Μη βαλβιδική και βαλβιδική κολπική μαρμαρυγή

Ομοιότητες και διαφοροποιήσεις

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What is ‘valvular’ atrial fibrillation?

The definition of valvular and non-valvular atrial fibrillation: results of a physicians' survey

Mauro Molteni[1]*, Hernan Polo Friz[1], Laura Primitz[1], Giuseppe Marano[2], Patrizia Boracchi[2], and Claudio Cimminiello[1]

(Q2) Do you think that the existing definitions of NVAF are sufficiently clear?	Cardiologists		Internists	
	n (%)	95% CI	*n* (%)	95% CI
No	98 (35.9)	(30.2–41.9)	69 (28.8)	(23.1–34.9)
Yes	156 (57.1)	(51.0–63.1)	163 (67.9)	(61.6–73.8)
No answer	19 (7.0)	(4.2–10.7)	8 (3.3)	(1.4–6.5)
Total	273 (100.0)		240 (100.0)	

Europace 2014;16:1720–1725

Table 4 Dominant answers grouped according to the five main topics, and by physicians' specialties

Clustering topics/questions	Cardiologists (n = 273)		Internists (n = 240)	
	n (%)	95% CI	n (%)	95% CI
(a) The presence/absence of a known rheumatic aetiology as origin of valvular disease				
Q3. Are the terms NVAF and non-rheumatic AF synonyms?				
No, n (%)	163 (59.7)	(53.6–65.6)	138 (57.5)	(51.0–63.8)
Q4. Are medical history of rheumatic disease and clinical signs of valvular involvement both prerequisites to define AF as rheumatic?				
Yes, n (%)	133 (48.7)	(42.6–54.8)	113 (47.1)	(40.6–53.6)
Q5. In the absence of clinical history of rheumatic disease and in the presence of a documented valvular anomaly, may AF then be defined as valvular?				
Yes, n (%)	156 (57.1)	(51.0–63.1)	122 (50.8)	(44.3–57.3)
Q6. In a patient with mitral valve disease of unclear origin, may AF then be defined as valvular?				
No, n (%)	65 (23.8)	(18.9–29.3)	67 (27.9)	(22.3–34.1)
(b) Site (mitral, aortic) and type of valve involvement (stenosis, insufficiency, both)				
Q7. In the presence of VHD other than mitral, may AF then be defined as valvular?				
Yes, n (%)	110 (40.3)	(34.4–46.4)	70 (29.2)	(23.5–35.4)
Q8. In a patient with rheumatic VHD, may AF then be classified as valvular if associated with mitral involvement or aortic involvement or both?				
Aortic and mitral involvement, n (%)	129 (47.3)	(41.2–53.4)	95 (39.6)	(33.4–46.1)
Q9. The term 'AF associated to rheumatic mitral valve disease' includes				
Both of them, n (%)	185 (67.8)	(61.9–73.3)	151 (62.9)	(56.5–69.0)
Q10. In the presence of with mitral valve regurgitation, may AF than be defined as valvular?				
Yes, n (%)	77 (28.2)	(22.9–33.9)	57 (23.8)	(18.5–29.6)
(c) The presence/absence of prosthetic heart valve				
Q11. In the presence of a biological aortic valve prosthesis, how may AF then be defined?				
NVAF, n (%)	73 (26.7)	(21.6–32.4)	77 (32.1)	(26.2–38.4)
(d) Haemodynamic relevance (severe/moderate/mild stenosis or insufficiency)				
Q12. Is the degree of valvular stenosis or regurgitation relevant for the definition of valvular AF?				
No, n (%)	98 (35.9)	(30.2–41.9)	69 (28.8)	(23.1–34.9)
Q13. Is the degree of valvular regurgitation relevant for the definition of valvular AF?				
Yes, n (%)	89 (32.6)	(27.1–38.5)	63 (26.2)	(20.8–32.3)
Q14. Is the degree of valvular stenosis the only relevant parameter for the definition of valvular AF?				
No, n (%)	150 (54.9)	(48.8–60.9)	116 (48.3)	(41.9–54.9)
Q15. In case of AF and mitral stenosis, is the degree of stenosis relevant for the definition of valvular AF?				
No, n (%)	118 (43.2)	(37.3–49.3)	92 (38.3)	(32.2–44.8)
(e) Miscellaneous				
Q16. Should AF during hyperthyroidism or post-surgery AF be considered as NVAF?				
Yes, n (%)	144 (52.7)	(46.6–58.8)	121 (50.4)	(43.9–56.9)
Q17. Is the degree of left atrium enlargement important to define the origin of AF?				
No, n (%)	85 (31.1)	(17.5–27.8)	78 (32.5)	(21.2–32.7)

Various definitions of non-valvular AF

- AHA/ACC/ESC 2001 AF guideline

'the term non-valvular AF is restricted to cases in which the rhythm disturbance occurs *in the absence of rheumatic mitral valve disease or a prosthetic heart valve'*

- Updated 2006

adds '. . . or *mitral valve repair*'

- 2015 focused update of the ESC

AF in the absence of *mechanical prosthetic heart valves and in the absence of moderate to severe mitral stenosis (usually of rheumatic origin)*

2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation

TABLE 4 Definitions of AF: A Simplified Scheme

Term	Definition
Paroxysmal AF	• AF that terminates spontaneously or with intervention within 7 d of onset. • Episodes may recur with variable frequency.
Persistent AF	• Continuous AF that is sustained >7 d.
Long-standing persistent AF	• Continuous AF >12 mo in duration.
Permanent AF	• The term "permanent AF" is used when the patient and clinician make a joint decision to stop further attempts to restore and/or maintain sinus rhythm. • Acceptance of AF represents a therapeutic attitude on the part of the patient and clinician rather than an inherent pathophysiological attribute of AF. • Acceptance of AF may change as symptoms, efficacy of therapeutic interventions, and patient and clinician preferences evolve.
Nonvalvular AF	• AF in the absence of rheumatic mitral stenosis, a mechanical or bioprosthetic heart valve, or mitral valve repair.

Inclusion criteria in NOACs trials

Trial	Molecule	Exclusion criteria
RE-LY	Dabigatran	History of heart valve disorder (i.e., prosthetic valve or hemodynamically relevant valve disease)
ROCKET-AF	Rivaroxaban	Hemodynamically significant mitral valve stenosis, prosthetic heart valves (annuloplasty with or without prosthetic ring, commisurotomy and/or valvuloplasty are permitted)
ARISTOTLE	Apixaban	Conditions other than AF that require anticoagulation (i.e. prosthetic heart valves)
ENGAGE AF	Edoxaban	Moderate-to-severe mitral stenosis, other indication for anticoagulation (subjects with bioprosthetic heart valves and/or valve repair could be included)

THE MAGNITUDE OF THE PROBLEM

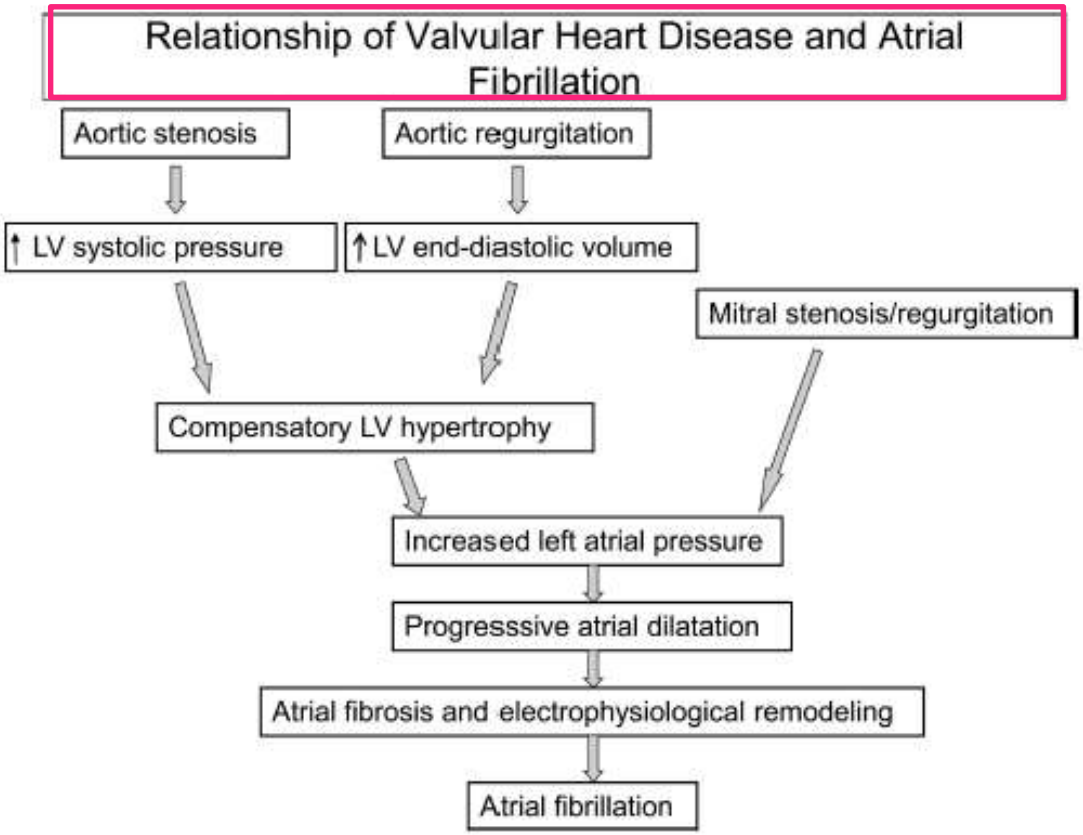
A prospective survey in European Society of Cardiology member countries of atrial fibrillation management: baseline results of EURObservational Research Programme Atrial Fibrillation (EORP-AF) Pilot General Registry

Table 2 Patient characteristics

	Whole cohort	First detected	Paroxysmal	Persistent AF	Long-standing persistent	Permanent	*P* value*
N = 3049 patients	3049	923	808	647	145	526	
Demographics							
Age in years (mean)	68.8	68.5	66.6	67.9	70.9	73.0	<0.001
Female gender (%)	40.4	37.2	43.4	40.3	42.1	40.9	0.119
Concomitant disease							
Hypertension (%)	70.9	71.9	67.9	77.8	70.6	77.8	0.112
Coronary artery disease (%)	36.4 (*N* = 2642)	36.2 (*N* = 291)	34.2 (*N* = 235)	38.5 (*N* = 47)	40.3 (*N* = 188)	38.5 (*N* = 47)	0.285
Myocardial infarction (%)	44.8	50.2	43.0	25.5	49.5	25.5	0.004
PTCA/CABG (%)	47.0	56.7	45.5	17.0	54.8	17.0	<0.001
Stable angina (%)	37.7	32.3	38.3	46.8	38.3	46.8	0.141
Lone atrial fibrillation*	3.9	4.1	6.9	0.0	0.2	0.0	<.0001
Chronic heart failure (%)	47.5 (*N* = 1382)	47.4 (*N* = 418)	30.8 (*N* = 229)	72.9 (*N* = 105)	64.0 (*N* = 332)	72.9 (*N* = 105)	<0.001
Heart failure NYHA class III/IV (%)	41.2	40.9	27.5	49.5	50.0	49.5	<0.001
Valvular disease (%)	63.5	66.3	47.3	68.2	77.2	68.2	<0.001
Dilated cardiomyopathy (%)	11.4	10.7	4.1	31.9	17.8	31.9	<0.001
Cardiomyopathy hypertrophic (%)	3.9	2.8	3.4	11.9	3.5	11.9	<0.001
Cardiomyopathy restrictive (%)	0.5	0.6	0.0	1.4	1.0	1.4	0.028
Cardiomyopathy hypertensive (%)	19.5	15.3	18.1	38.9	17.4	38.9	<0.001
Other cardiac disease (%)	8.1	7.4	7.2	8.8	9.3	8.8	0.507
Chronic obstructive pulmonary disease (COPD) (%)	11.1	12.3	7.4	19.6	13.6	19.6	<0.001
Hyperthyroidism (%)	3.0	1.8	3.4	5.7	4.0	5.7	0.048
Hypothyroidism (%)	7.2	8.0	6.7	4.9	6.3	4.9	0.548
Cardiovascular risk factors							
Diabetes mellitus (%)	20.6	20.8	16.8	23.8	25.8	20.2	0.002
Hypercholesterolaemia (%)	48.6	48.9	46.7	65.3	47.8	47.3	0.002
Current smoker (%)	11.3	12.2	12.0	11.9	7.9	11.5	0.155
No regular exercise (%)	39.3	41.4	33.0	28.0	51.8	36.1	<0.001
Co-morbidities							
Previous TIA (%)	4.1	3.3	3.8	5.3	5.6	4.0	0.260
Previous stroke (%)	6.4	6.4	4.7	12.5	9.5	4.5	<0.001
Ischaemic thrombo-embolic complications (%)	13.1	12.8	10.9	18.1	16.9	12.1	0.008
Haemorrhagic events (%)	5.9	5.9	4.9	4.4	9.2	4.7	0.007
Malignancy (%)	5.3	6.1	5.3	2.5	4.2	5.7	0.344

Europace 2014;16:308–319

Relationship between valvular heart conditions and atrial fibrillation



Darby A and DiMarco J. Circulation 2012;125:945-957

Prevalence and Predictors of Atrial Fibrillation in Rheumatic Valvular Heart Disease

Erdem Diker, MD, Sinan Aydogdu, MD, Murat Özdemir, MD, Tevfik Kural, MD, Kadir Polat, MD, Sengul Cehreli, MD, Ali Erdogan, MD, and Siber Göksel, MD

TABLE I Rate of Occurrence of Atrial Fibrillation in Various Groups of Rheumatic Valvular Disease

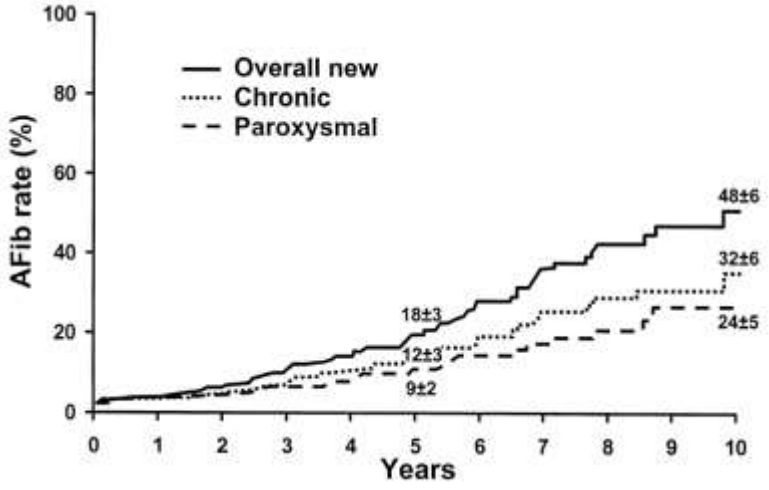
	Patients (no.)	Atrial Fibrillation No. (%)
Mitral stenosis	250	73 (29)
Mitral regurgitation	74	12 (16)
Aortic regurgitation	24	0 (0)
Aortic stenosis	20	1 (5)
Mitral stenosis + mitral regurgitation	274	142 (52)
Mitral stenosis + tricuspid regurgitation	42	27 (64)
Mitral stenosis + mitral regurgitation + tricuspid regurgitation	144	101 (70)
Aortic stenosis + aortic regurgitation	110	4 (4)
Mitral stenosis + aortic regurgitation	78	24 (31)
Mitral stenosis + mitral regurgitation + aortic regurgitation	36	21 (58)
Mitral stenosis + tricuspid regurgitation	23	12 (52)
Other	35	16 (46)
Total	1,110	433 (39)

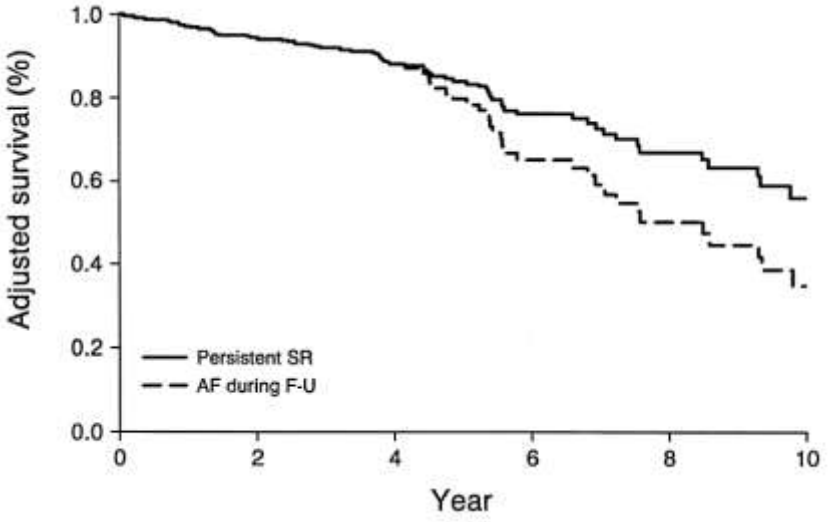
Am J Cardiol 1996

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*



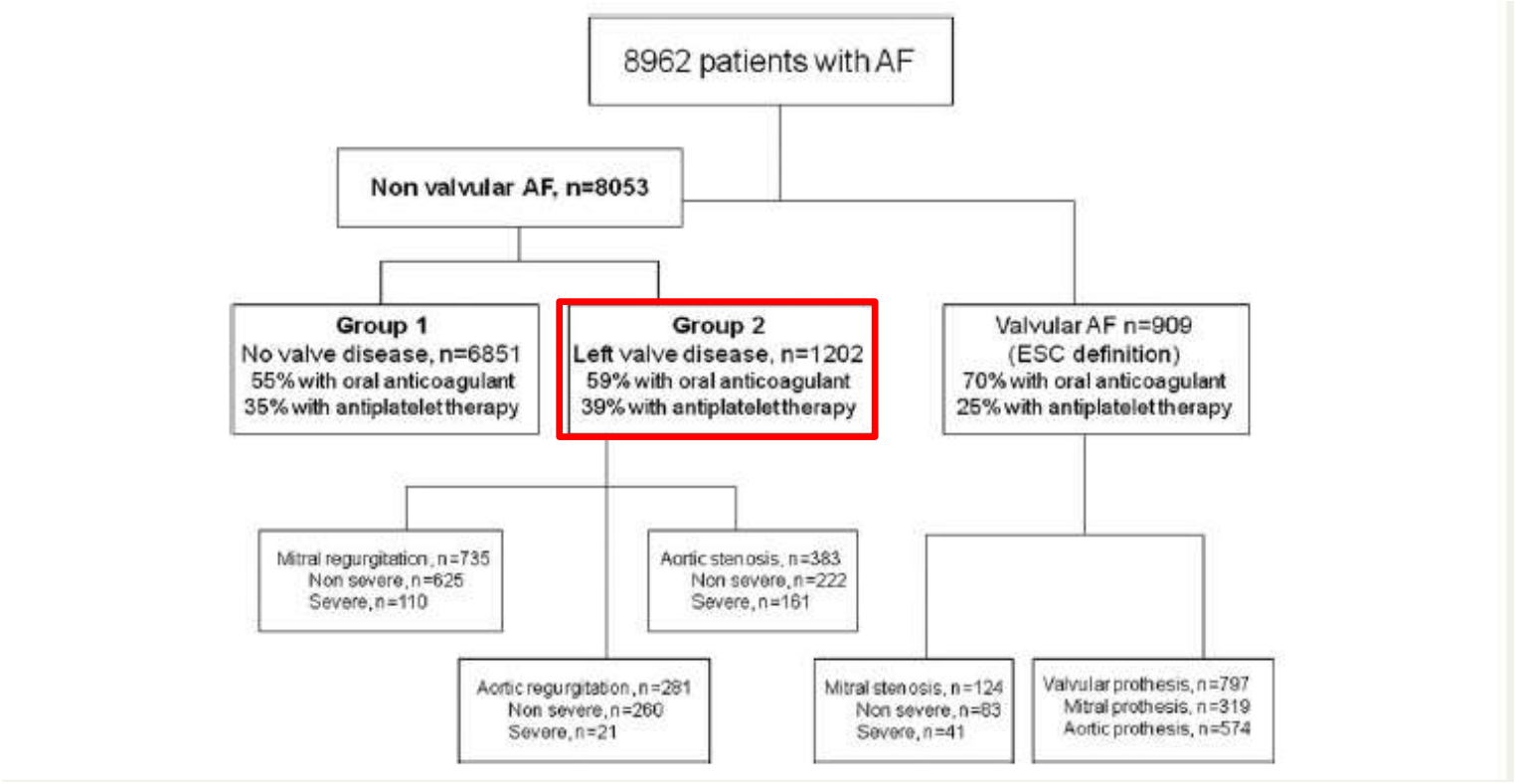


J Am Coll Cardiol 2002;40:84 –92

VALVULAR HEART DISEASES, AF AND THROMBO-EMBOLIC RISK

Prognostic value of CHA_2DS_2-VASc score in patients with 'non-valvular atrial fibrillation' and valvular heart disease: the Loire Valley Atrial Fibrillation Project

January 2000 and December 2010

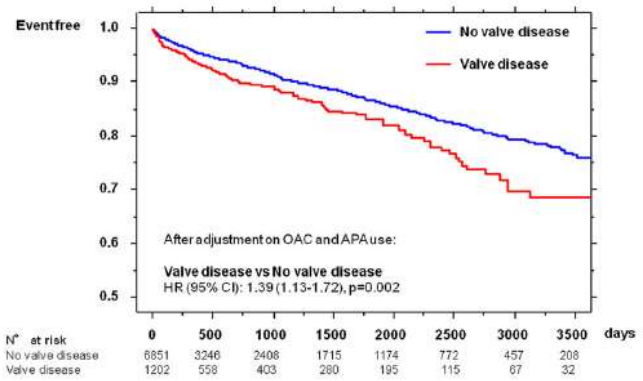


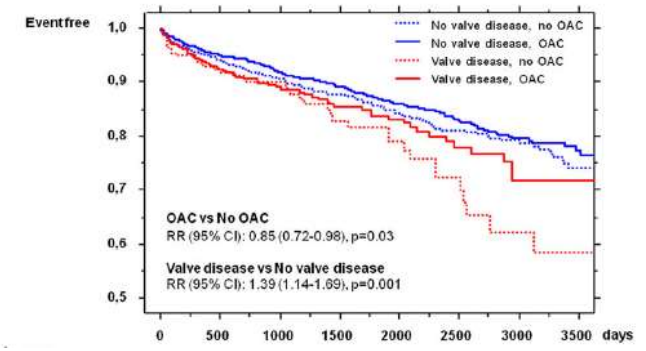
European Heart Journal 2015;36:1822–1830

Prognostic value of CHA_2DS_2-VASc score in patients with 'non-valvular atrial fibrillation' and valvular heart disease: the Loire Valley Atrial Fibrillation Project

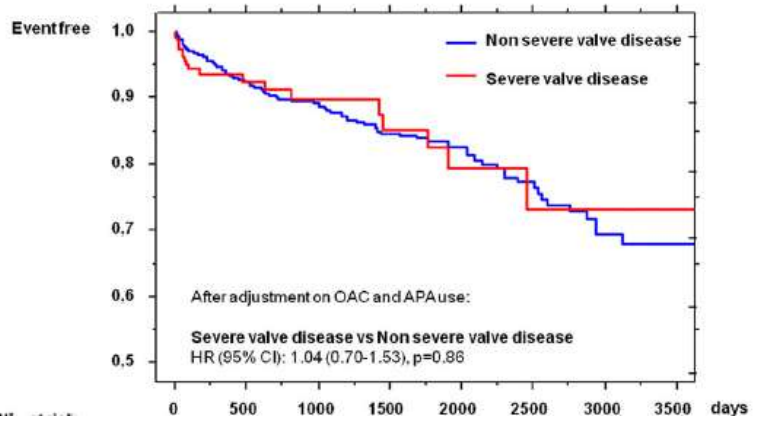
Raphael Philippart[1], Anne Brunet-Bernard[1], Nicolas Clementy[1], Thierry Bourguignon[1], Alain Mirza[1], Dominique Babuty[1], Denis Angoulvant[1], Gregory Y.H. Lip[2], and Laurent Fauchier[1]*

Stroke or systemic thromboembolism in AF with or without valve disease
8053 patients, 868±1043 days FU, 627 events





Stroke or systemic thromboembolism in AF with severe or non severe valve disease
1202 patients, 835±1011 days FU, 120 events



European Heart Journal 2015;36:1822–1830

Prognostic value of CHA_2DS_2-VASc score in patients with 'non-valvular atrial fibrillation' and valvular heart disease: the Loire Valley Atrial Fibrillation Project

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Table 3 Cox regression analysis for prediction of stroke/systemic thromboembolism

	Univariate analysis		Multivariable analysis	
	Hazard ratio (95% CI)	*P*-value	Hazard Ratio (95% CI)	*P*-value
Age (per 10-year increase)	1.57 (1.47–1.68)	<0.0001	1.25 (1.14–1.36)	<0.0001
Female gender	0.80 (0.69–0.93)	0.004	0.77 (0.64–0.93)	0.01
CHA_2DS_2VASc score (as a continuous variable)	0.72 (0.69–0.75)	<0.0001	1.33 (1.23–1.45)	<0.0001
HASBLED score (as a continuous variable)	0.69 (0.65–0.73)	<0.0001	0.93 (0.82–1.05)	0.22
Non-valvular AF with valve disease (compared with non-valvular AF and no valve disease)	1.39 (1.14–1.69)	0.001	1.24 (0.84–1.83)	0.28
Mitral regurgitation (vs. no mitral regurgitation)	1.09 (0.87–1.36)	0.48	0.78 (0.54–1.13)	0.19
Aortic regurgitation (vs. no aortic regurgitation)	1.39 (1.02–1.90)	0.04	1.08 (0.74–1.58)	0.68
Aortic stenosis (vs. no aortic stenosis)	1.64 (1.24–2.15)	0.0005	1.04 (0.69–1.56)	0.86
Severe valve disease (compared with all other patients)	1.32 (0.95–1.85)	0.10	0.93 (0.60–1.43)	0.73
Atrial flutter and no documented AF (vs. AF and no atrial flutter)	0.41 (0.24–0.68)	0.0005	0.48 (0.28–0.84)	0.01
Atrial flutter with documented AF (vs. AF and no atrial flutter)	0.50 (0.30–0.84)	0.01	0.74 (0.44–1.27)	0.28
Permanent AF (vs. Non-permanent AF)	1.26 (1.09–1.47)	0.002	1.12 (0.95–1.32)	0.17
Vitamin K antagonist at discharge (vs. no vitamin K antagonist at discharge)	0.84 (0.72–0.99)	0.03	0.93 (0.77–1.11)	0.41
Antiplatelet agent at discharge (vs. no antiplatelet agent at discharge)	1.53 (1.30–1.79)	<0.0001	1.20 (0.99–1.46)	0.06

European Heart Journal 2015;36:1822–1830

Prognostic value of CHA_2DS_2-VASc score in patients with 'non-valvular atrial fibrillation' and valvular heart disease: the Loire Valley Atrial Fibrillation Project

Raphael Philippart[1], Anne Brunet-Bernard[1], Nicolas Clementy[1], Thierry Bourguignon[1], Alain Mirza[1], Dominique Babuty[1], Denis Angoulvant[1], Gregory Y.H. Lip[2], and Laurent Fauchier[1]*

Table 4 Incidence of stroke/thromboembolic events in patients with non-valvular AF with or with no valve disease, by CHA_2DS_2VASc score

	Group 1 non-valvular AF, no valve disease (n = 6851, 78%)			Group 2 non-valvular AF, with valve disease (n = 1202, 13%)			
CHA_2DS_2VASc score	Therapy with OAC, %	Observed rate of events, %/year	Estimated rate of events with no OAC, %/year	Therapy with OAC, %	Observed rate of events, %/year	Estimated rate of events with no OAC, %/year	Incidence ratio (95% CI) vs. group 1
0–1 (n = 1637, 20%)	48	0.87	1.62	63	0.90	1.90	1.19 (0.47–3.03)
2–3 (n = 2881, 36%)	60	3.01	6.19	66	2.76	5.98	0.98 (0.76–1.27)
4–5 (n = 2800, 35%)	56	4.60	9.18	56	5.67	11.29	1.12 (0.93–1.34)
≥6 (n = 735, 9%)	50	9.67	18.32	52	11.07	21.22	1.30 (1.05–1.61)

European Heart Journal 2015;36:1822–1830

Prognostic value of CHA_2DS_2-VASc score in patients with 'non-valvular atrial fibrillation' and valvular heart disease: the Loire Valley Atrial Fibrillation Project

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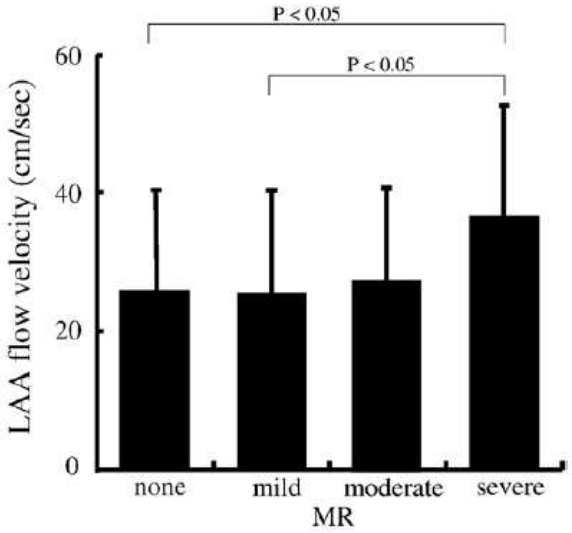
Table 5 Comparison of c-statistics (95% confidence intervals) for CHA_2DS_2VASc score in patients with non-valvular AF and in patients with valve disease

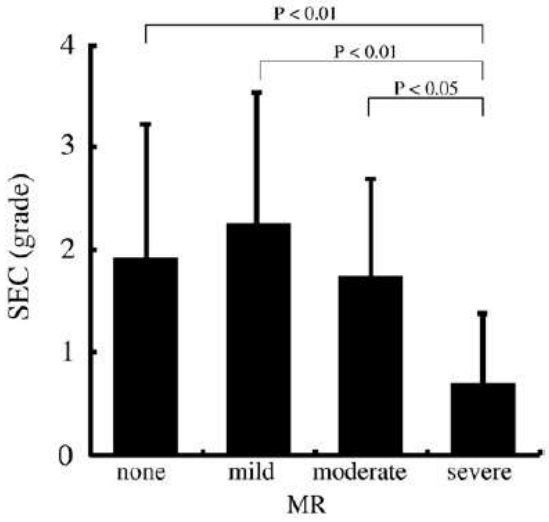
	C statistic (95% CI)			
	All patients	Patients not on VKA	Patients on VKA	*P*-value[a]
All patients	($n = 8053$) 0.655 (0.644–0.665)	($n = 3241$) 0.655 (0.638–0.671)	($n = 4065$) 0.654 (0.639–0.668)	0.96
Non-valvular AF and no valve disease (Group 1)	($n = 6851$) 0.655 (0.643–0.666)	($n = 2785$) 0.665 (0.647–0.683)	($n = 3408$) 0.645 (0.628–0.661)	0.42
Non-valvular AF with valve disease (Group 2)	($n = 1202$) 0.639 (0.611–0.666)[b]	($n = 456$) 0.582 (0.535–0.628)[b]	($n = 657$) 0.675 (0.637–0.710)[b]	0.10

European Heart Journal 2015;36:1822–1830

Relation of the severity of mitral regurgitation to thromboembolic risk in patients with atrial fibrillation

Nobuyuki Fukuda, Tadakazu Hirai, Kazumasa Ohara, Keiko Nakagawa, Takashi Nozawa, Hiroshi Inoue *





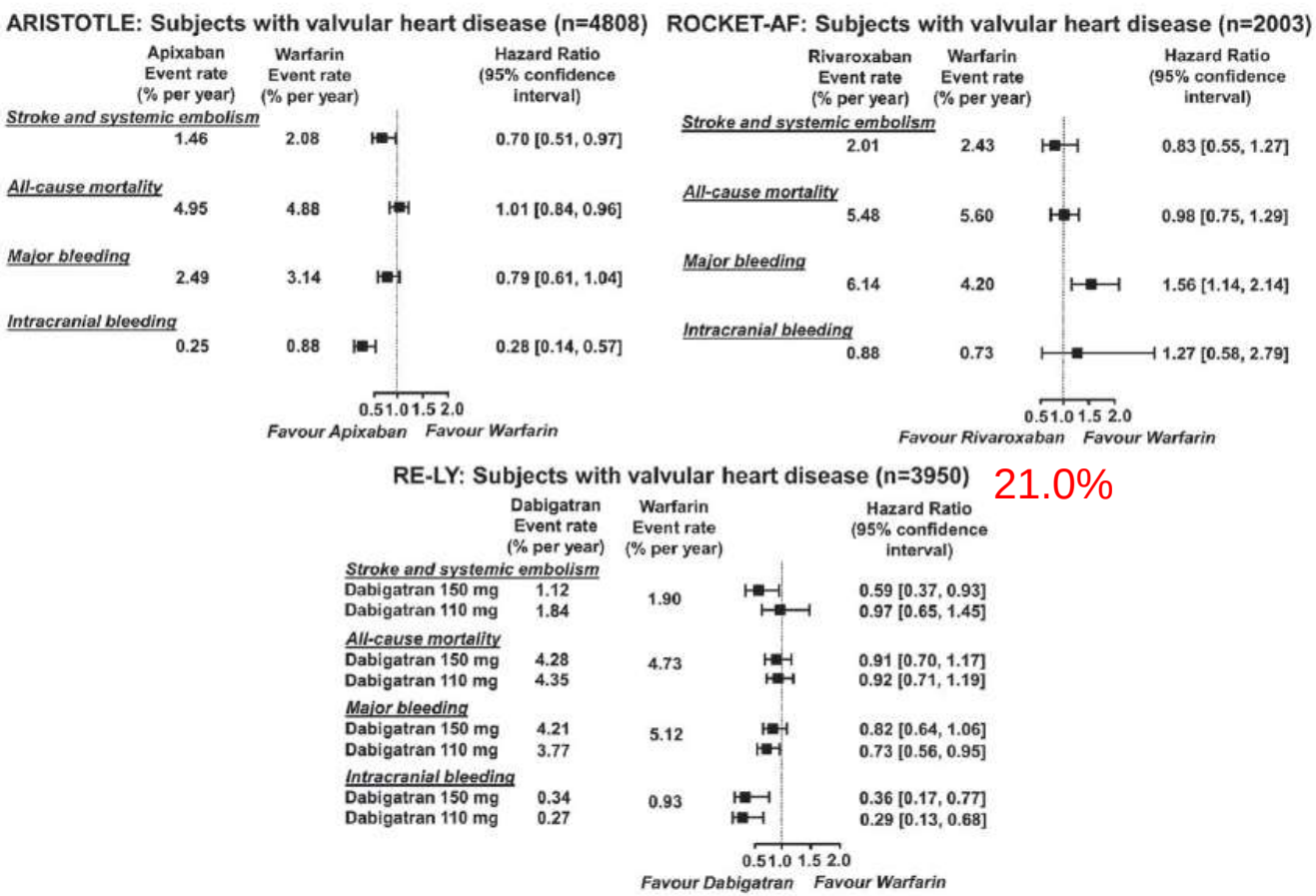
International Journal of Cardiology 2011;146:197–201

VALVULAR HEART DISEASES, AF AND THERAPY

Outcomes of AF patients with valvular heart disease treated with DOACs or vitamin K antagonists

26.4%

14.1%



21.0%

Curr Opin Cardiol 2017, 32:174–180

Guidelines about NOACs use in patients with valvular diseases

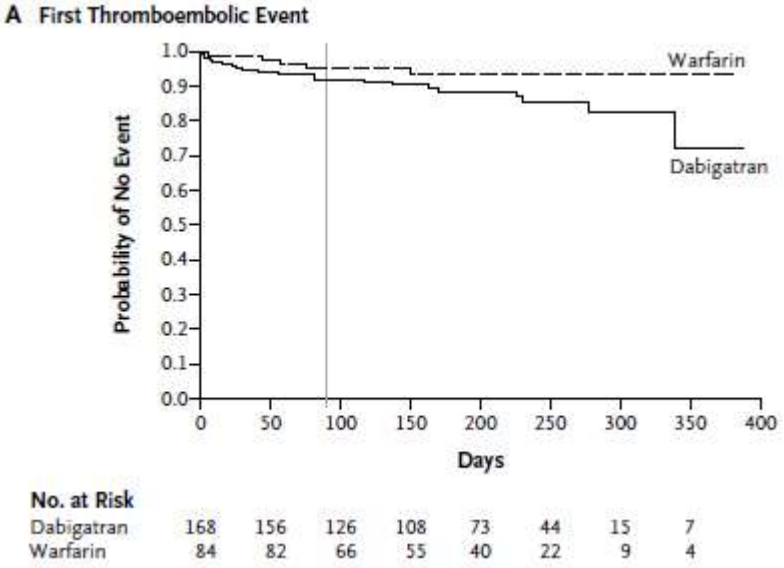
Group	Year	Moderate to severe mitral stenosis	Mechanichal heart valve	Bioprosthetic heart valve	TAVI	Mitral valve repair	Native valvular disease
ESC	2012	X	X	X	X	√	√
HRS/ACC/AHA	2014	X	X	X	X	X	√
EHRA	2015	X	X	√ Except for the first 3 months post-operatively	√ May require combination with antiplatelet therapy	√ Except for the first 3-6 months post-operatively	√

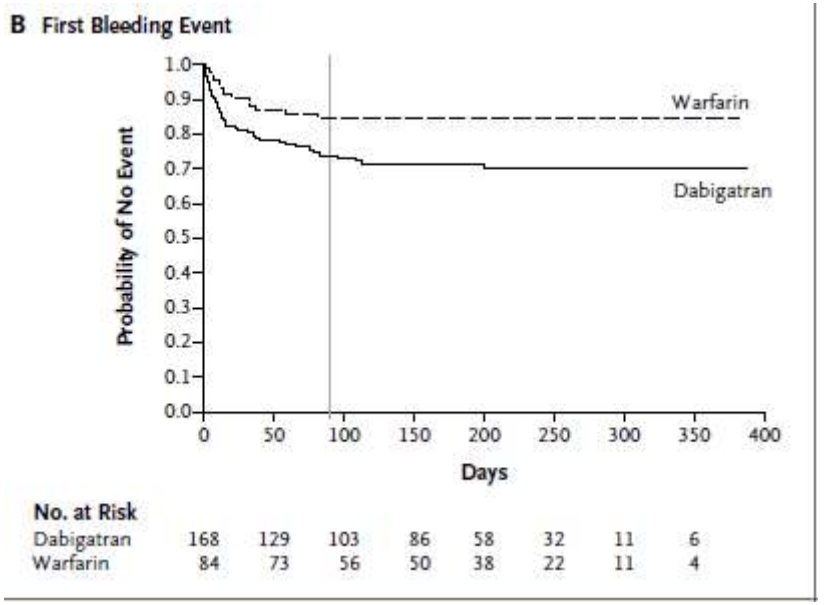
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Dabigatran versus Warfarin in Patients with Mechanical Heart Valves

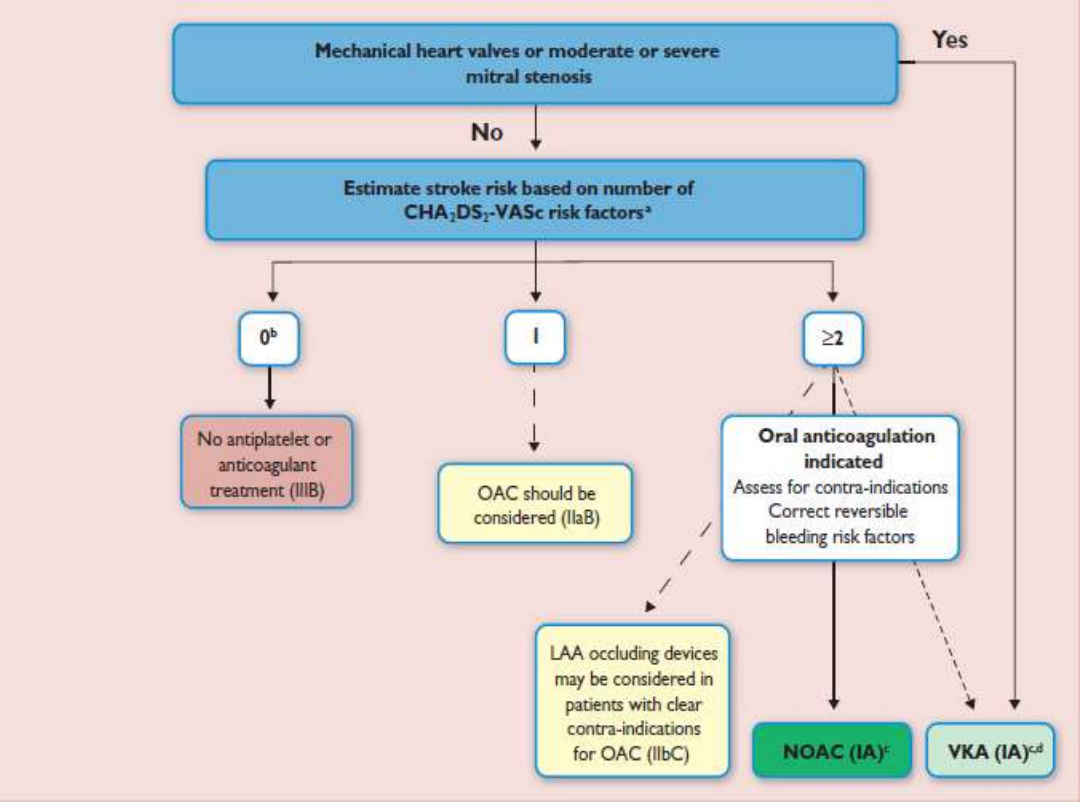
John W. Eikelboom, M.D., Stuart J. Connolly, M.D., Martina Brueckmann, M.D., Christopher B. Granger, M.D., Arie P. Kappetein, M.D., Ph.D., Michael J. Mack, M.D., Jon Blatchford, C.Stat., Kevin Devenny, B.Sc., Jeffrey Friedman, M.D., Kelly Guiver, M.Sc., Ruth Harper, Ph.D., Yasser Khder, M.D., Maximilian T. Lobmeyer, Ph.D., Hugo Maas, Ph.D., Jens-Uwe Voigt, M.D., Maarten L. Simoons, M.D., and Frans Van de Werf, M.D., Ph.D., for the RE-ALIGN Investigators*





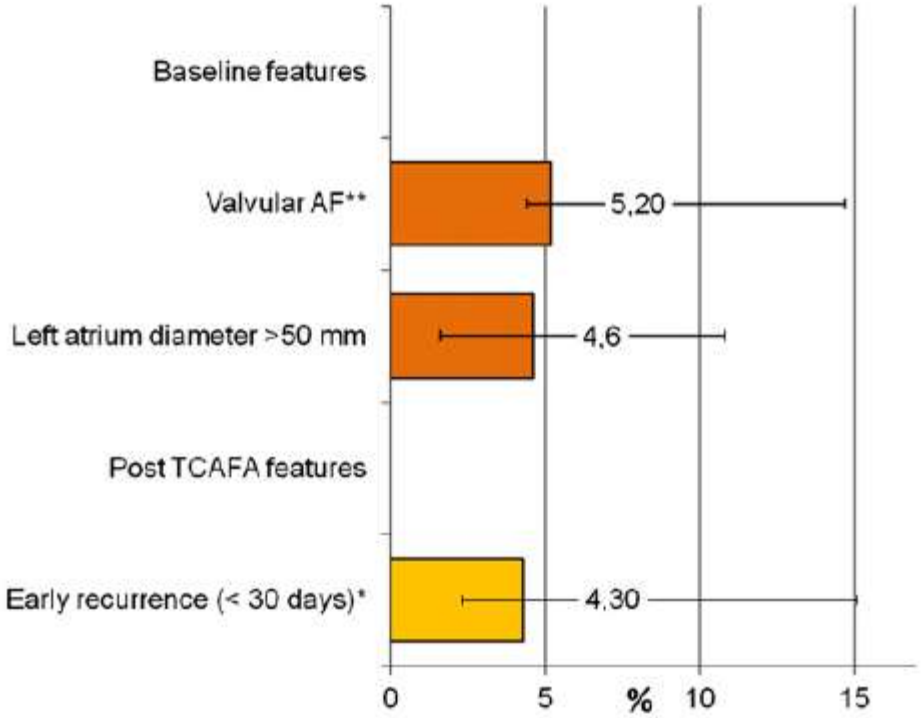
N Engl J Med 2013;369:1206-14

2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS



Which are the most reliable predictors of recurrence of atrial fibrillation after transcatheter ablation?: a meta-analysis

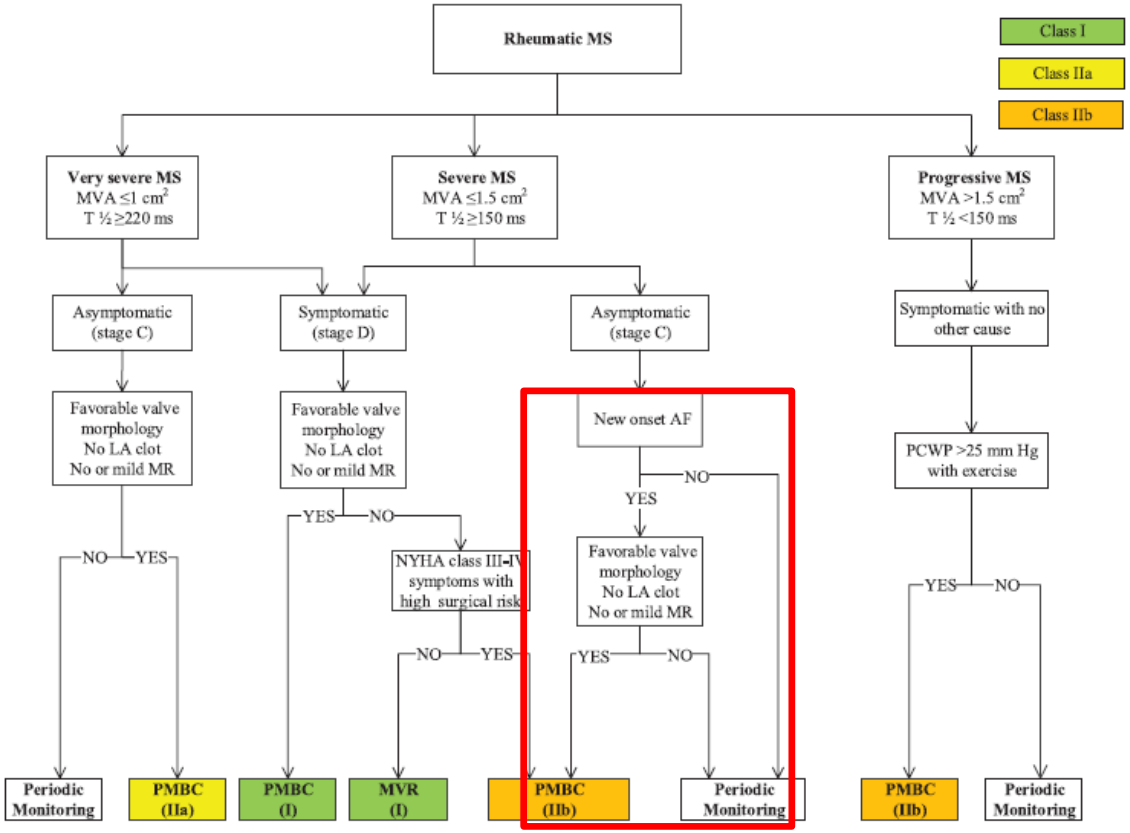
F. D'Ascenzo [a,j,*], A. Corleto [a], G. Biondi-Zoccai [b,j], M. Anselmino [a], F. Ferraris [a], L. di Biase [g], A. Natale [g], R.J. Hunter [c], R.J. Schilling [c], S. Miyazaki [e], H. Tada [d], K. Aonuma [h], L. Yenn-Jiang [f], H. Tao [i], C. Ma [d], D. Packer [i], S. Hammill [h], F. Gaita [a]



International Journal of Cardiology 2013;167:1984–1989

2014 AHA/ACC Guideline for the Management of Patients With Valvular Heart Disease: Executive Summary

A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines



Circulation. 2014;129:e521–e643

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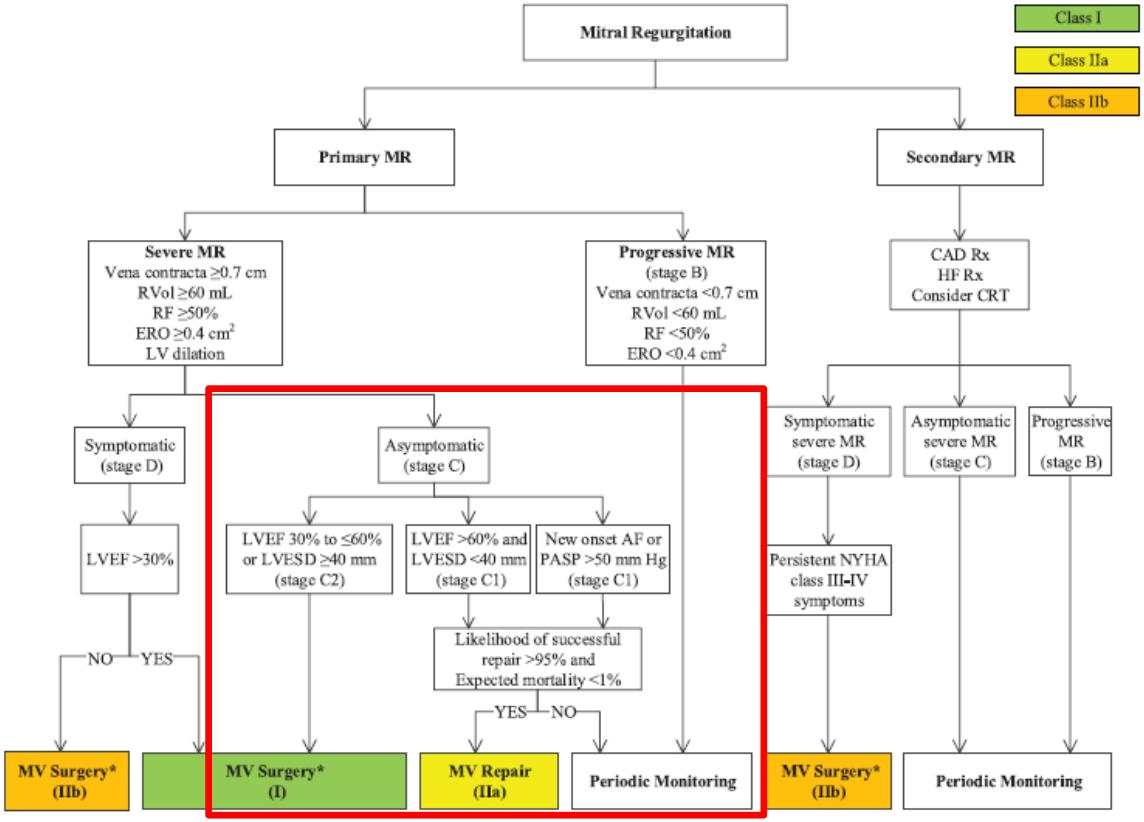

Circulation. 2014;129:e521–e643

conclusions

- There is a gap in the current definitions of valvular/non-valvular AF
- Need for a novel terminology (MARM-AF, etc)
- NOACs can be safely used in patients with native valvular diseases, regardless of their severity, and probably in bioprosthetic heart valve
- Future studies are warranted to increase the level of evidence of the safety and efficacy of NOACs in specific populations (TAVI etc).

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The Task Force for the management of atrial fibrillation of the European Society of Cardiology (ESC)

- we have decided to replace the historic term ‘non-valvular’ AF with reference to the specific underlying conditions.

Ευχαριστώ για την προσοχή σας