Evaluating Bleeding Risk for Venous Thromboembolism Prophylaxis

The majority of patients admitted to the hospital have at least some risk of developing venous thromboembolism (VTE). To help prevent VTE there are two classes of agents that can be utilized: non-pharmacologic and pharmacologic.

Pharmacologic agents (unfractionated heparin and low molecular weight heparin) are the preferred agents for prophylaxis as they reduce VTE more effectively than mechanical prophylaxis. They should always be the preferred choice if no contraindications exist.

Non-pharmacologic agents (mechanical) should be reserved for patients who have an absolute bleeding risk or a relative bleeding risk where the risk for bleeding out weights the risk for developing VTE.

Mechanical prophylaxis should include the use of both anti-embolism stockings and sequential compression devices.

**Absolute Bleeding Risk**
- Active hemorrhage
- Thrombolytics used within the past 24 hours

**Relative Bleeding Risk - If the risk for bleed out weights the risk for VTE:**
- Pantoprazole infusion
- GI/GU hemorrhage within the past 30 days
- INR ≥ 2.0
- End stage liver disease with coagulopathy
- Transfusion ≥ 2 units PRBC in last 72 hours
- Vitamin K use in last 24 hours
- Hgb drop ≥ 2 mg/dL or 10%
- Epidural catheter placement or removal
- Craniotomy in the past 2 weeks
- Severe trauma to spinal cord or head with hemorrhage in the past 4 weeks
- Recent intraocular, spinal or intracranial surgery
- Recent intraabdominal, retroperitoneal, intrathoracic surgery in last 24 hours
- Hypertensive crisis
- Multiple trauma
- Acute leukemia or other high-grade hematologic malignancy

Patients with both an absolute or relative bleeding risk should be re-evaluated daily for changes in bleeding risk status. If bleeding risk diminishes consider changing to pharmacologic prophylaxis.