

AperTO - Archivio Istituzionale Open Access dell'Università di Torino

**Posterior Wall Isolation in Persistent AF With Rapid Posterior Wall Activity: The Quest for Evidence**

**This is the author's manuscript**

*Original Citation:*

*Availability:*

This version is available <http://hdl.handle.net/2318/2008510> since 2024-11-28T15:22:43Z

*Published version:*

DOI:10.1016/j.jacep.2023.10.036

*Terms of use:*

Open Access

Anyone can freely access the full text of works made available as "Open Access". Works made available under a Creative Commons license can be used according to the terms and conditions of said license. Use of all other works requires consent of the right holder (author or publisher) if not exempted from copyright protection by the applicable law.

(Article begins on next page)



1 Defining the optimal ablation approach for patients with persistent atrial fibrillation (AF) is one of  
2 the holy grails of electrophysiology. In this issue of *JACC: Clinical Electrophysiology*, Segan et al.  
3 presented the results of a CAPLA substudy<sup>1</sup>. The original study was a multicenter randomized  
4 controlled trial, enrolling 338 patients with persistent AF randomized to pulmonary vein isolation  
5 (PVI) alone or PVI and posterior wall isolation (PWI) and showing no significant difference in 1-  
6 year arrhythmia-free survival between the groups<sup>2</sup>.

7 In the substudy, Segan et al. examined the pulmonary vein (PV) and the posterior wall (PW) electrical  
8 characteristics in patients presenting in AF at the time of ablation, to evaluate whether a selected  
9 subgroup of patients might benefit from PWI in addition to PVI. They conclude that: (i) rapid PW  
10 electrical activity (defined as less than the median of the shortest PW cycle length, i.e. < 140 ms) was  
11 independently associated with AF recurrence; (ii) the addition of PWI in this selected cohort was  
12 associated with less arrhythmic recurrence during follow-up.

13 However, we believe some critical points need a clarification. Specifically, Table 3 (stratified by AF  
14 occurrence) and Table 4 (stratified by the presence of low voltage zones) on the same population of  
15 151 patients, report very different numbers in both the rapid PV activity (CL<126 ms) and rapid PW  
16 activity (CL<140 ms) cohorts. Table 3 indicates 9 patients with rapid PV activity and 66 rapid PW  
17 activity, whereas Table 4 indicates 63 and 76 patients, respectively. **Also, since the median shortest**  
18 **CL was used to define rapid activity for both PV and PW, half of the study population should fulfill**  
19 **each of these criteria.**

20 Furthermore, it was reported that at Cox univariate and multivariate analysis, rapid PW activity was  
21 independently associated with an increased AF recurrence rate; however, Table 3, shows that rapid  
22 PW activity was actually more frequent among patients with no AF recurrence (49.3% vs 34.6%).  
23 Moreover, the average and at the shortest PW cycle length were numerically lower among patients

1 with no recurrence (average 174 ms, shortest 140 ms), as compared with patients with AF recurrence  
2 (average 178 ms, shortest 144 ms).

3 Altogether, the univariate data derived from a binary dichotomization of the outcome, appear to  
4 indicate a trend which is opposite to the suggested one, namely that rapid PW activity tends to be  
5 more frequent among patients without AF recurrence. In addition, significant results deriving from  
6 the subanalysis of a study with non-significant findings in the primary analysis should be considered  
7 hypothesis generating, particularly if the subanalysis was not pre-specified in the original statistical  
8 analysis plan.

9 Multiples randomized studies have investigated if additional substrate modification approaches  
10 beyond PVI relate to an improvement in arrhythmia-free survival<sup>3</sup>; in the present case, the need to  
11 better clarify the findings demands additional caution before translating any suggestion or  
12 recommendation into clinical practice.

13

1 **Acknowledgments**

2 None.

3

4 **Funding**

5 None.

6

7 **Disclosures**

8 None.

9

# 1   **References**

2

3   1    Segan L, Chieng D, Prabhu S, *et al.* Posterior Wall Isolation Improves Outcomes for  
4    Persistent AF With Rapid Posterior Wall Activity: CAPLA Substudy. *JACC Clin*  
5    *Electrophysiol* 2023. DOI:10.1016/J.JACEP.2023.08.018.

6   2    Kistler PM, Chieng D, Sugumar H, *et al.* Effect of Catheter Ablation Using Pulmonary  
7    Vein Isolation With vs Without Posterior Left Atrial Wall Isolation on Atrial Arrhythmia  
8    Recurrence in Patients With Persistent Atrial Fibrillation: The CAPLA Randomized  
9    Clinical Trial. *JAMA* 2023; **329**: 127–35.

10   3    Saglietto A, Ballatore A, Gaita F, *et al.* Comparative efficacy and safety of different  
11    catheter ablation strategies for persistent atrial fibrillation: a network meta-analysis of  
12    randomized clinical trials. *Eur Heart journal Qual Care Clin Outcomes* 2022; **8**: 619–29.

13