**Supplemental Table 4**. Interactions of the *APOE* ε2 and ε4 alleles with smoking and BMI in the relationship to FEV1/FVC.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trait | Effect  allele | Men & Women | | | Men | | | Women | | |
| Beta | SE | P-value | Beta | SE | P-value | Beta | SE | P-value |
| FEV1/FVC  No interactions | ε2 | 0.14 | 0.32 | .670 | 0.56 | 0.50 | .260 | -0.21 | 0.40 | .608 |
| ε4 | -0.69 | 0.30 | .024\* | -0.13 | 0.47 | .780 | -1.23 | 0.39 | .002\* |
| FEV1/FVC  Interaction  with smoking | ε2 | 0.14 | 0.48 | .780 | 0.24 | 0.70 | .730 | 0.02 | 0.65 | .970 |
| ε2\*smoking | 0.004 | 0.62 | .990 | 0.55 | 0.96 | .570 | -0.34 | 0.81 | .680 |
| ε4 | -0.60 | 0.45 | .180 | 0.42 | 0.65 | .520 | -1.92 | 0.61 | .002\* |
| ε4\*smoking | -0.11 | 0.59 | .850 | -1.10 | 0.92 | .230 | 1.20 | 0.78 | .120 |
| FEV1/FVC  Interaction  with BMI | ε2 | 0.06 | 0.37 | .879 | 0.18 | 0.58 | .757 | -0.07 | 0.46 | .883 |
| ε2\*BMI | 0.18 | 0.71 | .795 | 1.23 | 1.09 | .259 | -0.66 | 0.92 | .475 |
| ε4 | -0.96 | 0.34 | .005\* | -0.27 | 0.53 | .609 | -1.58 | 0.43 | <0.001\* |
| ε4\*BMI | 1.38 | 0.72 | .055 | 0.84 | 1.13 | .453 | 1.69 | 0.93 | .070 |

The ε3/ε3 genotype was considered as the reference.

Smoking status was defined as a cumulative smoking history of more than 100 cigarettes.

Body mass index (BMI) was dichotomized according to cut off between overweight and obesity, i.e., BMI < 30 kg/m2 and BMI > 30 kg/m2.

\* denotes significant result (*p-value* < 0.05).