

**Canon**



***Aquilion* PRIME**



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*Aquilion* PRIME

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Aquilion™ PRIME provides complete clinical flexibility and industry-leading patient care, comfort, and workflow

— All in a compact, energy efficient installation

The Aquilion PRIME 80- and 160-slice models leverage innovative technologies developed for the Aquilion ONE™ 320-detector row system to deliver advanced iterative reconstruction and Ultra Helical data acquisition in routine clinical practice.





## Adaptive Diagnostics

Variable Helical Pitch, <sup>SURE</sup>Subtraction™ and <sup>SURE</sup>Cardio™ Prospective are unique Adaptive Diagnostic scan modes that simplify complex protocols and provide consistent quality results. Aquilion PRIME delivers total clinical flexibility.



## Adaptive Diagnostics



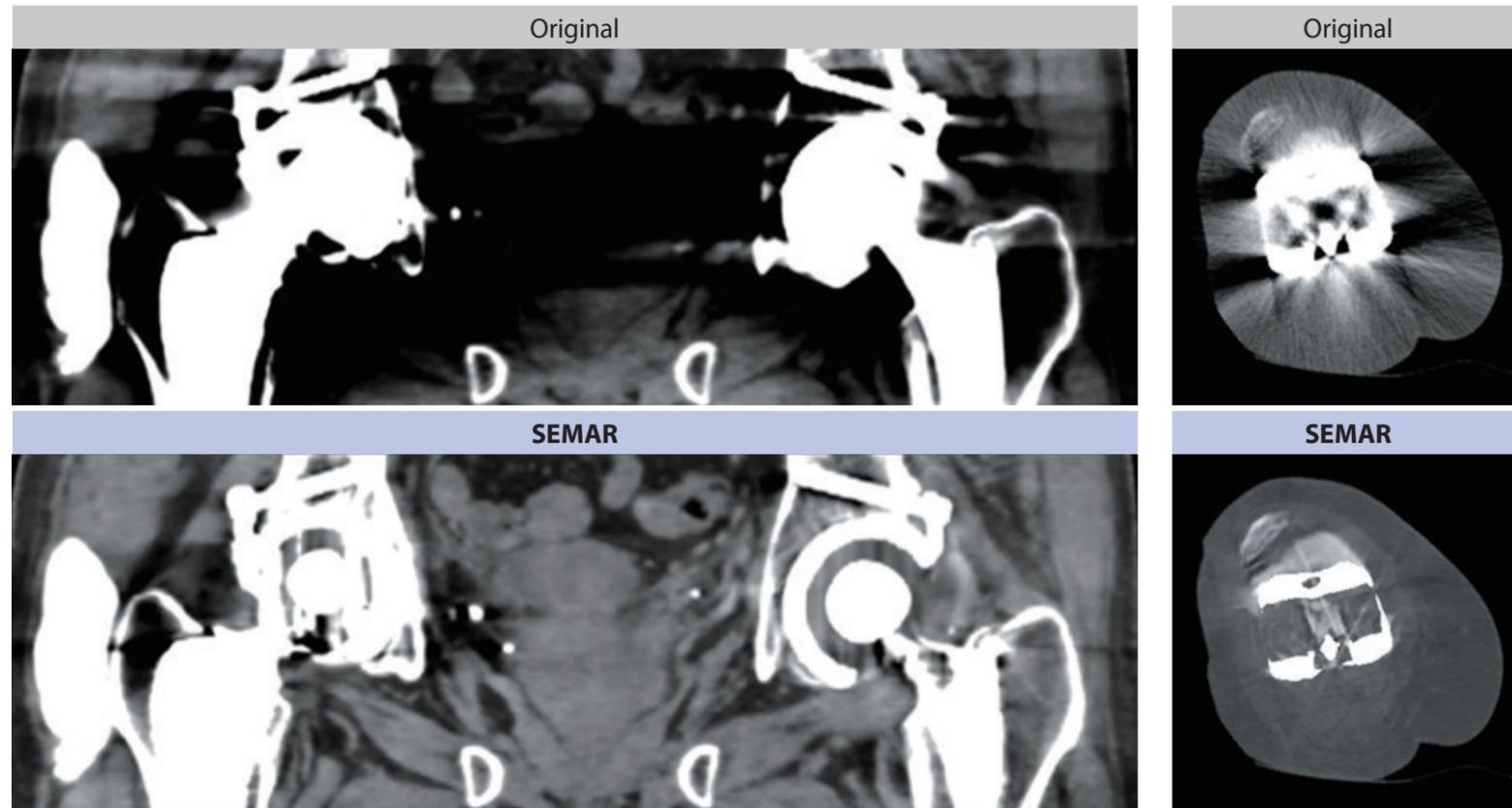
**//** With regard to the technology, we can't compare it with anything else as it is a new generation of equipment. **//**

Nigel Lewis  
Clinical Services Manager,  
Bradford Royal Infirmary, UK



## Single Energy Metal Artifact Reduction

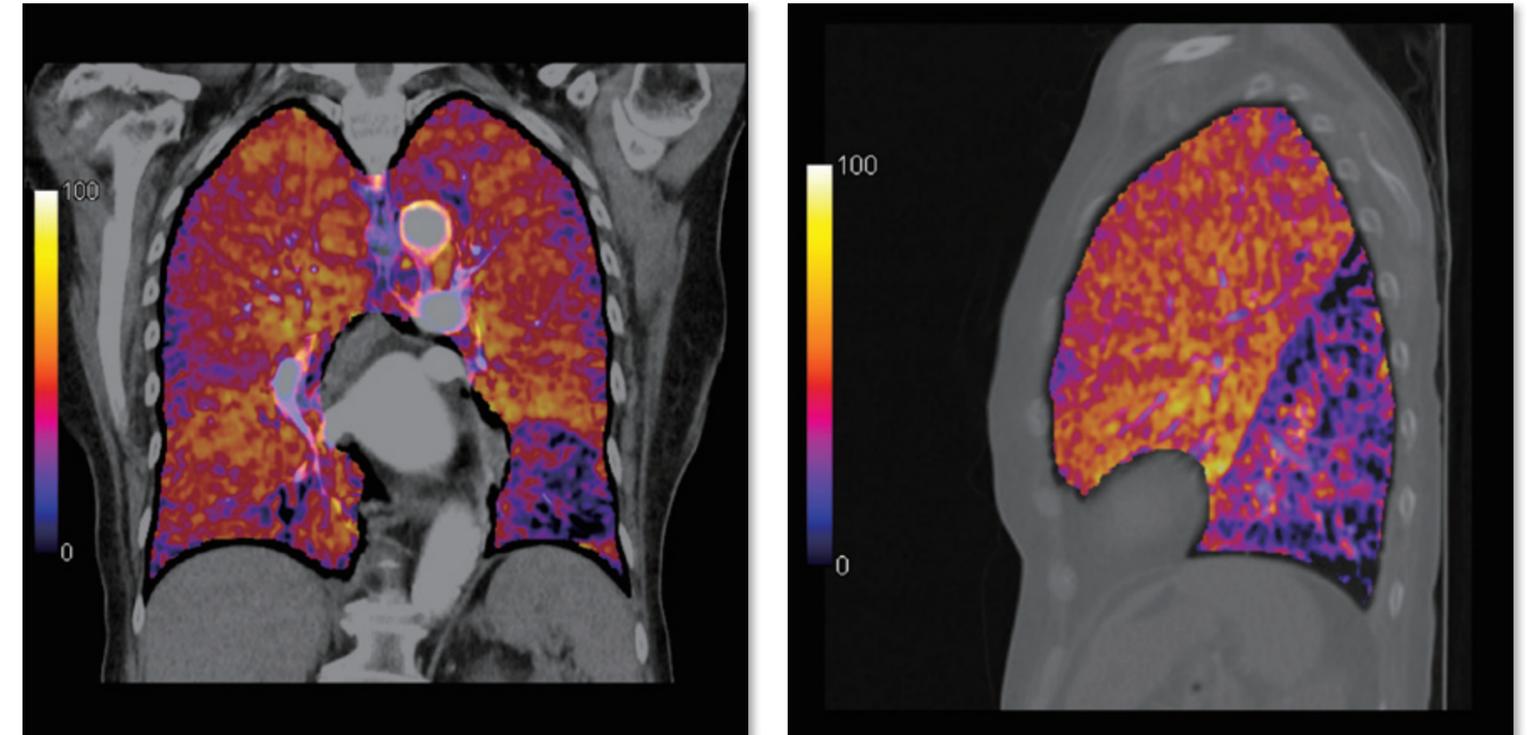
The innovative single-energy metal artifact reduction algorithm (SEMAR™) utilizes a sophisticated reconstruction technique to remove artifacts caused by metal and improves visualization of the implant, supporting bone, and adjacent soft tissues for clearer and more confident diagnosis.



## SURE<sup>Subtraction Lung</sup>

SURE<sup>Subtraction Lung</sup> is a perfect addition to our suite of Adaptive Diagnostics Clinical Solutions, which are designed to solve your clinical challenges with simplified workflow and to provide results of consistently high quality.

Thromboembolic disease is associated with significant risks, and patient outcomes are greatly improved by correct diagnosis and treatment. Routine diagnosis with blood flow maps enhances diagnostic capabilities to improve patient outcomes.



## vHP

Variable Helical Pitch (vHP) permits the table speed (pitch) to be seamlessly changed during a continuous acquisition. For the first time, vHP allows a combination of gated and non-gated acquisitions in a single scan, which is an enormous advantage in examinations such as the evaluation of aortic dissection and TAVR planning.

Selective gating of only the required segments dramatically reduces radiation dose and contrast medium usage. The entire acquisition is reconstructed as a single volume, making 3D and MPR review much faster and more accurate.

vHP demonstrates how Adaptive Diagnostics can provide solutions in challenging clinical scenarios, resulting in more efficient workflow for all medical staff and improved safety for patients.



Before

After

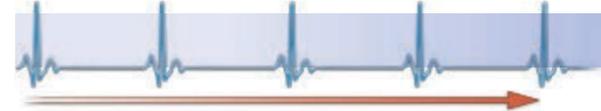
## SURE<sup>®</sup> Subtraction

With pixel-perfect subtraction of bone and calcium, SURE<sup>®</sup> Subtraction software provides unsurpassed visualization of vessels and contrast-enhanced tissue structures, providing all the information you need to make a diagnosis with confidence in the shortest time.

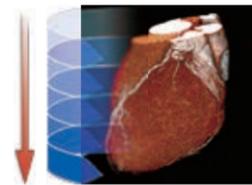
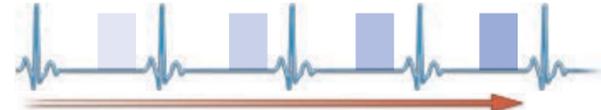
## SURE Cardio Prospective — Overcome the Unexpected

Aquilion PRIME performs coronary angiography using a prospectively triggered helical technique. This ensures superior uniformity in the z-axis compared to step-and-shoot techniques and shorter scan times. SURE Cardio Prospective includes proprietary arrhythmia rejection software, which recognizes irregular heart rhythms and controls scan exposure accordingly to ensure a diagnostic study every time, minimizing the need for repeat examinations.

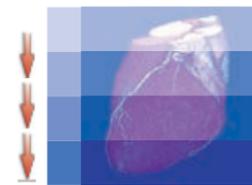
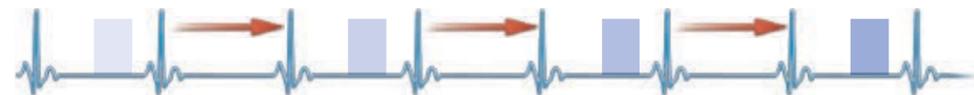
ECG-Gated Helical Scanning



SURE Cardio Prospective

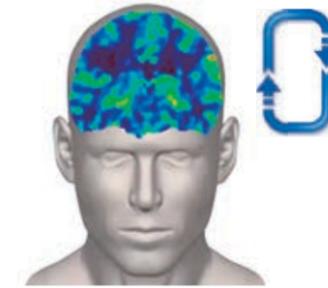


Step & Shoot Approach



## Shuttle Helical

Shuttle Helical offers a unique combination of helical and volume acquisition techniques. This combination eliminates the need for over-ranging associated with conventional helical shuttle techniques, resulting in better temporal resolution and reduced patient dose.



## Dual Energy

Helical Dual Energy scans provide advanced tissue characterization as well as multi-energy viewing, iodine mapping, and subtraction.

Aquilion PRIME performs Dual Energy analysis through a unique organ-modulated kV-switching technique synchronized with tube current modulation, ensuring dose-neutral acquisition.

## 3D CT Fluoroscopy

Volumetric 3D and 2D real-time CT fluoroscopy permit even the most difficult interventional procedures to be performed with greater ease and improved safety for you and your patients.

3D CT Fluoro features real-time display to monitor needle placement as it happens, a suite of dedicated biopsy planning tools, and oblique and double oblique needle tracking in 3D fluoroscopy mode.

With integrated AIDR 3D, CT interventions are safer and more accurate than ever before.





## Minimum Energy Minimum Space

The Aquilion PRIME has been thoughtfully engineered to meet today's demanding economic challenges.



## Efficient Design for Lower Costs and an Improved Work Environment

With a gantry design focussing on minimal installation space, reduced heat generation and less power consumption, Aquilion PRIME provides significant cost savings. With less noise from the gantry and air-conditioning a comfortable working environment has been created for a more pleasant patient experience.

## Evolution Gantry Scan Control

Aquilion PRIME is provided with X-ray exposure controls on either side of the gantry and a scan parameter confirmation display on the iStation monitor. This allows in-room control and contributes to improved scan outcomes, especially for young children and patients in medical or emotional distress.

## Commitment to the Environment

Aquilion PRIME has been engineered to meet our Corporation's specifications for environmentally conscious products. Improvements have been made by:

- reduction in overall weight
- less acoustic noise generation
- smaller installation space
- 50% reduction in heat generation

With further reductions in power requirements for system operation and air conditioning, Aquilion PRIME has a significantly smaller carbon footprint and less long-term environmental impact than previous CT systems.





## Integrated Dose Reduction

Dose-saving technologies which are fully integrated into the scan sequence, taking the guesswork out of optimizing patient dose.

## Integrated Dose Reduction — That Works

- Iterative reconstruction

- ✓ Noise reduction

- AIDR 3D

- ✓ Noise reduction

- ✓ Protocol integration

- ✓ Prospective mA reduction

- ✓ Ease of use

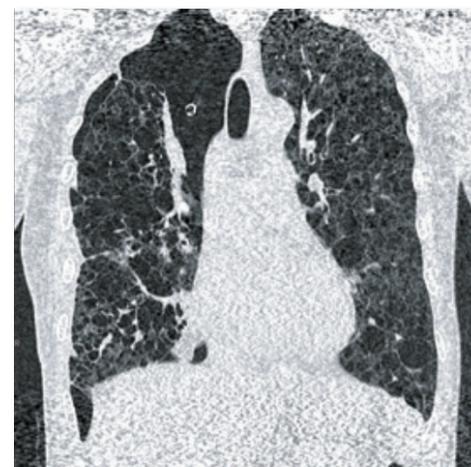
- ✓ Assured image quality

- ✓ Reconstruction speed of up to 60 images per second (ips)

- ✓ Applicable to every scan



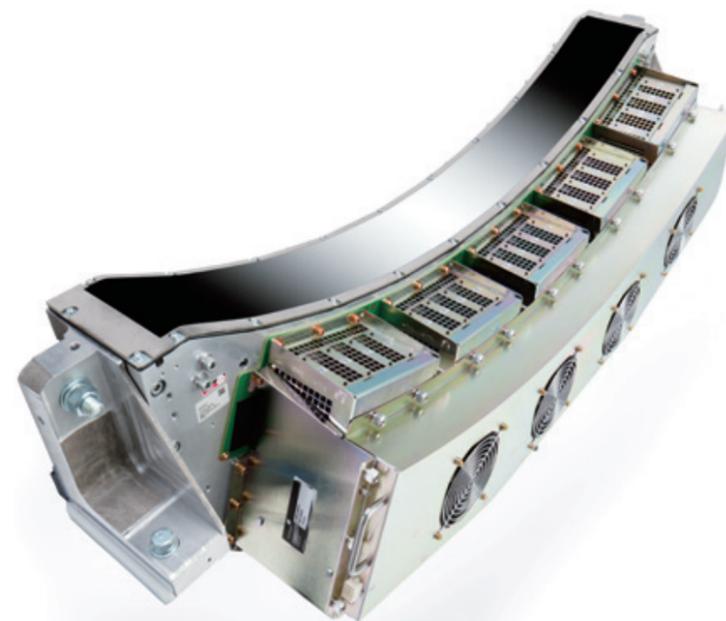
Adaptive Iterative Dose Reduction 3D (AIDR 3D) is fully integrated into the automatic exposure control software, taking the guesswork out of optimizing patient dose. ALARA is automatically achieved for each and every patient without compromising image quality or workflow.



without AIDR 3D



with AIDR 3D



## PUREVISION Detector

### Safer Imaging — Clearer Outcomes

Through lower radiation doses and low-kVp imaging, the new PUREVISION detector offers peace of mind in the optimization of radiation and contrast dose protocols, permitting physicians to perform safer CT examinations for all patients.

Breakthrough innovations in manufacturing processes and Data Acquisition System (DAS) design have resulted in a detector with a 40% increase in light output and a 28% decrease in electronic noise, making PUREVISION one of the most efficient detectors commercially available and still the only detector featuring true 0.5 mm resolution.



**Streamlined Workflow**

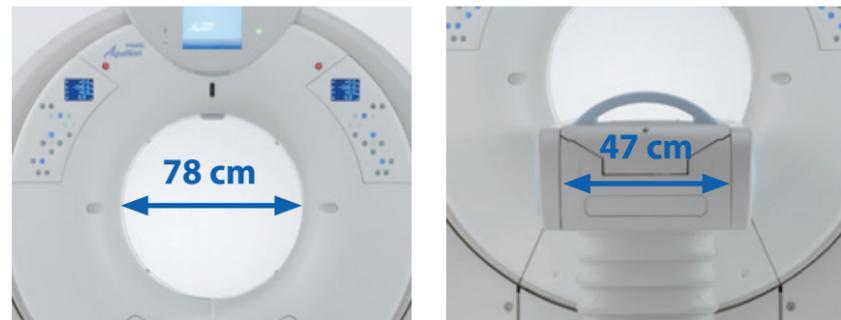
Streamlined workflow from patient positioning to diagnosis.  
Automated, and Instantaneous

## Evolution Gantry Design

The Aquilion PRIME Evolution Gantry features design innovations to improve the scanning experience for patients as well as operability and safety for you.

Tech Assist Lateral Slide, allows you to position patients with unparalleled ease, reducing physical strain.

The wide 78 cm open bore and 47 cm wide couch ensure comfortable scanning for even the largest patients. This design also provides physicians with superior patient access during interventional procedures.



**“** At Fairview Southdale Hospital, I am part of the Safe Patient Handling Committee, and we look for ways of eliminating employee injury and keeping our patients safe. The new technology, Tech Assist Lateral Slide, has helped our employees by not having to move patients as much. Now they can just move the table, and it’s much more comfortable for the patient. **”**

Judy Sager

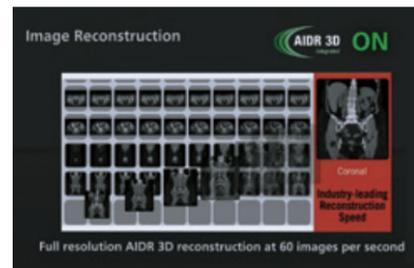
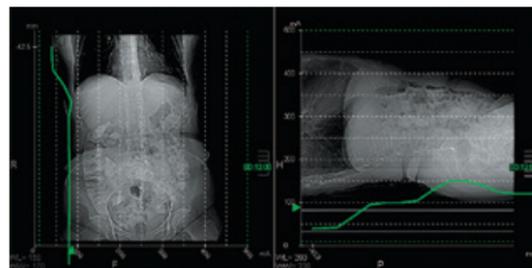
Director of Imaging, Fairview Southdale  
Hospital, Minnesota, USA





## Streamlined Workflow from Setup to Diagnosis

- Fast and safe patient positioning with Tech Assist Lateral Slide
- Real-time dual scanogram
- Scan plan
- Scan start
- InstaView™ instantaneous image reconstruction and review
- Simultaneous full resolution image reconstruction at 60 images per second with AIDR 3D



## 80 Detector Row Ultra Helical — With Gantry Tilt

Routine 80-row Ultra Helical acquisition is 43% faster than conventional 64-row helical systems. This increased acquisition speed results in shorter scan times, reduced contrast usage and costs, and improved image quality due to decreased movement artifacts.

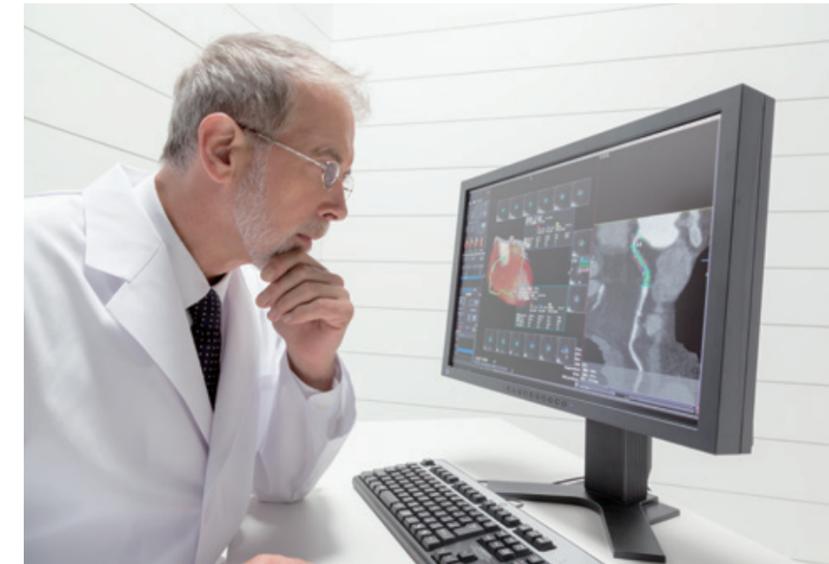
Aquilion PRIME allows a full  $\pm 30$  degrees of gantry tilt for helical acquisition, which assists in patient positioning and minimizes dose to radiosensitive organs such as the eyes.

Our unique Double Slice technology improves spatial resolution and image quality by providing 160 slices per rotation with no dose penalty.



## HybridView

Hybrid reconstruction kernels save time and reduce storage requirements. These newly introduced iterative reconstruction algorithms ensure fine lung detail and excellent soft tissue resolution in the same image. Reading times are shortened because you only need to concentrate on a single series to make a definitive diagnosis.

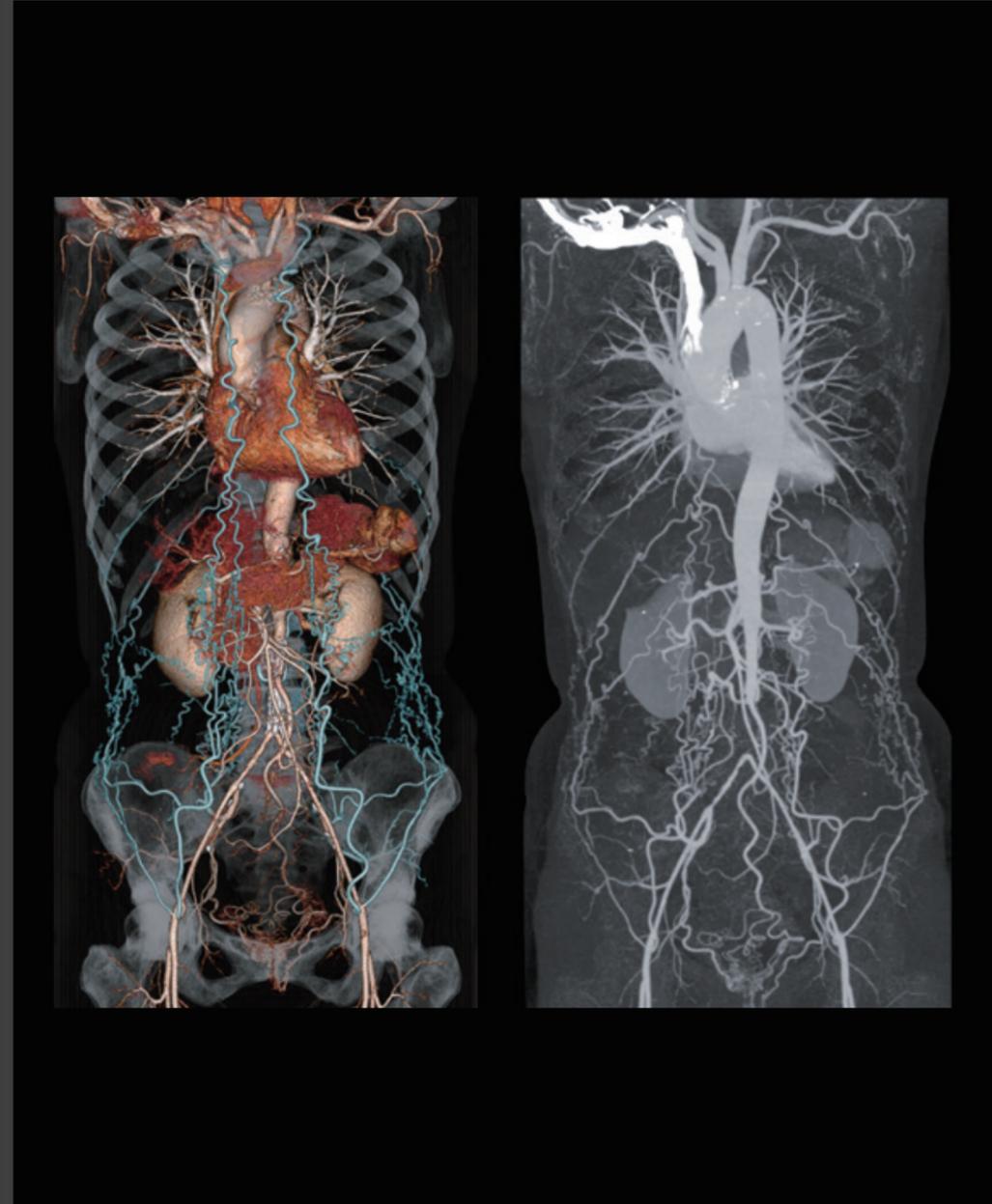
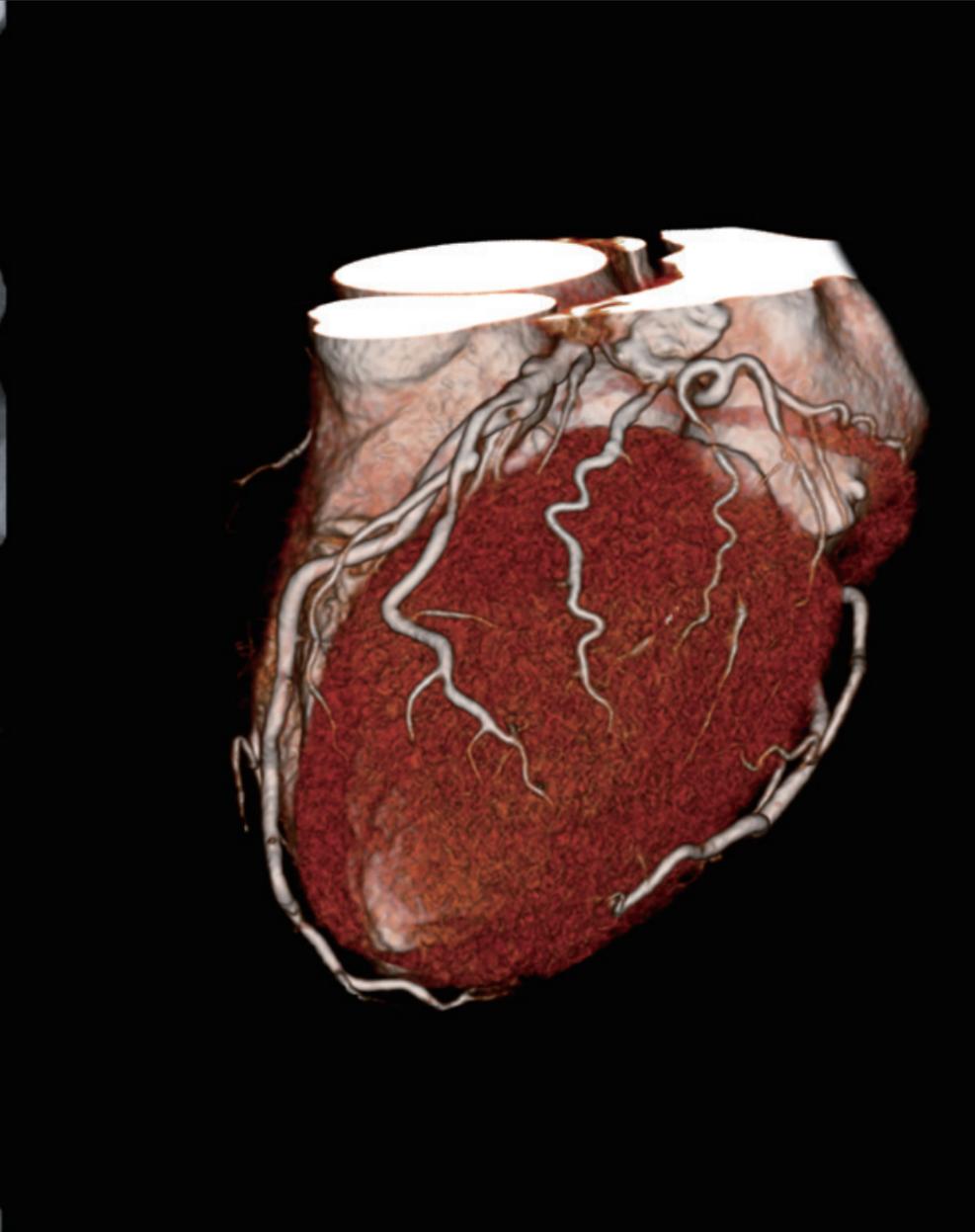
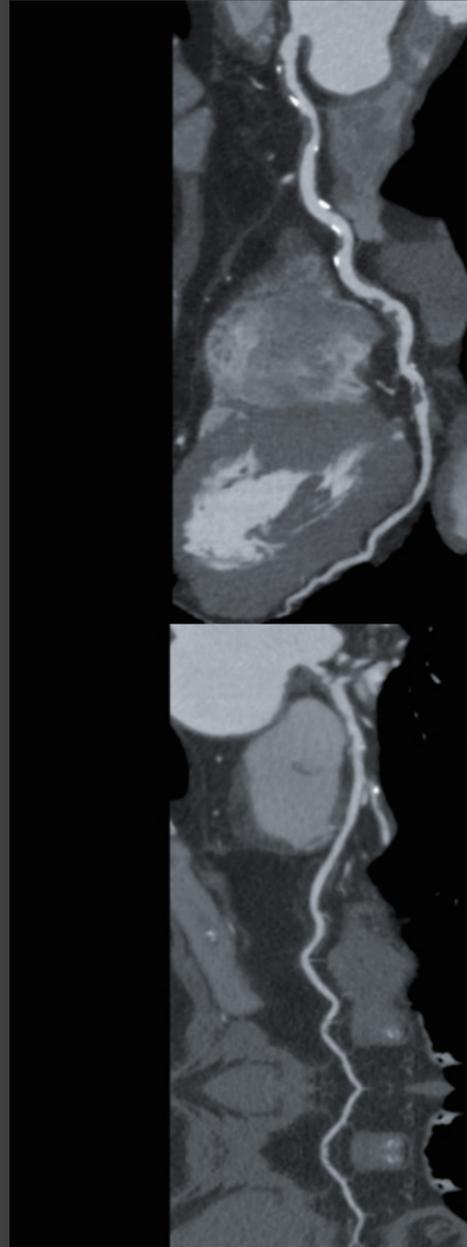
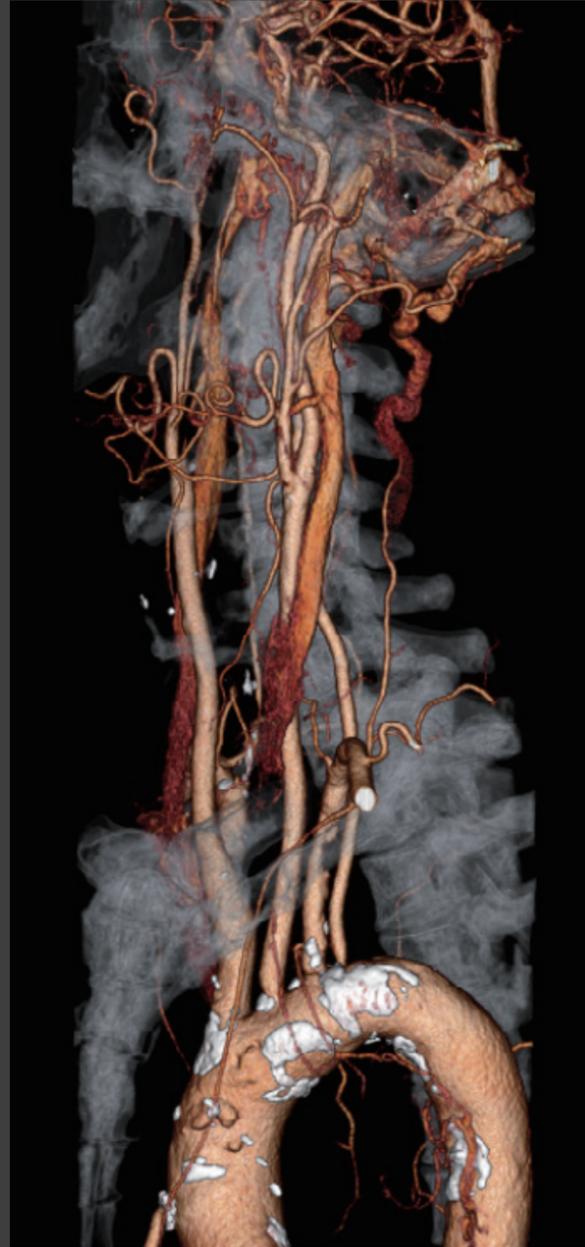
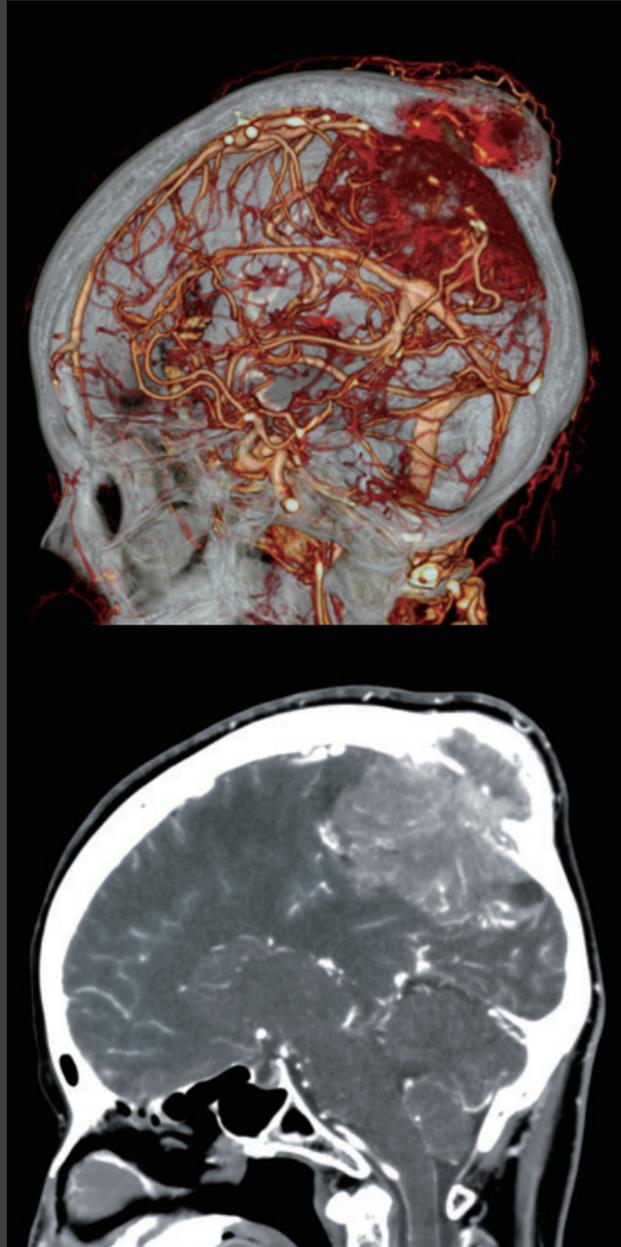


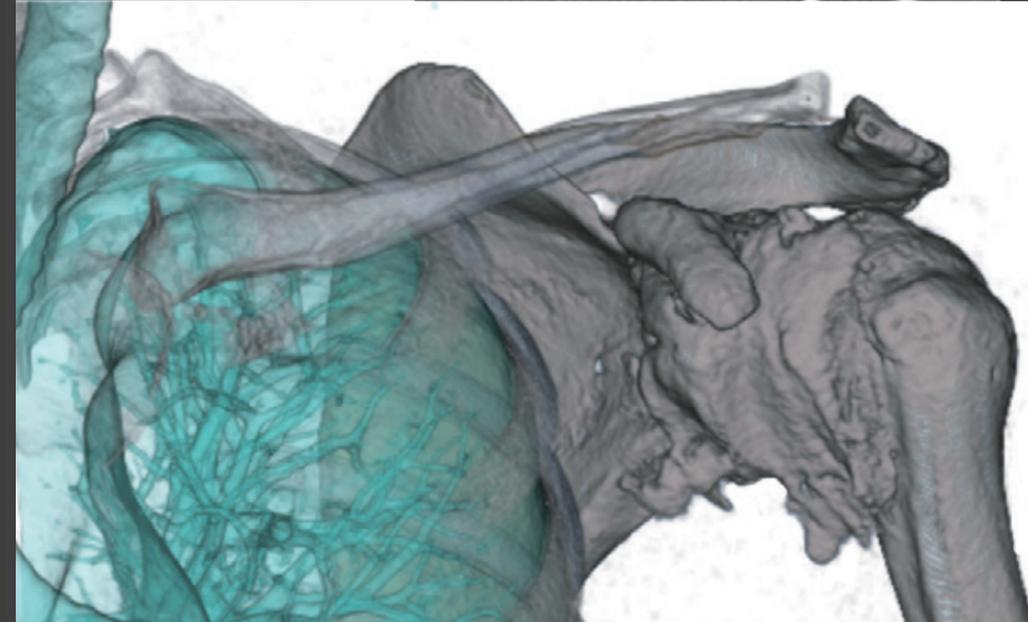
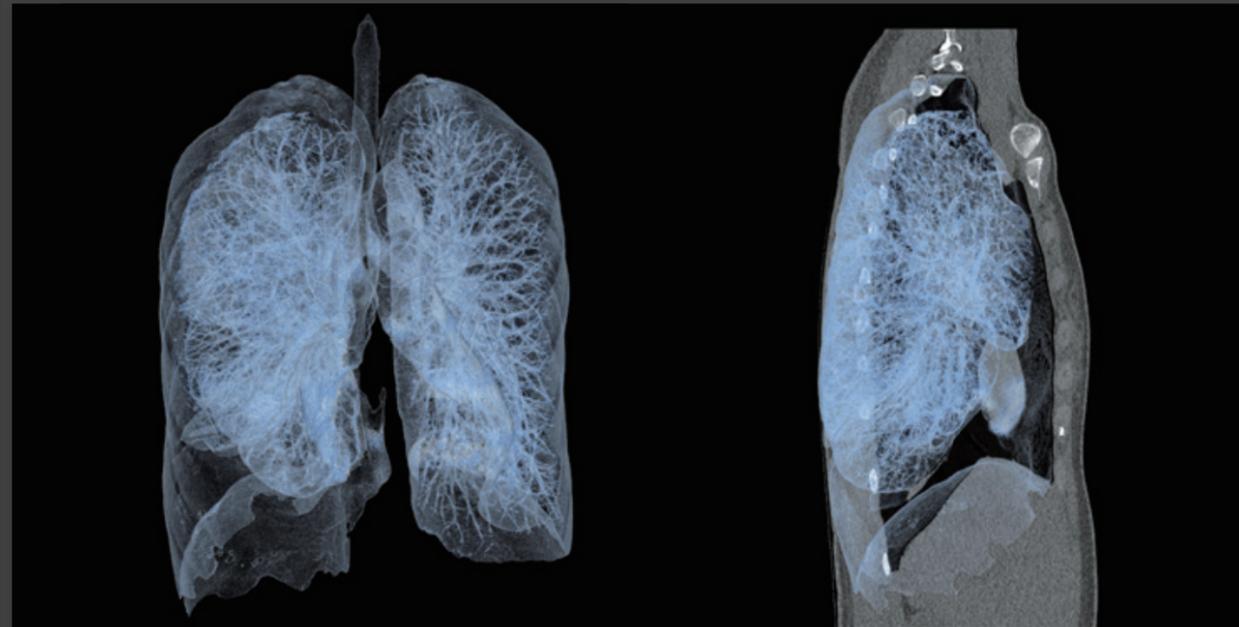
## ViTAL Images Advanced Visualization

For more than 20 years, Vital has supported clinicians' imaging requirements with powerful advanced visualization and data management solutions, including applications for cardiovascular, neurovascular, and oncology studies.

## Universal Viewing

Built from the ground up, VitreaView™ addresses the needs of physicians who want uniform access through a simple intuitive user interface for all patient imaging. It offers secure integrated access to imaging through the EMR, EHR, or HIE.







Clinical Flexibility,  
Industry Leading Patient Care,  
Comfort and Workflow

**Disclaimer:** Any reference to X-ray exposure is intended as a reference guideline only. The guidelines in this document do not substitute for the judgment of a healthcare provider. Each scan requires medical judgment by the healthcare provider about exposing the patient to ionizing radiation. In clinical practice, the use of the AIDR 3D features may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.

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

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CANON MEDICAL SYSTEMS CORPORATION

<https://global.medical.canon>

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*Made For life*