AMENDMENT NO 01

REF: TENDER FOR SELECTION OF STRATEGIC BUSINESS ASSOCIATE IN OPERATION & MAINTENANCE OF ECHOCARDIOGRAPHY, TMT, ECG & USG SERVICES AS PER THE QUALITY REQUIREMENTS UNDER ADMINISTRATIVE MANAGEMENT OF HLL AT HINDLABS IN PARASSALA, THIRUVANANTHPURAM Vide Tender HLL/CHO/SD/HCS/2019-20/Tender 001 Dated 11.12.2019

Amendment 01 – Some changes to the details given in the document as mentioned in the below table and adding Annexure 02 for bidder to confirm and quote accordingly.

SL NO	EXISITING TENDER DETAILS	AMMENDED TENDER DETAILS
01	The title as mentioned in the tender document on page numbers 1, 9 and 11 to be changed due to typing error: TENDER FOR SELECTION OF STRATEGIC BUSINESS ASSOCIATE IN OEPRATION & MAINTENANCE OF ECHOCARDIOGRAPHY, TMT, ECG & USG SERVICES AS P THE QUALITY REQUIERMENTS UNDER THE ADMINISTRATIVE MANAGEMENT OF HLL AT HINDLABS IN PARASALA, THRIUVANATHAPURAM	To be read as : TENDER FOR SELECTION OF STRATEGIC BUSINESS ASSOCIATE IN OPERATION & MAINTENANCE OF ECHOCARDIOGRAPHY, TMT, ECG & USG SERVICES AS PER THE QUALITY REQUIREMENTS UNDER ADMINISTRATIVE MANAGEMENT OF HLL AT HINDLABS IN PARASSALA, THIRUVANANTHPURAM
02	In the section 01 – Notice Inviting Tender for the details mentioned under heading Facilities to be offered new addition to be made: Facilities to be offered 1. ECHOCARDIOGRAPHY 2. ULTRASOUND SCAN 3. DOPPLER SCAN 4 TREAD MILL TEST (TMT) 5. CARDIOLOGY CONSULTATION	To be read as: Facilities to be offered 1. ECHOCARDIOGRAPHY 2. ULTRASOUND SCAN 3. DOPPLER SCAN 4 TREAD MILL TEST (TMT) 5. CARDIOLOGY CONSULTATION 6. ECG
03	In section 02 – Eligibility. Point number VI to be revised. VI. The bidder should have an annual turnover of INR 3 Crores and above for last three years ending in	To be read as: VI. The bidder should have an annual turnover of INR 2 Crores and above for last three years ending in March 2019.

	March 2019. The Balance Sheet and P&L Account for last three years 2016-17, 2017-18 and 2018 – 19 has to be submitted certified by registered Chartered Accountant.	The Balance Sheet and P&L Account for last three years 2016-17, 2017-18 and 2018 – 19 has to be submitted certified by registered Chartered Accountant.
04	In Section 03 – Scope of Service Point number V to be revised ○ ECHOCARDIOGRAPHY ○ ULTRASOUND SCAN ○ DOPPLER SCAN ○ Other cardio-USG services which arises from time to time.	To be read as: ○ ECHOCARDIOGRAPHY ○ ULTRASOUND SCAN ○ DOPPLER SCAN ○ ECG ○ Other cardio-USG services which arises from time to time.
05	New point to be added as POINT number X in Section 02 – Eligibility. No point in current Tender Document	To be read as (Included new): The parties submitting the Bid should ensure and confirm the machines to be installed for USG, TMT and ECG should confirm with the technical specification as detailed in ANNEXURE 02. The Bidder has to sign all the pages of Annexure 02 and submit along with Bid. Details of ANNEXURE 02 is as given below:

ANNEXURE 02

Technical Specification of Doppler High Resolution **USG Machine**

1. The system should be State of the art with full Digital Technology with Broadband beam former & should be for Whole Body applications including Abdominal, Ob/Gyn, Cardiac, Cerebrovascular, Peripheral Vascular, Musculoskeletal, Transcranial & Small Parts Imaging such as Breast, Thyroid, Testes, Intracavitary applications like Transvaginal & Transrectal, & Intraoperative applications.
2. The broadband beam former should be capable of simultaneously processing ultrasound signals from 1 MHz to 17 MHz.
3. The system should incorporate facility for High-resolution 2D, M Mode, PW, CW, Colour Flow Imaging, Power Doppler Angio, Duplex, Triplex, Imaging modes.
4. The machine should be capable of Dual Live display of greyscale reference image with colour Doppler image.
5. The equipment should have minimum 50,000 Digital Channels or more, and should be upgradable on the site to higher number of Channels. Higher Number of Channels is preferred
6. The system should employ the state of the art Transmit Real Time Compound Imaging Technology with Multiple Transmitted lines of sight of at least 5 lines. Wherein Multiple Coplanar Images from different viewing angles are obtained and combined into a single compound Image at real-time frame rates for improved visualization & better image quality in Abdominal & Vascular Imaging & to virtually clean up the image of artefacts.
7. System should have advanced Image Processing algorithms to analyze between targets and artefacts so as to sharpen target anatomy and reduce the speckle & artefacts for improved Image quality.
8. The system should have 256 Grey shades or more
9. The system should offer a scan depth up to 30 cm
10. The system shall have at least three universal transducer ports with electronic switching capability allowing any transducer to be connected to any port.

11. The system should support Convex, Linear, Sector, Volume, Matrix Array and static transducers. It should support volume imaging by freehand, mechanical, and electronic methods
12. The system should support multiple fully sampled live Volume Imaging, for both adult and paediatric imaging
13. All transducers should have Broad Bandwidth technology for extreme High Resolution 2D Imaging. The system should be able to capture all frequencies in a single Probe, without the need for user selection
14. The system should have a high dynamic range of 160 Db or more
15. The system should have facility for zoom (real-time and frozen image) and manipulation of Image through pre processing and post processing with Cine loop viewing of Images of all modes
16. System should have Cineloop review facility in individual and mixed modes with memory upto minimum of 2000 images and 100 seconds of M Mode data.
17. The system should offer a very high frame rate upto 500 frames per second.
18. The system should have Harmonic Imaging for Tissues for hard to image patients. The system shall support Tissue Harmonic imaging capability on phased, linear, 3D and curved array transducers. Tissue Harmonic Imaging should be available in colour flow imaging, M-Mode and 3D rendering modes.
19. System 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.
20. System should offer real time extended field of view Imaging (Panoramic imaging) up to 100 cm with curved and linear transducers. All grayscale imaging must be capable of real time spatial Compounding during the panoramic imaging
21. The system shall quantitatively calibrate panoramic images, allowing the user to perform area, circumference, distance and curved-linear distance measurements.
22. The system shall support simultaneous display of volume and multiplanar reconstructed (MPR) views.
23. The system should have the in-built software tool for imaging MPR. Thick Slice, and slice plane views

24. Full Trim capability must be support: Oblique and linear trimming in the MPRs: Freehand trimming of the volume
25. The system should support a utility for the creation of user defined general imaging protocols and the editing of default general imaging protocols
26. The system should provide extensive measurement, calculation and analysis packages for abdominal (General Vascular, Renal), small parts (Thyroid, Testicle, Breast). Ob/Gyn. Cardiology etc.
27. System should have Fully Articulating control panel including Height, swivel & slide Adjustments.
28. The system should have a fast Boot up time of less than 150 seconds, which switched on from 'OFF' position, and also less than 60 seconds from 'STANDBY' position.
29. The system should have digital storage (at least 150 GB built in hard disc) and retrieval of B/w & colour image data (both frozen and cine loops) on built in as well as removable media (CD, DVD & Magneto optical Disk).
30. Equipment with above features to be offered with the following board bandwidth probes
    a. Broadband Convex Array Transducer 2-5 MHz without need for frequency switching.
    b. Broadband Transducer 5-17MHz without need for frequency switching.
    c. Broadband Transvaginal / Transrectal probe with frequency range between 5 to 9 MHz
31. The system should have the following Documentation Devices:
    a. Black & White Thermal Printer with 10 printer rolls.
    b. On-Line UPS of appropriate rating from a reputed brand
    c. Colour Laser Printer
    d. Latest computer system with at least 1 Tb hard disc and 2 GB RAM for image storage/Transfer and reporting. 1000 DVDs data storage.

Technical Specification of **TMT**

1. The system must support 3-, 6-, 12- and 15-lead resting and stress ECG
2. All leads configurations can be displayed on-screen and printed in final reports
3. The system must provide pop-up medians in post-test review to view individual QRS complexes time synchronized to leads viewed in the trend graphs
4. The system must provide interpretative tools for resting ECG and stress ECG
5. The system must provide risk assessment tools for SCD like T-Wave Alternans
6. The system must allow for ECG display speed and amplitude adjustment
7. The system must provide ECG freeze frame during real-time display
8. System should display running trend of ST, Heart rate and METs on the screen to evaluate patient condition during exercise phase.
9. The system must provide BP measurements in both mm/Hg and kPA
10. The system must be able to score patient test results using Duke Treadmill score
11. The system must provide full disclosure ECG and allow detailed review and measurement of full disclosure ECG
12. The system must allow full disclosure strips to be appended to final report
13. The system must support viewing of final reports using non-proprietary, free software
14. The system must have the ability to simulate a stress test for quality assurance and training
15. The system must have the ability to view 3-, 6-, 12- or 15-ECG leads on screen during exam
16. The system must have the ability to customize user setups
17. Should have full disclosure playback review and storage for minimum of 50 tests
18. The system must use PC compatible monitors, printers and external storage devices, including CD-RW, SD CARD and USB external hard drives
19. The system must provide a detachable patient ECG acquisition module with replaceable patient lead wires
20. The Acquisition module should be digital
21. The system must provide patient procedure data storage on a PC network
22. The system must allow configurable color schemes to display real-time data
23. The system must allow configurable color schemes for final report printing to color printers
24. Final reports must be exportable from the system in Word, PDF
25. The system must support DICOM formatted report export

26. The ECG trace display speed must be adjustable in real-time
27. The system must provide a database backup and recovery tool
28. The system database must be sortable by procedure type, patient name, date of procedure, patient ID
29. During procedures, user must be able to open a previous procedure for the same patient to assess baseline, peak and maximum ST depression points
30. During the procedure, the user must be able to review procedure and patient information from the active ECG screen
31. Treadmill should have 60-inch walking surface with Two Stopping Modes
32. Treadmill should have emergency stop switch
33. Speed range of the Treadmill should be 0 to 13.5 mph
34. It should self-calibrating for Speed and grade

Technical Specification of **ECG MACHINE - 12 channel**

1. Simultaneous 12 Channel ECG recording with 12 lead simultaneous acquisitions
2. Should have visual alarm for open lead
3. Should have a digital display of 12 channel ECG
4. QWERTY Alphanumeric keyboard
5. Built-in ECG Parameters measurements and Interpretation
6. Minimum 25 ECG Storage inbuilt memory.
7. Should have maintenance free digital thermal array printer
8. Printer should work with standard thermal paper (should be available in Local Market)
9. Should have 12 lead ECG preview display before taking printouts and should have printer on/off selection.
10. Should have ECG lead annotation facility
11. Machine should have sufficient battery backup for taking at least 25 nos ECG on a fully charged battery

12. Should have with 2 patient cable sets, 8 clip on electrodes, 12 chest electrode with silicon rubber bulb, 12 packets of recording paper,1 bottle of jelly and 12 nos. reusable button type electrode
13. Should operate on mains(220v-50Hz) and rechargeable battery
14. Recording speed should be 25 mm/ sec and 50 mm/ sec.
15. CMRR should be>90dB or ECG machine should have digital processing with atleast 7000 samples per second from each lead wire.
16. Frequency response 0.05 Hz to 150 Hz.
17. Should have a digital filter for AC and EMG.

All other contents of the tender enquiry including terms & conditions remain unaltered.

Note:

i. Prospective Bidders are advised to check the website regularly prior to the closing date and time of submission of bids