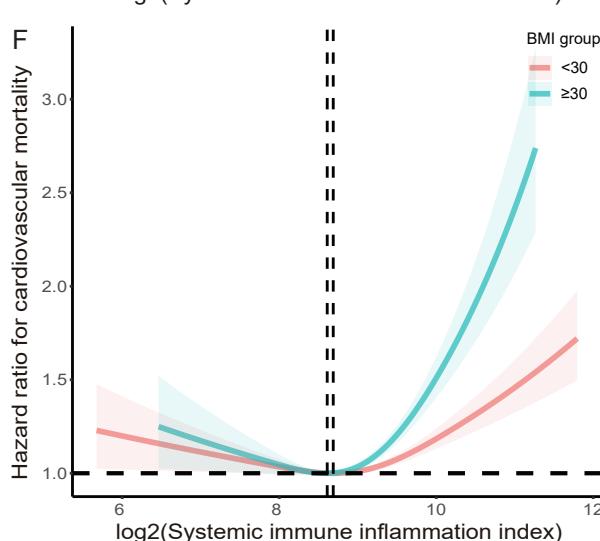
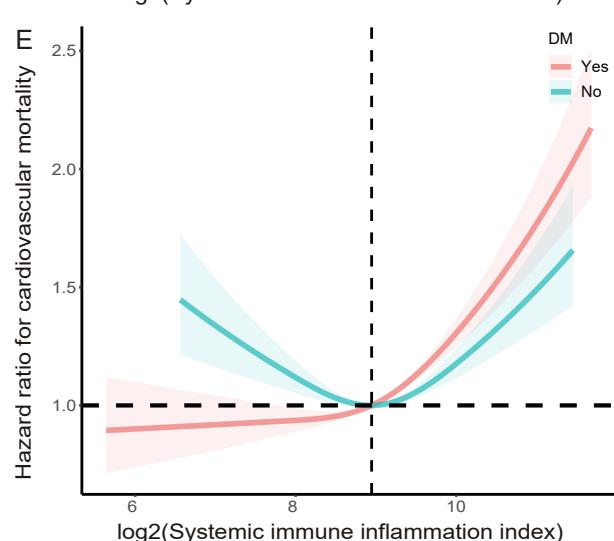
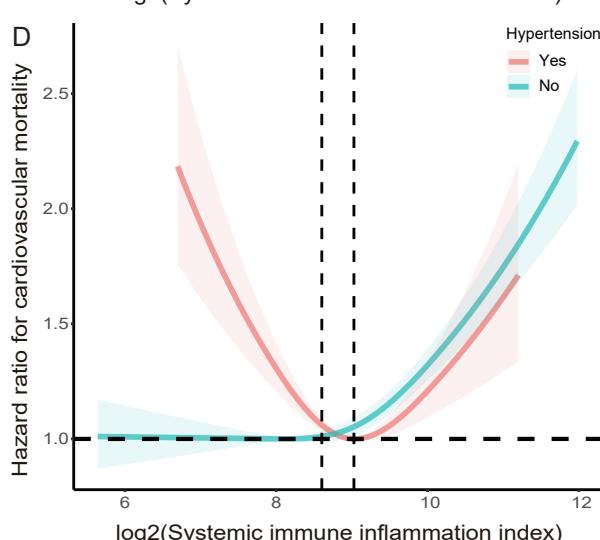
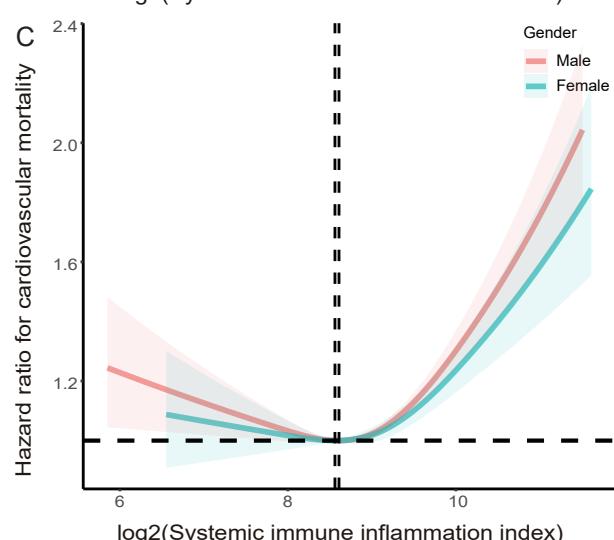
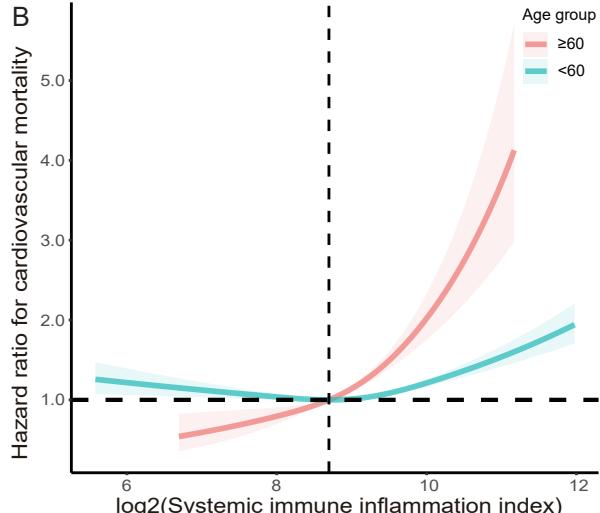
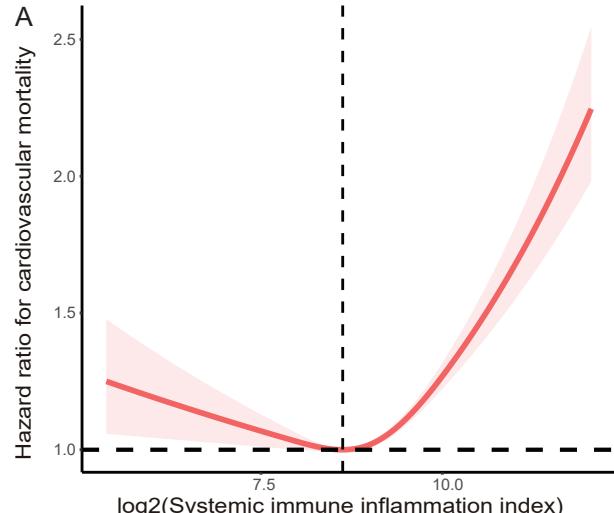


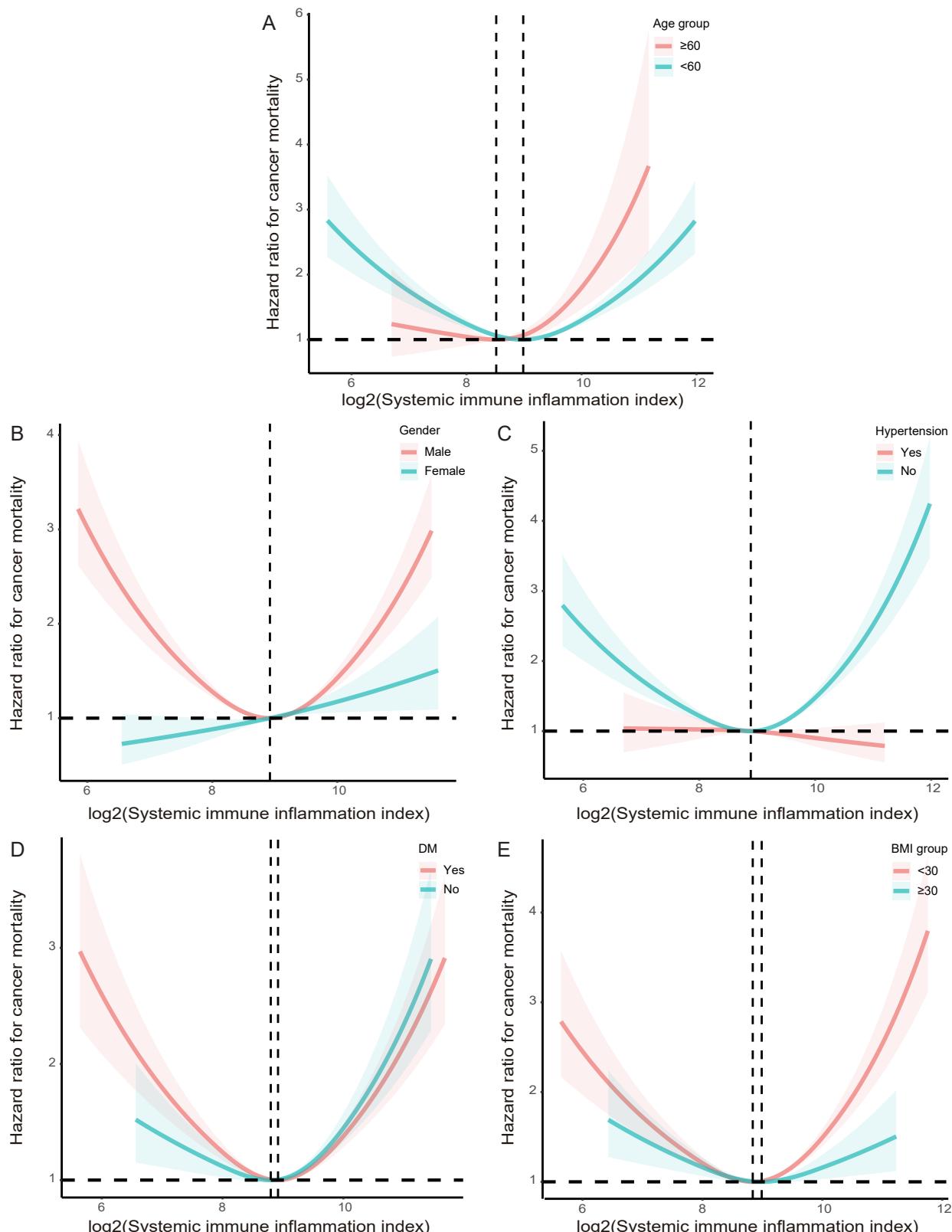
Supplementary Figure 1. Subgroup analysis for the associations of SII index with all-cause mortality based on age, gender, hypertension, DM, and BMI in CVD patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease.



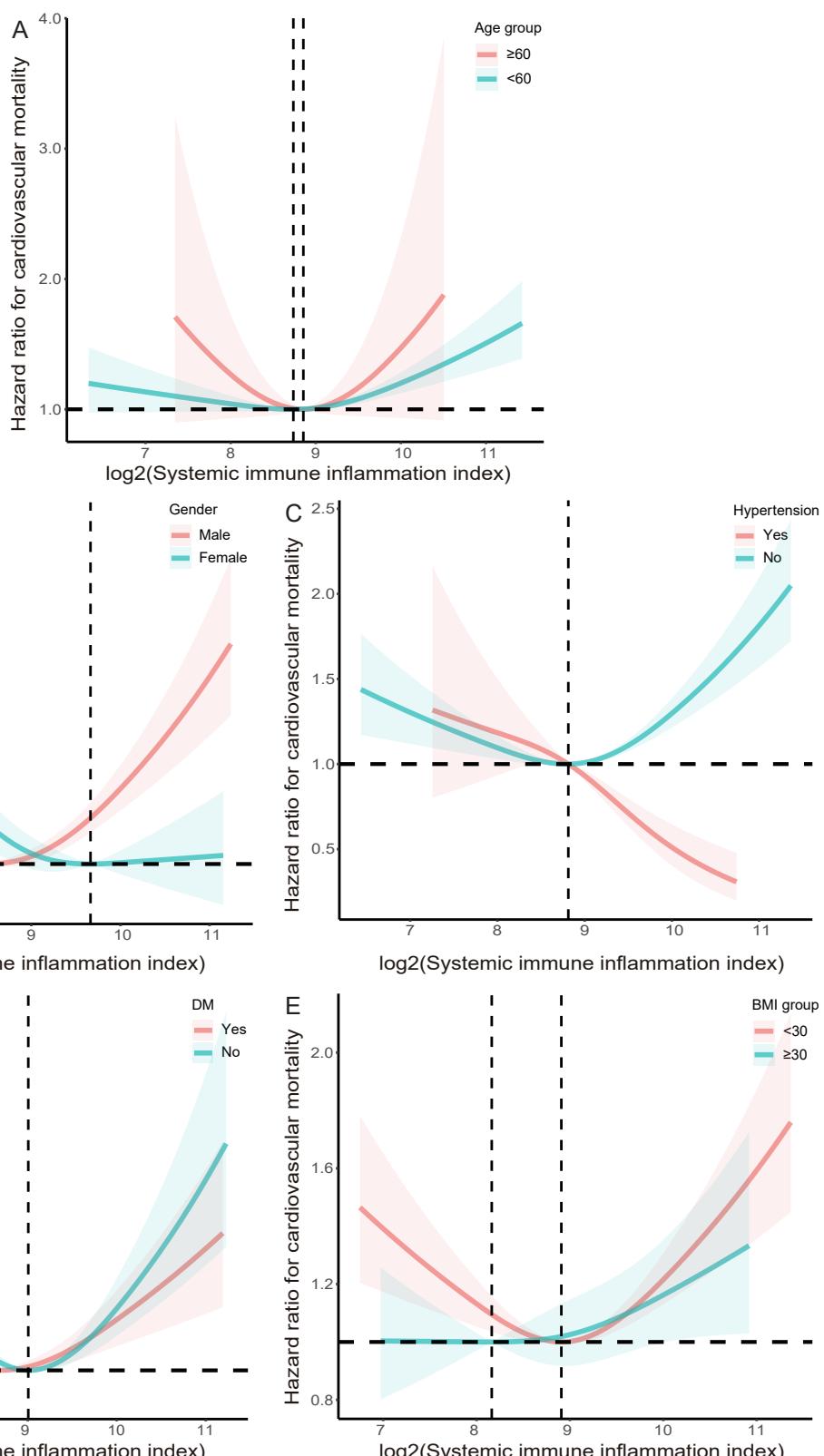
Supplementary Figure 2. Subgroup analysis for the associations of SII index with CVD mortality based on age, gender, hypertension, DM, and BMI in CVD patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease.



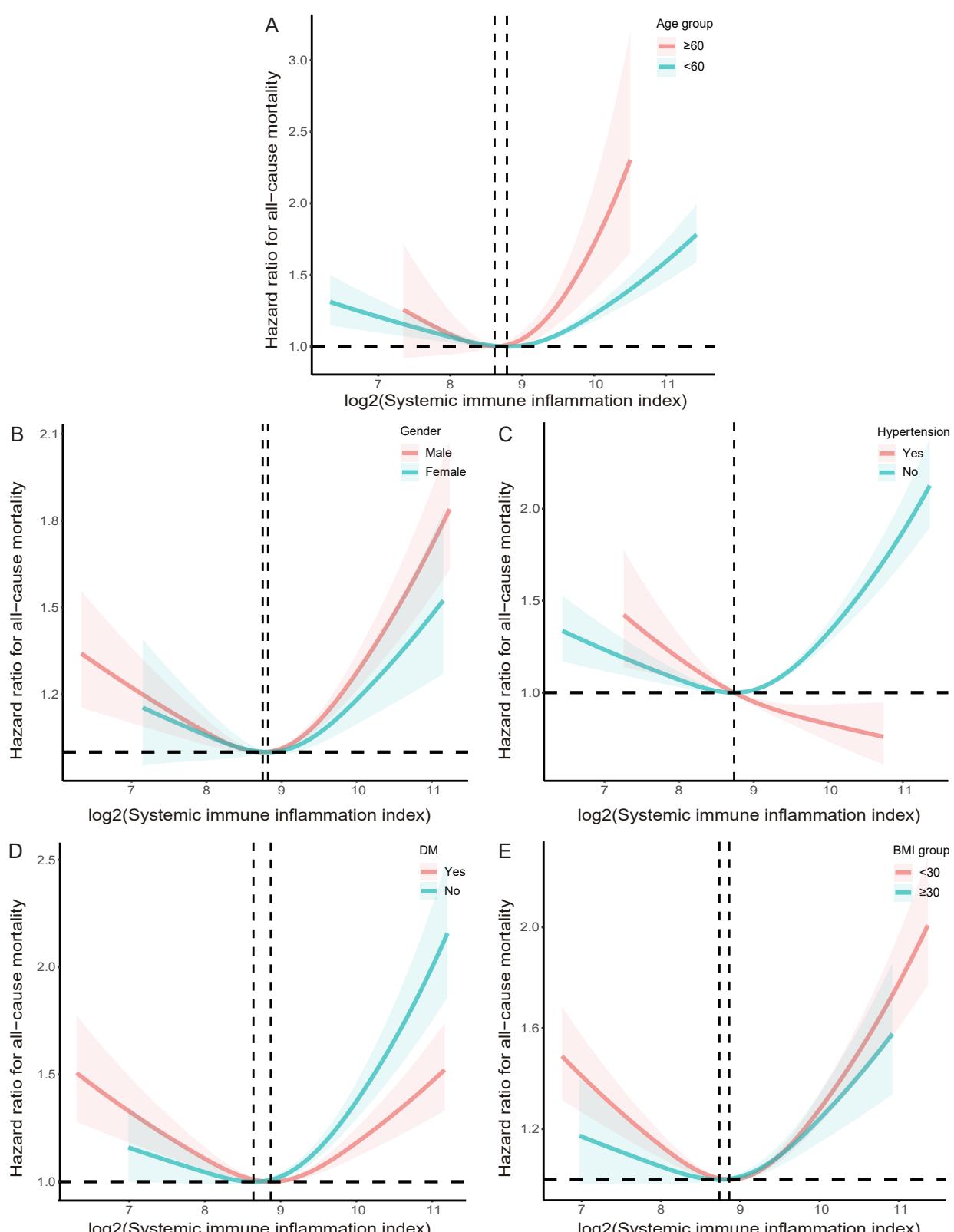
Supplementary Figure 3. Subgroup analysis for the associations of SII index with cancer-related mortality based on age, gender, hypertension, DM, and BMI in CVD patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease.



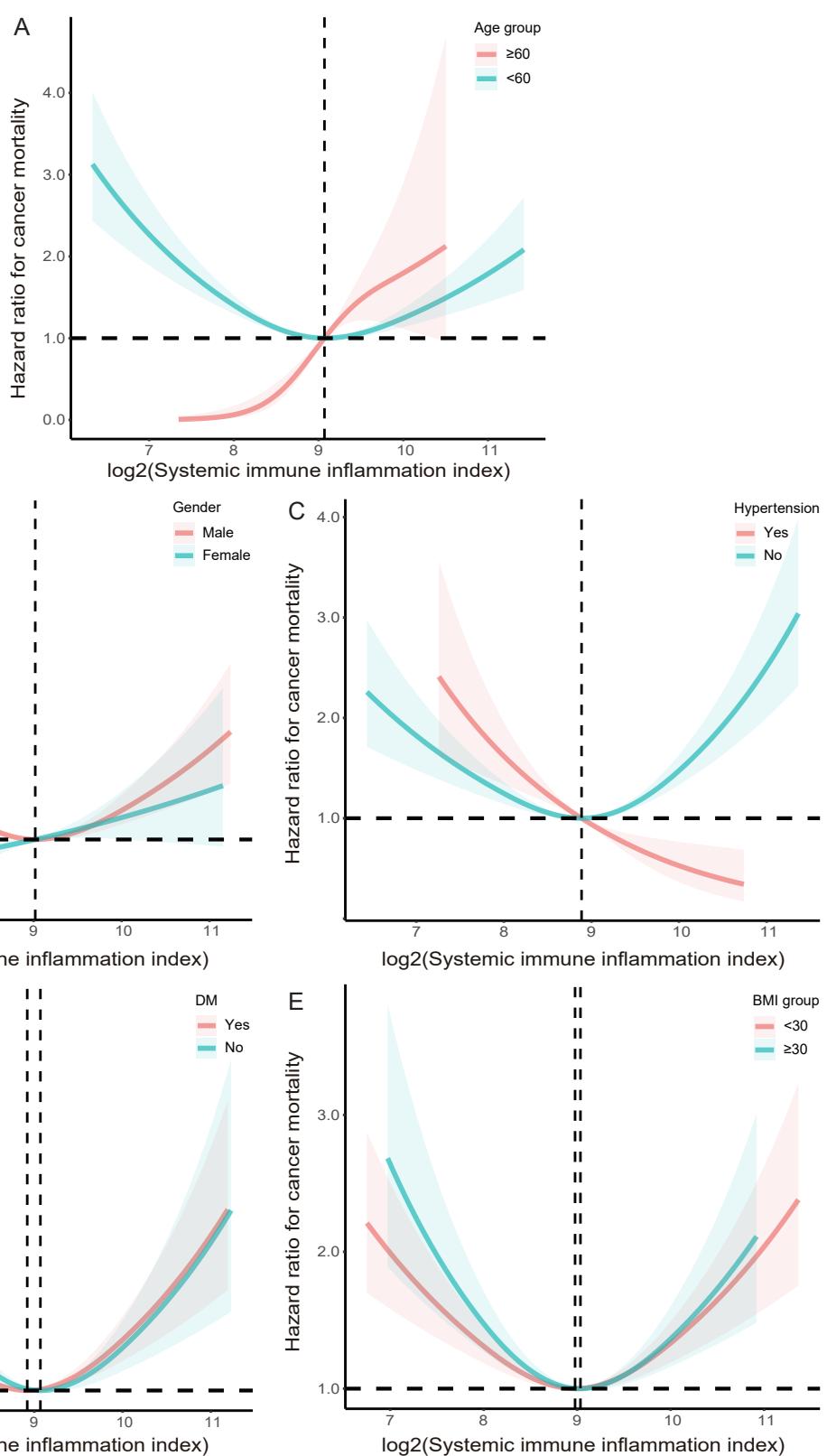
Supplementary Figure 4. Subgroup analysis for the associations of SII index with all-cause, mortality based on age, gender, hypertension, DM, and BMI in CHD patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CHD, coronary heart disease.



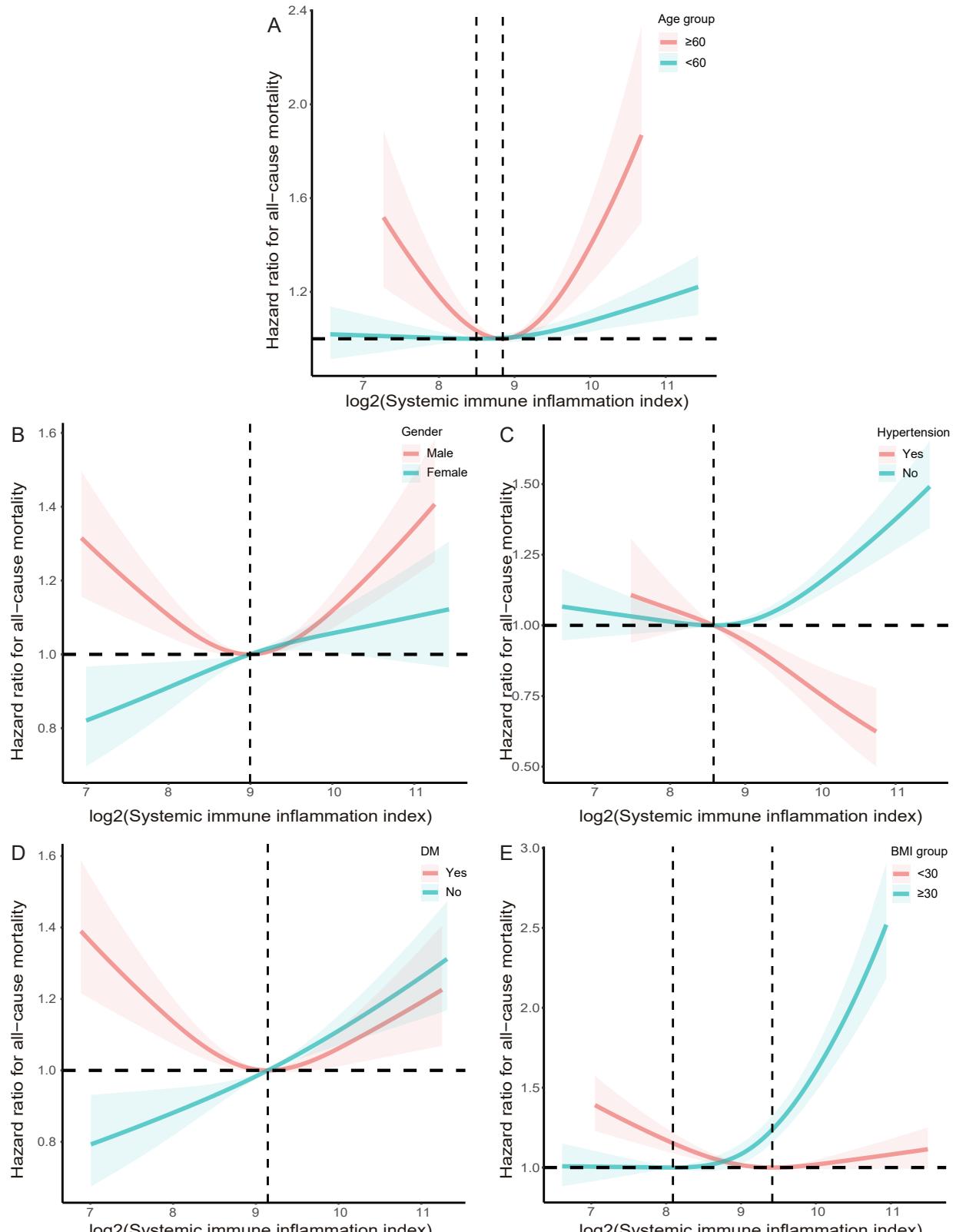
Supplementary Figure 5. Subgroup analysis for the associations of SII index with CVD mortality based on age, gender, hypertension, DM, and BMI in CHD patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease; CHD, coronary heart disease.



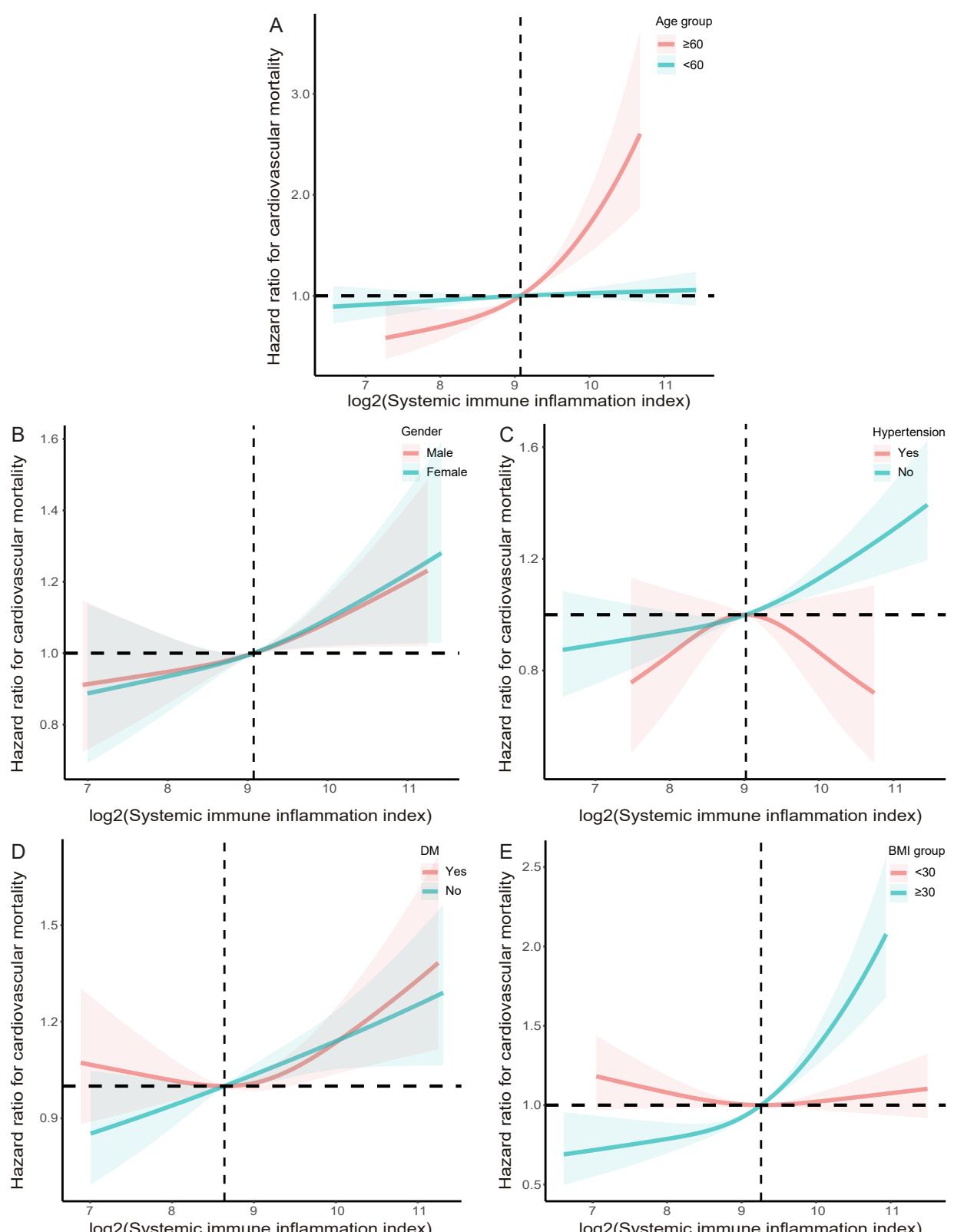
Supplementary Figure 6. Subgroup analysis for the associations of SII index with cancer-related mortality based on age, gender, hypertension, DM, and BMI in CHD patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CHD, coronary heart disease.



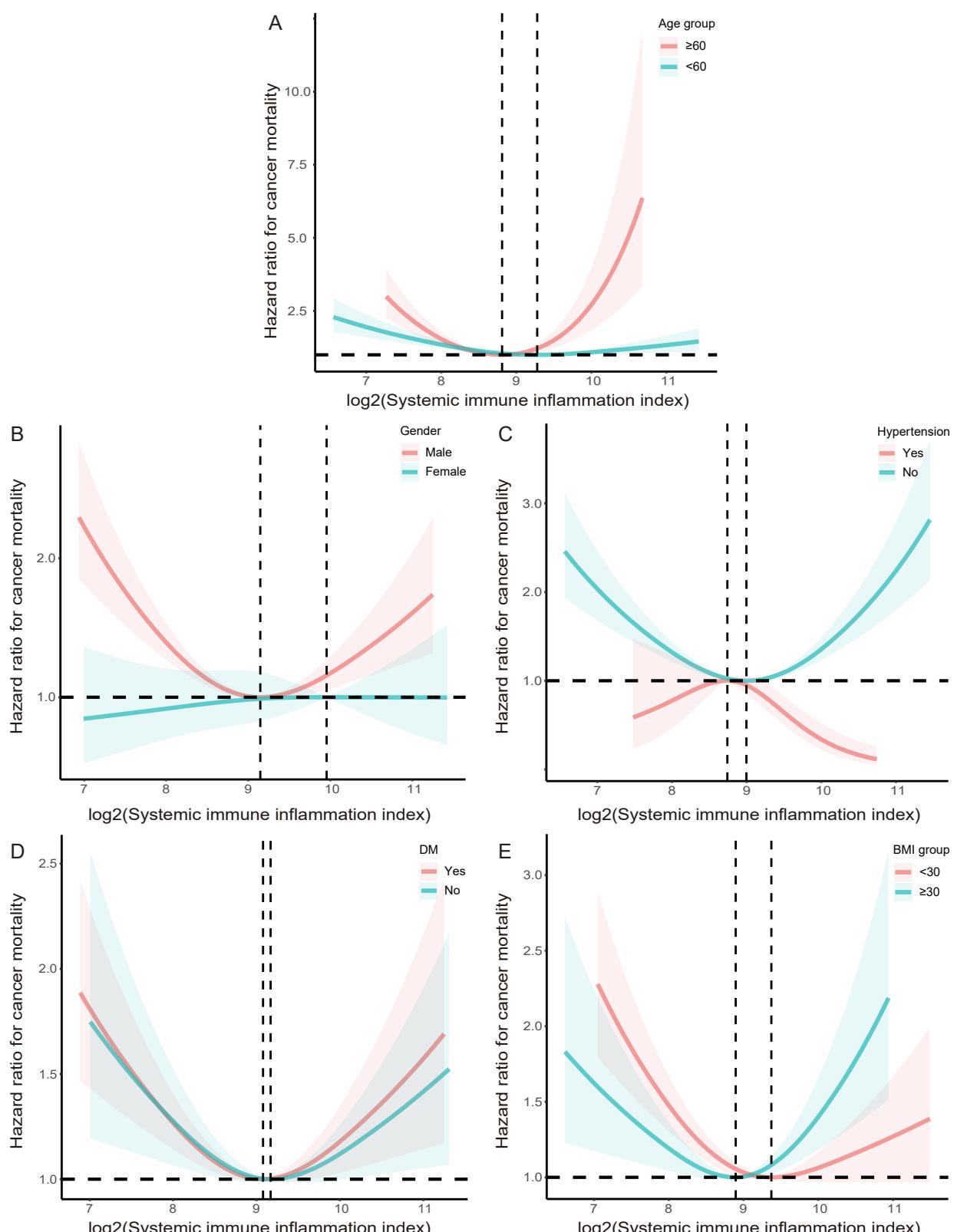
Supplementary Figure 7. Subgroup analysis for the associations of SII index with all-cause mortality based on age, gender, hypertension, DM, and BMI in CHF patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CHF, congestive heart failure.



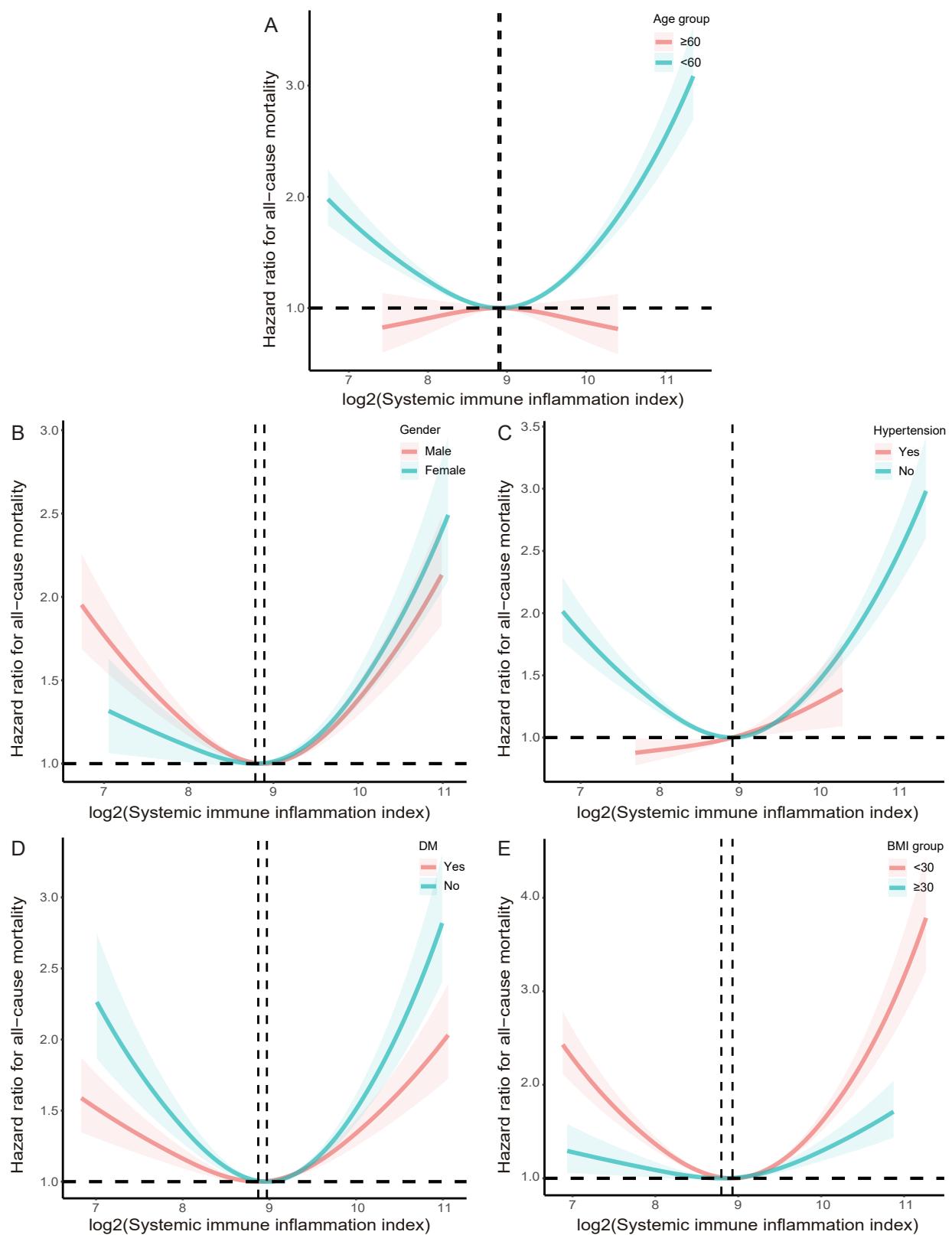
Supplementary Figure 8. Subgroup analysis for the associations of SII index with CVD mortality based on age, gender, hypertension, DM, and BMI in CHF patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease; CHF, congestive heart failure.



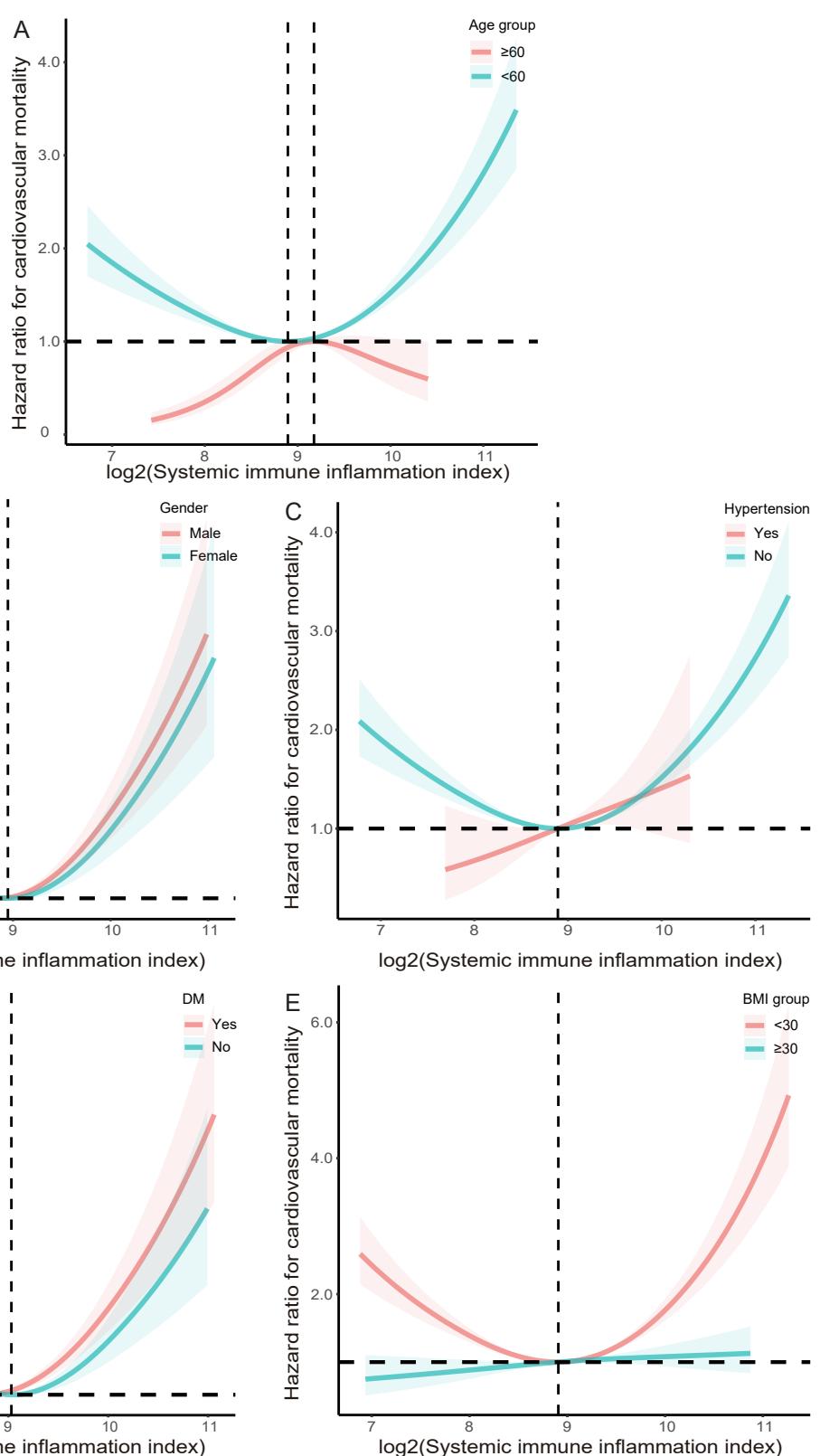
Supplementary Figure 9. Subgroup analysis for the associations of SII index with cancer-related mortality based on age, gender, hypertension, DM, and BMI in CHF patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CHF, congestive heart failure.



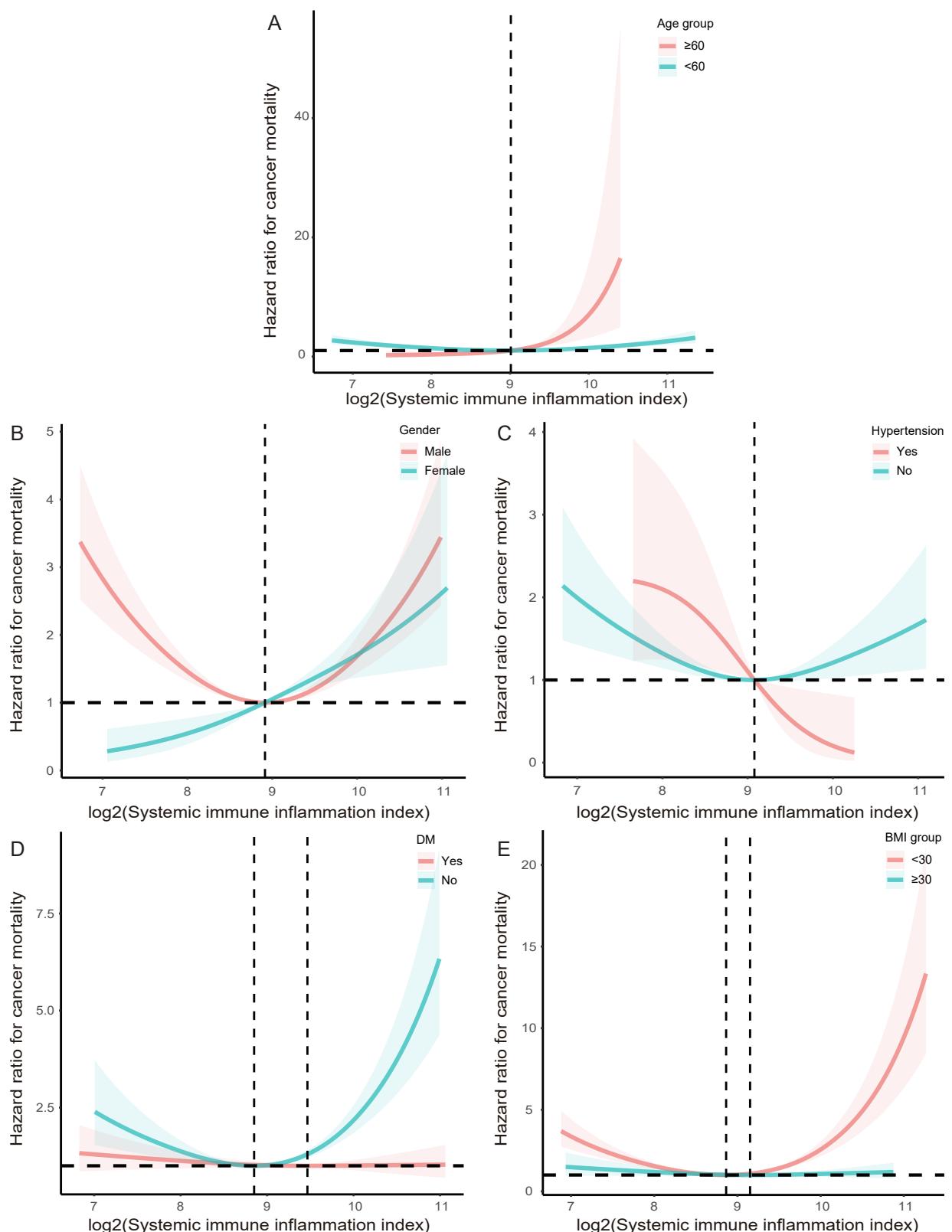
Supplementary Figure 10. Subgroup analysis for the associations of SII index with all-cause mortality based on age, gender, hypertension, DM, and BMI in angina pectoris patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index.



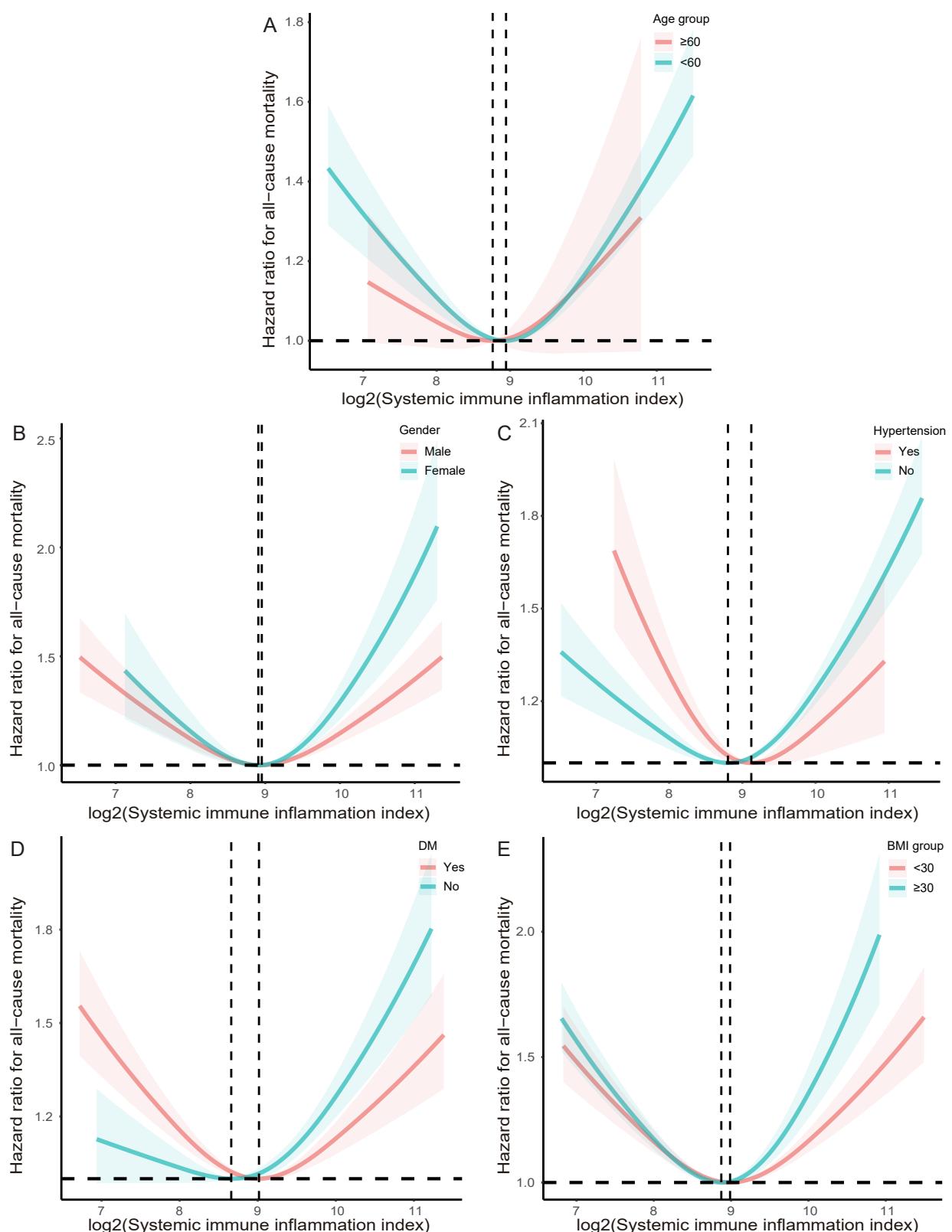
Supplementary Figure 11. Subgroup analysis for the associations of SII index with CVD mortality based on age, gender, hypertension, DM, and BMI in angina pectoris patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease.



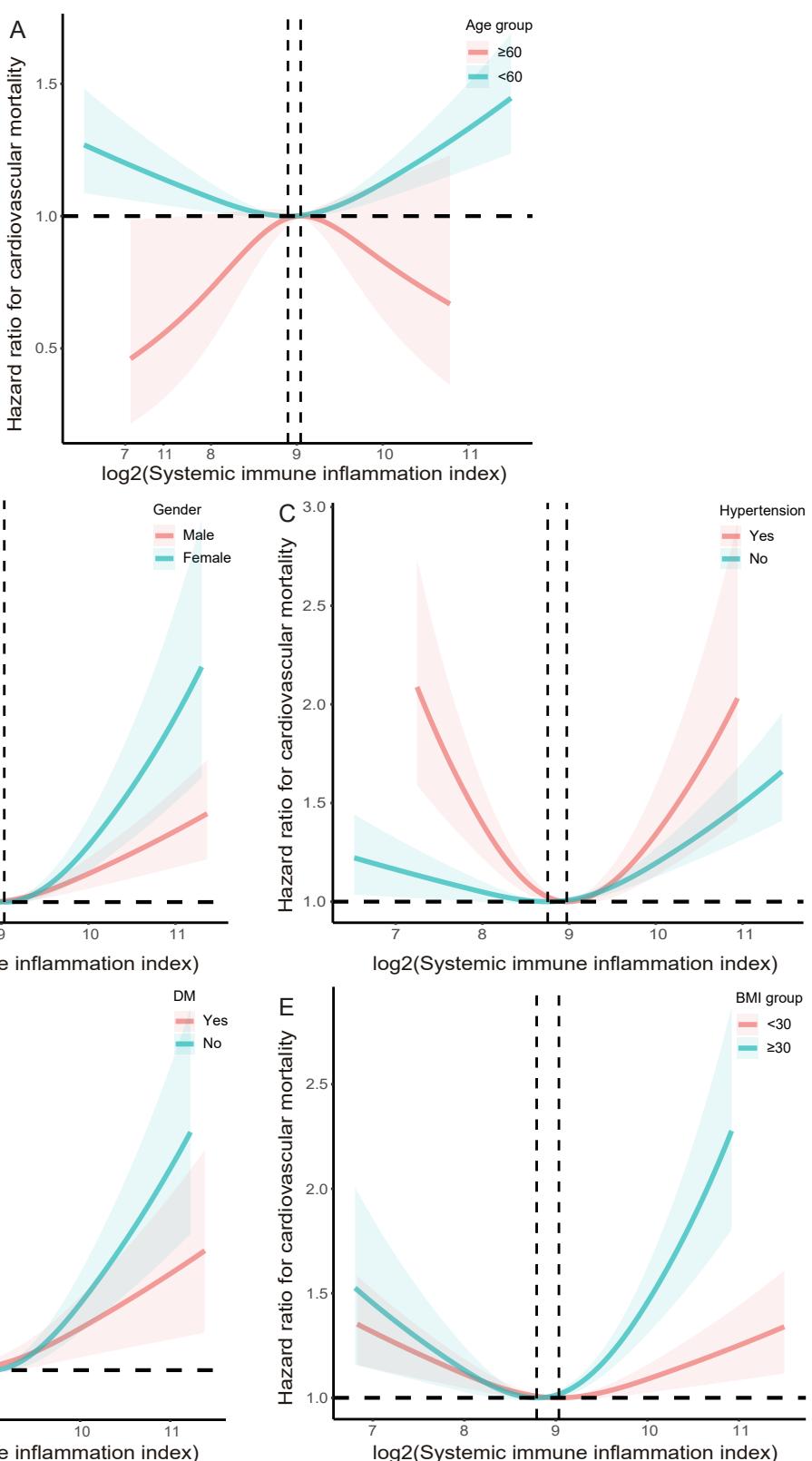
Supplementary Figure 12. Subgroup analysis for the associations of SII index with cancer-related mortality based on age, gender, hypertension, DM, and BMI in angina pectoris patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index.



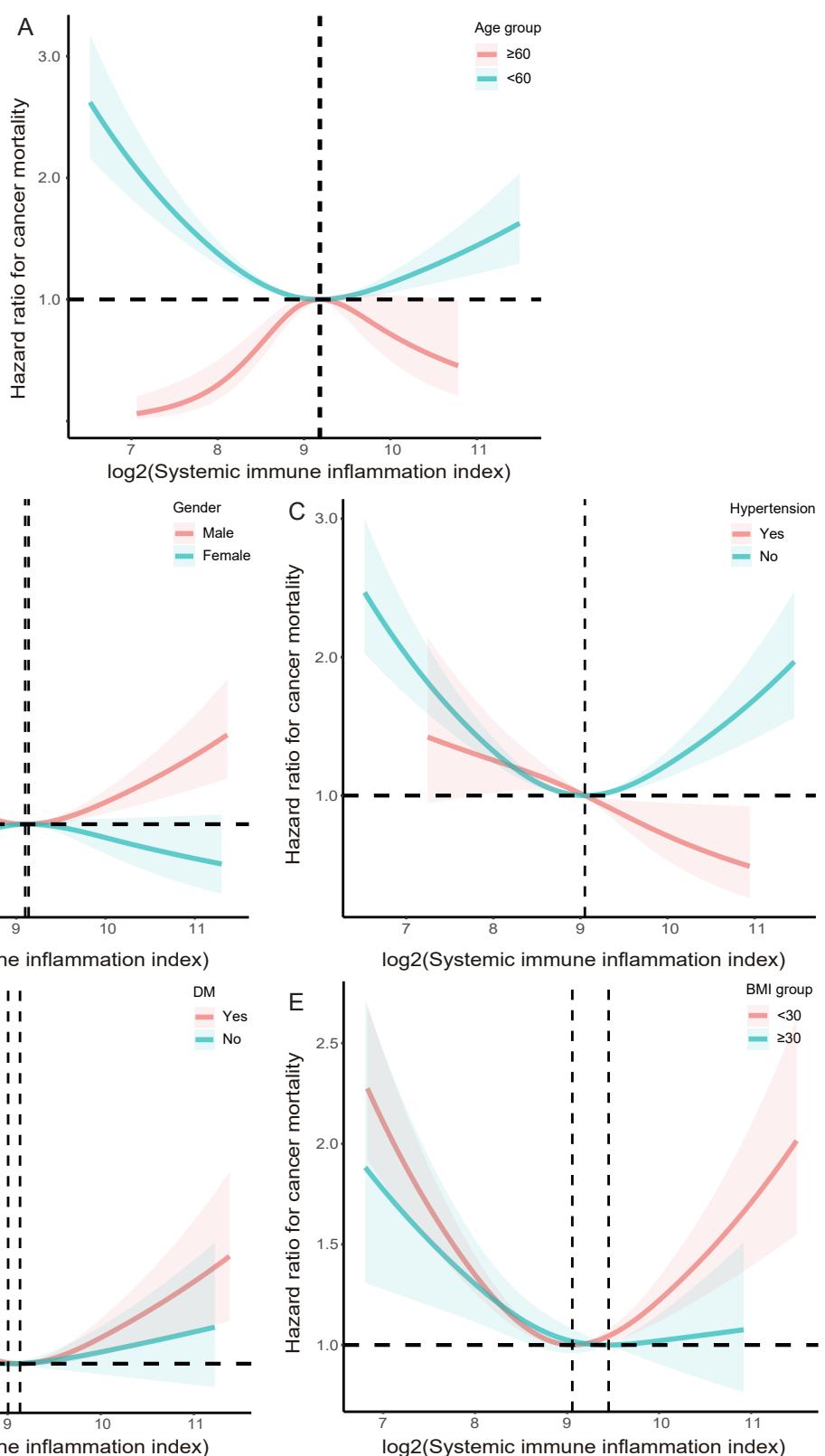
Supplementary Figure 13. Subgroup analysis for the associations of SII index with all-cause mortality based on age, gender, hypertension, DM, and BMI in MI patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; MI, myocardial infarction.



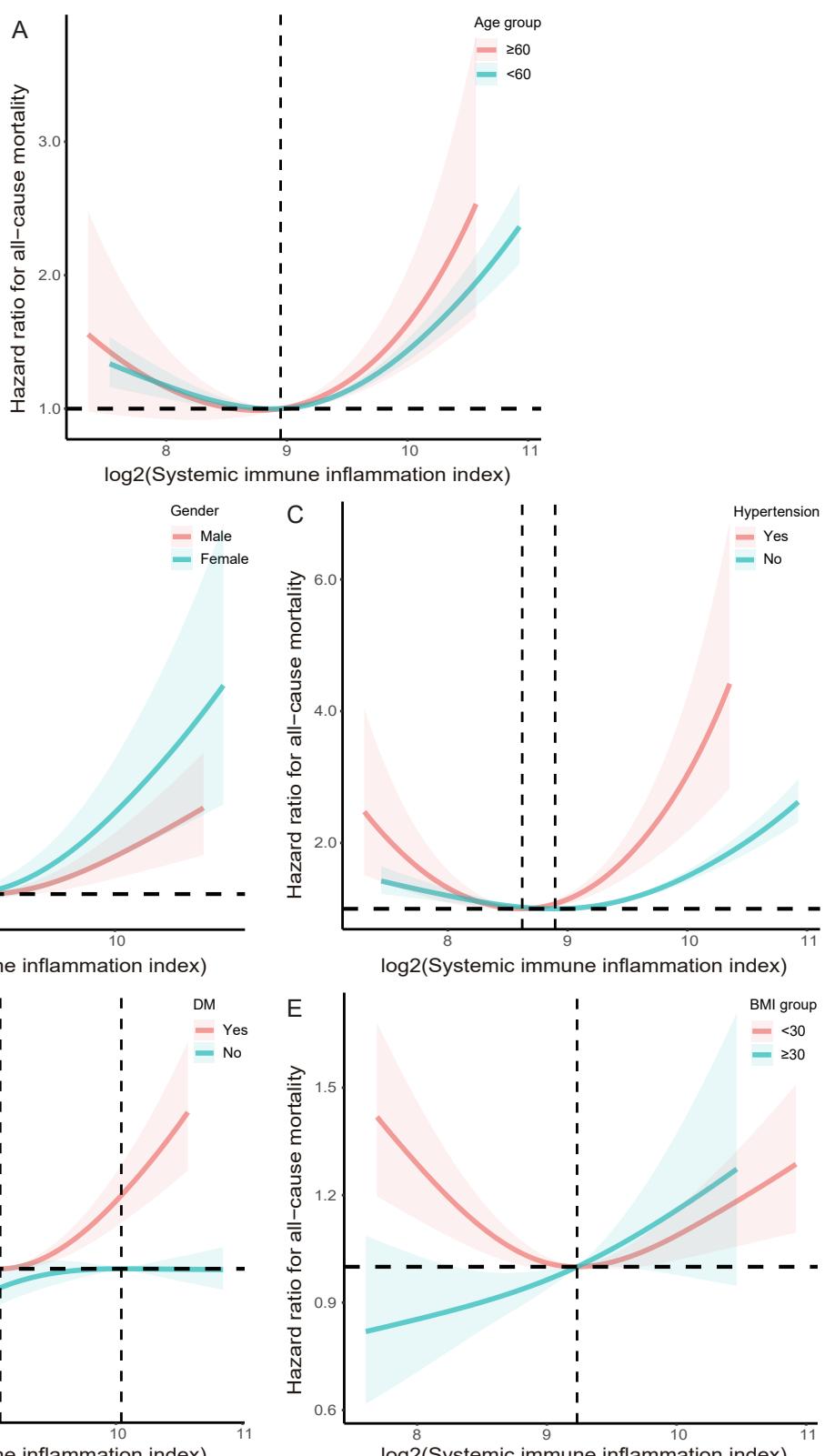
Supplementary Figure 14. Subgroup analysis for the associations of SII index with CVD mortality based on age, gender, hypertension, DM, and BMI in MI patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease; MI, myocardial infarction.



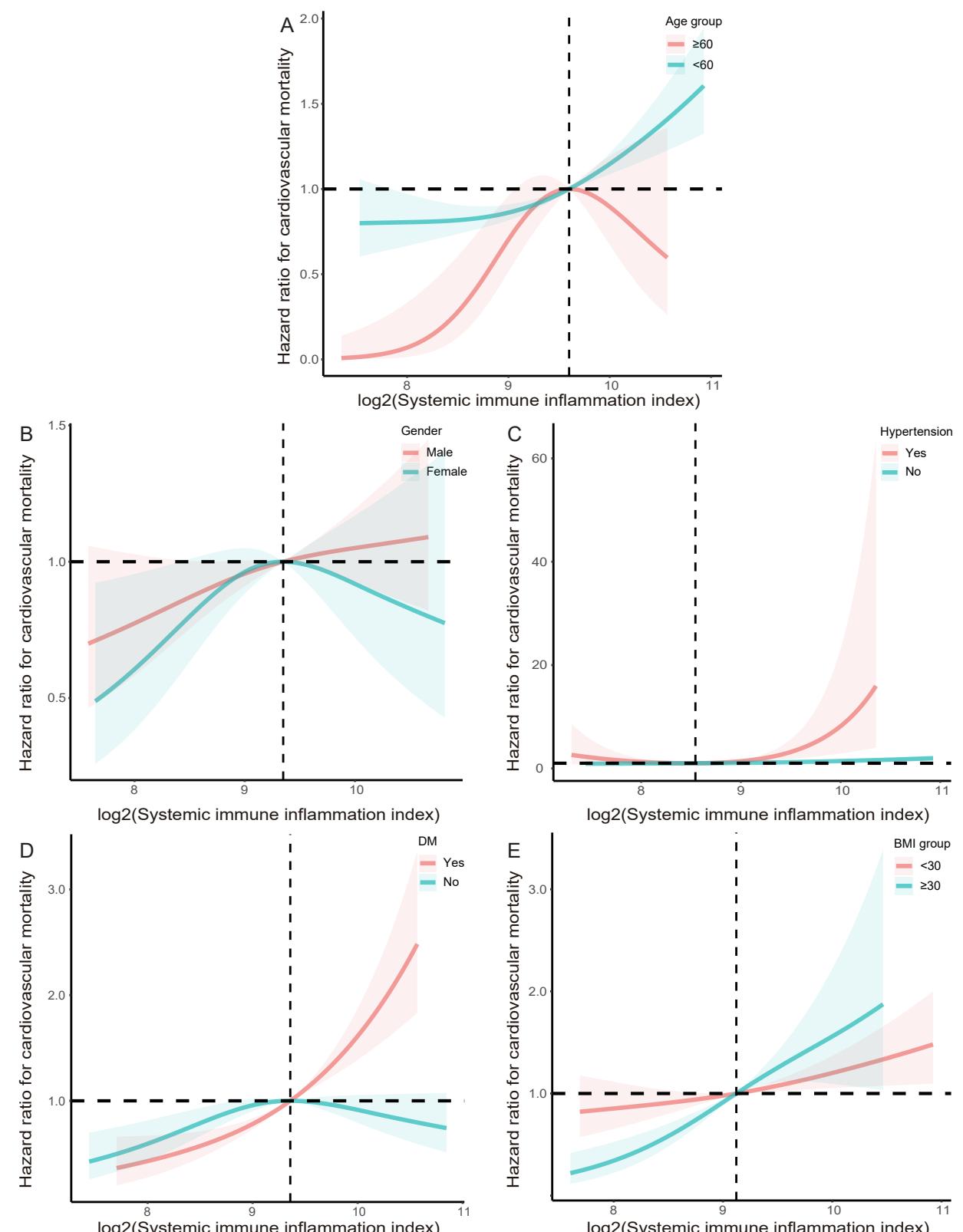
Supplementary Figure 15. Subgroup analysis for the associations of SII index with cancer-related mortality based on age, gender, hypertension, DM, and BMI in MI patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; MI, myocardial infarction.



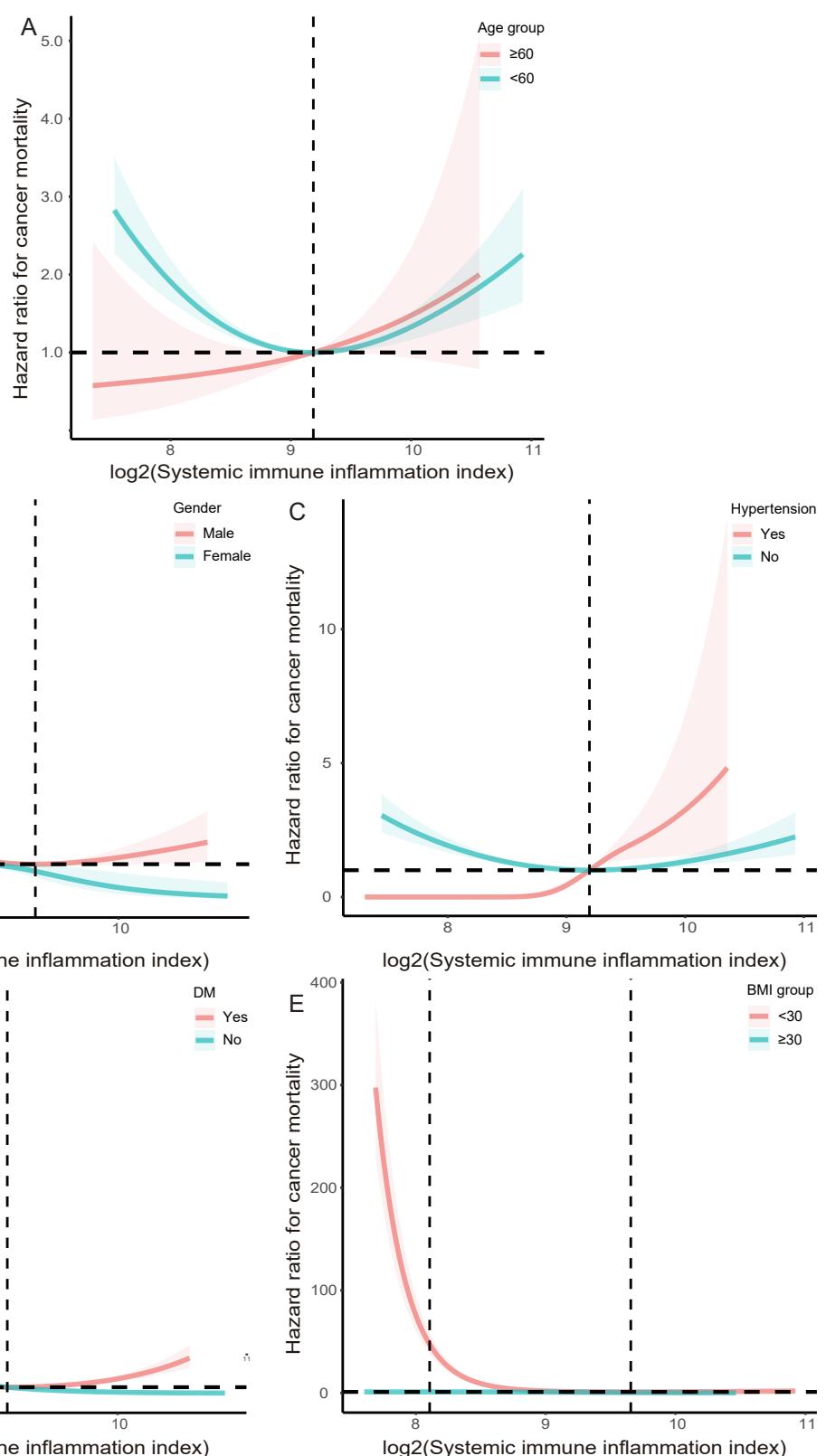
Supplementary Figure 16. Subgroup analysis for the associations of SII index with all-cause mortality based on age, gender, hypertension, DM, and BMI in stroke patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index.



Supplementary Figure 17. Subgroup analysis for the associations of SII index with CVD mortality based on age, gender, hypertension, DM, and BMI in stroke patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; CVD, cardiovascular disease.



Supplementary Figure 18. Subgroup analysis for the associations of SII index with cancer-related mortality based on age, gender, hypertension, DM, and BMI in stroke patients.

Abbreviation: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index.

Supplementary Table 1. Cox regression analysis of SII index for all-cause, CVD, and cancer-related mortality in CHD patients.

Mortality	Model 1		Model 2		Model 3	
	HR (95%CI)	P for trend	HR (95%CI)	P for trend	HR (95%CI)	P for trend
All-cause		<0.001		<0.001		0.005
Q1	1.00		1.00		1.00	
Q2	1.259 (1.032, 1.537) *		1.194 (0.976, 1.460)		1.202 (0.981, 1.474)	
Q3	1.191 (0.976, 1.454)		1.150 (0.940, 1.407)		1.184 (0.967, 1.450)	
Q4	1.762 (1.454, 2.315) ***		1.521 (1.248, 1.854) ***		1.365 (1.115, 1.672) **	
CVD		0.004		0.081		0.314
Q1	1.00		1.00		1.00	
Q2	1.174 (0.864, 1.594)		1.108 (0.813, 1.511)		1.116 (0.815, 1.527)	
Q3	1.060 (0.778, 1.594)		1.016 (0.743, 1.389)		1.017 (0.740, 1.398)	
Q4	1.609 (1.197, 2.161)		1.355 (0.999, 1.838)		1.220 (0.891, 1.670)	
Cancer-related		0.137		0.403		0.613
Q1	1.00		1.00		1.00	
Q2	0.869 (0.543, 1.389)		0.825 (0.513, 1.326)		0.808 (0.499, 1.308)	
Q3	1.005 (0.641, 1.576)		0.960 (0.609, 1.514)		0.931 (0.586, 1.478)	
Q4	1.347 (0.868, 2.092)		1.152 (0.731, 1.816)		1.067 (0.668, 1.703)	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease;

CHD, coronary heart disease; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4,

376.155-11700.000; *P < 0.05, **P < 0.01, ***P < 0.001; HR, hazard ratio; CI, confidence interval.

Model 1: age and sex. Model 2: model 1 variables plus race/ethnicity, education level, marital status,

family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user; Model 3 was

adjusted for model 2 variables plus body mass index, waist circumference, systolic blood pressure,

diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 2. Subgroups analysis for the associations of SII index with all-cause mortality in CHD patients.

	Q1	Q2	Q3	Q4	<i>P</i> for trend	<i>P</i> for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.107
< 60	1.00	1.440 (0.705, 2.941)	0.816 (0.350, 1.902)	1.767 (0.794, 3.929)	0.356	
≥ 60	1.00	1.178 (0.952, 1.459)	1.188 (0.960, 1.472)	1.330 (1.076, 1.645)	0.012	
Gender						0.309
Male	1.00	1.237 (0.962, 1.591)	1.278 (0.997, 1.638)	1.442 (1.128, 1.844) **	0.005	
Female	1.00	1.304 (0.894, 1.901)	1.016 (0.697, 1.480)	1.253 (0.859, 1.830)	0.534	
Hypertension						0.501
No	1.00	1.173 (0.658, 2.091)	1.118 (0.640, 1.955)	1.209 (0.666, 1.955)	0.603	
Yes	1.00	1.191 (0.954, 1.486)	1.189 (0.952, 1.486)	1.383 (1.110, 1.723) **	0.006	
DM						0.045
No	1.00	1.167 (0.886, 1.538)	1.130 (0.856, 1.491)	1.202 (0.904, 1.597)	0.292	
Yes	1.00	1.168 (0.853, 1.600)	1.128 (0.824, 1.544)	1.504 (1.117, 2.024)	0.010	
BMI						0.049
< 30 kg/m ²	1.00	1.064 (0.820, 1.379)	1.088 (0.837, 1.414)	1.332 (1.030, 1.721) *	0.025	
≥ 30 kg/m ²	1.00	1.378 (0.978, 1.940)	1.132 (0.805, 1.591)	1.313 (0.933, 1.847)	0.315	

Abbreviations: SII index, systemic immune inflammation index; CHD, coronary heart disease; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; **P* < 0.05; ***P* < 0.01; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total

cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 3. Subgroups analysis for the associations of SII index with CVD mortality in CHD patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.003
< 60	1.00	3.020 (1.490, 6.120) **	1.892 (0.903, 3.964)	2.763 (1.321, 5.779) **	0.043	
≥ 60	1.00	0.963 (0.786, 1.178)	0.970 (0.793, 1.187)	1.188 (0.977, 1.444)	0.063	
Gender						0.056
Male	1.00	1.038 (0.808, 1.334)	1.132 (0.881, 1.454)	1.314 (1.028, 1.679) *	0.017	
Female	1.00	1.274 (0.931, 1.744)	0.908 (0.662, 1.247)	1.311 (0.968, 1.776)	0.306	
Hypertension						0.028
No	1.00	0.865 (0.516, 1.448)	0.586 (0.335, 1.024)	0.854 (0.510, 1.432)	0.362	
Yes	1.00	1.100 (0.891, 1.357)	1.121 (0.909, 1.383)	1.354 (1.103, 1.663) **	0.004	
DM						0.134
No	1.00	1.240 (0.954, 1.611)	1.180 (0.906, 1.537)	1.413 (1.091, 1.830)	0.019	
Yes	1.00	0.923 (0.689, 1.237)	0.873 (0.650, 1.173)	1.203 (0.905, 1.599)	0.242	
BMI						0.021
< 30 kg/m ²	1.00	1.000 (0.786, 1.272)	1.040 (0.815, 1.328)	1.177 (0.927, 1.495)	0.145	
≥ 30 kg/m ²	1.00	1.290 (0.923, 1.803)	0.985 (0.708, 1.370)	1.470 (1.070, 2.020)	0.072	

Abbreviations: SII index, systemic immune inflammation index; CHD, coronary heart disease; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 736.155-11700.000; *P < 0.05; **P < 0.01; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total

cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 4. Subgroups analysis for the associations of SII index with cancer-related mortality in CHD patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.104
< 60	1.00	0.926 (0.372, 2.301)	0.870 (0.351, 2.158)	2.186 (0.975, 4.897)	0.043	
≥ 60	1.00	0.837 (0.602, 1.163)	0.848 (0.611, 1.177)	1.310 (0.967, 1.774)	0.046	
Gender						0.095
Male	1.00	0.732 (0.498, 1.075)	0.861 (0.591, 1.252)	1.330 (0.943, 1.875)	0.038	
Female	1.00	1.227 (0.714, 2.110)	1.030 (0.598, 1.776)	1.689 (1.016, 2.805)	0.062	
Hypertension						
No	1.00	0.920 (0.456, 1.860)	1.101 (0.544, 2.229)	1.030 (0.513, 2.071)	0.796	0.255
Yes	1.00	0.855 (0.603, 1.213)	0.898 (0.635, 1.271)	1.558 (1.136, 2.136)	0.002	
DM						0.406
No	1.00	0.914 (0.617, 1.355)	0.859 (0.576, 1.279)	1.483 (1.032, 2.131)	0.025	
Yes	1.00	0.874 (0.525, 1.455)	0.991 (0.607, 1.617)	1.539 (0.967, 2.451)	0.044	
BMI						0.001
< 30 kg/m ²	1.00	0.849 (0.549, 1.311)	1.044 (0.677, 1.609)	1.960 (1.335, 2.877)	<0.001	
≥ 30 kg/m ²	1.00	0.899 (0.574, 1.408)	0.738 (0.473, 1.152)	0.909 (0.583, 1.418)	0.504	

Abbreviations: SII index, systemic immune inflammation index; CHD, coronary heart disease; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea

nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 5. Cox regression analysis of SII index for all-cause, CVD, and cancer-related mortality in CHF patients.

Mortality	Model 1		Model 2		Model 3	
	HR (95%CI)	P for trend	HR (95%CI)	P for trend	HR (95%CI)	P for trend
All-cause		<0.001		<0.001		0.067
Q1	1.00		1.00		1.00	
Q2	1.004 (0.808, 1.247)		1.005 (0.807, 1.253)		1.040 (0.832, 1.299)	
Q3	1.085 (0.878, 1.339)		0.853 (1.311, 1.468)		1.009 (0.813, 1.252)	
Q4	1.564 (1.286, 1.901) ***		1.468 (1.201, 1.794) ***		1.212 (0.987, 1.488)	
CVD		0.001		0.003		0.174
Q1	1.00		1.00		1.00	
Q2	1.105 (0.789, 1.546)		1.165 (0.829, 1.639)		1.165 (0.825, 1.645)	
Q3	1.122 (0.806, 1.563)		1.146 (0.818, 1.605)		1.058 (0.754, 1.484)	
Q4	1.618 (1.191, 2.198) **		1.616 (1.180, 2.214) **		1.292 (0.935, 1.785)	
Cancer-related		0.105		0.379		0.817
Q1	1.00		1.00		1.00	
Q2	0.586 (0.330, 1.039)		0.543 (0.304, 0.972)		0.528 (0.293, 0.952) *	
Q3	0.760 (0.448, 1.292)		0.689 (0.401, 1.186)		0.632 (0.365, 1.093)	
Q4	1.330 (0.838, 2.111)		1.090 (0.677, 1.755)		0.942 (0.576, 1.541)	

Abbreviations: SII index, systemic immune inflammation index; CHF, congestive heart failure; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; CVD, cardiovascular disease; **P < 0.01, ***P < 0.001; HR, hazard ratio; CI, confidence interval. Model 1: age and sex. Model 2: model 1 variables plus race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user; Model 3 was adjusted for model 2 variables plus body mass index, waist circumference, systolic blood pressure, diastolic

blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 6. Subgroups analysis for the associations of SII index with all-cause mortality in CHF patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.161
< 60	1.00	0.828 (0.418, 1.639)	0.959 (0.526, 1.750)	1.264 (0.694, 2.303)	0.426	
≥ 60	1.00	1.055 (0.828, 1.343)	1.000 (0.788, 1.268)	1.228 (0.979, 1.540)	0.079	
Gender						0.019
Male	1.00	1.003 (0.747, 1.346)	1.139 (0.853, 1.521)	1.102 (0.832, 1.460)	0.374	
Female	1.00	1.168 (0.810, 1.684)	0.964 (0.679, 1.367)	1.402 (1.007, 1.951)	0.073	
Hypertension						0.016
No	1.00	0.947 (0.504, 1.779)	0.771 (0.405, 1.469)	0.593 (0.315, 1.114)	0.062	
Yes	1.00	1.083 (0.846, 1.385)	1.080 (0.852, 1.370)	1.386 (1.106, 1.736) **	0.004	
DM						0.052
No	1.00	0.949 (0.687, 1.312)	0.939 (0.686, 1.286)	0.963 (0.706, 1.313)	0.846	
Yes	1.00	1.209 (0.870, 1.681)	1.124 (0.822, 1.537)	1.581 (1.173, 2.310)	0.004	
BMI						0.004
< 30 kg/m ²	1.00	0.934 (0.691, 1.262)	0.917 (0.687, 1.224)	0.882 (0.663, 1.173)	0.398	
≥ 30 kg/m ²	1.00	1.217 (0.851, 1.741)	1.155 (0.818, 1.632)	1.710 (1.237, 2.363)	0.001	

Abbreviations: SII index, systemic immune inflammation index; CHF, congestive heart failure; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; **P < 0.01; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-

cholesterol.

Supplementary Table 7. Subgroups analysis for the associations of SII index with CVD mortality in CHF patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.095
< 60	1.00	2.606 (0.852, 7.968)	2.451 (0.827, 7.261)	2.266 (0.727, 7.059)	0.200	
≥ 60	1.00	1.033 (0.715, 1.491)	0.932 (0.648, 1.341)	1.196 (0.847, 1.690)	0.338	
Gender						0.019
Male	1.00	1.068 (0.669, 1.707)	1.348 (0.860, 2.114)	1.222 (0.780, 1.915)	0.272	
Female	1.00	1.486 (0.865, 2.552)	0.912 (0.531, 1.566)	1.449 (0.879, 2.388)	0.359	
Hypertension						0.248
No	1.00	1.354 (0.434, 4.226)	0.315 (0.087, 1.142)	0.852 (0.284, 2.557)	0.330	
Yes	1.00	1.192 (0.821, 1.731)	1.142 (0.795, 1.641)	1.385 (0.978, 1.960)	0.086	
DM						0.213
No	1.00	1.079 (0.639, 1.823)	1.124 (0.682, 1.853)	1.205 (0.734, 1.979)	0.443	
Yes	1.00	1.220 (0.750, 1.983)	0.942 (0.582, 1.524)	1.379 (0.874, 2.175)	0.298	
BMI						0.032
< 30 kg/m ²	1.00	0.900 (0.566, 1.430)	0.933 (0.601, 1.448)	0.987 (0.643, 1.516)	0.949	
≥ 30 kg/m ²	1.00	1.628 (0.932, 2.844)	1.116 (0.636, 1.957)	1.899 (1.119, 3.224)	0.053	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease; CHF, congestive heart failure; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-

density lipoprotein-cholesterol.

Supplementary Table 8. Subgroups analysis for the associations of SII index with cancer-related mortality in CHF patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.198
< 60	1.00	0.110 (0.014, 0.863) *	0.130 (0.038, 0.446) **	2.327 (0.805, 6.723)	0.115	
≥ 60	1.00	0.521 (0.278, 0.976) *	0.575 (0.314, 1.053)	0.844 (0.489, 1.456)	0.896	
Gender						0.251
Male	1.00	0.415 (0.201, 0.854) *	0.553 (0.274, 1.112)	0.731 (0.396, 1.352)	0.640	
Female	1.00	0.677 (0.211, 2.171)	0.918 (0.324, 2.602)	1.450 (0.541, 3.884)	0.284	
Hypertension						0.004
No	1.00	0.910 (0.122, 6.766)	1.441 (0.193, 10.752)	0.366 (0.035, 3.839)	0.468	
Yes	1.00	0.392 (0.193, 0.797) *	0.572 (0.304, 1.075)	1.124 (0.656, 1.926)	0.278	
DM						0.596
No	1.00	0.550 (0.242, 1.249)	0.738 (0.336, 1.621)	0.957 (0.465, 1.968)	0.786	
Yes	1.00	0.486 (0.189, 1.249)	0.706 (0.308, 1.619)	0.968 (0.450, 2.081)	0.728	
BMI						0.420
< 30 kg/m ²	1.00	0.355 (0.143, 0.883) *	0.640 (0.286, 1.434)	0.703 (0.333, 1.113)	0.859	
≥ 30 kg/m ²	1.00	0.618 (0.262, 1.454)	0.631 (0.278, 1.430)	1.004 (0.484, 2.081)	0.799	

Abbreviations: SII index, systemic immune inflammation index; CHF, congestive heart failure; DM,

diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-

736.154; Q4, 376.155-11700.000; *P < 0.05; **P < 0.01; HR, hazard ratio; CI, confidence interval.

Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family

poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist

circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin,

fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin,

blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 9. Cox regression analysis of SII index for all-cause, CVD, and cancer-related mortality in angina pectoris patients.

Mortality	Model 1		Model 2		Model 3	
	HR (95%CI)	P for trend	HR (95%CI)	P for trend	HR (95%CI)	P for trend
All-cause		<0.001			0.001	0.054
Q1	1.00		1.00		1.00	
Q2	0.996 (0.783, 1.266)		0.981 (0.770, 1.249)		0.972 (0.759, 1.244)	
Q3	1.039 (0.820, 1.316)		1.015 (0.799, 1.289)		0.991 (0.777, 1.263)	
Q4	1.501 (1.200, 1.876) ***		1.438 (1.146, 1.804)		1.250 (0.987, 1.583)	
CVD		0.034			0.061	0.333
Q1	1.00		1.00		1.00	
Q2	0.999 (0.694, 1.436)		0.977 (0.677, 1.408)		0.933 (0.641, 1.357)	
Q3	0.959 (0.667, 1.380)		0.929 (0.644, 1.342)		0.877 (0.604, 1.273)	
Q4	1.451 (1.033, 2.036) *		1.401 (0.992, 1.977)		1.204 (0.841, 1.722)	
Cancer-related		0.026			0.057	0.106
Q1	1.00		1.00		1.00	
Q2	1.340 (0.723, 2.483)		1.355 (0.728, 2.525)		1.420 (0.752, 2.681)	
Q3	1.267 (0.680, 2.360)		1.306 (0.697, 2.446)		1.287 (0.676, 2.449)	
Q4	1.988 (1.109, 3.563) *		1.825 (1.009, 3.299)		1.761 (0.949, 3.269)	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease; Q1,

4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; *P < 0.05,

***P < 0.001; HR, hazard ratio; CI, confidence interval. Model 1: age and sex. Model 2: model 1

variables plus race/ethnicity, education level, marital status, family poverty-income ratio,

hypertension, diabetes mellitus, smoker, alcohol user; Model 3 was adjusted for model 2 variables

plus body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean

energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 10. Subgroups analysis for the associations of SII index with all-cause mortality in angina pectoris patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.313
< 60	1.00	0.886 (0.398, 1.970)	0.998 (0.462, 2.162)	0.853 (0.371, 1.958)	0.809	
≥ 60	1.00	0.957 (0.736, 1.245)	0.983 (0.759, 1.272)	1.292 (1.005, 1.661)	0.036	
Gender						0.111
Male	1.00	1.019 (0.731, 1.421)	0.907 (0.658, 1.249)	1.150 (0.838, 1.578)	0.528	
Female	1.00	1.036 (0.693, 1.549)	1.250 (0.841, 1.860)	1.500 (1.017, 2.213)	0.021	
Hypertension						0.152
No	1.00	1.088 (0.490, 2.417)	1.265 (0.463, 3.461)	1.546 (0.652, 3.667)	0.146	
Yes	1.00	0.945 (0.724, 1.233)	0.953 (0.735, 1.236)	1.282 (0.996, 1.651)	0.046	
DM						0.033
No	1.00	1.125 (0.807, 1.568)	1.204 (0.856, 1.693)	1.250 (0.905, 1.727)	0.166	
Yes	1.00	0.819 (0.551, 1.218)	0.881 (0.607, 1.277)	1.312 (0.902, 1.908)	0.114	
BMI						0.091
< 30 kg/m ²	1.00	0.845 (0.610, 1.172)	0.923 (0.672, 1.268)	1.241 (0.917, 1.680)	0.096	
≥ 30 kg/m ²	1.00	1.249 (0.824, 1.895)	1.005 (0.675, 1.496)	1.340 (0.896, 2.004)	0.320	

Abbreviations: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body

mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum

creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 11. Subgroups analysis for the associations of SII index with CVD mortality in angina pectoris patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.018
< 60	1.00	3.969 (1.701, 9.261) **	3.658 (1.493, 8.960) **	1.629 (0.551, 4.815)	0.841	
≥ 60	1.00	0.817 (0.550, 1.215)	0.803 (0.546, 1.183)	1.189 (0.822, 1.720)	0.312	
Gender						0.245
Male	1.00	0.962 (0.571, 1.620)	0.949 (0.585, 1.538)	1.049 (0.670, 1.786)	0.724	
Female	1.00	1.132 (0.623, 2.056)	0.734 (0.390, 1.382)	1.272 (0.708, 2.286)	0.684	
Hypertension						0.124
No	1.00	0.777 (0.312, 1.937)	3.256 (1.451, 7.304) **	1.082 (0.475, 7.304)	0.597	
Yes	1.00	0.963 (0.648, 1.430)	0.812 (0.545, 1.209)	1.244 (0.851, 1.818)	0.363	
DM						0.307
No	1.00	1.075 (0.648, 1.782)	1.124 (0.675, 1.873)	1.432 (0.890, 2.305)	0.122	
Yes	1.00	0.764 (0.416, 1.401)	0.723 (0.400, 1.305)	1.073 (0.580, 1.987)	0.874	
BMI						0.050
< 30 kg/m ²	1.00	0.752 (0.462, 1.224)	0.728 (0.452, 1.173)	1.190 (0.765, 1.853)	0.402	
≥ 30 kg/m ²	1.00	1.360 (0.868, 2.697)	1.040 (0.541, 1.999)	1.269 (0.652, 2.469)	0.737	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; CVD, cardiovascular disease; **P < 0.01; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate

aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 12. Subgroups analysis for the associations of SII index with cancer-related mortality in angina pectoris patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.316
< 60	1.00	0.843 (0.714, 2.538)	1.731 (0.924, 3.662)	3.109 (1.214, 3.281) *	0.038	
≥ 60	1.00	1.357 (0.688, 2.676)	1.277 (0.638, 2.556)	1.463 (0.751, 2.851)	0.328	
Gender						0.108
Male	1.00	1.275 (0.567, 2.869)	1.027 (0.465, 2.265)	1.579 (0.747, 3.339)	0.329	
Female	1.00	2.354 (0.609, 9.091)	2.753 (0.712, 10.644)	3.166 (0.821, 12.206)	0.108	
Hypertension						0.511
No	1.00					<0.001
Yes	1.00	1.420 (0.697, 2.893)	1.362 (0.678, 2.738)	1.798 (0.910, 3.555)	0.116	
DM						0.038
No	1.00	2.053 (0.847, 4.979)	1.700 (0.683, 4.230)	1.521 (0.611, 3.790)	0.594	
Yes	1.00	1.501 (0.522, 4.321)	1.233 (0.460, 3.309)	3.121 (1.171, 8.316)	0.036	
BMI						0.109
< 30 kg/m ²	1.00	0.775 (0.302, 1.990)	1.105 (0.440, 2.777)	1.782 (0.757, 4.198)	0.086	
≥ 30 kg/m ²	1.00	2.343 (0.895, 6.138)	1.241 (0.474, 3.244)	1.416 (1.043, 1.153)	0.890	

Abbreviations: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body

mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-

11700.000; CVD, cardiovascular disease; *P < 0.05; HR, hazard ratio; CI, confidence interval.

Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin,

blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 13. Cox regression analysis of SII index for all-cause, CVD, and cancer-related mortality in MI patients.

Mortality	Model 1		Model 2		Model 3	
	HR (95%CI)	P for trend	HR (95%CI)	P for trend	HR (95%CI)	P for trend
All-cause		<0.001		<0.001		0.048
Q1	1.00		1.00		1.00	
Q2	1.089 (0.902, 1.314)		1.067 (0.882, 1.290)		1.096 (0.904, 1.328)	
Q3	1.050 (0.865, 1.275)		1.001 (0.823, 1.217)		0.980 (0.803, 1.196)	
Q4	1.525 (1.275, 1.823)		1.450 (1.207, 1.743)		1.249 (1.035, 1.507) *	
CVD		0.019		0.046		0.460
Q1	1.00		1.00		1.00	
Q2	1.069 (0.807, 1.416)		1.067 (0.803, 1.418)		1.090 (0.818, 1.453)	
Q3	0.957 (0.712, 1.287)		0.935 (0.694, 1.262)		0.891 (0.657, 1.208)	
Q4	1.417 (1.081, 1.856) *		1.368 (1.037, 1.806) *		1.176 (0.886, 1.563)	
Cancer-related		0.415		0.362		0.827
Q1	1.00		1.00		1.00	
Q2	0.849 (0.551, 1.306)		0.820 (0.530, 1.267)		0.815 (0.523, 1.270)	
Q3	0.848 (0.544, 1.320)		0.767 (0.489, 1.202)		0.739 (0.469, 1.166)	
Q4	1.321 (0.887, 1.969)		1.197 (0.795, 1.803)		1.041 (0.685, 1.584)	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease; MI, myocardial infarction; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; *P < 0.05; HR, hazard ratio; CI, confidence interval. Model 1: age and sex. Model 2: model 1 variables plus race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user; Model 3 was adjusted for model 2 variables plus body mass index, waist circumference, systolic blood pressure, diastolic blood

pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 14. Subgroups analysis for the associations of SII index with all-cause mortality in MI patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.155
< 60	1.00	1.587 (0.856, 2.942)	0.782 (0.388, 1.575)	1.419 (0.766, 2.629)	0.590	
≥ 60	1.00	1.050 (0.856, 1.289)	0.987 (0.799, 1.218)	1.194 (0.977, 1.458)	0.112	
Gender						0.043
Male	1.00	1.009 (0.797, 1.279)	1.001 (0.786, 1.274)	1.145 (0.911, 1.440)	0.242	
Female	1.00	1.210 (0.849, 1.726)	0.802 (0.554, 1.162)	1.293 (0.912, 1.832)	0.407	
Hypertension						0.082
No	1.00	0.596 (0.355, 1.001)	0.713 (0.430, 1.183)	0.751 (0.461, 1.223)	0.406	
Yes	1.00	1.176 (0.952, 1.454)	1.019 (0.817, 1.272)	1.343 (1.090, 1.653) *	0.019	
DM						0.014
No	1.00	1.025 (0.788, 1.333)	0.845 (0.643, 1.110)	0.996 (0.769, 1.291)	0.693	
Yes	1.00	1.169 (0.869, 1.573)	1.042 (0.768, 1.414)	1.552 (1.162, 2.074) **	0.007	
BMI						0.026
< 30 kg/m ²	1.00	0.954 (0.746, 1.221)	0.918 (0.707, 1.193)	1.142 (0.898, 1.454)	0.242	
≥ 30 kg/m ²	1.00	1.329 (1.052, 1.679)	0.883 (0.694, 1.123)	1.362 (1.093, 1.697)	0.302	

Abbreviations: SII index, systemic immune inflammation index; MI, myocardial infarction; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; **P < 0.01; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglycerides, and C-reactive protein.

triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 15. Subgroups analysis for the associations of SII index with CVD mortality in MI patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	OR (95%CI)	OR (95%CI)	OR (95%CI)	OR (95%CI)		
Age						0.043
< 60	1.00	4.574 (1.514, 13.816)	0.962 (0.271, 3.410)	1.210 (0.351, 4.169)	0.625	
≥ 60	1.00	1.010 (0.746, 1.369)	0.882 (0.641, 1.214)	1.109 (0.823, 1.493)	0.624	
Gender						0.099
Male	1.00	1.011 (0.710, 1.441)	0.954 (0.661, 1.377)	1.134 (0.804, 1.600)	0.516	
Female	1.00	1.246 (0.717, 2.165)	0.622 (0.345, 1.121)	1.162 (0.672, 2.010)	0.852	
Hypertension						0.157
No	1.00	0.391 (0.153, 0.997)	0.569 (0.231, 1.402)	0.632 (0.275, 1.449)	0.445	
Yes	1.00	1.189 (0.870, 1.624)	0.970 (0.697, 1.350)	1.257 (0.922, 1.714)	0.303	
DM						0.137
No	1.00	1.228 (0.819, 1.841)	0.834 (0.539, 1.291)	1.107 (0.737, 1.664)	0.907	
Yes	1.00	0.958 (0.624, 1.472)	0.800 (0.512, 1.251)	1.175 (0.767, 1.799)	0.619	
BMI						0.124
< 30 kg/m ²	1.00	0.862 (0.598, 1.242)	0.812 (0.549, 1.203)	0.994 (0.694, 1.425)	0.960	
≥ 30 kg/m ²	1.00	1.668 (0.999, 2.781)	0.909 (0.534, 1.547)	1.417 (0.856, 2.346)	0.639	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease; MI, myocardial infarction; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3 508.801-736.154; Q4, 376.155-11700.000; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular

filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 16. Subgroups analysis for the associations of SII index with cancer-related mortality in MI patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.217
< 60	1.00	1.812 (0.378, 8.6950)	1.962 (0.411, 9.357)	2.777 (0.607, 12.703)	0.200	
≥ 60	1.00	0.777 (0.486, 1.241)	0.683 (0.420, 1.110)	0.987 (0.632, 1.542)	0.961	
Gender						0.173
Male	1.00	0.686 (0.407, 1.158)	0.567 (0.327, 0.984) *	0.951 (0.586, 1.543)	0.831	
Female	1.00	1.019 (0.405, 2.563)	1.155 (0.475, 2.805)	1.124 (0.462, 2.805)	0.744	
Hypertension						0.212
No	1.00	0.555 (0.159, 1.935)	0.423 (0.116, 1.552)	0.605 (0.145, 2.520)	0.353	
Yes	1.00	0.835 (0.507, 1.375)	0.787 (0.474, 1.309)	1.150 (0.724, 1.827)	0.485	
DM						0.061
No	1.00	0.629 (0.350, 1.133)	0.529 (0.288, 0.972)	0.880 (0.519, 1.491)	0.706	
Yes	1.00	1.274 (0.609, 2.669)	1.234 (0.584, 2.604)	1.378 (0.649, 2.925)	0.453	
BMI						0.183
< 30 kg/m ²	1.00	0.780 (0.422, 1.444)	0.714 (0.372, 1.369)	1.233 (0.699, 2.172)	0.353	
≥ 30 kg/m ²	1.00	0.808 (0.412, 1.584)	0.565 (0.287, 1.112)	0.756 (0.384, 1.490)	0.269	

Abbreviations: SII index, systemic immune inflammation index; MI, myocardial infarction; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; *P < 0.05; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea

nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 17. Cox regression analysis of SII index for all-cause, CVD, and cancer-related mortality in stroke patients.

Mortality	Model 1		Model 2		Model 3	
	HR (95%CI)	P for trend	HR (95%CI)	P for trend	HR (95%CI)	P for trend
All-cause		0.052		0.022		0.196
Q1	1.00		1.00		1.00	
Q2	0.877 (0.575, 1.339)		0.859 (0.544, 1.355)		1.022 (0.633, 1.650)	
Q3	0.888 (0.575, 1.371)		0.909 (0.573, 1.444)		0.924 (0.567, 1.507)	
Q4	1.384 (0.921, 2.079)		1.509 (0.964, 2.361)		1.369 (0.847, 2.211)	
CVD		0.103		0.075		0.177
Q1	1.00		1.00		1.00	
Q2	1.234 (0.607, 2.510)		1.431 (0.667, 3.071)		1.514 (0.671, 3.4140)	
Q3	1.101 (0.525, 2.307)		1.303 (0.595, 2.855)		1.200 (0.524, 2.748)	
Q4	1.789 (0.891, 3.593)		2.066 (0.963, 4.431)		1.925 (0.855, 4.333)	
Cancer-related		0.874		0.890		0.544
Q1	1.00		1.00		1.00	
Q2	0.727 (0.269, 1.963)		0.432 (0.145, 1.286)		0.440 (0.131, 1.474)	
Q3	0.415 (0.131, 1.314)		0.312 (0.092, 1.062)		0.240 (0.063, 0.912)	
Q4	0.986 (0.374, 2.597)		0.806 (0.270, 2.403)		0.674 (0.202, 2.250)	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; HR, hazard ratio; CI, confidence interval. Model 1: age and sex. Model 2: model 1 variables plus race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user; Model 3 was adjusted for model 2 variables plus body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose,

glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 18. Subgroups analysis for the associations of SII index with all-cause mortality in stroke patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.154
< 60	1.00					
≥ 60	1.00	1.017 (0.614, 1.686)	0.966 (0.576, 1.620)	1.316 (0.781, 2.216)	0.294	
Gender						0.042
Male	1.00	1.239 (0.648, 2.372)	1.171 (0.609, 2.254)	1.356 (0.686, 2.254)	0.473	
Female	1.00	0.923 (0.365, 2.330)	0.584 (0.221, 1.541)	1.627 (0.695, 3.810)	0.204	
Hypertension						0.082
No	1.00	0.596 (0.355, 1.001)	0.713 (0.430, 1.183)	0.751 (0.461, 1.223)	0.406	
Yes	1.00	1.176 (0.952, 1.454)	1.019 (0.817, 1.272)	1.343 (1.090, 1.653) **	0.019	
DM						0.015
No	1.00	1.025 (0.788, 1.333)	0.845 (0.643, 1.110)	0.996 (0.769, 1.291)	0.693	
Yes	1.00	1.169 (0.869, 1.573)	1.042 (0.768, 1.414)	1.552 (1.162, 2.074)	0.007	
BMI						0.026
< 30 kg/m ²	1.00	0.954 (0.746, 1.221)	0.918 (0.707, 1.193)	1.142 (0.898, 1.454)	0.242	
≥ 30 kg/m ²	1.00	1.329 (1.052, 1.679)	0.883 (0.694, 1.123)	1.362 (1.093, 1.697)	0.302	

Abbreviations: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; **P<0.01; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric

acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 19. Subgroups analysis for the associations of SII index with CVD mortality in stroke patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.125
< 60	1.00	-	-	-	-	
≥ 60	1.00	1.393 (0.601, 3.2260)	1.127 (0.479, 2.651)	1.967 (0.837, 4.618)	0.168	
Gender						0.116
Male	1.00	2.120 (0.724, 6.209)	1.573 (0.516, 4.796)	2.138 (0.679, 6.730)	0.414	
Female	1.00	1.356 (0.267, 6.886)	0.242 (0.030, 1.983)	4.001 (0.685, 23.373)	0.216	
Hypertension						0.143
No	1.00	-	0.720 (0.030, 7.505)	4.514 (0.144, 4.032)	0.419	
Yes	1.00	1.557 (0.679, 3.573)	1.203 (0.511, 2.833)	1.902 (0.826, 4.379)	0.219	
DM						0.307
No	1.00	2.129 (0.478, 9.473)	1.692 (0.336, 8.520)	4.635 (0.982, 21.884)	0.043	
Yes	1.00	1.679 (0.487, 5.789)	2.190 (0.627, 7.649)	2.203 (0.539, 7.594)	0.297	
BMI						0.053
< 30 kg/m ²	1.00	0.917 (0.300, 2.804)	1.037 (0.334, 3.216)	2.224 (0.679, 7.283)	0.068	
≥ 30 kg/m ²	1.00	4.271 (0.900, 5.276)	2.685 (0.489, 4.731)	3.782 (0.711, 6.124)	0.220	

Abbreviations: SII index, systemic immune inflammation index; CVD, cardiovascular disease; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3 508.801-736.154; Q4, 376.155-11700.000; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, nitrogen, uric acid, serum creatinine, estimated glomerular filtration rate, total cholesterol,

triglyceride, and high-density lipoprotein-cholesterol.

Supplementary Table 20. Subgroups analysis for the associations of SII index with cancer-related mortality in stroke patients.

	Q1	Q2	Q3	Q4	P for trend	P for interaction
	HR (95%CI)	HR (95%CI)	HR (95%CI)	HR (95%CI)		
Age						0.008
< 60	1.00	-	-	-	-	
≥ 60	1.00	0.445 (0.113, 1.743)	0.221 (0.049, 1.005)	0.505 (0.119, 2.137)	0.265	
Gender						0.123
Male	1.00	-	-	-	-	
Female	1.00	0.261 (0.005, 12.784)	5.154 (0.126, 21.985)	1.178 (0.033, 4.575)	0.560	
Hypertension						0.007
No	1.00	-	-	-	-	
Yes	1.00	0.250 (0.064, 0.976)	0.178 (0.044, 0.724)	0.426 (0.121, 1.503)	0.348	
DM						0.001
No	1.00	0.064 (0.009, 0.446) *	0.024 (0.001, 0.410) *	0.237 (0.041, 1.368)	0.536	
Yes	1.00	-	-	-	-	
BMI						0.054
< 30 kg/m ²	1.00	-	-	-	-	
≥ 30 kg/m ²	1.00	0.100 (0.002, 4.542)	0.220 (0.019, 2.588)	0.271 (0.025, 2.934)	0.423	

Abbreviations: SII index, systemic immune inflammation index; DM, diabetes mellitus; BMI, body mass index; Q1, 4.056-349.500; Q2, 349.501-508.800; Q3, 508.801-736.154; Q4, 376.155-11700.000; *P < 0.05; HR, hazard ratio; CI, confidence interval. Analyses was adjusted for age and sex, race/ethnicity, education level, marital status, family poverty-income ratio, hypertension, diabetes mellitus, smoker, alcohol user, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, mean energy intake, hemoglobin, fast glucose, glycosylated hemoglobin, alanine transaminase, aspartate aminotransferase, albumin, blood urea nitrogen, uric

acid, serum creatinine, estimated glomerular filtration rate, total cholesterol, triglyceride, and high-density lipoprotein-cholesterol.