Supplementary

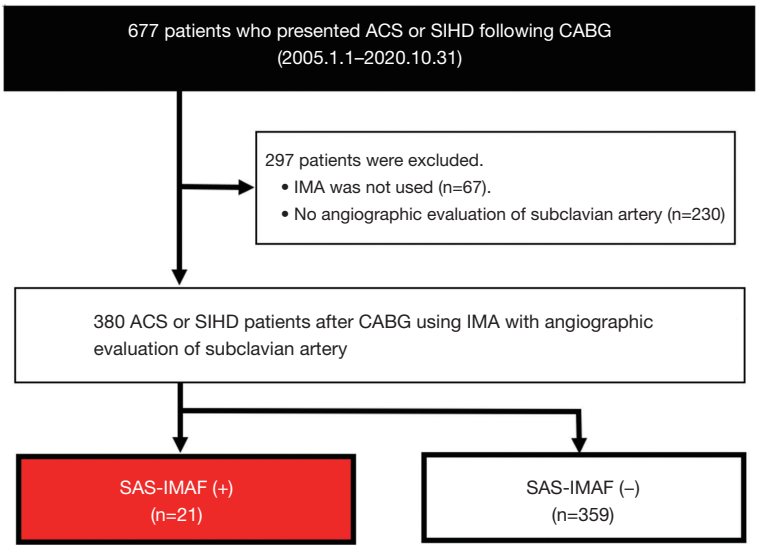

Figure S1 Patients' disposition.

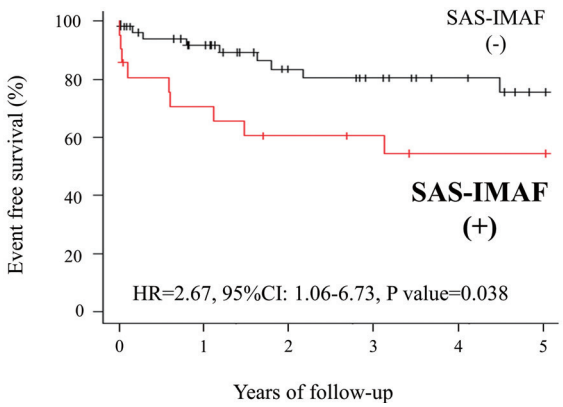

Figure S2 The occurrence of MACE in propensity score-matched cohort. the red and black lines indicate the event-free survival curve in patients with and without SAS-IMAF, respectively.

https://dx.doi.org/10.21037/cdt-23-211

Table S1 Time course of revascularization in patients with SAS-IMAF

ACS (n=15)	
Initial revascularization	Duration from admission to the procedure, days
PCI (n=9)	2.7±2.7
EVT (n=5)	11.8±11.1
Bypass surgery (n=1)	1
Additional revascularization	Duration from the initial procedure to additional one, days
EVT (n=6)	11.5±9.0
Bypass surgery (n=1)	42
SIHD (n=6)	
Initial revascularization	Duration from admission to the procedure, days
PCI only (n=1)	1
EVT only (n=5)	28.2±21.2

Table S2 Comparison of on-treatment LDL-C and BP levels

On-treatment LDL-C and BP levels	Overall (n=320)	SAS-IMAF (+) (n=16)	SAS-IMAF (–) (n=304)	P value
On-treatment LDL-C (mg/dL), mean ± SD	74.2±28.9	69.1±38.9	74.5±28.4	0.47
On-treatment LDL-C <70 mg/dL, n (%)	159 (49.7)	11 (68.8)	148 (48.7)	0.12
On-treatment SBP (mmHg)	122±21	112±23	122±21	0.06
On-treatment DBP (mmHg)	63±13	57±10	63±13	0.05
On-treatment SBP <140 mmHg and DBP <90 mmHg, n (%)	267 (83.4)	15 (93.8)	252 (82.9)	0.25

Table S3 Summary of MACE

Clinical outcomes	Overall (n=380)	SAS-IMAF (+) (n=21)	SAS-IMAF (–) (n=359)
MACE, n (%)	50 (13.2)	9 (42.9)	41 (11.4)
Cardiac death	29 (7.6)	4 (19.0)	25 (7.0)
Non-fatal MI	7 (1.8)	2 (9.5)	5 (1.4)
Non-fatal ischemic stroke, n (%)	21 (5.5)	5 (23.8)	16 (4.5)

https://dx.doi.org/10.21037/cdt-23-211

Table S4 Variance infraction factors produced from variables used for multivariate cox proportional hazards model for MACE

Variables	Variance infraction factors
Model 1	
SAS-IMAF	1.01
Age ≥75 years	1.01
Female	1.01
Model 2	
SAS-IMAF	1.07
Age ≥75 years	1.08
Female	1.05
CKD	1.08
Previous MI	1.21
LVEF <40%	1.21
ACS	1.11
DAPT	1.07
β-blocker	1.03
ACE inhibitor or ARB	1.10
Statin	1.05

Table S5 Univariate and multivariate analysis of predictors for cardiac death

Variables	Univariate analysis			Multivariate analysis (Model 1)			Multivariate analysis (Model 2)		
	HR	95% CI	P value	HR	95% CI	P value	HR	95% CI	P value
SAS-IMAF	3.14	0.98–10.05	0.05	2.88	0.89–9.31	0.08	1.75	0.45–6.80	0.42
Age ≥75 years	1.50	0.70–3.22	0.29	1.48	0.69–3.20	0.31	1.20	0.49–2.91	0.69
Female	0.60	0.18–2.08	0.43	0.63	0.18–2.16	0.46	0.70	0.17–2.86	0.62
Hypertension	2.09	0.48–9.07	0.33	–	–	–	–	–	–
Dyslipidemia	0.44	0.19–1.01	0.05	–	–	–	0.56	0.19–1.71	0.31
Type 2 DM	1.60	0.71–3.62	0.26	–	–	–	–	–	–
CKD	3.75	1.40–10.06	0.009	–	–	–	2.93	1.01–8.54	0.05
Previous MI	2.25	1.05–4.84	0.04	–	–	–	1.33	0.53–3.33	0.54
Previous stroke	1.15	0.47–2.80	0.76	–	–	–	–	–	–
LVEF <40%	5.57	2.52–12.33	<0.001	–	–	–	4.13	1.63–10.49	0.003
ACS	4.46	1.92–10.36	<0.001	–	–	–	4.56	1.75–11.91	0.002
Duration from CABG ≥10 years	1.25	0.59–2.69	0.56	–	–	–	–	–	–
LIMA to LAD	2.40	0.55–10.40	0.24	–	–	–	–	–	–
DAPT	0.94	0.42–2.14	0.89	–	–	–	0.82	0.30–2.20	0.69
β-blocker	0.42	0.18–0.94	0.03	–	–	–	0.36	0.13–0.96	0.04
ACE inhibitor or ARB	0.96	0.45–2.06	0.92	–	–	–	1.00	0.39–2.55	>0.99
Statin	0.39	0.18–0.86	0.02	–	–	–	0.55	0.18–1.66	0.29

Model 1: adjusted by age and gender. Model 2: adjusted by age, gender, dyslipidemia, kidney function, MI history, LVEF, ACS, DAPT, β-blocker, ACE inhibitor or ARB, and statin.

https://dx.doi.org/10.21037/cdt-23-211

Table S6 Univariate and multivariate analysis of predictors for non-fatal MI

Variables	Univariate analysis			Multivariate analysis (Model 1)			Multivariate analysis (Model 2)		
	HR	95% CI	P value	HR	95% CI	P value	HR	95% CI	P value
SAS-IMAF	7.45	1.36–40.94	0.02	8.65	1.46–51.26	0.02	4.37	0.63–30.18	0.13
Age ≥75 years	1.59	0.35–7.21	0.55	1.32	0.28–6.18	0.73	1.21	0.24–6.16	0.82
Female	2.22	0.42–11.71	0.35	2.81	0.49–16.15	0.25	4.65	0.71–30.32	0.11
Hypertension	–	–	–	–	–	–	–	–	–
Dyslipidemia	0.53	0.10–2.78	0.45	–	–	–	–	–	–
Type 2 DM	1.76	0.34–9.18	0.50	–	–	–	–	–	–
CKD	4.41	0.53–37.00	0.17	–	–	–	–	–	–
Previous MI	0.68	0.13–3.56	0.65	–	–	–	–	–	–
Previous stroke	0.59	0.07–4.98	0.63	–	–	–	–	–	–
LVEF <40%	1.42	0.27–7.44	0.68	–	–	–	–	–	–
ACS	3.89	0.74–20.30	0.11	–	–	–	3.94	0.62–24.80	0.14
Duration from CABG ≥10 years	1.14	0.25–5.17	0.86	–	–	–	–	–	–
LIMA to LAD	1.02	0.12–8.60	0.99	–	–	–	–	–	–
DAPT	2.60	0.31–21.81	0.38	–	–	–	2.69	0.27–26.72	0.40
β-blocker	0.59	0.11–3.09	0.53	–	–	–	0.51	0.09–2.98	0.46
ACE inhibitor or ARB	0.31	0.06–1.60	0.16	–	–	–	0.29	0.05–1.81	0.18
Statin	0.39	0.09–1.79	0.23	–	–	–	0.35	0.07–1.83	0.21

Model 1: adjusted by age and gender. Model 2: adjusted by age, gender, ACS, DAPT, β-blocker, ACE inhibitor or ARB, and statin.

Table S7 Univariate and multivariate analysis of predictors for non-fatal ischemic stroke

Variables	Univariate analysis			Multivariate analysis (Model 1)			Multivariate analysis (Model 2)		
	HR	95% CI	P value	HR	95% CI	P value	HR	95%CI	P value
SAS-IMAF	6.68	2.17–20.52	<0.001	6.03	1.93–18.80	0.002	7.72	2.33–25.58	<0.001
Age ≥75 years	1.99	0.80–4.92	0.14	1.91	0.76–4.81	0.17	1.80	0.65–4.97	0.26
Female	0.56	0.13–2.45	0.44	0.61	0.13–2.74	0.51	0.78	0.17–3.67	0.76
Hypertension	0.88	0.25–3.12	0.85	–	–	–	–	–	–
Dyslipidemia	2.11	0.48–9.27	0.32	–	–	–	–	–	–
Type 2 DM	1.15	0.46–2.83	0.77	–	–	–	–	–	–
CKD	1.46	0.57–3.70	0.43	–	–	–	–	–	–
Previous MI	1.59	0.66–3.86	0.30	–	–	–	–	–	–
Previous stroke	1.46	0.55–3.89	0.45	–	–	–	–	–	–
LVEF <40%	0.60	0.17–2.11	0.43	–	–	–	–	–	–
ACS	1.71	0.71–4.14	0.23	–	–	–	–	–	–
Duration from CABG ≥10 years	0.74	0.29–1.89	0.53	–	–	–	–	–	–
LIMA to LAD	1.02	0.29–3.58	0.98	–	–	–	–	–	–
DAPT	1.10	0.38–3.17	0.85	–	–	–	0.99	0.33–2.99	0.99
β-blocker	0.58	0.22–1.54	0.27	–	–	–	0.55	0.18–1.68	0.29
ACE inhibitor or ARB	0.70	0.29–1.70	0.43	–	–	–	0.98	0.36–2.70	0.97
Statin	0.97	0.34–2.72	0.95	–	–	–	0.83	0.27–2.54	0.74

Model 1: adjusted by age and gender. Model 2: adjusted by age, gender, DAPT, β-blocker, ACE inhibitor or ARB, and statin.

https://dx.doi.org/10.21037/cdt-23-211

Table S8 Univariate and multivariate analysis of predictors for MACE in patients with on-treatment LDL-C and BP levels

Variables	Univariate analysis			Multivariate analysis (Model 1)			Multivariate analysis (Model 2)		
	HR	95% CI	P value	HR	95% CI	P value	HR	95% CI	P value
SAS-IMAF	10.69	3.71–30.84	<0.001	9.09	3.09–26.76	<0.001	5.55	1.54–20.07	0.009
Age ≥75 years	2.30	1.11–4.78	0.03	1.99	0.93–4.28	0.08	1.54	0.62–3.83	0.35
Female	0.70	0.23–2.07	0.51	0.75	0.24–2.33	0.62	0.98	0.26–3.64	0.97
Hypertension	1.18	0.40–3.55	0.76	–	–	–	–	–	–
Dyslipidemia	1.08	0.40–2.95	0.88	–	–	–	–	–	–
Type 2 DM	0.99	0.48–2.04	0.98	–	–	–	–	–	–
CKD	3.31	1.39–7.84	0.007	–	–	–	2.23	0.84–5.92	0.11
Previous MI	1.60	0.78–3.28	0.20	–	–	–	–	–	–
Previous stroke	1.67	0.76–3.70	0.20	–	–	–	–	–	–
LVEF <40%	2.42	1.12–5.23	0.02	–	–	–	2.12	0.83–5.41	0.12
ACS	4.2	1.93–9.13	<0.001	–	–	–	6.46	2.35–17.78	<0.001
Duration from CABG ≥10 years	1.65	0.81–3.37	0.17	–	–	–	–	–	–
LIMA to LAD	0.94	0.34–2.58	0.91	–	–	–	–	–	–
DAPT	1.13	0.50–2.55	0.77	–	–	–	0.55	0.20–1.50	0.24
β-blocker	0.59	0.26–1.34	0.21	–	–	–	0.51	0.17–1.46	0.21
ACE inhibitor or ARB	0.37	0.18–0.78	0.009	–	–	–	0.42	0.17–1.05	0.06
Statin	0.66	0.28–1.53	0.33	–	–	–	0.63	0.21–1.84	0.40
On-treatment LDL-C <70 mg/dL	1.32	0.65–2.70	0.45	–	–	–	1.17	0.48–2.83	0.73
On-treatment SBP <140 mmHg and DBP <90 mmHg	1.55	0.52–4.60	0.43	–	–	–	1.32	0.34–5.12	0.69

Model 1: adjusted by age and gender. Model 2: adjusted by age, gender, kidney function, LVEF, ACS, DAPT, β-blocker, ACE inhibitor or ARB, statin, on-treatment LDL-C and BP levels.

https://dx.doi.org/10.21037/cdt-23-211

Table S9 Clinical characteristics of propensity score-matched subjects

Characters	SAS-IMAF (+) (n=21)	SAS-IMAF (–) (n=53)	P value	Standardized mean difference
MACE, n (%)	9 (42.9)	9 (17.0)	0.041	0.59
MACE (days)	953±784	950±685	0.99	0.003
Age (years)	74.4±6.7	76.1±7.9	0.30	0.23
Age ≥75 years, n (%)	12 (57.1)	32 (60.4)	>0.99	0.07
Female, n (%)	1 (4.8)	2 (3.8)	>0.99	0.05
Hypertension, n (%)	20 (95.2)	42 (79.2)	0.18	0.49
Dyslipidemia, n (%)	16 (76.2)	39 (73.6)	>0.99	0.06
Type 2 DM, n (%)	13 (61.9)	31 (58.5)	0.99	0.07
Smoking, n (%)	5 (23.8)	4 (7.5)	0.13	0.46
CKD, n (%)	16 (76.2)	38 (71.7)	0.92	0.10
Previous MI, n (%)	9 (42.9)	23 (43.4)	>0.99	0.01
Previous stroke, n (%)	11 (52.4)	15 (28.3)	0.09	0.51
LVEF (%)	42.8±15.3	44.4±14.4	0.68	0.10
LVEF <40%, n (%)	8 (38.1)	20 (37.7)	>0.99	0.007
ACS, n (%)	15 (71.4)	36 (67.9)	0.99	0.08
Duration from CABG ≥10 years, n (%)	11 (52.4)	23 (43.4)	0.66	0.18
LIMA to LAD, n (%)	19 (90.5)	49 (92.5)	>0.99	0.07
Use of mechanical support, n (%)	3 (14.3)	2 (3.8)	0.27	0.37
DAPT, n (%)	16 (76.2)	45 (84.9)	>0.99	0.03
β-blocker, n (%)	18 (85.7)	45 (84.9)	>0.99	0.02
Statin, n (%)	15 (71.4)	39 (73.6)	>0.99	0.05

Table S10 Variance infraction factors produced from variables used for propensity score matching

Variables	Variance infraction factors
SAS-IMAF	1.05
Age ≥75 years	1.07
Female	1.02
CKD	1.07
LVEF <40%	1.04
ACS	1.04
Statin	1.01

https://dx.doi.org/10.21037/cdt-23-211

Table S11 Details of patients with SAS-IMAF

No.	Age, y	Sex	Diagnosis	Suggestive findings of myocardial ischemia/ necrosis	Bypass grafts	Characteristics of SAS			AV access for hemodialysis	Initial revascularization strategy	Additional procedure	MACE
						Location	%DS	PG, mmHg				
ACS												
1	83	M	NSTEMI	Steal	RIMA	R	90	50	–	PCI	EVT	Stroke
2	76	M	NSTEMI	ECG	Both	Both	100	41	–	PCI	–	Stroke
3	83	M	NSTEMI	ECG	LIMA	L	50	20	L	PCI	EVT	Stroke
4	75	M	NSTEMI	SPECT	LIMA	L	100	30	–	PCI	Bypass	–
5	76	M	NSTEMI	Steal	LIMA	L	99	15	L	EVT	–	Cardiac death, stroke
6	83	M	UAP	ECG	LIMA	L	100	60	–	PCI	EVT	–
7	72	M	UAP	ECG	LIMA	L	99	23	–	Bypass	–	–
8	73	M	UAP	CFR	LIMA	L	50	24	L	PCI	–	Cardiac death
9	79	F	UAP	CFR	LIMA	L	50	65	–	EVT	–	MI
10	77	M	UAP	SPECT	LIMA	L	90	59	R	EVT	–	Cardiac death, MI
11	79	M	UAP	Steal	LIMA	L	75	30	–	EVT	–	–
12	68	M	UAP	SPECT	Both	L	75	29	L	PCI	EVT	–
13	80	M	UAP	Steal	LIMA	L	75	33	–	PCI	EVT	–
14	61	M	UAP	Steal	LIMA	L	99	80	L	PCI	EVT	Cardiac death
15	72	M	UAP	Steal	LIMA	L	50	60	L	EVT		Stroke
SIHD												
16	59	M	AP	SPECT	LIMA	L	75	60	L	EVT	–	–
17	75	M	AP	Steal	LIMA	L	75	33	–	EVT	–	–
18	73	M	AP	SPECT	LIMA	L	75	45	–	EVT	–	–
19	81	M	SMI	SPECT	LIMA	L	50	33	–	EVT	–	–
20	72	M	SMI	Steal	LIMA	L	75	29	L	PCI	–	–
21	66	M	SMI	ECG	Both	L	90	49	–	EVT	–	–

https://dx.doi.org/10.21037/cdt-23-211