

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. ICD-8 and -10 codes

Comorbidity/outcomes	ICD-8 and ICD-10 codes
Valvular disease	ICD-10: I05, I06, I080A, I081A-I083A, Z952, Z954 ICD-8: 4240, 4241, 39509, 39608, 39609, 39500-39502, 39600-39604
Ischemic heart disease	ICD-10: I20-I25 ICD-8: 410-414
Heart failure	ICD-10: I42, I50, J81, I110, I130, I132 ICD-8: 425, 428, 4270, 4271
Atrial fibrillation	ICD-10: I48 ICD-8: 4274
Ischemic stroke	ICD-10: I63, I64 ICD-8: 433, 434
Transient cerebral ischemia	ICD-10: G45 ICD-8: 435
Thrombosis or embolism in peripheral arteries	ICD-10: I74 ICD-8: 444
Peripheral vascular disease	ICD-10: I70, I74 ICD-8: 443
Coagulopathy	ICD-10: D66-D69 ICD-8: 286
Deep vein thrombosis	ICD-10: I801-I803, I808, I809, I821-I823, I828, I829 ICD-8: 45100, 45108, 45109, 45190, 45199, 45300, 45302, 45303, 45304, 45309
Pulmonary embolism	ICD-10: I26 ICD-8: 450
Bleeding	ICD-10: I60-I62, N02, R04, R31, D62, H052A, G951A, S368D, K298A, K228F, I864A, K638B, K638C, K838F, K868G, I312, H313, H356, H431, H450, S064-S066, J942, D500, K250, K252, K254, K256, K260, K262, K264, K266, K270, K272, K274, K276, K280, K282, K284, K286, K290, K625, K661, K920-K922, I850
Malignancy	ICD-10: C00-C97 ICD-8: 140-209
Chronic renal disease	ICD-10: E102, E112, E132, E142, I120, N02-N08, N11, N12, N14, N18, N19, N26, N158-N160, N162-N164, N168, M300, M313, M319, M321B, Q612, Q613, Q615, Q619, T858, T859, Z992 ICD-8: 403, 404, 581-584, 25002, 40039, 59009, 59320, 75310, 75311, 75319
Chronic obstructive pulmonary disease	ICD-10: J42-J44 ICD-8: 490-492

Liver disease	ICD-10: B15-B19, K70-K77, C22, I982, Z944, D684C, Q618A ICD-8: 070, 155, 571-573
Alcohol abuse	ICD-10: E244, E52, F10, G312, G621, G721, I426, K292, K70, K860, L27A, O354, T51, Z714, Z721 ICD-8: 291, 303, 57109, 57110, 57710
Orthopedic fractures	ICD-10: S42, S52, S62, S72, S82, S92

ICD, International Classification of Diseases

eTable 2. ATC codes

Pharmacotherapy	ATC codes
Beta-blockers	C07, C09BX
Calcium channel blockers	C08, C07F, C09BB, C09DB
Renin-angiotensin-system inhibitors	C09
Vasodilator drugs	C02DB, C02DD, C02DG
Antiadrenergic drugs	C02A, C02B, C02C
Thiazides	C03A, C07B, C07D, C09XA52, C03EA01
Loop diuretics	C03C, C03EB01, C03EB02
Spirolactone	C03DA01
Statins	C10AA
Anti-diabetics	A10
Aspirin	B01AC06, N02BA01
ADP-receptor inhibitors	B01AC04, B01AC22, B01AC24
Dipyridamole	B01AC07
Vitamin K antagonists	B01AA03, B01AA04
Non-vitamin K antagonists	B01AE07, B01AF01, B01AF02
Drugs used in alcohol dependence	N07BB
Non-steroidal anti-inflammatory drugs	M01A

ATC, Anatomical Therapeutic Chemical; ADP, adenosine diphosphate

eTable 3. OAC initiation within 30 days after the index date according to CHA₂DS₂-VASc in patients developing POAF following CABG and NVAF

CHA ₂ DS ₂ -VASc	NVAF		POAF	
	OAC initiation	No OAC initiation	OAC initiation	No OAC initiation
1	39.5%	60.5%	6.8%	93.2%
2	45.1%	54.9%	5.3%	94.7%
3	43.9%	56.1%	9.7%	90.3%
≥ 4	41.8%	58.2%	10.1%	89.9%

NVAF, non-valvular atrial fibrillation; POAF, postoperative atrial fibrillation; CABG, coronary artery bypass grafting; OAC, oral anticoagulation

eTable 4. Baseline characteristics of patients developing POAF following CABG and NVAF

Characteristics	NVAF N=3808	POAF N=1904	P-value
Demographics			
Age (median [interquartile range])	69 (64-74)	69 (64-74)	N/A
Male, N (%)	3158 (82.9)	1579 (82.9)	N/A
Comorbidities, N (%)			
Ischemic heart disease	3808 (100)	1904 (100)	N/A
Heart failure	528 (13.9)	264 (13.9)	N/A
Thromboembolism	300 (7.9)	150 (7.9)	N/A
Peripheral vascular disease	230 (6.0)	115 (6.0)	N/A
Hypertension	1926 (50.6)	963 (50.6)	N/A
Coagulopathy	16 (0.4)	6 (0.3)	0.55
Bleeding	511 (13.4)	188 (9.9)	< 0.001
Diabetes	468 (12.3)	234 (12.3)	N/A
Malignancy	567 (14.9)	177 (9.3)	< 0.001
Chronic renal disease	224 (5.9)	79 (4.2)	0.005
Chronic obstructive pulmonary disease	562 (14.8)	119 (6.3)	< 0.001
Liver disease	105 (2.8)	21 (1.1)	< 0.001
Alcohol abuse	251 (6.6)	57 (3.0)	< 0.001
Concomitant medical treatment, N (%)			
Statins	1837 (48.2)	1184 (62.2)	< 0.001
Aspirin	2296 (60.3)	1160 (60.9)	0.65
ADP-receptor inhibitors	418 (11.0)	196 (10.3)	0.43
Dipyridamole	110 (2.9)	49 (2.6)	0.49
NSAID	798 (21.0)	325 (17.1)	< 0.001
Risk scores			
CHA ₂ DS ₂ -VASc (mean [standard deviation])	3.1 (1.4)	3.1 (1.4)	N/A
CHADS ₂ (mean [standard deviation])	1.2 (1.1)	1.2 (1.1)	N/A
HAS-BLED (mean [standard deviation])	2.3 (1.2)	2.2 (1.1)	0.002

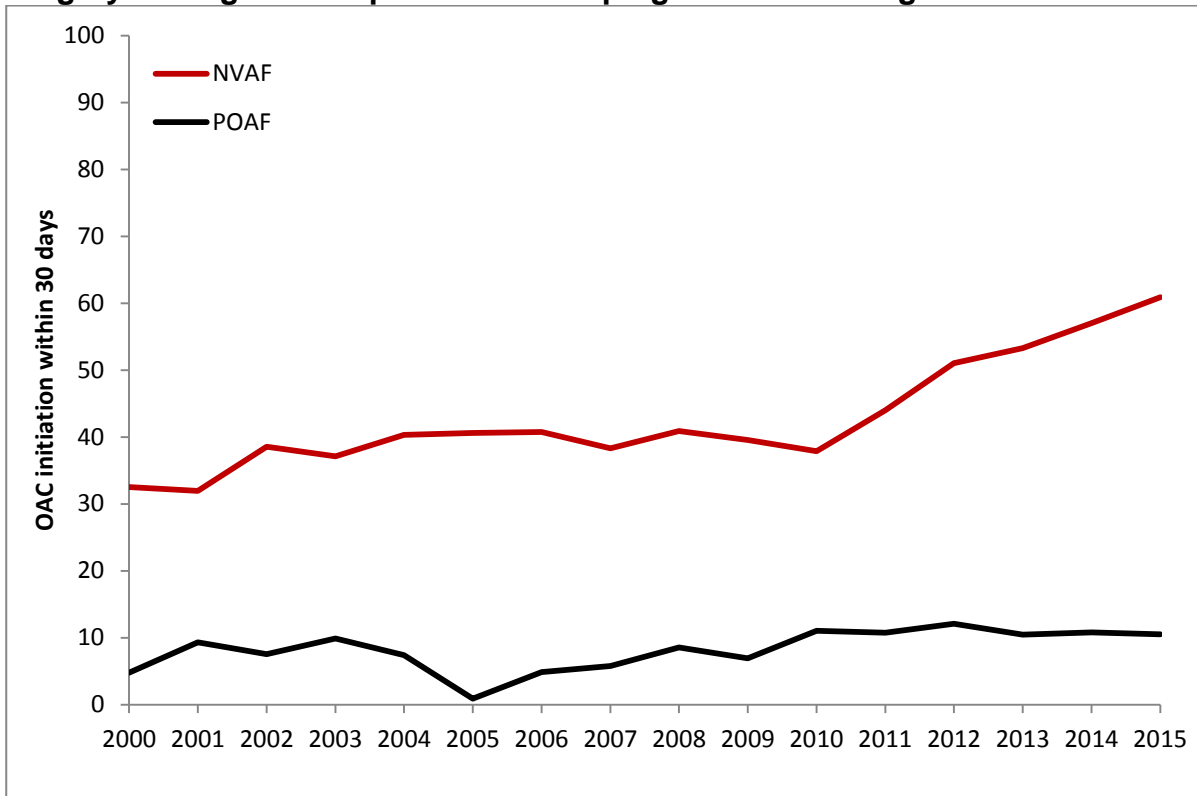
NVAF, non-valvular atrial fibrillation; POAF, postoperative atrial fibrillation; IHD, ischemic heart disease; ADP, adenosine diphosphate; NSAID, non-steroidal anti-inflammatory drugs; N/A, not applicable

eTable 5. Baseline characteristics of patients developing and not developing POAF following CABG

Characteristics	No POAF N=4964	POAF N=2157	P-value
Demographics			
Age (median [interquartile range])	64 (57-70)	68 (63-74)	< 0.001
Male, N (%)	4075 (82.1)	1776 (82.3)	0.80
Comorbidities, N (%)			
Ischemic heart disease	4964 (100)	2157 (100)	N/A
Heart failure	791 (15.9)	371 (17.2)	0.18
Thromboembolism	459 (9.3)	228 (10.6)	0.08
Peripheral vascular disease	270 (5.4)	135 (6.3)	0.17
Hypertension	2240 (45.1)	1099 (51.0)	< 0.001
Coagulopathy	20 (0.4)	8 (0.4)	0.84
Bleeding	418 (8.4)	217 (10.1)	0.03
Diabetes	1073 (21.6)	387 (17.9)	< 0.001
Malignancy	419 (8.4)	195 (9.0)	0.41
Chronic renal disease	215 (4.3)	95 (4.4)	0.89
Chronic obstructive pulmonary disease	259 (5.2)	133 (6.2)	0.11
Liver disease	92 (1.9)	31 (1.4)	0.22
Alcohol abuse	236 (4.8)	77 (3.6)	0.03
Concomitant medical treatment, N (%)			
Statins	3239 (65.3)	1356 (62.9)	0.05
Aspirin	3108 (62.6)	1324 (61.4)	0.33
ADP-receptor inhibitors	635 (12.8)	232 (10.8)	0.02
Dipyridamole	121 (2.4)	64 (3.0)	0.20
NSAID	815 (16.4)	372 (17.3)	0.39
Risk scores			
CHA ₂ DS ₂ -VASc (mean [standard deviation])	2.8 (1.5)	3.2 (1.4)	< 0.001
CHADS ₂ (mean [standard deviation])	1.1 (1.2)	1.3 (1.2)	< 0.001
HAS-BLED (mean [standard deviation])	1.9 (1.2)	2.2 (1.1)	< 0.001

POAF, postoperative atrial fibrillation; IHD, ischemic heart disease; ADP, adenosine diphosphate; NSAID, non-steroidal anti-inflammatory drugs; N/A, not applicable

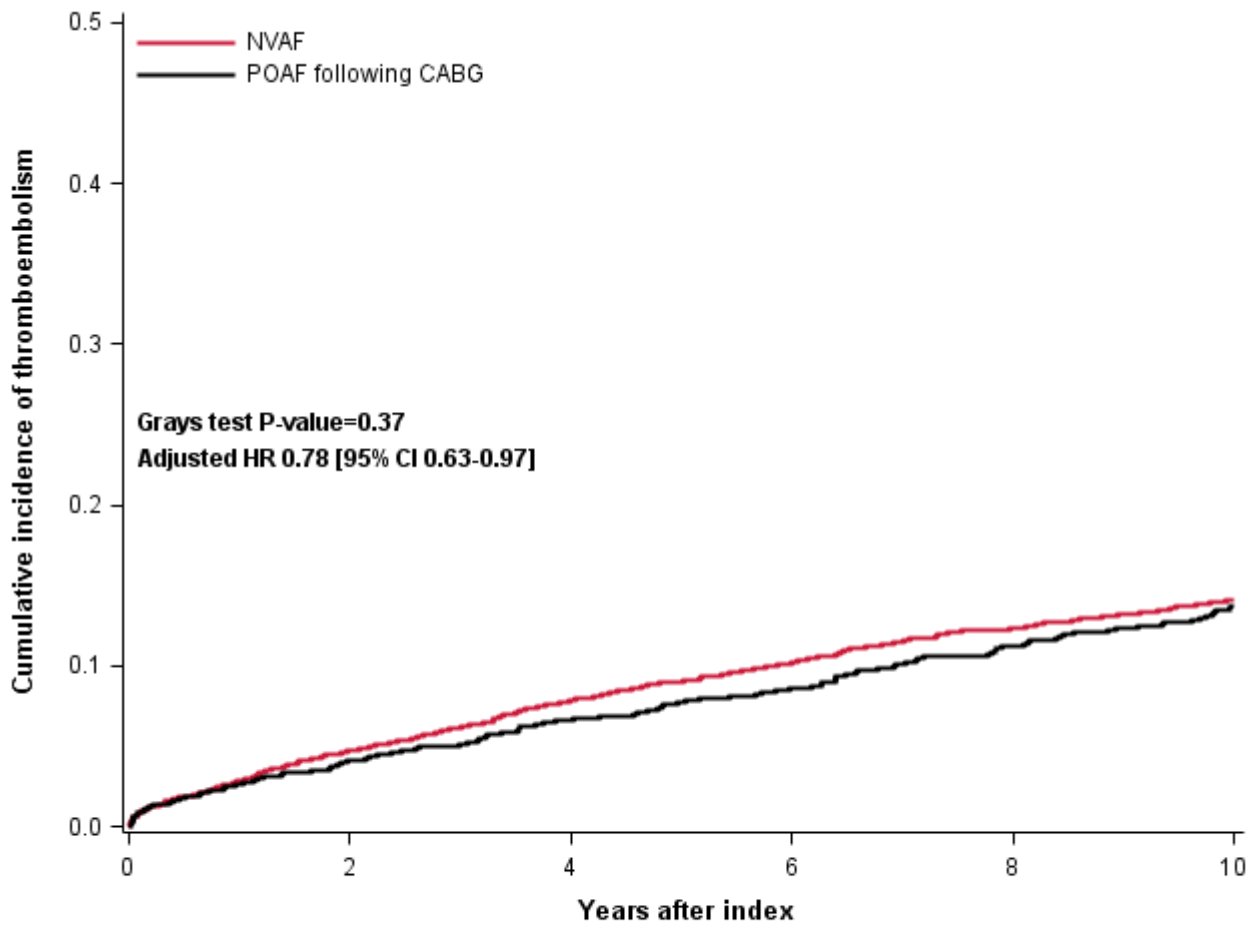
eFigure 1. OAC initiation within 30 days after the index date according to year of surgery or diagnosis in patients developing POAF following CABG and NVAF



NVAF, non-valvular atrial fibrillation; POAF, postoperative atrial fibrillation; CABG, coronary artery bypass grafting; OAC, oral anticoagulation

eFigure 2. Long-term outcomes in patients developing POAF following CABG and NVAF

a) Cumulative incidence of thromboembolism (composite of ischemic stroke, transient cerebral ischemia, and thrombosis or embolism in peripheral arteries)

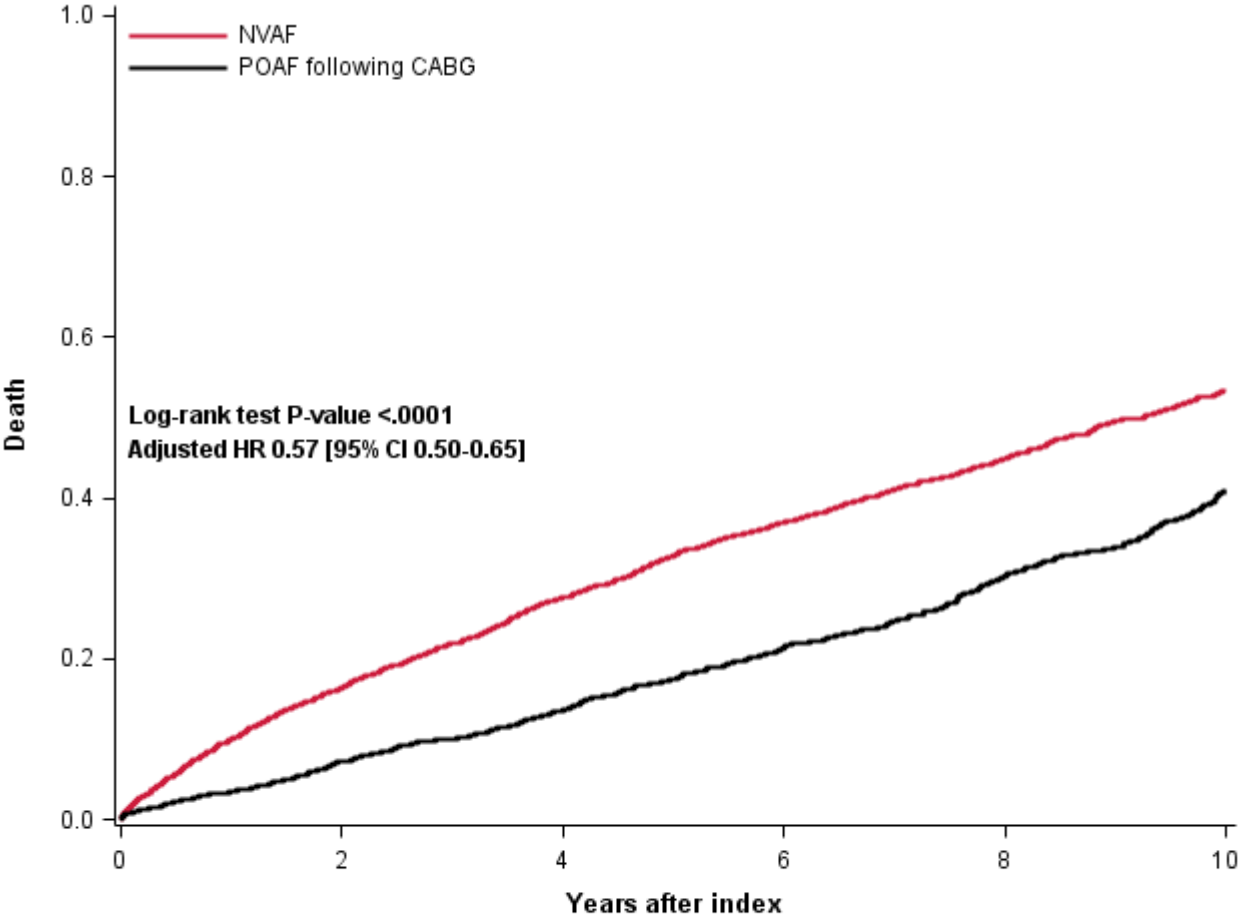


Patients at risk

NVAF	3808	2638	1865	1327	941	624
POAF	1904	1484	1125	837	603	395

NVAF, non-valvular atrial fibrillation; POAF, postoperative atrial fibrillation; CABG, coronary artery bypass grafting; IHD, ischemic heart disease; HR, hazard ratio; CI, confidence intervals

b) Kaplan-Meier curves for death

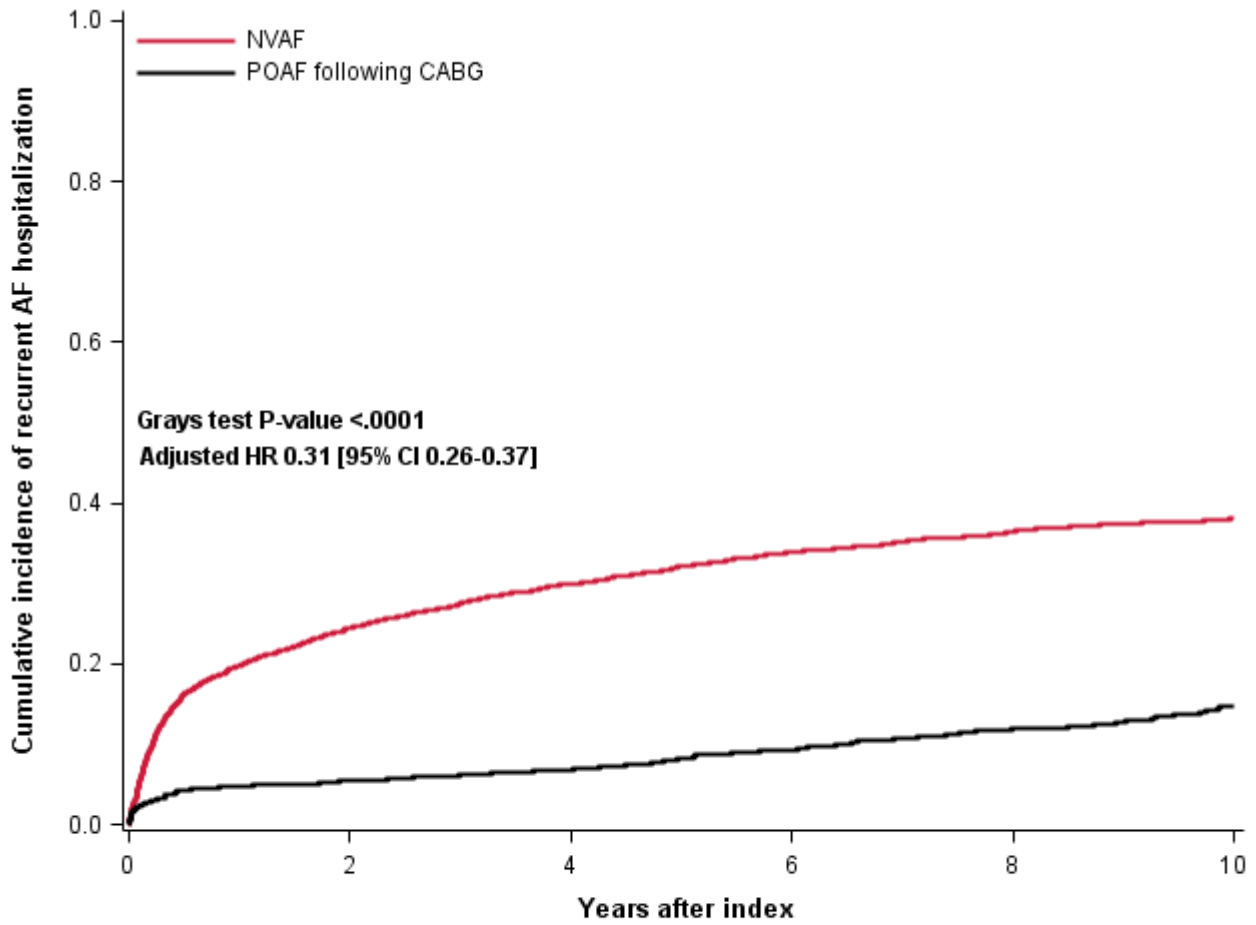


Patients at risk

NVAf	3808	2754	1992	1449	1048	708
POAF	1904	1533	1187	903	664	443

NVAf, non-valvular atrial fibrillation; POAF, postoperative atrial fibrillation; CABG, coronary artery bypass grafting; IHD, ischemic heart disease; HR, hazard ratio; CI, confidence intervals

c) Cumulative incidence of recurrent AF hospitalization



Patients at risk

NVAf	3808	2035	1330	876	586	369
POAF	1904	1448	1110	826	586	369

AF, atrial fibrillation; NVAf, non-valvular atrial fibrillation; POAF, postoperative atrial fibrillation; CABG, coronary artery bypass grafting; IHD, ischemic heart disease; HR, hazard ratio; CI, confidence intervals