BRANCH – VII D.M. MEDICAL ONCOLOGY

SYLLABUS / CURRICULUM:

1) Basic Scientific Principles:-

As foundations for treating malignant disease, the trainee should understand the biology of cancer, principles of therapy and proper conduct and interpretation of clinical research.

A. Cancer Biology:- Trainees should know the biology of normal cells and the basic processes of carcinogenesis. The should have an understanding the gene structure, organization, expression and regulation. A fundamental understanding of the cell cycle, its control by oncogenes and its interaction with chemotherapy is important. They should understand tumour cell kinetics, proliferation and programme cell death and the balance between cell death and cell proliferation.

Syllabus reading to include:

1. Essentials of Molecular Biology – Basic Principles. Genomics and Cancer, signal transduction, Immunology, Cytogenetics, Cell Cycle, Apoptosis, inversion and metestases, angiogenesis and Carcinogenesis, - Genetics, Viral Physics and Chemical.
2. Epidemiology – epidemiologic methods, descriptive and analytical epidemiology.
3. Principles of cancer management surgical Oncology, Medical Oncology, Radiation Oncology and Biologic therapy.
4. Cancer Chemotherapy.
5. Pharmacology of Cancer Biotherapeutics – interferon's interleukins, hormonal therapy, differentiating agents, monoclonal antibodies, antiagiogenic factors.
6. Clinical Trials.
7. Cancer Prevention – tobacco related cancers, diet chemoprevention.
8. Cancer Screening.
9. Cancer Diagnosis – Molecular pathology and Cytology, Imaging, Endoscopy, Laparoscopy.

10. Specialised techniques – minimal access surgery. Vascular access, isolated perfusion, intensity modulated radiation therapy.

11. Systemic Oncology:

i) Head and Neck Cancer.
ii) Long Cancer.
iii) Mediastinal neoplasms.
iv) Gastrointestinal tract cancer.
v) Cancers of the Genitourinary system.
vi) Gynaecologic cancer.
vii) Breast cancer.
viii) Endocrine Malignancies.
ix) Musculoskeletal turnouts.
x) Mesothelioma.
xi) Cancer of the Skin.
xii) Malignant Melanoma.
xiii) Central nervous system – malignancies.
xiv) Paediatric malignancies.
xv) Lymphomas and leukemia.

12. Pereneoplastic syndromes.

13. Cancer of the unknown primary site.

14. Peritoneal carcinomatosis.

15. Cancer in immunosuppressed host.

16. Oncologic emergencies – SVC syndrome, spinal cord compression, metabolic emergencies, urologic emergencies.

17. Treatment of metestatic cancer – brain, lung, bone, liver, malignant effusions and ascitis.

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- neuses and vomiting. Oral complications, pulmonary toxicity, cardiac toxicity, hair loss, genital dysfunction, second cancers, miscellaneous toxicity.

22. Rehabilitation of the cancer patient.

23. Oncology nursing including venous access.

24. Ethical issues in oncology.

25. Information systems in Oncology.

26. Alternative methods of cancer treatment.

27. Newer approaches in cancer treatment- Gene therapy, molecular therapy, cancer vaccines, image guided surgery, heavy particles in radiation therapy.

28. Reconstructive surgery.