TATA MEMORIAL CENTRE

Office of the Director Academics

Observership Program in Pediatric Oncology

Unit / Department	:	Pediatric Oncology
Duration	:	1 Week to 6 Months
Eligibility	:	Medical graduates will be eligible for selection as follows

A. Possession of MBBS from a University recognized by Medical Council of India (MCI).
B. Possession of MD in Pediatrics from a University recognized by MCI.OR Possession of MNAMS/DNB in Pediatrics

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Departments involved in the Training Programme:
Division of Pediatric Oncology under Dept. of Medical Oncology, Tata MemorialHospital

Objectives to be achieved by the time the candidate completes the course: The Pediatric Oncology Program is designed to provide a diversified, organizededucational environment that will allow the candidate to develop both the clinicaland research skills necessary to become an academic Pediatric Oncologist.

A. KNOWLEDGE (Cognitive Domain):

To train a pediatrician having requisite postgraduate qualification (MD Pediatricsor its equivalent) as a specialist in Pediatric Oncology who at the completion of the program would be able to:

1. Diagnose and provide comprehensive care to children with hematologicaland solid malignancies
2. Is able to carry out all necessary diagnostic and therapeutic procedures asrequired for the care of children with hematological and solid malignancies
3. Is equipped with adequate basic and applied knowledge to deliver optimaltreatment for hematological and malignant disorders
4. Counsel parents and relatives of the patient with empathy andcompassion
5. Design and execute research project
6. Interact with medical colleagues in multiple disciplines
7. Conduct teaching sessions, bedside seminars and lectures.

B. SKILLS (Psycho motor domain):

- Take a proper clinical history, examine the patient, and perform essential diagnostic procedures. Also, order relevant tests and interpret them to come toa reasonable diagnosis & staging of disease.

- Perform common procedures relevant to the specialty.
- Undertake complete monitoring of the patient.

C. HUMAN VALUES, ETHICAL PRACTICE, AND COMMUNICATIONABILITIES:

- Adopt ethical principles in all aspects of his/her practice. Professional honesty and integrity is to be fostered. Care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
- Develop communication skills, in particular the skill to explain various options available in management and to obtain a true informed consent from the patient & breaking of bad news.
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion.

Curriculum:

Practical Laboratory Training

A. General Hematology and Oncology

1. Review of normal and abnormal blood films with emphasis on morphology of redcells, white cells and platelets.
2. Performance of bone marrow aspiration; trephine needle biopsy
3. Staining and diagnostic evaluation of bone marrow aspirates.

B. Cytogenetics

Familiarization with cytogenetics, understanding the principles of cytogenetics and appreciating the relevance and significance of chromosomes in diagnostichematology and oncology

C. Flow Cytometery

A working knowledge of the principle and practice of flow-cytometery and interpretation of the clinical significance of common leukocyteimmunophenotypes.

D. Molecular Biology Module

Understanding the principles involved in the molecular diagnosis of hematological and oncological disorders.

1. PCR
2. FISH

3. RFLP and Southern Blotting.
4. Microarray technology

Clinical Oncology Training:

With appropriate guidance and under supervision, the post graduate trainee will be responsible primarily for the acquisition of knowledge in all areas of oncology.

Such knowledge will be acquired and demonstrated through seminars, case presentations, Journal clubs, tutorials and proper use of library for suggested reading and formal reviews of major selected topics. Faculty staff should be present at these various exercises so as to provide the appropriate inputs. When necessary faculty staff may be required to review certain subjects in form of formal lectures. Clinical experience will be acquired by the trainee by day to day management of all patients admitted to the various oncology services. Faculty will also be involved in teaching of trainees in the ward-rounds and outpatient clinics.

COURSE CONTENTS

I. BIOLOGICAL BASIS OF CHILDHOOD CANCER
- Epidemiology of Childhood Cancer
- Childhood Cancer and Heredity
- Molecular and Genetic Basis of Childhood Cancer
- Biology of Childhood Cancer
- Tumor Immunology and Pediatric Cancer

II. DIAGNOSIS AND EVALUATION OF THE CHILD WITH CANCER
- Clinical Assessment and Differential Diagnosis of the Child with Suspected Cancer
- Pathology and Molecular Diagnosis of Leukemia's and Lymphomas
- Diagnostic Pathology of Pediatric Malignancies
- Imaging Studies in the Diagnosis and Management of Pediatric Malignancies

III. PRINCIPLES OF MULTIMODAL THERAPY
- General Principles of Chemotherapy
- General Principles of Surgery
- Principles of Radiation Oncology
- Infants and Adolescents with Cancer: Special Considerations
- Hematopoietic Stem Cell Transplantation in Pediatric Oncology
- Cancer Clinical Trials: Design, Conduct, Analysis, and Reporting

- Regulating Patient Safety in Cancer Treatment
- Cell and Gene Therapies – Role in pediatric oncology
- Evolving Molecularly Targeted Therapies and Biotherapeutics

IV. MANAGEMENT OF COMMON CANCERS OF CHILDHOOD

- Acute lymphoblastic leukemia
- Acute Myelogenous Leukemia
- Chronic Leukemias of Childhood
- Myeloproliferative and Myelodysplastic Disorders
- Hodgkin lymphoma
- Malignant Non-Hodgkin Lymphomas in Children
- Lymphoproliferative Disorders and Malignancies Related to Immunodeficiencies
- The Histiocytoses
- Tumors of the Central Nervous System
- Retinoblastoma
- Tumors of the Liver
- Renal Tumors
- Neuroblastoma
- Rhabdomyosarcoma and the Undifferentiated SarcomasEwing Sarcoma Family of Tumors: Ewing Sarcoma of Bone and SoftTissue and the Peripheral primitive Neuroectodermal Tumors
- Nonrhabdomyosarcomatous Soft Tissue Sarcomas
- Osteosarcoma
- Germ Cell Tumors
- Endocrine Tumors
- Management Of Infrequent Cancers of Childhood

V. SUPPORTIVE CARE OF CHILDREN WITH CANCER

- Oncologic Emergencies
- Tumour Lysis Syndrome
- Hematologic Supportive Care for Children with Cancer
- Infectious Complications in Pediatric Cancer Patients
- Nutritional Supportive Care
- Symptom Management in Supportive Care
- Nursing Support of the Child with Cancer
- Rehabilitation of the Child with Cancer
- Psychiatric and Psychosocial Support for the Child and Family

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- The Other Side of the Bed: What Caregivers Can Learn fromListening to Patients and Their Families
- Ethical Considerations in Pediatric Oncology

VI. OTHER ISSUES ARISING AT DIAGNOSIS, DURING TREATMENT,AND AFTER CESSATION OF THERAPY

- Late Effects of Childhood Cancer and Its Treatment
- Palliative Care for the Child with Advanced Cancer
- Pediatric Cancer: Advocacy, Insurance, Education, and Employment
- Complementary and Alternative Medical Therapies in PediatricOncology
- Pediatric Oncology in Countries with Limited Resources

The candidate will need to

1. Attend all the clinical meeting happening in the campus like
    a. Thursday Clinical meeting.
    b. Clinico-Pathological meeting and other DMG related meetings.
2. Attend Saturday morning lecture series and also to participate in virtual tumorboard meeting on Saturdays.
3. Two-week compulsory posting in the department of Preventive Oncology.
4. Two-week exposure in Pain and Palliative Care program

Evaluation of the Trainee

There will be a continuous assessment and formal examination. Continuous assessment of the practical skills and theoretical knowledge will be carried out during various stages of the training. The candidate will be guided and judged asregards his/her abilities to provide competent care to his patients through various means like ward rounds, discussions held in OPD and weekly academic activities.

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Assessments	:	Intra-Departmental.
Completion Certificate	:	Will be issued upon successful completion of tenure.

Contacts

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