

Supplementary Materials

Table S1. Disease codes and their corresponding disease names.....	3
Table S2. Missing values of all collected variables	4
Table S3. All-cause mortality outcome according to SHR quartiles before PSM.....	6
Table S4. All-cause mortality outcome according to SHR sextiles before PSM.....	7
Table S5. All-cause mortality outcome according to the mean optimal threshold of SHR before PSM.....	8
Table S6. All-cause mortality outcome according to the mean optimal threshold of SHR after PSM	9
Table S7. All-cause mortality outcome according to the mean optimal threshold of SHR after PSM when the time of 28 days was treated as landmark time	10
Table S8. All-cause mortality outcome according to the optimal threshold of SHR for in-hospital mortality after PSM	11
Table S9. All-cause mortality outcome according to the optimal threshold of SHR for 28-day mortality after PSM	12
Table S10. All-cause mortality outcome according to the optimal threshold of SHR for 365-day mortality after PSM.....	13
Table S11. Patient's clinical characteristics according to SHR quartiles after PSM	14
Table S12. All-cause mortality outcome according to the SHR quartiles after PSM.....	17
Supplementary Figure S1. Histogram of propensity score distribution before and after PSM.....	18
Supplementary Figure S2. Propensity score distribution before and after PSM	19
Supplementary Figure S3. Kaplan-Meier survival curves by SHR quartiles after PSM	20
Supplementary Figure S4. Early mortality analysis by SHR quartiles after PSM.....	21
Supplementary Figure S5. ROC analysis for 28-day mortality prediction before PSM	22
Supplementary Figure S6. ROC analysis for 90-day mortality prediction before PSM.	23
Supplementary Figure S7. ROC analysis for 365-day mortality prediction before PSM	24
Supplementary Figure S8. ROC analysis for in-hospital mortality prediction after PSM	25

Supplementary Figure S9. ROC analysis for 28-day hospital mortality prediction after PSM	26
Supplementary Figure S10. ROC analysis for 90-day hospital mortality prediction after PSM.....	27
Supplementary Figure S11. ROC analysis for 365-day hospital mortality prediction after PSM.....	28
Supplementary Figure S12. Restricted cubic spline analysis of SHR-mortality relationships after PSM.....	29

Table S1. Disease codes and their corresponding disease names included in the study.

ICD	Disease names
ICD9	
410	Acute myocardial infarction
411	Other acute and subacute forms of ischemic heart disease
413	Angina pectoris
414	Other forms of chronic ischemic heart disease
ICD10	
I20.0	Unstable angina
I20.1	Angina pectoris with documented spasm
I20.8	Other forms of angina pectoris
I20.9	Angina pectoris, unspecified
I21.0	Acute transmural myocardial infarction of anterior wall
I21.01, I21.02, I21.09	Other subtypes of anterior wall myocardial infarction
I21.11, I21.19	Acute myocardial infarction of inferior wall
I21.21, I21.29	Acute myocardial infarction of other sites
I21.3	Acute myocardial infarction, unspecified site
I21.4	Acute subendocardial myocardial infarction
I21.9	Acute myocardial infarction, unspecified
I21.A1, I21.A9	Other types of myocardial infarction
I22.0, I22.1, I22.2, I22.8, I22.9	Subsequent myocardial infarction
I23.0-I23.8	Current complications following acute myocardial infarction
I24.0	Acute coronary thrombosis not resulting in myocardial infarction
I24.1	Dressler's syndrome
I24.8, I24.9	Other forms of acute ischemic heart disease
I25.5	Ischemic cardiomyopathy
I25.10, I25.110-I25.119	Atherosclerotic heart disease
I25.810, I25.82-I25.84:	Other forms of chronic ischemic heart disease
ICD, International Classification of Diseases.	

Table S2. Missing values of all collected variables.			
Characteristics	Number of values	missing values	Proportion
Gender	3352	0	0.00%
Age	3352	0	0.00%
Weight	3283	69	2.06%
Smoker	3352	0	0.00%
Alcohol abuse	3352	0	0.00%
AKI	3352	0	0.00%
Sepsis	3352	0	0.00%
Congestive heart failure	3352	0	0.00%
Cerebrovascular disease	3352	0	0.00%
Dementia	3352	0	0.00%
Chronic pulmonary disease	3352	0	0.00%
Hypertension	3352	0	0.00%
Diabetes	3352	0	0.00%
Osteoporosis	3352	0	0.00%
APSOI	3352	0	0.00%
SAPSOI	3352	0	0.00%
SOFA	3352	0	0.00%
GCS	3352	0	0.00%
Charlson	3352	0	0.00%
OASIS	3352	0	0.00%
Invasive ventilation	3352	0	0.00%
Statins	3352	0	0.00%
Aspirin	3352	0	0.00%
Antihypertension	3352	0	0.00%
Corticosteroids	3352	0	0.00%
RDW	3351	1	0.03%
Platelet	3351	1	0.03%
RBC	3351	1	0.03%
Creatinine	3352	0	0.00%
BUN	3352	0	0.00%
Total calcium	3106	246	7.34%
INR	3278	74	2.21%
Potassium	3352	0	0.00%
Sodium	3352	0	0.00%

Hemoglobin	3351	1	0.03%
AKI, Acute Kidney Injury; APSIII, Acute Physiology Score III; SAPSII, Simplified Acute Physiology Score II; SOFA, Sequential Organ Failure Assessment; GCS, Glasgow Coma Scale; Charlson, Charlson Comorbidity Index; OASIS, Oxford Acute Severity of Illness Score; RDW, Red Cell Distribution Width; RBC, Red Blood Cell count; BUN, Blood Urea Nitrogen; INR, International Normalized Ratio.			

Table S3. All-cause mortality outcome according to SHR quartiles before PSM.						
Outcome	Overall	SHR				P
		Q1	Q2	Q3	Q4	
n	3352	839	838	837	838	
In-hospital mortality (no/yes, %)	3072/280 (91.6/8.4)	796/43 (94.9/5.1)	784/54 (93.6/6.4)	791/46 (94.5/5.5)	701/137 (83.7/16.3)	<0.001
28-day mortality (no/yes, %)	3039/313 (90.7/9.3)	792/47 (94.4/5.6)	772/66 (92.1/7.9)	774/63 (92.5/7.5)	701/137 (83.7/16.3)	<0.001
90-day mortality (no/yes, %)	2888/464 (86.2/13.8)	748/91 (89.2/10.8)	745/93 (88.9/11.1)	744/93 (88.9/11.1)	651/187 (77.7/22.3)	<0.001
365-day mortality (no/yes, %)	2702/650 (80.6/19.4)	697/142 (83.1/16.9)	706/132 (84.2/15.8)	706/131 (84.3/15.7)	593/245 (70.8/29.2)	<0.001
Length of ICU stay (days, mean (SD))	4.09 (5.67)	3.59 (5.14)	3.75 (5.03)	4.08 (5.76)	4.95 (6.52)	<0.001
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.						

Table S4. All-cause mortality outcome according to SHR sextiles before PSM.								
Outcome	Overall	SHR						P
		S1	S2	S3	S4	S5	S6	
n	3352	560	559	558	558	558	559	
In-hospital mortality (no/yes, %)	3072/280 (91.6/8.4)	529/31 (94.5/5.5)	537/22 (96.1/3.9)	514/44 (92.1/7.9)	528/30 (94.6/5.4)	518/40 (92.8/7.2)	446/113 (79.8/20.2)	<0.001
28-day mortality (no/yes, %)	3039/313 (90.7/9.3)	525/35 (93.8/6.2)	533/26 (95.3/4.7)	506/52 (90.7/9.3)	519/39 (93.0/7.0)	509/49 (91.2/8.8)	447/112 (80.0/20.0)	<0.001
90-day mortality (no/yes, %)	2888/464 (86.2/13.8)	495/65 (88.4/11.6)	514/45 (91.9/8.1)	484/74 (86.7/13.3)	499/59 (89.4/10.6)	485/73 (86.9/13.1)	411/148 (73.5/26.5)	<0.001
365-day mortality (no/yes, %)	2702/650 (80.6/19.4)	459/101 (82.0/18.0)	481/78 (86.0/14.0)	463/95 (83.0/17.0)	473/85 (84.8/15.2)	452/106 (81.0/19.0)	374/185 (66.9/33.1)	<0.001
Length of ICU stay (days, mean (SD))	4.09 (5.67)	3.84 (5.66)	3.46 (4.45)	3.70 (5.07)	3.97 (5.91)	4.26 (5.67)	5.31 (6.80)	<0.001
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.								

Table S5. All-cause mortality outcome according to the mean optimal threshold of SHR before PSM.				
Outcome	Overall	SHR		P
		Low	High	
n	3352	2657	695	
In-hospital mortality (no/yes, %)	3072/280 (91.6/8.4)	2504/153 (94.2/5.8)	568/127 (81.7/18.3)	<0.001
28-day mortality (no/yes, %)	3039/313 (90.7/9.3)	2472/185 (93.0/7.0)	567/128 (81.6/18.4)	<0.001
90-day mortality (no/yes, %)	2888/464 (86.2/13.8)	2362/295 (88.9/11.1)	526/169 (75.7/24.3)	<0.001
365-day mortality (no/yes, %)	2702/650 (80.6/19.4)	2218/439 (83.5/16.5)	484/211 (69.6/30.4)	<0.001
Length of ICU stay (days, mean (SD))	4.09 (5.67)	3.81 (5.33)	5.16 (6.69)	<0.001
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.				

Table S6. All-cause mortality outcome according to the mean optimal threshold of SHR after PSM.				
Outcome	Overall	SHR		P
		Low	High	
n	1340	670	670	
In-hospital mortality (no/yes, %)	1143/197 (85.3/14.7)	590/80 (88.1/11.9)	553/117 (82.5/17.5)	0.005
28-day mortality (no/yes, %)	1143/197 (85.3/14.7)	590/80 (88.1/11.9)	553/117 (82.5/17.5)	0.005
90-day mortality (no/yes, %)	1056/284 (78.8/21.2)	543/127 (81.0/19.0)	513/157 (76.6/23.4)	0.053
365-day mortality (no/yes, %)	972/368 (72.5/27.5)	500/170 (74.6/25.4)	472/198 (70.4/29.6)	0.098
Length of ICU stay (days, mean (SD))	4.86 (6.19)	4.61 (5.57)	5.11 (6.75)	0.135
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.				

Table S7. All-cause mortality outcome according to the mean optimal threshold of SHR after PSM when the time of 28 days was treated as landmark time.

Outcome	Overall	SHR		P
		Low	High	
n	1143	590	553	
90-day mortality (no/yes, %)	1056/87 (92.4/7.6)	543/47 (92.0/8.0)	513/40 (92.8/7.2)	0.722
365-day mortality (no/yes, %)	972/171 (85.0/15.0)	500/90 (84.7/15.3)	472/81 (85.4/14.6)	0.838
Length of ICU stay (days, mean (SD))	4.54 (6.07)	4.21 (5.07)	4.88 (6.96)	0.063
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.				

Table S8. All-cause mortality outcome according to the optimal threshold of SHR for in-hospital mortality after PSM.				
Outcome	Overall	SHR		P
		Low	High	
n	1272	636	636	
In-hospital mortality (no/yes, %)	1081/191 (85.0/15.0)	561/75 (88.2/11.8)	520/116 (81.8/18.2)	0.002
28-day mortality (no/yes, %)	1077/195 (84.7/15.3)	555/81 (87.3/12.7)	522/114 (82.1/17.9)	0.013
90-day mortality (no/yes, %)	1007/265 (79.2/20.8)	523/113 (82.2/17.8)	484/152 (76.1/23.9)	0.009
365-day mortality (no/yes, %)	918/354 (72.2/27.8)	473/163 (74.4/25.6)	445/191 (70.0/30.0)	0.091
Length of ICU stay (days, mean (SD))	5.23 (7.54)	5.26 (8.19)	5.20 (6.83)	0.889
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.				

Table S9. All-cause mortality outcome according to the optimal threshold of SHR for 28-day mortality after PSM.				
Outcome	Overall	SHR		P
		Low	High	
n	1214	607	607	
In-hospital mortality (no/yes, %)	1020/194 (84.0/16.0)	528/79 (87.0/13.0)	492/115 (81.1/18.9)	0.006
28-day mortality (no/yes, %)	1008/206 (83.0/17.0)	515/92 (84.8/15.2)	493/114 (81.2/18.8)	0.108
90-day mortality (no/yes, %)	930/284 (76.6/23.4)	473/134 (77.9/22.1)	457/150 (75.3/24.7)	0.309
365-day mortality (no/yes, %)	846/368 (69.7/30.3)	428/179 (70.5/29.5)	418/189 (68.9/31.1)	0.574
Length of ICU stay (days, mean (SD))	5.13 (6.94)	5.11 (7.14)	5.15 (6.74)	0.928
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.				

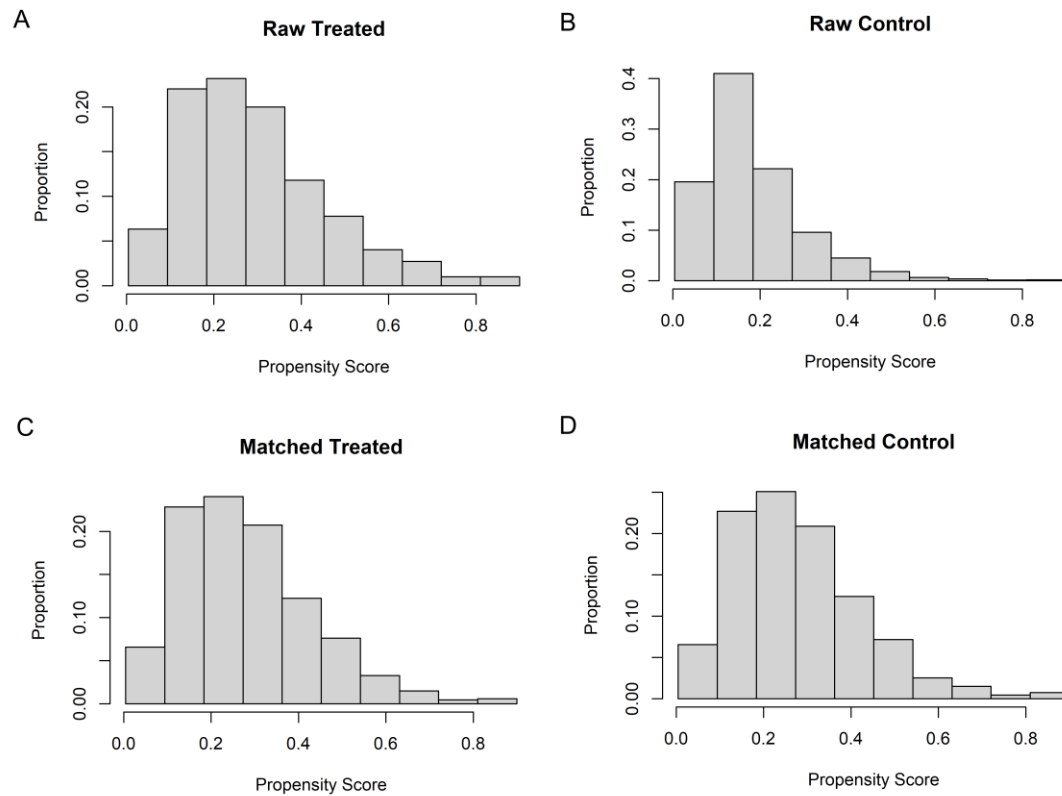
Table S10. All-cause mortality outcome according to the optimal threshold of SHR for 365-day mortality after PSM.				
Outcome	Overall	SHR		P
		Low	High	
n	1468	734	734	
In-hospital mortality (no/yes, %)	1260/208 (85.8/14.2)	650/84 (88.6/11.4)	610/124 (83.1/16.9)	0.004
28-day mortality (no/yes, %)	1249/219 (85.1/14.9)	637/97 (86.8/13.2)	612/122 (83.4/16.6)	0.079
90-day mortality (no/yes, %)	1158/310 (78.9/21.1)	591/143 (80.5/19.5)	567/167 (77.2/22.8)	0.141
365-day mortality (no/yes, %)	1059/409 (72.1/27.9)	542/192 (73.8/26.2)	517/217 (70.4/29.6)	0.162
Length of ICU stay (days, mean (SD))	4.94 (6.77)	4.78 (6.72)	5.11 (6.82)	0.340
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.				

Table S11. Patient's clinical characteristics according to SHR quartiles after PSM.						
Characteristics	Overall	SHR				P
		Q1	Q2	Q3	Q4	
n	1340	182	208	236	714	
Gender (male/female, %)	886/454 (66.1/33.9)	118/64 (64.8/35.2)	141/67 (67.8/32.2)	160/76 (67.8/32.2)	467/247 (65.4/34.6)	0.837
Age (years, mean (SD))	69.97 (11.71)	69.60 (12.84)	70.09 (11.35)	70.08 (11.96)	69.99 (11.44)	0.974
Weight (kg, mean (SD))	85.84 (28.39)	84.81 (21.14)	85.13 (21.61)	86.34 (22.71)	86.14 (33.07)	0.914
Smoker (no/yes, %)	1271/69 (94.9/5.1)	175/7 (96.2/3.8)	196/12 (94.2/5.8)	224/12 (94.9/5.1)	676/38 (94.7/5.3)	0.839
Alcohol abuse (no/yes, %)	1335/5 (99.6/0.4)	181/1 (99.5/0.5)	208/0 (100.0/0.0)	234/2 (99.2/0.8)	712/2 (99.7/0.3)	0.471
AKI (no/yes, %)	198/1142 (14.8/85.2)	22/160 (12.1/87.9)	40/168 (19.2/80.8)	29/207 (12.3/87.7)	107/607 (15.0/85.0)	0.138
Sepsis (no/yes, %)	659/681 (49.2/50.8)	97/85 (53.3/46.7)	106/102 (51.0/49.0)	104/132 (44.1/55.9)	352/362 (49.3/50.7)	0.265
Congestive heart failure (no/yes, %)	520/820 (38.8/61.2)	75/107 (41.2/58.8)	83/125 (39.9/60.1)	84/152 (35.6/64.4)	278/436 (38.9/61.1)	0.664
Cerebrovascular disease (no/yes, %)	1098/242 (81.9/18.1)	143/39 (78.6/21.4)	171/37 (82.2/17.8)	202/34 (85.6/14.4)	582/132 (81.5/18.5)	0.305
Dementia (no/yes, %)	1318/22 (98.4/1.6)	180/2 (98.9/1.1)	205/3 (98.6/1.4)	232/4 (98.3/1.7)	701/13 (98.2/1.8)	0.912
Chronic pulmonary disease (no/yes, %)	1045/295 (78.0/22.0)	138/44 (75.8/24.2)	166/42 (79.8/20.2)	182/54 (77.1/22.9)	559/155 (78.3/21.7)	0.792

Hypertension (no/yes, %)	878/462 (65.5/34.5)	117/65 (64.3/35.7)	135/73 (64.9/35.1)	153/83 (64.8/35.2)	473/241 (66.2/33.8)	0.946
Diabetes (no/yes, %)	582/758 (43.4/56.6)	65/117 (35.7/64.3)	109/99 (52.4/47.6)	103/133 (43.6/56.4)	305/409 (42.7/57.3)	0.010
APSIH (mean (SD))	47.64 (20.89)	46.09 (20.98)	46.22 (20.43)	49.31 (21.53)	47.91 (20.77)	0.310
SAPSII (mean (SD))	39.92 (13.60)	39.14 (13.54)	38.78 (13.28)	40.84 (13.46)	40.15 (13.75)	0.345
SOFA (mean (SD))	6.56 (3.93)	6.26 (3.55)	6.52 (4.13)	6.92 (3.91)	6.53 (3.96)	0.369
GCS (mean (SD))	12.33 (3.92)	12.42 (3.84)	12.38 (3.80)	12.09 (4.10)	12.38 (3.91)	0.780
Charlson (mean (SD))	6.56 (2.67)	6.48 (2.85)	6.39 (2.71)	6.64 (2.61)	6.61 (2.63)	0.700
OASIS (mean (SD))	33.32 (8.31)	33.07 (7.84)	32.64 (7.59)	33.92 (8.25)	33.39 (8.64)	0.424
Invasive ventilation (no/yes, %)	579/761 (43.2/56.8)	78/104 (42.9/57.1)	99/109 (47.6/52.4)	99/137 (41.9/58.1)	303/411 (42.4/57.6)	0.579
Statins (no/yes, %)	1130/210 (84.3/15.7)	147/35 (80.8/19.2)	173/35 (83.2/16.8)	211/25 (89.4/10.6)	599/115 (83.9/16.1)	0.083
Aspirin (no/yes, %)	189/1151 (14.1/85.9)	20/162 (11.0/89.0)	37/171 (17.8/82.2)	36/200 (15.3/84.7)	96/618 (13.4/86.6)	0.231
Antihypertension (no/yes, %)	135/1205 (10.1/89.9)	21/161 (11.5/88.5)	28/180 (13.5/86.5)	19/217 (8.1/91.9)	67/647 (9.4/90.6)	0.212
Corticosteroids (no/yes, %)	1154/186 (86.1/13.9)	160/22 (87.9/12.1)	177/31 (85.1/14.9)	203/33 (86.0/14.0)	614/100 (86.0/14.0)	0.877
Osteoporosis (no/yes, %)	1298/42 (96.9/3.1)	174/8 (95.6/4.4)	198/10 (95.2/4.8)	231/5 (97.9/2.1)	695/19 (97.3/2.7)	0.241
RDW (%, mean (SD))	14.26 (1.85)	14.33 (1.97)	14.30 (2.01)	14.25 (1.79)	14.23 (1.79)	0.893
Platelet ($\times 10^9/L$, mean (SD))	228.91 (88.99)	226.10 (78.05)	221.98 (79.98)	224.36 (89.13)	233.14 (93.86)	0.299

RBC ($\times 10^{12}$ /L, mean (SD))	3.91 (0.76)	3.96 (0.75)	3.91 (0.77)	3.89 (0.71)	3.91 (0.78)	0.828
Creatinine (mg/dL, mean (SD))	1.71 (1.65)	1.60 (1.55)	1.80 (1.83)	1.68 (1.61)	1.72 (1.63)	0.671
BUN (mg/dL, mean (SD))	30.24 (20.62)	29.73 (21.56)	30.02 (21.66)	31.73 (21.14)	29.93 (19.91)	0.676
Total calcium (mg/dL, mean (SD))	8.67 (0.73)	8.66 (0.88)	8.68 (0.66)	8.68 (0.63)	8.67 (0.73)	0.994
INR (mean (SD))	1.35 (0.70)	1.41 (0.81)	1.40 (0.66)	1.32 (0.48)	1.33 (0.74)	0.359
Potassium (mEq/L, mean (SD))	4.33 (0.74)	4.24 (0.67)	4.31 (0.72)	4.40 (0.73)	4.35 (0.76)	0.144
Sodium (mEq/L, mean (SD))	136.94 (4.74)	137.74 (3.89)	136.48 (5.22)	137.22 (4.30)	136.77 (4.90)	0.030
Hemoglobin (g/dL, mean (SD))	11.82 (2.28)	11.80 (2.13)	11.80 (2.24)	11.87 (2.15)	11.82 (2.38)	0.989
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; AKI, Acute Kidney Injury; APSIII, Acute Physiology Score III; SAPSII, Simplified Acute Physiology Score II; SOFA, Sequential Organ Failure Assessment; GCS, Glasgow Coma Scale; Charlson, Charlson Comorbidity Index; OASIS, Oxford Acute Severity of Illness Score; RDW, Red Cell Distribution Width; RBC, Red Blood Cell count; BUN, Blood Urea Nitrogen; INR, International Normalized Ratio.						

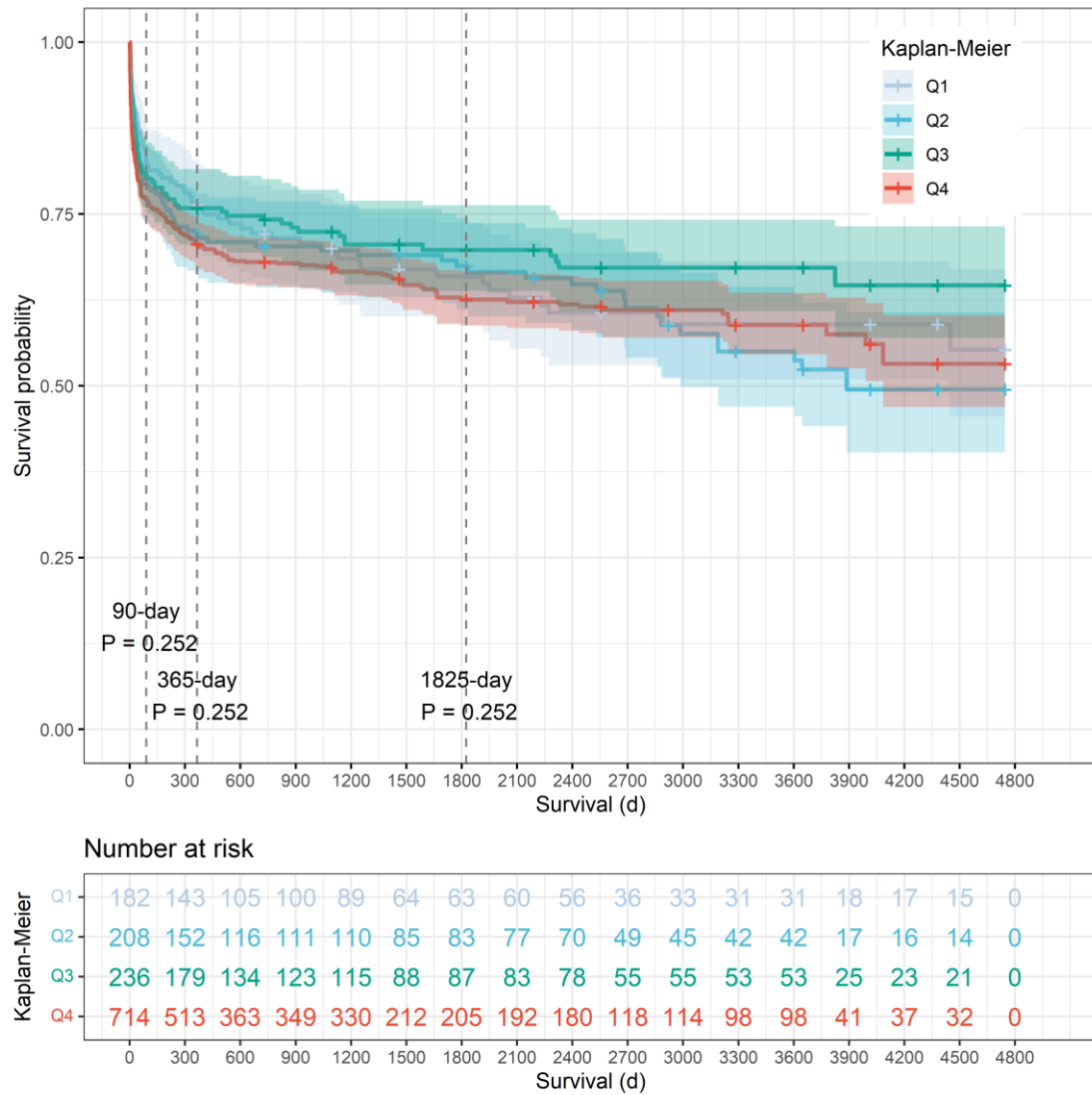
Table S12. All-cause mortality outcome according to the SHR quartiles after PSM.						
Outcome	Overall	SHR				P
		Q1	Q2	Q3	Q4	
n	1340	182	208	236	714	
In-hospital mortality (no/yes, %)	1143/197 (85.3/14.7)	166/16 (91.2/8.8)	179/29 (86.1/13.9)	205/31 (86.9/13.1)	593/121 (83.1/16.9)	0.037
28-day mortality (no/yes, %)	1143/197 (85.3/14.7)	164/18 (90.1/9.9)	180/28 (86.5/13.5)	206/30 (87.3/12.7)	593/121 (83.1/16.9)	0.065
90-day mortality (no/yes, %)	1056/284 (78.8/21.2)	150/32 (82.4/17.6)	165/43 (79.3/20.7)	190/46 (80.5/19.5)	551/163 (77.2/22.8)	0.390
365-day mortality (no/yes, %)	972/368 (72.5/27.5)	139/43 (76.4/23.6)	150/58 (72.1/27.9)	179/57 (75.8/24.2)	504/210 (70.6/29.4)	0.259
Length of ICU stay (days, mean (SD))	4.86 (6.19)	3.95 (3.86)	4.69 (5.08)	4.91 (6.40)	5.12 (6.85)	0.149
PSM, Propensity Score Matching; SHR, Stress Hyperglycemia Ratio; SD, Standard Deviation; ICU, Intensive Care Unit.						



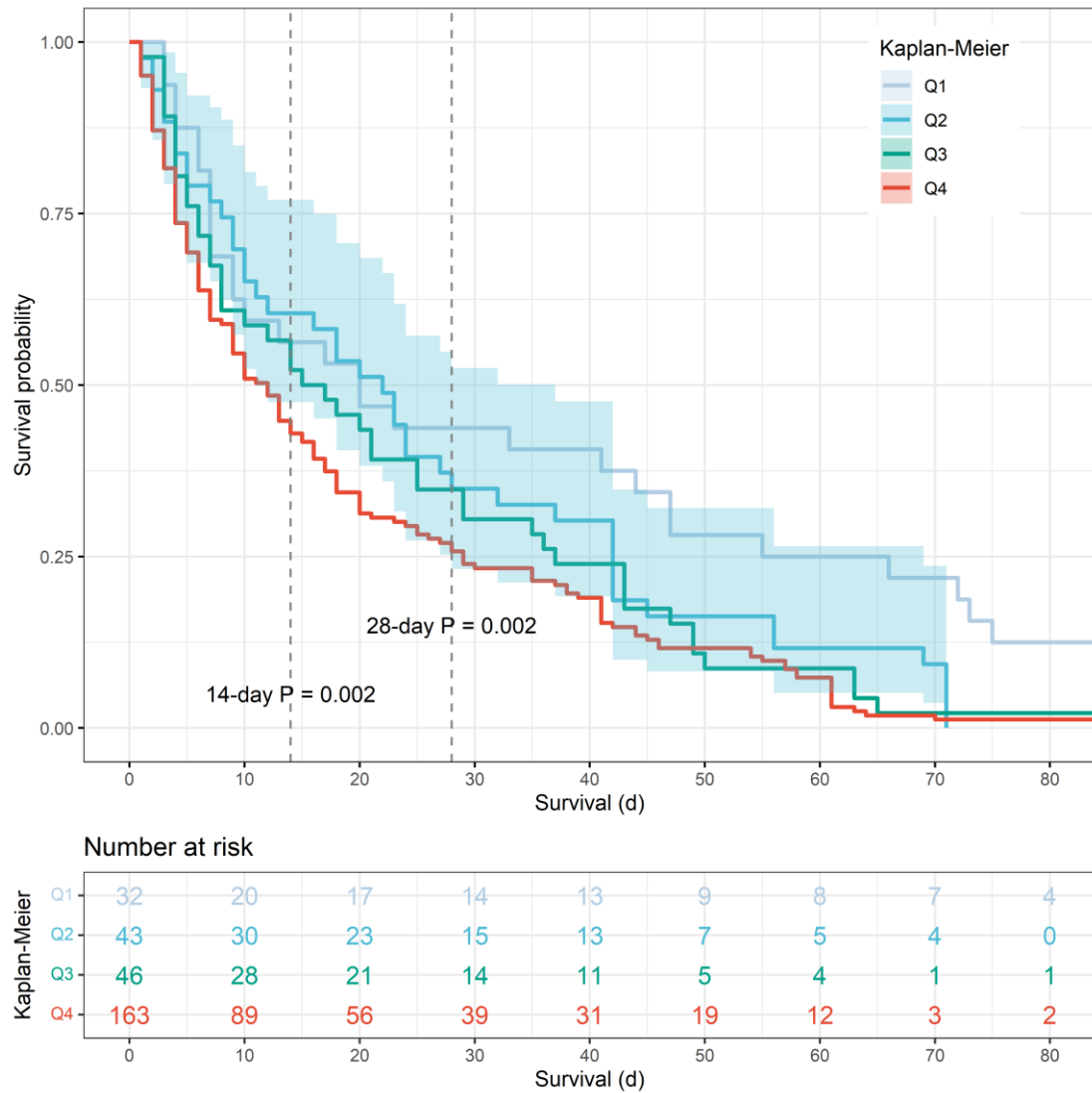
Supplementary Figure S1. Histogram of propensity score distribution before and after PSM. Pre-matching distributions showing misalignment between raw treated (A) and raw control (B) groups. Post-matching distributions demonstrating perfect overlap between matched treated (C) and control (D) groups after PSM, confirming achieved balance. PSM, Propensity Score Matching.



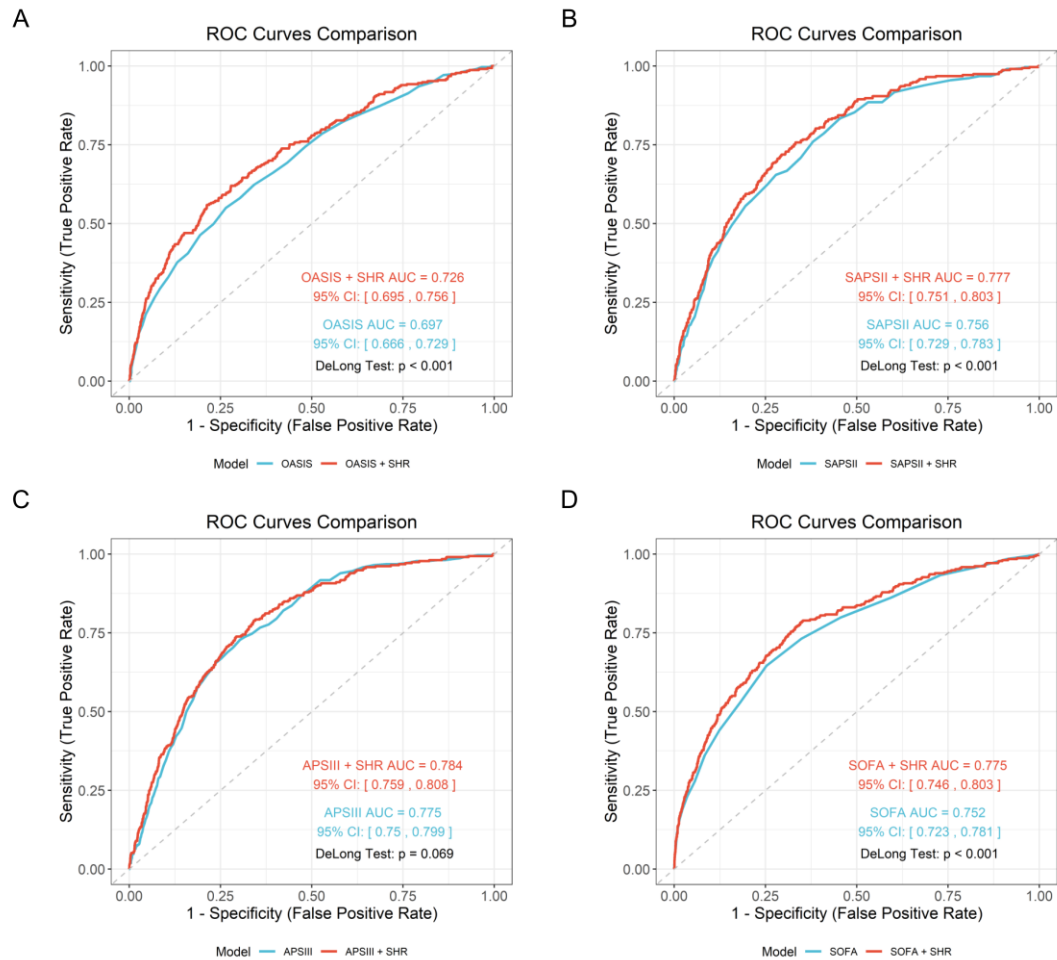
Supplementary Figure S2. Propensity score distribution before and after PSM. Density plots showing non-overlapping propensity score distributions between unmatched treated and unmatched control units prior to matching, indicating substantial baseline differences. Post-matching density plots demonstrating successful overlap between matched treated and control units within the region of common support. PSM, Propensity Score Matching.



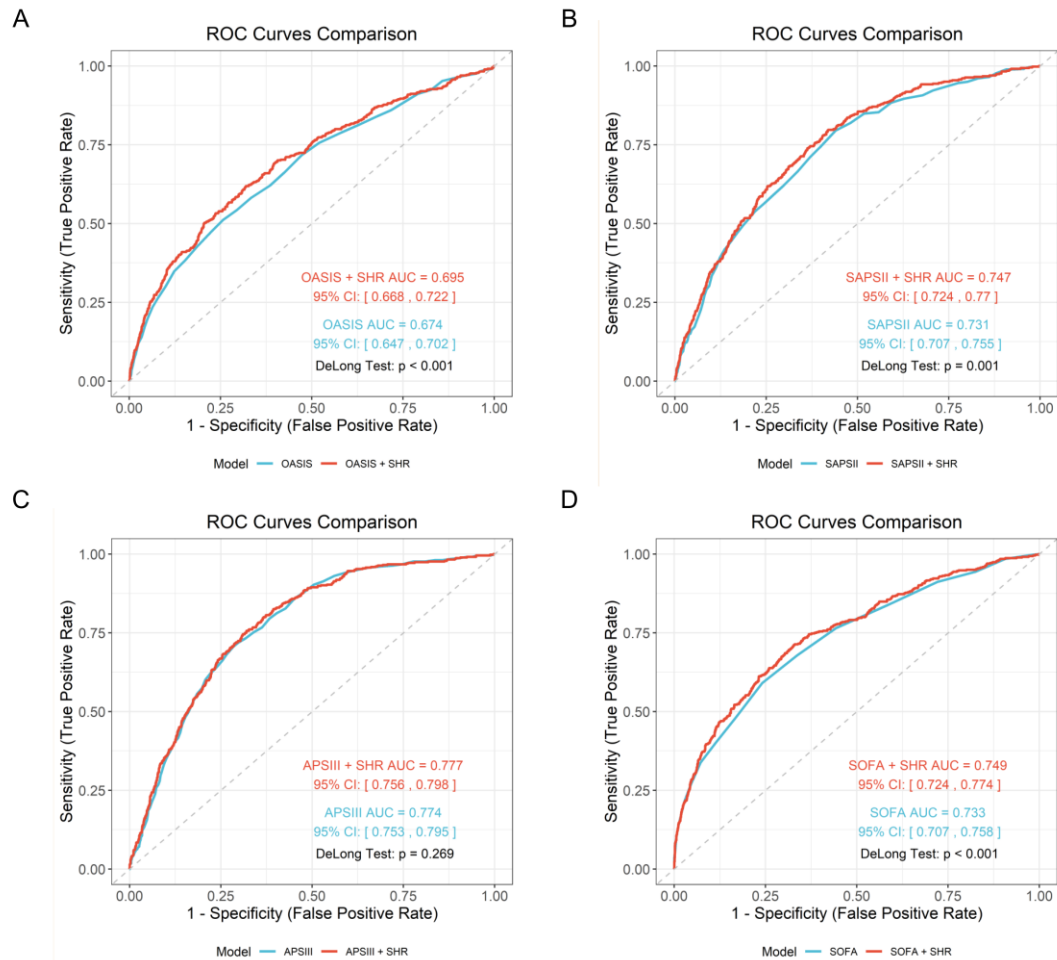
Supplementary Figure S3. Kaplan-Meier survival curves by SHR quartiles after PSM. Post-PSM survival analysis showing attenuated but persistent survival differences across SHR quartiles over 365-day follow-up (log-rank $P=0.252$). PSM, Propensity Score Matching.



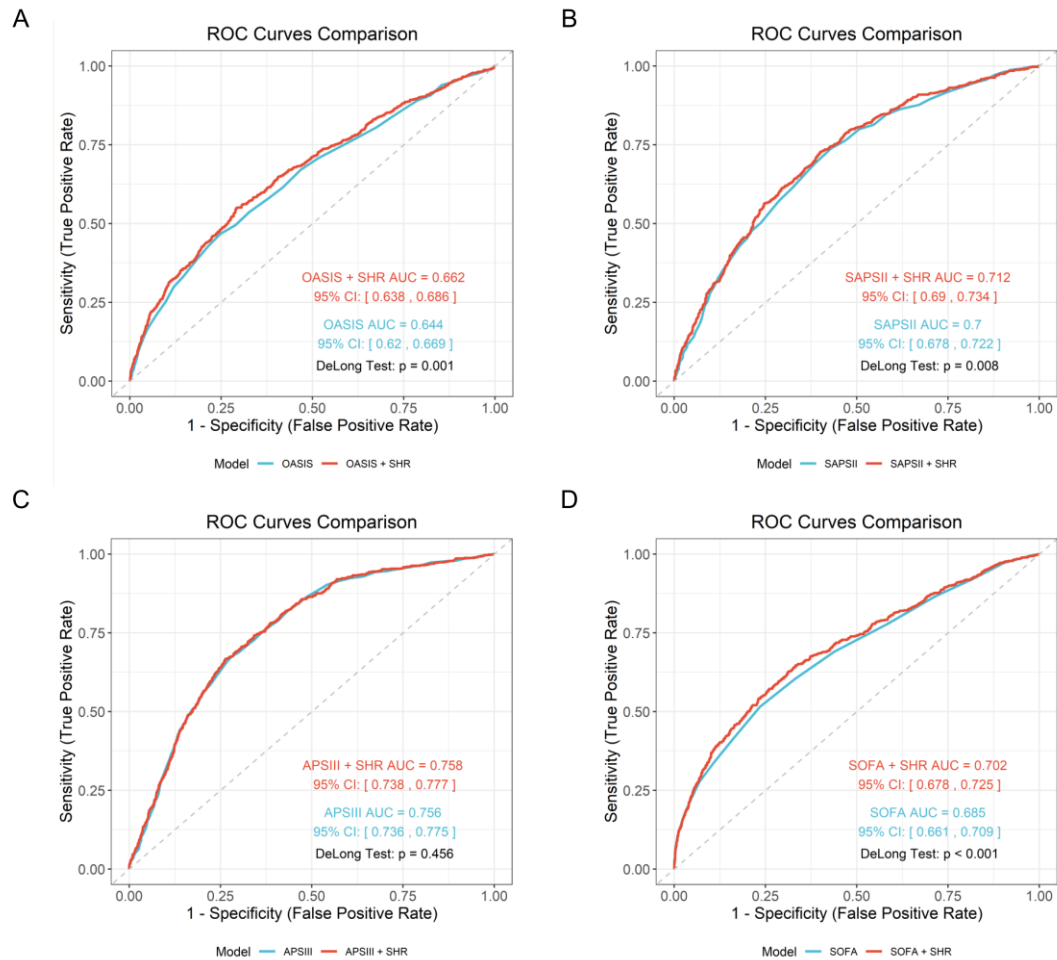
Supplementary Figure S4. Early mortality analysis by SHR quartiles after PSM. Post-PSM Kaplan-Meier curves demonstrating remaining significant differences in 14-day and 28-day mortality across SHR quartiles (log-rank $P=0.002$). PSM, Propensity Score Matching.



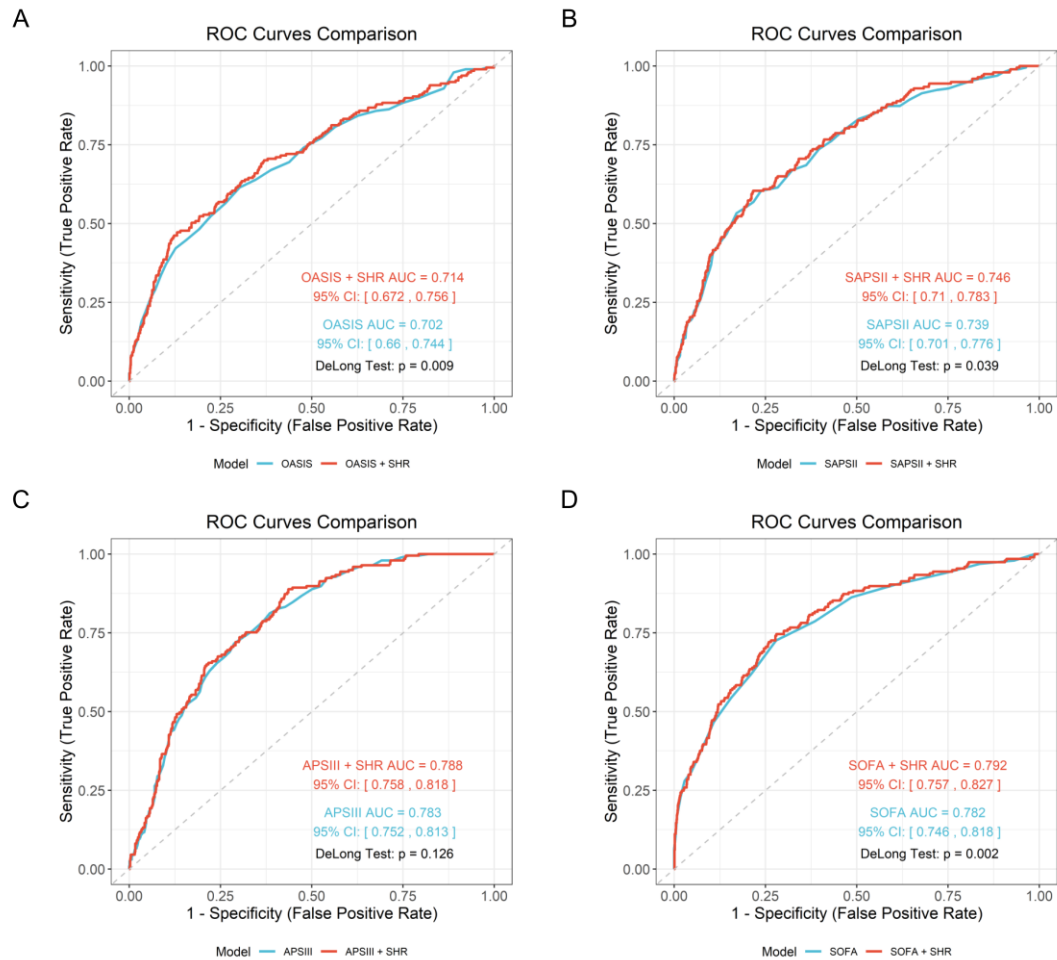
Supplementary Figure S5. ROC analysis for 28-day mortality prediction before PSM. A. OASIS; B. SAPSII; C. APSIII; D. SOFA. PSM, Propensity Score Matching; OASIS, Oxford Acute Severity of Illness Score; SAPSII, Simplified Acute Physiology Score II; APSIII, Acute Physiology Score III; SOFA, Sequential Organ Failure Assessment.



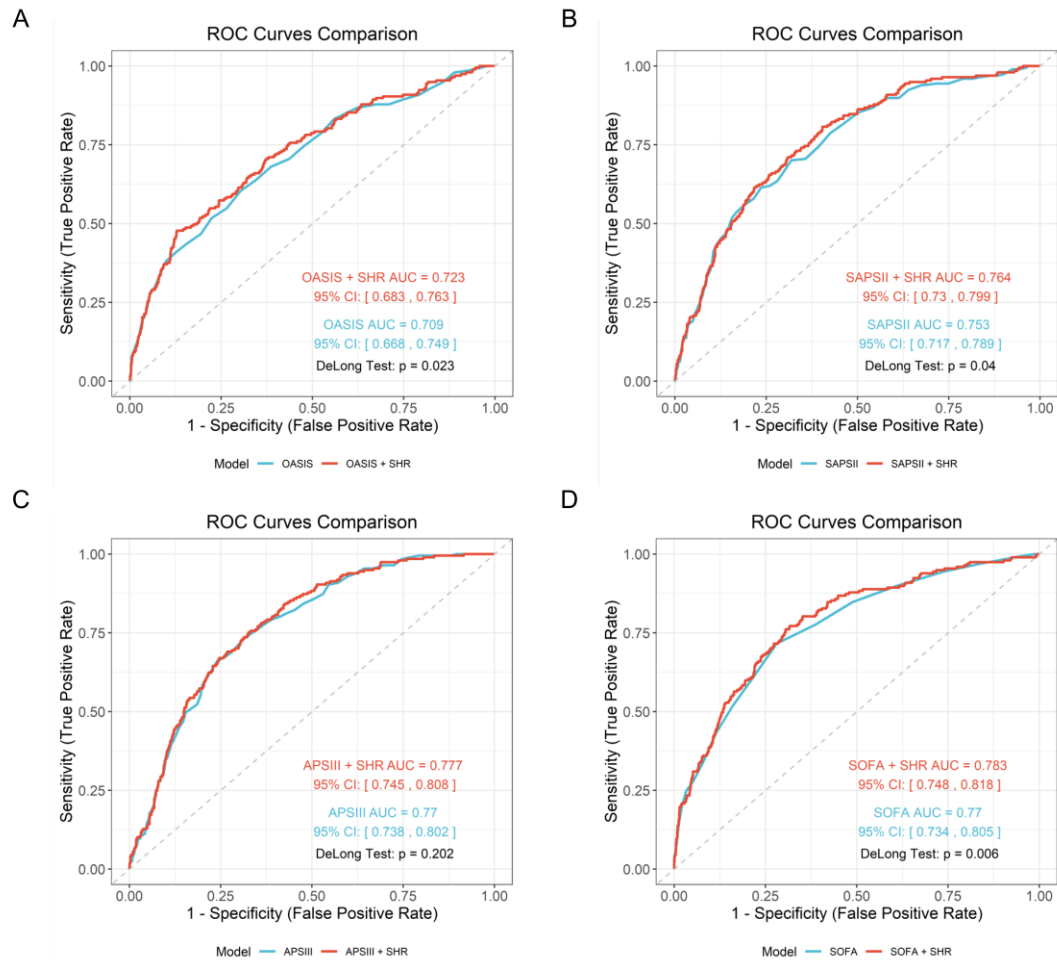
Supplementary Figure S6. ROC analysis for 90-day mortality prediction before PSM. A. OASIS; B. SAPSII; C. APSIII; D. SOFA. PSM, Propensity Score Matching; OASIS, Oxford Acute Severity of Illness Score; SAPSII, Simplified Acute Physiology Score II; APSIII, Acute Physiology Score III; SOFA, Sequential Organ Failure Assessment.



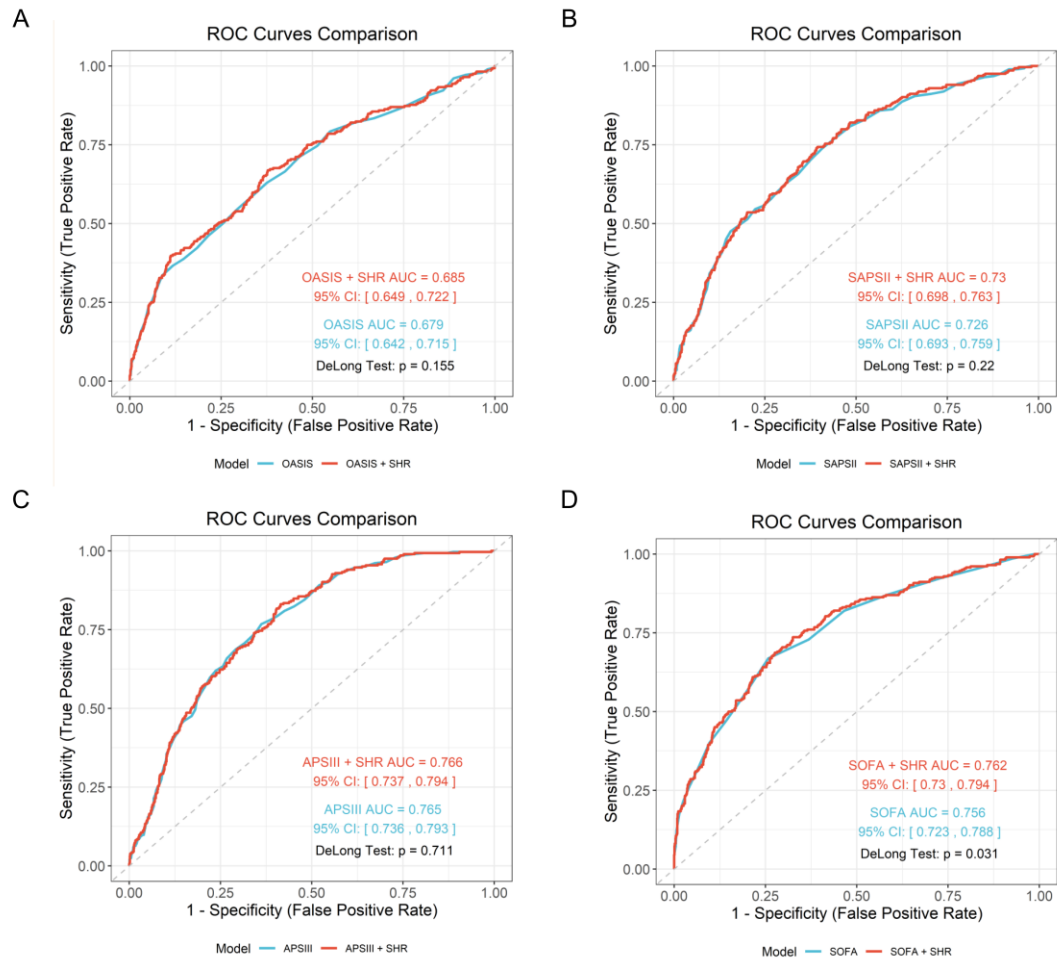
Supplementary Figure S7. ROC analysis for 365-day mortality prediction before PSM. A. OASIS; B. SAPSII; C. APSIII; D. SOFA. PSM, Propensity Score Matching; OASIS, Oxford Acute Severity of Illness Score; SAPSII, Simplified Acute Physiology Score II; APSIII, Acute Physiology Score III; SOFA, Sequential Organ Failure Assessment.



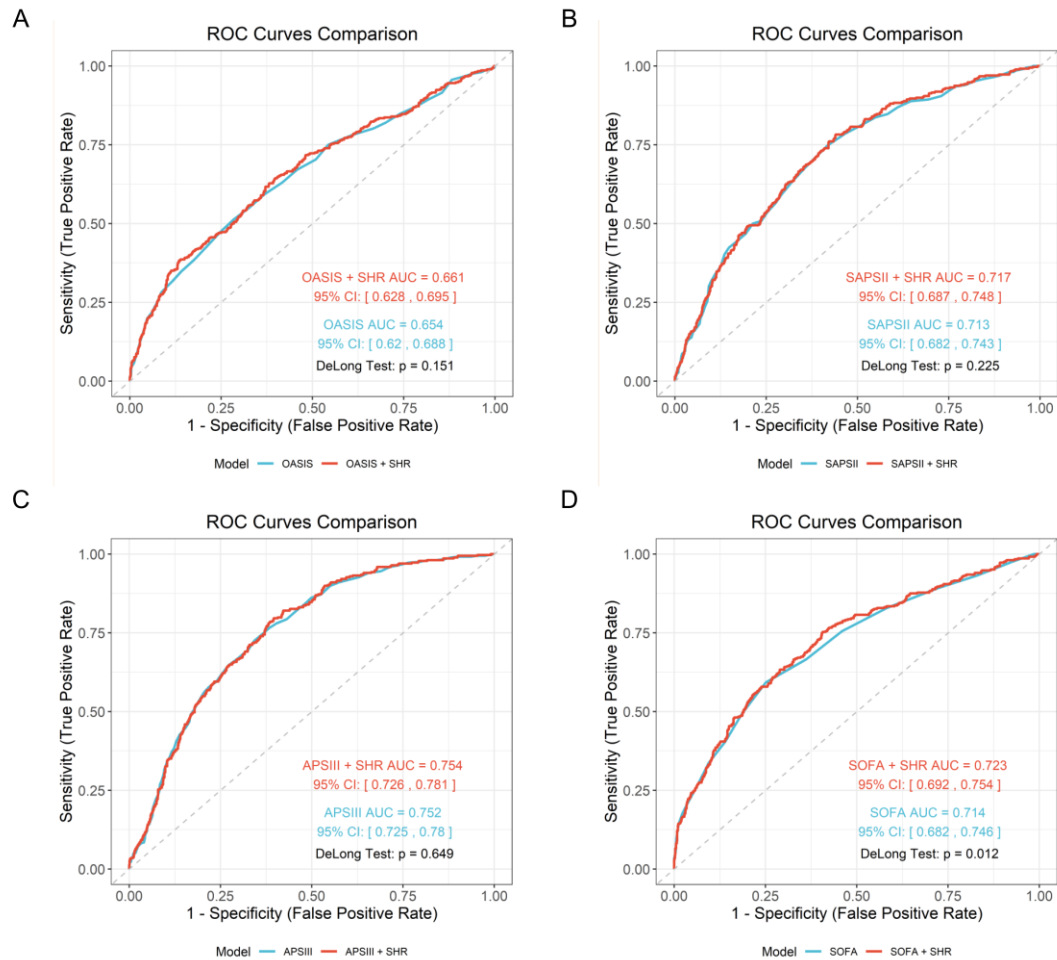
Supplementary Figure S8. ROC analysis for in-hospital mortality prediction after PSM. A. OASIS; B. SAPSII; C. APSIII; D. SOFA. PSM, Propensity Score Matching; OASIS, Oxford Acute Severity of Illness Score; SAPSII, Simplified Acute Physiology Score II; APSIII, Acute Physiology Score III; SOFA, Sequential Organ Failure Assessment.



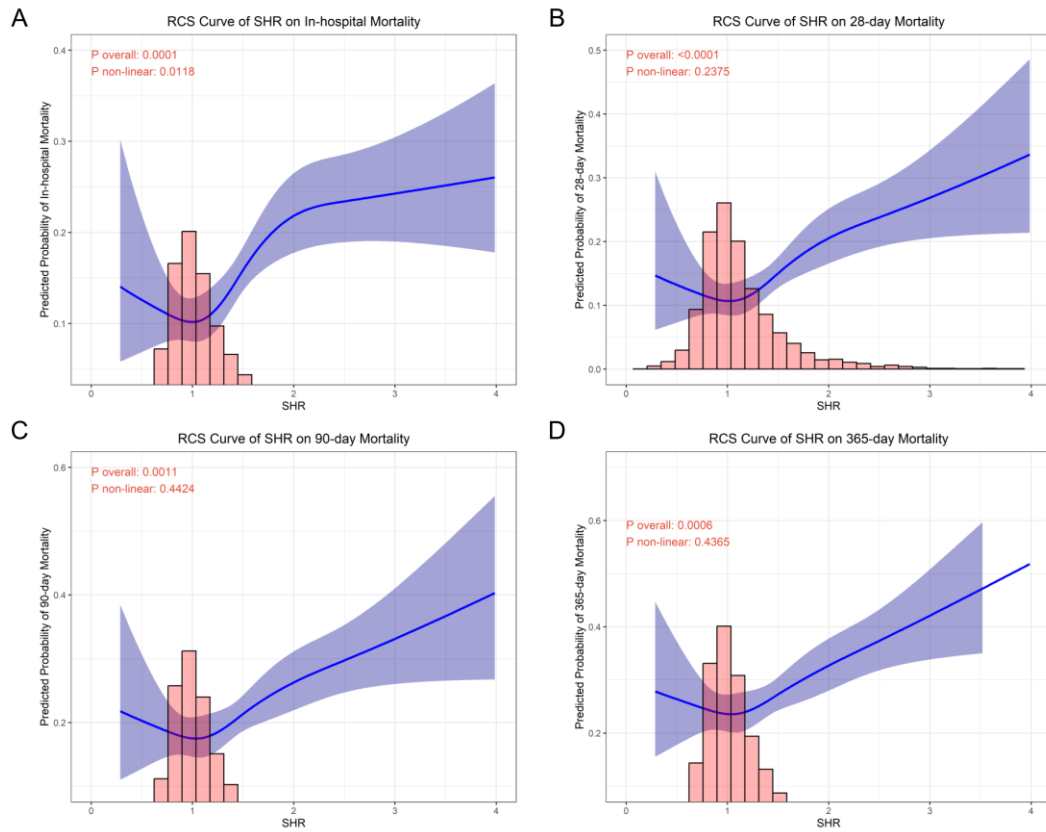
Supplementary Figure S9. ROC analysis for 28-day hospital mortality prediction after PSM. A. OASIS; B. SAPSII; C. APSIII; D. SOFA. PSM, Propensity Score Matching; OASIS, Oxford Acute Severity of Illness Score; SAPSII, Simplified Acute Physiology Score II; APSIII, Acute Physiology Score III; SOFA, Sequential Organ Failure Assessment.



Supplementary Figure S10. ROC analysis for 90-day hospital mortality prediction after PSM. A. OASIS; B. SAPSII; C. APSIII; D. SOFA. PSM, Propensity Score Matching; OASIS, Oxford Acute Severity of Illness Score; SAPSII, Simplified Acute Physiology Score II; APSIII, Acute Physiology Score III; SOFA, Sequential Organ Failure Assessment.



Supplementary Figure S11. ROC analysis for 365-day hospital mortality prediction after PSM. A. OASIS; B. SAPSII; C. APSIII; D. SOFA. PSM, Propensity Score Matching; OASIS, Oxford Acute Severity of Illness Score; SAPSII, Simplified Acute Physiology Score II; APSIII, Acute Physiology Score III; SOFA, Sequential Organ Failure Assessment.



Supplementary Figure S12. Restricted cubic spline analysis of SHR-mortality relationships after PSM. Associations between continuous SHR values and mortality risk at (A) in-hospital, (B) 28-day, (C) 90-day, and (D) 365-day timepoints. PSM, Propensity Score Matching.