

Early Catheter Ablation Delays Atrial Fibrillation Disease Progression and Reduces Healthcare Costs

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ATTEST Randomized Controlled Trial: Atrial Fibrillation Ablation Delays Disease Progression

Kuck K-H, Lebedev DS, Mikhaylov EN, et al. [Catheter ablation or medical therapy to delay progression of atrial fibrillation: The randomized controlled Atrial Fibrillation Progression Trial \(ATTEST\)](#). *Europace*. Published online December 17, 2020. 2021;23930:262-369.



OBJECTIVE

- To evaluate if radiofrequency (RF) catheter ablation is more effective than antiarrhythmic drug (AAD) treatment alone in delaying disease progression from paroxysmal to persistent atrial fibrillation (AF)



METHOD

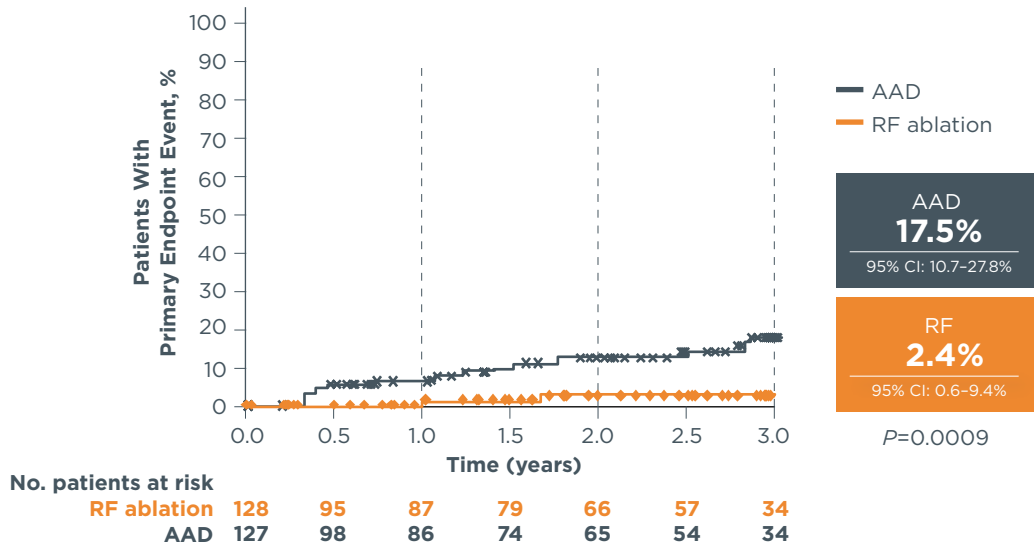
- Prospective, multicenter, randomized, controlled, open-label study
- 255 patients with paroxysmal AF randomized 1:1 to RF ablation or AAD treatment
- Medications managed in both groups per current treatment guidelines
- Primary endpoint: Rate of persistent AF/atrial tachycardia (AT) assessed at 3-year follow-up



RESULTS

The superiority of RF treatment over AAD alone in delaying persistent AF/AT progression was observed at 1-year follow-up and strengthened by the 3-year follow-up.

Kaplan-Meier Estimate of Persistent AF/AT Progression (Intent-to-Treat Population)



Treatment modality and age were associated with AF progression in the per-protocol population, suggesting that early RF ablation can delay disease progression.

Cox Model With Multiple Baseline Covariates and Treatment as the Time-Dependent Covariate



Patients treated with RF ablation

RF ABLATION PATIENTS WERE APPROXIMATELY **10X LESS LIKELY** TO **PROGRESS** TO PERSISTENT AF/AT THAN AAD PATIENTS
 Hazard ratio: 0.107 (95% CI: 0.024-0.47; $P=0.0031$)



Patients ≥ 65 years old

PATIENTS >65 YEARS OLD WERE ALMOST **4X MORE LIKELY** TO **PROGRESS** TO PERSISTENT AF/AT THAN PATIENTS 60-64 YEARS OLD, REGARDLESS OF TREATMENT ALLOCATION
 Hazard ratio: 3.87 (95% CI: 0.88-17.00; $P=0.0727$)

KEY TAKEAWAYS



- ATTEST demonstrated that **RF catheter ablation is superior to guideline-directed AAD therapy alone in delaying the progression to persistent AF** in patients with paroxysmal AF.
- Patients treated with RF ablation were **10X** less likely to progress, and patients ≥ 65 years were **4X** more likely to progress to persistent AF/AT, respectively.
- These results suggest that **early RF ablation** may be an **effective treatment strategy** for delaying AF progression.

ARTICLES WITH SIMILAR RESULTS

Kirchhof P, Camm AJ, Goette A, et al. [Early rhythm-control therapy in patients with atrial fibrillation](#). *N Engl J Med*. 2020; 383(14):1305-1316.



Reduction in Healthcare Utilization and Cost Associated with Paroxysmal and Persistent Atrial Fibrillation Ablation

Friedman DJ, Field ME, Rahman M, et al. [Catheter ablation and healthcare utilization and cost among patients with paroxysmal versus persistent atrial fibrillation](#). *Heart Rhythm* O2. Published online December 14, 2020 doi: 10.1016/j.hroo.2020.12.017.



OBJECTIVE

- To examine AF-related healthcare utilization and costs in patients with paroxysmal and persistent AF from preablation to postablation





METHOD

- Retrospective, observational cohort study of 2,794 paroxysmal AF and 1,909 persistent AF patients undergoing catheter ablation (2016-2018) identified in the OPTUM® deidentified Clinformatics® Data Mart Database
- Cost (2018 US\$) and outcomes compared for the year before/after ablation using McNemar test and Wilcoxon signed rank test



RESULTS

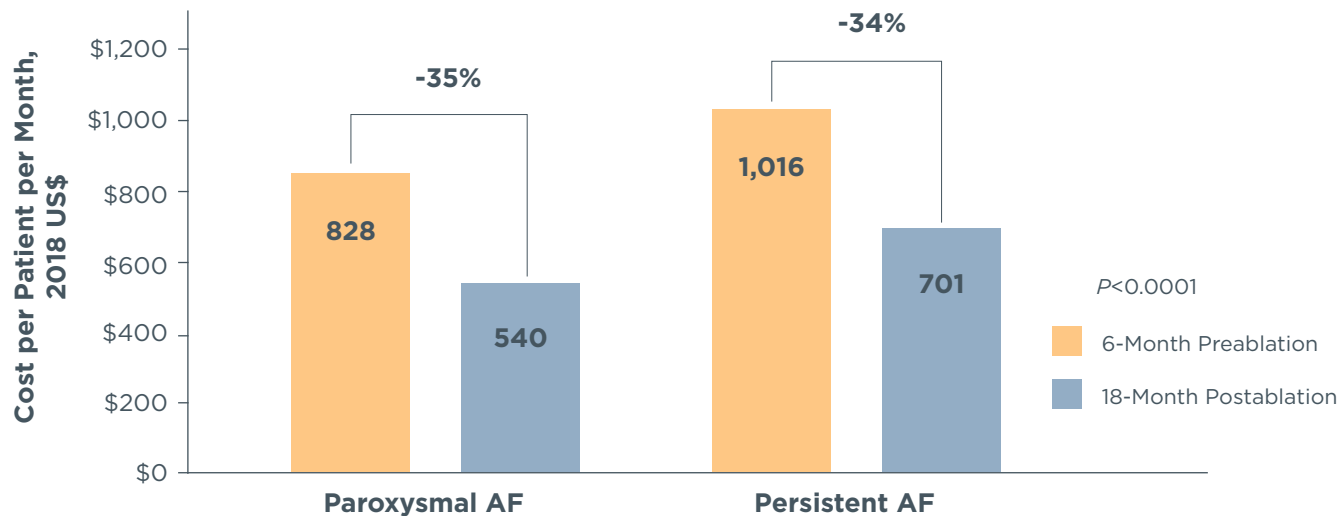
Mean Cost Per Patient Were Reduced 12-Month Postablation Compared to 12-Month Preablation

	AF-Specific Inpatient Admissions	Emergency Department Visits	AAD use	Cardioversions
	-28%	-76%	-25%	-59%
	-33%	-70%	-7%	-55%

P value for AAD use for persistent AF patients=0.014; all others <0.001

Total AF Management Costs Reduced at 18 Month Follow-Up in Spite of Repeat Ablation Costs

Mean Changes in Healthcare Cost per Patient per Month



KEY TAKEAWAYS



- Significant reductions in healthcare utilization and costs were observed among paroxysmal AF and persistent AF patients undergoing catheter ablation.
- The magnitude of reductions increased with greater duration of follow-up.
- Based on these data, a strategy of earlier catheter ablation may have the potential to reduce long-term healthcare utilization and costs.



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The THERMOCOOL SMARTOUCH[®] SF Catheter is indicated for drug refractory recurrent symptomatic persistent atrial fibrillation (AF) (continuous AF >7 days but <1 year), refractory or intolerant to at least 1 Class I or III AAD, when used with the CARTO[®] 3 System.

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Caution: US law restricts this device to sale by or on the order of a physician.

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