Assess Risk Factors*

No Risk Factors + Ambulatory

Contraindications**

SCDs until contraindication no longer present
Consider IVC filter very high risk patient

High risk

Contraindication to enoxaparin***
CrCl < 30 ml/min / Epidural/EVD/ICP monitor

Enoxaparin 30 mg BID

Mild TBI†
GCS 15; SDH < 8 mm; Contusion or Intraventricular hemorrhage < 2 cm

Repeat CTS stable

Enoxaparin 30 mg BID starting 24-48 hours after placement

ICP monitor/EVD/spinal drain

UFH 5000 U TID + SCD 24-48 hours after placement

Repeat CTS stable

Enoxaparin 30 mg BID starting after contraindication resolved

Severe TBI / Craniotomy†

Repeat CTS stable

Enoxaparin 30 mg BID starting 48-72 hours after stable CTS

SCDs in bed
Enoxaparin 40 mg daily

Transfer Patients: if patient is >48 hours from injury and has received prophylaxis, continue prophylaxis. If patient has not received prophylaxis, order four extremity duplex upon arrival and evaluate for VTE prophylaxis per risk stratification and condition. If <48 hours from injury, Evaluate for VTE prophylaxis per risk stratification and clinical condition.
*High risk VTE*
- Spinal cord injury
- Lower extremity fracture
- Pelvic fracture
- Severe head injury (Head AIS > 2)
- Injury Severity Score ≥ 9
- Shock in ED
- Surgical procedure > 120 minutes
- Age > 60
- Vein injury
- Central line
- Prolonged immobility
- Prior history DVT/PE
- Mechanical ventilation
- Obesity
- Malignancy

**Contraindications to pharmacologic VTE prophylaxis**
- Active bleeding
- High risk for bleeding
- Severe head injury†
- Solid organ injury
- Retroperitoneal / pelvic hematoma
- Ocular injury with hemorrhage
- Systemic anticoagulation
- INR > 2.0 or aPTT > 1.5 x normal
- Platelet count < 50,000

***Contraindications to enoxaparin***
- Epidural catheter
- Renal insufficiency Cr Cl < 30 ml/min
- ICP monitor/EVD/Spinal drain

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**IVC Filter**
- PE and complication of anticoagulation
- PE and contraindication to anticoagulation
- Recurrent PE on therapeutic anticoagulation
- Consider in very high risk with planned frequent interruptions in pharmacologic prophylaxis

**Solid organ injury/retroperitoneal or pelvic hematoma**
Follow Hg q 6 hours. If Hg drops < 1 gm / dl over 24 hours then Hg is stable and pharmacologic prophylaxis is initiated at 24 hours

†VTE Prophylaxis for the Patient with Head Injury and Spinal Cord Injury
**Traumatic brain and spinal cord injury**

- VTE prophylaxis will be initiated 48-72 hrs after the injury/procedure for most intracranial hemorrhages and after craniotomy.

- Prophylaxis may be started 24 hrs after a stable repeat head CT scan for patients with mild TBI and the following:
  
  a. GCS of 15 within 30 minutes of injury
  
  b. Subdural or epidural hematoma < 8 mm
  
  c. Contusion or intraventricular hemorrhage < 2 cm (single lobe only)

- For patients requiring operative intervention following spinal cord injury, VTE prophylaxis should be held the morning of surgery and may be resumed 24 hrs post-operatively unless otherwise specified by the operating team.

- Enoxaparin is preferred in these patient populations, as well. However, patients with one of the above conditions and an ICP monitor, EVD or spinal drain in place should receive heparin 5000 units Q 8 hrs. After removal of the ICP monitor or drain, patients should be changed to enoxaparin 30 mg Q 12 hrs.

