www.aquilionprime.com

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 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 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.

Made for Life™

TOSHIBA MEDICAL SYSTEMS CORPORATION

http://www.toshibamedicalsystems.com

MCACT0242EA 2013-10 TME/D

Toshiba Medical Systems Corporation meets internationally recognized standards for Quality Management System ISO 9001, ISO 13485.

Toshiba Medical Systems Corporation Nasu Operations meets the Environmental Management System standard ISO 14001.

Made for Life, Aquilion ONE, Aquilion, SURESubtraction, SURECardio and InstaView are trademarks of Toshiba Medical Systems Corporation.

VitreaView is a trademark of Vital Images, Inc.

Printed in Japan

TOSHIBA

Leading Innovation

PRIME Aquilion

Adaptive Diagnostics
Clinical Solutions

PRIME Aquilion

Table of Contents

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 Toshiba's 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.

▶ Visit **www.aquilionprime.com**

- Adaptive Diagnostics
- Minimum Energy
  Minimum Space
- Integrated Dose Reduction
- Streamlined Workflow

Adaptive Diagnostics

Variable Helical Pitch, SURESubtraction™ and SURECardio™ Prospective are Toshiba's unique Adaptive Diagnostic scan modes that simplify complex protocols and provide consistent quality results.

Aquilion PRIME delivers total clinical flexibility.

Adaptive Diagnostics

Adaptive Diagnostics
Clinical Solutions

“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

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

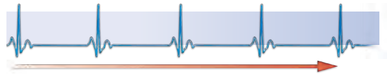
SURESubtraction

With pixel-perfect subtraction of bone and calcium, SURESubtraction 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.

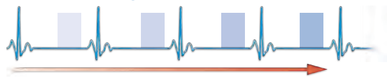
SURECardio Prospective — Overcome the Unexpected

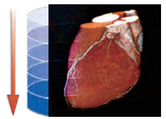
Aquilion PRIME performs coronary angiography using a prospectively triggered helical technique. This ensures superior uniformity in the z-axis compared to step-and-shoot techniques and shorter scan times. SURECardio Prospective includes Toshiba's proprietary arrhythmia rejection software, which recognizes 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

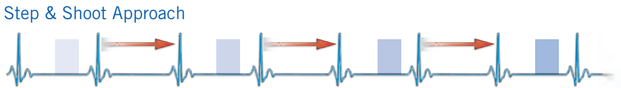


SURECardio Prospective





Step & Shoot Approach



Shuttle Helical

Toshiba's 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 ⓘStation monitor. This allows in-room control and contributes to improved scan outcomes, especially for young children and patients in medical or emotional distress.

Toshiba's Commitment to the Environment

Aquilion PRIME has been engineered to meet Toshiba 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

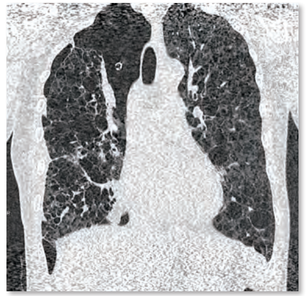
Toshiba's dose-saving technologies are fully integrated into the scan sequence, taking the guesswork out of optimizing patient dose.

Integrated Dose Reduction — That Works

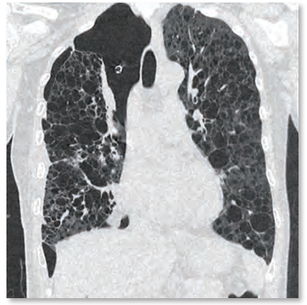
- Iterative reconstruction
  - ✓ **Noise reduction**
- **AIDR 3D**
  - ✓ **Noise reduction**
  - ✓ **Protocol integration**
  - ✓ **Prospective mA reduction**
  - ✓ **Ease of use**
  - ✓ **Assured image quality**
  - ✓ **Reconstruction speed of up to 60 images per second (ips)**
  - ✓ **Applicable to every scan**

AIDR 3D integrated

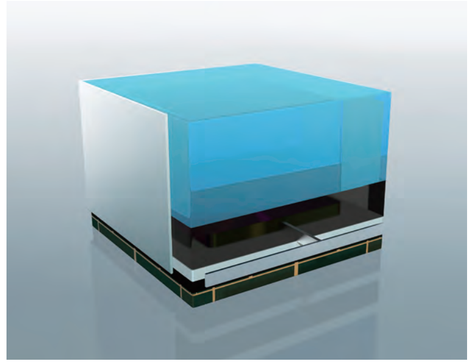
Toshiba's Adaptive Iterative Dose Reduction 3D (AIDR 3D) is fully integrated into the automatic exposure control software, taking the guesswork out of optimizing patient dose. ALARA is automatically achieved for each and every patient without compromising image quality or workflow.



without AIDR 3D



with AIDR 3D



Quantum 80 Detector

Incorporating the world's first 80-row detector, Aquilion PRIME builds on Toshiba's innovative 0.5 mm slice detector to deliver images with unparalleled spatial resolution in all planes for improved diagnostic accuracy.

With a highly efficient photon to light conversion rate and a mathematically negligible afterglow, Quantum 80 provides artifact free images with fewer x-ray photons.

Streamlined Workflow

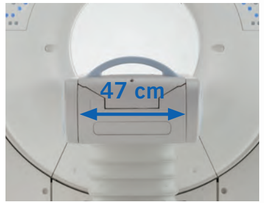
Streamlined workflow from patient positioning to diagnosis.
Automated, and Instantaneous.

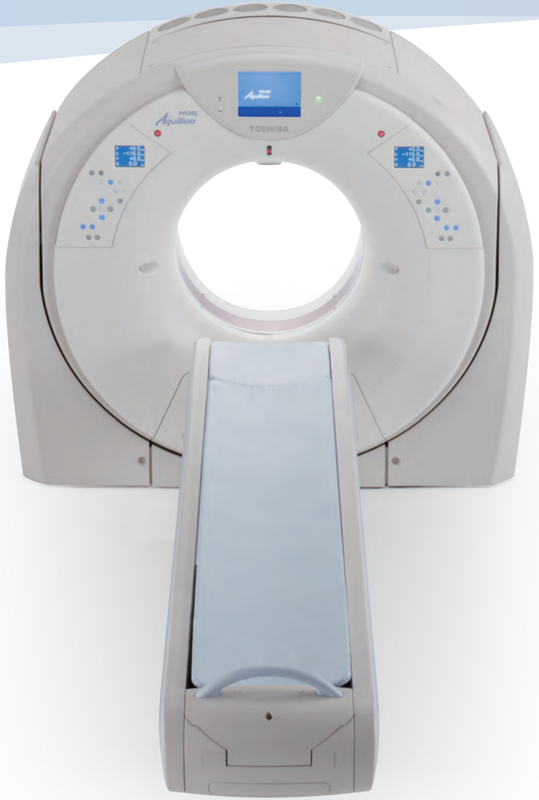
Evolution Gantry Design

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, another Toshiba first, 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.





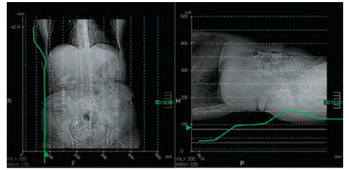
“At Fairview Southdale Hospital, I am part of the Safe Patient Handling Committee, and we look for ways of eliminating employee injury and keeping our patients safe. The new technology from Toshiba, Tech Assist Lateral Slide, has helped our employees by not having to move patients as much. Now they can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

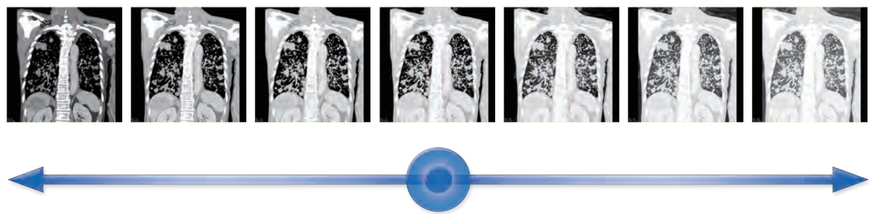
Routine 80-row Ultra Helical acquisition is 43% faster than conventional 64-row helical systems. This increased acquisition speed results in shorter scan times, reduced contrast usage and costs, and improved image quality due to decreased movement artifacts.

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

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

HybridView

Toshiba's 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.

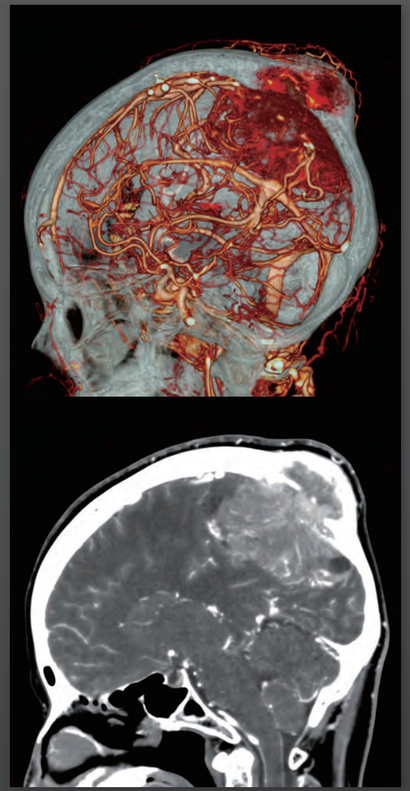


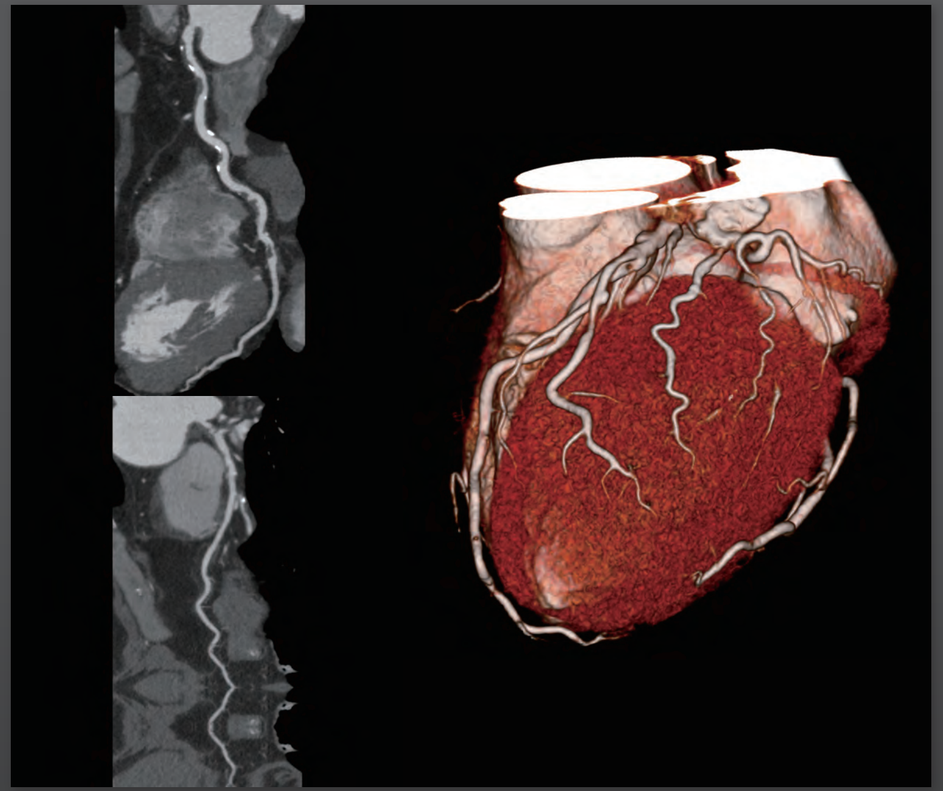
ViTAL Images Advanced Visualization

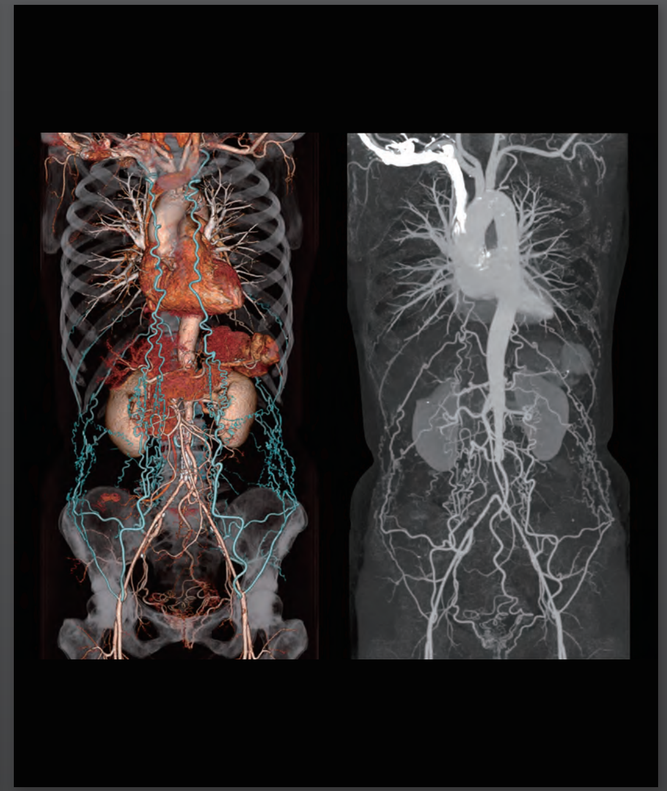
For more than 20 years, Vital has supported clinicians' imaging requirements with powerful advanced visualization and data management solutions, including applications for cardiovascular, neurovascular, and oncology studies.

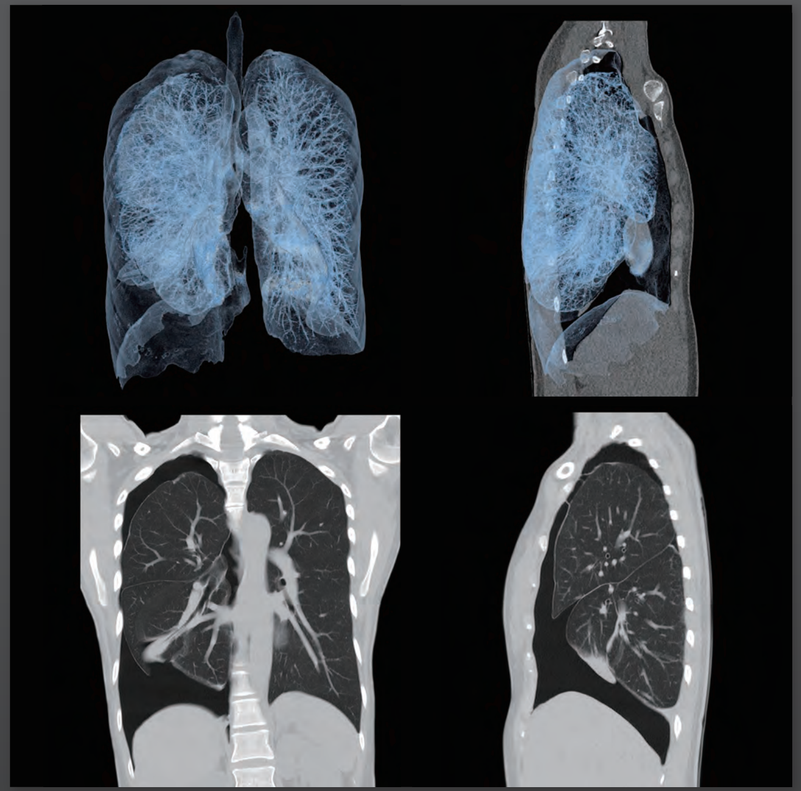
Universal Viewing

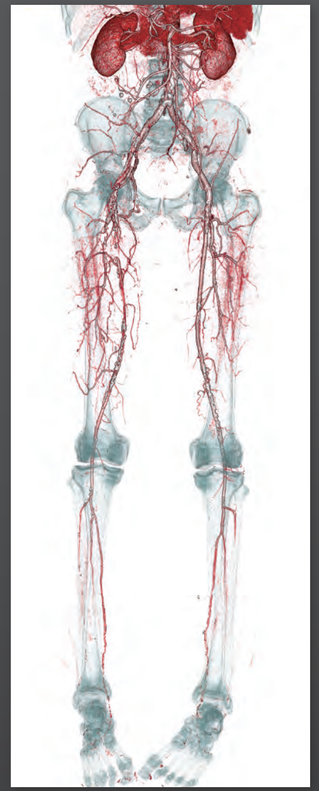
Built from the ground up, VitreaView™ addresses the needs of physicians who want uniform access through a simple intuitive user interface for all patient imaging. It offers secure integrated access to imaging through the EMR, EHR, or HIE.

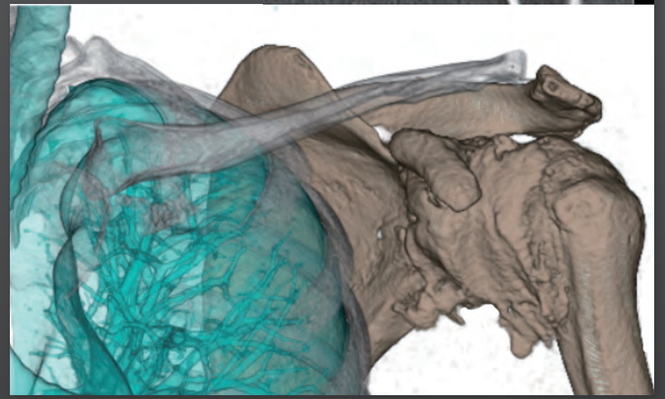


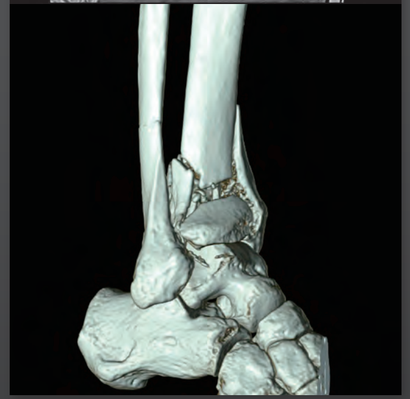












TOSHIBA AND THE ENVIRONMENT

Good for our planet, right for our customers

Caring for the earth and its people is at the heart of everything Toshiba does – and one of the many ways we innovate. Toshiba's passion for safeguarding the earth is enshrined in our Environmental Vision 2050, whereby we seek to improve our eco-efficiency by a factor of ten over the next four decades through strict monitoring of energy usage, continuous improvement of manufacturing processes and eco-conscious product development.

Far from being a distant goal, the Environmental Vision 2050 sets tangible milestones year by year. These include the reduction in emission of CO_2 and other greenhouse gases, and the complete phasing out of certain hazardous substances from our products.

TOSHIBA eco style

Minimum footprint 14.8 m^2

Aquilion PRIME requires less installation space than any other premium level CT with a footprint of only 14.8 m^2.(*1) This CT system has been made compact enough to meet even the most restrictive siting requirements.

Low-dose scanning technology AIDR 3D that reduces power consumption

AIDR 3D technology allows high-quality images to be acquired with lower X-ray exposure than in conventional systems. The patient exposure dose can be reduced by up to 75%,(*2) with a corresponding reduction in power consumption for X-ray generation.

Adaptive power managements

Innovative Adaptive Power Management technologies dramatically decrease energy requirements, reducing running costs and easing the environmental impact.

*1: Short couch version

*2: Compared with Toshiba products in which AIDR 3D is not installed.

GLOBAL INNOVATION BY DESIGN

For over 130 years Toshiba's research and development has improved the health and welfare of people around the world. Today, Toshiba Medical Systems offers a full range of diagnostic imaging products and is a reliable service partner in more than 110 countries. In accordance with our Made for Life™ commitment, we will continue to develop innovations that improve patient care and provide lasting quality for a lifetime of value.

WHY TOSHIBA?

Innovation

Toshiba is a world leader and innovator in high technology, spanning information & communications systems, digital consumer products, electronic devices, and medical imaging systems. Year on year we file thousands of patents, leading the way within each industry sector making innovation a key part of the Toshiba fabric.

Quality

At Toshiba quality and reliability is at the heart of everything we do. With technologies and products being developed in more than 30 R&D laboratories and over 300 subsidiary companies across the globe Toshiba engineers are dedicated to develop the best-performing, most reliable and environmentally friendly product solutions for you.

Design

Our product design is driven by customer feedback and the close consultation with industry visionaries and opinion leaders. Our award-winning Corporate Design Center has over 50 years of experience in developing appealing products and industry-leading solutions.

Partnership

Making sure your systems deliver from day one is an important part of our relationship. Whether you need onsite or offsite training, we can provide options that work best for you. Experienced clinical application specialists will help you maximize the potential of your new equipment.

Environment

With Environmental Vision 2050, Toshiba announced its commitment and determination to contribute to a better environment by emphasizing the stable supply of reliable energy and mitigation of climate change as well as by creating new value in harmony with the Earth.

Clinical Flexibility,
Industry Leading Patient Care,
Comfort and Workflow