

Supplementary Table 1-1. Statement for missing data

Factors	Number	Proportion
Left atrial anteroposterior diameter	13	1.4%
Ejection fraction	10	1.1%
Hemoglobin	1	0.1%
Uric acid	7	0.8%
Creatinine	7	0.8%
Cholesterol	14	1.6%
Albumin	10	1.1%
Homocysteine	180	20.0%
C-reactive protein	12	1.3%
Spontaneous echo contrast	13	1.4%

Supplementary Table 1-2. Expectation maximization analysis for missing data

Factors	Original	Expectation maximization
Left atrial anteroposterior diameter	4.0 ± 0.7	4.0 ± 0.7
Ejection fraction	63.3 ± 8.6	63.4 ± 8.6
Hemoglobin	141.4 ± 16.7	141.5 ± 16.7
Uric acid	349.0 ± 90.8	349.0 ± 91.0
Creatinine	82.7 ± 39.7	82.7 ± 39.8
Cholesterol	4.1 ± 1.0	4.1 ± 1.0
Albumin	41.5 ± 3.7	41.5 ± 3.7
Homocysteine	11.9 ± 5.3	11.8 ± 5.3
C-reactive protein	2.7 ± 8.3	2.7 ± 8.4
Spontaneous echo contrast	/	/

Supplementary Table 2-1. Multiple linear regression analysis of Cost, Model 1

	B	SE	90%CI	P value
Male	-0.305	0.615	(-1.316, 0.707)	0.620
Age	0.061	0.029	(0.012, 0.109)	0.039
Body mass index	-0.036	0.079	(-0.166, 0.093)	0.644
Hypertension	0.469	0.614	(-0.542, 1.480)	0.445
Diabetes	0.045	0.886	(-1.414, 1.504)	0.960
Heart failure	1.737	0.880	(0.288, 3.187)	0.049
Stroke	-0.124	1.140	(-2.001, 1.753)	0.913
Vascular disease	0.502	0.766	(-0.758, 1.763)	0.512
Cancer	-1.167	1.350	(-3.390, 1.057)	0.388
Cardiomyopathy	6.167	1.575	(3.574, 8.760)	<0.001
Abnormal uric acid metabolism	0.339	0.679	(-0.780, 1.457)	0.618

Supplementary Table 2-2. Multiple linear regression analysis of Cost, Model 2

	B	SE	90%CI	P value
Spontaneous echo contrast	2.521	1.167	(0.600, 4.443)	0.031
Left atrial anteroposterior diameter	0.423	0.572	(-0.518, 1.365)	0.459
Ejection fraction	-0.047	0.043	(-0.118, 0.023)	0.267
Hemoglobin	0.023	0.024	(-0.017, 0.063)	0.340
Uric acid	0.001	0.004	(-0.005, 0.008)	0.729
Creatinine	-0.003	0.009	(-0.019, 0.012)	0.719
Cholesterol	-0.092	0.363	(-0.690, 0.506)	0.800
Albumin	-0.139	0.107	(-0.315, 0.036)	0.192
Homocysteine	0.088	0.071	(-0.029, 0.204)	0.215
C-reactive protein	0.152	0.041	(0.085, 0.218)	<0.001

Supplementary Table 2-3. Multiple linear regression analysis of Cost, Model 3

	B	SE	90%CI	P value
Persistent AF	0.958	0.903	(-0.529, 2.445)	0.289
Com-CPVI	-0.149	0.653	(-1.225, 0.927)	0.820
IEC	0.362	0.893	(-1.108, 1.832)	0.686
Amiodarone	-0.245	1.232	(-2.273, 1.783)	0.843
Dronedarone	1.864	1.660	(-0.870, 4.597)	0.262
Propafenone	0.993	1.681	(-1.775, 3.761)	0.555
Beta blockers	-0.060	0.644	(-1.121, 1.001)	0.926
Sacubitril	0.650	0.962	(-0.933, 2.233)	0.499
valsartan				
SGLT2I	1.704	2.384	(-2.221, 5.630)	0.475
ACEI/ARB	-0.574	0.700	(-1.726, 0.578)	0.412
Statins	1.976	0.614	(0.965, 2.986)	0.001
Im-Recurr	4.166	0.817	(2.821, 5.512)	<0.001

SGLT2I: Sodium-dependent glucose transporters 2 inhibitor; ACEI: Angiotensin converting

enzyme inhibitor; ARB: Angiotensin receptor blocker.

Supplementary Table 3-1. Multiple linear regression analysis of duration of hospitalization, Model

	1			
	B	SE	90%CI	P value
Male	-0.185	0.147	(-0.428, 0.057)	0.209
Age	0.015	0.007	(0.003, 0.027)	0.033
Body mass index	0.001	0.019	(-0.030, 0.032)	0.944
Hypertension	-0.088	0.147	(-0.331, 0.154)	0.548
Diabetes	0.266	0.212	(-0.083, 0.616)	0.210
Heart failure	0.633	0.211	(0.285, 0.980)	0.003
Stroke	0.501	0.273	(0.052, 0.951)	0.067
Vascular disease	0.473	0.183	(0.171, 0.775)	0.010
Cancer	0.450	0.324	(-0.083, 0.983)	0.165
Cardiomyopathy	1.101	0.377	(0.480, 1.723)	0.004
Abnormal uric acid metabolism	0.090	0.163	(-0.178, 0.358)	0.581

Supplementary Table 3-2. Multiple linear regression analysis of duration of hospitalization, Model

	2			
	B	SE	90%CI	P value
Spontaneous echo contrast	0.074	0.269	(-0.368, 0.517)	0.783
Left atrial anteroposterior diameter	0.109	0.132	(-0.108, 0.326)	0.407
Ejection fraction	-0.030	0.010	(-0.046, -0.013)	0.003
Hemoglobin	-0.008	0.006	(-0.018, 0.001)	0.131
Uric acid	0.001	0.001	(-0.001, 0.002)	0.416
Creatinine	0.001	0.002	(-0.003, 0.004)	0.770
Cholesterol	-0.058	0.084	(-0.195, 0.080)	0.491
Albumin	-0.066	0.025	(-0.107, -0.026)	0.007
Homocysteine	0.012	0.016	(-0.014, 0.039)	0.443
C-reactive protein	0.019	0.009	(0.003, 0.034)	0.047

Supplementary Table 3-3. Multiple linear regression analysis of duration of hospitalization, Model
3

	B	SE	90%CI	P value
Persistent AF	0.365	0.216	(0.010, 0.720)	0.091
Com-CPVI	-0.229	0.156	(-0.485, 0.028)	0.143
IEC	-0.028	0.213	(-0.379, 0.323)	0.896
Amiodarone	-0.250	0.294	(-0.734, 0.234)	0.395
Dronedarone	-0.314	0.396	(-0.967, 0.339)	0.429
Propafenone	0.325	0.401	(-0.336, 0.986)	0.419
Beta blockers	0.249	0.154	(-0.004, 0.502)	0.106
Sacubitril	0.357	0.230	(-0.021, 0.735)	0.120
valsartan				
SGLT2I	0.244	0.569	(-0.694, 1.181)	0.669
ACEI/ARB	0.141	0.167	(-0.134, 0.416)	0.399
Statins	0.719	0.147	(0.478, 0.961)	<0.001
Im-Recurr	0.986	0.195	(0.665, 1.307)	<0.001

SGLT2I: Sodium-dependent glucose transporters 2 inhibitor; ACEI: Angiotensin converting enzyme inhibitor; ARB: Angiotensin receptor blocker.

Supplementary Table 4-1. Multiple linear regression analysis of duration of hospitalization after ablation, Model 1

	B	SE	90%CI	P value
Male	-0.137	0.103	(-0.307, 0.033)	0.184
Age	0.014	0.005	(0.006, 0.022)	0.004
Body mass index	0.009	0.013	(-0.013, 0.030)	0.519
Hypertension	-0.106	0.103	(-0.275, 0.064)	0.306
Diabetes	0.234	0.149	(-0.010, 0.479)	0.115
Heart failure	0.308	0.148	(0.065, 0.551)	0.037
Stroke	0.223	0.191	(-0.092, 0.538)	0.243
Vascular disease	-0.053	0.128	(-0.264, 0.159)	0.681
Cancer	0.111	0.226	(-0.262, 0.484)	0.623
Cardiomyopathy	0.195	0.264	(-0.240, 0.630)	0.461
Abnormal uric acid metabolism	0.094	0.114	(-0.094, 0.281)	0.411

Supplementary Table 4-2. Multiple linear regression analysis of duration of hospitalization after ablation, Model 2

	B	SE	90%CI	P value
Spontaneous echo contrast	0.401	0.193	(0.082, 0.719)	0.038
Left atrial anteroposterior diameter	0.025	0.095	(-0.130, 0.181)	0.788
Ejection fraction	-0.005	0.007	(-0.017, 0.006)	0.444
Hemoglobin	-0.001	0.004	(-0.007, 0.006)	0.874
Uric acid	0	0.001	(-0.001, 0.002)	0.498
Creatinine	0.001	0.002	(-0.002, 0.003)	0.689
Cholesterol	0.042	0.060	(-0.057, 0.141)	0.490
Albumin	-0.039	0.018	(-0.068, -0.010)	0.028
Homocysteine	-0.001	0.012	(-0.021, 0.018)	0.914
C-reactive protein	0.007	0.007	(-0.004, 0.019)	0.267

Supplementary Table 4-3. Multiple linear regression analysis of duration of hospitalization after ablation, Model 3

	B	SE	90%CI	P value
Persistent AF	0.235	0.148	(-0.009, 0.480)	0.113
Com-CPVI	0.111	0.107	(-0.066, 0.288)	0.303
IEC	0.060	0.147	(-0.182, 0.302)	0.682
Amiodarone	-0.011	0.202	(-0.344, 0.323)	0.957
Dronedarone	0.112	0.273	(-0.338, 0.561)	0.683
Propafenone	0.051	0.276	(-0.404, 0.506)	0.854
Beta blockers	-0.164	0.106	(-0.338, 0.010)	0.122
Sacubitril valsartan	0.224	0.158	(-0.036, 0.484)	0.157
SGLT2I	-0.264	0.392	(-0.910, 0.381)	0.500
ACEI/ARB	0.084	0.115	(-0.106, 0.273)	0.468
Statins	0.194	0.101	(0.028, 0.360)	0.055
Im-Recurr	0.986	0.134	(0.765, 1.207)	<0.001

SGLT2I: Sodium-dependent glucose transporters 2 inhibitor; ACEI: Angiotensin converting enzyme inhibitor; ARB: Angiotensin receptor blocker.

Supplementary Table 5-1. Logistics regression analysis of Im-Recurr, Model 1

	B	SE	OR	90%CI	P value
Male	-0.344	0.201	0.709	(0.509, 0.986)	0.086
Age	0.018	0.011	1.018	(1.000, 1.036)	0.095
Body mass index	0.030	0.028	1.030	(0.984, 1.079)	0.283
Hypertension	0.071	0.208	1.074	(0.762, 1.512)	0.733
Diabetes	0.105	0.282	1.111	(0.698, 1.767)	0.709
Heart failure	-0.004	0.289	0.996	(0.619, 1.601)	0.988
Stroke	0.392	0.340	1.480	(0.846, 2.588)	0.249
Vascular disease	-0.134	0.259	0.875	(0.571, 1.338)	0.604
Cancer	-0.371	0.493	0.690	(0.307, 1.553)	0.452
Cardiomyopathy	0.459	0.457	1.582	(0.746, 3.356)	0.316
Abnormal uric acid metabolism	0.209	0.221	1.232	(0.857, 1.771)	0.344

Supplementary Table 5-2. Logistics regression analysis of Im-Recurr, Model 2

	B	SE	OR	90%CI	P value
Spontaneous echo contrast	0.313	0.343	1.367	(0.778, 2.403)	0.362
Left atrial anteroposterior diameter	0.206	0.184	1.229	(0.908, 1.663)	0.262
Ejection fraction	0.003	0.014	1.003	(0.981, 1.026)	0.802
Hemoglobin	0.002	0.008	1.002	(0.989, 1.015)	0.781
Uric acid	-0.001	0.001	0.999	(0.997, 1.001)	0.428
Creatinine	-0.008	0.007	0.992	(0.980, 1.003)	0.240
Cholesterol	0.095	0.114	1.099	(0.911, 1.326)	0.406
Albumin	-0.005	0.034	0.995	(0.941, 1.052)	0.880
Homocysteine	0.021	0.021	1.021	(0.987, 1.057)	0.313
C-reactive protein	0.014	0.010	1.014	(0.998, 1.030)	0.163

Supplementary Table 5-3. Logistics regression analysis of Im-Recurr, Model 3

	B	SE	OR	90%CI	P value
Persistent AF	0.194	0.301	1.214	(0.740, 1.992)	0.519
Com-CPVI	-0.382	0.225	0.682	(0.471, 0.988)	0.089
IEC	0.524	0.299	1.689	(1.033, 2.759)	0.079
Amiodarone	-0.381	0.385	0.683	(0.362, 1.287)	0.323
Dronedarone	-0.525	0.566	0.592	(0.233, 1.502)	0.354
Propafenone	0.139	0.534	1.149	(0.478, 2.764)	0.795
Beta blockers	0.220	0.212	1.247	(0.880, 1.767)	0.298
Sacubitril	-0.159	0.330	0.853	(0.495, 1.468)	0.629
valsartan					
SGLT2I	-0.892	1.054	0.410	(0.072, 2.320)	0.397
ACEI/ARB	0.312	0.225	1.366	(0.943, 1.978)	0.166
Statins	-0.012	0.208	0.988	(0.701, 1.392)	0.955

SGLT2I: Sodium-dependent glucose transporters 2 inhibitor; ACEI: Angiotensin converting enzyme inhibitor; ARB: Angiotensin receptor blocker.

Supplementary Table 6. Comparison between patients accepted Com-CPVI or CPVI by PSM analysis

	Before PSM matching			After PSM matching		
	Com-CPVI N = 298	CPVI N = 600	P value	Com-CPVI N = 278	CPVI N = 278	P value
Male	191 (64.1)	394 (65.7)	0.641	183 (65.8)	179 (64.4)	0.722
Age, year	63.6 ± 10.2	61.4 ± 11.1	0.005 **	63.4 ± 10.3	62.9 ± 10.5	0.568
Body mass index, kg/m ²	24.6 ± 3.8	24.1 ± 3.8	0.091	24.7 ± 3.1	24.6 ± 3.5	0.747
Hypertension	149 (50.0)	332 (55.3)	0.131	144 (51.8)	135 (48.6)	0.445
Diabetes	32 (10.7)	80 (13.3)	0.268	32 (11.5)	32 (11.5)	1.000
Heart failure	55 (18.5)	61 (10.2)	<0.001 ***	40 (14.4)	50 (18.0)	0.250
Stroke	19 (6.4)	44 (7.3)	0.597	16 (5.8)	15 (5.4)	0.853
Vascular disease	44 (14.8)	117 (19.5)	0.082	40 (14.4)	38 (13.7)	0.807
Cancer	16 (5.4)	27 (4.5)	0.566	15 (5.4)	15 (5.4)	1.000
Cardiomyopathy	19 (6.4)	13 (2.2)	0.001 **	7 (2.5)	12 (4.3)	0.243
Abnormal uric acid metabolism	82 (27.5)	140 (23.3)	0.171	73 (26.3)	76 (27.3)	0.774
Spontaneous echo contrast	55 (18.7)	40 (6.8)	<0.001 ***	47 (17.2)	23 (8.4)	0.002 **
LAD, cm	4.3 ± 0.6	3.9 ± 0.6	<0.001 ***	4.3 ± 0.6	4.0 ± 0.6	<0.001 ***
Ejection fraction, %	61.4 ± 9.3	64.3 ± 8.1	<0.001 ***	62.2 ± 8.2	62.6 ± 9.0	0.601
Hemoglobin, g/L	142.3 ± 17.5	141.0 ± 16.3	0.273	142.5 ± 17.4	140.6 ± 16.7	0.180
Uric acid, μmol/L	349.7 ± 88.2	348.6 ± 92.2	0.867	348.2 ± 88.3	354.4 ± 97.7	0.428
Creatinine, μmol/L	82.7 ± 31.7	82.7 ± 43.2	0.999	82.6 ± 32.5	86.8 ± 60.2	0.305
Cholesterol, mmol/L	4.0 ± 0.9	4.1 ± 1.0	0.055	4.0 ± 0.9	4.1 ± 1.1	0.164
Albumin, g/L	41.2 ± 4.0	41.7 ± 3.5	0.052	41.3 ± 4.0	41.4 ± 3.7	0.569
Homocysteine, μmol/L	11.7 ± 5.4	12.0 ± 5.2	0.493	11.6 ± 5.2	12.5 ± 5.6	0.075
C-reactive protein, mg/L	2.6 ± 5.9	2.7 ± 9.3	0.783	2.4 ± 5.8	3.4 ± 12.6	0.246
Persistent AF	187 (62.8)	157 (26.2)	<0.001 ***	172 (61.9)	84 (30.2)	<0.001 ***
IEC	190 (63.8)	167 (27.8)	<0.001 ***	176 (63.3)	82 (29.5)	<0.001 ***
Amiodarone	257 (86.2)	540 (90.0)	0.093	241 (86.7)	242 (87.1)	0.900
Dronedarone	19 (6.4)	30 (5.0)	0.393	18 (6.5)	19 (6.8)	0.865
Propafenone	11 (3.7)	18 (3.0)	0.581	11 (4.0)	11 (4.0)	1.000
Beta blockers	87 (29.2)	182 (30.3)	0.726	81 (29.1)	95 (34.2)	0.202
Sacubitril valsartan	44 (14.8)	57 (9.5)	0.019 *	34 (12.2)	33 (11.9)	0.896
SGLT2I	4 (1.3)	9 (1.5)	1.000	4 (1.4)	4 (1.4)	1.000
ACEI/ARB	53 (17.8)	152 (25.3)	0.011 *	52 (18.7)	60 (21.6)	0.398
Statins	107 (35.9)	208 (34.7)	0.714	95 (34.2)	88 (31.7)	0.528
Im-Recurr	39 (13.1)	89 (14.8)	0.481	36 (12.9)	40 (14.4)	0.621
Cost, 10 ³ CNY	77.7 ± 10.7	77.3 ± 7.4	0.514	77.0 ± 5.9	77.1 ± 6.8	0.826
Duration of hospitalization, days	5.1 ± 2.3	5.2 ± 2.0	0.497	5.0 ± 2.1	5.3 ± 2.0	0.098
Duration of hospitalization after ablation, days	3.0 ± 1.8	2.8 ± 1.2	0.063	3.0 ± 1.7	2.8 ± 1.1	0.054

LAD: Left atrial anteroposterior diameter; SGLT2I: Sodium-dependent glucose transporters 2 inhibitor; ACEI: Angiotensin converting enzyme inhibitor; ARB: Angiotensin receptor blocker.

Supplementary Table 7. Comparison between elders patients (age \geqslant 65) and control by PSM analysis

	Before PSM matching			After PSM matching		
	Elders N = 411	Control N = 487	P value	Elders N = 301	Control N = 301	P value
Male	233 (56.7)	352 (72.3)	<0.001 ***	198 (65.8)	192 (63.8)	0.609
Age, year	70.9 \pm 4.7	54.8 \pm 8.9	<0.001 ***	70.5 \pm 4.4	56.0 \pm 8.2	<0.001 ***
Body mass index, kg/m ²	23.8 \pm 3.5	24.7 \pm 4.0	<0.001 ***	24.3 \pm 3.2	24.3 \pm 3.0	0.896
Hypertension	259 (63.0)	222 (45.6)	<0.001 ***	164 (54.5)	169 (56.1)	0.682
Diabetes	67 (16.3)	45 (9.2)	0.001 **	30 (10.0)	36 (12.0)	0.434
Heart failure	69 (16.8)	47 (9.7)	0.001 **	36 (12.0)	36 (12.0)	1.000
Stroke	46 (11.2)	17 (3.5)	<0.001 ***	16 (5.3)	16 (5.3)	1.000
Vascular disease	90 (21.9)	71 (14.6)	0.004 **	51 (16.9)	50 (16.6)	0.913
Cancer	33 (8.0)	10 (2.1)	<0.001 ***	4 (1.3)	10 (3.3)	0.105
Cardiomyopathy	16 (3.9)	16 (3.3)	0.625	11 (3.7)	8 (2.7)	0.484
Abnormal uric acid metabolism	100 (24.3)	122 (25.1)	0.803	72 (23.9)	74 (24.6)	0.849
Spontaneous echo contrast	47 (11.7)	48 (10.0)	0.415	35 (11.7)	33 (11.1)	0.819
LAD, cm	4.1 \pm 0.6	4.0 \pm 0.7	0.139	4.1 \pm 0.6	3.9 \pm 0.7	0.004 **
Ejection fraction, %	63.4 \pm 8.6	63.3 \pm 8.6	0.930	63.4 \pm 8.4	63.3 \pm 9.1	0.930
Hemoglobin, g/L	137.1 \pm 16.4	145.1 \pm 16.2	<0.001 ***	140.0 \pm 15.6	142.1 \pm 16.8	0.113
Uric acid, μ mol/L	344.0 \pm 91.3	353.3 \pm 90.3	0.128	352.6 \pm 89.3	345.4 \pm 93.1	0.334
Creatinine, μ mol/L	83.7 \pm 37.8	81.8 \pm 41.3	0.483	82.1 \pm 20.1	81.9 \pm 51.0	0.949
Cholesterol, mmol/L	4.0 \pm 1.0	4.2 \pm 0.9	<0.001 ***	4.0 \pm 1.0	4.2 \pm 1.0	0.015 *
Albumin, g/L	41.2 \pm 3.7	41.8 \pm 3.7	0.016 *	41.3 \pm 3.8	41.7 \pm 3.6	0.137
Homocysteine, μ mol/L	12.2 \pm 4.7	11.7 \pm 5.7	0.211	12.2 \pm 4.9	11.4 \pm 5.7	0.074
C-reactive protein, mg/L	3.3 \pm 11.0	2.1 \pm 5.1	0.053	2.6 \pm 6.2	2.3 \pm 6.0	0.565
Persistent AF	152 (37.0)	192 (39.4)	0.453	112 (37.2)	106 (35.2)	0.611
Com-CPVI	153 (37.2)	145 (29.8)	0.018 *	117 (38.9)	77 (25.6)	<0.001 ***
IEC	164 (39.9)	193 (39.6)	0.934	130 (43.2)	104 (34.6)	0.030 *
Amiodarone	367 (89.3)	430 (88.3)	0.637	270 (89.7)	272 (90.4)	0.786
Dronedarone	16 (3.9)	33 (6.8)	0.058	13 (4.3)	19 (6.3)	0.276
Propafenone	16 (3.9)	13 (2.7)	0.301	14 (4.7)	9 (3.0)	0.288
Beta blockers	118 (28.7)	151 (31.0)	0.454	78 (25.9)	99 (32.9)	0.060
Sacubitril valsartan	48 (11.7)	53 (10.9)	0.707	29 (9.6)	39 (13.0)	0.198
SGLT2I	5 (1.2)	8 (1.6)	0.594	3 (1.0)	7 (2.3)	0.202
ACEI/ARB	106 (25.8)	99 (20.3)	0.052	72 (23.9)	69 (22.9)	0.773
Statins	188 (45.7)	127 (26.1)	<0.001 ***	125 (41.5)	91 (30.2)	0.004 **
Im-Recurr	68 (16.5)	60 (12.3)	0.071	49 (16.3)	37 (12.3)	0.162
Cost, 10 ³ CNY	78.1 \pm 10.2	76.8 \pm 7.0	0.027 *	77.6 \pm 6.7	76.8 \pm 6.1	0.112
Duration of hospitalization, days	5.5 \pm 2.4	4.9 \pm 1.8	<0.001 ***	5.3 \pm 2.3	5.0 \pm 1.9	0.061
Duration of hospitalization after ablation, days	3.1 \pm 1.6	2.8 \pm 1.2	0.002 **	3.1 \pm 1.6	2.8 \pm 1.3	0.013 *

LAD: Left atrial anteroposterior diameter; SGLT2I: Sodium-dependent glucose transporters 2 inhibitor; ACEI: Angiotensin converting enzyme inhibitor; ARB: Angiotensin receptor blocker.

