College of Physicians and Surgeons of Mumbai

Syllabus for CPS-PG-Course

DHON-DIPLOMA IN HAEMATO ONCOLOGY

College of Physicians and Surgeons of Mumbai

CPS House, Dr. E. Borges Marg, Parel, Mumbai – 400012.

DHON-DIPLOMA IN HAEMATO ONCOLOGY

AIMS :

To produce a hemat-oncologist who:

Is capable of providing an excellent patient care

Possesses adequate knowledge base (both basic and applied) to effectively interact with medical colleagues in a wide range ofdisciplines.

Is a good researcher

Is a competent teacher

COURSE DESCRIPTION

Eligibility Criteria for Candidates:

i. A candidate should possess MBBS degree/ equivalent degree as per provisions of Indian Medical Council Act.

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ii. Candidates having a recognized 3 years degree Qualification (MD/MS/DNB) in any General Medicine or Paediatrics speciality

or 2 years Diploma Qualification in General Medicine or Paediatrics specialty

Duration of the Course : 2 years

OBJECTIVES AND GUIDELINES TO THE CONDUCT OF PROGRAM

It is a 2-year course that imparts intense training to candidates into the field of medical oncology and related subjects with adequate exposure to clinical and laboratory based activities.

CLINICAL TRAINING

The objectives of the clinical training are:

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

Tomakethestudentexpertinhandlingallkindsofmedicalemergenciesarisingeitherduetocancerspread or problems related to therapy. The latter include: a) infections secondary to severeneutropenia, leading to respiratory distress/failure, renal insufficiency, hepatic insufficiency, andneurological disturbance, b) hemorrhagic complications, c) electrolyte disturbance, d) othertoxicities.

To impart full knowledge concerning cancer chemotherapy, hormone therapy, biologics, gene therapy, immunetherapy; theirmechanismofaction, sideeffects, modeofadministration, interrelation with other drugs and their therapeutic effects.

Tomakethecandidatefamiliarwithallthemoderndiagnosisaidsincludingultrasound, CT scan, NMR, MRI, PET scans, mammography, endoscopy, and radinuclide scans.

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.

To make the candidate fully conversant with and trained in various aspects of high dose chemotherapy and stem cell transplantation (both allogeneic and autologous) including schedule of treatment, indication for the use of growth factors, GVHD prophylaxis and management of various complications including acute and chronic GVHD.

To provide an insight into clinical trials (design, data collection, analysis and interpretation of related statistics), cancer epidemiology, preventive and communityoncology.

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 behavior.

Toteachthecandidateabouteffectivecommunicationskillsandhowtoimpartbadnewstothe patients.

Tomakethemexpertinmanagingtheterminallyillpatients.Theywouldbegivenknowledge regarding pain management and other palliative caremeasures.

GUIDELINES

The candidate works in the department of hemat-oncology as following

INDOORS POSTING

This may vary from 8 months

The candidate is allotted certain beds and he is required to work up patients admitted on those beds. He plans out a diagnostic work up and treatment plan, discusses it with the concerned consultants,

presents it on the grand rounds and assumes complete responsibility of the patients during their hospital stay. He should work in harmony with the ward nurses.

OUT PATIENT DEPARTMENT (OPD) POSTING

Duration is 12 months.

The candidate is posted to chemotherapy evaluation clinics and various

specialty clinics including *breast cancer, gastrointestinal, urology, lymphoma-leukemia, pain evaluation, bone and soft tissue, pediatric tumors, head and neck, gynecology oncology, pulmonary oncology.*

The candidates posted to these clinics work under the supervision of consultants. They are expected to see new as well as follow-up patients so as to plan out the management and assess the therapeutic responses of a particular patient.

DAY CARE AND OPD PROCEDURES (MINOR OT) POSTING During this posting a candidate is expected to learn skills _ In introducing per cutaneous subclavian, internal jugular, and femoral vein catheters _ Familiarity with different venous access devices likes Hickman catheter, subcutaneous port etc. _ Institution of chemotherapy and supervision of side effects _ Procedures like bone marrow biopsy, liver biopsy, trucut biopsy, lumbar	4 months
BMT UNIT POSTING The candidate works under the supervision of concerned consultants and assumes responsibility of managing the patients undergoing high dose chemotherapy.	
ELECTIVE POSTING The candidate selects the area of his or her interest, it may be training within the institute or at other specialized centers within or out side India. The candidate is required to seek acceptance from the concerned departments/centers where he wishes to work and also permission	
ANCILLARY POSTING _ Surgical oncology _ Radiation oncology _ Laboratory _ Rotation to blood bank and nuclear medicine department	

LABORATORY TRAINING

The candidate, apart from understanding the value of laboratory tests in a given malignancy must possess the basic knowledge of interpreting the laboratory data and correlating it with clinical data. For this purpose, candidate is posted in various laboratories through laboratory posting or dissertation topic.

The candidate are posted to various laboratories, some o which are attached to medical oncology itself, such as cytogenetics laboratory, in-vitro tissue culture laboratory. In addition, candidate is posted in immunology, microbiology, HLA and pathology laboratory.

_ These postings enable the candidate to understand histopathology, immunopathology, histochemsitry, cytopathology, genetics of tumors, their functional properties and modes of spread etc. He is also made familiar with the various types of stem cell mobilization, harvesting, and cryopreservation techniques.

_ The candidate is required to learn the basic techniques of tissue culture, cytogenetics, staining and study of peripheral/bone marrow smears, operation of blood cell counter and cell separator machine.

EXAMINATION

The examination will be conducted in three parts.

Theory paper

Paper I

Basic science in oncology: Radiation physics, Tumor biology, Biochemistry, Biometry, Immunology and Pharmacology.

Paper II

General oncology, Tumor pathology, Staging, Diagnosis, Radiology, Nuclear medicine.

Paper III

Medical Oncology including chemotherapy, epidemiology, rehabilitation, terminal care, clinical trials and prevention.

Clinical and practical

Long case 1

Short cases 2

Viva-voce

Grand viva, histopathology, hematology slides, CT scans and X rays.

SYLLABUS

Paper I (Basic Science in Hemat-Oncology)

Cellcycle

Pathology, Invasion & Metastasis

Etiology of Cancer

Viral

Chemotherapy

Physical

Hormonal

Epidemiology of Cancer

Principles of Cancer Management–Surgical Oncology, RadiationTherapy, Chemotherapy, Biologic therapy

Pharmacology of Cancer Chemotherapy

Clinical trials in cancer

Cancerprevention Tobacco related cancer, Diet & Risk reduction Chemopreventive Agents, Hormones

Cancer Screening

Imaging Techniques of Cancer Diagnosis &Management

Specialized techniques of Cancer Diagnosis and Management

Vascular Accessand Specialised Technique of drug delivery

Paper – II Clinical Hemat-Oncology (Medical)

Cancer of Head and Neck

Cancer of Lung and Mediastinun

Cancer of Gastro Intestinal Track

Cancer of Genito Urinary System

Cancer of the Breast

Cancer of Endocrine System

Sarcomas of Soft Tissues &Bone

Benign & Malignant Mesotheliomas

Cancer of skin

Malignant Melanoma

Neoplasms ofCNS

Cancers of childhood

Lymphomas

Leukemias and other Haematological Malignancies

Paraneoplastic Synddromes

Cancers of unknown primary site

A.I.D.S – related malignancies

Oncological Emergencies

Treatment of Metastatic Cancers

Gynaecological Cancers

High Dose Chemotherapy &Transplantation

Paper – III (Recent Advances in Hemat-Oncology)

Essentials of Molecular Biology

Molecular Biology of Cancer: Onccogenes Cytogenetics

Bone Marrow dysfunction in cancer patient

Infections in cancer Patients and neutropenic patients

Adverse effects of treatment

Supportive Care and Quality of Life

Rehabilitation of Cancer Patient

Newer approaches in caner treatment

Newer drugs in cancer treatment

Periodicals Recommended

DHON-DIPLOMA IN HEMATONCOLOGY

EXAMINATION PATTERN

Theory Examination:

PAPER I	PAPER II	PAPER III
Basic science in oncology: Radiation physics, Tumor biology, Biochemistry, Biometry, Immunologyand Pharmacology	General oncology, Tumor pathology, Staging, Diagnosis, Radiology, Nuclear medicine	Medical Oncology including chemotherapy, epidemiology, rehabilitation, terminal care, clinical trialsand prevention
Section I	**Section I**	**Section I**
Q.1. 10 Marks Q.2. 10 Marks Q.3. 10 Marks Q.4. 10 Marks Q.5. 10 Marks **Total 50 Marks**	Q.1. 10 Marks Q.2. 10 Marks Q.3. 10 Marks Q.4. 10 Marks Q.5. 10 Marks **Total 50 Marks**	Q.1. 10 Marks Q.2. 10 Marks Q.3. 10 Marks Q.4. 10 Marks Q.5. 10 Marks **Total 50 Marks**
Section II	**Section II**	**Section II**
Q.6. 10 Marks Q.7. 10 Marks Q.8. 10 Marks Q.9. 10 Marks Q.10. 10 Marks **Total 50 Marks**	Q.6. 10 Marks Q.7. 10 Marks Q.8. 10 Marks Q.9. 10 Marks Q.10. 10 Marks **Total 50 Marks**	Q.6. 10 Marks Q.7. 10 Marks Q.8. 10 Marks Q.9. 10 Marks Q.10. 10 Marks **Total 50 Marks**
Section I + II = 100 Marks	Section I + II = 100 Marks	Section I + II = 100 Marks
Total Theory = 300 Marks, Passing = 150 (i.e. 50%) Marks in aggregate		

Practical Examination:		**Marks**
Paper - IV	Clinical Practical	100
Paper - V	Oral & Viva	100
Paper - VI	Cases-(1 Long ,2 short)60+20+20	100
Total Marks	**(Aggregate marks for passing is 50% out of total.)**	**300**

BOOKS:

Caner Principles and Practice of Oncology- Vincent T.Devita

Principles and Practice of Pediatric Oncology- Philip A.Pizzo

Decision Making in Oncology-Bengamin Djubegovic

Current Medical Diagnosis and Treatment- Lange Medical Book International edition

The Basic Science of Oncology-IanF.Tannock

Cancer Treatment- Charles MHaskel

Cancer Chemotherapy-Chabner

Principles of Internal Medicine-Harrison

Text Book for Pediatrics-Nelson

Text Book of Oncology-Abelloff and Armitage

Journals

Cancer Treatment Review

Journals of Pediatric Hematology/Oncology

Current Opinion in Oncology

The Indian Journal of Cancer

The Seminars in Oncology

Haematology/Oncology Clinics of North America

Medical and Pediatric Clinic of North America

Cancer

Current Problems in cancer

Journal of Clinical Oncology

Lancet

NEJM (New England Journal of Medicine)

Blood

British Journal of Hematology

Bone Marrow Transplantation