Table S3. Meta-prediction: Death from air pollution (APD) on *MTHFR* 1298 genotypes for controls (ct) and breast cancer (BC) cases (ca), and BC Risks.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Partition tree | |  |  |  |  | Tukey test |  |  |  |
| Variable | AICc | APD | Count | Mean | SD | Levels compared | Difference | SE Difference | Lower  CI | Upper CI | *p* |
| CC%ct | 333.989 | 2 | 12 | 5.65 | 4.261 | 3 / 2 | 3.671 | 2.591 | -2.599 | 9.942 | .341 |
|  |  | 3 and 4 | 38 | 8.766 | 7.063 | 4 / 2 | 2.792 | 2.329 | -2.844 | 8.427 | .460 |
|  |  |  |  |  |  | 3 / 4 | 0.880 | 2.215 | -4.481 | 6.240 | .917 |
| CC%ca | 335.215 | 2 | 12 | 8.1 | 5.520 | 3 / 2 | 1.929 | 2.622 | -4.418 | 8.275 | .744 |
|  |  | 3 and 4 | 38 | 9.429 | 6.899 | 4 / 2 | 0.980 | 2.357 | -4.725 | 6.683 | .909 |
|  |  |  |  |  |  | 3 / 4 | 0.950 | 2.242 | -4.476 | 6.375 | .906 |
| AC%ct | 376.175 | 2 and 3 | 26 | 42.654 | 12.917 | 3 / 4 | 5.670 | 3.382 | -2.517 | 13.857 | .225 |
|  |  | 4 | 24 | 37.108 | 5.044 | 2 / 4 | 5.400 | 3.556 | -3.207 | 14.007 | .292 |
|  |  |  |  |  |  | 3 / 2 | 0.270 | 3.957 | -9.307 | 9.847 | .997 |
| AC%ca | 380.838 | 2 and 3 | 26 | 42.9 | 12.177 | 2 / 4 | 5.746 | 3.719 | -3.255 | 14.747 | .280 |
|  |  | 4 | 24 | 38.096 | 8.113 | 3 / 4 | 3.997 | 3.537 | -4.565 | 12.559 | .501 |
|  |  |  |  |  |  | 2 / 3 | 1.749 | 4.139 | -8.267 | 11.765 | .907 |
| AA%ct | 402.467 | 2 and 3 | 26 | 49.719 | 13.691 | 4 / 3 | 6.550 | 4.373 | -4.033 | 17.132 | .301 |
|  |  | 4 | 24 | 54.45 | 12.089 | 2 / 3 | 3.942 | 5.115 | -8.438 | 16.321 | .723 |
|  |  |  |  |  |  | 4 / 2 | 2.608 | 4.597 | -8.518 | 13.734 | .838 |
| AA%ca | 406.211 | 2 and 3 | 26 | 47.962 | 13.130 | 4 / 3 | 4.946 | 4.568 | -6.109 | 16.001 | .529 |
|  |  | 4 | 24 | 52.825 | 13.773 | 4 / 2 | 4.767 | 4.803 | -6.856 | 16.390 | .585 |
|  |  |  |  |  |  | 2 / 3 | 0.180 | 5.344 | -12.753 | 13.112 | .200 |
| RR  1298CC | 96.505 | 2 and 3 | 26 | 1.247 | 0.756 | 3 / 4 | 0.225 | 0.206 | -0.274 | 0.725 | .524 |
|  |  | 4 | 24 | 1.031 | 0.386 | 2 / 4 | 0.205 | 0.217 | -0.321 | 0.730 | .616 |
|  |  |  |  |  |  | 3 / 2 | 0.021 | 0.241 | 0.564 | 0.605 | .996 |
| RR 1298AC | -13.145 | 2 | 12 | 1.103 | 0.254 | 2 / 3 | 0.093 | 0.081 | -0.102 | 0.288 | .484 |
|  |  | 3 and 4 | 38 | 1.02 | 0.185 | 2 / 4 | 0.078 | 0.072 | -0.098 | 0.253 | .537 |
|  |  |  |  |  |  | 4 / 3 | 0.016 | 0.069 | -0.151 | 0.183 | .971 |
| RR 1298AA | -33.558 | 2 | 12 | 0.928 | 0.189 | 3 / 2 | 0.098 | 0.065 | -0.060 | 0.255 | .302 |
|  |  | 3 and 4 | 38 | 0.992 | 0.158 | 3 / 4 | 0.052 | 0.056 | -0.083 | 0.186 | .626 |
|  |  |  |  |  |  | 4 / 2 | 0.046 | 0.059 | -0.096 | 0.188 | .716 |

RR = Risk Ratio

APD = Death rates from air pollution, Levels per million: 2 = < 100, 3 = 101-250, 4 = 251-400 and greater

**AICc = corrected version of Akaike information criterion**

**SD = standard deviation**

**SE = standard error**

**CI = confidence interval**

***p* = p-value or calculated probability**