

CT Scanner-3128

CT Scanner 128 Slice



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Analytical Technologies Limited

An ISO 9001 Certified Company

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▶▶ **Maximize the potential of today's clinical resources**

In today's demanding healthcare environment, you need a CT system that satisfies all your requirements on a day-to-day basis. Aquilion/CX meets your needs like no other system on the market. Keeping pace with TM advances in medicine with one of the most cost-effective and versatile diagnostic solutions ever developed, Aquilion has continuously evolved to meet the needs of patients, clinicians and facilities worldwide. Based on a sophisticated platform featuring proven technology, Aquilion CX now gives all the advantages you need to optimize workflow, improve image quality, enhance dose management and elevate the level of care you provide both now – and in the future.

▶▶ **FASTEST DATA TO DIAGNOSIS**

From performing exams to distributing data, Aquilion/CX accelerates the process of providing the information you need to make the best treatment decisions.

- Achieve industry-leading image quality with Quantum Detector technology
- Access information almost instantly using powerful information technologies
- Streamline procedures by automating manual processes with ATL's^{SURE} Technologies[™] software
- Increase patient throughput with unique, built-in, ergonomic-enhancing features

▶▶ **PROTECTING YOUR CT INVESTMENT**

Aquilion /CX lets you utilize healthcare resources efficiently by giving you the ability to perform more procedures more efficiently and support a wider range of applications. A proven record of product reliability, backed by support from local customer service teams, means less down time for a more cost-efficient operation.

▶▶ **High definition 128 slices in a single rotation**

Aquilion/CX presents the latest state of technological innovation in Multi Slice CT technology. With the new coneXact algorithm the Aquilion/CX is able to generate 128 unique slices per rotation with more detail than ever before.

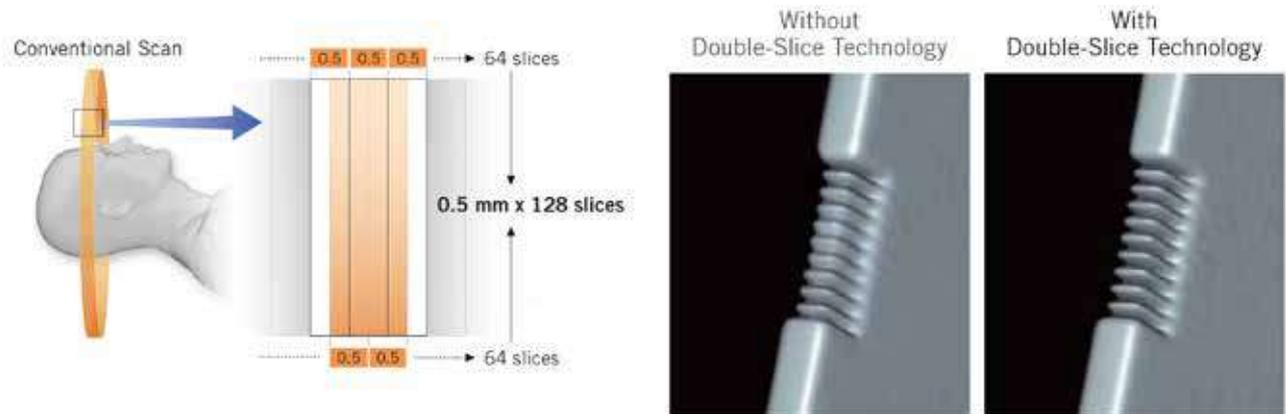
▶▶ **CONEXACT[™] RECONSTRUCTION**

Developed for Aquilion ONE[™] dynamic volume CT, new proprietary algorithms using the coneXact technology are now available for Aquilion/CX.

As a result, partial volume effects are minimized, leading to more detailed images while maintaining superior low contrast detectability.

▶▶ DOUBLE-SLICE TECHNOLOGY

Taking full advantage of the coneXact technology, acquired volume data can be reconstructed in double density, resulting in a more true-to-original reconstruction in MPR and 3D rendered images.



▶▶ Double-Slice Technology

- **High Fidelity**

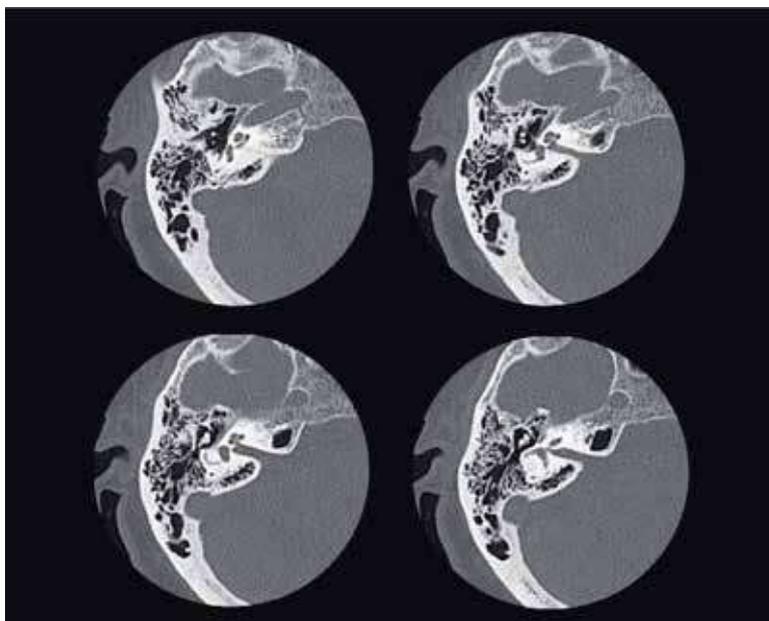
Double-slice reconstruction technology provides full fidelity images with superior resolution. Details of the most intricate structures are sharply depicted in any imaging plane.

- **Advanced Technology**

The advanced coneXact reconstruction technology originally developed for Aquilion ONE has been reengineered for Aquilion/CX to provide the same high-quality image reconstruction.

- **Innovative Solution**

ATL's unique double-slice solution both increases image resolution and reduces cone beam artifacts with absolutely no exposure dose penalty.

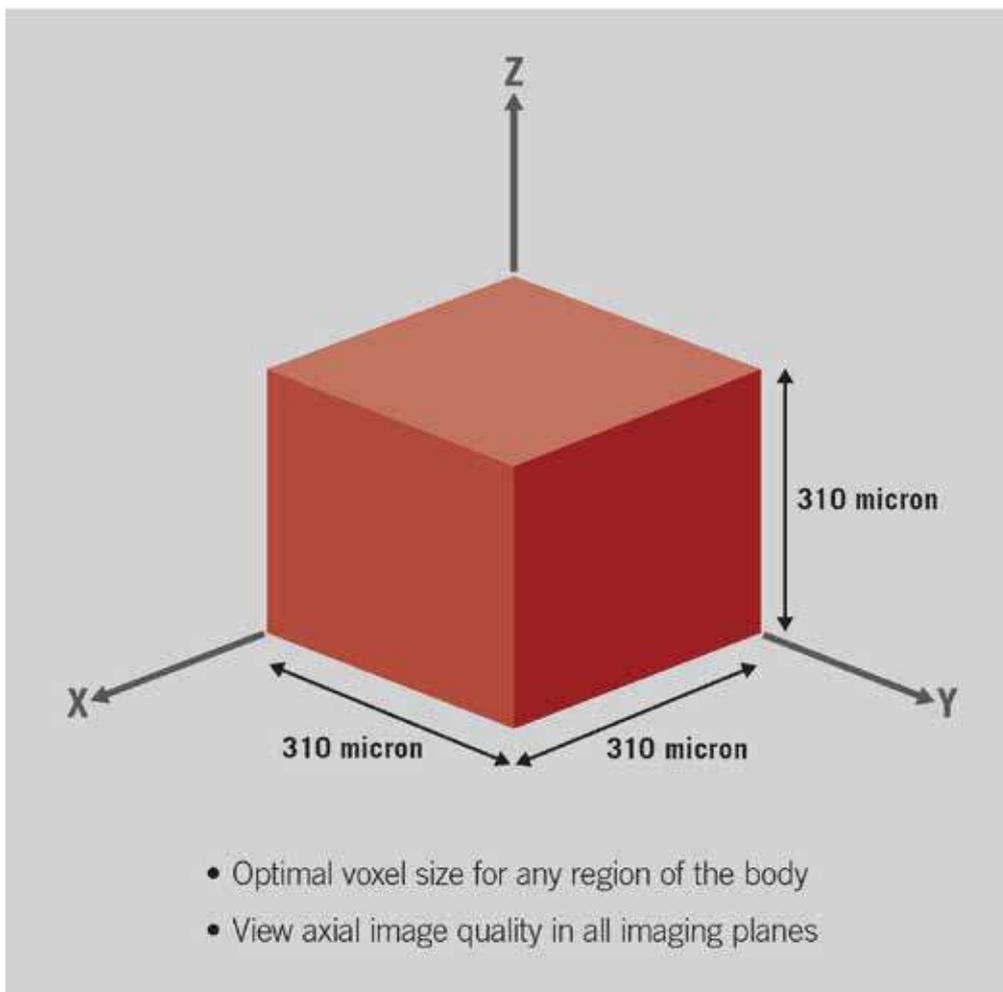


Temporal Bone: Double-slice reconstruction using coneXact technology provides exceptional spatial resolution, as demonstrated in these axial images of the inner ear.

▶▶ DOUBLE-SLICE TECHNOLOGY

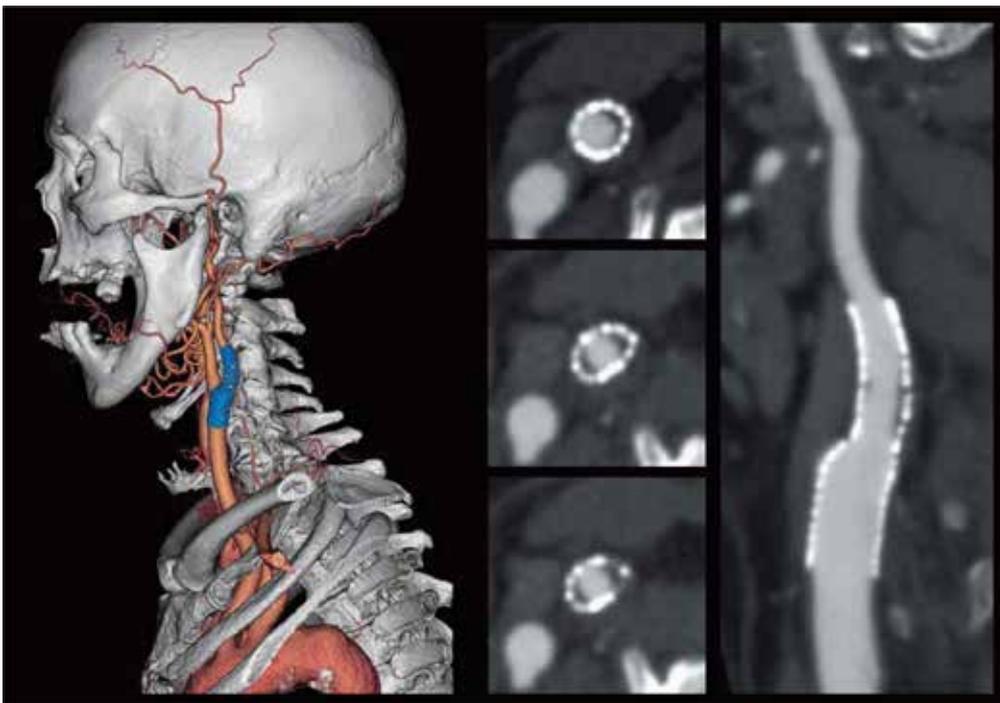
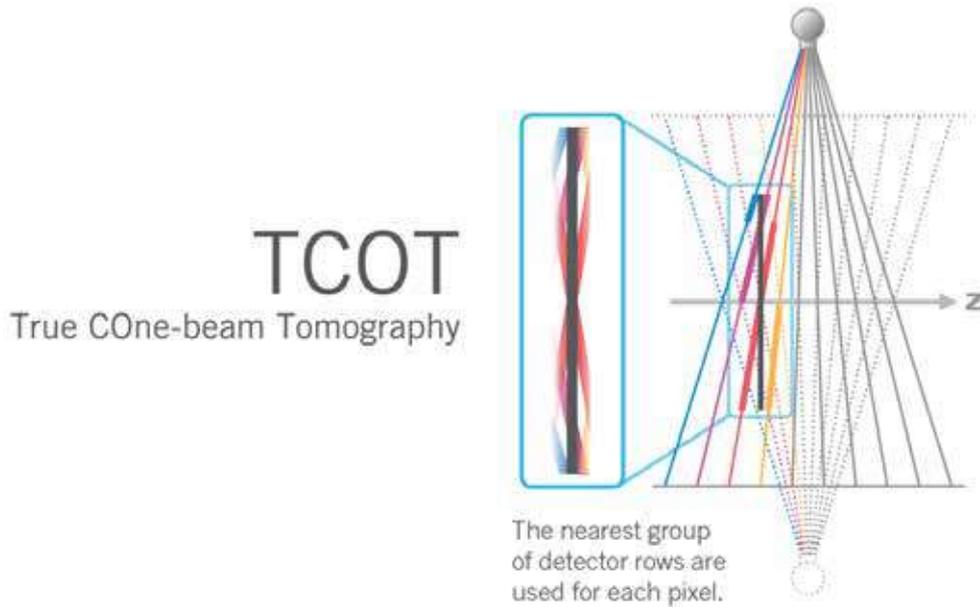
Featuring ATL's exclusive, industry-leading Quantum Detector technology, Aquilion/CX incorporates 0.5 mm detector technology for acquiring true isotropic voxels. This very small detector aperture (the smallest in current CT technology) provides razor-sharp images, ensuring fast and accurate diagnosis in all parts of the body with a lower exposure dose. Regardless of the procedure, you are always assured of superior diagnostic imaging with no compromise in image quality or patient safety.

- 0.5 mm detector elements are the thinnest in the industry
- The industry's best low contrast resolution creates consistent soft tissue imaging at the lowest possible dose
- Uniform image quality is achieved by ultra high 310 micron isotropic resolution



▶▶ **DOUBLE-SLICE TECHNOLOGY**

ATL's patented helical cone beam reconstruction technique "TCOT" uses a modified Feldkamp algorithm, employing data from multiple projections in the z-direction to correct for the cone beam effect resulting in a uniform slice profile. Unlike more approximate reconstruction techniques, the properties of the reconstructed axial image are constant for field of view, ensuring high quality images.



Carotid stent : A stent across the bifurcation of the left common carotid artery is depicted in this 3D image. The curved MPR view shows some in-stent restenosis in the internal carotid artery. The 310 micron spatial resolution provides excellent images that clearly demonstrate the struts of the stent.

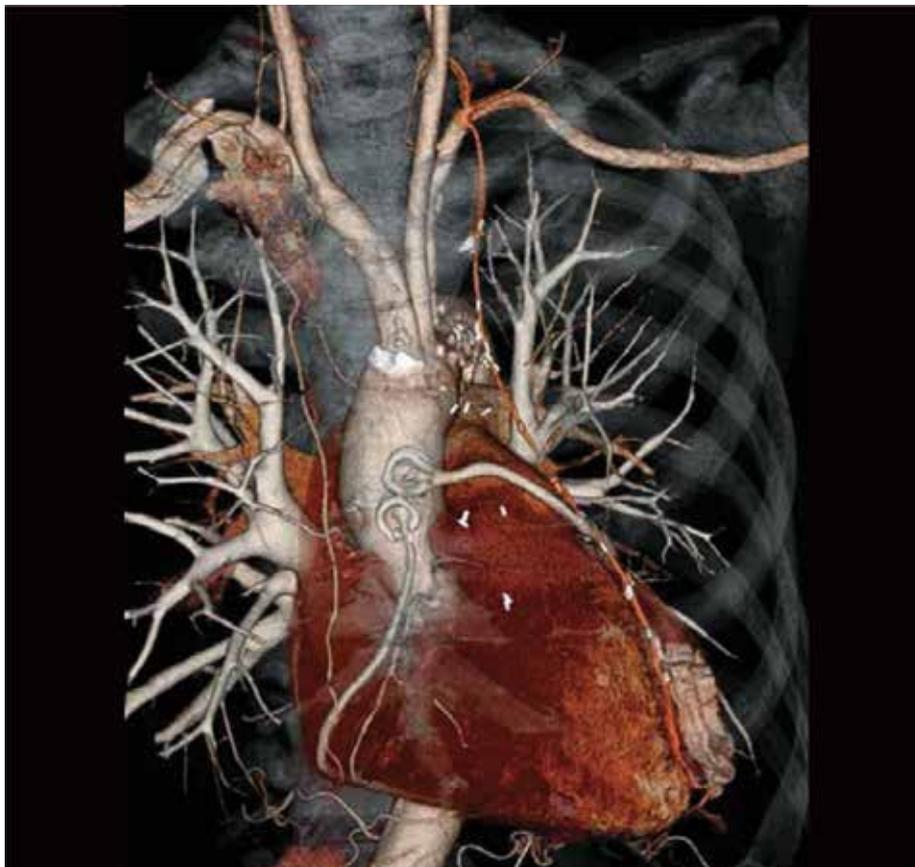
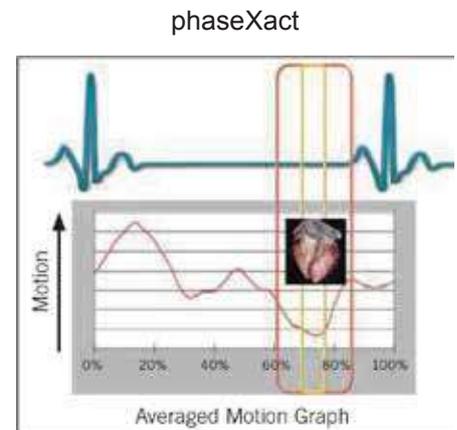
►► Cardiac scanning made easy

High performance in image quality and speed must go hand in hand with efficient workflow. The Aquilion /CX has specifically addressed workflow integration to optimize productivity and enhance diagnosis.

SURECARDIO™ WITH PHASEXACT*

Delivers clear, accurate cardiac images and enhances patient throughput and workflow by automatically selecting optimum scan parameters.

- Automated, clinically validated protocols provide the best temporal resolution regardless of patient heart rate or condition
- Achieve consistent Cardiac CTA with adaptive, multi-segment reconstruction
- Decrease patient scan time through protocol automation
- Reduce view time and storage space with phaseXact, which automatically selects the cardiac phase with the least motion



Coronary Artery Bypass Graft (CABG) acquired using SURECardio automated scan.

►► **SURECARDIO SCORING***

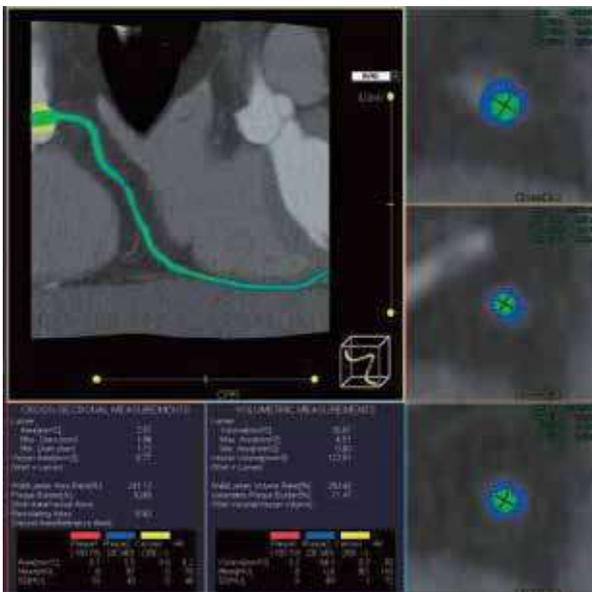
Provides fast and easy evaluation of calcium based on non-contrasted, ECG-gated data directly from the Aquilion console.

- Calculates Ca scores using the Agaston method and the Volume mass method
- A report and the representative images showing calcium will be automatically generated



SURECardio Scoring for fast volumetric coronary calcium evaluation.

►► **SUREPLAQUE™**



SUREPlaque permits both classification and quantification of coronary artery plaques.

A comprehensive advanced visualization tool to assist clinicians in evaluating the characteristics inside the blood vessel.

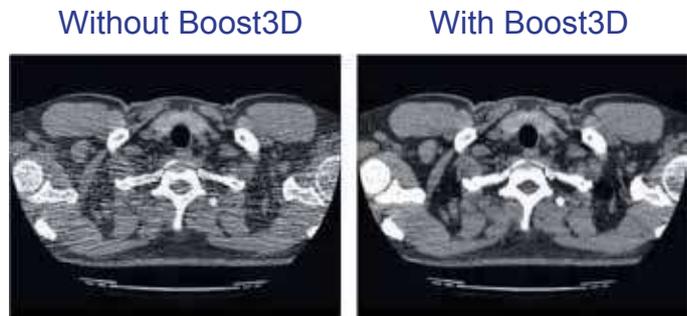
- Visualize coronary vessel anatomy and disease with ease using defined HU ranges
- Quantify plaque burden and coronary remodeling non-invasively
- Characterize lesions in the vessel wall as either calcified or non-calcified

▶▶ **Low dose imaging without compromise**

Thanks to the use of advanced dose reduction techniques, Aquilion/CX substantially reduces the patient exposure dose and improves the image quality by applying sophisticated algorithms to the raw data, both operating in three dimensions.

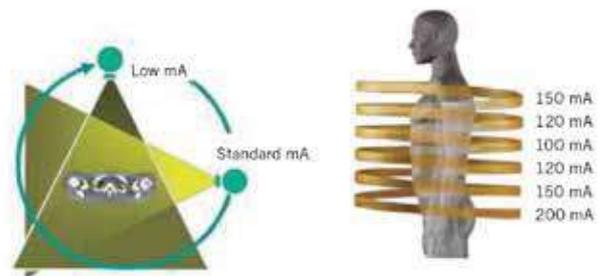
▶▶ **BOOST3D™**

Measures the acquired data for increased absorption (e.g., in the shoulder region) and performs compensation accordingly, resulting in superior image quality and a further reduction in the patient exposure dose.



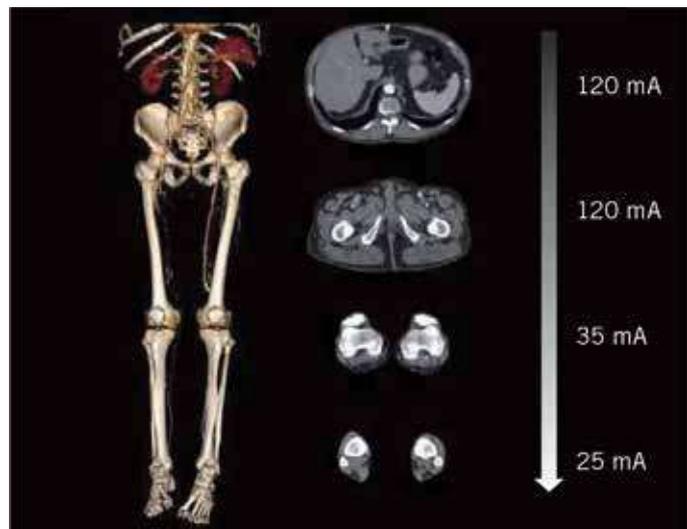
▶▶ **SUREEXPOSURE™ 3D**

Measures the size and attenuation of the patient and tailors the radiation dose to achieve the required image quality. Using an automatic, individualized protocol ensures that a uniform level of image quality can be maintained at the lowest possible dose for every patient.



▶▶ **QDS (Quantum Denoising Software)**

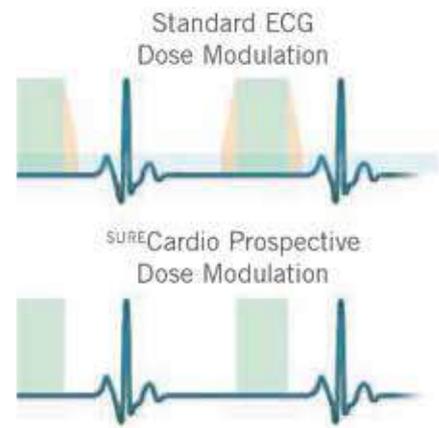
An adaptive image processing algorithm in which noise reduction is selectively applied, improving low contrast resolution. This unique algorithm substantially reduces the patient dose by up to 40% as compared to the scanning parameters normally employed for improved image quality.



▶▶ **SURECARDIO PROSPECTIVE***

Reduce the exposure dose during ECG-gated helical scanning by changing the helical pitch according to the heart rate and restricting X-ray exposure to the required cardiac phases in synchronization with the ECG signal.

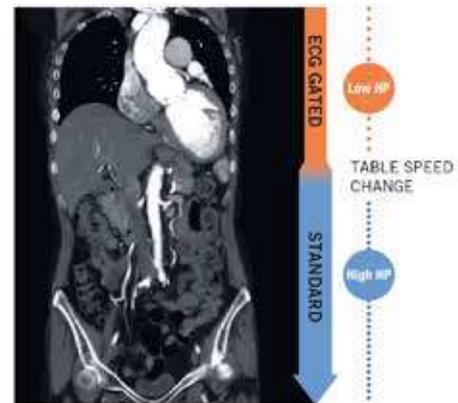
- Developed to perform low dose cardiac CTA in a volumetric helical scan
- Use a pulsed (ON | OFF) exposure control with higher helical pitch settings
- Pitch selection and exposure window are chosen automatically from the patient's heart rate



▶▶ **VARIABLE HELICAL PITCH***

Acquire a gated and a non-gated scan in a single examination using a single contrast bolus. Ideal for multiple procedures in one session such as:

- Coronary artery CTA (ECG gated using Cardiac Pitch) and CTA of the aorta (non-gated using a standard CTA pitch)
- Combine trauma applications such as a brain scan and a neck scan in one continuous scan



▶▶ **AUTOMATED DOSE REDUCTION PROGRAM**

Presets and easy-to-use clinically controlled parameters such as ^{SURE}exposure 3D help clinicians optimize patient dose during protocol planning.

- Low dose protocols for volumetric diagnosis
- Pediatric protocol automatically set based on age or date of birth
- Interactive CTDIVOL and DLP calculation, display and DICOM transfer to PACS

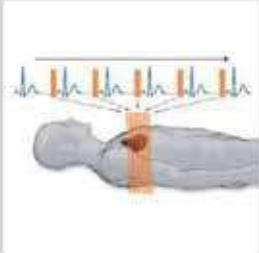
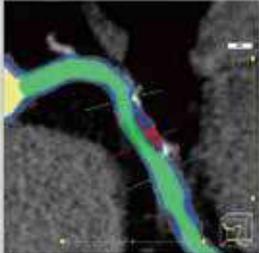
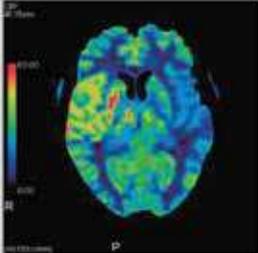
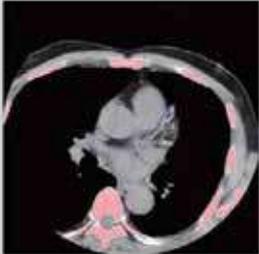
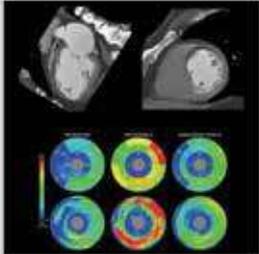
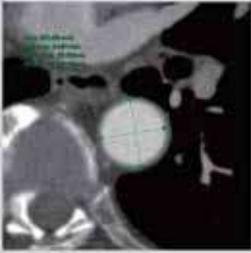
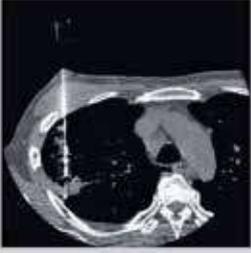
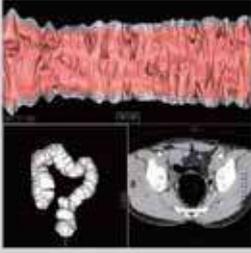
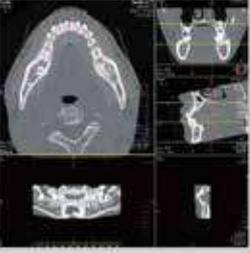
▶▶ **DOSE INDEX VALUE DISPLAY**

During scan planning, the predicted total exposure dose for an examination is calculated and the estimated dose index values are displayed

Published Reference dose values are available for review.

►► Maximizing clinical capabilities

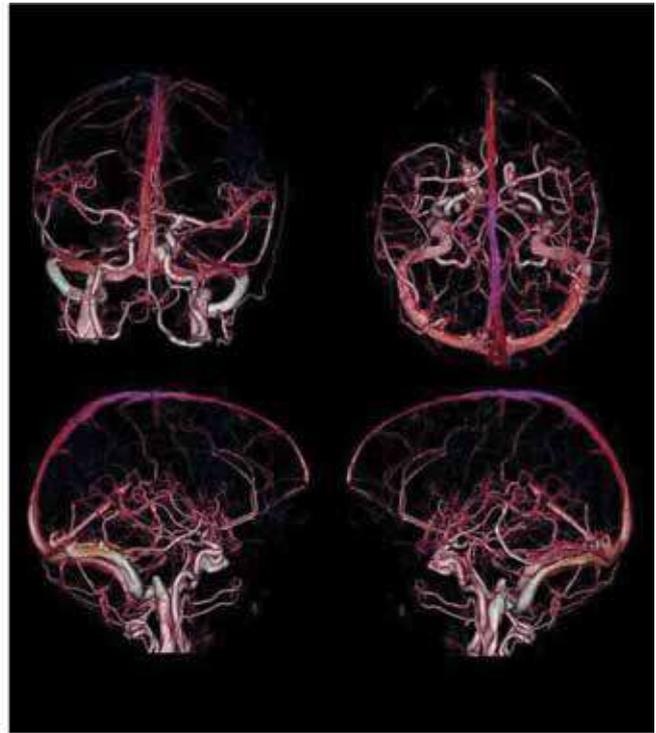
Aquilion/CX supports ATL's sophisticated suite of ^{SURE} Technologies and other advanced software tools to improve image quality, lower dose requirements and deliver the industry's fastest data to diagnosis. Continuous development of optional field upgradable software enhancements means that when it comes to maintaining state-of-the-art capabilities, your investment is always protected.

CARDIAC		NEURO
 <p>SURE Cardio Prospective* Automated ultra-low dose coronary artery CTA.</p>	 <p>SURE Plaque* Automated plaque visualization and characterization software.</p>	 <p>CBP Study* Blood flow characteristics are analyzed from dynamic scan images and the results are displayed as map images.</p>
 <p>SURE Cardio Scoring* Fast and easy evaluation of calcium based on non-contrast ECG-gated data.</p>	 <p>Cardiac Function Analysis* Calculates the various functional parameters, such as ejection fraction, wall motion, cardiac output, etc.</p>	 <p>SURE Subtraction™ Automated digital subtraction of intracranial vessels from bone.</p>
BODY		OTHERS
 <p>vHP* Acquire a gated and non-gated scan in a single examination using a single contrast bolus.</p>	 <p>Vessel View* Generate and displays CPR and cross-cut images of blood vessels.</p>	 <p>SURE Xtension™ Remote access to Aquilion's advanced 3D/MPR and clinical applications.</p>
 <p>SURE Fluoro™ Real-time reconstruction and display of fluoroscopic images for faster and safer interventional procedures.</p>	 <p>Colon View* Automated visualization software for accurate diagnosis in colon examinations.</p>	 <p>Dental Analysis* Comprehensive dental MPR software with easy-to-use tools for pre-operative planning.</p>

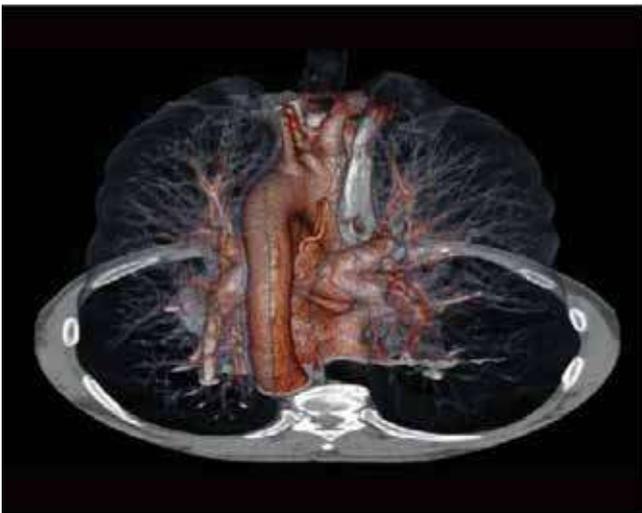
▶▶ **Aquilion /CX.**
Performance you can see



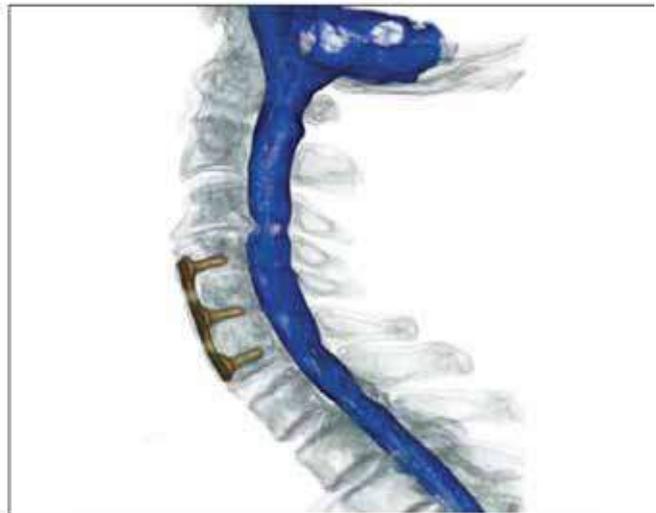
Pediatric CTA showing large Arteriovenous Malformation (AVM), using a low dose ^{SURE}Exposure 3D protocol.



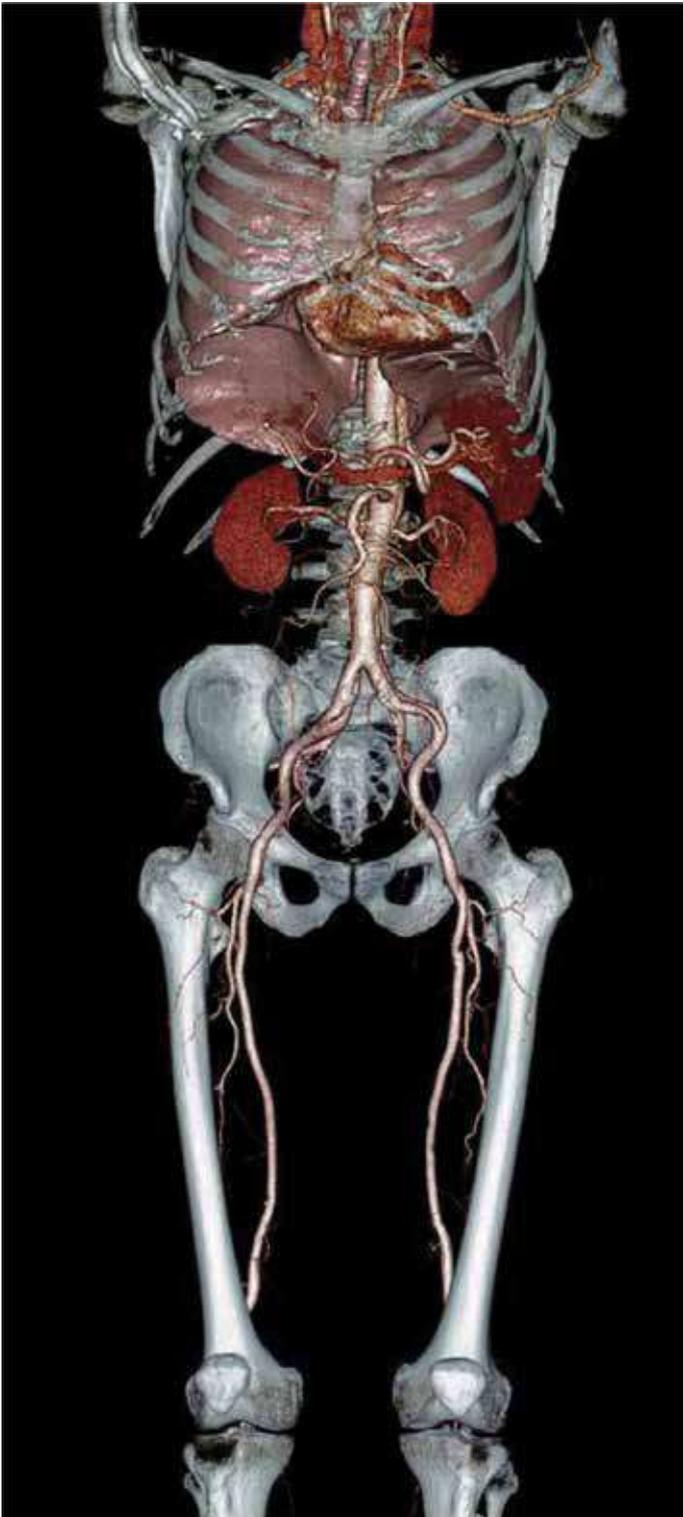
Brain CTA with ^{SURE}Subtraction bone removal.



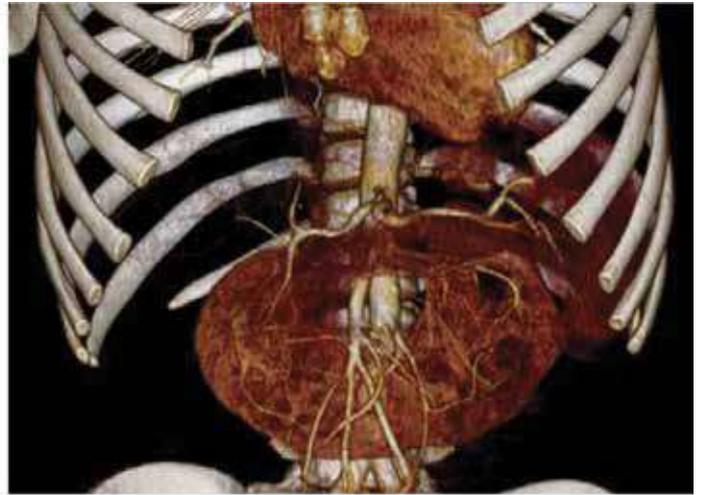
Pulmonary artery CTA using ^{SURE}Start™ and advanced on console 3D.



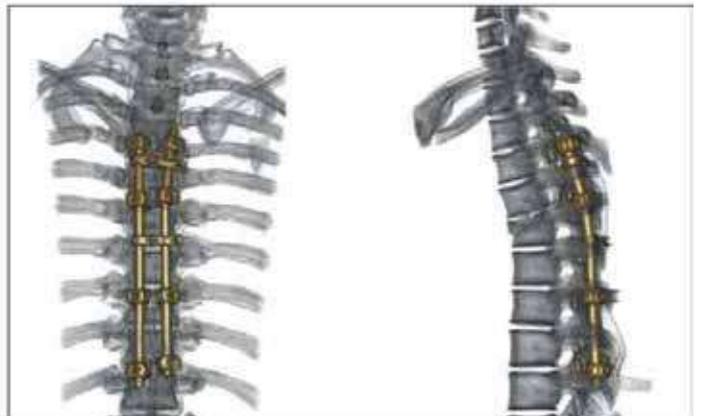
Artifact free cervical spine CT post myelogram.



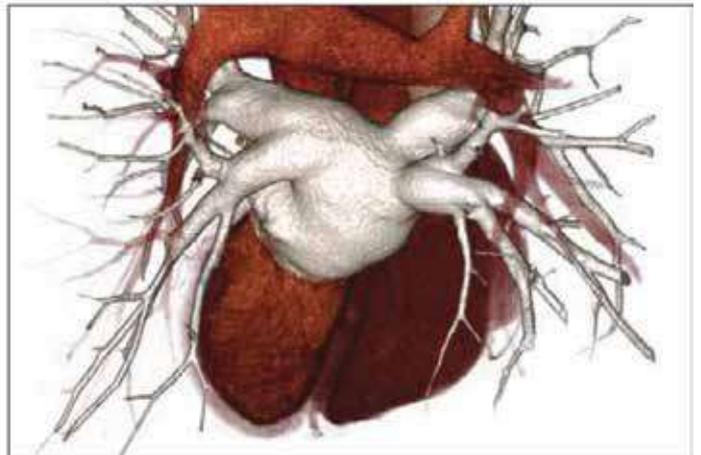
Aorta CTA rendered using on-console advanced 3D.



Renal CTA demonstrating horseshoe kidney.



Thoracic spine internal fixation device rendered using Aquillon's 3D multi object fusion.



Pulmonary vein mapping used for pre-ablation planning.

▶▶ Golden standard high performance

Every aspect of clinical performance has been considered in creating Aquilion /CX. As a result, you can count on ATL to improve patient comfort and clinician access, reduce radiation exposure and contrast media, boost productivity while providing the ultimate platform for treating a broader patient base and perform a wider range of procedures.

HIGH PERFORMANCE

Aquilion /CX provides new standards in performance that allow clinicians to do more with fewer resources in less time.

- 72 kW* generator with 350 ms* rotation acquires data quickly and reduces exam duration
- Ultra-fast reconstruction up to 28 images per second*
- Latest standard in DICOM, increasing the transfer speed up to 10 times
- Stores up to 500,000 images for immediate access
- 2D, 3D and 4D real-time dynamic perfusion imaging

ERGONOMIC DESIGN

A host of exclusive, ergonomic features increase patient comfort and operator convenience while making procedures safer and more efficient.

- Gantry and couch return to home position automatically with the push of a button.
- Carbon fiber couch top with 1500, 1800 mm (or even 2000 mm*) scan range
- Convenient front and (optional) rear table footswitches acilitate a more efficient workflow

Regulatory compliances



Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



Analytical Foundation

1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at Info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @



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