

## Supplementary Information

Table 1: Comparison of Dead/Surviving Patients.

| Feature                                | All (n=1181) | Missing rate | Survival<br>(n=1079) | Death<br>(n=102) | P-value     |
|----------------------------------------|--------------|--------------|----------------------|------------------|-------------|
| C-reactive protein                     | 53.96±60     | 0.30         | 49.38±56             | 102.49±78        | <0.05       |
| Percentage of eosinophils              | 0.92±2       | 0            | 0.97±2               | 0.37±1           | <0.05       |
| Percentage of basophils                | 0.27±0       | 0            | 0.28±0               | 0.21±0           | <0.05       |
| Red cell distribution width            | 13.97±2      | 0.11         | 13.91±2              | 14.54±2          | <0.05       |
| Platelet hematocrit                    | 0.19±0       | 0.02         | 0.2±0                | 0.15±0           | <0.05       |
| Mean platelet volume                   | 9.78±1       | 0.02         | 9.72±1               | 10.4±1           | <0.05       |
| hCT                                    | 35.15±7      | 0            | 35.24±6              | 34.24±7          | 0.060807832 |
| White blood cells                      | 7.49±5       | 0            | 7.2±5                | 10.55±5          | <0.05       |
| RBC                                    | 3.86±1       | 0            | 3.87±1               | 3.69±1           | <0.05       |
| Hemoglobin                             | 115.8±22     | 0            | 116.22±22            | 111.27±25        | <0.05       |
| MCV                                    | 91.64±7      | 0            | 91.51±7              | 93.04±7          | <0.05       |
| Mean hemoglobin content                | 30.21±3      | 0            | 30.21±3              | 30.24±3          | 0.405401466 |
| MCH                                    | 329.43±15    | 0            | 329.83±15            | 325.19±14        | <0.05       |
| Blood platelet count                   | 204.61±107   | 0.002        | 209.99±108           | 147.77±76        | <0.05       |
| Neutrophil count                       | 5.75±4       | 0            | 5.41±4               | 9.35±5           | <0.05       |
| Monocyte count                         | 0.61±1       | 0            | 0.62±1               | 0.49±0           | <0.05       |
| Eosinophil count                       | 0.06±0       | 0            | 0.06±0               | 0.04±0           | <0.05       |
| Basophil count                         | 0.02±0       | 0            | 0.02±0               | 0.02±0           | 0.906546212 |
| Lymphocyte count                       | 1.06±2       | 0            | 1.1±2                | 0.64±1           | <0.05       |
| Percentage of lymphocytes              | 16.64±12     | 0            | 17.55±12             | 6.99±7           | <0.05       |
| Percentage of monocytes                | 8.69±6       | 0            | 9.0±6                | 5.4±4            | <0.05       |
| Percentage of neutrophilic granulocyte | 73.48±16     | 0            | 72.2±15              | 87.05±10         | <0.05       |
| Width of platelet volume distribution  | 14.56±3      | 0.02         | 14.46±3              | 15.59±3          | <0.05       |
| TP                                     | 61.57±8      | 0.01         | 61.93±7              | 57.73±8          | <0.05       |
| Albumin                                | 33.54±5      | 0.01         | 33.97±5              | 29.0±5           | <0.05       |
| Globulin                               | 28.05±6      | 0.01         | 27.97±5              | 28.92±6          | 0.068769811 |
| Total bilirubin                        | 12.57±18     | 0.01         | 12.26±18             | 15.85±15         | <0.05       |
| Direct bilirubin                       | 5.14±11      | 0.01         | 4.89±11              | 7.78±10          | <0.05       |
| Total bile acid                        | 6.23±12      | 0.01         | 6.14±12              | 7.23±15          | 0.455663095 |
| Alanine aminotransferase               | 46.07±137    | 0.12         | 37.47±53             | 136.99±424       | 0.08382207  |

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| Feature                                             | All (n=1181)    | Missing rate | Survival<br>(n=1079) | Death<br>(n=102) | P-value     |
|-----------------------------------------------------|-----------------|--------------|----------------------|------------------|-------------|
| Aspartate amino trans-ferase                        | 75.59±513       | 0.12         | 42.6±69              | 424.48±1701      | <0.05       |
| White sphere ratio                                  | 1.24±0          | 0.11         | 1.26±0               | 1.03±0           | <0.05       |
| Uric Acid                                           | 302.48±139      | 0.01         | 296.28±128           | 368.1±217        | <0.05       |
| Carbonyldiamide                                     | 9.15±8          | 0.01         | 8.41±7               | 17.01±12         | <0.05       |
| Creatinine                                          | 125.25±182      | 0.01         | 118.06±176           | 201.27±223       | <0.05       |
| Prothrombin time                                    | 12.37±3         | 0.10         | 12.2±2               | 14.1±6           | <0.05       |
| Activated partial thromboplastin time               | 29.15±8         | 0.10         | 28.73±7              | 33.64±15         | <0.05       |
| Thrombin time                                       | 17.37±11        | 0.10         | 16.99±8              | 21.4±25          | <0.05       |
| Fibrinogen                                          | 4.25±2          | 0.10         | 4.24±2               | 4.34±2           | 0.765143603 |
| Percentage of prothrombin                           | 91.1±17         | 0.10         | 92.31±16             | 78.37±21         | <0.05       |
| International standard ratio                        | 1.06±0          | 0.10         | 1.05±0               | 1.23±1           | <0.05       |
| Plasma fibrinogen (fibrinogen) degradation products | 9.08±18         | 0.20         | 7.46±15              | 26.22±31         | <0.05       |
| Determination of antithrombin III antigen in plasma | 293.0±76        | 0.20         | 296.55±77            | 255.45±50        | <0.05       |
| Plasma plasminogen antigen measurement              | 270.92±28       | 0.10         | 271.02±28            | 269.85±34        | 0.712566673 |
| D-dimer                                             | 0.93±2          | 0.10         | 0.74±2               | 2.95±4           | <0.05       |
| Length of stay                                      | 11.84±9         | 0            | 11.92±9              | 10.95±9          | 0.141411026 |
| Length of ICU stay                                  | 7.51±6          | 0            | 6.89±6               | 8.1±7            | 0.252577415 |
| ICU Admission                                       | 156/1181(13.2%) | 0            | 76/1079(7.0%)        | 80/102(78.4%)    |             |
| Age                                                 | 66.78±19        | 0            | 65.99±19             | 75.17±15         | <0.05       |
| 60                                                  | 331/1181(28.0%) |              | 320/1079(29.6%)      | 11/102(10.8%)    |             |
| 60-69                                               | 231/1181(19.6%) |              | 214/1079(19.9%)      | 17/102(16.6%)    |             |
| 70-79                                               | 282/1181(23.9%) |              | 255/1079(23.6%)      | 27/102(26.5%)    |             |
| >80                                                 | 337/1181(28.5%) |              | 290/1079(26.9%)      | 47/102(46.1%)    |             |
| Gender                                              |                 |              |                      |                  | <0.05       |
| Male                                                | 722/1181(61.1%) |              | 644/1079(59.7%)      | 78/102(76.5%)    |             |
| Female                                              | 459/1181(38.9%) |              | 435/1079(40.3%)      | 24/102(23.5%)    |             |
| Diabetes                                            | 341/1181(28.9%) |              | 303/1079(28.1%)      | 38/102(37.3%)    | 0.065796573 |
| Hypertensive                                        | 570/1181(48.3%) |              | 519/1079(48.1%)      | 51/102(50%)      | 0.792253351 |
| Coronary heart disease                              | 323/1181(27.3%) |              | 288/1079(26.7%)      | 35/102(34.3%)    | 0.124895038 |
| Lung diseases                                       | 212/1181(18.0%) |              | 189/1079(17.5%)      | 23/102(22.5%)    | 0.258060253 |
| Heart failure                                       | 50/1181(4.2%)   |              | 46/1079(4.3%)        | 4/102(3.9%)      | 1           |

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| Feature                           | All (n=1181)    | Missing rate | Survival<br>(n=1079) | Death<br>(n=102) | P-value     |
|-----------------------------------|-----------------|--------------|----------------------|------------------|-------------|
| Myocardial infarction             | 55/1181(4.7%)   |              | 51/1079(4.7%)        | 4/102(3.9%)      | 0.902103515 |
| Cerebral infarction dis-<br>eases | 135/1181(11.4%) |              | 120/1079(11.1%)      | 15/102(14.7%)    | 0.355112726 |
| Arrhythmia                        | 72/1181(6.1%)   |              | 66/1079(6.1%)        | 6/102(5.9%)      | 1           |
| Cancer                            | 172/1181(14.6%) |              | 158/1079(14.6%)      | 14/102(13.7%)    | 0.916921369 |
| Renal function diseases           | 139/1181(11.8%) |              | 116/1079(10.8%)      | 23/102(22.5%)    | <0.05       |
| Liver function diseases           | 64/1181(5.4%)   |              | 55/1079(5.1%)        | 9/102(8.8%)      | 0.173802538 |

Note: Pulmonary diseases include chronic obstructive pulmonary disease, emphysema, and chronic bronchitis. Cancer includes various malignant solid tumors, leukemia, and lymphoma. Renal function diseases include renal insufficiency, renal failure (acute and chronic); Liver function diseases include hepatitis, cirrhosis, and hepatic insufficiency.

Table 2: Table of Disease Analysis Results.

| Feature    | Age60 | Age70 | Age80 | Cancer | PD | CHD | Diabetes | RFD | LFD | CI | HTN | Proportion | Death rate | Lift |
|------------|-------|-------|-------|--------|----|-----|----------|-----|-----|----|-----|------------|------------|------|
| Category1  | ✓     |       |       |        |    |     |          |     |     |    |     | 88%        | 10.40%     | 1.2  |
| Category2  | ✓     | ✓     |       |        |    |     |          |     |     |    |     | 71%        | 11.80%     | 1.4  |
| Category3  | ✓     | ✓     | ✓     |        |    |     |          |     |     |    |     | 45%        | 14.10%     | 1.7  |
| Category4  | ✓     |       |       | ✓      |    |     |          |     |     |    |     | 13%        | 14.40%     | 1.7  |
| Category5  | ✓     | ✓     |       | ✓      |    |     |          |     |     |    |     | 10%        | 16.70%     | 2    |
| Category6  | ✓     | ✓     | ✓     | ✓      |    |     |          |     |     |    |     | 8%         | 27.60%     | 3.3  |
| Category7  |       |       |       |        | ✓  |     |          |     |     |    |     | 24%        | 10.60%     | 1.3  |
| Category8  | ✓     |       |       |        | ✓  |     |          |     |     |    |     | 23%        | 11.70%     | 1.4  |
| Category9  | ✓     | ✓     |       |        | ✓  |     |          |     |     |    |     | 20%        | 12.20%     | 1.5  |
| Category10 | ✓     | ✓     | ✓     |        | ✓  |     |          |     |     |    |     | 10%        | 11.80%     | 1.4  |
| Category11 |       |       |       |        |    | ✓   |          |     |     |    |     | 36%        | 10.40%     | 1.2  |
| Category12 | ✓     |       |       |        |    | ✓   |          |     |     |    |     | 32%        | 10.80%     | 1.3  |
| Category13 | ✓     | ✓     |       |        |    | ✓   |          |     |     |    |     | 31%        | 12.20%     | 1.4  |
| Category14 | ✓     | ✓     | ✓     |        |    | ✓   |          |     |     |    |     | 18%        | 13.80%     | 1.6  |
| Category15 |       |       |       |        | ✓  | ✓   |          |     |     |    |     | 14%        | 17.30%     | 2.1  |
| Category16 | ✓     |       |       |        | ✓  | ✓   |          |     |     |    |     | 13%        | 17.80%     | 2.1  |
| Category17 | ✓     | ✓     |       |        | ✓  | ✓   |          |     |     |    |     | 11%        | 17.50%     | 2.1  |
| Category18 | ✓     | ✓     | ✓     |        | ✓  | ✓   |          |     |     |    |     | 7%         | 17.10%     | 2    |
| Category19 |       |       |       |        |    |     | ✓        |     |     |    |     | 41%        | 11%        | 1.3  |
| Category20 | ✓     |       |       |        |    |     | ✓        |     |     |    |     | 38%        | 13%        | 1.6  |
| Category21 | ✓     | ✓     |       |        |    |     | ✓        |     |     |    |     | 31%        | 14.40%     | 1.7  |
| Category22 | ✓     | ✓     | ✓     |        |    |     | ✓        |     |     |    |     | 17%        | 16.50%     | 2    |
| Category23 |       |       |       |        |    |     |          | ✓   |     |    |     | 25%        | 16.60%     | 2    |
| Category24 | ✓     |       |       |        |    |     |          | ✓   |     |    |     | 19%        | 19.00%     | 2.3  |
| Category25 | ✓     | ✓     |       |        |    |     |          | ✓   |     |    |     | 14%        | 17.90%     | 2    |
| Category26 | ✓     | ✓     | ✓     |        |    |     |          | ✓   |     |    |     | 8%         | 20.00%     | 2.4  |
| Category27 |       |       |       |        |    |     |          |     | ✓   |    |     | 10%        | 14.50%     | 1.7  |
| Category28 | ✓     |       |       |        |    |     |          |     | ✓   |    |     | 8%         | 19.00%     | 2.3  |
| Category29 | ✓     | ✓     |       |        |    |     |          |     | ✓   |    |     | 6%         | 21.40%     | 2.5  |
| Category30 | ✓     | ✓     | ✓     |        |    |     |          |     | ✓   |    |     | 5%         | 27.80%     | 3.3  |
| Category31 |       |       |       |        |    |     |          |     |     | ✓  |     | 14%        | 10.30%     | 1.2  |
| Category32 | ✓     |       |       |        |    |     |          |     |     | ✓  |     | 13%        | 10.90%     | 1.3  |
| Category33 | ✓     | ✓     |       |        |    |     |          |     |     | ✓  |     | 10%        | 10.50%     | 1.2  |
| Category34 | ✓     | ✓     | ✓     |        |    |     |          |     |     | ✓  |     | 8%         | 16.00%     | 1.9  |
| Category35 |       |       |       |        |    |     |          | ✓   | ✓   |    |     | 8.80%      | 42.10%     | 5    |
| Category36 | ✓     |       |       |        |    |     |          | ✓   | ✓   |    |     | 6.00%      | 54.50%     | 6.5  |
| Category37 | ✓     | ✓     |       |        |    |     |          | ✓   | ✓   |    |     | 3.80%      | 44.40%     | 5.3  |
| Category38 | ✓     | ✓     | ✓     |        |    |     |          | ✓   | ✓   |    |     | 3.50%      | 57.10%     | 6.8  |
| Category39 |       |       |       |        |    |     |          | ✓   | ✓   |    | ✓   | 6.30%      | 54.30%     | 6.5  |
| Category40 | ✓     |       |       |        |    |     |          | ✓   | ✓   |    | ✓   | 3.50%      | 57.10%     | 6.8  |
| Category41 | ✓     | ✓     |       |        |    |     |          | ✓   | ✓   |    | ✓   | 2.00%      | 50.00%     | 5.9  |
| Category42 | ✓     | ✓     | ✓     |        |    |     |          | ✓   | ✓   |    | ✓   | 2.00%      | 75.00%     | 8.9  |

Note: Pulmonary diseases include chronic obstructive pulmonary disease, emphysema, and chronic bronchitis. Cancer includes various malignant solid tumors, leukemia, and lymphoma. Renal function diseases include renal insufficiency, renal failure (acute and chronic); Liver function diseases include hepatitis, cirrhosis, and hepatic insufficiency.

Table 3: Comparison of Six Groups

| Indicator              | Group1     | Group2     | Group3     | Group4    | Group5     | Group6     | Group1-2 p  | Group2-3 p  | Group3-4 p  | Group4-5 p  | Group5-6 p  |
|------------------------|------------|------------|------------|-----------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| C-reactive protein     | 78.04±60   | 85.04±66   | 116.47±77  | 76.35±47  | 115.79±76  | 139.06±96  | 0.441258683 | 0.002302015 | 0.00988381  | 0.140547072 | 0.791415284 |
| Neutrophils Percentage | 84.86±6    | 86.75±6    | 86.62±6    | 90.5±5    | 92.4±3     | 92.09±3    | 0.004497486 | 0.87636292  | 0.00065754  | 0.401600516 | 0.374937154 |
| Lymphocytes Percentage | 8.54±4     | 7.13±4     | 7.33±4     | 4.26±3    | 3.81±2     | 3.19±1     | 0.003563831 | 0.860104779 | 0.000148889 | 0.666122597 | 0.467125056 |
| Albumin                | 31.5±4     | 28.97±4    | 29.96±4    | 27.88±3   | 25.95±3    | 28.04±3    | 9.30759E-08 | 0.173713039 | 0.016686701 | 0.086535946 | 0.246292107 |
| D-dimer                | 0.23±0     | 2.46±3     | 3.7±5      | 2.88±3    | 5.65±6     | 3.64±3     | 1.78631E-54 | 0.14595901  | 0.666428842 | 0.265173195 | 0.658999497 |
| White blood cells      | 8.01±4     | 6.73±2     | 15.74±8    | 13.59±3   | 12.41±2    | 16.89±6    | 0.056911869 | 1.90906E-30 | 0.613492642 | 0.450199612 | 0.055555556 |
| Age                    | 69.75±17   | 71.78±16   | 62.21±19   | 83.0±7    | 81.18±7    | 89.0±4     | 0.325246218 | 0.000298424 | 2.1175E-10  | 0.449353394 | 0.018354531 |
| Lymphocyte Count       | 0.61±0     | 0.47±0     | 1.09±1     | 0.53±0    | 0.47±0     | 0.51±0     | 0.000746684 | 2.5818E-12  | 2.71092E-06 | 0.611656827 | 0.646210015 |
| Hematocrit             | 34.04±6    | 32.08±7    | 34.56±7    | 33.08±5   | 33.53±4    | 30.23±7    | 0.005416983 | 0.016651711 | 0.25079647  | 0.961772431 | 0.276628881 |
| Creatinine             | 165.24±229 | 163.05±207 | 156.5±167  | 74.98±20  | 245.71±170 | 297.44±159 | 0.939445928 | 0.942925824 | 0.045062395 | 5.84505E-07 | 0.210910005 |
| Uric Acid              | 299.7±138  | 302.86±173 | 363.74±230 | 246.67±94 | 347.62±96  | 570.51±100 | 0.639212001 | 0.14636428  | 0.017448171 | 0.00388369  | 0.000754148 |
| Hemoglobin             | 112.73±22  | 105.52±25  | 112.5±24   | 108.08±17 | 110.18±13  | 96.86±24   | 0.003369691 | 0.058858376 | 0.379740307 | 0.904569442 | 0.204354023 |

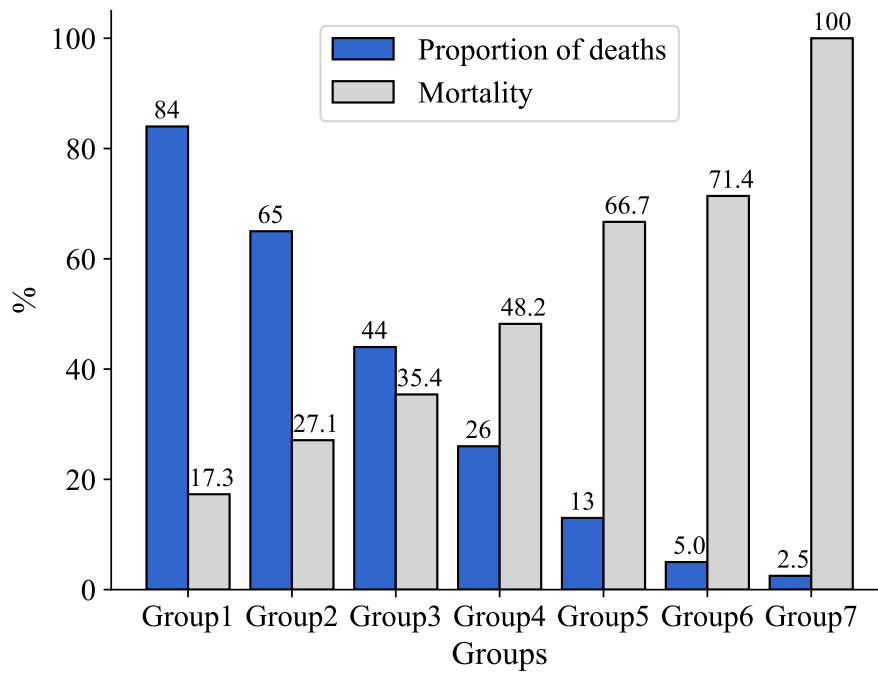


Figure 1: The mortality rate and the proportion of deaths in seven groups

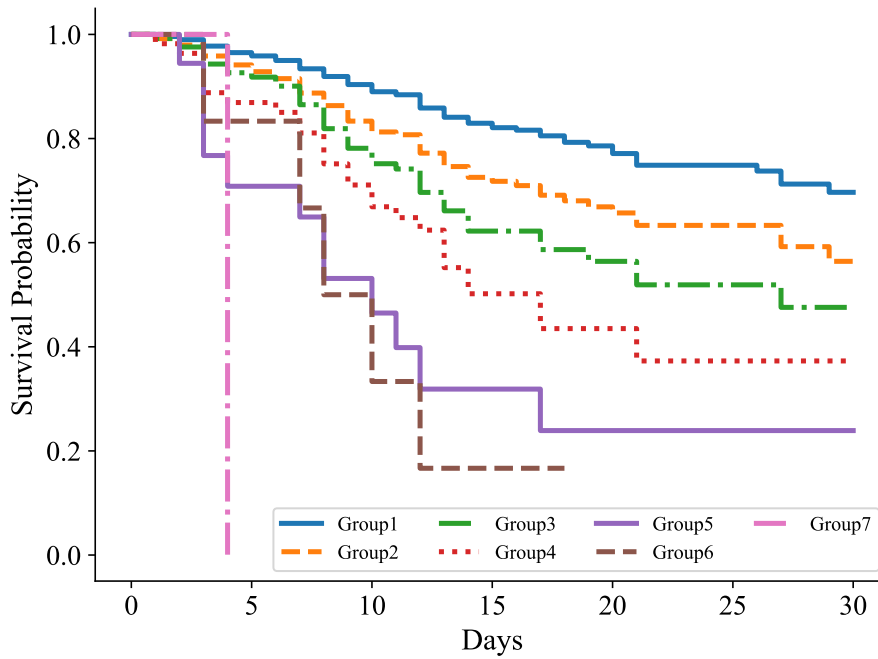


Figure 2: Survival curves of seven groups