अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर (छत्तीसगढ़)
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No. AIIMS/R/CS/EOI/Robotic/2023/ Raipur, Dtd:- 09/05/2023

Corrigendum

Sub: Expression of Interest For Supply & Installation of "Robotic Surgery System with Accessories Set" on Lease/Rental Basis for All India Institute of Medical Sciences, Raipur

Tender Id No: 2023_IMSRP_750750_1		
Point	**Existing Sentence**	**To be read as**
Point -35	**SPECIFICATIONS/ TECHNICAL COMPLIANCE STATEMENT:** -	**SPECIFICATIONS/ TECHNICAL COMPLIANCE STATEMENT:** As per Annexure- E

Sr. Proc. cum Stores Officer
AIIMS Raipur (C.G.)

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Annexure - E

Specification:-

	ROBOTIC SURGICAL SYSTEM WITH INSTRUMENTS & ACCESSORIES
	DESCRIPTION The following specification is for a system capable of working in the Master slave mode with the surgeon as the Master and his hand movements are translated in to minimally invasive instruments capable of navigating inside the human body and performing manoeuvres as desired by the surgeon as per the capabilities of the instruments for performing dissection and suturing in what is come to be called as a robot assisted surgery.
	CAPABILITES SPECIFICATION
1.	The equipment must be capable of performing minimally invasive robot assisted operative procedures in General Surgery, GI, Urology, Cardiac, Gynaecology, Thoracis, Colorectal for benign and cancer surgeries. The provided system must be the latest generation/ latest model at the time of procurement.
2.	The Main Equipment should comprise of the following fully integrated subsystems. 1. Surgeon's console – with Master controls and an integrated true High Definition 3D display stereo viewer. 2. Surgical Cart with 4 universal 8mm instrument/camera arms, rotating boom structure with a targeting laser. 3. Vision cart containing camera, image processing units and integrated true high definition display monitor for interaction 4. System should be capable for integration with the second surgeon console with provides the ability to switch surgeon console from one console to the other during surgery. 5. System should be capable for integration of skill simulator with the Surgeon console in the future with supplied model of robotic system to practice & enhance surgical skills of new & existing robotic surgeons. 6. System should be capable for an upgrade to Table motion feature in the future to achieve the motion of table while the system is still docked on patient. 7. System should be capable enough to use single site instrumentations.
3.	1. High-quality Three-Dimensional view of the field of operation is to be provided by the Vision system through its stereo endoscope. 2. The surgeon should be able to magnify the images with his own controls.
4.	The 8mm endoscopes should be capable to view at 0 degree. Capability for Real-time near-infrared guidance through visualization of injectable fluorescence dye with suitable endoscope, illuminator and camera should be available.
5.	Camera should provide high resolution images of the operative field along with perception of depth of field.
6.	Instruments to be used with the system should be able to provide surgeons with natural dexterity and a range of motion equal to the human hand. Such instruments should be able to offer a wide range of tips suitable for performing procedures for benign and oncology surgeries across multiple disciplines. These instruments shall offer Seen degrees of motion mimicking the dexterity of human hand.
7.	The masters at the surgeon's console should be capable of translating the natural hand and wrist movements in to corresponding precise and scaled movements to the instruments and camera attached to the surgical cart arms minimising fatigue. Such movements of the instrument tips shall replicate the experience of open surgery.
8.	There should be facility for scaling of surgeon hand movement s to corresponding smaller instrument tip movements. The surgeons hand movements shall be replicated at the instrument tip after filtering tremors if any in real time.
9.	There should be facility for leaning hand – eye coordination movements by a simulator subsystem.
10.	The system should perform self-checks to provide safety during usage.
11.	The system should have built in energy source for mono polar, bipolar cautery and Vessel Sealing, also have ability to use external energy source of at least one compatible model for emergency use.
12.	Ability to change instruments during surgery safely with proper guidance should be in built.
13.	Should provide the flexibility to place scope in any one of the surgical arms during the procedure.
14.	Features to provide ability for the assistants in the OR to see and communicate with the surgeon through monitor and telestration.
15.	Ability to adjust the surgeons view ports and console to suit individual comfort and ergonomics should be available.
16.	Ability to enable the surgeon to view two additional video sources from other medical systems with compatible video sources.

17.	While the robotic arms shall be operated by sterile persons the vision system and surgeons console shall be non-sterile are in the Operating room.
18.	Adequate safety features to prevent inadvertent movements of the surgeon affecting the instruments shall be available.
19.	The sub systems shall be easily movable within the OR. If wheels are used there should be features to lock the wheel to prevent movements.
20.	The system shall provide video output suitable for connecting to external devices such as recorders and additional video monitors.
21.	The system shall have all software required to support all disciplines of surgery which is possible by the system under the control of the surgeon.
22.	System shall have features for emergency release of the robotic instruments from the surgery.
23.	System should provide capability to conduct advance surgical steps like stapling and vessel sealing with the help of wristed robotic instruments
	OTHER REQUIREMENTS
A	**TRAINING**
A1	**Surgeon Training**
	Eight surgeons nominated in a phased manner by the Institution Headshall be trained and certified by the vendor for using the system to perform robot assisted surgeries. The duration of the training and the training method shall be as per international norms at an authorised training centre.
A2	**OT Staff training**
	A set of OT Staff such as Nurses and OT technicians and Biomedical staff shall be trained by the vendor for handling the system covering powering on, moving and positioning the system and observing the system for right function and errors if any etc. The training method and duration shall be outlined by the vendor. There may be multiple bathes of OT staff required to be trained over a period of time.
B	**INSTRUMENTS, CONSUMABLES & ACCESSORIES**
	The vendor should provide a list of Instruments, consumables and accessories available for the use of the system for 300 surgeries suitable for the capabilities of the system. Institute may increase the Quantity of Instruments Accessories & Reusable at the time of Purchase.
C	**ENVIRONMENT AND POWER**
	All equipment shall be capable of working on 230 V AC, +/-5%, 50 Hz Power supply. The system shall be capable of working between 22 to 30Deg C air-conditioned environment.
D	**Mandatory Terms & Conditions**
1	The Vendor will perform a detailed Pre-Site Survey of the Operation Theatre/Institute and will submit a Detailed report of the same within 15/30 Days of the Tender Submission to inform/update the Institution about all the auxiliary equipment/s & other requirements if any, necessary for full functioning of the device and its unhindered use for surgery.
2	System should be quoted with Performance Report/Certificate of Last 3 Years by Various user/users form Government Institutions of India.
3	The Vendor should have a Training Centre in India
4	The Vendor should be asked for rate of consumable required for approx. 250 surgery yearly.
5	The robotic system should have USGDA/ CE / BIS approval
External Accessories	
1	Ultrasonic Cleaner Ultrasonic Frequency-38 kHz or greater Power Density-13W/Litre or greater (Ultrasonic power output/internal tank volume) Tank size should be large enough to fully submerge instruments with at least 1inch(25mm) clearance around all instrument, the tank length should be a minimum of 28 Inch (712mm)
2	Instrument sterilization trays for robotic instruments
3	H2O2 gas plasma sterilizer Capable of standard cycle and express cycle Maximum temperature-Less than 55 degrees Free standing with built in wheels for mobility Should be compatible with da Vinci Xi endoscopes