

**Supplementary Table 1** The result of the MR analysis between brain dlPFC pQTLs and PD

| gene                | outcome | method                          | nsnp | b     | p-value  | or    | or_lci95 | or_uci95 |
|---------------------|---------|---------------------------------|------|-------|----------|-------|----------|----------|
| <i>CD38</i>         | PD      | Wald ratio                      | 1    | -1.14 | 6.99E-14 | 0.32  | 0.24     | 0.43     |
| <i>DGKQ</i>         | PD      | Wald ratio                      | 1    | -1.99 | 1.97E-09 | 0.14  | 0.07     | 0.26     |
| <i>GPNUMB</i>       | PD      | Wald ratio                      | 1    | 0.38  | 2.48E-08 | 1.46  | 1.28     | 1.67     |
| <i>SEC23IP</i>      | PD      | Wald ratio                      | 1    | 2.06  | 2.45E-05 | 7.88  | 3.02     | 20.56    |
| <i>CTSB</i>         | PD      | Wald ratio                      | 1    | -1.61 | 4.39E-05 | 0.20  | 0.09     | 0.43     |
| <i>ARSA</i>         | PD      | Wald ratio                      | 1    | 0.66  | 8.37E-05 | 1.94  | 1.39     | 2.70     |
| <i>IDUA</i>         | PD      | Wald ratio                      | 1    | 0.69  | 0.000542 | 2.00  | 1.35     | 2.96     |
| <i>AMZ2</i>         | PD      | Wald ratio                      | 1    | -0.52 | 0.000552 | 0.60  | 0.45     | 0.80     |
| <i>LMBRD1</i>       | PD      | Wald ratio                      | 1    | -1.39 | 0.001202 | 0.25  | 0.11     | 0.58     |
| <i>ENPP4</i>        | PD      | Wald ratio                      | 1    | -1.22 | 0.001288 | 0.30  | 0.14     | 0.62     |
| <i>PDLIM2</i>       | PD      | Wald ratio                      | 1    | -0.83 | 0.00165  | 0.43  | 0.26     | 0.73     |
| <i>ULK3</i>         | PD      | Wald ratio                      | 1    | -0.70 | 0.002271 | 0.50  | 0.32     | 0.78     |
| <i>SLC25A24</i>     | PD      | Wald ratio                      | 1    | -0.53 | 0.002661 | 0.59  | 0.42     | 0.83     |
| <i>PPP3CC</i>       | PD      | Wald ratio                      | 1    | 0.99  | 0.00323  | 2.68  | 1.39     | 5.16     |
| <i>CAMLG</i>        | PD      | Wald ratio                      | 1    | 0.68  | 0.004632 | 1.96  | 1.23     | 3.13     |
| <i>FABP1</i>        | PD      | Wald ratio                      | 1    | -0.23 | 0.004735 | 0.79  | 0.67     | 0.93     |
| <i>FARSB</i>        | PD      | Wald ratio                      | 1    | -1.38 | 0.007103 | 0.25  | 0.09     | 0.69     |
| <i>SAMM50</i>       | PD      | Wald ratio                      | 1    | 1.31  | 0.007748 | 3.72  | 1.41     | 9.77     |
| <i>TIPRL</i>        | PD      | Wald ratio                      | 1    | 2.64  | 0.011061 | 14.05 | 1.83     | 107.94   |
| <i>RCSD1</i>        | PD      | Wald ratio                      | 1    | -0.92 | 0.011347 | 0.40  | 0.20     | 0.81     |
| <i>LGALS3</i>       | PD      | Wald ratio                      | 1    | 0.53  | 0.012317 | 1.69  | 1.12     | 2.56     |
| <i>ZADH2</i>        | PD      | Wald ratio                      | 1    | -0.93 | 0.012569 | 0.39  | 0.19     | 0.82     |
| <i>TXNRD2</i>       | PD      | Inverse<br>variance<br>weighted | 2    | 0.33  | 0.015108 | 1.39  | 1.07     | 1.81     |
| <i>SWAP70</i>       | PD      | Wald ratio                      | 1    | -1.14 | 0.015864 | 0.32  | 0.13     | 0.81     |
| <i>LSS</i>          | PD      | Wald ratio                      | 1    | 0.30  | 0.016048 | 1.35  | 1.06     | 1.73     |
| <i>HBG2</i>         | PD      | Wald ratio                      | 1    | -0.10 | 0.017279 | 0.91  | 0.84     | 0.98     |
| <i>COMTD1</i>       | PD      | Wald ratio                      | 1    | -0.78 | 0.017695 | 0.46  | 0.24     | 0.87     |
| <i>GBASNIPSNAP2</i> | PD      | Wald ratio                      | 1    | -1.17 | 0.017972 | 0.31  | 0.12     | 0.82     |
| <i>VPSI3C</i>       | PD      | Wald ratio                      | 1    | 1.52  | 0.018378 | 4.59  | 1.29     | 16.28    |
| <i>AAMDC</i>        | PD      | Wald ratio                      | 1    | 0.21  | 0.018594 | 1.24  | 1.04     | 1.48     |
| <i>APIP</i>         | PD      | Wald ratio                      | 1    | -0.18 | 0.01885  | 0.84  | 0.72     | 0.97     |
| <i>ADHFE1</i>       | PD      | Wald ratio                      | 1    | 0.24  | 0.019354 | 1.27  | 1.04     | 1.56     |
| <i>GUF1</i>         | PD      | Wald ratio                      | 1    | 0.45  | 0.020869 | 1.57  | 1.07     | 2.30     |
| <i>FECH</i>         | PD      | Wald ratio                      | 1    | 0.69  | 0.023719 | 1.99  | 1.10     | 3.62     |
| <i>GART</i>         | PD      | Wald ratio                      | 1    | -0.36 | 0.024522 | 0.70  | 0.51     | 0.96     |
| <i>PFKM</i>         | PD      | Wald ratio                      | 1    | 1.12  | 0.025078 | 3.05  | 1.15     | 8.10     |
| <i>SFXN4</i>        | PD      | Wald ratio                      | 1    | -0.90 | 0.025243 | 0.40  | 0.18     | 0.89     |

|                   |    |            |   |       |          |      |      |       |
|-------------------|----|------------|---|-------|----------|------|------|-------|
| <i>BNIP1</i>      | PD | Wald ratio | 1 | 0.95  | 0.025837 | 2.58 | 1.12 | 5.93  |
| <i>CCDC92</i>     | PD | Wald ratio | 1 | -1.37 | 0.027652 | 0.25 | 0.08 | 0.86  |
| <i>CSDC2</i>      | PD | Wald ratio | 1 | -0.33 | 0.029184 | 0.72 | 0.54 | 0.97  |
| <i>SLC15A2</i>    | PD | Wald ratio | 1 | 0.37  | 0.033648 | 1.45 | 1.03 | 2.04  |
| <i>RASA1</i>      | PD | Wald ratio | 1 | -1.69 | 0.033964 | 0.18 | 0.04 | 0.88  |
| <i>DPYSL5</i>     | PD | Wald ratio | 1 | -0.97 | 0.035911 | 0.38 | 0.15 | 0.94  |
| <i>DPP3</i>       | PD | Wald ratio | 1 | 1.20  | 0.036677 | 3.33 | 1.08 | 10.28 |
| <i>NUDCD1</i>     | PD | Wald ratio | 1 | 1.04  | 0.038623 | 2.82 | 1.06 | 7.55  |
| <i>MICAL1</i>     | PD | Wald ratio | 1 | 0.72  | 0.038949 | 2.05 | 1.04 | 4.04  |
| <i>KIAA1161MY</i> | PD | Wald ratio | 1 | 0.27  | 0.039511 | 1.31 | 1.01 | 1.70  |
| <i>ORG</i>        |    |            |   |       |          |      |      |       |
| <i>GLRX5</i>      | PD | Wald ratio | 1 | 0.33  | 0.039825 | 1.39 | 1.02 | 1.89  |
| <i>FAH</i>        | PD | Wald ratio | 1 | 0.30  | 0.039853 | 1.36 | 1.01 | 1.81  |
| <i>ESD</i>        | PD | Wald ratio | 1 | -0.72 | 0.041126 | 0.48 | 0.24 | 0.97  |
| <i>GALC</i>       | PD | Wald ratio | 1 | 0.20  | 0.041281 | 1.22 | 1.01 | 1.48  |
| <i>RCN1</i>       | PD | Wald ratio | 1 | 0.63  | 0.042802 | 1.88 | 1.02 | 3.47  |
| <i>TOMIL2</i>     | PD | Wald ratio | 1 | 1.10  | 0.046749 | 3.01 | 1.02 | 8.91  |
| <i>ADA</i>        | PD | Wald ratio | 1 | -0.38 | 0.047221 | 0.69 | 0.47 | 1.00  |
| <i>COQ7</i>       | PD | Wald ratio | 1 | -0.37 | 0.048011 | 0.69 | 0.48 | 1.00  |

**Supplementary Table 2** The result of the MR analysis between brain eQTLs and PD

| name            | gene              | outco<br>me | method     | nsn<br>p | b      | p-value  | or   | or_lc<br>i95 | or_u<br>ci95 |
|-----------------|-------------------|-------------|------------|----------|--------|----------|------|--------------|--------------|
| ENSG00000261575 | #N/A              | PD          | Wald ratio | 1        | 0.771  | 2.17E-21 | 2.16 | 1.84         | 2.53         |
| ENSG00000265964 | #N/A              | PD          | Wald ratio | 1        | 0.930  | 2.49E-21 | 2.54 | 2.09         | 3.07         |
| ENSG00000185294 | <i>SPPL2C</i>     | PD          | Wald ratio | 1        | 1.041  | 3.44E-21 | 2.83 | 2.28         | 3.51         |
| ENSG00000186868 | <i>MAPT</i>       | PD          | Wald ratio | 1        | 0.565  | 6.89E-21 | 1.76 | 1.56         | 1.98         |
| ENSG00000214425 | #N/A              | PD          | Wald ratio | 1        | 0.257  | 6.89E-21 | 1.29 | 1.23         | 1.36         |
| ENSG00000204650 | <i>LINC02210</i>  | PD          | Wald ratio | 1        | -1.508 | 1.35E-20 | 0.22 | 0.16         | 0.30         |
| ENSG00000263142 | <i>LRRC37A17P</i> | PD          | Wald ratio | 1        | 1.501  | 2.94E-20 | 4.48 | 3.26         | 6.17         |
| ENSG00000262881 | #N/A              | PD          | Wald ratio | 1        | 0.955  | 4.79E-20 | 2.60 | 2.12         | 3.19         |
| ENSG00000176681 | <i>LRRC37A</i>    | PD          | Wald ratio | 1        | -0.259 | 1.62E-19 | 0.77 | 0.73         | 0.82         |
| ENSG00000204652 | #N/A              | PD          | Wald ratio | 1        | -0.538 | 7.80E-19 | 0.58 | 0.52         | 0.66         |
| ENSG00000225190 | <i>PLEKHM1</i>    | PD          | Wald ratio | 1        | 1.209  | 5.59E-16 | 3.35 | 2.50         | 4.49         |
| ENSG00000004468 | <i>CD38</i>       | PD          | Wald ratio | 1        | -0.695 | 1.20E-13 | 0.50 | 0.42         | 0.60         |
| ENSG00000138722 | <i>MMRN1</i>      | PD          | Wald ratio | 1        | 0.430  | 1.63E-12 | 1.54 | 1.36         | 1.73         |
| ENSG00000265315 | <i>RN7SL199P</i>  | PD          | Wald ratio | 1        | -0.464 | 3.53E-11 | 0.63 | 0.55         | 0.72         |
| ENSG00000265411 | <i>RN7SL656P</i>  | PD          | Wald ratio | 1        | -0.464 | 3.53E-11 | 0.63 | 0.55         | 0.72         |
| ENSG00000263503 | #N/A              | PD          | Wald ratio | 1        | -0.172 | 3.53E-11 | 0.84 | 0.80         | 0.89         |
| ENSG00000262539 | #N/A              | PD          | Wald ratio | 1        | -0.213 | 6.14E-11 | 0.81 | 0.76         | 0.86         |
| ENSG00000267246 | #N/A              | PD          | Wald ratio | 1        | -0.488 | 6.14E-11 | 0.61 | 0.53         | 0.71         |
| ENSG00000120071 | <i>KANSL1</i>     | PD          | Wald ratio | 1        | -0.380 | 6.14E-11 | 0.68 | 0.61         | 0.77         |
| ENSG00000214401 | <i>KANSL1-AS1</i> | PD          | Wald ratio | 1        | -0.253 | 6.14E-11 | 0.78 | 0.72         | 0.84         |
| ENSG00000120088 | <i>CRHR1</i>      | PD          | Wald ratio | 1        | 0.486  | 1.12E-09 | 1.63 | 1.39         | 1.90         |
| ENSG00000264070 | #N/A              | PD          | Wald ratio | 1        | 0.487  | 1.12E-09 | 1.63 | 1.39         | 1.90         |
| ENSG00000099377 | <i>HSD3B7</i>     | PD          | Wald ratio | 1        | -0.676 | 4.25E-09 | 0.51 | 0.41         | 0.64         |
| ENSG00000164182 | <i>NDUFAF2</i>    | PD          | Wald ratio | 1        | 1.128  | 2.08E-08 | 3.09 | 2.08         | 4.58         |
| ENSG00000136235 | <i>GPNMB</i>      | PD          | Wald ratio | 1        | 0.179  | 2.48E-08 | 1.20 | 1.12         | 1.27         |
| ENSG00000188906 | <i>LRRK2</i>      | PD          | Wald ratio | 1        | 1.890  | 3.16E-08 | 6.62 | 3.39         | 12.93        |
| ENSG00000136243 | <i>NUP42</i>      | PD          | Wald ratio | 1        | 0.221  | 4.25E-08 | 1.25 | 1.15         | 1.35         |
| ENSG00000226816 | #N/A              | PD          | Wald ratio | 1        | -0.483 | 4.25E-08 | 0.62 | 0.52         | 0.73         |
| ENSG00000262500 | <i>MAPK8IP1P1</i> | PD          | Wald ratio | 1        | 0.612  | 1.72E-07 | 1.84 | 1.47         | 2.32         |
| ENSG00000170425 | <i>ADORA2B</i>    | PD          | Wald ratio | 1        | 0.366  | 2.29E-07 | 1.44 | 1.25         | 1.66         |
| ENSG00000141027 | <i>NCOR1</i>      | PD          | Wald ratio | 1        | 1.216  | 2.38E-07 | 3.37 | 2.13         | 5.35         |
| ENSG00000260911 | #N/A              | PD          | Wald ratio | 1        | -0.738 | 2.80E-07 | 0.48 | 0.36         | 0.63         |
| ENSG00000103510 | <i>KAT8</i>       | PD          | Wald ratio | 1        | -0.439 | 3.02E-07 | 0.64 | 0.54         | 0.76         |
| ENSG00000103496 | <i>STX4</i>       | PD          | Wald ratio | 1        | 1.086  | 3.13E-07 | 2.96 | 1.95         | 4.49         |
| ENSG00000103549 | <i>RNF40</i>      | PD          | Wald ratio | 1        | -0.761 | 8.30E-07 | 0.47 | 0.35         | 0.63         |
| ENSG00000196118 | <i>CFAP119</i>    | PD          | Wald ratio | 1        | 0.402  | 2.20E-06 | 1.50 | 1.27         | 1.77         |
| ENSG00000214941 | <i>ZSWIM7</i>     | PD          | Wald ratio | 1        | 0.145  | 3.28E-06 | 1.16 | 1.09         | 1.23         |
| ENSG00000163749 | <i>CCDC158</i>    | PD          | Wald ratio | 1        | -0.324 | 4.46E-06 | 0.72 | 0.63         | 0.83         |
| ENSG00000178226 | <i>PRSS36</i>     | PD          | Wald ratio | 1        | -0.467 | 8.43E-06 | 0.63 | 0.51         | 0.77         |
| ENSG00000198171 | <i>DDRGI1</i>     | PD          | Wald ratio | 1        | 0.947  | 2.14E-05 | 2.58 | 1.67         | 3.99         |
| ENSG00000124613 | <i>ZNF391</i>     | PD          | Wald ratio | 1        | 0.311  | 4.07E-05 | 1.37 | 1.18         | 1.58         |

|                 |                 |    |                                 |   |        |          |      |      |      |
|-----------------|-----------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000169242 | <i>EFNA1</i>    | PD | Wald ratio                      | 1 | 0.740  | 4.24E-05 | 2.10 | 1.47 | 2.99 |
| ENSG00000219881 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | 0.788  | 4.98E-05 | 2.20 | 1.50 | 3.22 |
| ENSG00000169313 | <i>P2RY12</i>   | PD | Wald ratio                      | 1 | 0.976  | 6.04E-05 | 2.65 | 1.65 | 4.28 |
| ENSG00000166582 | <i>CENPV</i>    | PD | Wald ratio                      | 1 | 0.184  | 8.76E-05 | 1.20 | 1.10 | 1.32 |
| ENSG00000073969 | <i>NSF</i>      | PD | Wald ratio                      | 1 | -0.755 | 0.000106 | 0.47 | 0.32 | 0.69 |
| ENSG00000108379 | <i>WNT3</i>     | PD | Wald ratio                      | 1 | -0.508 | 0.000106 | 0.60 | 0.47 | 0.78 |
| ENSG00000131484 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | -0.501 | 0.000106 | 0.61 | 0.47 | 0.78 |
| ENSG00000185829 | <i>ARL17A</i>   | PD | Wald ratio                      | 1 | -0.194 | 0.000106 | 0.82 | 0.75 | 0.91 |
| ENSG00000238083 | <i>LRRC37A2</i> | PD | Wald ratio                      | 1 | -0.131 | 0.000106 | 0.88 | 0.82 | 0.94 |
| ENSG00000232300 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | -0.238 | 0.000106 | 0.79 | 0.70 | 0.89 |
| ENSG00000164733 | <i>CTSB</i>     | PD | Wald ratio                      | 1 | -0.336 | 0.000124 | 0.71 | 0.60 | 0.85 |
| ENSG00000162869 | <i>PPP1R21</i>  | PD | Wald ratio                      | 1 | -0.312 | 0.000164 | 0.73 | 0.62 | 0.86 |
| ENSG00000181754 | <i>AMIGO1</i>   | PD | Wald ratio                      | 1 | -0.707 | 0.000174 | 0.49 | 0.34 | 0.71 |
| ENSG00000138002 | <i>IFT172</i>   | PD | Wald ratio                      | 1 | 0.979  | 0.000175 | 2.66 | 1.60 | 4.44 |
| ENSG00000030582 | <i>GRN</i>      | PD | Wald ratio                      | 1 | -0.894 | 0.000183 | 0.41 | 0.26 | 0.65 |
| ENSG00000268516 | <i>ZNF8-DT</i>  | PD | Wald ratio                      | 1 | -0.655 | 0.000189 | 0.52 | 0.37 | 0.73 |
| ENSG00000271155 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | 0.471  | 0.000212 | 1.60 | 1.25 | 2.06 |
| ENSG00000005884 | <i>ITGA3</i>    | PD | Wald ratio                      | 1 | 0.708  | 0.000224 | 2.03 | 1.39 | 2.96 |
| ENSG00000231170 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | -0.188 | 0.000244 | 0.83 | 0.75 | 0.92 |
| ENSG00000100075 | <i>SLC25A1</i>  | PD | Wald ratio                      | 1 | 0.261  | 0.000249 | 1.30 | 1.13 | 1.49 |
| ENSG00000111875 | <i>ASF1A</i>    | PD | Wald ratio                      | 1 | 1.003  | 0.000264 | 2.73 | 1.59 | 4.67 |
| ENSG00000115234 | <i>SNX17</i>    | PD | Wald ratio                      | 1 | 1.349  | 0.000283 | 3.85 | 1.86 | 7.98 |
| ENSG00000143194 | <i>MAEL</i>     | PD | Wald ratio                      | 1 | 0.146  | 0.000284 | 1.16 | 1.07 | 1.25 |
| ENSG00000069482 | <i>GAL</i>      | PD | Wald ratio                      | 1 | -0.248 | 0.000366 | 0.78 | 0.68 | 0.89 |
| ENSG00000162552 | <i>WNT4</i>     | PD | Wald ratio                      | 1 | -0.489 | 0.000399 | 0.61 | 0.47 | 0.80 |
| ENSG00000117533 | <i>VAMP4</i>    | PD | Wald ratio                      | 1 | 0.725  | 0.000437 | 2.06 | 1.38 | 3.09 |
| ENSG00000168297 | <i>PXK</i>      | PD | Wald ratio                      | 1 | -0.485 | 0.000451 | 0.62 | 0.47 | 0.81 |
| ENSG00000170175 | <i>CHRNA1</i>   | PD | Wald ratio                      | 1 | 0.347  | 0.000506 | 1.41 | 1.16 | 1.72 |
| ENSG00000100403 | <i>ZC3H7B</i>   | PD | Wald ratio                      | 1 | -0.878 | 0.000511 | 0.42 | 0.25 | 0.68 |
| ENSG00000066926 | <i>FECH</i>     | PD | Wald ratio                      | 1 | 0.384  | 0.000523 | 1.47 | 1.18 | 1.82 |
| ENSG00000261026 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | 0.499  | 0.00057  | 1.65 | 1.24 | 2.19 |
| ENSG00000005981 | <i>ASB4</i>     | PD | Inverse<br>variance<br>weighted | 2 | -0.349 | 0.000574 | 0.71 | 0.58 | 0.86 |
| ENSG00000162378 | <i>ZYG11B</i>   | PD | Wald ratio                      | 1 | 0.916  | 0.000661 | 2.50 | 1.48 | 4.23 |
| ENSG00000235289 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | 0.394  | 0.000733 | 1.48 | 1.18 | 1.86 |
| ENSG00000126777 | <i>KTN1</i>     | PD | Wald ratio                      | 1 | 0.817  | 0.000771 | 2.26 | 1.41 | 3.64 |
| ENSG00000156958 | <i>GALK2</i>    | PD | Wald ratio                      | 1 | -0.805 | 0.000808 | 0.45 | 0.28 | 0.72 |
| ENSG00000145700 | <i>ANKRD31</i>  | PD | Wald ratio                      | 1 | -0.373 | 0.000858 | 0.69 | 0.55 | 0.86 |
| ENSG00000255046 | <i>#N/A</i>     | PD | Wald ratio                      | 1 | 0.317  | 0.000885 | 1.37 | 1.14 | 1.65 |
| ENSG00000101412 | <i>E2F1</i>     | PD | Wald ratio                      | 1 | 0.651  | 0.001104 | 1.92 | 1.30 | 2.83 |
| ENSG00000168216 | <i>LMBRD1</i>   | PD | Wald ratio                      | 1 | -0.501 | 0.001126 | 0.61 | 0.45 | 0.82 |
| ENSG00000206053 | <i>JPT2</i>     | PD | Wald ratio                      | 1 | 0.516  | 0.001128 | 1.68 | 1.23 | 2.29 |
| ENSG00000247775 | <i>SNCA-ASI</i> | PD | Wald ratio                      | 1 | -0.229 | 0.00119  | 0.80 | 0.69 | 0.91 |

|                 |                          |    |                                 |   |        |          |      |      |      |
|-----------------|--------------------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000115947 | <i>ORC4</i>              | PD | Wald ratio                      | 1 | 0.532  | 0.001194 | 1.70 | 1.23 | 2.35 |
| ENSG00000177234 | <i>LINC01561</i>         | PD | Wald ratio                      | 1 | -0.260 | 0.001204 | 0.77 | 0.66 | 0.90 |
| ENSG00000180185 | <i>FAHD1</i>             | PD | Wald ratio                      | 1 | -0.156 | 0.001212 | 0.86 | 0.78 | 0.94 |
| ENSG00000101311 | <i>FERMT1</i>            | PD | Wald ratio                      | 1 | -0.373 | 0.00124  | 0.69 | 0.55 | 0.86 |
| ENSG00000116783 | <i>TNNI3K</i>            | PD | Wald ratio                      | 1 | -0.266 | 0.001288 | 0.77 | 0.65 | 0.90 |
| ENSG00000120910 | <i>PPP3CC</i>            | PD | Wald ratio                      | 1 | 0.563  | 0.001295 | 1.76 | 1.25 | 2.47 |
| ENSG00000162971 | <i>TYW5</i>              | PD | Wald ratio                      | 1 | -0.288 | 0.001308 | 0.75 | 0.63 | 0.89 |
| ENSG00000239556 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.361 | 0.001371 | 0.70 | 0.56 | 0.87 |
| ENSG00000085788 | <i>DDHD2</i>             | PD | Wald ratio                      | 1 | 0.357  | 0.001379 | 1.43 | 1.15 | 1.78 |
| ENSG00000120913 | <i>PDLIM2</i>            | PD | Wald ratio                      | 1 | -0.329 | 0.00145  | 0.72 | 0.59 | 0.88 |
| ENSG00000253200 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.321 | 0.001453 | 0.73 | 0.60 | 0.88 |
| ENSG00000089041 | <i>P2RX7</i>             | PD | Inverse<br>variance<br>weighted | 2 | 0.405  | 0.001472 | 1.50 | 1.17 | 1.92 |
| ENSG00000258708 | <i>SLC25A21-<br/>AS1</i> | PD | Wald ratio                      | 1 | 0.373  | 0.001542 | 1.45 | 1.15 | 1.83 |
| ENSG00000155252 | <i>PI4K2A</i>            | PD | Wald ratio                      | 1 | 0.401  | 0.001554 | 1.49 | 1.16 | 1.92 |
| ENSG00000271755 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.276  | 0.001655 | 1.32 | 1.11 | 1.57 |
| ENSG00000199545 | <i>RNA5SP195</i>         | PD | Wald ratio                      | 1 | -2.577 | 0.001663 | 0.08 | 0.02 | 0.38 |
| ENSG00000172346 | <i>CSDC2</i>             | PD | Wald ratio                      | 1 | -0.239 | 0.001712 | 0.79 | 0.68 | 0.91 |
| ENSG00000236430 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.418  | 0.001745 | 1.52 | 1.17 | 1.97 |
| ENSG00000184110 | <i>EIF3C</i>             | PD | Wald ratio                      | 1 | -0.161 | 0.001954 | 0.85 | 0.77 | 0.94 |
| ENSG00000265242 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.459 | 0.001977 | 0.63 | 0.47 | 0.85 |
| ENSG00000237096 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.409  | 0.00205  | 1.50 | 1.16 | 1.95 |
| ENSG00000087157 | <i>PGS1</i>              | PD | Wald ratio                      | 1 | 0.350  | 0.002165 | 1.42 | 1.13 | 1.77 |
| ENSG00000026297 | <i>RNASET2</i>           | PD | Wald ratio                      | 1 | 0.485  | 0.002236 | 1.62 | 1.19 | 2.22 |
| ENSG00000178922 | <i>HYI</i>               | PD | Wald ratio                      | 1 | -0.228 | 0.002258 | 0.80 | 0.69 | 0.92 |
| ENSG00000085491 | <i>SLC25A24</i>          | PD | Wald ratio                      | 1 | -0.167 | 0.002263 | 0.85 | 0.76 | 0.94 |
| ENSG00000143819 | <i>EPHX1</i>             | PD | Wald ratio                      | 1 | -0.800 | 0.002356 | 0.45 | 0.27 | 0.75 |
| ENSG00000118407 | <i>FILIP1</i>            | PD | Wald ratio                      | 1 | -0.714 | 0.002441 | 0.49 | 0.31 | 0.78 |
| ENSG00000168077 | <i>SCARA3</i>            | PD | Wald ratio                      | 1 | -0.675 | 0.002566 | 0.51 | 0.33 | 0.79 |
| ENSG00000035499 | <i>DEPDC1B</i>           | PD | Wald ratio                      | 1 | -0.389 | 0.0026   | 0.68 | 0.53 | 0.87 |
| ENSG00000063854 | <i>HAGH</i>              | PD | Wald ratio                      | 1 | -0.409 | 0.002608 | 0.66 | 0.51 | 0.87 |
| ENSG00000125449 | <i>ARMC7</i>             | PD | Wald ratio                      | 1 | -0.893 | 0.002657 | 0.41 | 0.23 | 0.73 |
| ENSG00000260879 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.378 | 0.002661 | 0.68 | 0.54 | 0.88 |
| ENSG00000168350 | <i>DEGS2</i>             | PD | Wald ratio                      | 1 | -0.527 | 0.002772 | 0.59 | 0.42 | 0.83 |
| ENSG00000105852 | <i>PON3</i>              | PD | Wald ratio                      | 1 | 0.343  | 0.002861 | 1.41 | 1.12 | 1.77 |
| ENSG00000167186 | <i>COQ7</i>              | PD | Inverse<br>variance<br>weighted | 2 | 0.379  | 0.00287  | 1.46 | 1.14 | 1.87 |
| ENSG00000162039 | <i>MEIOB</i>             | PD | Inverse<br>variance<br>weighted | 2 | 0.143  | 0.002892 | 1.15 | 1.05 | 1.27 |
| ENSG00000164070 | <i>HSPA4L</i>            | PD | Wald ratio                      | 1 | -0.933 | 0.003119 | 0.39 | 0.21 | 0.73 |

|                 |                 |    |            |   |        |          |      |      |      |
|-----------------|-----------------|----|------------|---|--------|----------|------|------|------|
| ENSG00000205609 | <i>EIF3CL</i>   | PD | Wald ratio | 1 | -0.226 | 0.003131 | 0.80 | 0.69 | 0.93 |
| ENSG00000221933 | <i>OR2A25</i>   | PD | Wald ratio | 1 | -0.405 | 0.003146 | 0.67 | 0.51 | 0.87 |
| ENSG00000112796 | <i>ENPP5</i>    | PD | Wald ratio | 1 | -0.362 | 0.003173 | 0.70 | 0.55 | 0.89 |
| ENSG00000229402 | <i>#N/A</i>     | PD | Wald ratio | 1 | -0.527 | 0.003197 | 0.59 | 0.42 | 0.84 |
| ENSG00000065054 | <i>SLC9A3R2</i> | PD | Wald ratio | 1 | -0.334 | 0.003226 | 0.72 | 0.57 | 0.89 |
| ENSG00000260793 | <i>#N/A</i>     | PD | Wald ratio | 1 | 0.522  | 0.00323  | 1.69 | 1.19 | 2.39 |
| ENSG00000172236 | <i>TPSAB1</i>   | PD | Wald ratio | 1 | -0.205 | 0.003302 | 0.81 | 0.71 | 0.93 |
| ENSG00000251310 | <i>#N/A</i>     | PD | Wald ratio | 1 | -0.461 | 0.003322 | 0.63 | 0.46 | 0.86 |
| ENSG00000213215 | <i>OR2F1</i>    | PD | Wald ratio | 1 | -0.342 | 0.003343 | 0.71 | 0.57 | 0.89 |
| ENSG00000204869 | <i>IGFL4</i>    | PD | Wald ratio | 1 | 0.306  | 0.003421 | 1.36 | 1.11 | 1.67 |
| ENSG00000167778 | <i>SPRYD3</i>   | PD | Wald ratio | 1 | -0.787 | 0.003489 | 0.46 | 0.27 | 0.77 |
| ENSG00000117280 | <i>RAB29</i>    | PD | Wald ratio | 1 | 0.256  | 0.003521 | 1.29 | 1.09 | 1.54 |
| ENSG00000182372 | <i>CLN8</i>     | PD | Wald ratio | 1 | 0.340  | 0.003534 | 1.41 | 1.12 | 1.77 |
| ENSG00000105339 | <i>DENND3</i>   | PD | Wald ratio | 1 | -0.677 | 0.003565 | 0.51 | 0.32 | 0.80 |
| ENSG00000130768 | <i>SMPDL3B</i>  | PD | Wald ratio | 1 | 0.299  | 0.003608 | 1.35 | 1.10 | 1.65 |
| ENSG00000070061 | <i>ELP1</i>     | PD | Wald ratio | 1 | -0.418 | 0.003662 | 0.66 | 0.50 | 0.87 |
| ENSG00000149311 | <i>ATM</i>      | PD | Wald ratio | 1 | 0.954  | 0.003662 | 2.60 | 1.36 | 4.94 |
| ENSG00000270005 | <i>#N/A</i>     | PD | Wald ratio | 1 | 0.365  | 0.003691 | 1.44 | 1.13 | 1.84 |
| ENSG00000271875 | <i>#N/A</i>     | PD | Wald ratio | 1 | -0.342 | 0.003732 | 0.71 | 0.56 | 0.89 |
| ENSG00000249877 | <i>#N/A</i>     | PD | Wald ratio | 1 | -0.837 | 0.00385  | 0.43 | 0.25 | 0.76 |
| ENSG00000185619 | <i>PCGF3</i>    | PD | Wald ratio | 1 | -0.360 | 0.00404  | 0.70 | 0.55 | 0.89 |
| ENSG00000238084 | <i>#N/A</i>     | PD | Wald ratio | 1 | -0.196 | 0.004157 | 0.82 | 0.72 | 0.94 |
| ENSG00000132530 | <i>XAF1</i>     | PD | Wald ratio | 1 | -0.446 | 0.004294 | 0.64 | 0.47 | 0.87 |
| ENSG00000144792 | <i>ZNF660</i>   | PD | Wald ratio | 1 | -0.278 | 0.004345 | 0.76 | 0.63 | 0.92 |
| ENSG00000110171 | <i>TRIM3</i>    | PD | Wald ratio | 1 | -0.650 | 0.004372 | 0.52 | 0.33 | 0.82 |
| ENSG00000100299 | <i>ARSA</i>     | PD | Wald ratio | 1 | 0.652  | 0.004395 | 1.92 | 1.23 | 3.01 |
| ENSG00000271937 | <i>#N/A</i>     | PD | Wald ratio | 1 | -0.220 | 0.004455 | 0.80 | 0.69 | 0.93 |
| ENSG00000128253 | <i>RFPL2</i>    | PD | Wald ratio | 1 | -0.191 | 0.004533 | 0.83 | 0.72 | 0.94 |
| ENSG00000082898 | <i>XPO1</i>     | PD | Wald ratio | 1 | -0.860 | 0.004593 | 0.42 | 0.23 | 0.77 |
| ENSG00000117020 | <i>AKT3</i>     | PD | Wald ratio | 1 | 1.153  | 0.004593 | 3.17 | 1.43 | 7.03 |
| ENSG00000213214 | <i>ARHGEF35</i> | PD | Wald ratio | 1 | 0.225  | 0.004607 | 1.25 | 1.07 | 1.46 |
| ENSG00000221836 | <i>OR2A5</i>    | PD | Wald ratio | 1 | -0.157 | 0.004607 | 0.86 | 0.77 | 0.95 |
| ENSG00000221938 | <i>OR2A14</i>   | PD | Wald ratio | 1 | -0.308 | 0.004607 | 0.74 | 0.59 | 0.91 |
| ENSG00000221989 | <i>OR2A2</i>    | PD | Wald ratio | 1 | -0.188 | 0.004607 | 0.83 | 0.73 | 0.94 |
| ENSG00000273234 | <i>#N/A</i>     | PD | Wald ratio | 1 | -0.146 | 0.004607 | 0.86 | 0.78 | 0.96 |
| ENSG00000272368 | <i>#N/A</i>     | PD | Wald ratio | 1 | 0.239  | 0.00462  | 1.27 | 1.08 | 1.50 |
| ENSG00000197238 | <i>H4C11</i>    | PD | Wald ratio | 1 | -0.676 | 0.004864 | 0.51 | 0.32 | 0.81 |
| ENSG00000138641 | <i>HERC3</i>    | PD | Wald ratio | 1 | 0.314  | 0.004866 | 1.37 | 1.10 | 1.70 |
| ENSG00000109576 | <i>AADAT</i>    | PD | Wald ratio | 1 | -0.281 | 0.004892 | 0.76 | 0.62 | 0.92 |
| ENSG00000135541 | <i>AH11</i>     | PD | Wald ratio | 1 | -0.526 | 0.004946 | 0.59 | 0.41 | 0.85 |
| ENSG00000144460 | <i>NYAP2</i>    | PD | Wald ratio | 1 | 0.781  | 0.004967 | 2.18 | 1.27 | 3.76 |
| ENSG00000178467 | <i>P4HTM</i>    | PD | Wald ratio | 1 | 0.435  | 0.005057 | 1.55 | 1.14 | 2.09 |
| ENSG00000198380 | <i>GFPT1</i>    | PD | Wald ratio | 1 | -0.654 | 0.00511  | 0.52 | 0.33 | 0.82 |
| ENSG00000197674 | <i>#N/A</i>     | PD | Wald ratio | 1 | 0.393  | 0.00511  | 1.48 | 1.13 | 1.95 |

|                 |                  |    |                                 |   |        |          |      |      |      |
|-----------------|------------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000263488 | #N/A             | PD | Wald ratio                      | 1 | -0.466 | 0.005165 | 0.63 | 0.45 | 0.87 |
| ENSG00000216316 | #N/A             | PD | Wald ratio                      | 1 | -0.415 | 0.005217 | 0.66 | 0.49 | 0.88 |
| ENSG00000125388 | <i>GRK4</i>      | PD | Wald ratio                      | 1 | -0.333 | 0.005294 | 0.72 | 0.57 | 0.91 |
| ENSG00000197635 | <i>DPP4</i>      | PD | Wald ratio                      | 1 | 0.325  | 0.00535  | 1.38 | 1.10 | 1.74 |
| ENSG00000177479 | <i>ARIH2</i>     | PD | Wald ratio                      | 1 | 0.386  | 0.005611 | 1.47 | 1.12 | 1.93 |
| ENSG00000087076 | <i>HSD17B14</i>  | PD | Wald ratio                      | 1 | -0.405 | 0.005646 | 0.67 | 0.50 | 0.89 |
| ENSG00000255198 | <i>SNHG9</i>     | PD | Wald ratio                      | 1 | 0.273  | 0.005681 | 1.31 | 1.08 | 1.60 |
| ENSG00000267475 | #N/A             | PD | Wald ratio                      | 1 | -0.296 | 0.005708 | 0.74 | 0.60 | 0.92 |
| ENSG00000101442 | <i>ACTR5</i>     | PD | Wald ratio                      | 1 | 0.376  | 0.005719 | 1.46 | 1.12 | 1.90 |
| ENSG00000203288 | <i>TDRKH-AS1</i> | PD | Wald ratio                      | 1 | 0.193  | 0.005774 | 1.21 | 1.06 | 1.39 |
| ENSG00000273377 | <i>OR2Q1P</i>    | PD | Wald ratio                      | 1 | -0.335 | 0.005836 | 0.72 | 0.56 | 0.91 |
| ENSG00000253982 | <i>CLN8-AS1</i>  | PD | Wald ratio                      | 1 | 0.328  | 0.005857 | 1.39 | 1.10 | 1.75 |
| ENSG00000206187 | <i>LINC02346</i> | PD | Wald ratio                      | 1 | -0.575 | 0.00593  | 0.56 | 0.37 | 0.85 |
| ENSG00000213626 | <i>LBH</i>       | PD | Wald ratio                      | 1 | 0.852  | 0.00598  | 2.34 | 1.28 | 4.30 |
| ENSG00000143157 | <i>POGK</i>      | PD | Wald ratio                      | 1 | -0.487 | 0.006028 | 0.61 | 0.43 | 0.87 |
| ENSG00000132196 | <i>HSD17B7</i>   | PD | Wald ratio                      | 1 | -0.592 | 0.006044 | 0.55 | 0.36 | 0.84 |
| ENSG00000100614 | <i>PPM1A</i>     | PD | Wald ratio                      | 1 | 0.656  | 0.006059 | 1.93 | 1.21 | 3.08 |
| ENSG00000157445 | <i>CACNA2D3</i>  | PD | Wald ratio                      | 1 | -0.771 | 0.006081 | 0.46 | 0.27 | 0.80 |
| ENSG00000184009 | <i>ACTG1</i>     | PD | Wald ratio                      | 1 | -0.853 | 0.006163 | 0.43 | 0.23 | 0.78 |
| ENSG00000164615 | <i>CAMLG</i>     | PD | Wald ratio                      | 1 | -0.119 | 0.006175 | 0.89 | 0.82 | 0.97 |
| ENSG00000110218 | <i>PANX1</i>     | PD | Wald ratio                      | 1 | -0.404 | 0.006248 | 0.67 | 0.50 | 0.89 |
| ENSG00000227593 | #N/A             | PD | Wald ratio                      | 1 | 0.289  | 0.006248 | 1.34 | 1.09 | 1.64 |
| ENSG00000174353 | <i>TRIM74</i>    | PD | Wald ratio                      | 1 | -0.498 | 0.006256 | 0.61 | 0.43 | 0.87 |
| ENSG00000221553 | #N/A             | PD | Wald ratio                      | 1 | -0.767 | 0.006286 | 0.46 | 0.27 | 0.81 |
| ENSG00000250091 | #N/A             | PD | Wald ratio                      | 1 | 0.240  | 0.006327 | 1.27 | 1.07 | 1.51 |
| ENSG00000270028 | #N/A             | PD | Wald ratio                      | 1 | 0.227  | 0.006327 | 1.25 | 1.07 | 1.48 |
| ENSG00000133835 | <i>HSD17B4</i>   | PD | Wald ratio                      | 1 | -0.473 | 0.006336 | 0.62 | 0.44 | 0.88 |
| ENSG00000230316 | <i>FEZF1-AS1</i> | PD | Wald ratio                      | 1 | -0.224 | 0.006349 | 0.80 | 0.68 | 0.94 |
| ENSG00000124422 | <i>USP22</i>     | PD | Wald ratio                      | 1 | -0.496 | 0.006393 | 0.61 | 0.43 | 0.87 |
| ENSG00000183122 | #N/A             | PD | Wald ratio                      | 1 | -0.173 | 0.00645  | 0.84 | 0.74 | 0.95 |
| ENSG00000213672 | <i>NCKIPSD</i>   | PD | Wald ratio                      | 1 | 0.291  | 0.006497 | 1.34 | 1.08 | 1.65 |
| ENSG00000189129 | <i>PLAC9</i>     | PD | Wald ratio                      | 1 | -0.222 | 0.006533 | 0.80 | 0.68 | 0.94 |
| ENSG00000101460 | <i>MAP1LC3A</i>  | PD | Wald ratio                      | 1 | 0.283  | 0.006577 | 1.33 | 1.08 | 1.63 |
| ENSG00000135636 | <i>DYSF</i>      | PD | Wald ratio                      | 1 | 0.771  | 0.00677  | 2.16 | 1.24 | 3.78 |
| ENSG00000224043 | #N/A             | PD | Wald ratio                      | 1 | 0.286  | 0.006944 | 1.33 | 1.08 | 1.64 |
| ENSG00000197774 | <i>EME2</i>      | PD | Wald ratio                      | 1 | -0.422 | 0.007005 | 0.66 | 0.48 | 0.89 |
| ENSG00000228950 | #N/A             | PD | Wald ratio                      | 1 | -0.280 | 0.007044 | 0.76 | 0.62 | 0.93 |
| ENSG00000100413 | <i>POLR3H</i>    | PD | Wald ratio                      | 1 | -0.206 | 0.007156 | 0.81 | 0.70 | 0.95 |
| ENSG00000013288 | <i>MAN2B2</i>    | PD | Wald ratio                      | 1 | -0.453 | 0.007188 | 0.64 | 0.46 | 0.88 |
| ENSG00000167588 | <i>GPD1</i>      | PD | Wald ratio                      | 1 | 0.487  | 0.007191 | 1.63 | 1.14 | 2.32 |
| ENSG00000152147 | <i>GEMIN6</i>    | PD | Wald ratio                      | 1 | -0.618 | 0.007458 | 0.54 | 0.34 | 0.85 |
| ENSG00000261701 | <i>HPR</i>       | PD | Inverse<br>variance<br>weighted | 3 | -0.063 | 0.00747  | 0.94 | 0.90 | 0.98 |

|                 |                  |    |                                 |   |        |          |      |      |      |
|-----------------|------------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000173960 | <i>UBXN2A</i>    | PD | Wald ratio                      | 1 | 0.408  | 0.007503 | 1.50 | 1.12 | 2.03 |
| ENSG00000204876 | <i>LOC389602</i> | PD | Wald ratio                      | 1 | 0.145  | 0.007694 | 1.16 | 1.04 | 1.29 |
| ENSG00000172273 | <i>HINFP</i>     | PD | Wald ratio                      | 1 | -0.420 | 0.007881 | 0.66 | 0.48 | 0.90 |
| ENSG00000187010 | <i>RHD</i>       | PD | Inverse<br>variance<br>weighted | 2 | -0.099 | 0.008149 | 0.91 | 0.84 | 0.97 |
| ENSG00000131981 | <i>LGALS3</i>    | PD | Wald ratio                      | 1 | 0.524  | 0.008161 | 1.69 | 1.15 | 2.49 |
| ENSG00000221813 | <i>OR6B1</i>     | PD | Wald ratio                      | 1 | -0.241 | 0.008327 | 0.79 | 0.66 | 0.94 |
| ENSG00000248810 | <i>LINC02432</i> | PD | Wald ratio                      | 1 | -0.305 | 0.008504 | 0.74 | 0.59 | 0.93 |
| ENSG00000259160 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -1.162 | 0.008548 | 0.31 | 0.13 | 0.74 |
| ENSG00000204789 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.526 | 0.008574 | 0.59 | 0.40 | 0.87 |
| ENSG00000171476 | <i>HOPX</i>      | PD | Wald ratio                      | 1 | 1.224  | 0.008646 | 3.40 | 1.36 | 8.49 |
| ENSG00000171067 | <i>C11orf24</i>  | PD | Wald ratio                      | 1 | -0.242 | 0.008733 | 0.79 | 0.66 | 0.94 |
| ENSG00000120756 | <i>PLS1</i>      | PD | Wald ratio                      | 1 | 0.306  | 0.008739 | 1.36 | 1.08 | 1.71 |
| ENSG00000152404 | <i>CWF19L2</i>   | PD | Wald ratio                      | 1 | 0.806  | 0.00876  | 2.24 | 1.23 | 4.09 |
| ENSG00000271662 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.179 | 0.008978 | 0.84 | 0.73 | 0.96 |
| ENSG00000183726 | <i>TMEM50A</i>   | PD | Wald ratio                      | 1 | 0.332  | 0.009008 | 1.39 | 1.09 | 1.79 |
| ENSG00000228014 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.170 | 0.009037 | 0.84 | 0.74 | 0.96 |
| ENSG00000143776 | <i>CDC42BPA</i>  | PD | Wald ratio                      | 1 | 0.595  | 0.009163 | 1.81 | 1.16 | 2.84 |
| ENSG00000204169 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.200 | 0.00918  | 0.82 | 0.70 | 0.95 |
| ENSG00000214194 | <i>SMIM30</i>    | PD | Wald ratio                      | 1 | -1.208 | 0.009605 | 0.30 | 0.12 | 0.75 |
| ENSG00000272195 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.236 | 0.009618 | 0.79 | 0.66 | 0.94 |
| ENSG00000167515 | <i>TRAPPC2L</i>  | PD | Wald ratio                      | 1 | -0.295 | 0.009639 | 0.74 | 0.60 | 0.93 |
| ENSG00000049449 | <i>RCN1</i>      | PD | Wald ratio                      | 1 | 0.352  | 0.009696 | 1.42 | 1.09 | 1.86 |
| ENSG00000272511 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.320 | 0.009754 | 0.73 | 0.57 | 0.93 |
| ENSG00000137054 | <i>POLRIE</i>    | PD | Wald ratio                      | 1 | 0.281  | 0.009857 | 1.32 | 1.07 | 1.64 |
| ENSG00000173699 | <i>SPATA3</i>    | PD | Wald ratio                      | 1 | -0.229 | 0.01006  | 0.80 | 0.67 | 0.95 |
| ENSG00000227345 | <i>PARG</i>      | PD | Wald ratio                      | 1 | -0.590 | 0.01006  | 0.55 | 0.35 | 0.87 |
| ENSG00000169629 | <i>RGPD8</i>     | PD | Wald ratio                      | 1 | 0.203  | 0.010067 | 1.23 | 1.05 | 1.43 |
| ENSG00000143437 | <i>ARNT</i>      | PD | Wald ratio                      | 1 | -0.263 | 0.010403 | 0.77 | 0.63 | 0.94 |
| ENSG00000160216 | <i>AGPAT3</i>    | PD | Wald ratio                      | 1 | 0.550  | 0.010478 | 1.73 | 1.14 | 2.64 |
| ENSG00000109534 | <i>GARI</i>      | PD | Wald ratio                      | 1 | 0.307  | 0.010508 | 1.36 | 1.07 | 1.72 |
| ENSG00000227258 | <i>SMIM2-AS1</i> | PD | Wald ratio                      | 1 | -0.128 | 0.010602 | 0.88 | 0.80 | 0.97 |
| ENSG00000259358 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.666 | 0.010602 | 0.51 | 0.31 | 0.86 |
| ENSG00000172640 | <i>OR10AD1</i>   | PD | Wald ratio                      | 1 | -0.417 | 0.010678 | 0.66 | 0.48 | 0.91 |
| ENSG00000139865 | <i>TTC6</i>      | PD | Wald ratio                      | 1 | -0.345 | 0.010766 | 0.71 | 0.54 | 0.92 |
| ENSG00000144036 | <i>EXOC6B</i>    | PD | Wald ratio                      | 1 | -0.827 | 0.010828 | 0.44 | 0.23 | 0.83 |
| ENSG00000235296 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | -0.110 | 0.010872 | 0.90 | 0.82 | 0.97 |
| ENSG00000231806 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | 0.079  | 0.010886 | 1.08 | 1.02 | 1.15 |
| ENSG00000145214 | <i>DGKQ</i>      | PD | Wald ratio                      | 1 | 0.259  | 0.01101  | 1.30 | 1.06 | 1.58 |
| ENSG00000088833 | <i>NSFL1C</i>    | PD | Wald ratio                      | 1 | -0.389 | 0.011063 | 0.68 | 0.50 | 0.91 |
| ENSG00000078304 | <i>PPP2R5C</i>   | PD | Wald ratio                      | 1 | 0.405  | 0.011068 | 1.50 | 1.10 | 2.05 |
| ENSG00000254835 | <i>#N/A</i>      | PD | Wald ratio                      | 1 | 0.154  | 0.011178 | 1.17 | 1.04 | 1.31 |
| ENSG00000156990 | <i>RPUSD3</i>    | PD | Wald ratio                      | 1 | 0.250  | 0.011271 | 1.28 | 1.06 | 1.56 |

|                 |                         |    |                                 |   |        |          |      |      |      |
|-----------------|-------------------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000217377 | <i>AK4P5</i>            | PD | Inverse<br>variance<br>weighted | 2 | -0.477 | 0.011393 | 0.62 | 0.43 | 0.90 |
| ENSG00000228755 | <i>#N/A</i>             | PD | Wald ratio                      | 1 | 0.213  | 0.011451 | 1.24 | 1.05 | 1.46 |
| ENSG00000119242 | <i>CCDC92</i>           | PD | Wald ratio                      | 1 | -1.033 | 0.011601 | 0.36 | 0.16 | 0.79 |
| ENSG00000083544 | <i>TDRD3</i>            | PD | Wald ratio                      | 1 | -0.576 | 0.011609 | 0.56 | 0.36 | 0.88 |
| ENSG00000175749 | <i>EIF3KP1</i>          | PD | Wald ratio                      | 1 | -0.189 | 0.011678 | 0.83 | 0.71 | 0.96 |
| ENSG00000182544 | <i>MFSD5</i>            | PD | Wald ratio                      | 1 | -0.573 | 0.011678 | 0.56 | 0.36 | 0.88 |
| ENSG00000117399 | <i>CDC20</i>            | PD | Wald ratio                      | 1 | -0.341 | 0.011754 | 0.71 | 0.55 | 0.93 |
| ENSG00000143452 | <i>HORMAD1</i>          | PD | Wald ratio                      | 1 | -0.159 | 0.011927 | 0.85 | 0.75 | 0.97 |
| ENSG00000155158 | <i>TTC39B</i>           | PD | Wald ratio                      | 1 | 1.074  | 0.011932 | 2.93 | 1.27 | 6.76 |
| ENSG00000266999 | <i>#N/A</i>             | PD | Wald ratio                      | 1 | -0.453 | 0.012055 | 0.64 | 0.45 | 0.91 |
| ENSG00000184779 | <i>#N/A</i>             | PD | Wald ratio                      | 1 | -0.386 | 0.01232  | 0.68 | 0.50 | 0.92 |
| ENSG00000141012 | <i>GALNS</i>            | PD | Wald ratio                      | 1 | 0.469  | 0.012419 | 1.60 | 1.11 | 2.31 |
| ENSG00000104863 | <i>LIN7B</i>            | PD | Wald ratio                      | 1 | -0.363 | 0.012513 | 0.70 | 0.52 | 0.92 |
| ENSG00000215146 | <i>LOC441666</i>        | PD | Wald ratio                      | 1 | 0.097  | 0.012575 | 1.10 | 1.02 | 1.19 |
| ENSG00000111912 | <i>NCOA7</i>            | PD | Wald ratio                      | 1 | 0.865  | 0.01258  | 2.38 | 1.20 | 4.69 |
| ENSG00000188056 | <i>TREML4</i>           | PD | Wald ratio                      | 1 | -0.114 | 0.012591 | 0.89 | 0.82 | 0.98 |
| ENSG00000214743 | <i>#N/A</i>             | PD | Wald ratio                      | 1 | -0.744 | 0.012648 | 0.48 | 0.26 | 0.85 |
| ENSG00000261338 | <i>#N/A</i>             | PD | Wald ratio                      | 1 | 0.070  | 0.012713 | 1.07 | 1.02 | 1.13 |
| ENSG00000258144 | <i>LINC02406</i>        | PD | Wald ratio                      | 1 | 0.197  | 0.012867 | 1.22 | 1.04 | 1.42 |
| ENSG00000213973 | <i>ZNF99</i>            | PD | Wald ratio                      | 1 | -0.417 | 0.013124 | 0.66 | 0.47 | 0.92 |
| ENSG00000125445 | <i>MRPS7</i>            | PD | Wald ratio                      | 1 | -0.369 | 0.013255 | 0.69 | 0.52 | 0.93 |
| ENSG00000251450 | <i>RASGRF2-<br/>ASI</i> | PD | Wald ratio                      | 1 | 0.186  | 0.013279 | 1.20 | 1.04 | 1.39 |
| ENSG00000161798 | <i>AQP5</i>             | PD | Wald ratio                      | 1 | 0.264  | 0.013442 | 1.30 | 1.06 | 1.61 |
| ENSG00000147912 | <i>FBXO10</i>           | PD | Wald ratio                      | 1 | 0.462  | 0.013523 | 1.59 | 1.10 | 2.29 |
| ENSG00000124207 | <i>CSEIL</i>            | PD | Wald ratio                      | 1 | 0.522  | 0.013539 | 1.68 | 1.11 | 2.55 |
| ENSG00000198153 | <i>ZNF849P</i>          | PD | Wald ratio                      | 1 | -0.215 | 0.013597 | 0.81 | 0.68 | 0.96 |
| ENSG00000134248 | <i>LAMTOR5</i>          | PD | Wald ratio                      | 1 | -0.440 | 0.013638 | 0.64 | 0.45 | 0.91 |
| ENSG00000180011 | <i>ZADH2</i>            | PD | Wald ratio                      | 1 | -0.358 | 0.013659 | 0.70 | 0.53 | 0.93 |
| ENSG00000268038 | <i>LINC01785</i>        | PD | Wald ratio                      | 1 | -0.978 | 0.013841 | 0.38 | 0.17 | 0.82 |
| ENSG00000163827 | <i>LRRC2</i>            | PD | Inverse<br>variance<br>weighted | 2 | -0.105 | 0.013889 | 0.90 | 0.83 | 0.98 |
| ENSG00000012223 | <i>LTF</i>              | PD | Wald ratio                      | 1 | 0.120  | 0.014086 | 1.13 | 1.02 | 1.24 |
| ENSG00000074706 | <i>IPCEF1</i>           | PD | Wald ratio                      | 1 | 0.747  | 0.014218 | 2.11 | 1.16 | 3.83 |
| ENSG00000096063 | <i>SRPK1</i>            | PD | Wald ratio                      | 1 | -0.496 | 0.014228 | 0.61 | 0.41 | 0.91 |
| ENSG00000132749 | <i>TESMIN</i>           | PD | Wald ratio                      | 1 | 0.269  | 0.014286 | 1.31 | 1.06 | 1.62 |
| ENSG00000142185 | <i>TRPM2</i>            | PD | Wald ratio                      | 1 | 0.411  | 0.014447 | 1.51 | 1.09 | 2.10 |
| ENSG00000084764 | <i>MAPRE3</i>           | PD | Wald ratio                      | 1 | 0.975  | 0.014533 | 2.65 | 1.21 | 5.80 |
| ENSG00000256989 | <i>#N/A</i>             | PD | Wald ratio                      | 1 | -0.424 | 0.014621 | 0.65 | 0.47 | 0.92 |
| ENSG00000226856 | <i>THORLNC</i>          | PD | Wald ratio                      | 1 | 0.208  | 0.014841 | 1.23 | 1.04 | 1.45 |
| ENSG00000172687 | <i>ZNF738</i>           | PD | Wald ratio                      | 1 | 0.148  | 0.014993 | 1.16 | 1.03 | 1.31 |

|                 |                  |    |            |   |        |          |      |      |      |
|-----------------|------------------|----|------------|---|--------|----------|------|------|------|
| ENSG00000170017 | <i>ALCAM</i>     | PD | Wald ratio | 1 | 1.203  | 0.015002 | 3.33 | 1.26 | 8.78 |
| ENSG00000138246 | <i>DNAJC13</i>   | PD | Wald ratio | 1 | 0.418  | 0.015084 | 1.52 | 1.08 | 2.13 |
| ENSG00000169018 | <i>FEM1B</i>     | PD | Wald ratio | 1 | 1.006  | 0.015097 | 2.73 | 1.21 | 6.15 |
| ENSG00000260657 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.180 | 0.015097 | 0.84 | 0.72 | 0.97 |
| ENSG00000197256 | <i>KANK2</i>     | PD | Wald ratio | 1 | -0.317 | 0.015128 | 0.73 | 0.56 | 0.94 |
| ENSG00000177398 | <i>UMODL1</i>    | PD | Wald ratio | 1 | -0.244 | 0.015414 | 0.78 | 0.64 | 0.95 |
| ENSG00000223443 | <i>USP17L2</i>   | PD | Wald ratio | 1 | 0.567  | 0.01582  | 1.76 | 1.11 | 2.79 |
| ENSG00000226430 | <i>USP17L7</i>   | PD | Wald ratio | 1 | 0.590  | 0.01582  | 1.80 | 1.12 | 2.91 |
| ENSG00000239775 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.282 | 0.015825 | 0.75 | 0.60 | 0.95 |
| ENSG00000152760 | <i>DYNLT5</i>    | PD | Wald ratio | 1 | 0.120  | 0.01596  | 1.13 | 1.02 | 1.24 |
| ENSG00000167528 | <i>ZNF641</i>    | PD | Wald ratio | 1 | -0.374 | 0.01605  | 0.69 | 0.51 | 0.93 |
| ENSG00000105656 | <i>ELL</i>       | PD | Wald ratio | 1 | 0.238  | 0.016124 | 1.27 | 1.05 | 1.54 |
| ENSG00000250189 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.510 | 0.016177 | 0.60 | 0.40 | 0.91 |
| ENSG00000158856 | <i>DMTN</i>      | PD | Wald ratio | 1 | 0.815  | 0.016337 | 2.26 | 1.16 | 4.39 |
| ENSG00000163565 | <i>IFI16</i>     | PD | Wald ratio | 1 | 0.386  | 0.016509 | 1.47 | 1.07 | 2.02 |
| ENSG00000130818 | <i>ZNF426</i>    | PD | Wald ratio | 1 | -0.620 | 0.01662  | 0.54 | 0.32 | 0.89 |
| ENSG00000170837 | <i>GPR27</i>     | PD | Wald ratio | 1 | -0.356 | 0.016665 | 0.70 | 0.52 | 0.94 |
| ENSG00000163938 | <i>GNL3</i>      | PD | Wald ratio | 1 | -0.478 | 0.016718 | 0.62 | 0.42 | 0.92 |
| ENSG00000125629 | <i>INSIG2</i>    | PD | Wald ratio | 1 | 0.540  | 0.01677  | 1.72 | 1.10 | 2.67 |
| ENSG00000054282 | <i>SDCCAG8</i>   | PD | Wald ratio | 1 | 0.706  | 0.01677  | 2.03 | 1.14 | 3.62 |
| ENSG00000215032 | <i>GNL3LP1</i>   | PD | Wald ratio | 1 | -0.247 | 0.016789 | 0.78 | 0.64 | 0.96 |
| ENSG00000125450 | <i>NUP85</i>     | PD | Wald ratio | 1 | 0.228  | 0.016961 | 1.26 | 1.04 | 1.52 |
| ENSG00000163082 | <i>SGPP2</i>     | PD | Wald ratio | 1 | 0.254  | 0.017173 | 1.29 | 1.05 | 1.59 |
| ENSG00000272143 | <i>FGF14-AS2</i> | PD | Wald ratio | 1 | -0.314 | 0.017181 | 0.73 | 0.56 | 0.95 |
| ENSG00000146005 | <i>PSD2</i>      | PD | Wald ratio | 1 | -0.829 | 0.017218 | 0.44 | 0.22 | 0.86 |
| ENSG00000100583 | <i>SAMD15</i>    | PD | Wald ratio | 1 | -0.274 | 0.017374 | 0.76 | 0.61 | 0.95 |
| ENSG00000259162 | <i>#N/A</i>      | PD | Wald ratio | 1 | 0.980  | 0.017661 | 2.66 | 1.19 | 5.98 |
| ENSG00000164199 | <i>ADGRV1</i>    | PD | Wald ratio | 1 | -0.616 | 0.017714 | 0.54 | 0.32 | 0.90 |
| ENSG00000204524 | <i>ZNF805</i>    | PD | Wald ratio | 1 | -0.354 | 0.017853 | 0.70 | 0.52 | 0.94 |
| ENSG00000146731 | <i>CCT6A</i>     | PD | Wald ratio | 1 | -0.635 | 0.017972 | 0.53 | 0.31 | 0.90 |
| ENSG00000110427 | <i>KIAA1549L</i> | PD | Wald ratio | 1 | -0.862 | 0.017976 | 0.42 | 0.21 | 0.86 |
| ENSG00000167553 | <i>TUBA1C</i>    | PD | Wald ratio | 1 | 0.167  | 0.017976 | 1.18 | 1.03 | 1.36 |
| ENSG00000165272 | <i>AQP3</i>      | PD | Inverse    | 2 | -0.164 | 0.018627 | 0.85 | 0.74 | 0.97 |
|                 |                  |    | variance   |   |        |          |      |      |      |
|                 |                  |    | weighted   |   |        |          |      |      |      |
| ENSG00000161904 | <i>LEMD2</i>     | PD | Wald ratio | 1 | -0.481 | 0.018759 | 0.62 | 0.41 | 0.92 |
| ENSG00000181039 | <i>#N/A</i>      | PD | Wald ratio | 1 | 0.913  | 0.01885  | 2.49 | 1.16 | 5.34 |
| ENSG00000197442 | <i>MAP3K5</i>    | PD | Wald ratio | 1 | 0.836  | 0.019145 | 2.31 | 1.15 | 4.64 |
| ENSG00000267454 | <i>ZNF582-DT</i> | PD | Wald ratio | 1 | -0.227 | 0.01925  | 0.80 | 0.66 | 0.96 |
| ENSG00000182768 | <i>NGRN</i>      | PD | Wald ratio | 1 | -0.792 | 0.019266 | 0.45 | 0.23 | 0.88 |
| ENSG00000257075 | <i>RPEP6</i>     | PD | Wald ratio | 1 | 0.644  | 0.019401 | 1.90 | 1.11 | 3.27 |
| ENSG00000225764 | <i>P3H2-AS1</i>  | PD | Wald ratio | 1 | -0.234 | 0.019426 | 0.79 | 0.65 | 0.96 |
| ENSG00000112357 | <i>PEX7</i>      | PD | Wald ratio | 1 | 0.233  | 0.019428 | 1.26 | 1.04 | 1.53 |
| ENSG00000008838 | <i>MED24</i>     | PD | Wald ratio | 1 | -0.289 | 0.019631 | 0.75 | 0.59 | 0.95 |

|                 |                          |    |                                 |   |        |          |      |      |      |
|-----------------|--------------------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000197753 | <i>LHFPL5</i>            | PD | Wald ratio                      | 1 | 0.310  | 0.019631 | 1.36 | 1.05 | 1.77 |
| ENSG00000269514 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.226 | 0.019631 | 0.80 | 0.66 | 0.96 |
| ENSG00000224183 | <i>#N/A</i>              | PD | Inverse<br>variance<br>weighted | 2 | -0.097 | 0.01968  | 0.91 | 0.84 | 0.98 |
| ENSG00000197915 | <i>HRNR</i>              | PD | Wald ratio                      | 1 | -0.226 | 0.0197   | 0.80 | 0.66 | 0.96 |
| ENSG00000160588 | <i>MPZL3</i>             | PD | Wald ratio                      | 1 | -0.300 | 0.020086 | 0.74 | 0.58 | 0.95 |
| ENSG00000258232 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.272 | 0.020108 | 0.76 | 0.61 | 0.96 |
| ENSG00000119943 | <i>PYROXD2</i>           | PD | Wald ratio                      | 1 | 0.172  | 0.02031  | 1.19 | 1.03 | 1.37 |
| ENSG00000074266 | <i>EED</i>               | PD | Wald ratio                      | 1 | 0.591  | 0.020351 | 1.81 | 1.10 | 2.97 |
| ENSG00000152990 | <i>ADGRA3</i>            | PD | Wald ratio                      | 1 | 0.370  | 0.020351 | 1.45 | 1.06 | 1.98 |
| ENSG00000044459 | <i>CNTLN</i>             | PD | Wald ratio                      | 1 | -0.325 | 0.020439 | 0.72 | 0.55 | 0.95 |
| ENSG00000180081 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.280 | 0.020549 | 0.76 | 0.60 | 0.96 |
| ENSG00000076554 | <i>TPD52</i>             | PD | Wald ratio                      | 1 | 0.578  | 0.020583 | 1.78 | 1.09 | 2.91 |
| ENSG00000176236 | <i>RPP38-DT</i>          | PD | Inverse<br>variance<br>weighted | 2 | 0.148  | 0.020879 | 1.16 | 1.02 | 1.31 |
| ENSG00000258413 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.086  | 0.020891 | 1.09 | 1.01 | 1.17 |
| ENSG00000042286 | <i>AIFM2</i>             | PD | Wald ratio                      | 1 | 0.137  | 0.021216 | 1.15 | 1.02 | 1.29 |
| ENSG00000235241 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.585 | 0.021538 | 0.56 | 0.34 | 0.92 |
| ENSG00000179562 | <i>GCCI1</i>             | PD | Wald ratio                      | 1 | 0.293  | 0.021563 | 1.34 | 1.04 | 1.72 |
| ENSG00000181924 | <i>COA4</i>              | PD | Wald ratio                      | 1 | -0.488 | 0.021623 | 0.61 | 0.41 | 0.93 |
| ENSG00000183605 | <i>SFXN4</i>             | PD | Wald ratio                      | 1 | 0.268  | 0.021678 | 1.31 | 1.04 | 1.64 |
| ENSG00000230487 | <i>PSMG3-ASI</i>         | PD | Wald ratio                      | 1 | 0.405  | 0.021723 | 1.50 | 1.06 | 2.12 |
| ENSG00000270948 | <i>MTDHP1</i>            | PD | Wald ratio                      | 1 | 0.131  | 0.021745 | 1.14 | 1.02 | 1.28 |
| ENSG00000075673 | <i>ATP12A</i>            | PD | Inverse<br>variance<br>weighted | 2 | 0.195  | 0.021843 | 1.22 | 1.03 | 1.44 |
| ENSG00000148384 | <i>INPP5E</i>            | PD | Wald ratio                      | 1 | -0.340 | 0.021925 | 0.71 | 0.53 | 0.95 |
| ENSG00000166796 | <i>LDHC</i>              | PD | Wald ratio                      | 1 | 0.046  | 0.022073 | 1.05 | 1.01 | 1.09 |
| ENSG00000165949 | <i>IFI27</i>             | PD | Wald ratio                      | 1 | 0.312  | 0.022121 | 1.37 | 1.05 | 1.79 |
| ENSG00000259030 | <i>FPGT-<br/>TNNI3K</i>  | PD | Wald ratio                      | 1 | -0.209 | 0.022168 | 0.81 | 0.68 | 0.97 |
| ENSG00000118194 | <i>TNNT2</i>             | PD | Wald ratio                      | 1 | 0.381  | 0.022179 | 1.46 | 1.06 | 2.03 |
| ENSG00000258017 | <i>LOC1053697<br/>60</i> | PD | Wald ratio                      | 1 | -0.291 | 0.022316 | 0.75 | 0.58 | 0.96 |
| ENSG00000140450 | <i>ARRDC4</i>            | PD | Wald ratio                      | 1 | 0.343  | 0.022416 | 1.41 | 1.05 | 1.89 |
| ENSG00000242094 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.484 | 0.022472 | 0.62 | 0.41 | 0.93 |
| ENSG00000113249 | <i>HAVCRI</i>            | PD | Wald ratio                      | 1 | 0.199  | 0.022576 | 1.22 | 1.03 | 1.45 |
| ENSG00000145850 | <i>TIMD4</i>             | PD | Wald ratio                      | 1 | 0.259  | 0.022576 | 1.30 | 1.04 | 1.62 |
| ENSG00000158486 | <i>DNAH3</i>             | PD | Wald ratio                      | 1 | -0.193 | 0.022783 | 0.82 | 0.70 | 0.97 |
| ENSG00000165434 | <i>PGM2L1</i>            | PD | Wald ratio                      | 1 | -0.571 | 0.022804 | 0.56 | 0.35 | 0.92 |
| ENSG00000163466 | <i>ARPC2</i>             | PD | Wald ratio                      | 1 | 0.414  | 0.022865 | 1.51 | 1.06 | 2.16 |
| ENSG00000272782 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.122  | 0.023099 | 1.13 | 1.02 | 1.26 |

|                 |                  |    |            |   |        |          |      |      |      |
|-----------------|------------------|----|------------|---|--------|----------|------|------|------|
| ENSG00000248712 | <i>CCDC153</i>   | PD | Wald ratio | 1 | 0.215  | 0.023201 | 1.24 | 1.03 | 1.49 |
| ENSG00000088298 | <i>EDEM2</i>     | PD | Wald ratio | 1 | -0.219 | 0.023208 | 0.80 | 0.67 | 0.97 |
| ENSG00000133789 | <i>SWAP70</i>    | PD | Wald ratio | 1 | -0.218 | 0.023353 | 0.80 | 0.67 | 0.97 |
| ENSG00000136143 | <i>SUCLA2</i>    | PD | Wald ratio | 1 | -0.639 | 0.023503 | 0.53 | 0.30 | 0.92 |
| ENSG00000213462 | <i>ERV3-1</i>    | PD | Wald ratio | 1 | -0.077 | 0.023552 | 0.93 | 0.87 | 0.99 |
| ENSG00000113734 | <i>BNIP1</i>     | PD | Wald ratio | 1 | 0.212  | 0.023735 | 1.24 | 1.03 | 1.49 |
| ENSG00000145358 | <i>DDIT4L</i>    | PD | Inverse    | 2 | 0.209  | 0.023831 | 1.23 | 1.03 | 1.48 |
|                 |                  |    | variance   |   |        |          |      |      |      |
|                 |                  |    | weighted   |   |        |          |      |      |      |
| ENSG00000185963 | <i>BICD2</i>     | PD | Wald ratio | 1 | -0.240 | 0.024007 | 0.79 | 0.64 | 0.97 |
| ENSG00000140284 | <i>SLC27A2</i>   | PD | Wald ratio | 1 | -0.261 | 0.024075 | 0.77 | 0.61 | 0.97 |
| ENSG00000010072 | <i>SPRTN</i>     | PD | Wald ratio | 1 | -0.264 | 0.024091 | 0.77 | 0.61 | 0.97 |
| ENSG00000231326 | <i>LINC02662</i> | PD | Wald ratio | 1 | -0.906 | 0.024249 | 0.40 | 0.18 | 0.89 |
| ENSG00000269558 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.304 | 0.024449 | 0.74 | 0.57 | 0.96 |
| ENSG00000233058 | <i>#N/A</i>      | PD | Wald ratio | 1 | 0.316  | 0.024516 | 1.37 | 1.04 | 1.81 |
| ENSG00000162365 | <i>CYP4A22</i>   | PD | Wald ratio | 1 | -0.268 | 0.02454  | 0.76 | 0.61 | 0.97 |
| ENSG00000119457 | <i>SLC46A2</i>   | PD | Wald ratio | 1 | 0.160  | 0.024623 | 1.17 | 1.02 | 1.35 |
| ENSG00000242539 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.618 | 0.02511  | 0.54 | 0.31 | 0.93 |
| ENSG00000251320 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.441 | 0.025174 | 0.64 | 0.44 | 0.95 |
| ENSG00000196152 | <i>ZNF79</i>     | PD | Wald ratio | 1 | -0.204 | 0.025307 | 0.82 | 0.68 | 0.98 |
| ENSG00000152137 | <i>HSPB8</i>     | PD | Wald ratio | 1 | -0.936 | 0.025315 | 0.39 | 0.17 | 0.89 |
| ENSG00000175662 | <i>TOM1L2</i>    | PD | Wald ratio | 1 | 0.319  | 0.025376 | 1.38 | 1.04 | 1.82 |
| ENSG00000264880 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.163 | 0.025388 | 0.85 | 0.74 | 0.98 |
| ENSG00000218510 | <i>LINC00339</i> | PD | Wald ratio | 1 | 0.061  | 0.025432 | 1.06 | 1.01 | 1.12 |
| ENSG00000254485 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.191 | 0.025717 | 0.83 | 0.70 | 0.98 |
| ENSG00000178149 | <i>DALRD3</i>    | PD | Wald ratio | 1 | 0.462  | 0.025747 | 1.59 | 1.06 | 2.38 |
| ENSG00000205632 | <i>LINC01310</i> | PD | Wald ratio | 1 | 0.269  | 0.025857 | 1.31 | 1.03 | 1.66 |
| ENSG00000182963 | <i>GJC1</i>      | PD | Wald ratio | 1 | -0.192 | 0.025913 | 0.83 | 0.70 | 0.98 |
| ENSG00000174945 | <i>AMZ1</i>      | PD | Wald ratio | 1 | 0.336  | 0.025966 | 1.40 | 1.04 | 1.88 |
| ENSG00000100024 | <i>UPB1</i>      | PD | Wald ratio | 1 | -0.274 | 0.026015 | 0.76 | 0.60 | 0.97 |
| ENSG00000272983 | <i>#N/A</i>      | PD | Inverse    | 2 | 0.203  | 0.026299 | 1.22 | 1.02 | 1.46 |
|                 |                  |    | variance   |   |        |          |      |      |      |
|                 |                  |    | weighted   |   |        |          |      |      |      |
| ENSG00000163145 | <i>CIQTNF7</i>   | PD | Wald ratio | 1 | -0.163 | 0.026307 | 0.85 | 0.74 | 0.98 |
| ENSG00000259984 | <i>#N/A</i>      | PD | Wald ratio | 1 | 0.168  | 0.026341 | 1.18 | 1.02 | 1.37 |
| ENSG00000106153 | <i>CHCHD2</i>    | PD | Inverse    | 2 | 0.183  | 0.026419 | 1.20 | 1.02 | 1.41 |
|                 |                  |    | variance   |   |        |          |      |      |      |
|                 |                  |    | weighted   |   |        |          |      |      |      |
| ENSG00000099785 | <i>MARCHF2</i>   | PD | Wald ratio | 1 | -0.224 | 0.026884 | 0.80 | 0.66 | 0.97 |
| ENSG00000117868 | <i>ESYT2</i>     | PD | Wald ratio | 1 | -0.491 | 0.026999 | 0.61 | 0.40 | 0.95 |
| ENSG00000188672 | <i>RHCE</i>      | PD | Wald ratio | 1 | 0.085  | 0.027006 | 1.09 | 1.01 | 1.17 |
| ENSG00000196381 | <i>ZNF781</i>    | PD | Wald ratio | 1 | -0.082 | 0.027172 | 0.92 | 0.86 | 0.99 |
| ENSG00000223496 | <i>EXOSC6</i>    | PD | Wald ratio | 1 | 0.138  | 0.027238 | 1.15 | 1.02 | 1.30 |
| ENSG00000175164 | <i>ABO</i>       | PD | Wald ratio | 1 | -0.178 | 0.027309 | 0.84 | 0.71 | 0.98 |

|                 |                  |    |            |   |        |          |      |      |      |
|-----------------|------------------|----|------------|---|--------|----------|------|------|------|
| ENSG00000177981 | <i>ASB8</i>      | PD | Wald ratio | 1 | -0.122 | 0.027321 | 0.89 | 0.79 | 0.99 |
| ENSG00000178252 | <i>WDR6</i>      | PD | Wald ratio | 1 | -0.216 | 0.027335 | 0.81 | 0.67 | 0.98 |
| ENSG00000233232 | <i>#N/A</i>      | PD | Wald ratio | 1 | 0.107  | 0.027335 | 1.11 | 1.01 | 1.22 |
| ENSG00000269918 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.225 | 0.027493 | 0.80 | 0.65 | 0.98 |
| ENSG00000109762 | <i>SNX25</i>     | PD | Wald ratio | 1 | -0.715 | 0.027874 | 0.49 | 0.26 | 0.93 |
| ENSG00000165934 | <i>CPSF2</i>     | PD | Wald ratio | 1 | 0.480  | 0.027948 | 1.62 | 1.05 | 2.48 |
| ENSG00000248925 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.162 | 0.028117 | 0.85 | 0.74 | 0.98 |
| ENSG00000126861 | <i>OMG</i>       | PD | Wald ratio | 1 | -0.487 | 0.028188 | 0.61 | 0.40 | 0.95 |
| ENSG00000263327 | <i>TAPT1-AS1</i> | PD | Wald ratio | 1 | -0.393 | 0.02823  | 0.67 | 0.47 | 0.96 |
| ENSG00000124228 | <i>DDX27</i>     | PD | Wald ratio | 1 | -0.459 | 0.028657 | 0.63 | 0.42 | 0.95 |
| ENSG00000089195 | <i>TRMT6</i>     | PD | Wald ratio | 1 | 0.591  | 0.028672 | 1.81 | 1.06 | 3.07 |
| ENSG00000151689 | <i>INPP1</i>     | PD | Wald ratio | 1 | 0.190  | 0.028796 | 1.21 | 1.02 | 1.43 |
| ENSG00000165863 | <i>C10orf82</i>  | PD | Wald ratio | 1 | 0.252  | 0.028965 | 1.29 | 1.03 | 1.61 |
| ENSG00000148798 | <i>INA</i>       | PD | Wald ratio | 1 | 0.334  | 0.029046 | 1.40 | 1.03 | 1.88 |
| ENSG00000249898 | <i>#N/A</i>      | PD | Inverse    | 2 | 0.123  | 0.029135 | 1.13 | 1.01 | 1.26 |
|                 |                  |    | variance   |   |        |          |      |      |      |
|                 |                  |    | weighted   |   |        |          |      |      |      |
| ENSG00000095383 | <i>TBC1D2</i>    | PD | Wald ratio | 1 | 0.189  | 0.029257 | 1.21 | 1.02 | 1.43 |
| ENSG00000090861 | <i>AARS1</i>     | PD | Wald ratio | 1 | -0.488 | 0.029349 | 0.61 | 0.40 | 0.95 |
| ENSG00000270424 | <i>PAWRP2</i>    | PD | Wald ratio | 1 | -0.179 | 0.029349 | 0.84 | 0.71 | 0.98 |
| ENSG00000168301 | <i>KCTD6</i>     | PD | Wald ratio | 1 | -0.369 | 0.02962  | 0.69 | 0.50 | 0.96 |
| ENSG00000186148 | <i>LOC440895</i> | PD | Wald ratio | 1 | 0.177  | 0.029982 | 1.19 | 1.02 | 1.40 |
| ENSG00000034239 | <i>EFCAB1</i>    | PD | Wald ratio | 1 | 0.081  | 0.029984 | 1.08 | 1.01 | 1.17 |
| ENSG00000145725 | <i>PPIP5K2</i>   | PD | Wald ratio | 1 | 0.759  | 0.030059 | 2.14 | 1.08 | 4.24 |
| ENSG00000156299 | <i>TIAM1</i>     | PD | Wald ratio | 1 | -0.453 | 0.030102 | 0.64 | 0.42 | 0.96 |
| ENSG00000273117 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.440 | 0.030184 | 0.64 | 0.43 | 0.96 |
| ENSG00000226200 | <i>#N/A</i>      | PD | Wald ratio | 1 | 0.192  | 0.030204 | 1.21 | 1.02 | 1.44 |
| ENSG00000185290 | <i>NUPR2</i>     | PD | Wald ratio | 1 | 0.157  | 0.03026  | 1.17 | 1.02 | 1.35 |
| ENSG00000153574 | <i>RPIA</i>      | PD | Wald ratio | 1 | 0.350  | 0.030326 | 1.42 | 1.03 | 1.95 |
| ENSG00000259114 | <i>#N/A</i>      | PD | Wald ratio | 1 | 0.226  | 0.03041  | 1.25 | 1.02 | 1.54 |
| ENSG00000116031 | <i>CD207</i>     | PD | Wald ratio | 1 | -0.264 | 0.030513 | 0.77 | 0.60 | 0.98 |
| ENSG00000152672 | <i>CLEC4F</i>    | PD | Wald ratio | 1 | -0.212 | 0.030513 | 0.81 | 0.67 | 0.98 |
| ENSG00000258881 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.262 | 0.030513 | 0.77 | 0.61 | 0.98 |
| ENSG00000136010 | <i>ALDH1L2</i>   | PD | Wald ratio | 1 | -0.348 | 0.030662 | 0.71 | 0.52 | 0.97 |
| ENSG00000138640 | <i>FAM13A</i>    | PD | Wald ratio | 1 | -0.487 | 0.03104  | 0.61 | 0.39 | 0.96 |
| ENSG00000261070 | <i>LOC338694</i> | PD | Wald ratio | 1 | 0.181  | 0.03108  | 1.20 | 1.02 | 1.41 |
| ENSG00000178980 | <i>SELENOW</i>   | PD | Wald ratio | 1 | 0.636  | 0.031113 | 1.89 | 1.06 | 3.37 |
| ENSG00000121570 | <i>DPPA4</i>     | PD | Wald ratio | 1 | -0.176 | 0.031252 | 0.84 | 0.71 | 0.98 |
| ENSG00000116857 | <i>TMEM9</i>     | PD | Wald ratio | 1 | 0.305  | 0.031318 | 1.36 | 1.03 | 1.79 |
| ENSG00000185880 | <i>TRIM69</i>    | PD | Wald ratio | 1 | 0.094  | 0.031384 | 1.10 | 1.01 | 1.20 |
| ENSG00000235076 | <i>GAPDHP52</i>  | PD | Wald ratio | 1 | -0.230 | 0.031487 | 0.79 | 0.64 | 0.98 |
| ENSG00000160957 | <i>RECQL4</i>    | PD | Wald ratio | 1 | 0.267  | 0.031601 | 1.31 | 1.02 | 1.67 |
| ENSG00000037042 | <i>TUBG2</i>     | PD | Wald ratio | 1 | 0.447  | 0.03165  | 1.56 | 1.04 | 2.35 |
| ENSG00000103037 | <i>SETD6</i>     | PD | Wald ratio | 1 | 0.217  | 0.031825 | 1.24 | 1.02 | 1.51 |

|                 |                   |    |            |   |        |          |      |      |      |
|-----------------|-------------------|----|------------|---|--------|----------|------|------|------|
| ENSG00000114544 | <i>SLC41A3</i>    | PD | Wald ratio | 1 | 0.492  | 0.031832 | 1.63 | 1.04 | 2.56 |
| ENSG00000156110 | <i>ADK</i>        | PD | Wald ratio | 1 | -0.427 | 0.031864 | 0.65 | 0.44 | 0.96 |
| ENSG00000244215 | <i>LINC02016</i>  | PD | Wald ratio | 1 | -0.254 | 0.031886 | 0.78 | 0.61 | 0.98 |
| ENSG00000114120 | <i>SLC25A36</i>   | PD | Wald ratio | 1 | -0.907 | 0.031902 | 0.40 | 0.18 | 0.92 |
| ENSG00000271780 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.104 | 0.031989 | 0.90 | 0.82 | 0.99 |
| ENSG00000272444 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.355 | 0.031989 | 0.70 | 0.51 | 0.97 |
| ENSG00000214189 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.233 | 0.032479 | 0.79 | 0.64 | 0.98 |
| ENSG00000128829 | <i>EIF2AK4</i>    | PD | Wald ratio | 1 | -0.339 | 0.0327   | 0.71 | 0.52 | 0.97 |
| ENSG00000187553 | <i>CYP26C1</i>    | PD | Wald ratio | 1 | -0.144 | 0.032739 | 0.87 | 0.76 | 0.99 |
| ENSG00000234585 | <i>CCT6P3</i>     | PD | Wald ratio | 1 | -0.058 | 0.032836 | 0.94 | 0.89 | 1.00 |
| ENSG00000251379 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.144 | 0.032841 | 0.87 | 0.76 | 0.99 |
| ENSG00000019505 | <i>SYT13</i>      | PD | Wald ratio | 1 | -0.641 | 0.032849 | 0.53 | 0.29 | 0.95 |
| ENSG00000077942 | <i>FBLN1</i>      | PD | Wald ratio | 1 | 0.380  | 0.032938 | 1.46 | 1.03 | 2.07 |
| ENSG00000130592 | <i>LSP1</i>       | PD | Wald ratio | 1 | 0.245  | 0.033022 | 1.28 | 1.02 | 1.60 |
| ENSG00000114520 | <i>SNX4</i>       | PD | Wald ratio | 1 | 0.493  | 0.033031 | 1.64 | 1.04 | 2.58 |
| ENSG00000244234 | <i>GMCL2</i>      | PD | Wald ratio | 1 | 0.284  | 0.033123 | 1.33 | 1.02 | 1.72 |
| ENSG00000261310 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.542 | 0.033605 | 0.58 | 0.35 | 0.96 |
| ENSG00000050426 | <i>LETMD1</i>     | PD | Wald ratio | 1 | 0.221  | 0.03367  | 1.25 | 1.02 | 1.53 |
| ENSG00000043462 | <i>LCP2</i>       | PD | Wald ratio | 1 | -0.280 | 0.03377  | 0.76 | 0.58 | 0.98 |
| ENSG00000213542 | <i>RPL7AP43</i>   | PD | Wald ratio | 1 | 0.179  | 0.033853 | 1.20 | 1.01 | 1.41 |
| ENSG00000085871 | <i>MGST2</i>      | PD | Wald ratio | 1 | 0.475  | 0.03389  | 1.61 | 1.04 | 2.49 |
| ENSG00000187699 | <i>C2orf88</i>    | PD | Wald ratio | 1 | -0.445 | 0.033904 | 0.64 | 0.42 | 0.97 |
| ENSG00000260361 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.303 | 0.033975 | 0.74 | 0.56 | 0.98 |
| ENSG00000243414 | <i>TICAM2</i>     | PD | Wald ratio | 1 | -0.255 | 0.033988 | 0.77 | 0.61 | 0.98 |
| ENSG00000066084 | <i>DIP2B</i>      | PD | Wald ratio | 1 | 0.748  | 0.034064 | 2.11 | 1.06 | 4.22 |
| ENSG00000196878 | <i>LAMB3</i>      | PD | Wald ratio | 1 | -0.244 | 0.034072 | 0.78 | 0.62 | 0.98 |
| ENSG00000135424 | <i>ITGA7</i>      | PD | Wald ratio | 1 | 0.273  | 0.034146 | 1.31 | 1.02 | 1.69 |
| ENSG00000178445 | <i>GLDC</i>       | PD | Wald ratio | 1 | -0.319 | 0.034163 | 0.73 | 0.54 | 0.98 |
| ENSG00000255529 | <i>POLR2M</i>     | PD | Wald ratio | 1 | -0.343 | 0.034267 | 0.71 | 0.52 | 0.97 |
| ENSG00000270607 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.626 | 0.034294 | 0.53 | 0.30 | 0.95 |
| ENSG00000167332 | <i>OR51E2</i>     | PD | Wald ratio | 1 | 0.093  | 0.034583 | 1.10 | 1.01 | 1.20 |
| ENSG00000161048 | <i>NAPEPLD</i>    | PD | Wald ratio | 1 | -0.479 | 0.034718 | 0.62 | 0.40 | 0.97 |
| ENSG00000174600 | <i>CMKLR1</i>     | PD | Wald ratio | 1 | -0.281 | 0.034763 | 0.75 | 0.58 | 0.98 |
| ENSG00000239332 | <i>LINC01119</i>  | PD | Wald ratio | 1 | -0.267 | 0.034847 | 0.77 | 0.60 | 0.98 |
| ENSG00000108510 | <i>MED13</i>      | PD | Wald ratio | 1 | 0.735  | 0.034871 | 2.08 | 1.05 | 4.12 |
| ENSG00000147650 | <i>LRP12</i>      | PD | Wald ratio | 1 | 0.556  | 0.035129 | 1.74 | 1.04 | 2.93 |
| ENSG00000251532 | <i>#N/A</i>       | PD | Wald ratio | 1 | -0.204 | 0.035185 | 0.82 | 0.67 | 0.99 |
| ENSG00000224097 | <i>LOC401127</i>  | PD | Wald ratio | 1 | 0.172  | 0.035344 | 1.19 | 1.01 | 1.39 |
| ENSG00000248019 | <i>FAM13A-AS1</i> | PD | Wald ratio | 1 | -0.715 | 0.03548  | 0.49 | 0.25 | 0.95 |
| ENSG00000163171 | <i>CDC42EP3</i>   | PD | Wald ratio | 1 | -0.528 | 0.035529 | 0.59 | 0.36 | 0.96 |
| ENSG00000175324 | <i>LSM1</i>       | PD | Wald ratio | 1 | -0.373 | 0.03564  | 0.69 | 0.49 | 0.98 |
| ENSG00000178965 | <i>ERICH3</i>     | PD | Wald ratio | 1 | 0.468  | 0.03568  | 1.60 | 1.03 | 2.47 |
| ENSG00000198467 | <i>TPM2</i>       | PD | Wald ratio | 1 | -0.173 | 0.035729 | 0.84 | 0.72 | 0.99 |
| ENSG00000101546 | <i>RBFA</i>       | PD | Wald ratio | 1 | 0.239  | 0.035891 | 1.27 | 1.02 | 1.59 |

|                 |                          |    |                                 |   |        |          |      |      |      |
|-----------------|--------------------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000140937 | <i>CDH11</i>             | PD | Wald ratio                      | 1 | 0.930  | 0.036    | 2.53 | 1.06 | 6.04 |
| ENSG00000207116 | <i>RNU6-31P</i>          | PD | Wald ratio                      | 1 | -1.300 | 0.03638  | 0.27 | 0.08 | 0.92 |
| ENSG00000261758 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.271  | 0.036418 | 1.31 | 1.02 | 1.69 |
| ENSG00000247903 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.314  | 0.036514 | 1.37 | 1.02 | 1.84 |
| ENSG00000172469 | <i>MANEA</i>             | PD | Wald ratio                      | 1 | 0.348  | 0.036536 | 1.42 | 1.02 | 1.96 |
| ENSG00000204520 | <i>MICA</i>              | PD | Wald ratio                      | 1 | -0.155 | 0.036567 | 0.86 | 0.74 | 0.99 |
| ENSG00000234745 | <i>HLA-B</i>             | PD | Wald ratio                      | 1 | -0.233 | 0.036567 | 0.79 | 0.64 | 0.99 |
| ENSG00000272927 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.201 | 0.036595 | 0.82 | 0.68 | 0.99 |
| ENSG00000087074 | <i>PPP1R15A</i>          | PD | Wald ratio                      | 1 | -0.331 | 0.036838 | 0.72 | 0.53 | 0.98 |
| ENSG00000268081 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.083 | 0.036995 | 0.92 | 0.85 | 0.99 |
| ENSG00000107745 | <i>MICU1</i>             | PD | Wald ratio                      | 1 | -0.399 | 0.037027 | 0.67 | 0.46 | 0.98 |
| ENSG00000101391 | <i>CDK5RAP1</i>          | PD | Wald ratio                      | 1 | -0.305 | 0.037108 | 0.74 | 0.55 | 0.98 |
| ENSG00000066056 | <i>TIE1</i>              | PD | Wald ratio                      | 1 | -0.247 | 0.037141 | 0.78 | 0.62 | 0.99 |
| ENSG00000261349 | <i>#N/A</i>              | PD | Inverse<br>variance<br>weighted | 2 | -0.081 | 0.037224 | 0.92 | 0.85 | 1.00 |
| ENSG00000132507 | <i>EIF5A</i>             | PD | Wald ratio                      | 1 | 0.318  | 0.03731  | 1.37 | 1.02 | 1.85 |
| ENSG00000214279 | <i>SCART1</i>            | PD | Wald ratio                      | 1 | 0.126  | 0.037692 | 1.13 | 1.01 | 1.28 |
| ENSG00000273133 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | -0.153 | 0.037772 | 0.86 | 0.74 | 0.99 |
| ENSG00000176381 | <i>PRR18</i>             | PD | Wald ratio                      | 1 | 0.746  | 0.037943 | 2.11 | 1.04 | 4.27 |
| ENSG00000257139 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.134  | 0.038008 | 1.14 | 1.01 | 1.30 |
| ENSG00000060982 | <i>BCAT1</i>             | PD | Wald ratio                      | 1 | 0.349  | 0.038156 | 1.42 | 1.02 | 1.97 |
| ENSG00000141564 | <i>RPTOR</i>             | PD | Wald ratio                      | 1 | 0.480  | 0.038173 | 1.62 | 1.03 | 2.55 |
| ENSG00000231633 | <i>#N/A</i>              | PD | Wald ratio                      | 1 | 0.346  | 0.038289 | 1.41 | 1.02 | 1.96 |
| ENSG00000173157 | <i>ADAMTS20</i>          | PD | Wald ratio                      | 1 | 0.192  | 0.03845  | 1.21 | 1.01 | 1.45 |
| ENSG00000236144 | <i>TMEM147-<br/>AS1</i>  | PD | Wald ratio                      | 1 | -0.220 | 0.038739 | 0.80 | 0.65 | 0.99 |
| ENSG00000127220 | <i>ABHD8</i>             | PD | Wald ratio                      | 1 | 0.630  | 0.038766 | 1.88 | 1.03 | 3.42 |
| ENSG00000157470 | <i>FAM81A</i>            | PD | Wald ratio                      | 1 | 0.495  | 0.038997 | 1.64 | 1.03 | 2.63 |
| ENSG00000227544 | <i>LOC1005067<br/>25</i> | PD | Wald ratio                      | 1 | -0.865 | 0.03911  | 0.42 | 0.19 | 0.96 |
| ENSG00000088256 | <i>GNAI1</i>             | PD | Wald ratio                      | 1 | 0.768  | 0.039242 | 2.16 | 1.04 | 4.48 |
| ENSG00000164136 | <i>IL15</i>              | PD | Wald ratio                      | 1 | -0.373 | 0.039477 | 0.69 | 0.48 | 0.98 |
| ENSG00000259150 | <i>LINC00929</i>         | PD | Wald ratio                      | 1 | 0.306  | 0.039487 | 1.36 | 1.01 | 1.82 |
| ENSG00000182512 | <i>GLRX5</i>             | PD | Wald ratio                      | 1 | 0.432  | 0.039511 | 1.54 | 1.02 | 2.32 |
| ENSG00000258390 | <i>LINC02318</i>         | PD | Wald ratio                      | 1 | -0.218 | 0.039511 | 0.80 | 0.65 | 0.99 |
| ENSG00000142959 | <i>BEST4</i>             | PD | Wald ratio                      | 1 | -0.326 | 0.039581 | 0.72 | 0.53 | 0.98 |
| ENSG00000127530 | <i>OR7C1</i>             | PD | Wald ratio                      | 1 | 0.174  | 0.039771 | 1.19 | 1.01 | 1.41 |
| ENSG00000188269 | <i>OR7A5</i>             | PD | Wald ratio                      | 1 | 0.120  | 0.039771 | 1.13 | 1.01 | 1.26 |
| ENSG00000138942 | <i>RNF185</i>            | PD | Wald ratio                      | 1 | 0.194  | 0.039953 | 1.21 | 1.01 | 1.46 |
| ENSG00000178449 | <i>COX14</i>             | PD | Wald ratio                      | 1 | -0.385 | 0.039999 | 0.68 | 0.47 | 0.98 |
| ENSG00000224560 | <i>LOC1004191<br/>54</i> | PD | Wald ratio                      | 1 | -0.173 | 0.040221 | 0.84 | 0.71 | 0.99 |
| ENSG00000056050 | <i>HPF1</i>              | PD | Wald ratio                      | 1 | 0.206  | 0.040494 | 1.23 | 1.01 | 1.50 |

|                 |              |    |                                 |   |        |          |      |      |      |
|-----------------|--------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000266379 | #N/A         | PD | Wald ratio                      | 1 | 0.283  | 0.040656 | 1.33 | 1.01 | 1.74 |
| ENSG00000065268 | WDR18        | PD | Wald ratio                      | 1 | 0.130  | 0.040732 | 1.14 | 1.01 | 1.29 |
| ENSG00000235421 | #N/A         | PD | Inverse<br>variance<br>weighted | 2 | -0.107 | 0.040821 | 0.90 | 0.81 | 1.00 |
| ENSG00000259687 | #N/A         | PD | Wald ratio                      | 1 | 0.180  | 0.04086  | 1.20 | 1.01 | 1.42 |
| ENSG00000233087 | RAB6D        | PD | Wald ratio                      | 1 | 0.213  | 0.04098  | 1.24 | 1.01 | 1.52 |
| ENSG00000124713 | GNMT         | PD | Wald ratio                      | 1 | -0.059 | 0.041257 | 0.94 | 0.89 | 1.00 |
| ENSG00000183876 | ARSI         | PD | Wald ratio                      | 1 | -0.178 | 0.041302 | 0.84 | 0.71 | 0.99 |
| ENSG00000245384 | CXXC4-AS1    | PD | Wald ratio                      | 1 | 0.397  | 0.041315 | 1.49 | 1.02 | 2.18 |
| ENSG00000249087 | ZNF436-AS1   | PD | Wald ratio                      | 1 | 0.283  | 0.041435 | 1.33 | 1.01 | 1.74 |
| ENSG00000198056 | PRIMI        | PD | Wald ratio                      | 1 | -0.211 | 0.041492 | 0.81 | 0.66 | 0.99 |
| ENSG00000134086 | VHL          | PD | Wald ratio                      | 1 | -0.304 | 0.041564 | 0.74 | 0.55 | 0.99 |
| ENSG00000197181 | PIWIL2       | PD | Wald ratio                      | 1 | 0.083  | 0.041685 | 1.09 | 1.00 | 1.18 |
| ENSG00000135063 | FAM189A2     | PD | Wald ratio                      | 1 | -0.561 | 0.041842 | 0.57 | 0.33 | 0.98 |
| ENSG00000259658 | LOC100128108 | PD | Wald ratio                      | 1 | -0.149 | 0.042341 | 0.86 | 0.75 | 0.99 |
| ENSG00000186638 | KIF24        | PD | Wald ratio                      | 1 | -0.166 | 0.042402 | 0.85 | 0.72 | 0.99 |
| ENSG00000236255 | #N/A         | PD | Wald ratio                      | 1 | -0.145 | 0.042438 | 0.86 | 0.75 | 1.00 |
| ENSG00000115486 | GGCX         | PD | Wald ratio                      | 1 | -0.141 | 0.042451 | 0.87 | 0.76 | 1.00 |
| ENSG00000160223 | ICOSLG       | PD | Wald ratio                      | 1 | 0.330  | 0.042854 | 1.39 | 1.01 | 1.92 |
| ENSG00000165891 | E2F7         | PD | Wald ratio                      | 1 | 0.178  | 0.042857 | 1.19 | 1.01 | 1.42 |
| ENSG00000145715 | RASA1        | PD | Inverse<br>variance<br>weighted | 2 | -0.336 | 0.042917 | 0.71 | 0.52 | 0.99 |
| ENSG00000123352 | SPATS2       | PD | Wald ratio                      | 1 | 0.468  | 0.042947 | 1.60 | 1.01 | 2.51 |
| ENSG00000197013 | ZNF429       | PD | Wald ratio                      | 1 | -0.273 | 0.043122 | 0.76 | 0.58 | 0.99 |
| ENSG00000175279 | CENPS        | PD | Wald ratio                      | 1 | -0.483 | 0.043143 | 0.62 | 0.39 | 0.99 |
| ENSG00000160539 | PLPP7        | PD | Wald ratio                      | 1 | -0.615 | 0.043352 | 0.54 | 0.30 | 0.98 |
| ENSG00000197586 | ENTPD6       | PD | Wald ratio                      | 1 | 0.717  | 0.04377  | 2.05 | 1.02 | 4.12 |
| ENSG00000140326 | CDANI        | PD | Wald ratio                      | 1 | -0.291 | 0.043935 | 0.75 | 0.56 | 0.99 |
| ENSG00000196350 | ZNF729       | PD | Wald ratio                      | 1 | -0.281 | 0.044139 | 0.76 | 0.57 | 0.99 |
| ENSG00000122642 | FKBP9        | PD | Wald ratio                      | 1 | 0.298  | 0.044173 | 1.35 | 1.01 | 1.80 |
| ENSG00000258548 | LINC00645    | PD | Wald ratio                      | 1 | 0.151  | 0.04424  | 1.16 | 1.00 | 1.35 |
| ENSG00000144908 | ALDH1L1      | PD | Wald ratio                      | 1 | 0.474  | 0.044553 | 1.61 | 1.01 | 2.55 |
| ENSG00000053900 | ANAPC4       | PD | Wald ratio                      | 1 | -0.268 | 0.04489  | 0.77 | 0.59 | 0.99 |
| ENSG00000168792 | ABHD15       | PD | Wald ratio                      | 1 | 0.204  | 0.044941 | 1.23 | 1.00 | 1.50 |
| ENSG00000138074 | SLC5A6       | PD | Wald ratio                      | 1 | -0.349 | 0.044963 | 0.71 | 0.50 | 0.99 |
| ENSG00000138085 | ATRAID       | PD | Wald ratio                      | 1 | 0.355  | 0.044963 | 1.43 | 1.01 | 2.02 |
| ENSG00000138604 | GLCE         | PD | Wald ratio                      | 1 | -0.514 | 0.0455   | 0.60 | 0.36 | 0.99 |
| ENSG00000163820 | FYCO1        | PD | Wald ratio                      | 1 | -0.430 | 0.0455   | 0.65 | 0.43 | 0.99 |
| ENSG00000265798 | #N/A         | PD | Wald ratio                      | 1 | 0.159  | 0.045842 | 1.17 | 1.00 | 1.37 |
| ENSG00000231133 | HAR1B        | PD | Wald ratio                      | 1 | -0.275 | 0.045905 | 0.76 | 0.58 | 1.00 |
| ENSG00000175538 | KCNE3        | PD | Wald ratio                      | 1 | -0.179 | 0.04597  | 0.84 | 0.70 | 1.00 |

|                 |                     |    |                                 |   |        |          |      |      |      |
|-----------------|---------------------|----|---------------------------------|---|--------|----------|------|------|------|
| ENSG00000267160 | #N/A                | PD | Wald ratio                      | 1 | -0.452 | 0.046072 | 0.64 | 0.41 | 0.99 |
| ENSG00000259917 | #N/A                | PD | Wald ratio                      | 1 | 0.245  | 0.046105 | 1.28 | 1.00 | 1.63 |
| ENSG00000167550 | <i>RHEBL1</i>       | PD | Wald ratio                      | 1 | 0.349  | 0.046135 | 1.42 | 1.01 | 2.00 |
| ENSG00000261790 | #N/A                | PD | Wald ratio                      | 1 | 0.153  | 0.046439 | 1.17 | 1.00 | 1.36 |
| ENSG00000226824 | #N/A                | PD | Wald ratio                      | 1 | 0.062  | 0.046778 | 1.06 | 1.00 | 1.13 |
| ENSG00000165406 | <i>MARCHF8</i>      | PD | Wald ratio                      | 1 | 0.293  | 0.046782 | 1.34 | 1.00 | 1.79 |
| ENSG00000271215 | #N/A                | PD | Wald ratio                      | 1 | -1.316 | 0.04679  | 0.27 | 0.07 | 0.98 |
| ENSG00000101407 | <i>TTI1</i>         | PD | Wald ratio                      | 1 | -0.534 | 0.046935 | 0.59 | 0.35 | 0.99 |
| ENSG00000114547 | <i>ROPN1B</i>       | PD | Wald ratio                      | 1 | -0.090 | 0.046966 | 0.91 | 0.84 | 1.00 |
| ENSG00000198131 | <i>ZNF544</i>       | PD | Wald ratio                      | 1 | -0.188 | 0.046993 | 0.83 | 0.69 | 1.00 |
| ENSG00000206192 | #N/A                | PD | Inverse<br>variance<br>weighted | 2 | 0.159  | 0.047081 | 1.17 | 1.00 | 1.37 |
| ENSG00000233297 | #N/A                | PD | Inverse<br>variance<br>weighted | 2 | 0.093  | 0.04715  | 1.10 | 1.00 | 1.20 |
| ENSG00000160285 | <i>LSS</i>          | PD | Wald ratio                      | 1 | -0.297 | 0.047181 | 0.74 | 0.55 | 1.00 |
| ENSG00000133265 | <i>HSPBP1</i>       | PD | Wald ratio                      | 1 | -0.906 | 0.047205 | 0.40 | 0.17 | 0.99 |
| ENSG00000172992 | <i>DCAKD</i>        | PD | Wald ratio                      | 1 | -0.148 | 0.047232 | 0.86 | 0.75 | 1.00 |
| ENSG00000057663 | <i>ATG5</i>         | PD | Wald ratio                      | 1 | 0.847  | 0.047516 | 2.33 | 1.01 | 5.39 |
| ENSG00000168883 | <i>USP39</i>        | PD | Wald ratio                      | 1 | 0.307  | 0.047822 | 1.36 | 1.00 | 1.84 |
| ENSG00000100216 | <i>TOMM22</i>       | PD | Wald ratio                      | 1 | 0.278  | 0.047873 | 1.32 | 1.00 | 1.74 |
| ENSG00000143466 | #N/A                | PD | Wald ratio                      | 1 | -0.127 | 0.047988 | 0.88 | 0.78 | 1.00 |
| ENSG00000162888 | #N/A                | PD | Wald ratio                      | 1 | -0.204 | 0.047988 | 0.82 | 0.67 | 1.00 |
| ENSG00000151466 | <i>SCLT1</i>        | PD | Wald ratio                      | 1 | -0.701 | 0.048071 | 0.50 | 0.25 | 0.99 |
| ENSG00000130764 | <i>LRRC47</i>       | PD | Wald ratio                      | 1 | 0.620  | 0.048222 | 1.86 | 1.00 | 3.44 |
| ENSG00000238286 | #N/A                | PD | Wald ratio                      | 1 | -0.114 | 0.048304 | 0.89 | 0.80 | 1.00 |
| ENSG00000250158 | #N/A                | PD | Wald ratio                      | 1 | -0.248 | 0.048406 | 0.78 | 0.61 | 1.00 |
| ENSG00000032742 | <i>IFT88</i>        | PD | Wald ratio                      | 1 | -0.189 | 0.048458 | 0.83 | 0.69 | 1.00 |
| ENSG00000219545 | <i>UMAD1</i>        | PD | Wald ratio                      | 1 | 0.450  | 0.048471 | 1.57 | 1.00 | 2.45 |
| ENSG00000184277 | <i>TM2D3</i>        | PD | Wald ratio                      | 1 | 0.242  | 0.048499 | 1.27 | 1.00 | 1.62 |
| ENSG00000169251 | <i>NMD3</i>         | PD | Wald ratio                      | 1 | 0.158  | 0.048515 | 1.17 | 1.00 | 1.37 |
| ENSG00000161896 | <i>IP6K3</i>        | PD | Wald ratio                      | 1 | 0.339  | 0.048555 | 1.40 | 1.00 | 1.96 |
| ENSG00000241935 | <i>HOGA1</i>        | PD | Inverse<br>variance<br>weighted | 2 | 0.160  | 0.048569 | 1.17 | 1.00 | 1.37 |
| ENSG00000271918 | #N/A                | PD | Wald ratio                      | 1 | -0.245 | 0.048647 | 0.78 | 0.61 | 1.00 |
| ENSG00000232053 | #N/A                | PD | Wald ratio                      | 1 | 0.215  | 0.048789 | 1.24 | 1.00 | 1.54 |
| ENSG00000218416 | <i>LOC100130449</i> | PD | Wald ratio                      | 1 | 0.376  | 0.048888 | 1.46 | 1.00 | 2.12 |
| ENSG00000105404 | <i>RABAC1</i>       | PD | Wald ratio                      | 1 | -0.559 | 0.04901  | 0.57 | 0.33 | 1.00 |
| ENSG00000149273 | <i>RPS3</i>         | PD | Wald ratio                      | 1 | 0.294  | 0.049401 | 1.34 | 1.00 | 1.80 |
| ENSG00000164049 | <i>FBXW12</i>       | PD | Wald ratio                      | 1 | -0.191 | 0.049472 | 0.83 | 0.68 | 1.00 |
| ENSG00000213689 | <i>TREX1</i>        | PD | Wald ratio                      | 1 | 0.096  | 0.049472 | 1.10 | 1.00 | 1.21 |

|                 |                  |    |            |   |        |          |      |      |      |
|-----------------|------------------|----|------------|---|--------|----------|------|------|------|
| ENSG00000244380 | <i>#N/A</i>      | PD | Wald ratio | 1 | -0.164 | 0.049472 | 0.85 | 0.72 | 1.00 |
| ENSG00000160460 | <i>SPTBN4</i>    | PD | Wald ratio | 1 | 0.555  | 0.049583 | 1.74 | 1.00 | 3.03 |
| ENSG00000161265 | <i>U2AF1L4</i>   | PD | Wald ratio | 1 | -0.275 | 0.04964  | 0.76 | 0.58 | 1.00 |
| ENSG00000164039 | <i>BDH2</i>      | PD | Wald ratio | 1 | -0.275 | 0.049744 | 0.76 | 0.58 | 1.00 |
| ENSG00000237684 | <i>RPSAP35</i>   | PD | Wald ratio | 1 | 0.324  | 0.049835 | 1.38 | 1.00 | 1.91 |
| ENSG00000247157 | <i>LINC01252</i> | PD | Wald ratio | 1 | 0.167  | 0.049891 | 1.18 | 1.00 | 1.40 |
| ENSG00000256537 | <i>SMIM10L1</i>  | PD | Wald ratio | 1 | 0.161  | 0.049891 | 1.18 | 1.00 | 1.38 |

**Supplementary Table 3** The result of the MR analysis between CSF pQTLs and PD.

| gene           | outcome | method                          | nsnp | b     | p-value  | or    | or_lci95 | or_uci95 |
|----------------|---------|---------------------------------|------|-------|----------|-------|----------|----------|
| <i>ENTPD1</i>  | PD      | Wald ratio                      | 1    | 3.27  | 3.16E-08 | 26.24 | 8.25     | 83.50    |
| <i>GPNMB</i>   | PD      | Wald ratio                      | 1    | 0.86  | 3.95E-07 | 2.37  | 1.70     | 3.31     |
| <i>CTSB</i>    | PD      | Wald ratio                      | 1    | -1.66 | 2.19E-05 | 0.19  | 0.09     | 0.41     |
| <i>CD84</i>    | PD      | Wald ratio                      | 1    | -2.93 | 2.23E-05 | 0.05  | 0.01     | 0.21     |
| <i>FCGR2B</i>  | PD      | Wald ratio                      | 1    | 0.30  | 6.63E-05 | 1.35  | 1.16     | 1.56     |
| <i>ARSA</i>    | PD      | Wald ratio                      | 1    | 1.14  | 0.001185 | 3.12  | 1.57     | 6.19     |
| <i>PGD</i>     | PD      | Wald ratio                      | 1    | 1.07  | 0.001217 | 2.92  | 1.53     | 5.59     |
| <i>ICAM1</i>   | PD      | Wald ratio                      | 1    | -0.29 | 0.003739 | 0.75  | 0.62     | 0.91     |
| <i>COLEC11</i> | PD      | Wald ratio                      | 1    | -0.40 | 0.010088 | 0.67  | 0.50     | 0.91     |
| <i>ICOSLG</i>  | PD      | Wald ratio                      | 1    | -1.11 | 0.012961 | 0.33  | 0.14     | 0.79     |
| <i>IL1R1</i>   | PD      | Wald ratio                      | 1    | -1.28 | 0.015971 | 0.28  | 0.10     | 0.79     |
| <i>PCSK7</i>   | PD      | Wald ratio                      | 1    | -1.05 | 0.018285 | 0.35  | 0.15     | 0.84     |
| <i>EPHA1</i>   | PD      | Wald ratio                      | 1    | 0.58  | 0.025929 | 1.79  | 1.07     | 2.99     |
| <i>PLG</i>     | PD      | Wald ratio                      | 1    | 1.10  | 0.028549 | 3.01  | 1.12     | 8.07     |
| <i>GHR</i>     | PD      | Inverse<br>variance<br>weighted | 2    | 0.74  | 0.028627 | 2.09  | 1.08     | 4.05     |
| <i>TIE1</i>    | PD      | Wald ratio                      | 1    | -1.39 | 0.032611 | 0.25  | 0.07     | 0.89     |
| <i>ESD</i>     | PD      | Wald ratio                      | 1    | -0.29 | 0.036075 | 0.75  | 0.57     | 0.98     |
| <i>CTSA</i>    | PD      | Wald ratio                      | 1    | -1.21 | 0.045005 | 0.30  | 0.09     | 0.97     |

**Supplementary Table 4** The result of the MR analysis between Blood pQTLs and PD

| gene             | outcome | method                    | nsnp | b     | pval     | or   | or_lci95 | or_uci95 |
|------------------|---------|---------------------------|------|-------|----------|------|----------|----------|
| <i>SNCA</i>      | PD      | Wald ratio                | 1    | -0.87 | 6.26E-25 | 0.42 | 0.35     | 0.49     |
| <i>GPNUMB</i>    | PD      | Wald ratio                | 1    | 0.50  | 1.03E-07 | 1.64 | 1.37     | 1.97     |
| <i>FCGR2A</i>    | PD      | Inverse variance weighted | 3    | 0.06  | 1.76E-05 | 1.06 | 1.03     | 1.09     |
| <i>BAG3</i>      | PD      | Wald ratio                | 1    | 0.46  | 2.37E-05 | 1.59 | 1.28     | 1.97     |
| <i>CTSB</i>      | PD      | Wald ratio                | 1    | -0.19 | 0.00019  | 0.83 | 0.75     | 0.91     |
| <i>ATF6</i>      | PD      | Inverse variance weighted | 4    | 0.14  | 0.000395 | 1.15 | 1.06     | 1.24     |
| <i>UAP1</i>      | PD      | Wald ratio                | 1    | 0.42  | 0.001096 | 1.52 | 1.18     | 1.96     |
| <i>ENPP5</i>     | PD      | Inverse variance weighted | 2    | -0.07 | 0.003071 | 0.94 | 0.90     | 0.98     |
| <i>EGF</i>       | PD      | Inverse variance weighted | 2    | -0.14 | 0.00347  | 0.87 | 0.79     | 0.95     |
| <i>ICAM1</i>     | PD      | Wald ratio                | 1    | -0.04 | 0.003739 | 0.96 | 0.93     | 0.99     |
| <i>ASIP</i>      | PD      | Wald ratio                | 1    | -0.11 | 0.004238 | 0.89 | 0.83     | 0.97     |
| <i>SERPINE2</i>  | PD      | Inverse variance weighted | 2    | -0.16 | 0.004707 | 0.85 | 0.76     | 0.95     |
| <i>IDUA</i>      | PD      | Inverse variance weighted | 2    | -0.09 | 0.00476  | 0.92 | 0.86     | 0.97     |
| <i>HAVCR2</i>    | PD      | Wald ratio                | 1    | -0.09 | 0.004847 | 0.91 | 0.86     | 0.97     |
| <i>CCNH</i>      | PD      | Wald ratio                | 1    | 0.23  | 0.00812  | 1.25 | 1.06     | 1.48     |
| <i>FARS2</i>     | PD      | Wald ratio                | 1    | -0.17 | 0.008422 | 0.84 | 0.74     | 0.96     |
| <i>EMILIN3</i>   | PD      | Wald ratio                | 1    | 0.20  | 0.008924 | 1.22 | 1.05     | 1.42     |
| <i>TBXAS1</i>    | PD      | Inverse variance weighted | 2    | 0.28  | 0.009234 | 1.32 | 1.07     | 1.62     |
| <i>CREG1</i>     | PD      | Inverse variance weighted | 2    | -0.16 | 0.010294 | 0.85 | 0.75     | 0.96     |
| <i>NTRK1</i>     | PD      | Wald ratio                | 1    | 0.46  | 0.012179 | 1.58 | 1.10     | 2.26     |
| <i>B3GAT3</i>    | PD      | Inverse variance weighted | 2    | 0.10  | 0.012498 | 1.11 | 1.02     | 1.20     |
| <i>SURF1</i>     | PD      | Inverse variance weighted | 3    | -0.11 | 0.012686 | 0.90 | 0.82     | 0.98     |
| <i>MBD4</i>      | PD      | Wald ratio                | 1    | 0.43  | 0.014076 | 1.54 | 1.09     | 2.17     |
| <i>IL1B</i>      | PD      | Inverse variance weighted | 2    | 0.18  | 0.015933 | 1.20 | 1.03     | 1.39     |
| <i>RXFP1</i>     | PD      | Wald ratio                | 1    | -0.38 | 0.016837 | 0.68 | 0.50     | 0.93     |
| <i>FCGR2B</i>    | PD      | Weighted median           | 3    | 0.05  | 0.017572 | 1.05 | 1.01     | 1.09     |
| <i>MGAT2</i>     | PD      | Inverse variance weighted | 2    | -0.18 | 0.018373 | 0.83 | 0.71     | 0.97     |
| <i>CMPK1</i>     | PD      | Inverse variance weighted | 2    | 0.25  | 0.01839  | 1.28 | 1.04     | 1.58     |
| <i>RELL1</i>     | PD      | Wald ratio                | 1    | -0.37 | 0.018406 | 0.69 | 0.50     | 0.94     |
| <i>PAPPA2</i>    | PD      | Wald ratio                | 1    | -0.27 | 0.018976 | 0.76 | 0.61     | 0.96     |
| <i>EPHA10</i>    | PD      | Wald ratio                | 1    | 0.09  | 0.019106 | 1.09 | 1.01     | 1.17     |
| <i>APOA5</i>     | PD      | Wald ratio                | 1    | -0.22 | 0.019416 | 0.81 | 0.67     | 0.97     |
| <i>LOC652493</i> | PD      | Wald ratio                | 1    | 0.25  | 0.019416 | 1.29 | 1.04     | 1.60     |
| <i>NXPH3</i>     | PD      | Wald ratio                | 1    | 0.26  | 0.019416 | 1.30 | 1.04     | 1.62     |
| <i>BSG</i>       | PD      | Wald ratio                | 1    | 0.36  | 0.020875 | 1.44 | 1.06     | 1.95     |
| <i>CRABP2</i>    | PD      | Wald ratio                | 1    | 0.37  | 0.020875 | 1.44 | 1.06     | 1.97     |
| <i>FKBP14</i>    | PD      | Wald ratio                | 1    | 0.25  | 0.020875 | 1.29 | 1.04     | 1.60     |
| <i>GDA</i>       | PD      | Wald ratio                | 1    | 0.32  | 0.020875 | 1.37 | 1.05     | 1.80     |
| <i>IL19</i>      | PD      | Wald ratio                | 1    | 0.09  | 0.020875 | 1.09 | 1.01     | 1.17     |
| <i>ISOC1</i>     | PD      | Wald ratio                | 1    | 0.30  | 0.020875 | 1.35 | 1.05     | 1.74     |

|                 |    |                           |   |       |          |      |      |      |
|-----------------|----|---------------------------|---|-------|----------|------|------|------|
| <i>NSDHL</i>    | PD | Wald ratio                | 1 | 0.18  | 0.020875 | 1.20 | 1.03 | 1.40 |
| <i>SF1</i>      | PD | Wald ratio                | 1 | 0.25  | 0.020875 | 1.29 | 1.04 | 1.60 |
| <i>SIGLEC14</i> | PD | Wald ratio                | 1 | 0.15  | 0.020875 | 1.16 | 1.02 | 1.31 |
| <i>EFNA5</i>    | PD | Wald ratio                | 1 | 0.41  | 0.021098 | 1.51 | 1.06 | 2.14 |
| <i>CTSF</i>     | PD | Inverse variance weighted | 3 | -0.19 | 0.021581 | 0.83 | 0.70 | 0.97 |
| <i>GLCE</i>     | PD | Wald ratio                | 1 | 0.05  | 0.023594 | 1.06 | 1.01 | 1.11 |
| <i>FGFR3</i>    | PD | Inverse variance weighted | 2 | 0.20  | 0.023981 | 1.22 | 1.03 | 1.44 |
| <i>GABBR2</i>   | PD | Wald ratio                | 1 | -0.27 | 0.024934 | 0.76 | 0.60 | 0.97 |
| <i>STC2</i>     | PD | Wald ratio                | 1 | 0.29  | 0.026001 | 1.33 | 1.04 | 1.72 |
| <i>MFAP1</i>    | PD | Wald ratio                | 1 | -0.35 | 0.02822  | 0.70 | 0.51 | 0.96 |
| <i>COLEC10</i>  | PD | Inverse variance weighted | 2 | -0.15 | 0.028228 | 0.86 | 0.76 | 0.98 |
| <i>NRXN3</i>    | PD | Inverse variance weighted | 2 | 0.20  | 0.028724 | 1.22 | 1.02 | 1.45 |
| <i>KIAA1161</i> | PD | Wald ratio                | 1 | 0.12  | 0.029123 | 1.13 | 1.01 | 1.27 |
| <i>CCL15</i>    | PD | Inverse variance weighted | 2 | -0.05 | 0.031046 | 0.95 | 0.91 | 1.00 |
| <i>PLAU</i>     | PD | Wald ratio                | 1 | -0.22 | 0.031301 | 0.80 | 0.66 | 0.98 |
| <i>FAM171B</i>  | PD | Wald ratio                | 1 | 0.17  | 0.03247  | 1.19 | 1.01 | 1.39 |
| <i>PLG</i>      | PD | Inverse variance weighted | 3 | -0.13 | 0.034403 | 0.88 | 0.78 | 0.99 |
| <i>TCN2</i>     | PD | Inverse variance weighted | 5 | -0.04 | 0.036774 | 0.96 | 0.92 | 1.00 |
| <i>DNAJA4</i>   | PD | Wald ratio                | 1 | 0.29  | 0.03759  | 1.34 | 1.02 | 1.76 |
| <i>FAH</i>      | PD | Wald ratio                | 1 | 0.06  | 0.039853 | 1.07 | 1.00 | 1.13 |
| <i>ARL1</i>     | PD | Wald ratio                | 1 | -0.24 | 0.040188 | 0.78 | 0.62 | 0.99 |
| <i>SEMA3G</i>   | PD | Inverse variance weighted | 2 | 0.14  | 0.040396 | 1.15 | 1.01 | 1.31 |
| <i>GNMT</i>     | PD | Wald ratio                | 1 | -0.09 | 0.041842 | 0.91 | 0.84 | 1.00 |
| <i>PARK2</i>    | PD | Wald ratio                | 1 | -0.35 | 0.043418 | 0.71 | 0.50 | 0.99 |
| <i>PI3</i>      | PD | Wald ratio                | 1 | -0.11 | 0.04601  | 0.89 | 0.80 | 1.00 |
| <i>RACGAP1</i>  | PD | Inverse variance weighted | 3 | 0.16  | 0.046166 | 1.17 | 1.00 | 1.37 |
| <i>RBP4</i>     | PD | Wald ratio                | 1 | 0.24  | 0.046585 | 1.27 | 1.00 | 1.62 |
| <i>TXNDC5</i>   | PD | Inverse variance weighted | 4 | -0.08 | 0.048858 | 0.92 | 0.85 | 1.00 |
| <i>DHX8</i>     | PD | Inverse variance weighted | 2 | -0.05 | 0.049158 | 0.95 | 0.91 | 1.00 |
| <i>STIM1</i>    | PD | Inverse variance weighted | 4 | -0.10 | 0.049309 | 0.90 | 0.81 | 1.00 |
| <i>CBLN4</i>    | PD | Inverse variance weighted | 3 | -0.16 | 0.049768 | 0.86 | 0.73 | 1.00 |

**Supplementary Table 5** The result of the MR analysis between blood eQTLs and PD.

| exposure name   | gene           | outcome | method                    | nsn<br>p | b     | p-value  | or    | or_lci<br>95 | or_uci95 |
|-----------------|----------------|---------|---------------------------|----------|-------|----------|-------|--------------|----------|
| ENSG00000172465 | TCEAL1         | PD      | Wald ratio                | 1        | 3.01  | 4.42E-21 | 20.24 | 10.83        | 37.84    |
| ENSG00000266644 | #N/A           | PD      | Wald ratio                | 1        | 1.35  | 8.59E-21 | 3.87  | 2.92         | 5.14     |
| ENSG00000174547 | MRPL11         | PD      | Wald ratio                | 1        | 2.84  | 8.95E-21 | 17.17 | 9.46         | 31.17    |
| ENSG00000264070 | #N/A           | PD      | Inverse variance weighted | 2        | -0.33 | 3.43E-17 | 0.72  | 0.66         | 0.77     |
| ENSG00000225190 | PLEKHM1        | PD      | Wald ratio                | 1        | -0.73 | 2.65E-16 | 0.48  | 0.41         | 0.58     |
| ENSG00000264057 | #N/A           | PD      | Wald ratio                | 1        | -0.79 | 1.37E-15 | 0.46  | 0.38         | 0.55     |
| ENSG00000263503 | #N/A           | PD      | Inverse variance weighted | 3        | -0.26 | 1.64E-10 | 0.77  | 0.72         | 0.84     |
| ENSG00000214401 | KANSL1-<br>AS1 | PD      | Inverse variance weighted | 4        | -0.23 | 2.91E-10 | 0.80  | 0.74         | 0.85     |
| ENSG00000214846 | RPL10AP7       | PD      | Inverse variance weighted | 2        | -0.25 | 1.67E-09 | 0.78  | 0.72         | 0.85     |
| ENSG00000167394 | ZNF668         | PD      | Inverse variance weighted | 2        | 0.23  | 3.52E-09 | 1.26  | 1.17         | 1.36     |
| ENSG00000156928 | MALSU1         | PD      | Wald ratio                | 1        | 1.03  | 6.50E-09 | 2.81  | 1.98         | 3.99     |
| ENSG00000243368 | #N/A           | PD      | Wald ratio                | 1        | -1.54 | 1.77E-08 | 0.22  | 0.13         | 0.37     |
| ENSG00000226816 | #N/A           | PD      | Wald ratio                | 1        | -0.22 | 3.86E-08 | 0.80  | 0.74         | 0.87     |
| ENSG00000254918 | #N/A           | PD      | Wald ratio                | 1        | -0.70 | 4.84E-08 | 0.50  | 0.39         | 0.64     |
| ENSG00000131470 | PSMC3IP        | PD      | Inverse variance weighted | 2        | -0.54 | 1.07E-07 | 0.58  | 0.48         | 0.71     |
| ENSG00000262539 | #N/A           | PD      | Inverse variance weighted | 2        | -0.45 | 1.69E-07 | 0.64  | 0.54         | 0.75     |
| ENSG00000262766 | #N/A           | PD      | Wald ratio                | 1        | -0.95 | 1.85E-07 | 0.39  | 0.27         | 0.55     |
| ENSG00000230042 | AK3P3          | PD      | Wald ratio                | 1        | 0.41  | 5.11E-07 | 1.50  | 1.28         | 1.76     |
| ENSG00000214425 | #N/A           | PD      | Inverse variance weighted | 6        | 0.24  | 5.60E-07 | 1.27  | 1.16         | 1.40     |
| ENSG00000049167 | ERCC8          | PD      | Inverse variance weighted | 2        | 0.24  | 6.10E-07 | 1.27  | 1.16         | 1.40     |
| ENSG00000164182 | NDUFAF2        | PD      | Wald ratio                | 1        | 0.52  | 7.23E-07 | 1.67  | 1.37         | 2.05     |
| ENSG00000167397 | VKORC1         | PD      | Wald ratio                | 1        | 0.58  | 9.39E-07 | 1.79  | 1.42         | 2.27     |
| ENSG00000167395 | ZNF646         | PD      | Wald ratio                | 1        | -0.58 | 1.07E-06 | 0.56  | 0.45         | 0.71     |
| ENSG00000267198 | #N/A           | PD      | Wald ratio                | 1        | 0.28  | 1.62E-06 | 1.33  | 1.18         | 1.49     |
| ENSG00000103507 | BCKDK          | PD      | Inverse variance weighted | 6        | 0.23  | 1.69E-06 | 1.25  | 1.14         | 1.37     |
| ENSG00000225342 | #N/A           | PD      | Wald ratio                | 1        | -0.58 | 1.89E-06 | 0.56  | 0.44         | 0.71     |
| ENSG00000073969 | NSF            | PD      | Inverse variance weighted | 3        | -0.30 | 2.13E-06 | 0.74  | 0.65         | 0.84     |
| ENSG00000127415 | IDUA           | PD      | Inverse variance weighted | 3        | -0.37 | 2.27E-06 | 0.69  | 0.60         | 0.81     |
| ENSG00000156858 | PRR14          | PD      | Wald ratio                | 1        | 0.55  | 2.32E-06 | 1.74  | 1.38         | 2.18     |
| ENSG00000188725 | SMIM15         | PD      | Wald ratio                | 1        | -1.43 | 2.40E-06 | 0.24  | 0.13         | 0.43     |
| ENSG00000257410 | #N/A           | PD      | Wald ratio                | 1        | 0.66  | 7.49E-06 | 1.94  | 1.45         | 2.59     |
| ENSG00000260911 | #N/A           | PD      | Inverse variance weighted | 3        | -0.24 | 9.17E-06 | 0.79  | 0.71         | 0.88     |
| ENSG00000160766 | GBAP1          | PD      | Inverse variance weighted | 6        | 0.15  | 1.69E-05 | 1.16  | 1.08         | 1.24     |
| ENSG00000163686 | ABHD6          | PD      | Wald ratio                | 1        | -0.37 | 1.93E-05 | 0.69  | 0.59         | 0.82     |
| ENSG00000143740 | SNAP47         | PD      | Inverse variance weighted | 2        | 0.32  | 2.38E-05 | 1.38  | 1.19         | 1.60     |
| ENSG00000260943 | #N/A           | PD      | Inverse variance weighted | 6        | 0.15  | 2.53E-05 | 1.16  | 1.08         | 1.24     |
| ENSG00000261716 | H2BC20P        | PD      | Inverse variance weighted | 4        | 0.28  | 2.90E-05 | 1.32  | 1.16         | 1.50     |
| ENSG00000115216 | NRBP1          | PD      | Wald ratio                | 1        | -0.20 | 3.32E-05 | 0.81  | 0.74         | 0.90     |
| ENSG00000124613 | ZNF391         | PD      | Wald ratio                | 1        | 0.20  | 3.98E-05 | 1.22  | 1.11         | 1.34     |

|                 |           |    |                           |   |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000184348 | #N/A      | PD | Inverse variance weighted | 2 | 0.67  | 4.11E-05 | 1.96 | 1.42 | 2.71 |
| ENSG00000188987 | #N/A      | PD | Inverse variance weighted | 2 | 0.48  | 4.11E-05 | 1.61 | 1.28 | 2.03 |
| ENSG00000197697 | #N/A      | PD | Inverse variance weighted | 2 | 0.43  | 4.11E-05 | 1.54 | 1.25 | 1.90 |
| ENSG00000217275 | RPS10P1   | PD | Inverse variance weighted | 2 | 0.54  | 4.11E-05 | 1.72 | 1.33 | 2.23 |
| ENSG00000184678 | H2BC21    | PD | Inverse variance weighted | 4 | 0.39  | 4.47E-05 | 1.47 | 1.22 | 1.77 |
| ENSG00000224515 | #N/A      | PD | Wald ratio                | 1 | 0.61  | 4.73E-05 | 1.85 | 1.37 | 2.48 |
| ENSG00000266305 | MIR4518   | PD | Wald ratio                | 1 | 1.10  | 5.08E-05 | 3.01 | 1.77 | 5.13 |
| ENSG00000178226 | PRSS36    | PD | Wald ratio                | 1 | -0.42 | 5.69E-05 | 0.66 | 0.53 | 0.81 |
| ENSG00000141027 | NCOR1     | PD | Wald ratio                | 1 | 0.15  | 6.49E-05 | 1.17 | 1.08 | 1.26 |
| ENSG00000096654 | ZNF184    | PD | Inverse variance weighted | 2 | -0.30 | 7.32E-05 | 0.74 | 0.64 | 0.86 |
| ENSG00000180596 | H2BC4     | PD | Inverse variance weighted | 4 | 0.24  | 7.47E-05 | 1.27 | 1.13 | 1.42 |
| ENSG00000155438 | NIFK      | PD | Inverse variance weighted | 3 | -0.19 | 9.22E-05 | 0.83 | 0.75 | 0.91 |
| ENSG00000177565 | TBL1XR1   | PD | Wald ratio                | 1 | -0.30 | 0.000128 | 0.74 | 0.64 | 0.87 |
| ENSG00000185022 | MAFF      | PD | Wald ratio                | 1 | -0.78 | 0.000128 | 0.46 | 0.31 | 0.68 |
| ENSG00000157992 | KRTCAP3   | PD | Wald ratio                | 1 | 0.17  | 0.000132 | 1.19 | 1.09 | 1.30 |
| ENSG00000187837 | H1-2      | PD | Inverse variance weighted | 6 | 0.13  | 0.000154 | 1.14 | 1.06 | 1.22 |
| ENSG00000168216 | LMBRD1    | PD | Wald ratio                | 1 | 0.56  | 0.000159 | 1.76 | 1.31 | 2.36 |
| ENSG00000138760 | SCARB2    | PD | Inverse variance weighted | 4 | 0.26  | 0.000201 | 1.29 | 1.13 | 1.48 |
| ENSG00000180901 | KCTD2     | PD | Inverse variance weighted | 3 | 0.16  | 0.000229 | 1.17 | 1.08 | 1.28 |
| ENSG00000107651 | SEC23IP   | PD | Wald ratio                | 1 | 0.56  | 0.00023  | 1.75 | 1.30 | 2.35 |
| ENSG00000133627 | ACTR3B    | PD | Wald ratio                | 1 | 0.75  | 0.000242 | 2.12 | 1.42 | 3.17 |
| ENSG00000174680 | #N/A      | PD | Wald ratio                | 1 | 0.56  | 0.000258 | 1.76 | 1.30 | 2.38 |
| ENSG00000211803 | TRAV23D   | PD | Inverse variance weighted | 2 | 0.33  | 0.000271 | 1.39 | 1.16 | 1.66 |
|                 | V6        |    |                           |   |       |          |      |      |      |
| ENSG00000224805 | LINC00853 | PD | Inverse variance weighted | 3 | 0.26  | 0.000294 | 1.30 | 1.13 | 1.49 |
| ENSG00000205609 | EIF3CL    | PD | Inverse variance weighted | 4 | -0.21 | 0.000296 | 0.81 | 0.72 | 0.91 |
| ENSG00000168291 | PDHB      | PD | Inverse variance weighted | 3 | -0.16 | 0.00031  | 0.85 | 0.78 | 0.93 |
| ENSG00000108784 | NAGLU     | PD | Inverse variance weighted | 2 | 0.20  | 0.000323 | 1.22 | 1.09 | 1.35 |
| ENSG00000174946 | GPR171    | PD | Wald ratio                | 1 | -0.71 | 0.000357 | 0.49 | 0.33 | 0.73 |
| ENSG00000160714 | UBE2Q1    | PD | Inverse variance weighted | 2 | -0.33 | 0.000364 | 0.72 | 0.60 | 0.86 |
| ENSG00000213693 | SEC14LIP1 | PD | Wald ratio                | 1 | -0.99 | 0.000368 | 0.37 | 0.21 | 0.64 |
| ENSG00000157540 | DYRK1A    | PD | Wald ratio                | 1 | 0.51  | 0.000404 | 1.66 | 1.25 | 2.20 |
| ENSG00000109743 | BST1      | PD | Inverse variance weighted | 6 | -0.12 | 0.000411 | 0.88 | 0.82 | 0.95 |
| ENSG00000173473 | SMARCC1   | PD | Wald ratio                | 1 | 0.92  | 0.000418 | 2.52 | 1.51 | 4.20 |
| ENSG00000168763 | CNNM3     | PD | Inverse variance weighted | 3 | 0.47  | 0.000425 | 1.60 | 1.23 | 2.09 |
| ENSG00000173068 | BNC2      | PD | Inverse variance weighted | 3 | -0.13 | 0.000432 | 0.88 | 0.82 | 0.94 |
| ENSG00000204650 | LINC02210 | PD | Inverse variance weighted | 4 | -0.14 | 0.000433 | 0.87 | 0.81 | 0.94 |
| ENSG00000184110 | EIF3C     | PD | Inverse variance weighted | 2 | -0.27 | 0.00044  | 0.77 | 0.66 | 0.89 |
| ENSG00000172974 | #N/A      | PD | Wald ratio                | 1 | -1.14 | 0.000442 | 0.32 | 0.17 | 0.60 |
| ENSG00000268201 | #N/A      | PD | Inverse variance weighted | 2 | -0.40 | 0.000467 | 0.67 | 0.54 | 0.84 |
| ENSG00000099377 | HSD3B7    | PD | Inverse variance weighted | 2 | 0.32  | 0.000491 | 1.37 | 1.15 | 1.64 |
| ENSG00000053900 | ANAPC4    | PD | Inverse variance weighted | 6 | -0.13 | 0.000508 | 0.88 | 0.82 | 0.94 |
| ENSG00000123600 | METTL8    | PD | Wald ratio                | 1 | 0.22  | 0.000526 | 1.24 | 1.10 | 1.41 |
| ENSG00000130939 | UBE4B     | PD | Inverse variance weighted | 3 | 0.23  | 0.000575 | 1.26 | 1.11 | 1.44 |

|                 |           |    |                           |    |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000163519 | TRAT1     | PD | Inverse variance weighted | 5  | 0.15  | 0.000586 | 1.17 | 1.07 | 1.27 |
| ENSG00000139218 | SCAF11    | PD | Wald ratio                | 1  | 0.99  | 0.000595 | 2.70 | 1.53 | 4.75 |
| ENSG00000249790 | #N/A      | PD | Inverse variance weighted | 3  | 0.25  | 0.000602 | 1.28 | 1.11 | 1.48 |
| ENSG00000179921 | GPBAR1    | PD | Inverse variance weighted | 11 | -0.11 | 0.000609 | 0.89 | 0.84 | 0.95 |
| ENSG00000230068 | #N/A      | PD | Wald ratio                | 1  | -0.99 | 0.000615 | 0.37 | 0.21 | 0.66 |
| ENSG00000165863 | C10orf82  | PD | Wald ratio                | 1  | 1.04  | 0.000633 | 2.82 | 1.56 | 5.11 |
| ENSG00000172375 | C2CD2L    | PD | Inverse variance weighted | 3  | -0.12 | 0.000639 | 0.88 | 0.82 | 0.95 |
| ENSG00000147853 | AK3       | PD | Inverse variance weighted | 5  | 0.15  | 0.000686 | 1.16 | 1.06 | 1.26 |
| ENSG00000172269 | DPAGT1    | PD | Wald ratio                | 1  | -0.22 | 0.000703 | 0.80 | 0.71 | 0.91 |
| ENSG00000134193 | REG4      | PD | Wald ratio                | 1  | -0.72 | 0.000716 | 0.49 | 0.32 | 0.74 |
| ENSG00000244682 | #N/A      | PD | Inverse variance weighted | 6  | 0.21  | 0.000732 | 1.23 | 1.09 | 1.38 |
| ENSG00000267937 | #N/A      | PD | Wald ratio                | 1  | 0.98  | 0.000746 | 2.67 | 1.51 | 4.72 |
| ENSG00000162616 | DNAJB4    | PD | Wald ratio                | 1  | 0.22  | 0.000758 | 1.25 | 1.10 | 1.42 |
| ENSG00000095906 | NUBP2     | PD | Wald ratio                | 1  | 0.41  | 0.000826 | 1.50 | 1.18 | 1.91 |
| ENSG00000175556 | LONRF3    | PD | Wald ratio                | 1  | -0.38 | 0.000828 | 0.68 | 0.55 | 0.85 |
| ENSG00000110090 | CPT1A     | PD | Inverse variance weighted | 2  | 0.16  | 0.000855 | 1.17 | 1.07 | 1.29 |
| ENSG00000114316 | USP4      | PD | Inverse variance weighted | 3  | -0.43 | 0.000857 | 0.65 | 0.51 | 0.84 |
| ENSG00000147439 | BIN3      | PD | Inverse variance weighted | 3  | 0.13  | 0.000884 | 1.13 | 1.05 | 1.22 |
| ENSG00000188486 | H2AX      | PD | Wald ratio                | 1  | 0.48  | 0.000899 | 1.62 | 1.22 | 2.15 |
| ENSG00000178977 | LINC00324 | PD | Inverse variance weighted | 4  | 0.13  | 0.000918 | 1.14 | 1.06 | 1.24 |
| ENSG00000167074 | TEF       | PD | Inverse variance weighted | 4  | -0.12 | 0.00094  | 0.89 | 0.83 | 0.95 |
| ENSG00000180185 | FAHD1     | PD | Inverse variance weighted | 3  | -0.13 | 0.000947 | 0.88 | 0.81 | 0.95 |
| ENSG00000170356 | OR2A20P   | PD | Inverse variance weighted | 4  | 0.19  | 0.000956 | 1.21 | 1.08 | 1.36 |
| ENSG00000035141 | FAM136A   | PD | Inverse variance weighted | 2  | -0.21 | 0.00099  | 0.81 | 0.72 | 0.92 |
| ENSG00000183751 | TBL3      | PD | Wald ratio                | 1  | 0.66  | 0.001029 | 1.94 | 1.31 | 2.87 |
| ENSG00000113319 | RASGRF2   | PD | Inverse variance weighted | 2  | -0.31 | 0.001034 | 0.74 | 0.61 | 0.88 |
| ENSG00000189079 | ARID2     | PD | Wald ratio                | 1  | -0.72 | 0.001059 | 0.49 | 0.31 | 0.75 |
| ENSG00000172995 | ARPP21    | PD | Wald ratio                | 1  | 0.93  | 0.001085 | 2.52 | 1.45 | 4.40 |
| ENSG00000206053 | JPT2      | PD | Wald ratio                | 1  | 0.47  | 0.001091 | 1.61 | 1.21 | 2.13 |
| ENSG00000198554 | WDHD1     | PD | Wald ratio                | 1  | -0.73 | 0.00112  | 0.48 | 0.31 | 0.75 |
| ENSG00000147548 | NSD3      | PD | Wald ratio                | 1  | -0.24 | 0.001121 | 0.78 | 0.68 | 0.91 |
| ENSG00000131061 | ZNF341    | PD | Wald ratio                | 1  | 0.44  | 0.001181 | 1.55 | 1.19 | 2.02 |
| ENSG00000197774 | EME2      | PD | Wald ratio                | 1  | -0.23 | 0.001216 | 0.80 | 0.70 | 0.91 |
| ENSG00000253200 | #N/A      | PD | Wald ratio                | 1  | -0.42 | 0.001321 | 0.66 | 0.51 | 0.85 |
| ENSG00000239556 | #N/A      | PD | Wald ratio                | 1  | -0.18 | 0.001371 | 0.84 | 0.75 | 0.93 |
| ENSG00000088836 | SLC4A11   | PD | Wald ratio                | 1  | -0.41 | 0.00138  | 0.67 | 0.52 | 0.85 |
| ENSG00000231062 | #N/A      | PD | Wald ratio                | 1  | -0.44 | 0.001398 | 0.64 | 0.49 | 0.84 |
| ENSG00000229390 | #N/A      | PD | Inverse variance weighted | 4  | -0.14 | 0.001465 | 0.87 | 0.80 | 0.95 |
| ENSG00000196296 | ATP2A1    | PD | Wald ratio                | 1  | -0.41 | 0.001517 | 0.66 | 0.51 | 0.85 |
| ENSG00000115350 | POLE4     | PD | Inverse variance weighted | 3  | -0.39 | 0.001522 | 0.68 | 0.54 | 0.86 |
| ENSG00000180573 | H2AC6     | PD | Inverse variance weighted | 6  | 0.18  | 0.001529 | 1.20 | 1.07 | 1.34 |
| ENSG00000235290 | #N/A      | PD | Inverse variance weighted | 5  | -0.17 | 0.001545 | 0.85 | 0.76 | 0.94 |
| ENSG00000103160 | HSDL1     | PD | Inverse variance weighted | 4  | 0.09  | 0.001549 | 1.10 | 1.04 | 1.17 |
| ENSG00000173226 | IQCB1     | PD | Inverse variance weighted | 4  | -0.09 | 0.001572 | 0.92 | 0.87 | 0.97 |

|                 |               |    |                           |    |       |          |      |      |      |
|-----------------|---------------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000158158 | CNNM4         | PD | Wald ratio                | 1  | -0.18 | 0.001573 | 0.83 | 0.74 | 0.93 |
| ENSG00000164615 | CAMLG         | PD | Inverse variance weighted | 4  | -0.12 | 0.001581 | 0.89 | 0.83 | 0.96 |
| ENSG00000251692 | PTX4          | PD | Wald ratio                | 1  | 0.67  | 0.001605 | 1.95 | 1.29 | 2.95 |
| ENSG00000188467 | SLC24A5       | PD | Inverse variance weighted | 2  | -0.11 | 0.001663 | 0.90 | 0.84 | 0.96 |
| ENSG00000178971 | CTC1          | PD | Inverse variance weighted | 4  | 0.10  | 0.001686 | 1.10 | 1.04 | 1.17 |
| ENSG00000170175 | CHRNA1        | PD | Inverse variance weighted | 2  | 0.13  | 0.001704 | 1.14 | 1.05 | 1.23 |
| ENSG00000181754 | AMIGO1        | PD | Wald ratio                | 1  | -0.17 | 0.001713 | 0.85 | 0.76 | 0.94 |
| ENSG00000187778 | MCRS1         | PD | Wald ratio                | 1  | -0.89 | 0.001727 | 0.41 | 0.23 | 0.72 |
| ENSG00000139726 | DENR          | PD | Wald ratio                | 1  | -0.25 | 0.001774 | 0.78 | 0.66 | 0.91 |
| ENSG00000251417 | #N/A          | PD | Wald ratio                | 1  | 0.29  | 0.001809 | 1.33 | 1.11 | 1.59 |
| ENSG00000169696 | ASPCR1        | PD | Wald ratio                | 1  | 0.19  | 0.001814 | 1.20 | 1.07 | 1.35 |
| ENSG00000230358 | SPDYE21       | PD | Wald ratio                | 1  | 0.40  | 0.001853 | 1.50 | 1.16 | 1.93 |
| ENSG00000178188 | SH2B1         | PD | Wald ratio                | 1  | 0.62  | 0.001917 | 1.86 | 1.26 | 2.74 |
| ENSG00000249042 | #N/A          | PD | Wald ratio                | 1  | 0.56  | 0.001923 | 1.75 | 1.23 | 2.50 |
| ENSG00000101445 | PPP1R16B      | PD | Inverse variance weighted | 2  | 0.27  | 0.001939 | 1.30 | 1.10 | 1.54 |
| ENSG00000211776 | TRAV2         | PD | Inverse variance weighted | 2  | 0.51  | 0.001943 | 1.67 | 1.21 | 2.31 |
| ENSG00000158480 | SPATA2        | PD | Wald ratio                | 1  | -0.70 | 0.001974 | 0.50 | 0.32 | 0.77 |
| ENSG00000188612 | SUMO2         | PD | Wald ratio                | 1  | -0.36 | 0.001977 | 0.70 | 0.55 | 0.88 |
| ENSG00000174456 | C12orf76      | PD | Inverse variance weighted | 6  | -0.16 | 0.001991 | 0.85 | 0.77 | 0.94 |
| ENSG00000082898 | XPO1          | PD | Wald ratio                | 1  | -0.69 | 0.002004 | 0.50 | 0.32 | 0.78 |
| ENSG00000108312 | UBTF          | PD | Wald ratio                | 1  | -0.38 | 0.002013 | 0.68 | 0.54 | 0.87 |
| ENSG00000160678 | S100A1        | PD | Inverse variance weighted | 2  | 0.31  | 0.002057 | 1.36 | 1.12 | 1.66 |
| ENSG00000178464 | RPL10P16      | PD | Wald ratio                | 1  | -0.54 | 0.002091 | 0.58 | 0.41 | 0.82 |
| ENSG00000188033 | ZNF490        | PD | Wald ratio                | 1  | 0.38  | 0.002091 | 1.46 | 1.15 | 1.85 |
| ENSG00000145217 | SLC26A1       | PD | Wald ratio                | 1  | 0.22  | 0.002133 | 1.25 | 1.08 | 1.45 |
| ENSG00000205352 | PRR13         | PD | Inverse variance weighted | 3  | 0.18  | 0.002138 | 1.19 | 1.07 | 1.33 |
| ENSG00000136628 | EPRS1         | PD | Inverse variance weighted | 2  | -0.13 | 0.002174 | 0.88 | 0.81 | 0.96 |
| ENSG00000136819 | C9orf78       | PD | Inverse variance weighted | 10 | -0.08 | 0.002232 | 0.93 | 0.88 | 0.97 |
| ENSG00000124201 | ZNF1          | PD | Inverse variance weighted | 2  | 0.18  | 0.002254 | 1.19 | 1.07 | 1.34 |
| ENSG00000130511 | SSBP4         | PD | Wald ratio                | 1  | 0.44  | 0.002301 | 1.55 | 1.17 | 2.06 |
| ENSG00000152128 | TMEM163       | PD | Wald ratio                | 1  | 0.17  | 0.002327 | 1.18 | 1.06 | 1.32 |
| ENSG00000183682 | BMP8A         | PD | Inverse variance weighted | 3  | 0.23  | 0.002388 | 1.26 | 1.09 | 1.46 |
| ENSG00000163930 | BAP1          | PD | Wald ratio                | 1  | -0.65 | 0.002491 | 0.52 | 0.34 | 0.80 |
| ENSG00000236296 | GUSBP5        | PD | Inverse variance weighted | 6  | -0.11 | 0.002524 | 0.89 | 0.83 | 0.96 |
| ENSG00000235027 | #N/A          | PD | Inverse variance weighted | 2  | -0.34 | 0.002533 | 0.71 | 0.57 | 0.89 |
| ENSG00000182158 | CREB3L2       | PD | Wald ratio                | 1  | 0.54  | 0.002551 | 1.72 | 1.21 | 2.44 |
| ENSG00000173960 | UBXN2A        | PD | Inverse variance weighted | 3  | -0.13 | 0.002631 | 0.88 | 0.80 | 0.95 |
| ENSG00000184445 | KNTC1         | PD | Wald ratio                | 1  | -0.22 | 0.002636 | 0.80 | 0.70 | 0.93 |
| ENSG00000197646 | PDCD1LG2      | PD | Inverse variance weighted | 2  | -0.22 | 0.002672 | 0.80 | 0.69 | 0.93 |
| ENSG00000155755 | TMEM237       | PD | Inverse variance weighted | 3  | 0.21  | 0.002846 | 1.23 | 1.07 | 1.42 |
| ENSG00000234456 | MAGI2-<br>AS3 | PD | Inverse variance weighted | 3  | -0.15 | 0.002851 | 0.86 | 0.78 | 0.95 |
| ENSG00000212719 | LINC02693     | PD | Wald ratio                | 1  | 0.31  | 0.002868 | 1.37 | 1.11 | 1.68 |
| ENSG00000222365 | SNORD12B      | PD | Wald ratio                | 1  | 0.12  | 0.002875 | 1.12 | 1.04 | 1.21 |

|                 |                 |    |                           |   |       |          |      |      |      |
|-----------------|-----------------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000262500 | MAPK8IP1<br>P1  | PD | Inverse variance weighted | 2 | -0.56 | 0.002913 | 0.57 | 0.39 | 0.82 |
| ENSG00000185721 | DRG1            | PD | Inverse variance weighted | 2 | 0.29  | 0.002947 | 1.33 | 1.10 | 1.61 |
| ENSG00000162817 | C1orf115        | PD | Inverse variance weighted | 6 | 0.11  | 0.003003 | 1.12 | 1.04 | 1.20 |
| ENSG00000138768 | USO1            | PD | Wald ratio                | 1 | -0.19 | 0.003063 | 0.83 | 0.73 | 0.94 |
| ENSG00000078967 | UBE2D4          | PD | Wald ratio                | 1 | -0.28 | 0.003101 | 0.75 | 0.63 | 0.91 |
| ENSG00000163823 | CCR1            | PD | Inverse variance weighted | 9 | -0.10 | 0.003101 | 0.90 | 0.85 | 0.97 |
| ENSG00000267049 | #N/A            | PD | Wald ratio                | 1 | -0.55 | 0.003196 | 0.58 | 0.40 | 0.83 |
| ENSG00000140995 | DEF8            | PD | Inverse variance weighted | 4 | 0.19  | 0.003233 | 1.21 | 1.07 | 1.38 |
| ENSG00000259030 | FPGT-<br>TNNI3K | PD | Wald ratio                | 1 | -0.43 | 0.00327  | 0.65 | 0.49 | 0.87 |
| ENSG00000244932 | #N/A            | PD | Wald ratio                | 1 | 0.44  | 0.003309 | 1.56 | 1.16 | 2.09 |
| ENSG00000198408 | OGA             | PD | Wald ratio                | 1 | -0.73 | 0.003392 | 0.48 | 0.30 | 0.79 |
| ENSG00000182372 | CLN8            | PD | Inverse variance weighted | 2 | 0.16  | 0.003393 | 1.18 | 1.06 | 1.31 |
| ENSG00000179195 | ZNF664          | PD | Inverse variance weighted | 2 | -0.19 | 0.003422 | 0.82 | 0.72 | 0.94 |
| ENSG00000163812 | ZDHHC3          | PD | Wald ratio                | 1 | 0.34  | 0.003456 | 1.40 | 1.12 | 1.75 |
| ENSG00000162929 | SANBR           | PD | Inverse variance weighted | 6 | -0.10 | 0.003472 | 0.90 | 0.85 | 0.97 |
| ENSG00000138246 | DNAJC13         | PD | Inverse variance weighted | 3 | 0.20  | 0.003502 | 1.22 | 1.07 | 1.39 |
| ENSG00000267214 | #N/A            | PD | Wald ratio                | 1 | -0.93 | 0.003542 | 0.40 | 0.21 | 0.74 |
| ENSG00000164776 | PHKG1           | PD | Inverse variance weighted | 2 | -0.25 | 0.003619 | 0.78 | 0.66 | 0.92 |
| ENSG00000268804 | #N/A            | PD | Wald ratio                | 1 | -0.19 | 0.003636 | 0.83 | 0.73 | 0.94 |
| ENSG00000226252 | #N/A            | PD | Wald ratio                | 1 | -0.86 | 0.003689 | 0.42 | 0.24 | 0.76 |
| ENSG00000136235 | GPMB            | PD | Inverse variance weighted | 2 | 0.44  | 0.003694 | 1.56 | 1.15 | 2.10 |
| ENSG00000143157 | POGK            | PD | Wald ratio                | 1 | -0.22 | 0.003726 | 0.80 | 0.69 | 0.93 |
| ENSG00000163126 | ANKRD23         | PD | Wald ratio                | 1 | 0.45  | 0.003797 | 1.57 | 1.16 | 2.14 |
| ENSG00000132359 | RAP1GAP2        | PD | Inverse variance weighted | 4 | -0.26 | 0.003867 | 0.77 | 0.64 | 0.92 |
| ENSG00000090861 | AARS1           | PD | Inverse variance weighted | 3 | -0.25 | 0.003878 | 0.78 | 0.66 | 0.92 |
| ENSG00000163214 | DHX57           | PD | Wald ratio                | 1 | 0.15  | 0.003909 | 1.16 | 1.05 | 1.28 |
| ENSG00000182109 | #N/A            | PD | Inverse variance weighted | 4 | 0.17  | 0.003938 | 1.18 | 1.05 | 1.32 |
| ENSG00000135919 | SERPINE2        | PD | Inverse variance weighted | 6 | -0.11 | 0.003939 | 0.89 | 0.83 | 0.96 |
| ENSG00000196576 | PLXNB2          | PD | Inverse variance weighted | 4 | 0.15  | 0.003942 | 1.16 | 1.05 | 1.28 |
| ENSG00000096063 | SRPK1           | PD | Inverse variance weighted | 8 | -0.10 | 0.003952 | 0.90 | 0.84 | 0.97 |
| ENSG00000228107 | #N/A            | PD | Wald ratio                | 1 | 0.51  | 0.00396  | 1.67 | 1.18 | 2.37 |
| ENSG00000176597 | B3GNT5          | PD | Inverse variance weighted | 2 | 0.16  | 0.003969 | 1.18 | 1.05 | 1.31 |
| ENSG00000257167 | TMPO-AS1        | PD | Wald ratio                | 1 | -0.93 | 0.003974 | 0.39 | 0.21 | 0.74 |
| ENSG00000163913 | IFT122          | PD | Wald ratio                | 1 | 0.41  | 0.004047 | 1.51 | 1.14 | 2.01 |
| ENSG00000198216 | CACNA1E         | PD | Inverse variance weighted | 4 | -0.20 | 0.004091 | 0.82 | 0.72 | 0.94 |
| ENSG00000167861 | HID1            | PD | Wald ratio                | 1 | -0.51 | 0.004099 | 0.60 | 0.43 | 0.85 |
| ENSG00000104219 | ZDHHC2          | PD | Inverse variance weighted | 4 | 0.13  | 0.004148 | 1.14 | 1.04 | 1.24 |
| ENSG00000265242 | #N/A            | PD | Wald ratio                | 1 | -0.54 | 0.004165 | 0.58 | 0.40 | 0.84 |
| ENSG00000166908 | PIP4K2C         | PD | Wald ratio                | 1 | 0.31  | 0.004265 | 1.36 | 1.10 | 1.69 |
| ENSG00000255046 | #N/A            | PD | Wald ratio                | 1 | 0.16  | 0.00429  | 1.18 | 1.05 | 1.32 |
| ENSG00000160691 | SHC1            | PD | Inverse variance weighted | 2 | 0.12  | 0.004304 | 1.12 | 1.04 | 1.22 |
| ENSG00000078747 | ITCH            | PD | Wald ratio                | 1 | 0.19  | 0.004308 | 1.20 | 1.06 | 1.37 |

|                  |          |    |                           |    |       |          |      |      |      |
|------------------|----------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000019995  | ZRANB1   | PD | Inverse variance weighted | 4  | 0.10  | 0.004325 | 1.11 | 1.03 | 1.19 |
| ENSG000000171067 | C11orf24 | PD | Wald ratio                | 1  | -0.34 | 0.004326 | 0.71 | 0.57 | 0.90 |
| ENSG000000005884 | ITGA3    | PD | Inverse variance weighted | 2  | 0.32  | 0.004351 | 1.38 | 1.11 | 1.72 |
| ENSG000000136044 | APPL2    | PD | Inverse variance weighted | 3  | -0.12 | 0.004435 | 0.88 | 0.81 | 0.96 |
| ENSG000000205482 | SPDYE18  | PD | Wald ratio                | 1  | -0.34 | 0.004472 | 0.71 | 0.57 | 0.90 |
| ENSG000000152382 | TADA1    | PD | Wald ratio                | 1  | 0.29  | 0.004542 | 1.33 | 1.09 | 1.63 |
| ENSG000000205746 | PKD1P4   | PD | Inverse variance weighted | 3  | 0.50  | 0.004643 | 1.64 | 1.16 | 2.31 |
| ENSG000000206535 | LNP1     | PD | Wald ratio                | 1  | -0.39 | 0.004709 | 0.67 | 0.51 | 0.89 |
| ENSG000000100401 | RANGAP1  | PD | Wald ratio                | 1  | 0.33  | 0.004726 | 1.39 | 1.11 | 1.75 |
| ENSG000000155066 | PROM2    | PD | Wald ratio                | 1  | 0.50  | 0.004789 | 1.64 | 1.16 | 2.32 |
| ENSG000000155252 | PI4K2A   | PD | Wald ratio                | 1  | -0.33 | 0.004806 | 0.72 | 0.57 | 0.90 |
| ENSG000000123908 | AGO2     | PD | Inverse variance weighted | 4  | 0.21  | 0.004854 | 1.24 | 1.07 | 1.43 |
| ENSG000000260793 | #N/A     | PD | Wald ratio                | 1  | 0.43  | 0.004864 | 1.54 | 1.14 | 2.09 |
| ENSG000000113621 | TXNDC15  | PD | Inverse variance weighted | 2  | -0.11 | 0.004877 | 0.89 | 0.83 | 0.97 |
| ENSG000000222057 | RNU4-62P | PD | Wald ratio                | 1  | -0.71 | 0.004881 | 0.49 | 0.30 | 0.81 |
| ENSG000000177479 | ARIH2    | PD | Wald ratio                | 1  | 0.21  | 0.00497  | 1.23 | 1.06 | 1.42 |
| ENSG000000172059 | KLF11    | PD | Inverse variance weighted | 4  | -0.14 | 0.004988 | 0.87 | 0.79 | 0.96 |
| ENSG000000158201 | ABHD3    | PD | Inverse variance weighted | 6  | -0.20 | 0.004997 | 0.82 | 0.71 | 0.94 |
| ENSG000000243544 | RN7SL172 | PD | Wald ratio                | 1  | -0.20 | 0.005044 | 0.82 | 0.72 | 0.94 |
|                  | P        |    |                           |    |       |          |      |      |      |
| ENSG000000134900 | TPP2     | PD | Inverse variance weighted | 4  | 0.11  | 0.005089 | 1.12 | 1.03 | 1.21 |
| ENSG000000124571 | XPO5     | PD | Inverse variance weighted | 2  | -0.43 | 0.005101 | 0.65 | 0.48 | 0.88 |
| ENSG000000178467 | P4HTM    | PD | Wald ratio                | 1  | 0.12  | 0.005236 | 1.13 | 1.04 | 1.23 |
| ENSG000000149308 | NPAT     | PD | Wald ratio                | 1  | -0.22 | 0.005279 | 0.80 | 0.68 | 0.94 |
| ENSG000000132570 | PCBD2    | PD | Wald ratio                | 1  | -0.65 | 0.005295 | 0.52 | 0.33 | 0.82 |
| ENSG000000115827 | DCAF17   | PD | Wald ratio                | 1  | 0.49  | 0.005302 | 1.63 | 1.16 | 2.30 |
| ENSG000000148396 | SEC16A   | PD | Inverse variance weighted | 2  | -0.12 | 0.005327 | 0.88 | 0.81 | 0.96 |
| ENSG000000168101 | NUDT16L1 | PD | Wald ratio                | 1  | 0.48  | 0.005357 | 1.61 | 1.15 | 2.25 |
| ENSG000000174792 | ODAPH    | PD | Wald ratio                | 1  | 0.49  | 0.005404 | 1.63 | 1.16 | 2.31 |
| ENSG000000122729 | ACO1     | PD | Inverse variance weighted | 4  | 0.21  | 0.005459 | 1.23 | 1.06 | 1.42 |
| ENSG000000262468 | #N/A     | PD | Inverse variance weighted | 2  | 0.26  | 0.005533 | 1.30 | 1.08 | 1.56 |
| ENSG000000162366 | PDZK1IP1 | PD | Inverse variance weighted | 14 | -0.06 | 0.005615 | 0.94 | 0.90 | 0.98 |
| ENSG000000145949 | MYLK4    | PD | Inverse variance weighted | 2  | -0.15 | 0.005712 | 0.86 | 0.77 | 0.96 |
| ENSG000000104643 | MTMR9    | PD | Inverse variance weighted | 2  | -0.29 | 0.005742 | 0.75 | 0.61 | 0.92 |
| ENSG000000213214 | ARHGEF35 | PD | Inverse variance weighted | 2  | 0.12  | 0.005852 | 1.12 | 1.03 | 1.22 |
| ENSG000000125458 | NT5C     | PD | Inverse variance weighted | 2  | 0.13  | 0.005852 | 1.14 | 1.04 | 1.26 |
| ENSG000000253239 | IGLVI-70 | PD | Inverse variance weighted | 2  | -0.40 | 0.005869 | 0.67 | 0.50 | 0.89 |
| ENSG000000159403 | C1R      | PD | Wald ratio                | 1  | -0.33 | 0.005894 | 0.72 | 0.56 | 0.91 |
| ENSG000000176490 | DIRAS1   | PD | Wald ratio                | 1  | 0.19  | 0.005894 | 1.21 | 1.06 | 1.39 |
| ENSG000000140403 | DNAJA4   | PD | Inverse variance weighted | 5  | 0.11  | 0.005966 | 1.12 | 1.03 | 1.21 |
| ENSG000000119630 | PGF      | PD | Wald ratio                | 1  | -0.26 | 0.006119 | 0.77 | 0.64 | 0.93 |
| ENSG000000183864 | TOB2     | PD | Wald ratio                | 1  | 0.35  | 0.006153 | 1.42 | 1.10 | 1.81 |
| ENSG000000135052 | GOLM1    | PD | Inverse variance weighted | 8  | -0.12 | 0.006222 | 0.89 | 0.81 | 0.97 |
| ENSG000000255198 | SNHG9    | PD | Inverse variance weighted | 3  | 0.09  | 0.006285 | 1.09 | 1.03 | 1.17 |

|                 |                |    |                           |   |       |          |      |      |      |
|-----------------|----------------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000115504 | EHBP1          | PD | Wald ratio                | 1 | 0.68  | 0.006355 | 1.97 | 1.21 | 3.19 |
| ENSG00000174944 | P2RY14         | PD | Inverse variance weighted | 6 | -0.15 | 0.00637  | 0.86 | 0.77 | 0.96 |
| ENSG00000224043 | #N/A           | PD | Wald ratio                | 1 | 0.45  | 0.006378 | 1.56 | 1.13 | 2.16 |
| ENSG00000137876 | RSL24D1        | PD | Inverse variance weighted | 2 | -0.17 | 0.006384 | 0.84 | 0.74 | 0.95 |
| ENSG00000159256 | MORC3          | PD | Wald ratio                | 1 | 0.11  | 0.006476 | 1.12 | 1.03 | 1.21 |
| ENSG00000213672 | NCKIPSD        | PD | Wald ratio                | 1 | 0.15  | 0.006497 | 1.16 | 1.04 | 1.29 |
| ENSG00000257698 | GIHCG          | PD | Wald ratio                | 1 | 0.20  | 0.006533 | 1.23 | 1.06 | 1.42 |
| ENSG00000176946 | THAP4          | PD | Wald ratio                | 1 | -0.39 | 0.006655 | 0.68 | 0.51 | 0.90 |
| ENSG00000181350 | LRRC75A        | PD | Inverse variance weighted | 4 | 0.17  | 0.006779 | 1.18 | 1.05 | 1.34 |
| ENSG00000241627 | #N/A           | PD | Wald ratio                | 1 | 0.49  | 0.006799 | 1.62 | 1.14 | 2.31 |
| ENSG00000148090 | AUH            | PD | Wald ratio                | 1 | -0.48 | 0.006816 | 0.62 | 0.44 | 0.88 |
| ENSG00000179388 | EGR3           | PD | Wald ratio                | 1 | 0.71  | 0.006888 | 2.04 | 1.22 | 3.43 |
| ENSG00000171121 | KCNMB3         | PD | Wald ratio                | 1 | 0.42  | 0.007021 | 1.52 | 1.12 | 2.05 |
| ENSG00000162650 | ATXN7L2        | PD | Wald ratio                | 1 | -0.41 | 0.007159 | 0.66 | 0.49 | 0.89 |
| ENSG00000250334 | LINC00989      | PD | Inverse variance weighted | 4 | 0.13  | 0.007224 | 1.14 | 1.04 | 1.25 |
| ENSG00000250506 | CDK3           | PD | Wald ratio                | 1 | 0.61  | 0.007237 | 1.84 | 1.18 | 2.86 |
| ENSG00000162928 | PEX13          | PD | Wald ratio                | 1 | -0.42 | 0.007289 | 0.66 | 0.49 | 0.89 |
| ENSG00000173208 | ABCD2          | PD | Wald ratio                | 1 | -0.22 | 0.007349 | 0.80 | 0.69 | 0.94 |
| ENSG00000148356 | LRSAM1         | PD | Wald ratio                | 1 | -0.28 | 0.007416 | 0.75 | 0.61 | 0.93 |
| ENSG00000176681 | LRRC37A        | PD | Inverse variance weighted | 3 | -0.18 | 0.007519 | 0.83 | 0.73 | 0.95 |
| ENSG00000238083 | LRRC37A2       | PD | Inverse variance weighted | 4 | -0.34 | 0.007682 | 0.71 | 0.55 | 0.91 |
| ENSG00000171631 | P2RY6          | PD | Wald ratio                | 1 | -0.74 | 0.007689 | 0.48 | 0.28 | 0.82 |
| ENSG00000215424 | MCM3AP-<br>AS1 | PD | Inverse variance weighted | 2 | -0.17 | 0.00775  | 0.84 | 0.74 | 0.96 |
| ENSG00000140598 | EFL1           | PD | Inverse variance weighted | 2 | -0.38 | 0.007753 | 0.68 | 0.52 | 0.90 |
| ENSG00000181904 | C5orf24        | PD | Wald ratio                | 1 | -0.71 | 0.007773 | 0.49 | 0.29 | 0.83 |
| ENSG00000186868 | MAPT           | PD | Wald ratio                | 1 | 0.64  | 0.00786  | 1.90 | 1.18 | 3.04 |
| ENSG00000232300 | #N/A           | PD | Wald ratio                | 1 | -0.17 | 0.00786  | 0.85 | 0.75 | 0.96 |
| ENSG00000171160 | MORN4          | PD | Inverse variance weighted | 2 | 0.14  | 0.007888 | 1.15 | 1.04 | 1.28 |
| ENSG00000196396 | PTPN1          | PD | Wald ratio                | 1 | -0.17 | 0.007905 | 0.84 | 0.75 | 0.96 |
| ENSG00000163827 | LRRC2          | PD | Inverse variance weighted | 2 | -0.37 | 0.007975 | 0.69 | 0.53 | 0.91 |
| ENSG00000147912 | FBXO10         | PD | Wald ratio                | 1 | -0.33 | 0.008022 | 0.72 | 0.56 | 0.92 |
| ENSG00000109084 | TMEM97         | PD | Inverse variance weighted | 6 | -0.10 | 0.008093 | 0.91 | 0.84 | 0.98 |
| ENSG00000204564 | C6orf136       | PD | Inverse variance weighted | 2 | 0.26  | 0.008099 | 1.30 | 1.07 | 1.59 |
| ENSG00000134480 | CCNH           | PD | Wald ratio                | 1 | -0.44 | 0.00812  | 0.65 | 0.47 | 0.89 |
| ENSG00000260398 | #N/A           | PD | Wald ratio                | 1 | -0.44 | 0.00812  | 0.64 | 0.46 | 0.89 |
| ENSG00000241852 | C8orf58        | PD | Inverse variance weighted | 2 | 0.16  | 0.008196 | 1.17 | 1.04 | 1.32 |
| ENSG00000171236 | LRG1           | PD | Inverse variance weighted | 5 | -0.27 | 0.00822  | 0.76 | 0.62 | 0.93 |
| ENSG00000156958 | GALK2          | PD | Wald ratio                | 1 | 0.17  | 0.008321 | 1.19 | 1.05 | 1.35 |
| ENSG00000233695 | #N/A           | PD | Inverse variance weighted | 2 | -0.13 | 0.008385 | 0.87 | 0.79 | 0.97 |
| ENSG00000167220 | HDHD2          | PD | Inverse variance weighted | 2 | 0.12  | 0.008386 | 1.13 | 1.03 | 1.24 |
| ENSG00000242247 | ARFGAP3        | PD | Inverse variance weighted | 2 | -0.15 | 0.008389 | 0.86 | 0.77 | 0.96 |
| ENSG00000163281 | GNPDA2         | PD | Inverse variance weighted | 2 | -0.21 | 0.008438 | 0.81 | 0.69 | 0.95 |
| ENSG00000149136 | SSRP1          | PD | Inverse variance weighted | 2 | 0.23  | 0.008489 | 1.25 | 1.06 | 1.48 |

|                 |            |    |                           |    |       |          |      |      |      |
|-----------------|------------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000173809 | TDRD12     | PD | Wald ratio                | 1  | -0.35 | 0.008492 | 0.71 | 0.55 | 0.92 |
| ENSG00000225985 | #N/A       | PD | Wald ratio                | 1  | 0.83  | 0.008528 | 2.29 | 1.23 | 4.23 |
| ENSG00000150990 | DHX37      | PD | Wald ratio                | 1  | -0.43 | 0.008618 | 0.65 | 0.47 | 0.90 |
| ENSG00000245213 | GALNT7-DT  | PD | Inverse variance weighted | 3  | 0.27  | 0.008753 | 1.31 | 1.07 | 1.61 |
| ENSG00000214194 | SMIM30     | PD | Inverse variance weighted | 2  | -0.28 | 0.008756 | 0.76 | 0.62 | 0.93 |
| ENSG00000040633 | PHF23      | PD | Inverse variance weighted | 3  | -0.15 | 0.0088   | 0.86 | 0.77 | 0.96 |
| ENSG00000261644 | #N/A       | PD | Wald ratio                | 1  | -0.21 | 0.008818 | 0.81 | 0.70 | 0.95 |
| ENSG00000269918 | #N/A       | PD | Inverse variance weighted | 3  | -0.13 | 0.008858 | 0.88 | 0.79 | 0.97 |
| ENSG00000269772 | #N/A       | PD | Wald ratio                | 1  | 0.44  | 0.008879 | 1.55 | 1.12 | 2.14 |
| ENSG00000163637 | PRICKLE2   | PD | Wald ratio                | 1  | -0.57 | 0.008904 | 0.57 | 0.37 | 0.87 |
| ENSG00000146085 | MMUT       | PD | Inverse variance weighted | 7  | 0.09  | 0.008921 | 1.09 | 1.02 | 1.17 |
| ENSG00000268568 | #N/A       | PD | Wald ratio                | 1  | 0.11  | 0.008931 | 1.12 | 1.03 | 1.21 |
| ENSG00000241370 | RPP21      | PD | Wald ratio                | 1  | -0.37 | 0.009001 | 0.69 | 0.53 | 0.91 |
| ENSG00000171408 | PDE7B      | PD | Wald ratio                | 1  | -0.55 | 0.00905  | 0.58 | 0.38 | 0.87 |
| ENSG00000172005 | MAL        | PD | Inverse variance weighted | 5  | -0.12 | 0.009061 | 0.89 | 0.81 | 0.97 |
| ENSG00000112972 | HMGCS1     | PD | Inverse variance weighted | 2  | -0.48 | 0.009072 | 0.62 | 0.43 | 0.89 |
| ENSG00000188234 | AGAP4      | PD | Inverse variance weighted | 4  | -0.08 | 0.009106 | 0.93 | 0.87 | 0.98 |
| ENSG00000104133 | SPG11      | PD | Wald ratio                | 1  | -0.38 | 0.009109 | 0.68 | 0.51 | 0.91 |
| ENSG00000164855 | TMEM184A   | PD | Wald ratio                | 1  | -0.25 | 0.009197 | 0.78 | 0.64 | 0.94 |
| ENSG00000130529 | TRPM4      | PD | Inverse variance weighted | 10 | -0.09 | 0.009216 | 0.91 | 0.85 | 0.98 |
| ENSG00000243224 | TWF2-DT    | PD | Inverse variance weighted | 2  | -0.12 | 0.009387 | 0.88 | 0.81 | 0.97 |
| ENSG00000216775 | LOC730101  | PD | Wald ratio                | 1  | 0.20  | 0.009516 | 1.22 | 1.05 | 1.41 |
| ENSG00000229431 | #N/A       | PD | Wald ratio                | 1  | -0.40 | 0.009609 | 0.67 | 0.49 | 0.91 |
| ENSG00000177646 | ACAD9      | PD | Inverse variance weighted | 4  | 0.20  | 0.009651 | 1.22 | 1.05 | 1.41 |
| ENSG00000145723 | GIN1       | PD | Wald ratio                | 1  | 0.22  | 0.009664 | 1.24 | 1.05 | 1.46 |
| ENSG00000173406 | DAB1       | PD | Inverse variance weighted | 2  | 0.10  | 0.009684 | 1.11 | 1.03 | 1.20 |
| ENSG00000258521 | #N/A       | PD | Wald ratio                | 1  | -0.31 | 0.009689 | 0.73 | 0.58 | 0.93 |
| ENSG00000229474 | PATL2      | PD | Inverse variance weighted | 7  | -0.11 | 0.009778 | 0.90 | 0.83 | 0.97 |
| ENSG00000260051 | #N/A       | PD | Wald ratio                | 1  | 0.16  | 0.010063 | 1.18 | 1.04 | 1.34 |
| ENSG00000169629 | RGPD8      | PD | Wald ratio                | 1  | 0.18  | 0.010067 | 1.19 | 1.04 | 1.36 |
| ENSG00000255987 | #N/A       | PD | Inverse variance weighted | 3  | -0.23 | 0.010103 | 0.79 | 0.66 | 0.95 |
| ENSG00000145113 | MUC4       | PD | Inverse variance weighted | 2  | -0.17 | 0.010108 | 0.84 | 0.74 | 0.96 |
| ENSG00000183397 | C19orf71   | PD | Inverse variance weighted | 3  | -0.25 | 0.010176 | 0.78 | 0.64 | 0.94 |
| ENSG00000162723 | SLAMF9     | PD | Wald ratio                | 1  | -0.65 | 0.010182 | 0.52 | 0.32 | 0.86 |
| ENSG00000259976 | #N/A       | PD | Wald ratio                | 1  | 0.86  | 0.010196 | 2.36 | 1.23 | 4.53 |
| ENSG00000237149 | ZNF503-AS2 | PD | Wald ratio                | 1  | 0.42  | 0.010215 | 1.52 | 1.10 | 2.08 |
| ENSG00000172653 | #N/A       | PD | Wald ratio                | 1  | 0.26  | 0.010236 | 1.29 | 1.06 | 1.58 |
| ENSG00000243566 | UPK3B      | PD | Inverse variance weighted | 3  | -0.10 | 0.010251 | 0.91 | 0.84 | 0.98 |
| ENSG00000247400 | DNAJC3-DT  | PD | Wald ratio                | 1  | -0.21 | 0.010352 | 0.81 | 0.70 | 0.95 |
| ENSG00000261338 | #N/A       | PD | Inverse variance weighted | 4  | 0.11  | 0.010393 | 1.11 | 1.03 | 1.20 |

|                 |              |    |                           |   |       |          |      |      |      |
|-----------------|--------------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000156113 | KCNMA1       | PD | Inverse variance weighted | 4 | 0.10  | 0.010523 | 1.11 | 1.02 | 1.20 |
| ENSG00000225217 | #N/A         | PD | Inverse variance weighted | 2 | 0.18  | 0.010526 | 1.19 | 1.04 | 1.37 |
| ENSG00000242797 | #N/A         | PD | Wald ratio                | 1 | -0.31 | 0.010602 | 0.73 | 0.58 | 0.93 |
| ENSG00000245317 | LOC100996419 | PD | Wald ratio                | 1 | 0.52  | 0.010637 | 1.68 | 1.13 | 2.50 |
| ENSG00000199370 | #N/A         | PD | Wald ratio                | 1 | -0.24 | 0.010855 | 0.79 | 0.66 | 0.95 |
| ENSG00000205269 | TMEM170B     | PD | Inverse variance weighted | 5 | -0.15 | 0.010882 | 0.86 | 0.77 | 0.97 |
| ENSG00000186834 | HEXIM1       | PD | Wald ratio                | 1 | 0.44  | 0.010883 | 1.55 | 1.11 | 2.17 |
| ENSG00000167207 | NOD2         | PD | Inverse variance weighted | 8 | 0.05  | 0.010892 | 1.05 | 1.01 | 1.09 |
| ENSG00000269676 | #N/A         | PD | Wald ratio                | 1 | -0.20 | 0.01099  | 0.82 | 0.70 | 0.96 |
| ENSG00000089169 | RPH3A        | PD | Inverse variance weighted | 6 | -0.10 | 0.011018 | 0.90 | 0.84 | 0.98 |
| ENSG00000101391 | CDK5RAP1     | PD | Wald ratio                | 1 | 0.47  | 0.011072 | 1.61 | 1.11 | 2.32 |
| ENSG00000163932 | PRKCD        | PD | Inverse variance weighted | 5 | 0.18  | 0.011117 | 1.19 | 1.04 | 1.37 |
| ENSG00000156990 | RPUSD3       | PD | Wald ratio                | 1 | 0.16  | 0.011271 | 1.17 | 1.04 | 1.32 |
| ENSG00000171223 | JUNB         | PD | Inverse variance weighted | 2 | -0.42 | 0.011296 | 0.66 | 0.48 | 0.91 |
| ENSG00000138738 | PRDM5        | PD | Inverse variance weighted | 4 | -0.11 | 0.011341 | 0.89 | 0.82 | 0.97 |
| ENSG00000088298 | EDEM2        | PD | Inverse variance weighted | 2 | -0.10 | 0.011358 | 0.90 | 0.83 | 0.98 |
| ENSG00000237797 | #N/A         | PD | Wald ratio                | 1 | 0.77  | 0.011396 | 2.15 | 1.19 | 3.91 |
| ENSG00000167515 | TRAPPC2L     | PD | Wald ratio                | 1 | -0.15 | 0.011425 | 0.86 | 0.77 | 0.97 |
| ENSG00000135541 | AHI1         | PD | Inverse variance weighted | 4 | -0.08 | 0.01147  | 0.92 | 0.87 | 0.98 |
| ENSG00000130348 | QRSL1        | PD | Inverse variance weighted | 3 | -0.10 | 0.01148  | 0.90 | 0.83 | 0.98 |
| ENSG00000169926 | KLF13        | PD | Wald ratio                | 1 | -0.36 | 0.01149  | 0.70 | 0.53 | 0.92 |
| ENSG00000241782 | RPL21P95     | PD | Wald ratio                | 1 | 0.35  | 0.011514 | 1.43 | 1.08 | 1.88 |
| ENSG00000100393 | EP300        | PD | Wald ratio                | 1 | -0.13 | 0.011527 | 0.88 | 0.79 | 0.97 |
| ENSG00000148671 | ADIRF        | PD | Wald ratio                | 1 | -0.35 | 0.011581 | 0.71 | 0.54 | 0.93 |
| ENSG00000136827 | TOR1A        | PD | Inverse variance weighted | 4 | -0.11 | 0.011594 | 0.90 | 0.83 | 0.98 |
| ENSG00000110075 | PPP6R3       | PD | Wald ratio                | 1 | -0.22 | 0.011678 | 0.80 | 0.68 | 0.95 |
| ENSG00000132964 | CDK8         | PD | Wald ratio                | 1 | -0.36 | 0.01177  | 0.70 | 0.53 | 0.92 |
| ENSG00000126264 | HCST         | PD | Inverse variance weighted | 4 | 0.50  | 0.011816 | 1.65 | 1.12 | 2.43 |
| ENSG00000234694 | #N/A         | PD | Inverse variance weighted | 2 | -0.20 | 0.011961 | 0.82 | 0.70 | 0.96 |
| ENSG00000086062 | B4GALT1      | PD | Inverse variance weighted | 3 | 0.33  | 0.011964 | 1.38 | 1.07 | 1.78 |
| ENSG00000170027 | YWHAG        | PD | Inverse variance weighted | 2 | -0.11 | 0.011991 | 0.90 | 0.82 | 0.98 |
| ENSG00000184863 | RBM33        | PD | Wald ratio                | 1 | 0.80  | 0.012074 | 2.23 | 1.19 | 4.18 |
| ENSG00000169599 | NFU1         | PD | Wald ratio                | 1 | -0.16 | 0.012125 | 0.85 | 0.75 | 0.96 |
| ENSG00000169018 | FEM1B        | PD | Wald ratio                | 1 | 0.34  | 0.012152 | 1.40 | 1.08 | 1.82 |
| ENSG00000197912 | SPG7         | PD | Wald ratio                | 1 | 0.15  | 0.012212 | 1.16 | 1.03 | 1.31 |
| ENSG00000164484 | TMEM200A     | PD | Inverse variance weighted | 2 | 0.15  | 0.012279 | 1.17 | 1.03 | 1.32 |
| ENSG00000255310 | #N/A         | PD | Inverse variance weighted | 3 | -0.13 | 0.012329 | 0.88 | 0.80 | 0.97 |
| ENSG00000143971 | ETAA1        | PD | Inverse variance weighted | 2 | 0.26  | 0.012391 | 1.29 | 1.06 | 1.58 |
| ENSG00000176809 | LRRC37A3     | PD | Wald ratio                | 1 | -0.28 | 0.012419 | 0.76 | 0.61 | 0.94 |
| ENSG00000257743 | MGAM2        | PD | Wald ratio                | 1 | 0.19  | 0.012419 | 1.21 | 1.04 | 1.41 |
| ENSG00000164609 | SLU7         | PD | Inverse variance weighted | 2 | 0.52  | 0.012543 | 1.69 | 1.12 | 2.54 |

|                 |           |    |                           |   |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000234585 | CCT6P3    | PD | Inverse variance weighted | 3 | -0.10 | 0.012551 | 0.91 | 0.84 | 0.98 |
| ENSG00000176720 | BOK       | PD | Inverse variance weighted | 3 | 0.11  | 0.012584 | 1.12 | 1.02 | 1.22 |
| ENSG00000225450 | #N/A      | PD | Wald ratio                | 1 | 0.19  | 0.012616 | 1.21 | 1.04 | 1.41 |
| ENSG00000243970 | PPIEL     | PD | Inverse variance weighted | 3 | 0.19  | 0.012651 | 1.21 | 1.04 | 1.41 |
| ENSG00000124198 | ARFGEF2   | PD | Wald ratio                | 1 | 0.18  | 0.012678 | 1.20 | 1.04 | 1.38 |
| ENSG00000230953 | #N/A      | PD | Wald ratio                | 1 | -0.44 | 0.012713 | 0.64 | 0.46 | 0.91 |
| ENSG00000185499 | MUC1      | PD | Inverse variance weighted | 5 | 0.14  | 0.012762 | 1.15 | 1.03 | 1.28 |
| ENSG00000175203 | DCTN2     | PD | Wald ratio                | 1 | 0.71  | 0.012774 | 2.04 | 1.16 | 3.58 |
| ENSG00000138172 | CALHM2    | PD | Inverse variance weighted | 3 | 0.09  | 0.012975 | 1.09 | 1.02 | 1.17 |
| ENSG00000172367 | PDZD3     | PD | Inverse variance weighted | 2 | -0.15 | 0.012992 | 0.86 | 0.77 | 0.97 |
| ENSG00000236540 | #N/A      | PD | Inverse variance weighted | 2 | 0.24  | 0.013137 | 1.27 | 1.05 | 1.53 |
| ENSG00000196968 | FUT11     | PD | Wald ratio                | 1 | 0.30  | 0.013152 | 1.35 | 1.06 | 1.71 |
| ENSG00000180776 | ZDHC20    | PD | Inverse variance weighted | 2 | -0.18 | 0.013275 | 0.83 | 0.72 | 0.96 |
| ENSG00000270120 | #N/A      | PD | Inverse variance weighted | 3 | 0.09  | 0.013344 | 1.09 | 1.02 | 1.17 |
| ENSG00000128271 | ADORA2A   | PD | Wald ratio                | 1 | 0.20  | 0.013489 | 1.23 | 1.04 | 1.44 |
| ENSG00000132749 | TESMIN    | PD | Wald ratio                | 1 | 0.11  | 0.013489 | 1.11 | 1.02 | 1.21 |
| ENSG00000238142 | LOC105376 | PD | Inverse variance weighted | 2 | -0.18 | 0.01353  | 0.84 | 0.72 | 0.96 |
| 805             |           |    |                           |   |       |          |      |      |      |
| ENSG00000177303 | CASKIN2   | PD | Wald ratio                | 1 | 0.33  | 0.013534 | 1.39 | 1.07 | 1.81 |
| ENSG00000237914 | SIRPG-AS1 | PD | Inverse variance weighted | 4 | 0.10  | 0.013562 | 1.10 | 1.02 | 1.19 |
| ENSG00000228137 | #N/A      | PD | Wald ratio                | 1 | -0.63 | 0.013565 | 0.53 | 0.32 | 0.88 |
| ENSG00000133805 | AMPD3     | PD | Inverse variance weighted | 5 | 0.16  | 0.013573 | 1.17 | 1.03 | 1.33 |
| ENSG00000138593 | SECISBP2L | PD | Wald ratio                | 1 | 0.45  | 0.013688 | 1.56 | 1.10 | 2.23 |
| ENSG00000143379 | SETDB1    | PD | Wald ratio                | 1 | 0.24  | 0.013767 | 1.27 | 1.05 | 1.53 |
| ENSG00000123427 | EEF1AKM   | PD | Inverse variance weighted | 5 | -0.08 | 0.013812 | 0.92 | 0.86 | 0.98 |
| T3              |           |    |                           |   |       |          |      |      |      |
| ENSG00000237883 | DGUOK-AS1 | PD | Inverse variance weighted | 2 | 0.55  | 0.013851 | 1.74 | 1.12 | 2.69 |
| ENSG00000144504 | ANKMY1    | PD | Inverse variance weighted | 4 | 0.09  | 0.013866 | 1.10 | 1.02 | 1.18 |
| ENSG00000269947 | #N/A      | PD | Wald ratio                | 1 | 0.45  | 0.013876 | 1.56 | 1.10 | 2.23 |
| ENSG00000090565 | RAB11FIP3 | PD | Wald ratio                | 1 | 0.46  | 0.013939 | 1.58 | 1.10 | 2.28 |
| ENSG00000130201 | #N/A      | PD | Wald ratio                | 1 | -0.45 | 0.013966 | 0.64 | 0.45 | 0.91 |
| ENSG00000143776 | CDC42BPA  | PD | Inverse variance weighted | 2 | -0.24 | 0.014065 | 0.79 | 0.65 | 0.95 |
| ENSG00000128438 | #N/A      | PD | Wald ratio                | 1 | 0.41  | 0.014077 | 1.51 | 1.09 | 2.11 |
| ENSG00000172766 | NAA16     | PD | Inverse variance weighted | 2 | -0.16 | 0.01412  | 0.85 | 0.75 | 0.97 |
| ENSG00000143457 | GOLPH3L   | PD | Inverse variance weighted | 3 | -0.25 | 0.014154 | 0.78 | 0.64 | 0.95 |
| ENSG00000096092 | TMEM14A   | PD | Wald ratio                | 1 | 0.21  | 0.014165 | 1.24 | 1.04 | 1.47 |
| ENSG00000167543 | TP53I13   | PD | Inverse variance weighted | 2 | -0.19 | 0.01442  | 0.82 | 0.71 | 0.96 |
| ENSG00000207110 | RNVU1-32  | PD | Wald ratio                | 1 | 0.29  | 0.014436 | 1.34 | 1.06 | 1.69 |
| ENSG00000239415 | #N/A      | PD | Inverse variance weighted | 2 | -0.12 | 0.014445 | 0.89 | 0.81 | 0.98 |
| ENSG00000187166 | H1-7      | PD | Wald ratio                | 1 | -0.20 | 0.014508 | 0.82 | 0.70 | 0.96 |
| ENSG00000266631 | #N/A      | PD | Wald ratio                | 1 | -0.58 | 0.014581 | 0.56 | 0.35 | 0.89 |
| ENSG00000148848 | ADAM12    | PD | Inverse variance weighted | 2 | 0.24  | 0.014592 | 1.28 | 1.05 | 1.55 |

|                 |                  |    |                           |   |       |          |      |      |      |
|-----------------|------------------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000204745 | LOC102724<br>642 | PD | Inverse variance weighted | 2 | -0.24 | 0.014695 | 0.78 | 0.64 | 0.95 |
| ENSG00000139636 | LMBR1L           | PD | Wald ratio                | 1 | -0.42 | 0.014705 | 0.66 | 0.47 | 0.92 |
| ENSG00000230487 | PSMG3-<br>AS1    | PD | Inverse variance weighted | 4 | 0.15  | 0.01473  | 1.16 | 1.03 | 1.31 |
| ENSG00000182636 | NDN              | PD | Inverse variance weighted | 4 | -0.10 | 0.015045 | 0.90 | 0.83 | 0.98 |
| ENSG00000178974 | FBXO34           | PD | Wald ratio                | 1 | -0.16 | 0.015056 | 0.86 | 0.75 | 0.97 |
| ENSG00000104881 | PPP1R13L         | PD | Wald ratio                | 1 | 0.62  | 0.01507  | 1.86 | 1.13 | 3.08 |
| ENSG00000163466 | ARPC2            | PD | Wald ratio                | 1 | 0.30  | 0.015094 | 1.35 | 1.06 | 1.72 |
| ENSG00000123684 | LPGAT1           | PD | Inverse variance weighted | 2 | -0.15 | 0.015142 | 0.86 | 0.76 | 0.97 |
| ENSG00000197442 | MAP3K5           | PD | Inverse variance weighted | 3 | -0.09 | 0.015181 | 0.91 | 0.84 | 0.98 |
| ENSG00000127837 | AAMP             | PD | Wald ratio                | 1 | 0.32  | 0.015192 | 1.37 | 1.06 | 1.77 |
| ENSG00000099282 | TSPAN15          | PD | Inverse variance weighted | 2 | -0.23 | 0.01527  | 0.79 | 0.66 | 0.96 |
| ENSG00000123416 | TUBA1B           | PD | Wald ratio                | 1 | 0.37  | 0.015286 | 1.45 | 1.07 | 1.97 |
| ENSG00000255561 | FDXACB1          | PD | Inverse variance weighted | 2 | -0.48 | 0.015335 | 0.62 | 0.42 | 0.91 |
| ENSG00000178719 | GRINA            | PD | Inverse variance weighted | 3 | -0.09 | 0.015437 | 0.91 | 0.84 | 0.98 |
| ENSG00000168209 | DDIT4            | PD | Wald ratio                | 1 | -0.52 | 0.015466 | 0.60 | 0.39 | 0.91 |
| ENSG00000151014 | NOCT             | PD | Inverse variance weighted | 2 | -0.43 | 0.01547  | 0.65 | 0.46 | 0.92 |
| ENSG00000115355 | CCDC88A          | PD | Inverse variance weighted | 2 | 0.17  | 0.015683 | 1.19 | 1.03 | 1.37 |
| ENSG00000156671 | SAMD8            | PD | Wald ratio                | 1 | 0.53  | 0.015744 | 1.70 | 1.11 | 2.62 |
| ENSG00000163938 | GNL3             | PD | Wald ratio                | 1 | -0.20 | 0.01577  | 0.82 | 0.70 | 0.96 |
| ENSG00000157322 | CLEC18A          | PD | Inverse variance weighted | 4 | 0.08  | 0.015788 | 1.08 | 1.02 | 1.16 |
| ENSG00000172273 | HINFP            | PD | Inverse variance weighted | 3 | 0.10  | 0.015815 | 1.10 | 1.02 | 1.20 |
| ENSG00000157514 | TSC22D3          | PD | Wald ratio                | 1 | 0.73  | 0.016018 | 2.08 | 1.15 | 3.78 |
| ENSG00000242607 | RPS3AP34         | PD | Wald ratio                | 1 | -0.84 | 0.016043 | 0.43 | 0.22 | 0.86 |
| ENSG00000152672 | CLEC4F           | PD | Inverse variance weighted | 7 | -0.05 | 0.016054 | 0.95 | 0.91 | 0.99 |
| ENSG00000216895 | LOC100506<br>302 | PD | Wald ratio                | 1 | -0.24 | 0.016083 | 0.78 | 0.64 | 0.96 |
| ENSG00000151806 | GUF1             | PD | Inverse variance weighted | 2 | -0.12 | 0.01618  | 0.89 | 0.80 | 0.98 |
| ENSG00000205726 | ITSN1            | PD | Inverse variance weighted | 5 | 0.08  | 0.01621  | 1.09 | 1.02 | 1.16 |
| ENSG00000135766 | EGLN1            | PD | Inverse variance weighted | 3 | 0.13  | 0.016334 | 1.13 | 1.02 | 1.26 |
| ENSG00000225992 | #N/A             | PD | Inverse variance weighted | 2 | -0.26 | 0.016423 | 0.77 | 0.63 | 0.95 |
| ENSG00000132953 | XPO4             | PD | Wald ratio                | 1 | 0.27  | 0.016643 | 1.30 | 1.05 | 1.62 |
| ENSG00000148516 | ZEB1             | PD | Wald ratio                | 1 | 0.61  | 0.016669 | 1.84 | 1.12 | 3.03 |
| ENSG00000258839 | MC1R             | PD | Inverse variance weighted | 3 | -0.09 | 0.016851 | 0.92 | 0.85 | 0.98 |
| ENSG00000139428 | MMAB             | PD | Wald ratio                | 1 | 0.15  | 0.01687  | 1.16 | 1.03 | 1.32 |
| ENSG00000167657 | DAPK3            | PD | Inverse variance weighted | 2 | 0.28  | 0.016886 | 1.33 | 1.05 | 1.67 |
| ENSG00000067596 | DHX8             | PD | Wald ratio                | 1 | 0.24  | 0.017016 | 1.28 | 1.04 | 1.56 |
| ENSG00000157181 | ODR4             | PD | Wald ratio                | 1 | -0.35 | 0.017016 | 0.71 | 0.53 | 0.94 |
| ENSG00000212093 | #N/A             | PD | Wald ratio                | 1 | -0.19 | 0.017026 | 0.83 | 0.71 | 0.97 |
| ENSG00000270028 | #N/A             | PD | Wald ratio                | 1 | 0.40  | 0.017047 | 1.50 | 1.07 | 2.09 |
| ENSG00000253341 | #N/A             | PD | Wald ratio                | 1 | -0.39 | 0.017049 | 0.68 | 0.49 | 0.93 |
| ENSG00000165959 | CLMN             | PD | Inverse variance weighted | 4 | -0.12 | 0.017139 | 0.89 | 0.80 | 0.98 |
| ENSG00000148773 | MKI67            | PD | Wald ratio                | 1 | -0.60 | 0.017157 | 0.55 | 0.33 | 0.90 |

|                 |           |    |                           |   |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000213626 | LBH       | PD | Inverse variance weighted | 4 | -0.13 | 0.017206 | 0.88 | 0.79 | 0.98 |
| ENSG00000197586 | ENTPD6    | PD | Inverse variance weighted | 3 | -0.18 | 0.017238 | 0.84 | 0.72 | 0.97 |
| ENSG00000270175 | #N/A      | PD | Wald ratio                | 1 | -0.30 | 0.017292 | 0.74 | 0.58 | 0.95 |
| ENSG00000255449 | #N/A      | PD | Wald ratio                | 1 | 0.28  | 0.017316 | 1.33 | 1.05 | 1.67 |
| ENSG00000258867 | LINC01146 | PD | Wald ratio                | 1 | -0.27 | 0.017319 | 0.76 | 0.61 | 0.95 |
| ENSG00000125148 | MT2A      | PD | Inverse variance weighted | 8 | 0.09  | 0.017423 | 1.09 | 1.02 | 1.18 |
| ENSG00000179163 | FUCA1     | PD | Inverse variance weighted | 7 | -0.09 | 0.017456 | 0.91 | 0.84 | 0.98 |
| ENSG00000270107 | #N/A      | PD | Inverse variance weighted | 2 | 0.21  | 0.017506 | 1.24 | 1.04 | 1.47 |
| ENSG00000198879 | SFMBT2    | PD | Inverse variance weighted | 2 | -0.16 | 0.01753  | 0.85 | 0.75 | 0.97 |
| ENSG00000205763 | RP9P      | PD | Wald ratio                | 1 | -0.53 | 0.017549 | 0.59 | 0.38 | 0.91 |
| ENSG00000235560 | ZNF747-DT | PD | Inverse variance weighted | 2 | 0.19  | 0.017615 | 1.21 | 1.03 | 1.41 |
| ENSG00000154175 | ABI3BP    | PD | Inverse variance weighted | 2 | -0.30 | 0.017634 | 0.74 | 0.58 | 0.95 |
| ENSG00000182544 | MFSD5     | PD | Inverse variance weighted | 3 | -0.11 | 0.017698 | 0.90 | 0.82 | 0.98 |
| ENSG00000096968 | JAK2      | PD | Inverse variance weighted | 3 | 0.16  | 0.017712 | 1.17 | 1.03 | 1.34 |
| ENSG00000267724 | #N/A      | PD | Wald ratio                | 1 | 0.48  | 0.017761 | 1.62 | 1.09 | 2.40 |
| ENSG00000225331 | #N/A      | PD | Inverse variance weighted | 2 | -0.18 | 0.017789 | 0.84 | 0.73 | 0.97 |
| ENSG00000143315 | PIGM      | PD | Inverse variance weighted | 3 | -0.13 | 0.017791 | 0.88 | 0.79 | 0.98 |
| ENSG00000165555 | NOXRED1   | PD | Wald ratio                | 1 | 0.37  | 0.01794  | 1.45 | 1.07 | 1.98 |
| ENSG00000138709 | LARP1B    | PD | Inverse variance weighted | 2 | 0.22  | 0.017964 | 1.24 | 1.04 | 1.48 |
| ENSG00000146731 | CCT6A     | PD | Wald ratio                | 1 | -0.13 | 0.017972 | 0.87 | 0.78 | 0.98 |
| ENSG00000206838 | SNORA5A   | PD | Wald ratio                | 1 | -0.62 | 0.018022 | 0.54 | 0.32 | 0.90 |
| ENSG00000244242 | IFITM10   | PD | Wald ratio                | 1 | 0.21  | 0.018052 | 1.24 | 1.04 | 1.48 |
| ENSG00000225213 | #N/A      | PD | Wald ratio                | 1 | -0.41 | 0.018057 | 0.66 | 0.47 | 0.93 |
| ENSG00000180228 | PRKRA     | PD | Inverse variance weighted | 2 | 0.16  | 0.018123 | 1.18 | 1.03 | 1.35 |
| ENSG00000134291 | TMEM106   | PD | Inverse variance weighted | 6 | 0.09  | 0.018128 | 1.09 | 1.01 | 1.17 |
|                 | C         |    |                           |   |       |          |      |      |      |
| ENSG00000167797 | CDK2AP2   | PD | Inverse variance weighted | 5 | 0.26  | 0.018152 | 1.30 | 1.05 | 1.61 |
| ENSG00000232613 | #N/A      | PD | Wald ratio                | 1 | -0.40 | 0.018282 | 0.67 | 0.48 | 0.93 |
| ENSG00000244515 | KRT18P34  | PD | Wald ratio                | 1 | 0.31  | 0.018434 | 1.37 | 1.05 | 1.77 |
| ENSG00000211640 | IGLV6-57  | PD | Wald ratio                | 1 | -0.73 | 0.018519 | 0.48 | 0.26 | 0.88 |
| ENSG00000198015 | MRPL42    | PD | Inverse variance weighted | 2 | -0.09 | 0.018589 | 0.91 | 0.85 | 0.99 |
| ENSG00000259658 | LOC100128 | PD | Wald ratio                | 1 | -0.21 | 0.018639 | 0.81 | 0.68 | 0.97 |
|                 | 108       |    |                           |   |       |          |      |      |      |
| ENSG00000124659 | TBCC      | PD | Wald ratio                | 1 | 0.42  | 0.018816 | 1.53 | 1.07 | 2.17 |
| ENSG00000186468 | RPS23     | PD | Inverse variance weighted | 5 | 0.08  | 0.018916 | 1.08 | 1.01 | 1.15 |
| ENSG00000252645 | RNU7-111P | PD | Inverse variance weighted | 2 | -0.12 | 0.019001 | 0.88 | 0.80 | 0.98 |
| ENSG00000119777 | TMEM214   | PD | Wald ratio                | 1 | -0.55 | 0.019046 | 0.58 | 0.36 | 0.91 |
| ENSG00000125779 | PANK2     | PD | Inverse variance weighted | 2 | 0.15  | 0.019047 | 1.16 | 1.02 | 1.31 |
| ENSG00000185928 | #N/A      | PD | Wald ratio                | 1 | -0.46 | 0.019055 | 0.63 | 0.43 | 0.93 |
| ENSG00000203288 | TDRKH-    | PD | Wald ratio                | 1 | 0.27  | 0.019058 | 1.31 | 1.04 | 1.64 |
|                 | AS1       |    |                           |   |       |          |      |      |      |
| ENSG00000198833 | UBE2J1    | PD | Inverse variance weighted | 6 | 0.12  | 0.019225 | 1.13 | 1.02 | 1.25 |
| ENSG00000230149 | #N/A      | PD | Wald ratio                | 1 | 0.64  | 0.019258 | 1.90 | 1.11 | 3.26 |
| ENSG00000160294 | MCM3AP    | PD | Inverse variance weighted | 2 | -0.08 | 0.019261 | 0.93 | 0.87 | 0.99 |

|                 |           |    |                           |   |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000249396 | LINC02212 | PD | Wald ratio                | 1 | -0.68 | 0.019406 | 0.51 | 0.29 | 0.90 |
| ENSG00000136383 | ALPK3     | PD | Wald ratio                | 1 | 0.40  | 0.019428 | 1.49 | 1.07 | 2.09 |
| ENSG00000105011 | ASF1B     | PD | Inverse variance weighted | 4 | -0.25 | 0.019488 | 0.78 | 0.63 | 0.96 |
| ENSG00000232874 | LINC02924 | PD | Wald ratio                | 1 | -0.79 | 0.019498 | 0.45 | 0.23 | 0.88 |
| ENSG00000261556 | SMG1P7    | PD | Inverse variance weighted | 3 | 0.10  | 0.019499 | 1.10 | 1.02 | 1.19 |
| ENSG00000140854 | KATNB1    | PD | Inverse variance weighted | 2 | 0.22  | 0.019572 | 1.25 | 1.04 | 1.51 |
| ENSG00000169957 | ZNF768    | PD | Wald ratio                | 1 | 0.46  | 0.019631 | 1.58 | 1.08 | 2.32 |
| ENSG00000259684 | #N/A      | PD | Wald ratio                | 1 | -0.21 | 0.019729 | 0.81 | 0.69 | 0.97 |
| ENSG00000162378 | ZYG11B    | PD | Inverse variance weighted | 5 | 0.10  | 0.019819 | 1.10 | 1.02 | 1.19 |
| ENSG00000269220 | LINC00528 | PD | Inverse variance weighted | 2 | 0.25  | 0.01983  | 1.28 | 1.04 | 1.57 |
| ENSG00000116898 | MRPS15    | PD | Inverse variance weighted | 2 | 0.20  | 0.019888 | 1.22 | 1.03 | 1.43 |
| ENSG00000164669 | INTS4P1   | PD | Wald ratio                | 1 | 0.32  | 0.019934 | 1.37 | 1.05 | 1.80 |
| ENSG00000261229 | #N/A      | PD | Wald ratio                | 1 | 0.79  | 0.019938 | 2.20 | 1.13 | 4.27 |
| ENSG00000129993 | CBFA2T3   | PD | Inverse variance weighted | 3 | 0.25  | 0.020033 | 1.28 | 1.04 | 1.57 |
| ENSG00000259211 | #N/A      | PD | Wald ratio                | 1 | 0.48  | 0.020142 | 1.61 | 1.08 | 2.41 |
| ENSG00000204314 | PRRT1     | PD | Wald ratio                | 1 | 0.39  | 0.020144 | 1.48 | 1.06 | 2.06 |
| ENSG00000212127 | TAS2R14   | PD | Wald ratio                | 1 | 0.09  | 0.020317 | 1.10 | 1.01 | 1.19 |
| ENSG00000155090 | KLF10     | PD | Wald ratio                | 1 | -0.32 | 0.020397 | 0.73 | 0.56 | 0.95 |
| ENSG00000168906 | MAT2A     | PD | Inverse variance weighted | 3 | -0.18 | 0.020559 | 0.83 | 0.71 | 0.97 |
| ENSG00000163684 | RPP14     | PD | Wald ratio                | 1 | 0.27  | 0.02057  | 1.31 | 1.04 | 1.65 |
| ENSG00000012779 | ALOX5     | PD | Inverse variance weighted | 6 | -0.16 | 0.020661 | 0.85 | 0.74 | 0.98 |
| ENSG00000248593 | DSTNP2    | PD | Wald ratio                | 1 | 0.63  | 0.020679 | 1.88 | 1.10 | 3.22 |
| ENSG00000171862 | PTEN      | PD | Wald ratio                | 1 | 0.63  | 0.020696 | 1.88 | 1.10 | 3.20 |
| ENSG00000106245 | BUD31     | PD | Inverse variance weighted | 3 | -0.22 | 0.020827 | 0.80 | 0.67 | 0.97 |
| ENSG00000144746 | ARL6IP5   | PD | Inverse variance weighted | 3 | 0.20  | 0.020852 | 1.22 | 1.03 | 1.44 |
| ENSG00000228409 | #N/A      | PD | Wald ratio                | 1 | 0.12  | 0.020869 | 1.13 | 1.02 | 1.24 |
| ENSG00000261707 | #N/A      | PD | Inverse variance weighted | 2 | 0.20  | 0.021002 | 1.22 | 1.03 | 1.44 |
| ENSG00000131484 | #N/A      | PD | Inverse variance weighted | 2 | 0.61  | 0.021102 | 1.84 | 1.10 | 3.09 |
| ENSG00000225171 | DUTP6     | PD | Inverse variance weighted | 2 | 0.10  | 0.021111 | 1.11 | 1.02 | 1.21 |
| ENSG00000203772 | SPRN      | PD | Wald ratio                | 1 | -0.63 | 0.021128 | 0.53 | 0.31 | 0.91 |
| ENSG00000206503 | HLA-A     | PD | Inverse variance weighted | 6 | -0.07 | 0.021254 | 0.93 | 0.87 | 0.99 |
| ENSG00000160803 | UBQLN4    | PD | Wald ratio                | 1 | -0.14 | 0.021287 | 0.87 | 0.77 | 0.98 |
| ENSG00000156172 | CFAP418   | PD | Wald ratio                | 1 | -0.35 | 0.021415 | 0.71 | 0.53 | 0.95 |
| ENSG00000204241 | LINC02731 | PD | Inverse variance weighted | 2 | 0.20  | 0.021617 | 1.23 | 1.03 | 1.46 |
| ENSG00000139977 | NAA30     | PD | Wald ratio                | 1 | 0.24  | 0.021692 | 1.27 | 1.04 | 1.56 |
| ENSG00000198964 | SGMS1     | PD | Wald ratio                | 1 | -0.59 | 0.021852 | 0.56 | 0.34 | 0.92 |
| ENSG00000170017 | ALCAM     | PD | Inverse variance weighted | 6 | -0.10 | 0.021897 | 0.91 | 0.83 | 0.99 |
| ENSG00000142185 | TRPM2     | PD | Inverse variance weighted | 2 | -0.16 | 0.021924 | 0.86 | 0.75 | 0.98 |
| ENSG00000175806 | MSRA      | PD | Inverse variance weighted | 8 | 0.10  | 0.022177 | 1.10 | 1.01 | 1.20 |
| ENSG00000234127 | TRIM26    | PD | Inverse variance weighted | 2 | 0.16  | 0.022185 | 1.18 | 1.02 | 1.35 |
| ENSG00000135390 | ATP5MC2   | PD | Inverse variance weighted | 2 | 0.16  | 0.022207 | 1.17 | 1.02 | 1.34 |
| ENSG00000198182 | ZNF607    | PD | Inverse variance weighted | 2 | 0.21  | 0.022561 | 1.23 | 1.03 | 1.47 |
| ENSG00000256087 | ZNF432    | PD | Wald ratio                | 1 | 0.51  | 0.022628 | 1.66 | 1.07 | 2.57 |
| ENSG00000185507 | IRF7      | PD | Inverse variance weighted | 5 | 0.13  | 0.02265  | 1.14 | 1.02 | 1.27 |

|                 |         |    |                           |    |       |          |      |      |      |
|-----------------|---------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000099860 | GADD45B | PD | Inverse variance weighted | 5  | -0.19 | 0.022658 | 0.83 | 0.71 | 0.97 |
| ENSG00000173320 | STOX2   | PD | Wald ratio                | 1  | 0.43  | 0.022686 | 1.54 | 1.06 | 2.22 |
| ENSG00000256294 | ZNF225  | PD | Wald ratio                | 1  | -0.51 | 0.022709 | 0.60 | 0.39 | 0.93 |
| ENSG00000077458 | FAM76B  | PD | Inverse variance weighted | 3  | 0.10  | 0.022724 | 1.11 | 1.01 | 1.21 |
| ENSG00000042286 | AIFM2   | PD | Inverse variance weighted | 2  | 0.14  | 0.022794 | 1.15 | 1.02 | 1.29 |
| ENSG00000143418 | CERS2   | PD | Inverse variance weighted | 3  | -0.13 | 0.02285  | 0.88 | 0.79 | 0.98 |
| ENSG00000233850 | #N/A    | PD | Wald ratio                | 1  | -0.45 | 0.022854 | 0.64 | 0.43 | 0.94 |
| ENSG00000189159 | JPT1    | PD | Inverse variance weighted | 2  | -0.25 | 0.022892 | 0.78 | 0.62 | 0.97 |
| ENSG00000198218 | QRICH1  | PD | Wald ratio                | 1  | -0.12 | 0.022906 | 0.89 | 0.81 | 0.98 |
| ENSG00000228923 | #N/A    | PD | Wald ratio                | 1  | -0.19 | 0.023106 | 0.83 | 0.70 | 0.97 |
| ENSG00000262152 | #N/A    | PD | Wald ratio                | 1  | -0.40 | 0.02311  | 0.67 | 0.47 | 0.95 |
| ENSG00000262362 | #N/A    | PD | Wald ratio                | 1  | 0.56  | 0.02311  | 1.75 | 1.08 | 2.84 |
| ENSG00000077235 | GTF3C1  | PD | Wald ratio                | 1  | -0.77 | 0.023201 | 0.46 | 0.24 | 0.90 |
| ENSG00000262745 | #N/A    | PD | Wald ratio                | 1  | 0.58  | 0.023254 | 1.78 | 1.08 | 2.93 |
| ENSG00000196262 | PPIA    | PD | Wald ratio                | 1  | 0.13  | 0.023324 | 1.14 | 1.02 | 1.27 |
| ENSG00000163660 | CCNL1   | PD | Wald ratio                | 1  | -0.09 | 0.023349 | 0.92 | 0.85 | 0.99 |
| ENSG00000143756 | FBXO28  | PD | Inverse variance weighted | 5  | -0.08 | 0.023449 | 0.93 | 0.87 | 0.99 |
| ENSG00000133111 | RFXAP   | PD | Wald ratio                | 1  | 0.67  | 0.023462 | 1.96 | 1.09 | 3.50 |
| ENSG00000172183 | ISG20   | PD | Inverse variance weighted | 10 | -0.08 | 0.023548 | 0.92 | 0.86 | 0.99 |
| ENSG00000164237 | CMBL    | PD | Inverse variance weighted | 7  | -0.07 | 0.023596 | 0.93 | 0.87 | 0.99 |
| ENSG00000225762 | #N/A    | PD | Wald ratio                | 1  | 0.56  | 0.023664 | 1.76 | 1.08 | 2.87 |
| ENSG00000178803 | ADORA2A | PD | Wald ratio                | 1  | 0.52  | 0.023907 | 1.69 | 1.07 | 2.66 |
|                 | -AS1    |    |                           |    |       |          |      |      |      |
| ENSG00000200235 | #N/A    | PD | Wald ratio                | 1  | 0.35  | 0.023919 | 1.42 | 1.05 | 1.93 |
| ENSG00000144231 | POLR2D  | PD | Inverse variance weighted | 2  | -0.14 | 0.023938 | 0.87 | 0.77 | 0.98 |
| ENSG00000184677 | ZBTB40  | PD | Wald ratio                | 1  | -0.12 | 0.023942 | 0.89 | 0.80 | 0.98 |
| ENSG00000158445 | KCNB1   | PD | Inverse variance weighted | 2  | 0.28  | 0.023973 | 1.33 | 1.04 | 1.70 |
| ENSG00000131126 | TEX101  | PD | Inverse variance weighted | 5  | 0.13  | 0.023986 | 1.14 | 1.02 | 1.27 |
| ENSG00000261118 | #N/A    | PD | Wald ratio                | 1  | 0.45  | 0.024187 | 1.56 | 1.06 | 2.30 |
| ENSG00000149577 | SIDT2   | PD | Inverse variance weighted | 17 | -0.05 | 0.024197 | 0.95 | 0.91 | 0.99 |
| ENSG00000188672 | RHCE    | PD | Wald ratio                | 1  | 0.31  | 0.024267 | 1.37 | 1.04 | 1.80 |
| ENSG00000179314 | WSCD1   | PD | Wald ratio                | 1  | 0.62  | 0.024326 | 1.85 | 1.08 | 3.17 |
| ENSG00000044459 | CNTLN   | PD | Wald ratio                | 1  | -0.21 | 0.024449 | 0.81 | 0.68 | 0.97 |
| ENSG00000228696 | ARL17A  | PD | Inverse variance weighted | 3  | 0.14  | 0.024499 | 1.15 | 1.02 | 1.31 |
| ENSG00000152939 | MARVELD | PD | Wald ratio                | 1  | -0.60 | 0.02452  | 0.55 | 0.32 | 0.93 |
|                 | 2       |    |                           |    |       |          |      |      |      |
| ENSG00000261451 | #N/A    | PD | Wald ratio                | 1  | -0.44 | 0.0246   | 0.65 | 0.44 | 0.95 |
| ENSG00000096401 | CDC5L   | PD | Inverse variance weighted | 2  | 0.32  | 0.024602 | 1.37 | 1.04 | 1.81 |
| ENSG00000178209 | PLEC    | PD | Wald ratio                | 1  | -0.11 | 0.024624 | 0.90 | 0.82 | 0.99 |
| ENSG00000144724 | PTPRG   | PD | Wald ratio                | 1  | -0.65 | 0.024646 | 0.52 | 0.30 | 0.92 |
| ENSG00000162444 | RBP7    | PD | Inverse variance weighted | 9  | 0.11  | 0.024648 | 1.12 | 1.01 | 1.23 |
| ENSG00000139343 | SNRPF   | PD | Wald ratio                | 1  | 0.36  | 0.024744 | 1.44 | 1.05 | 1.98 |
| ENSG00000134183 | GNAT2   | PD | Wald ratio                | 1  | 0.37  | 0.024782 | 1.45 | 1.05 | 2.01 |
| ENSG00000171798 | KNDC1   | PD | Inverse variance weighted | 4  | -0.11 | 0.024917 | 0.89 | 0.81 | 0.99 |

|                 |           |    |                           |    |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000142583 | SLC2A5    | PD | Inverse variance weighted | 6  | 0.12  | 0.025027 | 1.12 | 1.01 | 1.24 |
| ENSG00000155629 | PIK3AP1   | PD | Inverse variance weighted | 3  | -0.21 | 0.025041 | 0.81 | 0.68 | 0.97 |
| ENSG00000197019 | SERTAD1   | PD | Inverse variance weighted | 2  | -0.16 | 0.025047 | 0.85 | 0.74 | 0.98 |
| ENSG00000259984 | #N/A      | PD | Wald ratio                | 1  | -0.39 | 0.025091 | 0.67 | 0.48 | 0.95 |
| ENSG00000242539 | #N/A      | PD | Wald ratio                | 1  | -0.67 | 0.02511  | 0.51 | 0.28 | 0.92 |
| ENSG00000168994 | PXDC1     | PD | Wald ratio                | 1  | 0.36  | 0.02516  | 1.43 | 1.05 | 1.95 |
| ENSG00000249249 | #N/A      | PD | Wald ratio                | 1  | 0.39  | 0.025183 | 1.48 | 1.05 | 2.07 |
| ENSG00000226986 | #N/A      | PD | Wald ratio                | 1  | -0.12 | 0.025344 | 0.89 | 0.80 | 0.99 |
| ENSG00000228305 | #N/A      | PD | Wald ratio                | 1  | -0.16 | 0.025344 | 0.86 | 0.75 | 0.98 |
| ENSG00000167077 | MEI1      | PD | Inverse variance weighted | 4  | -0.12 | 0.025483 | 0.89 | 0.80 | 0.99 |
| ENSG00000186141 | POLR3C    | PD | Wald ratio                | 1  | -0.61 | 0.025503 | 0.55 | 0.32 | 0.93 |
| ENSG00000171044 | XKR6      | PD | Wald ratio                | 1  | 0.20  | 0.025517 | 1.23 | 1.03 | 1.46 |
| ENSG00000105656 | ELL       | PD | Inverse variance weighted | 5  | -0.07 | 0.025677 | 0.93 | 0.87 | 0.99 |
| ENSG00000138111 | MFSD13A   | PD | Inverse variance weighted | 5  | -0.08 | 0.025745 | 0.92 | 0.85 | 0.99 |
| ENSG00000173917 | HOXB2     | PD | Inverse variance weighted | 11 | 0.05  | 0.025763 | 1.05 | 1.01 | 1.09 |
| ENSG00000145029 | NICN1     | PD | Inverse variance weighted | 3  | -0.08 | 0.025766 | 0.92 | 0.86 | 0.99 |
| ENSG00000129925 | PGAP6     | PD | Inverse variance weighted | 5  | 0.06  | 0.025769 | 1.06 | 1.01 | 1.12 |
| ENSG00000254691 | #N/A      | PD | Wald ratio                | 1  | 0.23  | 0.025842 | 1.26 | 1.03 | 1.55 |
| ENSG00000228399 | RPS20P6   | PD | Inverse variance weighted | 2  | 0.37  | 0.025889 | 1.45 | 1.05 | 2.02 |
| ENSG00000198646 | NCOA6     | PD | Inverse variance weighted | 3  | -0.17 | 0.025919 | 0.85 | 0.73 | 0.98 |
| ENSG00000203780 | FANK1     | PD | Inverse variance weighted | 2  | 0.16  | 0.026146 | 1.17 | 1.02 | 1.35 |
| ENSG00000238246 | #N/A      | PD | Wald ratio                | 1  | 0.53  | 0.02615  | 1.70 | 1.06 | 2.71 |
| ENSG00000235888 | #N/A      | PD | Wald ratio                | 1  | 0.47  | 0.026183 | 1.61 | 1.06 | 2.44 |
| ENSG00000149292 | TTC12     | PD | Inverse variance weighted | 5  | 0.09  | 0.026211 | 1.09 | 1.01 | 1.18 |
| ENSG00000146700 | SSC4D     | PD | Wald ratio                | 1  | -0.23 | 0.026268 | 0.79 | 0.64 | 0.97 |
| ENSG00000238086 | PPP1R26P1 | PD | Wald ratio                | 1  | -0.41 | 0.02635  | 0.66 | 0.46 | 0.95 |
| ENSG00000152760 | DYNLT5    | PD | Inverse variance weighted | 2  | 0.09  | 0.026426 | 1.09 | 1.01 | 1.18 |
| ENSG00000172071 | EIF2AK3   | PD | Wald ratio                | 1  | 0.31  | 0.02647  | 1.36 | 1.04 | 1.79 |
| ENSG00000246375 | PPM1K-DT  | PD | Wald ratio                | 1  | -0.21 | 0.026482 | 0.81 | 0.68 | 0.98 |
| ENSG00000105559 | PLEKHA4   | PD | Wald ratio                | 1  | -0.24 | 0.026486 | 0.79 | 0.64 | 0.97 |
| ENSG00000139180 | NDUFA9    | PD | Wald ratio                | 1  | 0.31  | 0.026542 | 1.37 | 1.04 | 1.81 |
| ENSG00000121281 | ADCY7     | PD | Inverse variance weighted | 4  | -0.07 | 0.026642 | 0.93 | 0.87 | 0.99 |
| ENSG00000198276 | UCKL1     | PD | Inverse variance weighted | 3  | 0.12  | 0.026701 | 1.12 | 1.01 | 1.24 |
| ENSG00000250982 | #N/A      | PD | Wald ratio                | 1  | -0.62 | 0.026789 | 0.54 | 0.31 | 0.93 |
| ENSG00000125817 | CENPB     | PD | Inverse variance weighted | 2  | 0.15  | 0.026965 | 1.16 | 1.02 | 1.32 |
| ENSG00000165688 | PMPCA     | PD | Wald ratio                | 1  | 0.54  | 0.02697  | 1.72 | 1.06 | 2.79 |
| ENSG00000122861 | PLAU      | PD | Inverse variance weighted | 2  | -0.15 | 0.026997 | 0.86 | 0.75 | 0.98 |
| ENSG00000161547 | SRSF2     | PD | Wald ratio                | 1  | -0.55 | 0.027052 | 0.58 | 0.36 | 0.94 |
| ENSG00000109066 | TMEM104   | PD | Wald ratio                | 1  | 0.41  | 0.027069 | 1.50 | 1.05 | 2.16 |
| ENSG00000257696 | #N/A      | PD | Wald ratio                | 1  | 0.27  | 0.027079 | 1.31 | 1.03 | 1.65 |
| ENSG00000139597 | N4BP2L1   | PD | Inverse variance weighted | 2  | 0.31  | 0.027192 | 1.36 | 1.04 | 1.80 |
| ENSG00000258581 | #N/A      | PD | Wald ratio                | 1  | -0.13 | 0.027193 | 0.87 | 0.78 | 0.99 |
| ENSG00000148297 | MED22     | PD | Wald ratio                | 1  | 0.35  | 0.027309 | 1.42 | 1.04 | 1.93 |
| ENSG00000139546 | TARBP2    | PD | Wald ratio                | 1  | -0.47 | 0.027312 | 0.62 | 0.41 | 0.95 |

|                 |           |    |                           |   |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000077420 | APBB1IP   | PD | Inverse variance weighted | 5 | -0.14 | 0.027368 | 0.87 | 0.76 | 0.98 |
| ENSG00000163376 | KBTBD8    | PD | Wald ratio                | 1 | 0.41  | 0.027429 | 1.51 | 1.05 | 2.18 |
| ENSG00000095574 | IKZF5     | PD | Wald ratio                | 1 | 0.51  | 0.027433 | 1.67 | 1.06 | 2.64 |
| ENSG00000181631 | P2RY13    | PD | Inverse variance weighted | 8 | -0.12 | 0.027655 | 0.89 | 0.80 | 0.99 |
| ENSG00000128191 | DGCR8     | PD | Inverse variance weighted | 6 | -0.07 | 0.027657 | 0.93 | 0.87 | 0.99 |
| ENSG00000136861 | CDK5RAP2  | PD | Inverse variance weighted | 3 | -0.07 | 0.027722 | 0.93 | 0.88 | 0.99 |
| ENSG00000166507 | NDST2     | PD | Inverse variance weighted | 3 | 0.11  | 0.027729 | 1.12 | 1.01 | 1.24 |
| ENSG00000234284 | ZNF879    | PD | Wald ratio                | 1 | 0.15  | 0.027736 | 1.16 | 1.02 | 1.32 |
| ENSG00000198546 | ZNF511    | PD | Inverse variance weighted | 2 | -0.29 | 0.02789  | 0.75 | 0.58 | 0.97 |
| ENSG00000114120 | SLC25A36  | PD | Wald ratio                | 1 | 0.44  | 0.027945 | 1.55 | 1.05 | 2.30 |
| ENSG00000188283 | ZNF383    | PD | Wald ratio                | 1 | 0.37  | 0.027955 | 1.45 | 1.04 | 2.02 |
| ENSG00000161956 | SENP3     | PD | Wald ratio                | 1 | 0.30  | 0.027958 | 1.35 | 1.03 | 1.76 |
| ENSG00000152117 | SMPD4BP   | PD | Inverse variance weighted | 2 | 0.10  | 0.027968 | 1.10 | 1.01 | 1.21 |
| ENSG00000251215 | #N/A      | PD | Wald ratio                | 1 | 0.36  | 0.028012 | 1.44 | 1.04 | 1.98 |
| ENSG00000169180 | XPO6      | PD | Inverse variance weighted | 4 | 0.15  | 0.02802  | 1.16 | 1.02 | 1.33 |
| ENSG00000233411 | #N/A      | PD | Wald ratio                | 1 | 0.14  | 0.028034 | 1.15 | 1.02 | 1.31 |
| ENSG00000178149 | DALRD3    | PD | Wald ratio                | 1 | 0.20  | 0.028093 | 1.23 | 1.02 | 1.47 |
| ENSG00000101236 | RNF24     | PD | Inverse variance weighted | 4 | 0.13  | 0.028121 | 1.14 | 1.01 | 1.28 |
| ENSG00000255139 | #N/A      | PD | Wald ratio                | 1 | 0.46  | 0.028163 | 1.59 | 1.05 | 2.41 |
| ENSG00000228989 | #N/A      | PD | Inverse variance weighted | 2 | -0.25 | 0.028212 | 0.78 | 0.63 | 0.97 |
| ENSG00000136206 | SPDYE1    | PD | Wald ratio                | 1 | 0.27  | 0.028256 | 1.32 | 1.03 | 1.68 |
| ENSG00000148204 | CRB2      | PD | Wald ratio                | 1 | 0.32  | 0.028277 | 1.38 | 1.03 | 1.84 |
| ENSG00000258794 | DUX4L27   | PD | Inverse variance weighted | 2 | 0.53  | 0.028341 | 1.70 | 1.06 | 2.73 |
| ENSG00000168522 | FNTA      | PD | Wald ratio                | 1 | -0.57 | 0.028381 | 0.57 | 0.34 | 0.94 |
| ENSG00000262943 | ALOX12P2  | PD | Wald ratio                | 1 | -0.42 | 0.028439 | 0.66 | 0.45 | 0.96 |
| ENSG00000160213 | CSTB      | PD | Inverse variance weighted | 4 | -0.07 | 0.028827 | 0.94 | 0.88 | 0.99 |
| ENSG00000256612 | CYP2B7P   | PD | Inverse variance weighted | 2 | -0.11 | 0.028893 | 0.90 | 0.82 | 0.99 |
| ENSG00000131788 | PIAS3     | PD | Wald ratio                | 1 | -0.50 | 0.028969 | 0.61 | 0.39 | 0.95 |
| ENSG00000225523 | IGKV6D-21 | PD | Inverse variance weighted | 2 | 0.44  | 0.02909  | 1.56 | 1.05 | 2.32 |
| ENSG00000140612 | SEC11A    | PD | Wald ratio                | 1 | 0.16  | 0.029123 | 1.17 | 1.02 | 1.35 |
| ENSG00000175054 | ATR       | PD | Wald ratio                | 1 | -0.56 | 0.029123 | 0.57 | 0.35 | 0.94 |
| ENSG00000225978 | #N/A      | PD | Inverse variance weighted | 2 | -0.10 | 0.029162 | 0.91 | 0.83 | 0.99 |
| ENSG00000189144 | ZNF573    | PD | Wald ratio                | 1 | -0.10 | 0.029199 | 0.90 | 0.83 | 0.99 |
| ENSG00000033050 | ABCF2     | PD | Wald ratio                | 1 | 0.13  | 0.029208 | 1.14 | 1.01 | 1.28 |
| ENSG00000166582 | CENPV     | PD | Inverse variance weighted | 2 | 0.19  | 0.029231 | 1.21 | 1.02 | 1.43 |
| ENSG00000143147 | GPR161    | PD | Wald ratio                | 1 | 0.37  | 0.029319 | 1.45 | 1.04 | 2.02 |
| ENSG00000158186 | MRAS      | PD | Inverse variance weighted | 6 | 0.17  | 0.029335 | 1.18 | 1.02 | 1.38 |
| ENSG00000100075 | SLC25A1   | PD | Inverse variance weighted | 2 | 0.12  | 0.029336 | 1.13 | 1.01 | 1.26 |
| ENSG00000172738 | TMEM217   | PD | Wald ratio                | 1 | 0.46  | 0.02934  | 1.58 | 1.05 | 2.40 |
| ENSG00000141391 | PRELID3A  | PD | Wald ratio                | 1 | 0.30  | 0.029429 | 1.35 | 1.03 | 1.76 |
| ENSG00000268852 | #N/A      | PD | Wald ratio                | 1 | -0.37 | 0.029431 | 0.69 | 0.49 | 0.96 |
| ENSG00000080546 | SESN1     | PD | Inverse variance weighted | 5 | -0.07 | 0.029493 | 0.93 | 0.87 | 0.99 |
| ENSG00000211934 | IGHV1-2   | PD | Wald ratio                | 1 | 0.89  | 0.029511 | 2.44 | 1.09 | 5.47 |
| ENSG00000253394 | LINC00534 | PD | Inverse variance weighted | 2 | 0.23  | 0.029522 | 1.26 | 1.02 | 1.56 |

|                 |         |    |                           |   |       |          |      |      |      |
|-----------------|---------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000124214 | STAU1   | PD | Wald ratio                | 1 | -0.29 | 0.029545 | 0.75 | 0.58 | 0.97 |
| ENSG00000124207 | CSE1L   | PD | Inverse variance weighted | 2 | 0.10  | 0.029626 | 1.11 | 1.01 | 1.21 |
| ENSG00000144550 | CPNE9   | PD | Wald ratio                | 1 | 0.63  | 0.029748 | 1.88 | 1.06 | 3.32 |
| ENSG00000005102 | MEOX1   | PD | Inverse variance weighted | 4 | -0.10 | 0.029873 | 0.91 | 0.83 | 0.99 |
| ENSG00000163958 | ZDHHC19 | PD | Inverse variance weighted | 7 | -0.13 | 0.029893 | 0.88 | 0.79 | 0.99 |
| ENSG00000204149 | AGAP6   | PD | Inverse variance weighted | 2 | 0.08  | 0.030043 | 1.09 | 1.01 | 1.17 |
| ENSG00000260027 | HOXB7   | PD | Wald ratio                | 1 | 0.31  | 0.030065 | 1.36 | 1.03 | 1.80 |
| ENSG00000129245 | FXR2    | PD | Wald ratio                | 1 | 0.52  | 0.030086 | 1.67 | 1.05 | 2.67 |
| ENSG00000198673 | TAF1D   | PD | Inverse variance weighted | 3 | 0.09  | 0.030153 | 1.10 | 1.01 | 1.19 |
| ENSG00000129472 | RAB2B   | PD | Inverse variance weighted | 6 | -0.12 | 0.030192 | 0.89 | 0.80 | 0.99 |
| ENSG00000118900 | UBN1    | PD | Inverse variance weighted | 4 | 0.23  | 0.030441 | 1.26 | 1.02 | 1.55 |
| ENSG00000166012 | TAF1D   | PD | Inverse variance weighted | 2 | -0.22 | 0.030446 | 0.81 | 0.66 | 0.98 |
| ENSG00000130270 | ATP8B3  | PD | Inverse variance weighted | 2 | 0.16  | 0.030455 | 1.18 | 1.02 | 1.36 |
| ENSG00000103502 | CDIPT   | PD | Wald ratio                | 1 | -0.32 | 0.030469 | 0.73 | 0.54 | 0.97 |
| ENSG00000135503 | ACVR1B  | PD | Wald ratio                | 1 | 0.18  | 0.030534 | 1.20 | 1.02 | 1.42 |
| ENSG00000237851 | #N/A    | PD | Wald ratio                | 1 | -0.37 | 0.030746 | 0.69 | 0.49 | 0.97 |
| ENSG00000164406 | LEAP2   | PD | Wald ratio                | 1 | -0.33 | 0.030813 | 0.72 | 0.54 | 0.97 |
| ENSG00000181963 | OR52K2  | PD | Inverse variance weighted | 5 | -0.10 | 0.031034 | 0.91 | 0.83 | 0.99 |
| ENSG00000109065 | NAT9    | PD | Wald ratio                | 1 | -0.32 | 0.031162 | 0.73 | 0.54 | 0.97 |
| ENSG00000241127 | YAE1    | PD | Wald ratio                | 1 | 0.47  | 0.031162 | 1.59 | 1.04 | 2.43 |
| ENSG00000229715 | #N/A    | PD | Inverse variance weighted | 3 | -0.11 | 0.031297 | 0.90 | 0.81 | 0.99 |
| ENSG00000162642 | C1orf52 | PD | Wald ratio                | 1 | -0.38 | 0.031304 | 0.69 | 0.49 | 0.97 |
| ENSG00000175970 | UNC119B | PD | Inverse variance weighted | 2 | 0.10  | 0.03151  | 1.11 | 1.01 | 1.22 |
| ENSG00000261662 | #N/A    | PD | Wald ratio                | 1 | -0.51 | 0.031523 | 0.60 | 0.38 | 0.96 |
| ENSG00000135926 | TMBIM1  | PD | Inverse variance weighted | 5 | 0.11  | 0.031614 | 1.12 | 1.01 | 1.24 |
| ENSG00000099904 | ZDHHC8  | PD | Wald ratio                | 1 | 0.19  | 0.031614 | 1.21 | 1.02 | 1.45 |
| ENSG00000198728 | LDB1    | PD | Wald ratio                | 1 | -0.15 | 0.031713 | 0.86 | 0.75 | 0.99 |
| ENSG00000182362 | YBEY    | PD | Inverse variance weighted | 9 | 0.06  | 0.031928 | 1.06 | 1.01 | 1.13 |
| ENSG00000232706 | #N/A    | PD | Wald ratio                | 1 | 0.63  | 0.031974 | 1.88 | 1.06 | 3.36 |
| ENSG00000132507 | EIF5A   | PD | Wald ratio                | 1 | 0.12  | 0.032125 | 1.12 | 1.01 | 1.25 |
| ENSG00000115520 | COQ10B  | PD | Wald ratio                | 1 | -0.35 | 0.032173 | 0.70 | 0.51 | 0.97 |
| ENSG00000171084 | FAM86JP | PD | Wald ratio                | 1 | 0.28  | 0.032241 | 1.32 | 1.02 | 1.70 |
| ENSG00000100029 | PES1    | PD | Wald ratio                | 1 | -0.18 | 0.03225  | 0.84 | 0.71 | 0.99 |
| ENSG00000232151 | #N/A    | PD | Wald ratio                | 1 | -1.51 | 0.032309 | 0.22 | 0.06 | 0.88 |
| ENSG00000171105 | INSR    | PD | Inverse variance weighted | 4 | 0.24  | 0.032341 | 1.28 | 1.02 | 1.60 |
| ENSG00000167107 | ACSF2   | PD | Wald ratio                | 1 | -0.60 | 0.03238  | 0.55 | 0.32 | 0.95 |
| ENSG00000234198 | #N/A    | PD | Wald ratio                | 1 | -0.51 | 0.032485 | 0.60 | 0.38 | 0.96 |
| ENSG00000151689 | INPP1   | PD | Inverse variance weighted | 2 | 0.10  | 0.03256  | 1.11 | 1.01 | 1.22 |
| ENSG00000131153 | GIN52   | PD | Inverse variance weighted | 2 | -0.12 | 0.032658 | 0.89 | 0.80 | 0.99 |
| ENSG00000256633 | #N/A    | PD | Inverse variance weighted | 2 | -0.13 | 0.032671 | 0.88 | 0.78 | 0.99 |
| ENSG00000197409 | H3C4    | PD | Inverse variance weighted | 5 | 0.18  | 0.032715 | 1.19 | 1.01 | 1.40 |
| ENSG00000151690 | MFSD6   | PD | Inverse variance weighted | 6 | 0.06  | 0.032762 | 1.06 | 1.01 | 1.13 |
| ENSG00000139055 | ERP27   | PD | Inverse variance weighted | 5 | 0.04  | 0.032839 | 1.04 | 1.00 | 1.08 |
| ENSG00000136147 | PHF11   | PD | Inverse variance weighted | 2 | -0.30 | 0.032867 | 0.74 | 0.56 | 0.98 |

|                 |              |    |                           |    |       |          |      |      |      |
|-----------------|--------------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000234028 | EIF2AK3-DT   | PD | Wald ratio                | 1  | 0.33  | 0.032868 | 1.39 | 1.03 | 1.89 |
| ENSG00000166164 | BRD7         | PD | Inverse variance weighted | 4  | -0.06 | 0.032912 | 0.94 | 0.89 | 1.00 |
| ENSG00000111325 | OGFOD2       | PD | Wald ratio                | 1  | -0.39 | 0.032949 | 0.68 | 0.47 | 0.97 |
| ENSG00000251992 | #N/A         | PD | Inverse variance weighted | 2  | -0.37 | 0.032966 | 0.69 | 0.49 | 0.97 |
| ENSG00000127838 | PNKD         | PD | Inverse variance weighted | 11 | 0.07  | 0.033022 | 1.07 | 1.01 | 1.15 |
| ENSG00000179562 | GCC1         | PD | Wald ratio                | 1  | 0.12  | 0.033187 | 1.13 | 1.01 | 1.26 |
| ENSG00000125304 | TM9SF2       | PD | Inverse variance weighted | 2  | 0.21  | 0.033302 | 1.23 | 1.02 | 1.49 |
| ENSG00000204256 | BRD2         | PD | Inverse variance weighted | 3  | 0.16  | 0.033461 | 1.17 | 1.01 | 1.36 |
| ENSG00000137161 | CNPY3        | PD | Wald ratio                | 1  | 0.19  | 0.033467 | 1.21 | 1.01 | 1.44 |
| ENSG00000013288 | MAN2B2       | PD | Inverse variance weighted | 3  | -0.07 | 0.033496 | 0.93 | 0.88 | 0.99 |
| ENSG00000100138 | SNU13        | PD | Inverse variance weighted | 2  | 0.11  | 0.033536 | 1.12 | 1.01 | 1.24 |
| ENSG00000130309 | COLGALT1     | PD | Inverse variance weighted | 3  | -0.08 | 0.033589 | 0.93 | 0.87 | 0.99 |
| ENSG00000100417 | PMM1         | PD | Inverse variance weighted | 2  | 0.10  | 0.033646 | 1.11 | 1.01 | 1.22 |
| ENSG00000108389 | MTMR4        | PD | Wald ratio                | 1  | 0.38  | 0.033699 | 1.46 | 1.03 | 2.08 |
| ENSG00000251364 | LOC100506258 | PD | Inverse variance weighted | 2  | -0.15 | 0.033851 | 0.86 | 0.74 | 0.99 |
| ENSG00000156398 | SFXN2        | PD | Inverse variance weighted | 2  | 0.10  | 0.033967 | 1.10 | 1.01 | 1.21 |
| ENSG00000182118 | FAM89A       | PD | Inverse variance weighted | 4  | 0.08  | 0.033993 | 1.08 | 1.01 | 1.17 |
| ENSG00000105968 | H2AZ2        | PD | Inverse variance weighted | 2  | 0.27  | 0.034023 | 1.32 | 1.02 | 1.70 |
| ENSG00000257924 | #N/A         | PD | Inverse variance weighted | 2  | 0.18  | 0.034041 | 1.19 | 1.01 | 1.40 |
| ENSG00000144445 | KANSL1L      | PD | Wald ratio                | 1  | -0.53 | 0.034043 | 0.59 | 0.36 | 0.96 |
| ENSG00000188641 | DPYD         | PD | Inverse variance weighted | 5  | -0.08 | 0.034052 | 0.92 | 0.85 | 0.99 |
| ENSG00000178999 | AURKB        | PD | Wald ratio                | 1  | 0.17  | 0.034076 | 1.19 | 1.01 | 1.39 |
| ENSG00000243926 | #N/A         | PD | Wald ratio                | 1  | 0.55  | 0.034106 | 1.74 | 1.04 | 2.90 |
| ENSG00000050405 | LIMA1        | PD | Inverse variance weighted | 3  | -0.09 | 0.034167 | 0.91 | 0.84 | 0.99 |
| ENSG00000137100 | DCTN3        | PD | Inverse variance weighted | 2  | -0.18 | 0.03421  | 0.83 | 0.71 | 0.99 |
| ENSG00000170835 | CEL          | PD | Wald ratio                | 1  | -0.24 | 0.034227 | 0.79 | 0.63 | 0.98 |
| ENSG00000198933 | TBKBP1       | PD | Inverse variance weighted | 4  | 0.08  | 0.03425  | 1.08 | 1.01 | 1.16 |
| ENSG00000234009 | RPL5P34      | PD | Wald ratio                | 1  | -0.47 | 0.034311 | 0.62 | 0.40 | 0.97 |
| ENSG00000179152 | TCAIM        | PD | Wald ratio                | 1  | 0.36  | 0.034339 | 1.43 | 1.03 | 1.99 |
| ENSG00000125449 | ARMC7        | PD | Inverse variance weighted | 2  | -0.19 | 0.034362 | 0.83 | 0.70 | 0.99 |
| ENSG00000137747 | TMPRSS13     | PD | Inverse variance weighted | 2  | -0.29 | 0.034415 | 0.75 | 0.57 | 0.98 |
| ENSG00000204922 | UQCC3        | PD | Wald ratio                | 1  | 0.30  | 0.034516 | 1.35 | 1.02 | 1.77 |
| ENSG00000176171 | BNIP3        | PD | Wald ratio                | 1  | -0.38 | 0.034575 | 0.68 | 0.48 | 0.97 |
| ENSG00000145725 | PPIP5K2      | PD | Inverse variance weighted | 4  | 0.07  | 0.034637 | 1.07 | 1.01 | 1.15 |
| ENSG00000123810 | B9D2         | PD | Inverse variance weighted | 4  | 0.15  | 0.034687 | 1.17 | 1.01 | 1.34 |
| ENSG00000143622 | RIT1         | PD | Inverse variance weighted | 2  | 0.12  | 0.034807 | 1.13 | 1.01 | 1.26 |
| ENSG00000178199 | ZC3H12D      | PD | Wald ratio                | 1  | 0.19  | 0.034838 | 1.21 | 1.01 | 1.45 |
| ENSG00000033327 | GAB2         | PD | Wald ratio                | 1  | -0.19 | 0.034844 | 0.82 | 0.69 | 0.99 |
| ENSG00000126353 | CCR7         | PD | Inverse variance weighted | 5  | 0.19  | 0.034915 | 1.21 | 1.01 | 1.45 |
| ENSG00000064490 | RFXANK       | PD | Inverse variance weighted | 3  | -0.10 | 0.034993 | 0.90 | 0.82 | 0.99 |
| ENSG00000108691 | CCL2         | PD | Wald ratio                | 1  | -0.58 | 0.03507  | 0.56 | 0.32 | 0.96 |

|                 |           |    |                           |   |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000233165 | #N/A      | PD | Inverse variance weighted | 2 | -0.19 | 0.035141 | 0.83 | 0.69 | 0.99 |
| ENSG00000232615 | #N/A      | PD | Wald ratio                | 1 | -0.20 | 0.035185 | 0.82 | 0.68 | 0.99 |
| ENSG00000217325 | PRELID1P1 | PD | Inverse variance weighted | 2 | -0.06 | 0.035192 | 0.94 | 0.88 | 1.00 |
| ENSG00000105197 | TIMM50    | PD | Wald ratio                | 1 | 0.49  | 0.035243 | 1.64 | 1.03 | 2.59 |
| ENSG00000007402 | CACNA2D   | PD | Wald ratio                | 1 | -0.27 | 0.035404 | 0.77 | 0.60 | 0.98 |
| 2               |           |    |                           |   |       |          |      |      |      |
| ENSG00000153093 | ACOXL     | PD | Inverse variance weighted | 2 | 0.34  | 0.03542  | 1.41 | 1.02 | 1.94 |
| ENSG00000186152 | #N/A      | PD | Inverse variance weighted | 2 | 0.24  | 0.035441 | 1.28 | 1.02 | 1.60 |
| ENSG00000211630 | #N/A      | PD | Wald ratio                | 1 | -0.11 | 0.035474 | 0.89 | 0.80 | 0.99 |
| ENSG00000240834 | #N/A      | PD | Wald ratio                | 1 | 0.19  | 0.035474 | 1.21 | 1.01 | 1.45 |
| ENSG00000198643 | FAM3D     | PD | Wald ratio                | 1 | 0.17  | 0.035504 | 1.19 | 1.01 | 1.40 |
| ENSG00000232372 | #N/A      | PD | Wald ratio                | 1 | -0.44 | 0.035534 | 0.64 | 0.42 | 0.97 |
| ENSG00000188707 | ZBED6CL   | PD | Inverse variance weighted | 2 | -0.12 | 0.035604 | 0.89 | 0.80 | 0.99 |
| ENSG00000232686 | #N/A      | PD | Wald ratio                | 1 | 0.47  | 0.035634 | 1.60 | 1.03 | 2.49 |
| ENSG00000174720 | LARP7     | PD | Inverse variance weighted | 2 | 0.20  | 0.035653 | 1.22 | 1.01 | 1.47 |
| ENSG00000153495 | TEX29     | PD | Wald ratio                | 1 | 0.32  | 0.035672 | 1.38 | 1.02 | 1.86 |
| ENSG00000175066 | GK5       | PD | Inverse variance weighted | 2 | 0.28  | 0.035745 | 1.32 | 1.02 | 1.71 |
| ENSG00000166126 | AMN       | PD | Wald ratio                | 1 | 0.53  | 0.035771 | 1.69 | 1.04 | 2.77 |
| ENSG00000158161 | EYA3      | PD | Wald ratio                | 1 | -0.10 | 0.035889 | 0.90 | 0.82 | 0.99 |
| ENSG00000186130 | ZBTB6     | PD | Wald ratio                | 1 | 0.26  | 0.035908 | 1.29 | 1.02 | 1.64 |
| ENSG00000141574 | SECTM1    | PD | Inverse variance weighted | 5 | -0.16 | 0.035919 | 0.85 | 0.73 | 0.99 |
| ENSG00000084754 | HADHA     | PD | Inverse variance weighted | 2 | 0.10  | 0.035931 | 1.11 | 1.01 | 1.22 |
| ENSG00000164713 | BRI3      | PD | Inverse variance weighted | 3 | -0.13 | 0.036178 | 0.88 | 0.78 | 0.99 |
| ENSG00000100804 | PSMB5     | PD | Inverse variance weighted | 3 | -0.12 | 0.036188 | 0.89 | 0.79 | 0.99 |
| ENSG00000229539 | #N/A      | PD | Wald ratio                | 1 | -0.19 | 0.036246 | 0.83 | 0.69 | 0.99 |
| ENSG00000187037 | GPR141    | PD | Inverse variance weighted | 3 | -0.12 | 0.03628  | 0.89 | 0.79 | 0.99 |
| ENSG00000141526 | SLC16A3   | PD | Inverse variance weighted | 3 | -0.08 | 0.036355 | 0.92 | 0.85 | 0.99 |
| ENSG00000227370 | #N/A      | PD | Inverse variance weighted | 2 | 0.19  | 0.036392 | 1.20 | 1.01 | 1.43 |
| ENSG00000172346 | CSDC2     | PD | Wald ratio                | 1 | -0.26 | 0.036424 | 0.77 | 0.61 | 0.98 |
| ENSG00000160404 | TOR2A     | PD | Inverse variance weighted | 2 | 0.25  | 0.036448 | 1.29 | 1.02 | 1.63 |
| ENSG00000136159 | NUDT15    | PD | Inverse variance weighted | 2 | -0.48 | 0.036461 | 0.62 | 0.40 | 0.97 |
| ENSG00000100644 | HIF1A     | PD | Inverse variance weighted | 4 | -0.16 | 0.036483 | 0.85 | 0.73 | 0.99 |
| ENSG00000267244 | LOC100288 | PD | Wald ratio                | 1 | -0.14 | 0.036536 | 0.87 | 0.76 | 0.99 |
| 123             |           |    |                           |   |       |          |      |      |      |
| ENSG00000255045 | #N/A      | PD | Wald ratio                | 1 | -0.51 | 0.036658 | 0.60 | 0.37 | 0.97 |
| ENSG00000143452 | HORMAD1   | PD | Inverse variance weighted | 2 | -0.10 | 0.036707 | 0.91 | 0.83 | 0.99 |
| ENSG00000259143 | #N/A      | PD | Inverse variance weighted | 4 | -0.16 | 0.036717 | 0.85 | 0.74 | 0.99 |
| ENSG00000230189 | #N/A      | PD | Inverse variance weighted | 2 | -0.26 | 0.036735 | 0.77 | 0.61 | 0.98 |
| ENSG00000198130 | HIBCH     | PD | Inverse variance weighted | 4 | -0.08 | 0.036751 | 0.92 | 0.85 | 0.99 |
| ENSG00000204619 | PPP1R11   | PD | Inverse variance weighted | 2 | 0.19  | 0.036859 | 1.21 | 1.01 | 1.46 |
| ENSG00000168386 | FILIP1L   | PD | Wald ratio                | 1 | -0.56 | 0.036921 | 0.57 | 0.34 | 0.97 |
| ENSG00000126787 | DLGAP5    | PD | Wald ratio                | 1 | -0.39 | 0.036935 | 0.68 | 0.47 | 0.98 |
| ENSG00000138074 | SLC5A6    | PD | Inverse variance weighted | 4 | -0.07 | 0.036965 | 0.93 | 0.87 | 1.00 |
| ENSG00000213967 | ZNF726    | PD | Wald ratio                | 1 | 0.56  | 0.037175 | 1.75 | 1.03 | 2.97 |

|                 |               |    |                           |   |       |          |      |      |      |
|-----------------|---------------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000260186 | #N/A          | PD | Wald ratio                | 1 | -0.73 | 0.037191 | 0.48 | 0.24 | 0.96 |
| ENSG00000149809 | TM7SF2        | PD | Inverse variance weighted | 2 | 0.12  | 0.037272 | 1.13 | 1.01 | 1.27 |
| ENSG00000121413 | ZSCAN18       | PD | Inverse variance weighted | 4 | 0.09  | 0.037292 | 1.09 | 1.01 | 1.19 |
| ENSG00000146530 | VWDE          | PD | Inverse variance weighted | 5 | 0.06  | 0.037298 | 1.06 | 1.00 | 1.13 |
| ENSG00000133256 | PDE6B         | PD | Wald ratio                | 1 | 0.15  | 0.037303 | 1.16 | 1.01 | 1.34 |
| ENSG00000166889 | PATL1         | PD | Wald ratio                | 1 | -0.27 | 0.03738  | 0.76 | 0.59 | 0.98 |
| ENSG00000250786 | SNHG18        | PD | Inverse variance weighted | 2 | 0.29  | 0.037386 | 1.33 | 1.02 | 1.75 |
| ENSG00000262944 | #N/A          | PD | Wald ratio                | 1 | 0.45  | 0.037435 | 1.57 | 1.03 | 2.40 |
| ENSG00000166037 | CEP57         | PD | Wald ratio                | 1 | -0.09 | 0.037526 | 0.92 | 0.84 | 0.99 |
| ENSG00000163820 | FYCO1         | PD | Inverse variance weighted | 2 | -0.15 | 0.037584 | 0.86 | 0.74 | 0.99 |
| ENSG00000152904 | GGPS1         | PD | Inverse variance weighted | 3 | 0.10  | 0.037607 | 1.10 | 1.01 | 1.21 |
| ENSG00000197723 | #N/A          | PD | Wald ratio                | 1 | 0.47  | 0.037622 | 1.60 | 1.03 | 2.49 |
| ENSG00000250548 | LINC01303     | PD | Wald ratio                | 1 | 0.18  | 0.037675 | 1.19 | 1.01 | 1.41 |
| ENSG00000132286 | TIMM10B       | PD | Wald ratio                | 1 | 0.16  | 0.03773  | 1.18 | 1.01 | 1.37 |
| ENSG00000215458 | AATBC         | PD | Inverse variance weighted | 3 | -0.09 | 0.038017 | 0.91 | 0.84 | 1.00 |
| ENSG00000010322 | NISCH         | PD | Wald ratio                | 1 | -0.32 | 0.038092 | 0.73 | 0.54 | 0.98 |
| ENSG00000153214 | TMEM87B       | PD | Inverse variance weighted | 4 | -0.10 | 0.038124 | 0.90 | 0.82 | 0.99 |
| ENSG00000237927 | #N/A          | PD | Inverse variance weighted | 2 | 0.11  | 0.038214 | 1.12 | 1.01 | 1.25 |
| ENSG00000187474 | FPR3          | PD | Inverse variance weighted | 6 | 0.11  | 0.038227 | 1.11 | 1.01 | 1.23 |
| ENSG00000150456 | EEF1AKM<br>T1 | PD | Wald ratio                | 1 | -0.32 | 0.038319 | 0.73 | 0.54 | 0.98 |
| ENSG00000106948 | AKNA          | PD | Inverse variance weighted | 2 | 0.12  | 0.038351 | 1.13 | 1.01 | 1.27 |
| ENSG00000114631 | PODXL2        | PD | Inverse variance weighted | 4 | -0.12 | 0.038432 | 0.89 | 0.80 | 0.99 |
| ENSG00000132514 | CLEC10A       | PD | Inverse variance weighted | 8 | -0.07 | 0.038435 | 0.94 | 0.88 | 1.00 |
| ENSG00000167286 | CD3D          | PD | Inverse variance weighted | 4 | -0.18 | 0.038457 | 0.84 | 0.71 | 0.99 |
| ENSG00000132906 | CASP9         | PD | Inverse variance weighted | 3 | -0.08 | 0.038606 | 0.93 | 0.86 | 1.00 |
| ENSG00000204390 | HSPA1L        | PD | Inverse variance weighted | 3 | -0.15 | 0.038617 | 0.86 | 0.75 | 0.99 |
| ENSG00000267344 | #N/A          | PD | Wald ratio                | 1 | 0.21  | 0.038634 | 1.23 | 1.01 | 1.50 |
| ENSG00000132383 | RPA1          | PD | Inverse variance weighted | 5 | -0.08 | 0.038745 | 0.93 | 0.86 | 1.00 |
| ENSG00000163923 | RPL39L        | PD | Wald ratio                | 1 | -0.20 | 0.038766 | 0.82 | 0.68 | 0.99 |
| ENSG00000170037 | CNTROB        | PD | Wald ratio                | 1 | 0.59  | 0.038812 | 1.81 | 1.03 | 3.18 |
| ENSG00000143401 | ANP32E        | PD | Wald ratio                | 1 | -0.22 | 0.038822 | 0.81 | 0.66 | 0.99 |
| ENSG00000196917 | HCAR1         | PD | Wald ratio                | 1 | -0.14 | 0.038835 | 0.87 | 0.76 | 0.99 |
| ENSG00000147650 | LRP12         | PD | Wald ratio                | 1 | 0.19  | 0.038982 | 1.20 | 1.01 | 1.44 |
| ENSG00000226508 | LINC01918     | PD | Wald ratio                | 1 | 0.68  | 0.038993 | 1.98 | 1.04 | 3.79 |
| ENSG00000204590 | GNL1          | PD | Wald ratio                | 1 | -0.46 | 0.039034 | 0.63 | 0.41 | 0.98 |
| ENSG00000128944 | KNSTRN        | PD | Inverse variance weighted | 3 | -0.08 | 0.039048 | 0.92 | 0.86 | 1.00 |
| ENSG00000163882 | POLR2H        | PD | Wald ratio                | 1 | -0.32 | 0.039131 | 0.72 | 0.53 | 0.98 |
| ENSG00000260467 | #N/A          | PD | Inverse variance weighted | 2 | -0.23 | 0.039282 | 0.80 | 0.64 | 0.99 |
| ENSG00000238975 | #N/A          | PD | Wald ratio                | 1 | -0.50 | 0.039341 | 0.61 | 0.38 | 0.98 |
| ENSG00000231890 | DARS1-<br>AS1 | PD | Wald ratio                | 1 | 0.21  | 0.03939  | 1.23 | 1.01 | 1.50 |
| ENSG00000176155 | CCDC57        | PD | Wald ratio                | 1 | -0.08 | 0.039511 | 0.92 | 0.85 | 1.00 |
| ENSG00000170322 | NFRKB         | PD | Inverse variance weighted | 5 | 0.16  | 0.039613 | 1.17 | 1.01 | 1.36 |

|                 |           |    |                           |   |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000150459 | SAP18     | PD | Wald ratio                | 1 | -0.22 | 0.039658 | 0.80 | 0.65 | 0.99 |
| ENSG00000141002 | TCF25     | PD | Wald ratio                | 1 | -0.40 | 0.039672 | 0.67 | 0.45 | 0.98 |
| ENSG00000248925 | #N/A      | PD | Wald ratio                | 1 | -0.21 | 0.039732 | 0.81 | 0.66 | 0.99 |
| ENSG00000223959 | AFG3L1P   | PD | Inverse variance weighted | 3 | 0.14  | 0.039743 | 1.15 | 1.01 | 1.31 |
| ENSG00000167904 | TMEM68    | PD | Wald ratio                | 1 | 0.23  | 0.039909 | 1.26 | 1.01 | 1.58 |
| ENSG00000229961 | #N/A      | PD | Inverse variance weighted | 2 | 0.41  | 0.039909 | 1.51 | 1.02 | 2.23 |
| ENSG00000178295 | GEN1      | PD | Wald ratio                | 1 | -0.16 | 0.040017 | 0.85 | 0.73 | 0.99 |
| ENSG00000136856 | SLC2A8    | PD | Inverse variance weighted | 2 | 0.08  | 0.040109 | 1.08 | 1.00 | 1.16 |
| ENSG00000151715 | TMEM45B   | PD | Inverse variance weighted | 5 | 0.06  | 0.040128 | 1.06 | 1.00 | 1.12 |
| ENSG00000130244 | FAM98C    | PD | Inverse variance weighted | 2 | 0.17  | 0.040181 | 1.18 | 1.01 | 1.39 |
| ENSG00000181450 | ZNF678    | PD | Wald ratio                | 1 | -0.54 | 0.040188 | 0.58 | 0.35 | 0.98 |
| ENSG00000261542 | #N/A      | PD | Inverse variance weighted | 3 | -0.35 | 0.040215 | 0.71 | 0.51 | 0.98 |
| ENSG00000142039 | CCDC97    | PD | Inverse variance weighted | 2 | 0.31  | 0.040249 | 1.37 | 1.01 | 1.84 |
| ENSG00000259418 | #N/A      | PD | Wald ratio                | 1 | 0.46  | 0.040312 | 1.59 | 1.02 | 2.48 |
| ENSG00000175161 | CADM2     | PD | Wald ratio                | 1 | 0.48  | 0.04034  | 1.61 | 1.02 | 2.54 |
| ENSG00000269397 | #N/A      | PD | Wald ratio                | 1 | 0.68  | 0.040364 | 1.97 | 1.03 | 3.78 |
| ENSG00000147799 | ARHGAP3   | PD | Wald ratio                | 1 | 0.22  | 0.040391 | 1.25 | 1.01 | 1.55 |
| 9               |           |    |                           |   |       |          |      |      |      |
| ENSG00000229127 | #N/A      | PD | Wald ratio                | 1 | -0.28 | 0.040418 | 0.76 | 0.58 | 0.99 |
| ENSG00000197279 | ZNF165    | PD | Inverse variance weighted | 3 | 0.22  | 0.040485 | 1.24 | 1.01 | 1.53 |
| ENSG00000160214 | RRP1      | PD | Inverse variance weighted | 2 | -0.22 | 0.040511 | 0.80 | 0.65 | 0.99 |
| ENSG00000135655 | USP15     | PD | Inverse variance weighted | 2 | 0.11  | 0.040546 | 1.12 | 1.00 | 1.24 |
| ENSG00000198839 | ZNF277    | PD | Wald ratio                | 1 | 0.51  | 0.040636 | 1.67 | 1.02 | 2.72 |
| ENSG00000111912 | NCOA7     | PD | Inverse variance weighted | 2 | -0.11 | 0.040688 | 0.89 | 0.80 | 1.00 |
| ENSG00000170425 | ADORA2B   | PD | Inverse variance weighted | 2 | 0.19  | 0.040729 | 1.21 | 1.01 | 1.46 |
| ENSG00000198156 | NPIPB6    | PD | Inverse variance weighted | 2 | -0.26 | 0.040799 | 0.77 | 0.60 | 0.99 |
| ENSG00000169710 | FASN      | PD | Wald ratio                | 1 | 0.10  | 0.040835 | 1.11 | 1.00 | 1.22 |
| ENSG00000129194 | SOX15     | PD | Wald ratio                | 1 | -0.38 | 0.04086  | 0.68 | 0.47 | 0.98 |
| ENSG00000129255 | MPDU1     | PD | Wald ratio                | 1 | 0.18  | 0.04086  | 1.19 | 1.01 | 1.41 |
| ENSG00000226403 | #N/A      | PD | Inverse variance weighted | 2 | -0.31 | 0.040971 | 0.73 | 0.55 | 0.99 |
| ENSG00000168734 | PKIG      | PD | Wald ratio                | 1 | 0.16  | 0.041022 | 1.18 | 1.01 | 1.38 |
| ENSG00000166896 | ATP23     | PD | Inverse variance weighted | 4 | 0.10  | 0.041031 | 1.11 | 1.00 | 1.22 |
| ENSG00000222267 | RNU6-892P | PD | Wald ratio                | 1 | 0.23  | 0.041036 | 1.25 | 1.01 | 1.56 |
| ENSG00000241106 | HLA-DOB   | PD | Inverse variance weighted | 4 | -0.08 | 0.041093 | 0.93 | 0.86 | 1.00 |
| ENSG00000165102 | HGSNAT    | PD | Inverse variance weighted | 2 | 0.36  | 0.041143 | 1.43 | 1.01 | 2.01 |
| ENSG00000214413 | BBIP1     | PD | Inverse variance weighted | 2 | 0.26  | 0.041211 | 1.30 | 1.01 | 1.66 |
| ENSG00000153922 | CHD1      | PD | Wald ratio                | 1 | 0.60  | 0.041225 | 1.82 | 1.02 | 3.25 |
| ENSG00000033627 | ATP6V0A1  | PD | Inverse variance weighted | 4 | -0.16 | 0.041236 | 0.85 | 0.73 | 0.99 |
| ENSG00000185432 | METTL7A   | PD | Inverse variance weighted | 3 | 0.09  | 0.041311 | 1.09 | 1.00 | 1.19 |
| ENSG00000186777 | ZNF732    | PD | Wald ratio                | 1 | 0.75  | 0.041334 | 2.12 | 1.03 | 4.35 |
| ENSG00000160783 | PMF1      | PD | Inverse variance weighted | 2 | 0.22  | 0.041351 | 1.24 | 1.01 | 1.54 |
| ENSG00000181511 | #N/A      | PD | Wald ratio                | 1 | 0.27  | 0.041444 | 1.31 | 1.01 | 1.69 |
| ENSG00000166704 | ZNF606    | PD | Inverse variance weighted | 3 | 0.17  | 0.041728 | 1.19 | 1.01 | 1.40 |
| ENSG00000117318 | ID3       | PD | Inverse variance weighted | 2 | -0.22 | 0.041733 | 0.80 | 0.65 | 0.99 |

|                 |           |    |                           |    |       |          |      |      |      |
|-----------------|-----------|----|---------------------------|----|-------|----------|------|------|------|
| ENSG00000268230 | #N/A      | PD | Wald ratio                | 1  | -0.27 | 0.041788 | 0.77 | 0.59 | 0.99 |
| ENSG00000075391 | RASAL2    | PD | Wald ratio                | 1  | 0.48  | 0.041807 | 1.62 | 1.02 | 2.59 |
| ENSG00000269001 | #N/A      | PD | Inverse variance weighted | 2  | -0.22 | 0.041814 | 0.80 | 0.65 | 0.99 |
| ENSG00000124713 | GNMT      | PD | Wald ratio                | 1  | -0.08 | 0.041842 | 0.92 | 0.85 | 1.00 |
| ENSG00000163617 | CCDC191   | PD | Wald ratio                | 1  | 0.17  | 0.041886 | 1.19 | 1.01 | 1.40 |
| ENSG00000264964 | #N/A      | PD | Wald ratio                | 1  | 0.28  | 0.041888 | 1.32 | 1.01 | 1.73 |
| ENSG00000131686 | CA6       | PD | Inverse variance weighted | 2  | -0.11 | 0.041924 | 0.90 | 0.81 | 1.00 |
| ENSG00000198848 | CES1      | PD | Inverse variance weighted | 5  | -0.13 | 0.041958 | 0.88 | 0.77 | 1.00 |
| ENSG00000054267 | ARID4B    | PD | Wald ratio                | 1  | 0.30  | 0.042056 | 1.35 | 1.01 | 1.82 |
| ENSG00000197982 | C1orf122  | PD | Wald ratio                | 1  | 0.10  | 0.042128 | 1.11 | 1.00 | 1.23 |
| ENSG00000107736 | CDH23     | PD | Inverse variance weighted | 8  | -0.05 | 0.042245 | 0.95 | 0.91 | 1.00 |
| ENSG00000172164 | SNTB1     | PD | Inverse variance weighted | 4  | 0.18  | 0.042371 | 1.20 | 1.01 | 1.43 |
| ENSG00000165406 | MARCHF8   | PD | Inverse variance weighted | 3  | 0.15  | 0.042394 | 1.16 | 1.01 | 1.33 |
| ENSG00000254946 | LINC02751 | PD | Wald ratio                | 1  | -0.51 | 0.042502 | 0.60 | 0.37 | 0.98 |
| ENSG00000137815 | RTF1      | PD | Wald ratio                | 1  | -0.14 | 0.042535 | 0.87 | 0.75 | 1.00 |
| ENSG00000198483 | ANKRD35   | PD | Wald ratio                | 1  | -0.08 | 0.042535 | 0.92 | 0.85 | 1.00 |
| ENSG00000236778 | INTS6-AS1 | PD | Inverse variance weighted | 2  | -0.16 | 0.042621 | 0.85 | 0.73 | 0.99 |
| ENSG00000128951 | DUT       | PD | Inverse variance weighted | 4  | -0.10 | 0.042644 | 0.90 | 0.82 | 1.00 |
| ENSG00000136274 | NACAD     | PD | Inverse variance weighted | 2  | 0.17  | 0.042669 | 1.19 | 1.01 | 1.40 |
| ENSG00000186940 | #N/A      | PD | Wald ratio                | 1  | -0.21 | 0.042684 | 0.81 | 0.66 | 0.99 |
| ENSG00000215006 | #N/A      | PD | Wald ratio                | 1  | -0.35 | 0.042684 | 0.70 | 0.50 | 0.99 |
| ENSG00000140988 | RPS2      | PD | Wald ratio                | 1  | 0.37  | 0.042722 | 1.44 | 1.01 | 2.06 |
| ENSG00000140990 | NDUFB10   | PD | Wald ratio                | 1  | -0.17 | 0.042722 | 0.84 | 0.71 | 0.99 |
| ENSG00000164244 | PRRC1     | PD | Inverse variance weighted | 2  | -0.15 | 0.042801 | 0.86 | 0.75 | 1.00 |
| ENSG00000139291 | TMEM19    | PD | Inverse variance weighted | 2  | -0.21 | 0.042955 | 0.81 | 0.66 | 0.99 |
| ENSG00000184304 | PRKD1     | PD | Inverse variance weighted | 2  | 0.06  | 0.043019 | 1.06 | 1.00 | 1.12 |
| ENSG00000114353 | GNAI2     | PD | Wald ratio                | 1  | -0.37 | 0.043023 | 0.69 | 0.48 | 0.99 |
| ENSG00000005206 | SPPL2B    | PD | Wald ratio                | 1  | -0.44 | 0.043124 | 0.64 | 0.42 | 0.99 |
| ENSG00000142798 | HSPG2     | PD | Inverse variance weighted | 3  | 0.13  | 0.04314  | 1.14 | 1.00 | 1.30 |
| ENSG00000182919 | C11orf54  | PD | Inverse variance weighted | 2  | 0.09  | 0.043171 | 1.09 | 1.00 | 1.19 |
| ENSG00000105229 | PIAS4     | PD | Wald ratio                | 1  | 0.18  | 0.043179 | 1.19 | 1.01 | 1.41 |
| ENSG00000165633 | VSTM4     | PD | Wald ratio                | 1  | 0.59  | 0.043279 | 1.81 | 1.02 | 3.21 |
| ENSG00000164011 | ZNF691    | PD | Wald ratio                | 1  | 0.51  | 0.043297 | 1.67 | 1.02 | 2.74 |
| ENSG00000125810 | CD93      | PD | Inverse variance weighted | 12 | 0.07  | 0.043387 | 1.07 | 1.00 | 1.14 |
| ENSG00000187239 | FNBP1     | PD | Inverse variance weighted | 2  | 0.09  | 0.043418 | 1.09 | 1.00 | 1.19 |
| ENSG00000163386 | #N/A      | PD | Inverse variance weighted | 2  | -0.37 | 0.043559 | 0.69 | 0.48 | 0.99 |
| ENSG00000235241 | #N/A      | PD | Wald ratio                | 1  | -0.37 | 0.043589 | 0.69 | 0.48 | 0.99 |
| ENSG00000184811 | TRARG1    | PD | Wald ratio                | 1  | -0.29 | 0.043663 | 0.75 | 0.56 | 0.99 |
| ENSG00000103723 | AP3B2     | PD | Inverse variance weighted | 2  | -0.09 | 0.043669 | 0.91 | 0.83 | 1.00 |
| ENSG00000143761 | ARF1      | PD | Wald ratio                | 1  | -0.41 | 0.04367  | 0.67 | 0.45 | 0.99 |
| ENSG00000198574 | SH2D1B    | PD | Inverse variance weighted | 7  | 0.16  | 0.043756 | 1.17 | 1.00 | 1.36 |
| ENSG00000188786 | MTF1      | PD | Wald ratio                | 1  | 0.25  | 0.043777 | 1.28 | 1.01 | 1.63 |
| ENSG00000143751 | SDE2      | PD | Inverse variance weighted | 2  | -0.28 | 0.043802 | 0.76 | 0.58 | 0.99 |
| ENSG00000151466 | SCLT1     | PD | Inverse variance weighted | 3  | 0.15  | 0.04391  | 1.17 | 1.00 | 1.36 |

|                 |                |    |                           |   |       |          |      |      |      |
|-----------------|----------------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000249601 | #N/A           | PD | Inverse variance weighted | 3 | -0.21 | 0.043936 | 0.81 | 0.66 | 0.99 |
| ENSG00000231234 | #N/A           | PD | Wald ratio                | 1 | -0.40 | 0.044146 | 0.67 | 0.45 | 0.99 |
| ENSG00000254685 | FPGT           | PD | Inverse variance weighted | 2 | -0.09 | 0.044243 | 0.91 | 0.83 | 1.00 |
| ENSG00000165630 | PRPF18         | PD | Wald ratio                | 1 | 0.32  | 0.044256 | 1.38 | 1.01 | 1.88 |
| ENSG00000243667 | DNAAF10        | PD | Wald ratio                | 1 | 0.14  | 0.044287 | 1.15 | 1.00 | 1.31 |
| ENSG00000251453 | #N/A           | PD | Wald ratio                | 1 | 0.25  | 0.044287 | 1.29 | 1.01 | 1.65 |
| ENSG00000157617 | C2CD2          | PD | Inverse variance weighted | 2 | -0.20 | 0.04441  | 0.82 | 0.68 | 1.00 |
| ENSG00000188848 | BEND4          | PD | Wald ratio                | 1 | 0.41  | 0.04454  | 1.51 | 1.01 | 2.25 |
| ENSG00000206965 | RNU6-5P        | PD | Wald ratio                | 1 | -0.53 | 0.044608 | 0.59 | 0.35 | 0.99 |
| ENSG00000188603 | CLN3           | PD | Inverse variance weighted | 2 | 0.13  | 0.044628 | 1.14 | 1.00 | 1.30 |
| ENSG00000203602 | #N/A           | PD | Wald ratio                | 1 | 0.29  | 0.045027 | 1.34 | 1.01 | 1.78 |
| ENSG00000128482 | RNF112         | PD | Wald ratio                | 1 | -0.11 | 0.045058 | 0.90 | 0.81 | 1.00 |
| ENSG00000166484 | MAPK7          | PD | Wald ratio                | 1 | 0.25  | 0.045058 | 1.28 | 1.01 | 1.63 |
| ENSG00000269969 | #N/A           | PD | Inverse variance weighted | 2 | 0.34  | 0.045068 | 1.40 | 1.01 | 1.94 |
| ENSG00000188739 | RBM34          | PD | Wald ratio                | 1 | -0.42 | 0.04509  | 0.66 | 0.44 | 0.99 |
| ENSG00000170153 | RNF150         | PD | Inverse variance weighted | 6 | -0.05 | 0.045211 | 0.95 | 0.90 | 1.00 |
| ENSG00000159840 | ZYX            | PD | Inverse variance weighted | 5 | -0.06 | 0.045237 | 0.94 | 0.89 | 1.00 |
| ENSG00000197037 | ZSCAN25        | PD | Wald ratio                | 1 | -0.28 | 0.045316 | 0.76 | 0.58 | 0.99 |
| ENSG00000125818 | PSMF1          | PD | Inverse variance weighted | 7 | 0.10  | 0.045433 | 1.11 | 1.00 | 1.22 |
| ENSG00000260698 | #N/A           | PD | Wald ratio                | 1 | -0.36 | 0.0455   | 0.70 | 0.49 | 0.99 |
| ENSG00000139926 | FRMD6          | PD | Inverse variance weighted | 2 | 0.27  | 0.04564  | 1.31 | 1.01 | 1.70 |
| ENSG00000160588 | MPZL3          | PD | Inverse variance weighted | 3 | -0.10 | 0.045662 | 0.91 | 0.82 | 1.00 |
| ENSG00000064225 | ST3GAL6        | PD | Inverse variance weighted | 4 | 0.08  | 0.045679 | 1.08 | 1.00 | 1.17 |
| ENSG00000137992 | DBT            | PD | Wald ratio                | 1 | 0.80  | 0.04575  | 2.22 | 1.02 | 4.86 |
| ENSG00000136643 | RPS6KC1        | PD | Wald ratio                | 1 | -0.31 | 0.045954 | 0.73 | 0.54 | 0.99 |
| ENSG00000136938 | ANP32B         | PD | Wald ratio                | 1 | -0.21 | 0.04603  | 0.81 | 0.66 | 1.00 |
| ENSG00000168282 | MGAT2          | PD | Wald ratio                | 1 | -0.17 | 0.046051 | 0.84 | 0.71 | 1.00 |
| ENSG00000125388 | GRK4           | PD | Inverse variance weighted | 2 | -0.07 | 0.046065 | 0.93 | 0.87 | 1.00 |
| ENSG00000205038 | PKHD1L1        | PD | Inverse variance weighted | 5 | 0.10  | 0.046247 | 1.11 | 1.00 | 1.22 |
| ENSG00000240399 | #N/A           | PD | Inverse variance weighted | 2 | 0.09  | 0.046269 | 1.09 | 1.00 | 1.19 |
| ENSG00000158435 | CNOT11         | PD | Inverse variance weighted | 2 | 0.19  | 0.046301 | 1.21 | 1.00 | 1.46 |
| ENSG00000248019 | FAM13A-<br>AS1 | PD | Inverse variance weighted | 3 | -0.13 | 0.046418 | 0.87 | 0.77 | 1.00 |
| ENSG00000171867 | PRNP           | PD | Inverse variance weighted | 2 | -0.16 | 0.046602 | 0.85 | 0.73 | 1.00 |
| ENSG00000259488 | #N/A           | PD | Inverse variance weighted | 2 | -0.19 | 0.046716 | 0.83 | 0.68 | 1.00 |
| ENSG00000223825 | #N/A           | PD | Wald ratio                | 1 | -0.39 | 0.046741 | 0.67 | 0.46 | 0.99 |
| ENSG00000157014 | TATDN2         | PD | Inverse variance weighted | 3 | 0.08  | 0.046844 | 1.08 | 1.00 | 1.17 |
| ENSG00000197880 | MDS2           | PD | Inverse variance weighted | 2 | 0.22  | 0.047297 | 1.25 | 1.00 | 1.56 |
| ENSG00000177606 | JUN            | PD | Inverse variance weighted | 8 | 0.11  | 0.047372 | 1.11 | 1.00 | 1.23 |
| ENSG00000135842 | NIBAN1         | PD | Inverse variance weighted | 4 | -0.11 | 0.047374 | 0.89 | 0.80 | 1.00 |
| ENSG00000211807 | TRAV26-1       | PD | Inverse variance weighted | 2 | 0.27  | 0.047464 | 1.31 | 1.00 | 1.72 |
| ENSG00000174446 | SNAPC5         | PD | Inverse variance weighted | 3 | -0.16 | 0.047506 | 0.85 | 0.73 | 1.00 |
| ENSG00000247199 | FBXO38-<br>DT  | PD | Wald ratio                | 1 | 0.38  | 0.047749 | 1.46 | 1.00 | 2.12 |

|                 |          |    |                           |   |       |          |      |      |      |
|-----------------|----------|----|---------------------------|---|-------|----------|------|------|------|
| ENSG00000134255 | CEPT1    | PD | Inverse variance weighted | 4 | 0.15  | 0.04781  | 1.16 | 1.00 | 1.35 |
| ENSG00000145416 | MARCHF1  | PD | Inverse variance weighted | 4 | 0.07  | 0.047917 | 1.08 | 1.00 | 1.16 |
| ENSG00000211637 | IGLV4-69 | PD | Wald ratio                | 1 | -0.28 | 0.048125 | 0.75 | 0.57 | 1.00 |
| ENSG00000211648 | IGLV1-47 | PD | Wald ratio                | 1 | -0.57 | 0.048125 | 0.57 | 0.32 | 1.00 |
| ENSG00000254030 | IGLC5    | PD | Wald ratio                | 1 | 0.22  | 0.048125 | 1.25 | 1.00 | 1.55 |
| ENSG00000159713 | TPPP3    | PD | Inverse variance weighted | 9 | 0.10  | 0.048147 | 1.11 | 1.00 | 1.23 |
| ENSG00000204574 | ABCF1    | PD | Inverse variance weighted | 2 | -0.17 | 0.048151 | 0.85 | 0.72 | 1.00 |
| ENSG00000151490 | PTPRO    | PD | Inverse variance weighted | 2 | 0.24  | 0.048206 | 1.27 | 1.00 | 1.62 |
| ENSG00000153786 | ZDHC7    | PD | Inverse variance weighted | 7 | -0.06 | 0.048283 | 0.94 | 0.89 | 1.00 |
| ENSG00000125454 | SLC25A19 | PD | Inverse variance weighted | 2 | 0.25  | 0.048361 | 1.29 | 1.00 | 1.66 |
| ENSG00000143353 | LYPLAL1  | PD | Inverse variance weighted | 2 | 0.11  | 0.04846  | 1.12 | 1.00 | 1.24 |
| ENSG00000135686 | KLHL36   | PD | Inverse variance weighted | 2 | 0.08  | 0.048473 | 1.08 | 1.00 | 1.16 |
| ENSG00000140284 | SLC27A2  | PD | Wald ratio                | 1 | -0.21 | 0.048482 | 0.81 | 0.66 | 1.00 |
| ENSG00000218186 | KRT8P43  | PD | Wald ratio                | 1 | -0.46 | 0.048485 | 0.63 | 0.40 | 1.00 |
| ENSG00000169251 | NMD3     | PD | Wald ratio                | 1 | -0.12 | 0.048515 | 0.88 | 0.78 | 1.00 |
| ENSG00000178718 | RPP25    | PD | Wald ratio                | 1 | -0.46 | 0.048652 | 0.63 | 0.40 | 1.00 |
| ENSG00000187796 | CARD9    | PD | Inverse variance weighted | 6 | 0.06  | 0.048683 | 1.06 | 1.00 | 1.13 |
| ENSG00000178252 | WDR6     | PD | Inverse variance weighted | 4 | -0.06 | 0.048718 | 0.95 | 0.89 | 1.00 |
| ENSG00000135245 | HILPDA   | PD | Wald ratio                | 1 | 0.36  | 0.048788 | 1.43 | 1.00 | 2.05 |
| ENSG00000232053 | #N/A     | PD | Wald ratio                | 1 | 0.38  | 0.048789 | 1.46 | 1.00 | 2.12 |
| ENSG00000180747 | SMG1P3   | PD | Inverse variance weighted | 4 | 0.38  | 0.048999 | 1.46 | 1.00 | 2.14 |
| ENSG00000100802 | C14orf93 | PD | Inverse variance weighted | 2 | -0.31 | 0.04916  | 0.74 | 0.54 | 1.00 |
| ENSG00000204791 | #N/A     | PD | Wald ratio                | 1 | -0.19 | 0.049222 | 0.83 | 0.69 | 1.00 |
| ENSG00000004975 | DVL2     | PD | Wald ratio                | 1 | -0.20 | 0.049309 | 0.82 | 0.67 | 1.00 |
| ENSG00000170502 | NUDT9    | PD | Inverse variance weighted | 2 | -0.16 | 0.04931  | 0.85 | 0.72 | 1.00 |
| ENSG00000246596 | #N/A     | PD | Wald ratio                | 1 | -0.52 | 0.049386 | 0.60 | 0.36 | 1.00 |
| ENSG00000203760 | CENPW    | PD | Wald ratio                | 1 | -0.28 | 0.049401 | 0.75 | 0.57 | 1.00 |
| ENSG00000111254 | AKAP3    | PD | Wald ratio                | 1 | -0.14 | 0.049435 | 0.87 | 0.75 | 1.00 |
| ENSG00000232112 | TMA7     | PD | Wald ratio                | 1 | 0.22  | 0.049472 | 1.25 | 1.00 | 1.55 |
| ENSG00000101447 | FAM83D   | PD | Wald ratio                | 1 | 0.21  | 0.049557 | 1.23 | 1.00 | 1.52 |
| ENSG00000163171 | CDC42EP3 | PD | Inverse variance weighted | 4 | 0.12  | 0.049647 | 1.13 | 1.00 | 1.28 |
| ENSG00000143952 | VPS54    | PD | Inverse variance weighted | 2 | 0.30  | 0.049665 | 1.35 | 1.00 | 1.83 |
| ENSG00000137462 | TLR2     | PD | Inverse variance weighted | 3 | 0.15  | 0.049752 | 1.16 | 1.00 | 1.35 |
| ENSG00000234477 | #N/A     | PD | Wald ratio                | 1 | 0.13  | 0.049792 | 1.14 | 1.00 | 1.31 |
| ENSG00000255328 | #N/A     | PD | Inverse variance weighted | 6 | -0.07 | 0.049805 | 0.93 | 0.87 | 1.00 |
| ENSG00000115486 | GGCX     | PD | Inverse variance weighted | 2 | -0.07 | 0.049836 | 0.93 | 0.86 | 1.00 |
| ENSG00000248367 | #N/A     | PD | Inverse variance weighted | 2 | 0.13  | 0.049848 | 1.14 | 1.00 | 1.30 |
| ENSG00000269932 | #N/A     | PD | Inverse variance weighted | 2 | 0.42  | 0.04995  | 1.51 | 1.00 | 2.29 |

**Supplementary Table 6: Phenome-wide MR results for brain CD38.**

| outcome                                                                | exposure | method     | nsnp | b     | se   | pval     | or | or_lci95 | or_uci95 |       |
|------------------------------------------------------------------------|----------|------------|------|-------|------|----------|----|----------|----------|-------|
| Other acute and subacute forms of ischemic heart disease               | CD38     | Wald ratio | 1    | 1.34  | 0.38 | 3.99E-04 |    | 3.83     | 1.82     | 8.06  |
| Other disorders of gallbladder                                         | CD38     | Wald ratio | 1    | -1.21 | 0.34 | 4.65E-04 |    | 0.30     | 0.15     | 0.59  |
| Chronic renal failure [CKD]                                            | CD38     | Wald ratio | 1    | 0.86  | 0.25 | 7.16E-04 |    | 2.36     | 1.43     | 3.87  |
| Ovarian cyst                                                           | CD38     | Wald ratio | 1    | 0.60  | 0.19 | 1.65E-03 |    | 1.82     | 1.25     | 2.64  |
| Other specified cardiac dysrhythmias                                   | CD38     | Wald ratio | 1    | 0.69  | 0.23 | 2.63E-03 |    | 1.99     | 1.27     | 3.11  |
| Poisoning by anticonvulsants and anti-Parkinsonism drugs               | CD38     | Wald ratio | 1    | -1.71 | 0.57 | 0.003    |    | 0.18     | 0.06     | 0.56  |
| Sleep disorders                                                        | CD38     | Wald ratio | 1    | 0.49  | 0.18 | 0.006    |    | 1.64     | 1.15     | 2.34  |
| Anaphylactic shock NOS                                                 | CD38     | Wald ratio | 1    | 1.44  | 0.55 | 0.009    |    | 4.23     | 1.43     | 12.50 |
| Diseases and other conditions of the tongue                            | CD38     | Wald ratio | 1    | 0.95  | 0.37 | 0.010    |    | 2.59     | 1.26     | 5.34  |
| Sleep apnea                                                            | CD38     | Wald ratio | 1    | 0.50  | 0.20 | 0.010    |    | 1.66     | 1.13     | 2.43  |
| Hypothyroidism                                                         | CD38     | Wald ratio | 1    | 0.28  | 0.11 | 0.011    |    | 1.33     | 1.07     | 1.66  |
| Noninflammatory disorders of ovary, fallopian tube, and broad ligament | CD38     | Wald ratio | 1    | 1.19  | 0.48 | 0.012    |    | 3.30     | 1.29     | 8.43  |
| Known or suspected fetal abnormality affecting management of mother    | CD38     | Wald ratio | 1    | -0.51 | 0.21 | 0.017    |    | 0.60     | 0.40     | 0.91  |
| Sciatica                                                               | CD38     | Wald ratio | 1    | 0.64  | 0.27 | 0.017    |    | 1.89     | 1.12     | 3.18  |
| Disorders of sweat glands                                              | CD38     | Wald ratio | 1    | -1.07 | 0.45 | 0.018    |    | 0.34     | 0.14     | 0.83  |
| Hypothyroidism NOS                                                     | CD38     | Wald ratio | 1    | 0.27  | 0.12 | 0.018    |    | 1.31     | 1.05     | 1.65  |
| Infertility, female                                                    | CD38     | Wald ratio | 1    | -0.83 | 0.36 | 0.021    |    | 0.44     | 0.22     | 0.88  |
| Other local infections of skin and subcutaneous tissue                 | CD38     | Wald ratio | 1    | -0.44 | 0.19 | 0.021    |    | 0.64     | 0.44     | 0.94  |
| Carbuncle and furuncle                                                 | CD38     | Wald ratio | 1    | -0.62 | 0.27 | 0.022    |    | 0.54     | 0.32     | 0.91  |
| Other headache syndromes                                               | CD38     | Wald ratio | 1    | 0.34  | 0.15 | 0.022    |    | 1.40     | 1.05     | 1.87  |
| Cervical cancer                                                        | CD38     | Wald ratio | 1    | 0.73  | 0.32 | 0.022    |    | 2.07     | 1.11     | 3.88  |

|                                                                                          |      |            |   |       |      |       |      |      |       |
|------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Symptoms involving nervous and musculoskeletal systems                                   | CD38 | Wald ratio | 1 | 0.68  | 0.30 | 0.024 | 1.96 | 1.09 | 3.53  |
| Peritoneal or intestinal adhesions                                                       | CD38 | Wald ratio | 1 | 1.01  | 0.45 | 0.024 | 2.74 | 1.14 | 6.58  |
| Abnormal heart sounds                                                                    | CD38 | Wald ratio | 1 | 0.89  | 0.40 | 0.025 | 2.45 | 1.12 | 5.35  |
| Irregular menstrual cycle/bleeding                                                       | CD38 | Wald ratio | 1 | 0.25  | 0.11 | 0.025 | 1.28 | 1.03 | 1.59  |
| Occlusion and stenosis of precerebral arteries                                           | CD38 | Wald ratio | 1 | -0.83 | 0.37 | 0.026 | 0.43 | 0.21 | 0.91  |
| Psoriatic arthropathy                                                                    | CD38 | Wald ratio | 1 | 1.07  | 0.48 | 0.027 | 2.92 | 1.13 | 7.54  |
| Uterine/Uterovaginal prolapse                                                            | CD38 | Wald ratio | 1 | 0.39  | 0.18 | 0.030 | 1.48 | 1.04 | 2.10  |
| Cerebral ischemia                                                                        | CD38 | Wald ratio | 1 | 0.51  | 0.24 | 0.033 | 1.67 | 1.04 | 2.68  |
| Symptoms affecting skin                                                                  | CD38 | Wald ratio | 1 | 0.37  | 0.17 | 0.034 | 1.44 | 1.03 | 2.03  |
| Stiffness of joint                                                                       | CD38 | Wald ratio | 1 | 1.10  | 0.52 | 0.035 | 3.00 | 1.08 | 8.31  |
| Phobia                                                                                   | CD38 | Wald ratio | 1 | 1.21  | 0.58 | 0.036 | 3.34 | 1.08 | 10.32 |
| Retention of urine                                                                       | CD38 | Wald ratio | 1 | 0.34  | 0.16 | 0.036 | 1.40 | 1.02 | 1.92  |
| Adverse effects of sedatives or other central nervous system depressants and anesthetics | CD38 | Wald ratio | 1 | 1.12  | 0.53 | 0.036 | 3.05 | 1.07 | 8.67  |
| Umbilical hernia                                                                         | CD38 | Wald ratio | 1 | 0.45  | 0.21 | 0.037 | 1.56 | 1.03 | 2.38  |
| Ectropion or entropion                                                                   | CD38 | Wald ratio | 1 | 0.82  | 0.40 | 0.039 | 2.27 | 1.04 | 4.94  |
| Open wounds of head; neck; and trunk                                                     | CD38 | Wald ratio | 1 | 0.43  | 0.21 | 0.039 | 1.54 | 1.02 | 2.32  |
| Renal failure                                                                            | CD38 | Wald ratio | 1 | 0.32  | 0.16 | 0.041 | 1.37 | 1.01 | 1.86  |
| Memory loss                                                                              | CD38 | Wald ratio | 1 | 0.99  | 0.49 | 0.043 | 2.69 | 1.03 | 7.01  |
| Hyperhidrosis                                                                            | CD38 | Wald ratio | 1 | -1.07 | 0.53 | 0.043 | 0.34 | 0.12 | 0.97  |
| Contracture of palmar fascia [Dupuytren's disease]                                       | CD38 | Wald ratio | 1 | -0.45 | 0.22 | 0.043 | 0.64 | 0.41 | 0.99  |
| GERD                                                                                     | CD38 | Wald ratio | 1 | 0.22  | 0.11 | 0.045 | 1.25 | 1.01 | 1.56  |
| Tachycardia NOS                                                                          | CD38 | Wald ratio | 1 | 0.55  | 0.28 | 0.048 | 1.73 | 1.01 | 2.98  |
| Noninflammatory disorders of cervix                                                      | CD38 | Wald ratio | 1 | -0.48 | 0.24 | 0.048 | 0.62 | 0.38 | 1.00  |
| Other biliary tract disease                                                              | CD38 | Wald ratio | 1 | -0.41 | 0.21 | 0.049 | 0.66 | 0.44 | 1.00  |
| Cystitis and urethritis                                                                  | CD38 | Wald ratio | 1 | 0.45  | 0.23 | 0.053 | 1.57 | 0.99 | 2.49  |

|                                            |      |            |   |       |      |       |      |      |      |
|--------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Congestive heart failure; nonhypertensive  | CD38 | Wald ratio | 1 | 0.34  | 0.18 | 0.054 | 1.41 | 0.99 | 2.00 |
| Hypopotassemia                             | CD38 | Wald ratio | 1 | 0.66  | 0.34 | 0.055 | 1.93 | 0.99 | 3.76 |
| Disturbance of skin sensation              | CD38 | Wald ratio | 1 | 0.46  | 0.24 | 0.055 | 1.58 | 0.99 | 2.53 |
| Otitis media and Eustachian tube disorders | CD38 | Wald ratio | 1 | -0.52 | 0.27 | 0.056 | 0.59 | 0.35 | 1.01 |
| Hyperlipidemia                             | CD38 | Wald ratio | 1 | 0.15  | 0.08 | 0.056 | 1.16 | 1.00 | 1.34 |
| Diseases of esophagus                      | CD38 | Wald ratio | 1 | 0.14  | 0.07 | 0.057 | 1.15 | 1.00 | 1.33 |
| Cystitis                                   | CD38 | Wald ratio | 1 | 0.45  | 0.24 | 0.058 | 1.57 | 0.98 | 2.52 |
| Precordial pain                            | CD38 | Wald ratio | 1 | -0.41 | 0.22 | 0.060 | 0.66 | 0.43 | 1.02 |
| Disorders of iron metabolism               | CD38 | Wald ratio | 1 | 0.93  | 0.50 | 0.061 | 2.55 | 0.96 | 6.76 |
| Disorders of lipid metabolism              | CD38 | Wald ratio | 1 | 0.14  | 0.08 | 0.061 | 1.15 | 0.99 | 1.34 |
| Blindness and low vision                   | CD38 | Wald ratio | 1 | 0.89  | 0.48 | 0.063 | 2.44 | 0.95 | 6.26 |
| Injury, NOS                                | CD38 | Wald ratio | 1 | 0.26  | 0.14 | 0.066 | 1.30 | 0.98 | 1.72 |
| Osteoarthritis, generalized                | CD38 | Wald ratio | 1 | 0.97  | 0.53 | 0.066 | 2.64 | 0.94 | 7.45 |
| Phlebitis and thrombophlebitis             | CD38 | Wald ratio | 1 | 0.38  | 0.21 | 0.068 | 1.47 | 0.97 | 2.21 |
| Disorders of muscle, ligament, and fascia  | CD38 | Wald ratio | 1 | -0.36 | 0.20 | 0.068 | 0.70 | 0.47 | 1.03 |
| Normal delivery                            | CD38 | Wald ratio | 1 | -0.55 | 0.30 | 0.068 | 0.58 | 0.32 | 1.04 |
| Asthma                                     | CD38 | Wald ratio | 1 | 0.16  | 0.09 | 0.069 | 1.17 | 0.99 | 1.38 |
| Viral hepatitis                            | CD38 | Wald ratio | 1 | 0.68  | 0.37 | 0.069 | 1.96 | 0.95 | 4.07 |
| Hypertensive chronic kidney disease        | CD38 | Wald ratio | 1 | 0.60  | 0.33 | 0.069 | 1.82 | 0.95 | 3.48 |
| Irregular menstrual cycle                  | CD38 | Wald ratio | 1 | 0.52  | 0.29 | 0.072 | 1.69 | 0.95 | 2.99 |
| Late effects of cerebrovascular disease    | CD38 | Wald ratio | 1 | 0.65  | 0.36 | 0.075 | 1.91 | 0.94 | 3.90 |
| Heart failure NOS                          | CD38 | Wald ratio | 1 | 0.36  | 0.20 | 0.075 | 1.43 | 0.96 | 2.12 |
| Fever of unknown origin                    | CD38 | Wald ratio | 1 | -0.37 | 0.21 | 0.076 | 0.69 | 0.46 | 1.04 |
| Bronchitis                                 | CD38 | Wald ratio | 1 | 0.91  | 0.51 | 0.078 | 2.48 | 0.90 | 6.77 |
| Hypercholesterolemia                       | CD38 | Wald ratio | 1 | 0.14  | 0.08 | 0.079 | 1.15 | 0.98 | 1.34 |
| Fracture of neck of femur                  | CD38 | Wald ratio | 1 | -0.54 | 0.30 | 0.079 | 0.58 | 0.32 | 1.06 |

|                                                                     |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Cancer of stomach                                                   | CD38 | Wald ratio | 1 | 0.96  | 0.55 | 0.079 | 2.62 | 0.89 | 7.66 |
| Hyposmolality and/or hyponatremia                                   | CD38 | Wald ratio | 1 | 0.53  | 0.30 | 0.080 | 1.70 | 0.94 | 3.09 |
| Gangrene                                                            | CD38 | Wald ratio | 1 | 0.96  | 0.55 | 0.080 | 2.62 | 0.89 | 7.69 |
| Other derangement of joint                                          | CD38 | Wald ratio | 1 | -0.50 | 0.29 | 0.081 | 0.60 | 0.34 | 1.06 |
| Hemoptysis                                                          | CD38 | Wald ratio | 1 | 0.49  | 0.28 | 0.084 | 1.63 | 0.94 | 2.85 |
| Excessive or frequent menstruation                                  | CD38 | Wald ratio | 1 | 0.24  | 0.14 | 0.085 | 1.27 | 0.97 | 1.66 |
| Hallux valgus (Bunion)                                              | CD38 | Wald ratio | 1 | 0.28  | 0.16 | 0.086 | 1.32 | 0.96 | 1.82 |
| Dysmenorrhea                                                        | CD38 | Wald ratio | 1 | 0.53  | 0.31 | 0.087 | 1.70 | 0.93 | 3.11 |
| Osteoporosis                                                        | CD38 | Wald ratio | 1 | 0.28  | 0.16 | 0.087 | 1.32 | 0.96 | 1.83 |
| Tobacco use disorder                                                | CD38 | Wald ratio | 1 | 0.17  | 0.10 | 0.087 | 1.18 | 0.98 | 1.43 |
| Duodenal ulcer                                                      | CD38 | Wald ratio | 1 | 0.41  | 0.24 | 0.088 | 1.50 | 0.94 | 2.40 |
| Anorexia                                                            | CD38 | Wald ratio | 1 | -0.76 | 0.45 | 0.089 | 0.47 | 0.19 | 1.12 |
| Fracture of clavicle or scapula                                     | CD38 | Wald ratio | 1 | 0.56  | 0.33 | 0.089 | 1.76 | 0.92 | 3.36 |
| Fetal distress and abnormal forces of labor                         | CD38 | Wald ratio | 1 | -0.49 | 0.29 | 0.090 | 0.61 | 0.35 | 1.08 |
| Duodenitis                                                          | CD38 | Wald ratio | 1 | 0.25  | 0.15 | 0.090 | 1.29 | 0.96 | 1.73 |
| Poisoning by psychotropic agents                                    | CD38 | Wald ratio | 1 | -0.50 | 0.29 | 0.091 | 0.61 | 0.34 | 1.08 |
| Symptoms and disorders of the joints                                | CD38 | Wald ratio | 1 | 0.36  | 0.21 | 0.092 | 1.43 | 0.94 | 2.18 |
| Other and unspecified disc disorder                                 | CD38 | Wald ratio | 1 | 0.33  | 0.20 | 0.092 | 1.39 | 0.95 | 2.04 |
| Jaundice (not of newborn)                                           | CD38 | Wald ratio | 1 | 0.73  | 0.43 | 0.092 | 2.07 | 0.89 | 4.83 |
| Enthesopathy                                                        | CD38 | Wald ratio | 1 | 0.23  | 0.13 | 0.092 | 1.25 | 0.96 | 1.63 |
| Benign neoplasm of other endocrine glands and related structures    | CD38 | Wald ratio | 1 | 0.73  | 0.44 | 0.093 | 2.08 | 0.88 | 4.90 |
| Disorders of refraction and accommodation; blindness and low vision | CD38 | Wald ratio | 1 | 0.44  | 0.26 | 0.094 | 1.55 | 0.93 | 2.59 |
| Fasciitis                                                           | CD38 | Wald ratio | 1 | -0.35 | 0.21 | 0.097 | 0.70 | 0.46 | 1.07 |
| Genital prolapse                                                    | CD38 | Wald ratio | 1 | 0.20  | 0.12 | 0.100 | 1.23 | 0.96 | 1.56 |
| Atrioventricular [AV] block                                         | CD38 | Wald ratio | 1 | -0.46 | 0.28 | 0.100 | 0.63 | 0.36 | 1.09 |
| Nonspecific abnormal findings in stool contents                     | CD38 | Wald ratio | 1 | 0.52  | 0.32 | 0.101 | 1.68 | 0.90 | 3.13 |

|                                                                                 |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Peptic ulcer (excl. esophageal)                                                 | CD38 | Wald ratio | 1 | 0.25  | 0.15 | 0.105 | 1.28 | 0.95 | 1.73 |
| Cardiac dysrhythmias                                                            | CD38 | Wald ratio | 1 | 0.14  | 0.09 | 0.106 | 1.15 | 0.97 | 1.37 |
| Ulcerative colitis (chronic)                                                    | CD38 | Wald ratio | 1 | 0.90  | 0.56 | 0.108 | 2.45 | 0.82 | 7.30 |
| Calculus of kidney                                                              | CD38 | Wald ratio | 1 | 0.37  | 0.23 | 0.111 | 1.44 | 0.92 | 2.27 |
| Electrolyte imbalance                                                           | CD38 | Wald ratio | 1 | 0.32  | 0.20 | 0.113 | 1.38 | 0.93 | 2.06 |
| Mechanical complication of unspecified genitourinary device, implant, and graft | CD38 | Wald ratio | 1 | 0.58  | 0.37 | 0.114 | 1.79 | 0.87 | 3.69 |
| Anemia of chronic disease                                                       | CD38 | Wald ratio | 1 | 0.77  | 0.49 | 0.114 | 2.16 | 0.83 | 5.62 |
| Cardiomegaly                                                                    | CD38 | Wald ratio | 1 | 0.40  | 0.26 | 0.115 | 1.50 | 0.91 | 2.48 |
| Other disorders of circulatory system                                           | CD38 | Wald ratio | 1 | 0.16  | 0.10 | 0.116 | 1.18 | 0.96 | 1.45 |
| Polymyalgia Rheumatica                                                          | CD38 | Wald ratio | 1 | 0.60  | 0.38 | 0.119 | 1.82 | 0.86 | 3.84 |
| Malignant neoplasm of ovary and other uterine adnexa                            | CD38 | Wald ratio | 1 | 0.44  | 0.28 | 0.119 | 1.55 | 0.89 | 2.70 |
| Poisoning by other anti-infectives                                              | CD38 | Wald ratio | 1 | 0.57  | 0.37 | 0.120 | 1.77 | 0.86 | 3.62 |
| Other symptoms/disorders of the urinary system                                  | CD38 | Wald ratio | 1 | 0.13  | 0.09 | 0.120 | 1.14 | 0.97 | 1.35 |
| Multiple sclerosis                                                              | CD38 | Wald ratio | 1 | -0.55 | 0.35 | 0.121 | 0.58 | 0.29 | 1.16 |
| Abnormal sputum                                                                 | CD38 | Wald ratio | 1 | 0.43  | 0.28 | 0.122 | 1.54 | 0.89 | 2.65 |
| Alcoholic liver damage                                                          | CD38 | Wald ratio | 1 | 0.71  | 0.46 | 0.122 | 2.02 | 0.83 | 4.95 |
| Peripheral vascular disease                                                     | CD38 | Wald ratio | 1 | 0.32  | 0.21 | 0.123 | 1.38 | 0.92 | 2.08 |
| Abnormal results of function study of liver                                     | CD38 | Wald ratio | 1 | 0.34  | 0.22 | 0.123 | 1.41 | 0.91 | 2.17 |
| Appendicitis                                                                    | CD38 | Wald ratio | 1 | 0.35  | 0.23 | 0.124 | 1.42 | 0.91 | 2.23 |
| Cholelithiasis with other cholecystitis                                         | CD38 | Wald ratio | 1 | 0.27  | 0.18 | 0.125 | 1.31 | 0.93 | 1.86 |
| Otitis media                                                                    | CD38 | Wald ratio | 1 | -0.47 | 0.30 | 0.125 | 0.63 | 0.35 | 1.14 |
| Otitis externa                                                                  | CD38 | Wald ratio | 1 | 0.86  | 0.56 | 0.128 | 2.36 | 0.78 | 7.12 |
| Diabetic retinopathy                                                            | CD38 | Wald ratio | 1 | 0.54  | 0.35 | 0.129 | 1.71 | 0.86 | 3.42 |
| Transient cerebral ischemia                                                     | CD38 | Wald ratio | 1 | 0.42  | 0.28 | 0.129 | 1.53 | 0.88 | 2.64 |

|                                                                                     |      |            |   |       |      |       |      |      |      |
|-------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Swelling, mass, or lump in head and neck [Space-occupying lesion, intracranial NOS] | CD38 | Wald ratio | 1 | 0.65  | 0.43 | 0.130 | 1.91 | 0.83 | 4.43 |
| Spondylosis without myelopathy                                                      | CD38 | Wald ratio | 1 | -0.28 | 0.18 | 0.130 | 0.76 | 0.53 | 1.09 |
| Portal hypertension                                                                 | CD38 | Wald ratio | 1 | 0.84  | 0.56 | 0.132 | 2.33 | 0.78 | 6.99 |
| Renal failure NOS                                                                   | CD38 | Wald ratio | 1 | 0.52  | 0.34 | 0.133 | 1.68 | 0.85 | 3.29 |
| Dysphagia                                                                           | CD38 | Wald ratio | 1 | 0.24  | 0.16 | 0.137 | 1.28 | 0.93 | 1.76 |
| Migraine                                                                            | CD38 | Wald ratio | 1 | 0.36  | 0.24 | 0.137 | 1.44 | 0.89 | 2.31 |
| Disorders of menstruation and other abnormal bleeding from female genital tract     | CD38 | Wald ratio | 1 | 0.15  | 0.10 | 0.138 | 1.17 | 0.95 | 1.43 |
| Gram negative septicemia                                                            | CD38 | Wald ratio | 1 | 0.67  | 0.45 | 0.138 | 1.94 | 0.81 | 4.68 |
| Psoriasis                                                                           | CD38 | Wald ratio | 1 | 0.40  | 0.27 | 0.142 | 1.50 | 0.87 | 2.56 |
| Malignant neoplasm of ovary                                                         | CD38 | Wald ratio | 1 | 0.42  | 0.28 | 0.142 | 1.52 | 0.87 | 2.65 |
| Other inflammatory spondylopathies                                                  | CD38 | Wald ratio | 1 | 0.47  | 0.32 | 0.142 | 1.59 | 0.86 | 2.97 |
| Pulmonary heart disease                                                             | CD38 | Wald ratio | 1 | 0.29  | 0.20 | 0.142 | 1.34 | 0.91 | 1.98 |
| Type 2 diabetes with ophthalmic manifestations                                      | CD38 | Wald ratio | 1 | 0.53  | 0.36 | 0.143 | 1.70 | 0.84 | 3.44 |
| Other disorders of synovium, tendon, and bursa                                      | CD38 | Wald ratio | 1 | 0.22  | 0.15 | 0.144 | 1.24 | 0.93 | 1.67 |
| Osteoarthritis NOS                                                                  | CD38 | Wald ratio | 1 | 0.17  | 0.12 | 0.146 | 1.19 | 0.94 | 1.51 |
| Other disorders of bladder                                                          | CD38 | Wald ratio | 1 | 0.19  | 0.13 | 0.146 | 1.21 | 0.93 | 1.57 |
| Adverse drug events and drug allergies                                              | CD38 | Wald ratio | 1 | 0.71  | 0.49 | 0.150 | 2.03 | 0.77 | 5.31 |
| Other disorders of middle ear and mastoid                                           | CD38 | Wald ratio | 1 | -0.64 | 0.45 | 0.152 | 0.53 | 0.22 | 1.27 |
| Psoriasis and related disorders                                                     | CD38 | Wald ratio | 1 | 0.39  | 0.27 | 0.152 | 1.47 | 0.87 | 2.51 |
| Circulatory disease NEC                                                             | CD38 | Wald ratio | 1 | 0.15  | 0.11 | 0.155 | 1.16 | 0.94 | 1.43 |
| Aseptic necrosis of bone                                                            | CD38 | Wald ratio | 1 | -0.79 | 0.55 | 0.155 | 0.45 | 0.15 | 1.35 |
| Other acquired musculoskeletal deformity                                            | CD38 | Wald ratio | 1 | 0.42  | 0.29 | 0.155 | 1.52 | 0.85 | 2.71 |
| Seborrheic keratosis                                                                | CD38 | Wald ratio | 1 | 0.33  | 0.23 | 0.156 | 1.39 | 0.88 | 2.20 |
| Alcohol-related disorders                                                           | CD38 | Wald ratio | 1 | 0.17  | 0.12 | 0.157 | 1.18 | 0.94 | 1.49 |

|                                                                     |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Poisoning/allergy of sulfonamides                                   | CD38 | Wald ratio | 1 | 0.62  | 0.44 | 0.157 | 1.86 | 0.79 | 4.38 |
| Other complications of pregnancy NEC                                | CD38 | Wald ratio | 1 | -0.40 | 0.28 | 0.157 | 0.67 | 0.38 | 1.17 |
| Acute appendicitis                                                  | CD38 | Wald ratio | 1 | 0.36  | 0.25 | 0.158 | 1.43 | 0.87 | 2.36 |
| Peripheral enthesopathies and allied syndromes                      | CD38 | Wald ratio | 1 | 0.15  | 0.11 | 0.159 | 1.17 | 0.94 | 1.44 |
| Hallux rigidus                                                      | CD38 | Wald ratio | 1 | 0.46  | 0.33 | 0.160 | 1.59 | 0.83 | 3.03 |
| Esophagitis, GERD and related diseases                              | CD38 | Wald ratio | 1 | 0.11  | 0.08 | 0.162 | 1.12 | 0.96 | 1.30 |
| Secondary hypothyroidism                                            | CD38 | Wald ratio | 1 | 0.54  | 0.39 | 0.162 | 1.72 | 0.80 | 3.68 |
| Phlebitis and thrombophlebitis of lower extremities                 | CD38 | Wald ratio | 1 | 0.30  | 0.22 | 0.163 | 1.36 | 0.88 | 2.08 |
| Complication of colostomy or enterostomy                            | CD38 | Wald ratio | 1 | 0.80  | 0.58 | 0.164 | 2.23 | 0.72 | 6.93 |
| Acquired foot deformities                                           | CD38 | Wald ratio | 1 | 0.19  | 0.13 | 0.164 | 1.21 | 0.93 | 1.57 |
| Other unspecified back disorders                                    | CD38 | Wald ratio | 1 | 0.45  | 0.32 | 0.165 | 1.56 | 0.83 | 2.94 |
| Dyspareunia                                                         | CD38 | Wald ratio | 1 | 0.52  | 0.38 | 0.167 | 1.68 | 0.80 | 3.51 |
| Hypertension complicating pregnancy, childbirth, and the puerperium | CD38 | Wald ratio | 1 | -0.55 | 0.40 | 0.168 | 0.58 | 0.27 | 1.26 |
| Rash and other nonspecific skin eruption                            | CD38 | Wald ratio | 1 | 0.38  | 0.28 | 0.168 | 1.47 | 0.85 | 2.53 |
| Benign mammary dysplasias                                           | CD38 | Wald ratio | 1 | -0.31 | 0.22 | 0.170 | 0.73 | 0.47 | 1.14 |
| Gastritis and duodenitis                                            | CD38 | Wald ratio | 1 | 0.11  | 0.08 | 0.171 | 1.12 | 0.95 | 1.31 |
| Dysuria                                                             | CD38 | Wald ratio | 1 | 0.51  | 0.37 | 0.173 | 1.66 | 0.80 | 3.45 |
| Derangement of joint, non-traumatic                                 | CD38 | Wald ratio | 1 | -0.33 | 0.24 | 0.173 | 0.72 | 0.45 | 1.15 |
| Other symptoms of respiratory system                                | CD38 | Wald ratio | 1 | 0.19  | 0.14 | 0.175 | 1.21 | 0.92 | 1.58 |
| Other chronic ischemic heart disease, unspecified                   | CD38 | Wald ratio | 1 | 0.15  | 0.11 | 0.176 | 1.17 | 0.93 | 1.46 |
| Malignant neoplasm of bladder                                       | CD38 | Wald ratio | 1 | -0.38 | 0.28 | 0.177 | 0.68 | 0.39 | 1.19 |
| Other congenital musculoskeletal anomalies                          | CD38 | Wald ratio | 1 | -0.71 | 0.53 | 0.181 | 0.49 | 0.17 | 1.39 |
| Diseases of the jaws                                                | CD38 | Wald ratio | 1 | 0.55  | 0.42 | 0.183 | 1.74 | 0.77 | 3.94 |
| Other conditions of brain                                           | CD38 | Wald ratio | 1 | -0.45 | 0.34 | 0.184 | 0.63 | 0.32 | 1.24 |
| Cervical cancer and dysplasia                                       | CD38 | Wald ratio | 1 | 0.29  | 0.22 | 0.185 | 1.33 | 0.87 | 2.03 |
| Benign neoplasm of brain and other parts of nervous system          | CD38 | Wald ratio | 1 | -0.60 | 0.45 | 0.185 | 0.55 | 0.23 | 1.33 |

|                                                                                      |      |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Complications of cardiac/vascular device, implant, and graft                         | CD38 | Wald ratio | 1 | -0.41 | 0.31 | 0.185 | 0.67 | 0.37 | 1.21 |
| Infection/inflammation of internal prosthetic device; implant; and graft             | CD38 | Wald ratio | 1 | 0.34  | 0.26 | 0.185 | 1.41 | 0.85 | 2.34 |
| Benign neoplasm of brain, cranial nerves, meninges                                   | CD38 | Wald ratio | 1 | -0.62 | 0.47 | 0.185 | 0.54 | 0.22 | 1.34 |
| Malposition and malpresentation of fetus or obstruction                              | CD38 | Wald ratio | 1 | -0.43 | 0.32 | 0.185 | 0.65 | 0.35 | 1.23 |
| Abdominal aortic aneurysm                                                            | CD38 | Wald ratio | 1 | 0.57  | 0.43 | 0.186 | 1.77 | 0.76 | 4.13 |
| Pyelonephritis                                                                       | CD38 | Wald ratio | 1 | 0.46  | 0.36 | 0.192 | 1.59 | 0.79 | 3.20 |
| Retinal vascular changes and abnormalities                                           | CD38 | Wald ratio | 1 | -0.58 | 0.44 | 0.193 | 0.56 | 0.24 | 1.34 |
| Burns                                                                                | CD38 | Wald ratio | 1 | -0.70 | 0.54 | 0.194 | 0.50 | 0.17 | 1.43 |
| Personal history of diseases of digestive system                                     | CD38 | Wald ratio | 1 | 0.14  | 0.11 | 0.196 | 1.15 | 0.93 | 1.42 |
| Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue | CD38 | Wald ratio | 1 | 0.27  | 0.21 | 0.197 | 1.31 | 0.87 | 1.96 |
| Osteoporosis, osteopenia and pathological fracture                                   | CD38 | Wald ratio | 1 | 0.20  | 0.15 | 0.198 | 1.22 | 0.90 | 1.64 |
| Right bundle branch block                                                            | CD38 | Wald ratio | 1 | -0.43 | 0.33 | 0.199 | 0.65 | 0.34 | 1.25 |
| Cancer of other female genital organs                                                | CD38 | Wald ratio | 1 | 0.34  | 0.26 | 0.201 | 1.40 | 0.84 | 2.34 |
| Symptoms involving head and neck                                                     | CD38 | Wald ratio | 1 | 0.30  | 0.24 | 0.202 | 1.35 | 0.85 | 2.15 |
| Disturbances in tooth eruption                                                       | CD38 | Wald ratio | 1 | -0.34 | 0.27 | 0.202 | 0.71 | 0.42 | 1.20 |
| Intestinal infection due to C. difficile                                             | CD38 | Wald ratio | 1 | -0.65 | 0.51 | 0.202 | 0.52 | 0.19 | 1.41 |
| Nephritis; nephrosis; renal sclerosis                                                | CD38 | Wald ratio | 1 | 0.42  | 0.33 | 0.204 | 1.53 | 0.79 | 2.93 |
| Other disorders of stomach and duodenum                                              | CD38 | Wald ratio | 1 | 0.28  | 0.22 | 0.205 | 1.33 | 0.86 | 2.06 |
| Pathologic fracture                                                                  | CD38 | Wald ratio | 1 | 0.72  | 0.57 | 0.205 | 2.06 | 0.67 | 6.29 |
| Primary/intrinsic cardiomyopathies                                                   | CD38 | Wald ratio | 1 | -0.47 | 0.37 | 0.207 | 0.62 | 0.30 | 1.30 |
| Gout                                                                                 | CD38 | Wald ratio | 1 | 0.29  | 0.23 | 0.208 | 1.34 | 0.85 | 2.11 |
| Benign neoplasm of colon                                                             | CD38 | Wald ratio | 1 | 0.12  | 0.10 | 0.210 | 1.13 | 0.93 | 1.36 |
| Abnormality of gait                                                                  | CD38 | Wald ratio | 1 | 0.40  | 0.32 | 0.212 | 1.50 | 0.79 | 2.82 |

|                                                                                              |      |            |   |       |      |       |      |      |      |
|----------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum | CD38 | Wald ratio | 1 | 0.22  | 0.18 | 0.214 | 1.24 | 0.88 | 1.75 |
| Osteopenia or other disorder of bone and cartilage                                           | CD38 | Wald ratio | 1 | -0.56 | 0.45 | 0.214 | 0.57 | 0.24 | 1.38 |
| Bursitis                                                                                     | CD38 | Wald ratio | 1 | 0.55  | 0.44 | 0.215 | 1.73 | 0.73 | 4.10 |
| Skin cancer                                                                                  | CD38 | Wald ratio | 1 | -0.14 | 0.11 | 0.219 | 0.87 | 0.69 | 1.09 |
| Osteoporosis NOS                                                                             | CD38 | Wald ratio | 1 | 0.22  | 0.18 | 0.220 | 1.24 | 0.88 | 1.76 |
| Cholesteatoma                                                                                | CD38 | Wald ratio | 1 | -0.64 | 0.52 | 0.221 | 0.53 | 0.19 | 1.47 |
| Inflammation of the eye                                                                      | CD38 | Wald ratio | 1 | 0.28  | 0.23 | 0.222 | 1.32 | 0.84 | 2.08 |
| Irritable Bowel Syndrome                                                                     | CD38 | Wald ratio | 1 | -0.22 | 0.18 | 0.222 | 0.81 | 0.57 | 1.14 |
| Colon cancer                                                                                 | CD38 | Wald ratio | 1 | 0.29  | 0.24 | 0.223 | 1.33 | 0.84 | 2.12 |
| Other specified nonpsychotic and/or transient mental disorders                               | CD38 | Wald ratio | 1 | 0.62  | 0.51 | 0.225 | 1.86 | 0.68 | 5.06 |
| Acute tonsillitis                                                                            | CD38 | Wald ratio | 1 | 0.63  | 0.52 | 0.227 | 1.88 | 0.68 | 5.21 |
| Chronic pharyngitis and nasopharyngitis                                                      | CD38 | Wald ratio | 1 | 0.50  | 0.42 | 0.227 | 1.65 | 0.73 | 3.74 |
| Other chronic nonalcoholic liver disease                                                     | CD38 | Wald ratio | 1 | -0.38 | 0.32 | 0.230 | 0.68 | 0.37 | 1.27 |
| Non-Hodgkins lymphoma                                                                        | CD38 | Wald ratio | 1 | 0.37  | 0.31 | 0.231 | 1.44 | 0.79 | 2.63 |
| Postinflammatory pulmonary fibrosis                                                          | CD38 | Wald ratio | 1 | 0.52  | 0.43 | 0.231 | 1.68 | 0.72 | 3.94 |
| Cerebrovascular disease                                                                      | CD38 | Wald ratio | 1 | 0.17  | 0.14 | 0.231 | 1.18 | 0.90 | 1.56 |
| Hypovolemia                                                                                  | CD38 | Wald ratio | 1 | 0.29  | 0.24 | 0.231 | 1.34 | 0.83 | 2.16 |
| Sepsis                                                                                       | CD38 | Wald ratio | 1 | -0.29 | 0.24 | 0.231 | 0.75 | 0.46 | 1.20 |
| Sepsis and SIRS                                                                              | CD38 | Wald ratio | 1 | -0.29 | 0.24 | 0.231 | 0.75 | 0.46 | 1.20 |
| Cardiac shunt/ heart septal defect                                                           | CD38 | Wald ratio | 1 | -0.64 | 0.53 | 0.232 | 0.53 | 0.19 | 1.50 |
| Other benign neoplasm of connective and other soft tissue                                    | CD38 | Wald ratio | 1 | 0.46  | 0.39 | 0.232 | 1.59 | 0.74 | 3.39 |
| Other disorders of bone and cartilage                                                        | CD38 | Wald ratio | 1 | -0.25 | 0.21 | 0.232 | 0.78 | 0.51 | 1.18 |
| Noninflammatory female genital disorders                                                     | CD38 | Wald ratio | 1 | -0.16 | 0.14 | 0.233 | 0.85 | 0.65 | 1.11 |
| Diplopia and disorders of binocular vision                                                   | CD38 | Wald ratio | 1 | -0.57 | 0.48 | 0.234 | 0.57 | 0.22 | 1.45 |
| Other acquired deformities of limbs                                                          | CD38 | Wald ratio | 1 | -0.38 | 0.32 | 0.237 | 0.69 | 0.37 | 1.28 |

|                                                        |      |            |   |       |      |       |      |      |      |
|--------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Dizziness and giddiness (Light-headedness and vertigo) | CD38 | Wald ratio | 1 | 0.23  | 0.19 | 0.238 | 1.25 | 0.86 | 1.82 |
| Cardiomyopathy                                         | CD38 | Wald ratio | 1 | -0.43 | 0.37 | 0.239 | 0.65 | 0.32 | 1.33 |
| Appendiceal conditions                                 | CD38 | Wald ratio | 1 | 0.26  | 0.22 | 0.242 | 1.30 | 0.84 | 2.01 |
| Paralytic ileus                                        | CD38 | Wald ratio | 1 | 0.66  | 0.56 | 0.243 | 1.93 | 0.64 | 5.84 |
| Dementias                                              | CD38 | Wald ratio | 1 | 0.49  | 0.42 | 0.244 | 1.63 | 0.72 | 3.69 |
| Intestinal malabsorption (non-celiac)                  | CD38 | Wald ratio | 1 | -0.33 | 0.28 | 0.247 | 0.72 | 0.41 | 1.26 |
| Other and unspecified disorders of back                | CD38 | Wald ratio | 1 | 0.33  | 0.28 | 0.247 | 1.39 | 0.80 | 2.42 |
| Disorders of fluid, electrolyte, and acid-base balance | CD38 | Wald ratio | 1 | 0.18  | 0.15 | 0.248 | 1.19 | 0.88 | 1.61 |
| Disorders of external ear                              | CD38 | Wald ratio | 1 | 0.39  | 0.34 | 0.250 | 1.48 | 0.76 | 2.88 |
| Rupture of synovium                                    | CD38 | Wald ratio | 1 | 0.61  | 0.53 | 0.251 | 1.84 | 0.65 | 5.19 |
| Disorders of tooth development                         | CD38 | Wald ratio | 1 | -0.30 | 0.26 | 0.252 | 0.74 | 0.44 | 1.24 |
| Cholelithiasis                                         | CD38 | Wald ratio | 1 | 0.13  | 0.11 | 0.253 | 1.14 | 0.91 | 1.43 |
| Secondary malignancy of lymph nodes                    | CD38 | Wald ratio | 1 | 0.20  | 0.18 | 0.253 | 1.23 | 0.86 | 1.74 |
| Fracture of unspecified bones                          | CD38 | Wald ratio | 1 | 0.41  | 0.36 | 0.256 | 1.50 | 0.75 | 3.03 |
| Postoperative infection                                | CD38 | Wald ratio | 1 | 0.22  | 0.20 | 0.256 | 1.25 | 0.85 | 1.83 |
| Hemorrhage or hematoma complicating a procedure        | CD38 | Wald ratio | 1 | 0.20  | 0.18 | 0.258 | 1.22 | 0.86 | 1.74 |
| Diaphragmatic hernia                                   | CD38 | Wald ratio | 1 | 0.10  | 0.08 | 0.258 | 1.10 | 0.93 | 1.30 |
| Acute and chronic tonsillitis                          | CD38 | Wald ratio | 1 | 0.33  | 0.29 | 0.259 | 1.39 | 0.79 | 2.44 |
| Congenital anomalies of genital organs                 | CD38 | Wald ratio | 1 | -0.54 | 0.48 | 0.260 | 0.58 | 0.23 | 1.49 |
| Cancer of bladder                                      | CD38 | Wald ratio | 1 | -0.30 | 0.26 | 0.261 | 0.74 | 0.44 | 1.25 |
| Ulceration of the lower GI tract                       | CD38 | Wald ratio | 1 | 0.44  | 0.40 | 0.262 | 1.56 | 0.72 | 3.39 |
| Other disorders of liver                               | CD38 | Wald ratio | 1 | 0.19  | 0.17 | 0.266 | 1.21 | 0.87 | 1.69 |
| Diseases of nail, NOS                                  | CD38 | Wald ratio | 1 | -0.40 | 0.36 | 0.267 | 0.67 | 0.33 | 1.36 |
| Disorders of mineral metabolism                        | CD38 | Wald ratio | 1 | 0.31  | 0.28 | 0.269 | 1.37 | 0.79 | 2.37 |
| Other open wound of head and face                      | CD38 | Wald ratio | 1 | 0.27  | 0.24 | 0.269 | 1.30 | 0.81 | 2.09 |
| Hypertensive heart and/or renal disease                | CD38 | Wald ratio | 1 | 0.35  | 0.31 | 0.269 | 1.41 | 0.77 | 2.61 |

|                                                               |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Prolapse of vaginal vault after hysterectomy                  | CD38 | Wald ratio | 1 | 0.63  | 0.57 | 0.270 | 1.88 | 0.61 | 5.75 |
| Allergy/adverse effect of penicillin                          | CD38 | Wald ratio | 1 | 0.12  | 0.11 | 0.274 | 1.12 | 0.91 | 1.38 |
| Melanomas of skin, dx or hx                                   | CD38 | Wald ratio | 1 | -0.27 | 0.25 | 0.274 | 0.76 | 0.46 | 1.24 |
| Melanomas of skin                                             | CD38 | Wald ratio | 1 | -0.27 | 0.25 | 0.274 | 0.76 | 0.46 | 1.24 |
| Other disorders of metabolism                                 | CD38 | Wald ratio | 1 | 0.38  | 0.34 | 0.275 | 1.46 | 0.74 | 2.86 |
| Degeneration of intervertebral disc                           | CD38 | Wald ratio | 1 | -0.27 | 0.24 | 0.276 | 0.77 | 0.48 | 1.24 |
| Cyst of kidney, acquired                                      | CD38 | Wald ratio | 1 | 0.40  | 0.36 | 0.277 | 1.49 | 0.73 | 3.03 |
| Nonrheumatic mitral valve disorders                           | CD38 | Wald ratio | 1 | 0.26  | 0.24 | 0.277 | 1.30 | 0.81 | 2.09 |
| Other arthropathies                                           | CD38 | Wald ratio | 1 | 0.08  | 0.07 | 0.278 | 1.08 | 0.94 | 1.25 |
| Late pregnancy and failed induction                           | CD38 | Wald ratio | 1 | 0.40  | 0.37 | 0.278 | 1.50 | 0.72 | 3.11 |
| Alcoholism                                                    | CD38 | Wald ratio | 1 | 0.15  | 0.14 | 0.278 | 1.16 | 0.88 | 1.53 |
| Celiac disease                                                | CD38 | Wald ratio | 1 | -0.33 | 0.30 | 0.281 | 0.72 | 0.40 | 1.31 |
| Injuries to the nervous system                                | CD38 | Wald ratio | 1 | 0.38  | 0.36 | 0.282 | 1.47 | 0.73 | 2.95 |
| Other tests                                                   | CD38 | Wald ratio | 1 | 0.18  | 0.17 | 0.282 | 1.20 | 0.86 | 1.67 |
| Acidosis                                                      | CD38 | Wald ratio | 1 | -0.43 | 0.40 | 0.284 | 0.65 | 0.30 | 1.43 |
| Type 2 diabetes with neurological manifestations              | CD38 | Wald ratio | 1 | 0.58  | 0.54 | 0.286 | 1.78 | 0.62 | 5.11 |
| Osteoarthritis, localized, primary                            | CD38 | Wald ratio | 1 | 0.15  | 0.14 | 0.287 | 1.16 | 0.88 | 1.52 |
| Pain in limb                                                  | CD38 | Wald ratio | 1 | 0.18  | 0.17 | 0.289 | 1.19 | 0.86 | 1.65 |
| Simple and unspecified goiter                                 | CD38 | Wald ratio | 1 | 0.56  | 0.53 | 0.289 | 1.75 | 0.62 | 4.90 |
| Ischemic Heart Disease                                        | CD38 | Wald ratio | 1 | 0.09  | 0.08 | 0.289 | 1.09 | 0.93 | 1.28 |
| Pain and other symptoms associated with female genital organs | CD38 | Wald ratio | 1 | 0.25  | 0.24 | 0.291 | 1.29 | 0.81 | 2.05 |
| Anxiety disorder                                              | CD38 | Wald ratio | 1 | 0.17  | 0.16 | 0.294 | 1.19 | 0.86 | 1.64 |
| Nasal polyps                                                  | CD38 | Wald ratio | 1 | 0.24  | 0.23 | 0.298 | 1.27 | 0.81 | 1.98 |
| Intestinal infection                                          | CD38 | Wald ratio | 1 | -0.14 | 0.14 | 0.298 | 0.87 | 0.66 | 1.13 |
| Abnormal glucose                                              | CD38 | Wald ratio | 1 | 0.51  | 0.49 | 0.299 | 1.67 | 0.64 | 4.38 |
| Erythematous conditions                                       | CD38 | Wald ratio | 1 | 0.27  | 0.26 | 0.301 | 1.31 | 0.78 | 2.19 |

|                                                            |      |            |   |       |      |       |      |      |      |
|------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Unspecified polyarthropathy or polyarthritis               | CD38 | Wald ratio | 1 | 0.23  | 0.22 | 0.302 | 1.26 | 0.82 | 1.93 |
| Gout and other crystal arthropathies                       | CD38 | Wald ratio | 1 | 0.22  | 0.21 | 0.303 | 1.25 | 0.82 | 1.89 |
| Traumatic arthropathy                                      | CD38 | Wald ratio | 1 | 0.58  | 0.56 | 0.303 | 1.78 | 0.59 | 5.35 |
| Inflammation of eyelids                                    | CD38 | Wald ratio | 1 | 0.27  | 0.26 | 0.304 | 1.31 | 0.78 | 2.20 |
| Joint effusions                                            | CD38 | Wald ratio | 1 | 0.35  | 0.34 | 0.305 | 1.42 | 0.73 | 2.78 |
| Symptoms concerning nutrition, metabolism, and development | CD38 | Wald ratio | 1 | -0.18 | 0.18 | 0.305 | 0.83 | 0.59 | 1.18 |
| Anal and rectal polyp                                      | CD38 | Wald ratio | 1 | 0.16  | 0.15 | 0.306 | 1.17 | 0.87 | 1.58 |
| Mood disorders                                             | CD38 | Wald ratio | 1 | 0.12  | 0.12 | 0.306 | 1.13 | 0.89 | 1.43 |
| Urinary calculus                                           | CD38 | Wald ratio | 1 | 0.17  | 0.16 | 0.307 | 1.18 | 0.86 | 1.62 |
| Ascites (non malignant)                                    | CD38 | Wald ratio | 1 | 0.34  | 0.33 | 0.307 | 1.40 | 0.73 | 2.66 |
| Bladder neck obstruction                                   | CD38 | Wald ratio | 1 | 0.30  | 0.29 | 0.307 | 1.35 | 0.76 | 2.39 |
| Delirium due to conditions classified elsewhere            | CD38 | Wald ratio | 1 | 0.51  | 0.50 | 0.312 | 1.67 | 0.62 | 4.48 |
| Cholelithiasis and cholecystitis                           | CD38 | Wald ratio | 1 | 0.11  | 0.11 | 0.313 | 1.11 | 0.90 | 1.37 |
| Irregular menstrual bleeding                               | CD38 | Wald ratio | 1 | 0.21  | 0.21 | 0.313 | 1.24 | 0.82 | 1.88 |
| Subjective visual disturbances                             | CD38 | Wald ratio | 1 | 0.52  | 0.52 | 0.316 | 1.69 | 0.61 | 4.67 |
| Symptoms involving digestive system                        | CD38 | Wald ratio | 1 | 0.10  | 0.10 | 0.317 | 1.11 | 0.90 | 1.36 |
| Superficial injury without mention of infection            | CD38 | Wald ratio | 1 | 0.20  | 0.20 | 0.317 | 1.22 | 0.83 | 1.79 |
| Inflammatory disease of cervix, vagina, and vulva          | CD38 | Wald ratio | 1 | 0.24  | 0.24 | 0.323 | 1.27 | 0.79 | 2.05 |
| Suppurative and unspecified otitis media                   | CD38 | Wald ratio | 1 | -0.43 | 0.44 | 0.326 | 0.65 | 0.27 | 1.54 |
| Crushing or internal injury to organs                      | CD38 | Wald ratio | 1 | 0.40  | 0.41 | 0.327 | 1.49 | 0.67 | 3.30 |
| Other diseases of blood and blood-forming organs           | CD38 | Wald ratio | 1 | 0.20  | 0.20 | 0.328 | 1.22 | 0.82 | 1.81 |
| Hypotension NOS                                            | CD38 | Wald ratio | 1 | -0.21 | 0.22 | 0.330 | 0.81 | 0.53 | 1.24 |
| Hypertension                                               | CD38 | Wald ratio | 1 | 0.06  | 0.06 | 0.333 | 1.06 | 0.94 | 1.19 |
| Cervicitis and endocervicitis                              | CD38 | Wald ratio | 1 | 0.34  | 0.36 | 0.334 | 1.41 | 0.70 | 2.84 |
| Abnormal function study of cardiovascular system           | CD38 | Wald ratio | 1 | 0.54  | 0.56 | 0.335 | 1.72 | 0.57 | 5.21 |
| Chronic periodontitis                                      | CD38 | Wald ratio | 1 | 0.52  | 0.54 | 0.335 | 1.69 | 0.58 | 4.91 |

|                                                                     |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Voice disturbance                                                   | CD38 | Wald ratio | 1 | 0.38  | 0.39 | 0.336 | 1.46 | 0.68 | 3.15 |
| Cellulitis and abscess of fingers/toes                              | CD38 | Wald ratio | 1 | -0.52 | 0.54 | 0.336 | 0.59 | 0.20 | 1.72 |
| Open-angle glaucoma                                                 | CD38 | Wald ratio | 1 | 0.39  | 0.40 | 0.337 | 1.47 | 0.67 | 3.23 |
| Inflammatory and toxic neuropathy                                   | CD38 | Wald ratio | 1 | 0.33  | 0.35 | 0.338 | 1.40 | 0.71 | 2.76 |
| Vaginal enterocele, congenital or acquired                          | CD38 | Wald ratio | 1 | 0.48  | 0.50 | 0.338 | 1.61 | 0.61 | 4.25 |
| Anal and rectal conditions                                          | CD38 | Wald ratio | 1 | 0.10  | 0.11 | 0.338 | 1.11 | 0.90 | 1.36 |
| Benign neoplasm of breast                                           | CD38 | Wald ratio | 1 | -0.31 | 0.33 | 0.339 | 0.73 | 0.38 | 1.39 |
| Unstable angina (intermediate coronary syndrome)                    | CD38 | Wald ratio | 1 | -0.18 | 0.18 | 0.339 | 0.84 | 0.59 | 1.20 |
| Contusion                                                           | CD38 | Wald ratio | 1 | 0.32  | 0.33 | 0.340 | 1.38 | 0.71 | 2.65 |
| Cancer within the respiratory system                                | CD38 | Wald ratio | 1 | 0.24  | 0.25 | 0.341 | 1.27 | 0.78 | 2.07 |
| Pelvic peritoneal adhesions, female (postoperative) (postinfection) | CD38 | Wald ratio | 1 | 0.25  | 0.26 | 0.341 | 1.28 | 0.77 | 2.12 |
| Cardiac and circulatory congenital anomalies                        | CD38 | Wald ratio | 1 | -0.23 | 0.25 | 0.343 | 0.79 | 0.49 | 1.28 |
| Secondary malignancy of respiratory organs                          | CD38 | Wald ratio | 1 | -0.26 | 0.28 | 0.343 | 0.77 | 0.45 | 1.32 |
| Gastric ulcer                                                       | CD38 | Wald ratio | 1 | 0.19  | 0.20 | 0.344 | 1.21 | 0.81 | 1.81 |
| Symptoms involving skin and other integumentary tissue              | CD38 | Wald ratio | 1 | -0.29 | 0.30 | 0.344 | 0.75 | 0.41 | 1.36 |
| Intracerebral hemorrhage                                            | CD38 | Wald ratio | 1 | -0.46 | 0.49 | 0.344 | 0.63 | 0.24 | 1.64 |
| Raynaud's syndrome                                                  | CD38 | Wald ratio | 1 | 0.36  | 0.38 | 0.344 | 1.43 | 0.68 | 3.03 |
| Aphakia and other disorders of lens                                 | CD38 | Wald ratio | 1 | -0.29 | 0.30 | 0.347 | 0.75 | 0.41 | 1.36 |
| Inflammatory diseases of female pelvic organs                       | CD38 | Wald ratio | 1 | 0.15  | 0.17 | 0.352 | 1.17 | 0.84 | 1.62 |
| Other disorders of peritoneum                                       | CD38 | Wald ratio | 1 | 0.21  | 0.23 | 0.354 | 1.23 | 0.79 | 1.92 |
| Atrial fibrillation and flutter                                     | CD38 | Wald ratio | 1 | 0.10  | 0.11 | 0.354 | 1.11 | 0.89 | 1.38 |
| Cyst or abscess of Bartholin's gland                                | CD38 | Wald ratio | 1 | 0.43  | 0.47 | 0.354 | 1.54 | 0.62 | 3.87 |
| Hemiplegia                                                          | CD38 | Wald ratio | 1 | 0.31  | 0.33 | 0.357 | 1.36 | 0.71 | 2.62 |
| Noninflammatory disorders of vulva and perineum                     | CD38 | Wald ratio | 1 | -0.32 | 0.35 | 0.357 | 0.72 | 0.36 | 1.44 |
| Diseases of the larynx and vocal cords                              | CD38 | Wald ratio | 1 | 0.23  | 0.25 | 0.357 | 1.26 | 0.77 | 2.07 |
| Atherosclerosis of the extremities                                  | CD38 | Wald ratio | 1 | 0.42  | 0.46 | 0.358 | 1.52 | 0.62 | 3.71 |

|                                                                |      |            |   |       |      |       |      |      |      |
|----------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Agorophobia, social phobia, and panic disorder                 | CD38 | Wald ratio | 1 | 0.45  | 0.49 | 0.359 | 1.56 | 0.60 | 4.05 |
| Glomerulonephritis                                             | CD38 | Wald ratio | 1 | 0.37  | 0.40 | 0.359 | 1.45 | 0.66 | 3.19 |
| Hematemesis                                                    | CD38 | Wald ratio | 1 | 0.27  | 0.29 | 0.359 | 1.31 | 0.74 | 2.32 |
| Other specified osteoporosis                                   | CD38 | Wald ratio | 1 | 0.51  | 0.56 | 0.361 | 1.67 | 0.56 | 5.01 |
| Nausea and vomiting                                            | CD38 | Wald ratio | 1 | -0.11 | 0.12 | 0.362 | 0.89 | 0.70 | 1.14 |
| Visual disturbances                                            | CD38 | Wald ratio | 1 | 0.21  | 0.23 | 0.364 | 1.23 | 0.79 | 1.91 |
| Vertiginous syndromes and other disorders of vestibular system | CD38 | Wald ratio | 1 | 0.15  | 0.17 | 0.364 | 1.16 | 0.84 | 1.61 |
| Hammer toe (acquired)                                          | CD38 | Wald ratio | 1 | -0.27 | 0.30 | 0.366 | 0.77 | 0.43 | 1.37 |
| Other anemias                                                  | CD38 | Wald ratio | 1 | 0.11  | 0.12 | 0.368 | 1.11 | 0.88 | 1.40 |
| Effects radiation NOS                                          | CD38 | Wald ratio | 1 | 0.21  | 0.23 | 0.369 | 1.23 | 0.78 | 1.94 |
| Nontoxic nodular goiter                                        | CD38 | Wald ratio | 1 | 0.34  | 0.38 | 0.370 | 1.41 | 0.66 | 2.99 |
| Endocarditis                                                   | CD38 | Wald ratio | 1 | -0.44 | 0.49 | 0.372 | 0.64 | 0.25 | 1.69 |
| First degree AV block                                          | CD38 | Wald ratio | 1 | -0.37 | 0.41 | 0.372 | 0.69 | 0.31 | 1.55 |
| Primary open angle glaucoma                                    | CD38 | Wald ratio | 1 | 0.36  | 0.40 | 0.372 | 1.43 | 0.65 | 3.16 |
| Neurological disorders                                         | CD38 | Wald ratio | 1 | 0.17  | 0.19 | 0.373 | 1.18 | 0.82 | 1.72 |
| Essential hypertension                                         | CD38 | Wald ratio | 1 | 0.05  | 0.06 | 0.374 | 1.05 | 0.94 | 1.18 |
| Calculus of ureter                                             | CD38 | Wald ratio | 1 | 0.24  | 0.26 | 0.375 | 1.26 | 0.75 | 2.13 |
| Bacterial enteritis                                            | CD38 | Wald ratio | 1 | -0.22 | 0.25 | 0.376 | 0.80 | 0.50 | 1.30 |
| Diseases of hard tissues of teeth                              | CD38 | Wald ratio | 1 | 0.21  | 0.23 | 0.377 | 1.23 | 0.78 | 1.95 |
| Depression                                                     | CD38 | Wald ratio | 1 | 0.11  | 0.12 | 0.379 | 1.11 | 0.88 | 1.41 |
| Fracture of foot                                               | CD38 | Wald ratio | 1 | 0.26  | 0.30 | 0.381 | 1.30 | 0.72 | 2.36 |
| Abdominal hernia                                               | CD38 | Wald ratio | 1 | 0.06  | 0.06 | 0.381 | 1.06 | 0.93 | 1.20 |
| Intestinal obstruction without mention of hernia               | CD38 | Wald ratio | 1 | 0.18  | 0.21 | 0.383 | 1.20 | 0.80 | 1.79 |
| Peritoneal adhesions (postoperative) (postinfection)           | CD38 | Wald ratio | 1 | 0.20  | 0.23 | 0.386 | 1.22 | 0.78 | 1.92 |
| Degenerative skin conditions and other dermatoses              | CD38 | Wald ratio | 1 | 0.15  | 0.18 | 0.389 | 1.16 | 0.82 | 1.64 |
| Delirium dementia and amnestic and other cognitive disorders   | CD38 | Wald ratio | 1 | 0.25  | 0.29 | 0.390 | 1.29 | 0.73 | 2.28 |

|                                                                     |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Myalgia and myositis unspecified                                    | CD38 | Wald ratio | 1 | 0.44  | 0.51 | 0.391 | 1.55 | 0.57 | 4.21 |
| Malaise and fatigue                                                 | CD38 | Wald ratio | 1 | -0.19 | 0.22 | 0.391 | 0.83 | 0.53 | 1.28 |
| Open wounds of extremities                                          | CD38 | Wald ratio | 1 | 0.17  | 0.20 | 0.392 | 1.19 | 0.80 | 1.76 |
| Degeneration of macula and posterior pole of retina                 | CD38 | Wald ratio | 1 | 0.24  | 0.28 | 0.394 | 1.27 | 0.74 | 2.18 |
| Carcinoma in situ of skin                                           | CD38 | Wald ratio | 1 | 0.43  | 0.50 | 0.396 | 1.53 | 0.57 | 4.09 |
| Pneumonitis due to inhalation of food or vomitus                    | CD38 | Wald ratio | 1 | 0.45  | 0.53 | 0.399 | 1.57 | 0.55 | 4.48 |
| Macular degeneration (senile) of retina NOS                         | CD38 | Wald ratio | 1 | 0.23  | 0.28 | 0.399 | 1.26 | 0.73 | 2.18 |
| Pleurisy; pleural effusion                                          | CD38 | Wald ratio | 1 | 0.14  | 0.16 | 0.399 | 1.15 | 0.83 | 1.57 |
| Decubitus ulcer                                                     | CD38 | Wald ratio | 1 | 0.36  | 0.43 | 0.403 | 1.43 | 0.62 | 3.30 |
| Fracture of pelvis                                                  | CD38 | Wald ratio | 1 | 0.40  | 0.48 | 0.403 | 1.49 | 0.58 | 3.84 |
| Other disorders of the kidney and ureters                           | CD38 | Wald ratio | 1 | 0.19  | 0.23 | 0.406 | 1.21 | 0.78 | 1.87 |
| Heart valve disorders                                               | CD38 | Wald ratio | 1 | 0.17  | 0.20 | 0.410 | 1.18 | 0.80 | 1.75 |
| Heartburn                                                           | CD38 | Wald ratio | 1 | 0.23  | 0.28 | 0.410 | 1.26 | 0.73 | 2.19 |
| Synovitis and tenosynovitis                                         | CD38 | Wald ratio | 1 | 0.20  | 0.25 | 0.414 | 1.22 | 0.75 | 1.98 |
| Superficial cellulitis and abscess                                  | CD38 | Wald ratio | 1 | -0.12 | 0.15 | 0.419 | 0.88 | 0.66 | 1.19 |
| Osteoarthritis                                                      | CD38 | Wald ratio | 1 | 0.07  | 0.08 | 0.420 | 1.07 | 0.91 | 1.26 |
| Liver abscess and sequelae of chronic liver disease                 | CD38 | Wald ratio | 1 | 0.34  | 0.42 | 0.420 | 1.40 | 0.62 | 3.20 |
| Pelvic inflammatory disease (PID)                                   | CD38 | Wald ratio | 1 | 0.34  | 0.42 | 0.421 | 1.41 | 0.61 | 3.22 |
| Malignant neoplasm of rectum, rectosigmoid junction, and anus       | CD38 | Wald ratio | 1 | -0.23 | 0.28 | 0.424 | 0.80 | 0.46 | 1.39 |
| Obstetrical/birth trauma                                            | CD38 | Wald ratio | 1 | 0.16  | 0.20 | 0.426 | 1.17 | 0.79 | 1.72 |
| Other diseases of respiratory system, not elsewhere classified      | CD38 | Wald ratio | 1 | 0.11  | 0.13 | 0.426 | 1.11 | 0.86 | 1.44 |
| Noninfectious gastroenteritis                                       | CD38 | Wald ratio | 1 | 0.08  | 0.11 | 0.426 | 1.09 | 0.88 | 1.34 |
| Degenerative disease of the spinal cord                             | CD38 | Wald ratio | 1 | -0.24 | 0.30 | 0.427 | 0.78 | 0.43 | 1.43 |
| Abnormal findings on exam of gastrointestinal tract/ abdominal area | CD38 | Wald ratio | 1 | 0.25  | 0.32 | 0.427 | 1.29 | 0.69 | 2.40 |
| Epiphora                                                            | CD38 | Wald ratio | 1 | 0.34  | 0.43 | 0.427 | 1.41 | 0.60 | 3.28 |
| Other dyspnea                                                       | CD38 | Wald ratio | 1 | 0.34  | 0.43 | 0.428 | 1.40 | 0.61 | 3.25 |

|                                                                   |      |            |   |       |      |       |      |      |      |
|-------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Neoplasm of uncertain behavior                                    | CD38 | Wald ratio | 1 | 0.27  | 0.34 | 0.429 | 1.31 | 0.67 | 2.57 |
| Fracture of humerus                                               | CD38 | Wald ratio | 1 | 0.25  | 0.31 | 0.430 | 1.28 | 0.69 | 2.37 |
| Perforation of tympanic membrane                                  | CD38 | Wald ratio | 1 | -0.32 | 0.40 | 0.431 | 0.73 | 0.33 | 1.60 |
| Elevated blood pressure reading without diagnosis of hypertension | CD38 | Wald ratio | 1 | -0.26 | 0.34 | 0.432 | 0.77 | 0.40 | 1.48 |
| Peripheral vascular disease, unspecified                          | CD38 | Wald ratio | 1 | 0.20  | 0.26 | 0.432 | 1.22 | 0.74 | 2.03 |
| Ankylosing spondylitis                                            | CD38 | Wald ratio | 1 | 0.41  | 0.52 | 0.432 | 1.50 | 0.54 | 4.16 |
| Allergic rhinitis                                                 | CD38 | Wald ratio | 1 | 0.31  | 0.40 | 0.433 | 1.37 | 0.63 | 2.97 |
| Polyarteritis nodosa and allied conditions                        | CD38 | Wald ratio | 1 | -0.35 | 0.45 | 0.436 | 0.70 | 0.29 | 1.70 |
| Fracture of upper limb                                            | CD38 | Wald ratio | 1 | 0.11  | 0.14 | 0.436 | 1.12 | 0.84 | 1.48 |
| Myocardial infarction                                             | CD38 | Wald ratio | 1 | 0.10  | 0.13 | 0.437 | 1.10 | 0.86 | 1.41 |
| Hydronephrosis                                                    | CD38 | Wald ratio | 1 | 0.23  | 0.29 | 0.439 | 1.25 | 0.71 | 2.22 |
| Foreign body injury                                               | CD38 | Wald ratio | 1 | -0.29 | 0.37 | 0.439 | 0.75 | 0.36 | 1.56 |
| Dental caries                                                     | CD38 | Wald ratio | 1 | 0.18  | 0.24 | 0.440 | 1.20 | 0.76 | 1.90 |
| Arthropathy NOS                                                   | CD38 | Wald ratio | 1 | 0.06  | 0.07 | 0.440 | 1.06 | 0.92 | 1.22 |
| Manlignant and unknown neoplasms of brain and nervous system      | CD38 | Wald ratio | 1 | -0.39 | 0.50 | 0.442 | 0.68 | 0.25 | 1.82 |
| Colorectal cancer                                                 | CD38 | Wald ratio | 1 | 0.15  | 0.19 | 0.443 | 1.16 | 0.79 | 1.70 |
| Megaloblastic anemia                                              | CD38 | Wald ratio | 1 | 0.30  | 0.39 | 0.444 | 1.35 | 0.62 | 2.93 |
| Other aneurysm                                                    | CD38 | Wald ratio | 1 | 0.23  | 0.30 | 0.446 | 1.26 | 0.69 | 2.29 |
| Postmenopausal atrophic vaginitis                                 | CD38 | Wald ratio | 1 | -0.30 | 0.39 | 0.446 | 0.74 | 0.35 | 1.60 |
| Complication of internal orthopedic device                        | CD38 | Wald ratio | 1 | 0.18  | 0.23 | 0.447 | 1.19 | 0.76 | 1.87 |
| Other non-epithelial cancer of skin                               | CD38 | Wald ratio | 1 | -0.10 | 0.13 | 0.449 | 0.91 | 0.71 | 1.17 |
| Endometrial hyperplasia                                           | CD38 | Wald ratio | 1 | 0.29  | 0.38 | 0.455 | 1.33 | 0.63 | 2.83 |
| Genitourinary congenital anomalies                                | CD38 | Wald ratio | 1 | -0.24 | 0.32 | 0.455 | 0.79 | 0.42 | 1.48 |
| Other diseases of the teeth and supporting structures             | CD38 | Wald ratio | 1 | 0.19  | 0.25 | 0.457 | 1.20 | 0.74 | 1.96 |
| Other disorders of intestine                                      | CD38 | Wald ratio | 1 | 0.15  | 0.20 | 0.458 | 1.16 | 0.78 | 1.72 |
| Iron deficiency anemias, unspecified or not due to blood loss     | CD38 | Wald ratio | 1 | -0.11 | 0.15 | 0.460 | 0.89 | 0.66 | 1.20 |

|                                                                    |      |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Fracture of vertebral column without mention of spinal cord injury | CD38 | Wald ratio | 1 | 0.26  | 0.35 | 0.461 | 1.30 | 0.65 | 2.58 |
| Cardiac pacemaker/device in situ                                   | CD38 | Wald ratio | 1 | -0.19 | 0.26 | 0.462 | 0.83 | 0.50 | 1.38 |
| Diabetes mellitus                                                  | CD38 | Wald ratio | 1 | 0.07  | 0.10 | 0.463 | 1.07 | 0.89 | 1.30 |
| Decreased white blood cell count                                   | CD38 | Wald ratio | 1 | -0.17 | 0.23 | 0.463 | 0.85 | 0.54 | 1.32 |
| Neutropenia                                                        | CD38 | Wald ratio | 1 | -0.17 | 0.23 | 0.463 | 0.85 | 0.54 | 1.32 |
| Viral warts & HPV                                                  | CD38 | Wald ratio | 1 | 0.30  | 0.41 | 0.464 | 1.35 | 0.61 | 2.99 |
| Scar conditions and fibrosis of skin                               | CD38 | Wald ratio | 1 | 0.19  | 0.27 | 0.465 | 1.21 | 0.72 | 2.04 |
| Obstruction of bile duct                                           | CD38 | Wald ratio | 1 | -0.34 | 0.46 | 0.470 | 0.71 | 0.29 | 1.78 |
| Urinary tract infection                                            | CD38 | Wald ratio | 1 | -0.08 | 0.12 | 0.470 | 0.92 | 0.73 | 1.16 |
| Premature beats                                                    | CD38 | Wald ratio | 1 | 0.40  | 0.56 | 0.471 | 1.49 | 0.50 | 4.46 |
| Chronic glomerulonephritis, NOS                                    | CD38 | Wald ratio | 1 | 0.32  | 0.45 | 0.472 | 1.38 | 0.58 | 3.30 |
| Extrapyramidal disease and abnormal movement disorders             | CD38 | Wald ratio | 1 | -0.31 | 0.43 | 0.472 | 0.73 | 0.31 | 1.71 |
| Cellulitis and abscess of trunk                                    | CD38 | Wald ratio | 1 | -0.38 | 0.53 | 0.473 | 0.69 | 0.24 | 1.92 |
| Iron deficiency anemias                                            | CD38 | Wald ratio | 1 | -0.11 | 0.15 | 0.476 | 0.90 | 0.67 | 1.20 |
| Bacterial pneumonia                                                | CD38 | Wald ratio | 1 | -0.11 | 0.16 | 0.477 | 0.89 | 0.65 | 1.22 |
| Acquired spondylolisthesis                                         | CD38 | Wald ratio | 1 | 0.23  | 0.33 | 0.480 | 1.26 | 0.66 | 2.42 |
| Lipoma of skin and subcutaneous tissue                             | CD38 | Wald ratio | 1 | 0.14  | 0.19 | 0.480 | 1.14 | 0.79 | 1.67 |
| Varicose veins                                                     | CD38 | Wald ratio | 1 | -0.09 | 0.12 | 0.480 | 0.92 | 0.72 | 1.17 |
| Varicose veins of lower extremity, symptomatic                     | CD38 | Wald ratio | 1 | 0.36  | 0.51 | 0.481 | 1.44 | 0.52 | 3.93 |
| Reflux esophagitis                                                 | CD38 | Wald ratio | 1 | 0.09  | 0.13 | 0.481 | 1.09 | 0.85 | 1.41 |
| Atopic/contact dermatitis due to other or unspecified              | CD38 | Wald ratio | 1 | -0.20 | 0.28 | 0.481 | 0.82 | 0.47 | 1.43 |
| Streptococcus infection                                            | CD38 | Wald ratio | 1 | -0.22 | 0.32 | 0.482 | 0.80 | 0.43 | 1.49 |
| Hyperparathyroidism                                                | CD38 | Wald ratio | 1 | -0.33 | 0.46 | 0.482 | 0.72 | 0.29 | 1.79 |
| Cancer of brain and nervous system                                 | CD38 | Wald ratio | 1 | -0.39 | 0.56 | 0.483 | 0.67 | 0.22 | 2.02 |
| Varicose veins of lower extremity                                  | CD38 | Wald ratio | 1 | -0.09 | 0.12 | 0.483 | 0.92 | 0.72 | 1.17 |
| Psychogenic and somatoform disorders                               | CD38 | Wald ratio | 1 | 0.39  | 0.56 | 0.489 | 1.47 | 0.49 | 4.43 |

|                                                        |      |            |   |       |      |       |      |      |      |
|--------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Shortness of breath                                    | CD38 | Wald ratio | 1 | 0.12  | 0.17 | 0.489 | 1.13 | 0.81 | 1.57 |
| Aortic valve disease                                   | CD38 | Wald ratio | 1 | 0.25  | 0.36 | 0.491 | 1.29 | 0.63 | 2.63 |
| Hemorrhage of rectum and anus                          | CD38 | Wald ratio | 1 | -0.08 | 0.11 | 0.491 | 0.92 | 0.74 | 1.16 |
| Neoplasm of unspecified nature of digestive system     | CD38 | Wald ratio | 1 | 0.27  | 0.40 | 0.493 | 1.31 | 0.60 | 2.86 |
| Anxiety disorders                                      | CD38 | Wald ratio | 1 | 0.11  | 0.16 | 0.494 | 1.11 | 0.82 | 1.52 |
| Fracture of ankle and foot                             | CD38 | Wald ratio | 1 | 0.18  | 0.27 | 0.495 | 1.20 | 0.71 | 2.03 |
| Other venous embolism and thrombosis                   | CD38 | Wald ratio | 1 | 0.37  | 0.55 | 0.498 | 1.45 | 0.50 | 4.22 |
| Secondary malignancy of bone                           | CD38 | Wald ratio | 1 | -0.19 | 0.28 | 0.498 | 0.83 | 0.48 | 1.43 |
| Tinnitus                                               | CD38 | Wald ratio | 1 | -0.38 | 0.57 | 0.500 | 0.68 | 0.22 | 2.08 |
| Angina pectoris                                        | CD38 | Wald ratio | 1 | 0.07  | 0.11 | 0.500 | 1.08 | 0.87 | 1.33 |
| Fracture of hand or wrist                              | CD38 | Wald ratio | 1 | 0.15  | 0.22 | 0.500 | 1.16 | 0.75 | 1.80 |
| Unspecified monoarthritis                              | CD38 | Wald ratio | 1 | -0.07 | 0.11 | 0.500 | 0.93 | 0.75 | 1.15 |
| Cardiac congenital anomalies                           | CD38 | Wald ratio | 1 | -0.17 | 0.25 | 0.502 | 0.84 | 0.51 | 1.39 |
| Benign neoplasm of ovary                               | CD38 | Wald ratio | 1 | 0.22  | 0.34 | 0.505 | 1.25 | 0.65 | 2.42 |
| Abnormal findings on examination of urine              | CD38 | Wald ratio | 1 | -0.14 | 0.22 | 0.506 | 0.87 | 0.57 | 1.32 |
| Cancer of esophagus                                    | CD38 | Wald ratio | 1 | 0.32  | 0.48 | 0.507 | 1.38 | 0.53 | 3.55 |
| Pneumococcal pneumonia                                 | CD38 | Wald ratio | 1 | -0.11 | 0.17 | 0.507 | 0.89 | 0.64 | 1.25 |
| Benign neoplasm of other parts of digestive system     | CD38 | Wald ratio | 1 | 0.12  | 0.18 | 0.510 | 1.13 | 0.79 | 1.60 |
| Curvature of spine                                     | CD38 | Wald ratio | 1 | -0.25 | 0.38 | 0.511 | 0.78 | 0.37 | 1.65 |
| Carditis                                               | CD38 | Wald ratio | 1 | -0.19 | 0.29 | 0.511 | 0.83 | 0.47 | 1.46 |
| Cholecystitis without cholelithiasis                   | CD38 | Wald ratio | 1 | 0.16  | 0.25 | 0.512 | 1.18 | 0.72 | 1.91 |
| Edema                                                  | CD38 | Wald ratio | 1 | -0.21 | 0.32 | 0.513 | 0.81 | 0.43 | 1.52 |
| Problems associated with amniotic cavity and membranes | CD38 | Wald ratio | 1 | -0.23 | 0.35 | 0.515 | 0.79 | 0.40 | 1.59 |
| Femoral hernia                                         | CD38 | Wald ratio | 1 | -0.33 | 0.51 | 0.517 | 0.72 | 0.27 | 1.95 |
| Esophageal bleeding (varices/hemorrhage)               | CD38 | Wald ratio | 1 | 0.20  | 0.32 | 0.518 | 1.23 | 0.66 | 2.28 |
| Skull and face fracture and other intercranial injury  | CD38 | Wald ratio | 1 | 0.15  | 0.24 | 0.518 | 1.17 | 0.73 | 1.86 |

|                                                                          |      |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Postmenopausal bleeding                                                  | CD38 | Wald ratio | 1 | 0.09  | 0.14 | 0.519 | 1.09 | 0.83 | 1.44 |
| Abnormal movement                                                        | CD38 | Wald ratio | 1 | 0.16  | 0.25 | 0.522 | 1.17 | 0.72 | 1.90 |
| Chronic cystitis                                                         | CD38 | Wald ratio | 1 | 0.27  | 0.43 | 0.526 | 1.32 | 0.56 | 3.07 |
| Opiates and related narcotics causing adverse effects in therapeutic use | CD38 | Wald ratio | 1 | -0.24 | 0.38 | 0.528 | 0.79 | 0.37 | 1.66 |
| Disorders of uterus, NEC                                                 | CD38 | Wald ratio | 1 | -0.14 | 0.23 | 0.530 | 0.87 | 0.56 | 1.35 |
| Prolapse of vaginal walls                                                | CD38 | Wald ratio | 1 | 0.10  | 0.15 | 0.532 | 1.10 | 0.81 | 1.49 |
| Myopia                                                                   | CD38 | Wald ratio | 1 | 0.23  | 0.37 | 0.532 | 1.26 | 0.61 | 2.57 |
| Disorders of calcium/phosphorus metabolism                               | CD38 | Wald ratio | 1 | -0.23 | 0.37 | 0.532 | 0.79 | 0.38 | 1.64 |
| Hemorrhage of gastrointestinal tract                                     | CD38 | Wald ratio | 1 | 0.11  | 0.18 | 0.532 | 1.12 | 0.79 | 1.59 |
| Other intestinal obstruction                                             | CD38 | Wald ratio | 1 | 0.14  | 0.22 | 0.534 | 1.15 | 0.74 | 1.78 |
| Chronic pancreatitis                                                     | CD38 | Wald ratio | 1 | -0.35 | 0.57 | 0.536 | 0.70 | 0.23 | 2.15 |
| Rheumatism, unspecified and fibrositis                                   | CD38 | Wald ratio | 1 | 0.25  | 0.41 | 0.538 | 1.29 | 0.58 | 2.86 |
| Urinary incontinence                                                     | CD38 | Wald ratio | 1 | 0.09  | 0.14 | 0.539 | 1.09 | 0.83 | 1.44 |
| Vitamin deficiency                                                       | CD38 | Wald ratio | 1 | 0.23  | 0.37 | 0.544 | 1.25 | 0.60 | 2.60 |
| Other diseases of respiratory system, NEC                                | CD38 | Wald ratio | 1 | 0.08  | 0.14 | 0.544 | 1.09 | 0.83 | 1.42 |
| Rheumatic disease of the heart valves                                    | CD38 | Wald ratio | 1 | 0.11  | 0.19 | 0.544 | 1.12 | 0.78 | 1.62 |
| Schizophrenia and other psychotic disorders                              | CD38 | Wald ratio | 1 | 0.27  | 0.44 | 0.545 | 1.31 | 0.55 | 3.12 |
| Pericarditis                                                             | CD38 | Wald ratio | 1 | -0.22 | 0.36 | 0.547 | 0.80 | 0.39 | 1.64 |
| Acid-base balance disorder                                               | CD38 | Wald ratio | 1 | -0.23 | 0.38 | 0.547 | 0.80 | 0.38 | 1.67 |
| Retinal detachment with retinal defect                                   | CD38 | Wald ratio | 1 | 0.21  | 0.35 | 0.550 | 1.23 | 0.62 | 2.43 |
| Chronic bronchitis                                                       | CD38 | Wald ratio | 1 | -0.14 | 0.24 | 0.550 | 0.87 | 0.54 | 1.39 |
| Disorders of esophageal motility                                         | CD38 | Wald ratio | 1 | -0.31 | 0.51 | 0.550 | 0.74 | 0.27 | 2.01 |
| Poisoning by antibiotics                                                 | CD38 | Wald ratio | 1 | 0.06  | 0.10 | 0.550 | 1.06 | 0.87 | 1.29 |
| Cancer of other lymphoid, histiocytic tissue                             | CD38 | Wald ratio | 1 | 0.16  | 0.27 | 0.551 | 1.18 | 0.69 | 2.01 |
| Hypoglycemia                                                             | CD38 | Wald ratio | 1 | -0.25 | 0.42 | 0.551 | 0.78 | 0.34 | 1.78 |

|                                                                     |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Mucous polyp of cervix                                              | CD38 | Wald ratio | 1 | 0.13  | 0.22 | 0.551 | 1.14 | 0.74 | 1.76 |
| Aortic aneurysm                                                     | CD38 | Wald ratio | 1 | 0.21  | 0.35 | 0.553 | 1.23 | 0.62 | 2.43 |
| Septal Deviations/Turbinate Hypertrophy                             | CD38 | Wald ratio | 1 | -0.11 | 0.19 | 0.555 | 0.90 | 0.62 | 1.29 |
| Other disorders of cervical region                                  | CD38 | Wald ratio | 1 | -0.33 | 0.57 | 0.555 | 0.72 | 0.24 | 2.17 |
| Other disorders of pancreatic internal secretion                    | CD38 | Wald ratio | 1 | -0.25 | 0.42 | 0.557 | 0.78 | 0.34 | 1.78 |
| Other retinal disorders                                             | CD38 | Wald ratio | 1 | -0.12 | 0.21 | 0.557 | 0.88 | 0.59 | 1.33 |
| Occlusion of cerebral arteries                                      | CD38 | Wald ratio | 1 | 0.12  | 0.20 | 0.559 | 1.13 | 0.76 | 1.68 |
| Pain in joint                                                       | CD38 | Wald ratio | 1 | 0.09  | 0.15 | 0.561 | 1.09 | 0.82 | 1.45 |
| Calculus of lower urinary tract                                     | CD38 | Wald ratio | 1 | -0.27 | 0.46 | 0.561 | 0.76 | 0.31 | 1.90 |
| Hematuria                                                           | CD38 | Wald ratio | 1 | 0.06  | 0.10 | 0.564 | 1.06 | 0.87 | 1.30 |
| Pulmonary collapse; interstitial and compensatory emphysema         | CD38 | Wald ratio | 1 | 0.17  | 0.29 | 0.565 | 1.18 | 0.67 | 2.08 |
| Acute upper respiratory infections of multiple or unspecified sites | CD38 | Wald ratio | 1 | 0.15  | 0.27 | 0.568 | 1.16 | 0.69 | 1.96 |
| Benign neoplasm of lip, oral cavity, and pharynx                    | CD38 | Wald ratio | 1 | -0.23 | 0.41 | 0.569 | 0.79 | 0.35 | 1.77 |
| Renal colic                                                         | CD38 | Wald ratio | 1 | -0.16 | 0.29 | 0.570 | 0.85 | 0.49 | 1.49 |
| Congestive heart failure (CHF) NOS                                  | CD38 | Wald ratio | 1 | 0.16  | 0.29 | 0.570 | 1.18 | 0.67 | 2.08 |
| Psoriasis vulgaris                                                  | CD38 | Wald ratio | 1 | 0.18  | 0.32 | 0.571 | 1.20 | 0.64 | 2.22 |
| Menopausal and postmenopausal disorders                             | CD38 | Wald ratio | 1 | 0.07  | 0.13 | 0.571 | 1.08 | 0.84 | 1.39 |
| Other deficiency anemia                                             | CD38 | Wald ratio | 1 | 0.22  | 0.38 | 0.575 | 1.24 | 0.58 | 2.64 |
| Bacterial infection NOS                                             | CD38 | Wald ratio | 1 | 0.07  | 0.12 | 0.575 | 1.07 | 0.85 | 1.35 |
| Meniere's disease                                                   | CD38 | Wald ratio | 1 | -0.30 | 0.54 | 0.577 | 0.74 | 0.26 | 2.13 |
| Other specified gastritis                                           | CD38 | Wald ratio | 1 | 0.08  | 0.15 | 0.582 | 1.08 | 0.81 | 1.44 |
| Prurigo and Lichen                                                  | CD38 | Wald ratio | 1 | -0.25 | 0.46 | 0.584 | 0.78 | 0.31 | 1.92 |
| Nonspecific findings on examination of blood                        | CD38 | Wald ratio | 1 | -0.09 | 0.16 | 0.584 | 0.91 | 0.67 | 1.26 |
| Osteomyelitis, periostitis, and other infections involving bone     | CD38 | Wald ratio | 1 | -0.28 | 0.52 | 0.584 | 0.75 | 0.27 | 2.09 |
| Regional enteritis                                                  | CD38 | Wald ratio | 1 | 0.17  | 0.31 | 0.586 | 1.18 | 0.64 | 2.18 |
| Functional digestive disorders                                      | CD38 | Wald ratio | 1 | 0.05  | 0.09 | 0.589 | 1.05 | 0.88 | 1.25 |

|                                                               |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Cholelithiasis with acute cholecystitis                       | CD38 | Wald ratio | 1 | 0.18  | 0.33 | 0.589 | 1.20 | 0.62 | 2.31 |
| Cardiac pacemaker in situ                                     | CD38 | Wald ratio | 1 | -0.15 | 0.27 | 0.589 | 0.86 | 0.51 | 1.47 |
| Noninfectious disorders of lymphatic channels                 | CD38 | Wald ratio | 1 | 0.26  | 0.49 | 0.590 | 1.30 | 0.50 | 3.38 |
| Cellulitis and abscess of face/neck                           | CD38 | Wald ratio | 1 | 0.30  | 0.56 | 0.592 | 1.35 | 0.45 | 4.09 |
| Mitral valve disease                                          | CD38 | Wald ratio | 1 | 0.13  | 0.24 | 0.593 | 1.14 | 0.71 | 1.81 |
| Hyperpotassemia                                               | CD38 | Wald ratio | 1 | -0.22 | 0.41 | 0.595 | 0.80 | 0.36 | 1.81 |
| Ptoxis of eyelid                                              | CD38 | Wald ratio | 1 | -0.16 | 0.30 | 0.597 | 0.85 | 0.47 | 1.55 |
| Diseases of pulp and periapical tissues                       | CD38 | Wald ratio | 1 | -0.16 | 0.30 | 0.598 | 0.85 | 0.47 | 1.55 |
| Other abnormal blood chemistry                                | CD38 | Wald ratio | 1 | -0.09 | 0.16 | 0.599 | 0.92 | 0.66 | 1.27 |
| Disorders of the pituitary gland and its hypothalamic control | CD38 | Wald ratio | 1 | -0.26 | 0.49 | 0.600 | 0.77 | 0.30 | 2.02 |
| Other specified benign mammary dysplasias                     | CD38 | Wald ratio | 1 | -0.26 | 0.49 | 0.602 | 0.77 | 0.30 | 2.02 |
| Respiratory failure                                           | CD38 | Wald ratio | 1 | -0.15 | 0.29 | 0.602 | 0.86 | 0.49 | 1.51 |
| Cardiac conduction disorders                                  | CD38 | Wald ratio | 1 | -0.08 | 0.16 | 0.605 | 0.92 | 0.68 | 1.26 |
| Palpitations                                                  | CD38 | Wald ratio | 1 | 0.11  | 0.21 | 0.607 | 1.12 | 0.74 | 1.69 |
| Chronic fatigue syndrome                                      | CD38 | Wald ratio | 1 | -0.27 | 0.53 | 0.612 | 0.76 | 0.27 | 2.16 |
| Acute renal failure                                           | CD38 | Wald ratio | 1 | -0.10 | 0.19 | 0.614 | 0.91 | 0.62 | 1.33 |
| Sicca syndrome                                                | CD38 | Wald ratio | 1 | -0.29 | 0.57 | 0.616 | 0.75 | 0.24 | 2.30 |
| Malunion and nonunion of fracture                             | CD38 | Wald ratio | 1 | 0.18  | 0.36 | 0.621 | 1.20 | 0.59 | 2.44 |
| Secondary malignancy of brain/spine                           | CD38 | Wald ratio | 1 | -0.22 | 0.46 | 0.623 | 0.80 | 0.33 | 1.95 |
| Nontoxic multinodular goiter                                  | CD38 | Wald ratio | 1 | 0.24  | 0.50 | 0.623 | 1.28 | 0.48 | 3.38 |
| Missed abortion/Hydatidiform mole                             | CD38 | Wald ratio | 1 | -0.18 | 0.37 | 0.623 | 0.83 | 0.40 | 1.73 |
| Cough                                                         | CD38 | Wald ratio | 1 | 0.12  | 0.24 | 0.626 | 1.13 | 0.70 | 1.81 |
| Ulcerative colitis                                            | CD38 | Wald ratio | 1 | -0.11 | 0.23 | 0.627 | 0.89 | 0.57 | 1.41 |
| Fracture of radius and ulna                                   | CD38 | Wald ratio | 1 | -0.09 | 0.18 | 0.628 | 0.92 | 0.64 | 1.31 |
| Arterial embolism and thrombosis                              | CD38 | Wald ratio | 1 | 0.20  | 0.43 | 0.632 | 1.23 | 0.53 | 2.83 |
| Other disorders of male genital organs                        | CD38 | Wald ratio | 1 | -0.12 | 0.24 | 0.633 | 0.89 | 0.55 | 1.44 |

|                                                                 |      |            |   |       |      |       |      |      |      |
|-----------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Displacement of intervertebral disc                             | CD38 | Wald ratio | 1 | 0.27  | 0.57 | 0.636 | 1.31 | 0.43 | 4.01 |
| Bronchiectasis                                                  | CD38 | Wald ratio | 1 | -0.14 | 0.30 | 0.636 | 0.87 | 0.48 | 1.56 |
| Abnormal findings on mammogram or breast exam                   | CD38 | Wald ratio | 1 | -0.15 | 0.33 | 0.637 | 0.86 | 0.45 | 1.63 |
| Diverticulosis and diverticulitis                               | CD38 | Wald ratio | 1 | 0.04  | 0.09 | 0.637 | 1.04 | 0.88 | 1.23 |
| Stricture and stenosis of esophagus                             | CD38 | Wald ratio | 1 | -0.14 | 0.30 | 0.638 | 0.87 | 0.48 | 1.56 |
| Ingrowing nail                                                  | CD38 | Wald ratio | 1 | -0.19 | 0.42 | 0.640 | 0.82 | 0.36 | 1.86 |
| Left bundle branch block                                        | CD38 | Wald ratio | 1 | 0.14  | 0.31 | 0.641 | 1.16 | 0.63 | 2.12 |
| Functional disorders of bladder                                 | CD38 | Wald ratio | 1 | 0.15  | 0.32 | 0.641 | 1.16 | 0.62 | 2.16 |
| Other disorders of eyelids                                      | CD38 | Wald ratio | 1 | 0.08  | 0.17 | 0.644 | 1.08 | 0.77 | 1.52 |
| Diverticulosis                                                  | CD38 | Wald ratio | 1 | 0.04  | 0.09 | 0.644 | 1.04 | 0.88 | 1.23 |
| Other peripheral nerve disorders                                | CD38 | Wald ratio | 1 | -0.05 | 0.12 | 0.644 | 0.95 | 0.75 | 1.19 |
| Unspecified diffuse connective tissue disease                   | CD38 | Wald ratio | 1 | 0.11  | 0.25 | 0.647 | 1.12 | 0.69 | 1.83 |
| Subarachnoid hemorrhage                                         | CD38 | Wald ratio | 1 | -0.21 | 0.45 | 0.648 | 0.81 | 0.33 | 1.98 |
| Pilonidal cyst                                                  | CD38 | Wald ratio | 1 | 0.24  | 0.53 | 0.648 | 1.28 | 0.45 | 3.64 |
| Disorder of skin and subcutaneous tissue NOS                    | CD38 | Wald ratio | 1 | 0.08  | 0.17 | 0.649 | 1.08 | 0.77 | 1.51 |
| Uterine leiomyoma                                               | CD38 | Wald ratio | 1 | 0.06  | 0.13 | 0.649 | 1.06 | 0.82 | 1.37 |
| Strabismus (not specified as paralytic)                         | CD38 | Wald ratio | 1 | 0.19  | 0.43 | 0.650 | 1.21 | 0.53 | 2.80 |
| Protein-calorie malnutrition                                    | CD38 | Wald ratio | 1 | -0.18 | 0.40 | 0.650 | 0.84 | 0.38 | 1.82 |
| Chondrocalcinosis                                               | CD38 | Wald ratio | 1 | -0.25 | 0.55 | 0.651 | 0.78 | 0.27 | 2.28 |
| Hearing loss                                                    | CD38 | Wald ratio | 1 | -0.09 | 0.20 | 0.652 | 0.91 | 0.62 | 1.35 |
| Empyema and pneumothorax                                        | CD38 | Wald ratio | 1 | -0.17 | 0.38 | 0.652 | 0.84 | 0.40 | 1.77 |
| Paroxysmal tachycardia, unspecified                             | CD38 | Wald ratio | 1 | 0.10  | 0.23 | 0.652 | 1.11 | 0.71 | 1.74 |
| Kyphoscoliosis and scoliosis                                    | CD38 | Wald ratio | 1 | -0.18 | 0.40 | 0.653 | 0.84 | 0.38 | 1.82 |
| Malignant neoplasm, other                                       | CD38 | Wald ratio | 1 | 0.05  | 0.10 | 0.654 | 1.05 | 0.85 | 1.29 |
| Sarcoidosis                                                     | CD38 | Wald ratio | 1 | -0.25 | 0.55 | 0.656 | 0.78 | 0.27 | 2.31 |
| Other ill-defined and unknown causes of morbidity and mortality | CD38 | Wald ratio | 1 | 0.05  | 0.11 | 0.658 | 1.05 | 0.85 | 1.29 |

|                                                       |      |            |   |       |      |       |      |      |      |
|-------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Benign neoplasm of skin                               | CD38 | Wald ratio | 1 | 0.07  | 0.15 | 0.659 | 1.07 | 0.80 | 1.43 |
| Bundle branch block                                   | CD38 | Wald ratio | 1 | -0.10 | 0.23 | 0.663 | 0.91 | 0.58 | 1.41 |
| Periodontitis (acute or chronic)                      | CD38 | Wald ratio | 1 | 0.16  | 0.37 | 0.664 | 1.17 | 0.57 | 2.42 |
| Fracture of patella                                   | CD38 | Wald ratio | 1 | 0.20  | 0.47 | 0.669 | 1.22 | 0.49 | 3.05 |
| Respiratory insufficiency                             | CD38 | Wald ratio | 1 | -0.13 | 0.31 | 0.671 | 0.88 | 0.48 | 1.61 |
| Cancer of urinary organs (incl. kidney and bladder)   | CD38 | Wald ratio | 1 | -0.09 | 0.20 | 0.674 | 0.92 | 0.62 | 1.37 |
| Ganglion and cyst of synovium, tendon, and bursa      | CD38 | Wald ratio | 1 | 0.10  | 0.23 | 0.676 | 1.10 | 0.70 | 1.73 |
| Paroxysmal supraventricular tachycardia               | CD38 | Wald ratio | 1 | 0.11  | 0.27 | 0.677 | 1.12 | 0.66 | 1.89 |
| Cataract                                              | CD38 | Wald ratio | 1 | -0.04 | 0.10 | 0.677 | 0.96 | 0.80 | 1.16 |
| Crystal arthropathies                                 | CD38 | Wald ratio | 1 | -0.22 | 0.52 | 0.680 | 0.81 | 0.29 | 2.24 |
| Nonspecific chest pain                                | CD38 | Wald ratio | 1 | 0.03  | 0.08 | 0.681 | 1.03 | 0.89 | 1.20 |
| Spinal stenosis                                       | CD38 | Wald ratio | 1 | 0.09  | 0.21 | 0.683 | 1.09 | 0.72 | 1.66 |
| Hemangioma and lymphangioma, any site                 | CD38 | Wald ratio | 1 | 0.13  | 0.32 | 0.688 | 1.14 | 0.60 | 2.14 |
| Other disorders of eye                                | CD38 | Wald ratio | 1 | -0.08 | 0.21 | 0.688 | 0.92 | 0.61 | 1.38 |
| Abnormal findings examination of lungs                | CD38 | Wald ratio | 1 | 0.10  | 0.26 | 0.690 | 1.11 | 0.67 | 1.84 |
| Type 2 diabetes                                       | CD38 | Wald ratio | 1 | 0.04  | 0.10 | 0.691 | 1.04 | 0.85 | 1.27 |
| Breast conditions, congenital or relating to hormones | CD38 | Wald ratio | 1 | -0.17 | 0.42 | 0.693 | 0.85 | 0.37 | 1.93 |
| Atrioventricular block, complete                      | CD38 | Wald ratio | 1 | -0.21 | 0.53 | 0.696 | 0.81 | 0.29 | 2.31 |
| Complications of labor and delivery NEC               | CD38 | Wald ratio | 1 | -0.11 | 0.27 | 0.699 | 0.90 | 0.53 | 1.53 |
| Diseases of spleen                                    | CD38 | Wald ratio | 1 | 0.22  | 0.57 | 0.699 | 1.25 | 0.41 | 3.81 |
| Cellulitis and abscess of arm/hand                    | CD38 | Wald ratio | 1 | -0.07 | 0.18 | 0.700 | 0.93 | 0.66 | 1.32 |
| Other signs and symptoms in breast                    | CD38 | Wald ratio | 1 | -0.19 | 0.49 | 0.702 | 0.83 | 0.32 | 2.16 |
| Malignant neoplasm of female breast                   | CD38 | Wald ratio | 1 | -0.05 | 0.12 | 0.702 | 0.95 | 0.75 | 1.22 |
| Gingival and periodontal diseases                     | CD38 | Wald ratio | 1 | 0.12  | 0.31 | 0.703 | 1.13 | 0.61 | 2.06 |
| Chronic pulmonary heart disease                       | CD38 | Wald ratio | 1 | 0.20  | 0.53 | 0.704 | 1.22 | 0.43 | 3.47 |
| Cerebral artery occlusion, with cerebral infarction   | CD38 | Wald ratio | 1 | 0.13  | 0.33 | 0.704 | 1.14 | 0.59 | 2.19 |

|                                             |      |            |   |       |      |       |      |      |      |
|---------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Other symptoms                              | CD38 | Wald ratio | 1 | -0.14 | 0.37 | 0.705 | 0.87 | 0.42 | 1.79 |
| Torus fracture                              | CD38 | Wald ratio | 1 | -0.12 | 0.32 | 0.707 | 0.89 | 0.48 | 1.65 |
| Retinal detachments and defects             | CD38 | Wald ratio | 1 | 0.09  | 0.23 | 0.708 | 1.09 | 0.70 | 1.71 |
| Other symptoms involving abdomen and pelvis | CD38 | Wald ratio | 1 | 0.09  | 0.23 | 0.708 | 1.09 | 0.70 | 1.71 |
| Abnormal involuntary movements              | CD38 | Wald ratio | 1 | -0.16 | 0.43 | 0.709 | 0.85 | 0.36 | 1.99 |
| Other disorders of tympanic membrane        | CD38 | Wald ratio | 1 | -0.13 | 0.35 | 0.710 | 0.88 | 0.44 | 1.75 |
| Large cell lymphoma                         | CD38 | Wald ratio | 1 | -0.20 | 0.54 | 0.710 | 0.82 | 0.28 | 2.35 |
| Flatulence                                  | CD38 | Wald ratio | 1 | 0.12  | 0.31 | 0.710 | 1.12 | 0.61 | 2.08 |
| Fracture of ribs                            | CD38 | Wald ratio | 1 | 0.17  | 0.46 | 0.711 | 1.19 | 0.48 | 2.95 |
| Cardiac arrest                              | CD38 | Wald ratio | 1 | 0.16  | 0.42 | 0.713 | 1.17 | 0.51 | 2.68 |
| Symptoms involving female genital tract     | CD38 | Wald ratio | 1 | -0.06 | 0.16 | 0.716 | 0.94 | 0.69 | 1.30 |
| Thrombocytopenia                            | CD38 | Wald ratio | 1 | -0.12 | 0.33 | 0.716 | 0.89 | 0.47 | 1.68 |
| Spondylosis and allied disorders            | CD38 | Wald ratio | 1 | -0.05 | 0.15 | 0.716 | 0.95 | 0.71 | 1.27 |
| Vascular insufficiency of intestine         | CD38 | Wald ratio | 1 | -0.19 | 0.54 | 0.720 | 0.82 | 0.29 | 2.37 |
| Fracture of lower limb                      | CD38 | Wald ratio | 1 | -0.06 | 0.15 | 0.720 | 0.95 | 0.70 | 1.28 |
| Obstructive chronic bronchitis              | CD38 | Wald ratio | 1 | -0.09 | 0.25 | 0.721 | 0.91 | 0.56 | 1.50 |
| Cancer, suspected or other                  | CD38 | Wald ratio | 1 | 0.04  | 0.10 | 0.722 | 1.04 | 0.85 | 1.27 |
| Diseases of lips                            | CD38 | Wald ratio | 1 | 0.18  | 0.49 | 0.722 | 1.19 | 0.45 | 3.14 |
| Lymphoid leukemia                           | CD38 | Wald ratio | 1 | -0.19 | 0.54 | 0.722 | 0.83 | 0.29 | 2.37 |
| Actinic keratosis                           | CD38 | Wald ratio | 1 | 0.09  | 0.25 | 0.725 | 1.09 | 0.66 | 1.80 |
| Diffuse diseases of connective tissue       | CD38 | Wald ratio | 1 | 0.08  | 0.22 | 0.726 | 1.08 | 0.70 | 1.67 |
| Breast cancer [female]                      | CD38 | Wald ratio | 1 | -0.04 | 0.12 | 0.727 | 0.96 | 0.76 | 1.22 |
| Arrhythmia (cardiac) NOS                    | CD38 | Wald ratio | 1 | -0.15 | 0.43 | 0.728 | 0.86 | 0.37 | 1.99 |
| Aphasia/speech disturbance                  | CD38 | Wald ratio | 1 | 0.12  | 0.33 | 0.729 | 1.12 | 0.58 | 2.16 |
| Coagulation defects                         | CD38 | Wald ratio | 1 | 0.15  | 0.42 | 0.730 | 1.16 | 0.51 | 2.65 |
| Hypotension                                 | CD38 | Wald ratio | 1 | -0.06 | 0.17 | 0.730 | 0.94 | 0.68 | 1.32 |

|                                                                                               |      |            |   |       |      |       |      |      |      |
|-----------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Ventral hernia                                                                                | CD38 | Wald ratio | 1 | -0.08 | 0.22 | 0.730 | 0.93 | 0.60 | 1.43 |
| Hypertrophy of breast (Gynecomastia)                                                          | CD38 | Wald ratio | 1 | -0.15 | 0.44 | 0.731 | 0.86 | 0.36 | 2.05 |
| Benign neoplasm of uterus                                                                     | CD38 | Wald ratio | 1 | 0.04  | 0.13 | 0.736 | 1.04 | 0.81 | 1.35 |
| Other disorders of biliary tract                                                              | CD38 | Wald ratio | 1 | 0.14  | 0.40 | 0.737 | 1.14 | 0.52 | 2.52 |
| Myeloproliferative disease                                                                    | CD38 | Wald ratio | 1 | -0.14 | 0.41 | 0.737 | 0.87 | 0.39 | 1.95 |
| Coronary atherosclerosis                                                                      | CD38 | Wald ratio | 1 | 0.03  | 0.10 | 0.739 | 1.03 | 0.85 | 1.26 |
| Lump or mass in breast                                                                        | CD38 | Wald ratio | 1 | -0.11 | 0.33 | 0.739 | 0.90 | 0.47 | 1.72 |
| Lymphoid leukemia, chronic                                                                    | CD38 | Wald ratio | 1 | 0.19  | 0.57 | 0.739 | 1.21 | 0.39 | 3.73 |
| Nonspecific abnormal findings on radiological and other examination of musculoskeletal system | CD38 | Wald ratio | 1 | -0.16 | 0.49 | 0.741 | 0.85 | 0.33 | 2.22 |
| Cellulitis and abscess of leg, except foot                                                    | CD38 | Wald ratio | 1 | -0.06 | 0.18 | 0.741 | 0.94 | 0.67 | 1.33 |
| Atherosclerosis                                                                               | CD38 | Wald ratio | 1 | 0.12  | 0.36 | 0.741 | 1.13 | 0.56 | 2.27 |
| Cancer of mouth                                                                               | CD38 | Wald ratio | 1 | -0.16 | 0.51 | 0.747 | 0.85 | 0.31 | 2.30 |
| Other disorders of arteries and arterioles                                                    | CD38 | Wald ratio | 1 | -0.11 | 0.35 | 0.747 | 0.89 | 0.44 | 1.79 |
| Lipoma                                                                                        | CD38 | Wald ratio | 1 | 0.05  | 0.16 | 0.748 | 1.05 | 0.77 | 1.45 |
| Acquired toe deformities                                                                      | CD38 | Wald ratio | 1 | 0.06  | 0.18 | 0.749 | 1.06 | 0.74 | 1.52 |
| Multiple myeloma                                                                              | CD38 | Wald ratio | 1 | 0.18  | 0.55 | 0.750 | 1.19 | 0.41 | 3.49 |
| Polyp of female genital organs                                                                | CD38 | Wald ratio | 1 | 0.04  | 0.13 | 0.750 | 1.04 | 0.81 | 1.34 |
| Stricture/obstruction of ureter                                                               | CD38 | Wald ratio | 1 | 0.14  | 0.43 | 0.750 | 1.15 | 0.50 | 2.65 |
| Chemotherapy                                                                                  | CD38 | Wald ratio | 1 | 0.03  | 0.09 | 0.756 | 1.03 | 0.86 | 1.23 |
| Frequency of urination and polyuria                                                           | CD38 | Wald ratio | 1 | 0.06  | 0.21 | 0.756 | 1.07 | 0.71 | 1.59 |
| Acute gastritis                                                                               | CD38 | Wald ratio | 1 | -0.12 | 0.38 | 0.760 | 0.89 | 0.43 | 1.86 |
| Diseases of white blood cells                                                                 | CD38 | Wald ratio | 1 | -0.06 | 0.21 | 0.768 | 0.94 | 0.62 | 1.42 |
| Disorders of conjunctiva                                                                      | CD38 | Wald ratio | 1 | -0.14 | 0.47 | 0.770 | 0.87 | 0.35 | 2.18 |
| Stricture of artery                                                                           | CD38 | Wald ratio | 1 | -0.13 | 0.44 | 0.770 | 0.88 | 0.37 | 2.08 |
| Noninflammatory disorders of vagina                                                           | CD38 | Wald ratio | 1 | 0.09  | 0.31 | 0.771 | 1.09 | 0.60 | 2.00 |

|                                                                  |      |            |   |       |      |       |      |      |      |
|------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Infection of the eye                                             | CD38 | Wald ratio | 1 | -0.16 | 0.55 | 0.772 | 0.85 | 0.29 | 2.49 |
| Inflammatory bowel disease and other gastroenteritis and colitis | CD38 | Wald ratio | 1 | -0.06 | 0.20 | 0.773 | 0.95 | 0.64 | 1.39 |
| Vascular hamartomas and non-neoplastic nevi                      | CD38 | Wald ratio | 1 | -0.15 | 0.51 | 0.774 | 0.86 | 0.32 | 2.34 |
| Acute pancreatitis                                               | CD38 | Wald ratio | 1 | -0.08 | 0.29 | 0.774 | 0.92 | 0.52 | 1.63 |
| Facial nerve disorders [CN7]                                     | CD38 | Wald ratio | 1 | 0.12  | 0.44 | 0.775 | 1.13 | 0.48 | 2.66 |
| Aneurysm and dissection of heart                                 | CD38 | Wald ratio | 1 | 0.14  | 0.49 | 0.776 | 1.15 | 0.44 | 2.99 |
| Peritonitis and retroperitoneal infections                       | CD38 | Wald ratio | 1 | -0.12 | 0.43 | 0.780 | 0.89 | 0.38 | 2.07 |
| Malignant neoplasm of uterus                                     | CD38 | Wald ratio | 1 | -0.10 | 0.36 | 0.782 | 0.90 | 0.44 | 1.84 |
| Effects of other external causes                                 | CD38 | Wald ratio | 1 | -0.06 | 0.20 | 0.783 | 0.95 | 0.64 | 1.40 |
| stress incontinence, female                                      | CD38 | Wald ratio | 1 | -0.05 | 0.17 | 0.784 | 0.95 | 0.68 | 1.34 |
| Pancreatic cancer                                                | CD38 | Wald ratio | 1 | 0.14  | 0.53 | 0.786 | 1.16 | 0.41 | 3.28 |
| Secondary malignant neoplasm                                     | CD38 | Wald ratio | 1 | 0.04  | 0.14 | 0.788 | 1.04 | 0.80 | 1.35 |
| Dislocation                                                      | CD38 | Wald ratio | 1 | 0.07  | 0.28 | 0.794 | 1.08 | 0.62 | 1.87 |
| Disorders of vitreous body                                       | CD38 | Wald ratio | 1 | -0.09 | 0.35 | 0.795 | 0.91 | 0.46 | 1.81 |
| Cancer of bronchus; lung                                         | CD38 | Wald ratio | 1 | 0.07  | 0.28 | 0.796 | 1.08 | 0.62 | 1.87 |
| Staphylococcus infections                                        | CD38 | Wald ratio | 1 | 0.06  | 0.23 | 0.799 | 1.06 | 0.67 | 1.67 |
| Emphysema                                                        | CD38 | Wald ratio | 1 | -0.08 | 0.31 | 0.803 | 0.93 | 0.50 | 1.71 |
| Obesity                                                          | CD38 | Wald ratio | 1 | 0.03  | 0.13 | 0.804 | 1.03 | 0.80 | 1.33 |
| Osteomyelitis                                                    | CD38 | Wald ratio | 1 | -0.13 | 0.54 | 0.805 | 0.87 | 0.30 | 2.53 |
| Osteoarthritis; localized                                        | CD38 | Wald ratio | 1 | 0.02  | 0.10 | 0.809 | 1.02 | 0.84 | 1.25 |
| Ill-defined descriptions and complications of heart disease      | CD38 | Wald ratio | 1 | 0.11  | 0.46 | 0.810 | 1.12 | 0.46 | 2.74 |
| Respiratory abnormalities                                        | CD38 | Wald ratio | 1 | 0.13  | 0.52 | 0.811 | 1.13 | 0.41 | 3.16 |
| Secondary malignant neoplasm of liver                            | CD38 | Wald ratio | 1 | 0.06  | 0.25 | 0.811 | 1.06 | 0.65 | 1.75 |
| Neuralgia, neuritis, and radiculitis NOS                         | CD38 | Wald ratio | 1 | -0.09 | 0.38 | 0.811 | 0.91 | 0.44 | 1.91 |
| Back pain                                                        | CD38 | Wald ratio | 1 | -0.03 | 0.13 | 0.812 | 0.97 | 0.76 | 1.24 |
| Labyrinthitis                                                    | CD38 | Wald ratio | 1 | -0.11 | 0.47 | 0.814 | 0.90 | 0.36 | 2.24 |

|                                                                                                                         |      |            |   |       |      |       |      |      |      |
|-------------------------------------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Internal derangement of knee                                                                                            | CD38 | Wald ratio | 1 | 0.03  | 0.11 | 0.815 | 1.03 | 0.83 | 1.27 |
| Hemorrhoids                                                                                                             | CD38 | Wald ratio | 1 | -0.02 | 0.09 | 0.815 | 0.98 | 0.82 | 1.16 |
| Schizophrenia                                                                                                           | CD38 | Wald ratio | 1 | 0.13  | 0.54 | 0.816 | 1.13 | 0.39 | 3.27 |
| Cellulitis and abscess of foot, toe                                                                                     | CD38 | Wald ratio | 1 | -0.04 | 0.18 | 0.816 | 0.96 | 0.68 | 1.36 |
| Gastrointestinal hemorrhage                                                                                             | CD38 | Wald ratio | 1 | -0.02 | 0.09 | 0.817 | 0.98 | 0.82 | 1.17 |
| Hemorrhage from gastrointestinal ulcer                                                                                  | CD38 | Wald ratio | 1 | -0.12 | 0.52 | 0.818 | 0.89 | 0.32 | 2.46 |
| Breast cancer                                                                                                           | CD38 | Wald ratio | 1 | -0.03 | 0.12 | 0.824 | 0.97 | 0.77 | 1.23 |
| Chronic liver disease and cirrhosis                                                                                     | CD38 | Wald ratio | 1 | -0.05 | 0.24 | 0.826 | 0.95 | 0.59 | 1.52 |
| Senile cataract                                                                                                         | CD38 | Wald ratio | 1 | -0.03 | 0.15 | 0.828 | 0.97 | 0.73 | 1.29 |
| Hemorrhage in early pregnancy                                                                                           | CD38 | Wald ratio | 1 | 0.09  | 0.40 | 0.830 | 1.09 | 0.50 | 2.38 |
| Other disorders of urethra and urinary tract                                                                            | CD38 | Wald ratio | 1 | 0.04  | 0.20 | 0.830 | 1.04 | 0.70 | 1.56 |
| Diseases of pancreas                                                                                                    | CD38 | Wald ratio | 1 | -0.05 | 0.25 | 0.830 | 0.95 | 0.58 | 1.55 |
| Primary angle-closure glaucoma                                                                                          | CD38 | Wald ratio | 1 | 0.10  | 0.49 | 0.831 | 1.11 | 0.43 | 2.89 |
| Cancer of larynx, pharynx, nasal cavities                                                                               | CD38 | Wald ratio | 1 | 0.11  | 0.51 | 0.831 | 1.12 | 0.41 | 3.06 |
| Pruritus and related conditions                                                                                         | CD38 | Wald ratio | 1 | -0.10 | 0.46 | 0.832 | 0.91 | 0.37 | 2.24 |
| Nonspecific abnormal findings on radiological and other examination of other intrathoracic organs (echocardiogram, etc) | CD38 | Wald ratio | 1 | -0.11 | 0.54 | 0.834 | 0.89 | 0.31 | 2.59 |
| Heart valve replaced                                                                                                    | CD38 | Wald ratio | 1 | 0.07  | 0.33 | 0.840 | 1.07 | 0.56 | 2.06 |
| Blood in stool                                                                                                          | CD38 | Wald ratio | 1 | -0.05 | 0.25 | 0.840 | 0.95 | 0.58 | 1.56 |
| Cancer of kidney and renal pelvis                                                                                       | CD38 | Wald ratio | 1 | -0.08 | 0.40 | 0.842 | 0.92 | 0.42 | 2.02 |
| Cardiac arrest and ventricular fibrillation                                                                             | CD38 | Wald ratio | 1 | 0.08  | 0.38 | 0.843 | 1.08 | 0.51 | 2.29 |
| Complication due to other implant and internal device                                                                   | CD38 | Wald ratio | 1 | -0.05 | 0.23 | 0.843 | 0.96 | 0.61 | 1.49 |
| Diseases of sebaceous glands                                                                                            | CD38 | Wald ratio | 1 | -0.03 | 0.14 | 0.844 | 0.97 | 0.74 | 1.28 |
| Chronic sinusitis                                                                                                       | CD38 | Wald ratio | 1 | 0.05  | 0.25 | 0.845 | 1.05 | 0.64 | 1.73 |
| Hemorrhage during pregnancy; childbirth and postpartum                                                                  | CD38 | Wald ratio | 1 | -0.06 | 0.30 | 0.846 | 0.94 | 0.52 | 1.70 |
| Inflammatory disease of breast                                                                                          | CD38 | Wald ratio | 1 | 0.09  | 0.48 | 0.846 | 1.10 | 0.43 | 2.82 |

|                                                            |      |            |   |       |      |       |      |      |      |
|------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Nevus, non-neoplastic                                      | CD38 | Wald ratio | 1 | -0.10 | 0.53 | 0.846 | 0.90 | 0.32 | 2.55 |
| Malignant neoplasm of testis                               | CD38 | Wald ratio | 1 | -0.05 | 0.24 | 0.847 | 0.95 | 0.60 | 1.53 |
| Diseases of the salivary glands                            | CD38 | Wald ratio | 1 | -0.09 | 0.48 | 0.847 | 0.91 | 0.35 | 2.35 |
| Altered mental status                                      | CD38 | Wald ratio | 1 | -0.05 | 0.28 | 0.847 | 0.95 | 0.55 | 1.63 |
| Cystic mastopathy                                          | CD38 | Wald ratio | 1 | 0.08  | 0.43 | 0.848 | 1.09 | 0.47 | 2.50 |
| Arterial embolism and thrombosis of lower extremity artery | CD38 | Wald ratio | 1 | 0.10  | 0.55 | 0.851 | 1.11 | 0.38 | 3.23 |
| Digestive congenital anomalies                             | CD38 | Wald ratio | 1 | -0.09 | 0.49 | 0.853 | 0.91 | 0.35 | 2.37 |
| Other paralytic syndromes                                  | CD38 | Wald ratio | 1 | -0.09 | 0.50 | 0.854 | 0.91 | 0.34 | 2.44 |
| Glaucoma                                                   | CD38 | Wald ratio | 1 | 0.03  | 0.20 | 0.861 | 1.03 | 0.70 | 1.52 |
| Musculoskeletal symptoms referable to limbs                | CD38 | Wald ratio | 1 | -0.03 | 0.18 | 0.862 | 0.97 | 0.69 | 1.37 |
| Pneumonia                                                  | CD38 | Wald ratio | 1 | -0.02 | 0.13 | 0.863 | 0.98 | 0.76 | 1.27 |
| Syncope and collapse                                       | CD38 | Wald ratio | 1 | -0.02 | 0.14 | 0.866 | 0.98 | 0.75 | 1.28 |
| Sebaceous cyst                                             | CD38 | Wald ratio | 1 | -0.02 | 0.14 | 0.867 | 0.98 | 0.74 | 1.28 |
| Miscarriage; stillbirth                                    | CD38 | Wald ratio | 1 | -0.03 | 0.19 | 0.868 | 0.97 | 0.67 | 1.40 |
| Epistaxis or throat hemorrhage                             | CD38 | Wald ratio | 1 | -0.04 | 0.26 | 0.869 | 0.96 | 0.57 | 1.60 |
| Urethral stricture (not specified as infectious)           | CD38 | Wald ratio | 1 | -0.04 | 0.23 | 0.869 | 0.96 | 0.62 | 1.50 |
| Ileostomy status                                           | CD38 | Wald ratio | 1 | 0.05  | 0.32 | 0.870 | 1.05 | 0.56 | 1.97 |
| Intracranial hemorrhage (injury)                           | CD38 | Wald ratio | 1 | 0.09  | 0.57 | 0.872 | 1.10 | 0.36 | 3.37 |
| Umbilical cord complications during labor and delivery     | CD38 | Wald ratio | 1 | -0.09 | 0.57 | 0.872 | 0.91 | 0.30 | 2.77 |
| Other disorders of soft tissues                            | CD38 | Wald ratio | 1 | 0.03  | 0.17 | 0.874 | 1.03 | 0.74 | 1.42 |
| Inguinal hernia                                            | CD38 | Wald ratio | 1 | 0.02  | 0.11 | 0.875 | 1.02 | 0.82 | 1.26 |
| Diseases of hair and hair follicles                        | CD38 | Wald ratio | 1 | -0.03 | 0.18 | 0.875 | 0.97 | 0.68 | 1.38 |
| Leukemia                                                   | CD38 | Wald ratio | 1 | 0.05  | 0.32 | 0.876 | 1.05 | 0.56 | 1.96 |
| Respiratory failure, insufficiency, arrest                 | CD38 | Wald ratio | 1 | 0.04  | 0.26 | 0.877 | 1.04 | 0.63 | 1.72 |
| Bipolar                                                    | CD38 | Wald ratio | 1 | -0.06 | 0.40 | 0.878 | 0.94 | 0.43 | 2.05 |
| Disorders of lacrimal system                               | CD38 | Wald ratio | 1 | 0.04  | 0.28 | 0.878 | 1.04 | 0.61 | 1.79 |

|                                                           |      |            |   |       |      |       |      |      |      |
|-----------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Constipation                                              | CD38 | Wald ratio | 1 | 0.02  | 0.13 | 0.878 | 1.02 | 0.79 | 1.32 |
| Poisoning by analgesics, antipyretics, and antirheumatics | CD38 | Wald ratio | 1 | -0.02 | 0.16 | 0.879 | 0.98 | 0.72 | 1.33 |
| Ulcer of esophagus                                        | CD38 | Wald ratio | 1 | 0.03  | 0.18 | 0.881 | 1.03 | 0.72 | 1.47 |
| Placenta previa and abruptio placenta                     | CD38 | Wald ratio | 1 | -0.06 | 0.37 | 0.881 | 0.95 | 0.46 | 1.96 |
| Benign neoplasm of unspecified sites                      | CD38 | Wald ratio | 1 | 0.04  | 0.26 | 0.884 | 1.04 | 0.62 | 1.74 |
| Orthostatic hypotension                                   | CD38 | Wald ratio | 1 | 0.05  | 0.35 | 0.885 | 1.05 | 0.53 | 2.10 |
| Complications of surgical and medical procedures          | CD38 | Wald ratio | 1 | -0.02 | 0.14 | 0.886 | 0.98 | 0.75 | 1.28 |
| Viral Enteritis                                           | CD38 | Wald ratio | 1 | -0.06 | 0.44 | 0.892 | 0.94 | 0.40 | 2.24 |
| Lymphadenitis                                             | CD38 | Wald ratio | 1 | -0.03 | 0.25 | 0.893 | 0.97 | 0.59 | 1.58 |
| Disorders of parathyroid gland                            | CD38 | Wald ratio | 1 | -0.06 | 0.44 | 0.893 | 0.94 | 0.40 | 2.22 |
| Other nonmalignant breast conditions                      | CD38 | Wald ratio | 1 | -0.04 | 0.29 | 0.899 | 0.96 | 0.54 | 1.71 |
| Convulsions                                               | CD38 | Wald ratio | 1 | -0.03 | 0.27 | 0.901 | 0.97 | 0.56 | 1.66 |
| Intracranial hemorrhage                                   | CD38 | Wald ratio | 1 | -0.04 | 0.31 | 0.906 | 0.96 | 0.53 | 1.76 |
| Intervertebral disc disorders                             | CD38 | Wald ratio | 1 | -0.02 | 0.14 | 0.909 | 0.98 | 0.75 | 1.29 |
| Disorders of adrenal glands                               | CD38 | Wald ratio | 1 | 0.06  | 0.51 | 0.909 | 1.06 | 0.39 | 2.88 |
| Other upper respiratory disease                           | CD38 | Wald ratio | 1 | 0.02  | 0.20 | 0.909 | 1.02 | 0.69 | 1.52 |
| Disease of tricuspid valve                                | CD38 | Wald ratio | 1 | -0.04 | 0.40 | 0.914 | 0.96 | 0.44 | 2.08 |
| Paroxysmal ventricular tachycardia                        | CD38 | Wald ratio | 1 | -0.04 | 0.42 | 0.916 | 0.96 | 0.42 | 2.19 |
| Nerve root and plexus disorders                           | CD38 | Wald ratio | 1 | -0.04 | 0.38 | 0.916 | 0.96 | 0.45 | 2.03 |
| Calculus of bile duct                                     | CD38 | Wald ratio | 1 | -0.03 | 0.25 | 0.918 | 0.97 | 0.59 | 1.60 |
| Periapical abscess                                        | CD38 | Wald ratio | 1 | -0.04 | 0.38 | 0.918 | 0.96 | 0.46 | 2.01 |
| Cervicalgia                                               | CD38 | Wald ratio | 1 | -0.03 | 0.31 | 0.918 | 0.97 | 0.53 | 1.76 |
| Acquired absence of breast                                | CD38 | Wald ratio | 1 | -0.03 | 0.27 | 0.921 | 0.97 | 0.58 | 1.64 |
| Congenital anomalies of great vessels                     | CD38 | Wald ratio | 1 | -0.03 | 0.31 | 0.921 | 0.97 | 0.53 | 1.77 |
| Fracture of tibia and fibula                              | CD38 | Wald ratio | 1 | 0.03  | 0.28 | 0.921 | 1.03 | 0.59 | 1.78 |
| Acute pharyngitis                                         | CD38 | Wald ratio | 1 | 0.04  | 0.44 | 0.922 | 1.04 | 0.44 | 2.46 |

|                                                               |      |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Other diseases of lung                                        | CD38 | Wald ratio | 1 | -0.05 | 0.46 | 0.923 | 0.96 | 0.39 | 2.37 |
| Pernicious anemia                                             | CD38 | Wald ratio | 1 | 0.05  | 0.47 | 0.923 | 1.05 | 0.42 | 2.64 |
| Swelling of limb                                              | CD38 | Wald ratio | 1 | -0.02 | 0.19 | 0.924 | 0.98 | 0.68 | 1.43 |
| Cervical intraepithelial neoplasia [CIN] [Cervical dysplasia] | CD38 | Wald ratio | 1 | 0.03  | 0.28 | 0.925 | 1.03 | 0.59 | 1.79 |
| Abdominal pain                                                | CD38 | Wald ratio | 1 | -0.01 | 0.07 | 0.927 | 0.99 | 0.87 | 1.13 |
| Overweight, obesity and other hyperalimentation               | CD38 | Wald ratio | 1 | 0.01  | 0.13 | 0.929 | 1.01 | 0.79 | 1.30 |
| Candidiasis                                                   | CD38 | Wald ratio | 1 | -0.02 | 0.28 | 0.930 | 0.98 | 0.56 | 1.69 |
| Corneal opacity and other disorders of cornea                 | CD38 | Wald ratio | 1 | 0.04  | 0.48 | 0.930 | 1.04 | 0.41 | 2.66 |
| Other mental disorder                                         | CD38 | Wald ratio | 1 | 0.01  | 0.08 | 0.934 | 1.01 | 0.86 | 1.18 |
| Chronic airway obstruction                                    | CD38 | Wald ratio | 1 | -0.01 | 0.13 | 0.934 | 0.99 | 0.77 | 1.28 |
| Other dyschromia                                              | CD38 | Wald ratio | 1 | -0.04 | 0.46 | 0.936 | 0.96 | 0.39 | 2.38 |
| Epilepsy, recurrent seizures, convulsions                     | CD38 | Wald ratio | 1 | 0.01  | 0.18 | 0.938 | 1.01 | 0.71 | 1.45 |
| Other forms of chronic heart disease                          | CD38 | Wald ratio | 1 | -0.02 | 0.31 | 0.940 | 0.98 | 0.54 | 1.78 |
| Malignant neoplasm of kidney, except pelvis                   | CD38 | Wald ratio | 1 | -0.03 | 0.41 | 0.942 | 0.97 | 0.44 | 2.16 |
| Thyrotoxicosis with or without goiter                         | CD38 | Wald ratio | 1 | -0.02 | 0.30 | 0.943 | 0.98 | 0.54 | 1.77 |
| Vitamin B-complex deficiencies                                | CD38 | Wald ratio | 1 | -0.03 | 0.47 | 0.945 | 0.97 | 0.38 | 2.44 |
| Other hypertrophic and atrophic conditions of skin            | CD38 | Wald ratio | 1 | 0.01  | 0.19 | 0.947 | 1.01 | 0.70 | 1.46 |
| Chronic tonsillitis and adenoiditis                           | CD38 | Wald ratio | 1 | -0.02 | 0.39 | 0.949 | 0.98 | 0.46 | 2.08 |
| Amblyopia                                                     | CD38 | Wald ratio | 1 | 0.03  | 0.56 | 0.951 | 1.03 | 0.35 | 3.08 |
| Chronic ulcer of skin                                         | CD38 | Wald ratio | 1 | -0.02 | 0.29 | 0.954 | 0.98 | 0.56 | 1.73 |
| Secondary malignant neoplasm of digestive systems             | CD38 | Wald ratio | 1 | 0.02  | 0.33 | 0.954 | 1.02 | 0.53 | 1.95 |
| Septicemia                                                    | CD38 | Wald ratio | 1 | -0.01 | 0.20 | 0.955 | 0.99 | 0.66 | 1.47 |
| Disorders of other cranial nerves                             | CD38 | Wald ratio | 1 | -0.02 | 0.35 | 0.958 | 0.98 | 0.50 | 1.94 |
| Symptoms of the muscles                                       | CD38 | Wald ratio | 1 | 0.03  | 0.49 | 0.959 | 1.03 | 0.39 | 2.67 |
| Ulceration of intestine                                       | CD38 | Wald ratio | 1 | -0.03 | 0.50 | 0.959 | 0.98 | 0.37 | 2.59 |
| Early or threatened labor; hemorrhage in early pregnancy      | CD38 | Wald ratio | 1 | 0.01  | 0.27 | 0.960 | 1.01 | 0.60 | 1.71 |

|                                                                |      |            |   |       |      |       |      |      |      |
|----------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Hypertrophy of female genital organs                           | CD38 | Wald ratio | 1 | 0.02  | 0.36 | 0.961 | 1.02 | 0.50 | 2.08 |
| Pain                                                           | CD38 | Wald ratio | 1 | -0.02 | 0.46 | 0.961 | 0.98 | 0.39 | 2.43 |
| Polyp of corpus uteri                                          | CD38 | Wald ratio | 1 | -0.01 | 0.15 | 0.963 | 0.99 | 0.74 | 1.33 |
| Dyschromia and Vitiligo                                        | CD38 | Wald ratio | 1 | 0.02  | 0.41 | 0.964 | 1.02 | 0.45 | 2.28 |
| Antepartum hemorrhage, abruptio placentae, and placenta previa | CD38 | Wald ratio | 1 | -0.02 | 0.45 | 0.964 | 0.98 | 0.41 | 2.35 |
| Endometriosis                                                  | CD38 | Wald ratio | 1 | -0.01 | 0.21 | 0.967 | 0.99 | 0.66 | 1.49 |
| Strabismus and other disorders of binocular eye movements      | CD38 | Wald ratio | 1 | 0.01  | 0.34 | 0.970 | 1.01 | 0.52 | 1.97 |
| Viral infection                                                | CD38 | Wald ratio | 1 | -0.01 | 0.24 | 0.972 | 0.99 | 0.61 | 1.60 |
| E. coli                                                        | CD38 | Wald ratio | 1 | 0.01  | 0.25 | 0.977 | 1.01 | 0.62 | 1.64 |
| Congenital anomalies of urinary system                         | CD38 | Wald ratio | 1 | 0.01  | 0.44 | 0.982 | 1.01 | 0.42 | 2.40 |
| Type 1 diabetes                                                | CD38 | Wald ratio | 1 | 0.00  | 0.25 | 0.985 | 1.00 | 0.61 | 1.65 |
| Other abnormality of urination                                 | CD38 | Wald ratio | 1 | 0.01  | 0.30 | 0.986 | 1.01 | 0.56 | 1.79 |
| Acute periodontitis                                            | CD38 | Wald ratio | 1 | 0.01  | 0.50 | 0.986 | 1.01 | 0.38 | 2.69 |
| Rheumatoid arthritis                                           | CD38 | Wald ratio | 1 | 0.00  | 0.20 | 0.987 | 1.00 | 0.68 | 1.48 |
| Purpura and other hemorrhagic conditions                       | CD38 | Wald ratio | 1 | 0.00  | 0.30 | 0.989 | 1.00 | 0.55 | 1.83 |
| Early onset of delivery                                        | CD38 | Wald ratio | 1 | -0.01 | 0.53 | 0.989 | 0.99 | 0.35 | 2.79 |
| Other cerebral degenerations                                   | CD38 | Wald ratio | 1 | 0.01  | 0.39 | 0.989 | 1.01 | 0.47 | 2.15 |
| Epilepsy                                                       | CD38 | Wald ratio | 1 | 0.00  | 0.43 | 0.996 | 1.00 | 0.43 | 2.31 |
| Rheumatoid arthritis and other inflammatory polyarthropathies  | CD38 | Wald ratio | 1 | 0.00  | 0.19 | 0.996 | 1.00 | 0.69 | 1.44 |

**Supplementary Table 7: Phenome-wide MR results for brain DGKQ.**

| outcome                                          | exposure | method     | nsnp | b     | se   | pval      | or    | or_lci95 | or_uci95 |
|--------------------------------------------------|----------|------------|------|-------|------|-----------|-------|----------|----------|
| Dysmenorrhea                                     | DGKQ     | Wald ratio | 1    | -2.14 | 0.67 | 1.423E-03 | 0.12  | 0.03     | 0.44     |
| Pain in joint                                    | DGKQ     | Wald ratio | 1    | 0.95  | 0.32 | 2.633E-03 | 2.59  | 1.39     | 4.82     |
| Internal derangement of knee                     | DGKQ     | Wald ratio | 1    | 0.69  | 0.23 | 3.191E-03 | 1.99  | 1.26     | 3.15     |
| Anaphylactic shock NOS                           | DGKQ     | Wald ratio | 1    | -3.31 | 1.20 | 5.683E-03 | 0.04  | 0.00     | 0.38     |
| Other arthropathies                              | DGKQ     | Wald ratio | 1    | 0.41  | 0.16 | 8.836E-03 | 1.51  | 1.11     | 2.05     |
| Ganglion and cyst of synovium, tendon, and bursa | DGKQ     | Wald ratio | 1    | 1.28  | 0.50 | 9.928E-03 | 3.61  | 1.36     | 9.58     |
| Acute gastritis                                  | DGKQ     | Wald ratio | 1    | 2.09  | 0.82 | 0.011     | 8.07  | 1.63     | 39.93    |
| Other disorders of synovium, tendon, and bursa   | DGKQ     | Wald ratio | 1    | 0.83  | 0.33 | 0.011     | 2.28  | 1.21     | 4.32     |
| Arthropathy NOS                                  | DGKQ     | Wald ratio | 1    | 0.41  | 0.16 | 0.011     | 1.50  | 1.10     | 2.06     |
| Tinnitus                                         | DGKQ     | Wald ratio | 1    | -3.06 | 1.24 | 0.013     | 0.05  | 0.00     | 0.53     |
| Unspecified diffuse connective tissue disease    | DGKQ     | Wald ratio | 1    | 1.32  | 0.54 | 0.014     | 3.74  | 1.30     | 10.76    |
| Unspecified monoarthritis                        | DGKQ     | Wald ratio | 1    | 0.57  | 0.23 | 0.015     | 1.77  | 1.12     | 2.80     |
| Poisoning by antibiotics                         | DGKQ     | Wald ratio | 1    | 0.52  | 0.21 | 0.016     | 1.68  | 1.10     | 2.56     |
| Congestive heart failure; nonhypertensive        | DGKQ     | Wald ratio | 1    | 0.92  | 0.39 | 0.018     | 2.51  | 1.17     | 5.37     |
| Calculus of kidney                               | DGKQ     | Wald ratio | 1    | -1.18 | 0.50 | 0.018     | 0.31  | 0.12     | 0.81     |
| Disorders of conjunctiva                         | DGKQ     | Wald ratio | 1    | 2.39  | 1.01 | 0.018     | 10.89 | 1.50     | 79.26    |
| Nonspecific chest pain                           | DGKQ     | Wald ratio | 1    | 0.39  | 0.17 | 0.020     | 1.48  | 1.07     | 2.07     |
| Acquired spondylolisthesis                       | DGKQ     | Wald ratio | 1    | 1.62  | 0.72 | 0.024     | 5.05  | 1.24     | 20.57    |
| Symptoms of the muscles                          | DGKQ     | Wald ratio | 1    | -2.38 | 1.06 | 0.025     | 0.09  | 0.01     | 0.74     |
| Benign mammary dysplasias                        | DGKQ     | Wald ratio | 1    | 1.09  | 0.49 | 0.025     | 2.97  | 1.14     | 7.71     |
| Allergy/adverse effect of penicillin             | DGKQ     | Wald ratio | 1    | 0.50  | 0.23 | 0.030     | 1.65  | 1.05     | 2.58     |
| Nausea and vomiting                              | DGKQ     | Wald ratio | 1    | 0.57  | 0.26 | 0.030     | 1.77  | 1.06     | 2.98     |
| Disorder of skin and subcutaneous tissue NOS     | DGKQ     | Wald ratio | 1    | 0.80  | 0.37 | 0.030     | 2.23  | 1.08     | 4.58     |
| Coagulation defects                              | DGKQ     | Wald ratio | 1    | -1.98 | 0.91 | 0.030     | 0.14  | 0.02     | 0.83     |

|                                                                                              |      |            |   |       |      |       |       |      |        |
|----------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|-------|------|--------|
| Asthma                                                                                       | DGKQ | Wald ratio | 1 | 0.40  | 0.19 | 0.032 | 1.49  | 1.03 | 2.14   |
| Displacement of intervertebral disc                                                          | DGKQ | Wald ratio | 1 | 2.64  | 1.24 | 0.033 | 14.01 | 1.24 | 157.93 |
| Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum | DGKQ | Wald ratio | 1 | 0.81  | 0.38 | 0.033 | 2.25  | 1.07 | 4.72   |
| Other conditions of brain                                                                    | DGKQ | Wald ratio | 1 | 1.57  | 0.74 | 0.034 | 4.82  | 1.13 | 20.55  |
| Disorders of menstruation and other abnormal bleeding from female genital tract              | DGKQ | Wald ratio | 1 | -0.47 | 0.22 | 0.035 | 0.62  | 0.40 | 0.97   |
| Glaucoma                                                                                     | DGKQ | Wald ratio | 1 | -0.89 | 0.42 | 0.035 | 0.41  | 0.18 | 0.94   |
| Other specified benign mammary dysplasias                                                    | DGKQ | Wald ratio | 1 | 2.22  | 1.06 | 0.036 | 9.23  | 1.16 | 73.50  |
| Atherosclerosis of the extremities                                                           | DGKQ | Wald ratio | 1 | 2.06  | 0.99 | 0.036 | 7.88  | 1.14 | 54.44  |
| Dyspareunia                                                                                  | DGKQ | Wald ratio | 1 | -1.70 | 0.81 | 0.037 | 0.18  | 0.04 | 0.90   |
| Staphylococcus infections                                                                    | DGKQ | Wald ratio | 1 | 1.04  | 0.50 | 0.038 | 2.83  | 1.06 | 7.54   |
| Mechanical complication of unspecified genitourinary device, implant, and graft              | DGKQ | Wald ratio | 1 | -1.64 | 0.80 | 0.039 | 0.19  | 0.04 | 0.92   |
| Heartburn                                                                                    | DGKQ | Wald ratio | 1 | 1.25  | 0.61 | 0.041 | 3.48  | 1.05 | 11.50  |
| Secondary malignant neoplasm                                                                 | DGKQ | Wald ratio | 1 | 0.60  | 0.29 | 0.041 | 1.82  | 1.02 | 3.23   |
| Hemorrhoids                                                                                  | DGKQ | Wald ratio | 1 | 0.39  | 0.19 | 0.042 | 1.48  | 1.01 | 2.14   |
| Symptoms concerning nutrition, metabolism, and development                                   | DGKQ | Wald ratio | 1 | 0.78  | 0.38 | 0.043 | 2.17  | 1.03 | 4.60   |
| Other acquired musculoskeletal deformity                                                     | DGKQ | Wald ratio | 1 | 1.28  | 0.64 | 0.044 | 3.61  | 1.03 | 12.62  |
| Other tests                                                                                  | DGKQ | Wald ratio | 1 | 0.73  | 0.37 | 0.045 | 2.08  | 1.02 | 4.27   |
| Megaloblastic anemia                                                                         | DGKQ | Wald ratio | 1 | -1.68 | 0.85 | 0.049 | 0.19  | 0.04 | 0.99   |
| Diffuse diseases of connective tissue                                                        | DGKQ | Wald ratio | 1 | 0.94  | 0.48 | 0.051 | 2.55  | 1.00 | 6.53   |
| Uterine/Uterovaginal prolapse                                                                | DGKQ | Wald ratio | 1 | 0.76  | 0.39 | 0.052 | 2.13  | 0.99 | 4.56   |
| Gangrene                                                                                     | DGKQ | Wald ratio | 1 | 2.32  | 1.19 | 0.052 | 10.13 | 0.98 | 104.46 |
| Disorders of muscle, ligament, and fascia                                                    | DGKQ | Wald ratio | 1 | 0.83  | 0.42 | 0.052 | 2.28  | 0.99 | 5.25   |
| Secondary malignancy of brain/spine                                                          | DGKQ | Wald ratio | 1 | 1.91  | 0.99 | 0.053 | 6.74  | 0.98 | 46.46  |

|                                                                                               |      |            |   |       |      |       |      |      |       |
|-----------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Poisoning/allergy of sulfonamides                                                             | DGKQ | Wald ratio | 1 | 1.82  | 0.95 | 0.054 | 6.20 | 0.97 | 39.53 |
| Peripheral enthesopathies and allied syndromes                                                | DGKQ | Wald ratio | 1 | 0.45  | 0.24 | 0.055 | 1.57 | 0.99 | 2.49  |
| Prolapse of vaginal walls                                                                     | DGKQ | Wald ratio | 1 | -0.63 | 0.33 | 0.057 | 0.53 | 0.28 | 1.02  |
| Heart failure NOS                                                                             | DGKQ | Wald ratio | 1 | 0.82  | 0.43 | 0.059 | 2.27 | 0.97 | 5.32  |
| Strabismus (not specified as paralytic)                                                       | DGKQ | Wald ratio | 1 | 1.74  | 0.92 | 0.059 | 5.70 | 0.93 | 34.76 |
| Pain and other symptoms associated with female genital organs                                 | DGKQ | Wald ratio | 1 | -0.97 | 0.52 | 0.061 | 0.38 | 0.14 | 1.04  |
| Cyst or abscess of Bartholin's gland                                                          | DGKQ | Wald ratio | 1 | 1.90  | 1.02 | 0.062 | 6.68 | 0.91 | 49.06 |
| Secondary malignant neoplasm of liver                                                         | DGKQ | Wald ratio | 1 | 1.02  | 0.55 | 0.064 | 2.76 | 0.94 | 8.09  |
| Abnormal findings on examination of urine                                                     | DGKQ | Wald ratio | 1 | -0.86 | 0.47 | 0.066 | 0.42 | 0.17 | 1.06  |
| Diabetic retinopathy                                                                          | DGKQ | Wald ratio | 1 | 1.40  | 0.77 | 0.067 | 4.07 | 0.91 | 18.30 |
| Pyelonephritis                                                                                | DGKQ | Wald ratio | 1 | -1.40 | 0.77 | 0.068 | 0.25 | 0.05 | 1.11  |
| Benign neoplasm of breast                                                                     | DGKQ | Wald ratio | 1 | 1.29  | 0.71 | 0.071 | 3.62 | 0.90 | 14.61 |
| Subarachnoid hemorrhage                                                                       | DGKQ | Wald ratio | 1 | 1.75  | 0.98 | 0.074 | 5.77 | 0.84 | 39.38 |
| Torus fracture                                                                                | DGKQ | Wald ratio | 1 | 1.21  | 0.69 | 0.077 | 3.36 | 0.88 | 12.87 |
| Cataract                                                                                      | DGKQ | Wald ratio | 1 | 0.37  | 0.21 | 0.077 | 1.44 | 0.96 | 2.17  |
| Nonspecific abnormal findings on radiological and other examination of musculoskeletal system | DGKQ | Wald ratio | 1 | 1.86  | 1.06 | 0.078 | 6.42 | 0.81 | 50.88 |
| Paroxysmal ventricular tachycardia                                                            | DGKQ | Wald ratio | 1 | 1.61  | 0.92 | 0.079 | 4.99 | 0.83 | 30.10 |
| Varicose veins of lower extremity, symptomatic                                                | DGKQ | Wald ratio | 1 | 1.94  | 1.11 | 0.080 | 6.99 | 0.80 | 61.37 |
| Genitourinary congenital anomalies                                                            | DGKQ | Wald ratio | 1 | 1.22  | 0.70 | 0.080 | 3.40 | 0.86 | 13.40 |
| Cancer of larynx, pharynx, nasal cavities                                                     | DGKQ | Wald ratio | 1 | -1.94 | 1.11 | 0.081 | 0.14 | 0.02 | 1.27  |
| Fracture of tibia and fibula                                                                  | DGKQ | Wald ratio | 1 | 1.05  | 0.60 | 0.082 | 2.86 | 0.87 | 9.36  |
| Symptoms and disorders of the joints                                                          | DGKQ | Wald ratio | 1 | 0.80  | 0.46 | 0.083 | 2.23 | 0.90 | 5.54  |
| Other deficiency anemia                                                                       | DGKQ | Wald ratio | 1 | -1.44 | 0.83 | 0.083 | 0.24 | 0.05 | 1.21  |
| Chronic pancreatitis                                                                          | DGKQ | Wald ratio | 1 | -2.14 | 1.24 | 0.084 | 0.12 | 0.01 | 1.33  |
| Senile cataract                                                                               | DGKQ | Wald ratio | 1 | 0.54  | 0.32 | 0.085 | 1.72 | 0.93 | 3.20  |

|                                                                                                                         |      |            |   |       |      |       |      |      |       |
|-------------------------------------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Aneurysm and dissection of heart                                                                                        | DGKQ | Wald ratio | 1 | -1.80 | 1.06 | 0.088 | 0.17 | 0.02 | 1.31  |
| Syncope and collapse                                                                                                    | DGKQ | Wald ratio | 1 | 0.50  | 0.30 | 0.091 | 1.65 | 0.92 | 2.96  |
| Nonspecific abnormal findings on radiological and other examination of other intrathoracic organs (echocardiogram, etc) | DGKQ | Wald ratio | 1 | 1.98  | 1.17 | 0.092 | 7.24 | 0.73 | 72.23 |
| Diseases of white blood cells                                                                                           | DGKQ | Wald ratio | 1 | -0.76 | 0.45 | 0.092 | 0.47 | 0.19 | 1.13  |
| Irregular menstrual bleeding                                                                                            | DGKQ | Wald ratio | 1 | -0.78 | 0.46 | 0.092 | 0.46 | 0.19 | 1.14  |
| Joint effusions                                                                                                         | DGKQ | Wald ratio | 1 | 1.24  | 0.74 | 0.095 | 3.44 | 0.81 | 14.65 |
| Cholelithiasis with other cholecystitis                                                                                 | DGKQ | Wald ratio | 1 | -0.64 | 0.39 | 0.096 | 0.53 | 0.25 | 1.12  |
| Fracture of clavicle or scapula                                                                                         | DGKQ | Wald ratio | 1 | 1.19  | 0.72 | 0.096 | 3.30 | 0.81 | 13.44 |
| Contracture of palmar fascia [Dupuytren's disease]                                                                      | DGKQ | Wald ratio | 1 | 0.80  | 0.48 | 0.097 | 2.23 | 0.86 | 5.73  |
| Disease of tricuspid valve                                                                                              | DGKQ | Wald ratio | 1 | 1.42  | 0.86 | 0.099 | 4.12 | 0.77 | 22.14 |
| Congestive heart failure (CHF) NOS                                                                                      | DGKQ | Wald ratio | 1 | 1.03  | 0.63 | 0.100 | 2.80 | 0.82 | 9.52  |
| Other disorders of male genital organs                                                                                  | DGKQ | Wald ratio | 1 | 0.87  | 0.53 | 0.102 | 2.38 | 0.84 | 6.70  |
| Enthesopathy                                                                                                            | DGKQ | Wald ratio | 1 | 0.47  | 0.29 | 0.103 | 1.61 | 0.91 | 2.84  |
| Other diseases of blood and blood-forming organs                                                                        | DGKQ | Wald ratio | 1 | 0.70  | 0.44 | 0.106 | 2.02 | 0.86 | 4.75  |
| Burns                                                                                                                   | DGKQ | Wald ratio | 1 | -1.87 | 1.16 | 0.107 | 0.15 | 0.02 | 1.50  |
| Urinary tract infection                                                                                                 | DGKQ | Wald ratio | 1 | -0.41 | 0.25 | 0.108 | 0.67 | 0.41 | 1.09  |
| Neuralgia, neuritis, and radiculitis NOS                                                                                | DGKQ | Wald ratio | 1 | -1.31 | 0.81 | 0.108 | 0.27 | 0.05 | 1.34  |
| Secondary malignancy of respiratory organs                                                                              | DGKQ | Wald ratio | 1 | 0.95  | 0.60 | 0.110 | 2.60 | 0.80 | 8.37  |
| Lipoma of skin and subcutaneous tissue                                                                                  | DGKQ | Wald ratio | 1 | -0.66 | 0.42 | 0.111 | 0.52 | 0.23 | 1.16  |
| Dysuria                                                                                                                 | DGKQ | Wald ratio | 1 | 1.27  | 0.81 | 0.115 | 3.57 | 0.73 | 17.33 |
| Cervical cancer                                                                                                         | DGKQ | Wald ratio | 1 | -1.09 | 0.69 | 0.116 | 0.34 | 0.09 | 1.31  |
| Secondary hypothyroidism                                                                                                | DGKQ | Wald ratio | 1 | -1.32 | 0.84 | 0.116 | 0.27 | 0.05 | 1.39  |
| Secondary malignancy of bone                                                                                            | DGKQ | Wald ratio | 1 | 0.94  | 0.60 | 0.117 | 2.57 | 0.79 | 8.37  |
| Cellulitis and abscess of trunk                                                                                         | DGKQ | Wald ratio | 1 | -1.78 | 1.14 | 0.119 | 0.17 | 0.02 | 1.58  |
| Acute periodontitis                                                                                                     | DGKQ | Wald ratio | 1 | 1.68  | 1.08 | 0.121 | 5.36 | 0.64 | 44.75 |

|                                                                  |      |            |   |       |      |       |      |      |       |
|------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Pruritus and related conditions                                  | DGKQ | Wald ratio | 1 | -1.54 | 1.00 | 0.123 | 0.22 | 0.03 | 1.52  |
| Other venous embolism and thrombosis                             | DGKQ | Wald ratio | 1 | 1.80  | 1.18 | 0.127 | 6.05 | 0.60 | 61.05 |
| Other benign neoplasm of connective and other soft tissue        | DGKQ | Wald ratio | 1 | -1.27 | 0.84 | 0.129 | 0.28 | 0.05 | 1.45  |
| Congenital anomalies of genital organs                           | DGKQ | Wald ratio | 1 | 1.57  | 1.04 | 0.129 | 4.82 | 0.63 | 36.74 |
| Other disorders of cervical region                               | DGKQ | Wald ratio | 1 | -1.85 | 1.22 | 0.131 | 0.16 | 0.01 | 1.73  |
| Fracture of lower limb                                           | DGKQ | Wald ratio | 1 | 0.50  | 0.33 | 0.131 | 1.65 | 0.86 | 3.17  |
| Pulmonary heart disease                                          | DGKQ | Wald ratio | 1 | 0.65  | 0.43 | 0.134 | 1.91 | 0.82 | 4.46  |
| Chronic pulmonary heart disease                                  | DGKQ | Wald ratio | 1 | 1.72  | 1.15 | 0.136 | 5.56 | 0.58 | 53.05 |
| Diseases of pancreas                                             | DGKQ | Wald ratio | 1 | -0.80 | 0.54 | 0.139 | 0.45 | 0.15 | 1.30  |
| Inguinal hernia                                                  | DGKQ | Wald ratio | 1 | -0.35 | 0.24 | 0.141 | 0.71 | 0.44 | 1.12  |
| Miscarriage; stillbirth                                          | DGKQ | Wald ratio | 1 | 0.60  | 0.41 | 0.142 | 1.82 | 0.82 | 4.05  |
| Inflammatory bowel disease and other gastroenteritis and colitis | DGKQ | Wald ratio | 1 | 0.61  | 0.42 | 0.147 | 1.85 | 0.81 | 4.22  |
| Primary/intrinsic cardiomyopathies                               | DGKQ | Wald ratio | 1 | 1.17  | 0.81 | 0.148 | 3.22 | 0.66 | 15.67 |
| Cardiomyopathy                                                   | DGKQ | Wald ratio | 1 | 1.15  | 0.80 | 0.149 | 3.15 | 0.66 | 14.99 |
| Fasciitis                                                        | DGKQ | Wald ratio | 1 | 0.66  | 0.46 | 0.150 | 1.94 | 0.79 | 4.77  |
| Pernicious anemia                                                | DGKQ | Wald ratio | 1 | -1.46 | 1.02 | 0.151 | 0.23 | 0.03 | 1.71  |
| Other congenital musculoskeletal anomalies                       | DGKQ | Wald ratio | 1 | 1.64  | 1.15 | 0.152 | 5.18 | 0.55 | 49.02 |
| Epilepsy, recurrent seizures, convulsions                        | DGKQ | Wald ratio | 1 | 0.57  | 0.40 | 0.153 | 1.76 | 0.81 | 3.83  |
| Primary angle-closure glaucoma                                   | DGKQ | Wald ratio | 1 | -1.50 | 1.05 | 0.155 | 0.22 | 0.03 | 1.76  |
| Contusion                                                        | DGKQ | Wald ratio | 1 | -1.02 | 0.72 | 0.159 | 0.36 | 0.09 | 1.49  |
| Vascular hamartomas and non-neoplastic nevi                      | DGKQ | Wald ratio | 1 | 1.55  | 1.10 | 0.159 | 4.70 | 0.55 | 40.53 |
| Postinflammatory pulmonary fibrosis                              | DGKQ | Wald ratio | 1 | -1.32 | 0.94 | 0.160 | 0.27 | 0.04 | 1.68  |
| Nasal polyps                                                     | DGKQ | Wald ratio | 1 | -0.69 | 0.49 | 0.160 | 0.50 | 0.19 | 1.31  |
| Osteoarthritis                                                   | DGKQ | Wald ratio | 1 | 0.25  | 0.18 | 0.161 | 1.29 | 0.91 | 1.82  |
| Coronary atherosclerosis                                         | DGKQ | Wald ratio | 1 | -0.30 | 0.22 | 0.162 | 0.74 | 0.48 | 1.13  |
| Strabismus and other disorders of binocular eye movements        | DGKQ | Wald ratio | 1 | 1.02  | 0.74 | 0.164 | 2.78 | 0.66 | 11.77 |

|                                                                 |      |            |   |       |      |       |      |      |       |
|-----------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Bacterial enteritis                                             | DGKQ | Wald ratio | 1 | 0.74  | 0.54 | 0.164 | 2.10 | 0.74 | 6.01  |
| Cellulitis and abscess of arm/hand                              | DGKQ | Wald ratio | 1 | 0.53  | 0.38 | 0.165 | 1.69 | 0.81 | 3.56  |
| Other specified cardiac dysrhythmias                            | DGKQ | Wald ratio | 1 | 0.69  | 0.49 | 0.166 | 1.98 | 0.75 | 5.23  |
| Other headache syndromes                                        | DGKQ | Wald ratio | 1 | 0.44  | 0.32 | 0.166 | 1.56 | 0.83 | 2.92  |
| Rupture of synovium                                             | DGKQ | Wald ratio | 1 | 1.58  | 1.14 | 0.166 | 4.87 | 0.52 | 45.95 |
| Stiffness of joint                                              | DGKQ | Wald ratio | 1 | 1.55  | 1.12 | 0.169 | 4.70 | 0.52 | 42.59 |
| Decreased white blood cell count                                | DGKQ | Wald ratio | 1 | -0.68 | 0.50 | 0.170 | 0.51 | 0.19 | 1.34  |
| Neutropenia                                                     | DGKQ | Wald ratio | 1 | -0.68 | 0.50 | 0.170 | 0.51 | 0.19 | 1.34  |
| Reflux esophagitis                                              | DGKQ | Wald ratio | 1 | 0.38  | 0.28 | 0.172 | 1.46 | 0.85 | 2.53  |
| Other ill-defined and unknown causes of morbidity and mortality | DGKQ | Wald ratio | 1 | -0.31 | 0.23 | 0.173 | 0.73 | 0.47 | 1.15  |
| Lipoma                                                          | DGKQ | Wald ratio | 1 | -0.48 | 0.35 | 0.174 | 0.62 | 0.31 | 1.24  |
| Precordial pain                                                 | DGKQ | Wald ratio | 1 | 0.64  | 0.47 | 0.175 | 1.89 | 0.75 | 4.76  |
| Superficial cellulitis and abscess                              | DGKQ | Wald ratio | 1 | 0.44  | 0.33 | 0.178 | 1.56 | 0.82 | 2.97  |
| Bronchitis                                                      | DGKQ | Wald ratio | 1 | 1.49  | 1.11 | 0.181 | 4.43 | 0.50 | 39.08 |
| Diseases of sebaceous glands                                    | DGKQ | Wald ratio | 1 | -0.40 | 0.30 | 0.182 | 0.67 | 0.37 | 1.21  |
| Cancer of other lymphoid, histiocytic tissue                    | DGKQ | Wald ratio | 1 | 0.79  | 0.59 | 0.182 | 2.19 | 0.69 | 6.96  |
| Diseases of the larynx and vocal cords                          | DGKQ | Wald ratio | 1 | -0.72 | 0.54 | 0.186 | 0.49 | 0.17 | 1.42  |
| Other disorders of bone and cartilage                           | DGKQ | Wald ratio | 1 | 0.60  | 0.46 | 0.186 | 1.83 | 0.75 | 4.46  |
| Irregular menstrual cycle/bleeding                              | DGKQ | Wald ratio | 1 | -0.31 | 0.24 | 0.189 | 0.73 | 0.46 | 1.17  |
| Emphysema                                                       | DGKQ | Wald ratio | 1 | -0.89 | 0.68 | 0.189 | 0.41 | 0.11 | 1.55  |
| Crystal arthropathies                                           | DGKQ | Wald ratio | 1 | 1.48  | 1.13 | 0.190 | 4.37 | 0.48 | 39.81 |
| Hemorrhage of gastrointestinal tract                            | DGKQ | Wald ratio | 1 | -0.50 | 0.39 | 0.192 | 0.60 | 0.28 | 1.29  |
| Other mental disorder                                           | DGKQ | Wald ratio | 1 | 0.23  | 0.18 | 0.192 | 1.26 | 0.89 | 1.79  |
| Intracranial hemorrhage                                         | DGKQ | Wald ratio | 1 | 0.86  | 0.66 | 0.193 | 2.37 | 0.65 | 8.68  |
| Back pain                                                       | DGKQ | Wald ratio | 1 | 0.35  | 0.27 | 0.193 | 1.42 | 0.84 | 2.41  |
| Viral warts & HPV                                               | DGKQ | Wald ratio | 1 | -1.14 | 0.88 | 0.194 | 0.32 | 0.06 | 1.79  |

|                                                         |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Cancer of brain and nervous system                      | DGKQ | Wald ratio | 1 | -1.57 | 1.21 | 0.195 | 0.21 | 0.02 | 2.23  |
| Poisoning by other anti-infectives                      | DGKQ | Wald ratio | 1 | 1.02  | 0.79 | 0.196 | 2.77 | 0.59 | 13.03 |
| Malposition and malpresentation of fetus or obstruction | DGKQ | Wald ratio | 1 | -0.90 | 0.70 | 0.197 | 0.41 | 0.10 | 1.59  |
| Symptoms involving female genital tract                 | DGKQ | Wald ratio | 1 | 0.45  | 0.35 | 0.198 | 1.57 | 0.79 | 3.13  |
| Palpitations                                            | DGKQ | Wald ratio | 1 | -0.59 | 0.46 | 0.199 | 0.56 | 0.23 | 1.36  |
| Disorders of uterus, NEC                                | DGKQ | Wald ratio | 1 | -0.62 | 0.49 | 0.201 | 0.54 | 0.21 | 1.39  |
| Cyst of kidney, acquired                                | DGKQ | Wald ratio | 1 | 1.01  | 0.79 | 0.201 | 2.74 | 0.59 | 12.80 |
| Noninflammatory disorders of vulva and perineum         | DGKQ | Wald ratio | 1 | 0.97  | 0.76 | 0.202 | 2.65 | 0.59 | 11.84 |
| Curvature of spine                                      | DGKQ | Wald ratio | 1 | -1.06 | 0.83 | 0.202 | 0.35 | 0.07 | 1.77  |
| Mucous polyp of cervix                                  | DGKQ | Wald ratio | 1 | 0.61  | 0.48 | 0.202 | 1.84 | 0.72 | 4.72  |
| Nonspecific findings on examination of blood            | DGKQ | Wald ratio | 1 | 0.45  | 0.35 | 0.203 | 1.56 | 0.79 | 3.11  |
| Diseases of hair and hair follicles                     | DGKQ | Wald ratio | 1 | -0.49 | 0.39 | 0.204 | 0.61 | 0.29 | 1.31  |
| Diseases of esophagus                                   | DGKQ | Wald ratio | 1 | 0.20  | 0.16 | 0.207 | 1.22 | 0.89 | 1.68  |
| Neoplasm of uncertain behavior                          | DGKQ | Wald ratio | 1 | 0.93  | 0.74 | 0.211 | 2.53 | 0.59 | 10.87 |
| Hypertrophy of female genital organs                    | DGKQ | Wald ratio | 1 | 0.99  | 0.79 | 0.211 | 2.68 | 0.57 | 12.52 |
| Esophagitis, GERD and related diseases                  | DGKQ | Wald ratio | 1 | 0.21  | 0.17 | 0.214 | 1.23 | 0.89 | 1.71  |
| Polyp of corpus uteri                                   | DGKQ | Wald ratio | 1 | -0.40 | 0.32 | 0.216 | 0.67 | 0.36 | 1.26  |
| Noninflammatory disorders of cervix                     | DGKQ | Wald ratio | 1 | 0.65  | 0.53 | 0.219 | 1.91 | 0.68 | 5.36  |
| Lymphadenitis                                           | DGKQ | Wald ratio | 1 | 0.67  | 0.55 | 0.221 | 1.95 | 0.67 | 5.69  |
| Chondrocalcinosis                                       | DGKQ | Wald ratio | 1 | 1.44  | 1.18 | 0.223 | 4.22 | 0.42 | 42.69 |
| Cellulitis and abscess of foot, toe                     | DGKQ | Wald ratio | 1 | 0.46  | 0.38 | 0.223 | 1.59 | 0.75 | 3.35  |
| Rash and other nonspecific skin eruption                | DGKQ | Wald ratio | 1 | 0.73  | 0.60 | 0.226 | 2.07 | 0.64 | 6.72  |
| Other disorders of eyelids                              | DGKQ | Wald ratio | 1 | 0.45  | 0.37 | 0.227 | 1.57 | 0.76 | 3.26  |
| Synovitis and tenosynovitis                             | DGKQ | Wald ratio | 1 | 0.64  | 0.53 | 0.234 | 1.89 | 0.66 | 5.38  |
| Occlusion and stenosis of precerebral arteries          | DGKQ | Wald ratio | 1 | -0.96 | 0.81 | 0.236 | 0.38 | 0.08 | 1.88  |
| Nerve root and plexus disorders                         | DGKQ | Wald ratio | 1 | 0.98  | 0.83 | 0.236 | 2.67 | 0.53 | 13.55 |

|                                                |      |            |   |       |      |       |      |      |       |
|------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Fracture of foot                               | DGKQ | Wald ratio | 1 | 0.78  | 0.66 | 0.237 | 2.17 | 0.60 | 7.84  |
| Malignant neoplasm, other                      | DGKQ | Wald ratio | 1 | -0.27 | 0.22 | 0.237 | 0.77 | 0.49 | 1.19  |
| Type 2 diabetes with ophthalmic manifestations | DGKQ | Wald ratio | 1 | 0.92  | 0.78 | 0.238 | 2.51 | 0.54 | 11.54 |
| Duodenitis                                     | DGKQ | Wald ratio | 1 | 0.39  | 0.33 | 0.238 | 1.47 | 0.78 | 2.79  |
| Cardiac pacemaker in situ                      | DGKQ | Wald ratio | 1 | 0.69  | 0.59 | 0.244 | 1.99 | 0.63 | 6.30  |
| Other retinal disorders                        | DGKQ | Wald ratio | 1 | 0.52  | 0.45 | 0.245 | 1.69 | 0.70 | 4.08  |
| Calculus of ureter                             | DGKQ | Wald ratio | 1 | 0.67  | 0.57 | 0.246 | 1.95 | 0.63 | 6.01  |
| Urinary incontinence                           | DGKQ | Wald ratio | 1 | 0.35  | 0.31 | 0.247 | 1.42 | 0.78 | 2.60  |
| Urinary calculus                               | DGKQ | Wald ratio | 1 | -0.40 | 0.35 | 0.251 | 0.67 | 0.34 | 1.33  |
| Fracture of ankle and foot                     | DGKQ | Wald ratio | 1 | 0.67  | 0.58 | 0.252 | 1.95 | 0.62 | 6.10  |
| Aortic aneurysm                                | DGKQ | Wald ratio | 1 | 0.85  | 0.75 | 0.258 | 2.35 | 0.54 | 10.32 |
| Secondary malignancy of lymph nodes            | DGKQ | Wald ratio | 1 | 0.44  | 0.39 | 0.258 | 1.55 | 0.73 | 3.29  |
| Other complications of pregnancy NEC           | DGKQ | Wald ratio | 1 | -0.69 | 0.61 | 0.259 | 0.50 | 0.15 | 1.66  |
| Sebaceous cyst                                 | DGKQ | Wald ratio | 1 | -0.34 | 0.30 | 0.260 | 0.71 | 0.39 | 1.29  |
| Endometriosis                                  | DGKQ | Wald ratio | 1 | -0.50 | 0.45 | 0.262 | 0.60 | 0.25 | 1.46  |
| Ulcer of esophagus                             | DGKQ | Wald ratio | 1 | -0.44 | 0.39 | 0.262 | 0.64 | 0.30 | 1.39  |
| Cellulitis and abscess of face/neck            | DGKQ | Wald ratio | 1 | 1.36  | 1.22 | 0.268 | 3.88 | 0.35 | 42.72 |
| Other abnormal blood chemistry                 | DGKQ | Wald ratio | 1 | 0.39  | 0.36 | 0.268 | 1.48 | 0.74 | 2.98  |
| Bipolar                                        | DGKQ | Wald ratio | 1 | -0.95 | 0.86 | 0.269 | 0.39 | 0.07 | 2.08  |
| Suppurative and unspecified otitis media       | DGKQ | Wald ratio | 1 | -1.05 | 0.96 | 0.273 | 0.35 | 0.05 | 2.28  |
| Raynaud's syndrome                             | DGKQ | Wald ratio | 1 | 0.90  | 0.83 | 0.274 | 2.47 | 0.49 | 12.49 |
| Kyphoscoliosis and scoliosis                   | DGKQ | Wald ratio | 1 | -0.94 | 0.86 | 0.275 | 0.39 | 0.07 | 2.11  |
| Anorexia                                       | DGKQ | Wald ratio | 1 | -1.05 | 0.96 | 0.278 | 0.35 | 0.05 | 2.32  |
| Pericarditis                                   | DGKQ | Wald ratio | 1 | -0.85 | 0.78 | 0.280 | 0.43 | 0.09 | 1.99  |
| Osteoarthritis, generalized                    | DGKQ | Wald ratio | 1 | 1.24  | 1.14 | 0.280 | 3.44 | 0.37 | 32.37 |
| Ingrowing nail                                 | DGKQ | Wald ratio | 1 | -0.97 | 0.90 | 0.280 | 0.38 | 0.06 | 2.21  |

|                                                                                          |      |            |   |       |      |       |      |      |       |
|------------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue     | DGKQ | Wald ratio | 1 | 0.48  | 0.45 | 0.284 | 1.62 | 0.67 | 3.90  |
| Gout and other crystal arthropathies                                                     | DGKQ | Wald ratio | 1 | 0.49  | 0.46 | 0.286 | 1.64 | 0.66 | 4.04  |
| Cellulitis and abscess of leg, except foot                                               | DGKQ | Wald ratio | 1 | 0.40  | 0.38 | 0.286 | 1.50 | 0.71 | 3.15  |
| Open wounds of head; neck; and trunk                                                     | DGKQ | Wald ratio | 1 | -0.48 | 0.45 | 0.286 | 0.62 | 0.25 | 1.50  |
| Cardiac pacemaker/device in situ                                                         | DGKQ | Wald ratio | 1 | 0.60  | 0.57 | 0.287 | 1.83 | 0.60 | 5.53  |
| Abdominal hernia                                                                         | DGKQ | Wald ratio | 1 | -0.15 | 0.14 | 0.289 | 0.86 | 0.66 | 1.13  |
| Other unspecified back disorders                                                         | DGKQ | Wald ratio | 1 | -0.74 | 0.70 | 0.291 | 0.48 | 0.12 | 1.88  |
| Endocarditis                                                                             | DGKQ | Wald ratio | 1 | 1.12  | 1.06 | 0.292 | 3.07 | 0.38 | 24.70 |
| Adverse effects of sedatives or other central nervous system depressants and anesthetics | DGKQ | Wald ratio | 1 | 1.21  | 1.15 | 0.293 | 3.36 | 0.35 | 32.13 |
| Fever of unknown origin                                                                  | DGKQ | Wald ratio | 1 | 0.47  | 0.45 | 0.293 | 1.60 | 0.67 | 3.82  |
| Other cerebral degenerations                                                             | DGKQ | Wald ratio | 1 | -0.88 | 0.84 | 0.294 | 0.41 | 0.08 | 2.15  |
| Ulcerative colitis                                                                       | DGKQ | Wald ratio | 1 | 0.52  | 0.50 | 0.299 | 1.68 | 0.63 | 4.50  |
| Other signs and symptoms in breast                                                       | DGKQ | Wald ratio | 1 | 1.09  | 1.06 | 0.301 | 2.98 | 0.38 | 23.63 |
| Other nonmalignant breast conditions                                                     | DGKQ | Wald ratio | 1 | 0.65  | 0.63 | 0.302 | 1.92 | 0.56 | 6.66  |
| Liver abscess and sequelae of chronic liver disease                                      | DGKQ | Wald ratio | 1 | -0.93 | 0.91 | 0.304 | 0.39 | 0.07 | 2.33  |
| Irritable Bowel Syndrome                                                                 | DGKQ | Wald ratio | 1 | 0.39  | 0.38 | 0.310 | 1.48 | 0.70 | 3.12  |
| Sarcoidosis                                                                              | DGKQ | Wald ratio | 1 | -1.21 | 1.20 | 0.311 | 0.30 | 0.03 | 3.10  |
| Menopausal and postmenopausal disorders                                                  | DGKQ | Wald ratio | 1 | 0.28  | 0.28 | 0.313 | 1.32 | 0.77 | 2.29  |
| Manligant and unknown neoplasms of brain and nervous system                              | DGKQ | Wald ratio | 1 | -1.10 | 1.09 | 0.314 | 0.33 | 0.04 | 2.83  |
| Chronic periodontitis                                                                    | DGKQ | Wald ratio | 1 | -1.18 | 1.18 | 0.317 | 0.31 | 0.03 | 3.10  |
| Stricture of artery                                                                      | DGKQ | Wald ratio | 1 | 0.95  | 0.95 | 0.318 | 2.58 | 0.40 | 16.52 |
| Flatulence                                                                               | DGKQ | Wald ratio | 1 | 0.68  | 0.68 | 0.318 | 1.98 | 0.52 | 7.54  |
| Pain in limb                                                                             | DGKQ | Wald ratio | 1 | 0.35  | 0.36 | 0.322 | 1.42 | 0.71 | 2.87  |
| Acute pancreatitis                                                                       | DGKQ | Wald ratio | 1 | -0.62 | 0.63 | 0.323 | 0.54 | 0.16 | 1.84  |

|                                                                 |      |            |   |       |      |       |      |      |       |
|-----------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Stricture/obstruction of ureter                                 | DGKQ | Wald ratio | 1 | -0.90 | 0.92 | 0.327 | 0.40 | 0.07 | 2.47  |
| Degeneration of intervertebral disc                             | DGKQ | Wald ratio | 1 | -0.51 | 0.53 | 0.331 | 0.60 | 0.21 | 1.69  |
| Abnormal involuntary movements                                  | DGKQ | Wald ratio | 1 | 0.91  | 0.94 | 0.331 | 2.49 | 0.40 | 15.60 |
| Essential hypertension                                          | DGKQ | Wald ratio | 1 | 0.12  | 0.13 | 0.331 | 1.13 | 0.88 | 1.45  |
| Ulcerative colitis (chronic)                                    | DGKQ | Wald ratio | 1 | 1.17  | 1.21 | 0.335 | 3.21 | 0.30 | 34.56 |
| Hypertensive heart and/or renal disease                         | DGKQ | Wald ratio | 1 | -0.65 | 0.68 | 0.336 | 0.52 | 0.14 | 1.96  |
| Chronic pharyngitis and nasopharyngitis                         | DGKQ | Wald ratio | 1 | 0.87  | 0.90 | 0.337 | 2.38 | 0.41 | 13.89 |
| Osteomyelitis                                                   | DGKQ | Wald ratio | 1 | -1.12 | 1.17 | 0.338 | 0.33 | 0.03 | 3.23  |
| Chronic cystitis                                                | DGKQ | Wald ratio | 1 | -0.89 | 0.93 | 0.341 | 0.41 | 0.07 | 2.56  |
| Osteoarthritis; localized                                       | DGKQ | Wald ratio | 1 | 0.21  | 0.22 | 0.342 | 1.23 | 0.80 | 1.90  |
| Noninflammatory disorders of vagina                             | DGKQ | Wald ratio | 1 | -0.63 | 0.67 | 0.342 | 0.53 | 0.14 | 1.96  |
| Respiratory abnormalities                                       | DGKQ | Wald ratio | 1 | 1.07  | 1.13 | 0.344 | 2.92 | 0.32 | 26.89 |
| Congenital anomalies of urinary system                          | DGKQ | Wald ratio | 1 | 0.90  | 0.96 | 0.345 | 2.47 | 0.38 | 16.09 |
| Myeloproliferative disease                                      | DGKQ | Wald ratio | 1 | -0.84 | 0.89 | 0.346 | 0.43 | 0.08 | 2.47  |
| Atherosclerosis                                                 | DGKQ | Wald ratio | 1 | 0.73  | 0.77 | 0.347 | 2.07 | 0.46 | 9.41  |
| Osteoarthritis NOS                                              | DGKQ | Wald ratio | 1 | 0.24  | 0.26 | 0.347 | 1.28 | 0.77 | 2.12  |
| Osteomyelitis, periostitis, and other infections involving bone | DGKQ | Wald ratio | 1 | -1.06 | 1.13 | 0.348 | 0.35 | 0.04 | 3.16  |
| Stricture and stenosis of esophagus                             | DGKQ | Wald ratio | 1 | -0.60 | 0.65 | 0.349 | 0.55 | 0.15 | 1.94  |
| Disturbance of skin sensation                                   | DGKQ | Wald ratio | 1 | -0.48 | 0.52 | 0.350 | 0.62 | 0.22 | 1.70  |
| Breast cancer                                                   | DGKQ | Wald ratio | 1 | 0.24  | 0.26 | 0.350 | 1.27 | 0.77 | 2.12  |
| Chronic tonsillitis and adenoiditis                             | DGKQ | Wald ratio | 1 | -0.78 | 0.83 | 0.352 | 0.46 | 0.09 | 2.36  |
| Hypertension                                                    | DGKQ | Wald ratio | 1 | 0.12  | 0.13 | 0.356 | 1.12 | 0.88 | 1.44  |
| Regional enteritis                                              | DGKQ | Wald ratio | 1 | 0.62  | 0.67 | 0.359 | 1.86 | 0.50 | 6.94  |
| Cystic mastopathy                                               | DGKQ | Wald ratio | 1 | 0.84  | 0.92 | 0.360 | 2.32 | 0.38 | 14.13 |
| Neoplasm of unspecified nature of digestive system              | DGKQ | Wald ratio | 1 | -0.78 | 0.86 | 0.364 | 0.46 | 0.09 | 2.47  |
| Other upper respiratory disease                                 | DGKQ | Wald ratio | 1 | -0.40 | 0.44 | 0.365 | 0.67 | 0.29 | 1.58  |

|                                                                     |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Poisoning by anticonvulsants and anti-Parkinsonism drugs            | DGKQ | Wald ratio | 1 | 1.12  | 1.24 | 0.365 | 3.06 | 0.27 | 34.53 |
| Retinal detachments and defects                                     | DGKQ | Wald ratio | 1 | 0.45  | 0.50 | 0.366 | 1.56 | 0.59 | 4.13  |
| Anxiety disorders                                                   | DGKQ | Wald ratio | 1 | 0.31  | 0.34 | 0.369 | 1.36 | 0.70 | 2.66  |
| Cardiac shunt/ heart septal defect                                  | DGKQ | Wald ratio | 1 | -1.03 | 1.15 | 0.370 | 0.36 | 0.04 | 3.41  |
| Alcoholic liver damage                                              | DGKQ | Wald ratio | 1 | 0.88  | 0.99 | 0.372 | 2.42 | 0.35 | 16.73 |
| Agoraphobia, social phobia, and panic disorder                      | DGKQ | Wald ratio | 1 | 0.94  | 1.05 | 0.372 | 2.56 | 0.33 | 20.06 |
| Hypertensive chronic kidney disease                                 | DGKQ | Wald ratio | 1 | -0.64 | 0.71 | 0.372 | 0.53 | 0.13 | 2.14  |
| Cholelithiasis with acute cholecystitis                             | DGKQ | Wald ratio | 1 | 0.64  | 0.72 | 0.372 | 1.90 | 0.46 | 7.85  |
| Cancer, suspected or other                                          | DGKQ | Wald ratio | 1 | -0.20 | 0.22 | 0.373 | 0.82 | 0.53 | 1.26  |
| Streptococcus infection                                             | DGKQ | Wald ratio | 1 | 0.61  | 0.69 | 0.373 | 1.85 | 0.48 | 7.12  |
| Diverticulosis and diverticulitis                                   | DGKQ | Wald ratio | 1 | -0.16 | 0.18 | 0.374 | 0.85 | 0.59 | 1.22  |
| Viral hepatitis                                                     | DGKQ | Wald ratio | 1 | 0.71  | 0.80 | 0.375 | 2.04 | 0.42 | 9.87  |
| Diverticulosis                                                      | DGKQ | Wald ratio | 1 | -0.16 | 0.18 | 0.377 | 0.85 | 0.59 | 1.22  |
| Effects radiation NOS                                               | DGKQ | Wald ratio | 1 | -0.44 | 0.50 | 0.380 | 0.64 | 0.24 | 1.72  |
| Primary open angle glaucoma                                         | DGKQ | Wald ratio | 1 | -0.76 | 0.87 | 0.382 | 0.47 | 0.08 | 2.57  |
| Pneumonitis due to inhalation of food or vomitus                    | DGKQ | Wald ratio | 1 | -1.01 | 1.16 | 0.382 | 0.36 | 0.04 | 3.51  |
| Abnormal findings on exam of gastrointestinal tract/ abdominal area | DGKQ | Wald ratio | 1 | -0.60 | 0.69 | 0.385 | 0.55 | 0.14 | 2.12  |
| Acidosis                                                            | DGKQ | Wald ratio | 1 | 0.75  | 0.86 | 0.385 | 2.11 | 0.39 | 11.40 |
| Benign neoplasm of lip, oral cavity, and pharynx                    | DGKQ | Wald ratio | 1 | 0.77  | 0.89 | 0.385 | 2.17 | 0.38 | 12.40 |
| Esophageal bleeding (varices/hemorrhage)                            | DGKQ | Wald ratio | 1 | 0.59  | 0.68 | 0.387 | 1.80 | 0.47 | 6.88  |
| Hallux valgus (Bunion)                                              | DGKQ | Wald ratio | 1 | 0.30  | 0.35 | 0.388 | 1.35 | 0.68 | 2.70  |
| Other open wound of head and face                                   | DGKQ | Wald ratio | 1 | -0.45 | 0.52 | 0.389 | 0.64 | 0.23 | 1.77  |
| Postmenopausal atrophic vaginitis                                   | DGKQ | Wald ratio | 1 | 0.72  | 0.84 | 0.390 | 2.06 | 0.40 | 10.73 |
| Breast cancer [female]                                              | DGKQ | Wald ratio | 1 | 0.22  | 0.26 | 0.391 | 1.25 | 0.75 | 2.09  |
| Open-angle glaucoma                                                 | DGKQ | Wald ratio | 1 | -0.75 | 0.87 | 0.391 | 0.47 | 0.09 | 2.61  |
| Paroxysmal tachycardia, unspecified                                 | DGKQ | Wald ratio | 1 | 0.43  | 0.50 | 0.391 | 1.53 | 0.58 | 4.05  |

|                                                  |      |            |   |       |      |       |      |      |       |
|--------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Other disorders of the kidney and ureters        | DGKQ | Wald ratio | 1 | -0.41 | 0.49 | 0.394 | 0.66 | 0.26 | 1.71  |
| Personal history of diseases of digestive system | DGKQ | Wald ratio | 1 | 0.20  | 0.23 | 0.395 | 1.22 | 0.77 | 1.93  |
| Cough                                            | DGKQ | Wald ratio | 1 | 0.44  | 0.52 | 0.396 | 1.56 | 0.56 | 4.35  |
| Postmenopausal bleeding                          | DGKQ | Wald ratio | 1 | 0.25  | 0.30 | 0.397 | 1.29 | 0.72 | 2.33  |
| Complication of internal orthopedic device       | DGKQ | Wald ratio | 1 | 0.42  | 0.50 | 0.397 | 1.53 | 0.57 | 4.06  |
| Pathologic fracture                              | DGKQ | Wald ratio | 1 | -1.04 | 1.24 | 0.400 | 0.35 | 0.03 | 3.98  |
| Acute appendicitis                               | DGKQ | Wald ratio | 1 | 0.46  | 0.55 | 0.400 | 1.59 | 0.54 | 4.69  |
| Allergic rhinitis                                | DGKQ | Wald ratio | 1 | 0.72  | 0.86 | 0.402 | 2.05 | 0.38 | 10.99 |
| Abnormal function study of cardiovascular system | DGKQ | Wald ratio | 1 | 1.02  | 1.22 | 0.403 | 2.78 | 0.25 | 30.64 |
| Disorders of adrenal glands                      | DGKQ | Wald ratio | 1 | -0.92 | 1.10 | 0.405 | 0.40 | 0.05 | 3.46  |
| Cervical cancer and dysplasia                    | DGKQ | Wald ratio | 1 | -0.39 | 0.47 | 0.405 | 0.68 | 0.27 | 1.69  |
| Gastritis and duodenitis                         | DGKQ | Wald ratio | 1 | 0.15  | 0.18 | 0.407 | 1.16 | 0.82 | 1.63  |
| Hemorrhage from gastrointestinal ulcer           | DGKQ | Wald ratio | 1 | 0.93  | 1.13 | 0.407 | 2.55 | 0.28 | 23.23 |
| Diseases and other conditions of the tongue      | DGKQ | Wald ratio | 1 | 0.66  | 0.80 | 0.410 | 1.93 | 0.40 | 9.16  |
| Nevus, non-neoplastic                            | DGKQ | Wald ratio | 1 | 0.94  | 1.14 | 0.411 | 2.56 | 0.27 | 24.15 |
| Perforation of tympanic membrane                 | DGKQ | Wald ratio | 1 | -0.71 | 0.87 | 0.412 | 0.49 | 0.09 | 2.68  |
| stress incontinence, female                      | DGKQ | Wald ratio | 1 | 0.31  | 0.37 | 0.413 | 1.36 | 0.65 | 2.82  |
| Diseases of nail, NOS                            | DGKQ | Wald ratio | 1 | -0.64 | 0.78 | 0.413 | 0.53 | 0.11 | 2.44  |
| Retinal vascular changes and abnormalities       | DGKQ | Wald ratio | 1 | 0.78  | 0.96 | 0.413 | 2.19 | 0.33 | 14.35 |
| Benign neoplasm of ovary                         | DGKQ | Wald ratio | 1 | 0.60  | 0.73 | 0.414 | 1.82 | 0.43 | 7.60  |
| Hemorrhage or hematoma complicating a procedure  | DGKQ | Wald ratio | 1 | 0.32  | 0.39 | 0.414 | 1.37 | 0.64 | 2.92  |
| Subjective visual disturbances                   | DGKQ | Wald ratio | 1 | -0.92 | 1.12 | 0.415 | 0.40 | 0.04 | 3.63  |
| Dysphagia                                        | DGKQ | Wald ratio | 1 | 0.29  | 0.35 | 0.416 | 1.33 | 0.67 | 2.66  |
| Other aneurysm                                   | DGKQ | Wald ratio | 1 | 0.54  | 0.66 | 0.416 | 1.71 | 0.47 | 6.23  |
| Respiratory insufficiency                        | DGKQ | Wald ratio | 1 | 0.54  | 0.67 | 0.417 | 1.72 | 0.46 | 6.40  |
| Viral Enteritis                                  | DGKQ | Wald ratio | 1 | 0.77  | 0.95 | 0.417 | 2.17 | 0.33 | 14.01 |

|                                                        |      |            |   |       |      |       |      |      |       |
|--------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Sicca syndrome                                         | DGKQ | Wald ratio | 1 | -1.00 | 1.24 | 0.418 | 0.37 | 0.03 | 4.14  |
| Blood in stool                                         | DGKQ | Wald ratio | 1 | -0.44 | 0.55 | 0.418 | 0.64 | 0.22 | 1.88  |
| Jaundice (not of newborn)                              | DGKQ | Wald ratio | 1 | 0.75  | 0.93 | 0.421 | 2.12 | 0.34 | 13.26 |
| Chronic liver disease and cirrhosis                    | DGKQ | Wald ratio | 1 | -0.42 | 0.52 | 0.421 | 0.66 | 0.24 | 1.83  |
| Corneal opacity and other disorders of cornea          | DGKQ | Wald ratio | 1 | 0.83  | 1.03 | 0.422 | 2.29 | 0.30 | 17.38 |
| Chemotherapy                                           | DGKQ | Wald ratio | 1 | 0.15  | 0.19 | 0.423 | 1.17 | 0.80 | 1.70  |
| Noninfectious gastroenteritis                          | DGKQ | Wald ratio | 1 | -0.18 | 0.23 | 0.432 | 0.83 | 0.53 | 1.31  |
| Cholesteatoma                                          | DGKQ | Wald ratio | 1 | -0.89 | 1.13 | 0.432 | 0.41 | 0.04 | 3.78  |
| Retinal detachment with retinal defect                 | DGKQ | Wald ratio | 1 | 0.59  | 0.75 | 0.433 | 1.80 | 0.41 | 7.88  |
| Benign neoplasm of colon                               | DGKQ | Wald ratio | 1 | -0.16 | 0.21 | 0.435 | 0.85 | 0.57 | 1.28  |
| Late pregnancy and failed induction                    | DGKQ | Wald ratio | 1 | -0.62 | 0.80 | 0.437 | 0.54 | 0.11 | 2.59  |
| Tachycardia NOS                                        | DGKQ | Wald ratio | 1 | -0.46 | 0.60 | 0.438 | 0.63 | 0.19 | 2.03  |
| Umbilical cord complications during labor and delivery | DGKQ | Wald ratio | 1 | -0.94 | 1.22 | 0.439 | 0.39 | 0.04 | 4.25  |
| Simple and unspecified goiter                          | DGKQ | Wald ratio | 1 | -0.88 | 1.14 | 0.439 | 0.41 | 0.04 | 3.86  |
| Superficial injury without mention of infection        | DGKQ | Wald ratio | 1 | 0.33  | 0.43 | 0.441 | 1.39 | 0.60 | 3.21  |
| Disorders of mineral metabolism                        | DGKQ | Wald ratio | 1 | -0.46 | 0.61 | 0.449 | 0.63 | 0.19 | 2.08  |
| Disorders of tooth development                         | DGKQ | Wald ratio | 1 | 0.43  | 0.57 | 0.449 | 1.53 | 0.51 | 4.66  |
| Chronic glomerulonephritis, NOS                        | DGKQ | Wald ratio | 1 | 0.73  | 0.96 | 0.451 | 2.07 | 0.31 | 13.66 |
| Multiple sclerosis                                     | DGKQ | Wald ratio | 1 | -0.57 | 0.76 | 0.451 | 0.56 | 0.13 | 2.51  |
| Cervicalgia                                            | DGKQ | Wald ratio | 1 | 0.50  | 0.66 | 0.453 | 1.64 | 0.45 | 6.02  |
| Abnormal movement                                      | DGKQ | Wald ratio | 1 | 0.40  | 0.54 | 0.454 | 1.49 | 0.52 | 4.28  |
| Varicose veins                                         | DGKQ | Wald ratio | 1 | 0.20  | 0.26 | 0.456 | 1.22 | 0.73 | 2.04  |
| Diseases of the salivary glands                        | DGKQ | Wald ratio | 1 | 0.78  | 1.05 | 0.457 | 2.18 | 0.28 | 17.00 |
| Degeneration of macula and posterior pole of retina    | DGKQ | Wald ratio | 1 | 0.45  | 0.60 | 0.458 | 1.56 | 0.48 | 5.06  |
| Angina pectoris                                        | DGKQ | Wald ratio | 1 | 0.17  | 0.24 | 0.463 | 1.19 | 0.75 | 1.88  |
| Problems associated with amniotic cavity and membranes | DGKQ | Wald ratio | 1 | -0.56 | 0.76 | 0.465 | 0.57 | 0.13 | 2.56  |

|                                                              |      |            |   |       |      |       |      |      |       |
|--------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Other anemias                                                | DGKQ | Wald ratio | 1 | -0.18 | 0.25 | 0.468 | 0.83 | 0.50 | 1.37  |
| Bacterial infection NOS                                      | DGKQ | Wald ratio | 1 | 0.18  | 0.26 | 0.470 | 1.20 | 0.73 | 1.99  |
| Complications of cardiac/vascular device, implant, and graft | DGKQ | Wald ratio | 1 | 0.48  | 0.66 | 0.470 | 1.61 | 0.44 | 5.89  |
| Hearing loss                                                 | DGKQ | Wald ratio | 1 | -0.31 | 0.43 | 0.472 | 0.73 | 0.31 | 1.71  |
| Visual disturbances                                          | DGKQ | Wald ratio | 1 | 0.35  | 0.49 | 0.474 | 1.42 | 0.54 | 3.71  |
| Acute tonsillitis                                            | DGKQ | Wald ratio | 1 | -0.81 | 1.13 | 0.475 | 0.45 | 0.05 | 4.07  |
| Fracture of neck of femur                                    | DGKQ | Wald ratio | 1 | 0.47  | 0.66 | 0.476 | 1.60 | 0.44 | 5.81  |
| Macular degeneration (senile) of retina NOS                  | DGKQ | Wald ratio | 1 | 0.43  | 0.60 | 0.476 | 1.53 | 0.47 | 4.97  |
| Gram negative septicemia                                     | DGKQ | Wald ratio | 1 | 0.69  | 0.97 | 0.477 | 1.99 | 0.30 | 13.36 |
| Alcoholism                                                   | DGKQ | Wald ratio | 1 | 0.21  | 0.30 | 0.478 | 1.24 | 0.69 | 2.24  |
| Swelling of limb                                             | DGKQ | Wald ratio | 1 | -0.29 | 0.41 | 0.478 | 0.75 | 0.33 | 1.68  |
| Ventral hernia                                               | DGKQ | Wald ratio | 1 | 0.34  | 0.48 | 0.479 | 1.40 | 0.55 | 3.60  |
| Viral infection                                              | DGKQ | Wald ratio | 1 | 0.37  | 0.53 | 0.480 | 1.45 | 0.52 | 4.09  |
| Cholelithiasis                                               | DGKQ | Wald ratio | 1 | -0.18 | 0.25 | 0.481 | 0.84 | 0.52 | 1.37  |
| Atrioventricular block, complete                             | DGKQ | Wald ratio | 1 | 0.81  | 1.16 | 0.481 | 2.26 | 0.23 | 21.75 |
| Acquired toe deformities                                     | DGKQ | Wald ratio | 1 | -0.28 | 0.40 | 0.483 | 0.76 | 0.35 | 1.65  |
| Anal and rectal polyp                                        | DGKQ | Wald ratio | 1 | -0.23 | 0.33 | 0.488 | 0.80 | 0.42 | 1.52  |
| Musculoskeletal symptoms referable to limbs                  | DGKQ | Wald ratio | 1 | -0.26 | 0.38 | 0.491 | 0.77 | 0.36 | 1.62  |
| Chronic bronchitis                                           | DGKQ | Wald ratio | 1 | 0.36  | 0.52 | 0.493 | 1.43 | 0.51 | 3.99  |
| Ulceration of intestine                                      | DGKQ | Wald ratio | 1 | 0.74  | 1.08 | 0.493 | 2.09 | 0.25 | 17.29 |
| Candidiasis                                                  | DGKQ | Wald ratio | 1 | 0.42  | 0.61 | 0.494 | 1.51 | 0.46 | 4.98  |
| Other non-epithelial cancer of skin                          | DGKQ | Wald ratio | 1 | 0.19  | 0.27 | 0.496 | 1.21 | 0.70 | 2.07  |
| Rheumatoid arthritis                                         | DGKQ | Wald ratio | 1 | 0.29  | 0.43 | 0.498 | 1.34 | 0.58 | 3.08  |
| Anemia of chronic disease                                    | DGKQ | Wald ratio | 1 | -0.71 | 1.05 | 0.499 | 0.49 | 0.06 | 3.87  |
| Other chronic nonalcoholic liver disease                     | DGKQ | Wald ratio | 1 | -0.46 | 0.69 | 0.502 | 0.63 | 0.16 | 2.42  |
| Tobacco use disorder                                         | DGKQ | Wald ratio | 1 | 0.14  | 0.21 | 0.503 | 1.15 | 0.76 | 1.74  |

|                                                                |      |            |   |       |      |       |      |      |       |
|----------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Schizophrenia                                                  | DGKQ | Wald ratio | 1 | 0.78  | 1.17 | 0.504 | 2.18 | 0.22 | 21.58 |
| Nephritis; nephrosis; renal sclerosis                          | DGKQ | Wald ratio | 1 | 0.48  | 0.72 | 0.504 | 1.62 | 0.39 | 6.63  |
| Malignant neoplasm of rectum, rectosigmoid junction, and anus  | DGKQ | Wald ratio | 1 | -0.41 | 0.61 | 0.504 | 0.66 | 0.20 | 2.21  |
| Dental caries                                                  | DGKQ | Wald ratio | 1 | -0.34 | 0.51 | 0.504 | 0.71 | 0.26 | 1.93  |
| Delirium dementia and amnestic and other cognitive disorders   | DGKQ | Wald ratio | 1 | 0.42  | 0.63 | 0.505 | 1.52 | 0.44 | 5.25  |
| Varicose veins of lower extremity                              | DGKQ | Wald ratio | 1 | 0.18  | 0.27 | 0.508 | 1.20 | 0.70 | 2.03  |
| Abdominal aortic aneurysm                                      | DGKQ | Wald ratio | 1 | 0.62  | 0.94 | 0.509 | 1.86 | 0.30 | 11.62 |
| Excessive or frequent menstruation                             | DGKQ | Wald ratio | 1 | -0.20 | 0.30 | 0.509 | 0.82 | 0.46 | 1.47  |
| Cerebral ischemia                                              | DGKQ | Wald ratio | 1 | -0.34 | 0.52 | 0.510 | 0.71 | 0.26 | 1.97  |
| Other symptoms of respiratory system                           | DGKQ | Wald ratio | 1 | 0.20  | 0.30 | 0.511 | 1.22 | 0.68 | 2.18  |
| Other disorders of pancreatic internal secretion               | DGKQ | Wald ratio | 1 | 0.60  | 0.91 | 0.511 | 1.82 | 0.30 | 10.87 |
| Late effects of cerebrovascular disease                        | DGKQ | Wald ratio | 1 | -0.51 | 0.79 | 0.514 | 0.60 | 0.13 | 2.80  |
| Poisoning by psychotropic agents                               | DGKQ | Wald ratio | 1 | -0.42 | 0.64 | 0.515 | 0.66 | 0.19 | 2.30  |
| Rheumatoid arthritis and other inflammatory polyarthropathies  | DGKQ | Wald ratio | 1 | 0.26  | 0.41 | 0.516 | 1.30 | 0.59 | 2.89  |
| Cancer within the respiratory system                           | DGKQ | Wald ratio | 1 | 0.35  | 0.54 | 0.517 | 1.42 | 0.49 | 4.11  |
| Rheumatism, unspecified and fibrositis                         | DGKQ | Wald ratio | 1 | -0.57 | 0.88 | 0.517 | 0.56 | 0.10 | 3.18  |
| Ankylosing spondylitis                                         | DGKQ | Wald ratio | 1 | -0.73 | 1.12 | 0.518 | 0.48 | 0.05 | 4.36  |
| Diseases of hard tissues of teeth                              | DGKQ | Wald ratio | 1 | -0.33 | 0.51 | 0.518 | 0.72 | 0.27 | 1.94  |
| Myalgia and myositis unspecified                               | DGKQ | Wald ratio | 1 | -0.71 | 1.10 | 0.519 | 0.49 | 0.06 | 4.27  |
| Diseases of spleen                                             | DGKQ | Wald ratio | 1 | 0.80  | 1.24 | 0.520 | 2.22 | 0.20 | 24.98 |
| Fracture of humerus                                            | DGKQ | Wald ratio | 1 | 0.44  | 0.68 | 0.521 | 1.55 | 0.41 | 5.85  |
| Non-Hodgkins lymphoma                                          | DGKQ | Wald ratio | 1 | 0.42  | 0.66 | 0.523 | 1.53 | 0.42 | 5.59  |
| Hydronephrosis                                                 | DGKQ | Wald ratio | 1 | 0.40  | 0.63 | 0.523 | 1.50 | 0.43 | 5.17  |
| Other diseases of respiratory system, not elsewhere classified | DGKQ | Wald ratio | 1 | -0.18 | 0.29 | 0.523 | 0.83 | 0.47 | 1.47  |
| Osteopenia or other disorder of bone and cartilage             | DGKQ | Wald ratio | 1 | -0.62 | 0.98 | 0.524 | 0.54 | 0.08 | 3.65  |
| Occlusion of cerebral arteries                                 | DGKQ | Wald ratio | 1 | 0.28  | 0.44 | 0.526 | 1.32 | 0.56 | 3.12  |

|                                                                     |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Pneumonia                                                           | DGKQ | Wald ratio | 1 | 0.18  | 0.28 | 0.527 | 1.20 | 0.69 | 2.09  |
| Noninfectious disorders of lymphatic channels                       | DGKQ | Wald ratio | 1 | -0.67 | 1.05 | 0.528 | 0.51 | 0.07 | 4.06  |
| Osteoarthritis, localized, primary                                  | DGKQ | Wald ratio | 1 | 0.19  | 0.30 | 0.529 | 1.21 | 0.67 | 2.18  |
| Symptoms involving head and neck                                    | DGKQ | Wald ratio | 1 | 0.32  | 0.51 | 0.529 | 1.38 | 0.51 | 3.76  |
| Other diseases of lung                                              | DGKQ | Wald ratio | 1 | 0.63  | 1.00 | 0.530 | 1.88 | 0.26 | 13.33 |
| Disorders of sweat glands                                           | DGKQ | Wald ratio | 1 | 0.61  | 0.98 | 0.530 | 1.85 | 0.27 | 12.52 |
| Disorders of iron metabolism                                        | DGKQ | Wald ratio | 1 | -0.67 | 1.08 | 0.533 | 0.51 | 0.06 | 4.22  |
| Acute upper respiratory infections of multiple or unspecified sites | DGKQ | Wald ratio | 1 | 0.36  | 0.58 | 0.534 | 1.43 | 0.46 | 4.45  |
| Functional digestive disorders                                      | DGKQ | Wald ratio | 1 | 0.12  | 0.20 | 0.534 | 1.13 | 0.77 | 1.66  |
| Transient cerebral ischemia                                         | DGKQ | Wald ratio | 1 | -0.38 | 0.60 | 0.535 | 0.69 | 0.21 | 2.25  |
| Arterial embolism and thrombosis of lower extremity artery          | DGKQ | Wald ratio | 1 | 0.73  | 1.18 | 0.536 | 2.08 | 0.20 | 21.13 |
| Fracture of radius and ulna                                         | DGKQ | Wald ratio | 1 | -0.24 | 0.39 | 0.537 | 0.78 | 0.36 | 1.69  |
| Large cell lymphoma                                                 | DGKQ | Wald ratio | 1 | 0.72  | 1.17 | 0.538 | 2.05 | 0.21 | 20.18 |
| Hypertension complicating pregnancy, childbirth, and the puerperium | DGKQ | Wald ratio | 1 | -0.52 | 0.85 | 0.539 | 0.59 | 0.11 | 3.16  |
| Disorders of other cranial nerves                                   | DGKQ | Wald ratio | 1 | 0.46  | 0.75 | 0.539 | 1.59 | 0.36 | 6.89  |
| Malignant neoplasm of female breast                                 | DGKQ | Wald ratio | 1 | 0.17  | 0.27 | 0.540 | 1.18 | 0.70 | 2.00  |
| Disorders of the pituitary gland and its hypothalamic control       | DGKQ | Wald ratio | 1 | -0.65 | 1.06 | 0.541 | 0.52 | 0.07 | 4.18  |
| Blindness and low vision                                            | DGKQ | Wald ratio | 1 | 0.63  | 1.04 | 0.541 | 1.89 | 0.25 | 14.43 |
| Urethral stricture (not specified as infectious)                    | DGKQ | Wald ratio | 1 | -0.30 | 0.49 | 0.541 | 0.74 | 0.29 | 1.93  |
| Intestinal infection                                                | DGKQ | Wald ratio | 1 | 0.18  | 0.30 | 0.544 | 1.20 | 0.67 | 2.14  |
| Obstructive chronic bronchitis                                      | DGKQ | Wald ratio | 1 | 0.33  | 0.54 | 0.545 | 1.39 | 0.48 | 4.05  |
| Other disorders of arteries and arterioles                          | DGKQ | Wald ratio | 1 | 0.46  | 0.77 | 0.545 | 1.59 | 0.35 | 7.17  |
| Secondary malignant neoplasm of digestive systems                   | DGKQ | Wald ratio | 1 | 0.43  | 0.72 | 0.546 | 1.54 | 0.38 | 6.27  |
| Cerebral artery occlusion, with cerebral infarction                 | DGKQ | Wald ratio | 1 | 0.44  | 0.72 | 0.547 | 1.55 | 0.37 | 6.41  |
| Sleep disorders                                                     | DGKQ | Wald ratio | 1 | -0.24 | 0.39 | 0.547 | 0.79 | 0.37 | 1.70  |
| Inflammation of eyelids                                             | DGKQ | Wald ratio | 1 | -0.34 | 0.57 | 0.549 | 0.71 | 0.23 | 2.17  |

|                                                               |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Type 2 diabetes with neurological manifestations              | DGKQ | Wald ratio | 1 | 0.70  | 1.17 | 0.549 | 2.01 | 0.20 | 19.80 |
| Inflammation of the eye                                       | DGKQ | Wald ratio | 1 | -0.30 | 0.50 | 0.550 | 0.74 | 0.28 | 1.96  |
| Hemorrhage of rectum and anus                                 | DGKQ | Wald ratio | 1 | 0.15  | 0.24 | 0.550 | 1.16 | 0.72 | 1.87  |
| Psychogenic and somatoform disorders                          | DGKQ | Wald ratio | 1 | 0.72  | 1.21 | 0.550 | 2.06 | 0.19 | 22.20 |
| Other disorders of biliary tract                              | DGKQ | Wald ratio | 1 | -0.52 | 0.87 | 0.551 | 0.60 | 0.11 | 3.27  |
| Gout                                                          | DGKQ | Wald ratio | 1 | 0.30  | 0.50 | 0.552 | 1.35 | 0.51 | 3.59  |
| Chronic fatigue syndrome                                      | DGKQ | Wald ratio | 1 | -0.68 | 1.15 | 0.552 | 0.51 | 0.05 | 4.79  |
| Hypoglycemia                                                  | DGKQ | Wald ratio | 1 | 0.54  | 0.91 | 0.555 | 1.72 | 0.29 | 10.30 |
| Disorders of lacrimal system                                  | DGKQ | Wald ratio | 1 | -0.35 | 0.60 | 0.556 | 0.70 | 0.22 | 2.26  |
| Iron deficiency anemias, unspecified or not due to blood loss | DGKQ | Wald ratio | 1 | 0.19  | 0.33 | 0.556 | 1.21 | 0.64 | 2.32  |
| Purpura and other hemorrhagic conditions                      | DGKQ | Wald ratio | 1 | 0.39  | 0.66 | 0.556 | 1.48 | 0.40 | 5.38  |
| Cancer of bronchus; lung                                      | DGKQ | Wald ratio | 1 | 0.36  | 0.61 | 0.557 | 1.43 | 0.43 | 4.77  |
| Paralytic ileus                                               | DGKQ | Wald ratio | 1 | -0.72 | 1.22 | 0.558 | 0.49 | 0.04 | 5.38  |
| Benign neoplasm of uterus                                     | DGKQ | Wald ratio | 1 | 0.16  | 0.28 | 0.560 | 1.18 | 0.68 | 2.04  |
| Sleep apnea                                                   | DGKQ | Wald ratio | 1 | -0.25 | 0.42 | 0.561 | 0.78 | 0.34 | 1.80  |
| Foreign body injury                                           | DGKQ | Wald ratio | 1 | 0.47  | 0.81 | 0.562 | 1.59 | 0.33 | 7.73  |
| First degree AV block                                         | DGKQ | Wald ratio | 1 | -0.52 | 0.89 | 0.563 | 0.60 | 0.10 | 3.43  |
| Functional disorders of bladder                               | DGKQ | Wald ratio | 1 | 0.40  | 0.69 | 0.563 | 1.49 | 0.39 | 5.72  |
| Pilonidal cyst                                                | DGKQ | Wald ratio | 1 | 0.67  | 1.16 | 0.565 | 1.95 | 0.20 | 18.85 |
| Heart valve replaced                                          | DGKQ | Wald ratio | 1 | -0.42 | 0.72 | 0.565 | 0.66 | 0.16 | 2.73  |
| Ill-defined descriptions and complications of heart disease   | DGKQ | Wald ratio | 1 | 0.57  | 0.99 | 0.565 | 1.77 | 0.25 | 12.26 |
| Septal Deviations/Turbinate Hypertrophy                       | DGKQ | Wald ratio | 1 | 0.23  | 0.40 | 0.566 | 1.26 | 0.57 | 2.78  |
| Missed abortion/Hydatidiform mole                             | DGKQ | Wald ratio | 1 | 0.46  | 0.80 | 0.566 | 1.58 | 0.33 | 7.62  |
| Uterine leiomyoma                                             | DGKQ | Wald ratio | 1 | 0.16  | 0.28 | 0.567 | 1.18 | 0.67 | 2.06  |
| Scar conditions and fibrosis of skin                          | DGKQ | Wald ratio | 1 | -0.33 | 0.58 | 0.567 | 0.72 | 0.23 | 2.22  |
| Cancer of mouth                                               | DGKQ | Wald ratio | 1 | -0.63 | 1.10 | 0.568 | 0.53 | 0.06 | 4.62  |

|                                                                        |      |            |   |       |      |       |      |      |       |
|------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Other specified nonpsychotic and/or transient mental disorders         | DGKQ | Wald ratio | 1 | -0.63 | 1.11 | 0.569 | 0.53 | 0.06 | 4.65  |
| Periodontitis (acute or chronic)                                       | DGKQ | Wald ratio | 1 | 0.45  | 0.80 | 0.572 | 1.57 | 0.33 | 7.50  |
| Erythematous conditions                                                | DGKQ | Wald ratio | 1 | 0.32  | 0.57 | 0.574 | 1.38 | 0.45 | 4.19  |
| Digestive congenital anomalies                                         | DGKQ | Wald ratio | 1 | 0.59  | 1.05 | 0.574 | 1.81 | 0.23 | 14.21 |
| Other derangement of joint                                             | DGKQ | Wald ratio | 1 | -0.35 | 0.63 | 0.575 | 0.70 | 0.21 | 2.40  |
| Symptoms affecting skin                                                | DGKQ | Wald ratio | 1 | 0.21  | 0.38 | 0.576 | 1.23 | 0.59 | 2.58  |
| Other symptoms involving abdomen and pelvis                            | DGKQ | Wald ratio | 1 | 0.27  | 0.49 | 0.580 | 1.31 | 0.50 | 3.46  |
| Colon cancer                                                           | DGKQ | Wald ratio | 1 | 0.28  | 0.51 | 0.580 | 1.33 | 0.49 | 3.62  |
| Noninflammatory disorders of ovary, fallopian tube, and broad ligament | DGKQ | Wald ratio | 1 | -0.57 | 1.04 | 0.581 | 0.56 | 0.07 | 4.30  |
| Alcohol-related disorders                                              | DGKQ | Wald ratio | 1 | 0.14  | 0.25 | 0.581 | 1.15 | 0.70 | 1.89  |
| Benign neoplasm of skin                                                | DGKQ | Wald ratio | 1 | 0.18  | 0.32 | 0.581 | 1.20 | 0.63 | 2.26  |
| Depression                                                             | DGKQ | Wald ratio | 1 | 0.15  | 0.26 | 0.582 | 1.16 | 0.69 | 1.94  |
| Diseases of the jaws                                                   | DGKQ | Wald ratio | 1 | -0.49 | 0.90 | 0.583 | 0.61 | 0.10 | 3.57  |
| Other acquired deformities of limbs                                    | DGKQ | Wald ratio | 1 | -0.38 | 0.69 | 0.584 | 0.69 | 0.18 | 2.65  |
| Bursitis                                                               | DGKQ | Wald ratio | 1 | 0.52  | 0.95 | 0.585 | 1.68 | 0.26 | 10.92 |
| Melanomas of skin, dx or hx                                            | DGKQ | Wald ratio | 1 | -0.30 | 0.54 | 0.586 | 0.74 | 0.26 | 2.16  |
| Melanomas of skin                                                      | DGKQ | Wald ratio | 1 | -0.30 | 0.54 | 0.586 | 0.74 | 0.26 | 2.16  |
| Hypotension NOS                                                        | DGKQ | Wald ratio | 1 | 0.26  | 0.47 | 0.586 | 1.29 | 0.51 | 3.26  |
| Aseptic necrosis of bone                                               | DGKQ | Wald ratio | 1 | 0.65  | 1.20 | 0.586 | 1.92 | 0.18 | 20.18 |
| Inflammatory disease of cervix, vagina, and vulva                      | DGKQ | Wald ratio | 1 | 0.29  | 0.53 | 0.587 | 1.33 | 0.47 | 3.75  |
| Disorders of calcium/phosphorus metabolism                             | DGKQ | Wald ratio | 1 | -0.43 | 0.81 | 0.590 | 0.65 | 0.13 | 3.14  |
| Cancer of stomach                                                      | DGKQ | Wald ratio | 1 | 0.64  | 1.19 | 0.590 | 1.90 | 0.19 | 19.40 |
| Pain                                                                   | DGKQ | Wald ratio | 1 | -0.54 | 1.00 | 0.592 | 0.58 | 0.08 | 4.18  |
| Other disorders of middle ear and mastoid                              | DGKQ | Wald ratio | 1 | -0.52 | 0.97 | 0.593 | 0.59 | 0.09 | 4.01  |
| Hallux rigidus                                                         | DGKQ | Wald ratio | 1 | 0.38  | 0.71 | 0.595 | 1.46 | 0.36 | 5.91  |
| Arterial embolism and thrombosis                                       | DGKQ | Wald ratio | 1 | 0.49  | 0.92 | 0.596 | 1.63 | 0.27 | 9.96  |

|                                                                     |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Atrioventricular [AV] block                                         | DGKQ | Wald ratio | 1 | -0.32 | 0.61 | 0.600 | 0.73 | 0.22 | 2.39  |
| Cardiac arrest and ventricular fibrillation                         | DGKQ | Wald ratio | 1 | -0.43 | 0.83 | 0.601 | 0.65 | 0.13 | 3.29  |
| Benign neoplasm of other endocrine glands and related structures    | DGKQ | Wald ratio | 1 | 0.49  | 0.94 | 0.603 | 1.63 | 0.26 | 10.37 |
| Ulceration of the lower GI tract                                    | DGKQ | Wald ratio | 1 | 0.44  | 0.86 | 0.605 | 1.56 | 0.29 | 8.40  |
| Cholelithiasis and cholecystitis                                    | DGKQ | Wald ratio | 1 | -0.12 | 0.23 | 0.606 | 0.89 | 0.57 | 1.39  |
| Retention of urine                                                  | DGKQ | Wald ratio | 1 | -0.18 | 0.35 | 0.611 | 0.84 | 0.42 | 1.65  |
| Disorders of refraction and accommodation; blindness and low vision | DGKQ | Wald ratio | 1 | 0.28  | 0.57 | 0.616 | 1.33 | 0.44 | 4.03  |
| Intracranial hemorrhage (injury)                                    | DGKQ | Wald ratio | 1 | -0.61 | 1.24 | 0.620 | 0.54 | 0.05 | 6.11  |
| Antepartum hemorrhage, abruptio placentae, and placenta previa      | DGKQ | Wald ratio | 1 | 0.48  | 0.96 | 0.621 | 1.61 | 0.24 | 10.58 |
| Bladder neck obstruction                                            | DGKQ | Wald ratio | 1 | -0.31 | 0.63 | 0.623 | 0.73 | 0.21 | 2.53  |
| Other disorders of gallbladder                                      | DGKQ | Wald ratio | 1 | -0.37 | 0.75 | 0.624 | 0.69 | 0.16 | 2.99  |
| Diplopia and disorders of binocular vision                          | DGKQ | Wald ratio | 1 | 0.51  | 1.04 | 0.624 | 1.66 | 0.22 | 12.64 |
| Labyrinthitis                                                       | DGKQ | Wald ratio | 1 | 0.49  | 1.01 | 0.625 | 1.64 | 0.23 | 11.90 |
| Hyperhidrosis                                                       | DGKQ | Wald ratio | 1 | 0.56  | 1.15 | 0.625 | 1.75 | 0.18 | 16.59 |
| Other forms of chronic heart disease                                | DGKQ | Wald ratio | 1 | 0.32  | 0.66 | 0.627 | 1.38 | 0.38 | 5.04  |
| Left bundle branch block                                            | DGKQ | Wald ratio | 1 | -0.33 | 0.67 | 0.627 | 0.72 | 0.19 | 2.68  |
| Type 1 diabetes                                                     | DGKQ | Wald ratio | 1 | 0.27  | 0.55 | 0.628 | 1.30 | 0.45 | 3.81  |
| Arrhythmia (cardiac) NOS                                            | DGKQ | Wald ratio | 1 | 0.45  | 0.92 | 0.628 | 1.56 | 0.26 | 9.51  |
| Phlebitis and thrombophlebitis of lower extremities                 | DGKQ | Wald ratio | 1 | -0.23 | 0.47 | 0.629 | 0.80 | 0.32 | 2.01  |
| Complication due to other implant and internal device               | DGKQ | Wald ratio | 1 | 0.24  | 0.49 | 0.630 | 1.27 | 0.48 | 3.33  |
| Crushing or internal injury to organs                               | DGKQ | Wald ratio | 1 | 0.42  | 0.88 | 0.630 | 1.53 | 0.27 | 8.56  |
| Other disorders of urethra and urinary tract                        | DGKQ | Wald ratio | 1 | -0.21 | 0.44 | 0.631 | 0.81 | 0.34 | 1.92  |
| Effects of other external causes                                    | DGKQ | Wald ratio | 1 | 0.21  | 0.43 | 0.632 | 1.23 | 0.53 | 2.88  |
| Cardiomegaly                                                        | DGKQ | Wald ratio | 1 | 0.27  | 0.56 | 0.633 | 1.30 | 0.44 | 3.87  |
| Fracture of upper limb                                              | DGKQ | Wald ratio | 1 | 0.15  | 0.31 | 0.634 | 1.16 | 0.63 | 2.13  |
| Complications of labor and delivery NEC                             | DGKQ | Wald ratio | 1 | 0.28  | 0.59 | 0.634 | 1.32 | 0.42 | 4.19  |

|                                                        |      |            |   |       |      |       |      |      |       |
|--------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Psoriasis and related disorders                        | DGKQ | Wald ratio | 1 | -0.28 | 0.59 | 0.635 | 0.76 | 0.24 | 2.39  |
| Psoriasis vulgaris                                     | DGKQ | Wald ratio | 1 | -0.32 | 0.68 | 0.636 | 0.72 | 0.19 | 2.75  |
| Other disorders of intestine                           | DGKQ | Wald ratio | 1 | 0.21  | 0.43 | 0.637 | 1.23 | 0.52 | 2.88  |
| Sciatica                                               | DGKQ | Wald ratio | 1 | 0.27  | 0.58 | 0.639 | 1.31 | 0.42 | 4.05  |
| Inflammatory diseases of female pelvic organs          | DGKQ | Wald ratio | 1 | 0.17  | 0.36 | 0.640 | 1.18 | 0.58 | 2.40  |
| Vaginal enterocele, congenital or acquired             | DGKQ | Wald ratio | 1 | 0.50  | 1.07 | 0.643 | 1.64 | 0.20 | 13.47 |
| Hammer toe (acquired)                                  | DGKQ | Wald ratio | 1 | -0.30 | 0.64 | 0.643 | 0.74 | 0.21 | 2.60  |
| Intestinal obstruction without mention of hernia       | DGKQ | Wald ratio | 1 | -0.20 | 0.44 | 0.645 | 0.82 | 0.34 | 1.94  |
| Other disorders of circulatory system                  | DGKQ | Wald ratio | 1 | 0.10  | 0.23 | 0.645 | 1.11 | 0.71 | 1.73  |
| Abnormal glucose                                       | DGKQ | Wald ratio | 1 | 0.49  | 1.07 | 0.646 | 1.63 | 0.20 | 13.20 |
| Disturbances in tooth eruption                         | DGKQ | Wald ratio | 1 | 0.26  | 0.58 | 0.647 | 1.30 | 0.42 | 4.03  |
| Dislocation                                            | DGKQ | Wald ratio | 1 | 0.28  | 0.61 | 0.649 | 1.32 | 0.40 | 4.37  |
| Cervicitis and endocervicitis                          | DGKQ | Wald ratio | 1 | -0.35 | 0.77 | 0.651 | 0.71 | 0.16 | 3.21  |
| Atopic/contact dermatitis due to other or unspecified  | DGKQ | Wald ratio | 1 | -0.27 | 0.61 | 0.656 | 0.76 | 0.23 | 2.52  |
| Dizziness and giddiness (Light-headedness and vertigo) | DGKQ | Wald ratio | 1 | -0.18 | 0.42 | 0.656 | 0.83 | 0.37 | 1.88  |
| Hyperpotassemia                                        | DGKQ | Wald ratio | 1 | -0.40 | 0.90 | 0.659 | 0.67 | 0.12 | 3.91  |
| Breast conditions, congenital or relating to hormones  | DGKQ | Wald ratio | 1 | -0.39 | 0.91 | 0.665 | 0.67 | 0.11 | 4.03  |
| Disorders of esophageal motility                       | DGKQ | Wald ratio | 1 | 0.48  | 1.11 | 0.667 | 1.61 | 0.18 | 14.08 |
| Anxiety disorder                                       | DGKQ | Wald ratio | 1 | 0.15  | 0.36 | 0.671 | 1.16 | 0.58 | 2.34  |
| Pleurisy; pleural effusion                             | DGKQ | Wald ratio | 1 | 0.15  | 0.35 | 0.673 | 1.16 | 0.58 | 2.30  |
| Circulatory disease NEC                                | DGKQ | Wald ratio | 1 | 0.10  | 0.23 | 0.673 | 1.10 | 0.71 | 1.72  |
| Other biliary tract disease                            | DGKQ | Wald ratio | 1 | -0.19 | 0.45 | 0.673 | 0.83 | 0.34 | 2.01  |
| Other diseases of respiratory system, NEC              | DGKQ | Wald ratio | 1 | -0.13 | 0.30 | 0.673 | 0.88 | 0.49 | 1.58  |
| Aortic valve disease                                   | DGKQ | Wald ratio | 1 | 0.33  | 0.79 | 0.678 | 1.39 | 0.30 | 6.51  |
| Phlebitis and thrombophlebitis                         | DGKQ | Wald ratio | 1 | -0.19 | 0.45 | 0.679 | 0.83 | 0.34 | 2.01  |
| Congenital anomalies of great vessels                  | DGKQ | Wald ratio | 1 | -0.27 | 0.66 | 0.684 | 0.76 | 0.21 | 2.80  |

|                                                                          |      |            |   |       |      |       |      |      |       |
|--------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Cancer of esophagus                                                      | DGKQ | Wald ratio | 1 | -0.42 | 1.04 | 0.684 | 0.65 | 0.08 | 5.05  |
| Other disorders of metabolism                                            | DGKQ | Wald ratio | 1 | -0.30 | 0.74 | 0.684 | 0.74 | 0.17 | 3.17  |
| Disorders of lipoid metabolism                                           | DGKQ | Wald ratio | 1 | 0.07  | 0.16 | 0.685 | 1.07 | 0.77 | 1.48  |
| Gastrointestinal hemorrhage                                              | DGKQ | Wald ratio | 1 | -0.08 | 0.20 | 0.686 | 0.92 | 0.63 | 1.36  |
| Glomerulonephritis                                                       | DGKQ | Wald ratio | 1 | 0.35  | 0.87 | 0.686 | 1.42 | 0.26 | 7.87  |
| Vascular insufficiency of intestine                                      | DGKQ | Wald ratio | 1 | 0.47  | 1.17 | 0.688 | 1.60 | 0.16 | 15.70 |
| Other acute and subacute forms of ischemic heart disease                 | DGKQ | Wald ratio | 1 | 0.33  | 0.82 | 0.689 | 1.39 | 0.28 | 6.94  |
| Infection/inflammation of internal prosthetic device; implant; and graft | DGKQ | Wald ratio | 1 | 0.22  | 0.56 | 0.689 | 1.25 | 0.42 | 3.75  |
| Gingival and periodontal diseases                                        | DGKQ | Wald ratio | 1 | 0.27  | 0.67 | 0.689 | 1.31 | 0.35 | 4.85  |
| Skin cancer                                                              | DGKQ | Wald ratio | 1 | 0.10  | 0.25 | 0.692 | 1.10 | 0.68 | 1.80  |
| Fracture of ribs                                                         | DGKQ | Wald ratio | 1 | 0.39  | 1.00 | 0.696 | 1.48 | 0.21 | 10.60 |
| Vitamin deficiency                                                       | DGKQ | Wald ratio | 1 | 0.31  | 0.81 | 0.696 | 1.37 | 0.28 | 6.64  |
| Hypovolemia                                                              | DGKQ | Wald ratio | 1 | -0.21 | 0.53 | 0.698 | 0.81 | 0.29 | 2.29  |
| Calculus of lower urinary tract                                          | DGKQ | Wald ratio | 1 | 0.39  | 1.00 | 0.700 | 1.47 | 0.21 | 10.54 |
| Irregular menstrual cycle                                                | DGKQ | Wald ratio | 1 | -0.24 | 0.63 | 0.701 | 0.78 | 0.23 | 2.70  |
| Pulmonary collapse; interstitial and compensatory emphysema              | DGKQ | Wald ratio | 1 | 0.24  | 0.62 | 0.702 | 1.27 | 0.37 | 4.31  |
| Malaise and fatigue                                                      | DGKQ | Wald ratio | 1 | -0.18 | 0.48 | 0.703 | 0.83 | 0.32 | 2.14  |
| Cancer of other female genital organs                                    | DGKQ | Wald ratio | 1 | 0.22  | 0.57 | 0.704 | 1.24 | 0.41 | 3.78  |
| Cystitis                                                                 | DGKQ | Wald ratio | 1 | -0.20 | 0.52 | 0.704 | 0.82 | 0.30 | 2.27  |
| Abnormal findings on mammogram or breast exam                            | DGKQ | Wald ratio | 1 | 0.27  | 0.71 | 0.705 | 1.31 | 0.33 | 5.22  |
| Other dyspnea                                                            | DGKQ | Wald ratio | 1 | 0.35  | 0.93 | 0.708 | 1.42 | 0.23 | 8.72  |
| Intestinal malabsorption (non-celiac)                                    | DGKQ | Wald ratio | 1 | 0.23  | 0.62 | 0.708 | 1.26 | 0.38 | 4.21  |
| Constipation                                                             | DGKQ | Wald ratio | 1 | -0.10 | 0.28 | 0.710 | 0.90 | 0.52 | 1.56  |
| Peritoneal or intestinal adhesions                                       | DGKQ | Wald ratio | 1 | -0.36 | 0.97 | 0.710 | 0.70 | 0.10 | 4.65  |
| Protein-calorie malnutrition                                             | DGKQ | Wald ratio | 1 | -0.32 | 0.86 | 0.711 | 0.73 | 0.14 | 3.91  |
| Other intestinal obstruction                                             | DGKQ | Wald ratio | 1 | -0.18 | 0.48 | 0.712 | 0.84 | 0.32 | 2.16  |

|                                                                     |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Nontoxic multinodular goiter                                        | DGKQ | Wald ratio | 1 | 0.40  | 1.08 | 0.713 | 1.49 | 0.18 | 12.22 |
| Fracture of unspecified bones                                       | DGKQ | Wald ratio | 1 | -0.28 | 0.77 | 0.713 | 0.75 | 0.17 | 3.43  |
| Renal colic                                                         | DGKQ | Wald ratio | 1 | -0.23 | 0.62 | 0.714 | 0.80 | 0.24 | 2.68  |
| Periapical abscess                                                  | DGKQ | Wald ratio | 1 | -0.30 | 0.81 | 0.716 | 0.74 | 0.15 | 3.67  |
| Hypothyroidism NOS                                                  | DGKQ | Wald ratio | 1 | 0.09  | 0.25 | 0.716 | 1.09 | 0.67 | 1.79  |
| Fracture of patella                                                 | DGKQ | Wald ratio | 1 | -0.36 | 1.01 | 0.720 | 0.70 | 0.10 | 5.03  |
| Osteoporosis, osteopenia and pathological fracture                  | DGKQ | Wald ratio | 1 | -0.12 | 0.33 | 0.720 | 0.89 | 0.47 | 1.69  |
| Acid-base balance disorder                                          | DGKQ | Wald ratio | 1 | 0.29  | 0.82 | 0.721 | 1.34 | 0.27 | 6.68  |
| Pelvic peritoneal adhesions, female (postoperative) (postinfection) | DGKQ | Wald ratio | 1 | 0.20  | 0.56 | 0.721 | 1.22 | 0.41 | 3.66  |
| Empyema and pneumothorax                                            | DGKQ | Wald ratio | 1 | -0.29 | 0.81 | 0.725 | 0.75 | 0.15 | 3.71  |
| Other hypertrophic and atrophic conditions of skin                  | DGKQ | Wald ratio | 1 | 0.14  | 0.41 | 0.726 | 1.15 | 0.52 | 2.56  |
| Spondylosis and allied disorders                                    | DGKQ | Wald ratio | 1 | 0.11  | 0.32 | 0.726 | 1.12 | 0.60 | 2.10  |
| Hyperlipidemia                                                      | DGKQ | Wald ratio | 1 | 0.06  | 0.16 | 0.728 | 1.06 | 0.77 | 1.46  |
| Extrapyramidal disease and abnormal movement disorders              | DGKQ | Wald ratio | 1 | 0.32  | 0.93 | 0.731 | 1.38 | 0.22 | 8.62  |
| Obesity                                                             | DGKQ | Wald ratio | 1 | 0.10  | 0.28 | 0.732 | 1.10 | 0.64 | 1.90  |
| Aphakia and other disorders of lens                                 | DGKQ | Wald ratio | 1 | 0.22  | 0.66 | 0.734 | 1.25 | 0.34 | 4.56  |
| Polyp of female genital organs                                      | DGKQ | Wald ratio | 1 | -0.09 | 0.28 | 0.737 | 0.91 | 0.53 | 1.57  |
| Cancer of bladder                                                   | DGKQ | Wald ratio | 1 | 0.19  | 0.57 | 0.742 | 1.21 | 0.39 | 3.71  |
| Portal hypertension                                                 | DGKQ | Wald ratio | 1 | -0.40 | 1.21 | 0.743 | 0.67 | 0.06 | 7.23  |
| Overweight, obesity and other hyperalimentation                     | DGKQ | Wald ratio | 1 | 0.09  | 0.28 | 0.743 | 1.10 | 0.64 | 1.89  |
| Nontoxic nodular goiter                                             | DGKQ | Wald ratio | 1 | 0.27  | 0.83 | 0.744 | 1.31 | 0.26 | 6.68  |
| Acquired absence of breast                                          | DGKQ | Wald ratio | 1 | -0.19 | 0.57 | 0.744 | 0.83 | 0.27 | 2.56  |
| Symptoms involving skin and other integumentary tissue              | DGKQ | Wald ratio | 1 | 0.21  | 0.66 | 0.748 | 1.24 | 0.34 | 4.48  |
| E. coli                                                             | DGKQ | Wald ratio | 1 | 0.17  | 0.54 | 0.749 | 1.19 | 0.41 | 3.40  |
| Degenerative skin conditions and other dermatoses                   | DGKQ | Wald ratio | 1 | -0.12 | 0.38 | 0.750 | 0.89 | 0.42 | 1.87  |
| Injury, NOS                                                         | DGKQ | Wald ratio | 1 | -0.10 | 0.31 | 0.752 | 0.91 | 0.49 | 1.66  |

|                                                                     |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Placenta previa and abruptio placenta                               | DGKQ | Wald ratio | 1 | -0.25 | 0.80 | 0.753 | 0.78 | 0.16 | 3.73  |
| Calculus of bile duct                                               | DGKQ | Wald ratio | 1 | 0.17  | 0.55 | 0.753 | 1.19 | 0.41 | 3.48  |
| Meniere's disease                                                   | DGKQ | Wald ratio | 1 | -0.37 | 1.16 | 0.753 | 0.69 | 0.07 | 6.79  |
| Diseases of lips                                                    | DGKQ | Wald ratio | 1 | 0.33  | 1.07 | 0.754 | 1.40 | 0.17 | 11.39 |
| Acute and chronic tonsillitis                                       | DGKQ | Wald ratio | 1 | -0.19 | 0.63 | 0.756 | 0.82 | 0.24 | 2.80  |
| Unspecified polyarthropathy or polyarthritis                        | DGKQ | Wald ratio | 1 | 0.15  | 0.48 | 0.756 | 1.16 | 0.46 | 2.94  |
| Septicemia                                                          | DGKQ | Wald ratio | 1 | 0.14  | 0.44 | 0.757 | 1.15 | 0.48 | 2.73  |
| Malignant neoplasm of testis                                        | DGKQ | Wald ratio | 1 | 0.16  | 0.52 | 0.758 | 1.17 | 0.42 | 3.25  |
| Hypothyroidism                                                      | DGKQ | Wald ratio | 1 | 0.07  | 0.24 | 0.759 | 1.08 | 0.67 | 1.74  |
| Myocardial infarction                                               | DGKQ | Wald ratio | 1 | -0.08 | 0.27 | 0.759 | 0.92 | 0.54 | 1.57  |
| Ectropion or entropion                                              | DGKQ | Wald ratio | 1 | -0.26 | 0.86 | 0.764 | 0.77 | 0.14 | 4.15  |
| Lump or mass in breast                                              | DGKQ | Wald ratio | 1 | 0.21  | 0.72 | 0.765 | 1.24 | 0.30 | 5.07  |
| Chronic ulcer of skin                                               | DGKQ | Wald ratio | 1 | 0.19  | 0.63 | 0.767 | 1.20 | 0.35 | 4.11  |
| Benign neoplasm of brain and other parts of nervous system          | DGKQ | Wald ratio | 1 | -0.29 | 0.97 | 0.768 | 0.75 | 0.11 | 5.06  |
| Vertiginous syndromes and other disorders of vestibular system      | DGKQ | Wald ratio | 1 | -0.11 | 0.36 | 0.770 | 0.90 | 0.44 | 1.82  |
| Other abnormality of urination                                      | DGKQ | Wald ratio | 1 | 0.19  | 0.64 | 0.770 | 1.21 | 0.34 | 4.23  |
| Hypertrophy of breast (Gynecomastia)                                | DGKQ | Wald ratio | 1 | -0.28 | 0.96 | 0.771 | 0.76 | 0.12 | 4.94  |
| Known or suspected fetal abnormality affecting management of mother | DGKQ | Wald ratio | 1 | 0.13  | 0.46 | 0.773 | 1.14 | 0.47 | 2.80  |
| Other dyschromia                                                    | DGKQ | Wald ratio | 1 | -0.29 | 1.00 | 0.774 | 0.75 | 0.11 | 5.31  |
| Cystitis and urethritis                                             | DGKQ | Wald ratio | 1 | -0.15 | 0.51 | 0.774 | 0.86 | 0.32 | 2.33  |
| Cardiac congenital anomalies                                        | DGKQ | Wald ratio | 1 | -0.16 | 0.55 | 0.775 | 0.85 | 0.29 | 2.51  |
| Other symptoms/disorders or the urinary system                      | DGKQ | Wald ratio | 1 | 0.05  | 0.18 | 0.775 | 1.05 | 0.73 | 1.51  |
| Hemoptysis                                                          | DGKQ | Wald ratio | 1 | -0.17 | 0.61 | 0.777 | 0.84 | 0.25 | 2.80  |
| Malignant neoplasm of ovary and other uterine adnexa                | DGKQ | Wald ratio | 1 | -0.17 | 0.61 | 0.781 | 0.84 | 0.26 | 2.79  |
| Malignant neoplasm of ovary                                         | DGKQ | Wald ratio | 1 | -0.17 | 0.61 | 0.781 | 0.84 | 0.25 | 2.81  |
| Lymphoid leukemia                                                   | DGKQ | Wald ratio | 1 | 0.32  | 1.16 | 0.781 | 1.38 | 0.14 | 13.49 |

|                                                                    |      |            |   |       |      |       |      |      |       |
|--------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Abdominal pain                                                     | DGKQ | Wald ratio | 1 | 0.04  | 0.14 | 0.781 | 1.04 | 0.78 | 1.38  |
| Carcinoma in situ of skin                                          | DGKQ | Wald ratio | 1 | 0.30  | 1.08 | 0.782 | 1.35 | 0.16 | 11.29 |
| Other symptoms                                                     | DGKQ | Wald ratio | 1 | 0.22  | 0.80 | 0.782 | 1.25 | 0.26 | 5.96  |
| Psoriasis                                                          | DGKQ | Wald ratio | 1 | -0.16 | 0.59 | 0.784 | 0.85 | 0.27 | 2.72  |
| Multiple myeloma                                                   | DGKQ | Wald ratio | 1 | 0.33  | 1.19 | 0.784 | 1.38 | 0.13 | 14.20 |
| Actinic keratosis                                                  | DGKQ | Wald ratio | 1 | -0.15 | 0.55 | 0.786 | 0.86 | 0.29 | 2.54  |
| Fracture of vertebral column without mention of spinal cord injury | DGKQ | Wald ratio | 1 | 0.21  | 0.76 | 0.786 | 1.23 | 0.28 | 5.45  |
| Chronic airway obstruction                                         | DGKQ | Wald ratio | 1 | -0.08 | 0.28 | 0.786 | 0.93 | 0.53 | 1.61  |
| Traumatic arthropathy                                              | DGKQ | Wald ratio | 1 | 0.32  | 1.21 | 0.793 | 1.37 | 0.13 | 14.78 |
| Cerebrovascular disease                                            | DGKQ | Wald ratio | 1 | -0.08 | 0.30 | 0.793 | 0.92 | 0.51 | 1.68  |
| Normal delivery                                                    | DGKQ | Wald ratio | 1 | -0.17 | 0.66 | 0.794 | 0.84 | 0.23 | 3.05  |
| Early onset of delivery                                            | DGKQ | Wald ratio | 1 | -0.29 | 1.13 | 0.795 | 0.74 | 0.08 | 6.87  |
| Early or threatened labor; hemorrhage in early pregnancy           | DGKQ | Wald ratio | 1 | 0.15  | 0.57 | 0.797 | 1.16 | 0.38 | 3.57  |
| Abnormal heart sounds                                              | DGKQ | Wald ratio | 1 | -0.22 | 0.86 | 0.798 | 0.80 | 0.15 | 4.36  |
| Phobia                                                             | DGKQ | Wald ratio | 1 | -0.32 | 1.25 | 0.799 | 0.73 | 0.06 | 8.40  |
| Hyperparathyroidism                                                | DGKQ | Wald ratio | 1 | -0.25 | 1.00 | 0.802 | 0.78 | 0.11 | 5.55  |
| Other disorders of soft tissues                                    | DGKQ | Wald ratio | 1 | -0.09 | 0.36 | 0.803 | 0.91 | 0.45 | 1.85  |
| Benign neoplasm of brain, cranial nerves, meninges                 | DGKQ | Wald ratio | 1 | -0.25 | 1.01 | 0.803 | 0.78 | 0.11 | 5.60  |
| Prolapse of vaginal vault after hysterectomy                       | DGKQ | Wald ratio | 1 | -0.30 | 1.24 | 0.805 | 0.74 | 0.07 | 8.30  |
| Other disorders of tympanic membrane                               | DGKQ | Wald ratio | 1 | -0.19 | 0.76 | 0.805 | 0.83 | 0.19 | 3.67  |
| Abnormal sputum                                                    | DGKQ | Wald ratio | 1 | -0.15 | 0.60 | 0.809 | 0.86 | 0.27 | 2.80  |
| Epistaxis or throat hemorrhage                                     | DGKQ | Wald ratio | 1 | -0.14 | 0.57 | 0.809 | 0.87 | 0.29 | 2.65  |
| Injuries to the nervous system                                     | DGKQ | Wald ratio | 1 | 0.19  | 0.77 | 0.810 | 1.20 | 0.27 | 5.46  |
| Intracerebral hemorrhage                                           | DGKQ | Wald ratio | 1 | 0.25  | 1.06 | 0.812 | 1.29 | 0.16 | 10.24 |
| Nonspecific abnormal findings in stool contents                    | DGKQ | Wald ratio | 1 | -0.16 | 0.69 | 0.813 | 0.85 | 0.22 | 3.26  |
| Peptic ulcer (excl. esophageal)                                    | DGKQ | Wald ratio | 1 | 0.08  | 0.33 | 0.815 | 1.08 | 0.57 | 2.06  |

|                                       |      |            |   |       |      |       |      |      |      |
|---------------------------------------|------|------------|---|-------|------|-------|------|------|------|
| Osteoporosis NOS                      | DGKQ | Wald ratio | 1 | -0.09 | 0.38 | 0.816 | 0.91 | 0.43 | 1.93 |
| Appendicitis                          | DGKQ | Wald ratio | 1 | 0.12  | 0.50 | 0.816 | 1.12 | 0.42 | 2.98 |
| Hypercholesterolemia                  | DGKQ | Wald ratio | 1 | 0.04  | 0.17 | 0.817 | 1.04 | 0.75 | 1.45 |
| Spondylosis without myelopathy        | DGKQ | Wald ratio | 1 | -0.09 | 0.40 | 0.818 | 0.91 | 0.42 | 1.99 |
| Psoriatic arthropathy                 | DGKQ | Wald ratio | 1 | -0.24 | 1.05 | 0.819 | 0.79 | 0.10 | 6.14 |
| GERD                                  | DGKQ | Wald ratio | 1 | 0.06  | 0.24 | 0.819 | 1.06 | 0.66 | 1.70 |
| Open wounds of extremities            | DGKQ | Wald ratio | 1 | -0.10 | 0.43 | 0.821 | 0.91 | 0.39 | 2.12 |
| Vitamin B-complex deficiencies        | DGKQ | Wald ratio | 1 | -0.23 | 1.02 | 0.823 | 0.80 | 0.11 | 5.86 |
| Other disorders of peritoneum         | DGKQ | Wald ratio | 1 | -0.11 | 0.49 | 0.823 | 0.90 | 0.34 | 2.34 |
| Edema                                 | DGKQ | Wald ratio | 1 | 0.15  | 0.69 | 0.824 | 1.17 | 0.30 | 4.51 |
| Pelvic inflammatory disease (PID)     | DGKQ | Wald ratio | 1 | -0.20 | 0.92 | 0.825 | 0.82 | 0.14 | 4.91 |
| Other inflammatory spondylopathies    | DGKQ | Wald ratio | 1 | -0.15 | 0.68 | 0.825 | 0.86 | 0.22 | 3.28 |
| Hypopotassemia                        | DGKQ | Wald ratio | 1 | -0.16 | 0.74 | 0.828 | 0.85 | 0.20 | 3.62 |
| Aphasia/speech disturbance            | DGKQ | Wald ratio | 1 | 0.16  | 0.72 | 0.828 | 1.17 | 0.29 | 4.79 |
| Celiac disease                        | DGKQ | Wald ratio | 1 | -0.14 | 0.65 | 0.829 | 0.87 | 0.24 | 3.13 |
| Memory loss                           | DGKQ | Wald ratio | 1 | 0.23  | 1.06 | 0.830 | 1.25 | 0.16 | 9.96 |
| Malunion and nonunion of fracture     | DGKQ | Wald ratio | 1 | 0.17  | 0.79 | 0.832 | 1.18 | 0.25 | 5.53 |
| Spinal stenosis                       | DGKQ | Wald ratio | 1 | 0.10  | 0.46 | 0.833 | 1.10 | 0.44 | 2.73 |
| Acute pharyngitis                     | DGKQ | Wald ratio | 1 | 0.20  | 0.95 | 0.834 | 1.22 | 0.19 | 7.82 |
| Cardiac dysrhythmias                  | DGKQ | Wald ratio | 1 | -0.04 | 0.19 | 0.837 | 0.96 | 0.66 | 1.39 |
| Infertility, female                   | DGKQ | Wald ratio | 1 | 0.16  | 0.77 | 0.838 | 1.17 | 0.26 | 5.34 |
| Hemangioma and lymphangioma, any site | DGKQ | Wald ratio | 1 | -0.14 | 0.70 | 0.838 | 0.87 | 0.22 | 3.42 |
| Diaphragmatic hernia                  | DGKQ | Wald ratio | 1 | -0.04 | 0.18 | 0.838 | 0.96 | 0.67 | 1.38 |
| Seborrheic keratosis                  | DGKQ | Wald ratio | 1 | -0.10 | 0.51 | 0.839 | 0.90 | 0.34 | 2.43 |
| Other disorders of eye                | DGKQ | Wald ratio | 1 | 0.09  | 0.45 | 0.839 | 1.10 | 0.45 | 2.65 |
| Myopia                                | DGKQ | Wald ratio | 1 | 0.16  | 0.79 | 0.840 | 1.17 | 0.25 | 5.53 |

|                                                                                     |      |            |   |       |      |       |      |      |       |
|-------------------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Other and unspecified disorders of back                                             | DGKQ | Wald ratio | 1 | -0.12 | 0.62 | 0.841 | 0.88 | 0.26 | 2.95  |
| Shortness of breath                                                                 | DGKQ | Wald ratio | 1 | 0.07  | 0.37 | 0.845 | 1.07 | 0.52 | 2.21  |
| Pancreatic cancer                                                                   | DGKQ | Wald ratio | 1 | 0.22  | 1.15 | 0.848 | 1.25 | 0.13 | 11.90 |
| Other disorders of stomach and duodenum                                             | DGKQ | Wald ratio | 1 | -0.09 | 0.48 | 0.851 | 0.91 | 0.35 | 2.36  |
| Postoperative infection                                                             | DGKQ | Wald ratio | 1 | 0.08  | 0.42 | 0.852 | 1.08 | 0.47 | 2.47  |
| Bronchiectasis                                                                      | DGKQ | Wald ratio | 1 | -0.12 | 0.65 | 0.853 | 0.89 | 0.25 | 3.15  |
| Ovarian cyst                                                                        | DGKQ | Wald ratio | 1 | 0.08  | 0.41 | 0.855 | 1.08 | 0.48 | 2.42  |
| Thyrotoxicosis with or without goiter                                               | DGKQ | Wald ratio | 1 | -0.12 | 0.65 | 0.856 | 0.89 | 0.25 | 3.18  |
| Amblyopia                                                                           | DGKQ | Wald ratio | 1 | -0.22 | 1.20 | 0.856 | 0.80 | 0.08 | 8.45  |
| Hemiplegia                                                                          | DGKQ | Wald ratio | 1 | 0.13  | 0.72 | 0.857 | 1.14 | 0.28 | 4.71  |
| Peripheral vascular disease, unspecified                                            | DGKQ | Wald ratio | 1 | 0.10  | 0.56 | 0.859 | 1.10 | 0.37 | 3.30  |
| Hyposmolality and/or hyponatremia                                                   | DGKQ | Wald ratio | 1 | 0.12  | 0.66 | 0.859 | 1.12 | 0.31 | 4.07  |
| Derangement of joint, non-traumatic                                                 | DGKQ | Wald ratio | 1 | 0.09  | 0.52 | 0.861 | 1.10 | 0.39 | 3.04  |
| Diseases of pulp and periapical tissues                                             | DGKQ | Wald ratio | 1 | 0.11  | 0.66 | 0.862 | 1.12 | 0.31 | 4.08  |
| Swelling, mass, or lump in head and neck [Space-occupying lesion, intracranial NOS] | DGKQ | Wald ratio | 1 | 0.16  | 0.93 | 0.862 | 1.17 | 0.19 | 7.22  |
| Hypotension                                                                         | DGKQ | Wald ratio | 1 | 0.06  | 0.37 | 0.862 | 1.07 | 0.52 | 2.19  |
| Elevated blood pressure reading without diagnosis of hypertension                   | DGKQ | Wald ratio | 1 | 0.12  | 0.73 | 0.864 | 1.13 | 0.27 | 4.70  |
| Convulsions                                                                         | DGKQ | Wald ratio | 1 | 0.10  | 0.59 | 0.866 | 1.11 | 0.35 | 3.54  |
| Polymyalgia Rheumatica                                                              | DGKQ | Wald ratio | 1 | -0.14 | 0.83 | 0.866 | 0.87 | 0.17 | 4.40  |
| Disorders of vitreous body                                                          | DGKQ | Wald ratio | 1 | 0.13  | 0.76 | 0.866 | 1.14 | 0.26 | 5.00  |
| Carditis                                                                            | DGKQ | Wald ratio | 1 | -0.10 | 0.62 | 0.868 | 0.90 | 0.27 | 3.06  |
| Dementias                                                                           | DGKQ | Wald ratio | 1 | -0.15 | 0.90 | 0.872 | 0.86 | 0.15 | 5.06  |
| Other disorders of liver                                                            | DGKQ | Wald ratio | 1 | -0.06 | 0.37 | 0.873 | 0.94 | 0.46 | 1.94  |
| Other disorders of bladder                                                          | DGKQ | Wald ratio | 1 | -0.05 | 0.29 | 0.873 | 0.96 | 0.54 | 1.68  |
| Frequency of urination and polyuria                                                 | DGKQ | Wald ratio | 1 | -0.07 | 0.44 | 0.873 | 0.93 | 0.39 | 2.22  |

|                                                               |      |            |   |       |      |       |      |      |       |
|---------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Malignant neoplasm of uterus                                  | DGKQ | Wald ratio | 1 | -0.13 | 0.79 | 0.874 | 0.88 | 0.19 | 4.11  |
| Benign neoplasm of other parts of digestive system            | DGKQ | Wald ratio | 1 | 0.06  | 0.39 | 0.878 | 1.06 | 0.49 | 2.28  |
| Obstetrical/birth trauma                                      | DGKQ | Wald ratio | 1 | -0.07 | 0.43 | 0.878 | 0.94 | 0.40 | 2.17  |
| Other and unspecified disc disorder                           | DGKQ | Wald ratio | 1 | -0.06 | 0.42 | 0.880 | 0.94 | 0.41 | 2.16  |
| Obstruction of bile duct                                      | DGKQ | Wald ratio | 1 | -0.15 | 1.00 | 0.880 | 0.86 | 0.12 | 6.16  |
| Renal failure NOS                                             | DGKQ | Wald ratio | 1 | -0.11 | 0.74 | 0.881 | 0.89 | 0.21 | 3.84  |
| Facial nerve disorders [CN7]                                  | DGKQ | Wald ratio | 1 | -0.14 | 0.94 | 0.882 | 0.87 | 0.14 | 5.52  |
| Symptoms involving nervous and musculoskeletal systems        | DGKQ | Wald ratio | 1 | -0.09 | 0.65 | 0.885 | 0.91 | 0.26 | 3.24  |
| Migraine                                                      | DGKQ | Wald ratio | 1 | 0.08  | 0.53 | 0.885 | 1.08 | 0.38 | 3.04  |
| Epilepsy                                                      | DGKQ | Wald ratio | 1 | 0.13  | 0.93 | 0.887 | 1.14 | 0.18 | 7.06  |
| Type 2 diabetes                                               | DGKQ | Wald ratio | 1 | 0.03  | 0.22 | 0.889 | 1.03 | 0.67 | 1.59  |
| Orthostatic hypotension                                       | DGKQ | Wald ratio | 1 | -0.11 | 0.76 | 0.889 | 0.90 | 0.20 | 4.02  |
| Rheumatic disease of the heart valves                         | DGKQ | Wald ratio | 1 | 0.06  | 0.40 | 0.892 | 1.06 | 0.48 | 2.33  |
| Premature beats                                               | DGKQ | Wald ratio | 1 | 0.16  | 1.20 | 0.892 | 1.18 | 0.11 | 12.37 |
| Otitis media and Eustachian tube disorders                    | DGKQ | Wald ratio | 1 | -0.08 | 0.59 | 0.893 | 0.92 | 0.29 | 2.95  |
| Peripheral vascular disease                                   | DGKQ | Wald ratio | 1 | 0.06  | 0.45 | 0.893 | 1.06 | 0.44 | 2.57  |
| Malignant neoplasm of kidney, except pelvis                   | DGKQ | Wald ratio | 1 | 0.12  | 0.88 | 0.894 | 1.13 | 0.20 | 6.34  |
| Lymphoid leukemia, chronic                                    | DGKQ | Wald ratio | 1 | -0.16 | 1.24 | 0.896 | 0.85 | 0.08 | 9.59  |
| Prurigo and Lichen                                            | DGKQ | Wald ratio | 1 | -0.13 | 1.00 | 0.898 | 0.88 | 0.12 | 6.28  |
| Leukemia                                                      | DGKQ | Wald ratio | 1 | -0.09 | 0.69 | 0.900 | 0.92 | 0.24 | 3.53  |
| Fetal distress and abnormal forces of labor                   | DGKQ | Wald ratio | 1 | 0.08  | 0.62 | 0.901 | 1.08 | 0.32 | 3.64  |
| Neurological disorders                                        | DGKQ | Wald ratio | 1 | 0.05  | 0.41 | 0.901 | 1.05 | 0.47 | 2.36  |
| Cervical intraepithelial neoplasia [CIN] [Cervical dysplasia] | DGKQ | Wald ratio | 1 | 0.08  | 0.62 | 0.901 | 1.08 | 0.32 | 3.60  |
| Abnormal findings examination of lungs                        | DGKQ | Wald ratio | 1 | 0.07  | 0.56 | 0.905 | 1.07 | 0.36 | 3.21  |
| Disorders of external ear                                     | DGKQ | Wald ratio | 1 | -0.09 | 0.74 | 0.906 | 0.92 | 0.22 | 3.88  |
| Cardiac arrest                                                | DGKQ | Wald ratio | 1 | -0.11 | 0.92 | 0.908 | 0.90 | 0.15 | 5.44  |

|                                                                          |      |            |   |       |      |       |      |      |       |
|--------------------------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Genital prolapse                                                         | DGKQ | Wald ratio | 1 | 0.03  | 0.27 | 0.909 | 1.03 | 0.61 | 1.74  |
| Other specified osteoporosis                                             | DGKQ | Wald ratio | 1 | 0.14  | 1.21 | 0.909 | 1.15 | 0.11 | 12.35 |
| Intervertebral disc disorders                                            | DGKQ | Wald ratio | 1 | 0.03  | 0.30 | 0.910 | 1.03 | 0.58 | 1.86  |
| Peritonitis and retroperitoneal infections                               | DGKQ | Wald ratio | 1 | -0.11 | 0.94 | 0.910 | 0.90 | 0.14 | 5.65  |
| Peritoneal adhesions (postoperative) (postinfection)                     | DGKQ | Wald ratio | 1 | -0.06 | 0.50 | 0.911 | 0.95 | 0.35 | 2.53  |
| Opiates and related narcotics causing adverse effects in therapeutic use | DGKQ | Wald ratio | 1 | 0.09  | 0.83 | 0.913 | 1.09 | 0.22 | 5.52  |
| Other diseases of the teeth and supporting structures                    | DGKQ | Wald ratio | 1 | 0.06  | 0.54 | 0.915 | 1.06 | 0.37 | 3.05  |
| Nonrheumatic mitral valve disorders                                      | DGKQ | Wald ratio | 1 | -0.06 | 0.52 | 0.916 | 0.95 | 0.34 | 2.64  |
| Other local infections of skin and subcutaneous tissue                   | DGKQ | Wald ratio | 1 | 0.04  | 0.42 | 0.916 | 1.04 | 0.46 | 2.36  |
| Mood disorders                                                           | DGKQ | Wald ratio | 1 | 0.03  | 0.26 | 0.916 | 1.03 | 0.62 | 1.70  |
| Atrial fibrillation and flutter                                          | DGKQ | Wald ratio | 1 | -0.02 | 0.24 | 0.918 | 0.98 | 0.61 | 1.57  |
| Cardiac and circulatory congenital anomalies                             | DGKQ | Wald ratio | 1 | -0.05 | 0.53 | 0.920 | 0.95 | 0.33 | 2.69  |
| Otitis media                                                             | DGKQ | Wald ratio | 1 | 0.07  | 0.66 | 0.921 | 1.07 | 0.29 | 3.88  |
| Pneumococcal pneumonia                                                   | DGKQ | Wald ratio | 1 | -0.04 | 0.37 | 0.923 | 0.97 | 0.47 | 1.98  |
| Abnormality of gait                                                      | DGKQ | Wald ratio | 1 | -0.07 | 0.70 | 0.923 | 0.93 | 0.24 | 3.67  |
| Anal and rectal conditions                                               | DGKQ | Wald ratio | 1 | -0.02 | 0.23 | 0.924 | 0.98 | 0.62 | 1.54  |
| Delirium due to conditions classified elsewhere                          | DGKQ | Wald ratio | 1 | -0.10 | 1.09 | 0.925 | 0.90 | 0.11 | 7.67  |
| Abnormal results of function study of liver                              | DGKQ | Wald ratio | 1 | 0.05  | 0.48 | 0.925 | 1.05 | 0.41 | 2.67  |
| Symptoms involving digestive system                                      | DGKQ | Wald ratio | 1 | 0.02  | 0.23 | 0.925 | 1.02 | 0.66 | 1.59  |
| Complications of surgical and medical procedures                         | DGKQ | Wald ratio | 1 | -0.03 | 0.29 | 0.926 | 0.97 | 0.55 | 1.73  |
| Fracture of hand or wrist                                                | DGKQ | Wald ratio | 1 | 0.04  | 0.48 | 0.928 | 1.04 | 0.41 | 2.69  |
| Inflammatory disease of breast                                           | DGKQ | Wald ratio | 1 | -0.09 | 1.04 | 0.929 | 0.91 | 0.12 | 7.02  |
| Complication of colostomy or enterostomy                                 | DGKQ | Wald ratio | 1 | -0.11 | 1.25 | 0.931 | 0.90 | 0.08 | 10.35 |
| Cancer of kidney and renal pelvis                                        | DGKQ | Wald ratio | 1 | -0.07 | 0.86 | 0.932 | 0.93 | 0.17 | 5.05  |
| Skull and face fracture and other intercranial injury                    | DGKQ | Wald ratio | 1 | 0.04  | 0.52 | 0.933 | 1.04 | 0.38 | 2.88  |
| Heart valve disorders                                                    | DGKQ | Wald ratio | 1 | -0.04 | 0.43 | 0.935 | 0.97 | 0.41 | 2.26  |

|                                                           |      |            |   |       |      |       |      |      |       |
|-----------------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Right bundle branch block                                 | DGKQ | Wald ratio | 1 | 0.06  | 0.73 | 0.936 | 1.06 | 0.26 | 4.40  |
| Cellulitis and abscess of fingers/toes                    | DGKQ | Wald ratio | 1 | 0.09  | 1.17 | 0.937 | 1.10 | 0.11 | 10.95 |
| Hemorrhage in early pregnancy                             | DGKQ | Wald ratio | 1 | -0.07 | 0.86 | 0.937 | 0.93 | 0.17 | 5.05  |
| Bacterial pneumonia                                       | DGKQ | Wald ratio | 1 | 0.03  | 0.35 | 0.938 | 1.03 | 0.52 | 2.03  |
| Epiphora                                                  | DGKQ | Wald ratio | 1 | -0.07 | 0.93 | 0.943 | 0.94 | 0.15 | 5.80  |
| Endometrial hyperplasia                                   | DGKQ | Wald ratio | 1 | 0.06  | 0.83 | 0.943 | 1.06 | 0.21 | 5.43  |
| Other paralytic syndromes                                 | DGKQ | Wald ratio | 1 | 0.08  | 1.09 | 0.944 | 1.08 | 0.13 | 9.09  |
| Malignant neoplasm of bladder                             | DGKQ | Wald ratio | 1 | 0.04  | 0.61 | 0.945 | 1.04 | 0.32 | 3.45  |
| Carbuncle and furuncle                                    | DGKQ | Wald ratio | 1 | -0.04 | 0.59 | 0.946 | 0.96 | 0.30 | 3.03  |
| Bundle branch block                                       | DGKQ | Wald ratio | 1 | -0.03 | 0.49 | 0.946 | 0.97 | 0.37 | 2.51  |
| Hematuria                                                 | DGKQ | Wald ratio | 1 | -0.02 | 0.23 | 0.947 | 0.98 | 0.63 | 1.53  |
| Unstable angina (intermediate coronary syndrome)          | DGKQ | Wald ratio | 1 | -0.03 | 0.40 | 0.947 | 0.97 | 0.45 | 2.12  |
| Altered mental status                                     | DGKQ | Wald ratio | 1 | 0.04  | 0.60 | 0.951 | 1.04 | 0.32 | 3.35  |
| Ptosis of eyelid                                          | DGKQ | Wald ratio | 1 | 0.04  | 0.66 | 0.952 | 1.04 | 0.29 | 3.77  |
| Poisoning by analgesics, antipyretics, and antirheumatics | DGKQ | Wald ratio | 1 | 0.02  | 0.34 | 0.954 | 1.02 | 0.52 | 1.99  |
| Ischemic Heart Disease                                    | DGKQ | Wald ratio | 1 | -0.01 | 0.18 | 0.955 | 0.99 | 0.70 | 1.40  |
| Polyarteritis nodosa and allied conditions                | DGKQ | Wald ratio | 1 | 0.05  | 0.97 | 0.956 | 1.06 | 0.16 | 7.09  |
| Hemorrhage during pregnancy; childbirth and postpartum    | DGKQ | Wald ratio | 1 | -0.04 | 0.65 | 0.956 | 0.97 | 0.27 | 3.44  |
| Chronic sinusitis                                         | DGKQ | Wald ratio | 1 | -0.03 | 0.55 | 0.957 | 0.97 | 0.33 | 2.86  |
| Acquired foot deformities                                 | DGKQ | Wald ratio | 1 | 0.01  | 0.29 | 0.959 | 1.02 | 0.57 | 1.80  |
| Disorders of fluid, electrolyte, and acid-base balance    | DGKQ | Wald ratio | 1 | -0.02 | 0.33 | 0.960 | 0.98 | 0.52 | 1.87  |
| Sepsis                                                    | DGKQ | Wald ratio | 1 | -0.03 | 0.53 | 0.961 | 0.97 | 0.35 | 2.74  |
| Sepsis and SIRS                                           | DGKQ | Wald ratio | 1 | -0.03 | 0.53 | 0.961 | 0.97 | 0.35 | 2.74  |
| Electrolyte imbalance                                     | DGKQ | Wald ratio | 1 | 0.02  | 0.44 | 0.961 | 1.02 | 0.43 | 2.42  |
| Other peripheral nerve disorders                          | DGKQ | Wald ratio | 1 | -0.01 | 0.26 | 0.962 | 0.99 | 0.60 | 1.64  |
| Fracture of pelvis                                        | DGKQ | Wald ratio | 1 | -0.05 | 1.04 | 0.964 | 0.95 | 0.12 | 7.34  |

|                                                     |      |            |   |       |      |       |      |      |       |
|-----------------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Thrombocytopenia                                    | DGKQ | Wald ratio | 1 | -0.03 | 0.71 | 0.964 | 0.97 | 0.24 | 3.87  |
| Degenerative disease of the spinal cord             | DGKQ | Wald ratio | 1 | -0.03 | 0.66 | 0.966 | 0.97 | 0.27 | 3.54  |
| Other specified gastritis                           | DGKQ | Wald ratio | 1 | 0.01  | 0.32 | 0.969 | 1.01 | 0.54 | 1.88  |
| Voice disturbance                                   | DGKQ | Wald ratio | 1 | 0.03  | 0.85 | 0.969 | 1.03 | 0.20 | 5.44  |
| Cardiac conduction disorders                        | DGKQ | Wald ratio | 1 | -0.01 | 0.34 | 0.969 | 0.99 | 0.50 | 1.93  |
| Mitral valve disease                                | DGKQ | Wald ratio | 1 | -0.02 | 0.51 | 0.969 | 0.98 | 0.36 | 2.69  |
| Colorectal cancer                                   | DGKQ | Wald ratio | 1 | -0.02 | 0.42 | 0.969 | 0.98 | 0.43 | 2.24  |
| Appendiceal conditions                              | DGKQ | Wald ratio | 1 | 0.02  | 0.48 | 0.970 | 1.02 | 0.39 | 2.63  |
| Inflammatory and toxic neuropathy                   | DGKQ | Wald ratio | 1 | 0.03  | 0.75 | 0.970 | 1.03 | 0.23 | 4.52  |
| Renal failure                                       | DGKQ | Wald ratio | 1 | 0.01  | 0.34 | 0.971 | 1.01 | 0.52 | 1.96  |
| Iron deficiency anemias                             | DGKQ | Wald ratio | 1 | 0.01  | 0.32 | 0.971 | 1.01 | 0.54 | 1.90  |
| Adverse drug events and drug allergies              | DGKQ | Wald ratio | 1 | -0.04 | 1.06 | 0.971 | 0.96 | 0.12 | 7.72  |
| Benign neoplasm of unspecified sites                | DGKQ | Wald ratio | 1 | 0.02  | 0.57 | 0.972 | 1.02 | 0.33 | 3.12  |
| Other chronic ischemic heart disease, unspecified   | DGKQ | Wald ratio | 1 | -0.01 | 0.24 | 0.974 | 0.99 | 0.61 | 1.60  |
| Paroxysmal supraventricular tachycardia             | DGKQ | Wald ratio | 1 | 0.02  | 0.58 | 0.976 | 1.02 | 0.33 | 3.17  |
| Hematemesis                                         | DGKQ | Wald ratio | 1 | -0.02 | 0.63 | 0.977 | 0.98 | 0.28 | 3.41  |
| Decubitus ulcer                                     | DGKQ | Wald ratio | 1 | 0.02  | 0.93 | 0.981 | 1.02 | 0.17 | 6.27  |
| Schizophrenia and other psychotic disorders         | DGKQ | Wald ratio | 1 | 0.02  | 0.96 | 0.984 | 1.02 | 0.16 | 6.67  |
| Cholecystitis without cholelithiasis                | DGKQ | Wald ratio | 1 | 0.01  | 0.54 | 0.985 | 1.01 | 0.35 | 2.89  |
| Acute renal failure                                 | DGKQ | Wald ratio | 1 | -0.01 | 0.42 | 0.985 | 0.99 | 0.44 | 2.26  |
| Cancer of urinary organs (incl. kidney and bladder) | DGKQ | Wald ratio | 1 | -0.01 | 0.44 | 0.986 | 0.99 | 0.42 | 2.34  |
| Respiratory failure, insufficiency, arrest          | DGKQ | Wald ratio | 1 | -0.01 | 0.56 | 0.988 | 0.99 | 0.33 | 2.95  |
| Infection of the eye                                | DGKQ | Wald ratio | 1 | 0.02  | 1.18 | 0.988 | 1.02 | 0.10 | 10.27 |
| Femoral hernia                                      | DGKQ | Wald ratio | 1 | -0.02 | 1.10 | 0.988 | 0.98 | 0.11 | 8.45  |
| Diabetes mellitus                                   | DGKQ | Wald ratio | 1 | 0.00  | 0.21 | 0.989 | 1.00 | 0.66 | 1.52  |
| Noninflammatory female genital disorders            | DGKQ | Wald ratio | 1 | 0.00  | 0.30 | 0.989 | 1.00 | 0.56 | 1.78  |

|                                          |      |            |   |       |      |       |      |      |       |
|------------------------------------------|------|------------|---|-------|------|-------|------|------|-------|
| Osteoporosis                             | DGKQ | Wald ratio | 1 | 0.00  | 0.36 | 0.990 | 1.00 | 0.50 | 2.02  |
| Intestinal infection due to C. difficile | DGKQ | Wald ratio | 1 | -0.01 | 1.09 | 0.992 | 0.99 | 0.12 | 8.44  |
| Ileostomy status                         | DGKQ | Wald ratio | 1 | -0.01 | 0.69 | 0.992 | 0.99 | 0.26 | 3.84  |
| Chronic renal failure [CKD]              | DGKQ | Wald ratio | 1 | 0.00  | 0.55 | 0.993 | 1.00 | 0.34 | 2.91  |
| Ascites (non malignant)                  | DGKQ | Wald ratio | 1 | 0.00  | 0.71 | 0.995 | 1.00 | 0.25 | 4.03  |
| Gastric ulcer                            | DGKQ | Wald ratio | 1 | 0.00  | 0.44 | 0.995 | 1.00 | 0.42 | 2.36  |
| Duodenal ulcer                           | DGKQ | Wald ratio | 1 | 0.00  | 0.52 | 0.995 | 1.00 | 0.36 | 2.76  |
| Otitis externa                           | DGKQ | Wald ratio | 1 | -0.01 | 1.22 | 0.997 | 0.99 | 0.09 | 10.95 |
| Respiratory failure                      | DGKQ | Wald ratio | 1 | 0.00  | 0.62 | 0.997 | 1.00 | 0.29 | 3.39  |
| Dyschromia and Vitiligo                  | DGKQ | Wald ratio | 1 | 0.00  | 0.89 | 0.997 | 1.00 | 0.17 | 5.72  |
| Umbilical hernia                         | DGKQ | Wald ratio | 1 | 0.00  | 0.46 | 0.998 | 1.00 | 0.40 | 2.48  |
| Disorders of parathyroid gland           | DGKQ | Wald ratio | 1 | 0.00  | 0.95 | 0.999 | 1.00 | 0.16 | 6.39  |

**Supplementary Table 8: Phenome-wide MR results for brain GPNMB.**

| outcome                                                        | exposure | method     | nsnp | b     | se   | pval      | or   | or_lci95 | or_uci95 |
|----------------------------------------------------------------|----------|------------|------|-------|------|-----------|------|----------|----------|
| Stricture of artery                                            | GPNMB    | Wald ratio | 1    | 0.75  | 0.19 | 1.055E-04 | 2.11 | 1.45     | 3.08     |
| Atherosclerosis of the extremities                             | GPNMB    | Wald ratio | 1    | 0.76  | 0.20 | 1.496E-04 | 2.14 | 1.44     | 3.16     |
| Other disorders of arteries and arterioles                     | GPNMB    | Wald ratio | 1    | 0.58  | 0.16 | 2.133E-04 | 1.78 | 1.31     | 2.42     |
| Peripheral vascular disease, unspecified                       | GPNMB    | Wald ratio | 1    | 0.38  | 0.11 | 8.369E-04 | 1.46 | 1.17     | 1.82     |
| Atherosclerosis                                                | GPNMB    | Wald ratio | 1    | 0.52  | 0.16 | 8.581E-04 | 1.69 | 1.24     | 2.30     |
| Arterial embolism and thrombosis                               | GPNMB    | Wald ratio | 1    | 0.61  | 0.19 | 1.156E-03 | 1.84 | 1.27     | 2.66     |
| Peripheral vascular disease                                    | GPNMB    | Wald ratio | 1    | 0.28  | 0.09 | 2.343E-03 | 1.32 | 1.10     | 1.58     |
| Arterial embolism and thrombosis of lower extremity artery     | GPNMB    | Wald ratio | 1    | 0.71  | 0.24 | 3.101E-03 | 2.04 | 1.27     | 3.27     |
| Cellulitis and abscess of foot, toe                            | GPNMB    | Wald ratio | 1    | 0.23  | 0.08 | 3.186E-03 | 1.26 | 1.08     | 1.46     |
| Carcinoma in situ of skin                                      | GPNMB    | Wald ratio | 1    | 0.65  | 0.22 | 3.270E-03 | 1.91 | 1.24     | 2.95     |
| Cellulitis and abscess of leg, except foot                     | GPNMB    | Wald ratio | 1    | 0.23  | 0.08 | 3.519E-03 | 1.25 | 1.08     | 1.46     |
| Postoperative infection                                        | GPNMB    | Wald ratio | 1    | 0.25  | 0.09 | 3.688E-03 | 1.28 | 1.08     | 1.52     |
| Atrioventricular block, complete                               | GPNMB    | Wald ratio | 1    | 0.67  | 0.24 | 4.472E-03 | 1.95 | 1.23     | 3.10     |
| Cellulitis and abscess of arm/hand                             | GPNMB    | Wald ratio | 1    | 0.22  | 0.08 | 4.781E-03 | 1.24 | 1.07     | 1.45     |
| Other inflammatory spondylopathies                             | GPNMB    | Wald ratio | 1    | -0.39 | 0.14 | 5.338E-03 | 0.68 | 0.52     | 0.89     |
| Lymphadenitis                                                  | GPNMB    | Wald ratio | 1    | 0.31  | 0.11 | 5.614E-03 | 1.36 | 1.09     | 1.69     |
| Complications of labor and delivery NEC                        | GPNMB    | Wald ratio | 1    | -0.31 | 0.12 | 8.836E-03 | 0.73 | 0.58     | 0.92     |
| Intestinal obstruction without mention of hernia               | GPNMB    | Wald ratio | 1    | 0.23  | 0.09 | 9.251E-03 | 1.26 | 1.06     | 1.51     |
| Ascites (non malignant)                                        | GPNMB    | Wald ratio | 1    | 0.36  | 0.14 | 0.012     | 1.44 | 1.09     | 1.91     |
| Dysphagia                                                      | GPNMB    | Wald ratio | 1    | -0.18 | 0.07 | 0.012     | 0.84 | 0.73     | 0.96     |
| Other intestinal obstruction                                   | GPNMB    | Wald ratio | 1    | 0.24  | 0.10 | 0.013     | 1.28 | 1.05     | 1.55     |
| Other disorders of eye                                         | GPNMB    | Wald ratio | 1    | 0.22  | 0.09 | 0.014     | 1.25 | 1.05     | 1.50     |
| Other acquired musculoskeletal deformity                       | GPNMB    | Wald ratio | 1    | 0.32  | 0.13 | 0.015     | 1.37 | 1.06     | 1.77     |
| Vertiginous syndromes and other disorders of vestibular system | GPNMB    | Wald ratio | 1    | 0.18  | 0.07 | 0.016     | 1.19 | 1.03     | 1.38     |

|                                                               |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Bacterial enteritis                                           | GPNMB | Wald ratio | 1 | 0.26  | 0.11 | 0.017 | 1.30 | 1.05 | 1.60 |
| stress incontinence, female                                   | GPNMB | Wald ratio | 1 | -0.18 | 0.08 | 0.018 | 0.84 | 0.72 | 0.97 |
| Musculoskeletal symptoms referable to limbs                   | GPNMB | Wald ratio | 1 | 0.18  | 0.08 | 0.019 | 1.20 | 1.03 | 1.40 |
| Bladder neck obstruction                                      | GPNMB | Wald ratio | 1 | -0.30 | 0.13 | 0.019 | 0.74 | 0.57 | 0.95 |
| Vascular insufficiency of intestine                           | GPNMB | Wald ratio | 1 | 0.55  | 0.24 | 0.020 | 1.73 | 1.09 | 2.76 |
| Functional disorders of bladder                               | GPNMB | Wald ratio | 1 | -0.32 | 0.14 | 0.022 | 0.73 | 0.55 | 0.95 |
| Other symptoms                                                | GPNMB | Wald ratio | 1 | 0.37  | 0.16 | 0.022 | 1.45 | 1.05 | 1.99 |
| Diseases of hard tissues of teeth                             | GPNMB | Wald ratio | 1 | -0.23 | 0.10 | 0.023 | 0.79 | 0.65 | 0.97 |
| Endometriosis                                                 | GPNMB | Wald ratio | 1 | 0.21  | 0.09 | 0.024 | 1.23 | 1.03 | 1.47 |
| Symptoms involving female genital tract                       | GPNMB | Wald ratio | 1 | -0.16 | 0.07 | 0.024 | 0.85 | 0.74 | 0.98 |
| Osteoporosis NOS                                              | GPNMB | Wald ratio | 1 | -0.17 | 0.08 | 0.026 | 0.84 | 0.72 | 0.98 |
| Superficial cellulitis and abscess                            | GPNMB | Wald ratio | 1 | 0.15  | 0.07 | 0.026 | 1.16 | 1.02 | 1.32 |
| Ulcerative colitis                                            | GPNMB | Wald ratio | 1 | 0.22  | 0.10 | 0.029 | 1.25 | 1.02 | 1.53 |
| Aphakia and other disorders of lens                           | GPNMB | Wald ratio | 1 | 0.29  | 0.13 | 0.030 | 1.34 | 1.03 | 1.74 |
| Joint effusions                                               | GPNMB | Wald ratio | 1 | -0.33 | 0.15 | 0.030 | 0.72 | 0.54 | 0.97 |
| Dyspareunia                                                   | GPNMB | Wald ratio | 1 | -0.36 | 0.17 | 0.031 | 0.70 | 0.51 | 0.97 |
| Hypertrophy of breast (Gynecomastia)                          | GPNMB | Wald ratio | 1 | 0.42  | 0.20 | 0.033 | 1.52 | 1.04 | 2.22 |
| Acquired spondylolisthesis                                    | GPNMB | Wald ratio | 1 | 0.31  | 0.15 | 0.033 | 1.36 | 1.03 | 1.81 |
| Benign neoplasm of lip, oral cavity, and pharynx              | GPNMB | Wald ratio | 1 | 0.38  | 0.18 | 0.034 | 1.47 | 1.03 | 2.09 |
| Dental caries                                                 | GPNMB | Wald ratio | 1 | -0.22 | 0.10 | 0.035 | 0.80 | 0.66 | 0.98 |
| Other disorders of bladder                                    | GPNMB | Wald ratio | 1 | -0.12 | 0.06 | 0.036 | 0.89 | 0.79 | 0.99 |
| Poisoning by analgesics, antipyretics, and antirheumatics     | GPNMB | Wald ratio | 1 | -0.14 | 0.07 | 0.044 | 0.87 | 0.76 | 1.00 |
| Inflammatory diseases of female pelvic organs                 | GPNMB | Wald ratio | 1 | -0.15 | 0.07 | 0.045 | 0.86 | 0.75 | 1.00 |
| Pain and other symptoms associated with female genital organs | GPNMB | Wald ratio | 1 | -0.20 | 0.11 | 0.051 | 0.81 | 0.66 | 1.00 |
| Diplopia and disorders of binocular vision                    | GPNMB | Wald ratio | 1 | -0.41 | 0.21 | 0.052 | 0.66 | 0.44 | 1.00 |
| Osteoporosis                                                  | GPNMB | Wald ratio | 1 | -0.14 | 0.07 | 0.053 | 0.87 | 0.75 | 1.00 |

|                                                               |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Disorders of conjunctiva                                      | GPNMB | Wald ratio | 1 | 0.40  | 0.21 | 0.053 | 1.49 | 0.99 | 2.23 |
| Other diseases of blood and blood-forming organs              | GPNMB | Wald ratio | 1 | 0.17  | 0.09 | 0.057 | 1.18 | 0.99 | 1.41 |
| Spinal stenosis                                               | GPNMB | Wald ratio | 1 | 0.18  | 0.09 | 0.060 | 1.19 | 0.99 | 1.44 |
| Pilonidal cyst                                                | GPNMB | Wald ratio | 1 | -0.44 | 0.24 | 0.061 | 0.64 | 0.41 | 1.02 |
| Hydronephrosis                                                | GPNMB | Wald ratio | 1 | 0.24  | 0.13 | 0.063 | 1.27 | 0.99 | 1.64 |
| Rheumatoid arthritis and other inflammatory polyarthropathies | GPNMB | Wald ratio | 1 | -0.15 | 0.08 | 0.063 | 0.86 | 0.73 | 1.01 |
| Poisoning/allergy of sulfonamides                             | GPNMB | Wald ratio | 1 | 0.36  | 0.19 | 0.063 | 1.43 | 0.98 | 2.09 |
| Aneurysm and dissection of heart                              | GPNMB | Wald ratio | 1 | 0.40  | 0.21 | 0.064 | 1.49 | 0.98 | 2.27 |
| Umbilical hernia                                              | GPNMB | Wald ratio | 1 | -0.17 | 0.09 | 0.065 | 0.84 | 0.70 | 1.01 |
| Epiphora                                                      | GPNMB | Wald ratio | 1 | -0.35 | 0.19 | 0.067 | 0.71 | 0.49 | 1.02 |
| Other complications of pregnancy NEC                          | GPNMB | Wald ratio | 1 | 0.23  | 0.13 | 0.067 | 1.26 | 0.98 | 1.61 |
| Cardiac conduction disorders                                  | GPNMB | Wald ratio | 1 | 0.13  | 0.07 | 0.071 | 1.13 | 0.99 | 1.30 |
| Swelling of limb                                              | GPNMB | Wald ratio | 1 | 0.15  | 0.08 | 0.076 | 1.16 | 0.98 | 1.37 |
| Septicemia                                                    | GPNMB | Wald ratio | 1 | 0.16  | 0.09 | 0.076 | 1.17 | 0.98 | 1.40 |
| Constipation                                                  | GPNMB | Wald ratio | 1 | 0.10  | 0.06 | 0.077 | 1.11 | 0.99 | 1.24 |
| Other disorders of liver                                      | GPNMB | Wald ratio | 1 | 0.13  | 0.08 | 0.078 | 1.14 | 0.99 | 1.32 |
| Breast conditions, congenital or relating to hormones         | GPNMB | Wald ratio | 1 | 0.32  | 0.19 | 0.080 | 1.38 | 0.96 | 1.99 |
| Cholecystitis without cholelithiasis                          | GPNMB | Wald ratio | 1 | 0.19  | 0.11 | 0.081 | 1.21 | 0.98 | 1.50 |
| Blood in stool                                                | GPNMB | Wald ratio | 1 | 0.19  | 0.11 | 0.082 | 1.21 | 0.98 | 1.51 |
| Intestinal infection                                          | GPNMB | Wald ratio | 1 | 0.10  | 0.06 | 0.083 | 1.11 | 0.99 | 1.25 |
| Peritoneal or intestinal adhesions                            | GPNMB | Wald ratio | 1 | 0.34  | 0.20 | 0.083 | 1.41 | 0.96 | 2.07 |
| Disorders of vitreous body                                    | GPNMB | Wald ratio | 1 | 0.26  | 0.15 | 0.085 | 1.30 | 0.96 | 1.76 |
| Torus fracture                                                | GPNMB | Wald ratio | 1 | -0.24 | 0.14 | 0.085 | 0.79 | 0.60 | 1.03 |
| Other disorders of the kidney and ureters                     | GPNMB | Wald ratio | 1 | 0.17  | 0.10 | 0.088 | 1.18 | 0.98 | 1.44 |
| Dizziness and giddiness (Light-headedness and vertigo)        | GPNMB | Wald ratio | 1 | 0.14  | 0.08 | 0.090 | 1.15 | 0.98 | 1.36 |
| Other tests                                                   | GPNMB | Wald ratio | 1 | 0.13  | 0.07 | 0.091 | 1.13 | 0.98 | 1.31 |

|                                                                                 |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Erythematous conditions                                                         | GPNMB | Wald ratio | 1 | 0.20  | 0.12 | 0.092 | 1.22 | 0.97 | 1.52 |
| Diseases of hair and hair follicles                                             | GPNMB | Wald ratio | 1 | 0.13  | 0.08 | 0.092 | 1.14 | 0.98 | 1.33 |
| Abnormal findings on mammogram or breast exam                                   | GPNMB | Wald ratio | 1 | -0.24 | 0.14 | 0.093 | 0.79 | 0.59 | 1.04 |
| Mechanical complication of unspecified genitourinary device, implant, and graft | GPNMB | Wald ratio | 1 | -0.27 | 0.16 | 0.095 | 0.76 | 0.56 | 1.05 |
| Other peripheral nerve disorders                                                | GPNMB | Wald ratio | 1 | -0.09 | 0.05 | 0.100 | 0.92 | 0.83 | 1.02 |
| Acid-base balance disorder                                                      | GPNMB | Wald ratio | 1 | 0.27  | 0.17 | 0.100 | 1.32 | 0.95 | 1.82 |
| Benign neoplasm of breast                                                       | GPNMB | Wald ratio | 1 | 0.24  | 0.14 | 0.102 | 1.27 | 0.95 | 1.68 |
| Palpitations                                                                    | GPNMB | Wald ratio | 1 | 0.15  | 0.09 | 0.104 | 1.16 | 0.97 | 1.40 |
| Pernicious anemia                                                               | GPNMB | Wald ratio | 1 | -0.33 | 0.21 | 0.107 | 0.72 | 0.48 | 1.08 |
| Hyposmolality and/or hyponatremia                                               | GPNMB | Wald ratio | 1 | 0.21  | 0.13 | 0.107 | 1.24 | 0.95 | 1.61 |
| Chemotherapy                                                                    | GPNMB | Wald ratio | 1 | 0.06  | 0.04 | 0.107 | 1.07 | 0.99 | 1.15 |
| Diseases of sebaceous glands                                                    | GPNMB | Wald ratio | 1 | 0.10  | 0.06 | 0.113 | 1.10 | 0.98 | 1.24 |
| Other cerebral degenerations                                                    | GPNMB | Wald ratio | 1 | -0.27 | 0.17 | 0.113 | 0.76 | 0.55 | 1.07 |
| Altered mental status                                                           | GPNMB | Wald ratio | 1 | 0.19  | 0.12 | 0.114 | 1.21 | 0.96 | 1.54 |
| Osteoarthritis; localized                                                       | GPNMB | Wald ratio | 1 | 0.07  | 0.04 | 0.114 | 1.07 | 0.98 | 1.17 |
| Other nonmalignant breast conditions                                            | GPNMB | Wald ratio | 1 | 0.20  | 0.13 | 0.115 | 1.23 | 0.95 | 1.58 |
| Benign mammary dysplasias                                                       | GPNMB | Wald ratio | 1 | 0.16  | 0.10 | 0.115 | 1.17 | 0.96 | 1.42 |
| Pneumococcal pneumonia                                                          | GPNMB | Wald ratio | 1 | -0.12 | 0.07 | 0.116 | 0.89 | 0.77 | 1.03 |
| Osteoarthritis                                                                  | GPNMB | Wald ratio | 1 | 0.06  | 0.04 | 0.116 | 1.06 | 0.99 | 1.14 |
| Acute renal failure                                                             | GPNMB | Wald ratio | 1 | 0.13  | 0.09 | 0.116 | 1.14 | 0.97 | 1.35 |
| Paroxysmal ventricular tachycardia                                              | GPNMB | Wald ratio | 1 | -0.29 | 0.19 | 0.117 | 0.75 | 0.52 | 1.08 |
| Actinic keratosis                                                               | GPNMB | Wald ratio | 1 | 0.17  | 0.11 | 0.120 | 1.19 | 0.96 | 1.48 |
| Hypopotassemia                                                                  | GPNMB | Wald ratio | 1 | -0.23 | 0.15 | 0.122 | 0.79 | 0.59 | 1.06 |
| Sebaceous cyst                                                                  | GPNMB | Wald ratio | 1 | 0.10  | 0.06 | 0.123 | 1.10 | 0.97 | 1.24 |
| Acidosis                                                                        | GPNMB | Wald ratio | 1 | 0.27  | 0.18 | 0.124 | 1.31 | 0.93 | 1.84 |

|                                                    |       |            |   |       |      |       |      |      |      |
|----------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Diverticulosis and diverticulitis                  | GPNMB | Wald ratio | 1 | 0.06  | 0.04 | 0.126 | 1.06 | 0.98 | 1.14 |
| Abnormal findings examination of lungs             | GPNMB | Wald ratio | 1 | 0.17  | 0.11 | 0.126 | 1.19 | 0.95 | 1.49 |
| Nerve root and plexus disorders                    | GPNMB | Wald ratio | 1 | 0.26  | 0.17 | 0.126 | 1.29 | 0.93 | 1.80 |
| Atrioventricular [AV] block                        | GPNMB | Wald ratio | 1 | 0.19  | 0.12 | 0.126 | 1.21 | 0.95 | 1.54 |
| Diverticulosis                                     | GPNMB | Wald ratio | 1 | 0.06  | 0.04 | 0.128 | 1.06 | 0.98 | 1.14 |
| Pain in joint                                      | GPNMB | Wald ratio | 1 | -0.10 | 0.06 | 0.132 | 0.91 | 0.80 | 1.03 |
| Epilepsy                                           | GPNMB | Wald ratio | 1 | 0.28  | 0.19 | 0.134 | 1.33 | 0.92 | 1.92 |
| Hematuria                                          | GPNMB | Wald ratio | 1 | -0.07 | 0.05 | 0.135 | 0.93 | 0.85 | 1.02 |
| Leukemia                                           | GPNMB | Wald ratio | 1 | 0.21  | 0.14 | 0.137 | 1.23 | 0.94 | 1.62 |
| Cholelithiasis with acute cholecystitis            | GPNMB | Wald ratio | 1 | 0.22  | 0.15 | 0.140 | 1.24 | 0.93 | 1.66 |
| Anxiety disorder                                   | GPNMB | Wald ratio | 1 | 0.11  | 0.07 | 0.141 | 1.11 | 0.97 | 1.28 |
| Bacterial pneumonia                                | GPNMB | Wald ratio | 1 | -0.10 | 0.07 | 0.141 | 0.90 | 0.78 | 1.04 |
| Sicca syndrome                                     | GPNMB | Wald ratio | 1 | -0.37 | 0.25 | 0.142 | 0.69 | 0.42 | 1.13 |
| Heartburn                                          | GPNMB | Wald ratio | 1 | 0.18  | 0.12 | 0.144 | 1.20 | 0.94 | 1.53 |
| Aortic aneurysm                                    | GPNMB | Wald ratio | 1 | 0.22  | 0.15 | 0.146 | 1.25 | 0.93 | 1.69 |
| Noninflammatory disorders of vagina                | GPNMB | Wald ratio | 1 | 0.20  | 0.14 | 0.147 | 1.22 | 0.93 | 1.59 |
| Sepsis                                             | GPNMB | Wald ratio | 1 | 0.16  | 0.11 | 0.148 | 1.17 | 0.95 | 1.44 |
| Sepsis and SIRS                                    | GPNMB | Wald ratio | 1 | 0.16  | 0.11 | 0.148 | 1.17 | 0.95 | 1.44 |
| Osteoporosis, osteopenia and pathological fracture | GPNMB | Wald ratio | 1 | -0.10 | 0.07 | 0.149 | 0.91 | 0.80 | 1.03 |
| Vitamin B-complex deficiencies                     | GPNMB | Wald ratio | 1 | -0.30 | 0.21 | 0.150 | 0.74 | 0.49 | 1.11 |
| Respiratory abnormalities                          | GPNMB | Wald ratio | 1 | 0.33  | 0.23 | 0.150 | 1.39 | 0.89 | 2.19 |
| Nausea and vomiting                                | GPNMB | Wald ratio | 1 | 0.08  | 0.05 | 0.150 | 1.08 | 0.97 | 1.20 |
| Disorders of muscle, ligament, and fascia          | GPNMB | Wald ratio | 1 | -0.12 | 0.09 | 0.154 | 0.88 | 0.75 | 1.05 |
| Genitourinary congenital anomalies                 | GPNMB | Wald ratio | 1 | -0.20 | 0.14 | 0.159 | 0.82 | 0.62 | 1.08 |
| Congenital anomalies of genital organs             | GPNMB | Wald ratio | 1 | -0.30 | 0.21 | 0.162 | 0.74 | 0.49 | 1.13 |
| Other disorders of soft tissues                    | GPNMB | Wald ratio | 1 | 0.10  | 0.07 | 0.162 | 1.11 | 0.96 | 1.28 |

|                                                                                      |       |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Chronic sinusitis                                                                    | GPNMB | Wald ratio | 1 | -0.16 | 0.11 | 0.166 | 0.86 | 0.69 | 1.07 |
| Ileostomy status                                                                     | GPNMB | Wald ratio | 1 | 0.19  | 0.14 | 0.166 | 1.21 | 0.92 | 1.60 |
| Complication of internal orthopedic device                                           | GPNMB | Wald ratio | 1 | -0.14 | 0.10 | 0.166 | 0.87 | 0.71 | 1.06 |
| Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue | GPNMB | Wald ratio | 1 | 0.13  | 0.09 | 0.168 | 1.13 | 0.95 | 1.36 |
| Other specified benign mammary dysplasias                                            | GPNMB | Wald ratio | 1 | 0.30  | 0.22 | 0.168 | 1.35 | 0.88 | 2.05 |
| Pain                                                                                 | GPNMB | Wald ratio | 1 | -0.28 | 0.20 | 0.169 | 0.75 | 0.51 | 1.13 |
| Cervical intraepithelial neoplasia [CIN] [Cervical dysplasia]                        | GPNMB | Wald ratio | 1 | 0.17  | 0.13 | 0.173 | 1.19 | 0.93 | 1.52 |
| Gastritis and duodenitis                                                             | GPNMB | Wald ratio | 1 | 0.05  | 0.04 | 0.175 | 1.05 | 0.98 | 1.13 |
| Shortness of breath                                                                  | GPNMB | Wald ratio | 1 | 0.10  | 0.08 | 0.175 | 1.11 | 0.96 | 1.28 |
| Glomerulonephritis                                                                   | GPNMB | Wald ratio | 1 | 0.24  | 0.18 | 0.175 | 1.27 | 0.90 | 1.80 |
| Benign neoplasm of unspecified sites                                                 | GPNMB | Wald ratio | 1 | 0.16  | 0.12 | 0.176 | 1.17 | 0.93 | 1.47 |
| Nephritis; nephrosis; renal sclerosis                                                | GPNMB | Wald ratio | 1 | 0.20  | 0.15 | 0.177 | 1.22 | 0.91 | 1.62 |
| Pathologic fracture                                                                  | GPNMB | Wald ratio | 1 | -0.34 | 0.25 | 0.181 | 0.71 | 0.44 | 1.17 |
| Unspecified diffuse connective tissue disease                                        | GPNMB | Wald ratio | 1 | 0.15  | 0.11 | 0.181 | 1.16 | 0.93 | 1.44 |
| Benign neoplasm of ovary                                                             | GPNMB | Wald ratio | 1 | -0.20 | 0.15 | 0.181 | 0.82 | 0.61 | 1.10 |
| Fracture of foot                                                                     | GPNMB | Wald ratio | 1 | 0.18  | 0.13 | 0.182 | 1.19 | 0.92 | 1.55 |
| Pericarditis                                                                         | GPNMB | Wald ratio | 1 | -0.21 | 0.16 | 0.184 | 0.81 | 0.59 | 1.11 |
| Lump or mass in breast                                                               | GPNMB | Wald ratio | 1 | -0.19 | 0.15 | 0.186 | 0.82 | 0.62 | 1.10 |
| Other chronic ischemic heart disease, unspecified                                    | GPNMB | Wald ratio | 1 | 0.07  | 0.05 | 0.186 | 1.07 | 0.97 | 1.18 |
| Osteopenia or other disorder of bone and cartilage                                   | GPNMB | Wald ratio | 1 | 0.26  | 0.20 | 0.187 | 1.30 | 0.88 | 1.92 |
| Right bundle branch block                                                            | GPNMB | Wald ratio | 1 | 0.19  | 0.15 | 0.188 | 1.21 | 0.91 | 1.62 |
| Myopia                                                                               | GPNMB | Wald ratio | 1 | -0.21 | 0.16 | 0.188 | 0.81 | 0.59 | 1.11 |
| Other abnormal blood chemistry                                                       | GPNMB | Wald ratio | 1 | -0.10 | 0.07 | 0.188 | 0.91 | 0.79 | 1.05 |
| Rheumatoid arthritis                                                                 | GPNMB | Wald ratio | 1 | -0.11 | 0.09 | 0.189 | 0.89 | 0.75 | 1.06 |
| Poisoning by psychotropic agents                                                     | GPNMB | Wald ratio | 1 | 0.17  | 0.13 | 0.191 | 1.19 | 0.92 | 1.53 |

|                                                     |       |            |   |       |      |       |      |      |      |
|-----------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Acquired toe deformities                            | GPNMB | Wald ratio | 1 | -0.11 | 0.08 | 0.191 | 0.90 | 0.77 | 1.05 |
| Inflammatory disease of breast                      | GPNMB | Wald ratio | 1 | 0.28  | 0.21 | 0.192 | 1.32 | 0.87 | 2.00 |
| Diseases of esophagus                               | GPNMB | Wald ratio | 1 | 0.04  | 0.03 | 0.193 | 1.04 | 0.98 | 1.11 |
| Esophagitis, GERD and related diseases              | GPNMB | Wald ratio | 1 | 0.04  | 0.03 | 0.195 | 1.05 | 0.98 | 1.12 |
| Secondary malignant neoplasm of digestive systems   | GPNMB | Wald ratio | 1 | 0.19  | 0.15 | 0.195 | 1.21 | 0.91 | 1.61 |
| Nonspecific findings on examination of blood        | GPNMB | Wald ratio | 1 | -0.09 | 0.07 | 0.202 | 0.91 | 0.79 | 1.05 |
| Abdominal aortic aneurysm                           | GPNMB | Wald ratio | 1 | 0.24  | 0.19 | 0.203 | 1.27 | 0.88 | 1.85 |
| Contusion                                           | GPNMB | Wald ratio | 1 | -0.19 | 0.15 | 0.203 | 0.83 | 0.62 | 1.11 |
| Pain in limb                                        | GPNMB | Wald ratio | 1 | 0.09  | 0.07 | 0.206 | 1.10 | 0.95 | 1.26 |
| Cancer of urinary organs (incl. kidney and bladder) | GPNMB | Wald ratio | 1 | -0.11 | 0.09 | 0.206 | 0.89 | 0.75 | 1.06 |
| Retinal vascular changes and abnormalities          | GPNMB | Wald ratio | 1 | -0.25 | 0.20 | 0.207 | 0.78 | 0.53 | 1.15 |
| Polyp of corpus uteri                               | GPNMB | Wald ratio | 1 | -0.08 | 0.07 | 0.209 | 0.92 | 0.81 | 1.05 |
| Cancer of bladder                                   | GPNMB | Wald ratio | 1 | -0.15 | 0.12 | 0.211 | 0.86 | 0.69 | 1.09 |
| Malignant neoplasm of female breast                 | GPNMB | Wald ratio | 1 | 0.07  | 0.05 | 0.212 | 1.07 | 0.96 | 1.19 |
| Hallux rigidus                                      | GPNMB | Wald ratio | 1 | -0.18 | 0.14 | 0.214 | 0.84 | 0.63 | 1.11 |
| Sciatica                                            | GPNMB | Wald ratio | 1 | -0.14 | 0.12 | 0.218 | 0.87 | 0.69 | 1.09 |
| Cancer, suspected or other                          | GPNMB | Wald ratio | 1 | -0.06 | 0.04 | 0.219 | 0.95 | 0.87 | 1.03 |
| Fracture of radius and ulna                         | GPNMB | Wald ratio | 1 | -0.10 | 0.08 | 0.220 | 0.91 | 0.78 | 1.06 |
| Nonrheumatic mitral valve disorders                 | GPNMB | Wald ratio | 1 | 0.13  | 0.11 | 0.223 | 1.14 | 0.92 | 1.40 |
| Fever of unknown origin                             | GPNMB | Wald ratio | 1 | 0.11  | 0.09 | 0.225 | 1.12 | 0.93 | 1.33 |
| Complication of colostomy or enterostomy            | GPNMB | Wald ratio | 1 | 0.31  | 0.25 | 0.225 | 1.36 | 0.83 | 2.24 |
| Abnormal results of function study of liver         | GPNMB | Wald ratio | 1 | 0.12  | 0.10 | 0.226 | 1.12 | 0.93 | 1.36 |
| Other and unspecified disorders of back             | GPNMB | Wald ratio | 1 | -0.15 | 0.13 | 0.231 | 0.86 | 0.67 | 1.10 |
| Anorexia                                            | GPNMB | Wald ratio | 1 | 0.23  | 0.20 | 0.232 | 1.26 | 0.86 | 1.86 |
| Disorder of skin and subcutaneous tissue NOS        | GPNMB | Wald ratio | 1 | -0.09 | 0.07 | 0.232 | 0.91 | 0.79 | 1.06 |
| Neoplasm of unspecified nature of digestive system  | GPNMB | Wald ratio | 1 | -0.21 | 0.17 | 0.233 | 0.81 | 0.58 | 1.14 |

|                                                                                 |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Disorders of menstruation and other abnormal bleeding from female genital tract | GPNMB | Wald ratio | 1 | -0.05 | 0.05 | 0.233 | 0.95 | 0.87 | 1.04 |
| Megaloblastic anemia                                                            | GPNMB | Wald ratio | 1 | -0.20 | 0.17 | 0.238 | 0.82 | 0.58 | 1.15 |
| Simple and unspecified goiter                                                   | GPNMB | Wald ratio | 1 | 0.27  | 0.23 | 0.239 | 1.31 | 0.83 | 2.07 |
| Pneumonia                                                                       | GPNMB | Wald ratio | 1 | -0.07 | 0.06 | 0.239 | 0.93 | 0.83 | 1.05 |
| Chronic pancreatitis                                                            | GPNMB | Wald ratio | 1 | 0.29  | 0.25 | 0.243 | 1.34 | 0.82 | 2.19 |
| Infection of the eye                                                            | GPNMB | Wald ratio | 1 | -0.28 | 0.24 | 0.244 | 0.76 | 0.47 | 1.21 |
| Lymphoid leukemia, chronic                                                      | GPNMB | Wald ratio | 1 | 0.29  | 0.25 | 0.245 | 1.34 | 0.82 | 2.20 |
| Abdominal pain                                                                  | GPNMB | Wald ratio | 1 | -0.03 | 0.03 | 0.247 | 0.97 | 0.91 | 1.02 |
| Chronic renal failure [CKD]                                                     | GPNMB | Wald ratio | 1 | 0.13  | 0.11 | 0.248 | 1.14 | 0.91 | 1.41 |
| Peritonitis and retroperitoneal infections                                      | GPNMB | Wald ratio | 1 | 0.22  | 0.19 | 0.248 | 1.25 | 0.86 | 1.81 |
| Other deficiency anemia                                                         | GPNMB | Wald ratio | 1 | -0.20 | 0.17 | 0.249 | 0.82 | 0.59 | 1.15 |
| Irregular menstrual cycle/bleeding                                              | GPNMB | Wald ratio | 1 | -0.06 | 0.05 | 0.249 | 0.95 | 0.86 | 1.04 |
| Endocarditis                                                                    | GPNMB | Wald ratio | 1 | 0.25  | 0.22 | 0.251 | 1.28 | 0.84 | 1.96 |
| Pelvic peritoneal adhesions, female (postoperative) (postinfection)             | GPNMB | Wald ratio | 1 | -0.13 | 0.11 | 0.251 | 0.88 | 0.70 | 1.10 |
| Anxiety disorders                                                               | GPNMB | Wald ratio | 1 | 0.08  | 0.07 | 0.251 | 1.08 | 0.94 | 1.24 |
| Skull and face fracture and other intercranial injury                           | GPNMB | Wald ratio | 1 | -0.12 | 0.11 | 0.252 | 0.89 | 0.72 | 1.09 |
| Other disorders of urethra and urinary tract                                    | GPNMB | Wald ratio | 1 | 0.10  | 0.09 | 0.252 | 1.11 | 0.93 | 1.32 |
| Coronary atherosclerosis                                                        | GPNMB | Wald ratio | 1 | -0.05 | 0.04 | 0.253 | 0.95 | 0.87 | 1.04 |
| Problems associated with amniotic cavity and membranes                          | GPNMB | Wald ratio | 1 | 0.18  | 0.16 | 0.256 | 1.20 | 0.88 | 1.63 |
| Other derangement of joint                                                      | GPNMB | Wald ratio | 1 | -0.14 | 0.13 | 0.259 | 0.87 | 0.67 | 1.11 |
| Late pregnancy and failed induction                                             | GPNMB | Wald ratio | 1 | -0.19 | 0.16 | 0.261 | 0.83 | 0.60 | 1.15 |
| Vitamin deficiency                                                              | GPNMB | Wald ratio | 1 | -0.18 | 0.16 | 0.261 | 0.83 | 0.60 | 1.15 |
| Other paralytic syndromes                                                       | GPNMB | Wald ratio | 1 | -0.25 | 0.22 | 0.262 | 0.78 | 0.51 | 1.20 |
| Disturbances in tooth eruption                                                  | GPNMB | Wald ratio | 1 | -0.13 | 0.12 | 0.262 | 0.88 | 0.70 | 1.10 |
| Malignant neoplasm of bladder                                                   | GPNMB | Wald ratio | 1 | -0.14 | 0.12 | 0.262 | 0.87 | 0.68 | 1.11 |

|                                                     |       |            |   |       |      |       |      |      |      |
|-----------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Congenital anomalies of great vessels               | GPNMB | Wald ratio | 1 | 0.15  | 0.13 | 0.263 | 1.16 | 0.89 | 1.51 |
| Malignant neoplasm of uterus                        | GPNMB | Wald ratio | 1 | -0.18 | 0.16 | 0.264 | 0.84 | 0.61 | 1.14 |
| Heart valve replaced                                | GPNMB | Wald ratio | 1 | 0.16  | 0.15 | 0.265 | 1.18 | 0.88 | 1.57 |
| Cyst of kidney, acquired                            | GPNMB | Wald ratio | 1 | 0.18  | 0.16 | 0.266 | 1.20 | 0.87 | 1.64 |
| Mood disorders                                      | GPNMB | Wald ratio | 1 | 0.06  | 0.05 | 0.266 | 1.06 | 0.96 | 1.17 |
| Cancer of mouth                                     | GPNMB | Wald ratio | 1 | 0.25  | 0.22 | 0.267 | 1.28 | 0.83 | 1.99 |
| Other disorders of stomach and duodenum             | GPNMB | Wald ratio | 1 | 0.11  | 0.10 | 0.268 | 1.12 | 0.92 | 1.35 |
| Fracture of tibia and fibula                        | GPNMB | Wald ratio | 1 | -0.13 | 0.12 | 0.273 | 0.87 | 0.69 | 1.11 |
| Renal failure                                       | GPNMB | Wald ratio | 1 | 0.07  | 0.07 | 0.275 | 1.08 | 0.94 | 1.23 |
| Dementias                                           | GPNMB | Wald ratio | 1 | 0.20  | 0.18 | 0.279 | 1.22 | 0.85 | 1.75 |
| Multiple myeloma                                    | GPNMB | Wald ratio | 1 | 0.26  | 0.24 | 0.280 | 1.30 | 0.81 | 2.08 |
| Candidiasis                                         | GPNMB | Wald ratio | 1 | -0.13 | 0.12 | 0.280 | 0.88 | 0.69 | 1.11 |
| Phlebitis and thrombophlebitis of lower extremities | GPNMB | Wald ratio | 1 | -0.10 | 0.10 | 0.281 | 0.90 | 0.75 | 1.09 |
| Pruritus and related conditions                     | GPNMB | Wald ratio | 1 | -0.22 | 0.20 | 0.282 | 0.80 | 0.54 | 1.20 |
| Cancer within the respiratory system                | GPNMB | Wald ratio | 1 | 0.12  | 0.11 | 0.282 | 1.13 | 0.91 | 1.40 |
| Stiffness of joint                                  | GPNMB | Wald ratio | 1 | 0.25  | 0.23 | 0.283 | 1.28 | 0.82 | 2.00 |
| Other disorders of gallbladder                      | GPNMB | Wald ratio | 1 | 0.16  | 0.15 | 0.285 | 1.18 | 0.87 | 1.58 |
| Postmenopausal atrophic vaginitis                   | GPNMB | Wald ratio | 1 | 0.18  | 0.17 | 0.285 | 1.20 | 0.86 | 1.68 |
| Cancer of larynx, pharynx, nasal cavities           | GPNMB | Wald ratio | 1 | 0.24  | 0.23 | 0.288 | 1.27 | 0.82 | 1.98 |
| Disorders of tooth development                      | GPNMB | Wald ratio | 1 | -0.12 | 0.11 | 0.290 | 0.89 | 0.71 | 1.11 |
| Inflammatory disease of cervix, vagina, and vulva   | GPNMB | Wald ratio | 1 | -0.11 | 0.11 | 0.290 | 0.89 | 0.72 | 1.10 |
| Disorders of iron metabolism                        | GPNMB | Wald ratio | 1 | -0.23 | 0.22 | 0.294 | 0.79 | 0.52 | 1.22 |
| Urethral stricture (not specified as infectious)    | GPNMB | Wald ratio | 1 | 0.10  | 0.10 | 0.295 | 1.11 | 0.91 | 1.35 |
| Bacterial infection NOS                             | GPNMB | Wald ratio | 1 | 0.05  | 0.05 | 0.296 | 1.06 | 0.95 | 1.17 |
| Dysuria                                             | GPNMB | Wald ratio | 1 | 0.17  | 0.16 | 0.299 | 1.19 | 0.86 | 1.64 |
| Cardiac pacemaker/device in situ                    | GPNMB | Wald ratio | 1 | 0.12  | 0.11 | 0.299 | 1.13 | 0.90 | 1.41 |

|                                                                          |       |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Hemiplegia                                                               | GPNMB | Wald ratio | 1 | 0.15  | 0.15 | 0.300 | 1.16 | 0.87 | 1.55 |
| Traumatic arthropathy                                                    | GPNMB | Wald ratio | 1 | -0.26 | 0.25 | 0.301 | 0.77 | 0.48 | 1.26 |
| Polyp of female genital organs                                           | GPNMB | Wald ratio | 1 | -0.06 | 0.06 | 0.302 | 0.94 | 0.85 | 1.05 |
| Chronic glomerulonephritis, NOS                                          | GPNMB | Wald ratio | 1 | 0.20  | 0.20 | 0.305 | 1.22 | 0.83 | 1.79 |
| Diffuse diseases of connective tissue                                    | GPNMB | Wald ratio | 1 | 0.10  | 0.10 | 0.306 | 1.11 | 0.91 | 1.34 |
| Pelvic inflammatory disease (PID)                                        | GPNMB | Wald ratio | 1 | -0.19 | 0.19 | 0.307 | 0.83 | 0.57 | 1.19 |
| Malignant neoplasm of testis                                             | GPNMB | Wald ratio | 1 | -0.11 | 0.11 | 0.308 | 0.90 | 0.73 | 1.10 |
| Obstruction of bile duct                                                 | GPNMB | Wald ratio | 1 | 0.21  | 0.20 | 0.309 | 1.23 | 0.82 | 1.84 |
| Gingival and periodontal diseases                                        | GPNMB | Wald ratio | 1 | 0.14  | 0.14 | 0.312 | 1.15 | 0.88 | 1.50 |
| Breast cancer [female]                                                   | GPNMB | Wald ratio | 1 | 0.05  | 0.05 | 0.313 | 1.06 | 0.95 | 1.17 |
| Phlebitis and thrombophlebitis                                           | GPNMB | Wald ratio | 1 | -0.09 | 0.09 | 0.313 | 0.91 | 0.76 | 1.09 |
| Cancer of brain and nervous system                                       | GPNMB | Wald ratio | 1 | 0.25  | 0.25 | 0.313 | 1.28 | 0.79 | 2.08 |
| Delirium dementia and amnestic and other cognitive disorders             | GPNMB | Wald ratio | 1 | 0.13  | 0.13 | 0.314 | 1.14 | 0.88 | 1.46 |
| Intracranial hemorrhage (injury)                                         | GPNMB | Wald ratio | 1 | -0.25 | 0.25 | 0.316 | 0.78 | 0.47 | 1.27 |
| Cervicitis and endocervicitis                                            | GPNMB | Wald ratio | 1 | -0.16 | 0.16 | 0.316 | 0.85 | 0.63 | 1.16 |
| Alcohol-related disorders                                                | GPNMB | Wald ratio | 1 | 0.05  | 0.05 | 0.317 | 1.05 | 0.95 | 1.17 |
| Viral warts & HPV                                                        | GPNMB | Wald ratio | 1 | -0.18 | 0.18 | 0.323 | 0.84 | 0.59 | 1.19 |
| Bundle branch block                                                      | GPNMB | Wald ratio | 1 | 0.10  | 0.10 | 0.323 | 1.10 | 0.91 | 1.34 |
| Opiates and related narcotics causing adverse effects in therapeutic use | GPNMB | Wald ratio | 1 | -0.17 | 0.17 | 0.324 | 0.85 | 0.61 | 1.18 |
| Raynaud's syndrome                                                       | GPNMB | Wald ratio | 1 | 0.17  | 0.17 | 0.325 | 1.18 | 0.85 | 1.64 |
| Convulsions                                                              | GPNMB | Wald ratio | 1 | -0.12 | 0.12 | 0.327 | 0.89 | 0.70 | 1.13 |
| Fetal distress and abnormal forces of labor                              | GPNMB | Wald ratio | 1 | -0.12 | 0.13 | 0.328 | 0.88 | 0.69 | 1.13 |
| Strabismus (not specified as paralytic)                                  | GPNMB | Wald ratio | 1 | -0.18 | 0.19 | 0.330 | 0.83 | 0.58 | 1.20 |
| Inflammatory bowel disease and other gastroenteritis and colitis         | GPNMB | Wald ratio | 1 | 0.08  | 0.09 | 0.331 | 1.09 | 0.92 | 1.29 |
| Fracture of clavicle or scapula                                          | GPNMB | Wald ratio | 1 | 0.14  | 0.15 | 0.332 | 1.15 | 0.87 | 1.53 |
| Osteoarthritis NOS                                                       | GPNMB | Wald ratio | 1 | 0.05  | 0.05 | 0.332 | 1.05 | 0.95 | 1.17 |

|                                                               |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Other specified osteoporosis                                  | GPNMB | Wald ratio | 1 | -0.24 | 0.25 | 0.332 | 0.79 | 0.49 | 1.28 |
| Paroxysmal tachycardia, unspecified                           | GPNMB | Wald ratio | 1 | -0.10 | 0.10 | 0.333 | 0.91 | 0.74 | 1.11 |
| Atrial fibrillation and flutter                               | GPNMB | Wald ratio | 1 | -0.05 | 0.05 | 0.333 | 0.95 | 0.86 | 1.05 |
| Other congenital musculoskeletal anomalies                    | GPNMB | Wald ratio | 1 | 0.23  | 0.23 | 0.335 | 1.25 | 0.79 | 1.98 |
| Other disorders of eyelids                                    | GPNMB | Wald ratio | 1 | -0.07 | 0.08 | 0.335 | 0.93 | 0.80 | 1.08 |
| Respiratory failure                                           | GPNMB | Wald ratio | 1 | 0.12  | 0.13 | 0.337 | 1.13 | 0.88 | 1.45 |
| Suppurative and unspecified otitis media                      | GPNMB | Wald ratio | 1 | -0.19 | 0.19 | 0.337 | 0.83 | 0.57 | 1.22 |
| Rupture of synovium                                           | GPNMB | Wald ratio | 1 | -0.22 | 0.23 | 0.337 | 0.80 | 0.51 | 1.26 |
| Atopic/contact dermatitis due to other or unspecified         | GPNMB | Wald ratio | 1 | 0.12  | 0.12 | 0.338 | 1.13 | 0.88 | 1.44 |
| Labyrinthitis                                                 | GPNMB | Wald ratio | 1 | 0.20  | 0.21 | 0.338 | 1.22 | 0.81 | 1.82 |
| Cardiac pacemaker in situ                                     | GPNMB | Wald ratio | 1 | 0.11  | 0.12 | 0.340 | 1.12 | 0.89 | 1.42 |
| Cholelithiasis                                                | GPNMB | Wald ratio | 1 | -0.05 | 0.05 | 0.341 | 0.95 | 0.86 | 1.05 |
| Ingrowing nail                                                | GPNMB | Wald ratio | 1 | 0.17  | 0.18 | 0.342 | 1.19 | 0.83 | 1.70 |
| Osteoarthritis, localized, primary                            | GPNMB | Wald ratio | 1 | 0.06  | 0.06 | 0.343 | 1.06 | 0.94 | 1.20 |
| Visual disturbances                                           | GPNMB | Wald ratio | 1 | -0.09 | 0.10 | 0.343 | 0.91 | 0.75 | 1.11 |
| Depression                                                    | GPNMB | Wald ratio | 1 | 0.05  | 0.05 | 0.343 | 1.05 | 0.95 | 1.17 |
| Chronic tonsillitis and adenoiditis                           | GPNMB | Wald ratio | 1 | 0.16  | 0.17 | 0.344 | 1.17 | 0.84 | 1.64 |
| Otitis media and Eustachian tube disorders                    | GPNMB | Wald ratio | 1 | -0.11 | 0.12 | 0.348 | 0.89 | 0.71 | 1.13 |
| Disorders of the pituitary gland and its hypothalamic control | GPNMB | Wald ratio | 1 | 0.20  | 0.22 | 0.351 | 1.22 | 0.80 | 1.87 |
| Periapical abscess                                            | GPNMB | Wald ratio | 1 | -0.15 | 0.17 | 0.352 | 0.86 | 0.62 | 1.19 |
| Benign neoplasm of uterus                                     | GPNMB | Wald ratio | 1 | 0.05  | 0.06 | 0.353 | 1.05 | 0.94 | 1.18 |
| Abnormal sputum                                               | GPNMB | Wald ratio | 1 | -0.11 | 0.12 | 0.365 | 0.90 | 0.70 | 1.14 |
| Other biliary tract disease                                   | GPNMB | Wald ratio | 1 | 0.08  | 0.09 | 0.365 | 1.09 | 0.91 | 1.30 |
| Arthropathy NOS                                               | GPNMB | Wald ratio | 1 | 0.03  | 0.03 | 0.367 | 1.03 | 0.97 | 1.10 |
| Respiratory failure, insufficiency, arrest                    | GPNMB | Wald ratio | 1 | 0.10  | 0.11 | 0.369 | 1.11 | 0.89 | 1.38 |
| Injuries to the nervous system                                | GPNMB | Wald ratio | 1 | -0.14 | 0.16 | 0.370 | 0.87 | 0.64 | 1.18 |

|                                                                     |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Type 2 diabetes with neurological manifestations                    | GPNMB | Wald ratio | 1 | 0.21  | 0.24 | 0.370 | 1.24 | 0.78 | 1.97 |
| Other open wound of head and face                                   | GPNMB | Wald ratio | 1 | -0.09 | 0.11 | 0.370 | 0.91 | 0.74 | 1.12 |
| Miscarriage; stillbirth                                             | GPNMB | Wald ratio | 1 | -0.07 | 0.08 | 0.371 | 0.93 | 0.79 | 1.09 |
| Symptoms concerning nutrition, metabolism, and development          | GPNMB | Wald ratio | 1 | -0.07 | 0.08 | 0.371 | 0.93 | 0.80 | 1.09 |
| Degenerative disease of the spinal cord                             | GPNMB | Wald ratio | 1 | -0.12 | 0.13 | 0.372 | 0.89 | 0.68 | 1.15 |
| Other specified gastritis                                           | GPNMB | Wald ratio | 1 | 0.06  | 0.06 | 0.373 | 1.06 | 0.93 | 1.20 |
| Placenta previa and abruptio placenta                               | GPNMB | Wald ratio | 1 | 0.15  | 0.16 | 0.375 | 1.16 | 0.84 | 1.60 |
| Diabetic retinopathy                                                | GPNMB | Wald ratio | 1 | 0.14  | 0.16 | 0.375 | 1.15 | 0.85 | 1.56 |
| Degenerative skin conditions and other dermatoses                   | GPNMB | Wald ratio | 1 | 0.07  | 0.08 | 0.380 | 1.07 | 0.92 | 1.25 |
| Heart valve disorders                                               | GPNMB | Wald ratio | 1 | 0.08  | 0.09 | 0.384 | 1.08 | 0.91 | 1.28 |
| Inflammation of the eye                                             | GPNMB | Wald ratio | 1 | 0.09  | 0.10 | 0.384 | 1.09 | 0.90 | 1.33 |
| Type 1 diabetes                                                     | GPNMB | Wald ratio | 1 | 0.10  | 0.11 | 0.385 | 1.10 | 0.89 | 1.37 |
| Delirium due to conditions classified elsewhere                     | GPNMB | Wald ratio | 1 | 0.19  | 0.22 | 0.386 | 1.21 | 0.78 | 1.87 |
| Other disorders of biliary tract                                    | GPNMB | Wald ratio | 1 | 0.15  | 0.18 | 0.388 | 1.16 | 0.82 | 1.65 |
| Abnormal findings on exam of gastrointestinal tract/ abdominal area | GPNMB | Wald ratio | 1 | 0.12  | 0.14 | 0.393 | 1.13 | 0.86 | 1.48 |
| Symptoms of the muscles                                             | GPNMB | Wald ratio | 1 | 0.18  | 0.22 | 0.396 | 1.20 | 0.79 | 1.83 |
| Fracture of upper limb                                              | GPNMB | Wald ratio | 1 | -0.05 | 0.06 | 0.399 | 0.95 | 0.84 | 1.07 |
| Breast cancer                                                       | GPNMB | Wald ratio | 1 | 0.04  | 0.05 | 0.399 | 1.05 | 0.94 | 1.16 |
| Functional digestive disorders                                      | GPNMB | Wald ratio | 1 | 0.03  | 0.04 | 0.400 | 1.03 | 0.96 | 1.12 |
| Alcoholic liver damage                                              | GPNMB | Wald ratio | 1 | 0.17  | 0.20 | 0.400 | 1.18 | 0.80 | 1.75 |
| Fasciitis                                                           | GPNMB | Wald ratio | 1 | -0.08 | 0.09 | 0.401 | 0.92 | 0.77 | 1.11 |
| Chronic airway obstruction                                          | GPNMB | Wald ratio | 1 | 0.05  | 0.06 | 0.403 | 1.05 | 0.94 | 1.17 |
| Disorders of lacrimal system                                        | GPNMB | Wald ratio | 1 | -0.10 | 0.12 | 0.404 | 0.90 | 0.71 | 1.15 |
| Abnormal findings on examination of urine                           | GPNMB | Wald ratio | 1 | 0.08  | 0.10 | 0.406 | 1.08 | 0.90 | 1.31 |
| Multiple sclerosis                                                  | GPNMB | Wald ratio | 1 | 0.13  | 0.16 | 0.406 | 1.14 | 0.84 | 1.54 |
| Adverse drug events and drug allergies                              | GPNMB | Wald ratio | 1 | 0.18  | 0.22 | 0.407 | 1.20 | 0.78 | 1.83 |

|                                                  |       |            |   |       |      |       |      |      |      |
|--------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Mitral valve disease                             | GPNMB | Wald ratio | 1 | 0.09  | 0.10 | 0.408 | 1.09 | 0.89 | 1.34 |
| Chronic liver disease and cirrhosis              | GPNMB | Wald ratio | 1 | 0.09  | 0.11 | 0.409 | 1.09 | 0.89 | 1.34 |
| Disorders of esophageal motility                 | GPNMB | Wald ratio | 1 | 0.19  | 0.23 | 0.409 | 1.20 | 0.77 | 1.87 |
| Irregular menstrual bleeding                     | GPNMB | Wald ratio | 1 | -0.08 | 0.09 | 0.411 | 0.93 | 0.77 | 1.11 |
| Back pain                                        | GPNMB | Wald ratio | 1 | 0.05  | 0.06 | 0.411 | 1.05 | 0.94 | 1.17 |
| Fracture of ribs                                 | GPNMB | Wald ratio | 1 | -0.17 | 0.20 | 0.414 | 0.85 | 0.57 | 1.26 |
| Gram negative septicemia                         | GPNMB | Wald ratio | 1 | 0.16  | 0.20 | 0.415 | 1.17 | 0.80 | 1.73 |
| Cerebral ischemia                                | GPNMB | Wald ratio | 1 | 0.09  | 0.11 | 0.416 | 1.09 | 0.89 | 1.34 |
| Fracture of ankle and foot                       | GPNMB | Wald ratio | 1 | 0.10  | 0.12 | 0.416 | 1.10 | 0.87 | 1.39 |
| Primary/intrinsic cardiomyopathies               | GPNMB | Wald ratio | 1 | -0.13 | 0.16 | 0.416 | 0.88 | 0.63 | 1.21 |
| Viral infection                                  | GPNMB | Wald ratio | 1 | 0.09  | 0.11 | 0.418 | 1.09 | 0.88 | 1.35 |
| Alcoholism                                       | GPNMB | Wald ratio | 1 | 0.05  | 0.06 | 0.419 | 1.05 | 0.93 | 1.19 |
| Gastric ulcer                                    | GPNMB | Wald ratio | 1 | 0.07  | 0.09 | 0.420 | 1.08 | 0.90 | 1.28 |
| Otitis media                                     | GPNMB | Wald ratio | 1 | -0.11 | 0.13 | 0.420 | 0.90 | 0.69 | 1.17 |
| Other symptoms of respiratory system             | GPNMB | Wald ratio | 1 | 0.05  | 0.06 | 0.421 | 1.05 | 0.93 | 1.18 |
| Fracture of patella                              | GPNMB | Wald ratio | 1 | -0.16 | 0.21 | 0.422 | 0.85 | 0.57 | 1.27 |
| Diseases of pulp and periapical tissues          | GPNMB | Wald ratio | 1 | -0.11 | 0.13 | 0.423 | 0.90 | 0.69 | 1.17 |
| Postinflammatory pulmonary fibrosis              | GPNMB | Wald ratio | 1 | 0.15  | 0.19 | 0.424 | 1.16 | 0.80 | 1.69 |
| Fracture of lower limb                           | GPNMB | Wald ratio | 1 | -0.05 | 0.07 | 0.426 | 0.95 | 0.83 | 1.08 |
| Myalgia and myositis unspecified                 | GPNMB | Wald ratio | 1 | -0.18 | 0.22 | 0.427 | 0.84 | 0.54 | 1.30 |
| Calculus of ureter                               | GPNMB | Wald ratio | 1 | 0.09  | 0.12 | 0.427 | 1.10 | 0.87 | 1.38 |
| Other disorders of pancreatic internal secretion | GPNMB | Wald ratio | 1 | 0.15  | 0.19 | 0.427 | 1.16 | 0.81 | 1.67 |
| Unspecified polyarthropathy or polyarthritis     | GPNMB | Wald ratio | 1 | 0.08  | 0.10 | 0.427 | 1.08 | 0.89 | 1.31 |
| Cervical cancer                                  | GPNMB | Wald ratio | 1 | -0.11 | 0.14 | 0.428 | 0.89 | 0.68 | 1.18 |
| Secondary malignant neoplasm of liver            | GPNMB | Wald ratio | 1 | -0.09 | 0.11 | 0.431 | 0.92 | 0.74 | 1.14 |
| Congestive heart failure (CHF) NOS               | GPNMB | Wald ratio | 1 | -0.10 | 0.13 | 0.433 | 0.90 | 0.70 | 1.16 |

|                                                                                                                         |       |            |   |       |      |       |      |      |      |
|-------------------------------------------------------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Other arthropathies                                                                                                     | GPNMB | Wald ratio | 1 | 0.03  | 0.03 | 0.434 | 1.03 | 0.96 | 1.09 |
| Corneal opacity and other disorders of cornea                                                                           | GPNMB | Wald ratio | 1 | -0.16 | 0.21 | 0.434 | 0.85 | 0.56 | 1.28 |
| Other forms of chronic heart disease                                                                                    | GPNMB | Wald ratio | 1 | -0.10 | 0.13 | 0.437 | 0.90 | 0.69 | 1.17 |
| Orthostatic hypotension                                                                                                 | GPNMB | Wald ratio | 1 | -0.12 | 0.16 | 0.437 | 0.89 | 0.65 | 1.20 |
| Elevated blood pressure reading without diagnosis of hypertension                                                       | GPNMB | Wald ratio | 1 | -0.11 | 0.15 | 0.437 | 0.89 | 0.67 | 1.19 |
| Malignant neoplasm, other                                                                                               | GPNMB | Wald ratio | 1 | -0.04 | 0.05 | 0.439 | 0.97 | 0.88 | 1.06 |
| Disturbance of skin sensation                                                                                           | GPNMB | Wald ratio | 1 | 0.08  | 0.11 | 0.440 | 1.08 | 0.88 | 1.33 |
| Cardiac and circulatory congenital anomalies                                                                            | GPNMB | Wald ratio | 1 | 0.08  | 0.11 | 0.443 | 1.09 | 0.88 | 1.34 |
| Primary open angle glaucoma                                                                                             | GPNMB | Wald ratio | 1 | 0.13  | 0.18 | 0.446 | 1.14 | 0.81 | 1.62 |
| Swelling, mass, or lump in head and neck [Space-occupying lesion, intracranial NOS]                                     | GPNMB | Wald ratio | 1 | -0.14 | 0.19 | 0.450 | 0.87 | 0.60 | 1.25 |
| Intracranial hemorrhage                                                                                                 | GPNMB | Wald ratio | 1 | 0.10  | 0.13 | 0.450 | 1.11 | 0.85 | 1.44 |
| Diseases of lips                                                                                                        | GPNMB | Wald ratio | 1 | 0.16  | 0.22 | 0.451 | 1.18 | 0.77 | 1.81 |
| Intracerebral hemorrhage                                                                                                | GPNMB | Wald ratio | 1 | 0.16  | 0.22 | 0.451 | 1.18 | 0.77 | 1.79 |
| Cervicalgia                                                                                                             | GPNMB | Wald ratio | 1 | 0.10  | 0.13 | 0.452 | 1.11 | 0.85 | 1.44 |
| Memory loss                                                                                                             | GPNMB | Wald ratio | 1 | 0.16  | 0.22 | 0.456 | 1.17 | 0.77 | 1.79 |
| Migraine                                                                                                                | GPNMB | Wald ratio | 1 | -0.08 | 0.11 | 0.457 | 0.92 | 0.75 | 1.14 |
| Nonspecific abnormal findings on radiological and other examination of other intrathoracic organs (echocardiogram, etc) | GPNMB | Wald ratio | 1 | -0.18 | 0.24 | 0.457 | 0.84 | 0.52 | 1.34 |
| Hemorrhoids                                                                                                             | GPNMB | Wald ratio | 1 | -0.03 | 0.04 | 0.458 | 0.97 | 0.90 | 1.05 |
| Cardiomyopathy                                                                                                          | GPNMB | Wald ratio | 1 | -0.12 | 0.16 | 0.460 | 0.89 | 0.65 | 1.22 |
| Scar conditions and fibrosis of skin                                                                                    | GPNMB | Wald ratio | 1 | 0.09  | 0.12 | 0.460 | 1.09 | 0.87 | 1.37 |
| Hypertrophy of female genital organs                                                                                    | GPNMB | Wald ratio | 1 | -0.12 | 0.16 | 0.461 | 0.89 | 0.65 | 1.22 |
| Other and unspecified disc disorder                                                                                     | GPNMB | Wald ratio | 1 | 0.06  | 0.09 | 0.464 | 1.07 | 0.90 | 1.26 |
| Diaphragmatic hernia                                                                                                    | GPNMB | Wald ratio | 1 | 0.03  | 0.04 | 0.466 | 1.03 | 0.96 | 1.10 |
| Cholelithiasis with other cholecystitis                                                                                 | GPNMB | Wald ratio | 1 | -0.06 | 0.08 | 0.469 | 0.94 | 0.81 | 1.10 |

|                                                                |       |            |   |       |      |       |      |      |      |
|----------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Abnormal function study of cardiovascular system               | GPNMB | Wald ratio | 1 | 0.18  | 0.25 | 0.470 | 1.20 | 0.74 | 1.95 |
| Decreased white blood cell count                               | GPNMB | Wald ratio | 1 | 0.07  | 0.10 | 0.470 | 1.08 | 0.88 | 1.31 |
| Neutropenia                                                    | GPNMB | Wald ratio | 1 | 0.07  | 0.10 | 0.470 | 1.08 | 0.88 | 1.31 |
| Diseases of the jaws                                           | GPNMB | Wald ratio | 1 | -0.13 | 0.18 | 0.474 | 0.88 | 0.61 | 1.26 |
| Osteomyelitis                                                  | GPNMB | Wald ratio | 1 | -0.17 | 0.24 | 0.475 | 0.84 | 0.53 | 1.35 |
| Other diseases of respiratory system, NEC                      | GPNMB | Wald ratio | 1 | -0.04 | 0.06 | 0.475 | 0.96 | 0.85 | 1.08 |
| Uterine leiomyoma                                              | GPNMB | Wald ratio | 1 | 0.04  | 0.06 | 0.475 | 1.04 | 0.93 | 1.17 |
| Overweight, obesity and other hyperalimentation                | GPNMB | Wald ratio | 1 | 0.04  | 0.06 | 0.476 | 1.04 | 0.93 | 1.16 |
| Anemia of chronic disease                                      | GPNMB | Wald ratio | 1 | -0.15 | 0.21 | 0.478 | 0.86 | 0.56 | 1.31 |
| Open-angle glaucoma                                            | GPNMB | Wald ratio | 1 | 0.13  | 0.18 | 0.479 | 1.13 | 0.80 | 1.60 |
| Epilepsy, recurrent seizures, convulsions                      | GPNMB | Wald ratio | 1 | -0.06 | 0.08 | 0.479 | 0.94 | 0.81 | 1.11 |
| Hammer toe (acquired)                                          | GPNMB | Wald ratio | 1 | -0.09 | 0.13 | 0.480 | 0.91 | 0.71 | 1.18 |
| Regional enteritis                                             | GPNMB | Wald ratio | 1 | -0.10 | 0.14 | 0.481 | 0.91 | 0.69 | 1.19 |
| Other specified nonpsychotic and/or transient mental disorders | GPNMB | Wald ratio | 1 | -0.16 | 0.22 | 0.483 | 0.85 | 0.55 | 1.33 |
| Obesity                                                        | GPNMB | Wald ratio | 1 | 0.04  | 0.06 | 0.483 | 1.04 | 0.93 | 1.16 |
| Noninfectious gastroenteritis                                  | GPNMB | Wald ratio | 1 | 0.03  | 0.05 | 0.484 | 1.03 | 0.94 | 1.13 |
| Hypoglycemia                                                   | GPNMB | Wald ratio | 1 | 0.13  | 0.19 | 0.485 | 1.14 | 0.79 | 1.64 |
| Epistaxis or throat hemorrhage                                 | GPNMB | Wald ratio | 1 | 0.08  | 0.12 | 0.486 | 1.08 | 0.86 | 1.36 |
| Other retinal disorders                                        | GPNMB | Wald ratio | 1 | 0.06  | 0.09 | 0.487 | 1.07 | 0.89 | 1.28 |
| Schizophrenia and other psychotic disorders                    | GPNMB | Wald ratio | 1 | -0.14 | 0.20 | 0.488 | 0.87 | 0.60 | 1.28 |
| Ankylosing spondylitis                                         | GPNMB | Wald ratio | 1 | -0.16 | 0.23 | 0.488 | 0.85 | 0.55 | 1.34 |
| Excessive or frequent menstruation                             | GPNMB | Wald ratio | 1 | -0.04 | 0.06 | 0.488 | 0.96 | 0.85 | 1.08 |
| Prolapse of vaginal vault after hysterectomy                   | GPNMB | Wald ratio | 1 | -0.17 | 0.25 | 0.488 | 0.84 | 0.51 | 1.37 |
| Polymyalgia Rheumatica                                         | GPNMB | Wald ratio | 1 | 0.12  | 0.17 | 0.489 | 1.12 | 0.81 | 1.56 |
| Ill-defined descriptions and complications of heart disease    | GPNMB | Wald ratio | 1 | 0.14  | 0.20 | 0.490 | 1.15 | 0.77 | 1.70 |
| Symptoms involving head and neck                               | GPNMB | Wald ratio | 1 | -0.07 | 0.10 | 0.490 | 0.93 | 0.76 | 1.14 |

|                                                                          |       |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Peripheral enthesopathies and allied syndromes                           | GPNMB | Wald ratio | 1 | -0.03 | 0.05 | 0.491 | 0.97 | 0.88 | 1.06 |
| Benign neoplasm of colon                                                 | GPNMB | Wald ratio | 1 | 0.03  | 0.04 | 0.492 | 1.03 | 0.95 | 1.12 |
| Congestive heart failure; nonhypertensive                                | GPNMB | Wald ratio | 1 | -0.05 | 0.08 | 0.493 | 0.95 | 0.81 | 1.11 |
| Ulceration of the lower GI tract                                         | GPNMB | Wald ratio | 1 | 0.12  | 0.17 | 0.494 | 1.13 | 0.80 | 1.59 |
| Cancer of bronchus; lung                                                 | GPNMB | Wald ratio | 1 | 0.09  | 0.12 | 0.494 | 1.09 | 0.85 | 1.39 |
| Other disorders of intestine                                             | GPNMB | Wald ratio | 1 | -0.06 | 0.09 | 0.497 | 0.94 | 0.79 | 1.12 |
| Appendicitis                                                             | GPNMB | Wald ratio | 1 | 0.07  | 0.10 | 0.498 | 1.07 | 0.88 | 1.31 |
| Infection/inflammation of internal prosthetic device; implant; and graft | GPNMB | Wald ratio | 1 | 0.08  | 0.11 | 0.499 | 1.08 | 0.86 | 1.35 |
| Obstetrical/birth trauma                                                 | GPNMB | Wald ratio | 1 | 0.06  | 0.09 | 0.501 | 1.06 | 0.89 | 1.26 |
| Arrhythmia (cardiac) NOS                                                 | GPNMB | Wald ratio | 1 | 0.13  | 0.19 | 0.502 | 1.13 | 0.79 | 1.64 |
| Degeneration of intervertebral disc                                      | GPNMB | Wald ratio | 1 | 0.07  | 0.11 | 0.503 | 1.07 | 0.87 | 1.33 |
| Neurological disorders                                                   | GPNMB | Wald ratio | 1 | 0.06  | 0.08 | 0.504 | 1.06 | 0.90 | 1.25 |
| Lymphoid leukemia                                                        | GPNMB | Wald ratio | 1 | 0.16  | 0.24 | 0.505 | 1.17 | 0.74 | 1.86 |
| Rheumatic disease of the heart valves                                    | GPNMB | Wald ratio | 1 | 0.05  | 0.08 | 0.506 | 1.06 | 0.90 | 1.24 |
| Staphylococcus infections                                                | GPNMB | Wald ratio | 1 | 0.07  | 0.10 | 0.507 | 1.07 | 0.88 | 1.31 |
| Nasal polyps                                                             | GPNMB | Wald ratio | 1 | -0.07 | 0.10 | 0.510 | 0.94 | 0.77 | 1.14 |
| Antepartum hemorrhage, abruptio placentae, and placenta previa           | GPNMB | Wald ratio | 1 | -0.13 | 0.20 | 0.510 | 0.88 | 0.60 | 1.29 |
| Nontoxic nodular goiter                                                  | GPNMB | Wald ratio | 1 | 0.11  | 0.17 | 0.511 | 1.12 | 0.80 | 1.56 |
| Burns                                                                    | GPNMB | Wald ratio | 1 | -0.15 | 0.24 | 0.511 | 0.86 | 0.54 | 1.36 |
| Respiratory insufficiency                                                | GPNMB | Wald ratio | 1 | 0.09  | 0.14 | 0.514 | 1.09 | 0.84 | 1.43 |
| Unspecified monoarthritis                                                | GPNMB | Wald ratio | 1 | 0.03  | 0.05 | 0.516 | 1.03 | 0.94 | 1.13 |
| Intervertebral disc disorders                                            | GPNMB | Wald ratio | 1 | 0.04  | 0.06 | 0.517 | 1.04 | 0.92 | 1.17 |
| Primary angle-closure glaucoma                                           | GPNMB | Wald ratio | 1 | -0.14 | 0.21 | 0.520 | 0.87 | 0.57 | 1.33 |
| Renal failure NOS                                                        | GPNMB | Wald ratio | 1 | -0.10 | 0.15 | 0.520 | 0.91 | 0.67 | 1.22 |
| Complication due to other implant and internal device                    | GPNMB | Wald ratio | 1 | 0.06  | 0.10 | 0.520 | 1.07 | 0.88 | 1.30 |
| Diseases of white blood cells                                            | GPNMB | Wald ratio | 1 | 0.06  | 0.09 | 0.521 | 1.06 | 0.89 | 1.27 |

|                                                                     |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Poisoning by other anti-infectives                                  | GPNMB | Wald ratio | 1 | 0.10  | 0.16 | 0.523 | 1.11 | 0.81 | 1.52 |
| Subarachnoid hemorrhage                                             | GPNMB | Wald ratio | 1 | -0.13 | 0.20 | 0.524 | 0.88 | 0.60 | 1.30 |
| Digestive congenital anomalies                                      | GPNMB | Wald ratio | 1 | 0.14  | 0.21 | 0.525 | 1.15 | 0.75 | 1.74 |
| Osteoarthritis, generalized                                         | GPNMB | Wald ratio | 1 | -0.15 | 0.23 | 0.529 | 0.86 | 0.55 | 1.36 |
| Other chronic nonalcoholic liver disease                            | GPNMB | Wald ratio | 1 | 0.09  | 0.14 | 0.529 | 1.09 | 0.83 | 1.44 |
| Acute upper respiratory infections of multiple or unspecified sites | GPNMB | Wald ratio | 1 | 0.07  | 0.12 | 0.530 | 1.08 | 0.86 | 1.36 |
| Acquired foot deformities                                           | GPNMB | Wald ratio | 1 | -0.04 | 0.06 | 0.531 | 0.96 | 0.86 | 1.08 |
| Portal hypertension                                                 | GPNMB | Wald ratio | 1 | 0.15  | 0.25 | 0.533 | 1.17 | 0.72 | 1.89 |
| Cardiac shunt/ heart septal defect                                  | GPNMB | Wald ratio | 1 | -0.14 | 0.23 | 0.537 | 0.87 | 0.55 | 1.37 |
| Other signs and symptoms in breast                                  | GPNMB | Wald ratio | 1 | 0.13  | 0.22 | 0.539 | 1.14 | 0.75 | 1.74 |
| Hematemesis                                                         | GPNMB | Wald ratio | 1 | -0.08 | 0.13 | 0.540 | 0.92 | 0.72 | 1.19 |
| Cardiac congenital anomalies                                        | GPNMB | Wald ratio | 1 | 0.07  | 0.11 | 0.542 | 1.07 | 0.86 | 1.33 |
| Pleurisy; pleural effusion                                          | GPNMB | Wald ratio | 1 | 0.04  | 0.07 | 0.543 | 1.04 | 0.91 | 1.20 |
| Precordial pain                                                     | GPNMB | Wald ratio | 1 | -0.06 | 0.10 | 0.544 | 0.94 | 0.78 | 1.14 |
| Chronic cystitis                                                    | GPNMB | Wald ratio | 1 | 0.11  | 0.19 | 0.546 | 1.12 | 0.77 | 1.63 |
| Nonspecific chest pain                                              | GPNMB | Wald ratio | 1 | 0.02  | 0.03 | 0.546 | 1.02 | 0.95 | 1.09 |
| Myocardial infarction                                               | GPNMB | Wald ratio | 1 | -0.03 | 0.06 | 0.551 | 0.97 | 0.87 | 1.08 |
| Septal Deviations/Turbinate Hypertrophy                             | GPNMB | Wald ratio | 1 | 0.05  | 0.08 | 0.551 | 1.05 | 0.89 | 1.23 |
| Chronic ulcer of skin                                               | GPNMB | Wald ratio | 1 | 0.08  | 0.13 | 0.553 | 1.08 | 0.84 | 1.38 |
| Aseptic necrosis of bone                                            | GPNMB | Wald ratio | 1 | 0.14  | 0.24 | 0.554 | 1.16 | 0.72 | 1.86 |
| Retinal detachments and defects                                     | GPNMB | Wald ratio | 1 | -0.06 | 0.10 | 0.555 | 0.94 | 0.77 | 1.15 |
| Frequency of urination and polyuria                                 | GPNMB | Wald ratio | 1 | 0.05  | 0.09 | 0.556 | 1.05 | 0.88 | 1.26 |
| Other headache syndromes                                            | GPNMB | Wald ratio | 1 | 0.04  | 0.07 | 0.556 | 1.04 | 0.91 | 1.18 |
| Cardiac dysrhythmias                                                | GPNMB | Wald ratio | 1 | -0.02 | 0.04 | 0.558 | 0.98 | 0.91 | 1.05 |
| Carditis                                                            | GPNMB | Wald ratio | 1 | -0.07 | 0.13 | 0.561 | 0.93 | 0.72 | 1.19 |
| Derangement of joint, non-traumatic                                 | GPNMB | Wald ratio | 1 | -0.06 | 0.11 | 0.562 | 0.94 | 0.76 | 1.16 |

|                                                           |       |            |   |       |      |       |      |      |      |
|-----------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Hyperparathyroidism                                       | GPNMB | Wald ratio | 1 | -0.12 | 0.20 | 0.562 | 0.89 | 0.60 | 1.32 |
| Diabetes mellitus                                         | GPNMB | Wald ratio | 1 | 0.02  | 0.04 | 0.567 | 1.03 | 0.94 | 1.12 |
| Foreign body injury                                       | GPNMB | Wald ratio | 1 | -0.09 | 0.16 | 0.571 | 0.91 | 0.66 | 1.26 |
| Non-Hodgkins lymphoma                                     | GPNMB | Wald ratio | 1 | -0.08 | 0.13 | 0.577 | 0.93 | 0.71 | 1.21 |
| Cataract                                                  | GPNMB | Wald ratio | 1 | -0.02 | 0.04 | 0.577 | 0.98 | 0.90 | 1.06 |
| Ptosis of eyelid                                          | GPNMB | Wald ratio | 1 | -0.07 | 0.13 | 0.579 | 0.93 | 0.72 | 1.21 |
| Chronic periodontitis                                     | GPNMB | Wald ratio | 1 | -0.13 | 0.24 | 0.582 | 0.88 | 0.55 | 1.40 |
| Secondary malignant neoplasm                              | GPNMB | Wald ratio | 1 | 0.03  | 0.06 | 0.582 | 1.03 | 0.92 | 1.16 |
| Bronchiectasis                                            | GPNMB | Wald ratio | 1 | -0.07 | 0.13 | 0.585 | 0.93 | 0.72 | 1.20 |
| Other disorders of circulatory system                     | GPNMB | Wald ratio | 1 | 0.03  | 0.05 | 0.585 | 1.03 | 0.94 | 1.12 |
| Early or threatened labor; hemorrhage in early pregnancy  | GPNMB | Wald ratio | 1 | 0.06  | 0.12 | 0.587 | 1.07 | 0.85 | 1.34 |
| Symptoms and disorders of the joints                      | GPNMB | Wald ratio | 1 | -0.05 | 0.09 | 0.588 | 0.95 | 0.79 | 1.14 |
| Pneumonitis due to inhalation of food or vomitus          | GPNMB | Wald ratio | 1 | 0.13  | 0.23 | 0.590 | 1.14 | 0.72 | 1.80 |
| Genital prolapse                                          | GPNMB | Wald ratio | 1 | -0.03 | 0.05 | 0.593 | 0.97 | 0.87 | 1.08 |
| Strabismus and other disorders of binocular eye movements | GPNMB | Wald ratio | 1 | -0.08 | 0.15 | 0.595 | 0.92 | 0.69 | 1.24 |
| Other upper respiratory disease                           | GPNMB | Wald ratio | 1 | -0.05 | 0.09 | 0.595 | 0.95 | 0.80 | 1.14 |
| Acute pharyngitis                                         | GPNMB | Wald ratio | 1 | -0.10 | 0.19 | 0.597 | 0.90 | 0.62 | 1.32 |
| Polyarteritis nodosa and allied conditions                | GPNMB | Wald ratio | 1 | -0.10 | 0.20 | 0.600 | 0.90 | 0.61 | 1.33 |
| Symptoms involving skin and other integumentary tissue    | GPNMB | Wald ratio | 1 | -0.07 | 0.13 | 0.601 | 0.93 | 0.72 | 1.21 |
| Ulceration of intestine                                   | GPNMB | Wald ratio | 1 | 0.11  | 0.22 | 0.605 | 1.12 | 0.73 | 1.72 |
| Other local infections of skin and subcutaneous tissue    | GPNMB | Wald ratio | 1 | -0.04 | 0.08 | 0.606 | 0.96 | 0.81 | 1.13 |
| Inflammation of eyelids                                   | GPNMB | Wald ratio | 1 | 0.06  | 0.12 | 0.606 | 1.06 | 0.85 | 1.33 |
| Premature beats                                           | GPNMB | Wald ratio | 1 | 0.13  | 0.25 | 0.606 | 1.13 | 0.70 | 1.83 |
| Inflammatory and toxic neuropathy                         | GPNMB | Wald ratio | 1 | -0.08 | 0.15 | 0.608 | 0.92 | 0.68 | 1.25 |
| Stricture/obstruction of ureter                           | GPNMB | Wald ratio | 1 | -0.10 | 0.19 | 0.610 | 0.91 | 0.63 | 1.31 |
| Other dyschromia                                          | GPNMB | Wald ratio | 1 | -0.10 | 0.20 | 0.610 | 0.90 | 0.61 | 1.34 |

|                                                              |       |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Psoriatic arthropathy                                        | GPNMB | Wald ratio | 1 | 0.11  | 0.21 | 0.612 | 1.11 | 0.73 | 1.69 |
| Other acquired deformities of limbs                          | GPNMB | Wald ratio | 1 | 0.07  | 0.14 | 0.612 | 1.07 | 0.82 | 1.41 |
| Cardiac arrest                                               | GPNMB | Wald ratio | 1 | 0.09  | 0.19 | 0.613 | 1.10 | 0.76 | 1.58 |
| Amblyopia                                                    | GPNMB | Wald ratio | 1 | -0.12 | 0.25 | 0.614 | 0.88 | 0.55 | 1.43 |
| Appendiceal conditions                                       | GPNMB | Wald ratio | 1 | 0.05  | 0.10 | 0.614 | 1.05 | 0.87 | 1.27 |
| Abnormal movement                                            | GPNMB | Wald ratio | 1 | -0.05 | 0.11 | 0.616 | 0.95 | 0.76 | 1.17 |
| Hallux valgus (Bunion)                                       | GPNMB | Wald ratio | 1 | -0.04 | 0.07 | 0.618 | 0.96 | 0.84 | 1.11 |
| Cardiomegaly                                                 | GPNMB | Wald ratio | 1 | 0.06  | 0.11 | 0.618 | 1.06 | 0.85 | 1.32 |
| Hypovolemia                                                  | GPNMB | Wald ratio | 1 | -0.05 | 0.11 | 0.618 | 0.95 | 0.77 | 1.17 |
| Diseases of nail, NOS                                        | GPNMB | Wald ratio | 1 | 0.08  | 0.16 | 0.619 | 1.08 | 0.79 | 1.48 |
| Other conditions of brain                                    | GPNMB | Wald ratio | 1 | -0.07 | 0.15 | 0.620 | 0.93 | 0.69 | 1.25 |
| Hypothyroidism                                               | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.620 | 1.02 | 0.93 | 1.13 |
| Disorders of calcium/phosphorus metabolism                   | GPNMB | Wald ratio | 1 | 0.08  | 0.16 | 0.627 | 1.08 | 0.79 | 1.49 |
| Pulmonary heart disease                                      | GPNMB | Wald ratio | 1 | 0.04  | 0.09 | 0.628 | 1.04 | 0.88 | 1.24 |
| Streptococcus infection                                      | GPNMB | Wald ratio | 1 | -0.07 | 0.14 | 0.629 | 0.93 | 0.71 | 1.23 |
| Protein-calorie malnutrition                                 | GPNMB | Wald ratio | 1 | -0.08 | 0.17 | 0.630 | 0.92 | 0.65 | 1.29 |
| Injury, NOS                                                  | GPNMB | Wald ratio | 1 | -0.03 | 0.06 | 0.630 | 0.97 | 0.86 | 1.10 |
| Cancer of kidney and renal pelvis                            | GPNMB | Wald ratio | 1 | -0.08 | 0.18 | 0.631 | 0.92 | 0.65 | 1.30 |
| Unstable angina (intermediate coronary syndrome)             | GPNMB | Wald ratio | 1 | -0.04 | 0.08 | 0.636 | 0.96 | 0.82 | 1.13 |
| Manlignant and unknown neoplasms of brain and nervous system | GPNMB | Wald ratio | 1 | 0.11  | 0.22 | 0.637 | 1.11 | 0.72 | 1.72 |
| Acute pancreatitis                                           | GPNMB | Wald ratio | 1 | 0.06  | 0.13 | 0.637 | 1.06 | 0.83 | 1.37 |
| Liver abscess and sequelae of chronic liver disease          | GPNMB | Wald ratio | 1 | 0.09  | 0.18 | 0.637 | 1.09 | 0.76 | 1.57 |
| Symptoms affecting skin                                      | GPNMB | Wald ratio | 1 | 0.04  | 0.08 | 0.638 | 1.04 | 0.89 | 1.20 |
| Flatulence                                                   | GPNMB | Wald ratio | 1 | 0.06  | 0.14 | 0.640 | 1.07 | 0.81 | 1.40 |
| Viral hepatitis                                              | GPNMB | Wald ratio | 1 | 0.08  | 0.16 | 0.641 | 1.08 | 0.78 | 1.49 |

|                                                                                              |       |            |   |       |      |       |      |      |      |
|----------------------------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum | GPNMB | Wald ratio | 1 | -0.04 | 0.08 | 0.641 | 0.96 | 0.83 | 1.12 |
| Type 2 diabetes with ophthalmic manifestations                                               | GPNMB | Wald ratio | 1 | 0.07  | 0.16 | 0.643 | 1.08 | 0.79 | 1.47 |
| Cancer of other lymphoid, histiocytic tissue                                                 | GPNMB | Wald ratio | 1 | 0.06  | 0.12 | 0.643 | 1.06 | 0.84 | 1.34 |
| Ectropion or entropion                                                                       | GPNMB | Wald ratio | 1 | 0.08  | 0.17 | 0.645 | 1.08 | 0.77 | 1.52 |
| Irregular menstrual cycle                                                                    | GPNMB | Wald ratio | 1 | -0.06 | 0.13 | 0.646 | 0.94 | 0.73 | 1.21 |
| Abnormal glucose                                                                             | GPNMB | Wald ratio | 1 | 0.10  | 0.22 | 0.646 | 1.10 | 0.72 | 1.69 |
| Bronchitis                                                                                   | GPNMB | Wald ratio | 1 | 0.10  | 0.23 | 0.646 | 1.11 | 0.71 | 1.73 |
| Other anemias                                                                                | GPNMB | Wald ratio | 1 | -0.02 | 0.05 | 0.647 | 0.98 | 0.88 | 1.08 |
| Other hypertrophic and atrophic conditions of skin                                           | GPNMB | Wald ratio | 1 | 0.04  | 0.08 | 0.648 | 1.04 | 0.88 | 1.22 |
| Other disorders of male genital organs                                                       | GPNMB | Wald ratio | 1 | -0.05 | 0.11 | 0.649 | 0.95 | 0.77 | 1.18 |
| Acute tonsillitis                                                                            | GPNMB | Wald ratio | 1 | 0.10  | 0.23 | 0.649 | 1.11 | 0.71 | 1.74 |
| Hypertension                                                                                 | GPNMB | Wald ratio | 1 | 0.01  | 0.03 | 0.649 | 1.01 | 0.96 | 1.06 |
| Pancreatic cancer                                                                            | GPNMB | Wald ratio | 1 | 0.11  | 0.23 | 0.653 | 1.11 | 0.70 | 1.76 |
| Carbuncle and furuncle                                                                       | GPNMB | Wald ratio | 1 | 0.05  | 0.12 | 0.654 | 1.05 | 0.84 | 1.33 |
| Circulatory disease NEC                                                                      | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.654 | 1.02 | 0.93 | 1.12 |
| Benign neoplasm of other parts of digestive system                                           | GPNMB | Wald ratio | 1 | -0.04 | 0.08 | 0.654 | 0.97 | 0.83 | 1.13 |
| Crystal arthropathies                                                                        | GPNMB | Wald ratio | 1 | 0.10  | 0.23 | 0.654 | 1.11 | 0.71 | 1.74 |
| Colorectal cancer                                                                            | GPNMB | Wald ratio | 1 | -0.04 | 0.09 | 0.655 | 0.96 | 0.81 | 1.14 |
| Complications of cardiac/vascular device, implant, and graft                                 | GPNMB | Wald ratio | 1 | -0.06 | 0.13 | 0.655 | 0.94 | 0.72 | 1.23 |
| Dislocation                                                                                  | GPNMB | Wald ratio | 1 | 0.06  | 0.12 | 0.655 | 1.06 | 0.83 | 1.35 |
| Disorders of sweat glands                                                                    | GPNMB | Wald ratio | 1 | -0.09 | 0.20 | 0.657 | 0.92 | 0.62 | 1.35 |
| Acute appendicitis                                                                           | GPNMB | Wald ratio | 1 | 0.05  | 0.11 | 0.658 | 1.05 | 0.84 | 1.31 |
| Essential hypertension                                                                       | GPNMB | Wald ratio | 1 | 0.01  | 0.03 | 0.662 | 1.01 | 0.96 | 1.06 |
| Adverse effects of sedatives or other central nervous system depressants and anesthetics     | GPNMB | Wald ratio | 1 | 0.10  | 0.23 | 0.662 | 1.11 | 0.70 | 1.76 |

|                                                                                               |       |            |   |       |      |       |      |      |      |
|-----------------------------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Hemoptysis                                                                                    | GPNMB | Wald ratio | 1 | -0.05 | 0.13 | 0.662 | 0.95 | 0.74 | 1.21 |
| Cyst or abscess of Bartholin's gland                                                          | GPNMB | Wald ratio | 1 | 0.09  | 0.21 | 0.663 | 1.09 | 0.73 | 1.64 |
| Colon cancer                                                                                  | GPNMB | Wald ratio | 1 | -0.05 | 0.10 | 0.663 | 0.96 | 0.78 | 1.17 |
| Benign neoplasm of brain and other parts of nervous system                                    | GPNMB | Wald ratio | 1 | 0.09  | 0.20 | 0.665 | 1.09 | 0.74 | 1.61 |
| Fracture of humerus                                                                           | GPNMB | Wald ratio | 1 | -0.06 | 0.14 | 0.665 | 0.94 | 0.72 | 1.23 |
| Noninflammatory disorders of vulva and perineum                                               | GPNMB | Wald ratio | 1 | -0.07 | 0.16 | 0.665 | 0.94 | 0.69 | 1.27 |
| Bursitis                                                                                      | GPNMB | Wald ratio | 1 | -0.08 | 0.19 | 0.668 | 0.92 | 0.63 | 1.35 |
| Displacement of intervertebral disc                                                           | GPNMB | Wald ratio | 1 | -0.11 | 0.25 | 0.670 | 0.90 | 0.55 | 1.47 |
| Other diseases of respiratory system, not elsewhere classified                                | GPNMB | Wald ratio | 1 | -0.03 | 0.06 | 0.672 | 0.98 | 0.87 | 1.09 |
| Malposition and malpresentation of fetus or obstruction                                       | GPNMB | Wald ratio | 1 | 0.06  | 0.14 | 0.672 | 1.06 | 0.80 | 1.40 |
| Aphasia/speech disturbance                                                                    | GPNMB | Wald ratio | 1 | -0.06 | 0.15 | 0.673 | 0.94 | 0.71 | 1.25 |
| Intestinal malabsorption (non-celiac)                                                         | GPNMB | Wald ratio | 1 | -0.05 | 0.13 | 0.673 | 0.95 | 0.74 | 1.21 |
| Umbilical cord complications during labor and delivery                                        | GPNMB | Wald ratio | 1 | -0.11 | 0.25 | 0.673 | 0.90 | 0.55 | 1.47 |
| Dysmenorrhea                                                                                  | GPNMB | Wald ratio | 1 | 0.06  | 0.14 | 0.674 | 1.06 | 0.81 | 1.38 |
| Benign neoplasm of brain, cranial nerves, meninges                                            | GPNMB | Wald ratio | 1 | 0.09  | 0.20 | 0.675 | 1.09 | 0.73 | 1.63 |
| Other unspecified back disorders                                                              | GPNMB | Wald ratio | 1 | -0.06 | 0.14 | 0.677 | 0.94 | 0.71 | 1.24 |
| Esophageal bleeding (varices/hemorrhage)                                                      | GPNMB | Wald ratio | 1 | -0.06 | 0.14 | 0.677 | 0.94 | 0.72 | 1.24 |
| Schizophrenia                                                                                 | GPNMB | Wald ratio | 1 | -0.10 | 0.24 | 0.680 | 0.91 | 0.57 | 1.45 |
| Noninflammatory female genital disorders                                                      | GPNMB | Wald ratio | 1 | 0.02  | 0.06 | 0.681 | 1.03 | 0.91 | 1.15 |
| Nonspecific abnormal findings on radiological and other examination of musculoskeletal system | GPNMB | Wald ratio | 1 | -0.09 | 0.21 | 0.683 | 0.92 | 0.60 | 1.40 |
| Hypothyroidism NOS                                                                            | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.685 | 1.02 | 0.92 | 1.13 |
| Anaphylactic shock NOS                                                                        | GPNMB | Wald ratio | 1 | -0.10 | 0.24 | 0.686 | 0.91 | 0.56 | 1.46 |
| Diseases of pancreas                                                                          | GPNMB | Wald ratio | 1 | 0.04  | 0.11 | 0.687 | 1.05 | 0.84 | 1.30 |
| Cervical cancer and dysplasia                                                                 | GPNMB | Wald ratio | 1 | 0.04  | 0.09 | 0.687 | 1.04 | 0.86 | 1.25 |
| Urinary calculus                                                                              | GPNMB | Wald ratio | 1 | -0.03 | 0.07 | 0.691 | 0.97 | 0.85 | 1.12 |

|                                                               |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Stricture and stenosis of esophagus                           | GPNMB | Wald ratio | 1 | -0.05 | 0.13 | 0.693 | 0.95 | 0.73 | 1.23 |
| Fracture of hand or wrist                                     | GPNMB | Wald ratio | 1 | -0.04 | 0.10 | 0.694 | 0.96 | 0.79 | 1.17 |
| Other mental disorder                                         | GPNMB | Wald ratio | 1 | 0.01  | 0.04 | 0.695 | 1.01 | 0.94 | 1.09 |
| GERD                                                          | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.695 | 1.02 | 0.93 | 1.12 |
| Voice disturbance                                             | GPNMB | Wald ratio | 1 | 0.07  | 0.17 | 0.696 | 1.07 | 0.76 | 1.50 |
| Cardiac arrest and ventricular fibrillation                   | GPNMB | Wald ratio | 1 | 0.07  | 0.17 | 0.696 | 1.07 | 0.77 | 1.49 |
| Rash and other nonspecific skin eruption                      | GPNMB | Wald ratio | 1 | -0.05 | 0.12 | 0.697 | 0.95 | 0.75 | 1.21 |
| Psoriasis                                                     | GPNMB | Wald ratio | 1 | 0.05  | 0.12 | 0.698 | 1.05 | 0.83 | 1.33 |
| Spondylosis and allied disorders                              | GPNMB | Wald ratio | 1 | 0.03  | 0.07 | 0.699 | 1.03 | 0.90 | 1.17 |
| Cancer of esophagus                                           | GPNMB | Wald ratio | 1 | -0.08 | 0.21 | 0.700 | 0.92 | 0.61 | 1.40 |
| Symptoms involving digestive system                           | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.703 | 1.02 | 0.93 | 1.11 |
| Viral Enteritis                                               | GPNMB | Wald ratio | 1 | -0.07 | 0.19 | 0.703 | 0.93 | 0.64 | 1.36 |
| Iron deficiency anemias, unspecified or not due to blood loss | GPNMB | Wald ratio | 1 | 0.03  | 0.07 | 0.703 | 1.03 | 0.90 | 1.17 |
| Disorders of mineral metabolism                               | GPNMB | Wald ratio | 1 | -0.05 | 0.12 | 0.703 | 0.95 | 0.75 | 1.22 |
| Subjective visual disturbances                                | GPNMB | Wald ratio | 1 | 0.09  | 0.23 | 0.708 | 1.09 | 0.70 | 1.71 |
| Benign neoplasm of skin                                       | GPNMB | Wald ratio | 1 | -0.02 | 0.07 | 0.708 | 0.98 | 0.86 | 1.11 |
| Occlusion and stenosis of precerebral arteries                | GPNMB | Wald ratio | 1 | 0.06  | 0.17 | 0.709 | 1.06 | 0.77 | 1.47 |
| Effects radiation NOS                                         | GPNMB | Wald ratio | 1 | -0.04 | 0.10 | 0.710 | 0.96 | 0.79 | 1.18 |
| Malignant neoplasm of ovary                                   | GPNMB | Wald ratio | 1 | 0.05  | 0.12 | 0.710 | 1.05 | 0.82 | 1.34 |
| Cystitis and urethritis                                       | GPNMB | Wald ratio | 1 | -0.04 | 0.10 | 0.711 | 0.96 | 0.79 | 1.18 |
| Secondary malignancy of lymph nodes                           | GPNMB | Wald ratio | 1 | 0.03  | 0.08 | 0.713 | 1.03 | 0.88 | 1.20 |
| Other benign neoplasm of connective and other soft tissue     | GPNMB | Wald ratio | 1 | -0.06 | 0.17 | 0.713 | 0.94 | 0.67 | 1.31 |
| Secondary malignancy of bone                                  | GPNMB | Wald ratio | 1 | -0.04 | 0.12 | 0.714 | 0.96 | 0.75 | 1.22 |
| Decubitus ulcer                                               | GPNMB | Wald ratio | 1 | 0.07  | 0.19 | 0.714 | 1.07 | 0.74 | 1.55 |
| Endometrial hyperplasia                                       | GPNMB | Wald ratio | 1 | 0.06  | 0.17 | 0.715 | 1.06 | 0.76 | 1.48 |
| Calculus of kidney                                            | GPNMB | Wald ratio | 1 | -0.04 | 0.10 | 0.718 | 0.96 | 0.79 | 1.18 |

|                                                                 |       |            |   |       |      |       |      |      |      |
|-----------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Urinary tract infection                                         | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.719 | 1.02 | 0.92 | 1.13 |
| Gangrene                                                        | GPNMB | Wald ratio | 1 | -0.09 | 0.24 | 0.719 | 0.92 | 0.57 | 1.47 |
| Congenital anomalies of urinary system                          | GPNMB | Wald ratio | 1 | -0.07 | 0.19 | 0.720 | 0.93 | 0.64 | 1.37 |
| Reflux esophagitis                                              | GPNMB | Wald ratio | 1 | -0.02 | 0.06 | 0.720 | 0.98 | 0.88 | 1.10 |
| Bipolar                                                         | GPNMB | Wald ratio | 1 | 0.06  | 0.18 | 0.721 | 1.06 | 0.76 | 1.50 |
| Secondary hypothyroidism                                        | GPNMB | Wald ratio | 1 | 0.06  | 0.17 | 0.722 | 1.06 | 0.76 | 1.49 |
| Periodontitis (acute or chronic)                                | GPNMB | Wald ratio | 1 | -0.06 | 0.16 | 0.726 | 0.94 | 0.69 | 1.30 |
| Malignant neoplasm of ovary and other uterine adnexa            | GPNMB | Wald ratio | 1 | 0.04  | 0.12 | 0.726 | 1.04 | 0.82 | 1.33 |
| Hemorrhage of gastrointestinal tract                            | GPNMB | Wald ratio | 1 | -0.03 | 0.08 | 0.727 | 0.97 | 0.83 | 1.14 |
| Acquired absence of breast                                      | GPNMB | Wald ratio | 1 | 0.04  | 0.12 | 0.727 | 1.04 | 0.83 | 1.31 |
| Paralytic ileus                                                 | GPNMB | Wald ratio | 1 | 0.09  | 0.25 | 0.729 | 1.09 | 0.67 | 1.77 |
| Ulcer of esophagus                                              | GPNMB | Wald ratio | 1 | 0.03  | 0.08 | 0.729 | 1.03 | 0.88 | 1.20 |
| Malaise and fatigue                                             | GPNMB | Wald ratio | 1 | -0.03 | 0.10 | 0.730 | 0.97 | 0.80 | 1.17 |
| Osteomyelitis, periostitis, and other infections involving bone | GPNMB | Wald ratio | 1 | -0.08 | 0.23 | 0.730 | 0.92 | 0.59 | 1.45 |
| Disorders of other cranial nerves                               | GPNMB | Wald ratio | 1 | 0.05  | 0.15 | 0.732 | 1.05 | 0.78 | 1.42 |
| Glaucoma                                                        | GPNMB | Wald ratio | 1 | 0.03  | 0.09 | 0.732 | 1.03 | 0.87 | 1.22 |
| Abnormal heart sounds                                           | GPNMB | Wald ratio | 1 | -0.06 | 0.18 | 0.732 | 0.94 | 0.67 | 1.33 |
| Contracture of palmar fascia [Dupuytren's disease]              | GPNMB | Wald ratio | 1 | -0.03 | 0.10 | 0.732 | 0.97 | 0.80 | 1.17 |
| Ischemic Heart Disease                                          | GPNMB | Wald ratio | 1 | -0.01 | 0.04 | 0.732 | 0.99 | 0.92 | 1.06 |
| Diseases of spleen                                              | GPNMB | Wald ratio | 1 | -0.09 | 0.25 | 0.733 | 0.92 | 0.56 | 1.50 |
| Renal colic                                                     | GPNMB | Wald ratio | 1 | 0.04  | 0.13 | 0.733 | 1.04 | 0.82 | 1.34 |
| Malignant neoplasm of kidney, except pelvis                     | GPNMB | Wald ratio | 1 | -0.06 | 0.18 | 0.734 | 0.94 | 0.66 | 1.34 |
| Effects of other external causes                                | GPNMB | Wald ratio | 1 | 0.03  | 0.09 | 0.735 | 1.03 | 0.87 | 1.22 |
| Agoraphobia, social phobia, and panic disorder                  | GPNMB | Wald ratio | 1 | -0.07 | 0.21 | 0.737 | 0.93 | 0.61 | 1.42 |
| Aortic valve disease                                            | GPNMB | Wald ratio | 1 | -0.05 | 0.16 | 0.737 | 0.95 | 0.69 | 1.30 |
| Nevus, non-neoplastic                                           | GPNMB | Wald ratio | 1 | 0.08  | 0.23 | 0.738 | 1.08 | 0.68 | 1.71 |

|                                                        |       |            |   |       |      |       |      |      |      |
|--------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Cough                                                  | GPNMB | Wald ratio | 1 | 0.04  | 0.11 | 0.740 | 1.04 | 0.84 | 1.28 |
| Skin cancer                                            | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.742 | 1.02 | 0.92 | 1.12 |
| Iron deficiency anemias                                | GPNMB | Wald ratio | 1 | 0.02  | 0.07 | 0.744 | 1.02 | 0.90 | 1.16 |
| Synovitis and tenosynovitis                            | GPNMB | Wald ratio | 1 | -0.04 | 0.11 | 0.746 | 0.97 | 0.78 | 1.20 |
| Dyschromia and Vitiligo                                | GPNMB | Wald ratio | 1 | -0.06 | 0.18 | 0.748 | 0.94 | 0.66 | 1.35 |
| Hemorrhage of rectum and anus                          | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.750 | 1.02 | 0.92 | 1.12 |
| Nonspecific abnormal findings in stool contents        | GPNMB | Wald ratio | 1 | -0.04 | 0.14 | 0.750 | 0.96 | 0.73 | 1.26 |
| Enthesopathy                                           | GPNMB | Wald ratio | 1 | 0.02  | 0.06 | 0.751 | 1.02 | 0.91 | 1.14 |
| Personal history of diseases of digestive system       | GPNMB | Wald ratio | 1 | 0.02  | 0.05 | 0.752 | 1.02 | 0.92 | 1.11 |
| Abnormality of gait                                    | GPNMB | Wald ratio | 1 | -0.04 | 0.14 | 0.752 | 0.96 | 0.72 | 1.26 |
| Mucous polyp of cervix                                 | GPNMB | Wald ratio | 1 | -0.03 | 0.10 | 0.756 | 0.97 | 0.80 | 1.17 |
| Vascular hamartomas and non-neoplastic nevi            | GPNMB | Wald ratio | 1 | 0.07  | 0.22 | 0.757 | 1.07 | 0.69 | 1.66 |
| Phobia                                                 | GPNMB | Wald ratio | 1 | 0.08  | 0.25 | 0.758 | 1.08 | 0.66 | 1.77 |
| Seborrheic keratosis                                   | GPNMB | Wald ratio | 1 | -0.03 | 0.10 | 0.764 | 0.97 | 0.79 | 1.19 |
| Symptoms involving nervous and musculoskeletal systems | GPNMB | Wald ratio | 1 | 0.04  | 0.13 | 0.765 | 1.04 | 0.80 | 1.35 |
| Diseases of the larynx and vocal cords                 | GPNMB | Wald ratio | 1 | -0.03 | 0.11 | 0.766 | 0.97 | 0.78 | 1.20 |
| Cholelithiasis and cholecystitis                       | GPNMB | Wald ratio | 1 | -0.01 | 0.05 | 0.767 | 0.99 | 0.90 | 1.08 |
| Internal derangement of knee                           | GPNMB | Wald ratio | 1 | -0.01 | 0.05 | 0.768 | 0.99 | 0.90 | 1.08 |
| Ovarian cyst                                           | GPNMB | Wald ratio | 1 | 0.02  | 0.08 | 0.769 | 1.02 | 0.87 | 1.21 |
| Disorders of uterus, NEC                               | GPNMB | Wald ratio | 1 | -0.03 | 0.10 | 0.771 | 0.97 | 0.80 | 1.18 |
| Disorders of lipid metabolism                          | GPNMB | Wald ratio | 1 | 0.01  | 0.03 | 0.775 | 1.01 | 0.95 | 1.08 |
| Infertility, female                                    | GPNMB | Wald ratio | 1 | -0.05 | 0.16 | 0.775 | 0.96 | 0.70 | 1.30 |
| Sarcoidosis                                            | GPNMB | Wald ratio | 1 | -0.07 | 0.24 | 0.778 | 0.93 | 0.58 | 1.50 |
| Intestinal infection due to C. difficile               | GPNMB | Wald ratio | 1 | -0.06 | 0.22 | 0.779 | 0.94 | 0.61 | 1.45 |
| Tobacco use disorder                                   | GPNMB | Wald ratio | 1 | 0.01  | 0.04 | 0.780 | 1.01 | 0.93 | 1.10 |
| Pyelonephritis                                         | GPNMB | Wald ratio | 1 | 0.04  | 0.16 | 0.780 | 1.04 | 0.77 | 1.42 |

|                                                          |       |            |   |       |      |       |      |      |      |
|----------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Other disorders of cervical region                       | GPNMB | Wald ratio | 1 | 0.07  | 0.25 | 0.781 | 1.07 | 0.66 | 1.75 |
| Cancer of other female genital organs                    | GPNMB | Wald ratio | 1 | 0.03  | 0.12 | 0.782 | 1.03 | 0.82 | 1.30 |
| Cerebral artery occlusion, with cerebral infarction      | GPNMB | Wald ratio | 1 | -0.04 | 0.15 | 0.784 | 0.96 | 0.72 | 1.28 |
| Hyperlipidemia                                           | GPNMB | Wald ratio | 1 | 0.01  | 0.03 | 0.787 | 1.01 | 0.95 | 1.08 |
| Acute periodontitis                                      | GPNMB | Wald ratio | 1 | -0.06 | 0.22 | 0.787 | 0.94 | 0.61 | 1.45 |
| Acute gastritis                                          | GPNMB | Wald ratio | 1 | -0.04 | 0.17 | 0.792 | 0.96 | 0.69 | 1.32 |
| Asthma                                                   | GPNMB | Wald ratio | 1 | 0.01  | 0.04 | 0.793 | 1.01 | 0.94 | 1.09 |
| Poisoning by anticonvulsants and anti-Parkinsonism drugs | GPNMB | Wald ratio | 1 | 0.07  | 0.25 | 0.794 | 1.07 | 0.65 | 1.75 |
| Secondary malignancy of brain/spine                      | GPNMB | Wald ratio | 1 | -0.05 | 0.20 | 0.794 | 0.95 | 0.64 | 1.41 |
| Inguinal hernia                                          | GPNMB | Wald ratio | 1 | -0.01 | 0.05 | 0.794 | 0.99 | 0.90 | 1.08 |
| Other disorders of metabolism                            | GPNMB | Wald ratio | 1 | -0.04 | 0.15 | 0.797 | 0.96 | 0.72 | 1.29 |
| Occlusion of cerebral arteries                           | GPNMB | Wald ratio | 1 | -0.02 | 0.09 | 0.797 | 0.98 | 0.82 | 1.16 |
| Late effects of cerebrovascular disease                  | GPNMB | Wald ratio | 1 | -0.04 | 0.16 | 0.799 | 0.96 | 0.70 | 1.31 |
| Diseases and other conditions of the tongue              | GPNMB | Wald ratio | 1 | 0.04  | 0.16 | 0.799 | 1.04 | 0.76 | 1.43 |
| Retinal detachment with retinal defect                   | GPNMB | Wald ratio | 1 | -0.04 | 0.15 | 0.800 | 0.96 | 0.71 | 1.30 |
| Fracture of neck of femur                                | GPNMB | Wald ratio | 1 | 0.03  | 0.13 | 0.800 | 1.03 | 0.80 | 1.35 |
| Other acute and subacute forms of ischemic heart disease | GPNMB | Wald ratio | 1 | -0.04 | 0.17 | 0.801 | 0.96 | 0.69 | 1.33 |
| Acute and chronic tonsillitis                            | GPNMB | Wald ratio | 1 | 0.03  | 0.13 | 0.802 | 1.03 | 0.80 | 1.32 |
| Left bundle branch block                                 | GPNMB | Wald ratio | 1 | -0.03 | 0.14 | 0.803 | 0.97 | 0.74 | 1.26 |
| Hyperpotasemia                                           | GPNMB | Wald ratio | 1 | -0.05 | 0.18 | 0.803 | 0.96 | 0.67 | 1.37 |
| First degree AV block                                    | GPNMB | Wald ratio | 1 | -0.04 | 0.18 | 0.805 | 0.96 | 0.67 | 1.36 |
| Jaundice (not of newborn)                                | GPNMB | Wald ratio | 1 | 0.05  | 0.19 | 0.809 | 1.05 | 0.72 | 1.52 |
| Large cell lymphoma                                      | GPNMB | Wald ratio | 1 | 0.06  | 0.24 | 0.809 | 1.06 | 0.67 | 1.69 |
| Other symptoms involving abdomen and pelvis              | GPNMB | Wald ratio | 1 | -0.02 | 0.10 | 0.809 | 0.98 | 0.80 | 1.19 |
| Spondylosis without myelopathy                           | GPNMB | Wald ratio | 1 | 0.02  | 0.08 | 0.809 | 1.02 | 0.87 | 1.20 |
| Noninfectious disorders of lymphatic channels            | GPNMB | Wald ratio | 1 | -0.05 | 0.21 | 0.810 | 0.95 | 0.62 | 1.45 |

|                                                                     |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Menopausal and postmenopausal disorders                             | GPNMB | Wald ratio | 1 | 0.01  | 0.06 | 0.810 | 1.01 | 0.91 | 1.13 |
| Sleep apnea                                                         | GPNMB | Wald ratio | 1 | 0.02  | 0.09 | 0.812 | 1.02 | 0.86 | 1.21 |
| Electrolyte imbalance                                               | GPNMB | Wald ratio | 1 | 0.02  | 0.09 | 0.813 | 1.02 | 0.86 | 1.22 |
| Duodenitis                                                          | GPNMB | Wald ratio | 1 | -0.02 | 0.07 | 0.813 | 0.98 | 0.86 | 1.12 |
| Secondary malignancy of respiratory organs                          | GPNMB | Wald ratio | 1 | 0.03  | 0.12 | 0.816 | 1.03 | 0.81 | 1.31 |
| Allergic rhinitis                                                   | GPNMB | Wald ratio | 1 | -0.04 | 0.17 | 0.818 | 0.96 | 0.68 | 1.35 |
| Fracture of unspecified bones                                       | GPNMB | Wald ratio | 1 | -0.04 | 0.16 | 0.820 | 0.96 | 0.71 | 1.31 |
| Normal delivery                                                     | GPNMB | Wald ratio | 1 | -0.03 | 0.13 | 0.821 | 0.97 | 0.75 | 1.26 |
| Emphysema                                                           | GPNMB | Wald ratio | 1 | 0.03  | 0.14 | 0.823 | 1.03 | 0.79 | 1.35 |
| Hemorrhage or hematoma complicating a procedure                     | GPNMB | Wald ratio | 1 | 0.02  | 0.08 | 0.824 | 1.02 | 0.87 | 1.19 |
| Missed abortion/Hydatidiform mole                                   | GPNMB | Wald ratio | 1 | 0.04  | 0.16 | 0.825 | 1.04 | 0.75 | 1.43 |
| Chondrocalcinosis                                                   | GPNMB | Wald ratio | 1 | 0.05  | 0.24 | 0.828 | 1.05 | 0.66 | 1.69 |
| Hemorrhage from gastrointestinal ulcer                              | GPNMB | Wald ratio | 1 | 0.05  | 0.23 | 0.829 | 1.05 | 0.67 | 1.65 |
| Senile cataract                                                     | GPNMB | Wald ratio | 1 | 0.01  | 0.06 | 0.830 | 1.01 | 0.89 | 1.15 |
| Disorders of refraction and accommodation; blindness and low vision | GPNMB | Wald ratio | 1 | -0.02 | 0.12 | 0.832 | 0.98 | 0.78 | 1.22 |
| Hemangioma and lymphangioma, any site                               | GPNMB | Wald ratio | 1 | -0.03 | 0.14 | 0.834 | 0.97 | 0.73 | 1.28 |
| Other disorders of middle ear and mastoid                           | GPNMB | Wald ratio | 1 | -0.04 | 0.20 | 0.835 | 0.96 | 0.65 | 1.41 |
| Paroxysmal supraventricular tachycardia                             | GPNMB | Wald ratio | 1 | -0.02 | 0.12 | 0.835 | 0.98 | 0.77 | 1.23 |
| Lipoma                                                              | GPNMB | Wald ratio | 1 | 0.01  | 0.07 | 0.836 | 1.02 | 0.88 | 1.17 |
| Other disorders of bone and cartilage                               | GPNMB | Wald ratio | 1 | -0.02 | 0.09 | 0.837 | 0.98 | 0.82 | 1.18 |
| Other aneurysm                                                      | GPNMB | Wald ratio | 1 | 0.03  | 0.13 | 0.838 | 1.03 | 0.79 | 1.34 |
| Pulmonary collapse; interstitial and compensatory emphysema         | GPNMB | Wald ratio | 1 | 0.03  | 0.13 | 0.839 | 1.03 | 0.80 | 1.32 |
| Thyrotoxicosis with or without goiter                               | GPNMB | Wald ratio | 1 | 0.03  | 0.13 | 0.841 | 1.03 | 0.79 | 1.33 |
| Vaginal enterocoele, congenital or acquired                         | GPNMB | Wald ratio | 1 | -0.04 | 0.22 | 0.845 | 0.96 | 0.63 | 1.47 |
| Hypotension NOS                                                     | GPNMB | Wald ratio | 1 | 0.02  | 0.10 | 0.847 | 1.02 | 0.84 | 1.23 |
| Empyema and pneumothorax                                            | GPNMB | Wald ratio | 1 | -0.03 | 0.17 | 0.847 | 0.97 | 0.70 | 1.34 |

|                                                                    |       |            |   |       |      |       |      |      |      |
|--------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Allergy/adverse effect of penicillin                               | GPNMB | Wald ratio | 1 | 0.01  | 0.05 | 0.849 | 1.01 | 0.92 | 1.10 |
| Ulcerative colitis (chronic)                                       | GPNMB | Wald ratio | 1 | 0.05  | 0.25 | 0.850 | 1.05 | 0.65 | 1.69 |
| Cellulitis and abscess of fingers/toes                             | GPNMB | Wald ratio | 1 | -0.04 | 0.24 | 0.851 | 0.96 | 0.60 | 1.53 |
| Nontoxic multinodular goiter                                       | GPNMB | Wald ratio | 1 | -0.04 | 0.22 | 0.853 | 0.96 | 0.63 | 1.47 |
| Kyphoscoliosis and scoliosis                                       | GPNMB | Wald ratio | 1 | 0.03  | 0.17 | 0.855 | 1.03 | 0.73 | 1.45 |
| Myeloproliferative disease                                         | GPNMB | Wald ratio | 1 | 0.03  | 0.18 | 0.855 | 1.03 | 0.73 | 1.47 |
| Gout and other crystal arthropathies                               | GPNMB | Wald ratio | 1 | 0.02  | 0.09 | 0.856 | 1.02 | 0.85 | 1.22 |
| Hemorrhage in early pregnancy                                      | GPNMB | Wald ratio | 1 | 0.03  | 0.18 | 0.857 | 1.03 | 0.73 | 1.46 |
| Celiac disease                                                     | GPNMB | Wald ratio | 1 | -0.02 | 0.13 | 0.858 | 0.98 | 0.75 | 1.27 |
| Prolapse of vaginal walls                                          | GPNMB | Wald ratio | 1 | 0.01  | 0.07 | 0.859 | 1.01 | 0.89 | 1.16 |
| Irritable Bowel Syndrome                                           | GPNMB | Wald ratio | 1 | -0.01 | 0.08 | 0.859 | 0.99 | 0.85 | 1.15 |
| Calculus of lower urinary tract                                    | GPNMB | Wald ratio | 1 | -0.04 | 0.20 | 0.862 | 0.97 | 0.65 | 1.44 |
| Disorders of adrenal glands                                        | GPNMB | Wald ratio | 1 | 0.04  | 0.22 | 0.863 | 1.04 | 0.67 | 1.61 |
| Other abnormality of urination                                     | GPNMB | Wald ratio | 1 | -0.02 | 0.13 | 0.865 | 0.98 | 0.76 | 1.26 |
| Calculus of bile duct                                              | GPNMB | Wald ratio | 1 | 0.02  | 0.11 | 0.865 | 1.02 | 0.82 | 1.27 |
| Cellulitis and abscess of face/neck                                | GPNMB | Wald ratio | 1 | -0.04 | 0.25 | 0.865 | 0.96 | 0.59 | 1.56 |
| Superficial injury without mention of infection                    | GPNMB | Wald ratio | 1 | 0.01  | 0.09 | 0.866 | 1.01 | 0.86 | 1.20 |
| Psoriasis vulgaris                                                 | GPNMB | Wald ratio | 1 | -0.02 | 0.14 | 0.870 | 0.98 | 0.74 | 1.28 |
| Hyperhidrosis                                                      | GPNMB | Wald ratio | 1 | -0.04 | 0.23 | 0.870 | 0.96 | 0.61 | 1.52 |
| Fracture of pelvis                                                 | GPNMB | Wald ratio | 1 | -0.03 | 0.21 | 0.871 | 0.97 | 0.64 | 1.46 |
| Hypertensive heart and/or renal disease                            | GPNMB | Wald ratio | 1 | 0.02  | 0.14 | 0.871 | 1.02 | 0.78 | 1.34 |
| Fracture of vertebral column without mention of spinal cord injury | GPNMB | Wald ratio | 1 | -0.02 | 0.15 | 0.872 | 0.98 | 0.72 | 1.32 |
| Open wounds of head; neck; and trunk                               | GPNMB | Wald ratio | 1 | 0.01  | 0.09 | 0.873 | 1.01 | 0.85 | 1.22 |
| Malunion and nonunion of fracture                                  | GPNMB | Wald ratio | 1 | -0.03 | 0.16 | 0.874 | 0.97 | 0.71 | 1.33 |
| Complications of surgical and medical procedures                   | GPNMB | Wald ratio | 1 | -0.01 | 0.06 | 0.874 | 0.99 | 0.88 | 1.11 |
| Chronic pulmonary heart disease                                    | GPNMB | Wald ratio | 1 | -0.04 | 0.23 | 0.875 | 0.96 | 0.61 | 1.53 |

|                                                               |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Otitis externa                                                | GPNMB | Wald ratio | 1 | -0.04 | 0.25 | 0.877 | 0.96 | 0.59 | 1.57 |
| Cystic mastopathy                                             | GPNMB | Wald ratio | 1 | 0.03  | 0.19 | 0.879 | 1.03 | 0.71 | 1.49 |
| Malignant neoplasm of rectum, rectosigmoid junction, and anus | GPNMB | Wald ratio | 1 | 0.02  | 0.13 | 0.880 | 1.02 | 0.80 | 1.30 |
| Cholesteatoma                                                 | GPNMB | Wald ratio | 1 | 0.03  | 0.23 | 0.881 | 1.04 | 0.66 | 1.63 |
| Psoriasis and related disorders                               | GPNMB | Wald ratio | 1 | 0.02  | 0.12 | 0.884 | 1.02 | 0.81 | 1.29 |
| Urinary incontinence                                          | GPNMB | Wald ratio | 1 | -0.01 | 0.06 | 0.886 | 0.99 | 0.88 | 1.12 |
| Thrombocytopenia                                              | GPNMB | Wald ratio | 1 | -0.02 | 0.14 | 0.888 | 0.98 | 0.74 | 1.30 |
| E. coli                                                       | GPNMB | Wald ratio | 1 | -0.01 | 0.11 | 0.891 | 0.99 | 0.80 | 1.22 |
| Hypotension                                                   | GPNMB | Wald ratio | 1 | -0.01 | 0.07 | 0.894 | 0.99 | 0.86 | 1.15 |
| Other dyspnea                                                 | GPNMB | Wald ratio | 1 | 0.03  | 0.19 | 0.894 | 1.03 | 0.71 | 1.48 |
| Early onset of delivery                                       | GPNMB | Wald ratio | 1 | -0.03 | 0.23 | 0.896 | 0.97 | 0.61 | 1.53 |
| Other symptoms/disorders or the urinary system                | GPNMB | Wald ratio | 1 | 0.00  | 0.04 | 0.900 | 1.00 | 0.93 | 1.08 |
| Other diseases of lung                                        | GPNMB | Wald ratio | 1 | 0.03  | 0.20 | 0.902 | 1.03 | 0.69 | 1.53 |
| Peptic ulcer (excl. esophageal)                               | GPNMB | Wald ratio | 1 | -0.01 | 0.07 | 0.902 | 0.99 | 0.87 | 1.13 |
| Disease of tricuspid valve                                    | GPNMB | Wald ratio | 1 | -0.02 | 0.17 | 0.904 | 0.98 | 0.70 | 1.38 |
| Perforation of tympanic membrane                              | GPNMB | Wald ratio | 1 | -0.02 | 0.18 | 0.904 | 0.98 | 0.69 | 1.38 |
| Blindness and low vision                                      | GPNMB | Wald ratio | 1 | 0.02  | 0.21 | 0.907 | 1.02 | 0.68 | 1.55 |
| Hypertensive chronic kidney disease                           | GPNMB | Wald ratio | 1 | -0.02 | 0.15 | 0.907 | 0.98 | 0.74 | 1.31 |
| Chronic bronchitis                                            | GPNMB | Wald ratio | 1 | -0.01 | 0.11 | 0.908 | 0.99 | 0.80 | 1.22 |
| Varicose veins of lower extremity, symptomatic                | GPNMB | Wald ratio | 1 | 0.03  | 0.23 | 0.909 | 1.03 | 0.66 | 1.60 |
| Disorders of external ear                                     | GPNMB | Wald ratio | 1 | 0.02  | 0.15 | 0.912 | 1.02 | 0.76 | 1.36 |
| Cellulitis and abscess of trunk                               | GPNMB | Wald ratio | 1 | 0.03  | 0.23 | 0.912 | 1.03 | 0.65 | 1.62 |
| Other disorders of synovium, tendon, and bursa                | GPNMB | Wald ratio | 1 | -0.01 | 0.07 | 0.913 | 0.99 | 0.87 | 1.13 |
| Neuralgia, neuritis, and radiculitis NOS                      | GPNMB | Wald ratio | 1 | -0.02 | 0.17 | 0.914 | 0.98 | 0.71 | 1.36 |
| Chronic fatigue syndrome                                      | GPNMB | Wald ratio | 1 | 0.02  | 0.23 | 0.915 | 1.03 | 0.65 | 1.62 |
| Cystitis                                                      | GPNMB | Wald ratio | 1 | -0.01 | 0.11 | 0.915 | 0.99 | 0.80 | 1.22 |

|                                                                  |       |            |   |       |      |       |      |      |      |
|------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Facial nerve disorders [CN7]                                     | GPNMB | Wald ratio | 1 | -0.02 | 0.19 | 0.916 | 0.98 | 0.67 | 1.43 |
| Ganglion and cyst of synovium, tendon, and bursa                 | GPNMB | Wald ratio | 1 | 0.01  | 0.10 | 0.916 | 1.01 | 0.83 | 1.23 |
| Heart failure NOS                                                | GPNMB | Wald ratio | 1 | -0.01 | 0.09 | 0.916 | 0.99 | 0.83 | 1.18 |
| Peritoneal adhesions (postoperative) (postinfection)             | GPNMB | Wald ratio | 1 | -0.01 | 0.10 | 0.918 | 0.99 | 0.81 | 1.21 |
| Ventral hernia                                                   | GPNMB | Wald ratio | 1 | -0.01 | 0.10 | 0.918 | 0.99 | 0.82 | 1.20 |
| Melanomas of skin, dx or hx                                      | GPNMB | Wald ratio | 1 | -0.01 | 0.11 | 0.918 | 0.99 | 0.80 | 1.23 |
| Melanomas of skin                                                | GPNMB | Wald ratio | 1 | -0.01 | 0.11 | 0.918 | 0.99 | 0.80 | 1.23 |
| Anal and rectal conditions                                       | GPNMB | Wald ratio | 1 | 0.00  | 0.05 | 0.918 | 1.00 | 0.92 | 1.10 |
| Rheumatism, unspecified and fibrositis                           | GPNMB | Wald ratio | 1 | 0.02  | 0.18 | 0.919 | 1.02 | 0.72 | 1.45 |
| Diseases of the salivary glands                                  | GPNMB | Wald ratio | 1 | -0.02 | 0.21 | 0.920 | 0.98 | 0.64 | 1.49 |
| Other ill-defined and unknown causes of morbidity and mortality  | GPNMB | Wald ratio | 1 | 0.00  | 0.05 | 0.920 | 1.00 | 0.92 | 1.10 |
| Cerebrovascular disease                                          | GPNMB | Wald ratio | 1 | 0.01  | 0.06 | 0.921 | 1.01 | 0.89 | 1.14 |
| Other non-epithelial cancer of skin                              | GPNMB | Wald ratio | 1 | 0.01  | 0.06 | 0.923 | 1.01 | 0.90 | 1.12 |
| Neoplasm of uncertain behavior                                   | GPNMB | Wald ratio | 1 | -0.01 | 0.15 | 0.925 | 0.99 | 0.73 | 1.33 |
| Abdominal hernia                                                 | GPNMB | Wald ratio | 1 | 0.00  | 0.03 | 0.925 | 1.00 | 0.95 | 1.06 |
| Retention of urine                                               | GPNMB | Wald ratio | 1 | -0.01 | 0.07 | 0.926 | 0.99 | 0.87 | 1.14 |
| Obstructive chronic bronchitis                                   | GPNMB | Wald ratio | 1 | 0.01  | 0.11 | 0.926 | 1.01 | 0.81 | 1.26 |
| Chronic pharyngitis and nasopharyngitis                          | GPNMB | Wald ratio | 1 | 0.02  | 0.18 | 0.929 | 1.02 | 0.71 | 1.46 |
| Poisoning by antibiotics                                         | GPNMB | Wald ratio | 1 | 0.00  | 0.04 | 0.929 | 1.00 | 0.92 | 1.09 |
| Benign neoplasm of other endocrine glands and related structures | GPNMB | Wald ratio | 1 | 0.02  | 0.19 | 0.930 | 1.02 | 0.70 | 1.48 |
| Anal and rectal polyp                                            | GPNMB | Wald ratio | 1 | 0.01  | 0.07 | 0.930 | 1.01 | 0.88 | 1.15 |
| Type 2 diabetes                                                  | GPNMB | Wald ratio | 1 | 0.00  | 0.04 | 0.933 | 1.00 | 0.92 | 1.10 |
| Other venous embolism and thrombosis                             | GPNMB | Wald ratio | 1 | 0.02  | 0.24 | 0.933 | 1.02 | 0.64 | 1.63 |
| Other specified cardiac dysrhythmias                             | GPNMB | Wald ratio | 1 | -0.01 | 0.10 | 0.938 | 0.99 | 0.81 | 1.21 |
| Varicose veins of lower extremity                                | GPNMB | Wald ratio | 1 | 0.00  | 0.06 | 0.939 | 1.00 | 0.90 | 1.12 |
| Crushing or internal injury to organs                            | GPNMB | Wald ratio | 1 | -0.01 | 0.18 | 0.940 | 0.99 | 0.69 | 1.40 |

|                                                                        |       |            |   |       |      |       |      |      |      |
|------------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Tinnitus                                                               | GPNMB | Wald ratio | 1 | 0.02  | 0.25 | 0.944 | 1.02 | 0.62 | 1.66 |
| Angina pectoris                                                        | GPNMB | Wald ratio | 1 | 0.00  | 0.05 | 0.945 | 1.00 | 0.91 | 1.09 |
| Degeneration of macula and posterior pole of retina                    | GPNMB | Wald ratio | 1 | -0.01 | 0.12 | 0.948 | 0.99 | 0.78 | 1.26 |
| Noninflammatory disorders of ovary, fallopian tube, and broad ligament | GPNMB | Wald ratio | 1 | 0.01  | 0.21 | 0.950 | 1.01 | 0.67 | 1.53 |
| Extrapyramidal disease and abnormal movement disorders                 | GPNMB | Wald ratio | 1 | 0.01  | 0.19 | 0.950 | 1.01 | 0.70 | 1.47 |
| Cancer of stomach                                                      | GPNMB | Wald ratio | 1 | 0.01  | 0.24 | 0.952 | 1.01 | 0.63 | 1.63 |
| Coagulation defects                                                    | GPNMB | Wald ratio | 1 | -0.01 | 0.19 | 0.953 | 0.99 | 0.69 | 1.42 |
| Uterine/Uterovaginal prolapse                                          | GPNMB | Wald ratio | 1 | 0.00  | 0.08 | 0.953 | 1.00 | 0.86 | 1.17 |
| Syncope and collapse                                                   | GPNMB | Wald ratio | 1 | 0.00  | 0.06 | 0.958 | 1.00 | 0.89 | 1.12 |
| Other diseases of the teeth and supporting structures                  | GPNMB | Wald ratio | 1 | 0.01  | 0.11 | 0.959 | 1.01 | 0.81 | 1.25 |
| Prurigo and Lichen                                                     | GPNMB | Wald ratio | 1 | -0.01 | 0.20 | 0.961 | 0.99 | 0.66 | 1.48 |
| Macular degeneration (senile) of retina NOS                            | GPNMB | Wald ratio | 1 | -0.01 | 0.12 | 0.962 | 0.99 | 0.78 | 1.26 |
| Femoral hernia                                                         | GPNMB | Wald ratio | 1 | 0.01  | 0.22 | 0.963 | 1.01 | 0.65 | 1.56 |
| Transient cerebral ischemia                                            | GPNMB | Wald ratio | 1 | -0.01 | 0.12 | 0.964 | 0.99 | 0.78 | 1.27 |
| Other disorders of tympanic membrane                                   | GPNMB | Wald ratio | 1 | -0.01 | 0.15 | 0.965 | 0.99 | 0.73 | 1.34 |
| Disorders of parathyroid gland                                         | GPNMB | Wald ratio | 1 | -0.01 | 0.19 | 0.968 | 0.99 | 0.68 | 1.45 |
| Noninflammatory disorders of cervix                                    | GPNMB | Wald ratio | 1 | 0.00  | 0.11 | 0.970 | 1.00 | 0.81 | 1.24 |
| Tachycardia NOS                                                        | GPNMB | Wald ratio | 1 | 0.00  | 0.12 | 0.972 | 1.00 | 0.78 | 1.26 |
| Hearing loss                                                           | GPNMB | Wald ratio | 1 | 0.00  | 0.09 | 0.972 | 1.00 | 0.84 | 1.19 |
| Hypertension complicating pregnancy, childbirth, and the puerperium    | GPNMB | Wald ratio | 1 | 0.01  | 0.17 | 0.972 | 1.01 | 0.71 | 1.42 |
| Meniere's disease                                                      | GPNMB | Wald ratio | 1 | 0.01  | 0.24 | 0.973 | 1.01 | 0.63 | 1.60 |
| Postmenopausal bleeding                                                | GPNMB | Wald ratio | 1 | 0.00  | 0.06 | 0.975 | 1.00 | 0.89 | 1.13 |
| Gout                                                                   | GPNMB | Wald ratio | 1 | 0.00  | 0.10 | 0.976 | 1.00 | 0.82 | 1.22 |
| Curvature of spine                                                     | GPNMB | Wald ratio | 1 | 0.00  | 0.17 | 0.976 | 1.00 | 0.71 | 1.39 |
| Lipoma of skin and subcutaneous tissue                                 | GPNMB | Wald ratio | 1 | 0.00  | 0.08 | 0.977 | 1.00 | 0.85 | 1.18 |
| Hypercholesterolemia                                                   | GPNMB | Wald ratio | 1 | 0.00  | 0.03 | 0.977 | 1.00 | 0.94 | 1.07 |

|                                                                     |       |            |   |       |      |       |      |      |      |
|---------------------------------------------------------------------|-------|------------|---|-------|------|-------|------|------|------|
| Duodenal ulcer                                                      | GPNMB | Wald ratio | 1 | 0.00  | 0.11 | 0.978 | 1.00 | 0.82 | 1.23 |
| Open wounds of extremities                                          | GPNMB | Wald ratio | 1 | 0.00  | 0.09 | 0.979 | 1.00 | 0.84 | 1.19 |
| Psychogenic and somatoform disorders                                | GPNMB | Wald ratio | 1 | -0.01 | 0.25 | 0.980 | 0.99 | 0.61 | 1.61 |
| Varicose veins                                                      | GPNMB | Wald ratio | 1 | 0.00  | 0.05 | 0.983 | 1.00 | 0.90 | 1.11 |
| Hemorrhage during pregnancy; childbirth and postpartum              | GPNMB | Wald ratio | 1 | 0.00  | 0.13 | 0.987 | 1.00 | 0.77 | 1.30 |
| Edema                                                               | GPNMB | Wald ratio | 1 | 0.00  | 0.14 | 0.987 | 1.00 | 0.76 | 1.32 |
| Other disorders of peritoneum                                       | GPNMB | Wald ratio | 1 | 0.00  | 0.10 | 0.987 | 1.00 | 0.82 | 1.21 |
| Gastrointestinal hemorrhage                                         | GPNMB | Wald ratio | 1 | 0.00  | 0.04 | 0.988 | 1.00 | 0.93 | 1.08 |
| Known or suspected fetal abnormality affecting management of mother | GPNMB | Wald ratio | 1 | 0.00  | 0.09 | 0.988 | 1.00 | 0.83 | 1.20 |
| Disorders of fluid, electrolyte, and acid-base balance              | GPNMB | Wald ratio | 1 | 0.00  | 0.07 | 0.989 | 1.00 | 0.88 | 1.14 |
| Purpura and other hemorrhagic conditions                            | GPNMB | Wald ratio | 1 | 0.00  | 0.13 | 0.990 | 1.00 | 0.77 | 1.30 |
| Sleep disorders                                                     | GPNMB | Wald ratio | 1 | 0.00  | 0.08 | 0.996 | 1.00 | 0.86 | 1.17 |
| Abnormal involuntary movements                                      | GPNMB | Wald ratio | 1 | 0.00  | 0.19 | 0.998 | 1.00 | 0.69 | 1.45 |

**Supplementary Table 9 The details of studies for QTLs and Parkinson's disease via MR.**

| Study                            | PD risk GWAS                                              | Blood eQTL                                 | Blood pQTL (number of proteins) | CSF pQTL (number of proteins) | Brain eQTL (number of genes)                                                                    | Brain pQTL (number of proteins) | Methods                                                                                                               |
|----------------------------------|-----------------------------------------------------------|--------------------------------------------|---------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Our study</b>                 | Nalls (2019) <sup>1</sup>                                 | The eQTLGen <sup>6</sup>                   | Sun (2018) <sup>5</sup>         | Yang (2021) <sup>4</sup>      | The PsychENCODE <sup>3, 10</sup>                                                                | The ROS/MAP <sup>2</sup>        | Two-sample MR analysis, Colocalization, Steiger filtering analysis, fine mapping, Protein Interactor, phenome-wide MR |
| Ge (2023)                        | Nalls (2019) <sup>1</sup>                                 | /                                          | Sun (2018) <sup>5</sup>         | /                             | /                                                                                               | The ROS/MAP <sup>2</sup>        | Two-sample MR analysis, Colocalization, drugability and safety analysis                                               |
| Storm (2021) <sup>11</sup>       | Nalls (2014) <sup>12</sup> / Nalls (2019) <sup>1</sup>    | The eQTLGen <sup>6</sup>                   | Sun (2018) <sup>5</sup>         | /                             | The PsychENCODE <sup>3, 10</sup>                                                                | Hillary (2019) <sup>13</sup>    | Two-sample MR analysis, Colocalization                                                                                |
| Png (2021) <sup>14</sup>         | Pankratz (2011) <sup>15</sup>                             | /                                          | Png (2021) <sup>14</sup>        | /                             | /                                                                                               | /                               | Two-sample MR analysis, Colocalization                                                                                |
| Cui (2021)                       | The PD cohort in the UK Biobank (The details are unknown) | Only CD4 and CD8 (The details are unknown) | /                               | /                             | The brain eQTL dataset (The details are unknown)                                                | /                               | Summary data-based MR                                                                                                 |
| Yang (2021) <sup>4</sup>         | Nalls (2019) <sup>1</sup>                                 | /                                          | Yang (2021) <sup>4</sup>        | Yang (2021) <sup>4</sup>      | /                                                                                               | Yang (2021) <sup>4</sup>        | MR, Colocalization                                                                                                    |
| Demis (2021) <sup>16</sup>       | Chang (2017) <sup>17</sup>                                | /                                          | /                               | /                             | The GTEx version 7 data and the UK Brain Expression Consortium Braineac data set contains data* | /                               | MR, Colocalization, TWAS, Weighted Gene Co-expression Network Analysis, Protein Interactor Networks                   |
| Baird (2021) <sup>18</sup>       | Nalls (2014) <sup>12</sup>                                | /                                          | /                               | /                             | The GTEx brain meta-analysis <sup>19</sup>                                                      | /                               | two-sample MR, Colocalization, Steiger filtering analysis                                                             |
| Nalls (2019) <sup>1</sup>        | Nalls (2019) <sup>1</sup>                                 | The eQTLGen <sup>6</sup>                   | /                               | /                             | Qi (2018) <sup>19</sup>                                                                         | /                               | summary-based MR                                                                                                      |
| Bandres-Ciga(2019) <sup>20</sup> | Bandres-Ciga(2019) <sup>20</sup>                          | Zhu (2016) <sup>21</sup>                   | /                               | /                             | Zhu (2016) <sup>21</sup>                                                                        | /                               | Two-sample MR                                                                                                         |

\* Data source: <https://www.gtexportal.org/home/> and <http://www.braineac.org/>.

**Supplementary Table 10** List of datasets used in this study

| Data source                         | Dataset    | Cohort/Project | Sample size        |
|-------------------------------------|------------|----------------|--------------------|
| Nalls et al. (2019) <sup>1</sup>    | PD GWAS    | IPDGC          | 482730 (induvials) |
| Wingo et al. (2021) <sup>2</sup>    | Brain pQTL | ROS/MAP        | 376 (induvials)    |
| Robins et al. (2021)                | Brain pQTL | Banner         | 152 (induvials)    |
| Akbarian et al. (2015) <sup>3</sup> | Brain eQTL | PsychENCODE    | 1866 (induvials)   |
| Sieberts et al (2020)               | Brain eQTL | CMC, AMP-AD    | 1433 (induvials)   |
| Yang et al. (2021) <sup>4</sup>     | CSF pQTL   | NA             | 713 (proteins)     |
| Sun et al. (2018) <sup>5</sup>      | Blood pQTL | NA             | 2994 (proteins)    |
| Võsa et al. (2018) <sup>6</sup>     | Blood eQTL | eQTLGen        | 31684 (induvials)  |

**Supplementary Table 11** Known PD causative/risk genes

| <b>Gene name</b> | <b>Locus</b> | <b>Inheritance</b> | <b>Disease onset</b> | <b>Clinical phenotype</b> |
|------------------|--------------|--------------------|----------------------|---------------------------|
| <i>LRRK2</i>     | 12q12        | AD/AR              | Late                 | Typical                   |
| <i>SNCA</i>      | 4q22.1       | AD                 | Early                | Typical                   |
| <i>VPS35</i>     | 16q11.2      | AD                 | Late                 | Atypical                  |
| <i>ATXN2</i>     | 12q24.12     | AD                 | Early                | Typical                   |
| <i>GCH1</i>      | 14q22.2      | AD                 | Early                | Typical                   |
| <i>DNAJC13</i>   | 3q22.1       | AD                 | Late                 | Typical                   |
| <i>TMEM230</i>   | 20p13-p12    | AD                 | Late                 | Typical                   |
| <i>UCHL1</i>     | 4p13         | AD                 | Early                | Typical                   |
| <i>RIC3</i>      | 11p15.4      | AD                 | Early or late        | Typical                   |
| <i>HTRA2</i>     | 2q13.1       | AD                 | Late                 | Typical                   |
| <i>GIGYF2</i>    | 2q37.1       | AD                 | Early                | Typical                   |
| <i>CHCHD2</i>    | 7p11.2       | AD                 | Early or late        | Typical                   |
| <i>EIF4G1</i>    | 3q27.1       | AD                 | Late                 | Typical                   |
| <i>PTRHD1</i>    | 2p23.3       | AR                 | Early                | Atypical                  |
| <i>POXDL</i>     | 7q32.3       | AR                 | Juvenile             | Typical                   |
| <i>PRKN</i>      | 6q26         | AR                 | Juvenile or early    | Typical                   |
| <i>PINK</i>      | 1p36.12      | AR                 | Juvenile or early    | Typical                   |
| <i>DJI</i>       | 1p36.23      | AR                 | Juvenile or early    | Typical                   |
| <i>ATP13A2</i>   | 1p36.13      | AR                 | Juvenile             | Atypical                  |
| <i>PLA2G6</i>    | 22q13.1      | AR                 | Juvenile or early    | Atypical                  |
| <i>FBXO7</i>     | 22q12.3      | AR                 | Juvenile or early    | Atypical                  |

|               |          |     |                                  |                     |
|---------------|----------|-----|----------------------------------|---------------------|
| <i>DNAJC6</i> | 1q31.3   | AR  | Juvenile or early                | Atypical or typical |
| <i>SPG11</i>  | 15q21.1  | AR  | Juvenile                         | Atypical            |
| <i>SYNJ1</i>  | 21q22.11 | AR  | Early                            | Atypical            |
| <i>VPS13C</i> | 15q22.2  | AR  | Early                            | Atypical            |
| <i>RAB38B</i> | Xq28     | XLD | Early for men,<br>late for women | Atypical or typical |
| <i>GBA</i>    | 1q22     | AD  | Early or late                    | Typical             |

The genes were summarized in Lunati A et al (2018)<sup>7</sup>. AD: Autosomal dominant; AR: Autosomal recessive; XLD: X-linked

**Supplementary Table 12** List of PD drug and the corresponding drug targets

| Drug name   | Target                              | Gene Name     | Uniprot ID | Pharmacological Action |
|-------------|-------------------------------------|---------------|------------|------------------------|
| levodopa    | Dopamine D1 receptor                | <i>DRD1</i>   | P21728     | Yes                    |
|             | Dopamine D5 receptor                | <i>DRD5</i>   | P21918     | Yes                    |
|             | Dopamine D2 receptor                | <i>DRD2</i>   | P14416     | Yes                    |
|             | Dopamine D3 receptor                | <i>DRD3</i>   | P35462     | Yes                    |
|             | Dopamine D4 receptor                | <i>DRD4</i>   | P21917     | Yes                    |
| Carbidopa   | Aromatic-L-amino-acid decarboxylase | <i>DDC</i>    | P20711     | Yes                    |
| pramipexole | Dopamine D3 receptor                | <i>DRD3</i>   | P35462     | Yes                    |
|             | Dopamine D2 receptor                | <i>DRD2</i>   | P14416     | Yes                    |
|             | Dopamine D4 receptor                | <i>DRD4</i>   | P21917     | Yes                    |
|             | 5-hydroxytryptamine receptor 1A     | <i>HTR1A</i>  | P08908     | Unknown                |
|             | Alpha-2A adrenergic receptor        | <i>ADRA2A</i> | P08913     | Unknown                |
| ropinirole  | Dopamine D3 receptor                | <i>DRD3</i>   | P35462     | Yes                    |
|             | Dopamine D2 receptor                | <i>DRD2</i>   | P14416     | Yes                    |
|             | Dopamine D4 receptor                | <i>DRD4</i>   | P21917     | Unknown                |
|             | Alpha-1A adrenergic receptor        | <i>ADRA1A</i> | P35348     | Unknown                |
|             | Alpha-1B adrenergic receptor        | <i>ADRA1B</i> | P35368     | Unknown                |
|             | Alpha-1D adrenergic receptor        | <i>ADRA1D</i> | P25100     | Unknown                |
|             | Alpha-2A adrenergic receptor        | <i>ADRA2A</i> | P08913     | Unknown                |
|             | Alpha-2B adrenergic receptor        | <i>ADRA2B</i> | P18089     | Unknown                |
|             | Alpha-2C adrenergic receptor        | <i>ADRA2C</i> | P18825     | Unknown                |
| rotigotine  | Dopamine D3 receptor                | <i>DRD3</i>   | P35462     | Yes                    |
|             | Dopamine D2 receptor                | <i>DRD2</i>   | P14416     | Yes                    |
|             | Dopamine D4 receptor                | <i>DRD4</i>   | P21917     | Yes                    |

|             |                                             |               |        |         |
|-------------|---------------------------------------------|---------------|--------|---------|
| apomorphine | Dopamine D5 receptor                        | <i>DRD5</i>   | P21918 | Unknown |
|             | Dopamine D1 receptor                        | <i>DRD1</i>   | P21728 | Unknown |
|             | 5-hydroxytryptamine receptor 1A             | <i>HTR1A</i>  | P08908 | Unknown |
|             | Alpha-2B adrenergic receptor                | <i>ADRA2B</i> | P18089 | Unknown |
|             | Dopamine D3 receptor                        | <i>DRD3</i>   | P35462 | Yes     |
|             | Dopamine D2 receptor                        | <i>DRD2</i>   | P14416 | Yes     |
|             | Dopamine D4 receptor                        | <i>DRD4</i>   | P21917 | Yes     |
|             | Dopamine D5 receptor                        | <i>DRD5</i>   | P21918 | Unknown |
|             | Dopamine D1 receptor                        | <i>DRD1</i>   | P21728 | Unknown |
|             | Alpha-2B adrenergic receptor                | <i>ADRA2B</i> | P18089 | Unknown |
|             | Alpha-2C adrenergic receptor                | <i>ADRA2C</i> | P18825 | Unknown |
|             | Alpha-2A adrenergic receptor                | <i>ADRA2A</i> | P08913 | Unknown |
|             | 5-hydroxytryptamine receptor 1A             | <i>HTR1A</i>  | P08908 | Unknown |
|             | 5-hydroxytryptamine receptor 2A             | <i>HTR2A</i>  | P28223 | Unknown |
|             | 5-hydroxytryptamine receptor 2B             | <i>HTR2B</i>  | P41595 | Unknown |
|             | 5-hydroxytryptamine receptor 2C             | <i>HTR2C</i>  | P28335 | Unknown |
| Selegiline  | 5-hydroxytryptamine receptor 1D             | <i>HTR1D</i>  | P28221 | Unknown |
|             | 5-hydroxytryptamine receptor 1B             | <i>HTR1B</i>  | P28222 | Unknown |
| Rasagiline  | Amine oxidase [flavin-containing] B         | <i>MAOB</i>   | P27338 | Yes     |
| Safinamide  | Amine oxidase [flavin-containing] B         | <i>MAOB</i>   | P27338 | Yes     |
|             | Apoptosis regulator Bcl-2                   | <i>BCL2</i>   | P10415 | Yes     |
| Zonisamide  | Amine oxidase [flavin-containing] B         | <i>MAOB</i>   | P27338 | Yes     |
|             | Sodium channel protein type 1 subunit alpha | <i>SCN1A</i>  | P35498 | Yes     |
|             | Sodium channel protein type 2 subunit alpha | <i>SCN2A</i>  | Q99250 | Yes     |

|                                                           |                |        |         |
|-----------------------------------------------------------|----------------|--------|---------|
| Sodium channel protein type 3 subunit alpha               | <i>SCN3A</i>   | Q9NY46 | Yes     |
| Sodium channel protein type 4 subunit alpha               | <i>SCN4A</i>   | P35499 | Yes     |
| Sodium channel protein type 5 subunit alpha               | <i>SCN5A</i>   | Q14524 | Yes     |
| Sodium channel protein type 9 subunit alpha               | <i>SCN9A</i>   | Q15858 | Yes     |
| Sodium channel protein type 11 subunit alpha              | <i>SCN11A</i>  | Q9UI33 | Yes     |
| Sodium channel subunit beta-1                             | <i>SCN1B</i>   | Q07699 | Yes     |
| Sodium channel subunit beta-2                             | <i>SCN2B</i>   | O60939 | Yes     |
| Sodium channel subunit beta-3                             | <i>SCN3B</i>   | Q9NY72 | Yes     |
| Sodium channel subunit beta-4                             | <i>SCN4B</i>   | Q8IWT1 | Yes     |
| Voltage-dependent T-type calcium channel subunit alpha-1G | <i>CACNA1G</i> | O43497 | Yes     |
| Voltage-dependent T-type calcium channel subunit alpha-1H | <i>CACNA1H</i> | O95180 | Yes     |
| Voltage-dependent T-type calcium channel subunit alpha-1I | <i>CACNA1I</i> | Q9P0X4 | Yes     |
| Carbonic anhydrase 1                                      | <i>CA1</i>     | P00915 | Unknown |
| Carbonic anhydrase 2                                      | <i>CA2</i>     | P00918 | Unknown |
| Carbonic anhydrase 3                                      | <i>CA3</i>     | P07451 | Unknown |
| Carbonic anhydrase 4                                      | <i>CA4</i>     | P22748 | Unknown |
| Carbonic anhydrase 5A, mitochondrial                      | <i>CA5A</i>    | P35218 | Unknown |
| Carbonic anhydrase 5B, mitochondrial                      | <i>CA5B</i>    | Q9Y2D0 | Unknown |

|                 |                                        |               |        |         |
|-----------------|----------------------------------------|---------------|--------|---------|
|                 | Carbonic anhydrase 6                   | <i>CA6</i>    | P23280 | Unknown |
|                 | Carbonic anhydrase 7                   | <i>CA7</i>    | P43166 | Unknown |
|                 | Carbonic anhydrase-related protein     | <i>CA8</i>    | P35219 | Unknown |
|                 | Carbonic anhydrase 9                   | <i>CA9</i>    | Q16790 | Unknown |
|                 | Carbonic anhydrase-related protein 10  | <i>CA10</i>   | Q9NS85 | Unknown |
|                 | Carbonic anhydrase-related protein 11  | <i>CA11</i>   | O75493 | Unknown |
|                 | Carbonic anhydrase 12                  | <i>CA12</i>   | O43570 | Unknown |
|                 | Carbonic anhydrase 13                  | <i>CA13</i>   | Q8N1Q1 | Unknown |
|                 | Carbonic anhydrase 14                  | <i>CA14</i>   | Q9ULX7 | Unknown |
|                 | Amine oxidase [flavin-containing] B    | <i>MAOB</i>   | P27338 | Unknown |
|                 | Amine oxidase [flavin-containing] A    | <i>MAOA</i>   | P21397 | Unknown |
| Entacapone      | Catechol O-methyltransferase           | <i>COMT</i>   | P21964 | Yes     |
| Opicapone       | Catechol O-methyltransferase           | <i>COMT</i>   | P21964 | Yes     |
| Tolcapone       | Catechol O-methyltransferase           | <i>COMT</i>   | P21964 | Yes     |
| trihexyphenidyl | Muscarinic acetylcholine receptor M1   | <i>CHRM1</i>  | P11229 | Yes     |
|                 | Muscarinic acetylcholine receptor M2   | <i>CHRM2</i>  | P08172 | Unknown |
|                 | Muscarinic acetylcholine receptor M3   | <i>CHRM3</i>  | P20309 | Unknown |
|                 | Muscarinic acetylcholine receptor M4   | <i>CHRM4</i>  | P08173 | Unknown |
|                 | Muscarinic acetylcholine receptor M5   | <i>CHRM5</i>  | P08912 | Unknown |
| benztropine     | Muscarinic acetylcholine receptor M1   | <i>CHRM1</i>  | P11229 | Yes     |
|                 | Sodium-dependent dopamine transporter  | <i>SLC6A3</i> | Q01959 | Yes     |
|                 | Histamine H1 receptor                  | <i>HRH1</i>   | P35367 | Unknown |
| Amantadine      | Matrix protein 2                       | <i>M</i>      | P21430 | Yes     |
|                 | Glutamate receptor ionotropic, NMDA 3A | <i>GRIN3A</i> | Q8TCU5 | Yes     |
|                 | Dopamine D2 receptor                   | <i>DRD2</i>   | P14416 | Yes     |

|                |                                                 |                |        |         |
|----------------|-------------------------------------------------|----------------|--------|---------|
|                | Neuronal acetylcholine receptor subunit alpha-7 | <i>CHRNA7</i>  | P36544 | Unknown |
|                | Neuronal acetylcholine receptor subunit alpha-4 | <i>CHRNA4</i>  | P43681 | Unknown |
|                | Neuronal acetylcholine receptor subunit alpha-3 | <i>CHRNA3</i>  | P32297 | Unknown |
| Istradefylline | Adenosine receptor A2a                          | <i>ADORA2A</i> | P29274 | Yes     |
| Clozapine      | Dopamine D2 receptor                            | <i>DRD2</i>    | P14416 | Yes     |
|                | 5-hydroxytryptamine receptor 2A                 | <i>HTR2A</i>   | P28223 | Yes     |
|                | Dopamine D1 receptor                            | <i>DRD1</i>    | P21728 | Unknown |
|                | Dopamine D3 receptor                            | <i>DRD3</i>    | P35462 | Unknown |
|                | Dopamine D4 receptor                            | <i>DRD4</i>    | P21917 | Unknown |
|                | 5-hydroxytryptamine receptor 1A                 | <i>HTR1A</i>   | P08908 | Unknown |
|                | 5-hydroxytryptamine receptor 1B                 | <i>HTR1B</i>   | P28222 | Unknown |
|                | 5-hydroxytryptamine receptor 1D                 | <i>HTR1D</i>   | P28221 | Unknown |
|                | 5-hydroxytryptamine receptor 1E                 | <i>HTR1E</i>   | P28566 | Unknown |
|                | 5-hydroxytryptamine receptor 3A                 | <i>HTR3A</i>   | P46098 | Unknown |
|                | 5-hydroxytryptamine receptor 2C                 | <i>HTR2C</i>   | P28335 | Unknown |
|                | 5-hydroxytryptamine receptor 6                  | <i>HTR6</i>    | P50406 | Unknown |
|                | 5-hydroxytryptamine receptor 7                  | <i>HTR7</i>    | P34969 | Unknown |
|                | Neuron-specific vesicular protein calcyon       | <i>CALY</i>    | Q9NYX4 | Unknown |
|                | Glutathione S-transferase P                     | <i>GSTP1</i>   | P09211 | Unknown |

Pharmacologic Agents Used for Motor Symptoms in Parkinson Disease were summarized by Armstrong, M. J. et, al<sup>8</sup>. Targets are distilled from DrugBank database<sup>9</sup>. In this database, if a therapeutic action is driven by the activity of the drug towards that target, the pharmacological action tag will be "yes"; if the activity of the drug is not related to the therapeutic activity, the

pharmacological tag will be "no"; and lastly if the activity of the drug towards the target has not been established to be related to the therapeutic effect, the pharmacological tag will be "unknown". Targets with the tag of pharmacological action is "Yes" or "Unknown" were extracted.

**Supplementary Table 13:** Phenotypes used for phenome-wide MR.

| PheCode | cases | controls | excluded<br>controls | Phenotype Description                                                       | Phenotype Category    |
|---------|-------|----------|----------------------|-----------------------------------------------------------------------------|-----------------------|
| 008.5   | 2737  | 399970   | 6254                 | Bacterial enteritis                                                         | infectious diseases   |
| 008.52  | 650   | 399970   | 8341                 | Intestinal infection due to C. difficile                                    | infectious diseases   |
| 008.6   | 862   | 399970   | 8129                 | Viral Enteritis                                                             | infectious diseases   |
| 008     | 8991  | 399970   | 0                    | Intestinal infection                                                        | infectious diseases   |
| 038.1   | 832   | 393897   | 14232                | Gram negative septicemia                                                    | infectious diseases   |
| 038     | 4005  | 393897   | 11059                | Septicemia                                                                  | infectious diseases   |
| 041.1   | 3149  | 393897   | 11915                | Staphylococcus infections                                                   | infectious diseases   |
| 041.2   | 1644  | 393897   | 13420                | Streptococcus infection                                                     | infectious diseases   |
| 041.4   | 2744  | 393897   | 12320                | E. coli                                                                     | infectious diseases   |
| 041     | 12187 | 393897   | 2877                 | Bacterial infection NOS                                                     | infectious diseases   |
| 070     | 1215  | 403316   | 4430                 | Viral hepatitis                                                             | infectious diseases   |
| 078     | 1007  | 403316   | 4638                 | Viral warts & HPV                                                           | infectious diseases   |
| 079     | 2806  | 403316   | 2839                 | Viral infection                                                             | infectious diseases   |
| 080     | 4489  | 402343   | 2129                 | Postoperative infection                                                     | infectious diseases   |
| 081     | 2485  | 402343   | 4133                 | Infection/inflammation of internal prosthetic device;<br>implant; and graft | infectious diseases   |
| 1000    | 579   | 408382   | 0                    | Burns                                                                       | injuries & poisonings |
| 1001    | 1210  | 407751   | 0                    | Foreign body injury                                                         | injuries & poisonings |
| 1002    | 5512  | 403449   | 0                    | Symptoms concerning nutrition, metabolism, and<br>development               | symptoms              |
| 1005    | 1222  | 407739   | 0                    | Other symptoms                                                              | symptoms              |
| 1008    | 1007  | 407954   | 0                    | Crushing or internal injury to organs                                       | injuries & poisonings |
| 1009    | 8440  | 400521   | 0                    | Injury, NOS                                                                 | injuries & poisonings |

|        |       |        |       |                                                                                              |                       |
|--------|-------|--------|-------|----------------------------------------------------------------------------------------------|-----------------------|
| 1010   | 5972  | 402989 | 0     | Other tests                                                                                  | symptoms              |
| 1011   | 9140  | 399821 | 0     | Complications of surgical and medical procedures                                             | injuries & poisonings |
| 1015   | 4230  | 404731 | 0     | Effects of other external causes                                                             | symptoms              |
| 1019   | 16398 | 392563 | 0     | Other ill-defined and unknown causes of morbidity and mortality                              | symptoms              |
| 112    | 2134  | 406301 | 526   | Candidiasis                                                                                  | infectious diseases   |
| 145    | 643   | 406821 | 1497  | Cancer of mouth                                                                              | neoplasms             |
| 149    | 628   | 406821 | 1512  | Cancer of larynx, pharynx, nasal cavities                                                    | neoplasms             |
| 150    | 720   | 393372 | 14869 | Cancer of esophagus                                                                          | neoplasms             |
| 151    | 554   | 393372 | 15035 | Cancer of stomach                                                                            | neoplasms             |
| 153.2  | 3051  | 382756 | 23154 | Colon cancer                                                                                 | neoplasms             |
| 153.3  | 2095  | 382756 | 24110 | Malignant neoplasm of rectum, rectosigmoid junction, and anus                                | neoplasms             |
| 153    | 4562  | 382756 | 21643 | Colorectal cancer                                                                            | neoplasms             |
| 157    | 589   | 393372 | 15000 | Pancreatic cancer                                                                            | neoplasms             |
| 158    | 1056  | 393372 | 14533 | Neoplasm of unspecified nature of digestive system                                           | neoplasms             |
| 159    | 5584  | 393372 | 10005 | Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum | neoplasms             |
| 165.1  | 2101  | 406226 | 634   | Cancer of bronchus; lung                                                                     | neoplasms             |
| 165    | 2700  | 406226 | 35    | Cancer within the respiratory system                                                         | neoplasms             |
| 172.1  | 2691  | 395071 | 11199 | Melanomas of skin, dx or hx                                                                  | neoplasms             |
| 172.11 | 2691  | 395071 | 11199 | Melanomas of skin                                                                            | neoplasms             |
| 172.2  | 11149 | 395071 | 2741  | Other non-epithelial cancer of skin                                                          | neoplasms             |
| 172.3  | 667   | 395071 | 13223 | Carcinoma in situ of skin                                                                    | neoplasms             |
| 172    | 13752 | 395071 | 138   | Skin cancer                                                                                  | neoplasms             |
| 174.1  | 12671 | 388549 | 7741  | Breast cancer [female]                                                                       | neoplasms             |

|        |       |        |       |                                                               |           |
|--------|-------|--------|-------|---------------------------------------------------------------|-----------|
| 174.11 | 11874 | 388549 | 8538  | Malignant neoplasm of female breast                           | neoplasms |
| 174    | 12898 | 388549 | 7514  | Breast cancer                                                 | neoplasms |
| 175    | 2415  | 387566 | 18980 | Acquired absence of breast                                    | neoplasms |
| 180.1  | 1659  | 381902 | 25400 | Cervical cancer                                               | neoplasms |
| 180.3  | 2090  | 381902 | 24969 | Cervical intraepithelial neoplasia [CIN] [Cervical dysplasia] | neoplasms |
| 180    | 3653  | 381902 | 23406 | Cervical cancer and dysplasia                                 | neoplasms |
| 182    | 1284  | 381967 | 25710 | Malignant neoplasm of uterus                                  | neoplasms |
| 184.1  | 2127  | 389695 | 17139 | Malignant neoplasm of ovary and other uterine adnexa          | neoplasms |
| 184.11 | 2103  | 389695 | 17163 | Malignant neoplasm of ovary                                   | neoplasms |
| 184    | 2463  | 389695 | 16803 | Cancer of other female genital organs                         | neoplasms |
| 187.2  | 2981  | 401788 | 4192  | Malignant neoplasm of testis                                  | neoplasms |
| 189.1  | 1045  | 404796 | 3120  | Cancer of kidney and renal pelvis                             | neoplasms |
| 189.11 | 1002  | 404796 | 3163  | Malignant neoplasm of kidney, except pelvis                   | neoplasms |
| 189.2  | 2427  | 404796 | 1738  | Cancer of bladder                                             | neoplasms |
| 189.21 | 2146  | 404796 | 2019  | Malignant neoplasm of bladder                                 | neoplasms |
| 189    | 4165  | 404796 | 0     | Cancer of urinary organs (incl. kidney and bladder)           | neoplasms |
| 191.1  | 531   | 407239 | 1191  | Cancer of brain and nervous system                            | neoplasms |
| 191    | 655   | 407239 | 1067  | Manlignant and unknown neoplasms of brain and nervous system  | neoplasms |
| 195.1  | 15979 | 370604 | 22378 | Malignant neoplasm, other                                     | neoplasms |
| 195    | 16725 | 370604 | 21632 | Cancer, suspected or other                                    | neoplasms |
| 197    | 21798 | 370604 | 16559 | Chemotherapy                                                  | neoplasms |
| 198.1  | 5379  | 370604 | 32978 | Secondary malignancy of lymph nodes                           | neoplasms |
| 198.2  | 2211  | 370604 | 36146 | Secondary malignancy of respiratory organs                    | neoplasms |
| 198.3  | 1519  | 370604 | 36838 | Secondary malignant neoplasm of digestive systems             | neoplasms |

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| 198.4  | 2638  | 370604 | 35719 | Secondary malignant neoplasm of liver                     | neoplasms |
| 198.5  | 806   | 370604 | 37551 | Secondary malignancy of brain/spine                       | neoplasms |
| 198.6  | 2151  | 370604 | 36206 | Secondary malignancy of bone                              | neoplasms |
| 198    | 9483  | 370604 | 28874 | Secondary malignant neoplasm                              | neoplasms |
| 199    | 1412  | 370604 | 36945 | Neoplasm of uncertain behavior                            | neoplasms |
| 200    | 995   | 404466 | 3500  | Myeloproliferative disease                                | neoplasms |
| 202.2  | 1793  | 404466 | 2702  | Non-Hodgkins lymphoma                                     | neoplasms |
| 202.24 | 573   | 404466 | 3922  | Large cell lymphoma                                       | neoplasms |
| 202    | 2270  | 404466 | 2225  | Cancer of other lymphoid, histiocytic tissue              | neoplasms |
| 204.1  | 578   | 404466 | 3917  | Lymphoid leukemia                                         | neoplasms |
| 204.12 | 506   | 404466 | 3989  | Lymphoid leukemia, chronic                                | neoplasms |
| 204.4  | 552   | 404466 | 3943  | Multiple myeloma                                          | neoplasms |
| 204    | 1661  | 404466 | 2834  | Leukemia                                                  | neoplasms |
| 208    | 20204 | 386011 | 2746  | Benign neoplasm of colon                                  | neoplasms |
| 210    | 984   | 406821 | 1156  | Benign neoplasm of lip, oral cavity, and pharynx          | neoplasms |
| 211    | 5280  | 395301 | 8380  | Benign neoplasm of other parts of digestive system        | neoplasms |
| 214.1  | 4611  | 401613 | 2737  | Lipoma of skin and subcutaneous tissue                    | neoplasms |
| 214    | 6271  | 401613 | 1077  | Lipoma                                                    | neoplasms |
| 215    | 1110  | 401613 | 6238  | Other benign neoplasm of connective and other soft tissue | neoplasms |
| 216    | 7722  | 400618 | 621   | Benign neoplasm of skin                                   | neoplasms |
| 217.1  | 597   | 400618 | 7746  | Nevus, non-neoplastic                                     | neoplasms |
| 217    | 649   | 400618 | 7694  | Vascular hamartomas and non-neoplastic nevi               | neoplasms |
| 218.1  | 10345 | 391653 | 6963  | Uterine leiomyoma                                         | neoplasms |
| 218    | 10610 | 391653 | 6698  | Benign neoplasm of uterus                                 | neoplasms |
| 220    | 1482  | 380325 | 27154 | Benign neoplasm of ovary                                  | neoplasms |

|        |       |        |       |                                                                  |                     |
|--------|-------|--------|-------|------------------------------------------------------------------|---------------------|
| 225.1  | 774   | 407239 | 948   | Benign neoplasm of brain, cranial nerves, meninges               | neoplasms           |
| 225    | 828   | 407239 | 894   | Benign neoplasm of brain and other parts of nervous system       | neoplasms           |
| 227    | 876   | 407399 | 686   | Benign neoplasm of other endocrine glands and related structures | neoplasms           |
| 228    | 1603  | 407358 | 0     | Hemangioma and lymphangioma, any site                            | neoplasms           |
| 229    | 2402  | 406559 | 0     | Benign neoplasm of unspecified sites                             | neoplasms           |
| 240    | 602   | 391429 | 16930 | Simple and unspecified goiter                                    | endocrine/metabolic |
| 241.2  | 680   | 391429 | 16852 | Nontoxic multinodular goiter                                     | endocrine/metabolic |
| 241    | 1143  | 391429 | 16389 | Nontoxic nodular goiter                                          | endocrine/metabolic |
| 242    | 1860  | 391429 | 15672 | Thyrototoxicosis with or without goiter                          | endocrine/metabolic |
| 244.1  | 1117  | 391429 | 16415 | Secondary hypothyroidism                                         | endocrine/metabolic |
| 244.4  | 14171 | 391429 | 3361  | Hypothyroidism NOS                                               | endocrine/metabolic |
| 244    | 14871 | 391429 | 2661  | Hypothyroidism                                                   | endocrine/metabolic |
| 250.1  | 2660  | 388756 | 17545 | Type 1 diabetes                                                  | endocrine/metabolic |
| 250.2  | 18945 | 388756 | 1260  | Type 2 diabetes                                                  | endocrine/metabolic |
| 250.23 | 1298  | 388756 | 18907 | Type 2 diabetes with ophthalmic manifestations                   | endocrine/metabolic |
| 250.24 | 575   | 388756 | 19630 | Type 2 diabetes with neurological manifestations                 | endocrine/metabolic |
| 250.4  | 685   | 388756 | 19520 | Abnormal glucose                                                 | endocrine/metabolic |
| 250.7  | 1339  | 396859 | 10763 | Diabetic retinopathy                                             | endocrine/metabolic |
| 250    | 20203 | 388756 | 2     | Diabetes mellitus                                                | endocrine/metabolic |
| 251.1  | 939   | 386319 | 21703 | Hypoglycemia                                                     | endocrine/metabolic |
| 251    | 943   | 405386 | 2632  | Other disorders of pancreatic internal secretion                 | endocrine/metabolic |
| 252.1  | 781   | 405386 | 2794  | Hyperparathyroidism                                              | endocrine/metabolic |
| 252    | 877   | 405386 | 2698  | Disorders of parathyroid gland                                   | endocrine/metabolic |

|        |       |        |      |                                                               |                     |
|--------|-------|--------|------|---------------------------------------------------------------|---------------------|
| 253    | 693   | 405386 | 2882 | Disorders of the pituitary gland and its hypothalamic control | endocrine/metabolic |
| 255    | 642   | 405386 | 2933 | Disorders of adrenal glands                                   | endocrine/metabolic |
| 260.6  | 835   | 406492 | 1634 | Anorexia                                                      | endocrine/metabolic |
| 260    | 1057  | 406492 | 1412 | Protein-calorie malnutrition                                  | endocrine/metabolic |
| 261.2  | 754   | 406492 | 1715 | Vitamin B-complex deficiencies                                | endocrine/metabolic |
| 261    | 1208  | 406492 | 1261 | Vitamin deficiency                                            | endocrine/metabolic |
| 272.1  | 35844 | 373034 | 83   | Hyperlipidemia                                                | endocrine/metabolic |
| 272.11 | 33242 | 373034 | 2685 | Hypercholesterolemia                                          | endocrine/metabolic |
| 272    | 35927 | 373034 | 0    | Disorders of lipid metabolism                                 | endocrine/metabolic |
| 274.1  | 3195  | 405198 | 568  | Gout                                                          | endocrine/metabolic |
| 274.2  | 616   | 405198 | 3147 | Crystal arthropathies                                         | endocrine/metabolic |
| 274.21 | 560   | 405198 | 3203 | Chondrocalcinosis                                             | endocrine/metabolic |
| 274    | 3763  | 405198 | 0    | Gout and other crystal arthropathies                          | endocrine/metabolic |
| 275.1  | 669   | 406834 | 1458 | Disorders of iron metabolism                                  | hematopoietic       |
| 275.5  | 1204  | 406834 | 923  | Disorders of calcium/phosphorus metabolism                    | endocrine/metabolic |
| 275    | 2127  | 406834 | 0    | Disorders of mineral metabolism                               | endocrine/metabolic |
| 276.1  | 4123  | 401506 | 3332 | Electrolyte imbalance                                         | endocrine/metabolic |
| 276.12 | 1826  | 401506 | 5629 | Hyposmolality and/or hyponatremia                             | endocrine/metabolic |
| 276.13 | 975   | 401506 | 6480 | Hyperpotassemia                                               | endocrine/metabolic |
| 276.14 | 1430  | 401506 | 6025 | Hypopotassemia                                                | endocrine/metabolic |
| 276.4  | 1161  | 401506 | 6294 | Acid-base balance disorder                                    | endocrine/metabolic |
| 276.41 | 1055  | 401506 | 6400 | Acidosis                                                      | endocrine/metabolic |
| 276.5  | 2834  | 401506 | 4621 | Hypovolemia                                                   | endocrine/metabolic |
| 276    | 7455  | 401506 | 0    | Disorders of fluid, electrolyte, and acid-base balance        | endocrine/metabolic |
| 277    | 1424  | 407537 | 0    | Other disorders of metabolism                                 | endocrine/metabolic |

|        |       |        |       |                                                                |                     |
|--------|-------|--------|-------|----------------------------------------------------------------|---------------------|
| 278.1  | 10799 | 397993 | 169   | Obesity                                                        | endocrine/metabolic |
| 278    | 10968 | 397993 | 0     | Overweight, obesity and other hyperalimentation                | endocrine/metabolic |
| 280.1  | 7414  | 390026 | 11521 | Iron deficiency anemias, unspecified or not due to blood loss  | hematopoietic       |
| 280    | 7787  | 390026 | 11148 | Iron deficiency anemias                                        | hematopoietic       |
| 281.1  | 1076  | 390026 | 17859 | Megaloblastic anemia                                           | hematopoietic       |
| 281.11 | 754   | 390026 | 18181 | Pernicious anemia                                              | hematopoietic       |
| 281    | 1133  | 390026 | 17802 | Other deficiency anemia                                        | hematopoietic       |
| 285.2  | 702   | 390026 | 18233 | Anemia of chronic disease                                      | hematopoietic       |
| 285    | 12256 | 390026 | 6679  | Other anemias                                                  | hematopoietic       |
| 286    | 941   | 406281 | 1739  | Coagulation defects                                            | hematopoietic       |
| 287.3  | 1563  | 406281 | 1117  | Thrombocytopenia                                               | hematopoietic       |
| 287    | 1791  | 406281 | 889   | Purpura and other hemorrhagic conditions                       | hematopoietic       |
| 288.1  | 3184  | 401375 | 4402  | Decreased white blood cell count                               | hematopoietic       |
| 288.11 | 3184  | 401375 | 4402  | Neutropenia                                                    | hematopoietic       |
| 288    | 3788  | 401375 | 3798  | Diseases of white blood cells                                  | hematopoietic       |
| 289.4  | 2622  | 401375 | 4964  | Lymphadenitis                                                  | hematopoietic       |
| 289.5  | 515   | 401375 | 7071  | Diseases of spleen                                             | hematopoietic       |
| 289    | 4177  | 401375 | 3409  | Other diseases of blood and blood-forming organs               | hematopoietic       |
| 290.1  | 956   | 402383 | 5622  | Dementias                                                      | mental disorders    |
| 290.2  | 654   | 402383 | 5924  | Delirium due to conditions classified elsewhere                | mental disorders    |
| 290    | 1970  | 402383 | 4608  | Delirium dementia and amnestic and other cognitive disorders   | mental disorders    |
| 291    | 641   | 402383 | 5937  | Other specified nonpsychotic and/or transient mental disorders | mental disorders    |
| 292.1  | 1514  | 402383 | 5064  | Aphasia/speech disturbance                                     | mental disorders    |

|        |       |        |       |                                                                                     |                  |
|--------|-------|--------|-------|-------------------------------------------------------------------------------------|------------------|
| 292.3  | 700   | 402383 | 5878  | Memory loss                                                                         | mental disorders |
| 292.4  | 2189  | 402383 | 4389  | Altered mental status                                                               | mental disorders |
| 292    | 4655  | 402383 | 1923  | Neurological disorders                                                              | mental disorders |
| 293.1  | 907   | 405975 | 2079  | Swelling, mass, or lump in head and neck [Space-occupying lesion, intracranial NOS] | mental disorders |
| 293    | 2986  | 405975 | 0     | Symptoms involving head and neck                                                    | mental disorders |
| 295.1  | 571   | 365476 | 42914 | Schizophrenia                                                                       | mental disorders |
| 295    | 850   | 365476 | 42635 | Schizophrenia and other psychotic disorders                                         | mental disorders |
| 296.1  | 1064  | 365476 | 42421 | Bipolar                                                                             | mental disorders |
| 296.2  | 11901 | 365476 | 31584 | Depression                                                                          | mental disorders |
| 296    | 12560 | 365476 | 30925 | Mood disorders                                                                      | mental disorders |
| 300.1  | 6375  | 365476 | 37110 | Anxiety disorder                                                                    | mental disorders |
| 300.12 | 709   | 365476 | 42776 | Agoraphobia, social phobia, and panic disorder                                      | mental disorders |
| 300.13 | 503   | 365476 | 42982 | Phobia                                                                              | mental disorders |
| 300    | 6939  | 365476 | 36546 | Anxiety disorders                                                                   | mental disorders |
| 303    | 529   | 365476 | 42956 | Psychogenic and somatoform disorders                                                | mental disorders |
| 306    | 28791 | 365476 | 14694 | Other mental disorder                                                               | mental disorders |
| 317.1  | 8968  | 379355 | 20638 | Alcoholism                                                                          | mental disorders |
| 317.11 | 802   | 379355 | 28804 | Alcoholic liver damage                                                              | mental disorders |
| 317    | 12922 | 379355 | 16684 | Alcohol-related disorders                                                           | mental disorders |
| 318    | 19780 | 379355 | 9826  | Tobacco use disorder                                                                | mental disorders |
| 327.3  | 4471  | 403723 | 767   | Sleep apnea                                                                         | neurological     |
| 327    | 5238  | 403723 | 0     | Sleep disorders                                                                     | neurological     |
| 331    | 1112  | 395209 | 12640 | Other cerebral degenerations                                                        | neurological     |
| 333    | 891   | 395209 | 12861 | Extrapyramidal disease and abnormal movement disorders                              | neurological     |

|        |       |        |       |                                                     |              |
|--------|-------|--------|-------|-----------------------------------------------------|--------------|
| 334    | 1789  | 395209 | 11963 | Degenerative disease of the spinal cord             | neurological |
| 335    | 1356  | 395209 | 12396 | Multiple sclerosis                                  | neurological |
| 338    | 771   | 408190 | 0     | Pain                                                | symptoms     |
| 339    | 7891  | 398780 | 2290  | Other headache syndromes                            | neurological |
| 340    | 2870  | 398780 | 7311  | Migraine                                            | neurological |
| 342    | 1500  | 395209 | 12252 | Hemiplegia                                          | neurological |
| 344    | 660   | 395209 | 13092 | Other paralytic syndromes                           | neurological |
| 345.1  | 901   | 395209 | 12851 | Epilepsy                                            | neurological |
| 345.3  | 2232  | 395209 | 11520 | Convulsions                                         | neurological |
| 345    | 5087  | 395209 | 8665  | Epilepsy, recurrent seizures, convulsions           | neurological |
| 348    | 1426  | 395209 | 12326 | Other conditions of brain                           | neurological |
| 350.1  | 888   | 406217 | 1856  | Abnormal involuntary movements                      | neurological |
| 350.2  | 1601  | 406217 | 1143  | Abnormality of gait                                 | neurological |
| 350    | 2744  | 406217 | 0     | Abnormal movement                                   | neurological |
| 351    | 12592 | 394067 | 2302  | Other peripheral nerve disorders                    | neurological |
| 352.2  | 880   | 394067 | 14014 | Facial nerve disorders [CN7]                        | neurological |
| 352    | 1393  | 394067 | 13501 | Disorders of other cranial nerves                   | neurological |
| 353    | 1139  | 394067 | 13755 | Nerve root and plexus disorders                     | neurological |
| 357    | 1368  | 406852 | 741   | Inflammatory and toxic neuropathy                   | neurological |
| 361.1  | 1392  | 397761 | 9808  | Retinal detachment with retinal defect              | sense organs |
| 361    | 3263  | 397761 | 7937  | Retinal detachments and defects                     | sense organs |
| 362.2  | 2191  | 396859 | 9911  | Degeneration of macula and posterior pole of retina | sense organs |
| 362.29 | 2188  | 396859 | 9914  | Macular degeneration (senile) of retina NOS         | sense organs |
| 362.4  | 849   | 396859 | 11253 | Retinal vascular changes and abnormalities          | sense organs |
| 362    | 3867  | 396859 | 8235  | Other retinal disorders                             | sense organs |
| 364    | 732   | 397761 | 10468 | Corneal opacity and other disorders of cornea       | sense organs |

|        |       |        |       |                                                                     |              |
|--------|-------|--------|-------|---------------------------------------------------------------------|--------------|
| 365.1  | 1043  | 397761 | 10157 | Open-angle glaucoma                                                 | sense organs |
| 365.11 | 1037  | 397761 | 10163 | Primary open angle glaucoma                                         | sense organs |
| 365.2  | 705   | 397761 | 10495 | Primary angle-closure glaucoma                                      | sense organs |
| 365    | 4462  | 397761 | 6738  | Glaucoma                                                            | sense organs |
| 366.2  | 8369  | 388609 | 11983 | Senile cataract                                                     | sense organs |
| 366    | 20352 | 388609 | 0     | Cataract                                                            | sense organs |
| 367.1  | 1257  | 406530 | 1174  | Myopia                                                              | sense organs |
| 367.9  | 723   | 406530 | 1708  | Blindness and low vision                                            | sense organs |
| 367    | 2431  | 406530 | 0     | Disorders of refraction and accommodation; blindness and low vision | sense organs |
| 368.1  | 538   | 405654 | 2769  | Amblyopia                                                           | sense organs |
| 368.2  | 732   | 405654 | 2575  | Diplopia and disorders of binocular vision                          | sense organs |
| 368.9  | 615   | 405654 | 2692  | Subjective visual disturbances                                      | sense organs |
| 368    | 3307  | 405654 | 0     | Visual disturbances                                                 | sense organs |
| 369    | 560   | 399306 | 9095  | Infection of the eye                                                | sense organs |
| 371.3  | 2396  | 399306 | 7259  | Inflammation of eyelids                                             | sense organs |
| 371    | 3174  | 399306 | 6481  | Inflammation of the eye                                             | sense organs |
| 372    | 765   | 399306 | 8890  | Disorders of conjunctiva                                            | sense organs |
| 374.1  | 1068  | 399306 | 8587  | Ectropion or entropion                                              | sense organs |
| 374.3  | 1834  | 399306 | 7821  | Ptosis of eyelid                                                    | sense organs |
| 374    | 5726  | 399306 | 3929  | Other disorders of eyelids                                          | sense organs |
| 375.2  | 899   | 401245 | 6817  | Epiphora                                                            | sense organs |
| 375    | 2218  | 401245 | 5498  | Disorders of lacrimal system                                        | sense organs |
| 378.1  | 918   | 401245 | 6798  | Strabismus (not specified as paralytic)                             | sense organs |
| 378    | 1442  | 401245 | 6274  | Strabismus and other disorders of binocular eye movements           | sense organs |

|        |      |        |      |                                                                |                    |
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| 379.2  | 1372 | 401245 | 6344 | Disorders of vitreous body                                     | sense organs       |
| 379.3  | 1825 | 401245 | 5891 | Aphakia and other disorders of lens                            | sense organs       |
| 379    | 3910 | 401245 | 3806 | Other disorders of eye                                         | sense organs       |
| 380.1  | 524  | 407510 | 927  | Otitis externa                                                 | sense organs       |
| 380    | 1451 | 407510 | 0    | Disorders of external ear                                      | sense organs       |
| 381.1  | 1824 | 404888 | 2249 | Otitis media                                                   | sense organs       |
| 381.11 | 856  | 404888 | 3217 | Suppurative and unspecified otitis media                       | sense organs       |
| 381    | 2259 | 404888 | 1814 | Otitis media and Eustachian tube disorders                     | sense organs       |
| 384.4  | 1044 | 404888 | 3029 | Perforation of tympanic membrane                               | sense organs       |
| 384    | 1364 | 404888 | 2709 | Other disorders of tympanic membrane                           | sense organs       |
| 385.3  | 608  | 404888 | 3465 | Cholesteatoma                                                  | sense organs       |
| 385    | 828  | 404888 | 3245 | Other disorders of middle ear and mastoid                      | sense organs       |
| 386.1  | 578  | 402827 | 5556 | Meniere's disease                                              | sense organs       |
| 386.3  | 767  | 402827 | 5367 | Labyrinthitis                                                  | sense organs       |
| 386.9  | 4611 | 402827 | 1523 | Dizziness and giddiness (Light-headedness and vertigo)         | sense organs       |
| 386    | 6134 | 402827 | 0    | Vertiginous syndromes and other disorders of vestibular system | sense organs       |
| 389.4  | 515  | 404562 | 3884 | Tinnitus                                                       | sense organs       |
| 389    | 4256 | 404562 | 143  | Hearing loss                                                   | sense organs       |
| 394.2  | 2985 | 402421 | 3555 | Mitral valve disease                                           | circulatory system |
| 394.3  | 1260 | 402421 | 5280 | Aortic valve disease                                           | circulatory system |
| 394.7  | 1058 | 402421 | 5482 | Disease of tricuspid valve                                     | circulatory system |
| 394    | 4895 | 402421 | 1645 | Rheumatic disease of the heart valves                          | circulatory system |
| 395.1  | 2892 | 402421 | 3648 | Nonrheumatic mitral valve disorders                            | circulatory system |
| 395.6  | 1499 | 402421 | 5041 | Heart valve replaced                                           | circulatory system |
| 395    | 4239 | 402421 | 2301 | Heart valve disorders                                          | circulatory system |

|        |       |        |       |                                                                   |                    |
|--------|-------|--------|-------|-------------------------------------------------------------------|--------------------|
| 396    | 1049  | 402421 | 5491  | Abnormal heart sounds                                             | circulatory system |
| 401.1  | 77723 | 330366 | 872   | Essential hypertension                                            | circulatory system |
| 401.2  | 1719  | 330366 | 76876 | Hypertensive heart and/or renal disease                           | circulatory system |
| 401.22 | 1548  | 330366 | 77047 | Hypertensive chronic kidney disease                               | circulatory system |
| 401    | 77977 | 330366 | 618   | Hypertension                                                      | circulatory system |
| 402    | 1487  | 330366 | 77108 | Elevated blood pressure reading without diagnosis of hypertension | circulatory system |
| 411.1  | 5181  | 377103 | 26677 | Unstable angina (intermediate coronary syndrome)                  | circulatory system |
| 411.2  | 11703 | 377103 | 20155 | Myocardial infarction                                             | circulatory system |
| 411.3  | 16175 | 377103 | 15683 | Angina pectoris                                                   | circulatory system |
| 411.4  | 20023 | 377103 | 11835 | Coronary atherosclerosis                                          | circulatory system |
| 411.41 | 698   | 377103 | 31160 | Aneurysm and dissection of heart                                  | circulatory system |
| 411.8  | 14921 | 377103 | 16937 | Other chronic ischemic heart disease, unspecified                 | circulatory system |
| 411.9  | 1169  | 377103 | 30689 | Other acute and subacute forms of ischemic heart disease          | circulatory system |
| 411    | 31355 | 377103 | 503   | Ischemic Heart Disease                                            | circulatory system |
| 414    | 1796  | 377103 | 30062 | Other forms of chronic heart disease                              | circulatory system |
| 415.2  | 590   | 402375 | 5996  | Chronic pulmonary heart disease                                   | circulatory system |
| 415    | 4257  | 402375 | 2329  | Pulmonary heart disease                                           | circulatory system |
| 416    | 2573  | 402375 | 4013  | Cardiomegaly                                                      | circulatory system |
| 418.1  | 3582  | 377532 | 27847 | Precordial pain                                                   | circulatory system |
| 418    | 31429 | 377532 | 0     | Nonspecific chest pain                                            | circulatory system |
| 420.2  | 1273  | 405779 | 1909  | Pericarditis                                                      | circulatory system |
| 420.3  | 686   | 405779 | 2496  | Endocarditis                                                      | circulatory system |
| 420    | 2020  | 405779 | 1162  | Carditis                                                          | circulatory system |
| 425.1  | 1208  | 405779 | 1974  | Primary/intrinsic cardiomyopathies                                | circulatory system |
| 425    | 1247  | 405779 | 1935  | Cardiomyopathy                                                    | circulatory system |

|        |       |        |       |                                                  |                    |
|--------|-------|--------|-------|--------------------------------------------------|--------------------|
| 426.2  | 2125  | 380919 | 25917 | Atrioventricular [AV] block                      | circulatory system |
| 426.21 | 988   | 380919 | 27054 | First degree AV block                            | circulatory system |
| 426.24 | 587   | 380919 | 27455 | Atrioventricular block, complete                 | circulatory system |
| 426.3  | 3353  | 380919 | 24689 | Bundle branch block                              | circulatory system |
| 426.31 | 1498  | 380919 | 26544 | Right bundle branch block                        | circulatory system |
| 426.32 | 1757  | 380919 | 26285 | Left bundle branch block                         | circulatory system |
| 426.9  | 2487  | 380919 | 25555 | Cardiac pacemaker/device in situ                 | circulatory system |
| 426.91 | 2283  | 380919 | 25759 | Cardiac pacemaker in situ                        | circulatory system |
| 426    | 6959  | 380919 | 21083 | Cardiac conduction disorders                     | circulatory system |
| 427.1  | 3225  | 380919 | 24817 | Paroxysmal tachycardia, unspecified              | circulatory system |
| 427.11 | 2359  | 380919 | 25683 | Paroxysmal supraventricular tachycardia          | circulatory system |
| 427.12 | 938   | 380919 | 27104 | Paroxysmal ventricular tachycardia               | circulatory system |
| 427.2  | 14820 | 380919 | 13222 | Atrial fibrillation and flutter                  | circulatory system |
| 427.3  | 3236  | 380919 | 24806 | Other specified cardiac dysrhythmias             | circulatory system |
| 427.4  | 1137  | 380919 | 26905 | Cardiac arrest and ventricular fibrillation      | circulatory system |
| 427.42 | 927   | 380919 | 27115 | Cardiac arrest                                   | circulatory system |
| 427.5  | 922   | 380919 | 27120 | Arrhythmia (cardiac) NOS                         | circulatory system |
| 427.6  | 536   | 380919 | 27506 | Premature beats                                  | circulatory system |
| 427.7  | 2193  | 380919 | 25849 | Tachycardia NOS                                  | circulatory system |
| 427.9  | 3832  | 380919 | 24210 | Palpitations                                     | circulatory system |
| 427    | 24681 | 380919 | 3361  | Cardiac dysrhythmias                             | circulatory system |
| 428.1  | 2031  | 402834 | 4096  | Congestive heart failure (CHF) NOS               | circulatory system |
| 428.2  | 4269  | 402834 | 1858  | Heart failure NOS                                | circulatory system |
| 428    | 5415  | 402834 | 712   | Congestive heart failure; nonhypertensive        | circulatory system |
| 429.2  | 524   | 402834 | 5603  | Abnormal function study of cardiovascular system | circulatory system |

|        |      |        |      |                                                             |                    |
|--------|------|--------|------|-------------------------------------------------------------|--------------------|
| 429    | 796  | 402834 | 5331 | Ill-defined descriptions and complications of heart disease | circulatory system |
| 430.1  | 812  | 399017 | 9132 | Subarachnoid hemorrhage                                     | circulatory system |
| 430.2  | 700  | 399017 | 9244 | Intracerebral hemorrhage                                    | circulatory system |
| 430    | 1796 | 399017 | 8148 | Intracranial hemorrhage                                     | circulatory system |
| 433.1  | 1185 | 399017 | 8759 | Occlusion and stenosis of precerebral arteries              | circulatory system |
| 433.2  | 4134 | 399017 | 5810 | Occlusion of cerebral arteries                              | circulatory system |
| 433.21 | 1501 | 399017 | 8443 | Cerebral artery occlusion, with cerebral infarction         | circulatory system |
| 433.3  | 2920 | 399017 | 7024 | Cerebral ischemia                                           | circulatory system |
| 433.31 | 2146 | 399017 | 7798 | Transient cerebral ischemia                                 | circulatory system |
| 433.8  | 1263 | 399017 | 8681 | Late effects of cerebrovascular disease                     | circulatory system |
| 433    | 8742 | 399017 | 1202 | Cerebrovascular disease                                     | circulatory system |
| 440.2  | 811  | 400595 | 7555 | Atherosclerosis of the extremities                          | circulatory system |
| 440    | 1324 | 400595 | 7042 | Atherosclerosis                                             | circulatory system |
| 441    | 576  | 400595 | 7790 | Vascular insufficiency of intestine                         | circulatory system |
| 442.1  | 1374 | 400595 | 6992 | Aortic aneurysm                                             | circulatory system |
| 442.11 | 903  | 400595 | 7463 | Abdominal aortic aneurysm                                   | circulatory system |
| 442    | 1808 | 400595 | 6558 | Other aneurysm                                              | circulatory system |
| 443.1  | 1148 | 400595 | 7218 | Raynaud's syndrome                                          | circulatory system |
| 443.9  | 2566 | 400595 | 5800 | Peripheral vascular disease, unspecified                    | circulatory system |
| 443    | 3927 | 400595 | 4439 | Peripheral vascular disease                                 | circulatory system |
| 444.1  | 557  | 400595 | 7809 | Arterial embolism and thrombosis of lower extremity artery  | circulatory system |
| 444    | 921  | 400595 | 7445 | Arterial embolism and thrombosis                            | circulatory system |
| 446    | 828  | 400595 | 7538 | Polyarteritis nodosa and allied conditions                  | circulatory system |
| 447.1  | 873  | 400595 | 7493 | Stricture of artery                                         | circulatory system |

|        |       |        |       |                                                                     |                    |
|--------|-------|--------|-------|---------------------------------------------------------------------|--------------------|
| 447    | 1333  | 400595 | 7033  | Other disorders of arteries and arterioles                          | circulatory system |
| 450    | 705   | 408256 | 0     | Noninfectious disorders of lymphatic channels                       | circulatory system |
| 451.2  | 3587  | 369592 | 35782 | Phlebitis and thrombophlebitis of lower extremities                 | circulatory system |
| 451    | 3900  | 369592 | 35469 | Phlebitis and thrombophlebitis                                      | circulatory system |
| 452    | 558   | 369592 | 38811 | Other venous embolism and thrombosis                                | circulatory system |
| 454.1  | 11697 | 369592 | 27672 | Varicose veins of lower extremity                                   | circulatory system |
| 454.11 | 633   | 369592 | 38736 | Varicose veins of lower extremity, symptomatic                      | circulatory system |
| 454    | 12172 | 369592 | 27197 | Varicose veins                                                      | circulatory system |
| 455    | 23896 | 369592 | 15473 | Hemorrhoids                                                         | circulatory system |
| 458.1  | 1347  | 387905 | 19709 | Orthostatic hypotension                                             | circulatory system |
| 458.9  | 3518  | 387905 | 17538 | Hypotension NOS                                                     | circulatory system |
| 458    | 5827  | 387905 | 15229 | Hypotension                                                         | circulatory system |
| 459.9  | 16366 | 387905 | 4690  | Circulatory disease NEC                                             | circulatory system |
| 459    | 16544 | 387905 | 4512  | Other disorders of circulatory system                               | circulatory system |
| 465.2  | 870   | 406447 | 1644  | Acute pharyngitis                                                   | respiratory        |
| 465    | 2335  | 406447 | 179   | Acute upper respiratory infections of multiple or unspecified sites | respiratory        |
| 470    | 4939  | 390045 | 13977 | Septal Deviations/Turbinate Hypertrophy                             | respiratory        |
| 471    | 3311  | 390045 | 15605 | Nasal polyps                                                        | respiratory        |
| 472    | 966   | 390045 | 17950 | Chronic pharyngitis and nasopharyngitis                             | respiratory        |
| 473.4  | 1086  | 390045 | 17830 | Voice disturbance                                                   | respiratory        |
| 473    | 2630  | 390045 | 16286 | Diseases of the larynx and vocal cords                              | respiratory        |
| 474.1  | 614   | 390045 | 18302 | Acute tonsillitis                                                   | respiratory        |
| 474.2  | 1126  | 390045 | 17790 | Chronic tonsillitis and adenoiditis                                 | respiratory        |
| 474    | 2013  | 390045 | 16903 | Acute and chronic tonsillitis                                       | respiratory        |
| 475    | 2602  | 390045 | 16314 | Chronic sinusitis                                                   | respiratory        |

|        |       |        |       |                                                             |             |
|--------|-------|--------|-------|-------------------------------------------------------------|-------------|
| 476    | 1060  | 390045 | 17856 | Allergic rhinitis                                           | respiratory |
| 477    | 2456  | 390045 | 16460 | Epistaxis or throat hemorrhage                              | respiratory |
| 479    | 4101  | 390045 | 14815 | Other upper respiratory disease                             | respiratory |
| 480.1  | 6710  | 398538 | 3713  | Bacterial pneumonia                                         | respiratory |
| 480.11 | 5951  | 398538 | 4472  | Pneumococcal pneumonia                                      | respiratory |
| 480    | 10059 | 398538 | 364   | Pneumonia                                                   | respiratory |
| 495    | 26332 | 375505 | 7124  | Asthma                                                      | respiratory |
| 496.1  | 1727  | 375505 | 31729 | Emphysema                                                   | respiratory |
| 496.2  | 2934  | 375505 | 30522 | Chronic bronchitis                                          | respiratory |
| 496.21 | 2698  | 375505 | 30758 | Obstructive chronic bronchitis                              | respiratory |
| 496.3  | 1882  | 375505 | 31574 | Bronchiectasis                                              | respiratory |
| 496    | 10502 | 375505 | 22954 | Chronic airway obstruction                                  | respiratory |
| 497    | 631   | 375505 | 32825 | Bronchitis                                                  | respiratory |
| 501    | 586   | 397411 | 10964 | Pneumonitis due to inhalation of food or vomitus            | respiratory |
| 502    | 887   | 397411 | 10663 | Postinflammatory pulmonary fibrosis                         | respiratory |
| 506    | 1174  | 397411 | 10376 | Empyema and pneumothorax                                    | respiratory |
| 507    | 6448  | 397411 | 5102  | Pleurisy; pleural effusion                                  | respiratory |
| 508    | 2005  | 397411 | 9545  | Pulmonary collapse; interstitial and compensatory emphysema | respiratory |
| 509.1  | 2018  | 397411 | 9532  | Respiratory failure                                         | respiratory |
| 509.2  | 1749  | 397411 | 9801  | Respiratory insufficiency                                   | respiratory |
| 509    | 2565  | 397411 | 8985  | Respiratory failure, insufficiency, arrest                  | respiratory |
| 510    | 781   | 408180 | 0     | Other diseases of lung                                      | respiratory |
| 512.7  | 5884  | 399833 | 3244  | Shortness of breath                                         | respiratory |
| 512.8  | 2884  | 399833 | 6244  | Cough                                                       | respiratory |
| 512.9  | 912   | 399833 | 8216  | Other dyspnea                                               | respiratory |

|        |       |        |       |                                                                                      |             |
|--------|-------|--------|-------|--------------------------------------------------------------------------------------|-------------|
| 512    | 9128  | 399833 | 0     | Other symptoms of respiratory system                                                 | respiratory |
| 513    | 611   | 408350 | 0     | Respiratory abnormalities                                                            | respiratory |
| 514    | 2500  | 406461 | 0     | Abnormal findings examination of lungs                                               | respiratory |
| 516.1  | 2073  | 406794 | 94    | Hemoptysis                                                                           | respiratory |
| 516    | 2167  | 406794 | 0     | Abnormal sputum                                                                      | respiratory |
| 519.8  | 8844  | 399525 | 592   | Other diseases of respiratory system, NEC                                            | respiratory |
| 519    | 9436  | 399525 | 0     | Other diseases of respiratory system, not elsewhere classified                       | respiratory |
| 520.2  | 2364  | 398136 | 8461  | Disturbances in tooth eruption                                                       | digestive   |
| 520    | 2449  | 398136 | 8376  | Disorders of tooth development                                                       | digestive   |
| 521.1  | 3051  | 398136 | 7774  | Dental caries                                                                        | digestive   |
| 521    | 3091  | 398136 | 7734  | Diseases of hard tissues of teeth                                                    | digestive   |
| 522.5  | 1177  | 398136 | 9648  | Periapical abscess                                                                   | digestive   |
| 522    | 1795  | 398136 | 9030  | Diseases of pulp and periapical tissues                                              | digestive   |
| 523.3  | 1222  | 398136 | 9603  | Periodontitis (acute or chronic)                                                     | digestive   |
| 523.31 | 668   | 398136 | 10157 | Acute periodontitis                                                                  | digestive   |
| 523.32 | 561   | 398136 | 10264 | Chronic periodontitis                                                                | digestive   |
| 523    | 1742  | 398136 | 9083  | Gingival and periodontal diseases                                                    | digestive   |
| 525    | 2689  | 398136 | 8136  | Other diseases of the teeth and supporting structures                                | digestive   |
| 526    | 960   | 398136 | 9865  | Diseases of the jaws                                                                 | digestive   |
| 527    | 710   | 403323 | 4928  | Diseases of the salivary glands                                                      | digestive   |
| 528.5  | 684   | 403323 | 4954  | Diseases of lips                                                                     | digestive   |
| 528    | 3939  | 403323 | 1699  | Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue | digestive   |
| 529    | 1236  | 403323 | 4402  | Diseases and other conditions of the tongue                                          | digestive   |
| 530.1  | 32108 | 369275 | 7578  | Esophagitis, GERD and related diseases                                               | digestive   |

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|--------|-------|--------|-------|------------------------------------------|-----------|
| 530.11 | 14223 | 369275 | 25463 | GERD                                     | digestive |
| 530.12 | 5243  | 369275 | 34443 | Ulcer of esophagus                       | digestive |
| 530.14 | 10551 | 369275 | 29135 | Reflux esophagitis                       | digestive |
| 530.2  | 1672  | 369275 | 38014 | Esophageal bleeding (varices/hemorrhage) | digestive |
| 530.3  | 1874  | 369275 | 37812 | Stricture and stenosis of esophagus      | digestive |
| 530.5  | 639   | 369275 | 39047 | Disorders of esophageal motility         | digestive |
| 530.9  | 2100  | 369275 | 37586 | Heartburn                                | digestive |
| 530    | 35852 | 369275 | 3834  | Diseases of esophagus                    | digestive |
| 531.1  | 617   | 401525 | 6819  | Hemorrhage from gastrointestinal ulcer   | digestive |
| 531.2  | 4109  | 401525 | 3327  | Gastric ulcer                            | digestive |
| 531.3  | 3002  | 401525 | 4434  | Duodenal ulcer                           | digestive |
| 531    | 7436  | 401525 | 0     | Peptic ulcer (excl. esophageal)          | digestive |
| 532    | 6482  | 369275 | 33204 | Dysphagia                                | digestive |
| 535.1  | 1184  | 378124 | 29653 | Acute gastritis                          | digestive |
| 535.6  | 7655  | 378124 | 23182 | Duodenitis                               | digestive |
| 535.8  | 8147  | 378124 | 22690 | Other specified gastritis                | digestive |
| 535    | 28941 | 378124 | 1896  | Gastritis and duodenitis                 | digestive |
| 537    | 3404  | 378124 | 27433 | Other disorders of stomach and duodenum  | digestive |
| 540.1  | 3217  | 405552 | 192   | Appendicitis                             | digestive |
| 540.11 | 2608  | 405552 | 801   | Acute appendicitis                       | digestive |
| 540    | 3409  | 405552 | 0     | Appendiceal conditions                   | digestive |
| 550.1  | 15995 | 361617 | 31349 | Inguinal hernia                          | digestive |
| 550.2  | 27126 | 361617 | 20218 | Diaphragmatic hernia                     | digestive |
| 550.3  | 651   | 361617 | 46693 | Femoral hernia                           | digestive |
| 550.4  | 3727  | 361617 | 43617 | Umbilical hernia                         | digestive |
| 550.5  | 3448  | 361617 | 43896 | Ventral hernia                           | digestive |

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|--------|-------|--------|-------|------------------------------------------------------------------------|-----------|
| 550    | 47344 | 361617 | 0     | Abdominal hernia                                                       | digestive |
| 555.1  | 1743  | 334783 | 72435 | Regional enteritis                                                     | digestive |
| 555.2  | 3195  | 334783 | 70983 | Ulcerative colitis                                                     | digestive |
| 555.21 | 539   | 334783 | 73639 | Ulcerative colitis (chronic)                                           | digestive |
| 555    | 4528  | 334783 | 69650 | Inflammatory bowel disease and other gastroenteritis and colitis       | digestive |
| 556.1  | 674   | 334783 | 73504 | Ulceration of intestine                                                | digestive |
| 556    | 1063  | 334783 | 73115 | Ulceration of the lower GI tract                                       | digestive |
| 557.1  | 1855  | 334783 | 72323 | Celiac disease                                                         | digestive |
| 557    | 2103  | 334783 | 72075 | Intestinal malabsorption (non-celiac)                                  | digestive |
| 558    | 15747 | 334783 | 58431 | Noninfectious gastroenteritis                                          | digestive |
| 559    | 1660  | 334783 | 72518 | Ileostomy status                                                       | digestive |
| 560.1  | 522   | 334783 | 73656 | Paralytic ileus                                                        | digestive |
| 560.3  | 832   | 334783 | 73346 | Peritoneal or intestinal adhesions                                     | digestive |
| 560.4  | 3346  | 334783 | 70832 | Other intestinal obstruction                                           | digestive |
| 560    | 3994  | 334783 | 70184 | Intestinal obstruction without mention of hernia                       | digestive |
| 561.2  | 1689  | 334783 | 72489 | Flatulence                                                             | digestive |
| 561    | 15977 | 334783 | 58201 | Symptoms involving digestive system                                    | digestive |
| 562.1  | 27268 | 334783 | 46910 | Diverticulosis                                                         | digestive |
| 562    | 27311 | 334783 | 46867 | Diverticulosis and diverticulitis                                      | digestive |
| 563    | 10442 | 334783 | 63736 | Constipation                                                           | digestive |
| 564.1  | 5548  | 334783 | 68630 | Irritable Bowel Syndrome                                               | digestive |
| 564.8  | 1650  | 334783 | 72528 | Abnormal findings on exam of gastrointestinal tract/<br>abdominal area | digestive |
| 564.9  | 15392 | 334783 | 58786 | Personal history of diseases of digestive system                       | digestive |
| 564    | 22138 | 334783 | 52040 | Functional digestive disorders                                         | digestive |

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|--------|-------|--------|-------|------------------------------------------------------|-----------|
| 565.1  | 7408  | 387338 | 14215 | Anal and rectal polyp                                | digestive |
| 565    | 14997 | 387338 | 6626  | Anal and rectal conditions                           | digestive |
| 567    | 887   | 387338 | 20736 | Peritonitis and retroperitoneal infections           | digestive |
| 568.1  | 3108  | 387338 | 18515 | Peritoneal adhesions (postoperative) (postinfection) | digestive |
| 568    | 3308  | 387338 | 18315 | Other disorders of peritoneum                        | digestive |
| 569    | 4200  | 387338 | 17423 | Other disorders of intestine                         | digestive |
| 571.5  | 1664  | 400055 | 7242  | Other chronic nonalcoholic liver disease             | digestive |
| 571.8  | 942   | 400055 | 7964  | Liver abscess and sequelae of chronic liver disease  | digestive |
| 571.81 | 529   | 400055 | 8377  | Portal hypertension                                  | digestive |
| 571    | 2895  | 400055 | 6011  | Chronic liver disease and cirrhosis                  | digestive |
| 572    | 1547  | 400055 | 7359  | Ascites (non malignant)                              | digestive |
| 573.5  | 897   | 400055 | 8009  | Jaundice (not of newborn)                            | digestive |
| 573.7  | 3479  | 400055 | 5427  | Abnormal results of function study of liver          | digestive |
| 573    | 5847  | 400055 | 3059  | Other disorders of liver                             | digestive |
| 574.1  | 13777 | 391307 | 3877  | Cholelithiasis                                       | digestive |
| 574.11 | 1513  | 391307 | 16141 | Cholelithiasis with acute cholecystitis              | digestive |
| 574.12 | 5472  | 391307 | 12182 | Cholelithiasis with other cholecystitis              | digestive |
| 574.2  | 2634  | 391307 | 15020 | Calculus of bile duct                                | digestive |
| 574.3  | 2761  | 391307 | 14893 | Cholecystitis without cholelithiasis                 | digestive |
| 574    | 16225 | 391307 | 1429  | Cholelithiasis and cholecystitis                     | digestive |
| 575.2  | 777   | 391307 | 16877 | Obstruction of bile duct                             | digestive |
| 575.7  | 1412  | 391307 | 16242 | Other disorders of gallbladder                       | digestive |
| 575.8  | 1040  | 391307 | 16614 | Other disorders of biliary tract                     | digestive |
| 575    | 3892  | 391307 | 13762 | Other biliary tract disease                          | digestive |
| 577.1  | 1986  | 406271 | 704   | Acute pancreatitis                                   | digestive |
| 577.2  | 514   | 406271 | 2176  | Chronic pancreatitis                                 | digestive |

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|--------|-------|--------|-------|-------------------------------------------------|---------------|
| 577    | 2690  | 406271 | 0     | Diseases of pancreas                            | digestive     |
| 578.1  | 1961  | 385157 | 21843 | Hematemesis                                     | digestive     |
| 578.2  | 2639  | 385157 | 21165 | Blood in stool                                  | digestive     |
| 578.8  | 13222 | 385157 | 10582 | Hemorrhage of rectum and anus                   | digestive     |
| 578.9  | 5229  | 385157 | 18575 | Hemorrhage of gastrointestinal tract            | digestive     |
| 578    | 21137 | 385157 | 2667  | Gastrointestinal hemorrhage                     | digestive     |
| 579.8  | 1659  | 385157 | 22145 | Nonspecific abnormal findings in stool contents | digestive     |
| 579    | 3195  | 385157 | 20609 | Other symptoms involving abdomen and pelvis     | digestive     |
| 580.1  | 1033  | 397602 | 10326 | Glomerulonephritis                              | genitourinary |
| 580.14 | 845   | 397602 | 10514 | Chronic glomerulonephritis, NOS                 | genitourinary |
| 580    | 1522  | 397602 | 9837  | Nephritis; nephrosis; renal sclerosis           | genitourinary |
| 585.1  | 4521  | 397602 | 6838  | Acute renal failure                             | genitourinary |
| 585.2  | 1412  | 397602 | 9947  | Renal failure NOS                               | genitourinary |
| 585.3  | 2629  | 397602 | 8730  | Chronic renal failure [CKD]                     | genitourinary |
| 585    | 6985  | 397602 | 4374  | Renal failure                                   | genitourinary |
| 586.2  | 1260  | 397602 | 10099 | Cyst of kidney, acquired                        | genitourinary |
| 586.4  | 913   | 397602 | 10446 | Stricture/obstruction of ureter                 | genitourinary |
| 586    | 3362  | 397602 | 7997  | Other disorders of the kidney and ureters       | genitourinary |
| 590    | 1324  | 379936 | 27701 | Pyelonephritis                                  | genitourinary |
| 591    | 12491 | 379936 | 16534 | Urinary tract infection                         | genitourinary |
| 592.1  | 2948  | 379936 | 26077 | Cystitis                                        | genitourinary |
| 592.12 | 892   | 379936 | 28133 | Chronic cystitis                                | genitourinary |
| 592    | 3088  | 379936 | 25937 | Cystitis and urethritis                         | genitourinary |
| 593    | 16409 | 379936 | 12616 | Hematuria                                       | genitourinary |
| 594.1  | 3191  | 401005 | 4765  | Calculus of kidney                              | genitourinary |
| 594.2  | 778   | 401005 | 7178  | Calculus of lower urinary tract                 | genitourinary |

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|-------|-------|--------|-------|-------------------------------------------------------|---------------|
| 594.3 | 2417  | 401005 | 5539  | Calculus of ureter                                    | genitourinary |
| 594.8 | 2055  | 401005 | 5901  | Renal colic                                           | genitourinary |
| 594   | 6643  | 401005 | 1313  | Urinary calculus                                      | genitourinary |
| 595   | 1951  | 401005 | 6005  | Hydronephrosis                                        | genitourinary |
| 596.1 | 1980  | 394699 | 12282 | Bladder neck obstruction                              | genitourinary |
| 596.5 | 1664  | 394699 | 12598 | Functional disorders of bladder                       | genitourinary |
| 596   | 9933  | 394699 | 4329  | Other disorders of bladder                            | genitourinary |
| 597.1 | 3331  | 394699 | 10931 | Urethral stricture (not specified as infectious)      | genitourinary |
| 597   | 4069  | 394699 | 10193 | Other disorders of urethra and urinary tract          | genitourinary |
| 598   | 3547  | 405414 | 0     | Abnormal findings on examination of urine             | genitourinary |
| 599.2 | 6755  | 384930 | 17276 | Retention of urine                                    | genitourinary |
| 599.3 | 1199  | 384930 | 22832 | Dysuria                                               | genitourinary |
| 599.4 | 8856  | 384930 | 15175 | Urinary incontinence                                  | genitourinary |
| 599.5 | 4037  | 384930 | 19994 | Frequency of urination and polyuria                   | genitourinary |
| 599.9 | 1926  | 384930 | 22105 | Other abnormality of urination                        | genitourinary |
| 599   | 24031 | 384930 | 0     | Other symptoms/disorders or the urinary system        | genitourinary |
| 608   | 2833  | 389094 | 17034 | Other disorders of male genital organs                | genitourinary |
| 610.1 | 928   | 401746 | 6287  | Cystic mastopathy                                     | genitourinary |
| 610.4 | 1553  | 401746 | 5662  | Benign neoplasm of breast                             | genitourinary |
| 610.8 | 696   | 401746 | 6519  | Other specified benign mammary dysplasias             | genitourinary |
| 610   | 3379  | 401746 | 3836  | Benign mammary dysplasias                             | genitourinary |
| 611.3 | 1525  | 401746 | 5690  | Lump or mass in breast                                | genitourinary |
| 611   | 1580  | 401746 | 5635  | Abnormal findings on mammogram or breast exam         | genitourinary |
| 612.2 | 854   | 401746 | 6361  | Hypertrophy of breast (Gynecomastia)                  | genitourinary |
| 612   | 942   | 401746 | 6273  | Breast conditions, congenital or relating to hormones | genitourinary |
| 613.1 | 723   | 406978 | 1260  | Inflammatory disease of breast                        | genitourinary |

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|--------|-------|--------|-------|---------------------------------------------------------------------------|---------------|
| 613.7  | 704   | 406978 | 1279  | Other signs and symptoms in breast                                        | genitourinary |
| 613    | 1983  | 406978 | 0     | Other nonmalignant breast conditions                                      | genitourinary |
| 614.1  | 2546  | 399757 | 6658  | Pelvic peritoneal adhesions, female (postoperative)<br>(postinfection)    | genitourinary |
| 614.3  | 936   | 399757 | 8268  | Pelvic inflammatory disease (PID)                                         | genitourinary |
| 614.5  | 2864  | 399757 | 6340  | Inflammatory disease of cervix, vagina, and vulva                         | genitourinary |
| 614.51 | 1323  | 399757 | 7881  | Cervicitis and endocervicitis                                             | genitourinary |
| 614.53 | 758   | 399757 | 8446  | Cyst or abscess of Bartholin's gland                                      | genitourinary |
| 614    | 6204  | 399757 | 3000  | Inflammatory diseases of female pelvic organs                             | genitourinary |
| 615    | 4053  | 399757 | 5151  | Endometriosis                                                             | genitourinary |
| 618.1  | 7462  | 396730 | 4769  | Prolapse of vaginal walls                                                 | genitourinary |
| 618.2  | 5428  | 396730 | 6803  | Uterine/Uterovaginal prolapse                                             | genitourinary |
| 618.5  | 513   | 396730 | 11718 | Prolapse of vaginal vault after hysterectomy                              | genitourinary |
| 618.6  | 681   | 396730 | 11550 | Vaginal enterocele, congenital or acquired                                | genitourinary |
| 618    | 11966 | 396730 | 265   | Genital prolapse                                                          | genitourinary |
| 619.1  | 730   | 399629 | 8602  | Noninflammatory disorders of ovary, fallopian tube, and<br>broad ligament | genitourinary |
| 619.2  | 3336  | 399629 | 5996  | Disorders of uterus, NEC                                                  | genitourinary |
| 619.3  | 2884  | 399629 | 6448  | Noninflammatory disorders of cervix                                       | genitourinary |
| 619.4  | 1776  | 399629 | 7556  | Noninflammatory disorders of vagina                                       | genitourinary |
| 619.5  | 1355  | 399629 | 7977  | Noninflammatory disorders of vulva and perineum                           | genitourinary |
| 619    | 9332  | 399629 | 0     | Noninflammatory female genital disorders                                  | genitourinary |
| 621    | 1133  | 396384 | 11444 | Endometrial hyperplasia                                                   | genitourinary |
| 622.1  | 7910  | 396384 | 4667  | Polyp of corpus uteri                                                     | genitourinary |
| 622.2  | 3450  | 396384 | 9127  | Mucous polyp of cervix                                                    | genitourinary |
| 622    | 10881 | 396384 | 1696  | Polyp of female genital organs                                            | genitourinary |

|        |       |        |       |                                                                                 |                         |
|--------|-------|--------|-------|---------------------------------------------------------------------------------|-------------------------|
| 623    | 1275  | 396384 | 11302 | Hypertrophy of female genital organs                                            | genitourinary           |
| 624.9  | 5924  | 399509 | 3528  | stress incontinence, female                                                     | genitourinary           |
| 624    | 6688  | 399509 | 2764  | Symptoms involving female genital tract                                         | genitourinary           |
| 625.1  | 1192  | 399509 | 8260  | Dyspareunia                                                                     | genitourinary           |
| 625    | 3003  | 399509 | 6449  | Pain and other symptoms associated with female genital organs                   | genitourinary           |
| 626.1  | 15880 | 377857 | 15224 | Irregular menstrual cycle/bleeding                                              | genitourinary           |
| 626.12 | 9820  | 377857 | 21284 | Excessive or frequent menstruation                                              | genitourinary           |
| 626.13 | 1989  | 377857 | 29115 | Irregular menstrual cycle                                                       | genitourinary           |
| 626.14 | 3817  | 377857 | 27287 | Irregular menstrual bleeding                                                    | genitourinary           |
| 626.2  | 1787  | 377857 | 29317 | Dysmenorrhea                                                                    | genitourinary           |
| 626.8  | 1370  | 377857 | 29734 | Infertility, female                                                             | genitourinary           |
| 626    | 18580 | 377857 | 12524 | Disorders of menstruation and other abnormal bleeding from female genital tract | genitourinary           |
| 627.1  | 9109  | 377857 | 21995 | Postmenopausal bleeding                                                         | genitourinary           |
| 627.3  | 1115  | 377857 | 29989 | Postmenopausal atrophic vaginitis                                               | genitourinary           |
| 627    | 10699 | 377857 | 20405 | Menopausal and postmenopausal disorders                                         | genitourinary           |
| 628    | 4777  | 377857 | 26327 | Ovarian cyst                                                                    | genitourinary           |
| 634.1  | 1251  | 400946 | 6764  | Missed abortion/Hydatidiform mole                                               | pregnancy complications |
| 634    | 5463  | 400946 | 2552  | Miscarriage; stillbirth                                                         | pregnancy complications |
| 635.2  | 866   | 400946 | 7149  | Antepartum hemorrhage, abruptio placentae, and placenta previa                  | pregnancy complications |
| 635.3  | 1274  | 400946 | 6741  | Placenta previa and abruptio placenta                                           | pregnancy complications |
| 635    | 2005  | 400946 | 6010  | Hemorrhage during pregnancy; childbirth and postpartum                          | pregnancy complications |
| 636.2  | 617   | 400946 | 7398  | Early onset of delivery                                                         | pregnancy complications |

|       |      |        |       |                                                                     |                         |
|-------|------|--------|-------|---------------------------------------------------------------------|-------------------------|
| 636.3 | 1083 | 400946 | 6932  | Hemorrhage in early pregnancy                                       | pregnancy complications |
| 636   | 2558 | 400946 | 5457  | Early or threatened labor; hemorrhage in early pregnancy            | pregnancy complications |
| 642   | 1114 | 407847 | 0     | Hypertension complicating pregnancy, childbirth, and the puerperium | pregnancy complications |
| 645   | 1256 | 407705 | 0     | Late pregnancy and failed induction                                 | pregnancy complications |
| 646   | 2235 | 406726 | 0     | Other complications of pregnancy NEC                                | pregnancy complications |
| 650   | 1928 | 407033 | 0     | Normal delivery                                                     | pregnancy complications |
| 652   | 1720 | 405994 | 1247  | Malposition and malpresentation of fetus or obstruction             | digestive               |
| 653   | 1404 | 405994 | 1563  | Problems associated with amniotic cavity and membranes              | pregnancy complications |
| 655   | 4325 | 404636 | 0     | Known or suspected fetal abnormality affecting management of mother | pregnancy complications |
| 661   | 2272 | 401037 | 5652  | Fetal distress and abnormal forces of labor                         | pregnancy complications |
| 663   | 533  | 401037 | 7391  | Umbilical cord complications during labor and delivery              | pregnancy complications |
| 665   | 5335 | 401037 | 2589  | Obstetrical/birth trauma                                            | pregnancy complications |
| 669   | 2559 | 401037 | 5365  | Complications of labor and delivery NEC                             | pregnancy complications |
| 681.1 | 566  | 397635 | 10760 | Cellulitis and abscess of fingers/toes                              | dermatologic            |
| 681.2 | 524  | 397635 | 10802 | Cellulitis and abscess of face/neck                                 | dermatologic            |
| 681.3 | 5539 | 397635 | 5787  | Cellulitis and abscess of arm/hand                                  | dermatologic            |
| 681.5 | 5547 | 397635 | 5779  | Cellulitis and abscess of leg, except foot                          | dermatologic            |
| 681.6 | 5502 | 397635 | 5824  | Cellulitis and abscess of foot, toe                                 | dermatologic            |
| 681.7 | 602  | 397635 | 10724 | Cellulitis and abscess of trunk                                     | dermatologic            |
| 681   | 7451 | 397635 | 3875  | Superficial cellulitis and abscess                                  | dermatologic            |
| 686.1 | 2302 | 397635 | 9024  | Carbuncle and furuncle                                              | dermatologic            |
| 686.3 | 587  | 397635 | 10739 | Pilonidal cyst                                                      | dermatologic            |
| 686   | 4520 | 397635 | 6806  | Other local infections of skin and subcutaneous tissue              | dermatologic            |

|        |      |        |       |                                                    |              |
|--------|------|--------|-------|----------------------------------------------------|--------------|
| 687.1  | 2157 | 403407 | 3397  | Rash and other nonspecific skin eruption           | dermatologic |
| 687.4  | 2900 | 403407 | 2654  | Disturbance of skin sensation                      | dermatologic |
| 687    | 5554 | 403407 | 0     | Symptoms affecting skin                            | dermatologic |
| 689    | 5782 | 403179 | 0     | Disorder of skin and subcutaneous tissue NOS       | dermatologic |
| 694.2  | 783  | 402672 | 5506  | Other dyschromia                                   | dermatologic |
| 694    | 987  | 402672 | 5302  | Dyschromia and Vitiligo                            | dermatologic |
| 695.7  | 779  | 402672 | 5510  | Prurigo and Lichen                                 | dermatologic |
| 695    | 2420 | 402672 | 3869  | Erythematous conditions                            | dermatologic |
| 696.4  | 2237 | 398199 | 8525  | Psoriasis                                          | dermatologic |
| 696.41 | 1684 | 398199 | 9078  | Psoriasis vulgaris                                 | dermatologic |
| 696.42 | 708  | 398199 | 10054 | Psoriatic arthropathy                              | dermatologic |
| 696    | 2293 | 398199 | 8469  | Psoriasis and related disorders                    | dermatologic |
| 697    | 548  | 402672 | 5741  | Sarcoidosis                                        | dermatologic |
| 698    | 783  | 408178 | 0     | Pruritus and related conditions                    | dermatologic |
| 701.2  | 2356 | 403875 | 2730  | Scar conditions and fibrosis of skin               | dermatologic |
| 701    | 4804 | 403875 | 282   | Other hypertrophic and atrophic conditions of skin | dermatologic |
| 702.1  | 2594 | 403439 | 2928  | Actinic keratosis                                  | dermatologic |
| 702.2  | 3092 | 403439 | 2430  | Seborrheic keratosis                               | dermatologic |
| 702    | 5522 | 398746 | 4693  | Degenerative skin conditions and other dermatoses  | dermatologic |
| 703.1  | 970  | 402357 | 5634  | Ingrowing nail                                     | dermatologic |
| 703    | 1287 | 402357 | 5317  | Diseases of nail, NOS                              | dermatologic |
| 704    | 5344 | 402357 | 1260  | Diseases of hair and hair follicles                | dermatologic |
| 705.8  | 592  | 399255 | 9114  | Hyperhidrosis                                      | dermatologic |
| 705    | 817  | 399255 | 8889  | Disorders of sweat glands                          | dermatologic |
| 706.2  | 8876 | 399255 | 830   | Sebaceous cyst                                     | dermatologic |
| 706    | 8948 | 399255 | 758   | Diseases of sebaceous glands                       | dermatologic |

|       |       |        |       |                                                                 |                 |
|-------|-------|--------|-------|-----------------------------------------------------------------|-----------------|
| 707.1 | 913   | 406973 | 1075  | Decubitus ulcer                                                 | dermatologic    |
| 707   | 1988  | 406973 | 0     | Chronic ulcer of skin                                           | dermatologic    |
| 709.2 | 513   | 399404 | 9044  | Sicca syndrome                                                  | dermatologic    |
| 709.7 | 2720  | 399404 | 6837  | Unspecified diffuse connective tissue disease                   | dermatologic    |
| 709   | 3463  | 399404 | 6094  | Diffuse diseases of connective tissue                           | dermatologic    |
| 710.1 | 565   | 365819 | 42577 | Osteomyelitis                                                   | musculoskeletal |
| 710   | 612   | 365819 | 42530 | Osteomyelitis, periostitis, and other infections involving bone | musculoskeletal |
| 714.1 | 4412  | 365085 | 39464 | Rheumatoid arthritis                                            | musculoskeletal |
| 714   | 4879  | 365085 | 38997 | Rheumatoid arthritis and other inflammatory polyarthropathies   | musculoskeletal |
| 715.2 | 620   | 365085 | 43256 | Ankylosing spondylitis                                          | musculoskeletal |
| 715   | 1671  | 365085 | 42205 | Other inflammatory spondylopathies                              | musculoskeletal |
| 716.1 | 3535  | 365819 | 39607 | Unspecified polyarthropathy or polyarthrits                     | musculoskeletal |
| 716.2 | 15790 | 365819 | 27352 | Unspecified monoarthritis                                       | musculoskeletal |
| 716.9 | 37043 | 365819 | 6099  | Arthropathy NOS                                                 | musculoskeletal |
| 716   | 38715 | 365819 | 4427  | Other arthropathies                                             | musculoskeletal |
| 717   | 1152  | 407809 | 0     | Polymyalgia Rheumatica                                          | musculoskeletal |
| 720   | 3733  | 391917 | 13311 | Spinal stenosis                                                 | musculoskeletal |
| 721.1 | 5077  | 391917 | 11967 | Spondylosis without myelopathy                                  | musculoskeletal |
| 721   | 7930  | 391917 | 9114  | Spondylosis and allied disorders                                | musculoskeletal |
| 722.1 | 513   | 391917 | 16531 | Displacement of intervertebral disc                             | musculoskeletal |
| 722.6 | 2846  | 391917 | 14198 | Degeneration of intervertebral disc                             | musculoskeletal |
| 722.9 | 4434  | 391917 | 12610 | Other and unspecified disc disorder                             | musculoskeletal |
| 722   | 9241  | 391917 | 7803  | Intervertebral disc disorders                                   | musculoskeletal |
| 723   | 521   | 391917 | 16523 | Other disorders of cervical region                              | musculoskeletal |

|        |       |        |       |                                                    |                 |
|--------|-------|--------|-------|----------------------------------------------------|-----------------|
| 724.9  | 1617  | 391917 | 15427 | Other unspecified back disorders                   | musculoskeletal |
| 724    | 2077  | 391917 | 14967 | Other and unspecified disorders of back            | musculoskeletal |
| 726.1  | 9668  | 378711 | 20582 | Enthesopathy                                       | musculoskeletal |
| 726.3  | 858   | 378711 | 29392 | Bursitis                                           | musculoskeletal |
| 726    | 14983 | 378711 | 15267 | Peripheral enthesopathies and allied syndromes     | musculoskeletal |
| 727.1  | 2754  | 378711 | 27496 | Synovitis and tenosynovitis                        | musculoskeletal |
| 727.4  | 3185  | 378711 | 27065 | Ganglion and cyst of synovium, tendon, and bursa   | musculoskeletal |
| 727.5  | 593   | 378711 | 29657 | Rupture of synovium                                | musculoskeletal |
| 727    | 7629  | 378711 | 22621 | Other disorders of synovium, tendon, and bursa     | musculoskeletal |
| 728.7  | 3843  | 378711 | 26407 | Fasciitis                                          | musculoskeletal |
| 728.71 | 3503  | 378711 | 26747 | Contracture of palmar fascia [Dupuytren's disease] | musculoskeletal |
| 728    | 4488  | 378711 | 25762 | Disorders of muscle, ligament, and fascia          | musculoskeletal |
| 729.1  | 1010  | 378711 | 29240 | Rheumatism, unspecified and fibrositis             | musculoskeletal |
| 729    | 6170  | 378711 | 24080 | Other disorders of soft tissues                    | musculoskeletal |
| 733.4  | 542   | 391041 | 17378 | Aseptic necrosis of bone                           | musculoskeletal |
| 733.8  | 1268  | 391041 | 16652 | Malunion and nonunion of fracture                  | musculoskeletal |
| 733    | 3773  | 391041 | 14147 | Other disorders of bone and cartilage              | musculoskeletal |
| 735.2  | 5144  | 394914 | 8903  | Acquired toe deformities                           | musculoskeletal |
| 735.21 | 1939  | 394914 | 12108 | Hammer toe (acquired)                              | musculoskeletal |
| 735.23 | 1561  | 394914 | 12486 | Hallux rigidus                                     | musculoskeletal |
| 735.3  | 6699  | 394914 | 7348  | Hallux valgus (Bunion)                             | musculoskeletal |
| 735    | 9865  | 394914 | 4182  | Acquired foot deformities                          | musculoskeletal |
| 736    | 1649  | 394914 | 12398 | Other acquired deformities of limbs                | musculoskeletal |
| 737.3  | 1063  | 394914 | 12984 | Kyphoscoliosis and scoliosis                       | musculoskeletal |
| 737    | 1134  | 394914 | 12913 | Curvature of spine                                 | musculoskeletal |
| 738.4  | 1521  | 394914 | 12526 | Acquired spondylolisthesis                         | musculoskeletal |

|        |       |        |       |                                                    |                      |
|--------|-------|--------|-------|----------------------------------------------------|----------------------|
| 738    | 1921  | 394914 | 12126 | Other acquired musculoskeletal deformity           | musculoskeletal      |
| 740.1  | 17691 | 380522 | 10748 | Osteoarthritis; localized                          | musculoskeletal      |
| 740.11 | 9069  | 380522 | 19370 | Osteoarthritis, localized, primary                 | musculoskeletal      |
| 740.2  | 599   | 380522 | 27840 | Osteoarthritis, generalized                        | musculoskeletal      |
| 740.9  | 12436 | 380522 | 16003 | Osteoarthritis NOS                                 | musculoskeletal      |
| 740    | 28439 | 380522 | 0     | Osteoarthritis                                     | musculoskeletal      |
| 741.2  | 615   | 402633 | 5713  | Stiffness of joint                                 | musculoskeletal      |
| 741.4  | 1425  | 402633 | 4903  | Joint effusions                                    | musculoskeletal      |
| 741    | 3634  | 402633 | 2694  | Symptoms and disorders of the joints               | musculoskeletal      |
| 742.9  | 2000  | 402633 | 4328  | Other derangement of joint                         | musculoskeletal      |
| 742    | 2913  | 402633 | 3415  | Derangement of joint, non-traumatic                | musculoskeletal      |
| 743.1  | 6484  | 401279 | 1198  | Osteoporosis                                       | musculoskeletal      |
| 743.11 | 5622  | 401279 | 2060  | Osteoporosis NOS                                   | musculoskeletal      |
| 743.13 | 532   | 401279 | 7150  | Other specified osteoporosis                       | musculoskeletal      |
| 743.2  | 514   | 401279 | 7168  | Pathologic fracture                                | musculoskeletal      |
| 743.9  | 820   | 401279 | 6862  | Osteopenia or other disorder of bone and cartilage | musculoskeletal      |
| 743    | 7682  | 401279 | 0     | Osteoporosis, osteopenia and pathological fracture | musculoskeletal      |
| 745    | 8037  | 400924 | 0     | Pain in joint                                      | musculoskeletal      |
| 747.1  | 2618  | 406165 | 178   | Cardiac congenital anomalies                       | congenital anomalies |
| 747.11 | 586   | 406165 | 2210  | Cardiac shunt/ heart septal defect                 | congenital anomalies |
| 747.13 | 1799  | 406165 | 997   | Congenital anomalies of great vessels              | congenital anomalies |
| 747    | 2796  | 406165 | 0     | Cardiac and circulatory congenital anomalies       | congenital anomalies |
| 750    | 703   | 406730 | 1528  | Digestive congenital anomalies                     | congenital anomalies |
| 751.1  | 732   | 406730 | 1499  | Congenital anomalies of genital organs             | congenital anomalies |
| 751.2  | 855   | 406730 | 1376  | Congenital anomalies of urinary system             | congenital anomalies |
| 751    | 1596  | 406730 | 635   | Genitourinary congenital anomalies                 | congenital anomalies |

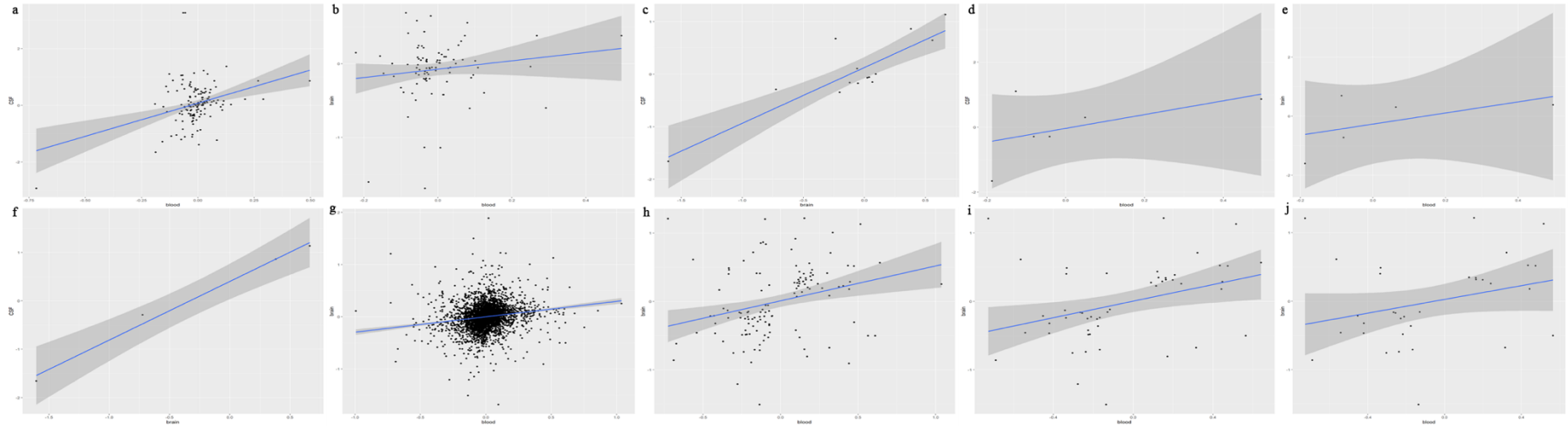
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|-------|-------|--------|------|-------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 756   | 594   | 407831 | 536  | Other congenital musculoskeletal anomalies                                                                              | congenital anomalies  |
| 760   | 11274 | 397687 | 0    | Back pain                                                                                                               | symptoms              |
| 761   | 1796  | 407165 | 0    | Cervicalgia                                                                                                             | symptoms              |
| 764   | 2383  | 405481 | 1097 | Sciatica                                                                                                                | symptoms              |
| 766   | 1181  | 405481 | 2299 | Neuralgia, neuritis, and radiculitis NOS                                                                                | symptoms              |
| 770   | 642   | 408319 | 0    | Myalgia and myositis unspecified                                                                                        | symptoms              |
| 771.1 | 4663  | 403468 | 830  | Swelling of limb                                                                                                        | symptoms              |
| 771   | 5493  | 403468 | 0    | Musculoskeletal symptoms referable to limbs                                                                             | symptoms              |
| 772   | 698   | 408263 | 0    | Symptoms of the muscles                                                                                                 | symptoms              |
| 773   | 6327  | 402634 | 0    | Pain in limb                                                                                                            | symptoms              |
| 781   | 1886  | 407075 | 0    | Symptoms involving nervous and musculoskeletal systems                                                                  | symptoms              |
| 782.3 | 1648  | 407145 | 168  | Edema                                                                                                                   | symptoms              |
| 782   | 1816  | 407145 | 0    | Symptoms involving skin and other integumentary tissue                                                                  | symptoms              |
| 783   | 3940  | 405021 | 0    | Fever of unknown origin                                                                                                 | symptoms              |
| 785   | 41316 | 367645 | 0    | Abdominal pain                                                                                                          | symptoms              |
| 788   | 9163  | 399798 | 0    | Syncope and collapse                                                                                                    | symptoms              |
| 789   | 11706 | 397255 | 0    | Nausea and vomiting                                                                                                     | symptoms              |
| 790.6 | 6413  | 402342 | 206  | Other abnormal blood chemistry                                                                                          | symptoms              |
| 790   | 6619  | 402342 | 0    | Nonspecific findings on examination of blood                                                                            | symptoms              |
| 791   | 550   | 408411 | 0    | Gangrene                                                                                                                | symptoms              |
| 793.2 | 567   | 408263 | 131  | Nonspecific abnormal findings on radiological and other examination of other intrathoracic organs (echocardiogram, etc) | circulatory system    |
| 793   | 698   | 408263 | 0    | Nonspecific abnormal findings on radiological and other examination of musculoskeletal system                           | injuries & poisonings |

|       |       |        |       |                                                                    |                       |
|-------|-------|--------|-------|--------------------------------------------------------------------|-----------------------|
| 798.1 | 593   | 405532 | 2836  | Chronic fatigue syndrome                                           | symptoms              |
| 798   | 3429  | 405532 | 0     | Malaise and fatigue                                                | symptoms              |
| 800.1 | 1814  | 387765 | 19382 | Fracture of neck of femur                                          | injuries & poisonings |
| 800.3 | 2162  | 387765 | 19034 | Fracture of tibia and fibula                                       | injuries & poisonings |
| 800.4 | 768   | 387765 | 20428 | Fracture of patella                                                | injuries & poisonings |
| 800   | 7251  | 387765 | 13945 | Fracture of lower limb                                             | injuries & poisonings |
| 801.1 | 1842  | 387765 | 19354 | Fracture of foot                                                   | injuries & poisonings |
| 801   | 2339  | 387765 | 18857 | Fracture of ankle and foot                                         | injuries & poisonings |
| 802   | 722   | 387765 | 20474 | Fracture of pelvis                                                 | injuries & poisonings |
| 803.1 | 1692  | 387765 | 19504 | Fracture of humerus                                                | injuries & poisonings |
| 803.2 | 5246  | 387765 | 15950 | Fracture of radius and ulna                                        | injuries & poisonings |
| 803.3 | 1521  | 387765 | 19675 | Fracture of clavicle or scapula                                    | injuries & poisonings |
| 803   | 8521  | 387765 | 12675 | Fracture of upper limb                                             | injuries & poisonings |
| 804   | 3357  | 387765 | 17839 | Fracture of hand or wrist                                          | injuries & poisonings |
| 805   | 1352  | 387765 | 19844 | Fracture of vertebral column without mention of spinal cord injury | injuries & poisonings |
| 807   | 775   | 387765 | 20421 | Fracture of ribs                                                   | injuries & poisonings |
| 809   | 1304  | 387765 | 19892 | Fracture of unspecified bones                                      | injuries & poisonings |
| 818   | 508   | 405554 | 2899  | Intracranial hemorrhage (injury)                                   | injuries & poisonings |
| 819   | 2957  | 405554 | 450   | Skull and face fracture and other intracranial injury              | injuries & poisonings |
| 823   | 1674  | 385157 | 22130 | Torus fracture                                                     | injuries & poisonings |
| 830   | 2094  | 391457 | 15410 | Dislocation                                                        | injuries & poisonings |
| 835   | 15430 | 391457 | 2074  | Internal derangement of knee                                       | injuries & poisonings |
| 836   | 528   | 391457 | 16976 | Traumatic arthropathy                                              | injuries & poisonings |
| 850   | 5329  | 394929 | 8703  | Hemorrhage or hematoma complicating a procedure                    | injuries & poisonings |
| 853   | 502   | 394929 | 13530 | Complication of colostomy or enterostomy                           | injuries & poisonings |

|       |       |        |       |                                                                                          |                       |
|-------|-------|--------|-------|------------------------------------------------------------------------------------------|-----------------------|
| 854   | 1789  | 394929 | 12243 | Complications of cardiac/vascular device, implant, and graft                             | injuries & poisonings |
| 857   | 1241  | 394929 | 12791 | Mechanical complication of unspecified genitourinary device, implant, and graft          | injuries & poisonings |
| 858   | 3167  | 394929 | 10865 | Complication of internal orthopedic device                                               | injuries & poisonings |
| 859   | 3265  | 394929 | 10767 | Complication due to other implant and internal device                                    | injuries & poisonings |
| 870.3 | 2919  | 400426 | 5616  | Other open wound of head and face                                                        | injuries & poisonings |
| 870   | 3837  | 400426 | 4698  | Open wounds of head; neck; and trunk                                                     | injuries & poisonings |
| 871   | 4219  | 400426 | 4316  | Open wounds of extremities                                                               | injuries & poisonings |
| 907   | 1315  | 407496 | 150   | Injuries to the nervous system                                                           | injuries & poisonings |
| 915   | 4289  | 403595 | 1077  | Superficial injury without mention of infection                                          | injuries & poisonings |
| 916   | 1486  | 407475 | 0     | Contusion                                                                                | injuries & poisonings |
| 939   | 2110  | 404817 | 2034  | Atopic/contact dermatitis due to other or unspecified                                    | dermatologic          |
| 946   | 548   | 404817 | 3596  | Anaphylactic shock NOS                                                                   | injuries & poisonings |
| 960.2 | 16090 | 381797 | 11074 | Allergy/adverse effect of penicillin                                                     | injuries & poisonings |
| 960   | 18430 | 381797 | 8734  | Poisoning by antibiotics                                                                 | injuries & poisonings |
| 961.1 | 874   | 381797 | 26290 | Poisoning/allergy of sulfonamides                                                        | injuries & poisonings |
| 961   | 1256  | 381797 | 25908 | Poisoning by other anti-infectives                                                       | injuries & poisonings |
| 965.1 | 1150  | 381797 | 26014 | Opiates and related narcotics causing adverse effects in therapeutic use                 | injuries & poisonings |
| 965   | 6910  | 381797 | 20254 | Poisoning by analgesics, antipyretics, and antirheumatics                                | injuries & poisonings |
| 966   | 509   | 381797 | 26655 | Poisoning by anticonvulsants and anti-Parkinsonism drugs                                 | injuries & poisonings |
| 967   | 588   | 381797 | 26576 | Adverse effects of sedatives or other central nervous system depressants and anesthetics | injuries & poisonings |
| 969   | 1940  | 381797 | 25224 | Poisoning by psychotropic agents                                                         | injuries & poisonings |

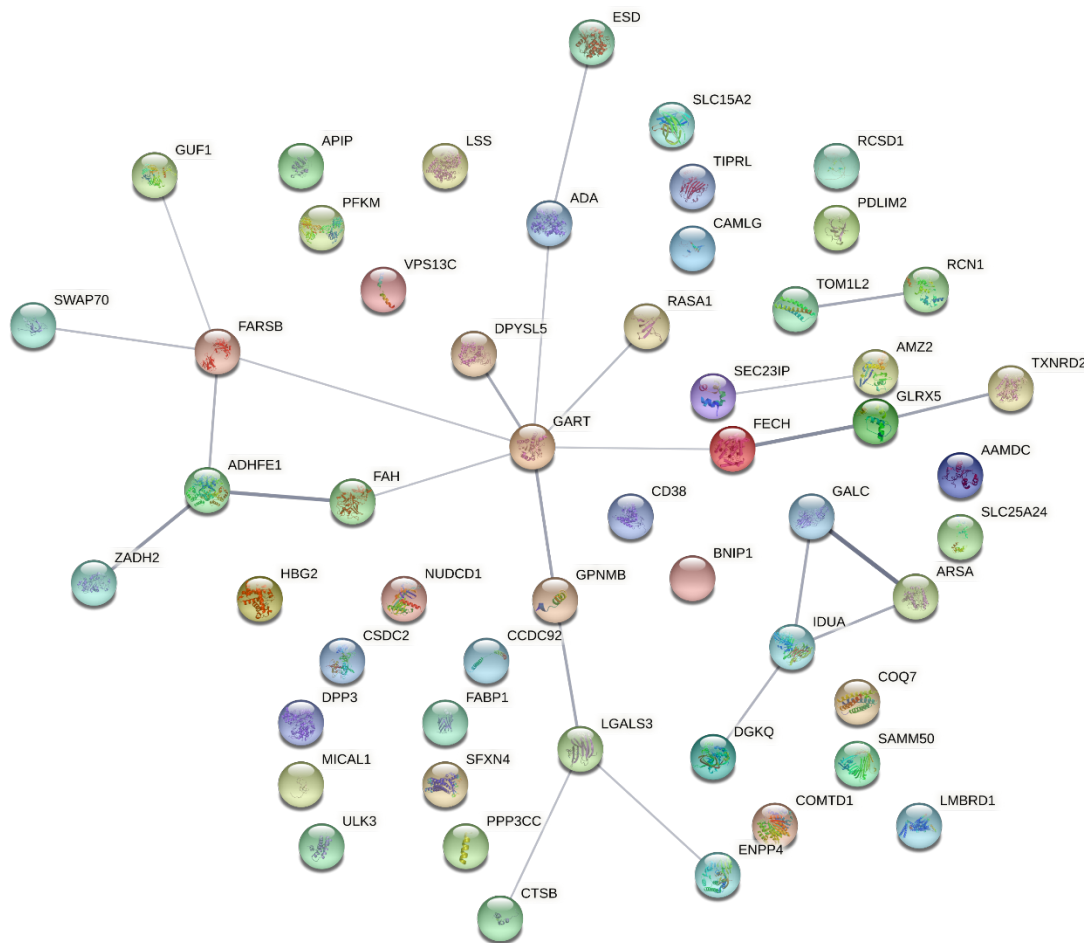
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|-------|------|--------|-------|----------------------------------------|-----------------------|
| 979   | 695  | 381797 | 26469 | Adverse drug events and drug allergies | injuries & poisonings |
| 990   | 3130 | 403295 | 2536  | Effects radiation NOS                  | injuries & poisonings |
| 994.2 | 2811 | 406150 | 0     | Sepsis                                 | infectious diseases   |
| 994   | 2811 | 406150 | 0     | Sepsis and SIRS                        | infectious diseases   |

**Supplementary Figure 1** The Pearson correlation analysis among different tissues.



**a:** The correlation analysis for the MR effects between brain proteins and CSF proteins (No p-value threshold, Pearson correlation = 0.8745, p-value = 4.28e-05, number of genes = 14). **b:** The correlation analysis for the MR effects between brain proteins and CSF proteins when limited p-value threshold to 0.05 (Pearson correlation = 0.9946, p-value = 0.0053, number of genes = 4). **c-d:** **c,** The MR effects between blood proteins and CSF proteins showed a robust positive correlation at no p-value threshold (Pearson correlation = 0.3311, p-value = 4.19e-05, number of genes = 147), **d,** while increasing the p-value threshold to  $p < 0.05$  led to no correlation (p-value = 0.2835, number of genes = 6); **e-f:** the MR effects between blood proteins and brain proteins showed no correlation both at no p-value threshold (**e**) and 0.05 threshold (**f**). **g-j:** At the transcriptional level, we found a robust positive correlation between the brain and blood MR effects (**g**, No p value threshold, Pearson correlation = 0.167, p-value < 2.2e-16, number of genes = 4283). Increasing the p-value threshold resulted in a still robust and higher correlation (**h**,  $p < 0.05$  threshold: Pearson correlation = 0.286, p-value = 0.001, number of genes = 126; **i**,  $p < 0.01$  threshold: Pearson correlation = 0.349, p-value = 0.012, number of genes = 50; **j**,  $p < 0.005$  threshold: Pearson correlation = 0.287, p-value = 0.005, number of genes = 34) between brain and blood eQTL.

**Supplementary Figure 2** The Protein-protein interaction network using proteins suggestive to be causal for PD from brain.



Note:

number of nodes:

53

number of edges:

24

average node degree:

0.906

avg. local clustering coefficient:

0.308

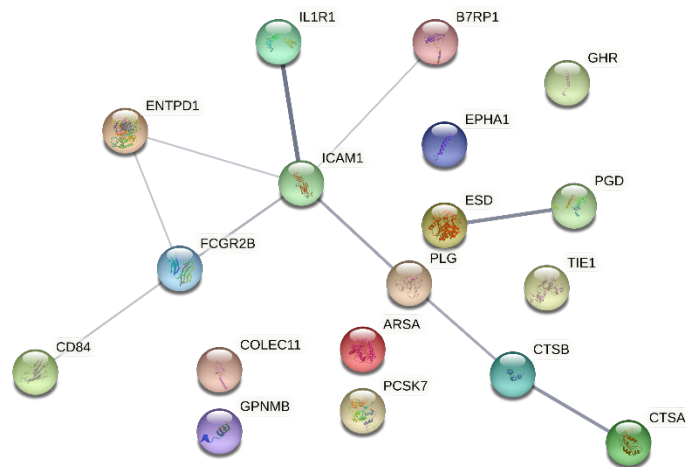
expected number of edges:

9

PPI enrichment p-value:

3.43e-05

**Supplementary Figure 3** The Protein-protein interaction network using proteins suggestive to be causal for PD from CSF.



Note:

number of nodes:

18

number of edges:

10

average node degree:

1.11

avg. local clustering coefficient:

0.413

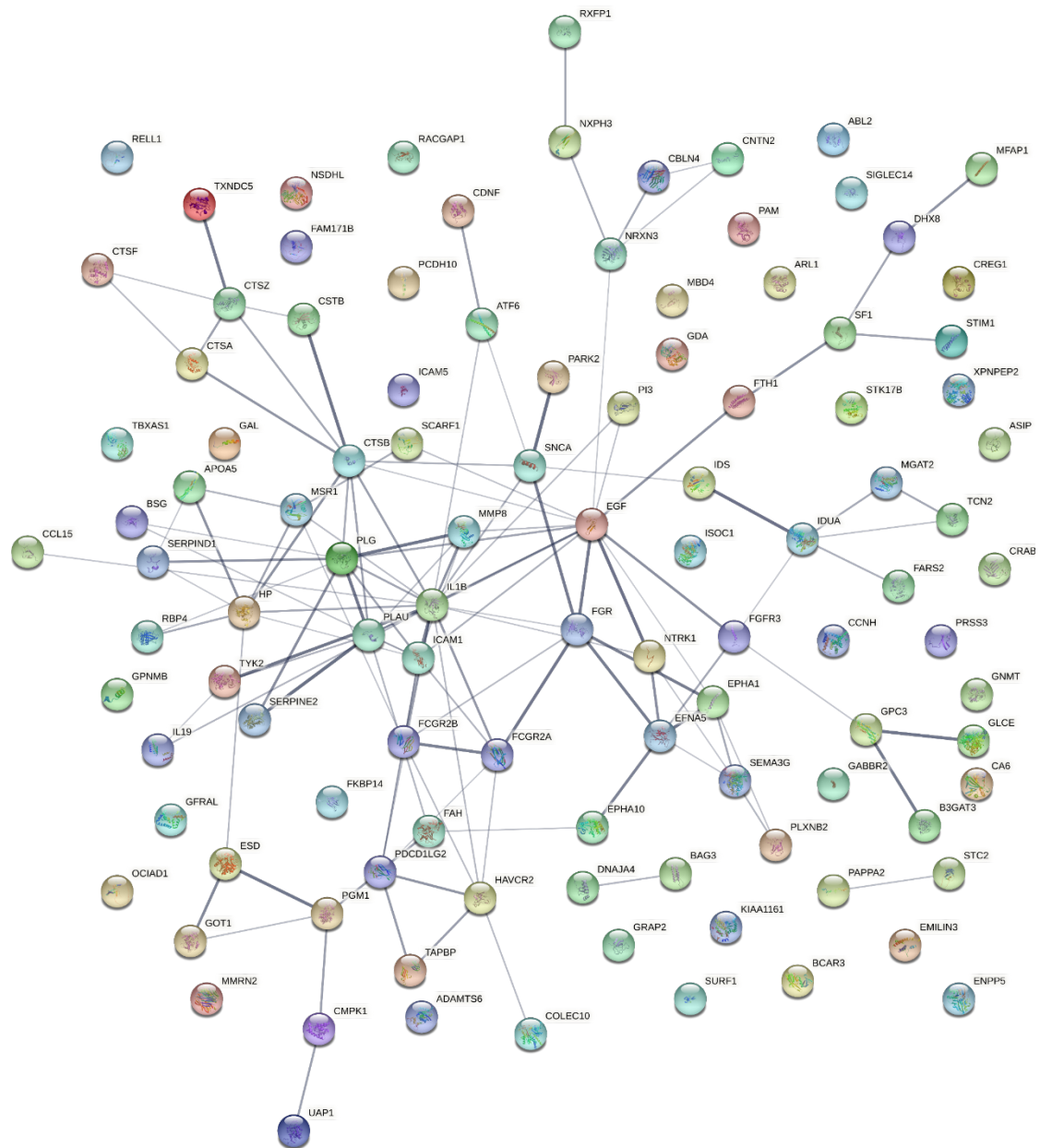
expected number of edges:

2

PPI enrichment p-value:

4.48e-05

**Supplementary Figure 4** The Protein-protein interaction network using proteins suggestive to be causal for PD from blood.



Note:

number of nodes:107

number of edges:127

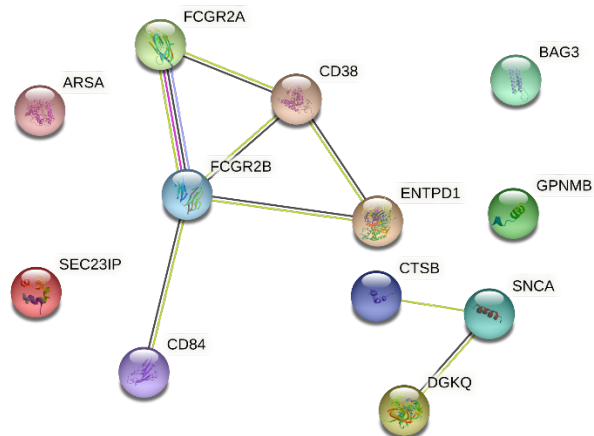
average node degree:2.37

avg. local clustering coefficient:0.378

expected number of edges:57

PPI enrichment p-value:1.44e-15

**Supplementary Figure 5** The Protein-protein interaction network using MR-identified proteins passed multiple correction.



Note:

number of nodes:

12

number of edges:

8

average node degree:

1.33

avg. local clustering coefficient:

0.5

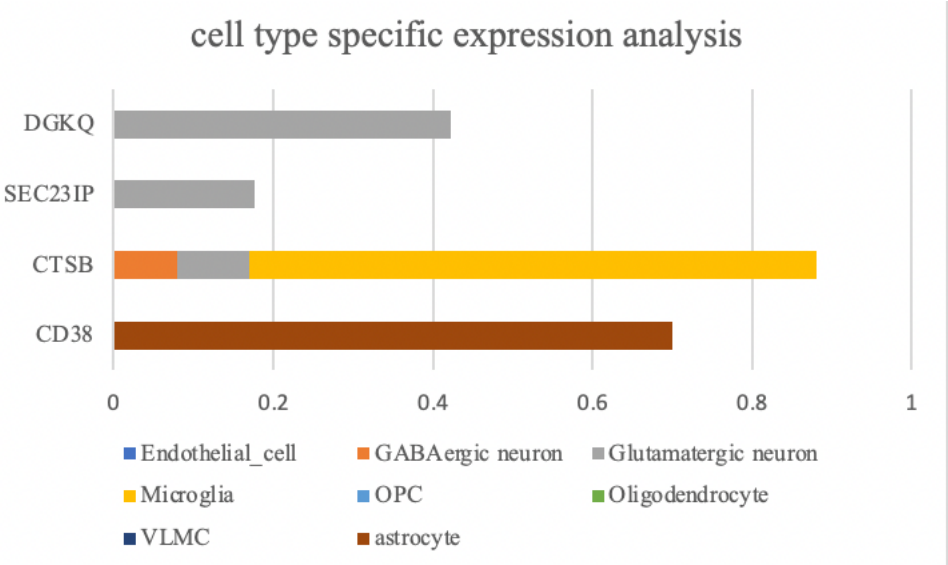
expected number of edges:

1

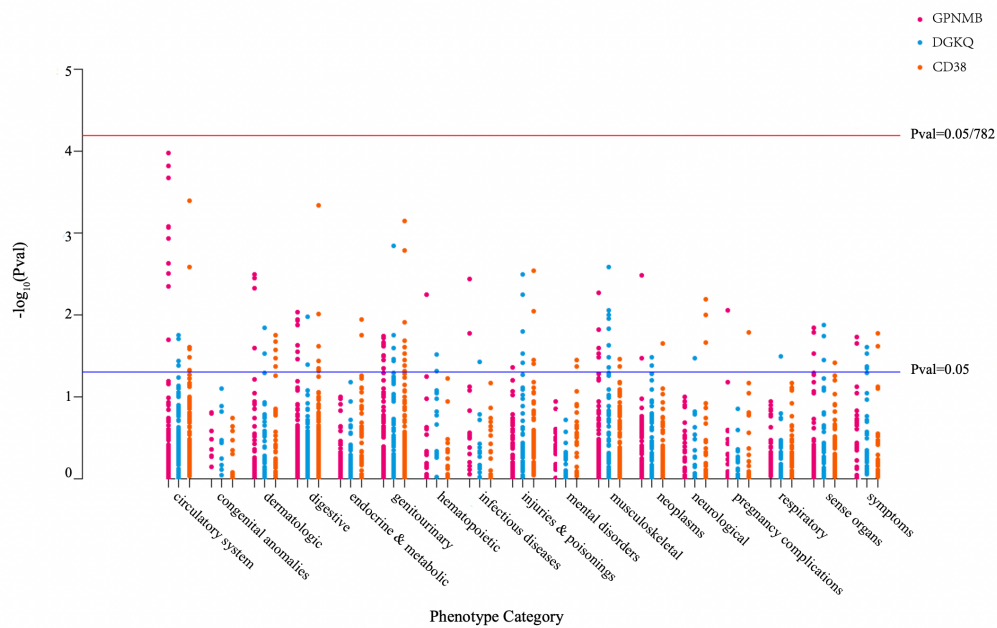
PPI enrichment p-value:

0.000108

**Supplementary Figure 6:** Cell type specific expression analysis.



**Supplementary Figure 7: Results of phenome-wide MR.**



As our previous study, in order to assess the potential side effects of therapeutic targets, we utilized therapeutic target gene expression in the brain as the exposure factor and summary statistics of diseases in the UK Biobank cohort ( $n \leq 408\,961$ ) as the outcomes for conducting phenome-wide MR. Causal effects are considered statistically significant when  $p < 0.05/782$  (after applying Bonferroni correction).

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