Miami Dade College

Course Description
MLT1300 | Clinical Hematology | 2.00 credits
Didactic study of blood cells to include the origin, morphology, function and dysfunction of cells and related disease states of the blood. Theoretical concepts and principles of routine hematology procedures, quality control and instrumentation. Corequisite; MLT1300L.

Course Competencies:
Competency 1: The student will distinguish normal and abnormal hematological laboratory findings to predict the diagnosis of hematological disorders and diseases by:
1. Discussing the importance of the CBC parameters (WBC, RBC, Hb, HCT, RBC Indices, Platelet Count, and Differential) in the diagnosis of disease.
2. Identifying each stage of development in the red blood cell series
3. Listing the sites of formation and the function of granulocytes, lymphocytes, monocytes, and platelets
4. Describing molecular techniques used in the diagnosis of hematological disorders

Competency 2: The student will recognize laboratory results consistent with leukemia and other white blood cell disorders by:
1. Describing the acute and chronic leukemias with their clinical and morphologic characteristics.
2. Identifying the types of leukocytes (granulocytic, lymphocytic, and monocytic) and classify their stages of development.
3. Describing the acute and chronic leukemias with their clinical and morphologic characteristics and classify leukemias according to their FAB classification.

Competency 3: The student will analyze and compare the basic pathology related to these
different abnormalities in the red and white blood cells by:
1. Describing the general characteristics and laboratory data associated with acute/ chronic myeloid, lymphocytic, monocytic, and morphological classification of anemia according to their diagnostic features.
2. Identifying abnormal RBC morphology (Anisocytosis, hypochromic, poikilocytosis) and correlate with disease.
3. Describing the disease mechanism of the different anemias (Aplastic, IDA, ACD, Megaloblastic, Hemolytic, and Hemoglobinopathies).

Learning Outcomes:
1. Numbers / Data
2. Critical Thinking
3. Computer / Technology Usage
4. Communication
5. Cultural / Global Prospective

Updated: Fall 2024