Medical Systems

The reduction of national medical expenses has become a pressing need today, because of the rapidly aging society. In order to fulfill these customers' needs, Toshiba's Medical Systems Division is offering high-performance and high image quality medical equipment, as well as solutions for the efficient business management of hospitals. The X-ray CT system (Asteion™/DUAL) and the 3D-Angio system (XIDF-100A) offer fast, world-class, high-quality 3-dimensional images, to improve examination throughput and hospital administration.

Asteion™/DUAL Whole-Body CT Scanner

Toshiba has developed and released an X-ray CT (Computed Tomography) system permitting simultaneous acquisition of two slices per single rotation.

The major features are described below:

- Simultaneous acquisition of two slices per rotation shortens the examination time, reducing the time that the patient must stay on the couch. At the same time, the X-ray exposure dose is reduced, resulting in extending the service life of the X-ray tube. In addition, when scanning time equal to that for conventional CT systems is used, a wider range in the axial direction can be scanned.
- The Asteion™/Dual system employs a state-of-the-art solid-state detector developed for the top of the range CT system Aquilion™/Multi,which is capable of acquiring four slices in a single scan. The Asteion™/Dual system provides high-resolution data in the axial direction, improving diagnostic capability.
- A function for automatically optimizing the exposure dose level according to the scanning region and a scanning mode in which X-ray exposure is reduced are provided, reducing invasiveness.
- This system employs technology and know-how developed for top-of-the-line CT systems. This includes image display and filming processing functions designed for efficiently handling large quantities of images, which provides physicians and radiographic technicians with increased ease of use.

Head image

Chest (bronchus) multiplanar reconstruction (MPR) image


Asteion™/DUAL whole-body CT scanner

3D-Angio System

It is sometimes difficult to determine the 3D (three-Dimensional) structures of complex cerebral vessels, although such determination is essential in interventional radiology operations, which are less invasive treatments for aneurysms and stenosis. The 3D-Angio systems were developed to assist determination of 3D vessel structures by reconstructing and displaying 3D vessel structures from rotational DSA (Digital Subtraction Angiography) images.

Features include:

- High spatial resolution: less than or equal to 1 lp/mm
- 3D displays provided quickly: display of 3D images of 256^3 voxels in 2 minutes, and redisplay of 3D images of 512^3 voxels in another 7 minutes
- Easy to use: automatic 3D display (no interactive operations)
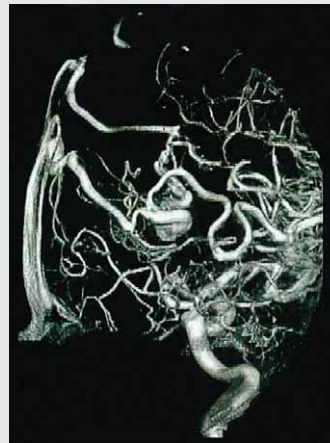
Reconstructed image of cerebral arteriovenous malformation

XIDF-100A reconstruction unit