Haematology and Haematological Oncology

I) OBJECTIVES

1. To provide a broad training and in-depth experience at a level sufficient for trainees to acquire competence and professionalism required of a specialist in Haematology and Haematological Oncology (Haem & Haem Onc).

2. To enhance clinical and procedural skills, practical and scientific knowledge and proper attitudes in the management of patients with Haem & Haem Onc disorders.

3. To inculcate and enhance critical thinking, self-learning, and commitment to continuing medical education in Internal Medicine in general and Haem & Haem Onc in particular.

4. To encourage and provide opportunities in the pursuance of scientific enquiry and basic research in Haem & Haem Onc.

5. To inspire trainees to be leaders of teams of health care workers for the holistic management of patients with Haem & Haem Onc disorders; to respond to the cost effective issues of various treatment modalities; to be sensitive to community needs and to plan for future services in Haem & Haem Onc.

6. To provide supervision, guidance and opportunities to acquire the necessary competence for accreditation in this specialty.

7. To acquire professional competence in training future trainees in Haem & Haem Onc.

II) STRUCTURE

1. This period consists of three years of supervised and accredited training in Haem & Haem Onc. The three-year training programme comprises two years of core training in Haem & Haem Onc as described below (with a minimum of 12 months of core training to be undertaken in training units that have been formally accredited by the College), plus one year of training in any of the following:

   1.1 The same specialty which may be accredited for a maximum of 12 months, AND/OR

   1.2 A broad-based specialty, defined as either Advanced Internal Medicine (AIM) or Geriatric Medicine, which may be accredited for a maximum of 12 months, AND/OR
1.3 Overseas training in Haem & Haem Onc, which may be accredited for a maximum of twelve months, with prior approval by the specialty board, AND/OR

1.4 Research in Haem & Haem Onc, which may be accredited for a maximum of six months, with prior approval by the specialty board.

2. The two years of core training should include experience in the following:

2.1 Haemopoietic Stem Cell Transplantation: A minimum of three months full-time or part-time equivalent service in a unit of international standard. Training in this area can be accredited for a maximum of six months.

2.2 Laboratory Haematology: A minimum of three months full-time or part-time equivalent service in a laboratory which offers a full range of diagnostic services in Haematology and exposure to hospital blood banking. Training in this area can be accredited for a maximum of six months.

2.3 Blood Transfusion: One month of full-time service in a blood bank with comprehensive service and laboratory support. Attachment to the Hong Kong Red Cross Blood Transfusion Service is encouraged.

3. To ensure the acquisition of a broad-based physician training for all Higher Physician Trainees undergoing Haem & Haem Onc training, the College requires that all registered Higher Physician Trainees undergo dual training in a broad-based specialty, defined as either Advanced Internal Medicine (AIM) or Geriatric Medicine, together with training in Haem & Haem Onc. Fellows who have been trained in Haem & Haem Onc without a broad-based specialty will not be accepted as Trainer in any specialty in the future.

4. The structures of dual training programmes approved by the College include the following and Trainees must clearly indicate the programme chosen at the time of application to be registered as Higher Physician Trainee of the College:

4.1 Concurrent training: A minimum of four years of supervised training is required. The training programme comprises 24 months (cumulative) of core training in a broad-based specialty and 24 months (cumulative) of core training in Haem & Haem Onc.

4.2 Sequential training: A minimum of five years of supervised training is required. The training programme comprises 36 months training in either Haem & Haem Onc or the broad-based specialty followed by 24 months of core training in remaining specialty.
III) CONTENTS

1. Knowledge

There should be ample opportunities for the trainee to observe, manage and assume responsibility for the investigation and treatment of patients suffering from a wide variety of acute and chronic haematological and haemic-oncological problems in a Haematology Unit or Medical Unit which deliver expert specialised care to such patients.

The knowledge required can be addressed by competence in the following areas of activities of the Haem & Haem Onc specialist.

1.1 In-hospital management of patients with various blood disorders, including anaemias, abnormalities in white cells and platelets, marrow failures, leukaemias and lymphomas, chronic myeloproliferative neoplasms, chronic lymphoproliferative diseases, splenomegalies as well as thromboembolic disorders.

1.2 Chemotherapy and supportive management of patients suffering from leukaemias and lymphomas.

1.3 Competence in interpretation of morphological haematology and routine and specialised haematological tests.

1.4 Ambulatory care of patients and special outpatient follow-up.

1.5 Consultation by other specialties on general haematology, bleeding and blood transfusion problems.

1.6 Anticoagulant clinic for the management of acquired and inherited thrombotic diseases.

1.7 Haemophilia Centre for the management of inherited bleeding diseases.

1.8 Working and advanced knowledge in the following specialised areas.
   a. Haematopoietic stem cell transplantation.
   b. Plasmapheresis and other apheresis procedures.
   c. Blood component collection, processing and blood banking.
   d. Routine as well as specialised haematological laboratory procedures.
2. **Skills and Attitudes**

2.1 Competence in eliciting relevant clinical features and in interpreting morphology of peripheral blood smears and marrow biopsy.

2.2 Appropriateness in the ordering and interpretation of special haematology tests, e.g.

   a. Measurement of haematinics, including serum ferritin, serum B12 and folate, Schillings tests.

   b. Immune causes of cytopenias including characterisation of antibodies to red cells and platelets.

   c. Red cell enzyme deficiencies.

   d. Immunophenotyping, cytogenetics and molecular studies of leukaemias and lymphomas.

   e. HLA typing for stem cell matching.

   f. Coagulation factor assays and tests for inhibitors.

   g. Tests for thrombophilias.

   h. Molecular diagnosis and monitoring of haematological disease.

2.3 Procedural skills including marrow aspiration and trephine biopsy, management of venous assess catheters, plasmapheresis and cytapheresis, peripheral blood stem cell and marrow harvest and processing, intrathecal administration of drugs.

2.4 Cost effectiveness of cytotoxic therapy for haemic malignancy.

2.5 Risk-benefit assessment of different treatment modalities.

2.6 Assessment of new and innovative therapies for various blood disorders.

2.7 Choice of drugs and procedures for management of immuno-suppressed patients with opportunistic infections.

2.8 Counselling of patients and relatives on alternative strategies for the treatment of malignant and non-malignant blood diseases.

2.9 Ability to communicate with patients and relatives in handling expectation, emotional problem and ethical issues relating to the management of malignant
blood diseases.

2.10 Ability to deal with treatment failures, to manage and give appropriate counselling in “do not resuscitate” cases, and to provide bereavement support.

2.11 Ability to communicate and cooperate with medical, scientific and technical staff in haematology laboratory.

IV) INSTITUTIONAL REQUIREMENTS

1. The minimum trainer to trainee ratio should not be less than 1:2 at any one time.
2. Sufficient haematology beds supervised by fully trained haematologist/haematological oncologist for acute and clinical admissions of patients with non-malignant and malignant blood disorders. This can take place in an independent haematology unit or as part of a General Medical Unit.
3. Sufficient reverse isolation facilities for the management of patients with immuno-suppression and agranulocytosis.
4. Access to intensive or high dependency care.
5. Access to 24-hours laboratory and imaging services for management of acute haematological problems including hypercalcaemia, hyperviscosity, disseminated intravascular coagulation and bleeding problems.
6. Access to specialised procedures for the acute and chronic management of blood diseases, including plasmapheresis and cytapheresis, haematopoietic stem cell transplantation, etc.
7. Access to services of specialised haematology diagnostic laboratory, blood transfusion services and drug level monitoring.
8. Acute medical audit and postgraduate education programmes.