**Request for Proposal**

**For**

**Establishing a Oncology Suite**

**On**

**Outsource Basis**

**For**

**Diagnosis and Treatment of Cancer Patients**

**In**

**Medical College Associated Hospitals**

**Under**

**Directorate of Medical Education**

**Government of Madhya Pradesh**

**Government of Madhya Pradesh**

**Director Medical Education**

**Satpura Bhawan, Bhopal – 462004, Madhya Pradesh**

1. The Government of Madhya Pradesh has adopted a Public Private Partnership (PPP) policy for the healthcare sector. The Department of Medical Education, Govt. of M.P. has envisaged the policy decision of outsourcing the health care service for treatment and diagnosis of Cancer Patients. In view of above outsourcing of facility for Oncology Suite is to be established in the Government Medical Colleges Associated Hospitals for providing cancer care services. The State Government will be outsourcing the facility for Oncology Suite for cancer patients by establishing various equipment like High Energy Medical Linear Accelerator, CT scanner 64 slice with Upgrades for Radiotherapy Simulator and MRI 1.5 Tesla Machine.
2. The Director, Medical Education, Madhya Pradesh for and on behalf of Department of Medical Education, Govt. of Madhya Pradesh invites National Bidding, for Establishing a Oncology Suite on Outsource Basis for Diagnosis and Treatment of Cancer Patients in the Medical Colleges Associated Hospitals. Under the Phase I of providing healthcare to cancer patients in Madhya Pradesh the Oncology Suite is to be established on outsourced basis in Gandhi Medical College situated in Bhopal for treatment and diagnosis of Cancer Patients.
3. Sealed open tenders are invited through National Competitive open bidding from the eligible bidders as per tender conditions for establishment of Oncology Suite on outsource basis for Diagnosis and Treatment of Cancer Patients in the Medical Colleges Associated Hospitals. Under the Phase I of providing healthcare to cancer patients in Madhya Pradesh the Oncology Suite is to be established in Gandhi Medical College situated in Bhopal for treatment and diagnosis of Cancer Patients.
4. Details of Tender are as follows :-

| Sr | Description | Equipment Required to be Installed | Earnest Money Deposit (Rs) |
|---|---|---|---|
| 1 | Request for Proposal to establish & operate Oncology Suite on outsource basis for Diagnosis and Treatment of Cancer Patients in the Medical Colleges Associated Hospitals. Under the Phase I the Oncology Suite is to be established on outsource basis in Gandhi Medical College Bhopal for treatment and diagnosis of Cancer Patients. | 1. High Energy Medical Linear Accelerator.<br>2. CT scanner 64 slice with Upgrades for Radiotherapy Simulator.<br>3. MRI – 1.5 Tesla | Rs. 10 Lakh<br>(Rupees Ten Lakh Only) |

5. The Schedule of tendering activities for request for proposal to establish & operate Oncology Suite for Diagnosis and Treatment of Cancer Patients in the Medical Colleges Associated Hospitals on outsource basis. Under the Phase I the Oncology Suite is to be established in Gandhi Medical College Bhopal on outsource basis for treatment and diagnosis of Cancer Patients under the Directorate of Medical Education, Madhya Pradesh are as under:

| Sr. No. | Activity | Date and Time |
|---|---|---|
| 1 | Start of Purchase of Tender Document | 13/04/2016 at 11:00 Hrs |
| 2 | End of Purchase of Tender Document | 12/05/2016 at 17:00 Hrs |
| 3 | Date and time of pre-bid meeting at Directorate of Medical Education, Satpura Bhawan, 6th Floor Bhopal (MP) | 25/04/2016 at 15:00 Hrs |
| 4 | End of Bid Submission –<br>Physical bid submission only at Directorate of Medical Education, Satpura Bhawan,6th Floor, Bhopal (MP) | 13/05/2016 at 17:30 Hrs |
| 5 | Opening of Tender (Outer Envelope-D).<br>The Physical bid opening<br>Opening of EMD & Commercial Proposal – Envelope (A) | 13/05/2016 at 18:00 Hrs |
| 6 | Opening of Technical Bid – Envelope (B) | 16/05/2016 |
| 7 | Opening of Financial Bid (Envelope-C) | The Financial bid would be opened physically in presence of those Bidders whose bids are Techno-Commercially qualified. The dates of financial bid opening would be informed later to technically qualified bidders declared on website:- http://www.medicaleducation.mp.gov.in/ |

6. A set of tender documents can be purchased from the Office of Director Medical Education, Satpura Bhawan, 6th Floor, Bhopal (MP) on any working day from 13/04/2016 at 11:00 Hrs to 12/05/2016 at 17:00 Hrs for Rs 25,000 (Rupees Twenty Five Thousand Only) as tender document cost which will be non-refundable and should be paid the form of a demand draft from any Nationalized/Scheduled bank drawn in favour of the "Director Medical Education, Bhopal, Madhya Pradesh" payable at Bhopal.

7. The tender document can be downloaded online from the website of the Director Medical Education **http://www.medicaleducation.mp.gov.in** and can be submitted on or before the last date of submission of the bid with enclosing a demand Draft of Rs. 25,000/- (Rupees Twenty Five Thousand Only) as tender document cost from any Nationalized/ Scheduled bank drawn in favour of the "Director Medical Education, Bhopal Madhya Pradesh" payable in Bhopal towards the tender form fees

8. A Pre-Bid meeting shall be held in the office of Director Medical Education to clarify any queries of the tenderers on 25/04/2016 at 15:00 Hrs

9. Earnest money of INR Rs.10 Lakh ( Rs. Ten lakhs only) in the form of Demand draft / Bank Guarantee drawn on a Nationalized Bank in the name of "Director Medical Education, Bhopal Madhya Pradesh"

10. The State Government reserves the right to accept or reject any bid without assigning any reason thereof.

**Director Medical Education, MP**

**Request for Proposal**
**For**
**Establishing a Oncology Suite**

**On Outsource Basis**

**For**

**Diagnosis and Treatment of Cancer Patients**

**In**

**Medical College Associated Hospitals**

**Under the**

**Directorate of Medical Education M.P.**

1. **Background**

The Government of Madhya Pradesh has adopted a Public Private Partnership (PPP) policy for the health sector. The overriding objective of the policy is to utilize the technical, financial and managerial resources available in the private sector for strengthening the quality of services being provided through the public health care network. Outsourcing para-clinical and non-clinical support services at the public health facilities is one of the priority areas under the policy. This tender is being released to invite bids for the Establishing a Oncology Suite on outsource basis for diagnosis and treatment of Cancer Patients in Medical College Associated Hospitals. Under the Phase I the Oncology Suite is to established on outsource basis for treatment and diagnosis of Cancer Patients in Gandhi Medical College, later the same can be extended to the other Medical Colleges also.

2. **Scope of Work**

3. The Successful bidder is required to set up an Oncology Suite (the "Suite") for providing healthcare services to cancer patients on outsource basis by establishing various equipment like High Energy Medical Linear Accelerator, CT scanner 64 slice with Upgrades for Radiotherapy Simulator and MRI 1.5 Tesla Machine for treatment and diagnosis of Cancer Patients
4. The minimum facilities to be provided for the set up an Oncology Suite are listed in **Annexure I.**
5. The Standard specifications of major equipment to be installed in the Oncology Suite on outsource basis is listed in **Annexure II**.
6. All construction, renovation and furnishing works at the site required for the set up an Oncology Suite on outsource basis shall be part of the scope of work on a turnkey basis.
7. The bidder (a single legal entity or a consortium thereof) selected through this tender shall be required to execute the Project. The successful bidder may operate the Suite either directly i.e. through staff directly contracted by it, or indirectly by engaging concessionaires. However, as far as the State Govt. is concerned, the liability for complying with contractual obligations with regard to the services shall rest with the successful bidder.

8. **Pricing of Services:** Each bidder shall quote the percentage discount offered on the base rates of investigations and therapy as given in Annexure VIII, Annexure IX & Annexure X in the financial bid. The resultant rates will be rounded off to the nearest multiple of INR 5.

9. The schedule of rates fixed in accordance with the above procedure shall be allowed to be revised annually based on the Executive Council of the Autonomous Society of Medical Colleges.

10. The successful bidder can present a case to change the increase. Any acceptance of these rates will be at the discretion of the hospital committee.

11. The State Government shall notify the successful bidder of the revised rates within 15 working days from the date of submission of the revised schedule of rates by the successful bidder. The new rates will be applicable from the date of notification of the revised schedule of rates by the successful bidder.

12. **Rent for Space Allotted:** The Dean of the Medical College Associated Hospital will provide space in the associated hospital campus to the successful bidder. Under the Phase I Dean of Gandhi Medical College Bhopal will provide space in the associated hospital campus to the successful bidder for Establishment of Oncology Suite on Outsource Basis.

13. The successful bidder will offer rent in the financial proposal over & above the minimum base rent of Rs. 3,00,000/- (Rupees Three Lakh Only) per month (base rent for the first year) for the space provided for the installation of the machines.

    The rent will be escalated annually as follows -

    First Year - Rs. 3, 00,000/ Month (Base Rent)

    Second Year - 10 % increase on Base rent

    Third Year - 20 % increase on Base rent

    Fourth Year - 30 % increase on Base rent

    Fifth Year - 40 % increase on Base rent

14. If the Agreement for the participation is extended beyond 5 years tenure on the of performance for the next tenure of 5 years, then the rent rates applicable will be revised by the Executive Council of the Medical College Autonomous Society. Under Phase I the rent rates applicable will be revised by the Executive Council of the Gandhi Medical College Autonomous Society, Bhopal.

15. The successful bidder will have their separate electricity connection and meter as per the MPEB norms and applicable charges and will have to pay the electricity bill for the operations of the machines.

16. **Independent Data Centre** : Regardless of the choice made by the successful bidder with regard to the mode of operating the Suite i.e. directly managed or managed through concessionaires, the Suite will have to be established as a separate 'Data centre' and will have to maintain data on key details of its operations especially the in-and-out patient data records.

17. **Commitments by the State Government:** The State Government will provide space on rental basis for the establishment of the Oncology Suite on outsource basis within the premise of the medical college associated hospitals as per the AERB/ MCI or the norms applicable for installation of the machines. Under the Phase I, The Dean Gandhi Medical College Bhopal will provide the space for the establishment of Oncology Suite on outsource basis.

18. The bidders are requested to visit the proposed site for the installation of equipment in the Oncology Suite on outsource basis before the Pre-bid and put forth the queries if any. The bidders are requested to contact the office of Dean of Medical College for queries related with allotment of space. Under the Phase I, bidders are requested to contact the office of Dean of Gandhi Medical College for queries related with allotment of space

19. The State Government will assist the successful bidder by speeding up the process of securing all regulatory approvals essential for planning, construction and operation of the Suite.

20. Under the project for the Establishment of Oncology Suite on outsource basis in the Medical College Associated Hospitals, the successful bidder's request and upon approval from the Atomic Energy Regulatory Board (AERB), the State Government will permit the successful bidder to build the bunker for establishment of Linear Accelerator. Under the Phase I for Establishment of Oncology Suite on outsource basis in Gandhi Medical College Associated Hospital, Bhopal the bidder will assess the utility of the existing bunker in the Department of Radiotherapy Hamidia Hospital, Bhopal to establish and operate the linear accelerator required in the Oncology Suite. The costs involved in extracting and shifting the bunker including site re-development shall be borne by the successful bidder. However, if the AERB does not approve this bunker then the successful bidder is expected to build a new bunker for the Suite at its own cost.

21. The bidder has to visit the site designated for the establishment of the Linear Accelerator.

22. The State Government may, at any time during the execution of the Project, request the successful bidder to install a mammography machine in the Oncology Suite and provide mammography services also. Adequate time shall be given to the successful bidder to add this service line within one year of establishment of the Oncology Suite. The rates of the services shall be decided at the time of addition of this service line however, in any case, the rates shall not be less than the latest CGHS non-NABH rates in Delhi.

23. The State Government may request successful bidder to add additional similar units in the future along with the Suite, depending on demand of Services on similar terms of reference that will be agreed in the concession agreement between both the parties. The acceptance will be at the discretion of successful bidder.

    **Project Period, Phasing and Expansion:** The State Government will sign a concession agreement with the successful bidder for establishing and operating the Suite for a period of 5 years. The agreement can be extended by another term of 5 years on satisfactory services. The rent for the extended period of service will be decided by the Executive Committee of the Autonomous Society of Medical Colleges. Under the Phase I the Oncology Suite will be established in Gandhi Medical College Bhopal, and in the next phase the same can be extended to the other Medical Colleges also.

24. The State Government shall ensure that the physical possession of the space for the Suite is made available at the time of signing the Concession Agreement.

25. **Payment Mechanism, Performance Bonus and Penalty:** The resultant prices (the "Resultant Prices") of services arrived at by applying the discount rate quoted by the successful bidder on the prices attached in Annexure VIII, Annexure IX & Annexure X shall be applicable to the patients attending the OPD/IPD of the Medical College Associated Hospitals i.e. the patients who are either admitted in the College or are being treated by doctors employed by the Medical Colleges.

26. The patients belonging to the groups listed below shall be charged 40% less of the base rates of investigation and therapy as enclosed in Annexure VIII, Annexure IX & Annexure X :

    - Below Poverty Line (BPL) individuals.
    - Individuals under Deen Dayal Antyodaya Yojna (DDY) scheme.
    - Individuals employed by Government/Autonomous Medical College and their associated Hospitals and their immediate family members comprising of a person's parents, spouses, siblings and children.

27. The successful bidder will be free to diagnose and treat patients other than IPD/OPD patients and charge at their own rates.

28. The successful bidder will have to give priority to the IPD/OPD Patients for diagnosis and treatment in routine hospital Working hours.

29. Unknown Patients who are brought in unconscious, not have any relatives with them will be managed free till they regain consciousness.

30. The payment for the patients falling under Clauses 26 will be made by the Authorities of Medical College Associated Hospital and under the phase I payment for the patients falling under Clauses 26

will be made by the Authorities of Gandhi Medical College Associated Hospital on a monthly basis against a consolidated invoice submitted by the Oncology Suite.

31. The successful bidder shall be free to treat patients other than those covered under clause 26 and charge any rate from them.

32. **Performance Monitoring:** The performance of the Suite shall be treated as 'satisfactory' if the downtime of the equipment is less than 48 working hours. The performance assessment will be done on an annual basis through a third party performance auditor based on an audit of the in-and-out patient data records maintained by the Oncology Suite on their own cost.

33. **Eligibility Criteria for Bidders**

    The bidder can be a single legal entity or a combination of upto 3 (three) legal entities (the "Consortium"), coming together to implement the Project. However, no bidder applying individually or as a member of a Consortium, as the case may be, can be a member of another bidder. The term "bidder" used herein would apply to both a single entity and a Consortium.

34. The bidder must have at least 2 years' experience of operating the following number of machines:

| **Machine** | **Installations** |
|---|---|
| Linear Accelerator | 2 |
| CT | 3 |
| MRI | 3 |

35. The combined turnover of the bidder must not be less than 30 Crores in the last 3 years. A certificate as per Annexure V will be required from the auditors of the bidders certifying the annual turn-over for the last 3 completed financial years.

36. The bidder must have an authorization letter from a linear accelerator manufacturer of repute assuring the supply of the linear accelerator for this Project. This manufacturer should have installed a minimum of 50 linear accelerators within India and a certificate to this effect shall be part of the authorization letter.

37. In case the bidder is a consortium, the eligibility criteria will apply to the cumulative figures of the consortium members.

38. **Procedure for Submission of Bids**

    The bids are required to be submitted in three separate envelopes as follows:

    **Outer Envelope D - Covering Envelope for Envelope A, B & C**

    **Envelope A – EMD & Commercial Proposal**

    This will contain the documents in support of the eligibility criteria. At the very minimum, these must include:

    - The Bidder Details as per Annexure III
    - The Statement of Legal Capacity as per Annexure IV
    - The Financial Capacity of Bidders as per Annexure V
    - The authorization letter from a linear accelerator manufacturer.

    **Envelope B – Technical Proposal**

Detailed technical specifications of the major equipment proposed to be installed in the Suite by the bidder and confirmation of their compliance with the required technical specifications as per this tender document.

**Envelope C – Financial Proposal**

This will contain the offer of bidder for the discount offered in percentage on the base rates enclosed in Annexure VIII, Annexure IX & Annexure X.

39. The envelope must be clearly marked "Financial Proposal – Do Not Open with the Technical Proposal"

40. The discount offered can be 0% or in multiples of 5% e.g. 5%, 10%, 15%,20%, 25%, etc.

41. All bids must be accompanied by a letter of transmittal as per the format attached as Annexure VII.
42. A bidder must seal all envelopes listed in Clauses 38 and then seal these envelopes along with the letter of transmittal mentioned in Clause 41 an outer envelope and mark it as 'Original'. Similarly, a copy of the bid must be sealed with the outer envelope sealed and marked as 'Copy'.

43. The original bid and its copy should be sealed in an outer envelope-D carrying the name and address of the bidder and marked as:

    "**Bid for Establishing and Operating an Oncology Suite for diagnosis and treatment of Cancer Patients in Medical College Associated Hospitals under Phase I for Establishing and Operating an Oncology Suite for diagnosis and treatment of Cancer Patients in Gandhi Medical College Bhopal**".

44. All bids must be addressed and submitted to the office of:

    The Director,
    Medical Education Madhya Pradesh,
    Satpura Bhawan, Bhopal (M.P.)
    Email: dme12001@yahoo.com
    Phone: (0755)2551719; Fax – (0755) 2552388

45. **Evaluation Procedure**

The bids shall be evaluated by an Evaluation Committee in the following manner:

**Stage-1**

Envelope A of all bids shall be examined to confirm if all eligibility criteria are met. The bidders who fail to meet one or more of the stipulated eligibility criteria shall be declared as 'non-responsive' and their technical and financial bids shall not be opened.

**Stage-2**

Envelope B of all bidders who have qualified in Stage-1 successfully shall be opened next and evaluated (the "Technical Evaluation") on the parameters as indicated below:

**Technical Evaluation Parameter**

| Sections | Parameter | Marks | Max Marks |
|---|---|---|---|
| **Section 1 – Oncology Experience**<br>Bidder's experience of operating Linear Accelerators<br>(on the number of linear accelerators currently being operated) | 2 Linear Accelerator installation | 10 | 25 |
| | 3 Linear Accelerators installations | 18 | |
| | 4 or more Linear Accelerators installations | 25 | |
| **Section 1 – Experience Radiology**<br>Bidder's experience of operating CT and MRI<br>(calculated in machine years e.g. if a bidder has operated 3 CT machines for 2 years each, then the machine years for this operation would be:<br>3 x 2 = 6) | 5 to 10 machine years | 4 | 15 |
| | 11 to 25 machine years | 8 | |
| | 26 to 40 machine years | 12 | |
| | 40 or more | 15 | |
| **Section 2 – Assessment of Linear Accelerator Manufacturing Partner**<br>competency of the Accelerator manufacturing partner in supplying and installing Linear Accelerators in India. (judged on the number of LINACs currently operational in India which are supplied and installed by the bidder's Linear Accelerator manufacturing partner | Up to 124 linear accelerators installations | 10 | 40 |
| | 125-174 linear accelerators installations | 20 | |
| | 175 to 224 or more linear accelerators installations | 30 | |
| | More than 225 linear accelerators installations | 40 | |
| **Section 3 – Turnover**<br>Total annual turnover in the last 3 financial years (assessment based on certificate issued by the Auditors) | Up to 50 Crores | 4 | 10 |
| | 50 crores Upto 100 Crores | 8 | |
| | Over 100 Crores | 10 | |
| **Section 4 – Evaluation of the quality of technical bid** | | 10 | 10 |
| | | **Total Score** | **100** |

46. Bids scoring less than 50 marks in the technical evaluation shall be declared as 'non-responsive' and their financial bids shall not be opened.

47. The financial bids will be judged on the basis of the score obtained by the bidder for the following A) The discount offered by the bidder quoted as percentage value on the base rates as per the rate list enclosed in the Annexure VIII, Annexure IX & Annexure X for the investigations and therapy offered for patient care services.

    **Assigned Score for Financial Evaluation for Discount offered in Percentage on base rates**

| Sr | Discount offered on base rates as enclosed in Annexure VIII, Annexure IX & Annexure X (Discount offered In Percentage) | Assigned Score for Financial Evaluation |
|---|---|---|
| 1 | 0% - 3% | 0 |
| 2 | 4% - 5% | 20 |
| 3 | 6% - 10% | 40 |
| 4 | 11% - 15% | 60 |
| 5 | 16% - 24% | 80 |
| 6 | 25% and above | 100 |

48. The final scores for a bidder will be the weighted average of the technical and financial bids, where the technical and financial bids will be assigned a weight of 70% and 30% respectively.

49. The scoring system of this 'Quality-and-Cost-Based-Selection' (QCBS) procedure to be used for obtaining final scores is illustrated below:

    **Total Combined Score = (Score for Technical Proposal) x 0.70) + (Score for Financial Proposal) x 0.30)**

50. **Clarifications**

    Any queries or requests for additional information concerning this tender shall be submitted in writing or via fax or email to:

    The Director
    Medical Education
    Bhopal, Madhya Pradesh
    Email: dme12001@yahoo.com
    Phone: (0755)2551719; Fax – (0755) 2552388

51. The envelopes / communication shall clearly bear the following identification / title:

    "Query / Request for Additional Information: Tender to "Establish & operate Oncology Suite on outsource basis for Diagnosis and Treatment of Cancer Patients in the Medical Colleges Associated Hospitals. Under the Phase I the Oncology Suite is to be established on outsource basis in Gandhi Medical College Bhopal for treatment and diagnosis of Cancer Patients."

52. Bidders should send in their queries at least 10 (ten) days before the bid submission date. The State Government shall endeavor to respond to the queries within the period specified therein, but no later than 5 (five) days prior to the bid submission date. The responses will be sent by fax or e-mail.

53. The State Government shall endeavor to respond to the questions raised or clarifications sought by the bidders. However, the State Government reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this clause shall be taken or read as compelling or requiring the State Government to respond to any question or to provide any clarification.

54. The State Government may also, on its own motion, if deemed necessary, issue interpretations and clarifications to all bidders. All clarifications and interpretations issued by the State Government shall be deemed to be part of the bidding documents. Verbal clarifications and information given by State Government or its employees or representatives shall not in any way or manner be binding on the State Government.

55. **Amendment of Tender:** At any time prior to the bid submission date, the State Government may, for any reason, whether at its own initiative or in response to clarifications requested by a bidder, modify the tender by the issuance of an Addendum.

56. **Single Bid:** A consortium /legal entity/ equipment manufacturer should be part of only one bid.

57. **Mention of Support Required:** The bidder must mention in its bid any grant, support, minimum commitment or funding (e.g. Viability Gap Funding) it seeks from the State Government to execute this Project. The State Government reserves the right to accept or reject the mention of support required by the bidder mentioned in the tender document.

58. **Bid Security:** Earnest money of INR Rs.10 Lakh (Rs.Ten lakhs only) in the form of Demand draft / Bank Guarantee in the name of "Director Medical Education, Bhopal Madhya Pradesh" should accompany the bid. Bid Securities of unsuccessful bidders will be returned to them within 30 days of the award of contract.

59. **Bid Fee:** This tender document can be purchased against a bid fee of Rs 25,000 (Rupees twenty five thousand only) in the form of a Demand Draft of Rs 25,000 (Rupees Twenty Five Thousand Only) as tender document cost which will be non-refundable and should be paid the form of a demand draft from any Nationalized/Scheduled bank drawn in favour of the "Director Medical Education, Bhopal, Madhya Pradesh" payable at Bhopal.

60. **Concessionaire:** The legal entity to which the Project is eventually awarded (the successful bidder if it is a single legal entity or a Special Purpose Vehicle if the successful bidder is a consortium) shall be referred to as the "Concessionaire". The Concessionaire shall be a company registered under the Companies Act of India (1956 or 2013) and shall be responsible for the design, development, financing, procurement, installation, operation, maintenance and transfer to the State Government of the Suite.

61. **Concession Agreement:** The award of the Project will be done by means of a concession agreement which shall set forth the detailed terms and conditions for grant of the concession to the Concessionaire, including the scope of the Concessionaire's services and obligations (the "Concession").

62. **Reconnaissance:** Bidders are invited to examine the Project in greater detail, and to carry out, at their cost, such studies as may be required for submitting their respective bids for award of the Concession including the implementation of the Project.

63. **Verification:** The State Government reserves the right to verify all statements, information and documents submitted by the bidder in response to this tender or the bidding documents and the bidder shall, when so required by the State Government, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the State Government shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the State Government there under.

64. Each page, form, annexure and appendices of the technical and financial bid must be signed by the authorized signatory of the bidder. All blank spaces in the financial bid must be filled in completely where indicated, either typed or written in ink.

65. The State Government reserves the right to reject any bid and appropriate the bid security if:

    - At any time, a material misrepresentation is made or uncovered, or
    - The bidder does not provide, within the time specified by the State Government, the supplemental information sought by the State Government for evaluation of the bid.

66. The State Government reserves the right to accept or reject one or all bids without giving any explanation.

67. The statements and explanations contained in this tender are intended to provide a better understanding to the bidders about the subject matter of this tender and should not be construed or interpreted as limiting in any way or manner the scope of services and obligations of the Concessionaire set forth in the Concession Agreement or the State Government's rights to amend, alter, change, supplement or clarify the scope of work, the Concession to be awarded pursuant to this tender or the terms thereof or herein contained. Consequently, any omissions, conflicts or contradictions in the bidding documents including this tender are to be noted, interpreted and applied appropriately to give effect to this intent, and no claims on that account shall be entertained by the State Government.

68. The bid and all related correspondence and documents in relation to the bidding process shall be in English language. Supporting documents and printed literature furnished by the bidder with the bid may be in any other language provided that they are accompanied by translations of all the pertinent passages in the English language, duly authenticated and certified by the bid. Supporting materials, which are not translated into English, may not be considered. For the purpose of interpretation and evaluation of the bid, English language translation shall prevail.

69. A bidder shall be responsible for all of the costs associated with the preparation of their bids and their participation in the bidding process. The State Government will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the bidding process.

70. Bidders are required to bid for the entire Project. Bids for only a part of the Project will not be considered.

71. Bids received after the stipulated last date and time shall not be considered.

72. All major equipment (as per Annexure II) required in the Suite shall be new, unless permitted otherwise by this tender or the State Government. Refurbished units will not be entertained.

73. The successful bidder will have to arrange for the supply of the required machines as per the specifications in this Tender Document.

74. The successful bidder will have to arrange the medical staff and other ancillary staff required by the Suite. The successful bidder will also have to arrange for the reporting of investigations performed by the Suite.

75. The medical staff at the Suite should be competent enough to guide the functioning of the linear accelerator, MRI and CT machines and analyze the reports. The medical staff should also be able to guide the post graduate students.

76. The successful bidder will give assistance to the Department of Radiotherapy & Radio-diagnosis of the Medical College Associated Hospital and under the phase I the Department of Radiotherapy & Radio-diagnosis of Gandhi Medical College, Bhopal so as to fulfill the desired Medical Council of India norms.

77. All bids will be opened in the presence of the bidders who so ever choose to be present at that time.

78. The successful bidder will have to submit a No Objection Certificate from the AERB before the installation of the linear accelerator and CT machines, and shall undergo an inspection by the AERB within 3 months of installation as required under the Radiation Protection Rules.

79. The safety, security and maintenance of all equipment and materials required by the Project will be the responsibility of the successful bidder.

80. Any dispute or controversy arising in dealing with the patients or patients' attendants will be brought to the notice of Joint Director cum Superintendent of the Medical College Associated Hospital and under phase I the Joint Director cum Superintendent of Gandhi Medical College, Bhopal, or his/her representative before any legal action outside the premises is considered.

81. The successful bidder will have to install the linear accelerator, MRI and CT machines within the stipulated period of 9 months, if the existing bunker (referred to in Clause 6.3) is used for the Oncology Suite, or 15 months, if a new bunker is created for the Suite, from the date of signing the Concession Agreement. Any delay attributable to the AERB approval beyond 2 months will be added to the above period.

82. Post graduate students and faculty members of the Department of Radiotherapy & Radio-diagnosis of the Medical College Associated Hospital and under the phase I the Department of Radiotherapy & Radio-diagnosis of Gandhi Medical College, Bhopal will be freely allowed for clinical and research work in the Suite and the successful bidder will render full co-operation. However, the time consumed by such work shall be capped at 5% of the working hours of the Suite on a daily basis.

83. The successful bidder will have to provide trolleys/wheel chairs for shifting of admitted patients in the Medical College Associated Hospital and under the phase I the Gandhi Medical College, Bhopal Gandhi Medical College, Bhopal to the Suite.

**PROFORMA OF AGREEMENT**

**(On a stamp paper)**

Agreement executed between the Dean of Medical College of M..P under phase I Dean of Gandhi Medical Hospital Bhopal (hereinafter called the “First Party”) and.....

.....(hereinafter called the “Second Party”)

1. Duration of agreement shall be for a minimum period of 5 years extended for further 5 years or mutually agreed period subject to performance of the Second Party. Agreement can be terminated by prior notice of one month by the First Party in case of violation of terms and conditions by the Second Party.
2. That the Second Party shall have no right, title or interest in the premises allotted to it for running of the linear accelerator, MRI and CT machines after the completion of the contract period or earlier in case of termination of the contract. Possession shall be handed over by the Second Party to the First Party without any claim/objection whatsoever and without any damage to the premises.
3. That the Second Party shall arrange/appoint duly qualified personnel including doctors, staff & attendants for operating the machines & to ensure proper and quick services to the patients. A list of personnel who run the machines shall be submitted to the First Party by the Second Party, specifying their qualifications and experience at the time of installation of the machines.
4. That the First Party or authorized persons/committee shall have the power and authority to inspect the machine/ premises/ accounts/ registers with a view to ensure smooth and proper running of the same and prompt services to the patients as also to keep constant vigil.
5. That the Second Party shall be free to examine other patients referred from outside at their own rates and information in that respect shall be kept and will be transmitted to the First Party on a monthly basis.
6. That machines/ accessories shall be kept properly maintained round the clock. In case of breakdown of any equipment, the Second Party will be responsible for repair of the unit within 48 working hours and during the period of break down the Second Party will have to carry out investigations referred to them from the hospital at the approved rates from outside agencies. Failure to get the repair done within 48 working hours of the break down, the Second Party would be liable to ensure that the patients get their investigations done.
7. That the students/ teaching staff of Medical Colleges of M.P. Under Phase I Gandhi Medical College, Bhopal shall have the right to use the machines/ accessories/ installations free of cost from time to time as and when needed and will have full access to the linear accelerator/CT/MRI units.
8. That investigation reports in respect of patients examined shall be submitted on the letterhead of the Second Party duly signed by qualified competent expert without delay.
9. That in the event of non-compliance or violation of any of the terms and conditions herein above by the Second Party, the contract shall be liable to be terminated by the First Party after serving one month notice.
10. Within the contractual period, the period, the Second Party will not be allowed to move the machines from the earmarked premises.
11. For the purpose of installation of equipment in the earmarked premises, the Second Party shall do only necessary partitions etc. at their own cost with the prior permission of the Dean of the Medical College and the additions/ alterations to the premises shall be allowed.
12. That the Second Party shall be bound to abide by the instructions issued from time to time by the First Party.

13. The First Party should provide investigation facilities round the clock.
14. The Second Party should provide facility for the study of academic/thesis cases of the Department of Radio-Diagnosis and Oncology duly forwarded by the Head of Department of the Medical College. The Second Party should ensure the availability of technicians, ancillary staff & radiologists for carrying out investigations & reporting round the clock. (being a govt. hospital, patients are expected to be scanned round the clock).
15. No other equipment will be allowed to be installed within premises other than a linear accelerator, MRI and CT machines.
16. The Second Party will not be allowed to sublet the provided space or to make any other deal/ agreement regarding the space made available to it without approval of first party.
17. The Second Party will have to undertake the responsibility of proper & orderly maintenance of discipline, decorum and dignified approach of their staff towards patients and their wards, hospital & college staff and the students.
18. Breach or violation of any terms and conditions of the agreement by the Second Party shall be liable for the termination of the agreement. For such a termination of the agreement, the First Party shall have the right to impose the penalty of forfeiting the security deposit of the Second Party.
19. The Medical Colleges of M.P. Under Phase I Gandhi Medical College, Bhopal may include any clause in the agreement as per their specific requirements.
20. The Jurisdiction of Bhopal shall be the jurisdiction for all legal matters in this regards at the cost & expenses of the Second Party.

Signature of Authorized Signatory

Date:

Signature of Dean of Medical Colleges of M.P. /

Under Phase I Dean of Gandhi Medical College, Bhopal

Witness:

1. _____

   _____

   _____

2. _____

   _____

   _____

**Annexure I**

**Minimum Project Facilities**

| Sr. No. | Medical Equipment | Quantity |
|---|---|---|
| 1 | CT Scan | 1 |
| 2 | MRI | 1 |
| 3 | Linear Accelerator | 1 |

**Legend:**
CT – Computed Tomography
MRI – Magnetic Resonance Imaging

**Annexure II**

**Minimum Equipment Specifications**

## Specifications for a 64 slice CT scanner {with Upgrades for Simulator}

This tender is to fulfill requirement for the latest generation multi-slice CT scanner capable of acquiring 64 or more slices per 360 degree rotation for all types of scans and applications. The model offered should be a state-of-the-art whole body CT scanner with volume scanning capabilities. The model should be under current production and the gantry should be manufactured with slip-ring technology.

RT UPGRADES TO USE AS CT SIMULATOR.

The offered product should meet the following specifications:

**X-Ray Generator:**

1. The X-Ray generator and chiller should be inbuilt in the Gantry
2. It should be high frequency generator with output of at least 80 KW
3. The mA range available should at least be 50mA to 600mA

**X-Ray Tube:**

1. The X-ray tube should have anode heat capacity of 8.0 MHU or more
2. The X-ray tube should have a cooling rate of not less than 1600 kHU per min
3. Tube voltage range availability from 80kV to 140kV
4. Maximum scan field of view available should be 50cm or more

**Detector and Data Acquisition System:**

1. The detector should have 64 channel output which allows simultaneous acquisition of 64 or more slices per rotation with slice thickness of 0.625mm or lower for all types of scans and applications
2. The detector offered should be solid state / ceramic
3. The detector should have 700 or more effective elements / channels per slice (this number should not include the reference elements / channels and channels required for calibration)
4. The scanner should have inbuilt pediatric protocols

**Gantry:**

1. The gantry should be provided with user – friendly control panels for easy positioning
2. Gantry aperture should be 70 cm. or more in diameter
3. The CT scanner should have low voltage slip rings incorporated in the Gantry
4. The scan time for a 360 Degree rotation should be 0.4 second or lowerfor both vascular and cardiology applications
5. The gantry should have a physical tilt of 30 degrees or more on either side and remote tilt should be available as standard

**Patient Table:**

1. The table should have a carbon fibre table top with a metal free scannable range of 160 cm or more

2. The patient table offered should have a minimum load bearing capacity of at least 200 kg with 1 mm positioning accuracy
3. Minimum horizontal table speed at least 100 mm/sec
4. The vertical range should be atleast 35 cms (maximum height –minimum height)
5. Remote UP/DOWN, FWS, BWD should be standard

**Spiral Section:**

1. The scanner should be able to simultaneously acquire 64 or more slices per rotation with slice thickness of 0.625mm or lower for all types of scans and applications
2. The scan time for a 360 Degree rotation should be 0.4 second or lower for both vascular and cardiology applications
3. The real time reconstruction speed for spiral scans should be minimum 30images / sec. or more
4. Bolus Triggered or bolus chase Spiral acquisition should be possible
5. Slice increment.-specify scan and selectable slice thickness
6. Single Continuous spiral scan time at the specified low contrast resolution should be at least 60 sec or more

**Image Reconstruction:**

1. Real Time reconstruction speed should be minimum 30images/sec.
2. Display Matrix: 512 x 512
3. Reconstructed slice thickness should be up to10mm and should be freely selectable

**Operator Console:**

1. The latest multitasking computer should be offered with 64 Bit processor and a menu driven platform.The system should have a minimum RAM of 4 GB
2. Main Console should include a high resolution, TFT/LCD color monitor of 19” or more
3. The display matrix should be atleast 1024 x 1024
4. The Hard Disk capacity for both image and raw data should be 250 GB or more
5. It should have facility to store at least 10,000 images
6. The system should be supported with archiving facility. CD and DVD archiving facility are required
7. DICOM facility to send, store, print, receive etc should be standard
8. The console should support Filming in user defined formats
9. Fully DICOM 3.0 compatible (or newer version if available at time of delivery)
10. Computer desk and cabinet to be included
11. An integrated intercom and Automated Patient Instruction System (API) should be provided

**Archival (Operator Console):**

1. Filming parallel to other activities, including independent scanning, documentation and post-processing and configurable image text
2. Archiving: DVD/ Blue Ray writer should be provided for archival
3. Option of viewing these discs on any PC without DICOM viewer should be available

4. Software for Remote Diagnostics Service over a telephone line
5. System must be PACS interface ready without any new hardware or software

**Operator Console Image Processing Section:**

The following applications should be standard at the console and it should be able to use the following without requirement of a satellite workstation:

1. Registration, scheduling and protocol selection
2. Real-time Multi-Planar Reconstruction (MPR) of secondary views, with viewing perspectives in all planes including curved and orthogonal MPR
3. CT Angiography: MIP and MinIP
4. 3D Volume Rendering (VRT), Volume measurements
5. 3D Surface Shaded Display
6. CT number display, window width, window level
7. Topogram display
8. Cine display
9. Other advanced 3D applications and color coding for different tissues
10. Sub-mm HRCT lung
11. Prospective (step and shoot) and retrospective cardiac acquisition
12. Automated Bone Removal
13. Neuro Perfusion
14. Calcium Scoring

**The following evaluation tools should be standard:**

1. Parallel evaluation of multiple ROI in circle, irregular and polygonal forms
2. Statistical Evaluation for area/ volume, S.D, Mean/Max and Histograms
3. Distance & angle measurement, freely selectable positioning of coordinate system, grid and image annotation

**The following post processing tools should be offered as standard:**

1. 2-D post processing, including image zoom and pan, image manipulations, including averaging, reversal of grey-scale values, and mirroring
2. Image filter functions, including advanced smoothing algorithm and advanced bone correction
3. Advanced image algorithms such as Posterior Fossa Optimization for reduction of beam hardening artifacts in head images

**Independent Workstation:**

1. High speed CPU (3.0 GHz or higher processing speed) with post-processing capability of atleast 15000 concurrent slices
2. Should have its independent memory and hard disk of atleast 500 GB

3. Should have a high resolution medical grade LCD colour monitor of size 21” or more, capable of simultaneously viewing and performing all post processing functions and filming independently without the help of the main console
4. Two way data transfer between operator console and the workstation

**Workstation Image Processing:**

The following applications should be standard:

1. Standard evaluation applications: Distance, Angle, Marker, Region of Interest,Arrow, Pixel lens, Anatomical Registration, Synchronized Scrolling,Correlated Cursors
2. Image manipulation: Zoom, pan, window
3. Image presentation: 2D, MPR, MPR thick, MPR/MPR fusion, MIP,MIP thin, MinIP, VRT
4. Real-time Multi-Planar Reconstruction (MPR) of secondary views, with viewing perspectives in all planes including curved and orthogonal MPR
5. 3D Volume Rendering (VRT), Volume measurements
6. 3D Surface Shaded Display
7. Volume Calculation
8. Interactive & Automatic Cine display should be available
9. Boneremoval, Table removal
10. Region Growing.

**The following software should be offered as standard:**

1. **Vascular Imaging:**
    a. Automatic evaluation and quantification of angiography images of the general vessels
    b. Plaque visualization, Calcification Removal

2. **Cardiac Imaging**:
    a. Calcium Scoring
    b. Automatic evaluation and quantification of angiography images of the coronary arteries
    c. LV Function evaluation
    d. 4D Imaging of beating heart
    e. ECG controlled data acquisition and image reconstruction
    f. Coronary tracking
    g. Plaque visualization and stenosis analysis
    h. Heart isolation

3. **Neuro Imaging**:
    a. Neuro DSA

b. Neuro Perfusion

4. **Oncology Imaging**:
    a. Colonography
    b. Lung Nodule Evaluation
    c. RECIST/WHO measurement
    d. Two time-point display for the same patient

**Resolution:**

1. The system should have a high contrast resolution of at least 17 lp/cm for axial and spiral scan 0%MTF with full 50cm FOV
2. Specify low contrast resolution of the system achieved with 20cm CATPHAN phantom. Specify surface dose, mAs, slice thickness and HU used

**Dry Imager:**

1. A dry imager with Digital Interface and control integrated with main console. Dicom 3.0 (or newer version if available) compatible. Attach conformance statement of DICOM compatibility
2. Camera should print on multiple film sizes, one of which must be 17" x 14" film size
3. Camera having dpi resolution of 500 dpi or more with minimum three ports

**Accessories:**

1. Lead glass of at least 100cm by 80cm
2. Full System UPS of Suiteable Capacity for 15 min backup
3. Dual Head CT compatible pressure injector with remote control of standard make, latest model with interface software. Capable of maximum 300psi pressure and flow rate of 10 ml/s
4. Patient Positioning Accessories: Head Rest, Head and Arm Support, Knee and Leg Support, Coronal Supine Head Holder

**RT { CT simulator } Upgrade: -**

**The CT scanner mentioned above can be upgradable to a CT simulator with the following additional integrations.**

1. **Flat table top with carbon Overlay.**
2. **Laser Set.**
3. **CT Simulator work Station.**
4. **Radiotherapy Application Software.**

Note: - The bidder has to quote latest model of 64 slice CT scanner with Upgrades for Simulator in the tender and should agree to upgrade the software & Hardware of the model quoted in the tender for 64 slice CT scanner with Upgrades for Simulator on the demand of the user.

# DETAILED TECHNICAL SPECIFICATION OF MRI – 1.5 TESLA

1. **MAGNET SYSTEM: -**
    1. Super conducting Magnet
    2. Field strength: - 1.5 T
    3. Ultra-short magnet length { Of around < 150 cm }
    4. Magnet weight 4350 KG { Inc. Gantry }
    5. Bore diameter at isocenter – 60 cm
    6. Cryocooler inbuilt: - low to Zero boil off rate, Liquid Helium
    7. Patient intercom system: - 2 way communication system
2. **ACTIVELY SHIELDED GRADIENT: -**
    1. Water cooled gradient coil
    2. Maximum gradient field strength of 30 mT/m, ie. 52 mT/m effective
    3. Maximum slew rate of 100 T/m/s, ie. 173 T/m/s effective
    4. Minimum rise time of 300 microseconds.
    5. Minimum slice thickness in 2D: - 0.1 mm
    6. Minimum slice thickness in 3D: - 0.05 mm
    7. Min/max FOV (2D & 3D): - 0.5 / 45 cm
3. **PATIENT BED: -**
    a) Table capacity: - 200 kg

    b) Computer controlled motorized patient bed with vertical and horizontal movement for easy positioning

    c) Halogen / laser light beams for easy positioning

    d) Return to scale function for easy administration of contrast
4. **RF AMPLIFIER AND RECEIVER: -**
    - Generate a transmit power of 15 kw or higher with integrated water cooling
    - Accurate, flexible on the fly generation of gradient and RF wave forms
    - Receiver bandwidth of 1 MHz
    - Integrated electronic cabinet water cooling
    - Integrated circularly polarized body coil
    - Compatible with parallel imaging techniques such as iPAT, mSENSE and GRAPPA
5. **OPERATOR CONSOLE: -**
    1. 19” or higher high resolution LCD Monitor
    2. Mouse, alphanumeric keyboard
    3. 2 way intercom system for patient communication
6.

**MR CONSOLE: -**

1. workstation with 21” monitor
2. Workstation table
3. Patient supervision display
4. RAM memory capacity at least 8 GB
5. Hard disk capacity not less than 500 GB
6. DVD rewritable
7. Operating software with all application Suites, post processing software and DICOM 3 compatible.

7. **PATIENT COMFORT ACCESSORIES: -**

- Soft mattress with head rest
- Knee support, positioning wedges
- Soft Velcro immobilization straps
- MR compatible sand bags
- Hand held or easily accessible nurse call device

8. **RF COILS: -**

a) Head Coil : - up to 6 channel coil or higher

b) Neck coil: - up to 4 channel coil or higher

c) The different coils are removable for better patient handling

d) High quality Circular polarized body coil { integrated to magnet }

e) 2 flexible coils for wrist, TMJ, inner ear with parallel imaging compatibility

f) Shoulder coils

g) Bi lateral breast coils

h) Torso coils

i) All coils should have parallel imaging compatibility

j) Flexible coils for imaging of large body regions

k) Multipurpose endocavitatory coil for imaging of prostrate, uterus and cervix

l) Combination of multiple coil connectivity for various applications and high resolution imaging.

9. **APPLICATION SOFTWARE**

1. Enabled with multiple application Suites such as Neuro, Angio, cardiac, Body, Onco, Breast, Ortho and pediatric.

2. MR Software: -

a) The graphical user interface offers optimized clinical workflow. Parallel working and one-click exams are efficiently supported.

b) - Parallel scanning and reconstruction are standard. Images can be loaded and used for graphical slice planning during reconstruction.

c) - The task card approach enables structured workflow with multiple patients by easy image exchange between tasks.

d) - In addition to the three segments of graphical slice positioning the user interface shows small

e) Reference views from other series. The drag drop functionality is fully supported. As soon as images are reconstructed they can be used for slice positioning. Images can be automatically loaded into the User Interface and displayed in Movie mode (Inline Movie).

f) - Preset exam-oriented scan programs can be customized to meet clinical requirements in daily routine, and stored in a hierarchical structure.

g) - Software-controlled patient table movement by soft buttons or automatically within the scan protocols.

h) Table automatically moves into the magnet's isocenter for measurement.

i) - iPAT image reconstruction is performed in minimum time due to high-performance computer hardware and the optimized GRAPPA algorithm.

j) Intelligent Coil Control supports and automates the use and administration of receive coils:

- Detection of the position of the fixed-position and flexible position receive coils
- Graphic display of the receive coil position within the images that are used for slice planning
- Graphic selection of receive coils directly from the syngo user interface
- Automatic Coil Select: coils in the field of view are selected automatically.

k) In order to ensure an efficient work and measurement flow, many post-processing steps are performed automatically via Inline technology during or directly after a measurement, e.g. calculation of subtraction images, MIP, standard deviation, wash-in and wash-out maps etc. - 2D PACE (Prospective Acquisition Correction) - the motion correction for examinations with breath-hold.

l) iPAT (integrated Parallel Acquisition Techniques) further increase the acquisition speed compared with conventional standard scan techniques. iPAT fully compatible with the surface coils.

m) Dynamic Analysis evaluation software allows the calculation of functions such as addition/subtraction, division/multiplication, ADC maps, T1 and T2, Time-to-Peak maps (TTP) and standard deviation.

n) - Mean Curve can be used to evaluate dynamic examinations, e.g. employing contrast media.

o) - The 3D Post-Processing Card includes the basic functionalities for manual MPR, MIP, MinIP and SSD image reconstructions (Multiplanar Reconstruction, Maximum Intensity Projection, Minimum Intensity Projection and Shaded Surface Display).

p) - Efficient filming is possible directly from the different Task Cards and can be controlled by minimum user interaction. There is a wide range of different film layouts with regular and irregular formats. The Mother and Child function allows to display the position of the measured slice in a scout showing a small image in the upper right-hand or the lower left-hand corner of the larger image (image within an image).

q) - With the Patient Browser the images can be freely positioned on the film via drag&drop. Pan&zoom and windowing of images on the film sheet is also possible.

r) - Supports storing of a viewing tool (DICOM Viewer) together with images on a DICOM CD to be handed out to the patient.

s) - Studies can be easily networked and managed using the standard DICOM 3.0 protocol for efficient support of workflow. The following standard functions are supported: Send/Receive, Query/Retrieve, Basic Print for DICOM-compatible laser cameras (Camera is not included in the basic unit. DICOM Worklist DICOM Storage Commitment.

3. Application provides dedicated evaluation software for creation of full-format images from overlapping MR volume data sets and MIPs acquired at multiple stages.

The option features:

- Display and storage of full-format images, e.g. of the spine, the central nervous system or the vessel tree, composed from multiple overlapping stages.
- Dedicated composing algorithms, optimized for the generation of anatomical or angiographic full-format images.
- Data sets with different FoV, resolution, matrix and slice thickness can be combined.
- Generation of full-format images from inline MIPs.
- Original, detail and reconstructed images can be displayed in different layouts.
- Comparison of two reconstructed images for evaluation and diagnosis is thus made possible.
- Filming in different layouts is supported.
- Measurements on reconstructed images.
- Extended orthopedic functions:
- Scoliotic angle, kyphotic angle, vertical distance measurement and differences in width of the intervertebral spaces.

4. Susceptibility weighted imaging: -

1. SWI measuring sequence, iPAT compatible optimized measuring protocols for the head

2. inline-post processing for automatic calculation of relevant images within the scope of image reconstruction:

3. calculation of susceptibility-weighted images

4. venous angiography: MIP of a thin slice block

5. SWI has been optimized for clinical use to support diagnostics with cerebrovascular diseases (e.g. cerebral insult), venous malformation, brain trauma and tumors.

5. Single Voxel Spectroscopy: -

(a) Integrated software package including sequences and protocols for proton spectroscopy to examine metabolic changes in the brain

(b) package comprises:

(c) - Single voxel measurement with Spin Echo technique

(d) - Echo times down to 30 msec for Spin Echo

(e) - Voxel size down to 1 cm3 (Range 10mm-40mm per direction)

(f) - Voxel can be freely angulated

(g) - Fully automatic adjustments including localized 3D volume shimming for optimized homogeneity of the volume of interest

(h) - Optimized B1- and T1-insensitive water suppression with variable suppression bandwidth

(i) - Variable phase cycling

(j) - An online display allows monitoring of scan progress

(k) - All adjustments can still be performed manually with real-time guidance.

(l) - Optimized protocols for proton spectroscopy of the brain

(m) - Quality control using a FID technique is available to the user

6. Chemical Shift Imaging: -

- The 2D Chemical Shift Imaging option is used to measure 2D proton spectroscopic data to generate metabolite images e.g. in brain tumors, metabolic diseases of the brain and degenerative changes in brain metabolism
- Hybrid CSI measurement with Spin Echo technique
- - Echo times 135-300 msec for Spin Echo
- - Repetition times 0,5-10 sec.
- - voxel size down to 2,5x2,5x5 mm3 in the three spatial directions
- - Field of View down to 80mm, matrix size between 8x8 and 32x32 voxels
- - volume can be freely angulated
- - Fully automatic adjustments including localized 3D volume shimming for optimized homogeneity of large volumes for 2D Hybrid CSI

- - All adjustments can still be performed manually with real-time guidance (as i.e. interactive shimming).
- - Optimized B1- and T1-insensitive water suppression with variable suppression bandwidth
- - Optimized protocols for CSI brain examinations
- - Quality control using a FID technique

7. Spectroscopy evaluation: -

(a) Software package for evaluation of spectroscopy data.

(b) Subsequent water suppression with optional phase correction

I. - Apodization

II. - Zero filling

III. - Fourier transformation

IV. - Base line correction

V. - Automatic or manual phase correction

VI. - Curve fitting and peak labeling

VII. - Summaries in tabular form of the essential results specifying the metabolites, their position, integrals and signal ratios in relation to a selectable reference.

VIII. - Capability of exporting spectroscopy header information and data into a documented external format.

IX. - Automated peak normalization to tissue, water or reference

X. - Dedicated evaluation protocols for SVS breast (for 1.5T only)

10. **ACCESSORIES**

- Hand held metal detector
- MP compatible patient trolley
- UPS for complete system with backup
- Coil storage cart.

Note: - The bidder has to quote latest model of MRI – 1.5 Tesla in the tender and should agree to upgrade the software & Hardware of the model quoted in the tender for MRI – 1.5 Tesla on the demand of the user.

# Detailed Technical Specification for a High Energy Medical Linear Accelerator for Intensity Modulated Radio Therapy

The high energy medical linear accelerator should be able to perform various specialized treatment techniques such as:

(a) Three dimensional Conformal Radiotherapy

(b) Dynamic Intensity Modulated Radiation Therapy

(c) The quoted Model should have been launched after 2010 in the Global market, any model launched/approved before 2010 will not be accepted.

The unit must have highest quality performance in all respects. The model quoted should be latest technology and approved by FDA, CE and AERB (NOC/TAC).

Basic Features

## 1.0 Photon Beam Characteristics

### 1.1 *Beam Energies*

The accelerator shall be capable of producing three clinically useful photon beams with energies of 10 MV for the high energy and 6 MV for the low energy. The minimum characteristics of each energy for a 10 x 10 field at 100 cm TSD should be as follows:

| **Nominal Energy (MV)** | **$D_{max}$ (cm)** | **% Depth Dose at 10 cm Depth (10x10 field)** |
|---|---|---|
| 6 | 1.5 $\pm$ 0.2 | 67.0 $\pm$ 1.0 |
| 10 | 3 $\pm$ 0.2 | 80.0 $\pm$ 1.0 |

For both the energies quoted specify the above characteristics.

### 1.2 *Dose Rate and Beam Stability*

1.2.1 The maximum dose rate for routine clinical applications shall equal at least 600 monitor units (MU)/min for a 10 x 10 cm field at the depth of maximum buildup at a TSD of 100 cm for both photon beams ( 6 and 10 MV ). Higher Dose rate is preferable and should be quoted in Option.

### 1.3 *Field Size Specifications*

1.

1.3.1

The field size is defined as the distance along the radial and transverse axes between the points of 50% density on an x-ray film taken at 100 cm TSD with minimum buildup. The digital display, light field size and mechanical display should be accurate to within ± 2 mm.

1.3.2

The accelerator shall provide a continuously variable rectangular, unclipped field size from 1 x 1 cm to 35 x 35 cm at 100 cm SSD. The maximum clipped field size should equal or exceed 40 x 40 cm at 100 cm SSD. Clipped corners are unacceptable for fields smaller than 35 x 35 cm.

1.3.3

A detachable block holder should be provided to accommodate 2 trays simultaneously for wedges and block trays. The size of the blocking trays should be at least 5 cm larger than the maximum field size at the lower position. Specify location and size of blocking trays.

1.3.4

Asymmetrical Collimation

Asymmetrical collimation for two sets of jaws shall be provided. One set of jaws shall be capable of crossing the center line by at least 10 cm as projected at 100 cm TSD. The collimators shall re-center automatically when the symmetrical mode of operation is re-selected.

## 1.4 *Beam Profile*

### 1.4.1 Field Flatness Specification

Variation of x-ray intensity relative to the central axis shall not exceed ± 2.5% at 100 cm SSD and 10 cm depth over the central 80% of the field for the longitudinal and transverse axes of all field sizes from 10 x 10 cm to 40 x 40 cm. State the maximum variations for the above field sizes at each energy.

### 1.4.2 Field Symmetry Specifications

The maximum percent differences of average doses shall not exceed ± 2.0% for the longitudinal and transverse halves of the field at 100 cm TSD and 10 cm depth, at gantry angles of 0, 90, 180 and 270 degrees. Field sizes shall be specified as 10 x 10 cm and 40 x 40 cm. Average dose is defined as the arithmetic average of minimum and maximum doses within the central 80% of the field for both axes.

## 1.5 *Mechanical / Motorized Wedges*

1.5.1

A minimum of 4 physical wedges shall be supplied with the accelerator, including 15, 30, 45 and 60 degrees or alternately an in-built motorized wedge shall be provided that can produce an effect of any wedge angle up to 60 degrees.

## 1.6 *Radiation Leakage*

Radiation leakage limits shall be within appropriate regulatory agency guidelines as follows:

1.6.1

Photon leakage. The photon leakage rate at any point one meter from the target outside the cone defined by the primary x-ray collimator shall be less than 0.1% of the absorbed dose at the isocenter.

1.6.2

Collimator transmission. The movable collimators shall not permit transmission of radiation exceeding 0.5% of the central axis dose at Dmax measured in air for both photon energies.

1.6.3 Neutron leakage.

The neutron leakage rate should not exceed 0.15% expressed in neutron dose equivalent (REM) when added to the photon leakage for a 10 x 10 cm field at the isocenter at any point one meter from the target when the jaws are closed.

1.6.4

In addition to meeting above specifications for radiation leakage, the linac should also meet all the mandatory safety and radiation leakage regulations as specified by Atomic Energy Regulatory Board, Mumbai, India for a medical linear accelerator.

## 2.0 Electron Beam Characteristics

### 2.1 Electron Beam Energies

Four or more clinically useful electron beam energies shall be provided. The lowest energy shall be 6 MeV and the highest energy shall be 15 MeV or above. Energy shall be specified as the most probable energy ($E_p$) of the electron energy spectrum at 100 cm from the accelerator exit window.

### 2.2 *Dose Rate*

The dose rate at the isocenter shall not be less than 800 MU/minute for each electron energy. Higher dose rate is preferable and should be offered if available.

### 2.3 *Field Size*

The electron beam size is defined by the inside dimensions of the electron beam applicators projected geometrically to a plane surface at 100 cm SSD. A range of field sizes from 4 x 4 cm to 25 x 25 cm is required. A method to obtain irregular field shapes shall be provided.

2.3.1

It shall be possible to visualize both the field defining light and the optical distance indicator with an electron applicator in place.

### 2.4 *Beam Profile*

2.4.1

Field Flatness

The maximum percent variation of the electron intensity at 100 cm SSD at $D_{max}$ shall not exceed 5% (within the central 80% of the longitudinal and transverse axes relative to the central axis) for field sizes from 10 x 10 cm to 25 x 25 cm and for all the electron beam energies.

2.4.2 Beam Symmetry

The maximum percent variation in the average electron intensity to the longitudinal and transverse halves of the electron field at $D_{max}$ for a 10 x 10 and 25 x 25 cm field at 100 cm SSD shall not exceed $\pm$ 2% at gantry angles of 0, 90, 180 and 270 degrees.

The average electron intensity is the average of the maximum and minimum points within the central 80% of the field for each of the axes.

2.5 ***X-ray Contamination***

The x-ray contamination of the electron beam shall be less than 5% of the maximum dose for all energies specified previously.

2.6 ***Total Skin Electron Irradiation Mode***

A high dose rate electron mode for total skin electron irradiation must be provided with a minimum dose rate of 900 MU/min or above for the 6 MeV electron beam.

## 3.0 Mechanical Specifications

3.1

The target to axis distance should be 100 $\pm$ 0.2 cm. The isocenter shall lie within a sphere of radius 1 mm. The accelerator gantry shall be capable of rotation equal to or greater than 360 degrees with a variation of the mechanical and radiation isocenters during rotation of less than $\pm$ l.0 mm throughout the entire rotation. Digital scales indicating gantry angle position shall be provided both in the treatment room and at the control console. Accuracy of the scales shall be $\pm$ 0.5 degree.

The distance from the end of the lower collimator to the isocenter shall be greater than 45 cm. The bottom of the blocking tray should be greater than 30 cm from the isocenter. The height of the isocenter above the finished floor shall be less than 130 cm. Digital scales indicating collimator angle position shall be provided both in the treatment room and at the control console. Accuracy of the scales shall be $\pm$ 0.5 degree.

### 3.2 Treatment Couch (with indexed carbon fiber table top)

Specify the range of motions of the treatment couch. The maximum height of the couch shall be at least 40 cm above the isocenter. The lowest couch position shall be less than 63 cm above the finished floor. Motions (except couch top rotation) shall be both manual and variable-speed motor driven. The linear accelerator's use for conformal therapy and intensity modulated radiation therapy / IGRT requires an indexed carbon fiber couch top that is designed for precise and repeatable patient

positioning. The couch top shall have side rails with attached universal clamps and immobilization straps. Patient support panels in the couch (tennis racket or Mylar) shall be provided to facilitate large posterior treatments at extended distances without moving the patient. The accessory rails beside the patient support panels shall be removable, allowing treatment and port film images without interference from the rails. Convenient digital scales in metric units shall be incorporated on the couch or on an in-room monitor which will allow the operator to check the orientation of the couch height and couch angle with respect to the gantry. Couch positions (except couch top rotation) shall also be displayed at the control console. Accuracy of the scales for vertical, lateral and longitudinal motions shall be within $\pm$ 1 mm.

3.3 ***Treatment Room and Console Position Displays***

For accuracy of patient set-up, digital displays of gantry rotation angle, collimator rotation angle, collimator jaw settings (symmetric and asymmetric), and treatment couch vertical position, lateral position, longitudinal position and turntable rotation angle about isocenter shall be provided both in the treatment room and at the operator console. Accuracy of collimator and gantry angle displays shall be $\pm$ 0.5o, with a resolution of 0.1o. Accuracy of collimator jaw position displays shall be $\pm$ 1 mm with a resolution of 1 mm. Accuracy of the couch vertical, lateral and longitudinal displays shall be $\pm$ 2 mm with a resolution of 1 mm.

3.4 ***MLC – Multi Leaf Collimator***

The MLC system quoted shall have at least 120/160 leaves or more (60 pairs or more). The resolution of the MLC leaves at isocenter shall be 0.5 cm or less. Specify over travel distance of the MLC leaves in cm.

The MLC must be capable to perform all types of IMRT treatments such as multiple static fields, dynamic MLC rotation and Arc & VMAT.

The MLC workstation must have user interface, can open or close desired patient's file, can load treatment plan, graphical beams, eye view of the MLC leaf and collimator jaw position as well as 3-D transparent image of the surface contour, body organs and gross tumour volume, clinical target volume and planning target volume as planned in the treatment planning system.

3.5 ***Portal Imaging***

The electronic portal imaging system shall be based on amorphous silicon flat panel detector technology. The size of the flat panel detector shall be at least 30 cm x 30 cm or more with a resolution of 1024 pixels.

Portal Dosimetry verification license must be provided.

Specify portal imager panel size and pixel size – higher panel and pixel is preferable.

*3.6* ***IMRT****:*

Linac should be capable of performing both Step & shoot; Dynamic IMRT and all the necessary planning system, s/w and algorithm should be included in the offer.

## 4.0 Oncology information and image management / treatment record and verify system

The vendor shall provided a comprehensive oncology information & image management and treatment record & verify system. The system shall assist in the integration of radiotherapy patient data throughout the entire department. It shall also record and verify treatment parameters of patients undergoing treatment on the linac(s). The system shall be based on one comprehensive unified database, thereby eliminating the need for redundant entry of data used in different applications. The Oncology network system shall work on minimum 64 bit digital platform or higher.

The system shall provide the following functions: Record and Review Patient Diagnoses; Plan a course of treatment in advance so that treatments are readily delivered when the patient arrives; Write RT prescriptions that detail treatment techniques, fractions, and dose; Define treatment fields; Link setup fields and notes to treatment fields; Setup notes can include photos that show how to set up the patient; Track dose to specific sites; Define site breakpoints with instructions that appear when the breakpoint will be exceeded; Store treatment plan information to avoid redundant and time-consuming data entry.

MLC user operation shall be accomplished entirely through the Oncology Information System (OIS), thereby eliminating the need for a separate control station for the MLC. Planned leaf shapes shall be incorporated directly into a patient's planned treatment field(s) in the electronic Chart.

The MLC shape shall automatically appear on the OIS treatment screen during the setup and treatment of any patient with a planned MLC shape. The shape shall be displayed simultaneously with all other pertinent treatment parameters.

The system shall have the capability of storing patient photos facilitating correct treatment. The digital patient photographs should upload to the database. After treatment of the first field, all subsequent fields shall be automatically and sequentially downloaded to start auto-setup of the next field without requiring operator interaction at either the OIS console or In-Room Monitor.

The record and verification station shall accept and store demographic data, notes or comments and diagnostic information for each radiotherapy patient. When the patient proceeds with tumor localization, treatment planning and simulation, the treatment parameters will also be entered into the patient's file automatically or manually.

A daily patient schedule and time management schedule must be capable of being displayed on the computer monitor at the record and verify workstation. This schedule shall include, at a minimum, the scheduled treatment time for each patient, the patient's identification number and the patient's name. The schedule shall be used to select a patient for treatment on the accelerator.

The system shall be capable of maintaining a record of field-specific and treatment-specific daily and cumulative doses for the target site and additional sites of interest. It shall be possible to specify a prescribed dose for each treatment site for every patient. The system shall prevent treatment if this dose will be exceeded upon completion of the treatment. A manual override shall be provided. Overriding prescribed dose limits by unauthorized

personnel shall not be permitted. After the daily irradiation of a patient, the therapy history will be updated and the given target doses, or doses calculated to other sites, shall be accumulated.

The Operating System shall provide a convenient and efficient means for the user to generate and to print hard copy reports of information contained in the database.

The scheduler of the OIS should be capable of maintaining schedules for multiple departments and scheduling any resource desired by the site. It should have a graphical user interface for ease of customizing schedule views, changing appointment times and minimizing keystrokes.

The OIS shall provide the capability to integrate simulation, CT, MRI, PET and electronic portal imaging system images into the OIS database to provide a readily available reference during the patient's course of treatment. Reviewing images immediately after acquisition from a remote location shall be permitted. The OIS shall provide the additional feature of managing drug administration to patients.

The Hardware should consist of the following: Separate, but fully integrated Data and Image Servers with back up with 1 TB capacity or more to handle our busy department workload; 2 Edit Workstation for Image Review and Approval; a latest 10 mega pixel digital camera for acquiring patient photos; a networked color image DICOM laser printer; capability for high speed internet connectivity for Online Service support.

## 5.0 Treatment Planning System

An advanced, top-end 3-dimensional treatment planning system (TPS) that supports multiple dose calculation algorithms such as Monte-Carlo, anisotropic analytical algorithm, convolution superposition algorithm shall be supplied. The TPS software shall run on a very powerful, graphics intensive computer system with adequate, latest backup technology. The system shall have high capacity hard disks and a DVD writer.

The software must be capable of performing both 3D-CRT and as well as intensity modulated radiotherapy (IMRT) treatment planning for coplanar and non-coplanar beams. A TPS that can perform only IMRT treatment planning will be summarily rejected. If IMRT is delivered as a boost dose after delivery of partial treatment by conventional 3D-CRT plan, then it must be possible to incorporate the delivered plan at the time of IMRT treatment planning for the most optimal optimization. Virtual simulation feature shall be provided. Automatic image registration between different image sets (image fusion) shall be offered as a standard feature. For IMRT planning, the system shall support both static (step-and-shoot) and dynamic (sliding window) techniques. Dose may be computed at a user-specified depth in a flat water phantom for QA check of optimized plan. Beam parameters from an optimized plan may be transferred to a user-defined QA phantom.

In addition to supporting the supplied linac in this tender, the TPS software must support the existing linacs (if any) in the department information can be obtained from the department if necessary). External electron beam planning including 3D pencil beam dose calculation, AAA and /or Monte-Carlo dose calculation for coplanar and non-coplanar beams shall be provided. Compensator and block design, including transfer (via 3.5 inch floppy disk) of compensator and block data to the existing 3D computerized cutting and designing system in the user department. A complete DICOM-RT import/export license must be provided along with the DICOM-3 image import/export license.

Full network connectivity between the linac, the oncology information & treatment record & verify system, its additional workstations on either locations, all treatment planning systems on either locations must be established.

The TPS and its workstations will have 23" LCD monitors.

TPS should include the following planning System ;

i. Virtual Simulations –

ii.3D CRT

iii. Inverse Planning software for IMRT -

iv. Step and Shoot IMRT Planning

v. Sliding window IMRT planning/ Dynamic

vi. VMAT planning (future upgradable)

vii. Automatic Segmentation in Contouring (option)

viii. Planning for FFF application (future upgradable)

ix. TPS workstation with dose calculation License – 1 no

x. Contouring Workstation with license – 1 no

6.0 **Dosimetry Instruments / Accessories for Machine ;**

The standard Dosimetry equipment for machine QA shall be provided.

Please provide details.

**GENERAL CONDITIONS & REQUIREMENTS**

In the above specifications wherever the word 'shall' is mentioned, it is taken in the meaning that the required feature / facility / procedure / specification / standard is mandatory.

All claims regarding meeting of the specifications shall be duly supported by appropriate, latest technical catalogues / brochures from the manufacturer. Simply stating that the equipment meets the specifications is not sufficient and any such quotations will be summarily rejected. During the warranty period, software up gradation for the purchased clinical capabilities shall be provided free of cost wherever applicable.

The machine shall be AERB type approved (TAC) or with a NOC from the regulatory body.

The vendor shall give a minimum of Two years comprehensive, on-site warranty for the entire linac system (inclusive of vacuum and non-vacuum parts, all locally supplied items) from the principals. Pro-rata warranty is not acceptable.

Bidder will confirm that No refurbished spare parts to be considered during Warranty and CMC period and any such offer will be summarily rejected.

**CMC/ AMC :**

Bidder shall take care of CMC/ AMC of the equipment

UPS System with the power rating of 80 kVA for the entire linac for min. 20 min shall be supplied. UPS systems should take care of Linac, all computer terminals, workstations / accessories wherever applicable. Provide all the details.

The Chiller system 10Tr (back up Chiller Config) shall be provided along with the machine by the principals.

A closed-circuit color TV system and A patient calling system shall be supplied.

Internet broad band connectivity for remote servicing shall be provided by Purchaser.

Future Upgradation Possibility:

The model quoted shall be capable of onsite upgrade to following capabilities :

a. IGRT with 3D KV CBCT
b. VMAT
c. FFF

**Site Preparation & AERB :**

1. Vendor has to provide all support on Site Layout drawing/preparation, so that the same plan can be submitted to AERB for approval.
2. Any modification/changes on plan has to be done by the vendor.
3. Periodical site visit and support to be done by Vendor's experienced engineer.
4. Installation and commission will be done Free of cost.

Note: - The bidder has to upgrade the software & Hardware of the model quoted in the tender for High Energy Medical Linear Accelerator for Intensity Modulated Radio Therapy with appropriate collimaters on the demand of the user.

**Annexure III**

**Bidder Details**

**(to be filled in by each member of a consortium)**

1. Member's Details

    a. Name:

    b. Country of Incorporation:

    c. Address of the corporate headquarters and its branch office(s), if any, in India:

    d. Date of incorporation and/or commencement of business:

    e. Details of individual(s) who will serve as the point of contact/communication for the State Government:

        I. Name:

        II. Designation:

        III. Company:

        IV. Address:

        V. Telephone Number:

        VI. Email Address:

        VII. Fax Number:

    f. Particulars of the Authorized Signatory of the Member:

        I. Name:

        II. Designation:

        III. Company:

        IV. Address:

        V. Telephone Number:

VI. Email Address:

VII. Fax Number:

g. Details of Machines operated by the Member

| **Machine** | **Count** | **Duration of Operation (completed calendar years)** |
|---|---|---|
| CT | | |
| MRI | | |
| Linear Accelerator | | |

……..

Signature of Authorized Signatory

Name:

Designation:

Mobile No.:

Email Address: Date:

**Annexure IV**

**Statement of Legal Capacity**

To

The Director
Medical Education
Bhopal, Madhya Pradesh
Email: dme12001@yahoo.com
Phone: (0755)2551719; Fax – (0755) 2552388

Subject: **Statement of Legal Capacity**

Sir

We hereby confirm that we members in the Consortium have agreed that _____ will act as the Lead Member of our Consortium.

Moreover, we have agreed that _____ will act as our representative and has been duly authorized to submit the bid. Further, the authorized signatory is vested with requisite powers to furnish such a letter and authenticate the same.

Regards

---

Signature of Authorized Signatory (for each member)

Name:

Designation:

Date:

**Annexure V**

**Financial Capacity of Bidders**

**(to be filled in by each member of a consortium)**

1. Turnover of the Member:

| | **2014-15 (Rs)** | **2013-14 (Rs)** | **2012-13 (Rs)** |
|---|---|---|---|
| Turnover | | | |
| Total | | | |

2. Name and Address of Members' Bankers:

3. Name and Address of Member's Auditors:

……..

Signature of Authorized Signatory of the Auditors

Name:

Designation:

Mobile No.:

Email Address: Date:

**Annexure VI**

**Financial Bid**

To

The Director
Medical Education
Bhopal, Madhya Pradesh
Email: dme12001@yahoo.com
Phone: (0755)2551719; Fax – (0755) 2552388

Sir

We, hereby, offer to deliver the services in accordance with your tender dated …….

The Financial Proposal of the firm is as under:-

| Sr | Category of Patients | Common Percentage (%) Discount quoted on the base rates applicable for all the investigations and therapy as per the list provided in Annexure VIII, Annexure IX & Annexure X on cumulative basis |
|---|---|---|
| 1 | Percentage (%) Discount quoted on the base rates for various investigations and therapy as per Annexure VIII, Annexure IX & Annexure X for<br>**Category I**<br>Above Poverty Line (APL) Patients attending the IPD & OPD of the Medical College Associated Hospital | |
| 2 | Percentage (%) Discount quoted on the base rates for various investigations and therapy as per Annexure VIII, Annexure IX & Annexure X for<br>**Category II**<br>Above Poverty Line (APL) Patients who are the staff or first relative (Parents, Siblings, Spouse and Children) of the staff working in the Medical College and Associated Hospitals attending the IPD & OPD | |
| | Total Average Percentage Discount offered as per formula = $\frac{\text{(Category I \% quoted + Category II \% quoted)}}{2} \times 100$ | |

Sincerely

……..

Signature of Authorized Signatory

Name:

Designation:

Mobile No.:

Email Address: Date:

**Annexure VII**

**Letter of Transmittal**

To

The Director
Medical Education
Bhopal, Madhya Pradesh
Email: dme12001@yahoo.com
Phone: (0755)2551719; Fax – (0755) 2552388

Sir

We, the undersigned, offer to organize the Diagnosis and treatment services offered on in accordance with your tender dated …….

We, hereby, submit our bid which is placed in the attached envelope containing the following FOUR Envelopes:

- Envelope-A EMD & Commercial Proposal
- Envelope-B Containing Technical Proposal
- Envelope-C containing Financial Proposal
- Envelope -D Outer Envelope Containing Envelope A,B & C

We declare that all the information and statements made in this bid are true and we accept that any misrepresentation of facts may lead to our disqualification and/or black-listing.

The offer made by us in the Financial Proposal is valid till 6 months from the date of submission of this bid. We confirm that this bid will remain binding upon us and may be accepted by you at any time before the expiry date.

We agree to bear all costs incurred by us in connection with the preparation and submission of the bid and to bear any further pre-contract costs.

We undertake that in case there is any change in facts or circumstances during the consideration of our bid, we shall intimate your esteemed office of the same immediately.

We understand that the State Government is not bound to accept the lowest financial bid or any bid or to give any reason for award, or for the rejection of any bid.

We irrevocably waive any right or remedy which we may have to challenge or question any decision taken by the State Government in connection with the evaluation of this bid.

We understand that the project shall be awarded to a company already incorporated under the Companies Act of 1956 or 2013 or one which shall incorporate itself as such prior to execution of the Concession Agreement.

We confirm that we have the authority of …….. to submit this bid and to negotiate on its behalf.

Sincerely

……..

Signature of Authorized Signatory

Name:

Designation:

Mobile No.:

Email Address: Date:

Seal of the Firm:

**Annexure VIII**

**Base Rate List for Computed Tomography Investigations**

| Sr. No. | COMBISCAN | Proposed Base Rate (Rs) |
|---|---|---|
| 1 | COMBISCAN BRAIN | 9,000 |
| 2 | COMBISCAN BRAIN + ORBIT | 12,000 |
| 3 | COMBISCAN ORBIT | 7,000 |
| 4 | COMBISCAN TEMPORAL BONE | 9,000 |
| 5 | COMBISCAN PNS | 7,000 |
| 6 | COMBISCAN NECK | 7,500 |
| 7 | COMBISCAN CHEST | 9,000 |
| 8 | COMBISCAN SPINE ONE REGION | 9,000 |
| 9 | COMBISCAN JOINT | 7,000 |
| 10 | COMBISCAN PELVIS | 8,000 |
| 11 | COMBISCAN EXTRIMITY | 7,000 |
| 12 | COMBISCAN VERTIGO PROTOCOL | 10,000 |
| 13 | COMBISCAN STROKE PROTOCOL | 14,500 |
| 14 | COMBISCAN COCHLEAR IMPLANT PROTOCOL | 10,000 |
| 15 | COMBISCAN HEART | 14,500 |
| 16 | COMBISCAN ABDOMEN | 12,000 |
| 17 | COMBISCAN CT WHOLE ABD & MRCP | 10,000 |

## Base Rate List for Computed Tomography Investigations

| Sr.No. | Test | Propose Base Rate Plain (Rs) | Proposed Additional Base Rate With Contrast (Rs) |
|---|---|---|---|
| 1 | CT Scan Brain | 2,300 | 1,000 |
| 2 | CT Brain and MRI Diffusion | 3,500 | |
| 3 | CT Scan PNS region (With Sagittal& Coronal) | 2,500 | |
| 4 | CT PNS [ Limited Corona! ] | 1,800 | |
| 5 | CT Orbits | 3,500 | 1,000 |
| 6 | CT Scan temporal bone – HRCT | 4,500 | 1,000 |
| 7 | CT scan spine (any one part) | 4,500 | 1,000 |
| 8 | CT Scan neck region / Face | 5,000 | 1,000 |
| 9 | CT Scan chest/Thorax / HRCT | 5,000 | 1,000 |
| 10 | CT Scan abdomen - Upper Abdomen | 5,000 | 1,500 |
| 11 | CT Full Abdomen - Abd/Pelvis | 5,500 | 2,000 |
| 12 | CT Scan pelvis | 5,000 | 1,500 |
| 13 | CT Angiography [ Contrast Must & Included ] . | | |
| | (c) Cerebral | 10,000 | |
| | (d) Carotids | 10,000 | |
| | (c ) Coronary with calcium scoring | 12,000 | |
| | 8. Pulmonary | 10,000 | |
| | 9. Great Vessels | 10,000 | |
| | 10. Coeliac | 10,000 | |
| | 11. Mesentric | 10,000 | |
| | 12. Renal | 10,000 | |
| | ( l ) Splenic | 10,000 | |
| | m) Peripheral Limb Angio | 10,000 | |
| | n) Hepatic | 10,000 | |
| | (L) Aorta | 10,000 | |
| | (M) Any two regions | 13,000 | |
| 14 | Virtual Endoscopy | | |
| | (n) Bronchus | 5,000 | 1,000 |
| | (o) Colon | 5,000 | 1,000 |

| | | | |
|---|---|---|---|
| 15 | Dental CT [ Per Jaw 1 | 3,500 | |
| 16 | CT IVU ( Contrast Must ) | 7,000 | |
| 17 | CT Enteroclysis | | |
| 18 | 3DCT | 5,000 | |
| 19 | CT Guided Biopsy (including Biopsy Gun) | 6,000 | |
| 20 | CT Guided Procedure | 6,000 | |
| 21 | CT Myelo ( Inclusive of Contrast ) | 7,000 | |
| 22 | CT Cisternography ( Inclusive of Contrast ) | 7,500 | |
| 23 | Calcium Score | 3,000 | |
| Note: - Anaesthesia I Screening study / CD / 2nd Opinion / emergency charges I will be extra as applicable. | | | |
| Note: - Ambulance facility available at minimal charges. | | | |
| Note:- Emergency Charges- Rs.500 outdoor scanning and films only) | | | |

**Annexure IX**

**Base Rate List for Magnetic Resonance Imaging (MRI) Investigations**

| Sr. No. | Magnetic Resonance Imaging Tests | Proposed Base Rate Plain (Rs) |
|---|---|---|
| 1 | MRI Brain | 6,000 |
| 2 | MRI Angio | 6,500 |
| 3 | MRI Venogram | 6,500 |
| 4 | MR Brain with Angio / ( Stroke Protocol ) | 8,500 |
| 5 | MR Brain with Veno | 8,000 |
| 6 | MR Brain + Angio + Veno | 11,000 |
| 7 | MRI IAC (Temporal Bone ) + Brain | 7,000 |
| 8 | MRI Orbits | 6,500 |
| 9 | MRI Pituitary (Sella) | 6,500 |
| 10 | MR Brain + Spectroscopy | 10,000 |
| 11 | MR Brain with Orbits | 8,500 |
| 12 | MRI Brain + Whole Spine / Neural Axis | 12,000 |
| 13 | MR Epilepsy [ TLE ] | 7,000 |
| 14 | MR Vertigo ( Brain +Angio+Carotids+IAC+C-spine ) | 8,500 |
| 15 | MR Volumetry + MRS + TLE | 9,000 |
| 16 | Brain + CSF Q Flow | 8,500 |
| 17 | Brain ( Trigeminal ) | 7,000 |
| 18 | MRI Whole Spine | 12,000 |
| 19 | Spine Trauma Protocol (MRI-one region spine+CT cuts+Whole spine screening ) | 8,500 |
| 20 | MRI Cervical Spine | 6,000 |
| 21 | MRI Cervico-Dorsal Spine | 6,500 |
| 22 | MRI Dorsal Spine | 6,000 |
| 23 | MRI Dorso-Lumbar Spine | 6,500 |
| 24 | MRI Lumbar Spine –Dedicated | 6,500 |
| 25 | MRI Lumbar Spine with Stress | 8,000 |
| 26 | MRI Screening | 4,500 |
| 27 | MRI Knee Joint [ Per Joint ] | 5,500 |

| | | |
|---|---|---|
| 28 | Joint Trauma protocol ( MRI- one region+CT +3D Reconstruction ) | 8,500 |
| 29 | MRI Hip Joint [ Per Joint ] | 6,000 |
| 30 | MRI Extremity [ Single Region ] | 6,000 |
| 31 | MRI Thigh [ Single ] / Leg / Foot | 6,000 |
| 32 | MRI Ankle [ Single ] | 6,500 |
| 33 | MRI Shoulder [ Single ] | 6,000 |
| 34 | MRI Elbow [ Single ] | 6,000 |
| 35 | MRI Wrist [ Single ] | 6,000 |
| 36 | MR1 SI joints | 5,500 |
| 37 | MRI TM Joint | 7,000 |
| 38 | MRI Pelvis with Both Hips | 7,500 |
| 39 | MRI Brachial Plexus including Cervical Spine | 7,500 |
| 40 | MRI PNS | 6,000 |
| 41 | MRI Neck | 6,000 |
| 42 | MRI Chest | 6,000 |
| 43 | MRI Abdomen [ Upper ] | 6,000 |
| 44 | MRI Pelvis | 6,000 |
| 45 | MRI Abdomen + Pelvis | 8,500 |
| 46 | MR Perfusion | 7,500 |
| 47 | MRCP + (Abdomen) ) | 7,000 |
| 48 | MR Whole Body STIR ( screening ) | 10,000 |
| | *[ Contrast Must & Included ]* | |
| 49 | MR Urography | 8,500 |
| 50 | MR Perineum | 8,500 |
| 51 | MRI Prostate ( Diffusion + Dynamic + Spectro ) | 8,500 |
| 52 | MR1 Contrast Enhanced Angio | 8,500 |
| 53 | MRI Breast | 8,500 |
| | | |
| | **MRI Protocols** | |
| 54 | MRI Brain Tumor [Contrast+Diffusion+Perfusion+spectro] | 12,500 |
| 55 | MRI MS Protocol [ Contrast + Orbit + Whole Cord ] | 12,500 |
| 56 | MR Cisterno ( MRI + HRCT ) | 8,000 |

| | | |
|---|---|---|
| | | |
| 57 | Combiscan ( Single Region ) without contrast | 8,500 |
| 58 | Backache Protocol ( L.S. Spine + Screening of Pelvis + S.I.Joint + Hip Joint & Whole Spine Screening ) | 8,500 |
| 59 | Headache Protocol ( Brain + Veno + PNS + Anglo ) | 10,000 |

| |
|---|
| Contrast @ Rs. 2500 |
| Extra Region Screening @ Rs.( 1500 / 2000 / 2500 & 3000 ) |
| Note:- Anesthesia / Screening study / CD / 2nd Opinion / emergency charges / will be extra as applicable. |
| Note:- Ambulance facility available at minimal charges. |

## Annexure X

### Base Rate List for Linear Accelerator Therapy

| Sr. | Tests | Rate (Rs) |
|---|---|---|
| 1 | Standard Radiotherapy | 93,000/- |
| 2 | Palliative therapy | 47,500/- |
| 3 | 3D Planning | 8910/- |
| 4 | 2D Planning | 6350/- |
| 5 | Intensity modulated radiotherapy | 1,29,000/- |
| 6 | Image guided radiotherapy | 188,000/- |
| 7 | Electron beam therapy | 89,060/- |