My Patient is Tachycardic… Now What Do I Do?

1) Obtain an electrocardiogram

2) Follow the steps below

- Call for Help! (to discuss cardioversion)
- Bring code cart (with defibrillator) to room
- Assess the rhythm
  - If sinus rhythm, consider hemorrhage and pulmonary embolism. Assess for tension pneumothorax if on the ventilator.
  - If non-sinus rhythm, perform synchronized cardioversion (200 J)

   Step 1: Assess for new hemodynamic instability (hypotension, chest pain, altered mental status)

   - Hemodynamically unstable
   - Hemodynamically stable

   Step 2: Assess QRS duration

   - Wide Complex (QRS > 120 msec)
   - Narrow Complex (QRS < 120 msec)

   Step 3: Assess if the rhythm is regular or irregular

   - Regular (same distance between QRS complexes)
   - Irregularly irregular (different distances between QRS complexes) with no P waves

   Step 4: Assess for P waves and Flutter Waves

   - P waves before every QRS and QRS after every P wave
   - P waves are upright in leads I and II

   Evaluate causes of sinus tachycardia (see below)

   Consult Cardiology if patient's tachycardia does not follow this algorithm

2) Evaluate for causes of sinus tachycardia

Do not just start a beta-blocker to improve the heart rate. Identify and treat the specific cause of the sinus tachycardia.

- Pain and anxiety
- Fever / infection
- Hypoxemia
- Intravascular volume depletion (e.g., over-diuresis, vomiting/diarrhea, NPO)
- Blood loss (including non-obvious sources like the retroperitoneum)
- Alcohol withdrawal
- Pulmonary embolism (uncommon cause of sinus tachycardia in absence of hypoxemia, hemodynamic changes, shortness of breath)

Note: thyroid studies are typically unhelpful in critically ill patients and should not be ordered unless other clinical signs point toward hyperthyroidism as likely diagnosis.