

The development and widespread use of such diagnostic-imaging technology as X-ray diagnostic equipment, X-ray CT scanners, magnetic resonance imaging (MRI), nuclear medicine equipment, and diagnostic ultrasound equipment makes possible early diagnosis and treatment with minimal invasiveness. Bringing to bear the high-technology strengths of the entire company, Toshiba continually works to meet the demands of the medical industry, providing total solution such as picture archiving and communication system (PACS) and hospital information system (HIS) to medical institutions.

## Aquilion™ MULTI Multislice Whole-Body X-Ray CT Scanner



Aquilion™ MULTI multislice whole-body X-ray CT scanner

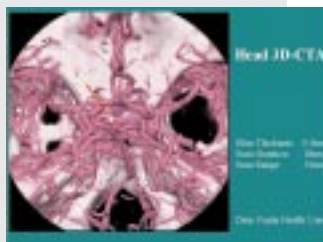
Based on the technologies developed for Aquilion™, which supports half-second scanning, Toshiba has introduced a multislice CT scanner, Aquilion™ MULTI, which is the top system in Toshiba's series of helical whole-body X-ray CT scanners. This system has a multislice detector that makes it possible to acquire data for four slices simultaneously.

The main features of Aquilion™ MULTI are as follows:

- **Multislice detector:**  
A highly efficient scintillator is employed. Slice thickness can be selected from 0.5 mm, the thinnest in the world, to 8 mm. It can support both high-resolution scanning and high-speed scanning.
- **High-speed scanning:**  
Scanning time is reduced to approximately 1/10 that of current 1-second CT scanners. Most examinations can be completed within a single breath-hold, minimizing patient discomfort.
- **High-resolution, high-quality images:**  
Even if a smaller slice thickness is selected, scanning time can be shorter than in existing models. Longitudinal resolution is improved by the use of thin slices. Isotropic voxel data, with the same resolution in each axis, provides higher definition and smoother 3-dimensional images.

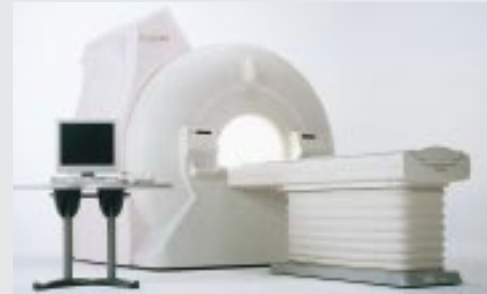


Jaw-to-knee 3D image



Head 3D-CT-angio image

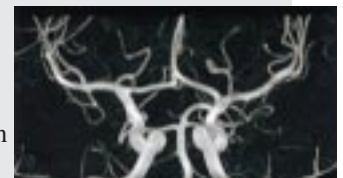
## EXCELART™ MRI System with Revolutionary Noise Reduction Technology



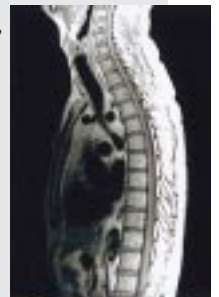
EXCELART™ MRI system

Toshiba has developed a 1.5-T MRI system, EXCELART™, incorporating new noise reduction technology known as Pianissimo™, which dramatically reduces noise levels during scanning. The basic development concept of this system is “Human-friendly quiet MRI”, with the primary goal being to minimize the main sources of patient discomfort during MRI examinations: (1) long examination times, (2) a confined examination space, and (3) excessive noise.

- **Fast scan:**  
This system also supports an ultra-fast scanning technique, Single-Shot EPI (Echo Planar Imaging), providing higher image quality in a shorter time.
- **Short-length, large-bore gantry assembly:**  
The inner diameter of the patient bore, where the patient is placed during examination, is 60 cm at the center, 5 cm larger than in conventional models. In addition, the gantry assembly appears less threatening to the patient due to its short length (less than 2 m) and curved design.
- **Noise reduction technology (Pianissimo™):**  
The gradient coil, which is the source of scanning noise, is sealed in a vacuum chamber and independently supported to reduce subjective noise levels to approximately 1/10 those of conventional MRI scanners without noise reduction mechanisms.



Brain MR angiography without contrast medium



C/T spine MR imaging