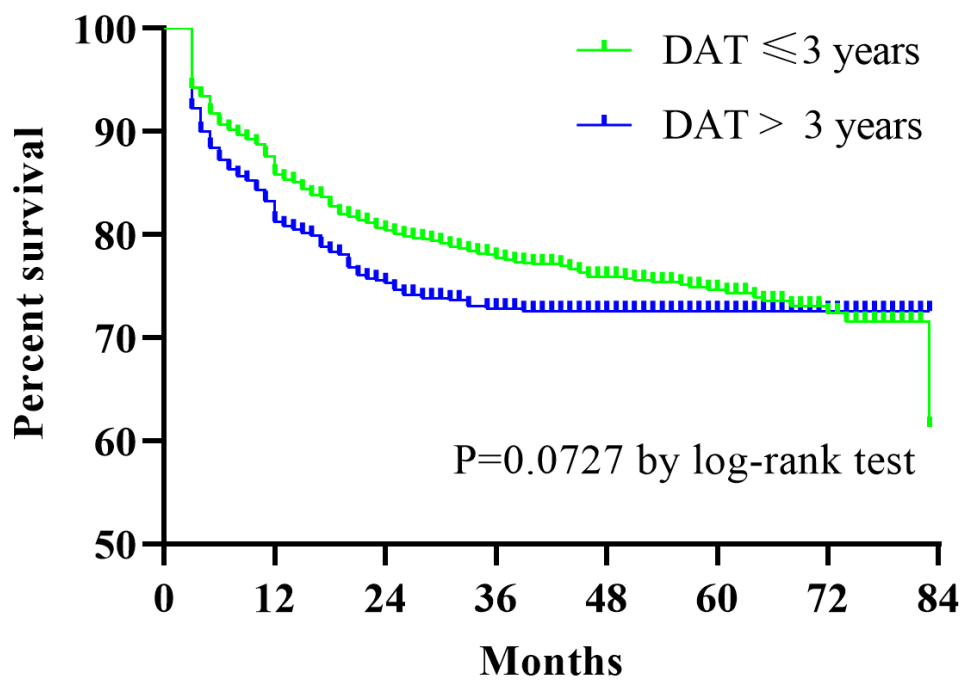
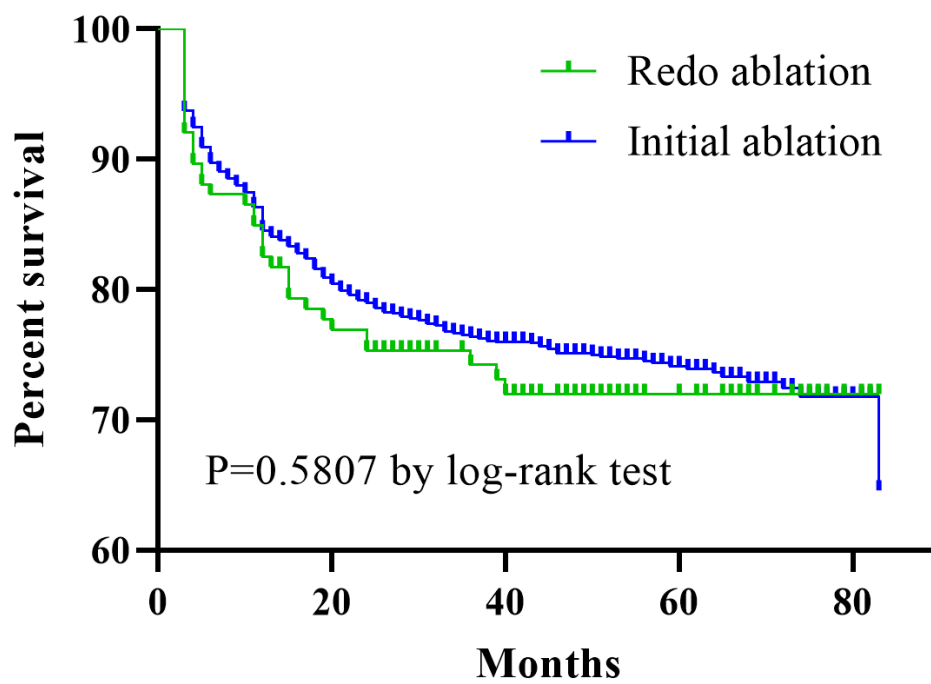




Supplementary Figure S1. Kaplan-Meier curves for cumulative survival free from atrial fibrillation recurrence between patients with DAT ≤ 3 years and > 3 years. The percent of AF-free survival did not significantly differ ($n = 1439$ for DAT ≤ 3 years and $n = 658$ for DAT > 3 years) (DAT: diagnosis-to-ablation time)



Supplementary Figure S2. Kaplan-Meier curves for cumulative survival free from atrial fibrillation recurrence among initial or redo groups. The AF-free survival rate was not significantly different compared to the patients with initial ablation.

Supplementary Table S1. Baseline and follow-up information

	All patients (n=2097)	DAT≤1 (n=923)	1<DAT≤3 (n=516)	DAT>3(n=658)	P- value
Age, mean (SD) (years)	59.98(10.57)	58.40(11.12)	61.16(10.35)*	61.28(9.63)*	<0.001
60-64	412(19.6%)	166(18.0%)	116(22.6%)	130(19.8%)	
65-74	578(27.6%)	220(23.8%)	159(30.8%)	199(30.2%)	
≥75	165(7.9%)	64(6.9%)	47(9.1%)	54(8.2%)	
Male	1315(62.7%)	608(65.9%)	311(60.3%)*	396(60.2%)*	0.001
Persistent AF	807(38.5%)	429(46.5%)	164(31.8%)*	214(32.5%)*	<0.001
DAT, mean (SD) (months)	35.88(38.94)	5.37(4.53)	27.97(6.51)*	84.88(31.84)*	<0.001
Congestive heart failure	42(2.0%)	24(2.6%)	7(1.4%)	11(1.7%)	0.208
Hypertension	1030 (49.1%)	431(46.7%)	257(49.8%)	342(52.0%)*	0.110
Diabetes mellitus	342(16.3%)	143(15.5%)	86(16.7%)	113(17.2%)	0.059
Prior stroke/TIA/systemic embolism	207(9.9%)	85(9.2%)	54(10.5%)	68(10.3%)	0.664
Vascular disease	452(21.6%)	168(18.2%)	105(20.3%)	179(27.2%)*	<0.001
CHA ₂ DS ₂ -VASc score, mean (SD)	1.9(1.57)	1.74(1.58)	1.99(1.54)*	2.05(1.55)*	<0.001
Triglyceride glucose index	8.56(0.56)	8.58(0.56)	8.55(0.55)	8.55(0.55)	0.576
HAS-BLED score, mean (SD)	0.52(0.66)	0.46(0.65)	0.57(0.67)*	0.57(0.67)*	<0.001
Renal disease	2(0.1%)	2(0.2%)	0(0%)	0(0%)	0.280
Liver disease	12(0.6%)	9(1.0%)	1(0.2%)	2(0.3%)	0.092
Anemia	10(0.5%)	7(0.8%)	2(0.4%)	1(0.2%)	0.213
Alcohol consumption	481(22.9%)	222(24.1%)	112(21.7%)	147(22.3%)	0.206
Body mass index, kg/m ² , mean (SD)	26.17(3.51)	26.25(3.58)	26.07(3.55)	26.12(3.39)	0.595
LAD 40 -50mm	913(43.5%)	416(45.1%)	215(41.7%)	282(42.9%)	0.012
>50mm	144(6.9%)	71(7.7%)	35(6.8%)	38(5.8%)	0.330
Redo ablation during follow-up	126 (6.0%)	31(3.4%)	36(7.0%)*	59(9.0%)*	<0.001
Observational period prescription					
Non-vitamin k oral anticoagulants	1885(89.9%)	828(89.7%)	466(90.3%)	591(89.8%)	0.933
Warfarin	199(9.5%)	80(8.7%)	52(10.1%)	67(10.2%)	0.522
Antiplatelet drugs	328(15.6%)	147(15.9%)	92(17.8%)	89(13.5%)	0.125
ACEI/ARB	514(24.5%)	225(24.4%)	120(23.3%)	169(25.7%)	0.223
Statins	594(28.3%)	247(26.8%)	162(31.4%)	185(28.1%)	0.172
Follow-up duration, mean (SD) (months)	46.89(16.46)	46.06(16.37)	48.17(17.04)	47.07(16.08)	0.063

AF recurrence		516(24.6%)	216(23.4%)	123(23.8%)	177(26.9%)	0.001
Persistent AF recurrence	AF	63(3.0%)	20(2.2%)	10(1.9%)	33(5.0%)	0.007
Cardiovascular rehospitalization		309(14.7%)	129(14.0%)	83(16.1%)	97(14.7%)	0.193
Major cardiovascular and cerebrovascular events		123(5.9%)	57(6.2%)	31(6.0%)	35(5.3%)	0.765
New stroke/TIA/systemic embolism		68(3.2%)	33(3.6%)	19(3.7%)	16(2.4%)	0.707
Acute myocardial infarction		16(0.8%)	7(0.8%)	5(1.0%)	4(0.6%)	0.779
Advanced heart failure	heart	13(0.6%)	5(0.5%)	3(0.6%)	5(0.8%)	0.855
Major bleeding		2(0.1%)	1(0.1%)	0(0%)	1(0.1%)	0.694
Deaths		38(1.8%)	16(1.7%)	7(1.4%)	15(2.3%)	0.486
Long-term prescription						
Oral anticoagulants		389(18.6%)	182(19.7%)	85(16.5%)	122(18.5%)	0.315
Antiarrhythmic drugs		210(10.0%)	85(9.2%)	47(9.1%)	78(11.9%)	0.165
Antiplatelet drugs		680(32.4%)	321(33.8%)	163(31.6%)	205(31.2%)	0.249
ACEI/ARB		729(34.8%)	330(35.8%)	168(32.6%)	231(35.1%)	0.463
Statins		852(40.6%)	370(40.1%)	227(44.0%)	255(38.8%)	0.175

Abbreviations: DAT, diagnosis-to-ablation time; AF, atrial fibrillation; CHA2DS2-VASc, congestive heart failure, hypertension, age 75 years or older (doubled), diabetes, stroke (doubled), vascular disease, age 65 to 74 years, sex category (female); HAS-BLED, hypertension, abnormal renal or liver function, stroke, bleeding history or predisposition, labile international normalized ratio, elderly, drugs or alcohol concomitantly; LAD, left atrial diameter; ACEI, angiotensin converting enzyme inhibitors; ARB, Angiotensin receptor blockers.

* P<0.05, compared with DAT≤1year

Supplementary Table S2. Univariable and multivariable cox regression for atrial fibrillation recurrence at 2 years post operation (n=2097)

Variable	Univariate		Multivariate	
	HR(95%CI)	P-value	HR(95%CI)	P-value
Age	1.004(0.995-1.013)	0.359	1.002(0.991-1.014)	0.700
Female	1.237(1.028-1.490)	0.025	1.333(1.076-1.653)	0.009
Persistent AF	1.158(0.961-1.394)	0.123	1.153(0.946-1.404)	0.158
DAT intervals				
DAT≤1 year	Reference	-	Reference	-
1 year<DAT≤3years	0.921(0.723-1.172)	0.504	0.941(0.837-1.202)	0.627
DAT>3 years	1.234(1.003-1.520)	0.047	1.265(1.024-1.563)	0.029
Congestive heart failure	0.867(0.431-1.744)	0.689		
Hypertension	0.966(0.804-1.160)	0.708		
Diabetes mellitus	1.699(1.369-2.109)	0.000	1.772(1.384-2.269)	0.000
Prior stroke/TIA /systemic embolism	0.977(0.716-1.333)	0.884		
Vascular disease	1.089(0.875-1.355)	0.447		
CHA2DS2-VASc score	1.060(1.001-1.121)	0.045	0.947(0.865-1.035)	0.230
HAS-BLED score	0.939(0.816-1.081)	0.384		
Alcohol consumption	0.875(0.699-1.096)	0.244		
LAD ≥ 40 mm	1.321(1.100-1.586)	0.003	1.253(1.031-1.522)	0.023
Observational period prescription				
ACEI/ARB	1.099(0.889-1.358)	0.382		
Statins	1.029(0.822-1.287)	0.805		
Long-term prescription				
ACEI/ARB	1.053(0.870-1.275)	0.597		
Statins	1.068(0.883-1.293)	0.498		
Obesity#	1.208(0.991-1.473)	0.061	1.129(0.923-1.381)	0.237

Abbreviations: DAT, diagnosis-to-ablation time; AF, atrial fibrillation; CHA2DS2-VASc, congestive heart failure, hypertension, age 75 years or older (doubled), diabetes, stroke (doubled), vascular disease, age 65 to 74 years, sex category (female); HAS-BLED, hypertension, abnormal renal or liver function, stroke, bleeding history or predisposition, labile international normalized ratio, elderly, drugs or alcohol concomitantly; LAD, left atrial diameter.

* since first diagnosis; # BMI ≥28.0

Supplementary Table S3. Univariable and multivariable cox regression for atrial fibrillation recurrence in patients with DAT <3 years (n=1439)

Variable	Univariate		Multivariate	
	HR(95%CI)	P-value	HR(95%CI)	P-value
Age	1.004(0.995-1.014)	0.383	1.004(0.990-1.017)	0.608
Female	1.306(1.053-1.621)	0.015	1.354(1.043-1.758)	0.023
Persistent AF	1.002(0.808-1.243)	0.986	0.978(0.773-1.238)	0.854
Congestive heart failure	0.682(0.282-1.650)	0.396		
Hypertension	1.024(0.827-1.267)	0.829		
Diabetes mellitus	1.324(1.010-1.735)	0.042	1.196(0.868-1.649)	0.274
Prior stroke/TIA /systemic embolism	0.972(0.672-1.407)	0.882		
Vascular disease	1.196(0.922-1.552)	0.177		
CHA2DS2-VASc score	1.061(0.994-1.133)	0.077	0.970(0.868-1.083)	0.585
HAS-BLED score	0.936(0.792-1.105)	0.434		
Alcohol consumption	0.898(0.693-1.163)	0.414		
LAD $\geq$ 40 mm	1.296(1.048-1.603)	0.017	1.286(1.017-1.626)	0.036
Observational period prescription				
ACEI/ARB	1.189(0.927-1.525)	0.173		
Statins	1.205(0.926-1.569)	0.165		
Long-term prescription				
ACEI/ARB	1.054(0.843-1.318)	0.645		
Statins	1.249(0.999-1.561)	0.051	1.184(0.939-1.493)	0.154
Obesity#	1.265(1.006-1.592)	0.045	1.162(0.909-1.486)	0.232

Abbreviations: DAT, diagnosis-to-ablation time; AF, atrial fibrillation; CHA2DS2-VASc, congestive heart failure, hypertension, age 75 years or older (doubled), diabetes, stroke (doubled), vascular disease, age 65 to 74 years, sex category (female); HAS-BLED, hypertension, abnormal renal or liver function, stroke, bleeding history or predisposition, labile international normalized ratio, elderly, drugs or alcohol concomitantly; LAD, left atrial diameter.

* since first diagnosis; # BMI $\geq$ 28.0

Supplementary Table S4. Univariable and multivariable cox regression for atrial fibrillation recurrence in patients with DAT ≥ 3 years (n=658)

Variable	Univariate		Multivariate	
	HR(95%CI)	P-value	HR(95%CI)	P-value
Age	0.995(0.980-1.010)	0.526	0.988(0.972-1.004)	0.132
Female	1.126(0.835-1.518)	0.435	1.279(0.939-1.742)	0.119
Persistent AF	1.451(1.075-1.959)	0.015	1.304(0.946-1.797)	0.105
Congestive heart failure	1.552(0.576-4.183)	0.385		
Hypertension	1.011(0.753-1.358)	0.943		
Diabetes mellitus	2.124(1.527-2.954)	0.000	2.093(1.500-2.920)	0.000
Prior stroke/TIA /systemic embolism	1.004(0.617-1.635)	0.986		
Vascular disease	0.905(0.645-1.269)	0.561		
CHA2DS2-VASc score	1.047(0.954-1.149)	0.331		
HAS-BLED score	0.873(0.696-1.094)	0.238		
Alcohol consumption	0.835(0.577-1.208)	0.338		
LAD ≥ 40 mm	1.547(1.149-2.084)	0.004	1.443(1.051-1.982)	0.023
Observational period prescription				
ACEI/ARB	1.107(0.790-1.551)	0.554		
Statins	0.749(0.517-1.086)	0.127		
Long-term prescription				
ACEI/ARB	1.175(0.867-1.592)	0.298		
Statins	0.841(0.613-1.154)	0.285		
Obesity#	1.186(0.864-1.629)	0.290		

Abbreviations: DAT, diagnosis-to-ablation time; AF, atrial fibrillation; CHA2DS2-VASc, congestive heart failure, hypertension, age 75 years or older (doubled), diabetes, stroke (doubled), vascular disease, age 65 to 74 years, sex category (female); HAS-BLED, hypertension, abnormal renal or liver function, stroke, bleeding history or predisposition, labile international normalized ratio, elderly, drugs or alcohol concomitantly; LAD, left atrial diameter.

* since first diagnosis; # BMI ≥ 28.0