

Amendment -I

Dated 18.05.2023

Tender Ref : HSCC/PUR /Mauritius /New Cancer Hospital/2022/03

The replies of pre bid queries have been received details are as under.

HDR BRACHYTHERAPY SYSTEM TECHNICAL SPECIFICATION AMENDMENT REQUEST BY BIDDERS

Sl. No.	HDR Tender Specifications	Amendment Request	Clarification/ Reason for Amendment	Remarks for technical Experts
	The whole proposed HDR Brachytherapy system must be compulsory compatible with the Oncology Information System (OIS) installed at national Cancer Hospital over long term period especially after any upgrading software version. The Bidder must provide/Guarantee compatibility at no extra cost for a period 10 Years	clause should be reviewed as it is a restrictive bidding ONLY The bidder who is awarded to the linear Accelerator will be able to submit a quote with this clause as the software for the linear Accelerator will not be a compatible with any other software of other brands	This will permit only the awarded of the Linear Accelerator to be the sole bidder of HDR Brachytherapy system. Hence, it becomes a restrictive bidding exercise not allowing other brands to have a fair chance.	Compatibility is mandatory. This is important to ensure continuous safe-treatment of patients from one modality to another. Comments: 1. Part of the treatments are done on LINAC and the remaining treatments are done on brachytherapy. In order to ensure continuous and safe treatment for patients, compatibility with OIS is mandatory. 2. Proof of compatibility must compulsorily be provided by the company to ensure smooth running of the equipment. <b>3. However, if bidders have any alternative to ensure compatibility it will be accepted.</b>
	ii) two dedicated contouring stations with auto-contouring and anatomical software installed to facilitate contouring structures iii) two dedicated 3-Dimensions Treatment Planning Systems (TPS) for brachytherapy, including the algorithms (as close as possible to monte Carlo algorithms) to calculate	ii) Dedicated contouring station with auto-contouring and anatomical software installed to facilitate contouring structures iii) Dedicated 3-Dimensions Treatment Planning Systems (TPS) for brachytherapy, including the algorithms (as close as possible to monte Carlo	We think that one contouring station is sufficient since you are asking for one Saginova system; We think that one 3 D TPS is sufficient since you are asking for one Saginova system;	Two contouring stations and two TPS are needed.

	the dose distribution, dwell times, and dwell positions. In addition, the brachytherapy Treatment Planning System (BTPS) must be capable of performing both forward and inverse treatment planning for intracavitary and / or intraluminal HDR brachytherapy,	algorithms) to calculate the dose distribution, dwell times, and dwell positions. In addition, the brachytherapy Treatment Planning System (BTPS) must be capable of performing both forward and inverse treatment planning for intracavitary and / or intraluminal HDR brachytherapy,		
Page 3 of 21	<b>1-10</b> :The Source head should have adequate shielding and its height should be adjustable	The Source head should have adequate shielding to ensure radiation safety during park position.	We think that most manufacturers cannot offer this feature adjustable height	1.10 This feature is not mandatory and can be replaced with “the device must be easily manoeuvrable for optimal access to the treatment channels”.
Page 5 of 21	<b>5-1</b> : Two dedicated state of the art brachytherapy treatment planning systems (BT <sup>2</sup> PS) and two dedicated contouring workstations (CW) must be provided for brachytherapy treatment planning. They must be the latest version available, and both hardware and software must be upgradable	Dedicated state of the art brachytherapy treatment planning systems (BT <sup>2</sup> PS) and dedicated contouring workstations (CW) must be provided for brachytherapy treatment planning. They must be the latest version available, and both hardware and software must be upgradable	We think that one contouring station, and one 3 D TPS are sufficient since you are asking for one Saginova system;	5.1 Two contouring stations and two TPS are needed.
Page 6-21	<b>5-13</b> : The CWs (both) must have anatomical atlas software installed to facilitate contouring structures & auto-contouring features must be enable and provided	The CWs (both) must have anatomical atlas software or equivalent system installed to facilitate contouring structures & auto-contouring features must be enable and provided	Anatomical atlas for contouring, it’s a unique feature from VARIAN,	5.13 Anatomical atlas is needed and is mandatory to enable oncologists in their contouring tasks.
Page 7 of 21	<b>5-23</b> : The vendor should provide advanced model-based dose calculation algorithm for inhomogeneity correction in dose calculation as per the AAPM TG 186 recommendations	The vendor should provide dose calculation algorithm with inhomogeneity correction for applicators and shielded materials in dose calculation as per the AAPM TG-43 or AAPM TG	<b>5-23</b> : Since the gold standard of dose calculation in Brachytherapy is TG43 and TG 186 is still used as R&D,	5.23 TG186 is preferred although TG43 may be accepted as an alternative for dose-calculation in brachytherapy.  6.2 up to 6.10: can be amended

	<p><b>6-2</b> : Gynecological applicator Fletcher suit type – 6 Sets; and 5 complete sets of non disposal Universal Gynecological Applicators</p> <p><b>6-3</b> : Gynecological application templates 2 set each (2 sets Syed-Neblett and 2 sets of MUPIT with all required accessories)</p> <p><b>6-4</b> : CT/MRI compatible gynecological Fletcher -Suit type applicators 2 sets</p> <p><b>iii)</b> Brain applicators (Gliosite) 10 each</p>	186 recommendations”	6-2 to 6-6 : Applicators specifications and numbers should be reviewed according the physicians needs	<p>according to the availability of applicators on the market. For examples: 6.7, 6.8 (ii) and 6.8 (iii) can be removed since they are no more available on the market.</p> <p>6.9 Surface mould – 5 sets IOHDR or Surface Flap sets of applicators.</p> <p>6.10 the number can be reduced by one-quarter because of their short expiry dates.</p>
Page 8 of 21	<p><b>6-13</b> : Vendor should provide one extra treatment control console system which will be compatible with offered HDR treatment machine for the purpose of performing intra-operative HDR brachytherapy treatment</p> <p><b>7-4</b> : The bidder must provide two moderns ergonomically adjustable HDR brachytherapy specialized medical beds/tables with all accessories and motorized movements (up &amp; down movement, backrest lifting). The bidder must ensure that the dimensions of the medical beds/tables are appropriate to easily carry the patient through th maze and entering the treatment area. The medical beds must be equipped with rolling casters – allowing 360 degrees rotation – that can be easily locked to prevent movement</p>	<p>Vendor should provide one extra treatment control console system which will be compatible with offered HDR treatment machine for the purpose of performing intra-operative HDR brachytherapy treatment</p> <p>The bidder must provide a modern ergonomically adjustable HDR brachytherapy specialized medical bed/table with all accessories and motorized movements (up &amp; down movement, backrest lifting). The bidder must ensure that the dimensions of the medical bed/table are appropriate to easily carry the patient through the maze and entering the treatment area. The medical bed must be equipped with rolling casters –allowing 360 degrees rotation – that can be easily locked to prevent movement</p>	<p>6-13 : Could you please give more details on this extra treatment control console for the purpose of performing intra operative HDR brachytherapy treatment</p> <p>7-4 : We think that one ergonomically adjustable HDR brachytherapy specialized medical bed / table is sufficient since you are asking for one Saginova system</p>	<p>6.13 No comment.</p> <p>7.4 We need two as mentioned in the specification.</p>

Page 10 of 21	<b>8-7</b> : The bidder must provide a modern electric brachy-treatment table with all accessories (Motorized /Hydraulic locking clamp mounting and Lithotomy position support) for brachytherapy		8-7 : Please, could you explain the difference between this and 7-4	8.7 specialised bed for LDR brachytherapy iodine-125 or for general brachytherapy purposes other than gynaecological.
Page 11 of 21	<p><b>8-11</b> : The bidder must provide two X-Ray reconstruction jigs, and two sets of X-ray marker wires for all applicators</p> <p><b>8-12</b> : two well type chambers with calibration certificate must be provided for source calibration (that is, for measuring the source strength) (especially for Iridium - 192) with all associated accessories: including two modern electrometers and all cables (&gt;20 meters long) and appropriate /related connectors /adaptors, Two sets of cables must be provided</p> <p><b>8-17</b> : Two complete set of quality Assurance (QA) and Quality Control (QC) Equipment (eg. Source check positioning ruler/tools/simulator, GAFchromic phantom, Gafchromic films, complete in-vivo dosimetry system for monitoring dose to rectum and bladder) for verifying the source positioning accuracy and stepping accuracy must be provided. Phantom and recording video camera for source positioning and source-step accuracy of every channel must be provided. It must compulsorily be also possible to verify source transfer tube length automatically.</p>	<p><b>8-11</b> : The bidder must provide one X-Ray reconstruction jig, and one set of X-ray marker wires for all applicators</p> <p><b>8-12</b> : Well type chamber with calibration certificate must be provided for source calibration (that is, for measuring the source strength) (especially for Iridium - 192) with all associated accessories: including two modern electrometers and all cables (&gt;20 meters long) and appropriate /related connectors /adaptors, One set of cables must be provided</p> <p><b>8-17</b> : A complete set of quality Assurance (QA) and Quality Control (QC) Equipment (eg. Source check positioning ruler/tools/simulator, GAFchromic phantom, Gafchromic films, complete in-vivo dosimetry system for monitoring dose to rectum and bladder) for verifying the source positioning accuracy and stepping accuracy must be provided. Phantom and recording video camera for source positioning and source-step accuracy of every channel must be provided. It must compulsorily</p>	<p>8-11 : We think that one x-ray reconstruction jigs is sufficient instead of 2</p> <p>8-12 : We think no need to have 2 well type chambers for source calibration, since only one which will be used, so the second one will be just additional cost for purchase and even for calibration</p> <p>8-17 : We think that one set of Quality assurance is sufficient since you are asking for one Brachytherapy system</p> <p>8-18 : We think that one set of In vivo dosimetry is sufficient since you are asking for one brachytherapy system, it's just additional cost</p>	<p>8.11 Two in numbers are needed.</p> <p>8.12 Two Well-types are needed.</p> <p>8.17 Two sets of QA are needed.</p> <p>8.18 Two sets of in-vivo are needed together with their complete QA/QC tools.</p>

	<p><b>8-18</b> : Vendor should provide two complete sets of in-vivo dosimetry for live monitoring the dose receive to rectum and bladder during HDR gynecological treatment. All associated QC/QA tools must be provided for calibration including phantom, ionization chamber, and licensed software.</p>	<p>be also possible to verify source transfer tube length automatically.</p> <p><b>8-18</b> : Vendor should provide a complete set of in-vivo dosimetry for live monitoring the dose receive to rectum and bladder during HDR gynaecological treatment. All associated QC/QA tools must be provided for calibration including phantom, ionization chamber, and licensed software.</p>		
<p>Page 12 of 21</p>	<p><b>9-1</b> : Refer to section 8.15 above: the bidder should provide two independent digital wall-mounted radiation monitoring systems with radiation warning lights situated : The 1<sup>st</sup> one must be on the wall at the maze end, opposite to the maze entrance. It must be visible through the glass window of maze door. More precisely, it must be installed at an angle on the wall inside the treatment room opposite to the after-loader. The four digit LED display must be readable from 9 meters away. The 2<sup>nd</sup> one must be on the wall at the console area. Both systems must monitor the level of radiation inside the treatment room. That is, their detectors must be found inside the treatment room area of the HDR bunker. Both systems must give visual and audible warnings to indicate that radiation is present. The level of radiation monitors by both systems</p>	<p><b>9-1</b> : Refer to section 8.15 above: the bidder should provide an independent digital wall-mounted radiation monitoring systems with a 3-state tower warning lights : The 1<sup>st</sup> one inside the treatment room, it must be visible through the installed camera, the second one outside the treatment room (at the console area) at the entrance of the bunker next to the door. The system must monitor the level of radiation inside the treatment room. That is, the radiation detector must be found inside the treatment room area of the HDR bunker. The system must give visual and audible warnings to indicate that radiation is present. This device can operate in case of a power failure with an emergency power supply.</p>	<p>We think that since you are asking for one brachytherapy system and one bunker, just one digital wall mounted radiation monitoring is sufficient</p>	<p>9.1 Two digital wall-mounted monitoring systems are needed.</p>

	must also be displayed inside the console room et the console control unit, they must have some batteries backup systems in case of power-failures.			
Page 13 of 21	<b>9-6</b> : At least three sets of high quality radiation warning signages must be provided by the bidder. The signages must be large (at least of dimension 30 cm x 40 cm ) and visible during the day at a distance of 5 m and luminous in the dark. They must be posted at appropriate, strategic locations on the wall as and doors within the controlled areas of the brachytherapy department as shown in the table	Set of high quality radiation warning signages must be provided by the bidder. The signages must be large (at least of dimension 30 cm x 40 cm ) and visible during the day at a distance of 5 m and luminous in the dark. They must be posted at appropriate, strategic locations on the wall as and doors within the controlled areas of the brachytherapy department as shown in the table	We think since you are asking for one brachytherapy system and one bunker, one set of high quality radiation warning signages is sufficient	9.6 Three sets are needed.
SECTION - VI LIST OF REQUIREMENTS	Delivery time: 90 days from date of Notification of Award.	120 days from date of Notification of Award	Production lead time is 60 days and shipment time is 45 to 50 days	A period of 90 days will remain unchanged to allow optimum and continuous treatment of patients.

All other terms and conditions of the tender enquiry documents including Amendments issued so far shall remain unchanged.

Prospective bidders are advised to regularly visit HSCC website/CPMP Website for the Corrigendum/amendments etc. if any, as these will be notified on these portals only. No separate advertisement will published in the newspaper in this regard.

**Senior Chief Executive,  
Ministry of Health & Wellness,  
Republic of Mauritius**