Клапно или неклапно предсърдно мъждене?
При кои групи пациенти не трябва да употребяваме NOAC

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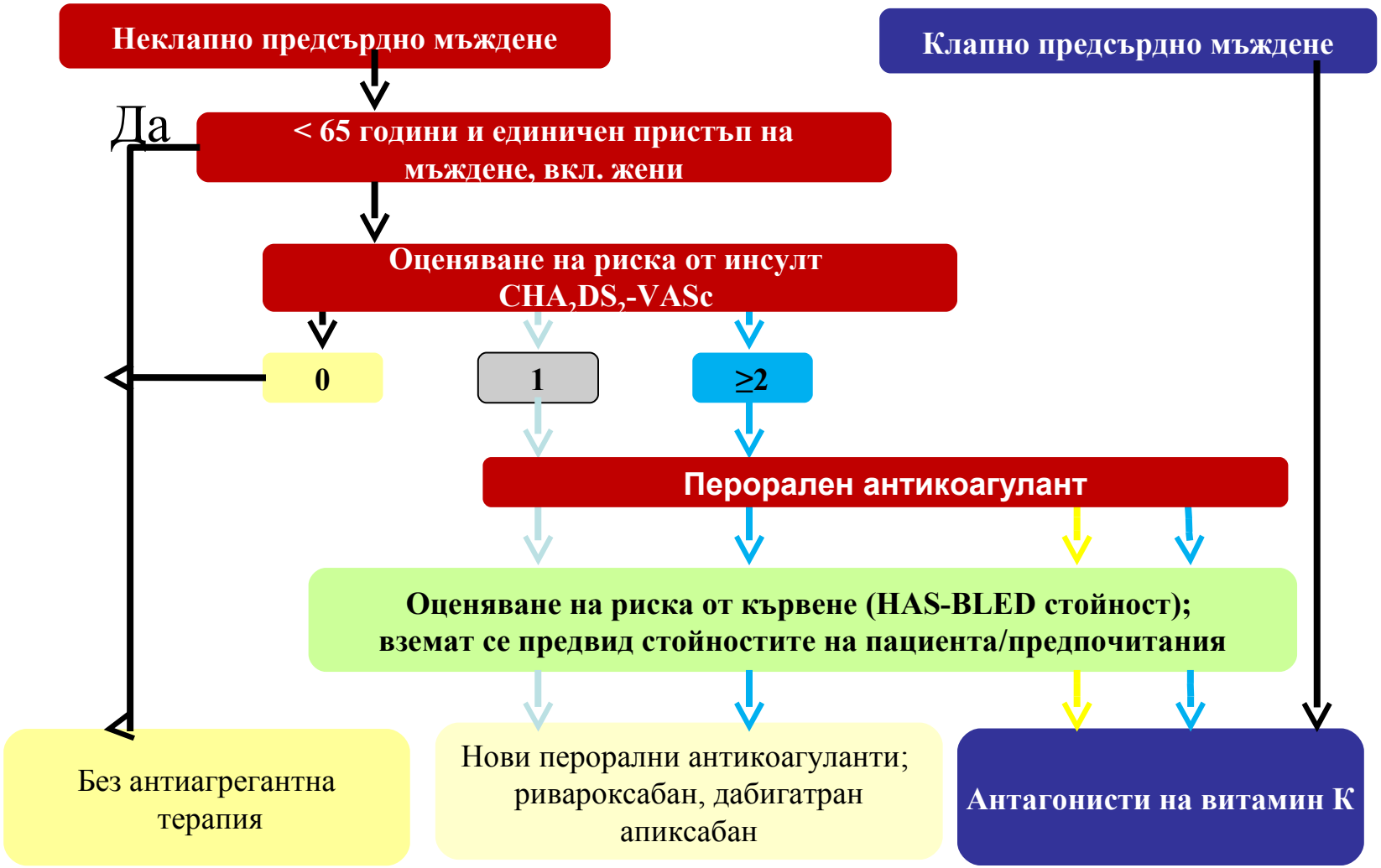
Препоръки на Европейското кардиологично дружество ПМ 2012 г.



Camm AJ *et al*. *Eur Heart J* 2012

Europace (2014) **16**, 1720–1725
doi:10.1093/europace/euu178

CLINICAL RESEARCH
Atrial fibrillation

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

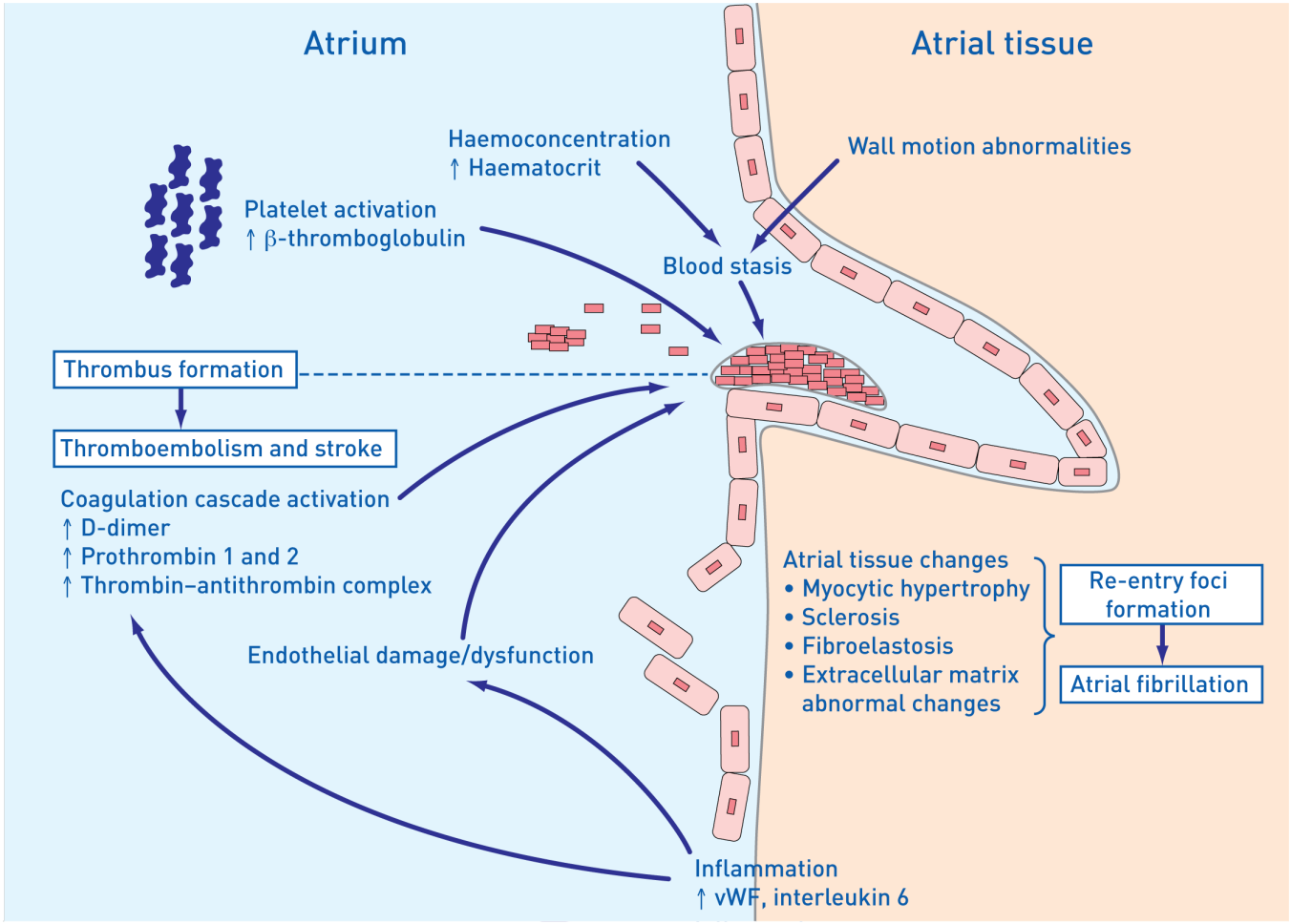
Mauro Molteni[1]*, Hernan Polo Friz[1], Laura Primitz[1], Giuseppe Marano[2], Patrizia Boracchi[2], and Claudio Cimminiello[1]

- 57,1% от кардиолозите и 67.9% от интернистите считат, че дефиницията на неклапно ПМ е достатъчно ясна
- Половината от анкетираните считат, че съвместното наличие на анамнеза за прекаран ревматизъм и клинични белези за клапно въвличане означава ревматично ПМ
- Една трета са на мнение, че наличието на аортен клапен порок при ПМ дефинира клапно ПМ
- Подобна е попорцията на отговорилите, че при наличие на митрална регургитация ПМ трябва да бъде дефинирано като клапно
- По-голяма част от анкетираните считат, че степента на клапния порок е с по-малко значение за разграничаването клапно/неклапно ПМ

Дефиниция на клапно и неклапно ПМ съобразно ръководните правила

AHA/ACC/HRS AF guidelines	‘историческия термин неклапно ПМ трябва да се използва когато ритъмното нарушение е налично при липса на ревматичен митрален клапен порок, клапна протеза или митрална клапна реконструкция’
2008 ACCP Guidelines	Клапно ПМ - mitral stenosis или клапна протеза
The 2012 focused update of the ESC Guidelines on AF	‘Терминът клапно ПМ се употребява, когато ПМ е свързано с ревматично клапно заболяване (главно митрална стеноза) или имплантирана клапна протеза’

Компоненти на триадата на Virchow's в тромбогенезата при ПМ



vWF = Von Willebrand factor

Watson T et al. Lancet 2009;373:155–66

Основни изключващи критерии в основните проучвания SPAF

RE-LY trial	‘. . . history of heart valve disorders (i.e., prosthetic valve or hemodynamically relevant valve disease) . . . ’;
ROCKET-AF trial	‘. . . hemodynamically significant mitral valve stenosis. Prosthetic heart valve (annuloplasty with or without prosthetic ring, commissurotomy and/or valvuloplasty are permitted) . . .’;
ARISTOTLE trial:	‘Key exclusion criteria were . . . moderate or severe mitral stenosis, conditions other than atrial fibrillation that required anticoagulation (e.g., a prosthetic heart valve) . . .’;
ENGAGE AF trial	‘Key exclusion criteria were . . . moderate-to severe mitral stenosis . . .’.

RE-LY - Подгрупов анализ симптомна СН

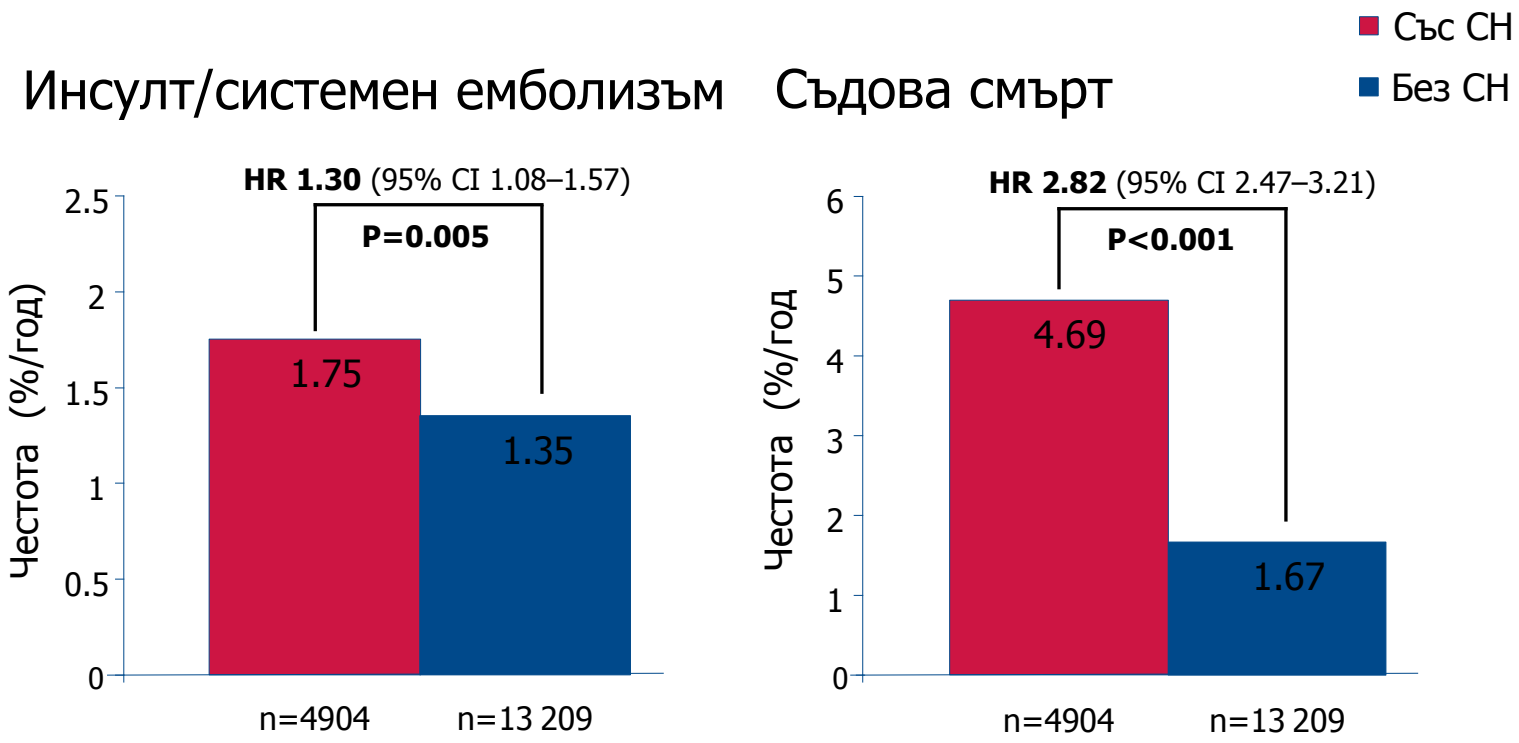
	With sHF (n=4904)	Without sHF (n=13 209)	P value
Age, yrs, mean (SD)	68.3 (10.2)	72.7 (7.7)	<0.001
Male gender, %	66.9	62.3	<0.001
Diabetes, %	26.5	22.1	<0.001
Hypertension, %	75.2	80.2	<0.001
Stroke, %	10.4	13.3	<0.001
Coronary artery disease, %	31.8	26.3	0.0003
Valvular heart disease, %	**26.2**	**19.8**	**<0.001**
LVEF ≤40%	43.5*	11.2**	<0.001
CrCl, mL/min, mean (SD)	76.3 (32.6)	71.7 (25.7)	<0.001
Type of AF, %			<0.001
Paroxysmal	21.6	37.0	
Persistent	33.9	31.2	
Permanent	44.5	31.7	
Heart rate, bpm, mean (SD)	76.1 (15.2)	72.6 (14.6)	<0.001

*Missing data in 2015 patients; **7205 patients; bpm = beats per minute; CrCl = creatinine clearance; LVEF = left ventricular ejection fraction; SD = standard deviation; sHF = symptomatic heart failure

Ferreira J et al. Circulation 2011;124: A10956

Честота на инциденти при пациенти със или без симптомна СН в RELY

- Симптоматичната СН повишава риска от мозъчен инсулт/системен емболизъм и съдова смърт



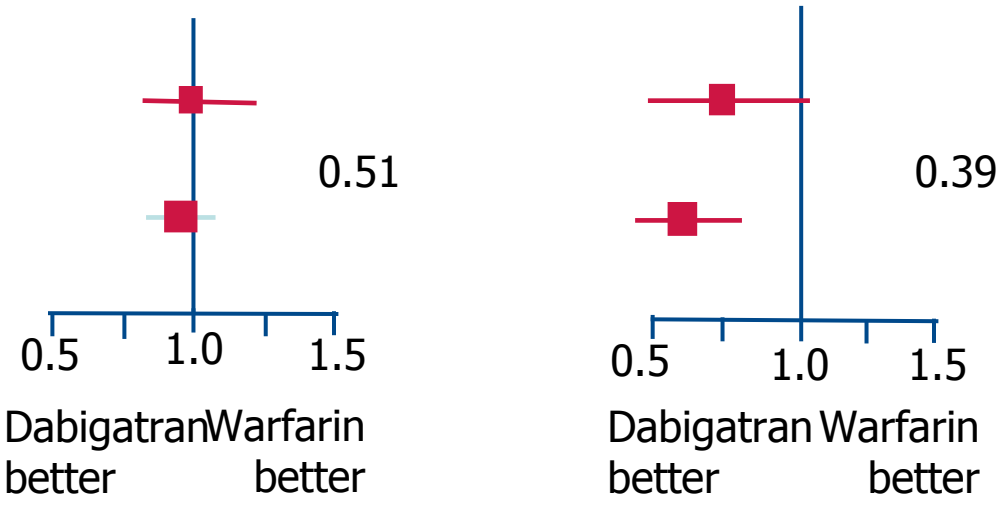
CI = confidence interval; HR = hazard ratio; SE = systemic embolism; sHF = symptomatic heart failure

Ferreira J et al. Circulation 2011;124: A10956

Субгрупов анализ симптомна СН: мозъчен инсулт и системен емболизъм

- Липса на промяна в основния резултат на проучването в зависимост от ЗСН

	Честота (% на год)			D110 vs. warfarin	D150 vs. warfarin
	D110	D150	W	P (interaction)	P (interaction)
Със ЗСН	1.90	1.44	1.92	0.51	0.39
Без ЗСН	1.41	1.00	1.64		



Ferreira J et al. Circulation 2011;124: A10956

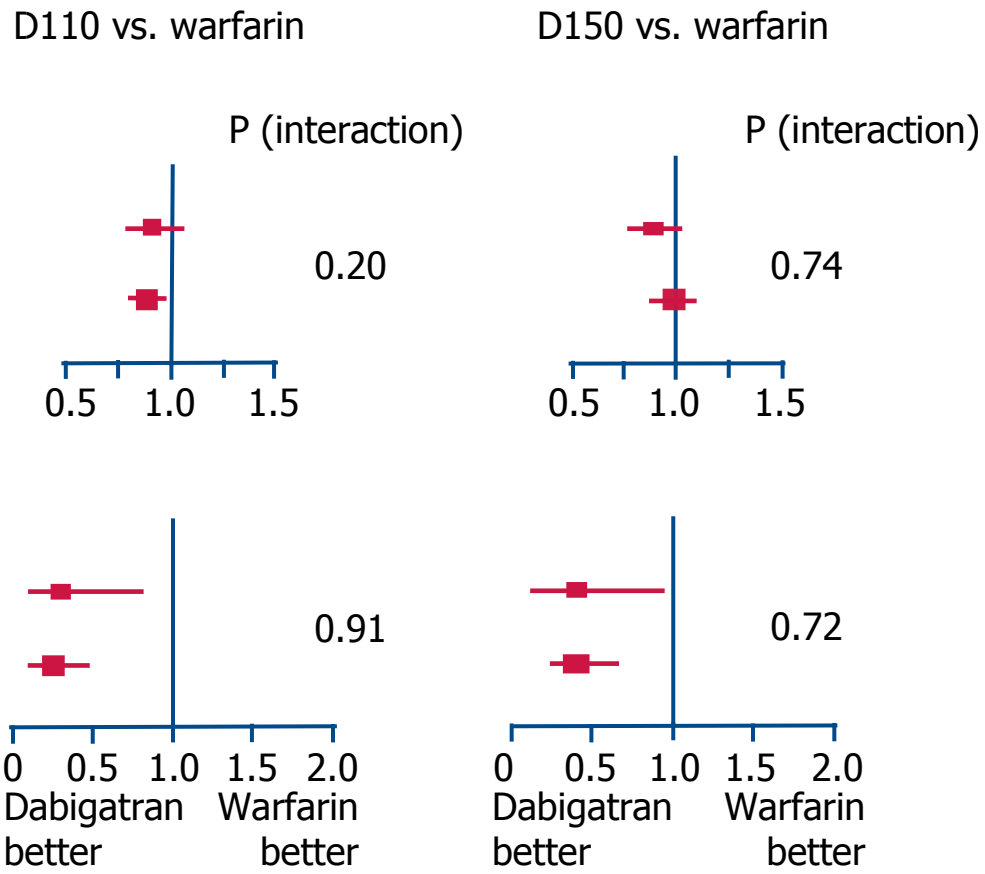
Субгрупов анализ симптомна СН: честота на кървене

Голямо кървене

	Честота (% на год) D110	D150	W
Със ЗСН	3.26	3.10	3.90
Без ЗСН	2.73	3.39	3.45

Интракраниално кървене

Със ЗСН	0.22	0.26	0.65
Без ЗСН	0.23	0.34	0.80



Ferreira J et al. Circulation 2011;124: A10956

Clinical characteristics and outcomes with rivaroxaban vs. warfarin in patients with non-valvular atrial fibrillation but underlying native mitral and aortic valve disease participating in the ROCKET AF trial

Table 2 Type of valvular disease in patients assessed as having significant valvular disease

Characteristic	*N* (%)
Valve location/abnormality[a]	
Aortic stenosis	215 (11.0%)
Aortic regurgitation	486 (24.8%)
Mitral regurgitation	1756 (89.6%)
Other (without any of preceding)	11 (0.6%)
Etiology[a]	
Rheumatic	62 (3.2%)
Congenital	15 (0.8%)
Calcific/degenerative	791 (40.4%)
Post-infarction and/or ischaemic	253 (12.9%)
Other	307 (15.7%)
Unknown	312 (15.9%)
No data	268 (13.7%)
Prior cardiac valvular procedures	106 (5.3%)
Valvuloplasty	64 (60.4%)
Other cardiac valvular procedure	42 (39.6%)

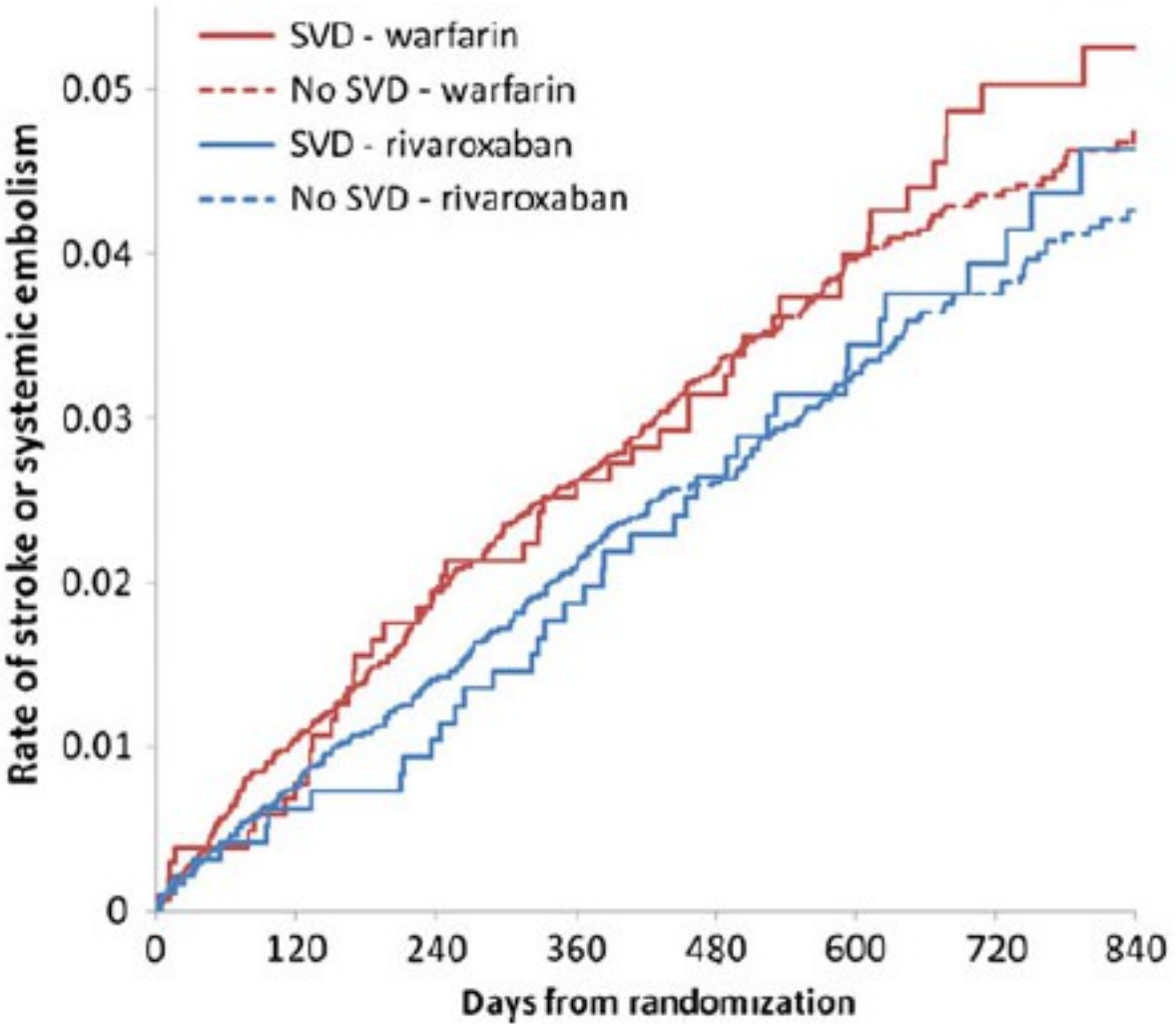
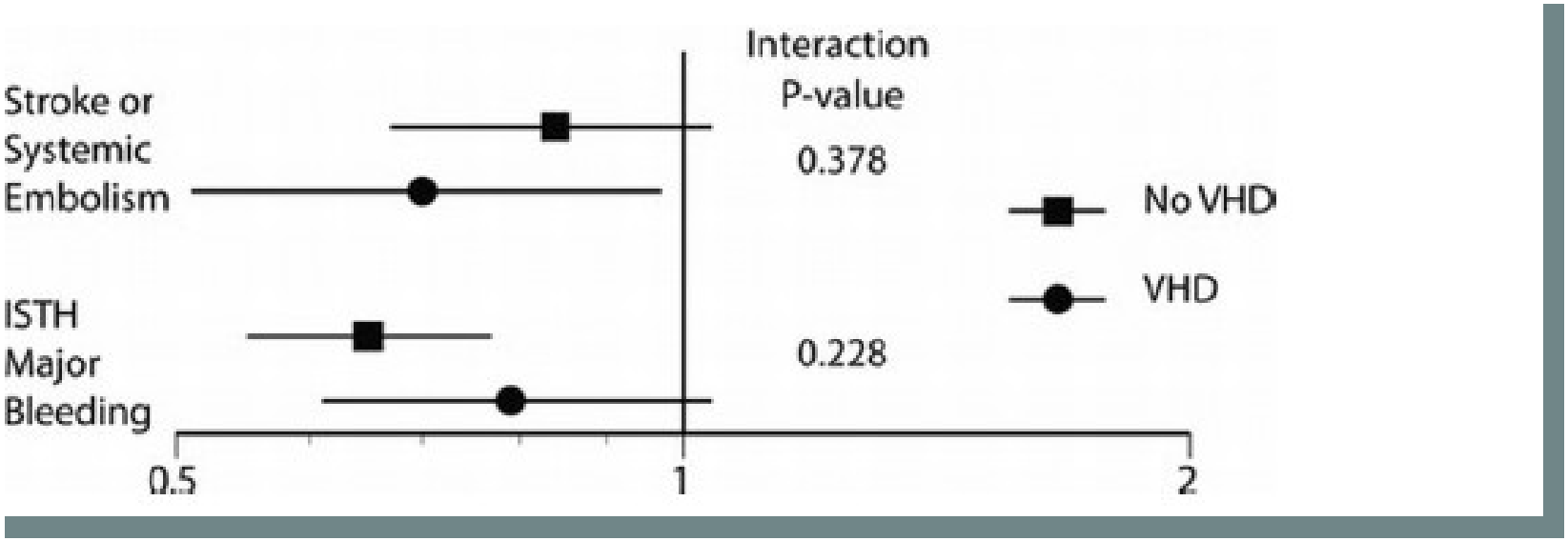

SVD - warfarin
No SVD - warfarin
SVD - rivaroxaban
No SVD - rivaroxaban
Rate of stroke or systemic embolism
0.05
0.04
0.03
0.02
0.01
0
0
120
240
360
480
600
720
840
Days from randomization

Table 5 Efficacy (intention-to-treat population) and safety (on-treatment population) outcomes in patients with and without significant valvular disease in patients randomized to rivaroxaban and warfarin

	SVD			No SVD			*P*-value for interaction of SVD and treatment
	Rivaroxaban events/100 pt-yrs (total events)	Warfarin events/100 pt-yrs (total events)	Rivaroxaban vs. Warfarin HR (95% CI)	Rivaroxaban events/100 pt-yrs (total events)	Warfarin events/100 pt-yrs (total events)	Rivaroxaban vs. Warfarin HR (95% CI)	
Efficacy outcomes							
Stroke or SE	2.01 (38)	2.43 (50)	0.83 (0.55–1.27)	1.96 (231)	2.22 (256)	0.89 (0.75–1.07)	0.76
Stroke, SE, or vascular death	5.14 (94)	5.26 (105)	0.99 (0.75–1.31)	4.16 (478)	4.47 (504)	0.94 (0.83–1.06)	0.72
Stroke, SE, vascular death, or MI	6.09 (110)	6.62 (130)	0.94 (0.73–1.21)	4.81 (549)	5.17 (579)	0.94 (0.83–1.05)	0.98
All-cause death	5.48 (100)	5.60 (112)	0.98 (0.75–1.29)	4.19 (482)	4.60 (520)	0.91 (0.80–1.03)	0.60
Safety outcomes							
Major or NMCR bleeding	19.81 (253)	16.83 (240)	1.25 (1.05–1.49)	14.19 (1222)	14.14 (1209)	1.01 (0.94–1.10)	0.034
Major bleeding	6.14 (88)	4.20 (68)	1.56 (1.14–2.14)	3.22 (307)	3.33 (318)	0.98 (0.84–1.15)	0.010
ICH	0.88 (13)	0.73 (12)	1.27 (0.58–2.79)	0.43 (42)	0.74 (72)	0.59 (0.40–0.86)	0.084

ARISTOTLE

- 4808 (26.4%) – умерено клапно засягане – митрална или трикуспидална регургитация, аортна стеноза или регургитация
- 251 пациенти – клапна хирургия



European Heart Journal
doi:10.1093/eurheartj/ehu352

What is 'valvular' atrial fibrillation? A reappraisal

Raffaele De Caterina[1] and A. John Camm[2*]

- the risk of thrombo-embolism is particularly high in AF accompanying moderate-to-severe mitral stenosis and mechanical prosthetic valves. Since mitral stenosis, with or without other associated valvular disease, is virtually always rheumatic, the terms 'AF with mitral stenosis' and 'rheumatic AF' may be used interchangeably. It is not clear, however, whether the pathogenesis of thrombosis in AF accompanying mitral stenosis is qualitatively different from those of most common forms of 'non-valvular' AF. This, together with the notion that—at variance with most cases of AF in the presence of a mechanical heart valve—anticoagulation intensity with VKA can be kept at the same target INR levels as in 'non-valvular' AF, may justify properly conducted trials of NOACs in such a condition;

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- valvular heart diseases, such as mitral regurgitation, aortic stenosis, or aortic insufficiency, do not result in conditions of low flow in the left atrium, and do not apparently increase the risk of thrombo-embolism compared with that entailed by AF *per se*, and probably do not make thrombo-embolic risk less responsive to NOACs compared with most forms of 'non-valvular' AF;
- similarly, hypertrophic cardiomyopathy, even if possibly increasing the risk of thrombo-embolism in AF, may not make thrombo-embolic risk less susceptible to NOACs compared with most forms of 'non-valvular' AF (but no data on this are available yet);

Indications for antithrombotic therapy after valvular surgery

	Class	Level
Oral anticoagulation is recommended lifelong for all patients with a mechanical prosthesis.	I	B
Oral anticoagulation is recommended lifelong for patients with bioprostheses who have other indications for anticoagulation.	I	C
The addition of low-dose aspirin should be considered in patients with a mechanical prosthesis and concomitant atherosclerotic disease.	IIa	C
The addition of low-dose aspirin should be considered in patients with a mechanical prosthesis after thromboembolism despite adequate INR.	IIa	C
Oral anticoagulation should be considered for the first 3 months after implantation of a mitral or tricuspid bioprosthesis.	IIa	C
Oral anticoagulation should be considered for the first 3 months after mitral valve repair.	IIa	C
Low-dose aspirin should be considered for the first 3 months after implantation of an aortic bioprosthesis.	IIa	C
Oral anticoagulation may be considered for the first 3 months after implantation of an aortic bioprosthesis.	IIb	C

European Heart Journal 2012 - doi:10.1093/eurheartj/ehs109 & European Journal of Cardio-Thoracic Surgery 2012 - doi:10.1093/ejcts/ezs455).

Risk factors for thromboembolism

- **Prosthesis thrombogenicity**
  - Low
    - Carbomedics (aortic position), Medtronic Hall, St.Jude Medical, ON-X.
  - Medium
    - Other bileaflet valves.
  - High
    - Lillehei-Kaster, Omniscience, Starr-Edwards, Bjork-Shiley, other tilting-disc valves.
- **Patient-related risk factors**
  - Mitral, tricuspid, or pulmonary valve replacement.
  - Previous thromboembolism.
  - Atrial fibrillation.
  - Mitral stenosis of any degree.
  - Left ventricular ejection fraction < 35%.

European Heart Journal 2012 - doi:10.1093/eurheartj/ehs109 & European Journal of Cardio-Thoracic Surgery 2012 - doi:10.1093/ejcts/ezs455).

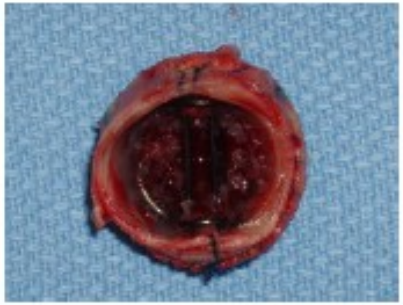
		Without risk factors	With risk factors
		SR	AF
		LA <50 mm	LA >50 mm
		MV gr 0	MV gr +
		LV normal	EF <35%
		SEC 0	SEC +
		AVR	MVR, TVR, PVR
PROSTHESIS THROMBOGENICITY (as determined by valve thrombosis rates)*	**low**	**2.5**	**3.0**
	medium	**3.0**	**3.5**
	high	**3.5**	**4.0****

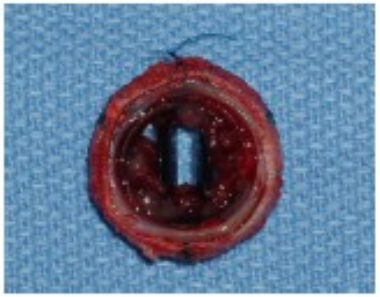
*Prosthesis thrombogenicity: Low = Medtronic Hall, St. Jude Medical (without Silzone), Carbomedics AVR, bioprostheses; Medium = Bileaflet valves with insufficient data, Bjork-Shiley valves; High = Lillehei Kaster, Omniscience, Starr Edwards. SR, sinus rhythm; AF, atrial fibrillation; LA, left atrium; MVgr, mitral valve gradient; LV, left ventricle; EF, ejection fraction; SEC, spontaneous echo contrast; AVR, MVR, TVR, PVR, aortic, mitral tricuspid and pulmonary valve replacement, respectively. **There is considerable un-

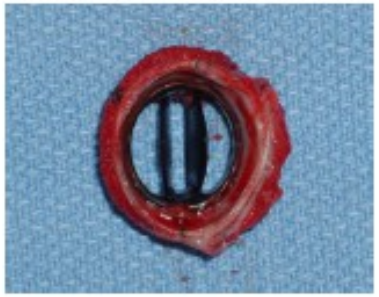
Dabigatran effective in animal models

Aortic valves (high flow, high pressure, shear stress conditions)

- Thrombus deposition was adequately controlled with dabigatran 20 mg/kg bid over 30 days in the pig model





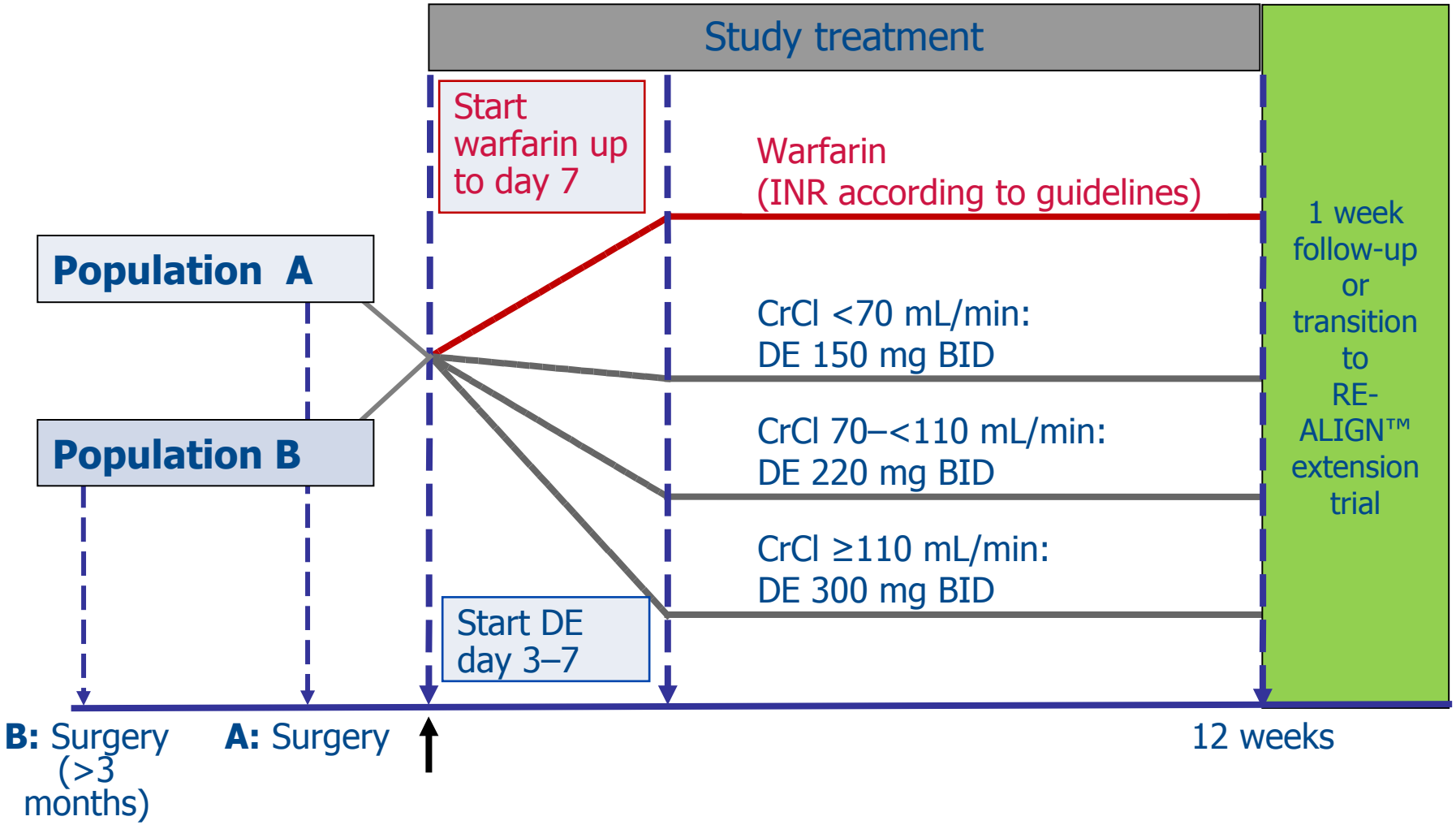


Aortic valve: **No anticoagulant** **LMWH** **Dabigatran**

Mitral valves (low flow, low pressure conditions)

- Although thrombus deposition was not fully prevented with dabigatran 20 mg/kg bid over 90 days, survival overall was prolonged with dabigatran

RE-ALIGN™: study design



CrCl = creatinine clearance; DE = dabigatran etexilate; INR = international normalized ratio

Eikelboom JW et al. N Engl J Med 2013;369:1206–14

RE-ALIGN™: baseline characteristics (1)

	Dabigatran (n=168)	Warfarin (n=84)
Male, n (%)	107 (64)	56 (67)
Age, mean (SD), years	56.0 (9.4)	55.7 (10.4)
CrCl, mean (SD), mL/min	107.8 (39.9)	106.4 (34.4)
Type of valve replacement (n, %)		
Aortic	113 (67)	59 (70)
Mitral	49 (29)	22 (26)
Aortic and mitral	6 (4)	3 (4)
Thromboembolic risk, n (%)		
Low (aortic valve, no additional risk factors)	51 (30)	23 (27)
Intermediate or high (aortic valve with additional risk factors, or mitral valve)	117 (70)	61 (73)
Population A or B (n, %)		
A (current surgery)	133 (79)	66 (79)
B (surgery ≥3 months previously)	35 (21)	18 (21)

CrCl = creatinine clearance; SD = standard deviation

Eikelboom JW et al. N Engl J Med 2013;369:1206–14

RE-ALIGN™: adjudicated efficacy outcomes

	Population A		Population B		All patients	
	Dabigatran (n=133)	Warfarin (n=66)	Dabigatran (n=35)	Warfarin (n=18)	Dabigatran (n=168)	Warfarin (n=84)
Death, n (%)	1 (1)	2 (3)	0	0	1 (1)	2 (2)
Stroke, n (%)	9 (7)	0	0	0	9 (5)	0
SE, n (%)	0	0	0	0	0	0
TIA, n (%)	2 (2)	2 (3)	1 (3)	0	3 (2)	2 (2)
MI, n (%)	1 (1)	0	2 (6)	0	3 (2)	0
Death/stroke/SE/ MI, n (%)	11 (8)	2 (3)	2 (6)	0	13 (8)	2 (2)
Death/stroke/TIA/SE/ MI, n (%)	12 (9)	4 (6)	3 (9)	0	15 (9)	4 (5)

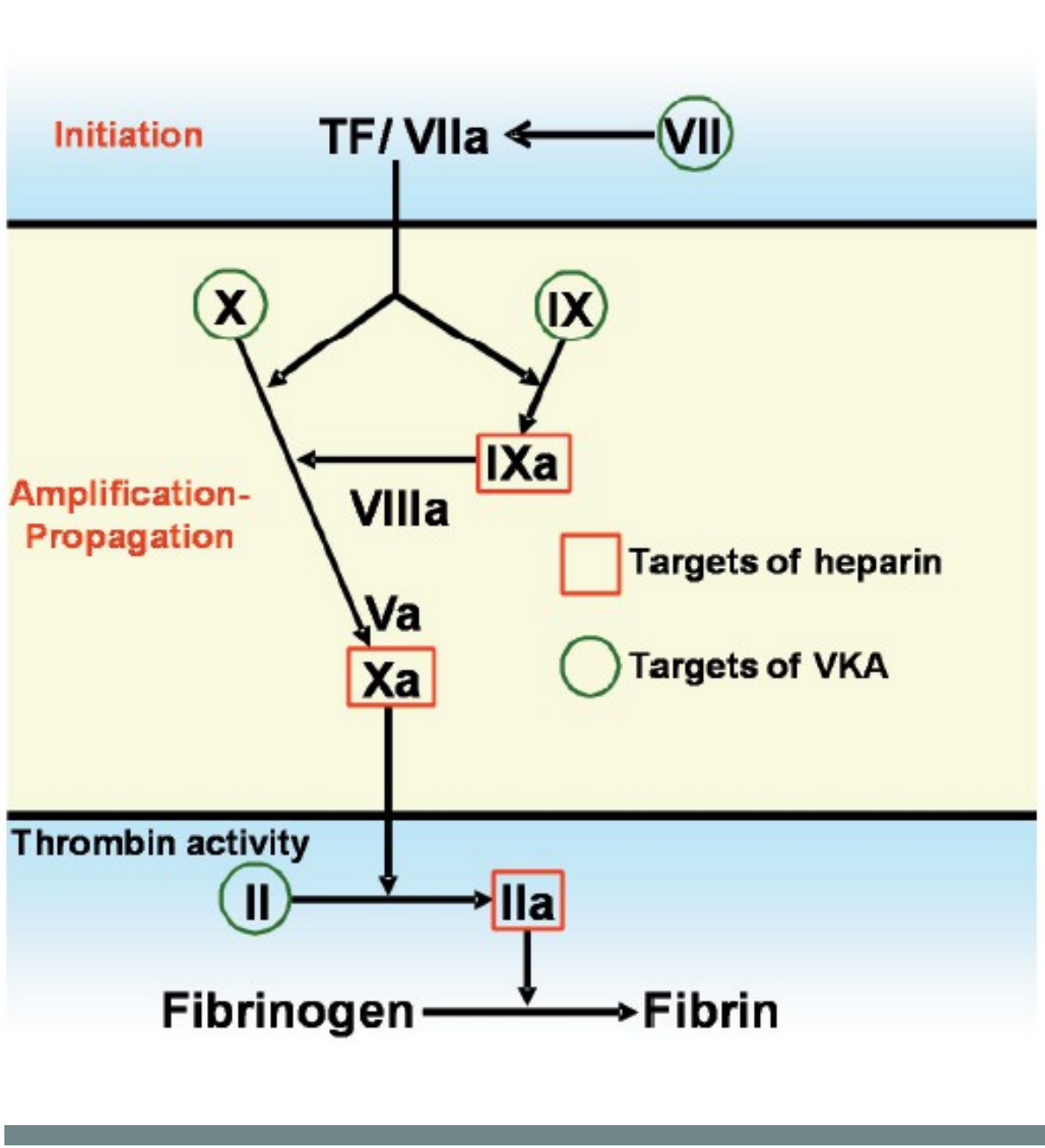
MI = myocardial infarction; SE = systemic embolism; TIA = transient ischaemic attack

Eikelboom JW et al. N Engl J Med 2013;369:1206–14

RE-ALIGN™: adjudicated safety outcomes

	Population A		Population B		All patients	
	Dabigatran (n=133)	Warfarin (n=66)	Dabigatran (n=35)	Warfarin (n=18)	Dabigatran (n=168)	Warfarin (n=84)
Major bleeding, n (%)	7 (5)	2 (3)	0	0	7 (4)	2 (2)
Major bleeding with pericardial location, n (%)	7 (5)	2 (3)	0	0	7 (4)	2 (2)
Any bleeding, n (%)	35 (26)	8 (12)	10 (29)	2 (11)	45 (27)	10 (12)

Eikelboom JW et al. N Engl J Med 2013;369:1206–14


Initiation
TF/ VIIa
VII
X
IX
IXa
VIIIa
Amplification-
Propagation
Targets of heparin
Va
Xa
Targets of VKA
Thrombin activity
II
IIa
Fibrinogen
Fibrin

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Low-dose aspirin should be considered for the first 3 months after implantation of an aortic bioprosthesis.	IIa	C
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European Heart Journal 2012 - doi:10.1093/eurheartj/ehs109 & European Journal of Cardio-Thoracic Surgery 2012 - doi:10.1093/ejcts/ezs455).

European Heart Journal
doi:10.1093/eurheartj/ehu352

CURRENT OPINION

What is 'valvular' atrial fibrillation? A reappraisal

Raffaele De Caterina[1] and A. John Camm[2]*

- AF in the presence of a bioprosthetic heart valve or after valve repair appears to be at a risk of thrombo-embolism not substantially different from more common forms of 'non-valvular' AF, and in any case, on the basis of preliminary evidence accrued from trials with NOACs there is no evidence of different efficacy or safety compared with warfarin.

Vitamin K antagonists in heart disease: Current status and perspectives (Section III)

Position Paper of the ESC Working Group on Thrombosis – Task Force on Anticoagulants in Heart Disease

Raffaele De Caterina[1*,**]; Steen Husted[2*,**]; Lars Wallentin[3*,**]; Felicita Andreotti[4**]; Harald Arnesen[5**]; Fedor Bachmann[6**]; Colin Baigent[7**]; Kurt Huber[8**]; Jørgen Jespersen[9**]; Steen Dalby Kristensen[10**]; Gregory Y. H. Lip[11**]; João Morais[12**]; Lars Hvilsted Rasmussen[13**]; Agneta Siegbahn[14**]; Freek W. A. Verheugt[15**]; Jeffrey I. Weitz[16**]

- We recommend VKA therapy (target INR, 2.5; range, 2.0–3.0) for patients with rheumatic mitral valve disease complicated by the presence of left atrial thrombus [I – A].
- We suggest VKA therapy (target INR 2.5; range, 2.0–3.0) in patients with rheumatic mitral valve disease and normal sinus rhythm with a left atrial diameter > 55 mm [IIa – C].
- We recommend VKA therapy (target INR, 2.5; range, 2.0–3.0) for patients with rheumatic mitral valve disease complicated by atrial fibrillation, previous systemic embolism, or both [I – C]
- We recommend anticoagulation with a VKAs in all patients with a mechanical heart valve [I – A]
- We recommend adjusting the intensity of anticoagulation in such cases according to three features, namely the thrombogenicity of the prosthesis, the position (aortic vs mitral/tricuspid/pulmonary), and associated thromboembolic risk factors [I – B]
- We recommend that antiplatelet drugs are not routinely prescribed for all patients with mechanical valves [IIb – B]

Vitamin K antagonists in heart disease: Current status and perspectives (Section III)

Position Paper of the ESC Working Group on Thrombosis – Task Force on Anticoagulants in Heart Disease

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- We recommend that the addition of antiplatelet drugs to anticoagulation is individualised, balancing risk and benefit, restricted to specific indications, and only combined with relatively low-intensity anticoagulation (INR ≤3.0) [IIa – B]
- We specifically recommend against the routine addition of aspirin to VKAs in patients with a mechanical prosthetic valve in cases of co-existent coronary heart disease [IIb – B]
- We recommend avoiding drug-eluting stents in patients with mechanical valves to shorten the duration of dual or triple therapy with one or two antiplatelet agents plus a VKAs [III – A]
- We recommend that patients with bioprosthetic valves in the mitral position are treated with VKAs during the first three months after valve insertion [IIa – B]

NOACs при бъбречна дисфункция

Практически препоръки за дозиране при хронична бъбречна болест

Dabigatran	Apixaban	Edoxaban *	Rivaroxaban
При CrCl 30–49 ml/min е възможна доза от 150 mg два пъти дневно (КХП), но при "висок риск от кървене (КХП дозата е 110 mg два пъти дневно или "препоръч-ваната" (актуализирани ГИ данни)[1] Забележка: Дозировка от 75 mg два пъти дневно е одобрена само в САЩ.# -При CrCl 15–30 ml/min -При CrCl 30–49 ml/min -И друг "оранжев" фактор (напр. verapamil)	При CrCl 15–29 ml/min: възможна доза от 2.5 mg два пъти дневно Серумен креатинин ≥1.5 mg/dl в комбинация с възраст ≥ 80 години или тегло ≤60 kg (КХП) или друг "жълт" фактор: 2.5 mg два пъти дневно	Липсват данни	15 mg веднъж дневно при CrCl 15–49 ml/min

*Все още не е одобрен за употреба от EMA. Необходима актуализация на данните след финализиране на КХП; #Без показание от EMA. Препоръка от FDA въз основа на фармакокинетични данни. Внимателна прецента на ползите и риска при този подход. В Европа не се предлагат капсули 75 mg за показание ПМ.;; Австралийска информация за предписване Дисклеймър Всички NOACS трябва да бъдат прилагани в съответствие с местната информация за предписване, която може да не бъде еднаква за страните от Европа и САЩ.

1. Camm et al, Eur Heart J 2012;33:2719-47; Heidbuch el et al, Europace 2013;15:625-651; Heidbuchel et al,Eur Heart J 2013;34:2094-106

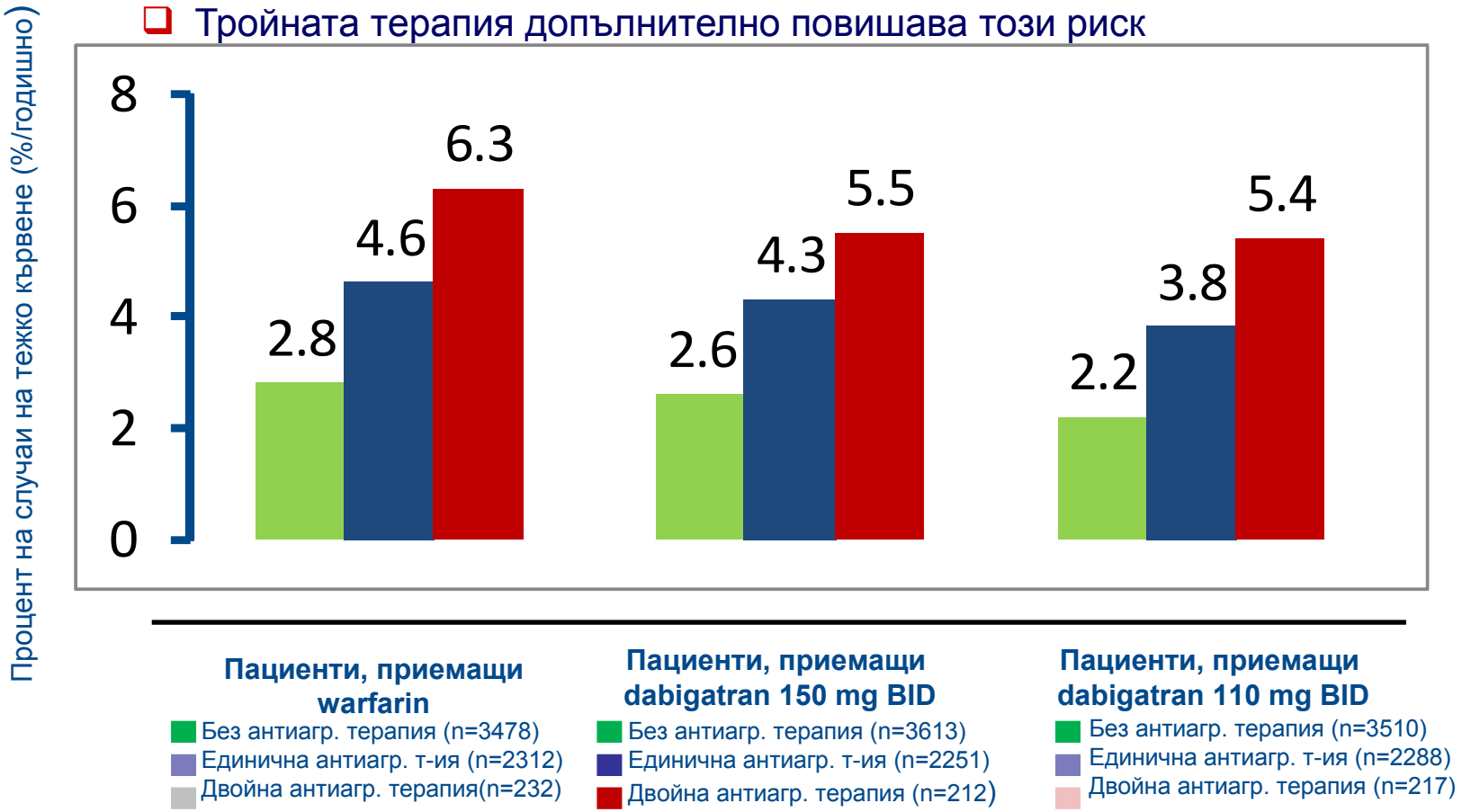
www.escardio.org/EHRA

Antithrombotic treatment in patients undergoing PCI who require oral anticoagulation

Recommendations	Class[a]	Level[b]
In patients with a firm indication for oral anticoagulation (e.g. atrial fibrillation with CHA_2DS_2-VASc score ≥2, venous thromboembolism, LV thrombus, or mechanical valve prosthesis), oral anticoagulation is recommended in addition to antiplatelet therapy.	I	C
New-generation DES are preferred over BMS among patients requiring oral anticoagulation if bleeding risk is low (HAS-BLED ≤2).	IIa	C
In patients with SCAD and atrial fibrillation with CHA_2DS_2-VASc score ≥2 at low bleeding risk (HAS-BLED ≤2), initial triple therapy of (N)OAC and ASA (75–100 mg/day) and clopidogrel 75 mg/day should be considered for a duration of at least one month after BMS or new-generation DES followed by dual therapy with (N)OAC and aspirin 75–100 mg/day or clopidogrel (75 mg/day) continued up to 12 months.	IIa	C
DAPT should be considered as alternative to initial triple therapy for patients with SCAD and atrial fibrillation with a CHA_2DS_2-VASc score ≤1.	IIa	C
In patients with ACS and atrial fibrillation at low bleeding risk (HAS-BLED≤2), initial triple therapy of (N)OAC and ASA (75–100 mg/day) and clopidogrel 75 mg/day should be considered for a duration of 6 months irrespective of stent type followed by (N)OAC and aspirin 75–100 mg/day or clopidogrel (75 mg/day) continued up to 12 months.	IIa	C
In patients requiring oral anticoagulation at high bleeding risk (HAS BLED ≥3), triple therapy of (N)OAC and ASA (75–100 mg/day) and clopidogrel 75 mg/day should be considered for a duration of one month followed by (N)OAC and aspirin 75–100 mg/day or clopidogrel (75 mg/day) irrespective of clinical setting (SCAD or ACS) and stent type (BMS or new-generation DES).	IIa	C
Dual therapy of (N)OAC and clopidogrel 75 mg/day may be considered as an alternative to initial triple therapy in selected patients.	IIb	B
The use of ticagrelor and prasugrel as part of initial triple therapy is not recommended	III	C

Риск от кървене при пациенти с ПМ, приемащи съпътстваща антиагрегантна и антикоагулантна терапия

- Комбинирането на антиагрегантни и антикоагулантни средства значимо повишава риска от кървене, независимо от това коя възможна комбинация се използва
  - Тройната терапия допълнително повишава този риск



Dans AL et al. Circulation 2013;127:634–40

RE-DUAL PCI™: Цели

- RE-DUAL PCI™ ще изследва два нови подхода за подобряване на лечението на пациенти с ПМ, подложени на ПКИ

Две нови схеми с dabigatran:
150 или 110 mg BID плюс единична антиагрегантна терапия (P2Y12 инхибитор)

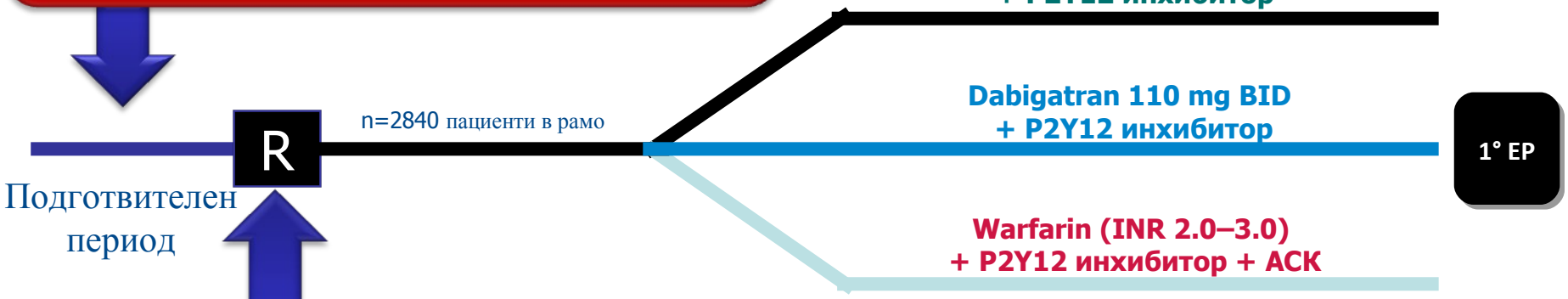
„Подобрено" лечение:
АВК плюс двойна антиагрегантна терапия (но с по-ранно прекратяване на АСК)

НКПМ = неклапно предсърдно мъждене

Boehringer Ingelheim Прессъобщение, 19 ноември 2013 г.; Може да се намери на http://www.boehringer-ingelheim.com/news/news_releases/press_releases/2013/19_november_2013_dabigatranetexilate1.html, посетен януари 2014 г.; и Boehringer Ingelheim, данни на файл

RE-DUAL PCI™: Дизайн

Оценка на характеристиките, свързани с висок риск спрямо невисок риск (преходна терапия по преценка на лекаря)



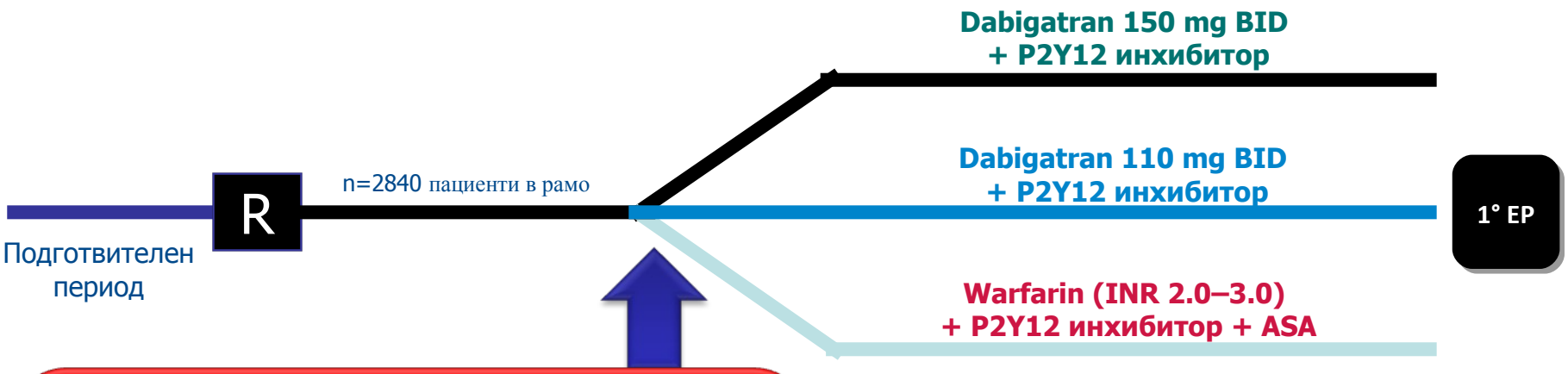
Рандомизацията може да се направи ≤72 часа след ПКИ
Лекарството по изпитването трябва да се прилага 6 часа след отстраняването на интродюсера, ≤72 часа след ПКИ

Визити за проследяване на месец 1, 3, 6, 9, 12 и 15; и 18, 24 и 30 след рандомизацията или в края на изпитването

Минимална продължителност на лечението: 6 месеца

ДАТ = двойна антитромботична терапия; КЦ = крайна цел; INR = международно нормализирано съотношение;
Адаптирано от Cannon C. AHA 2013 and Boehringer Ingelheim, данни на файл

RE-DUAL PCI™: Дизайн



Прекратяване на приема на АСК:

- Рамена с dabigatran: веднага след успешна процедура (незабавно започване на ДАТ)
- Рамо с warfarin: 1 месец след BMS или 3 месеца след DES

Приложението на P2Y12-инхибитор може да бъде прекратено след 12-ия месец по преценка на лекаря

Визити за проследяване на месец 1, 3, 6, 9, 12 и 15; и 18, 24 и 30 след рандомизацията или в края на изпитването

Минимална продължителност на лечението: 6 месеца

ДАТ = двойна антитромботична терапия; КЦ = крайна цел; INR = международно нормализирано съотношение; Адаптирано от Cannon C. AHA 2013 and Boehringer Ingelheim, данни на файл