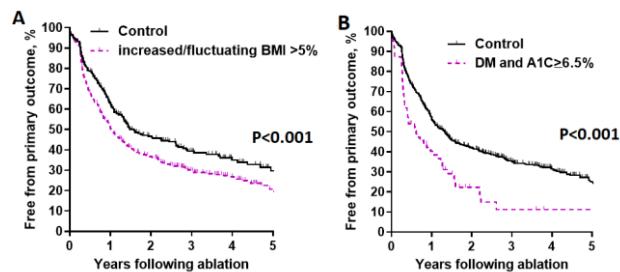


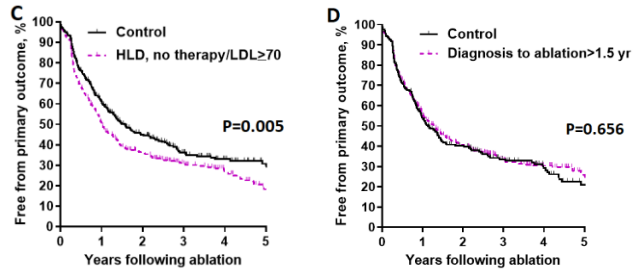
**Background:** Shorter diagnosis-to-ablation time (DAT) and risk factor modification (RFM) have been shown to improve atrial fibrillation (AF) outcomes. However, pursuing RFM may delay DAT negating the procedural benefit.

**Methods:** This study included 724 patients undergoing AF ablation at a tertiary center from 2012-2019. Pre-specified modifiable (MRFs) included DAT>1.5 years, body mass index (BMI) $\geq 30$  mg/m<sup>2</sup>, fluctuation in BMI>5% prior to ablation, mean blood pressure>125/80 mmHg, obstructive sleep apnea with continuous positive airway pressure noncompliance, uncontrolled hyperlipidemia (HLD) or low-density lipoprotein $\geq 70$  mg/dL, tobacco use, excessive alcohol use, and diabetes mellites (DM) with hemoglobinA1c (HbA<sub>1c</sub>)  $\geq 6.5\%$ . The primary outcomes were recurrent arrhythmias, cardiovascular (CV) hospitalizations and mortality following ablation. A multivariate analysis was performed.

**Results:** High prevalence of pre-ablation MRFs with over 50% of the study patients had uncontrolled HLD, BMI $\geq 30$  mg/m<sup>2</sup>, fluctuating BMI>5% or delayed DAT. The median time of DAT was 2.3 (interquartile range [IQR] 0.6, 5.8) years. During a median follow-up of 2.6 (IQR 1.4, 4.6) years after ablation, 467 (64.5%) patients met the primary outcome and independent RFs were a fluctuation in BMI (adjusted hazard ratio [AHR] 1.31, 95% confidence interval [CI] 1.07-1.60; P=0.008), DM with elevated HbA<sub>1c</sub> (AHR 1.50, 95% CI 1.09-2.03; P=0.014) and uncontrolled HLD (AHR 1.30, 95% CI 1.08-1.57; P=0.005). Delayed DAT over 1.5 years did not alter the ablation outcome, Figure 1.

**Conclusion:** Substantial portions of patients undergoing AF ablation have potentially MRFs. Fluctuating BMI, diabetes with HbA<sub>1c</sub> $\geq 6.5\%$ , and uncontrolled HLD portend an increased risk of recurrent arrhythmia, CV hospitalizations and mortality following ablation, underscoring the importance of RFM in patients with AF undergoing catheter ablation.





**Figure 1.** Kaplan-Meier curves for the time from catheter ablation to the primary outcome in patients with and without modifiable risk factors. BMI = body mass index, DM = diabetes mellitus, HbA1c = hemoglobin A1c, HLD = hyperlipidemia, LDL = low-density lipoprotein, yr = year.