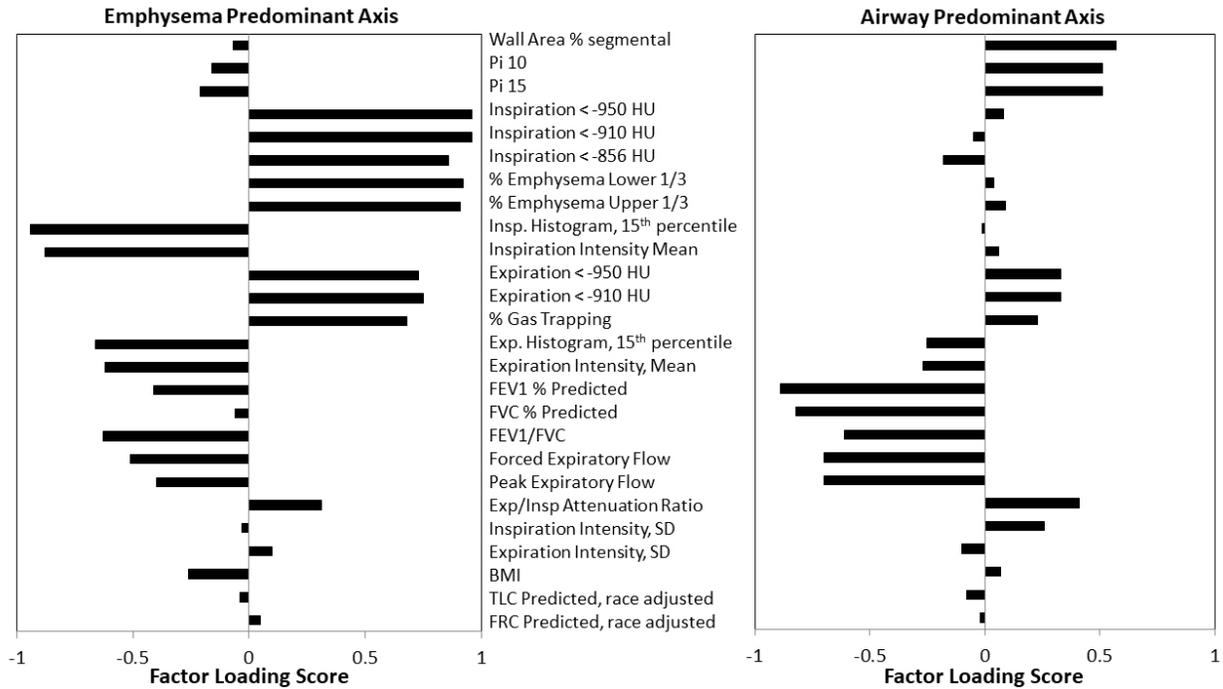**Supplementary Figure 1. Factor loading scores of the Airway-Predominant Disease and Emphysema-Predominant Disease Axes**

Twenty-six CT and spirometric measures were combined into distinct factors using factor analysis and named according to the loading scores of the variables on the factors. Two multidimensional factors were associated with lower pulmonary function; the EPD axis because of the strong correlation between pulmonary function and the low attenuation measures on CT and the APD axis because of its correlation with CT measures of airway measures and pulmonary function.