

Complications of catheter ablation for atrial fibrillation: important differences in patients with systolic heart failure

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BACKGROUND

AF ablation is associated with improved survival and reduced hospitalisation in patients with heart failure with reduced ejection fraction (HFrEF). In light of strong randomized evidence, international guidelines propose a class 1 recommendation for AF ablation in patients with HFrEF. However, there are understandable concerns regarding the safety of AF ablation in HFrEF and fear of complications may result in apprehension in the referral and undertaking of CA in these patients

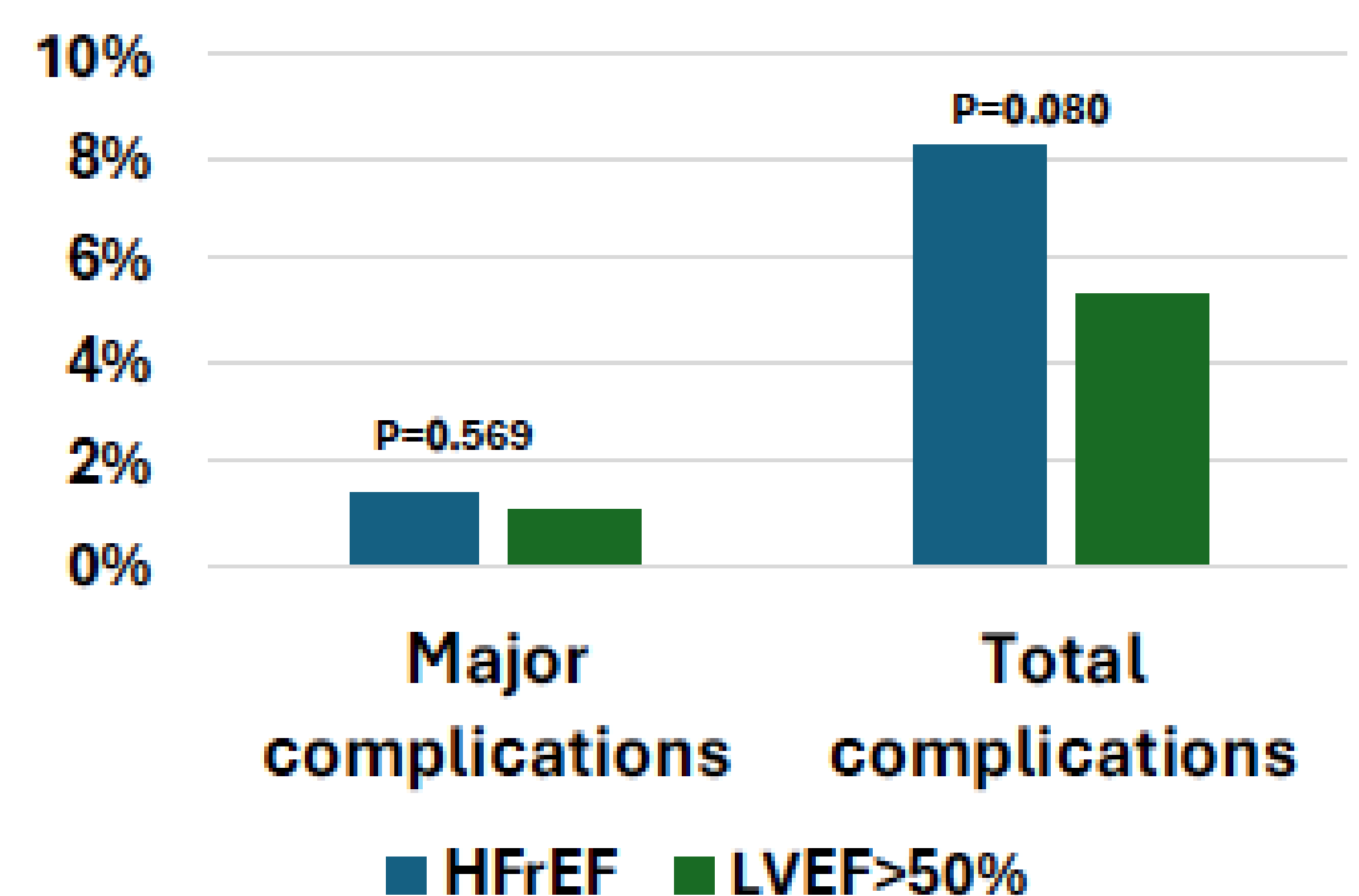
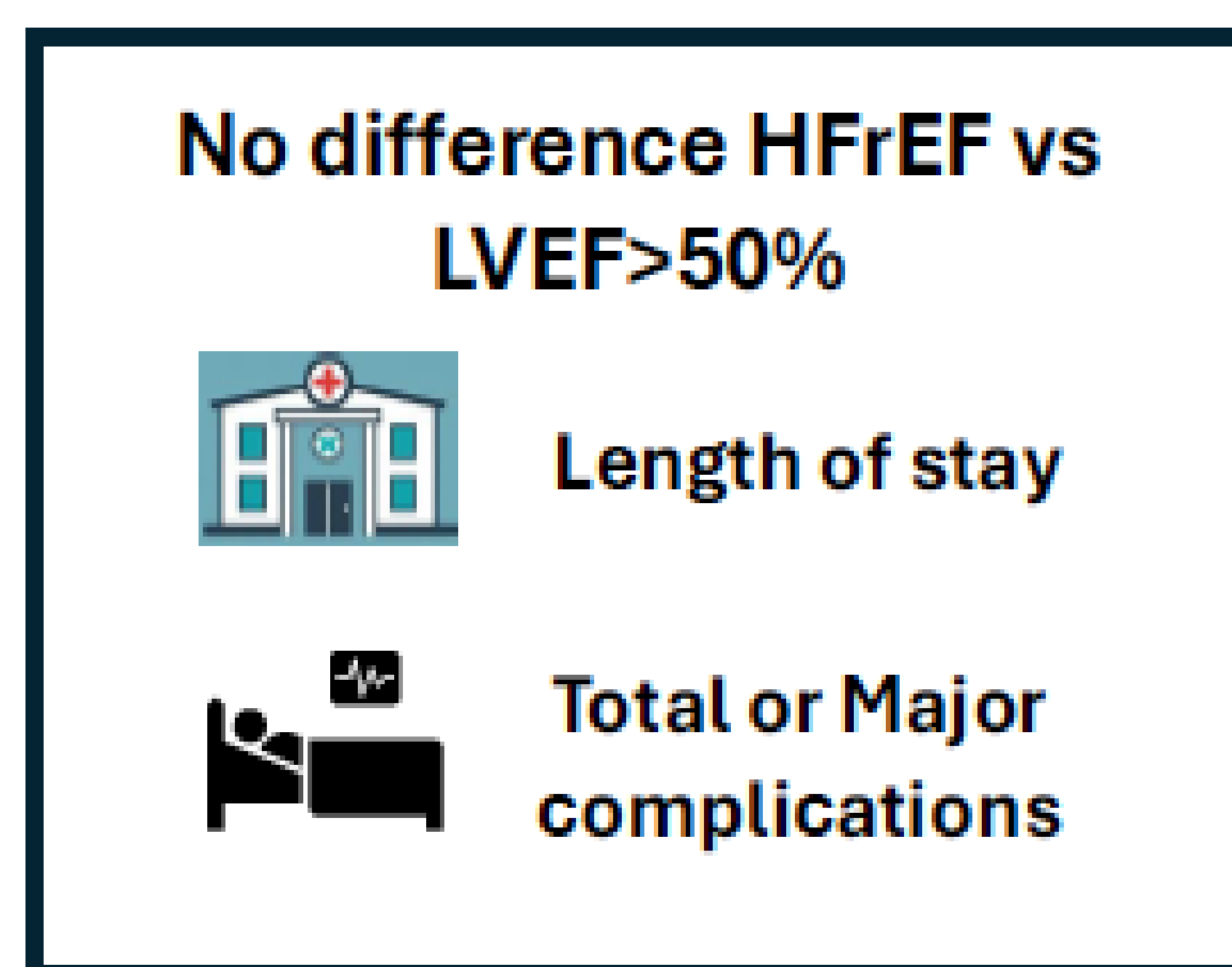
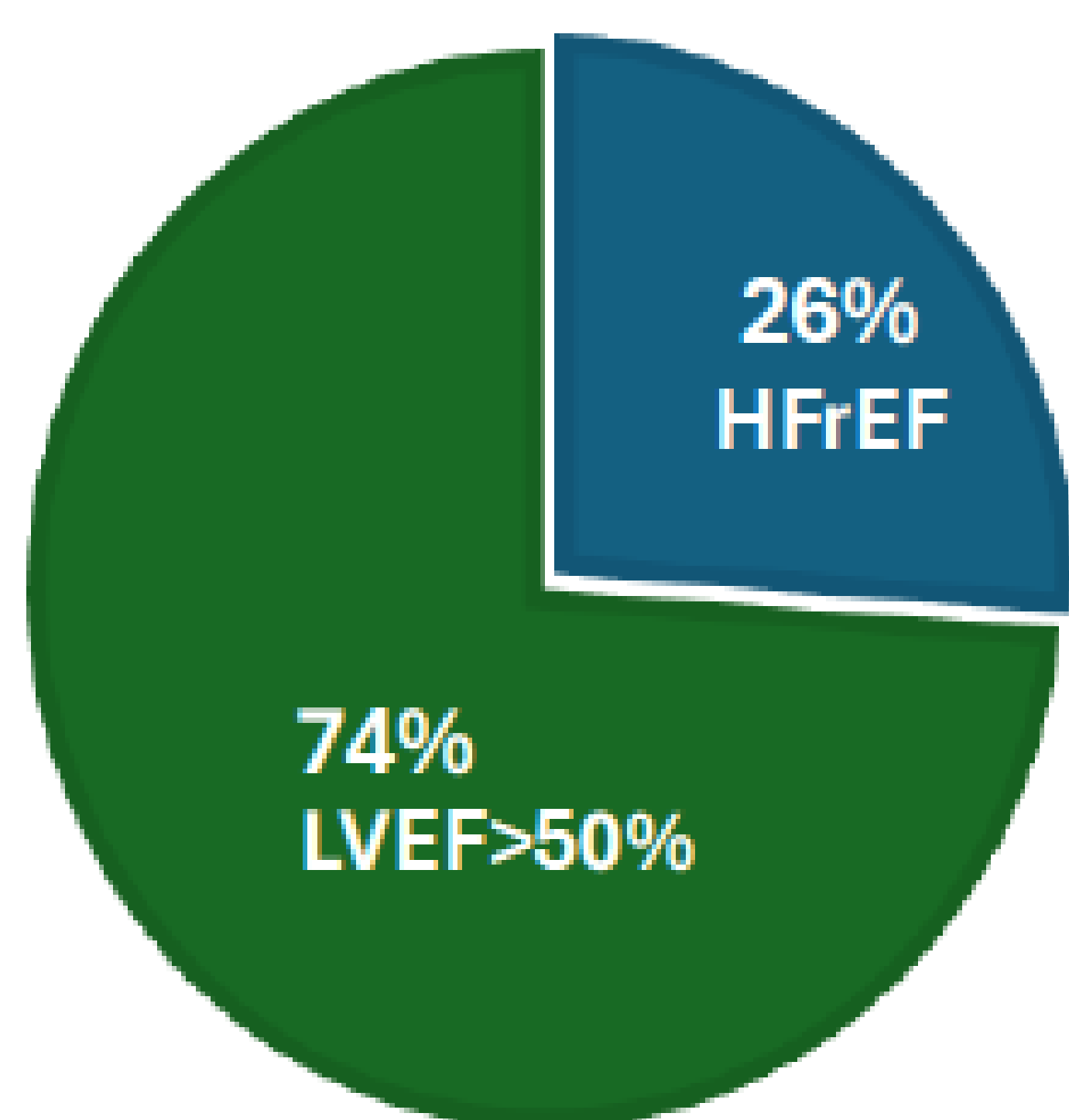
OBJECTIVE

To compare the acute safety outcomes in patients with and without HFrEF (LVEF < 50%) undergoing catheter ablation for AF.

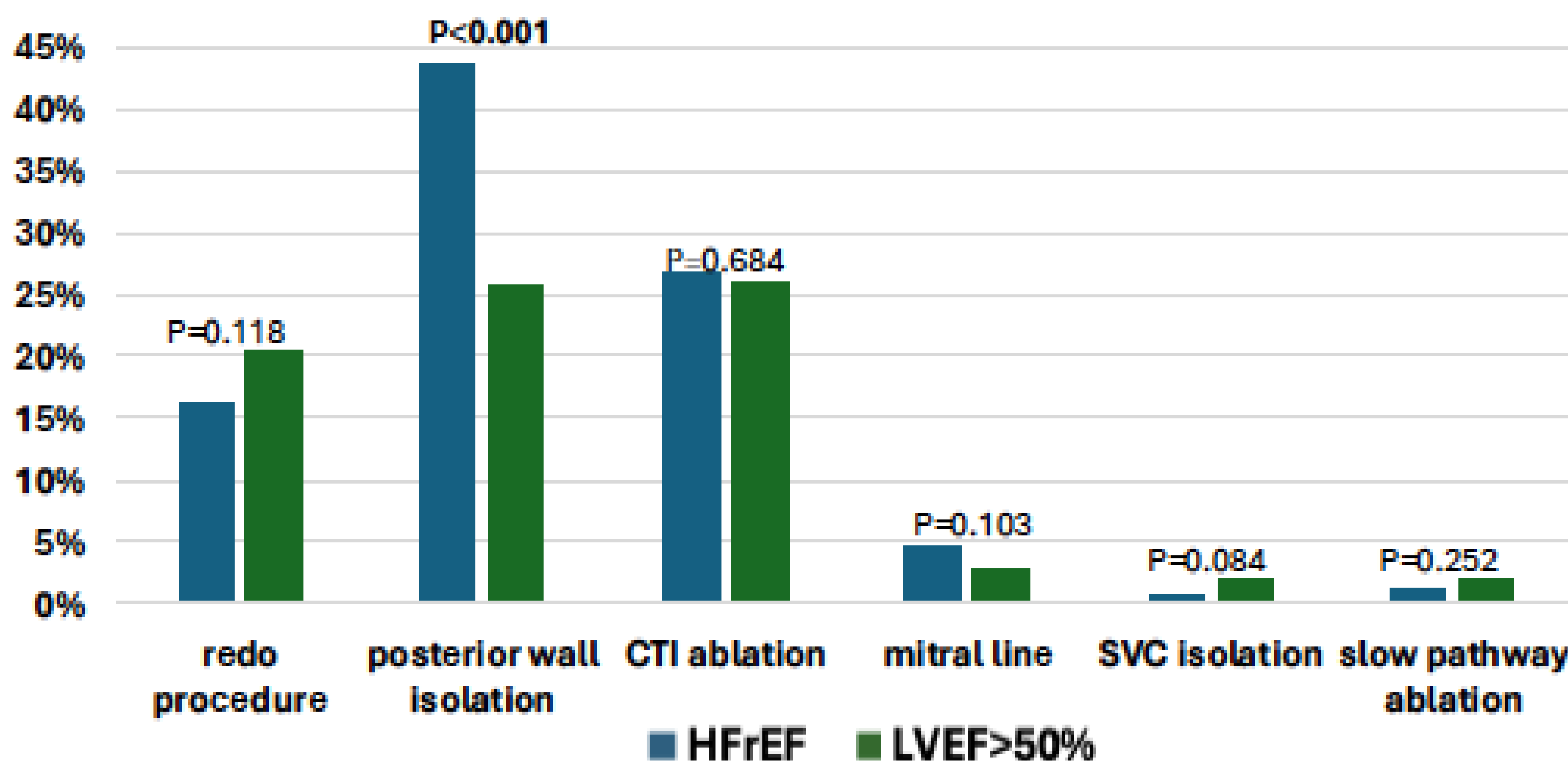
METHODS

All catheter ablations for AF performed at a cardiac transplant tertiary referral centre between 2013 and 2023 were reviewed for procedural characteristics and complications

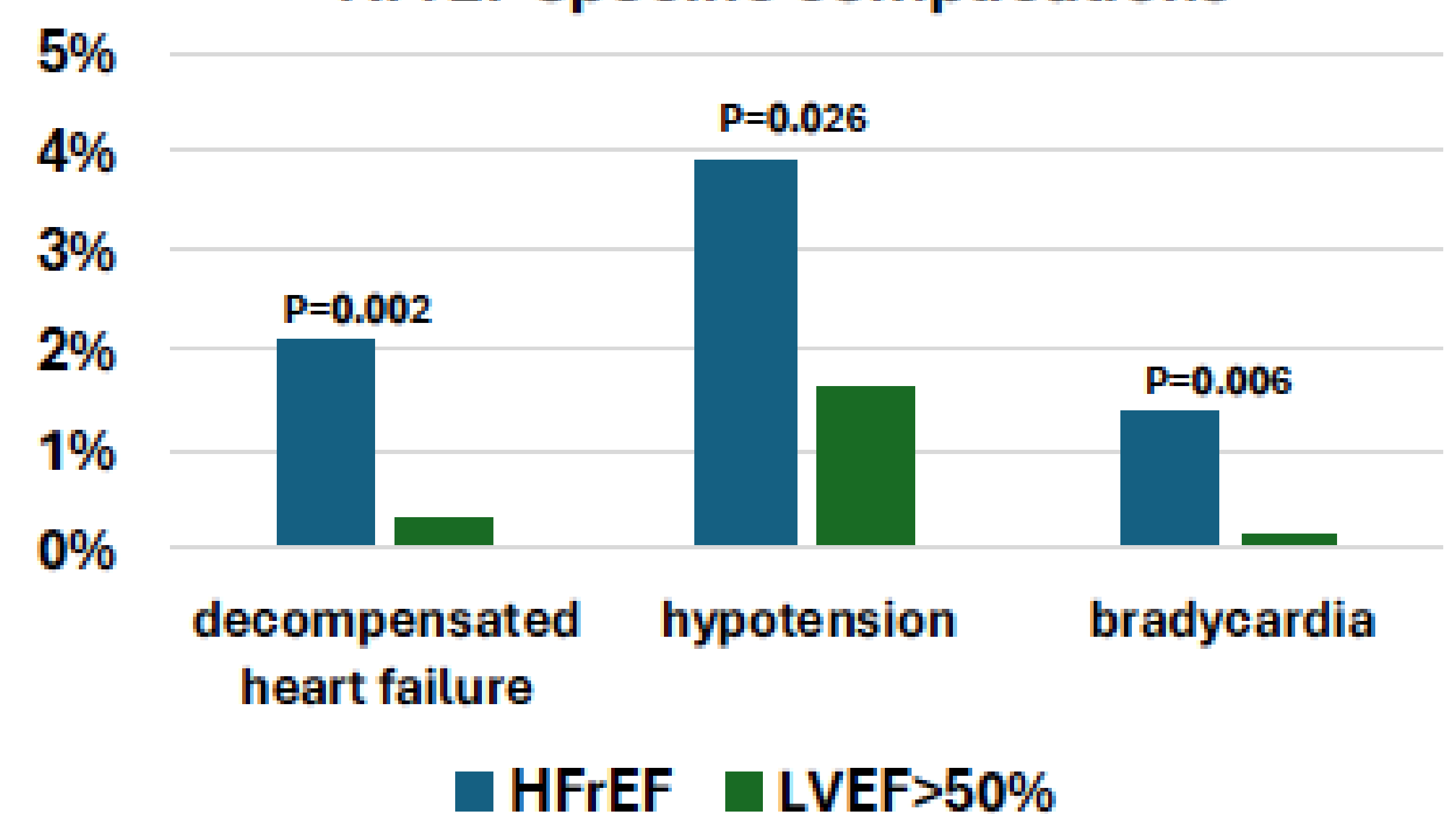
1071 catheter ablations for atrial fibrillation performed over a 10-year period



Procedure characteristics



HFrEF specific complications



RESULTS

280 (26.1%) procedures were performed in patients with LVEF < 50%. There were higher rates of persistent AF (81.4% vs 43.4%, $p < 0.001$), higher CHA₂DS₂-VASc scores (2 vs 1, $p < 0.001$) and fewer women (16% vs 33.9%, $p < 0.001$) in the HFrEF group. Patients with HFrEF has significantly more LAA thrombus (2.5% vs 0.8%, $p = 0.022$). Procedure duration ($p < 0.001$) and RF time ($p < 0.001$) were significantly longer in the HFrEF group. Heart failure decompensation (2.1% vs 0.3%, $p = 0.002$), bradycardia requiring intervention (1.4% vs 0.1%, $p = 0.006$) and hypotension (3.9% vs 1.6%, $p = 0.026$) were more common in patients with HFrEF. There was no difference in the incidence of major complications (HFrEF 1.4% vs LVEF > 50% 1%, $p = 0.569$) or hospital length of stay (median one night, $p = 0.096$).

CONCLUSIONS

Left atrial appendage thrombus, heart failure decompensation, bradycardia and hypotension were more common in patients with HFrEF undergoing catheter ablation. Attention to periprocedural pharmacotherapy and fluid management may improve the safety of AF ablation in heart failure.