| Table S1. The 26 variables used to calculate the propensity score in the logistic regression model |
|-----------------------------------------------|
| **Patient characteristics**                  | Age, sex, body weight                          |
| **Illness severity**                          | SOFA score, APACHE II score, positive blood culture |
| **Source of ICU admission**                  | Emergency department/ward/other hospital       |
| **Pre-existing condition**                   | Liver insufficiency, chronic heart failure, chronic respiratory disorder, chronic hemodialysis, immunocompromise |
| **SOFA sub-score**                           | Respiratory, cardiovascular, renal, hepatic, GCS |
| **ICU characteristics**                      | Closed ICU/open ICU/other, volume of ICU       |
| **Primary source of infection**              | Abdomen/lung/urinary tract/bone+soft tissue/central nervous system/other/unknown |
| **Causal microorganisms**                    | Gram-positive bacteria/Gram-negative bacteria/mixed organisms/other/unknown |
| **Therapeutic interventions**                | Immunoglobulin, low-dose steroid, renal replacement therapy, low-dose heparin for prophylaxis against venous thromboembolism, surgical intervention |

**Abbreviations:** SOFA, Sequential Organ Failure Assessment; APACHE, Acute Physiology and Chronic Health Evaluation; ICU, intensive care unit; GCS, Glasgow Coma Score.
### Table S2. Baseline characteristics in patients with and without anticoagulant therapy by each cut-off point of the JAAM DIC scoring system

| JAAM DIC score | 0  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | Total |
|----------------|----|----|----|----|----|----|----|----|----|-------|
| n=41           | n=193 | n=310 | n=326 | n=275 | n=361 | n=306 | n=127 | n=258 | n=2197 |
| Patient characteristics | | | | | | | | | | |
| Age (years) | 75 (62-81) | 74 (63-81) | 71 (61-80) | 73 (62-81) | 74 (64-81) | 72 (63-80) | 72 (63-80) | 73 (62-81) | 71 (60-80) | 72 (62-80) |
| Sex, male | 25 (61%) | 123 (64%) | 211 (68%) | 189 (58%) | 153 (56%) | 211 (58%) | 172 (56%) | 77 (61%) | 133 (52%) | 1294 (59%) |
|Illness severity | | | | | | | | | | |
| APACHE II score | 17 (11-22) | 19 (15-24) | 20 (15-26) | 21 (16-28) | 22 (16-27) | 23 (17-28) | 24 (18-30) | 24 (17-31) | 26 (20-32) | 22 (17-28) |
| SOFA score | 6 (3-8) | 7 (4-9) | 7 (5-9) | 9 (6-11) | 9 (6-11) | 9 (7-12) | 11 (8-13) | 11 (9-13) | 13 (10-15) | 9 (6-12) |
|Source of ICU admission | | | | | | | | | | |
| Emergency department | 28 (68%) | 118 (61%) | 144 (46%) | 145 (44%) | 128 (47%) | 160 (44%) | 130 (42%) | 59 (46%) | 124 (48%) | 1036 (47%) |
| Ward | 10 (24%) | 47 (24%) | 95 (31%) | 88 (27%) | 77 (28%) | 109 (30%) | 103 (34%) | 42 (33%) | 72 (28%) | 643 (29%) |
| Other hospital | 3 (7%) | 28 (15%) | 71 (23%) | 93 (29%) | 70 (25%) | 92 (25%) | 73 (24%) | 26 (20%) | 62 (24%) | 518 (24%) |
|Pre-existing comorbidities | | | | | | | | | | |
| Immunocompromised | 3 (7%) | 18 (9%) | 31 (10%) | 39 (12%) | 30 (11%) | 34 (9%) | 33 (11%) | 8 (6%) | 35 (14%) | 231 (11%) |
| Chronic kidney disease | 0 (0%) | 13 (7%) | 28 (9%) | 20 (6%) | 23 (8%) | 32 (9%) | 23 (8%) | 12 (9%) | 16 (6%) | 167 (8%) |
| Chronic heart failure | 4 (10%) | 20 (10%) | 22 (7%) | 13 (4%) | 14 (5%) | 16 (4%) | 10 (3%) | 11 (9%) | 15 (6%) | 125 (6%) |
| Chronic respiratory disorder | 0 (0%) | 11 (6%) | 21 (7%) | 9 (3%) | 13 (5%) | 17 (5%) | 7 (2%) | 4 (3%) | 7 (3%) | 89 (4%) |
| Liver insufficiency | 0 (0%) | 0 (0%) | 2 (1%) | 1 (0%) | 4 (1%) | 4 (1%) | 3 (1%) | 1 (1%) | 2 (1%) | 17 (1%) |
|Site of infection | | | | | | | | | | |
| Abdomen | 5 (12%) | 45 (23%) | 84 (27%) | 115 (35%) | 87 (32%) | 132 (37%) | 117 (38%) | 45 (35%) | 75 (29%) | 705 (32%) |
| Lung | 18 (44%) | 82 (42%) | 107 (35%) | 95 (29%) | 80 (29%) | 85 (24%) | 49 (16%) | 15 (12%) | 32 (12%) | 563 (26%) |
| Urinary tract | 8 (20%) | 31 (16%) | 36 (12%) | 36 (11%) | 48 (17%) | 69 (19%) | 60 (20%) | 20 (16%) | 83 (32%) | 391 (18%) |
| Category                        | No. (%)                      |
|--------------------------------|------------------------------|
| Bone/soft tissue               | 8 (20%) 25 (13%) 46 (15%) 43 (13%) 32 (12%) 37 (10%) 39 (13%) 19 (15%) 18 (7%) 267 (12%) |
| Central nervous system         | 2 (5%) 4 (2%) 3 (1%) 5 (2%) 5 (2%) 5 (1%) 6 (2%) 7 (6%) 14 (5%) 51 (2%) |
| Other/unknown                  | 0 (0%) 6 (3%) 34 (11%) 32 (10%) 23 (8%) 33 (9%) 35 (11%) 21 (17%) 36 (14%) 220 (10%) |
| Therapeutic interventions      |                             |
| Immunoglobulin                 | 6 (15%) 35 (18%) 76 (25%) 111 (34%) 91 (33%) 115 (32%) 107 (35%) 54 (43%) 102 (40%) 697 (32%) |
| Low-dose steroid               | 6 (15%) 32 (17%) 58 (19%) 79 (24%) 63 (23%) 82 (23%) 88 (29%) 37 (29%) 99 (38%) 544 (25%) |
| Renal replacement therapy      | 3 (7%) 29 (15%) 58 (19%) 81 (25%) 66 (24%) 99 (27%) 104 (34%) 58 (46%) 103 (40%) 601 (27%) |
| Surgical intervention          | 14 (34%) 56 (29%) 135 (44%) 154 (47%) 113 (41%) 144 (40%) 146 (48%) 56 (44%) 109 (42%) 927 (42%) |
| Antithrombin                   | 3 (7%) 21 (11%) 56 (18%) 95 (29%) 93 (34%) 129 (36%) 132 (43%) 62 (49%) 138 (53%) 729 (33%) |
| Recombinant thrombomodulin     | 0 (0%) 15 (8%) 46 (15%) 76 (23%) 71 (26%) 127 (35%) 121 (40%) 60 (47%) 128 (50%) 644 (29%) |
| Heparin/Heparinoid             | 2 (5%) 8 (4%) 9 (3%) 18 (6%) 24 (9%) 14 (4%) 13 (4%) 13 (10%) 20 (8%) 121 (6%) |
| Outcomes                       |                             |
| In-hospital mortality          | 6 (15%) 38 (20%) 60 (19%) 78 (24%) 78 (28%) 124 (34%) 106 (35%) 47 (37%) 102 (40%) 639 (29%) |
| With anticoagulant             | 0 (0%) 12 (30%) 19 (22%) 34 (22%) 42 (29%) 69 (35%) 66 (34%) 30 (33%) 71 (37%) 343 (31%) |
| Without anticoagulant          | 6 (16%) 26 (17%) 41 (18%) 44 (25%) 36 (27%) 55 (34%) 40 (35%) 17 (49%) 31 (46%) 296 (27%) |
| Bleeding complications         | 3 (7%) 16 (8%) 25 (8%) 31 (10%) 31 (11%) 50 (14%) 47 (15%) 17 (13%) 33 (13%) 253 (12%) |
| With anticoagulant             | 0 (0%) 6 (15%) 6 (7%) 17 (11%) 22 (15%) 38 (19%) 35 (18%) 11 (12%) 30 (16%) 165 (15%) |
| Without anticoagulant          | 3 (8%) 10 (7%) 19 (9%) 14 (8%) 9 (7%) 12 (7%) 12 (11%) 6 (17%) 3 (4%) 88 (8%) |

Abbreviations: JAAM, Japanese Association for Acute Medicine; DIC, disseminated intravascular coagulation; APACHE, Acute Physiology and Chronic Health Evaluation; SOFA, Sequential Organ Failure Assessment; ICU, intensive care unit.
### Table S3

Actual sample size and estimated mortality in the anticoagulant and control groups according to each cut-off point of the ISTH overt DIC scoring system

| Cut-off | Criteria negative (ISTH overt DIC score < cut-off point) | Criteria positive (ISTH overt DIC score ≥ cut-off point) |
|---------|----------------------------------------------------------|---------------------------------------------------------|
|         | Sample size | Anticoagulant | Control | Sample size | Anticoagulant | Control |
|         |             | Mortality | 95% CI | Mortality | 95% CI | Mortality | 95% CI | Mortality | 95% CI | Mortality | 95% CI |
| 1       | 161         | 9.5      | 1.1-48.5 | 19.9      | 9.6-36.9 | 1732      | 27.3     | 18-39.2   | 37.2     | 31.6-43.1 |
| 2       | 293         | 14       | 3.7-40.5 | 19.2      | 11.9-29.6 | 1600      | 27.9     | 18.1-40.5 | 39       | 33.1-45.4 |
| 3       | 536         | 20.8     | 7.4-46.3 | 24.8      | 16.2-35.9 | 1357      | 27.9     | 17.7-41   | 40.7     | 34.4-47.4 |
| 4       | 906         | 20.5     | 10.1-36.9 | 26.9      | 20.4-34.7 | 987       | 30.4     | 17.7-47   | 44.7     | 36.7-52.9 |
| 5       | 1339        | 22.9     | 13.4-36.4 | 30.3      | 24.4-36.9 | 554       | 33.7     | 16.7-56.2 | 49.9     | 39.2-60.6 |
| 6       | 1630        | 24.4     | 15.3-36.5 | 32.4      | 26.9-38.3 | 263       | 37.5     | 13.7-69.3 | 54.4     | 38.9-69.1 |
| 7       | 1804        | 25.8     | 16.8-37.4 | 34        | 28.6-39.7 | 89        | 40.1     | 6.7-86.1  | 59.9     | 34.4-81  |
| 8       | 1877        | 26.1     | 17.3-37.4 | 34.9      | 29.6-40.5 | 16        | 65.4     | 32.8-88.4 | 65.4     | 32-88.4  |
| Total   | 1893        | 26.5     | 17.6-37.7 | 35.2      | 30-40.8   |            |           |           |           |           |

Abbreviations: ISTH, International Society of Thrombosis and Hemostasis; DIC, disseminated intravascular coagulation; CI, confidence interval.
Table S4. Actual sample size and estimated mortality in the anticoagulant and control groups according to each cut-off point of the JAAM DIC scoring system

| Cut-off | Criteria negative (JAAM DIC score < cut-off point) | Criteria positive (JAAM DIC score ≥ cut-off point) |
|---------|---------------------------------------------------|--------------------------------------------------|
|         | Sample size  | Mortality | 95% CI      | Mortality | 95% CI     | Sample size  | Mortality | 95% CI      | Mortality | 95% CI     |
| 1       | 41           | 13.5       | 5.6-28.9    | 13.5      | 5.6-28.9   | 2156         | 28.0       | 19.4-38.4   | 35.4      | 30.6-40.5  |
| 2       | 234          | 18.1       | 6.1-43.1    | 14.4      | 10.1-20.1  | 1963         | 28.4       | 19.4-39.5   | 37.9      | 32.7-43.3  |
| 3       | 544          | 22.1       | 9.6-43.0    | 17.6      | 12.8-23.7  | 1653         | 28.8       | 19.1-41.1   | 42.1      | 36.2-48.3  |
| 4       | 870          | 21.2       | 10.0-39.6   | 24.5      | 18.0-32.3  | 1327         | 30.7       | 19.9-44.2   | 43.7      | 37.3-50.3  |
| 5       | 1145         | 22.1       | 11.7-37.6   | 27.4      | 21.2-34.6  | 1052         | 32.5       | 20.3-47.6   | 44.8      | 37.7-52.1  |
| 6       | 1506         | 25.4       | 15.6-38.4   | 29.9      | 24.5-35.8  | 691          | 32.1       | 17.2-51.8   | 46.9      | 37.6-56.5  |
| 7       | 1812         | 26.6       | 17.5-38.1   | 31.3      | 26.5-36.7  | 385          | 32.6       | 13.6-59.8   | 52.8      | 39.7-65.5  |
| 8       | 1939         | 26.8       | 18.0-37.9   | 32.9      | 28.0-38.1  | 258          | 34.4       | 12.0-67.0   | 51.5      | 35.9-66.8  |
| Total   | 2197         | 27.8       | 19.4-38.2   | 34.8      | 30.2-39.8  |              |            |             |           |            |

Abbreviations: JAAM, Japanese Association for Acute Medicine; DIC, disseminated intravascular coagulation; CI, confidence interval.