

Supplementary Methods

Definition of primary outcome and secondary outcomes

In our department, a volume-based feeding protocol was employed. The target of protein for each patient was 1.3 g/kg estimated dry body weight per day, and the target of calorie was 25 kcal/kg estimated dry body weight per day. For patients with $BMI \geq 30$, ideal body weight was used to determine the target for protein and calories. Daily protein prescription (DPP) was defined as protein delivered by enteral nutrition. DPP % was defined as the ratio between DPP and the target of protein. The average DPP % was calculated using the following formula: average DPP % = $(\frac{\sum_{day=1}^7(DPP)}{7})/(1.3 * \text{body weight})$. The daily calories were delivered by enteral nutrition (the calories of propofol were not included).

Recurrence of EFI was defined as any episode of EFI after prokinetic agent administration. New onset atrial fibrillation was scanned according to diagnosis when discharged from the ICU. Diarrhea was defined as more than 3 bowel movements per day and stool weight greater than 200 grams per day or volume greater than 250 mL per day which needed to be interrupted. Constipation was defined as failure of the bowel to open for three consecutive days. Hyperglycemia was defined as any episode of blood glucose > 7.2 mmol/L. Elevated creatine kinase was defined as any episode of creatine kinase level > 198 IU/L, while the elevated cardiac troponin T was defined as any episode of cardiac troponin T level > 0.5 μ g/L. Hyperkalemia and hypokalemia were defined as blood potassium level > 5.5 mmol/L or < 3.5 mmol/L, respectively. Hypermagnesemia and hypomagnesemia were defined as blood magnesia level > 1.5 mmol/L or < 0.75 mmol/L, respectively. Hyperphosphatemia and hypophosphatemia were defined as blood phosphoremia level > 1.46 mmol/L or < 0.32 mmol/L, respectively. Delirium was defined according to conventional widely accepted standards based on Confusion Assessment Method for the ICU (CAM-ICU) method. All the events were determined through patients' personal record review by two independent intensivists.

Covariates, missing value imputation, and statistical methods

All covariates included in our study are listed below, with the percentage of missing values. For any missing lab values, we used the mean value of the entire cohort at that same time point as the imputed value. The results of lab test at admission were defined as the worst value obtained within 24 hours after admission. The results of lab test before starting prokinetic agents were defined as the worst value obtained within 24 hours before prokinetic agent starting.

Descriptive statistics were used to characterize the study population. Continuous variables were reported as medians with interquartile ranges or means with standard deviation, and categorical variables were reported as counts with relative frequencies.

Categorical data were compared with χ^2 test and continuous data with the Wilcoxon rank sum test.

Univariate logistic regression analysis was performed to assess the independent association of clinical factors, including prokinetic agents, feeding start time, supplementary parenteral nutrition, prokinetic agent, administration of other agents (insulin, probiotic, opioid, propofol, muscle relaxant, and vasopressor), CRRT, placement of nasoenteric tube, disease severity, age, gender, admission type, BMI, and hospitalization time before ICU admission, and feeding success. Multivariate logistic regression analyses were fitted to examine association for prokinetic agents and feeding success. All potential confounders using in univariate logistic regression analysis were introduced as candidate covariates using backward elimination logistic regression method. We report the results from the regression model as odds ratios with 95% confidence intervals.

The propensity score was calculated with 1:1 matching to 1:5 matching because of limited patient numbers in the metoclopramide group using nearest neighbor matching. Potential confounders in the matching model were selected based on logistic regression and clinical interests. In Model 1, we matched patients based on baseline factors of clinical interest and lab results before prokinetic treatment with $P < 0.10$: age (as a continuous variable), gender (as a categorical variable), admission type (as a categorical variable), APACHE score (as a continuous variable), comorbidity (as a categorical variable), ICU admission diagnosis (as a categorical variable), BMI (as a continuous variable), CRP (as a continuous variable), TT (as a continuous variable), ATIII (as a continuous variable), ALT (as a continuous variable), AST (as a continuous variable), TB (as a continuous variable), HBDB (as a continuous variable), GLU (as a continuous variable), LDH (as a continuous variable), ALP (as a continuous variable), CHOL (as a continuous variable), TP (as a continuous variable), GLB (as a continuous variable), DBIL (as a continuous variable), and PLT (as a continuous variable).

In Model 2, we matched patients based on baseline factors of clinical interest and lab results at admission with $P < 0.10$: age (as a continuous variable), gender (as a categorical variable), admission type (as a categorical variable), APACHE score (as a continuous variable), comorbidity (as a categorical variable), ICU admission diagnosis (as a categorical variable), BMI (as a continuous variable), APTT (as a continuous variable), TB (as a continuous variable), IBIL (as a continuous variable), HBDH (as a continuous variable), TP (as a continuous variable), GLB (as a continuous variable), GGT (as a continuous variable), PH (as a continuous variable), HCO_3 (as a continuous variable), DBIL (as a continuous variable), and PLT (as a continuous variable).

One-to-one nearest neighbor matching was performed between groups without replacement using a caliper width of 0.20 times of the standard deviation of the logit of the propensity score. To assess the performance of the matching, we compared baseline variables between the matched groups using method mentioned above. In the matched cohort, we performed logistic regression, chi-square test, Fisher's exact test and McNemar's test to assess the association between prokinetic agents and feeding success

when it is appropriate.

Our statistical analysis tools included: pandas (0.23.4), numpy (1.15.1), matplotlib (2.2.3), xlrd (1.1.0), ctmaching (0.0.6), scipy (1.1.10), itertools (4.3.0), scikit-learn (0.19.2), and seaborn (0.9.0).

Table S1: Variables of patients enrolled in the study

| Variables | Missing percentage (%) |
|---|------------------------|
| Age | 0.00 |
| Gender | 0.00 |
| BMI | 0.00 |
| APACHE II | 0.00 |
| SOFA | 0.00 |
| NUTRIC score | 0.00 |
| Admission type | 0.00 |
| Admission reason | 0.00 |
| Time before ICU admission | 0.00 |
| Feeding start after admission | 0.00 |
| Prokinetics start time | 0.00 |
| Clinical situation when prokinetics started | 0.00 |
| ICU admission diagnosis | 0.00 |
| Comorbidity | 0.00 |
| CRP at admission | 5.72 |
| PCT at admission | 7.25 |
| IL-6 at admission | 5.07 |
| INR at admission | 0.36 |
| PT at admission | 0.36 |
| TT at admission | 0.36 |
| ATIII at admission | 0.91 |
| APTT at admission | 0.36 |
| Fib, at admission | 0.36 |
| D-dimer at admission | 0.91 |
| ALT at admission | 0.18 |
| AST at admission | 0.18 |
| TB at admission | 0.18 |
| IB at admission | 0.18 |
| TBA at admission | 7.97 |
| LDH at admission | 0.18 |
| Urea at admission | 0.18 |
| Uric acid at admission | 0.18 |
| Pro-BNP at admission | 6.74 |
| HBDH at admission | 0.18 |
| CK at admission | 0.18 |
| TPN-T at admission | 7.28 |
| Glu at admission | 0.00 |

| | |
|---|------|
| ALP at admission | 0.18 |
| TP at admission | 0.18 |
| GLB at admission | 0.18 |
| ALB at admission | 0.18 |
| DBIL at admission | 0.18 |
| Cys-c at admission | 0.18 |
| GGT at admission | 0.18 |
| CHOL at admission | 0.18 |
| TG at admission | 0.18 |
| LDL-C at admission | 0.18 |
| HDL-C at admission | 0.18 |
| Lac at admission | 1.45 |
| pH at admission | 0.36 |
| PaO ₂ at admission | 0.91 |
| PaCO ₂ at admission | 0.91 |
| HCO ₃ at admission | 4.17 |
| AG at admission | 0.00 |
| RBC at admission | 0.00 |
| HCT at admission | 0.00 |
| WBC at admission | 0.00 |
| MCH at admission | 0.00 |
| MCHC at admission | 0.00 |
| PLT at admission | 0.00 |
| HGB at admission | 0.00 |
| Na at admission | 0.00 |
| K at admission | 0.00 |
| Ca at admission | 0.00 |
| Mg at admission | 0.00 |
| P at admission | 0.00 |
| Cl at admission | 0.00 |
| CRP the day before prokinetic drug administration | 5.65 |
| PCT the day before prokinetic drug administration | 5.65 |
| IL-6 the day before prokinetic drug administration | 6.74 |
| INR the day before prokinetic drug administration | 8.99 |
| PT the day before prokinetic drug administration | 8.99 |
| TT the day before prokinetic drug administration | 9.71 |
| ATIII the day before prokinetic drug administration | 9.42 |
| APTT the day before prokinetic drug administration | 9.53 |
| Fib, the day before prokinetic drug administration | 9.71 |
| D-Dimer the day before prokinetic drug administration | 9.6 |
| ALT the day before prokinetic drug administration | 9.31 |
| AST the day before prokinetic drug administration | 9.31 |
| TB the day before prokinetic drug administration | 9.31 |
| IB the day before prokinetic drug administration | 9.31 |

| | |
|---|------|
| TBA the day before prokinetic drug administration | 5.36 |
| LDH the day before prokinetic drug administration | 8.37 |
| UREA the day before prokinetic drug administration | 9.31 |
| URIC the day before prokinetic drug administration | 9.31 |
| Pro-BNP the day before prokinetic drug administration | 5.4 |
| HBDH the day before prokinetic drug administration | 8.37 |
| CK the day before prokinetic drug administration | 8.37 |
| TPN-T the day before prokinetic drug administration | 8.12 |
| Glu the day before prokinetic drug administration | 2.17 |
| ALP the day before prokinetic drug administration | 9.31 |
| TP the day before prokinetic drug administration | 9.31 |
| GLB the day before prokinetic drug administration | 9.31 |
| ALB the day before prokinetic drug administration | 9.31 |
| DBIL the day before prokinetic drug administration | 9.31 |
| Cys-c the day before prokinetic drug administration | 9.31 |
| GGT the day before prokinetic drug administration | 9.31 |
| CHOL the day before prokinetic drug administration | 7.46 |
| TG the day before prokinetic drug administration | 7.46 |
| LDL-C the day before prokinetic drug administration | 7.46 |
| HDL-C the day before prokinetic drug administration | 7.46 |
| Lac the day before prokinetic drug administration | 9.42 |
| pH the day before prokinetic drug administration | 6.16 |
| PaO ₂ the day before prokinetic drug administration | 8.88 |
| PaCO ₂ the day before prokinetic drug administration | 9.06 |
| HCO ₃ the day before prokinetic drug administration | 8.73 |
| AG the day before prokinetic drug administration | 6.88 |
| RBC the day before prokinetic drug administration | 8.04 |
| HCT the day before prokinetic drug administration | 8.04 |
| WBC the day before prokinetic drug administration | 8.04 |
| MCH the day before prokinetic drug administration | 8.04 |
| MCHC the day before prokinetic drug administration | 8.04 |
| PLT the day before prokinetic drug administration | 8.04 |
| HGB the day before prokinetic drug administration | 8.04 |
| Na the day before prokinetic drug administration | 1.27 |
| K the day before prokinetic drug administration | 1.27 |
| Mg the day before prokinetic drug administration | 6.45 |
| P the day before prokinetic drug administration | 6.45 |
| Cl the day before prokinetic drug administration | 5.8 |
| Enteral nutrition type | 0.00 |
| Sufentanil | 0.00 |
| Fentanyl | 0.00 |
| Dezocine | 0.00 |
| Propofol | 0.00 |
| Probiotic | 0.00 |

| | |
|--------------------------------|------|
| Muscle relaxants | 0.00 |
| Mosapride | 0.00 |
| Fat Emulsion Injection | 0.00 |
| Insulin | 0.00 |
| Parenteral nutrition (Kabiven) | 0.00 |
| ICU LOS | 0.00 |
| Hospital LOS | 0.00 |
| Hospital cost | 0.00 |
| ICU Mortality | 0.00 |
| Recurrence of EFI | 0.00 |
| New onset AFib | 0.00 |
| Ventilation-free days | 0.00 |
| CRRT-free days | 0.00 |
| Vasopressor-free days | 0.00 |
| Diarrhea | 0.00 |
| Constipation | 0.00 |
| Hyperglycemia | 0.00 |
| Delirium | 0.00 |

SD: standard deviation; CRP: C-reactive protein; PCT: Procalcitonin; PT: prothrombin time; TT: Thrombin time; AT III: Antithrombin III; APTT: Activated partial thromboplastin time; Fib: fibrinogen; ALT: Alanine Aminotransferase; AST: Aspartate Aminotransferase; TB: Total bilirubin; IB: Indirect bilirubin; TBA: Total bile acids; LDH: Lactate dehydrogenase; BNP: type B natriuretic peptide; HBDH: hydroxybutyrate dehydrogenase; CK: Creatine kinase; cTNT: cardiac troponin T; Glu: Glucose; ALP: Alkaline Phosphatase; Cys-c: Cystatin C; GGT: Gamma-Glutamyl Transferase; CHOL: cholesterol; TG: Triglycerides; LDL-C: Low-density lipoprotein cholesterol; HDL-C: High-density lipoprotein cholesterol; LAC: lactate; AG: anion gap; RBC: Red blood cell; HCT: Hematocrit; WBC: white blood cell; MCH: Mean corpuscular hemoglobin; MCHC: Mean corpuscular hemoglobin concentration; PLT: platelet; HGB: Hemoglobin;

Table S2 Biochemical test results at ICU admission

| | Unmatched cohort | | | | Matched cohort [†] | | | |
|--|------------------|-------------------|--------------------|-------|-----------------------------|---------------------|---------------------|-------|
| | All (n=552) | M group (n=38) | D group (n=514) | P | All (n=114) | M-M group (n=38) | D-M group (n=76) | P |
| Inflammatory marker, mean ± SD | | | | | | | | |
| CRP, mg/L | 83.20 ± 85.22 | 75.31 ± 63.62 | 83.80 ± 86.67 | 0.606 | 80.88 ± 84.61 | 75.31 ± 63.62 | 83.40 ± 92.93 | 0.672 |
| PCT, ng/mL | 5.26 ± 14.32 | 4.44 ± 11.53 | 5.32 ± 14.51 | 0.731 | 2.69 ± 8.20 | 4.44 ± 11.53 | 1.89 ± 6.02 | 0.133 |
| IL-6, pg/mL | 310.21 ± 791.48 | 433.43 ± 1020.05 | 300.95 ± 772.59 | 0.402 | 277.31 ± 677.62 | 433.43 ± 1020.05 | 208.22 ± 446.19 | 0.152 |
| Coagulation test, mean ± SD | | | | | | | | |
| INR | 1.34 ± 0.56 | 1.21 ± 0.25 | 1.35 ± 0.57 | 0.135 | 1.21 ± 0.43 | 1.21 ± 0.25 | 1.22 ± 0.50 | 0.977 |
| PT, s | 15.72 ± 6.31 | 14.19 ± 2.93 | 15.83 ± 6.48 | 0.121 | 14.24 ± 4.95 | 14.19 ± 2.93 | 14.26 ± 5.71 | 0.941 |
| TT, s | 19.72 ± 8.36 | 19.75 ± 9.33 | 19.71 ± 8.30 | 0.980 | 19.76 ± 11.09 | 19.75 ± 9.33 | 19.76 ± 11.93 | 0.997 |
| ATIII, % | 62.11 ± 25.11 | 66.68 ± 17.68 | 61.78 ± 25.55 | 0.252 | 70.17 ± 18.44 | 66.68 ± 17.68 | 71.89 ± 18.67 | 0.154 |
| APTT, s | 44.16 ± 23.37 | 37.00 ± 10.40 | 44.69 ± 23.97 | 0.050 | 36.18 ± 9.23 | 37.0 ± 10.40 | 35.77 ± 8.63 | 0.505 |
| Fib, g/L | 3.14 ± 1.71 | 3.07 ± 1.70 | 3.14 ± 1.71 | 0.793 | 3.31 ± 1.60 | 3.07 ± 1.70 | 3.44 ± 1.54 | 0.264 |
| D-dimer, mg/L FEU | 7.58 ± 7.57 | 7.23 ± 6.31 | 7.61 ± 7.66 | 0.732 | 6.46 ± 6.20 | 7.23 ± 6.31 | 6.08 ± 6.16 | 0.359 |
| Biochemical analysis, mean ± SD | | | | | | | | |
| ALT, IU/L | 142.99 ± 410.68 | 43.76 ± 87.34 | 150.34 ± 424.07 | 0.123 | 39.68 ± 62.57 | 43.76 ± 87.34 | 37.64 ± 46.07 | 0.625 |
| AST, IU/L | 292.07 ± 972.55 | 44.55 ± 55.17 | 310.41 ± 1005.46 | 0.104 | 46.16 ± 67.81 | 44.55 ± 55.17 | 46.96 ± 73.64 | 0.845 |
| TB, µmol/L | 31.95 ± 49.02 | 16.94 ± 13.15 | 33.06 ± 50.51 | 0.050 | 14.48 ± 10.15 | 16.94 ± 13.15 | 13.25 ± 8.09 | 0.067 |
| IB, µmol/L | 9.98 ± 15.06 | 6.44 ± 3.11 | 10.24 ± 15.56 | 0.134 | 5.99 ± 3.21 | 6.44 ± 3.11 | 5.76 ± 3.25 | 0.282 |
| TBA, µmol/L | 20.68 ± 50.39 | 7.10 ± 13.97 | 22.25 ± 52.80 | 0.163 | 5.12 ± 10.16 | 7.10 ± 13.97 | 3.22 ± 3.43 | 0.185 |
| LDH, mmol/L | 546.92 ± 929.12 | 274.47 ± 187.81 | 567.10 ± 958.58 | 0.061 | 292.20 ± 272.45 | 274.47 ± 187.81 | 301.07 ± 306.91 | 0.625 |
| Urea, mmol/L | 9.05 ± 6.73 | 9.44 ± 7.61 | 9.02 ± 6.67 | 0.711 | 8.19 ± 6.90 | 9.44 ± 7.61 | 7.56 ± 6.49 | 0.172 |
| Uric acid, µmol/L | 240.22 ± 137.26 | 240.66 ± 113.83 | 240.19 ± 138.94 | 0.984 | 232.09 ± 120.03 | 240.66 ± 113.83 | 227.81 ± 123.53 | 0.592 |

| | | | | | | | | |
|--|----------------------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-----------------------|-------|
| Pro-BNP, pg/ml | 3194.12 ± 7021.3 | 2760.39 ± 6513.39 | 3233.56 ± 7072.05 | 0.699 | 2666.63 ± 6960.42 | 2760.39 ± 6513.39 | 2617.71 ± 7228.63 | 0.919 |
| HBDH, IU/L | 350.66 ± 414.35 | 217.92 ± 143.08 | 360.49 ± 426.08 | 0.041 | 227.26 ± 161.13 | 217.92 ± 143.08 | 231.93 ± 170.15 | 0.645 |
| CK, IU/L | 754.84 ± 2538.44 | 397.16 ± 583.32 | 781.33 ± 2624.33 | 0.368 | 458.26 ± 1172.21 | 397.16 ± 583.32 | 488.82 ± 1378.25 | 0.696 |
| cTNT, ng/L | 98.18 ± 353.78 | 62.68 ± 97.09 | 101.34 ± 367.93 | 0.536 | 60.43 ± 101.67 | 62.68 ± 97.09 | 59.25 ± 104.68 | 0.872 |
| Glu, mmol/L | 9.14 ± 3.42 | 8.90 ± 2.76 | 9.16 ± 3.46 | 0.642 | 8.59 ± 2.77 | 8.90 ± 2.76 | 8.44 ± 2.78 | 0.414 |
| ALP, IU/L | 84.69 ± 67.53 | 69.50 ± 40.42 | 85.81 ± 69.01 | 0.151 | 69.18 ± 38.85 | 69.50 ± 40.42 | 69.03 ± 38.32 | 0.951 |
| TP, g/L | 53.05 ± 9.15 | 55.97 ± 8.37 | 52.83 ± 9.17 | 0.041 | 54.57 ± 9.25 | 55.97 ± 8.37 | 53.87 ± 9.63 | 0.255 |
| GLB, g/L | 21.66 ± 6.72 | 23.41 ± 5.88 | 21.53 ± 6.76 | 0.096 | 23.24 ± 6.19 | 23.41 ± 5.88 | 23.15 ± 6.38 | 0.834 |
| ALB, g/L | 31.46 ± 6.10 | 32.56 ± 5.44 | 31.38 ± 6.14 | 0.249 | 31.33 ± 5.68 | 32.56 ± 5.44 | 30.71 ± 5.72 | 0.102 |
| Cys-c, mg/L | 1.27 ± 0.97 | 1.30 ± 1.19 | 1.27 ± 0.95 | 0.844 | 1.24 ± 1.19 | 1.30 ± 1.19 | 1.21 ± 1.20 | 0.716 |
| GGT, IU/L | 71.15 ± 125.75 | 37.24 ± 33.69 | 73.66 ± 129.66 | 0.085 | 47.40 ± 61.17 | 37.24 ± 33.69 | 52.49 ± 70.7 | 0.211 |
| Chol, mmol/L | 2.71 ± 1.15 | 2.76 ± 0.95 | 2.70 ± 1.17 | 0.775 | 3.00 ± 1.06 | 2.76 ± 0.95 | 3.12 ± 1.09 | 0.081 |
| TG, mmol/L | 1.40 ± 1.10 | 1.45 ± 1.13 | 1.40 ± 1.10 | 0.792 | 1.37 ± 0.93 | 1.45 ± 1.13 | 1.33 ± 0.83 | 0.529 |
| LDL-C, mmol/L | 1.34 ± 0.81 | 1.31 ± 0.71 | 1.35 ± 0.82 | 0.805 | 1.52 ± 0.82 | 1.31 ± 0.71 | 1.62 ± 0.86 | 0.057 |
| HDL-C, mmol/L | 0.69 ± 0.44 | 0.73 ± 0.47 | 0.69 ± 0.44 | 0.545 | 0.83 ± 0.51 | 0.73 ± 0.47 | 0.88 ± 0.52 | 0.154 |
| Lac, mmol/L | 2.07 ± 1.60 | 1.89 ± 1.04 | 2.08 ± 1.64 | 0.493 | 1.98 ± 1.40 | 1.89 ± 1.04 | 2.03 ± 1.55 | 0.626 |
| Arterial Blood Gas Test, mean \pm SD | | | | | | | | |
| pH | 7.27 ± 0.49 | 7.14 ± 0.59 | 7.28 ± 0.48 | 0.086 | 7.18 ± 0.63 | 7.14 ± 0.59 | 7.21 ± 0.65 | 0.569 |
| PaO ₂ , mmHg | 103.18 ± 44.88 | 110.01 ± 41.83 | 102.7 ± 45.08 | 0.352 | 106.32 ± 53.01 | 110.01 ± 41.83 | 104.57 ± 57.73 | 0.619 |
| PaCO ₂ , mmHg | 39.33 ± 9.26 | 36.89 ± 5.20 | 39.51 ± 9.46 | 0.102 | 38.32 ± 8.25 | 36.89 ± 5.20 | 39.01 ± 9.32 | 0.207 |
| HCO ₃ , mmol/L | 24.79 ± 5.14 | 23.38 ± 3.52 | 24.89 ± 5.22 | 0.093 | 24.72 ± 5.15 | 23.38 ± 3.52 | 25.34 ± 5.67 | 0.063 |
| AG, mmol/L | 11.64 ± 6.99 | 10.49 ± 4.79 | 11.72 ± 7.12 | 0.306 | 12.21 ± 6.02 | 10.49 ± 4.79 | 13.07 ± 6.41 | 0.055 |
| Complete blood count, mean \pm SD | | | | | | | | |
| RBC, $\times 10^{12}/\text{L}$ | 3.39 ± 0.79 | 3.35 ± 0.62 | 3.39 ± 0.8 | 0.762 | 3.50 ± 0.79 | 3.35 ± 0.62 | 3.58 ± 0.86 | 0.145 |
| HCT, L/L | 0.31 ± 0.07 | 0.30 ± 0.06 | 0.31 ± 0.07 | 0.604 | 0.32 ± 0.07 | 0.30 ± 0.06 | 0.33 ± 0.07 | 0.074 |
| WBC, $\times 10^9/\text{L}$ | 11.35 ± 5.78 | 11.42 ± 7.92 | 11.34 ± 5.60 | 0.934 | 11.48 ± 6.04 | 11.42 ± 7.92 | 11.50 ± 4.91 | 0.948 |

| | | | | | | | | |
|-----------------------------|--------------------|--------------------|--------------------|-------|--------------------|--------------------|--------------------|-------|
| MCH, pg | 30.03 ± 2.38 | 29.68 ± 2.45 | 30.06 ± 2.37 | 0.358 | 30.04 ± 2.30 | 29.68 ± 2.45 | 30.22 ± 2.22 | 0.251 |
| MCHC, g/L | 326.20 ± 15.22 | 324.87 ± 17.32 | 326.30 ± 15.06 | 0.576 | 325.78 ± 15.55 | 324.87 ± 17.32 | 326.24 ± 14.69 | 0.660 |
| PLT, $\times 10^9/\text{L}$ | 133.21 ± 92.72 | 144.18 ± 67.31 | 132.39 ± 94.33 | 0.450 | 157.76 ± 84.43 | 144.18 ± 67.31 | 164.55 ± 91.46 | 0.226 |
| HGB, g/L | 101.16 ± 22.93 | 99.05 ± 19.35 | 101.31 ± 23.18 | 0.558 | 104.68 ± 23.12 | 99.05 ± 19.35 | 107.49 ± 24.43 | 0.066 |
| Na, mmol/L | 139.77 ± 6.91 | 139.84 ± 6.7 | 139.77 ± 6.93 | 0.953 | 140.14 ± 7.67 | 139.84 ± 6.7 | 140.29 ± 8.15 | 0.766 |
| K, mmol/L | 3.87 ± 0.53 | 3.90 ± 0.58 | 3.87 ± 0.52 | 0.778 | 3.92 ± 0.52 | 3.90 ± 0.58 | 3.92 ± 0.50 | 0.799 |
| Ca, mmol/L | 2.03 ± 0.22 | 2.11 ± 0.22 | 2.02 ± 0.22 | 0.027 | 2.06 ± 0.21 | 2.11 ± 0.22 | 2.04 ± 0.21 | 0.134 |
| Mg, mmol/L | 0.85 ± 0.23 | 0.88 ± 0.16 | 0.85 ± 0.24 | 0.432 | 0.86 ± 0.17 | 0.88 ± 0.16 | 0.85 ± 0.17 | 0.445 |
| P, mmol/L | 0.95 ± 0.42 | 0.95 ± 0.38 | 0.95 ± 0.42 | 0.908 | 0.98 ± 0.39 | 0.95 ± 0.38 | 0.99 ± 0.39 | 0.627 |
| Cl, mmol/L | 108.55 ± 7.57 | 110.29 ± 7.94 | 108.42 ± 7.53 | 0.152 | 108.74 ± 8.74 | 110.29 ± 7.94 | 108.0 ± 9.06 | 0.197 |

†: 1 to 2 propensity score matching based on model 1 as described in method

SD: standard deviation; CRP: C-reactive protein; PCT: Procalcitonin; PT: prothrombin time; TT: Thrombin time; AT III: Antithrombin III; APTT: Activated partial thromboplastin time; Fib: fibrinogen; ALT: Alanine Aminotransferase; AST: Aspartate Aminotransferase; TB: Total bilirubin; IB: Indirect bilirubin; TBA: Total bile acids; LDH: Lactate dehydrogenase; BNP: type B natriuretic peptide; HBDH: hydroxybutyrate dehydrogenase; CK: Creatine kinase; cTNT: cardiac troponin T; Glu: Glucose; ALP: Alkaline Phosphatase; Cys-c: Cystatin C; GGT: Gamma-Glutamyl Transferase; CHOL: cholesterol; TG: Triglycerides; LDL-C: Low-density lipoprotein cholesterol; HDL-C: High-density lipoprotein cholesterol; LAC: lactate; AG: anion gap; RBC: Red blood cell; HCT: Hematocrit; WBC: white blood cell; MCH: Mean corpuscular hemoglobin; MCHC: Mean corpuscular hemoglobin concentration; PLT: platelet; HGB: Hemoglobin;

Table S3 Biochemical test results the day before prokinetic drug administration and enteral nutrition type at time of prokinetic drug administration

| | Unmatched cohort | | | | Matched cohort [†] | | | |
|--|------------------|---------------------|----------------------|-------|-----------------------------|-----------------------|-----------------------|-------|
| | All (n = 552) | M group (n = 38) | D group (n = 514) | P | All (n = 114) | M-M group (n = 38) | D-M group (n = 76) | P |
| Enteral nutrition type, n (%) | | | | | | | | |
| Ensure | 37 (6.7) | 4 (10.53) | 33 (6.42) | 0.522 | 8 (7.02) | 4 (10.53) | 4 (5.26) | 0.517 |
| Peptamen Junior | 34 (6.16) | 2 (5.26) | 32 (6.23) | 0.911 | 3 (2.63) | 2 (5.26) | 1 (1.32) | 0.535 |
| Fresubin Diabetes | 369 (66.85) | 23 (60.53) | 346 (67.32) | 0.497 | 73 (64.04) | 23 (60.53) | 50 (65.79) | 0.730 |
| Others | 125 (22.64) | 11 (28.95) | 114 (22.18) | 0.447 | 33 (28.95) | 11 (28.95) | 22 (28.95) | 1.000 |
| Inflammatory marker, mean ± SD | | | | | | | | |
| CRP, mg/L | 102.89 ± 89.53 | 41.81 ± 48.34 | 107.77 ± 90.36 | 0.014 | 53.02 ± 47.38 | 41.81 ± 48.34 | 59.42 ± 46.78 | 0.312 |
| PCT, ng/mL | 5.23 ± 13.66 | 1.33 ± 1.92 | 5.50 ± 14.07 | 0.199 | 0.92 ± 1.95 | 1.33 ± 1.92 | 0.74 ± 1.96 | 0.269 |
| Il-6, pg/mL | 312.49 ± 831.72 | 176.39 ± 338.54 | 323.83 ± 859.83 | 0.557 | 120.68 ± 232.23 | 176.39 ± 338.54 | 85.49 ± 128.33 | 0.296 |
| Coagulation test, mean ± SD | | | | | | | | |
| INR | 1.38 ± 0.58 | 1.22 ± 0.28 | 1.39 ± 0.60 | 0.168 | 1.23 ± 0.53 | 1.22 ± 0.28 | 1.24 ± 0.63 | 0.875 |
| PT, s | 16.09 ± 6.62 | 14.19 ± 3.28 | 16.22 ± 6.77 | 0.146 | 14.40 ± 6.02 | 14.19 ± 3.28 | 14.52 ± 7.17 | 0.829 |
| TT, s | 19.76 ± 9.26 | 23.08 ± 21.29 | 19.55 ± 7.93 | 0.076 | 21.28 ± 17.84 | 23.08 ± 21.29 | 20.30 ± 15.84 | 0.553 |
| ATIII, % | 62.28 ± 26.63 | 73.82 ± 21.07 | 61.64 ± 26.78 | 0.052 | 74.59 ± 18.43 | 73.82 ± 21.07 | 74.97 ± 17.25 | 0.826 |
| APTT, s | 45.11 ± 24.39 | 40.90 ± 31.28 | 45.38 ± 23.92 | 0.393 | 37.59 ± 20.56 | 40.90 ± 31.28 | 35.78 ± 11.21 | 0.341 |
| Fib, g/L | 3.29 ± 1.89 | 3.18 ± 1.65 | 3.30 ± 1.90 | 0.766 | 3.73 ± 1.69 | 3.18 ± 1.65 | 4.04 ± 1.65 | 0.048 |
| D-dimer, mg/L FEU | 7.67 ± 7.60 | 7.31 ± 6.36 | 7.69 ± 7.67 | 0.804 | 7.05 ± 6.47 | 7.31 ± 6.36 | 6.92 ± 6.60 | 0.829 |
| Biochemical analysis, mean ± SD | | | | | | | | |
| ALT, IU/L | 141.11 ± 324.01 | 34.16 ± 33.94 | 148.61 ± 333.8 | 0.057 | 35.27 ± 31.17 | 34.16 ± 33.94 | 35.84 ± 29.95 | 0.809 |
| AST, IU/L | 263.76 ± 792.44 | 36.68 ± 34.61 | 279.68 ± 817.4 | 0.099 | 40.91 ± 36.11 | 36.68 ± 34.61 | 43.07 ± 36.94 | 0.426 |
| TB, µmol/L | 34.66 ± 51.69 | 15.27 ± 11.59 | 36.02 ± 53.13 | 0.031 | 13.48 ± 9.82 | 15.27 ± 11.59 | 12.57 ± 8.75 | 0.215 |

| | | | | | | | | |
|--|-----------------------|-----------------------|----------------------|-------|-----------------------|-----------------------|-----------------------|-------|
| IB, $\mu\text{mol/L}$ | 9.10 \pm 13.08 | 5.66 \pm 3.10 | 9.34 \pm 13.48 | 0.131 | 5.74 \pm 3.01 | 5.66 \pm 3.10 | 5.78 \pm 2.99 | 0.868 |
| TBA, $\mu\text{mol/L}$ | 22.73 \pm 49.38 | 6.09 \pm 8.19 | 24.19 \pm 51.21 | 0.245 | 4.86 \pm 6.29 | 6.09 \pm 8.19 | 3.89 \pm 4.36 | 0.397 |
| LDH, mmol/L | 550.19 \pm 869.47 | 264.83 \pm 129.14 | 567.35 \pm 891.85 | 0.098 | 278.69 \pm 120.14 | 264.83 \pm 129.14 | 285.62 \pm 116.17 | 0.493 |
| UREA, mmol/L | 10.58 \pm 9.04 | 9.03 \pm 7.75 | 10.68 \pm 9.12 | 0.326 | 7.99 \pm 5.86 | 9.03 \pm 7.75 | 7.46 \pm 4.6 | 0.225 |
| URIC, $\mu\text{mol/L}$ | 210.38 \pm 130.85 | 200.83 \pm 132.36 | 211.05 \pm 130.87 | 0.680 | 176.48 \pm 111.78 | 200.83 \pm 132.36 | 164.11 \pm 98.63 | 0.137 |
| Pro-BNP, pg/ml | 4241.13 \pm 7758.26 | 2057.07 \pm 2145.67 | 4413.88 \pm 8014.3 | 0.275 | 2815.41 \pm 7141.34 | 2057.07 \pm 2145.67 | 3147.19 \pm 8469.15 | 0.639 |
| HBDH, IU/L | 364.33 \pm 429.96 | 219.17 \pm 116.66 | 373.06 \pm 440.31 | 0.089 | 227.65 \pm 106.73 | 219.17 \pm 116.66 | 231.9 \pm 102.44 | 0.637 |
| CK, IU/L | 606.18 \pm 1942.88 | 292.54 \pm 555.94 | 625.04 \pm 1994.55 | 0.416 | 235.12 \pm 379.56 | 292.54 \pm 555.94 | 206.42 \pm 252.7 | 0.368 |
| cTNT, ng/L | 130.89 \pm 405.42 | 60.98 \pm 103.42 | 137.88 \pm 423.5 | 0.471 | 48.54 \pm 84.65 | 60.98 \pm 103.42 | 41.43 \pm 72.97 | 0.468 |
| Glu, mmol/L | 9.29 \pm 3.35 | 8.33 \pm 2.53 | 9.36 \pm 3.40 | 0.069 | 8.63 \pm 2.92 | 8.33 \pm 2.53 | 8.79 \pm 3.10 | 0.440 |
| ALP, IU/L | 113.84 \pm 102.03 | 84.42 \pm 42.63 | 115.9 \pm 104.66 | 0.097 | 83.10 \pm 39.82 | 84.42 \pm 42.63 | 82.43 \pm 38.65 | 0.822 |
| TP, g/L | 56.87 \pm 9.08 | 61.66 \pm 7.22 | 56.53 \pm 9.11 | 0.002 | 60.02 \pm 6.88 | 61.66 \pm 7.22 | 59.19 \pm 6.60 | 0.116 |
| GLB, g/L | 23.06 \pm 7.23 | 26.94 \pm 7.59 | 22.78 \pm 7.14 | 0.002 | 25.54 \pm 6.25 | 26.94 \pm 7.59 | 24.83 \pm 5.38 | 0.127 |
| ALB, g/L | 33.89 \pm 5.85 | 34.72 \pm 4.01 | 33.84 \pm 5.96 | 0.416 | 34.48 \pm 3.87 | 34.72 \pm 4.01 | 34.36 \pm 3.83 | 0.678 |
| Cys-c, mg/L | 1.41 \pm 1.07 | 1.38 \pm 1.25 | 1.41 \pm 1.05 | 0.873 | 1.22 \pm 0.96 | 1.38 \pm 1.25 | 1.14 \pm 0.78 | 0.276 |
| GGT, IU/L | 96.02 \pm 158.56 | 55.55 \pm 42.92 | 98.86 \pm 163.28 | 0.142 | 65.39 \pm 71.63 | 55.55 \pm 42.92 | 70.39 \pm 82.37 | 0.350 |
| CHOL, mmol/L | 2.69 \pm 1.16 | 3.11 \pm 1.04 | 2.67 \pm 1.17 | 0.062 | 3.18 \pm 0.9 | 3.11 \pm 1.04 | 3.22 \pm 0.82 | 0.648 |
| TG, mmol/L | 1.52 \pm 1.25 | 1.89 \pm 1.33 | 1.49 \pm 1.24 | 0.128 | 1.60 \pm 1.04 | 1.89 \pm 1.33 | 1.45 \pm 0.84 | 0.089 |
| LDL-C, mmol/L | 1.29 \pm 0.81 | 1.55 \pm 0.72 | 1.27 \pm 0.82 | 0.100 | 1.64 \pm 0.67 | 1.55 \pm 0.72 | 1.69 \pm 0.65 | 0.403 |
| HDL-C, mmol/L | 0.58 \pm 0.38 | 0.68 \pm 0.35 | 0.57 \pm 0.39 | 0.150 | 0.75 \pm 0.40 | 0.68 \pm 0.35 | 0.78 \pm 0.42 | 0.314 |
| Lac, mmol/L | 1.80 \pm 1.10 | 1.70 \pm 0.95 | 1.80 \pm 1.11 | 0.615 | 1.68 \pm 1.13 | 1.70 \pm 0.95 | 1.67 \pm 1.21 | 0.887 |
| Arterial Blood Gas Test, mean \pm SD | | | | | | | | |
| pH | 7.34 \pm 0.37 | 7.35 \pm 0.29 | 7.34 \pm 0.37 | 0.952 | 7.33 \pm 0.41 | 7.35 \pm 0.29 | 7.32 \pm 0.46 | 0.751 |
| PaO ₂ , mmHg | 99.28 \pm 43.57 | 100.23 \pm 41.14 | 99.21 \pm 43.77 | 0.897 | 103.82 \pm 56.73 | 100.23 \pm 41.14 | 105.50 \pm 62.88 | 0.612 |
| PaCO ₂ , mmHg | 39.63 \pm 8.72 | 38.07 \pm 4.99 | 39.74 \pm 8.92 | 0.287 | 39.72 \pm 8.74 | 38.07 \pm 4.99 | 40.49 \pm 9.96 | 0.189 |
| HCO ₃ , mmol/L | 25.49 \pm 5.04 | 24.81 \pm 3.97 | 25.55 \pm 5.11 | 0.433 | 25.96 \pm 5.10 | 24.81 \pm 3.97 | 26.51 \pm 5.50 | 0.128 |

| | | | | | | | | |
|-------------------------------|-----------------|-----------------|-----------------|-------|----------------|-----------------|----------------|-------|
| AG, mmol/L | 10.9 ± 6.70 | 10.89 ± 6.24 | 10.90 ± 6.73 | 0.991 | 10.88 ± 6.39 | 10.89 ± 6.24 | 10.88 ± 6.51 | 0.998 |
| Complete blood count, mean±SD | | | | | | | | |
| RBC, ×10 ¹² /L | 3.26 ± 0.74 | 3.27 ± 0.53 | 3.26 ± 0.75 | 0.925 | 3.34 ± 0.72 | 3.27 ± 0.53 | 3.38 ± 0.81 | 0.474 |
| HCT, L/L | 0.30 ± 0.06 | 0.30 ± 0.05 | 0.30 ± 0.06 | 0.937 | 0.31 ± 0.06 | 0.30 ± 0.05 | 0.32 ± 0.07 | 0.277 |
| WBC, ×10 ⁹ /L | 11.18 ± 5.61 | 10.10 ± 4.18 | 11.26 ± 5.69 | 0.261 | 9.95 ± 3.82 | 10.10 ± 4.18 | 9.87 ± 3.65 | 0.783 |
| MCH, pg | 30.07 ± 2.27 | 29.63 ± 2.37 | 30.11 ± 2.26 | 0.275 | 30.05 ± 2.15 | 29.63 ± 2.37 | 30.28 ± 2.01 | 0.168 |
| MCHC, g/L | 322.91 ± 15.08 | 321.75 ± 13.81 | 322.99 ± 15.18 | 0.654 | 321.84 ± 12.88 | 321.75 ± 13.81 | 321.88 ± 12.47 | 0.963 |
| PLT, ×10 ⁹ /L | 153.74 ± 116.77 | 188.31 ± 102.31 | 151.27 ± 117.45 | 0.083 | 187.43 ± 98.59 | 188.31 ± 102.31 | 186.95 ± 97.41 | 0.950 |
| HGB, g/L | 97.46 ± 20.89 | 96.53 ± 15.29 | 97.52 ± 21.24 | 0.795 | 99.93 ± 19.96 | 96.53 ± 15.29 | 101.78 ± 21.99 | 0.233 |
| Na, mmol/L | 139.77 ± 8.13 | 138.53 ± 7.70 | 139.86 ± 8.16 | 0.310 | 140.65 ± 9.31 | 138.53 ± 7.7 | 141.72 ± 9.9 | 0.085 |
| K, mmol/L | 3.91 ± 0.52 | 3.96 ± 0.57 | 3.90 ± 0.52 | 0.496 | 3.91 ± 0.51 | 3.96 ± 0.57 | 3.88 ± 0.49 | 0.453 |
| Mg, mmol/L | 0.85 ± 0.17 | 0.90 ± 0.18 | 0.85 ± 0.17 | 0.132 | 0.88 ± 0.15 | 0.90 ± 0.18 | 0.87 ± 0.13 | 0.361 |
| P, mmol/L | 0.93 ± 0.41 | 0.94 ± 0.37 | 0.93 ± 0.42 | 0.840 | 0.88 ± 0.32 | 0.94 ± 0.37 | 0.84 ± 0.30 | 0.212 |
| Cl, mmol/L | 108.0 ± 8.09 | 106.55 ± 9.67 | 108.1 ± 7.97 | 0.275 | 107.59 ± 8.68 | 106.55 ± 9.67 | 108.12 ± 8.15 | 0.387 |

†: 1 to 2 propensity score matching based on model 1 as described in methods section

SD: standard deviation; CRP: C-reactive protein; PCT: Procalcitonin; PT: prothrombin time; TT: Thrombin time; AT III: Antithrombin III; APTT: Activated partial thromboplastin time; Fib: fibrinogen; ALT: Alanine Aminotransferase; AST: Aspartate Aminotransferase; TB: Total bilirubin; IB: Indirect bilirubin; TBA: Total bile acids; LDH: Lactate dehydrogenase; BNP: type B natriuretic peptide; HBDH: hydroxybutyrate dehydrogenase; CK: Creatine kinase; cTNT: cardiac troponin T; Glu: Glucose; ALP: Alkaline Phosphatase; Cys-c: Cystatin C; GGT: Gamma-Glutamyl Transferase; CHOL: cholesterol; TG: Triglycerides; LDL-C: Low-density lipoprotein cholesterol; HDL-C: High-density lipoprotein cholesterol; LAC: lactate; AG: anion gap; RBC: Red blood cell; HCT: Hematocrit; WBC: white blood cell; MCH: Mean corpuscular hemoglobin; MCHC: Mean corpuscular hemoglobin concentration; PLT: platelet; HGB: Hemoglobin;

Table S4 Treatments during the study period

| | | | | | | | | |
|--|--------------|--------------|---------------|-------|--------------|--------------|--------------|-------|
| Number of patients, n (%) | 22 (3.99) | 1 (2.63) | 21 (4.09) | 0.990 | 3 (2.63) | 1 (2.63) | 2 (2.63) | 1.000 |
| Average amount [#] , mg, mean ± SD | 10.75±23.17 | 1.14 | 11.20±23.64 | - | 6.86±6.36 | 1.14 | 9.71±5.66 | - |
| Exposure day ^{##} , day, mean ± SD | 1.95±1.68 | 1.00 | 2.00±1.7 | - | 1.67±1.15 | 1.0 | 2.00±1.41 | - |
| Fat Emulsion Injection | | | | | | | | |
| Number of patients, n (%) | 193 (34.96) | 11 (28.95) | 182 (35.41) | 0.529 | 33 (28.95) | 11 (28.95) | 22 (28.95) | 1.000 |
| Average amount [#] , ml, mean ± SD | 124.09±103.5 | 124.68±92.71 | 124.06±104.35 | 0.983 | 130.61±89.04 | 124.68±92.71 | 133.57±89.22 | 0.795 |
| Insulin | | | | | | | | |
| Number of patients, n (%) | 264 (47.83) | 12 (31.58) | 252 (49.03) | 0.056 | 42 (36.84) | 12 (31.58) | 30 (39.47) | 0.537 |
| Average amount [#] , mg, mean ± SD | 28.2±28.03 | 19.49±25.08 | 28.62±28.14 | 0.271 | 22.32±24.51 | 19.49±25.08 | 23.54±24.62 | 0.643 |
| Kabiven | | | | | | | | |
| Number of patients, n (%) | 99 (17.93) | 14 (36.84) | 85 (16.54) | 0.003 | 26 (22.81) | 14 (36.84) | 12 (15.79) | 0.022 |
| Exposure day ^{##} , day, mean ± SD | 2.79±2.19 | 3.79±2.64 | 2.62±2.08 | 0.066 | 3.56±2.57 | 3.79±2.64 | 3.27±2.57 | 0.630 |
| Placement of nasoenteric tubes | | | | | | | | |
| Number of patients, n (%) | 93 (16.85) | 3 (7.89) | 90 (17.51) | 0.192 | 32 (16.84) | 3 (7.89) | 29 (19.08) | 0.160 |
| Average dose of metoclopramide, mg, mean ± SD | - | 28.76 (8.22) | - | - | - | 28.76 (8.22) | - | - |
| Average dose of domperidone, mg, mean ± SD | - | - | 30.29 (5.24) | - | - | - | 30.13 (4.37) | - |
| Ventilation time, days, mean ± SD | 6.62 ± 1.18 | 7.0 ± 0.0 | 6.6 ± 1.21 | 0.328 | 6.7 ± 0.88 | 7.0 ± 0.0 | 6.61 ± 0.99 | 0.248 |

[‡]: 1 to 2 propensity score matching based on Model 1 as described in methods

[#]: for patients who use this drug

^{##}: within the observational period

Figure S1: Percentage of patients who reached the 80% goal of protein or calories during observational period in the unmatched cohort (A,C) and in the 1:2 propensity score matched cohort (B, D) based on Model 1 as detailed in the methods.

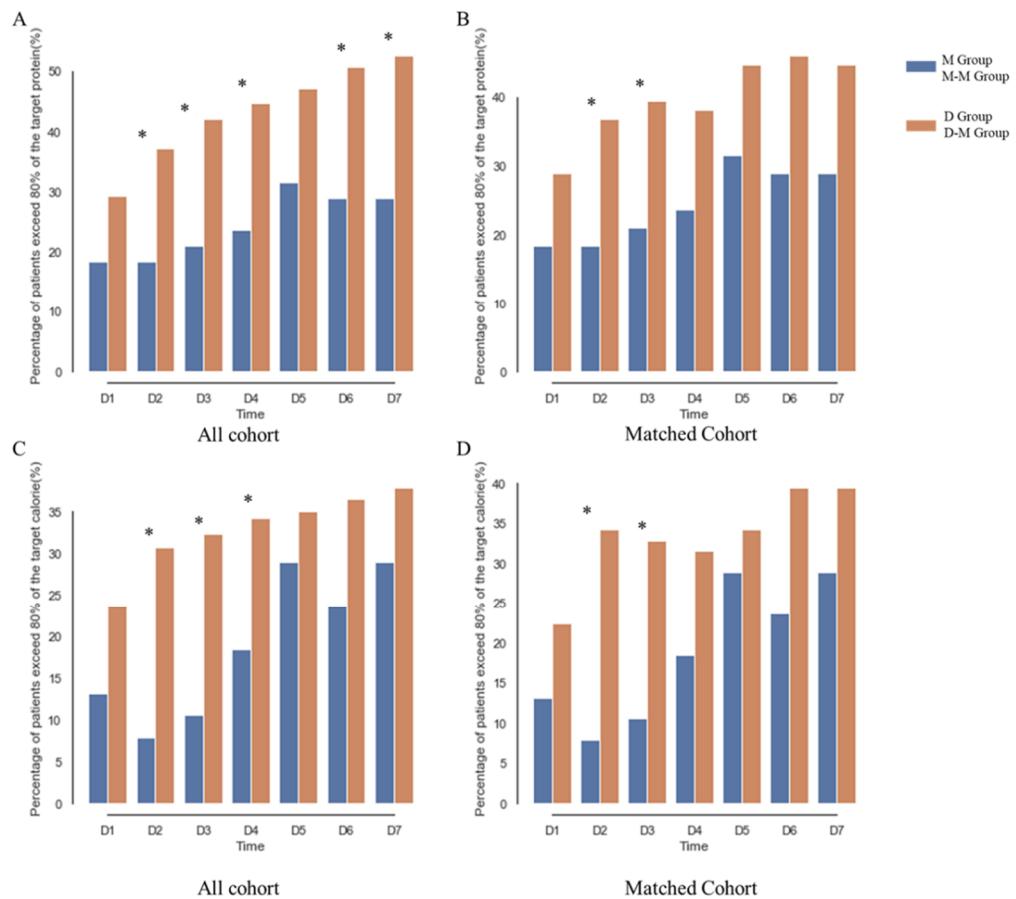


Figure S2: The amount of enteral nutrition volume, calories, and protein delivered during observational period in the unmatched cohort (A,C,E) and the 1:2 propensity score matched cohort (B, D,F) based on Model 1 as detailed in the methods.

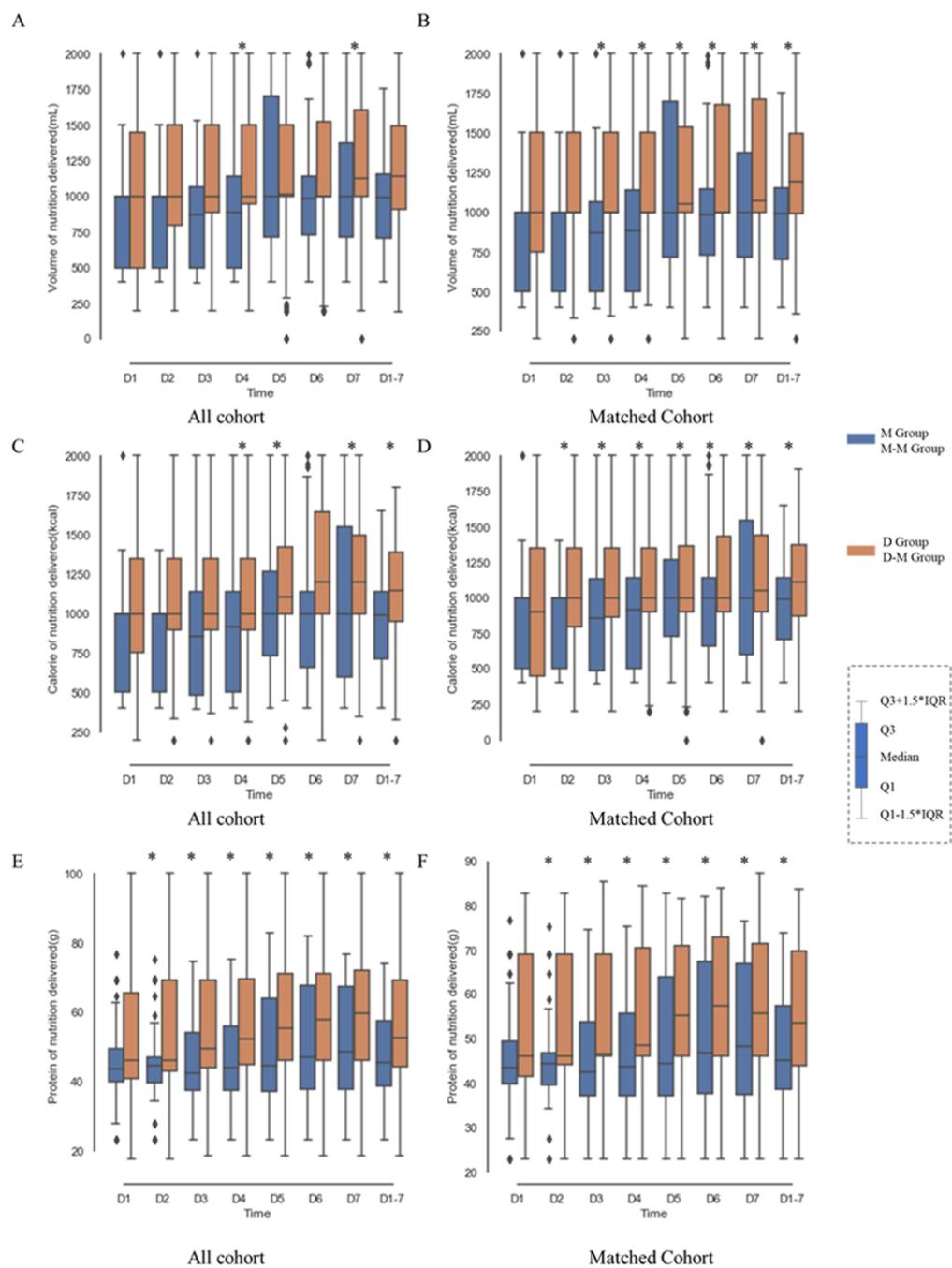


Table S5 Univariate regression model for primary outcome in unmatched and matched cohorts

| Variable | Unmatched cohort | | | | Matched cohort [†] | | | |
|--|---------------------------------------|-------------|---------------------|-------|---------------------------------------|------------|---------------------|-------|
| | Feeding success ^{††} , # (%) | | Odds Ratio (95% CI) | P | Feeding success ^{††} , # (%) | | Odds Ratio (95% CI) | P |
| | No | Yes | | | No | Yes | | |
| EFI treatment | | | | | | | | |
| Metoclopramide | 30 (78.95) | 8 (21.05) | 1 [Reference] | 0.014 | 30 (78.95) | 8 (21.05) | 1 [Reference] | 0.040 |
| Domperidone | 298 (57.98) | 216 (42.02) | 2.718 (1.222-6.405) | | 45 (59.21) | 31 (40.89) | 2.583 (1.046-6.380) | |
| Feeding start time[‡] | | | | | | | | |
| Within 7 day | 294 (57.98) | 213 (42.02) | 1 [Reference] | 0.024 | 69 (64.49) | 38 (35.51) | 1 [Reference] | 0.277 |
| ≥ 7 day | 34 (75.56) | 11 (24.44) | 0.447 (0.221-0.901) | | 6 (85.71) | 1 (14.29) | 0.303 (0.035-2.608) | |
| Supplementary Parenteral nutrition^{§§} | | | | | | | | |
| No | 176 (57.70) | 129 (42.30) | 1 [Reference] | 0.248 | 40 (61.54) | 25 (38.46) | 1 [Reference] | 0.272 |
| Yes | 152 (61.54) | 95 (38.46) | 0.853 (0.605-1.201) | | 35 (71.42) | 14 (28.57) | 0.640 (0.289-1.419) | |
| Insulin^{¶¶} | | | | | | | | |
| No | 175 (60.76) | 113 (39.24) | 1 [Reference] | 0.502 | 49 (68.06) | 23 (31.94) | 1 [Reference] | 0.505 |
| Yes | 153 (57.95) | 111 (42.04) | 1.124 (0.800-1.579) | | 26 (61.90) | 16 (38.10) | 1.311 (0.592-2.905) | |
| Probiotic | | | | | | | | |
| No | 300 (59.05) | 208 (40.94) | 1 [Reference] | 0.553 | 70 (65.42) | 37 (34.58) | 1 [Reference] | 0.746 |
| Yes | 28 (63.63) | 16 (36.37) | 0.824 (0.435-1.562) | | 5 (71.43) | 2 (28.57) | 0.757 (0.140-4.091) | |
| Opioid | | | | | | | | |
| No | 99 (68.27) | 46 (31.72) | 1 [Reference] | 0.012 | 32 (76.19) | 10 (23.81) | 1 [Reference] | 0.077 |
| Yes | 229 (56.26) | 178 (43.73) | 1.637 (1.120-2.498) | | 43 (59.72) | 29 (40.28) | 2.158 (0.921-5.060) | |
| CRRT | | | | | | | | |
| No | 303 (58.83) | 212 (41.17) | 1 [Reference] | 0.298 | 71 (65.74) | 37 (34.26) | 1 [Reference] | 0.963 |
| Yes | 25 (67.56) | 12 (32.43) | 0.686 (0.337-1.396) | | 5 (71.43) | 2 (28.57) | 0.959 (0.168-5.484) | |

| Propofol ^{ff} | | | | | | | | |
|---|-------------|-------------|---------------------|-------|------------|------------|----------------------|-------|
| No | 185 (62.29) | 112 (37.71) | 1 [Reference] | 0.139 | 49 (71.01) | 20 (28.99) | 1 [Reference] | 0.147 |
| Yes | 143 (56.08) | 112 (43.92) | 1.294 (0.920-1.819) | | 26 (57.78) | 19 (41.30) | 1.790 (0.814-3.936) | |
| Muscle relaxant ^{ff} | | | | | | | | |
| No | 317 (59.81) | 213 (40.19) | 1 [Reference] | 0.361 | 73 (65.77) | 38 (34.23) | 1 [Reference] | 0.974 |
| Yes | 11 (50.00) | 11 (50.00) | 1.488 (0.634-3.495) | | 2 (66.67) | 1 (33.33) | 0.961 (0.084-10.935) | |
| Placement of nasoenteric tube ^{ff} | | | | | | | | |
| No | 264 (57.52) | 195 (42.48) | 1 [Reference] | 0.044 | 64 (65.31) | 34 (34.69) | 1 [Reference] | 0.788 |
| Yes | 64 (68.82) | 29 (31.18) | 0.613 (0.381-0.988) | | 11 (68.75) | 5 (31.25) | 0.856 (0.275-2.665) | |
| Vasopressor ^{ff} | | | | | | | | |
| No | 220 (58.20) | 158 (41.79) | 1 [Reference] | 0.390 | 56 (67.47) | 27 (32.53) | 1 [Reference] | 0.537 |
| Yes | 108 (62.07) | 66 (37.93) | 0.851 (0.589-1.230) | | 19 (61.29) | 12 (38.71) | 1.310 (0.556-3.084) | |
| SOFA score ^A | | | | | | | | |
| < 4 | 141 (58.75) | 99 (41.25) | 1 [Reference] | 0.779 | 46 (63.01) | 27 (36.99) | 1 [Reference] | 0.405 |
| ≥ 4 | 187 (59.94) | 125 (40.06) | 0.952 (0.676-1.341) | | 29 (70.73) | 12 (29.27) | 0.705 (0.309-1.606) | |
| NUTRIC score ^A | | | | | | | | |
| < 4 | 99 (57.89) | 72 (42.11) | 1 [Reference] | 0.625 | 22 (56.41) | 17 (43.59) | 1 [Reference] | 0.130 |
| ≥ 4 | 229 (60.10) | 152 (39.90) | 0.913 (0.633-1.316) | | 53 (70.67) | 22 (29.33) | 0.537 (0.240-1.201) | |
| Age | | | | | | | | |
| < 54 | 176 (60.69) | 114 (39.31) | 1 [Reference] | 0.523 | 35 (67.31) | 17 (32.69) | 1 [Reference] | 0.754 |
| ≥ 54 | 152 (58.02) | 110 (41.98) | 1.117 (0.795-1.570) | | 40 (64.52) | 22 (35.48) | 1.132 (0.520-2.467) | |
| Gender | | | | | | | | |
| Female | 98 (53.55) | 85 (46.45) | 1 [Reference] | 0.048 | 23 (63.89) | 13 (36.11) | 1 [Reference] | 0.771 |
| Male | 230 (62.33) | 139 (37.67) | 0.679 (0.487-0.998) | | 52 (66.67) | 26 (33.33) | 0.885 (0.387-2.023) | |
| Admission type | | | | | | | | |
| Post elective surgery | 117 (58.79) | 82 (41.21) | 1 [Reference] | | 26 (66.67) | 13 (33.33) | 1 [Reference] | |

| | | | | | | | | |
|---|-------------|-------------|---------------------|-------|------------|------------|---------------------|-------|
| Post emergency surgery | 31 (64.58) | 17 (31.42) | 0.782 (0.406-1.507) | 0.463 | 6 (66.67) | 3 (33.33) | 1.000 (0.215-4.653) | 1.000 |
| From ward | 63 (64.95) | 34 (35.05) | 0.770 (0.465-1.274) | 0.309 | 15 (68.18) | 7 (31.82) | 0.933 (0.305-2.853) | 0.904 |
| From emergency department | 110 (56.70) | 84 (43.30) | 1.090 (0.730-1.626) | 0.675 | 25 (60.98) | 16 (39.02) | 1.280 (0.513-3.195) | 0.597 |
| Transfer from other hospital | 7 (50.00) | 7 (50.00) | 1.427 (0.482-4.223) | 0.521 | 3 (100.00) | 0 (0.00) | - | - |
| APACHE score ^Δ | | | | | | | | |
| < 18 | 128 (56.89) | 97 (43.11) | 1 [Reference] | 0.315 | 27 (61.36) | 17 (38.64) | 1 [Reference] | 0.430 |
| ≥ 18 | 200 (61.16) | 127 (38.84) | 0.838 (0.593-1.183) | | 48 (68.57) | 22 (31.43) | 0.728 (0.331-1.603) | |
| Surgical ^{ΔΔ} | | | | | | | | |
| No | 168 (59.36) | 115 (40.64) | 1 [Reference] | 0.978 | 42 (67.74) | 20 (32.26) | 1 [Reference] | 0.632 |
| Yes | 160 (59.48) | 109 (40.52) | 0.995 (0.708-1.398) | | 33 (63.46) | 19 (36.54) | 1.209 (0.556-2.627) | |
| Hospitalization time before ICU admission | | | | | | | | |
| < 4 days | 251 (59.20) | 173 (40.80) | 1 [Reference] | 0.847 | 55 (67.07) | 27 (32.93) | 1 [Reference] | 0.644 |
| ≥ 4 days | 77 (60.16) | 51 (39.84) | 0.961 (0.642-1.438) | | 20 (62.50) | 12 (37.50) | 1.222 (0.522-2.863) | |
| BMI | | | | | | | | |
| < 23 | 80 (53.33) | 70 (46.67) | 1 [Reference] | 0.333 | 15 (65.22) | 8 (34.78) | 1 [Reference] | 0.948 |
| ≥ 23 | 238 (60.71) | 154 (39.29) | 0.832 (0.573-1.207) | | 60 (65.93) | 31 (34.07) | 0.969 (0.370-2.534) | |

[†]: 1 to 2 propensity score matching based on model 1 as described in methods

^{††}: Average DPP % > 80%

[‡]: calculated from ICU admission

[§]: within the observational period

^Δ: at ICU admission

^{ΔΔ}: Post-surgery or experienced major surgery within 48 hours prior to ICU admission

EFI: enteral feeding intolerance; BMI: Body mass index

Table S6 Primary outcomes by propensity score matching using different ratios based on Model 1

| Variables | 1:1 | | 1:3 | | 1:4 | | 1:5 | |
|-----------|------------------------------|---------|------------------------------|---------|------------------------------|---------|------------------------------|---------|
| | Feeding Success [‡] | P value |
| All | 24 (31.58) | | 61 (40.13) | | 81 (42.63) | | 96 (42.11) | |
| M-M group | 8 (21.05) | 0.048 | 8 (21.05) | 0.010 | 8 (21.05) | 0.005 | 8 (21.05) | 0.007 |
| D-M group | 16 (42.11) | | 53 (46.49) | | 73 (48.03) | | 88 (46.32) | |

[‡]: defined as average DPP % > 80%

Figure S3. Percentage of daily protein prescription in protein goal (DPP %) through the observational period in (A) 1:1, (B) 1:3, (C) 1:4, and (D) 1:5 propensity score matched cohorts based on Model 1 as detailed in the methods.

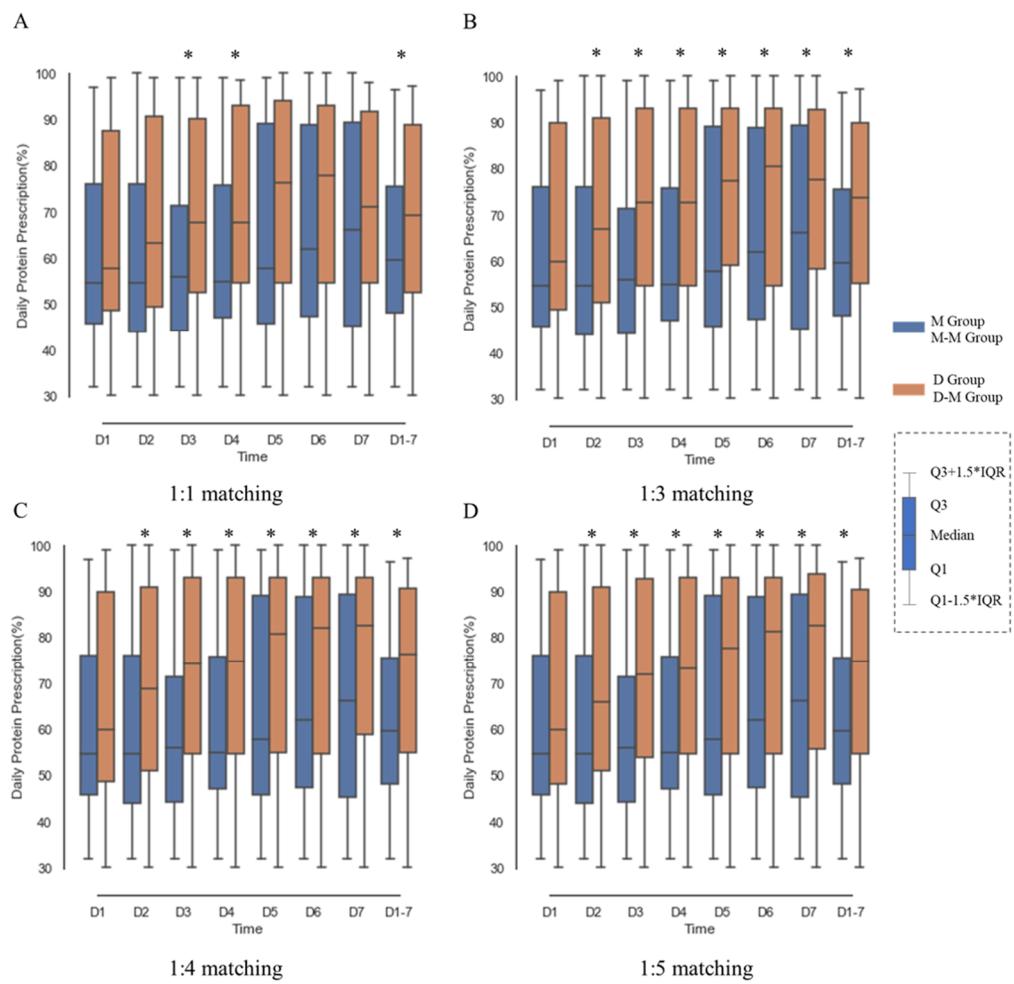


Table S7 Primary outcomes by propensity score matching using different ratios based on Model 2

| Variables | 1:1 | | 1:2 | | 1:3 | | 1:4 | |
|-----------|------------------------------|---------|------------------------------|---------|------------------------------|---------|------------------------------|---------|
| | Feeding Success [†] | P value |
| All | 29 (38.16) | | 41 (35.96) | | 55 (36.18) | | 71 (37.37) | |
| M-M group | 8 (21.05) | 0.005 | 8 (21.05) | 0.032 | 8 (21.05) | 0.041 | 8 (21.05) | 0.033 |
| D-M group | 21 (55.26) | | 33 (43.42) | | 47 (41.23) | | 63 (41.45) | |

[†]: defined as average DPP % > 80%

Figure S4. Percentage of daily protein prescription in protein goal (DPP%) through the observational period in (A) 1:1, (B) 1:2, (C) 1:3, and (D) 1:4 propensity score matched cohorts based on Model 2 as detailed in the methods.

