From MEDICAL ASSESSMENT

- **QRS < 90 msec**
  - Yes
  - **Probable SVT**
  - No
  - **Known aberrancy**
    - Yes
    - **Presumed VT**
    - No
    - **NCT Algorithm (A)**

- **Tachycardia terminated and hypotension / poor perfusion resolved**
  - Yes
  - **Complete MEDICAL ASSESSMENT**
  - No
  - **TRANSPORT**

- **WCT Algorithm (B)**

**Definitions:**
- **NCT** – narrow complex tachycardia
- **SVT** – supraventricular tachycardia
- **VT** – ventricular tachycardia
- **WCT** – wide complex tachycardia
INDICATIONS: ALL THREE MUST BE PRESENT

1. Sustained tachycardia with a heart rate of greater than 150 beats per minute.

2. SBP less than 90 mmHg and at least one other sign of poor perfusion:
   - Weak pulses, cool & pale / cyanotic skin, slowed capillary refill
   - Acutely altered LOC
   - Acute heart failure

3. Tachycardia is known or suspected to be the cause of hypotension or poor perfusion.

CONTRAINDICATIONS:

- Rhythm known or suspected to be sinus tachycardia.
- Do not cardiovert or defibrillate with a functioning LVAD (C08 Left Ventricular Assist Device).

NOTES:

- If the patient’s condition allows, consider sedation with midazolam before cardioversion. Monitor for hypotension or signs of respiratory depression with sedation.
- For NCT (probable SVT) providers with appropriate delegation may consider carotid sinus massage (CSM) in the absence of known contraindications.
- Ensure that the device is switched to the synchronized mode for cardioversion.
- If tachycardia recurs after initial termination, consider repeat shock at same energy dose as was previously successful in terminating the tachycardia.

This care map has been developed in accordance with the Heart & Stroke Foundation of Canada 2015 Canadian Resuscitation & First Aid Guidelines (Advanced Cardiac Life Support & Pediatric Advanced Life Support).

ADENOSINE:

- First dose: 0.1 mg / kg (max = 6 mg) IV rapid push, followed by fluid flush
- Second dose: 0.2 mg / kg (max = 12 mg) IV rapid push, followed by fluid flush
- Do not exceed two doses, even if tachycardia recurs
A. Narrow Complex Tachycardia - Adolescent

1. Ensure patent airway
   Ensure oxygenation / ventilation

2. Valsalva manoeuvre

3. Establish cardiac monitor
   Consider ECG & vascular access

4. Consider CSM
   Consider adenosine

5. Yes: Tachycardia terminated
   No: Synchronized cardioversion
   Consider sedation

6. Yes: Tachycardia terminated
   No: Hypotension / poor perfusion resolved

7. Yes: Complete MEDICAL ASSESSMENT
   No: TRANSPORT

SYNCED SHOCK ENERGY:
Biphasic = 0.5 to 1 Joule / kg
Monophasic = 2 Joule / kg

If no response, consider one additional shock with increased energy dose.
Ensure patent airway
Ensure oxygenation / ventilation

Establish cardiac monitor
Consider ECG & vascular access

Synchronized cardioversion
Consider sedation

SYNCED SHOCK ENERGY:
Biphasic = 0.5 to 1 Joules / kg
Monophasic = 2 Joules / kg

TRANSPORT

No

Consider up to two additional shocks with increasing energy dose

Yes

Tachycardia terminated