Empowering Critical Thinking

Image-guided solutions for cardiovascular

gehealthcare.com/cardiovascular
Empowering Critical Thinking

Every decision in the cath lab has an impact. When GE first invented the cardiovascular flat panel detector in 2000 our aim was to provide unsurpassed image quality and information that empower critical thinking, giving clinicians the tools to make informed decisions leading to excellent patient care. The legacy of innovation and excellence continues today, with versatile systems that address the increasingly demanding world of interventional cardiac care. In a rapidly changing environment that demands equipment adapts with the needs of new techniques and protocols, GE cardiovascular systems continue to deliver on this promise to:

- Customize your cardiovascular environment
- Experience 360° unified expansion
- Evolve easily with an open architecture
Customize your cardiovascular environment

GE offers a portfolio of versatile systems for your procedural demands, so you can, in a single click, change from a classic angioplasty setting to an advanced atrial fibrillation procedure with the performance you require.

Angiography systems to fit your clinical practice

Our dose-efficient, image-guided angiography systems allow you to scale from diagnostic coronary evaluations and interventions to complex structural heart procedures, from device implants and diagnostic EP studies to complex ablations. The Optima* IGS and Innova* IGS single plane and bi-plane systems are supplied with a choice of 20 x 20 cm (7.9 x 7.9 in.) or 30 x 30 cm panel sizes for maximum versatility while being suited for the procedure you perform. The Discovery* IGS available with the 30 x 30 cm (11.8 x 11.8 in.) detector provides exceptional mobility.

The 20 x 20 cm detector, for pure cardiac procedures, will give you 38% more anatomical coverage than the 17.7 x 17.7 cm (7 x 7 in.) detectors available on the market. For labs performing both peripheral and cardiovascular procedures, GE offers a 30 x 30 cm detector that provides greater coverage while still providing the ability to achieve steep angulations.

Dose-efficient technologies

As part of our GE Blueprint strategy - that helps support your efforts by offering insights and suggestions for integrating your organization’s leadership, practices, and technological resources - GE’s imaging technologies provide the image clarity you need while helping you keep dose as low as possible.

The high-powered X-ray tube provides a hardened beam that reduces scatter radiation. The GE flat panel detector provides one of the highest Detector Quantum Efficiency (DQE) in the industry. Plus, spectral filtration is available in several thicknesses and is under automatic system control to help you achieve efficient radiation dose management.

GE offers dose reduction features that empower clinician to easily optimize and personalize dose settings from the table-side, while maintaining clinical details needed to help make well informed decisions.

With Dose Personalization chose from five automatic exposure preferences and four different frame rates down to 3.75 fps to balance the need for image quality and radiation dose limitations. The AutoEx automatic exposure control calculates Equivalent Patient Thickness after every exposure and streamlines the process of dose setting while maintaining operator efficiency. InnovaSense* is an advanced patient contouring technology that uses an intelligent detector to assess gantry movement and select the best position for the image receptor relative to the patient to reduce radiation exposure.

1 except in following countries: Germany, Switzerland, Austria, New Zealand where that list is limited to 3 preferences.
EP and Hemodynamic recording systems

With a legacy going back more than 25 years, GE hemodynamic and EP recording systems provide solutions that optimize workflow and deliver accurate measurement algorithms and excellent signal quality for cardiovascular procedures.

The Mac-Lab* hemodynamic recording system is the heart of the GE cath lab workflow infrastructure and is designed to make clinicians more efficient, more productive and better able to effectively care for patients. Automatic data collection from the time the patient enters the holding room, through the procedure to recovery help save time and reduce data entry errors. For those complex pediatric cases, Mac-Lab gives you dedicated advanced measurement algorithms.

With the legacy of Prucka, the CardioLab* EP recording system provides the exceptional signal quality and information to perform complex cases. The pure signal processing algorithms helps clinicians discern subtle waveform changes with true bipolar recordings and up to 224 inputs and 128 channels. It’s a difference you can see – one that may help modify or support your diagnostic. CardioLab EP recording provides a multi-point connectivity between CardioLab, Innova IGS, Vivid* Ultrasound and CARTO™ 3D mapping systems. The latter provides synchronized signal data, images and mapping information for complex EP procedures.

For institutions demanding more from their labs, the GE ComboLab system combines the power of the Mac-Lab and the CardioLab into one system, providing a versatile solution that maximizes lab assets and minimizes service and training costs. No feature is compromised, the ComboLab retains the power and capabilities of the stand-alone Mac-Lab Hemodynamic and CardioLab EP recording systems.

Advanced visualization designed to help in your clinical challenges

Improve the efficiency of your cath lab and enhance clinical confidence as you plan, guide and assess complex procedures with the GE full suite of advanced applications. Designed to respond to specific clinical challenges, applications are available across a full range of cardiovascular procedures.

Guide and assess stent positioning and deployment with StentViz technology. StentViz automatically detects both the guide-wire and the marker balls, helping you perform elastic registration while compensating for non-rigid stent deformation during PCI procedures. Advanced visualization during structural heart procedures such as localization and guidance of devices is supported with Innova HeartVision that overlays 3D segmented datasets from CT, MR or 3D rotational angiography images onto live fluoroscopic images in a single click. Its image stabilization features provide a steady 3D reference during complex procedures such as coarctation procedures and transcatheter valve implantation or replacement.

Fuse, 3D models from rotational angiography, MR and CT with live fluoroscopy, and intra-cardiac signals from CardioLab with Innova EPVision 2.0. Add electrical signal information from the CardioLab recording system using any EP catheter, providing advanced visualization for accessory pathway procedures without the cost of specialty consumables. Innova EPVision 2.0 provides 3D localization of devices not visualized by magnetic or impedance-based mapping systems.
Experience
360° unified expansion

With our fully integrated systems everyone in the cardiovascular patient care team can enjoy enhanced productivity. Our systems provide reliable access to data, applications and information regardless of modality, platform, device or data format.

Standard communication protocols
With open communication between information and clinical systems, GE solutions are the convergence point for cath lab information. From the time the patient arrives in the department until they are transferred, information is collected and distributed to systems throughout the lab, streamlining operations and enhancing productivity. Synchronized signal, image, information and other discrete data are collected from integrated clinical systems such as Fractional Flow Reserve, Intravascular Ultrasound, 3D mapping systems, Ablation generators, and more. You have the potential to streamline workflow and data analysis, simplify reporting, speed the billing process and even manage inventory thanks to the interfacing of HL7 to CVIS.

Using standard communication protocols wherever possible supports forward adaptability between systems, helping to ensure your investments today continue to deliver value as your needs change and integration demands increase.

Efficient workflows from single point of access
The bi-directional interface and system integration between ComboLab and Innova IGS helps reduce errors and save time by sending patient demographics to the Innova IGS system via DICOM™ Modality Work list to imaging and recording systems. The Centricity® CA1000 image review and analysis workstation allows retrieval of previously acquired images and other procedural data for comprehensive review and reporting of the patient’s clinical condition.

Our networking systems mean that you can review cases and reports without delaying procedures or observe current procedures in near real-time with fast access to patient raw waveforms. This leads to seamless workflow and data analysis for simplified and secure reporting thanks to 360° connectivity resulting in a single point of contact.

Share information throughout the hospital
More and more often there is a need to provide information about a patient’s exposure to radiation. DoseWatch® helps you deliver the right dose, while still producing quality images. By tracking patients’ cumulative dose over time, you can take steps to prevent excessive medical radiation exposure. This web-based patient radiation dose monitoring software captures, tracks and reports radiation dose directly from any imaging device or PACS. It helps you improve patient care by understanding each patient’s exposure, identifying sources of variability, and improving protocol and exam delivery with a variety of embedded analysis and optimization capabilities.

With iCenter® on-line asset maintenance and management software, you can use data and analytics on asset status, location, maintenance history, utilization and planning to improve your operational performance. It lets you optimize equipment utilization and uptime, manage equipment lifecycle for greater ROI, control costs and improve capital planning and help ensure planned maintenance compliance.

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Evolve easily with an open architecture

Choosing GE means that you can purchase a comprehensive and totally integrated cath lab solution or alternatively implement new elements on your current equipment and still maintain a unified experience. With GE Cardiovascular and its integrated systems you can add or remove component parts of your system or applications without difficulty. This creates maximum upgradability and effective asset utilization with optimal efficiency.

Choose the system that works for you

With our fully integrated systems everyone in the cardiovascular patient care team can enjoy enhanced productivity. We aim to facilitate your access to new procedures and improve diagnostic turn around by the integration of multi-data sources such as scanners, ultrasound, MRI, 3D-rotational angiography and recording systems. Multiple clinical system integration is possible like Fractional Flow Reserve, Intravascular Ultrasound, 3D mapping systems, Ablation generators, and more. The GE level of connectivity enables integrated technologies covering the portfolio of cardiovascular techniques.

For example, you can immediately access the integrated Fractional Flow Reserve (FFR) from your Mac-Lab, without a separate analyzer workstation therefore you are always in control. Our systems are fully expandable as your portfolio of procedures evolves, one application can open up a full array of new opportunities for your lab.

Combine interventional cardiology and electrophysiology in one-room

With the GE open architecture you can upgrade your Mac-Lab to ComboLab combining hemodynamic and recording data without the need to add a suspension or a screen. You can also update your AW with the dedicated EP applications like Innova EP Vision 2.0 that works perfectly with ComboLab to use its electrical signal information to create 3D electro-anatomical maps to overlay on the live fluoroscopy image.

With open architecture, you can easily add new applications to your portfolio. For structural heart procedures that demand meticulous, detailed planning Valve Planning allows you to segment the aorta from the iliac arteries to the aortic root to select your access route. You can also measure the aortic annulus and define the valve plane to help select the device size to implant. The Valve Planning Protocol helps you measure the distance between the valve leaflets and coronary ostia for planning the valve intervention. During the procedure, precise guidance and device positioning are crucial. Innova HeartVision provides high precision to assist valve positioning and deployment, while minimizing motion with ECG synchronization and image stabilization.

Offer world-class training and service

Critical thinking requires the support of a well-trained clinical staff and the assurance that your systems will be up and running properly when you need them most.

We offer product and EP clinical training at the GE Healthcare Institute and directly at your facility to give you and your team valuable hands-on learning experiences.

In addition to our InSite™ remote support, we offer an experienced support network and around-the-clock service offerings designed to help maximize equipment uptime, drive quality of care, improve productivity, and manage risk. With OnWatch you will have the transparency needed to plan for equipment servicing, bringing a higher level of efficiency to your organization. OnWatch provides fully automated and continuous monitoring of critical subsystem elements. Key parameters are set and any deviation generates an alert. GE will then work with you to schedule any necessary maintenance to keep your operations running smoothly. With OnWatch you can be confident and comfortable that your organization has the dependability it needs to operate efficiently while creating a less stressful experience due to disruptions in exam and patients’ schedules.
About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

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