

TOSHIBA
Leading Innovation >>>



Aquilion™

Uncompromised Performance and Value

Accept No Compromise.

A CT that Combines Performance and Value

The Aquilion™ RXL 16-detector row CT system delivers routine low-dose scans for each patient in a wide variety of clinical examinations with unsurpassed workflow. The system is designed to comfortably handle the pace in the busiest of departments and will continue meeting healthcare demands well into the future.

Safe, Efficient and Accurate

Aquilion RXL incorporates Toshiba's latest technologies for the reduction of exposure dose while maintaining high image quality.

Safe

- AIDR 3D, personalized dose reduction
- SURE[®]Exposure XYZ mA modulation
- (NEMA) XR 25 Dose Check software
- Active collimation
- IHE Structured Dose Report

Accurate

- 0.5 mm x 16-row, high-resolution detector
- coneXact double-slice technology, 32 slices per rotation
- 72 cm gantry opening with +/- 30° tilt
- Industry-leading, low-contrast resolution

Efficient

- Single or optional dual console configuration
- 3D advanced visualization on console
- SURE[®]Technologies:
 - SURE[®]Start
 - SURE[®]Subtraction*
 - SURE[®]Fluoro*
- 0.5 second rotation

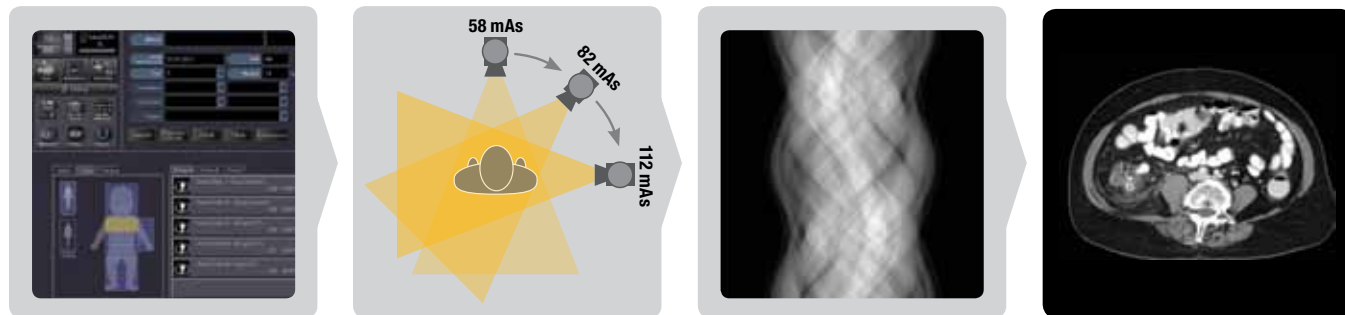


Dose reduction for every patient and every procedure.

Toshiba offers a full suite of dose-reduction technologies to improve patient safety while producing high-quality images for accurate diagnoses.

Integrated, Automated and Adaptive Dose Management

In order to achieve the highest quality images at the lowest possible dose, Aquilion RXL includes an array of adaptive and integrated dose-reduction strategies. These strategies are implemented at every stage in the scanning process, from patient registration through data acquisition, raw data and image reconstruction.



Patient Registration

- The system prompts the user to select the appropriate protocol based on patient age, weight and exam type
- Dose is displayed on the console prior to scanning for operator confirmation and validation
- Aquilion RXL includes the National Electrical Manufacturers Association (NEMA) XR 25 Dose Check requiring dose notification and alert features

Acquisition

- Integrated ^{SURE}Exposure 3D mA modulation is scanogram-based to automatically reduce patient dose
- Active collimation limits helical over-ranging, reducing dose delivered to the patient on all helical scans

Raw Data and Image Reconstruction

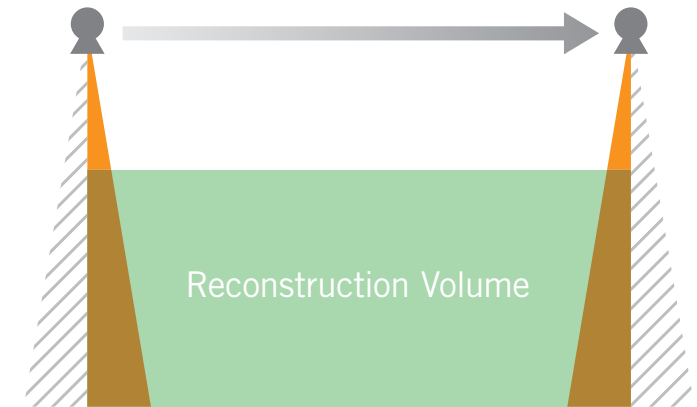
- Adaptive Iterative Dose Reduction 3D (AIDR 3D) adaptively targets noise in the raw and image data space and is used to automatically lower patient dose while maintaining spatial resolution and image texture*



*In clinical practice, the use of 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.

Active Collimation

In helical scanning, exposure is needed before the start and after the end of the planned scan range in order to reconstruct images at these positions. This over-ranging requires at least one extra rotation, although only a small portion of this data is utilized. Active collimation synchronizes the width of the X-ray beam at the ends of the scan range to the clinically useful area needed for image reconstruction. By eliminating exposure that is not used for diagnosis, patient dose can be reduced.



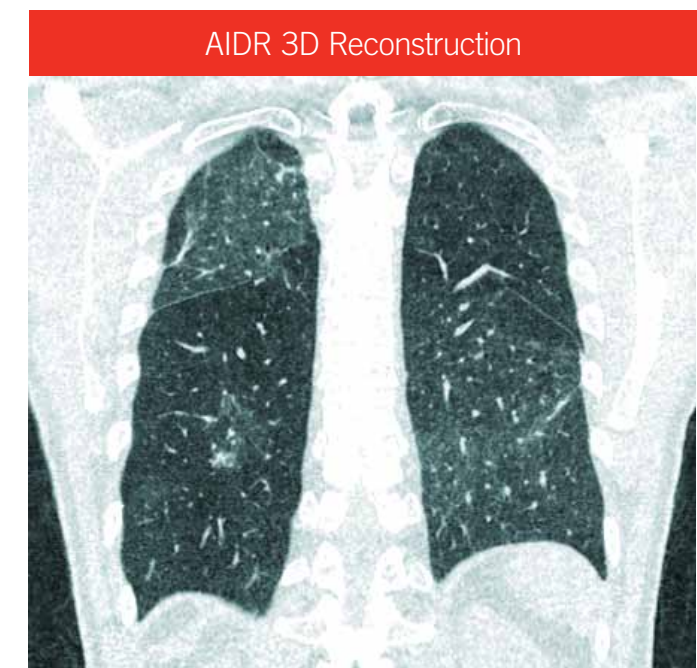
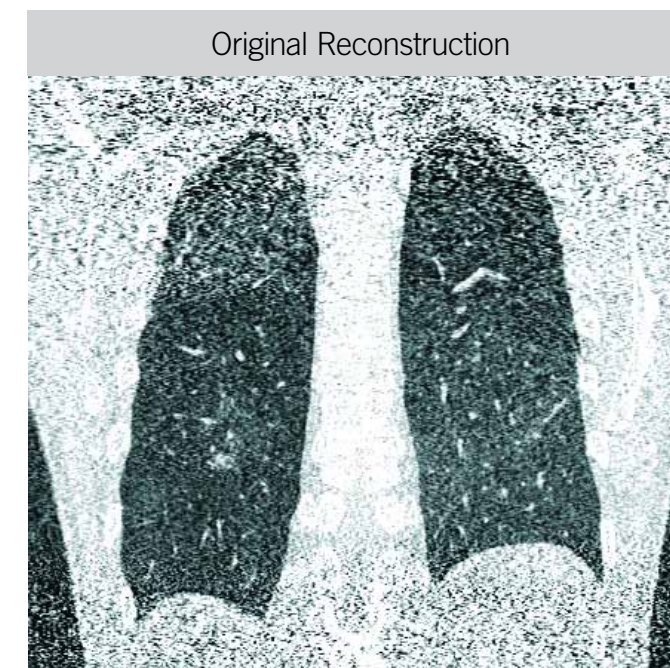
Personalized Dose Management

Adaptive Iterative Dose Reduction 3D (AIDR 3D)

AIDR 3D is the latest evolution of iterative reconstruction technology that has been fully integrated into the imaging chain to ensure automatic dose reduction for all patients.

Accelerated Workflow

Dose-reduction technologies must be fast enough to fit into busy workflow schedules, and AIDR 3D has been optimized to reconstruct images with speeds that allow the algorithm to be used for any clinical situation.



Optimizing clinical workflow.

Aquilion RXL incorporates a new console to improve productivity and optimize workflow. Automated processing enables fast access to images for accurate diagnoses.

Accelerated Workflow

New Console Architecture

Aquilion RXL accelerates the process of providing the information required for making the best treatment decisions throughout the workflow.

- Single or optional dual console configuration
- 3D advanced visualization on console
- 0.5 second rotation
- High-speed image reconstruction

Automated Processing

Ultrafast Data Transfer

- The enhanced DICOM* protocol allows an ultrafast data transfer speed of up to 60 images per second
- Automated data transfer to multiple destinations can be set in the exam protocol

MPR Image Generation – MultiView

MultiView automation saves time by reconstructing multiplanar reconstruction (MPR) images as a part of the exam protocol.



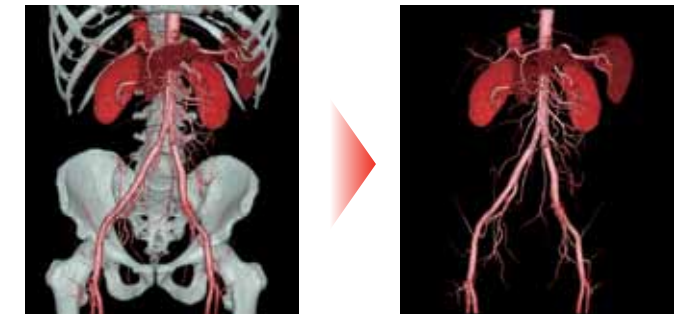
SURE Technologies

Toshiba's sophisticated clinical application software packages for various anatomical regions provide automated processing for accurate diagnoses and significant improvements in workflow.

- SUREStart
- SURESubtraction*
- SUREFluoro*

3D Reconstruction Automated Bone Removal

Aquilion RXL incorporates automated bone removal algorithms to quickly and accurately segment bone in CT angiography examinations. In just a few seconds, high-quality angiographic images are available for diagnosis.



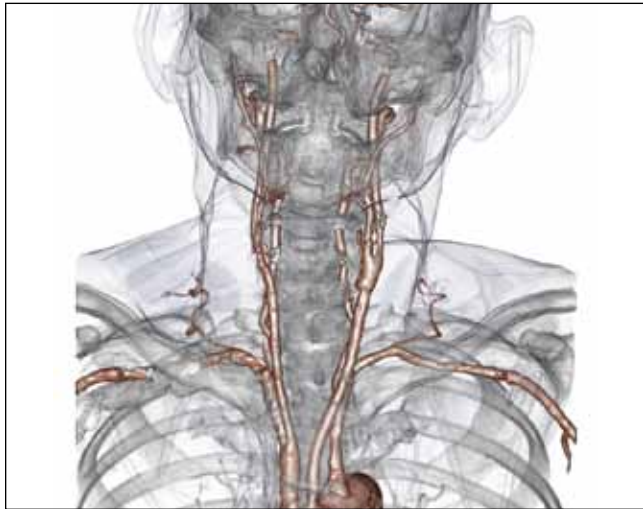
*Optional.



Maximizing clinical capabilities.

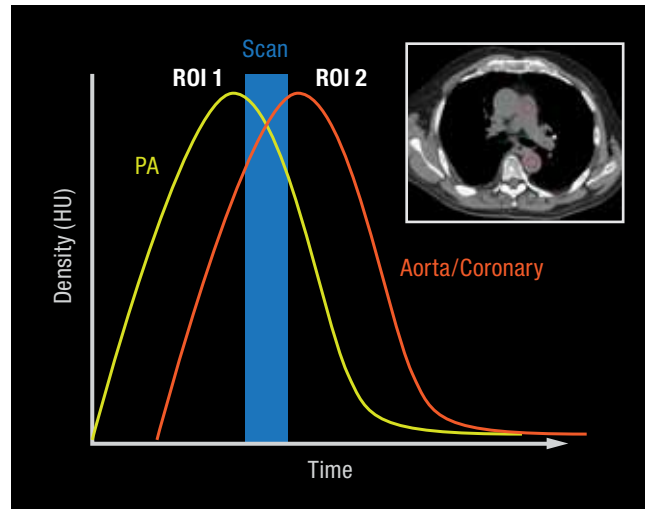
Aquilion RXL supports Toshiba's sophisticated suite of SURE Technologies and other advanced software tools to further increase clinical utility and incorporate cutting-edge clinical application capabilities to meet customer needs.

SURESubtraction*



SURESubtraction provides automated digital subtraction of the vessels from bone, specially developed for head and neck regions. It enhances diagnostic accuracy and improves workflow.

SURESTART



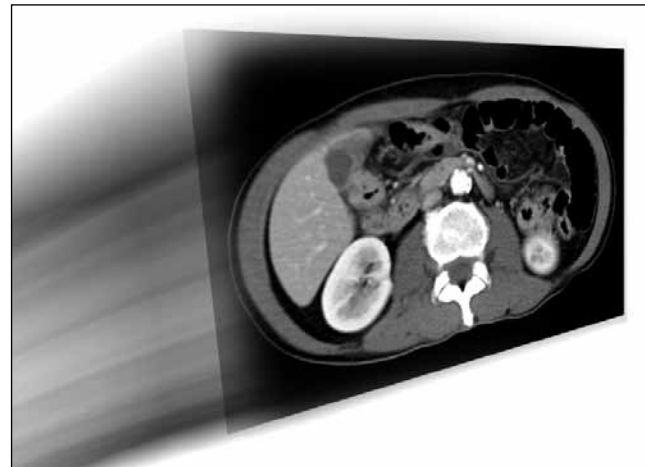
Automated bolus tracking with the ability to track dual ROI placements to ensure optimal contrast opacification and usage.

SUREFluoro*

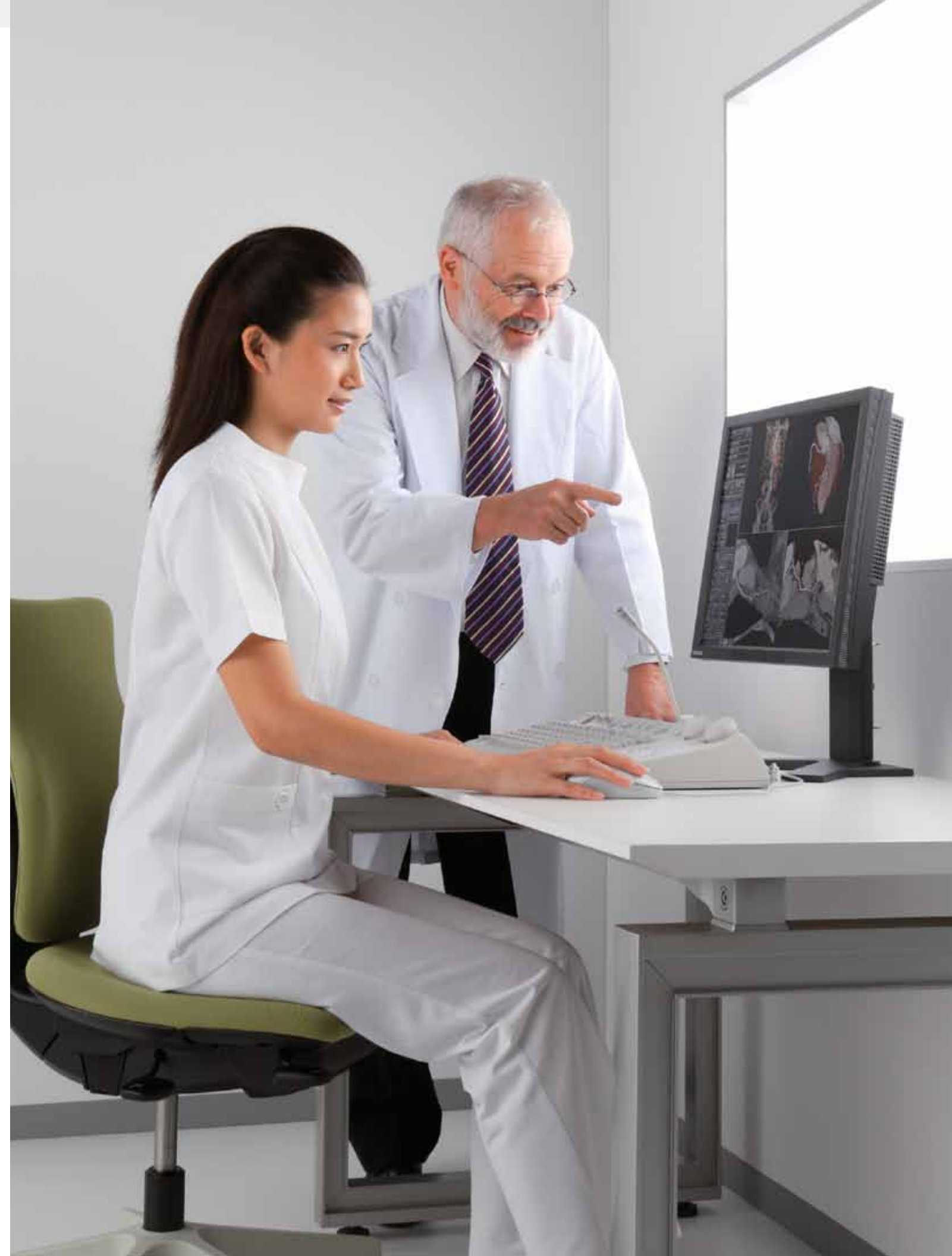


SUREFluoro allows real-time monitoring by three contiguous CT slices for interventional procedures, improving accuracy while shortening the procedure time.

SUREScan



Real-time reconstruction at 12 frames per second, ideal for trauma and acute situations where instantaneous image review is needed.

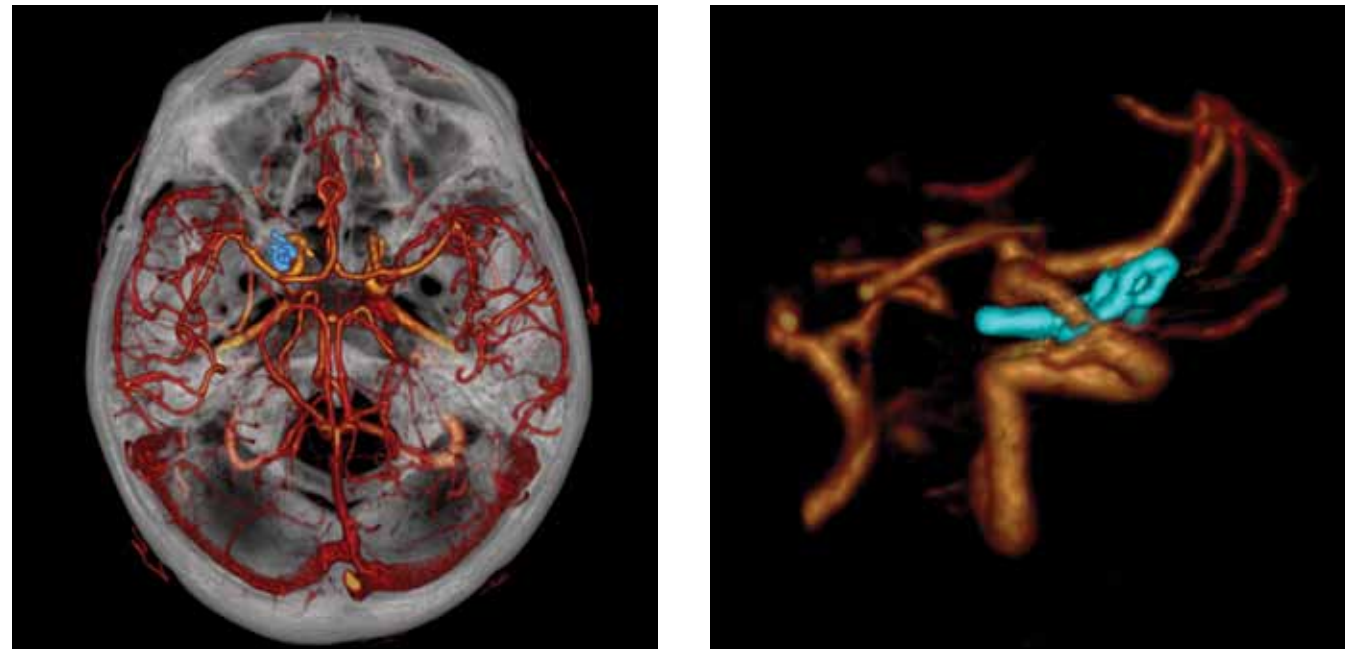


*Optional.

Aquilion RXL. Clinical excellence.

Head CTA with SURESubtraction

An aneurysm clip is demonstrated in the distal carotid artery. SURESubtraction software provides pixel-perfect subtraction of the bone and aneurysm clip.



Scan Mode	Collimation	Pitch	kVp	mAs	Rotation Time	Dose Reduction	CTDIvol	DLP	Effective Dose	K Factor
Helical	0.5 mm x 16	0.938	120	75	0.5 s	AIDR 3D	8.8 mGy	137.1 mGy.cm	0.29 mSv	0.0021*
Helical	0.5 mm x 16	0.938	120	125	0.5 s	AIDR 3D	14.7 mGy	228.5 mGy.cm	0.48 mSv	0.0021*

Chest, Abdomen and Pelvis CT

A hiatal hernia with dilatation of the distal esophagus is demonstrated in the axial and coronal MPRs.

A pleural effusion is also noted in the right lung and a simple cyst is seen within the liver.

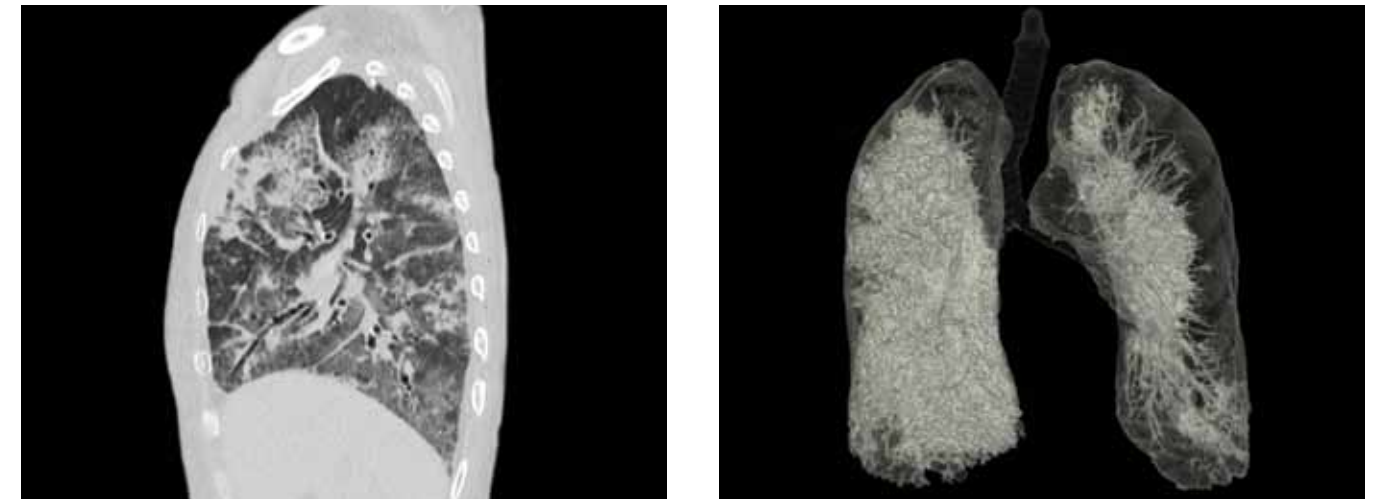


Scan Mode	Collimation	Pitch	kVp	mAs	Rotation Time	Dose Reduction	CTDIvol	DLP	Effective Dose	K Factor
Helical	1.0 mm x 16	0.938	120	^{SURE} Exposure	0.5 s	AIDR 3D	7.1 mGy	419.6 mGy.cm	6.1 mSv	0.0145*

*AAPM report no. 96

Lung CT

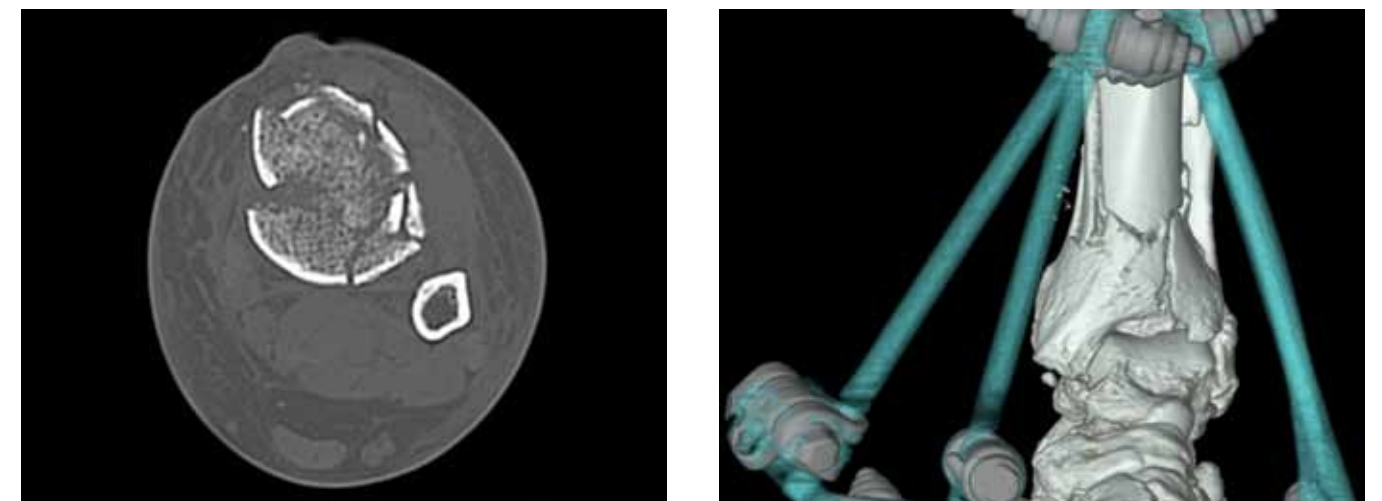
Extensive pulmonary contusion is demonstrated bilaterally in this CT scan of the chest. A pleural effusion is also demonstrated in the left lung.



Scan Mode	Collimation	Pitch	kVp	mAs	Rotation Time	Dose Reduction	CTDIvol	DLP	Effective Dose	K Factor
Helical	1.0 mm x 16	1.437	120	^{SURE} Exposure	0.5 s	AIDR 3D	6.8 mGy	256.6 mGy.cm	3.6 mSv	0.014*

Ankle CT

A comminuted fracture of the distal tibia and fibula is demonstrated in the axial and 3D reconstruction. External fixation devices are demonstrated in the 3D image.



Scan Mode	Collimation	Pitch	kVp	mAs	Rotation Time	Dose Reduction	CTDIvol	DLP
Helical	0.5 mm x 16	0.688	135	75	0.5 s	AIDR 3D	16.0 mGy	264.7 mGy.cm

*AAPM report no. 96

TECHNOLOGY HISTORY

For over 130 years, Toshiba has been a world leader in developing technology to improve the quality of life. Our 50,000 global patents demonstrate a long, rich history of leading innovation. It might surprise you to learn about some of the things we've invented.

1915 First X-ray tube	1995 First real-time CT fluoro	2007 First dynamic volume CT scanner
1970 First color video phone	1995 First DVD	2010 First 3D TV (without glasses)
1973 First real-time ultrasound system	1996 First quiet MRI	2011 First 3D ultrasound volume rendering
1985 First slip-ring CT scanner	1999 First 0.5 mm multidetector CT	
1985 First laptop computer	2004 First 64 row multidetector CT	

AWARD-WINNING SERVICE AND SUPPORT

Developed with customer input, Toshiba's innovative support programs have resulted in greater satisfaction when using Aquilion products as reflected in customer surveys time after time.

InTouch Center™

A centralized service facility that provides applications and service support expertise for Aquilion customers 24 hours a day, seven days a week.

InnerVision® Plus

Monitored around the clock, remote system diagnostics help identify problems and provide potential solutions before care is interrupted or an engineer can arrive.

InTouch Agreements

Tailored to meet specific customer requirements, these range from an a la carte approach that helps manage risk to full security agreements that provide complete system protection.

Technical Assistance

Customer support specialists are available 24/7 to identify and resolve technical issues in real time. Application specialists are also on hand to assist staff with protocol and image quality issues.

Local Customer Teams

A single call mobilizes a local team of Toshiba Customer Engineers. Averaging 10 years of experience with Toshiba and 105 hours of specialized training per year, they can quickly resolve almost any performance issue.

Parts Support

A complete inventory of Aquilion product parts is ready for shipment when and where they're needed, any time day or night.



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