**S4 Table.** **Demographic and clinical baseline characteristics of patients who underwent other gastrointestinal surgery**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Classification** |  | **Before matching** | **After matching** |
|  |  |  | **rTM group** | **non-rTM group** | **Standardized difference %** | **rTM group** | **non-rTM group** | **Standardized difference %** |
|  |  |  | **N = 956** | **N = 1278** | **N = 614** | **N = 614** |
| Sex, n (%) | Male |  | 539 (56.4) | 780 (61.0) | 9.5 | 361 (58.8) | 345 (56.2) | 5.3 |
|  | Female |  | 417 (43.6) | 498 (39.0) | - | 253 (41.2) | 269 (43.8) | - |
| Age, years | n |  | 956 | 1278 | - | 614 | 614 | - |
|  | Median (Minimum/maximum) |  | 77.0(21/100) | 74.5(23/103) | - | 77.0(21/99) | 77.0(23/103) | - |
| Concomitant drugs, n (%) | Catecholamine | No | 205 (21.4) | 437 (34.2) | 28.7 | 167 (27.2) | 167 (27.2) | 0.0 |
|  | Yes | 751 (78.6) | 841 (65.8) | - | 447 (72.8) | 447 (72.8) | - |
|  | Antibiotics | No | 1 (0.1) | 36 (2.8) | 22.8 | 1 (0.2) | 0 (0.0) | 5.7 |
|  |  | Yes | 955 (99.9) | 1242 (97.2) | - | 613 (99.8) | 614 (100.0) | - |
|  | Antifungals | No | 905 (94.7) | 1252 (98.0) | 17.6 | 593 (96.6) | 591 (96.3) | 1.8 |
|  |  | Yes | 51 (5.3) | 26 (2.0) | - | 21 (3.4) | 23 (3.7) | - |
|  | Other drugs for DIC treatment | No | 100 (10.5) | 0 (0.0) | 48.3 | 90 (14.7) | 0 (0.0) | 58.6 |
|  | Yes | 856 (89.5) | 1278 (100.0) | - | 524 (85.3) | 614 (100.0) | - |
|  | Steroids | No | 716 (74.9) | 1021 (79.9) | 12.0 | 479 (78.0) | 488 (79.5) | 3.6 |
|  |  | Yes | 240 (25.1) | 257 (20.1) | - | 135 (22.0) | 126 (20.5) | - |
|  | Neutrophil elastase inhibitors (Sivelestat) | No | 677 (70.8) | 1045 (81.8) | 26.0 | 470 (76.5) | 464 (75.6) | 2.3 |
|  | Yes | 279 (29.2) | 233 (18.2) | - | 144 (23.5) | 150 (24.4) | - |
|  | Immunoglobulins | No | 485 (50.7) | 963 (75.4) | 52.7 | 367 (59.8) | 369 (60.1) | 0.7 |
|  | Yes | 471 (49.3) | 315 (24.6) | - | 247 (40.2) | 245 (39.9) | - |
| Complications, n (%) | Myocardial infarction | No | 945 (98.8) | 1261 (98.7) | 1.6 | 608 (99.0) | 607 (98.9) | 1.6 |
| Yes | 11 (1.2) | 17 (1.3) | - | 6 (1.0) | 7 (1.1) | - |
|  | Congestive heart failure | No | 875 (91.5) | 1151 (90.1) | 5.1 | 568 (92.5) | 558 (90.9) | 5.9 |
|  | Yes | 81 (8.5) | 127 (9.9) | - | 46 (7.5) | 56 (9.1) | - |
|  | Peripheral vascular disease | No | 928 (97.1) | 1241 (97.1) | 0.2 | 594 (96.7) | 595 (96.9) | 0.9 |
|  | Yes | 28 (2.9) | 37 (2.9) | - | 20 (3.3) | 19 (3.1) | - |
|  | Cerebral vascular disease | No | 914 (95.6) | 1209 (94.6) | 4.7 | 585 (95.3) | 586 (95.4) | 0.8 |
|  | Yes | 42 (4.4) | 69 (5.4) | - | 29 (4.7) | 28 (4.6) | - |
|  | Dementia | No | 938 (98.1) | 1261 (98.7) | 4.4 | 605 (98.5) | 604 (98.4) | 1.3 |
|  |  | Yes | 18 (1.9) | 17 (1.3) | - | 9 (1.5) | 10 (1.6) | - |
|  | Chronic lung disease | No | 928 (97.1) | 1210 (94.7) | 12.0 | 591 (96.3) | 584 (95.1) | 5.6 |
|  | Yes | 28 (2.9) | 68 (5.3) | - | 23 (3.7) | 30 (4.9) | - |
|  | Collagen disease | No | 948 (99.2) | 1265 (99.0) | 1.9 | 610 (99.3) | 608 (99.0) | 3.6 |
|  | Yes | 8 (0.8) | 13 (1.0) | - | 4 (0.7) | 6 (1.0) | - |
|  | Peptic ulcer | No | 853 (89.2) | 1119 (87.6) | 5.2 | 546 (88.9) | 541 (88.1) | 2.6 |
|  |  | Yes | 103 (10.8) | 159 (12.4) | - | 68 (11.1) | 73 (11.9) | - |
|  | Mild liver diseasea | No | 919 (96.1) | 1159 (90.7) | 22.1 | 587 (95.6) | 592 (96.4) | 4.2 |
|  | Yes | 37 (3.9) | 119 (9.3) | - | 27 (4.4) | 22 (3.6) | - |
|  | Diabetes | No | 861 (90.1) | 1140 (89.2) | 2.8 | 546 (88.9) | 534 (87.0) | 6.0 |
|  |  | Yes | 95 (9.9) | 138 (10.8) | - | 68 (11.1) | 80 (13.0) | - |
|  | Hemiplegia | No | 954 (99.8) | 1276 (99.8) | 1.2 | 614 (100.0) | 614 (100.0) | - |
|  |  | Yes | 2 (0.2) | 2 (0.2) | - | 0 (0.0) | 0 (0.0) | - |
|  | Renal dysfunction | No | 883 (92.4) | 1211 (94.8) | 9.8 | 575 (93.6) | 574 (93.5) | 0.7 |
|  | Yes | 73 (7.6) | 67 (5.2) | - | 39 (6.4) | 40 (6.5) | - |
|  | Diabetes mellitus with chronic complications | No | 944 (98.7) | 1248 (97.7) | 8.2 | 603 (98.2) | 603 (98.2) | 0.0 |
|  | Yes | 12 (1.3) | 30 (2.3) | - | 11 (1.8) | 11 (1.8) | - |
|  | Solid cancer, leukemia, lymphoma | No | 891 (93.2) | 1133 (88.7) | 15.9 | 566 (92.2) | 564 (91.9) | 1.2 |
|  | Yes | 65 (6.8) | 145 (11.3) | - | 48 (7.8) | 50 (8.1) | - |
|  | Moderate to high liver dysfunction | No | 943 (98.6) | 1224 (95.8) | 17.5 | 604 (98.4) | 606 (98.7) | 2.7 |
|  | Yes | 13 (1.4) | 54 (4.2) | - | 10 (1.6) | 8 (1.3) | - |
|  | Metastatic solid tumors | No | 889 (93.0) | 1136 (88.9) | 14.3 | 567 (92.3) | 566 (92.2) | 0.6 |
|  | Yes | 67 (7.0) | 142 (11.1) | - | 47 (7.7) | 48 (7.8) | - |
|  | AIDS・HIV | No | 955 (99.9) | 1278 (100.0) | 4.6 | 614 (100.0) | 614 (100.0) | - |
|  |  | Yes | 1 (0.1) | 0 (0.0) | - | 0 (0.0) | 0 (0.0) | - |
| Treatments, n (%) | Ventilators | No | 495 (51.8) | 1056 (82.6) | 69.6 | 432 (70.4) | 440 (71.7) | 2.9 |
|  | Yes | 461 (48.2) | 222 (17.4) | - | 182 (29.6) | 174 (28.3) | - |
|  | Dialysis | No | 714 (74.7) | 1170 (91.5) | 46.2 | 522 (85.0) | 522 (85.0) | 0.0 |
|  |  | Yes | 242 (25.3) | 108 (8.5) | - | 92 (15.0) | 92 (15.0) | - |
|  | Extracorporeal membrane oxygenation | No | 956 (100.0) | 1278 (100.0) | - | 614 (100.0) | 614 (100.0) | - |
|  | Yes | 0 (0.0) | 0 (0.0) | - | 0 (0.0) | 0 (0.0) | - |
|  | Intra-aortic Balloon Pumping | No | 956 (100.0) | 1278 (100.0) | - | 614 (100.0) | 614 (100.0) | - |
|  | Yes | 0 (0.0) | 0 (0.0) | - | 0 (0.0) | 0 (0.0) | - |
|  | Central venous catheterization | No | 948 (99.2) | 1263 (98.8) | 3.4 | 608 (99.0) | 609 (99.2) | 1.7 |
|  | Yes | 8 (0.8) | 15 (1.2) | - | 6 (1.0) | 5 (0.8) | - |
|  | Pleural effusion | No | 403 (42.2) | 1009 (79.0) | 81.3 | 370 (60.3) | 377 (61.4) | 2.3 |
|  |  | Yes | 553 (57.8) | 269 (21.0) | - | 244 (39.7) | 237 (38.6) | - |
|  | Blood purification therapy | No | 714 (74.7) | 1170 (91.5) | 46.2 | 522 (85.0) | 522 (85.0) | 0.0 |
|  | Yes | 242 (25.3) | 108 (8.5) | - | 92 (15.0) | 92 (15.0) | - |
|  | Coagulation blood test | No | 19 (2.0) | 143 (11.2) | 37.7 | 19 (3.1) | 19 (3.1) | 0.0 |
|  | Yes | 937 (98.0) | 1135 (88.8) | - | 595 (96.9) | 595 (96.9) | - |
| Transfusion, n (%) | Red blood cell transfusion | No | 508 (53.1) | 707 (55.3) | 4.4 | 344 (56.0) | 356 (58.0) | 3.9 |
| Yes | 448 (46.9) | 571 (44.7) | - | 270 (44.0) | 258 (42.0) | - |
|  | Whole blood transfusion | No | 956 (100.0) | 1278 (100.0) | - | 614 (100.0) | 614 (100.0) | - |
|  | Yes | 0 (0.0) | 0 (0.0) | - | 0 (0.0) | 0 (0.0) | - |
| Number of beds in medical facilities, n (%) | <200 beds |  | 20 (2.1) | 61 (4.8) | 14.8 | 13 (2.1) | 35 (5.7) | 18.6 |
| ≥200, <500 |  | 592 (61.9) | 751 (58.8) | 6.5 | 399 (65.0) | 368 (59.9) | 10.4 |
| ≥500 |  | 344 (36.0) | 466 (36.5) | 1.0 | 202 (32.9) | 211 (34.4) | 3.1 |
| Platelets(averageb) | n |  | 77 | 43 | - | 51 | 20 | - |
| Median |  | 15.40 | 18.50 | - | 15.30 | 20.38 | - |
| Creatinine(average) | n |  | 77 | 43 | - | 51 | 20 | - |
| Median |  | 0.990 | 0.890 | - | 0.950 | 0.950 | - |
| Total bilirubin(averageb) | n |  | 73 | 42 | - | 47 | 20 | - |
| Median |  | 0.700 | 0.700 | - | 0.750 | 0.680 | - |
| Direct bilirubin(averageb) | n |  | 37 | 21 | - | 25 | 7 | - |
| Median |  | 0.220 | 0.100 | - | 0.220 | 0.300 | - |
| FDP/D-dimer(averageb) | n |  | 29 | 10 | - | 16 | 4 | - |
| Median |  | 6.200 | 4.050 | - | 8.400 | 4.050 | - |
| Platelets(minimumc) | n |  | 77 | 43 | - | 51 | 20 | - |
| Median |  | 14.20 | 16.10 | - | 14.90 | 19.90 | - |
| Creatinine(minimumc) | n |  | 77 | 43 | - | 51 | 20 | - |
| Median |  | 0.950 | 0.890 | - | 0.890 | 0.935 | - |
| Total bilirubin(minimumc) | n |  | 73 | 42 | - | 47 | 20 | - |
| Median |  | 0.670 | 0.700 | - | 0.750 | 0.680 | - |
| Direct bilirubin(minimumc) | n |  | 37 | 21 | - | 25 | 7 | - |
| Median |  | 0.220 | 0.100 | - | 0.220 | 0.300 | - |
| FDP/D-dimer(minimumd) | n |  | 29 | 10 | - | 16 | 4 | - |
| Median |  | 6.200 | 4.050 | - | 8.400 | 4.050 | - |
| Platelets(maximumd) | n |  | 77 | 43 | - | 51 | 20 | - |
| Median |  | 16.30 | 19.30 | - | 16.30 | 23.90 | - |
| Creatinine(maximumd) | n |  | 77 | 43 | - | 51 | 20 | - |
| Median |  | 0.990 | 0.900 | - | 0.950 | 0.970 | - |
| Total bilirubin(maximumd) | n |  | 73 | 42 | - | 47 | 20 | - |
| Median |  | 0.730 | 0.700 | - | 0.750 | 0.750 | - |
| Direct bilirubin(maximumd) | n |  | 37 | 21 | - | 25 | 7 | - |
| Median |  | 0.220 | 0.100 | - | 0.220 | 0.300 | - |
| FDP/D-dimer(maximumd) | n |  | 29 | 10 | - | 16 | 4 | - |
| Median |  | 6.200 | 4.050 | - | 8.400 | 4.050 | - |

aIncludes diseases that seem to be severe (e.g., liver cirrhosis), but as defined in the previous study (Quan H, Med Care, 2005, 43, 1130)

bWhen there were repeated test results, we adopted the average.

cWhen there were repeated test results, we adopted the minimum.

dWhen there were repeated test results, we adopted the maximum.

rTM, recombinant thrombomodulin; DIC, disseminated intravascular coagulation; FDP, fibrinogen/fibrin degradation products; SD, standard deviation