공통규격서

HSK NO.	Item No.	DESCRIPTION	UNIT	Q'TY
		Digital Breast Tomosynthesis System	System	1

A.특징(Features)

1. Digital Technology offers the capability to aquire images in near-real time and process them.
2. This system offers high exam productivity and potential dose reduction as compared with screen /film
3. There is excellent contrast sensitivity and very low noise level.
4. Acquisition Workstation that will display the acquired images in the room for a quick check of breast positioning and motion, or to adjust brightness and contrast levels.
5. Archiving, Networking and Filming for diagnosis is possible from the acquisition workstation and number of equally high quality film copies can be produced as needed

B. 구성 (Consist)

1. X-ray Gantry	1 sys
1) Generator	
2) X-ray Tube	
3) Collimation System	
4) C-Arm Assembly	
5) Compression Mode	
2. Digital Image Receptor	1 sys
3. Acquisition Workstation	1 sys
4. Tomosynthesis System	1 sys
5. DICOM Service	1 sys
6. Standard Components	1 set
7. Soft Copy Workstation	1 sys
8. Optional Components	each 1 sys
9. Stereotactic TOMO Biopsy System	1 sys
10. Vacuum Assisted Breast Biopsy System	1 sys
11. Breast MRI CAD System	1 sys
12. Accessories	1 sys

C. 세부사양 (Specification)

1. X-ray Gantry — 1 sys

1) Generator

(1) Type	: high frequency inverter type or equivalent
(2) Rating	: 5 kW or more
(3) Kv Range	: 20 kV ~ 49 kV or 22 kV ~ 49 kV
(4) mA Range	: small focus 35mA or 50mA large focus 100mA or 200mA

2) X-ray Tube

(1) Anode Type	: Tungsten, rotating orr equivalent
(2) Anode Design	: Bi-angular or equivalent
(3) Anode Speed	: High-speed 9500 RPM or equivalent
(4) Heat Capacity	: 300,000 HU or more
(5) Focal Spot Size	: 0.1 mm/0.3 mm or equivalent
(6) Filtration	: Rh / Ag / Al or Mo / Ag

3) Collimation System

(1) Collimation Mode	: Fully automatic or User-selectable

4) C-Arm Assembly

(1) Vertical Trable	: 710 mm ~ 1,420 mm or 650 mm ~ 1,500mm
(2) Rotation	:+195°~-155°(Convetional) or equivalent +180°~-140°(Tomosynthesis) or equivalent
(3) SID	: 700 mm or 660 mm
(4) Patient Face Shield	: Removable, Retractable
(5) StereoLoc Ready	

5) Compression Mode

(1) Compression Type	: Pre-Compression Full Range Compression Dual Compression
(2) Compression Force (Max.)	: 200N or more
(3) Compression Paddle Tilt	: standard / F.A.S.T ; user selectable
(4) Left, Right Paddle Shift	: Motorized or user selectable

2. Digital Image Receptor — 1 sys

1) Detector

(1) Detector Type	: TFT based Direct or Indirect Detector
(2) Conversion Material	:Amorphous Selenium or Amorphous Silicon
(3) Image Receptor Size	: 240 mm X 290 mm or 240mm X 285 mm
(4) Image Matrix	: 3,328 X 4,096 or 2,394 X 2,850
(5) Pixel Size	: 70 micron or 100 micron

(6) Spetial Resolution : 7.14 cycles / mm or : 6.7 cycles / mm

(7) Output Image Depth :14bit or equivalent

(8) Imaging Mode : Conventional 2D

Tomosynthesis 3D

Combo 2D + 3D mode (one compression)

2) Grid

(1) Anti-scatter Grid :High Transmission Cellular grid or equivalent

(2) Magnification Mode :Auto Retract or equivalent

3. Acquisition Workstation 1 sys

1) Workstation

(1) CPU :Quad-Core Intell Based CPU or equivalent

(2) Memory :DDR3 SDRAM16GB or equivalent

(3) Hard Dive :1TB in RAID-1 Cofiguration or equivalent

(4) Storage Media :DVD+/-R/W or equivalent

(5) Image Display :2 mega pixel LCD Monitor(21"Barco) or equivalent 1ea

(6) User Interface Display :1.2 mega pixel LCD Monitor(17"NEC) or equivalent 1ea

(7) Operating System : Windows type

(8) User Interface :keyboard, mouse or equivalent

2) Exposure Mode

(1) manual : Operator selects all paramaters

(2) Auto-time : System selects mAs

(3) Auto-kV : System selects kV and mAs

(4) Auto-filter : System selects filter, kV and mAs

3) Intergrated Radiation Shield 1ea

(1) LEAD Equivalence :5mm or equivalent

(2) Material :Leaded glass or equivalent

4. Tomosynthesis System 1 sys

1) System Type :Intergrated 2D&3D System

2) Tube Head Rotating Range : 15° or 25°

3) Projection :15 Projection or 9 Projection

4) Examination Mode

(1) 2D Conventional Mode

(2) 3D Tomo Mode

(3) 2D+3D Combo Mode

(4) HD Mode : C-View or I-View

5) Tomosynthesis Examination Positioning

(1) RCC, LCC

(2) RMLO, LMLO

6) Tomosynthesis Scan Time
(1) 3D Tomo Mode : about 4sec or less
(2) 2D+3D Combo Mode : about 5sec or less
7) Reconstruction Time : about 2sec or less

5. DICOM Service 1 sys
1) DICOM 3.0 Package
(1) Worklist
(2) Print
(3) Storage
(4) Storage commitment
(5) Query / Retrieve
(6) Modality Performed Procedure Step

6. Standard Components 1 sys
1) Compression Paddle each 1set
(1) 24 cm X 29 cm FAST paddle or equivalent
(2) 18 cm X 24 cm FAST paddle or equivalent
(3) 10 cm contact paddle or equivalent
(4) 7.5 cm contact paddle for Q.C use or equivalent

2) Magnification each 1set
(1) Magnification Platform or euaivalent
(2) 10 cm magnification paddle or euaivalent

3) 2D Localization kit each 1set
(1) Localization paddle or euaivalent
(2) Localization crosshair assembly or euaivalent

4) Accessories each 1set
(1) Face Shield or euaivalent
(2) FFDM Calibration Phantom or euaivalent
(3) Dual Function Footswitches or euaivalent

5) Manual each 1set
(1) User manual
(2) Service manual
(3) Quality control

7. Soft Copy Workstation : SecurViewDX or euaivalent 1 sys
1) SecurView Tomosynthesis License
2) Dedicated 2.0 X 2.5K monitor(5MP 21"Barco) 1ea
3) Dual B & W 2,048 X 2.560 high resolution Monitor(5MP 21"Barco) 1ea
4) Viewing other Mammo
5) Image Storage 420GB (RAID 5 System)
6) CPU : Intel Xeon (4 Core, 2.5 GHz, 10 MB)
7) HDD : 2TB 3.5 inch Serial ATA

8) RAM : 16GB 1866 MHz DDR3
9) O/S : Windows 7

8. Optional Components each 1 sys
1) Computer Aided Detection Processor : R2 CAD or I-CAD
2) Synthesized 2D Image Processor : C-view or V-view
3) Volum Density Calculation (ABCSK연구에서 사용 중인 동일 장비) :Quantra(공통)

9. Stereotactic TOMO Biopsy System each 1 sys
1) Digital StereoLoc II upright stereotactic breast biopsy system : Affirm or Multicare Platinum (Affirm prone biopsy)
2) D.B.I™ (Decubitus Beast Imaging) Table

10. Vacuum Assisted Breast Biopsy System : ATEC Sappire or Encor Enspire(선택) 1 sys
(1) Connecting Port Sono
(2) Connecting Port STX
(3) Connecting Port MRI
(4) Ultrasound Guided Breast Biopsy Phantom (US-9, Kyoto Kagaku社)

11. Breast MRI CAD System : Cadstream 1 sys
1) Image Processing Computer
(1) Microsoft Windows 7 Professional, 64-bit
(2) Intel Core i7-4790 Processor or higher
(3) 8BG RAM / 128GB SSD / 4TB HDD
(4) NVIDIA GT630 2GB Graphic card or higher
(5) Built-in 10/100/1000BASE-T Gigabit Ethernet
(6) CD/DVD RW Optical Drive
(7) Mouse and Keyboard
(8) LCD 24" Widescreen Display 1ea
2) Software
(1) Automated analysis, Angiogenesis Maps
(2) 2D/3D Image registration
(3) Multiplanar reformatting
(4) Subtraction images
(5) Kinetics
(6) Diffusion Analysis
(7) Morphology reporting
(8) Maximum intensity projections (MIPs)
(9) Segmentation and volume summaries
(10) Patient monitoring analysis
(11) Portfolio for reporting
(12) Work-list integration with PACS
(13) CADalog, CADstream's study library

12. Accessories

A type

1) desk & chair for OCS computer 1set
2) desk & chair for soft copy workstation 1set
3) storage closet for paddle 1set
4) Apron 2ea
5) Thyroid 2ea

B type

1) X-ray protection shield 1 ea
2) Face protection shield 1 ea
3) Magnification stand 1.5 1 ea
4) Magnification stand 1.8 1 ea
5) Square spot paddle 1 ea
6) Round spot paddle 1 ea
7) pair of compression /Decompression/Up/Down footswitches 1 ea
8) Operating Manual 1 ea
9) Monitor 5 MP for SenoIris 1 set (2 ea)
10) Apron 2 ea
11) Thyroid 2 ea
12) Breast Phantom 1 set
13) Stereo vacuum and needle gun 1 set

D. 비고 (Remark)

1. 장비 사용법에 대한 충분한 설명과 사용자 매뉴얼 책자를 제공해야 하고, 사용자교육을 철저히 실시하여야한다.

2. 공급자는 해당 병원에서 원하는 장소에 장비 설치를 해주어야 하며, 사용상 문제가 없어야한다.

3. 공급자(계약자)는 장비 검수 완료 후부터 3년 내에 발생하는 기계적 하자에 대한 책임을 진다.

4. 사양 및 구성에 표기된 명칭과 기능이 각 제조사에서 사용하는 명칭 또는 기능과 상이하더라도 그 기능이 동등 또는 대체가능하거나 그 이상일 경우에는 인정한다. (단 기종이 바뀔 수 있는 주 기능이 아닌 보고 기능에 한한다.)

5. 장비의 원활한 가동을 위하여 (12. Accessories)에 명기된 품목 외에 추가 필요품목의 경우 상호간의 협의에 의하여 추가되어 질 수 있다.

6. 계약 및 납품되어 지는 장비는 FDA와 KFDA를 모두 득한 장비여야 한다.

위와 같이 일반 경쟁 입찰을 의뢰합니다.
PS : 입찰 후 최저가 응찰 업체를 낙찰자로 결정함.

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