



VALVULAR HEART DISEASE AND PULMONARY CIRCULATION

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Conflicts of Interest

None



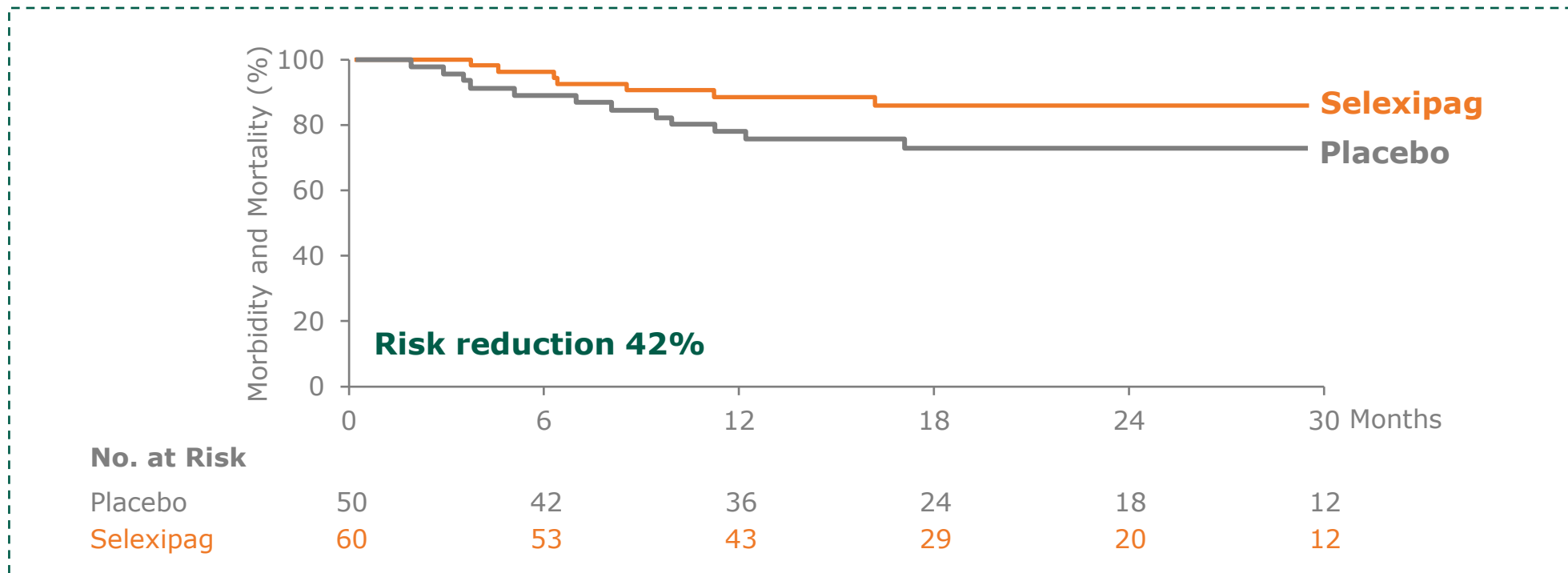
CONTENTS

- **Pulmonary arterial hypertension**
- **Rheumatic heart disease**
- **Mitral regurgitation and aortic stenosis**
- **TAVI**
- **Mitral valve intervention**
- **Tricuspid regurgitation**



Griphon study: pulmonary arterial hypertension in congenital heart disease

- Pulmonary arterial hypertension with repaired shunt lesion (ASD, VSD or PDA)
- Selexipag (oral selective IP prostacyclin-receptor agonist)

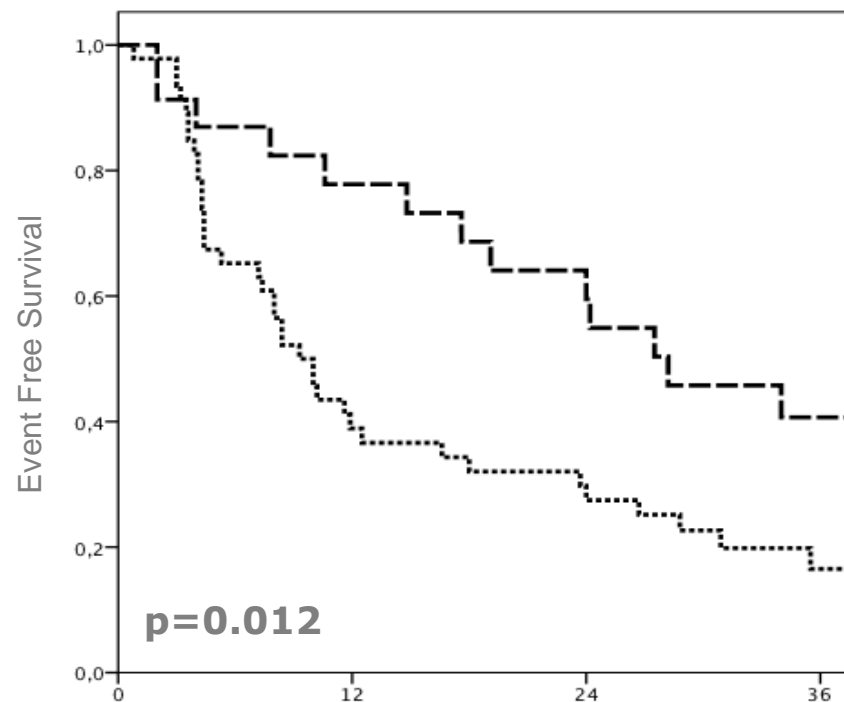


M. Beghetti (Geneva, CH), FP 6092



Joint-intention study: initial oral combination therapy in pulmonary arterial hypertension

Mortality, Hospitalization and treatment escalation-free survival



**Initial Bosentan
and Sildenafil**

**Initial Bosentan
or Sildenafil**

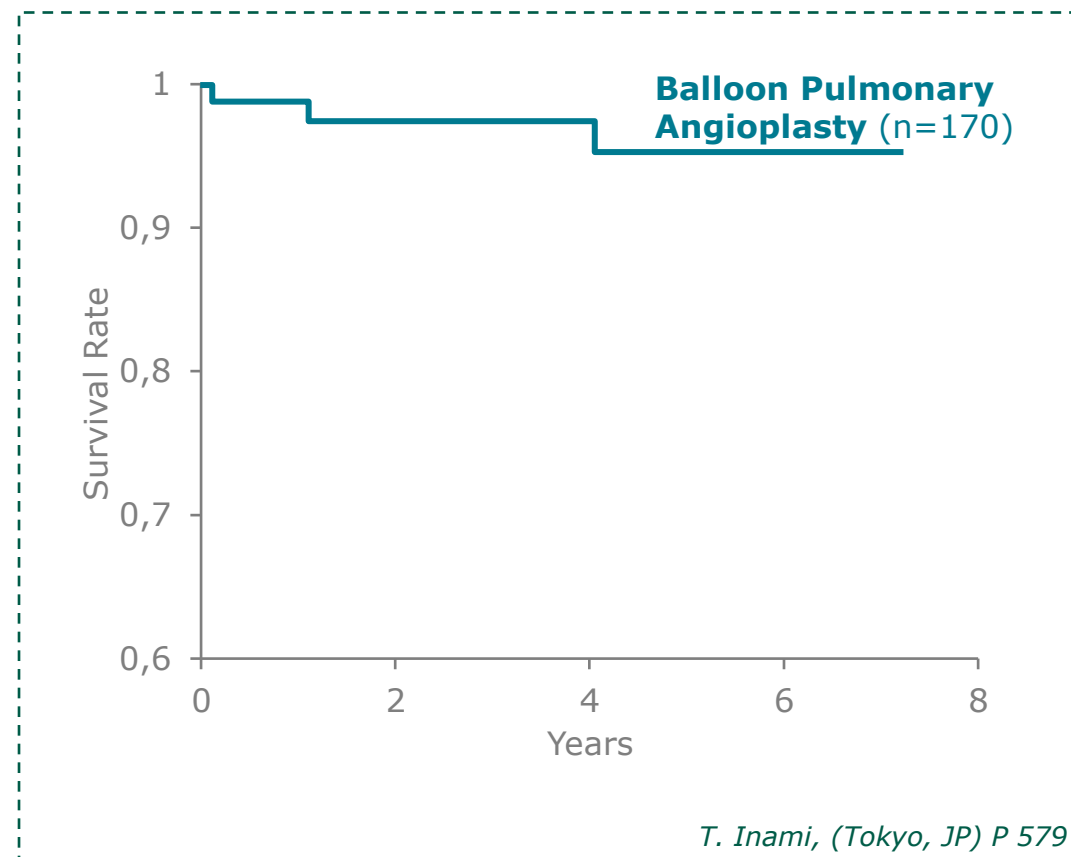
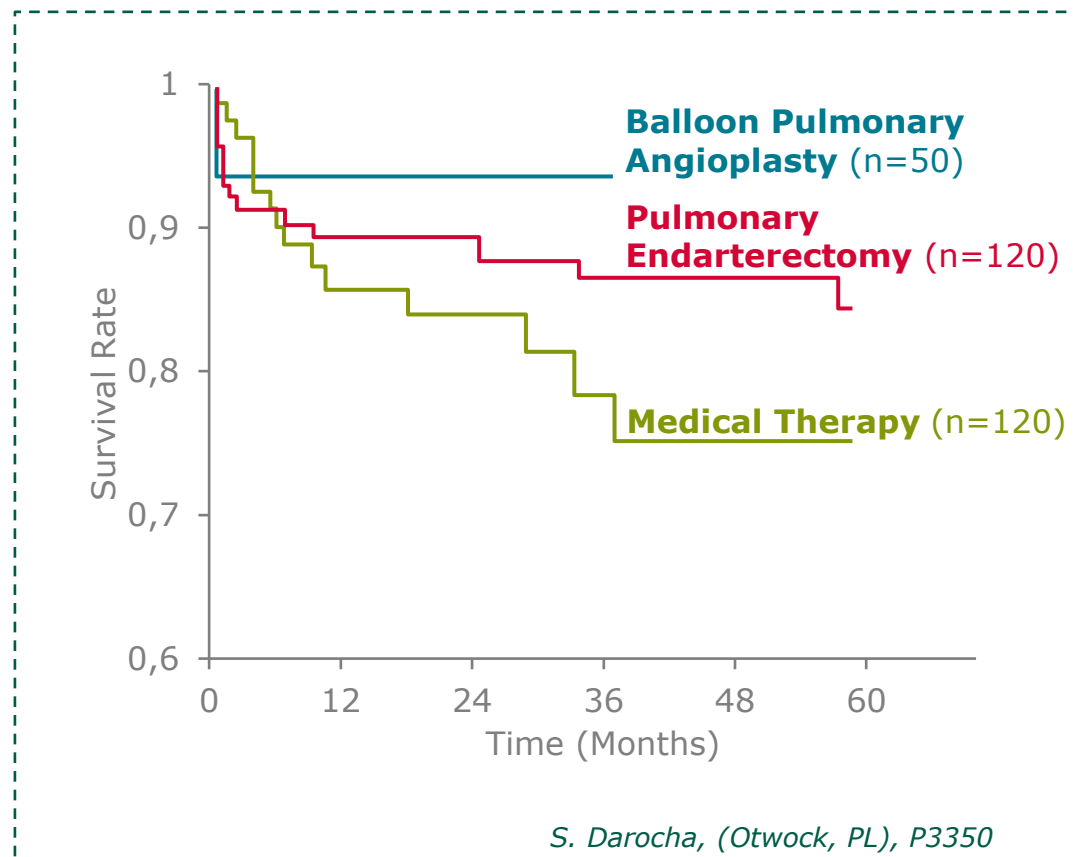
At risk:

Follow-up (months)	0	12	24	36
Combo:	23	17	13	8
Mono:	46	17	12	5

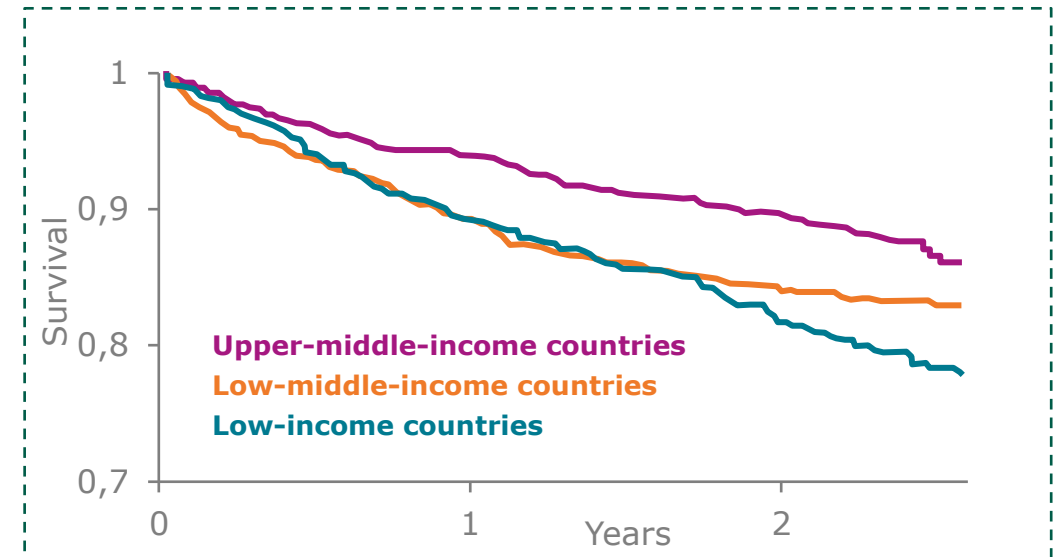
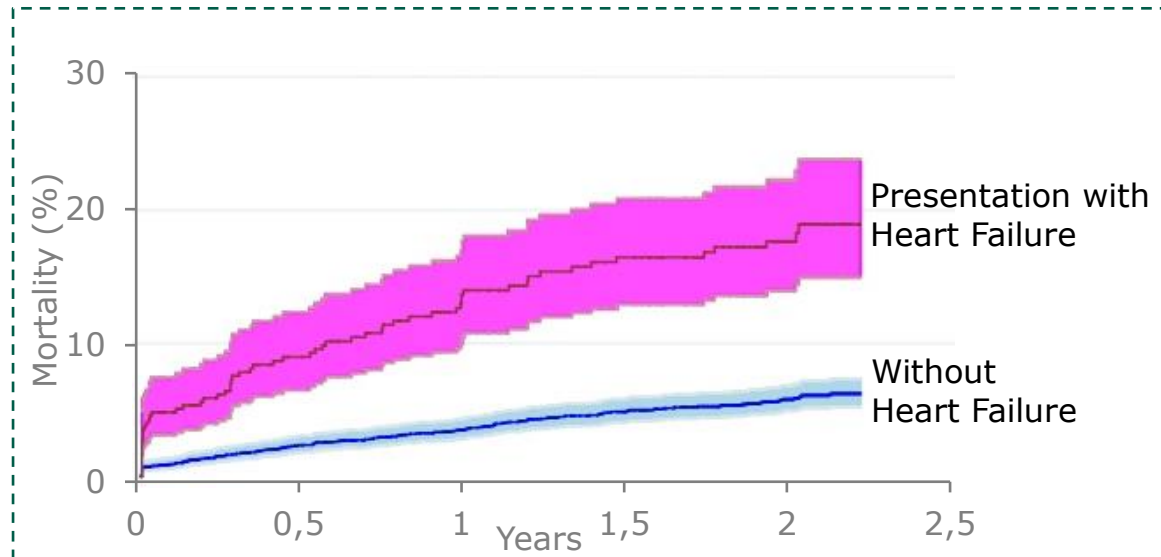
M. Palazzini, (Bologna, IT), P2782



Balloon pulmonary angioplasty in chronic thromboembolic pulmonary hypertension



REMEDY: 2-year follow-up of the global rheumatic heart disease registry



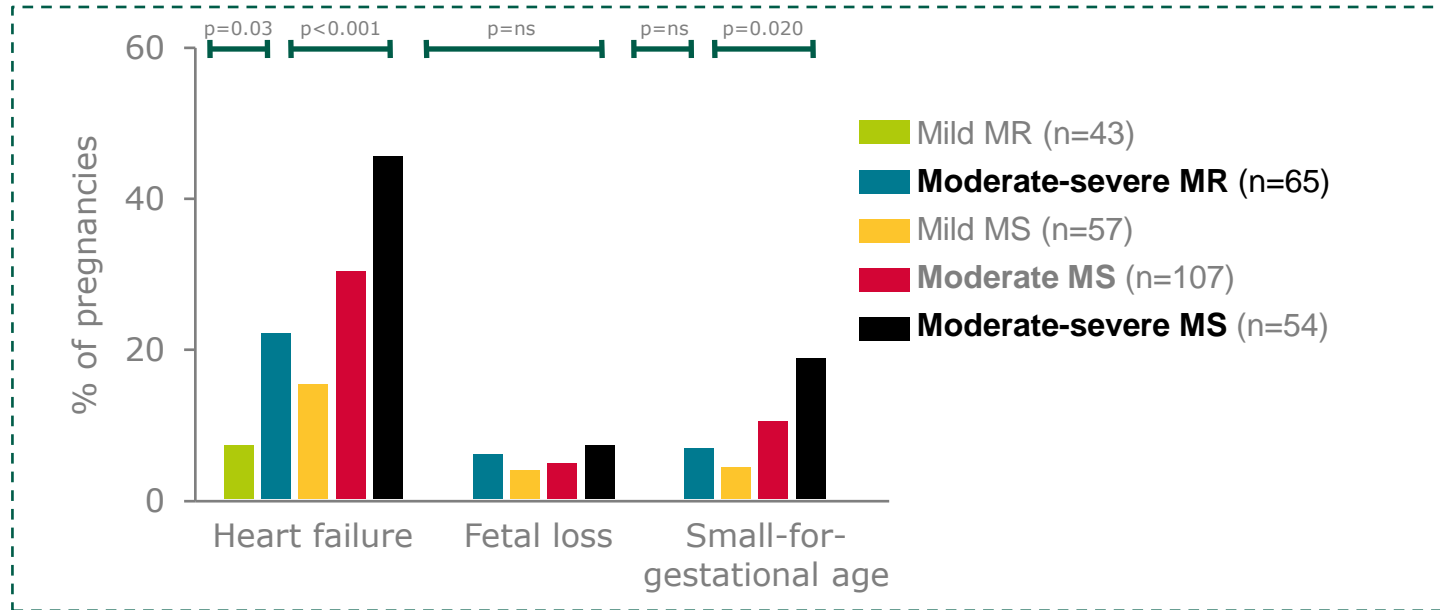
- **14 countries, N=3343, median age 28 [18-40]**
- **High rates of death, CHF and stroke despite low age for symptomatic patients.**
- **Higher mortality for low-income countries and less educated patients**
- **Better access to quality tertiary care and optimised use of interventions are likely to improve outcomes.**

L. Zühlke (Cape Town, SA), FP 5733



ROPAC registry: Pregnancy in women with rheumatic mitral valve disease

○ N=390



Maternal mortality:
MS: 1 during pregnancy; 2 after pregnancy
MR: 0 during pregnancy; 1 after pregnancy

- High risk of heart failure and fetal growth restriction
- Counselling and close follow-up during and after pregnancy

I. Van Hagen, (Rotterdam, NL), FP 6086



Very severe MR predicts postoperative LV dysfunction after mitral valve repair for primary MV disease

- N=83 pts with primary MR undergoing MV repair

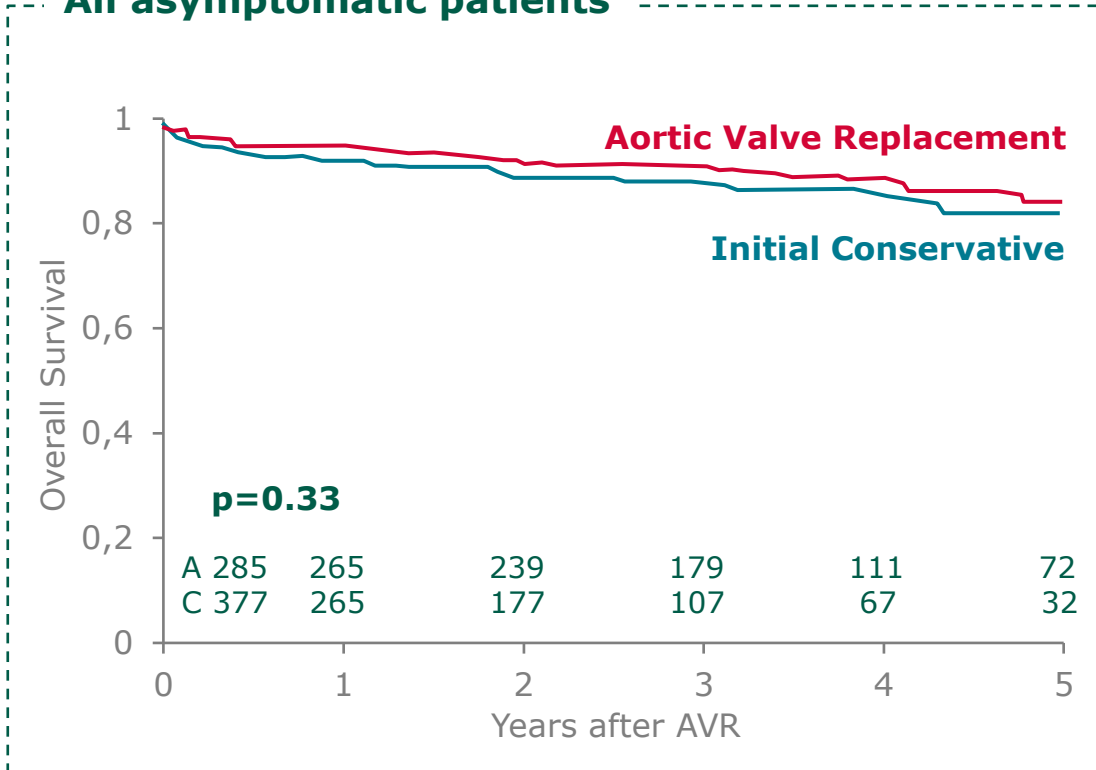
	<u>Severe</u> Mitral Regurgitation (Reg Volume ≤ 80 ml)	<u>Very Severe</u> Mitral Regurgitation (Reg Volume > 80 ml)	p value
PREOPERATIVE			
End-systolic Diameter	3.52 ±0.57	3.87 ±0.54	0.005
Ejection Fraction	0.67 ±0.1	0.67 ±0.08	0.91
EROA (cm ²)	0.43 ±0.16	0.83 ±0.27	<0.001
Regurgitant Volume (ml)	58 ±16	113 ±29	<0.001
POSTOPERATIVE			
End-systolic Diameter	3.64 ±0.6	3.97 ±0.54	0.01
(acute postoperative) Ejection Fraction < 50%	43%	64%	0.03

LM Laufer-Perl (Tel Aviv,IL), P5541

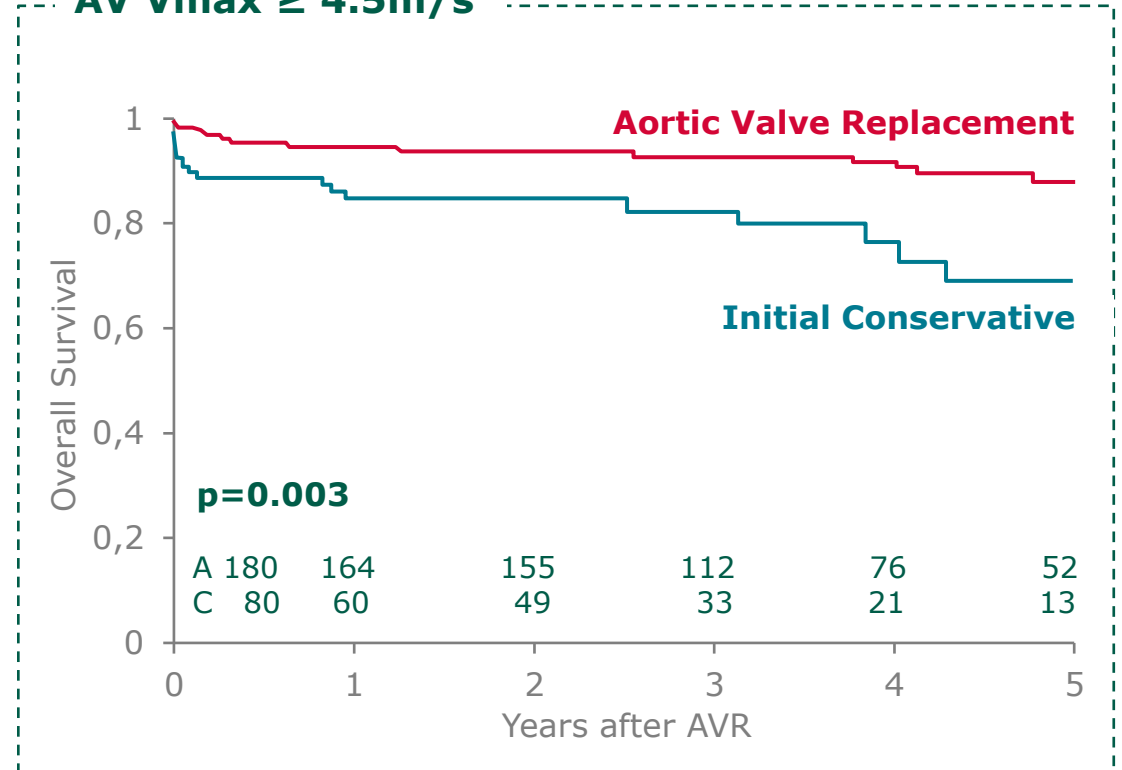


Current aortic stenosis registry

All asymptomatic patients



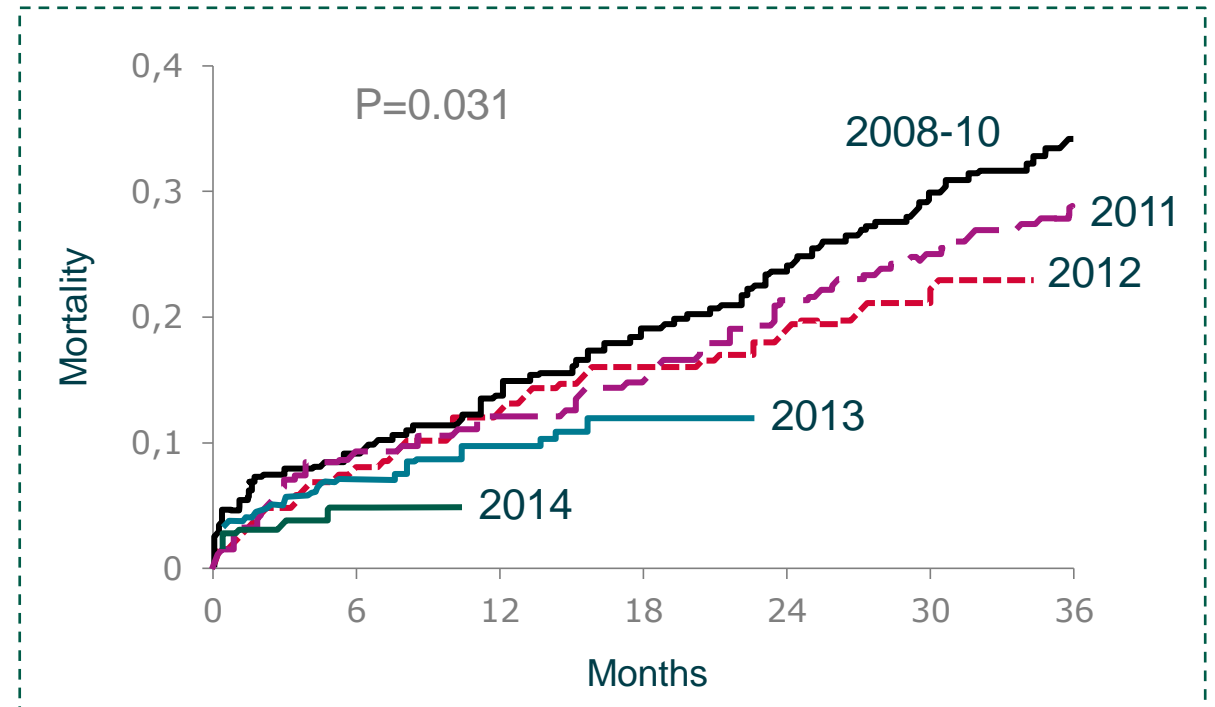
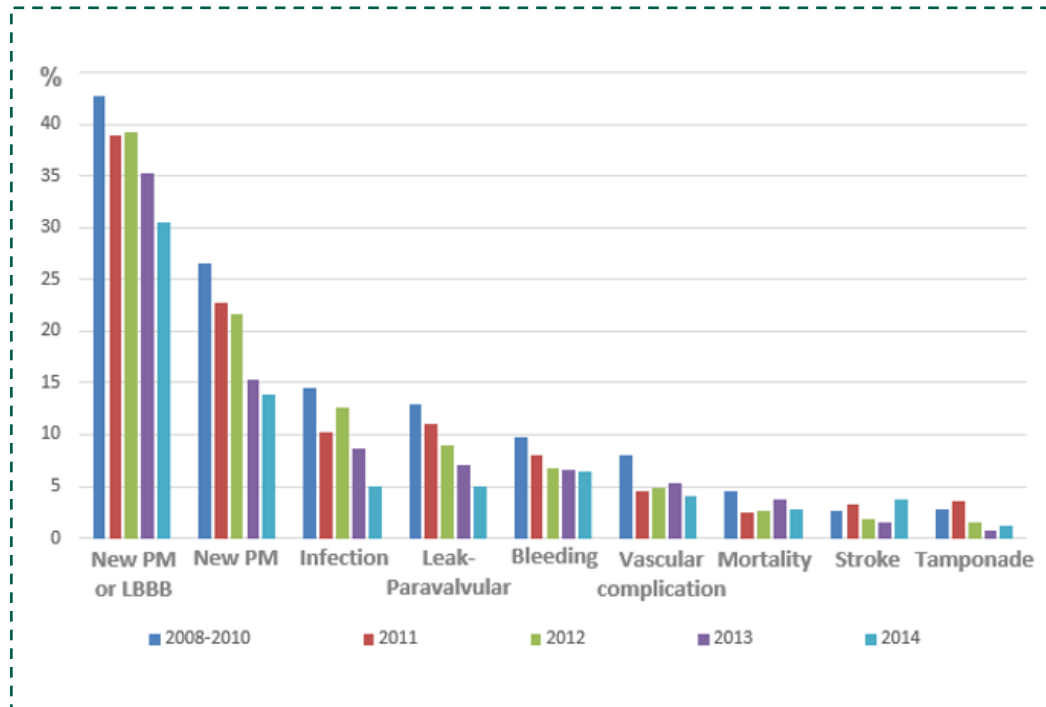
AV Vmax ≥ 4.5m/s



M. Miyake (Kyoto, JP), P5935



Temporal trends of TAVI outcomes 2008-2014



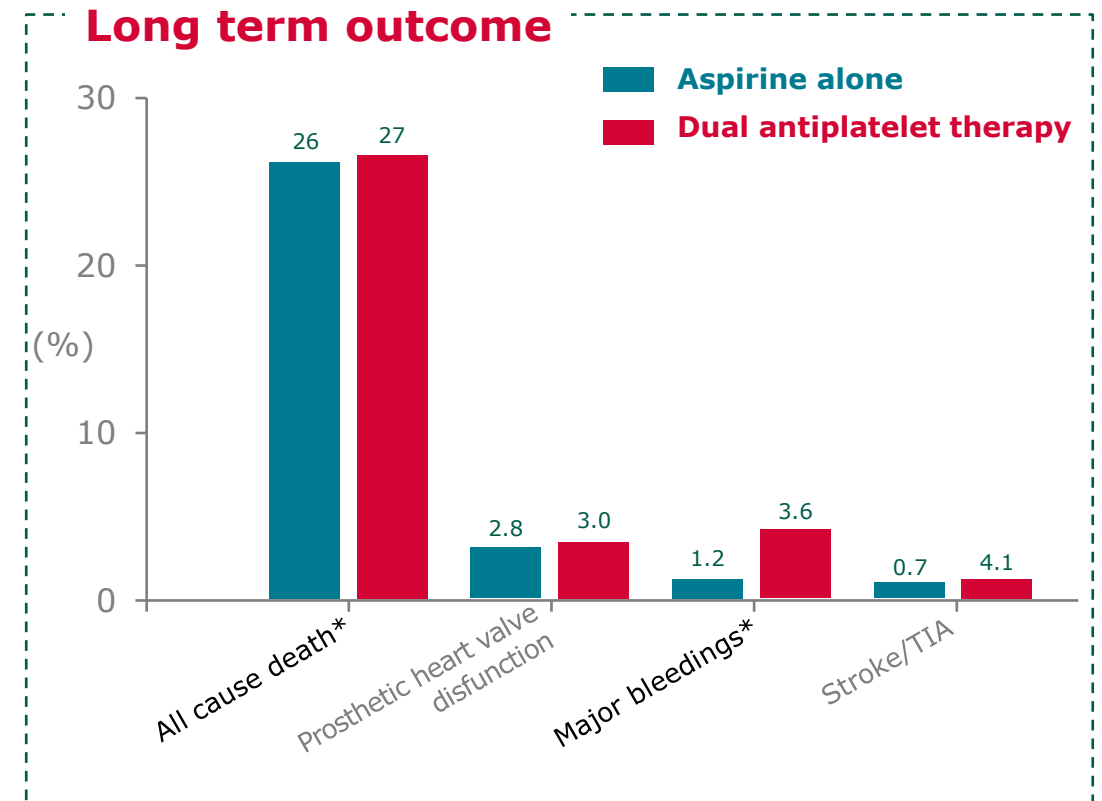
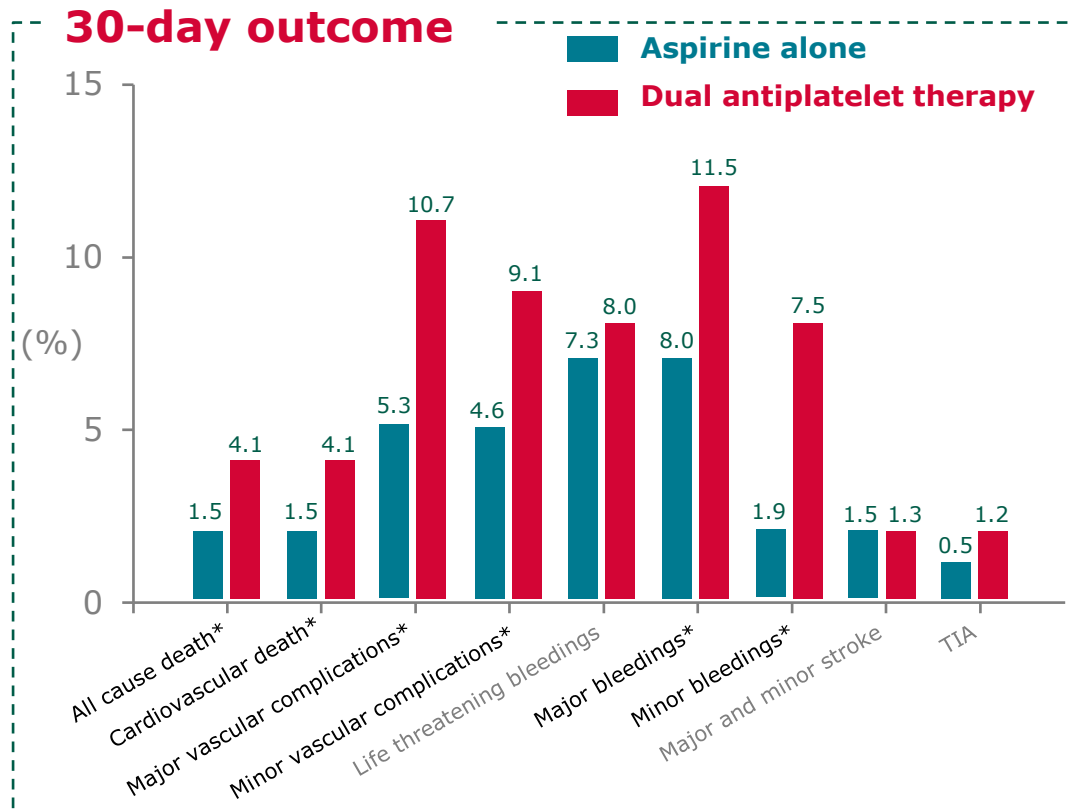
- Evolution from novel technology to mainstream therapy
- Learning curve, structured program and utilization in lower risk patients, procedural simplification

U. Landes (Tel Aviv,IL), P6464



ITER registry: Single vs. dual antiplatelet therapy after TAVI

○ N=1364 (Aspirin 605, DAPT 759)



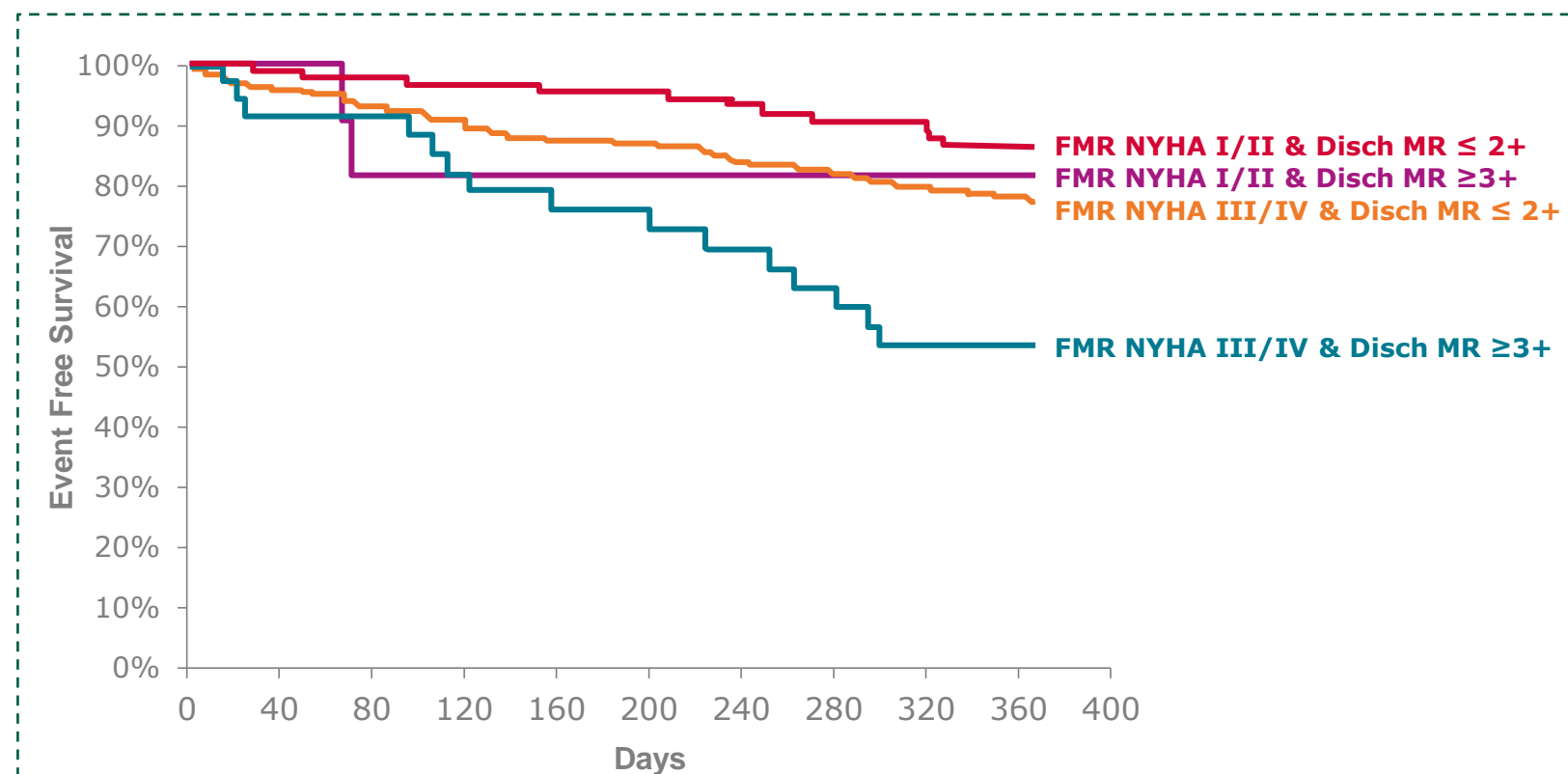
- Aspirin alone was associated with reduced risk of major vascular complications and bleedings.
- No increased risk of prosthetic valve dysfunction, lower risk of peri-procedural complications and all cause mortality.

M. Bianco (San Francesco AL CAN, IT), FP 6609



EVEREST II REALISM. Edge-to-edge repair: survival by symptoms and discharge MR

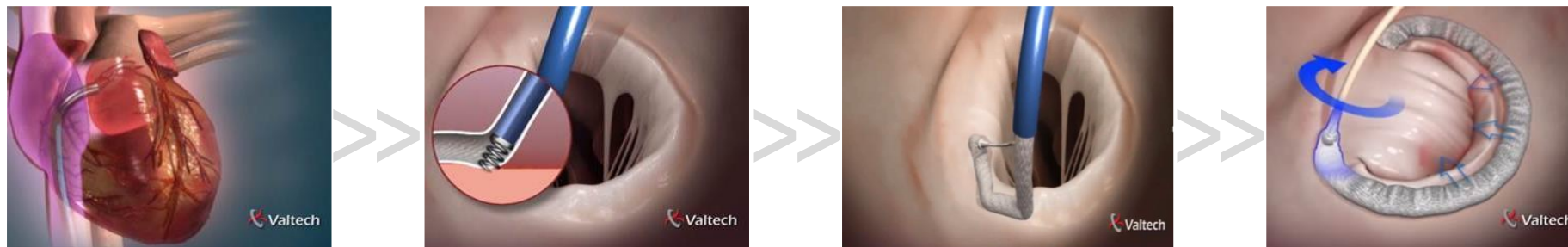
- N = 525
- Significant functional MR



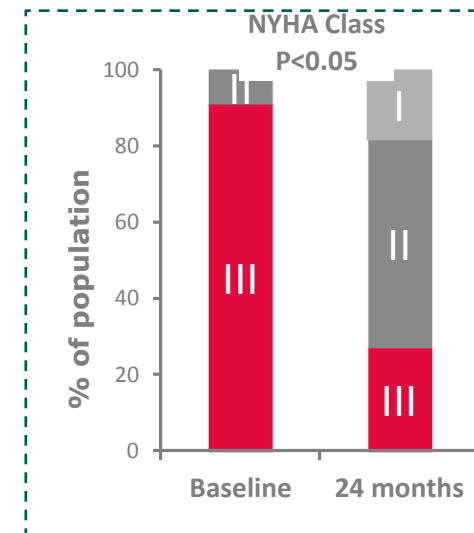
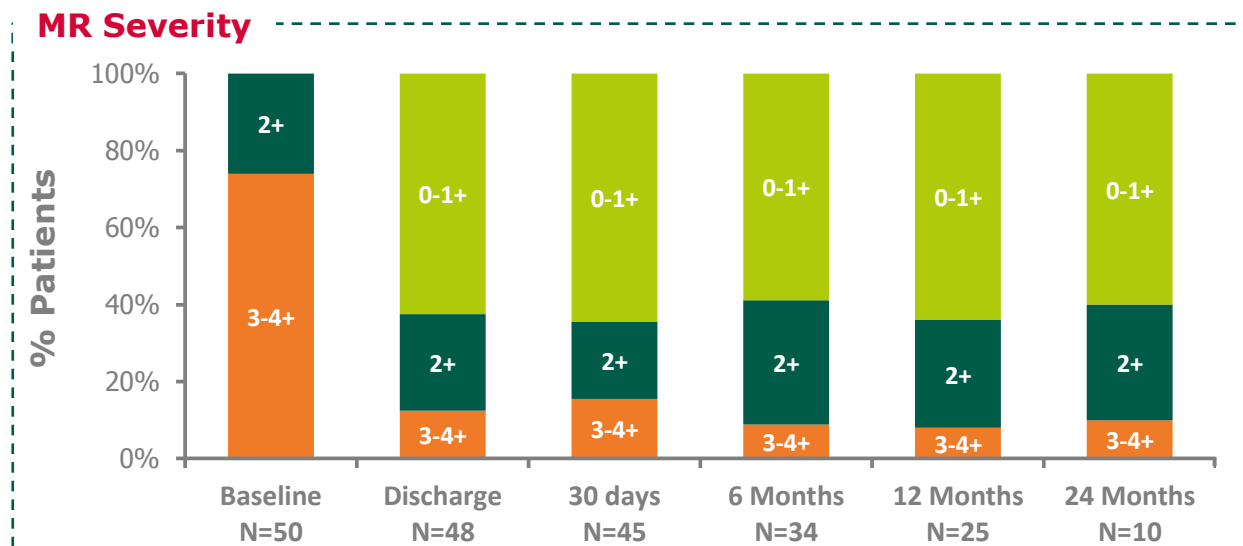
S. Kar, (Los Angeles, USA), FP 2114



Percutaneous mitral annuloplasty (Cardioband)



- 7 centers
- N = 50
- 31 ischemic
- 19 non ischemic



K.H. Kuck, (Hamburg GE), FP 1278



Outcome of mitral valve surgery for primary MR with and without tricuspid annuloplasty

- 287 patients, primary mitral regurgitation

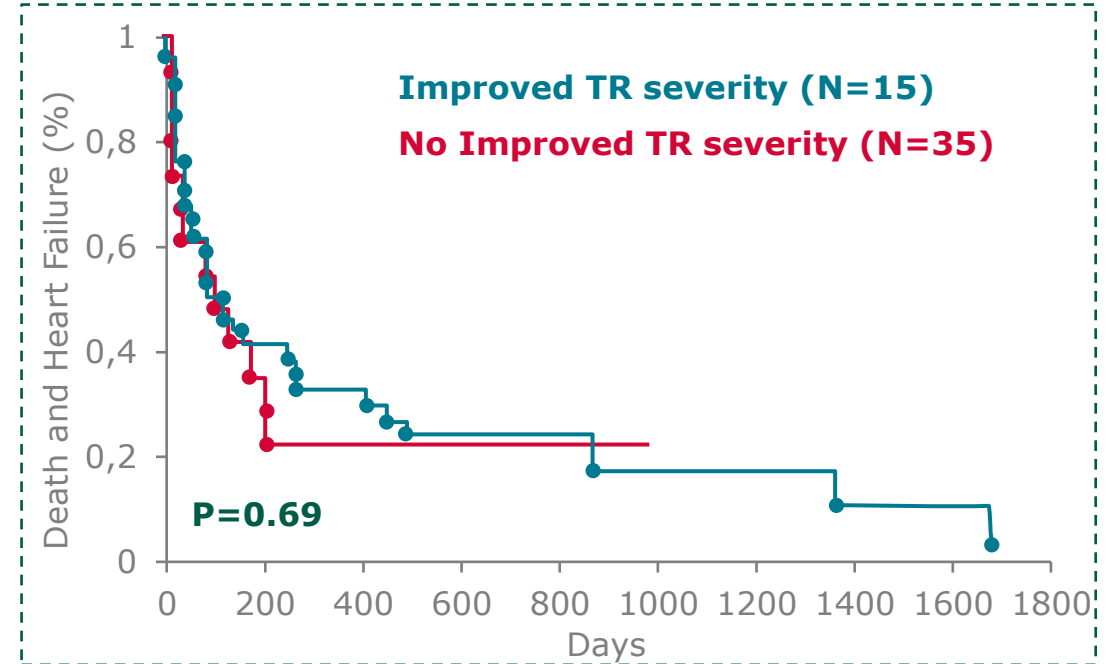
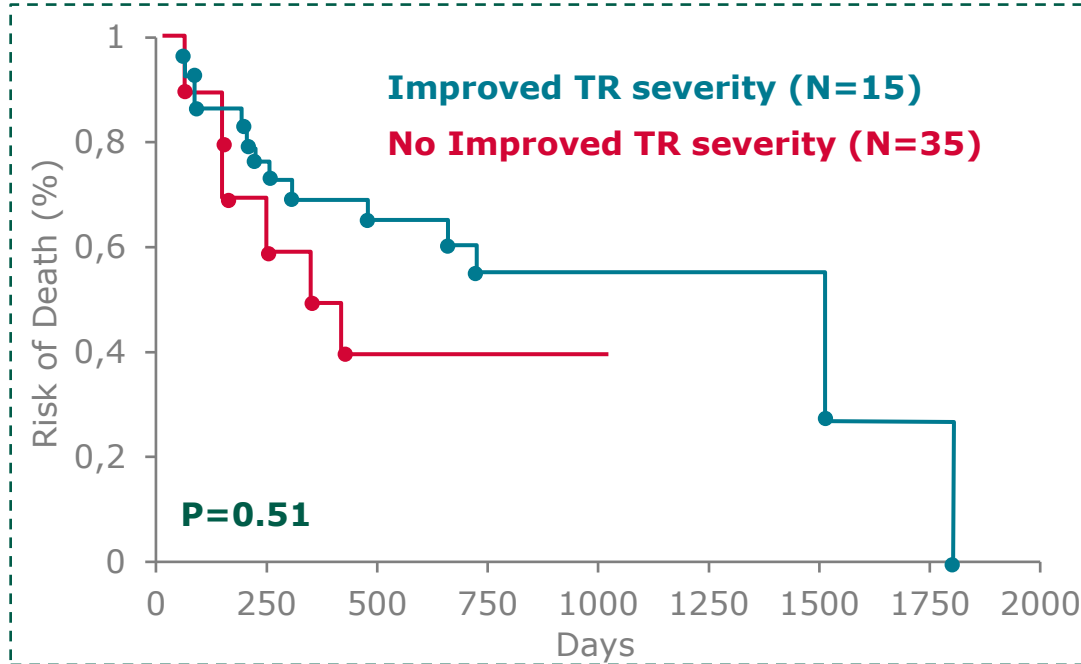
	Associated TA N=165 (57%)	No associated TA N=122 (43%)	p value
Male gender	60 (36%)	65 (53%)	0.02*
Age (years)	61 ± 16	62 ± 17	0.68
Coronary artery disease	7 (4%)	14 (12%)	0.02*
TTE Findings			
Tricuspid annulus (mm)	41±6	37±6	0.0001*
Moderate to severe TR	79 (48%)	18 (15%)	0.001*
Systolic PAP (mmHg)	53±15	46±15	0.0002*
Reduced LVEF (< 50%)	25 (15%)	10 (7%)	0.04*
Outcome			
Death	8 (5%)	16 (13%)	0.01*
Major Bleeding	11 (7%)	17 (14%)	0.04*

A. Darmon, (Paris, FR), P2768



Diuretics in severe secondary tricuspid regurgitation?

- 50 Patients with moderate-to-severe TR before diuretic therapy



- TR decreased in 30% of patients with diuretics without association to a better prognosis
- Cardiac surgery (when indicated) should not be delayed by diuretic therapy

H. L. Doan (Paris, Fr), P2775



○ Pulmonary Arterial Hypertension

- Potential benefit of initial oral combination therapy
- Promising role for balloon pulmonary angioplasty in CTEPH
- GRIPHON: Role for Selexipag in patients with corrected congenital heart disease

○ Valvular Heart Disease

- Burden of rheumatic disease in general and in pregnancy
- Prognostic relevance of very severe valve disease
- Encouraging results for percutaneous treatment of secondary MR (edge-to-edge repair and direct annuloplasty)
- Improved outcomes with TAVI over time
- Potential role for single antithrombotic therapy after TAVI
- Don't forget to treat tricuspid regurgitation

