



YENEPOYA

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

YENEPOYA (DEEMED TO BE UNIVERSITY)

Deralakatte, Mangaluru -575018

REGULATIONS AND CURRICULUM GOVERNING

MCH SURGICAL ONCOLOGY

(CURRICULUM - EFFECTIVE FROM 2019-20)

ATTESTED

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YENEPOYA

(DEEMED TO BE UNIVERSITY)
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NOTIFICATION – 37-ACM/10/2019 dtd. 31.12.2019

Sub: Starting of M.Ch (Surgical Oncology) course

Ref: Resolution of the Academic council at its 37th meeting held on
13.12.2019, vide agenda-24

The Academic Council at its 37th meeting and subsequently 48th meeting of Board of Management held on 13.12.2019 have accepted the proposal for starting of M.Ch (Surgical Oncology) course with effect from the academic year 2019-2020 onwards.

REGISTRAR

To,

The Principal, Yenepoya Medical College

Copy to:

1. Controller of Examinations
2. File copy

PTD

Objectives :

At the end of the MCh course in Surgical Oncology, the student should be able to :

- Recognize the key importance of medical problems in the context of the health priority of the country.
- Practice the specialty of Surgical Oncology in keeping with the principles of professional ethics and oncological principle.
- Take detailed history , perform full physical examination and make a clinical diagnosis .
- Perform and interpret relevant investigations(Imaging and laboratory).
- Diagnosis the illnesses in adults based on the analysis history , physical examination and investigative work up.
- Plan and advice measures for the prevention of cancer .
- Plan rehabilitation of adults suffering from chronic illness, and those with special needs.
- Manage oncological emergencies efficiently .
- Demonstrate skills in documentation of case details ,and of morbidity and
- Mortality data relevant to the assigned situation.
- Demonstrate communication skills of a high order in explaining management and prognosis , providing counseling and giving health education messages to patients, families and communities.
- Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities.
- Develop skills as a self directed learner ,recognize continuing educational needs, use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence based medicine.
- Demonstrate competence in basic concepts of research methodology and epidemiology.
- Facilitate learning of medical /nursing students,practicing physicians , paramedical health workers and other providers as a teacher-trainer.
- Play the assigned role in the implementation of national health programs, effectively and responsibly.
- Function as a productive member of a team engaged in health care , research and education.

Syllabus:

A trainee in Surgical Oncology has to become familiar with the basic principles of

- Surgery
- Radiotherapy
- Chemotherapy
- Endocrine therapy
- Immunotherapy
- Evaluation of the choices of treatments
- Adverse effects with these treatments
- Interactions of these treatments modalities with those of surgery
- Surveillance and prevention of cancer
- Palliative oncology
- Clinical research in oncology

1. Etiology and epidemiology of malignant diseases

- Genetic Predisposition to Cancer
- Chemical Carcinogenesis
- Hormones and the Etiology of Cancer
- Ionizing Radiation
- Ultraviolet Radiation Carcinogenesis
- Physical Carcinogens
- Trauma and Inflammation
- Oncogenic viruses
- Parasites
- Environmental factors in carcinogenesis

2. Prognosis and natural history of malignant diseases

- Mechanisms and patterns in local, regional and distant dissemination of malignant diseases
- Differences in natural history between hereditary and sporadic forms of cancer
- Diseases predisposing to malignancy e.g. Inflammatory bowel disease or primary sclerosing cholangitis
- Prognostic and predictive factors
- Cancer etio pathogenesis
- Genetics of hereditary malignant diseases

3. Cancer biology

- Cell kinetics, proliferation, apoptosis and the balance between cell death and cell
- proliferation
- Angiogenesis and lymphangiogenesis
- Genome maintenance mechanisms to prevent cancer
- Intercellular and intermolecular adhesion mechanisms and signaling pathways
- Potential effects of surgery and surgery-related events on cancer biology (e.g.
- Angioenesis)

4. Tumor immunology

- Cellular and humoral components of the immune system
- Regulatory mechanisms of the immune system
- Tumor antigenicity
- Immune-mediated antitumour cytotoxicity
- Effect of cytokines on the tumor
- Effects of the tumor on anti-tumor immune mechanisms
- Potential adverse effects of surgery and surgery-related events (like blood transfusions) on the immunological responses

5. Cancer Screening and Early Detection

- Cancer screening and early detection

6. Theory and practice of clinical trials

7. Cancer Epidemiology

- Cancer Epidemiology

8. Cancer Prevention

- Prevention of tobacco-related cancers
- Nutrition in the etiology and prevention of cancer
- Chemo-prevention of cancer
- Cytokinetics
- Drug resistance and its clinical circumvention
- Principles of dose, schedule, and combination
- Chemotherapy
- Regional Chemotherapy
- Animal models in developmental therapeutics

- In vitro and in vivo predictive tests
- Pharmacology
- Toxicology by organ system

9. Chemotherapeutic Agents and their principles

- Folate Antagonists
- Pyrimidine and Purine Antimetabolites
- Alkylating Agents and Platinum Antitumor Compounds
- Anthracyclines and DNA Intercalators
- Epipodophyllotoxins / DNA Topoisomerases
- Microtubule – targeting anticancer drugs derived from plants and microbes
- Vinca Alkaloids, Taxanes, and Epothilones, Asparaginase
- Recent Advances/concepts
- Bone marrow transplantation

10. Principles of Endocrine Therapy

- Steroid Hormone Binding and Hormone Receptors
- Hypothalamic and Other Peptide Hormones
- Corticosteroids
- Estrogens and Anti-estrogens
- Clinical use of Aromatase Inhibitors in Breast Carcinoma
- Progestins
- Androgen Deprivation Strategies in the treatment of Advanced Prostate Cancer

11. Principles of Cancer Pathology

- Principles of cancer pathology

12. Principles of Imaging

- Imaging neoplasms of the head and neck and central nervous system
- Imaging neoplasms of the thorax
- Imaging neoplasms of the abdomen and pelvis
- Cross-sectional imaging of musculoskeletal neoplasms
- Imaging the breast
- Ultrasound in cancer medicine
- Radionuclide imaging in cancer medicine
- Perspectives in imaging
- Interventional radiology for the cancer patient

13. Principles of Surgical Oncology

- Principles of Surgical Oncology
- Vascular access in cancer patients
- Advances in surgical oncology

14. Principles of Radiation Oncology

- Physical and biologic basis of Radiation Oncology
- Principles of Hyperthermia
- Photodynamic Therapy for cancer

15. Principles of Medical Oncology

- Principles of Medical Oncology

16. Principles of Biotherapeutics

- Immunostimulants
- Active specific immunotherapy with vaccines
- Interferons
- Cytokines: biology and applications in cancer medicine
- Hematopoietic Growth Factors.
- Monoclonal Serotherapy
- Cancer Gene Therapy
- Hepatitis Viruses
- Parasites

17. Neoplasms of the Thorax

- Cancer of the Lung
- Malignant Mesothelioma
- Thymomas and Thymic Tumors

18. Neoplasms of the Female Reproductive Organs

- Neoplasms of the vulva and vagina
- Neoplasms of the cervix
- Endometrial cancer
- Neoplasms of the fallopian tube
- Ovarian cancer
- Gestational Trophoblastic Disease

19. Neoplasms of the Breast

- Neoplasms of the breast

20. Neoplasms of the Skin

- Neoplasms of the skin

21. Malignant Melanoma

- Malignant melanoma

22. Neoplasms of the Bone and soft Tissue

- Bone Tumors & Sarcoma of non- osseous tissues

23. Neoplasms of the Hematopoietic System

- Myelodysplastic Syndrome
- Acute Myeloid Leukemia in adults
- Chronic Myeloid Leukemia
- Acute Lymphocytic Leukemia
- Chronic Lymphocytic Leukemia
- Tumors of the heart and great vessels
- Primary germ cell tumors of the Thorax
- Metastatic tumors in the Thorax
- Hairy – Cell Leukemia
- Hodgkin’s Disease
- Non – Hodgkin’s Lymphomas
- Mycosis Fungoides and the Sezary Syndrome
- Plasma cell tumors
- Mast cell Leukemia and other mast cell neoplasms
- Polycythemia vera and essential thrombocythemia

24. Neoplasms of the Alimentary Canal

- Neoplasms of the Esophagus
- Neoplasms of the Stomach
- Primary Neoplasms of the Liver
- Treatment of Liver Metastases
- The Gallbladder

- Diagnosis and Management of Biliary Tract Cancer
- Neoplasms of the Ampulla of Vater
- Neoplasms of the Exocrine Pancreas
- Neoplasms of the small intestine, vermiform appendix, and peritoneum, colon and
- rectum & anal canal

25. Neoplasms of the Genitourinary Tract

- Renal Cell Carcinoma
- Neoplasms of the Renal Pelvis and Ureter
- Bladder Cancer
- Neoplasms of the Prostate
- Neoplasms of the Penis
- Neoplasms of the Testis
- Neoplasms in Acquired Immunodeficiency Syndrome

26. Neoplasms of Unknown Primary Site

- Neoplasms of unknown primary site

27. Neoplasms in Children

- Principles and practice of pediatric oncology
- Incidence, origins, epidemiology
- Principles of pediatric radiation oncology
- Late effects of treatment of cancer in children and adolescents
- Childhood Acute Lymphoblastic Leukemia
- Pediatric Acute Myeloid Leukemia
- Hodgkin's disease in children and adolescents
- Non – Hodgkin's Lymphoma in children
- Langerhan's Cell Histiocytosis
- Hepatic tumors
- Renal tumors of childhood
- Germ cell tumors
- Neuroblastoma
- Soft tissue sarcoma of childhood

28. Complications of Cancer and its Treatment

- Management of cancer pain
- Anorexia and Cachexia
- Antiemetic Therapy
- Neurologic complications

- Dermatologic complications of cancer chemotherapy
- Skeletal complications
- Hematologic complications of cancer
- Blood bank support
- Coagulopathic complications of cancer
- Urologic complications
- Cardiac complications
- Respiratory complications
- Liver function and hepatotoxicity in cancer
- Gastrointestinal complications
- Oral complications
- Gonadal complications
- Endocrine complications
- Secondary cancers : incidence, risk factors, and management

29. Infections in Patients with Cancer

- Infections in patients with cancer

30. Oncologic Emergencies

- Oncologic Emergencies

31. Other areas in which knowledge is to be acquired

- Biostatistics, Research methodology and clinical Epidemiology
- Ethics
- Medico legal aspects relevant to the discipline
- Health policy issues as may be applicable to the discipline

Rules and regulations pertaining to PG course as per the Council

Governing body :

Duration of the course:

MCh in Surgical Oncology - 3years

Teaching, Learning and Evaluation:

Experiential learning	Ot-intraoperative teaching and assessing the MCh resident in the skills of surgery.
Integrated inter –disciplinary learning	Tumor Board 2pm every Monday discussing minimum 6 to 8 cases
Participatory learning	Daily rounds in the ward training for MChPG’s.methodology of maintenance of records, how to prepare cases for surgery and follow up. Reports to HOD and VC
Self –directed learning	Discuss of cases in OPD for smooth management and treatment for OT procedure and mode of treatment .

Teaching Schedule

Following is the suggested weekly teaching programme in the Department of Oncology.

Sl.no.	Description	Frequency
1.	Case Presentation & discussion	Once a week
2.	Seminar	Once a week
3.	Journal club	Once a week
4.	Grand Round presentations	Once a month
5.	Emergency case discussions	Once a week
6.	Statistical & Mortality Meet	Once a month
7.	Clinico- Pathological meet	Once a month
8.	Clinico- Radiological meet	Once a month
9.	Clinico- Surgical meet	Once a month
10.	Faculty lecture teaching	Once a month

External posting

Radiation Oncology	4weeks
Medical Oncology	4 weeks
Onco-pathology	2 weeks
Community Oncology	2 weeks
Radiology Department	2 weeks
Pain and Palliative care	2 weeks
External posting as observer to other institution	4 weeks

Internal assessments:

The performance of the resident during the training should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

Sl.No	Items	marks
1.	Personal attributes	20
2.	Clinical work	20
3.	Academic activities	20
4.	End of term theory examination	20
5.	End of term practical examination	20

1. Personal attributes :

- **Behaviour and emotional stability** : Dependable , disciplined, dedicated , stable in emergency situation , shows positive approach .
- **Motivation and initiative:** Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- **Honesty and integrity:** Truthful , admits mistakes, does not cook up information ,has ethical conduct , exhibits good moral values , loyal to the institution .
- **Interpersonal skills and leadership quality:** Has compassionate attitude towards patients and attendants , gets on well with colleagues and paramedical staff , is respectful to seniors, has good communication skills.

2. Clinical work:

- **Availability:** Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave .

- **Diligence:** Dedicated , hardworking , does not shirk duties , leaves no work pending , does not sit idle , competent in clinical case work up and management .
- **Academic ability:** Intelligent, shows sound knowledge and skills, participates adequately in academic activities , and performs well in oral presentation and departmental tests.
- **Clinical performance :** Proficient in clinical presentations and case discussion during rounds and OPD work up , Preparing documents of the case history /examination and progress notes in the file (daily notes , round discussion , investigations and management) skill of performing bed side procedures and handling emergencies.

3. **Academic Activity :**

Performance during presentation at Journal club /Seminar / Case discussion/ Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

4. **End of term theory examination :**

End of 1st ,2nd year and after 2 years 9 month examination will be conducted by the department of oncology Yenepoya Medical College Hospital.

5. **End of term practical / oral examination:**

After 2 years 9 months examination will be conducted by the department of Oncology, Yenepoya Medical college and Hospital.

Marks for personal attributes and clinical work should be given annually by all the consultants under whom the resident is posted during the year. Average of the three years should be put as the final marks out of 20.

Marks for academic activity should be given by the all consultants who have attended the session presented by the resident.

The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations

Dissertation / Publication Guidelines :Mandatory

Student Research activities

- Publication : Index Journals
- Presentation : Regional /National
- Poster : Regional / International / National