

1 **Supplemental Table 1.** Adjusted prevalence ratios and 95% confidence intervals of clinical characteristics in mild-to-moderate and severe-to-  
 2 very severe COPD patients

	COPDGene		KOCOSS
	NHW	AA OR (95% CI)	Koreans OR (95% CI)
<b>Mild-to-moderate</b>			
Age ≥65 years	<i>Reference</i>	0.58 (0.49, 0.68)	1.54 (1.43, 1.65)
Sex, male	<i>Reference</i>	0.93 (0.85, 1.02)	1.81 (1.73, 1.89)
Smoking status, current	<i>Reference</i>	1.60 (1.46, 1.73)	0.85 (0.75, 0.95)
Overweight or obese	<i>Reference</i>	0.97 (0.91, 1.03)	0.64 (0.59, 0.69)
Education, high school or less	<i>Reference</i>	1.67 (1.51, 1.84)	2.67 (2.48, 2.87)
<b>Symptoms</b>			
Cough > 3months	<i>Reference</i>	0.67 (0.58, 0.76)	0.5 (0.43, 0.58)
Phlegm > 3months	<i>Reference</i>	0.80 (0.69, 0.91)	0.80 (0.70, 0.90)
mMRC ≥2	<i>Reference</i>	1.46 (1.32, 1.59)	0.77 (0.67, 0.86)
<b>Moderate-to-severe AE in the previous year</b>	<i>Reference</i>	1.06 (0.90, 1.22)	0.70 (0.58, 0.82)
<b>Six-minute walk distance &lt;350m</b>	<i>Reference</i>	2.63 (2.29, 2.97)	1.39 (1.17, 1.60)
<b>Cardiovascular disease</b>			
Hypertension	<i>Reference</i>	1.31 (1.20, 1.43)	0.78 (0.69, 0.86)
Congestive heart failure	<i>Reference</i>	1.46 (0.71, 2.21)	0.80 (0.44, 1.17)
Dyslipidemia	<i>Reference</i>	0.69 (0.59, 0.78)	0.25 (0.21, 0.29)
Myocardial infarction	<i>Reference</i>	0.95 (0.60, 1.30)	0.44 (0.29, 0.59)
Peripheral vascular disease	<i>Reference</i>	0.61 (0.19, 1.03)	0.26 (0.11, 0.40)
<b>Diabetes mellitus</b>	<i>Reference</i>	1.61 (1.21, 2.01)	1.48 (1.17, 1.79)
<b>Gastro-esophageal reflux</b>	<i>Reference</i>	0.66 (0.54, 0.78)	0.34 (0.27, 0.40)
<b>Osteoporosis</b>	<i>Reference</i>	0.47 (0.29, 0.65)	0.45 (0.28, 0.63)
<b>Poor quality of life*</b>	<i>Reference</i>	1.19 (1.09, 1.29)	1.27 (1.16, 1.37)

**Severe-to-very severe**

<b>Age ≥65 years</b>	<i>Reference</i>	0.65 (0.54, 0.75)	1.23 (1.11, 1.35)
<b>Sex, male</b>	<i>Reference</i>	1.04 (0.93, 1.14)	1.72 (1.64, 1.81)
<b>Smoking status, current</b>	<i>Reference</i>	1.30 (1.07, 1.53)	0.89 (0.71, 1.08)
<b>Overweight or obese</b>	<i>Reference</i>	0.92 (0.82, 1.01)	0.35 (0.29, 0.42)
<b>Education, high school or less</b>	<i>Reference</i>	1.60 (1.42, 1.78)	2.40 (2.21, 2.59)
<b>Symptoms</b>			
Cough > 3months	<i>Reference</i>	0.68 (0.56, 0.80)	0.59 (0.48, 0.70)
Phlegm > 3months	<i>Reference</i>	0.76 (0.64, 0.88)	0.66 (0.55, 0.77)
mMRC ≥2	<i>Reference</i>	1.00 (0.95, 1.06)	0.75 (0.69, 0.81)
<b>Moderate-to-severe AE in the previous year</b>	<i>Reference</i>	1.03 (0.92, 1.15)	0.77 (0.67, 0.88)
<b>Six-minute walk distance &lt;350m</b>	<i>Reference</i>	1.38 (1.28, 1.49)	0.79 (0.68, 0.90)
<b>Cardiovascular disease</b>			
Hypertension	<i>Reference</i>	1.38 (1.24, 1.53)	0.84 (0.71, 0.97)
Congestive heart failure	<i>Reference</i>	1.26 (0.73, 1.79)	0.64 (0.29, 0.99)
Dyslipidemia	<i>Reference</i>	1.01 (0.86, 1.16)	0.20 (0.13, 0.26)
Myocardial infarction	<i>Reference</i>	0.76 (0.42, 1.11)	0.48 (0.26, 0.70)
Peripheral vascular disease	<i>Reference</i>	0.85 (0.27, 1.43)	0.54 (0.14, 0.95)
<b>Diabetes mellitus</b>	<i>Reference</i>	1.69 (1.21, 2.17)	1.87 (1.34, 2.40)
<b>Gastro-esophageal reflux</b>	<i>Reference</i>	0.62 (0.47, 0.76)	0.33 (0.22, 0.45)
<b>Osteoporosis</b>	<i>Reference</i>	0.48 (0.29, 0.67)	0.33 (0.16, 0.50)
<b>Poor quality of life*</b>	<i>Reference</i>	1.02 (0.98, 1.06)	0.89 (0.84, 0.94)

3 COPDGene, US Genetic Epidemiology of COPD; KOCOSS, Korean COPD Subtype Study; NHW, non-Hispanic White; AA, African American;  
4 COPD, chronic obstructive pulmonary disease; mMRC, modified Medical Round Council; AE, acute exacerbation; \* defined as the St. George's  
5 Respiratory Questionnaire (SGRQ) or COPD-specific version of SGRQ total score ≥25. Adjusted for age, sex, BMI categories (underweight,  
6 normal, overweight, obese, and unknown), and smoking (former, and current)