



Letter to the Editor

## Left atrial size and function as markers of AF progression and outcomes

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Persistent AF, left atrial (LA) size and low voltage areas (LVA) mirror AF progression. Approximately 1/3 patients undergoing catheter ablation has persistent AF [1], while LVA can be found in 10% of patients with paroxysmal AF and in 35% of patients with persistent AF [2]. Also, LA enlargement indicates advanced disease stage and is associated with poor success of AF treatment strategies. All this may require additional ablation strategies, continuation of antiarrhythmic drugs and/or intensive clinical follow-up because of higher recurrence rates [2].

In the current study Akkaya and colleagues [3] analyzed whether additional LA roof ablation using cryoballoon in persistent AF affects LA size and function. The authors found LA volume decrease at 3-months follow-up, albeit the LA-EF remained similar before and after ablation.

We'd like to congratulate the authors presenting these interesting results. Although the main focus of this study was to prove the safety and efficiency of pulmonary vein isolation and additional LA roof ablation, we'd like to stress the LA-EF importance. Of note, in this study the LA size and function were, the LA size and function were

analyzed using echocardiography. However, echocardiography is associated with significant inter- and intra-observer inaccuracies and doesn't reliably reflect the true LA size because of its complex geometry. Recently we analyzed the role of CMR-derived LA-EF and its association with LVA [4]. Notably, the association between LA-EF and LVA was stronger than with LA size. Furthermore, we demonstrated that worse LA-EF was significantly associated with AF progression phenotypes – with persistent AF and presence of LVA.

Summarizing, pre-procedural LA size/function measurements can improve the prediction of electro-anatomical substrate helping individualize AF treatment and improve ablation success.

### References

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