Table S1. Patient characteristics before applying multiple imputation method and the numbers (percentages) of missing values for each variable.

Variables	AT (n = 331)	Control (n = 1,291)
Age, median (IQR)	77 (68–83)	77 (68–84)
Female, n (%)	130 (39.3)	574 (44.5)
Body mass index, n (%)		
<18.5	71 (21.5)	233 (18.0)
≥18.5, <25.0	177 (53.5)	675 (52.3)
≥25.0, <30.0	42 (12.7)	196 (15.2)
>30.0	11 (3.3)	57 (4.4)
missing	30 (9.1)	130 (10.1)
Smoking status, n (%)		
Current/ex-smoker	103 (31.1)	376 (29.1)
Never smoker	171 (51.7)	705 (54.6)
missing	57 (17.2)	210 (16.3)
Charlson Comorbidity Index, median (IQR)	1 (0–3)	1 (0–3)
Ambulance use, n (%)	241 (72.8)	949 (73.5)
Emergent admission, n (%)	326 (98.5)	1,264 (97.9)
Japan Coma Scale at admission, n (%)		
Alert	183 (55.3)	687 (53.2)
Confusion	63 (19.0)	338 (26.2)
Somnolence	42 (12.7)	145 (11.2)
Coma	42 (12.7)	121 (9.4)
missing	1 (0.3)	0 (0)
Laboratory data, median (IQR)		
White blood cells, 10^9/L	13.6 (9.8–19.6)	14.8 (10.1–22.4)
missing, n (%)	35 (10.6)	106 (8.2)
Hemoglobin, g/dL	9.6 (8.3–10.8)	9.8 (8.3–11.4)
missing, n (%)	35 (10.6)	106 (8.2)
Platelet, 10^9/L	56 (28–88)	66 (36–114)
missing, n (%)	35 (10.6)	107 (8.3)
Prothrombin time, INR	1.57 (1.35–1.91)	1.44 (1.24–1.75)
missing, n (%)	55 (16.6)	202 (15.6)
Albumin, g/dL	2.1 (1.8–2.4)	2.2 (1.8–2.6)
missing, n (%)	36 (10.9)	130 (10.1)
Aspartate aminotransferase, IU/L	92 (45–292)	77 (35–212)
missing, n (%)	35 (10.6)	106 (8.2)
Alanine aminotransferase, IU/L	49 (22–150)	42 (20–118)
missing, n (%)	35 (10.6)	108 (8.4)
Lactate dehydrogenase, IU/L	359 (258–551)	348 (251–557)
missing, n (%)	52 (15.7)	259 (20.1)
C-reactive protein, mg/dL	24.7 (17.9–31.3)	22.8 (14.8–29.9)
missing, n (%)	38 (11.5)	123 (9.5)
Focus of infection, n (%)		
Abdominal	132 (39.9)	420 (32.5)
Blood	2 (0.6)	10 (0.8)

Bone and soft tissue	15 (4.5)	45 (3.5)
Cardiovascular	6 (1.8)	33 (2.6)
Central nervous system	1 (0.3)	22 (1.7)
Respiratory	31 (9.4)	156 (12.1)
Urogenital	8 (2.4)	62 (4.8)
Others	200 (60.4)	730 (56.5)
Supportive therapies, n (%)		
Mechanical ventilation	188 (56.8)	514 (39.8)
Extracorporeal membrane oxygenation	8 (2.4)	22 (1.7)
Intra-aortic balloon pumping	3 (0.9)	12 (0.9)
Polymyxin B hemoperfusion	54 (16.3)	120 (9.3)
Renal replacement therapy	129 (39.0)	326 (25.3)
Noradrenaline	246 (74.3)	755 (58.5)
Dopamine	78 (23.6)	305 (23.6)
Vasopressin	72 (21.8)	144 (11.2)
Treatments, n (%)		
Antibiotics on day 0 to day 2	260 (78.5)	934 (72.3)
Recombinant thrombomodulin	192 (58.0)	554 (42.9)
Unfractionated heparin	281 (84.9)	910 (70.5)
Low-molecular-weight heparin	10 (3.0)	29 (2.2)
Gabexate mesilate/nafamostat mesilate	187 (56.5)	463 (35.9)
Sivelestat sodium	56 (16.9)	105 (8.1)
Systemic steroids	122 (36.9)	391 (30.3)
Ulinastatin	34 (10.3)	117 (9.1)
Intravenous immunoglobulin	111 (33.5)	221 (17.1)
Transfusion therapy, n (%)		
Red blood cells	118 (35.6)	336 (26.0)
Fresh frozen plasma	114 (34.4)	259 (20.1)
Platelet concentrate	76 (23.0)	184 (14.3)
Albumin	206 (62.2)	474 (36.7)

AT, antithrombin; IQR, interquartile range; INR, international normalized ratio.

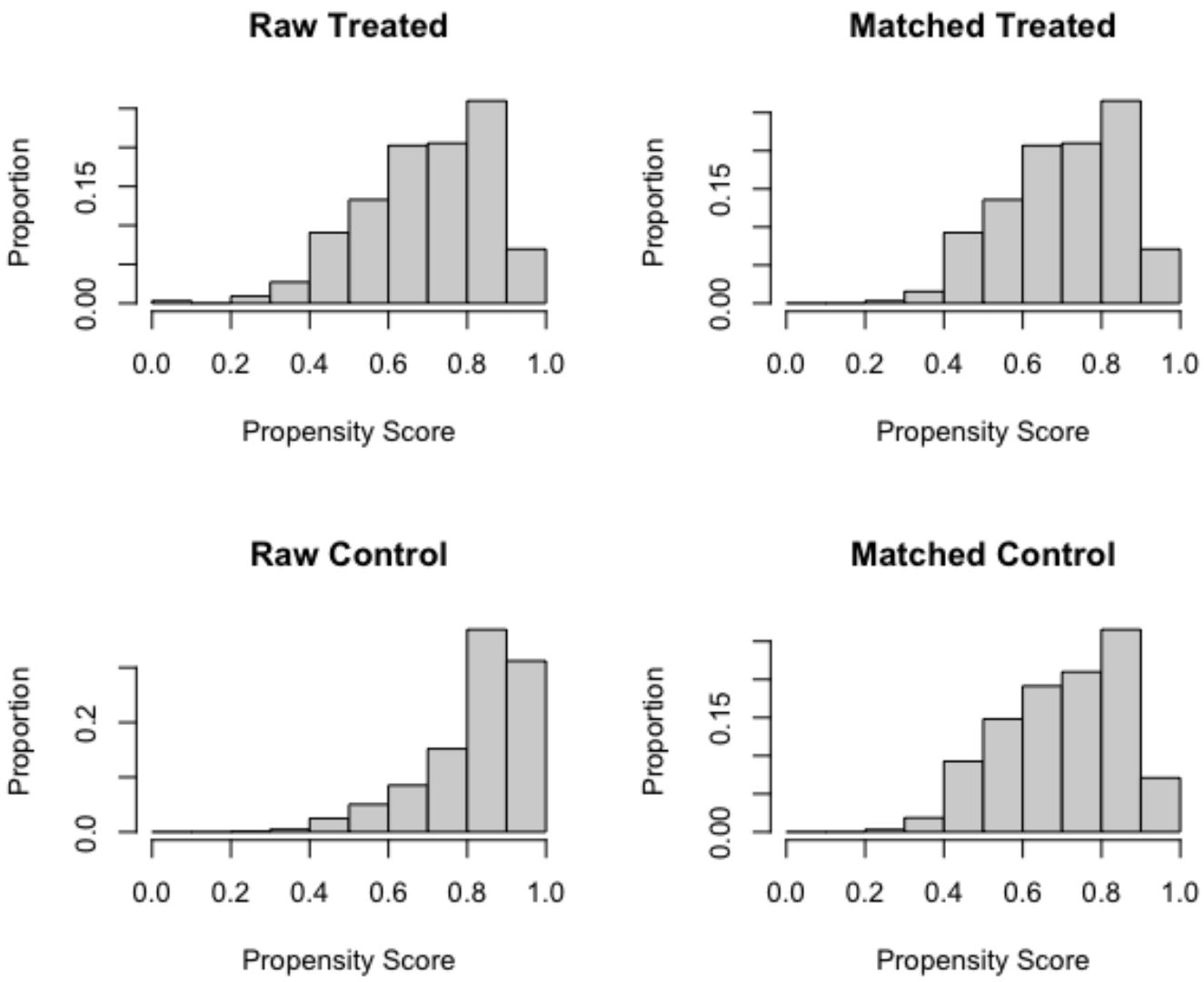

Figure S1. Distributions of propensity scores in the treated (antithrombin) group and control group before and after matching.

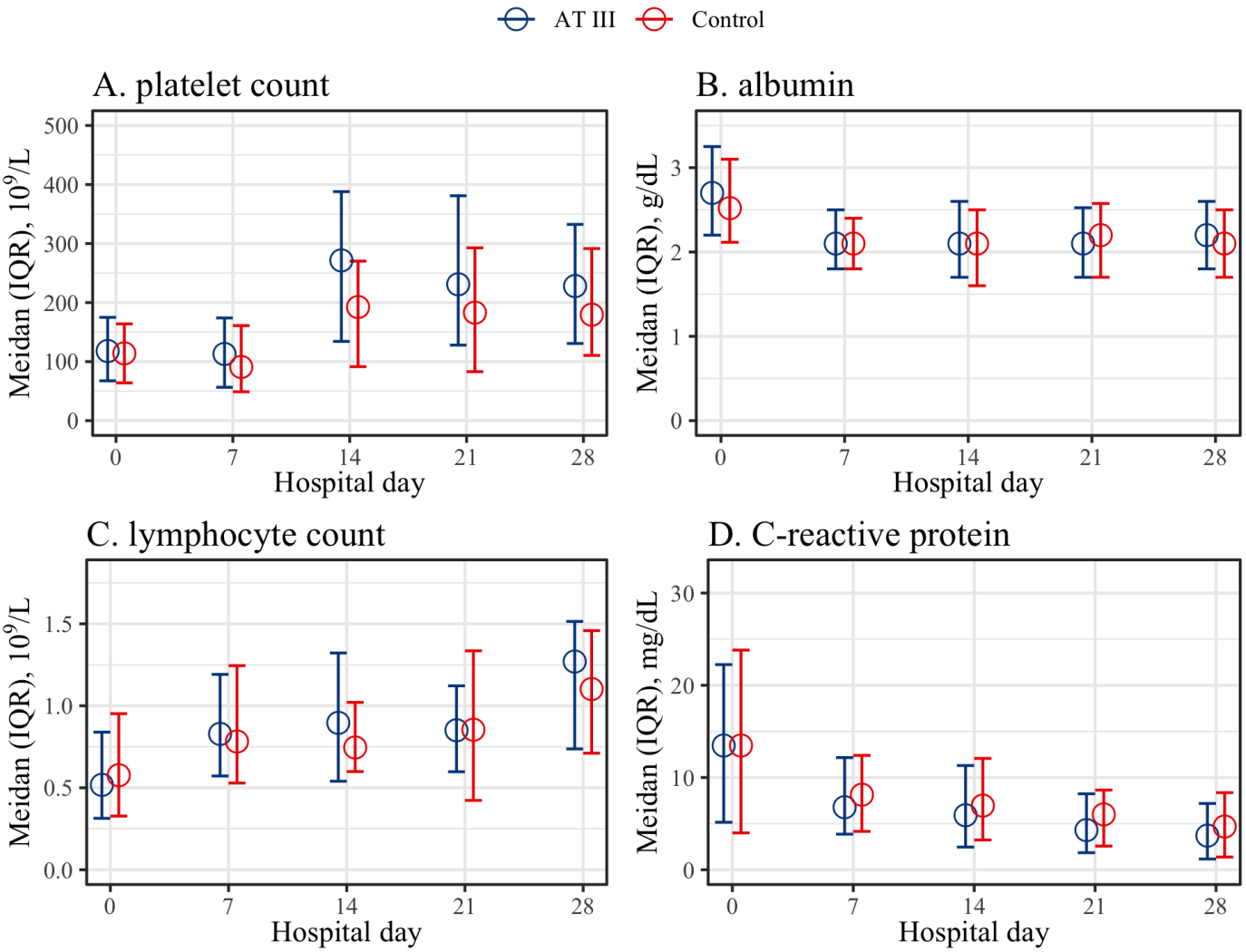

Figure S2. Changes in laboratory data after admission in the AT group and control group. A, platelet count; B, albumin; C, lymphocyte count; D, C-reactive protein. AT, antithrombin; IQR, interquartile range