SUPPLEMENTARY TABLE S1 Single-variate logistic regression and Cox regression with bootstrapping on the risks of the major adverse outcomes

Method of staging (cutoff values)	Crude OR for $\geq$ 1 SAE at 1 year by bootstrapping[#] (95% CI)	Crude OR for $\geq$ 2 SAE at 1 year by bootstrapping[#] (95% CI)	Crude OR for $\geq$ 1 SAE every year at 2 years by bootstrapping[#] (95% CI)	Crude HR for mortality by bootstrapping[#] (95% CI)
FEV_1%pred (GOLD)				
1 ($\geq$80%)	1	1	1	1
2 ($\geq$50% and <80)	0.83 (0.82-0.84)*	0.25 (0.24-0.26)*	0.81 (0.79-0.83)*	1.63 (1.55-1.72)*
3 ($\geq$30% and <50)	4.44 (4.35-4.53)*	5.93 (5.81-6.05)*	4.90 (4.76-5.00)*	3.42 (3.25-3.60)*
4 (<30%)	2.34 (2.29-2.39)*	2.92 (2.83-3.00)*	2.86 (2.77-2.94)*	4.44 (4.18-4.71)*
FEV_1%pred (quartiles)				
1 ($\geq$69.3%)	1	1	1	1
2 ($\geq$53.6% and <69.3)	0.78 (0.76-0.79)*	0.98 (0.95-1.01)	1.79 (1.73-1.84)*	2.27 (2.23-2.29)*
3 ($\geq$41.0% and <53.6)	5.81 (5.70-5.87)*	8.41 (8.25-8.58)*	10.70 (10.49-11.02)*	3.29 (3.25-3.35)*
4 (<41.0%)	4.10 (4.01-4.14)*	10.59 (10.38-10.80)*	8.41 (8.25-8.58)*	3.97 (3.94-4.06)*
Z score (quartiles)				
1 ($\geq$-1.70)	1	1	1	1
2 ($\geq$-2.57 and < -1.70)	0.80 (0.78-0.82)*	0.41 (0.41-10.80)	0.41 (0.40-0.41)*	1.92 (1.88-1.93)*
3 ($\geq$-3.17 and < -2.57)	7.39 (7.24-7.46)*	12.94 (12.55-13.20)*	15.03 (14.73-15.33)*	3.46 (3.42-3.53)*
4 (<-3.17)	3.06 (3.00-3.13)*	7.69 (7.54-7.85)*	7.39 (7.17-7.54)*	2.89 (2.86-2.94)*
$(FEV_1 \cdot Ht^{-2})_A$ (quartiles)				
1 ($\geq$0.63)	1	1	1	1
2 ($\geq$0.47 and <0.63)	1.08 (1.06-1.11)*	1.60 (1.57-1.65)*	1.68 (1.63-1.72)*	1.36 (1.35-1.39)*
3 ($\geq$0.36 and <0.47)	3.63 (3.56-3.67)*	7.32 (7.17-7.46)*	3.32 (3.25-3.39)*	4.39 (4.35-4.48)*
4 (<0.36)	4.06 (4.01-4.14)*	12.55 (12.18-12.81)*	6.23 (6.05-6.36)*	3.22 (3.16-3.29)*
$(FEV_1 \cdot Ht^{-2})_B$[¶]				
1 ($\geq$0.50)	1	1	1	1
2 ($\geq$0.40 and < 0.30)	1.65 (1.62-1.67)*	2.97 (2.89-3.03)*	1.45 (1.40-1.48)*	2.20 (2.18-2.23)*
3 ($\geq$0.30 and < 0.40)	5.21 (5.16-5.26)*	11.70 (11.36-11.94)*	5.37 (5.26-5.47)*	2.89 (2.86-2.92)*
4 (< 0.30)	4.62 (4.57-4.71)*	14.15 (13.74-14.44)*	7.54 (7.39-7.69)*	5.16 (5.05-5.20)*
$FEV_1 \cdot Ht^{-3}$ (quartiles)				
1 ($\geq$0.38)	1	1	1	1
2 ($\geq$0.29 and <0.38)	1.48 (1.45-1.49)*	2.77 (2.69-2.83)*	1.97 (1.92-2.01)*	1.70 (1.67-1.73)*
3 ($\geq$0.22 and <0.29)	3.94 (3.90-4.01)*	6.42 (6.23-6.55)*	3.97 (3.90-4.06)*	4.53 (4.44-4.62)*
4 (<0.22)	3.86 (3.78-3.90)*	13.87 (13.60-14.15)*	6.17 (5.99-6.30)*	3.22 (3.16-3.25)*
FEV_1Q (quartiles)				

1 ($\geq$3.38)	1	1	1	1
2 ($\geq$2.50 and <3.38)	1.88 (1.84-1.90)*	1.70 (1.65-1.73)*	1.38 (1.34-1.40)*	2.34 (2.27-2.39)*
3 ($\geq$1.90 and <2.50)	3.22 (3.16-3.29)*	7.39 (7.24-7.54)*	3.49 (3.42-3.56)*	4.48 (4.39-4.62)*
4 (<1.90)	5.21 (5.10-5.26)*	10.70 (10.49-11.02)*	6.17 (6.05-6.30)*	5.21 (5.05-5.37)*

FEV_1, forced expiratory volume in 1 second; FEV_1%pred, percentage of predicted FEV_1; $FEV_1 \cdot Ht^{-2}$, FEV_1 over height squared; $FEV_1 \cdot Ht^{-3}$, FEV_1 over height cubed; FEV_1Q, FEV_1 quotient; GOLD, the Global Initiative for Chronic Obstructive Lung Disease; OR, odds ratio; SAE, severe acute exacerbation; 95% CI, 95% confidence interval; HR, hazard ratio.

[#] : Bootstrapping was performed using SAS (version 9.4, SAS Institute, Cary, North Carolina) with 5000 random samplings with replacement. [¶] The cutoff values (0.5, 0.4, 0.3) were proposed by Miller *et al* [1]. * : $P < 0.05$.

REFERENCE FOR SUPPLEMENTARY TABLE S1:

1 Miller MR, Pedersen OF, Dirksen A. A new staging strategy for chronic obstructive pulmonary disease. *Int J Chron Obstruct Pulmon Dis* 2007; 2(4): 657–663.