Table S2. MR results of PSC on TD

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| --- | --- | --- | --- | --- | --- |
| Exposure vs outcome | Methods | SNPs | OR | 95%CI | *P* |
| PSC vs GD | MR Egger | 16 | 1.403 | 0.898-2.192 | 0.175 |
| Weighted median | 16 | 1.217 | 1.036-1.429 | **0.017** |
| Inverse variance weighted | **16** | **1.230** | **1.089-1.389** | **0.001** |
| Simple mode | 16 | 1.216 | 0.914-1.618 | 0.212 |
| Weighted mode | 16 | 1.120 | 0.893-1.406 | 0.352 |
| PSC vs AT | MR Egger | 15 | 0.604  | 0.280-1.305 | 0.226  |
| Weighted median | 15 | 0.975  | 0.652-1.460  | 0.904  |
| Inverse variance weighted | 15 | 0.977  | 0.690-1.383  | 0.896  |
| Simple mode | 15 | 0.980  | 0.532-1.807  | 0.950  |
| Weighted mode | 15 | 0.995  | 0.532-1.860  | 0.988  |
| PSC vs hyperthyroidism | MR Egger | 47 | 1.001  | 0.999-1.002  | 0.289  |
| Weighted median | 47 | 1.001  | 1.000-1.002  | **0.004**  |
| Inverse variance weighted | **47** | **1.001**  | **1.001-1.002**  | **0.000**  |
| Simple mode | 47 | 1.000  | 0.998-1.002  | 0.963  |
| Weighted mode | 47 | 1.000  | 0.999-1.001  | 0.959  |
| PSC vs hypothyroidism | MR Egger | 12 | 0.996  | 0.990-1.003  | 0.313  |
| Weighted median | 12 | 1.000  | 0.999-1.002  | 0.781  |
| Inverse variance weighted | 12 | 1.001  | 0.999-1.002  | 0.368  |
| Simple mode | 12 | 1.001  | 0.999-1.004  | 0.432  |
| Weighted mode | 12 | 0.999  | 0.998-1.001  | 0.599  |
| PSC vs TC | MR Egger | 7 | 5.576  | 0.411-75.720  | 0.253  |
| Weighted median | 7 | 1.308  | 0.772-2.216  | 0.318  |
| Inverse variance weighted | 7 | 1.288  | 0.862-1.925  | 0.216  |
| Simple mode | 7 | 1.383  | 0.642-2.977  | 0.439  |
| Weighted mode | 7 | 1.371  | 0.699-0.690  | 0.394  |
| PSC vs TSH | MR Egger | 18 | 1.002  | 0.957-1.050  | 0.923  |
| Weighted median | 18 | 0.995  | 0.952-1.040  | 0.821  |
| Inverse variance weighted | 18 | 1.006  | 0.973-1.040  | 0.746  |
| Simple mode | 18 | 0.968  | 0.888-1.055  | 0.469  |
| Weighted mode | 18 | 1.004  | 0.963-1.048  | 0.848  |
| PSC vs TRH | MR Egger | 18 | 0.956  | 0.907-1.007  | 0.111  |
| Weighted median | 18 | 0.960  | 0.921-1.000  | 0.052  |
| Inverse variance weighted | 18 | 0.986  | 0.948-1.026  | 0.499  |
| Simple mode | 18 | 0.950  | 0.864-1.044  | 0.302  |
| Weighted mode | 18 | 0.958  | 0.918-0.999  | 0.062  |
| PSC vs TBG | MR Egger | 7 | 1.161  | 0.894-1.506  | 0.313  |
| Weighted median | 7 | 1.064  | 0.880-1.286  | 0.523  |
| Inverse variance weighted | 7 | 0.917  | 0.779-1.080  | 0.298  |
| Simple mode | 7 | 0.771  | 0.507-1.173  | 0.271  |
| Weighted mode | 7 | 1.078  | 0.893-1.301  | 0.465  |
| PSC vs THRα | MR Egger | 18 | 0.981  | 0.936-1.028  | 0.423  |
| Weighted median | 18 | 0.960  | 0.913-1.009  | 0.107  |
| Inverse variance weighted | 18 | 1.000  | 0.967-1.033  | 0.985  |
| Simple mode | 18 | 0.960  | 0.869-1.062  | 0.440  |
| Weighted mode | 18 | 0.957  | 0.902-1.015  | 0.161  |
| PSC vs TP | MR Egger | 18 | 0.974  | 0.928-1.023  | 0.309  |
| Weighted median | 18 | 0.980  | 0.939-1.203  | 0.361  |
| Inverse variance weighted | 18 | 0.984  | 0.951-1.018  | 0.358  |
| Simple mode | 18 | 0.972  | 0.900-1.049  | 0.472  |
| Weighted mode | 18 | 0.979  | 0.940-1.019 | 0.306  |
| PSC vs TG | MR Egger | 18 | 0.989  | 0.939-1.043  | 0.697  |
| Weighted median | 18 | 0.990  | 0.945-1.037  | 0.667  |
| Inverse variance weighted | 18 | 0.985  | 0.950-1.022 | 0.424  |
| Simple mode | 18 | 1.024  | 0.934-1.122  | 0.620  |
| Weighted mode | 18 | 0.981  | 0.939-1.024  | 0.389  |

MR, Mendelian randomization; PSC, primary sclerosing cholangitis; TD, thyroid dysfunction; SNP, single-nucleotide polymorphism; OR, odds ratio; CI, confidence interval; GD, Graves' disease; AT, autoimmune thyroiditis; TC, thyroid cancer; TSH, thyroid stimulating hormone; TRH, thyrotropin-releasing hormone, TBG, thyroxine-binding globulin; THRα, thyroid hormone receptor alpha; TP, thyroid peroxidase; TG, thyroglobulin.