האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

HEMATOLOGY - 96706

Last update 12-09-2018

HU Credits: 5

Degree/Cycle: 2nd degree (Master)

Responsible Department: Medicine

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: Ein Karem

Course/Module Coordinator: BATIA AVNI, MD

Coordinator Email: batiaa@hadassah.org.il

Coordinator Office Hours: please contact by mail

Teaching Staff:

Dr.

Course/Module description:

The course concentrates on the following subjects:

1. Anemia and other disorders of the red blood cells (RBC)
2. Coagulation disorders (thrombophilia and bleeding disorders)
3. Transfusion medicine
4. Hematological malignancies including lymphomas, leukemias, myeloma, myelodysplastic and myeloproliferative disorders.
5. Bone marrow transplant
6. Additional subjects include neutrophils, infections in the neutropenic patient and dental treatment in the hematology patient.

Course/Module aims:

We aim to teach basic knowledge of the common as well as exceptional critical medical situations that the future doctor may diagnose or be involved in the treatment of. Understanding the science behind the medical event and the importance in the correct diagnosis and clinical approach is critical for the future doctor. Examples: diagnosis of acute leukemia on a dental exam (gingival hypertrophy), an approach to the bleeding patient.

Learning outcomes - On successful completion of this module, students should be able to:

On successful completion of this course, students should be able to:

1. Describe RBC function, differentiate between the different anemias, be able to discuss the causes, clinical features, laboratory investigations and management of anemias.
2. Describe haemostasis and the basic coagulation laboratory tests, be able to discuss approach and management of thrombophilia and bleeding disorders.
3. Discuss aspects of the ABO and Rh blood group systems, describe pretransfusion testing and outline possible side effects to blood products transfusion.
4. Define and classify acute leukemia, lymphoma, myeloma, myeloproliferative and myelodysplastic syndroms. Describe the common presenting symptoms of the above malignancies, the therapeutic approach and the principal treatments (examples: chemotherapy for acute leukemia, supportive care for chronic lymphocytic leukemia, targeted therapy for chronic myeloid leukemia).
5. Discuss indications and steps in bone marrow transplant procedures (conditioning and transplant), and outline common side effects to transplant.
6. Examine slides of blood smears and describe the normal as well as the pathological cells seen.

Attendance requirements(%):
80% in the frontal lectures
100% in laboratories

Teaching arrangement and method of instruction: The course is based on oral lectures (70%) and laboratory work (30%). In the lab we present clinical cases and show relevant blood test results and slides that help in the diagnosis of the clinical case. We suggest possible therapeutic approach to the case presented. Labs are given to small groups (1/8 of the class).

Course/Module Content:
1. Hematopoiesis
2. Normal RBC, introduction to anemia, microcytic/ normocytic/ macrocytic anemia, hemoglobinopathies, enzymopathies, thalassemia, aplastic anemia, approach to hemolytic anemia, autoimmune hemolysis, approach to anemia.
3. Structure and function of the coagulation system, common tests to evaluate coagulation, disseminated intravascular coagulation syndrome, thrombocytopenia, inherited bleeding disorders, thrombophilia, the anti-platelets and anti-coagulation medicines
4. The ABO and Rh system, preparation of blood products for transfusion, medical complications in transfusion medicine.
5. Bone marrow transplant: Indications, procedures and complications.
6. Acute leukemia – classification, diagnosis and treatment. Lymphoma – clinical and laboratory characteristics, therapeutic approach. The chronic lymphoproliferative diseases. Plasma cell dyscrasias. The myeloproliferative and myelodysplastic syndromes. Approach to erythrocytosis and thrombocytosis.
7. Hematological morphology (red cells, white cells and platelets) – normal and pathological.
8. Normal neutrophil, febrile neutropenia
9. Dental exam and findings in various hematological conditions.

Required Reading:
Relevant chapters in a text book as Harrison's principles of internal medicine.

Additional Reading Material:

Grading Scheme:

Additional information:

Participation in laboratory is mandatory