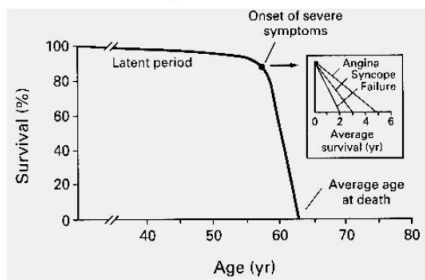


# Lecture: Aortic Valve Disease Combined with Ischemic or Mitral Disease: When to operate on the aortic valve

Fausto Pinto, MD

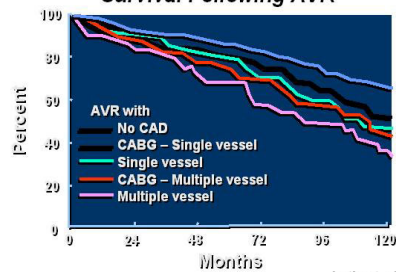
## Natural History of Aortic Stenosis



Ross, Braunwald *Circulation* 1968;38:V61

61.00 Pinto 1 of 15

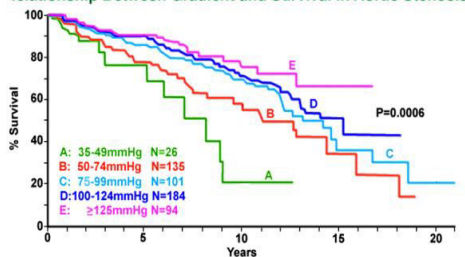
## Effect of Concomitant CAD Survival Following AVR



Lytle et. al. 1988

61.00 Pinto 2 of 15

## Relationship Between Gradient and Survival in Aortic Stenosis



61.00 Pinto 3 of 15

## Asymptomatic AS

### Natural history of aortic stenosis

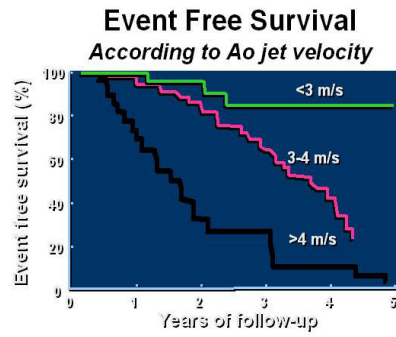
$\Delta 0.1 - 0.3 \text{ cm}^2/\text{yr}$   
10-15 mmHg/yr

61.00 Pinto 4 of 15

## Asymptomatic AS

- Incidence of angina, syncope and dyspnea if V Max >4 m/s:  
2 yrs: 38%  
3 yrs: 79%
- Probability of sudden death in the asymptomatic pt:  
<1% / yr

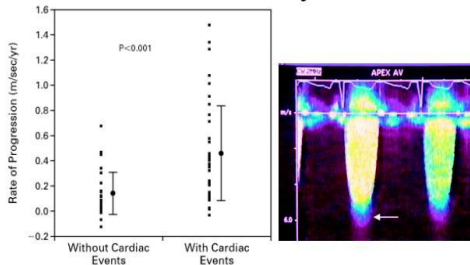
61.00 Pinto 5 of 15



Otto, Burwash, Legget, Munt, et al *Circulation* 1997

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## Rate of Progression Ao Jet Velocity



Rosenhek R et al *N Eng J Med* 2000;343

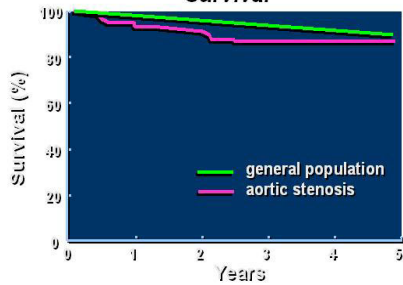
61.00 Pinto 7 of 15

## AS Progression More Rapid

- Elderly pts
- Presence of CAD
- Calcific degenerative etiology

61.00 Pinto 8 of 15

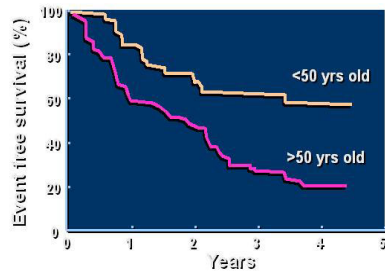
## Asymptomatic Severe AS Survival



Rosenhek R et al *N Eng J Med* 2000

61.00 Pinto 9 of 15

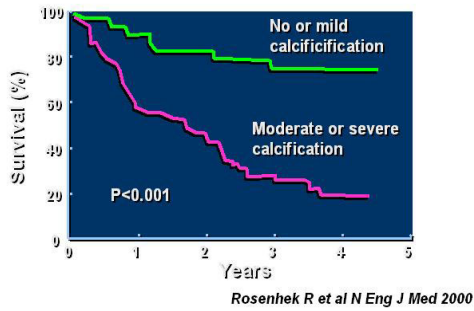
## Prognosis of AS and Age



Rosenhek R et al *N Eng J Med* 2000

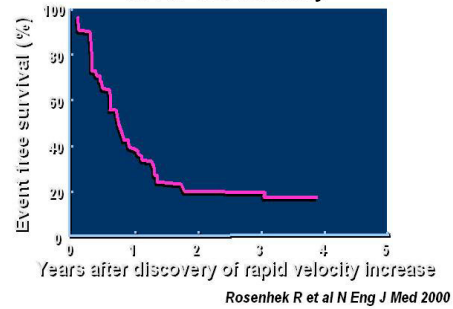
61.00 Pinto 10 of 15

## Calcification and Prognosis in AS



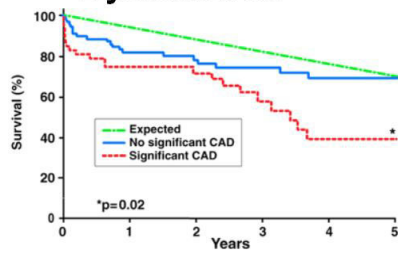
61.00 Pinto 11 of 15

## Calcification and Rapid Increase in Ao Jet Velocity



61.00 Pinto 12 of 15

## Aortic Stenosis with LV Dysfunction



61.00 Pinto 13 of 15

## Recommendations for the use of AVR in pts with AS undergoing other procedures

- AVR indicated
  - Pts with severe AS undergoing CABG or MVR*
- AVR possibly indicated
  - Pts with only moderate AS who require CABG or other heart surgery*

ACC/AHA Task Force on Practice Guidelines  
Circulation 1998;98:1949-1984

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## Concomitant AVR (Yes or No?)

### *Variables*

- Severity of leaflet calcification
- Leaflet mobility
- Etiology of aortic valve disease
- Rate of progression of AS
- Patient's life expectancy
- General condition

61.00 Pinto 15 of 15

## Concomitant AVR (Yes or No?)

### ■ If mild AS

*tailored approach*

*use all information you can get*

*intra op TEE*

*valve inspection (calcification, etc)*