

Top Ten Things To Know Device-Based Therapy of Cardiac Rhythm Abnormalities

1. Recently published trial data and significant changes in the technology available for pacemaker follow-up, specifically in the area of remote follow-up and monitoring, were considered impactful to prompt this focused update of the 2008 Guidelines for Device-based Therapy of Cardiac Rhythm Abnormalities, particularly in the areas of cardiac resynchronization therapy (CRT) and device follow-up.
2. Modification of ventricular electromechanical delay with multisite ventricular pacing (commonly called “biventricular pacing” or CRT) improves myocardial structure and performance of the failing heart.
3. The most significant updates to guideline clinical recommendations include:
 - a. limitation of the Class I (is indicated) recommendation to patients with QRS duration greater than or equal to 150 milliseconds (ms),
 - b. limitation of the Class I indication to patients with left bundle-branch block (LBBB) pattern,
 - c. expansion of Class I indication to New York Heart Association (NYHA) class II (and with LBBB with QRS duration greater than or equal to 150 ms), and
 - d. the addition of a Class IIb (may be useful) recommendation for patients who have left ventricular ejection fraction (LVEF) less than or equal to 30%, ischemic etiology of HF, sinus rhythm, LBBB with a QRS duration greater than or equal to 150 ms, and NYHA class I symptoms.
4. Previously only patients with marked limitation to activity (NYHA Class III or ambulatory Class IV symptoms) were selected for CRT. In this guideline update, selected patients with no or mild symptoms (NYHA Class I and II) are potential candidates for CRT.
5. Subgroup analyses from several studies suggest that a QRS duration of less than 150 ms is a risk factor for failure to respond to CRT therapy. These patients who otherwise qualify for CRT are afforded a Class II (can/may be useful) recommendation.
6. The term guideline-directed medical therapy (GDMT) has been introduced in this focused update and reflects optimal medical therapy as defined within an ACCF/AHA guideline (primarily Class I) with recommended therapies. This new term, GDMT, will also be used throughout all future guidelines.
7. CRT implantation should be performed only when the LVEF meets guideline criteria for patients with nonischemic cardiomyopathy who have received greater than 3 months of GDMT, or for patients with ischemic cardiomyopathy greater than 40 days after myocardial infarction who received GDMT with no intervening revascularization, or greater than 3 months if revascularization was performed.
8. Important technological advances have been made related to follow-up and remote monitoring of cardiovascular implantable electronic devices (CIEDs)—including pacemakers, implantable cardioverter-defibrillators, CRTs, implantable loop recorders, and implantable cardiovascular monitors. Remote monitoring using bidirectional telemetry may complement in-person follow-ups.
9. Compared with in-person office visits to evaluate CIEDs, remote monitoring allows for early discovery of clinically actionable events and decreased time for clinical decision-making in response to events.
10. Collaboration among heart failure and electrophysiology clinicians is essential to provide for the continuum of care regarding patient selection, review of device interrogation reports, and considerations of device adjustments with changes in patient preferences including end-of-life issues.