

**PRE-SELECTION
DOCUMENT**

FOR

THE INSTALLATION OF MRI SUIT

IN

AYUB TEACHING HOSPITAL

ON

PUBLIC PRIVATE PARTNERSHIP

I. INTRODUCTION

This Public Private Partnership is an agreement between Ayub Teaching Hospital (contracting authority) and a private party, to be selected through open competition, as per Government of Khyber Pakhtunkhwa rules and regulations, for the provision of round the clock Magnetic Resonance Imaging services at the premises of the Ayub Teaching Hospital (ATH).

This arrangement is intended to establish a cooperative and productive working relationship between the *contracting authority and concessionaire*.

II. EVALUATION OF FIRMS

The potential firms shall be evaluated for the following three elements, as per Chapter IV of The Khyber Pakhtunkhwa Public Private Partnership Act, 2014:

1. Ability to manage finances
2. Professional and technical qualification
3. Managerial and organizational capacity

Details of the evaluation criteria of pre-selection is given at annex I.

III. TERMS AND CONDITIONS

1. **MRI Machine:** The private partner shall install 1.5 Tesla refurbished MRI System with all accessories and facilities necessary (as per details given at annex II) for optimum functioning
2. **Time Period:** All the phases of the project shall be completed in 120 days (construction of building facility in 3 months and installation of the functional machine in next 3 months) from the date of signing of the agreement/Memorandum of Understanding.
3. **Steering Committee:** The construction, installation and operation will be supervised by the Steering Committee, comprising members of both the partners under the chairmanship of the Hospital Director.
4. **Working Hours and uptime:** The investigations given at annex III shall be provided round the clock with an uptime of 95% per annum.
5. **Agreement Period:** This agreement shall be for a period of five years, extendable for another two years on mutual agreement of the partners.

6. **Land & Building:** The Hospital shall provide land for construction of building. The contractor shall construct a facility sufficient to serve the purpose with the following facilities:

- Console & Control Room
- Reporting Room
- Waiting Area
- Reception
- Two Washrooms
- Manager Office
- Fire Extinguishing Equipment
- Cooling/Heating System
- Wi-Fi
- Drinking Water
- Generator back-up
- Store

Since MRI is highly specialized equipment with peculiar and specific needs in terms of above mentioned aspects as well as topographical requirements, it is therefore, the responsibility of concessionaire to inspect and ensure the suitability of the site/space as provided by contracting authority.

The building constructed by the concessionaire shall remain the property of contracting authority, after expiry of agreement/MOU period.

7. **Delay:** For delayed installation beyond the aforesaid period, a penalty of PKR 20,000 per week shall be levied. If the facility is not made available to contracting authority within 30 days after the expiry of the scheduled time period of installation, the order shall stand automatically cancelled and security deposit shall stand forfeited.
8. **Ownership:** At the end of the agreement period, the building shall be the property of the hospital. The MRI machine shall be the property of the private partner.
9. **Out-door Patients:** The firm shall charge fee for various MRI investigation for out-door patients. The private partner is not required to quote fee at this stage.
10. **In-door Patients:** MRI facility shall be provided to the in-door patients free of cost (soft copy through the Hospital Information System). However, if a patient demands for MRI film then the private party shall charge the patient. The private partner is not required to quote fee at this stage.
11. **Human Resource:** Provision of human resource, including both technical & non-technical shall be the responsibility of the Private Partner. Radiologist for reporting of indoor shall be provided by Ayub Teaching Hospital.
12. **Maintenance:** Maintenance of the machine shall be the responsibility of the private partner to ensure round the clock service to the patients.

13. **Utility Bills:** All expenses on account of electricity, water etc. shall be borne by concessionaire.
14. **Helium Charges:** Re-filling of the Liquid Helium shall be the responsibility of the private partner.
15. **Consumables:** Provision of the all type consumables/disposables shall be the responsibility of the private partner.
16. **Reporting For In-Door Patients:** Reporting for in-door patients shall be done by the Radiologist of ATH free of cost.
17. **Reporting For Out-Door Patients:** The private partner can have the services of ATH Radiologist for reporting of out-door patients through mutually agreed fee. Alternatively, the private partner can have its own radiologist for the purpose.
18. **Mass Emergency/Catastrophe/Disaster:** This investigations shall be done free of cost in such situations. The emergency shall be decided by the hospital authority.
19. **Discipline:** The staff will have to obey hospital discipline in terms of timing, uniforms and other requirements.
20. **Environment and staff safety:** The facility shall remain safe for patients and staff. It shall be registered with the national agency for radiation safety.
21. **Reporting design:** Report shall be computerized, delivered in a proper file highlighting hospital and department. An envelope shall be used for the film.
22. **Teaching:** The private partner shall permit the under graduate and post graduate medical students of Ayub Medical Teaching Institution for training purposes. This unit shall be considered an integral part of the hospital for medical education.
23. **Damage to Machine:** Contracting authority will not be responsible for any loss/damage to machine or property due to natural calamity or otherwise.
24. **Cleanliness & House-Keeping:** The cleanliness of the equipment and MRI building and house-keeping of the facility shall be the responsibility of concessionaire.
25. **Back-Up Power:** Concessionaire will have to procure a suitable stand-by source of power (Generator Set and UPS), capable of catering the power requirement of MRI machine with all accessories and facility, so that services remain available un-interrupted round the clock.

26. **Repeat Scan:** The poor quality *MRI* scans shall be repeated at no extra cost. Decision for repeat scan shall only be made by the consultant (Radiologist) on duty.
27. **Online System:** The concessionaire will be responsible to connect the machine with the Hospital Management Information System (HIMS) and Picture Communication and Archiving System (PACS) in collaboration with the IT department of ATH.
28. **Patient Turn Over:** The contracting authority is in not a position to offer a commitment or surety as far as the case load/distribution is concerned on day to day basis.
29. **Medico-Legal Cases:** ATH receives patients with medico-legal registration as well, hence privacy and protection of data is of prime importance.
30. **Data Rights:** All data generated in the proposed center shall be the 'Intellectual property' of contracting authority only.
31. **Privacy of Patients:** Privacy and other ethical values of patients under investigation shall be maintained in individual cases by concessionaire.
32. **Government Rules:** The private partner shall abide by all the guidelines issued by the Federal or Provincial Government of Pakistan and contracting authority from time to time during the contract period.
33. **Concessionaire status:** Status of the private partner, as a whole or in part, is non-transferable and, the concessionaire shall not sell or transfer by any mode whatsoever any proprietary right or entrust any other party to run the MRI / facility.
34. **Dispute Resolution:** In the event of dispute or difference whatsoever arising between the parties to the agreement, an arbitrator shall be appointed as per Government of Khyber Pakhtunkhwa rules. The provisions of the Arbitration and Conciliation Act shall be applicable and the award made thereunder shall be final and binding upon the parties, subject to legal remedies available under the Law.
35. **Documents Submission:** Documents complete in all respect along with the Pre-Selection Form (annex IV) shall be submitted to the Hospital Director, Ayub Teaching Hospital on or before the closing date as mentioned in the advertisement.

ANNEXURE I

EVALUATION CRITERIA FOR PRE-SELECTION

70 percent score is mandatory according to the following elements of the evaluation criteria:

No.	ELEMENT	Points
1.	Ability to Manage Finances	40
2.	Professional & Technical Qualification	30
3.	Managerial and Organizational Capability	30
Total		100

Details of the elements of the evaluation criteria are given below:

1. Adequate professional and technical qualifications, human resources, equipment and other physical facilities as necessary to carry out all the phases of the Project as per details and specification given in Annex VI, including design, construction, operation and maintenance;
2. sufficient ability to manage the financial aspects of the Project and capability to sustain its financing requirements, supported by official bank documents; and
3. appropriate managerial and organizational capability, reliability and experience, including previous experience in operating similar projects, i.e. 1.5 Tesla refurbished MRI system and preferably similar projects through Public-Private Partnership.

Firms are required to provide sufficient details with supporting documents to prove their suitability according to the evaluation criteria elements

ANNEXURE II

**Technical specifications of
1.5 Tesla MRI System**

No.	ITEM SPECIFICATIONS
1	MAGNET
1.1	Type: Super Conductor Zero Boil Off
1.2	Field Strength: 1.5 Tesla
1.3	Shielding Method: Active/ passive
1.4	Shimming Method: Active
1.5	Bore Opening: 60cm or more
1.6	Magnet Length: 160cm or less with covers.
1.7	Magnet Field Stability: 0.1 Ppm/Hr
1.8	FOV: 50 cm minimum. Larger will be preferred. Less than 50cm not acceptable.
1.9	Cryogen Boil-Off Rate: Zero boil off.
1.10	Other features: operating panel on both sides of the gantry is essential requirement with patient positioning display, laser light localization, lighting, In Bore ventilation system.
1.11	Guaranteed Magnet Homogeneity at 50cm field of view: 2 ppm or less using 24 plane method with 24 points per plane using VRMS method.
2	RF SYSTEM
2.1	Transmitter type: Digital
2.2	Transmitter Power: 10KW or more
2.3	System should be capable of 16 channel coil connectivity using optic fiber transmission or latest technology.
3	EXAMINATION COILS All following coils must be compatible with the system
3.1	Whole Body: Gantry integrated whole body imaging coil.
3.2	Head: 11 elements or more, Array Head Coil for Head Imaging.
3.3	Spine: 12 elements or more, Array Spine Coil. Must be integrated in patient table and slideable to ensure patients head is out of magnet when doing feet first imaging.

3.4	Torso: 16 elements or more, Array Torso Coil/Coil Combination. 45 cm or more coverage
3.5	Peripheral Vascular Imaging: Lower Limb Coil or Coil Combination.
3.6	16 elements flex coil for imaging of small parts, wrist, ankle, knee joints and shoulder.
3.7	Coil for bilateral Breast imaging.
3.8	System must be capable of feet first imaging for all body organs to eliminate claustrophobia.
3.9	Combination of Coils: System must be capable of connecting 3 coils simultaneously; head, neck and spine as well as torso, spine and flexible coils must be connected at the same time.
4	GRADIENT SUBSYSTEM
4.1	Gradient Strength: 33mT/m or more.
4.2	Duty Cycle: 100%.
4.3	Slew Rate: 125 mT/m/mSec or More.
5	ACQUISITION PARAMETERS
5.1	2D Minimum Slice Thickness: 0.5mm or less.
5.2	3D: 0.1mm or less.
5.3	Acquisition Matrix: 64 to 1024 Parallel Imaging for Speeding Up Acquisition.
6	PATIENT COUCH
6.1	Type: Fully motorized/hydraulic table.
6.2	Weight Bearing Capacity: Min 200kg or more.
6.3	Min. Height: 0.7 meter or less.
6.4	The couch should be capable to support peripheral angiography.
7	OPERATING CONSOLE
7.1	Standard Console: Standard Console with keyboard and mouse.
7.2	Display Monitor: High Resolution 23" or more TFT/LCD.
7.3	Hard Disk Capacity: Minimum Storage capacity of 400,000 uncompressed images at 256 x 256 matrix.
7.4	DVD/CD/R/W: DVD (PC format compatible) / CD Read / Writeable DVD.
7.5	Connectivity / Networking: DICOM 3.0 Query / Retrieve, Import /Export, Storage & DICOM Print and work list.
8	RECONSTRUCTION ENGINE

8.1	Image Reconstruction CPU: Intel Xeon Quad Core / AMD Opetaron, with clock speed of 2.66GHz or more.
8.2	Reconstruction Speed: minimum 10,000 images per second (256 x 256 matrix) at full FOV in 2D.
8.3	RAM: 12GB RAM or more.
8.4	Hard Disks: 300GB or more.
9	PATIENT COMFORTS
9.1	Lighting: In-bore lighting and ventilation.
9.2	Intercom: Integrated Two way communications between patient and operator.
9.3	Patient Observation: CCTV Camera to observe patient during examination.
9.4	Safety/Emergency run down, safety switches for emergency ramp down. And patient call system for patient to signal emergency.
9.5	Hardware and software for noise reduction in all sequences for patient comfort.
9.6	System should have power down mode to conserve electricity, and gradients. Should be capable to be shut off at night to conserve electricity.
9.7	Built in patient monitoring on gantry LCD Monitor.
9.8	System should have power down mode to conserve electricity and gradients and should be capable to be shut off at night to conserve electricity.
10	<p>Imaging Sequences / Techniques All standard packages including: Spin Echo, Fast Spin Echo, Gradient Echo, Inversion Recovery Fast Inversion Recovery, FLAIR, STIR/TURBO, STIR, and EPI Time Of Flight 2D & 3D and phase contract and quantitative flow, Contrast Bolus Tracking, 2D and 3D MRCP, MR Myelography, MRA AND MRV Fat Suppression Echo Planer Imaging (Single & Multi Shot) Contrast enhanced MRA Dynamic Liver Imaging, Brain Volume Imaging Bilateral Breast Imaging Diffusion Imaging With ADC Maps Functional Imaging Cardiac Imaging Enhancement for peripheral vascular rum-offs Interactive Vascular Imaging for quick post processing & removing backgrounds MPR-Multi Planar Reconstructions High resolution 3D studies for joins and inner ear examination. Parallel-Imaging Acceleration techniques for reducing scan time and increasing resolution. Wireless Cardiac Gating System Wireless Peripheral Pulse and Respiratory Gating System Advanced Cardiac, Neuro, Breast, Ortho, Oncology, Body and Pediatric packages. Magnetization Transfer Diffusion Tensor Imaging Spectroscopy</p>

	<p>Fast Protocols for Uncooperative patients Motion correction in all direction. Non contrast imaging for cerebral shunt studies, kidneys, peripheral vessels, dynamic angiography without contrast and other body organs. At least 5 non-contrast imaging techniques should be provided.</p> <p>Energy-saving design to reduce power requirements: Total power requirement should be 25 kVA or less of MRI including water chiller to reduce the running cost The system should have Eco / Standby / Sleep mode to automatically turns off a part of the system while it is not been used and the power consumption should reduce to 5 kVA or less in this mode. The system should be able to recover from Eco mode within 1 second to be ready for scanning.</p>
11	ACCESSORIES
11.1	All Standard Quality Control Phantoms as per requirement of complete MRI System
11.2	Film Printer DICOM Compatible Laser Imager for film sizes 14'' x 17'' and 8'' x 10''. (Kodak, Agfa, Fuji, Konica).
11.3	RF room, chiller, compatible UPS, and compatible diesel generator for complete MRI
11.4	MRI Compatible Wheel Chairs, Trolley & IV Pole
11.5	MRI Compatible Automatic Injector is of any of these two companies (Medrad-Bayer/Medron).
11.6	Hand Held Metal Detector
12	INSTALLATION
12.1	Complete installation of MRI system will be responsibility of the supplying firm.
12.2	Installation of RF Room, Chiller, Compatible UPS, Distribution Board, Diesel Generator, Air Conditioning of MRI Suite and electrical wiring will be responsibility of the supplying firm.
13	CONTRY OF MANUFACTURE AND ORIGIN:
13.1	CONTRY OF MANUFACTURE AND ORIGIN OF MRI SYSTEM INCLUDING MAGNET AND COILS SHOULD BE USA / EUROPE / JAPAN
14	SEFETY & QUALITY STANDARDS:
14.1	FDA 510K Approval and CE Marked, equipment should be USA, Europe or Japanese manufactured with corresponding CE and FDA approvals showing manufacturing site.

ANNEXURE III

No.	Name of MR Investigation
1.	<p>ORDERED PRIMARY REGION</p> <ul style="list-style-type: none">i. Head (Brain)ii. Spine<ul style="list-style-type: none">a) Cervicalb) Dorsalc) Lumbo Sacraliii. Thoraxiv. Abdomenv. Pelvisvi. Joint (Single)vii. Limb (Soft Tissue) Single
2.	<p>SPECIAL INVESTIGATION</p> <ul style="list-style-type: none">i. MRCPii. MRAiii. MRSiv. MRUv. MR Perfusionvi. DTIvii. Tractographyviii. CSF flow study
3.	<p>PROCEDURE BASED INVESTIGATION</p> <ul style="list-style-type: none">i. MR Arthrography

	ii. CE-MRA iii. MR Enteroclysis
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ANNEXURE IV

Form No.

AYUB TEACHING HOSPITAL ABBOTTABAD

OFFICE OF THE HOSPITAL DIRECTOR

Reference No. /...../...../

Dated:

PRE-SELECTION FORM

for MRI system

1- Name and full address of firm

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2- Address to: The Hospital Director, Ayub Teaching Hospital Abbottabad

3- Reference: Notice No. / dated

4- Pre-Selection Document fee Rs. _____ deposited vide demand draft no.
 dated of (Name and
 address of Banker)

5- We (Name of Firm) agree to abide by all the terms & conditions as
 mentioned in Pre-Selection Document No. dated

6- Documents are complete in all respect and have been duly signed.

Signature of authorized official with stamp