Supplemental Table 1. Association between *MUC5B* variant and ILD according to ILD pattern.

| | **MUC5B variant positive** | | | |
	RA-ILD	**RA no-ILD**	**OR (95% CI)**	**p value**
All ILD	78/238 (32.8%)	413/2323 (17.8%)	2.25 (1.69, 3.02)	<0.001
UIP	28/70 (40.0%)	412/2320 (17.8%)	3.09 (1.89, 5.04)	<0.001
Non-UIP	8/32 (25.0%)	412/2321 (17.8%)	1.54 (0.69, 3.46)	0.29

Abbreviations: OR (odds ratio), CI (confidence interval), ILD (interstitial lung disease), UIP (usual interstitial pneumonia)
Non-UIP group includes all other patterns of ILD.

Supplemental Table 2. Association between *MUC5B* promoter variant and RA duration at time of ILD diagnosis.

	MUC5B variant positive			
	RA-ILD	**RA no-ILD**	**OR (95% CI)**	**p value**
All ILD	78/238 (32.8%)	413/2323 (17.8%)	2.25 (1.69, 3.02)	<0.001
ILD <7 years after RA onset	35/114 (30.7%)	207/1140 (18.2%)	2.00 (1.30, 3.06)	0.001
ILD ≥7 years after RA onset	43/124 (34.7%)	206/1183 (17.4%)	2.51 (1.69, 3.75)	<0.001

Abbreviations: RA (rheumatoid arthritis), ILD (interstitial lung disease), OR (odds ratio), CI (confidence interval)
Time from RA diagnosis to ILD diagnosis categorized as before or after 7 years, based on the median value.

Supplemental Table 3. Associations between the *MUC5B* promoter variant and chronic obstructive pulmonary disease (COPD) or bronchiectasis.

	RA-COPD (N=841)	RA no-COPD (N=1478)	OR (95% CI)	p value
MUC5B rs35705950	Number (%)			
Never smoker/*MUC5B* neg.	77 (9.2)	361 (24.4)	1 (Ref)	-
Never smoker/*MUC5B* pos.	14 (1.7)	85 (5.7)	0.77 (0.42, 1.43)	0.41
Ever smoker/*MUC5B* neg.	608 (72.3)	862 (58.3)	3.31 (2.53, 4.32)	<0.001
Ever smoker/*MUC5B* pos.	142 (16.9)	171 (11.6)	3.89 (2.79, 5.42)	<0.001
			RERI 0.82 (-0.23, 1.93)[a]	

[a]Relative excess risk due to interaction (RERI) is represented as relative risk with 95% CI. Abbreviations: COPD (chronic obstructive pulmonary disease), OR (odds ratio), CI (confidence interval), ILD (interstitial lung disease), COPD (chronic obstructive pulmonary disease), RERI (relative excess risk due to interaction)