Supplementary Material

**Periodontitis and breast cancer: A bidirectional two-sample Mendelian randomization study**

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# Supplementary Tables

Table S1. SNPs used as instruments and their association with the exposure and the outcome

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SNP | EA | OA | R2 | F | exposure | | | outcome | | |
| beta | se | pval | beta | se | pval |
|  |  |  |  |  | Periodontitis | | | Breast cancer | | |
| rs151226594 | T | G | 0.00050 | 22.847 | -0.3671 | 0.0768 | 1.75E-06 | -0.1196 | 0.0817 | 0.143 |
| rs138868497 | T | C | 0.00050 | 22.847 | 1.6387 | 0.3324 | 8.20E-07 | -0.0717 | 0.1421 | 0.6139 |
| rs10143801 | A | G | 0.00053 | 24.303 | -0.084 | 0.0171 | 8.66E-07 | -0.0257 | 0.0196 | 0.1902 |
| rs76734229 | A | G | 0.00053 | 24.129 | -0.1761 | 0.037 | 1.94E-06 | -0.0069 | 0.0352 | 0.8434 |
| rs9954920 | T | C | 0.00050 | 22.651 | 0.0769 | 0.0163 | 2.37E-06 | -0.0023 | 0.018 | 0.8964 |
| rs73155039 | A | G | 0.00049 | 22.257 | 0.8316 | 0.1757 | 2.22E-06 | -0.0868 | 0.0969 | 0.3708 |
|  |  |  |  |  | Breast cancer | | | Periodontitis | | |
| rs6721996 | A | G | 0.00025 | 62.803 | 0.499 | -0.1371 | 0.0173 | 0.1555 | 0.0751 | 39474.5 |
| rs487930 | A | C | 0.00020 | 49.160 | 0.5267 | 0.1227 | 0.0175 | 0.0155 | 0.8669 | 37505.8 |
| rs1910020 | C | T | 0.00023 | 57.304 | 0.7179 | -0.1461 | 0.0193 | 0.0168 | 0.2401 | 24111.5 |
| rs9371545 | A | G | 0.00027 | 67.007 | 0.0712 | 0.2775 | 0.0339 | 0.0312 | 0.8545 | 6023.37 |
| rs9693995 | T | C | 0.00020 | 49.959 | 0.5572 | -0.1244 | 0.0176 | 0.0156 | 0.6518 | 35555.3 |
| rs1078806 | G | A | 0.00068 | 168.415 | 0.4077 | 0.231 | 0.0178 | 0.0157 | 0.7996 | 33143.5 |
| rs78540526 | T | C | 0.00034 | 83.962 | 0.0727 | 0.3033 | 0.0331 | 0.0325 | 0.0104 | 5604.35 |
| rs2619415 | T | G | 0.00023 | 57.467 | 0.1112 | -0.2206 | 0.0291 | 0.0256 | 0.4216 | 9422.58 |
| rs3095602 | A | G | 0.00054 | 134.065 | 0.2753 | 0.2281 | 0.0197 | 0.0171 | 0.380 | 23438.6 |
| rs132289 | G | A | 0.00021 | 50.754 | 0.9819 | -0.5564 | 0.0781 | 0.0599 | 0.8616 | 1945.98 |

Table S2. Mendelian randomization estimates for the relationship between genetically instrumented periodontitis and breast cancer in the validation set

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome | Exposure | Method | Beta | SE | P value | OR (95% CI) | Cochran's Q | | | Horizontal pleiotropy | | |
| Q | Q\_df | Q\_pval | Egger intercept | SE | P value |
| Periodontitis | Breast cancer | MR Egger | -0.001 | 0.003 | 0.796 | 0.999(0.994-1.005) | 13.423 | 28 | 0.991 | -0.018 | 0.015 | 0.305 |
| IVW | 0.000 | 0.000 | 0.001 | 0.947(1.000-1.003) | 13.532 | 29 | 0.994 |  |  |  |
| Weighted median | -0.001 | 0.002 | 0.770 | 0.999(0.996-1.003) |  |  |  |  |  |  |
| Simple mode | -0.001 | 0.003 | 0.774 | 0.999(0.993-1.005) |  |  |  |  |  |  |
| Weighted mode | -0.001 | 0.003 | 0.781 | 0.999(0.993-1.005) |  |  |  |  |  |  |
| Breast cancer | Periodontitis | MR Egger | 1.753 | 1.480 | 0.247 | 5.769(0.317-104.875) | 18.081 | 26 | 0.873 | -0.013 | 0.011 | 0.270 |
| IVW | 0.264 | 0.667 | 0.693 | 1.302(0.352-4.815) | 19.352 | 27 | 0.857 |  |  |  |
| Weighted median | 1.211 | 0.971 | 0.204 | 3.358(0.519-21.718) |  |  |  |  |  |  |
| Simple mode | 0.594 | 1.674 | 0.712 | 1.812(0.079-41.325) |  |  |  |  |  |  |
| Weighted mode | 1.179 | 1.087 | 0.258 | 3.252(0.440-24.008) |  |  |  |  |  |  |

MR, Mendelian randomization; IVW, inverse variance weighted; df, degree of freedom; MR, Mendelian randomization; Q, heterogeneity statistic Q.