Key Aspects of Care:

- The first priority is to ensure that the patient is hemodynamically stable.
- Peptic ulcers account for most cases of upper GI bleeding, but bleeding from varices has a much higher case fatality rate and demands aggressive treatment.
- Antithrombotic agents may pose challenges to managing GI bleeding and efforts toward hemostasis need to be balanced with risks of thrombosis.
- This is considered a guidance document only. Clinical decisions can lead to a determination to escalate therapy in a way that is dictated by patient response. Implementing the algorithm as outlined has the likelihood of successfully managing patients with upper GI bleeding.

Algorithm 1. Patient Assessment and Risk Stratification

### Different Presentations of Upper GI Bleed
- Hematemesis (vomiting of blood or coffee-ground-like material)
- Melena (black, tarry stools)
- Hematochezia (red or maroon blood in the stool)
- Bleeding could be associated with nonspecific symptoms of nausea, vomiting, epigastric pain, vasovagal phenomena and syncope.

### Assess for Complicating Comorbidities
#### Rapid Assessment
- Positive history of cirrhosis, varices (known or suspected), AAA repair, gastric surgery, ETOH, VAD
- Age > 60 years
- Renal failure
- Liver failure
- Disseminated malignancy
- Cardiac failure
- Ischemic heart disease
- Chronic anticoagulation/Chronic Anti-Platelet Therapy
- NSAIDs Used

See page 4, Related Tools for additional recommendations on management of chronic anticoagulation and variceal bleeding.

### Risk Stratification
- Endoscopic, clinical, and laboratory features may be useful for risk stratification of patients who present with acute upper GI bleeding.
- Use of the Modified Glasgow-Blatchford Bleeding Score (GBS) (please see Table 1) may aid with triage of patients with UGIB.

### Modified GBS Score
- **Score 0**
  - Consider outpatient management
- **Score ≥ 1**
  - Admission

#### Table 1. Modified Glasgow-Blanchford Score

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUN, mg/dL</td>
<td></td>
</tr>
<tr>
<td>≥ 18.2 to &lt; 22.4</td>
<td>2</td>
</tr>
<tr>
<td>≥ 22.4 to &lt; 28.0</td>
<td>3</td>
</tr>
<tr>
<td>≥ 28.0 to &lt; 70.0</td>
<td>4</td>
</tr>
<tr>
<td>≥ 70.0</td>
<td>6</td>
</tr>
<tr>
<td>Hemoglobin, men, g/dL</td>
<td></td>
</tr>
<tr>
<td>&gt; 12.0 to &lt; 13.0</td>
<td>1</td>
</tr>
<tr>
<td>≥ 10.0 to &lt; 12.0</td>
<td>3</td>
</tr>
<tr>
<td>&lt; 10.0</td>
<td>6</td>
</tr>
<tr>
<td>Hemoglobin, women, g/dL</td>
<td></td>
</tr>
<tr>
<td>≥ 10.0 to &lt; 12.0</td>
<td>1</td>
</tr>
<tr>
<td>&lt; 10.0</td>
<td>6</td>
</tr>
<tr>
<td>SBP, mmHg</td>
<td></td>
</tr>
<tr>
<td>100-109</td>
<td>1</td>
</tr>
<tr>
<td>90-99</td>
<td>2</td>
</tr>
<tr>
<td>&lt; 90</td>
<td>3</td>
</tr>
<tr>
<td>Other Markers</td>
<td></td>
</tr>
<tr>
<td>Heart Rate ≥ 100 bpm</td>
<td>1</td>
</tr>
<tr>
<td>Maximum Score</td>
<td>16</td>
</tr>
</tbody>
</table>

All patients with hemodynamic instability or active bleeding should be evaluated for the ICU.

See Algorithm 2, page 2, for management recommendations.
**Monitoring and Laboratory Tests**
- Supplemental oxygen by nasal cannula if hypoxic, and **airway assessment- may need intubation for airway protection**
- NPO
- Place large bore vascular access by using two (2) large bore (16 gauge or larger) peripheral IV catheters or a sheath introducer such as a Cordis.
- Check vital signs
- Order Lab Tests: CBC, PT/INR, PTT, electrolytes, BUN/Cr ratio
- Type & Cross

**Resuscitation**
- Adequate **resuscitation and stabilization** are essential prior to endoscopy to minimize treatment-associated complications.
- For patients with active bleeding, **provide IV fluids** (0.9 NS, 1-2 liters, based on vital signs)
- Routine placement of NG-tube is not recommended. Consider **NG-tube placement** in case of: hematochezia to exclude torrential upper GI bleeding, if requested to enhance endoscopic visibility, or if needed for airway management.
- If a **transfusion** is clinically indicated, please refer to the **Transfusion Therapy: Indications for Ordering Guideline**.

**Pharmacotherapy**
- IV proton pump inhibition*
- Consider octreotide and prophylactic antibiotics if varices suspected.
- NSAIDs can be held
- Consider anticoagulation reversal based on risk/benefit profile. See OSUWMC guidelines for **recommendations on anticoagulation reversal**.
- For Antiplatlet holding guidance, please refer to **Management of Antiplatelet Therapy in Patients with Arterial Stents Around the Time of Surgeries and Procedures** clinical practice guideline.
- Consider a prokinetic agent, such as erythromycin 250 mg IV or Reglan 10 mg IV ~30-60 minutes before planned EGD, to enhance endoscopic visibility in suspected upper GI bleeding.

**Consults**
- Obtain GI Consult
- Consult Cardiology and/or Pharmacy if patient on antithrombotic therapies (and high thrombotic risk)

**What is the patient’s response to fluid resuscitation?**

See Algorithm 3, on page 3.

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*Current evidence does not provide evidence of a significant clinical difference between intermittent and continuous infusion PPIs in acute GI bleeds prior to endoscopy.*
Algorithm 3. Management Based on Patient Response to Fluid Resuscitation

Evaluate patient response to fluid resuscitation

- **Full Positive Response**
  - Improved HR and BP without vasopressor support
  - Hgb stable and/or appropriate response if transfused
  - Admit to Med/Surg

  Consult GI to evaluate for endoscopy within 12-24 hours

  Await further recommendations from GI

- **Partial Positive Response**
  - HR still > 100 bpm
  - SBP still < 100 mmHg
  - Fresh blood on NG lavage/inability to clear after 900-100cc water
  - Admit/Transfer to ICU

  Page GI fellow on call to evaluate for emergent endoscopy within 6 hours

- **No Response**
  - Continued bleeding
  - Significant Hgb decline/inappropriate response if transfused
  - No improvement in HR or BP
  - Admit/Transfer to ICU

  Page GI Fellow and Acute Care Surgery Service on call – LIFE THREAT

  Immediate evaluation by Surgery and GI

  Endoscopy as needed

  Antithrombotic addressed/reversed (see page 4, Related Tools)

  If peripheral IV cannot be obtained, placement of introducer is recommended

  Transfuse as indicated

  Massive transfusion if needed; see page 6 of the Blood and Blood Products Policy in the Perioperative Department for Massive Transfusion Protocol

  LIFE-THREATENING EMERGENCY
Dabigatran (Pradaxa®) Reversal Treatment for Management of Antiplatelet Therapy in Patients with Massive Transfusion Protocol (MTP) Variceal Bleeding: Diagnosis and Management

Rivaroxaban, Apixaban: Factor Xa Inhibitors -

References


• Feagins LA, et al. The Rate of Post-Polypectomy Bleeding for Patients on Uninterrupted Clopidogrel Therapy During Elective Colonoscopy Is Acceptably Low. Digestive Diseases and Sciences, 2011; 2631–2638


• Hyett BH, et al. The AIMS65 score compared with the Glasgow-Blatchford score in predicting outcomes in upper GI bleeding. Gastrointestinal Endoscopy, 2013; 551-557.

• Imperiale TF, et al. Somatostatin or octreotide compared with H2 antagonists and placebo in the management of acute nonvariceal upper gastrointestinal hemorrhage: a meta-analysis. Annals of Internal Medicine, 1997; 1062-1071.


• Segal JB, et al. Paucity of studies to support that abnormal coagulation test results predict bleeding in the setting of invasive procedures: an evidence-based review. Transfusion, 2005; 1413-1425.


