

**Supplementary Table 1.** Clinical characteristics before intubation in patients with IPF

Variable	Before matching			After matching		
	Early intubation group (n=60)	Delayed intubation group (n=36)	P-value	Early intubation group (n=33)	Delayed intubation group (n=33)	P-value
<b>ABGA before intubation</b>						
Arterial pH	7.42 (7.38–7.45)	7.41 (7.39–7.45)	0.679	7.41 (7.38–7.44)	7.41 (7.38–7.45)	0.937
PaCO <sub>2</sub> (mm Hg)	37.0 (32.3–42.5)	41.0 (36.8–50.2)	0.009	35.9 (31.1–43.0)	42.0 (38.1–51.0)	0.016
PaO <sub>2</sub> (mm Hg)	60.0 (51.7–68.6)	64.0 (53.5–79.4)	0.115	60.0 (52.4–69.7)	64.2 (53.5–79.4)	0.374
FiO <sub>2</sub> (%)	80 (69–90)	81 (70–90)	0.198	80 (69–90)	81 (66–90)	0.818
Bicarbonate (mmol/L)	24.4 (21.1–26.5)	25.7 (22.9–30.6)	0.075	24.1 (20.2–26.3)	26.7 (23.5–31.0)	0.042
PaO <sub>2</sub> /FiO <sub>2</sub> ratio	76.1 (63.0–101.6)	85.0 (62.1–130.0)	0.551	76.1 (65.1–97.4)	85.6 (62.6–130.0)	0.442
ROX index	3.7 (2.9–4.7)	4.0 (2.8–4.7)	0.98	3.4 (2.8–4.5)	4.2 (2.7–4.7)	0.594
Hypercapnic respiratory failure <sup>a</sup>	5 (9.4)	9 (25.7)	0.071	3 (10.3)	9 (28.1)	0.025
<b>Vital sign before intubation</b>						
Mean blood pressure (mm Hg)	94 (84–108)	96 (81–105)	0.859	95 (84–108)	95 (81–102)	0.748
Body temperature (°C)	37.1 (36.5–37.8)	36.9 (36.6–37.4)	0.365	37.2 (36.5–38.0)	36.9 (36.6–37.5)	0.102
Heart rate (/min)	102 (81–119)	106 (95–120)	0.335	110 (92–121)	104 (96–120)	0.707
Respiratory rate (/min)	30 (26–35)	31 (25–37)	0.63	32 (28–38)	32 (26–38)	0.922
Saturation (%)	90 (87–93)	90 (86–95)	0.791	90 (87–94)	91 (86–95)	0.754
<b>Laboratory findings before intubation</b>						
WBC (10 <sup>3</sup> /ul)	13.7 (10.9–16.5)	13.5 (9.0–16.9)	0.749	13.7 (10.8–18.1)	12.9 (9.4–15.7)	0.877
Hemoglobin (g/ul)	12.4 (11.1–13.4)	12.8 (10.9–14.0)	0.494	12.6 (11.0–13.4)	12.8 (10.9–14.0)	0.256
Platelet (10 <sup>3</sup> /ul)	207 (168–257)	200 (168–256)	0.752	211 (174–245)	202 (169–257)	0.339
Total bilirubin (mg/dl)	0.8 (0.6–1.0)	0.6 (0.4–1.0)	0.061	0.8 (0.6–1.1)	0.6 (0.4–0.9)	0.186
Albumin (g/dl)	3.0 (2.7–3.4)	2.9 (2.8–3.3)	0.527	3.2 (2.9–3.3)	3.2 (2.9–3.4)	0.29
Creatinine (mg/dl)	0.9 (0.7–1.2)	0.8 (0.6–1.0)	0.257	0.9 (0.6–1.1)	0.8 (0.6–1.0)	0.394
CRP (mg/dl)	13.9 (6.8–18.8)	6.9 (3.6–10.5)	0.003	13.5 (6.5–16.7)	6.3 (3.6–10.5)	0.012
Lactate (mmol/L)	1.7 (1.2–2.5)	1.4 (1.2–1.6)	0.329	1.7 (1.2–2.3)	1.3 (1.2–1.6)	0.181

Values are presented as median (interquartile range) or number (%).

IPF: idiopathic pulmonary fibrosis; ABGA: arterial blood gas analysis; PaCO<sub>2</sub>: partial pressure of carbon dioxide in alveolar gas; PaO<sub>2</sub>: partial pressure of dioxide in alveolar gas; FiO<sub>2</sub>: fraction of inspired oxygen; ROX: the ratio of oxygen saturation; WBC: white blood cell CRP: C-reactive protein.

a) Hypercapnic respiratory failure was characterized by a PaCO<sub>2</sub> higher than 50 mm Hg.