COURSE STRUCTURE AND COMPONENTS

1- SPECIALITY TRAINING:

Objective: To develop the core competencies and procedural skills required for practice of Clinical Hematology and basic Laboratory Hematology.

Eligibility: MD in Medicine or MD in Paediatrics from any MCI recognized institution.

Course structure & contents:

- The Department of Clinical Hematology will also organize its academic program for the candidates as follows:
  1. Clinical Hematology Teaching Conference/Seminar (weekly)
  2. Tumor Board (weekly)
  3. Inpatient Hematology Patient Care Conference (weekly)
  4. Social Service/Psychosocial Conference (weekly)
  5. Hematopathology Conference (weekly)
  6. Journal Club (weekly)

- The candidate would participate in all teaching activities both intradepartmental as well as interdepartmental like:
  1. Inpatient ward rounds and case based discussions (Daily)
  2. Hematology OPDs (Monday,Wed, Thurs)
  3. Clinico-pathological conferences (Once a month)
  4. Mortality meetings (once a month)
  5. Journal Clubs (Once a week)
  6. Seminars (Once a week)

Syllabus:

BENIGN HEMATOLOGY

1. *BASICS OF HEMATOPOIESIS*
2. *NUTRITIONAL ANEMIAS*
   - *Epidemiology of Nutritional anemias*
   - *Pathophysiology,Causes of Nutritional Anemias*

Dr. S.P. Verma
MD (Med.) DM (Clinical Hematology)
Associate Professor
Department of Clinical Hematology
King Georges Medical University
Lucknow.

- *Diagnosis, Management and Preventive aspects of Nutritional Anemias*

3. *HEMALYTIC ANEMIAS*

   - *Pathology and pathophysiology of hemolytic anemias*
   - *Clinical Assessment and Differential Diagnosis Inherited Hemolytic anemias with focus on thalassemias/Sickle cell anemia/Hereditary spherocytosis and G6PD*
   - *Clinical assessment and Differential Diagnosis of Aquired haemolytic anemias with focus on Autoimmune haemolytic anemia, Microangiopathic haemolytic anemias and Paroxysmal Nocturnal Hemoglobinuria*
   - *Non immune acquired haemolytic anemias*
   - *Optimal management of Acquired and Inherited haemolytic anemias*

4. *ANEMIA OF CHRONIC DISEASES*

5. *BONE MARROW FAILURE SYNDROMES*

   - *Etiology, Natural history and Pathology of Inherited Bone marrow failure syndromes*
   - *Fanconi Anemia clinical features, diagnosis*
   - *Overview of Diamond Blackfan Anemia, Schwachman Diamond Syndrome, Dyskeratosis congenita*
   - *Optimal Management of inherited bone marrow failure syndromes*
   - *Acquired bone marrow failure syndrome- etiology and pathophysiology*
   - *Diagnosis and management of Acquired aplastic anemia*
   - *Newer drugs in management of AAA.*
   - *Curative options in acquired aplastic anemia*

Dr. S.P. Verma
MD (Med.) DM (Clinical Hematology)
Associate Professor
Department of Clinical Hematology
King Georges Medical University
Lucknow.

6. *DISORDERS OF BLEEDING AND THROMBOTIS*

- *Acquired and Inherited Platelet disorders*
- *Acquired and inherited coagulopathy- Hemophilias /DIC*
- *DVT/Pulmonary embolism*
- *Unusaul site thrombosis and its evaluation/management*
- *Arterial thrombosis-Approach and management*

7. *HEMATOLOGICAL MALIGNANCIES*

- *Acute lymphoblastic leukemia*
- *Acute Myelogenous Leukemia*
- *Chronic Lymphoproliferative Disorders (CLPD)*
- *Myeloproliferative Neoplasms (CML/PMF/ET/PV)*
- *Myelodysplastic Syndromes*
- *Hodgkin lymphoma*
- *Non-Hodgkin Lymphomas*
- *Management Of Infrequent Cancers of Childhood*

8. *SUPPORTIVE CARE OF PATIENTS WITH HEMATOLOGICAL MALIGNANCIES*

- *Oncologic Emergencies (Tumor Lysis Syndrome, Spinal cord compression/SVC obstruction/Hypercalcemia)*
- *Hematologic Supportive Care*
- *Infectious Complications and Febrile neutropenia*
- *Nutritional Supportive Care*
- *Symptom Management in Supportive Care*
- *Nursing Support*
- *Psychiatric and Psychosocial Support for the patient and Family*
- *The Other Side of the Bed: What Caregivers Can Learn from Listening to Patients and Their Families*

Dr. S.P. Verma
MD (Med.) DM (Clinical Hematolog
Associate Professor
Department of Clinical Hematolog
King Georges Medical University
Lucknow.

- *Ethical Considerations in adult hematology and hemato- Oncology*

9. *OTHER ISSUES ARISING AT DIAGNOSIS, DURING TREATMENT, AND AFTER CESSATION OF THERAPY*
    - *Late Effects of haematological Cancers and Its Treatment*
    - *Educational Issues/rehabilitative issues*
    - *Palliative Care for the patients with end stage hematological Cancer*
    - *Financial Issues in hematology practice and ways to tackle*
    - *Hemato-oncology: Advocacy, Insurance, Education, and Employment*
    - *Hematology and Hemato-oncology in Countries with Limited Resources*
    - *Preventing aspects in adult hemato oncology*
    - *Resources for adults with haematological disorders, Their Families, and Physicians*
    - *Role of Telemedicine*
10. *CONSULTATIVE HEMATOLOGY*
    - *Obstetric setting*
    - *Surgical settings*
    - *Others*

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

Dr. S.P. Verma
MD (Med.) DM (Clinical Hematology)
Associate Professor
Department of Clinical Hematology
King George Medical University
Lucknow.

2- GENERIC COMPONENTS OF THE TRAINING:

1. Good Professional Practice: Trainees must appreciate the need of relationship of trust between the profession and the society. A good doctor should be able to have effective communication, ethical practice, honesty, transparency and concerns about the patient safety. Effective communication skills with patients, families and colleagues and co-operation and collaboration with colleagues to achieve quality care. Ethical and legal decision skills and minimizing medication and procedural errors. Annual workplace based assessment and consultant feedback and suggestions
2. Infection control: Trainee should be able to appropriately manage infections and risk factors for infection at an institutional level including prevention of hospital acquired infections and cross infections.
3. Self-care and maintaining wellbeing: Trainees should be taking care of self-awareness, personal health, personal growth, personal lives, values and attitudes. They should care for themselves physically and emotionally.
4. Communication skills in Clinical and Professional Setting: Trainees will develop communication skills so that they communicate effectively and sensitively with patients, relatives, carers and professional colleagues in different situations.
5. Leadership: Trainee should be able to play a leadership role and work with colleagues to plan, deliver, develop services and improved care and service delivery. He should understand the importance of good communication in teams and the role of human interactions on effectiveness and patient safety.
6. Quality improvement: Trainee should be able to prioritise the patient and patient safety in all clinical activities. He should be able to critically evaluate where services can be improved by measuring performances and acting to improve quality standards.
7. Scholarship: Trainee should be able to develop skills in personal/professional development, teaching, educational supervision and research. He should be able to design a research project and be aware of research methodology, valid statistical analysis, writing and publishing papers.
8. Standards of care: To be able to consistently and effectively assess and treat patient problems
9. Dealing with Emergencies: Trainee should be able to initiate management of patients presenting as emergencies and to appropriately communicate the diagnosis and prognosis. He should be able to make a quick D/D and ask for relevant investigations and treat or refer as appropriate.

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

1. Evaluate a patient with suspected Hematological disorder
2. Competent in identifying and managing Oncological emergencies
3. Able to plan investigations for confirmation of diagnosis and staging/risk stratification of haematological disorders
4. Competent in handling and administering chemotherapeutic drugs
5. Perform independently various procedures in Hematology practice including Bone marrow aspiration, Intrathecal chemotherapy administration, Pleural and Ascetic fluid paracentesis etc.
6. Able to interpret lab investigations of benign and malignant haematological disorders.
7. Competent in counselling the family of a patient with haematological disorder and breaking a bad news.
8. Be conversant with basic principles of radiotherapy in management of haematological tumors.

Administrative:

1. Communicate effectively with patients and their families regarding their problem and its solution, Counsel family members regarding the problem.
2. Develop the skills for teaching Hematology and Hemato-oncology
3. Be a team leader in the multidisciplinary management of Haematological disorders

Final eligibility assessment for awarding the Fellowship:

Exit examination will consists of: Two theory papers. One with MCQ of 100 questions (1mark each) to be completed in 90 minutes and second with short answer type questions with 10 questions (10 marks each) in 90 minutes.

Dr. S.P. Verma
MD (Med.) DM (Clinical Hematology)
Associate Professor
Department of Clinical Hematology
King Georges Medical University
Lucknow.

Practical Examination

1. One long case
2. Two short cases
3. Practical Viva Voce/spots

Examiners: There shall be 02 examiners, 01 internal and 01 external examiner. Practical will be of 200 marks.

On satisfactory completion of the course, the student will get a certificate of completion of Clinical Hematology Fellowship of King Georges Medical University.

Dr. S.P. Verma
MD (Med.) DM (Clinical Hematology)
Associate Professor
Department of Clinical Hematology
King Georges Medical University
Lucknow.