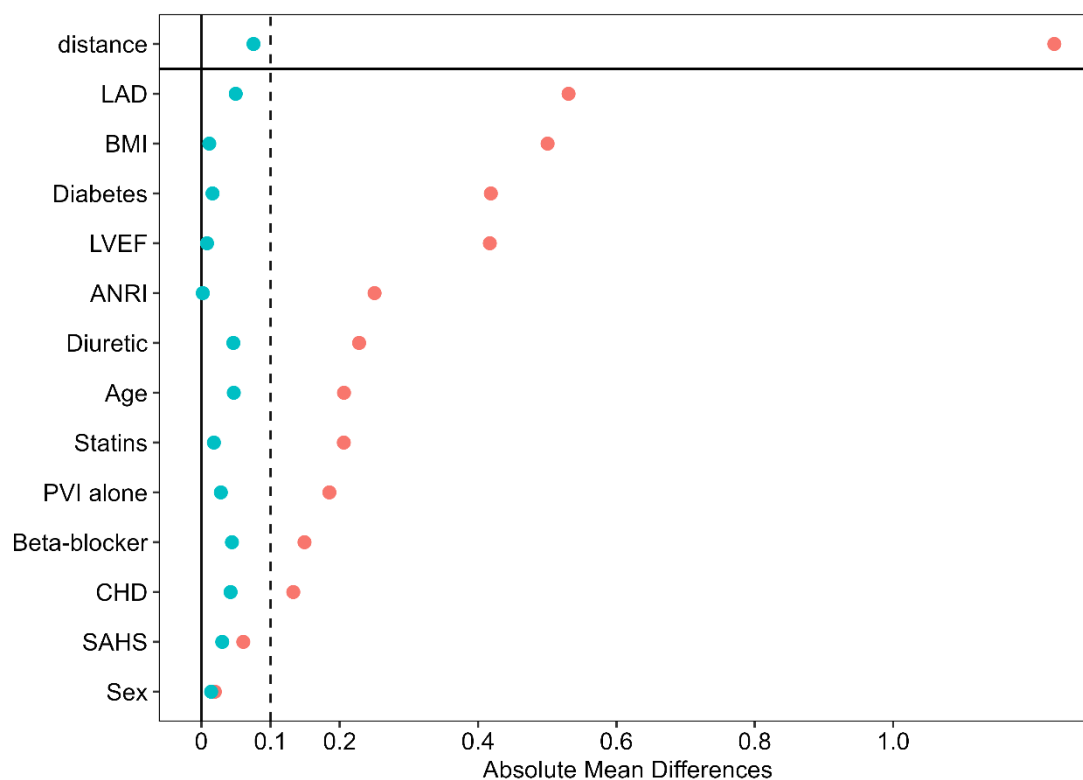


## Supplemental Figure



**Supplementary Figure S1** Covariate balance before and after propensity score matching. The horizontal axis represents the standardized mean difference, and the vertical axis lists various variables. Red circles represent the unadjusted cohort; green circles represent the adjusted (matched) cohort. The vertical dashed line represents the threshold of 0.1, indicating acceptable balance. Variables are ordered by the magnitude of imbalance before matching. SMD values closer to zero indicate better balance between the SGLT2i and control groups.

Abbreviations: LAD, left atrial diameter; BMI, body mass index; LVEF, left ventricular ejection fraction; ANRI, angiotensin receptor-enkephalinase inhibitor; PVI, pulmonary vein isolation; CHD, coronary heart disease; SAHS, sleep apnea-hypopnea syndrome

## Supplementary Tables

**Supplementary Table S1** Baseline characteristics of the study population before and after propensity score matching

	Before Matching	After Matching
	n=430	n=242
Male	229 (53.3)	134 (55.4)
Age(years)	69 (62,74)	69 (64,74)
BMI(kg/m <sup>2</sup> )	25.2±3.3	25.8±3.1
Diagnosis		
Paroxysmal AF	231 (53.7)	119 (49.2)
Persistent AF	199 (46.3)	123 (50.8)
Duration(years)	2 (0.2,4)	1 (0.2,4)
Smoke	79 (18.4)	46 (19)
Drink	47 (10.9)	27 (11.2)
Diabetes	193 (44.9)	170 (70.2)
SAHS	25 (5.8)	16 (6.6)
Hypertension	298 (69.3)	183 (75.6)
CHD	103 (24)	73 (30.2)
Stroke	38 (8.8)	27 (11.2)
Hyperlipidemia	89 (20.7)	51 (21.1)
HbA1c(%)	6.1 (5.7,6.8)	6.5 (6,7.2)
WBC(×10 <sup>9</sup> /L)	6.3 (5.3,7.5)	6.4 (5.6,7.7)
NEUT(%)	63.4±9.1	64±9
NT-proBNP(pg/mL)	430.5 (142,899.2)	484 (150,1157.5)
Cr(umol/L)	72 (63,83.2)	75 (63,86)
TG(mmol/L)	1.3 (1,1.9)	1.3 (1,1.9)
LAD(mm)	43.7±5.6	44.7±5.3
LVEF(%)	58 (54.2,62)	58 (54,62)
Medications		
Diuretic	60 (14)	46 (19)
ANRI	69 (16)	48 (19.8)
Beta-blocker	187 (43.5)	123 (50.8)
Statins	270 (62.8)	186 (76.9)
Propafenone	9 (2.1)	5 (2.1)
Amiodarone	121 (28.1)	66 (27.3)
ACEI /ARB	160 (37.2)	93 (38.4)
Metformin	69 (16)	66 (27.3)
Glinides	8 (1.9)	7 (2.9)
DPP4i	10 (2.3)	8 (3.3)
Sulfonylurea	29 (6.7)	28 (11.6)
Alpha-glucosidase inhibitors	39 (9.1)	37 (15.3)
Insulin	20 (4.7)	18 (7.4)
Ablation type		
PVI alone	279 (64.9)	144 (59.5)
SVC	59 (13.7)	35 (14.5)

Linear ablation	37 (8.6)	21 (8.7)
BOX	58 (13.5)	41 (16.9)
Further substrate modification	18 (4.2)	10 (4.1)
Intraoperative Electrical Cardioversion	176 (40.9)	108 (44.6)

Values are expressed as mean  $\pm$  SD, median (IQR), or n (%).

Abbreviations: BMI, body mass index; SAHS, sleep apnea-hypopnea syndrome; CHD, coronary heart disease; HbA1c, hemoglobin A1C; WBC, white blood cell; NEUT, neutrophil percentage; NT-proBNP, N-terminal pro-brain natriuretic peptide; Cr, creatinine; TG, triglyceride; LAD, left atrial diameter; LVEF, left ventricular ejection fraction; ANRI, angiotensin receptor-enkephalinase inhibitor; ACEI, angiotensin-converting enzyme inhibitor; ARB, aldosterone receptor blocker; DPP4i, dipeptidyl peptidase 4 inhibitors; PVI, pulmonary vein isolation; SVC, superior vena cava

**Supplementary Table S2 Multivariate Cox regression analysis including all ablation strategies in the propensity-scored matched cohort**

Variables	aHR* (95% CI)	p-value
Sex	0.684(0.373-1.254)	0.220
Age	0.985(0.952-1.019)	0.374
Diagnosis	1.621(0.8-3.284)	0.180
Duration	1.070(1.014-1.128)	0.013
Diabetes	0.76(0.336-1.721)	0.511
HbA1c	0.792(0.549-1.144)	0.214
SGLT2i	0.450(0.217-0.932)	0.032
Diuretic	1.187(0.575-2.449)	0.643
Amiodarone	1.719(0.911-3.244)	0.094
Metformin	0.535(0.221-1.295)	0.166
SVC	1.463(0.57-3.754)	0.429
Linear ablation	0.425(0.102-1.779)	0.241
BOX	1.013(0.476-2.155)	0.972
Further substrate modification	0.684(0.158-2.962)	0.612

Values are presented as hazard ratios (95% confidence intervals).

\*Hazard ratios were adjusted for sex, age, diagnosis, duration, diabetes, HbA1c, diuretic, amiodarone, metformin, SVC, linear ablation, BOX, and further substrate modification.

Abbreviations: CI, confidence interval; HR, hazard ratio; aHR, adjusted hazard ratio