

Supplementary Tables

Supplementary Table S1. Baseline characteristics of the pooled extubated cohort according to EFI <1.333 and EFI ≥1.333 groups.

Variable	Overall Extubated (n=107)	EFI < 1.333 (n=43)	EFI ≥ 1.333 (n=64)	P value
Age, years	64 (55–71)	65 (57–72)	63 (54–70)	0.452
Male sex, n (%)	65 (60.7)	26 (60.5)	39 (60.9)	0.963
APACHE II score	17 (13–21)	18 (14–22)	16 (12–20)	0.085
Duration of MV, days	5 (3–8)	6 (4–9)	5 (3–7)	0.124
Respiratory parameters				
RSBI, breaths·min ⁻¹ ·L ⁻¹	46 (35–62)	58 (45–75)	40 (32–52)	<0.001
MIP, cmH ₂ O	32 (24–40)	26 (20–34)	36 (28–44)	<0.001

P0.1, cmH ₂ O	-1.9 (-2.8 to -1.2)	-2.5 (-3.5 to -1.8)	-1.6 (-2.2 to -1.0)	<0.001
Outcomes				
Reintubation within 48 h, n (%)	7 (6.5)	7 (16.3)	0 (0.0)	0.001

Data are presented as median (IQR) or n (%). P values compare High risk vs Low risk groups. [P values compare patients with \$EFI < 1.333\$ and \$EFI \geq 1.333\$.](#)

Note: This table characterizes the population included in the Kaplan-Meier and Cox analyses.

[Abbreviations: EFI, Electrical impedance tomography-derived flow index; MIP, maximal inspiratory pressure; RSBI, rapid shallow breathing index; P0.1, airway occlusion pressure at 100 ms.](#)

Supplementary Table S2. Discriminatory performance and early-warning time of EFI and conventional weaning indices for SBT failure

Index	Threshold for Alert	Pooled AUC (95% CI)	Sensitivity (%)	Specificity (%)	Early-warning time, min (median [IQR])†
EFI	< 1.333	0.98 (0.95–0.99)	95.3	85.0	6 [4–9]
RSBI	> 68.33	0.94 (0.89–0.98)	90.7	88.8	19 [14–23]
MIP	< 20.71	0.84 (0.76–0.91)	81.4	78.5	21 [16–25]
P0.1	< –3.043	0.85 (0.77–0.92)	83.7	80.4	18 [15–22]

AUC values are for the primary endpoint of SBT failure .

†Early-warning time was calculated among patients with SBT failure (n=43), defined as the time from first crossing the threshold to SBT termination. A longer early-warning time indicates earlier alerting before SBT termination.

Note: Sensitivity and Specificity are derived from the pooled dataset at the specified thresholds.

Abbreviations: EFI, Electrical impedance tomography-derived flow index; MIP, maximal inspiratory pressure; RSBI, rapid shallow breathing index; P0.1, airway occlusion pressure at 100 ms.