

Canon



AquilionTM Prime SP

Complete Clinical Capability

80 detector row Ultra Helical CT

Complete Clinical Capability





Expand your clinical capability Enhance your productivity Capitalize on your investment

From fast patient throughput to robust cardiac scanning and new diagnostic capabilities, the new Aquilion Prime SP is a CT system of choice for all your imaging needs.

Built with premium technology migrated straight from our high-end CT, Aquilion Prime SP empowers your facility to handle all patients from pediatric to bariatric, even the most challenging cases, while providing all staff with a fast and efficient solution to make their work easy.





Expand your clinical capability

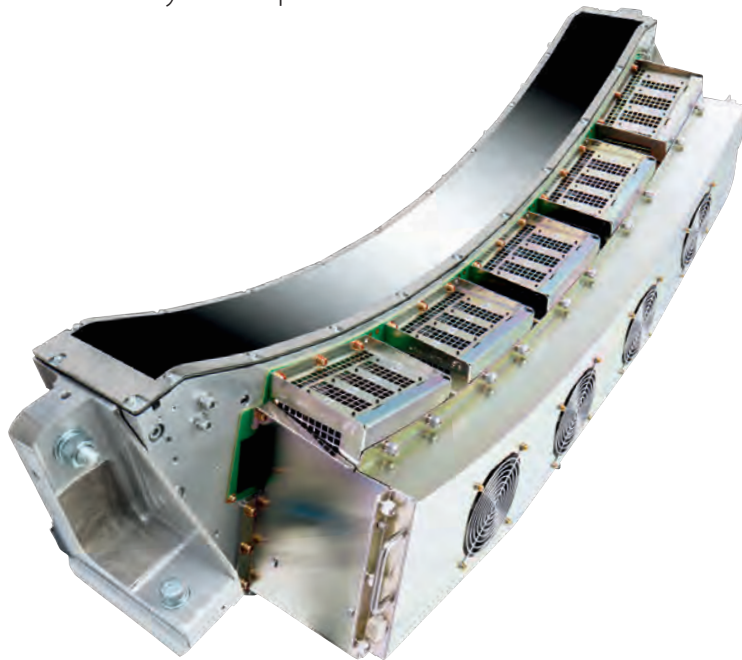
From complex to routine, Aquilion Prime SP is designed to keep pace with your work list, with a better balance between image quality and dose.

An expansive suite of protocol integrated application solutions enables the seamless and rapid adoption of advanced CT procedures into your clinical practice. Aquilion Prime SP can automate complex exams while delivering high-quality data.

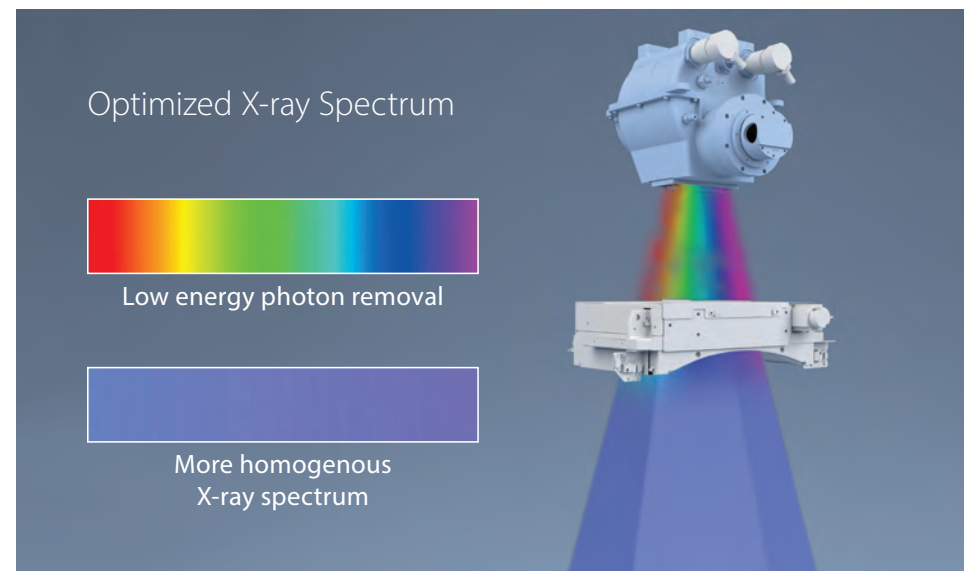
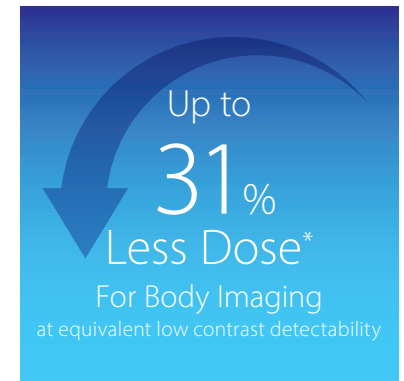
A better balance between image quality and dose – from the youngest to the largest

PUREVISION Optics provides significantly improved imaging efficiency from photon generation to detection. An optimized beam spectrum combined with a more efficient detector results in a better balance between image quality and dose.

PUREVISION Optics transforms routine CT imaging to new levels of image detail and low contrast detectability with up to 31% less dose.*




PUREVISION detector with industry-leading 0.5 mm element size delivers sharp isotropic images with a boost of 40% more light output.



Patient-specific beam shaping filters provide an optimized X-ray spectrum and more homogenous distribution, improving low contrast detectability by up to 22% for body imaging and up to 19% for brain imaging as shown by a model observer study.*


*A non-prewhitening model observer study was conducted comparing Aquilion Prime SP to Aquilion PRIME. Maximum dose reduction values were established by comparing low contrast detectability under baseline conditions for abdominal and brain examination based on the detectability index performance metric, a measure of signal to noise that takes into account the magnitude and texture of both the signal and the noise for a given LCD task.

Brain Imaging
With up to
19%
Better*



Low Contrast Detectability
at equivalent dose

Body Imaging
With up to
22%
Better*



Low Contrast Detectability
at equivalent dose



Adaptive Diagnostics

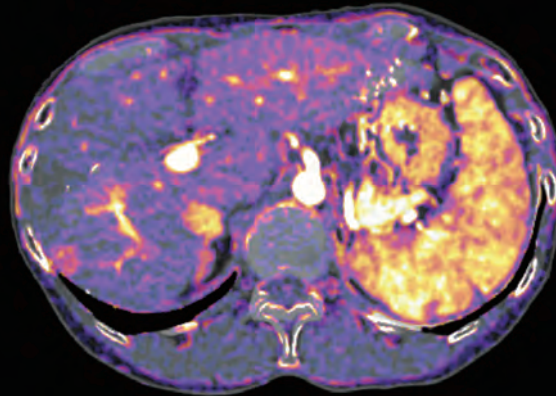
- ✓ Patient-centric imaging solutions
- ✓ Simplifying complex protocols
- ✓ Providing consistent quality results

SURESubtraction™ Angio*



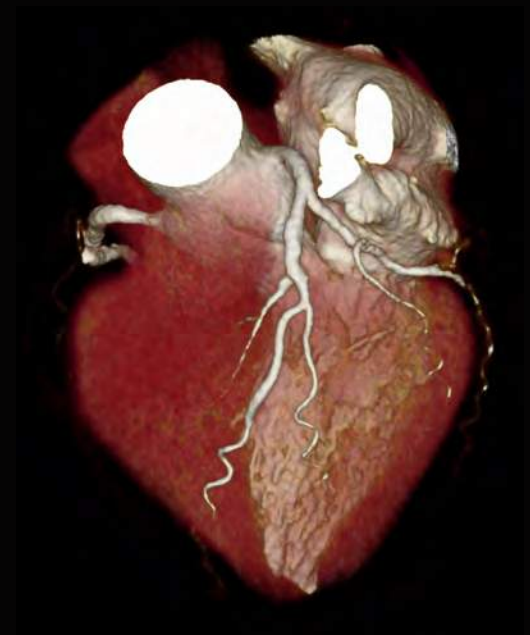
Improved visualization in CTA with true subtraction of bone and calcification.

SURESubtraction Iodine Mapping*



Enhance your diagnostic capabilities with color iodine maps provided automatically for any multiphase abdominal protocol.

SURECardio™ Prospective*

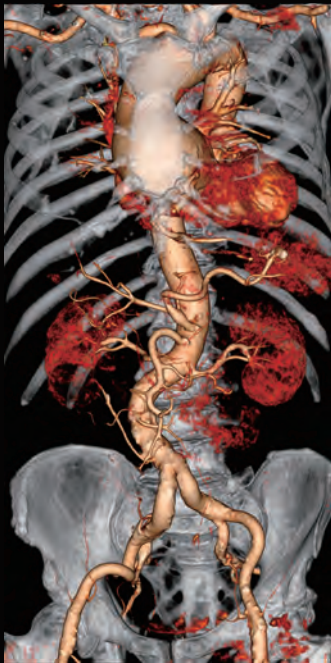


SURECardio Prospective reacts instantly to a change in the patient's heart rate ensuring diagnostic image quality even in patients with arrhythmia.

The right application for a confident diagnosis

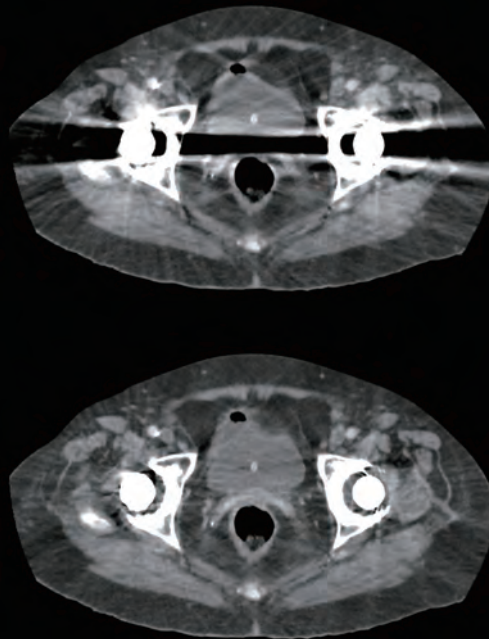
Automated, reliable and robust

vHP* 3 Phase
(Three-phase variable Helical Pitch)



Improved three exams in one with vHP3.

SEMAR™
(Single Energy Metal Artifact Reduction)



Improve visualization of bone and soft tissue with SEMAR.

Dual Energy*

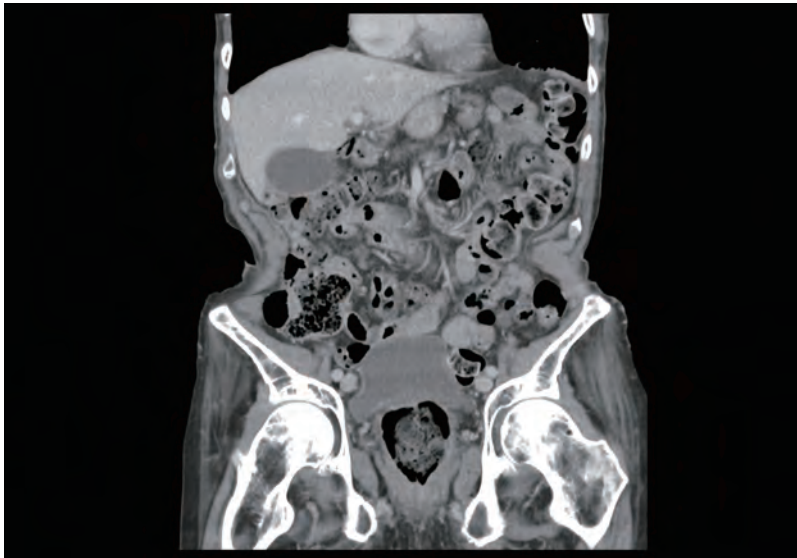


Tissue visualization with easy-to-use Dual Energy scanning.

Clinical capabilities you can rely on

A better balance between image quality and dose with every examination defines CT imaging on the Aquilion Prime SP.

AIDR* 3D Enhanced

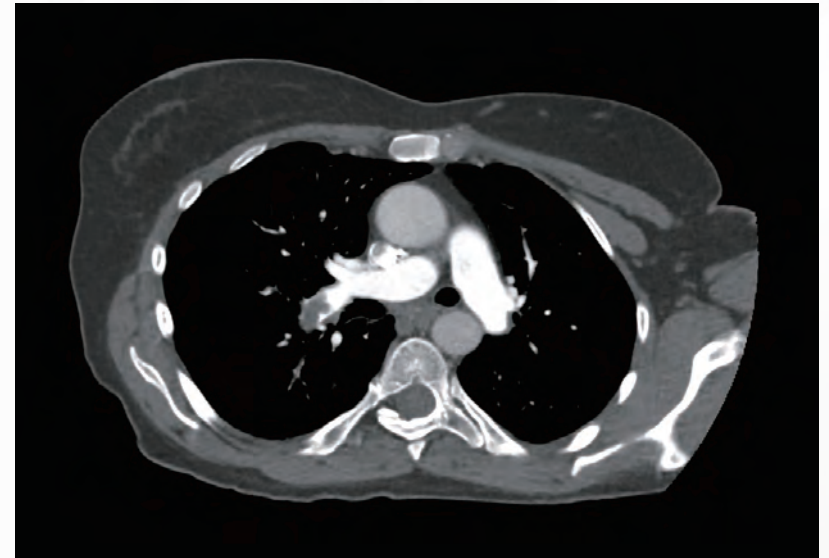


A better balance between image quality and dose

The protocol integration of exposure controls and AIDR 3D Enhanced iterative reconstruction solution automatically ensures excellent image detail at significant dose savings for the patient.

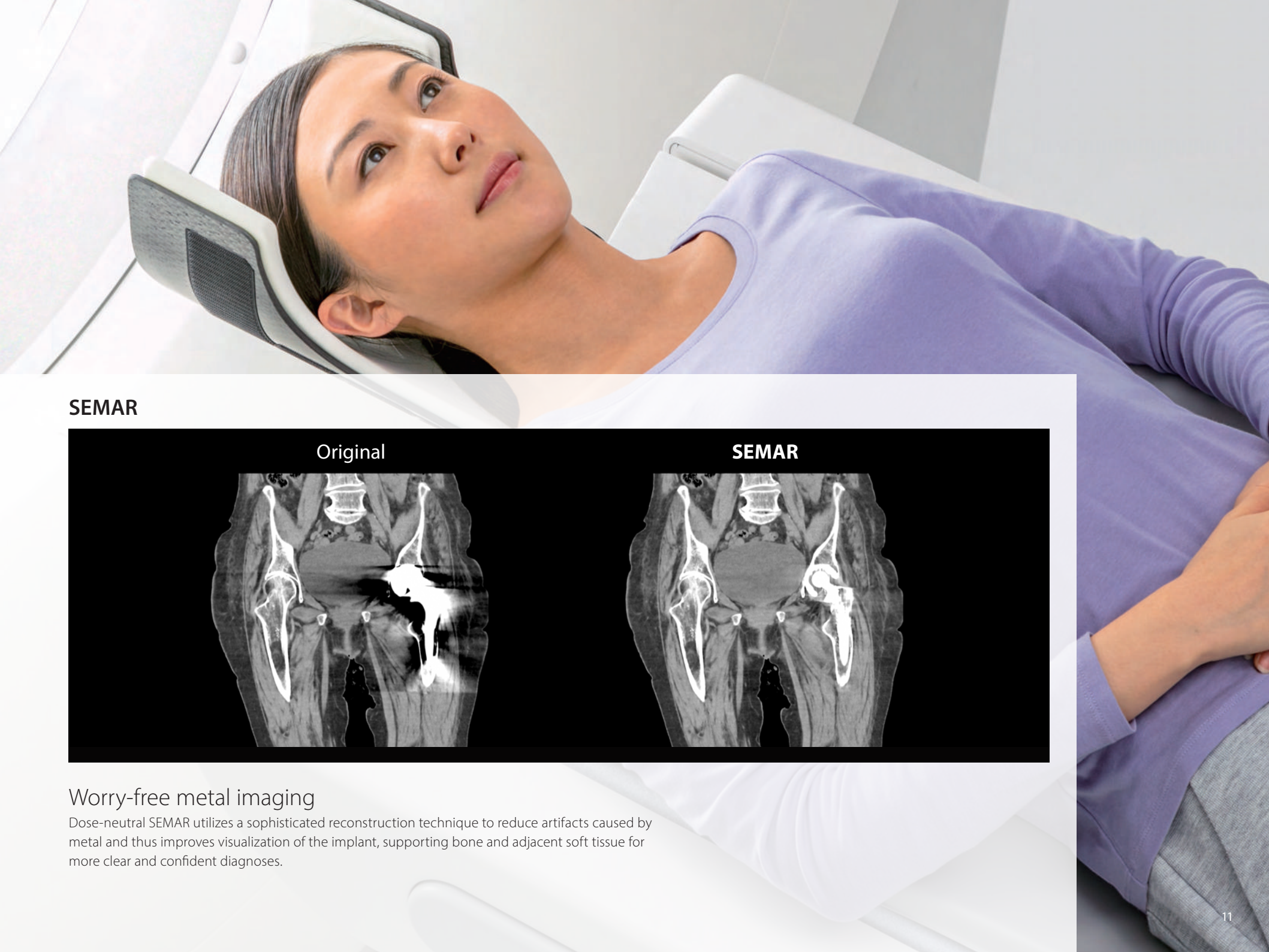
*Adaptive Iterative Dose Reduction

SURE^{kV}



Kidney-friendly examinations

Aquilion Prime SP allows for automated kV selection based on the patient's size and the clinical task selected. As part of our SURE^{Exposure}™ technology, this function has the potential to help optimize the use of iodine contrast, may help decrease cost and patient risk.



SEMAR



Worry-free metal imaging

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 tissue for more clear and confident diagnoses.

Robust cardiac CT examinations – automated, adaptive and easy

^{SURE}Cardio Prospective is a unique application that dramatically lowers patient dose during coronary CTA exams. This advanced software adapts to the patient's heart rate adjusting scan parameter (pitch) and exposure window settings.



Prospectively gated ultra helical cardiac CTA

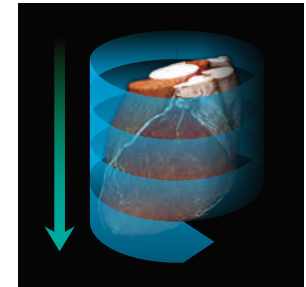
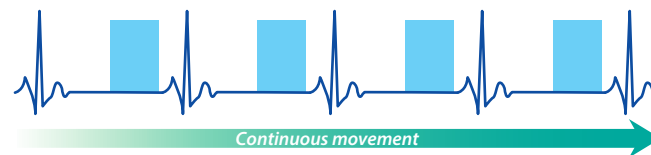


Prospectively gated ultra helical

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

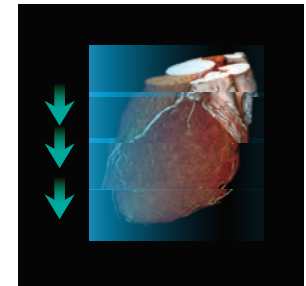
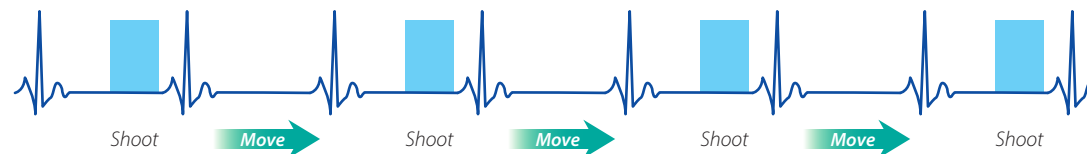
Our advantage

^{SURE}Cardio Prospective: Faster scan for reduced contrast requirements and superior temporal uniformity.



Others

Step & Shoot: Longer scan time and temporally misaligned segments.



Real-time adaptive exposure

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

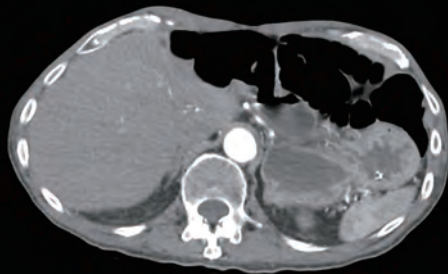


*Option

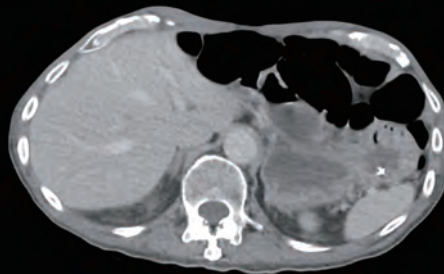
Oncology imaging – from detection to treatment response

Aquilion Prime SP's accessible gantry design, 4D respiratory-gated acquisition* capability and powerful advanced imaging applications deliver an ideal oncology solution from detection and planning to intervention and treatment response verification.

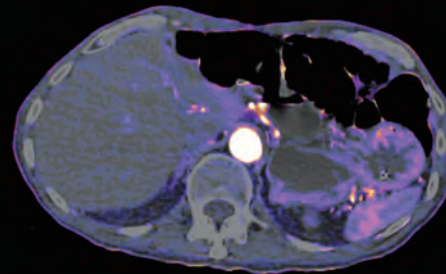
Arterial phase



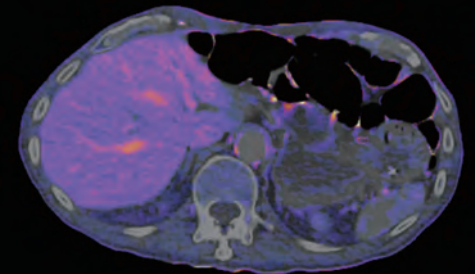
Venous phase



Arterial – venous



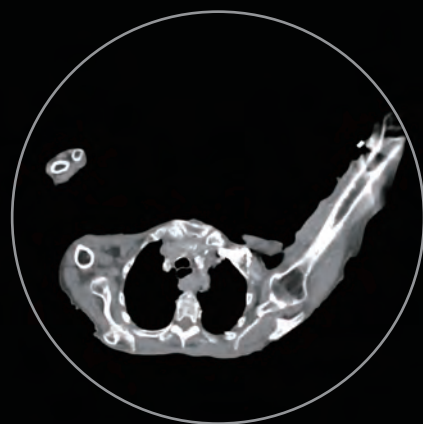
Venous – arterial



Outstanding lesion conspicuity with
SURESubtraction's unique differential iodine enhancement.



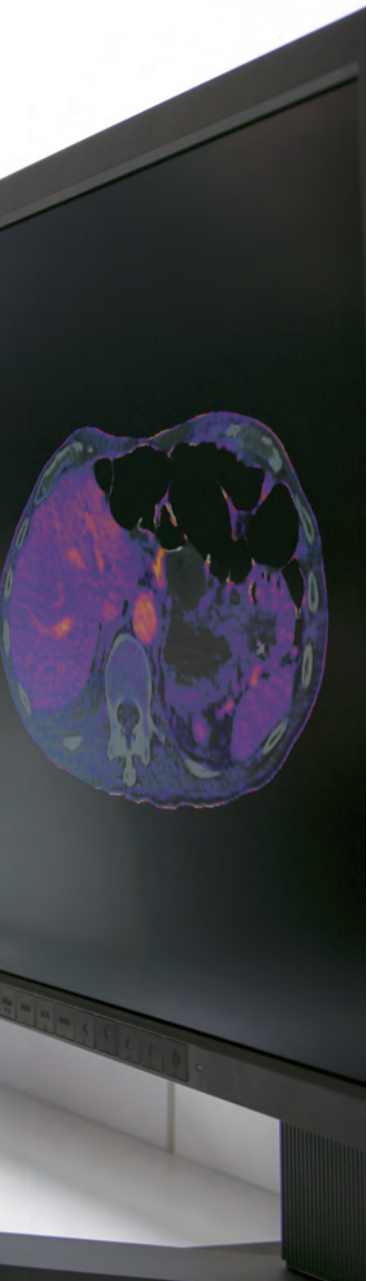
Easy patient access with 78 cm large bore and 70 cm extended field-of-view* (FOV).



Workflow-automated volumetric CT Fluoroscopy* with iterative reconstruction.

*Option





Enhance your productivity

From new graduates to experienced technologists, the Aquilion Prime SP's integrated workflow solutions render even the most complex of tasks easy. Through exposure control automation, vHP3 scanning and automatic image processing, Aquilion Prime SP will be a powerful part of your imaging team.

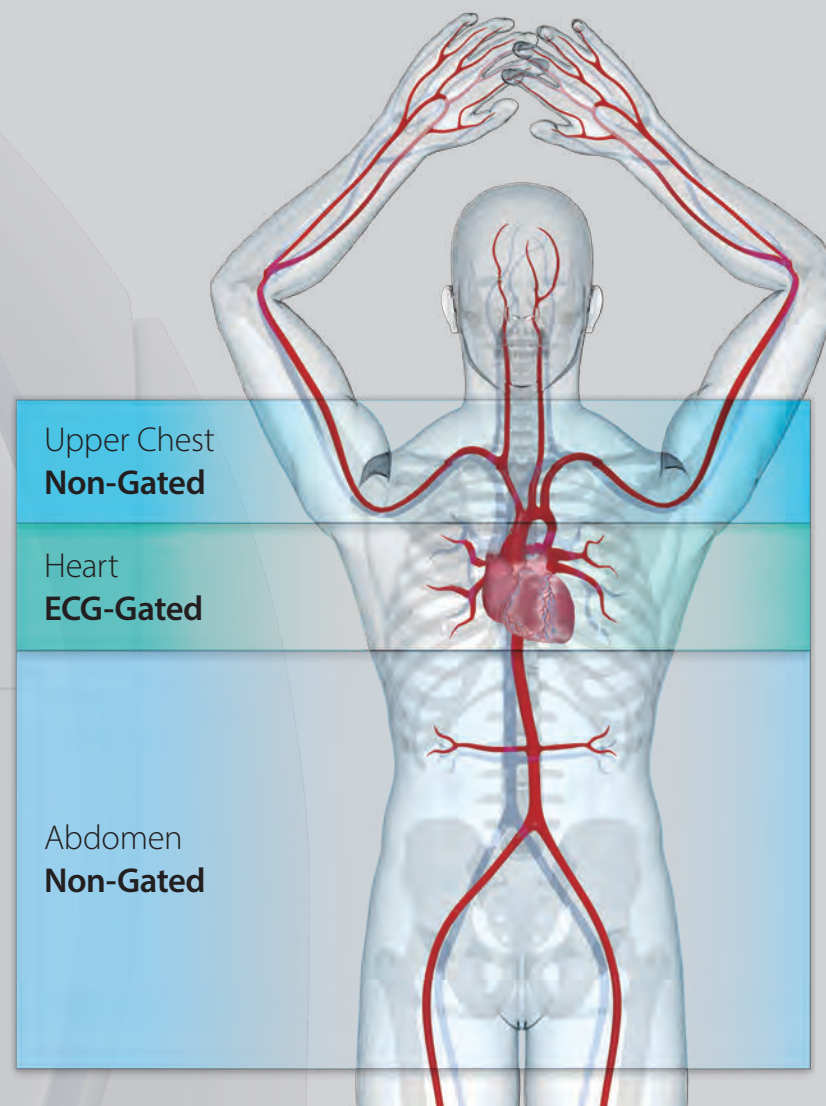
Faster, safer and optimal patient imaging

The all new vHP3*, allows three examinations to be performed in a single acquisition, seamlessly transitioning between scan parameter settings that have been optimized for each body region.

Providing the flexibility to vary between ECG gating, scan pitch and exposure control in a single uninterrupted scan, enables patient exams to be performed faster, with the potential for less contrast media and lower radiation dose.

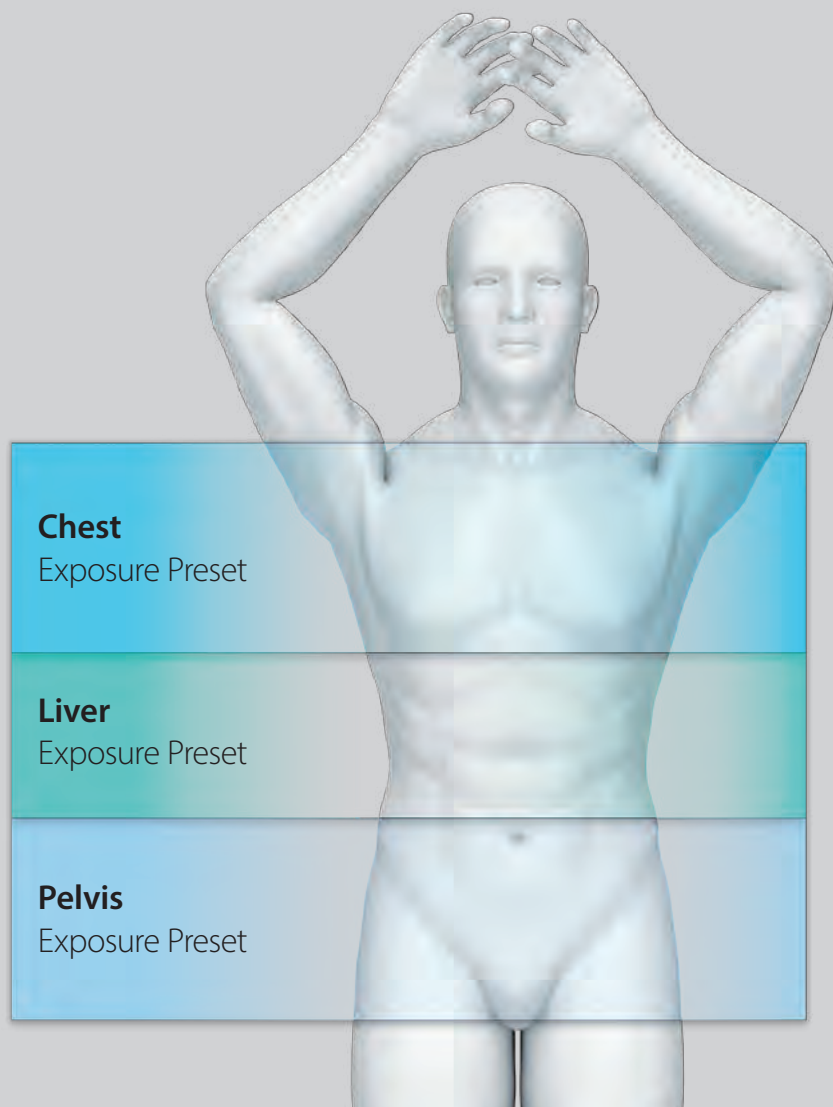
vHP3's adaptive reconstruction engine provides high fidelity images through the entire scan range, overcoming the challenges of image reconstruction through the transition zones. With three scans in one, the single series reconstruction enables several studies to be interpreted simultaneously for faster reading.

vHP 3 Phase – Optimal Gating Cardiovascular scan



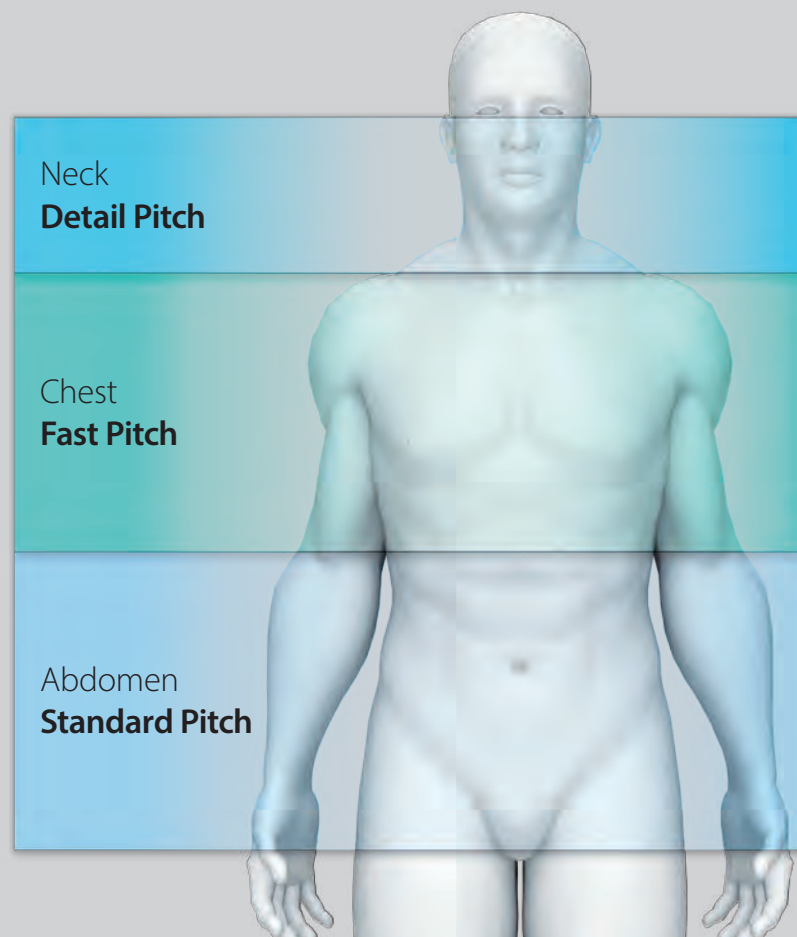
vHP 3 Phase – Optimal Exposure

Chest, Abdomen, Pelvis



vHP 3 Phase – Optimal Speed

Trauma scan



*Option

Power assisted patient positioning

When every second counts, you need imaging equipment to work for you. The Aquilion Prime SP Tech Assist Lateral Slide* expedites the setup of patients and reduces the heavy lifting required by the attending care team.

- ✓ Faster patient setup
- ✓ Safer for technologists
- ✓ Comfortable for patients
- ✓ Accurate iso-center scanning



^{SURE}Position remotely adjusts the patient to the exact iso-center ensuring best practice in CT accuracy – without the need for repeating the scanogram image.

*Option

Workflow that makes you perform

Protocol integrated automation at every step empowers even a novice operator with the skills to perform brilliantly the first time – every time.



Select Protocol

Automated

**Advanced
Visualization**

Scan Planning

Integrated

**Patient Dose
Management**

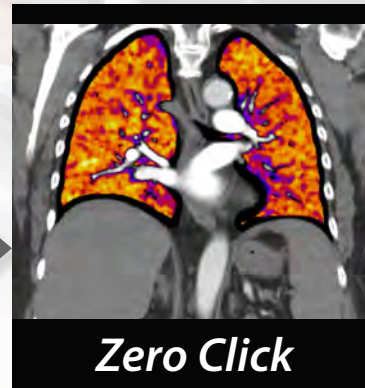
kVp, mA, AIDR 3D,
Dose reduction

Scan

FAST

Results

Real-time
reconstruction







Capitalize on your investment

From installation to department expansion, the Aquilion Prime SP is the right economic choice. Designed to be more than efficient, Aquilion Prime SP checks all the boxes for a CT system capable of fast throughput, patient and technologist safety and a platform to expand any department's imaging portfolio for improved productivity.

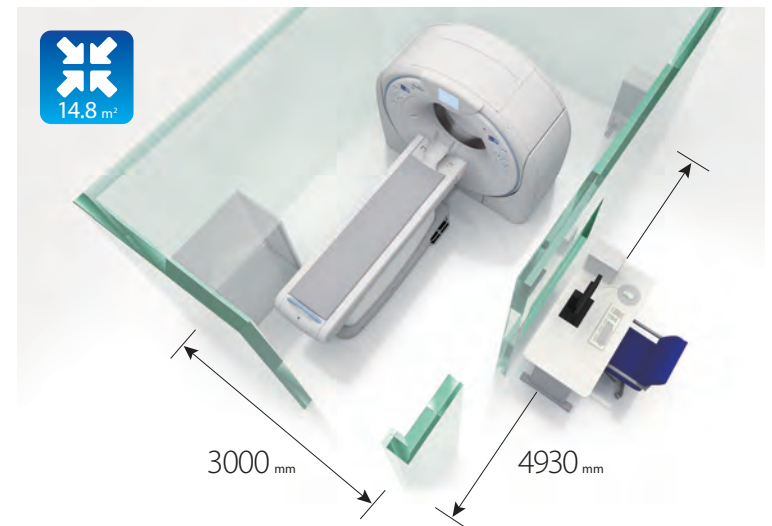
Increased productivity, lower costs, enhanced diagnostic performance

Aquilion Prime SP is a total solution for all your clinical demands. A full host of innovative design features ensure outstanding patient accessibility, efficient workflow and low running costs. A wide range of robust imaging applications and workflow automation features provide exceptional diagnostic precision and clinical versatility.





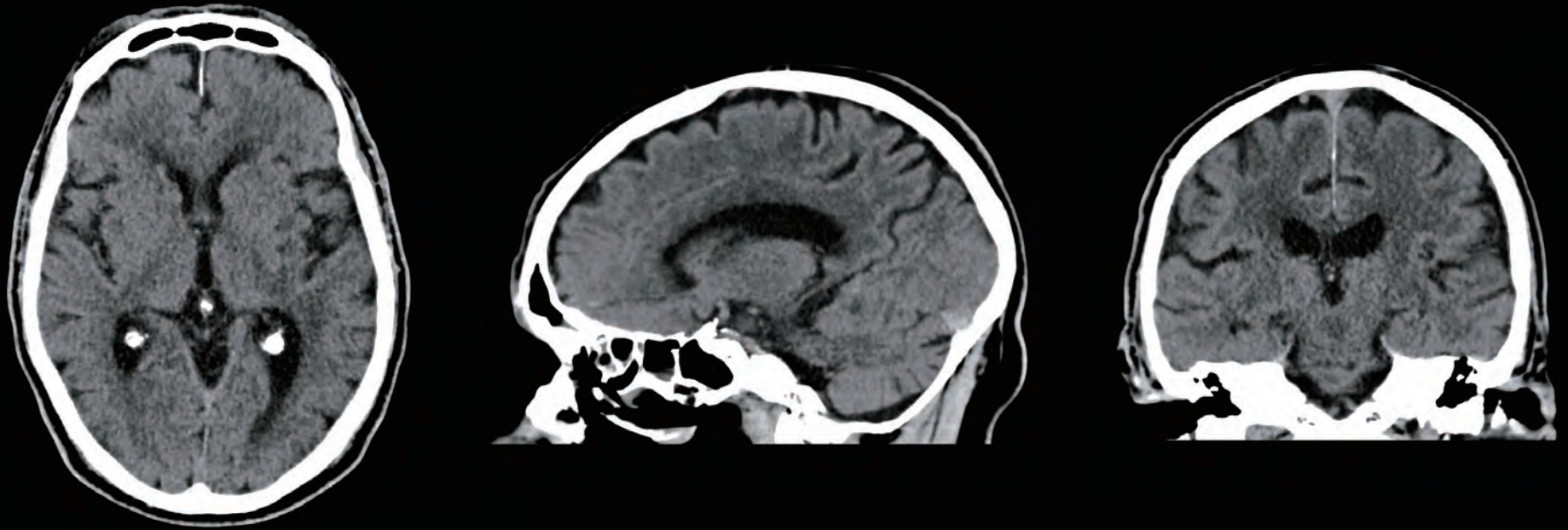
With only 2.0 dB above ambient noise level, the system's console is extremely quiet, providing radiographers with a calm workspace.



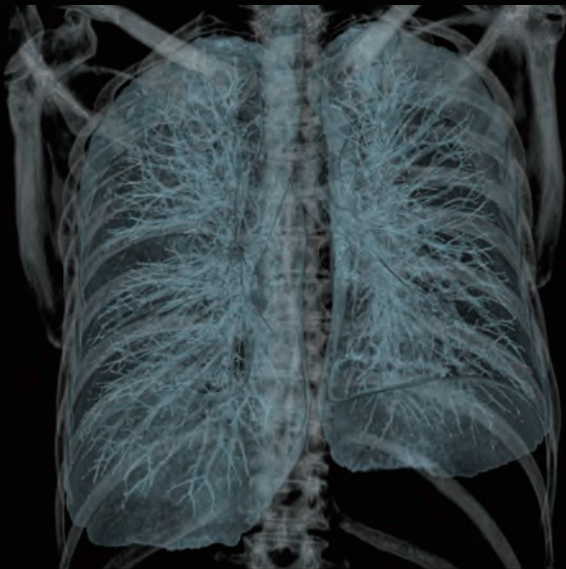
With a minimum installation space of just 14.8 m²*, Aquilion Prime SP provides you more space to work in.

*with short couch

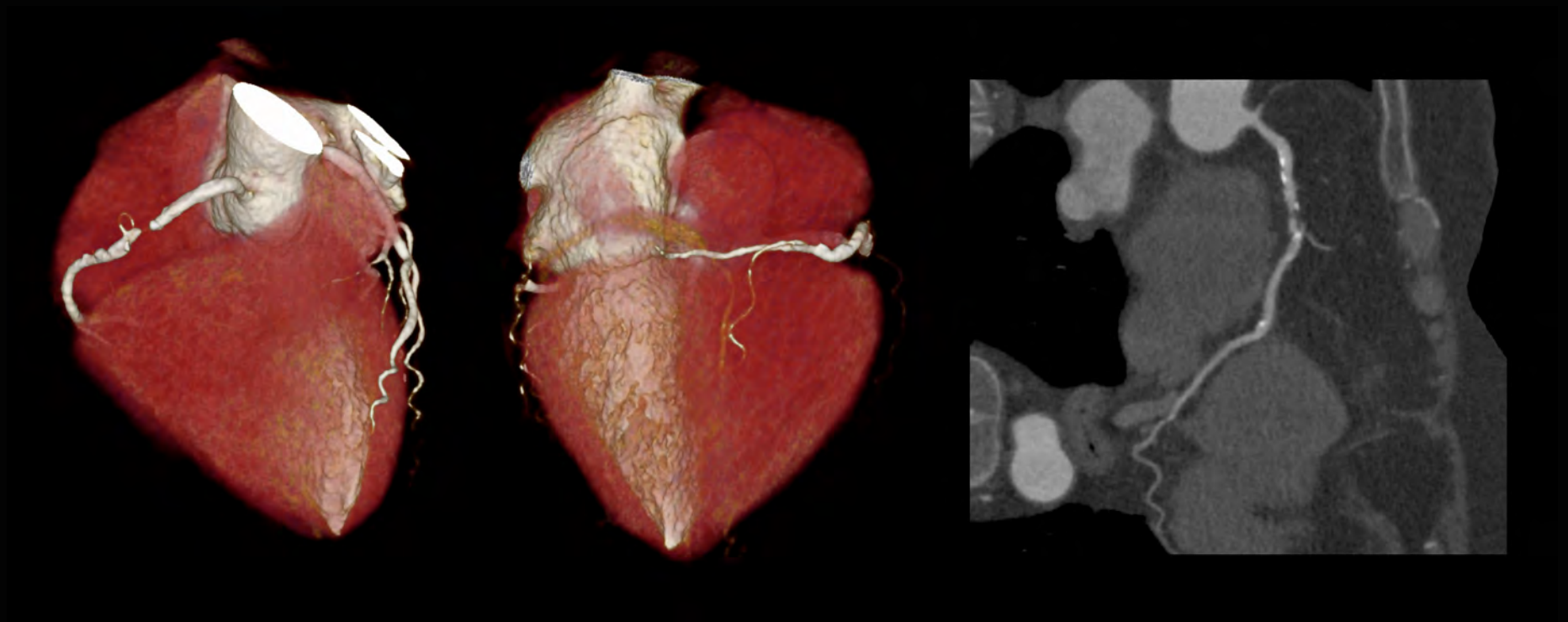
Brain Imaging



Chest Imaging



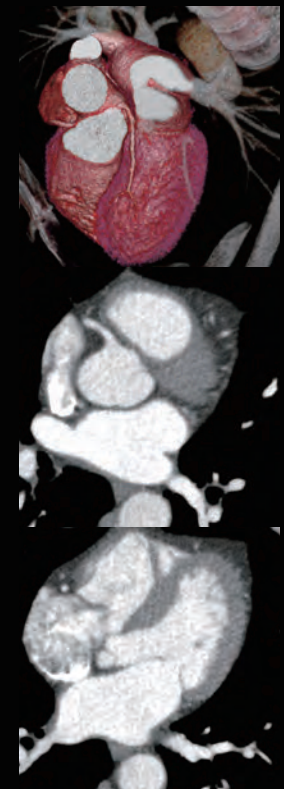
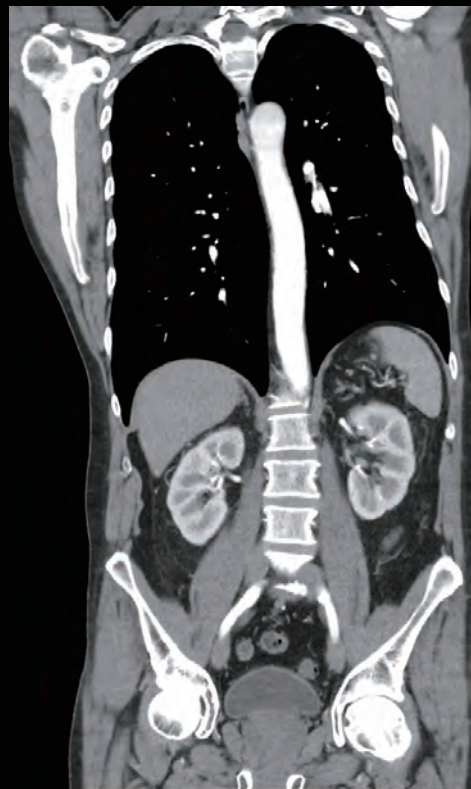
Cardiac Imaging



Upper Chest
Non-Gated

Heart
ECG-Gated

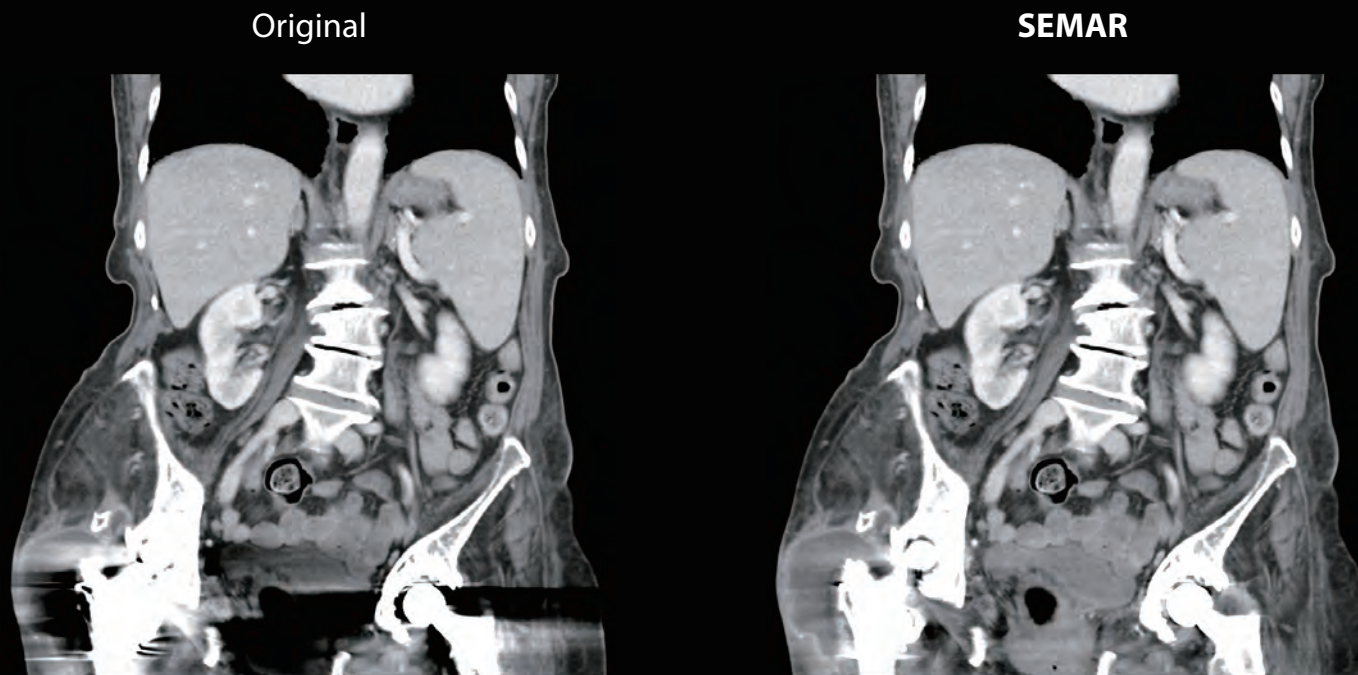
Abdomen
Non-Gated

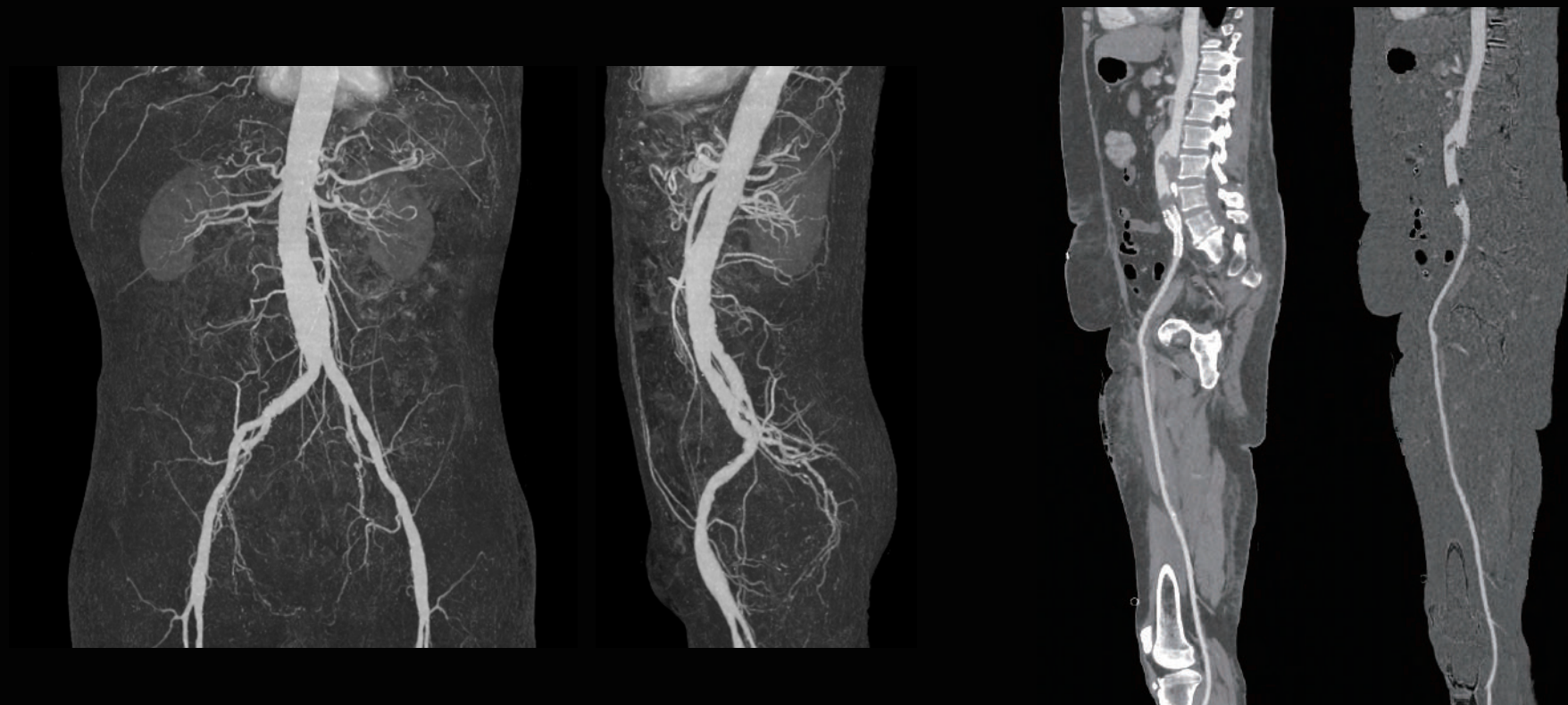


TAVR scan with vHP3* for optimal gating

*Option

Body Imaging



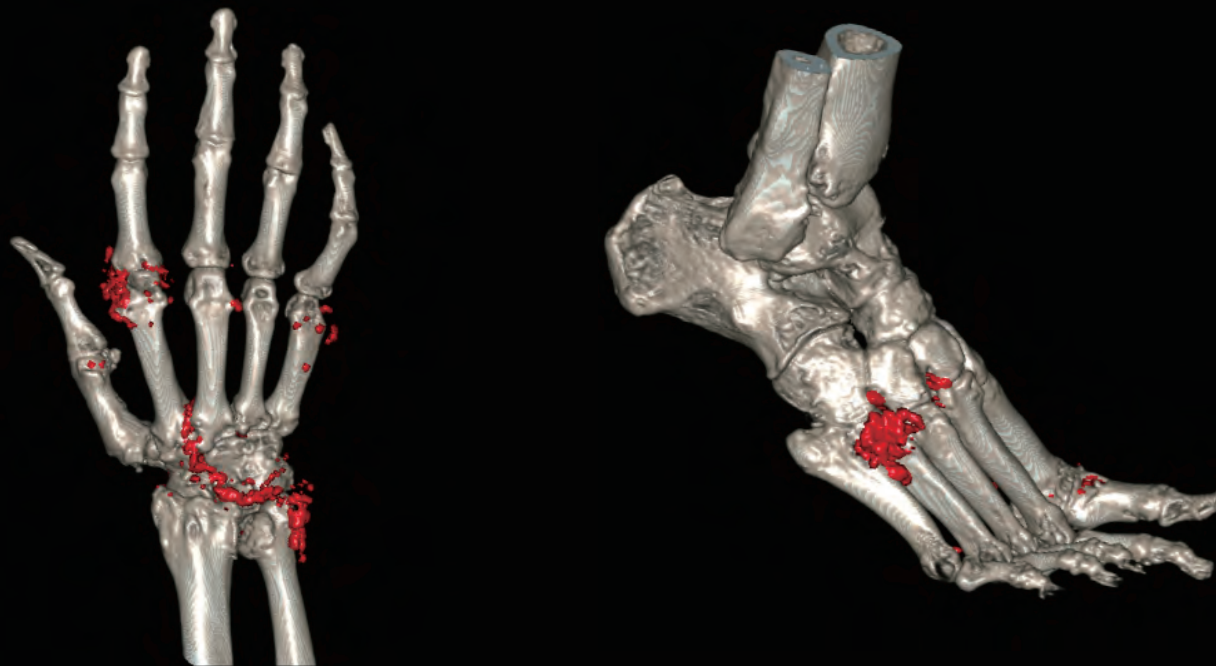


SURE Subtraction Angio* with automated bone, calcium and stent removal

*Option

MSK Imaging





Dual Energy* monosodium urate visualization





Main specifications

Main specifications		
Detector	PUREVISION detector technology	
	80 rows of 0.5 mm	
Gantry	Rotation time	0.35 s
	Generator	72 kW
	Bore aperture	78 cm
	Tilt	± 30°
Patient couch	Max. load	220 / 315 kg ^{*2}
	Max. scan range	150 – 200 cm ^{*2}
Reconstruction speed	Helical	50 fps / 70 fps ^{*1}
Reconstruction	Iterative reconstruction	AIDR 3D Enhanced
	FOV	500 mm , 700 mm ^{*1}
Installation	Power capacity	100 kVA / 110 kVA ^{*1}
	Min. installation space	14.8 m ² (short couch)
Image quality	Spatial resolution	21.5 lp/cm at MTF 0% ^{*3}

^{*1} Option

^{*2} Depends on system configuration

^{*3} For reference

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 feature 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.

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Aquilion™ Prime SP

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