

# Equipment Specifications

## Positron Emission Tomography (PET)/Computed Tomography (CT)

VISN 15/Eastern Kansas VAMC: Topeka Campus

589-B82017

### A. REQUIREMENT OVERVIEW

Eastern Kansas VA (Topeka) is requesting a PET/CT. This equipment will be used to provide diagnostic imaging for oncology, cardiac and neurologic imaging. This document outlines the current state of needs for the Medical Center.

### B. TECHNICAL REQUIREMENTS

#### 1. Unit physical specifications

Minimum number of slices	128
Minimum gantry aperture [cm]	78, long bore
Minimum detector width [mm]	2m scan ranges
Minimum detector field of view [cm]	65
Table height range from floor [cm]	53-96
Maximum patient weight supported [lbs]	500
Minimum 360° rotation time [s] – Vendors are encouraged to propose the fastest 360° rotation available.	0.28
Minimum number of crystals	3 ring – 24,336; 4 ring – 32,448
Minimum size of crystals	4.0mm x 4.0mm
Minimum time of flight resolution [ps]	555
Minimum time of flight localization [ps]	540
Minimum time of flight coincidence window [ns]	4.1
Maximum system dimensions [cm]	203.6 x 234.4 x 136
Maximum system weight [kg]	3864.6

#### 2. Additional specifications

<input checked="" type="checkbox"/>	Time of Flight PET system with list mode reconstruction
<input checked="" type="checkbox"/>	High-definition PET reconstruction
<input checked="" type="checkbox"/>	4D (respiratory gating) for PET and CT
<input checked="" type="checkbox"/>	ECG cardiac gating for PET and CT
<input checked="" type="checkbox"/>	PET/CT image review server or thin client
<input checked="" type="checkbox"/>	UPS to maintain total system functionality for 10 minutes without facility power



<input checked="" type="checkbox"/>	Medrad CT injector interface
<input checked="" type="checkbox"/>	RTP flat pallet
<input checked="" type="checkbox"/>	Patient comfort table pads
<input checked="" type="checkbox"/>	Compatibility with radiopharmaceuticals, including FDG
<input checked="" type="checkbox"/>	Intego system (PET infusion system)
<input checked="" type="checkbox"/>	Head holder/stabilizer
<input checked="" type="checkbox"/>	Fusion processing
<input checked="" type="checkbox"/>	Capability to integrate with dose tracking system: NexoDose
<input checked="" type="checkbox"/>	Patient video monitoring

### 3. Quality assurance and safety tools/instruments

	Description	Qty
<input checked="" type="checkbox"/>	Gammex – ACR CT Accreditation Phantom Kit	1
<input checked="" type="checkbox"/>	Biodex – ACR PET Accreditation Phantom	1
<input checked="" type="checkbox"/>	Low Contrast CT Phantom & Holder	1
<input checked="" type="checkbox"/>	Other QA and safety tools/instruments	1

### 4. Software application options

<input checked="" type="checkbox"/>	Dose Reduction Software or capability
<input checked="" type="checkbox"/>	Metal artifact reduction software
<input checked="" type="checkbox"/>	Tumor Tracking with auto tumor segmentation
<input checked="" type="checkbox"/>	Follow-up comparison tumor evaluation software
<input checked="" type="checkbox"/>	PERSIST quantitative software
<input checked="" type="checkbox"/>	Cardiac non-quantitative (i.e. conventional cardiac PET/CT) and quantitative (myocardial flow reserve and absolute myocardial blood flow) software – preferred applications: Cedars (AutoQuant) HeartSee Emory Cardiac toolbox 4DM CVIT
<input checked="" type="checkbox"/>	Alignment software

### 5. Workstation specifications

This requirement includes a processing workstation located in the control room. The processing workstation shall mimic the reading workstation configuration and license structure. This requirement also includes one (1) reading workstation(s) located in the nuclear medicine department. Vendors are encouraged to propose the recommended number of monitors for each workstation. Both workstation types shall have the following specifications.

<input checked="" type="checkbox"/>	Minimum number of reading workstations	1
<input checked="" type="checkbox"/>	Minimum processing workstation monitor dimensions [in]	19



<input checked="" type="checkbox"/>	Minimum reading workstation monitor dimensions [in]	19
<input checked="" type="checkbox"/>	Acquisition/console hardware	
<input checked="" type="checkbox"/>	LCD monitor(s) (number determined by vendor as appropriate)	
<input checked="" type="checkbox"/>	Keyboard/mouse	
<input checked="" type="checkbox"/>	Workstation UPS (as defined by vendor)	
<input checked="" type="checkbox"/>	Software application licensure	

#### 6. Security requirements

<input checked="" type="checkbox"/>	OEM-supported operating system
<input checked="" type="checkbox"/>	DICOM 3.0 print, store, commit, and modality worklist
<input checked="" type="checkbox"/>	HL7 integration (HIS/RIS)
<input checked="" type="checkbox"/>	Wireless connectivity to VA Network – Compatible with 802.11b/g/n and FIPS 140-2 compliant
<input checked="" type="checkbox"/>	Encrypted hard drive
<input checked="" type="checkbox"/>	PACS compatibility – Philips iSite

#### 7. Objectives

Specifications listed below are not required, but preferred. Vendors who do not include the below specifications in the submitted offer will not be docked or excluded from consideration. Specifications listed below will be evaluated based on added value.

<input checked="" type="checkbox"/>	Uptake room or exam room anxiety-reducing technology
<input checked="" type="checkbox"/>	Flow motion technology
<input checked="" type="checkbox"/>	True V Extended FOV
<input checked="" type="checkbox"/>	Ultra HD resolution recovery of HD PET with noise reducing technology of Time of Flight
<input checked="" type="checkbox"/>	Digital detector
<input checked="" type="checkbox"/>	BGO crystals are not preferred

## C. TRAINING REQUIREMENTS

Description	No. of Personnel
On-site clinical applications training during go-live for physicians, to cover each of the software packages	3
Pre-installation clinical applications training for technologists, to include tuition	3
On-site clinical applications training for technologists during go-live	3
On-site follow-up clinical applications training for technologists	3
Biomedical technician training package (to include tuition)	1



Biomedical technician training shall include any prerequisites required prior to the training and shall be equivalent to the training received by OEM field service representatives. Technicians shall be given all service manuals, schematics, diagrams, diagnostic software, other special tools, and keys equivalent to what OEM field service representatives have available to diagnose, troubleshoot, repair, and maintain the equipment.

Technologists who complete the clinical applications training shall receive continuing education credits (CMEs).

Off-site training will not be purchased at the time of award. Vendors must demonstrate that they can provide any required off-site training listed above, therefore off-site training should be quoted as an optional item. Travel for VA employees is not authorized under the HTME contracts. In no case should any training include expenses for travel or travel for VA personnel at no cost.

## **D. SERVICE REQUIREMENTS**

1. VPN/Remote Access – The vendor shall provide, at no additional cost, 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. The vendor shall either utilize the VA national site-to-site VPN or work with the Office of Cyber and Information Security and the VAMC Information Systems Security Officer to establish a client-based VPN.
2. Service and Operator Manuals – The vendor shall provide the following documentation for the proposed systems:
  - a. Two (2) copies of operator instruction manuals (one (1) electronic and one (1) physical copy)
  - b. Two (2) copies of a system manager (super user) 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 representatives shall perform installation and maintenance during the warranty period.

## **E. OTHER INFORMATION/DOCUMENTATION REQUESTED**

1. Product brochures
2. Technical specification sheets, to include system dimensions and weight
3. DICOM Conformance Statement
4. IHE integration statement
5. FIPS 140-2 certification
6. Completed pre-procurement assessment form (6550)
7. Completed MDS2 form
8. Detailed information about the curriculum and length of the biomedical technical training
9. Details on any off-site training offered for technologists
10. Information about your company’s 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 (include third party coverage)
  - c. Provide a listing of part depots
11. Information about your company’s support options following the warranty period, including a description of on-line or telephonic applications support and availability



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- 12. Version/platform long-term plan
  - 13. Two (2) copies of the product service manual (1 hard copy and 1 digital copy)
  - 14. Information on any FDA safety recalls associated with the proposed equipment

## F. TRADE-IN

- |                                     |                                       |
|-------------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> | a. VA has no trade-in units to offer. |
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