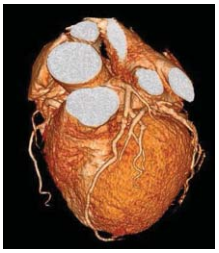
Medical Systems

In the medical field, Toshiba applies medical imaging systems in the area of motile heart and circulatory organs, and enhanced imaging, visualization and quantification technologies that improve the quality of diagnosis.

Aquilion™ CFX Whole-Body X-Ray CT Scanner

Aquilion™ CFX whole-body CT scanner



3D image of heart (Courtesy of Fujita Health University)

Toshiba Medical Systems Corporation has developed the Aquilion™ CFX as the top system in Toshiba's line up of X-ray CT scanners. This system permits simultaneous acquisition of 16 slices in a single scan.

Its main features are as follows:

- In order to support cardiovascular examinations, which require rapid scanning, the minimum scan time has been reduced to 0.4 s. The optimal scan parameters and image reconstruction conditions are selected automatically according to the patient's heart rate, permitting tomographic images to be acquired with a temporal resolution as high as 40 ms.
- This system is equipped with a high-resolution solid-state detector that supports both isotropic-resolution and high-speed scanning. In isotropic-resolution scanning with a slice thickness of 0.5 mm, structural details of blood vessels measuring 3 mm or less, such as the coronary arteries extending over the entire heart and cerebral blood vessels, can be clearly visualized. In high-speed scanning with 16-slice simultaneous acquisition at a slice thickness of 2 mm, scanning from the neck to the pubis can be completed in only 8 s. These features improve diagnostic performance as well as minimizing any patient discomfort.

Aplio™ CV Version Diagnostic Ultrasound System

Aplio™ CV version diagnostic ultrasound system

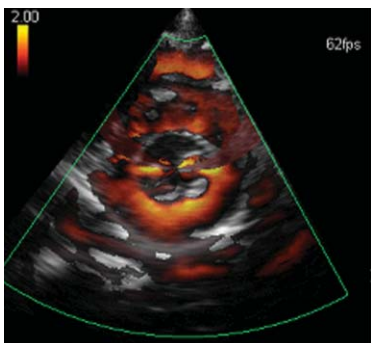
Toshiba Medical Systems Corporation has developed the Aplio™ CV (Cardiovascular) version, which has dedicated transducers and clinical applications for cardiovascular examination.

This version includes not only workflow enhancement for routine examination, but also advanced clinical applications such as contrast harmonic imaging and a quantitative cardiac function analysis package. Online network connection to the full digital echo laboratory environment is also available.

The main features of the system are as follows:

- Tissue Strain Imaging™
  Calculates the myocardial strain (extension or contraction of the muscle of the heart) from the raw velocity data and displays it as color-coded images. (Technology award from the Japan Society of Ultrasonics in Medicine)
- 1.5 harmonic imaging
  Dramatically enhances the contrast agent signals to detect the flow or perfusion in heart. (Technology award from the Japan Society of Ultrasonics in Medicine)
- Programmable/dedicated measurement package
  Increases throughput with a dedicated cardiovascular measurement package and also by adding original measurements using the programmable function.
- Small-diameter tranesophageal echocardiographic probe
  Specifically designed to image the heart from inside the body by inserting a transducer into the esophagus.

1.5 Harmonic Imaging



Tissue Strain Imaging™