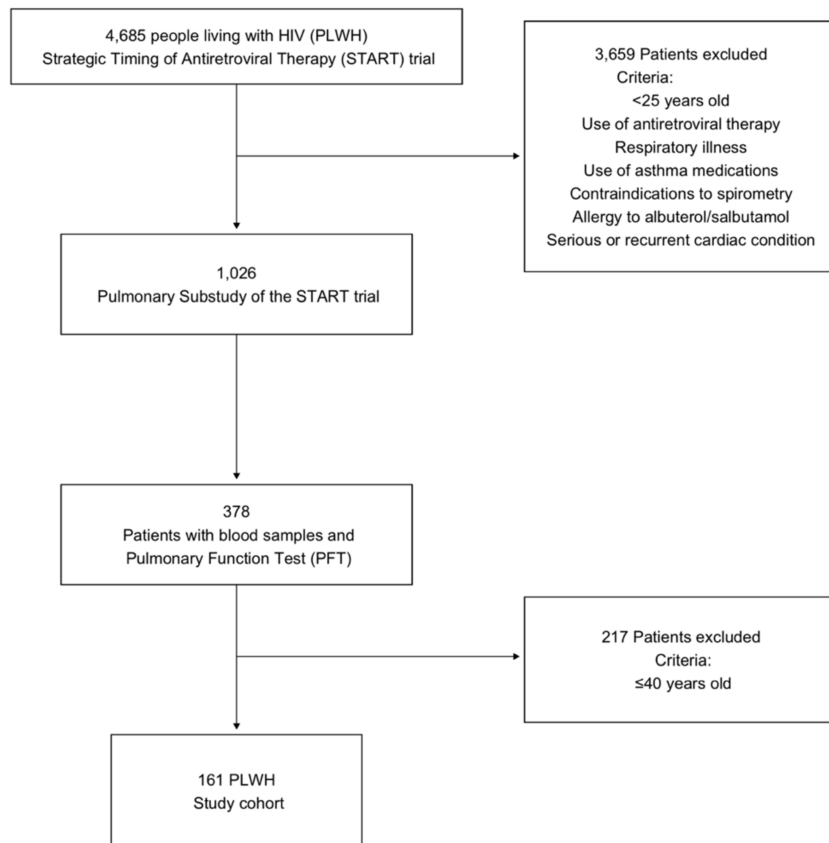


## **DNA Methylation is Associated with Airflow Obstruction in Patients Living with Human Immunodeficiency Virus**

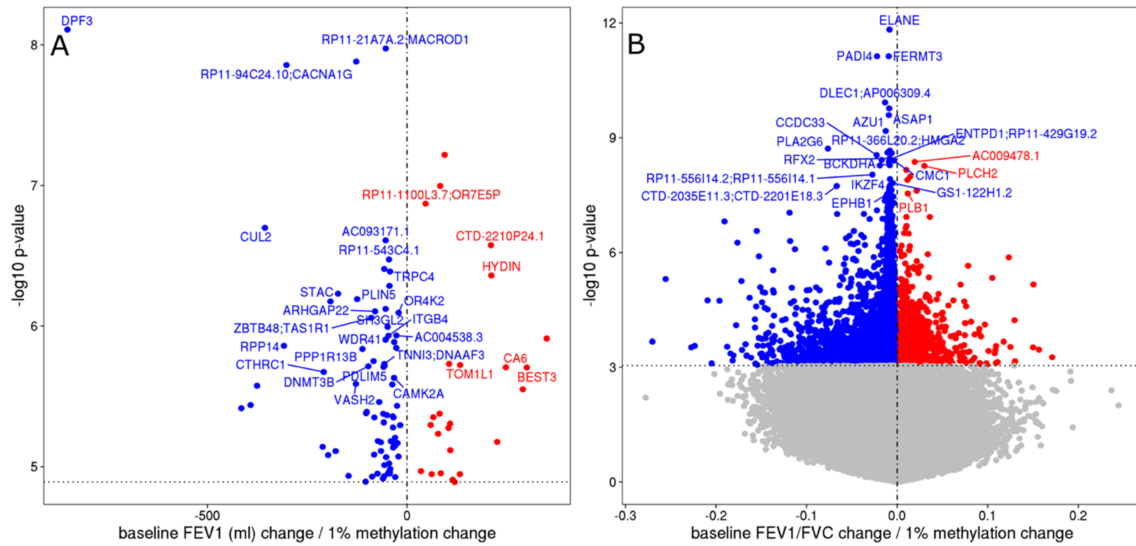
### **Supplementary Figures**

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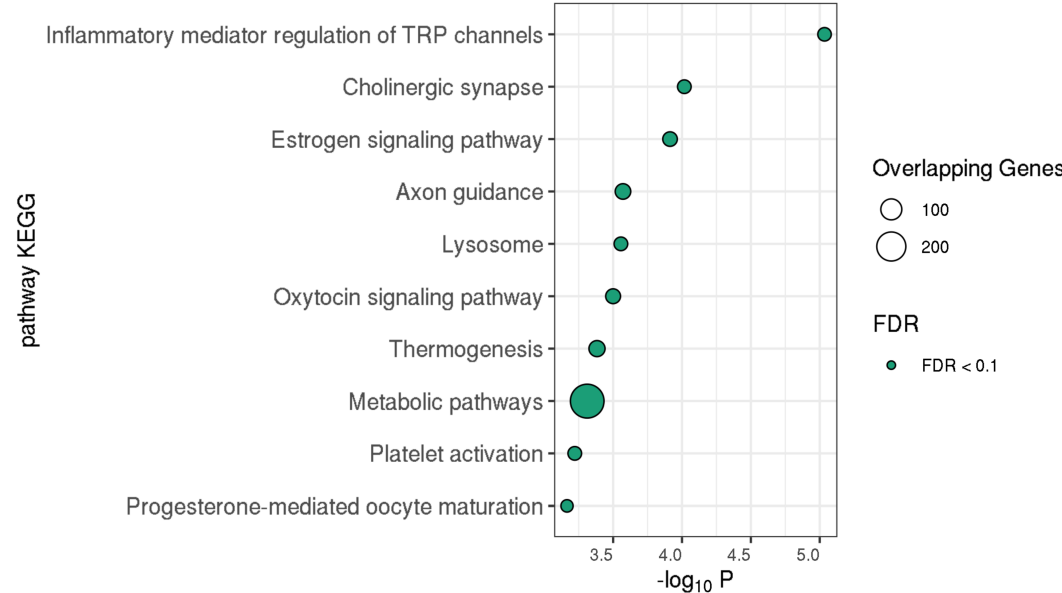
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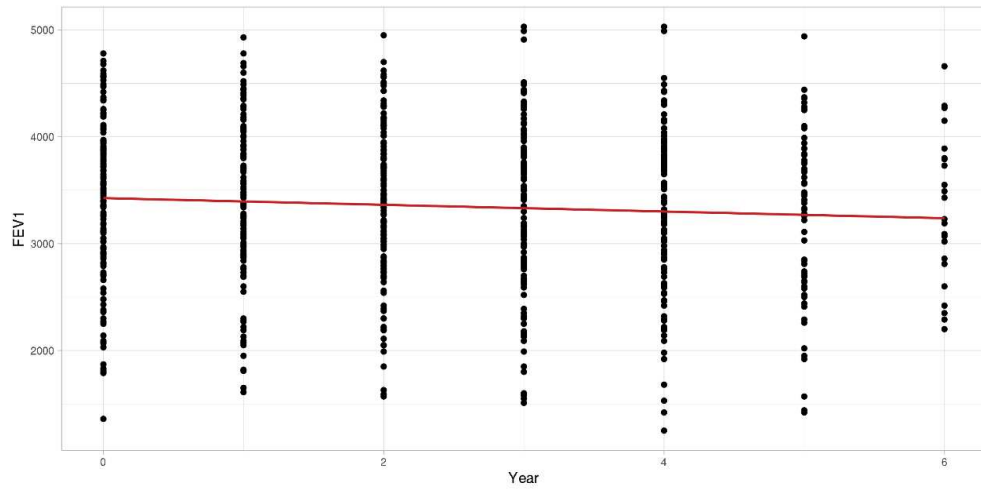
**Figure S1. Diagram of the study cohort.** The diagram shows the exclusion criteria used to obtain the study cohort.



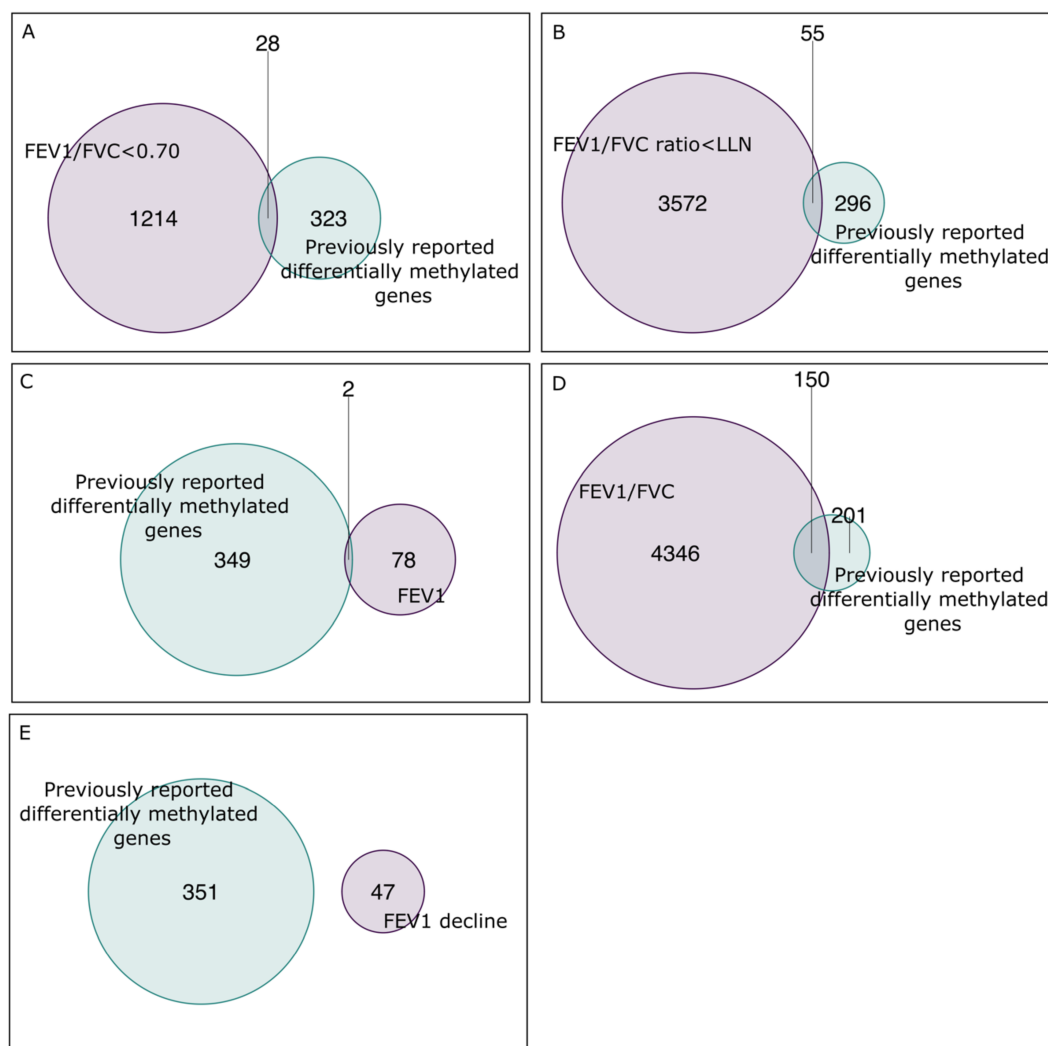
**Figure S2. DMPs Associated with FEV<sub>1</sub> and FEV<sub>1</sub>/FVC.** The figure shows the absolute effect of a 1% change in methylation of the DMPs for FEV<sub>1</sub> (A) and FEV<sub>1</sub>/FVC (B) (x-axis). The y-axis on the plots represents the level of statistical significance for each DMP. The dashed horizontal line in A and B represents the -log<sub>10</sub> p-value that correspond to the FDR<0.1.



**Figure S3. Top 10 KEGG biologic pathways enriched by genes identified for the FEV<sub>1</sub>/FVC ratio.** The axis on the figure represents the pathway’s enrichment level of significance (x-axis) for each biologic pathway (y-axis). The size of the circles inside the figure area represents the number of overlapping genes between the genes in the pathways and the genes characterized by DMPs. The color green represents statistically significant enrichment based on the FDR<0.1.



**Figure S4. FEV<sub>1</sub> decline in PLWH over the course of a median of 5 years.** The plot's x- and y-axis represent the number of years and forced expiratory volume in 1 second (FEV<sub>1</sub>) records, respectively. Dots inside the plot represent records for the subjects in the study cohort. The red line represents the linear decline of FEV<sub>1</sub> over the course of the Strategic Timing of Antiretroviral Therapy (START) trial.



**Figure S5. Overlapping of differentially methylated genes identified in previously published COPD and population-based cohorts shown in green [1,2] and in PLWH shown in purple.** Panels represent the overlap with differentially methylated genes for (A) FEV1/FVC < 0.70; (B) FEV1/FVC < LLN; (C) FEV1 (D) FEV1/FVC; (E) FEV1 decline.

## References

- 1 Qiu W, Baccarelli A, Carey VJ, *et al.* Variable DNA Methylation Is Associated with Chronic Obstructive Pulmonary Disease and Lung Function. *Am J Respir Crit Care Med* 2012;**185**:373–81. doi:10.1164/rccm.201108-1382OC
- 2 de Vries M, Nedeljkovic I, van der Plaat DA, *et al.* DNA methylation is associated with lung function in never smokers. *Respiratory Research* 2019;**20**:268. doi:10.1186/s12931-019-1222-8

