

**Equipment Specifications**  
**High-end CT scanner**  
**Iowa City (636A8) VA Healthcare System**  
**618-B89009**

The Iowa City VA Healthcare System is requesting a high tech CT scanner that can deliver the best imaging at the lowest possible dose. This CT scanner will be utilized as our primary cardiac scanner, but will also be used for biopsies/IR procedures, CT fluoroscopy, and possibly brain perfusion studies, as well as routine CT scanning.

**CT Scanner Technical Requirements**

1. Scanner shall provide the ability for the user to independently operate the table, gantry and CT fluoroscopy mode while performing biopsy or patient related exams. This ability would be in addition to performing these functions in the control room.
2. Dual Energy Imaging (either at the radiation source or in the detector)
3. Gantry aperture  $\geq 70\text{cm}$
4. Fastest 360 Degree rotation
5. Minimum detector width must be  $\geq 60\text{ mm}$
6. Display CTDIvol (dose) before scan
7. Display DLP (dose) after exposure
8. Modeled iterative reconstruction / Noise reduction (greatest noise reduction possible)
9. Longest z-axis acquisition per rotation and, while achieving that - maximum temporal resolution, maximum spatial resolution in mm and in line pair equivalents, maximum reconstruction rate (frames/sec) with max. available noise reduction applied, and smallest focal spot size for largest z-axis coverage
10. Retrospective and prospective gated ECG Coronary CCTA
11. ECG Monitor
12. Triggered studies using a ROI gate placed in the appropriate vessel for CTA and CCTA
13. Gantry tilt preferred but not required
14. Gantry or Ceiling (preferred) mounted contrast injector with proven reliable synchronicity
15. Detector field of view of at least 50 cm
16. HL7 integration (HIS/RIS)
17. DICOM, MWL, STORAGE COMMIT SCU, RDSR
18. Full UPS

**Table Technical Requirements**

1. Table height will lower to a level where the patient can simply swivel around in order to transfer to a wheelchair.
2. Patient weight capacity  $\geq 200\text{kg}$  or 440 lb – vendor encouraged to submit bid with highest weight support available.

**Workstation Technical Requirements**

1. Primary - operating/scanning workstation including UPS (as defined by vendors)
2. Secondary – reconstruction, 3D - workstation including UPS (as defined by vendors)

*Each vendor is to respond with functionally each workstation provided – (e.g. same functionality, do they operate independently)*

**Advanced Applications**

1. CT Fluoroscopy

2. CT Perfusion (Organ and Brain) - preferred
3. CT Cardiac
4. Integration to 3rd party Advanced Visualization System – TeraRecon

*Each vendor is to respond with advanced applications that meet the criteria listed above. Please include all other advanced applications offered by your company in the optional section on the quotes.*

## **Training**

### Technologist Training:

1. On-site
  - a. Clinical applications **during go-live** - minimum of 4 days (32 hours total)
  - b. It is expected that the applications training will cover in detail all of the software packages
2. Follow-up
  - a. 2 follow up training to be used within 1-year
  - b. Applications training to be provided after technologists/physicians have hands-on experience with the system - between **1-2 months** following go-live for a minimum of 3 days (24 hours total)
  - c. Applications training to be provided after technologists/physicians have hands-on experience with the system – between **5-6 months** after go-live for a minimum of 3 days (24 hours total)
3. Off site
  - a. Offsite Training for **5 Technologists**
  - b. Offsite Training Travel Package – (Lodging/Meals/Transportation)

### Physician Training:

1. Go-Live onsite Applications Training and Follow-up Applications training to be used for IR and other radiologists
2. **Total number of physicians – 2**
3. Please include training package to meet these requirements based on vendors recommendations

### Technical Training:

Biomedical Technical Training Package for 1 technician – to include tuition and travel (lodging, rental car, airfare/mileage and per diem). Include training for all courses including any prerequisites and is equivalent to what your OEM field service representatives receives. All service manuals, schematics, diagrams, diagnostic software, other special tools and hardware keys equivalent to what their OEM field service reps have available to diagnose, troubleshoot, repair and maintain the equipment.

-On-going updates to drawing/documents

### Warranty and Service:

1. VPN/Remote Access – The vendor shall provide, at no additional charge, any and all equipment service programs, such as remote diagnostics, during the warranty period. The vendor shall provide post-warranty remote diagnostic service program as an “Add Option” with the offer. The system shall provide Vendor Remote Diagnostics via VPN. Vendor shall utilize the VA national Site-to-Site VPN, or the vendor shall work with the Office of Cyber and Information Security and the VAMC Information Security Officer to establish a Client-Based VPN.
2. Service and Operator Manuals – The vendor shall provide the following documentation for the proposed system:
  - a. Two (2) copies of operator's instruction manuals (one electronic and one paper copy)

- b. Two (2) copies of complete technical service manuals including detailed troubleshooting guides, necessary diagnostic software, service keys, schematic diagrams, and parts lists (one electronic and one paper copy)
  - c. Two (2) copies of a system manager's (super users) manual outlining back-up procedures, managing privilege group limits, routine tasks, etc.
3. Minimum Warranty – The system and accessories shall be covered under the manufacturer's warranty, and shall include all parts and labor for one year following acceptance by the VAMC. This warranty must include PMs as required by the manufacturer. The manufacturer's factory-trained field service personnel shall perform installation and maintenance during the warranty period.

**Support and other documentation to Provide:**

1. Please specify longest z-axis acquisition per rotation...and, while achieving that:
  - a. Maximum temporal resolution
  - b. Maximum spatial resolution in mm and in line pair equivalents
  - c. Maximum reconstruction rate (frames/sec) with max. available noise reduction applied
  - d. Smallest focal spot size for largest z-axis coverage
2. Please specify gantry tilt (if applicable)
3. Please specify Dose-modulation technique
4. Please specify dynamic scan rate
5. Please specify High-contrast spatial resolution
6. Please specify Noise, percent at rads
7. Please specify method used for cooling (i.e. water-cooled or air-cooled)
  - a. If water cooled - specify method of connection (e.g., simple access to cold water vs. intercooler)
  - b. If air cooled – specify sound levels and BTU production into room
8. Please provide the weight of the unit.
9. Please provide the physical size (Height, Width, Depth).
10. Please provide a set of typical drawings
11. Provide DICOM Conformance Statement
12. Provide completed Pre-procurement Assessment form (6550)
13. Provide information about your companies support structure during the warranty period
  - a. Describe on-line or telephonic applications support and availability
  - b. Provide a listing of Field Service Engineer locations and availability
  - c. Listing of part depots
14. Provide information about your company's support options following the warranty period
  - a. Describe on-line or telephonic applications support and availability
15. Provide references for the clinical applications trainer that will be assigned to VISN 23.
16. Provide any information on FDA safety recalls associated with the equipment and/or coils

**Trade in**

Option 1 - VA will retain any hard drives containing electronic personal health information (ePHI)  
 Station: Iowa City (636A6)  
 Manufacturer: Toshiba/Canon  
 Model: Aquilion One  
 Installation date: 12/16/2013  
 EE/Asset Number: 3029228/126927  
 Serial Number: 2DC13Y2453