

## Supplementary Appendix 1 Evaluation of logistic regression model performance.

To assess the usefulness and goodness-of-fit of the multivariate logistic regression model, Hosmer–Lemeshow chi-squared statistics and Nagelkerke  $R^2$  were calculated. The probability for each case was then computed, and the area under the receiver operating characteristic curve (AUROC) was used to evaluate the discriminative power of the multivariate logistic regression models.

For the whole group, the final model demonstrated a Hosmer-Lemeshow chi-squared statistic of 2.851 ( $P = 0.943$ ), Nagelkerke  $R^2$  of 0.340, and an AUROC of 0.805 (95% confidence interval: 0.737-0.873;  $P < 0.001$ ). In the subgroup analysis, the final model showed a Hosmer-Lemeshow chi-squared statistic of 5.804 ( $P = 0.669$ ), Nagelkerke  $R^2$  of 0.404, and an AUROC of 0.839 (95% confidence interval: 0.731-0.947;  $P < 0.001$ ).

## Supplementary Table 1 Comparison of postoperative between the nonextubated and early extubation groups

Variables	Delayed extubation ( $n = 66$ )	Early extubation ( $n = 94$ )	$P$ value
Ventilator support time (HR)	20.8 (16.0, 73.5)	-	-
Reoperation, $n$ (%)	0 (0.0)	2 (2.2)	0.511 <sup>b</sup>
Reintubation, $n$ (%)	4 (6.1)	6 (6.5)	$> 0.999$ <sup>b</sup>
ICU stay (days)	7.5 (6.0, 13.3)	6.0 (4.0, 6.0)	$< 0.001$ <sup>a</sup>
Hospital stay (days)	26.0 (22.0, 42.3)	23.0 (21.0, 29.0)	0.026 <sup>a</sup>

<sup>a</sup> $P$ : Mann–Whitney U test; <sup>b</sup> $P$ : Fisher’s exact test.

HR: Hazard ratio; ICU: Intensive care unit.