XI congresso nazionale

simeu

ROMA 24-26 MAGGIO 2018

La cardioversione nel paziente con fibrillazione atriale in Pronto Soccorso: Quali opzioni?

Atrial fibrillation (AF): facts

- Common (~ **1**% general population)
- ↑ stroke **X 5**
- ↑ mortality **X 2** ♀, **X 1.5** ♂
- *High* costs, *low* QOL

- AC ↓ stroke to 1.5% + ↓ mortality
- No ↓ with rate control

Kirchhof P, et al. Europ Heart J 2016 doi:10.1093/eurheartj/ehw210

Anticoagulation (AC) in cardioversion (CV)

- AC *recommended:* AF > 48 h / unknown
- **CV without** AC: *common* if AF < 48 h
- AC *recommend:* AF < 48 h **+ risk factors**

- Recommendations based **mainly** on consensus
- **No** randomized trials are available…

Airaksinen KE, et al. J Am Coll Cardiol 2013;62:1187-92
Stiell IG, et al. Can J Em Med 2010;12:181-91

Relationship between atrial tachyarrhythmias and symptoms

- 48 pts with history of AF + pacemaker (PM)
- PM-detected AF VS patient symptoms
- Follow-up 12 mths

Clinically **silent** AF > **90%**

Symptoms PPV **17%**

Strickberger SA, et al. Heart Rhythm 2005;2:125-31

CV of nonrheumatic AF. Reduced TE complications with 4 weeks of AC are related to atrial thrombus resolution

TEE study
VKA ≥4 wks

Complete resolution
90%

Collins LJ, et al. Circulation 1995;92(2):160-3

CV for non-valvular AF: underestimated risk for thromboembolic complications?

X 3-6 symptomatic TE *after* ECV in pts on AVKA @ 30 days

New **silent** embolic lesions (MRI): ~ **5**%

Predictors:

- Age
- Large left atrium

Klein HH. Dtsch MedWochenschr 2013;138:1309-11
Bernhardt P, et al. Am Soc Echocardiogr 2005;18(6):649-53

What if no AC *after* CV of AF < 48 h?

Author	**n**	**% TE**
Weigner et al. 1997	224	0.9
Michael et al. 1999	217	0.5
Burton et al. 2005	314	0.0
Gallagher et al. 2002	198	0.5
Stiell et al. 2010	41	0.0
Xavier Scheuermeyer et al. 2010	104	0.0

Thromboembolic Complications After Cardioversion of Acute Atrial Fibrillation

The FinCV (Finnish CardioVersion) Study

3.143 pts
AF < **48** h

TE @ 30 days

No AC
before / after CV

Retrospective

Airaksinen KE, et al. J Am Coll Cardiol 2013;62:1187-92

Thromboembolic Complications After Cardioversion of Acute Atrial Fibrillation

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TE rate **0.7**%

Airaksinen KE, et al. J Am Coll Cardiol 2013;62:1187-92

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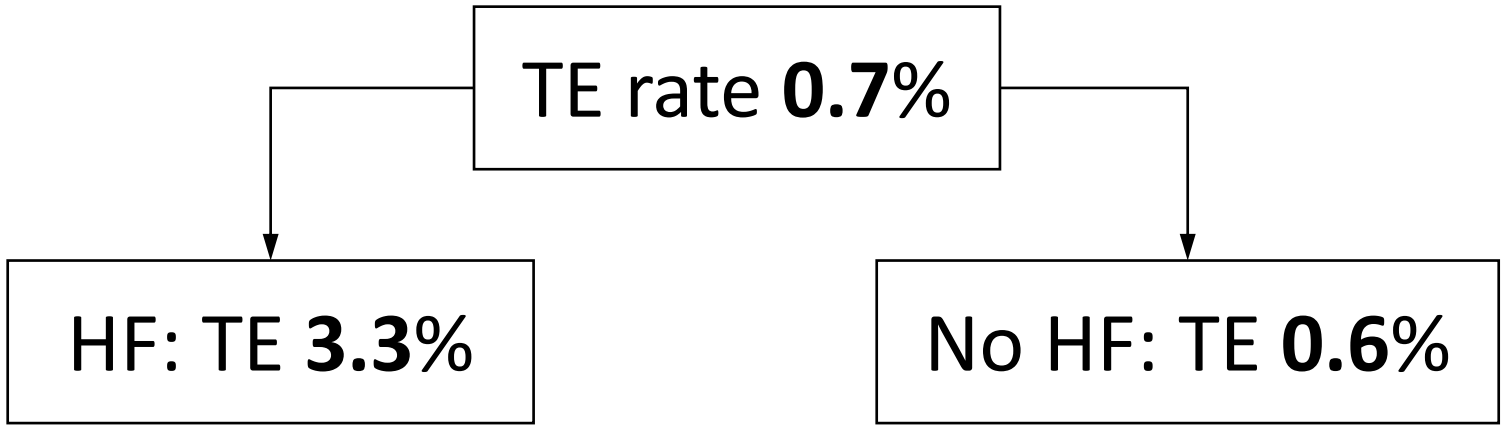

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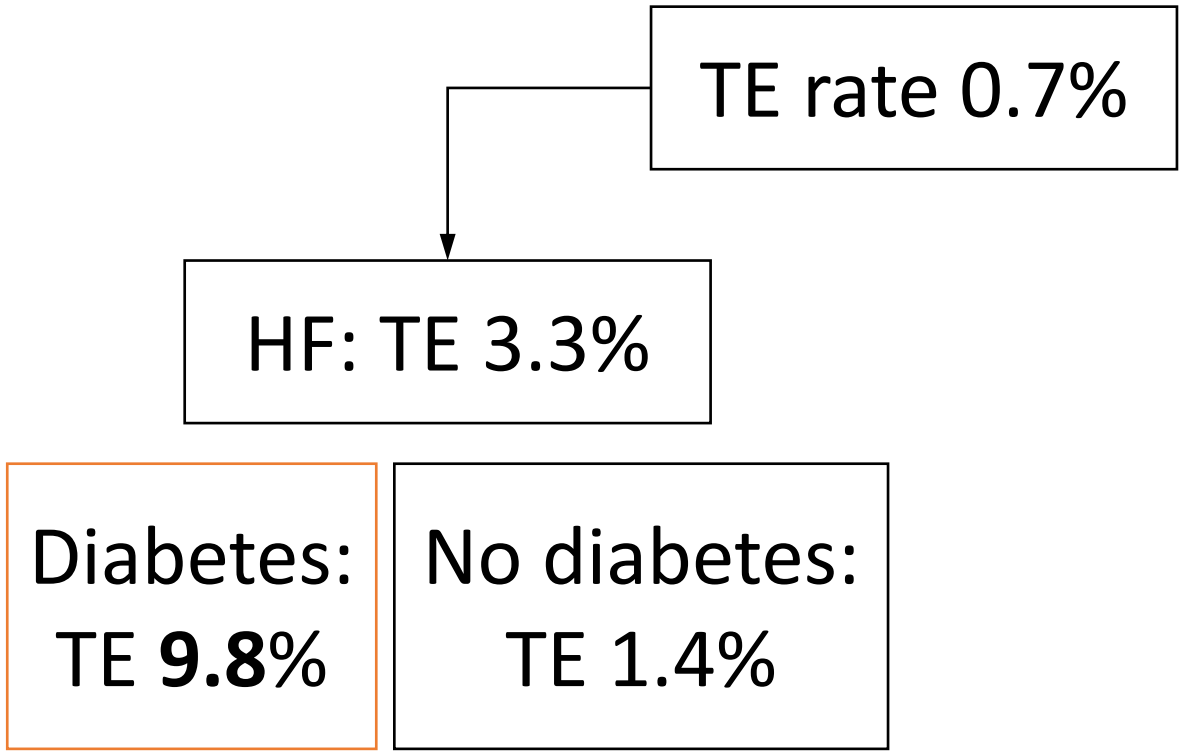

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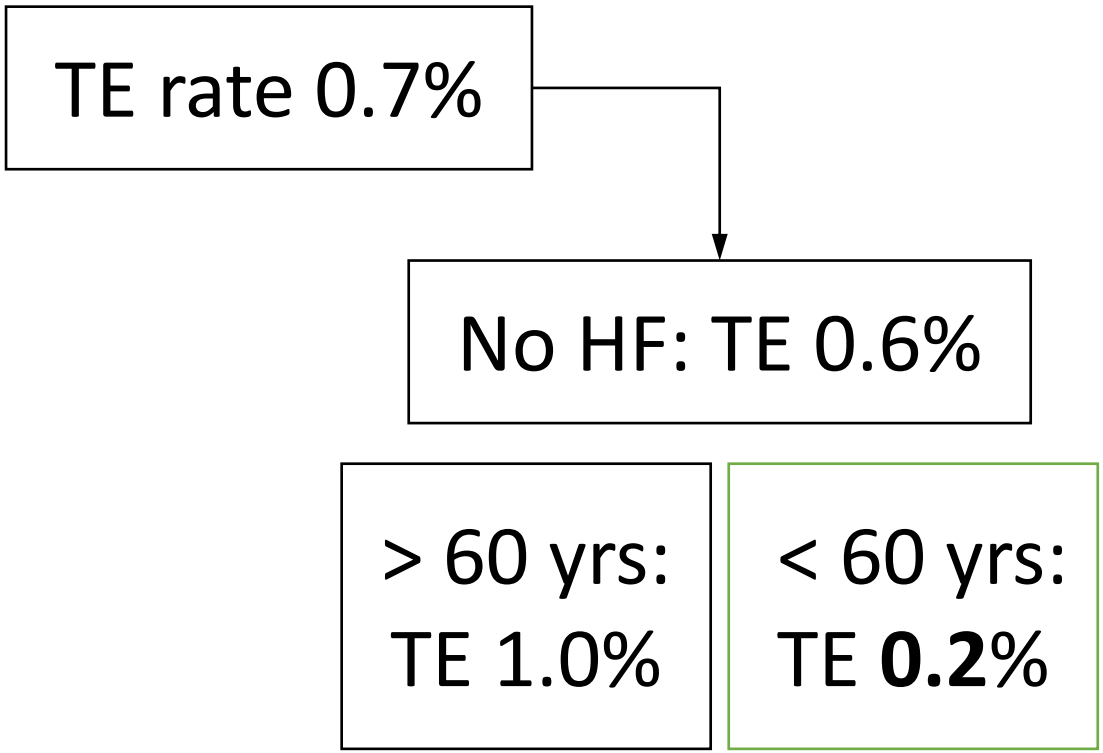

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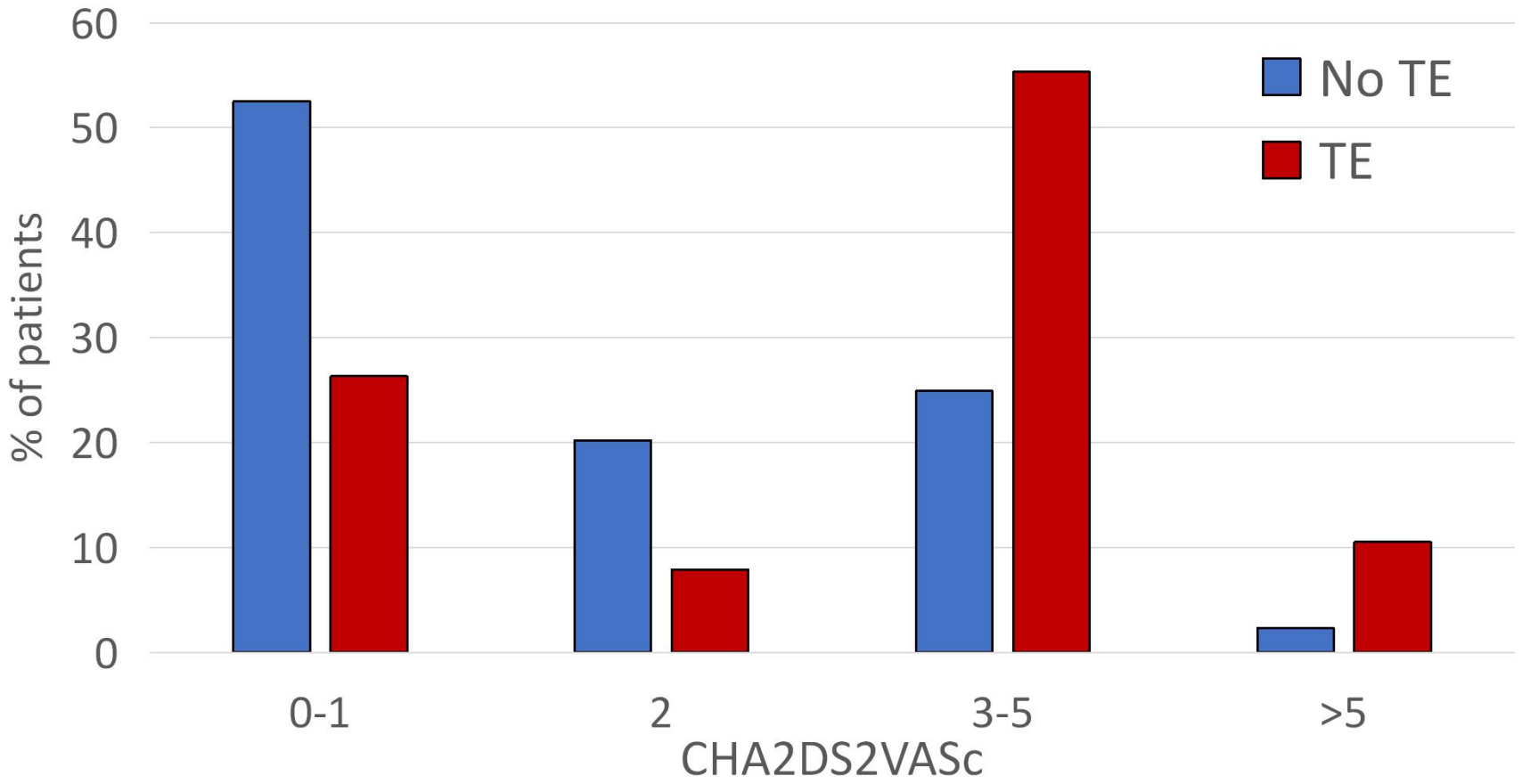
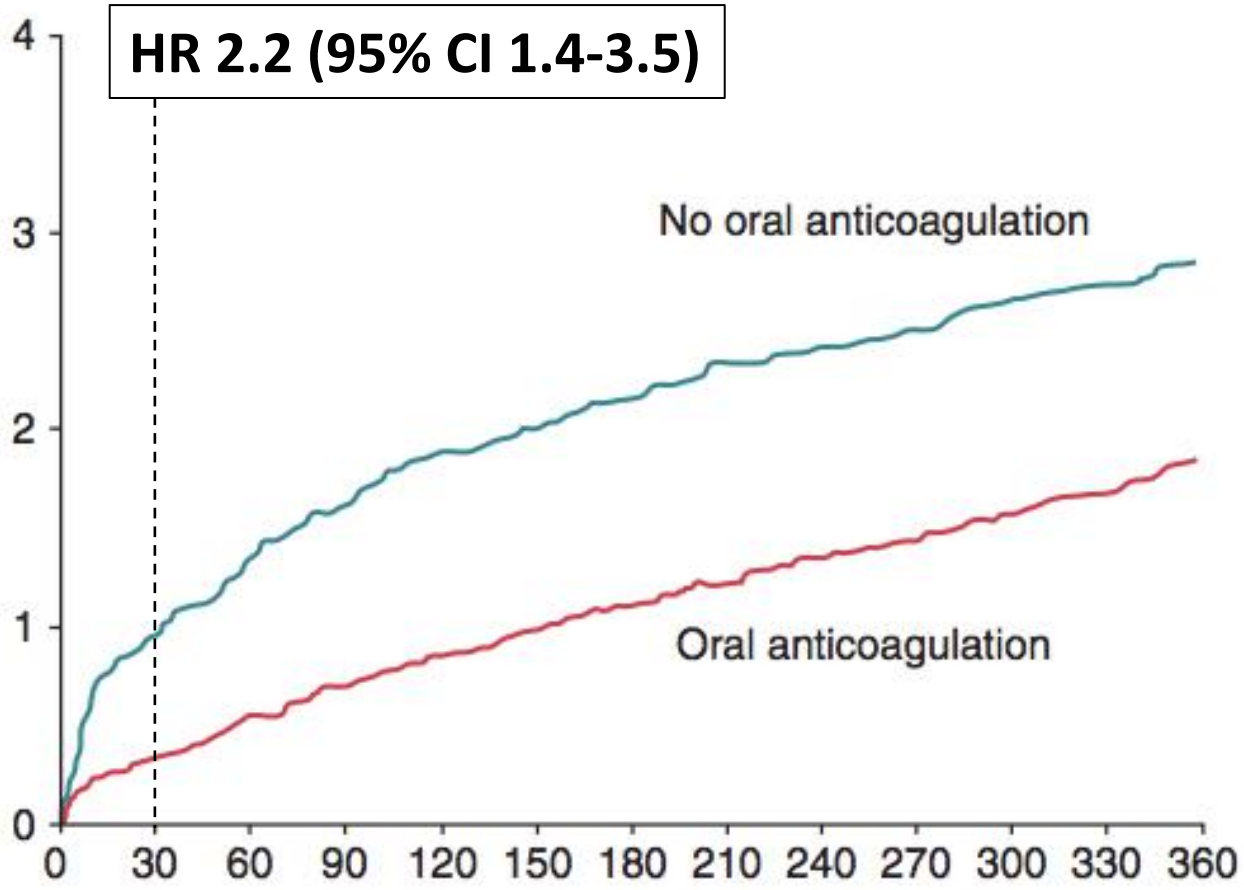


Airaksinen KE, et al. J Am Coll Cardiol 2013;62:1187-92

Thromboembolic risk in 16 274 atrial fibrillation patients undergoing direct current cardioversion with and without oral anticoagulant therapy



AF *duration* **not** reported

Hansen ML, et al. Europace 2015;17:18-23

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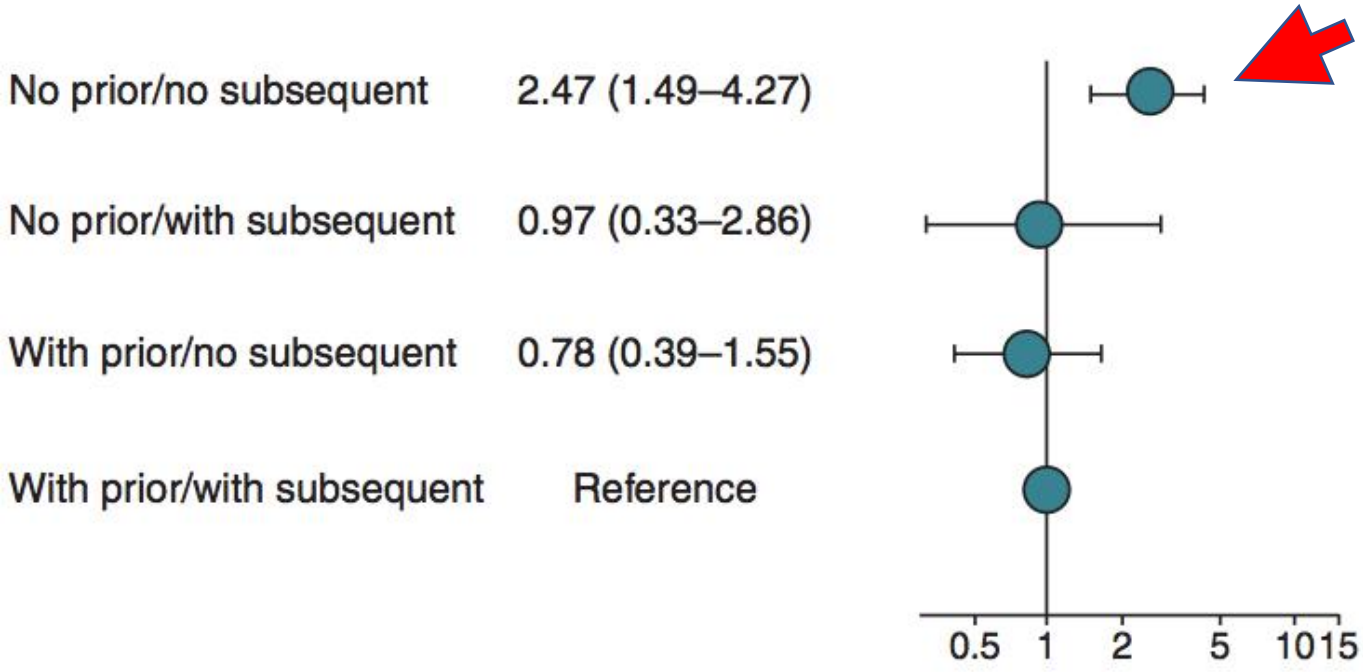


CHA2DS2-VASc ≥2 HR 7

Hansen ML, et al. Europace (2015) 17, 18-23

DOACS
Post-hoc analysis of registrative trials

Dabigatran Versus Warfarin in Patients With Atrial Fibrillation

An Analysis of Patients Undergoing Cardioversion

N = 18.113

	D110	D150	Warfarin
Stroke/SE	0.8	0.3	0.6
Major bleeding	1.7	0.6	0.6
Death	nr	nr	nr

N = **1270**

30-day outcome

mCHA2DS2-VASc: 2.1

Nagarakanti R, et al. Circulation 2011;123:131-136

Outcomes After Cardioversion and Atrial Fibrillation Ablation in Patients Treated With Rivaroxaban and Warfarin in the ROCKET AF Trial

N = 14.264

	Rivaroxaban	Warfarin
Stroke/SE	1.9	1.9
MB+NMCRB	18.7	13.4
Death	1.9	3.7

N = **321**

30-day outcome

mCHA2DS2-VASc: 3.5

Piccini JP, et al. J Am Coll Cardiol 2013;61:1998-2006

Efficacy and Safety of Apixaban in Patients After Cardioversion for Atrial Fibrillation

Insights From the ARISTOTLE Trial

N = 18.201

	Apixaban	Warfarin
Stroke/SE	0	0
Major bleeding	0.3	0.2
Death	0.6	0.5

N = **540**

30-day outcome

mCHA2DS2-VASc: 2.1

Flaker G, et al. J Am Coll Cardiol 2014;63:1082-7

Cardioversion of Atrial Fibrillation in ENGAGE AF-TIMI 48

n = 21.105

	E60	E30	Warfarin
Stroke/SE	0	1.8	0
Major bleeding	0	0	0
Death	0.7	0	0

N = **365**

30-day outcome

mCHA2DS2-VASc: 2.1

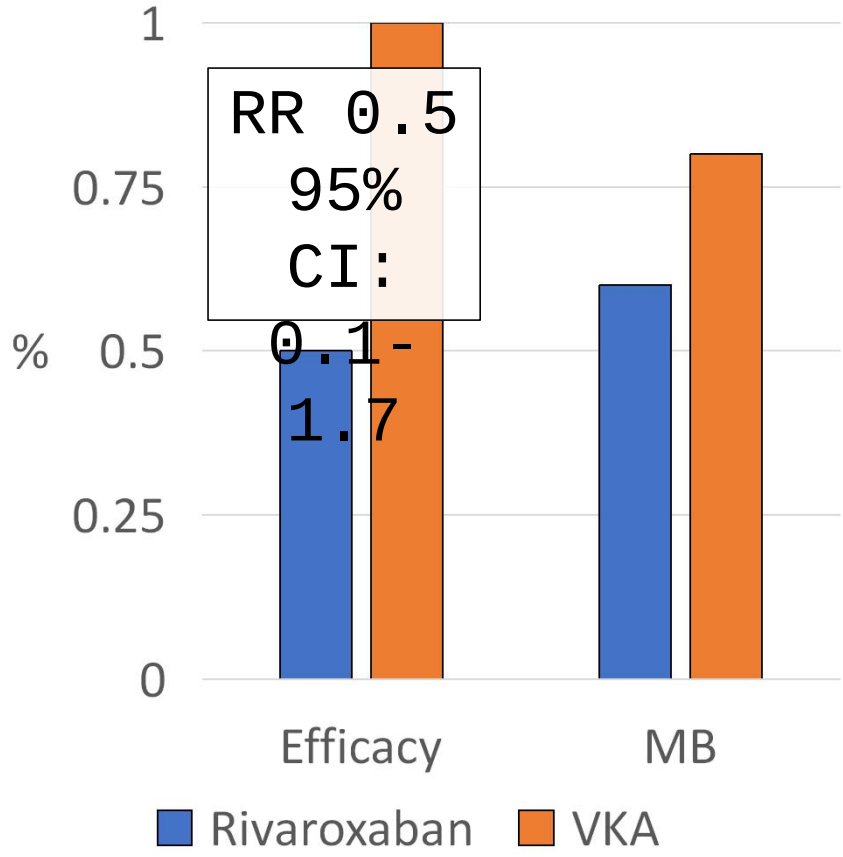
Plitt A, et al. Clin Cardiol 2016;39(6):345-6

DOACS
Ad-hoc trials

Rivaroxaban vs. vitamin K antagonists for cardioversion in atrial fibrillation

- n = **1504**, NVAF > **48** h
- Randomized 2:1
- Early (1-5 d) vs delayed (3-8 wks) CV
- CHA2DS2-VASc ≥ 2: 64%

ECV “on time”
77% vs 36%

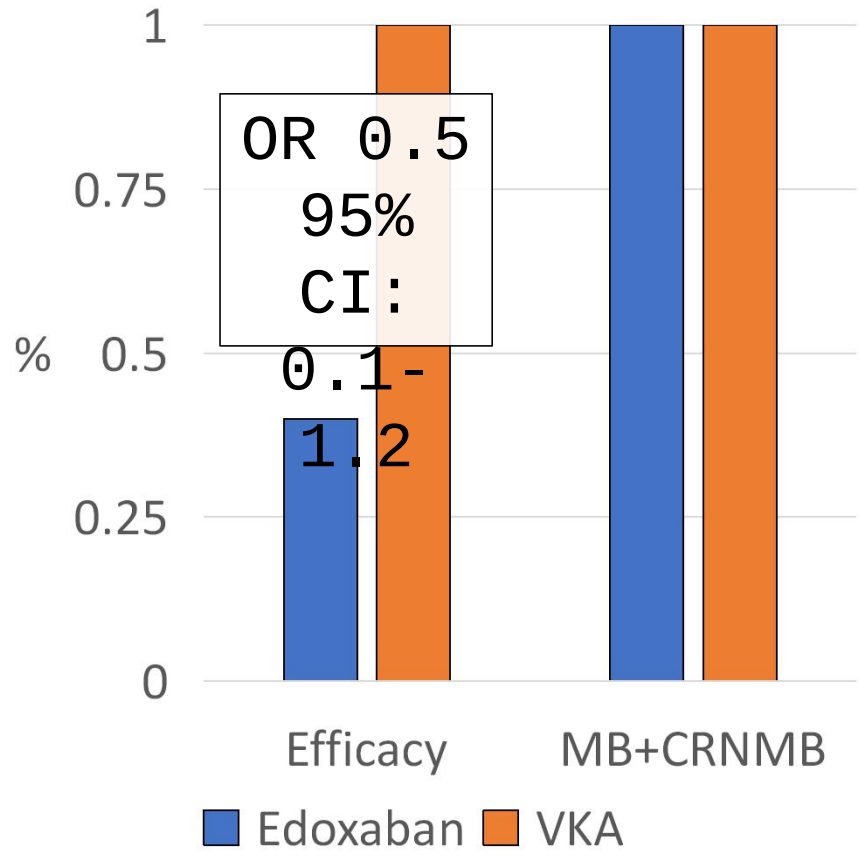


Cappato R, et al. Eur Heart J 2014 doi:10.1093/eurheartj/ehu367

Edoxaban versus enoxaparin–warfarin in patients undergoing cardioversion of atrial fibrillation (ENSURE-AF) a randomised, open-label, phase 3b trial

- n = **2199**, NVAF > **48** h
- Randomized 1:1
- TEE vs standard CV (enoxaparin + warfarin)
- mCHA2DS2-VASc: 2.6

ECV “on time”
No difference

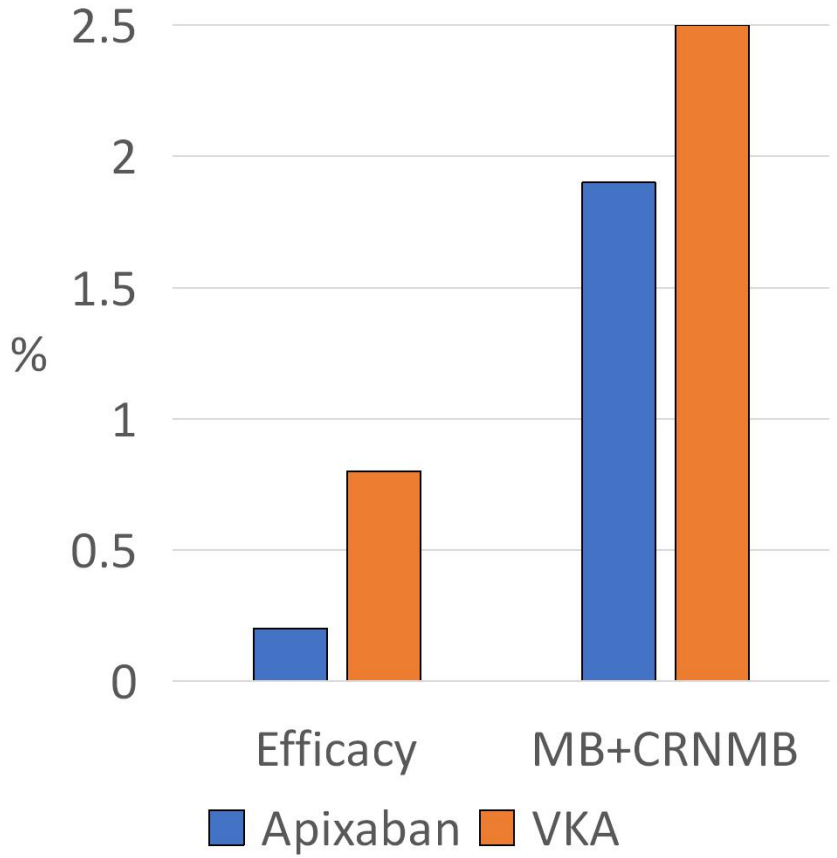


Goette A, et al. Lancet 2016;388:1995-2003

Apixaban compared to heparin/vitamin K antagonist in patients with atrial fibrillation scheduled for cardioversion: the EMANATE trial

- n = **1500**, NVAF > **48** h
- Randomized 1:1
- Loading dose vs standard
- mCHA2DS2-VASc: 2.4

If loading dose
CV -22.3 days



Ezekowitz MD, et al. Europ Heart J 2018 doi:10.1093/eurheartj/ehy148

Bottom line

- FA → CV: AC importante!
- Durata: <48 vs > 48 h
- DOAC sovrapponibili a VKA
  - Efficacia
  - Sicurezza (ma ↓ eventi emorragici)
  - QOL

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REGIONE DEL VENETO

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