**Table S1.** The main information for genetic variants associated with hypertension in the UK biobank.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Rs ID | Chr:position | Risk allele | Effect (beta) | Standard error | INFO | MAF | P value |
| rs880315 | 1:10796866 | T | -0.5076 | 0.0323 | 0.99 | 0.343 | 9.59E-56 |
| rs17030613 | 1:113190807 | A | -0.2847 | 0.0213 | 0.99 | 0.210 | 8.22E-41 |
| rs17367504 | 1:11862778 | A | 0.8968 | 0.0413 | 0.98 | 0.159 | 1.58E-104 |
| rs11585169 | 1:150572037 | A | 0.1557 | 0.0209 | 1.00 | 0.419 | 8.30E-14 |
| rs13796 | 1:154245917 | T | -0.1626 | 0.0257 | 1.00 | 0.135 | 2.44E-10 |
| rs3820068 | 1:15798197 | A | 0.2935 | 0.0387 | 0.91 | 0.196 | 3.31E-14 |
| rs3738633 | 1:16359827 | A | -0.1224 | 0.0177 | 0.99 | 0.450 | 4.96E-12 |
| rs2171690 | 1:164740099 | T | 0.1181 | 0.0174 | 0.98 | 0.465 | 1.19E-11 |
| rs7524019 | 1:167367193 | T | 0.1036 | 0.0174 | 1.00 | 0.495 | 2.60E-09 |
| rs7796 | 1:1684169 | C | 0.3385 | 0.0314 | 0.98 | 0.489 | 5.00E-27 |
| rs4656180 | 1:169113881 | A | -0.196 | 0.0215 | 0.94 | 0.347 | 6.63E-20 |
| rs12405515 | 1:172357441 | T | -0.1698 | 0.0174 | 1.00 | 0.430 | 1.92E-22 |
| rs12118102 | 1:176634724 | A | 0.3559 | 0.0459 | 1.00 | 0.052 | 8.45E-15 |
| rs150816167 | 1:179571862 | T | -0.2873 | 0.0446 | 0.96 | 0.043 | 1.17E-10 |
| rs41475048 | 1:183058452 | A | -0.1233 | 0.0202 | 0.99 | 0.254 | 9.93E-10 |
| rs882624 | 1:201735913 | T | -0.1571 | 0.0185 | 1.00 | 0.334 | 2.33E-17 |
| rs2169137 | 1:204497913 | C | 0.1588 | 0.0194 | 0.99 | 0.213 | 3.17E-16 |
| rs2629665 | 1:207220800 | A | -0.1193 | 0.0177 | 1.00 | 0.409 | 1.52E-11 |
| rs2761436 | 1:207919748 | T | 0.1767 | 0.0205 | 0.98 | 0.463 | 6.36E-18 |
| rs12408022 | 1:217718789 | T | 0.1483 | 0.0199 | 0.99 | 0.259 | 9.60E-14 |
| rs9431431 | 1:221358796 | A | -0.134 | 0.019 | 0.99 | 0.294 | 1.71E-12 |
| rs2760061 | 1:228191075 | A | 0.1771 | 0.0176 | 1.00 | 0.480 | 1.04E-23 |
| rs2004776 | 1:230848702 | T | 0.2513 | 0.0203 | 0.96 | 0.240 | 2.55E-35 |
| rs150266910 | 1:23442265 | T | 0.1731 | 0.0267 | 1.00 | 0.178 | 9.57E-11 |
| rs6429422 | 1:243472801 | T | -0.246 | 0.0185 | 0.97 | 0.322 | 3.29E-40 |
| rs6686889 | 1:25030470 | T | 0.1918 | 0.0199 | 0.96 | 0.253 | 6.95E-22 |
| rs3737801 | 1:27960832 | C | 0.3886 | 0.0601 | 0.98 | 0.072 | 1.02E-10 |
| rs2493292 | 1:3328659 | T | 0.2481 | 0.0251 | 0.97 | 0.144 | 5.54E-23 |
| rs4360494 | 1:38455891 | C | 0.2978 | 0.0215 | 0.87 | 0.449 | 1.29E-43 |
| rs11210029 | 1:41865293 | A | -0.203 | 0.0313 | 0.99 | 0.362 | 8.92E-11 |
| rs7515635 | 1:42408070 | T | 0.2509 | 0.0303 | 0.94 | 0.462 | 1.25E-16 |
| rs4926923 | 1:48109225 | T | 0.1918 | 0.0308 | 0.98 | 0.089 | 4.75E-10 |
| rs11579440 | 1:49052423 | T | 0.2674 | 0.0425 | 0.99 | 0.151 | 3.24E-10 |
| rs147696085 | 1:51021867 | A | -0.2296 | 0.0357 | 0.97 | 0.094 | 1.33E-10 |
| rs112557609 | 1:56576924 | A | 0.2164 | 0.0216 | 0.99 | 0.343 | 1.50E-23 |
| rs60199046 | 1:59663341 | A | 0.3472 | 0.0225 | 0.99 | 0.289 | 1.18E-53 |
| rs709209 | 1:6278414 | A | 0.1238 | 0.0223 | 1.00 | 0.342 | 2.82E-08 |
| rs4908678 | 1:7739250 | T | -0.1124 | 0.018 | 0.99 | 0.371 | 4.59E-10 |
| rs2252865 | 1:8422676 | T | 0.1189 | 0.0181 | 1.00 | 0.354 | 5.51E-11 |
| rs10923038 | 1:88651771 | A | 0.2008 | 0.0313 | 0.99 | 0.381 | 1.36E-10 |
| rs10922502 | 1:89360158 | A | -0.2863 | 0.0313 | 0.99 | 0.372 | 6.14E-20 |
| rs2065152 | 1:90228519 | T | 0.1103 | 0.018 | 1.00 | 0.356 | 8.95E-10 |
| rs17516329 | 1:92319781 | A | 0.1417 | 0.0221 | 0.99 | 0.310 | 1.58E-10 |
| rs9662255 | 1:9441949 | A | -0.2167 | 0.021 | 0.98 | 0.436 | 6.90E-25 |
| rs150194832 | 2:106126880 | C | -0.2147 | 0.0354 | 1.00 | 0.091 | 1.35E-09 |
| rs62158170 | 2:114082175 | A | 0.1645 | 0.0211 | 0.99 | 0.216 | 6.63E-15 |
| rs10864859 | 2:121440218 | T | 0.1962 | 0.0325 | 1.00 | 0.079 | 1.52E-09 |
| rs4954192 | 2:135632981 | T | -0.1225 | 0.0179 | 1.00 | 0.372 | 8.15E-12 |
| rs1438896 | 2:145646072 | T | 0.195 | 0.0189 | 0.99 | 0.298 | 4.56E-25 |
| rs62169544 | 2:146950908 | A | -0.1207 | 0.0175 | 0.99 | 0.446 | 4.96E-12 |
| rs12990959 | 2:148572160 | T | -0.1271 | 0.0187 | 1.00 | 0.308 | 1.11E-11 |
| rs3175 | 2:153618773 | A | 0.1287 | 0.022 | 0.96 | 0.349 | 4.63E-09 |
| rs55732192 | 2:162278233 | T | -0.3358 | 0.0521 | 0.99 | 0.094 | 1.15E-10 |
| rs1446468 | 2:164963486 | T | -0.5063 | 0.0304 | 0.98 | 0.454 | 4.38E-62 |
| rs6712203 | 2:165557318 | T | -0.2092 | 0.0313 | 0.99 | 0.378 | 2.41E-11 |
| rs6758859 | 2:173965056 | T | 0.1211 | 0.0179 | 1.00 | 0.363 | 1.45E-11 |
| rs11694601 | 2:174949358 | A | -0.1909 | 0.0309 | 0.98 | 0.400 | 6.41E-10 |
| rs72914576 | 2:175529967 | C | -0.2081 | 0.0263 | 1.00 | 0.183 | 2.72E-15 |
| rs60148403 | 2:177989414 | A | -0.1674 | 0.0261 | 0.99 | 0.198 | 1.38E-10 |
| rs1837164 | 2:178716601 | A | 0.1824 | 0.0311 | 1.00 | 0.365 | 4.66E-09 |
| rs79146658 | 2:179786068 | T | -0.3344 | 0.0312 | 0.98 | 0.086 | 7.85E-27 |
| rs10184839 | 2:181946115 | A | -0.1398 | 0.019 | 1.00 | 0.296 | 2.09E-13 |
| rs16823124 | 2:183224127 | A | 0.2276 | 0.0187 | 0.92 | 0.307 | 4.06E-34 |
| rs7592578 | 2:191439591 | T | -0.1998 | 0.0224 | 1.00 | 0.194 | 4.71E-19 |
| rs1344653 | 2:19730845 | A | -0.2534 | 0.03 | 0.98 | 0.500 | 3.09E-17 |
| rs296797 | 2:201102905 | T | 0.2161 | 0.0308 | 0.99 | 0.398 | 2.16E-12 |
| rs1469760 | 2:204125426 | T | -0.1891 | 0.0208 | 1.00 | 0.415 | 1.16E-19 |
| rs2162003 | 2:205077128 | T | 0.1279 | 0.0183 | 0.97 | 0.391 | 3.20E-12 |
| rs1263671 | 2:207996447 | T | -0.1394 | 0.0238 | 0.98 | 0.164 | 4.69E-09 |
| rs7255 | 2:20878820 | T | -0.192 | 0.0207 | 1.00 | 0.454 | 1.70E-20 |
| rs1047891 | 2:211540507 | A | -0.2528 | 0.0328 | 1.00 | 0.316 | 1.37E-14 |
| rs66774912 | 2:21423532 | A | -0.1826 | 0.0299 | 0.99 | 0.135 | 1.06E-09 |
| rs1250259 | 2:216300482 | A | -0.2782 | 0.0233 | 0.99 | 0.262 | 8.61E-33 |
| rs4674114 | 2:217659266 | A | -0.2116 | 0.0256 | 1.00 | 0.202 | 1.28E-16 |
| rs1063281 | 2:218668732 | T | -0.1623 | 0.0179 | 0.98 | 0.397 | 1.21E-19 |
| rs2972146 | 2:227100698 | T | 0.2532 | 0.0313 | 0.92 | 0.358 | 6.53E-16 |
| rs12052878 | 2:238227594 | A | -0.1497 | 0.022 | 1.00 | 0.316 | 1.11E-11 |
| rs10779936 | 2:23950200 | A | -0.1526 | 0.0226 | 1.00 | 0.285 | 1.41E-11 |
| rs4507125 | 2:239864732 | A | -0.1244 | 0.0211 | 1.00 | 0.208 | 3.60E-09 |
| rs55701159 | 2:25139596 | T | 0.3959 | 0.0481 | 0.99 | 0.113 | 1.73E-16 |
| rs1275988 | 2:26914364 | T | -0.541 | 0.0308 | 0.99 | 0.389 | 4.42E-69 |
| rs9678851 | 2:27887034 | A | -0.1722 | 0.0307 | 1.00 | 0.433 | 1.99E-08 |
| rs7562 | 2:28635740 | T | 0.2313 | 0.0305 | 0.98 | 0.479 | 3.26E-14 |
| rs13420463 | 2:37517566 | A | 0.3143 | 0.036 | 1.00 | 0.227 | 2.72E-18 |
| rs4952611 | 2:40567743 | T | -0.1401 | 0.018 | 0.99 | 0.421 | 7.38E-15 |
| rs11681462 | 2:42352567 | A | -0.1325 | 0.0214 | 0.99 | 0.215 | 5.96E-10 |
| rs76326501 | 2:43167878 | A | 0.3618 | 0.0305 | 0.98 | 0.091 | 2.17E-32 |
| rs11690961 | 2:46363336 | A | 0.3036 | 0.0319 | 0.99 | 0.117 | 1.93E-21 |
| rs10189186 | 2:53025757 | A | 0.1893 | 0.0302 | 0.98 | 0.474 | 3.91E-10 |
| rs1975487 | 2:55809054 | A | -0.141 | 0.0176 | 0.94 | 0.481 | 1.01E-15 |
| rs925484 | 2:60611437 | C | -0.1492 | 0.0209 | 1.00 | 0.405 | 8.66E-13 |
| rs7608483 | 2:61836235 | A | 0.1171 | 0.0176 | 1.00 | 0.413 | 2.83E-11 |
| rs13014371 | 2:64217786 | T | -0.1176 | 0.0175 | 0.99 | 0.430 | 1.68E-11 |
| rs2540951 | 2:65276736 | A | 0.2243 | 0.021 | 1.00 | 0.380 | 1.26E-26 |
| rs12052761 | 2:69065841 | A | -0.1229 | 0.0177 | 0.99 | 0.394 | 4.22E-12 |
| rs3771371 | 2:71627539 | T | -0.133 | 0.0206 | 0.99 | 0.430 | 1.15E-10 |
| rs10193543 | 2:72483329 | T | 0.1391 | 0.0235 | 1.00 | 0.167 | 3.20E-09 |
| rs1876487 | 2:73114352 | A | -0.1099 | 0.0196 | 0.99 | 0.295 | 1.93E-08 |
| rs11689667 | 2:85491365 | T | 0.2029 | 0.0206 | 1.00 | 0.456 | 7.36E-23 |
| rs72847885 | 2:86326717 | A | 0.2413 | 0.0318 | 1.00 | 0.338 | 3.08E-14 |
| rs2175337 | 2:9298590 | A | 0.1656 | 0.021 | 0.99 | 0.384 | 3.52E-15 |
| rs2579519 | 2:96675166 | T | -0.1818 | 0.018 | 1.00 | 0.383 | 4.24E-24 |
| rs28675079 | 3:111500002 | A | -0.1444 | 0.0222 | 1.00 | 0.182 | 8.34E-11 |
| rs347591 | 3:11290122 | T | 0.3181 | 0.032 | 0.97 | 0.338 | 2.87E-23 |
| rs6806529 | 3:123049938 | A | 0.1372 | 0.0209 | 0.99 | 0.437 | 5.81E-11 |
| rs6438857 | 3:124557643 | T | 0.2736 | 0.0305 | 0.99 | 0.420 | 3.13E-19 |
| rs62270945 | 3:128201889 | T | 0.5276 | 0.0651 | 1.00 | 0.029 | 5.17E-16 |
| rs2306374 | 3:138119952 | T | -0.1774 | 0.0236 | 0.98 | 0.162 | 5.24E-14 |
| rs729639 | 3:13826854 | T | -0.1246 | 0.0216 | 0.99 | 0.340 | 8.35E-09 |
| rs16851397 | 3:141134818 | A | -0.3942 | 0.0415 | 0.99 | 0.047 | 2.04E-21 |
| rs62278541 | 3:142631909 | A | 0.1677 | 0.0214 | 0.99 | 0.353 | 4.84E-15 |
| rs11128722 | 3:14958126 | A | -0.2865 | 0.0309 | 0.93 | 0.430 | 1.93E-20 |
| rs73158427 | 3:153721493 | A | 0.1801 | 0.0235 | 1.00 | 0.162 | 1.76E-14 |
| rs143112823 | 3:154707967 | A | -0.4171 | 0.0557 | 0.99 | 0.088 | 7.16E-14 |
| rs419076 | 3:169100886 | T | 0.2755 | 0.0173 | 0.97 | 0.473 | 2.66E-57 |
| rs4894535 | 3:171995605 | T | 0.1848 | 0.0281 | 0.99 | 0.158 | 4.72E-11 |
| rs73171158 | 3:176927949 | T | -0.1288 | 0.0217 | 0.92 | 0.463 | 2.82E-09 |
| rs7611674 | 3:179169230 | T | 0.1576 | 0.0223 | 0.98 | 0.191 | 1.67E-12 |
| rs262986 | 3:183435713 | A | -0.2371 | 0.0305 | 0.99 | 0.470 | 7.67E-15 |
| rs12374077 | 3:185317674 | C | 0.1748 | 0.0182 | 0.99 | 0.344 | 8.05E-22 |
| rs13082711 | 3:27537909 | T | -0.1778 | 0.0203 | 0.93 | 0.239 | 1.70E-18 |
| rs72851229 | 3:29374219 | C | -0.1364 | 0.0231 | 0.97 | 0.175 | 3.63E-09 |
| rs9815354 | 3:41912651 | A | -0.5267 | 0.028 | 0.98 | 0.164 | 6.22E-79 |
| rs6797587 | 3:48197614 | A | -0.2378 | 0.0185 | 0.96 | 0.329 | 6.56E-38 |
| rs36022378 | 3:49913705 | T | -0.1765 | 0.0219 | 1.00 | 0.200 | 8.60E-16 |
| rs13303 | 3:52558008 | T | -0.1326 | 0.0208 | 0.99 | 0.437 | 1.75E-10 |
| rs9810888 | 3:53635595 | T | -0.1151 | 0.0175 | 1.00 | 0.498 | 4.38E-11 |
| rs9827472 | 3:56726646 | T | -0.133 | 0.0181 | 1.00 | 0.365 | 1.75E-13 |
| rs12486605 | 3:57706503 | T | -0.1508 | 0.0176 | 1.00 | 0.428 | 1.01E-17 |
| rs3774702 | 3:63856870 | A | 0.147 | 0.0228 | 0.99 | 0.178 | 1.18E-10 |
| rs918466 | 3:64710253 | A | -0.1402 | 0.0177 | 0.99 | 0.410 | 2.67E-15 |
| rs7630745 | 3:66427029 | T | 0.1636 | 0.0215 | 1.00 | 0.342 | 2.73E-14 |
| rs4499560 | 3:70920485 | A | -0.2199 | 0.0326 | 0.98 | 0.314 | 1.46E-11 |
| rs729448 | 3:73260545 | A | -0.1303 | 0.0207 | 0.99 | 0.450 | 2.76E-10 |
| rs1375564 | 3:85656311 | T | 0.2579 | 0.0315 | 0.98 | 0.362 | 2.84E-16 |
| rs13107325 | 4:103188709 | T | -0.6747 | 0.0339 | 1.00 | 0.074 | 3.72E-88 |
| rs4699165 | 4:106109381 | A | 0.1377 | 0.0214 | 1.00 | 0.363 | 1.16E-10 |
| rs13112725 | 4:106911742 | C | 0.4137 | 0.0358 | 0.99 | 0.237 | 6.81E-31 |
| rs7694643 | 4:109017528 | A | -0.1318 | 0.0181 | 0.99 | 0.355 | 3.07E-13 |
| rs6825911 | 4:111381638 | T | -0.202 | 0.0215 | 1.00 | 0.208 | 6.94E-21 |
| rs4834735 | 4:119958809 | T | 0.1511 | 0.0254 | 0.99 | 0.136 | 2.64E-09 |
| rs66887589 | 4:120509279 | T | -0.161 | 0.0174 | 0.99 | 0.478 | 1.83E-20 |
| rs3097937 | 4:124794644 | A | 0.2226 | 0.0381 | 0.99 | 0.201 | 4.95E-09 |
| rs1250129 | 4:1254930 | A | -0.2069 | 0.0322 | 1.00 | 0.116 | 1.29E-10 |
| rs72719160 | 4:144051276 | A | -0.2243 | 0.0324 | 1.00 | 0.315 | 4.34E-12 |
| rs4292285 | 4:145271954 | A | -0.1073 | 0.0177 | 0.98 | 0.402 | 1.28E-09 |
| rs4835266 | 4:146821725 | T | 0.1645 | 0.021 | 0.97 | 0.484 | 4.24E-15 |
| rs10305838 | 4:148400256 | T | -0.2542 | 0.0293 | 1.00 | 0.140 | 4.65E-18 |
| rs6823767 | 4:151295085 | T | -0.2129 | 0.0341 | 1.00 | 0.277 | 4.40E-10 |
| rs13139571 | 4:156645513 | A | -0.2408 | 0.0203 | 1.00 | 0.237 | 2.29E-32 |
| rs11730129 | 4:16032948 | T | -0.1608 | 0.0249 | 1.00 | 0.218 | 9.98E-11 |
| rs869396 | 4:169688000 | A | -0.2221 | 0.0207 | 0.99 | 0.467 | 8.00E-27 |
| rs2498323 | 4:3451109 | A | 0.2957 | 0.035 | 1.00 | 0.100 | 3.07E-17 |
| rs1878825 | 4:36091370 | C | -0.1072 | 0.0183 | 0.98 | 0.351 | 4.62E-09 |
| rs2291435 | 4:38387395 | T | -0.262 | 0.0303 | 0.98 | 0.467 | 5.31E-18 |
| rs871606 | 4:54799245 | T | 0.5261 | 0.0335 | 0.99 | 0.105 | 1.93E-55 |
| rs6551716 | 4:63575696 | A | 0.1478 | 0.0251 | 0.99 | 0.144 | 3.91E-09 |
| rs10008637 | 4:77414144 | T | 0.2157 | 0.0302 | 1.00 | 0.462 | 9.24E-13 |
| rs16998073 | 4:81184341 | A | -0.494 | 0.0192 | 1.00 | 0.291 | 3.74E-146 |
| rs2014912 | 4:86715670 | T | 0.4772 | 0.042 | 0.92 | 0.153 | 6.97E-30 |
| rs13149209 | 4:89750668 | T | 0.281 | 0.0367 | 1.00 | 0.215 | 1.97E-14 |
| rs79409628 | 5:108113740 | T | -0.3086 | 0.0368 | 1.00 | 0.084 | 5.24E-17 |
| rs9885577 | 5:121194226 | T | 0.1621 | 0.0218 | 0.98 | 0.367 | 1.01E-13 |
| rs13359291 | 5:122476457 | A | 0.4333 | 0.0415 | 0.99 | 0.157 | 1.64E-25 |
| rs6595838 | 5:127868199 | A | 0.3229 | 0.0331 | 1.00 | 0.299 | 1.54E-22 |
| rs12521868 | 5:131784393 | T | -0.1403 | 0.0176 | 0.91 | 0.423 | 1.83E-15 |
| rs2400509 | 5:147696018 | A | -0.1476 | 0.0234 | 1.00 | 0.257 | 2.69E-10 |
| rs9687065 | 5:148391140 | A | 0.2199 | 0.0222 | 0.99 | 0.190 | 4.85E-23 |
| rs157678 | 5:156145654 | A | -0.1457 | 0.0223 | 0.97 | 0.337 | 6.85E-11 |
| rs114503346 | 5:172192350 | T | -0.2678 | 0.0426 | 0.97 | 0.047 | 3.10E-10 |
| rs72812846 | 5:173377636 | A | -0.2053 | 0.0197 | 0.98 | 0.279 | 2.15E-25 |
| rs28362590 | 5:176731452 | T | 0.1242 | 0.0203 | 1.00 | 0.247 | 8.70E-10 |
| rs12153395 | 5:179411477 | A | -0.3303 | 0.0486 | 0.98 | 0.116 | 1.07E-11 |
| rs1173771 | 5:32815028 | A | -0.6321 | 0.0307 | 0.96 | 0.399 | 5.92E-94 |
| rs4957026 | 5:361148 | A | 0.1982 | 0.0323 | 1.00 | 0.332 | 8.12E-10 |
| rs1694068 | 5:53283630 | A | 0.2657 | 0.0311 | 1.00 | 0.382 | 1.18E-17 |
| rs1848510 | 5:57754005 | A | 0.1256 | 0.0181 | 1.00 | 0.365 | 4.10E-12 |
| rs6875372 | 5:64079015 | A | 0.1886 | 0.0303 | 0.98 | 0.486 | 4.80E-10 |
| rs72761109 | 5:71506529 | T | 0.1583 | 0.0223 | 1.00 | 0.310 | 1.19E-12 |
| rs10078021 | 5:75038431 | T | -0.1534 | 0.0182 | 0.99 | 0.372 | 3.15E-17 |
| rs10057188 | 5:77837789 | A | -0.1796 | 0.0208 | 0.97 | 0.459 | 5.79E-18 |
| rs10059921 | 5:87514515 | T | -0.4248 | 0.0587 | 0.99 | 0.083 | 4.39E-13 |
| rs62380354 | 5:89484911 | A | 0.1825 | 0.0291 | 0.96 | 0.111 | 3.68E-10 |
| rs1871190 | 5:97953719 | T | 0.1954 | 0.0324 | 0.99 | 0.326 | 1.66E-09 |
| rs72613227 | 6:106320771 | A | -0.1884 | 0.0285 | 0.99 | 0.130 | 3.87E-11 |
| rs9486916 | 6:109013930 | T | 0.1842 | 0.0261 | 0.96 | 0.194 | 1.84E-12 |
| rs3822857 | 6:116313931 | C | -0.1238 | 0.018 | 0.99 | 0.379 | 6.09E-12 |
| rs2693560 | 6:117523671 | A | -0.1501 | 0.0181 | 0.99 | 0.371 | 1.09E-16 |
| rs9372498 | 6:118572486 | A | 0.2731 | 0.0319 | 0.98 | 0.081 | 1.13E-17 |
| rs11154027 | 6:121781390 | T | 0.1439 | 0.0208 | 1.00 | 0.461 | 4.47E-12 |
| rs13209747 | 6:127115454 | T | 0.3017 | 0.0175 | 0.97 | 0.441 | 6.23E-67 |
| rs9349379 | 6:12903957 | A | 0.2677 | 0.0212 | 0.99 | 0.407 | 1.32E-36 |
| rs6941056 | 6:143591821 | C | 0.2008 | 0.0207 | 0.99 | 0.438 | 3.57E-22 |
| rs7765526 | 6:147713764 | A | 0.201 | 0.0307 | 0.98 | 0.460 | 5.88E-11 |
| rs17080102 | 6:151004770 | C | -0.4853 | 0.034 | 0.97 | 0.070 | 3.91E-46 |
| rs13192976 | 6:152312415 | A | -0.4634 | 0.0329 | 0.99 | 0.111 | 5.22E-45 |
| rs9479509 | 6:153427265 | A | -0.1152 | 0.019 | 1.00 | 0.288 | 1.21E-09 |
| rs449789 | 6:159699125 | C | 0.3721 | 0.0297 | 0.97 | 0.139 | 4.50E-36 |
| rs555754 | 6:160769423 | A | -0.1392 | 0.0205 | 1.00 | 0.469 | 1.04E-11 |
| rs9456648 | 6:161712235 | T | -0.1166 | 0.0185 | 1.00 | 0.327 | 2.76E-10 |
| rs11961593 | 6:166164137 | T | -0.3158 | 0.0349 | 0.97 | 0.070 | 1.49E-19 |
| rs1322639 | 6:169587103 | A | 0.2978 | 0.0247 | 1.00 | 0.224 | 2.41E-33 |
| rs12216497 | 6:19028623 | T | 0.1307 | 0.0206 | 0.99 | 0.439 | 2.25E-10 |
| rs6911827 | 6:22130601 | T | 0.2378 | 0.0306 | 0.97 | 0.458 | 7.96E-15 |
| rs1799945 | 6:26091179 | C | -0.3888 | 0.0244 | 0.93 | 0.150 | 3.88E-57 |
| rs926552 | 6:29548089 | A | -0.2501 | 0.0272 | 0.90 | 0.133 | 3.54E-20 |
| rs409558 | 6:31708147 | T | 0.336 | 0.0293 | 0.81 | 0.150 | 2.28E-30 |
| rs4714224 | 6:39186743 | C | -0.1358 | 0.0196 | 0.99 | 0.275 | 3.78E-12 |
| rs1563788 | 6:43308363 | T | 0.3385 | 0.0332 | 0.95 | 0.287 | 2.36E-24 |
| rs78648104 | 6:50683009 | T | -0.4287 | 0.0541 | 1.00 | 0.093 | 2.37E-15 |
| rs13205180 | 6:51832494 | T | 0.1721 | 0.0174 | 0.98 | 0.489 | 4.38E-23 |
| rs631441 | 6:53994626 | T | -0.1543 | 0.0222 | 1.00 | 0.310 | 3.56E-12 |
| rs1925153 | 6:56102780 | T | -0.1936 | 0.0213 | 0.99 | 0.445 | 8.81E-20 |
| rs504691 | 6:72206620 | A | -0.1177 | 0.0177 | 0.99 | 0.398 | 3.14E-11 |
| rs9392172 | 6:7723962 | C | -0.1845 | 0.0205 | 1.00 | 0.469 | 2.57E-19 |
| rs10943605 | 6:79655477 | A | 0.1723 | 0.0173 | 1.00 | 0.488 | 2.93E-23 |
| rs7753695 | 6:80818531 | T | 0.1031 | 0.0176 | 1.00 | 0.446 | 4.77E-09 |
| rs114275780 | 6:8224648 | A | 0.2577 | 0.0459 | 0.95 | 0.066 | 1.95E-08 |
| rs9449350 | 6:82281417 | T | -0.2189 | 0.0323 | 1.00 | 0.315 | 1.19E-11 |
| rs60255247 | 6:85283253 | A | 0.2491 | 0.033 | 0.98 | 0.114 | 4.53E-14 |
| rs35410524 | 6:96885405 | T | 0.3368 | 0.0387 | 0.98 | 0.189 | 3.19E-18 |
| rs12705090 | 7:100467700 | T | -0.2361 | 0.0262 | 1.00 | 0.188 | 2.17E-19 |
| rs17477177 | 7:106411858 | T | -0.7351 | 0.0375 | 0.99 | 0.204 | 9.01E-86 |
| rs1997571 | 7:116198621 | A | -0.1448 | 0.0208 | 1.00 | 0.409 | 3.46E-12 |
| rs4728142 | 7:128573967 | A | -0.1814 | 0.0305 | 0.91 | 0.444 | 2.59E-09 |
| rs11556924 | 7:129663496 | T | -0.181 | 0.0181 | 0.99 | 0.383 | 1.83E-23 |
| rs13238550 | 7:131059056 | A | 0.2572 | 0.0309 | 1.00 | 0.397 | 7.80E-17 |
| rs10267979 | 7:136618188 | A | -0.1317 | 0.0218 | 1.00 | 0.324 | 1.62E-09 |
| rs141212865 | 7:139404666 | A | 0.301 | 0.0387 | 0.98 | 0.190 | 7.68E-15 |
| rs13240040 | 7:14375977 | A | 0.1186 | 0.019 | 0.99 | 0.322 | 3.98E-10 |
| rs73727605 | 7:149474622 | A | 0.2853 | 0.0423 | 1.00 | 0.067 | 1.53E-11 |
| rs3918226 | 7:150690176 | T | 0.6117 | 0.0329 | 0.98 | 0.081 | 5.31E-77 |
| rs10224002 | 7:151415041 | A | -0.3672 | 0.0337 | 0.96 | 0.286 | 1.31E-27 |
| rs1870735 | 7:155744303 | C | 0.206 | 0.0311 | 0.98 | 0.452 | 3.61E-11 |
| rs2107595 | 7:19049388 | A | 0.4435 | 0.0282 | 1.00 | 0.159 | 8.24E-56 |
| rs6959688 | 7:1966831 | A | -0.2344 | 0.031 | 0.99 | 0.403 | 4.22E-14 |
| rs4507656 | 7:22156538 | C | -0.1487 | 0.0199 | 0.97 | 0.304 | 8.69E-14 |
| rs12979 | 7:24738164 | C | 0.2739 | 0.0449 | 0.98 | 0.134 | 1.09E-09 |
| rs2969070 | 7:2512545 | A | -0.1791 | 0.0179 | 0.93 | 0.369 | 1.76E-23 |
| rs1055144 | 7:25871109 | T | 0.152 | 0.0259 | 0.99 | 0.192 | 4.58E-09 |
| rs6969780 | 7:27159136 | C | 0.2957 | 0.0526 | 0.98 | 0.092 | 1.88E-08 |
| rs917275 | 7:28658522 | A | -0.1887 | 0.0212 | 1.00 | 0.390 | 5.02E-19 |
| rs342989 | 7:35467896 | A | 0.1631 | 0.0207 | 1.00 | 0.234 | 3.05E-15 |
| rs2052263 | 7:36225818 | A | 0.1983 | 0.0327 | 1.00 | 0.121 | 1.41E-09 |
| rs76206723 | 7:40447971 | A | -0.3632 | 0.0333 | 0.99 | 0.107 | 1.27E-27 |
| rs1004558 | 7:44240407 | T | 0.1793 | 0.027 | 1.00 | 0.179 | 3.14E-11 |
| rs73105827 | 7:45036785 | T | -0.1878 | 0.0313 | 0.97 | 0.090 | 2.07E-09 |
| rs11977526 | 7:46008110 | A | -0.4308 | 0.0211 | 0.96 | 0.402 | 1.75E-92 |
| rs12668436 | 7:47548893 | T | -0.1709 | 0.0238 | 1.00 | 0.248 | 6.47E-13 |
| rs17454517 | 7:50915776 | A | 0.1216 | 0.0174 | 1.00 | 0.498 | 2.65E-12 |
| rs1468520 | 7:7290732 | A | -0.1638 | 0.0234 | 0.99 | 0.162 | 2.49E-12 |
| rs1091811 | 7:73491212 | A | -0.1745 | 0.0275 | 0.999 | 0.170 | 2.28E-10 |
| rs10245696 | 7:90449362 | A | 0.1549 | 0.0209 | 1.00 | 0.400 | 1.18E-13 |
| rs2282978 | 7:92264410 | T | 0.2928 | 0.0218 | 0.98 | 0.332 | 3.46E-41 |
| rs2978098 | 8:101676675 | A | 0.1548 | 0.0176 | 0.99 | 0.454 | 1.33E-18 |
| rs142449193 | 8:102750597 | T | -0.4549 | 0.074 | 0.97 | 0.044 | 7.86E-10 |
| rs2513877 | 8:103883630 | A | -0.1294 | 0.022 | 1.00 | 0.197 | 4.22E-09 |
| rs35783704 | 8:105966258 | A | -0.4619 | 0.0507 | 0.98 | 0.104 | 8.81E-20 |
| rs2898290 | 8:11433909 | T | 0.3123 | 0.0304 | 0.95 | 0.476 | 1.08E-24 |
| rs2071518 | 8:120435812 | T | 0.4583 | 0.0233 | 0.99 | 0.261 | 2.94E-86 |
| rs62523863 | 8:126520544 | A | 0.2689 | 0.0368 | 0.99 | 0.219 | 2.87E-13 |
| rs894344 | 8:135612745 | A | -0.1267 | 0.0176 | 0.99 | 0.407 | 5.79E-13 |
| rs4454254 | 8:141060027 | A | -0.2467 | 0.0212 | 0.97 | 0.369 | 2.65E-31 |
| rs34591516 | 8:142367087 | T | 0.3121 | 0.0409 | 0.91 | 0.049 | 2.26E-14 |
| rs62524579 | 8:144060955 | A | -0.1656 | 0.0182 | 1.00 | 0.467 | 1.08E-19 |
| rs4875958 | 8:1721090 | A | 0.2256 | 0.0336 | 0.99 | 0.287 | 1.85E-11 |
| rs62503324 | 8:23400615 | T | 0.2033 | 0.0204 | 1.00 | 0.242 | 2.11E-23 |
| rs6557876 | 8:25900675 | T | -0.4156 | 0.0349 | 0.98 | 0.250 | 1.11E-32 |
| rs17321041 | 8:26445194 | T | 0.2313 | 0.0363 | 0.97 | 0.063 | 1.78E-10 |
| rs2979470 | 8:30288272 | T | 0.1991 | 0.0302 | 0.99 | 0.492 | 4.62E-11 |
| rs11991469 | 8:32413280 | C | -0.1327 | 0.0206 | 1.00 | 0.455 | 1.09E-10 |
| rs7845722 | 8:33309993 | A | -0.127 | 0.0209 | 1.00 | 0.396 | 1.25E-09 |
| rs2978456 | 8:42324765 | T | -0.1781 | 0.0212 | 0.99 | 0.449 | 5.14E-17 |
| rs4873492 | 8:51947549 | T | 0.3431 | 0.0403 | 0.99 | 0.172 | 1.61E-17 |
| rs2922895 | 8:6379932 | C | 0.1317 | 0.0175 | 1.00 | 0.431 | 5.86E-14 |
| rs2354862 | 8:64501744 | A | 0.2507 | 0.0317 | 0.99 | 0.362 | 2.42E-15 |
| rs13253358 | 8:68920135 | T | 0.2127 | 0.033 | 1.00 | 0.299 | 1.13E-10 |
| rs1350100 | 8:76054904 | A | 0.1653 | 0.0208 | 0.98 | 0.450 | 1.80E-15 |
| rs1449544 | 8:76591880 | A | 0.1927 | 0.0205 | 1.00 | 0.457 | 6.68E-21 |
| rs56345595 | 8:82814156 | A | 0.1329 | 0.0177 | 1.00 | 0.417 | 5.20E-14 |
| rs61040371 | 8:8503700 | T | 0.1836 | 0.0314 | 0.99 | 0.366 | 4.77E-09 |
| rs2142141 | 8:90940205 | C | -0.1054 | 0.0179 | 0.98 | 0.467 | 3.68E-09 |
| rs62526122 | 8:92769569 | A | 0.2108 | 0.0345 | 0.97 | 0.302 | 1.02E-09 |
| rs35287509 | 9:10594635 | T | -0.1082 | 0.0184 | 1.00 | 0.343 | 4.17E-09 |
| rs7043304 | 9:112358150 | T | 0.176 | 0.0249 | 0.99 | 0.143 | 1.63E-12 |
| rs111245230 | 9:113169775 | T | -0.7486 | 0.0834 | 0.97 | 0.035 | 2.81E-19 |
| rs13290326 | 9:116696625 | T | -0.1562 | 0.0204 | 0.99 | 0.496 | 2.11E-14 |
| rs1861881 | 9:119312256 | T | 0.115 | 0.0186 | 0.99 | 0.316 | 6.49E-10 |
| rs1953126 | 9:123640500 | T | 0.162 | 0.0215 | 0.95 | 0.354 | 4.34E-14 |
| rs10818775 | 9:125755571 | T | -0.2745 | 0.0315 | 0.97 | 0.121 | 2.73E-18 |
| rs72765298 | 9:127900996 | T | -0.3421 | 0.0315 | 0.98 | 0.125 | 1.56E-27 |
| rs6271 | 9:136522274 | T | -0.4313 | 0.0352 | 0.98 | 0.074 | 1.72E-34 |
| rs11145807 | 9:139520789 | A | 0.155 | 0.0184 | 0.98 | 0.408 | 4.10E-17 |
| rs520015 | 9:211762 | C | 0.2003 | 0.0301 | 1.00 | 0.488 | 2.84E-11 |
| rs4364717 | 9:21801530 | A | -0.1006 | 0.0174 | 1.00 | 0.453 | 7.56E-09 |
| rs9886665 | 9:22942770 | T | 0.2048 | 0.0343 | 0.98 | 0.263 | 2.47E-09 |
| rs12216886 | 9:2493751 | T | 0.1292 | 0.0221 | 0.99 | 0.190 | 4.76E-09 |
| rs4553000 | 9:34223553 | T | -0.1464 | 0.0204 | 1.00 | 0.486 | 7.47E-13 |
| rs76452347 | 9:35906471 | T | -0.2246 | 0.0229 | 0.99 | 0.205 | 9.37E-23 |
| rs60191654 | 9:753648 | A | -0.2382 | 0.0385 | 0.99 | 0.190 | 5.88E-10 |
| rs11141731 | 9:89888472 | T | -0.1258 | 0.0207 | 0.99 | 0.233 | 1.31E-09 |
| rs112184198 | 10:102604514 | A | -0.6626 | 0.0498 | 0.97 | 0.105 | 1.94E-40 |
| rs72847884 | 10:103115345 | A | 0.2664 | 0.0423 | 1.00 | 0.046 | 3.04E-10 |
| rs11191156 | 10:103702763 | A | -0.1573 | 0.0215 | 1.00 | 0.351 | 2.72E-13 |
| rs11191548 | 10:104846178 | T | 1.0983 | 0.0553 | 0.97 | 0.081 | 1.16E-87 |
| rs4387287 | 10:105677897 | A | 0.1575 | 0.0234 | 0.91 | 0.164 | 1.77E-11 |
| rs111777102 | 10:111965826 | T | 0.214 | 0.0354 | 0.99 | 0.064 | 1.56E-09 |
| rs34872471 | 10:114754071 | T | -0.2021 | 0.0226 | 1.00 | 0.292 | 4.16E-19 |
| rs1801253 | 10:115805056 | C | 0.3183 | 0.0197 | 0.99 | 0.266 | 1.57E-58 |
| rs72842207 | 10:121433675 | T | -0.2112 | 0.0211 | 1.00 | 0.215 | 1.10E-23 |
| rs11592107 | 10:122968964 | A | 0.3024 | 0.0326 | 1.00 | 0.310 | 1.55E-20 |
| rs72834453 | 10:124235226 | T | -0.3246 | 0.0465 | 0.98 | 0.123 | 2.95E-12 |
| rs1813353 | 10:18707448 | T | 0.3013 | 0.0183 | 0.96 | 0.337 | 5.97E-61 |
| rs72795925 | 10:20531420 | T | 0.1623 | 0.0247 | 0.99 | 0.222 | 5.13E-11 |
| rs10732433 | 10:21037294 | T | 0.1899 | 0.0208 | 0.98 | 0.423 | 5.77E-20 |
| rs3802517 | 10:28233469 | A | 0.2527 | 0.0301 | 1.00 | 0.468 | 4.65E-17 |
| rs1265842 | 10:28924901 | T | 0.1113 | 0.0174 | 0.99 | 0.480 | 1.70E-10 |
| rs9337951 | 10:30317073 | A | 0.2583 | 0.0227 | 0.99 | 0.342 | 4.24E-30 |
| rs11008355 | 10:31412561 | C | -0.1441 | 0.0241 | 0.99 | 0.239 | 2.10E-09 |
| rs10826995 | 10:32082658 | T | -0.1653 | 0.0228 | 0.98 | 0.285 | 3.80E-13 |
| rs76164690 | 10:32590362 | T | -0.154 | 0.025 | 0.99 | 0.143 | 7.19E-10 |
| rs2246438 | 10:45273079 | A | -0.1119 | 0.0194 | 1.00 | 0.276 | 7.81E-09 |
| rs10761530 | 10:62390726 | T | 0.117 | 0.0172 | 1.00 | 0.496 | 1.14E-11 |
| rs4590817 | 10:63467553 | C | -0.4151 | 0.0232 | 0.94 | 0.167 | 9.50E-72 |
| rs10995311 | 10:64564934 | C | 0.2017 | 0.0175 | 0.991 | 0.441 | 7.14E-31 |
| rs7090758 | 10:65335315 | T | -0.1533 | 0.0173 | 1.00 | 0.474 | 6.89E-19 |
| rs10823136 | 10:69855363 | T | -0.254 | 0.0397 | 0.97 | 0.069 | 1.58E-10 |
| rs10998362 | 10:70404159 | T | 0.1367 | 0.0228 | 0.98 | 0.313 | 2.13E-09 |
| rs77413490 | 10:89681688 | T | 0.4489 | 0.0764 | 0.99 | 0.043 | 4.27E-09 |
| rs11187142 | 10:94468685 | T | 0.3312 | 0.0496 | 0.99 | 0.105 | 2.53E-11 |
| rs932764 | 10:95895940 | A | -0.4303 | 0.0306 | 0.98 | 0.431 | 5.43E-45 |
| rs4494250 | 10:96563757 | A | 0.1917 | 0.0181 | 0.85 | 0.363 | 3.06E-26 |
| rs633185 | 11:100593538 | C | 0.376 | 0.0192 | 0.89 | 0.287 | 2.29E-85 |
| rs7129220 | 11:10350538 | A | 0.5002 | 0.0472 | 0.95 | 0.119 | 2.96E-26 |
| rs4754196 | 11:107096777 | A | -0.3486 | 0.0303 | 1.00 | 0.483 | 1.46E-30 |
| rs1076485 | 11:116772441 | T | 0.3388 | 0.0457 | 0.99 | 0.125 | 1.19E-13 |
| rs8258 | 11:117283676 | T | 0.2225 | 0.0212 | 0.99 | 0.374 | 9.42E-26 |
| rs12574332 | 11:122521123 | T | 0.2072 | 0.0266 | 1.00 | 0.120 | 6.14E-15 |
| rs11222084 | 11:130273230 | A | -0.4972 | 0.0214 | 1.00 | 0.362 | 5.19E-119 |
| rs900145 | 11:13293905 | T | 0.1493 | 0.0189 | 0.96 | 0.296 | 2.62E-15 |
| rs4757391 | 11:16302939 | T | -0.3041 | 0.0215 | 0.99 | 0.202 | 1.69E-45 |
| rs757081 | 11:17351683 | C | -0.3429 | 0.032 | 0.99 | 0.335 | 7.72E-27 |
| rs661348 | 11:1905292 | T | -0.4451 | 0.0316 | 1.00 | 0.425 | 5.23E-45 |
| rs10766533 | 11:19224677 | A | 0.2099 | 0.0337 | 0.99 | 0.281 | 4.69E-10 |
| rs11030119 | 11:27728102 | A | -0.1679 | 0.0189 | 0.91 | 0.302 | 7.31E-19 |
| rs871004 | 11:28512458 | A | 0.2336 | 0.0317 | 0.99 | 0.343 | 1.65E-13 |
| rs919045 | 11:31111810 | T | 0.1193 | 0.0179 | 1.00 | 0.367 | 2.75E-11 |
| rs4922591 | 11:32374199 | T | -0.1513 | 0.0214 | 0.97 | 0.377 | 1.39E-12 |
| rs4755947 | 11:45243463 | T | 0.2561 | 0.0313 | 0.98 | 0.120 | 2.75E-16 |
| rs7103648 | 11:47461783 | A | -0.235 | 0.0178 | 0.94 | 0.387 | 7.18E-40 |
| rs9667596 | 11:48691193 | T | 0.505 | 0.045 | 0.99 | 0.140 | 3.12E-29 |
| rs75905900 | 11:55113534 | A | 0.4174 | 0.0449 | 1.00 | 0.132 | 1.36E-20 |
| rs11607056 | 11:57496820 | T | -0.1829 | 0.0218 | 1.00 | 0.328 | 4.77E-17 |
| rs11229457 | 11:58207203 | T | -0.317 | 0.0369 | 0.98 | 0.213 | 8.45E-18 |
| rs751984 | 11:61278246 | T | 0.3937 | 0.0275 | 0.99 | 0.117 | 1.38E-46 |
| rs3741378 | 11:65408937 | T | -0.4087 | 0.0446 | 0.94 | 0.135 | 4.83E-20 |
| rs67330701 | 11:69079707 | T | -0.2798 | 0.0322 | 0.90 | 0.093 | 3.22E-18 |
| rs504217 | 11:72006086 | T | 0.2745 | 0.0335 | 1.00 | 0.072 | 2.51E-16 |
| rs2298807 | 11:73068571 | T | 0.1233 | 0.0211 | 1.00 | 0.210 | 4.89E-09 |
| rs7927515 | 11:76125330 | A | 0.2271 | 0.0319 | 0.97 | 0.346 | 1.05E-12 |
| rs59986178 | 11:77359909 | C | 0.176 | 0.0299 | 1.00 | 0.105 | 3.92E-09 |
| rs2450128 | 11:77940075 | A | -0.1505 | 0.024 | 1.00 | 0.152 | 3.53E-10 |
| rs110419 | 11:8252853 | A | 0.112 | 0.0171 | 0.84 | 0.478 | 6.16E-11 |
| rs7126805 | 11:828916 | A | 0.1511 | 0.0236 | 0.73 | 0.273 | 1.62E-10 |
| rs2289125 | 11:89224453 | A | -0.3847 | 0.0255 | 0.98 | 0.220 | 1.82E-51 |
| rs11021221 | 11:95308854 | A | -0.1877 | 0.0233 | 0.99 | 0.170 | 6.93E-16 |
| rs12184466 | 12:111281636 | T | 0.2533 | 0.0249 | 0.81 | 0.200 | 2.83E-24 |
| rs3184504 | 12:111884608 | T | 0.4999 | 0.0175 | 0.99 | 0.481 | 8.04E-180 |
| rs35444 | 12:115552437 | A | 0.2671 | 0.0179 | 1.00 | 0.386 | 1.91E-50 |
| rs11067763 | 12:116198341 | A | 0.2177 | 0.0288 | 1.00 | 0.101 | 4.43E-14 |
| rs1060105 | 12:123806219 | T | -0.1894 | 0.0216 | 0.81 | 0.203 | 2.11E-18 |
| rs117206641 | 12:133086888 | T | 0.3154 | 0.0499 | 0.99 | 0.140 | 2.66E-10 |
| rs28621435 | 12:13860990 | A | -0.2976 | 0.0482 | 0.97 | 0.112 | 6.47E-10 |
| rs61912333 | 12:19554817 | C | 0.1191 | 0.0176 | 0.98 | 0.492 | 1.13E-11 |
| rs12579720 | 12:20173764 | C | -0.2865 | 0.0203 | 1.00 | 0.244 | 3.46E-45 |
| rs17287293 | 12:24770878 | A | -0.197 | 0.0286 | 1.00 | 0.150 | 5.97E-12 |
| rs55935819 | 12:2521579 | A | 0.1271 | 0.0181 | 0.99 | 0.365 | 1.96E-12 |
| rs6487543 | 12:26438189 | A | 0.1325 | 0.0212 | 0.97 | 0.230 | 4.21E-10 |
| rs7965392 | 12:42540280 | A | 0.1118 | 0.0179 | 1.00 | 0.389 | 4.16E-10 |
| rs117233107 | 12:4328521 | A | -0.5334 | 0.0934 | 0.88 | 0.015 | 1.11E-08 |
| rs78998485 | 12:434755 | C | -0.2449 | 0.0346 | 1.00 | 0.258 | 1.48E-12 |
| rs11168245 | 12:48204499 | C | 0.1758 | 0.0205 | 1.00 | 0.239 | 1.09E-17 |
| rs1126930 | 12:49399132 | C | 0.6378 | 0.0856 | 1.00 | 0.035 | 9.48E-14 |
| rs7977389 | 12:49981722 | T | 0.1883 | 0.0334 | 0.99 | 0.106 | 1.70E-08 |
| rs7302981 | 12:50537815 | A | 0.2652 | 0.0177 | 0.99 | 0.378 | 1.69E-50 |
| rs61926181 | 12:50767037 | A | -0.4813 | 0.0484 | 0.98 | 0.040 | 2.76E-23 |
| rs73099903 | 12:53440779 | T | 0.4694 | 0.0557 | 1.00 | 0.082 | 3.43E-17 |
| rs7297416 | 12:54443090 | A | 0.3764 | 0.0329 | 0.88 | 0.305 | 2.90E-30 |
| rs4143175 | 12:67782397 | T | 0.2187 | 0.0352 | 0.99 | 0.242 | 5.10E-10 |
| rs521033 | 12:69951428 | A | -0.1802 | 0.0253 | 1.00 | 0.140 | 1.10E-12 |
| rs17249754 | 12:90060586 | A | -0.8446 | 0.0403 | 1.00 | 0.168 | 1.25E-97 |
| rs76785029 | 12:94882905 | T | -0.3473 | 0.0395 | 1.00 | 0.079 | 1.57E-18 |
| rs11108209 | 12:96109855 | T | -0.1901 | 0.03 | 0.99 | 0.094 | 2.40E-10 |
| rs3742182 | 13:111375132 | T | -0.1863 | 0.0261 | 1.00 | 0.186 | 9.00E-13 |
| rs9549328 | 13:113636156 | T | 0.2164 | 0.0247 | 0.98 | 0.230 | 1.77E-18 |
| rs7331680 | 13:115000650 | T | 0.4101 | 0.0423 | 1.00 | 0.149 | 3.35E-22 |
| rs2480171 | 13:21559858 | T | 0.2909 | 0.0467 | 1.00 | 0.113 | 4.69E-10 |
| rs55641580 | 13:25257917 | T | 0.1745 | 0.0265 | 1.00 | 0.124 | 4.79E-11 |
| rs1331012 | 13:27115424 | T | 0.2043 | 0.0338 | 1.00 | 0.271 | 1.49E-09 |
| rs9549297 | 13:41397482 | A | -0.1483 | 0.0229 | 0.99 | 0.178 | 9.27E-11 |
| rs75961402 | 13:56398286 | A | 0.2659 | 0.0418 | 1.00 | 0.155 | 1.95E-10 |
| rs3861113 | 13:72364382 | A | 0.2126 | 0.0322 | 0.99 | 0.076 | 3.95E-11 |
| rs1215469 | 13:80707408 | A | -0.1383 | 0.0211 | 0.99 | 0.229 | 5.23E-11 |
| rs1475130 | 14:100225144 | T | -0.1839 | 0.0216 | 1.00 | 0.346 | 1.89E-17 |
| rs11626434 | 14:101998443 | C | -0.1345 | 0.0219 | 0.99 | 0.359 | 7.87E-10 |
| rs34161718 | 14:104620193 | T | -0.1319 | 0.0216 | 0.97 | 0.241 | 1.07E-09 |
| rs452036 | 14:23865885 | A | -0.304 | 0.0215 | 1.00 | 0.355 | 1.96E-45 |
| rs8904 | 14:35871217 | A | 0.2104 | 0.0214 | 1.00 | 0.368 | 7.72E-23 |
| rs34983854 | 14:39858442 | A | -0.2056 | 0.0307 | 1.00 | 0.400 | 2.06E-11 |
| rs9888615 | 14:53377540 | T | -0.274 | 0.0332 | 0.92 | 0.291 | 1.46E-16 |
| rs731681 | 14:68010224 | C | -0.1071 | 0.0174 | 1.00 | 0.437 | 7.98E-10 |
| rs57786342 | 14:69260028 | A | 0.1423 | 0.0216 | 0.99 | 0.204 | 4.37E-11 |
| rs4903064 | 14:73279420 | T | 0.1543 | 0.0206 | 1.00 | 0.236 | 7.84E-14 |
| rs11627326 | 14:85785251 | C | 0.1546 | 0.0227 | 0.99 | 0.288 | 9.78E-12 |
| rs4904503 | 14:89565130 | T | 0.15 | 0.0225 | 0.99 | 0.298 | 2.52E-11 |
| rs11160085 | 14:93112102 | T | 0.1398 | 0.0228 | 0.99 | 0.304 | 8.61E-10 |
| rs9323988 | 14:98587630 | T | -0.1987 | 0.021 | 0.93 | 0.385 | 3.42E-21 |
| rs10873612 | 15:26105602 | T | -0.1096 | 0.0179 | 1.00 | 0.403 | 9.51E-10 |
| rs11629850 | 15:40317075 | A | 0.2297 | 0.0301 | 1.00 | 0.469 | 2.26E-14 |
| rs2925345 | 15:41311799 | T | 0.189 | 0.0174 | 1.00 | 0.470 | 1.60E-27 |
| rs4924570 | 15:41974660 | T | -0.1692 | 0.0181 | 0.99 | 0.370 | 9.62E-21 |
| rs1036477 | 15:48914926 | A | 0.4759 | 0.0336 | 1.00 | 0.103 | 1.77E-45 |
| rs3098186 | 15:50810621 | T | -0.1735 | 0.0207 | 0.99 | 0.480 | 4.40E-17 |
| rs956006 | 15:62808539 | T | -0.1619 | 0.022 | 1.00 | 0.331 | 1.84E-13 |
| rs7178615 | 15:66869072 | A | -0.1371 | 0.018 | 0.97 | 0.376 | 2.90E-14 |
| rs2289261 | 15:67457485 | C | -0.1485 | 0.0216 | 0.98 | 0.345 | 5.62E-12 |
| rs11853359 | 15:71621524 | A | -0.166 | 0.0183 | 1.00 | 0.333 | 1.30E-19 |
| rs61653296 | 15:74557817 | A | -0.1405 | 0.0218 | 1.00 | 0.198 | 1.13E-10 |
| rs1378942 | 15:75077367 | A | -0.388 | 0.0185 | 0.96 | 0.331 | 6.03E-98 |
| rs62011052 | 15:79156983 | T | -0.2574 | 0.0287 | 1.00 | 0.151 | 3.39E-19 |
| rs2759308 | 15:81016227 | A | 0.3155 | 0.0303 | 0.99 | 0.475 | 1.89E-25 |
| rs2034618 | 15:83799632 | T | -0.1157 | 0.0209 | 0.98 | 0.222 | 3.36E-08 |
| rs28611491 | 15:90641809 | T | 0.2544 | 0.0393 | 0.98 | 0.078 | 9.46E-11 |
| rs2521501 | 15:91437388 | A | -0.3693 | 0.0191 | 0.97 | 0.325 | 1.84E-83 |
| rs11632112 | 15:93468276 | C | -0.1645 | 0.0241 | 1.00 | 0.236 | 8.66E-12 |
| rs12906962 | 15:95312071 | T | -0.2378 | 0.0188 | 0.98 | 0.323 | 8.73E-37 |
| rs4984496 | 15:96635898 | T | 0.1763 | 0.0187 | 1.00 | 0.330 | 4.93E-21 |
| rs57327054 | 16:14487036 | T | -0.1173 | 0.0191 | 1.00 | 0.309 | 8.07E-10 |
| rs3915425 | 16:15912544 | T | 0.1913 | 0.022 | 0.99 | 0.318 | 4.00E-18 |
| rs13333226 | 16:20365654 | A | 0.2965 | 0.0223 | 0.98 | 0.184 | 2.94E-40 |
| rs28590346 | 16:2080653 | A | -0.1914 | 0.0191 | 1.00 | 0.342 | 9.84E-24 |
| rs11639856 | 16:24788645 | A | -0.2254 | 0.0258 | 0.99 | 0.193 | 2.65E-18 |
| rs72799341 | 16:30936743 | A | 0.1599 | 0.0204 | 0.85 | 0.240 | 4.92E-15 |
| rs2379829 | 16:3538873 | C | -0.2678 | 0.0342 | 1.00 | 0.268 | 4.48E-15 |
| rs4785955 | 16:4297651 | T | 0.1721 | 0.0256 | 0.98 | 0.213 | 1.79E-11 |
| rs12921187 | 16:4943019 | T | -0.175 | 0.0175 | 0.93 | 0.428 | 1.65E-23 |
| rs10468291 | 16:49768046 | A | -0.1166 | 0.0176 | 0.99 | 0.428 | 3.70E-11 |
| rs34941092 | 16:50550137 | A | -0.3225 | 0.0425 | 1.00 | 0.150 | 3.23E-14 |
| rs9932220 | 16:51758116 | A | -0.1591 | 0.021 | 1.00 | 0.217 | 3.76E-14 |
| rs28633979 | 16:65282820 | A | -0.2 | 0.0206 | 1.00 | 0.428 | 2.50E-22 |
| rs62047964 | 16:70729954 | T | 0.6572 | 0.0469 | 0.91 | 0.062 | 1.06E-44 |
| rs1012089 | 16:74171973 | C | -0.192 | 0.0302 | 0.99 | 0.475 | 1.95E-10 |
| rs35261357 | 16:75444572 | T | 0.2413 | 0.0209 | 1.00 | 0.415 | 1.01E-30 |
| rs56844452 | 16:80864776 | T | -0.3289 | 0.0406 | 0.99 | 0.070 | 5.44E-16 |
| rs8059962 | 16:81574197 | T | -0.1397 | 0.0177 | 0.42 | 0.421 | 3.38E-15 |
| rs7500448 | 16:83045790 | A | 0.3589 | 0.0239 | 0.98 | 0.254 | 3.62E-51 |
| rs3851018 | 16:86437811 | C | 0.1918 | 0.0309 | 0.98 | 0.433 | 5.40E-10 |
| rs6540125 | 16:87993889 | T | 0.2042 | 0.0317 | 0.99 | 0.334 | 1.21E-10 |
| rs1126464 | 16:89704365 | C | 0.2071 | 0.0208 | 1.00 | 0.243 | 1.89E-23 |
| rs12941318 | 17:1333598 | T | -0.1738 | 0.0211 | 0.94 | 0.496 | 1.60E-16 |
| rs4480845 | 17:1958609 | T | 0.3156 | 0.0316 | 0.98 | 0.359 | 1.85E-23 |
| rs9899540 | 17:30777924 | A | 0.2011 | 0.0316 | 1.00 | 0.384 | 1.87E-10 |
| rs7215084 | 17:3880148 | T | 0.1116 | 0.0173 | 1.00 | 0.486 | 1.17E-10 |
| rs79089478 | 17:40317241 | T | 0.3836 | 0.0643 | 0.99 | 0.027 | 2.38E-09 |
| rs12946454 | 17:43208121 | A | -0.4125 | 0.0341 | 0.86 | 0.265 | 1.01E-33 |
| rs17608766 | 17:45013271 | T | -0.5274 | 0.0295 | 0.90 | 0.144 | 2.12E-71 |
| rs7406910 | 17:46688256 | T | -0.4347 | 0.0533 | 1.00 | 0.088 | 3.39E-16 |
| rs12940887 | 17:47402807 | T | 0.2279 | 0.018 | 1.00 | 0.367 | 9.63E-37 |
| rs2645466 | 17:57853214 | A | -0.1358 | 0.0224 | 1.00 | 0.295 | 1.32E-09 |
| rs2240736 | 17:59485393 | T | 0.4088 | 0.0343 | 0.93 | 0.266 | 1.17E-32 |
| rs740698 | 17:60767151 | T | -0.2221 | 0.021 | 0.65 | 0.435 | 3.83E-26 |
| rs4308 | 17:61559625 | A | 0.1753 | 0.0181 | 0.73 | 0.377 | 3.74E-22 |
| rs6504213 | 17:62381714 | T | -0.2982 | 0.0312 | 0.99 | 0.408 | 1.25E-21 |
| rs112260610 | 17:64252393 | T | 0.2588 | 0.0435 | 0.99 | 0.144 | 2.69E-09 |
| rs4796514 | 17:6475090 | T | -0.2313 | 0.021 | 0.90 | 0.391 | 4.11E-28 |
| rs2467099 | 17:73949045 | T | -0.1428 | 0.0209 | 0.77 | 0.223 | 7.58E-12 |
| rs78378222 | 17:7571752 | T | 1.0488 | 0.0945 | 0.95 | 0.014 | 1.28E-28 |
| rs9302885 | 17:76799898 | A | 0.2242 | 0.0302 | 1.00 | 0.448 | 1.03E-13 |
| rs1154214 | 18:24546824 | T | -0.2031 | 0.0306 | 1.00 | 0.396 | 3.27E-11 |
| rs10164193 | 18:31161426 | T | -0.2196 | 0.0327 | 0.99 | 0.077 | 1.87E-11 |
| rs61735998 | 18:34289285 | T | 0.4712 | 0.0702 | 1.00 | 0.025 | 1.98E-11 |
| rs12958173 | 18:42141977 | A | 0.295 | 0.0329 | 0.95 | 0.297 | 2.97E-19 |
| rs7236548 | 18:43097750 | A | 0.3621 | 0.0264 | 0.99 | 0.185 | 8.48E-43 |
| rs36010659 | 18:48283949 | T | 0.2485 | 0.0294 | 0.98 | 0.141 | 2.98E-17 |
| rs72930904 | 18:52607301 | T | -0.14 | 0.0237 | 1.00 | 0.162 | 3.24E-09 |
| rs12605156 | 18:53498114 | A | 0.1418 | 0.0221 | 0.99 | 0.189 | 1.51E-10 |
| rs7235890 | 18:55732115 | T | -0.1692 | 0.0288 | 0.97 | 0.106 | 4.12E-09 |
| rs6567160 | 18:57829135 | T | 0.2242 | 0.0357 | 1.00 | 0.233 | 3.33E-10 |
| rs10460108 | 18:73034151 | A | 0.2141 | 0.0301 | 0.98 | 0.479 | 1.12E-12 |
| rs1047922 | 18:74070562 | T | -0.2121 | 0.0297 | 1.00 | 0.155 | 9.70E-13 |
| rs10409243 | 19:10332988 | T | -0.3077 | 0.0313 | 0.97 | 0.398 | 8.10E-23 |
| rs1529744 | 19:10841472 | T | -0.1209 | 0.022 | 0.99 | 0.322 | 3.87E-08 |
| rs167479 | 19:11526765 | T | -0.362 | 0.0188 | 1.00 | 0.472 | 1.67E-82 |
| rs3760994 | 19:1435771 | A | -0.144 | 0.0218 | 1.00 | 0.497 | 4.27E-11 |
| rs10418305 | 19:15278808 | C | -0.2849 | 0.0344 | 0.98 | 0.099 | 1.21E-16 |
| rs3745318 | 19:16436262 | T | 0.1396 | 0.0206 | 0.98 | 0.252 | 1.30E-11 |
| rs1077795 | 19:17222584 | A | 0.1987 | 0.0199 | 0.99 | 0.263 | 1.62E-23 |
| rs8111708 | 19:18558876 | A | 0.1515 | 0.0216 | 0.99 | 0.348 | 2.23E-12 |
| rs2304130 | 19:19789528 | A | -0.2396 | 0.0318 | 0.98 | 0.084 | 4.48E-14 |
| rs6511291 | 19:21950402 | T | -0.1158 | 0.0177 | 0.99 | 0.432 | 6.89E-11 |
| rs740406 | 19:2232221 | A | -0.5158 | 0.045 | 1.00 | 0.060 | 2.10E-30 |
| rs62104477 | 19:30294991 | T | 0.1703 | 0.0185 | 0.99 | 0.330 | 4.22E-20 |
| rs8105753 | 19:31927547 | A | 0.2178 | 0.0318 | 0.80 | 0.369 | 6.84E-12 |
| rs7256564 | 19:33889593 | A | 0.1955 | 0.0324 | 1.00 | 0.311 | 1.53E-09 |
| rs12983238 | 19:39438532 | A | -0.1266 | 0.0201 | 0.95 | 0.310 | 3.23E-10 |
| rs4803327 | 19:40840739 | T | 0.1149 | 0.0173 | 0.80 | 0.473 | 3.46E-11 |
| rs1800470 | 19:41858921 | A | -0.15 | 0.0213 | 1.00 | 0.370 | 1.76E-12 |
| rs73046792 | 19:49605705 | A | -0.3554 | 0.0426 | 1.00 | 0.163 | 7.23E-17 |
| rs4247374 | 19:7252756 | T | -0.6354 | 0.0456 | 1.00 | 0.139 | 4.52E-44 |
| rs2009733 | 19:8398714 | A | 0.1217 | 0.0176 | 1.00 | 0.495 | 5.10E-12 |
| rs1327235 | 20:10969030 | A | -0.3018 | 0.0173 | 1.00 | 0.471 | 4.76E-68 |
| rs2618647 | 20:17882452 | A | -0.1216 | 0.0174 | 0.99 | 0.485 | 2.70E-12 |
| rs6081613 | 20:19465907 | A | 0.2842 | 0.0229 | 0.97 | 0.275 | 2.55E-35 |
| rs2143635 | 20:2793063 | T | -0.2304 | 0.035 | 0.96 | 0.102 | 4.79E-11 |
| rs6060114 | 20:30169673 | T | 0.1689 | 0.0238 | 0.99 | 0.158 | 1.41E-12 |
| rs6141767 | 20:31225069 | C | 0.2147 | 0.0286 | 0.99 | 0.152 | 5.63E-14 |
| rs13042148 | 20:32298286 | T | -0.1674 | 0.0244 | 1.00 | 0.155 | 7.24E-12 |
| rs4810332 | 20:40268334 | A | -0.1715 | 0.0183 | 0.97 | 0.381 | 6.51E-21 |
| rs1764975 | 20:4101290 | A | 0.2819 | 0.0379 | 0.99 | 0.181 | 1.08E-13 |
| rs6031435 | 20:42797358 | A | -0.2592 | 0.0303 | 0.89 | 0.460 | 1.09E-17 |
| rs6095241 | 20:47308798 | A | -0.1358 | 0.0174 | 1.00 | 0.440 | 6.22E-15 |
| rs237485 | 20:48004238 | A | 0.1124 | 0.0191 | 0.99 | 0.306 | 3.63E-09 |
| rs6015450 | 20:57751117 | A | -0.4911 | 0.0266 | 0.97 | 0.124 | 5.37E-76 |
| rs35213536 | 20:62694319 | T | 0.2044 | 0.0205 | 1.00 | 0.243 | 2.54E-23 |
| rs6108168 | 20:8626271 | A | -0.1901 | 0.0199 | 0.97 | 0.255 | 1.10E-21 |
| rs1882961 | 21:16556367 | T | 0.2443 | 0.0326 | 0.98 | 0.306 | 6.69E-14 |
| rs11909120 | 21:30131872 | A | -0.1985 | 0.0293 | 1.00 | 0.145 | 1.24E-11 |
| rs11701033 | 21:33788341 | C | -0.2187 | 0.0392 | 1.00 | 0.182 | 2.52E-08 |
| rs12627651 | 21:44760603 | A | 0.215 | 0.0197 | 1.00 | 0.287 | 7.86E-28 |
| rs35796750 | 21:47422412 | T | -0.1246 | 0.0208 | 1.00 | 0.455 | 2.05E-09 |
| rs12628032 | 22:19967980 | T | 0.2277 | 0.0224 | 0.30 | 0.309 | 2.65E-24 |
| rs9608690 | 22:28921347 | A | -0.3711 | 0.06 | 1.00 | 0.068 | 6.13E-10 |
| rs4823006 | 22:29451671 | A | 0.1396 | 0.0174 | 0.95 | 0.445 | 1.17E-15 |
| rs5753103 | 22:30768777 | A | 0.1377 | 0.0206 | 1.00 | 0.444 | 2.62E-11 |
| rs9609429 | 22:32517431 | T | 0.1203 | 0.0195 | 0.99 | 0.284 | 6.32E-10 |
| rs470113 | 22:40729614 | A | -0.2403 | 0.0265 | 0.82 | 0.182 | 1.43E-19 |
| rs73161324 | 22:42038786 | T | 0.3112 | 0.0478 | 0.50 | 0.056 | 7.55E-11 |

Abbreviations: Chr, chromosome; INFO, imputation quality score; and MAF, minor allele frequency.

**Table S2.** Descriptive characteristics of participants in the UK Biobank study by hypertension.

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristic | Category | | |
| Origin\*  (n = 502,507) | Baseline hypertension\*\* (n = 437,185) | Missing covariate\*\*\*  (n = 25,487) |
| Age (years, mean ± SD) | 56.5 ± 8.1 | 56.0 ± 8.1 | 56.9 ± 8.1 |
| Sex, male (n, %) | 229,123 (45.6) | 194,302 (44.4) | 70,930 (50.9) |
| Race, White (n, %) | 472,128 (94.1) | 411,698 (94.2) | - |
| TDI (mean ± SD) | -1.3 ± 3.1 | -1.4 ± 3.1 | -1.0 ± 3.3 |
| BMI (kg/m2, mean ± SD) | 27.4 ± 4.8 | 27.2 ± 4.7 | 27.4 ± 4.6 |
| BMI (kg/m2, n, %) |  |  |  |
| Normal (<25 kg/m2) | 165,036 (32.9) | 151,279 (34.6) | 7,929 (31.1) |
| Overweight (25 to 29.9 kg/m2) | 212,118 (42.2) | 185,474 (42.4) | 10,619 (41.7) |
| Obesity (≥30 kg/m2) | 122,248 (24.3) | 98,315 (22.5) | 6,472 (25.4) |
| Missing value | 3,105 (0.6) | 2,117 (0.5) | 467 (1.8) |
| Physical activity (MET, Min/week, mean ± SD) | 2650.2 ± 2713.1 | 2666.9 ± 2710.7 | 2633.8 ± 2743.3 |
| Smoke status (n, %) |  |  |  |
| Never | 273,522 (54.4) | 243,723 (55.7) | 17,320 (67.9) |
| Previous | 173,058 (34.4) | 146,410 (33.5) | 4,860 (19.1) |
| Current | 52,979 (10.4) | 45,541 (10.4) | 3,089 (12.1) |
| Missing value | 2,948 (0.6) | 1,511 (0.4) | 218 (0.9) |
| Alcohol drinker status (n, %) |  |  |  |
| Never | 22,385 (4.5) | 18,946 (4.3) | 6,202 (24.3) |
| Previous | 18,104 (3.6) | 14,567 (3.3) | 1,316 (5.2) |
| Current | 460,365 (91.6) | 403,197 (92.2) | 17,801 (69.8) |
| Missing value | 1,653 (0.3) | 475 (0.2) | 168 (0.7) |
| Diabetes baseline (n, %) | 26,400 (5.3) | 17,741 (4.1) | 2,454 (9.6) |
| Maternal smoking around birth (n, %) | 126625 (25.6) | 116,286 (29.1) | 2,117 (8.8) |
| Breasted as a baby (n, %) | 277598 (55.34) | 256,455 (72.0) | 19,447 (88.3) |

Data are presented as the mean ± standard deviation (SD), numbers and percentages.

Abbreviations: TDI, Townsend Deprivation index; BMI, body mass index; and MET, Metabolic Equivalent Task.

\* The total of 502,507 people

\*\*Participants without baseline hypertension

\*\*\*Participants who missing the data of covariates

**Table S3.** The association of breastfeeding and maternal smoking on hypertension.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Maternal smoking | Breastfeeding | Case/control | HR (95% CI) | *P* |
| Yes | No | 4,082/26,995 | ref | - |
|  | Yes | 9,607/48,412 | 0.97 (0.93, 1.01) | 0.124 |
| No | No | 6,697/50,013 | ref | - |
|  | Yes | 26,057/146,562 | 0.97 (0.94, 1.00) | 0.084 |

Abbreviations: HR, hazard ratio; and CI, confidence interval.

Adjusted for age (continuous), sex (male, female), race (White/Mixed/Asian or Asian British/Black or Black British), UK Biobank assessment centre, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), smoking status (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no).

**Table S4.** Subgroup analysis for the association of hypertension and maternal smoking or breastfeeding by specific characteristics.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Characteristic | Maternal smoking (n = 399,531) | | | Breastfeeding (n = 356,079) | | |
| Case/control | HR (95% CI) | *P*\* | Case/control | HR (95% CI) | *P*\* |
| Age |  |  | <0.001 |  |  | 0.013 |
| <60 | 600/259,685 | 1.17 (1.13, 1.20) |  | 650/279,659 | 1.10 (1.06, 1.13) |  |
| >=60 | 658/200,186 | 1.03 (1.01, 1.06) |  | 716/214,062 | 1.02 (0.98, 1.05) |  |
| Sex |  |  | 0.061 |  |  | 0.683 |
| Female | 412/249,937 | 1.09 (1.06, 1.12) |  | 446/268,804 | 0.96 (0.93, 0.99) |  |
| Male | 846/209,934 | 1.12 (1.09, 1.15) |  | 920/224,917 | 0.97 (0.93, 1.00) |  |
| BMI |  |  | 0.470 |  |  | 0.614 |
| Normal (<25 kg/m2) | 260/150,879 | 1.11 (1.06, 1.16) |  | 286/162,135 | 0.94 (0.89, 0.99) |  |
| Overweight (25 to 29.9 kg/m2) | 452/194,407 | 1.10 (1.07, 1.13) |  | 488/208,776 | 0.98 (0.95, 1.02) |  |
| Obesity (≥30 kg/m2) | 526/112,085 | 1.10 (1.06, 1.13) |  | 572/120,195 | 0.96 (0.92, 1.00) |  |
| Smoke status |  |  | 0.238 |  |  | 0.818 |
| Never | 479/250,769 | 1.10 (1.07, 1.13) |  | 514/269,633 | 0.98 (0.94, 1.01) |  |
| Previous | 494/159,542 | 1.10 (1.07, 1.14) |  | 529/170,350 | 0.94 (0.91, 0.98) |  |
| Current | 275/47,658 | 1.15 (1.09, 1.22) |  | 312/51,726 | 0.96 (0.89, 1.03) |  |

Abbreviations: BMI, body mass index; HR, hazard ratio; and CI, confidence interval.

Adjusted for age (continuous), sex (male, female), race (White/Mixed/Asian or Asian British/Black or Black British), UK Biobank assessment centre, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), smoking status (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no). The stratified factor in each stratum was excluded.

\* *P* value for interaction.

**Table S5.** The association of maternal smoking and sex with hypertension by sex (n = 399,531).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Maternal smoking | Sex | Case/control | HR (95% CI) | *P* |
| No | women | 20,797/137,830 | ref | - |
|  | men | 22,213/102,405 | 1.26 (1.23, 1.29) | <2E-16 |
| Yes | women | 8,726/54,167 | 1.08 (1.05, 1.12) | 5.57E-08 |
|  | men | 10,404/42,989 | 1.42 (1.38, 1.46) | <2E-16 |

Adjusted for age (continuous), race (White/Mixed/Asian or Asian British/Black or Black British), UK Biobank assessment centre, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), smoking status (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no).

**Table S6.** The association of maternal smoking and own smoking history with hypertension (n = 318,425).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Maternal smoking | Smoking history | Case/control | HR (95% CI) | *P*\* | *P*\*\* |
| No | Never | 21,581/140,610 | ref | - | 0.070 |
|  | Former | 17,039/76,386 | 1.12 (1.09, 1.15) | <2E-16 |  |
|  | Current | 4,180/22,429 | 1.22 (1.18, 1.27) | <2E-16 |  |
| Yes | Never | 8,928/54,065 | 1.09 (1.06, 1.13) | 3.97E-10 |  |
|  | Former | 7,665/31,184 | 1.24 (1.20, 1.27) | <2E-16 |  |
|  | Current | 2,448/11,666 | 1.43 (1.37, 1.51) | <2E-16 |  |

Adjusted for age (continuous), sex (male, female), race (White/Mixed/Asian or Asian British/Black or Black British), UK Biobank assessment centre, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no).

\* Stratification analysis

\*\* The analysis of interaction between smoking during pregnancy and self-smoking

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Maternal smoking | Smoking history | Women (n= 220,785) | | | Men (n= 177,396) | | | |
| Case/control | HR (95% CI) | *P\** | Case/control | HR (95% CI) | *P\** | *P\*\** |
| No | Never | 12,307/86,388 | ref | - | 9,274/54,222 | ref | - | 0.014 |
| Former | 6,784/40,358 | 1.07 (1.03, 1.10) | 3.88E-04 | 10,255/36,028 | 1.18 (1.14, 1.22) | <2E-16 |  |
| Current | 1,598/10,646 | 1.21 (1.14, 1.29) | 1.83E-09 | 2,582/11,783 | 1.25 (1.19, 1.31) | <2E-16 |  |
| Yes | Never | 4,563/31,561 | 1.07 (1.02, 1.11) | 1.87E-03 | 4,365/22,504 | 1.13 (1.08, 1.17) | 3.10E-09 |  |
| Former | 3,126/16,768 | 1.18 (1.13, 1.24) | 6.14E-13 | 4,539/14,416 | 1.30 (1.24, 1.35) | <2E-16 |  |
| Current | 992/5,694 | 1.42 (1.31, 1.54) | <2E-16 | 1,456/5,972 | 1.46 (1.37, 1.56) | <2E-16 |  |

**Table S7.** The association of maternal smoking and own smoking history with hypertension by sex (n = 398,181).

Adjusted for age (continuous), race (White/Mixed/Asian or Asian British/Black or Black British), UK Biobank assessment centre, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no).

\* Stratification analysis

\*\* The analysis of interaction between sex and own smoking history

**Table S8.** Adjusted hazard ratios and 95% confidence intervals for hypertension polygenic risk score with the risk of hypertension (n = 400,124).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Hypertension PRS (tertiles) | | | | |
| Low | Intermediate | High | Per unit of PRS | *P* |
| Case/control | 15,801/110,806 | 20,462/114,975 | 25,438/112,642 |  |  |
| Model 1 | Ref | 1.25 (1.22, 1.27) | 1.57 (1.54, 1.60) | 1.07 (1.06, 1.07) | <2E-16 |
| Model 2 | Ref | 1.25 (1.23, 1.28) | 1.1 (1.57, 1.64) | 1.07 (1.07, 1.07) | <2E-16 |

PRS, polygenic risk score.

Model 1, age (continuous), sex (male, female);

Model 2, Adjusted for age (continuous), sex (male, female), UK Biobank assessment centre, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), smoking status (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), diabetes at baseline (yes/no), genotyping batch, and the first 4 genetic principal components.

**Table S9.** The joint association of maternal smoking and breastfeeding on incident hypertension in participants with different genetic risk after excluding participants with cardiovascular disease at baseline (n = 283,057).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hypertension PRS (tertiles) | Category of exposure | HR (95% CI) | *P* | *P* for interaction |
|  | Maternal smoking |  |  |  |
| Low genetic risk | No | Ref | Ref | 0.355 |
|  | Yes | 1.13 (1.08, 1.18) | 6.10E-07 |  |
| Intermediate genetic risk | No | 1.30 (1.25, 1.34) | <0.001 |  |
|  | Yes | 1.39 (1.33, 1.45) | <0.001 |  |
| High genetic risk | No | 1.67 (1.61, 1.72) | <0.001 |  |
|  | Yes | 1.82 (1.74, 1.89) | <0.001 |  |
|  | Breastfeeding |  |  |  |
| Low genetic risk | Yes | Ref | Ref | 0.524 |
|  | No | 1.03 (0.98, 1.09) | 0.234 |  |
| Intermediate genetic risk | Yes | 1.26 (1.22, 1.30) | <0.001 |  |
|  | No | 1.37 (1.31, 1.44) | <0.001 |  |
| High genetic risk | Yes | 1.65 (1.60, 1.71) | <0.001 |  |
|  | No | 1.69 (1.61, 1.76) | <0.001 |  |

Abbreviation: HR: hazard rations; CI, confidence interval; PRS, polygenic risk score.

\* Adjusted for age (continuous), sex (male, female), UK Biobank assessment center, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), smoking status (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no), genotyping batch, and the first 4 genetic principal components.

**Table S10.** The joint association of maternal smoking and breastfeeding with incident hypertension in participants with different genetic risk after excluding participants with follow-up time of less than 2 years in the UK Biobank (n = 278,873).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hypertension PRS (tertiles) | Category of exposure | HR (95% CI) | *P* | *P* for interaction |
|  | Maternal smoking |  |  |  |
| Low genetic risk | No | Ref | Ref | 0.578 |
|  | Yes | 1.11 (1.06, 1.17) | 4.30E-05 |  |
| Intermediate genetic risk | No | 1.27 (1.22, 1.32) | <0.001 |  |
|  | Yes | 1.40 (1.33, 1.47) | <0.001 |  |
| High genetic risk | No | 1.64 (1.58, 1.71) | <0.001 |  |
|  | Yes | 1.80 (1.72, 1.88) | <0.001 |  |
|  | Breastfeeding |  |  |  |
| Low genetic risk | Yes | Ref | Ref | 0.993 |
|  | No | 1.02 (0.97, 1.08) | 0.423 |  |
| Intermediate genetic risk | Yes | 1.25 (1.20, 1.30) | <0.001 |  |
|  | No | 1.35 (1.28, 1.42) | <0.001 |  |
| High genetic risk | Yes | 1.63 (1.57, 1.69) | <0.001 |  |
|  | No | 1.68 (1.61, 1.77) | <0.001 |  |

Abbreviation: HR: hazard rations; CI, confidence interval; PRS, polygenic risk score.

Adjusted for age (continuous), sex (male, female), UK Biobank assessment center, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), smoking status (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no), genotyping batch, and the first 4 genetic principal components.

**Table S11.** The joint association of maternal smoking and breastfeeding with incident hypertension in participants with different genetic risk among never smokers (n = 162,439).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hypertension PRS (tertiles) | Category of exposure | HR (95% CI) | *P* | *P* for interaction |
|  | Maternal smoking |  |  |  |
| Low genetic risk | No | Ref | Ref | 0.756 |
|  | Yes | 1.09 (1.02, 1.17) | 0.011 |  |
| Intermediate genetic risk | No | 1.29 (1.23, 1.36) | <0.001 |  |
|  | Yes | 1.40 (1.32, 1.49) | <0.001 |  |
| High genetic risk | No | 1.67 (1.60, 1.75) | <0.001 |  |
|  | Yes | 1.80 (1.70, 1.91) | <0.001 |  |
|  | Breastfeeding |  |  |  |
| Low genetic risk | Yes | Ref | Ref | 0.559 |
|  | No | 0.99 (0.92, 1.07) | 0.804 |  |
| Intermediate genetic risk | Yes | 1.28 (1.22, 1.34) | <0.001 |  |
|  | No | 1.32 (1.24, 1.41) | <0.001 |  |
| High genetic risk | Yes | 1.65 (1.58, 1.73) | <0.001 |  |
|  | No | 1.69 (1.59, 1.80) | <0.001 |  |

Abbreviation: HR: hazard rations; CI, confidence interval; PRS, polygenic risk score.

\* Adjusted for age (continuous), sex (male, female), UK Biobank assessment center, Townsend Deprivation index (continuous), alcohol consumption (never, previous, current, missing), smoking status (never, previous, current, missing), body mass index (<25 kg/m2, 25 to 29.9 kg/m2, ≥30 kg/m2, missing), physical activity (continuous), and diabetes at baseline (yes/no), genotyping batch, and the first 4 genetic principal components.

**Figure S1**. The proportional hazards assumption using Schoenfeld residuals.