Thrombocytopenia

When to worry about bleeding?

- Surgical bleeding: Platelet<50,000
- Spontaneous bleeding: Platelet<10-20,000

When to transfuse platelets?

- Keep plt>50,000 for most surgeries, >100,000 for neurosurgical procedures
- For lumbar punctures keep plt>75-100,000 and for paracenteses there is no recommended platelet guidelines unless the patient has clinically evident DIC or hyperfibrinolysis (per the AASLD guidelines)
- In general keep platelets>10,000, >20,000 if febrile and >50,000 if bleeding
- 1 unit of platelets will increase platelet count by ~30k

Major causes of thrombocytopenia

- Infections: HBV, HCV, HIV, H pylori, DIC, sepsis
- Drugs: Sulfonamides, Vancomycin, Piperacillin, Heparin
- Sequestration: hypersplenism, chronic liver disease
- Bone marrow disorders: suppression, infiltration, hematologic disorders
- Immune Thrombocytopenia
- Thrombotic microangiopathies (TTP, HUS)
- Nutrient deficiency (B12, folate), EtOH use
- Pregnancy (gestational, preeclampsia, HELLP)
- Don't forget about pseudothrombocytopenia due to clumping (order platelet count in a citrated tube – blue top)

Immune Thrombocytopenia

- Diagnosis of exclusion, need to rule out other non-immune causes first
- Bone marrow biopsy is not always indicated for diagnosis, but may be if other cytopenias are present or if patients do not respond to ITP therapy
- Can be associated with HIV, HCV, CLL
- Acute management
    - Platelet>30,000 and asymptomatic: Observe
    - Platelet<30,000 or >30,000 with bleeding: Glucocorticoids, IVIG
    - Do not transfuse unless severe bleeding with platelet<30,000 or platelet<10,000
    - Thrombopoietin receptor agonists (N-plate), Rituximab, splenectomy are considered second-line therapies and reserved for severe persistent/recurrent thrombocytopenia or those with significant bleeding symptoms