

19TH ANNUAL CANADIAN ECHO WEEKEND
APRIL 20-22, 2017
TORONTO, ON

Session Title: Debate

Low gradient “severe” AS with preserved EF: This is measurement error and non-severe AS in the vast majority of the patients

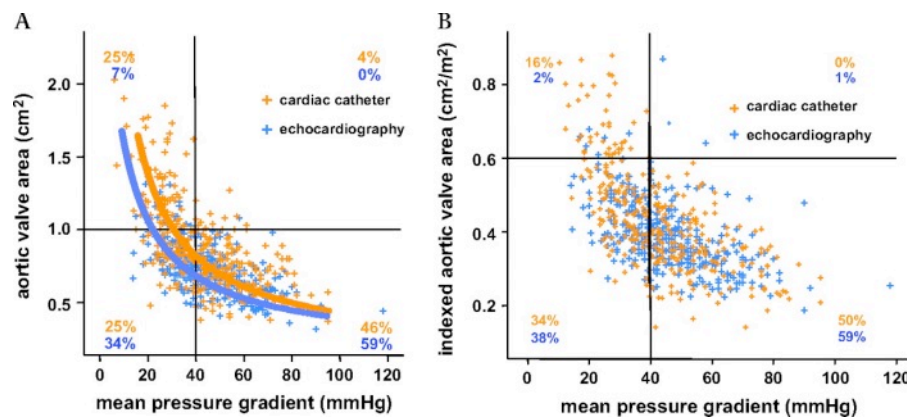
Presenter/Author: Kwan Chan

OBJECTIVES: What questions or points will participants learn or discuss?

1. Meaning of low gradient AS
2. Importance of measurement errors in this clinical scenario
3. Heterogeneity of low gradient AS patients

DISCUSSION: Please provide a summary of the discussion and/or include 3 to 6 key presentation slides.

Inconsistent grading of the severity of aortic valve stenosis in echocardiography and cardiac catheterisation.



Jan Minners et al. Heart 2010;96:1463-1468

From: **Low gradient severe aortic stenosis with preserved ejection fraction: reclassification of severity by fusion of Doppler and computed tomographic data**

Eur Heart J. 2015;36(31):2087-2096. doi:10.1093/eurheartj/ehv188

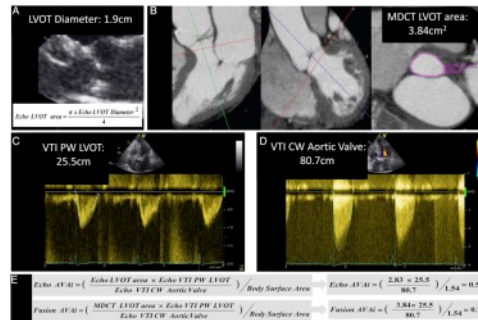


Figure Legend:

Aortic valve area index (AVAi) evaluated by echocardiography (Echo) and by fusion of multidetector computed tomography (MDCT) and Doppler echocardiographic data. By echocardiography, the left ventricular outflow tract (LVOT) diameter was measured 5 mm below the aortic annulus, and the left ventricular outflow tract area was estimated (A). Using multidetector computed tomography, the left ventricular outflow tract area was planimetered at the reconstructed double-oblique transverse view in systole, 5 mm below the annulus (B). The velocity time integral (VTI) of the flow at the left ventricular outflow tract was measured on pulsed wave (PW) Doppler recordings obtained from the apical five-chamber view with the sample volume located 5 mm below the aortic annulus (C). The velocity time integral of the flow at the aortic valve was measured on continuous wave (CW) Doppler recordings (D). By applying the continuity equation, the echocardiography and the fusion aortic valve area index were evaluated by using the echocardiography -estimated left ventricular outflow tract area and the multidetector computed

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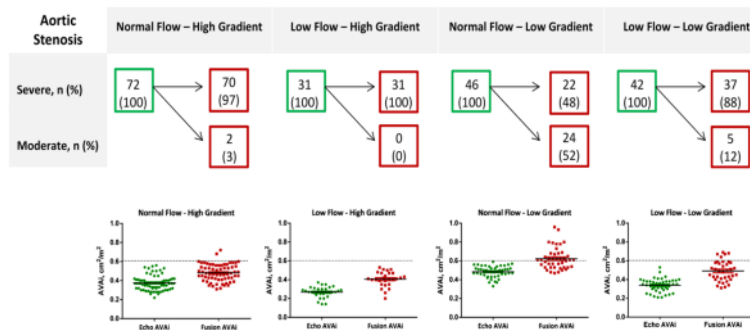
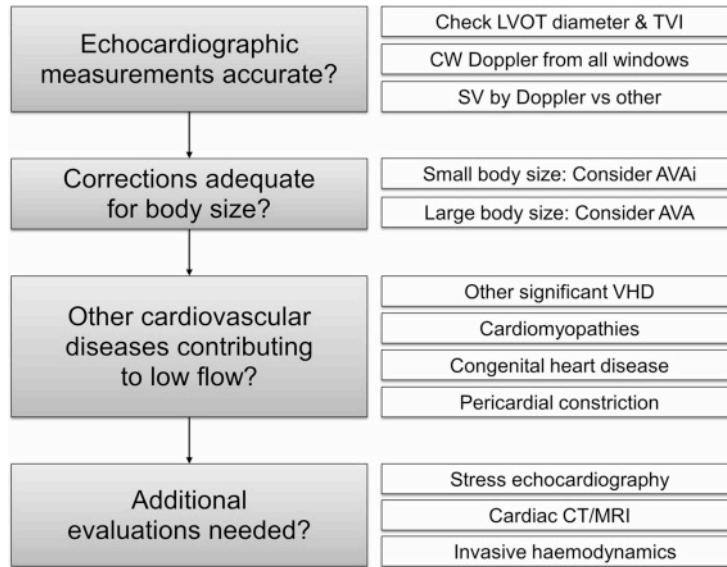


Figure Legend:

Reclassification of aortic stenosis severity in patients with echocardiographic severe aortic stenosis and preserved ejection fraction. AVAi, aortic valve area index.

Proposed systematic approach to diagnosis of low-flow/low-gradient severe aortic stenosis.

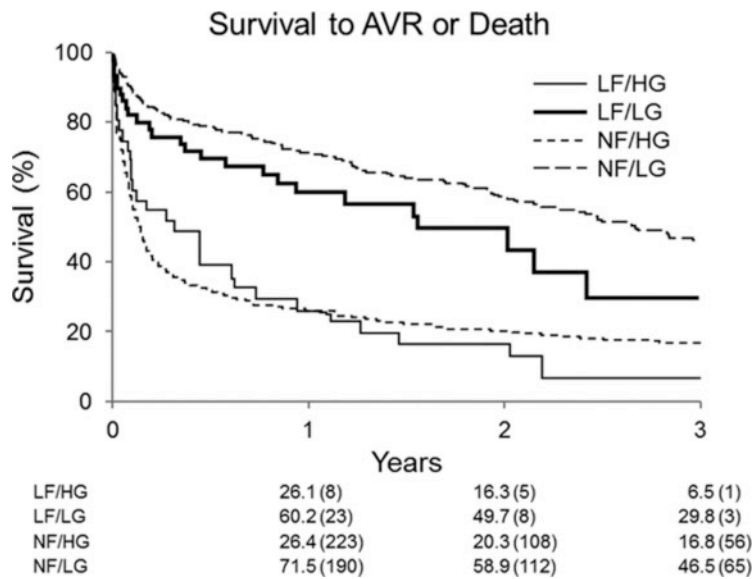


Sorin V Pislaru, and Patricia A Pellikka *Heart* 2016;102:665-671



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Survival to surgical or transcatheter aortic valve replacement (AVR).



Mackram F. Eleid et al. *Circulation*. 2013;128:1781-1789



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