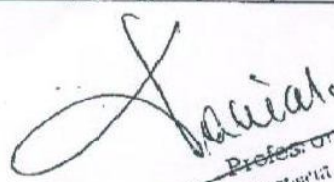


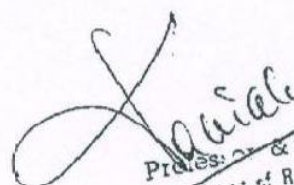
## Section - VII: Technical Specifications

The model offered should be high end model under current production, should be of slip ring technology. The offer should meet the specifications as follows:

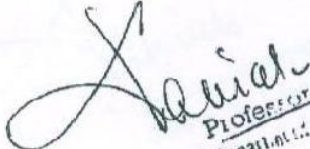
	Specification	Suggested Changes
1. Gantry	a). The CT Scanner should have low voltage slip rings incorporated in the Gantry.	
	b). The minimum scan time for a 360 deg. rotation should be less than or equal to 0.35 sec. (350 milli sec.).	b). The minimum scan time for a 360 deg. rotation should be less than or equal to 0.4 sec. (400 milli sec.).
	c). The gantry should have a minimum tilt of 30 degree on either side & remote tilt should be available as standard.	
	d). The gantry should be provided with user control panels on either side for easy positioning.	
	e). The sub millimeter slice @ 0.63 mm or less should be available. The system should be in position to perform 128 slices/rotation.	e). The sub millimeter slice @ 0.63 mm or less should be available. The system should have suitable technology to generate 128 Slice /rotation.
	f). The Gantry should have 3D positioning laser lights.	
	g). The Scan Field Of View (FOV) in acquisition mode should be at least from 200mm to 500mm with intermediate steps for scanning different anatomies.	
	h). Aperture should be at least 70cm diameter.	
2. X-Ray Section	a). The X-Ray Generator should be compact & in-built in the Gantry.	
	b). The system X-Ray power should be 70KW & above.	
	c). The mA range available should be between 10 to 600 mA or more with increments in steps of not more than 10 mA.	c). The mA range available should be between 20 to 600 mA or more with increments in steps of not more than 10 mA.
	d). The X-Ray Tube should be essentially Dual Focus with capacity of at least 7 MHU. Any special feature of the X Ray tube to be highlighted with literature.	
	e). Specify the focal spots of the X-Ray tube.	
	f). The X-Ray Tube should have a cooling rate of not less than 1000KHU per minute.	
	g). The X-Ray tube cooler unit should be in-built in the Gantry.	
3. Detectors	a). The Detector offered should have facility to acquire 128 slices or more simultaneously with dual energy capability.	a). The Detector offered should have facility to acquire 128 slices or more.

  
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	b). The detector should be solid state type. Specify the material.	
	c). Specify the Fan Angle of the X-rays and the geometry.	
	d). The detectors should not require frequent calibration	
<b>4. Patient Couch</b>	a). The patient table offered should have a minimum load bearing capacity of at least 200 kg.	
	b). Table top: please specify dimensions.	
	c). The range of metal free scan should be 150 cm or more.	
	d). The vertical range should be at least 55 cm (max. height minus min. height)	
	e). Specify the reproducing accuracy of the table.	
	f). Remote UP/DOWN, FORWARD/BACKWARD on the patient couch should be standard.	
<b>5. Spiral/Helical Section</b>	a). The system offered should have spiral capability of at least 100 sec. & above. Real Time Spiral @ 10 f/s should be standard.	a). The system offered should have spiral capability of at least 100 sec. & above. Real Time Spiral @ 8 f/s should be standard.
	b). The range of spiral facility in Axial Direction should be more than 100 cm.	
	c). The Reconstruction Time in Spiral Scan should not be more than 100 milli seconds.	
	d). The system should have the facility to track Contrast medium to trigger scan using Multiple ROI and should be included in the scope of supply. Real time monitor of the Contrast Trigger Mechanism should be available.	
	e). System should perform Tilt Spiral Scan as standard at any of the chosen angles in Multi Slice Mode.	To be deleted.
	f). High Resolution scan package of 0.63 mm or less should be offered as standard.	
	g). Multi Slice CT Fluoroscopy with at least 3 Slice positions & Reconstruction @ 10 images/sec. should be available.	g). Multi Slice CT Fluoroscopy with at least 3 Slice positions & Reconstruction @ 8 images/sec. should be available. Large LCD monitor of 24 inch or more must also be there in Gantry room.
<b>6. Computer Section</b>	a). The computer offered should be the latest multitasking processors & a menu driven platform with a RAM size of at least 4GB. 57	
	b). The Monitor should be the latest color of at least 18 inches & flat screen. There should be two monitor independent console.	

  
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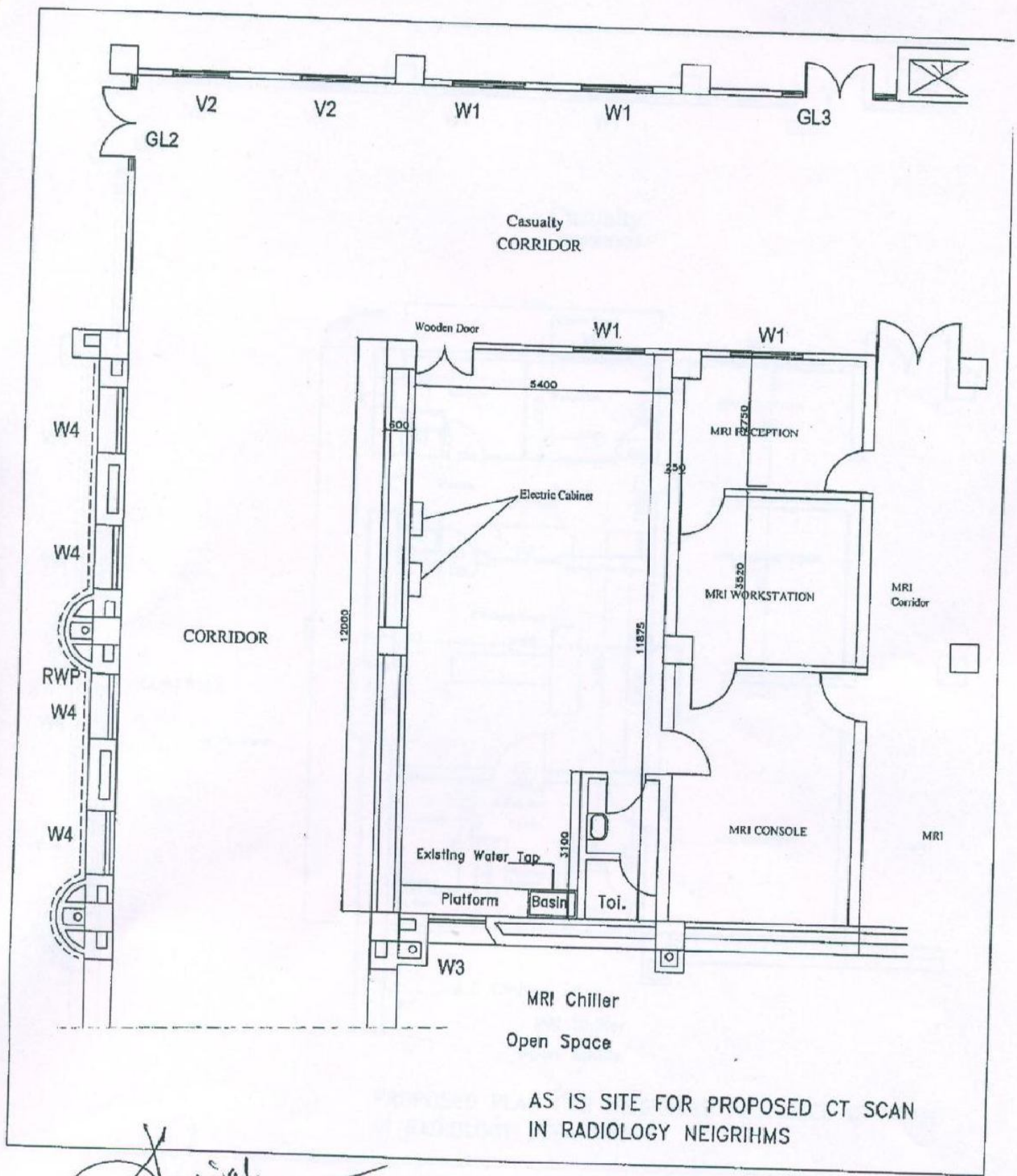
	c). The display matrix should be at least 1024/1024.	
	d). The reconstruction time for an axial scan should not be more than 100 milli seconds.	
	e). The hard disk capacity for both image & raw data should be more than 500 GB.	
	f). It should have facility to store at least 500,000 images.	
	g). The system should be supported with archiving facility of DVD & CD Main Console.	
	h). DICOM facility to send, store, print, receive, Query/Retrieve, MWM, MPPS etc. should be standard.	
	i). PC Based connectivity should be standard for easy transfer of Images & Report.	
<b>7. Image Processing Section</b>	a). The system should have standard software like 3D Volume rendering, MIP, CT Angio, Color Angio Display, Virtual Endoscopy, Colonoscopy, CT Neuro Perfusion, Dental Scan, Prospective ECG Gated Scan, Colon view should be available as standard on the system.	
	b). The following software should be offered as standard (MPR, ROI, Volume Calculation, CT Number Display, Window Width, Window Level, Topogram Display, Cine Display, HRCT 58 Lung, Dynamic Scan)	
	c). Cardiac Scan Attachment with ECG Gated Segmented Recon, Calcium Score, Plaque Analysis, Cardiac Function Analysis, Vessel Flythrough of the Coronaries should be included in the scope of supply in the Workstation and in the Main Console.	Additional standard Softwares: Lung Nodule Calculation. Colonography. Image Fusion of different modalities. Advanced Vessel Analysis.
	d). Automatic display of MPR Images after scan will be preferred.	
	e). There should be state-of-art workstations with at least 6GB RAM, CD/DVD Archival/DICOM Viewer. Two workstations included in the scope of supply and it should support all the software as listed on the main console.	
<b>8. Resolution</b>	a). The System Spatial Resolution should be mentioned with parameters.	
	b). The low contrast resolution should not be more than 3mm at 0.5%. Shoulder, Pelvis Streak Artefact Suppression Software should be standard.	
	c). Noise suppression protocols to maintain LCR at low dose should be standard.	
	d). Special software (like MA Modulation in routine & cardiac mode) to ensure dose efficiency should be standard.	

  
**Anil**  
 Professor & HOD  
 Department of Radiology  
 NEIGRI, Sec-12, Gurgaon - 124001

	e). Specify the CT Dose Index.	
9. Accessories	a). Multi size Dry Laser Imager of any reputed make with 600 dpi or more.	
	b). Color Laser Printer preferably of HP or equivalent.	b). Color Laser Printer
	c). Lead Glass of at least 3ft by 5ft.	c). Lead Glass of 3ft by 5ft. or more.
	d). Stabilizer for the entire system of suitable capacity.	To be deleted.
	e). UPS with one hour back-up of suitable capacity to handle the complete CT Scanner system.	e). UPS with half an hour back-up of suitable capacity to handle the complete CT Scanner system
	f). Laser colour printer.	
	g). Dual Head Pressure Injector of reputed make with 100 no. syringes & tubings.	Add: Suitable ECG Monitor.
10. Warranty	Comprehensive Five years for CT Scanner System including X-Ray Tube & all accessories.	
11. CMC (Comprehensive Maintenance Contract)	The Year-wise CMC inclusive of the X-Ray Tube should be quoted from 6 <sup>th</sup> to 10 <sup>th</sup> year inclusive of labour, spares & X-Ray Tube. The CMC should cover all vendor items & accessories. CMC charges will be taken into account for evaluation of the bids for ranking purpose and to arrive at the lowest bid.	
12. Datasheet	All compliance to the tender should be in the form of original data sheet or original certificate from the manufacturer.	
13. Training	For a period of six weeks to Radiologists on site.	
14. Turnkey	<ul style="list-style-type: none"> <li>-Air-conditioner of 10 ton split AC for whole area including workstation area.</li> <li>-False ceiling of Gypsum board</li> <li>-Flooring of Vitriified antistatic floor tiles</li> <li>-Wall tiles up to false ceiling</li> <li>-Crash Medicine Cart Trolley (1no.)</li> <li>-Patient Trolley (1no.)</li> <li>-Wheel Chair (1no.)</li> <li>-Doctor's Chair (1no.)</li> <li>-View Boxes: High Luminal Intensity (LCD) double panel(4x2) -(2nos.)</li> <li>-Steel cupboard branded)- 2no.</li> </ul>	<p>Air-conditioner of 10 ton split or ductable AC for whole area including workstation area.</p> <p>To Add: Turn Key works to be executed as per drawing provided (As Is &amp; Proposed Plan) by user Department. Thickness of Lead in Lead lined door – 2 mm..</p>

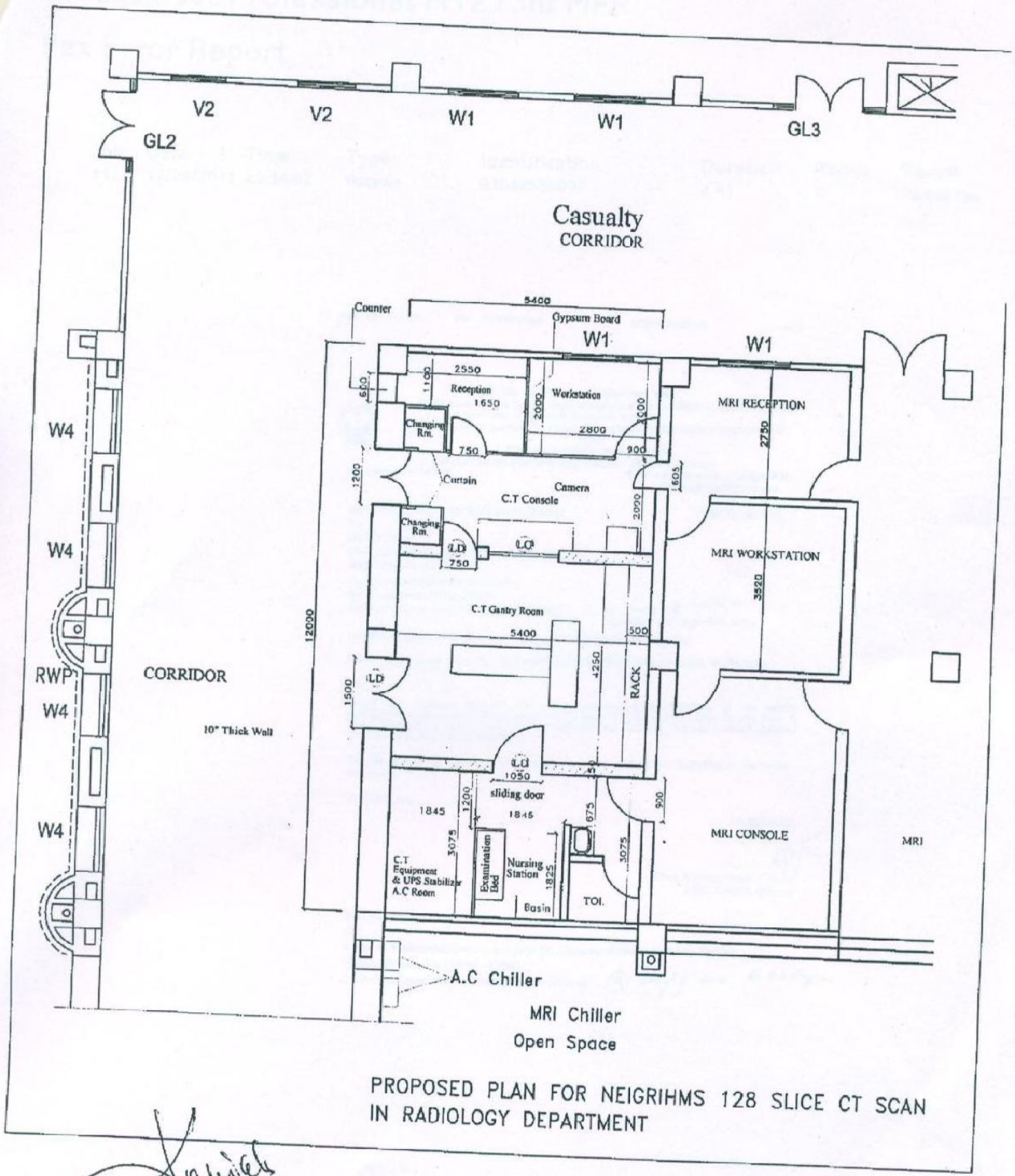
*Saniah*

Director & HOD  
Department of Radiology  
NEIGRI  
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AS IS SITE FOR PROPOSED CT SCAN  
IN RADIOLOGY NEIGRIHMS

*Adwal.*



PROPOSED PLAN FOR NEIGRIHMS 128 SLICE CT SCAN IN RADIOLOGY DEPARTMENT

*Kavitha*