

# Updated guidelines part 1 Aortic stenosis

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June 2018

ESC guidelines

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1. Eurovision Song Contest?

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## ESC guidelines

1. Eurovision Song Contest?
2. I heard they were out
3. I have looked at them but got bored / distracted
4. I have read them
5. I was on the writing committee

## Guidelines...



## Guidelines...are like sausages



## Guidelines... are like sausages



- Everyone likes them..

## Guidelines... are like sausages



- Everyone likes them..
- But if you knew what went into making them you might be less keen!

## ESC guidelines updated

### ESC Press Office

#### Press releases

#### Press Services & Media Alerts

#### ESC Congresses

#### Fact sheets

#### ESC Media and Embargo Policy

#### ESC Industry Media Policy

### ESC/EACTS Guidelines for the management of valvular heart disease published today

26 Aug 2017

**Topic(s):** Valvular Heart Disease; Barcelona, Spain - 26 Aug 2017; European Society of Cardiology (ESC) / European Association for Cardio-Thoracic Surgery (EACTS) Guidelines for the management of valvular heart disease are published online today in European Heart Journal (E) and on the ESC website. (2)

"Since the 2012 Guidelines a large amount of new data have accumulated, particularly in the field of catheter interventional treatment of valvular heart disease," said Prof Heimo Baumgartner, ESC Chairperson (Germany). "In aortic stenosis, there have been five randomised clinical trials comparing surgical aortic valve replacement (SAVR) and transcatheter aortic valve implantation (TAVI) as well as large-scale registry data."

"There is also new evidence regarding predictors of outcome in asymptomatic patients with valvular heart disease and on antithrombotic therapy in this patient population among other innovations," he continued. "This definitely required an update of management recommendations."

"We have now expanded the indications for transcatheter valves because there is new evidence in the intermediate risk population," said Prof Volkmar Falk, EACTS Chairperson (Germany).

### What's new?

- Update assessment of severity
- Highlights flow dependent indices
- Valve area now only for low-flow low-gradient AS
- Change in grading of recommendation for intervention

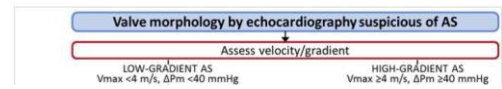
### Why has it changed?

- Avoid underestimation of AS severity
  - Treat those who will benefit
- Avoid excess diagnosis of low flow, low gradient AS
  - Don't treat those who won't benefit

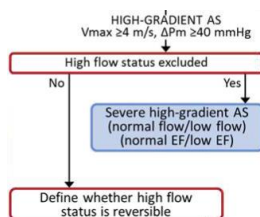
### Assessment of AS severity

- Stepwise approach starting with...
- Valve morphology suggestive of aortic stenosis?

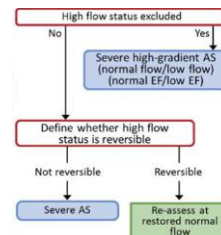
### Start by measuring the gradient



### If the Vmax is >4m/s...



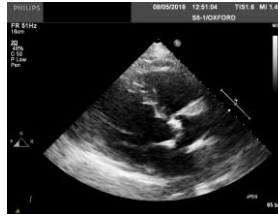
### If no high flow state or irreversible physiology



### High flow state?

- Anaemia
- Hyperthyroidism
- Liver cirrhosis
- Large arteriovenous shunt

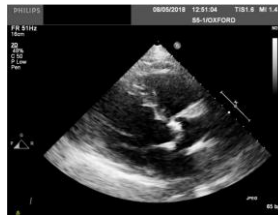
### A note of caution...



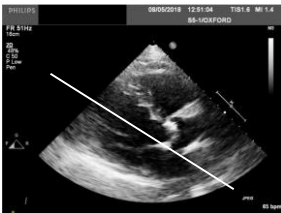
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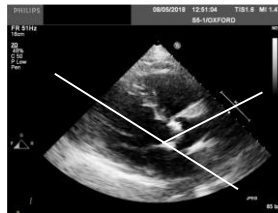
### A note of caution...observe the angle



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R parasternal view



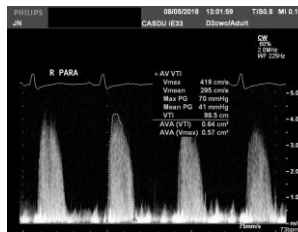
R parasternal view



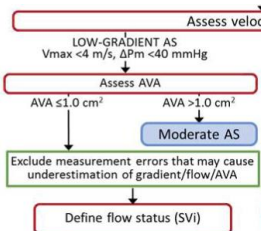
Angle improved for CW alignment



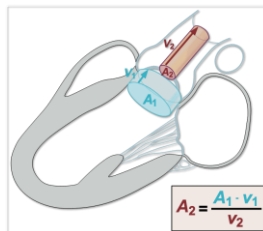
Actual Vmax



What if valve looks bad but Vmax < 4m/s?

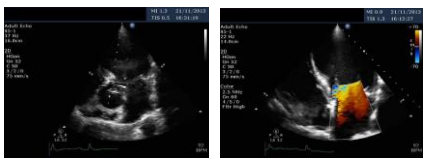


Calculate aortic valve area (AVA)

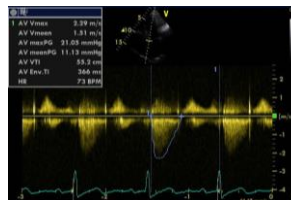




Don't be mistaken

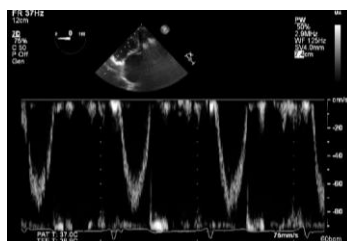


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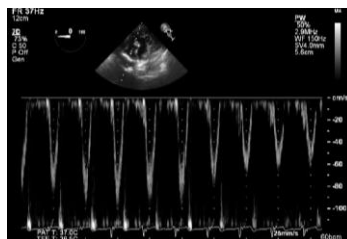
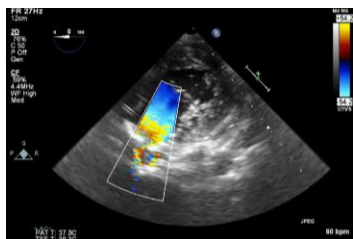
Sample the LVOT velocity carefully

Take care with LVOT PW sample point

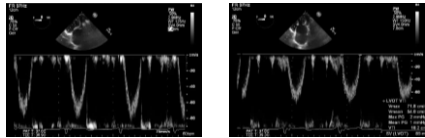


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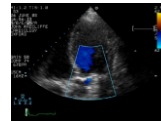
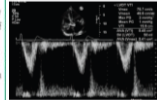
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Inaccurate Doppler measurement

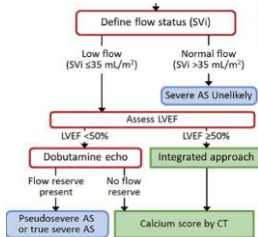
LVOT VTI  
(NOTE: can also be performed in 3CV)

Sample volume positioned just at level of AV annulus and moved carefully into the LVOT if necessary, until laminar flow curve obtained i.e. smooth velocity curve with narrow band, well defined peak. (Typically 0.5-1.0cm from AV annulus in calcific AS; AV annulus level in bicuspid AS). Trace around outer signal

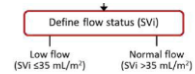


BSE Aortic Stenosis protocol

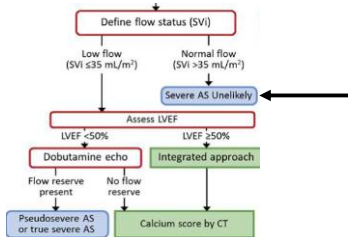
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What if valve looks bad but Vmax < 4m/s?



Measure Stroke volume index

- Already measured LVOT diameter and LVOT VTI
- Input patient size (BSA)
- Normal is > 35ml/m<sup>2</sup>



