

## **September 19, 2017 AHD Objectives**

### **Anemia Evaluation:**

1. Make a table and distinguish between the clinical presentation, the laboratory findings (such as RDW, peripheral smear, etc), and the associated conditions seen in each of the four causes of microcytic anemia: 1) iron deficiency, 2) globin synthesis (thalassemia), 3) porphyrin synthesis (sideroblastic anemia and lead poisoning), and 4) anemia of chronic disease.
2. Distinguish between iron deficiency anemia and anemia of chronic disease based on pre-test probability and iron studies including ferritin, transferrin, and percent saturation.
3. Understand how to correct a reticulocyte count to determine whether the bone marrow has adequate or inadequate response to an anemia.
4. Give a differential diagnosis for macrocytic anemia.
5. Know how to diagnose alpha-thalassemia trait and beta-thalassemia trait based on their clinical presentation and hemoglobin electrophoresis results.
6. Describe the evaluation for suspected hemolytic anemia and the appropriate work up for hemolysis that is suspected due to mechanical destruction, immune destruction, or intrinsic red cell defects (hereditary or acquired). Know the findings on peripheral blood smear that are seen in microangiopathic anemia and autoimmune hemolytic anemia.

### **Thrombocytopenia:**

1. Define thrombocytopenia in adults and know at what platelet count patients start to develop symptoms.
2. Describe the questions a physician should ask a patient about who is presenting with thrombocytopenia. List several diseases that cause thrombocytopenia in the following three categories: 1) decreased production, 2) increased sequestration, and 3) increased destruction.
3. Describe the first, most important lab test to order in the evaluation of a patient with thrombocytopenia.
4. Define factitious thrombocytopenia and understand how to diagnosis it and its significance.
5. Make a table and distinguish between the 4 causes of emergent thrombocytopenia in terms of clinical presentation, laboratory evaluation, and management. (ITP, HIT, TTP, and HELLP syndrome).

### **Multiple Myeloma:**

1. Describe the clinical symptoms and laboratory findings that should prompt a diagnostic evaluation for myeloma.
2. List the appropriate laboratory tests and radiologic tests that an internist should order in the evaluation of a patient with suspected myeloma.
3. Discuss the treatment options for myeloma patients who are <65 years old and in otherwise good health as well as for elderly patients who have significant comorbidities.
4. Describe the side effects of the chemotherapy agents used in myeloma therapy.

