

# Printemps des Urgences 2021

Session ACFA

Mardi 18 mai 2021

## Tout savoir sur les anticoagulants

**Jean-Baptiste GUICHARD**

M.D., Ph.D.

Service de Cardiologie

CHU de Saint-Étienne



# AF and thromboembolic risk

---

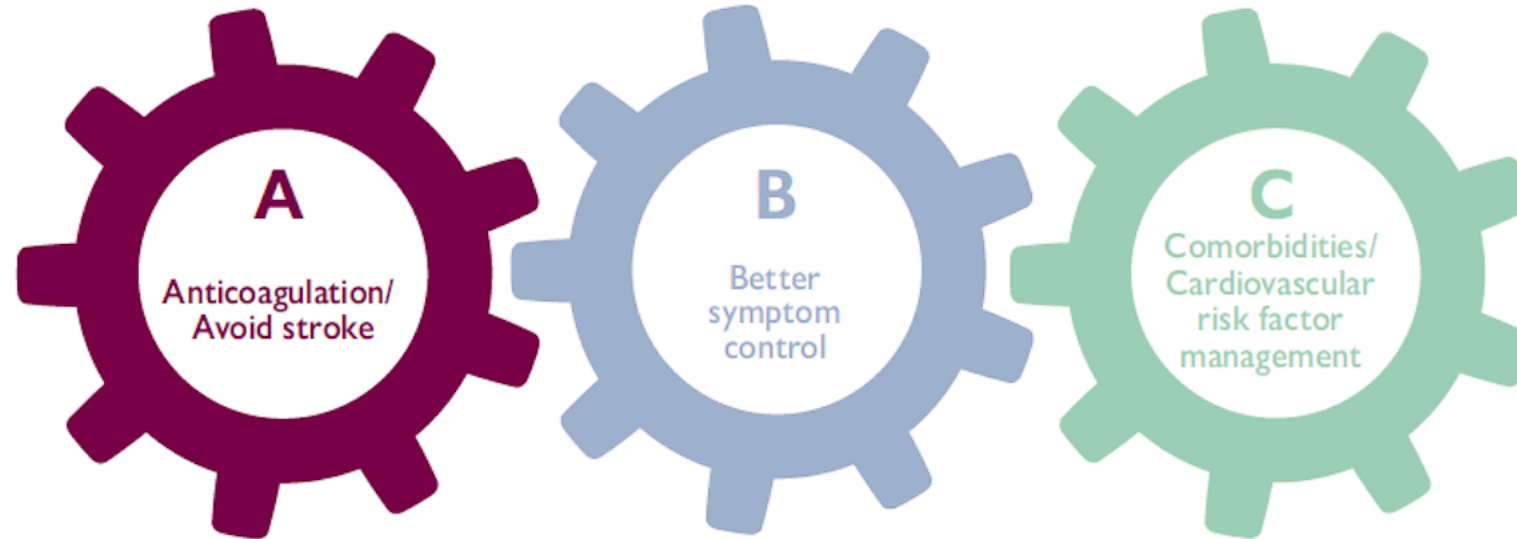
- The risk of systemic embolisms and strokes is 5-fold higher in AF patients compared to the general population
- The prevalence of stroke in AF population is about 6%
- AF is the major etiology of strokes (30% of all ischemic strokes and the likely cause of a significant part of cryptogenic stroke)
- Cardioembolic strokes lead to higher mortality and major disability compared with other strokes

**Management of the thromboembolic risk is crucial for every AF patient**

# Anticoagulation in AF

Management of the thromboembolic risk is crucial for every AF patient

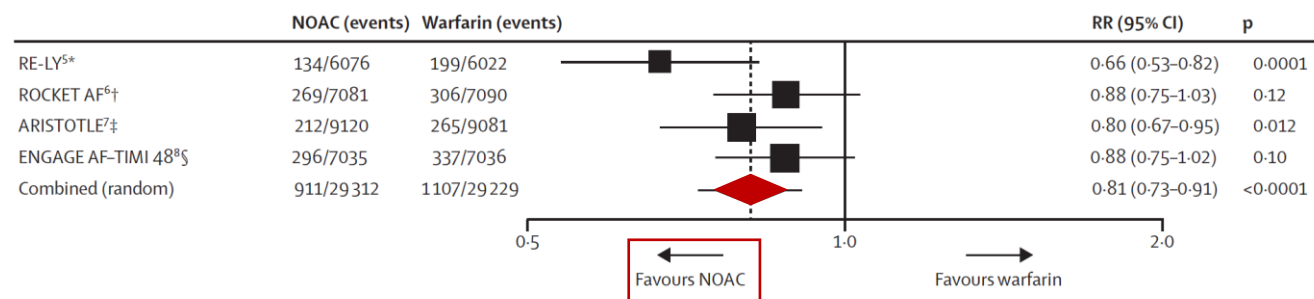
## Treat AF: The ABC pathway



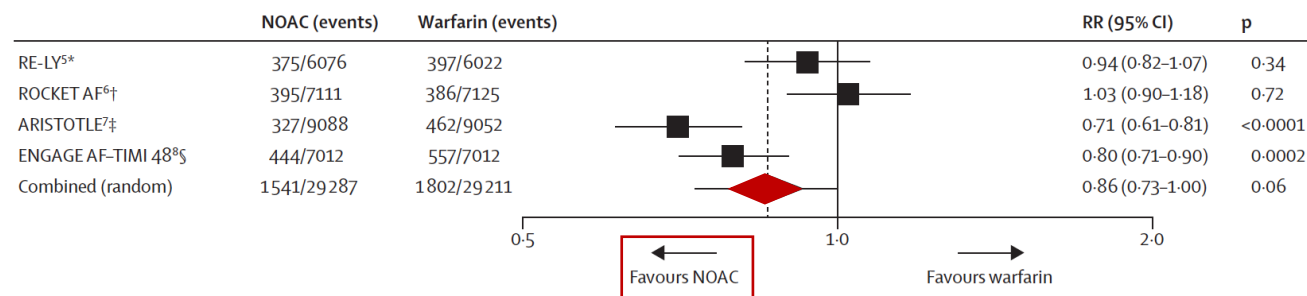
# Which anticoagulant?

Relevant data from non-inferiority RCTs regarding NOACs versus VKAs :

## Lower stroke and systemic embolic risk in NOACs groups



## Lower major bleeding risk in NOACs groups



# Which anticoagulant?

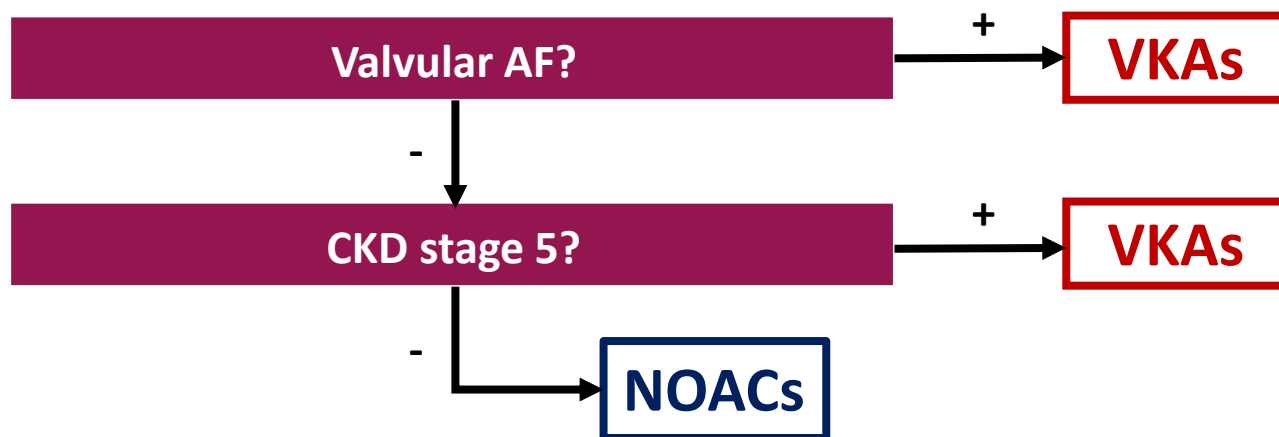
The **use of NOACs is more convenient than VKAs** in AF :

- Wider therapeutic range
- Less drug and food interactions
- No biological monitoring regarding the efficacy
- No heparin bridging required

## ► ESC AF guidelines 2020

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
For stroke prevention in AF patients who are eligible for OAC, <b>NOACs are recommended in preference to VKAs</b> (excluding patients with mechanical heart valves or moderate-to-severe mitral stenosis). <sup>423,424</sup>	I	A

# Proper use of NOACs



## Valvular AF :

- Prosthetic mechanical heart valve
- Moderate to severe mitral stenosis

**CKD stage 5** = ClCr < 15 ml/min

Rivaroxaban		Apixaban	
15 mg o.d.	20 mg o.d.	2.5 mg b.i.d.	5 mg b.i.d.

ClCr 15 to 50 ml/min

#1 : ClCr 15 to 30 ml/min

#2 : At least 2 of 3 :

- Age > 80 yo
- Body weight < 60 kg
- Serum creatinine > 133 micromol/l

# Which anticoagulant?

## Is there a potential benefit of heparin versus NOACs in AF ?

- No data from RCTs and observational studies prove the superiority of heparin compared with NOACs
- Whether in acute and chronic management of AF

## Which heparin can be used in AF?

- Unfractionated heparin (UFH), whether IV or SC
- No approval of Low-Molecular-Weight Heparin (LMWH) ... but widely used in clinical practice.

# Which anticoagulant?

Is there a potential benefit of heparin versus NOACs in AF ?

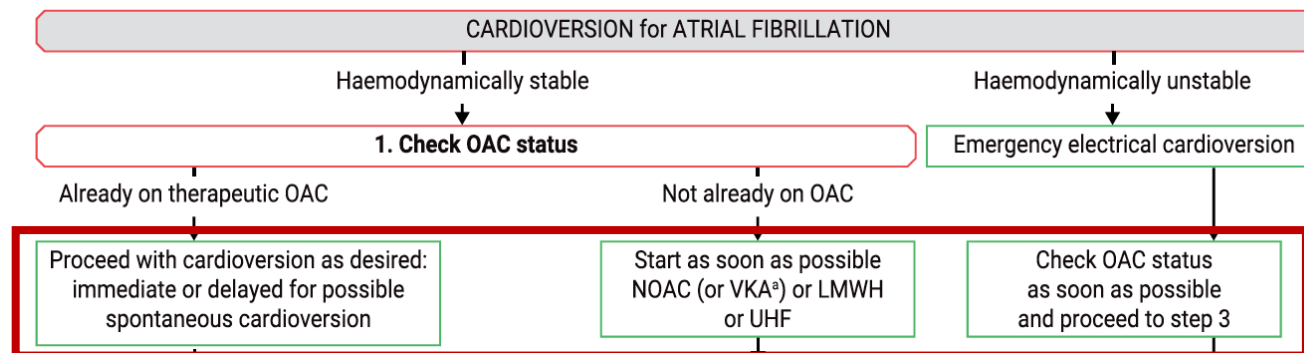
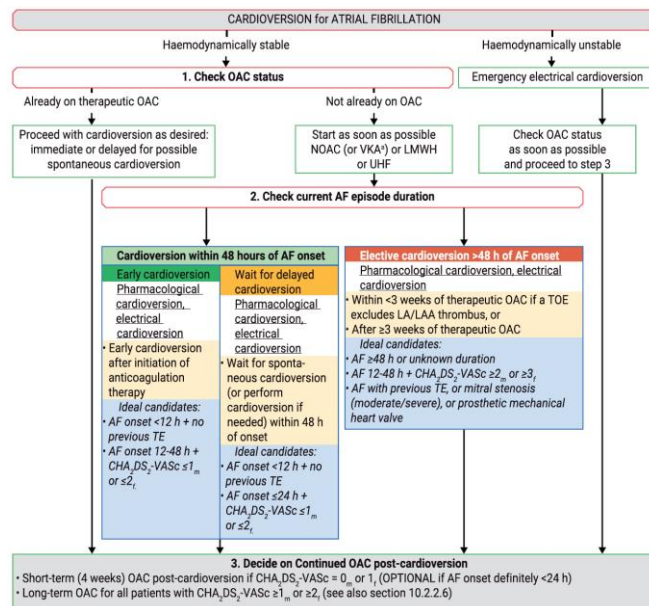
	Pooled NOAC (events)	Pooled warfarin (events)		RR (95% CI)	p
<b>Strokes and Systemic embolism</b>					
VKA status					
Naïve	386/13789	513/13834		0.75 (0.66-0.86)	} 0.31
Experienced	522/15514	597/15395		0.85 (0.70-1.03)	
<b>Major bleeding</b>					
VKA status					
Naïve	656/12776	786/12820		0.84 (0.76-0.93)	} 0.78
Experienced	909/16446	1040/16265		0.87 (0.70-1.08)	

**NOACs are efficient and safe when prescribed for AF onset**



# Anticoagulation when AF onset

**#1** : If a rhythm control is considered, anticoagulation is indicated regardless the thromboembolic risk of the patient (CHA<sub>2</sub>DS<sub>2</sub> VAS<sub>c</sub> score)



► Anticoagulation is mandatory for every AF patient with a rhythm control strategy

# Anticoagulation when AF onset

**#2 : Anticoagulation when AF onset is not an emergency in most cases but has to be discussed before the patient discharge**

The short-term thromboembolic risk in AF is pretty **low** : the anticoagulation can be delayed along the hospitalization ( significant difference compared with venous thromboembolic events)

If an early rhythm control is considered, the anticoagulation should be started as soon as possible

CHA <sub>2</sub> DS <sub>2</sub> -VASc Score	Annual Risk of Stroke (%)
0.....	0
1.....	1.3
2.....	2.2
3.....	3.2
4.....	4.0
5.....	6.7
6.....	9.8
7.....	9.6
8.....	6.7
9.....	15.2

# Anticoagulation when AF onset

**#3 : The assessment of the thromboembolic score remains relevant when AF onset**

Components of CHA<sub>2</sub>DS<sub>2</sub>-VAS<sub>c</sub>

Risk Factor	Score
<b>C</b> ardiac failure	1
<b>H</b> TN	1
<b>A</b> ge ≥75 y	2
<b>D</b> iabetes	1
<b>S</b> troke	2
<b>V</b> ascular disease (MI, PAD, aortic atherosclerosis)	1
<b>A</b> ge 65-74 y	1
<b>S</b> ex <b>c</b> ategory (female)	1

CHA<sub>2</sub>DS<sub>2</sub> VAS<sub>c</sub> score and AF duration are 2 items conditioning the feasibility and the safety of an early rhythm control strategy.

The anticoagulation duration after cardioversion depends on CHA<sub>2</sub>DS<sub>2</sub> VAS<sub>c</sub> score :

- Short term OAC (4 weeks) when CHA<sub>2</sub>DS<sub>2</sub> VAS<sub>c</sub> 0(M) 1(F)
- Long term OAC for other patients

# Anticoagulated patient and AF

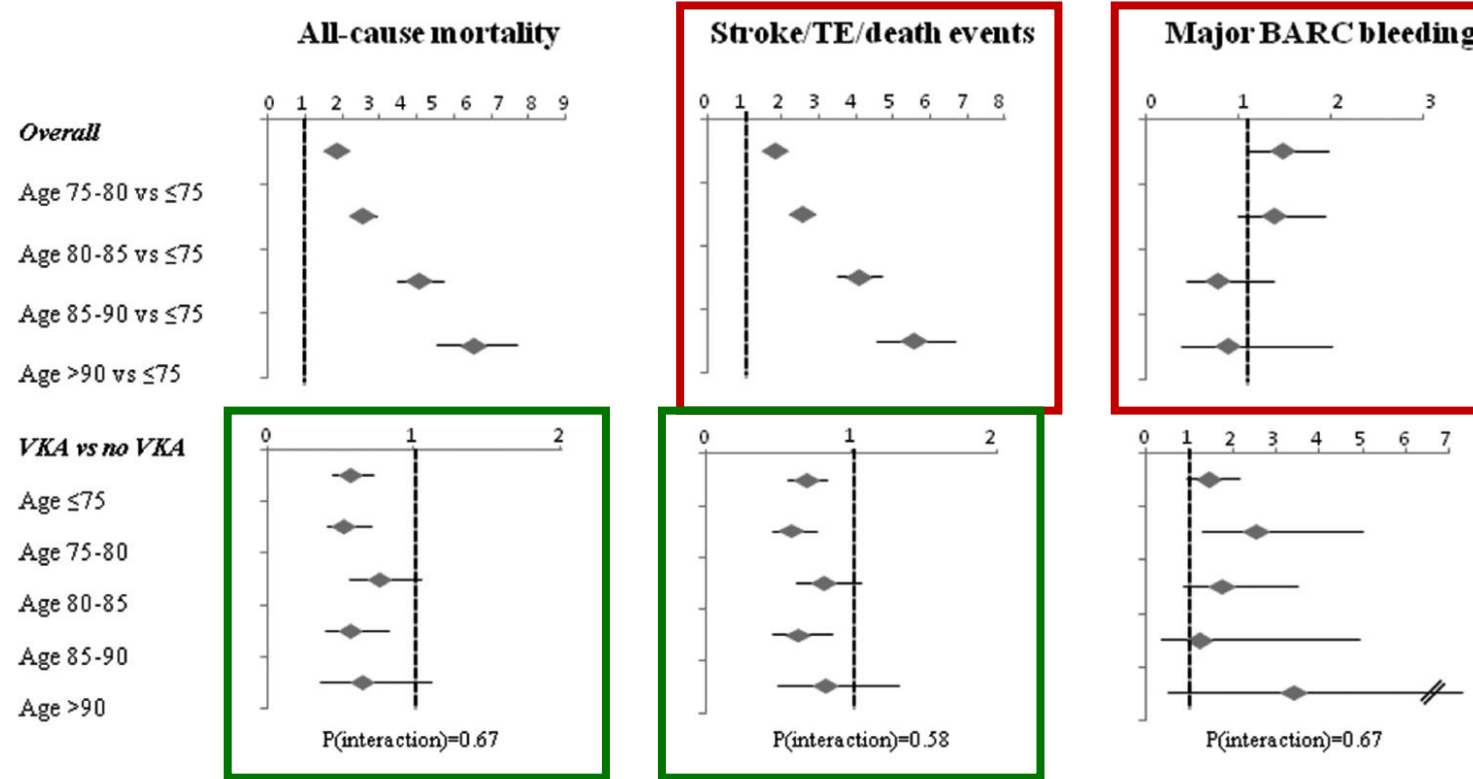
---

## Check-list of some relevant questions

### #1 : Is there an indication for OAC prescription ?

- Regarding AF : assessment of CHA<sub>2</sub>DS<sub>2</sub> VAS<sub>c</sub> score
- Another indication for OAC

# Specific settings : AF and the elderly



Elderly patients with AF have a higher risk of stroke and a less significant higher risk of bleeding

The benefits of AOC therapy for stroke, systemic embolism and mortality is present regardless of increasing age

# Specific settings : AF and the elderly

## Strokes and Systemic embolism

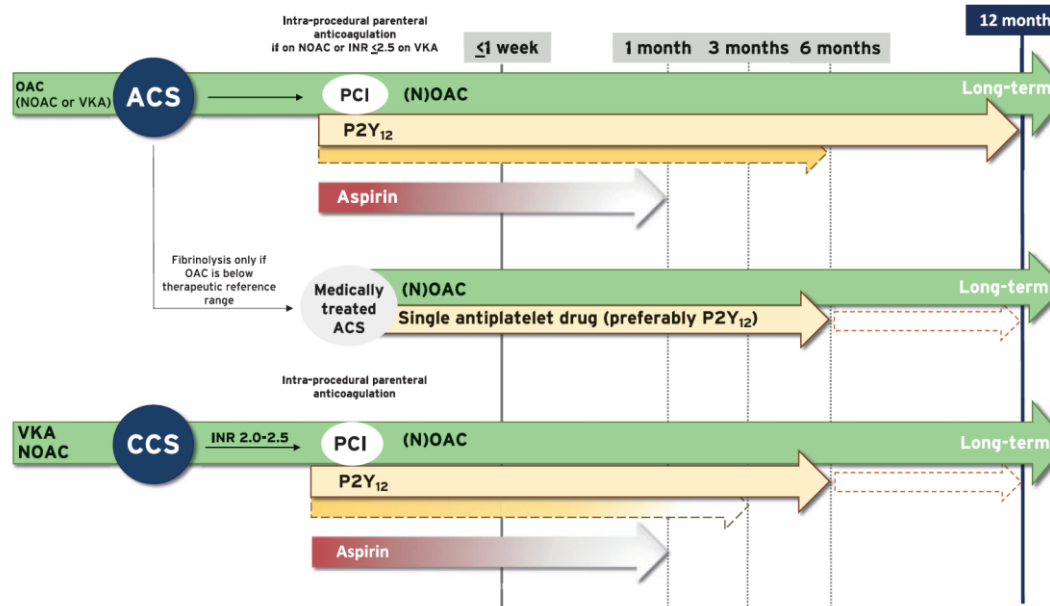
A	Pooled NOAC (events)	Pooled warfarin (events)	RR (95% CI)	P <sub>interaction</sub>
Age (years)				
<75	496/18 073	578/18 004	0.85 (0.73-0.99)	} 0.38
≥75	415/11 188	532/11 095	0.78 (0.68-0.88)	

## Major bleeding

Age (years)				
<75	1317/18 460	1543/18 396	0.79 (0.67-0.94)	} 0.28
≥75	1328/10 771	1346/10 686	0.93 (0.74-1.17)	

NOACs are efficient and safe in elderly patients with AF

# Specific settings : AF and CAD



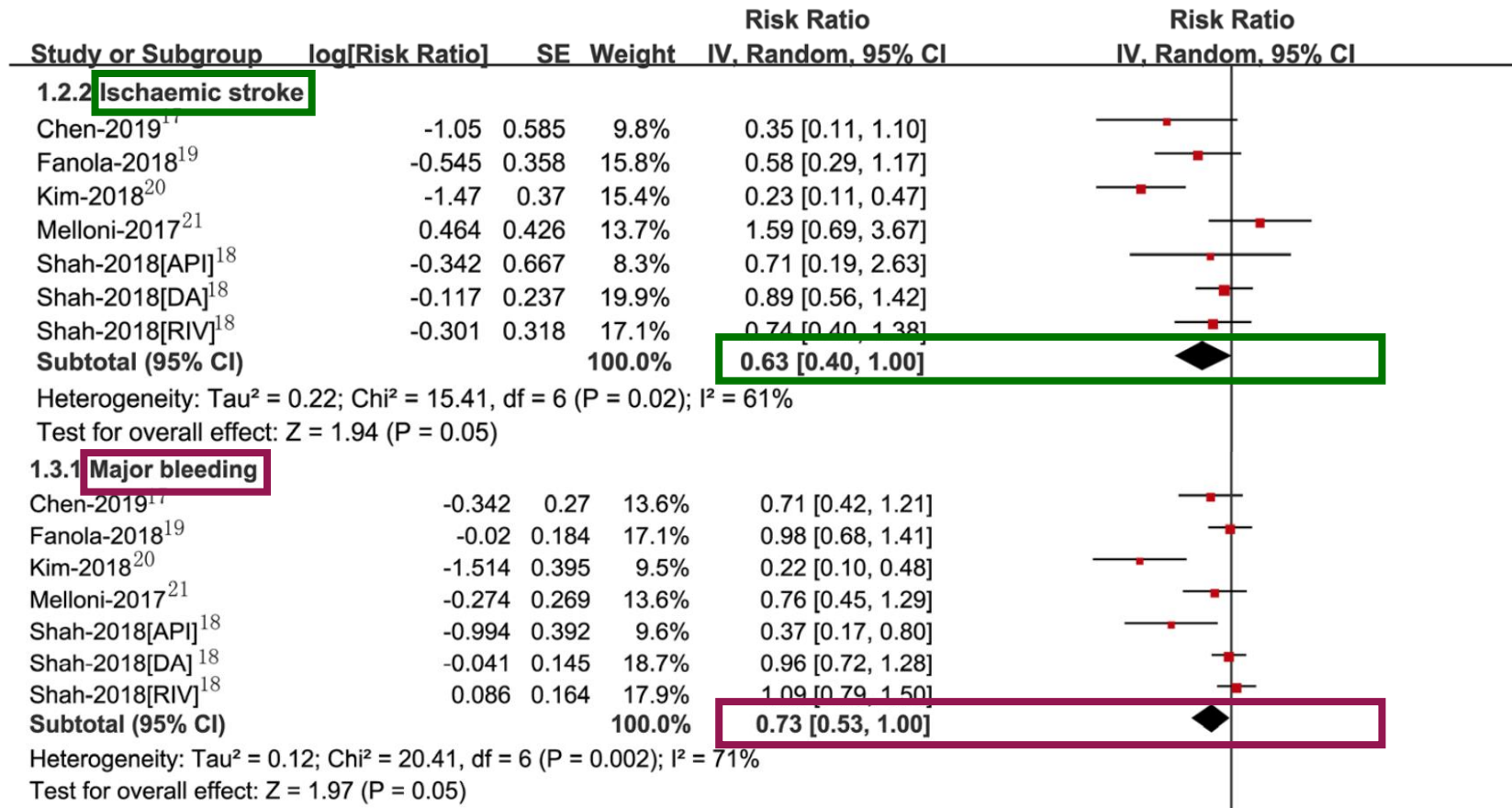
NOACs can be the only antithrombotic therapy in patients with AF and CAD

But the antithrombotic strategy depends on the type of coronary revascularization, bleeding and thromboembolic risk

**Always call the cardiologist before antiplatelet removal**



# Specific settings : AF and cancer



NOACs seem to be **efficient** and **safe** in patients with AF and cancer



# Take away messages

- ▶ NOACs are recommended in AF in preference to other OACs
- ▶ Anticoagulation is indicated regardless the  $CHA_2DS_2$   $VAS_c$  score when a rhythm control is considered
- ▶ NOACs indication and dose should be discussed for every AF patient
- ▶ NOACs seem to be efficient and safe in elderly patients and AF
- ▶ NOACs seem to be efficient and safe in patients with cancer and AF





Merci pour votre attention

