

Krishna Vishwa Vidyapeeth

(Deemed to be University), Karad

Curriculum for Fellowship in

Medical Oncology

Duration 1 year

GOALS

- To providing specialized training in medical Oncology, including Hospital based oncology practice, Community Oncology development and Community intervention strategies.
- To make understand the concept of holistic management of a cancer patient.
- To instil concept of interdisciplinary management of patients by interacting with other team members like the radiation oncologist, surgical oncologist, Nuclear medicine & allied imaging departments, palliative care specialists & pathologists as & when necessary.

OBJECTIVES

The objectives of the clinical training are:

1. To develop clinical judgment and technical skills in diagnosis and the total management of patients with neoplastic diseases, with various modalities of treatment individually or in combination.
2. To make the student expert in handling all kinds of medical emergencies arising either due to cancer spread or problems related to therapy. The latter include:
 - a) infections secondary to severe neutropenia, leading to respiratory distress/failure, renal insufficiency, hepatic insufficiency and neurological disturbance.
 - b) hemorrhagic complications,
 - c) electrolyte disturbance
 - d) other toxicities.
3. To impart full knowledge concerning cancer chemotherapy, hormone therapy, biologics, gene therapy, immune therapy; their mechanism of action, side effects, mode of administration, interrelation with other drugs and their therapeutic effects.
4. To make the candidate familiar with all the modern diagnosis aids including ultrasound, CT scan, NMR, MRI, PET scans, mammography, endoscopy, and radionuclide scans.
5. To make the candidate conversant with the indications and application of blood component therapy, newer antibiotics, newer antifungal and antiviral agents and other supportive measures.
6. To make candidate capable of performing basic clinical procedures (bone marrow aspiration, biopsy, lumbar punctures, abdominal and thoracic paracentesis).

7. To provide an insight into clinical research (design, data collection, analysis and interpretation of related statistics), cancer epidemiology, preventive and community oncology.
8. To make the candidate understand the psychology of his patients, which is often disturbed with the knowledge that he or she has a cancer. The candidate will be made to learn to understand and tackle these psychological issues with compassion and gentle behaviour.
9. To teach the candidate about effective communication skills and how to impart bad news to the patients.
10. To make them expert in managing the terminally ill patients. They would be given knowledge regarding pain management and other palliative care measures.

Eligibility:

Medical Graduates with degree equivalent to MBBS and recognised by National Medical Commission (NMC) & Having MD in General Medicine recognised by NMC.

Clinical experience and teaching activities:

- Clinical work including chemotherapy, daily patient management, management of patients on chemotherapy and palliative care for advanced malignancy patients.
- Weekly multi-disciplinary seminar so as to cover the topics of Malignancies of Head & Neck, Gastrointestinal tract, Thorax, Bones & soft tissue sarcomas, Breast,
- Skin, Gynecologic oncology and other miscellaneous sites - over a 36-month period.
- Once in 15 days journal club presentation to keep updated about recent developments in the field of oncology.
- Interesting case discussions in weekly multidisciplinary tumor board meetings.

Methods of training:

- Month-wise structure of Training Program: The candidate will spend major part of the training in the Department of Medical Oncology.
- Postings in other departments (Radiation oncology, Pathology, Molecular Lab, Pain and Palliative care) will be done in co-ordination with those departments.
- Rotation and Posting in other departments: The candidate would spend the training period with the following structured rotation:
 - 9 months Medical Oncology
 - 1 month Radiation Oncology
 - 1 month Surgical Oncology
 - 1 month Oncopathology

Syllabus:

1. Essentials of Molecular Biology- Principles, Genomics and Cancer, Signal transduction, Immunology, Cytogenetics, Cell Cycle, Apoptosis, Invasion and metastases, angiogenesis and

Carcinogenesis: Genetics, viral, physical and Chemical. Genomics and Proteomics, Destabilization of the Cancer Genome, Telomeres, Telomerase, and Cell Immortalization, Cancer Stem Cells.

2. Epidemiology-epidemiological methods, descriptive and analytical epidemiology.
3. Principles of Cancer management; Surgical Oncology, Medical Oncology, Radiation Oncology and Biologic Therapy.
4. Cancer Therapy.
5. Pharmacology of Cancer Biotherapeutics - Interferon Interleukin, Hormonal therapy, Differentiating agents, monoclonal antibodies, anti angiogenic factors.
6. Clinical Trials.
7. Cancer prevention, Tobacco related cancers, diet, chemo prevention.
8. Cancer screening.
9. Cancer Diagnosis – Molecular pathology and Cytology, Imaging, Endoscopy, Laparoscopy.
10. Specialized techniques- vascular access, isolated perfusion, and Intensity Modulated Radiation therapy.
11. Systemic Oncology:
 - i. Head and Neck Cancer
 - ii. Lung Cancer
 - iii. Mediastinal neoplasm
 - iv. Gastrointestinal tract cancer
 - v. Cancers of Genitourinary system
 - vi. Gynecologic cancer
 - vii. Breast cancer
 - viii. Endocrine Malignancies
 - ix. Musculoskeletal tumours
 - x. Sarcomas of the Soft Tissue DM Medical Oncology Curriculum 7
 - xi. Mesothelioma
 - xii. Cancer of the skin
 - xiii. Malignant Melanoma
 - xiv. Central nervous system malignancies
 - xv. Pediatric malignancies
 - xvi. Lymphomas and Leukemias
12. Paraneoplastic syndromes.

13. Cancer of the unknown primary.
14. Peritoneal carcinomatosis.
15. Cancer in immunosuppressed host.
16. Oncological emergencies – SVC syndrome, spinal cord compression, metabolic emergencies, urology emergencies.
17. Treatment of metastatic cancer-brain, lung, bone, liver, malignant Effusions and ascites.
18. Haemopoetic therapy-transfusion, grown factors, autologous and Allogenic stem cell transplantation.
19. Infection in the cancer patient.
20. Supportive care and quality of life-pain management, nutritional support, sexual problems, genetic counseling, psychological issues, community resources, care of the terminally ill patient.
21. Adverse effects of treatment –nausea and vomiting. Oral complications, pulmonary toxicity, cardiac toxicity, hair loss, gonadal dysfunction, recurrence, miscellaneous toxicity.
22. Rehabilitation of cancer patients.
23. Oncology nursing including various access routes.
24. Ethical Issues in Oncology.
25. Societal Issues in Oncology
26. Information systems in Oncology.
27. Alternative methods in Cancer treatment.
28. Newer approaches in Cancer treatment- Gene therapy, Molecular therapy, Cancer vaccines, image guided surgery, heavy particles in Radiation therapy, Focused Ultrasound, RNA Inhibition, Charged Particle Therapy, Robotic Surgery, Nanotechnology
29. Reconstructive surgery.



Duration of the Program : 1 year

Tuition Fee of the Program : USD 2000

