Supplementary

Table S1 Univariate and multivariate Cox proportional hazard modeling analysis for 1-year all-cause mortality (continuous TG/HDL-c)

Variables	Univariate analysis		Multivariate analysis	
	HR (95% CI)	P value	HR (95% CI)	P value
Age	1.03 (1.01, 1.05)	0.009	1.02 (0.99, 1.05)	0.188
Male	3.46 (1.07, 11.16)	0.038	3.34 (0.98, 11.33)	0.053
BMI	0.94 (0.84, 1.05)	0.265	–	–
Smoking	0.98 (0.55, 1.76)	0.95	–	–
SBP at admission	1.01 (0.99, 1.02)	0.250	–	–
DBP at admission	0.99 (0.97, 1.02)	0.688	–	–
Hypertension	1.32 (0.64, 2.73)	0.456	–	–
CAD	1.69 (0.67, 4.27)	0.270	–	–
Diabetes mellitus	2.72 (1.35, 5.49)	0.005	1.31 (0.51, 3.36)	0.571
Stroke	3.48 (1.62, 7.47)	0.001	2.64 (1.09, 6.41)	0.031
COPD	0.79 (0.31, 2.01)	0.624	–	–
CKD	2.67 (1.19, 5.97)	0.017	2.71 (1.08, 6.82)	0.034
Timing of operation				
Acute	Reference	–	–	–
Sub-acute	0.97 (0.47, 2.03)	0.939	–	–
Chronic	1.00 (0.37, 2.66)	0.996	–	–
Pericardial effusion	3.3 (1.59, 6.85)	0.001	0.69 (1.55, 8.80)	0.003
Pleural effusion	1.12 (0.61, 2.05)	0.724	–	–
Glucose	1.01 (1.00, 1.01)	0.003	1.01 (1.00, 1.01)	0.115
Uric acid	1.00 (1.00, 1.00)	0.928	–	–
TG/HDL-c	1.07 (1.01, 1.13)	0.030	1.07 (1.00, 1.15)	0.041

TG/HDL-c, triglyceride to high-density lipoprotein cholesterol; HR, hazard ratio; CI, confidence interval; BMI, body mass index; SBP, systolic blood pressure; DBP, diastolic blood pressure; CAD, coronary artery disease; COPD, chronic obstructive pulmonary disease; CKD, chronic kidney disease.

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Table S2 Univariate and multivariate Cox proportional hazard modeling analysis for 1-year all-cause mortality (TG/HDL-c ratio group)

Variables	Univariate analysis		Multivariate analysis	
	HR (95% CI)	P value	HR (95% CI)	P value
Age	1.03 (1.01, 1.05)	0.009	1.03 (1.01, 1.06)	0.007
Male	3.46 (1.07, 11.16)	0.038	5.27 (1.59, 17.44)	0.006
BMI	0.94 (0.84, 1.05)	0.265	–	–
Smoking	0.98 (0.55, 1.76)	0.95	–	–
SBP at admission	1.01 (0.99, 1.02)	0.250	–	–
DBP at admission	0.99 (0.97, 1.02)	0.688	–	–
Hypertension	1.32 (0.64, 2.73)	0.456	–	–
CAD	1.69 (0.67, 4.27)	0.270	–	–
Diabetes mellitus	2.72 (1.35, 5.49)	0.005	1.15 (0.51, 2.58)	0.7315
Stroke	3.48 (1.62, 7.47)	0.001	3.06 (1.37, 6.86)	0.006
COPD	0.79 (0.31, 2.01)	0.624	–	–
CKD	2.67 (1.19, 5.97)	0.017	3.08 (1.32, 7.17)	0.009
Timing of operation				
Acute	Reference	–	–	–
Sub-acute	0.97 (0.47, 2.03)	0.939	–	–
Chronic	1.00 (0.37, 2.66)	0.996	–	–
Pericardial effusion	3.3 (1.59, 6.85)	0.001	3.01 (1.42, 6.36)	0.004
Pleural effusion	1.12 (0.61, 2.05)	0.724	–	–
Glucose	1.01 (1.00, 1.01)	0.003	1.03 (1.00, 1.01)	0.007
Uric acid	1.00 (1.00, 1.00)	0.928	–	–
TG/HDL-c ratio groups				
Quintile 4	Reference	–	Reference	–
Quintile 1	3.42 (1.12, 10.50)	0.031	4.67 (1.46, 14.94)	0.001
Quintile 2	1.47 (0.41, 5.21)	0.551	1.88 (0.52, 6.82)	0.337
Quintile 3	1.94 (0.58, 6.44)	0.280	2.21 (0.65, 7.57)	0.206
Quintile 5	3.55 (1.18, 10.69)	0.024	4.84 (1.55, 15.13)	0.007

Quintile 1: TG/HDL-c ratio <1.44. Quintile 2: 1.44≤ TG/HDL-c ratio <2.09. Quintile 3: 2.09≤ TG/HDL-c ratio <2.97. Quintile 4: 2.97≤ TG/HDL-c ratio <4.11. Quintile 5: TG/HDL-c ratio ≥4.11. TG/HDL-c, triglyceride to high-density lipoprotein cholesterol; HR, hazard ratio; CI, confidence interval; BMI, body mass index; SBP, systolic blood pressure; DBP, diastolic blood pressure; CAD, coronary artery disease; COPD, chronic obstructive pulmonary disease; CKD, chronic kidney disease.

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Table S3 Univariate and multivariate Cox proportional hazard modeling analysis for 1-year MACCEs (continuous TyG index)

Variables	Univariate analysis		Multivariate analysis	
	HR (95% CI)	P value	HR (95% CI)	P value
Age	1.03 (1.00, 1.05)	0.009	1.03 (1.00, 1.06)	0.012
Male	3.46 (1.07, 11.16)	0.038	–	–
BMI	0.94 (0.84, 1.05)	0.265	–	–
Smoking	0.98 (0.55, 1.76)	0.950	–	–
SBP at admission	1.01 (0.99, 1.01)	0.892	–	–
DBP at admission	0.99 (0.97, 1.01)	0.29	–	–
Hypertension	1.32 (0.56, 1.47)	0.698	–	–
CAD	1.69 (0.44, 2.32)	0.98	–	–
Diabetes	2.72 (0.76, 2.68)	0.272	–	–
Stroke	3.48 (1.41, 4.78)	0.002	2.60 (1.19, 5.68)	0.016
COPD	0.79 (0.38, 1.50)	0.418	–	–
CKD	2.67 (0.99, 3.69)	0.054	2.46 (1.08, 5.61)	0.033
Timing of operation				
Acute	Reference	–	–	–
Sub-acute	0.97 (0.63, 1.75)	0.863	–	–
Chronic	1.00 (0.77, 2.70)	0.255	–	–
Pericardial effusion	3.30 (1.28, 4.17)	0.005	3.43 (1.62, 7.25)	0.001
Pleural effusion	1.12 (0.63, 1.54)	0.948	–	–
WBC	1.05 (0.96, 1.08)	0.565	–	–
Creatinine	1.00 (1.00, 1.00)	0.100	–	–
Platelet	0.99 (1.00, 1.00)	0.435	–	–
Uric acid	1.00 (1.00, 1.00)	0.910	–	–
TyG	1.32 (1.18, 2.22)	0.003	1.04 (0.58, 1.85)	0.897

MACCEs, major adverse cardiovascular and cerebrovascular events; TyG, triglyceride-glucose; HR, hazard ratio; CI, confidence interval; BMI, body mass index; SBP, systolic blood pressure; DBP, diastolic blood pressure; CAD, coronary artery disease; COPD, chronic obstructive pulmonary disease; CKD, chronic kidney disease; WBC, white blood cell.

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Table S4 Univariate and multivariate Cox proportional hazard modeling analysis for 1-year MACCEs

Variables	Univariate analysis	
	HR (95% CI)	P value
Age	1.03 (1.00, 1.07)	0.0644
Male	2.19 (0.51, 9.44)	0.2932
BMI	0.99 (0.86, 1.15)	0.9314
Smoking	0.98 (0.41, 2.37)	0.968
SBP at admission	0.99 (0.97, 1.02)	0.615
DBP at admission	0.98 (0.94, 1.02)	0.4136
Hypertension	1.26 (0.42, 3.77)	0.6806
CAD	4.82 (1.75, 13.27)	0.0023
Diabetes mellitus	4.30 (1.65, 11.20)	0.0028
Stroke	7.07 (2.71, 18.42)	<0.0001
COPD	0 (0.00, inf)	0.9972
CKD	3.70 (1.24, 11.07)	0.0193
Timing of operation		
Acute	Reference	
Sub-acute	1.60 (0.62, 4.15)	0.3324
Chronic	1.46 (0.39, 5.38)	0.5723
Pericardial effusion	3.37 (1.13, 10.08)	0.0299
Pleural effusion	1.12 (0.45, 2.81)	0.8059
Uric acid	1.00 (1.00, 1.00)	0.9566
Continuous TG/HDL-c	1.05 (0.95, 1.17)	0.3408
Continuous TyG index	1.37 (0.69, 2.72)	0.3654
TG/HDL-c ratio groups		
Quintile 4	4.67 (1.46, 14.94)	0.001
Quintile 1	1.88 (0.52, 6.82)	0.337
Quintile 2	2.21 (0.65, 7.57)	0.206
Quintile 3	4.84 (1.55, 15.13)	0.007
Quintile 5	4.67 (1.46, 14.94)	0.001

Quintile 1: TG/HDL-c ratio <1.44. Quintile 2: 1.44≤ TG/HDL-c ratio <2.09. Quintile 3: 2.09≤ TG/HDL-c ratio <2.97. Quintile 4: 2.97≤ TG/HDL-c ratio <4.11. Quintile 5: TG/HDL-c ratio ≥4.11. MACCEs, major adverse cardiovascular and cerebrovascular events; HR, hazard ratio; CI, confidence interval; BMI, body mass index; SBP, systolic blood pressure; DBP, diastolic blood pressure; CAD, coronary artery disease; COPD, chronic obstructive pulmonary disease; inf, infinity; CKD, chronic kidney disease; TG/HDL-c, triglyceride to high-density lipoprotein cholesterol.

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Table S5 Results for the tests of equality of group means to test for difference in the means across ARAEs groups once redundant variables have been removed

Variables	Wilks' lambda	F	df1	df2	Sig.	Rank
Hypertension	0.986	8.34	1	935	0.004	1
TyG index	0.987	7.538	1	935	0.006	2
Uric acid	0.988	6.862	1	935	0.009	3
WBC	0.991	5.07	1	935	0.025	4
Pericardial effusion	0.993	4	1	935	0.046	5
DBP	0.995	2.795	1	935	0.095	6
HDL-C	0.996	2.343	1	935	0.126	7
Diabetes mellitus	0.997	1.976	1	935	0.16	8
CAD	0.997	1.807	1	935	0.179	9
Pleura effusion	0.997	1.707	1	935	0.192	10
Male	0.998	1.239	1	935	0.266	11
Timing of operation	0.999	0.52	1	935	0.471	12
Platelet	0.999	0.519	1	935	0.472	13
COPD	0.999	0.344	1	935	0.558	14
BMI	0.999	0.295	1	935	0.587	15
Stroke	1	0.181	1	935	0.671	16
LDL-C	1	0.123	1	935	0.726	17
Smoking	1	0.12	1	935	0.73	18
CKD	1	0.039	1	935	0.844	19
Creatinine	1	0.015	1	935	0.903	20
SBP	1	0.014	1	935	0.907	21
Age	1	0.004	1	935	0.952	22

ARAEs, aortic-related adverse events; df, degree of freedom; Sig., significance; TyG, triglyceride-glucose; WBC, white blood cell; DBP, diastolic blood pressure; HDL-C, high-density lipoprotein cholesterol; CAD, coronary artery disease; COPD, chronic obstructive pulmonary disease; BMI, body mass index; LDL-C, low-density lipoprotein cholesterol; CKD, chronic kidney disease; SBP, systolic blood pressure.

Table S6 Canonical discriminant analysis efficiency parameters to determine the significance of each canonical discriminant function

Test of function	Wilks' lambda	Chi-square	df	Sig.
1 through 8	0.963	21.915	1	0.000

df, degree of freedom; Sig., significance.

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