

In the medical systems field, Toshiba aims to establish human-friendly and patient-centered medical care based on the concept of "Made for Life™" to create great value based on the preciousness of life. As one of the total solution providers for various medical care needs from diagnosis to remedy, we provide the latest diagnostic imaging equipment and medical information systems.

Aquilion ONE™ Whole-Body X-ray CT Scanner



Aquilion ONE™ whole-body X-ray CT scanner

Toshiba Medical Systems Corporation has developed the diagnostic X-ray computed tomography (CT) scanner Aquilion ONE™, which allows 320 slices to be acquired simultaneously in a single rotation of only 0.35 s, providing new volume-imaging diagnostic capabilities.

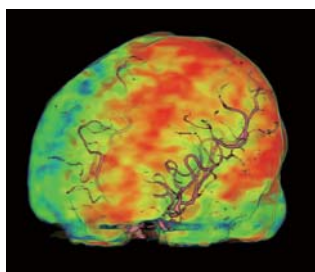


Image of cerebral blood flow
(Courtesy of Fujita Health University)

The main features of Aquilion ONE™ are as follows:

- Aquilion ONE™ can cover a range of up to 160 mm in the axial direction in a single rotation, substantially reducing the scan time. For example, in cerebral or cardiac studies, the entire target organ can be scanned in a single rotation. This makes it possible to obtain volumes with minimal motion artifacts, even in patients who are unable to hold their breath or remain still, such as infants.
- Volumes can be generated from the data acquired in the same temporal phase in a single rotation. Dynamic volumetric data can be acquired by continuous-rotation scanning to obtain a series of volumes over time. This is expected to lead to a number of new clinical applications such as the evaluation of blood flow and the observation of dynamic processes such as joint movement.
- In order to facilitate observation and analysis of the acquired volumetric still and dynamic data, the overall workflow from scanning to image display and analysis has been improved by increasing the speed of the three-dimensional (3D) image processing software and the clinical application software for the head and heart.

Artida™ Cardiovascular Diagnostic Ultrasound System

Toshiba Medical Systems Corporation has developed the cardiovascular diagnostic ultrasound system Aplio™ Artida™, which can display 3D images of the heart in real time.

The main features of Artida™ are as follows:

- Artida™ incorporates the Cardiac 4D function, which is used to generate 3D images or multiple two-dimensional images of the heart in real time. The heart is scanned three-dimensionally with the electronically steered ultrasound beams generated by a newly developed matrix array transducer that is extremely compact and lightweight.
- The user interface allows the operator to handle 3D image data in an intuitive manner and display clinically useful 3D images, ensuring efficient real-time 3D image diagnosis.
- Artida™ is provided with a 3D myocardial tracking function employing the pattern-matching method, allowing myocardial motion to be traced, analyzed, and displayed. Motion of the heart walls (such as myocardial strain) can be visualized in three dimensions, which is extremely important in the diagnosis of heart disease.
- To ensure efficient examination of the heart, which is a moving organ, the data acquisition rate has been increased.
- High-quality images are displayed on a large LCD (Liquid Crystal Display) monitor. The monitor with large grip handle is mounted on a freely moveable arm, allowing the operator to easily adjust it to the most comfortable viewing position.
- The switches on the operating panel and on the touch command screen are laid out for efficient workflow in cardiovascular examinations.



Artida™



Cardiac 4D transducer



Cardiac 4D imaging