Table S1. Details of postoperative complications

|                          | All (n = 880) | Nonsarcopenia (n=713) | Sarcopenia (n=167) | P       |
|--------------------------|---------------|-----------------------|--------------------|---------|
| **Total postoperative complications*** | 231 (26.2)    | 153 (21.5)            | 78 (46.7)          | <0.001* |
| Severe complications³    | 58 (6.6)      | 35 (4.9)              | 23 (13.8)          | <0.001* |
| **Grade II**             | 173 (19.6)    | 118 (16.5)            | 55 (32.9)          | <0.001* |
| Pneumonia                | 32            | 15                    | 17                 |         |
| Intra-abdominal infection| 27            | 24                    | 3                  |         |
| Gastrointestinal dysfunction⁵ | 25        | 15                    | 10                 |         |
| Wound infection          | 14            | 12                    | 2                  |         |
| Small bowel obstruction  | 13            | 8                     | 5                  |         |
| Duodenal fistula         | 9             | 6                     | 3                  |         |
| Venous thrombosis        | 9             | 7                     | 2                  |         |
| Intra-abdominal hemorrhage| 8             | 6                     | 2                  |         |
| Pulmonary atelectasis    | 6             | 3                     | 3                  |         |
| Seroperitoneum           | 6             | 5                     | 1                  |         |
| Anastomotic leakage      | 5             | 4                     | 1                  |         |
| Lymphatic fistula        | 4             | 2                     | 2                  |         |
| Pancreatic fistula       | 3             | 2                     | 1                  |         |
| Blood Infection          | 3             | 3                     | 0                  |         |
| Gastrointestinal hemorrhage | 3            | 3                     | 0                  |         |
| Wernicke's encephalopathy| 2             | 1                     | 1                  |         |
| Arrhythmia               | 1             | 1                     | 1                  |         |
| Pulmonary embolism       | 1             | 1                     | 0                  |         |
| Urinary system infection | 1             | 0                     | 1                  |         |
| Intestinal infection     | 1             | 0                     | 0                  |         |
| **Grade III**            | 31 (3.5)      | 24 (3.4)              | 7 (4.2)            | 0.602   |
| Intra-abdominal hemorrhage | 15            | 14                    | 1                  |         |
| Anastomotic leakage      | 7             | 4                     | 3                  |         |
| Pleural effusion         | 3             | 1                     | 2                  |         |
| Intra-abdominal infection| 3             | 2                     | 1                  |         |
| Biliary fistula          | 1             | 1                     | 0                  |         |
| Pancreatic fistula       | 2             | 2                     | 0                  |         |
| **Grade IV**             | 23 (2.6)      | 10 (1.4)              | 13 (7.8)           | <0.001* |
| Heart failure            | 5             | 3                     | 2                  |         |
| Anastomotic leakage      | 1             | 1                     | 0                  |         |
| Anastomotic stenosis     | 1             | 0                     | 1                  |         |
| Cerebral infarction      | 1             | 1                     | 0                  |         |
| Intra-abdominal hemorrhage | 1             | 0                     | 1                  |         |
| Multiple organ failure   | 2             | 0                     | 2                  |         |
| Pancreatic fistula       | 1             | 1                     | 0                  |         |
| Pneumonia                | 1             | 0                     | 1                  |         |
| Pulmonary embolism       | 1             | 0                     | 1                  |         |
| Respiratory failure      | 5             | 2                     | 3                  |         |
Table S2. Sensitivity and specificity of nutritional tools and sarcopenia in the prediction of postoperative complications

| Factors      | Sensitivity% | Specificity% | ROC (95% CI) |
|--------------|--------------|--------------|--------------|
| MUST ≥1      | 51.08        | 57.63        | 0.544 (0.500-0.587) |
| NRS-2002 ≥3  | 44.16        | 67.95        | 0.561 (0.517-0.604) |
| MST ≥2       | 34.63        | 70.80        | 0.532 (0.488-0.576) |
| SNAQ ≥2      | 26.84        | 81.97        | 0.544 (0.500-0.588) |
| Sarcopenia   | 33.77        | 86.29        | 0.600 (0.556-0.645) |

ROC, Receiver operating characteristic; CI, confidence interval.

*Complications classified as grade II and above.
# Complications classified as grade III and above.
& Complications requiring total parenteral nutrition support, including delayed gastric emptying, prolonged postoperative ileus, etc.

The number in the table indicates the number of patients and percent.
Figure S1. Kaplan Meier curves for overall survival and disease-free survival in patients with/without sarcopenia and nutritional risk (a, b sarcopenia vs nonsarcopenia; c, d MUST ≥1 vs MUST <1; e, f NRS-2002 ≥3 vs NRS-2002 <3; g, h MST ≥2 vs MST <2; i, j SNAQ ≥2 vs SNAQ <2).