



### About GE Healthcare

GE Healthcare is 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](#), or visit our website [www.gehealthcare.com](http://www.gehealthcare.com) for more information.

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2. 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)
3. 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
4. Work Related Musculoskeletal Disorders In Sonography, Society Of Diagnostic Medical Sonography, 2018, Susan Murphey, BS, RDMS, RDCS, CECD <https://www.sdms.org/docs/default-source/Resources/work-related-musculoskeletal-disorders-in-sonography-white-paper.pdf?sfvrsn=8>
5. <https://doi.org/10.1016/j.amjcard.2011.01.006>
6. Average system noise level is 31 dB (min 28 dB, max 38 dB), depending on ambient temperature
7. The Role of AI in Streamlining Echocardiography Quantification White Paper, Kristin McLeod - JB80498XX
8. 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
9. European Association of Echocardiography recommendations for standardization of performance, digital storage and reporting of echocardiographic studies (Eur Journal of Echo 2008 - Evangelista, Badano, Monaghan, Zamorano, Lancellotti).
10. Recommendations for Quantification of Doppler Echocardiography: A Report From the Doppler Quantification Task Force of the Nomenclature and Standards Committee of the American Society of Echocardiography (JASE 2002)
11. Centricity Cardio Workflow v7 Intelligent Reporting out-of-the-box configuration compared to 2017 IAC guidelines excluding doppler. CCW Intelligent Reporting Outcome - JB74831XX
12. EchoPAC Suite is a marketing name for EchoPAC Plug-in
13. With the DICOM SR support, Measures & Analysis (M&A) for an exam can be sent at the end of the exam or when exported from local archive. The destination can be either a server on the network (Storage SCP) or a removable media (DICOM Media) depending on the DICOM dataflow selected. Custom measurements supported only for Adult Echo (TID5200) and Pediatric Heart (TID5220).
14. <https://www.ncbi.nlm.nih.gov/pubmed/27689562>
15. Data Breaches Will Cost Healthcare \$4B in 2019, Threats Outpace Tech, healthitsecurity, source: t.ly/xrAA
16. 5 Tips for Controlling Costs in Hospitals and Biomed Shops, source: t.ly/l9n7
17. Errors in Sonography, DOI: 10.1007/978-88-470-2339-0\_8.
18. e. a. M. Mårtensson, «High incidence of defective ultrasound transducers in use in routine clinical practice», European Journal of Echocardiography, vol. 10, no. 3, pp. 389-394, 2009. <https://academic.oup.com/ehjicimaging/article/10/3/389/2396618>  
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19. A multicentre survey of the condition of ultrasound probes, Ultrasound. 2016 Nov, Published online 2016 Aug 1. doi: 10.1177/1742271X16662301. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5098704/>
20. GE internal data
21. Standardization of left atrial, right ventricular, and right atrial deformation imaging using two-dimensional speckle tracking echocardiography: a consensus document of the EACVI/ASE/Industry Task Force to standardize deformation imaging. Badano et al. European Heart Journal - Cardiovascular Imaging (2018) 0, 1-10 doi:10.1093/ehjci/jej042
22. Digital Expert is only offered in the USA

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JB72916XX



# POWERED BY AI ELEVATED BY YOU

## Vivid™ T9 Ultra Edition



# vivid

[gehealthcare.com/vivid](http://gehealthcare.com/vivid)





*Your time is precious.  
Save it.*

DETECTABILITY<sup>7</sup>  
 98%

**AI AFI LV with AI View Recognition**

Fully automatic recognition of the apical imaging views.  
Measurements of GLS and segmental longitudinal Strain for LV.



# POWERED BY AI

AI helps reduce tedious tasks and inter-observer variability.

## Improve diagnostic speed and accuracy

Vivid T9 Ultra Edition introduces the latest AI-based technology to help reduce user fatigue and improve workflow efficiency. Diagnose more confidently and accelerate exams via automated (AI-driven) Cardiac Doppler and 2D LV measurements.

The results are impressive. Exam time was reduced, operator fatigue minimized with more than 80% less clicks<sup>7</sup> to get 2D measurements, and inter-observer variability diminished.

Discover the many innovations brought by the Vivid T9 Ultra Edition, and more importantly, their contribution to your clinical practice.

- Ultra Fast.
- Ultra Precise.
- Ultra Efficient.

**AI Cardiac Auto Doppler with AI**

**REDUCED TIME  
PER MEASUREMENT**

 UP TO  
**93%**

Fewer Keystrokes<sup>8</sup>

**LOWER INTER  
OPERATOR VARIABILITY**

**REDUCE  
VARIABILITY**  
  
**~3x**

Standardized exams with  
greater reproducibility<sup>8</sup>

**ACCELERATED  
WORKFLOW**



Productivity improvement



# CLINICAL EXCELLENCE for cardiovascular practices

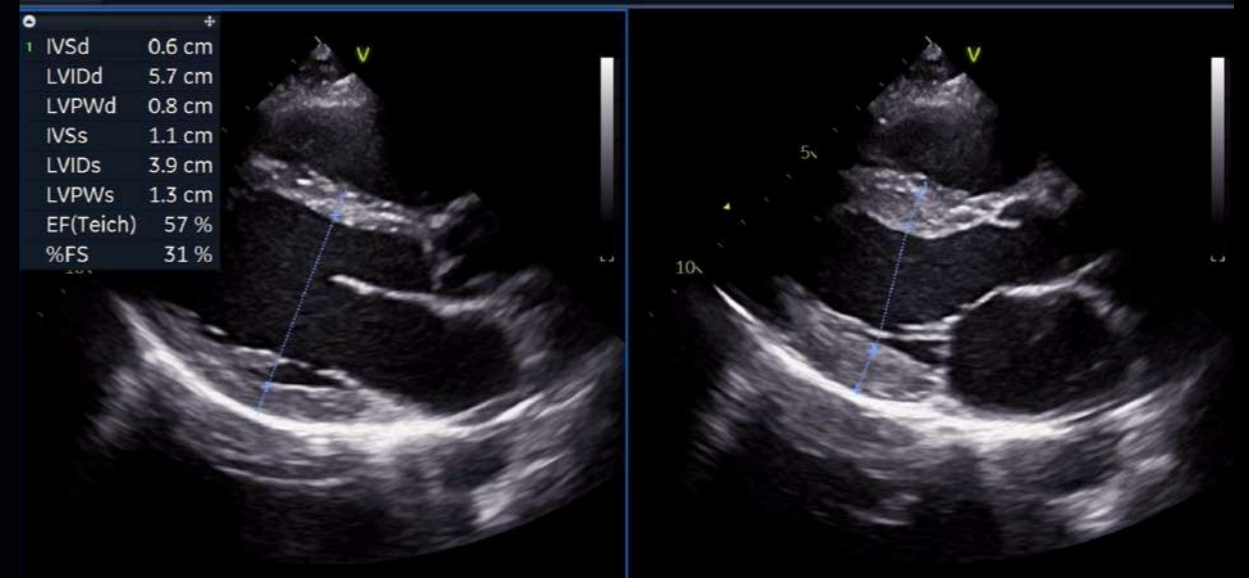
## POWERED BY AI ELEVATED BY YOU

At GE Healthcare we strive to empower you by reducing wasted time and effort. We aim to remove tedious tasks and help make every moment count for your patients – seeing problems clearly and quickly, performing procedures with great precision... and providing quality of care for all.

LESS CLICKS, UP TO 7  
-80%

### AI AI Auto Measure 2D

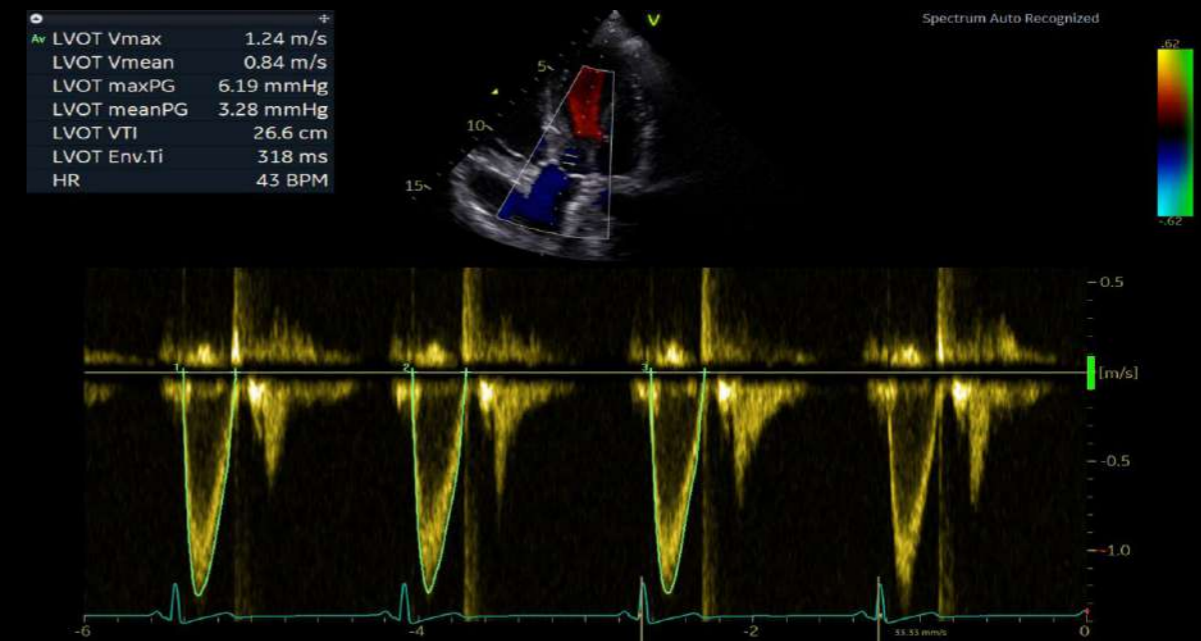
With the power of AI, the manual caliper measurements can be completed with 3 clicks: **Freeze - Measure - Auto**. A full set of reproducible measurements will instantly appear on the screen.



ACCURACY 7  
98%

### AI 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.







# CLINICAL EXCELLENCE

## for Pediatrics

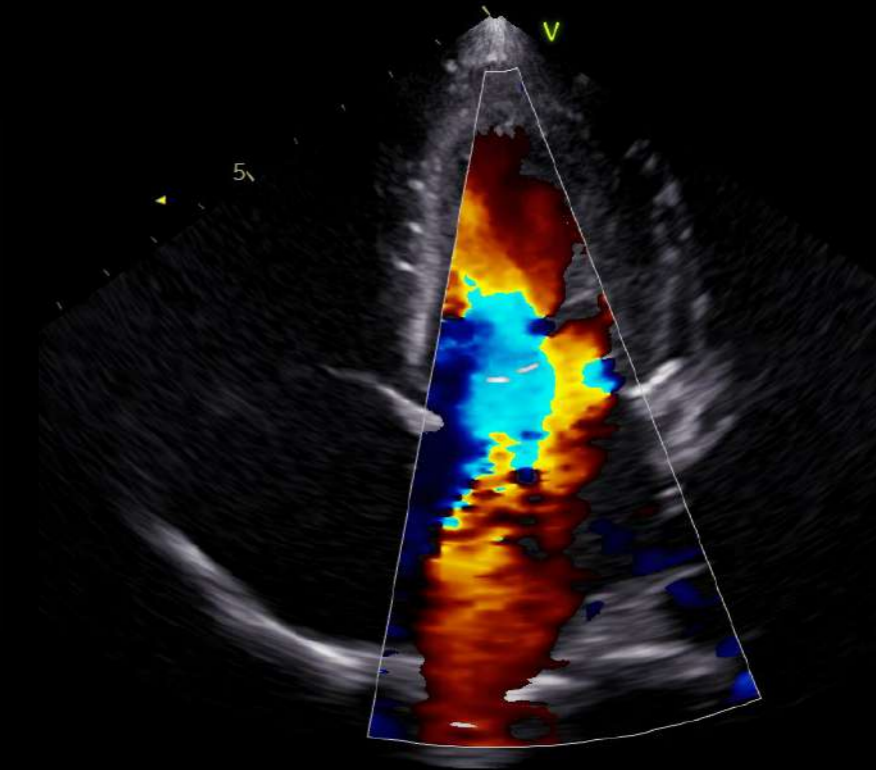
**The smallest cardiac patients can pose the biggest care challenges with difficult to diagnose, severe conditions.**

Pediatric echoes require speed and versatility. Accurate diagnostics and precise measurements are achievable with great image quality, dedicated presets and tools on your Vivid system.

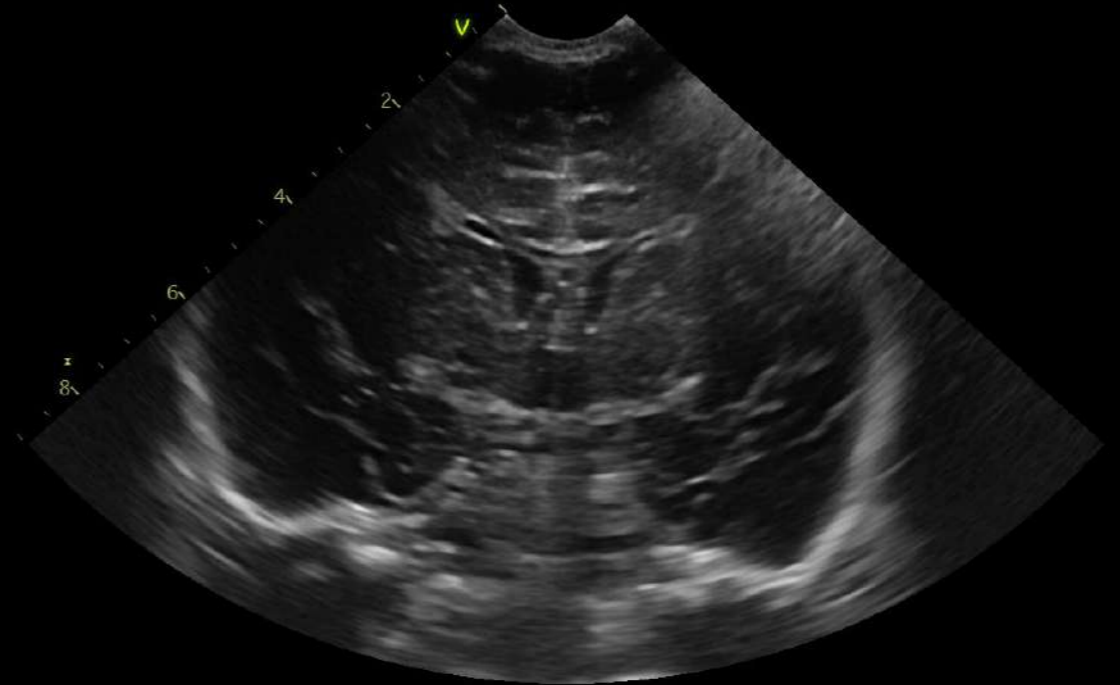
Visualize small anatomies with speed, clarity and confidence thanks to Vivid T9's great image quality, range of high-frequency probes, and dedicated pediatric and neonatal presets.

### Pediatric cardiology

Visualize small anatomies with speed, clarity and confidence thanks to Vivid T9 Ultra Edition's high-resolution imaging and dedicated pediatric probes.



### Neonatal cephalic







# CLINICAL EXCELLENCE

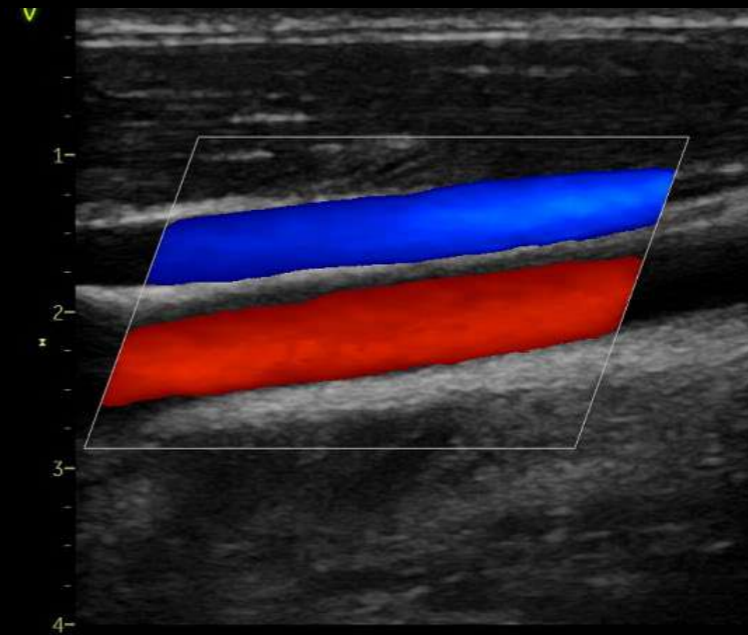
## beyond Cardiology

The demand for multi-purpose, cost efficient ultrasound systems with uncompromised image quality is growing. With the aging population, vascular and abdominal exams are increasingly challenging.

Vivid T9 Ultra Edition provides you exceptional 2D and color flow imaging across applications. Efficient workflow, a wide range of linear and curved probes and dedicated quantification tools ensure the confidence you need for speedy and accurate diagnosis also under challenging conditions.

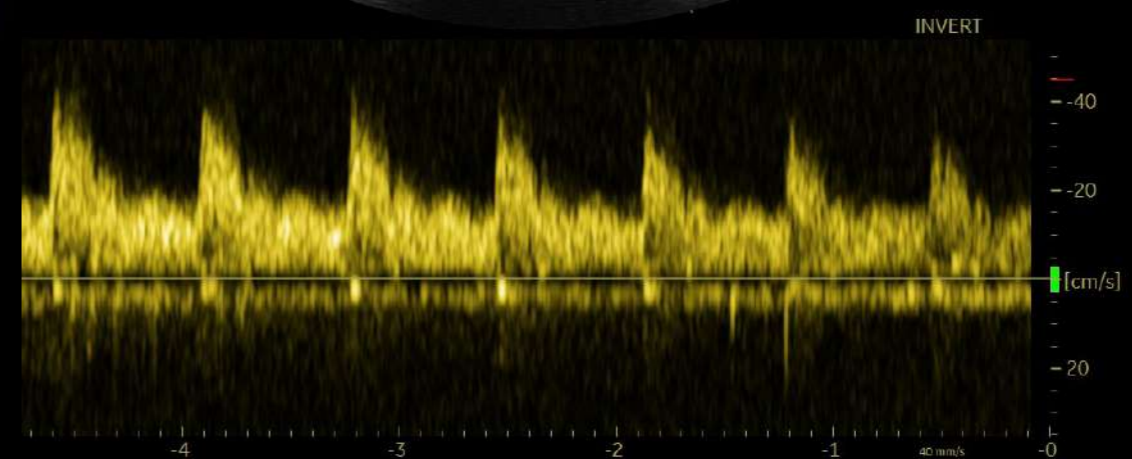
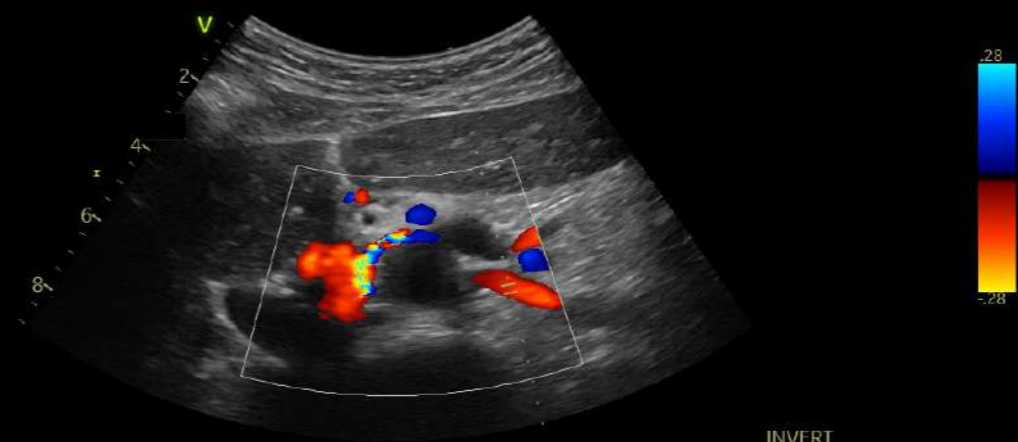
### Vascular

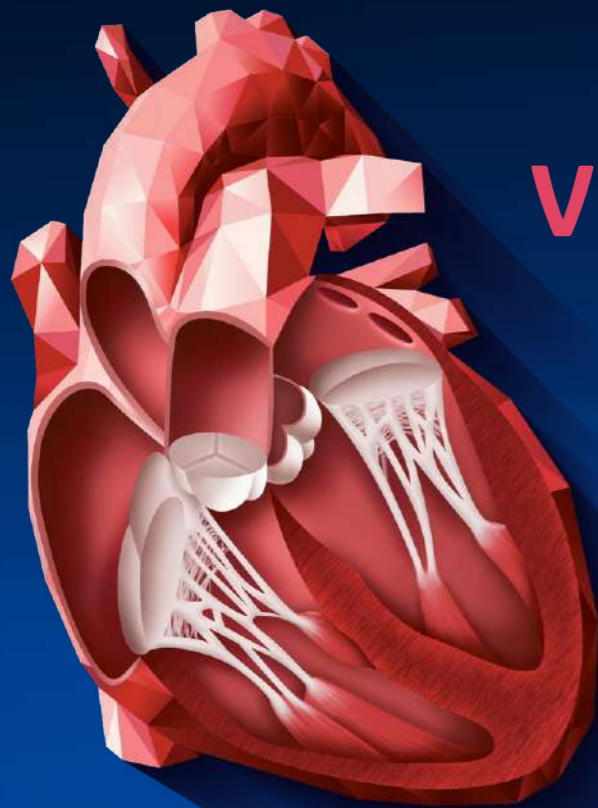
Develop fast and complete quantitative assessment of vascular anatomies with advanced vascular measurement tools.



### Abdominal

Visualize tissues and flow patterns with greater details thanks to Vivid T9 Ultra Edition's high-resolution imaging and dedicated imaging presets.





# VIVID HEART APPLICATIONS

A wide range of clinical applications for use in Core Echo and your cardiovascular practice.

## VISUALIZATION AND NAVIGATION

Ultra Edition

Curved Anatomical M-Mode

LVO Contrast

Scan Coach

Smart Stress

Blood Flow Imaging

## FLOW QUANTIFICATION

Ultra Edition

Cardiac Auto Doppler **AI**

AI Auto Measure Spectrum Recognition **AI**

## CHAMBER QUANTIFICATION

Ultra Edition

Z-Scores

AI Auto Measure 2D **AI**

Auto EF **AI**

## AFI FUNCTIONAL IMAGING

Ultra Edition

AFI LV with AI View Recognition **AI**

AFI RV

AFI LA



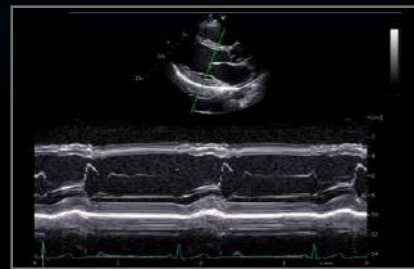


## VIVID HEART APPLICATIONS

# VISUALIZATION AND NAVIGATION

New in Ultra Edition

Why guess? When you can see.



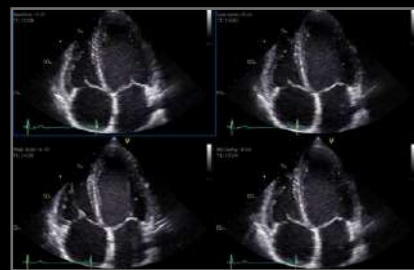
### Curved Anatomical M-Mode

View Anatomical color and tissue velocity in M-mode. Adjust the cursor at any plane, in live imaging or with recalled images.



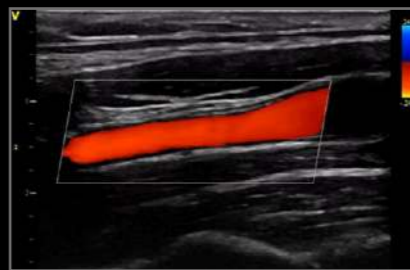
### LVO Contrast

Benefit from high-resolution detection of contrast in the LV cavity with LVO Contrast and excellent suppression of myocardial tissue signals on the Vivid T9 Ultra Edition new Coded Phase Inversion (CPI).



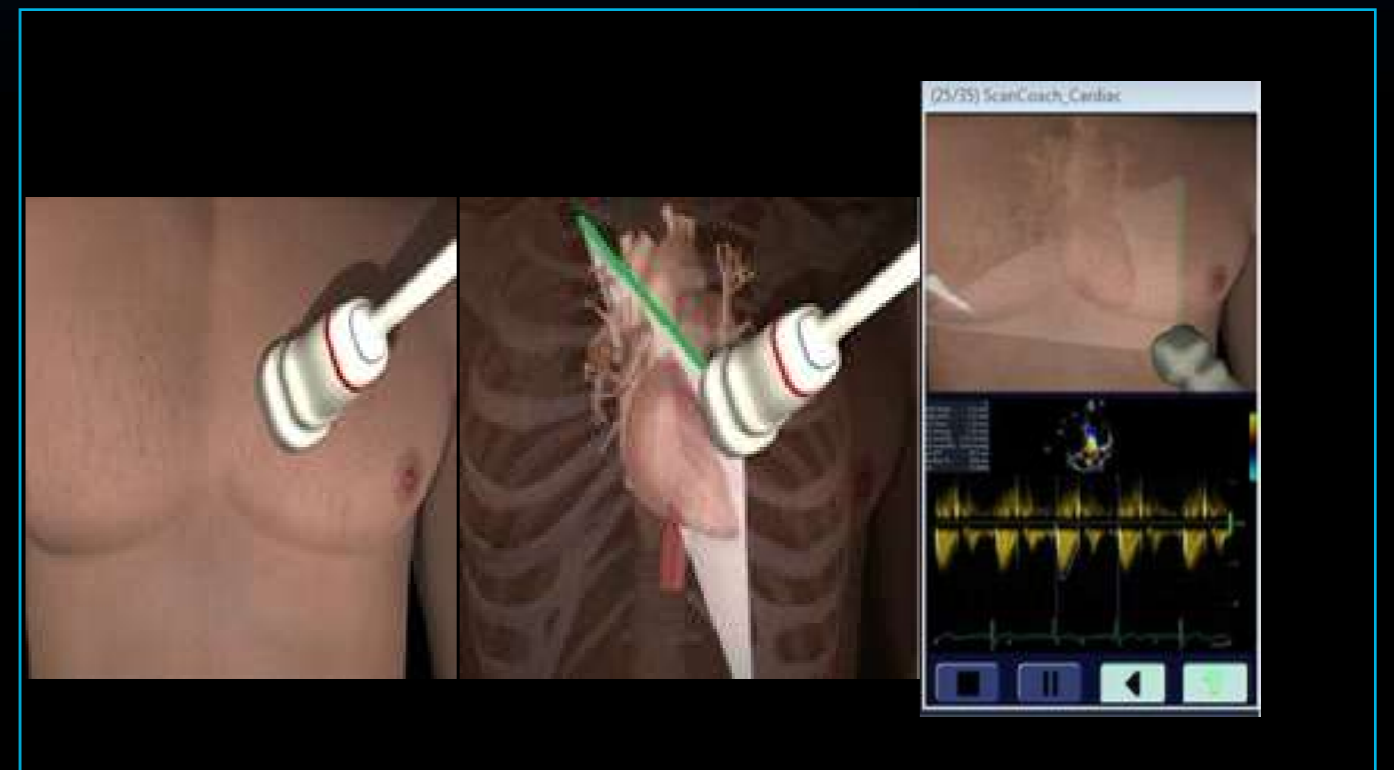
### Smart Stress

Over 17 imaging parameters from each plane can be saved and recalled at each stress level, reducing system adjustments during acquisition.



### Blood Flow Imaging

Enhance blood flow dynamics visualization using a signal-processing algorithm for visualizing blood flow data.



Ultra Edition

### Scan Coach

A reference and education tool that provides modules depicting basic scanning techniques with animated graphics of probe position, schematic of anatomy and reference clinical image.

#### Benefits:

##### Guided scanning:

- Conveniently located onboard the console within the Scan Assist Pro feature
- Provides guidance to obtain different views and measurements
- Helps inexperienced users performing echo scans

##### Education and reference tool:

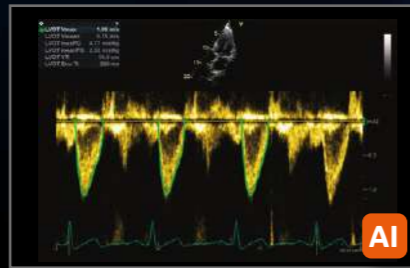
- Assists in positioning the probe and probe orientation
- Anatomical reference helps visualize where the scan plane is located inside the heart
- Scan Assist Pro exam protocols can be customized per local guidelines and help ensure exam completeness



# VIVID HEART APPLICATIONS

## FLOW QUANTIFICATION

Your time is precious. Save it.



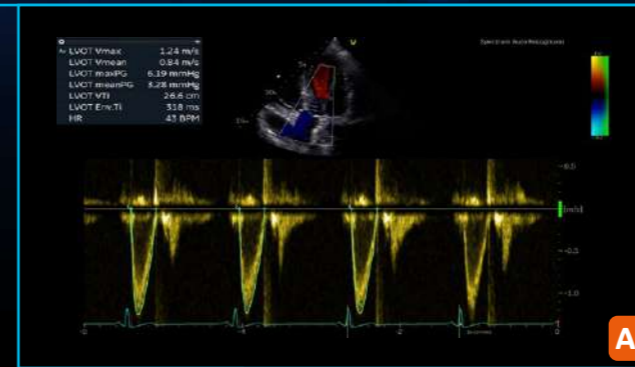
### Cardiac Auto Doppler

Semi-automatic Cardiac Doppler measurements.

Benefits:

- Enhances reproducibility of follow-up studies when used in automated mode<sup>8</sup>
- Offers Doppler measurement in multiple cardiac cycles as recommended by guidelines for irregular heart rhythms<sup>9,10</sup>
- Supports less experienced users with advanced automation

## New in Ultra Edition



Ultra Edition

### AI Auto Measure Spectrum Recognition

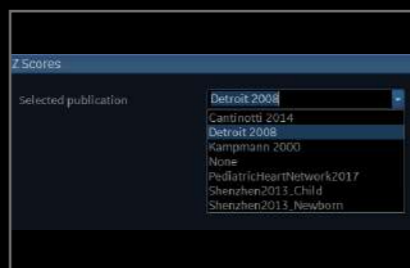
Semi-automatic selection of appropriate spectral Doppler measurement tool.

Benefits:

- Enables fewer manual interactions by automatically opening the appropriate measurement tool<sup>7</sup>
- Works seamlessly with Cardiac Auto Doppler
- Enhances reproducibility of follow-up studies when used in fully automated mode<sup>7</sup>
- Supports less experienced users with advanced automation

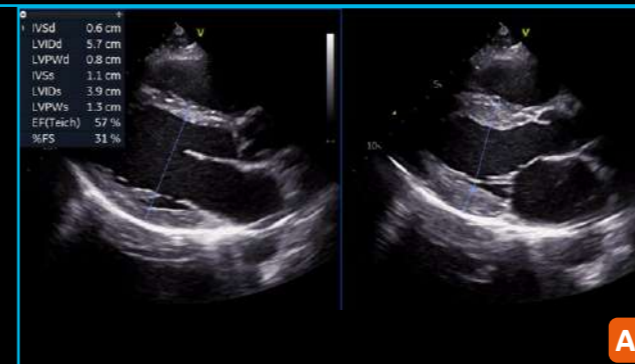
## CHAMBER QUANTIFICATION

Precision at the heart of quantification.



### Z-Scores

Vivid T9 Ultra Edition Support for six sets of user selectable Z score publications covering the most common pediatric dimension measurements.



Ultra Edition

### AI Auto Measure 2D

Semi-automated LV dimension measurements (2D calipers) in the parasternal long axis view, reducing manual interactions.

Benefits:

- Achieves fast measurements of left ventricle dimensions:
  - Up to 80% less clicks<sup>7</sup>
  - No need to scroll to look for ED and ES frames
  - Reduce manual workflow during analysis of cardiac images
- Improves reliability and repeatability of measurements – potentially increasing reproducibility for follow-up studies



Ultra Edition

### Auto EF

Powered by AI-based View Recognition, Auto EF provides semi-automated quantification of left ventricular volumes and ejection fraction.

Benefits:

- Achieves fast measurements of ejection fraction
- DICOM<sup>®</sup> support. Assessment of the left ventricle ejection fraction also on data sets acquired on other vendors' systems