

SUPPLEMENTARY MATERIAL

Table s1: Factors associated with 90-day mortality

	Univariate analysis		Multivariate analysis			
	crude HR (95% CI)	P-value	adjusted HR (95% CI)	P-value	adjusted HR ^a (95% CI)	P-value
Low V _T	1					
Intermediate V _T	0.81 (0.58, 1.12)	0.20	1.49 (1.03, 2.15)	0.03	1.35 (0.95, 1.92)	0.09
High V _T	0.67 (0.46, 0.97)	0.04	1.85 (1.17, 2.92)	0.01	1.62 (1.06, 2.49)	0.03
Age	1.01 (1.00, 1.02)	0.04	1.01 (1.00, 1.02)	0.01	1.01 (1.00, 1.02)	0.01
Male	1.40 (1.05, 1.87)	0.02	1.75 (1.27, 2.42)	0.00	1.66 (1.22, 2.25)	0.00
Body Mass Index	0.97 (0.94, 1.00)	0.02	0.97 (0.95, 1.00)	0.08	0.97 (0.95, 1.00)	0.07
APACHE II Score	1.00 (0.99, 1.02)	0.55				
SOFA Score	1.02 (0.99, 1.06)	0.21				
P _a O ₂ /F _I O ₂ at diagnosis	1.00 (1.00, 1.00)	0.50				
Chronic obstructive pulmonary disease	1.17 (0.90, 1.52)	0.25				
Diabetes mellitus	0.86 (0.66, 1.12)	0.27				
Hypertension	0.68 (0.53, 0.88)	0.00	0.80 (0.60, 1.06)	0.12	0.72 (0.54, 0.95)	0.02
Chronic renal failure	0.98 (0.69, 1.39)	0.91				
Heart failure	0.89 (0.68, 1.17)	0.41				
Liver cirrhosis	1.67 (1.16, 2.41)	0.01	1.52 (1.03, 2.25)	0.04	1.57 (1.07, 2.31)	0.02

Malignancy	1.61 (1.21, 2.13)	0.00	1.33 (0.99, 1.80)	0.06	1.36 (1.02, 1.83)	0.04
Continuous hemofiltration	2.01 (1.55, 2.60)	0.00				
C _{RS} ^b (ml/cmH ₂ O)	0.94 (0.92, 0.96)	0.00	0.93 (0.91, 0.96)	0.00	0.93 (0.91, 0.96)	0.00
Plateau Pressure	1.03 (1.02, 1.04)	0.00				
PEEP	1.09 (1.02, 1.16)	0.01	1.06 (0.99, 1.15)	0.10		
Driving Pressure	1.07 (1.04, 1.10)	0.00				
F _I O ₂ (%)	1.05 (1.04, 1.06)	0.00	1.05 (1.04, 1.06)	0.00	1.05 (1.04, 1.06)	0.00
P _a O ₂ (cmH ₂ O)	0.99 (0.98, 1.00)	0.00	0.99 (0.99, 1.00)	0.05	0.99 (0.99, 1.00)	0.03

^aBackward elimination selective procedure

^bC_{RS}: respiratory-system compliance

Table s2. Correlation and Collinearity tests of some respiratory parameters

	Spearman's Rho Correlation			VIF
	F _I O ₂	P _a O ₂	C _{RS}	
F _I O ₂	1.00	-0.23*	-0.20*	1.09
P _a O ₂	-0.23*	1.00	0.09 ^{NS}	1.05
C _{RS}	-0.20*	0.09 ^{NS}	1.00	1.04

* P < 0.001,

C_{RS}: respiratory-system compliacne

NS: non-significance

VIF < 2 indicates no significant collinearity

Table s3. Cox regression model for 28- and 90-day mortality in propensity score matched cohort

	28-day mortality				90-day mortality			
	adjusted HR ^a (95% CI)	P	adjusted HR ^b (95% CI)	P	adjusted HR ^a (95% CI)	P	adjusted HR ^b (95% CI)	P
Low V _T	1		1		1		1	
Intermediate V _T	1.35 (0.81, 2.26)	0.25	1.01 (0.64, 1.59)	0.98	1.38 (0.84, 2.27)	0.20	0.98 (0.63, 1.52)	0.93
C _{RS} ^c , per ml/cmH ₂ O	0.96 (0.93, 0.99)	0.02	--	--	0.95 (0.92, 0.99)	0.01	--	--
F _I O ₂ , per %	1.07 (1.05, 1.09)	0.00	1.07 (1.05, 1.09)	0.00	1.06 (1.04, 1.08)	0.00	1.06 (1.04, 1.08)	0.00

^awith C_{RS} model

^bwithout C_{RS} model

^cC_{RS}: respiratory-system compliance