



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




# Vivid iq<sup>TM</sup>


ULTRA EDITION


## 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 2019<sup>1</sup>

 **1 in 4**  
cardiologists state they  
are burned out<sup>2</sup>

 **>10%**  
increase in Ischemic Heart  
Disease (IHD) alone by 2030<sup>3</sup>

 **20%**  
of sonographers are leaving  
the profession or taking  
premature retirement<sup>4</sup>

 **108 MILLION**  
annual echo exams  
performed globally<sup>5</sup>

 **x2**  
Shortage of health workers is  
**set to double**<sup>6</sup>



**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.

# 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.

### 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



UPGRADE NOW!

VIVID IQ ULTRA EDITION

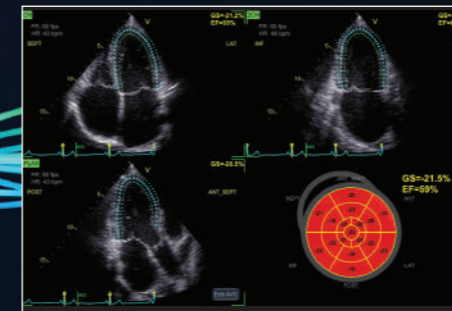
## Let a portable exceed your expectations

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.

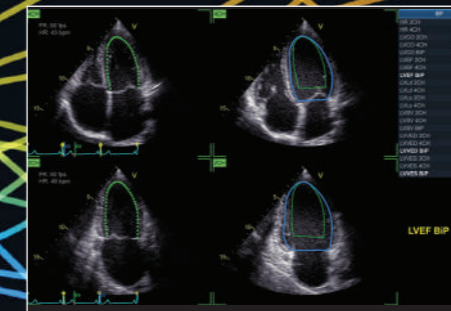
Great things do come in small packages.

## LATEST INNOVATIONS



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

**In 15 seconds**  
(on average)<sup>7</sup>



Ejection Fraction and Automatic Region of Interest definition with only 1 click - with **Easy AutoEF**<sup>8</sup>.

**Only 1 Click**

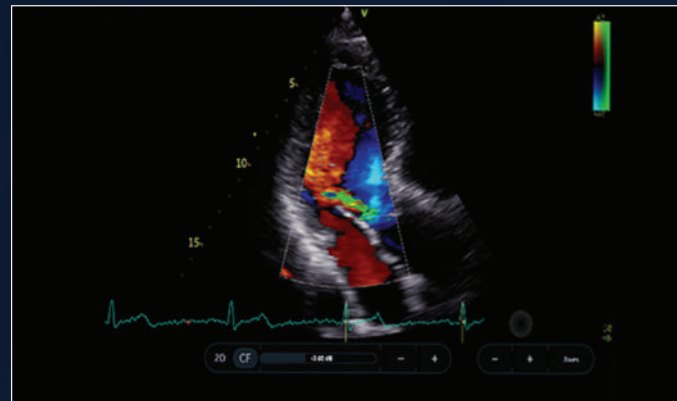


**L4-20t-RS Single Crystal**<sup>9</sup> wide band linear probe with configurable button control functionality.

**With integrated button control**

YOUR VISION. OUR SUPERB IMAGES.

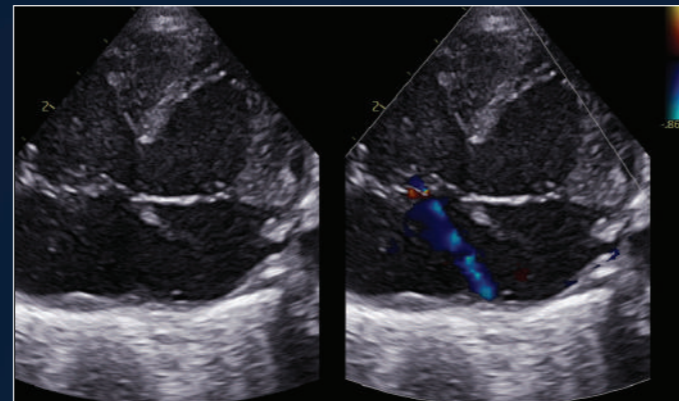
The diagnoses and treatment plans for your patients require a clear picture of their condition. With so much riding on the image, it has to be the best possible quality.



**M5Sc XD-Clear Matrix probe<sup>10</sup>**

**Superb Image Quality**

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



**Neonatal Echo Ultrasound**

**When portability meets image quality**

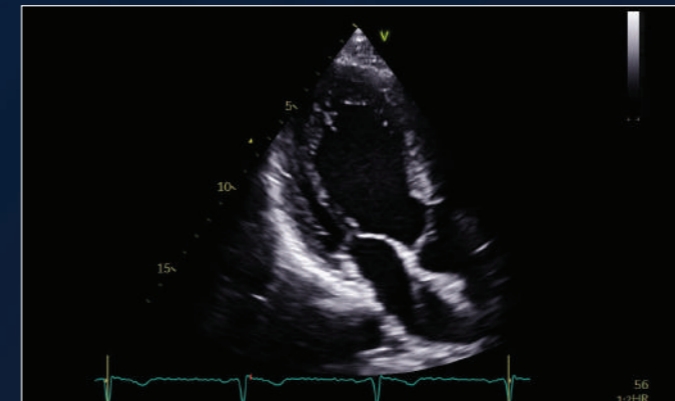
Impressive image quality with 12S and 6S probes allows for confident diagnosis with the tiniest patients in their critical moments. The ultra-portable small footprint system allows easy access in limited space in the NICU.

*“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

**10-15%** of echo exams result in sub-optimal images<sup>11</sup>


LATEST INNOVATIONS

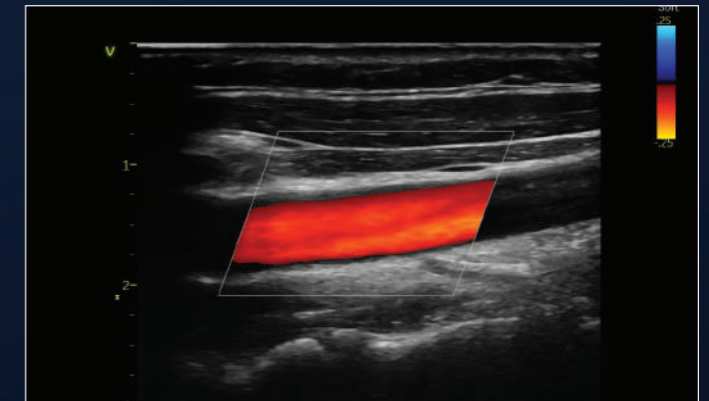


**Penetration QuickApp**

**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**

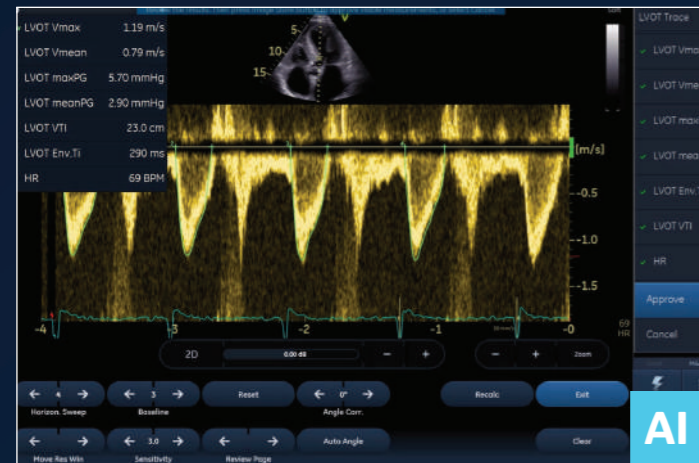
Four configurable control buttons allow you to ergonomically position yourself at the bedside, performing essential functions such as Freeze, Store, mode switch, among other functions, away from the scanner.

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.

**80%**  
Less clicks<sup>12</sup>



**Cardiac Auto Doppler with AI Auto Measure Spectrum Recognition**

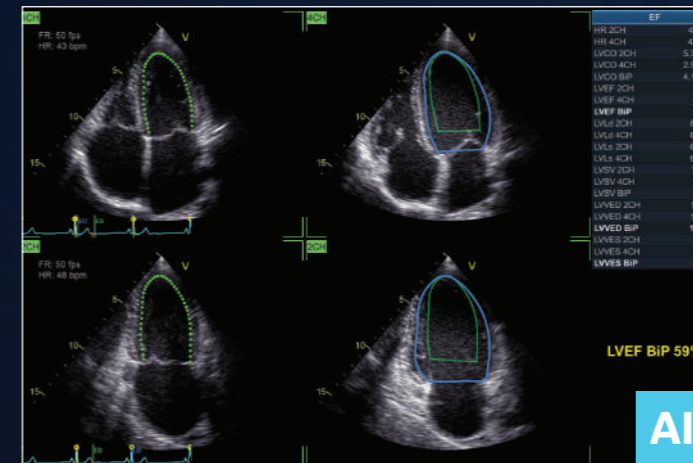
**Reduced time per measurement**

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.

**Up to 93% fewer keystrokes<sup>13</sup>**

**35%** of cardiac sonographers miss work due to pain<sup>14</sup>

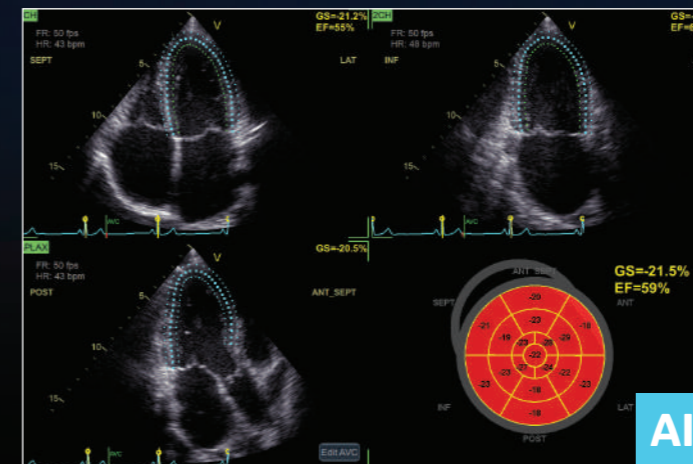
**LATEST INNOVATIONS**



**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)**

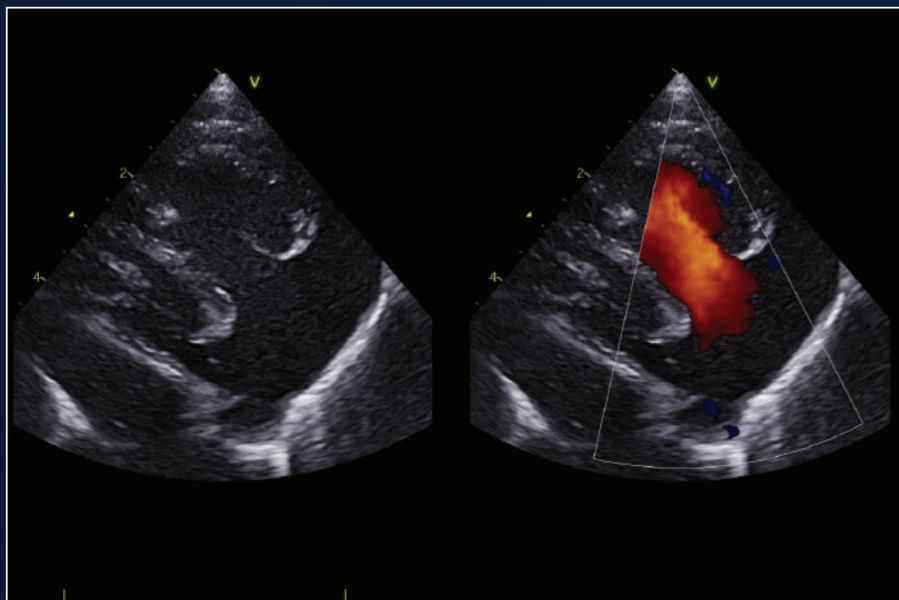
*“We started out with the GE Vivid iq systems and have progressed through every iteration to the current Vivid iq platform. The latest iq system provides excellent image quality with superior useability and interface to anything on the portable market. The available AI measurement packages ensure our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

- Kam Aldridge  
Senior Sonographer  
Cardionexus, Brisbane, Australia

## HIGH VERSATILITY

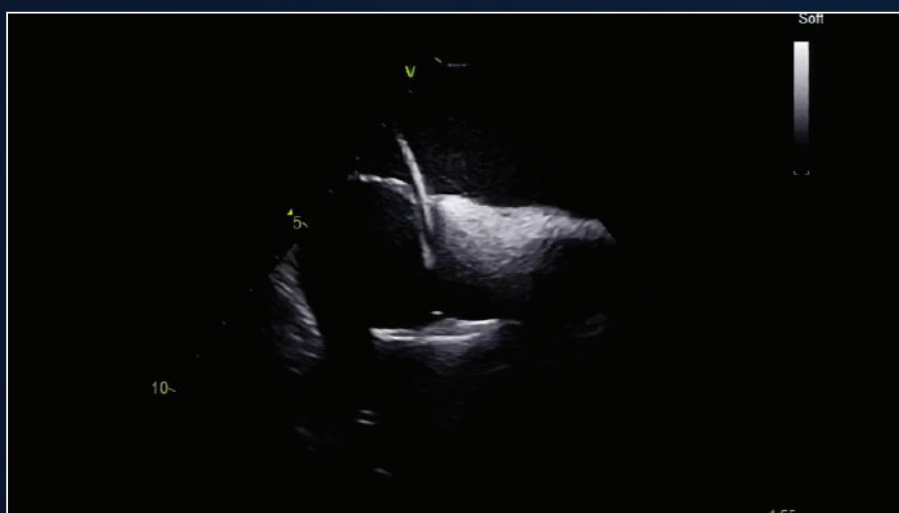
Ever wished you could use the same cardiovascular ultrasound system for both pediatric and adult patients and take it from the echo lab to the OR and interventional labs? Do more with Vivid iq 2D TTE, 4D TEE and 2D ICE imaging.

### BEYOND ADULT ECHOLAB.



#### 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.



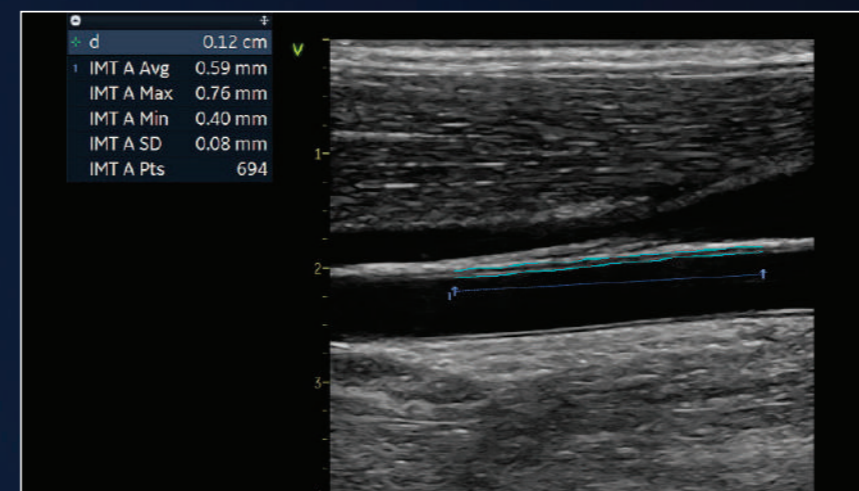
#### Interventional 2D ICE

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.”*

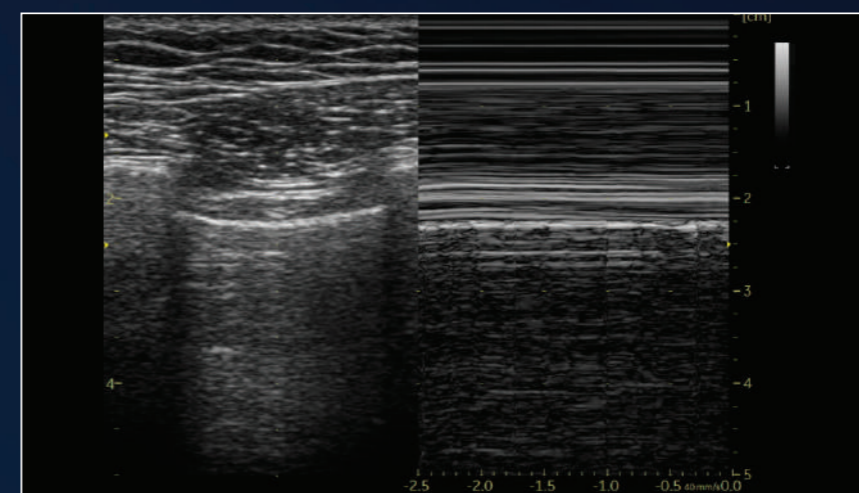
– Dr. Gemma Giralt  
Pediatric Cardiologist,  
Vall d'Hebron, Barcelona

### 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

Beside 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 cart<sup>15</sup>)
- 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



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



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 Suite<sup>16</sup>
- 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

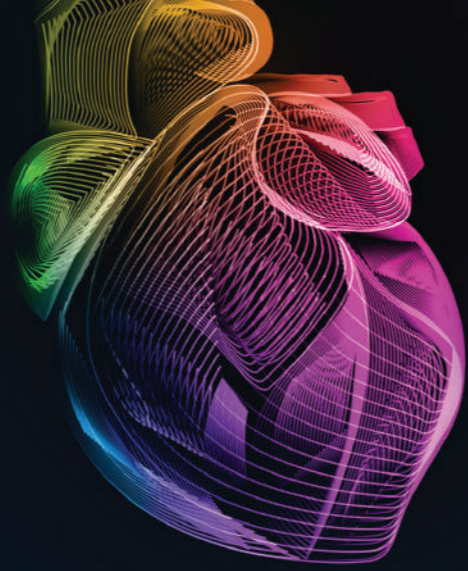
- Familiar Vivid user interface, faster staff ramp-up
- Analyzing and reporting from the ergonomic comfort of a workstation
- More focus on patient at acquisition

**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

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

Cardiac Auto Doppler **AI**

**AI Auto Measure Spectrum Recognition** **AI**

AFI FUNCTIONAL IMAGING

Ultra Edition

**Easy AFI LV** **AI**

AFI RV

AFI LA

VALVES AND CHAMBERS QUANTIFICATION

Ultra Edition

4D Auto AVQ

4D Auto MVQ

**AI Auto Measure 2D** **AI**

**Easy AutoEF** **AI**

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](http://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.<sup>17</sup>

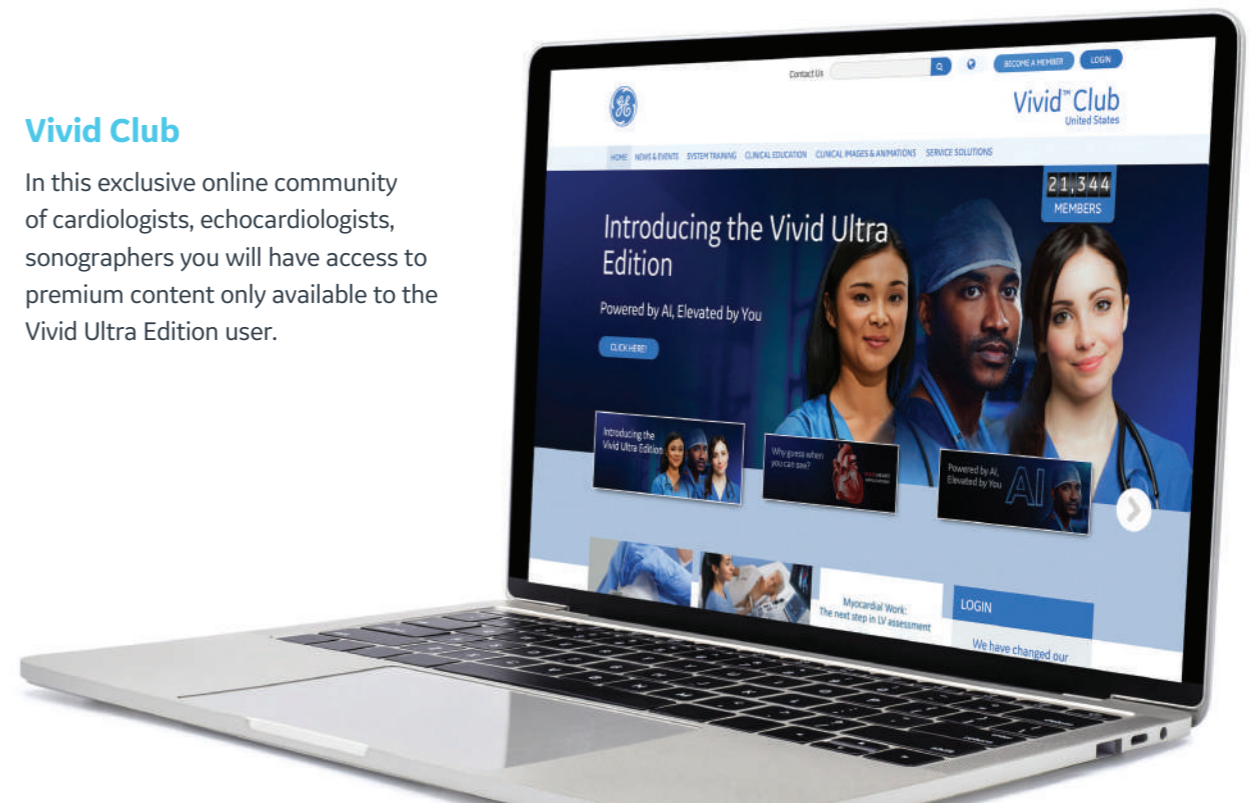


**Whitepapers & Case Studies**

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

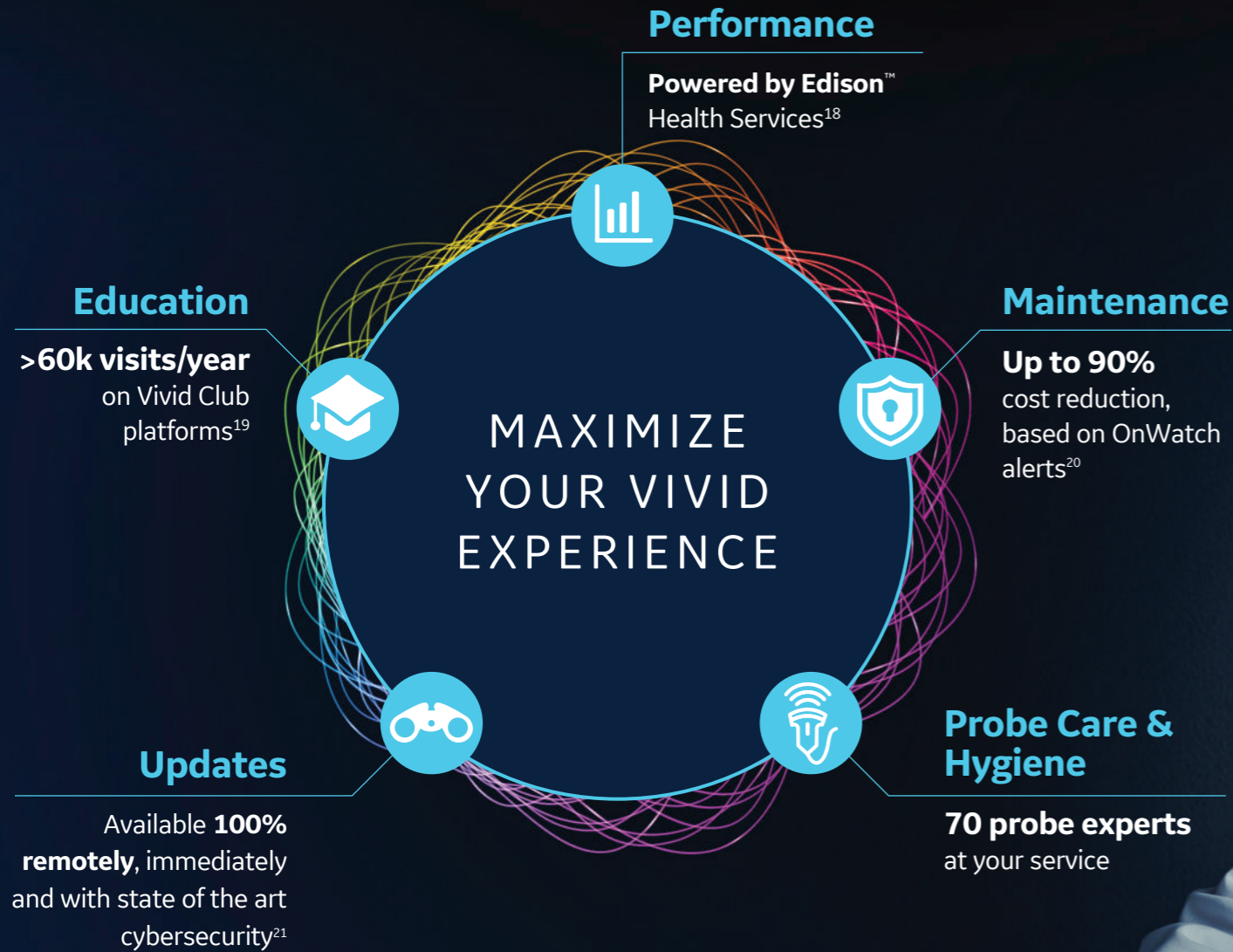
**Vivid Club**

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.<sup>22</sup>

 **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 24/7<sup>21</sup>**

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](http://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-\(cvds\)](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](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. EchoPAC Suite is the marketing name for EchoPAC Plug-in
17. Whitepaper "AFI - strain imaging from research to clinical routine"- JB16411XX
18. Imaging Insights is an Edison™ application
19. GE internal data - Website analytics from January 2021 to December 2021
20. GE internal data
21. Based on Software e-Delivery Software installed
22. 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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