GE Healthcare

Infinia Hawkeye 4

Illuminating more. So you can do more.

Among its many enhancements are the countless lives it will reach

The Infinia™ Hawkeye™ 4 SPECT/CT from GE Healthcare builds upon its industry-leading performance with a wealth of innovations, from delivering low dosage and improved acquisition times to enhancing imaging results through scatter modeling and reduction, motion detection and correction, and accurate attenuation correction. And yet, perhaps its most striking advancement is offering a decade's worth of refinements with improved productivity and a lowered total cost of ownership. With the Infinia Hawkeye 4, hospitals and care providers can now increase their profitability and competitiveness, help in earlier detection of diseases and elevate patient care while achieving more than they ever before thought possible. Illuminating the hidden recesses of the human body as well as your institution's true potential.

Proven and improved

Pioneered by GE Healthcare over a decade ago, this industry-revolutionizing hybrid SPECT/CT imaging technology has undergone continuous enhancements, culminating in the Infinia Hawkeye 4, the latest model of the world's most widely installed hybrid SPECT/CT technology. Celebrating over 1,300 installations, performing 500,000 scans annually and recognized by more than 240 published citations, Infinia Hawkeye technology has been tested and proven to deliver:

- Superb image quality
- Exceptional clinical diagnostic accuracy
- Highly accurate SPECT/CT registration and attenuation correction
- Outstanding workflow efficiency and productivity
- Minimal patient dose
- Reduced total cost of ownership and siting requirements

Enhancing the world's pioneering SPECT/CT system

The reliable design of Infinia Hawkeye 4 embodies the perfect balance of optimum workflow efficiency, reduced dose, expansive clinical applications and ongoing product innovation. Made possible only through a decade of hybrid imaging experience, the Infinia Hawkeye technology boasts many diagnostic milestones including:

- 4-slice CT imaging on a single NM/CT slip-ring gantry
- Automated gantry movements and Ignite™ enable one-click applications to accelerate workflow
- Evolution™ resolution recovery, delivering ½ time acquisition and enhanced image quality for bone and cardiac SPECT scans
- Infinia^{VC} Hawkeye—exclusive camera-based PET/CT imaging
- Volumetrix Suite registration and 3D fusion with existing CT scans

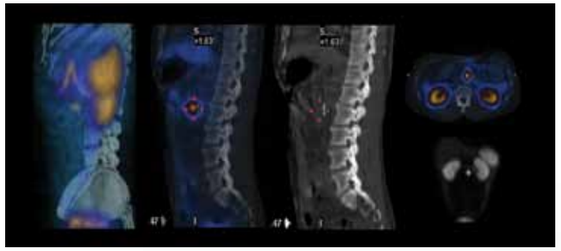
Advanced new features of the Infinia Hawkeye 4 include:

- The ability to perform cardiac and bone SPECT scans at ½ dose
- The ability to acquire whole-body bone scans in ½ the time or ½ the dose
- Automatic image registration of DICOM-compliant CT study with single or multiple SPECT or PET exams
- New Volumetrix MI tomographic volume rendering and 3D fusion of SPECT with MR and PET scans
- Enhanced motion detection and correction
- Modality Performed Procedure Step (MPPS) to expedite reporting and speed workflow while reducing patient ID errors

Confidence that comes from documented and published change in patient management

Physicians using Infinia Hawkeye 4 technology have repeatedly achieved greater diagnostic accuracy when compared with SPECT scanning alone. For example, diagnoses with Infinia Hawkeye 4 have been shown to modify patient interpretation, driving change in patient management in prostate, thyroid, neuroendocrine and other types of tumor cases studied.

Overall, you can be confident that the Infinia Hawkeye 4 will deliver change in patient management in a major part of the studies.*

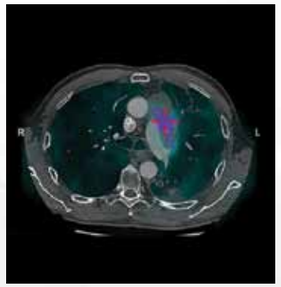


SPECT images acquired
24h post IV injection of 6mCi

In-111 Somatostatin: increased uptake in the retro-peritoneum, anterior to previous surgical field, with enlarged lymph node in the corresponding location of the study.

Diagnosis: Metastatic lymph node.

Courtesy of Tel-Aviv Sourasky Medical Center



*Between 8% and 75% of researched cases, depending on type of study

Enhancing results with a SPECT-optimized low-dose CT

This dramatic improvement in patient management can be attributed to these technological achievements:

- Patented SPECT-optimized time-averaged CT imaging for optimal attenuation correction
- Advanced reconstruction techniques using LightSpeed™ and VCT™ technology with unique registration tools for accurate lesion localization
- Ultra-low-dose CT scans optimized for attenuation correction and localization
- Advanced artifact reduction techniques including helical view weighting, parallel-beam projection rebinning, ring artifact reduction, noise reduction and edge enhancement filters
- Motion detection and correction software package detects changes in organ position throughout the study and then calculates the magnitude of this motion and corrects it
- Quality assurance tool to ensure accurate SPECT/CT co-registration

Infinia Hawkeye 4 registered with
VCT/Neuroendocrine-carcinoma

111In - Pentetreotide, 3.5 MBq/kg MEGP collimator / CT axial, full rotation, 120 keV 58 mAs, CTDIvol 3.78

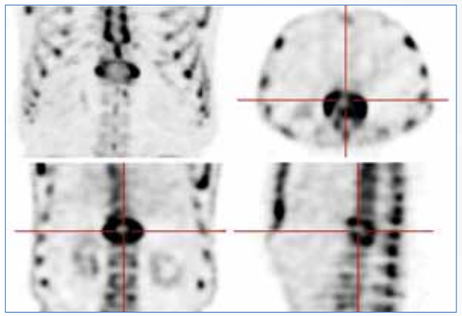
Courtesy of HEGP Hospital, Paris, France, Drs C. Hignette and M. Faraggi

Degenerative disease in the acromia-clavicular joint and no traumatic injuries

Courtesy of Clinic Saint Jean, Brussels, Belgium

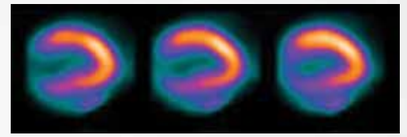
Do more with more–streamlined workflow and 1/2 time scans

While institutions face the challenge of getting by with less, the Infinia Hawkeye 4 consistently delivers more. The tool of choice for heavy-workload clinics, community hospitals and specialized nuclear medicine departments alike, the Infinia Hawkeye 4 combines reduced scan time, faster processing and online scan quality assurance to reduce the need for study retakes. Even patient registration and billing are now streamlined through DICOM worklist and Modality Performance Procedure Step tools.

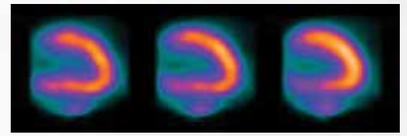


½ time Tc-99m SPECT with Evolution for Bone

Image courtesy of Tel-Aviv Sourasky Medical Center



Full time MPI rest SPECT



½ time MPI rest SPECT with Evolution for Cardiac

Images courtesy of London Health Sciences, London, Ontario

Increase productivity

- Exclusive slip-ring gantry for continuous rotation in either direction
- Online automatic body contouring for consistent high-image quality SPECT and WB scans
- Continuous SPECT scans to eliminate acquisition dead time between views
- One-click applications through Ignite™ streamlined workflow and automated gantry movements
- Dual detectors with single-head flexibility and free geometric maneuverability for imaging, standing, lying, seated or in wheelchair

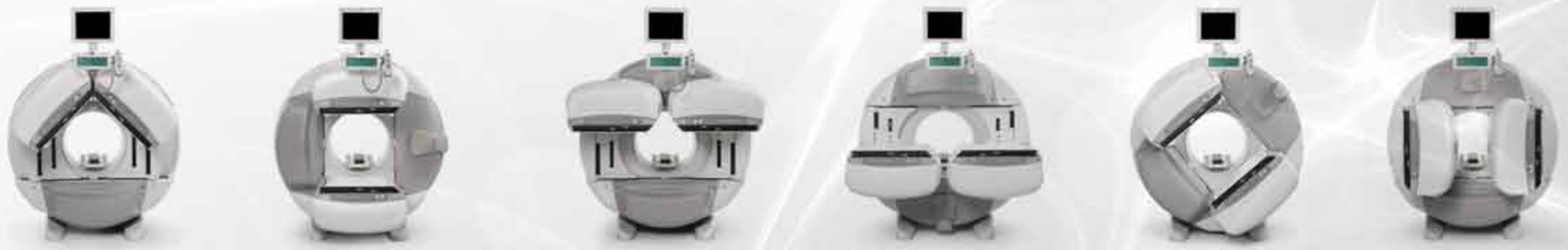
Powerful display and analysis

- New Volumetrix MI toolbox for registration and fusion of multiple 2D and 3D data sets
- Simultaneous review and registration of previous and follow-up, single and multi-isotope studies
- Oblique MR or CT slice input for 3D multi-modality registration and fusion with SPECT or PET scans
- Up to 50 user-definable reporting layouts

Timesaving algorithms

- ½ time SPECT Scans with Evolution™ for Bone
- ½ time MPI SPECT scans with Evolution™ for Cardiac
- ½ time spots and whole-body scans with Planar Evolution™ for Bone

These improve SPECT study resolution and signal-to-noise ratios while effectively modeling image scatter and lowering noise variability.



Patient care starts with lower patient dose

Your ability to achieve greater accuracy and increase productivity should never come at the expense of the patient. This belief is a hallmark of GE Healthcare's patient-first approach to technology. Which is why the Infinia Hawkeye 4 provides you with the ability to significantly lower the dose and patient exposure in both SPECT and CT modes while maintaining full resolution and image quality for nuclear scans localization and attenuation correction. Innovations to improve the overall patient experience include:

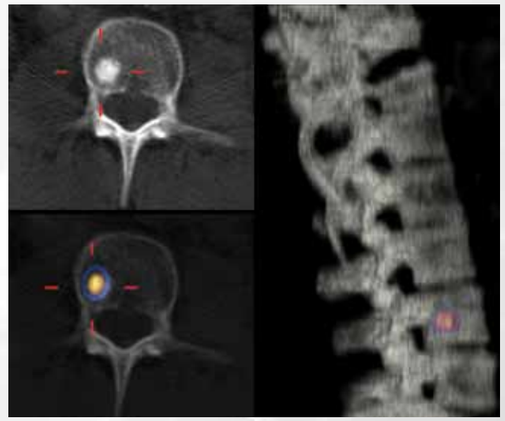
- Optional Evolution™ algorithms enable ½ dose Tc-99m Bone or Cardiac SPECT scans without compromising image quality
- The ultra-low CT patient dose results from Infinia Hawkeye 4's operation on as low as 1.0 to 2.5 mA combined with its "half-scan" 240-degree irradiation during each 360-degree rotation
- Typical effective doses range 0.8 to 1.0 mSv in chest scans, 1.3 to 1.7 mSv in abdomen and pelvis scans, and 0.10 - 0.12 mSv in brain scans

2,140 Kcounts

1,284 Kcounts

Image courtesy of Dr Declerck, Clinic Saint Jean, Brussels, Belgium

Infinia Hawkeye 4's ½ time NM scans combined with Ignite™ streamlined Hybrid SPECT/CT workflow significantly reduce the time a patient spends on the table. The need for rescans due to patient movement and discomfort is also reduced. And registration to previously acquired diagnostic CT scans can eliminate the need for repeat scans, saving the patient from unnecessary dose exposure. It's an illuminating approach to radiation reduction that actually protects a patient's health.



Hawkeye 4 CT axial, full rotation, 120 keV58 mAs, CTDIvol 3.78

Image courtesy of Drs E. Zerbib Clinic Val D'or, France

Xeleris: Your portal to a world of integration

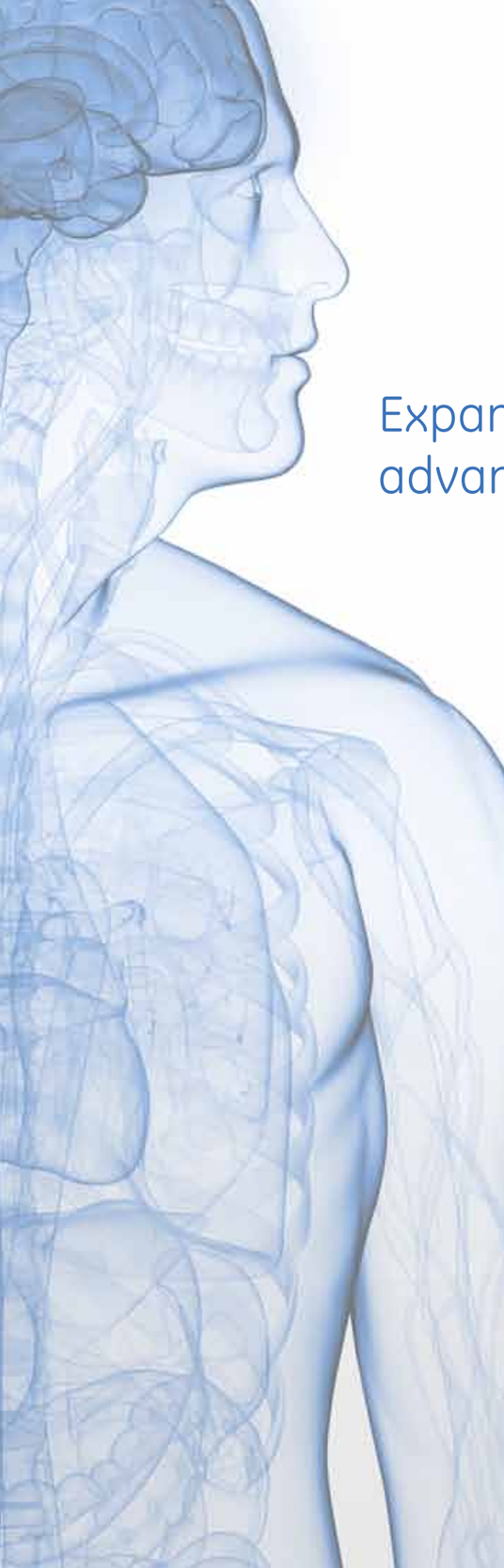
Your ability to achieve more is exponentially enhanced with the power of the Xeleris workstation, a well-suited complement to your Infinia Hawkeye 4 system. Xeleris delivers the accurate information you need to manage patient data quickly and efficiently and offers innovative productivity tools, built-in connectivity, exceptional processing speed and remarkable versatility.

Over 7,500 Xeleris workstations have been installed worldwide and, like Infinia Hawkeye 4, Xeleris capabilities have been continually enhanced. The latest-generation Xeleris workstations deliver:

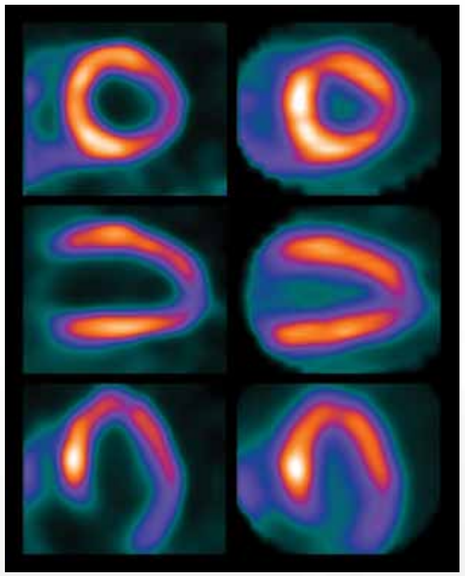
- PACS-compatible DICOM features with IHE profile support, including storage commit (MPPS), multi-frame secondary capture (MFSC) and DICOM Viewer (NM, SPECT/CT, PET/CT on CD/DVD)
- Multi-process architecture for simultaneous advanced applications for NM and PET
- Dual monitor / wide screen for more effective side-by-side multi-modality reviews
- Instant access and registration to previous exams including SPECT, PET and CT scans
- Scalable enterprise-wide networking capability to integrate existing and future devices
- Continued commitment to GE legacy connectivity and DirectConnect to non-GE scanners

WAN XFL: Access anywhere at any time

Free yourself from a traditional workstation while maintaining productivity and responsiveness with the Xeleris Floating License. The innovative portable solution for nuclear medicine, XFL, takes the Xeleris workstation to exciting, new places. Specifically, wherever you happen to be. Easily installed on your PC, now you can access data on-site through LAN and off-site through WAN and VPN.

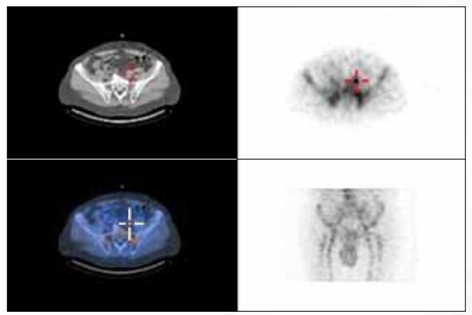


Expand your potential through advanced applications

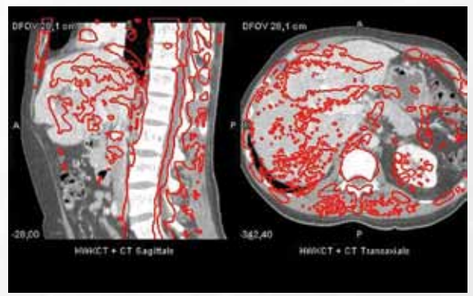


Morphing Conventional

Cardiac morphing - the data-processing algorithm that compensates for the motion of the beating heart. It enhances visual clarity of MPI scans by performing non-rigid 3D registration of the entire cardiac cycle to the end-diastolic phase.



Evolution toolkit - a resolution recovery and scatter modeling software that provides the tools to improve resolution and reduce noise of 99mTc, 123I, 111In, 67Ga SPECT studies. The result is enhanced visual clarity.



Volumetrix MI - a single application for non-cardiac SPECT or SPECT/CT data display, analysis and reporting. Includes powerful registration and 3D segmented SPECT datasets for volume-rendering and fusion engine for hybrid SPECT/CT, PET/CT, CT/MR, SPECT/MR and PET/MR studies.

Illuminating Solutions. Exceptional Support.

GE Healthcare offers a family of SPECT/CT systems specifically designed for your different needs. Leading researchers, imaging center diagnosticians, decision-seeking cardio specialists, and heavy-workload nuclear medicine practitioners at community hospitals can all realize their optimal solutions. For both imaging equipment needs and the needs of their patients, GE Healthcare has the answer. Offering a breadth and depth that is strengthened by our leading-edge software and remarkable low dosage.

As the leader in customer support and service quality, GE Healthcare offers web-integrated support to keep you operational, with built-in error-tracing circuitry and bug-detection software within our systems, as well as remote service and diagnostic tools supported by top-caliber field engineers.

InSite™ is GE Healthcare's remote diagnostic and solutions network connecting your system to our centralized, online engineering and applications support team.

iLinq™ on the operator console provides access to an online engineer or applications specialist immediately.

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

It's easy to stay current with the GE Healthcare Continuum, your direct upgrade path to the latest technology, ensuring your systems remain up-to-date with:

- Scalable GE enterprise-wide networking solutions to support and integrate new and existing purchases
- Site planning and installation
- Customized financing and service solutions
- Masters Series seminars and TiP education offerings to keep physicians and technologists current
- Direct upgrade or uptrade paths, so you can take full advantage of the newest innovations

Whether finding the ideal solution for your institution's specific need or ensuring your systems are always operating at the highest levels of performance and technology, GE Healthcare continues to be an invaluable partner.

The Infinia Hawkeye 4, our productive general-purpose system, delivers a decade's worth of refinements to practitioners seeking cost-effective, proven ways to impact patient outcomes.

The Discovery NM/CT 670, our most advanced SPECT/CT, is a beacon of technological progress for researchers seeking new frontiers.

The Discovery NM/CT 570, our dedicated cardiac imaging system, provides cardiac specialists the most innovative advancements for diagnosing the oldest diseases.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com

GE Healthcare
3000 North Grandview Blvd
Waukesha, WI 53188
U.S.A.

www.gehealthcare.com

imagination at work

NU-XXX-01.10-EN-US