Supplemental table I Compare Models with Latent Class Trajectory =1, 2, 3, 4, 5

Trajectory	BIC	Cluster I	Cluster 2	Cluster 3	Cluster 4	Cluster 5
I	9756	100 (%)				
2	9666	228 (92.7%)	18 (7.3%)			
3	9683	45 (18.3%)	105 (42.7%)	96 (39.0%)		
4	9679	35 (14.2%)	86 (35.0%)	34 (13.8%)	91 (37.0%)	
5	9703	48 (19.5%)	59 (24.0%)	102 (41.5%)	19 (7.7%)	18 (7.3%)

Supplemental table 2 Latent Class Linear Mixed Model with Three-Group

Trajectory Posterior Class Probability

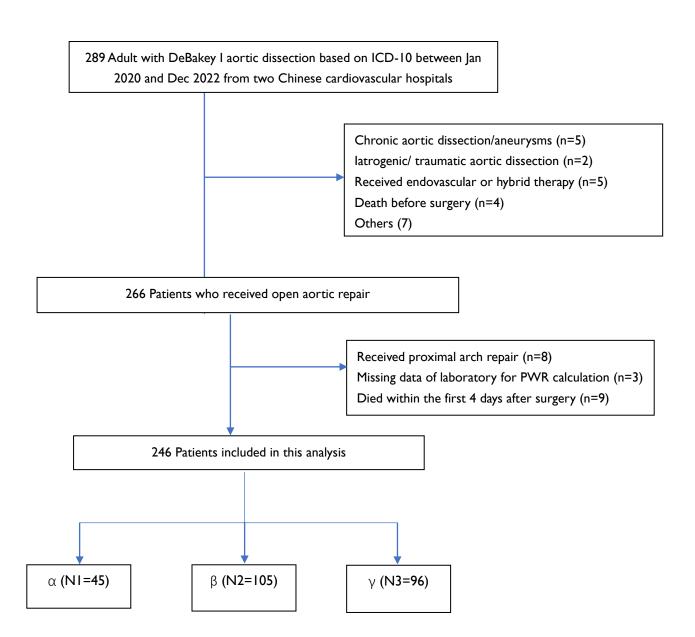
		Mean	Min	25%	Median	75%	Max
	N (%)	probability	probability	probability	probability	probability	probability
Cluster α	45 (18.3%)	0.85	0.44	0.80	0.91	0.96	0.99
Cluster β	105 (42.7%)	0.75	0.57	0.66	0.79	0.87	0.94
Cluster γ	96 (39.0%)	0.89	0.46	0.77	0.98	0.99	1.0

Supplemental Table 3 Results of Cox Proportional Hazard Model Assessing the Effect of Platelet-Leukocyte Ratio Trajectory Group on Mortality at 30 Days

	Hazard ratio (95%CI)	P value
Mortality at 30 days		
Unadjusted		
α (N ₁ =45)	I.0 (ref.)	
β (N ₂ =105)	1.712 (0.364, 8.063)	0.496
γ (N ₃ =96)	3.505 (0.797, 15.425)	0.097
Adjusted for baseline and clinical factors		
α (N ₁ =45)	I.0 (ref.)	
β (N ₂ =105)	1.645 (0.345, 7.838)	0.532
γ (N ₃ =96)	3.392 (0.760, 15.127)	0.109
Adjusted for baseline, clinical, and procedural factors		
α (N ₁ =45)	I.0 (ref.)	
β (N ₂ =105)	1.615 (0.335, 7.777)	0.550
γ (N ₃ =96)	3.575 (0.792, 16.133)	0.098
Mortality at 30 days		
Unadjusted		
Pooled α and β (N ₁₊₂ =150)	I.0 (ref.)	
γ (N ₃ =96)	2.339 (1.039, 5.266)	0.040
Adjusted for baseline and clinical factors		
Pooled α and β (N ₁₊₂ =150)	I.0 (ref.)	
γ (N ₃ =96)	2.323 (1.029, 5.246)	0.042
Adjusted for baseline, clinical, and procedural factors		
Pooled α and β (N ₁₊₂ =150)	I.0 (ref.)	
γ (N ₃ =96)	2.485 (1.080, 5.720)	0.032

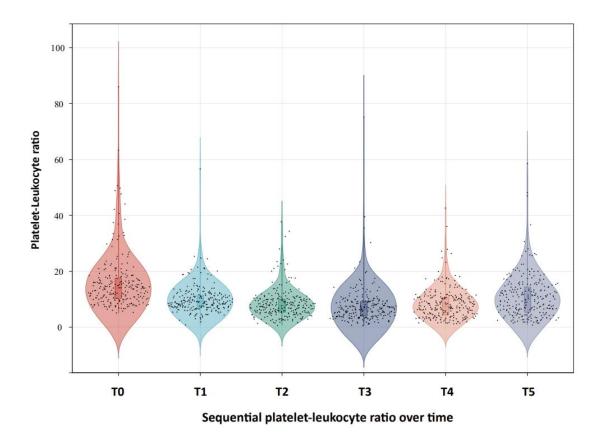
Supplemental Table 4 The Effect of Ulinastatin on Mortality at Last Follow-up by Platelet-Leukocyte Ratio Trajectory Group

	Hazard ratio (95%CI) (no use vs use of ulinastatin)	P value
Crude		
Overall	0.539 (0.224, 1.297)	0.167
Three-trajectory group		
α (N ₁ =45)	1.071 (0.097, 11.813)	0.955
β (N ₂ =105)	0.251 (0.032, 1.979)	0.189
γ (N ₃ =96)	0.768 (0.260, 2.270)	0.633
Two-trajectory group		
Pooled α and β (N ₁₊₂ =150)	0.403 (0.089, 1.820)	0.237
γ (N ₃ =96)	0.768 (0.260, 2.270)	0.633
Adjusted for baseline and clinical factors		
Overall	0.591 (0.238, 1.468)	0.257
Three-trajectory group		
α (N ₁ =45)	0.775 (0.069, 8.652)	0.835
β (N ₂ =105)	0.174 (0.021, 1.435)	0.104
γ (N ₃ =96)	0.985 (0.305, 3.189)	0.980
Two-trajectory group		
Pooled α and β (N ₁₊₂ =150)	0.294 (0.063, 1.360)	0.117
γ (N ₃ =96)	0.985 (0.305, 3.189)	0.980
Adjusted for baseline, clinical, and procedural factors		
Overall	0.580 (0.233, 1.442)	0.241
Three-trajectory group		
α (N ₁ =45)	0.749 (0.067, 8.339)	0.813
β (N ₂ =105)	0.176 (0.021, 1.455)	0.107
γ (N ₃ =96)	0.979 (0.301, 3.186)	0.972
Two-trajectory group		
Pooled α and β (N ₁₊₂ =150)	0.294 (0.063, 1.362)	0.117
γ (N ₃ =96)	0.979 (0.301, 3.186)	0.972

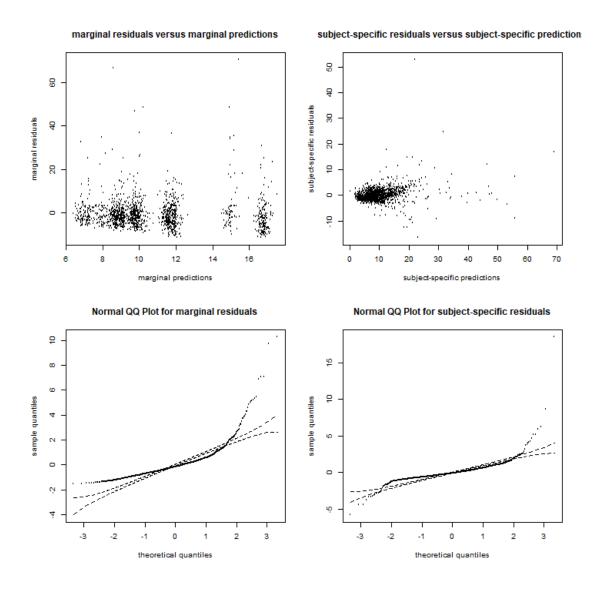


Supplemental Figure I Patient selection flow chart

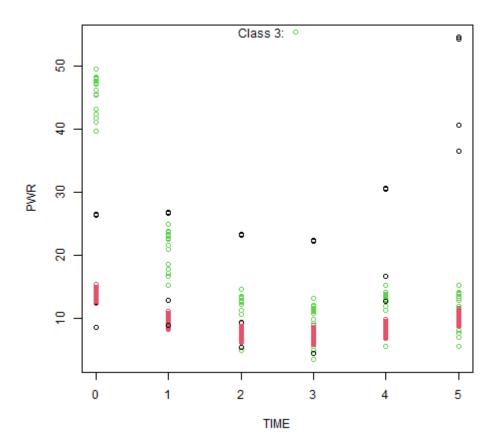
PWR: platelet-white blood cell ratio



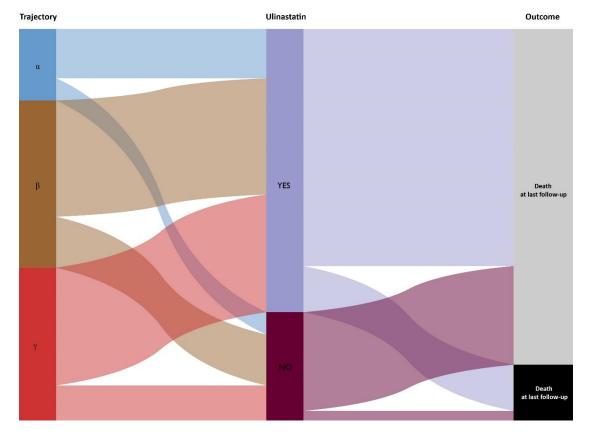
Supplemental Figure 2 Sequential platelet-leukocyte ratio over time of entire cohort



Supplemental Figure 3 Statistics performances of latent class extend mixed model



Supplemental Figure 4 Predicted leukocyte count trajectory over time



Supplemental Figure 5 Alluvial plot of leukocyte trajectory across ulinastatin use and mortality

China Additive Anti-inflammatory Action for Aortopathy & Arteriopathy (5A) Investigators

Hong Liu MD, PhD, Department of Cardiovascular Surgery, the First Affiliated Hospital of Nanjing Medical University, Nanjing 210029, P.R. China;

Sheng Zhao MD, PhD, Department of Cardiovascular Surgery, the First Affiliated Hospital of Nanjing Medical University, Nanjing 210029, P.R China;

Yong-feng Shao, MD, PhD, Department of Cardiovascular Surgery, the First Affiliated Hospital of Nanjing Medical University, Nanjing 210029, P.R China;

Zhi-wei Tang, MD, Department of Cardiovascular Surgery, the First Affiliated Hospital of Nanjing Medical University, Nanjing 210029, P.R. China;

Si-chong Qian MD, PhD, Department of Cardiovascular Surgery, Beijing Anzhen Hospital, Capital Medical University, Beijing 100029, P.R China;

Hai-yang Li, MD, PhD, Department of Cardiovascular Surgery, Beijing Anzhen Hospital, Capital Medical University, Beijing 100029, P.R China;

Hong-jia Zhang, MD, PhD, Department of Cardiovascular Surgery, Beijing Anzhen Hospital, Capital Medical University, Beijing 100029, P.R China;

Ying-yuan Zhang, MD, Department of Cardiovascular Surgery, the First Affiliated Hospital of Guangzhou Medical University, Guangzhou 510120, P.R China;

Ying Wu MD, Department of Laboratory, the First Affiliated Hospital of Shantou University Medical College, Shantou 515041, P.R China;

Liang Hong MD; Department of Cardiovascular Surgery, Nanjing First Hospital, Nanjing Medical University, Nanjing 210012, P.R China;

Ji-nong Yang MD; Department of Cardiovascular Surgery, the Affiliated Hospital of Qingdao University, Qingdao 266003, P.R China;

Ji-sheng Zhong MD; Department of Cardiovascular Surgery, Xiamen Cardiovascular Hospital, Xiamen University, Xiamen 361004, P.R China;

Tian Niu, MD, Department of Cardiovascular Surgery, Xiamen Cardiovascular Hospital, Xiamen University, Xiamen 361004, P.R China;

Yu-qi Wang MD; Department of Cardiovascular Surgery, Teda International Cardiovascular Hospital, Chinese Academy of Medical Sciences, Tianjin 300457, P.R. China;

Bing-qi Sun MD; Department of Cardiovascular Surgery, Teda International Cardiovascular Hospital, Chinese Academy of Medical Sciences, Tianjin 300457, P.R. China;

Dong Kai Wu MD, PhD, Department of Cardiovascular Surgery, Xiangya Hospital, Central South University, Changsha 410008, P.R China;

Guo-liang Fan MD, Department of Cardiovascular Surgery, Shanghai East Hospital, Tongji University, Shanghai 200120, P.R China.

Jun-quan Chen, MD, PhD, Department of Cardiovascular Surgery, Tianjin Chest Hospital, Tianjin Medical University, Tianjin 300222, P.R China;

Dong-dong Wu MD, PhD, Department of Cardiovascular Surgery, Beijing Fuwai Hospital, Peking Union Medical College & Chinese Academy of Medical Sciences, Beijing 100037, P.R China;

Yi-yao Jiang, MD, PhD, Department of Cardiovascular Surgery, the First Affiliated Hospital of Bengbu Medical College, Bengbu 233099, P.R China;

Sheng-qiang Zhang, MD, Department of Cardiovascular Surgery, the First Affiliated Hospital of Bengbu Medical College, Bengbu 233099, P.R China;

Si-qiang Zheng, MD, PhD, Department of Thoracic Surgery, Shanghai Lung Hospital, Tongji University, Shanghai 200433, P.R China;

Xin-ya Li, MD, PhD, Department of Cardiovascular Surgery, the First Hospital of University of Science and Technology of China, Hefei 230002, China;

Hong-hua Yue, MD, PhD, Department of Cardiovascular Surgery, West China School of Medicine and West China Hospital, Sichuan University, Chengdu 610041, China;

Zhi-hua Zeng, MD, Department of Cardiovascular Surgery, the Second Affiliated Hospital of Nanchang University, Nanchang 330008, P.R. China;

Lu Han, MD, Department of Cardiovascular Surgery, Beijing Chaoyang Hospital, Capital Medical University, Beijing 100043, P.R China;