**July 31, 2018 AHD Objectives**

**Transfusions:**

1. Know the indications for the transfusion of packed red cells, fresh frozen plasma, platelets, and cryoprecipitate.

2. Make a table and compare and contrast the clinical presentations, pathophysiology, diagnostic evaluation, and treatment of the following transfusion reactions:

a) acute hemolytic transfusion reaction,

b) delayed hemolytic transfusion reaction,

c) febrile transfusion reaction,

d) transfusion associated circulatory overload (TACO), and

e) transfusion associated acute lung injury (TRALI).

3. Describe the indications for a type and cross, type and screen, and “hold clot”.

4. Know the indications for specific types of blood products including CMV negative,

 washed red blood cells, leukopore filtered, and irradiated blood products.

**Pain Management:**

1. Distinguish the differences between the patient with acute pain, acute on chronic pain, and chronic pain. Understand the difference between somatic, visceral, and neurologic pain syndromes.
2. Make a table and know the equivalent narcotic doses between IV morphine, hydromorphone, fentanyl, and PO morphine, oxycodone, methadone, and hydrocodone.
3. Understand how specific opioid characteristics and relative potencies play a role in opioid selection.
4. Know the recommended treatment strategy for acute mild, moderate, and severe pain in the hospital setting.
5. Describe the types of *non-pharmacologic* adjuvant treatments and *pharmacologic* adjuvant treatments including anti-epileptic and anti-depressant drug classes.
6. Define tolerance, physical dependence, and addiction.

**Heme/Onc Emergencies:**

1. Identify the oncologic emergencies of hypercalcemia, tumor lysis syndrome, hyperviscosity, spinal cord compression, and superior vena cava (SVC) syndrome based on symptoms and exam findings.
2. Know the appropriate laboratory and imaging tests to order to diagnose and manage each of these syndromes.
3. Prioritize your management algorithms for each of these diagnoses. Who do you consult to help you manage these problems?
4. Identify and diagnose the hematologic emergency condition of thrombotic thrombocytopenic purpura. Know the appropriate consultants to involve and the treatments available.