

Hematology Rotation Description

Overview and Rationale

The discipline of hematology relates to the care of patients with disorders of the blood, bone marrow and the lymphatic system, including anemia, hematological malignancies and other clonal processes, and congenital and acquired disorders of hemostasis, coagulation and thrombosis. The general internist must be competent in the assessment and management of the patient with hematological needs. The scope of practice in this discipline by a general internist depends upon the presence or absence of a hematologist in the community. In the absence of a hematologist, the internist may be required to provide hematology consultative services and perform a range of procedures on patients with hematological needs

Goals

1. Acquire the knowledge, skill and attitude to effectively assess and manage the patient with hematological needs.

Objectives

At the end of the rotation the resident should be able to:

- 1 Detect abnormal physical, laboratory and radiological findings related to the lymphohematopoietic system
- 2 To assess for the need for bone marrow aspiration and biopsy and lymph node biopsy
- 3 Demonstrate competence in the initial diagnostic evaluation and management of the hemostatic and clotting system
- 4 List the indications for transfusion of blood and its separate components.
- 5 Demonstrate competence in the management of therapeutic anticoagulation.
- 6 Demonstrate competence in the management of common causes of anemia.
- 7 Demonstrate knowledge of the pharmacology of common chemotherapies.
- 8 Demonstrate competence in the management of the neutropenic immunocompromised patient

Rotation Description

The hematology rotation is a four week rotation offered at Howard University Hospital comprising both an outpatient and inpatient consultative experiential educational experience. The attending hematologist is responsible for all clinical, educational and administrative activities during this rotation. Residents will also interact with fellows doing subspecialty training in hematology.

The resident will initially independently assess and evaluate inpatient consultations from the clinical services at HUH. The resident is responsible for collecting and collating all laboratory and radiological data and the subsequent completion of the consult database. Patients are presented to the attending physicians during daily teaching rounds which take place at the bedside. Teaching rounds are patient-based discussions which are evidence-based and involve all aspects of the care of the patient including clinical, diagnostic, and therapeutic aspects of care.

Residents will also attend the outpatient hematology clinics. These include the general hematology clinic and specialty clinics such as, the sickle cell anemia clinic, and the anticoagulation clinic. Residents will assess and follow new and established patients in these clinics under the direct supervision and mentorship of the attending physician assigned to the clinic. The resident will be exposed to the outpatient management of common hematological disorders and to appreciate the natural history of common hematological disorders.

Teaching Methods

Core Lectures: A series of lectures covering core elements in hematological diseases will be given throughout the year primarily at pathophysiology conference and grand rounds.

Didactics: Didactic sessions are conducted during teaching rounds on a daily basis. These sessions are facilitated and precepted by the attending physician. Topics may be presented by the resident or fellow and covers the core elements of hematology. These may include the following:

- Hemochromatosis
- *Hemostasis and thrombosis*
 - Abnormal coagulation (abnormal prothrombin and partial thromboplastin times)
 - Anticardiolipin antibody syndrome
 - Anticoagulation, fibrinolysis (therapeutic)
 - Disseminated intravascular coagulation
 - Hypercoagulable state
 - Hyperviscosity syndrome
- *Platelet disorders*
 - Platelet dysfunction
 - Thrombocytopenia
 - Thrombocytosis
- *Leukocyte disorders*
 - Leukemoid reaction
 - Immunosuppression
 - Neutropenia
- *Myeloproliferative disorders*
 - Chronic myelogenous leukemia
 - Polycythemia Vera
- *Neoplasia (see also Oncology)*
 - Hodgkin's and non-Hodgkin's lymphomas
 - Leukemia, acute and chronic
 - Myelodysplastic syndrome
 - Myeloid metaplasia
- Polycythemia, secondary

- *Red Cell Disorders*
- *Anemia*
- *Transfusion therapy*

Procedures Skills

- *Therapeutic phlebotomy*
- *Bone marrow aspiration and cone biopsy(optional)*

Primary interpretation of test

- *the peripheral smear*
- *Bone marrow aspiration and cone biopsy*
- *Chromosomal analysis of peripheral blood and bone marrow aspirate*
- *Clotting assays, including factor levels and mixing studies*
- *Hemoglobin electrophoresis*
- *Lymph node biopsy and lymphoid cell immunophenotype*
- *Radiographic, sonographic and nuclear studies to assess adenopathy, splenomegaly and red cell mass*
- *Serum and urine electrophoresis*

Evaluation

Resident: Residents will be evaluated by faculty throughout the rotation. Mid-rotation there will be formative evaluation and feedback designed to identify areas of strength and deficiency in an attempt to improve the overall growth and development of the resident. At the end of the rotation there will be a face to face summative evaluation process using a global rating form. The resident will be evaluated on the six ACGME competencies.

Faculty: Faculty will be evaluated using a global rating form at the end of the rotation. These evaluations will be done in an anonymous manner, and the form returned to the program director's office. Faculty will be given feedback quarterly.

Rotation: The rotation will be evaluated by residents using a global rating form completed by the resident at the end of the rotation. The rotation will also be assessed using the results of the in-training examination.

Reading List