

## Ablación de FA más allá de las guías. Desde las indicaciones clásicas a la evidencia emergente sobre ablación temprana.

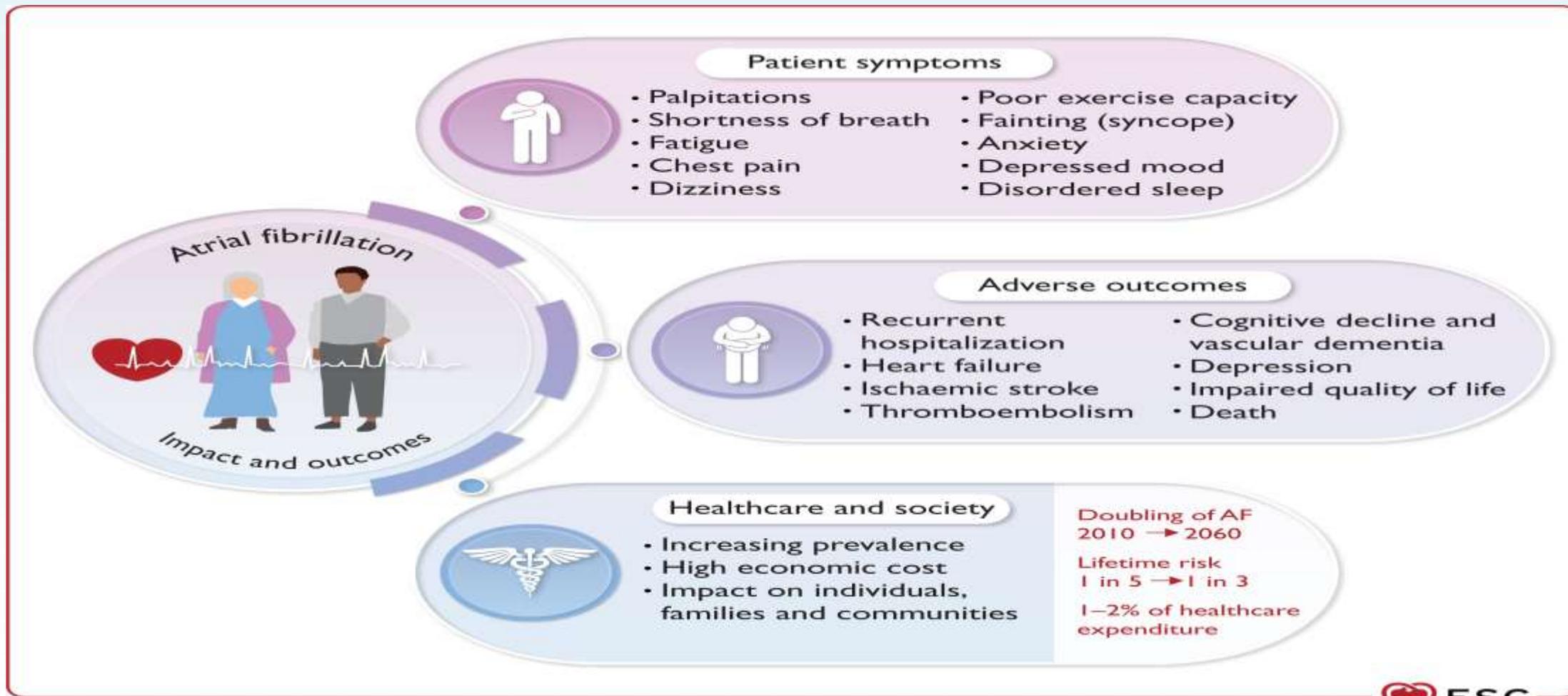
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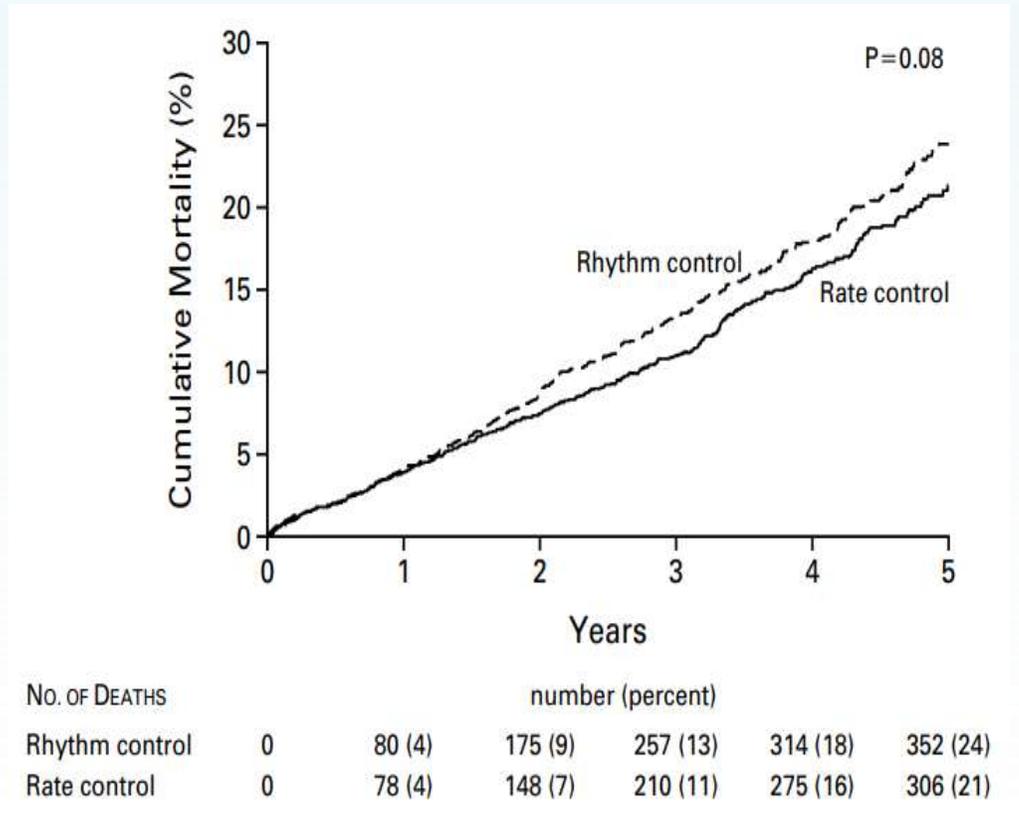
## CONFLICTOS DE INTERES

No tengo conflictos de interés



# CONTROL DE RITMO VS CONTROL DE FRECUENCIA

Estudio	Pacientes	Duración FA	Seguimiento	Edad	RS
AFFIRM 2002	4060		3.5	70±9	35 vs 63
RACE 2002	522	1 a 399	2.3	68±9	10 vs 39
PIAF 2000	252	7 a 360	1	61±10	10 vs 56
STAF 2003	200	6±3 meses	1.6	66±8	11 vs 26
HOT CAFE 2004	205	7 a 730	1.7	61±11	? vs 64



## ABLACION COMO PRIMERA LINEA

**RAAFT (2005)**

**MANTRA PAF  
(2012)**

**RAAFT -2 (2014)**

**CABANA (2019)**

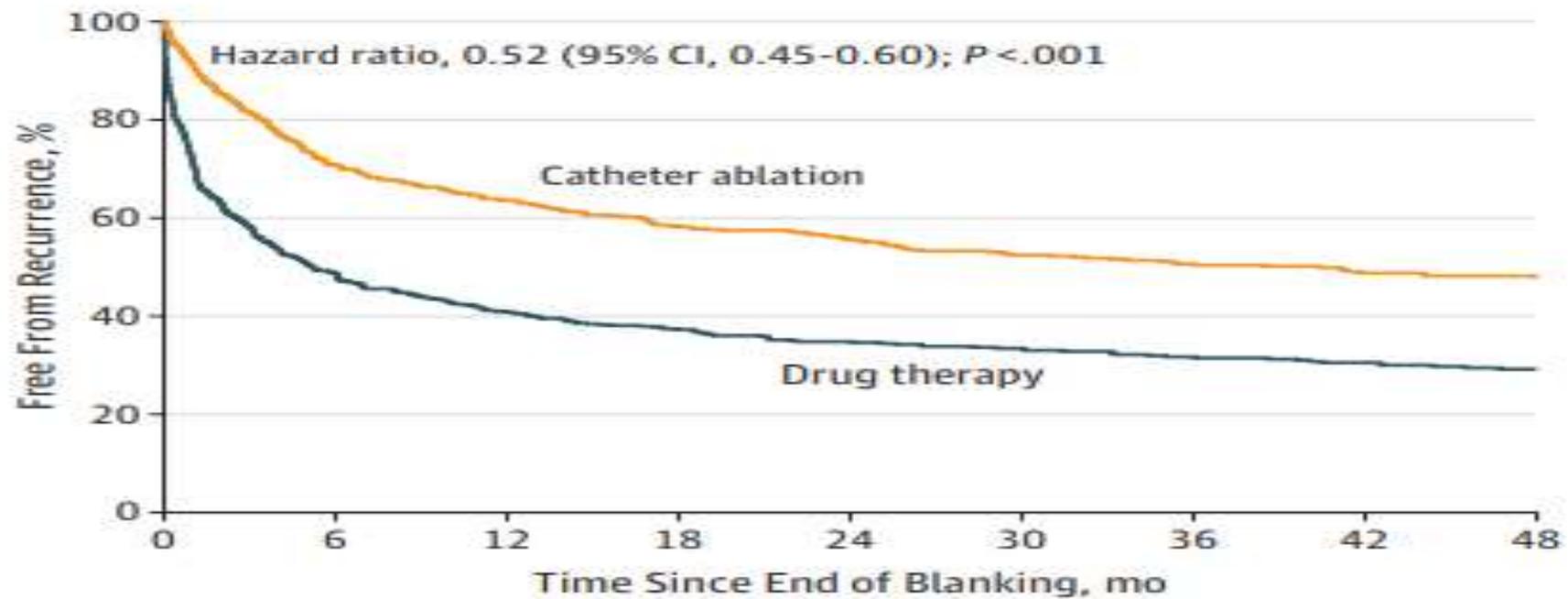
## CABANA

- Estudio multicéntrico, aleatorizado con 2204 pacientes en total
- 1100 pacientes en cada brazo a recibir ablación vs fármacos (control del ritmo o frecuencia)
- Hipótesis: la ablación con catéter es más efectivo que la terapia médica en pacientes con FA
- Resultado primario: compuesto de muerte por cualquier causa, ictus, sangrado severo y parada cardiaca
- Resultados secundarios: mortalidad total u hospitalizaciones y recurrencia de FA
- 40% con FA paroxística



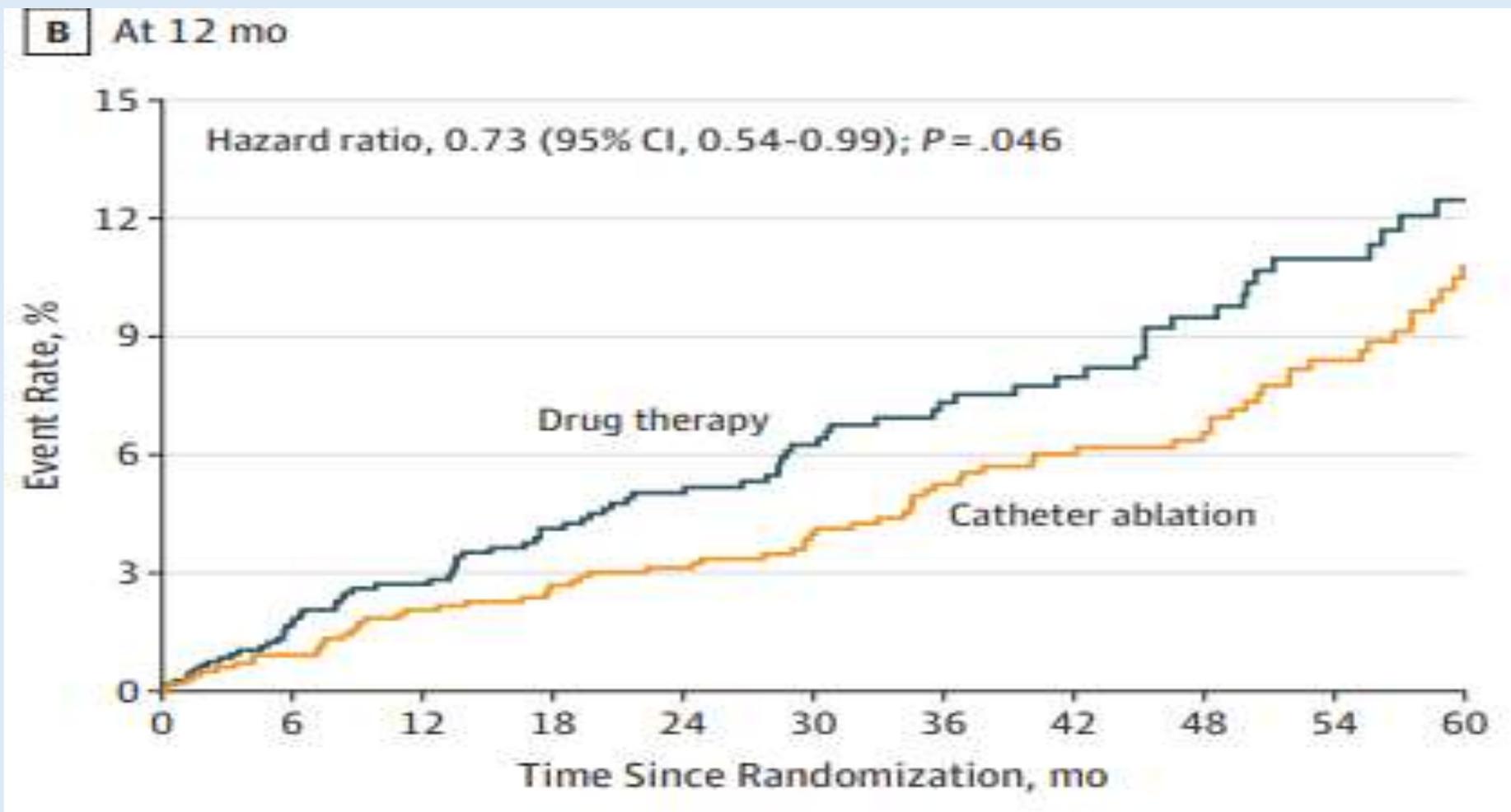
	Events, No. (%)		Kaplan-Meier 4-Year Event Rate, %				
	Catheter Ablation Group (n = 1108)	Drug Therapy Group (n = 1096)	Catheter Ablation Group (n = 1108)	Drug Therapy Group (n = 1096)	Absolute Reduction	Hazard Ratio (95% CI) <sup>a</sup>	P Value
Primary end point (death, disabling stroke, serious bleeding, or cardiac arrest) <sup>b</sup>	89 (8.0)	101 (9.2)	7.2	8.9	1.7	0.86 (0.65-1.15) <sup>c</sup>	.30
Components of primary end point							
Death	58 (5.2)	67 (6.1)	4.7	5.3	0.6	0.85 (0.60-1.21)	.38
Disabling stroke	3 (0.3)	7 (0.6)	0.1	0.7	0.6	0.42 (0.11-1.62)	.19
Serious bleeding	36 (3.2)	36 (3.3)	3.0	3.7	0.7	0.98 (0.62-1.56)	.93
Cardiac arrest	7 (0.6)	11 (1.0)	0.7	1.1	0.4	0.62 (0.24-1.61)	.33
Secondary end point							
Death or cardiovascular hospitalization	573 (51.7)	637 (58.1)	54.9	62.7	7.8	0.83 (0.74-0.93)	.001

**Figure 6. Recurrent Atrial Fibrillation After Blanking by Intention-to-Treat Analysis**

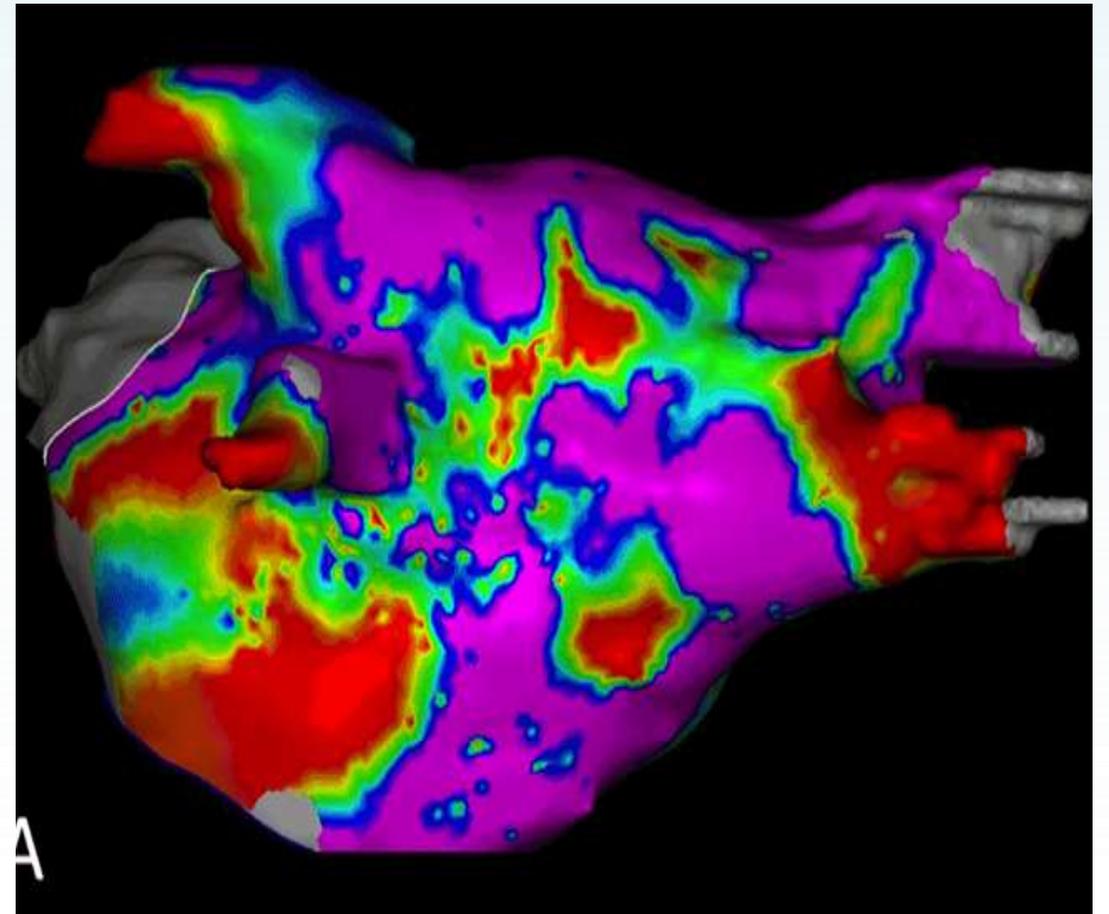
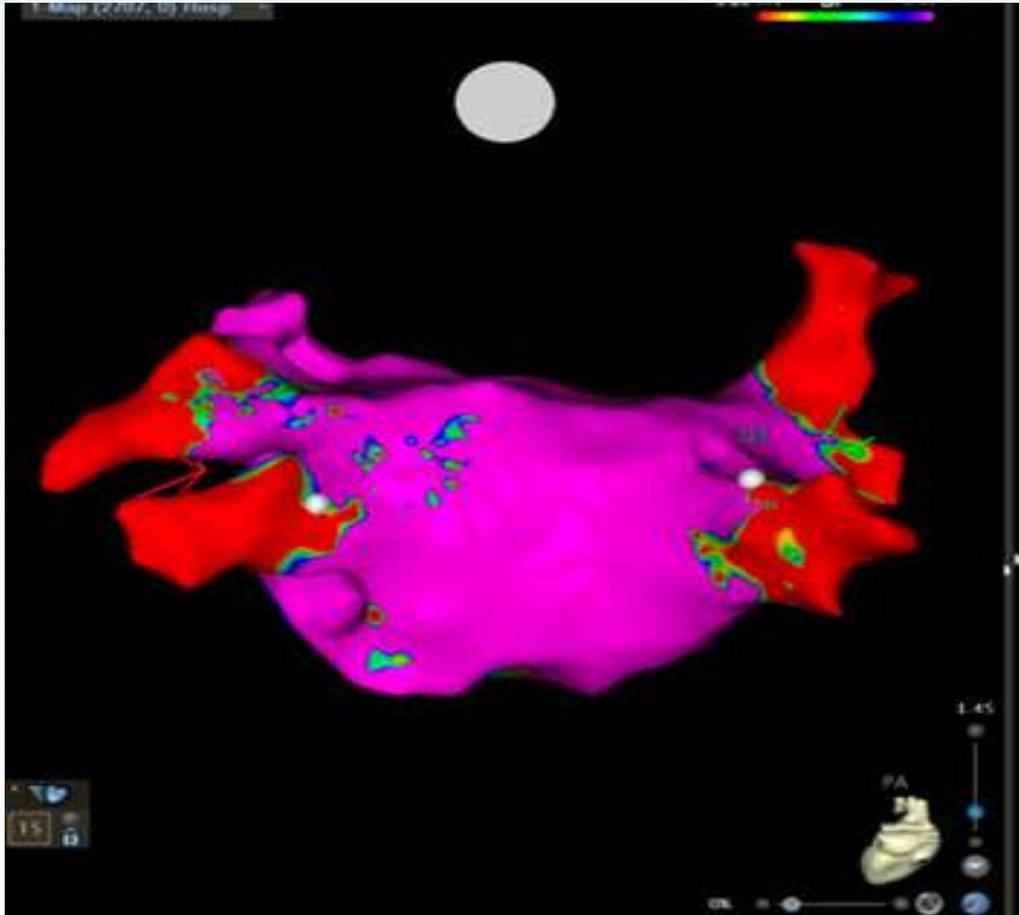


No. at risk	0	6	12	18	24	30	36	42	48
Drug therapy	629	304	252	212	181	157	131	115	94
Catheter ablation	611	432	381	328	291	241	201	163	134

# Resultado CABANA: Análisis por protocolo



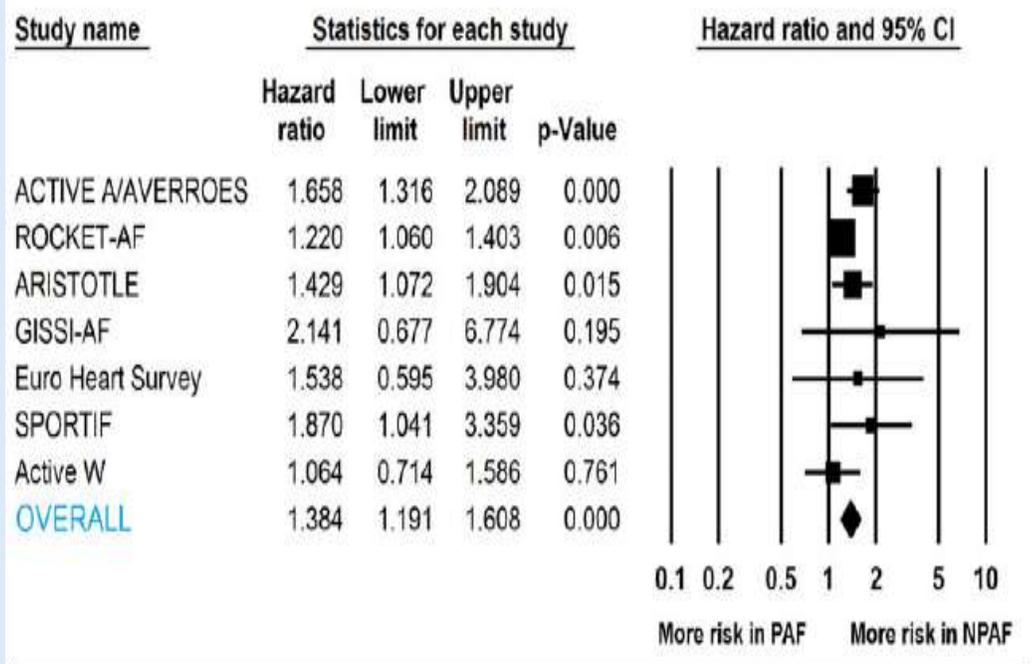
# PROGRESION DE LA ENFERMEDAD



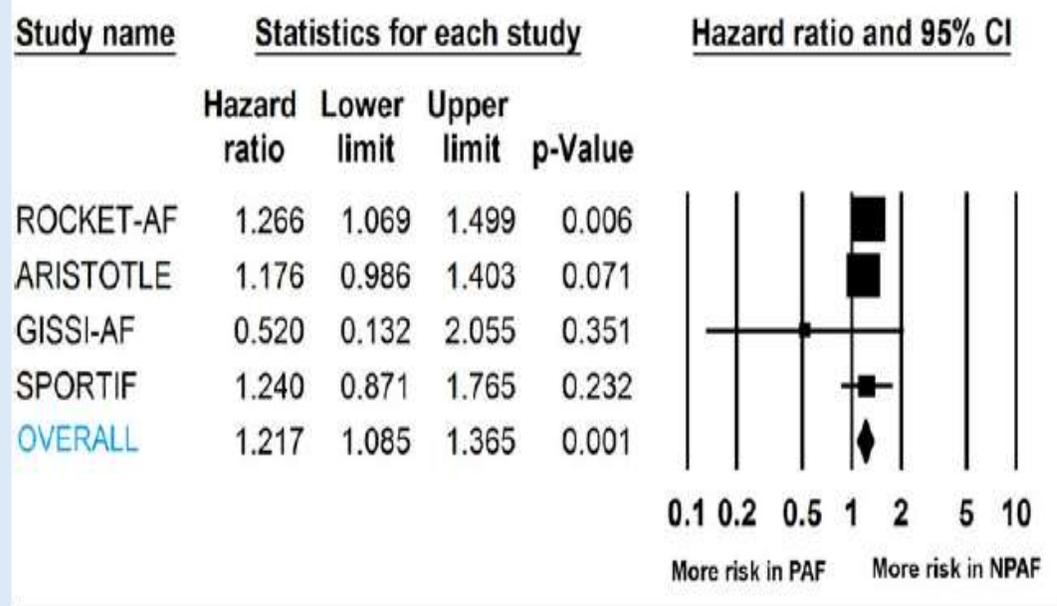
Progression of Paroxysmal to Persistent Atrial Fibrillation: 10-Year Follow-up in the Canadian Registry of Atrial Fibrillation. *Heart Rhythm* 2017;14:801-807.

# The impact of atrial fibrillation type on the risk of thromboembolism, mortality, and bleeding: a systematic review and meta-analysis

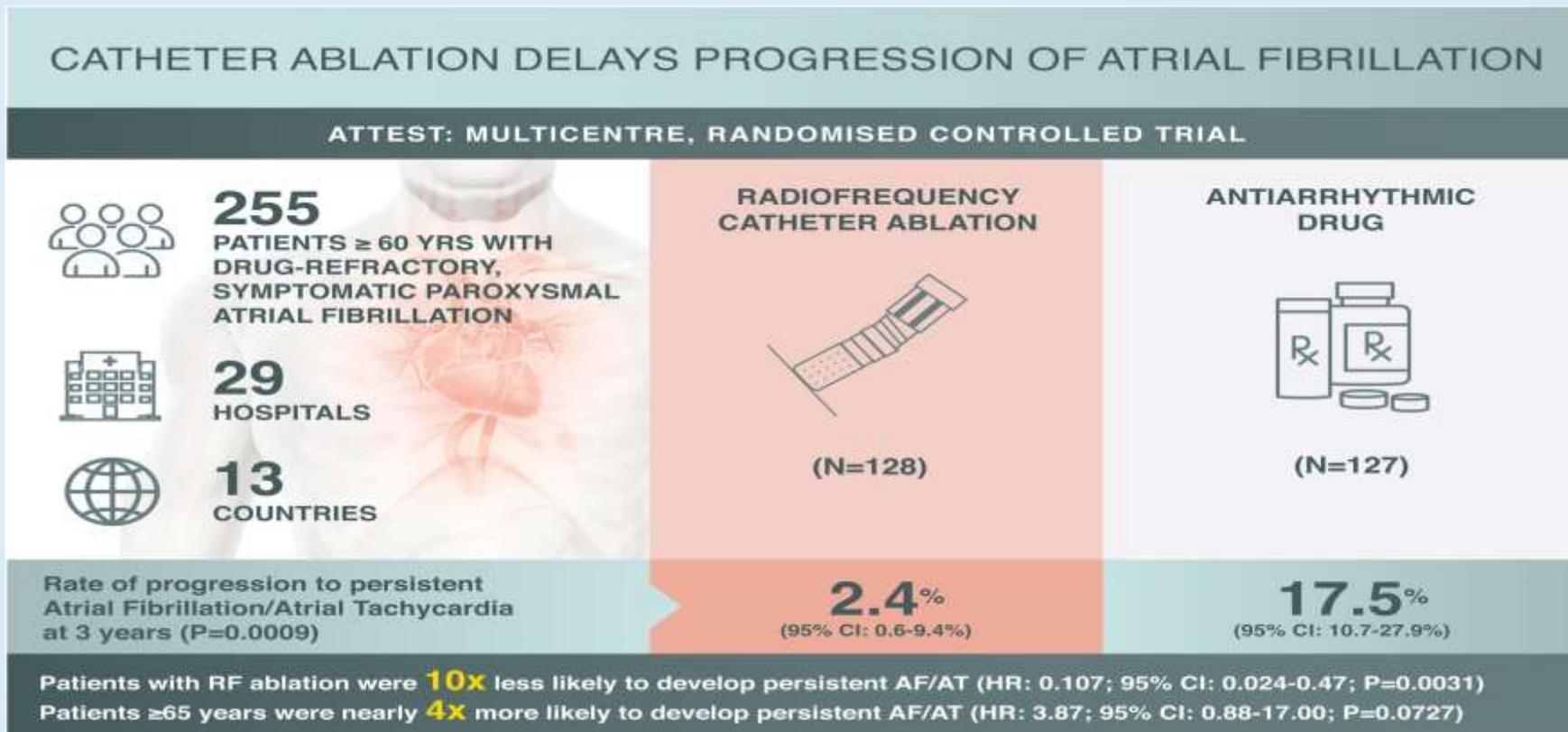
## B Stroke or Systemic Embolism (adjusted)



## B All-cause mortality (adjusted)



# Catheter ablation or medical therapy to delay progression of atrial fibrillation: the randomized controlled atrial fibrillation progression trial (ATTEST)



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## Early Rhythm-Control Therapy in Patients with Atrial Fibrillation

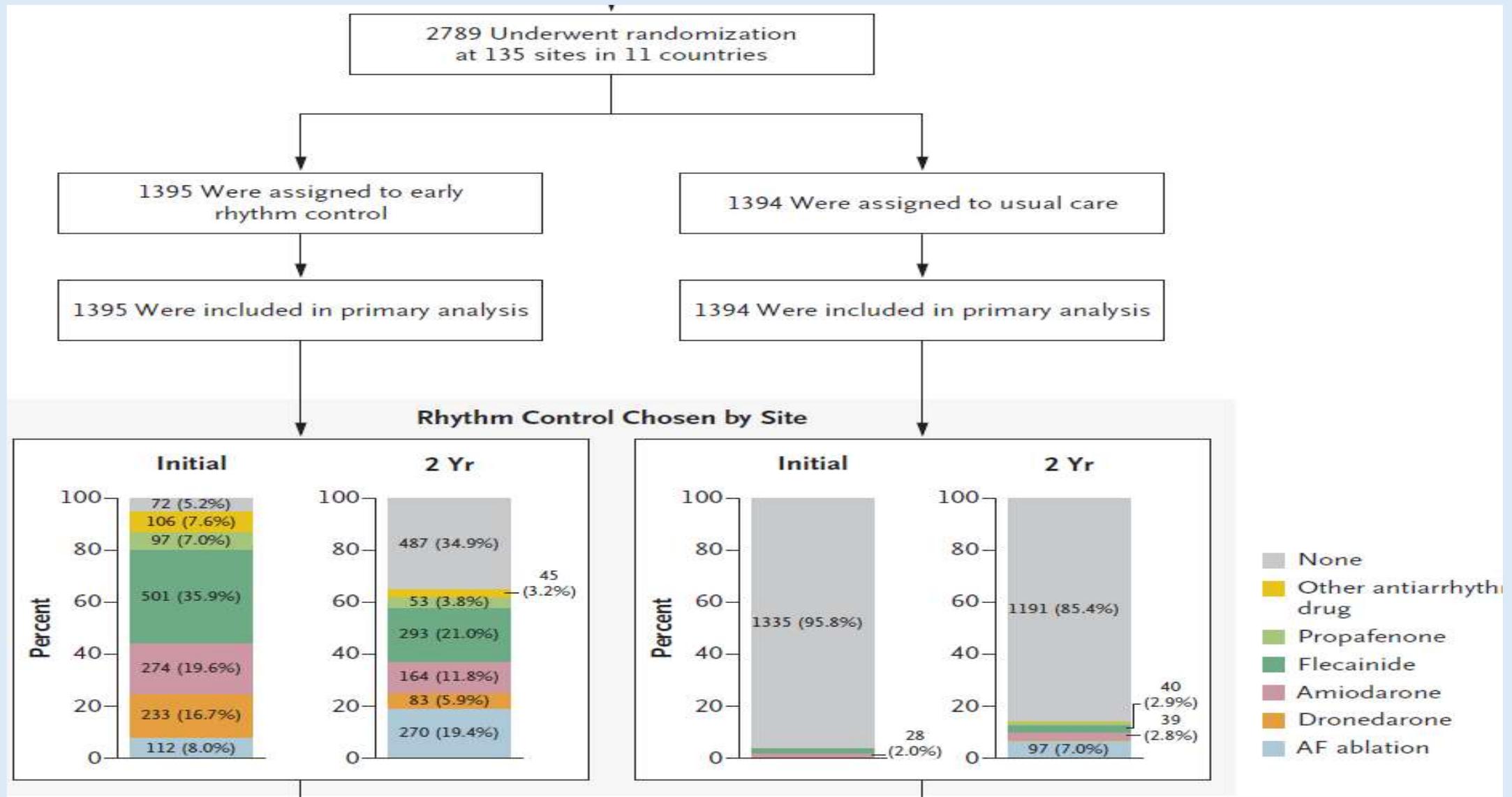
P. Kirchhof, A.J. Camm, A. Goette, A. Brandes, L. Eckardt, A. Elvan, T. Fetsch, I.C. van Gelder, D. Haase, L.M. Haegeli, F. Hamann, H. Heidbüchel, G. Hindricks, J. Kautzner, K.-H. Kuck, L. Mont, G.A. Ng, J. Rekosz, N. Schoen, U. Schotten, A. Suling, J. Taggeselle, S. Themistoclakis, E. Vettorazzi, P. Vardas, K. Wegscheider, S. Willems, H.J.G.M. Crijns, and G. Breithardt, for the EAST-AFNET 4 Trial Investigators\*

## EAST AFNET 4 (2020)

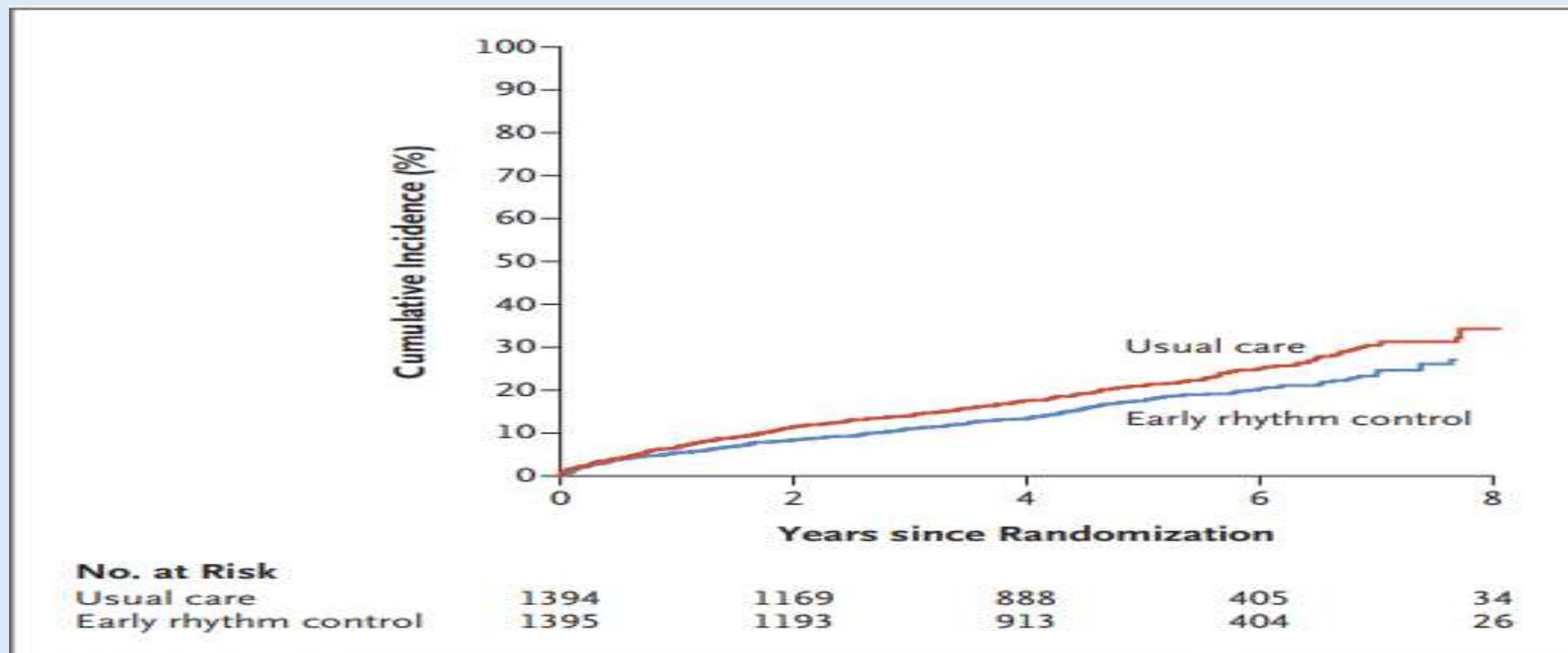
- Estudio multicéntrico, aleatorizado, 2789 pacientes, con FA de reciente diagnóstico (menos de un año a la fecha de ingreso al estudio)
- Comparar la eficacia y la seguridad de la estrategia control del ritmo temprano vs control de frecuencia
- Control del ritmo precoz: por ablación con catéter o fármacos antiarrítmicos
- Manejo habitual: control de FC
- Resultado primario: muerte por causas cardiovasculares, ECV, hospitalización por ICC o SCA.
- Seguimiento medio 5 años (detenido de forma precoz)

# EAST AFNET 4 (2020)

- EDAD MEDIA 74 AÑOS
- 46% MUJERES
- TIPO DE FA
  - PRIMER EPISODIO 38%
  - PAROXISTICA 36%
  - PERSISTENTE 26%
- 54% EN RITMO SINUSAL A LA INCLUSIÓN DEL ESTUDIO
- MEDIANA DE DIAS DESDE EL DX: 36 D
- 30% ASINTOMÁTICO
- 30% IC COMPENSADA
- $CHA_2DSVAS_2C$  PROMEDIO 3.4
- 90% ACO AL ALTA



# EAST AFNET 4 (2020)



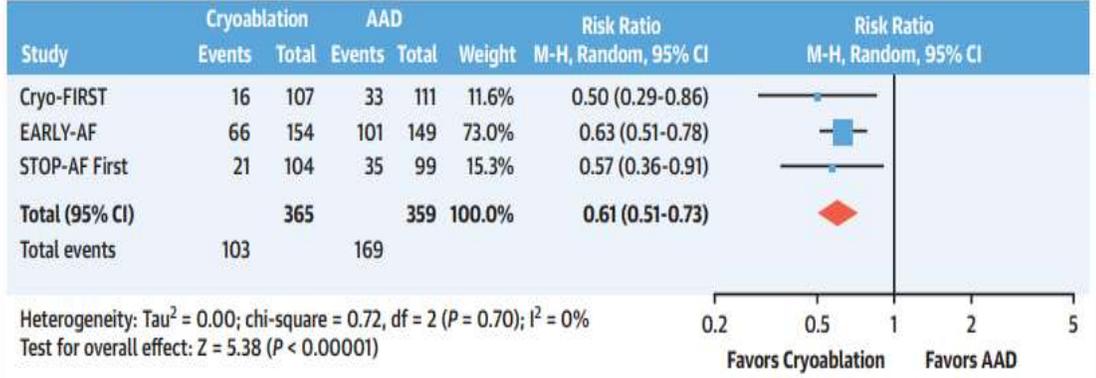
**Figure 2. Aalen–Johansen Cumulative-Incidence Curves for the First Primary Outcome.**

The first primary outcome was a composite of death from cardiovascular causes, stroke, or hospitalization with worsening of heart failure or acute coronary syndrome.

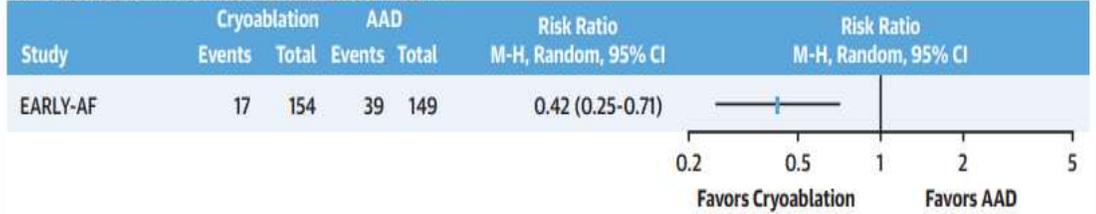
# Cryoballoon Ablation as Initial Treatment for Atrial Fibrillation

**FIGURE 2** Atrial Tachyarrhythmia Recurrence

## A Any Atrial Tachyarrhythmia



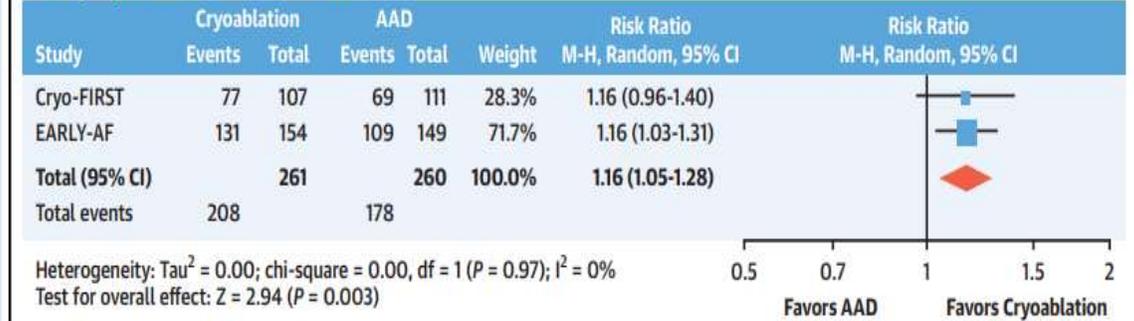
## B Symptomatic Atrial Tachyarrhythmia



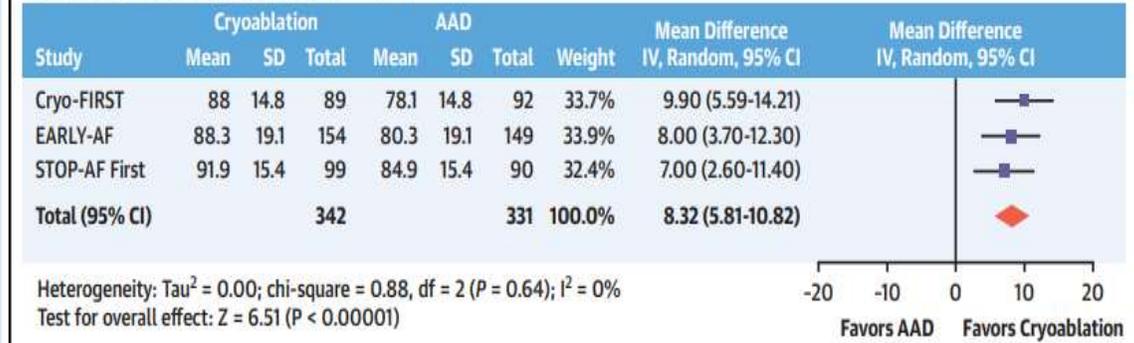
(A) Any atrial tachyarrhythmia. (B) Symptomatic atrial tachyarrhythmia.

**FIGURE 3** Quality of Life

## A Asymptomatic at 12 Months



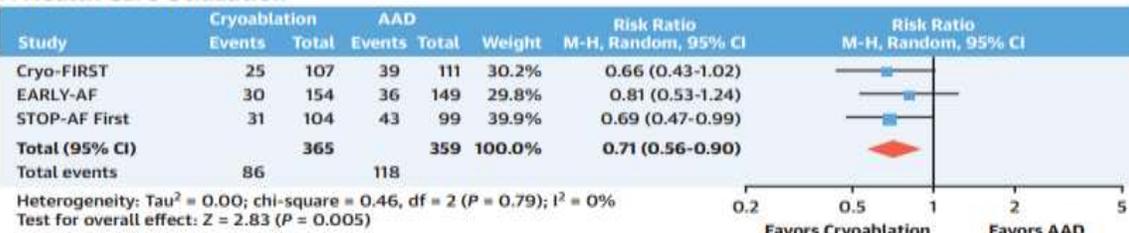
## B Mean Difference in AFEQT Score



# Cryoballoon Ablation as Initial Treatment for Atrial Fibrillation

FIGURE 4 Forest Plot Reporting Health Care Resource Use

## A Health Care Utilization



## B Hospitalization



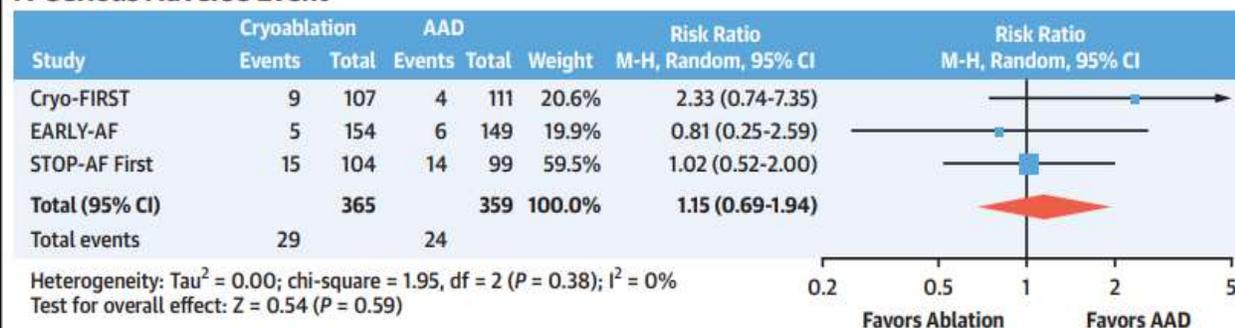
## C Emergency Department Visit



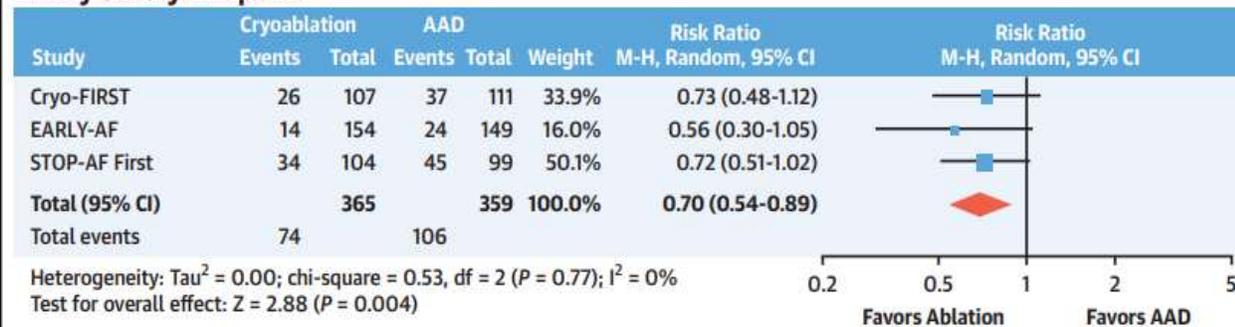
(A) Any health care use, (B) hospitalization >24 hours, (C) emergency department consultation, (D) cardioversion, and (E) nonprotocol ablation (defined as repeat ablation in patients randomized to first-line cryoablation, or "cross-over" ablation performed in those randomized to antiarrhythmic drug therapy).

FIGURE 5 Safety Outcomes

## A Serious Adverse Event



## B Any Safety Endpoint



(A) Treatment-related serious adverse events (as defined in the original study). (B) Any safety endpoint.



# Impact of atrial fibrillation catheter ablation on mortality, stroke, and heart failure hospitalizations: A meta-analysis

## (C) Hospitalization for heart failure

Study or Subgroup	TE	SE	Weight	Hazard Ratio IV, Random, 95% CI
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Type = Matched database

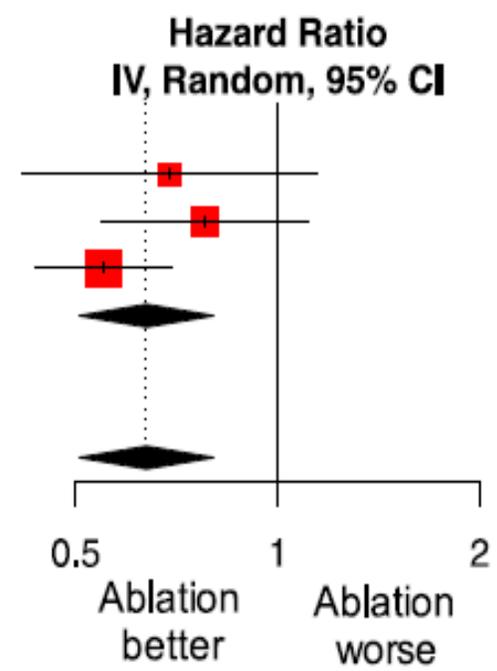
Reynolds 2012	-0.37	0.2570	17.6%	0.69 [0.42; 1.14]
Chang 2014	-0.25	0.1814	30.6%	0.78 [0.55; 1.11]
Srivatsa 2018	-0.60	0.1206	51.7%	0.55 [0.43; 0.70]
<b>Total (95% CI)</b>			<b>100.0%</b>	<b>0.64 [0.51; 0.80]</b>

Heterogeneity:  $\tau^2 = 0.0121$ ;  $\chi^2 = 2.76$ ,  $df = 2$  ( $P = 0.25$ );  $I^2 = 28\%$

**Total (95% CI)** **100.0%** **0.64 [0.51; 0.80]**

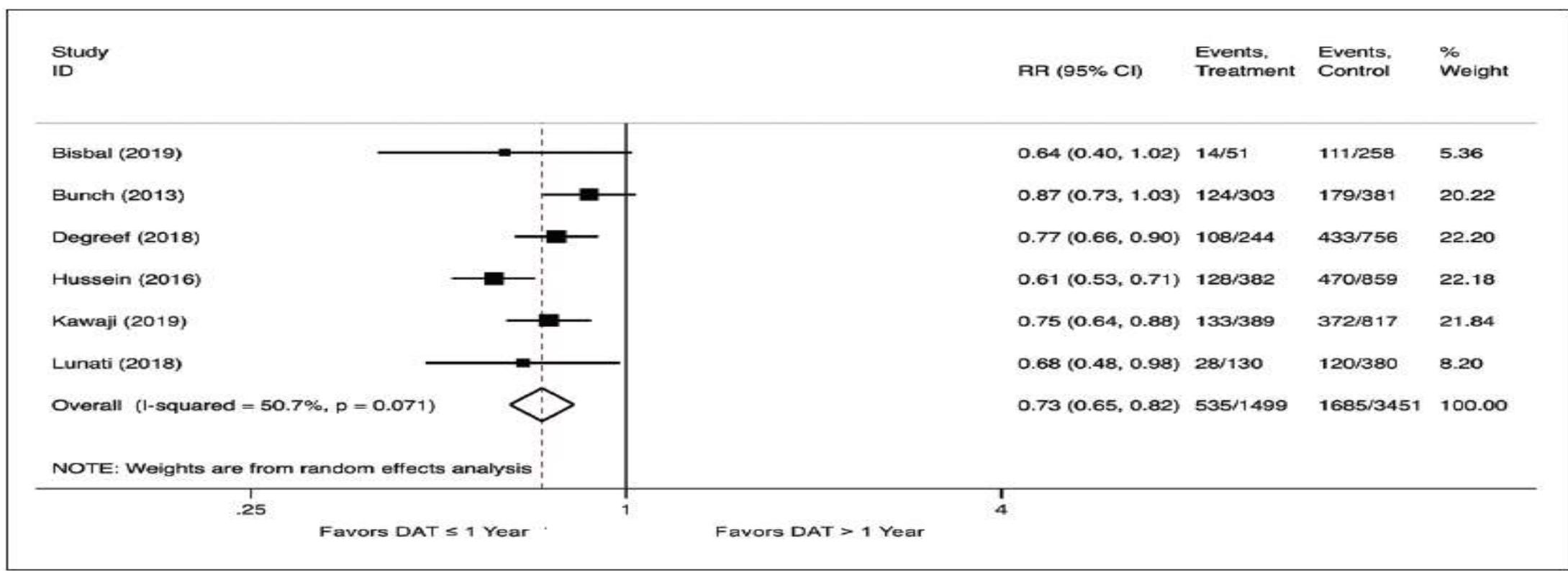
Heterogeneity:  $\tau^2 = 0.0121$ ;  $\chi^2 = 2.76$ ,  $df = 2$  ( $P = 0.25$ );  $I^2 = 28\%$

Residual heterogeneity:  $\tau^2 = NA$ ;  $\chi^2 = 2.76$ ,  $df = 2$  ( $P = 0.25$ );  $I^2 = 28\%$



# Diagnosis-to-Ablation Time and Recurrence of Atrial Fibrillation Following Catheter Ablation

## A Systematic Review and Meta-Analysis of Observational Studies



## CONCLUSIONES

- La evidencia actual es contundente que debemos de mantener al paciente en ritmo sinusal y entre más rápido actuemos mejor.
- La ablación es superior a los fármacos en el control del ritmo, retrasa la progresión de la enfermedad, mejoría de síntomas y de calidad de vida, menos uso de servicios de salud.
- La ablación es un procedimiento seguro.
- Evidencia sugiere una reducción de la mortalidad con la ablación como estrategia de control de ritmo.