

“Workshop on Radiation based techniques for Imaging and Therapy of Cancer” **17th August 2024**

Report

Preamble

Vidyalankar Institute of technology (VIT) always promotes interaction with industries and research laboratories to inculcate research culture among faculty and students. In this regard VIT had conducted six workshops

1. “Application of Radiation and Radioisotopes in Diagnosis and Therapy of Cancer” on Saturday, 15 October 2016.
2. “ Current Challenges in Diagnosis and Radiotherapy of Cancer ”on 6 October 2018.
3. “Principles and Instrumentation of Radio-Diagnostic and Radiotherapy Techniques” on 1 February 2020
4. “Technological Advancements and Challenges of Radiation Based Techniques in Diagnosis and Therapy of Cancer” 20 March 2021
5. "Advancements in Radio-Diagnostic and Radiotherapy Equipment" 6 August 2022
6. "Workshop on Techniques of Diagnosis and Radiotherapy of Cancer"9 September 2023

Biomedical Engineering Department of VIT wanted to continue interaction with the Society. In the year 2024 VIT had requested for a workshop at Tata Centre and with the help of Dr. Badri.N. Pandey, Chairman, SRR Academic Activities Committee, we could get permission from Tata Memorial Hospital. It was decided to conduct a **“Workshop on Radiation based techniques for Imaging and Therapy of Cancer”** on **17th August 2024** an area important to Society and Biomedical Engineering students. Dr. Badri suggested collaborating with **Dr. Rutu Raj Upeti** at **Tata Memorial Hospital, Parel, Mumbai**. **Mrs. Priyadarshini Sahoo** was appointed as **Coordinator**

About Society for Radiation Research

Society for Radiation Research is a Society of Scientists, Clinicians, Students, Academia and Industries having interest in field of Radiation Research. The society is started with the following objectives:

1. To promote research in the areas of:
 - Radiation biology with basic and applied aspects.
 - Clinical radiation biology and oncology.
 - Radiation hormesis and low dose radiation biology.
 - Environmental radiation biology, non-ionizing radiation effects.
 - Radiation medicine, radiation technologies.
 - Transnational research.
 - Terrestrial and space radiation biology and any other relevant research areas.
2. To facilitate integration and interaction of different radiation research areas.
3. To promote the diffusion of knowledge in these research areas through organizing meetings, conferences, workshops, awareness programs, scientific publications etc.
4. Promote discussion, interactions amongst scientist-public-industry and acting as liaison to communicate facts and research developments to public, government and regulatory bodies.
5. Integration of Society with other National and International Scientific Bodies.
6. Facilitate and promote research in areas of radiation research by various means. Encourage and promote young researchers and students to pursue research and build career in the areas of radiation research.
7. Promote and facilitate education of radiation research in national Institutes and Universities.

About Biomedical Engineering Department, VIT

The Biomedical Engineering Department of VIT has a clear vision to become a **Centre of Excellence** in the field of Biomedical engineering where learners are nurtured in a scholarly environment to evolve into competent professionals to benefit society. Department has been accredited by National Board of Accreditation and has signed MoU with GE Healthcare for creating a Centre of Excellence lab. Biomedical Department at VIT also has signed MoU with Capgemini Engineering to promote Industrial and Academic interaction. VIT is also accredited with A+ grade by NAAC. The Competent Authority has granted Autonomous status to VIT from year 2023.

About the Workshop

VIT had requested for a workshop at Tata Centre Dr. Badri N Pandey Chairman, SRR Academic Activities Committee had approached Dr Sudeep Gupta, Director TMH, Dr J. P. Agarwal for their approvals. With the help of Dr. Badri.N. Pandey, of SRR we could get permission from Tata Memorial Hospital. It was decided to conduct a **“Workshop on Radiation based techniques for Imaging and Therapy of Cancer”** on **17th August 2024** an area important to Society and Biomedical Engineering students. Dr. Badri suggested collaborating with **Dr. Rutu Raj Upeti at Tata Memorial Hospital, Parel, Mumbai. Mrs. Priyadarshini Sahoo** was appointed as **Coordinator**.

VIT had approached SRR to organise a **“Workshop on Radiation based techniques for Imaging and Therapy of Cancer”** for Biomedical Engineers, at any hospital associated with SRR possibly TMH. In response to our request Dr. Badri Pandey from SRR had contacted Dr Sudeep Gupta,

Director TMH, Dr J. P. Agarwal for their approvals. A convenient date was suggested by TMH as 17 August, and a brochure was circulated among faculty and on SRR website. No of participants were limited to 30 as per Tata Memorial Hospital norms.

Brochure



SOCIETY FOR RADIATION RESEARCH (SRR)
in association with
Vidyalankar Institute of Technology
Wadala, Mumbai



organizes

**"Workshop on Radiation based techniques for
 Imaging and Therapy of Cancer"**

DATE/TIME: August 17, 2024 (SATURDAY), 10:00 am onwards

Venue



TATA MEMORIAL HOSPITAL
Department of Radiation Oncology, Medical Physics and Nuclear Medicine

**Limited Participants
 (First-Cum-First Basis)**

No Registration Fee



SRR GOVERNING COUNCIL

Designation	Name
President	Dr R. Bilimappa, Prof. Emeritus and Senior Consultant, Radiation Oncology, HCG Hospitals, Bangalore
Vice President	Prof. Venkatachalam Perumal, Professor and Head, Department of Human Genetics Sri Rama Chandra University, Porur, Chennai
Secretary	Dr Amit Kumar, Radiation Signalling and Cancer Biology Section, Radiation Biology and Health Sciences Division, Bhabha Atomic Research Centre, Mumbai
Treasurer	Dr Chandan Kumar, Radiopharmaceutical Division, Bhabha Atomic Research Centre, Mumbai
Founder President, SRR and Editor-in Chief, Journal of Radiation and Cancer Research	Dr K. P. Mishra, Ex-Vice Chancellor, Nehru Gram Bharati University, Allahabad, Ex-Head, Radiation Biology and Health Sciences Division, Bhabha Atomic Research Centre, Mumbai 400 085
Editor-in Chief, Journal of Radiation and Cancer Research	Dr Nagraj Huligol, Advanced Centre for Radiation Oncology, Dr Balabhai Nanavati Hospital, Vile Parle (W), Mumbai 400 056

Members
Dr Chinmay Kumar Panda, Dept of Oncogene Regulation, Chittaranjan National Cancer Institute, 37 SP Mukherjee Road, Kolkata
Dr Gautam Sarma, Department of Radiation Oncology, All India Institute of Medical Sciences (AIIMS), Guwahati
Dr J P Agrawal, Head, Department of Radiation Oncology, Tata Memorial Hospital, Mumbai
Dr Kamlesh Mumbrekar, Manipal Academy of Higher Education, Manipal
Dr Pramila Sawant, Head, Internal Dosimetry Section, Radiation Safety and Systems Division, Bhabha Atomic Research Centre, Mumbai
Dr Sandeep Shukla, Institute of Nuclear Medicine and Allied Sciences, Delhi
Dr T Verma, King George's Medical University, Lucknow
Prof. Vandana Jain, Head, Department of Radiotherapy and Oncology, Rural Medical College, Loni, Ahmednagar



PROGRAM OUTLINE-Topic Covered

Brachytherapy HDR V3-18

Mr. Mukesh Patil
Time: 10:15 am- 10:45 am
Venue: Annex Basement

Linear Accelerator Novalis Tx

Mrs. Priyadarshini Sahoo
Time: 11:00 am- 11:30 am
Venue: HBB Basement

PET-CT Techniques

Mrs. Sneha Mithun
Time: 11:45 am- 12:30 pm
Venue: Main Building Basement

Contact details

Prof. Geetha Narayanan, Mob: +91-9821854617
Email: geetha.narayanan@vit.edu.in
Prof. Arunkumar Ram, Mob: +91 8850860004
Email: arunkumar.ram@vit.edu.in
Registration can be done online.
Last Date for Registration: August 15, 2024

Society for Radiation Research (SRR)

(Registration No.: Maharashtra State, Mumbai 2280, 2014 GBBSD)
Registered Office: Advanced Centre for Radiation Oncology,
Nanavati Max Super Speciality Hospital, Vile Parle (W), Mumbai
400 056
Email: srrindia1415@gmail.com
Web page: www.srrindia.org
Facebook: <https://www.facebook.com/Society-for-Radiation-Research-SRR-771727076329168/>

Registration Link

<http://tiny.cc/SRR-VIT24>

Program Outline

Topic	Speaker
Brachytherapy HDR V3-18	Mr. Mukesh Patil Time-10.15am-10.45 am Venue: Annex basement
Linear Accelerator Novalis Tx	Dr. Priyadarshini Sahoo Time-11.00am-11.30 am Venue: HBB basement
PET CT Technique	Mrs. Sneha Mithun Time-11.45am-12.30 pm Venue: Main Building basement

Overview of the Workshop

The participants were assembled near Tata Memorial Hospital, Homi Bhabha Building Gate at 9.45am. After security checks and permission from Centre students were assembled in Homi Bhabha Building Gate reception and then divided in to three groups



Participants at **Tata Memorial Hospital**

The students were divided into three groups and they were directed to three different locations, namely Brachytherapy HDR V3-18, Linear Accelerator Novalis Tx and PET CT Technique

The session on Linear Accelerator Novalis Tx was by Dr. Priyadarshini Sahoo who elaborated on the evolution of Linear accelerator. She elaborately explained about the principle of working of LINAC and the various models available. Also, she elaborated on the control systems and how to target the radiation to the affected location and avoid neighbouring areas



Ms. Priyadarshini Sahoo on LINAC Linear Accelerator



Mr. Mukesh Patil Demonstrating Brachytherapy

This session was followed by Brachytherapy HDR V3-18 given by Mr. Mukesh Patil. He explained about the use of Brachy therapy in treatment of skin and cervical cancer. According to him radioactive material is injected through small tubes to the affected areas. This will destroy the cancer cells in the area and also prevent spreading of the disease.

The next session was taken by Mrs. Sneha Mithun on "PET CT Technique". In this session complete demonstration of PET CT scan with patient on the machine was given. Since patients were on the machine photographs were not allowed. Students were explained about the technology of PET CT. They were also explained about the precautions to be followed before going for PET scan

A group photograph was taken at the end of the session. Later faculty had discussion with Dr. Priyadarshini Sahoo regarding possibility of collaborative projects at the centre.

All the sessions were quite interactive, and the participants were involved in the demonstrations which were obvious from the level of questions asked by them. The speakers were also interested in all demonstrations as the participants were interactive and were asking specific doubts

The workshop was really useful for all the participants. The session concluded with feedbacks from the participants. This was followed by a meeting and vote of thanks by faculty from VIT.



Token of appreciation from VIT

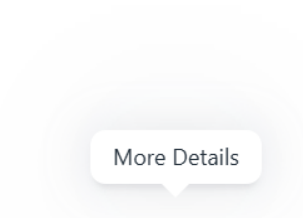
Members of TMH team for sparing time, putting efforts and whole hearty Organizing the Workshop at TMH.

Feedbacks on various aspects of the workshop

1. The Workshop helped me to understand the Concepts and Technology involved in Imaging and Radiotherapy

28 Responses

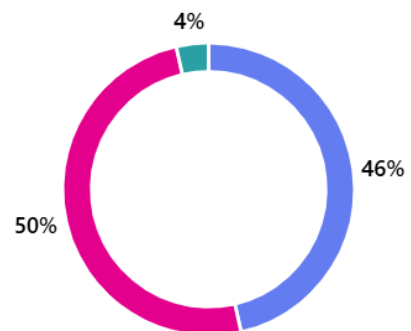
Strongly Agree	14
Agree	14
Neutral	0
Disagree	0



2. The Resource Person and Experts were able to explain the concepts and helped solve my queries

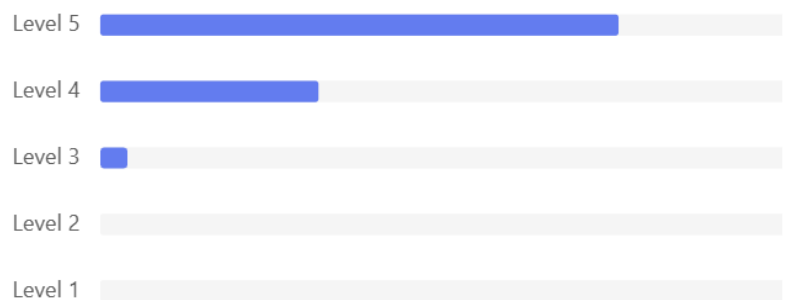
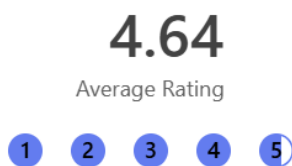
28 Responses

Strongly Agree	13
Agree	14
Neutral	1
Disagree	0



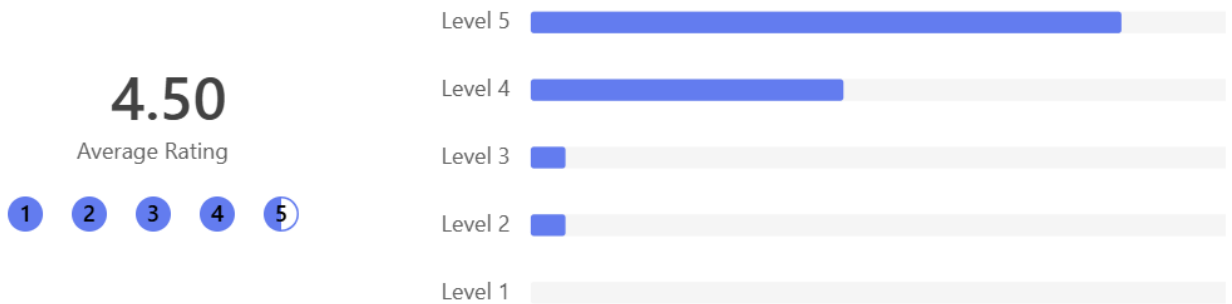
3. Rate the quality of visit to lab facilities in the scale of 1 to 5

28 Responses



4. Rate the workshop overall in the scale of 1 to 5 1: Poor 2: Satisfactory 3: Good 4: Very Good 5: Excellent

28 Responses



4.50

Average Rating



Do you have any remarks/ suggestion for the subsequent workshop

- It should have been full day
- Well organized workshop. Next time we can keep something hands on.
- Keep more like these sessions.
- The visit was really nice. I like to attend more visits like this.
- It would be nice if there could be a provision to let us get a hands-on workshop on any modality along with the technician who'd also demonstrate how they calibrate and troubleshoot any errors in the equipment's.
- It was a very great opportunity to observe cancer treatment and it's various factors from a close view.
- It was a good experience.
- We would love to visits more hospitals.

Convener

Head, Biomedical Engineering