Tachycardia With a Pulse Algorithm

Assess appropriateness for clinical condition. Heart rate typically ≥ 150/min if tachyarrhythmia.

Identify and Treat Underlying Cause
- Maintain patient airway; assist breathing as necessary
- Oxygen as indicated
- Cardiac monitor to identify rhythm; monitor blood pressure and oximetry

Persistent Tachyarrhythmia Causing:
- Hypotension?
- Acutely altered mental status?
- Signs of shock?
- Ischemic chest discomfort?
- Acute heart failure?

Synchronized Cardioversion*
- Consider sedation
- If regular narrow complex, consider adenosine

Wide QRS? >0.12 seconds
- IV access and 12-lead ECG if available
- Consider adenosine only if regular and monomorphic
- Consider antiarrhythmic infusion
- Consider expert consultation

Doses/Details

Synchronized Cardioversion**
Initial recommended doses:
- Narrow regular: 50–100 J
- Narrow irregular: 120–200 J
- Wide regular: 100 J
- Wide irregular: Defibrillation dose (not synchronized)

Adenosine IV Dose:
- First dose: 6 mg rapid IV push; follow with NS flush.
- Second dose: 12 mg, if required

Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia
Procanamide IV Dose:
- 20–50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases > 50% or maximum dose 17 mg/kg given.
- Maintenance infusion: 1–4 mg/min. Avoid if prolonged QT or CHF.

Amiodarone IV Dose:
- First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.

Sotalol IV Dose:
- 100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.

** Scholten M, Szili-Torok T, Kloosterman P, Jordaens L, Comparison of monophasic and biphasic shocks for transthoracic cardioversion of atrial fibrillation. Heart 2003;89:1032-1034