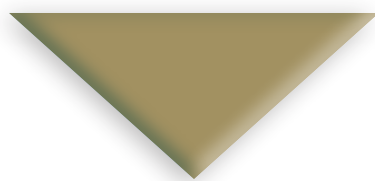




ESSENTIAL MESSAGES FROM ESC GUIDELINES

Committee for Practice Guidelines

To improve the quality of clinical practice and patient care in Europe



Cardiac Pacing

**GUIDELINES FOR CARDIAC PACING AND
CARDIAC RESYNCHRONIZATION THERAPY**

For more information

www.escardio.org/guidelines



**EUROPEAN
SOCIETY OF
CARDIOLOGY®**

ESC ESSENTIAL MESSAGES

2013 ESC GUIDELINES ON CARDIAC PACING AND CARDIAC RESYNCHRONIZATION THERAPY

The Task Force on cardiac pacing and resynchronization therapy
of the European Society of Cardiology (ESC).

Developed in collaboration with the European Heart Rhythm Association (EHRA).

Chairperson

Professor Michele Brignole

Department of Cardiology

Ospedali Del Tigullio

Via Don Bobbio 25

IT-16033 Lavagna, (GE) Italy

Tel: +39 0185 329 569

Fax: +39 0185 306 506

Email: mbrignole@ASL4.liguria.it

Authors/Task Force Members

Angelo Auricchio (Switzerland); Gonzalo Baron-Esquivias (Spain); Pierre Bordachar (France); Giuseppe Boriani (Italy); Ole-A Breithardt (Germany); John Cleland (UK); Jean-Claude Deharo (France); Victoria Delgado (Netherlands); Perry M. Elliott (UK); Bulent Gorenek (Turkey); Carsten W. Israel (Germany); Christophe Leclercq (France); Cecilia Linde (Sweden); Lluís Mont (Spain); Luigi Padeletti (Italy); Richard Sutton (UK); Panos E. Vardas (Greece).

Other ESC entities having participated in the development of this document:

Association: Acute Cardiovascular Care Association (ACCA), European Association of Cardiovascular Imaging (EACVI), Heart Failure Association (HFA).

Working Groups: Myocardial and Pericardial Diseases.

Councils: Cardiology Practice.



ESC Staff:

Veronica Dean, Catherine Despres, Karine Villanese - Sophia Antipolis, France.



ESSENTIAL MESSAGES FROM 2013 ESC GUIDELINES ON CARDIAC PACING AND CARDIAC RESYNCHRONIZATION THERAPY

Table of contents

-  Section 1 - Take home messages
-  Section 2 - Major gaps in evidence

Take home messages

1. The document outlines an innovative classification of bradyarrhythmias by mechanism. There are three main groups: persistent bradycardia, intermittent bradycardia with electrocardiographic documentation, and suspected intermittent bradycardia (not yet documented). Recommendations are provided for the three categories. Until now, guidelines and text books have classified bradyarrhythmias according to their aetiology, for example sinus node dysfunction, myocardial infarction, or bundle branch block. Classification of bradyarrhythmias according to mechanism (i.e., the clinical presentation) is more useful for selecting patients for permanent cardiac pacing therapy than their aetiology.
2. The strength of indications for CRT focuses mainly on the presence or absence of left bundle branch block. Unique recommendations are given for NYHA class II and III patients. A spectrum of response to CRT, as with most other treatments, is recognized: the beneficial effects of CRT may be greater in females, patients with non-ischaemic cardiomyopathy and patients with QRS duration >150 ms (the longer the QRS duration, the greater the benefit). Different recommendations are given for patients with atrial fibrillation. These patients are subdivided into patients with an indication for CRT and patients with an indication for AV junction ablation.
3. Different recommendations are given for an upgrade or “de novo” implantation of CRT in patients with a brady indication for pacing.
4. Clinical guidance to the choice between CRT-P or CRT-D in primary prevention is provided.
5. In the decision process for indication for pacing/CRT and for the choice of the best modality attention should be paid to a careful evaluation of the risk of complications. In general the risk of complications is higher when implanting more complex devices and for re-intervention and upgrades.

Major gaps in evidence

1. Too few LoE A (brady pacing).
2. Too many LoE C (brady pacing).
3. Need of RCTs for CRT subgroups (e.g., RBBB, NYHA I, QRS duration, etc).
4. Need of RCTs for CRT in AF patients.
5. Need of RCTs for CRT optimization.
6. Need of RCTs for specific conditions (e.g., pacing in children, alternative sites, etc).



**EUROPEAN
SOCIETY OF
CARDIOLOGY®**

EUROPEAN SOCIETY OF CARDIOLOGY
2035, ROUTE DES COLLES
LES TEMPLIERS - BP 179
06903 SOPHIA ANTIPOLIS CEDEX - FRANCE
PHONE: +33 (0)4 92 94 76 00
FAX: +33 (0)4 92 94 76 01
E-mail: guidelines@escardio.org

©2013 The European Society of Cardiology

No part of these Pocket Guidelines may be translated or reproduced in any form without written permission from the ESC.

The following material was adapted from the 2013 ESC Guidelines on Cardiac Pacing and Cardiac Resynchronization Therapy (European Heart Journal 2013; 34:2281-2329 - doi:10.1093/eurheartj/ehs150).

To read the full report as published by the European Society of Cardiology, visit our Web Site at:

www.escardio.org/guidelines

Copyright © European Society of Cardiology 2013 - All Rights Reserved.

The content of these European Society of Cardiology (ESC) Guidelines has been published for personal and educational use only. No commercial use is authorized. No part of the ESC Guidelines may be translated or reproduced in any form without written permission from the ESC. Permission can be obtained upon submission of a written request to ESC, Practice Guidelines Department, 2035, route des Colles - Les Templiers - BP179 - 06903 Sophia Antipolis Cedex - France.

Disclaimer:

The ESC Guidelines represent the views of the ESC which were arrived at after careful consideration of the available evidence at the time they were written. Health professionals are encouraged to take them fully into account when exercising their clinical judgment. The guidelines do not, however, override the individual responsibility of health professionals to make appropriate decisions in the circumstances of the individual patients, in consultation with that patient, and where appropriate and necessary the patient's guardian or carer. It is also the health professional's responsibility to verify the rules and regulations applicable to drugs and devices at the time of prescription.

For more information

www.escardio.org/guidelines



**EUROPEAN
SOCIETY OF
CARDIOLOGY®**

EUROPEAN SOCIETY OF CARDIOLOGY
2035, ROUTE DES COLLES
LES TEMPLIERS - BP 179
06903 SOPHIA ANTIPOLIS CEDEX - FRANCE
PHONE: +33 (0)4 92 94 76 00
FAX: +33 (0)4 92 94 76 01
E-mail: guidelines@escardio.org

For more information

www.escardio.org/guidelines