ValvularAS guidelines updates

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What is new in the 2017 Valvular Heart Disease Guidelines?

Changes in recommendations	
2012	2017
Indications for intervention in symptomatic aortic stenosis	
IIb C Intervention may be considered in symptomatic patients with low-flow, low-gradient aortic stenosis and reduced ejection fraction without flow (contractile) reserve.	IIa C Intervention should be considered in symptomatic patients with low-flow, low-gradient aortic stenosis and reduced ejection fraction without flow (contractile) reserve, particularly when CT calcium scoring confirms severe aortic stenosis.

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2017 ESC/EACTS Guidelines for the Management of Valvular Heart Disease (European Heart Journal 2017 - doi:10.1093/eurheartj/ehx391)

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What is new in the 2017 Valvular Heart Disease Guidelines?

EACTS | ESC European Society of Cardiology

Changes in recommendations	
2012	**2017**
Indications for surgery in asymptomatic aortic stenosis	
IIb C Markedly elevated BNP levels.	**IIa C** Markedly elevated BNP levels (>threefold age- and sex-corrected normal range) confirmed by repeated measurements without other explanations.
IIb C Increase of mean pressure gradient with exercise by >20 mmHg.	**Taken out**
IIb C Excessive LV hypertrophy in the absence of hypertension.	**Taken out**

What is new in the 2017 Valvular Heart Disease Guidelines?

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2017 New recommendations
Diagnosis of severe aortic stenosis See new recommendations for the diagnosis of severe aortic stenosis (Figure and Table).
Indications for surgery in asymptomatic aortic stenosis
New IIa C recommendation: Severe pulmonary hypertension (systolic pulmonary artery pressure at rest >60 mmHg confirmed by invasive measurement) without other explanation.
Indications for intervention in asymptomatic severe primary mitral regurgitation **New additional statement:** If pulmonary hypertension (SPAP >50 mmHg at rest) is the only indication for surgery, the value should be confirmed by invasive measurement.

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What is new in the 2017 Valvular Heart Disease Guidelines?

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2017 New recommendations

IIa B

- In patients treated with coronary stent implantation, triple therapy with aspirin (75-100 mg/day), clopidogrel (75 mg/day), and VKA should be considered for 1 month, irrespective of the type of stent used and the clinical presentation (i.e. ACS or stable CAD).
- Triple therapy comprising aspirin (75-100 mg/day), clopidogrel (75 mg/day), and VKA for longer than 1 month and up to 6 months should be considered in patients with high ischaemic risk due to ACS or other anatomical/procedural characteristics that outweigh the bleeding risk.

IIa A

- Dual therapy comprising VKA and clopidogrel (75 mg/day) should be considered as an alternative to 1-month triple antithrombotic therapy in patients in whom the bleeding risk outweighs the ischaemic risk.

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What is new in the 2017 Valvular Heart Disease Guidelines?

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2017 New recommendations

IIa B

- In patients who have undergone PCI, discontinuation of antiplatelet treatment should be considered at 12 months.
- In patients requiring aspirin and/or clopidogrel in addition to VKA, the dose intensity of VKA should be carefully regulated with a target INR in the lower part of the recommended target range and a time in therapeutic range >65–70%.

IIa C

- Dual antiplatelet therapy should be considered for the first 3–6 months after TAVI, followed by lifelong single antiplatelet therapy in patients who do not need oral anticoagulation for other reasons.

IIb C

- Single antiplatelet therapy may be considered after TAVI in the case of high bleeding risk.

III B

- The use of NOACs is contraindicated in mechanical valves.

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III B
- The use of NOACs is contraindicated in mechanical valves.

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Management of coronary artery disease

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(Adapted from Windecker et al.)

Recommendations	Class	Level
Diagnosis of coronary artery disease		
Coronary angiography is recommended before valve surgery in patients with severe VHD and any of the following: • history of cardiovascular disease, • suspected myocardial ischaemia, • LV systolic dysfunction, • in men >40 years and postmenopausal women, • one or more cardiovascular risk factors.	I	C
Coronary angiography is recommended in the evaluation of moderate to severe secondary mitral regurgitation.	I	C
CT angiography should be considered as an alternative to coronary angiography before valve surgery in patients with severe VHD and low probability of CAD or in whom conventional coronary angiography is technically not feasible or associated with a high-risk.	IIa	C

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Management of coronary artery disease *(continued)*

ESC European Society of Cardiology

(Adapted from Windecker et al.)

Recommendations	Class	Level
Indications for myocardial revascularization		
CABG is recommended in patients with a primary indication for aortic/mitral valve surgery and coronary artery diameter stenosis≥70%.	I	C
CABG should be considered in patients with a primary indication for aortic/mitral valve surgery and coronary artery diameter stenosis ≥50-70%.	IIa	C
PCI should be considered in patients with a primary indication to undergo TAVI and coronary artery diameter stenosis >70% in proximal segments.	IIa	C
PCI should be considered in patients with a primary indication to undergo transcatheter mitral valve interventions and coronary artery diameter stenosis >70% in proximal segments.	IIa	C

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Management of atrial fibrillation in patients with VHD

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Recommendations	Class	Level
Anticoagulation		
NOACs should be considered as an alternative to VKAs in patients with aortic stenosis, aortic regurgitation, and mitral regurgitation presenting with atrial fibrillation.	IIa	B
NOACs should be considered as alternative to VKAs after the third month of implantation in patients who have atrial fibrillation associated with a surgical or transcatheter aortic valve bioprosthesis.	IIa	C
The use of NOACs is not recommended in patients with atrial fibrillation and moderate to severe mitral stenosis.	III	C
NOACS are contra-indicated in patients with a mechanical valve.	III	B

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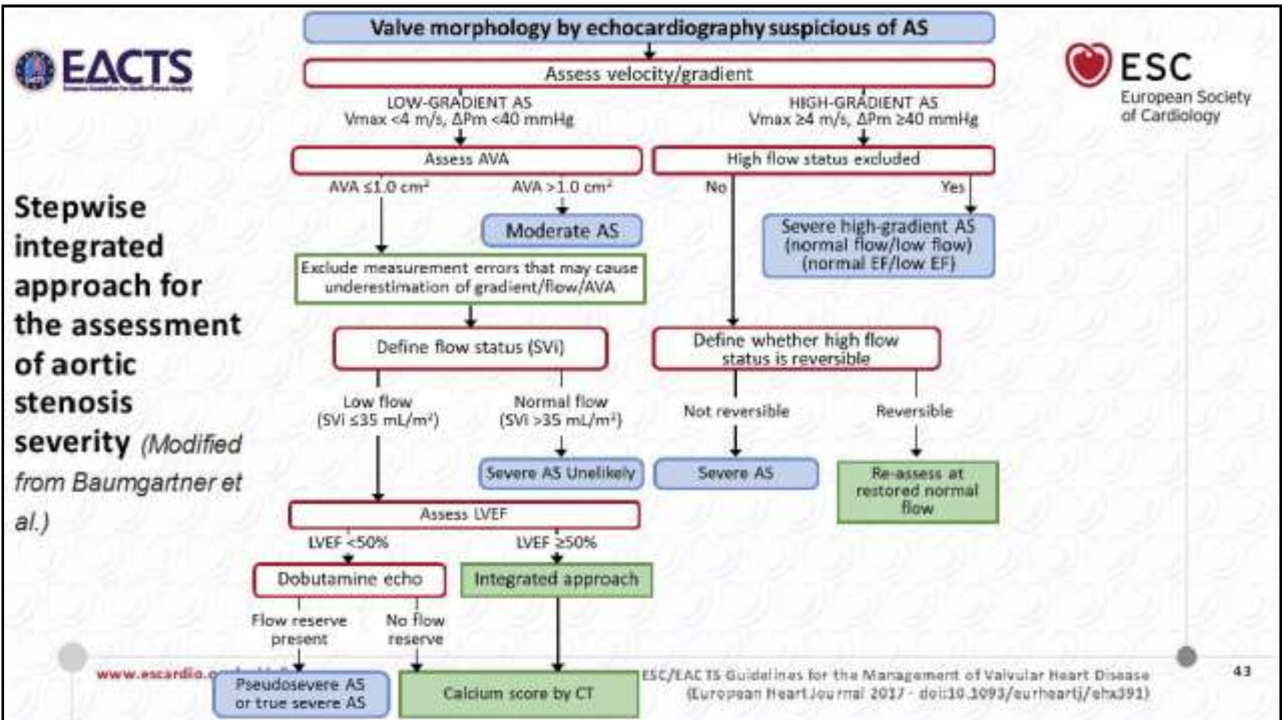
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Stepwise integrated approach for the assessment of aortic stenosis severity (Modified from Baumgartner et al.)
Valve morphology by echocardiography suspicious of AS
Assess velocity/gradient
LOW-GRADIENT AS
Vmax <4 m/s, ΔPm <40 mmHg
HIGH-GRADIENT AS
Vmax ≥4 m/s, ΔPm ≥40 mmHg
Assess AVA
AVA ≤1.0 cm²
AVA >1.0 cm²
Moderate AS
Exclude measurement errors that may cause underestimation of gradient/flow/AVA
Define flow status (SVi)
Low flow (SVi ≤35 mL/m²)
Normal flow (SVi >35 mL/m²)
Severe AS Unlikely
Assess LVEF
LVEF <50%
LVEF ≥50%
Dobutamine echo
Integrated approach
Flow reserve present
No flow reserve
Pseudosevere AS or true severe AS
Calcium score by CT
High flow status excluded
No
Yes
Severe high-gradient AS (normal flow/low flow) (normal EF/low EF)
Define whether high flow status is reversible
Not reversible
Reversible
Severe AS
Re-assess at restored normal flow
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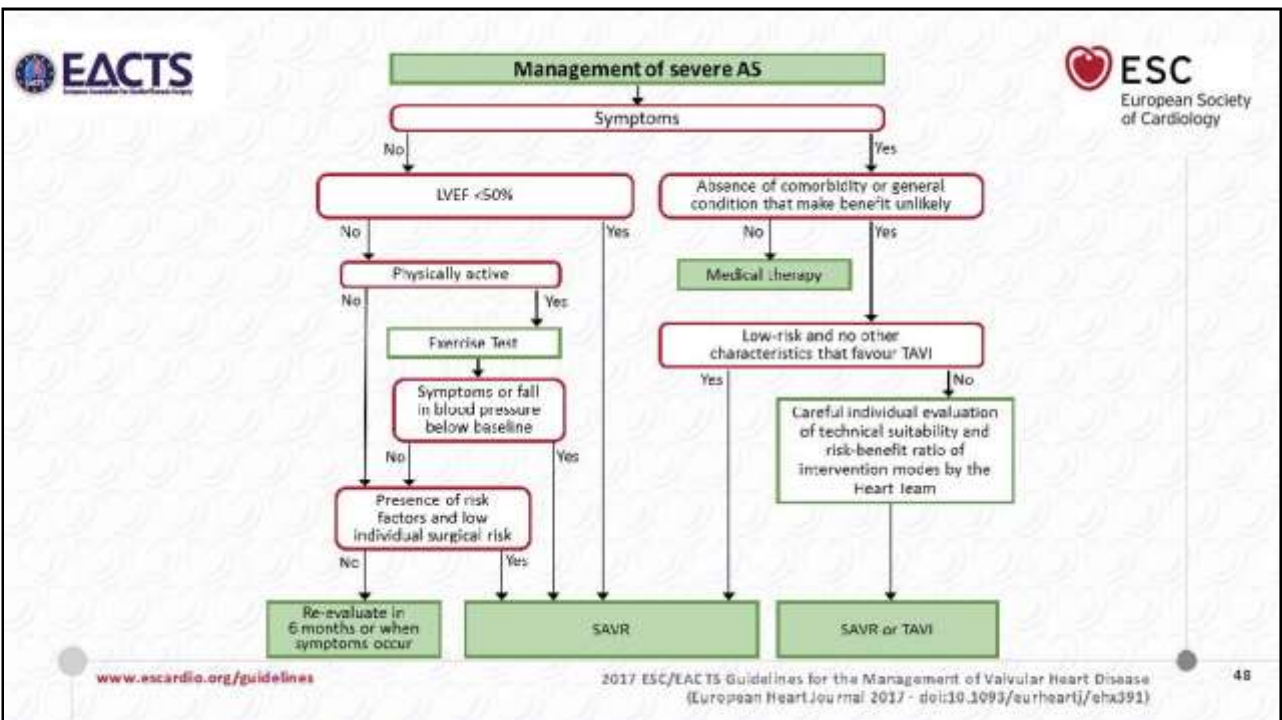
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Management of severe AS
Symptoms
No
Yes
LVEF <50%
No
Yes
Physically active
No
Yes
Exercise Test
Symptoms or fall in blood pressure below baseline
No
Yes
Presence of risk factors and low individual surgical risk
No
Yes
Re-evaluate in 6 months or when symptoms occur
SAVR
Absence of comorbidity or general condition that make benefit unlikely
No
Yes
Medical therapy
Low-risk and no other characteristics that favour TAVI
Yes
No
Careful individual evaluation of technical suitability and risk-benefit ratio of intervention modes by the Heart Team
SAVR or TAVI
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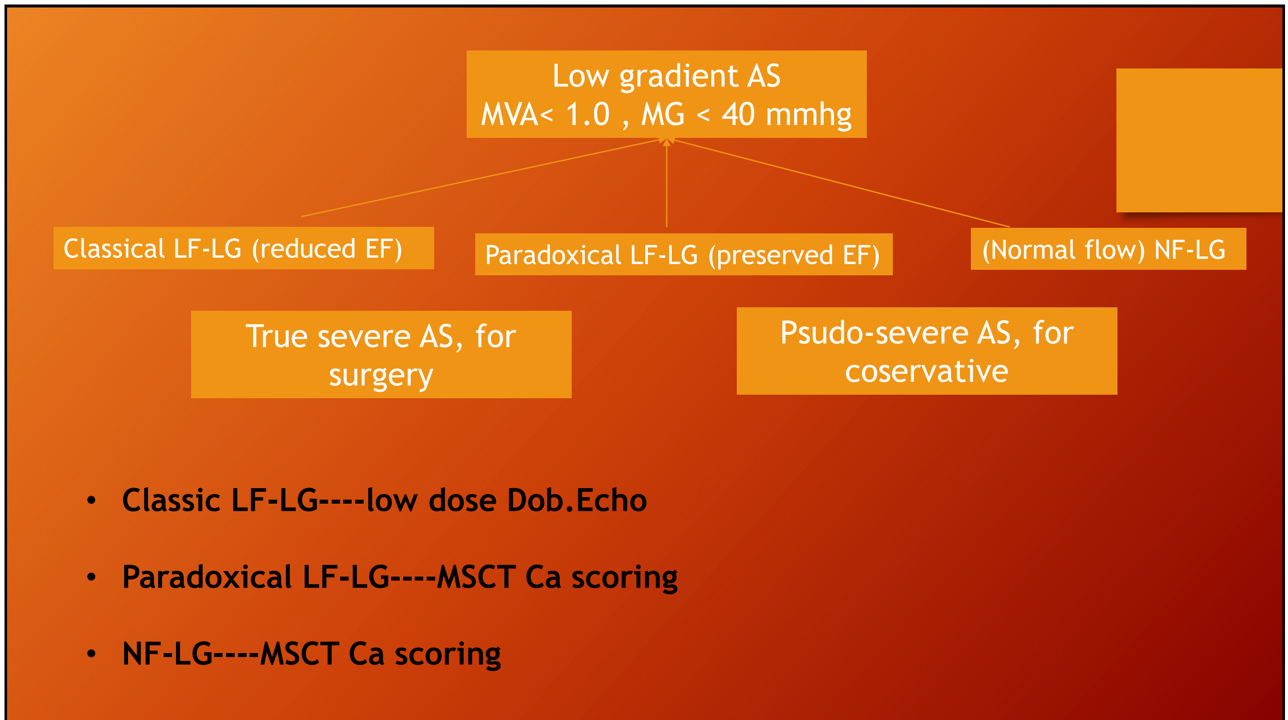

Thank you