

**Supplemental Table 4** Risk associated variance and the results of meta-analysis

| SNP         | dbSNP      | A1 | A2 | A1 Freq | FreqSE | Outcome       | Analysis           | N    | Beta   | SE    | 95% CI               | Isg   | Qtest | p        | p<0.05 | p<0.05/25 | p<0.05/88 | p<0.05/2022 | NearGene |         |
|-------------|------------|----|----|---------|--------|---------------|--------------------|------|--------|-------|----------------------|-------|-------|----------|--------|-----------|-----------|-------------|----------|---------|
| 1:155135036 | rs35749011 | a  | g  | 0.0291  | 0.0119 | COGI          | COGI_surv          | 2244 | 0.895  | 0.203 | 2.45 [-1.64, 3.65]   | 0.00  | 0.794 | 1.06E-05 | 1      | 1         | 1         | 1           | 1        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0259  | 0.0067 | MOCA          | MOCA_cont          | 1074 | -1.164 | 0.373 | -1.16 [-1.89, -0.43] | 0.00  | 0.490 | 1.80E-03 | 1      | 1         | 1         | 1           | 1        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0310  | 0.0131 | COGI          | COGI_base          | 2859 | 0.678  | 0.220 | 1.97 [1.28, 3.03]    | 0.00  | 0.848 | 2.02E-03 | 1      | 1         | 1         | 1           | 1        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0289  | 0.0113 | HY            | HY_cont            | 3627 | 0.076  | 0.028 | 0.08 [0.02, 0.13]    | 0.00  | 0.531 | 7.10E-03 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0263  | 0.0080 | SEADL         | SEADL_cont         | 2218 | -1.641 | 0.748 | -1.64 [-3.11, -0.18] | 0.00  | 0.441 | 2.82E-02 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0223  | 0.0076 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.212  | 0.099 | 0.21 [0.02, 0.41]    | 0.00  | 0.879 | 3.32E-02 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0288  | 0.0156 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.643  | 0.307 | 1.90 [1.04, 3.47]    | 25.50 | 0.261 | 3.66E-02 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0265  | 0.0099 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.153  | 0.076 | 0.15 [0.00, 0.30]    | 0.00  | 0.855 | 4.50E-02 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0274  | 0.0139 | INS           | INS_base           | 2103 | 0.364  | 0.218 | 1.44 [0.94, 2.21]    | 0.00  | 0.493 | 9.48E-02 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0230  | 0.0075 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.157  | 0.099 | 0.16 [-0.04, 0.35]   | 0.00  | 0.704 | 1.15E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0346  | 0.0161 | HY3           | HY3_base           | 1289 | 0.440  | 0.315 | 1.55 [0.84, 2.88]    | 0.00  | 0.469 | 1.63E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0238  | 0.0119 | MMSE          | MMSE_cont          | 2114 | -0.211 | 0.155 | -0.21 [-0.52, 0.09]  | 0.00  | 0.850 | 1.74E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0244  | 0.0075 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.116  | 0.085 | 0.12 [-0.05, 0.28]   | 12.20 | 0.335 | 1.76E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0332  | 0.0158 | DEPR          | DEPR_surv          | 1314 | 0.301  | 0.229 | 1.35 [0.86, 2.12]    | 38.30 | 0.150 | 1.89E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0267  | 0.0092 | HY3           | HY3_surv           | 2582 | 0.212  | 0.192 | 1.24 [0.85, 1.80]    | 4.00  | 0.402 | 2.70E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0297  | 0.0140 | SLEEP         | SLEEP_base         | 1724 | 0.245  | 0.237 | 1.28 [0.80, 2.03]    | 7.00  | 0.375 | 3.00E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0298  | 0.0139 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.247  | 0.250 | 1.28 [0.78, 2.09]    | 0.00  | 0.619 | 3.25E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0254  | 0.0088 | DYSKINESIAS   | DYSKINESIAS_surv   | 1656 | 0.170  | 0.183 | 1.19 [0.83, 1.70]    | 0.00  | 0.956 | 3.51E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0292  | 0.0137 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.198  | 0.245 | 1.22 [0.75, 1.97]    | 0.00  | 0.657 | 4.19E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0243  | 0.0081 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.067  | 0.084 | 0.07 [-0.10, 0.23]   | 29.60 | 0.213 | 4.28E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0235  | 0.0058 | SEADL70       | SEADL70_surv       | 1277 | 0.203  | 0.292 | 1.23 [0.69, 2.17]    | 0.00  | 0.567 | 4.86E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0273  | 0.0082 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.034  | 0.153 | 1.03 [0.77, 1.40]    | 0.00  | 0.813 | 8.24E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0298  | 0.0145 | CONST         | CONST_base         | 1472 | 0.040  | 0.238 | 1.04 [0.65, 1.66]    | 0.00  | 0.729 | 8.65E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 1:155135036 | rs35749011 | a  | g  | 0.0268  | 0.0132 | DEPR          | DEPR_base          | 1870 | -0.003 | 0.302 | 1.00 [0.55, 1.80]    | 0.00  | 0.724 | 9.92E-01 | 1      | 1         | 1         | 1           | 0        | KRTCAP2 |
| 2:18147848  | rs76116224 | a  | t  | 0.9045  | 0.0153 | SLEEP         | SLEEP_base         | 1033 | -0.765 | 0.195 | 0.47 [0.32, 0.68]    | 0.00  | 0.453 | 8.41E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9038  | 0.0145 | HY            | HY_cont            | 2574 | -0.048 | 0.021 | -0.05 [-0.09, -0.01] | 0.00  | 0.513 | 2.11E-02 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9132  | 0.0094 | SEADL70       | SEADL70_surv       | 1100 | -0.357 | 0.218 | 0.70 [0.46, 1.07]    | 0.00  | 0.702 | 1.01E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9049  | 0.0148 | INS           | INS_base           | 1529 | -0.207 | 0.162 | 0.81 [0.59, 1.12]    | 45.70 | 0.101 | 2.01E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.8977  | 0.0094 | UPDRS3_scaled | UPDRS3_scaled_cont | 1389 | -0.089 | 0.073 | -0.09 [-0.23, 0.05]  | 55.80 | 0.060 | 2.22E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.8983  | 0.0131 | UPDRS4_scaled | UPDRS4_scaled_cont | 1091 | 0.091  | 0.081 | 0.09 [-0.07, 0.25]   | 0.00  | 0.425 | 2.59E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9010  | 0.0112 | COGI          | COGI_base          | 2369 | -0.205 | 0.184 | 0.81 [0.57, 1.17]    | 0.00  | 0.708 | 2.63E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9062  | 0.0130 | HY3           | HY3_surv           | 1991 | -0.138 | 0.126 | 0.87 [0.68, 1.12]    | 49.40 | 0.065 | 2.74E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.8983  | 0.0135 | UPDRS1_scaled | UPDRS1_scaled_cont | 1092 | -0.107 | 0.102 | -0.11 [-0.31, 0.09]  | 39.80 | 0.173 | 2.91E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9053  | 0.0186 | UPDRS_scaled  | UPDRS_scaled_cont  | 1941 | -0.065 | 0.064 | -0.06 [-0.19, 0.06]  | 36.20 | 0.152 | 3.14E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9117  | 0.0128 | COGI          | COGI_surv          | 1672 | 0.111  | 0.181 | 1.12 [0.78, 1.59]    | 0.00  | 0.590 | 5.38E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9036  | 0.0090 | DYSKINESIAS   | DYSKINESIAS_surv   | 1115 | 0.089  | 0.161 | 1.09 [0.80, 1.50]    | 0.00  | 0.475 | 5.79E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9039  | 0.0126 | DEPR          | DEPR_base          | 1119 | -0.110 | 0.244 | 0.90 [0.56, 1.44]    | 0.00  | 0.713 | 6.53E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9132  | 0.0180 | SEADL         | SEADL_cont         | 1200 | 0.271  | 0.623 | 0.27 [-0.95, 1.49]   | 0.00  | 0.501 | 6.64E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9205  | 0.0174 | MMSE          | MMSE_cont          | 1565 | 0.046  | 0.109 | 0.05 [-0.17, 0.26]   | 0.00  | 0.984 | 6.70E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.8996  | 0.0128 | UPDRS2_scaled | UPDRS2_scaled_cont | 1087 | 0.032  | 0.100 | 0.03 [-0.17, 0.23]   | 0.00  | 0.648 | 7.53E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 2:18147848  | rs76116224 | a  | t  | 0.9019  | 0.0077 | MOTORFLUX     | MOTORFLUX_base     | 1112 | -0.045 | 0.218 | 0.96 [0.62, 1.46]    | 0.00  | 0.684 | 8.36E-01 | 1      | 1         | 1         | 1           | 0        | KCN53   |
| 12:40614434 | rs76904798 | t  | c  | 0.1552  | 0.0187 | HY3           | HY3_surv           | 2582 | 0.281  | 0.078 | 1.32 [1.14, 1.54]    | 17.90 | 0.283 | 3.01E-04 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1450  | 0.0114 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.179  | 0.078 | 1.20 [1.03, 1.39]    | 0.00  | 0.456 | 2.12E-02 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1553  | 0.0172 | MMSE          | MMSE_cont          | 2114 | 0.139  | 0.060 | 0.14 [0.02, 0.26]    | 0.00  | 0.936 | 2.12E-02 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1460  | 0.0158 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.207  | 0.115 | 1.23 [0.98, 1.54]    | 0.00  | 0.566 | 7.05E-02 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1522  | 0.0165 | HY            | HY_cont            | 3627 | 0.020  | 0.012 | 0.02 [-0.00, 0.04]   | 14.40 | 0.303 | 1.02E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1458  | 0.0153 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.064 | 0.040 | -0.06 [-0.14, 0.01]  | 0.00  | 0.657 | 1.05E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1472  | 0.0206 | MOCA          | MOCA_cont          | 1074 | 0.268  | 0.166 | 0.27 [-0.06, 0.59]   | 33.90 | 0.209 | 1.07E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1540  | 0.0259 | COGI          | COGI_surv          | 2244 | -0.145 | 0.104 | 0.87 [0.71, 1.06]    | 0.00  | 0.792 | 1.64E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1508  | 0.0123 | DEPR          | DEPR_surv          | 1314 | -0.122 | 0.108 | 0.88 [0.72, 1.09]    | 0.00  | 0.485 | 2.59E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1521  | 0.0119 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.120  | 0.110 | 1.13 [0.91, 1.40]    | 18.80 | 0.295 | 2.76E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1479  | 0.0189 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.060  | 0.066 | 0.06 [0.93, 1.21]    | 0.00  | 0.513 | 3.68E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1453  | 0.0158 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.032 | 0.040 | -0.03 [-0.11, 0.05]  | 0.00  | 0.484 | 4.16E-01 | 1      | 1         | 1         | 1           | 0        | LRRK2   |
| 12:40614434 | rs76904798 | t  | c  | 0.1569  | 0.0225 | INS           | INS_surv           |      |        |       |                      |       |       |          |        |           |           |             |          |         |



|            |            |   |   |        |        |               |                    |      |        |       |       |                |       |       |          |   |   |   |   |         |
|------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|-------|----------------|-------|-------|----------|---|---|---|---|---------|
| 6:72487762 | rs12528068 | t | c | 0.2920 | 0.0195 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.003  | 0.028 | 0.00  | [-0.05, 0.06]  | 54.30 | 0.053 | 9.21E-01 | 0 | 0 | 0 | 0 | RIMS1   |
| 6:72487762 | rs12528068 | t | c | 0.2906 | 0.0097 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.008 | 0.092 | 0.99  | [0.83, 1.19]   | 0.00  | 0.591 | 9.33E-01 | 0 | 0 | 0 | 0 | RIMS1   |
| 6:72487762 | rs12528068 | t | c | 0.2937 | 0.0136 | INS           | INS_base           | 2220 | -0.002 | 0.078 | 1.00  | [0.86, 1.16]   | 22.60 | 0.250 | 9.80E-01 | 0 | 0 | 0 | 0 | RIMS1   |
| 1:23266461 | rs10797576 | t | c | 0.1416 | 0.0080 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.337  | 0.114 | 1.40  | [1.12, 1.75]   | 0.00  | 0.943 | 3.01E-03 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1371 | 0.0119 | COGI          | COGI_base          | 2859 | 0.349  | 0.118 | 1.42  | [1.12, 1.79]   | 4.40  | 0.396 | 3.16E-03 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1482 | 0.0136 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.189  | 0.080 | 1.21  | [1.03, 1.41]   | 0.00  | 0.640 | 1.75E-02 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1408 | 0.0148 | MOCA          | MOCA_cont          | 1074 | -0.383 | 0.175 | -0.38 | [-0.73, -0.04] | 0.00  | 0.762 | 2.88E-02 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1390 | 0.0144 | CONST         | CONST_base         | 1472 | 0.152  | 0.122 | 1.16  | [0.92, 1.48]   | 0.00  | 0.566 | 2.14E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1381 | 0.0178 | SLEEP         | SLEEP_base         | 1724 | 0.133  | 0.121 | 1.14  | [0.90, 1.45]   | 0.00  | 0.546 | 2.70E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1479 | 0.0182 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.035  | 0.035 | 0.03  | [-0.03, 0.10]  | 0.00  | 0.591 | 3.28E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1399 | 0.0034 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.119 | 0.146 | 0.89  | [0.67, 1.18]   | 0.00  | 0.996 | 4.14E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1379 | 0.0037 | HY3           | HY3_base           | 1289 | -0.136 | 0.173 | 0.87  | [0.62, 1.23]   | 34.00 | 0.220 | 4.31E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1360 | 0.0210 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.023  | 0.034 | 0.02  | [-0.04, 0.09]  | 0.00  | 0.944 | 5.00E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1361 | 0.0217 | HY            | HY_cont            | 3627 | 0.008  | 0.013 | 0.01  | [-0.02, 0.03]  | 0.00  | 0.414 | 5.25E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1440 | 0.0175 | INS           | INS_surv           | 1112 | 0.057  | 0.095 | 1.06  | [0.88, 1.27]   | 16.00 | 0.311 | 5.47E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1408 | 0.0187 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.021  | 0.037 | 0.02  | [-0.05, 0.09]  | 0.00  | 0.951 | 5.75E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1415 | 0.0198 | COGI          | COGI_surv          | 2244 | 0.057  | 0.111 | 1.06  | [0.85, 1.32]   | 33.20 | 0.152 | 6.07E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1392 | 0.0168 | HY3           | HY3_surv           | 2582 | 0.048  | 0.094 | 1.05  | [0.87, 1.26]   | 0.00  | 0.079 | 6.10E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1410 | 0.0162 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.049  | 0.116 | 1.05  | [0.84, 1.32]   | 15.10 | 0.317 | 6.71E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1297 | 0.0192 | M MSE         | M MSE_cont         | 2114 | -0.027 | 0.066 | -0.03 | [-0.16, 0.10]  | 0.00  | 0.787 | 6.87E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1428 | 0.0201 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.013 | 0.042 | -0.01 | [-0.09, 0.07]  | 29.00 | 0.207 | 7.57E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1393 | 0.0173 | INS           | INS_base           | 2220 | -0.028 | 0.102 | 0.97  | [0.80, 1.19]   | 0.00  | 0.498 | 7.86E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1446 | 0.0200 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.006  | 0.041 | 0.01  | [-0.08, 0.09]  | 0.00  | 0.502 | 8.88E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1459 | 0.0118 | SEADL70       | SEADL70_surv       | 1683 | -0.016 | 0.135 | 0.98  | [0.76, 1.28]   | 13.60 | 0.327 | 9.05E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1379 | 0.0149 | DEPR          | DEPR_base          | 1314 | 0.009  | 0.118 | 1.01  | [0.80, 1.27]   | 37.90 | 0.154 | 9.42E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1393 | 0.0129 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.005 | 0.072 | 0.99  | [0.86, 1.15]   | 0.00  | 0.442 | 9.44E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1369 | 0.0172 | DEPR          | DEPR_cont          | 2138 | 0.007  | 0.133 | 1.01  | [0.78, 1.31]   | 0.00  | 0.569 | 9.60E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 1:23266461 | rs10797576 | t | c | 0.1351 | 0.0165 | SEADL         | SEADL_cont         | 2218 | -0.012 | 0.344 | -0.01 | [-0.69, 0.66]  | 0.00  | 0.473 | 9.73E-01 | 0 | 0 | 0 | 0 | SIPAIL2 |
| 4:17968811 | rs34025766 | a | t | 0.1636 | 0.0118 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.224  | 0.077 | 1.25  | [1.08, 1.45]   | 32.30 | 0.182 | 3.30E-03 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1598 | 0.0093 | SEADL         | SEADL_cont         | 2218 | -0.758 | 0.312 | -0.76 | [-1.37, -0.15] | 13.20 | 0.327 | 1.52E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1645 | 0.0096 | CONST         | CONST_base         | 1472 | 0.271  | 0.116 | 1.31  | [1.05, 1.64]   | 48.60 | 0.100 | 1.90E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1581 | 0.0127 | M MSE         | M MSE_cont         | 2114 | -0.129 | 0.060 | -0.13 | [-0.25, -0.01] | 0.00  | 0.874 | 3.27E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1617 | 0.0190 | INS           | INS_surv           | 1112 | 0.173  | 0.084 | 1.19  | [1.01, 1.40]   | 0.00  | 0.648 | 3.83E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1604 | 0.0189 | COGI          | COGI_surv          | 2244 | 0.201  | 0.098 | 1.22  | [1.01, 1.48]   | 29.00 | 0.187 | 4.03E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1601 | 0.0128 | DEPR          | DEPR_surv          | 1314 | 0.200  | 0.099 | 1.22  | [1.01, 1.48]   | 0.00  | 0.904 | 4.38E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1536 | 0.0222 | HY            | HY_cont            | 3627 | 0.022  | 0.012 | 0.02  | [-0.00, 0.05]  | 33.60 | 0.122 | 6.29E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1660 | 0.0156 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.062  | 0.037 | 0.06  | [-0.01, 0.14]  | 0.00  | 0.541 | 9.60E-02 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1643 | 0.0078 | SEADL70       | SEADL70_surv       | 1683 | 0.129  | 0.118 | 1.14  | [0.90, 1.43]   | 8.70  | 0.357 | 2.77E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1574 | 0.0202 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.031  | 0.032 | 0.03  | [-0.03, 0.09]  | 14.10 | 0.313 | 3.34E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1685 | 0.0079 | DYSKINESIAS   | DYSKINESIAS_surv   | 1232 | 0.124  | 0.131 | 1.13  | [0.87, 1.46]   | 0.00  | 0.558 | 3.47E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1634 | 0.0149 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.060 | 0.065 | 0.94  | [0.83, 1.07]   | 0.00  | 0.718 | 3.53E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1518 | 0.0221 | HY3           | HY3_surv           | 2582 | 0.068  | 0.087 | 1.07  | [0.90, 1.27]   | 43.70 | 0.076 | 4.37E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1659 | 0.0111 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.027  | 0.037 | 0.03  | [-0.05, 0.10]  | 30.80 | 0.193 | 4.65E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1638 | 0.0091 | DEPR          | DEPR_base          | 2138 | 0.082  | 0.119 | 1.09  | [0.86, 1.37]   | 0.00  | 0.681 | 4.91E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1644 | 0.0108 | SLEEP         | SLEEP_base         | 1724 | 0.040  | 0.116 | 1.04  | [0.83, 1.30]   | 26.30 | 0.228 | 7.30E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1643 | 0.0124 | HYPOSMIA      | HYPOSMIA_base      | 1588 | -0.035 | 0.108 | 0.97  | [0.78, 1.19]   | 0.00  | 0.547 | 7.44E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1571 | 0.0194 | COGI          | COGI_base          | 2859 | -0.033 | 0.121 | 0.97  | [0.76, 1.23]   | 27.90 | 0.206 | 7.87E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1675 | 0.0073 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.025  | 0.106 | 1.03  | [0.83, 1.26]   | 0.00  | 0.906 | 8.14E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1585 | 0.0239 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.007 | 0.034 | -0.01 | [-0.07, 0.06]  | 33.40 | 0.162 | 8.47E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1675 | 0.0104 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.005  | 0.032 | 0.01  | [-0.06, 0.07]  | 0.00  | 0.925 | 8.71E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1632 | 0.0107 | HY3           | HY3_base           | 1289 | -0.024 | 0.157 | 0.98  | [0.72, 1.33]   | 0.00  | 0.960 | 8.77E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 4:17968811 | rs34025766 | a | t | 0.1657 | 0.0121 | INS           | INS_base           | 2220 | -0.015 | 0.095 | 0.99  | [0.82, 1.19]   | 48.40 | 0.060 | 8.79E-01 | 0 | 0 | 0 | 0 | LCORL   |
| 19:2341047 | rs55818311 | t | c | 0.6692 | 0.0133 | DEPR          | DEPR_base          | 2138 | 0.287  | 0.101 | 1.33  | [1.09, 1.62]   | 0.00  | 0.701 | 4.49E-03 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6744 | 0.0188 | COGI          | COGI_base          | 2859 | 0.154  | 0.095 | 1.17  | [0.97, 1.40]   | 1.00  | 0.421 | 1.04E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6784 | 0.0154 | INS           | INS_surv           | 1112 | -0.107 | 0.072 | 0.90  | [0.78, 1.03]   | 0.00  | 0.550 | 1.36E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6614 | 0.0103 | M MSE         | M MSE_cont         | 2114 | -0.067 | 0.050 | -0.07 | [-0.16, 0.03]  | 0.00  | 0.628 | 1.80E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6673 | 0.0181 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.037  | 0.034 | 0.04  | [-0.03, 0.10]  | 11.60 | 0.341 | 2.71E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6766 | 0.0149 | CONST         | CONST_base         | 1472 | 0.078  | 0.091 | 1.08  | [0.90, 1.29]   | 0.00  | 0.745 | 3.92E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6671 | 0.0199 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.023 | 0.029 | -0.02 | [-0.08, 0.03]  | 0.00  | 0.691 | 4.26E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6718 | 0.0208 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.021  | 0.027 | 0.02  | [-0.03, 0.07]  | 28.90 | 0.179 | 4.30E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6714 | 0.0140 | SEADL         | SEADL_cont         | 2218 | -0.205 | 0.268 | -0.20 | [-0.73, 0.32]  | 18.40 | 0.284 | 4.44E-01 | 0 | 0 | 0 | 0 | SPPL2B  |
| 19:2341047 | rs55818311 | t | c | 0.6677 | 0.0191 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.025  |       |       |                |       |       |          |   |   |   |   |         |

|             |            |   |   |        |        |               |                    |      |        |       |       |               |       |       |          |   |   |   |   |   |        |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|-------|---------------|-------|-------|----------|---|---|---|---|---|--------|
| 9:17727065  | rs10756907 | a | g | 0.7601 | 0.0166 | MOCA          | MOCA_cont          | 1074 | -0.116 | 0.140 | -0.12 | [-0.39, 0.16] | 43.70 | 0.149 | 4.07E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7511 | 0.0212 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | 0.057  | 0.092 | 1.06  | [0.88, 1.27]  | 33.10 | 0.188 | 5.33E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7520 | 0.0226 | DEPR          | DEPR_base          | 2138 | 0.064  | 0.106 | 1.07  | [0.87, 1.31]  | 23.40 | 0.243 | 5.46E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7446 | 0.0262 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.017  | 0.030 | 0.02  | [-0.04, 0.07] | 0.00  | 0.617 | 5.74E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7621 | 0.0142 | SEADL70       | SEADL70_surv       | 1683 | -0.029 | 0.105 | 0.97  | [0.79, 1.19]  | 0.00  | 0.672 | 7.85E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7752 | 0.0154 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.022 | 0.120 | 0.98  | [0.77, 1.24]  | 0.00  | 0.781 | 8.53E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7565 | 0.0215 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.005  | 0.027 | 0.00  | [-0.05, 0.06] | 9.50  | 0.355 | 8.55E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7606 | 0.0286 | INS           | INS_surv           | 1112 | -0.014 | 0.078 | 0.99  | [0.85, 1.15]  | 47.10 | 0.093 | 8.55E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7507 | 0.0233 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.004 | 0.029 | -0.00 | [-0.06, 0.05] | 0.00  | 0.791 | 9.01E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 9:17727065  | rs10756907 | a | g | 0.7679 | 0.0186 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.007 | 0.095 | 0.99  | [0.82, 1.20]  | 0.00  | 0.976 | 9.46E-01 | 0 | 0 | 0 | 0 | 0 | SH3GL2 |
| 13:49927732 | rs9568188  | t | c | 0.7423 | 0.0204 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.307 | 0.117 | 0.74  | [0.58, 0.93]  | 12.70 | 0.318 | 8.91E-03 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7471 | 0.0080 | SEADL70       | SEADL70_surv       | 1683 | -0.220 | 0.100 | 0.80  | [0.66, 0.98]  | 0.00  | 0.585 | 2.82E-02 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7482 | 0.0249 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.062 | 0.034 | -0.06 | [-0.13, 0.00] | 33.40 | 0.173 | 6.82E-02 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7434 | 0.0236 | MMSE          | MMSE_cont          | 2114 | 0.092  | 0.051 | 0.09  | [-0.01, 0.19] | 0.00  | 0.826 | 7.36E-02 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7479 | 0.0241 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.035 | 0.029 | -0.03 | [-0.09, 0.02] | 0.00  | 0.937 | 2.33E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7451 | 0.0290 | DEPR          | DEPR_base          | 2138 | -0.114 | 0.104 | 0.89  | [0.73, 1.09]  | 0.00  | 0.574 | 2.74E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7470 | 0.0176 | COGi          | COGi_surv          | 2244 | -0.087 | 0.084 | 0.92  | [0.78, 1.08]  | 0.00  | 0.758 | 2.99E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7489 | 0.0251 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.034  | 0.034 | 0.03  | [-0.03, 0.10] | 43.60 | 0.100 | 3.13E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7470 | 0.0247 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.062  | 0.067 | 1.06  | [0.93, 1.21]  | 6.50  | 0.378 | 3.56E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7409 | 0.0284 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.021 | 0.030 | -0.02 | [-0.08, 0.04] | 0.00  | 0.866 | 4.78E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7556 | 0.0077 | MOCA          | MOCA_cont          | 1074 | -0.100 | 0.141 | -0.10 | [-0.38, 0.18] | 0.00  | 0.802 | 4.79E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7410 | 0.0251 | CONST         | CONST_base         | 1472 | -0.062 | 0.097 | 0.94  | [0.78, 1.14]  | 0.00  | 0.512 | 5.21E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7431 | 0.0210 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.058  | 0.096 | 1.06  | [0.88, 1.28]  | 26.10 | 0.247 | 5.46E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7355 | 0.0278 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.052 | 0.092 | 0.95  | [0.79, 1.14]  | 0.00  | 0.651 | 5.70E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7298 | 0.0275 | HY3           | HY3_surv           | 2582 | -0.038 | 0.072 | 0.96  | [0.84, 1.11]  | 5.00  | 0.394 | 5.94E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7420 | 0.0174 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.028 | 0.055 | 0.97  | [0.87, 1.08]  | 0.00  | 0.969 | 6.13E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7438 | 0.0237 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.012 | 0.027 | -0.01 | [-0.07, 0.04] | 5.70  | 0.389 | 6.47E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7404 | 0.0276 | HY            | HY_cont            | 3627 | -0.003 | 0.010 | -0.00 | [-0.02, 0.02] | 40.00 | 0.074 | 7.32E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7369 | 0.0194 | SLEEP         | SLEEP_base         | 1724 | 0.025  | 0.095 | 1.03  | [0.85, 1.23]  | 0.00  | 0.611 | 7.92E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7347 | 0.0206 | COGi          | COGi_base          | 2859 | -0.019 | 0.098 | 0.98  | [0.81, 1.19]  | 0.00  | 0.816 | 8.48E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7313 | 0.0253 | HY3           | HY3_base           | 1289 | 0.019  | 0.132 | 1.02  | [0.79, 1.32]  | 0.00  | 0.581 | 8.86E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7472 | 0.0222 | INS           | INS_surv           | 1112 | 0.011  | 0.077 | 1.01  | [0.87, 1.18]  | 0.00  | 0.426 | 8.91E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7496 | 0.0158 | SEADL         | SEADL_cont         | 2218 | 0.014  | 0.273 | 0.01  | [-0.52, 0.55] | 0.00  | 0.855 | 9.60E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7475 | 0.0204 | DEPR          | DEPR_surv          | 1314 | -0.003 | 0.088 | 1.00  | [0.84, 1.19]  | 0.00  | 0.759 | 9.76E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 13:49927732 | rs9568188  | t | c | 0.7417 | 0.0255 | INS           | INS_base           | 2220 | -0.001 | 0.082 | 1.00  | [0.85, 1.17]  | 36.60 | 0.137 | 9.93E-01 | 0 | 0 | 0 | 0 | 0 | CAB39L |
| 3:48748989  | rs12497850 | t | g | 0.6440 | 0.0143 | INS           | INS_surv           | 1112 | -0.175 | 0.067 | 0.84  | [0.74, 0.96]  | 6.30  | 0.376 | 9.44E-03 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6408 | 0.0134 | MOCA          | MOCA_cont          | 1074 | 0.237  | 0.123 | 0.24  | [-0.01, 0.48] | 0.00  | 0.447 | 5.51E-02 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6399 | 0.0174 | HY3           | HY3_base           | 1289 | 0.182  | 0.121 | 1.20  | [0.95, 1.52]  | 2.60  | 0.358 | 1.32E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6598 | 0.0174 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.034  | 0.026 | 0.03  | [-0.02, 0.09] | 0.00  | 0.497 | 2.03E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6550 | 0.0195 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.034  | 0.030 | 0.03  | [-0.02, 0.09] | 27.20 | 0.221 | 2.58E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6495 | 0.0239 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.088 | 0.084 | 0.92  | [0.78, 1.08]  | 0.00  | 0.754 | 2.92E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6446 | 0.0235 | COGi          | COGi_base          | 2859 | -0.093 | 0.090 | 0.91  | [0.76, 1.09]  | 0.00  | 0.667 | 2.99E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6423 | 0.0119 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.048  | 0.059 | 1.05  | [0.93, 1.18]  | 0.00  | 0.491 | 4.16E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6270 | 0.0271 | HY3           | HY3_surv           | 2582 | -0.047 | 0.063 | 0.95  | [0.84, 1.08]  | 0.00  | 0.914 | 4.58E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6444 | 0.0226 | HY            | HY_cont            | 3627 | 0.006  | 0.009 | 0.01  | [-0.01, 0.02] | 12.80 | 0.320 | 5.08E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6488 | 0.0164 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.069 | 0.105 | 0.93  | [0.76, 1.15]  | 0.00  | 0.797 | 5.11E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6316 | 0.0147 | DEPR          | DEPR_surv          | 1314 | -0.048 | 0.078 | 0.95  | [0.82, 1.11]  | 0.00  | 0.857 | 5.38E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6438 | 0.0212 | SLEEP         | SLEEP_base         | 1724 | 0.047  | 0.086 | 1.05  | [0.89, 1.24]  | 0.00  | 0.920 | 5.88E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6470 | 0.0239 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.012  | 0.024 | 0.01  | [-0.04, 0.06] | 0.00  | 0.813 | 6.34E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6508 | 0.0191 | SEADL         | SEADL_cont         | 2218 | 0.094  | 0.239 | 0.09  | [-0.38, 0.56] | 0.00  | 0.492 | 6.94E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6386 | 0.0153 | DEPR          | DEPR_base          | 2138 | -0.030 | 0.092 | 0.97  | [0.81, 1.16]  | 0.00  | 0.523 | 7.48E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6453 | 0.0210 | MMSE          | MMSE_cont          | 2114 | 0.010  | 0.045 | 0.01  | [-0.08, 0.10] | 19.70 | 0.274 | 8.22E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6563 | 0.0197 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.005 | 0.030 | -0.01 | [-0.06, 0.05] | 6.10  | 0.381 | 8.64E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6414 | 0.0149 | CONST         | CONST_base         | 1472 | -0.015 | 0.088 | 0.99  | [0.83, 1.17]  | 28.90 | 0.229 | 8.69E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6494 | 0.0147 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.014 | 0.085 | 0.99  | [0.84, 1.16]  | 0.00  | 0.715 | 8.68E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6416 | 0.0205 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.003  | 0.050 | 1.00  | [0.91, 1.11]  | 0.00  | 0.521 | 9.49E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6538 | 0.0188 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.001  | 0.027 | 0.00  | [-0.05, 0.05] | 0.00  | 0.928 | 9.75E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6511 | 0.0226 | INS           | INS_base           | 2220 | -0.002 | 0.073 | 1.00  | [0.86, 1.15]  | 0.00  | 0.671 | 9.77E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 3:48748989  | rs12497850 | t | g | 0.6506 | 0.0118 | SEADL70       | SEADL70_surv       | 1683 | 0.000  | 0.094 | 1.00  | [0.83, 1.20]  | 0.00  | 0.632 | 9.97E-01 | 0 | 0 | 0 | 0 | 0 | IP6K2  |
| 7:23300049  | rs199351   | a | c | 0.6076 | 0.0192 | DEPR          | DEPR_base          | 2138 | -0.242 | 0.093 | 0.79  | [0            |       |       |          |   |   |   |   |   |        |

|             |            |   |   |        |        |               |                    |      |        |       |                      |       |       |          |   |   |   |   |   |           |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|----------------------|-------|-------|----------|---|---|---|---|---|-----------|
| 17:44866805 | rs11658976 | a | g | 0.5919 | 0.0241 | INS           | INS_base           | 2220 | 0.090  | 0.070 | 1.09 [0.95, 1.26]    | 0.00  | 0.440 | 2.03E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5925 | 0.0279 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.096 | 0.080 | 0.91 [0.78, 1.06]    | 29.20 | 0.216 | 2.27E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5801 | 0.0182 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.038  | 0.033 | 0.04 [-0.03, 0.10]   | 0.00  | 0.662 | 2.47E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5973 | 0.0168 | DEPR          | DEPR_base          | 2138 | 0.092  | 0.089 | 1.10 [0.92, 1.31]    | 0.00  | 0.619 | 3.03E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.6053 | 0.0223 | HY3           | HY3_base           | 1289 | -0.112 | 0.115 | 0.89 [0.71, 1.12]    | 63.50 | 0.064 | 3.29E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5946 | 0.0245 | COGI          | COGI_base          | 2859 | -0.071 | 0.085 | 0.93 [0.79, 1.10]    | 0.00  | 0.701 | 4.02E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5789 | 0.0186 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.027  | 0.033 | 0.03 [-0.04, 0.09]   | 0.00  | 0.833 | 4.17E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5917 | 0.0093 | SEADL70       | SEADL70_surv       | 1683 | 0.074  | 0.101 | 1.08 [0.88, 1.31]    | 0.00  | 0.612 | 4.63E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5905 | 0.0036 | MOCA          | MOCA_cont          | 1074 | -0.090 | 0.133 | -0.09 [-0.35, 0.17]  | 0.00  | 0.968 | 4.96E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5769 | 0.0208 | MMSE          | MMSE_cont          | 2114 | 0.030  | 0.048 | 0.03 [-0.06, 0.12]   | 0.00  | 0.718 | 5.33E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.6036 | 0.0322 | HY3           | HY3_surv           | 2582 | 0.041  | 0.069 | 1.04 [0.91, 1.19]    | 11.20 | 0.342 | 5.53E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5794 | 0.0185 | SEADL         | SEADL_cont         | 2218 | -0.146 | 0.256 | -0.15 [-0.65, 0.35]  | 0.00  | 0.810 | 5.67E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5949 | 0.0258 | SLEEP         | SLEEP_base         | 1724 | -0.044 | 0.081 | 0.96 [0.82, 1.12]    | 0.00  | 0.777 | 5.86E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5923 | 0.0250 | COGI          | COGI_surv          | 2244 | -0.039 | 0.080 | 0.96 [0.82, 1.12]    | 0.00  | 0.604 | 6.28E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5820 | 0.0209 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.012  | 0.026 | 0.01 [-0.04, 0.06]   | 0.00  | 0.905 | 6.48E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5970 | 0.0172 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.030  | 0.067 | 1.03 [0.90, 1.17]    | 28.60 | 0.210 | 6.53E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5869 | 0.0217 | HY            | HY_cont            | 3627 | 0.003  | 0.010 | 0.00 [-0.02, 0.02]   | 18.70 | 0.260 | 7.26E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5924 | 0.0152 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.017 | 0.055 | 0.98 [0.88, 1.09]    | 32.70 | 0.179 | 7.51E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.6017 | 0.0288 | DEPR          | DEPR_surv          | 1314 | 0.013  | 0.089 | 1.01 [0.85, 1.21]    | 0.00  | 0.737 | 8.85E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5807 | 0.0171 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.001 | 0.029 | -0.00 [-0.06, 0.06]  | 0.00  | 0.927 | 9.74E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 17:44866805 | rs11658976 | a | g | 0.5993 | 0.0192 | CONST         | CONST_base         | 1472 | 0.002  | 0.084 | 1.00 [0.85, 1.18]    | 1.80  | 0.396 | 9.85E-01 | 0 | 0 | 0 | 0 | 0 | WNT3      |
| 3:28705690  | rs6808178  | t | c | 0.3861 | 0.0201 | MOCA          | MOCA_cont          | 1074 | -0.310 | 0.122 | -0.31 [-0.55, -0.07] | 0.00  | 0.639 | 1.07E-02 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4039 | 0.0193 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.104  | 0.050 | 1.11 [1.01, 1.22]    | 0.00  | 0.841 | 3.94E-02 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3909 | 0.0185 | COGI          | COGI_base          | 2859 | 0.167  | 0.089 | 1.18 [0.99, 1.41]    | 16.30 | 0.302 | 6.12E-02 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3965 | 0.0116 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.123 | 0.085 | 0.88 [0.75, 1.04]    | 35.60 | 0.184 | 1.48E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3961 | 0.0178 | SLEEP         | SLEEP_base         | 1724 | -0.125 | 0.087 | 0.88 [0.74, 1.05]    | 0.00  | 0.530 | 1.51E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3929 | 0.0153 | SEADL         | SEADL_cont         | 2218 | -0.303 | 0.240 | -0.30 [-0.77, 0.17]  | 0.00  | 0.849 | 2.06E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4036 | 0.0116 | MMSE          | MMSE_cont          | 2114 | -0.052 | 0.046 | -0.05 [-0.14, 0.04]  | 0.00  | 0.858 | 2.54E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4169 | 0.0099 | DEPR          | DEPR_surv          | 1314 | -0.090 | 0.079 | 0.91 [0.78, 1.07]    | 0.00  | 0.731 | 2.55E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3948 | 0.0122 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.119  | 0.106 | 1.13 [0.92, 1.38]    | 47.90 | 0.147 | 2.60E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4008 | 0.0119 | DEPR          | DEPR_base          | 2138 | -0.093 | 0.093 | 0.91 [0.76, 1.09]    | 0.00  | 0.557 | 3.16E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3929 | 0.0186 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | 0.083  | 0.083 | 1.09 [0.92, 1.28]    | 1.60  | 0.406 | 3.20E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3977 | 0.0209 | COGI          | COGI_surv          | 2244 | 0.077  | 0.078 | 1.08 [0.93, 1.26]    | 31.90 | 0.163 | 3.21E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3974 | 0.0194 | HY            | HY_cont            | 3627 | 0.008  | 0.009 | 0.01 [-0.01, 0.03]   | 36.00 | 0.103 | 3.64E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3899 | 0.0107 | SEADL70       | SEADL70_surv       | 1683 | 0.069  | 0.093 | 1.07 [0.89, 1.29]    | 7.30  | 0.365 | 4.61E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4005 | 0.0163 | HY3           | HY3_base           | 1289 | 0.078  | 0.120 | 1.08 [0.85, 1.37]    | 32.90 | 0.225 | 5.19E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4041 | 0.0113 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.017 | 0.030 | -0.02 [-0.08, 0.04]  | 24.20 | 0.245 | 5.67E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3946 | 0.0161 | INS           | INS_base           | 2220 | 0.040  | 0.073 | 1.04 [0.90, 1.20]    | 35.40 | 0.146 | 5.85E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4124 | 0.0237 | HY3           | HY3_surv           | 2582 | -0.035 | 0.065 | 0.97 [0.85, 1.10]    | 0.00  | 0.773 | 5.87E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3985 | 0.0173 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.013  | 0.024 | 0.01 [-0.03, 0.06]   | 0.00  | 0.726 | 5.87E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3924 | 0.0189 | CONST         | CONST_base         | 1472 | 0.042  | 0.087 | 1.04 [0.88, 1.24]    | 0.00  | 0.412 | 6.31E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4046 | 0.0113 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.009  | 0.030 | 0.01 [-0.05, 0.07]   | 0.00  | 0.518 | 7.75E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4111 | 0.0211 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.006  | 0.027 | 0.01 [-0.05, 0.06]   | 36.30 | 0.139 | 8.35E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.3954 | 0.0199 | INS           | INS_surv           | 1112 | 0.010  | 0.068 | 1.01 [0.88, 1.15]    | 41.00 | 0.132 | 8.88E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 3:28705690  | rs6808178  | t | c | 0.4000 | 0.0163 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.006 | 0.061 | 0.99 [0.88, 1.12]    | 0.00  | 0.449 | 9.26E-01 | 0 | 0 | 0 | 0 | 0 | LINC00693 |
| 5:102365794 | rs26431    | c | g | 0.7096 | 0.0138 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.287  | 0.113 | 1.33 [1.07, 1.66]    | 0.00  | 0.685 | 1.10E-02 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7120 | 0.0183 | INS           | INS_base           | 2220 | -0.138 | 0.075 | 0.87 [0.75, 1.01]    | 2.70  | 0.409 | 6.80E-02 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7123 | 0.0211 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | 0.112  | 0.087 | 1.12 [0.94, 1.33]    | 15.60 | 0.314 | 1.99E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7112 | 0.0160 | HY3           | HY3_base           | 1289 | -0.150 | 0.122 | 0.86 [0.68, 1.09]    | 0.00  | 0.894 | 2.20E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7154 | 0.0191 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.096  | 0.089 | 1.10 [0.93, 1.31]    | 0.00  | 0.599 | 2.80E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7088 | 0.0204 | SLEEP         | SLEEP_base         | 1724 | 0.093  | 0.090 | 1.10 [0.92, 1.31]    | 41.80 | 0.112 | 3.01E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7244 | 0.0205 | SEADL         | SEADL_cont         | 2218 | 0.254  | 0.263 | 0.25 [-0.26, 0.77]   | 0.00  | 0.467 | 3.34E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7131 | 0.0216 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.026  | 0.032 | 0.03 [-0.04, 0.09]   | 4.40  | 0.393 | 4.18E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7087 | 0.0182 | DEPR          | DEPR_surv          | 1314 | 0.064  | 0.088 | 1.07 [0.90, 1.27]    | 1.50  | 0.407 | 4.65E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7130 | 0.0162 | HY3           | HY3_surv           | 2582 | -0.047 | 0.067 | 0.95 [0.84, 1.09]    | 0.00  | 0.530 | 4.88E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7115 | 0.0186 | DEPR          | DEPR_base          | 2138 | 0.068  | 0.099 | 1.07 [0.88, 1.30]    | 0.00  | 0.461 | 4.89E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7128 | 0.0210 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.017 | 0.028 | -0.02 [-0.07, 0.04]  | 0.00  | 0.599 | 5.50E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7088 | 0.0155 | CONST         | CONST_base         | 1472 | 0.052  | 0.091 | 1.05 [0.88, 1.26]    | 49.30 | 0.096 | 5.69E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7114 | 0.0219 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.018  | 0.032 | 0.02 [-0.04, 0.08]   | 7.40  | 0.372 | 5.79E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7096 | 0.0198 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.014 | 0.026 | -0.01 [-0.06, 0.04]  | 0.00  | 0.842 | 5.81E-01 | 0 | 0 | 0 | 0 | 0 | PAM       |
| 5:102365794 | rs26431    | c | g | 0.7130 | 0.0160 | COGI          | COGI_surv          | 2244 | 0.039  | 0.083 | 1.04 [0.88, 1.22]    | 36.50 | 0.126 | 6.37E-01 | 0 | 0 |   |   |   |           |

|              |             |   |   |        |        |               |                    |      |        |       |                      |       |       |          |   |   |   |   |   |         |
|--------------|-------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|----------------------|-------|-------|----------|---|---|---|---|---|---------|
| 2:135464616  | rs57891859  | a | g | 0.7270 | 0.0188 | SLEEP         | SLEEP_base         | 1724 | -0.023 | 0.096 | 0.98 [0.81, 1.18]    | 0.00  | 0.506 | 8.13E-01 | 0 | 0 | 0 | 0 | 0 | TMEM163 |
| 2:135464616  | rs57891859  | a | g | 0.7349 | 0.0119 | HY3           | HY3_base           | 1289 | 0.032  | 0.141 | 1.03 [0.78, 1.36]    | 62.70 | 0.068 | 8.19E-01 | 0 | 0 | 0 | 0 | 0 | TMEM163 |
| 2:135464616  | rs57891859  | a | g | 0.7207 | 0.0164 | INS           | INS_surv           | 1112 | 0.015  | 0.071 | 1.02 [0.88, 1.17]    | 0.00  | 0.861 | 8.31E-01 | 0 | 0 | 0 | 0 | 0 | TMEM163 |
| 2:135464616  | rs57891859  | a | g | 0.7353 | 0.0175 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.004 | 0.030 | -0.00 [-0.06, 0.05]  | 10.10 | 0.351 | 8.88E-01 | 0 | 0 | 0 | 0 | 0 | TMEM163 |
| 2:135464616  | rs57891859  | a | g | 0.7279 | 0.0103 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.009  | 0.094 | 1.01 [0.84, 1.21]    | 0.00  | 0.454 | 9.22E-01 | 0 | 0 | 0 | 0 | 0 | TMEM163 |
| 3:122196892  | rs55961674  | t | c | 0.1708 | 0.0163 | SLEEP         | SLEEP_base         | 1724 | 0.267  | 0.107 | 1.31 [1.06, 1.61]    | 0.00  | 0.768 | 1.30E-02 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1662 | 0.0156 | COGI          | COGI_base          | 2859 | -0.185 | 0.118 | 0.83 [0.66, 1.05]    | 0.00  | 0.902 | 1.17E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1641 | 0.0184 | HY3           | HY3_surv           | 2582 | 0.129  | 0.087 | 1.14 [0.96, 1.35]    | 30.60 | 0.174 | 1.35E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1800 | 0.0101 | MOCA          | MOCA_cont          | 1074 | -0.183 | 0.160 | -0.18 [-0.50, 0.13]  | 47.50 | 0.126 | 2.54E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1774 | 0.0170 | INS           | INS_base           | 2220 | 0.082  | 0.091 | 1.09 [0.91, 1.30]    | 0.00  | 0.719 | 3.68E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1769 | 0.0173 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.120 | 0.135 | 0.89 [0.68, 1.16]    | 0.00  | 0.848 | 3.76E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1738 | 0.0201 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.028 | 0.032 | -0.03 [-0.09, 0.03]  | 0.00  | 0.536 | 3.81E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1814 | 0.0280 | INS           | INS_surv           | 1112 | 0.067  | 0.088 | 1.07 [0.90, 1.27]    | 0.00  | 0.841 | 4.46E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1718 | 0.0096 | SEADL70       | SEADL70_surv       | 1683 | 0.085  | 0.122 | 1.09 [0.86, 1.38]    | 4.80  | 0.379 | 4.87E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1862 | 0.0233 | DEPR          | DEPR_surv          | 1314 | 0.067  | 0.105 | 1.07 [0.87, 1.31]    | 0.00  | 0.784 | 5.23E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1778 | 0.0229 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.050 | 0.079 | 0.95 [0.81, 1.11]    | 0.00  | 0.833 | 5.29E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1794 | 0.0158 | MMSE          | MMSE_cont          | 2114 | 0.036  | 0.058 | 0.04 [-0.08, 0.15]   | 0.00  | 0.860 | 5.36E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1706 | 0.0215 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.041 | 0.068 | 0.96 [0.84, 1.10]    | 0.00  | 0.575 | 5.42E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1742 | 0.0148 | COGI          | COGI_surv          | 2244 | 0.059  | 0.098 | 1.06 [0.87, 1.29]    | 0.00  | 0.769 | 5.49E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1684 | 0.0161 | HY3           | HY3_base           | 1289 | 0.080  | 0.153 | 1.08 [0.80, 1.46]    | 0.00  | 0.560 | 6.04E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1711 | 0.0159 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.049 | 0.103 | 0.95 [0.78, 1.16]    | 0.00  | 0.556 | 6.32E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1741 | 0.0214 | HY            | HY_cont            | 3627 | -0.005 | 0.012 | -0.00 [-0.03, 0.02]  | 10.70 | 0.340 | 6.90E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1774 | 0.0171 | SEADL         | SEADL_cont         | 2218 | 0.110  | 0.311 | 0.11 [-0.50, 0.72]   | 0.00  | 0.815 | 7.23E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1746 | 0.0194 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.011 | 0.035 | -0.01 [-0.08, 0.06]  | 42.10 | 0.098 | 7.48E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1704 | 0.0141 | CONST         | CONST_base         | 1472 | -0.022 | 0.111 | 0.98 [0.79, 1.21]    | 0.00  | 0.976 | 8.40E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1789 | 0.0193 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.005 | 0.034 | -0.00 [-0.07, 0.06]  | 0.00  | 0.842 | 8.91E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1802 | 0.0185 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.003  | 0.039 | 0.00 [-0.07, 0.08]   | 34.90 | 0.162 | 9.49E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1750 | 0.0171 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.006  | 0.108 | 1.01 [0.81, 1.24]    | 4.40  | 0.381 | 9.53E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 3:122196892  | rs55961674  | t | c | 0.1813 | 0.0183 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.002  | 0.039 | 0.00 [-0.07, 0.08]   | 0.00  | 0.603 | 9.55E-01 | 0 | 0 | 0 | 0 | 0 | KPNA1   |
| 10:121536327 | rs117896735 | a | g | 0.0219 | 0.0050 | COGI          | COGI_base          | 2483 | 0.700  | 0.283 | 2.01 [1.16, 3.50]    | 0.00  | 0.435 | 1.32E-02 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0234 | 0.0035 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.290  | 0.162 | 1.34 [0.97, 1.83]    | 48.40 | 0.071 | 7.39E-02 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0264 | 0.0056 | MOCA          | MOCA_cont          | 1074 | -0.500 | 0.415 | -0.50 [-1.31, 0.31]  | 46.60 | 0.132 | 2.29E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0273 | 0.0087 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.094 | 0.082 | 0.09 [-0.07, 0.25]   | 0.00  | 0.487 | 2.47E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0275 | 0.0103 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.108  | 0.104 | 0.11 [-0.10, 0.31]   | 0.00  | 0.915 | 3.00E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0182 | 0.0018 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.346 | 0.356 | 0.71 [0.35, 1.42]    | 6.50  | 0.343 | 3.31E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0256 | 0.0070 | DEPR          | DEPR_base          | 2138 | -0.307 | 0.351 | 0.74 [0.37, 1.46]    | 0.00  | 0.911 | 3.82E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0232 | 0.0073 | SLEEP         | SLEEP_base         | 1724 | 0.219  | 0.270 | 1.25 [0.73, 2.11]    | 0.00  | 0.860 | 4.17E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0209 | 0.0039 | CONST         | CONST_base         | 1472 | 0.239  | 0.296 | 1.27 [0.71, 2.27]    | 25.00 | 0.255 | 4.19E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0239 | 0.0037 | INS           | INS_surv           | 1112 | -0.162 | 0.212 | 0.85 [0.56, 1.29]    | 0.00  | 0.662 | 4.44E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0276 | 0.0110 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.065  | 0.091 | 0.07 [-0.11, 0.24]   | 41.10 | 0.131 | 4.75E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0254 | 0.0036 | SEADL         | SEADL_cont         | 2112 | -0.512 | 0.798 | -0.51 [-2.08, 1.05]  | 0.00  | 0.732 | 5.22E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0233 | 0.0031 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.124  | 0.193 | 1.13 [0.77, 1.65]    | 0.00  | 0.601 | 5.23E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0292 | 0.0066 | HY3           | HY3_surv           | 2582 | -0.118 | 0.196 | 0.89 [0.60, 1.31]    | 0.00  | 0.973 | 5.48E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0227 | 0.0068 | HYPOSIMIA     | HYPOSIMIA_surv     | 1588 | 0.156  | 0.261 | 1.17 [0.70, 1.95]    | 16.50 | 0.307 | 5.50E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0286 | 0.0098 | HY            | HY_cont            | 3627 | -0.017 | 0.029 | -0.02 [-0.07, 0.04]  | 0.00  | 0.591 | 5.51E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0221 | 0.0066 | INS           | INS_base           | 2220 | -0.127 | 0.236 | 0.88 [0.55, 1.40]    | 0.00  | 0.582 | 5.91E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0220 | 0.0044 | SEADL70       | SEADL70_surv       | 1683 | 0.134  | 0.324 | 1.14 [0.61, 2.16]    | 0.00  | 0.804 | 6.78E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0233 | 0.0039 | COGI          | COGI_surv          | 2075 | 0.113  | 0.273 | 1.12 [0.66, 1.91]    | 0.00  | 0.983 | 6.80E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0252 | 0.0044 | DEPR          | DEPR_surv          | 1314 | -0.066 | 0.277 | 0.94 [0.54, 1.61]    | 0.00  | 0.964 | 8.11E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0182 | 0.0023 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.067 | 0.296 | 0.94 [0.52, 1.67]    | 0.00  | 0.884 | 8.21E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0277 | 0.0105 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.016 | 0.104 | -0.02 [-0.22, 0.19]  | 0.00  | 0.698 | 8.78E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0297 | 0.0101 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.012 | 0.088 | -0.01 [-0.18, 0.16]  | 0.00  | 0.713 | 8.97E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 10:121536327 | rs117896735 | a | g | 0.0289 | 0.0078 | MMSE          | MMSE_cont          | 2114 | 0.014  | 0.143 | 0.01 [-0.27, 0.29]   | 0.00  | 0.931 | 9.21E-01 | 0 | 0 | 0 | 0 | 0 | INPP5F  |
| 13:97865021  | rs4771268   | t | c | 0.2272 | 0.0185 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.075 | 0.030 | -0.07 [-0.13, -0.02] | 0.00  | 0.486 | 1.34E-02 | 0 | 0 | 0 | 0 | 0 | MBNL2   |
| 13:97865021  | rs4771268   | t | c | 0.2390 | 0.0098 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.051 | 0.029 | -0.05 [-0.11, 0.00]  | 0.00  | 0.601 | 7.29E-02 | 0 | 0 | 0 | 0 | 0 | MBNL2   |
| 13:97865021  | rs4771268   | t | c | 0.2336 | 0.0133 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.112 | 0.068 | 0.89 [0.78, 1.02]    | 0.00  | 0.831 | 1.02E-01 | 0 | 0 | 0 | 0 | 0 | MBNL2   |
| 13:97865021  | rs4771268   | t | c | 0.2284 | 0.0159 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.044 | 0.027 | -0.04 [-0.10, 0.01]  | 0.00  | 0.443 | 1.10E-01 | 0 | 0 | 0 | 0 | 0 | MBNL2   |
| 13:97865021  | rs4771268   | t | c | 0.2198 | 0.0142 | MMSE          | MMSE_cont          | 2114 | 0.079  | 0.051 | 0.08 [-0.02, 0.18]   | 0.00  | 0.912 | 1.25E-01 | 0 | 0 | 0 | 0 | 0 | MBNL2   |
| 13:97865021  | rs4771268   | t | c | 0.2258 | 0.0119 | HY3           | HY3_base           | 1289 | -0.196 | 0.139 | 0.82 [0.63, 1.08]    | 29.30 | 0.243 | 1.60E-01 | 0 | 0 | 0 | 0 | 0 | MBNL2   |
| 13:97865021  | rs4771268   | t | c | 0.2305 | 0.0197 | HY            | HY_cont            | 3627 | -0.014 | 0.010 | -0.01 [-0.03, 0.01]  | 0.00  | 0.453 | 1.75E-01 | 0 | 0 | 0 | 0 | 0 | MBNL2   |
| 13:97865021  | rs4771268   | t | c | 0.2283 | 0.0134 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | 0.111  | 0.092 |                      |       |       |          |   |   |   |   |   |         |

|             |            |   |   |        |        |               |                    |      |        |       |       |                |       |       |          |   |   |   |   |       |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|-------|----------------|-------|-------|----------|---|---|---|---|-------|
| 4.90626111  | rs356182   | a | g | 0.5804 | 0.0238 | COGi          | COGi_surv          | 2244 | -0.051 | 0.075 | 0.95  | [0.82, 1.10]   | 23.30 | 0.236 | 4.98E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5852 | 0.0172 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.015  | 0.024 | 0.02  | [-0.03, 0.06]  | 0.00  | 0.914 | 5.22E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5853 | 0.0121 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.016 | 0.025 | -0.02 | [-0.07, 0.03]  | 0.00  | 0.505 | 5.32E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5978 | 0.0155 | CONST         | CONST_base         | 1472 | 0.040  | 0.086 | 1.04  | [0.88, 1.23]   | 24.50 | 0.258 | 6.39E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5740 | 0.0222 | SEADL         | SEADL_cont         | 2218 | -0.086 | 0.235 | -0.09 | [-0.55, 0.37]  | 0.00  | 0.591 | 7.14E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.6000 | 0.0184 | SLEEP         | SLEEP_base         | 1724 | 0.029  | 0.085 | 1.03  | [0.87, 1.22]   | 0.00  | 0.596 | 7.32E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5778 | 0.0227 | HY3           | HY3_surv           | 2582 | -0.019 | 0.064 | 0.98  | [0.87, 1.11]   | 29.80 | 0.181 | 7.68E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5820 | 0.0176 | HY            | HY_cont            | 3627 | 0.002  | 0.009 | 0.00  | [-0.02, 0.02]  | 0.00  | 0.890 | 8.06E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5879 | 0.0160 | SEADL70       | SEADL70_surv       | 1683 | -0.022 | 0.093 | 0.98  | [0.82, 1.17]   | 45.60 | 0.119 | 8.15E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.5973 | 0.0195 | HY3           | HY3_base           | 1289 | 0.019  | 0.117 | 1.02  | [0.81, 1.28]   | 0.00  | 0.840 | 8.69E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.90626111  | rs356182   | a | g | 0.6055 | 0.0167 | INS           | INS_base           | 2220 | -0.009 | 0.071 | 0.99  | [0.86, 1.14]   | 0.00  | 0.604 | 8.95E-01 | 0 | 0 | 0 | 0 | SNCA  |
| 4.15737348  | rs4698412  | a | g | 0.5809 | 0.0264 | MOCA          | MOCA_cont          | 1074 | -0.285 | 0.117 | -0.28 | [-0.51, -0.06] | 0.00  | 0.527 | 1.45E-02 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5705 | 0.0164 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.040 | 0.029 | -0.04 | [-0.10, 0.02]  | 0.00  | 0.584 | 1.63E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5681 | 0.0263 | COGi          | COGi_surv          | 2244 | 0.101  | 0.074 | 1.11  | [0.96, 1.28]   | 0.00  | 0.930 | 1.74E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5697 | 0.0153 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.038 | 0.029 | -0.04 | [-0.09, 0.02]  | 0.00  | 0.761 | 1.81E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5643 | 0.0203 | HY3           | HY3_base           | 1289 | -0.138 | 0.116 | 0.87  | [0.69, 1.09]   | 10.50 | 0.327 | 2.33E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5601 | 0.0181 | CONST         | CONST_base         | 1472 | -0.102 | 0.086 | 0.90  | [0.76, 1.07]   | 0.00  | 0.548 | 2.36E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5583 | 0.0154 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.077 | 0.081 | 0.93  | [0.79, 1.09]   | 12.50 | 0.334 | 3.46E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5817 | 0.0208 | SEADL         | SEADL_cont         | 2112 | 0.215  | 0.229 | 0.22  | [-0.23, 0.66]  | 0.00  | 0.861 | 3.48E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5698 | 0.0159 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.023 | 0.026 | -0.02 | [-0.07, 0.03]  | 0.00  | 0.809 | 3.68E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5571 | 0.0168 | HYPOSMIA      | HYPOSMIA_base      | 1588 | -0.069 | 0.081 | 0.93  | [0.80, 1.09]   | 41.70 | 0.128 | 3.94E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5600 | 0.0146 | INS           | INS_base           | 2220 | 0.055  | 0.071 | 1.06  | [0.92, 1.21]   | 12.10 | 0.336 | 4.35E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5757 | 0.0150 | HY3           | HY3_surv           | 2582 | -0.046 | 0.063 | 0.96  | [0.84, 1.08]   | 0.00  | 0.471 | 4.71E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5600 | 0.0164 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.069 | 0.102 | 0.93  | [0.76, 1.14]   | 0.00  | 0.381 | 5.01E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5677 | 0.0222 | INS           | INS_surv           | 1112 | 0.043  | 0.064 | 1.04  | [0.92, 1.18]   | 0.00  | 0.732 | 5.02E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5798 | 0.0127 | HY            | HY_cont            | 3627 | 0.006  | 0.009 | 0.01  | [-0.01, 0.02]  | 0.00  | 0.612 | 5.12E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5625 | 0.0153 | SEADL70       | SEADL70_surv       | 1683 | -0.050 | 0.092 | 0.95  | [0.79, 1.14]   | 0.00  | 0.938 | 5.85E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5822 | 0.0086 | MNSE          | MNSE_cont          | 2114 | -0.020 | 0.044 | -0.02 | [-0.11, 0.07]  | 2.80  | 0.408 | 6.56E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5741 | 0.0193 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.025  | 0.057 | 1.03  | [0.92, 1.15]   | 0.00  | 0.808 | 6.56E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5734 | 0.0153 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.007 | 0.023 | -0.01 | [-0.05, 0.04]  | 27.20 | 0.194 | 7.78E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5588 | 0.0182 | SLEEP         | SLEEP_base         | 1724 | 0.021  | 0.085 | 1.02  | [0.86, 1.21]   | 0.00  | 0.623 | 8.09E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5767 | 0.0272 | DEPR          | DEPR_surv          | 1314 | -0.017 | 0.077 | 0.98  | [0.84, 1.14]   | 44.10 | 0.111 | 8.24E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5648 | 0.0205 | COGi          | COGi_base          | 2859 | -0.019 | 0.087 | 0.98  | [0.83, 1.16]   | 0.00  | 0.441 | 8.25E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5659 | 0.0156 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.002 | 0.025 | -0.00 | [-0.05, 0.05]  | 0.00  | 0.501 | 9.27E-01 | 0 | 0 | 0 | 0 | BST1  |
| 4.15737348  | rs4698412  | a | g | 0.5663 | 0.0173 | DEPR          | DEPR_base          | 2138 | -0.003 | 0.091 | 1.00  | [0.83, 1.19]   | 17.00 | 0.296 | 9.70E-01 | 0 | 0 | 0 | 0 | BST1  |
| 17:42294337 | rs2269906  | a | c | 0.6706 | 0.0216 | SLEEP         | SLEEP_base         | 1724 | -0.217 | 0.089 | 0.80  | [0.68, 0.96]   | 0.00  | 0.636 | 1.46E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6617 | 0.0210 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.086 | 0.036 | -0.09 | [-0.16, -0.02] | 38.40 | 0.136 | 1.56E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6672 | 0.0172 | CONST         | CONST_base         | 1472 | -0.171 | 0.090 | 0.84  | [0.71, 1.01]   | 0.00  | 0.473 | 5.74E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6544 | 0.0228 | SEADL         | SEADL_cont         | 2218 | 0.514  | 0.271 | 0.51  | [-0.02, 1.05]  | 24.50 | 0.234 | 5.76E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6608 | 0.0213 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.067 | 0.035 | -0.07 | [-0.14, 0.00]  | 0.00  | 0.779 | 6.03E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6591 | 0.0200 | INS           | INS_surv           | 1112 | -0.138 | 0.074 | 0.87  | [0.75, 1.01]   | 10.90 | 0.346 | 6.28E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6687 | 0.0215 | DEPR          | DEPR_base          | 2138 | -0.172 | 0.095 | 0.84  | [0.70, 1.01]   | 0.00  | 0.923 | 6.90E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6720 | 0.0254 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.049 | 0.028 | -0.05 | [-0.10, 0.01]  | 0.00  | 0.961 | 8.08E-02 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6662 | 0.0212 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.129  | 0.085 | 1.14  | [0.96, 1.35]   | 0.00  | 0.976 | 1.30E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6562 | 0.0202 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.117 | 0.086 | 0.89  | [0.75, 1.05]   | 4.00  | 0.384 | 1.76E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6728 | 0.0268 | HY            | HY_cont            | 3627 | -0.010 | 0.010 | -0.01 | [-0.03, 0.01]  | 0.00  | 0.963 | 3.27E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6645 | 0.0223 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.050 | 0.057 | 0.95  | [0.85, 1.06]   | 0.00  | 0.949 | 3.81E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6654 | 0.0246 | HY3           | HY3_base           | 1289 | -0.099 | 0.122 | 0.91  | [0.71, 1.15]   | 2.70  | 0.358 | 4.17E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6533 | 0.0230 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.086 | 0.107 | 0.92  | [0.74, 1.13]   | 36.30 | 0.208 | 4.22E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6694 | 0.0191 | MNSE          | MNSE_cont          | 2114 | -0.035 | 0.050 | -0.03 | [-0.13, 0.06]  | 30.80 | 0.182 | 4.85E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6482 | 0.0291 | MOCA          | MOCA_cont          | 1074 | -0.091 | 0.143 | -0.09 | [-0.37, 0.19]  | 0.00  | 0.590 | 5.25E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6591 | 0.0244 | INS           | INS_base           | 2220 | 0.038  | 0.074 | 1.04  | [0.90, 1.20]   | 0.00  | 0.577 | 6.12E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6682 | 0.0247 | COGi          | COGi_base          | 2859 | -0.047 | 0.093 | 0.95  | [0.80, 1.15]   | 15.80 | 0.306 | 6.15E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6731 | 0.0192 | DEPR          | DEPR_surv          | 1314 | -0.044 | 0.092 | 0.96  | [0.80, 1.15]   | 44.10 | 0.111 | 6.34E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6623 | 0.0125 | SEADL70       | SEADL70_surv       | 1683 | -0.042 | 0.108 | 0.96  | [0.78, 1.18]   | 4.50  | 0.381 | 6.94E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6758 | 0.0219 | HY3           | HY3_surv           | 2582 | -0.025 | 0.069 | 0.98  | [0.85, 1.12]   | 0.00  | 0.827 | 7.14E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6605 | 0.0213 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.011 | 0.031 | -0.01 | [-0.07, 0.05]  | 0.00  | 0.557 | 7.17E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6628 | 0.0230 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.022  | 0.070 | 1.02  | [0.89, 1.17]   | 25.30 | 0.236 | 7.52E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6643 | 0.0172 | COGi          | COGi_surv          | 2244 | -0.024 | 0.085 | 0.98  | [0.83, 1.15]   | 0.00  | 0.464 | 7.75E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 17:42294337 | rs2269906  | a | c | 0.6645 | 0.0204 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.006 | 0.031 | -0.01 | [-0.07, 0.05]  | 0.00  | 0.878 | 8.52E-01 | 0 | 0 | 0 | 0 | UBTF  |
| 3:182760073 | rs10513789 | t | g | 0.8232 | 0.0099 | HY            | HY_cont            | 3627 | -0.027 | 0.011 | -0.03 | [-0.05, -0.01] | 0.00  | 0.644 | 1.48E-02 | 0 | 0 | 0 | 0 | MCCC1 |
| 3:182760073 | rs10513789 | t | g | 0.8137 | 0.0188 | CONST         | CONST_base         | 1472 | 0.210  | 0.110 | 1.23  | [1.00, 1.53]   | 0.00  | 0.597 | 5.47E-02 | 0 | 0 | 0 | 0 | MCCC1 |

|             |           |   |   |        |        |               |                    |      |        |       |                      |       |       |          |   |   |   |   |          |
|-------------|-----------|---|---|--------|--------|---------------|--------------------|------|--------|-------|----------------------|-------|-------|----------|---|---|---|---|----------|
| 17:76425480 | rs666463  | a | t | 0.8331 | 0.0149 | MMSE          | MMSE_cont          | 2114 | -0.116 | 0.060 | -0.12 [-0.23, 0.00]  | 41.50 | 0.102 | 5.46E-02 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8227 | 0.0124 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.051  | 0.033 | 0.05 [-0.01, 0.12]   | 0.00  | 0.513 | 1.20E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8346 | 0.0159 | DEPR          | DEPR_base          | 2138 | -0.164 | 0.121 | 0.85 [0.67, 1.08]    | 40.90 | 0.106 | 1.75E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8283 | 0.0088 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.134  | 0.108 | 1.14 [0.93, 1.41]    | 0.00  | 0.617 | 2.12E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8365 | 0.0139 | INS           | INS_surv           | 1112 | 0.098  | 0.087 | 1.10 [0.93, 1.31]    | 0.00  | 0.505 | 2.60E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8272 | 0.0157 | SEADL70       | SEADL70_surv       | 1683 | 0.131  | 0.123 | 1.14 [0.90, 1.45]    | 43.00 | 0.135 | 2.86E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8190 | 0.0210 | HY3           | HY3_surv           | 2582 | -0.064 | 0.078 | 0.94 [0.81, 1.09]    | 0.00  | 0.665 | 4.14E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8397 | 0.0278 | DEPR          | DEPR_surv          | 1314 | 0.088  | 0.109 | 1.09 [0.88, 1.35]    | 0.00  | 0.965 | 4.19E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8310 | 0.0204 | MOCA          | MOCA_cont          | 1074 | -0.114 | 0.164 | -0.11 [-0.44, 0.21]  | 45.10 | 0.141 | 4.89E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8258 | 0.0082 | COGI          | COGI_base          | 2859 | -0.072 | 0.111 | 1.07 [0.86, 1.34]    | 0.00  | 0.745 | 5.16E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8289 | 0.0196 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.025 | 0.039 | -0.03 [-0.10, 0.05]  | 16.00 | 0.308 | 5.19E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8247 | 0.0205 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.046  | 0.075 | 1.05 [0.90, 1.21]    | 0.00  | 0.847 | 5.38E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8267 | 0.0173 | COGI          | COGI_surv          | 2244 | 0.050  | 0.097 | 1.05 [0.87, 1.27]    | 0.00  | 0.648 | 6.07E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8272 | 0.0073 | CONST         | CONST_base         | 1472 | 0.036  | 0.109 | 1.04 [0.84, 1.28]    | 37.50 | 0.171 | 7.42E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8256 | 0.0088 | SLEEP         | SLEEP_base         | 1724 | -0.026 | 0.108 | 0.97 [0.79, 1.20]    | 0.00  | 0.864 | 8.07E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8249 | 0.0090 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.022 | 0.102 | 0.98 [0.80, 1.19]    | 0.00  | 0.481 | 8.32E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:76425480 | rs666463  | a | t | 0.8269 | 0.0159 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.003 | 0.035 | -0.00 [-0.07, 0.06]  | 17.80 | 0.290 | 9.30E-01 | 0 | 0 | 0 | 0 | DNAH17   |
| 17:42434630 | rs850738  | a | g | 0.5920 | 0.0205 | MMSE          | MMSE_cont          | 2114 | 0.109  | 0.045 | 0.11 [0.02, 0.20]    | 44.30 | 0.083 | 1.67E-02 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5854 | 0.0268 | COGI          | COGI_base          | 2859 | -0.207 | 0.087 | 0.81 [0.69, 0.96]    | 0.00  | 0.905 | 1.72E-02 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5964 | 0.0192 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.050 | 0.024 | -0.05 [-0.10, -0.00] | 0.00  | 0.597 | 3.57E-02 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5851 | 0.0279 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.215 | 0.104 | 0.81 [0.66, 0.99]    | 0.00  | 0.595 | 3.80E-02 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5970 | 0.0148 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.059 | 0.029 | -0.06 [-0.12, -0.00] | 0.00  | 0.578 | 4.63E-02 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5976 | 0.0239 | COGI          | COGI_surv          | 2244 | -0.132 | 0.077 | 0.88 [0.75, 1.02]    | 0.00  | 0.697 | 8.54E-02 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5871 | 0.0255 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.128 | 0.082 | 0.88 [0.75, 1.03]    | 30.80 | 0.216 | 1.18E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5946 | 0.0170 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.041 | 0.026 | -0.04 [-0.09, 0.01]  | 0.00  | 0.663 | 1.20E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5908 | 0.0269 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.074 | 0.050 | 0.93 [0.84, 1.02]    | 0.00  | 0.907 | 1.35E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5939 | 0.0261 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.087 | 0.060 | 0.92 [0.82, 1.03]    | 0.00  | 0.938 | 1.44E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5866 | 0.0213 | HY            | HY_cont            | 3627 | -0.012 | 0.009 | -0.01 [-0.03, 0.01]  | 0.00  | 0.591 | 1.96E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5955 | 0.0144 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.032 | 0.026 | -0.03 [-0.08, 0.02]  | 0.00  | 0.689 | 2.12E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5965 | 0.0137 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.034 | 0.030 | -0.03 [-0.09, 0.02]  | 0.00  | 0.554 | 2.42E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5885 | 0.0290 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.094 | 0.082 | 0.91 [0.78, 1.07]    | 13.70 | 0.327 | 2.48E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5975 | 0.0130 | SEADL         | SEADL_cont         | 2218 | 0.252  | 0.240 | 0.25 [-0.22, 0.72]   | 2.30  | 0.412 | 2.94E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5869 | 0.0351 | INS           | INS_surv           | 1112 | -0.058 | 0.066 | 0.94 [0.83, 1.08]    | 0.20  | 0.415 | 3.86E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5874 | 0.0321 | CONST         | CONST_base         | 1472 | 0.068  | 0.086 | 1.07 [0.90, 1.27]    | 0.00  | 0.448 | 4.33E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5697 | 0.0417 | HY3           | HY3_surv           | 2582 | -0.045 | 0.066 | 0.96 [0.84, 1.09]    | 0.00  | 0.776 | 4.95E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.6009 | 0.0225 | MOCA          | MOCA_cont          | 1074 | -0.075 | 0.123 | -0.07 [-0.32, 0.17]  | 0.00  | 0.821 | 5.45E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.6032 | 0.0158 | SEADL70       | SEADL70_surv       | 1683 | -0.051 | 0.096 | 0.95 [0.79, 1.15]    | 0.00  | 0.506 | 5.96E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5874 | 0.0381 | DEPR          | DEPR_surv          | 1314 | -0.032 | 0.081 | 0.97 [0.83, 1.13]    | 41.30 | 0.130 | 6.91E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 17:42434630 | rs850738  | a | g | 0.5904 | 0.0273 | DEPR          | DEPR_base          | 2138 | -0.001 | 0.091 | 1.00 [0.84, 1.19]    | 27.90 | 0.205 | 9.92E-01 | 0 | 0 | 0 | 0 | FAM171A2 |
| 490636630   | rs5019538 | a | g | 0.6699 | 0.0086 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.196 | 0.083 | 0.82 [0.70, 0.97]    | 46.30 | 0.114 | 1.80E-02 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6691 | 0.0131 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.114 | 0.051 | 0.89 [0.81, 0.98]    | 0.00  | 0.888 | 2.37E-02 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6709 | 0.0097 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.229 | 0.103 | 0.80 [0.65, 0.97]    | 14.30 | 0.311 | 2.54E-02 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6593 | 0.0095 | DEPR          | DEPR_surv          | 1314 | 0.169  | 0.082 | 1.18 [1.01, 1.39]    | 0.00  | 0.712 | 3.99E-02 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6574 | 0.0110 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.058  | 0.030 | 0.06 [-0.00, 0.12]   | 0.00  | 0.875 | 5.52E-02 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6674 | 0.0095 | CONST         | CONST_base         | 1472 | 0.142  | 0.088 | 1.15 [0.97, 1.37]    | 0.00  | 0.578 | 1.07E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6694 | 0.0138 | DEPR          | DEPR_base          | 2138 | 0.138  | 0.095 | 1.15 [0.95, 1.38]    | 0.00  | 0.954 | 1.45E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6659 | 0.0098 | COGI          | COGI_base          | 2859 | 0.114  | 0.090 | 1.12 [0.94, 1.34]    | 0.00  | 0.495 | 2.05E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6672 | 0.0088 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.064 | 0.059 | 0.94 [0.84, 1.05]    | 0.00  | 0.854 | 2.82E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6587 | 0.0114 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.023 | 0.026 | -0.02 [-0.07, 0.03]  | 0.00  | 0.507 | 3.72E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6518 | 0.0190 | MMSE          | MMSE_cont          | 2114 | -0.042 | 0.047 | -0.04 [-0.13, 0.05]  | 0.00  | 0.544 | 3.73E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6564 | 0.0170 | HY            | HY_cont            | 3627 | 0.007  | 0.009 | 0.01 [-0.01, 0.03]   | 0.00  | 0.414 | 4.37E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6698 | 0.0129 | SLEEP         | SLEEP_base         | 1724 | 0.066  | 0.087 | 1.07 [0.90, 1.27]    | 0.00  | 0.636 | 4.53E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6570 | 0.0171 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.017  | 0.025 | 0.02 [-0.03, 0.07]   | 0.00  | 0.478 | 4.78E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6661 | 0.0092 | HY3           | HY3_base           | 1289 | -0.076 | 0.117 | 0.93 [0.74, 1.17]    | 4.20  | 0.352 | 5.14E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6569 | 0.0106 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.017 | 0.030 | 0.02 [-0.04, 0.08]   | 0.00  | 0.469 | 5.62E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6417 | 0.0167 | MOCA          | MOCA_cont          | 1074 | -0.066 | 0.124 | -0.07 [-0.31, 0.18]  | 0.00  | 0.831 | 5.95E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6599 | 0.0135 | SEADL70       | SEADL70_surv       | 1683 | 0.044  | 0.097 | 1.04 [0.86, 1.26]    | 0.00  | 0.435 | 6.52E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6582 | 0.0175 | COGI          | COGI_surv          | 2244 | -0.027 | 0.078 | 1.03 [0.88, 1.20]    | 0.00  | 0.472 | 7.28E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6690 | 0.0105 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.027 | 0.084 | 0.97 [0.83, 1.15]    | 0.00  | 0.537 | 7.50E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6474 | 0.0196 | SEADL         | SEADL_cont         | 2218 | -0.060 | 0.243 | -0.06 [-0.54, 0.42]  | 0.00  | 0.629 | 8.07E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6640 | 0.0082 | INS           | INS_surv           | 1112 | -0.016 | 0.067 | 0.98 [0.86, 1.12]    | 0.00  | 0.793 | 8.12E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6625 | 0.0156 | HY3           | HY3_surv           | 2582 | -0.015 | 0.066 | 0.99 [0.87, 1.12]    | 46.50 | 0.060 | 8.22E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs5019538 | a | g | 0.6574 | 0.0107 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.002 | 0.027 | -0.00 [-0.05, 0.05]  | 0.00  | 0.431 | 9.56E-01 | 0 | 0 | 0 | 0 | SNCA     |
| 490636630   | rs50195   |   |   |        |        |               |                    |      |        |       |                      |       |       |          |   |   |   |   |          |





|             |            |   |   |        |        |               |                    |      |        |       |       |                |       |       |          |   |   |   |   |         |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|-------|----------------|-------|-------|----------|---|---|---|---|---------|
| 5.60137959  | rs1867598  | a | g | 0.8909 | 0.0123 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.008  | 0.077 | 1.01  | [0.87, 1.17]   | 31.50 | 0.188 | 9.20E-01 | 0 | 0 | 0 | 0 | ELOVL7  |
| 1.226916078 | rs4653767  | t | c | 0.7302 | 0.0150 | INS           | INS_surv           | 1112 | 0.168  | 0.076 | 1.18  | [1.02, 1.37]   | 0.00  | 0.551 | 2.71E-02 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7288 | 0.0140 | HY3           | HY3_surv           | 2582 | -0.100 | 0.071 | 0.90  | [0.79, 1.04]   | 20.70 | 0.259 | 1.56E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7331 | 0.0150 | COGI          | COGI_base          | 2859 | -0.131 | 0.098 | 0.88  | [0.72, 1.06]   | 0.00  | 0.748 | 1.79E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7232 | 0.0173 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.102 | 0.091 | 0.90  | [0.76, 1.08]   | 0.00  | 0.908 | 2.58E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7293 | 0.0179 | SEADL         | SEADL_cont         | 2218 | -0.258 | 0.261 | -0.26 | [-0.77, 0.25]  | 22.30 | 0.252 | 3.23E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7261 | 0.0190 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.024 | 0.029 | -0.02 | [-0.08, 0.03]  | 42.50 | 0.095 | 4.01E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7244 | 0.0190 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.088 | 0.114 | 0.92  | [0.73, 1.15]   | 6.90  | 0.341 | 4.44E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7260 | 0.0170 | MMSE          | MMSE_cont          | 2114 | -0.035 | 0.050 | -0.03 | [-0.13, 0.06]  | 0.00  | 0.676 | 4.87E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7233 | 0.0100 | SEADL70       | SEADL70_surv       | 1683 | 0.066  | 0.105 | 1.07  | [0.87, 1.31]   | 33.70 | 0.196 | 5.27E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7390 | 0.0113 | CONST         | CONST_base         | 1472 | 0.048  | 0.098 | 1.05  | [0.87, 1.27]   | 0.00  | 0.444 | 6.23E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7330 | 0.0189 | COGI          | COGI_surv          | 2244 | 0.036  | 0.085 | 1.04  | [0.88, 1.22]   | 0.00  | 0.687 | 6.70E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7289 | 0.0191 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.011 | 0.026 | -0.01 | [-0.06, 0.04]  | 44.10 | 0.065 | 6.89E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7236 | 0.0191 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.013 | 0.032 | -0.01 | [-0.08, 0.05]  | 33.70 | 0.171 | 6.91E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7415 | 0.0186 | MOCA          | MOCA_cont          | 1074 | 0.053  | 0.137 | 0.05  | [-0.22, 0.32]  | 0.00  | 0.743 | 7.02E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7266 | 0.0066 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.020  | 0.054 | 1.02  | [0.92, 1.13]   | 0.00  | 0.890 | 7.07E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7323 | 0.0204 | DEPR          | DEPR_base          | 2138 | -0.035 | 0.102 | 0.97  | [0.79, 1.18]   | 0.00  | 0.603 | 7.31E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7334 | 0.0174 | HY3           | HY3_base           | 1289 | -0.041 | 0.132 | 0.96  | [0.74, 1.24]   | 0.00  | 0.647 | 7.59E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7415 | 0.0155 | SLEEP         | SLEEP_base         | 1724 | -0.026 | 0.095 | 0.97  | [0.81, 1.17]   | 0.00  | 0.644 | 7.86E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7232 | 0.0197 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.008 | 0.032 | -0.01 | [-0.07, 0.05]  | 0.00  | 0.458 | 8.03E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7313 | 0.0206 | INS           | INS_base           | 2220 | 0.019  | 0.080 | 1.02  | [0.87, 1.19]   | 6.60  | 0.380 | 8.17E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7233 | 0.0196 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.006 | 0.028 | -0.01 | [-0.06, 0.05]  | 0.00  | 0.854 | 8.19E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7398 | 0.0132 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | 0.014  | 0.091 | 1.01  | [0.85, 1.21]   | 0.00  | 0.552 | 8.77E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 1.226916078 | rs4653767  | t | c | 0.7330 | 0.0191 | HY            | HY_cont            | 3627 | -0.001 | 0.010 | -0.00 | [-0.02, 0.02]  | 8.20  | 0.365 | 9.19E-01 | 0 | 0 | 0 | 0 | ITPKB   |
| 17.40741013 | rs12951632 | t | c | 0.7403 | 0.0083 | HY3           | HY3_base           | 1289 | -0.287 | 0.131 | 0.75  | [0.58, 0.97]   | 0.00  | 0.431 | 2.78E-02 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7471 | 0.0196 | HY            | HY_cont            | 3627 | -0.021 | 0.010 | -0.02 | [-0.04, -0.00] | 41.90 | 0.062 | 3.47E-02 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7499 | 0.0219 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.042 | 0.029 | -0.04 | [-0.10, 0.02]  | 0.00  | 0.518 | 1.49E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7561 | 0.0117 | MMSE          | MMSE_cont          | 2114 | 0.059  | 0.052 | 0.06  | [-0.04, 0.16]  | 10.00 | 0.353 | 2.55E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7523 | 0.0122 | MOCA          | MOCA_cont          | 1074 | -0.153 | 0.140 | -0.15 | [-0.43, 0.12]  | 43.60 | 0.150 | 2.75E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7493 | 0.0212 | HY3           | HY3_surv           | 2582 | -0.068 | 0.071 | 0.93  | [0.81, 1.07]   | 0.00  | 0.486 | 3.42E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7508 | 0.0176 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.026 | 0.027 | -0.03 | [-0.08, 0.03]  | 0.00  | 0.962 | 3.42E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7565 | 0.0158 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.031 | 0.033 | -0.03 | [-0.10, 0.03]  | 0.00  | 0.483 | 3.53E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7411 | 0.0148 | CONST         | CONST_base         | 1472 | 0.091  | 0.099 | 1.10  | [0.90, 1.33]   | 0.00  | 0.624 | 3.54E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7457 | 0.0182 | SLEEP         | SLEEP_base         | 1724 | 0.086  | 0.096 | 1.09  | [0.90, 1.32]   | 0.00  | 0.495 | 3.70E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7436 | 0.0092 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.086 | 0.117 | 0.92  | [0.73, 1.15]   | 0.00  | 0.442 | 4.63E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7578 | 0.0175 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.018 | 0.029 | -0.02 | [-0.07, 0.04]  | 0.00  | 0.800 | 5.37E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7578 | 0.0139 | SEADL         | SEADL_cont         | 2218 | -0.160 | 0.272 | -0.16 | [-0.69, 0.37]  | 0.00  | 0.707 | 5.57E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7585 | 0.0163 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.018 | 0.033 | -0.02 | [-0.08, 0.05]  | 0.00  | 0.914 | 5.91E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7583 | 0.0189 | DEPR          | DEPR_base          | 2138 | -0.047 | 0.104 | 0.95  | [0.78, 1.17]   | 0.00  | 0.891 | 6.50E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7485 | 0.0178 | COGI          | COGI_surv          | 2244 | 0.033  | 0.085 | 1.03  | [0.88, 1.22]   | 0.00  | 0.763 | 6.96E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7411 | 0.0129 | COGI          | COGI_base          | 2859 | -0.031 | 0.098 | 0.97  | [0.80, 1.17]   | 0.00  | 0.637 | 7.49E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7539 | 0.0200 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.013  | 0.055 | 1.01  | [0.91, 1.13]   | 0.00  | 0.489 | 8.10E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7571 | 0.0188 | DEPR          | DEPR_surv          | 1314 | -0.020 | 0.088 | 0.98  | [0.82, 1.17]   | 0.00  | 0.949 | 8.22E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7544 | 0.0160 | SEADL70       | SEADL70_surv       | 1683 | -0.020 | 0.104 | 0.98  | [0.80, 1.20]   | 30.80 | 0.216 | 8.48E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7508 | 0.0169 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.009 | 0.094 | 0.99  | [0.82, 1.19]   | 29.50 | 0.225 | 9.20E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7566 | 0.0182 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.002 | 0.066 | 1.00  | [0.88, 1.14]   | 0.00  | 0.480 | 9.75E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7477 | 0.0160 | INS           | INS_base           | 2220 | 0.002  | 0.081 | 1.00  | [0.86, 1.17]   | 19.70 | 0.274 | 9.79E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7527 | 0.0171 | INS           | INS_surv           | 1112 | -0.002 | 0.075 | 1.00  | [0.86, 1.16]   | 26.20 | 0.238 | 9.81E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 17.40741013 | rs12951632 | t | c | 0.7436 | 0.0167 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.002 | 0.091 | 1.00  | [0.84, 1.19]   | 40.00 | 0.139 | 9.86E-01 | 0 | 0 | 0 | 0 | RETREG3 |
| 5.134199105 | rs11950533 | a | c | 0.0987 | 0.0110 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.185 | 0.085 | 0.83  | [0.70, 0.98]   | 0.00  | 0.681 | 2.98E-02 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0955 | 0.0114 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.228 | 0.105 | 0.80  | [0.65, 0.98]   | 38.40 | 0.136 | 3.00E-02 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0904 | 0.0110 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.085 | 0.045 | -0.09 | [-0.17, 0.00]  | 0.00  | 0.940 | 5.65E-02 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.1050 | 0.0025 | HY3           | HY3_base           | 1289 | -0.371 | 0.211 | 0.69  | [0.46, 1.04]   | 0.00  | 0.796 | 7.87E-02 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0939 | 0.0133 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.069  | 0.044 | 0.07  | [-0.02, 0.16]  | 1.10  | 0.421 | 1.20E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0990 | 0.0136 | CONST         | CONST_base         | 1472 | -0.227 | 0.149 | 0.80  | [0.59, 1.07]   | 0.00  | 0.712 | 1.28E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.1008 | 0.0071 | HY3           | HY3_surv           | 2582 | 0.136  | 0.101 | 1.15  | [0.94, 1.40]   | 14.80 | 0.310 | 1.77E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0988 | 0.0147 | SEADL         | SEADL_cont         | 2218 | 0.500  | 0.395 | 0.50  | [-0.27, 1.27]  | 0.00  | 0.713 | 2.06E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0951 | 0.0123 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.051 | 0.041 | -0.05 | [-0.13, 0.03]  | 26.50 | 0.200 | 2.12E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.1003 | 0.0126 | DEPR          | DEPR_surv          | 1314 | 0.143  | 0.132 | 1.15  | [0.89, 1.49]   | 0.00  | 0.724 | 2.78E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.1004 | 0.0127 | MOCA          | MOCA_cont          | 1074 | 0.200  | 0.198 | 0.20  | [-0.19, 0.59]  | 0.00  | 0.577 | 3.14E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0976 | 0.0104 | COGI          | COGI_surv          | 2244 | 0.122  | 0.125 | 1.13  | [0.88, 1.44]   | 0.00  | 0.974 | 3.27E-01 | 0 | 0 | 0 | 0 | C5orf24 |
| 5.134199105 | rs11950533 | a | c | 0.0997 | 0      |               |                    |      |        |       |       |                |       |       |          |   |   |   |   |         |

|             |            |   |   |        |        |               |                    |      |        |       |       |                |       |       |          |   |   |   |   |   |        |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|-------|----------------|-------|-------|----------|---|---|---|---|---|--------|
| 3:161077630 | rs1450522  | a | g | 0.6677 | 0.0328 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.015 | 0.031 | -0.02 | [-0.08, 0.04]  | 11.10 | 0.345 | 6.17E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6750 | 0.0121 | HY3           | HY3_base           | 1289 | 0.035  | 0.124 | 1.04  | [0.81, 1.32]   | 0.00  | 0.532 | 7.76E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6725 | 0.0195 | COGI          | COGI_surv          | 2244 | 0.021  | 0.078 | 1.02  | [0.88, 1.19]   | 0.00  | 0.975 | 7.85E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6843 | 0.0152 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.023 | 0.087 | 0.98  | [0.82, 1.16]   | 0.00  | 0.753 | 7.88E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6669 | 0.0232 | INS           | INS_surv           | 1112 | 0.019  | 0.070 | 1.02  | [0.89, 1.17]   | 0.00  | 0.489 | 7.93E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6711 | 0.0140 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.019  | 0.087 | 1.02  | [0.86, 1.21]   | 45.00 | 0.122 | 8.28E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6707 | 0.0107 | SEADL70       | SEADL70_surv       | 1683 | -0.018 | 0.095 | 0.98  | [0.82, 1.18]   | 0.00  | 0.461 | 8.49E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6859 | 0.0152 | SLEEP         | SLEEP_base         | 1724 | -0.011 | 0.091 | 0.99  | [0.83, 1.18]   | 36.80 | 0.148 | 9.05E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6732 | 0.0282 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.002 | 0.025 | -0.00 | [-0.05, 0.05]  | 0.00  | 0.572 | 9.36E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:161077630 | rs1450522  | a | g | 0.6741 | 0.0110 | COGI          | COGI_base          | 2859 | -0.006 | 0.092 | 0.99  | [0.83, 1.19]   | 0.00  | 0.730 | 9.49E-01 | 0 | 0 | 0 | 0 | 0 | SPTSSB |
| 3:151108965 | rs11707416 | a | t | 0.3743 | 0.0109 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.228  | 0.107 | 1.26  | [1.02, 1.55]   | 0.00  | 0.611 | 3.35E-02 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3462 | 0.0268 | SEADL         | SEADL_cont         | 2218 | 0.403  | 0.250 | 0.40  | [-0.09, 0.89]  | 0.00  | 0.687 | 1.06E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3548 | 0.0265 | SEADL70       | SEADL70_surv       | 1683 | -0.118 | 0.097 | 0.89  | [0.74, 1.07]   | 0.00  | 0.485 | 2.22E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3681 | 0.0161 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.085  | 0.084 | 1.09  | [0.92, 1.28]   | 0.00  | 0.417 | 3.14E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3605 | 0.0263 | INS           | INS_surv           | 1112 | 0.068  | 0.070 | 1.07  | [0.93, 1.23]   | 0.00  | 0.887 | 3.35E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3721 | 0.0133 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.075 | 0.083 | 0.93  | [0.79, 1.09]   | 38.60 | 0.149 | 3.68E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3678 | 0.0203 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.022  | 0.026 | 0.02  | [-0.03, 0.07]  | 0.00  | 0.874 | 3.90E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3584 | 0.0273 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.020 | 0.027 | -0.02 | [-0.07, 0.03]  | 0.00  | 0.516 | 4.54E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3713 | 0.0116 | INS           | INS_base           | 2220 | 0.051  | 0.073 | 1.05  | [0.91, 1.21]   | 0.00  | 0.758 | 4.84E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3533 | 0.0326 | DEPR          | DEPR_surv          | 1314 | -0.051 | 0.085 | 0.95  | [0.81, 1.12]   | 29.20 | 0.216 | 5.49E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3750 | 0.0119 | CONST         | CONST_base         | 1472 | -0.049 | 0.088 | 0.95  | [0.80, 1.13]   | 0.00  | 0.442 | 5.76E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3740 | 0.0129 | SLEEP         | SLEEP_base         | 1724 | 0.046  | 0.085 | 1.05  | [0.89, 1.24]   | 2.60  | 0.405 | 5.92E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3610 | 0.0263 | COGI          | COGI_surv          | 2244 | 0.039  | 0.079 | 1.04  | [0.89, 1.21]   | 0.00  | 0.664 | 6.19E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3493 | 0.0310 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.025 | 0.052 | 0.97  | [0.88, 1.08]   | 0.00  | 0.826 | 6.27E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3647 | 0.0194 | COGI          | COGI_base          | 2859 | -0.038 | 0.091 | 0.96  | [0.81, 1.15]   | 42.70 | 0.094 | 6.75E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3620 | 0.0276 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.012 | 0.031 | -0.01 | [-0.07, 0.05]  | 37.40 | 0.144 | 7.02E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3732 | 0.0123 | HY3           | HY3_base           | 1289 | -0.047 | 0.123 | 0.95  | [0.75, 1.21]   | 0.00  | 0.932 | 7.02E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3589 | 0.0294 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.011  | 0.030 | 0.01  | [-0.05, 0.07]  | 0.00  | 0.501 | 7.09E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3574 | 0.0328 | MOCA          | MOCA_cont          | 1074 | -0.048 | 0.130 | -0.05 | [-0.30, 0.21]  | 42.00 | 0.160 | 7.10E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3562 | 0.0226 | HY3           | HY3_surv           | 2582 | -0.008 | 0.064 | 0.99  | [0.87, 1.13]   | 0.00  | 0.651 | 9.04E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 3:151108965 | rs11707416 | a | t | 0.3517 | 0.0248 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.002  | 0.061 | 1.00  | [0.89, 1.13]   | 18.20 | 0.291 | 9.78E-01 | 0 | 0 | 0 | 0 | 0 | MED12L |
| 17:43744203 | rs62053943 | t | c | 0.1336 | 0.0211 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.249 | 0.118 | 1.28  | [1.02, 1.62]   | 0.00  | 0.992 | 3.47E-02 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1269 | 0.0129 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.247 | 0.126 | 0.78  | [0.61, 1.00]   | 0.00  | 0.697 | 5.03E-02 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1259 | 0.0192 | SEADL70       | SEADL70_surv       | 1683 | -0.268 | 0.138 | 1.31  | [1.00, 1.71]   | 19.10 | 0.293 | 5.24E-02 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1377 | 0.0132 | HY3           | HY3_base           | 1289 | -0.343 | 0.183 | 0.71  | [0.50, 1.02]   | 0.00  | 0.510 | 6.07E-02 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1327 | 0.0207 | SLEEP         | SLEEP_base         | 1724 | 0.192  | 0.120 | 1.21  | [0.96, 1.53]   | 3.10  | 0.402 | 1.08E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1347 | 0.0194 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.105 | 0.071 | 0.90  | [0.78, 1.04]   | 0.00  | 0.437 | 1.41E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1387 | 0.0135 | CONST         | CONST_base         | 1472 | -0.148 | 0.123 | 0.86  | [0.68, 1.10]   | 24.20 | 0.260 | 2.28E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1279 | 0.0194 | COGI          | COGI_base          | 2859 | -0.151 | 0.136 | 0.86  | [0.66, 1.12]   | 0.60  | 0.424 | 2.66E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1318 | 0.0191 | DEPR          | DEPR_surv          | 1314 | -0.128 | 0.119 | 0.88  | [0.70, 1.11]   | 44.80 | 0.107 | 2.85E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1348 | 0.0199 | HY3           | HY3_surv           | 2582 | 0.094  | 0.091 | 1.10  | [0.92, 1.31]   | 0.00  | 0.557 | 3.05E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1134 | 0.0138 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.040  | 0.045 | 0.04  | [-0.05, 0.13]  | 0.00  | 0.435 | 3.81E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1298 | 0.0198 | HY            | HY_cont            | 3627 | -0.011 | 0.013 | -0.01 | [-0.04, 0.01]  | 4.90  | 0.397 | 4.17E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1301 | 0.0112 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.113  | 0.151 | 1.12  | [0.83, 1.50]   | 0.00  | 0.398 | 4.55E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1300 | 0.0216 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.054 | 0.086 | 0.95  | [0.80, 1.12]   | 5.20  | 0.387 | 5.30E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1314 | 0.0194 | INS           | INS_base           | 2220 | 0.063  | 0.104 | 1.06  | [0.87, 1.30]   | 0.00  | 0.436 | 5.45E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1315 | 0.0268 | COGI          | COGI_surv          | 2244 | -0.066 | 0.115 | 0.94  | [0.75, 1.17]   | 31.60 | 0.165 | 5.69E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1185 | 0.0169 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.017 | 0.036 | -0.02 | [-0.09, 0.05]  | 38.70 | 0.100 | 6.28E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1111 | 0.0140 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.015 | 0.040 | -0.02 | [-0.09, 0.06]  | 0.00  | 0.534 | 7.05E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1356 | 0.0111 | INS           | INS_surv           | 1112 | -0.027 | 0.097 | 0.97  | [0.80, 1.18]   | 0.00  | 0.741 | 7.82E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1274 | 0.0231 | DEPR          | DEPR_base          | 2138 | -0.033 | 0.138 | 0.97  | [0.74, 1.27]   | 34.00 | 0.157 | 8.12E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1250 | 0.0214 | SEADL         | SEADL_cont         | 2218 | 0.070  | 0.351 | 0.07  | [-0.62, 0.76]  | 0.00  | 0.774 | 8.41E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 17:43744203 | rs62053943 | t | c | 0.1301 | 0.0245 | MOCA          | MOCA_cont          | 1074 | -0.003 | 0.175 | -0.00 | [-0.35, 0.34]  | 0.00  | 0.921 | 9.86E-01 | 0 | 0 | 0 | 0 | 0 | CRHRI  |
| 12:05723572 | rs823118   | t | c | 0.5740 | 0.0192 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.061 | 0.029 | -0.06 | [-0.12, -0.00] | 0.00  | 0.851 | 3.60E-02 | 0 | 0 | 0 | 0 | 0 | NUCKS1 |
| 12:05723572 | rs823118   | t | c | 0.5688 | 0.0211 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.051  | 0.025 | 0.05  | [0.00, 0.10]   | 11.00 | 0.345 | 4.27E-02 | 0 | 0 | 0 | 0 | 0 | NUCKS1 |
| 12:05723572 | rs823118   | t | c | 0.5769 | 0.0260 | HY3           | HY3_surv           | 2582 | -0.120 | 0.062 | 0.89  | [0.79, 1.00]   | 0.00  | 0.452 | 5.30E-02 | 0 | 0 | 0 | 0 | 0 | NUCKS1 |
| 12:05723572 | rs823118   | t | c | 0.5811 | 0.0135 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.095 | 0.082 | 0.91  | [0.77, 1.07]   | 0.00  | 0.688 | 2.46E-01 | 0 | 0 | 0 | 0 | 0 | NUCKS1 |
| 12:05723572 | rs823118   | t | c | 0.5801 | 0.0199 | COGI          | COGI_surv          | 2244 | -0.075 | 0.075 | 0.93  | [0.80, 1.07]   | 0.00  | 0.860 | 3.16E-01 | 0 | 0 | 0 | 0 | 0 | NUCKS1 |
| 12:05723572 | rs823118   | t | c | 0.5760 | 0.0195 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.026 | 0.026 | -0.03 | [-0.08, 0.02]  | 0.00  | 0.728 | 3.18E-01 | 0 | 0 | 0 | 0 | 0 | NUCKS1 |
| 12:05723572 | rs823118   | t | c | 0.5858 | 0.0196 | CONST         | CONST_base         |      |        |       |       |                |       |       |          |   |   |   |   |   |        |

|             |            |   |   |        |        |               |                    |      |        |       |                      |       |       |          |   |   |   |   |              |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|----------------------|-------|-------|----------|---|---|---|---|--------------|
| 3:18361759  | rs73038319 | a | c | 0.9581 | 0.0092 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.051  | 0.212 | 1.05 [0.69, 1.60]    | 41.00 | 0.148 | 8.10E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9572 | 0.0076 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.012  | 0.062 | 0.01 [-0.11, 0.13]   | 0.00  | 0.939 | 8.42E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9515 | 0.0098 | COGI          | COGI_base          | 2148 | 0.032  | 0.169 | 1.03 [0.74, 1.44]    | 0.00  | 0.939 | 8.49E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9504 | 0.0120 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.011 | 0.061 | -0.01 [-0.13, 0.11]  | 27.60 | 0.209 | 8.63E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9493 | 0.0087 | HY3           | HY3_surv           | 2582 | 0.024  | 0.147 | 1.02 [0.77, 1.37]    | 0.00  | 0.490 | 8.69E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9527 | 0.0099 | HY3           | HY3_base           | 1289 | -0.038 | 0.258 | 0.96 [0.58, 1.60]    | 0.00  | 0.824 | 8.83E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9502 | 0.0047 | MOCA          | MOCA_cont          | 1026 | -0.039 | 0.285 | -0.04 [-0.60, 0.52]  | 0.00  | 0.667 | 8.92E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9526 | 0.0084 | COGI          | COGI_base          | 2859 | -0.027 | 0.197 | 0.97 [0.66, 1.43]    | 0.00  | 0.634 | 8.92E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 3:18361759  | rs73038319 | a | c | 0.9444 | 0.0083 | DEPR          | DEPR_surv          | 1177 | -0.010 | 0.186 | 0.99 [0.69, 1.43]    | 0.00  | 0.937 | 9.58E-01 | 0 | 0 | 0 | 0 | SATB1        |
| 6:27738801  | rs4140646  | a | g | 0.2512 | 0.0209 | DEPR          | DEPR_surv          | 1314 | -0.186 | 0.090 | 0.83 [0.70, 0.99]    | 0.00  | 0.845 | 3.93E-02 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2371 | 0.0268 | COGI          | COGI_surv          | 2244 | -0.159 | 0.088 | 0.85 [0.72, 1.01]    | 0.00  | 0.503 | 7.03E-02 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2465 | 0.0244 | HY3           | HY3_surv           | 2582 | -0.104 | 0.073 | 0.90 [0.78, 1.04]    | 14.10 | 0.317 | 1.51E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2309 | 0.0131 | SEADL         | SEADL_cont         | 2218 | -0.342 | 0.272 | -0.34 [-0.88, 0.19]  | 0.00  | 0.824 | 2.09E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2310 | 0.0168 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.037  | 0.030 | 0.04 [-0.02, 0.10]   | 47.60 | 0.064 | 2.16E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2396 | 0.0200 | SLEEP         | SLEEP_base         | 1724 | 0.113  | 0.096 | 1.12 [0.93, 1.35]    | 0.00  | 0.549 | 2.40E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2341 | 0.0294 | HY3           | HY3_base           | 1289 | 0.152  | 0.140 | 1.16 [0.89, 1.53]    | 43.40 | 0.171 | 2.76E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2284 | 0.0187 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.035 | 0.034 | -0.03 [-0.10, 0.03]  | 9.00  | 0.360 | 3.14E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2364 | 0.0248 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.026  | 0.028 | 0.03 [-0.03, 0.08]   | 7.70  | 0.371 | 3.40E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2401 | 0.0227 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.053 | 0.057 | 0.95 [0.85, 1.06]    | 0.00  | 0.633 | 3.46E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2270 | 0.0112 | SEADL70       | SEADL70_surv       | 1683 | 0.091  | 0.102 | 1.10 [0.90, 1.34]    | 0.00  | 0.913 | 3.72E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2407 | 0.0208 | DEPR          | DEPR_base          | 2138 | -0.089 | 0.108 | 0.91 [0.74, 1.13]    | 19.60 | 0.274 | 4.09E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2300 | 0.0270 | INS           | INS_base           | 2220 | 0.068  | 0.083 | 1.07 [0.91, 1.26]    | 0.00  | 0.578 | 4.15E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2270 | 0.0203 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.022  | 0.035 | 0.02 [-0.05, 0.09]   | 0.00  | 0.776 | 5.17E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2248 | 0.0245 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.058 | 0.098 | 0.94 [0.78, 1.14]    | 44.40 | 0.126 | 5.53E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2340 | 0.0285 | INS           | INS_surv           | 1112 | -0.038 | 0.075 | 0.96 [0.83, 1.11]    | 0.00  | 0.824 | 6.10E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2256 | 0.0189 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.015  | 0.030 | 0.01 [-0.04, 0.07]   | 9.00  | 0.358 | 6.17E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2337 | 0.0253 | COGI          | COGI_base          | 2859 | -0.050 | 0.104 | 0.95 [0.78, 1.17]    | 44.10 | 0.085 | 6.29E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2329 | 0.0163 | MOCA          | MOCA_cont          | 1074 | -0.063 | 0.140 | -0.06 [-0.34, 0.21]  | 0.00  | 0.997 | 6.52E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2378 | 0.0213 | CONST         | CONST_base         | 1472 | 0.033  | 0.098 | 1.03 [0.85, 1.25]    | 31.20 | 0.213 | 7.34E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2329 | 0.0151 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.022 | 0.069 | 0.98 [0.85, 1.12]    | 45.90 | 0.086 | 7.45E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2371 | 0.0185 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.011 | 0.094 | 0.99 [0.82, 1.19]    | 0.00  | 0.826 | 9.11E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 6:27738801  | rs4140646  | a | g | 0.2300 | 0.0279 | MMSE          | MMSE_cont          | 2114 | 0.003  | 0.053 | 0.00 [-0.10, 0.11]   | 0.00  | 0.767 | 9.49E-01 | 0 | 0 | 0 | 0 | LOC100131289 |
| 16:52969426 | rs10221156 | a | g | 0.0793 | 0.0095 | HY            | HY_cont            | 2077 | -0.045 | 0.022 | -0.05 [-0.09, -0.00] | 0.00  | 0.951 | 3.93E-02 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52969426 | rs10221156 | a | g | 0.0834 | 0.0149 | INS           | INS_base           | 1033 | 0.156  | 0.196 | 1.17 [0.80, 1.71]    | 38.60 | 0.164 | 4.27E-01 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52969426 | rs10221156 | a | g | 0.0787 | 0.0144 | SLEEP         | SLEEP_base         | 1033 | -0.175 | 0.221 | 0.84 [0.54, 1.29]    | 14.10 | 0.325 | 4.27E-01 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52969426 | rs10221156 | a | g | 0.0869 | 0.0118 | COGI          | COGI_surv          | 1132 | -0.122 | 0.200 | 0.88 [0.60, 1.31]    | 25.80 | 0.249 | 5.40E-01 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52969426 | rs10221156 | a | g | 0.0825 | 0.0067 | MMSE          | MMSE_cont          | 1066 | -0.031 | 0.102 | -0.03 [-0.23, 0.17]  | 0.00  | 0.863 | 7.61E-01 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52969426 | rs10221156 | a | g | 0.0852 | 0.0134 | HY3           | HY3_surv           | 1299 | -0.017 | 0.137 | 0.98 [0.75, 1.29]    | 0.00  | 0.975 | 9.03E-01 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52969426 | rs10221156 | a | g | 0.0784 | 0.0140 | COGI          | COGI_base          | 1538 | -0.011 | 0.235 | 0.99 [0.62, 1.57]    | 23.50 | 0.264 | 9.63E-01 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52969426 | rs10221156 | a | g | 0.0770 | 0.0075 | UPDRS_scaled  | UPDRS_scaled_cont  | 1108 | 0.000  | 0.073 | -0.00 [-0.14, 0.14]  | 0.00  | 0.985 | 9.99E-01 | 0 | 0 | 0 | 0 | CHD9         |
| 16:52636242 | rs3104783  | a | c | 0.4252 | 0.0193 | CONST         | CONST_base         | 1472 | -0.172 | 0.086 | 0.84 [0.71, 1.00]    | 0.00  | 0.977 | 4.55E-02 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4280 | 0.0308 | HY3           | HY3_base           | 1289 | -0.148 | 0.119 | 0.86 [0.68, 1.09]    | 24.40 | 0.267 | 2.17E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4403 | 0.0238 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.102  | 0.083 | 1.11 [0.94, 1.30]    | 0.00  | 0.514 | 2.18E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4253 | 0.0251 | SLEEP         | SLEEP_base         | 1724 | 0.094  | 0.084 | 1.10 [0.93, 1.29]    | 0.00  | 0.566 | 2.64E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4360 | 0.0204 | DEPR          | DEPR_base          | 2138 | -0.096 | 0.090 | 0.91 [0.76, 1.08]    | 0.00  | 0.792 | 2.88E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4394 | 0.0265 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.021  | 0.025 | 0.02 [-0.03, 0.07]   | 5.50  | 0.382 | 4.09E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4380 | 0.0130 | SEADL70       | SEADL70_surv       | 1683 | 0.066  | 0.090 | 1.07 [0.89, 1.27]    | 16.40 | 0.310 | 4.68E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4226 | 0.0256 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.055 | 0.082 | 0.95 [0.81, 1.11]    | 0.00  | 0.451 | 4.98E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4346 | 0.0285 | INS           | INS_base           | 2220 | -0.044 | 0.071 | 0.96 [0.83, 1.10]    | 13.10 | 0.328 | 5.32E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4343 | 0.0217 | INS           | INS_surv           | 1112 | 0.034  | 0.064 | 1.03 [0.91, 1.17]    | 0.00  | 0.747 | 5.96E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4433 | 0.0243 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.012  | 0.024 | 0.01 [-0.03, 0.06]   | 0.00  | 0.463 | 6.17E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4330 | 0.0246 | DEPR          | DEPR_surv          | 1314 | 0.025  | 0.078 | 1.03 [0.88, 1.19]    | 0.00  | 0.767 | 7.50E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4256 | 0.0347 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.008 | 0.026 | -0.01 [-0.06, 0.04]  | 0.00  | 0.826 | 7.70E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4216 | 0.0285 | HY3           | HY3_surv           | 2582 | -0.018 | 0.061 | 0.98 [0.87, 1.11]    | 33.10 | 0.153 | 7.75E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4358 | 0.0293 | HY            | HY_cont            | 3627 | -0.002 | 0.009 | -0.00 [-0.02, 0.02]  | 0.00  | 0.138 | 8.01E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4394 | 0.0262 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.006  | 0.029 | 0.01 [-0.05, 0.06]   | 0.00  | 0.578 | 8.25E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4325 | 0.0239 | SEADL         | SEADL_cont         | 2218 | -0.051 | 0.234 | -0.05 [-0.51, 0.41]  | 0.00  | 0.975 | 8.26E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4373 | 0.0284 | COGI          | COGI_base          | 2859 | 0.018  | 0.088 | 1.02 [0.86, 1.21]    | 38.10 | 0.126 | 8.40E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4396 | 0.0249 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.005 | 0.029 | -0.00 [-0.06, 0.05]  | 0.00  | 0.779 | 8.72E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4290 | 0.0179 | MOCA          | MOCA_cont          | 1074 | -0.016 | 0.120 | -0.02 [-0.25, 0.22]  | 42.70 | 0.155 | 8.95E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4330 | 0.0202 | COGI          | COGI_surv          | 2244 | 0.008  | 0.074 | 1.01 [0.87, 1.17]    | 0.00  | 0.629 | 9.15E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 | rs3104783  | a | c | 0.4433 | 0.0269 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.009 | 0.104 | 0.99 [0.81, 1.22]    | 0.00  | 0.680 | 9.34E-01 | 0 | 0 | 0 | 0 | CASC16       |
| 16:52636242 |            |   |   |        |        |               |                    |      |        |       |                      |       |       |          |   |   |   |   |              |

|             |            |   |   |        |        |               |                    |      |        |       |                     |       |       |          |   |   |   |   |   |        |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|---------------------|-------|-------|----------|---|---|---|---|---|--------|
| 1:171719769 | rs11578699 | t | c | 0.1853 | 0.0182 | INS           | INS_base           | 2220 | 0.106  | 0.091 | 1.11 [0.93, 1.33]   | 0.00  | 0.472 | 2.42E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1944 | 0.0211 | SEADL70       | SEADL70_surv       | 1683 | -0.122 | 0.121 | 0.88 [0.70, 1.12]   | 0.00  | 0.945 | 3.11E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1849 | 0.0191 | HY            | HY_cont            | 3627 | 0.010  | 0.011 | 0.01 [-0.01, 0.03]  | 0.00  | 0.698 | 3.85E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1868 | 0.0254 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.024 | 0.033 | -0.02 [-0.09, 0.04] | 22.30 | 0.252 | 4.61E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1825 | 0.0168 | SLEEP         | SLEEP_base         | 1724 | 0.078  | 0.108 | 1.08 [0.88, 1.33]   | 0.00  | 0.915 | 4.07E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1877 | 0.0237 | SEADL         | SEADL_cont         | 2218 | -0.207 | 0.297 | -0.21 [-0.79, 0.38] | 0.00  | 0.442 | 4.87E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1803 | 0.0185 | MMSE          | MMSE_cont          | 2114 | -0.037 | 0.057 | -0.04 [-0.15, 0.08] | 35.30 | 0.146 | 5.23E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1902 | 0.0188 | DEPR          | DEPR_base          | 2138 | 0.064  | 0.113 | 1.07 [0.85, 1.33]   | 7.70  | 0.371 | 5.71E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1887 | 0.0115 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.062  | 0.131 | 1.06 [0.82, 1.38]   | 0.00  | 0.845 | 6.36E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1818 | 0.0114 | CONST         | CONST_base         | 1472 | -0.044 | 0.110 | 0.96 [0.77, 1.19]   | 0.00  | 0.775 | 6.88E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1833 | 0.0191 | COGI          | COGI_base          | 2859 | 0.040  | 0.113 | 1.04 [0.83, 1.30]   | 3.60  | 0.403 | 7.23E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1822 | 0.0128 | HY3           | HY3_base           | 1289 | 0.053  | 0.150 | 1.05 [0.79, 1.41]   | 0.00  | 0.952 | 7.24E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1928 | 0.0220 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.012 | 0.037 | -0.01 [-0.08, 0.06] | 0.00  | 0.693 | 7.46E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1939 | 0.0219 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.009 | 0.037 | -0.01 [-0.08, 0.06] | 18.10 | 0.292 | 8.08E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1828 | 0.0152 | DEPR          | DEPR_surv          | 1314 | 0.019  | 0.099 | 1.02 [0.84, 1.24]   | 0.00  | 0.683 | 8.50E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1952 | 0.0178 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.017  | 0.105 | 1.02 [0.83, 1.25]   | 42.60 | 0.137 | 8.76E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1844 | 0.0196 | COGI          | COGI_surv          | 2244 | -0.009 | 0.096 | 0.99 [0.82, 1.20]   | 6.70  | 0.380 | 9.23E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 1:171719769 | rs11578699 | t | c | 0.1848 | 0.0224 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.003  | 0.030 | 0.00 [-0.06, 0.06]  | 0.00  | 0.851 | 9.28E-01 | 0 | 0 | 0 | 0 | 0 | VAMP4  |
| 6:30108683  | rs9261484  | t | c | 0.2458 | 0.0127 | HY3           | HY3_base           | 1289 | 0.261  | 0.133 | 1.30 [1.00, 1.68]   | 0.00  | 0.536 | 5.01E-02 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2403 | 0.0286 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.064  | 0.033 | 0.06 [-0.00, 0.13]  | 0.00  | 0.703 | 5.25E-02 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2411 | 0.0202 | COGI          | COGI_surv          | 2244 | 0.147  | 0.083 | 1.16 [0.98, 1.36]   | 0.00  | 0.593 | 7.84E-02 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2339 | 0.0083 | SEADL70       | SEADL70_surv       | 1683 | 0.165  | 0.102 | 1.18 [0.96, 1.44]   | 0.00  | 0.930 | 1.08E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2386 | 0.0260 | SLEEP         | SLEEP_base         | 1724 | -0.151 | 0.097 | 0.86 [0.71, 1.04]   | 0.00  | 0.901 | 1.18E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2353 | 0.0104 | MOCA          | MOCA_cont          | 1074 | -0.209 | 0.137 | -0.21 [-0.48, 0.06] | 0.00  | 0.778 | 1.28E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2392 | 0.0260 | SEADL         | SEADL_cont         | 2218 | -0.375 | 0.269 | -0.37 [-0.90, 0.15] | 0.00  | 0.541 | 1.64E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2381 | 0.0220 | DEPR          | DEPR_surv          | 1314 | 0.112  | 0.091 | 1.12 [0.94, 1.34]   | 47.80 | 0.088 | 2.17E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2451 | 0.0270 | INS           | INS_base           | 2220 | -0.076 | 0.080 | 0.93 [0.79, 1.09]   | 0.00  | 0.527 | 3.46E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2293 | 0.0143 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.052 | 0.058 | 0.95 [0.85, 1.06]   | 0.00  | 0.679 | 3.67E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2439 | 0.0151 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.084  | 0.094 | 1.09 [0.90, 1.31]   | 0.00  | 0.421 | 3.73E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2502 | 0.0346 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.025 | 0.029 | -0.03 [-0.08, 0.03] | 0.00  | 0.621 | 3.81E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2371 | 0.0115 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.051  | 0.068 | 1.05 [0.92, 1.20]   | 0.00  | 0.836 | 4.57E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2515 | 0.0103 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.064 | 0.118 | 0.94 [0.74, 1.18]   | 0.00  | 0.915 | 5.90E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2356 | 0.0276 | HY            | HY_cont            | 3627 | 0.004  | 0.010 | 0.00 [-0.02, 0.02]  | 0.00  | 0.610 | 6.72E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2428 | 0.0285 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.035  | 0.092 | 1.04 [0.87, 1.24]   | 0.00  | 0.937 | 6.99E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2397 | 0.0133 | INS           | INS_surv           | 1112 | -0.025 | 0.074 | 0.98 [0.84, 1.13]   | 37.90 | 0.153 | 7.35E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2344 | 0.0140 | CONST         | CONST_base         | 1472 | 0.024  | 0.098 | 1.02 [0.85, 1.24]   | 0.00  | 0.649 | 8.09E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2305 | 0.0235 | MMSE          | MMSE_cont          | 2114 | -0.011 | 0.052 | -0.01 [-0.11, 0.09] | 0.00  | 0.993 | 8.30E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2351 | 0.0167 | DEPR          | DEPR_base          | 2138 | 0.020  | 0.103 | 1.02 [0.83, 1.25]   | 2.60  | 0.410 | 8.49E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2449 | 0.0233 | COGI          | COGI_base          | 2859 | -0.018 | 0.099 | 0.98 [0.81, 1.19]   | 0.00  | 0.964 | 8.53E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2414 | 0.0285 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.006  | 0.033 | 0.01 [-0.06, 0.07]  | 37.20 | 0.145 | 8.63E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2373 | 0.0285 | UPDRS4_scaled | UPDRS4_scaled_cont | 1928 | -0.003 | 0.029 | -0.00 [-0.06, 0.05] | 15.90 | 0.311 | 9.04E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2431 | 0.0303 | HY3           | HY3_surv           | 2582 | 0.008  | 0.072 | 1.01 [0.87, 1.16]   | 11.70 | 0.337 | 9.13E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 6:30108683  | rs9261484  | t | c | 0.2384 | 0.0164 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.001 | 0.027 | -0.00 [-0.05, 0.05] | 12.80 | 0.326 | 9.62E-01 | 0 | 0 | 0 | 0 | 0 | TRIM40 |
| 10:15557406 | rs896435   | t | c | 0.7000 | 0.0126 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.172  | 0.089 | 1.19 [1.00, 1.41]   | 0.00  | 0.649 | 5.29E-02 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6981 | 0.0292 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.031  | 0.027 | 0.03 [-0.02, 0.08]  | 0.00  | 0.684 | 2.43E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6970 | 0.0267 | COGI          | COGI_surv          | 2244 | -0.087 | 0.078 | 0.92 [0.79, 1.07]   | 29.10 | 0.186 | 2.62E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6950 | 0.0229 | COGI          | COGI_base          | 2859 | 0.101  | 0.093 | 1.11 [0.92, 1.33]   | 0.00  | 0.680 | 2.80E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6940 | 0.0253 | SLEEP         | SLEEP_base         | 1724 | -0.071 | 0.090 | 0.93 [0.78, 1.11]   | 0.00  | 0.444 | 4.30E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6971 | 0.0296 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.023 | 0.031 | -0.02 [-0.08, 0.04] | 36.70 | 0.149 | 4.65E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6846 | 0.0196 | SEADL         | SEADL_cont         | 2218 | 0.179  | 0.248 | 1.18 [-0.31, 0.67]  | 0.00  | 0.936 | 4.71E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.7088 | 0.0163 | HY3           | HY3_base           | 1289 | 0.082  | 0.127 | 1.09 [0.85, 1.39]   | 0.00  | 0.795 | 5.15E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6938 | 0.0258 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.016 | 0.025 | -0.02 [-0.06, 0.03] | 44.50 | 0.063 | 5.29E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6927 | 0.0277 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.014 | 0.028 | -0.01 [-0.07, 0.04] | 48.60 | 0.058 | 6.26E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6990 | 0.0169 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.022  | 0.053 | 1.02 [0.92, 1.13]   | 0.00  | 0.610 | 6.78E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6904 | 0.0280 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.032  | 0.086 | 1.03 [0.87, 1.22]   | 0.00  | 0.490 | 7.14E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.7064 | 0.0203 | INS           | INS_surv           | 1112 | -0.027 | 0.074 | 0.97 [0.84, 1.13]   | 0.00  | 0.908 | 7.22E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6949 | 0.0142 | SEADL70       | SEADL70_surv       | 1683 | 0.033  | 0.098 | 1.03 [0.85, 1.25]   | 0.00  | 0.674 | 7.35E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.7048 | 0.0201 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.019  | 0.062 | 1.02 [0.90, 1.15]   | 0.00  | 0.990 | 7.65E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.7000 | 0.0157 | CONST         | CONST_base         | 1472 | -0.026 | 0.092 | 0.97 [0.81, 1.17]   | 0.00  | 0.895 | 7.74E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6948 | 0.0156 | DEPR          | DEPR_base          | 2138 | -0.026 | 0.099 | 0.97 [0.80, 1.18]   | 0.00  | 0.605 | 7.91E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   | t | c | 0.6914 | 0.0234 | HY            | HY_cont            | 3627 | 0.002  | 0.010 | 0.00 [-0.02, 0.02]  | 0.00  | 0.650 | 8.26E-01 | 0 | 0 | 0 | 0 | 0 | ITGA8  |
| 10:15557406 | rs896435   |   |   |        |        |               |                    |      |        |       |                     |       |       |          |   |   |   |   |   |        |

|             |             |   |   |        |        |               |                    |      |        |       |                     |       |       |          |   |   |   |   |   |        |
|-------------|-------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|---------------------|-------|-------|----------|---|---|---|---|---|--------|
| 20:6006041  | rs77351827  | t | c | 0.1329 | 0.0083 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.062  | 0.043 | 0.06 [-0.02, 0.15]  | 0.00  | 0.449 | 1.50E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1300 | 0.0092 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.151 | 0.116 | 0.86 [0.68, 1.08]   | 34.90 | 0.175 | 1.92E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1315 | 0.0060 | DEPR          | DEPR_surv          | 1314 | 0.139  | 0.115 | 1.15 [0.92, 1.44]   | 38.20 | 0.152 | 2.28E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1313 | 0.0038 | INS           | INS_surv           | 1112 | -0.117 | 0.100 | 0.89 [0.73, 1.08]   | 0.00  | 0.665 | 2.41E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1342 | 0.0085 | COGI          | COGI_base          | 2712 | 0.119  | 0.122 | 1.13 [0.89, 1.43]   | 0.00  | 0.668 | 3.31E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1335 | 0.0085 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.034 | 0.037 | -0.03 [-0.11, 0.04] | 38.30 | 0.151 | 3.59E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1311 | 0.0056 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.104 | 0.115 | 0.90 [0.72, 1.13]   | 0.00  | 0.439 | 3.67E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1330 | 0.0073 | HY3           | HY3_base           | 1289 | 0.139  | 0.157 | 1.15 [0.84, 1.56]   | 0.00  | 0.943 | 3.76E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1307 | 0.0073 | MMSE          | MMSE_cont          | 2114 | -0.058 | 0.066 | -0.06 [-0.19, 0.07] | 0.00  | 0.765 | 3.81E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1315 | 0.0069 | CONST         | CONST_base         | 1472 | 0.105  | 0.121 | 1.11 [0.88, 1.41]   | 0.00  | 0.898 | 3.88E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1325 | 0.0095 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.035  | 0.043 | 0.03 [-0.05, 0.12]  | 15.50 | 0.311 | 4.16E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1303 | 0.0087 | SLEEP         | SLEEP_base         | 1724 | 0.097  | 0.121 | 1.10 [0.87, 1.40]   | 0.00  | 0.719 | 4.21E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1367 | 0.0094 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.048  | 0.071 | 1.05 [0.91, 1.21]   | 0.00  | 0.614 | 5.01E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1312 | 0.0071 | INS           | INS_base           | 2220 | 0.061  | 0.101 | 1.06 [0.87, 1.30]   | 38.40 | 0.124 | 5.48E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1299 | 0.0090 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.023 | 0.039 | -0.02 [-0.10, 0.05] | 0.00  | 0.736 | 5.51E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1311 | 0.0059 | DEPR          | DEPR_base          | 2138 | 0.065  | 0.128 | 1.07 [0.83, 1.37]   | 13.30 | 0.326 | 6.11E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1317 | 0.0043 | HY3           | HY3_surv           | 2582 | -0.028 | 0.096 | 0.97 [0.81, 1.17]   | 0.00  | 0.633 | 7.67E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1276 | 0.0081 | SEADL         | SEADL_cont         | 2218 | 0.105  | 0.356 | 0.11 [-0.59, 0.80]  | 5.60  | 0.387 | 7.67E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1325 | 0.0074 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.023 | 0.085 | 0.98 [0.83, 1.16]   | 0.00  | 0.473 | 7.92E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1341 | 0.0055 | MOCA          | MOCA_cont          | 1074 | 0.040  | 0.180 | 0.44 [-0.31, 0.39]  | 17.90 | 0.301 | 8.25E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1318 | 0.0058 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.025  | 0.143 | 1.03 [0.77, 1.36]   | 60.50 | 0.080 | 8.63E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1337 | 0.0100 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.005  | 0.035 | 0.00 [-0.06, 0.07]  | 0.00  | 0.909 | 8.97E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1334 | 0.0107 | HY            | HY_cont            | 3627 | 0.001  | 0.013 | 0.00 [-0.02, 0.03]  | 0.00  | 0.946 | 9.29E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 20:6006041  | rs77351827  | t | c | 0.1305 | 0.0072 | COGI          | COGI_surv          | 2244 | 0.005  | 0.118 | 1.00 [0.80, 1.27]   | 0.00  | 0.632 | 9.69E-01 | 0 | 0 | 0 | 0 | 0 | CRLS1  |
| 8:16697593  | rs620513    | t | g | 0.2631 | 0.0109 | CONST         | CONST_base         | 1472 | 0.187  | 0.100 | 1.21 [0.99, 1.47]   | 0.00  | 0.439 | 6.24E-02 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2637 | 0.0053 | HY3           | HY3_base           | 1289 | 0.219  | 0.137 | 1.24 [0.95, 1.63]   | 0.00  | 0.460 | 1.11E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2524 | 0.0203 | HY3           | HY3_surv           | 2582 | -0.093 | 0.074 | 0.91 [0.79, 1.05]   | 17.00 | 0.291 | 2.10E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2550 | 0.0201 | COGI          | COGI_surv          | 2244 | 0.101  | 0.086 | 1.11 [0.93, 1.31]   | 0.00  | 0.576 | 2.41E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2583 | 0.0131 | DEPR          | DEPR_base          | 2138 | 0.101  | 0.104 | 1.11 [0.90, 1.36]   | 0.00  | 0.679 | 3.34E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2393 | 0.0148 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.030  | 0.034 | 0.03 [-0.04, 0.10]  | 49.30 | 0.066 | 3.75E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2609 | 0.0121 | SLEEP         | SLEEP_base         | 1724 | 0.078  | 0.098 | 1.08 [0.89, 1.31]   | 0.00  | 0.958 | 4.25E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2482 | 0.0117 | SEADL         | SEADL_cont         | 2112 | 0.174  | 0.270 | 0.17 [-0.36, 0.70]  | 0.00  | 0.517 | 5.19E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2376 | 0.0133 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.019 | 0.030 | -0.02 [-0.08, 0.04] | 0.00  | 0.721 | 5.22E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2397 | 0.0143 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.018 | 0.030 | -0.02 [-0.08, 0.04] | 2.60  | 0.410 | 5.49E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2604 | 0.0088 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | -0.057 | 0.096 | 0.94 [0.78, 1.14]   | 33.90 | 0.182 | 5.51E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2463 | 0.0151 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.034  | 0.059 | 1.03 [0.92, 1.16]   | 0.00  | 0.587 | 5.62E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2501 | 0.0217 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.040  | 0.070 | 1.04 [0.91, 1.19]   | 25.60 | 0.234 | 5.70E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2627 | 0.0111 | INS           | INS_base           | 2220 | 0.047  | 0.083 | 1.05 [0.89, 1.23]   | 4.10  | 0.399 | 5.73E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2397 | 0.0139 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.019  | 0.034 | 0.02 [-0.05, 0.09]  | 17.30 | 0.298 | 5.77E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2634 | 0.0374 | INS           | INS_surv           | 1112 | 0.014  | 0.077 | 1.01 [0.87, 1.18]   | 0.00  | 0.733 | 8.55E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2453 | 0.0129 | DEPR          | DEPR_surv          | 1314 | 0.016  | 0.089 | 1.02 [0.85, 1.21]   | 9.40  | 0.356 | 8.55E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2582 | 0.0087 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.013  | 0.096 | 1.01 [0.84, 1.22]   | 0.00  | 0.618 | 8.90E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2471 | 0.0223 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.002  | 0.027 | 0.00 [-0.05, 0.05]  | 0.00  | 0.494 | 9.54E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2495 | 0.0148 | SEADL70       | SEADL70_surv       | 1683 | 0.006  | 0.110 | 1.01 [0.81, 1.25]   | 0.00  | 0.408 | 9.56E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 8:16697593  | rs620513    | t | g | 0.2497 | 0.0187 | HY            | HY_cont            | 3627 | 0.000  | 0.010 | 0.00 [-0.02, 0.02]  | 11.60 | 0.331 | 9.79E-01 | 0 | 0 | 0 | 0 | 0 | FGF20  |
| 17:43798308 | rs117615688 | a | g | 0.0484 | 0.0073 | HY3           | HY3_base           | 1289 | -0.605 | 0.330 | 0.55 [0.29, 1.04]   | 0.00  | 0.751 | 6.69E-02 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0510 | 0.0062 | COGI          | COGI_base          | 2450 | 0.340  | 0.200 | 1.40 [0.95, 2.08]   | 10.10 | 0.352 | 8.92E-02 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0540 | 0.0090 | CONST         | CONST_base         | 1335 | -0.341 | 0.211 | 0.71 [0.47, 1.08]   | 0.00  | 0.788 | 1.07E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0497 | 0.0052 | SEADL         | SEADL_cont         | 2218 | 0.891  | 0.563 | 0.89 [-0.21, 2.00]  | 0.00  | 0.726 | 1.14E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0557 | 0.0146 | SLEEP         | SLEEP_base         | 1724 | 0.309  | 0.196 | 1.36 [0.93, 2.00]   | 10.70 | 0.348 | 1.15E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0503 | 0.0031 | DEPR          | DEPR_surv          | 1314 | 0.276  | 0.179 | 1.32 [0.93, 1.87]   | 21.80 | 0.270 | 1.22E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0584 | 0.0140 | HYPOSOMIA     | HYPOSOMIA_base     | 1588 | 0.247  | 0.186 | 1.28 [0.89, 1.84]   | 54.40 | 0.052 | 1.84E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0517 | 0.0089 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.123 | 0.122 | 0.88 [0.70, 1.12]   | 0.00  | 0.658 | 3.13E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0519 | 0.0049 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.188  | 0.199 | 1.21 [0.82, 1.78]   | 16.70 | 0.308 | 3.43E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0597 | 0.0128 | INS           | INS_base           | 2220 | 0.154  | 0.173 | 1.17 [0.83, 1.64]   | 41.50 | 0.102 | 3.74E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0519 | 0.0126 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.053 | 0.061 | -0.05 [-0.17, 0.07] | 2.90  | 0.398 | 3.80E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0524 | 0.0140 | HY            | HY_cont            | 3627 | 0.017  | 0.021 | 0.02 [-0.02, 0.06]  | 14.40 | 0.304 | 4.23E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0548 | 0.0079 | INS           | INS_surv           | 1112 | 0.107  | 0.152 | 1.11 [0.83, 1.50]   | 0.00  | 0.672 | 4.83E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0501 | 0.0150 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.038  | 0.066 | 0.04 [-0.09, 0.17]  | 0.00  | 0.772 | 5.59E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0522 | 0.0133 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.036  | 0.070 | 0.04 [-0.10, 0.17]  | 0.00  | 0.637 | 6.09E-01 | 0 | 0 | 0 | 0 | 0 | CHRHR1 |
| 17:43798308 | rs117615688 | a | g | 0.0510 | 0.0124 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.028 | 0.057 | -0.03 [-0.14, 0.08] | 0.00  | 0.928 | 6.23E-01 | 0 |   |   |   |   |        |

|              |            |   |   |        |        |               |                    |      |        |       |       |               |       |       |          |   |   |   |   |        |
|--------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|-------|---------------|-------|-------|----------|---|---|---|---|--------|
| 10:121415685 | rs72840788 | a | g | 0.2287 | 0.0106 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | -0.057 | 0.119 | 0.94  | [0.75, 1.19]  | 59.70 | 0.084 | 6.34E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2307 | 0.0105 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.016 | 0.034 | -0.02 | [-0.08, 0.05] | 0.00  | 0.693 | 6.44E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2328 | 0.0135 | SLEEP         | SLEEP_base         | 1724 | -0.032 | 0.097 | 0.97  | [0.80, 1.17]  | 0.00  | 0.920 | 7.38E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2243 | 0.0144 | SEADL         | SEADL_cont         | 2218 | -0.084 | 0.275 | -0.08 | [-0.62, 0.45] | 6.60  | 0.379 | 7.59E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2314 | 0.0120 | CONST         | CONST_base         | 1472 | -0.028 | 0.100 | 1.03  | [0.84, 1.25]  | 10.80 | 0.344 | 7.82E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2292 | 0.0160 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.016 | 0.068 | 0.98  | [0.86, 1.13]  | 11.40 | 0.343 | 8.15E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2153 | 0.0140 | MMSE          | MMSE_cont          | 2114 | -0.010 | 0.053 | -0.01 | [-0.11, 0.10] | 0.00  | 0.875 | 8.59E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2346 | 0.0212 | HY3           | HY3_surv           | 2582 | -0.012 | 0.072 | 0.99  | [0.86, 1.14]  | 31.70 | 0.165 | 8.71E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2306 | 0.0139 | COGI          | COGI_base          | 2859 | 0.013  | 0.102 | 1.01  | [0.83, 1.24]  | 17.60 | 0.291 | 8.96E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2279 | 0.0133 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.002 | 0.028 | -0.00 | [-0.06, 0.05] | 0.00  | 0.762 | 9.36E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 10:121415685 | rs72840788 | a | g | 0.2285 | 0.0139 | INS           | INS_base           | 2220 | 0.000  | 0.084 | 1.00  | [0.85, 1.18]  | 26.30 | 0.219 | 9.97E-01 | 0 | 0 | 0 | 0 | BAG3   |
| 17:7355621   | rs12600861 | a | c | 0.6426 | 0.0238 | SEADL         | SEADL_cont         | 2218 | -0.429 | 0.244 | -0.43 | [-0.91, 0.05] | 0.90  | 0.423 | 7.91E-02 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6329 | 0.0298 | HY            | HY_cont            | 3627 | 0.013  | 0.009 | 0.01  | [-0.00, 0.03] | 0.00  | 0.637 | 1.42E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6479 | 0.0185 | MOCA          | MOCA_cont          | 1074 | -0.179 | 0.124 | -0.18 | [-0.42, 0.06] | 23.40 | 0.271 | 1.50E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6359 | 0.0299 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.034  | 0.024 | 0.03  | [-0.01, 0.08] | 0.00  | 0.739 | 1.54E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6452 | 0.0141 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.108  | 0.105 | 1.11  | [0.91, 1.37]  | 46.80 | 0.153 | 3.07E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6417 | 0.0211 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.028  | 0.030 | 0.03  | [-0.03, 0.09] | 38.40 | 0.136 | 3.45E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6383 | 0.0178 | HY3           | HY3_base           | 1289 | -0.085 | 0.117 | 0.92  | [0.73, 1.16]  | 0.00  | 0.444 | 4.71E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6409 | 0.0144 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.059 | 0.084 | 0.94  | [0.80, 1.11]  | 0.00  | 0.458 | 4.81E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6411 | 0.0185 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.041  | 0.059 | 1.04  | [0.93, 1.17]  | 28.00 | 0.215 | 4.87E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6402 | 0.0220 | HY3           | HY3_surv           | 2582 | -0.039 | 0.064 | 0.96  | [0.85, 1.09]  | 13.80 | 0.320 | 5.47E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6420 | 0.0258 | SLEEP         | SLEEP_base         | 1724 | 0.050  | 0.085 | 1.05  | [0.89, 1.24]  | 0.00  | 0.999 | 5.62E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6380 | 0.0254 | DEPR          | DEPR_base          | 1314 | 0.045  | 0.079 | 1.05  | [0.90, 1.22]  | 0.00  | 0.800 | 5.69E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6461 | 0.0196 | CONST         | CONST_base         | 1472 | -0.049 | 0.087 | 0.95  | [0.80, 1.13]  | 0.00  | 0.485 | 5.75E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6499 | 0.0177 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.027  | 0.051 | 1.03  | [0.93, 1.14]  | 0.00  | 0.713 | 5.91E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6531 | 0.0217 | MMSE          | MMSE_cont          | 2114 | -0.023 | 0.047 | -0.02 | [-0.11, 0.07] | 0.00  | 0.524 | 6.18E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6333 | 0.0311 | COGI          | COGI_base          | 2859 | -0.036 | 0.089 | 0.96  | [0.81, 1.15]  | 41.00 | 0.105 | 6.84E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6415 | 0.0213 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.012  | 0.030 | 0.01  | [-0.05, 0.07] | 0.00  | 0.540 | 6.91E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6374 | 0.0223 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.008 | 0.027 | -0.01 | [-0.06, 0.04] | 0.00  | 0.916 | 7.52E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6518 | 0.0207 | COGI          | COGI_surv          | 2244 | -0.023 | 0.076 | 0.98  | [0.84, 1.14]  | 0.00  | 0.672 | 7.67E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6570 | 0.0167 | SEADL70       | SEADL70_surv       | 1683 | -0.026 | 0.096 | 0.97  | [0.81, 1.18]  | 0.00  | 0.910 | 7.88E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6437 | 0.0183 | DEPR          | DEPR_base          | 2138 | 0.022  | 0.093 | 1.02  | [0.85, 1.23]  | 16.40 | 0.301 | 8.10E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6425 | 0.0279 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.013 | 0.083 | 0.99  | [0.84, 1.16]  | 0.00  | 0.897 | 8.71E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6443 | 0.0237 | INS           | INS_base           | 2220 | 0.003  | 0.072 | 1.00  | [0.87, 1.16]  | 0.00  | 0.639 | 9.63E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 17:7355621   | rs12600861 | a | c | 0.6558 | 0.0200 | INS           | INS_surv           | 1112 | 0.001  | 0.067 | 1.00  | [0.88, 1.14]  | 0.00  | 0.780 | 9.87E-01 | 0 | 0 | 0 | 0 | CHRNBI |
| 16:30977799  | rs11150601 | a | g | 0.6731 | 0.0194 | INS           | INS_surv           | 1112 | -0.123 | 0.071 | 0.88  | [0.77, 1.01]  | 46.40 | 0.097 | 8.01E-02 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6503 | 0.0272 | HY3           | HY3_surv           | 2582 | -0.105 | 0.064 | 0.90  | [0.79, 1.02]  | 0.00  | 0.899 | 1.02E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6542 | 0.0186 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.049 | 0.030 | -0.05 | [-0.11, 0.01] | 0.00  | 0.750 | 1.06E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6540 | 0.0126 | INS           | INS_base           | 2220 | -0.119 | 0.074 | 0.89  | [0.77, 1.03]  | 25.10 | 0.229 | 1.07E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6536 | 0.0190 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.046 | 0.030 | -0.05 | [-0.11, 0.01] | 0.00  | 0.954 | 1.29E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6544 | 0.0231 | HY            | HY_cont            | 3627 | -0.012 | 0.009 | -0.01 | [-0.03, 0.01] | 15.80 | 0.289 | 1.86E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6603 | 0.0188 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.110 | 0.084 | 0.90  | [0.76, 1.06]  | 0.00  | 0.953 | 1.88E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6439 | 0.0144 | SEADL70       | SEADL70_surv       | 1683 | -0.118 | 0.098 | 1.12  | [0.93, 1.36]  | 0.00  | 0.925 | 2.27E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6518 | 0.0169 | COGI          | COGI_base          | 2859 | 0.106  | 0.092 | 1.11  | [0.93, 1.33]  | 40.00 | 0.112 | 2.49E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6534 | 0.0203 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.026 | 0.026 | -0.03 | [-0.08, 0.03] | 0.00  | 0.828 | 3.25E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6480 | 0.0151 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.083  | 0.086 | 1.09  | [0.92, 1.29]  | 0.00  | 0.836 | 3.38E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6571 | 0.0185 | DEPR          | DEPR_base          | 1314 | -0.069 | 0.080 | 0.93  | [0.80, 1.09]  | 4.90  | 0.385 | 3.85E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6476 | 0.0259 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.021 | 0.025 | -0.02 | [-0.07, 0.03] | 0.00  | 0.935 | 3.85E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6526 | 0.0287 | SLEEP         | SLEEP_base         | 1724 | -0.075 | 0.087 | 0.93  | [0.78, 1.10]  | 22.70 | 0.256 | 3.86E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6451 | 0.0287 | DEPR          | DEPR_base          | 2138 | -0.057 | 0.093 | 0.94  | [0.79, 1.13]  | 0.00  | 0.565 | 5.38E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6544 | 0.0148 | HY3           | HY3_base           | 1289 | 0.063  | 0.122 | 1.07  | [0.84, 1.35]  | 0.00  | 0.840 | 6.04E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6534 | 0.0268 | MMSE          | MMSE_cont          | 2114 | 0.024  | 0.046 | 0.02  | [-0.07, 0.11] | 0.00  | 0.964 | 6.06E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6483 | 0.0175 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.019  | 0.051 | 1.02  | [0.92, 1.13]  | 47.20 | 0.078 | 7.06E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6521 | 0.0273 | CONST         | CONST_base         | 1472 | -0.029 | 0.090 | 0.97  | [0.81, 1.16]  | 0.00  | 0.435 | 7.45E-01 | 0 | 0 | 0 | 0 | SETDIA |
| 16:30977799  | rs11150601 | a | g | 0.6556 | 0.0184 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.009 | 0.027 | -0.01 | [-0.06, 0.04] | 0.00  | 0.769 | 7.54E-01 | 0 | 0 | 0 | 0 | SETDIA |

|              |             |   |   |        |        |               |                    |      |        |       |       |               |       |       |          |   |   |   |   |   |          |
|--------------|-------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|-------|---------------|-------|-------|----------|---|---|---|---|---|----------|
| 9:34046391   | rs6476434   | t | c | 0.7220 | 0.0156 | INS           | INS_surv           | 1112 | -0.084 | 0.072 | 0.92  | [0.80, 1.06]  | 0.00  | 0.809 | 2.45E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7275 | 0.0010 | CONST         | CONST_base         | 1472 | 0.105  | 0.095 | 1.11  | [0.92, 1.34]  | 0.00  | 0.467 | 2.67E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7321 | 0.0081 | HY3           | HY3_base           | 1289 | -0.119 | 0.129 | 0.89  | [0.69, 1.14]  | 0.00  | 0.415 | 3.55E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7080 | 0.0143 | MOCA          | MOCA_cont          | 1074 | 0.119  | 0.134 | 0.12  | [-0.14, 0.38] | 0.00  | 0.805 | 3.77E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7234 | 0.0183 | HY3           | HY3_surv           | 2582 | -0.059 | 0.071 | 0.94  | [0.82, 1.08]  | 0.00  | 0.905 | 4.02E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7166 | 0.0152 | HY            | HY_cont            | 3627 | 0.007  | 0.010 | 0.01  | [-0.01, 0.03] | 25.10 | 0.197 | 4.58E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7270 | 0.0101 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.062  | 0.091 | 1.06  | [0.89, 1.27]  | 2.10  | 0.403 | 4.95E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7252 | 0.0094 | INS           | INS_base           | 2220 | 0.050  | 0.078 | 1.05  | [0.90, 1.23]  | 0.00  | 0.501 | 5.20E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7097 | 0.0121 | SEADL70       | SEADL70_surv       | 1683 | 0.053  | 0.106 | 1.05  | [0.86, 1.30]  | 0.00  | 0.510 | 6.14E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7101 | 0.0152 | MMSE          | MMSE_cont          | 2114 | 0.020  | 0.048 | 0.02  | [-0.07, 0.11] | 15.60 | 0.307 | 6.77E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7285 | 0.0100 | SLEEP         | SLEEP_base         | 1724 | 0.036  | 0.094 | 1.04  | [0.86, 1.25]  | 27.40 | 0.220 | 6.99E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7132 | 0.0145 | COGI          | COGI_surv          | 2244 | 0.032  | 0.084 | 1.03  | [0.88, 1.22]  | 2.90  | 0.410 | 7.08E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7277 | 0.0076 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.031 | 0.092 | 0.97  | [0.81, 1.16]  | 0.00  | 0.417 | 7.32E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7070 | 0.0110 | SEADL         | SEADL_cont         | 2218 | 0.050  | 0.258 | 0.05  | [-0.46, 0.56] | 20.00 | 0.271 | 8.47E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7219 | 0.0175 | DEPR          | DEPR_surv          | 1314 | 0.014  | 0.090 | 1.01  | [0.85, 1.21]  | 0.00  | 0.741 | 8.76E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 9:34046391   | rs6476434   | t | c | 0.7223 | 0.0060 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.003  | 0.028 | 0.00  | [-0.05, 0.06] | 43.30 | 0.116 | 9.09E-01 | 0 | 0 | 0 | 0 | 0 | UBAP2    |
| 6:32578772   | rs112485576 | a | c | 0.1439 | 0.0185 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.070  | 0.040 | 0.07  | [-0.01, 0.15] | 8.10  | 0.367 | 8.23E-02 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1450 | 0.0185 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.062  | 0.040 | 0.06  | [-0.02, 0.14] | 0.00  | 0.743 | 1.23E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1436 | 0.0185 | UPDRS3_scaled | UPDRS3_scaled_cont | 2994 | 0.049  | 0.033 | 0.05  | [-0.02, 0.11] | 0.00  | 0.889 | 1.33E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1484 | 0.0183 | INS           | INS_base           | 2220 | -0.136 | 0.099 | 0.87  | [0.72, 1.06]  | 0.00  | 0.548 | 1.72E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1455 | 0.0182 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.045  | 0.035 | 0.04  | [-0.02, 0.11] | 0.00  | 0.851 | 2.00E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1444 | 0.0161 | DEPR          | DEPR_base          | 2138 | 0.135  | 0.125 | 1.14  | [0.90, 1.46]  | 0.00  | 0.878 | 2.80E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1432 | 0.0174 | COGI          | COGI_surv          | 2244 | 0.106  | 0.104 | 1.11  | [0.91, 1.36]  | 37.50 | 0.119 | 3.09E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1514 | 0.0100 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.104 | 0.113 | 0.90  | [0.72, 1.12]  | 0.00  | 0.687 | 3.57E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1495 | 0.0141 | COGI          | COGI_base          | 2859 | -0.106 | 0.124 | 0.90  | [0.71, 1.15]  | 0.00  | 0.736 | 3.92E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1421 | 0.0080 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.049  | 0.071 | 1.05  | [0.91, 1.21]  | 0.00  | 0.575 | 4.86E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1380 | 0.0207 | HY            | HY_cont            | 3627 | -0.007 | 0.013 | -0.01 | [-0.03, 0.02] | 0.00  | 0.901 | 5.78E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1487 | 0.0108 | HY3           | HY3_base           | 1289 | -0.080 | 0.159 | 1.08  | [0.79, 1.48]  | 28.00 | 0.249 | 6.17E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1405 | 0.0099 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.039 | 0.084 | 0.96  | [0.82, 1.13]  | 0.00  | 0.603 | 6.47E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1453 | 0.0209 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.052  | 0.115 | 1.05  | [0.84, 1.32]  | 0.00  | 0.768 | 6.51E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1454 | 0.0201 | SLEEP         | SLEEP_base         | 1724 | 0.044  | 0.120 | 1.04  | [0.83, 1.32]  | 19.50 | 0.281 | 7.16E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1412 | 0.0244 | SEADL         | SEADL_cont         | 2218 | 0.119  | 0.337 | 0.12  | [-0.54, 0.78] | 0.00  | 0.970 | 7.23E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1408 | 0.0151 | MMSE          | MMSE_cont          | 2114 | -0.020 | 0.063 | -0.02 | [-0.14, 0.10] | 0.00  | 0.768 | 7.55E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1417 | 0.0070 | SEADL70       | SEADL70_surv       | 1683 | 0.031  | 0.128 | 1.03  | [0.80, 1.33]  | 33.90 | 0.195 | 8.07E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1406 | 0.0131 | INS           | INS_surv           | 1112 | 0.022  | 0.095 | 1.02  | [0.85, 1.23]  | 0.00  | 0.912 | 8.18E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1488 | 0.0160 | HY3           | HY3_surv           | 2582 | 0.019  | 0.086 | 1.02  | [0.86, 1.21]  | 0.00  | 0.647 | 8.23E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1338 | 0.0269 | MOCA          | MOCA_cont          | 1074 | 0.029  | 0.174 | 0.03  | [-0.31, 0.37] | 3.20  | 0.377 | 8.68E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1489 | 0.0197 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.005  | 0.036 | 0.00  | [-0.06, 0.07] | 20.00 | 0.271 | 8.90E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1443 | 0.0143 | CONST         | CONST_base         | 1472 | 0.015  | 0.121 | 1.02  | [0.80, 1.29]  | 0.00  | 0.781 | 9.02E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 6:32578772   | rs112485576 | a | c | 0.1372 | 0.0082 | DEPR          | DEPR_surv          | 1314 | 0.000  | 0.113 | 1.00  | [0.80, 1.25]  | 0.00  | 0.904 | 9.98E-01 | 0 | 0 | 0 | 0 | 0 | HLA-DRB5 |
| 10:104015279 | rs10748818  | a | g | 0.8586 | 0.0126 | DEPR          | DEPR_base          | 2138 | 0.232  | 0.134 | 1.26  | [0.97, 1.64]  | 0.00  | 0.987 | 8.39E-02 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8543 | 0.0115 | HY3           | HY3_surv           | 2582 | -0.145 | 0.085 | 0.87  | [0.73, 1.02]  | 0.00  | 0.511 | 8.88E-02 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8454 | 0.0163 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.223  | 0.143 | 1.25  | [0.94, 1.66]  | 0.00  | 0.732 | 1.19E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8517 | 0.0197 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.053  | 0.041 | 0.05  | [-0.03, 0.13] | 0.00  | 0.826 | 1.87E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8500 | 0.0173 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.108  | 0.083 | 1.11  | [0.95, 1.31]  | 43.10 | 0.103 | 1.93E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8530 | 0.0158 | HY            | HY_cont            | 3627 | 0.016  | 0.012 | 0.02  | [-0.01, 0.04] | 0.00  | 0.555 | 1.94E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8623 | 0.0102 | SLEEP         | SLEEP_base         | 1724 | 0.157  | 0.123 | 1.17  | [0.92, 1.49]  | 26.20 | 0.228 | 2.01E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8488 | 0.0213 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.037  | 0.036 | 0.04  | [-0.03, 0.11] | 13.60 | 0.324 | 2.98E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8468 | 0.0235 | MOCA          | MOCA_cont          | 1074 | 0.161  | 0.166 | 0.16  | [-0.16, 0.49] | 23.20 | 0.272 | 3.31E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8550 | 0.0068 | SEADL70       | SEADL70_surv       | 1683 | -0.117 | 0.123 | 0.89  | [0.70, 1.13]  | 23.50 | 0.264 | 3.41E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8500 | 0.0191 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.032  | 0.035 | 0.03  | [-0.04, 0.10] | 8.10  | 0.365 | 3.67E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8531 | 0.0185 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.035  | 0.041 | 0.04  | [-0.04, 0.11] | 7.40  | 0.372 | 3.87E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8515 | 0.0147 | COGI          | COGI_surv          | 2244 | -0.085 | 0.104 | 0.92  | [0.75, 1.13]  | 0.00  | 0.873 | 4.18E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8485 | 0.0155 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.088  | 0.114 | 1.09  | [0.87, 1.37]  | 25.50 | 0.265 | 4.42E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8523 | 0.0140 | COGI          | COGI_base          | 2859 | -0.087 | 0.120 | 0.92  | [0.72, 1.16]  | 23.30 | 0.227 | 4.71E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8525 | 0.0187 | SEADL         | SEADL_cont         | 2218 | 0.233  | 0.325 | 0.23  | [-0.40, 0.87] | 11.90 | 0.399 | 4.73E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8525 | 0.0157 | INS           | INS_surv           | 1112 | -0.057 | 0.092 | 0.94  | [0.79, 1.13]  | 11.90 | 0.339 | 5.35E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8589 | 0.0086 | CONST         | CONST_base         | 1472 | 0.074  | 0.122 | 1.08  | [0.85, 1.37]  | 0.00  | 0.434 | 5.45E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs10748818  | a | g | 0.8614 | 0.0107 | HYPOSMIA      | HYPOSMIA_base      | 1588 | 0.065  | 0.115 | 1.07  | [0.85, 1.34]  | 0.00  | 0.894 | 5.71E-01 | 0 | 0 | 0 | 0 | 0 | GBF1     |
| 10:104015279 | rs107488    |   |   |        |        |               |                    |      |        |       |       |               |       |       |          |   |   |   |   |   |          |



|             |            |   |   |        |        |               |                    |      |        |       |                     |       |       |          |   |   |   |   |   |        |
|-------------|------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|---------------------|-------|-------|----------|---|---|---|---|---|--------|
| 18:40673380 | rs12456492 | a | g | 0.6428 | 0.0173 | DEPR          | DEPR_base          | 2138 | -0.111 | 0.093 | 0.89 [0.75, 1.07]   | 13.40 | 0.325 | 2.30E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6338 | 0.0123 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.032 | 0.030 | -0.03 [-0.09, 0.03] | 0.00  | 0.486 | 2.90E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6498 | 0.0196 | COGI          | COGI_base          | 2859 | 0.086  | 0.091 | 1.09 [0.91, 1.30]   | 0.00  | 0.903 | 3.44E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6530 | 0.0176 | SLEEP         | SLEEP_base         | 1724 | -0.081 | 0.086 | 0.92 [0.78, 1.09]   | 7.90  | 0.368 | 3.48E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6577 | 0.0185 | CONST         | CONST_base         | 1472 | 0.082  | 0.089 | 1.09 [0.91, 1.29]   | 34.00 | 0.195 | 3.57E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6551 | 0.0202 | HYPOSMIA      | HYPOSMIA_base      | 1588 | -0.074 | 0.084 | 0.93 [0.79, 1.09]   | 51.10 | 0.069 | 3.81E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6343 | 0.0127 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | -0.024 | 0.030 | -0.02 [-0.08, 0.04] | 21.30 | 0.267 | 4.31E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6538 | 0.0108 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.078  | 0.108 | 1.08 [0.87, 1.34]   | 0.00  | 0.628 | 4.73E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6441 | 0.0321 | MOCA          | MOCA_cont          | 1074 | -0.090 | 0.127 | -0.09 [-0.34, 0.16] | 0.00  | 0.426 | 4.76E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6452 | 0.0258 | COGI          | COGI_surv          | 2244 | 0.054  | 0.079 | 1.06 [0.90, 1.23]   | 0.00  | 0.570 | 4.99E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6387 | 0.0170 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.015 | 0.024 | -0.02 [-0.06, 0.03] | 0.00  | 0.657 | 5.33E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6469 | 0.0228 | HY            | HY_cont            | 3627 | -0.005 | 0.009 | -0.00 [-0.02, 0.01] | 0.00  | 0.662 | 6.13E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6574 | 0.0172 | INS           | INS_base           | 2220 | -0.036 | 0.073 | 0.96 [0.84, 1.11]   | 0.00  | 0.511 | 6.25E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6477 | 0.0113 | HY3           | HY3_base           | 1289 | 0.059  | 0.121 | 1.06 [0.84, 1.34]   | 0.00  | 0.957 | 6.28E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6352 | 0.0136 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.011 | 0.026 | -0.01 [-0.06, 0.04] | 32.60 | 0.191 | 6.84E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6355 | 0.0240 | DEPR          | DEPR_surv          | 1314 | -0.028 | 0.084 | 0.97 [0.83, 1.15]   | 26.80 | 0.233 | 7.38E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6387 | 0.0281 | SEADL70       | SEADL70_surv       | 1683 | -0.017 | 0.094 | 0.98 [0.82, 1.18]   | 55.60 | 0.061 | 8.55E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6335 | 0.0260 | SEADL         | SEADL_cont         | 2218 | -0.042 | 0.243 | -0.04 [-0.52, 0.43] | 0.00  | 0.854 | 8.63E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6402 | 0.0219 | HY3           | HY3_surv           | 2582 | -0.011 | 0.066 | 0.99 [0.87, 1.13]   | 36.10 | 0.130 | 8.67E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6425 | 0.0216 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | -0.009 | 0.059 | 0.99 [0.88, 1.11]   | 0.00  | 0.992 | 8.82E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6326 | 0.0128 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.003 | 0.027 | -0.00 [-0.06, 0.05] | 10.80 | 0.346 | 9.04E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6580 | 0.0221 | INS           | INS_surv           | 1112 | -0.005 | 0.070 | 0.99 [0.87, 1.14]   | 0.00  | 0.938 | 9.38E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 18:40673380 | rs12456492 | a | g | 0.6456 | 0.0186 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.005 | 0.084 | 1.00 [0.84, 1.17]   | 0.00  | 0.774 | 9.55E-01 | 0 | 0 | 0 | 0 | 0 | RIT2   |
| 8:22525980  | rs2280104  | t | c | 0.3768 | 0.0166 | MOCA          | MOCA_cont          | 1074 | -0.205 | 0.123 | -0.20 [-0.45, 0.04] | 0.00  | 0.448 | 9.58E-02 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3801 | 0.0057 | CONST         | CONST_base         | 1472 | -0.137 | 0.087 | 0.87 [0.74, 1.03]   | 0.00  | 0.967 | 1.17E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3745 | 0.0236 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.080  | 0.060 | 1.08 [0.96, 1.22]   | 0.00  | 0.696 | 1.79E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3603 | 0.0184 | SEADL         | SEADL_cont         | 2218 | -0.320 | 0.240 | -0.32 [-0.79, 0.15] | 15.70 | 0.307 | 1.83E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3772 | 0.0235 | COGI          | COGI_base          | 2859 | 0.118  | 0.089 | 1.13 [0.95, 1.34]   | 0.00  | 0.813 | 1.83E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3745 | 0.0062 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.122  | 0.102 | 1.13 [0.92, 1.38]   | 0.00  | 0.713 | 2.33E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3752 | 0.0181 | COGI          | COGI_surv          | 2244 | 0.086  | 0.073 | 1.09 [0.94, 1.26]   | 22.00 | 0.248 | 2.42E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3638 | 0.0229 | SEADL70       | SEADL70_surv       | 1683 | 0.109  | 0.095 | 1.12 [0.93, 1.34]   | 40.10 | 0.154 | 2.52E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3771 | 0.0254 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.023  | 0.029 | 0.02 [-0.03, 0.08]  | 0.00  | 0.709 | 4.42E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3679 | 0.0155 | MOTORFLUX     | MOTORFLUX_base     | 1803 | -0.064 | 0.083 | 0.94 [0.80, 1.10]   | 0.00  | 0.429 | 4.44E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3752 | 0.0275 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | -0.017 | 0.025 | -0.02 [-0.07, 0.03] | 0.00  | 0.705 | 5.12E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3696 | 0.0184 | DEPR          | DEPR_surv          | 1314 | 0.044  | 0.080 | 1.05 [0.89, 1.22]   | 12.70 | 0.334 | 5.80E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3858 | 0.0325 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.013 | 0.026 | -0.01 [-0.06, 0.04] | 0.00  | 0.880 | 6.20E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3816 | 0.0206 | HYPOSMIA      | HYPOSMIA_base      | 1588 | -0.039 | 0.082 | 0.96 [0.82, 1.13]   | 53.50 | 0.056 | 6.38E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3807 | 0.0299 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | -0.010 | 0.024 | -0.01 [-0.06, 0.04] | 0.00  | 0.482 | 6.96E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3829 | 0.0210 | SLEEP         | SLEEP_base         | 1724 | 0.024  | 0.085 | 1.02 [0.87, 1.21]   | 37.10 | 0.145 | 7.81E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3779 | 0.0070 | HY3           | HY3_base           | 1289 | 0.027  | 0.116 | 1.03 [0.82, 1.29]   | 0.00  | 0.798 | 8.17E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3727 | 0.0250 | DEPR          | DEPR_base          | 2138 | 0.017  | 0.091 | 1.02 [0.85, 1.22]   | 0.00  | 0.875 | 8.52E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3781 | 0.0184 | INS           | INS_base           | 2220 | -0.012 | 0.071 | 0.99 [0.86, 1.14]   | 0.00  | 0.969 | 8.62E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3841 | 0.0071 | INS           | INS_surv           | 1112 | -0.007 | 0.067 | 0.99 [0.87, 1.13]   | 0.00  | 0.806 | 9.12E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3896 | 0.0274 | HY            | HY_cont            | 3627 | 0.000  | 0.009 | -0.00 [-0.02, 0.02] | 25.90 | 0.190 | 9.84E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3728 | 0.0198 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | -0.001 | 0.050 | 1.00 [0.91, 1.10]   | 0.00  | 0.777 | 9.85E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3737 | 0.0265 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.000  | 0.029 | -0.00 [-0.06, 0.06] | 0.00  | 0.806 | 9.93E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 8:22525980  | rs2280104  | t | c | 0.3712 | 0.0211 | MMSE          | MMSE_cont          | 2114 | 0.000  | 0.046 | -0.00 [-0.09, 0.09] | 0.00  | 0.475 | 9.95E-01 | 0 | 0 | 0 | 0 | 0 | BIN3   |
| 11:13378700 | rs3802920  | t | g | 0.2152 | 0.0183 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.048  | 0.030 | 0.05 [-0.01, 0.11]  | 47.20 | 0.092 | 1.06E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2189 | 0.0163 | COGI          | COGI_base          | 2859 | 0.155  | 0.101 | 1.17 [0.96, 1.42]   | 0.00  | 0.586 | 1.26E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2157 | 0.0143 | DYSKINESIAS   | DYSKINESIAS_surv   | 1856 | 0.087  | 0.067 | 1.09 [0.96, 1.24]   | 0.00  | 0.802 | 1.91E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2153 | 0.0119 | MOTORFLUX     | MOTORFLUX_base     | 1709 | -0.059 | 0.058 | 0.94 [0.84, 1.06]   | 0.00  | 0.568 | 3.10E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2053 | 0.0157 | SEADL         | SEADL_cont         | 2218 | -0.283 | 0.281 | -0.28 [-0.83, 0.27] | 0.00  | 0.729 | 3.15E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2199 | 0.0205 | HYPOSMIA      | HYPOSMIA_base      | 1588 | -0.094 | 0.094 | 0.91 [0.76, 1.09]   | 0.00  | 0.861 | 3.17E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2213 | 0.0194 | INS           | INS_base           | 2220 | 0.077  | 0.084 | 1.08 [0.92, 1.27]   | 28.20 | 0.203 | 3.60E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2136 | 0.0145 | MMSE          | MMSE_cont          | 2114 | 0.047  | 0.053 | 0.05 [-0.06, 0.15]  | 0.00  | 0.863 | 3.80E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2127 | 0.0128 | INS           | INS_surv           | 1112 | -0.061 | 0.076 | 0.94 [0.81, 1.09]   | 0.00  | 0.777 | 4.19E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2106 | 0.0165 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.019  | 0.028 | 0.02 [-0.04, 0.07]  | 17.50 | 0.282 | 4.96E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2268 | 0.0009 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.075  | 0.120 | 1.08 [0.85, 1.36]   | 0.00  | 0.758 | 5.31E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2108 | 0.0197 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | 0.018  | 0.031 | 0.02 [-0.04, 0.08]  | 0.00  | 0.786 | 5.54E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2210 | 0.0155 | DEPR          | DEPR_surv          | 1314 | 0.052  | 0.093 | 1.05 [0.88, 1.26]   | 47.60 | 0.090 | 5.81E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2089 | 0.0122 | MOCA          | MOCA_cont          | 1074 | -0.074 | 0.143 | -0.07 [-0.35, 0.21] | 0.00  | 0.896 | 6.03E-01 | 0 | 0 | 0 | 0 | 0 | IGSF9B |
| 11:13378700 | rs3802920  | t | g | 0.2129 | 0.0091 |               |                    |      |        |       |                     |       |       |          |   |   |   |   |   |        |

|              |             |   |   |        |        |               |                    |      |        |       |                     |       |       |          |   |   |   |   |   |         |
|--------------|-------------|---|---|--------|--------|---------------|--------------------|------|--------|-------|---------------------|-------|-------|----------|---|---|---|---|---|---------|
| 14:75373034  | rs3742785   | a | c | 0.7821 | 0.0134 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.038 | 0.096 | 0.96 [0.80, 1.16]   | 2.80  | 0.399 | 6.97E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7791 | 0.0201 | DEPR          | DEPR_surv          | 1314 | -0.037 | 0.107 | 0.96 [0.78, 1.19]   | 0.00  | 0.917 | 7.34E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7877 | 0.0125 | INS           | INS_surv           | 1112 | -0.029 | 0.087 | 0.97 [0.82, 1.15]   | 0.00  | 0.818 | 7.45E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7806 | 0.0196 | MOCA          | MOCA_cont          | 1074 | -0.049 | 0.166 | -0.05 [-0.37, 0.28] | 43.50 | 0.150 | 7.70E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7837 | 0.0118 | COGI          | COGI_base          | 2859 | -0.024 | 0.107 | 0.98 [0.79, 1.20]   | 0.00  | 0.870 | 8.21E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7810 | 0.0135 | SLEEP         | SLEEP_base         | 1724 | -0.018 | 0.102 | 0.98 [0.80, 1.20]   | 0.00  | 0.907 | 8.61E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7838 | 0.0126 | MMSE          | MMSE_cont          | 2114 | -0.007 | 0.057 | -0.01 [-0.12, 0.10] | 0.00  | 0.878 | 8.98E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7916 | 0.0037 | SEADL70       | SEADL70_surv       | 1683 | -0.014 | 0.121 | 0.99 [0.78, 1.25]   | 0.00  | 0.998 | 9.07E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 14:75373034  | rs3742785   | a | c | 0.7834 | 0.0140 | CONST         | CONST_base         | 1472 | -0.012 | 0.104 | 0.99 [0.81, 1.21]   | 0.00  | 0.412 | 9.09E-01 | 0 | 0 | 0 | 0 | 0 | RPS6KL1 |
| 1:154898185  | rs114138760 | c | g | 0.0194 | 0.0036 | DEPR          | DEPR_surv          | 1177 | 0.407  | 0.270 | 1.50 [0.89, 2.55]   | 0.00  | 0.998 | 1.31E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0164 | 0.0037 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.271  | 0.186 | 1.31 [0.91, 1.89]   | 0.00  | 0.543 | 1.45E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0156 | 0.0033 | CONST         | CONST_base         | 1355 | 0.501  | 0.355 | 1.65 [0.82, 3.31]   | 44.60 | 0.144 | 1.58E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0153 | 0.0034 | DEPR          | DEPR_base          | 1683 | 0.579  | 0.422 | 1.78 [0.78, 4.08]   | 17.50 | 0.300 | 1.70E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0142 | 0.0035 | UPDRS2_scaled | UPDRS2_scaled_cont | 1956 | -0.137 | 0.133 | -0.14 [-0.40, 0.12] | 0.00  | 0.689 | 3.04E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0178 | 0.0051 | HY3           | HY3_surv           | 1498 | 0.235  | 0.279 | 1.26 [0.73, 2.19]   | 41.90 | 0.142 | 4.00E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0137 | 0.0041 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.375  | 0.482 | 1.45 [0.57, 3.74]   | 0.00  | 0.846 | 4.37E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0148 | 0.0035 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.259  | 0.352 | 1.30 [0.65, 2.58]   | 0.00  | 0.928 | 4.61E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0149 | 0.0029 | DYSKINESIAS   | DYSKINESIAS_surv   | 1656 | 0.165  | 0.233 | 1.18 [0.75, 1.86]   | 0.00  | 0.756 | 4.81E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0154 | 0.0029 | SEADL         | SEADL_cont         | 1836 | -0.694 | 1.020 | -0.69 [-2.69, 1.31] | 0.00  | 0.765 | 4.96E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0164 | 0.0046 | HY3           | HY3_base           | 1289 | -0.374 | 0.557 | 0.69 [0.23, 2.05]   | 0.00  | 0.870 | 5.02E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0163 | 0.0034 | SLEEP         | SLEEP_base         | 1460 | -0.240 | 0.374 | 0.79 [0.38, 1.64]   | 0.00  | 0.706 | 5.22E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0143 | 0.0035 | HY            | HY_cont            | 3060 | -0.026 | 0.040 | -0.03 [-0.10, 0.05] | 0.00  | 0.745 | 5.24E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0141 | 0.0031 | INS           | INS_base           | 1854 | 0.181  | 0.320 | 1.20 [0.64, 2.24]   | 23.70 | 0.263 | 5.72E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0160 | 0.0039 | COGI          | COGI_surv          | 2030 | 0.103  | 0.313 | 1.11 [0.60, 2.05]   | 0.00  | 0.975 | 7.41E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0150 | 0.0034 | UPDRS1_scaled | UPDRS1_scaled_cont | 1964 | -0.039 | 0.128 | -0.04 [-0.29, 0.21] | 34.10 | 0.180 | 7.62E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0148 | 0.0036 | UPDRS3_scaled | UPDRS3_scaled_cont | 1997 | -0.036 | 0.125 | -0.04 [-0.28, 0.21] | 0.00  | 0.465 | 7.74E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0150 | 0.0034 | COGI          | COGI_base          | 2219 | 0.112  | 0.435 | 1.12 [0.48, 2.62]   | 0.00  | 0.890 | 7.97E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0140 | 0.0033 | UPDRS4_scaled | UPDRS4_scaled_cont | 1651 | 0.027  | 0.114 | 0.03 [-0.20, 0.25]  | 0.00  | 0.671 | 8.10E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0137 | 0.0037 | UPDRS_scaled  | UPDRS_scaled_cont  | 2730 | 0.025  | 0.110 | 0.03 [-0.19, 0.24]  | 16.40 | 0.301 | 8.20E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0154 | 0.0028 | MOCA          | MOCA_cont          | 1026 | -0.103 | 0.519 | -0.10 [-1.12, 0.91] | 14.60 | 0.310 | 8.42E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0141 | 0.0040 | MMSE          | MMSE_cont          | 1850 | -0.040 | 0.203 | -0.04 [-0.44, 0.36] | 42.00 | 0.125 | 8.44E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0158 | 0.0034 | HYPOSIMIA     | HYPOSIMIA_base     | 1334 | -0.034 | 0.386 | 0.97 [0.45, 2.06]   | 0.00  | 0.522 | 9.29E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 1:154898185  | rs114138760 | c | g | 0.0142 | 0.0020 | SEADL70       | SEADL70_surv       | 1683 | -0.014 | 0.375 | 0.99 [0.47, 2.06]   | 0.00  | 0.959 | 9.70E-01 | 0 | 0 | 0 | 0 | 0 | PMVK    |
| 12:123326598 | rs10847864  | t | g | 0.3732 | 0.0205 | INS           | INS_surv           | 1112 | 0.097  | 0.067 | 1.10 [0.97, 1.26]   | 0.00  | 0.618 | 1.48E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3696 | 0.0237 | SLEEP         | SLEEP_base         | 1724 | 0.118  | 0.087 | 1.13 [0.95, 1.33]   | 0.00  | 0.425 | 1.72E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3770 | 0.0204 | SEADL70       | SEADL70_surv       | 1683 | -0.124 | 0.094 | 0.88 [0.73, 1.06]   | 0.00  | 0.872 | 1.90E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3878 | 0.0222 | SEADL         | SEADL_cont         | 2112 | 0.308  | 0.240 | 0.31 [-0.16, 0.78]  | 37.80 | 0.141 | 1.99E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3810 | 0.0263 | HY            | HY_cont            | 3627 | -0.011 | 0.009 | -0.01 [-0.03, 0.01] | 0.00  | 0.959 | 2.06E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3738 | 0.0226 | INS           | INS_base           | 2220 | 0.089  | 0.073 | 1.09 [0.95, 1.26]   | 8.30  | 0.366 | 2.25E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3780 | 0.0266 | UPDRS3_scaled | UPDRS3_scaled_cont | 2446 | -0.030 | 0.027 | -0.03 [-0.08, 0.02] | 0.00  | 0.506 | 2.65E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3784 | 0.0267 | UPDRS4_scaled | UPDRS4_scaled_cont | 1798 | 0.025  | 0.026 | 0.02 [-0.03, 0.08]  | 43.30 | 0.117 | 3.39E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3795 | 0.0291 | COGI          | COGI_surv          | 2244 | -0.071 | 0.079 | 0.93 [0.80, 1.09]   | 34.90 | 0.139 | 3.67E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3662 | 0.0206 | HYPOSIMIA     | HYPOSIMIA_base     | 1588 | -0.072 | 0.083 | 0.93 [0.79, 1.10]   | 0.00  | 0.615 | 3.91E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3619 | 0.0116 | HY3           | HY3_base           | 1289 | -0.109 | 0.123 | 0.90 [0.71, 1.15]   | 0.00  | 0.466 | 4.11E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3855 | 0.0286 | MOCA          | MOCA_cont          | 1074 | -0.071 | 0.385 | 0.88 [-0.16, 0.32]  | 7.90  | 0.354 | 5.22E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3638 | 0.0165 | COGI          | COGI_base          | 2859 | 0.046  | 0.089 | 1.05 [0.88, 1.25]   | 0.00  | 0.972 | 6.09E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3845 | 0.0228 | DEPR          | DEPR_base          | 2138 | -0.047 | 0.094 | 0.95 [0.79, 1.15]   | 14.00 | 0.321 | 6.21E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3698 | 0.0208 | CONST         | CONST_base         | 1472 | -0.037 | 0.088 | 0.96 [0.81, 1.15]   | 0.00  | 0.831 | 6.74E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3834 | 0.0275 | UPDRS1_scaled | UPDRS1_scaled_cont | 2111 | 0.007  | 0.030 | 0.01 [-0.05, 0.07]  | 49.10 | 0.067 | 8.09E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3877 | 0.0319 | DEPR          | DEPR_surv          | 1314 | 0.018  | 0.080 | 1.02 [0.87, 1.19]   | 20.20 | 0.281 | 8.23E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3687 | 0.0127 | DYSKINESIAS   | DYSKINESIAS_base   | 1232 | 0.016  | 0.107 | 1.02 [0.82, 1.25]   | 59.30 | 0.086 | 8.79E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3733 | 0.0259 | HY3           | HY3_surv           | 2582 | 0.010  | 0.066 | 1.01 [0.89, 1.15]   | 44.10 | 0.074 | 8.79E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3816 | 0.0227 | MOTORFLUX     | MOTORFLUX_surv     | 1709 | 0.006  | 0.056 | 1.01 [0.91, 1.11]   | 0.00  | 0.940 | 9.07E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3738 | 0.0162 | MOTORFLUX     | MOTORFLUX_base     | 1803 | 0.009  | 0.086 | 1.01 [0.85, 1.19]   | 0.00  | 0.568 | 9.21E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3944 | 0.0218 | MMSE          | MMSE_cont          | 2114 | 0.001  | 0.045 | 0.00 [-0.09, 0.09]  | 21.50 | 0.259 | 9.90E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3816 | 0.0285 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | 0.000  | 0.030 | -0.00 [-0.06, 0.06] | 15.90 | 0.309 | 9.93E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 12:123326598 | rs10847864  | t | g | 0.3806 | 0.0285 | UPDRS_scaled  | UPDRS_scaled_cont  | 2994 | 0.000  | 0.024 | -0.00 [-0.05, 0.05] | 0.00  | 0.442 | 9.96E-01 | 0 | 0 | 0 | 0 | 0 | HIP1R   |
| 1:205737739  | rs11557080  | a | g | 0.1349 | 0.0111 | COGI          | COGI_surv          | 2244 | -0.164 | 0.115 | 0.85 [0.68, 1.06]   | 0.00  | 0.945 | 1.54E-01 | 0 | 0 | 0 | 0 | 0 | RAB29   |
| 1:205737739  | rs11557080  | a | g | 0.1443 | 0.0245 | DEPR          | DEPR_base          | 2138 | -0.175 | 0.134 | 0.84 [0.65, 1.09]   | 0.00  | 0.556 | 1.94E-01 | 0 | 0 | 0 | 0 | 0 | RAB29   |
| 1:205737739  | rs11557080  | a | g | 0.1436 | 0.0218 | UPDRS2_scaled | UPDRS2_scaled_cont | 2103 | -0.054 | 0.043 | -0.05 [-0.14, 0.03] | 16.40 | 0.305 | 2.05E-01 | 0 | 0 | 0 | 0 | 0 | RAB29   |
| 1:205737739  | rs11557080  | a | g | 0.1303 | 0.0089 | HY3           | HY3_base           | 1    |        |       |                     |       |       |          |   |   |   |   |   |         |