Description of Additional Supplementary Files:

Supplementary Data 1: Summary statistics from exposure-wide association study.

Supplementary Data 2: SERS model weights, responses in bold are significant (p<0.05) in the multivariable model.

Supplementary Data 3: Hazard ratio of each SERS decile compared to the first decile in the EUR evaluation subset.

Supplementary Data 4: Hazard ratio of each PGS decile compared to the first decile in the EUR evaluation subset.

Supplementary Data 5: Prediction of COPD incidence in subsampled populations of the UK Biobank (N=1500). The absolute C index and its standard errors (SE) are shown in each model without adjusting for covariates.