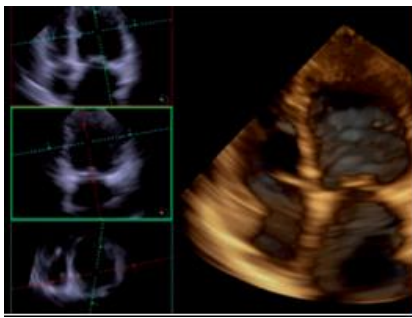
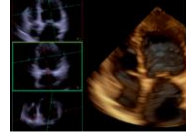




EuroValve

April 26-27, 2018

NH, Palermo, Sicily, ITALY



Is AF a marker for earlier referral for valve treatment?

Massimo Mancone

“Sapienza” Università di Roma

Policlinico Umberto I

Cardiologia Interventistica

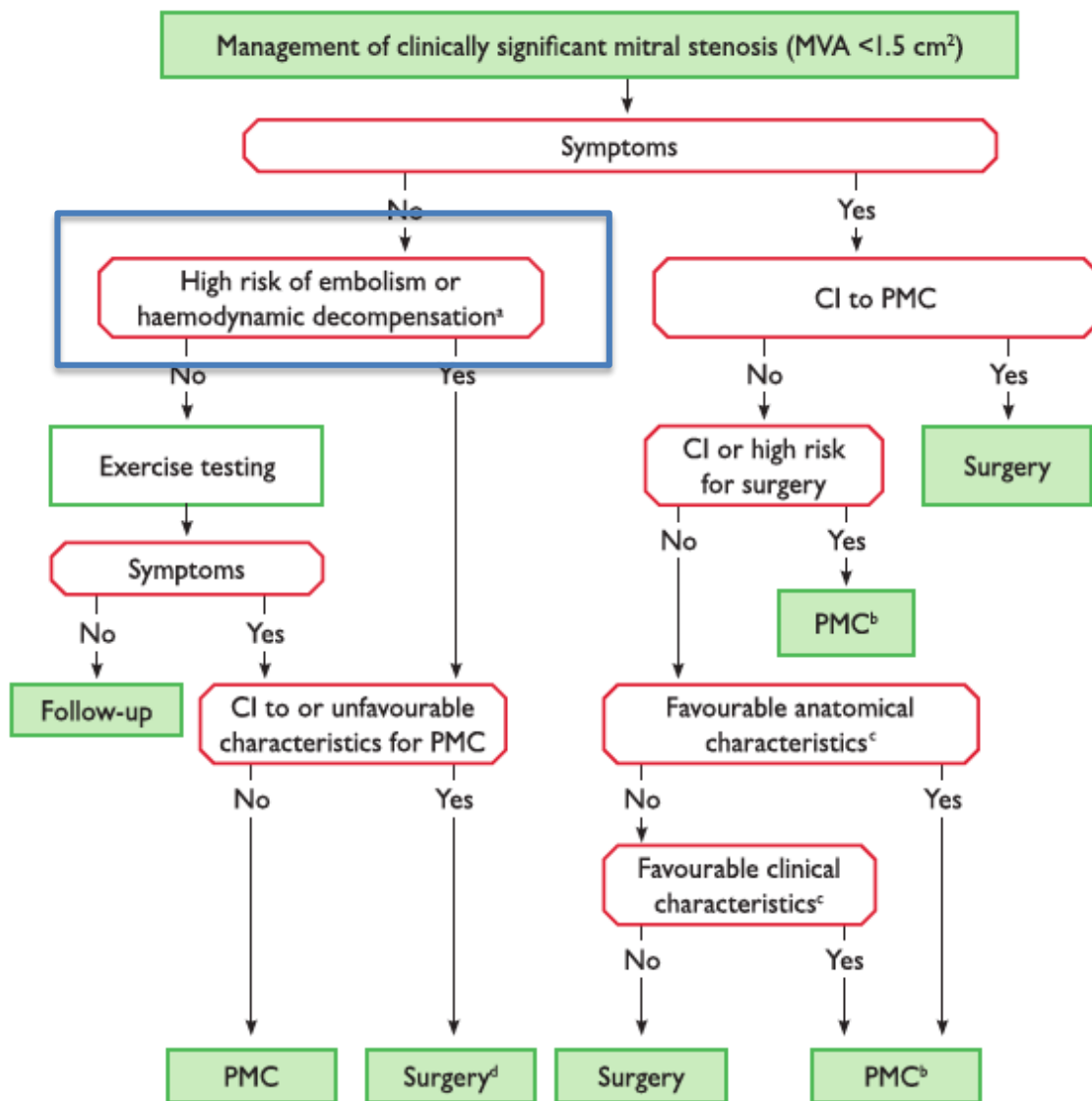




2017 ESC/EACTS Guidelines for the management of valvular heart disease

The Task Force for the Management of Valvular Heart Disease
the European Society of Cardiology (ESC) and the European
Association for Cardio-Thoracic Surgery (EACTS)

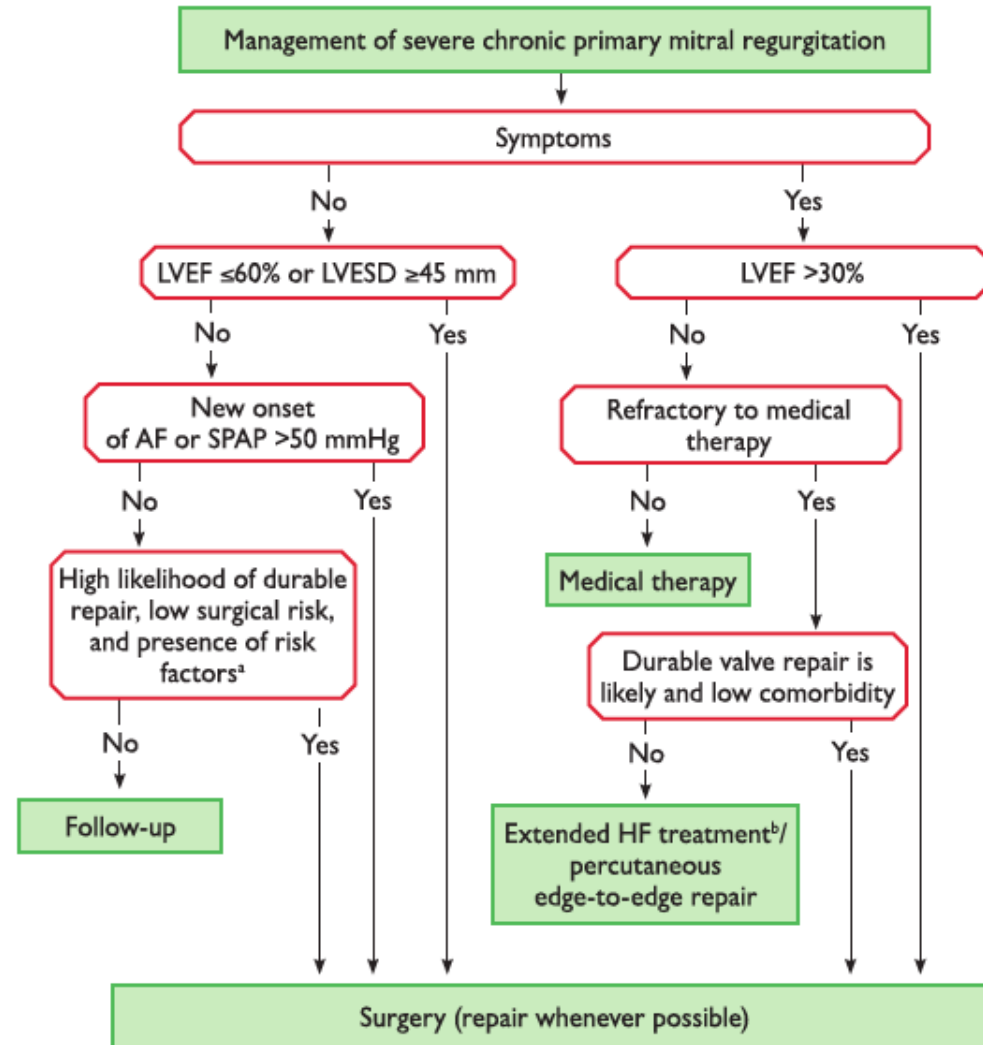
- high thromboembolic risk (history of systemic embolism, dense spontaneous contrast in the LA, new-onset or paroxysmal atrial fibrillation), and/or
- high risk of haemodynamic decompensation (systolic pulmonary pressure >50 mmHg at rest, need for major non-cardiac surgery, desire for pregnancy).





2017 ESC/EACTS Guidelines for the management of valvular heart disease

The Task Force for the Management of Valvular Heart Disease of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS)





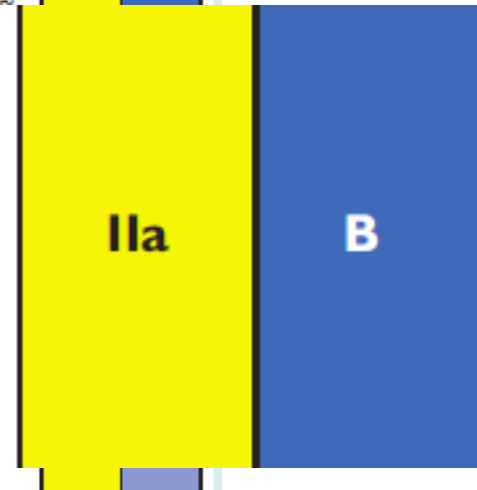
2017 ESC/EACTS Guidelines for the management of valvular heart disease

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Indications for intervention in severe primary mitral regurgitation

Recommendations	Class ^a	Level ^b
Mitral valve repair should be the preferred technique when the results are expected to be durable.	I	C
Surgery is indicated in symptomatic patients with LVEF >30%. ^{121,131,132}	I	B
Surgery is indicated in asymptomatic patients with LV dysfunction (LVESD ≥45 mm ² and/or LVEF ≤60%). ^{122,131}	I	B
Surgery should be considered in asymptomatic patients with preserved LV function (LVESD <45 mm and LVEF >60%) and atrial fibrillation secondary to mitral regurgitation or pulmonary hypertension.	IIa	B

Surgery should be considered in asymptomatic patients with preserved LV function (LVESD <45 mm and LVEF >60%) and atrial fibrillation secondary to mitral regurgitation or pulmonary hypertension^d (systolic pulmonary pressure at rest >50 mmHg).^{123,124}



ity low.

- Indication for intervention in primary mitral regurgitation is guided by symptoms and risk stratification that includes the assessment of ventricular function and size, atrial fibrillation, systolic pulmonary pressure and LA size.





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Surgical interventions

Surgical ablation of atrial fibrillation should be considered in patients with symptomatic atrial fibrillation who undergo valve surgery.³⁷

IIa

A

Surgical ablation of atrial fibrillation may be considered in patients with asymptomatic atrial fibrillation who undergo valve surgery, if feasible, with minimal risk.

IIb

C

Surgical excision or external clipping of the LA appendage may be considered in patients undergoing valve surgery.⁴⁶

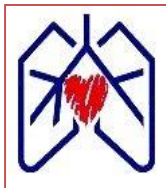
IIb

B

LA = left atrial; NOAC = non-vitamin K antagonist oral anticoagulant; VHD = valvular heart disease; VKA = vitamin K antagonist.

^aClass of recommendation.

^bLevel of evidence.





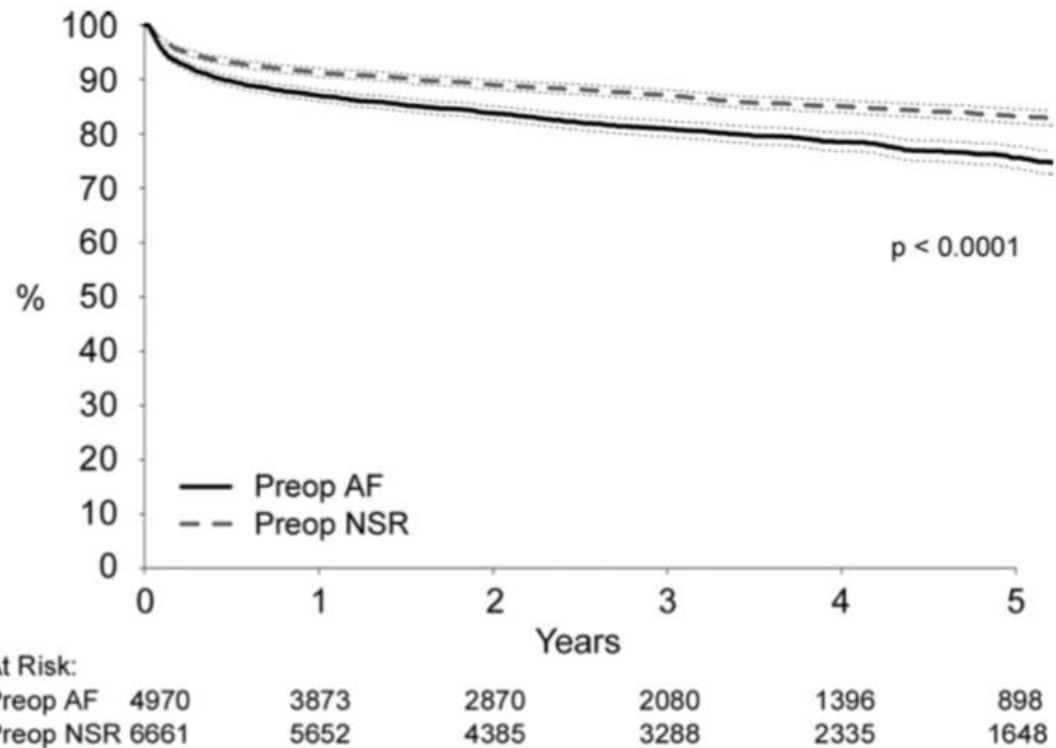
Longitudinal Outcome of Isolated Mitral Repair in Older Patients: Results From 14,604 Procedures Performed From 1991 to 2007

Impact of preoperative (preop) atrial fibrillation (AF [solid line]) on 5-year Kaplan-Meier rates for avoidance of readmission for congestive heart failure after mitral valve re-pair in patients aged 65 years or more.

Kaplan-Meier estimated event rates shown with 95% confidence intervals.

Atrial fibrillation at the time of initial mitral repair has significant in-fluence on

5-year readmission for congestive heart failure (hazard ratio 1.51; 95% confidence interval: 1.39 to 1.66)





Atrial Fibrillation Complicating the Course of Degenerative Mitral Regurgitation

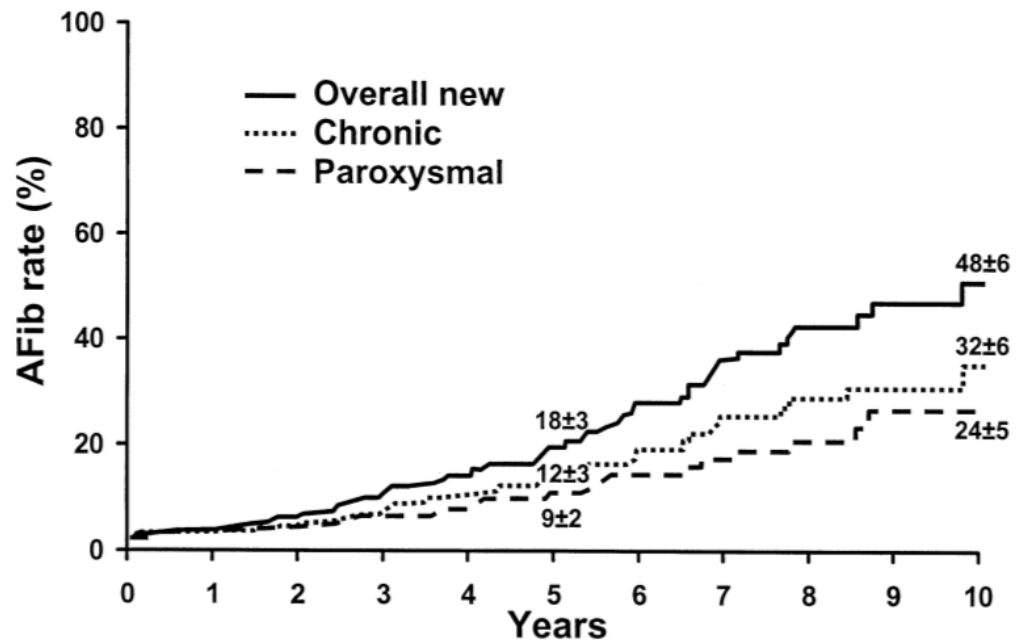
Determinants and Long-Term Outcome

Francesco Grigioni, MD,* Jean-François Avierinos, MD,* Lieng H. Ling, MBBS, MRCP,*
Christopher G. Scott, MS,† Kent R. Bailey, PhD,† A. Jamil Tajik, MD, FACC,*
Robert L. Frye, MD, FACC,* Maurice Enriquez-Sarano, MD, FACC*

Rochester, Minnesota

Two populations of patients with degenerative MR in sinus rhythm at diagnosis were eligible for the study.

Incidence of atrial fibrillation (AFib) under conservative (medical) management among patients with mitral regurgitation due to flail leaflets diagnosed with the patient in sinus rhythm





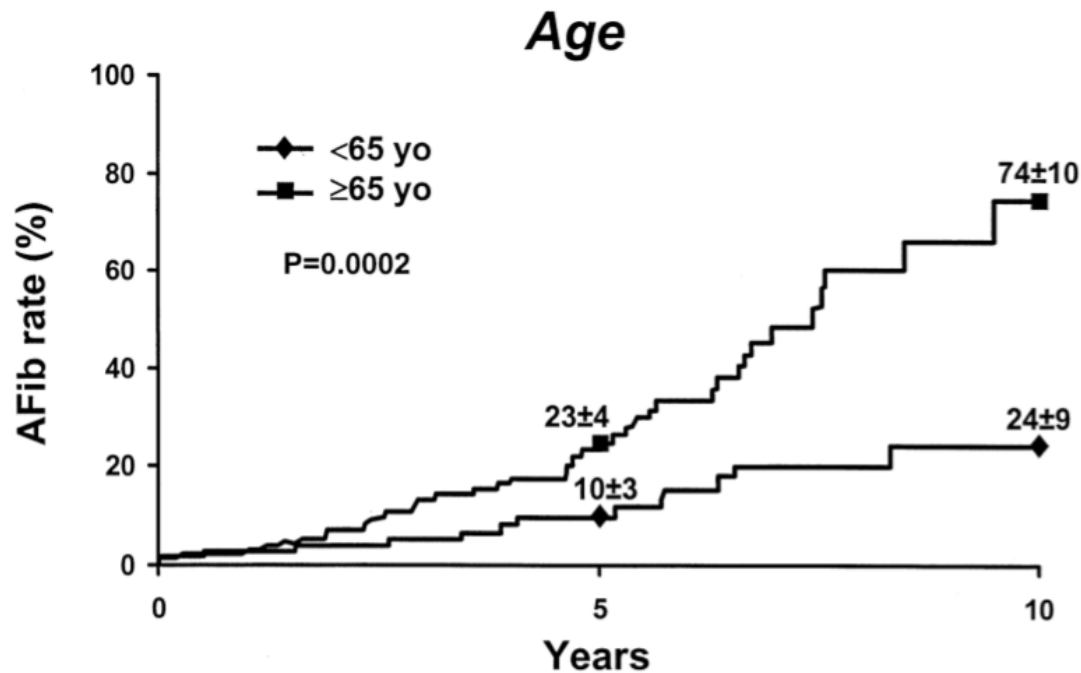
Atrial Fibrillation Complicating the Course of Degenerative Mitral Regurgitation

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Atrial fibrillation (AFib) rate in patients with mitral regurgitation due to flail leaflets diagnosed with the patient in sinus rhythm, **according to age at diagnosis, 65 or 65 years old (yo)**. Note the considerably higher rate in older patients





Atrial Fibrillation Complicating the Course of Degenerative Mitral Regurgitation

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Rochester, Minnesota

Multivariate Predictors of Atrial Fibrillation

Variable	Unit	Risk Ratio	95% CI	p Value
A. Models Using Original Variables in Patients With MR Due to Flail Leaflets				
Age	Per year	1.044	1.02–1.08	0.002
Gender	Per female	1.85	0.98–3.40	0.057
LA	Per mm	1.08	1.04–1.12	0.0002
B. Models Using Original Variables in All Patients With Degenerative MR				
Age	≥ 65 years	2.76	1.64–4.86	0.0001
Gender	Per female	1.47	0.89–2.37	0.14
LA	≥ 50 mm	2.77	1.72–4.45	0.0001
C. Models Using Normalized Variables in All Patients With Degenerative MR				
Age	≥ 65 years	3.26	1.79–6.36	0.0001
Gender	Per female	1.30	0.75–2.20	0.34
LA-normalized	Per 10% increase	1.46	1.25–1.68	0.0001

CI = confidence interval; LA = left atrial diameter; LA-normalized = LA/(mean LA of patient gender) (10% increase in LA-normalized is 5.0 mm in men and 4.7 mm in women); MR = mitral regurgitation.





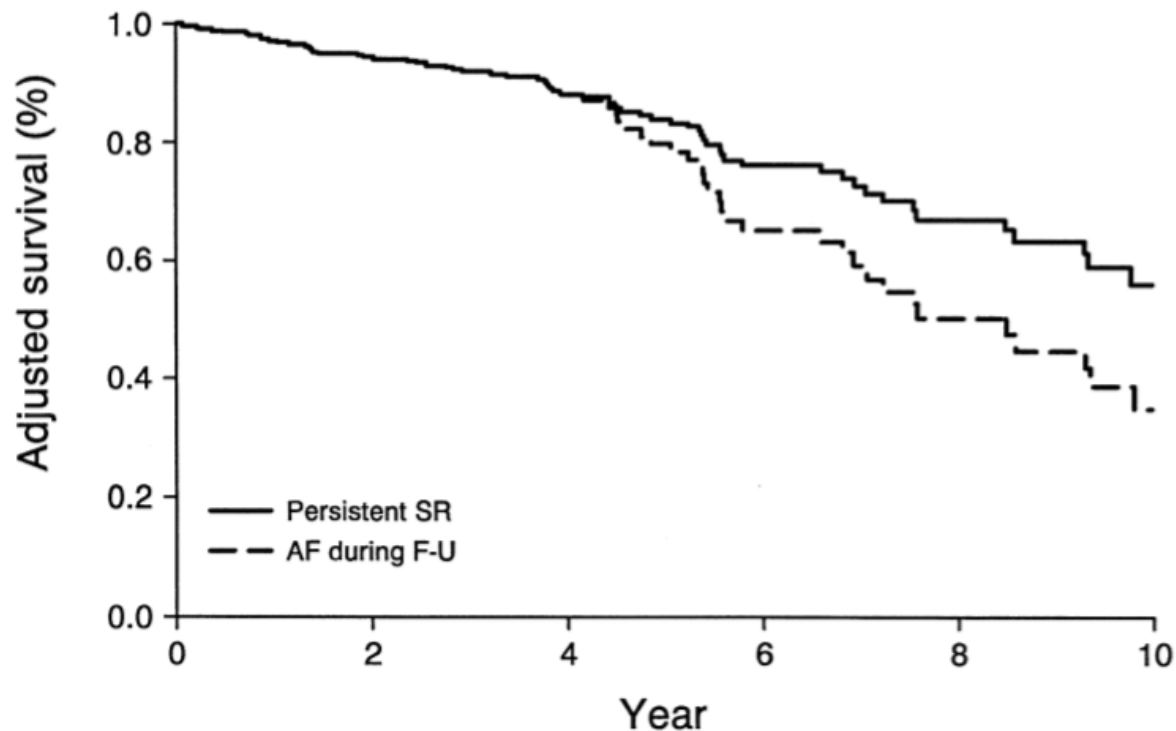
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Rochester, Minnesota

Survival of patients with mitral regurgitation due to flail leaflets adjusted for age, gender, ejection fraction and symptoms at baseline, and separating at the fourth year after diagnosis those patients with and those without postdiagnosis atrial fibrillation





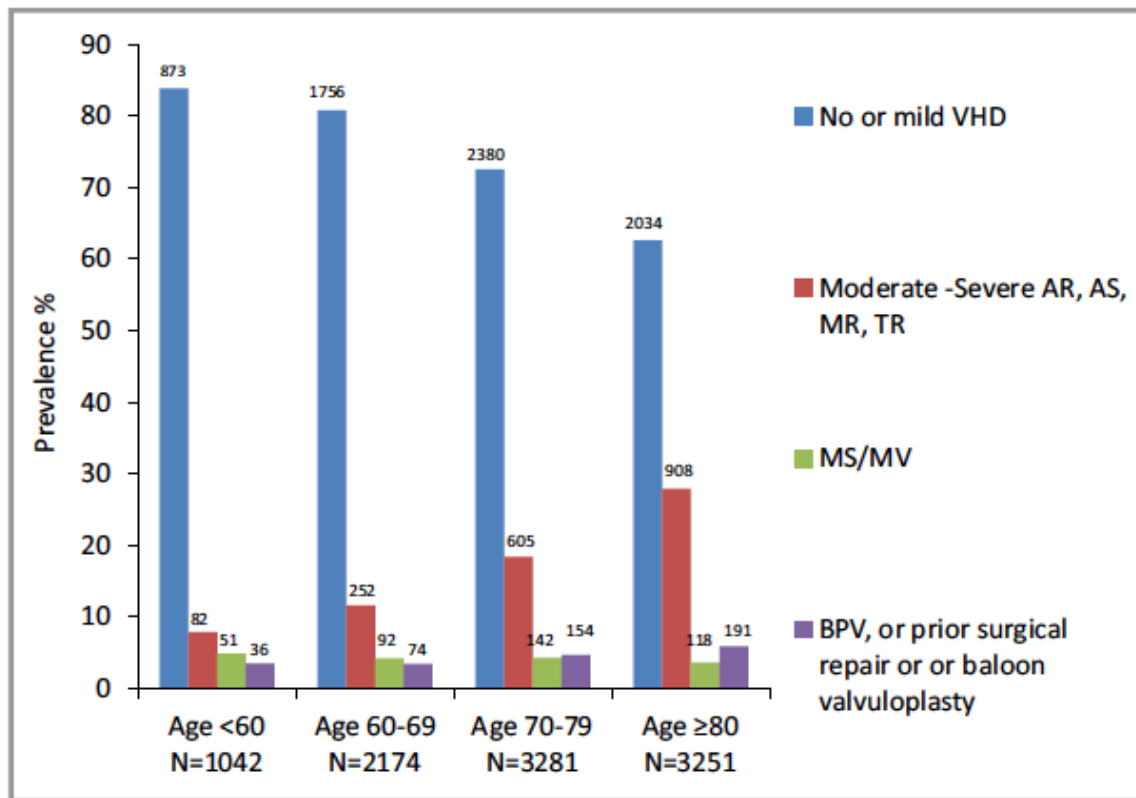
Prevalence, Characteristics, and Outcomes of Valvular Heart Disease in Patients With Atrial Fibrillation: Insights From the ORBIT-AF (Outcomes Registry for Better Informed Treatment for Atrial Fibrillation)

Kevin L. Thomas, MD; Larry R. Jackson II MD; Peter Shrader, MA; Jack Ansell, MD; Gregg C. Fonarow, MD; Bernard Gersh, MB, ChB, DPhil; Peter R. Kowey, MD; Kenneth W. Mahaffey, MD; Daniel E. Singer, MD; Laine Thomas, PhD; Jonathan P. Piccini, MD, MHS; Eric D. Peterson, MD, MPH

Among 9748 patients with AF, 2705 (27.7%) had **significant** VHD

Prevalence of valvular heart disease (VHD) by age (n=9748).

AR indicates aortic regurgitation; AS, aortic stenosis; BPV, bioprosthetic valve; MR, mitral regurgitation; MS, mitral stenosis; MV, mechanical valve; and TR, tricuspid regurgitation.





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Table 4. Outcomes Across VHD Categories

Outcome	No or Mild Significant VHD (N=7043)	Moderate or Severe AR, AS, MR, or TR (N=1847)	Mechanical Valve or Mitral Stenosis (N=403)	BPV, Surgical Repair, or Balloon Valvuloplasty (N=455)	P Value*
All-cause mortality					
Unadjusted	Reference	2.08 (1.80–2.39)	1.62 (1.30–2.03)	1.79 (1.44–2.24)	<0.001
Adjusted	Reference	1.23 (1.07–1.42)	1.10 (0.85–1.42)	0.99 (0.76–1.30)	0.025
Stroke, non-CNS embolism, or TIA					
Unadjusted	Reference	1.53 (1.20–1.96)	1.39 (0.86–2.26)	1.70 (1.16–2.49)	<0.001
Adjusted	Reference	0.97 (0.74–1.27)	0.93 (0.58–1.49)	1.07 (0.73–1.57)	0.949
Major bleeding					
Unadjusted	Reference	1.53 (1.26–1.85)	1.91 (1.50–2.44)	2.10 (1.62–2.72)	<0.001
Adjusted	Reference	1.10 (0.91–1.32)	1.22 (0.87–1.71)	1.33 (0.97–1.82)	0.342





Prevalence, Characteristics, and Outcomes of Valvular Heart Disease in Patients With Atrial Fibrillation: Insights From the ORBIT-AF (Outcomes Registry for Better Informed Treatment for Atrial Fibrillation)

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Among 9748 patients with AF, 2705 (27.7%) had **significant** VHD

Table 5. MS: Incidence Rate and Association With Outcomes

Outcome	Event Rates		Unadjusted		Adjusted	
	No or Mild VHD (N=7043)	MS (N=137)	HR (95% CI)	P Value	HR (95% CI)	P Value
All-cause death	721 (4.45)	28 (9.14)	2.07 (1.48–2.89)	<0.001	1.44 (0.98–2.11)	0.061
Stroke, non-CNS embolism, or TIA	223 (1.39)	5 (1.64)	1.18 (0.41–3.39)	0.759	0.79 (0.26–2.42)	0.684
Major bleeding	509 (3.25)	18 (6.27)	1.93 (1.26–2.94)	0.002	1.46 (0.90–2.39)	0.126

Table 10. MV: Incidence Rate and Association With Outcomes

Outcome	Event Rates		Unadjusted		Adjusted	
	No or Mild VHD (N=7043)	MV (N=306)	HR (95% CI)	P Value	HR (95% CI)	P Value
All-cause death	721 (4.45)	47 (6.49)	1.46 (1.11–1.91)	0.006	1.06 (0.80–1.41)	0.676
Stroke, non-CNS embolism, or TIA	223 (1.39)	14 (1.97)	1.41 (0.86–2.31)	0.171	0.97 (0.56–1.69)	0.918
Major bleeding	509 (3.25)	42 (6.19)	1.90 (1.41–2.56)	<0.001	1.22 (0.78–1.89)	0.385

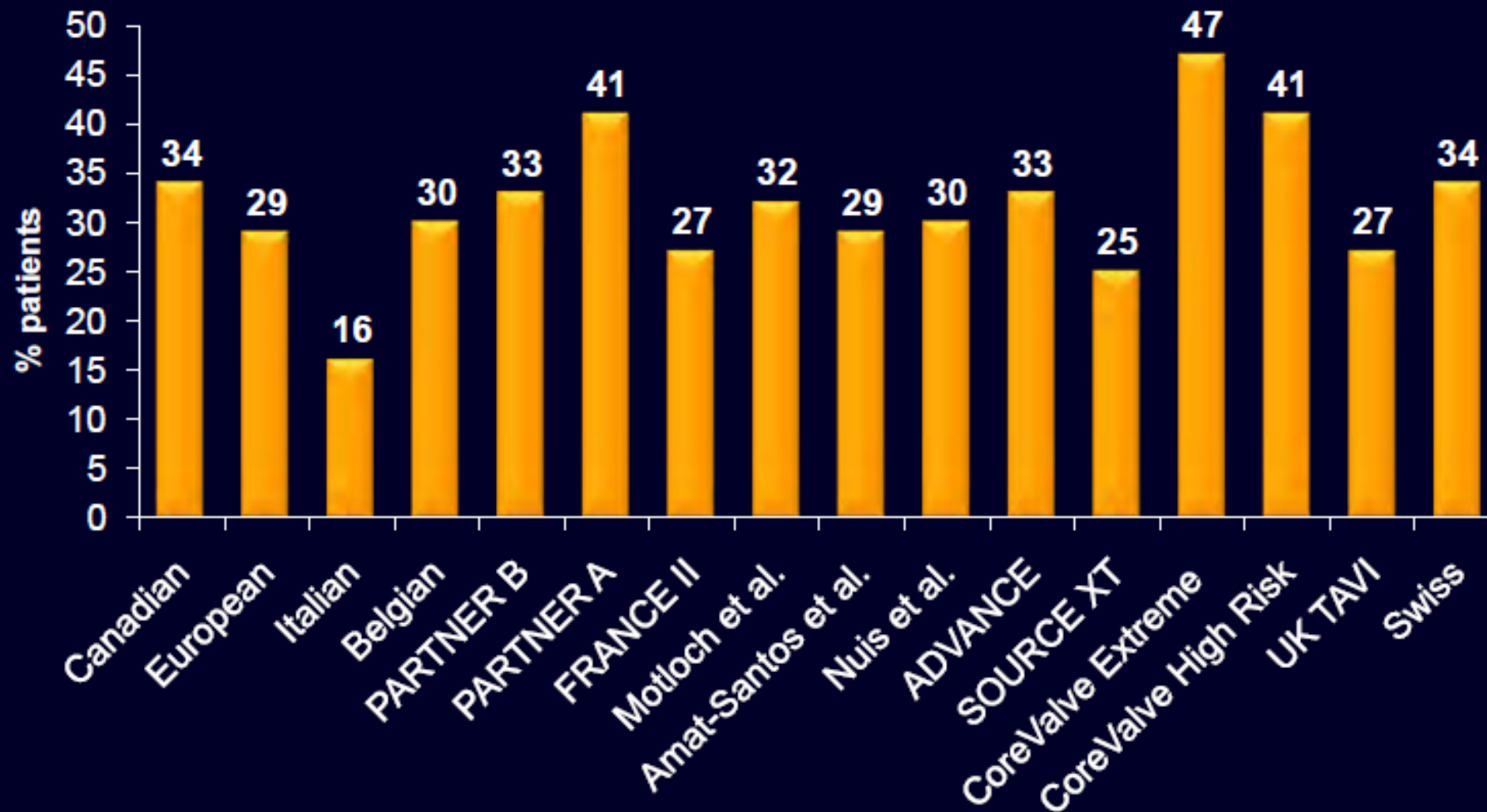
Table 7. AS: Incidence Rate and Association With Outcomes

Outcome	Event Rates		Unadjusted		Adjusted	
	No or Mild VHD (N=7043)	AS (N=413)	HR (95% CI)	P Value	HR (95% CI)	P Value
All-cause death	721 (4.45)	104 (11.45)	2.58 (2.09–3.19)	<0.001	1.40 (1.13–1.73)	0.002
Stroke, non-CNS embolism, or TIA	223 (1.39)	22 (2.46)	1.76 (1.11–2.79)	0.016	0.97 (0.59–1.60)	0.909
Major bleeding	509 (3.25)	62 (7.31)	2.24 (1.71–2.95)	<0.001	1.38 (1.00–1.92)	0.052

Values are expressed as number of events and percentages. AS indicates aortic stenosis; CI, confidence interval; CNS, central nervous system; HR, hazard ratio; TIA, transient ischemic attack and VHD, valvular heart disease.



BASELINE AFIB IN TAVI CANDIDATES



1-Rodes-Cabau et al, JACC 2010
 2-Piazza et al, EuroInterv 2008
 3-Tamburino et al, Circulation, 2011
 4-Bosmans et al, Inter Cardiovasc and Thor Surg, 2011

5-Leon et al, NEJM 2010
 6-Smith et al, NEJM 2011
 7-Gilard et al, NEJM 2012
 8-Motloch et al, Ann Thorac Surg 2011

9-Amat-Santos et al, JACC 2012
 10-Nuis et al, Am J Cardiol 2012
 11-Linke et al, TVT 2012
 12-Wendler et al, EuroPCR 2012

13-Popma et al, JACC 2014
 14-Adams et al, NEJM 2014
 15-Ludman, Circulation 2015
 16-Stortecky, Circ Cardio Interv 2013



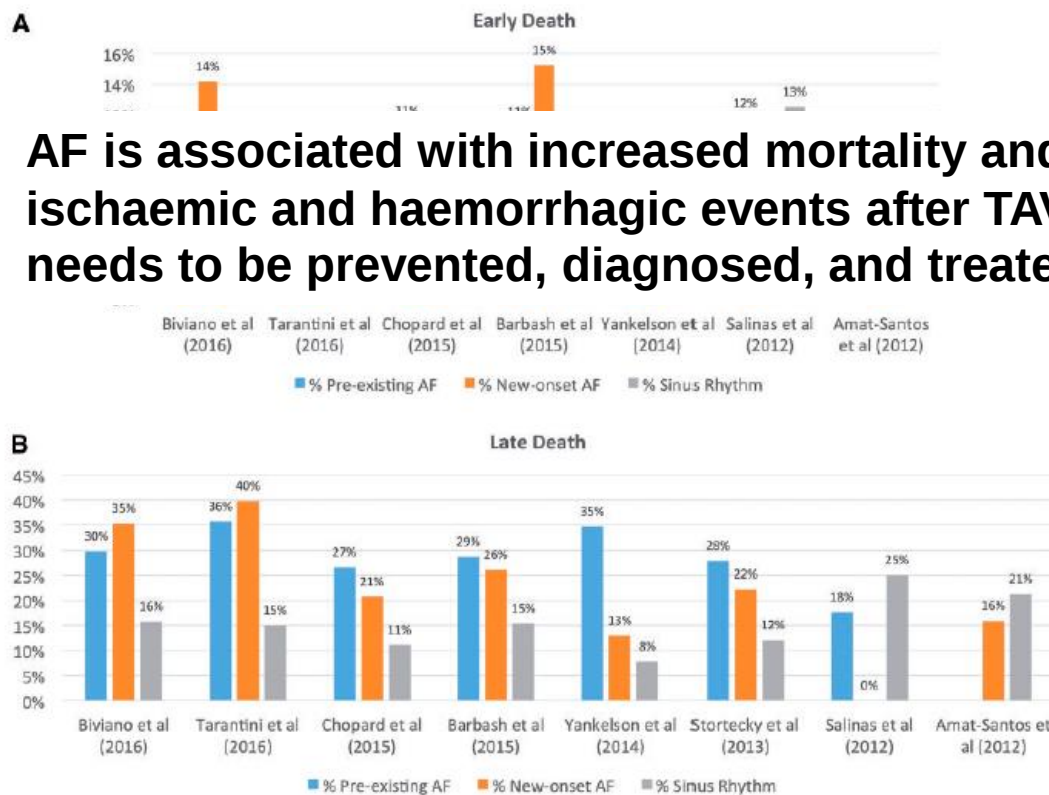
Atrial fibrillation in patients undergoing transcatheter aortic valve implantation: epidemiology, timing, predictors, and outcome

Giuseppe Tarantini^{1*}, Marco Mojoli¹, Marina Urena², and Alec Vahanian²

¹Department of Cardiac, Thoracic and Vascular Sciences, University Hospital of Padova, Via Giustiniani 2, 35128 Padova, Italy; and ²Cardiology Department, Hôpital Bichat-Claude Bernard, 46 Rue Henri Huchard, 75018 Paris, France

Received 30 June 2016; revised 19 August 2016; accepted 11 September 2016; online publish-ahead-of-print 12 October 2016

Rates of death related to pre-existing atrial fibrillation, new-onset atrial fibrillation, and sinus rhythm in transcatheter aortic valve implantation patients across relevant literature.



AF is associated with increased mortality and adverse ischaemic and haemorrhagic events after TAVI and as such needs to be prevented, diagnosed, and treated properly.





Matrix metalloproteinases and atrial remodeling in patients with mitral valve disease and atrial fibrillation

Wim Anné^a, Rik Willems^a, Tania Roskams^b, Paul Sergeant^c, Paul Herijgers^c, Patricia Holemans^a, Hugo Ector^a, Hein Heidbüchel^{a,*}

^aDepartment of Cardiology, University Hospital Gasthuisberg, University of Leuven, Herestraat 49, B-3000 Leuven, Belgium

^bDepartment of Pathology, University Hospital Gasthuisberg, University of Leuven, Leuven, Belgium

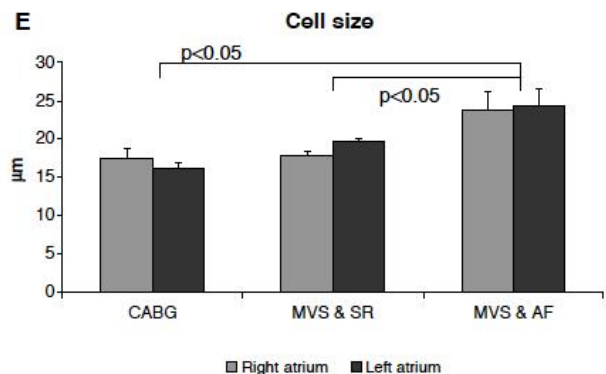
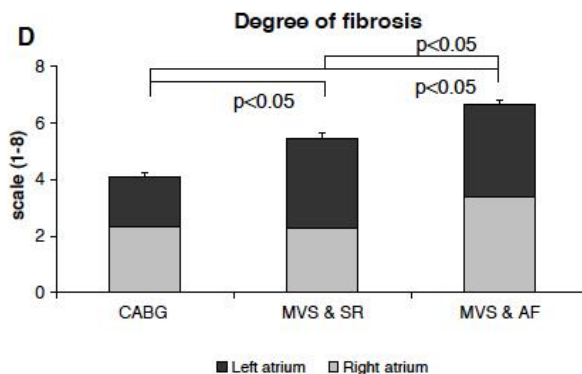
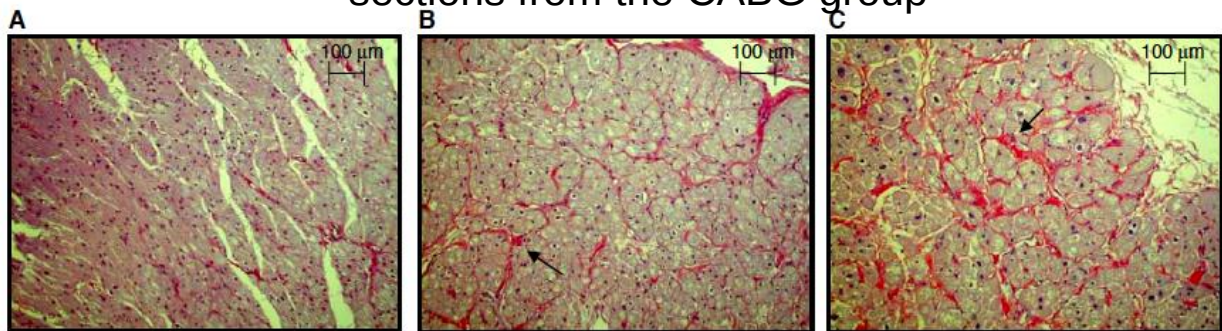
^cDepartment of Cardiac Surgery, University Hospital Gasthuisberg, University of Leuven, Leuven, Belgium

Received 26 November 2004; received in revised form 11 April 2005; accepted 15 April 2005

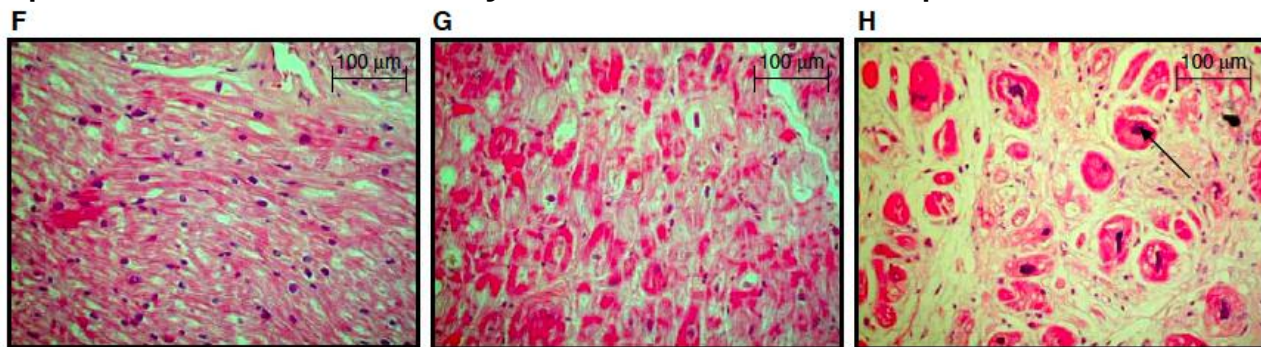
Available online 23 May 2005

Time for primary review 15 days

Representative Sirius Red stained paraffin sections from the CABG group

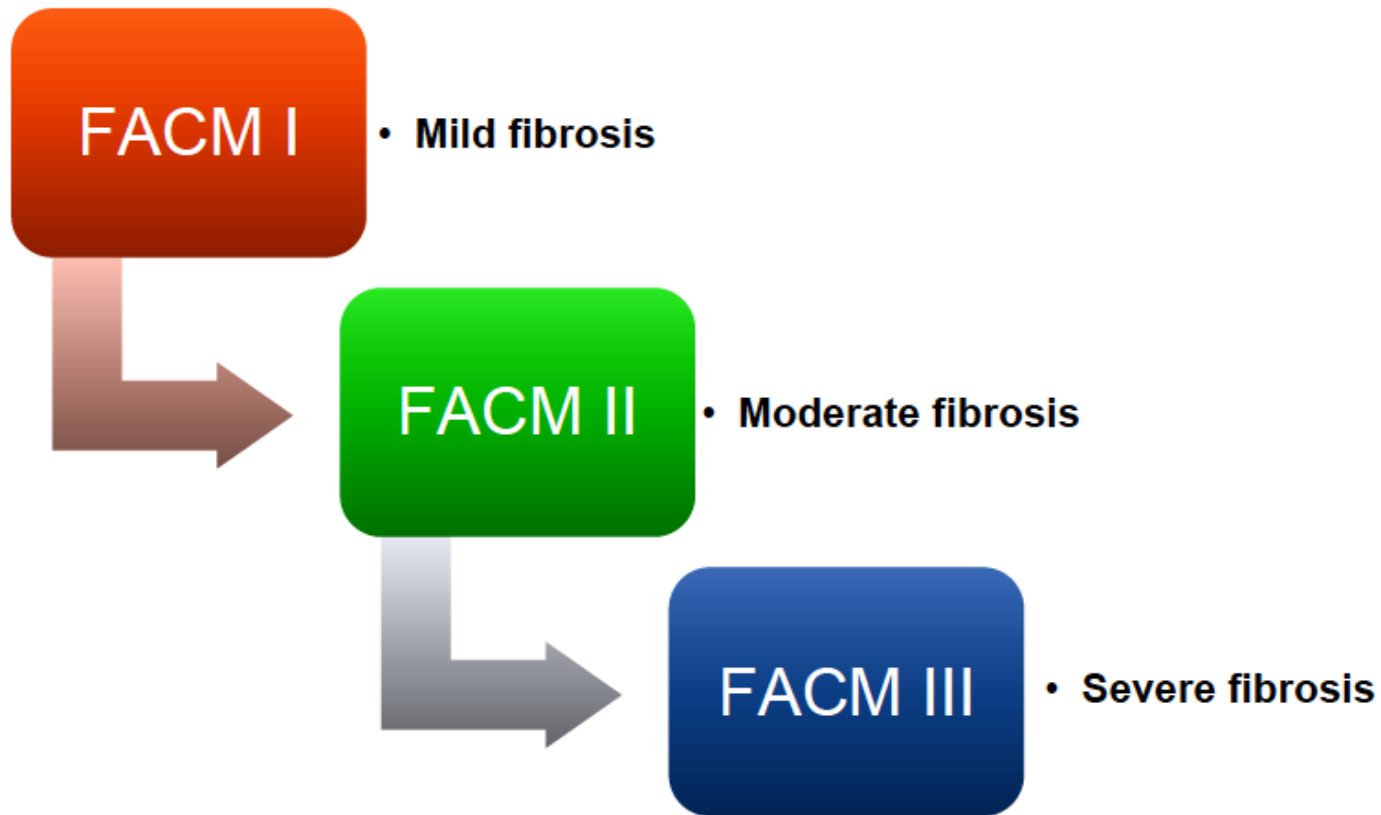


Representative hematoxyline– eosin stained paraffin sections





Fibrotic Atrial Cardiomyopathy

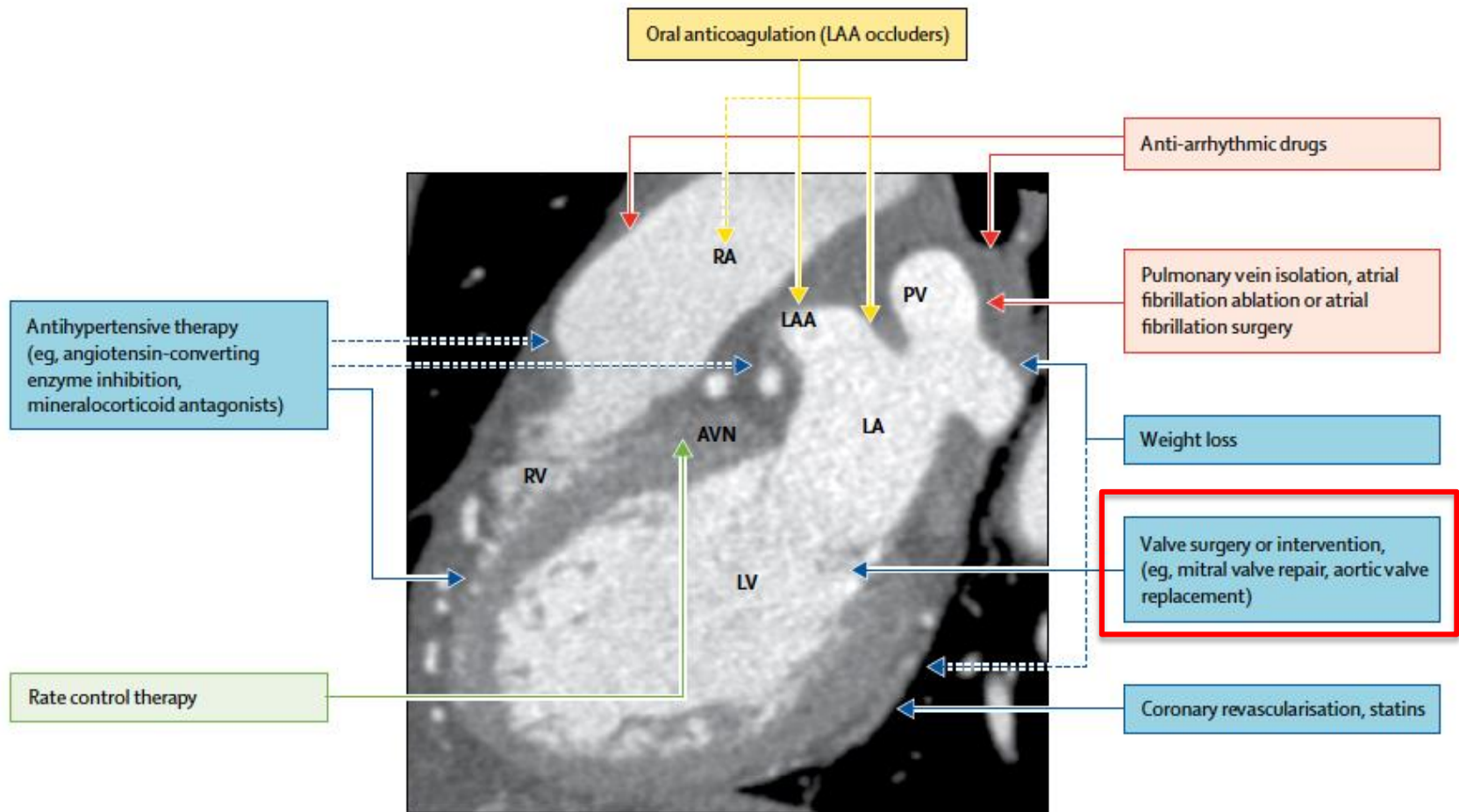




The future of atrial fibrillation management: integrated care and stratified therapy



Main cardiac targets of the different domains of atrial fibrillation management



CT image (oblique and rotated view) of the heart. Arrows point to the main target of the therapies. Solid lines point to established treatment targets and dashed lines indicate potential additional treatment targets.





Is AF a marker for earlier referral for valve treatment?

**Try to Refers Before
AF Appear**





Thanks

