

**TOSHIBA  
MEDICAL**

***Aquilion ONE***

GENESIS Edition

GENESIS Edition  
Transforming CT



Transforming clinical confidence

Transforming patient experience

Transforming your workspace

# **GENESIS Edition Transforming CT**

Brought to you by the leaders in area detector technology



Aquilion ONE™ / GENESIS Edition goes beyond the evolution of dynamic volume CT. Intensive clinically focused research and innovative technological developments have culminated in a CT system with industry-leading spatial resolution and reduced radiation dose requirements.

GENESIS Edition maximizes the patient experience during CT examinations, and through intelligent examination protocols, provides excellent image quality with low radiation and contrast dose tailored to each and every patient.

Intelligent technology for increased patient safety and superior patient care.

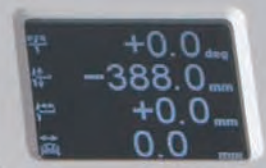




**ONE  
Aquilion**



**TOSHIBA**



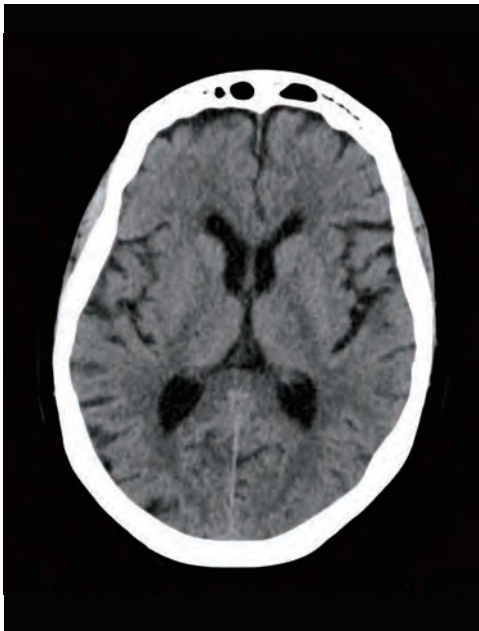




# Transforming clinical confidence



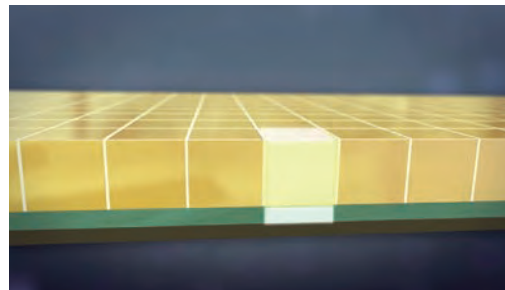
# The right balance between image quality and dose for every patient, from the youngest to the largest



PUREVISION Optics – Delivering excellent brain image quality.

GENESIS Edition transforms routine imaging to new levels of image detail and low contrast resolution.

An optimized beam spectrum based on PUREVISION Optics results in a better balance between image quality and dose.



PUREVISION Detector – High-precision manufacturing produces a scintillator with 40% greater light output.



# Eliminating the workflow challenges of MBIR<sup>\*1</sup> Integrated, easy to use, and fast



Chest scan performed with 0.2 mSv.

GENESIS Edition provides sharper image detail and lower patient dose with the world's first fully integrated MBIR solution.

FIRST<sup>\*2</sup> utilizes forward projection iterations to deliver high-quality images with up to 85.3 percent<sup>\*3</sup> dose reduction. A full volumetric reconstruction (320 images) for routine clinical use can be obtained as fast as three minutes.

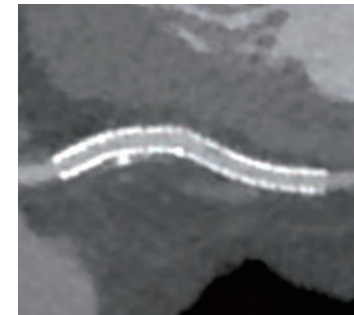
Following Toshiba's longstanding philosophy of minimizing dose while maintaining efficient clinical workflow, FIRST integrates seamlessly into your daily clinical practice.

\*1 Model-Based Iterative Reconstruction

\*2 Option

\*3 Compared to TSX-301C filtered back projection (FBP) on Aquilion ONE/VISION Edition

FIRST – Forward projection model-based iterative reconstruction optimized for routine clinical application and immediate implementation.



# The right application for a confident diagnosis

## Automated, reliable, and robust

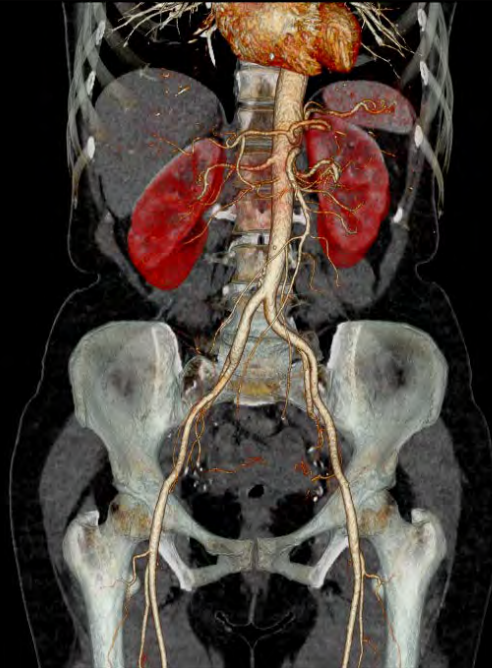
GENESIS Edition offers a comprehensive suite of Adaptive Diagnostic solutions to enable clinicians to more easily conduct complex exams that are reproducible.

### Subtraction CTA



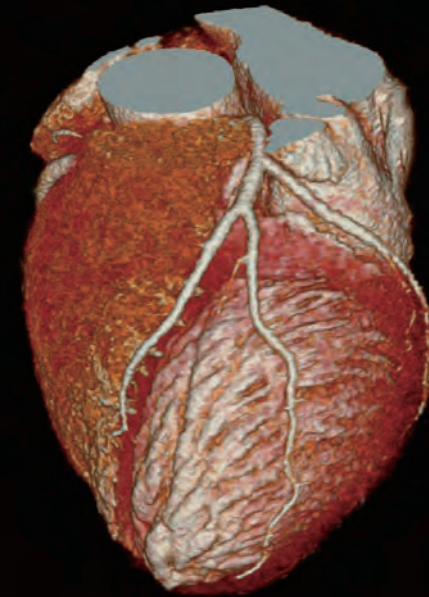
Superior visualization in CTA with true subtraction of bone and calcification.

### SURE<sup>kV</sup>



Provides automated kV selection based on patient size.

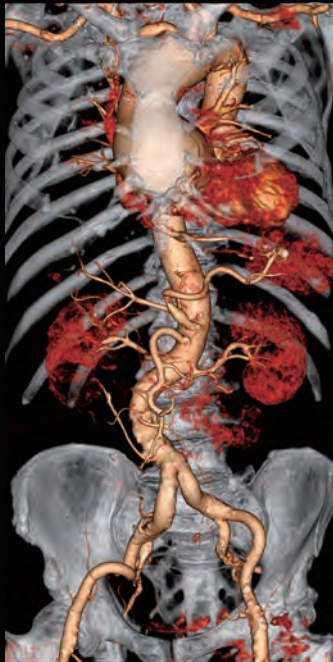
### SURE<sup>Cardio</sup><sup>TM</sup>\*



The robust solution for coronary imaging with ONE shot volume imaging and arrhythmia scanning.

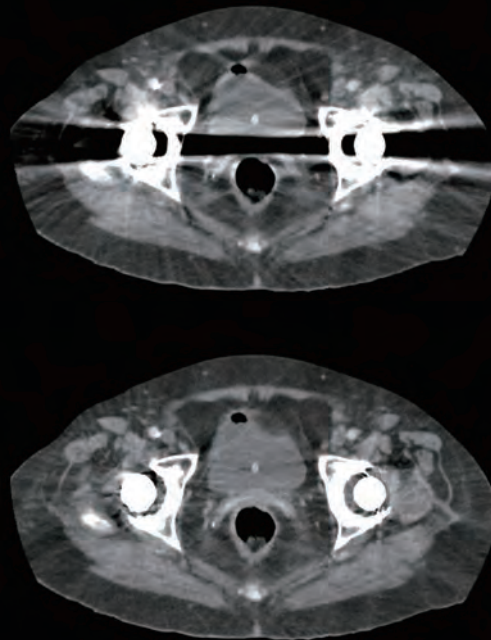


### TAVR\*



Easily combined gated and non-gated acquisition for fast and low-dose TAVR exams.

### SEMAR™



Improved visualization of bone and soft tissue-  
Single energy raw data based metal artifact reduction.

### DE Tissue Visualization\*

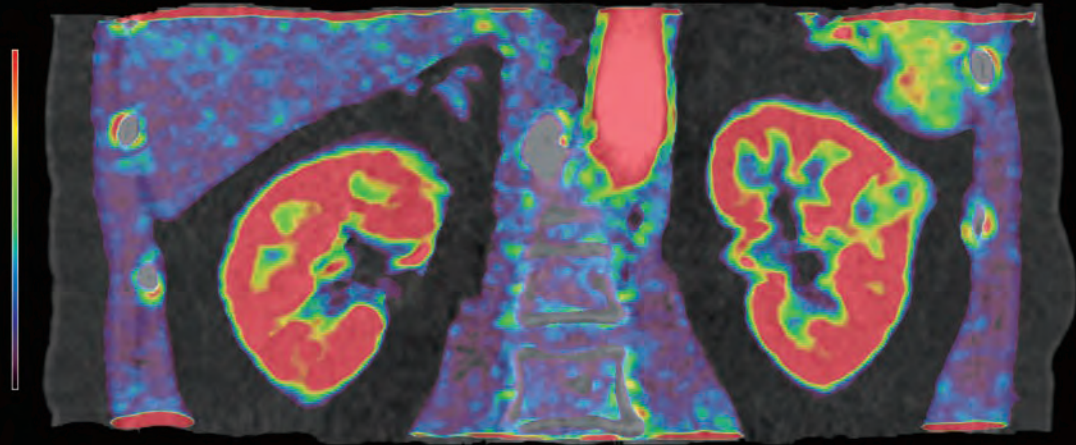
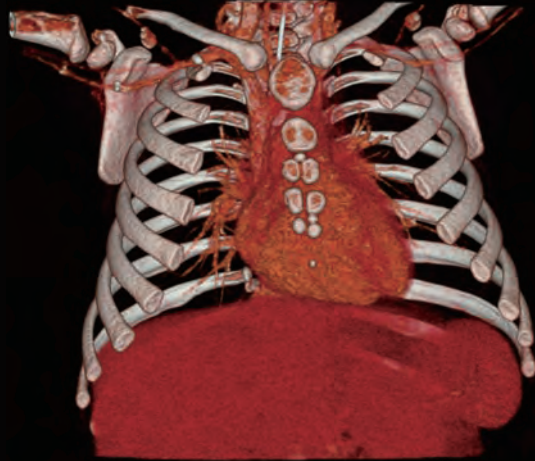


Tissue Visualization with easy-to-use Dual Energy scanning.

\*Option

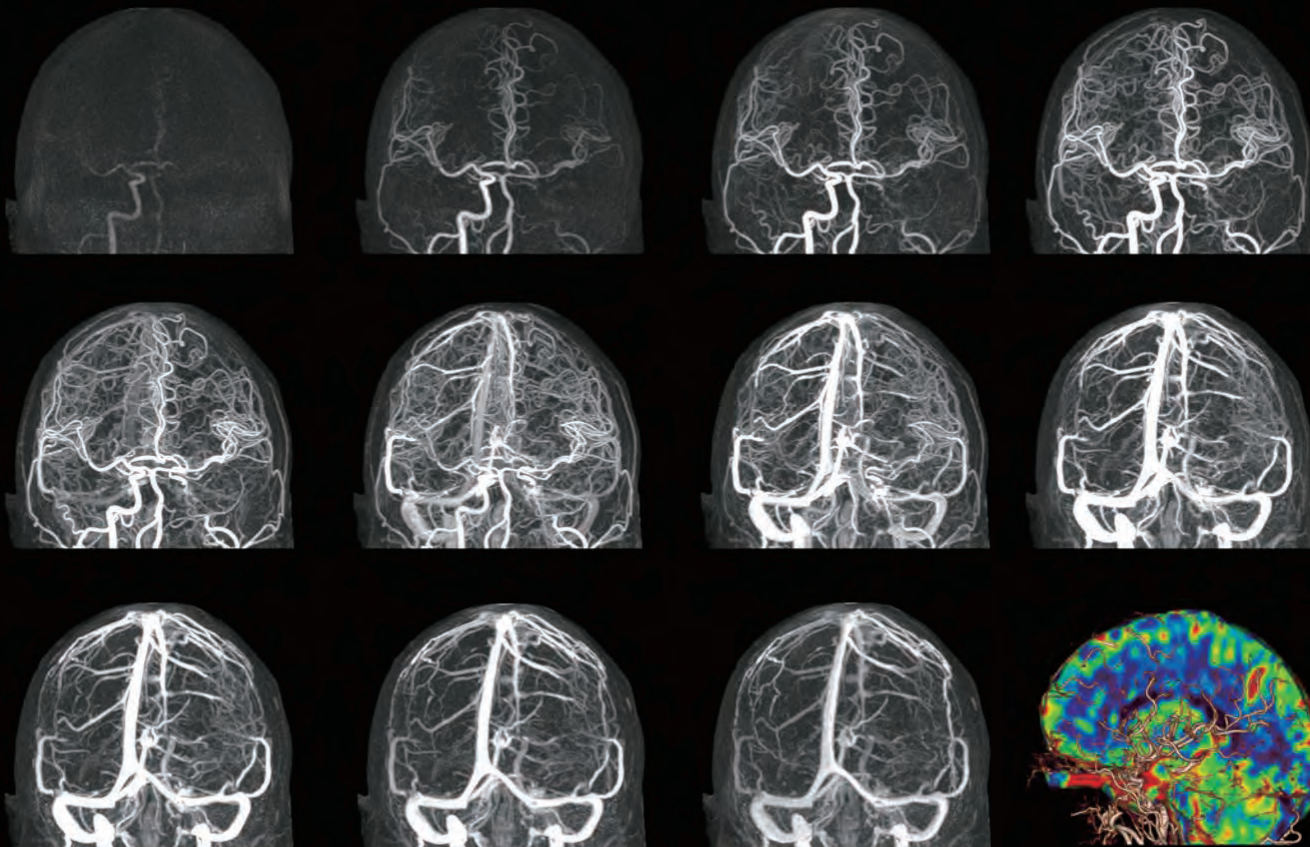
# Dynamic Volume CT – Simply efficient

More than a decade of clinical partnerships with leading institutions sets Toshiba apart as the industry leader in dynamic volume CT. Together, we have developed new procedures for better patient care, automated workflows, and refined reconstruction technology to make the remarkable routine.





Aquilion ONE / GENESIS Edition – A new standard in CT based on 10 years of clinical know-how  
There is no substitute for experience.





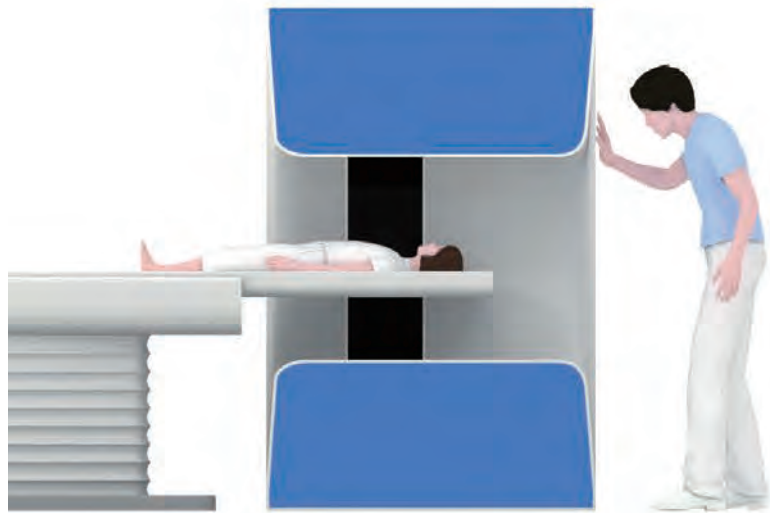




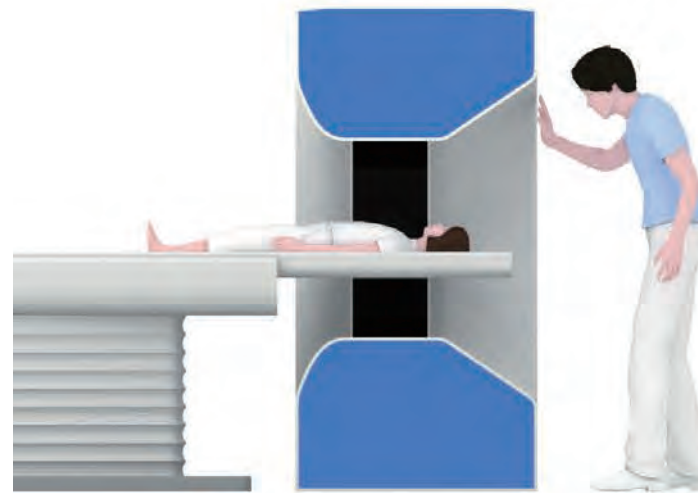
# Transforming patient experience

# Patient-centric design

GENESIS Edition has been designed with a unique flared gantry, providing a calming, wide-open space for a better patient experience. The short bore is safer, with improved access to the patient from the front and rear of the gantry. During trauma and interventional procedures, patients can easily be cared for from the front and rear of the gantry.



Claustrophobic tunnel design



GENESIS Edition – Patient-friendly open flared design





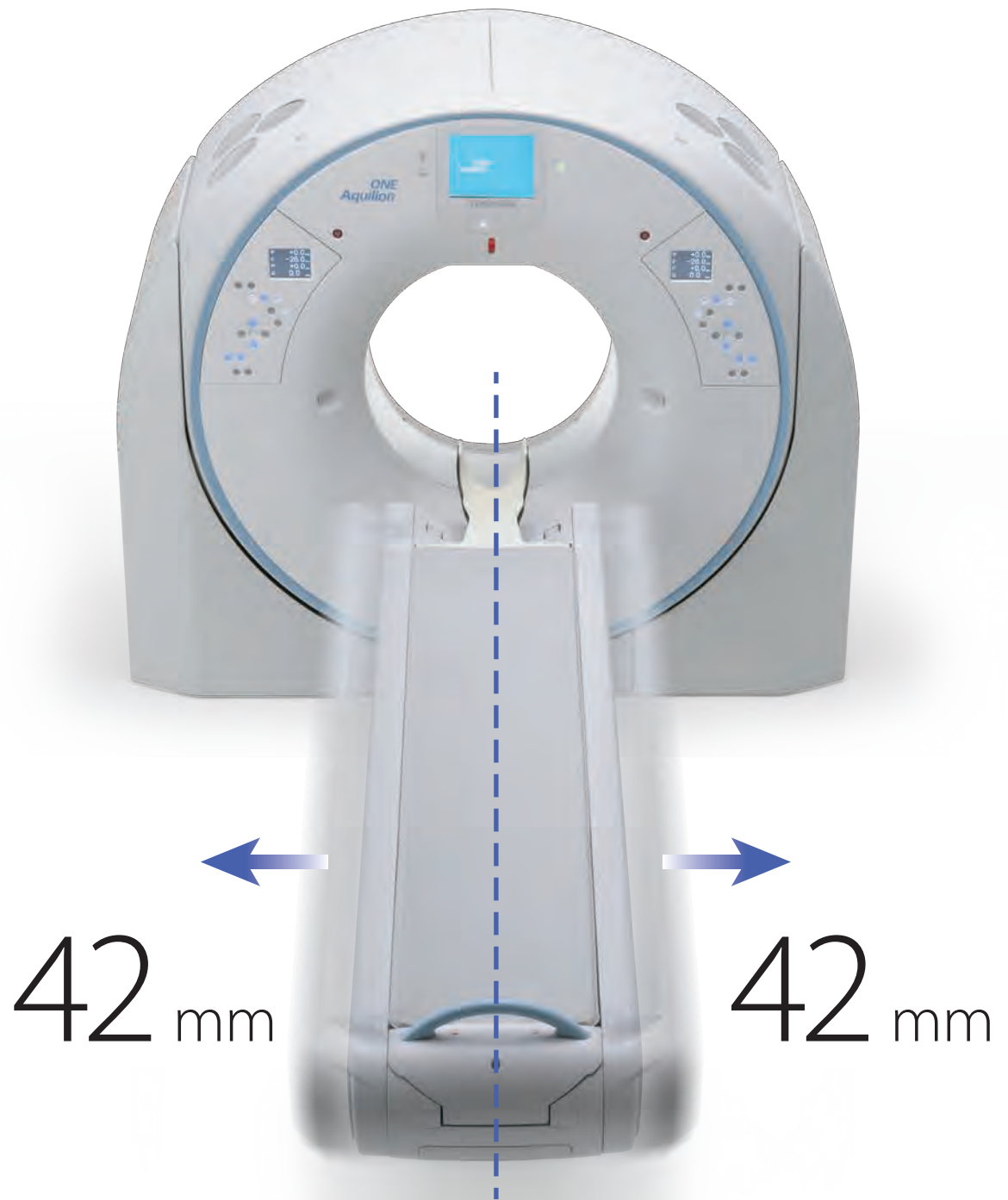


The open flared design ensures that all patients, from the youngest to the largest, will remain at ease during scanning and provides unobstructed access at all times.

## A couch designed for patient and technologist safety

Tech Assist Lateral Slide\* ensures safety and comfort by providing a tool to mechanically move the patient to the correct position with the push of a button.

Tech Assist Lateral Slide reduces the risk of injury to the patient and the technologist.



Once on the table, perfect positioning – No push, no pull.

\*Option



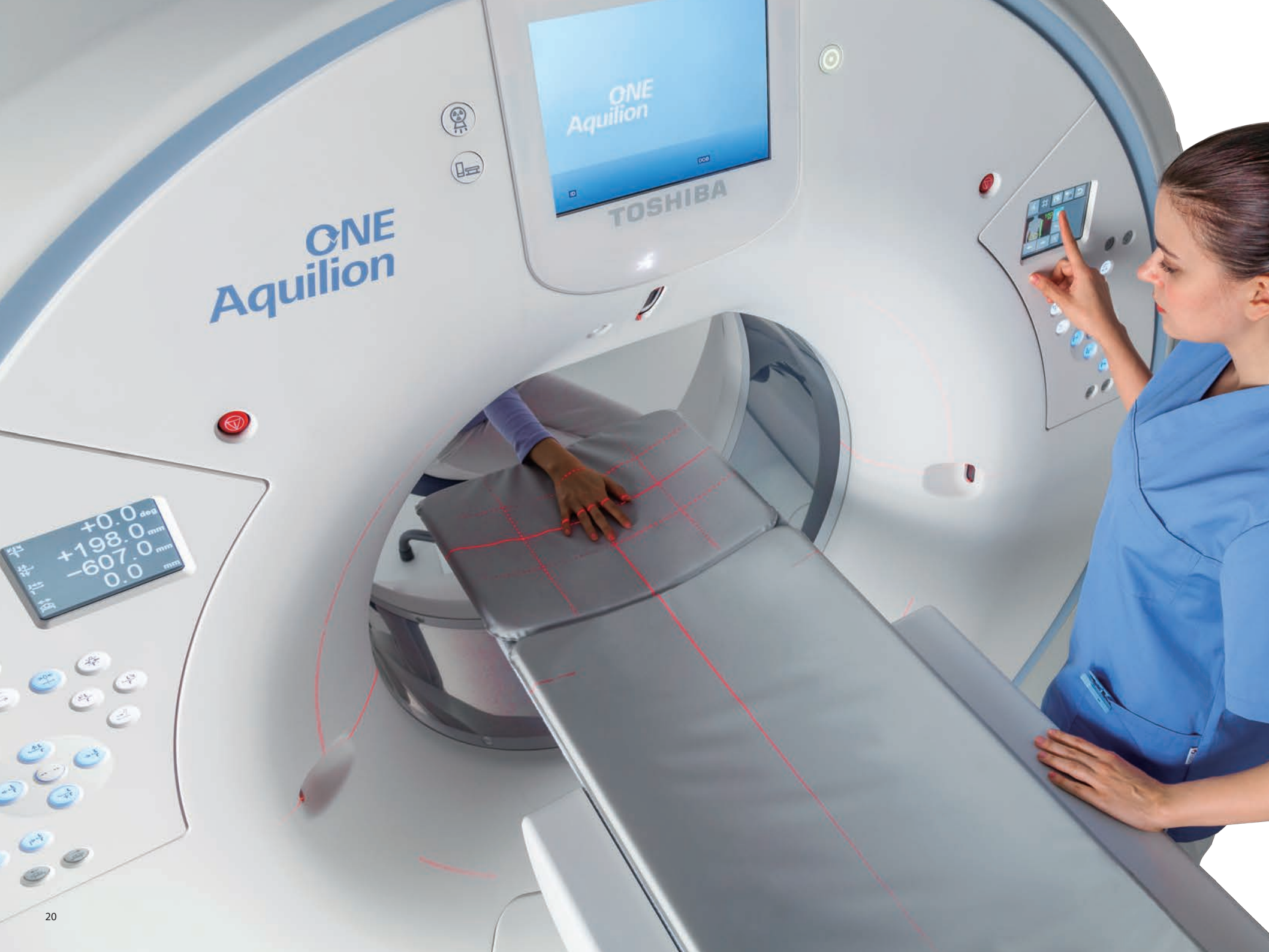
## No need to accept a premium CT system without gantry tilt

Gantry tilt is a fundamental feature of CT systems, permitting angled scanning at your desired reading plane and avoiding direct exposure to radiosensitive organs.

Precision engineering equips GENESIS Edition with bidirectional gantry tilt. Highly advanced reconstruction technology overcomes the mathematical complexity of angled scanning for helical and volumetric acquisition, with no compromise in image quality.







ONE  
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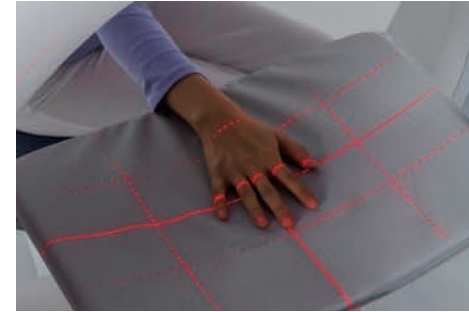
+0.0 deg  
+198.0 mm  
-607.0 mm  
0.0 mm



## Introducing the ease of X-ray in CT

Thanks to GENESIS Edition, CT scans can now be performed with the simplicity of conventional X-ray. Laser collimation\* allows the field of view and scan range to be set directly on the gantry. Patients are positioned more comfortably. Examinations are performed faster and with reduced radiation dose.

\*Option

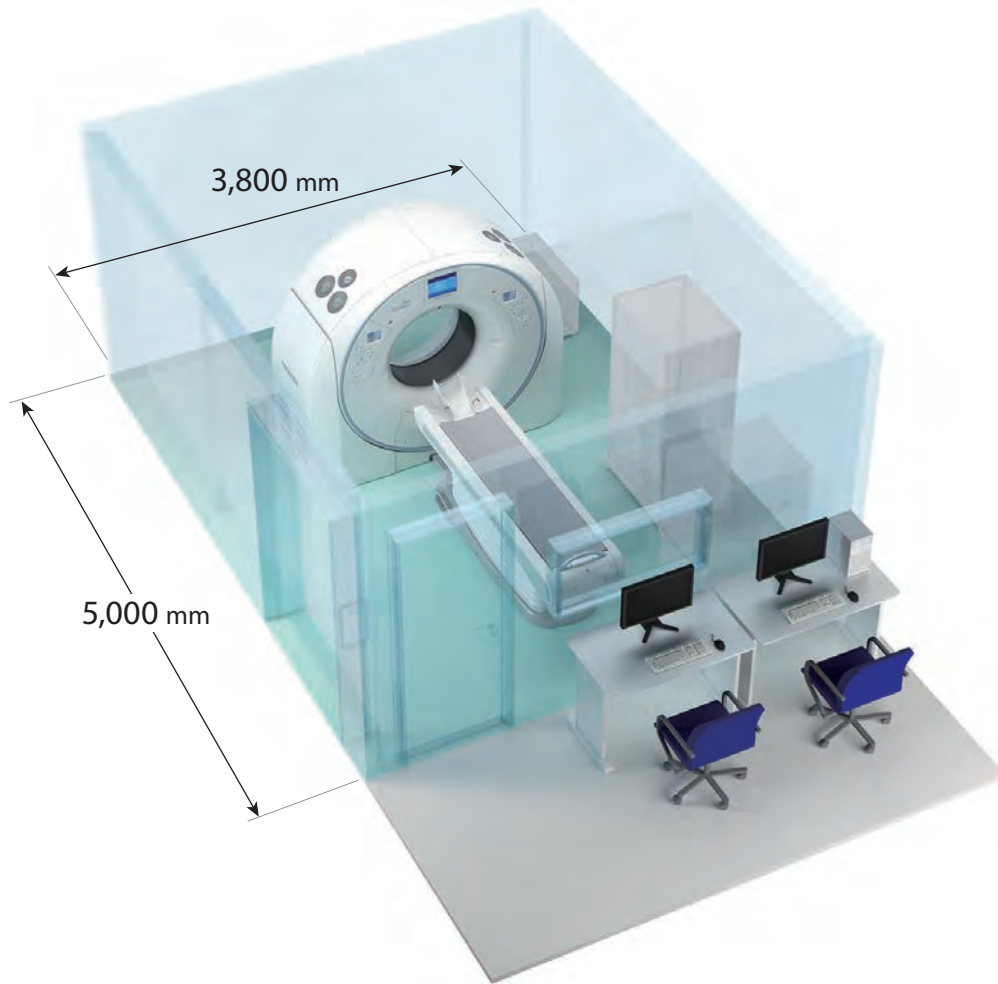








# Transforming your workspace



## Economize on space, not on performance

GENESIS Edition is smaller, lighter, and requires less power than any other premium CT system. Designed for an installation space of just 19 m<sup>2</sup>, GENESIS Edition can be installed in most existing CT rooms, avoiding costly renovations.

The compact design also provides more in-room space for trauma or interventional procedures.



Installation Space



Power Capacity



Gantry Weight







## Making your work flow

GENESIS Edition helps to make complex exams easier and more reproducible. All steps from exam planning to reconstruction and postprocessing can be combined in the same protocol. So simply selecting from the wide range of pre- or user-defined protocols is all that's needed to achieve rapid and robust results.



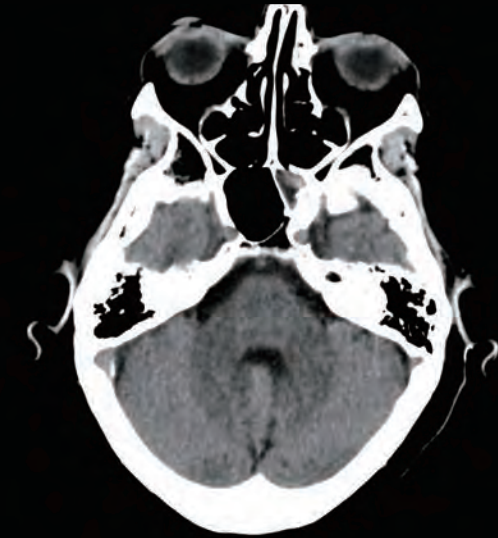
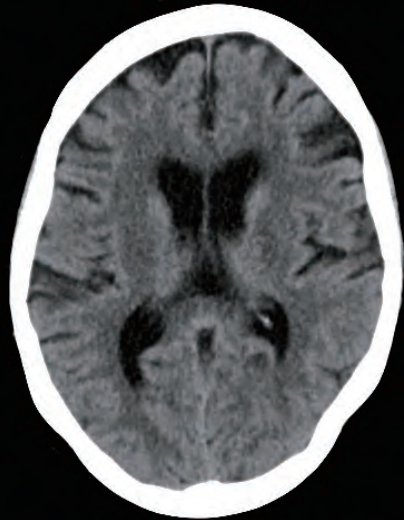
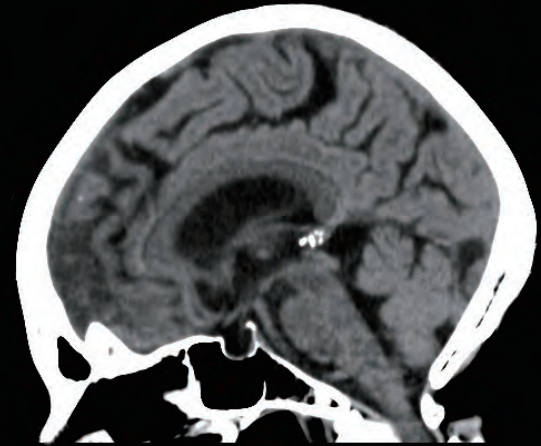
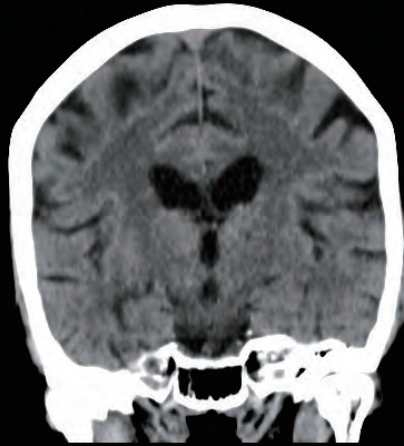
Powerful Protocols

Patient Adaptive Exposure

Advanced Applications

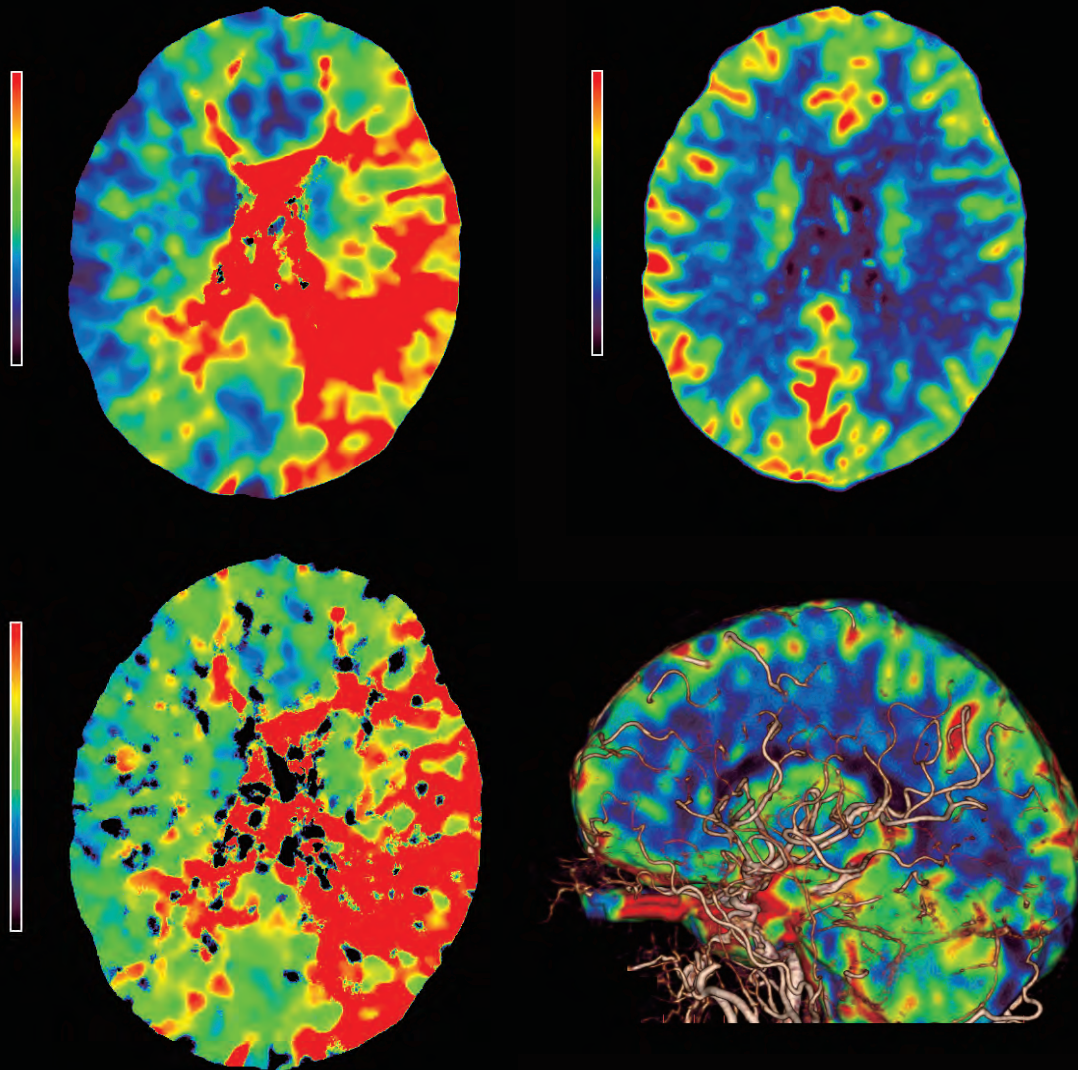
**AUTOMATED** ▶▶▶

# Brain Imaging



Superb brain image quality with clear grey-white matter differentiation and significantly reduced artifacts thanks to PUREVISION optics

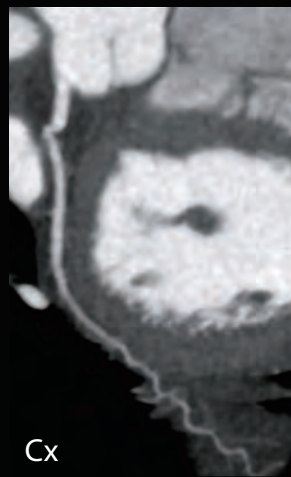
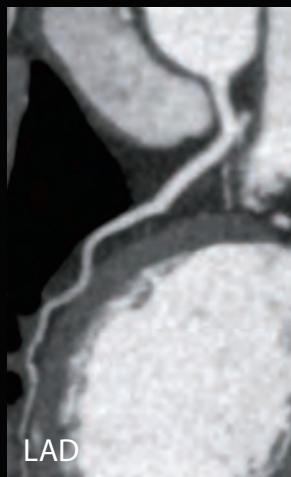
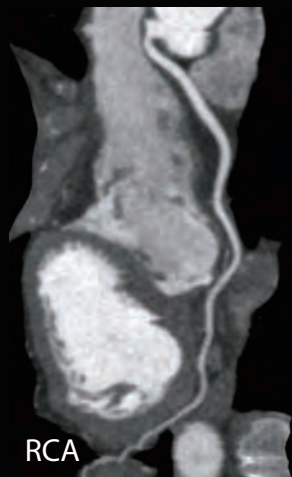
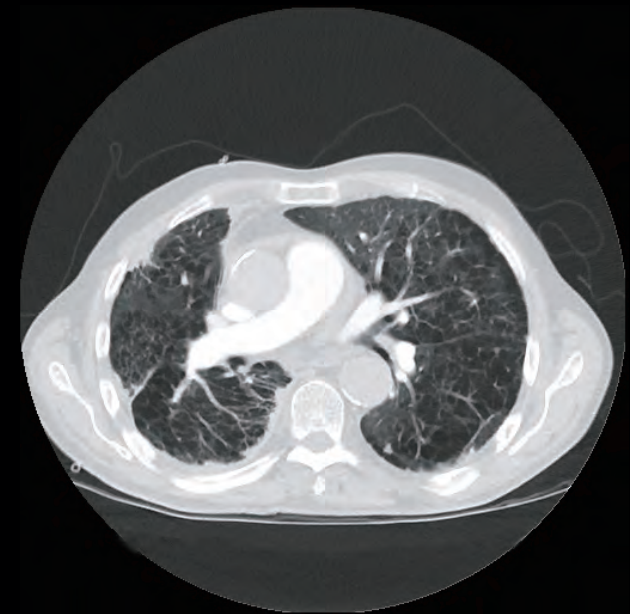
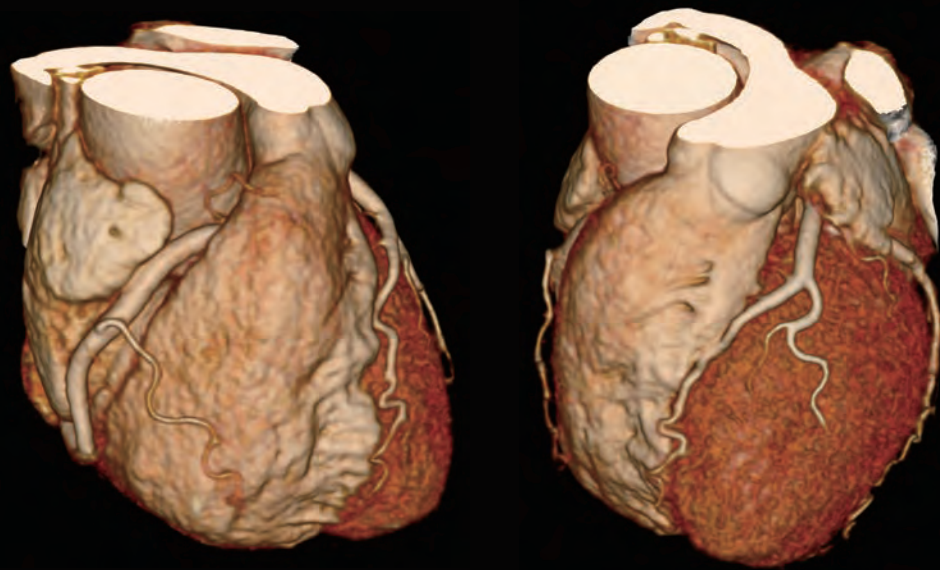




Whole-brain perfusion\* with Dynamic Volume CT

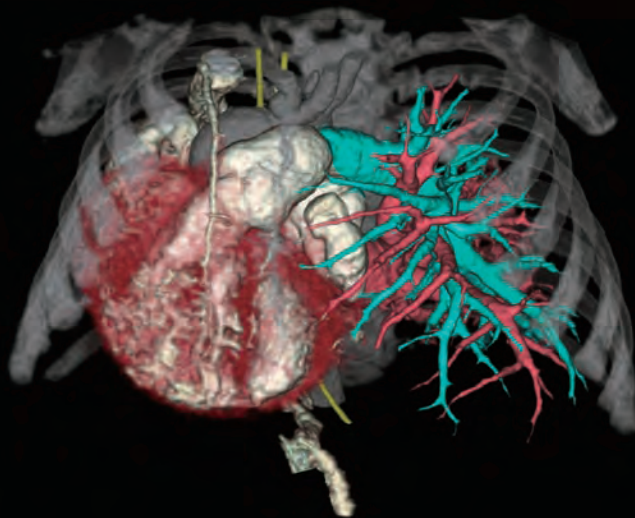
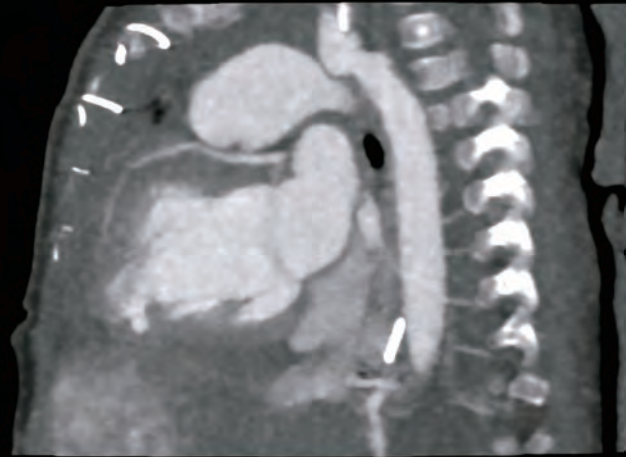
\*Option

# Chest Imaging



ONE beat cardiac CT\* with high spatial resolution at only 0.26 mSv

Enhanced clinical confidence with <sup>SURE</sup>Subtraction™ Lung\*

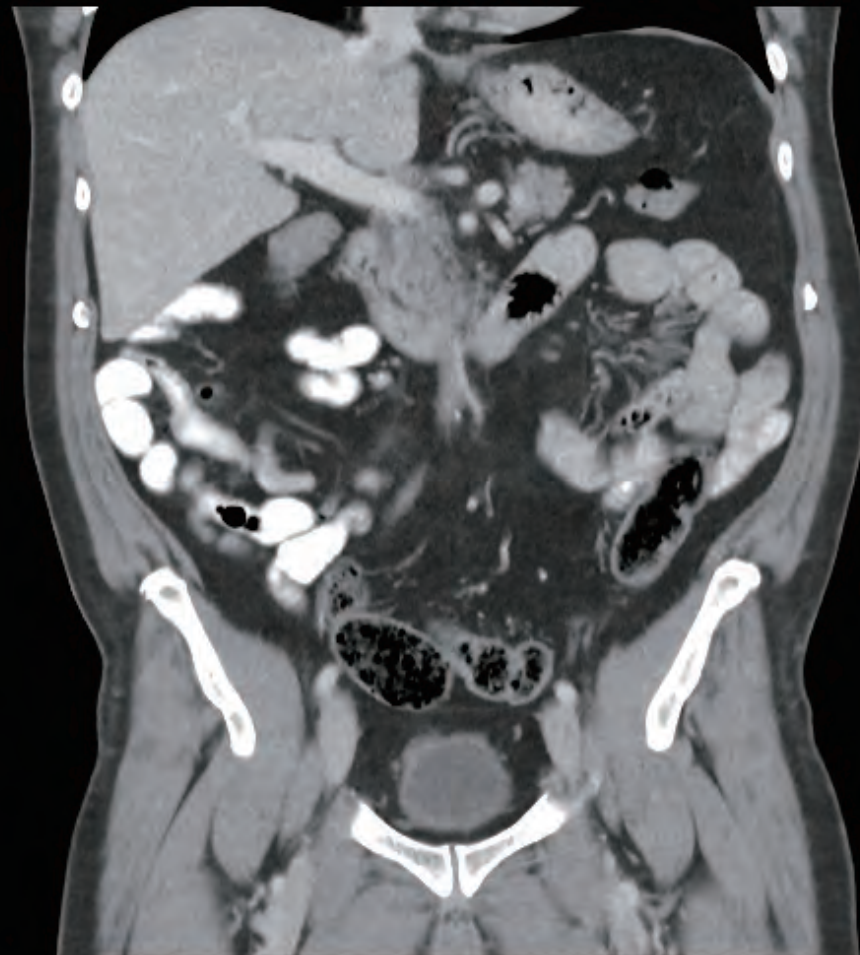
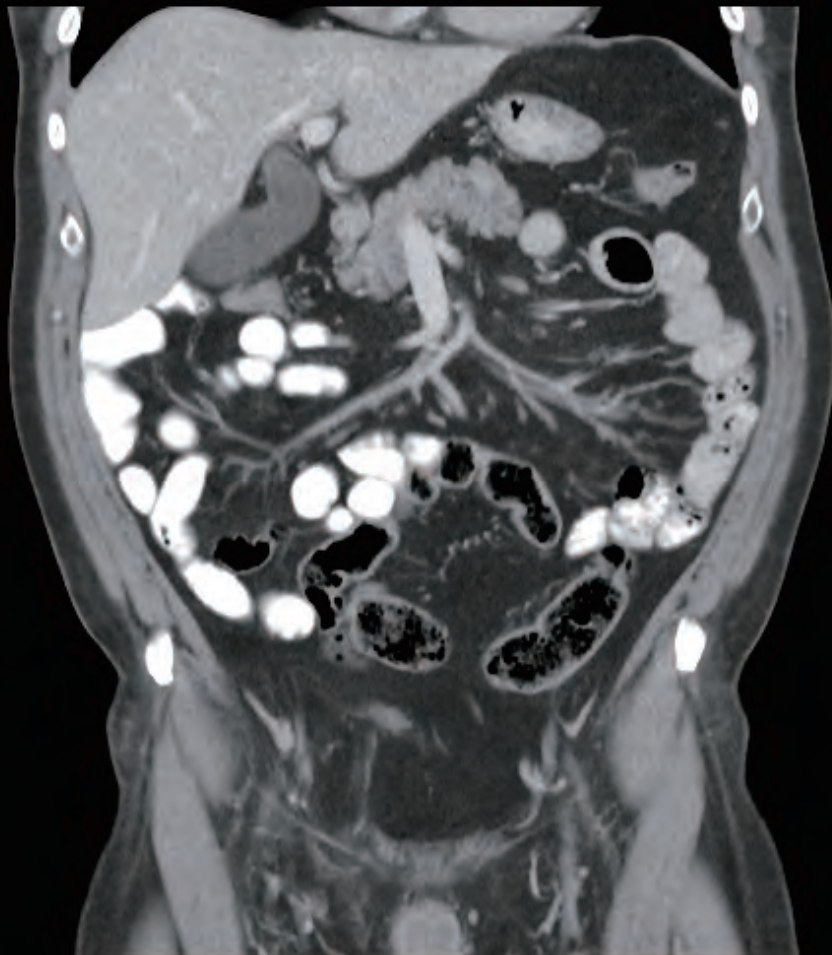


ONE volume chest scan of newborns: ultra-fast scan, ultra-low dose

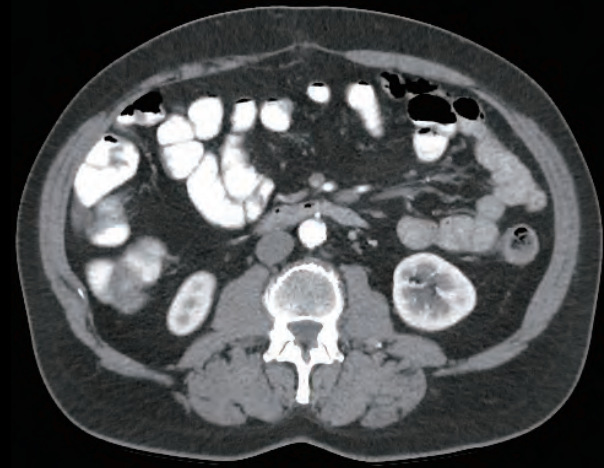
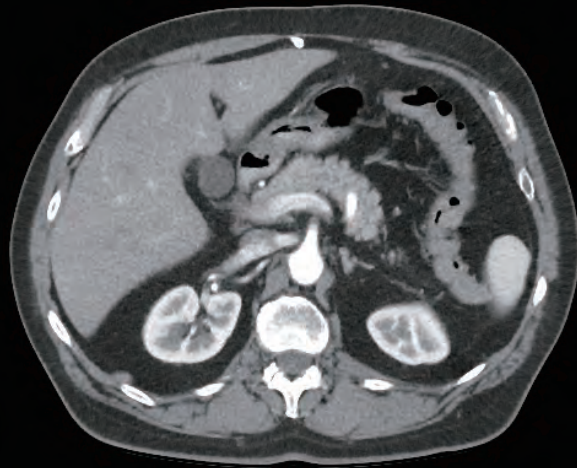
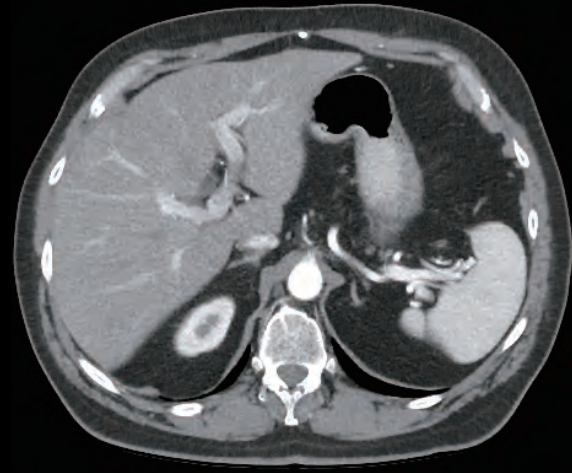
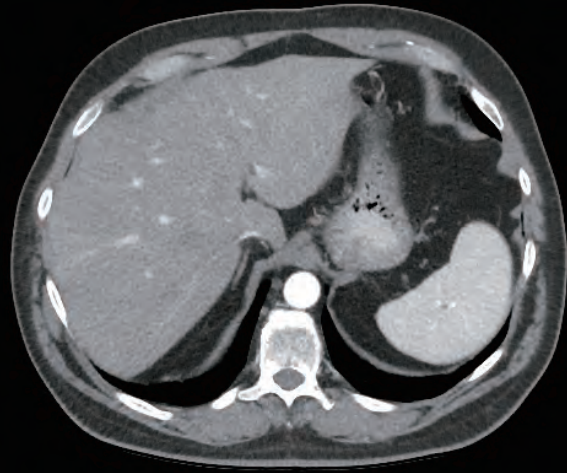
\*Option



## Body Imaging

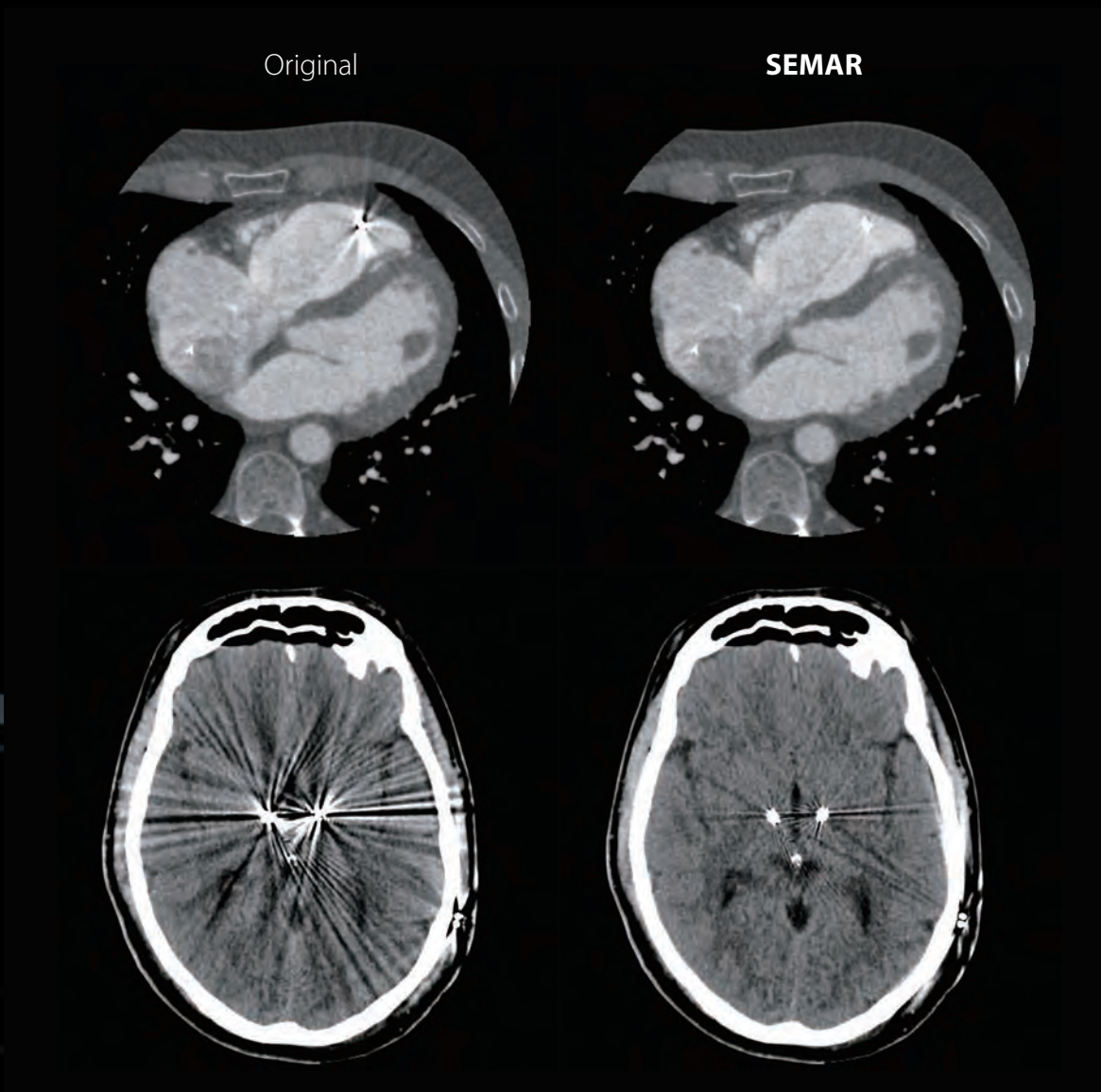


Excellent image detail and low contrast resolution in the abdomen





# SEMAR Single Energy Metal Artifact Reduction

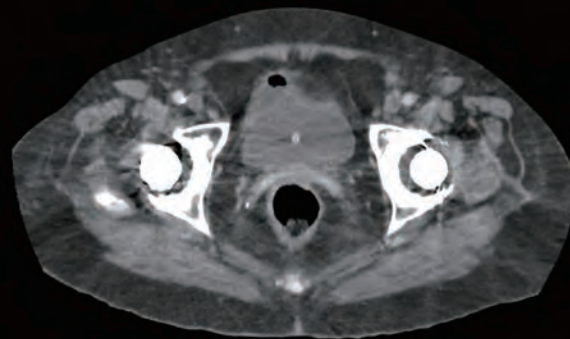
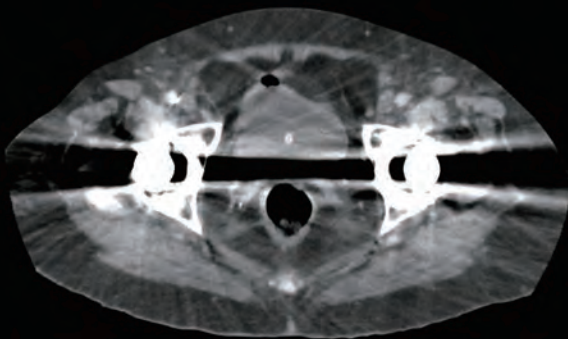




Original



SEMAR







### Main specifications

<b>Detector</b>		PUREVISION detector
		320 rows, 0.5 mm
<b>Gantry</b>	Rotation time	Min. 0.275 s* <sup>1</sup> , 0.35 s
	Bore size	78 cm
	Bore depth	38.7 cm
	Tilt	± 30°
<b>Patient couch</b>	Load	220–315 kg, 694 lbs* <sup>2</sup>
	Max. scan range	150–200 cm* <sup>2</sup>
<b>Reconstruction speed</b>	Volume	5 s
	Helical	Max. 80 fps
<b>Reconstruction</b>	Iterative reconstruction	AIDR 3D* <sup>3</sup> Enhanced
	MBIR	FIRST* <sup>1</sup>
<b>Installation</b>	Power capacity	125 kVA* <sup>1</sup> , 100 kVA
	Space	Min. 19 m <sup>2</sup> (short couch), 204 ft <sup>2</sup>

\*1 Option

\*2 Depend on system configuration

\*3 Adaptive Iterative Dose Reduction 3D







## **GENESIS Edition Transforming CT**

**WARNING:** Any reference to x-ray exposure, intravenous contrast dosage, and other medication 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. Use the As Low As Reasonably Achievable (ALARA) radiation dose principle to balance factors such as the patient's condition, size and age; region to be imaged; and diagnostic task.

**Disclaimer:** In clinical practice, the use of the AIDR 3D and FIRST 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. Due to local regulatory processes, this product may not be available in each country. Please contact your local Toshiba sales representative for the most current information.

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*Made For life*