”This House believes AVR/TAVI should be offered ~~without~~
waiting for symptoms in <u>severe</u> AS”   recommended

NO!

Dr Benoy N Shah MD(Res) FRCP FESC
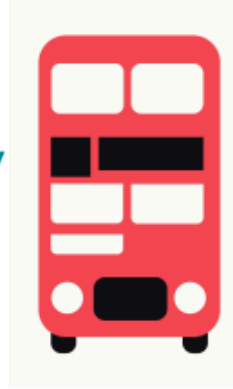President – British Heart Valve Society
@dr_benoy_n_shah

Can we trust Marc Dweck?

Can **YOU** trust Marc Dweck?

What is 'very severe' aortic stenosis? A proposal for a new category of severity in the classification of aortic stenosis

Benoy Nalin Shah [1]*, Ankur Kalra [2,3], and Abdul Jamil Tajik [4]

Parameter	MILD	MODERATE	SEVERE	
Vmax	2.0-3.0	3.0 - 3.9	≥ 4.0	
Peak Gradient	< 36	36 - 63	≥ 64	
Mean Gradient	< 30	30 - 39	≥ 40	
AVA	< 2.0	< 1.5	< 1.0	

B) Asymptomatic patients with severe aortic stenosis

Intervention is recommended in asymptomatic patients with severe aortic stenosis and systolic LV dysfunction (LVEF <50%) without another cause.[9,238,239]	I	B
Intervention is recommended in asymptomatic patients with severe aortic stenosis and demonstrable symptoms on exercise testing.	I	C
Intervention should be considered in asymptomatic patients with severe aortic stenosis and systolic LV dysfunction (LVEF <55%) without another cause.[9,240,241]	IIa	B
Intervention should be considered in asymptomatic patients with severe aortic stenosis and a sustained fall in BP (>20 mmHg) during exercise testing.	IIa	C

Intervention should be considered in asymptomatic patients with LVEF >55% and a normal exercise test if the procedural risk is low and one of the following parameters is present:

- Very severe aortic stenosis (mean gradient ≥60 mmHg or V_{max} >5 m/s).[9,242]
- Severe valve calcification (ideally assessed by CCT) and V_{max} progression ≥0.3 m/s/year.[164,189,243]
- Markedly elevated BNP levels (>3× age- and sex-corrected normal range) confirmed by repeated measurements and without other explanation.[163,171]

IIa	B

This House believes AVR/TAVI should be offered ~~without~~ recommended waiting for symptoms in <u>severe</u> AS with:
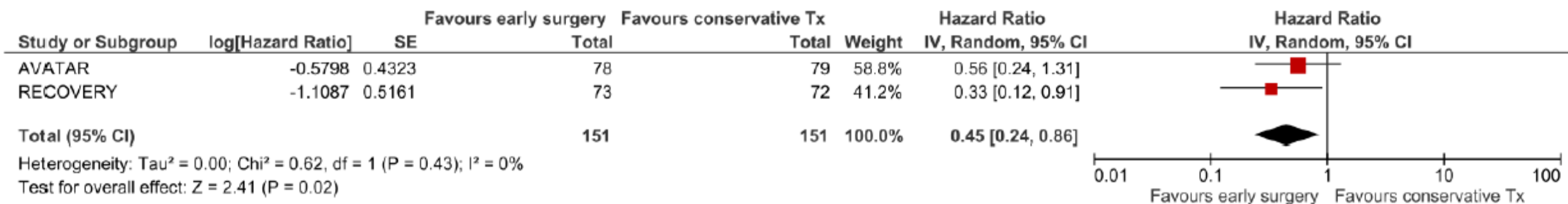
AV V$_{max}$ < 5.0m/s

Normal LV systolic function

Normal exercise treadmill test

Management of asymptomatic severe aortic stenosis: a systematic review and meta-analysis

Vasiliki Tsampasian [ID] ,[1,2] Ciaran Grafton-Clarke,[1,2] Abraham Edgar Gracia Ramos [ID] ,[3,4] George Asimakopoulos,[5,6] Pankaj Garg,[1,2] Sanjay Prasad,[5,6] Liam Ring,[7] Gerry P McCann [ID] ,[8,9] James Rudd,[10] Marc R Dweck,[11] Vassilios S Vassiliou[1,2]

Study or Subgroup	log[Hazard Ratio]	SE	Favours early surgery Total	Favours conservative Tx Total	Weight	Hazard Ratio IV, Random, 95% CI
AVATAR	-0.5798	0.4323	78	79	58.8%	0.56 [0.24, 1.31]
RECOVERY	-1.1087	0.5161	73	72	41.2%	0.33 [0.12, 0.91]
Total (95% CI)			151	151	100.0%	0.45 [0.24, 0.86]

Heterogeneity: Tau² = 0.00; Chi² = 0.62, df = 1 (P = 0.43); I² = 0%
Test for overall effect: Z = 2.41 (P = 0.02)

Conclusion This meta-analysis provides evidence that, in patients with severe asymptomatic aortic stenosis, early intervention reduces all-cause mortality and improves outcomes compared with conservative management. While this is very encouraging, further randomised controlled studies are needed to draw firm conclusions and identify the optimal timing of intervention.

openheart

Early Surgery or Conservative Care for Asymptomatic Aortic Stenosis

Duk-Hyun Kang, M.D., Ph.D., Sung-Ji Park, M.D., Ph.D., Seung-Ah Lee, M.D., Sahmin Lee, M.D., Ph.D., Dae-Hee Kim, M.D., Ph.D., Hyung-Kwan Kim, M.D., Ph.D., Sung-Cheol Yun, Ph.D., Geu-Ru Hong, M.D., Ph.D., Jong-Min Song, M.D., Ph.D., Cheol-Hyun Chung, M.D., Ph.D., Jae-Kwan Song, M.D., Ph.D., Jae-Won Lee, M.D., Ph.D., and Seung-Woo Park, M.D., Ph.D.
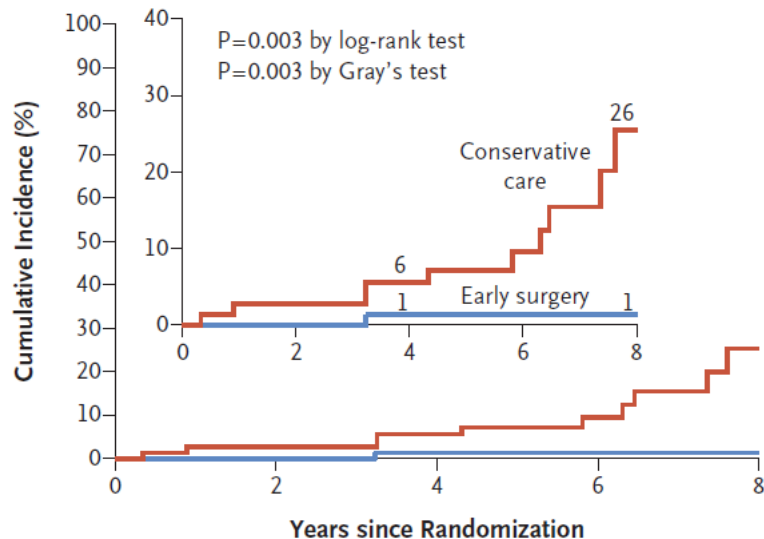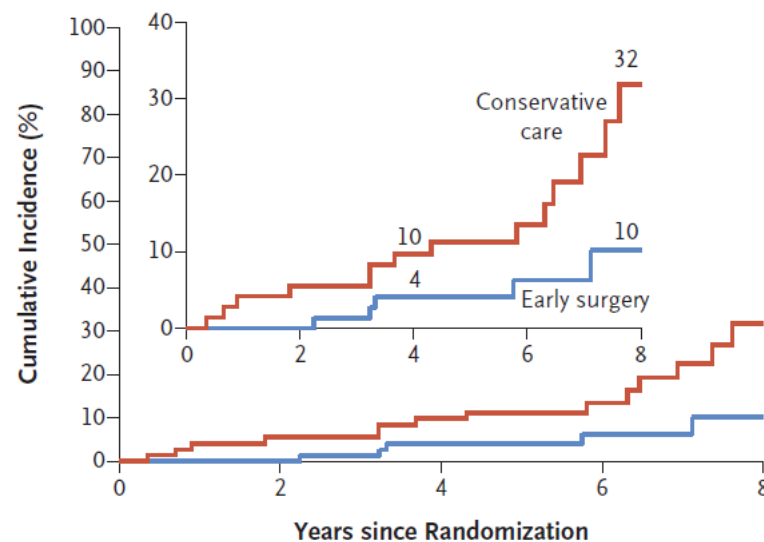
RECOVERY TRIAL – The Fine Details

INCLUSION CRITERIA

- AVA < 0.75cm^2 AND either Vmax > 4.5m/s OR mean gradient >50mmHg

- Age 20-80 years

- Exercise testing performed in 24 / 145 (17%)

- Doppler criteria
    - Peak AV velocity   5.0-5.1m/s
    - Mean Gradient   63-64mmHg

Vmax 4.0 - 4.5m/s not included

Age > 80 not included

83% did **not** have exercise test → might have had unmasked symptoms

Enrolled patients had VERY severe aortic stenosis

Aor... ...ement Versus Conservative
Trea... ...tomatic Severe Aortic
Ster... ...AR Trial

Marko Ba... ...hD; Martin Penicka, MD, PhD; Gheorghe Doros, PhD;
Marek A. ... ...PhD; Martin Kotrc, MD; Sigita Glaveckaite, MD, PhD;
Hrvoje Ga... ...PhD; Lazar Velicki, MD, PhD; Stefano Salizzoni [ID], MD, PhD;
Wojtek W... ...MD, PhD; Serge D. Nikolic, PhD; Bernard Iung [ID], MD;
Jozef Bar... ...AR Trial Investigators*

...5:648–658.
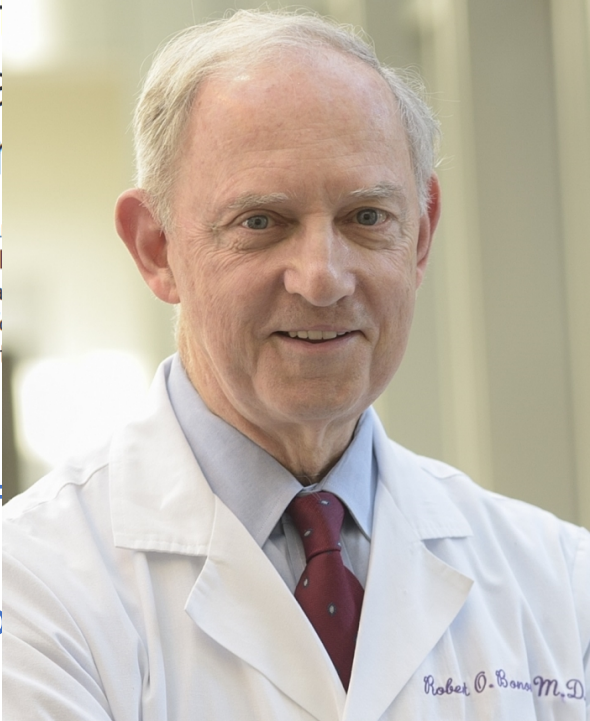
N = ...vs WW (n = 79)

No... ...for enrolment

Mean age 67yrs. Median STS...

Operative m...

1° EP...

39 eve...

...spitalization

...t – NS

...spitalization – NS

...spitalization

"This is a small trial," said Robert O. Bonow, MD (Northwestern University Feinberg School of Medicine, Chicago, IL), commenting for TCTMD. "It's larger than RECOVERY, but it's still a small trial and as a result, it's difficult to draw strong conclusions. I still think we need more information."

Log–Rank Test p–value = 0.021

10%

0%

0   6   12   18   24   30   36   42   48

Time (Months)
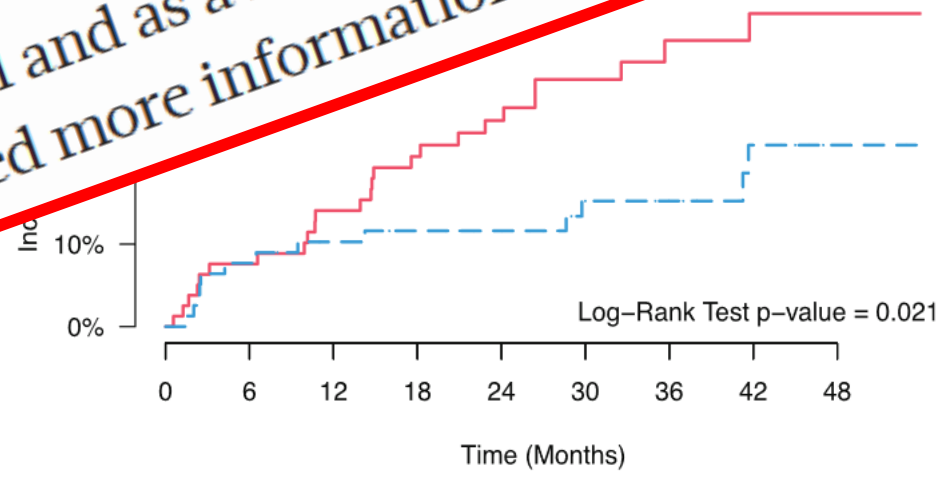
Patients, n

Conservative Treat.	79	73	66	59	49	36	25	19	12
Early Surgery	78	72	68	63	56	46	38	23	13

Outcomes of Patients With Asymptomatic Aortic Stenosis Followed Up in Heart Valve Clinics

Patrizio Lancellotti, MD, PhD; Julien Magne, PhD; Raluca Dulgheru, MD; Marie-Annick Clavel, DVM, PhD; Erwan Donal, MD, PhD; Mani A. Vannan, MBBS; John Chambers, MD; Raphael Rosenhek, MD; Gilbert Habib, MD, PhD; Guy Lloyd, MD; Stefano Nistri, MD, PhD; Madalina Garbi, MD; Stella Marchetta, MD; Khalil Fattouch, MD; Augustin Coisne, MD, PhD; David Montaigne, MD, PhD; Thomas Modine, MD; Laurent Davin, MD; Olivier Gach, MD, PhD; Marc Radermecker, MD, PhD; Shizhen Liu, MD, PhD; Linda Gillam, MD; Andrea Rossi, MD; Elena Galli, MD, PhD; Federica Ilardi, MD; Lionel Tastet, MSc; Romain Capoulade, PhD; Robert Zilberszac, MD, PhD; E. Mara Vollema, MD; Victoria Delgado, MD, PhD; Bernard Cosyns, MD, PhD; Stephane Lafitte, MD, PhD; Anne Bernard, MD, PhD; Luc A. Pierard, MD, PhD; Jeroen J. Bax, MD, PhD; Philippe Pibarot, DVM, PhD; Cécile Oury, PhD

Outcomes for 1375 patients with AVA < 1.5cm²
861 patients had AVA < 1.0cm²

10 HVCs in USA / Canada / Europe

Mean F/U 27 months

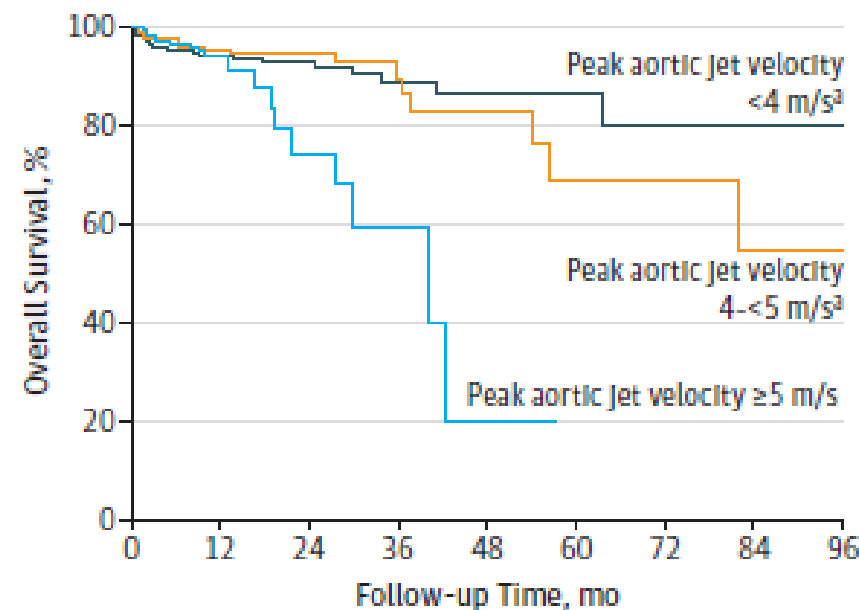388/861 (45%) had AVR/TAVI at mean 14 months from study start

64 deaths during watchful waiting
   32 non-cardiovascular
   32 cardiovascular
   - 23 heart failure
   - 4 sudden death
   - 2 acute MI
   - 2 stroke
   - 1 large PE

JAMA Cardiology   November 2018   Volume 3, Number 11

AV Vmax 4.3m/s; mean G 42mmHg
Asymptomatic

1 year

CONCLUSIONS

Very severe AS (Vmax >5m/s)   → Recommend AVR / TAVI
Abnormal exercise test   → Recommend AVR / TAVI
LV systolic dysfunction   → Recommend AVR / TAVI

AV Vmax 4.0 – 4.9m/s   Discuss risks / benefits of early intervention vs WW
                              Explain (on-going) clinical uncertainty about best approach
                              Remains a debated issue…still!
                              Explain LACK of definitive data supporting early intervention

                              Clinic review with echo every 6 months
                              Must NOT wait until next clinic visit to mention symptoms!
                              Tailor explanations of symptom onset to patient's daily life

EUROVALVE
DEBATING CHAMBER

CAMBRIDGE UNION SOCIETY

OCTOBER 7 & 8, 2022

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Philippe Pibarot, Canada
Mani Vannan, USA
Jeroen Bax, The Netherlands

LOCAL HOST
Madalina Garbi, United Kingdom