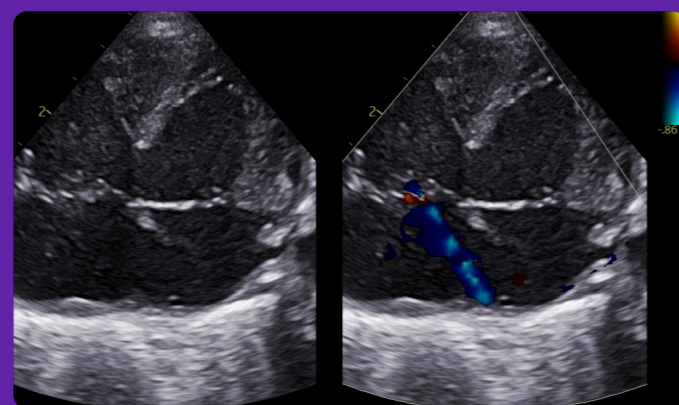
The diagnoses and treatment plans for your patients require a clear picture of their condition. With so much riding on the image, it has to be the best possible quality.



M5Sc XD-Clear Matrix probe¹⁰

Superb Image Quality

An innovative combination of advanced materials and acoustic design providing ultra-wide bandwidth.



Neonatal Echo Ultrasound

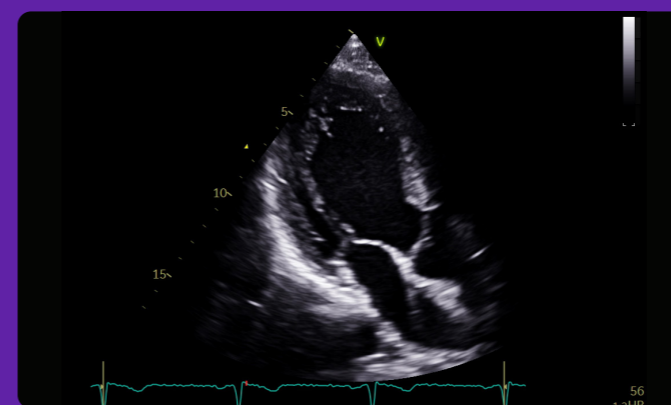
When portability meets image quality

Impressive image quality with 12S-RS and 6S-RS probes allows for confident diagnosis with the tiniest patients in their critical moments. The ultra-portable small footprint system allows easy access in limited space in the NICU.



10-15% of echo exams result in sub-optimal images¹¹

Latest innovations



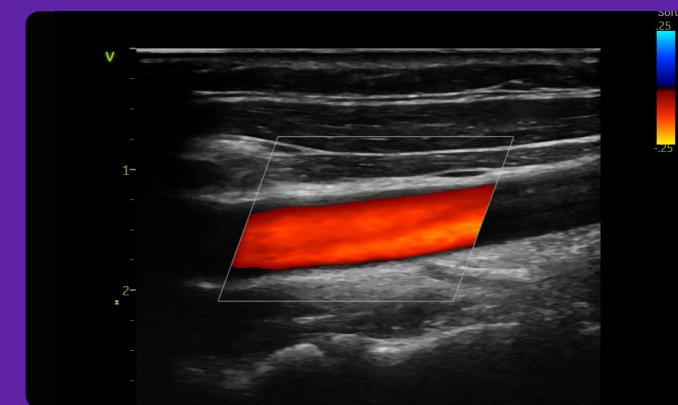
Penetration QuickApp

Improved Visibility

Designed and tested by expert echocardiographers to achieve the best possible penetration in challenging imaging windows.



1 click to optimize penetration



L4-20t-RS Single Crystal Linear Probe

Beautifully clear vascular imaging

Four configurable control buttons allow you to ergonomically position yourself at the bedside, performing essential functions such as Freeze, Store, mode switch, among other functions, away from the scanner.

“The image quality of the Vivid iq is impressive for such a tiny system even on post-op patients. It is perfect to move from bed to bed and its modern workflow makes it super fun to use.”

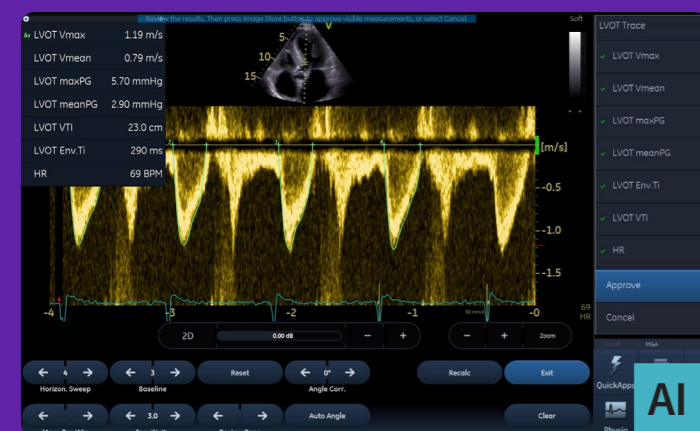
– Dr David Blanchard |
Cardiologist
Marie-Lannelongue Hospital, France

Your time. Our workflow tools.

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

AI Auto Measure 2D

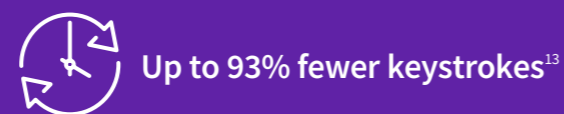
With the power of AI, a full set of reproducible measurements will instantly appear on the screen.



Cardiac Auto Doppler with AI Auto Measure Spectrum Recognition

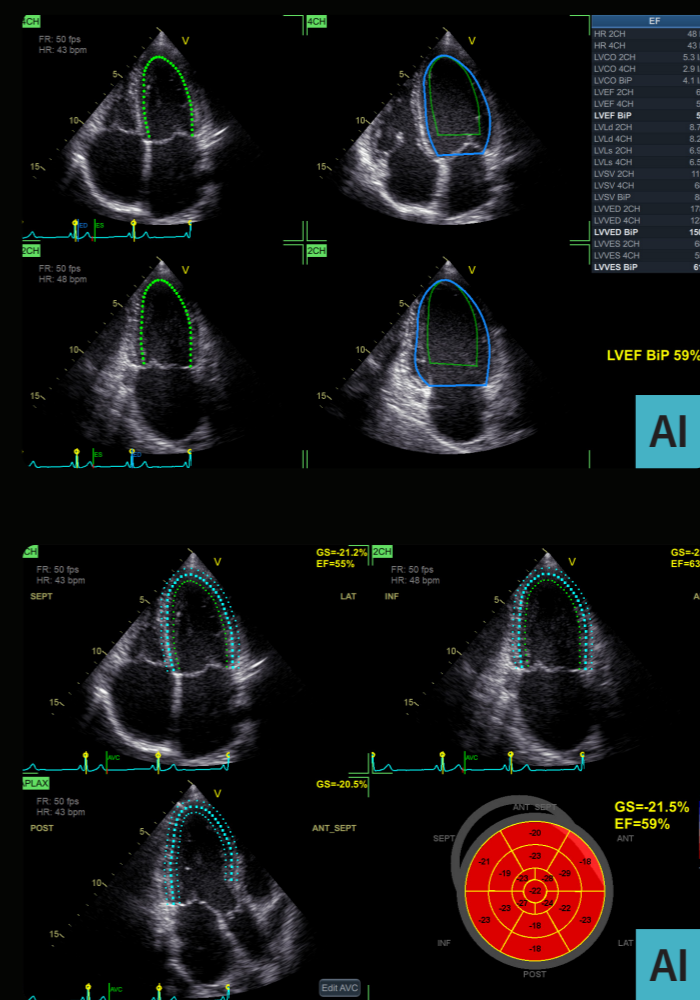
Reduced time per measurement

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.



35% of cardiac sonographers miss work due to pain¹⁴

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. 2 Chamber or 4 Chamber Ejection Fraction available with or without ECG.



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 EF measurements.



EF and strain results in 15 seconds (on average)

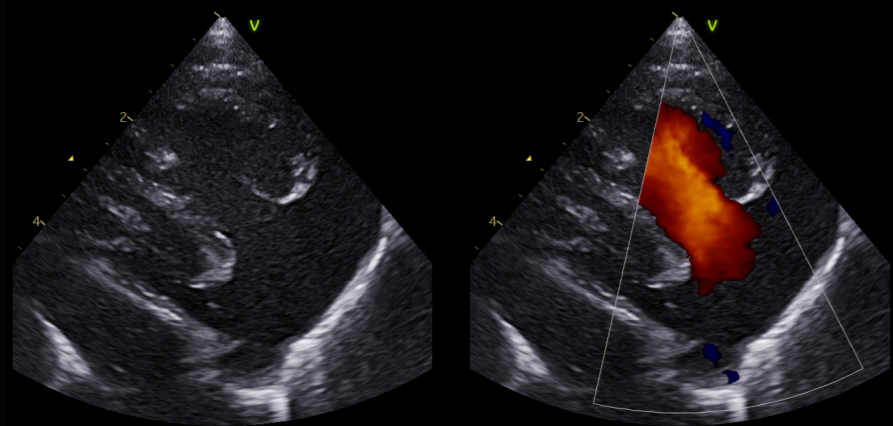
“ We started out with the GE HealthCare Vivid iq systems and have progressed through every iteration to the current Vivid iq platform. The latest iq system provides excellent image quality with superior usability and interface to anything on the portable market. The available AI measurement packages ensure our team members daily schedule is seamless and efficient.”

– Kam Aldridge
Senior Sonographer
Cardionexus, Brisbane, Australia

High versatility

Ever wished you could use the same cardiovascular ultrasound system for both pediatric and adult patients and take it from the echo lab to the OR and interventional labs? Do more with Vivid iq 2D TTE, 4D TEE and 2D ICE imaging.

Beyond adult echo lab.



Pediatric imaging

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



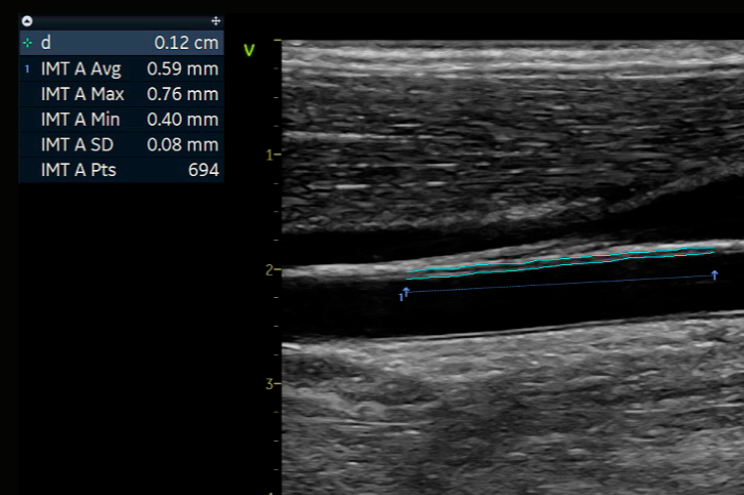
Interventional 2D ICE

Great image quality, with easy and intuitive Intracardiac echo (ICE) touch user interface for your 2D ultrasound-guided ablation and structural heart procedures.

“The Vivid iq is the perfect system for ICUs due to its portability and size. It is easy to use, and the tactile screen makes it clean and very intuitive because the user interface is similar to other non-medical devices we use everyday such as mobile phones or tablets. For me the most remarkable benefit from Vivid iq is the 12S probe image quality because its resolution is similar to that of a Premium system in patients from premature age to 3.2 kg.”

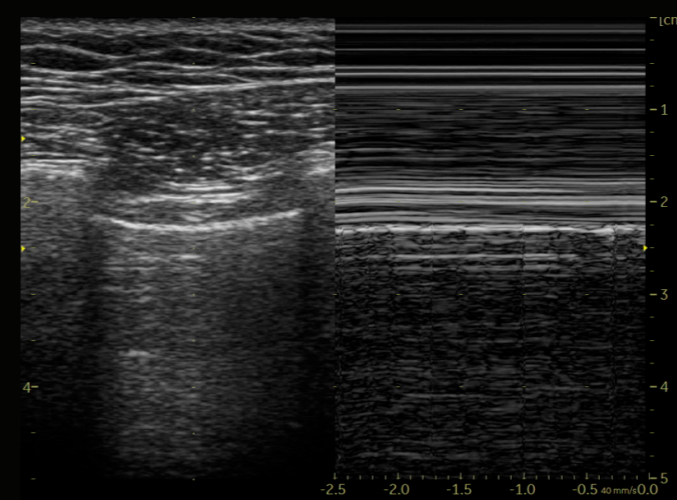
– Dr. Gemma Giralt
Pediatric Cardiologist,
Vall d’Hebron, Barcelona

Beyond cardiology.



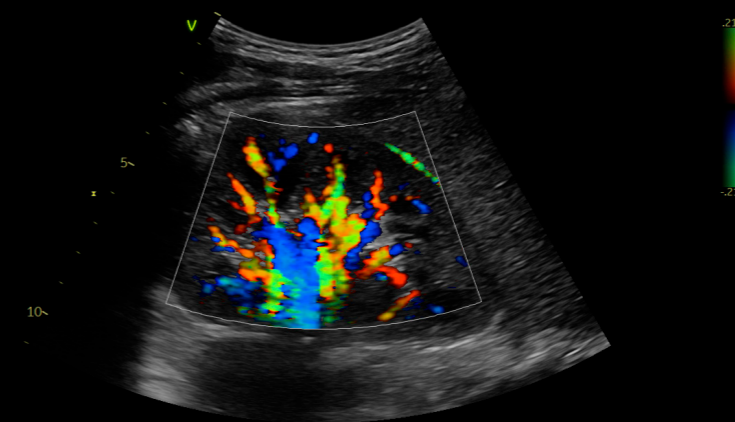
Vascular quantification

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



Lung Assessment

Bedside lung assessment is made easier with dedicated FAST and lung presets that help to quickly optimize images.



Abdominal diagnosis

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

Your needs. Our design.

Prolonged scanning poses a known risk for work related musculoskeletal disorders (WRMSDs) and staff wellness is a key asset to your organization. Vivid iq Ultra Edition brings a new level of user experience – for fast scanning with ergonomic comfort.



Developed for
Right & Left hand



Easy
to clean



4h
battery



5.2 kg
(lightweight)

Modern ergonomics

Extreme portability

- Lightweight (11.5 lbs./5.2 Kg.)
- Up to 4 hours battery scan time on a cart (Or up to 1-hour scan time without cart¹⁵)
- Instant scan from Standby mode
- WIFI image transfer

Excellent ergonomics

- Click-to-set and 2-finger trackpad gestures promoting ergonomic arm posture
- One-click left/right user interface inversion
- Adjustable screen angle for viewing and typing position
- Height-adjustable cart for standing/sitting position with convenient foot pedal

Ultimate cleanability

- Sealed, splash-proof control panel and touch screen for fast and easy cleaning

Intuitive, delightful user experience

- 15.6" ultra-high-resolution, wide format, flat color screen
- Multi-touch LCD technology allowing double-click, pinch-to-zoom, and swipe gestures
- Clickable glass trackpad
- Common user interface and functionality with the Vivid family of Cardiovascular Ultrasound



EchoPAC Connect†

Connect† from anywhere,¹⁶ at any time, to any console.¹⁷



Connect from anywhere¹⁶

EchoPAC Connect† provides you with the flexibility you need to accommodate to the unique way you work, whether your department is equipped with GE HealthCare ViewPoint™ 6 server, Centricity™ PACS, or any 3rd party PACS vendor.¹⁷ Perform your measurements & diagnosis – using both 2D & 3D images – on site or remotely, with the same excellent quality as on your acquisition consoles.

Multi-vendor¹⁸

With EchoPAC Connect†, you can enjoy a wide spectrum of 2D & 3D Vivid applications, from standard to most advanced measurements, regardless of which console was used to acquire your patients' images.

Enjoy the proven robustness of AFI LV, or exceptional GE HealthCare 4D measurement applications like TVQ (Tricuspid Valve Quantification) usable on all images acquired in your department, from both, Vivid systems and non-GE HealthCare consoles.¹⁸

The power of EchoPAC

EchoPAC Connect† benefits from the latest AI-based technology introduced on Vivid Ultra Edition†, aimed to reduce tedious tasks and improve workflow efficiency.

Obtain measurements in 1 simple click with Easy AutoEF and Easy AFI LV. **Measurements can be obtained in less than 15 seconds.⁷**

Reduce tedious tasks of most common exams with AI Auto Measure Spectrum Recognition and AI Auto Measure 2D, and minimize the number of clicks needed to acquire standard measurements.¹²

Seamless workflow integration

EchoPAC Connect† provides you with a seamless workflow experience thanks to a centralized server installation and DICOM® server, which automatically transfers data from all acquisition system.¹⁷ whatever the brand, directly to your EchoPAC Connect†.

So, whether your department is equipped with a GE HealthCare ViewPoint server, Centricity PACS or any 3rd party PACS,¹⁷ the seamless integration of EchoPAC Connect† will simplify your everyday workflow. Dongle-free. Peace of mind. Your EchoPAC Connect† is available at any time, from any computer, from anywhere, without the need to use dongle.



“ The new Easy AFI LV speeds up strain measurements and simultaneously provides an automated LV ejection fraction measurement. Once good standard views are acquired, the strain algorithm enables incredibly robust measurements!¹⁹

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

“ I am amazed by the measurements you can perform on EchoPAC after the patient has left!²⁰

– Dr. Lamin E.S. Jaitheh
Consultant Cardiologist & Lecturer in Cardiology Department of Internal Medicine
Edward Francis Small Teaching Hospital/School of Medicine & Allied Health Sciences,
University of the Gambia

† EchoPAC Connect is a marketing name for EchoPAC Plug-in (v206) combined with a GE HealthCare Host. It is possible for several EchoPAC Plug-in users to open the same patient records. However, only the first user will have access to all the features of EchoPAC Plug-in. Other users will have read-only access to the patient records. This behaviour may change depending on the host in which EchoPAC Plug-in is integrated.

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		Ultra Edition	
4D Markers	FlexiViews	HD Color	Dual Crop
View X	LVO Contrast	Scan Coach	Pre-Post Compare
		Vascular Contrast	Strain Elastography

Flow Quantification	Ultra Edition	AFI Functional Imaging	Ultra Edition
Cardiac Auto Doppler <small>AI</small>	AI Auto Measure Spectrum Recognition <small>AI</small>		Easy AFI LV <small>AI</small>
			AFI RV
			AFI LA

Valves and Chambers Quantification		Ultra Edition	
4D Auto AVQ	4D Auto MVQ	AI Auto Measure 2D <small>AI</small>	Easy AutoEF <small>AI</small>
4D Auto LVQ			

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 HealthCare device.¹⁹

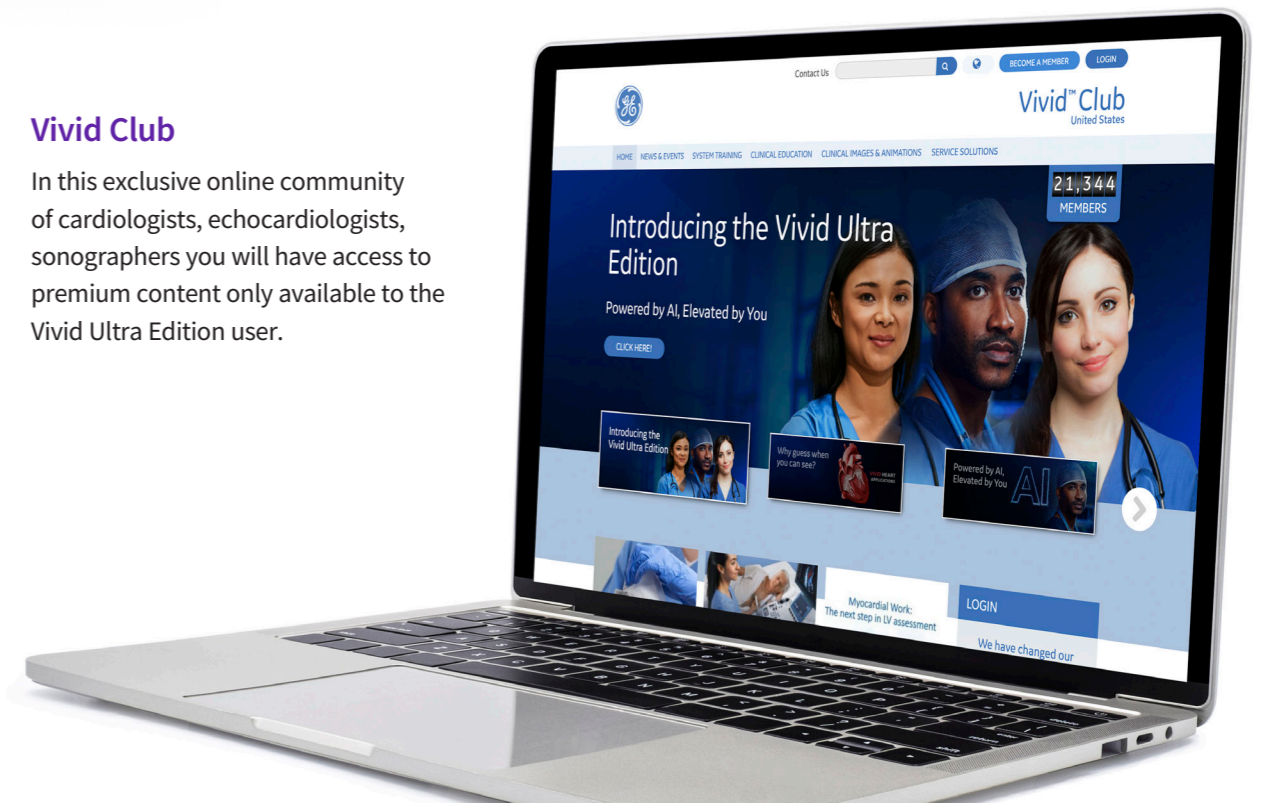


Whitepapers & Case Studies

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

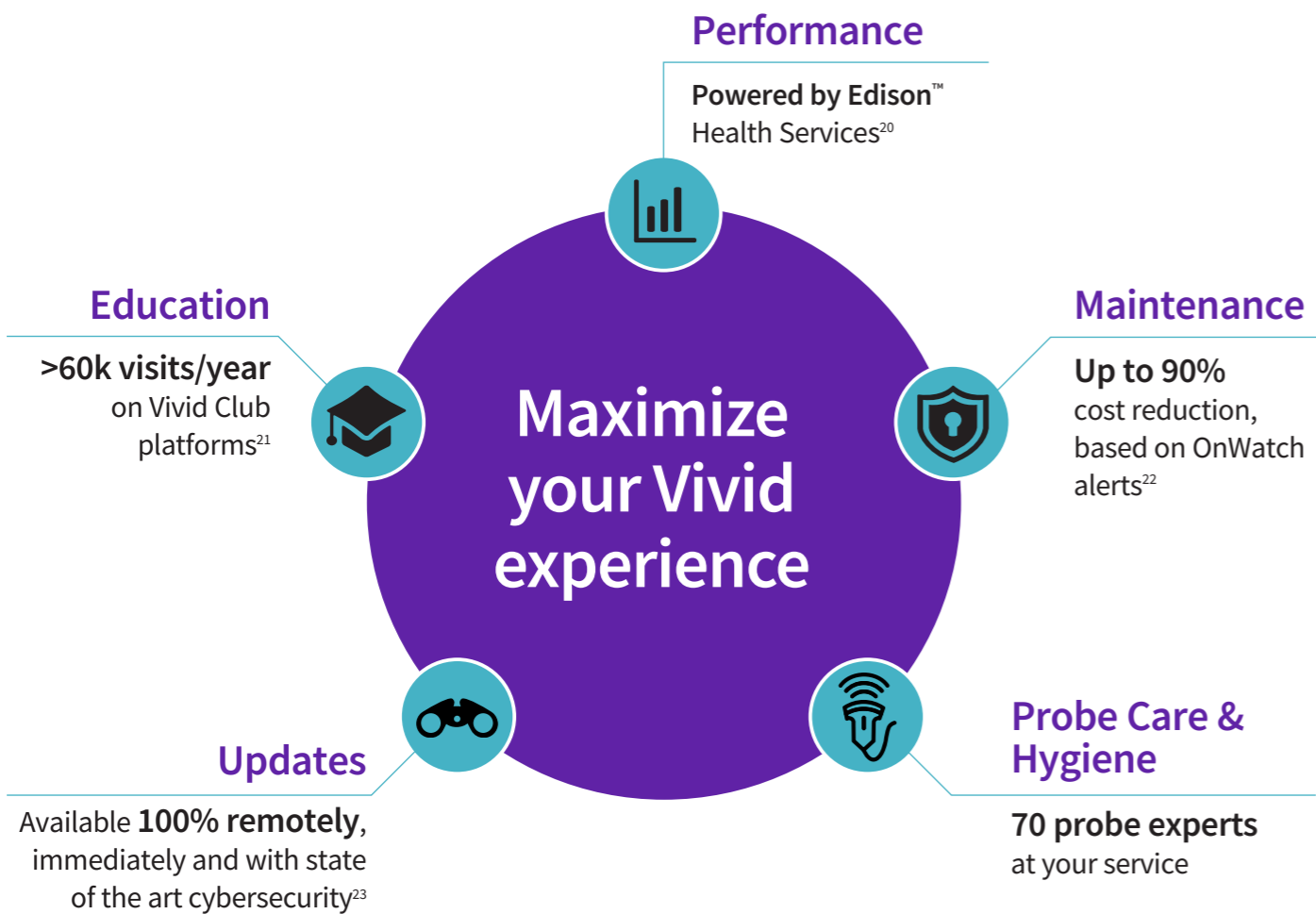
Vivid Club

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) provides an interactive, real-time, flexible & convenient way to get education and support.²⁴

 Live exchange with peers


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 24/7²³

SonoDefense

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

 Advanced cybersecurity & data privacy protection

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

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. L4-20t-RS only available on Vivid iq Premium, 4D, and Point of Care versions.
10. M5Sc XD-Clear Matrix probe only available on Vivid iq Premium and 4D versions.
11. 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.
12. The Role of AI in Streamlining Echocardiography Quantification White Paper, Kristin McLeod and Jurica Sprem. JB20789XX.
13. 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.
14. 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>.
15. Depending on operation modes used and battery status.
16. For diagnostic use, in citrix environment using Hospital IT network.
17. Enabled by ViewPoint 6 Desktop integration.
18. EchoPAC Plug-in provides basic and advanced viewing and quantitative analysis capabilities for 2D, 4D and multi-dimensional ultrasound parametric images from the GE HealthCare Vivid™ family of scanners, DICOM® images and 3D/4D from multi-vendor ultrasound fleet.
19. Whitepaper "AFI - strain imaging from research to clinical routine"- JB16411XX.
20. Imaging Insights is an Edison™ application.
21. GE internal data - Website analytics from January 2021 to December 2021.
22. GE internal data.
23. Based on Software e-Delivery Software installed.
24. 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.

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.

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

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