**Table S2 Best gene-gene interaction models, as identified by GMDR**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | Training Accuracy (%) | Testing Accuracy (%) | Cross-Validation Consistency | P-value |
|
| rs1360780 | 0.57 | 0.56 | 10/10 | **0.01** |
| rs1360780×rs110402 | 0.59 | 0.54 | 9/10 | 0.05 |
| rs1360780×rs947008×rs110402 | 0.61 | 0.57 | 10/10 | **<0.001** |

Note: Adjusted for gender, age, ethnicity, marital status, smoking status and alcohol status. The best interaction model was selected based on the balance test error of the 1/10 test sample, the accuracy of the cross-validation and P-value, suggest that rs1360780 ×rs947008 ×rs110402 is the best interaction model (Cross-Validation Consistency:10/10, *P*<0.001). Statistically significant P value was denoted in bold.