Canon

Aquilion Serve

Simply delivers.

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Ever increasing workloads are pushing medical imaging departments to their limits. At Canon Medical we have listened closely to the challenges facing our customers and have asked ourselves, “what can we do to help?”

Introducing the Aquilion Serve: a CT scanner that delivers consistent imaging results with less training, better image quality, lower radiation dose, and faster throughput– leaving more time for patient care. Its next-generation user experience and powerful suite of intelligent technologies simplify patient positioning and enable automatic planning of most routine CT exams.

Day or night, whether operated by an expert or a first-time user, the Aquilion Serve simply delivers.

Outcomes driven innovation

INSTINX

Optimizing workflow with INSTINX*

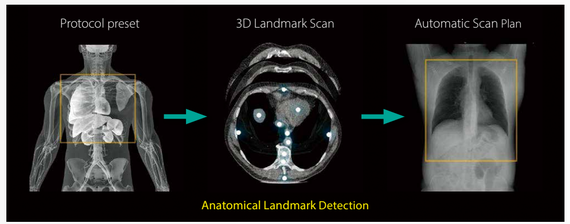
Canon introduces INSTINX, a total workflow experience redesigned from the ground up to set new standards in efficiency and consistency. Every detail of the workflow has been thoroughly refined based on clinical testing in medical centers around the world.

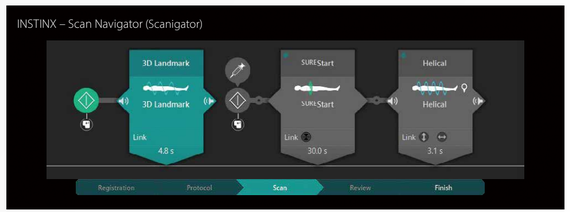
Now every operation is more intuitive and can be learned faster than ever before. This ease of use contributes to work satisfaction, time savings and flexible allocation of resources.

Instinctive user experience

Anatomical Landmark Detection

Using data acquired via the 3D Landmark scan, Canon's Anatomical Landmark Detection (ALD) can accurately identify the anatomical structures required to perform automatic scan planning for all routine examinations. An industry first, 3D Landmark scan is an ultra-low-dose helical scan performed using the SilverBeam filter, at the same dose as traditional 2D scanograms. ALD enables the scan range and field of view to be automatically set to the same position predefined in the scan protocol, thus saving time while ensuring consistent results for all CT technologists.





* INSTINX is a multimodality brand concept developed to highlight the new standards in efficient and consistent workflow made possible with Canon's technology.

World's first built-in gantry cameras

Built-in gantry cameras provide one-touch patient positioning right from the touch screen on the gantry.

Technologists and patients alike enjoy increased safety with Tech Assist Lateral Slide, a feature that mechanically moves the patient up, down, left, or right to the correct position at the touch of a button.

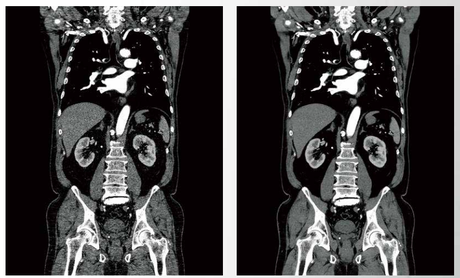
Advanced intelligent Clear-IQ Engine (AiCE)

Harnessing the enormous computational power of Deep Learning neural networks, AiCE has an outstanding ability to distinguish signal from noise to deliver CT images that are sharp, clear and distinct.

Fully integrated into a patient-centric workflow, AiCE protocols automatically reduce radiation dose while maintaining diagnostic detail.

Original

AiCE Integrated Intelligence

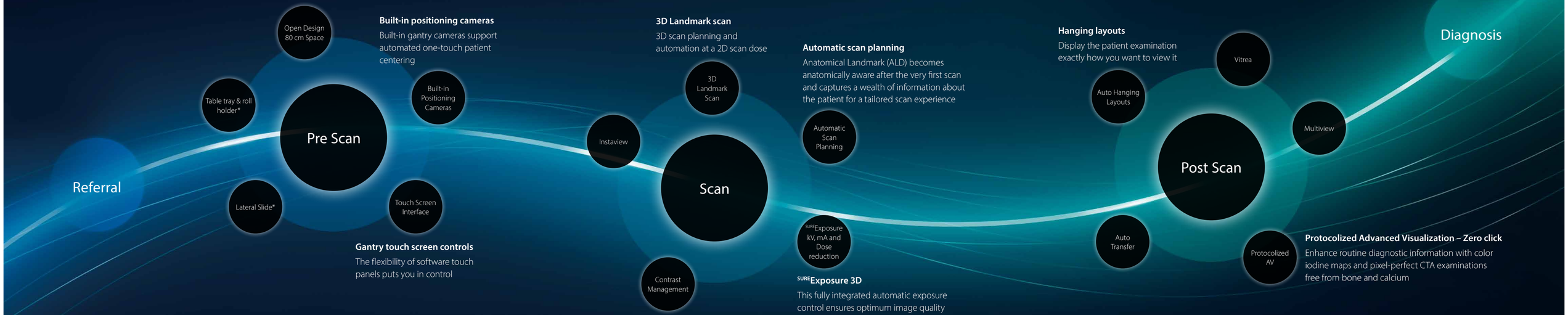


Simplicity delivered

Aquilion Serve offers a totally redesigned operator workflow that brings together powerful AI-enabled automation and an intuitive interface to provide high-quality CT exams that are faster, safer and easier to perform.

INSTINX—Scanning is easier than ever before

A patient-centric CT workflow solution, incorporating intuitive design and automated features for improved efficiency



* Option

Quick patient positioning

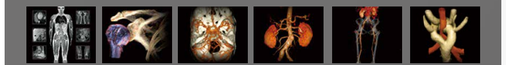
Easy, robust scanning

Consistent, efficient reporting

Integrated post processing with Vitrea

The Vitrea post-processing solution seamlessly integrates with Aquilion Serve, providing powerful post processing analysis via advanced visualization tools or automated routine case review for any examination — right after the examination.

Vitrea


Multi Modality Viewer

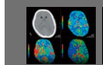
Musculoskeletal

Circle of Wills

Vascular Aorta

Runoff

Larynx Airway


Brain Perfusion 2D with Bayesian

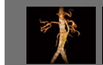

Brain Perfusion 4D


Liver Analysis


Colon Analysis


Multi-Chamber Functional Analysis


Fat Measurement

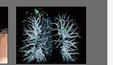

Endovascular Stent Planning


TAVR planning


EP planning


Dental Option

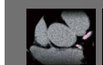

iCAD VeraLook CT Colon CAD


MeVis Visia CT Lung CAD


Lung Analysis

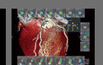

Lung Density Analysis

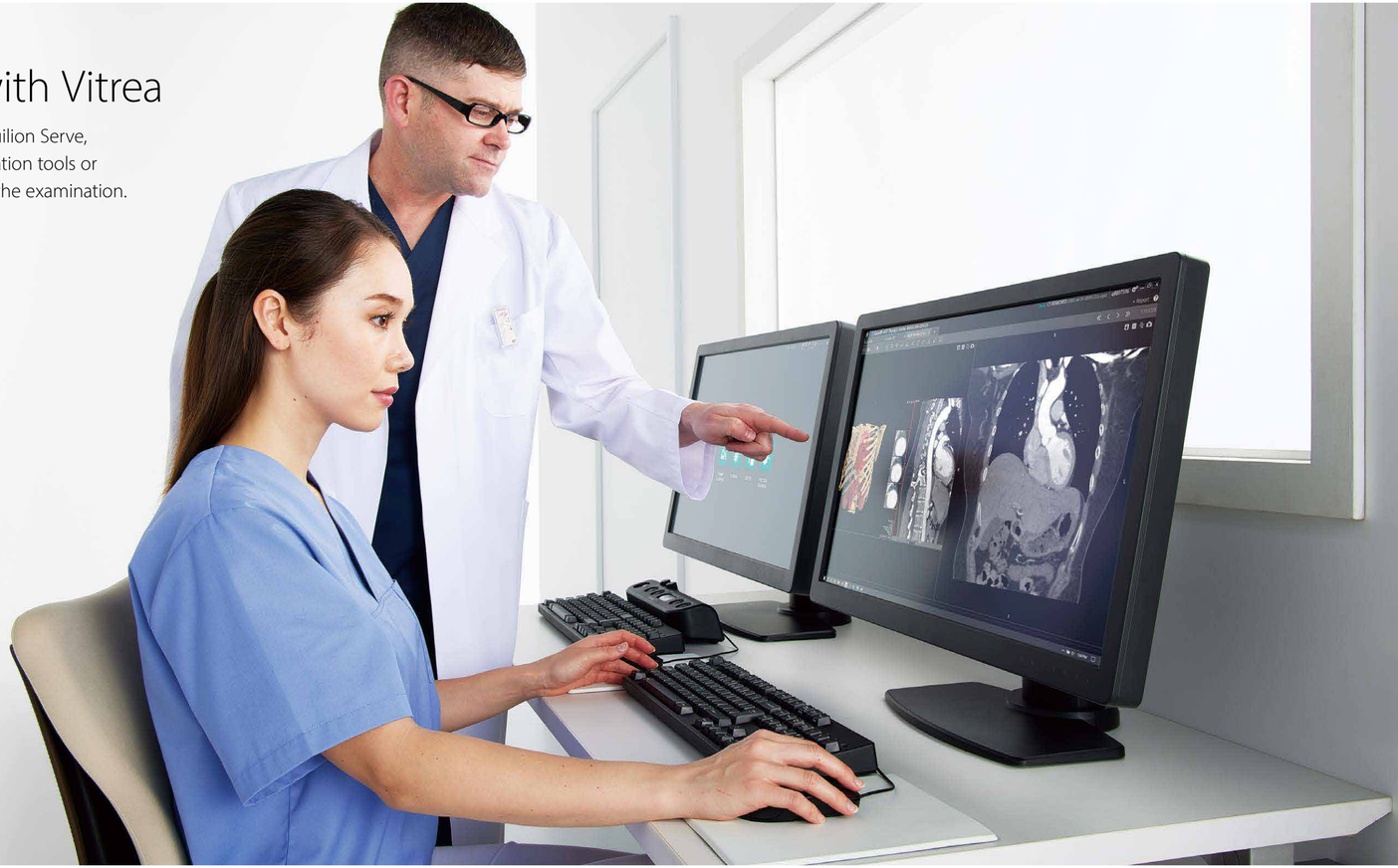

Image Denoising


VScore


Cardiac Analysis

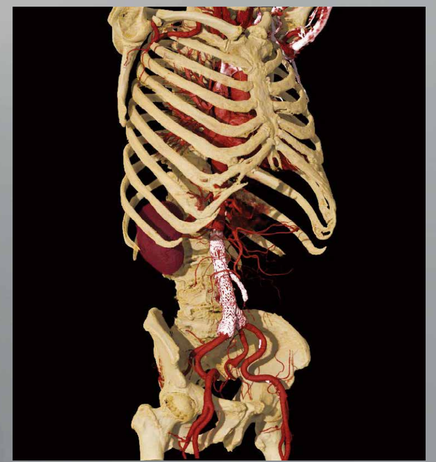

Cardiac Functional Analysis


AutoPlaque



Photorealistic CT

Vitrea is loaded with a suite of post processing applications for routine image review and work-up of vascular CTA examinations. Global Illumination rendering is available in all applications for photorealistic images to facilitate communication with patients and clinicians.



* Vitrea is a separate Canon product available for purchase.

Interventional CT—Safe in your hands

Conduct faster, more focused interventional procedures with our new CTF interface that enables one-handed operation thanks to ergonomically designed controls and a versatile touchscreen tablet and a 27inch in-room display monitor. The 80 cm gantry bore and lateral couch movement provide unparalleled positioning flexibility and patient access.

Plus, with Canon Medical's iterative reconstruction you now have real-time access to the high-quality, low-dose images you need to increase the speed and safety of all your interventional procedures.

* Option

Consistency delivered

Every clinical examination is different. But your busy workload demands a streamlined, standardized workflow that consistently delivers quality results with minimal rescans in all situations. Let the smart features in Aquilion Serve deliver that consistency.

Welcome to the age of AI-assisted CT

Advanced intelligent Clear-IQ Engine (AiCE) – Deep Learning Reconstruction

AiCE is a innovative approach to CT reconstruction that uses Deep Learning technology to match the spatial resolution and low-noise properties of advanced model-based iterative reconstructions.

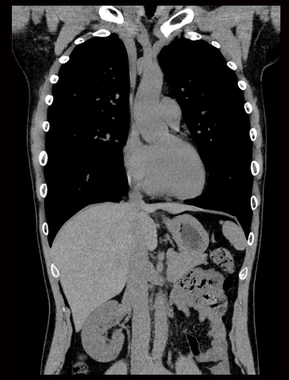
AiCE is available for all body regions providing sharp, clear and distinct images for a more confident diagnosis.

- Low Noise
- Natural Image Texture*
- Sharp High Contrast Resolution
- Clear Low Contrast Detectability

AiCE Integrated Intelligence

Original

AiCE Integrated Intelligence



* Natural defined as similar to FBP compared to MBIR

"Advanced Deep Learning Reconstruction of clinical images using AiCE heralds a new era in CT. It enables phenomenal patient dose reduction, up to 90% below the National Diagnostic Reference Levels, at the same time as providing extremely high-quality clinical images and all in a rapid time frame suitable for everyday clinical use."

Dr. Richard Hawkins
Mid Cheshire Hospitals
NHS Foundation Trust, UK

Robust cardiovascular imaging—Automated, adaptive and easy

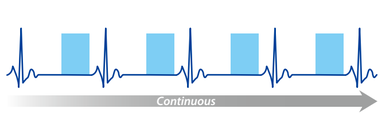
Cardiac*

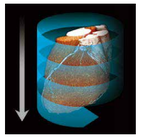
The combination of 0.35 second gantry rotation and the dose efficiency of AiCE enables quality cardiac examinations. Perform both calcium scoring and CTA with the intelligent SURECardio engine that is coded with the experience of thousands of cardiac examinations, ensuring scan and exposure parameters adapt exactly to your patients in real-time.

Prospectively gated ultra helical

Combining the advantages of helical scanning with ECG narrow phase exposure, SURECardio Prospective offers excellent z-axis uniformity, short scan times, and the low-dose advantages delivered by prospective ECG scanning.

SURECardio Prospective: Faster scan for reduced contrast requirements and superior temporal uniformity.





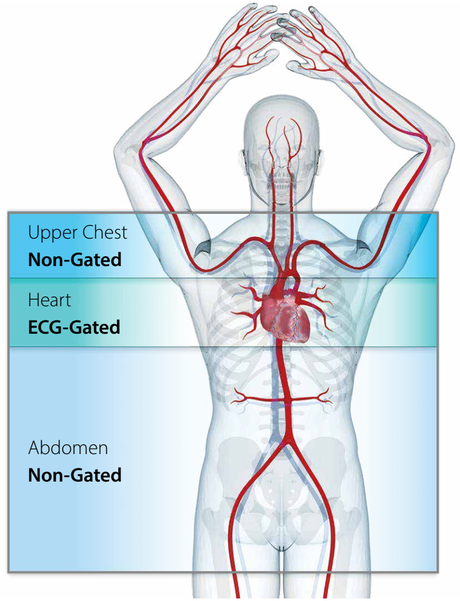
Real-time adaptive exposure

When detecting arrhythmia or an irregular heartbeat, the SURECardio engine compensates in real time by adapting the exposure window to ensure image reconstruction can provide a diagnostic examination.

Single acquisition TAVR scan – ECG gating when you need it

Variable Helical Pitch (vHP) 3 phase* allows TAVR scans to be performed in a single acquisition, seamlessly transitioning from a standard helical scan to ECG gating through the heart then back to standard speed helical scanning to below pelvis.

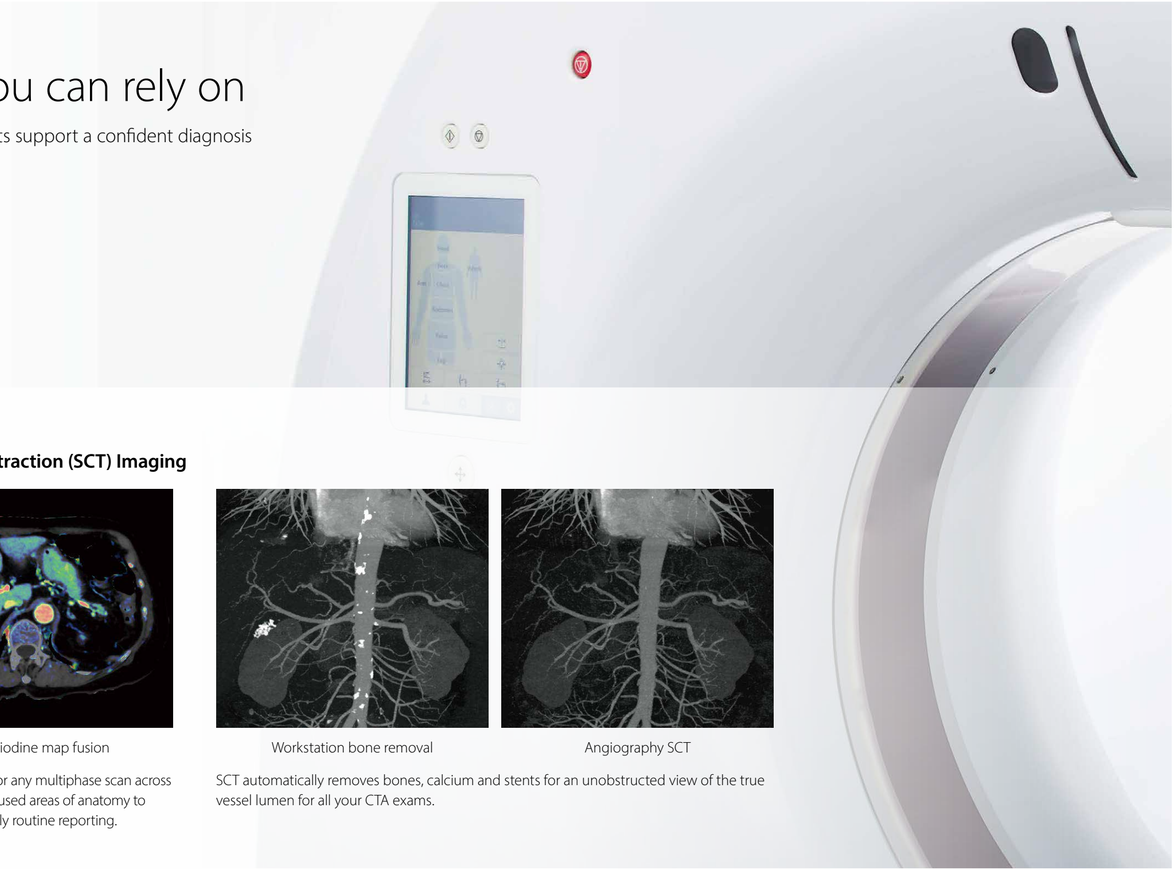
The scan is performed with a single contrast injection and one breath hold.



*Option

Clinical capabilities you can rely on

Fast, streamlined workflows and consistent results support a confident diagnosis for every patient with Aquilion Serve.



Enhanced diagnostic confidence with SURESubtraction (SCT) Imaging

Original CT image

Color iodine map fusion

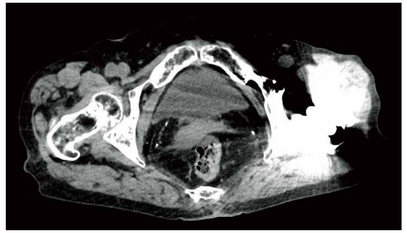
Iodine mapping SCT automatically produces color iodine maps for any multiphase scan across lung, bone, and body imaging. These maps clearly highlight perfused areas of anatomy to help you make a more confident diagnosis and enhance your daily routine reporting.

Workstation bone removal

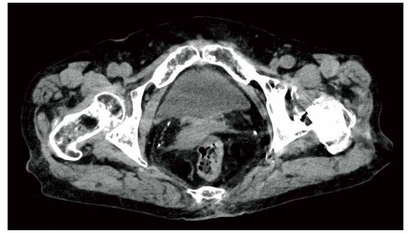
Angiography SCT

SCT automatically removes bones, calcium and stents for an unobstructed view of the true vessel lumen for all your CTA exams.

Single Energy Metal Artifact Reduction (SEMAR)
Worry-free metal imaging



Original CT image



With SEMAR + AiCE

Dose-neutral SEMAR utilizes a sophisticated reconstruction technique to reduce artifacts caused by metal and thus improves visualization of the implant, supporting bone and adjacent soft tissues for clearer and more confident diagnoses.

Extended FOV*

Easy patient access with 80 cm bore and full 80 cm FOV reconstruction offers flexible patient positioning with specialized radiotherapy patient positioning devices. The system also offers retrospective and prospective respiratory gating for a comprehensive CT simulation solution.

*Option

Value delivered

Aquilion Serve delivers exceptional value by automating tasks, accelerating patient throughput and minimizing training requirements. It's also available at a very accessible price point and designed to save space and energy. When you choose Aquilion Serve, you choose value now and into the future.

Serve efficiently and productively

The highly productive Aquilion Serve offers optimized patient throughput, consistent results and impressive uptime that can meet the needs of multiple departments and expand your clinical capabilities.

From the moment the Aquilion Serve arrives on your premises, the productivity is immediately apparent with shorter setup times, shorter training requirements for the staff and ease of scanning.

Aquilion Serve's intuitive and automated workflow solution drives faster throughput and higher productivity while ensuring a level of consistency that is the hallmark of any successful diagnostic imaging business.

The time saved due to workflow provides opportunities to serve more patients and reduce the burden on overloaded staff members. At the same time, the ease of use and consistency support flexibility in staff allocation.

"Anatomical Landmark Detection can automatically perform scan planning, setting the scan range and FOV based on the patient's actual anatomy as identified on the 3D Landmark scan. This makes it easy for anyone to perform any scan and shortens the exam time for increased throughput."

Hiroyuki Yamaguchi
Section Chief, Department of Radiological Technology, Hakujyuji Hospital, Fukuoka, Japan

"I spent just three hours learning with the applications specialist and could then confidently scan with the Aquilion Serve on my own on the very first day I was trained. By the next day I was teaching one of my colleagues. That's how easy it is."

Gabrielle James
Radiographer in Charge, South Coast Radiology, Burleigh, Queensland, Australia

Serve the environment consciously

Aquilion Serve is designed to enhance efficiency, including by reducing environmental impact. The compact, eco-friendly design minimizes energy consumption as well as infrastructure requirements.

Reduce infrastructure requirements

Aquilion Serve saves space with the smallest footprint in its class. Despite a large 80 cm gantry aperture, it is surprisingly compact. Its space-saving dimensions contribute to easy installation and allow use in most standard CT rooms.

Reduce energy consumption

Aquilion Serve incorporates a host of innovative adaptive power management technologies, helping you decrease energy consumption and reduce running costs while minimizing your environmental footprint.

Reduce downtime and maintenance

Aquilion Serve's soft, round design makes it easy to clean and disinfect the surfaces of the system. Further, its new minimal-click installation reduces software installation time and minimizes downtime during maintenance and upgrades.

14.8 m²* Installation Space

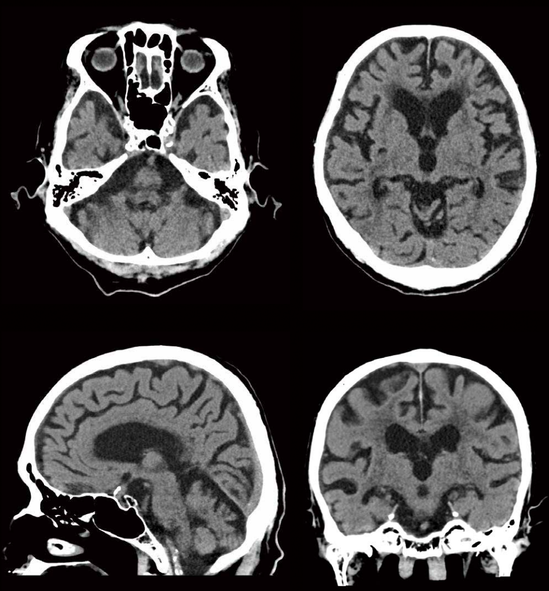
75 kVA Power Capacity

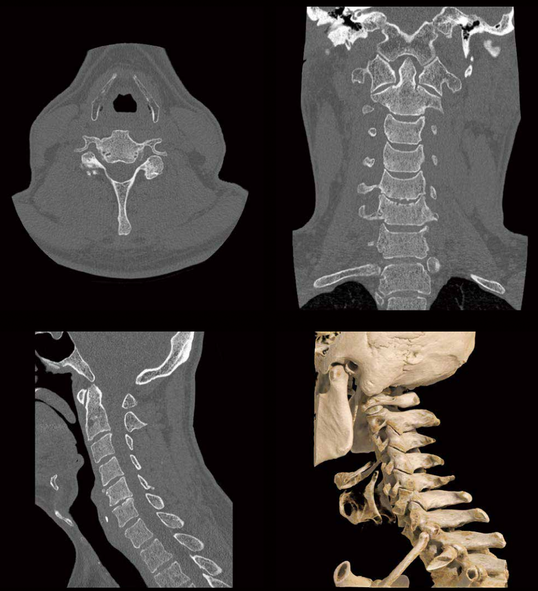
* With short couch

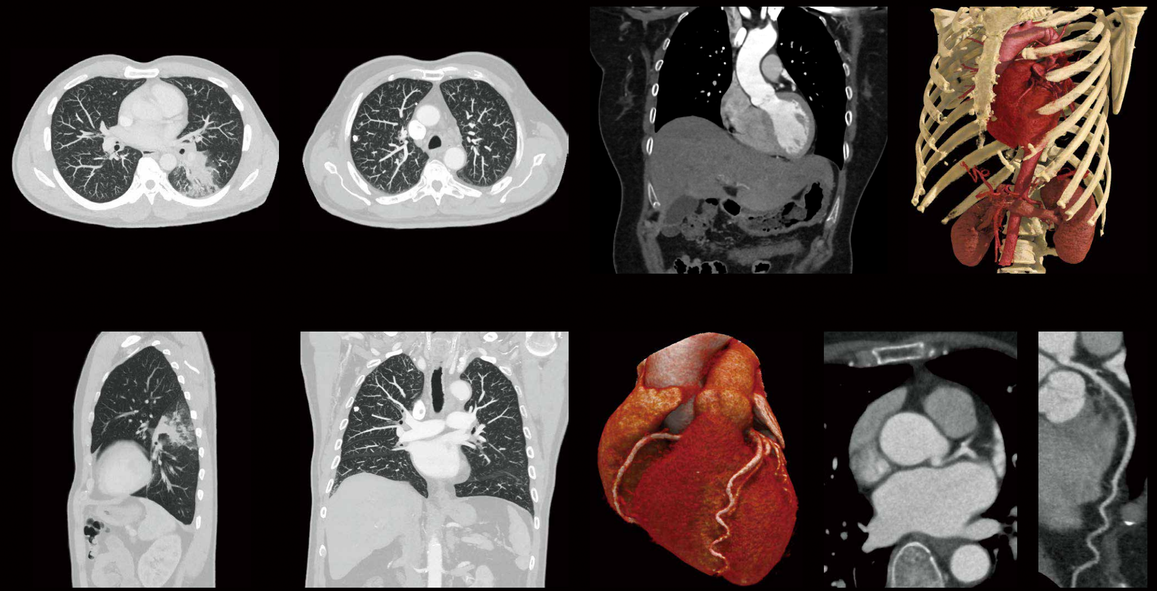
Approach toward an eco-conscious design

While our goal is to continue to bring innovative new products such as Aquilion Serve to the market each year, we do so in a conscientious way and with the intention of contributing to a sustainable global environment.
Based on a product development and design process that complies with IEC 60601-1-9 “Environmental product design for medical equipment”, we are working on energy saving, resource saving, space saving, use of recycled materials, reduction of hazardous chemical substances, improvement of recyclability of products, reduction of packaging materials, and so on.
These efforts cover the entire product life cycle, from production to disposal. We are also working on eco-design, including innovations to increase the user efficiency of our products in order to improve the productivity of our customers' examinations.
Our products comply with ErP, REACH, and RoHS.

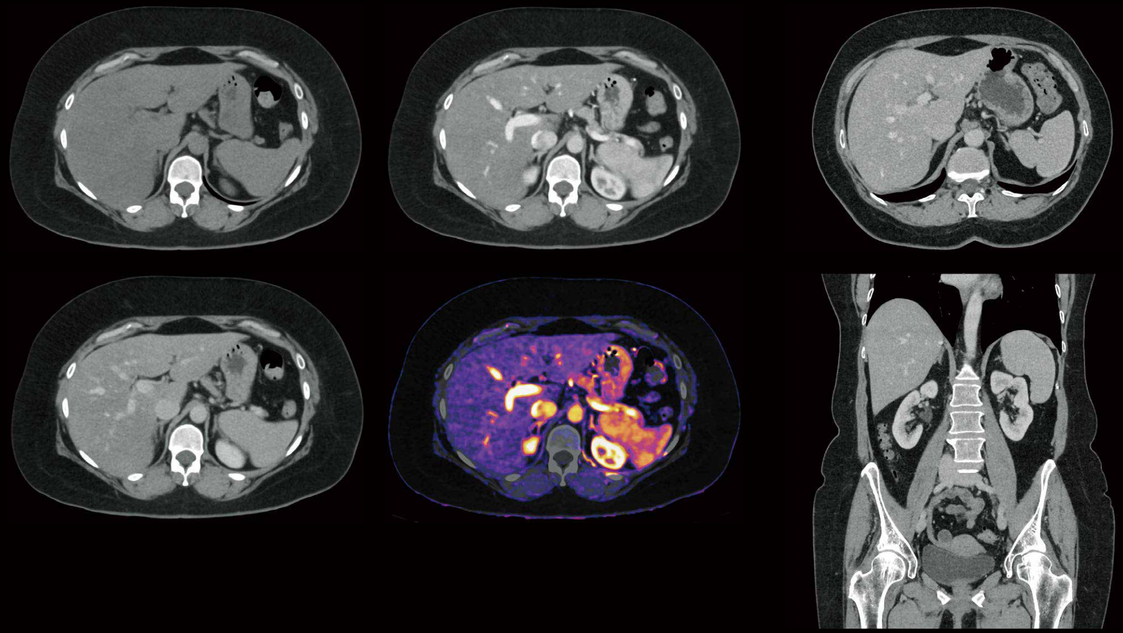
Clinical images

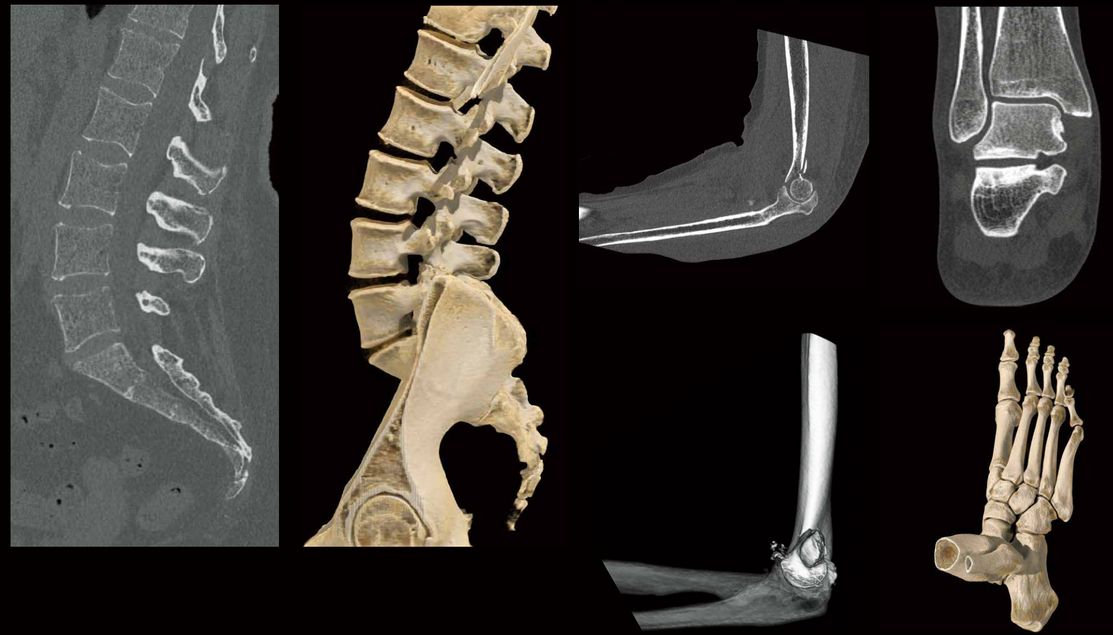






Clinical images





Main specifications		
Detector	PURE ViSION detector	80 rows, 0.5 mm
Gantry	Rotation time	0.35 s*1, 0.75 s
	Bore size	80 cm
	Bore depth	28.8 cm
Patient couch	Load	220 / 315 kg*2
	Max. scan range	150-200 cm*2
Reconstruction speed	Volume	5 s
	Helical	Max. 100 fps*1
Reconstruction	Iterative reconstruction	AIDR*3 3D Enhanced
	Deep Learning Reconstruction	AiCE*1
Installation	Power capacity	75 kVA
	Space	Min. 14.8 m^2 (short couch)

*1 Requires option license
*2 Depending on system configuration
*3 Adaptive Iterative Dose Reduction

Clinical results may vary due to clinical settings, patient preparation and other factors.

Due to local regulatory processes, some of the products included in the brochure may not be available in each country. Please contact your sales representative for the most current information.

The views and opinions expressed in this brochure are those of the clinicians and do not necessarily reflect the views of Canon Medical Systems Corporation.

Some images in this brochure were created on a Vitrea Advanced Visualization Workstation.

Altivity

Altivity is Canon Medical's new approach to AI innovation. It is a multimodality, overarching brand, which pulls together all the AI technology that Canon Medical provides under one name.

Aquilion Serve

CANON MEDICAL SYSTEMS CORPORATION
https://global.medical.canon

Design and specifications are subject to change without notice.
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Canon Medical Systems Corporation meets internationally recognized standards for Quality Management System ISO 9001, ISO 13485.
Canon Medical Systems Corporation meets the Environmental Management System standard ISO 14001.

Made For life