Clinical Practice Guidelines:
Cardiac/Tachycardia – broad complex

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<td>Purpose</td>
<td>To ensure consistent management of patients with Tachycardia – broad complex.</td>
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<td>Scope</td>
<td>Applies to all QAS clinical staff.</td>
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Tachycardia – broad complex

**Broad complex tachycardia (BCT)** is defined as a heart rate > 100 bpm with a QRS complex > 0.12 seconds.\(^1\) The 12-Lead ECG differential diagnosis includes:

- ventricular tachycardia (VT)
- supraventricular tachycardia (SVT) with aberrant conduction
  - pre-existing BBB
  - intraventricular conduction disturbances
- pre-excitation (e.g. Wolff-Parkinson-White syndrome)

The most important clinical feature when treating patients with BCT is their haemodynamic status. All patients presenting with a BCT associated with haemodynamic instability regardless of cause, require immediate synchronised cardioversion otherwise delay may precipitate severe deterioration and cardiac arrest.

VT is the most common form of BCT, accounting for approximately 80% of cases.

**12-Lead ECG changes more likely to be VT include (Wellen’s criteria):**\(^2,3\)

- AV dissociation
- Left axis deviation (or extreme axis deviation)
- QRS > 0.14 seconds
- Fusion or capture beats present
- Precordial QRS concordance
- RSR pattern in V1, mono or biphasic QRS in V1 or monophasic QS in V6

Age > 35 years and prior history of myocardial disease has a high sensitivity and positive predictive value for VT. The management of patients with BCT should therefore be guided by both history and clinical assessment.

**Clinical features**

- Palpitations
- Chest pain and/or discomfort (described as burning, pressure or tightness)
- Dyspnoea
- ALOC
- Syncope
- Haemodynamic compromise

**Risk Assessment**

- Not applicable
Additional information

- All BCTs should be considered as VT until proven otherwise.
- It is possible for a patient with a pacemaker to have a tachycardia that is pacemaker-facilitated.\textsuperscript{3}

**Pulse present?**

**Yes**
- Haemodynamically compromised?
  - (e.g. ALOC, SBP < 90 mmHg, chest pain, heart failure)
  - Manage as per appropriate CPG:
    - CPG: Resuscitation – Adult
    - CPG: Resuscitation – Paediatric
    - CPG: Resuscitation – Newly born
  - Consider:
    - Amiodarone
    - Magnesium sulphate

**No**
- Transport to hospital
- Pre-notify as appropriate

**No**

**Haemodynamically compromised?**

**Yes**
- Synchronised cardioversion

**No**

Note: Officers are only to perform procedures for which they have received specific training and authorisation by the QAS.