

Supplementary Material 1

Supplementary Figure legend

Supplementary Fig. 1 Flowchart of study population.

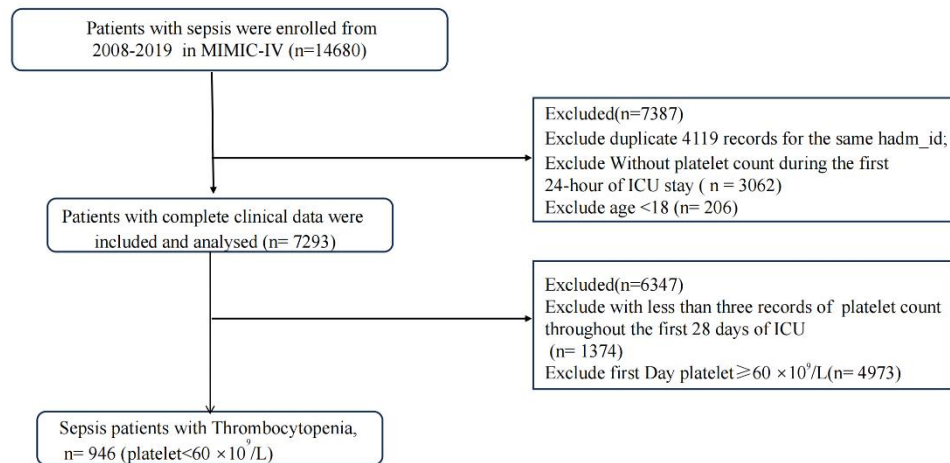
Supplementary Fig. 2 Forest plot of subgroup analyses.

Supplementary Fig. 3 Kaplan-Meier curves for different groups.

Supplementary Table Legend

Supplementary Table 1 Baseline characteristics of the study population stratified by platelet trajectories.

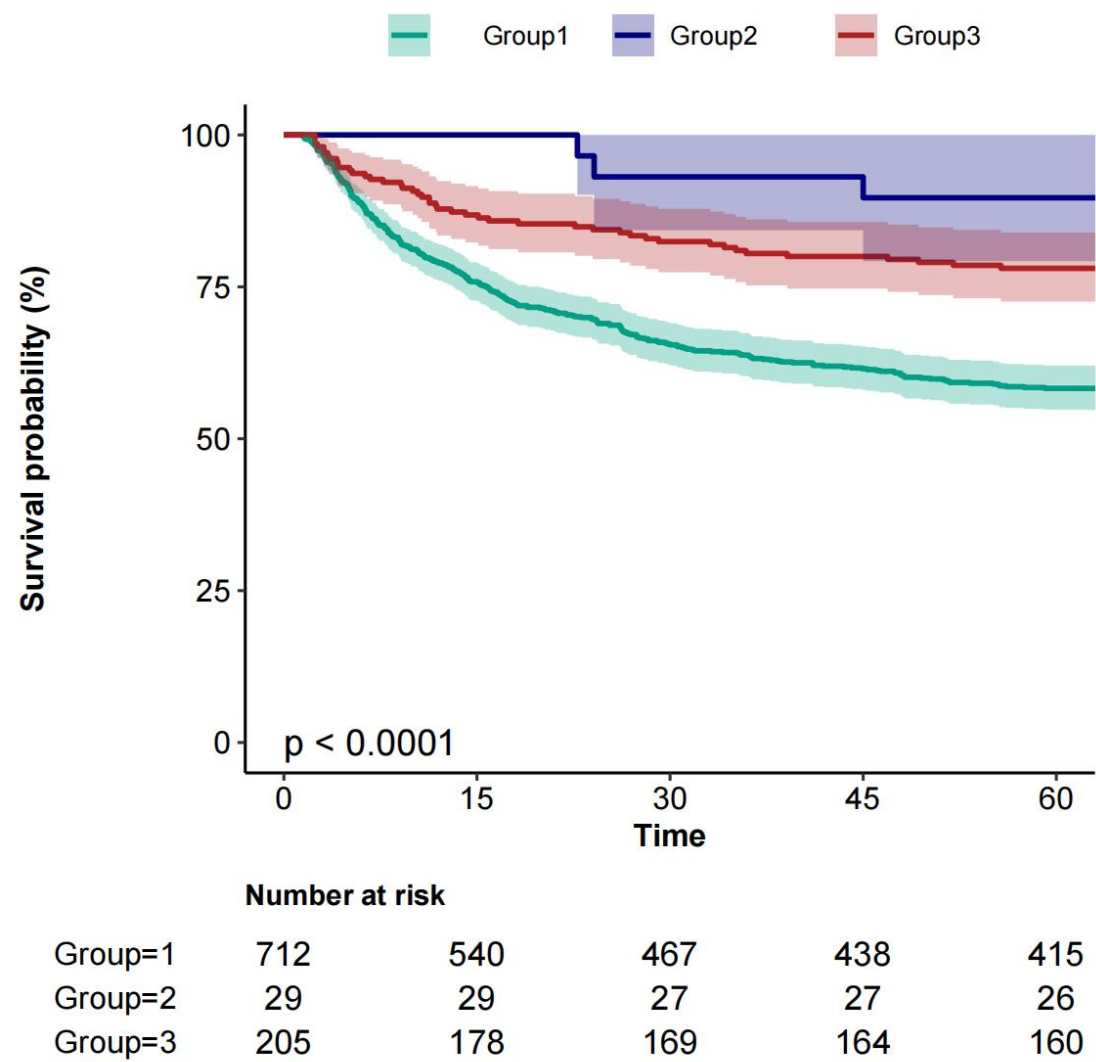
Supplementary Table 2 Relationship between different platelet trajectories and 60-day mortality in different models with primary data.



Supplementary Fig. 1 Flowchart of study population.

Group	Subgroup	Class	Total	Event(%)	HR 95%CI		P.for interaction
sex	Total	Total	946	345(36.47)	0.94 (0.89~0.99)		0.004
	female						0.185
		class1	194	76 (39.2)	1(Ref)		
		class2	83	36 (43.4)	1.15 (0.77~1.71)		
		class3	15	3 (20)	0.43 (0.14~1.36)		
	male	class4	86	16 (18.6)	0.42 (0.25~0.73)		
		class1	298	120 (40.3)	1(Ref)		
		class2	137	65 (47.4)	1.19 (0.88~1.6)		
		class3	14	0 (0)	0 (0~Inf)		
class4	119	29 (24.4)	0.53 (0.35~0.8)				
age	age<60	class1	248	78 (31.5)	1(Ref)		0.325
		class2	87	30 (34.5)	1.11 (0.73~1.69)		
		class3	16	0 (0)	0 (0~Inf)		
		class4	102	18 (17.6)	0.51 (0.31~0.85)		
	age>=60	class1	244	118 (48.4)	1(Ref)		
		class2	133	71 (53.4)	1.11 (0.83~1.49)		
		class3	13	3 (23.1)	0.37 (0.12~1.17)		
		class4	103	27 (26.2)	0.46 (0.3~0.7)		
myocardial infarct	No	class1	454	174 (38.3)	1(Ref)		0.104
		class2	197	90 (45.7)	1.24 (0.96~1.6)		
		class3	28	2 (7.1)	0.15 (0.04~0.6)		
		class4	186	38 (20.4)	0.47 (0.33~0.67)		
	Yes	class1	38	22 (57.9)	1(Ref)		
		class2	23	11 (47.8)	0.68 (0.33~1.4)		
		class3	1	1 (100)	1.75 (0.23~13.12)		
		class4	19	7 (36.8)	0.55 (0.23~1.28)		
congestive heart failure	No	class1	402	151 (37.6)	1(Ref)		0.264
		class2	169	75 (44.4)	1.21 (0.91~1.59)		
		class3	24	1 (4.2)	0.09 (0.01~0.63)		
		class4	169	37 (21.9)	0.52 (0.36~0.74)		
	Yes	class1	90	45 (50)	1(Ref)		
		class2	51	26 (51)	1.02 (0.63~1.65)		
		class3	5	2 (40)	0.68 (0.17~2.82)		
		class4	36	8 (22.2)	0.38 (0.18~0.8)		
peripheral vascular disease	No	class1	464	177 (38.1)	1(Ref)		0.311
		class2	211	95 (45)	1.2 (0.93~1.54)		
		class3	28	3 (10.7)	0.23 (0.07~0.71)		
		class4	190	42 (22.1)	0.52 (0.37~0.73)		
	Yes	class1	28	19 (67.9)	1(Ref)		
		class2	9	6 (66.7)	1.35 (0.54~3.4)		
		class3	1	0 (0)	0 (0~Inf)		
		class4	15	3 (20)	0.2 (0.06~0.69)		
cerebro-vascular disease	No	class1	448	172 (38.4)	1(Ref)		0.783
		class2	196	87 (44.4)	1.18 (0.91~1.53)		
		class3	28	3 (10.7)	0.23 (0.07~0.71)		
		class4	183	37 (20.2)	0.46 (0.32~0.66)		
	Yes	class1	44	24 (54.5)	1(Ref)		
		class2	24	14 (58.3)	1.02 (0.53~1.97)		
		class3	1	0 (0)	0 (0~Inf)		
		class4	22	8 (36.4)	0.62 (0.28~1.38)		
chronic pulmonary disease	No	class1	395	150 (38)	1(Ref)		0.146
		class2	169	81 (47.9)	1.33 (1.02~1.74)		
		class3	24	3 (12.5)	0.27 (0.09~0.84)		
		class4	162	36 (22.2)	0.53 (0.37~0.76)		
	Yes	class1	97	46 (47.4)	1(Ref)		
		class2	51	20 (39.2)	0.74 (0.43~1.24)		
		class3	5	0 (0)	0 (0~Inf)		
		class4	43	9 (20.9)	0.36 (0.18~0.73)		
liver disease	No	class1	205	94 (45.9)	1(Ref)		0.472
		class2	143	68 (47.6)	0.99 (0.73~1.36)		
		class3	28	3 (10.7)	0.18 (0.06~0.55)		
		class4	136	29 (21.3)	0.38 (0.25~0.58)		
	Yes	class1	287	102 (35.5)	1(Ref)		
		class2	77	33 (42.9)	1.28 (0.86~1.9)		
		class3	1	0 (0)	0 (0~Inf)		
		class4	69	16 (23.2)	0.61 (0.36~1.04)		
diabetes	No	class1	386	150 (38.9)	1(Ref)		0.135
		class2	162	76 (46.9)	1.2 (0.91~1.58)		
		class3	24	2 (8.3)	0.17 (0.04~0.69)		
		class4	164	30 (18.3)	0.4 (0.27~0.59)		
	Yes	class1	106	46 (43.4)	1(Ref)		
		class2	58	25 (43.1)	1.08 (0.67~1.76)		
		class3	5	1 (20)	0.38 (0.05~2.74)		
		class4	41	15 (36.6)	0.86 (0.48~1.55)		
renal disease	No	class1	391	156 (39.9)	1(Ref)		0.894
		class2	171	79 (46.2)	1.19 (0.9~1.55)		
		class3	24	2 (8.3)	0.17 (0.04~0.67)		
		class4	167	36 (21.6)	0.48 (0.33~0.69)		
	Yes	class1	101	40 (39.6)	1(Ref)		
		class2	49	22 (44.9)	1.14 (0.68~1.92)		
		class3	5	1 (20)	0.42 (0.06~3.05)		
		class4	38	9 (23.7)	0.53 (0.26~1.09)		
malignant cancer	No	class1	349	132 (37.8)	1(Ref)		0.052
		class2	99	38 (38.4)	0.99 (0.69~1.42)		
		class3	21	0 (0)	0 (0~Inf)		
		class4	162	33 (20.4)	0.47 (0.32~0.69)		
	Yes	class1	143	64 (44.8)	1(Ref)		
		class2	121	63 (52.1)	1.23 (0.87~1.74)		
		class3	8	3 (37.5)	0.71 (0.22~2.27)		
		class4	43	12 (27.9)	0.57 (0.31~1.06)		
					0.25 0.50 1.0 2.0 4.0	Effect (95%CI)	

Supplementary Fig. 2 Forest plot of subgroup analyses.



Supplementary Fig. 3 Kaplan-Meier curves for different groups.

Supplementary Table 1 Baseline characteristics of the study population stratified by platelet trajectories.

Variables	Total (n = 946)	1 (n = 492)	2 (n = 220)	3 (n = 29)	4 (n = 205)	P
Age (years)(mean±SD)	60.6 ± 14.9	60.5 ± 14.0	62.6 ± 15.2	54.6 ± 20.8	59.4 ± 15.4	0.02
Sex (n,%)						0.471
Female	378 (40.0)	194 (39.4)	83 (37.7)	15 (51.7)	86 (42)	
Male	568 (60.0)	298 (60.6)	137 (62.3)	14 (48.3)	119 (58)	
Value (median,IQR)	43.0 (32.0, 52.0)	48.0 (40.0, 54.0)	28.0 (19.0, 36.0)	38.0 (27.0, 50.0)	45.0 (36.0, 54.0)	< 0.001
Heart rate (beats/min)(mean±SD)	91.6 ± 16.8	90.3 ± 16.4	93.3 ± 17.1	92.9 ± 16.0	92.7 ± 17.5	0.095
SBP (mmHg)(mean±SD)	113.7 ± 15.8	112.9 ± 15.4	114.3 ± 15.7	117.5 ± 14.6	114.7 ± 17.0	0.245
DBP (mmHg)(mean±SD)	63.0 ± 10.8	62.1 ± 10.6	62.4 ± 10.0	67.2 ± 12.4	65.2 ± 11.4	< 0.001
Respiratory rate (beats/min)(mean±SD)	20.7 ± 4.8	20.2 ± 4.7	21.4 ± 5.0	21.9 ± 5.2	21.2 ± 4.8	0.002
Temperature (°C)(mean±SD)	37.0 ± 0.5	36.9 ± 0.5	37.0 ± 0.5	37.0 ± 0.4	37.1 ± 0.6	< 0.001
SpO2 (%) (mean±SD)	96.6 ± 2.1	96.6 ± 2.3	96.4 ± 1.9	96.9 ± 1.9	96.6 ± 1.7	0.527
Glucose (mol/L)(median,IQR)	131.0 (108.0, 168.0)	130.5 (107.0, 168.0)	136.2 (110.7, 173.9)	129.0 (117.3, 170.4)	130.5 (106.4, 161.0)	0.261
Hematocrit (%) (median,IQR)	24.4 (21.1, 29.4)	24.3 (21.1, 28.5)	22.4 (19.7, 26.2)	26.6 (21.7, 31.1)	28.0 (23.2, 32.7)	< 0.001
Hemoglobin (g/dl)(mean±SD)	8.5 ± 2.1	8.4 ± 2.0	7.7 ± 1.8	9.1 ± 2.4	9.4 ± 2.0	< 0.001
Platelets (×10 ⁹ /L)(median,IQR)	31.0 (20.0, 43.0)	36.0 (26.0, 45.0)	19.0 (11.0, 26.0)	26.0 (14.0, 40.0)	36.0 (24.0, 46.0)	< 0.001
WBC (×10 ¹² /L)(median,IQR)	7.6 (3.9, 13.2)	8.7 (4.8, 13.9)	5.0 (1.5, 10.6)	11.3 (4.1, 17.0)	7.5 (4.4, 12.7)	< 0.001
Anion gap (mmol/L)(median,IQR)	16.0 (14.0, 20.0)	16.0 (14.0, 20.0)	16.0 (13.0, 19.0)	15.0 (13.0, 16.0)	17.0 (14.0, 20.0)	0.101
Bicarbonate (mmol/l)(mean±SD)	19.8 ± 4.8	19.7 ± 4.9	19.8 ± 4.6	20.8 ± 4.5	19.7 ± 4.6	0.725
Urea nitrogen (mg/dl)(median,IQR)	32.0 (19.0, 52.0)	36.0 (21.0, 54.0)	27.0 (18.0, 48.0)	21.0 (15.0, 36.0)	32.0 (18.0, 54.0)	0.003
Calcium (mg/dl)(mean±SD)	7.7 ± 0.9	7.8 ± 0.9	7.7 ± 0.8	7.6 ± 0.6	7.6 ± 1.0	< 0.001
Chloride (mmol/L)(mean±SD)	100.7 ± 7.4	100.3 ± 7.8	101.7 ± 6.6	102.2 ± 5.4	100.3 ± 7.4	0.069
Creatinine (mg/dl)(median,IQR)	1.3 (0.9, 2.3)	1.4 (0.9, 2.4)	1.2 (0.8, 2.1)	1.2 (0.8, 1.5)	1.4 (0.8, 2.4)	0.045
Sodium (mmol/L)(mean±SD)	135.2 ± 6.0	134.8 ± 6.5	135.9 ± 5.1	136.1 ± 4.4	135.1 ± 5.7	0.173
Potassium (mEq/L)(mean±SD)	4.5 ± 0.9	4.5 ± 0.8	4.4 ± 0.8	4.2 ± 0.5	4.4 ± 1.0	0.082
INR (s)(median,IQR)	1.6 (1.3, 2.2)	1.7 (1.4, 2.3)	1.6 (1.4, 2.0)	1.2 (1.2, 1.5)	1.4 (1.2, 1.9)	< 0.001
PT (s)(median,IQR)	17.6 (14.7, 23.0)	18.7 (15.4, 25.1)	17.4 (15.0, 21.5)	14.2 (12.7, 16.3)	15.7 (13.8, 20.4)	< 0.001
APTT (s)(median,IQR)	35.3 (29.8, 46.4)	37.9 (31.6, 51.3)	34.0 (29.1, 42.0)	29.8 (27.9, 33.1)	33.5 (28.3, 40.5)	< 0.001
Lactate (mmol/L)(mean±SD)	3.6 ± 3.2	4.0 ± 3.5	3.6 ± 3.0	1.9 ± 1.4	3.0 ± 2.1	0.026
Myocardial Infarct (n,%)						0.511
NO	865 (91.4)	454 (92.3)	197 (89.5)	28 (96.6)	186 (90.7)	
YES	81 (8.6)	38 (7.7)	23 (10.5)	1 (3.4)	19 (9.3)	
Congestive heart failure (n,%)						0.402
NO	764 (80.8)	402 (81.7)	169 (76.8)	24 (82.8)	169 (82.4)	
YES	182 (19.2)	90 (18.3)	51 (23.2)	5 (17.2)	36 (17.6)	
Peripheral vascular disease (n,%)						0.535
NO	893 (94.4)	464 (94.3)	211 (95.9)	28 (96.6)	190 (92.7)	
YES	53 (5.6)	28 (5.7)	9 (4.1)	1 (3.4)	15 (7.3)	
Cerebrovascular disease (n,%)						0.558

Variables	Total (n = 946)	1 (n = 492)	2 (n = 220)	3 (n = 29)	4 (n = 205)	P
NO	855 (90.4)	448 (91.1)	196 (89.1)	28 (96.6)	183 (89.3)	
YES	91 (9.6)	44 (8.9)	24 (10.9)	1 (3.4)	22 (10.7)	
Chronic pulmonary disease (n,%)						0.721
NO	750 (79.3)	395 (80.3)	169 (76.8)	24 (82.8)	162 (79)	
YES	196 (20.7)	97 (19.7)	51 (23.2)	5 (17.2)	43 (21)	
Liver disease (n,%)						< 0.001
NO	512 (54.1)	205 (41.7)	143 (65)	28 (96.6)	136 (66.3)	
YES	434 (45.9)	287 (58.3)	77 (35)	1 (3.4)	69 (33.7)	
Diabetes (n,%)						0.345
NO	736 (77.8)	386 (78.5)	162 (73.6)	24 (82.8)	164 (80)	
YES	210 (22.2)	106 (21.5)	58 (26.4)	5 (17.2)	41 (20)	
Renal disease (n,%)						0.778
NO	753 (79.6)	391 (79.5)	171 (77.7)	24 (82.8)	167 (81.5)	
YES	193 (20.4)	101 (20.5)	49 (22.3)	5 (17.2)	38 (18.5)	
Malignant cancer (n,%)						< 0.001
NO	631 (66.7)	349 (70.9)	99 (45)	21 (72.4)	162 (79)	
YES	315 (33.3)	143 (29.1)	121 (55)	8 (27.6)	43 (21)	
APS III (mean±SD)	66.8 ± 27.3	68.9 ± 28.2	66.1 ± 26.8	55.9 ± 22.3	64.2 ± 25.9	0.023
SAPS II(mean±SD)	42.6 ± 14.9	43.5 ± 15.4	43.5 ± 13.9	35.1 ± 15.4	40.4 ± 14.4	0.002
OASIS (mean±SD)	34.2 ± 9.6	34.8 ± 10.1	33.5 ± 8.8	31.0 ± 8.2	34.0 ± 9.2	0.099
SOFA(mean±SD)	8.7 ± 3.6	9.0 ± 3.8	8.4 ± 3.3	7.3 ± 3.2	8.4 ± 3.4	0.017

SBP, systolic blood pressure; DBP, diastolic blood pressure; SpO₂, oxygen saturation; WBC, white blood cell; INR, international normalized ratio; PT, prothrombin time; APTT, activated partial thromboplastin time; APS III, Acute Physiology Score III; SAPS II, Simplified Acute Physiology Score II; OASIS, Outcome and Assessment Information Set; SOFA, sequential organ failure assessment score.

Supplementary Table 2 Relationship between different platelet trajectories and 60-day morality in different models with primary data.

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P
Class1	1(Reference)		1(Reference)		1(Reference)		1(Reference)		1(Reference)	
Class2	1.18 (0.92~1.49)	0.187	1.11 (0.87~1.42)	0.397	1.15 (0.89~1.48)	0.279	1.12 (0.86~1.44)	0.396	1.22 (0.95~1.58)	0.124
Class3	0.21 (0.07~0.65)	0.007	0.25 (0.08~0.77)	0.016	0.27 (0.09~0.86)	0.026	0.27 (0.08~0.84)	0.025	0.28 (0.09~0.89)	0.031
Class4	0.49 (0.35~0.67)	<0.001	0.52 (0.38~0.73)	<0.001	0.63 (0.45~0.88)	0.007	0.64 (0.45~0.9)	0.011	0.68 (0.48~0.95)	0.026

Model 1: crude model.

Model 2: adjusted for age, sex, SBP, SpO2, heart rate, temperature.

Model 3: adjusted for age, sex, SBP, SpO2, heart rate, temperature, hemoglobin, urea nitrogen, INR, potassium, lactate,

Model 4: adjusted for age, sex, SBP, SpO2, heart rate, temperature, hemoglobin, urea nitrogen, INR, potassium, lactate, congestive heart failure, peripheral vascular disease, liver disease, renal disease, malignant cancer.

Model 5: adjusted for age, sex, SBP, SpO2, heart rate, temperature, hemoglobin, urea nitrogen, INR, potassium, lactate, congestive heart failure, peripheral vascular disease, liver disease, renal disease, malignant cancer, SOFA, APS III, OASIS, SAPS II.

SBP, systolic blood pressure; SpO2, oxygen saturation; INR, international normalized ratio; SOFA, sequential organ failure assessment score; APS III, Acute Physiology Score III; OASIS, Outcome and Assessment Information Set; SAPS II, Simplified Acute Physiology Score II.