Evaluate the following in every sickle cell patient:
- Cardiopulmonary signs/symptoms
- Hemoglobin and reticulocyte count
- Signs/symptoms concerning for vaso-occlusive or anemic crisis

Vaso-occlusive Crisis
- Typical SCC, consistent with previous exacerbations of pain
- Caused by anemia, dehydration, viral processes
- These patients typically have higher resting hemoglobin levels and won’t have a drop in hemoglobin with vaso-occlusive crisis
- Management: pain control and rehydration
  - Fluids:
    - PO vs IV depending on level of dehydration/ability to take PO
    - IV fluid of choice: D5 ½ NS at maintenance rate
    - Severe dehydration/hypotension: NS bolus followed by D5 ½ NS
  - Opioids for pain control
    - If requiring ≥ 3 doses of pain medications, consider admission
  - Acetaminophen
  - Avoid NSAIDs as sickle cell patients typically have underlying renal dysfunction

Anemic Crisis
- > 2 g/dL drop from baseline hemoglobin
- Obtain hemoglobin, reticulocyte count
- Rule-out other sources of bleeding (GI)
- 3 general categories:
  - Transient Red Cell Aplasia
    - Typically, from viral infection (classically Parvovirus B19)
    - Well appearing
    - Low reticulocyte counts
    - Keep away from pregnant females
  - Splenic Sequestration
Typically occurs in pediatric patients (because they haven’t auto-infarcted their spleen yet)
- Large spleen on exam, LUQ pain
- Rapid drop in hemoglobin, may be in hemodynamic shock/extremis
- Need emergent resuscitative transfusion
- High reticulocyte count
- Rare in adults but possible

Hemolytic Crisis
- Typical hemolytic crisis in SC patient
- Lab abnormalities associated with hemolysis include:
  - Elevated LDH, elevated reticulocyte count, elevated LFTs/bilirubin
  - Transfuse when indicated

Special Circumstances
- Always consider/evaluate the following diagnoses in sickle cell patients:
  - Hyphemia, priapism, CVA, gallstones, osteomyelitis, sepsis, and fever (no functional spleen)

References: