

## Syllabus for Pediatric Oncology Fellowship

### *Eligibility*

- Age limit: 37yr (For year 2019) / as per KGMU Senior resident appointment policy
- Qualification: MD/DNB Pediatrics

### *Course structure & contents:*

- The academic program for candidates selected for Pediatric Oncology Fellowship will be organized as follows:
  1. Clinical Oncology Teaching Conference/Seminar (weekly)
  2. Tumor Board (weekly)
  3. Inpatient Oncology Patient Care Conference (weekly)
  4. Social Service/Psychosocial Conference (weekly)
  5. Hematopathology Conference (weekly)
  6. Journal Club (monthly)
- The candidate would participate in all teaching activities both intradepartmental as well as interdepartmental like:
  1. Admission rounds
  2. Clinico-pathological conferences
  3. Mortality meetings
  4. Ward rounds
  5. Journal Clubs
  6. Seminars

  
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*Syllabus:*

PEDIATRIC ONCOLOGY

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 Leukemias 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*

  
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- *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*

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- *Renal Tumors*
- *Neuroblastoma*
- *Rhabdomyosarcoma and the Undifferentiated Sarcomas*
- *Ewing Sarcoma Family of Tumors: Ewing Sarcoma of Bone and Soft Tissue and the Peripheral primitive Neuroectodermal Tumors*
- *Nonrhabdomyosarcomatous Soft Tissue Sarcomas*
- *Osteosarcoma*
- *Germ Cell Tumors*
- *Endocrine Tumors*
- *Management Of Infrequent Cancers of Childhood*
- *Tumour Lysis Syndrome*

V. *SUPPORTIVE CARE OF CHILDREN WITH CANCER*

- *Oncologic Emergencies*
- *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*
- *The Other Side of the Bed: What Caregivers Can Learn from Listening 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*
- *Educational Issues for Children with Cancer*
- *Palliative Care for the Child with Advanced Cancer*
- *Financial Issues in Pediatric Cancer*
- *Pediatric Cancer: Advocacy, Insurance, Education, and Employment*
- *Complementary and Alternative Medical Therapies in Pediatric Oncology*
- *Pediatric Oncology in Countries with Limited Resources*
- *Preventing Cancer in Adulthood: Advice for the Pediatrician*
- *Resources for Children with Cancer, Their Families, and Physicians*
- *Role of Telemedicine in Pediatric Cancer Care*

***Research Activities:***

In addition to prospectively following their cases for 1 year, the candidate would be encouraged to undertake independent research projects and also actively associate

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with the ongoing research activities. He/she would be expected to publish the results of his/her research in journals of repute.

**Course Goals:**

At the end of the course, the student will be able to:

1. Evaluate a child with suspected childhood cancer
2. Competent in identifying and managing Oncological emergencies
3. Able to plan investigations for confirmation of diagnosis and staging/risk stratification of childhood cancers
4. Competent in handling and administering chemotherapeutic drugs
5. Perform independently various procedures in Pediatric Oncology, including Bone marrow aspiration, Intrathecal chemotherapy administration, Pleural and Ascitic fluid paracentesis etc.
6. Able to interpret histopathology of common childhood cancers.
7. Competent in counseling the family of a child with cancer.
8. Be conversant with pediatric surgical principles of management of common childhood tumors.
9. Be conversant with basic principles of radiotherapy in management of common childhood tumors.
10. Research: The student will be able to conduct a literature search, critically appraise published literature, develop a research proposal, conduct and analyse a research study and write a paper for publication.

**Administrative:**

1. Communicate effectively with patients and their families regarding their problem and its solution, Counsel parents regarding the child's problem.

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2. Develop the skills for teaching pediatric oncology.
3. Be a team leader in the multidisciplinary management of Childhood cancer.

  
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