

TREATMENT OPTIONS FOR ATRIAL FIBRILLATION

The treatment of atrial fibrillation focuses on effectively and safely controlling the irregular heart rhythm, improving symptoms, and reducing key complications based on shared decision-making between healthcare professionals and patients.¹

WHAT IS AF?

Atrial fibrillation (AF) is characterized by an irregular and often fast heart rhythm that results in uncoordinated contraction of the top 2 chambers of the heart (the atria)¹



14 million people

affected across Europe²



AF increases the risk of other **potentially fatal conditions**³



5x

Increase heart failure



2.4x

Increase stroke



2x

Increase cardiovascular mortality

The seriousness of AF is critically misunderstood:

45% OF PATIENTS

mistakenly believe it is not a life-threatening condition⁴

The latest guidelines recommend an integrated management strategy to:⁵



Reduce mortality



Tailor management to patient preferences



Reduce hospitalizations

TREAT AF⁵



Anticoagulation/
Avoid stroke



Better symptom control



Comorbidities/Cardiovascular risk factor management

Patients should have a principal role in making decisions regarding their care, informed by a multidisciplinary team of:⁵



Cardiologists



Electrophysiologists



Non-specialist healthcare professionals: primary care physicians, registered nurses, etc



Allied health professionals: dietitians, medical technologists, etc

TREATMENT PATHWAY⁵:



Management of **underlying cardiovascular risk factors** and **reducing stroke risk** to improve life expectancy and quality of life



Rate control therapies to control the heart rate



Rhythm control therapies, including antiarrhythmic drugs (AADs) and catheter ablation, to maintain normal sinus rhythm for the long-term

SPOTLIGHT:

Rhythm control therapies – management of AF over the long-term



DRUG THERAPY TREATMENT (AADs)

AADs act to suppress the firing of, or depress the transmission of abnormal electrical signals which cause arrhythmia⁵

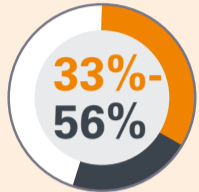
Examples: Sodium channel blockers (disopyramide, flecainide, propafenone) and potassium channel blockers (amiodarone, dronedarone, sotalol)⁵



CATHETER ABLATION*

Interventional procedure to create small scars on targeted parts of heart tissue that block the abnormal electrical signals causing the arrhythmia⁵

EFFICACY



of patients **ARE IN NORMAL SINUS RHYTHM AT 1 YEAR⁶**



UP TO 94%

of patients are **FREE FROM ARRHYTHMIA RECURRENCE AT 1 YEAR⁷⁻¹⁶**

QUALITY OF LIFE



of patients **IMPROVEMENT IN QUALITY OF LIFE¹⁷**



of patients **IMPROVEMENT IN QUALITY OF LIFE¹⁸**



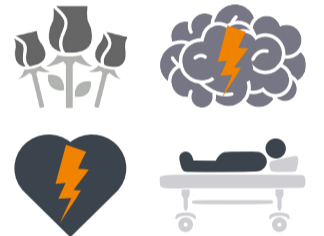
ADVERSE EVENTS/COMPLICATIONS



of patients **WITHDRAW FROM TREATMENT DUE TO ADVERSE EVENTS⁶**



lower chance of **DEATH, STROKE, CARDIAC ARREST AND CARDIOVASCULAR HOSPITALIZATION OVER 7 YEARS^{**19-20}**



**46% cardiac arrest, 41% stroke, 33% death, 17% cardiovascular hospitalization.

HEALTHCARE COSTS

LOW INITIAL COSTS

however **CUMULATIVE COSTS** can rise over time

with costs increasing to **UP TO 28% ANNUALLY** over 9 years²¹⁻²⁴

PROJECTING COSTS TO 10 YEARS AFTER ABLATION

CATHETER ABLATION was associated with a

35% SAVINGS²⁴

Patients with **paroxysmal (intermittent) AF ARE ALMOST 10X LESS LIKELY TO PROGRESS TO PERSISTENT AF**, if treated with catheter ablation, than those treated with AADs (HR 0.11; 95% CI 0.025-0.483; p=0.0034²⁵)



PAROXYSMAL AF



PERSISTENT AF



PERSISTENT AF



Catheter ablation is more clinically effective and cost effective compared to drug therapy for the treatment of patients with AF^{5,6,17,18,20,25}

*Catheter ablation is limited as a first line therapy, please contact your health care provider to understand if you are a candidate.

REFERENCES

1. Iuzzo PA (2015). Handbook of Cardiac Anatomy, Physiology and Devices. Springer Science and Business Media, LLC: Switzerland.
2. Institute for Health Metrics and Evaluation (IHME) (2021). Global Burden of Disease Study 2019 (GBD 2019). Used with permission. All rights reserved. Available online at: <http://ghdx.healthdata.org/gbd-results-tool>. Accessed: 2021-09-01.
3. Oduyayo A, Wong CX, Hsiao AJ, Hopewell S, Altman DG et al. (2016) Atrial fibrillation and risks of cardiovascular disease, renal disease, and death: systematic review and meta-analysis. *Bmj* 354:4462.
4. Aloni E, Brindhart G, Brugada J, Camm J, Lip GY et al. (2010) An international survey of physician and patient understanding, perception, and attitudes to atrial fibrillation and its contribution to cardiovascular disease morbidity and mortality. *Europace* 12 (5): 628-633.
5. Hindricks G, Potpara T, Dagres N, Arboe E, Bax JJ, Blomström-Lundqvist C, Borroni G, Castella M, Dan GA, Dilaveris PE, Fauchier L, Filippatos G, Kalman JM, Le Mer M, Lane DA, Lebeau JP, Lettino M, Lip GH, Pinto FJ, Thomas GN, Valgimigli M, Van Gelder IC, Van Putte BP, Watkins CL; ESC Scientific Document Group. 2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association for 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. *Eur Heart J* 2021 Feb 1;42(5):373-488.
6. Valero-Cabré A, Audureau E, Takeda A, Jarzebowski W, Belmin J et al. (2019) Antiarrhythmics for maintaining sinus rhythm after cardioversion of atrial fibrillation. *Cochrane Database Syst Rev* 9:CD005049.
7. Hussein A, Das M, Chaturvedi V, Asfour IK, Daryanani N et al. (2017) Prospective use of Ablation Index targets improves clinical outcomes following ablation for atrial fibrillation. *J Cardiovasc Electrophysiol* 28 (9): 1037-1047.
8. Taghji P, El Haddad M, Philips T, Wolf M, Knecht S et al. (2018) Evaluation of a Strategy Aiming to Enclose the Pulmonary Veins With Contiguous and Optimized Radiofrequency Lesions in Paroxysmal Atrial Fibrillation: A Pilot Study. *JACC Clin Electrophysiol* 4 (1): 99-108.
9. Philips T, Taghji P, El Haddad M, Wolf M, Knecht S et al. (2018) Improving procedural and one-year outcome after contact force-guided pulmonary vein isolation: the role of interlesion distance, ablation index, and contact force variability in the 'CLOSE'-protocol. *Europace* 20 (F1_3): 1419-1427.
10. Solimene F, Schillaci V, Shopova G, Urraro F, Arestia A et al. (2019) Safety and efficacy of atrial fibrillation ablation guided by Ablation Index module. *J Interv Card Electrophysiol* 54 (1): 9-15.
11. Di Giovanni G, Wauters K, Chierchia GB, Sierra J, Levinstein M et al. (2014) One-year follow-up after single procedure Cryoballoon ablation: a comparison between the first and second generation balloon. *J Cardiovasc Electrophysiol* 25 (8): 834-839.
12. Jourda F, Providencia R, Marjot E, Bouzeman A, Hirsch H et al. (2015) Contact force guided radiofrequency vs. second-generation balloon cryotherapy for pulmonary vein isolation in patients with paroxysmal atrial fibrillation—a prospective evaluation. *Europace* 17 (2): 225-231.
13. Lemes C, Wissner E, Lin T, Mathew S, Deiss S et al. (2016) One-year clinical outcome after pulmonary vein isolation in persistent atrial fibrillation using the second-generation 28 mm cryoballoon: a retrospective analysis. *Europace* 18 (2): 201-205.
14. Guhl EN, Siddoway D, Adelstein E, Voigt A, Saba S et al. (2016) Efficacy of Cryoballoon Pulmonary Vein Isolation in Patients With Persistent Atrial Fibrillation. *J Cardiovasc Electrophysiol* 27 (4): 423-427.
15. Irfan G, de Asmundis C, Mugnai G, Poelaert J, Verborght C et al. (2016) One-year follow-up after second-generation cryoballoon ablation for atrial fibrillation in a large cohort of patients: a single-centre experience. *Europace* 18 (7): 987-993.
16. Boveda S, Metzner A, Nguyen DU, Chun KRJ, Goehel K et al. (2018) Single-Procedure Outcomes and Quality-of-Life Improvement 12 Months Post-Cryoballoon Ablation in Persistent Atrial Fibrillation: Results From the Multicenter CRYO4PERSISTENT AF Trial. *JACC Clin Electrophysiol* 4 (11): 1449-1447.
17. Jais P, Cauchemez B, Macle L, Daoud E, Khairy P et al. (2008) Catheter ablation versus antiarrhythmic drugs for atrial fibrillation: the A4 study. *Circulation* 118 (24): 2498-2505.
18. Mark DB, Anstrom KJ, Sheng S, Piccini JP, Baloch KN et al. (2019) Effect of Catheter Ablation vs Medical Therapy on Quality of Life Among Patients With Atrial Fibrillation: The CABANA Randomized Clinical Trial. *JAMA*. 19. Packer DL, Mark DB, Robb RA, Monahan KH, Bahnsen TD et al. (2019) Effect of Catheter Ablation vs Antiarrhythmic Drug Therapy on Mortality, Stroke, Bleeding, and Cardiac Arrest Among Patients With Atrial Fibrillation: The CABANA Randomized Clinical Trial. *JAMA*. 20. Noseworthy PA, Gersh BJ, Kent DM, Piccini JP, Packer DL et al. (2019) Atrial fibrillation ablation in practice: assessing CABANA generalizability. *Eur Heart J* 40 (16): 1257-1264.
21. Bruggenjurgen B, Kohler S, Ezzat N, Reinhold T, Willich SN (2019) Cost effectiveness of antiarrhythmic medications in patients suffering from atrial fibrillation. *Pharmacoeconomics* 31 (3): 195-213.
22. Nilsson J, Akerborg O, Bege-Le Bagousse G, Rosenquist M, Lindgren P (2013) Cost-effectiveness analysis of dronedarone versus other anti-arrhythmic drugs for the treatment of atrial fibrillation—results for Canada, Italy, Sweden and Switzerland. *Eur J Health Econ* 14 (3): 481-493.
23. Akerborg O, Nilsson J, Basacle S, Lindgren P, Reynolds M (2012) Cost-effectiveness of dronedarone in atrial fibrillation: results for Canada, Italy, Sweden, and Switzerland. *Clin Ther* 34 (8): 1788-1802.
24. Weerasooriya R, Jais P, Le Heuzey JY, Scaevae C, Choi KJ et al. (2003) Cost analysis of catheter ablation for paroxysmal atrial fibrillation. *Pacing Clin Electrophysiol* 26 (1 Pt 2): 292-294.
25. Kuck KH, Lebedev D, Mikaylov E, Romanov A, Geller L, Kalesj D, Neumann T, Davtyan K, On YK, Popov S, Duyang F (2019) Catheter ablation delays progression of atrial fibrillation from paroxysmal to persistent atrial fibrillation. *ESC Late-breaking Science* 2019. Paris, France. August 31, 2019.

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