

STS/EACTS Latin America Cardiovascular Surgery Conference

November 15-17, 2018

Hilton Cartagena | Cartagena, Colombia



The Society
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Surgeons



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European Association for Cardiothoracic Surgery

ZIEKENHUIS

ST ANTONIUS

Minimal Invasive Mitral Valve Surgery After Previous Sternotomy Without Aortic Clamping: Short- and Long Term Results of a Single Surgeon Single Institution

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Why minimally invasive access in redo surgery?

1. No risk injuring patent grafts
2. No need extensive dissection pericardial adhesions
3. No need for aortic clamping
4. Optimal exposure after previous aortic valve prosthesis

Technique

- Peripheral cannulation
- Hypothermic (25 °C) fibrillatory arrest (no X-clamping)
- Anterolateral mini thoracotomy 4th intercostal space

Patients

- Retrospective analysis (n=103, 2008-2017)
- Single surgeon, consecutive series
- Patients
 - 68 ± 9yrs
 - Male 66%
 - Good left ventricular function 64%

Previous procedure	% ^a	Procedure number	%
AVR/Bentall	34	1 st re-operation	77
CABG	31	2 nd re-operation	16
CABG + AVR/Bentall	13	3 rd re-operation	5
Aortic surgery ^b	27	4 th re-operation	2
MVP	31		
MVR	9		
Other ^c	3		

^a Do not add up 100%

^b Bentall, ascending aorta or arch replacement

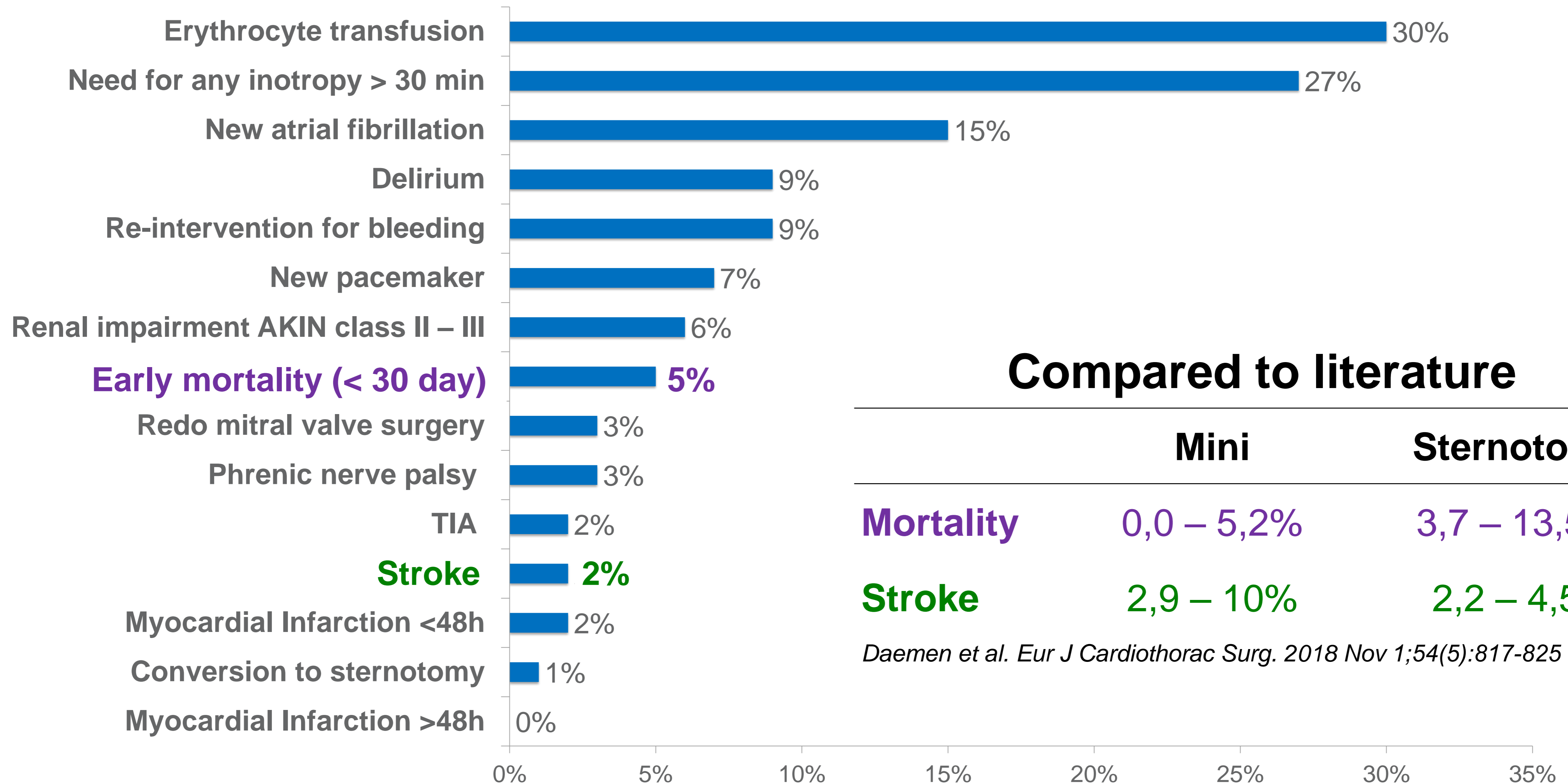
AVR Aortic valve replacement;

CABG Coronary artery bypass graft;

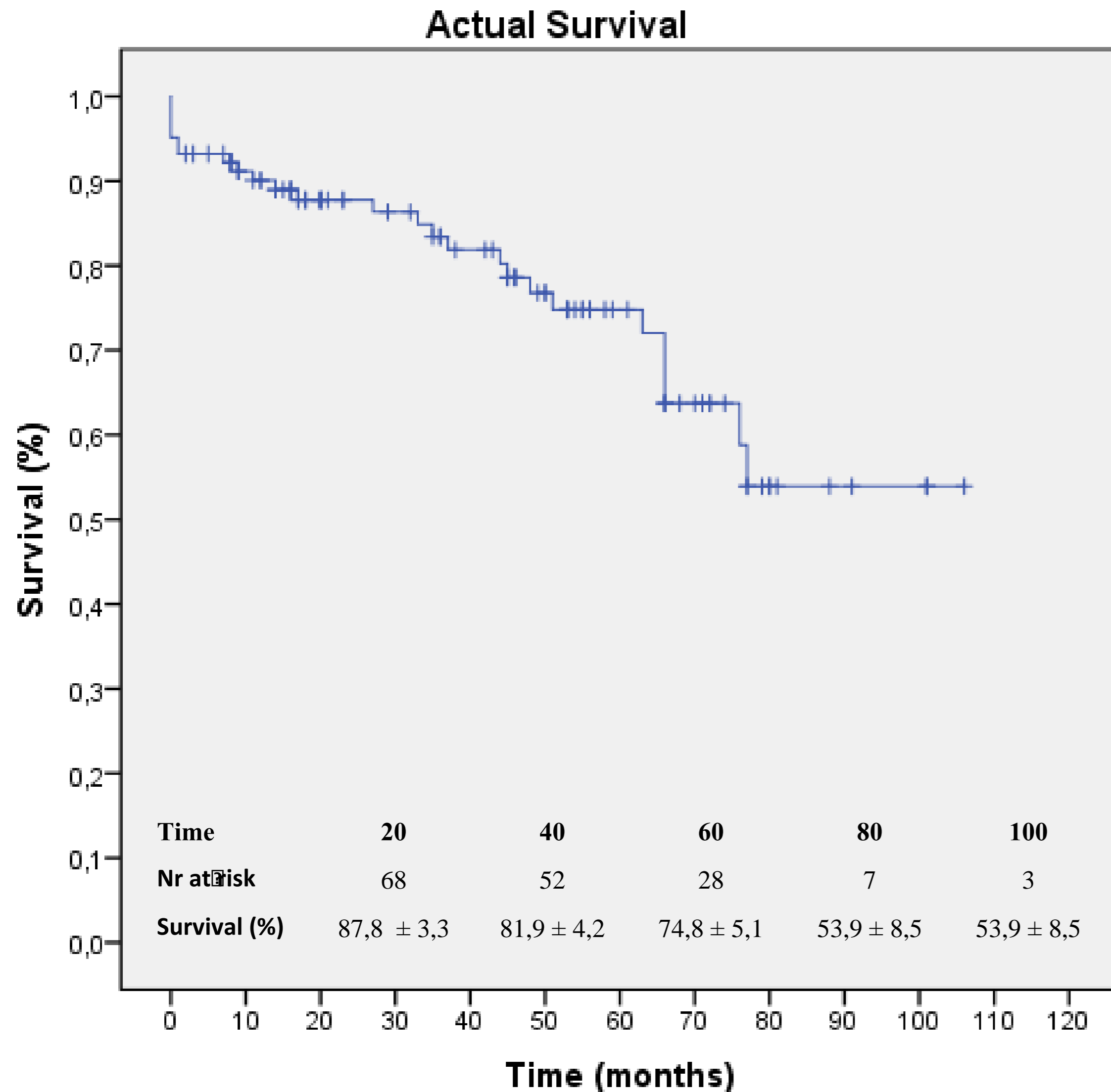
MVP Mitral valve repair;

MVR Mitral valve replacement;

Results (1) Postoperative outcomes



Results (2) Long term survival



Survival 1 year 90 ± 3%

Survival 5 year 75 ± 5%

Literature

Survival

1 year 89 – 93 %

5 year 76 – 88 %

Murzi et al. J Thorac Cardiovasc Surg. 2014 Dec;148(6):2763-8
Meyer et al. Ann Thorac Surg. 2009 May;87(5):1426-30.

Conclusion

Redo mitral valve surgery with minimally invasive technique is associated with:

1. Acceptable rate of overall complications
2. Low stroke risk
3. Acceptable early mortality
4. Acceptable late mortality

Good alternative for redo sternotomy

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THANK YOU



Prosthesis choice and repair techniques

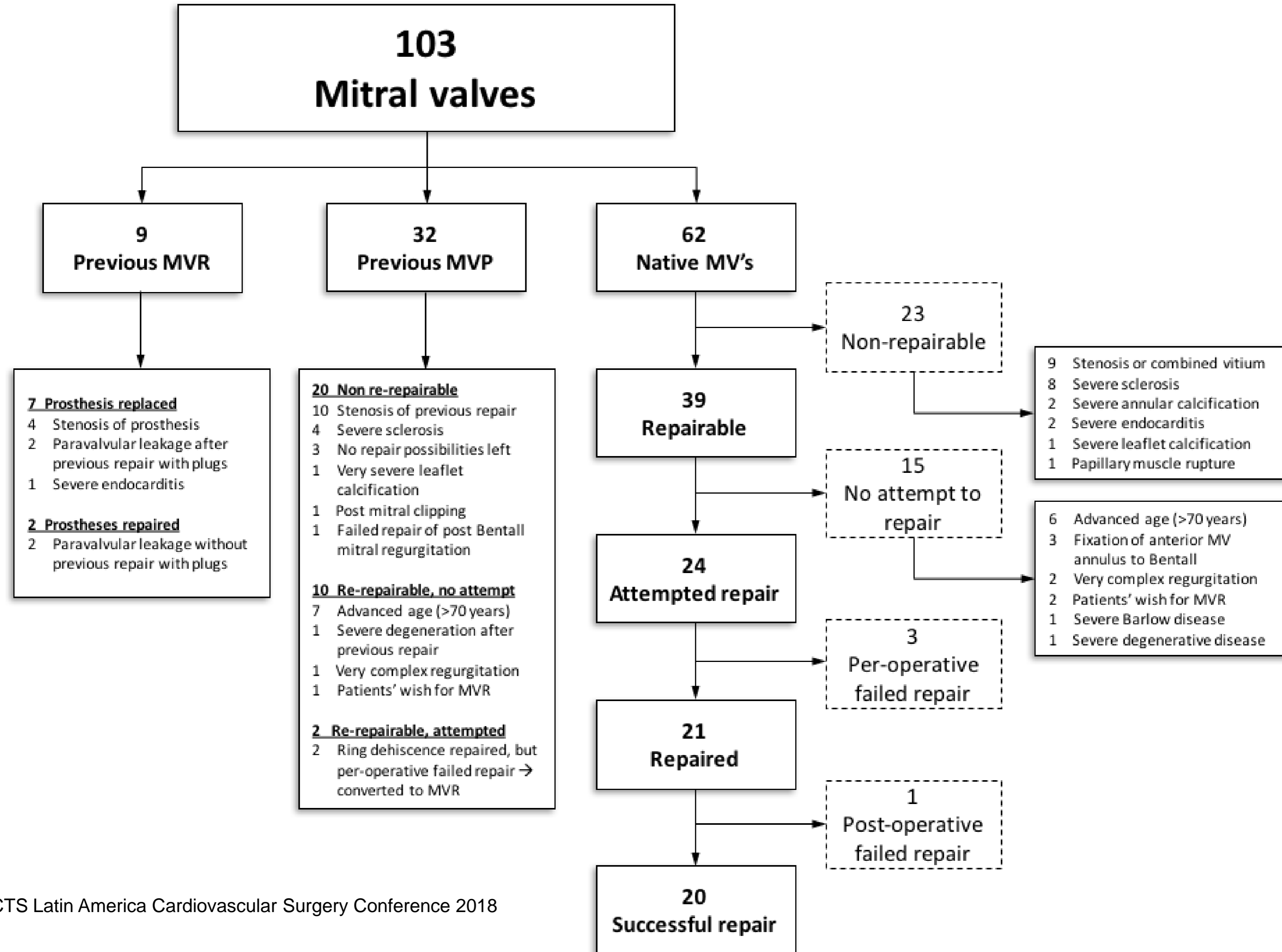
	%	%
Mitral valve replacement	79	
Biological prosthesis		45
Mechanical prosthesis		55
Mitral valve repair	21	
Ring		67
Ring + neochords PMVL		10
Ring + resection PMVL		5
Ring + neochords AMVL		10
Ring + resection AMVL		5
Alfieri (no ring)		5

N= 101. Repair of paravalvular leakage after previous mitral valve replacement (n=2) excluded in this table

AMVL Anterior mitral valve leaflet;

PMVL Posterior mitral valve leaflet

Reparability decision making



Mitral valve etiology and indication for surgery

	%	%		%	%
Native Mitral Valve Regurgitation	52		Native Mitral Valve Stenosis	5	
<u>Classification</u>			Rheumatic		33
Carpentier class I		45	Degenerative		67
Carpentier class II		43	Native Mitral Valve Combined disease	10	
Carpentier class IIIa		0	Rheumatic		17
Carpentier class IIIb		12	Degenerative		83
<u>Etiology</u>			Previous MVR^d	9	
Degenerative		40	Stenosis		33
Myxomatous		6	PVL		67
Barlow		2	Previous MVP^e	31	
Annular dilatation		28	Recurrent MR		41
Ischemic		11	Ring dehiscence		31
Endocarditis		6	Stenosis		13
Post Bentall		8	Stenosis + MR		13
			Failed repair of post Bentall MR		3

MR Mitral valve regurgitation; **MVP** Mitral valve repair; **MVR** Mitral valve replacement; **PVL**: Paravalvular leakage;

Early mortality (<30 days)

1. Massive bleeding thoracic wall
2. Hemorrhagic stroke
3. Sepsis pneumonia
4. Sepsis perforated diverticulitis
5. Cardiogenic shock due to dehiscent prosthesis (endocarditis)