Introduction: Despite increasing number of ablations performed for persistent atrial fibrillation (AF), even with multiple procedures, arrhythmia outcomes continue to remain suboptimal. Whether repeat ablation procedure improves arrhythmia outcomes in the female population with persistent AF (PsAF) compared to men is not well understood.

Methods: We conducted a large scale multicentre long-term observational study with prospective follow up evaluating multiprocedural long term arrhythmia outcomes in people with PsAF undergoing catheter ablations.

Result: From a total of 4,089 patients undergoing AF ablation at 4 sites, 281 patients had more than one ablation procedure for PsAF and were included in the analysis. Eighty-six (30.6%) were women. Female gender (HR 2.16 p<0.001) and enduring pulmonary vein isolation (HR 1.66 p=0.01) were independently associated with AF recurrence.

Conclusion: Female gender is a strong and independent predictor of arrhythmia recurrence in people with persistent AF despite multiple ablation procedures.