

सलनः प्रकाशन हतु प्रात ।

**CANCER HOSPITAL & RESEARCH INSTITUTE,  
JAN VIKAS GWALIOR M. P.  
MANDRE KI MATA, GWALIOR-474002(M.P.) Ph. 0751-2336502-03**

Sealed Tenders in two parts (Technical Bid and Financial Bid) are invited for **3D TREATMENT PLANNING SYSTEM** for Onchology so as to reach the undersigned latest by 02/3/2015 (up to 4 PM). Tender Form indicating Technical specification terms & Conditions can be obtained on payment of 500/- in cash or Rs. 525/- by post if required through D.D. payable in favour of the Director.

DIRECTOR

संचालक

**CANCER HOSPITAL & RESEARCH INSTITUTE  
JAN VIKAS NYAS, GWALIOR MP  
MANDRE KI MATA, GWALIOR 474009 MP  
PHONE 0751-2336502/03/04 Fax 0751-2336506**

**TENDER DATE EXTENSION INFORMATION**

Last date for receipt of tender for 3D Treatment Planning System for Oncology is extended from 2.03.2015 to 16.03.2015 (Monday). Complete Tender Form may be submitted by 16.03.2015 in office hours.

**Medical Superintendent**

**Cancer Hospital & Research Institute**  
**(Jan Vikas Nyas) Gwalior**  
**Tender Form**

**Date : .....**

1. Name of Firm/Person : .....
2. Address for communication : .....  
.....
3. Permanent Address : .....  
.....
4. Name of the authorized person  
with complete address : .....
5. If any Authorization form any  
manufacturer/company(details) : .....
6. Details of the DD attached : .....
7. Details of S.T./CST/Drug License : .....
8. Phone Number/Mobile No. : .....  
Fax No. : .....  
E-mail : .....

I hereby declare that I have read the tender document and I voluntarily accept all the terms & conditions laid down by the C.H.R.I. All the rates quoted by me are valid up to ..... if any disparity in supply of price were made by me the hospital would have the authority to take any action including forfeiture of earnest money deposit. I agree to abide all the decisions by the hospital in this regard.

**Date: .....**

**Place:.....**

**Name of the Authorization Signatory  
with Signature**



**Cancer Hospital & Research Institute**  
**Jan Vikas Nyas, Gwalior**

**Tenders are invited for the purchase of 3-D Treatment Planning**  
**System for Radiation Oncology**

**Terms & Condition:-**

- 1- Tender should reach this office by hand or by post on or before 2.03.2015 (Monday).
- 2- A Bank Draft of Rs. 20,000/- in favour of Medical Superintendent, Cancer Hospital & Research Institute, Gwalior should be enclosed with the tender form as Earnest Money.
- 3- The price should be quoted in Indian Currency only.
- 4- The tender should contain full description of items quoted etc.
- 5- **Payment** : Management may consider part payment of the total cost of the unit at the time of delivery of the unit whereas balance amount will be paid after installation, commissioning and satisfactory demonstration of the unit.
- 6- **Warranty** : **A.** The supplier should give minimum comprehensive warranty of five years.  
**B.** Separate price must be quoted for extended comprehensive warranty for another three years after expiry of five years of warranty.  
**C.** During the warranty period any new application software up-gradation will be provided free of cost and without any extra charges.  
**D.** Separate price must be quoted for annual maintenance contract/comprehensive maintenance contract for three years after expiry of warranty.
- 7- Various up-gradation modules available and price must be quoted separately.
- 8- Quote your detailed specifications supported by original manufacturer brochure and product catalogue (photocopy or computer print will not be accepted).

- 9- Indicate if the LC will be opened for the purchase of the equipment.
- 10- Bidders are required to demonstrate the working of treatment planning software before opening of tender.
- 11- The firm will have to provide training (on\_ site & off \_ site ) to the Radiation oncologist & Physicist for one week. The detail of such training should be included in the offer.
- 12- Power input to be 220-240VAC, 50 Hz fitted with Indian plug.
- 13- Reputed brand online UPS (APC, Tata Liebert) of suitable rating with voltage regulation and spike protection for 30 minutes back up for the system and room.
- 14- Availability of Spare part: After the approval of the tender the supplier shall give and undertaking on stamp paper that the spare parts will be provided on demand to this hospital within a reasonable time as and when they are required. This undertaking shall be given at the time of installation.
- 15- List of users of unit is enclosed along with their full address.
- 16- List following documents is also required to be attached wit the tender.
  - (a) Demand draft towards earnest money.
  - (b) Income tax certificate/details of PAN
  - (c) Sales tax number and certificates.
  - (d) Details of the product with specification.
  - (e) Status of the firm.
  - (f) Quality certification, ISO certificate & safety features specially with regard to use hospitals.
- 17-. The undersigned reserves the right to cancel any tender without assigning any reason. The management has the right to accept the tender even of higher rates.
- 18- In case of dispute the legal jurisdiction will be of Gwalior.



**Administrative Officer**



## Specifications for 3D Treatment Planning System

Quotations are invited for

- Latest 3D Treatment Planning System (TPS) for Radiotherapy planning with treatment planning accessories.

### 1. Description of the system

- 1.1 3D Treatment Planning System capable of radiotherapy treatment planning for teletherapy (Cobalt & linac) and brachytherapy.
- 1.2 This system should have capability of integration with Simulators, CT scanner/ MRI, HDR, Cobalt machine & Linear Accelerators of any vendor.
- 1.3 The TPS should be capable of 3D treatment planning with independent work station for virtual simulation.
- 1.4 The TPS should have latest state of art hardware & software with following features as described in Technical specifications

### 2. Technical Specifications

#### 2.1 Software

- 2.1.1 Patient registration, record and file management should be user friendly.
- 2.1.2 Patient Data Acquisition through film scanners, digitizer, DICOM 3.0 import facility from CT Scanners/ MRI & Simulator of any vendor.
- 2.1.3 Advanced Contouring tools with patient identity information should be available. Auto segmentation/contouring based on electron density values for different organs should be included & follow ICRU-50 Volume definitions.
- 2.1.4 System should also be capable of showing the combined dose distribution to the target volume resulting from whole treatment received by teletherapy (photon, electron, photon + electron) and brachytherapy.
- 2.1.5 System must have facility of treatment planning for Photon & Electron beam of all energies in the therapeutic range.
- 2.1.6 The system must be capable of calculating mixed beam treatment with photon and electron radiation.
- 2.1.7 System must have facility of machine data acquisition through RFA/scanner, etc.
- 2.1.8 The system must support regular & irregular fields for all types of beam modifiers such as Bolus, Blocks, MLCs, tissue compensator, wedges, dynamic wedge, asymmetric beams, etc.
- 2.1.9 System must be capable of conformal radiotherapy planning and multiple isocentre calculations.
- 2.1.10 System should be capable of making tissue inhomogeneity correction (as per electron density), irregular point dose calculations and auto-contouring as per CT data. Accuracy of dose calculations must be as per TG-23 Bench Mark Tests.



- 2.1.11 Facility of Brachytherapy Planning for remote afterloading systems using different types of radiation sources in clinical practice.
- 2.1.12 Source strength for all types of sources in terms of air KERMA rate, apparent activity, exposure rate for all the radioactive sources used in radiotherapy.
- 2.1.13 Capable of calculating tissue attenuation and source sheathing.
- 2.1.14 Provision of assigning source strength and treatment time to each individual radioisotope. Auto decay correction in output.
- 2.1.15 Provision to position, delete source, dose points and applicator points with keyboard and mouse.
- 2.1.16 Facility of advanced comprehensive plan and display tools, drawing and margining tools, multiplan comparison and summation.
- 2.1.17 Provision of 3-D display of entire anatomical volume with sources, dose points, different body organs, isodose distribution with different color coding.
- 2.1.18 Display of dose to any defined point or volume. Isodose display in percentage as well as in cGy
- 2.1.19 System should be able to store all unit and source data separately.
- 2.1.20 Facility of creating user's defined templates for various situations.
- 2.1.21 It should have capability of Virtual Simulation feature and multi-planar reconstruction in sagittal, coronal and oblique planes from CT data set.
- 2.1.22 TPS should show DVH, Beam's Eye View at any depth, shielding area, etc.
- 2.1.23 It should have capability of importing image from CT, MRI, Gamma camera via networking (DICOM compatible)
- 2.1.24 Specify the algorithm (pencil beam/collapsed cone convolution/Monte Carlo) used for calculations in the TPS.
- 2.1.25 System should have image registration and fusion facility for the images acquired from different imaging modalities.
- 2.1.26 System should have separate password for physics area, clinical area and system administrator.
- 2.1.27 Optional Software (Price must be quoted separately)**
  - 2.1.27.1 IMRT planning
  - 2.1.27.2 SRS and SRT Treatment planning
  - 2.1.27.3 Radiobiological Plan Evaluation for teletherapy, brachytherapy, combined

## 2.2 Hardware

- 2.2.1 Latest high end PC available at the time of supply with DVD Writer of latest technology, Hard Disk, USB Pen Drive, external hard disk, A3 size Flat Bed Color Film Scanner for CT / MRI and X-Ray Radiographs, 19"/21" LCD Color Display Unit, Laser Printer A4 size and Color Inkjet Printer of A3 size. The model, dpi and the make of scanner should be mentioned.
- 2.2.2 Separate one contouring station connected with TPS and the CT/MRI available in the hospital.

2.2.3 Complete installation of the system and interior of the TPS room to the user's satisfaction.

### **3. User manuals and certificates**

- 3.1 User/Technical/Maintenance manuals to be supplied in English.
- 3.2 Operators, physics, configuration and utility programme manuals.
- 3.3 Certificate of calibration and inspection.
- 3.4 License for Operating system and software must be supplied along with the system to the Hospital.
- 3.5 List of important spare parts and accessories with their part number and costing
- 3.6 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
- 3.7 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

### **4. Environmental factors**

- 4.1 The unit shall be capable of being stored continuously in ambient temperature of 0-50 °C and relative humidity of 15-90%
- 4.2 The unit shall be capable of operating continuously in ambient temperature of 10 – 40 °C and relative humidity of 15-90%.

**5 Insurance:** Insurance of the equipment en-route up to the department till commissioning is responsibility of supplier.

**6** All information asked for must be provided in the same order as in the specifications. Incomplete and ambiguous information will not be accepted.