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ESC 2010
Arrhythmien

Dorothee Meyer zu Vilsendorf

ESC 2010

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Guidelines for the management of atrial fibrillation

The Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC)

Developed with the special contribution of the European Heart Rhythm Association (EHRA)†

Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS)

Published today - Advanced Access

European Heart Journal

http://eurheartj.oxfordjournals.org/

Neue Antworten auf alte Fragen??

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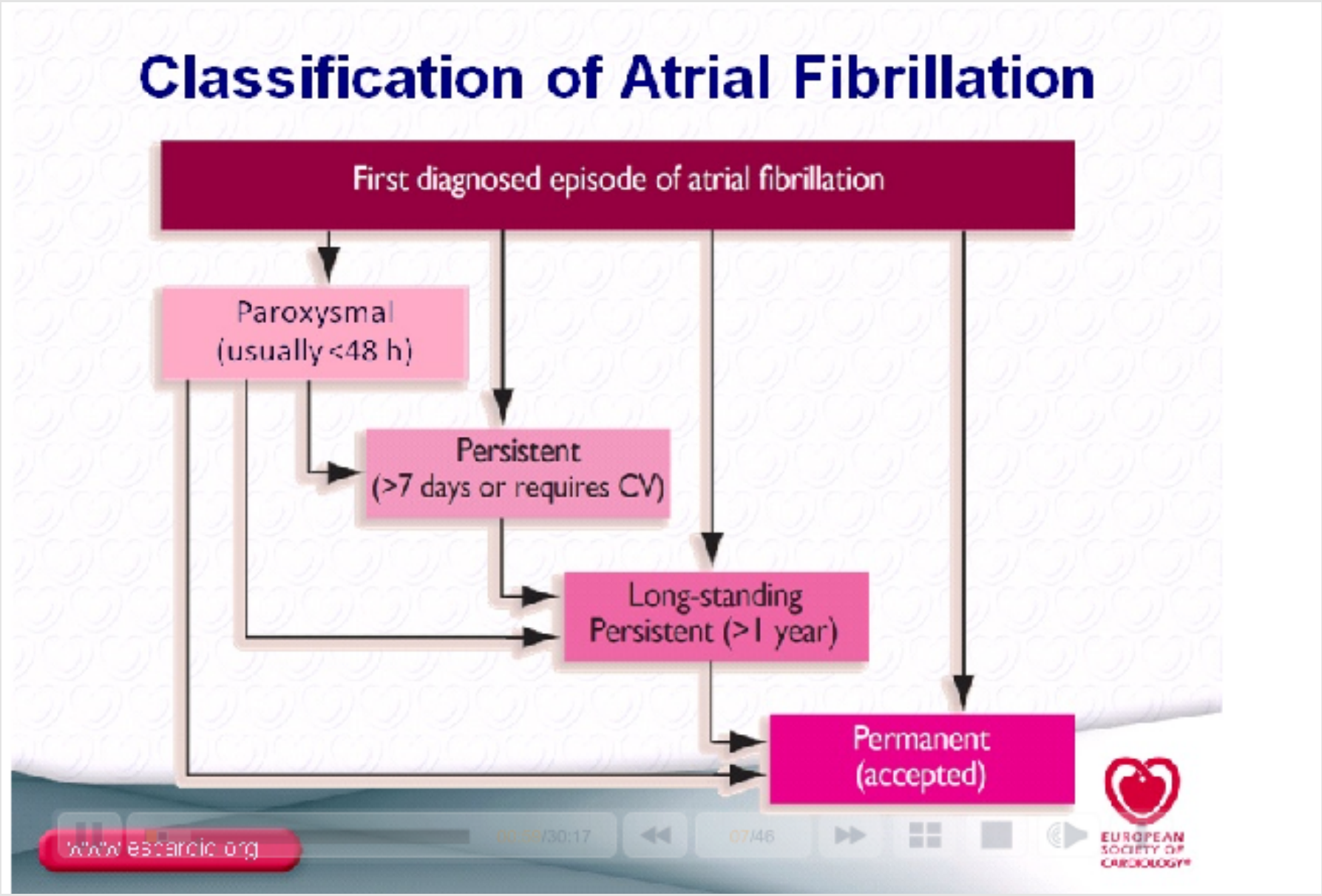
- Wen muß ich antikoagulieren ?
- Frequenz – oder Rhythmuskontrolle ?
- Rhythmuskontrolle wie ?
- Ablation für wen ?
- „Upstream“-Therapie?
  (ACE Hemmer, AT-II Blocker…)


Classification of Atrial Fibrillation
First diagnosed episode of atrial fibrillation
Paroxysmal
(usually <48 h)
Persistent
(>7 days or requires CV)
Long-standing
Persistent (>1 year)
Permanent
(accepted)
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Antikoagulation

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CHADS 2 Score

C: Congestive heart failure	1 Punkt
H: Hypertonus	1 Punkt
A: Age > 75 Jahre	1 Punkt
D: Diabetes	1 Punkt
S: Stroke, TIA	2 Punkte

Score ≥2 → Marcumar (ESC-Guidelines 2006)

Erweiterter Score

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CHA_2DS_2-VASc

Risk factor	Score
Congestive heart failure/LV dysfunction	1
Hypertension	1
Age ≥75	2
Diabetes mellitus	1
Stroke/TIA/thrombo-embolism	2
Vascular disease[a]	1
Age 65–74	1
Sex category (i.e. female sex)	1
Maximum score	**9**

Lip GY et. Al Chest 2010;137:263-272

Table 8 CHA_2DS_2VASc score and stroke rate

(a) Risk factors for stroke and thrombo-embolism in non-valvular AF	
'Major' risk factors	**'Clinically relevant non-major' risk factors**
Previous stroke, TIA, or systemic embolism Age ≥75 years	Heart failure or moderate to severe LV systolic dysfunction (e.g. LV EF ≤40%) Hypertension - Diabetes mellitus Female sex - Age 65–74 years Vascular disease[a]
(b) Risk factor-based approach expressed as a point based scoring system, with the acronym CHA_2DS_2-VASc (Note: maximum score is 9 since age may contribute 0, 1, or 2 points)	

„Real-World“ Antikoagulation bei VHF

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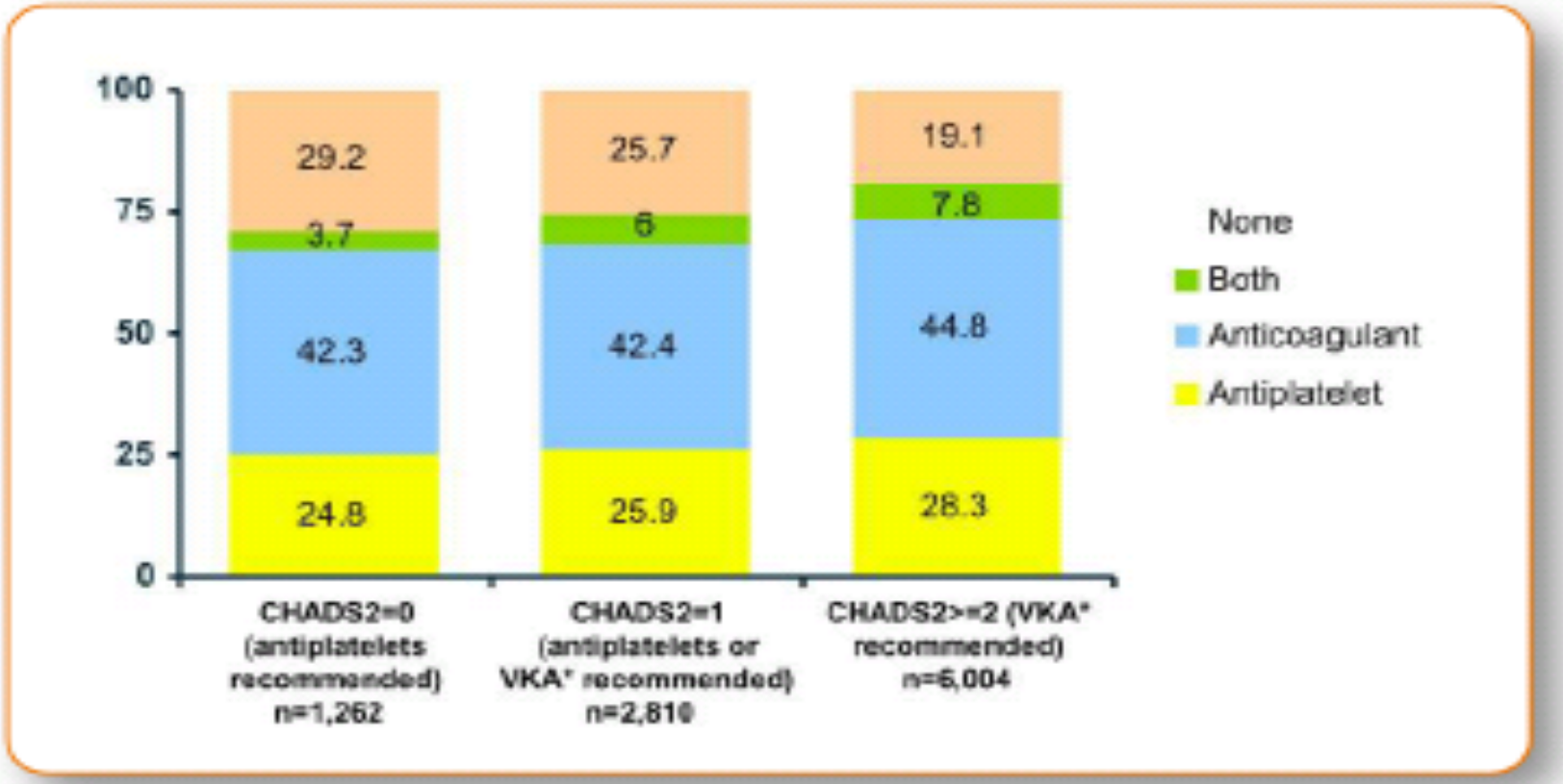
Preliminary Results - Sub-analysis on-going

RealiseAF

Management of AF in a real life setting deviates from guidelines*



*ACC/AHA/ESC guidelines

Antikoagulation bei wem?

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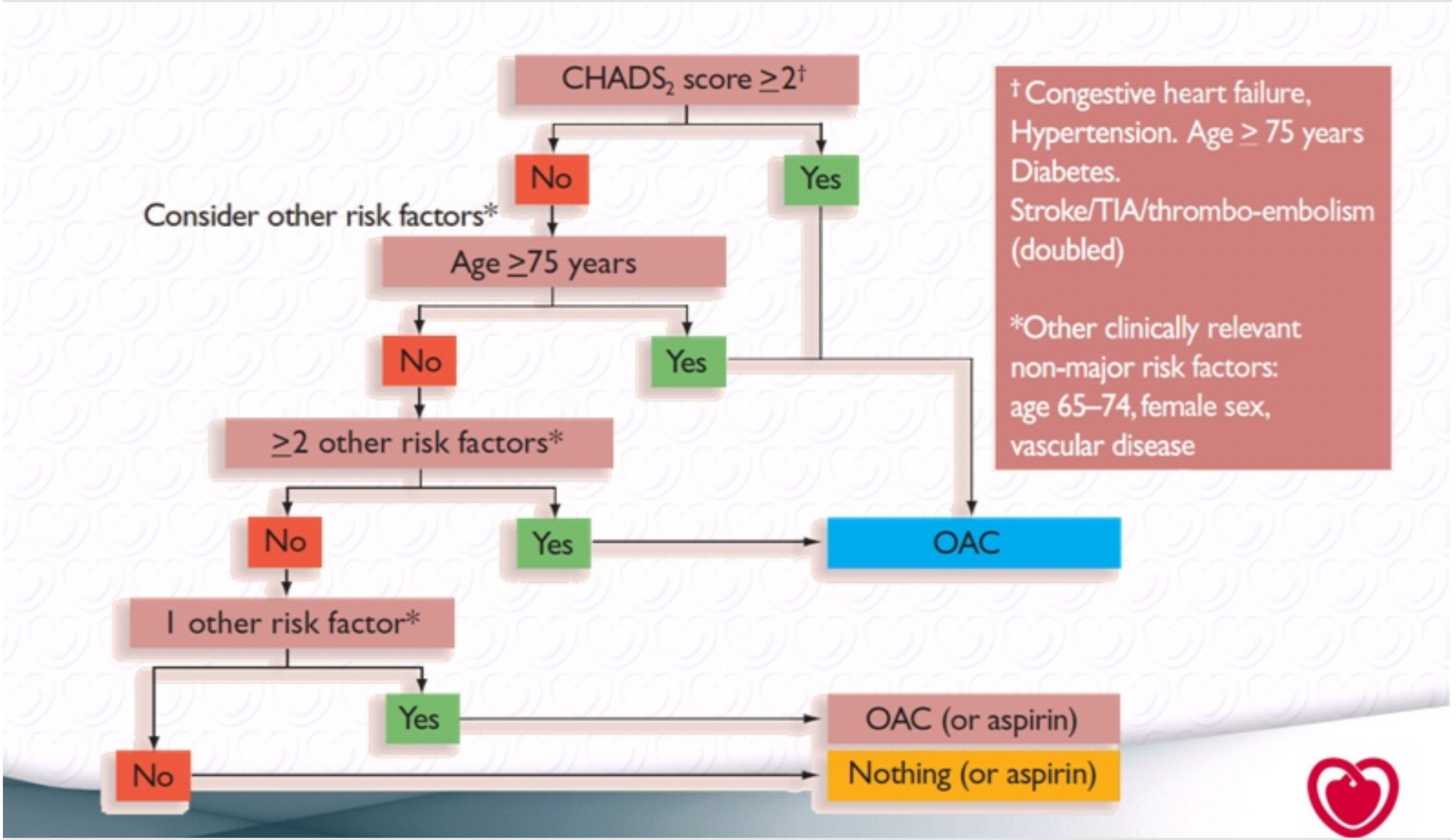

Marcumar und Stenting

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Table 11 Antithrombotic strategies following coronary artery stenting in patients with AF at moderate to high thrombo-embolic risk (in whom oral anticoagulation therapy is required)

Haemorrhagic risk	Clinical setting	Stent implanted	Anticoagulation regimen
Low or intermediate (e.g. HAS-BLED score 0–2)	Elective	Bare-metal	1 month: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Lifelong: VKA (INR 2.0–3.0) alone
	Elective	Drug-eluting	3 (-olimus[a] group) to 6 (paclitaxel) months: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone
	ACS	Bare-metal/ drug-eluting	6 months: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone

Lip. et al. Thromb Haemost 2010; 103:13-28, ESC Working group of thrombosis

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High (e.g. HAS-BLED score ≥3)	Elective	Bare-metal[c]	2–4 weeks: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Lifelong: VKA (INR 2.0–3.0) alone
	ACS	Bare-metal[c]	4 weeks: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone

ACS = acute coronary syndrome; AF = atrial fibrillation; INR = international normalized ratio; VKA = vitamin K antagonist.

Gastric protection with a proton pump inhibitor (PPI) should be considered where necessary.

Blutungsrisiko

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Bleeding Risk – HAS-BLED Score

Letter	Clinical characteristic[a]	Points awarded
H	Hypertension	1
A	Abnormal renal and liver function (1 point each)	1 or 2
S	Stroke	1
B	Bleeding	1
L	Labile INRs	1
E	Elderly (e.g. age >65 years)	1
D	Drugs or alcohol (1 point each)	1 or 2
		Maximum 9 points

Pisters R. et al. Chest 2010

Neue Antikoagulantien

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- Dabigatran: RELY Studie 2009 (Dabigatran vs. Marcumar)
- Apixaban: AVERROES-Studie

AVERROES Studie

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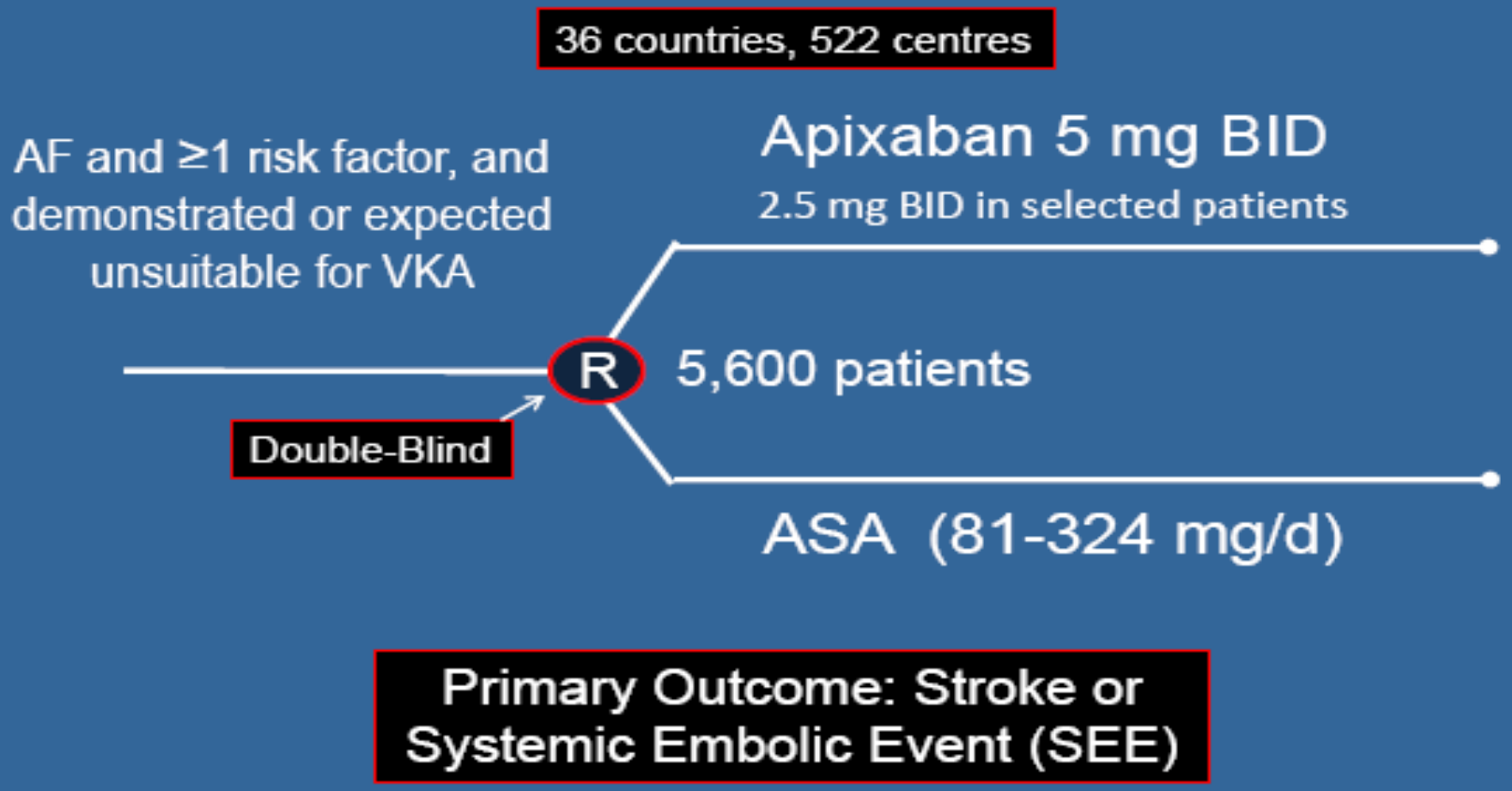
- Randomisierte Doppel-Blind-Studie
- Vergleich ASS vs. Apixaban bei Vorhofflimmern und
  - mindestens 1 Risikofaktor für Insult
  - Unverträglichkeit von Warfarin
- Apixaban: Fakor Xa Inhibitor
- Weltweite Studie, Einschluß von 5600 Patienten bis Dezember 2009

AVERROES Design



Ergebnis (Prim. Endpunkt)

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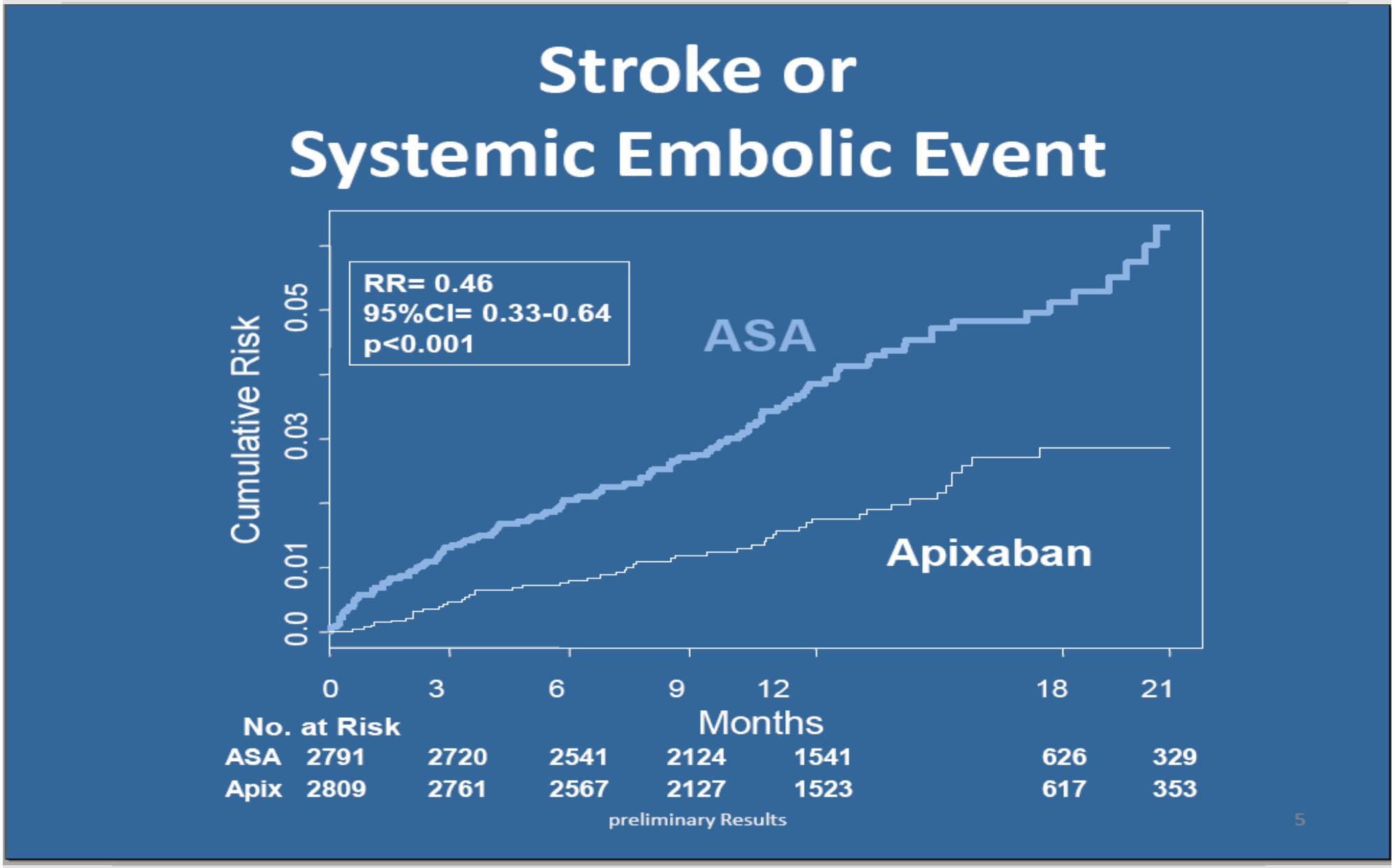

Connolly S, et al., ESC 2010

Komplikationen: Blutungen

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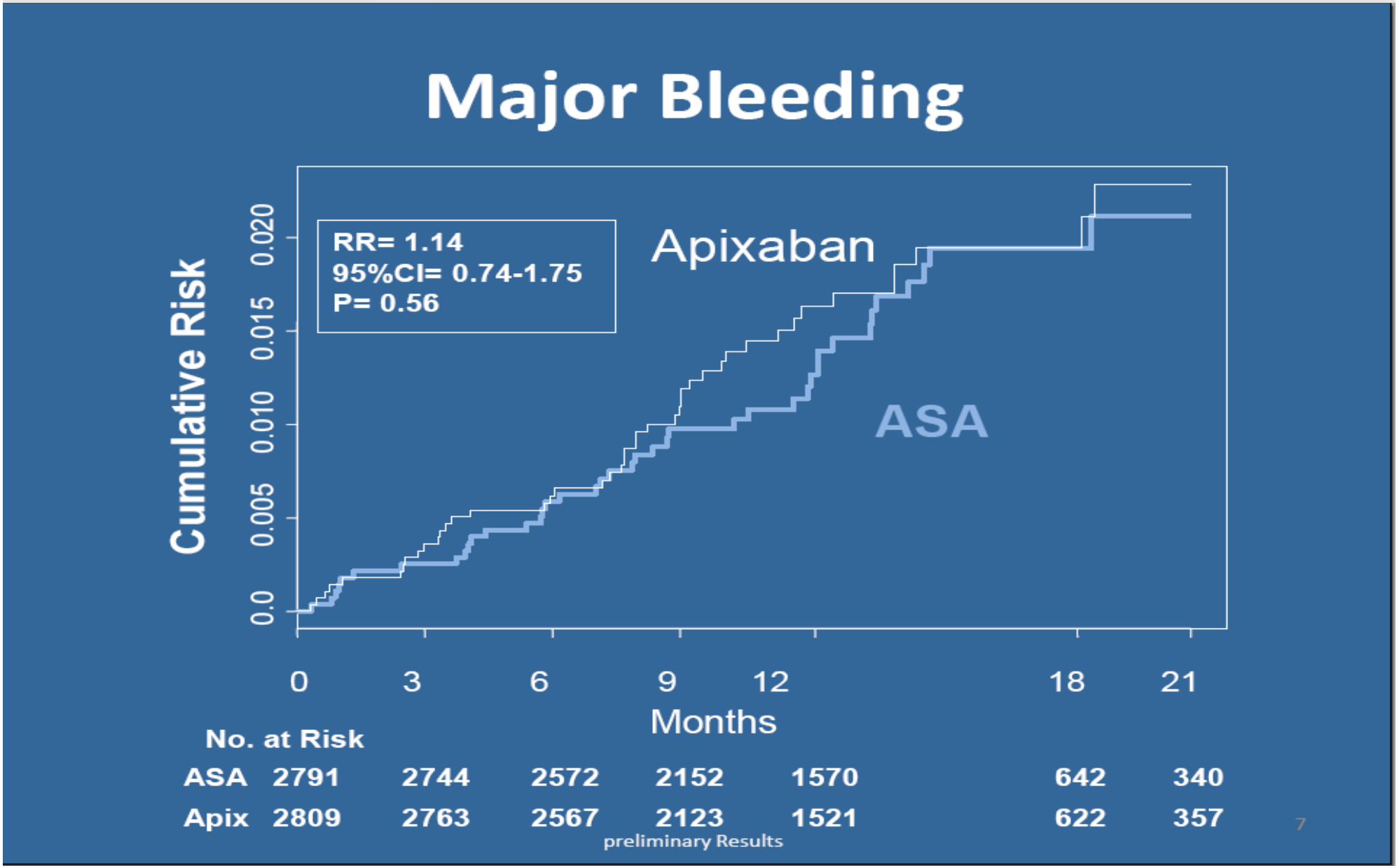

Medikamentöse Rhythmuskontrolle (II)

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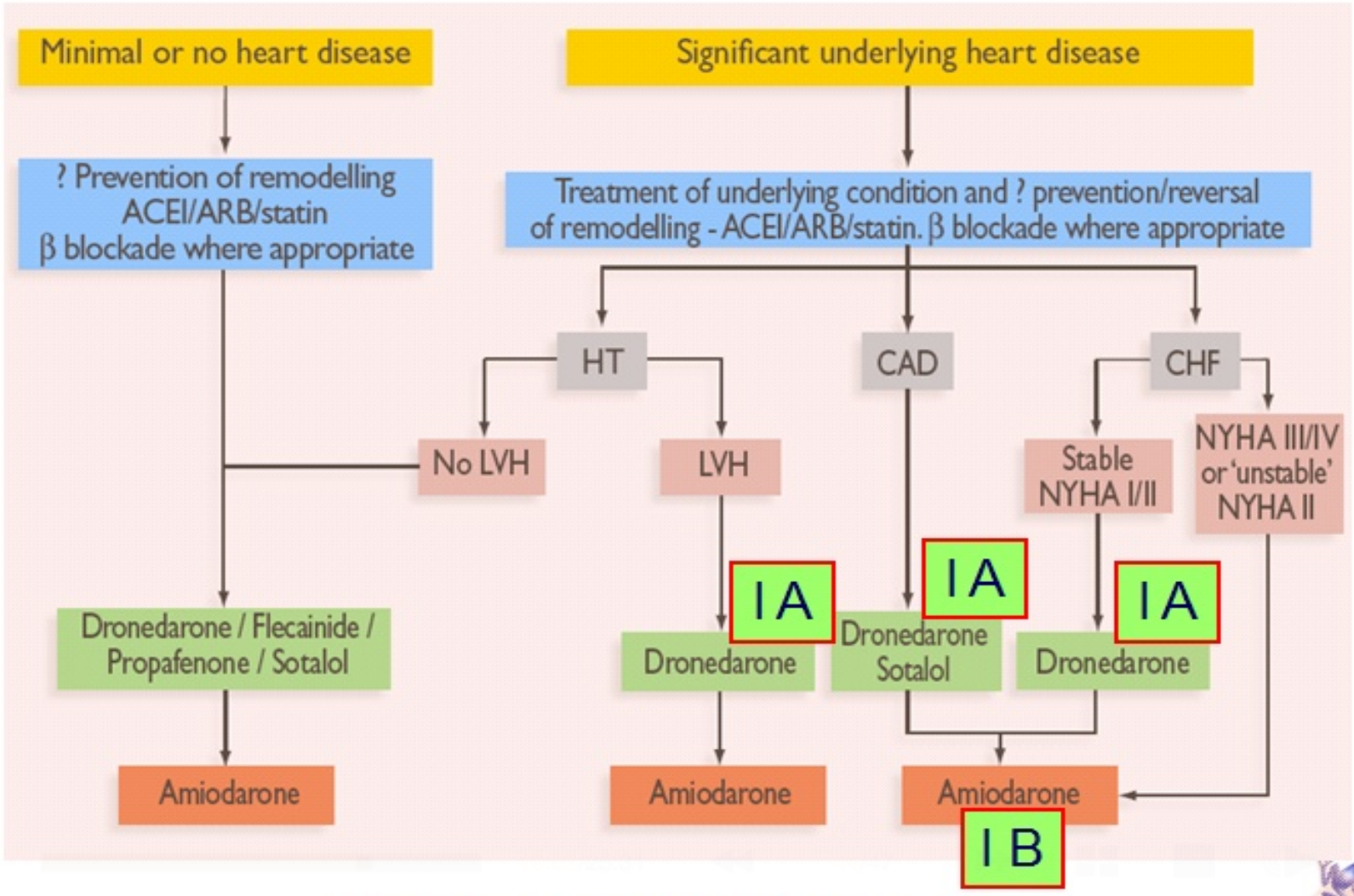

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Camm et al. ESC AF guidelines 2010 Eur Heart J 2010

Ablation von Vorhofflimmern

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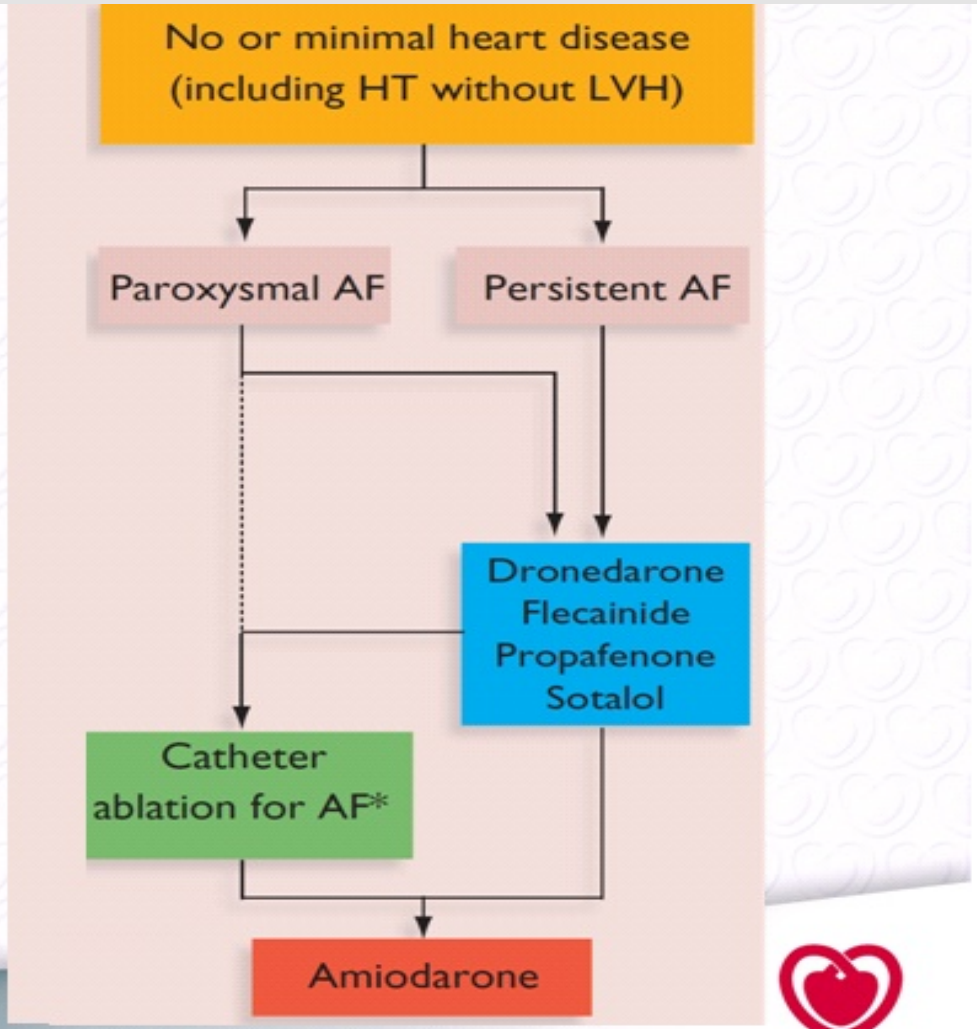
Indication for LA Catheter Ablation

Catheter ablation for paroxysmal AF should be considered in symptomatic patients who have previously failed a trial of antiarrhythmic medication.	IIa	A
Ablation of persistent symptomatic AF that is refractory to antiarrhythmic therapy should be considered a treatment option.	IIa	B
Catheter ablation of AF may be considered prior to antiarrhythmic drug therapy in symptomatic patients despite adequate rate control with paroxysmal symptomatic AF and no significant underlying heart disease.	IIb	B



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Catheter Ablation for A Fib: Success Without AAD

Author	Source	Patients	Success (%)	Major Complications (%)
1. Jais	Circ; 2008	53 (Parox)	89	3.0
2. DiBiase (Natale)	Circ Arr; 2009	103 (Parox)	75-PVI ± CFAE 12-CFAE	NONE
3. Cha (Packer)	Circ; 2008	523 (Parox-58%)	72	5.0
4. Zado (Marchlinski)	JCE; 2008	1,165 (Parox-64%)	64	1.7
5. Porter (Wilber)	JCE; 2008	67 (Parox-63%)	90-Parox 68-Persis	1.5
6. Pappone	JACC; 2006	99 (Parox)	93	NONE
7. Chun (Kuck)	EHJ; 2009	27 (Parox)	70	NONE
8. Plorkowski	PACE; 2008	83 (Parox-80%)	77	4.8
9. Furlanello	JCE; 2008	20 (Parox-70%)	90	NONE
10. Pak (Y H Kim)	JCE;2008	77 (Parox)	68	4.0
11. Oakes (Marrouche)	Circ; 2009	81 (Parox-51%)	69	---
12. Wieczorek (Morady)	JCE; 2010	88 (Parox)	80	NONE
13. Chilukuri (Calkins)	JCE; 2010	109 (Parox-68%)	32	3.7

ACC/AHA/ESC Guidelines 2006 for the Management of Pts With Atrial Fibrillation

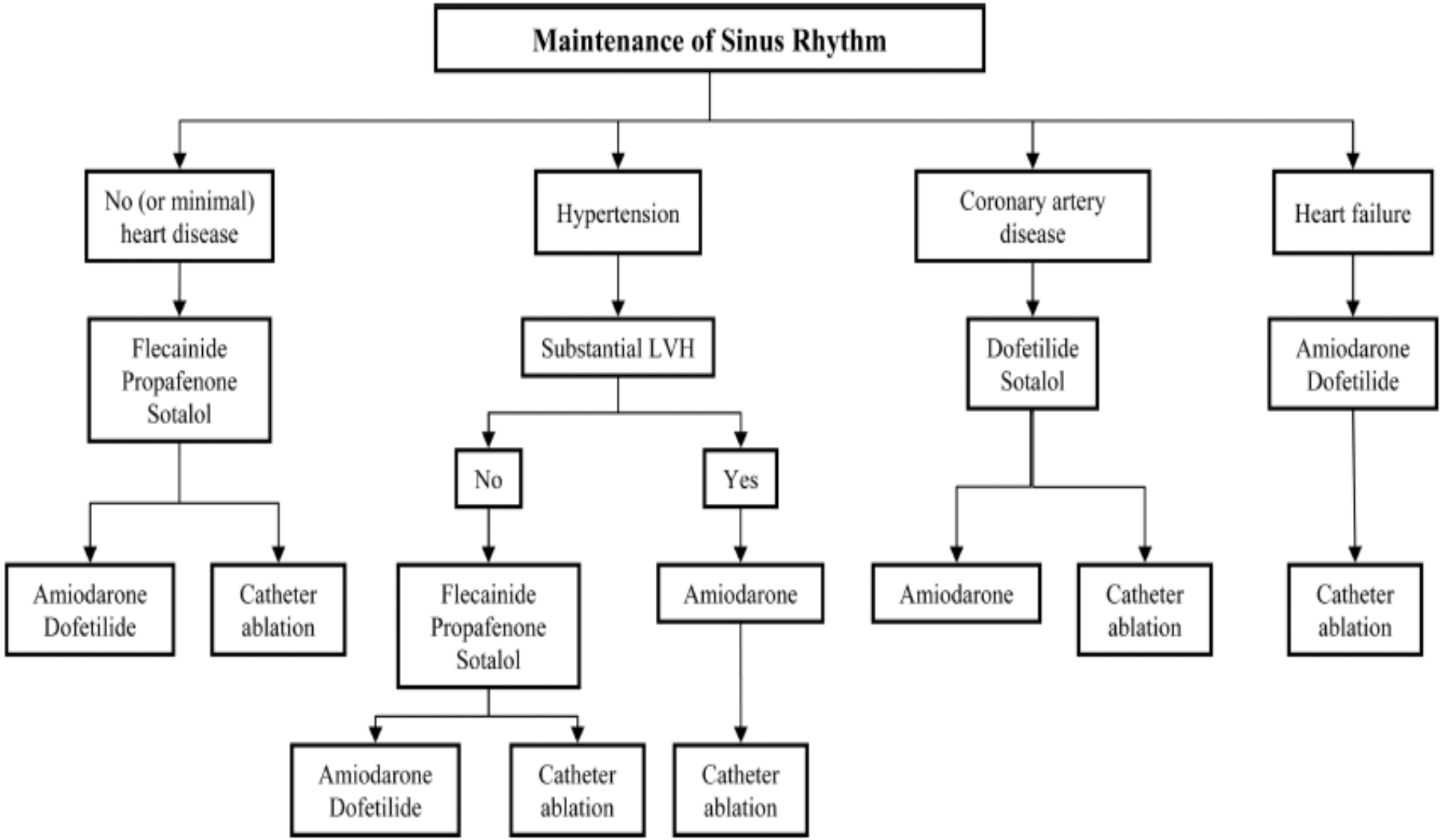

Figure 9 Antiarrhythmic drug therapy to maintain sinus rhythm in patients with recurrent paroxysmal or persistent atrial fibrillation. Within each box, drugs are listed alphabetically and not in order of suggested use. The vertical flow indicates order of preference under each condition. The seriousness of heart disease proceeds from left to right, and selection of therapy in patients with multiple conditions depends on the most serious condition present. See Section 8.3.3.3 in the full-text guidelines for details. LVH indicates left ventricular hypertrophy.

Ablation bei struktureller Herzerkrankung ?

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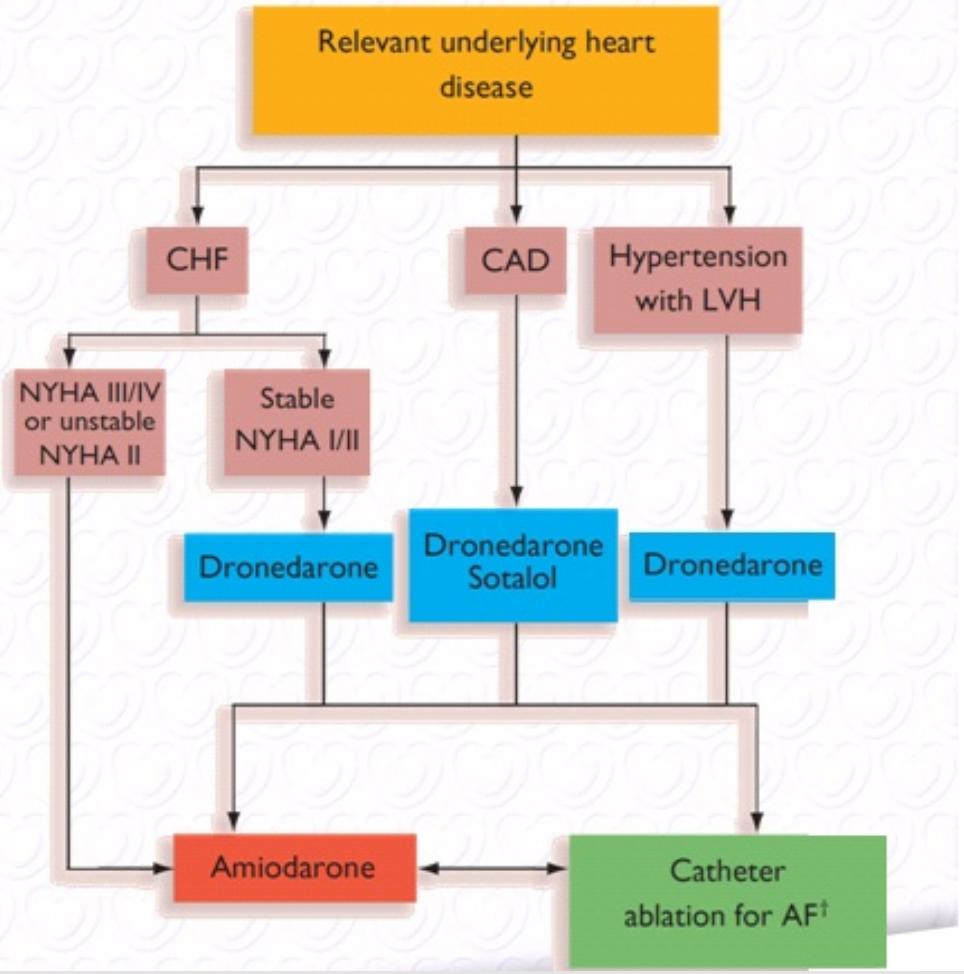
Catheter ablation of AF in patients with heart failure may be considered when antiarrhythmic medication, including amiodarone, fails to control symptoms.	IIb	B
Catheter ablation of AF may be considered in patients with symptomatic long-standing persistent AF refractory to antiarrhythmic drugs.	IIb	C

Ablation when SHD is Present



Medikamentöse Rhythmuskontrolle

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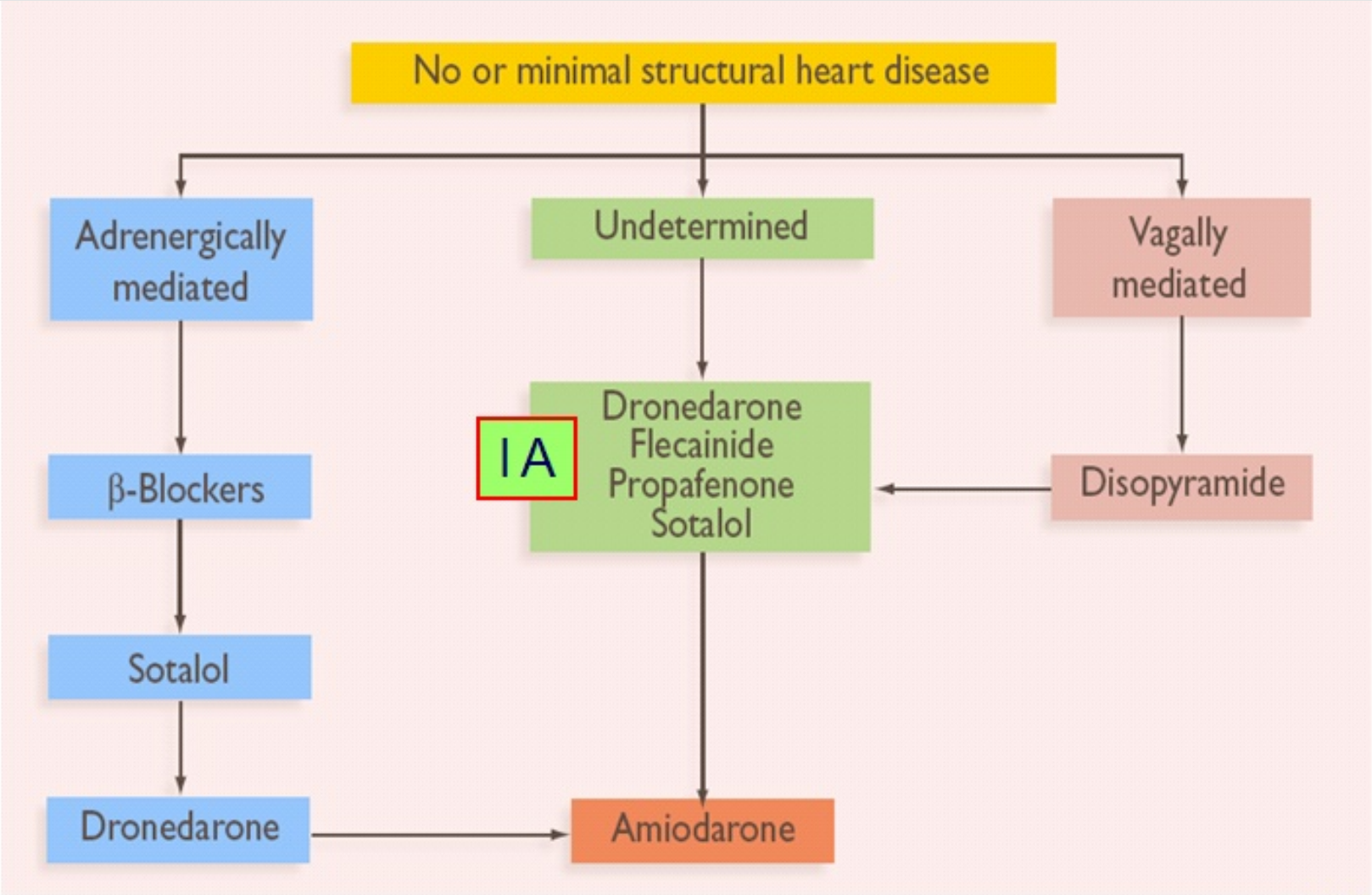

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Camm et al. ESC AF guidelines 2010 Eur Heart J 2010

Rolle von Amiodaron

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Antiarrhythmic Medication for Rhythm Control

Amiodarone is more effective in maintaining sinus rhythm than sotalol, propafenone, flecainide (by analogy), or dronedarone (LoE A), but because of its toxicity profile should generally be used when other agents have failed or are contraindicated (LoE C).	I	A / C
In patients with severe heart failure, NYHA class III and IV or recently unstable (decompensation within the prior month) NYHA class II, amiodarone should be the drug of choice.	I	B

Angiotensin II-Antagonist in Paroxysmal Atrial Fibrillation

ANTIPAF-Trial

(ClinicalTrials.gov: Identifier: NCT 00098137)

This work was supported by German Ministry of Research and Education (BMBF) through AFNET (German Competence Network on Atrial Fibrillation; Grant 01GI0204).

Daiichi Sankyo supported the study by an unrestricted research grant given to the German AFNET.

ANTIPAF

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- Prospektive, randomisierte, Multicenter Studie
- Pat. mit paroxysmalem Vorhofflimmern, ohne relevante strukturelle Herzerkrankung
- Olmesartan vs. Placebo
- Primärer Endpunkt: AF burden während des 12 Monats Follow - up

Goette et al., ESC 2010

ANTIPAF Trial

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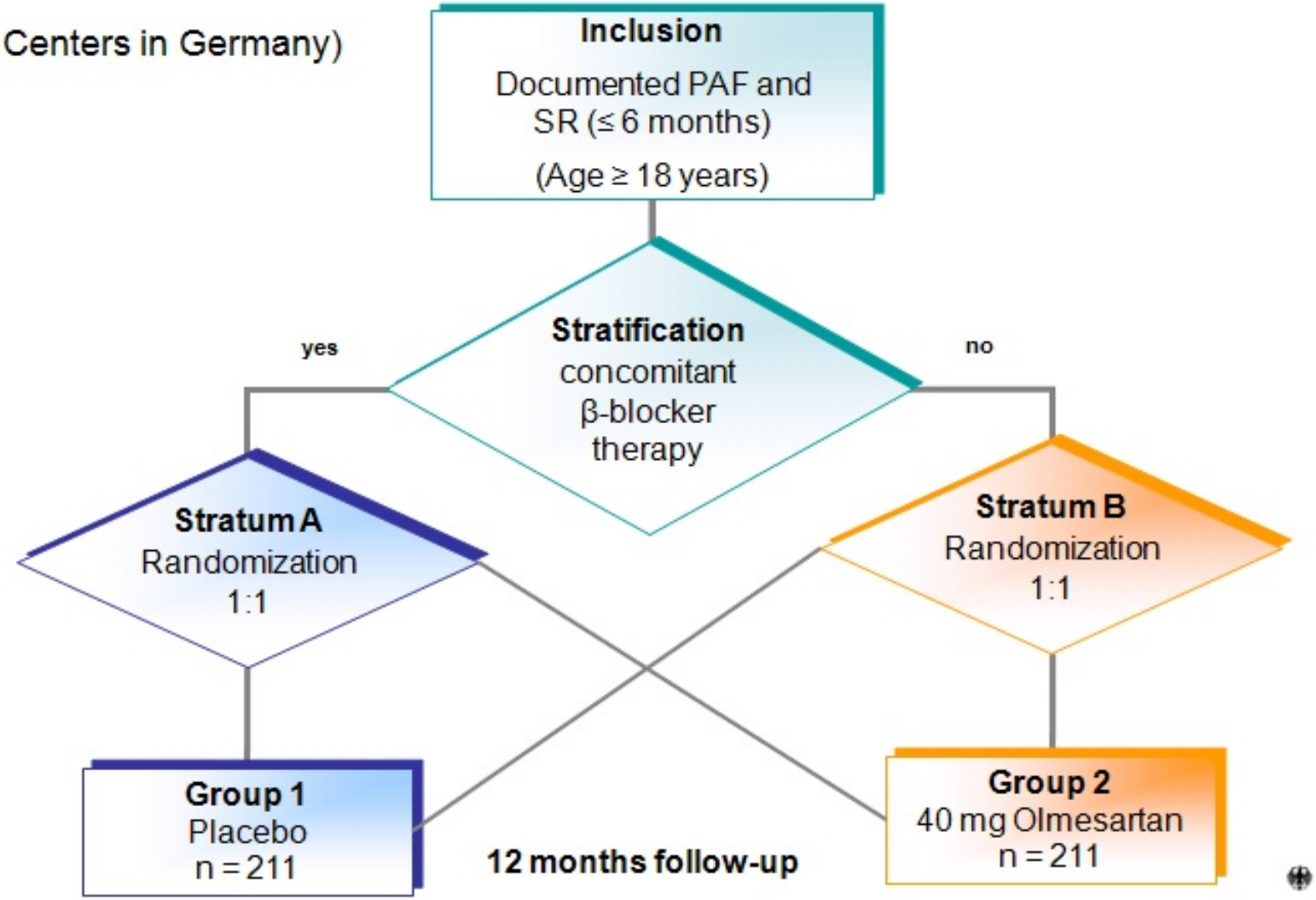
(37 Study Centers in Germany)



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Ergebnis: „AF Burden“

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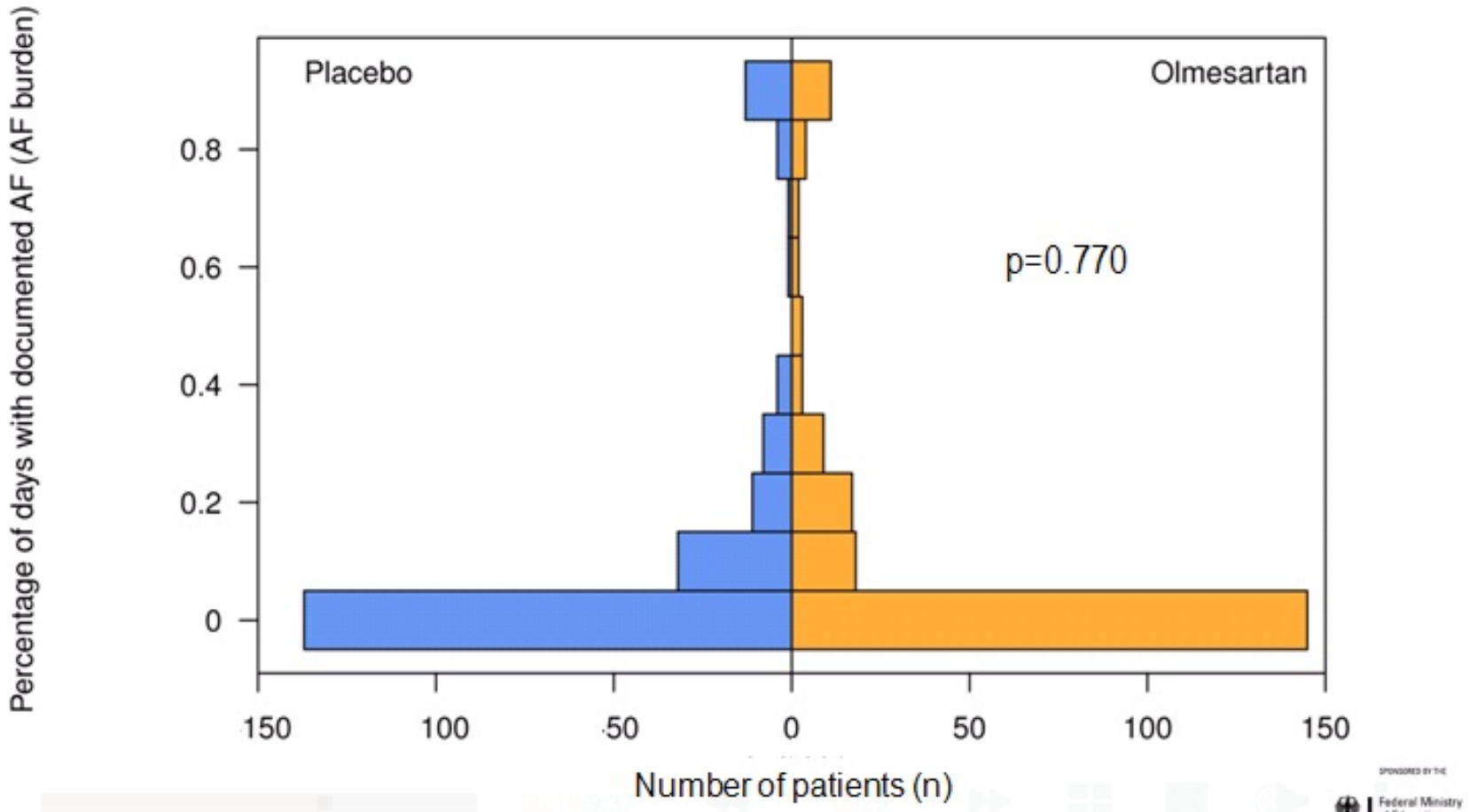

Federal Ministry of Education and Research

ANTIPAF: Fazit

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- ARB (Angiotensin-Rezeptor-Blocker) Therapie reduziert nicht das Auftreten von Vorhofflimmern-Episoden, bei herzgesunden Pat. mit paroxysmalem Vorhofflimmern

Zusammenfassung

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- Antikoagulation bei VHF:
  - großzügigere Indikation, bes. bei älteren Patienten
  - Tripeltherapie nach Stenting (möglichst kurz)
- Neue orale Antithrombotika (Dabigatran, Apixaban) am Horizont zur Antikoagulation bei VHF
- Dronedaron als neue Therapie-Option zur Rhythmuskontrolle
  - besser verträglich als Amiodaron, aber weniger effektiv
- Vorhofflimmer-Ablation in den Leitlinien fest etabliert
- „Upstream"-Therapie nach LL möglich, Daten zur Sekundärprävention aber negativ (ANTIPAF)