

## FELLOWSHIP IN BRACHYTHERAPY

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### ABOUT THE UNIVERSITY

Malla Reddy Vishwavidyapeeth is a reputed educational institution located in Hyderabad, Telangana, India. Recognized as a “Deemed to be University under Distinct (Existing) Category,” the university offers multidisciplinary programs across medical, dental, nursing, pharmaceutical sciences, and allied health sciences. The institution emphasizes academic excellence, clinical expertise, innovation, and global collaboration in advancing healthcare education.

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### PROGRAM OVERVIEW

The Fellowship in Brachytherapy is a one-year specialized program designed to develop expertise in internal radiation therapy techniques for cancer management.

The program focuses on:

- Principles and physics of brachytherapy
- Intracavitary and interstitial brachytherapy
- Image-guided brachytherapy
- High Dose Rate (HDR) and Low Dose Rate (LDR) techniques
- Treatment planning and dosimetry
- Radiation safety and complication management

The program integrates clinical exposure, hands-on procedural training, and advanced radiation planning to ensure comprehensive expertise in brachytherapy.

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(Deemed to be University)

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### PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

Graduates will be able to:

1. Apply brachytherapy techniques effectively in cancer treatment.
  2. Perform radiation planning and dose optimization.
  3. Utilize image-guided brachytherapy methods.
  4. Ensure patient safety and evidence-based care.
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### PROGRAM OUTCOMES (POS)

1. **Technical Expertise:** Master HDR and LDR brachytherapy procedures.
  2. **Planning Skills:** Perform accurate treatment planning and dosimetry.
  3. **Clinical Skills:** Manage gynecological, prostate, and other cancers using brachytherapy.
  4. **Safety Management:** Ensure radiation protection and toxicity management.
  5. **Decision-Making Skills:** Optimize individualized cancer treatment strategies.
  6. **Research Orientation:** Contribute to advancements in radiation oncology.
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#### COURSE OUTCOMES (COS)

- **CO1:** Understand principles of brachytherapy and radiation physics.
  - **CO2:** Perform intracavitary and interstitial procedures.
  - **CO3:** Apply image-guided brachytherapy techniques.
  - **CO4:** Manage radiation-related toxicities.
  - **CO5:** Integrate brachytherapy into multimodal cancer care.
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#### PROGRAM-SPECIFIC OUTCOMES (PSOS)

1. Demonstrate expertise in brachytherapy techniques.
  2. Apply precision-based internal radiation therapy.
  3. Integrate clinical and technological approaches in oncology.
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#### PROGRAM DETAILS

- **Certificate Awarded by:** Malla Reddy Vishwavidyapeeth
  - **Program Duration:** One-Year Fellowship
  - **Mode of Delivery:** Clinical + Hands-on + Theoretical
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#### ELIGIBILITY CRITERIA

- **Academic Qualification:** MD/DNB in Radiation Oncology or equivalent
  - **Professional Requirement:** As per institutional norms
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#### KEY FEATURES

- Advanced training in internal radiation therapy
- Hands-on exposure to HDR and LDR brachytherapy
- Training in image-guided procedures
- Focus on precision oncology

- Evidence-based radiation practice
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## LEARNING OUTCOMES

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### KNOWLEDGE & UNDERSTANDING

- Comprehensive understanding of brachytherapy principles
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### COGNITIVE SKILLS

- Clinical decision-making in radiation oncology
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### PRACTICAL & PROFESSIONAL SKILLS

- Proficiency in brachytherapy procedures and planning
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### TRANSFERABLE SKILLS

- Patient communication and multidisciplinary coordination
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### SUBJECT-SPECIFIC SKILLS

- Advanced internal radiation therapy techniques
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## CURRICULUM MODULES – THEORY

- Radiation Physics in Brachytherapy
  - HDR & LDR Techniques
  - Intracavitary & Interstitial Procedures
  - Image-Guided Brachytherapy
  - Treatment Planning & Dosimetry
  - Radiation Safety
  - Toxicity Management
  - Multimodal Cancer Therapy
  - Advances in Brachytherapy
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## PRACTICAL COURSEWORK

- HDR and LDR brachytherapy procedures
- Treatment planning and dose calculation
- Image-guided brachytherapy sessions
- Clinical case discussions

- Radiation safety protocols
  - Research and documentation
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## CAREER OUTCOMES

Graduates can pursue careers as:

- Brachytherapy Specialist
- Radiation Oncologist (Advanced Practice)
- Consultant in Oncology Centers
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