Pulse present

Yes

Resuscitation

No

Unstable Bradycardia

Yes

Deactivate ICD if performing TCP

No

HR less than 60 bpm & hypotension / hypoperfusion

Yes

Deactivate ICD

No

HR greater than 150 bpm & hypotension / hypoperfusion

Yes

Unstable Tachycardia

No

Inappropriate ICD shocks

Yes

Consider deactivating ICD

No

Complete Medical Assessment
**INDICATIONS:**

- Patient with ICD and
  - Inappropriate shocks for non-malignant dysrhythmia, or
  - Failure to shock or convert malignant dysrhythmia
- Patient with implanted pacemaker, and
  - Output failure or failure to capture
  - Failure to sense intrinsic (cardiac) electrical activity

**CONTRAINDICATIONS:**

- None

**NOTES:**

Application of an external magnet over an ICD will inactivate the cardioverting and defibrillating functions, but not the pacemaker function. Application of an external magnet over an implanted pacemaker will convert the device to its asynchronous mode, but will not turn the device off. Some devices may be programmed not to respond to external magnet application.

- Pulseless arrest is managed with standard ACLS protocols. If external defibrillation is required, apply pads or paddles at least 10 cm away from ICD if possible.
- **ICD discharge during chest compressions is not harmful to rescuers.** Providers with appropriate delegation must deactivate ICD.
- TCP may cause an ICD to discharge. Inactivate the ICD when applying TCP.
- **WCT should be presumed to be malignant dysrhythmia in a patient with an ICD (ie. shock delivery is appropriate).** Shocks with a NCT or no discernible dysrhythmia are inappropriate. Providers with appropriate delegation may consider inactivating the ICD after consultation with OLMS.
- With unstable tachycardia do not inactivate ICD.

**ABBREVIATIONS:**

- ACLS – Advanced Cardiac Life Support
- ICD – implanted cardiovertor-defibrillator
- NCT – narrow complex tachycardia
- OLMS – On-line Medical Support
- TCP - transcutaneous pacing
- WCT – wide complex tachycardia