

7th Advances in Heart Failure 2024

10 e 11 de Outubro

FACULDADE DE MEDICINA DA UNIVERSIDADE DO PORTO

ORGANIZAÇÃO

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EVENTS.

COMORBILIDADES DA IC: UM OLHAR SOBRE AS ESC GUIDELINES DE 2024

**7th Advances
in Heart
Failure 2024**

10 e 11 de Outubro

FACULDADE DE MEDICINA DA UNIVERSIDADE DO PORTO

Abordagem da Fibrilhação Auricular

João Primo

Atrial Fibrillation Begets Heart Failure and Vice Versa: Temporal Associations and Differences in Preserved vs. Reduced Ejection Fraction

Rajalakshmi Santhanakrishnan, MBBS¹, Na Wang, MA², Martin G. Larson, SD^{3,4}, Jared W. Magnani, MD, MSc^{1,4}, David D. McManus, MD⁵, Steven A. Lubitz, MD, MPH^{6,7,8}, Patrick T. Ellinor, MD, PhD^{6,7,8}, Susan Cheng, MD^{4,9}, Ramachandran S. Vasan, MD^{1,4,10}, Douglas S. Lee, MD¹¹, Thomas J. Wang, MD¹², Daniel Levy, MD^{4,13}, Emelia J. Benjamin, MD, ScM^{1,4,5,14}, and Jennifer E. Ho, MD^{4,6}

Patient symptoms

- Palpitations
- Shortness of breath
- Fatigue
- Chest pain
- Dizziness
- Poor exercise capacity
- Fainting (syncope)
- Anxiety
- Depressed mood
- Disordered sleep

Adverse outcomes

- Recurrent hospitalization
- Heart failure
- Ischaemic stroke
- Thromboembolism
- Cognitive decline and vascular dementia
- Depression
- Impaired quality of life
- Death

Healthcare and society

- Increasing prevalence
- High economic cost
- Impact on individuals, families and communities

Doubling of AF
2010 → 2060

Lifetime risk
1 in 5 → 1 in 3

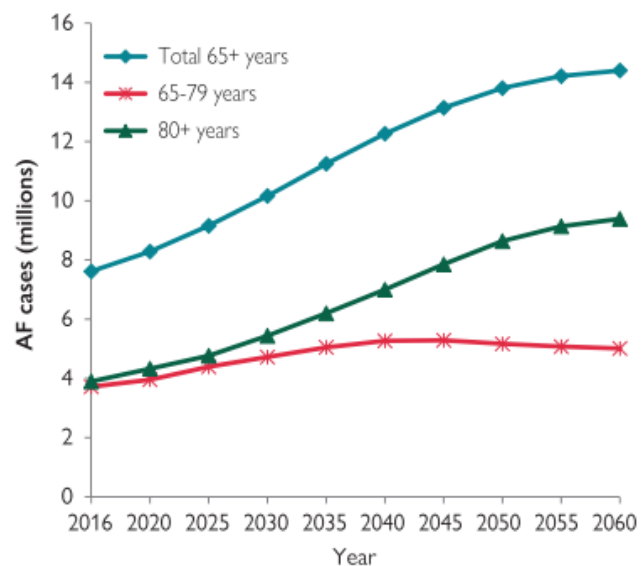
1–2% of healthcare
expenditure

Santhanakrishnan R, Wang N, Larson MG, Magnani JW, McManus DD, Lubitz SA, *et al.*

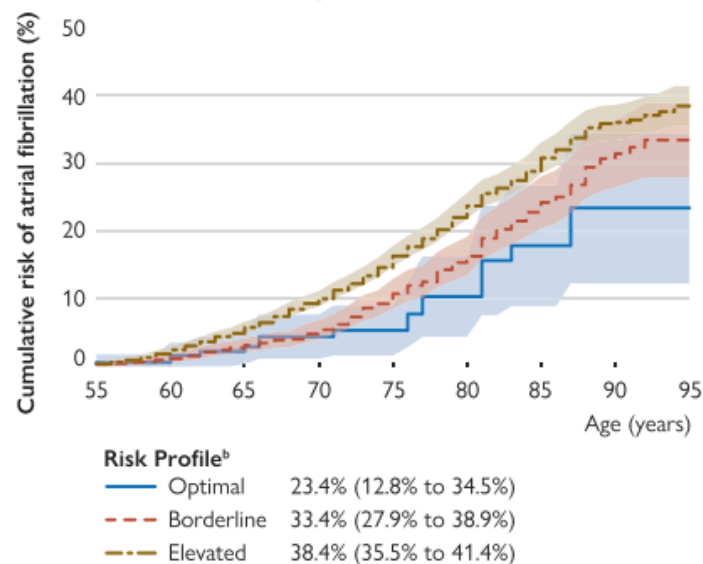
Atrial fibrillation begets heart failure and vice versa: temporal associations and differences in preserved versus reduced ejection fraction.

Circulation 2016;**133**:484–92. <https://doi.org/10.1161/CIRCULATIONAHA.115.018614>

Projected increase in AF prevalence among elderly in EU 2016-2060



Lifetime risk of AF increases with increasing risk factor burden^a



Patient symptoms



- Palpitations
- Shortness of breath
- Fatigue
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Doubling of AF 2010 → 2060

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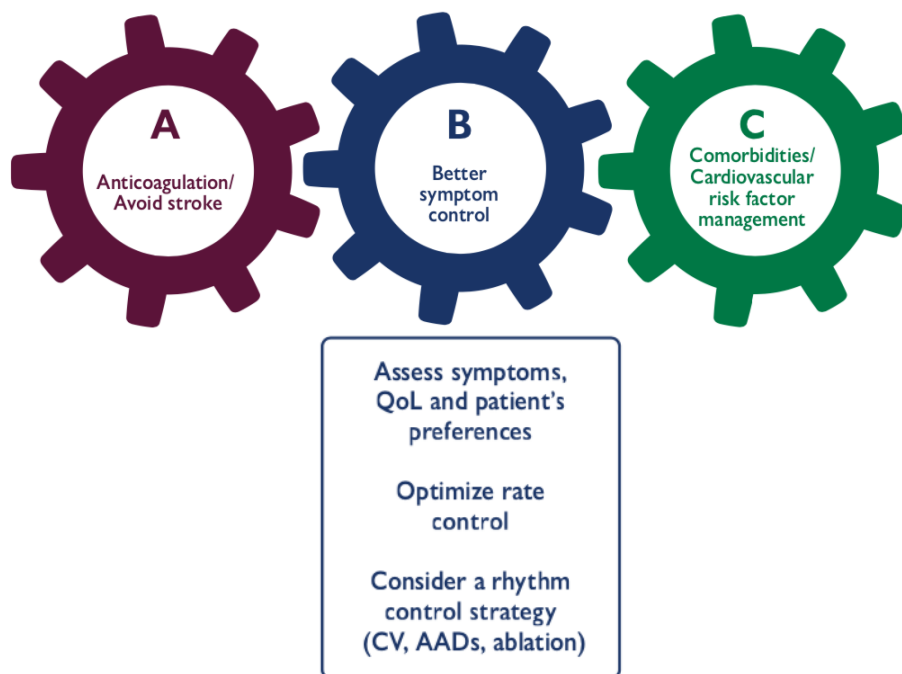
1-2% of healthcare expenditure



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



2024 ESC Guidelines for the management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS)

Developed by the task force for the management of atrial fibrillation of the European Society of Cardiology (ESC), with the special contribution of the European Heart Rhythm Association (EHRA) of the ESC.
Endorsed by the European Stroke Organisation (ESO)

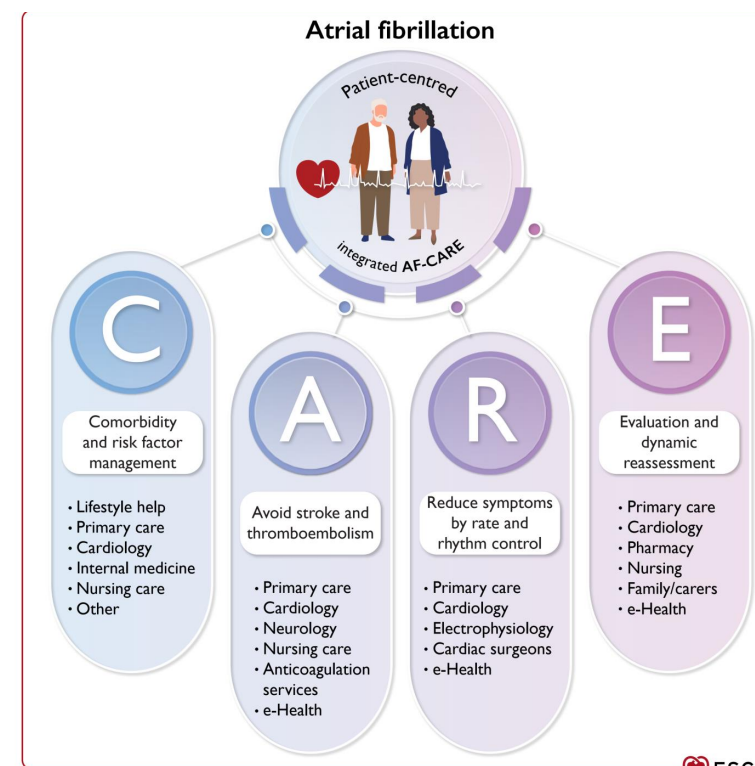


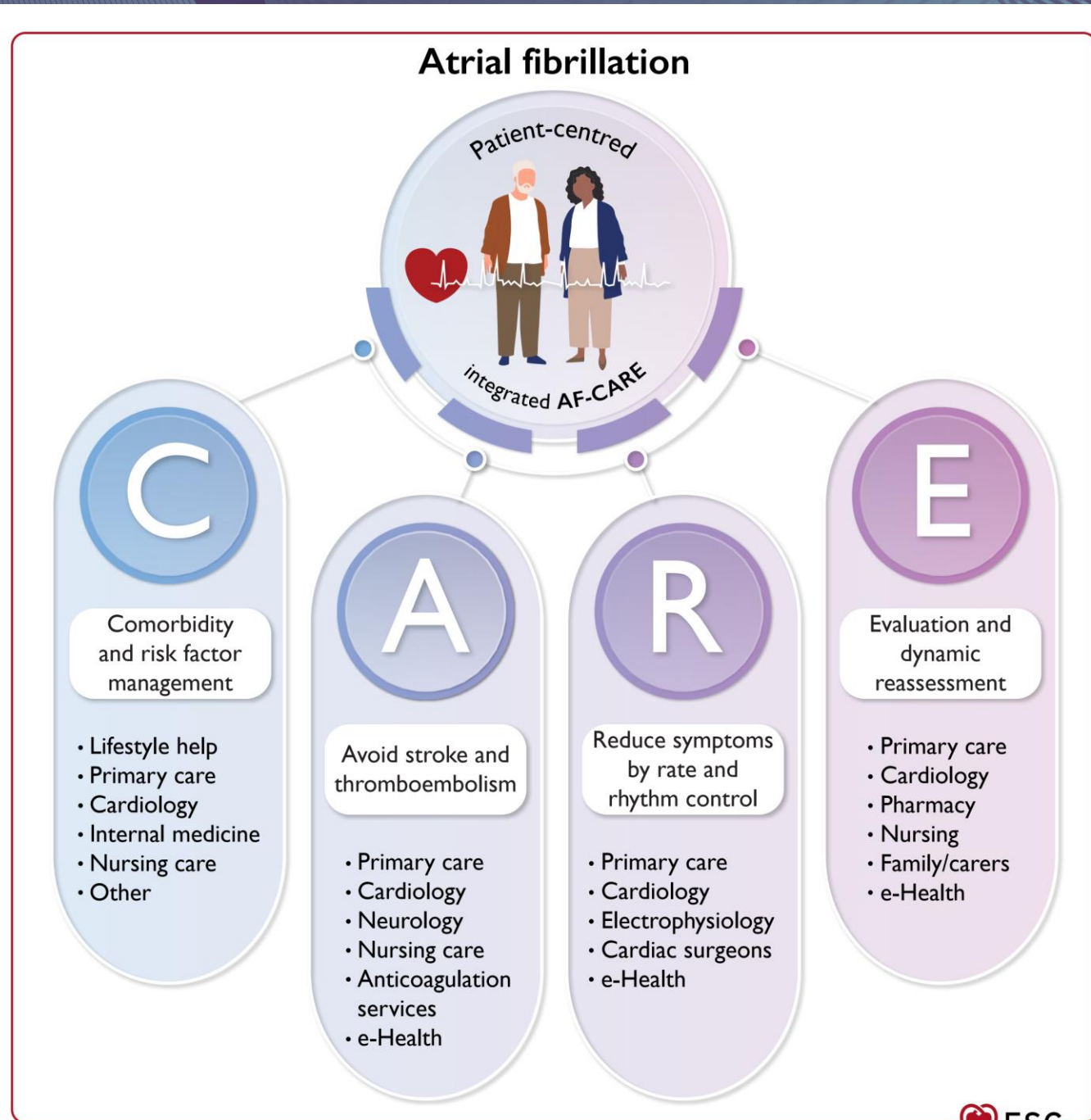
Table 9 Achieving patient-centred AF management

Components of patient-centred AF management:

- Optimal treatment according to the AF-CARE pathway, which includes:
 - [C] Comorbidity and risk factor management
 - [A] Avoid stroke and thromboembolism
 - [R] Reduce symptoms by rate and rhythm control
 - [E] Evaluation and dynamic reassessment
- Lifestyle recommendations
- Psychosocial support
- Education and awareness for patients, family members, and caregivers
- Seamless co-ordination between primary care and specialized AF care

How to implement patient-centred AF management:

- Shared decision-making
- Multidisciplinary team approach
- Patient education and empowerment, with emphasis on self-care
- Structured educational programmes for healthcare professionals
- Technology support (e-Health, m-Health, telemedicine)^a





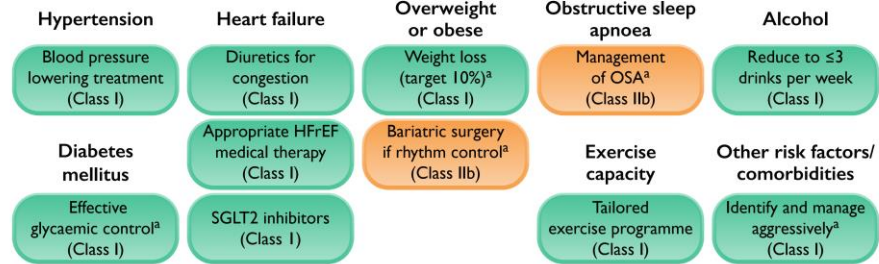
Equality in healthcare provision (gender, ethnicity, socioeconomic) (Class I)

Education for patients, families and healthcare professionals (Class I)

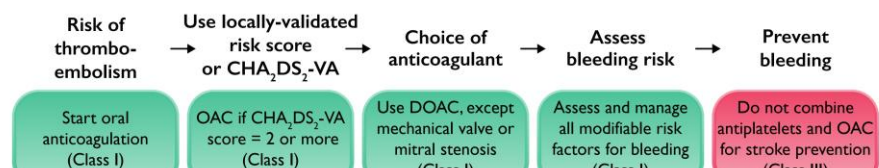
Patient-centred AF management with a multidisciplinary approach (Class IIa)



Comorbidity and risk factor management



Avoid stroke and thromboembolism



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

Developed by the task force for the management of atrial fibrillation of the European Society of Cardiology (ESC), with the special contribution of the European Heart Rhythm Association (EHRA) of the ESC, and endorsed by the European Stroke Organisation (ESO)



Reduce symptoms by rate and rhythm control

See patient pathways for:

First-diagnosed AF

Paroxysmal AF

Persistent AF

Permanent AF

Consider:

Rate control drugs

Cardioversion

Antiarrhythmic drugs

Catheter ablation

Endoscopic/hybrid ablation

Surgical ablation

Ablate and pace

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)

Classificação de Fibrilhação Auricular

1	2	3				4
At risk for AF	Pre-AF	AF				Permanent AF
		<div>← Patients may transition among different substages of AF →</div>				
Presence of modifiable and nonmodifiable risk factors associated with AF. Modifiable risk factors: <ul style="list-style-type: none">• Obesity• Lack of fitness• Hypertension• Sleep apnea• Alcohol• Diabetes Nonmodifiable risk factors: <ul style="list-style-type: none">• Genetics• Male sex• Age	Evidence of structural or electrical findings further predisposing a patient to AF: <ul style="list-style-type: none">• Atrial enlargement• Frequent atrial ectopy• Short bursts of atrial tachycardia<ul style="list-style-type: none">• Atrial flutter• Other high AF risk scenarios*	Paroxysmal AF (3A) AF that is intermittent and terminates within ≤7 d of onset	Persistent AF (3B) AF that is continuous and sustains for >7 d and requires intervention	Long-standing persistent AF (3C) AF that is continuous for >12 mo in duration	Successful AF ablation (3D) Freedom from AF after percutaneous or surgical intervention to eliminate AF	No further attempts at rhythm control after discussion between patient and clinician
<div>Treat Modifiable Risk Factors →</div>						
	Consider heightened surveillance	<div>→ Ongoing monitoring as clinically appropriate for AF burden →</div>				
		<div>→ Is AF associated with pathophysiological changes? →</div>				
		<div>→ Stroke risk assessment and therapy if appropriate →</div>				
		<div>→ Treat symptoms →</div>				

What's new

Classe I: Diuréticos, Inibidores da SGLT2, tratamento médico da ICC, Controle da Glicemia,
Classe IIb: Cirurgia Bariátrica, Correção da Apneia do sono e alterações do estilo de vida

[C] Comorbidity and risk factor management—Section 5

Diuretics are recommended in patients with AF, HF, and congestion to alleviate symptoms and facilitate better AF management.	I	C
Appropriate medical therapy for HF is recommended in AF patients with HF and impaired LVEF to reduce symptoms and/or HF hospitalization and prevent AF recurrence.	I	B
Sodium-glucose cotransporter-2 inhibitors are recommended for patients with HF and AF regardless of left ventricular ejection fraction to reduce the risk of HF hospitalization and cardiovascular death.	I	A
Effective glycaemic control is recommended as part of comprehensive risk factor management in individuals with diabetes mellitus and AF, to reduce burden, recurrence, and progression of AF.	I	C
Bariatric surgery may be considered in conjunction with lifestyle changes and medical management in individuals with AF and body mass index $\geq 40 \text{ kg/m}^2$ ^c where a rhythm control strategy is planned, to reduce recurrence and progression of AF.	IIb	C
Management of obstructive sleep apnoea may be considered as part of a comprehensive management of risk factors in individuals with AF to reduce recurrence and progression.	IIb	B
When screening for obstructive sleep apnoea in individuals with AF, using only symptom-based questionnaires is not recommended.	III	B

What's new

Revised Recommendations: control Tensional, Perda de peso, exercicio fisico, reduzir consumo de alcool

Section 5—[C] Comorbidity and risk factor management

Attention to good BP control is recommended in AF patients with hypertension to reduce AF recurrences and risk of stroke and bleeding.

I

B

Blood pressure lowering treatment is recommended in patients with AF and hypertension to reduce recurrence and progression of AF and prevent adverse cardiovascular events.

I

B

In obese patients with AF, weight loss together with management of other risk factors should be considered to reduce AF incidence, AF progression, AF recurrences, and symptoms.

IIa

B

Weight loss is recommended as part of comprehensive risk factor management in overweight and obese individuals with AF to reduce symptoms and AF burden, with a target of 10% or more reduction in body weight.

I

B

Physical activity should be considered to help prevent AF incidence or recurrence, with the exception of excessive endurance exercise, which may promote AF.

IIa

C

A tailored exercise programme is recommended in individuals with paroxysmal or persistent AF to improve cardiorespiratory fitness and reduce AF recurrence.

I

B

Advice and management to avoid alcohol excess should be considered for AF prevention and in AF patients considered for OAC therapy.

IIa

B

Reducing alcohol consumption to ≤ 3 standard drinks (≤ 30 grams of alcohol) per week is recommended as part of comprehensive risk factor management to reduce AF recurrence.

I

B

What's new

Inibidores da enzima de conversão e ARA-2 como primeira linha, Tratamento apropriado da IC, Peso ideal, exercício físico moderado, evitar excesso de álcool, Inibidores da SGLT2

Primary prevention of AF—Section 10.5

Maintaining optimal blood pressure is recommended in the general population to prevent AF, with ACE inhibitors or ARBs as first-line therapy.

I

B

Appropriate medical HF therapy is recommended in individuals with HFrEF to prevent AF.

I

B

Maintaining normal weight (BMI 20–25 kg/m²) is recommended for the general population to prevent AF.

I

B

Maintaining an active lifestyle is recommended to prevent AF, with the equivalent of 150–300 min per week of moderate intensity or 75–150 min per week of vigorous intensity aerobic physical activity.

I

B

Avoidance of binge drinking and alcohol excess is recommended in the general population to prevent AF.

I

B

Metformin or SGLT2 inhibitors should be considered for individuals needing pharmacological management of diabetes mellitus to prevent AF.

IIa

B

Weight reduction should be considered in obese individuals to prevent AF.

IIa

B

What's new

Revised recomendations

Concomitant AF ablation should be considered in patients undergoing cardiac surgery, balancing the benefits of freedom from atrial arrhythmias and the risk factors for recurrence (left atrial dilatation, years in AF, age, renal dysfunction, and other cardiovascular risk factors).

Ila

A

Concomitant surgical ablation is recommended in patients undergoing mitral valve surgery and AF suitable for a rhythm control strategy to prevent symptoms and recurrence of AF, with shared decision-making supported by an experienced team of electrophysiologists and arrhythmia surgeons.

I

A

What's new

Revised recommendations

Section 7.2—Rhythm control strategies in patients with AF

AF catheter ablation for PVI should/may be considered as first-line rhythm control therapy to improve symptoms in selected patients with symptomatic:

- Paroxysmal AF episodes.

IIa

B

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.

I

A

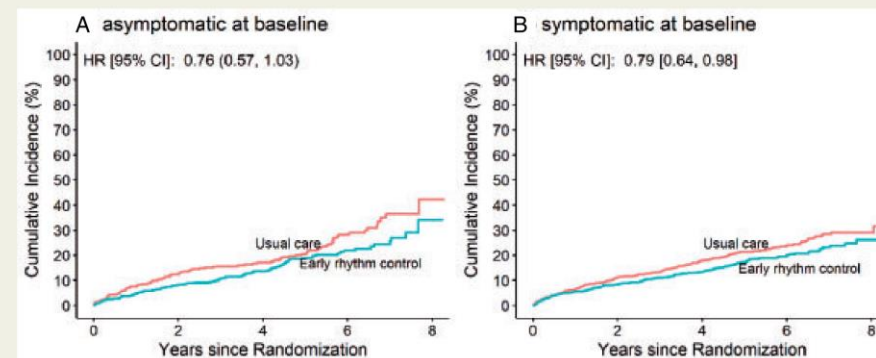
Assintomaticos vs Sintomáticos

- 1) Dts assintomaticos e sintomaticos partilham as mesmas características clínicas, similar CHA₂DS₂VASc scores com pequenas diferenças no tipo de comorbilidades e mais FA persistente nos dts assintomaticos.
- 2) Anticoagulação e tratamento concomitante de problemas cardiovasculares sem diferenças entre assintomaticos e sintomaticos.

Systematic, early rhythm control strategy for atrial fibrillation in patients with or without symptoms: the EAST-AFNET 4 trial

Stephan Willems^{1,2,3}, Katrin Borof⁴, Axel Brandes ^{5,6}, Günter Breithardt ^{3,7}, A. John Camm⁸, Harry J.G.M. Crijns⁹, Lars Eckardt^{3,7}, Nele Gessler ^{1,2}, Andreas Goette^{6,10,11}, Laurent M. Haegeli^{12,13}, Hein Heidbuchel¹⁴, Josef Kautzner¹⁵, G. André Ng ¹⁶, Renate B. Schnabel ^{2,4}, Anna Suling¹⁷, Lukasz Szumowski¹⁸, Sakis Themistoclakis ¹⁹, Panos Vardas²⁰, Isabelle C. van Gelder²¹, Karl Wegscheider ^{2,3,15}, and Paulus Kirchhof ^{2,3,4,22*}

Similar reduction of cardiovascular death, stroke, or hospitalisation for heart failure or acute coronary syndrome in symptomatic and asymptomatic patients



Our findings support the systematic, early initiation of rhythm control therapy in asymptomatic patients with atrial fibrillation and concomitant cardiovascular conditions.

What's new

Doença do nó sinusal. Redo de ablação recomendada

Catheter ablation—Section 7.2.5

Sinus node disease/tachycardia–bradycardia syndrome

Atrial fibrillation catheter ablation should be considered in patients with AF-related bradycardia or sinus pauses on AF termination to improve symptoms and avoid pacemaker implantation.

Ila

C

Recurrence after catheter ablation

Repeat AF catheter ablation should be considered in patients with AF recurrence after initial catheter ablation, provided the patient's symptoms were improved after the initial PVI or after failed initial PVI, to reduce symptoms, recurrence, and progression of AF.

Ila

B

Patients with heart failure

AF catheter ablation is recommended in patients with AF and HFrEF with high probability of tachycardia-induced cardiomyopathy to reverse left ventricular dysfunction.^{604,611}

I

B

AF catheter ablation should be considered in selected AF patients with HFrEF to reduce HF hospitalization and prolong survival.^{4,513,514,604,610,612}

IIa

B

**Successful AF ablation has been shown
to lead to improvements in LV function**

Catheter Ablation Versus Medical Rate Control in Atrial Fibrillation and Systolic Dysfunction

The CAMERA-MRI Study

Sandeep Prabhu, MBBS,^{a,b,c,d} Andrew J. Taylor, MBBS, PhD,^{a,b,e} Ben T. Costello, MBBS,^{a,b}
David M. Kaye, MBBS, PhD,^{a,b,e} Alex J.A. McLellan, MBBS, PhD,^{a,b,c,d} Aleksandr Voskoboinik, MBBS,^{a,b,c,d}
Hariharan Sugumar, MBBS,^{a,b,c,d} Siobhan M. Lockwood, MBBS,^f Michael B. Stokes, MBBS,^f Bhupesh Pathik, MBBS,^{c,d}
Chrisan J. Nalliah, MBBS,^{c,d} Geoff R. Wong, MBBS,^{c,d} Sonia M. Azzopardi, RN,^{a,b} Sarah J. Gutman, MBBS,^{a,b}
Geoffrey Lee, MBBS, PhD,^c Jamie Layland, MBCHB, PhD,^e Justin A. Mariani, MBBS, PhD,^{a,b,d}
Liang-han Ling, MBBS, PhD,^{a,b,d} Jonathan M. Kalman, MBBS, PhD,^{c,d} Peter M. Kistler, MBBS, PhD^{a,b,d}



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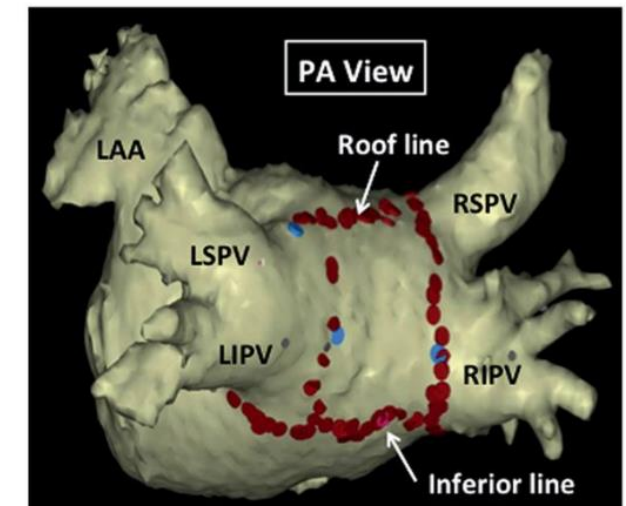
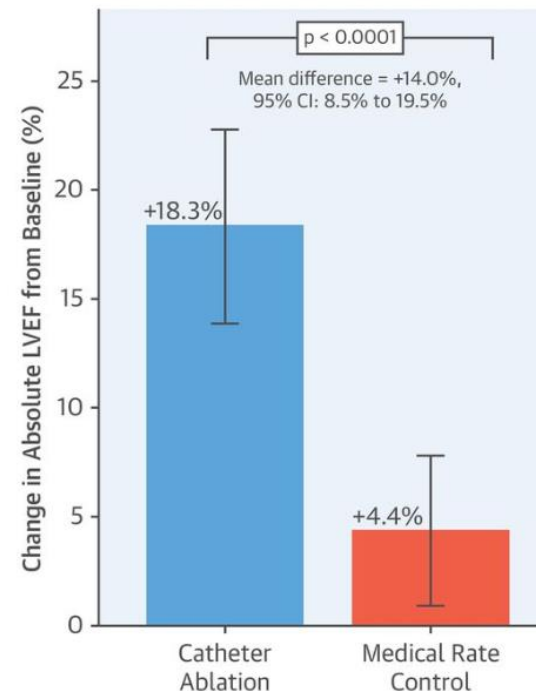
CENTRAL ILLUSTRATION: Change in Absolute LVEF From Baseline According to Treatment Arm

A

Primary Endpoint: Change in LVEF at Baseline and 6 Months by Treatment Arm

B

Catheter Ablation Lesion Set in Left Atrium: Pulmonary Vein and Posterior Wall Isolation



Patients with heart failure

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B

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IIa

B

Circulation

Ablation Versus Amiodarone for Treatment of Persistent Atrial Fibrillation in Patients With Congestive Heart Failure and an Implanted Device

Results From the AATAC Multicenter Randomized Trial

Luigi Di Biase, Prasant Mohanty, Sanghamitra Mohanty, Pasquale Santangeli, Chintan Trivedi, Dhanunjaya Lakkireddy, Madhu Reddy, Pierre Jais, Sakis Themistoclakis, Antonio Dello Russo, Michela Casella, Gemma Pelargonio, Maria Lucia Narducci, Robert Schweikert, Petr Neuzil, Javier Sanchez, Rodney Horton, Salwa Beheiry, Richard Hongo, Steven Hao, Antonio Rossillo, ...

Originally published 30 Mar 2016 | Circulation. 2016;133:1637–1644

Conclusions—This multicenter randomized study shows that CA of AF is superior to AMIO in achieving freedom from AF at long-term follow-up and reducing unplanned hospitalization and mortality in patients with heart failure and persistent AF.

Patients with heart failure

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I

B

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IIa

B



The NEW ENGLAND
JOURNAL of MEDICINE

ORIGINAL ARTICLE

Catheter Ablation for Atrial Fibrillation with Heart Failure

Nassir F. Marrouche, M.D., Johannes Brachmann, M.D., Dietrich Andresen, M.D., Jürgen Siebels, M.D., Lucas Boersma, M.D., Luc Jordaens, M.D., Béla Merkely, M.D., Evgeny Pokushalov, M.D., Prashanthan Sanders, M.D., Jochen Proff, B.S., Heribert Schunkert, M.D., Hildegard Christ, M.D., et al., for the CASTLE-AF Investigators*

February 1, 2018

N Engl J Med 2018; 378:417-427

DOI: 10.1056/NEJMoa1707855

Patients with heart failure

AF catheter ablation is recommended in patients with AF and HFrEF with high probability of tachycardia-induced cardiomyopathy to reverse left ventricular dysfunction

AF catheter ablation in selected AF patients reduces hospitalization

ORIGINAL ARTICLE

Catheter Ablation in End-Stage Heart Failure with Atrial Fibrillation

Christian Sohns, M.D., Henrik Fox, M.D., Nassir F. Marrouche, M.D., Harry J.G.M. Crijns, M.D., Ph.D., Angelika Costard-Jaeckle, M.D., Leonard Bergau, M.D., Gerhard Hindricks, M.D., Nikolaos Dagres, M.D., Samuel Sossalla, M.D., Rene Schramm, M.D., Ph.D., Thomas Fink, M.D., Mustapha El Hamriti, M.D., Maximilian Moersdorf, M.D., Vanessa Sciacca, M.D., Frank Konietzschke, Ph.D., Volker Rudolph, M.D., Jan Gummert, M.D., Jan G.P. Tijssen, Ph.D., and Philipp Sommer, M.D.,
for the CASTLE HTx Investigators

CONCLUSIONS

Among patients with atrial fibrillation and end-stage heart failure, the combination of catheter ablation and guideline-directed medical therapy was associated with a lower likelihood of a composite of death from any cause, implantation of a left ventricular assist device, or urgent heart transplantation than medical therapy alone.

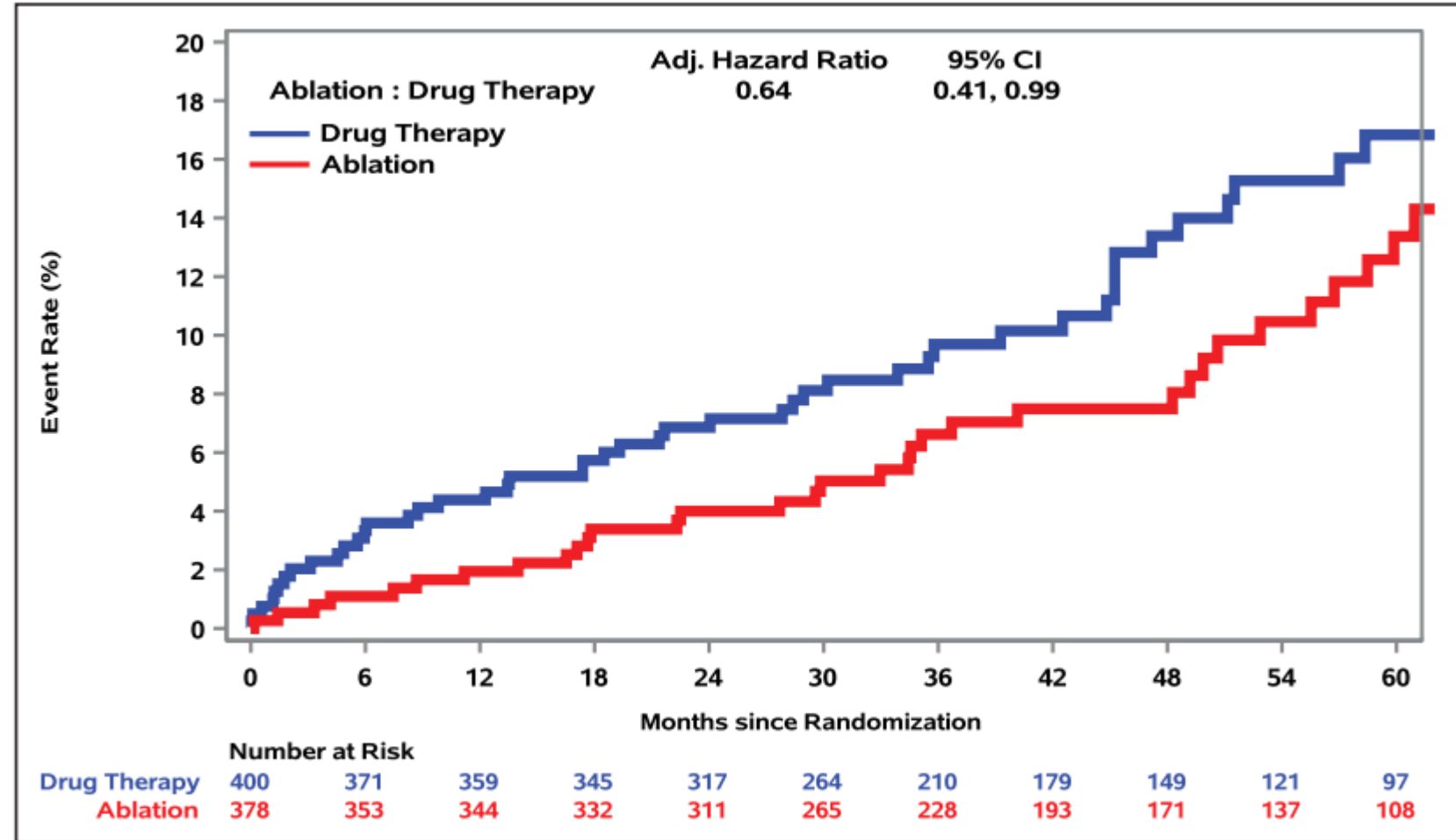
Patients with heart failure

AF catheter ablation is recommended in patients with AF and HF EF $\geq 40\%$ and symptomatic tachycardia-induced

Circulation

ORIGINAL RESEARCH ARTICLE

Ablation Versus Drug Therapy for Atrial Fibrillation in Heart Failure Results From the CABANA Trial



Patients with heart failure

AF catheter ablation is recommended in patients with AF and HFrEF with high probability of tachycardia-induced cardiomyopathy to reverse left ventricular dysfunction

AF catheter ablation selected AF patients hospitalization and pr

I

B

Circulation

ORIGINAL RESEARCH ARTICLE

Randomized Ablation-Based Rhythm-Control Versus Rate-Control Trial in Patients With Heart Failure and Atrial Fibrillation: Results from the RAFT-AF trial

Ratika Parkash¹, MD, MSc; George A. Wells, PhD; Jean Rouleau, MD; Mario Talajic², MD; Vidal Essebag³, MD, PhD; Allan Skanes, MD; Stephen B. Wilton⁴, MD, MSc; Atul Verma⁵, MD; Jeffrey S. Healey⁶, MD, MSc; Laurence Sterns, MD; Matthew Bennett, MD; Jean-Francois Roux, MD; Lena Rivard⁷, MD; Peter Leong-Sit, MD; Mats Jensen-Urstad, MD; Umjeet Jolly, MD; Francois Philippon, MD; John L. Sapp⁸, MD; Anthony S.L. Tang, MD

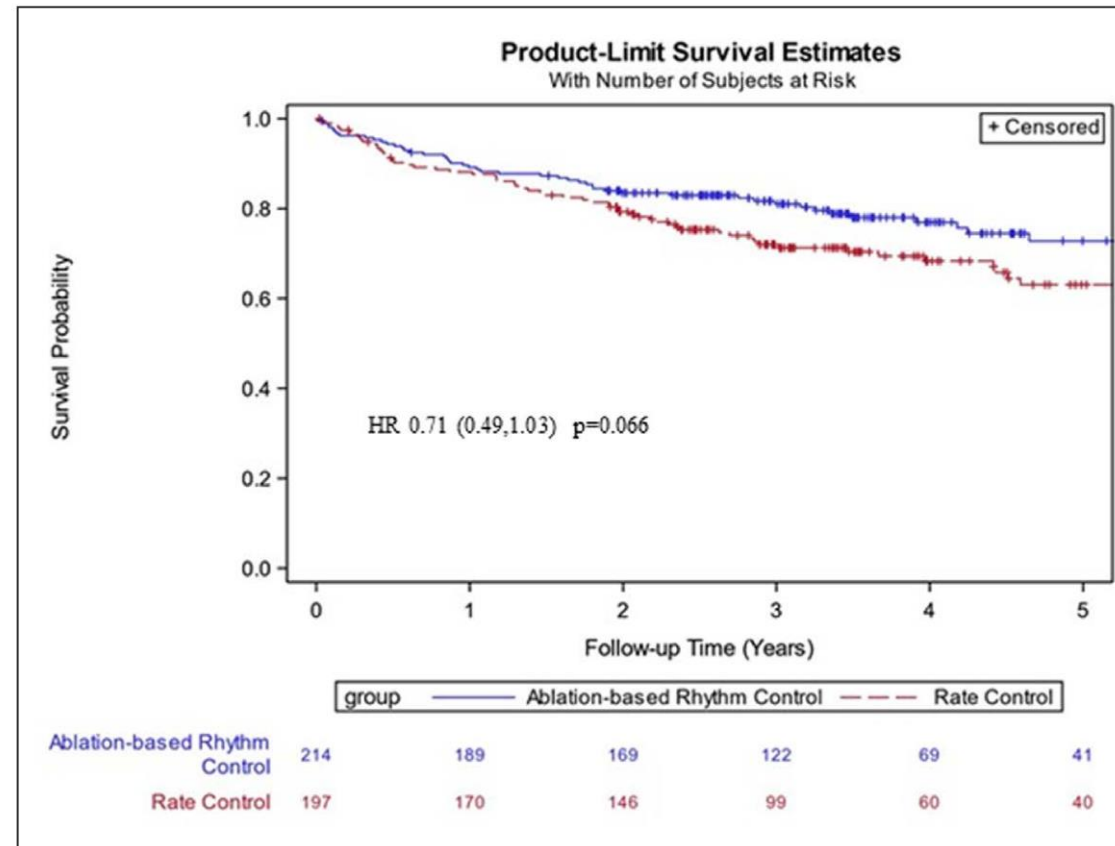


Figure 3. Freedom from all-cause mortality or heart failure event.

The blue line indicates the ablation-based rhythm-control group; the red line, the rate-control group; and HR, hazard ratio.

Patients with heart failure

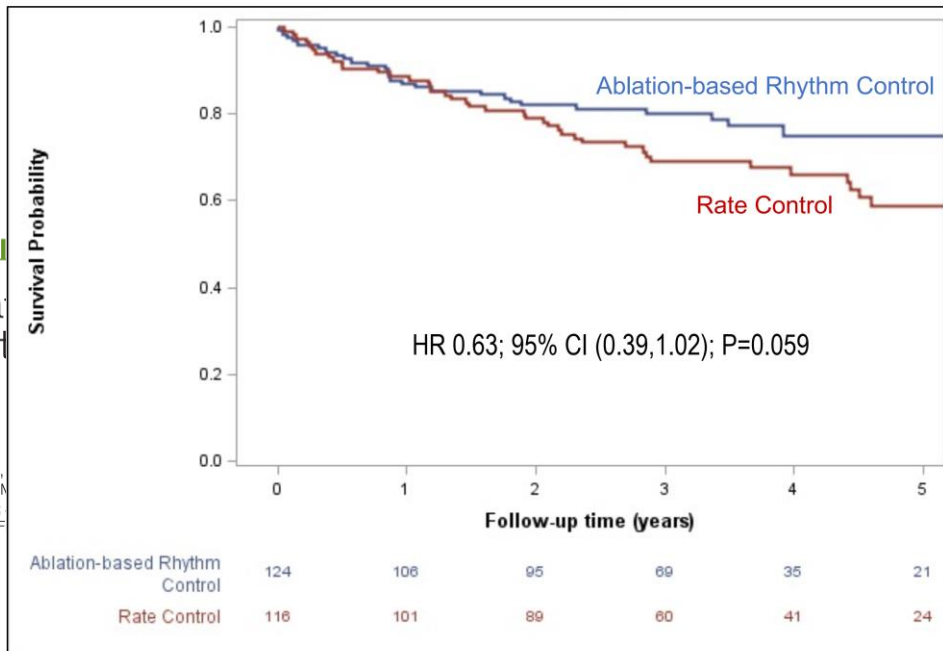
AF catheter ablation is recommended in patients with AF and HFrEF with high probability of tachycardia-induced cardiomyopathy to reverse left

I

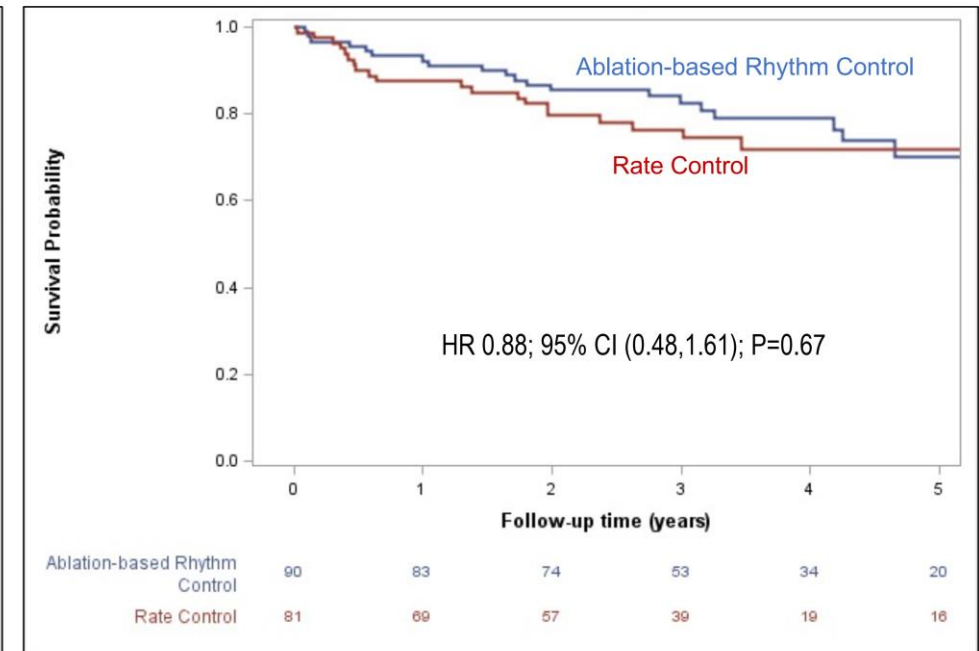
B

All-cause Mortality and HF Events by LVEF

Primary Endpoint in Patient with LVEF $\leq 45\%$



Primary Endpoint in Patient with LVEF $> 45\%$



Circulation

ORIGINAL RESEARCH ARTICLE

Randomized Ablation Versus Rate-Control in Heart Failure and Atrial Fibrillation: The RAFT-AF trial

Ratika Parkash, MD, MSc; George A. Wells, Allan Skanes, MD; Stephen B. Wilton, MD; Laurence Sterns, MD; Matthew Bennett, MD; Mats Jensen-Urstad, MD; Umjeet Jolly, MD; F

MENSAGENS FINAIS

2024 ESC Guidelines for the management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS)

Developed by the task force for the management of atrial fibrillation of the European Society of Cardiology (ESC), with the special contribution of the European Heart Rhythm Association (EHRA) of the ESC.
Endorsed by the European Stroke Organisation (ESO)

A Insuficiência cardíaca está intimamente ligada à fibrilação auricular.

É necessário implementar estratégias para reduzir mortalidade em doentes com fibrilação auricular

O tratamento de Insuficiência cardíaca deverá ser personalizado e otimizado.

A ablação por cateter da fibrilação auricular é uma estratégia de tratamento da insuficiência cardíaca