BMSICL	**Bihar Medical Services & Infrastructure Corporation Limited, 2nd & 3rd Floor, Swasthya Bhawan, Behind IGIMS, Sheikhpura, Adjacent to State Health Society, Patna 800023, Phone/Fax: +91612 2283287,+ 91612 2283288**

Corrigendum-II

Bihar Medical Services and Infrastructure Corporation Limited (BMSICL) had invited E-Bids from the interested parties for the procurement, rate contract and the supply of medical equipment for different Govt. Institutions of Bihar vide Notice Inviting Re-Tender No.- BMSICL/2024-25/ME-386. During and after Pre-bid meeting various suggestions were received from different prospective bidders regarding amendment in technical specification of equipment which were discussed and deliberated on by the experts, who after due deliberation recommended certain amendments in the technical specification of the equipment, which are annexed as Annexure-I of this corrigendum. In order to facilitate maximum participation of bidders the tender schedule is being revised as follows:-

Tender Reference No.	**BMSICL/2024-25/ME-386**
Last date and time of submission of online bids	**23rd January 2025 till 17:00 Hrs.**
Last date and time of submission of original documents of EMD, Tender Fee and Document	**24th January 2025 till 14:00 Hrs.**
Date, Time and Place of opening of Technical Bid	**24th January 2025 (at 15:00 Hrs.) on the website of https:/eproc2.bihar.gov.in in the office of BMSICL**
Date and time of opening of financial Bids	**To be announced later on https:/eproc2.bihar.gov.in**

Note:-

1. **Bidders are advised to refer to the Annexure-I of this corrigendum before submission of bid.**
2. **Those who have submitted their bids are requested to re-submit their bids in accordance with this corrigendum.**

Annexed:- as above

Sd/-
GM (Procurement)
BMSICL

Annexure-I		
Name of Equipment:- TMT MACHINE		
SI. No	**Technical Specification as per tender**	**Final Amendment**
	System requirements:	
1	System should acquire 12 lead ECG simultaneously	No Change
2	System should be able to convert analog ECG signal to Digital signal at the patient end through Wireless Acquisition Module.	No Change
	Software features:	
3	Should be able to record Resting ECG and Exercise ECG	No Change
4	In Resting ECG should have Interpretation Software for adults and pediatrics, simultaneous 12- lead ECG analysis program	No Change
5	Should have Interpretation for Adult, Child.	No Change
6	During exercise mode system should display the following parameters on the single screen during exercise mode.	No Change
7	12 lead raw ECG with average complexes	No Change
8	Real-time ST analysis& ST-HR trends of all 12 leads	No Change
9	Enlarged QRS complex.	No Change
10	Protocol, METS, Max HR, Target HR, Current HR, BP, Stage time, exercise time, treadmill speed & grade	No Change
11	HR detection lead, mains filter, status, amplitude.	No Change
12	Should have Duke treadmill score, ST/HR slope, ST/HR loop	No Change
13	Should have QT correction: Bazett, Fredericia, Framingham, or Hodges	No Change
14	Should have Lead selection: Right precordial, left posterior, Frank, Nehb	No Change
	Should have Computerized measurements:	
15	QT Dispersion	No Change
16	Averaged measurements	No Change
17	Should have Vector Analysis	No Change
18	System should have prompt for BP entry	No Change
19	System should have automatic BP measurement Device	System should have automatic BP measurement Device. US FDA/EU CE approved.
20	System should have a customized lead sequence display.	No Change
21	Should have multiple screen formats (6x2, 3x4, 3x 2 etc.)	No Change
22	System should have facility for Online enable or disable stage--wise printouts	No Change
23	Software should be able to display full disclosure of all 12 leads	No Change
24	User should be able to mark the ECG waveform to enter a comment at any stage	No Change
25	System should provide facility to hold the stage	No Change
26	Software should have the facility to change the background, grid lines, trace colors	No Change

27	System software should have a grid at the background of tracing to measure the S'T levels manually	No Change
28	Should have the facility to store & recall the complete test and revalidate the ECG	No Change
29	System should be able to view & print ST graphs & tables	No Change
30	System should have the facility to email the test as a pdf file	No Change
31	System should have shortcut keys for operating important functions.	No Change
32	Should have an automatic Blood Pressure Measurement Unit which should be integrated with the stress system for measurement during exercise.	No Change
	Hardware features:	
33	Should have at least 21" or more Touch screen display	Should have at least 21 inch or more High resolution colour LCD/LED TFT display.
34	Should have Licenced Windows	No Change
35	Processor: Intel i5-65000 CPU @3.20GHz.	No Change
36	RAM: 4GB;	No Change
37	HDD: 500GB;	No Change
38	Wireless keyboard & Mouse with BT USB dongle	No Change
39	Should have Black & White Laser Printer	No Change
40	Wireless Acquisition Module should have the following features	No Change
41	Should be lightweight less than 250 gm inclusive of batteries	No Change
42	Should work with 2 x AA rechargeable batteries and Should have a Charging time of fewer than 200 minutes	No Change
43	Should have a battery capacity of at least 35 hours of continuous display and should get connected with a system with Bluetooth	Should have a battery capacity of at least 3.5 hours of continuous display and should get connected with a system with Bluetooth
44	Should have a safety feature like pairing to the proper data transfer	No Change
	The system should have the following printout settings:	No Change
45	Print raw rhythm during online stage-wise printouts	No Change
46	Printouts should be on ordinary pre-printed graph papers through laser or desk jet printer	No Change
47	Multiple print formats in landscape or portrait	No Change
48	Facility to print the complete test report in review mode with a single click of a mouse	No Change
49	Facility to mark the strip & take the print of marked strips	No Change
50	Facility to print the ECG of any time	No Change
	System should be provided with heavy duty noiseless Treadmill with following 1 specifications	No Change
51	Should have 2HP AC Motor with self-cooling	No Change
52	Should have user weight up to 250 kg	No Change
53	Should have a running area of more than 500 x 1500 mm Should have a Speed Range of 0.8 to 20 kmph	No Change
54	Should have Grade Range: 0-25%	No Change

55	Should have an Interactive shock cushioned deck for patient comfort & safety	No Change
56	Should have an Auto tensioning drive system	No Change
57	Should be supplied with suitable Servo Stabilizer.	No Change
58	European CE from Notified body/ USFDA approved model	The complete System Should be European CE from Notified body/ USFDA approved
	Added Point	Arrythmia Detection in Excersise & Rhythm ECG
		QT Dispersion Software
		QT analyser software
		Should have visual presentation of QT intervals, PR intervals and ST alteration at any time during an exercise ECG
	Added Point	Basic Exercise Test software should provide:
		Enlarged QRS Complex with Superimposition technique.
		Real Time Average Complex.
		Reanalysis of final summary report.
		24 bit amplitude resolution with 8000 Hz or more sampling frequency
		Built-in standard exercise test protocols alongwith min. 5 user defined protocols.

Name of Equipment:- Echocardiography system High-End		
SI. No	**Technical Specification as per tender**	**Final Amendment**
	Specifications for 2D/3D Echocardiography system High-End	
1	The system must be latest generation technologically advanced Digital 2D Echocardiography system for Transthoracic adult, pediatrics, and neonatal applications and upgradeable to fetal echo.	No Change
2	System must be offered with a minimum of 4 million digital processed channels. Technical data sheet should be enclosed in	No Change

	technical bid to support the number of channels on the systems. If not mentioned, please attach a letter from manufacturer along with the technical bid clearly stating the digital processed channels of the offered system.	
3	System must be offered with a very high dynamic range of at least 280dB to pick up subtle echoes. Dynamic range in Db must be clearly mentioned in the technical quote. System offered lesser than specified parameters will not be considered.	No Change
4	System must be offered with a minimum 21 inch High Resolution Flat Panel Medical Grade Display monitor with nearly infinite position adjustments.	No Change
5	System should have at-least four Imaging universal active probe ports with electronic switching facility from keyboard without probe adapter.	No Change
6	Operating modes B-mode, M-Mode, B/M Mode, Doppler Mode, and Colour flow, Power Doppler, DCA/DPA, Contrast Imaging, B/Colour flow, PW Doppler, CW Doppler.	No Change
7	System should support broad band probes spanning a frequency of 1-22MHz.	No Change
8	B mode & B colour simultaneous should be available side by side real time display of B-Mode & Colour flow. Digital zoom facility for region of interest in real time and frozen images.	No Change
9	Image. storage facility on in build hard disc or MOD/CD/DVD-RW facility should be available. In built hard disk with minimum capacity of 500 GB. System should have extensive image management capability including thumb nail review, Cineloop editing etc.	No Change
10	Cine loop as well as cine scroll facility in B mode with storage of 1500 or more images should be available. Cineloop frames should also be available for abdominal contrast applications	No Change
11	System must be offered with Speckle Reduction Imaging: Image processing technique to remove speckles and clutter artifacts.	No Change
12	Advanced measurements & calculation package for vascular and cardiac should be available.	No Change
13	System should be capable of scanning depth of 40cms. Scanning Depth should be clearly mentioned in the technical quote If not mentioned Please attach a letter from manufacturer along with the technical bid clearly stating the scanning depth of 40cms in the offered system.	No Change
14	System must be offered with an 2D frame rate of at least 1900 frames/second. Acquisition frame rate should be clearly mentioned in the technical quote If not mentioned Please attach a letter from manufacturer along with the technical bid clearly stating the frame rate of the offered system. Tissue Doppler Imaging should be min 230 fps	No Change
15	System must be offered with 8 TGC slide pot	No Change
16	System must be offered with minimum 12-inch-high resolution user interface touch panel and dual view facility. The user should be able	No Change

	to view the scanned image on the touch screen while the main display is tilted towards the patient.	
17	System should have THI & should be able to work in combined mode of harmonic imaging and real time compound imaging to get excellent image quality. The system shall offer Tissue Harmonic Imaging in Power Doppler imaging mode for improved sensitivity and specificity in differentiating blood/agent from tissue.	No Change
18	The system should have Contrast Harmonic Imaging and should have optimization settings to detect the Contrast Agents. Please specify other advanced Technologies to perform better Contrast Harmonic Imaging.	No Change
19	**2D Quantification Tools:**	No Change
	a) Should provide region of interest analysis for contrast imaging, tissue analysis and color Doppler.	No Change
	b). Automated measurements of intima media thickness in carotids and other superficial vessels.	No Change
	c) Automated global and segmental longitudinal strain measurement.	No Change
	d) Strain quantification for measuring the myocardial velocity from Color Tissue Doppler (TDI) dataset and derive the displacement, strain and strain rate along user-defined M-Lines and overlay opening and closing of aortic and mitral valves on SQ curves to display Left Ventricle mechanical events,	No Change
	e) The system should have tools to automatically draw region of interest based on the selectec anatomical view, and generates LV Ejection Fraction (EF), End Systolic Volume (ESV) and Enc Diastolic Volume (EDV). It should also provide an in-depth report displaying areas, volumes and advanced parameters for LV systolic and diastolic function including: LV Ejection Fraction (EF), Peak Ejection Rate (PER), Peak Rapid Filling Rate (PRFR) and Atrial Filling Fraction (AFF).	No Change
	3D Quantification tools: (Online in the system and Offline workstation)	No Change
	a) The system should provide easy access to Live 3D, 3D Zoom, Full Volume and 3D Color data sets. It should Offer viewing, cropping, slicing and quantification including distance measurements, area,Bi-plane LV Volume, Ejection Fraction (EF) and LV Mass calculations.	No Change
	b) 3DQ should also provide Multi-planar Reconstruction (MPR) views for unlimited anatomical planes from 3D volume and 3D slice generation.	No Change
	c) It should provide display dynamic three-dimensional rendering and left ventricular (LV) volumes. Multi-planar Reconstruction (MPR) views to provide unlimited anatomical planes from 3D volume. User should be able to measure LV endocardial volumes, stroke volume (SV) and frue 3D ejection fraction (EF) using a semi-automated border detection in 3D space.	No Change
	d) The system should compute global and regional LV volumes based on ACC 17-segment model. Displays global LV volume waveform should provide selective display of 17 regional volume	No Change

	waveforms. It should offer timing assessment for each 17 minimal regional volumes and determine a synchronicity index for all volume segments or a user-selectable group of volume segments.	
	e) It should provide comprehensive report with summary of synchronicity indexes and displays regional Timing and Radial Excursion Parametric Images in bull's eye representation.	No Change
20	**Cardiac Motion Quantification:**	No Change
	The system should automatically draw a region of interest based on the selected anatomical view, providing an angle-independent analysis of regional myocardial-tissue velocity, displacement, strain, and strain rate, using the speckle-tracking technology.	No Change
	It should generate measurements of the global and regional functions and reports them in a table, a 17 or 18-segment bull's eye. It should additionally compute LV Ejection Fraction (EF), End Systolic Volume (ESV) and End Diastolic Volume (EDV).	No Change
21	**Mifral Valve Navigation:**	No Change
	The system should use Al to take a Live 3D volume of the Mitral Valve and turn it into an easy to interpret model in 6 guided steps-providing. Access to a comprehensive list of MV measurements and calculations. The tool should guide the operator through the entire process using simple commands and clear graphics making it easy to analyze.	Deleted
22	Auto Strain LA &RV should be provided standard.	No Change
23	Automatic real time & frozen tracing of instantaneous peal velocity & instantaneous mean velocity (or frequency) should be available. Triplex Imaging should be standard on the system.	No Change
24	**SYSTEM MUST BE THE FOLLOWING TRANSDUCERS**	No Change
1	Phased array 1-5 MHz (±1MHz) broadband adult Echo Transducer Matrix/Single Crystal for 2D Echo- cardiography with Bi-plane imaging to acquire two simultaneous views for increased throughput. Must have Tissue Harmonic Imaging, must attach original technical data sheet of transducer to specify the above technology used in the transducer.	No Change
2	3-8 MHz(±1MHz) Pediatric Echo Transducer for Pediatric and small adult Cardiology imaging. Must have Tissue Harmonic Imaging, must have smaller footprint than the adult echo transducer. Must attach original technical data sheet of transducer to specify the above technology used in the transducer.	No Change
3	Linear Transducer 3-12MHz (±1MHz) for Vascular & Small Parts application.	No Change
25	**System should be supplied with the following peripheral devices:**	No Change
1	KVA ONLINE UPS.	No Change
2	Thermal Printer	No Change
24	**The, below requirement must be quoted separately as field upgrade. (Will be considered for technical evaluation only. Not considered for L1 derivation)**	No Change

1	4-12 MHz neonatal Echo Transducer for Pediatric and small adult Cardiology imaging. 'Must have Tissue Harmonic Imaging, must have broadband technology for excellent Image quality. Must have smaller footprint than the pediatrics echo transducer. Must attach original technical data sheet of transducer to specify the above technology used in the transducer.	4-12 MHz (±1 MHz) neonatal Echo Transducer for Pediatric and small adult Cardiology imaging. 'Must have Tissue Harmonic Imaging, must have broadband technology for excellent Image quality. Must have smaller footprint than the pediatrics echo transducer. Must attach original technical data sheet of transducer to specify the above technology used in the transducer.
2	Live 3D Adult TEE matrix/Pure Wave/Single crystal technology transducer with 2500 elements and 2 to 7MHz (±1MHz) operating frequency range, electronically rotatable array from 0° to 180°, Electro cautery suppression with Speckle Reduction, harmonic imaging, M-mode, color M-mode, color flow, PW Doppler, CW Doppler. Must have smaller footprint than the adult echo transducer. Must attach original technical data sheet of transducer to specify the above technology used in the transducer.	Deleted
3	Transesophageal 2D transducer 3 to 8 MHz (±1MHz) operating frequency range Electro cautery suppression with Speckle Reduction, harmonic imaging, M-mode, color M-mode, color flow, PW Doppler, CW Doppler for **Pediatric TEE application.**	No Change
	Must have smaller footprint than the adult TEE transducer. Must attach original technical data sheet of transducer to specify the above technology used in the transducer.	No Change
4	Transesophageal 2D transducer 3 to 8 MHz (±1MHz) operating frequency range with Speckle Reduction, harmonic imaging, M-mode, color M-mode, color flow, PW Doppler, CW Doppler for **Neonatal TEE application.**	No Change
	Must have smaller footprint than the Pediatric TEE transducer. Must attach original technical data sheet of transducer to specify the above technology used in the transducer.	Deleted
25	**Mandatory certifications:**	No Change
	a) US FDA / CE (Issued by notified body)	No Change

Name of Equipment:- TPI Machine		
SI. No	**Technical Specification as per tender**	**Final Amendment**
1	It should be compact and light in weight.	No Change
2	It Should have facility to attach to patient arm, leg as well as IV Pole	No Change

3	MODE OF OPERATION: Demand or Asynchronous.	No Change
4	It should have Pacing Rates range at least 30ppm-200ppm	No Change
5	It should have Rapid Atrial Pacing Rates easy to increments from at least 80ppm-800ppm	No Change
6	It should have Output Amplitude range of at least 0.1V-10 V or 0.1mA to 20 mA or more	No Change
7	It should have Pulse Width of 1 ms or wider	No Change
8	Display should demonstrate both sensing and pulsing.	No Change
9	Control: All controls are to be located on the front	No Change
10	Should have safety lock for set pacing parameters	No Change
11	It should have Sensitivity ranges: Ventricular: 1-20 mV or more	No Change
12	Lock function should be available to avoid accidentally changing the value	No Change
13	It should work on 9 V alkaline batteries or 1.5 V AA batteries which are very easily available in the market.	No Change
14	Uninterrupted Pacing	No Change
15	Backlit screen to display all the major parameters	No Change
16	It should have pacing pause mode	No Change
17	It should have Low Battery Indicator	No Change
18	It Should have US FDA and European CE certificate and certificate to be submitted.	No Change