

07/12/2023

Amendment No. 3

Sub: Amendment to the referred tender enquiry.

Ref.: HITES/PCD/AIIMS-IV/71 /Mix/2023-24, Dated 20-10-2023 read with Amendment No.1 and 2, Dated: 24-11-2023 and 04/12/2023.

The following changes are being incorporated in the above referred Tender Enquiry Document

SECTION VII**TECHNICAL SPECIFICATIONS**

Item Name: High End Echocardiography system (4D ECHO) (Tender ID: 023_HITE_171584_12)		
Tender Page & Para	TENDER SPECIFICATION	AMENDED AS
15	Should be able to perform MPR views for quantification from 3D Imaging on volume measurements like LV volumes, Ejection fraction from 3D Image, etc. Also should offer synchronicity indicates to measure and compare timing of maximum contraction of LV volumes to determine those patients who will best benefit from CRT system. Should display global LV volume and should provide simultaneous display of 17 regional volume waveform. This should be offered both on the system and on a licensed work station (both licensed hardware and licensed software) should be offered and highlighted in the technical bid.	Should be able to perform MPR views for quantification from 3D Imaging on volume measurements like LV volumes, Ejection fraction from 3D Image, etc. Also should offer synchronicity/Triplane TSI indicates to measure and compare timing. Should display global LV volume and should provide simultaneous display of 17 regional volume/Strain waveform. This should be offered both on the system and on a licensed work station (both licensed hardware and licensed software) should be offered and highlighted in the technical bid.

Item Name: Ambulatory BP Monitor (Tender ID: 2023_HITE_171584_13)		
Tender Page & Para	TENDER SPECIFICATION	AMENDED AS
4	Measurement Range: Systolic 60 - 260mmHg (min. division: 1mmHg) Diastolic 0 - 160mmHg (min. division: 1mmHg) Pulse 30-200bpm (min. division: 1bpm)	Measurement Range: Systolic 60 - 260mmHg (min. division: 1mmHg) Diastolic 25 - 200mmHg (min. division: 1mmHg) Pulse 30-200bpm (min. division: 1bpm)
BOQ Para 22.1	Ambulatory BP monitor with recorder and carrying case as per specification - 01 no	Ambulatory BP monitor with recorder and carrying case as per specification - 05 nos
11	Cuffs: Small Cuffs, (13-22cm) - 2 nos Adult Cuffs, (20-31cm) - 4nos Large Cuffs, (28-36cm) - 4 nos Extra Large Adult, (32-42cm) - 2 nos Added Para : (Every cuff size can be +/- 5 cm for both upper and lower sizes)	Cuffs: Small Cuffs, (13-22cm) - 5 nos Adult Cuffs, (20-31cm) - 10 nos Large Cuffs, (28-36cm) - 5 nos Extra Large Adult, (32-42cm) - 2 nos (Every cuff size can be +/- 5 cm for both upper and lower sizes)

Reply to the Technical Pre-Bid Representation.

Tender ID: 2023_HITE_171584_7			
Item Name: CR System			
Tender Page & Para	TENDER SPECIFICATION	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
Point No. 1 (d)	Deleted	Mammography cassette 18 X 24cm: 1 nos. (Optional) Justification: It will provide option to use Mammography application	Mammography cassette 18 X 24cm: 1 nos.
Point No. 1 (e)	Deleted	Mammography cassette 24 X 30cm: 1 nos. (Optional) Justification: It will provide option to use Mammography application	Mammography cassette 24 X 30cm: 1 nos.
Point No. 2 (d)	Deleted	Digitizer must have a resolution of 20 pixel/mm(minimum) for screening mammography. Justification: It will allow bidders to quote better product as per requirement of AIIMS.	Digitizer must have a resolution of 20 pixel/ mm(minimum) for screening mammography.
Point No. 2 (e)	Deleted	It should have input -output buffer/ stacker that can load at least 4 cassettes at least. Justification: It will allow bidders to quote better product as per requirement of AIIMS.	It should have input -output buffer/ stacker that can load at least 4 cassettes at least.
Point No. 3 (k)	Deleted	The software must have dedicated pediatric and mammography image processing Justification: It will allow bidders to quote better product as per requirement of AIIMS.	No Change
Point No. 4 (d)	The system must deliver its first film within 80 seconds from the request sent	The system must deliver its first film within 100 seconds from the request sent Justification: For wider participation	The system must deliver its first film within 100 seconds from the request sent
BOQ: Point No. 5 (a)	Deleted	TEC Recommendation	Mammography cassette 18 X 24cm: 1 no.
BOQ: Point No. 5 (b)	Deleted	TEC Recommendation	Mammography cassette 24 X 30cm: 1 no.

Tender ID: 2023_HITE_171584_8			
Item Name: Colour Doppler 4D			
Tender Page & Para	TENDER SPECIFICATION	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
1.3	The system shall include at least a 21" LCD/LED monitor for both excellent image viewing as well as providing for workflow and productivity features.	The system shall include at least a 23" LCD/LED monitor for both excellent image viewing as well as providing for workflow and productivity features.	The system shall include at least a 23" LCD/LED monitor for both excellent image viewing as well as providing for workflow and productivity features.
		The system shall include at least a 21" LCD/LED monitor for both excellent image viewing as well as providing for workflow and productivity features	
4	Shearwave Elastography should be available in atleast Linear & convex probes. Strain elastography should be available in Linear, convex and trans vaginal Probes. OPTIONAL: The price for Trans Vaginal probe with shearwave elastography should be quoted optionally, if available.	FDA approved Real time color coded Shearwave Elastography should be available in Linear & convex probes. Strain elastography should be available in Linear, and trans vaginal Probes. Please delete:- OPTIONAL: The price for Trans Vaginal probe with shearwave elastography should be quoted optionally, if available. Because in BOQ, the TVS probe is standard.	Shearwave Elastography should be available in atleast Linear & convex probes. Strain elastography should be available in Linear, convex and trans vaginal Probes. The price for Trans Vaginal probe with shearwave elastography should be quoted as standard .
		Shear Wave Elastography should be available in Convex,TVs & Linear Probe.	
8.4	The system shall provide scan depth of 2 - 30 cm or more	The system shall provide scan depth of 2 - 50 cm or more	The system shall provide scan depth of 2 - 40 cm or more
		The system shall provide scan depth of 50 cm or more Justification: Higher depth will help to make the right diagnosis and must be needed in many cases for example in the case of polyhydramnios the depth required is upto 50 cm	

15(c)	Trans-vaginal Probe with Biopsy attachment, Operating Frequency : 4-9 MHz with elastography & CEUS	Trans-vaginal Probe FOV 240 degree or more with Biopsy attachment, Operating Frequency : 3-12 MHz with elastography & CEUS Justification: With higher FOV its easy to see both the ovaries simultaneously and easy to make diagnosis for bicornate uterus. The lower frequency provide more penetration while higher frequency provide more resolution which support in difficult to scan patients.	No Change
15(d)	3D / 4D Volume Convex Probe of frequency of probe: 1 to 5MHz with post processing softwares such as MPR, SSD	3D / 4D Volume Convex Probe of frequency of probe: 2 to 9MHz with post processing softwares such as MPR, SSD	No Change
15(e)	Pediatric micro convex probe for Neurosonogram 5-8MHz	Pediatric micro convex probe for Neurosonogram 4-11MHz Pediatric micro convex probe for Neurosonogram 3-11MHz Justification: The higher frequency provides high resolution which support in difficult to scan patients. As in neonate's higher frequency is required for making detailed diagnosis	Pediatric micro convex probe for Neurosonogram 3-11 MHz
15(f)	TCD sector probe (Paediatric) :2-5Mhz (Optional) -1No Hockey stick probe 8-18 MHz +/-3MHz (optional) - 1 No	TCD sector probe (Paediatric) : 2-9Mhz (Optional) -1No Justification: The higher frequency leads to better resolution for better diagnosis.	TCD sector probe (Paediatric) : 2-9 Mhz -1No Hockey stick probe 8-18 MHz +/-3MHz - 1 No
BOQ 7	TCD sector probe (Pediatric) :2-5Mhz (Optional) - 1 No	NA	TCD sector probe (Pediatric) : 2-9 Mhz - 1 No
BOQ 12	Hockey stick probe 8-18 MHz +/-3MHz (optional) - 1 No	NA	Hockey stick probe 8-18 MHz +/-3MHz - 1 No
18	Should meet IEC 60601-1, IEC 60601-1-2 & IEC 60601-2-37 standards and valid test report to be submitted from any NABL accredited labs or from the labs in their country of origin (incase of foreign	NA	Deleted

	manufacturers) for the quoted model		
21	Added Para : System should have B- flow. (OPTIONAL)	" B- flow" is particular company specific term. Request to delete for wider competition.	Deleted
23	Added Para: The System Upgradable to 2D Linear Matrix Probe. (OPTIONAL)	The system upgradable to 4D Linear Probe. Justification: 4D linear probe having more diagnosis capabilities and applications in case of plaque analysis	The System should be upgradable to 2D Linear Matrix Probe.
24	Added Para : Multi Parametric Report page should be Available for Comprehensive Liver Package Report with Shear wave, Fatty Liver Information along with BMI and Blood Test Information to give Current condition of Liver status whether Normal to Severe Cirrhosis Condition (OPTIONAL)	NA	Deleted
25	Added Para: The System should Upgradable to Auto Volume Measurement for Hypo echoic structures. (OPTIONAL)	The System should Upgradable to Auto Volume Measurement for Hypo echoic structures with Voume TVS Probe. (OPTIONAL)	Deleted
26	Added Para: System should Upgradable to Automatic Fetal Heart Volume scan using Volume probe. (OPTIONAL)	System should Upgradable to Automatic Fetal Heart Volume scan using Volume probe <u>with Automatic view/Selection of 4Ch, LVOT, RVOT, Stomach, Ductal Arch, Aortic Arch, 3V View, SVC/IVC from Touch screen to view Different anatomy for Fetal Heart by One touch.</u> (OPTIONAL)	Deleted
		System should have STIC for hetal heart.	

27	Added Para : The System Should Upgradable to 2D Strain/Wall Motion Tracking for Fetal Heart using Normal Convex probe. (OPTIONAL)	The system should upgradable to 4D strain/wall motion tracking for fetal heart using normal convex probe/ cardiac probe. (OPTIONAL) Justification: It gives volumetric structure of LV with motion that helps to see every part of LV in a better way.	The System Should Upgradable to 2D Strain/Wall Motion Tracking for Fetal Heart using Normal Convex probe.
28	Added Para: System should have auto biometry measurement in OBS application (OPTIONAL)	NA	System should have auto biometry measurement in OBS application
29	Added Para : System should be upgradable to Fusion Imaging with Convex, Linear and Endocavity Probe (OPTIONAL)	Added Para : System should have Fusion Imaging with Convex, Linear and Endocavity Probe.	Deleted
31	Added Para : All the Optional items offered should be quoted separately and the price should be valid for warranty period	NA	Deleted
32	Atleast 10 inch touch screen with twin display for ease of use and faster throughput	Atleast 12 inch touch screen with twin display for ease of use and faster throughput. Atleast 12 inch touch screen with twin display for ease of use and faster throughput	Atleast 12 inch touch screen with twin display for ease of use and faster throughput
	Point to be added	The system should have a frame rate of at least 4000 frames per second (fps) in B mode Justification: Higher frame rate provide fast processing of the system and also provide high image quality.	Added Para: Should have frame rate of 3000 f/s or more
	Point to be added	Frame rate should be 3000 f/s or more	

Tender ID: 2023_HITE_171584_9			
Item Name: Colour Doppler (2D &3D)			
Tender Page & Para	TENDER SPECIFICATION	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
1.2	The system shall include at least a 19" LCD monitor to allow for both excellent images viewing as well as providing for workflow and productivity features	The system shall include at least a 21" LCD monitor and 12" touchscreen to allow for both excellent images viewing as well as providing for workflow and productivity features	The system shall include at least a 21" LCD monitor to allow for both excellent images viewing as well as providing for workflow and productivity features
		At least a 21.5" LCD Monitor Justification: Higher the monitor lesser the strain on eyes during scanning specifically while looking the small pathologies.	
		Request to increase the display size to at least 21" LCD/LED monitor for better visualization Justification: Most of the reputed brands/manufacturers offer 21" monitor as standard in this segment of Ultrasound.	
1.3	The system shall have three active universal probe ports in a convenient, easy to access location to maximize the availability of needed probes.	The system shall have four active universal probe ports in a convenient, easy to access location to maximize the availability of needed probes.	The system shall have four active universal probe ports in a convenient, easy to access location to maximize the availability of needed probes.
		Request to increase the transducer ports to 4 active transducer ports . Justification: Most of the reputed brands/manufacturers offer 4 ports in this segment of Ultrasound.	

		The system shall have three active probe ports in a convenient, easy to access location to maximize the availability of needed	
2.1	The system shall offer an extended field-of-view imaging that operates by sweeping a transducer over the anatomy of interest. This mode shall build the extended field-of-view in a real-time manner, showing the image as it builds	The system shall offer an extended field-of-view B/ B+ Color imaging that operates by sweeping a transducer over the anatomy of interest. Justification: It will help to trace or scan a complete vessel in one frame with blood flow.	No Change
2.5	System should be able to reconstruct 3D image using 2D probe	Request to delete the point. Justification: As this is single company specific.	No Change
5.2	The system shall provide scan depths from a minimum of 2 cm to a maximum of at least 30 cm.	The system shall provide scan depths from a minimum of 0 cm to a maximum of at least 45 cm.	No Change
5.3	System should have minimum of 17,000 Digital Channels for better resolution.	System should have minimum of 40 Lakhs Digital Channels for better resolution. System should have minimum of 7,00,000 Digital Channels or more for better resolution. Justification: Larger Processing channels provides high resolution imaging experience. This is useful during scanning of obese patients. Should be 128 Hardware channel with 3 Lac channel.	System should have minimum of 3,00,000 (3 lakh) Digital Channels for better resolution.
5.4	System should have Dynamic Range of atleast 170 Db.	System should have dynamic range of atleast 350 dB Justification: More dynamic range will display more shades of gray and an overall smoother image with more tissue differentiation which helps in making the diagnosis faster.	System should have Dynamic Range of atleast 200 dB .

		System should have Dynamic Range of atleast 250 Db.	
9.2	The system shall include at least 500 GB of dedicated hard drive for large local storage capacity,with 20000 image storage capacity or more.	The Ultrasound Machine should have Solid State Device (SSD) and Hard Drive Disk (HDD) of 1TB as separate drives Justification: This increases the workflow speed and provides security to the operating system.	The system shall include at least 500 GB of dedicated hard drive for large local storage capacity,with 20000 image storage capacity or more. Also should provide 1TB SSD as a separate drive.
12 (a)	Convex Probe with biopsy attachment. : 2 - 6 MHz	Convex Probe with biopsy attachment: 1-9 MHz Justification: The lower frequency provide more penetration while higher frequency provide more resolution which support in difficult to scan patients.	No Change
12 (b)	Transvaginal / Intracavitary Probe with Biopsy attachment. : 4- 9 MHz	Transvaginal / Intracavitary Probe with Biopsy attachment. FOV should be more than 190 degree : 3- 12 MHz Justification: With higher FOV it's easy to see both the ovaries simultaneously and easy to make diagnosis for bicornate uterus. The lower frequency provide more penetration while higher frequency provide resolution which support in difficult to scan patients.	No Change

12 (c)	Linear Probe with biopsy attachment. : 5 – 12 MHz	Linear Probe with biopsy attachment. : 3 – 16 MHz Justification: This Linear Probe solution offers wide frequency band. This single probe solution is valuable in variety of medical applications like Abdomen, vascular and MSK. Incase of Abdomen when we are looking of bowels, we require deep penetration So, 3 MHz is giving deep penetration. Additionally, 16MHz is providing high resolution which is useful in case of vascular and MSK Exams. This frequency range is giving precise and detailed diagnosis	No Change
BOQ 4	Linear Probe with biopsy attachment. : 5 – 12 MHz - 1 no - 1 No	NA	Linear Probe with biopsy attachment. : 5 – 12 MHz - 1 No
12 (d)	Sector Probe (TCD):2-4MHz (Optional)	NA	Deleted
BOQ 5	Sector Probe (TCD): 2-4MHz (Optional) - 1 no - 1 No	NA	Deleted
12 (e)	Pediatrics micro convex probe (Optional)	Pediatrics micro convex probe (Optional) 3-11 MHz Justification: The higher frequency provides more resolution wjch support in difficult to scan patients. As in neonate's higher frequency is required for making the right diagnosis	Deleted
BOQ 6	Pediatrics micro convex probe (Optional) - 1 No	NA	Deleted

13	Should meet IEC 60601-1, IEC 60601-1-2 & IEC 60601-2-37 standards and valid test report to be submitted from any NABL accredited labs or from the labs in their country of origin (incase of foreign manufacturers) for the quoted model	NA	Deleted
16	Added Para : The System Should Upgradable to advanced Contrast Package available in the Industry (OPTIONAL).	It should be deleted. Justification: For wider participation and the points are single company specific.	The System Should Upgradable to advanced Contrast Package available in the Industry
17	Added Para :The System should be Upgradable to Shear wave Elastography (Support for Convex Probe) (OPTIONAL).	The System should be Upgradable to Shear wave Elastography (Support for Convex and Linear Probe) (OPTIONAL). Justification: For the quantitative analysis of small parts and breast lesions	The System should be Upgradable to Shear wave Elastography in Convex, Linear probes.
		It should be deleted. Justification: For wider participation and the points are single company specific.	
		Should be in Convex, Linear & TVs Probe	
18	Added Para: System should be upgradable for 4D imaging and STIC for fetal echo (OPTIONAL).	It should be deleted. Justification: For wider participation and the points are single company specific.	Deleted
19	Added Para : System should to be upgradable for 4D imaging with convex & TVS probes (OPTIONAL).	NA	Deleted
20	Added Para : All the Optional items offered should be quoted separately and the price should be valid for warranty period	NA	Deleted

	Point to be added	The system should be upgradable to fatty Liver imaging finding Justification: The Fat quantification application allows to perform a colored quantitative attenuation analysis of tissues in real time which helps to diagnose fatty changes in liver	No Change
	Point to be added	Frame rate should be 2500 f/s or more	Added Para: Frame rate should be 2500 f/s or more

Tender ID: 2023_HITE_171584_10			
Item Name: Portable Colour Doppler			
Tender Page & Para	TENDER SPECIFICATION	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
5	Scanning depth to be 28 cm or more	Scanning depth to be 40 cm or more Justification: It will helpful for scanning obese patients and deeper/ larger organs.	No Change
6	The system to have a dynamic range of 165 decibels or more.	The system to have a dynamic range of 250 decibels or more. Justification: More dynamic range will display more shades of gray and an overall smoother image with more tissue differentiation which helps in making the diagnosis faster.	The system to have a dynamic range of 250 decibels or more
7	The system should support Convex , Linear probes and endocavitary probe.	The system should support Convex , Linear probes, endocavitary probe and intraoperative probes. Justification: It helps in OT as well as in case of trauma cases.	No Change

8(a)	Convex electronic phased array transducer: 2-6 MHz for abdominal imaging.	Convex probe with biopsy attachment: 1-8 MHz Justification: The lower frequency provide more penetration while higher frequency provide more resolution which support in difficult to scan patients.	No Change
8(c)	Endocavitary probe (5-9MHz) with 120 deg FOV or more .	Endocavitary probe (5-9MHz) with 200 deg FOV or more . Justification: With higher FOV it's easy to see both the ovaries simultaneously and easy to make diagnosis for bicornate uterus. The lower frequency provide more penetration while higher frequency provide more resolution which support in difficult to scan patients.	No Change
10	The system should have a frame rate of at least 300 frames per second (fps) in B mode.	The system should have a frame rate of at least 1500 frames per second (fps) in B mode. Justification: Higher frame rate provides fast processing of the system	No Change
12	The system must have integrated high resolution TFT /LCD/LED of 11" or more	The system must have integrated high resolution TFT /LCD/LED of 15" or more Justification: Higher the monitor lesser the strain on eyes during scanning specifically while looking the small pathologies. Request to amend the monitor of size not less than 15" LED/LCD. Justification: For better visualization. Most of reputed manufacture offer this as standard with no extra cost in this range of product.	No Change
14	The system should have the facility of digital storage and retrieval of B/W and colour image data on USB and LAN transfer of data should also be present.	Request to include internal storage for 120GB with integrated Solid State Device (SSD). Justification: This increases the workflow speed and provides security to the operating system.	No Change
24	In built battery backup should be atleast 50 minutes	In built battery backup should be atleast 120 minutes Justification: In ICU/ Emergency/ OT environment every minute is crucial so longer battery backup can help for providing more and faster no. of diagnosis	No Change

28	Should meet IEC 60601-1, IEC 60601-1-2 & IEC 60601-2-37 standards and valid test report to be submitted from any NABL accredited labs or from the labs in their country of origin (incase of foreign manufacturers) for the quoted model	NA	Deleted
BOQ	Added Para : All the Optional items offered should be quoted separately and the price should be valid for warranty period	NA	Deleted
NA	Point to be added	Machine should have 4 active ports (Optional) Justification: All the probes will remain active no need to interchange the probes during the scanning	No Change
NA	Point to be added	System should have touch panel Justification: While working in sterilized area we can easily disinfect touch pad with wipe	No Change

Item Name: High End Echocardiography system (4D ECHO) (Tender ID: 023_HITE_171584_12)			
Tender Page & Para	TENDER SPECIFICATION	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
4	System must be offered with a minimum 21 inch high resolution OLED flat panel medical grade display monitor with infinite position adjustments. Company should provide wider monitor if available	System must be offered with a minimum 23 inch high resolution OLED/HDU flat panel medical grade display monitor with infinite position adjustments. Company should provide wider monitor if available Justification: High Definition Ultrasound monitor is the latest technology. Requesting to include the same. Latest system are coming with 23.8/24 inches. So that only latest and wider monitor is offered	No Change
12	Should be able to perform advanced quantification measurements like strain & Strain rate quantification. Should measure the myocardial velocity and derives the	Should be able to perform advanced quantification measurements like strain & Strain rate quantification. Should measure the myocardial velocity and derives the strain rate and strain along user-defined M-lines, Capable of drawing up to M lines at a time, Capable of sub-dividing each M-	No Change

	<p>strain rate and strain along user-defined M-lines, Capable of drawing up to 3 Mlines at a time, Capable of sub-dividing each M-line into 8 sub-regions or according to user-defined sub-region sizes, Point of interest tool obtains values from any point on the M- mode display. In addition to the tissue Doppler based strain system should have 2D based strain like VVI, AFI and TMQ should be offered. These should be offered both on the system and on a licensed workstation. OFF-CART workstation (both licensed hardware and licensed software) should be quoted and highlighted in the technical bid Added Para: CT/Flouro integration (Optional)</p>	<p>line into 8 sub-regions or according to user-defined sub-region sizes, Point of interest tool obtains values from any point on the M- mode display. In addition to the tissue Doppler based strain system should have 2D based strain like VVI, AFI and (TMQ & Automated Strain) should be offered. These should be offered both on the system and on a licensed Echopac/Tomtec workstation. OFF-CART workstation (both licensed hardware and licensed software) should be quoted and highlighted in the technical bid Added Para: CT/Flouro integration (Optional) Justification: Capable of drawing 3 M Lines on three images or one M Lines on an image sub dividing with 8 Sub Region. Latest Strain is AFI /Automated Strain. It should be added. Also Latest Workstation is Echopac/Tomtec - Request to kindly mention so that only top the workstation is offered.</p>	
15	<p>Should be able to perform MPR views for quantification from 3D Imaging on volume measurements like LV volumes, Ejection fraction from 3D Image, etc. Also should offer synchronicity indicates to measure and compare timing of maximum contraction of LV volumes to determine those patients who will best benefit from CRT system. Should display global LV volume and should provide simultaneous display of 17 regional volume waveform. This should be offered both on the system and on a licensed work station (both licensed hardware and licensed software) should be offered and highlighted in the technical bid.</p>	<p>Should be able to perform MPR views for quantification from 3D Imaging on volume measurements like LV volumes, Ejection fraction from 3D Image, etc. Also should offer synchronicity/Triplane TSI indicates to measure and compare timing . Should display global LV volume and should provide simultaneous display of 17 regional volume/Strain waveform. This should be offered both on the system and on a licensed work station (both licensed hardware and licensed software) should be offered and highlighted in the technical bid. Justification: Synchronicity software using volume is company specific, We have Triplane Tissue Synchronisation imaging for measuing delay and standard deviation and bulls' Eye. Request to add TRlplane TSI and 17 Regional Volume /Strain for allowing for participation.</p>	<p>Should be able to perform MPR views for quantification from 3D Imaging on volume measurements like LV volumes, Ejection fraction from 3D Image, etc. Also should offer synchronicity/Triplane TSI indicates to measure and compare timing . Should display global LV volume and should provide simultaneous display of 17 regional volume/Strain waveform. This should be offered both on the system and on a licensed work station (both licensed hardware and licensed software) should be offered and highlighted in the technical bid.</p>

20	<p>Latest PC (off-cart workstation) with permanent licence software for analysing and quantification of 2D and 3D data sets like Strain and Strain rate imaging, Tissue Motion Annular Displacement, Mitral valve 3D data sets, 2D Speckel tracking. CD/DVD writer with Image management software and colour laser Printer. PC should be offered with a flat panel 17" display monitor, 1 TB SSD, i7 processor, 16GB RAM. (hardware essential for OFF cart quantification)</p>	<p>Latest PC (off-cart workstation) Echopac/Tomtec with permanent licence software for analysing and quantification of 2D, M Mode , offline m mode, PW and CW measurements and 3D data sets like Strain and Strain rate imaging, Tissue Motion Annular Displacement, Mitral valve 3D data sets, 2D Speckel tracking. CD/DVD writer with Image management software and colour laser Printer. PC should be offered with a flat panel 17" display monitor, 1 TB SSD, i7 processor, 16 GB RAM. (hardware essential for OFF cart quantification) Justification: Workstation should be latest , top of the line. It should able to quantify 2D,M Mode, PW and CW measuremnets. It should also have Reporting solution and it should be customisable.</p>	No Change
Transducers 1	<p>4D (Live 3D) Echo matrix transducer for adult 4D (Live 3D) with frequency ranging from 1-5±1 MHz. This probe must support for exceptional 4D (Live 3D) image quality on the matrix array transducer to simultaneous display of two real-time live high-quality image planes. This transducer should have either single crystal technology or pure wave technology or matrix technology for excellent Image quality on difficult to image patient. Please mention the crystal technology used in the transducer. Systems offered with normal transducers for adult echo are liable for rejection.</p>	<p>4D (Live 3D) Echo matrix transducer for adult 4D (Live 3D) with wider apex and frequency ranging from 1-5±1 MHz. This probe must support for exceptional 4D (Live 3D) image quality on the matrix array transducer to simultaneous display of two real-time live high-quality image planes. This transducer should have either single crystal technology or pure wave technology or matrix technology for excellent Image quality on difficult to image patient. Please mention the crystal technology used in the transducer. Systems offered with normal transducers for adult echo are liable for rejection. Justification: Latest Transducer has better imaging and wider apex. Adding helps in ensuring that latest probe is only offered with the vendors.</p>	No Change
3	<p>3-8 (+/-1) MHz Broadband pediatric echo transducer for pediatric and small adult cardiology imaging.</p>	<p>2-7 (+/-1) MHz Live 3D Broadband pediatric echo transducer for pediatric and small adult live 3D cardiology imaging.</p>	No Change

5	4D (3D) Echo matrix TEE transducer for Adult 4D (3D) with frequency ranging from 2-7 (+/-1) MHz. Please quote prices of all probes separately also.	4D (3D) Echo matrix TEE transducer for Adult 4D (3D) customisable tee probe button with frequency ranging from 2-7 (+/-1) MHz. Please quote prices of all probes separately also. Justification: Latest Transducer has better imaging and customisable tee probe button . Adding helps in ensuring that latest probe is only offered with the vendors.	No Change
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Item Name: Ambulatory BP Monitor (Tender ID: 2023_HITE_171584_13)				
Tender Page & Para	TENDER SPECIFICATION	NAME OF THE FIRM	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
4	Measurement Range: Systolic 60 - 260mmHg (min. division: 1mmHg) Diastolic 0 - 160mmHg (min. division: 1mmHg) Pulse 30-200bpm (min. division: 1bpm)	Rohanika Electronic & Medical system	Measurement Range: Systolic 60 - 260mmHg (min. division: 1mmHg) Diastolic 25 - 200mmHg (min. division: 1mmHg) Pulse 30-200bpm (min. division: 1bpm)	Measurement Range: Systolic 60 - 260mmHg (min. division: 1mmHg) Diastolic 25 - 200mmHg (min. division: 1mmHg) Pulse 30-200bpm (min. division: 1bpm)
BOQ Para 22.1	Ambulatory BP monitor with recorder and carrying case as per specification - 01 no	Rohanika Electronic & Medical system	Suggestion from bidder : A minimum of 5 recorders must be included in the configuration	Ambulatory BP monitor with recorder and carrying case as per specification - 05 nos
11	Cuffs: Small Cuffs, (13-22cm) - 2 nos Adult Cuffs, (20-31cm) - 4nos Large Cuffs, (28-36cm) - 4 nos Extra Large Adult, (32-42cm) - 2 nos Added Para : (Every cuff size can be +/- 5 cm for both upper and lower sizes)	NA	TEC Recommendation	Cuffs: Small Cuffs, (13-22cm) - 5 nos Adult Cuffs, (20-31cm) - 10 nos Large Cuffs, (28-36cm) - 5 nos Extra Large Adult, (32-42cm) - 2 nos (Every cuff size can be +/- 5 cm for both upper and lower sizes)

Item Name: Point of Care device (Cardiac Biomarker) (Tender ID: 2023_HITE_171584_14)			
Tender Page & Para	TENDER SPECIFICATION	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
11	Should be supplied with cartridges for 100 tests for each parameters separately. The rates should be quoted separately for each individual cartridge and combination cartridges and prices will be freezed for warranty period	Should be supplied with cartridges for Total 150 tests, ie 25 for each parameter either separately or in combination. The rates should be quoted separately for each cartridge and prices will be freezed for warranty period Justification: 1) The consumables required to be submitted with main unit are 100 for each test. 2) We wish to point out that each consumable has a shelf life of 6 months in refrigerated conditions. 3) As per tender specifications 100 units of each test kit can lead to expiry of shelf life as many may not be consumed. 4) Therefore we have suggested 150 nos Total test kits ie 25 each.	No Change
	Points to be added	The machine should additionally be able to assess High Sensitive Troponin I (CV<10% and defined 99th percentile for male, female, overall) Justification: Diagnosis of acute MI, namely the detection of an increase and/or decrease of a cardiac biomarker, preferably high-sensitivity cardiac troponin, with at least one value above the 99th percentile of the URL	No Change
	Points to be added	The test strip should have in-built internal quality control and manufacture should also have external liquid control to ensure the integrity of test strips. Justification: For good quality control and accuracy	No Change
	Points to be added	The instrument should have inbuilt quality controls to ensure that the integrity of system is as per the manufacturer and also an external device to ensure that the POC instrument calibration is ok. Justification: For good quality control and accuracy	No Change