INDICATIONS (See sidebar for CONTRAINDICATIONS and CAUTIONS)

The low-molecular-weight heparin (LMWH) enoxaparin is the first-line therapy for patients requiring injectable anticoagulation, such as for:

- Venous thromboembolism (VTE) prophylaxis (see table 1)
- VTE treatment (see table 2)
- Acute coronary syndrome (ACS) (see table 3 and Acute Coronary Syndrome (ACS) CPM)

DOSAGE AND ADMINISTRATION

### TABLE 1. Enoxaparin Dosing for VTE Prophylaxis

<table>
<thead>
<tr>
<th>Risk level</th>
<th>Normal renal function (CrCl ≥ 30 mL/min)</th>
<th>Renal insufficiency (CrCl &lt; 30 mL/min)</th>
<th>BMI &gt; 40 kg/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard risk (e.g., medical inpatients)</td>
<td>40 mg SQ once daily</td>
<td>30 mg SQ once daily</td>
<td>0.5 mg/kg every 12 hours</td>
</tr>
<tr>
<td>High risk (e.g., major orthopedic surgery)</td>
<td>30 mg SQ twice daily OR 40 mg SQ once daily</td>
<td>30 mg SQ once daily</td>
<td>OR 40 mg SQ every 12 hours</td>
</tr>
</tbody>
</table>

### TABLE 2. Enoxaparin Dosing for VTE Treatment

<table>
<thead>
<tr>
<th>Normal renal function (CrCl ≥ 30 mL/min)</th>
<th>Renal insufficiency* (CrCl &lt; 30 mL/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mg/kg SQ every 12 hours</td>
<td>1 mg/kg SQ once daily</td>
</tr>
</tbody>
</table>

*Consider using IV unfractionated heparin in dialysis patients, or those with CrCl ≤ 15 mL/min.

### TABLE 3. Enoxaparin Dosing for ACS

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>STEMI</th>
<th>Non-STEMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 75</td>
<td>30 mg IV bolus followed by 1 mg/kg SQ every 12 hours (max 100 mg first 2 doses)</td>
<td>1 mg/kg SQ every 12 hours</td>
</tr>
<tr>
<td>≥ 75</td>
<td>No bolus. 0.75 mg/kg SQ every 12 hours (max 75 mg first 2 doses)</td>
<td>1 mg/kg SQ once daily</td>
</tr>
</tbody>
</table>

*Consider using IV unfractionated heparin in dialysis patients, or those with CrCl ≤ 15 mL/min.

See page 2 for guidelines regarding conversion to oral anticoagulation therapy.

CONTRAINDICATIONS

- Hemodialysis (see Heparin Low-Dose Unfractionated Guideline for VTE Prophylaxis and Heparin Unfractionated Guideline for VTE Treatment)
- Active major bleeding
- Recent or planned epidural or dural anesthesia (see Anticoagulant Epidural Guideline)
- Recent intracranial hemorrhage (within the previous 4 – 12 weeks)
- Known or suspected heparin-induced thrombocytopenia (HIT):
  - Do not use heparin or LMWH
  - Use a HIT-specific anticoagulant (see Diagnosis and Pharmacologic Management of Suspected and Confirmed Heparin-Induced Thrombocytopenia guideline)

CAUTIONS

- Thrombocytopenia (platelet count < 100,000/mm³) or known bleeding diathesis.
- Recent episode of major bleeding (e.g., bleeding requiring a transfusion or hospitalization within the previous 30 days).
- Recent surgery, major trauma, or thrombotic stroke (within the previous 2 weeks).
- Acute peptic ulcer disease.
- Renal insufficiency (creatinine clearance < 30 mL/min). The bleeding risk of LMWH in patients with renal insufficiency is increased. Consider using unfractionated heparin (UFH) in these patients (see Heparin Low-Dose Unfractionated Guideline for VTE Prophylaxis and Heparin Unfractionated Guideline for VTE Treatment).
- Weight < 45 kg for women or < 57 kg for men or weight > 190 kg. IV UFH may be a more suitable choice for therapeutic anticoagulation; however, the American Society of Hematology guidelines do not suggest an upper weight limit for LMWH.
Conversion to oral anticoagulation therapy

- **Warfarin:** Follow *Warfarin Initiation and Maintenance Guidelines*. Overlap enoxaparin with warfarin for a minimum of 5 days and until a therapeutic INR is documented on 2 occasions at 24 hours apart.

- **Direct oral anticoagulant (DOAC):** Stop LMWH and give the first dose of DOAC at the time the next dose of LMWH would have been due. **Note:** The DOAC selected alters the choice of dose and the number of days on LMWH before conversion (see *Transitioning to Direct Oral Anticoagulants* clinical guideline).

**LABORATORY MONITORING**

Perform the following laboratory testing to monitor patients on LMWH:

- Draw a baseline BMP, aPTT STAT (include CBC, PT / INR if not done within the previous 7 days).
- Draw CBC every other day while hospitalized (therapeutic dose). No platelet monitoring is needed for prophylactic dosing.
- Monitor BMP if clinical situation suggests a risk of decline in renal function.