|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table S9. Association of six leukocytes traits with five digestive system cancers using univariable Mendelian randomization in European cohort. | | | | | | | | | | | | | |  |
| **Outcoms** | **Exposures** | **Method** | **NO. of SNPs** | **Beta** | **Standard Error** | **P-value** | **OR** | **95% CI-low** | **95% CI-up** | **Q** | **Q P-value** | **Intercept P-value** | **Global Test P-value** | **Power** |
| Esophageal cancer | Leukocytes | Inverse variance weighted | 300 | -0.1132 | 0.2320 | 0.6255 | 0.8929 | 0.5667 | 1.4071 | 216.3854 | 0.9999 |  | 0.999 |  |
|  |  | MR Egger | 300 | -0.2278 | 0.5436 | 0.6755 | 0.7963 | 0.2744 | 2.3111 | 216.3311 | 0.9999 | 0.8159 |  |  |
|  |  | Weighted median | 300 | -0.2905 | 0.3712 | 0.4338 | 0.7479 | 0.3613 | 1.5481 |  |  |  |  |  |
|  | Basophils | Inverse variance weighted | 87 | 0.0651 | 0.3671 | 0.8592 | 1.0673 | 0.5198 | 2.1914 | 58.1471 | 0.9908 |  | 0.992 |  |
|  |  | MR Egger | 87 | -0.6095 | 0.7120 | 0.3944 | 0.5436 | 0.1347 | 2.1947 | 56.9245 | 0.9917 | 0.2720 |  |  |
|  |  | Weighted median | 87 | -0.3794 | 0.5587 | 0.4971 | 0.6843 | 0.2289 | 2.0455 |  |  |  |  |  |
|  | Eosinophils | Inverse variance weighted | 299 | -0.0508 | 0.2077 | 0.8067 | 0.9505 | 0.6326 | 1.4280 | 229.5601 | 0.9988 |  | 0.998 |  |
|  |  | MR Egger | 299 | -0.2212 | 0.4731 | 0.6404 | 0.8015 | 0.3171 | 2.0260 | 229.3994 | 0.9986 | 0.6888 |  |  |
|  |  | Weighted median | 299 | -0.1940 | 0.3355 | 0.5632 | 0.8237 | 0.4267 | 1.5899 |  |  |  |  |  |
|  | Lymphocytes | Inverse variance weighted | 301 | -0.1288 | 0.2184 | 0.5552 | 0.8791 | 0.5730 | 1.3488 | 218.3951 | 0.9999 |  | 0.996 |  |
|  |  | MR Egger | 301 | -0.4037 | 0.5142 | 0.4330 | 0.6678 | 0.2438 | 1.8296 | 218.7438 | 0.9999 | 0.5553 |  |  |
|  |  | Weighted median | 301 | -0.2634 | 0.3603 | 0.4648 | 0.7684 | 0.3792 | 1.5572 |  |  |  |  |  |
|  | Monocytes | Inverse variance weighted | 389 | -0.1307 | 0.1698 | 0.4413 | 0.8775 | 0.6291 | 1.2239 | 277.9551 | 1.0000 |  | 0.998 |  |
|  |  | MR Egger | 389 | -0.2454 | 0.3041 | 0.4203 | 0.7824 | 0.4311 | 1.4202 | 278.1614 | 1.0000 | 0.6499 |  |  |
|  |  | Weighted median | 389 | -0.3753 | 0.2894 | 0.1946 | 0.6871 | 0.3897 | 1.2115 |  |  |  |  |  |
|  | Neutrophils | Inverse variance weighted | 231 | -0.1550 | 0.2557 | 0.5445 | 0.8565 | 0.5189 | 1.4136 | 162.3793 | 0.9997 |  | 0.999 |  |
|  |  | MR Egger | 231 | -0.1110 | 0.5822 | 0.8490 | 0.8950 | 0.2859 | 2.8013 | 162.3864 | 0.9998 | 0.9330 |  |  |
|  |  | Weighted median | 231 | -0.2911 | 0.4112 | 0.4790 | 0.7474 | 0.3338 | 1.6735 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gastric cancer | Leukocytes | Inverse variance weighted | 289 | -0.0337 | 0.1444 | 0.8156 | 0.9669 | 0.7285 | 1.2832 | 230.2489 | 0.9948 |  | 0.996 |  |
|  |  | MR Egger | 289 | -0.0476 | 0.3420 | 0.8894 | 0.9535 | 0.4878 | 1.8639 | 230.2469 | 0.9941 | 0.9642 |  |  |
|  |  | Weighted median | 289 | 0.0698 | 0.2297 | 0.7611 | 1.0723 | 0.6836 | 1.6821 |  |  |  |  |  |
|  | Basophils | Inverse variance weighted | 84 | 0.0648 | 0.2325 | 0.7803 | 1.0670 | 0.6765 | 1.6829 | 63.9720 | 0.9400 |  | 0.95 |  |
|  |  | MR Egger | 84 | 0.7203 | 0.4653 | 0.1255 | 2.0550 | 0.8256 | 5.1153 | 61.3271 | 0.9574 | 0.1077 |  |  |
|  |  | Weighted median | 84 | 0.4197 | 0.3654 | 0.2507 | 1.5216 | 0.7434 | 3.1142 |  |  |  |  |  |
|  | Eosinophils | Inverse variance weighted | 287 | -0.0312 | 0.1265 | 0.8048 | 0.9692 | 0.7565 | 1.2418 | 219.3246 | 0.9987 |  | 0.996 |  |
|  |  | MR Egger | 287 | 0.0338 | 0.2834 | 0.9051 | 1.0344 | 0.5936 | 1.8025 | 219.2588 | 0.9985 | 0.7977 |  |  |
|  |  | Weighted median | 287 | -0.1374 | 0.1970 | 0.4856 | 0.8716 | 0.5924 | 1.2825 |  |  |  |  |  |
|  | Lymphocytes | Inverse variance weighted | 300 | -0.1214 | 0.1337 | 0.3638 | 0.8857 | 0.6815 | 1.1510 | 249.0081 | 0.9840 |  | 0.984 |  |
|  |  | MR Egger | 300 | -0.2129 | 0.3140 | 0.4983 | 0.8082 | 0.4368 | 1.4956 | 248.9044 | 0.9824 | 0.7477 |  |  |
|  |  | Weighted median | 300 | -0.0359 | 0.2169 | 0.8686 | 0.9647 | 0.6306 | 1.4759 |  |  |  |  |  |
|  | Monocytes | Inverse variance weighted | 390 | -0.0895 | 0.1037 | 0.3883 | 0.9144 | 0.7462 | 1.1205 | 332.7043 | 0.9822 |  | 0.976 |  |
|  |  | MR Egger | 390 | -0.0790 | 0.1872 | 0.6734 | 0.9241 | 0.6403 | 1.3336 | 332.6997 | 0.9805 | 0.9462 |  |  |
|  |  | Weighted median | 390 | -0.1763 | 0.1796 | 0.3264 | 0.8384 | 0.5896 | 1.1922 |  |  |  |  |  |
|  | Neutrophils | Inverse variance weighted | 223 | -0.0593 | 0.1591 | 0.7092 | 0.9424 | 0.6899 | 1.2872 | 181.1295 | 0.9768 |  | 0.976 |  |
|  |  | MR Egger | 223 | -0.0833 | 0.3692 | 0.8217 | 0.9201 | 0.4463 | 1.8970 | 181.1347 | 0.9794 | 0.9427 |  |  |
|  |  | Weighted median | 223 | -0.0012 | 0.2550 | 0.9964 | 0.9988 | 0.6060 | 1.6464 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Colorectal cancer | Leukocytes | Inverse variance weighted | 298 | -0.0940 | 0.0680 | 0.1670 | 0.9103 | 0.7967 | 1.0401 | 241.7865 | 0.9917 |  | 0.988 |  |
|  |  | MR Egger | 298 | -0.5120 | 0.1624 | 0.0018 | 0.5993 | 0.4359 | 0.8239 | 233.7545 | 0.9969 | 0.0049 |  |  |
|  |  | Weighted median | 298 | -0.1208 | 0.1061 | 0.2547 | 0.8862 | 0.7199 | 1.0910 |  |  |  |  |  |
|  | Basophils | Inverse variance weighted | 82 | 0.1689 | 0.1075 | 0.1162 | 1.1840 | 0.9590 | 1.4618 | 58.0316 | 0.9748 |  | 0.968 |  |
|  |  | MR Egger | 82 | 0.0171 | 0.2087 | 0.9349 | 1.0172 | 0.6757 | 1.5315 | 57.3117 | 0.9741 | 0.3987 |  |  |
|  |  | Weighted median | 82 | 0.2741 | 0.1839 | 0.1360 | 1.3154 | 0.9173 | 1.8862 |  |  |  |  |  |
|  | Eosinophils | Inverse variance weighted | 295 | -0.1490 | 0.0599 | 0.0128 | 0.8615 | 0.7662 | 0.9688 | 259.5116 | 0.9271 |  | 0.936 | 0.72 |
|  |  | MR Egger | 295 | -0.0563 | 0.1374 | 0.6822 | 0.9452 | 0.7221 | 1.2374 | 258.9496 | 0.9247 | 0.4541 |  |  |
|  |  | Weighted median | 295 | -0.1721 | 0.0966 | 0.0747 | 0.8419 | 0.6967 | 1.0173 |  |  |  |  |  |
|  | Lymphocytes | Inverse variance weighted | 288 | -0.0752 | 0.0643 | 0.2416 | 0.9275 | 0.8177 | 1.0520 | 236.6908 | 0.9848 |  | 0.986 |  |
|  |  | MR Egger | 288 | -0.1846 | 0.1523 | 0.2264 | 0.8314 | 0.6169 | 1.1206 | 237.3183 | 0.9853 | 0.4289 |  |  |
|  |  | Weighted median | 288 | -0.0886 | 0.1077 | 0.4105 | 0.9152 | 0.7411 | 1.1302 |  |  |  |  |  |
|  | Monocytes | Inverse variance weighted | 371 | -0.0304 | 0.0497 | 0.5402 | 0.9700 | 0.8801 | 1.0692 | 271.8783 | 1.0000 |  | 0.998 |  |
|  |  | MR Egger | 371 | -0.0237 | 0.0885 | 0.7886 | 0.9765 | 0.8211 | 1.1614 | 271.8866 | 1.0000 | 0.9273 |  |  |
|  |  | Weighted median | 371 | -0.0392 | 0.0822 | 0.6338 | 0.9616 | 0.8184 | 1.1298 |  |  |  |  |  |
|  | Neutrophils | Inverse variance weighted | 225 | -0.0715 | 0.0762 | 0.3483 | 0.9310 | 0.8019 | 1.0810 | 197.4282 | 0.8992 |  | 0.936 |  |
|  |  | MR Egger | 225 | -0.2882 | 0.1776 | 0.1061 | 0.7496 | 0.5292 | 1.0618 | 195.6033 | 0.9070 | 0.1781 |  |  |
|  |  | Weighted median | 225 | -0.1022 | 0.1203 | 0.3959 | 0.9029 | 0.7132 | 1.1431 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hepatocarcinoma | Leukocytes | Inverse variance weighted | 295 | 0.0361 | 0.2041 | 0.8597 | 1.0367 | 0.6949 | 1.5468 | 232.0259 | 0.9964 |  | 1 |  |
|  |  | MR Egger | 295 | -0.2603 | 0.4782 | 0.5866 | 0.7708 | 0.3019 | 1.9680 | 232.4956 | 0.9966 | 0.4937 |  |  |
|  |  | Weighted median | 295 | 0.1487 | 0.3228 | 0.6450 | 1.1603 | 0.6164 | 2.1844 |  |  |  |  |  |
|  | Basophils | Inverse variance weighted | 85 | -0.1734 | 0.3196 | 0.5874 | 0.8408 | 0.4494 | 1.5731 | 75.1494 | 0.7442 |  | 0.782 |  |
|  |  | MR Egger | 85 | 0.1548 | 0.6209 | 0.8038 | 1.1674 | 0.3457 | 3.9423 | 74.7693 | 0.7288 | 0.5392 |  |  |
|  |  | Weighted median | 85 | -0.2790 | 0.5455 | 0.6089 | 0.7565 | 0.2597 | 2.2035 |  |  |  |  |  |
|  | Eosinophils | Inverse variance weighted | 292 | -0.1680 | 0.1846 | 0.3629 | 0.8454 | 0.5887 | 1.2139 | 234.1475 | 0.9938 |  | 0.992 |  |
|  |  | MR Egger | 292 | -0.1740 | 0.4270 | 0.6840 | 0.8403 | 0.3639 | 1.9406 | 234.1472 | 0.9930 | 0.9876 |  |  |
|  |  | Weighted median | 292 | 0.0073 | 0.2854 | 0.9796 | 1.0073 | 0.5757 | 1.7625 |  |  |  |  |  |
|  | Lymphocytes | Inverse variance weighted | 289 | -0.0995 | 0.1942 | 0.6085 | 0.9053 | 0.6187 | 1.3246 | 180.6711 | 1.0000 |  | 1 |  |
|  |  | MR Egger | 289 | -0.6667 | 0.4540 | 0.1430 | 0.5134 | 0.2109 | 1.2499 | 178.7600 | 1.0000 | 0.1679 |  |  |
|  |  | Weighted median | 289 | -0.3116 | 0.3282 | 0.3424 | 0.7323 | 0.3849 | 1.3932 |  |  |  |  |  |
|  | Monocytes | Inverse variance weighted | 379 | -0.1790 | 0.1492 | 0.2303 | 0.8361 | 0.6241 | 1.1202 | 272.3722 | 1.0000 |  | 0.999 |  |
|  |  | MR Egger | 379 | -0.0782 | 0.2689 | 0.7714 | 0.9248 | 0.5460 | 1.5664 | 272.1691 | 1.0000 | 0.6525 |  |  |
|  |  | Weighted median | 379 | -0.1893 | 0.2516 | 0.4519 | 0.8276 | 0.5054 | 1.3551 |  |  |  |  |  |
|  | Neutrophils | Inverse variance weighted | 224 | -0.1425 | 0.2270 | 0.5301 | 0.8672 | 0.5557 | 1.3531 | 177.9444 | 0.9882 |  | 0.991 |  |
|  |  | MR Egger | 224 | 0.2180 | 0.5111 | 0.6702 | 1.2436 | 0.4567 | 3.3867 | 177.3247 | 0.9878 | 0.4320 |  |  |
|  |  | Weighted median | 224 | 0.4085 | 0.3589 | 0.2550 | 1.5045 | 0.7446 | 3.0400 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pancreatic cancer | Leukocytes | Inverse variance weighted | 295 | -0.0171 | 0.1489 | 0.9086 | 0.9831 | 0.7342 | 1.3163 | 220.0720 | 0.9996 |  | 1 |  |
|  |  | MR Egger | 295 | 0.0050 | 0.3597 | 0.9890 | 1.0050 | 0.4965 | 2.0340 | 220.0675 | 0.9995 | 0.9463 |  |  |
|  |  | Weighted median | 295 | 0.1303 | 0.2307 | 0.5722 | 1.1392 | 0.7248 | 1.7904 |  |  |  |  |  |
|  | Basophils | Inverse variance weighted | 88 | -0.1178 | 0.2272 | 0.6040 | 0.8889 | 0.5694 | 1.3874 | 65.0409 | 0.9623 | 0.8231 | 0.974 |  |
|  |  | MR Egger | 88 | -0.2029 | 0.4422 | 0.6476 | 0.8164 | 0.3431 | 1.9424 | 64.9906 | 0.9557 |  |  |  |
|  |  | Weighted median | 88 | -0.0456 | 0.3671 | 0.9011 | 0.9554 | 0.4653 | 1.9618 |  |  |  |  |  |
|  | Eosinophils | Inverse variance weighted | 291 | 0.0399 | 0.1298 | 0.7585 | 1.0407 | 0.8069 | 1.3423 | 239.4022 | 0.9864 | 0.5732 | 0.988 |  |
|  |  | MR Egger | 291 | 0.1864 | 0.2904 | 0.5215 | 1.2049 | 0.6819 | 2.1291 | 239.0842 | 0.9854 |  |  |  |
|  |  | Weighted median | 291 | -0.1216 | 0.2125 | 0.5671 | 0.8855 | 0.5839 | 1.3430 |  |  |  |  |  |
|  | Lymphocytes | Inverse variance weighted | 294 | -0.0428 | 0.1376 | 0.7559 | 0.9581 | 0.7317 | 1.2547 | 226.6335 | 0.9984 | 0.6918 | 1 |  |
|  |  | MR Egger | 294 | -0.1578 | 0.3208 | 0.6232 | 0.8541 | 0.4555 | 1.6015 | 226.4760 | 0.9982 |  |  |  |
|  |  | Weighted median | 294 | -0.1868 | 0.2243 | 0.4050 | 0.8296 | 0.5345 | 1.2877 |  |  |  |  |  |
|  | Monocytes | Inverse variance weighted | 383 | 0.0706 | 0.1088 | 0.5161 | 1.0732 | 0.8672 | 1.3281 | 277.7842 | 1.0000 | 0.9896 | 1 |  |
|  |  | MR Egger | 383 | 0.0684 | 0.1992 | 0.7314 | 1.0708 | 0.7246 | 1.5824 | 277.7840 | 1.0000 |  |  |  |
|  |  | Weighted median | 383 | -0.1181 | 0.1801 | 0.5118 | 0.8886 | 0.6243 | 1.2647 |  |  |  |  |  |
|  | Neutrophils | Inverse variance weighted | 229 | 0.0226 | 0.1647 | 0.8907 | 1.0229 | 0.7407 | 1.4126 | 157.6100 | 0.9999 | 0.6165 | 1 |  |
|  |  | MR Egger | 229 | 0.1970 | 0.3848 | 0.6091 | 1.2178 | 0.5728 | 2.5889 | 157.3586 | 0.9999 |  |  |  |
|  |  | Weighted median | 229 | 0.1376 | 0.2494 | 0.5810 | 1.1476 | 0.7038 | 1.8710 |  |  |  |  |  |
| Abbreviations: CI, Confidence interval; NO.: Number; OR, Odds Ratio; Q, Cochran Q statistics; SNPs, single nucleotide polymorphisms. | | | | | | | | | | | | | | |
| OR and 95% CI represent change in odds ratio of cancers per 1 SD increase in of each blood leukocyte subtypes. | | | | | | | | | | | | | | |