Infinia

Infinite Possibilities in Nuclear Medicine

imagination at work
The definition of diagnostic confidence

Today's healthcare environment demands more than ever before. Doctors, technologists and administrators face challenges every day to be more productive, versatile and flexible - to work harder and smarter. And there are greater demands on image quality - to see more, improve diagnostic confidence and patient care.

To meet these challenges head-on, GE Medical Systems introduces revolutionary nuclear imaging systems - Infinia™ and Infinia Hawkeye®.

The power to image it all

A free-geometry nuclear medicine system with slip-ring gantry, Infinia combines the flexibility of a single-head camera with the productivity of a dual-head design. It delivers image quality previously unseen across the full energy spectrum. And unique in the industry, Infinia arrives ready for the exclusive GE Hawkeye SPECT/CT, offering the utmost in diagnostic confidence.

- Productivity: Ultra-rapid scan cycle with intuitive GE graphical interface
- Versatility: Unparalleled clinical flexibility that combines open-detector design and free-geometric maneuverability
- Xeleris workstation: Delivers more effective workflow with advanced Ignite™ technology, unsurpassed connectivity and the ultimate in ease-of-use
- Image quality: Unique all-digital Elite™ detector technology optimizes imaging performance for today's full range of radiopharmaceuticals at all energy levels, in all imaging modes with the highest count rate
• Diagnostic confidence: Infinia Hawkeye delivers new clarity to images with inherently registered CT and nuclear medicine tomograms, providing diagnostic confidence with proven impact on patient management.

• Six Sigma quality: First nuclear medicine system developed via strict Six Sigma design methodology for ultimate product quality, unprecedented reliability and customer-focused serviceability.
Pick up the pace with Infinia

Clinicians can do it better, faster and smarter with Infinia. Its advanced state-of-the-art design combined with the Xeleris workstation accelerates the entire imaging process – boosting productivity and integrating workflow.

**Life in the fast lane**

- **Ignite** offers fast, automated one-keystroke exams for selected nuclear medicine procedures – from scan through processing. Images are automatically ready for rapid review on Xeleris.

- **Elite detectors** provide the largest field of view – 21.25 inches x 15.75 inches (54 cm by 40 cm), providing the broadest coverage for even the largest patients.

- **Operator-friendly collimator exchange** – typically less than 3 minutes.

- **Intuitive user interface** shared by acquisition and processing offers better functionality, shorter learning curves and improved technologist productivity.

- **Real-time Automatic Body Contouring** reduces setup time significantly over manual contouring.

Select patient

Position patient and gantry. Start scan.

View auto-processed results at Xeleris.
The flexibility to do it all

Take the most comprehensive clinical applications package and combine it with Infinia’s flexible gantry, and it’s easy to see why this is the most versatile and hardworking nuclear medicine system available today.

Adjusts to all patient needs

- Uncompromised image performance for all studies and all energies. Infinia’s dual-detector system with single-head flexibility meets all needs, including standing, seated, wheelchair and stretcher scanning positions.

- Comprehensive clinical library of nuclear medicine, PET, SPECT/CT and PET/CT applications

- Seamless connectivity with full DICOM and worklist support. Xeleris offers the unique Direct Connect™ capability for all GE legacy and most multi-vendor cameras.

- Exclusive slip-ring gantry design allows for continuous rotation in either direction and provides the backbone for advanced nuclear medicine applications, including Hawkeye
Accelerate workflow with Xeleris

Xeleris delivers state-of-the-art processing speed, innovative productivity tools, and built-in connectivity.

Faster results, faster response

- Exclusive GE Ignite technology provides accelerated workflow from Infinia to Xeleris
- Same user-friendly graphical interface as Infinia’s acquisition station
- Powerful GE Volumetrix™ software delivers state-of-the-art imaging tomography with advanced displays of SPECT, PET and other modality images under one interface
- Myovation™ cardiology software comes equipped with its own sophisticated processing capabilities, while providing the interface for other optional cardiac quantitative analysis packages
- Loaded with a full range of proven software - from oncology and renal to bone and brain
- Xeleris offers direct connectivity to most current and previous GE nuclear medicine and PET systems, and to non-GE systems
Experience world-class image quality

Infinia delivers superb resolution and clarity — without compromise. The Elite detector's unique crystal technology, advanced correction algorithms and micro-digital design produces unsurpassed image quality, every time.

See more than ever before

- Advanced, all-digital Elite detector with 3/8-inch crystals optimized for low-to-medium energy exams, delivers the ultimate SPECT reconstruction resolution available today, measured with exacting NEMA standards.

- Simultaneous isotope-specific corrections include energy, linearity, uniformity, isotope decay and center of rotation, all in real-time.

- Automatic Body Contouring maintains minimal distance between the detector and patient throughout the exam. This increases resolution and contrast by 30 percent and provides physicians with consistent image quality.

- Optional 1-inch etched crystals for high-energy imaging. Precise match between the etching pattern and the photomultiplier array ensures high-quality images at all energies.
Exclusive GE Hawkeye delivers diagnostic confidence

Form and function. CT and SPECT – the future of nuclear imaging. In the same way that PET/CT combines anatomy and physiology for pinpointing PET tracers, only GE's exclusive Hawkeye provides the same capability for SPECT procedures. Infinia Hawkeye provides unprecedented diagnostic confidence with both detection and precise localization of disease, as well as advanced attenuation correction.

Advanced attenuation correction
- Hawkeye CT information yields dramatically improved nuclear image attenuation and scatter correction across all energy levels and patient sizes
- Hawkeye achieves outstanding image resolution and contrast through superb transmission maps, with 1,000-fold higher photon density than source-based methods and 10 times better resolution
- Eliminates cross talk between emission and transmission data, as encountered in traditional attenuation correction

Localize disease for better patient care
- Infinia Hawkeye's high-quality SPECT images focus on functional abnormalities that appear earlier than the anatomical changes seen with CT alone
- CT pinpoints disease location, by providing the anatomical detail of where the lesion resides

- Acquired in a single exam, the system inherently registers the two images for a complete pathology picture. This total image increases diagnostic confidence and illuminates a clearer path to patient treatment.

Unparalleled patient care backed by rigorous research
Infinia Hawkeye boosts physician confidence and eliminates inferences and guesswork. According to a growing body of research, the additional information provided by Hawkeye has led to changes in patient management across a range of common pathologies:
- Cardiology imaging sensitivity increased by 12 percent and specificity by 16 percent due to Hawkeye's accurate information, decreasing reliance on angiograms for confident diagnoses**
- Doctors changed patient management of prostate cancer patients. Hawkeye enables physicians to select the most appropriate patient care.***
- With Hawkeye, neuroendocrine tumors were seen 40 percent more accurately, with significant impact on clinical disease management in 11 percent of those patients****
- Additional information from Hawkeye studies changed management and surgical planning of thyroid and parathyroid cases*****

**Validation of a Hybrid SPECT/CT System with Attenuation Correction: A Phantom Study and Multicenter Trial. Y. Liu, et al.
***Hawkeye-Mediated Multiple Image Fusion Applied to Prostate Cancer Detection. M. J. Carvalho, et al.
****SPECT/CT Hybrid Imaging with 111In Pentetetide in Assessment of Neuroendocrine Tumors. Y. Krausz, et al.
*****Contribution of SPECT/CT to Preoperative Localization of Parathyroid Adenomas. Y. Krausz, et al.
Designed for reliability and optimal performance

Infinia is the first nuclear medicine system to be designed with the stringent GE Six Sigma methodology, ensuring uptime through reliability and an easy-to-service product.

- GE’s remote diagnostic and solutions network, InSita,” links your system directly to our centralized, on-line, engineering and applications support team to save time and maximize your productivity.

- All systems arrive complete with the latest broadband capability. This secure and encrypted technology enables next generation training, image transfer and remote equipment diagnostics.

- iLinq” on the operator console features Contact GE, an on-line technical manual, links to the latest protocols and real-time training modules.

- iCenter™ provides access to the latest updates on equipment uptime, contract information, parts delivery and equipment alerts.

Built for today
...ready for tomorrow

GE exclusive features such as Hawkeye, slip-ring gantry, and one-inch detector technology have Infinia defining how feature applications will be achieved. Infinia with Xeleris is positioned for all the challenges of tomorrow. Coupled with GE’s ongoing commitment to keep technology current, Infinia is a bridge to the future.