Department of Surgical Oncology

MCh Surgical Oncology PG Curriculum

1) Learning Outcomes

Practice the specialty of Surgical Oncology in keeping with the principles of professional ethics and oncological principles.

Offer to the community, the current evidence based standard of care in Surgical Oncology and recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy

- Ability to independently perform elective and emergency surgery for various solid tumors.
- Should have mastered most of the competencies, pertaining to Surgical Oncology, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system.
- Ability to be an integral member of multidisciplinary team to help in patient centered decision making process.
- Plan and advise measures for the prevention and rehabilitation of patients suffering from disease and disability related to the cancer.
- Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behavior in accordance with the societal norms and expectations.
- Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyze relevant published research literature.

2) SYLLABUS:

Objectives of M.Ch. Surgical Oncology

Develop clinical judgment and technical skills in the comprehensive management of patients with cancer. The special technical skills are concerned with multimodality treatment of cancer and the mastery of surgical management of cancer. In addition learning of surgical techniques and integration of surgical treatment as part of the overall care of cancer patients.

BASIC & ALLIED SCIENCES:

Pathology:

Modern pathology consists of many laboratory sciences including histopathology, cytology, immunohistochemistry, immunology etc. The general pathology of tumours, their modes of spread and knowledge of their effects on various human systems. This knowledge and experience would be gained through an integrated teaching programme of clinico-pathological meetings.

Tumour Biology & Immunology:

Knowledge of these areas gives necessary insight in the management of cancer. Knowledge of cell kinetics and difference between normal and cancer cells is fundamental. Cancer immunology is one of the major areas of progress in understanding tumour biology.

Radiation Therapy:

Basics of radiation therapy in the management of cancer.

Clinical Pharmacology and Medical Oncology:

Knowledge of drugs used in the treatment of cancer.

Cancer Epidemiology:

In addition to guiding the treatment of prevalent cancers understanding cancer epidemiology would help in understanding the distribution and determinants of cancer in human populations. Incidence, causative factors, cancer control programme, prevention of cancer, cancer screening, research methodology, design and conduct of clinical research and trials

Genetics:

Genetic mechanisms in neoplastic diseases are being more clearly understood. A broad understanding of the genetic basis of cancer development and the basics of genetic counselling for cancer.

Medical Statistics:

Working knowledge of medical statistics is required. This will help in presentation and analysis of scientific data and in the writing and publication of medical research.

Part-I

1. Etiology of cancer
2. Pathogenesis of cancer

3. Experimental Oncology
4. Tumor Immunology
5. Tumor Biology
6. Principles of Cytogenetics and Molecular Biology
7. Host effects of cancer
8. Haematological complications of cancer
9. Disseminated intravascular coagulation
10. Development of new drugs
11. Infections in patients with cancer
12. Cancer detection & prevention
13. Diagnostic Radiology
14. Principles of Management
15. Principles of Nuclear Medicine
16. Experimental Design of clinical trials
17. Principles of Cancer Surgery
18. Principles of Radiation Therapy
19. Principles of Cancer Chemotherapy
20. Chemotherapeutic agents
21. Principles of Endocrine Therapy
22. Blood component therapy

Part-II

Clinical Surgical Oncology:

Cancer of the Breast, Bone & Soft Tissues, Gastro Intestinal Tract.

Cancer of the Lung, Oesophagus, Mediastinal tumours, Cardiac, Pleural and Pericardial tumours, and miscellaneous tumours of thorax.

Genito-Urinary Tumours, Gynecological cancers

Cancers of Head & Neck

Paediatric solid tumours

Lymphomas

Metastatic tumours of unknown origin

Reconstructive Surgery

Rehabilitative measures in oncology

Palliative care

Oncologic emergencies

Part-III

Selected new developments:

- Hyperthermia
- Radiation Sensitizers

- Photodynamic therapy
- Brachytherapy -Intraoperative
- Particle beam radiation therapy
- Targeted therapy
- Nuclear medicine
- Cryosurgery
- New developments in cancer therapy
- New imaging techniques

3) TEACHING LEARNING METHODS:

Teaching method and learning methods will include

a) Knowledge acquisition by

- Personal study including effective use of medical literature, tutorials, post graduate teaching.
- Journal Club
- Seminar (presentations)
- Lecture/ discussion: lectures on newer topics by faculty, in place of seminar/as per need.
- Case presentation/Discussion: Trainees will present a clinical case for discussion before a faculty and discussion made pertaining to its management and decision to be recorded in case files.

b) Clinical skills and attitudes by

- Demonstration of examination skills in patients
- Presenting history, demonstrating clinical findings & use of investigations on ward rounds or tutorial sessions
- Presenting cases for group discussion – grand rounds, PG meetings etc.
- Observation of consultants managing clinical problems in day to day practice
- Observation of consultants communicating with patients and members of team in day to day practice
- Clinical teaching: In OPD, ward rounds, emergency, ICU and operation theater
- Bedside clinical training for patient care management and for bedside manners

- Grand ward rounds
- Multi-disciplinary seminars
- Clinico-pathological Conference: All students are expected to present cases of interest by turn. Active participation by pathologists is recommended. Prior intimation of case by students to faculty members is expected. Such meetings should be entered into logbook.
- Interdepartmental Meeting (Tumor Board): It is strongly recommended that Tumor Board meetings be held once a week especially with Department of Radiation Oncology, Medical Oncology and Pathology. Either case presentations or a topic of common interest can be actively discussed.

c) Procedures

- Demonstration of technique by Faculty in patients requiring the procedure and learning as second and first assistants.
- Perform procedure under observation and independently
- Reinforce skills during on the job training with both in-patients and out-patients.

d) Paper presentation

e) Poster presentation

4) Interdisciplinary training:

- Participation in multidisciplinary management of patients through weekly Tumor Board.
- Short rotation of 2 weeks in the Department of Radiation oncology

5) Assessment Methods:

- **The formative assessment** will be observation of the resident's (sutdent's) performance in day to day practice. This requires close interaction between the residents and consultants, allowing direct observation of the resident's performance in a range of clinical settings. Formative assessment of knowledge will also include annual appraisals by external subject experts, assessment of

presentations in clinics, grand rounds, seminars etc. The log book will also be assessed periodically.

- **The summative assessment** of competence will be done in the form of MCh Final Examination leading to the award of the degree of MCh in Surgical Oncology. The final examination is a two-stage examination comprising of theory and practical examination.

EXAMINATION PATTERN: As per other M.Ch. programmes

A. Research Project: Thesis
B. Theory Paper
    i. Basic Sciences as applicable to Surgical Oncology.
    ii. Clinical and Surgical Oncology.
    iii. Principles and Practice of Oncology.
    iv. Recent Advances in Oncology, Epidemiology and Rehabilitation
C. Clinical Examination.
    i. Long case.
    ii. Short cases.
D. Viva Voce Examination

Including Pathology (specimens), imaging (X-ray, mammography, CT, MRI etc.), operative surgery, surgical instruments and devices.

AWARD OF EXAMINATIONS: As per University rules.