

# TOSHIBA

Leading Innovation >>>



*Astelion*

PERFORMANCE THAT MATTERS

TOSHIBA  
eco style



## MINIMUM ENERGY – MAXIMUM PERFORMANCE

Astelion™ delivers outstanding cost performance and excellent image quality at very low dose. The eco-friendly system is loaded with cutting-edge technologies designed to help you deliver the highest quality care at affordable costs. Astelion's compact design allows you to place it in the smallest possible area without the need for a separate technical room or extensive building works.

### AIDR 3D

Equipped with the latest iterative image reconstruction technology, Astelion can help you achieve optimal image quality at minimal dose. As it is fully integrated into Astelion's workflow, AIDR 3D assists you to save dose in every exam and on every patient.



The image shows a close-up of the control panel of a medical device named 'Astelion'. The panel is white and features a digital display showing three rows of numbers: '00.0', '-393', and '00000'. Below the display is a keypad with several green buttons, some of which have symbols. A red power button is located above the keypad. The background is a soft-focus green, suggesting a natural or clinical setting with plants.

## Astelion

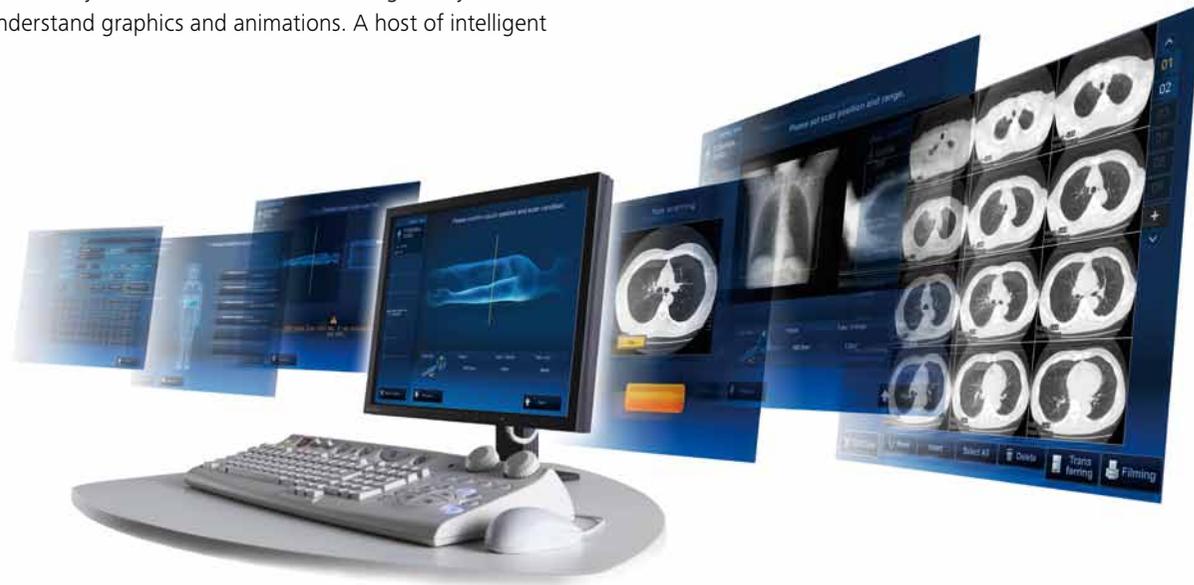
Astelion is developed with a particular focus on eco-friendly performance and carbon footprint. While it is manufactured with the minimum possible use of material and energy, the system delivers uncompromising performance at reduced energy consumption every day and on every patient. 92% of Astelion's parts are recyclable – an industry record.

## OPTIMIZED CLINICAL WORKFLOW

Astelion is designed to handle even the busiest workloads with ease. The system's intuitive user interface guides you step by step through the examination with modern and easy-to-understand graphics and animations. A host of intelligent functions enable a fast and efficient workflow.

### NAVI MODE OPERATION

Astelion's Navi Mode is perfectly suited for fast patient throughput. Regardless of whether you are an expert or a novice, this unique function lets you take advantage of the system's high performance features quickly and with ease.



### Exam Plan

#### Protocol selection

After patient registration Astelion selects the correct adult or child protocols automatically.

#### Dose check

Astelion helps ensure that the radiation dose limit you defined cannot be exceeded to avoid unintended high dose levels.

### Scan

#### SUREExposure™ 3D

This fully integrated automatic exposure control ensures optimum image quality for each patient at the lowest possible dose.

#### Real-time imaging

Astelion provides real-time imaging during the scan allowing you to monitor the result instantaneously – a valuable tool for saving scan time and radiation dose.

### Reconstruction

#### AIDR 3D

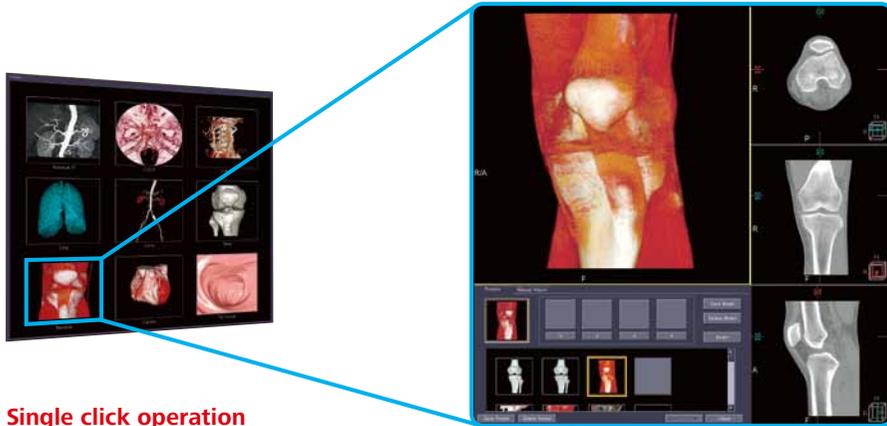
Toshiba's iterative reconstruction technology can be applied to all examinations resulting in dose reductions of up to 75% in daily routine.

#### Fast reconstruction

With a reconstruction speed of up to 15 images per second rapid diagnosis and high patient throughput are facilitated.

## Easy 3D

Astelion's user-friendly 3D imaging package allows you to generate volume images with outstanding ease of use. With a simple push of a button you select a specific protocol and the desired images are displayed.

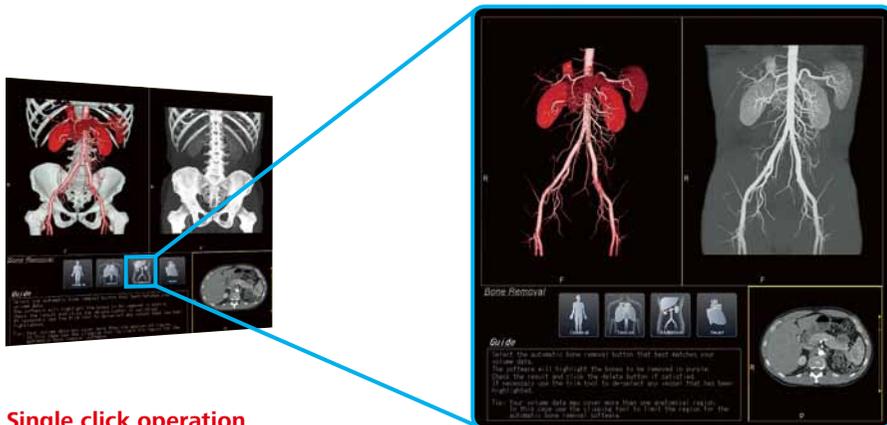


Single click operation

FAST

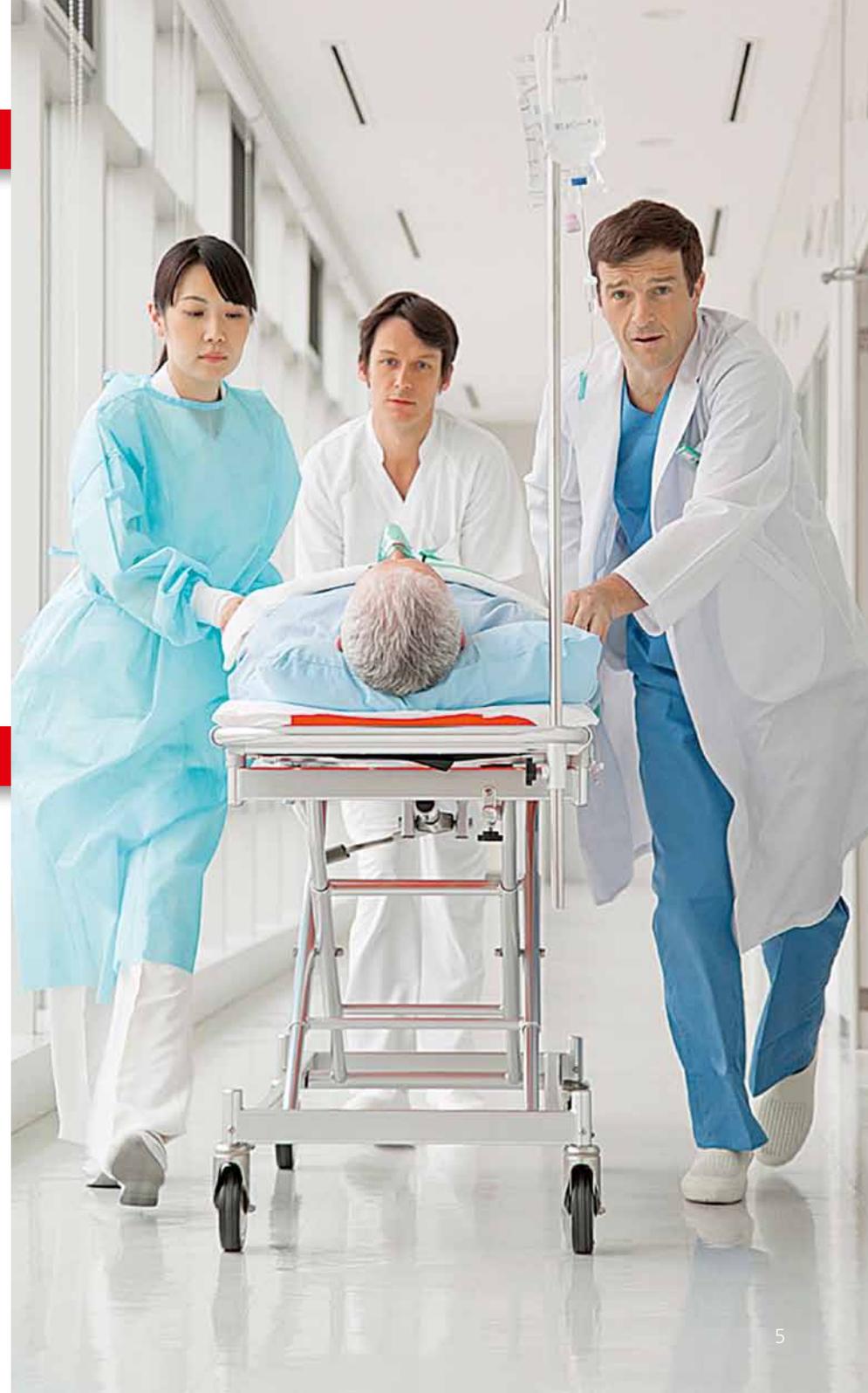
## AUTOMATED BONE REMOVAL

Astelion's bone segmentation algorithm automatically removes bones quickly and accurately from an angiogram. In just a few seconds high-quality bone free angiographic images are ready for your diagnosis.



Single click operation

AUTOMATIC



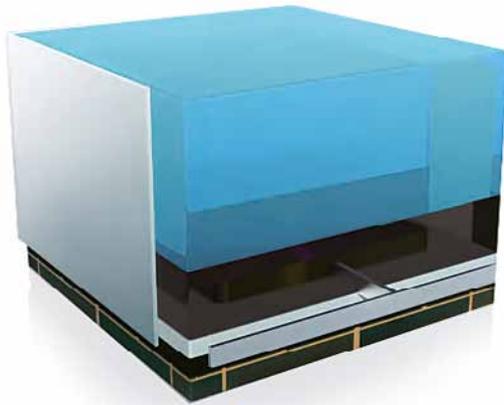
## POWERFUL PERFORMANCE – LOW DOSE

Astelion is designed to provide outstanding imaging performance. The system is equipped with powerful technology migrated from Toshiba's premium CT scanners ensuring you achieve the best possible diagnostic results at minimum dose levels and in the shortest possible time. Astelion's intelligent workflow support ensures that you can take advantage of this premium technology in your daily clinical routine.



### 0.5 MM DETECTOR TECHNOLOGY\*

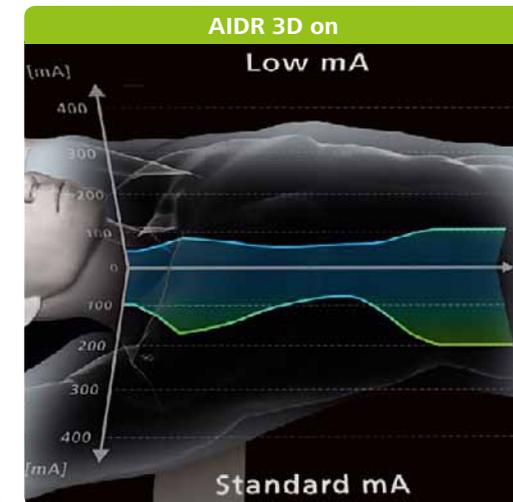
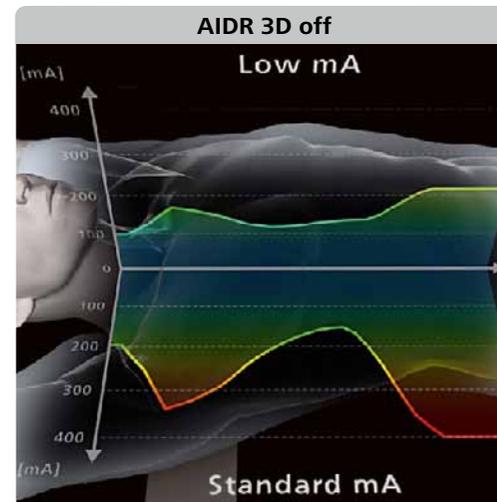
Toshiba's industry-leading Quantum Detector technology provides you with consistent high image quality across all clinical targets and in all imaging planes. Regardless of the procedure you are always assured of superior diagnostic results without compromising on or patient safety.



Astelion's industry-leading detector design delivers razor-sharp, fully isotropic images in all planes.

### LOW DOSE BY DESIGN

Toshiba's dose-reducing features AIDR 3D and <sup>SURE</sup>Exposure 3D are fully integrated into Astelion's workflow. The combination of these unique technologies reduces the applied dose automatically before you start scanning. Thus – while maintaining the desired image quality – the system helps you ensure you run your exams with the lowest dose and the highest quality imaging every day and on each patient.



AIDR 3D is fully integrated in Astelion's automatic exposure control software <sup>SURE</sup>Exposure 3D so you can simply run every scan at the lowest possible dose.

\*Astelion Advance Edition

## MINIMUM SPACE – MAXIMUM EFFICIENCY

Astelion's compact housing and small footprint allow you to operate it in small spaces without compromising on usability. The system's user-friendly design and exceptionally wide couch provide you with an ergonomic work environment and high patient comfort at all times. Its efficient workflow and low energy consumption help you increase productivity and throughput significantly.



### SMALL SPACE REQUIREMENTS

Astelion fits easily just about anywhere. With its small space requirement of just 10.4 m<sup>2</sup> it delivers powerful performance in the most compact format.

### QUICK INSTALLATION

With Astelion's simple siting requirements the system is quickly installed. Your facility will be up and running in the shortest possible time.



### SINGLE-CONSOLE OPERATION

Astelion's single console incorporates the latest multicore technology for fast image reconstruction and efficient handling of large datasets.

### QUIET GANTRY

Astelion's Quiet Gantry design with intelligent fan control reduces the noise level in your examination room to a minimum.

### ECONOMIC EFFICIENCY

Astelion's optimized system performance eliminates the need for cooling times between exams, allowing you to perform more exams in less time.

#### Standard



Tube cooling is required.



#### With AIDR 3D



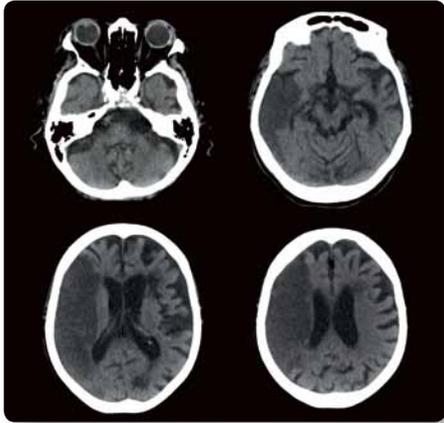
Tube cooling is not required.



**"Non-stop scanning"**



## PERFORMANCE YOU CAN SEE



A large infarct involving the right temporal and parietal lobes.



MIP image showing the artery supplying a tumor arising from the celiac axis.



3D-rendered abdominal aorta and arteries.



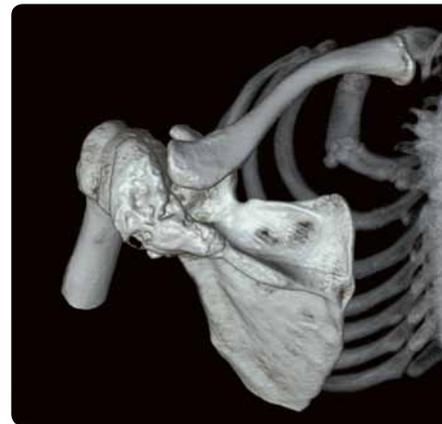
3D-rendered bronchi with bone.



Metal fixation devices in the left femur.



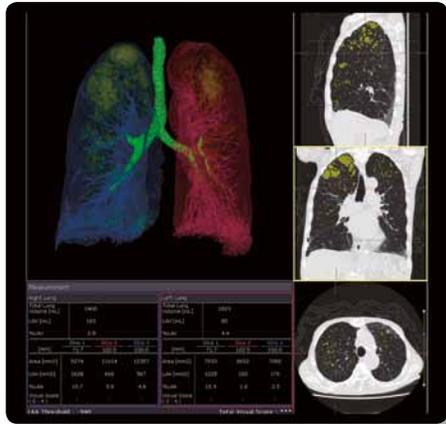
Position and condition check of osteosynthesis material.



3D-rendered left scapula fracture.

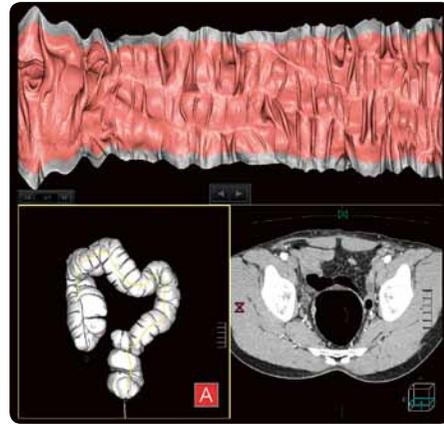


3D-rendered right hand fracture.



**Lung Volume Analysis\***

Quantification of low attenuation regions in lung tissue (regions of pulmonary emphysema).



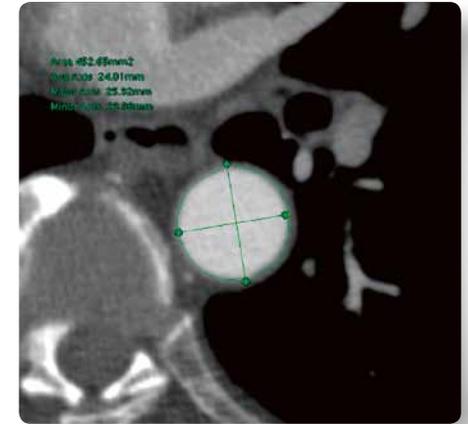
**Colon View\***

Advanced visualization and reporting tools for CT colonoscopy. Display Includes fillet view, fly-through and polyp tagging.



**SUREFluoro™\***

Real-time reconstruction and display of fluoroscopic images for faster, safer interventional procedures.



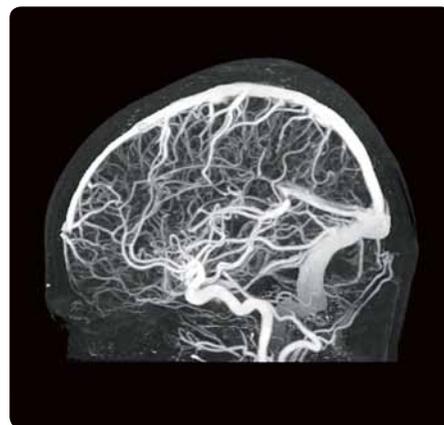
**Vessel View\***

Generates and displays CPR and cross-cut images of blood vessels.



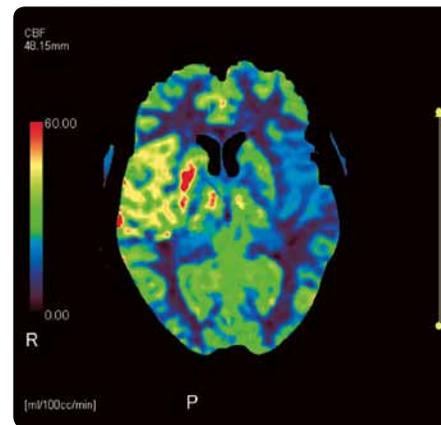
**Fat Index View\***

Automatically calculates the ratio of visceral to subcutaneous fat as a prognostic indicator of metabolic syndrome.



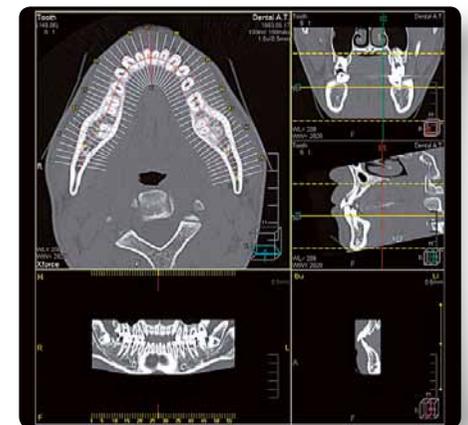
**SURESubtraction™\***

Automated digital subtraction of intracranial vessels from bone.



**CBP Study\***

Blood flow characteristics are analyzed from dynamic scan images and the results are displayed as map images.



**Dental Analysis\***

Comprehensive dental MPR software with easy-to-use tools for pre-operative planning.

\*option

## ASTELION COMES WITH INDUSTRY-LEADING SERVICE AND SUPPORT

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 120 countries around the globe. Our Mission is to deliver the best quality products and services, as well as the industry's best after-sales support through long-term, customer focused partnerships.



### Innovation

Toshiba is a world leader and innovator in high technology. Year on year we file thousands of patents, making innovation a key part of the Toshiba fabric. In accordance with our Made for Life™ commitment, we develop innovations that improve patient care and provide lasting quality for a lifetime of value.

### 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 Design Center has over 50 years of experience in developing pioneering products and industry-leading solutions to ensure that you can work at the highest standards of diagnostic precision, usability and productivity.

### 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 and your team to maximize the potential your new CT system has to offer.

## GOOD FOR OUR PLANET, RIGHT FOR OUR CUSTOMERS



\*compared to a 4-slice scanner released in 2003

Caring for 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 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<sub>2</sub> and other greenhouse gases, and the complete phasing out of certain hazardous substances from our products.



### Design, manufacturing and shipment

#### No sustainability without quality

By manufacturing high quality diagnostic imaging equipment that lasts, we ensure that you can enjoy working with your machine over many years. Our software-driven platforms are easy to upgrade to keep you abreast of new diagnostic tools for a long time. And while we continuously work to improve the performance of our equipment, we drive down consumption of energy and resources at the same time.

### Product use

#### Energy efficiency is the key

A major part of the greenhouse gas emissions our medical imaging systems produce accrue while you scan your patients. Therefore we design our products to be outstandingly energy efficient, and even to recycle energy wherever possible. Take for instance our Aquilion ONE™ CT scanner. While braking its gantry, 25 % of the energy used to set it into rotation can be recovered and stored for the next scan.

### Refurbishment and recycling

#### End of use is not the end of life

Because outstanding quality lasts, your Toshiba medical imaging equipment remains of high value even after you replace it with new equipment. Our SecondLife refurbishment program helps to maximize the life span of our equipment by enabling you to sell or buy used equipment of the same high quality as our new machines.



# Astelion



## TOSHIBA MEDICAL SYSTEMS CORPORATION

[www.toshibamedicalsystems.com](http://www.toshibamedicalsystems.com)

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**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 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.

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.

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