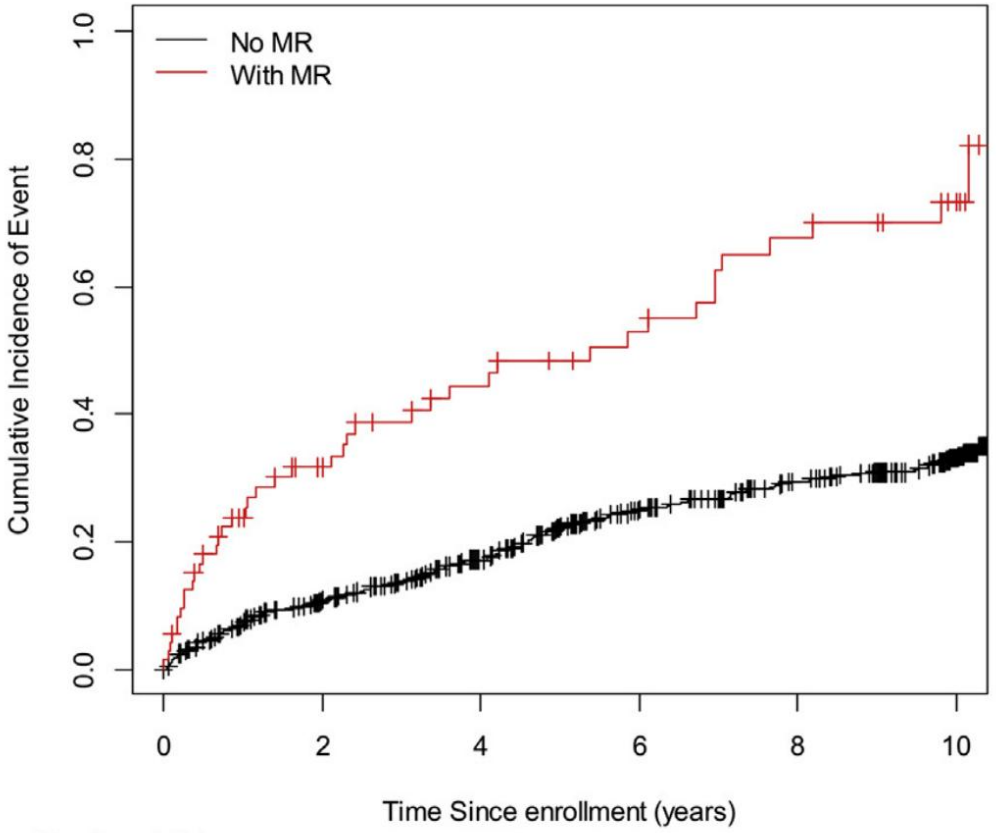
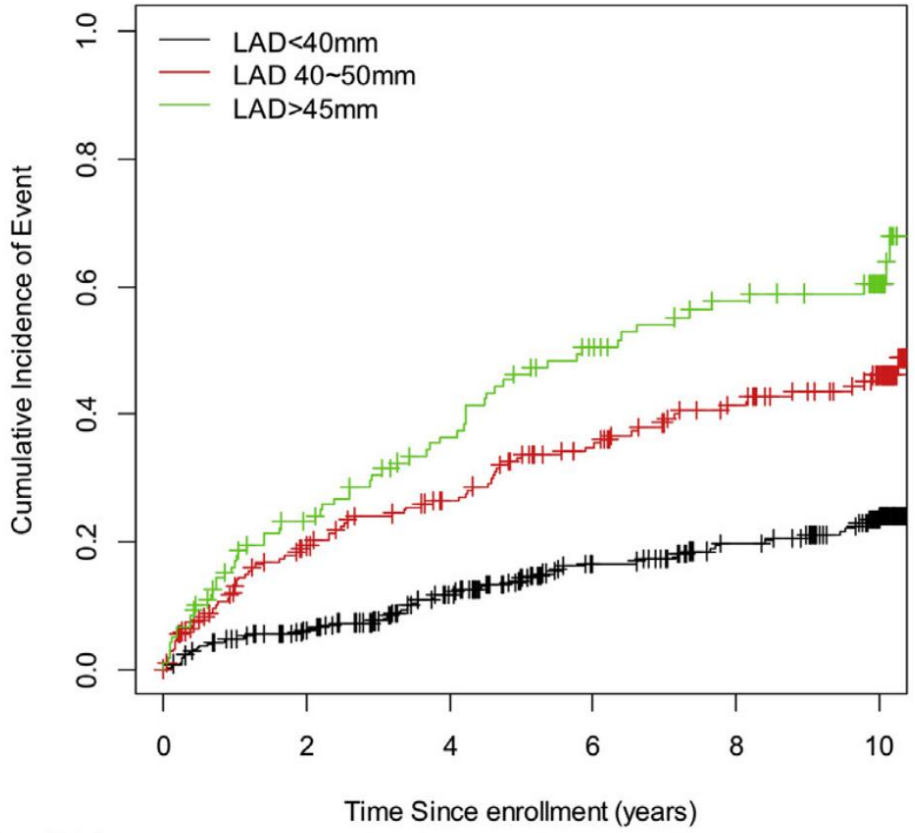

GENERAL UNIVERSITY
HOSPITAL IN PRAGUE
FIRST FACULTY
OF MEDICINE
Charles University
PROGRESSIVE-AF
Štěpán Havránek

Fibrilace síní jako trvale progredující onemocnění

Progrese paroxysmální → perzistentní FS ~ 8 – 15% pacientů / 12 měsíců

Progrese FS dle mitrální regurgitace a dle dilatace levé síně





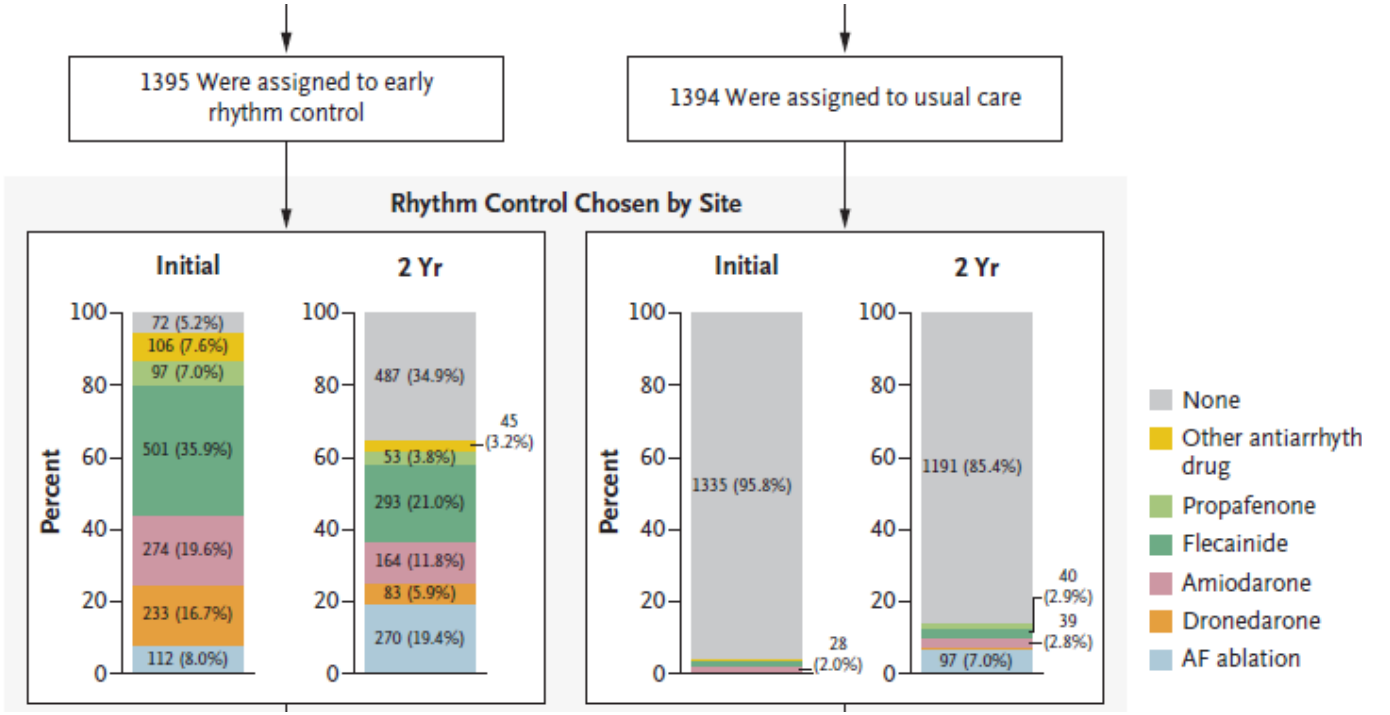
G.J. Padfield, et al. Progression of paroxysmal to persistent atrial fibrillation. Heart Rhythm 2017: 14; 801-7.

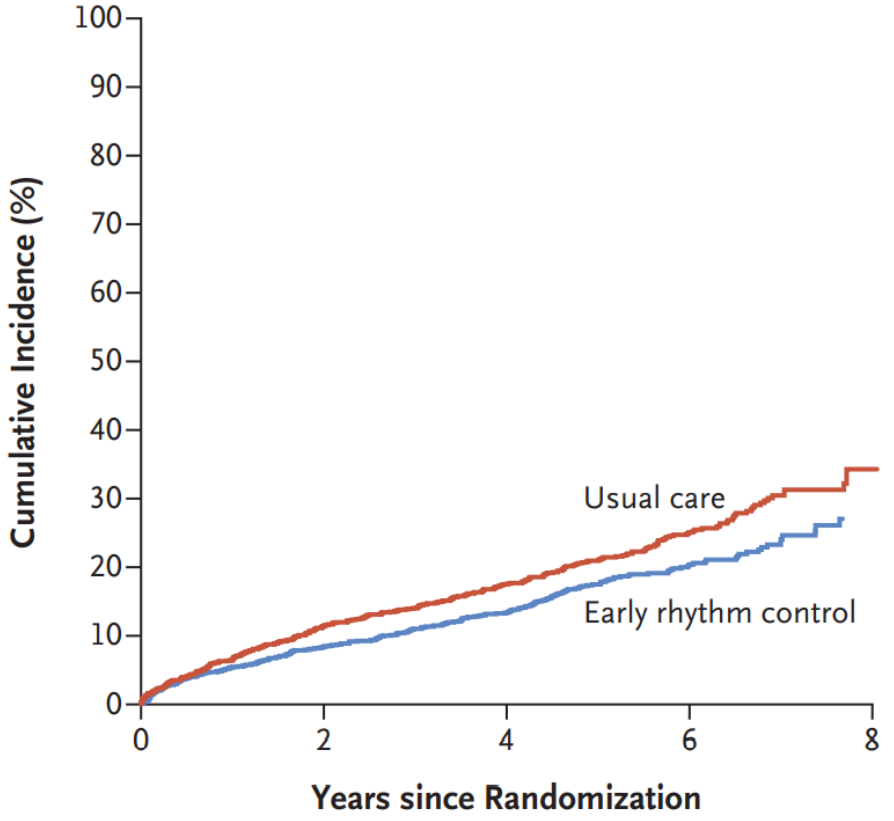
EAST: Časná kontrola rytmu snižuje CV mortalitu a výskyt CMP

Studijní populace
- FS < 1 rok
- Věk > 75 let
- CMP / SE
- Nebo 2 z AHY, > 65let, SS, DM, ICHS, renální insuficience

Randomizace
- Zvyklá léčba
- Časná kontrola rytmu (AA, Ablace)

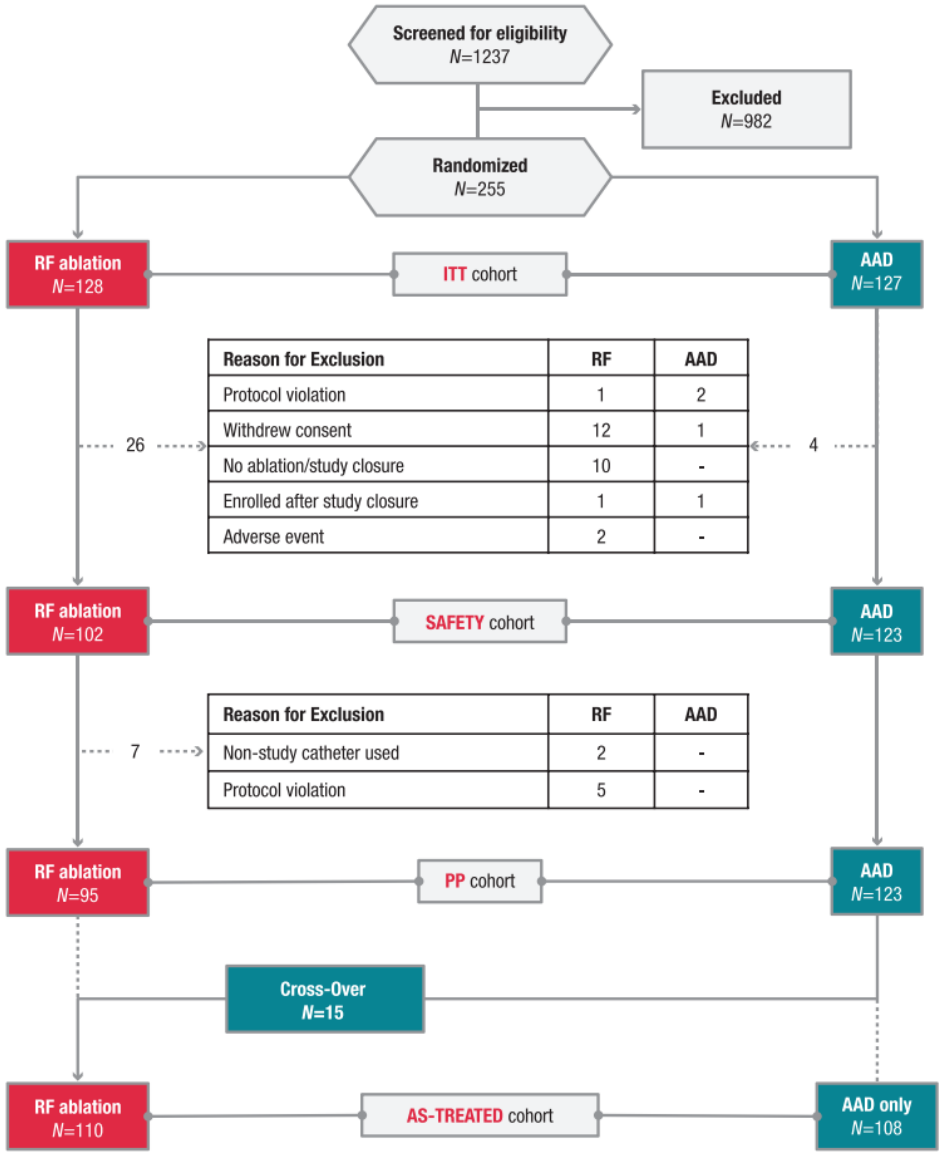
Primární endpoint
(KV mortalita, CMP, hospitalizace pro SS, AKS)



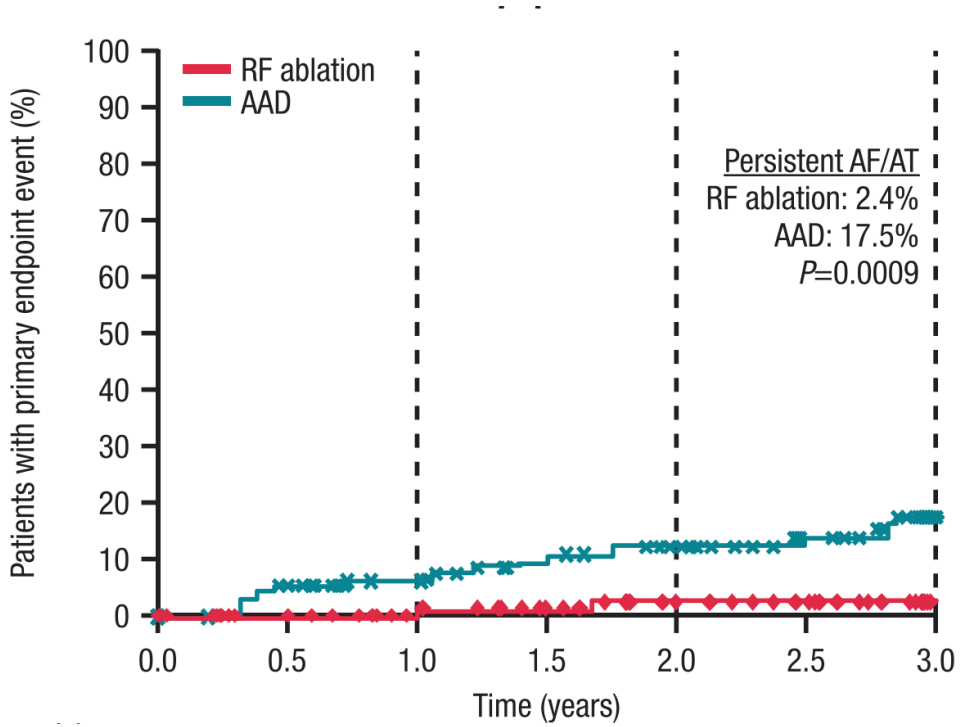


Kirchhof P, et al. Early rhythm-control therapy in patients with atrial fibrillation. N Engl J Med 2020;383:1305-16.

Studie ATTEST



- ≥ 60 let
- Patroxysmální AF > 2 roky, >2 paroxysmy / 6M
- Selhání 1-2 AADs
- HATCH score 1-4



RF ablace 10x méně často progrese do perzistentní AF
Nemocní ≥60 let 4x častěji progredovali do perzistentní AF

Kuck KH. EP EUROPACE 2021. 23: 362--9.

Může ablační terapie zpomalit progresi fibrilace síní?

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JANUARY 12, 2023 VOL. 388 NO. 2

Progression of Atrial Fibrillation after Cryoablation or Drug Therapy

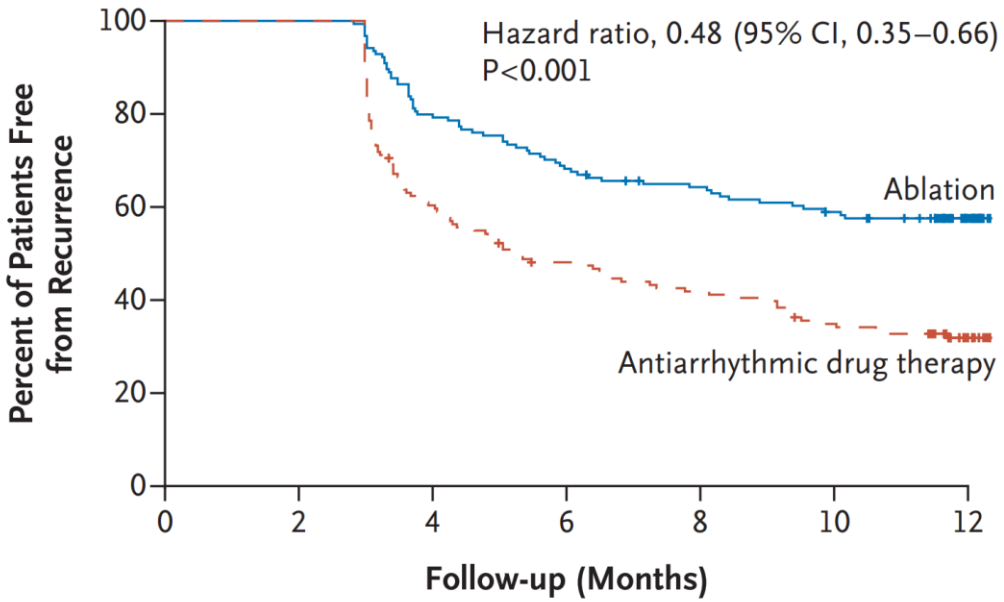
J.G. Andrade, M.W. Deyell, L. Macle, G.A. Wells, M. Bennett, V. Essebag, J. Champagne, J.-F. Roux, D. Yung, A. Skanes, Y. Khaykin, C. Morillo, U. Jolly, P. Novak, E. Lockwood, G. Amit, P. Angaran, J. Sapp, S. Wardell, S. Lauck, J. Cadrin-Tourigny, S. Kochhäuser, and A. Verma, for the EARLY-AF Investigators*

PROGRESSIVE-AF navazuje follow-up daty na EARLY-AF

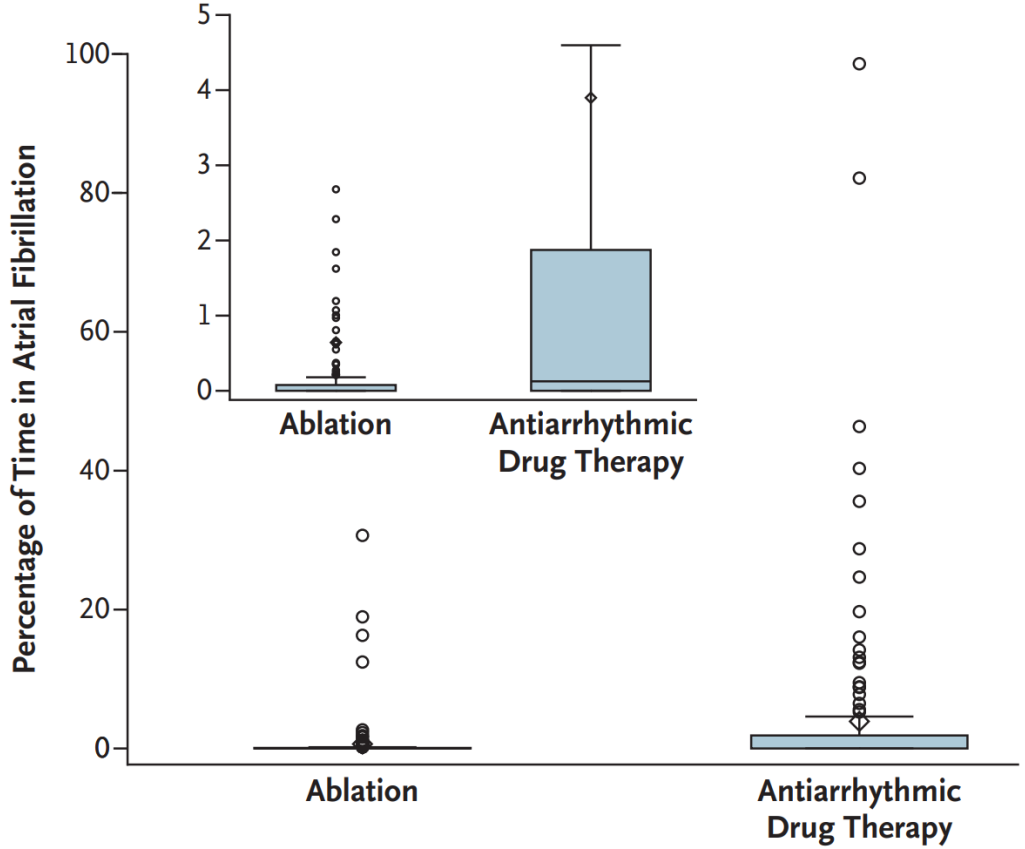
Studijní populace EARLY-AF

- 303 pacientů s paroxysmální FS bez předchozí intervence
  - Ablace (kryo)
  - Léková větev
- Sledování 12 měsíců

Výsledky EARLY-AF



No. at Risk							
Ablation	154	154	123	105	96	86	55
Antiarrhythmic drug therapy	149	149	89	69	60	49	27



Andrale J.G., et al. Cryoablation of Drug Therapy for Intial treatment of AF. N Engl J Med 2021;384:305-14.

Výsledky PROGRESSIVE-AF

The NEW ENGLAND JOURNAL of MEDICINE

RESEARCH SUMMARY

Progression of Atrial Fibrillation after Cryoablation or Drug Therapy

Andrade JG et al. DOI: 10.1056/NEJMoa2212540

CLINICAL PROBLEM

Atrial fibrillation may progress over time from a paroxysmal to a persistent form because of electrical and structural remodeling of the heart. In the EARLY-AF trial, treatment of paroxysmal atrial fibrillation with cryoablation led to a lower incidence of recurrence of any atrial tachyarrhythmias in the first year than antiarrhythmic drug therapy, but whether cryoablation reduces the risk of progression to persistent atrial fibrillation is unknown.

CLINICAL TRIAL

Design: In a follow-up analysis of the multicenter, randomized EARLY-AF trial involving patients with paroxysmal atrial fibrillation, the proportion of patients with progression to persistent atrial fibrillation after cryoablation was compared with that after the receipt of antiarrhythmic drug therapy.

Intervention: 303 patients who had undergone ablation or received antiarrhythmic drug therapy were followed for at least 3 years; an implantable continuous cardiac rhythm monitor was used to detect atrial fibrillation events. Data regarding the first episode of persistent atrial fibrillation and recurrent atrial tachyarrhythmia were collected.

RESULTS

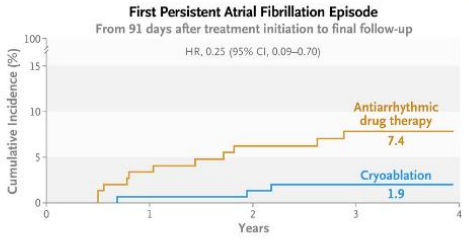
Efficacy: During 3 years of follow-up, the incidence of persistent atrial fibrillation or recurrent atrial tachyarrhythmias was lower in the ablation group than in the antiarrhythmic drug group.

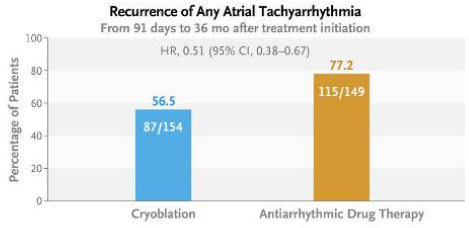
Safety: During follow-up, adverse events, including cardiac events and stroke, were less common in the ablation group than in the antiarrhythmic drug group.

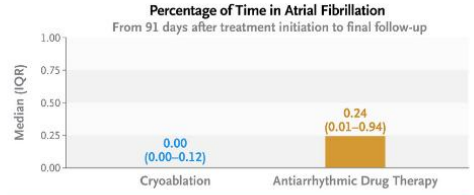
LIMITATIONS AND REMAINING QUESTIONS

- Cardiovascular outcomes should be considered hypothesis-generating only.
- Some patients crossed over to ablation after failure of drug therapy.
- Only one ablation technology was used.

Links: Full Article | NEJM Quick Take | Editorial

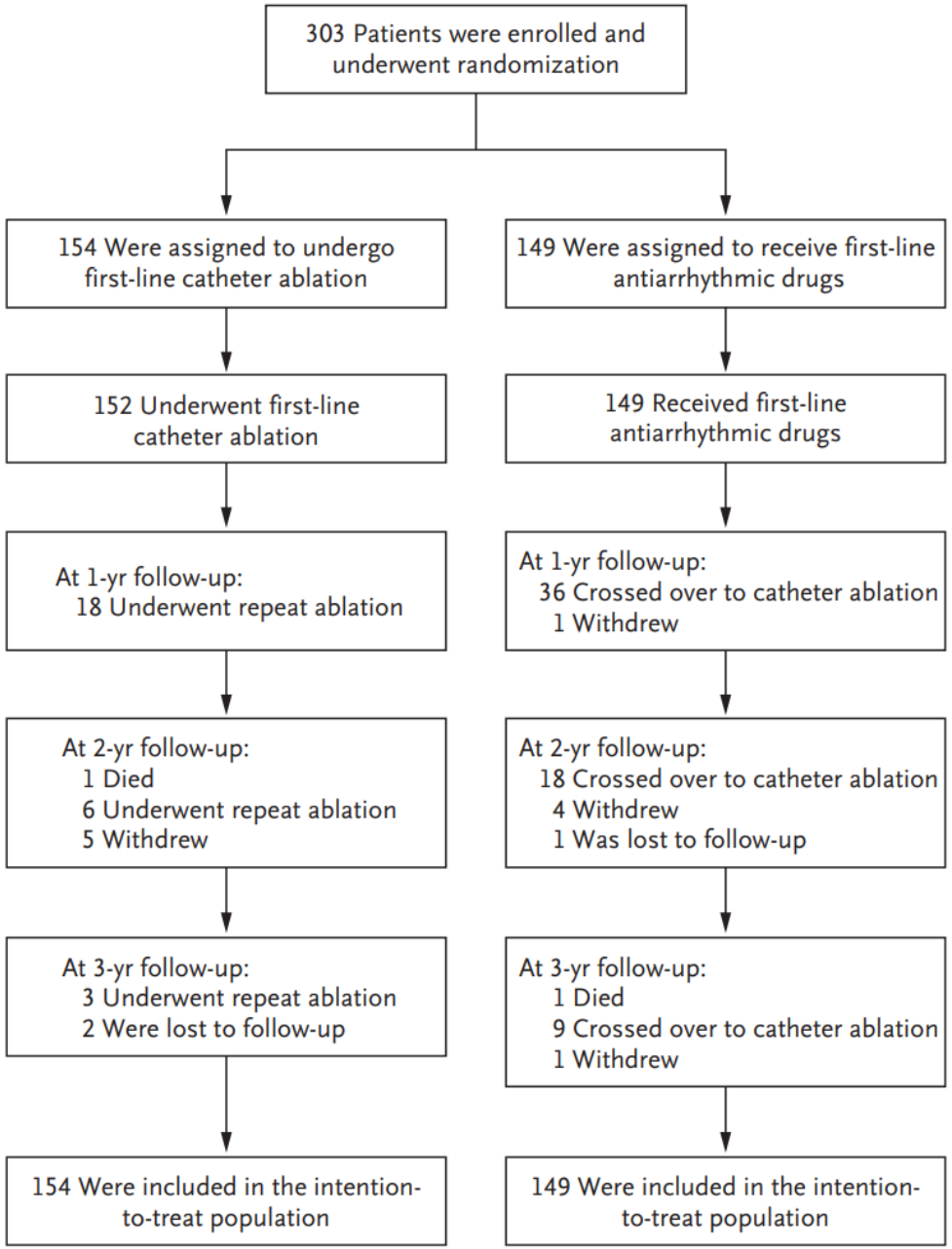






CONCLUSIONS

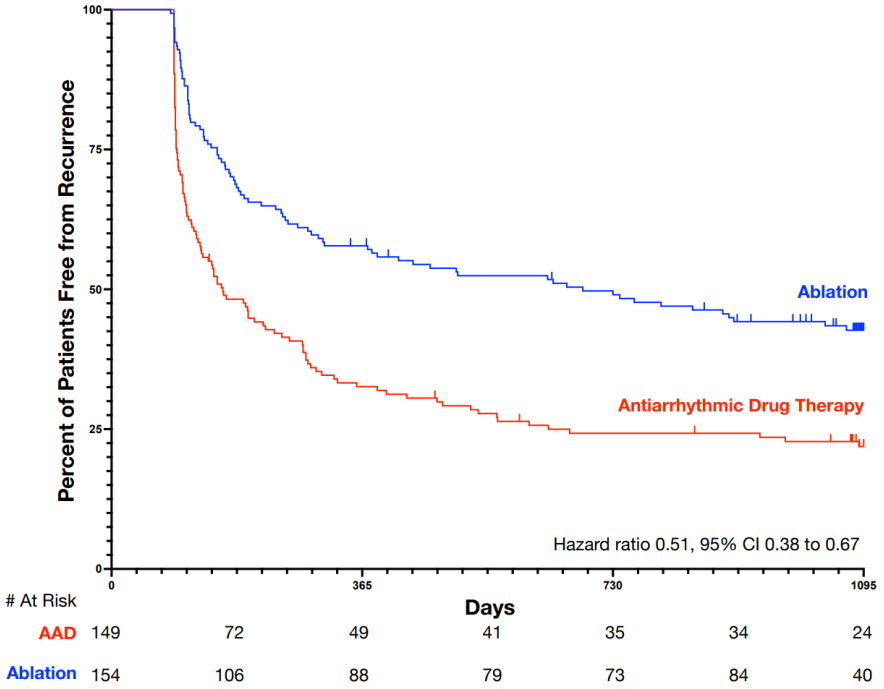
Patients with paroxysmal atrial fibrillation treated with cryoablation had a lower incidence of persistent atrial fibrillation or recurrent atrial tachyarrhythmias during 3 years of follow-up than those who had been treated with antiarrhythmic drugs.

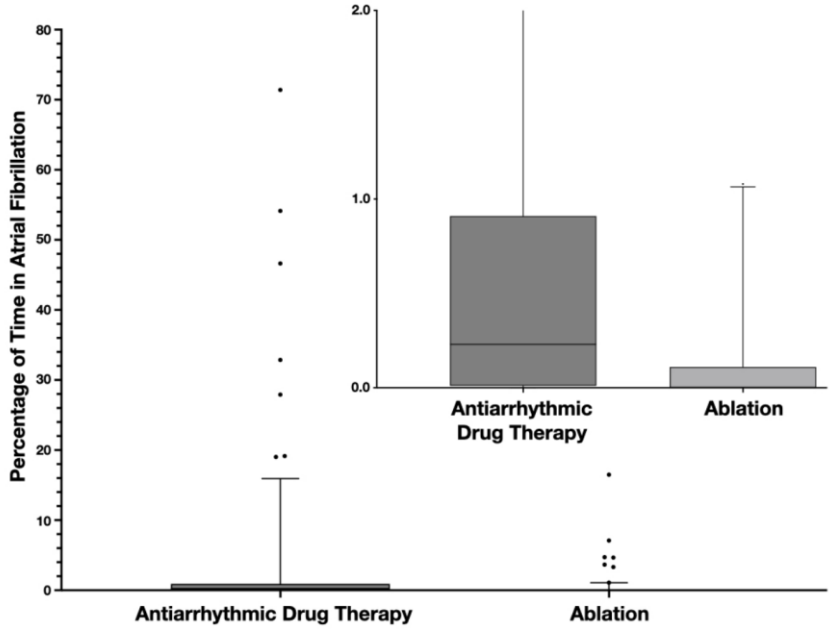


J.G. Andrade, et al. Progression of Atrial fibrillation after Cryoablation or Drug Therapy. NEJM 2023: 388; 105-16.

Primární endpointy studie

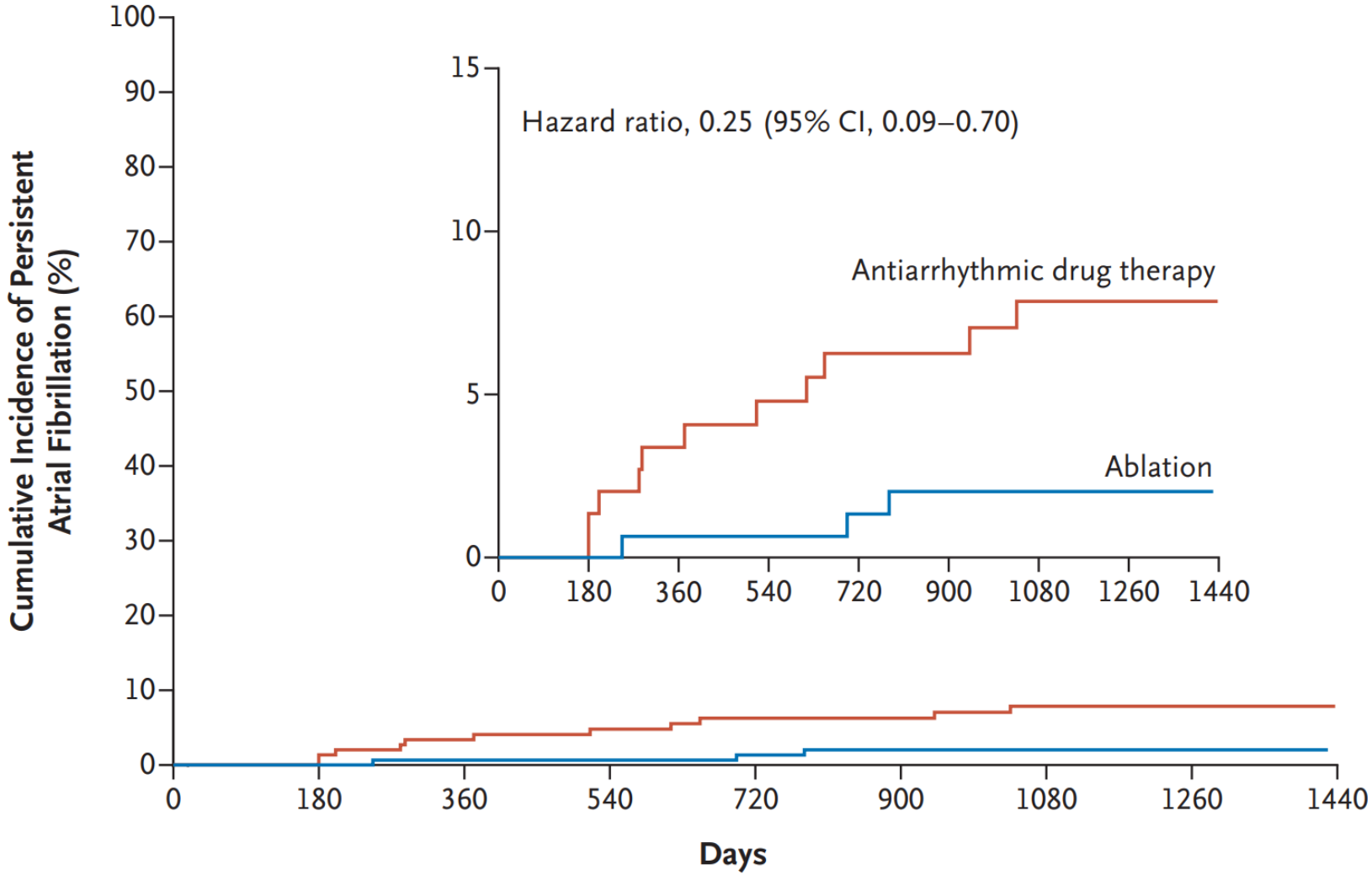
End Point	Ablation Group (N = 154)	Antiarrhythmic Drug Group (N = 149)	Hazard Ratio (95% CI)
	number (percent)		
Progression to persistent atrial fibrillation from 91 days after treatment initiation to final follow-up	3 (1.9)	11 (7.4)	0.25 (0.09–0.70)
Recurrence of any atrial tachyarrhythmia			
From 91 days to 12 mo after treatment initiation†	66 (42.9)	101 (67.8)	0.48 (0.35–0.66)
From 91 days to 36 mo after treatment initiation	87 (56.5)	115 (77.2)	0.51 (0.38–0.67)





J.G. Andrade, et al. Progression of Atrial fibrillation after Cryoablation or Drug Therapy. NEJM 2023: 388; 105-16.

Kumulativní incidence perzistentní AF



No. at Risk									
Antiarrhythmic drug therapy	149	148	142	133	129	123	104	43	0
Ablation	154	154	153	151	145	141	125	43	0

J.G. Andrade, et al. Progression of Atrial fibrillation after Cryoablation or Drug Therapy. NEJM 2023: 388; 105-16.

Sekundární endpointy studie I

End Point	Ablation Group (N = 154)	Antiarrhythmic Drug Group (N = 149)	Treatment Effect (95% CI)
Quality-of-life end points§			
Change from baseline in AFEQT score¶			
At 12 mo‡	26.9±1.9	22.9±2.0	8.0±2.2
At 24 mo	29.7±2.0	24.7±2.0	9.0±2.3
At 36 mo	28.1±2.0	24.8±2.0	7.4±2.2
Change from baseline in EQ-5D score‖			
At 12 mo	0.06±0.01	0.01±0.01	0.05±0.02
At 24 mo	0.06±0.02	0.04±0.02	0.03±0.02
At 36 mo	0.06±0.02	0.01±0.02	0.05±0.02
Change from baseline in EQ-VAS score**			
At 12 mo‡	7.73±1.44	5.71±1.46	2.94±1.69
At 24 mo	7.44±1.56	6.53±1.55	1.87±1.85
At 36 mo	7.64±1.59	6.15±1.63	2.45±1.77
No symptoms — no. (%)††‡‡			
At 12 mo‡	131 (85.1)	109 (73.2)	1.17 (1.05–1.30)
At 24 mo	121/128 (94.5)	110/131 (84.0)	1.13 (1.04–1.24)
At 36 mo	138/145 (95.2)	116/140 (82.9)	1.15 (1.06–1.26)

J.G. Andrade, et al. Progression of Atrial fibrillation after Cryoablation or Drug Therapy. NEJM 2023: 388; 105-16.

Sekundární endpointy studie II

End Point	Ablation Group (N = 154)	Antiarrhythmic Drug Group (N = 149)	Treatment Effect (95% CI)
Secondary health care utilization end points‡‡			
Emergency department visit			
No. of patients with event (%)	40 (26.0)	46 (30.9)	0.84 (0.59–1.20)
No. of events	67	83	
Median no. of events per patient among those with an event (IQR)	1 (1–2)	1 (1–2)	
Hospitalization			
No. of patients with event (%)	8 (5.2)	25 (16.8)	0.31 (0.14–0.66)
No. of events	9	29	
Median no. of events per patient among those with an event (IQR)	1 (1–1)	1 (1–1)	
Cardioversion			
No. of patients with event (%)	14 (9.1)	20 (13.4)	0.68 (0.36–1.29)
No. of events	18	31	
Median no. of events per patient among those with an event (IQR)	1 (1–1)	1 (1–2)	
Nonprotocol ablation§§			
No. of patients with event (%)	27 (17.5)	63 (42.3)	0.41 (0.28–0.61)
No. of events	31	69	
Median no. of events per patient among those with an event (IQR)	1 (1–1)	1 (1–1)	

J.G. Andrade, et al. Progression of Atrial fibrillation after Cryoablation or Drug Therapy. NEJM 2023: 388; 105-16.

Safety endpoints

End Point	Ablation Group (N = 154)	Antiarrhythmic Drug Group (N = 149)	Treatment Effect (95% CI)
Safety end points — no. (%)‡‡			
Serious adverse event			
At 12 mo‡	5 (3.2)	6 (4.0)	0.81 (0.25–2.59)
At 36 mo	7 (4.5)	15 (10.1)	0.45 (0.19–1.05)
Any safety end-point event			
At 12 mo‡	14 (9.1)	24 (16.1)	0.59 (0.29–1.21)
At 36 mo	17 (11.0)	35 (23.5)	0.47 (0.28–0.79)

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Závěrem

Progressive-AF

V průběhu tříletého sledování pacientů s paroxysmální fibrilací síní

- Ablační léčba vedla k nižší rekurenci jakékoliv arytmie
- Snížení „AF burden“
- K nižšímu výskytu perzistentních forem fibrilace síní

Katetrizační léčba je schopna zpomalit progresi fibrilace síní

Výsledky podporují časnou intervenční strategii u pacientů s paroxysmální fibrilací síní

Výsledky jsou v souladu s předchozími časně intervenčními studiemi včetně EAST, která ukazuje na prognostický benefit časné agresivní léčby fibrilace síní.

Výsledky jsou konsistentní i se studií ATTEST (Kuck KH 2021), která ukázala zpomalení progrese AF při RF energii u pacientů ≥ 65let se selháním AADs.

Děkuji za pozornost!