

S.No.	Pg.No.	Clause in the Bid Document	Suggestion	Reply No	Replies from Department of Medical Education
1	8, Clause 3.1	The Service Provider will procure all equipment, material, qualified consultants and required manpower and provide 24 x 7 CT/MRI services to patients of the allied hospitals of GMC, Bhopal	MRI is not a 24 hours modality and regular hours of operations should be rather limited to 8:00 A.M. till 5:00 P.M.	1.1	Pls refer our reply No 16.2
2	Clause 3.2		2700 sq ft might be increased in case of patient load increases so in order to install another machines.	2.1	Agreed
3	8, Clause 3.1	The Service Provider shall perform all tests / Scans as mentioned in the CGHS rate List	The CGHS price list is a benchmark for service pricing and not for conducting Tests. several other types of tests may be conducted/ required by the institute and hence limiting to or listing CGHS may not be appropriate.	3.1	No Change
4	8, Clause 3.3	The diagnostic scanning charges are to be kept at prevailing CGHS-Bhopal circle rates for all patients irrespective of patients recommended by Hospital or outside Private Patients.	Request the Private patients be allowed to be charged at Market rates.	4.1	No Change
5	8, Clause 3.3	The diagnostic scanning charges are to be kept at prevailing CGHS-Bhopal circle rates for all patients irrespective of patients recommended by Hospital or outside Private Patients. Please clarify whether non NABL or NABL rates will be given, In case of Bidder gets NABL accreditation.	Please amend the same as "The diagnostic scanning charges are to be kept at prevailing CGHS-Bhopal circle rates for all patients irrespective of patients recommended by Hospital or outside Private Patients. However the centre gets NABL accreditation The NABL rates charges will apply.	5.1	Agreed, (all rates as per CGHS list)
6	8, Clause 3.3	Scan Charges for patients belonging to priority households of the state of Madhya Pradesh as per the The National Food Security Act, 2013 and other Government Beneficiaries entitled for free healthcare facility from the State Government would be paid by Authority to the service provider on his submission of bills on a monthly basis.	Request you to share the Budgetary Provision for Free scans.	6.1	Please refer Clause 8.4 of the RFP
7	Pg. No. 9, Clause 3.6	Teaching Staff of Radiology department will prepare report of CT & MRI of patients referred from the GMC & allied hospital only.	TAT for the reports of patients referred from the GMC and allied Hospital which shall be reported by the teaching staff of GMC must be provided. The time taken for reporting these cases should be kept out of the TAT calculation mentioned in the clause 7.24	7.1	As per RFP
			There must be an explicit mention of TAT for Medico Legal Cases, emergency cases and non-emergency cases.		
			The hospital has to provide doctor for medico legal case (for court evidence)		
			The responsibility for the Medico legal cases will also lie in the hands of the Radiologist reporting the same.		
			Kindly provide the list of allied hospitals under GMC.	7.2	Please check under Abbreviations & Definitions of RFP

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8	Pg. No. 9, Clause 4.1	Experience of providing 5,000 CT / MRI Scans (both inclusive) in last 3 years.	Hospital should rather ask for an experience of providing 5000 CT & MRI per year for last 3 years. to be given on MIS as well as via statutory auditor.	8.1	No Change
9	Pg. No. 9, Clause 4.2	Financial Status and credibility: The bidder's Hospital/company / Group Radiology centre should have minimum annual turnover of Rupees 2 crores in each of the last three financial years (2013-14, 2014-15, 2015-16).	Request you to make the minimum turnover of the concessionaire to be at least INR 7 crores for the CT MRI centers for the last 3 years. This is important as very small and non-serious players may be able to participate for the tender resulting in sub-optimal outcomes.	9.1	No Change
10	Pg. No. 9, Clause 5.1	Initial period of contract shall be for 7 (Seven) years from the date of signing of contract, extendable by another 7 (Seven) years on satisfactory performance and Technological Up-gradation of the Machines	We request a minimum tenure of the project to be 10 years in a single shot. Otherwise the project will not be viable at the given rates. The minimum contract period has been 10 years in all other states where a similar PPP project has been released.	10.1	Agreed, Clause 5.1 to be read as below : Initial period of contract shall be for 10 (Ten) years from the date of signing of contract, extendable by another 10 (Ten) years on satisfactory performance and Technological Up-gradation(including Hardware upgradation as well) of the Machines
11	Pg. No. 9, Clause 6.1	No subletting of any part or whole of the process /infrastructure / services shall be allowed.	Non core activities like Housekeeping and Security can be outsourced for better management, request such provisions to be allowed.	11.1	Agreed for House Keeping & Security
12	Page 10 Clause 7.3	The installation, repair and maintenance of the electrical lines, water pipelines, air conditioning fittings and any other type of fittings inside the building, handed over to the service provider will be the sole responsibility of the Service Provider.	Electricity cable should be available from the transformer till the site.	12.1	No change
13	Pg. No. 10, Clause 7.5	Electricity and water connection will have to be procured by Service provider.	The Authority/ Hospital must also provide Power and water connection at the radiology project site of appropriate rating and 3 phase. This must be provided till the meter of the service provider. The expenses of the laying the cables from the transformer to the project site may be borne by the service provider, but he appropriate sanctions and approvals should be taken by the Hospital Authorities from the electricity department. Additionally, a space for keeping the generator must be provided. This must be near the site where CT and MRI machines are placed.	13.1 13.2	All necessary support in arranging Power & Water connection shall be given by the Authority/ Hospital. Any Cost/ Expenses incurred shall be borne by the Service Providers. Agreed
14	Pg. No. 11, Clause 7.11	Only Newly purchased equipment must be installed by the Service Provider	The equipment to be installed must be a new product launch done in the last 3-4 years at any global or local forum. It should be a product launched in or after 2014. this is to make sure that the product has all the advanced features and is further serviceable for the long duration of the PPP contract.	14.1	Equipment must be of Latest Technology launched in India by the manufacturer (as certified by the manufacturer)

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15	Pg. No. 12, Clause 7.21	Radiologist should be available to attend cases round the clock. Service Provider should submit doctor / Employee duty roster to the hospital administration in advance.	All the cases of Govt. and allied institutes will be reported by the GMC staff then what is the need for a radiologist round the clock?	15.1	Radiologist, for other than Government Cases to be available during day shift, but anesthetic/critical care consultant to be available round the clock
			Radiologists can be made available in the General day shift, after which provisions of reporting the private and emergency cases through tele reporting be allowed.	15.2	
16	Pg. No. 12, Clause 7.24	The Patients referred from the Hospital has to be given due priority over an outside Private Patient. Maximum permissible time for service delivery to Hospital. Patients shall be 2 hours for CT Scans and 4 hours for MRI Scans from the time of registration. All emergency cases such as Head Injuries Trauma etc need to be dealt with in 1 hour.	Since the reporting would be largely dependent on the Radiologists of GMC the TAT would also be affected by the reporting done by them.	16.1	Reporting is agreed to be taken out of TAT Calculation, However Scan & Images delivery exist will remain as such
			Moreover, these are very harsh and irrational timelines. These terms are acceptable as scan times for CT scans but impossible to achieve for MRI scans.	16.2	Agreed to revise time limits for MRI Scans only (i.e 4 hours limit is being increased to 12 hours), However time limit for all emergency cases even in MRI shall remain same
			1. Services should be provided to all patients (Govt. or Pvt.) on first come first service basis with a token system except for emergencies and elderly patients.	16.3	NO change
			2. When reporting of Govt. patients is to be done by Hamidia Radiologists why turn-around time for reporting is asked from private service provider.	16.4	Refer Reply No 16.1
			The patients will be given registration and token number on first cum first basis. This would eliminate any kind of chaos and mismanagement. Emergency cases will be given priority such as head Injuries Trauma etc. It is very difficult to define time limit for patients during peak hours of operation when OPD is under way. Therefore fixing time limit specially in MRI exam is not possible. Please amend as "The Patients referred from the Hospital has to be given due priority over an outside Private Patient during normal scanning. All emergency cases such as head Injuries Trauma etc need to be dealt within 1 hour. Hospital referred patients will be registered as per first cum first serve basis..	16.5	Refer Reply No 16.2
			The 2 hour service delivery provided for the patient for CT scan may vary case to case(Abdominal CT Scan investigation)	16.6	No Change
			We request you to kindly revise the clause to: -		
			<ul style="list-style-type: none"> For emergency cases – CT scan must be done within 1 hour. MRI scan is not an emergency scan and must be completed within 6 hrs from the time of registration 	16.7	No change for emergency cases (irrespective of CT/MRI)
			<ul style="list-style-type: none"> All other cases,CT scan can be done within 2 hours and MRI scan within 24 hours of scanning. Request you to kindly change it appropriately. TAT should be till scan completion as the reporting will be done by the Hospital Staff for all Government patients. 	16.8	Refer Reply No 16.1

S.No.	Pg.No.	Clause in the Bid Document	Suggestion	Reply No	Replies from Department of Medical Education
17	Pg. No. 12, Clause 7.26	The Service Provider has to provide 24 X 7 uninterrupted CT/MRI services by posting qualified required work force at the CT/MRI Unit.	Services should be made available as per OPD hours and timing should be extended as the workload ramps up. However, Emergency patients for CT will be attended 24/7. There are rarely any emergencies for MRI. There is no point in keeping the centre open and pay for all three shifts if there are no workloads. A private player would like to open it 24/7 once there are sufficient workloads.	17.1	Pls refer our Reply No 16.1, 16.2 & 16.6
			Minimum 5% to 7% downtime is allowed i.e. 18 days per annum. any alternate arrangement should be forced upon only when the downtime exceeds the permissible downtime.	17.2	Pls refer Reply No 17.5
			As per point 3.6 Reporting will be done by Radiology dept. of the Hospital for Govt Referred cases. During normal working hours Radiologist will be provided by Bidder. Also after normal hours Tele-radiology should be allowed Please amend the same as "The Service Provider has to provide 24 X 7 uninterrupted CT/MRI services by posting qualified required work force at the CT/MRI Unit during normal hours and on call basis from 8pm to morning 8am.	17.3	Pls refer our reply No 15.1
			As the equipment has its wear and tear while running hence it must be agreed that downtime is natural.	17.4	No change
			<ul style="list-style-type: none"> All the bids allow 95% uptime. If the time exceeds more than that then any action should be taken. 	17.5	Non Change
			<ul style="list-style-type: none"> Please note that no concessionaire would deliberately incur a loss by closing the center. And making it not functional. 	17.6	NO comments
18	Page 13 Clause 7.27	Service Provider should make alternative arrangements in the event of breakdown of the services at his own cost. In case the Service Provider fails to make such arrangement and the patient claims any damages, it shall be the responsibility of the Service Provider.	Service provider should be asked to assure 95% uptime across the year. Alternative arrangement should be asked only beyond permitted one time downtime of at least 72 hours.	18.1	Pls refer our reply No 17.5
19	Pg. No. 13, Clause 7.29	The CT/MRI centre should have prior arrangements to shift such patients to other specialty centres for management of complications. The cost of management of such complications shall be borne by the Service Provider without any liability, responsibility of the Hospital.	Hospital should be mandated to aid and complete care in case of any exigencies seen during imaging.	19.1	for Clause 7.29, the words "other Speciality centres" are replaced by "any speciality centre"
			Why to be shifted to other centre? Hamidia hospital should have capacity to handle such cases.		
			<ul style="list-style-type: none"> CT/ MRI center cannot be assured of all their previous illnesses and allergies and reaction history unless the same is documented and provided by the hospital 		
			Please delete This Clause Page 4 of 11		

S.No.	Pg.No.	Clause in the Bid Document	Suggestion	Reply No	Replies from Department of Medical Education
20	Pg. No. 13, Clause 7.31	In case any indoor patient admitted in the Hospital needs Radiologist's opinion, the CT/MRI centre's Radiologist will give his consultation free of cost.	If the patient is scanned at the CT/ MRI centre can the consultation be given. He cannot be pulled in for X ray, USG consultations etc.	20.1	Agreed
			The Indoor patients reporting is in all cases being done by the radiologists of GMC. This point contradicts the previous clause. Request the point to be deleted.		
21	Pg. No. 13, Clause 7.32	Service Provider must maintain all medico-legal & other records and should be able to provide them in hard and soft copy to the Hospital Administration & Police on demand.	The size of the images goes in Terabytes per year and it will be very difficult for the service provider to keep the record for 10 years or so.	21.1	Service Provided shall handover all records (in hard disk) on an annual basis to the Hospital
			Medico legal liability and records are Primary Employer's (Hospital's) responsibility. All the records will be given to the hospital and should be maintained by the hospital.		
			<ul style="list-style-type: none"> Hence we suggest year wise handover the collected data till that time and handing over the to the govt. 		
22	Pg. No. 13, Clause 7.33	The service provider shall submit the hard(CT/MRI Film) and soft copies of the report and images to the hospital and to the Hospital referred patients within the stipulated time mentioned below.	Submitting films to the hospital and patient would incur double the cost request if the soft copy can be given to the hospital and the hard copy of the images to the patient.	22.1	Hard Copies shall be given to the Patients and Soft Copy to the Hospital
			Please amend the clause as "The service provider shall submit the hard(CT/MRI Film) and soft copies of the report and images to the hospital and to the Hospital referred patient. Emergency cases should be reported within 2 hrs. All routine scan within 8am to 2pm within same day and after 2Pm should be reported before 1PM of next day.		
			Why two reports are to be submitted. Why do hospital needs to keep one set of films when all soft images are to be given to the hospital?		
			Soft copies of the films should be given to the patient only if asked. Extra Rs. 100 should be charged for each CD.		
			Submitting 2 copies would increase the cost by Rs. 250 -300 per film.which will make the project extremely unviable.		
23	Pg. No. 14, Clause 7.36	The Service Provider in the presence of his authorized person has to permit at the CT/MRI centre, the Under Graduate and Post Graduate medical students of the GMC, Bhopal and allied hospital for training purposes without any condition and cost. For Medical education this centre will be considered as an integral part of the Hospital.	Acceptable but it must be planned and the working hours should be restricted to 2 hours in the first shift and 2 hours in the evening.	23.1	Agreed, 1) Service Provider will Provide Seperate Work Station in the Teaching Room and 2) working hours would be restricted to 2 hours in the first shift and 2 hours in the evening.
			1. A separate workstation should be asked for education purpose which can be set up in a separate teaching room. 2. For research cases, a time slot in non-peak hours should be finalized on mutual consent and prior intimation.		
			<ul style="list-style-type: none"> Kindly note that since this is a commercial operation, the training should not interfere with the patient treatment and scanning. 		

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24	Pg. No. 14, Clause 9.1	Service Provider must integrate his software with the existing HMIS (Hospital Management Information System) of the Hospital.	<p>This is beyond the scope and domain of the service provider.</p> <ul style="list-style-type: none"> Kindly retain the IT development scope with the IT team of the hospital. 	24.1	NO change
25	Pg. No. 14, Clause 10.5	Any medico-legal issues arising in the course of or out of treatment of patients will be the sole responsibility of Service Provider. The Service Provider will keep the Hospital duly indemnified.	Kindly delete this line. As patient treatment is not within the scope of service provider for CT scan and MRI PPP.	25.1	No Change
			<p>This point is repeated many times in the RFP.</p> <p>Hospital should help in case of emergencies as they are equipped to handle these cases.</p>	25.2	refer our Reply No 19.1
26	Pg. No. 20, clause 18.1	The successful bidder is required to install approved brand new CT and MRI machines as per specifications mentioned above within 4 months of signing of the agreement. Any delay beyond stipulated 4 months would attract a penalty of Rs. 50,000 (Fifty Thousand only) per week. The delayed installation penalty would be allowed to accrue to a maximum of 5 lakhs (10 weeks).	<p>This is harsh clause and will be difficult to follow as there are numerous delays in permissions and clearances which results in delay in handover of the site for the project.</p> <p>Increase in the time of installation:</p> <ul style="list-style-type: none"> Please allow at least 3 months for CT scans and 5 months for MRI scans from hand over of the site along with suitable power rating . 	26.1	Agreed, only for increase in time of installation i.e 3 months for CT machine & 5 months for MRI machine from date of Hand over of Site
27	Page 20 point 18.2 A)	Penalty for delays in Service Delivery (both scanning and delivery of Reports) beyond time limits as stipulated in clause 7.24 & 7.33 above, penalties shall be imposed as below The reporting of all Govt referred cases has to be done by Radiology deptt of the Hospital.	Please delete the caluse.	27.1	Pls refer our Reply No 16.1
28	Page 20 Clause 18.2 B	In case, the breakdown is not rectified in 3 days then after that Rs 10000.00 (Rs. Ten Thousand only) per day will be charged, as penalty charges.	<ol style="list-style-type: none"> Rs. 10,000 is too big a penalty for reason beyond Service Provider's control. It would be double loss for service provider as he would be losing on revenue too because of downtime. Authority should ask for a 95% uptime across the year and penalty should be applicable only after downtime beyond 	28.1	No Change
29	Page 20 Clause 18.2 C	The uptime calculations shall be done every 6 months hence this means that the service should not be down for more than 9 days in every six months, otherwise penalty charges shall apply as per clause 8.2 (B)	Downtime is always calculated annually. Some faults beyond Service providers control may stretch for a longer time.	29.1	No Change
30	Page 21 Clause 18.3	Hospital would be in its right to deduct any payment from monthly bills any penalties levied and any dues not paid by the service provider to any third party that had rendered service to the service provider	Any deduction should not be done without prior intimation to the service provider and without asking for an explanation for the cause of deduction.	30.1	No change

S.No.	Pg.No.	Clause in the Bid Document	Suggestion	Reply No	Replies from Department of Medical Education
31	Pg. No. 23, clause 21 a)	Technology Up gradation:	Any technology upgrade involving a hardware upgrade would be impossible to provide as that will double the project capex.	31.1	Technology Upgradation includes Hardware upgradation as well as Software Upgradation
			No hardware upgrade is possible during the tenure. Only software upgrades whenever available shall be done. Please define a technology in advance so that that it is relevant for a period of 10 years. Provide minimum technical specifications for the same to avoid installation of old and low end models which may get obsolete in coming years.		
		a) Review by a Board appointed by Authority upon assessing the need for a technology up gradation. Such reviews should not be made in less than one year.	Software upgrades as and when required should be provided by the Service provider.		
			Kindly restrict the technology upgrade to software upgrades only.		
32	NA	Tests mentioned in CGHS list requiring additional items	All additional items required for doing tests except Contrast should be provided by the Hospital. E.g. Biopsy needle, catheter	32.1	Agreed only for Biopsy Needle and Catheter
33	NA	Revision of Price?	There should be a revision of price linked to revision of CGHS rates (only in case of increase of rates).	33.1	Prices are linked to CGHS rates irrespective of Increase or Decrease
34	NA	No Competitive Facility	Authority should assure that no competitive facility (PPP or Govt.) should come up in the same hospital premises for the tenure of the agreement. In case the PPP set up achieves its maximum capacity, service provider should be given first right of refusal for setting up another machine. It should be assured that any competitive facility under any other scheme or by donation should not be installed during the agreement tenure.	34.1	Agreed
35	NA	Assured Referral	The Hospital should assure that all the CT/MRI cases of the hospital will be referred to the PPP centre only. Directives for the same should be sent to all the departments and doctors.	35.1	Agreed
36	NA	Draft Concession Agreement	Please provide a detailed draft concession agreement which has to be signed by the bidder after winning.	36.1	Please refer to Annexure 8 of RFP

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Technical Queries

1		Technical Specifications for CT & MR	Minimum specifications should be asked to ensure that low end, old platforms are not installed by the service provider. Such machines may become obsolete in coming 3-5 years and may not be relevant for full 10 years of the contract. Also, low end machines may not be able to deliver on high end tests, desired quality and image clarity.		Please refer our Reply No 14.1
2		CT scan Specifications for a state of the art latest machine which would be relevant for full tenure	To ensure mid end/high end machines, minimum Specifications should be as following: 1. Machine should be latest platform launched; CE/USFDA approved 2. 64 rows of detectors and should be able to produce/ generate 128 slices 3. Rotation time should be 0.42 or better 4. Tube should be 7mhu or better 5. Additional Workstation from OEM supplier with following applications: a. Complete coronary analysis including coronary quantification b. Brain perfusion c. Body perfusion d. Lung nodule analysis		
3		MRI specifications for a state of the art latest machine which is relevant for full tenure	To ensure mid end/high end MRI machines, minimum Specifications should be as following: 1. Machine should be latest platform launched; CE/USFDA approved 2. Minimum 16 RF channel or more 3. Gradient should be 33/120 or better 4. Having at least neurovascular coil, body coil, one extremity coil and spine coil		

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MRI Scanner

S.No./ Parameters	Key MRI Specification	Reasons for Key Specifications		
1	1.5T MRI model 1.5 Tesla MRI having 60cm bore size, and 16 Channel System with atleast 3 independent coils having 16 Channel or more, Minimum Gradient should be atleast 33mT/m and above and 120 mT/m/s slew rate	<p>A New Generation of MRI Scanners is released once every 3 years hence we need to have a technology which will last for atleast 10 years</p> <p>All companies today have an entry level MRI in 1.5T Segment & an Institution level MRI. The basic Benchmarking for Institution level MRI is minimum 33mT/m Gradient and 120 mT/m/s slew rate which all 4 companies manufacture today.</p> <p>Maximum Scans in MRI today are done for Head, Spine & Body hence it is recommended that all 3 Coils should be independent 16 Channel or better to improve resolution and have better performance, All 4 manufacturers have these standards in their equipment portfolio.</p>		
2	Field of View Min 45 * 45*45 cms Field of View (in X,Y,Z) directions with best Image quality should be possible .	<p>FOV is critical to ensure better coverage of the patient</p> <p>Bore diameter is 60 cm; 45 + FOV ensures better utilization of the field and imaging of shoulder, Liver, pancreatic, whole body and whole abdomen for X,Y,Z FOV</p> <p>In Z direction FOV gives higher coverage. E.g. for Head, neck and full spine MRI which is very common for trauma, injuries and degeneration, a 45 cm FOV system will do imaging in 2 stations and 16-18 minutes while a 30 cm FOV system would do in 3 stations and 20 minutes.</p>		Please refer our Reply No 14.1
3	<p>Advanced softwares as per govt. need 3D CSI – Chemical shift imaging for onco cases and prostate and breast spectroscopy Package</p> <p>The system should have facility to do head to Toe imaging without shifting the patient</p> <p>Safety System should be CE marked and or FDA approved . FDA and CE certificates to be attached</p>	<p>Oncology screening is a big focus area – Breast, Prostate and whole body imaging is required across Delhi</p> <p>Head to toe imaging saves time and improves image acquisition</p> <p>MRI is a very complex technology and all safety certificates are required.</p>		

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CT Scanner

S.No./ Parameters	Key CT scan (128 Slice) Specification	Reasons for Key Specifications
1	128 Slice CT scan system new 128 slice acquisition with a minimum 64 Rows of Detector and a rotation speed of 0.4Sec or better for Cardiac Scanning	Solid state detectors to acquire min. 128 slice direct acquisition at a time, free from frequent calibration.
		Over the period, newer CT systems are increase designed around purpose to achieve clinical excellence in Trauma management, Coronary imaging, gated scans, lower dose with advancements in Iterative reconstruction Technology offering low dose capability, intelligent motion correction and lower contrast injections and Dual Energy capabilities.
		It results in patient safety for pediatric, senior citizens and chronically ill patients, CT for screening and assist in advanced programs including liver transplant program, Oncology, Planning and guiding, and monitoring therapy.
2	Advanced Imaging reconstruction Advanced image reconstruction techniques provide the breakthrough, enabling high image quality in multi-slice CT exams at significantly less dose than before	ASiR-V is the latest in reconstruction, applying more advanced modeling and optimization technologies in projection- and image-space as part of the iterative reconstruction process dose-lowering software in the industry. It allows healthcare providers to lower dose by up to 82%
		Reconstruction also improves low-contrast detectability and can have equivalent IQ to an acquisition with 1.67 times the mA.
3	Spatial Resolution with Temporal Resolution Spatial resolution quoted in absolute terms is very critical. preferably 0.30mm While maintaining high spatial resolution, it is also essential to have high temporal resolution. Spatial resolution preferably 71 ms or better	Spatial resolution is the key for image quality and resolution – it is like the pixels for the LCD TV. Please note that latest technology works on low power and higher resolution as good as 0.28mm on new system.
		New system offer intelligent motion correction enabling high temporal resolution for freezing coronary motion and provide artefact free imaging as best as 29ms.
		Thus able to manage not only high heart rate but also fluctuating heart rate, and reduce need for beta blockers.
4	Sub Second rotation times for faster acquisition Scan time: Minimum scan time for 360 degree rotation should be less than 0.4 sec. Usable Pitch should be at least 1.5 Detector Width at least 38 mm	Sub second scan times results in better coverage per second – coverage = (Detector width * Helical Pitch/ Rotation time)
		40 mm*1.675/0.35= 191.5mm in one sec
		67 mm in one rotation
5	Console with all advanced applications The CT scan machine to have an inbuilt Dual Monitor console with all applications Image reconstruction matrix of at least 512x512. Image Storage and raw data storage of at least 900 GB.	Console is critical for speed, accuracy for CT scan machine
		Image recon matrix is useless without console
		Resolution provides image quality in conjunction with speed for coverage

Please refer our Rpely No 14.1

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6	Advanced Softwares as per govt. need on the Main Console	<ul style="list-style-type: none"> CT angiography with 3D capability and volume rendering capability. 	Important for doing renal angiography, peripheral angio and others advanced applications		
		<ul style="list-style-type: none"> Virtual endoscopies with vol rendering tech. 	Virtual colonoscopies for gastro cases to avoid intervention		
		<ul style="list-style-type: none"> CT perfusion for head / Neuro and body – 4D 	Perfusion studies norm for body and neuro cases		
		<ul style="list-style-type: none"> Imaging Bone removal software 	Bone removal -to facilitate segmentation of bony structures and calcifications for CT Angiography exams.		
		<ul style="list-style-type: none"> Advanced Vessel analysis 	vascular anatomy and pathology and aid in determining treatment paths from CT Angiographic.		
		<ul style="list-style-type: none"> 4D Dynamic Imaging – such as 32 cm coverage for perfusion studies , kinematic studies, free-breathing imaging for Angio. 	4D dynamic Imaging capabilities allow 500 slice equivalent speed and coverage, enabling newer dimensions to routine radiology imaging but allowing expand to sports injury imaging, free-breathing artefact free imaging, kinematic study and wider coverage and speed for perfusion.		
7	Safety	System should be CE marked/ FDA approved . FDA and CE certificates to be attached AERB Type approval is a must	AERB is Mandatory to be available.		
			Lot of companies sometimes quote systems without AERB which results in project delays.		