

Best Of 2020 en Rythmologie



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Avec le soutien institutionnel de



Liens d'intérêt

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*Orateur ou
consultant :*

Bayer, BMS Pfizer, Boehringer Ingelheim, Medtronic,
Novartis, XO.



European Society
of Cardiology

European Heart Journal (2020) 00, 1–126

doi:10.1093/eurheartj/ehaa612

ESC GUIDELINES

2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association of Cardio-Thoracic Surgery (EACTS)

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

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

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AF and physical activity

UK Biobank cohort, 402 406 individuals

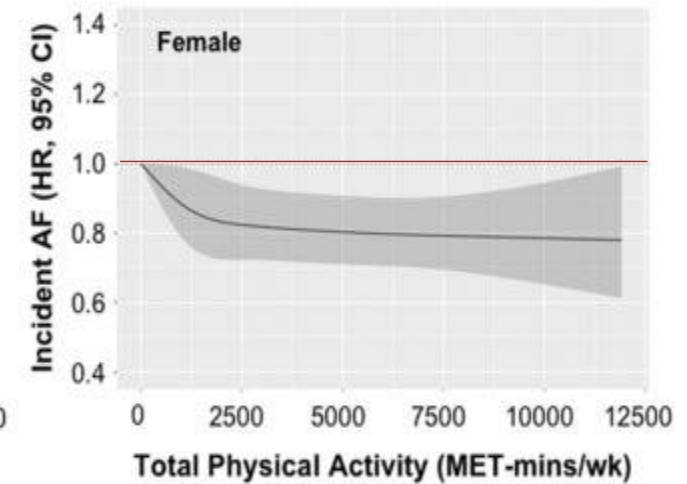
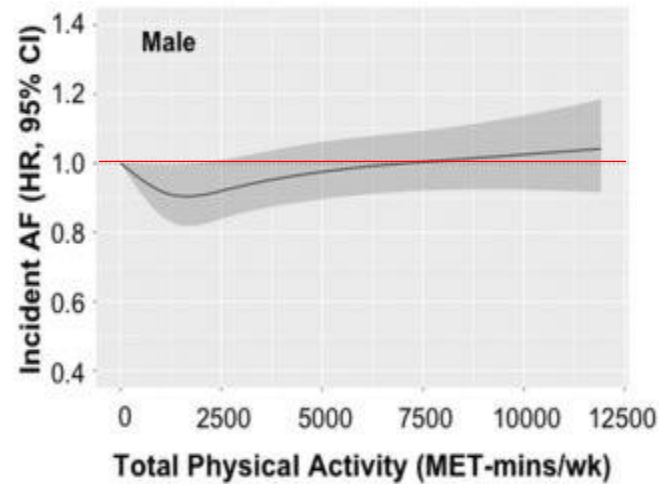
. FU: 8640 new AF

. 1500 vs. 0 MET-'/wk:

F: HR 0.85 (0.74-0.98)

M: HR 0.90 (0.82-1.00)

. p-int=0.01 for M vs F



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. **Males:**

5000 vigorous MET-'/wk:

HR 1.12 (1.01-1.25)

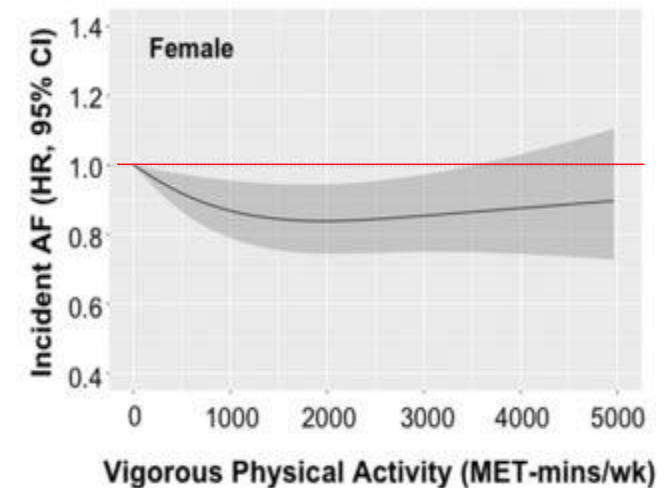
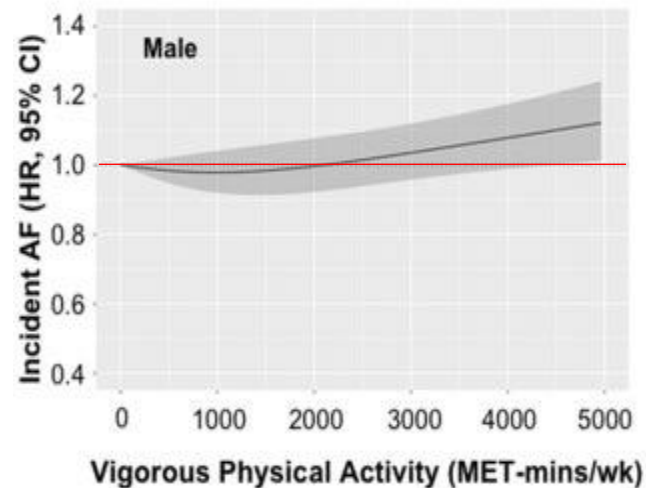
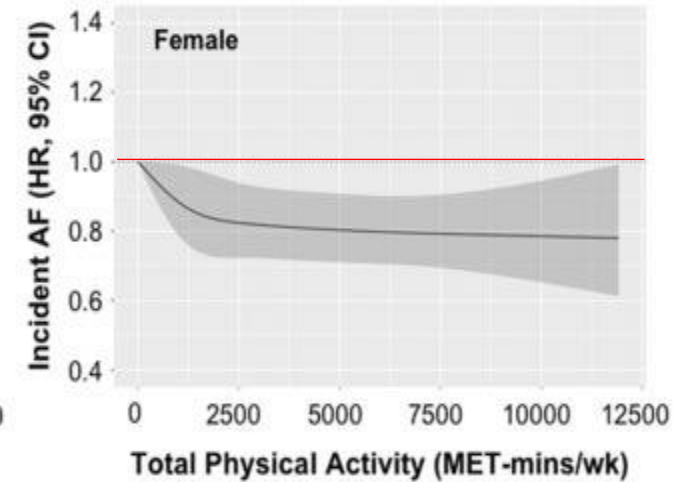
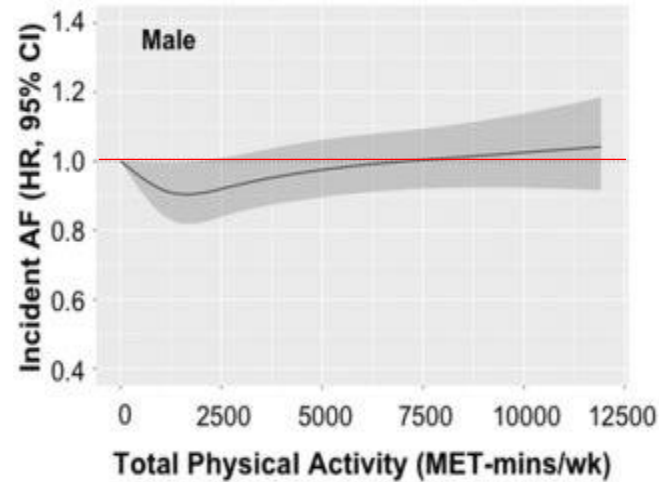


Figure 7 Potential benefits from and risks of screening for AF

AF SCREENING

RISKS

- Abnormal results may cause anxiety
- ECG misinterpretation results may lead to overdiagnosis and overtreatment
- ECG may detect other abnormalities (true or false positives) that may lead to invasive tests and treatments that have the potential for serious harm (e.g., angiography / revascularisation with bleeding, contrast-induced nephropathy and allergic reactions to the contrast)

BENEFITS

Prevention of:

- Stroke/SE using OAC in patients at risk
- Subsequent onset of symptoms

Prevention/reversal of:

- Electrical/mechanical atrial remodelling
- AF-related haemodynamic derangements
- Atrial and ventricular tachycardia-induced cardiomyopathy

Prevention/reduction of:

- AF-related morbidity; hospitalization; mortality

Reduction of:

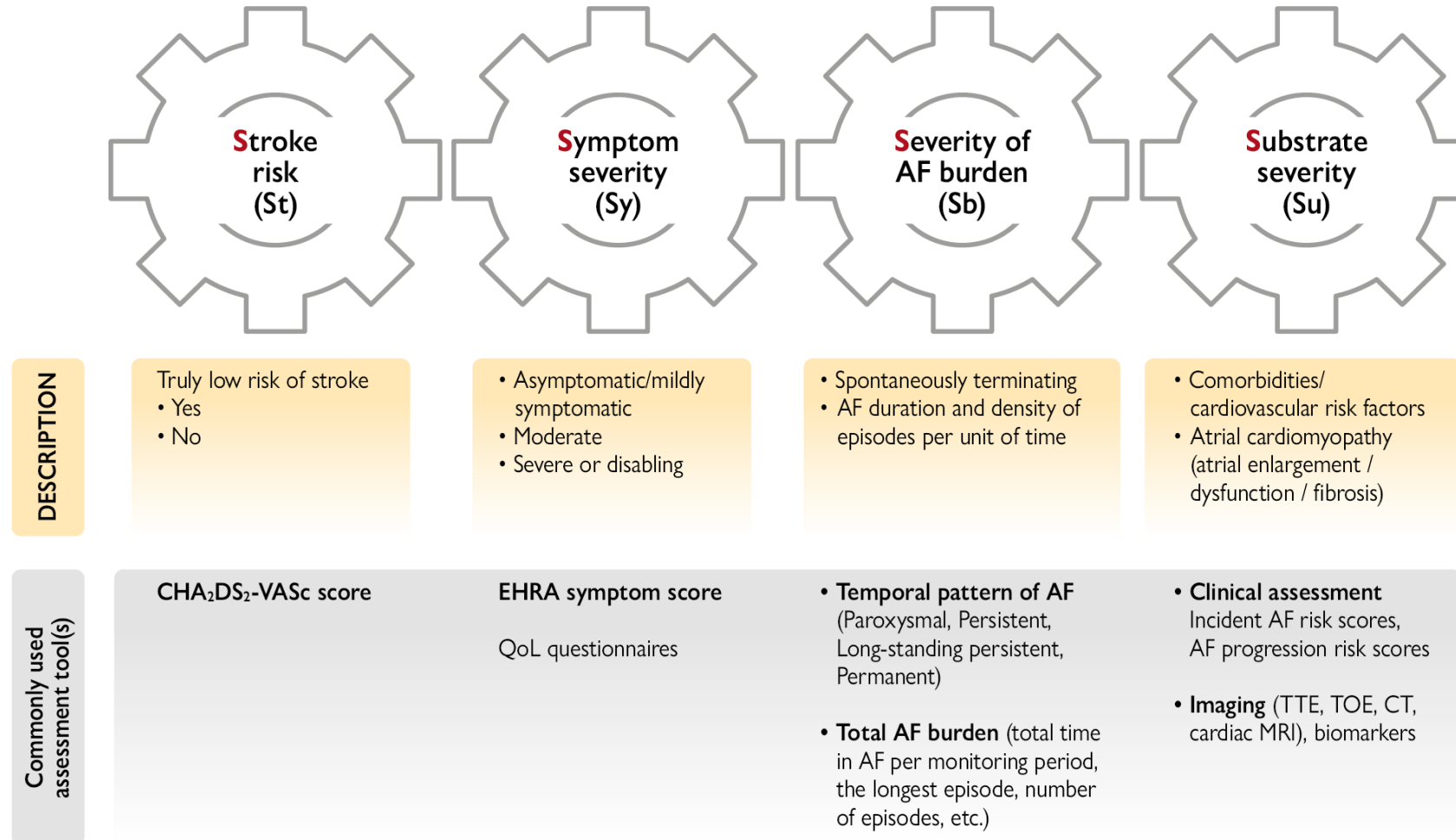
- The outcomes associated with conditions / diseases associated with AF that are discovered and treated as a consequence of the examinations prompted by AF detection

AF screening

- Opportunistic screening for AF is recommended in patients ≥ 65 years old, hypertensive patients, and in patients with obstructive sleep apnea.
- Systematic ECG screening should be considered to detect AF in patients aged ≥ 75 years, or those at high risk of stroke.

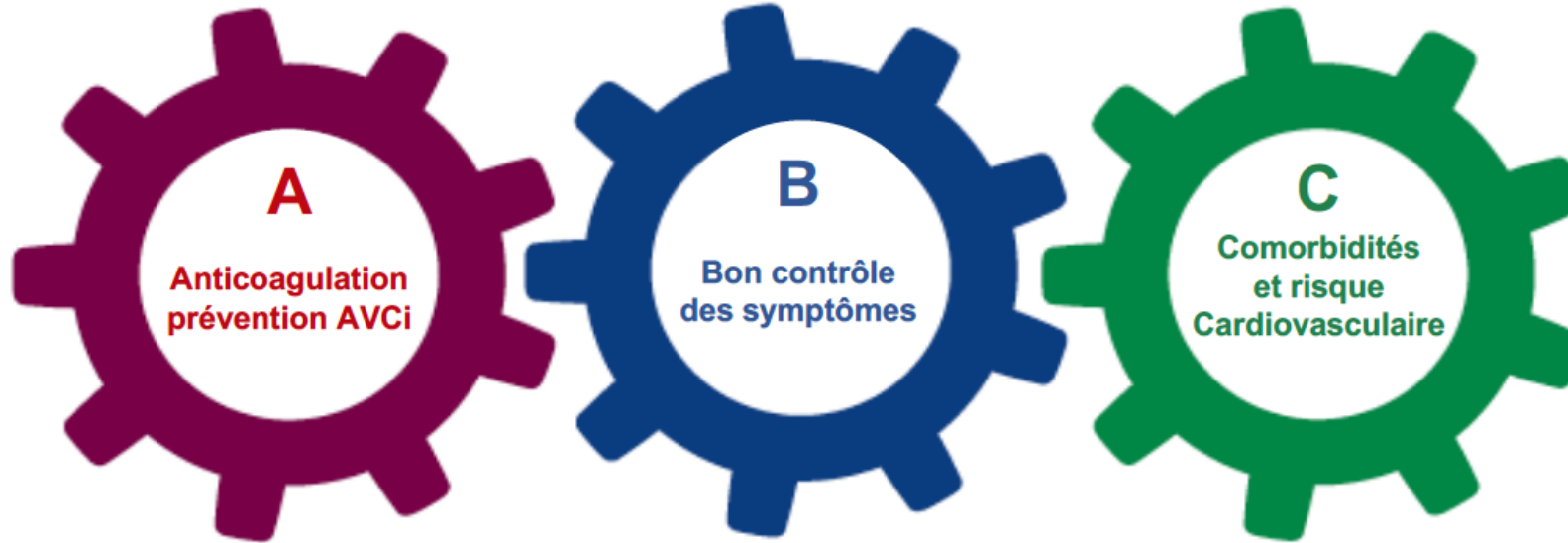
CC : Confirmer et Caractériser la FA

Characterize AF : 4S



FA : CC et ABC

Traiter la FA : ABC



1. Identifier patients à bas risque
CHA₂DS₂-VASc 0 (h), 1 (f)

2. Prévention du risque si
CHA₂DS₂-VASc ≥1 (h), 2 (f)

Évaluer risque hémorragique et
ses facteurs de risque
modifiables

3. Anticoagulant (AOD ou AVK
avec TTR >70%)

Évaluation des
symptômes, QdV et
avis du patient

Optimisation du
contrôle de la FC

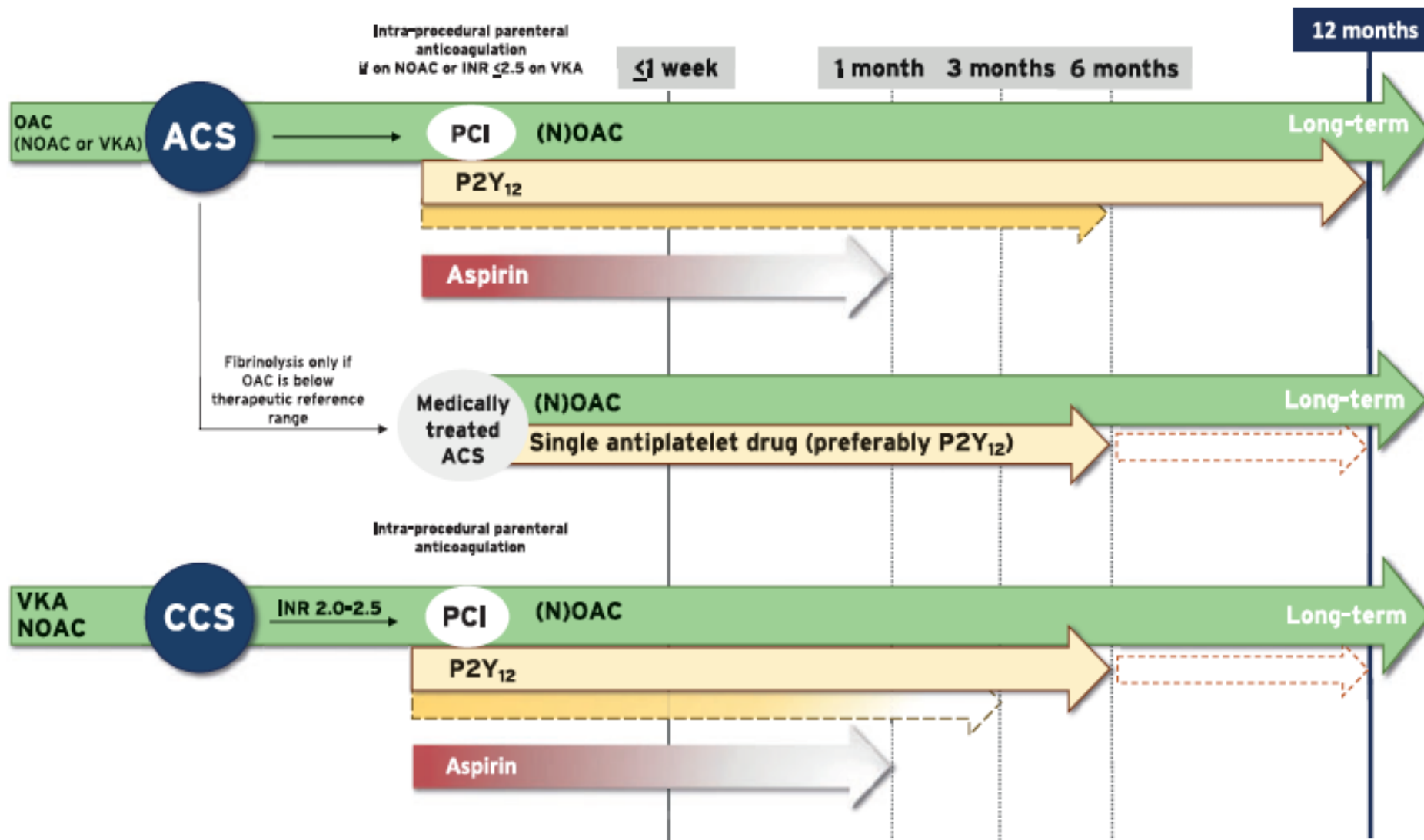
Envisager un
contrôle du rythme
(CEE, AA, ablation)

Comorbidités et
prise en charge des
facteurs de risque
Cardiovasculaires

Mode de vie
(réduction de
l'obésité, exercice
physique, réduction
de l'alcool, etc.)

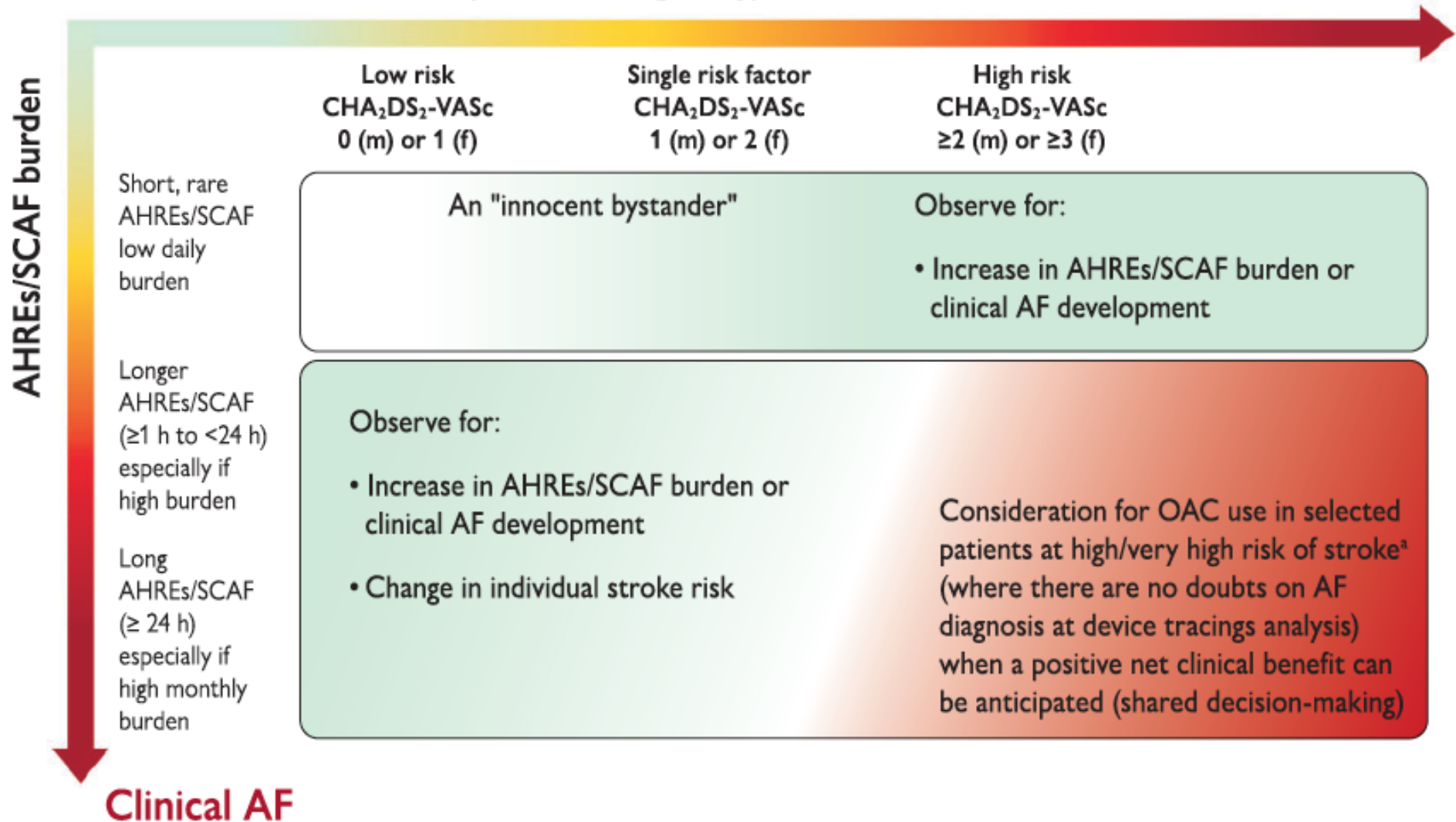
“ABC”: A = Avoid Stroke, Anticoagulation

AF, ACS
PCI/ stenting



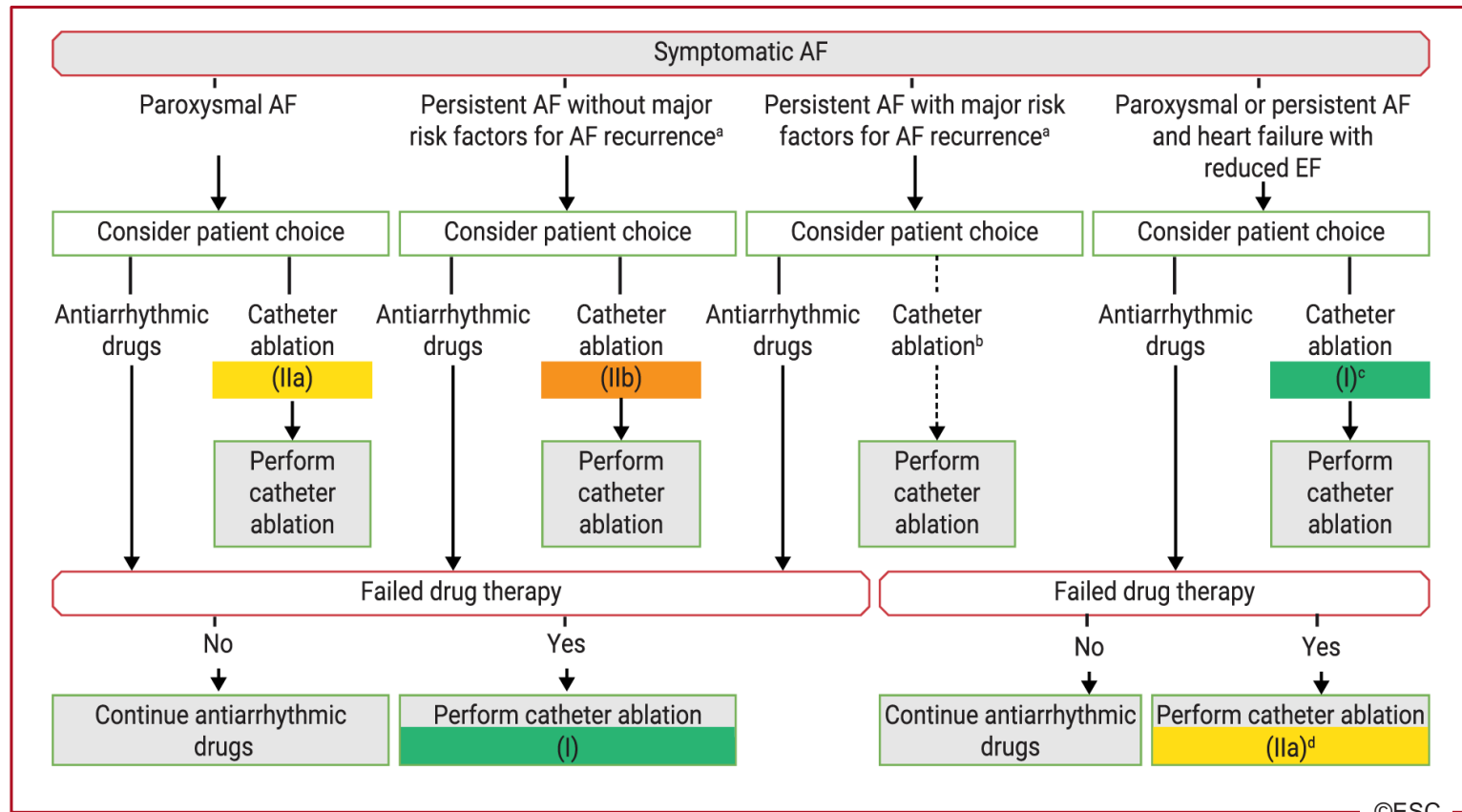
Subclinical AF and AHRE

THE RISK OF STROKE (*re-assess regularly*)



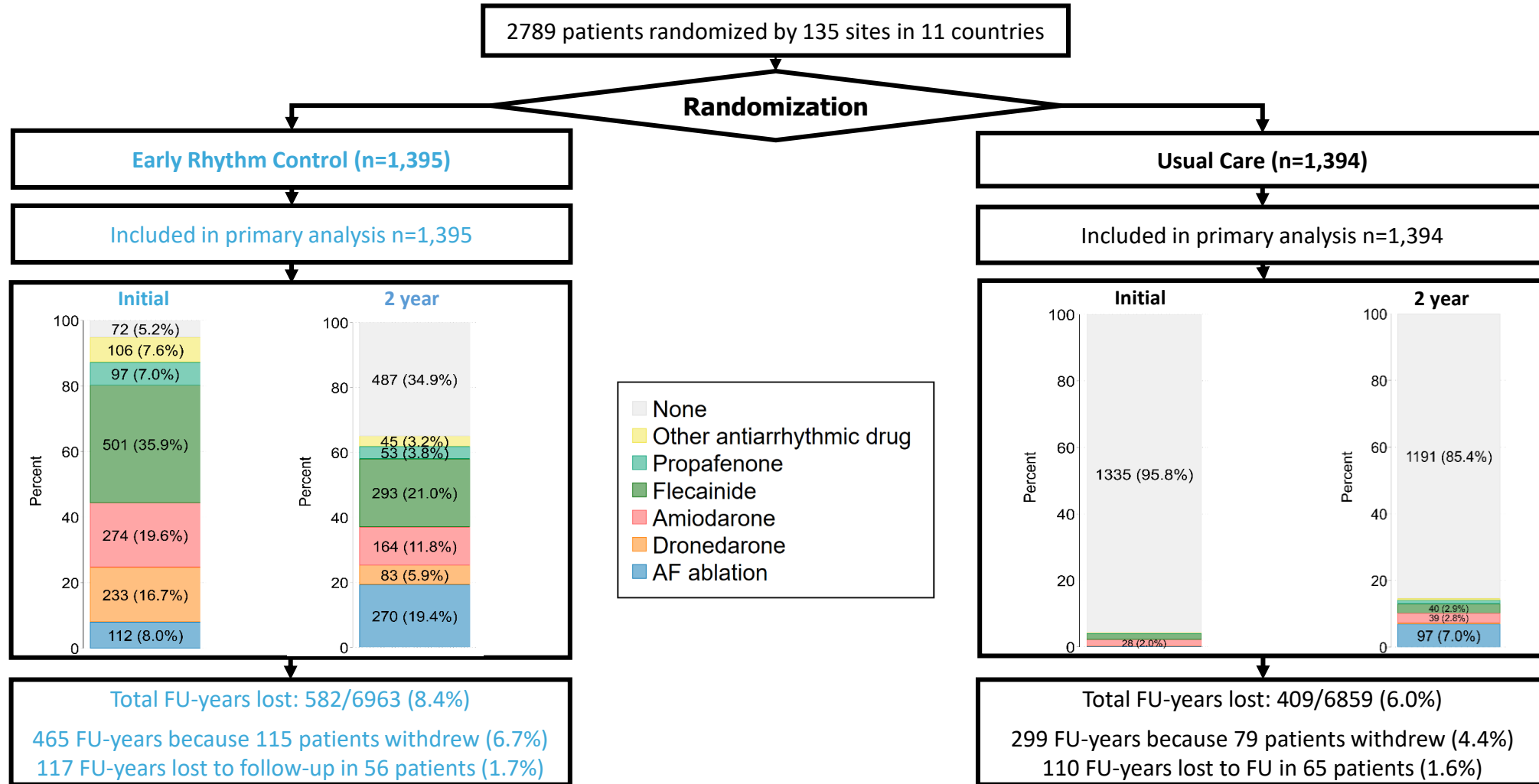
'ABC' : B = Better symptom control

Rhythm control and AF catheter ablation

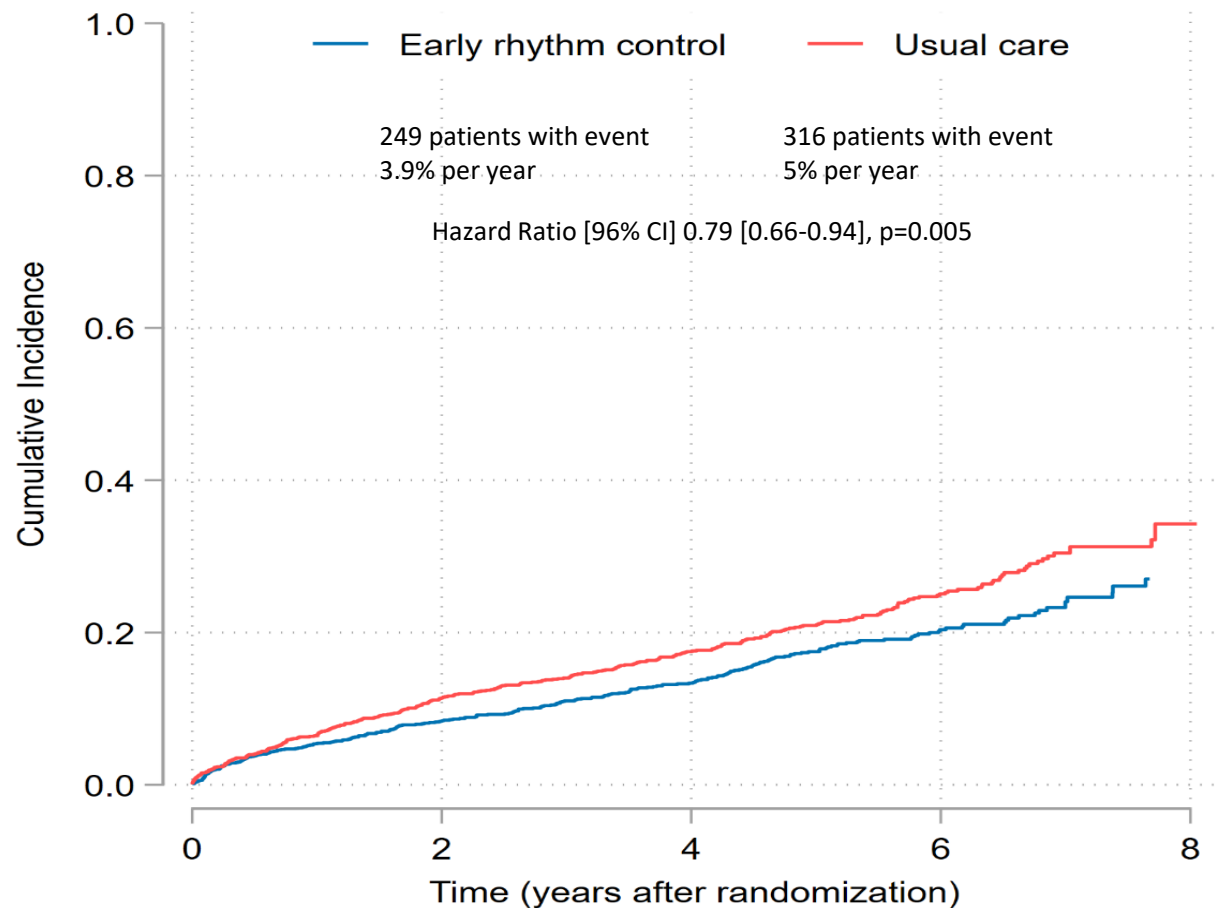


^aSignificantly enlarged LA volume, advanced age, long AF duration, renal dysfunction, and other cardiovascular risk factors. ^bIn rare individual circumstances, catheter ablation may be carefully considered as first-line therapy. ^cRecommended to reverse LV dysfunction when tachycardiomyopathy is highly probable. ^dTo improve survival and reduce hospitalization.

EAST – AFNET 4 CONSORT diagram



EAST – AFNET 4. First primary outcome (CV death, Stroke, HF hospitalization, ACS hospitalization)



Patients at risk

Early rhythm control	1395	1193	913	404	26
Usual care	1394	1169	888	405	34

EAST – AFNET 4

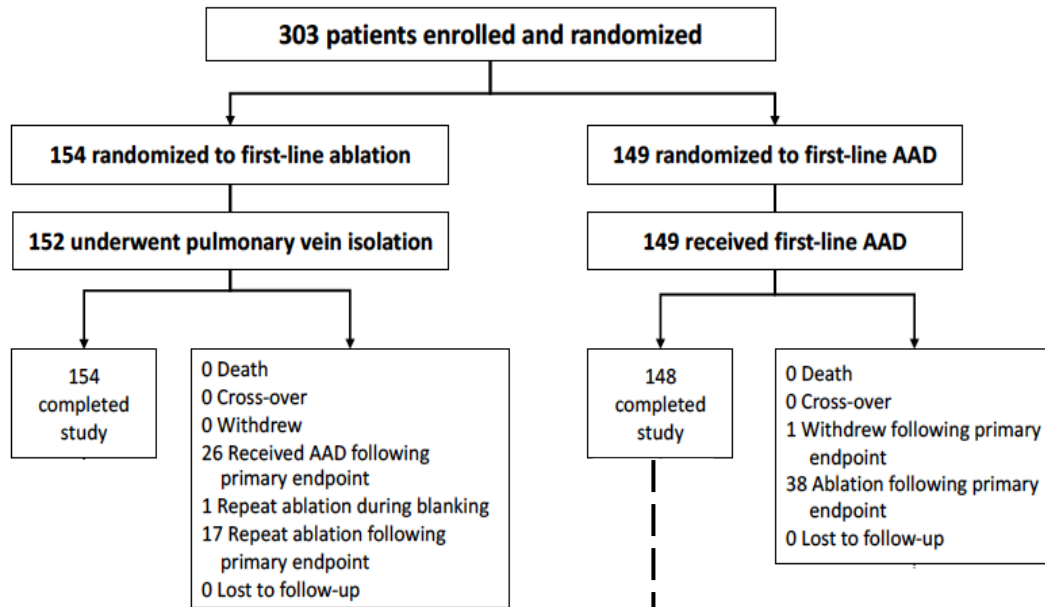
Analysis of primary and secondary outcomes

- CV death: 1 vs. 1.3/100 P-Y (HR 0.72, 95% CI 0.52-0.98)
- Stroke: 0.6 vs. 0.9/100 P-Y (HR 0.65, 95% CI 0.44-0.98)
- HF hospitalization: 2.1 vs. 2.6/100 P-Y
- ACS hospitalization: 0.8 vs. 1.0/100 P-Y

- **Secondary outcomes for rhythm control vs. usual care:**
- Nights spent in the hospital: 5.8 vs. 5.1 days
- Change in left ventricular ejection fraction at 2 years: 1.5 vs. 0.8%
- Sinus rhythm: 82.1% vs. 60.5% ($p < 0.05$)
- All-cause mortality: 9.9% vs. 11.8%
- Adverse event related to rhythm-control therapy: 4.9% vs. 1.4%

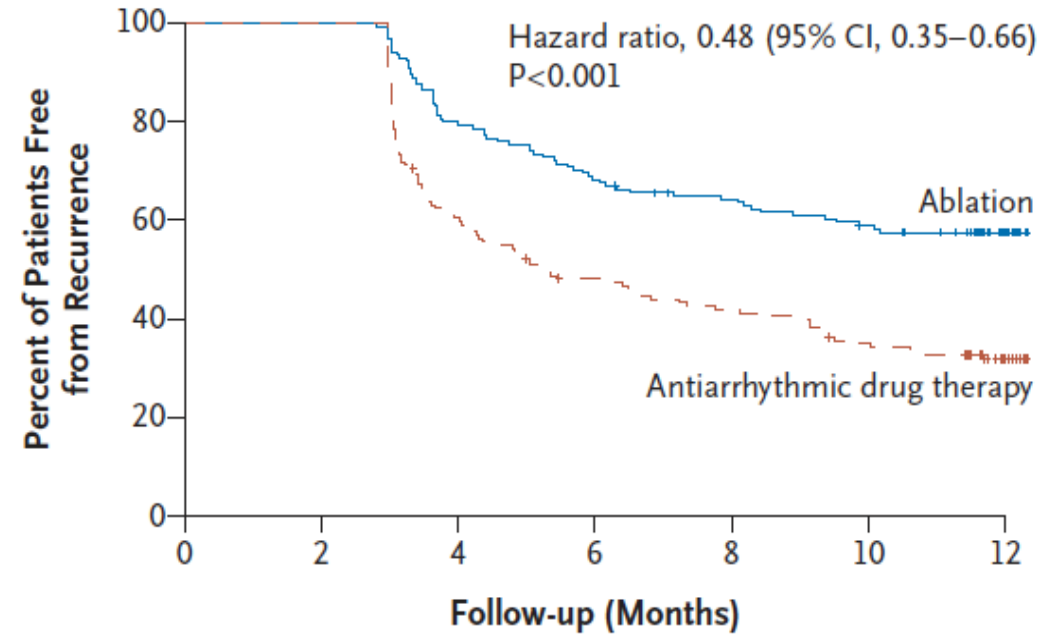
EARLY-AF

Recurrence of Atrial Tachyarrhythmia over Time



AAD use:

	Used first N (%)	Used second N (%)
Flecainide	114 (76.5%)	10 (6.7%)
Propafenone	7 (4.7%)	9 (6.0%)
Sotalol	23 (15.4%)	17 (11.4%)
Dronedaron	5 (3.4%)	7 (4.7%)
Amiodarone	0	3 (2.0%)
Total	149 (100%)	46 (30.9%)



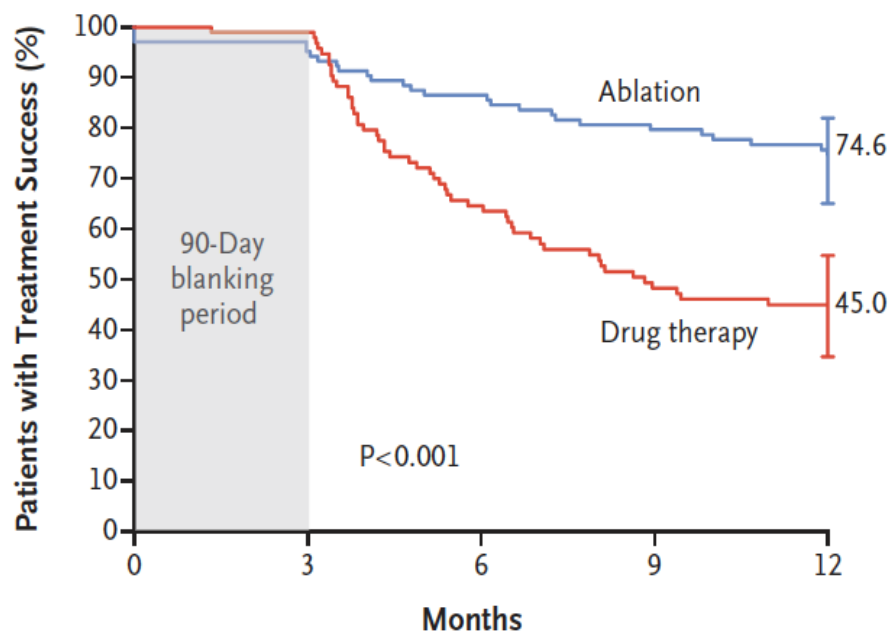
No. at Risk

	0	2	4	6	8	10	12
Ablation	154	154	123	105	96	86	55
Antiarrhythmic drug therapy	149	149	89	69	60	49	27

Ablation experience		Event No./Total No.	Hazard Ratio
High volume centers		123/231	0.42 (0.29, 0.60)
Low volume centers		44/72	0.77 (0.42, 1.40)

STOP AF First

Treatment success: freedom from failure of the procedure, any subsequent AF surgery or ablation in the left atrium; or atrial arrhythmia recurrence, cardioversion, or use of class I or III AADs (ablation group only) outside the 90-day blanking period



No. at Risk	0	3	6	9	12
Ablation	104	99	88	81	70
Drug therapy	99	93	60	44	39

Table 3. Primary Efficacy End-Point Events within 12 Months.*

Event	Ablation (N=104)	Drug Therapy (N=99)
	<i>no. of patients</i>	
Primary efficacy end-point event	26	51
Initial failure of the procedure	3	—
Documented atrial fibrillation, atrial tachycardia, or atrial flutter after 90 days	21	35
Ablation in left atrium†	0	15
Cardioversion after 90 days	0	1
Class I or III antiarrhythmic drug use after 90 days	2	—

Table 4. Serious Adverse Events.*

Serious Adverse Event	Ablation (N=104)		Drug Therapy (N=99)	
	<i>no. of events</i>	<i>no. of patients (%)</i>	<i>no. of events</i>	<i>no. of patients (%)</i>
Any serious adverse event	22	15 (14)	16	14 (14)

Arrhythmic Mitral Valve Prolapse

- Mayo Clinic 2003-11
- N = 595 patients
- Age 65±16

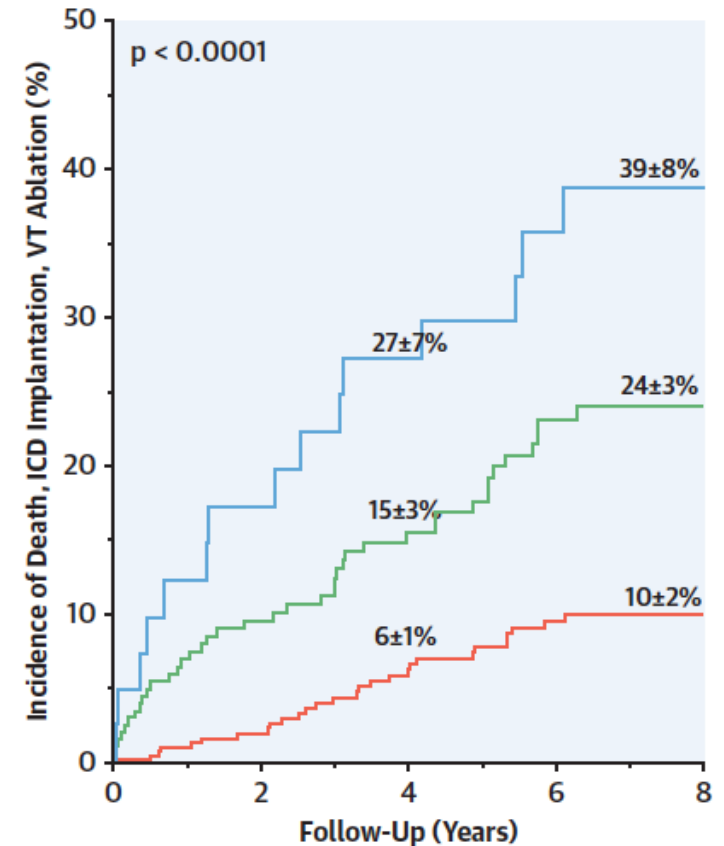
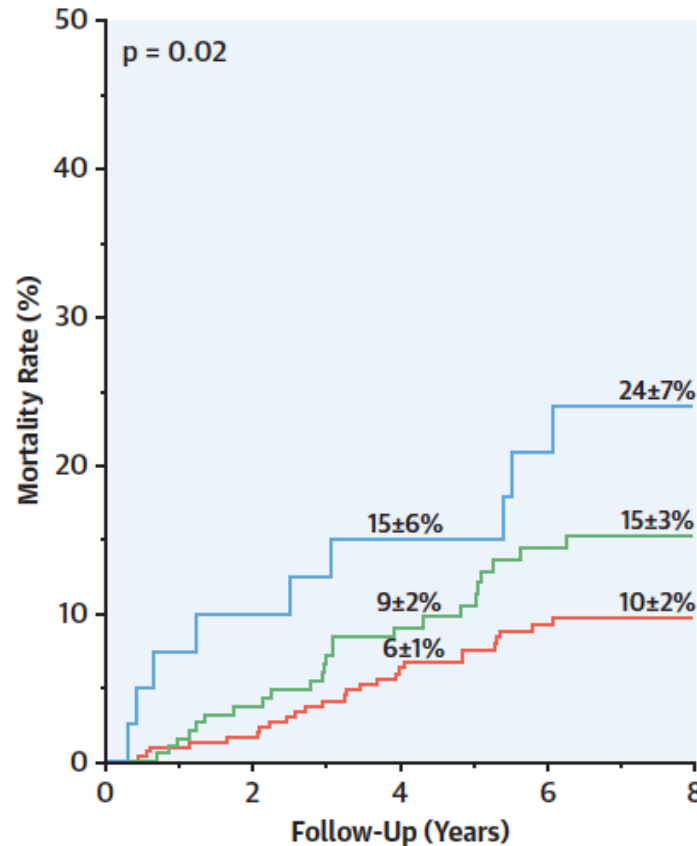
Mild V arrhythmia:

- PVCs >5%: 43%
- NSVT <180/": 27%

Severe V arrhythmia :

- NSVT >180/": 9%

HR 3.25 for death



Patients at risk

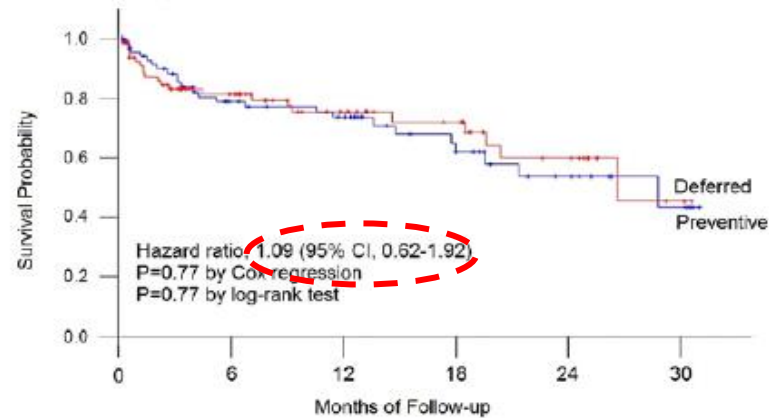
— 338	293	246	203	138	338	293	246	203	138
— 206	178	142	105	61	206	178	142	105	61
— 41	38	34	27	18	41	38	34	27	18

— No/Trivial Arrhythmia — Mild/Moderate Arrhythmia — Severe Arrhythmia

BERLIN VT: VT Ablation in ICD Patients

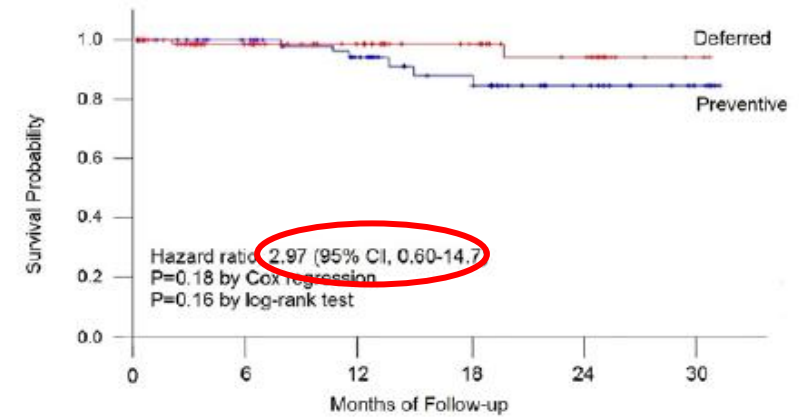
- . Stable CAD
- . LVEF 30-50%
- . documented VT
- . Randomization 1:1 to preventive or deferred ablation strategy.
- . FU 396±284 days

A Primary Endpoint



Patients at Risk	0	6	12	18	24	30
Preventive Ablation	76	45	35	19	10	4
Deferred Ablation	83	48	30	22	12	2

B Death from any Cause

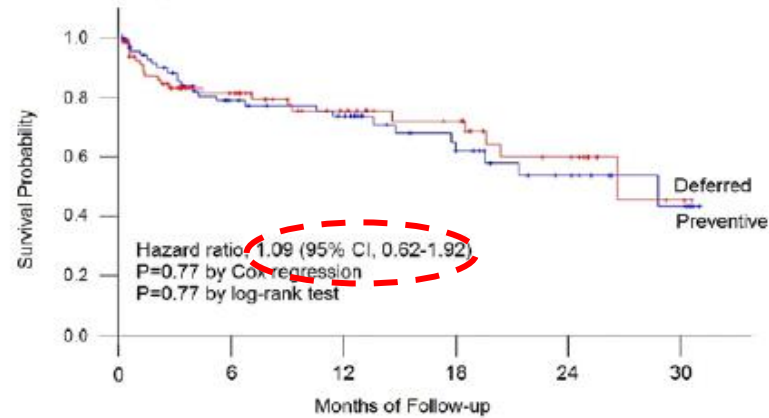


Patients at Risk	0	6	12	18	24	30
Preventive Ablation	76	59	43	25	14	5
Deferred Ablation	83	56	40	29	20	2

BERLIN VT: VT Ablation in ICD Patients

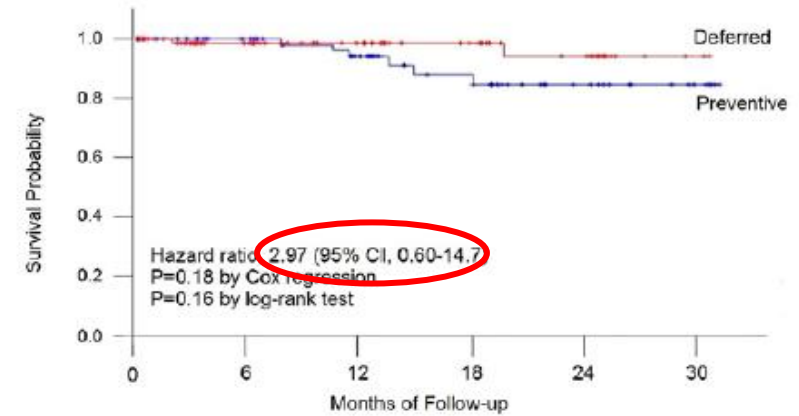
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A Primary Endpoint



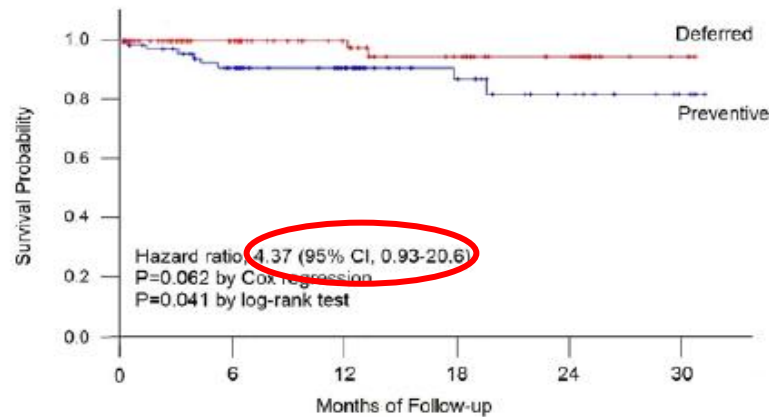
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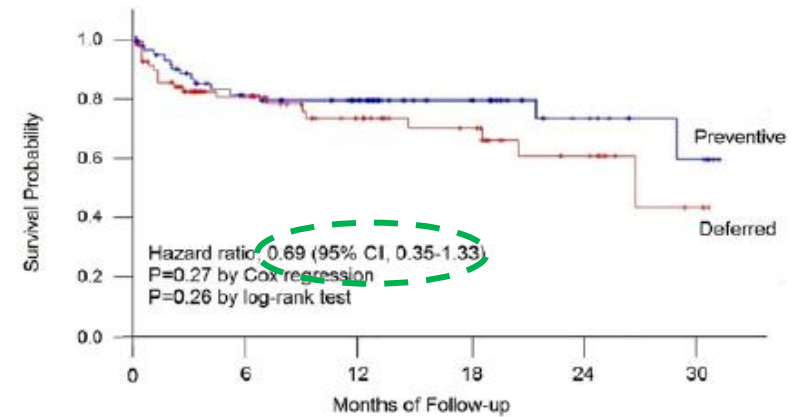


Patients at Risk	0	6	12	18	24	30
Preventive Ablation	76	59	43	25	14	5
Deferred Ablation	83	56	40	29	20	2

C Hospitalization for Worsening Heart Failure



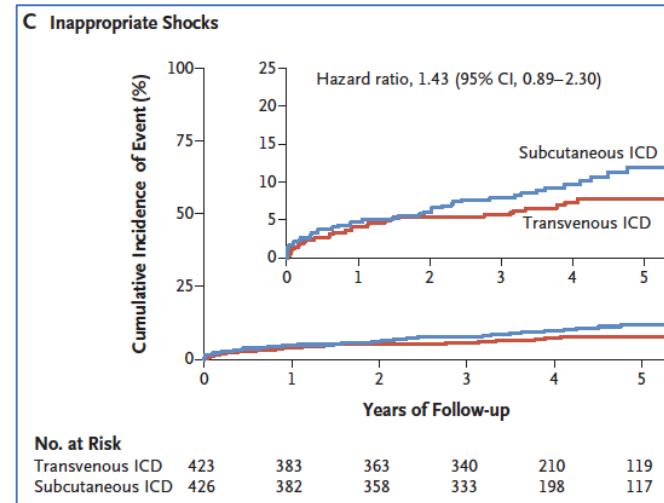
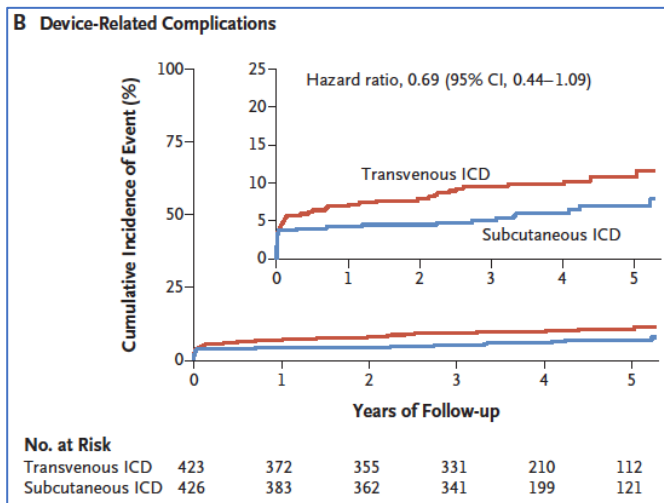
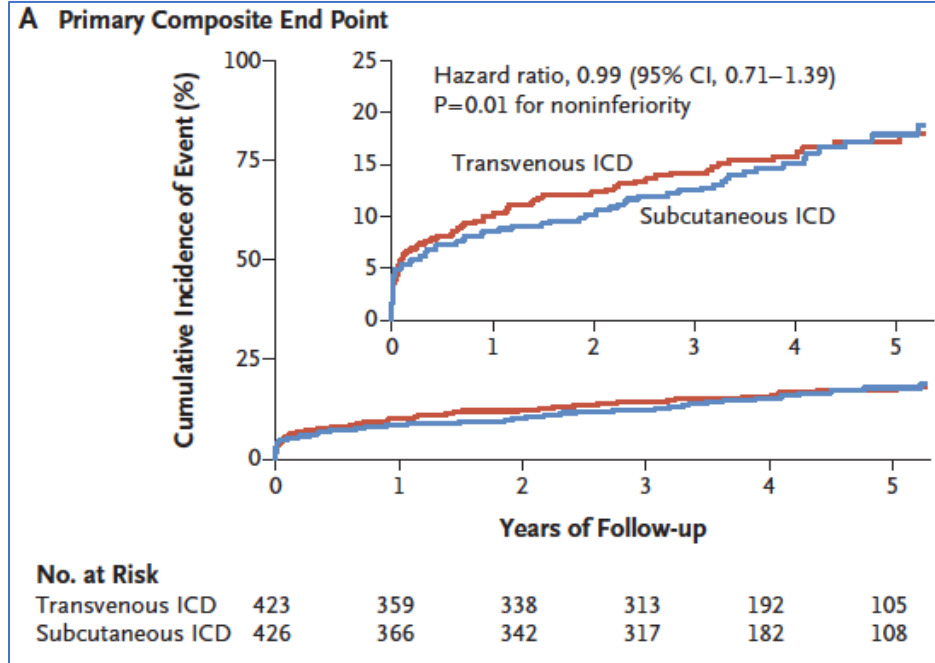
D Hospitalization for Ventricular Arrhythmia (VT/VF)



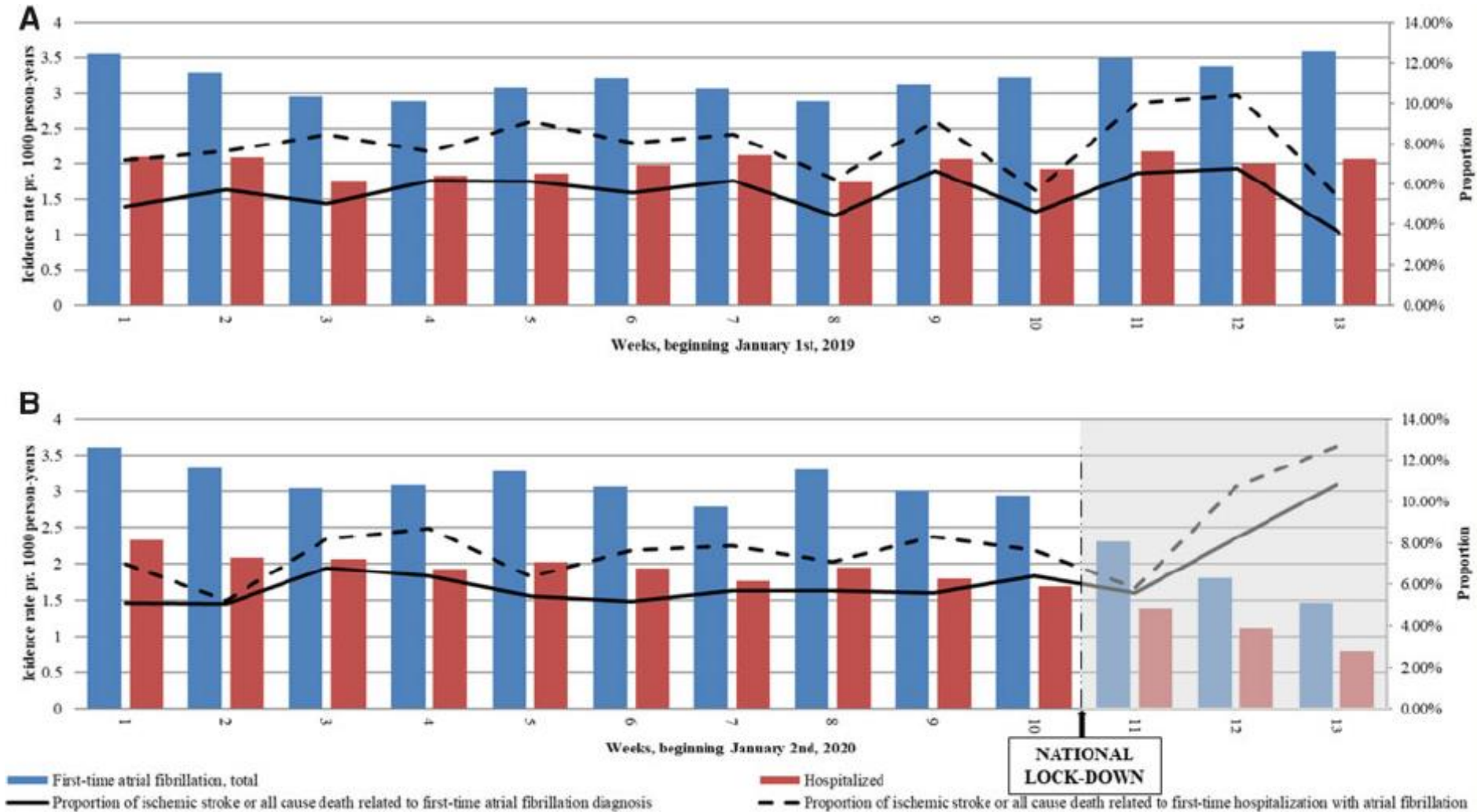
Subcutaneous or Transvenous ICD

PRAETORIAN

- 849 patients
- Median age 63
- CAD 69%
- Secondary prevention 19%
- Median FU 49 months

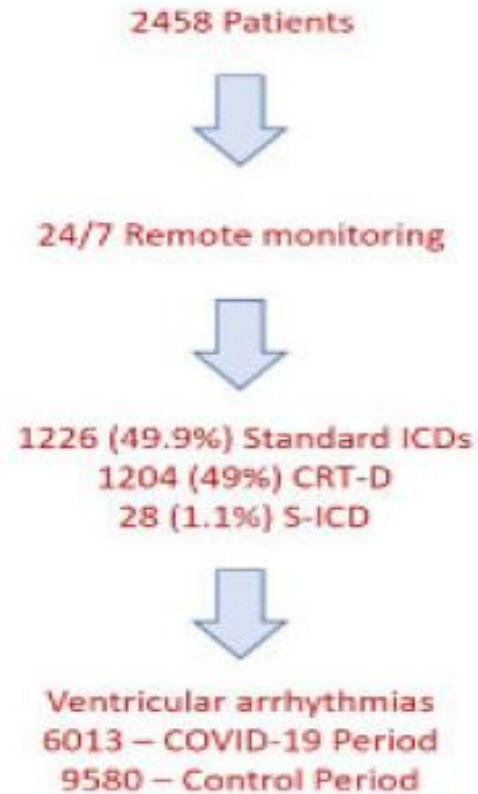
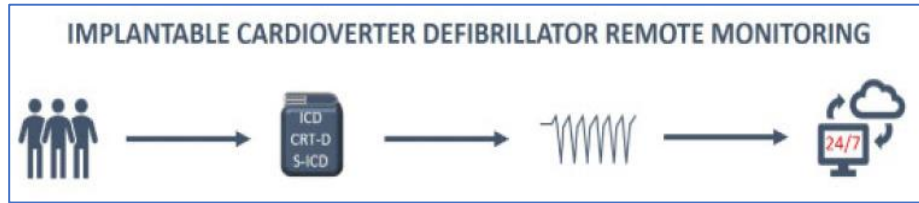


COVID-19: new onset AF with lockdown (Denmark)

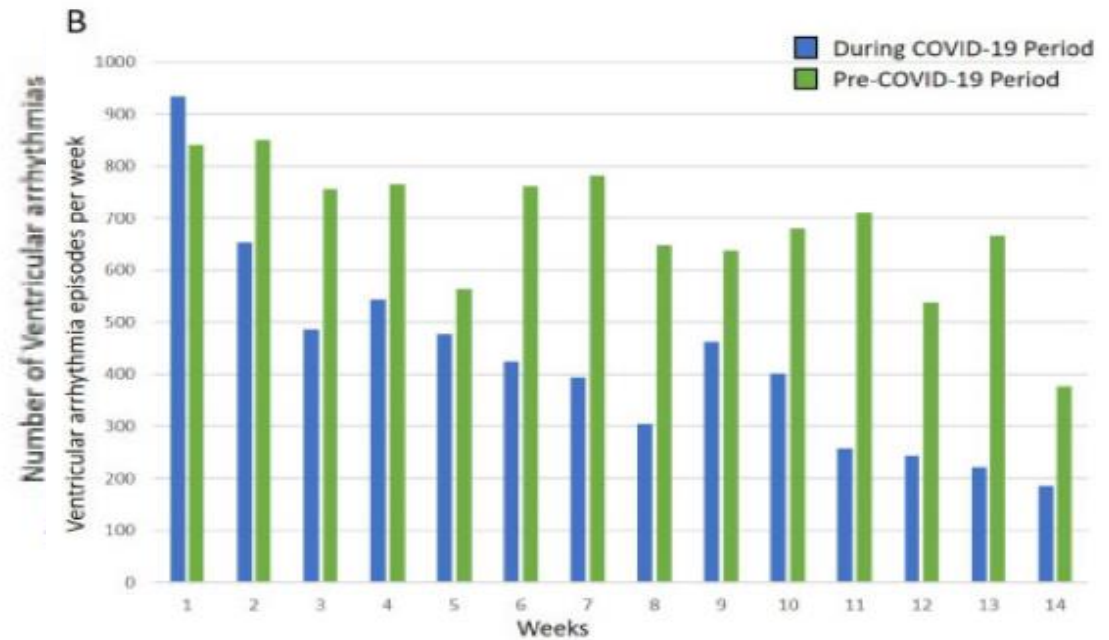


- 47% drop in Nb of new AF (562 vs. 1053)
- Adjusted OR of related event (isch. stroke or all-cause death) 2020 vs 2019 = **1.41** (0.93–2.12)

COVID-19: VT/VF in ICD patients (USA)



COVID-19 & Control Periods

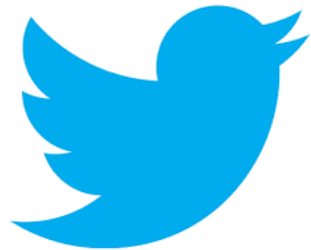


32% reduction in VA during COVID-19

- Fewer ventricular arrhythmias during COVID-19: incident rate ratio (IRR) 0.68, 95% CI 0.58–0.79, $p < 0.001$



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