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 (if O₂ sat < 94%)
- 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 second

Y

IV access and 12-lead ECG if available.
- Consider adenosine only if regular and monomorphic.
- Consider antiarrhythmic infusion.
- Consider expert consultation.

N

IV access and 12-lead ECG if available.
- Vagal maneuvers.
- Adenosine (if regular)
- β-Blocker or calcium channel blocker.
- Consider expert consultation.

Doses/Details

**Synchronized Cardioversion**

Initial recommended doses:
- Narrow regular: 50–100 J
- Narrow irregular: 120–200 J monophasic
- 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

Procainamide 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.
