

Supplement Table1. Patient demographics and baseline characteristics

Characteristic	Cohort		p-value
	Internal Cohort N = 272	External Test Cohort N = 77	
Age, Mean $\pm$ SD	70 $\pm$ 9	67 $\pm$ 12	0.026 ¹
Sex, n (%)			0.270 ²
Female	118 (43.4%)	28 (36.4%)	
Male	154 (56.6%)	49 (63.6%)	
BMI, Mean $\pm$ SD	24.9 $\pm$ 3.7	24.1 $\pm$ 6.4	0.247 ¹
SEC Grade, n (%)			0.611 ³
0	56 (20.6%)	10 (13.0%)	
1	71 (26.1%)	22 (28.6%)	
2	49 (18.0%)	17 (22.1%)	
3	87 (32.0%)	26 (33.8%)	
4	9 (3.3%)	2 (2.6%)	
Left atrial appendage blood flow velocity, Mean $\pm$ SD	34 $\pm$ 15	51 $\pm$ 22	<0.001 ¹
WBC, Mean $\pm$ SD	6.00 $\pm$ 1.72	13.22 $\pm$ 42.85	0.155 ¹
Hemoglobin, Mean $\pm$ SD	131 $\pm$ 21	133 $\pm$ 29	0.561 ¹
Platelet, Mean $\pm$ SD	191 $\pm$ 59	193 $\pm$ 75	0.861 ¹
hs-CRP, Mean $\pm$ SD	7 $\pm$ 19	8 $\pm$ 16	0.660 ¹
HbA1c, Mean $\pm$ SD	6.19 $\pm$ 1.10	6.13 $\pm$ 1.33	0.694 ¹
Total cholesterol, Mean $\pm$ SD	4.31 $\pm$ 1.66	4.28 $\pm$ 1.18	0.848 ¹
Triglyceride, Mean $\pm$ SD	1.31 $\pm$ 0.79	1.28 $\pm$ 0.73	0.801 ¹
HDL, Mean $\pm$ SD	1.20 $\pm$ 0.33	1.24 $\pm$ 0.35	0.353 ¹
LDL, Mean $\pm$ SD	2.64 $\pm$ 0.81	2.70 $\pm$ 0.84	0.574 ¹
Albumin, Mean $\pm$ SD	45 $\pm$ 27	42 $\pm$ 5	0.222 ¹
Creatinine, Mean $\pm$ SD	82 $\pm$ 37	81 $\pm$ 27	0.690 ¹
eGFR, Mean $\pm$ SD	80 $\pm$ 23	81 $\pm$ 21	0.782 ¹

Characteristic	Cohort		p-value
	Internal Cohort N = 272	External Test Cohort N = 77	
TyG, Mean $\pm$ SD	8.58 $\pm$ 0.61	8.58 $\pm$ 0.60	0.989 ¹
MET-IR, Mean $\pm$ SD	38 $\pm$ 7	37 $\pm$ 11	0.314 ¹
TSH, Mean $\pm$ SD	2.92 $\pm$ 5.03	3.66 $\pm$ 12.43	0.630 ¹
D-Dimer, Mean $\pm$ SD	0.57 $\pm$ 1.40	0.43 $\pm$ 0.69	0.243 ¹
BNP, Mean $\pm$ SD	250 $\pm$ 892	261 $\pm$ 941	0.935 ¹
LAA PH, Mean $\pm$ SD	7.41 $\pm$ 0.05	7.42 $\pm$ 0.03	0.010 ¹
LAA PO2, Mean $\pm$ SD	97 $\pm$ 38	107 $\pm$ 37	0.038 ¹
LAA PCO2, Mean $\pm$ SD	40.2 $\pm$ 5.5	38.6 $\pm$ 3.9	0.005 ¹
LAA sodium, Mean $\pm$ SD	141.41 $\pm$ 2.48	141.70 $\pm$ 2.15	0.312 ¹
LAA potassium, Mean $\pm$ SD	3.47 $\pm$ 0.37	3.49 $\pm$ 0.32	0.728 ¹
LAA calcium, Mean $\pm$ SD	1.14 $\pm$ 0.06	1.17 $\pm$ 0.10	0.024 ¹
LAA glucose, Mean $\pm$ SD	6.43 $\pm$ 1.52	6.05 $\pm$ 1.44	0.050 ¹
LAA Lactic acid, Mean $\pm$ SD	1.50 $\pm$ 0.64	1.49 $\pm$ 0.56	0.841 ¹
LAA Hco3, Mean $\pm$ SD	25.29 $\pm$ 3.42	25.16 $\pm$ 2.16	0.709 ¹
LAA Tco2, Mean $\pm$ SD	22.68 $\pm$ 2.80	22.35 $\pm$ 1.95	0.251 ¹
LAA SPO2, Mean $\pm$ SD	96.22 $\pm$ 7.44	96.65 $\pm$ 5.30	0.581 ¹
Types of atrial fibrillation, n (%)			0.478 ²
Paroxysmal atrial fibrillation	143 (52.6%)	44 (57.1%)	
Persistent atrial fibrillation	129 (47.4%)	33 (42.9%)	
CHA2DS2-VASC, Mean $\pm$ SD	3.49 $\pm$ 1.65	2.71 $\pm$ 1.68	<0.001 ¹
HASBLED, Mean $\pm$ SD	1.96 $\pm$ 0.95	1.86 $\pm$ 1.15	0.489 ¹
LVEF, Mean $\pm$ SD	57 $\pm$ 11	60 $\pm$ 5	0.004 ¹
LA, Mean $\pm$ SD	40 $\pm$ 10	41 $\pm$ 5	0.424 ¹
Mitral regurgitation, n (%)			<0.001 ³
Mild	183 (67.3%)	23 (29.9%)	

Characteristic	Cohort		p-value
	Internal Cohort N = 272	External Test Cohort N = 77	
Moderate	55 (20.2%)	19 (24.7%)	
None	33 (12.1%)	21 (27.3%)	
Severe	1 (0.4%)	14 (18.2%)	
Tricuspid regurgitation, n (%)			<0.001 ³
Mild	149 (54.8%)	23 (29.9%)	
Moderate	75 (27.6%)	22 (28.6%)	
None	42 (15.4%)	21 (27.3%)	
Severe	6 (2.2%)	11 (14.3%)	
Hypertension, n (%)			0.267 ²
No	108 (39.7%)	36 (46.8%)	
Yes	164 (60.3%)	41 (53.2%)	
Diabetes, n (%)			0.758 ²
No	211 (77.6%)	61 (79.2%)	
Yes	61 (22.4%)	16 (20.8%)	
Coronary heart disease, n (%)			0.145 ²
No	234 (86.0%)	61 (79.2%)	
Yes	38 (14.0%)	16 (20.8%)	
Stroke, n (%)			0.735 ²
No	227 (83.5%)	63 (81.8%)	
Yes	45 (16.5%)	14 (18.2%)	
Thyroid disease, n (%)			0.011 ³
No	266 (97.8%)	70 (90.9%)	
Yes	6 (2.2%)	7 (9.1%)	
OSAS, n (%)			>0.999 ³
No	271 (99.6%)	77 (100.0%)	

Characteristic	Cohort		p-value
	Internal Cohort N = 272	External Test Cohort N = 77	
Yes	1 (0.4%)	0 (0.0%)	0.703 ²
Smoke, n (%)			
No	247 (90.8%)	71 (92.2%)	
Yes	25 (9.2%)	6 (7.8%)	0.581 ³
Alcohol, n (%)			
No	258 (94.9%)	72 (93.5%)	
Yes	14 (5.1%)	5 (6.5%)	0.006 ³
Antithrombotic drugs, n (%)			
Double antiplatelet	12 (4.4%)	3 (3.9%)	
No antithrombotic	95 (34.9%)	35 (45.5%)	
Single anticoagulation	132 (48.5%)	24 (31.2%)	
Single anticoagulation+double antiplatelet	0 (0.0%)	2 (2.6%)	
single anticoagulation+single antiplatelet	10 (3.7%)	1 (1.3%)	
Single antiplatelet	23 (8.5%)	12 (15.6%)	
ACEI/ARB, n (%)			0.039 ²
No	137 (50.4%)	49 (63.6%)	
Yes	135 (49.6%)	28 (36.4%)	
Calcium channel blocker, n (%)			0.079 ²
No	157 (57.7%)	53 (68.8%)	
Yes	115 (42.3%)	24 (31.2%)	
β-blocker, n (%)			0.060 ²
No	212 (77.9%)	52 (67.5%)	
Yes	60 (22.1%)	25 (32.5%)	
Statins, n (%)			0.856 ²
No	170 (62.5%)	49 (63.6%)	

Characteristic	Cohort		p-value
	Internal Cohort N = 272	External Test Cohort N = 77	
Yes	102 (37.5%)	28 (36.4%)	0.364 ²
SGLT2-i, n (%)			
No	241 (88.6%)	71 (92.2%)	
Yes	31 (11.4%)	6 (7.8%)	0.745 ²
Diuretic, n (%)			
No	220 (80.9%)	61 (79.2%)	
Yes	52 (19.1%)	16 (20.8%)	

¹Welch Two Sample t-test

²Pearson's Chi-squared test

³Fisher's exact test