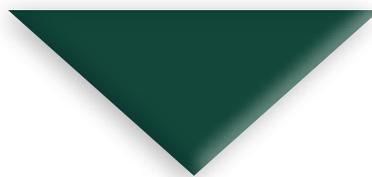


ESSENTIAL MESSAGES FROM ESC GUIDELINES

Committee for Practice Guidelines

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



VHD

**ESC/EACTS GUIDELINES ON THE MANAGEMENT
OF VALVULAR HEART DISEASE**

For more information

www.escardio.org/guidelines

ESC ESSENTIAL MESSAGES

ESC/EACTS GUIDELINES ON THE MANAGEMENT OF VALVULAR HEART DISEASE (VERSION 2012)*

The Joint Task Force on the Management of Valvular Heart Disease
of the European Society of Cardiology (ESC) and the European Association
for Cardio-Thoracic Surgery (EACTS)

Chairpersons

Alec Vahanian

Service de Cardiologie, Hopital Bichat AP-HP
46 rue Henri Huchard
75018 Paris, France
Tel: +33 1 40 25 67 60
Fax: +33 1 40 25 67 32
Email: alec.vahanian@bch.aphp.fr

Ottavio Alfieri

S. Raffaele University Hospital
20132 Milan
Italy
Tel: +39 02 26437109
Fax: +39 02 26437125
Email: ottavio.alfieri@hsr.it

Authors/Task Force Members

Felicita Andreotti (Italy); Manuel J. Antunes (Portugal), Gonzalo Barón-Esquivias (Spain), Helmut Baumgartner (Germany), Michael Andrew Borger (Germany), Thierry P. Carrel (Switzerland), Michele De Bonis (Italy), Arturo Evangelista (Spain), Volkmar Falk (Switzerland), Bernard Iung (France), Patrizio Lancellotti (Belgium), Luc Pierard (Belgium), Susanna Price (UK), Hans-Joachim Schäfers (Germany), Gerhard Schuler (Germany), Janina Stepinska (Poland), Karl Swedberg (Sweden), Johanna Takkenberg (The Netherlands), Ulrich Otto Von Oppell (UK), Stephan Windecker (Switzerland), Jose Luis Zamorano (Spain), Marian Zembala (Poland)

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

Association: European Association of Echocardiography (EAE), European Association of Percutaneous Cardiovascular Interventions (EAPCI), Heart Failure Association (HFA).

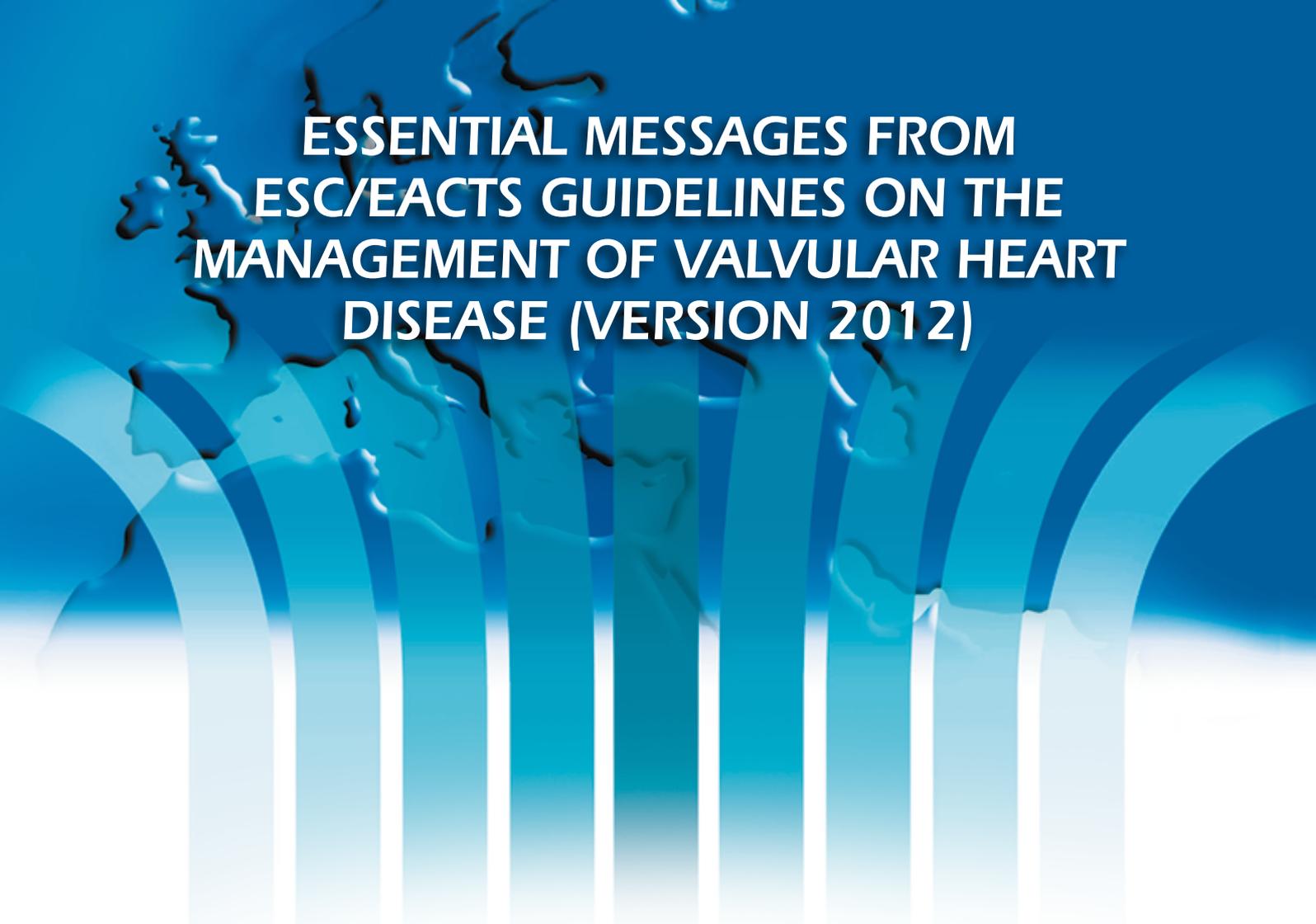
Working Groups: Acute Cardiac Care, Cardiovascular Surgery, Valvular Heart Disease, Thrombosis, Grown-up Congenital Heart Disease.

Councils: Cardiology Practice, Cardiovascular Imaging.

ESC Staff:

Veronica Dean, Catherine Despres, Nathalie Cameron - Sophia Antipolis, France.

*Adapted from the ESC/EACTS Guidelines on the management of Valvular Heart Diseases (European Heart Journal (2012) 33:2451-2496 - doi:10.1093/eurheartj/ehs109 and European Journal of Cardio-Thoracic Surgery 2012 - doi:10.1093/ejcts/ezs455).



ESSENTIAL MESSAGES FROM ESC/EACTS GUIDELINES ON THE MANAGEMENT OF VALVULAR HEART DISEASE (VERSION 2012)

Table of contents

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

Take home messages

- 1 - Decision-making in patients with valvular disease should ideally be carried out by a “heart team” with particular expertise in valvular heart disease (VHD), including cardiologists, cardiac surgeons, imaging specialists, anaesthetists and, if needed, other specialists. This “heart team” approach is particularly advisable in the management of high-risk patients and is also important for other subsets, such as asymptomatic patients, where the evaluation of reparability is a key component in decision-making.
 - A comprehensive evaluation of the cardiac and extra-cardiac condition of the patient, constantly checking for consistency between the results of diagnostic investigation and clinical findings, is necessary at each step of the decision-making process.
 - Decision-making in high risk patients is difficult. In the absence of a perfect risk score, scores should be included in, but not be substitutes for, the clinical judgement of the ‘heart team’.
- 2 - Intervention is indicated in patients with severe valve disease causing symptoms and /or ventricular dysfunction unless the ‘heart team’ states that the patient is not suitable for surgery.
- 3 - In *aortic regurgitation* pathology of the aortic root is frequent.
 - In patients with Marfan syndrome, surgery is indicated when the maximal ascending aortic diameter is ≥ 50 mm, while the threshold for intervention should be lower in patients with risk factors for progression.
 - In cases with bicuspid aortic valve the new threshold is 50 mm for patients with risk factors and 55 mm for all other patients.
 - The thresholds are lower if aortic valve replacement is combined with the treatment of aortic root disease or if valve repair is performed.
- 4 - In *aortic stenosis*,
 - Transcatheter aortic valve implantation (TAVI) should be performed only ‘in hospitals with cardiac surgery on-site’ and with a ‘heart team’ available to assess individual patient risks.
 - TAVI is indicated in patients with severe symptomatic aortic stenosis who are judged, by the ‘heart team’, to be unsuitable for surgery but have sufficient life expectancy. TAVI should be considered for high-risk patients with severe symptomatic aortic stenosis based on the individual risk profile as assessed by the ‘heart team’, rather than on thresholds of risk scores. TAVI should not be performed in patients at low or intermediate risk for surgery.
 - Aortic valve replacement should be considered in symptomatic patients with low-flow, low-gradient (<40 mmHg) aortic stenosis with normal ejection fraction only if comprehensive evaluation suggests significant obstruction.
 - Surgery should be considered in asymptomatic patients at low operative risk, with normal exercise performance, with very severe aortic stenosis or progressive disease. Surgery may also be considered in patients with markedly elevated natriuretic peptide levels, significant increase of mean pressure gradient by exercise echocardiography or excessive left ventricular hypertrophy.

Take home messages

5 - In *mitral regurgitation*,

- Valve repair should be the preferred technique when it is expected to be durable. As a consequence it is important to increase surgical expertise and the number of reference centres for this frequently occurring disease.
- In asymptomatic patients with primary mitral regurgitation (MR) surgery should be considered in those patients with preserved left ventricular function, high likelihood of durable repair, low surgical risk, flail leaflet and left ventricular end-systolic diameter >40 mm. Surgery may also be considered in asymptomatic patients at low risk in cases with severe dilatation of the left atrium or pulmonary hypertension on exercise echocardiography.
- In patients with secondary MR, severe MR should be corrected at the time of bypass surgery. The indications for isolated mitral valve surgery in symptomatic patients with severe secondary MR and severely depressed systolic LV function, who cannot be revascularized or who present with cardiomyopathy, are questionable.
- Percutaneous mitral valve repair using the edge to edge technique may be considered in high risk or inoperable patients refractory to optimal medical management with the aim of improving symptoms.

6 - In *mitral stenosis*

- Most patients with severe mitral stenosis and favourable valve anatomy currently undergo percutaneous mitral commissurotomy.
- Decision-making as to the type of intervention in patients with unfavourable anatomy is still a matter of debate and must take into account the multifactorial nature of predicting the results of percutaneous commissurotomy.

7 - *Tricuspid disease* should not be forgotten,

- During left sided valve surgery, tricuspid valve surgery is indicated in patients with severe tricuspid regurgitation (TR) and should be considered in the presence of moderate primary TR or mild to moderate secondary TR if there is significant annular dilatation.
- Isolated tricuspid valve surgery in severe primary TR is recommended in patients with symptoms as well as in asymptomatic patients with progressive right ventricular (RV) enlargement and/or initial signs of RV dysfunction.

8 - The choice of the type of *valve prosthesis* should be individualized and discussed in detail with the patient and surgeon, taking into account multiple factors.

- Age is one of the parameters for the decision; the age limit for implanting a bioprosthesis was lowered to 60–65 years for patients who should receive an aortic prosthesis, and to 65–70 years for those receiving a mitral prosthesis. In patients aged 60–65 years, who are to receive an aortic prosthesis, and those aged 65–70 years in the case of mitral prosthesis, both valves are acceptable and the choice requires careful analysis of additional factors.

9 - In patients with aortic bioprostheses the use of low-dose aspirin is now favoured for a 3-month postoperative period.

Major gaps in evidence

- Overall, owing to the paucity of evidence-based data in the field of valvular heart disease, leading to most recommendations being based on expert consensus, the Task Force pleads for an increase in the research efforts in this field.
- The elaboration and validation of improved risk scoring systems for predicting outcomes after valve surgery and interventional procedures is desirable.
- The prognostic impact and diagnostic value of stress echocardiography should be further evaluated.
- More data are needed on the long term results of aortic valve repair.
- Further trials are needed to evaluate the potential role of transcatheter aortic valve implantation in intermediate risk patients with aortic stenosis and that of edge to edge percutaneous mitral valve repair in high risk patients with secondary MR.
- The indications for intervention in asymptomatic patients with AS or MR should be further evaluated.
- Controlled clinical trials are needed to better define the modalities of early anticoagulant therapy after valve replacement using a mechanical prosthesis, a bioprosthesis in aortic position or after transcatheter aortic valve implantation.
- Clinical trials are necessary to evaluate the usefulness of direct oral inhibitors of factor IIa or Xa in patients with a mechanical prosthesis.
- The role of TAVI in patients with failure of surgically implanted bioprosthesis should be further evaluated.



**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

©2012 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 ESC/EACTS Guidelines on the management of Valvular Heart Diseases
(European Heart Journal (2012) 33:2451-2496 - doi:10.1093/eurheartj/ehs109
& European Journal of Cardio-Thoracic Surgery 2012 - doi:10.1093/ejcts/ezs455).

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 2012 - 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