HART CENTRUM

Update in de behandeling en ablatie van atriumfibrillatie

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cardioloog - elektrofysioloog

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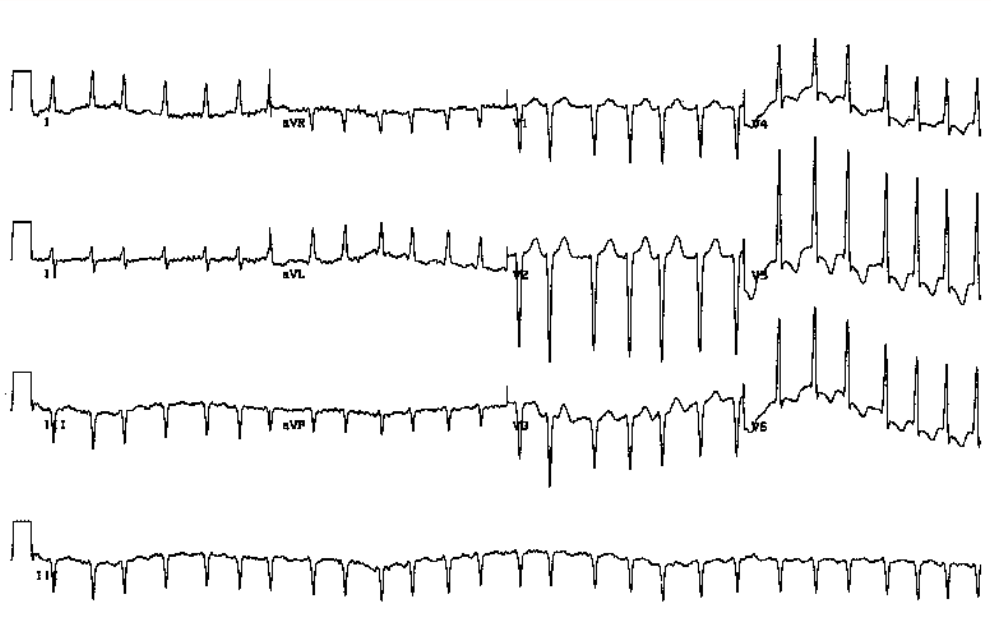
Casus: man 48j

- <u>Cardiovasculaire risicofactoren</u>:
  Hypertensie, BMI 28kg/m^2
- <u>Medicatie</u>: perindopril/amlodipine

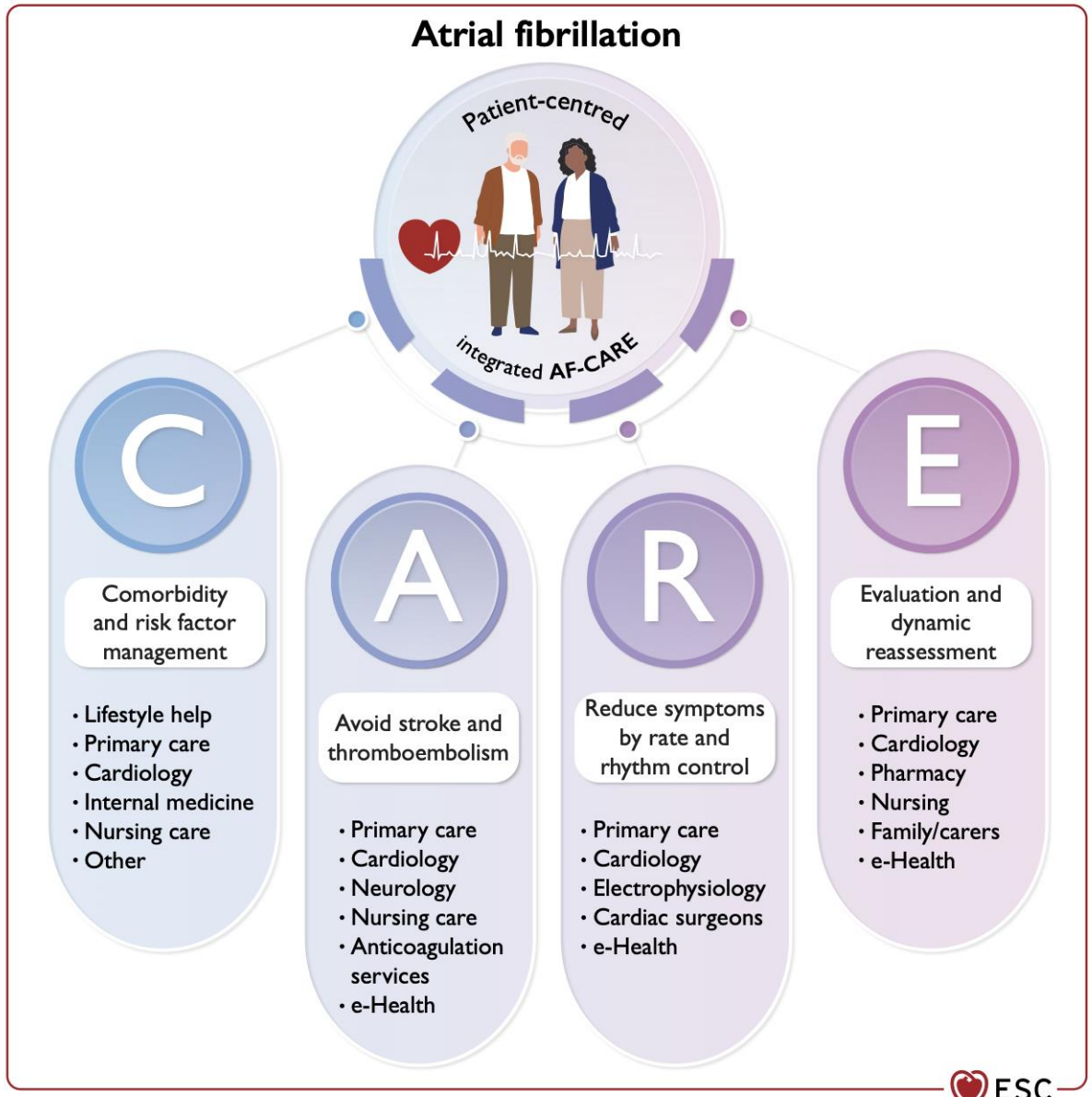
- Sinds laatste 2 jaar ***palpitaties*** gepaard met ***thoracaal ongemak***
- Duur en frequentie episodes **progressief**: nu 1x per week, tot 1 à 2 uur durend

ECG:



Diagnose: **paroxysmale VKF**

Hoe behandelen we deze patiënt?



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2024 ESC Guidelines for the management of AF

C

Comorbidity and risk factor management

Hypertension	Heart failure	Overweight or obese	Obstructive sleep apnoea	Alcohol
Blood pressure lowering treatment (Class I)	Diuretics for congestion (Class I)	Weight loss (target 10%)[a] (Class I)	Management of OSA[a] (Class IIb)	Reduce to ≤3 drinks per week (Class I)
BD <138/80mmHg	Appropriate HFrEF medical therapy (Class I)	Bariatric surgery if rhythm control[a] (Class IIb)		
Diabetes mellitus			**Exercise capacity**	**Other risk factors/ comorbidities**
Effective glycaemic control[a] (Class I)	SGLT2 inhibitors (Class I)		Tailored exercise programme (Class I)	Identify and manage aggressively[a] (Class I)

Van belang voor:

- preventie VKF
- ritmecontrole / VKF recurrece
- symtoomcontrole
- cardiovasculaire prognose

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2024 ESC Guidelines for the management of AF

A Avoid stroke and thromboembolism

Risk of thrombo-embolism	Use locally-validated risk score or CHA_2DS_2-VA	Choice of anticoagulant	Assess bleeding risk	Prevent bleeding
Start oral anticoagulation (Class I)	OAC if CHA_2DS_2-VA score = 2 or more (Class I)	Use DOAC, except mechanical valve or mitral stenosis (Class I)	Assess and manage all modifiable risk factors for bleeding (Class I)	Do not combine antiplatelets and OAC for stroke prevention (Class III)
Temporal pattern of AF not relevant (Class III)	OAC if CHA_2DS_2-VA score = 1 (Class IIa)	If VKA: Target INR 2.0–3.0; (Class I) >70% INR range; (Class IIa) or switch to DOAC (Class I)	Do not use risk scores to withhold anticoagulation (Class III)	Avoid antiplatelets beyond 12 months in OAC treated CCS/PVD (Class III)
Antiplatelet therapy not an alternative (Class III)				

	Acronym	Score
C	Congestive HF	1
H	Hypertension	1
A	Age ≥ 75	2
D	Diabetes Mellitus	1
S	Stroke, TIA, TE	2
V	Vascular disease (prior MI, PAD, aortic plaque)	1
A	Age 65-74	1

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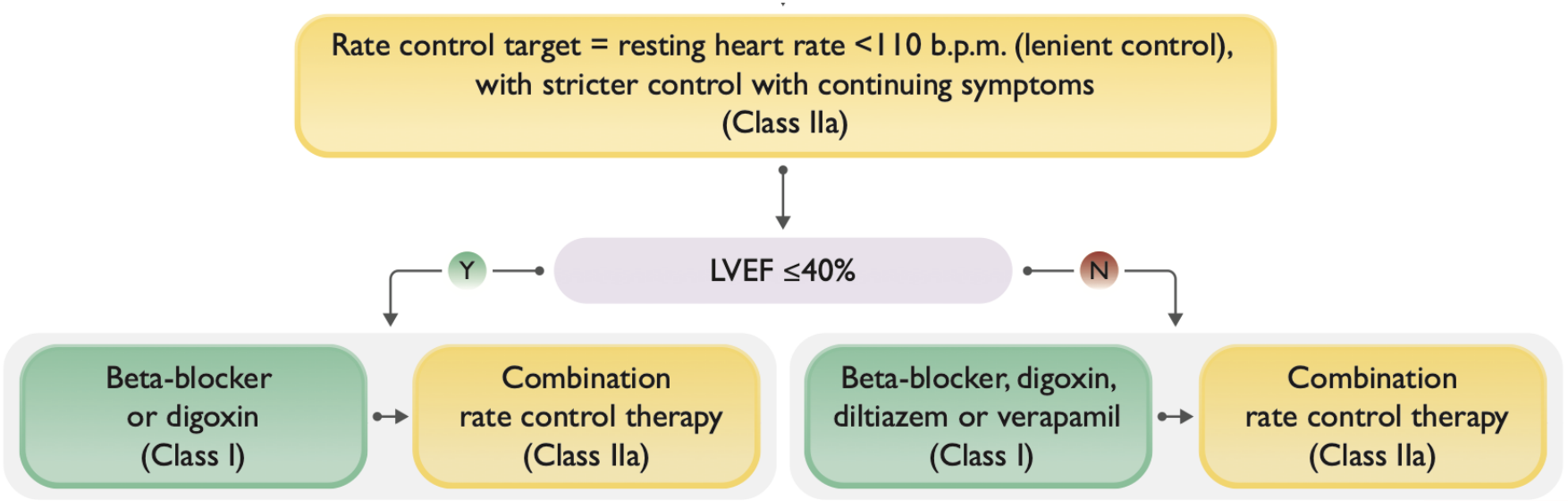
Reduce symptoms by rate and rhythm control



Lenient rate control with a resting heart rate of < 110 b.p.m. should be considered as the initial target for patients with AF, with stricter control reserved for those with continuing AF-related symptoms.[459,460,466]	IIa	B

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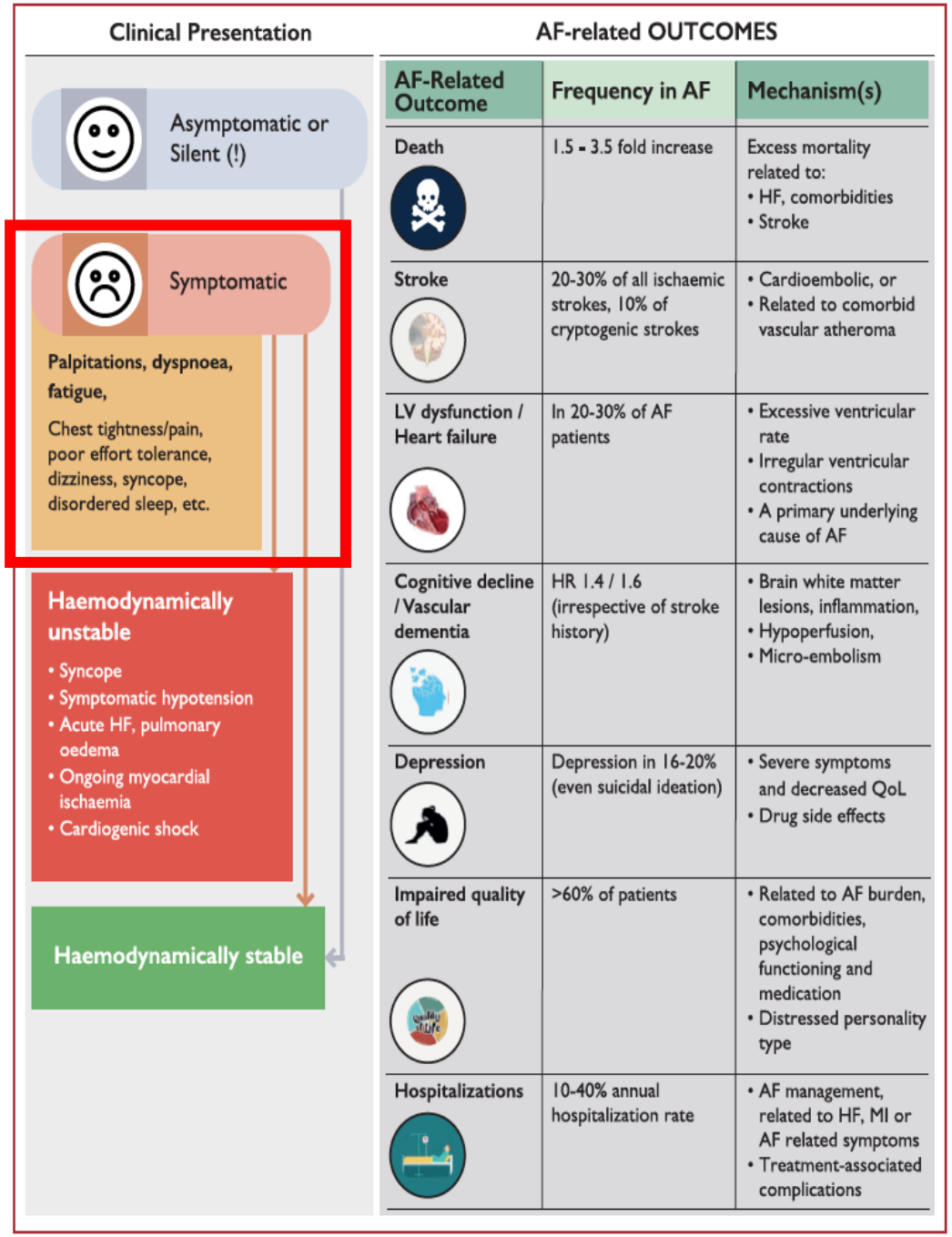
Ritmecontrole

- = nastreven sinusritme
- **vroegtijdig**
- voor **symtoomcontrole**
- voor betere **prognose**

Recommendations	Class[a]	Level[b]
Rhythm control therapy is recommended for symptom and QoL improvement in symptomatic patients with AF.[551–553]	I	A
Implementation of a rhythm control strategy should be considered within 12 months of diagnosis in selected patients with AF at risk of thromboembolic events to reduce the risk of cardiovascular death or hospitalization.[17,527]	IIa	B



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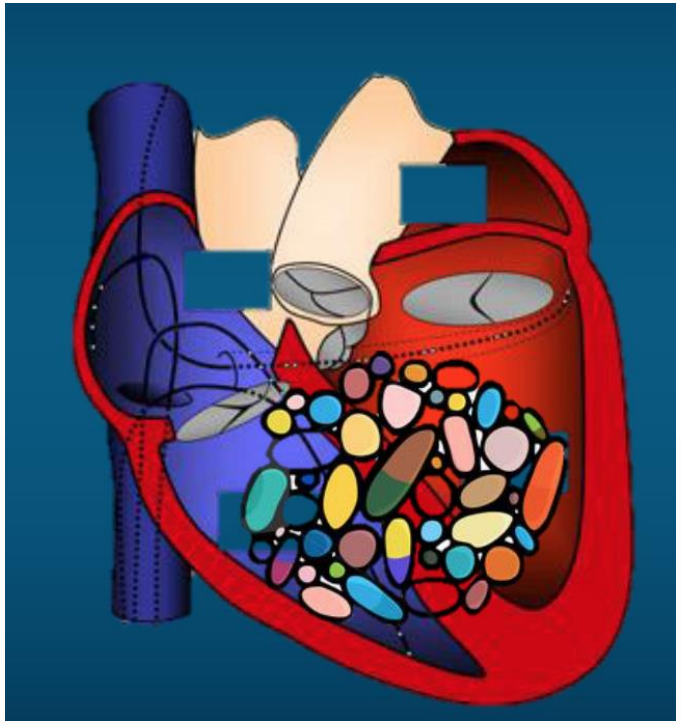
RITMECONTROLE

Ablatie vs. Anti-aritmica



Pulmonale Venen Isolatie (PVI)

flecainide / propafenone
sotalol
amiodarone

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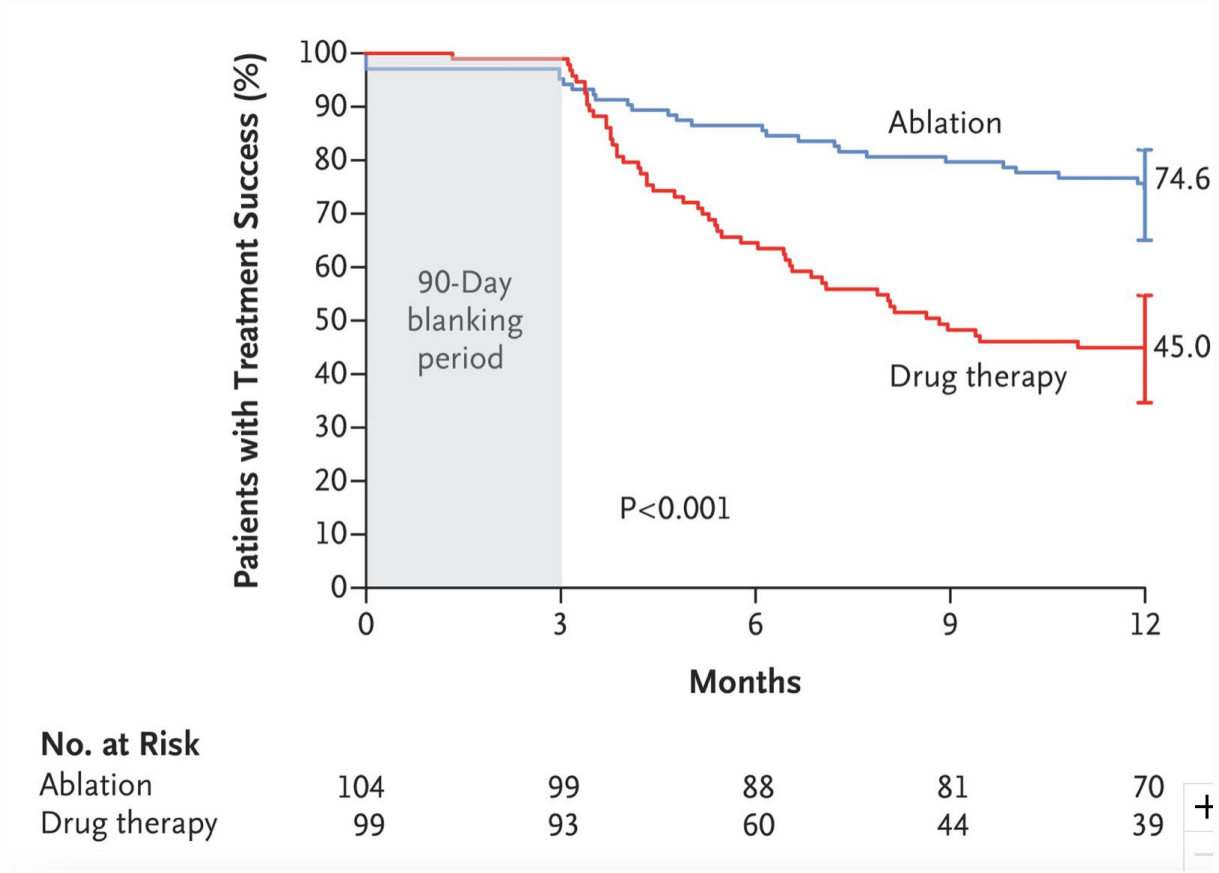
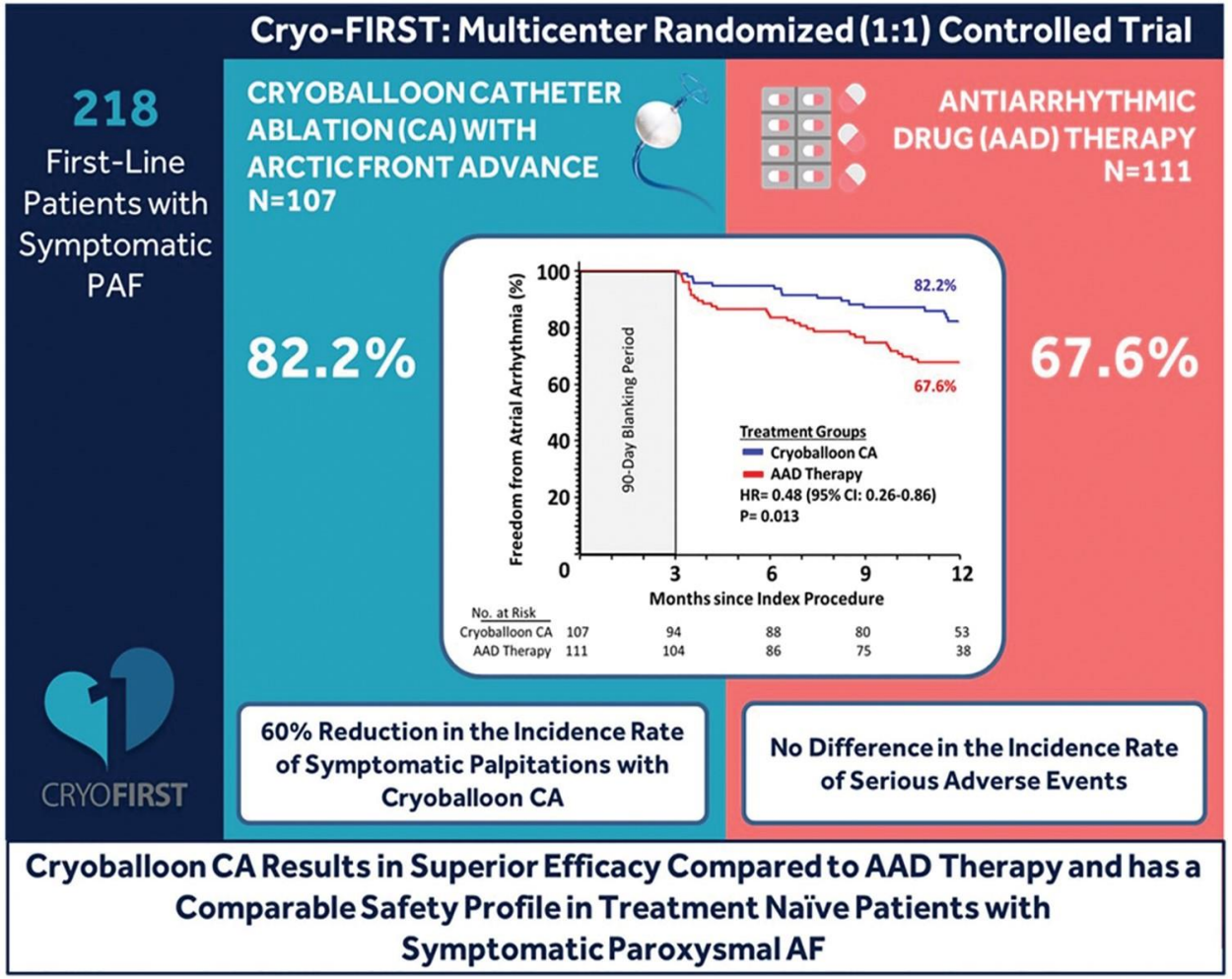
Ablatie is superieur aan anti-aritmica ter preventie van aritmie-recidief



Wazni O et al. STOP-AF First, NEJM 2021



Kuniss M et al. Cryo-FIRST, Europace 2021

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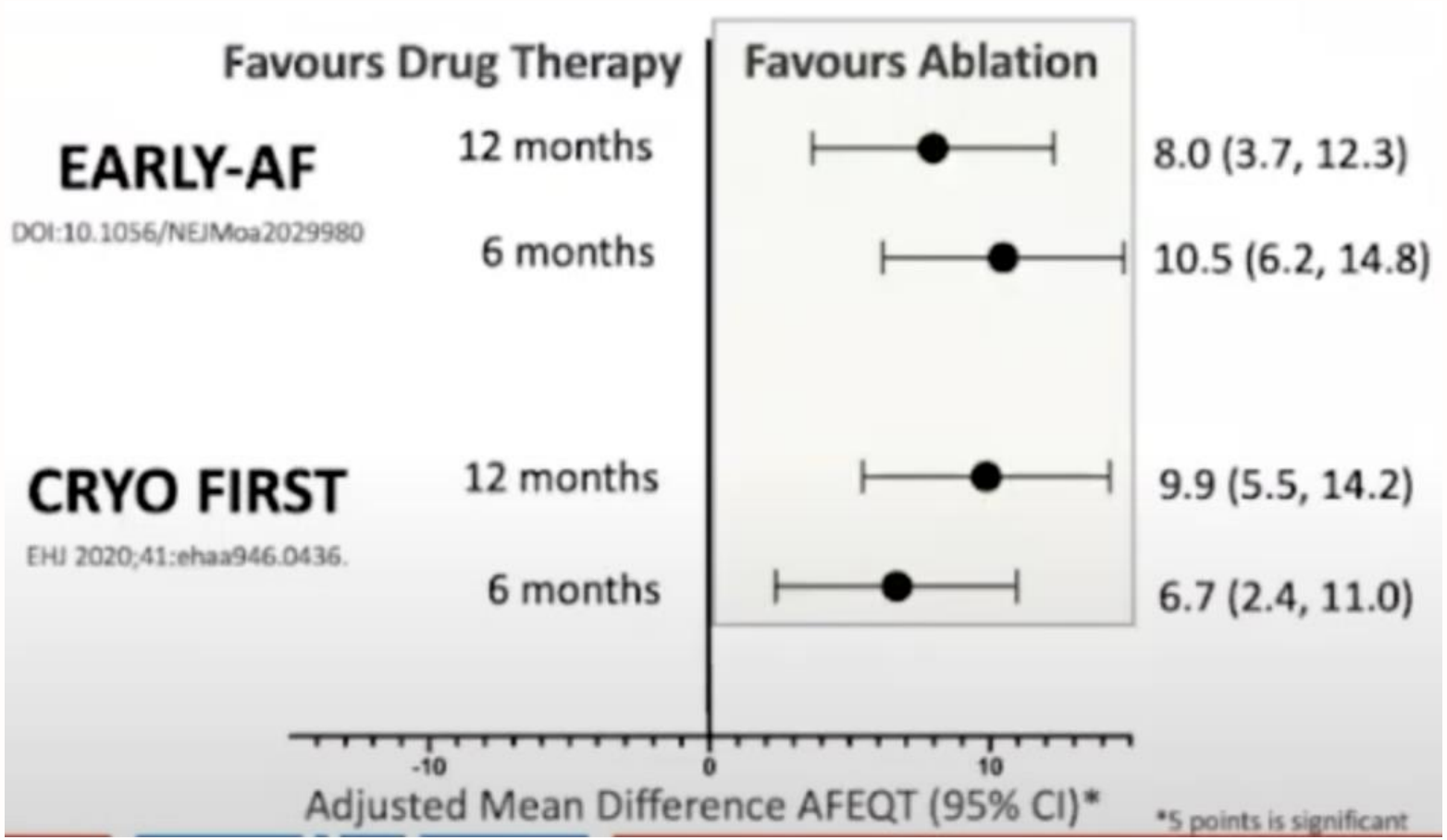
Ablatie is superieur aan anti-aritmica ter verbetering van levenskwaliteit



Kuniss M et al. Cryo-FIRST, Europace 2021

Andrade J et al. EARLY-AF, NEJM 2021

Ritmecontrole :
VKF ablatie **eerste keuze behandeling** bij parox VKF

First-line rhythm control therapy		
Catheter ablation is recommended as a first-line option within a shared decision-making rhythm control strategy in patients with paroxysmal AF, to reduce symptoms, recurrence, and progression of AF.[16,591–594]	I	A

AF patients resistant or intolerant to antiarrhythmic drug therapy		
Catheter ablation is recommended in patients with paroxysmal or persistent AF resistant or intolerant to antiarrhythmic drug therapy to reduce symptoms, recurrence, and progression of AF.[3,15,503,505,506,508]	I	A

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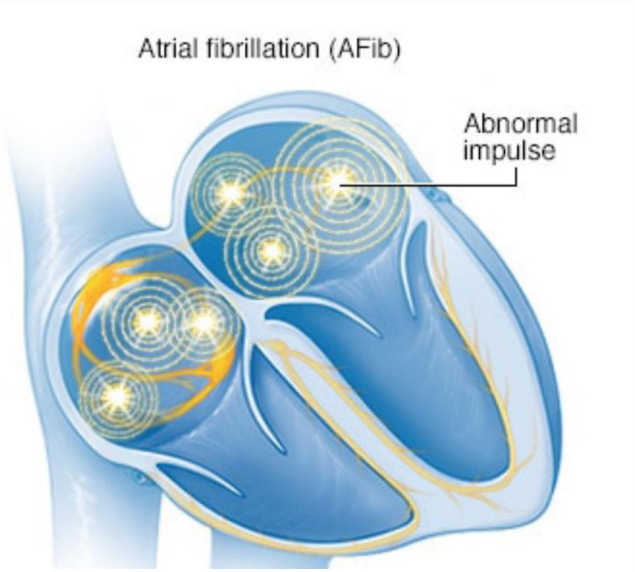
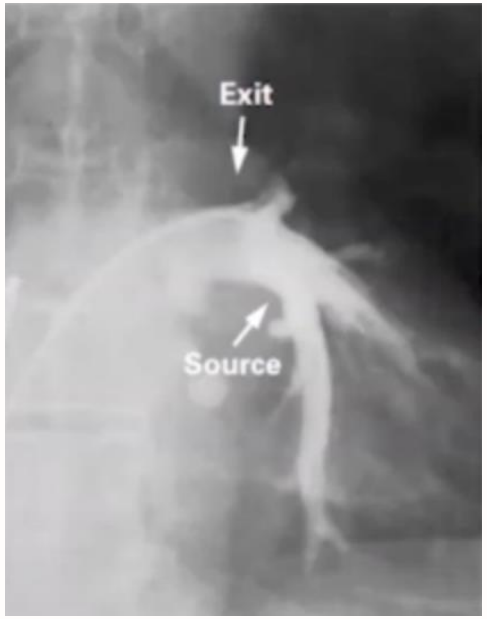
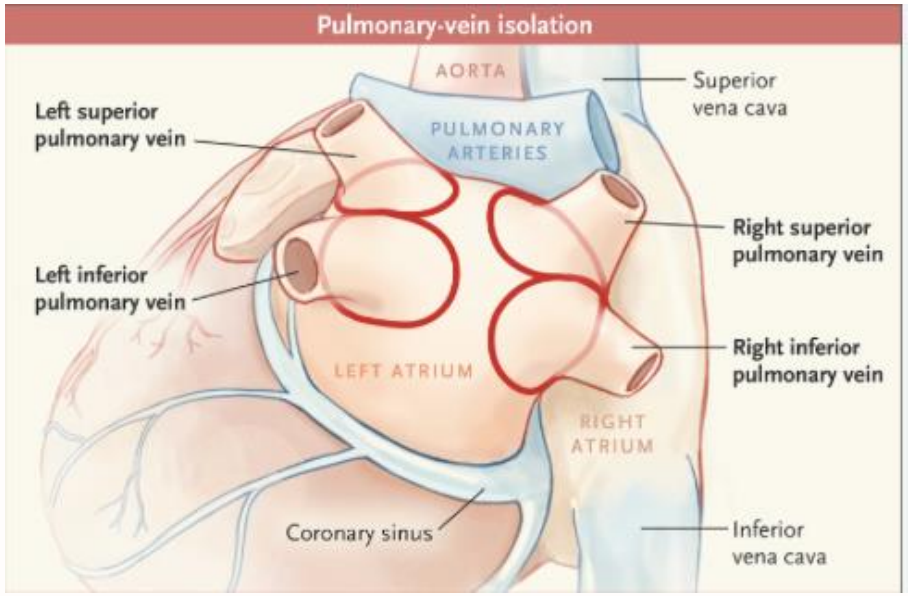
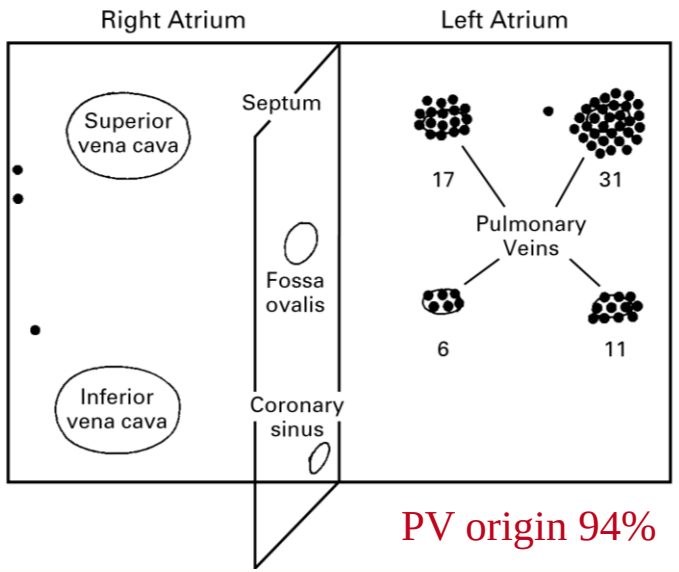
VKF ablatie: pulmonale venen isolatie

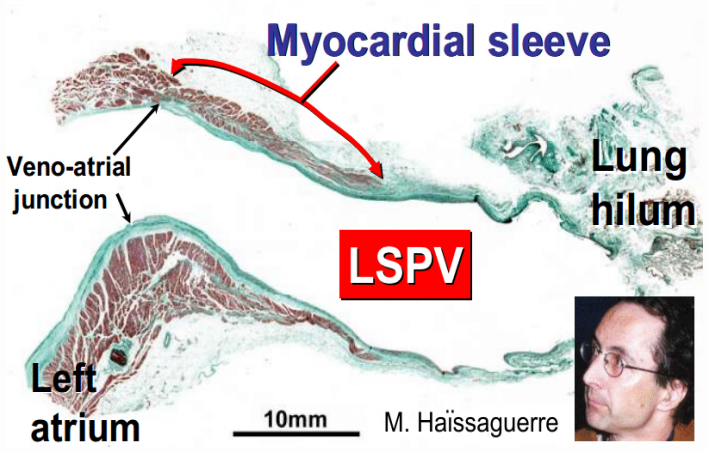




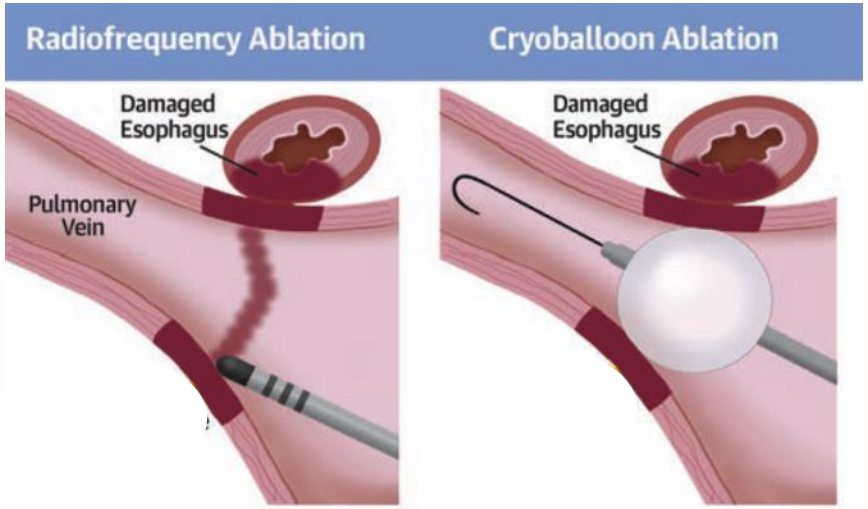




PV origin 94%



Haïssaguerre M, et al. N Engl J Med 1998; 339: 659–66



VKF ablatie is veilig

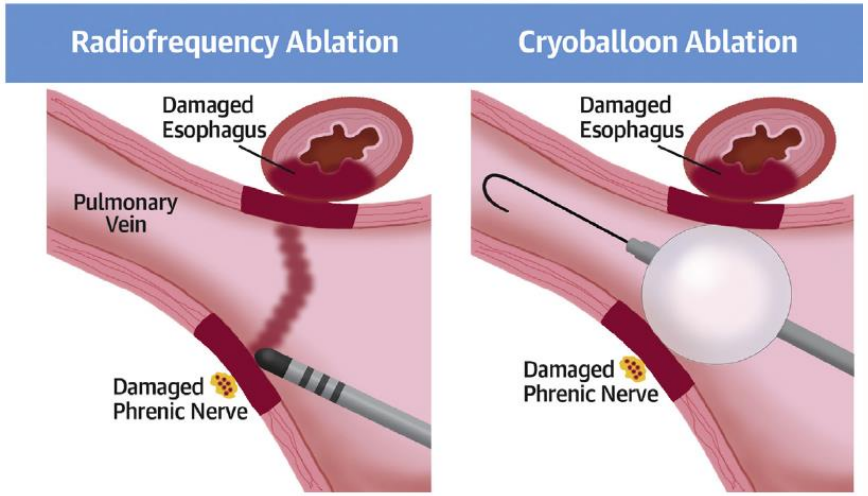
Complicaties van pulmonale venen isolatie (PVI)

Procedure-gerelateerd

- tamponade ~ 0.3%
- stroke/TIA < 0.3%
- liescomplicaties < 0.5% (punctie met echo)

Energie-gerelateerd

- N. phrenicus schade 1 - 2% (cryo>RF)
- atrio-esophageale fistel 0.025% (RF>>cryo)



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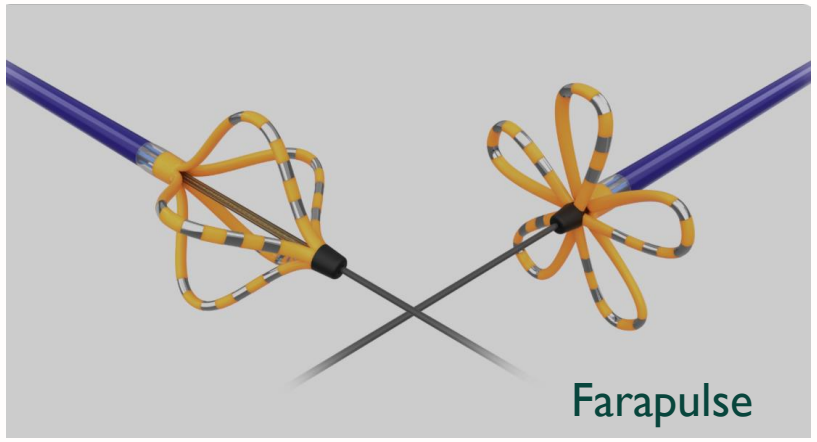
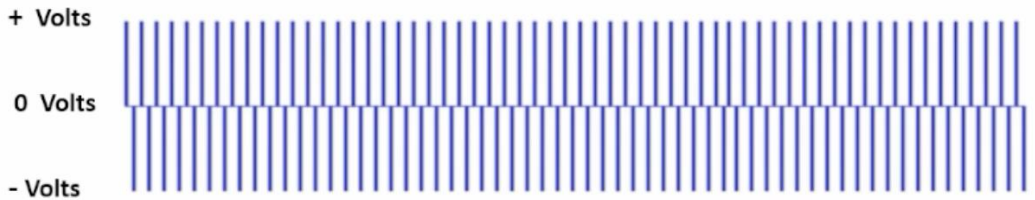
Pulsed field ablatie (PFA) of electroporatie: nieuwe *niet-thermische* energie, nog veiliger



PFA: technology and biophysical aspects

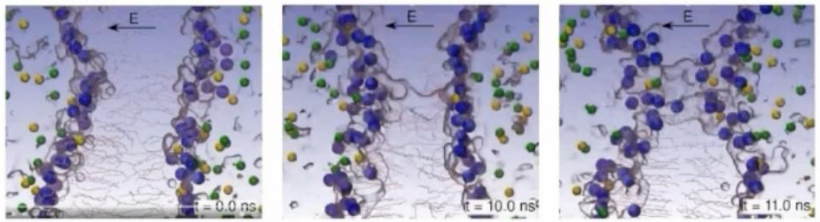
Pulsed field ablation

The use of pulsed electric fields to ablate cardiac tissues, through the mechanism of irreversible electroporation.



Irreversible electroporation

The mechanism of tissue necrosis through exposure to high electric field gradients that induce a permanent, hyper-permeabilization of the cell membranes, leading to cell death.



Cell membrane permeabilization in nanoseconds.

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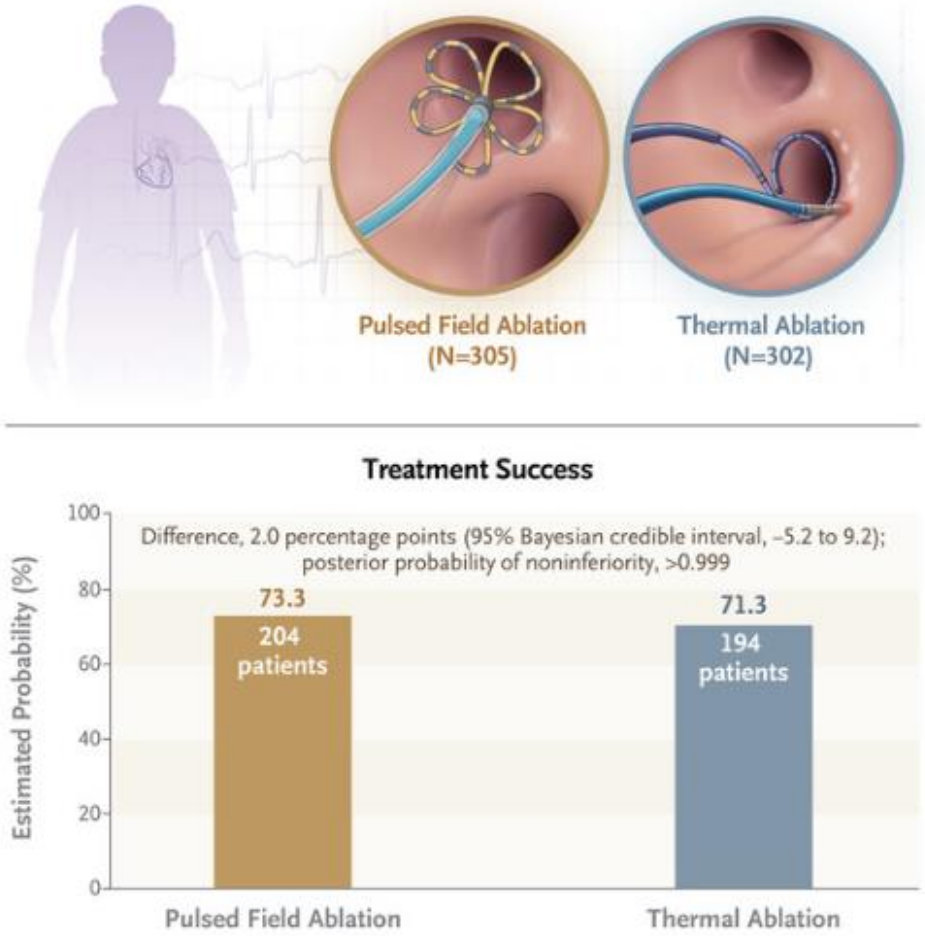
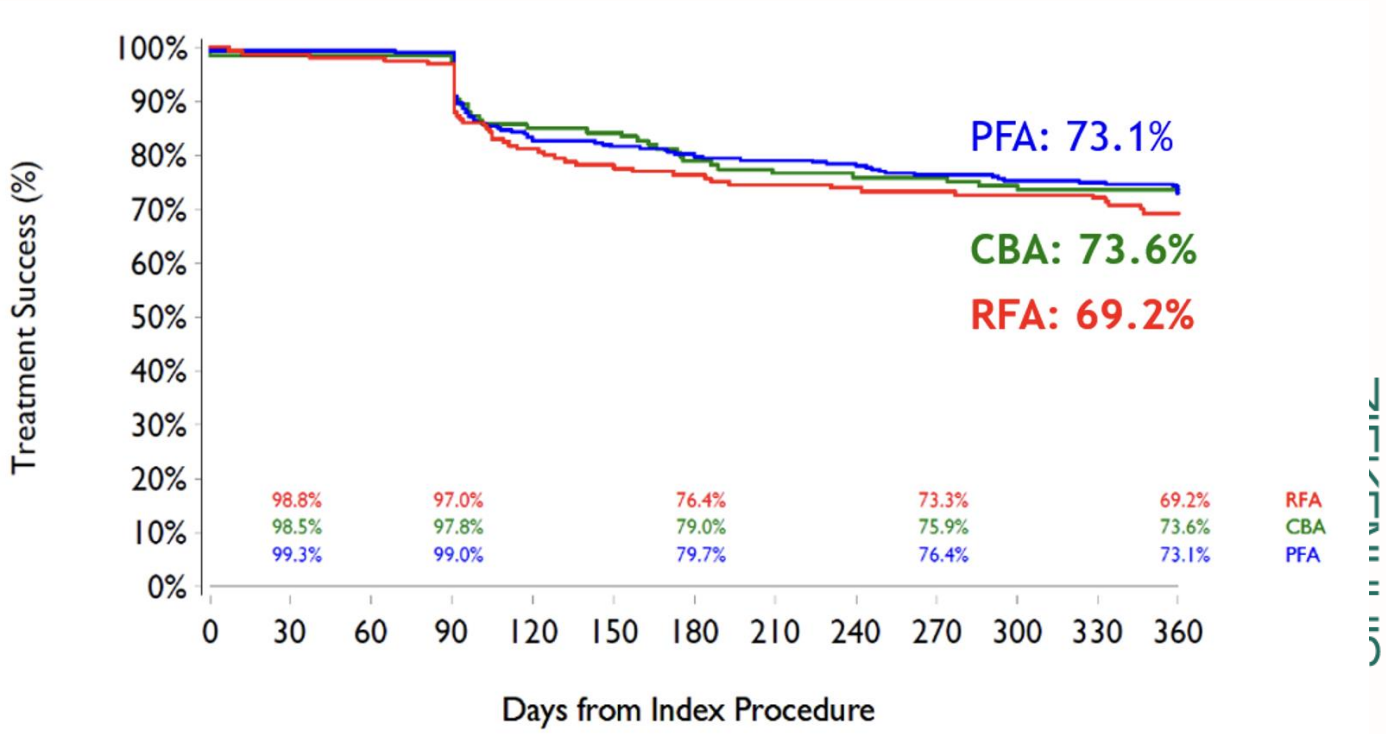
Pulsed field ablatie (PFA): even effectief voor ritmecontrole

ADVENT studie : Gerandomiseerd PFA (Farapulse) vs Thermale energy (radiofrequency + Cryoballon) voor parox VKF





Reddy et al. N Engl J Med 2023

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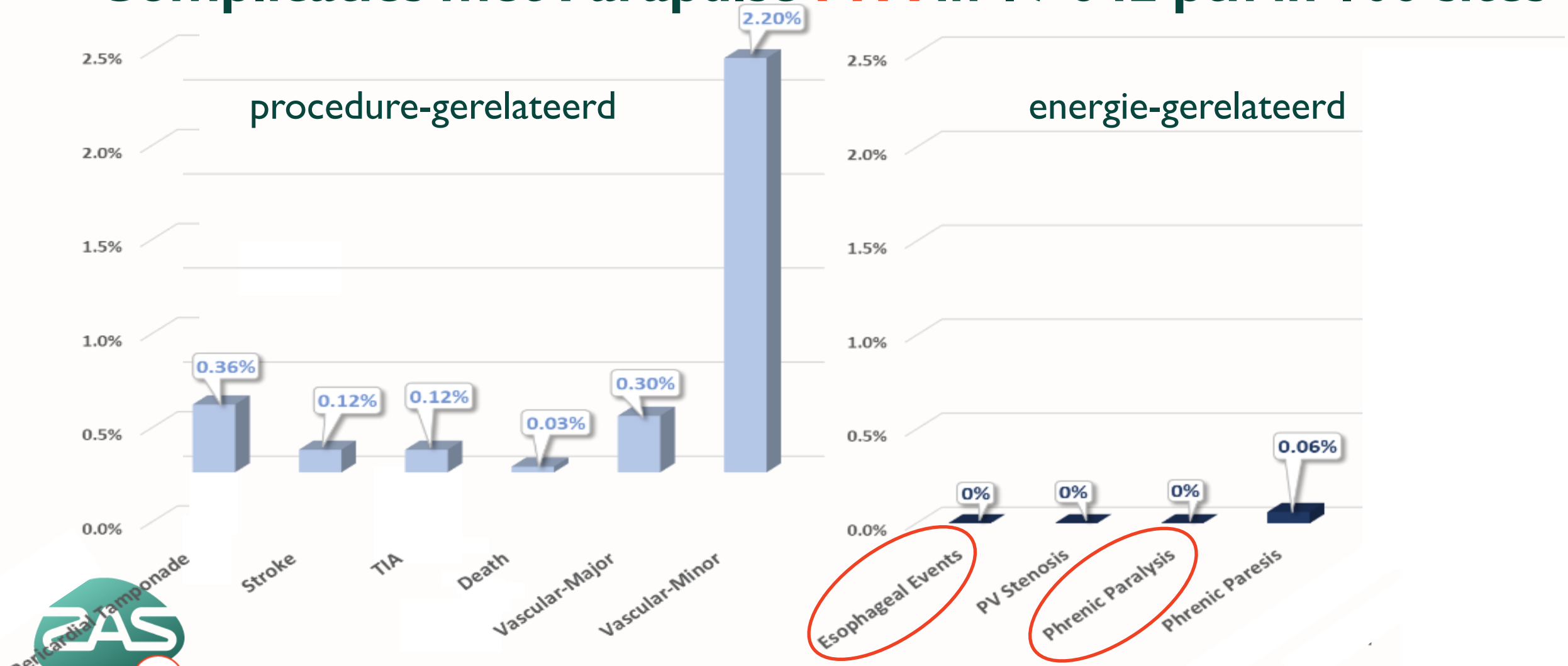
Pulsed field ablatie (PFA): nog veiliger

Complicaties met Farapulse PFA in 17'642 ptn in 106 sites



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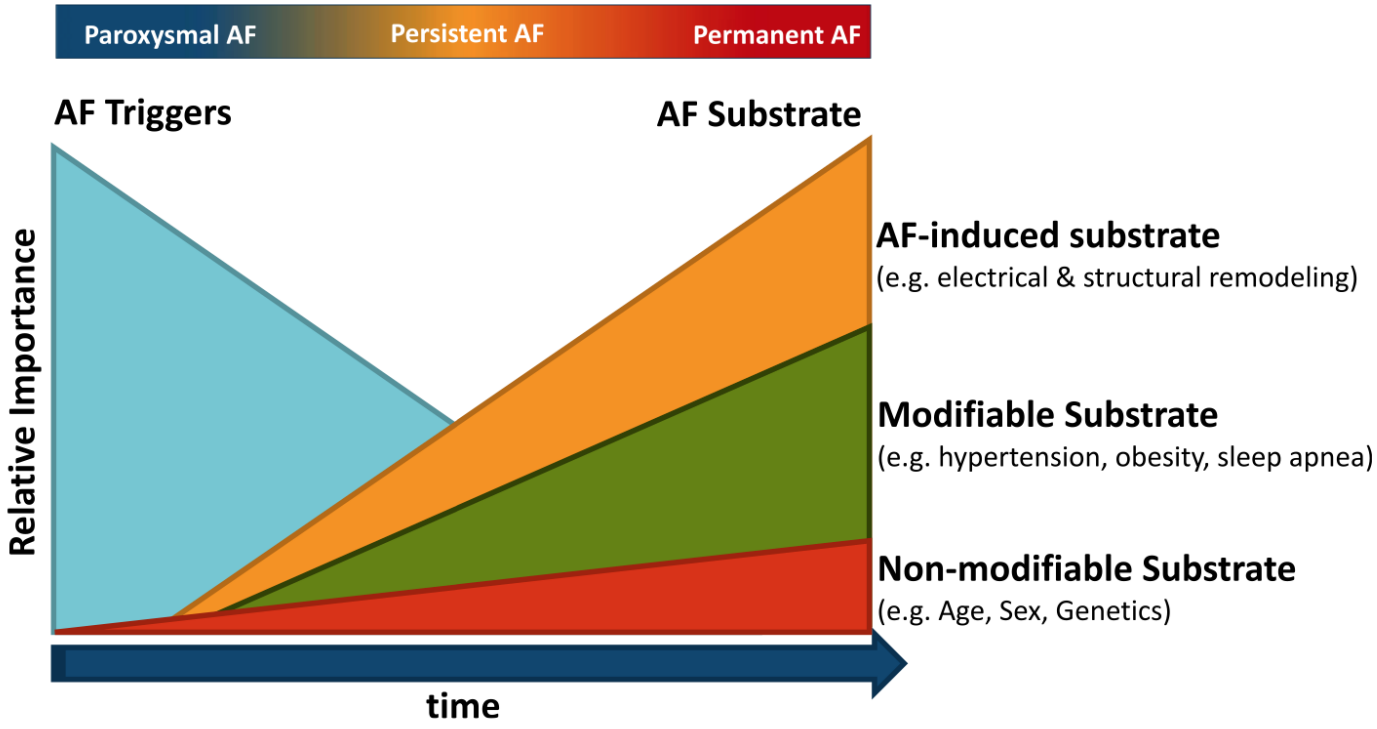
Reddy V, Manifest 17K, AHA, Nov 12th 2023

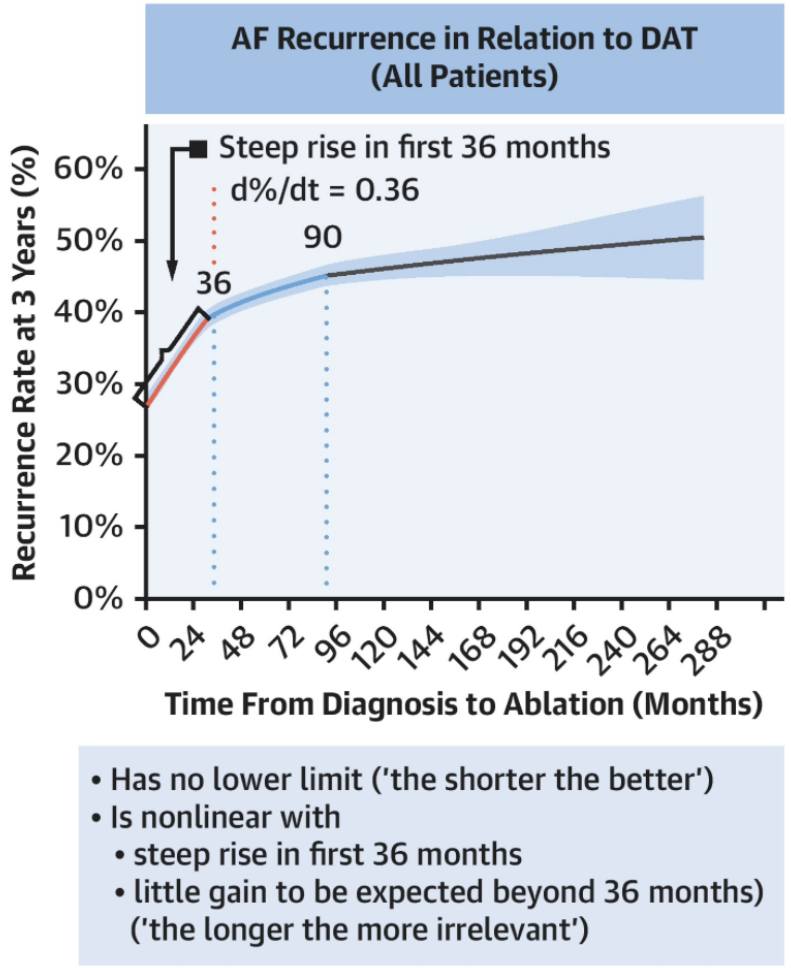
Timing van VKF ablatie?

Korte diagnose-tot-ablatie tijd: predictor van succes

Uitstel van ablatie leidt tot slechtere outcome

Natuurlijke progressie van VKF





- Has no lower limit ('the shorter the better')
- Is nonlinear with
  - steep rise in first 36 months
  - little gain to be expected beyond 36 months) ('the longer the more irrelevant')

De Greef Y. et al. J Am Coll Cardiol EP. 2023, 9 2263–2272

VKF ablatie: praktische aspecten

- algemene anesthesie (dus nuchter)
- 1 overnachting (geselecteerde gevallen single-day discharge)
- NOAC vooraf: minimally interrupted (= geen inname ochtend van ablatie)
- NOAC nadien:
    - minstens 2 maand verder (CHADSVA = 0)
    - nadien in functie CHADSVA-score
- anti-aritmica verder tot eerste controle (blanking periode), nadien individueel
- belang van **cardiale revalidatie**

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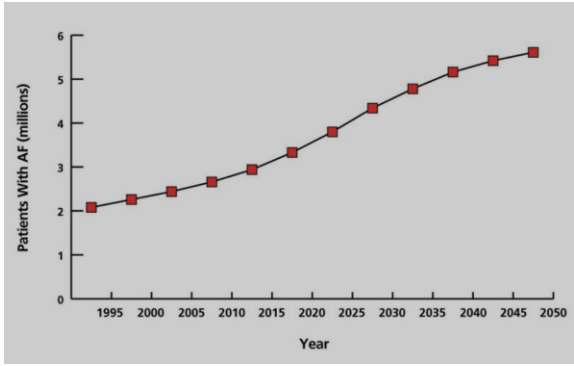
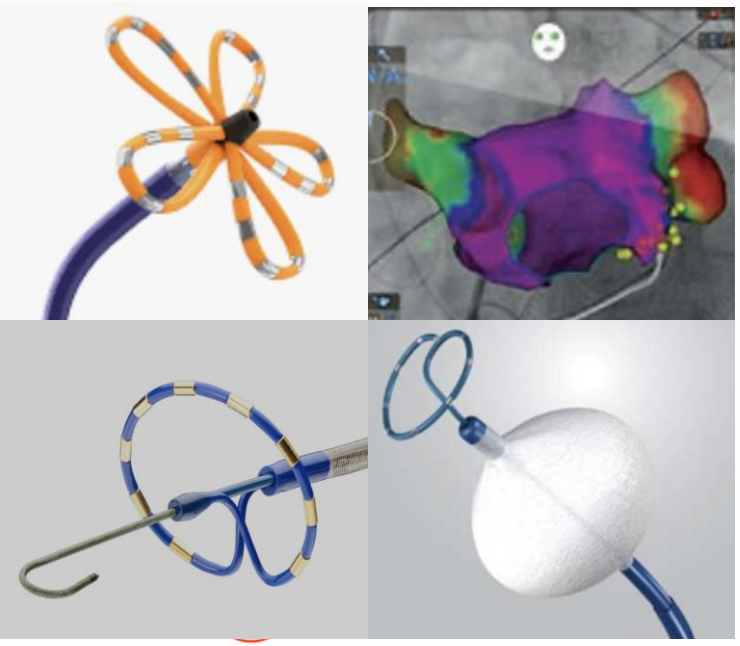
“VKF epidemie”:

- sterk stijgende prevalentie VKF
- ablatie als eerstelijnsbehandeling
- # PVI stijgt **10%** / jaar



ZAS Hartcentrum is voorbereid:

Efficiënte, veilige en snelle ablatie-technieken



Uitbreiding van de elektrofysiologie-staf

Prof. Bruno Schwagten, MD PhD
Prof. Yves De Greef, MD PhD
Dr. Michael Wolf, MD PhD
Dr. Benjamin De Becker, MD PhD

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“VKF epidemie”:

- sterk stijgende prevalentie VKF
- ablatie als eerstelijnsbehandeling
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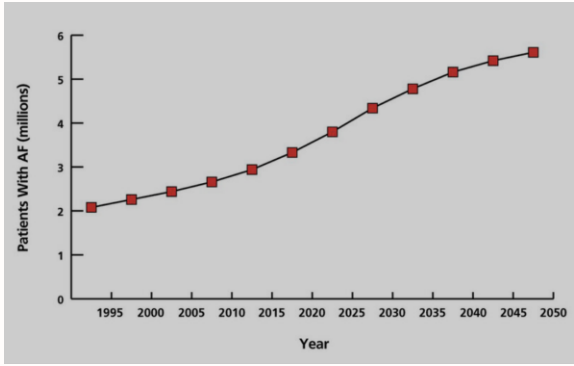

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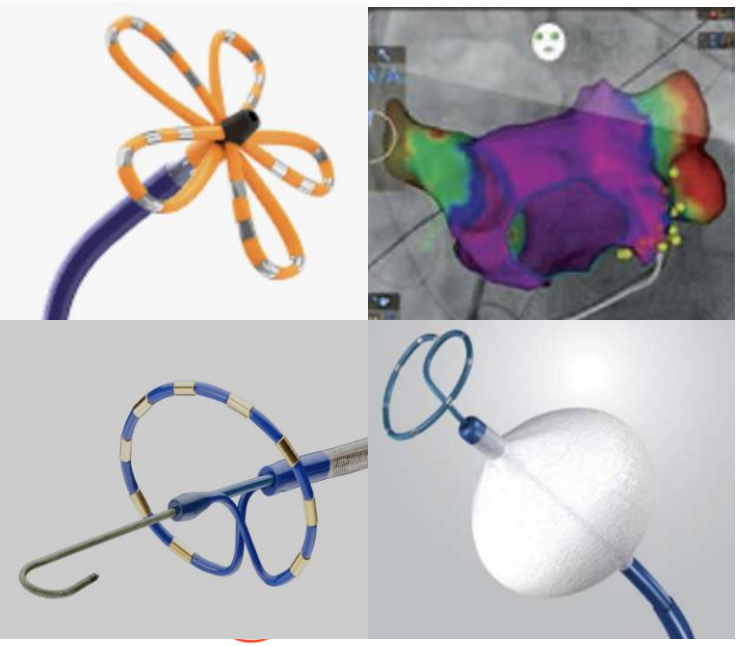

Uitbreiding van de EFO-staf

Uitbreiding van de cathlab capaciteit:

5 cathlab zalen
+ hybride zaal in 2024
+ zesde cathlab zaal in 2025

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Evaluation and dynamic reassessment

Re-evaluate when AF episodes or non-AF admissions

Regular re-evaluation: 6 months after presentation, and then at least annually or based on clinical need

ECG, blood tests, cardiac imaging, ambulatory ECG, other imaging as needed

Assess new and existing risk factors and comorbidities (Class I)

Stratify risk for stroke and thromboembolism (Class I)

Check impact of AF symptoms before and after treatment (Class I)

Assess and manage modifiable bleeding risk factors (Class I)

Continue OAC despite rhythm control if risk of thromboembolism (Class I)

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Take-home boodschappen
Behandeling van VKF anno 2025

- **AF-CARE: patiënt-gecentreerde, geïntegreerde zorg**
  Start met behandeling van **comorbiditeiten** en **risicofactoren**

- **Ritmecontrole**
  - ***Vroege*** *ritmecontrole, voor zowel* ***symptoomcontrole*** *als betere* ***prognose***
  - Ablatie = **eerste keuze behandeling** voor paroxysmale VKF
  - VKF ablatie is **nog veiliger** geworden met nieuwe technieken (PFA)

- Belang van **vroegtijdige** ablatie
  - Geassocieerd met betere outcome

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Ziekenhuis aan de Stroom
[ZAS] is het netwerk van
ZNA en GZA Ziekenhuizen

GZA
Ziekenhuizen
GasthuisZusters Antwerpen
Sint-Augustinus - Sint-Vincentius - Sint-Jozef

zna

ZIEKENHUIS aan de STROOM