

SHIP TO: WHSE/INSIDE DELIVERY  
V.A. Medical Center  
OVERTON BROOKS VAMC  
510 E. STONER AVE.  
SHREVEPORT, LA 71101-4295  
REQUISITION: 667-B89001

DELIVER TO:  
VA SHREVEPORT OVERTON BROOKS MEDICAL  
CENTER  
510 STONER ST  
SHREVEPORT, LA. 71130

LARGE BORE CT SCANNER - ONCOLOGY

- Includes 12 Month Warranty.
- Quotation includes a trade-in not to exceed removal of the system.

This amount includes de-installation and

**EQUIPMENT SUMMARY:**

**LARGE BORE CT SCANNER - ONCOLOGY**

<u>QTY</u>	<u>DESCRIPTION</u>
1	AQUILION LB HIGH CAPACITY EXTENDED COUCH
1	CT SCANNER AQ LB WITH HIGH CAPACITY EXTENDED COUCH
1	ACCESSORY KIT FOR HIGH CAPACITY COUCH
1	CT PHANTOM
1	CONSOLE DESK 65" X 36" X 30"
2	CHAIR WITH ADJUSTABLE ARMS AND BACK
5	MEDIA,DVD-RAM DRIVE (9.4 GB)
1	NON-CORROSIVE FLOOR LEVELING EPOXY KIT
1	DICOM 3 MODALITY WORKLIST MANAGEMENT (MWM) SERVICE CLASS USER (SCU) SYSTEM
1	TOSHIBA POWER DISTRIBUTION UNIT
1	EXTENDED FIELD OF VIEW
1	CIVCO TABLE INSERT KIT FOR HIGH CAPACITY EXTENDED COUCH (AQUILION VISION, ONE, PRIME, LB, LIGHTNING)
1	TABLE TOP MOUNTING BRACKET FOR HIGH CAPACITY EXTENDED COUCH (BRACKET ONLY)
1	CIVCO UNIVERSAL TABLE TOP INSERT FOR HIGH CAPACITY EXTENDED COUCH
1	MIM MAESTRO CT SIM SOFTWARE (HARDWARE INCLUDED)
1	GREEN LASER ISOCENTER MARKING SYSTEM - WALL MOUNTED
1	CT AQ PRIME-S (2ND GENERATION) BIOMED TRAINING COURSE - TUITION ONLY (10 DAYS)

## AQ/LB-SERIES/ONC/S.000

### AQUILION LARGE BORE CT SCANNER - ONCOLOGY

Aquilion Large Bore Series (Aquilion LB), with Adaptive Iterative Dose Reduction 3D (AIDR 3D), is a large bore Computed Tomography (CT) scanner that provides improved patient positioning with outstanding image quality and clinical performance for today's radiology and oncology suites.

The system was designed for improved patient positioning and image quality necessary for CT simulation, oncology treatment planning, interventional radiology procedures and bariatric patients. This includes:

- Widest bore opening in the industry (90 cm) for easy patient positioning and maximum flexibility for treatment planning, and
- Largest true (non-extrapolated) field-of-view (70 cm), which covers more anatomy with greater accuracy than ever before by using Toshiba's PUREVISION PLUS Detector.

The Aquilion LB solves one of the biggest problems faced in oncology - the positioning of a large patient on a breast board with both arms up and the board tilted to its maximum (25%).

The Aquilion Large Bore Series scanner includes Aquilion's best-in-class, PUREVISION detector with 0.5mm elements. Aquilion LB's PUREVISION detector provides true isotropic resolution to radiology and oncology alike. Capable of reconstructing 32 unique slices with every rotation using Toshiba's proprietary coneXact algorithm. The Aquilion LB enables the user to scan in one plane and reconstruct information in another plane with the same image quality. This allows clinicians to use 3D volumetric information when needed. Aquilion LB's PUREVISION detector is the only detector to provide three slice-width combinations - 16x0.5, 16x1 and 16x2 mm - and it achieves an industry-leading, low-contrast resolution without using additional dose.

The combination of a high-speed scanner and a powerful, high-voltage generator meets every diagnostic requirement. Solid-state, multi-row detectors and optimal reconstruction techniques ensure high-quality images. A high-performance CPU, large color monitor, hybrid keyboard and refined Graphic User Interface (GUI) make the operating environment highly efficient.

#### COMPONENTS

- Large-aperture, 90 cm, slip-ring gantry and extra-wide couch (47 cm)
- 72 kW High-frequency X-ray generator and 7.5 MHU high-heat-capacity X-ray tube
- Ergonomic operator console
- Volumetric image processor
- High-capacity hard disk

- CD-R / DVD-RAM Drive - 9.4 GBytes (double sided DVD RAM)
- Image data transfer link
- Patient comfort accessories
- Operator manuals and quality assurance phantoms

## KEY FEATURES

### Single-Energy Metal Artifact Reduction (SEMAR)

SEMAR (Single-Energy Metal Artifact Reduction) technology employs a sophisticated reconstruction algorithm to reduce artifacts caused by metal while improving visualization of the implant, its supporting bone and adjacent soft tissues for accurate imaging.

SEMAR can be used in routine low-dose scans, and the combination with AIDR 3D provides the best possible image quality without the need for a dedicated scan procedure or additional radiation exposure. It can be used with Helical scan mode. Toshiba will include SEMAR with each system as a value add.

*\* Bone structures near the metal-tissue interface may become distorted. Metal artifacts may not be completely removed in areas near the metal material. Comparison with the original images is suggested when performing diagnosis using SEMAR images.*

**Improved Patient Positioning:** The industry's largest aperture of 90 cm and the 70 cm true reconstruction field-of-view provides extreme flexibility during CT simulation and improved treatment planning.

**Routine Fast Scanning:** Using slip-ring technology, Aquilion LB is able to perform 0.32-second partial scans and 0.5-second routine scans to meet the demands of dynamic and helical examinations.

**High Image Quality:** The Aquilion LB features 994 channels in 40 rows of solid-state detectors; specialized, user-selectable, image-reconstruction algorithms; and a wide selection of slice thicknesses that provides 32 slices of high quality images. The system provides outstanding low-contrast resolution of 2 mm at 0.3% and high-contrast resolution of 0.35 mm.

**High-Power Generator:** Robust, high-voltage circuits generate 72 kW of power and 600 mA, providing support for the 7.5 MHU X-ray tube that makes possible helical scans up to 100 seconds and scans with metal-free scan range of up to 1,800 mm.

**Multiple kV Selections:** 80, 100, 120 and 135 kV.

**Fast Image Reconstruction Time:** Up to 22 images per second.

**SURETechnology:** Real-time helical display, which provides instantaneous visualization of acquired images, allows the operator to rapidly assess if additional images are needed. SUREStart bolus tracking software, which is included in the standard configuration, provides the ability to monitor contrast media in real-time.

**Easy Operation:** Perform easy operations using the 18-inch LCD monitor, mouse and hybrid keyboard. Scan automatically by programming procedures with eXam Plan and vocal instructions through VoiceLink™.

**Optimal Space Utilization:** The Aquilion LB has only three components - gantry, couch and console - with a footprint of only 27 square meters.

### DOSE-REDUCTION FEATURES

Aquilion LB Series reinforces Toshiba's guiding principle of ALARA for every patient. To achieve this, Aquilion LB Series has an array of adaptive and integrated dose-reduction strategies that are implemented at every stage, from patient registration to image reconstruction. In addition, patient dose reduction is integrated into the console software, so it activates prior to turning on the x-ray beam.

#### Adaptive Iterative Dose Reduction 3D (AIDR 3D)

AIDR 3D is the third generation in the evolution of Toshiba's iterative reconstruction technology. AIDR 3D is an iterative algorithm intended to reduce pixel noise from the original data, the results analyzed, and the process repeated until the target level of noise-reduction is achieved. This iterative algorithm is superior in reducing background noise while preserving diagnostic information compared to non-iterative approaches.

AIDR 3D can be integrated into all acquisition modes for routine clinical use and is able to remove image noise resulting in dose reduction. This feature, a \$150,000 value, is included in each Aquilion LB Series at no additional charge.

#### SUREExposure3D (x, y, z automated mA modulation software)

Toshiba's SUREExposure3D software automatically adjusts the mAs based on patient anatomy to adapt to and compensate for changes in attenuation level.

#### Quantum Denoising Software - QDS (Adaptive Noise Reduction)

Toshiba's Quantum Denoising Software is an adaptive noise reduction algorithm that works in the image data space by preferentially smoothing areas of uniform density while preserving the edge information of the image. QDS works in both two and three dimensions and can drastically reduce image noise, thus lowering dose. Most importantly, QDS works in conjunction with the SUREExposure3D software to adjust the mAs based on

the expected noise reduction from QDS. In this way, patient dose reduction is totally integrated in the Aquilion console software prior to turning on the x-ray beam.

#### **SUREExposure3D (x, y, z automated mA modulation software)**

Toshiba's SUREExposure3D software automatically adjusts the mAs rapidly during the scan to adapt to and compensate for changes in attenuation level produced by the non-uniformity of the anatomy being imaged. Therefore, as the scan moves from the shoulders to the lung, the mAs goes down, and as the tube rotates around the patient, less mAs is used anterior-posterior than laterally. Sure Exposure helps reduce dose while maintaining image quality.

#### **Boost3D**

Boost3D is an adaptive, three-dimensional algorithm that virtually eliminates degradation of image quality due to highly attenuating anatomical structures, such as the pelvis or shoulders. Without dose reduction algorithms, like Boost3D, these highly attenuating areas require increased mAs and kVp to overcome the low photon count. Instead, Boost3D seeks out portions of the raw-projection data where there is a disproportionate loss in x-ray signal and applies a three-dimensional algorithm locally to reduce the image noise and streak artifacts.

#### **NEMA XR 25, XR 26 and XR 29**

Aquilion PRIME Series ELITE meets the National Electrical Manufacturers Association's (NEMA) Medical Imaging & Technology Alliance (MITA) standards XR 25, XR 26 and XR 29.

- MITA XR 25 Computed Tomography Dose Check
  - Includes dose alerts and allows facilities to set dose notification values.
- MITA XR 26 Access Controls for Computed Tomography: Identification, Interlocks, and Logs
  - Provides access control ensuring only authorized operators can alter controls of the CT equipment.
- MITA XR 29 Standard Attributes on Computed Tomography (CT) Equipment Related to Dose Optimization and Management
  - Smart Dose standard bundles four important features to ensure that equipment produces high-quality diagnostic images while supporting patient safety:
    - DICOM Structured Reporting
    - CT Dose Check
    - Automatic Exposure Controls,
    - Pediatric and adult reference protocols.

## EQUIPMENT DESCRIPTION

### Aquilion LB Gantry

The Aquilion LB gantry uses a direct-drive design to provide accurate alignment between beam and detector, and to reduce rotational noise for higher-quality images.

A low-voltage slip ring assures reliable, continuous power transfer.

- Digital signal transmission facilitated by innovative optical-coupling technology moves information to the volumetric image processor
- Generator is inside the gantry to conserve space

Other features include:

- Industry's largest aperture: 90 cm
- Five scan fields of view: 24, 32, 40, 55 and 70 cm
- Gantry controls on both sides (right and left)
- Patient positioning lights
- Wide range of scan times provides greater flexibility for optimal image quality (0.32 partial; 0.5, 0.75, 1, 1.5, 2 and 3 seconds full)
- Slice thickness selections of 16x0.5, 16x1 and 16x2 mm with the capability of stacking images to the desired slice thickness

### CT Console

- Consists of hybrid keyboard, mouse, monitor and Navibox
- Controls the entire system, including power
- Image display
- Scanscope control
- Remote control of couch-top movement
- Window level and width adjustment
- Three preset windows can be stored in the eXam Plans
- Other mouse-operated, image-processing functions
- High line-rate, 18-inch LCD monitor
- Displays images in 512x512 or 1024x1024
- CT number display ranges from -1,536 to +8,191
- 32 programmable voice commands

\* *Dual console (optional)*

### X-ray Tube

The Aquilion LB is equipped with the MegaCool™ X-ray tube. This compact, high-performance tube was designed specifically to minimize tube-cooling delays in heavy patient-load conditions using 0.5-second scan time.

Other features include:

- Dual focal spots
- Anode capacity of 7.5 MHU
- Dissipation rate of 1,386 kHU per minute maximum

### **Detectors**

The PUREViSION detector design allows Toshiba to generate a 70 cm true field-of-view - the largest in the industry - for improved positioning.

Other features include:

- PUREViSION solid-state detector array
- Low-contrast resolution of 2 mm at 0.3%
- 994 detector channels and 40 rows of detector elements
- 1,800 views per second to produce high-resolution images

### **Computer**

- Two 64-bit processors
- Windows 7 Operating System
- Capable of simultaneous scanning, reconstructing, archiving and filming without interruption - true multi-tasking system
- Ultra-fast, 217 GB hard disk
- 100,000 images on both scan and display console
- 3,600 rotations of raw data maximum
- CD-R / DVD-RAM Drive - 9.4 GBytes (double sided DVD RAM)
- DICOM CD writer (*option*) - Archive up to 1000 images

## **PATIENT AND IMAGE MANAGEMENT**

### **Patient Demographics Management**

- Enter individual patient information at the time of examination manually or imported from Modality Worklist Management query.
- On-line patient appointment file management

### **Image Management**

Aquilion LB images can be stored on hard disk, magneto-optical disk or transferred via gigabit Ethernet connection using DICOM 3.0 standards.

### **DICOM 3.0 (Storage SCU)**

- Allows the CT scanner to export images to CT simulation, 3D workstations or any other device on the network
- Consists of software only and utilizes pre-existing Ethernet ports on the CT scanner to connect to a coax-Ethernet-based network running TCP-IP communication protocols
- The system can be set to automatically transfer images to the network after an exam is complete

### **DICOM 3.0 (Print SCU)**

Allows the CT scanner to send image data that has been acquired and reconstructed to a film imager for printing via Ethernet in conformance with DICOM 3.0 standards

### Image Display

- Display in multiple formats ranging from 1 to 16
- Overlay an inset scanogram for quick reference marking
- Add, subtract, rotate or filter images
- Adjust window width and level non-linearly, accommodating up to six built-in curves and six user-defined curves

### IMAGE QUALITY ENHANCEMENTS

**Automatic, 2-Pass, Beam-Hardening Correction (BHC):** Compensates for the non-uniform, beam-hardening effect of bone for more accurate reconstruction. Reduction of streak artifacts in the posterior fossa and elimination of cupping artifact in the mid-brain.

**Reconstruction Algorithms:** Grouped by anatomical application, more than 50 algorithms are provided for customized image reconstruction according to the diagnostic information needed or physician preference.

### HELICAL SCAN & FUNCTIONALITY

**MultiView:** Built into protocol for fast, multi-planar reconstruction in batch mode specifically for multislice data sets. Coronal, sagittal and axial images are created from isotropic volume data.

**3D Imaging:** Provides excellent image quality with surface shaded-renderings and volume-rendered 3D images. Provides zooming and panning over the 3D surface and performs distance measurements. Other features include:

- 3D surface display
- 3D shaded volume display
- Maximum intensity projection (Max - IP)
- Minimum intensity projection (Min - IP)
- Intensity volume rendering

### Quantitative Analysis

- Profile display of CT numbers along a selected line in the axial plane
- Distance measurement and display
- CT number display
- Histogram display

### Annotation

- Four lines of comments and arrow display
- 36 exam information fields that can be selectively masked or shown depending on site requirements

### eXam Plan Protocols

- 684 eXam Plan protocols that can be adjusted while scanning
- Four preset reconstructions
- eXam Plan sets can be stored on optical disks and copied to other Toshiba scanners

### Archiving

- Can be automated with each eXam Plan
- Data can be stored on and retrieved from MOD
- Raw data and image data can be protected to prevent deletion

### Filming

- Auto filming can be set as part of the eXam Plan
- Images are displayed in 512x512 or 1024x1024

## CUSTOMER CARE SERVICES

### InnerVision™ Plus

Remote system diagnostics are available around-the-clock to help identify problems and provide potential solutions before care is interrupted or an engineer can arrive. InnerVision Plus is included at no charge and connected while any CT is under warranty, or any service agreement including Full Service, In-House Support, Partnership and/or VISN Master Service Agreement

### Image Maker Express

Image Maker Express is an online marketing resource that helps Toshiba customers build demand for imaging service by growing their referring physician and patient relationships. Image Maker Express includes:

- Easy-to-use marketing resources and tools developed exclusively for Toshiba customers to bring together effective marketing strategies and tactics.
- A wealth of collaterals and content to create high-quality brochures, print ads and more to help market the Toshiba customer's new imaging capabilities.

Image Maker Express Materials available include:

- Product images and logos
- Clinical images and videos
- PowerPoint presentations and promotional videos
- Brochure samples
- Customizable press releases and media tips
- Marketing strategy tutorials

*\*Offerings may vary per product*

### APPLICATION TRAINING

Each system includes a two phase education program and the industry exclusive Performance Pro guarantee.

Performance Pro is a unique approach to education utilizing blended learning with the promise of technical proficiency and optimal productivity. If for any reason the customer is not satisfied with any portion of the training, Toshiba will conduct that portion of the training again, at no charge.

**Choice of two (2) Medical Imaging Consultants self-study programs; The CT CrossTrainer and/or The CT Registry Review Program.**

The CT CrossTrainer is designed to acquaint the less-experienced technologist with important CT principles, technology and clinical exams. The program consists of 6 comprehensive StudyModules that have been accredited for 17 Category A CE credits; credits are earned by passing a post test for each StudyModule.

The CT Registry Review Program is designed to help the experienced CT technologist prepare to pass the ARRT's post-primary exam in CT. The course consists of 8 comprehensive StudyModules that have been accredited for 19 Category A CE credits; credits are earned by passing a post-test for each StudyModule.

**Phase I:** An initial thirty-two (32) hours, of on-site education will be provided at the customer facility following system go-live. This training is provided for up to four (4) imaging including to focus on maximizing CT simulation scanning techniques and protocols for radiation therapy planning. Training is scheduled consecutively, Monday through Friday, with Monday mornings and Friday afternoons scheduled as travel time for the applications specialist. CE credits are earned by participants that attend the Phase II training event in its entirety.

**Phase II:** An additional twenty-four (24) hours of on-site education will be provided for the same four (4) imaging professionals, which participated in Phase I training, approximately 6-8 weeks following installation to optimize staff proficiency and system productivity.

***Note: Toshiba personnel are not responsible for scanning patients, patient safety, any actual patient contact, or operation of equipment during education sessions. Toshiba will only demonstrate proper equipment operation.***

The training is offered to the Customer at no charge, providing that it is completed no later than one (1) year after the warranty start date.

Additional onsite training is available for purchase.

**COMPONENT SUMMARY:**

<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
	1	<b>AQUILION LB HIGH CAPACITY EXTENDED COUCH</b>
	1	<b>CT SCANNER AQ LB WITH HIGH CAPACITY EXTENDED COUCH</b>
	1	<b>ACCESSORY KIT FOR HIGH CAPACITY COUCH</b> Includes each of the following items: <ul style="list-style-type: none"><li>• Rolled Edge Foot Extension Pad</li><li>• Wide &amp; Medium Security Straps</li><li>• Chin and Forehead Straps</li><li>• Adult Head Rest Pads (Medium and Large)</li><li>• Tilt Wedge</li><li>• Knee Support Wedge</li><li>• Coronal Head Support</li><li>• Table Pad</li><li>• Protective Table Covers (Box of Four)</li><li>• Detachable Rail 77"</li></ul>
	1	<b>CT PHANTOM</b> Measures image quality to ensure compliance to Toshiba standards for: <ul style="list-style-type: none"><li>• High-contrast resolution</li><li>• Low-contrast resolution</li><li>• Slice thickness</li><li>• Noise</li><li>• Contrast scale</li></ul>
	1	<b>CONSOLE DESK 65" X 36" X 30"</b> Measures 65" x 36" x 30"
	2	<b>CHAIR WITH ADJUSTABLE ARMS AND BACK</b>
	5	<b>MEDIA,DVD-RAM DRIVE (9.4 GB)</b> <ul style="list-style-type: none"><li>• 9.4 GB</li><li>• Two-sided</li></ul>
	1	<b>NON-CORROSIVE FLOOR LEVELING EPOXY KIT</b>
	1	<b>DICOM 3 MODALITY WORKLIST MANAGEMENT (MWM) SERVICE CLASS USER (SCU) SYSTEM</b> Allows the CT system to obtain details of patients and scheduled examinations electronically from the HIS/RIS system, avoiding the potential mistakes of manual entry.

*Note: This option does not include a DICOM gateway for the HIS/RIS system.*

**1 TOSHIBA POWER DISTRIBUTION UNIT**

The PDU is engineered to address common power problems found in the hospital environment and to isolate the CT system components to meet IEC 60601-1 Third Edition requirements. This is important to assure optimal reliability and performance of CT systems. Customer is responsible for complying with Toshiba's site specifications for electrical power.

This device provides most of the electrical site preparation requirements of Toshiba CT systems. The PDU contains a low impedance isolation step-down transformer with a shielding plate between primary and secondary.

**Voltage Conversion**

Wiring costs are significantly reduced since the PDU accepts a single, 480V delta input, supplying 200V to the generator and the various other parts of the system.

**Distribution**

The PDU comes prepackaged with the distribution breakers needed for each system feed. Having all system breakers in one location also makes it easier for service personnel to remove power.

**Installation**

Installation is much faster, more predictable, and less expensive with a factory-assembled and tested system.

**1 EXTENDED FIELD OF VIEW**

This software identifies the extent to which the patient body and patient immobilizing devices are visualized outside the XL scan field of view (70 cm) in Large Bore CT Scanner.

- For reconstruction, a reconstruction field with a diameter of up to 850 mm can be specified for the raw data acquired with an FOV of XL
- The anatomy of the patient that extends outside the XL FOV can be visualized

*Prerequisite: Software V3.1ER000 or higher*

**1 CIVCO TABLE INSERT KIT FOR HIGH CAPACITY EXTENDED COUCH (AQUILION VISION, ONE, PRIME, LB, LIGHTNING)**

The TABLE-INSERT-HC-EXT kit includes the table mounting Bracket and a Universal Couchtop™ with an IPPS™ CT Couch Overlay.

**1 TABLE TOP MOUNTING BRACKET FOR HIGH CAPACITY EXTENDED COUCH (BRACKET ONLY)**

The table top mounting Bracket is used for securing CIVCO High Capacity Table Top insert.

*Note:*

- Applies to the Aquilion Lightning and Aquilion Large Bore Extended 1800 mm couches
- When table top mounting bracket (CAFT-021A/1B) is sold separately a Universal Couchtop™ (MT-IL 6521) may be required.

**1 CIVCO UNIVERSAL TABLE TOP INSERT FOR HIGH CAPACITY EXTENDED COUCH**

The Universal Couchtop™ Overlay is designed to provide rapid, accurate, and repeatable patient setup and localization. The Civco Prodigy 2 (every 7 cm) indexing system provides convenient and consistent orthogonal alignment.

- Optimum patient comfort
- Treatment flexibility
- Quick set-up and ease-of-use
- Highly repeatable patient positioning

*Note:*

- Applies to Aquilion ONE family, Aquilion PRIME family, and Aquilion Large Bore High Capacity 300 kg 2000 mm couches.
- When Universal Couchtop Overlay (MT-IL 6521) is sold separately a mounting Bracket (CAFT-021A/1B) may be required.

**1 MIM MAESTRO CT SIM SOFTWARE (HARDWARE INCLUDED)**

MIM Maestro provides a practical imaging solution for Oncologists. CT vendor and Therapy Equipment neutral, the Maestro provides a robust solution for CT SIM functionality.

**COMPONENTS (HEADING2)**

- WKS - Hardware
- INS - MIM Installation - One day (up to 10 hours per day) of MIM Software installation, DICOM / network connectivity and/ or applications training.
- Fusion Contouring
- Auto Contouring
- 4D CT
- Contour CoPilot
- Adaptive Therapy
- Dose Evaluation
- VoxAlign Deformation Engine

## **KEY FEATURES**

### **GTV Contouring**

Accurate target volume definition, with Assist Alignment generates accurate fusions. Multiple modalities can be fused simultaneously and contours can be edited dynamically from any plane and on any modality.

### **Auto Contouring**

Providing an auto contouring solution for both CT and MRI. Fitting into the edition workflow, CoPilot learns from your edits, providing the fastest way to contour on any plane.

### **4-D CT**

MIM unlocks the full benefit that 4-D CT offers. In addition to contouring and dose review on the 4-D cine and MIP images, MIM allows you to contour a single phase and use the VoxAlign Deformation Engine to automatically propagate the contours to all other phases. 4-D CT will provide MIPS, Mean and MinIP imaging solutions from the 4-D data sets generated on the CT system.

### **Contour CoPilot**

Contour CoPilot uses flexible and accurate VoxAlign Deformation Engine to learn from the work that you have already done on a contour slice and propagate that contour to the next slice, using the underlying images to find and adjust to the differences in the volume.

### **Adaptive Therapy**

Deciding when to replan a patient can be a challenge without sophisticated quantitative tools. Using MIM, contours can be automatically deformed from a planning CT to a CBCT. Then DVH and isodose curves can be compared against the original treatment plan, or even summed for an overall picture of delivered dose.

### **VoxAlign Deformation Engine**

VoxAlign Deformation Engine is the first commercially available deformable registration algorithm tuned for CT-CT registration. This algorithm is a constrained, intensity based, free form deformable registration.

Implementation uses the entire contrast window of the CT for the matching of the two scans. The algorithm also employs millions of degrees of freedom for the registration, allowing it to accurately capture very local deformations in addition to global changes. Finally the algorithm is constrained in an attempt to minimize the unexpected deformations in the final result, such as bone deformation or registrations which aren't smooth or tear tissue.

**1 GREEN LASER ISOCENTER MARKING SYSTEM - WALL MOUNTED**

The CT-4-3 consists of a single overhead moving line laser to project the sagittal plane, two moving lateral lasers to project the coronal plane, and fixed lasers to project the axial plane.

**1 CT AQ PRIME-S (2ND GENERATION) BIOMED TRAINING COURSE - TUITION ONLY (10 DAYS)**

This ten day clinical biomed engineer-focused course held at the Toshiba Institute of Advanced Imaging in Irvine, California provides theory of operation, and maintenance and repair for servicing Toshiba's Aquilion PRIME CT system. This training course is for Engineers experienced in CT and diagnostic imaging who will service Aquilion PRIME 2nd generation CT scanners.

The training course will focus on basic operation, preventative maintenance, and troubleshooting and repair procedures for the most common system problems on the Aquilion PRIME 2nd generation scanner.

This course will be conducted with a blend of instructor led classroom discussions, quizzes and laboratory hands-on practice. The system used in this class is model TSX303A/1.

Students must bring notebook computers equipped with Pentium-class CPUs, 10GB of available hard disk space, Windows 7, DVD/CD-ROM drive, a serial port (RS232), crossover serial cable, and Ethernet wired network connectivity. Laptops are not available to borrow or rent during class.

This course includes tuition only. Airfare, meals, and lodging are not included.