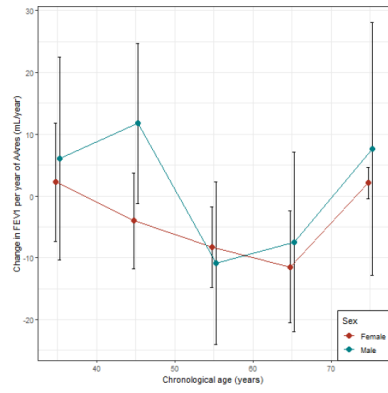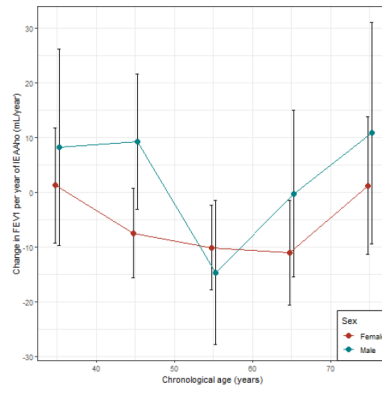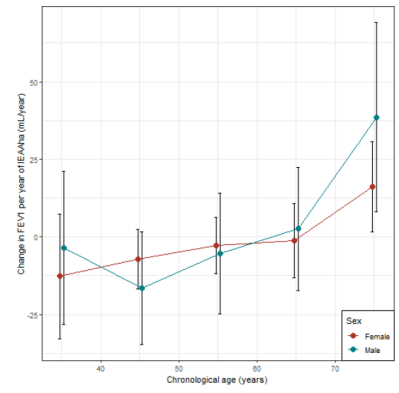Supplementary Figure 1. Sex-specific effect on epigenetic age acceleration.
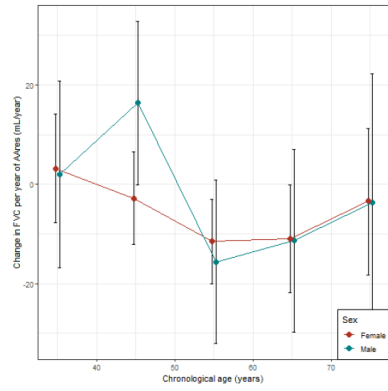
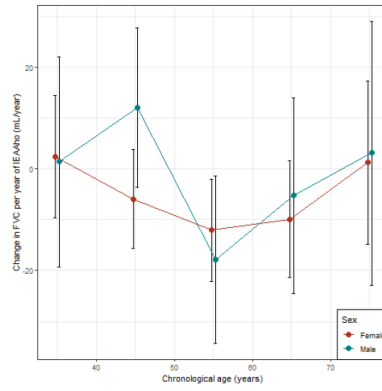**A** Changes in FEV₁ per year of AA$_{res}$

B Changes in FEV₁ per year of IEAA
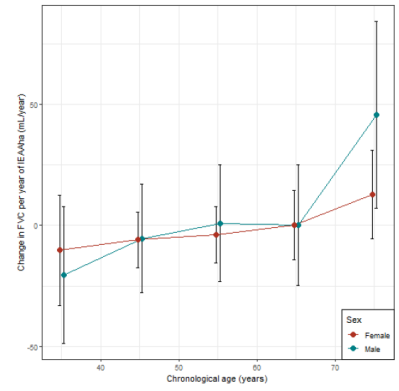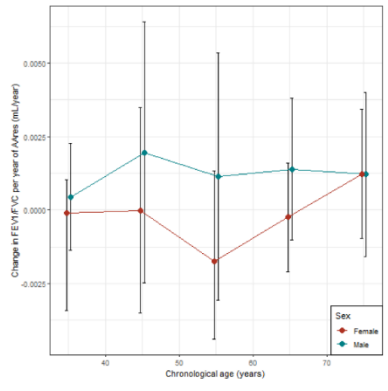
C Changes in FEV₁ per year of EEAA

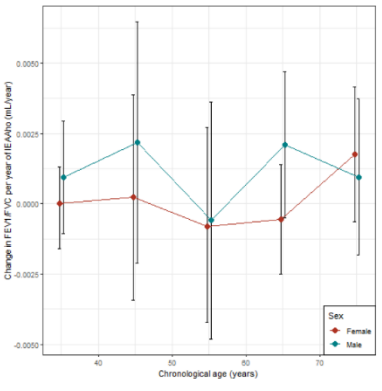**D** Changes in FVC per year of AA$_{res}$
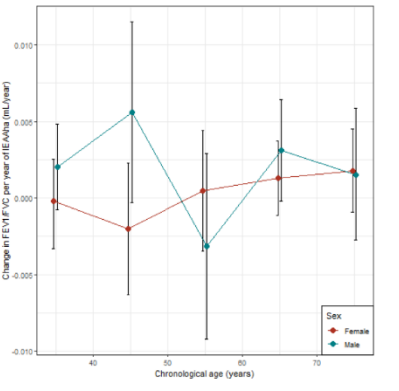
E Changes in FVC per year of IEAA

F Changes in FVC per year of EEAA
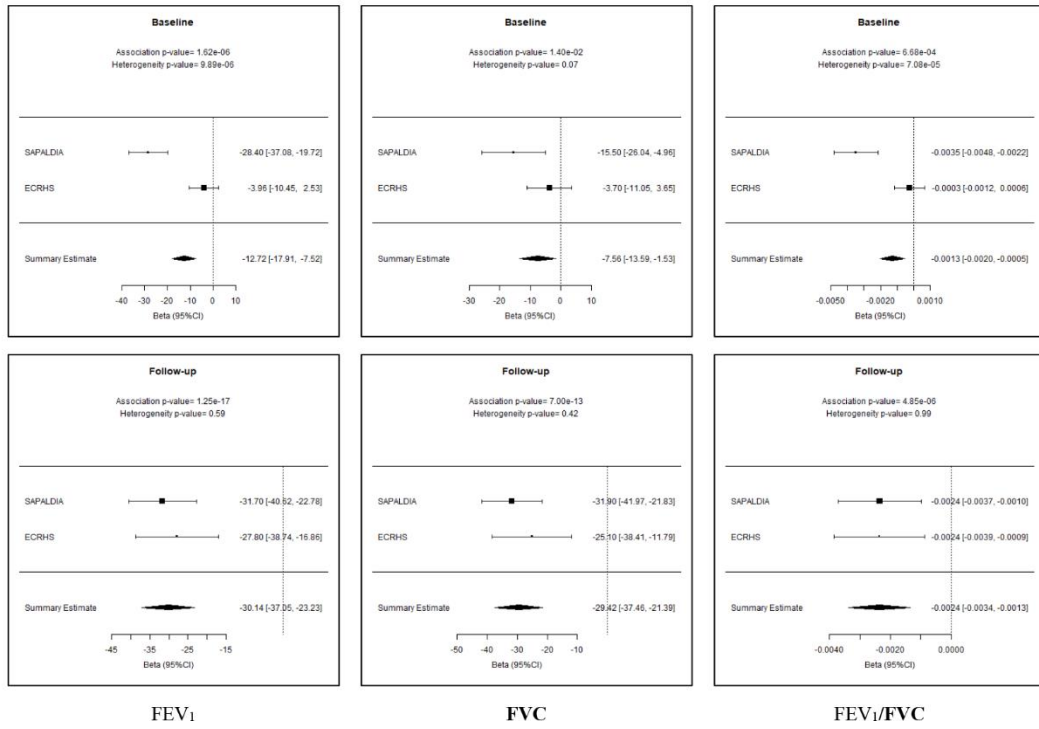
G Changes in FEV₁/FVC per year of AA$_{res}$

H Changes in FEV₁/FVC per year of IEAA

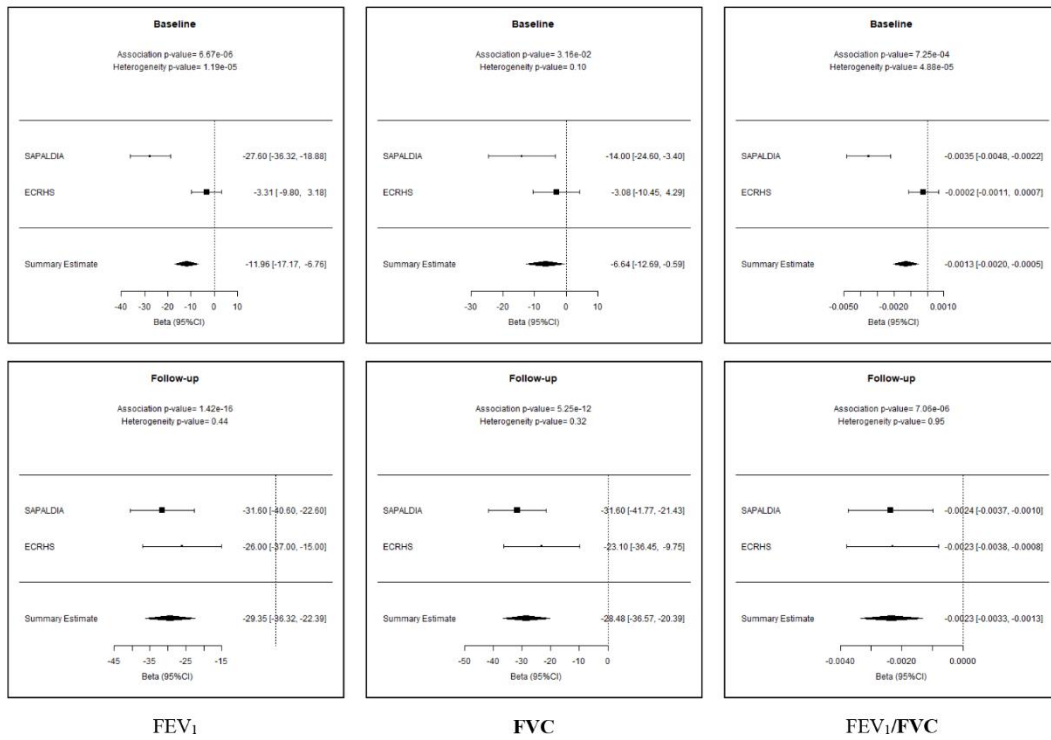**I** Changes in FEV₁/FVC per year of EEAA

Supplementary Figure 2. Age stratified analyses comparing association between lung function and epigenetic age accelerations. X-axis represents stratifications by 10 years intervals. Y-axis represents the estimates (changed in lung function per year of epigenetic age acceleration in mLs/year) from the linear models with 95% confidence intervals.
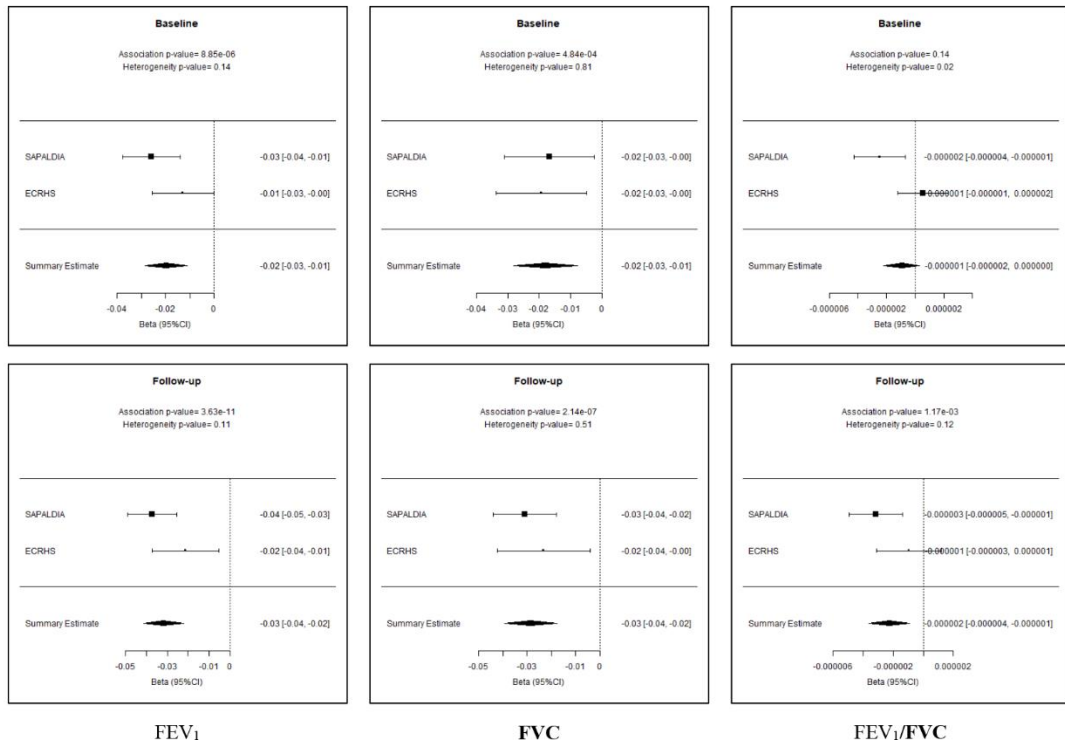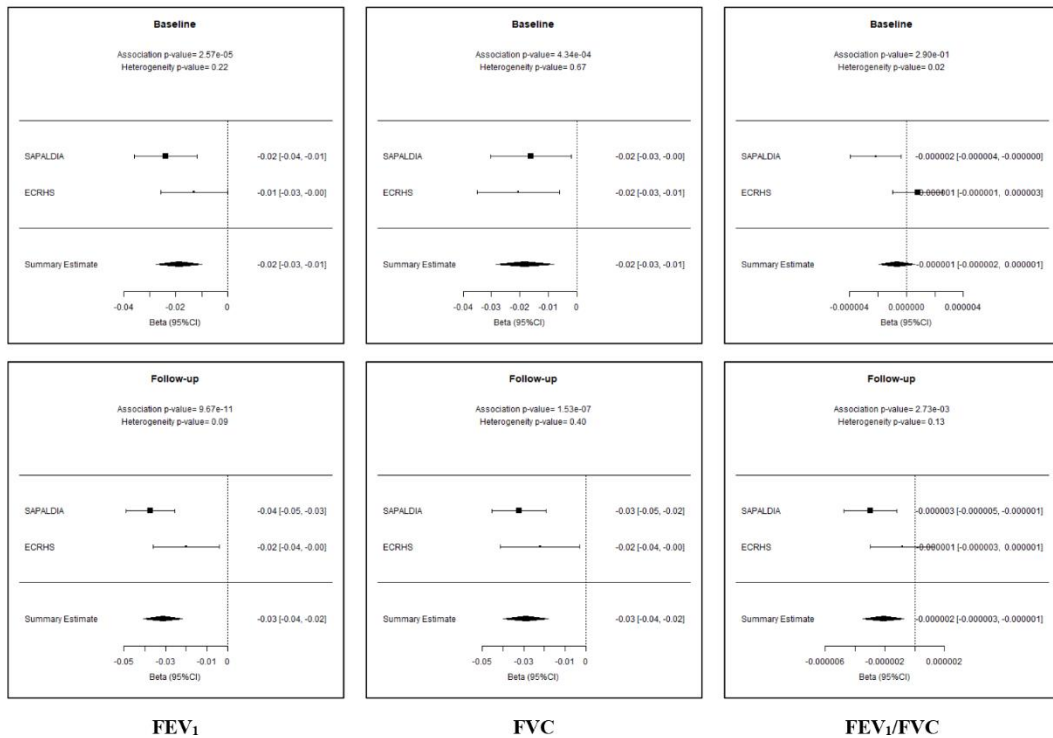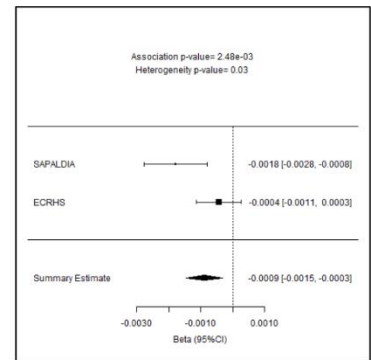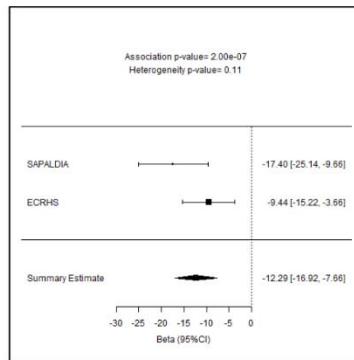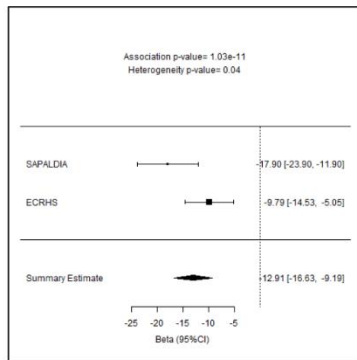
A DNAmAge_grim

B AA_grim

C DNAmPAI1

FEV$_1$ **FVC**   FEV$_1$/**FVC**

D DNAmPAI1$_{adj}$

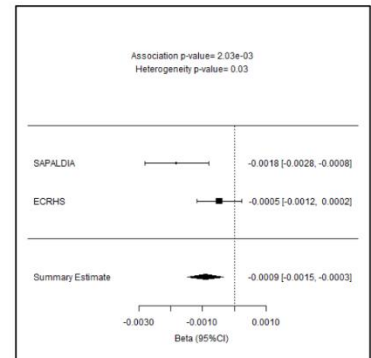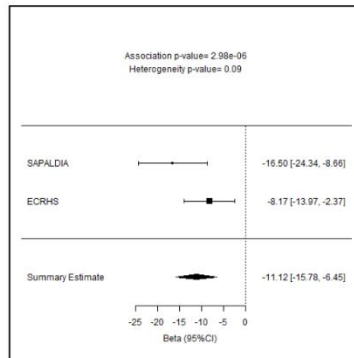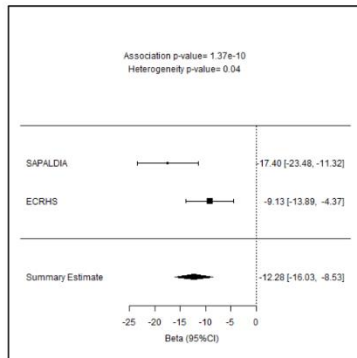**FEV$_1$**   **FVC**   **FEV$_1$/FVC**

Supplementary Figure 3. Cross-sectional meta-analysis results of association between DNAm GrimAge (DNAmGrim), Age-adjusted measure of DNAm GrimAge (AA$_{grim}$), DNAm plasminogen activation inhibitor 1 (DNAmPAI1) and Age adjusted DNAm PAI-1 (DNAmPAI1$_{adj}$) with lung function (FEV$_1$, FVC, and FEV$_1$/FVC) in SAPALDIA and ECRHS cohorts. The estimates have been measured with 95% confidence interval.

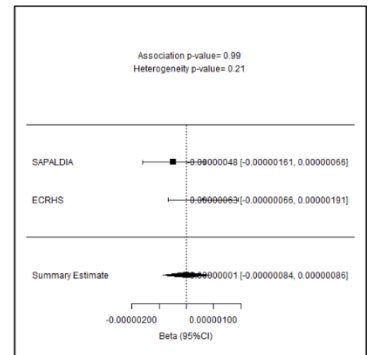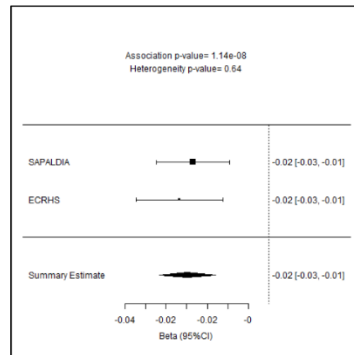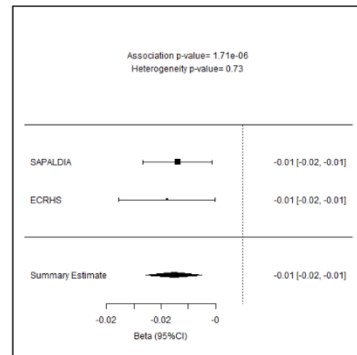**Supplementary Figure 4. Linear mixed model meta-analysis association of lung function (FEV$_1$, FVC, and FEV$_1$/FVC) with DNAm GrimAge (DNAmGrim), Age-adjusted measure of DNAm GrimAge (AA$_{grim}$), DNAm plasminogen activation inhibitor 1 (DNAmPAI1) and Age adjusted DNAm PAI-1 (DNAmPAI1$_{adj}$) two time points (baseline and follow-up).** The estimates have been measured with 95% confidence interval.