CLIENT NAME:

TAPAN MUKESHBHAI PATEL MEMORIAL HOSPITAL , MEDICAL COLLEGE AND RESEARCH CENTER, SHIRPUR

RADIOLOGY TENDER

TENDER DOCUMENT:

SVKM/TMPMH/BMD /010

SECTION 2 – SPECIFICATIONS

1. Bone Mineral Densitometer

(High end)Basic system

Architecture:

- Should use Linear X-ray fan-beam utilizing motorized table and C-arm
- Should X -ray System Switched-pulse dual-energy/Constant Potential Source
- It should have a Multi-element of 64 or more solid state detectors provided wider area ofcoverage and this allow shorter scanning time
- Should have Oil Cooled/Fan cooled High Capacity X-ray Tube
- System design should utilize a multi-element detector array paired with true fan-beamacquisition geometry, enabling rapid, dual-energy bone density measurements
- Should have Automatic calibration Technique for test Programme & quality control
- Scan protocols should be customized, effortless analysis and work flow.
- Computer Aided Image Repositioning allows image centering without moving the patient.
- Image, scan analysis, and reference curves are combined in a concise, single-page report.
- Should be able to perform a Whole Body BMD Scan in minimum of 5 Minutes.
- Should provide Controls on scan table for User Convenience
- Should be able to take patient weight we can up to 200 kg (450 lbs.)

Data Management Capabilities:

The system should have the following data management capabilities like

- Computer worktable with Intel Pentium PC
- It should have a minimum of 200GB hard drive and 2GB RAM facilities
- Monitor should be 17inch LCD Monitor
- CD R/W drive and pen drive facilities
- It also connect with HP Color Ink Jet printer
- DICOM Network communication, confirming to DICOM Service class
- It can be upgradeable to IRIS System(seamlessly) and PACS

Applications and Analysis packages:

- Spine and Proximal Femur
- Forearm & Dual hip
- Whole Body/BMD Analysis
- Advanced Body Composition with Sub region Analysis

- Scoliotic Spine Analysis
- Pediatric Applications
- Automated Dual Femur
- Automatic Low BMD Spine and Hip Analysis
- Decubitus Lateral BMD Body
- Instant Vertebral Assessment

It can be upgradeable to following

- Prosthetic Hip
- Small animal
- Infant whole body

Quality Assurance

- Automated daily procedure
- Multiple system checks with automatic pass/fail results
- Automatic trending graph of QA variables
- Optional print of QA graph

2. Bone Mineral Densitometer (Mid end)

1. Bone Mineral Density Determination using Dual Energy X-Ray source

2. Technical Specifications:

- Scanning Method- Fan Beam & Narrow Angle Fan Beam
- X-ray Source: Constant Potential Source/ Switched Pulse Dual Energy
- Detector System : Multi Element / Direct Digital Detectors - solid state with fast pulse countingtechnology
- BMD Precision : Better Than 1%
- Scan Time: A/P Spine </ = 30 Secs; Femur </ = 30 Secs
- Calibration: Automatic calibration Technique for test Programme & quality control
- Patient Position : Cross Hair Laser Light
- Scan region - 190cmx60cms or more for total body
- Patient Weight Limits: more than 150kg
- Reference data: >11,000 USA/Northern European Subjects, as well as NHANES, and Numerousregional databases.
- Table Height: 25"
- Magnifications: None

- Sample Size(mm): 0.60x1.05 or less for AP Sine & Femur

3. Software for the following:
- AP Spine
- Dual Femur
- Total Body with Body Composition
- Vertibral Assessment (AP & Lateral Views)
- Lateral spine BMD
- Fore Arm
- Comparison to previous Scan
- Composer
- Pediatric software (Spine & Total Body for age group 5-19)
- Orthopedic Hip Analysis
- DICOM (Option)
- Visceral Fat Analysis (FDA Approval)
- Upgradeable to Neonatal Software

4. Computer System:
- Workable with most Advanced configuration
- Hard Disk Minimum - 160GB
- RAM : Minimum 1 GB
- CD ROM (write/ read) drive
- Monitor: At least 17" Colour monitor
- Printers: Laser/ inkjet

5. AERB