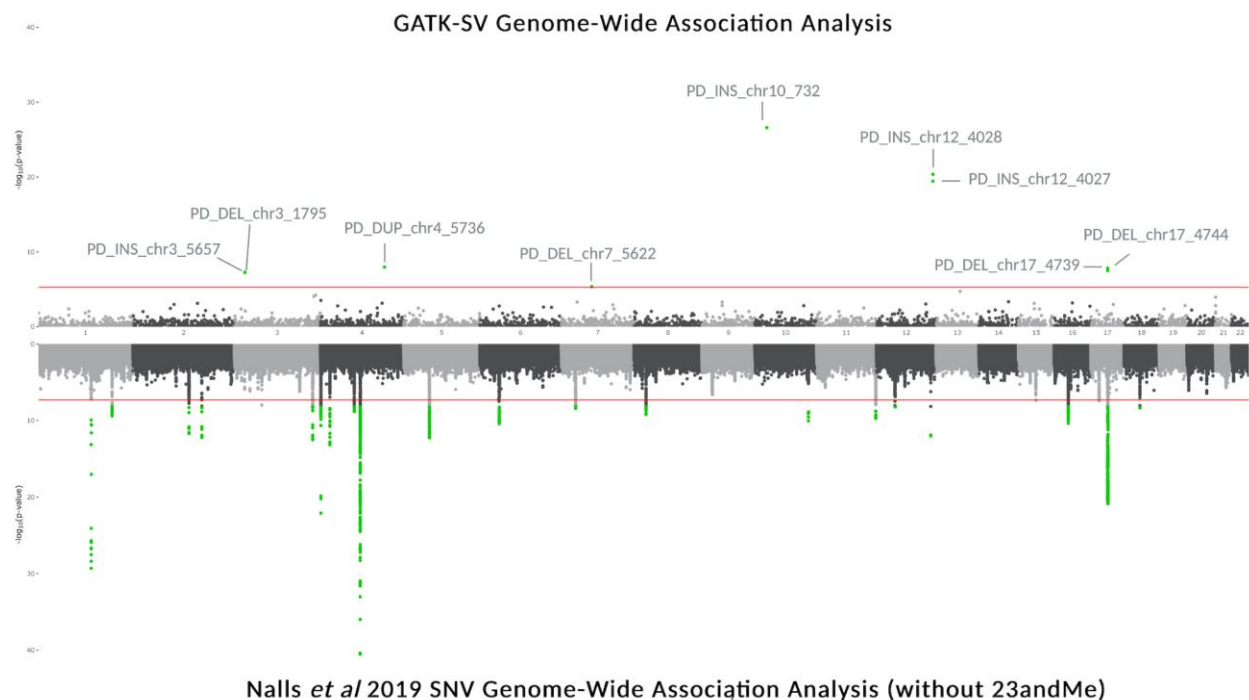
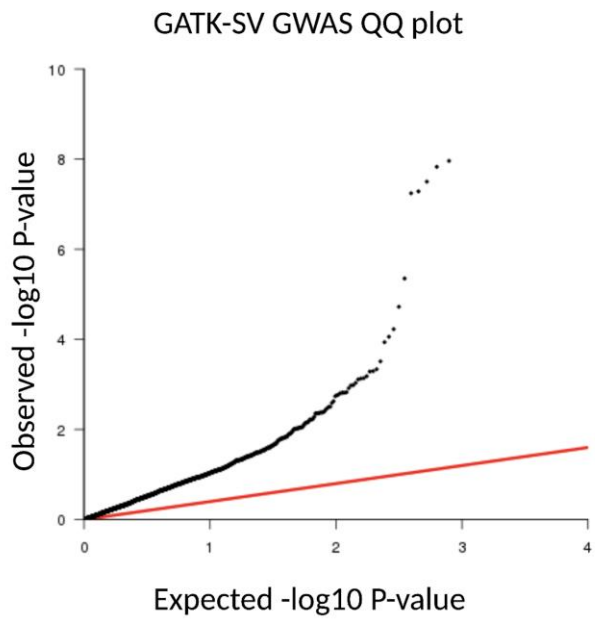


# Supplementary Materials

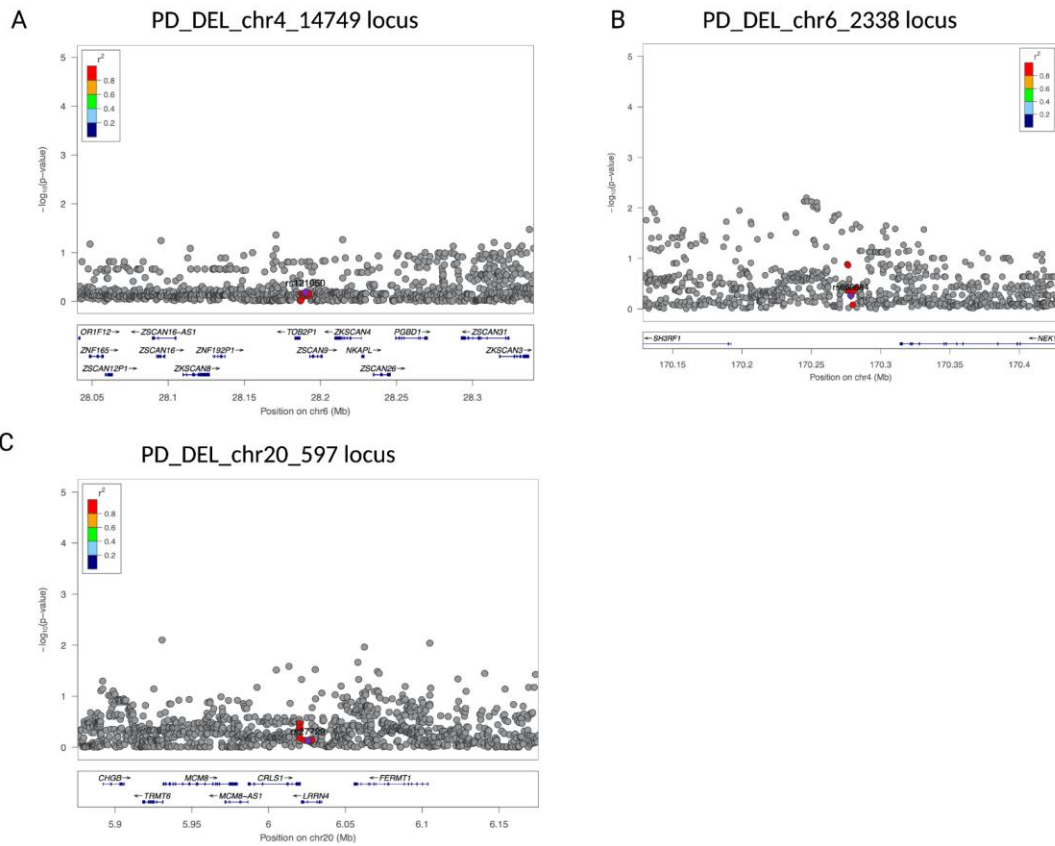
## Supplementary Figures



**Sup Fig 1: Manhattan (on the hudson) plots for the SV GWAS (top) and Nalls *et al* 2019 SNV (bottom) GWAS:** The top plot represents the SV GWAS results in this present study showing nine genome-wide significant SVs. Significant SVs are highlighted in green and annotated by SV ID in gray. The red line represents the genome-wide significance level ( $P = 5 \times 10^{-6}$ ) for SV. To note, none of the significant SV were confirmed with LRS. The bottom plot represents the SNV Meta5 PD GWAS. The red dotted line represents the genome-wide significance level ( $P = 5 \times 10^{-8}$ ) for SNV. The X axis represents the base pair position of variants from smallest to largest per chromosome (1–22).



**Sup Fig 2: QQ-plot of the SV GWAS, testing 3154 variants, lambda = 1.011**



**Sup Fig 3: The risk association signal at the three known risk that contain a validated SV in linkage disequilibrium with the lead PD risk SNV a) Locus zoom plot of the chr 4 rs62333164 locus b) Locus zoom plot of the chr6 rs4140646 locus c) Locus zoom plot of the chr20 rs77351827 locus**

## Supplementary Tables

**Supplementary Table 1: Clinical and demographic characteristics of WGS data for samples included in the SV GWAS**

| Study                                     | Cases (N)   | Controls (N) | Total (N)   | Female case (%) | Female control (%) | Case age at onset (mean , SD in years) | Control age at last exam (mean, SD in years) |
|---|-------------|--------------|-------------|-----------------|--------------------|--|--|
| PPMI                                      | 395         | 176          | 571         | 33.92           | 11.03              | 61.56 (9.47)                           | 68.47 (10.21)                                |
| PDBP cases & controls                     | 776         | 391          | 1167        | 35.82           | 18.25              | 59.79 (10.03)                          | 63.49 (10.68)                                |
| HBS cases & controls                      | 618         | NA           | 618         | 35.44           | NA                 | 62.04 (10.47)                          | NA   |
| BioFind cases & non-cases                 | 95          | 68           | 163         | 34.74           | 18.40              | 61.42 (6.63)                           | 69.88 (7.34)                                 |
| NABEC controls                            | NA          | 253          | 253         | NA              | 38.34              | NA                                     | 54.38 (24.48)                                |
| UKBEC controls                            | NA          | 72           | 72          | NA              | 23.61              | NA                                     | 56.88 (18.63)                                |
| PD Clinical cases                         | 497         | NA           | 497         | 39.84           | NA                 | 55.71 (11.61)                          | NA   |
| PD Path cases                             | 204         | NA           | 204         | 36.76           | NA                 | 78.77 (8.72)                           | NA   |
| Welllderly controls                       | NA          | 1104         | 1104        | NA              | 59.96              | NA                                     | 85.03 (4.28)                                 |
| BLSA controls                             | NA          | 715          | 715         | NA              | 47.55              | NA                                     | 76.51 (11.46)                                |
| TOTAL                                     | <b>2585</b> | <b>2779</b>  | <b>5364</b> |                 |                    |  |  |
| SD: standard deviation; NA: Not available |             |              |             |                 |                    |  |  |

**Supplementary Table 2: Summary of the validated SV in LD with PD risk variants**

| GATK-SV_ID        | TYPE | LENGTH | NEAREST GENE | CHR   | START     | STOP      | PD RISK SNV TAG LD | R2       | D'       | DISTANCE SV TO SNV bp | LRS VALIDATED |
|-------------------|------|--------|--------------|-------|-----------|-----------|--------------------|----------|----------|-----------------------|---------------|
| PD_DEL_chr4_14749 | DEL  | 417    | NEK1         | chr4  | 169357313 | 169357730 | rs62333164         | 0.331166 | 0.81627  | 304,276               | Yes           |
| PD_DEL_chr6_2338  | DEL  | 325    | ZSCAN9       | chr6  | 28222429  | 28222754  | rs4140646          | 0.203208 | 0.654587 | 451,407               | Yes           |
| PD_DEL_chr20_597  | DEL  | 1950   | LRRN4        | chr20 | 6045003   | 6046953   | rs77351827         | 0.889976 | 0.952148 | 21,558                | Yes           |

**Supplementary Table 3: LRS ONT Sequencing run information for the PPMI samples**

|                 | PPMI Blood LRS |                 |               |                |  |
|-----------------|----------------|-----------------|---------------|----------------|--|
| Sample ID       | n50            | Total output GB | Chimera Rate% | Total Coverage | "PASS" SV discovered with Sniffles2 in LRS |
| PPMI3404        | 34.27          | 118.74          | 1.69          | 30.33          | 33362                                      |
| PPMI4018        | 34.81          | 107.87          | 1.68          | 27.43          | 37506                                      |
| PPMI3223        | 35.31          | 122.74          | 1.34          | 32.20          | 33084                                      |
| PPMI3173        | 33.43          | 148.27          | 1.94          | 38.47          | 33159                                      |
| PPMI3150        | 39.06          | 127.36          | 2.00          | 34.76          | 32783                                      |
| PPMI4011        | 42.62          | 111.95          | 1.78          | 32.58          | 33260                                      |
| PPMI3951        | 41.05          | 104.37          | 3.04          | 30.69          | 32901                                      |
| PPMI3469        | 34.31          | 130.48          | 2.02          | 38.16          | 33027                                      |
|                 |                |                 |               |                |  |
| <b>Average=</b> | 36.86          | 121.47          | 1.94          | 33.08          | 33635                                      |

**Supplementary Table 4: Summary statistics from the SV GWAS**

| CHR | GATK-SV_ID       | POSITION(hg38) | SV_LENGTH | A1    | A2    | FREQ_CASES | FREQ_CONTROLS | P_VALUE    | BONF       | OR       | SE        | beta       |
|-----|------------------|----------------|-----------|-------|-------|------------|---------------|------------|------------|----------|-----------|------------|
| 10  | PD_INS_chr10_732 | 20546251       | 85        | <INS> | N     | 0.2663     | 0.6116        | 2.52E-27   | 7.94E-24   | 0.458825 | 0.0719466 | -0.7790864 |
| 12  | D_INS_chr12_4028 | 128085007      | 128       | <INS> | N     | 0.0354     | 0.2513        | 4.27E-21   | 1.35E-17   | 0.389287 | 0.100092  | -0.9434384 |
| 12  | D_INS_chr12_4027 | 128085006      | 113       | <INS> | N     | 0.0354     | 0.2515        | 3.69E-20   | 1.16E-16   | 0.375289 | 0.106564  | -0.9800589 |
| 4   | D_DUP_chr4_5736  | 148366424      | 79        | N     | <DUP> | 0.04932    | 0.00522       | 1.10E-08   | 3.45E-05   | 3.86466  | 0.236537  | 1.35187371 |
| 17  | D_DEL_chr17_4739 | 45495980       | 56000     | <DEL> | N     | 0.1816     | 0.2339        | 1.48E-08   | 4.67E-05   | 0.688686 | 0.0658522 | -0.3729698 |
| 17  | D_DEL_chr17_4744 | 45559980       | 18020     | <DEL> | N     | 0.1812     | 0.2335        | 3.16E-08   | 9.96E-05   | 0.693831 | 0.0660702 | -0.3655269 |
| 3   | PD_INS_chr3_574  | 18827184       | 87        | <INS> | N     | 0.2795     | 0.3152        | 5.18E-08   | 0.00016351 | 0.596164 | 0.0949956 | -0.5172395 |
| 3   | PD_DEL_chr3_1795 | 18827042       | 110       | <DEL> | N     | 0.3099     | 0.339         | 5.73E-08   | 0.00018068 | 0.587199 | 0.0980993 | -0.5323915 |
| 7   | PD_DEL_chr7_5622 | 54396114       | 1017      | <DEL> | N     | 0.006393   | 0.07184       | 4.47E-06   | 0.0140869  | 0.401792 | 0.198722  | -0.9118207 |
| 13  | D_DEL_chr13_4608 | 73147749       | 2591      | <DEL> | N     | 0.03367    | 0.02051       | 1.90E-05   | 0.059827   | 2.02036  | 0.164444  | 0.70327571 |
| 3   | PD_INS_chr3_5657 | 189440563      | 143       | <INS> | N     | 0.3656     | 0.5309        | 5.94E-05   | 0.187388   | 0.788733 | 0.0591082 | -0.2373274 |
| 3   | D_DUP_chr3_7804  | 185538669      | 87        | N     | <DUP> | 0.08908    | 0.04284       | 8.75E-05   | 0.276019   | 1.56169  | 0.113634  | 0.44576857 |
| 21  | D_DEL_chr21_1195 | 10753940       | 984       | N     | <DEL> | 0.03346    | 0.01331       | 0.00011549 | 0.364255   | 0.498751 | 0.18043   | -0.6956483 |
| 4   | PD_INS_chr4_56   | 827662         | 134       | N     | <INS> | 0.4859     | 0.4912        | 0.00030766 | 0.97035    | 0.821214 | 0.0545813 | -0.1969715 |
| 10  | PD_CPX_chr10_1   | 600547         | 143       | <CPX> | N     | 0.06035    | 0.05524       | 0.309694   | 1          | 1.12407  | 0.115126  | 0.11695603 |
| 10  | PD_CPX_chr10_107 | 74744656       | 880       | <CPX> | N     | 0.01044    | 0.01026       | 0.348699   | 1          | 1.28784  | 0.26994   | 0.2529664  |
| 10  | PD_CPX_chr10_140 | 95448269       | 270       | <CPX> | N     | 0.4023     | 0.4099        | 0.373424   | 1          | 0.953514 | 0.0534797 | -0.0476012 |
| 10  | PD_CPX_chr10_145 | 97699971       | 380       | <CPX> | N     | 0.06654    | 0.07395       | 0.199259   | 1          | 1.14472  | 0.105292  | 0.13516007 |
| 10  | PD_CPX_chr10_176 | 122599975      | 645       | <CPX> | N     | 0.02882    | 0.02573       | 0.314502   | 1          | 1.17686  | 0.161911  | 0.16284987 |
| 10  | PD_CPX_chr10_192 | 130837415      | 2996      | <CPX> | N     | 0.1143     | 0.1024        | 0.154236   | 1          | 1.12653  | 0.0836215 | 0.11914211 |
| 10  | PD_CPX_chr10_193 | 131278556      | 3235      | <CPX> | N     | 0.0325     | 0.03041       | 0.147032   | 1          | 1.24026  | 0.148489  | 0.21532104 |
| 10  | PD_CPX_chr10_58  | 41833395       | 340       | <CPX> | N     | 0.07273    | 0.07593       | 0.920842   | 1          | 1.00987  | 0.0988108 | 0.00982161 |
| 10  | PD_CPX_chr10_64  | 44928688       | 286       | <CPX> | N     | 0.1888     | 0.1846        | 0.24062    | 1          | 1.08134  | 0.0666409 | 0.07820101 |
| 10  | PD_CPX_chr10_83  | 57497185       | 1038      | N     | <CPX> | 0.1897     | 0.1988        | 0.158246   | 1          | 0.911015 | 0.0660499 | -0.0931959 |
| 11  | PD_CPX_chr11_33  | 24263178       | 3191      | <CPX> | N     | 0.01412    | 0.01799       | 0.502163   | 1          | 0.86566  | 0.214969  | -0.1442631 |
| 11  | PD_CPX_chr11_37  | 25333802       | 61        | <CPX> | N     | 0.06596    | 0.06279       | 0.749685   | 1          | 1.03358  | 0.103508  | 0.0330285  |
| 11  | PD_CPX_chr11_81  | 49858223       | 27910     | <CPX> | N     | 0.0559     | 0.05056       | 0.354118   | 1          | 1.11667  | 0.119089  | 0.11035104 |
| 11  | PD_CPX_chr11_83  | 50146991       | 185091    | <CPX> | N     | 0.1687     | 0.1761        | 0.0347348  | 1          | 0.861754 | 0.0704666 | -0.1487854 |
| 11  | PD_CPX_chr11_97  | 66251227       | 1223      | <CPX> | N     | 0.354      | 0.3728        | 0.590361   | 1          | 0.970939 | 0.0547847 | -0.0294916 |
| 12  | PD_CPX_chr12_100 | 72845798       | 2258      | <CPX> | N     | 0.1768     | 0.1886        | 0.63626    | 1          | 0.968199 | 0.0683345 | -0.0323176 |
| 12  | PD_CPX_chr12_129 | 93501896       | 249       | <CPX> | N     | 0.1576     | 0.1612        | 0.986952   | 1          | 0.998837 | 0.0711798 | -0.0011637 |
| 12  | PD_CPX_chr12_170 | 127001817      | 51        | <CPX> | N     | 0.1501     | 0.154         | 0.97821    | 1          | 1.00207  | 0.0757661 | 0.00206786 |
| 12  | PD_CPX_chr12_38  | 27942505       | 2967      | <CPX> | N     | 0.04217    | 0.03706       | 0.618729   | 1          | 1.07153  | 0.138829  | 0.06908753 |
| 12  | PD_CPX_chr12_48  | 37924183       | 540       | <CPX> | N     | 0.3876     | 0.3699        | 0.0209779  | 1          | 1.13191  | 0.0536778 | 0.12390647 |
| 12  | PD_CPX_chr12_82  | 63191236       | 566       | <CPX> | N     | 0.01451    | 0.01421       | 0.0684678  | 1          | 1.48695  | 0.217753  | 0.39672704 |
| 13  | PD_CPX_chr13_111 | 99870365       | 108       | <CPX> | N     | 0.04112    | 0.04327       | 0.215383   | 1          | 0.846805 | 0.13422   | -0.1662848 |
| 13  | PD_CPX_chr13_72  | 73162806       | 165       | <CPX> | N     | 0.07099    | 0.06369       | 0.825018   | 1          | 1.02454  | 0.109666  | 0.02424373 |
| 14  | PD_CPX_chr14_22  | 39645473       | 120       | <CPX> | N     | 0.02805    | 0.03077       | 0.908566   | 1          | 1.01827  | 0.157661  | 0.01810511 |
| 14  | PD_CPX_chr14_4   | 25142260       | 2258      | <CPX> | N     | 0.01702    | 0.01134       | 0.137147   | 1          | 1.37538  | 0.214416  | 0.31873006 |
| 14  | PD_CPX_chr14_72  | 63350176       | 99        | <CPX> | N     | 0.1049     | 0.1002        | 0.0645152  | 1          | 1.1742   | 0.0868701 | 0.16058706 |



|    |                  |           |           |       |       |          |          |           |   |          |           |            |
|----|------------------|-----------|-----------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 15 | PD_CPX_chr15_119 | 95148443  | 1083      | <CPX> | N     | 0.07099  | 0.07413  | 0.161482  | 1 | 0.865836 | 0.102893  | -0.1440598 |
| 15 | PD_CPX_chr15_121 | 98107635  | 895212    | <CPX> | N     | 0.05145  | 0.04156  | 0.0391947 | 1 | 1.30289  | 0.128305  | 0.26458487 |
| 15 | PD_CPX_chr15_22  | 28852119  | 264515    | <CPX> | N     | 0.01025  | 0.01277  | 0.0324266 | 1 | 0.582655 | 0.252516  | -0.54016   |
| 15 | PD_CPX_chr15_49  | 44876374  | 133941    | <CPX> | N     | 0.02186  | 0.01925  | 0.101759  | 1 | 1.38056  | 0.197075  | 0.32248921 |
| 15 | PD_CPX_chr15_59  | 52096199  | 154       | <CPX> | N     | 0.1046   | 0.1071   | 0.556984  | 1 | 1.05159  | 0.0856488 | 0.0503033  |
| 15 | PD_CPX_chr15_69  | 65116434  | 417       | <CPX> | N     | 0.009478 | 0.01223  | 0.109075  | 1 | 0.654226 | 0.264797  | -0.4243024 |
| 15 | PD_CPX_chr15_84  | 77894603  | 933       | <CPX> | N     | 0.009091 | 0.01116  | 0.63223   | 1 | 0.881322 | 0.263967  | -0.1263322 |
| 16 | PD_CPX_chr16_107 | 82601104  | 2842      | <CPX> | N     | 0.01199  | 0.009896 | 0.223849  | 1 | 1.34571  | 0.244104  | 0.29692175 |
| 16 | PD_CPX_chr16_118 | 88501232  | 84        | <CPX> | N     | 0.119    | 0.1242   | 0.642186  | 1 | 1.03884  | 0.0819999 | 0.03810471 |
| 16 | PD_CPX_chr16_34  | 20424476  | 174678    | <CPX> | N     | 0.0147   | 0.01169  | 0.59859   | 1 | 1.1313   | 0.234344  | 0.12336741 |
| 16 | PD_CPX_chr16_98  | 78004631  | 182       | <CPX> | N     | 0.1191   | 0.1204   | 0.256623  | 1 | 1.09482  | 0.0798549 | 0.09058997 |
| 18 | PD_CPX_chr18_69  | 63658528  | 229       | <CPX> | N     | 0.01528  | 0.02015  | 0.324103  | 1 | 0.814887 | 0.207599  | -0.2047058 |
| 18 | PD_CPX_chr18_71  | 64696744  | 352       | <CPX> | N     | 0.01586  | 0.02231  | 0.579934  | 1 | 0.89929  | 0.191786  | -0.1061497 |
| 19 | PD_CPX_chr19_30  | 6296866   | 34632     | <CPX> | N     | 0.02128  | 0.01907  | 0.246394  | 1 | 0.801142 | 0.191275  | -0.2217171 |
| 1  | PD_CPX_chr1_12   | 3999598   | 183       | <CPX> | N     | 0.03528  | 0.03446  | 0.890662  | 1 | 1.02051  | 0.147693  | 0.0203025  |
| 1  | PD_CPX_chr1_146  | 86673283  | 875       | <CPX> | N     | 0.04603  | 0.04678  | 0.793197  | 1 | 0.966601 | 0.129574  | -0.0339695 |
| 1  | PD_CPX_chr1_224  | 161697925 | 555       | <CPX> | N     | 0.0354   | 0.04102  | 0.518276  | 1 | 0.915238 | 0.137106  | -0.0885711 |
| 1  | PD_CPX_chr1_247  | 186257581 | 409       | <CPX> | N     | 0.04565  | 0.04822  | 0.850158  | 1 | 0.975971 | 0.128745  | -0.0243224 |
| 1  | PD_CPX_chr1_248  | 187495696 | 1901      | N     | <CPX> | 0.2188   | 0.2227   | 0.525942  | 1 | 1.04136  | 0.0639014 | 0.04052755 |
| 1  | PD_CPX_chr1_266  | 196775942 | 275       | <CPX> | N     | 0.1542   | 0.1562   | 0.258336  | 1 | 1.08929  | 0.0756656 | 0.08552611 |
| 1  | PD_CPX_chr1_3    | 1499897   | 636       | <CPX> | N     | 0.01673  | 0.01793  | 0.801908  | 1 | 0.951143 | 0.199661  | -0.0500909 |
| 1  | PD_CPX_chr1_308  | 231831817 | 131       | <CPX> | N     | 0.02708  | 0.02645  | 0.0774847 | 1 | 1.34299  | 0.167036  | 0.29489847 |
| 1  | PD_CPX_chr1_343  | 247991172 | 1360      | <CPX> | N     | 0.05996  | 0.05632  | 0.844706  | 1 | 1.02287  | 0.115447  | 0.0226124  |
| 1  | PD_CPX_chr1_35   | 16545311  | 218231129 | N     | <CPX> | 0.02495  | 0.04678  | 0.535534  | 1 | 0.91135  | 0.149824  | -0.0928283 |
| 1  | PD_CPX_chr1_37   | 16625298  | 218151142 | N     | <CPX> | 0.0236   | 0.02339  | 0.768819  | 1 | 0.950539 | 0.172585  | -0.0507261 |
| 1  | PD_CPX_chr1_89   | 44355904  | 1594      | <CPX> | N     | 0.04217  | 0.04282  | 0.798212  | 1 | 1.03369  | 0.129616  | 0.03313492 |
| 20 | PD_CPX_chr20_37  | 17416602  | 75        | <CPX> | N     | 0.01315  | 0.01205  | 0.162527  | 1 | 1.39278  | 0.237216  | 0.33130175 |
| 20 | PD_CPX_chr20_72  | 44677205  | 6369      | <CPX> | N     | 0.2621   | 0.2667   | 0.139281  | 1 | 1.09163  | 0.0593028 | 0.08767199 |
| 20 | PD_CPX_chr20_8   | 3378828   | 4769      | <CPX> | N     | 0.02186  | 0.02267  | 0.829549  | 1 | 1.03997  | 0.182029  | 0.03919187 |
| 22 | PD_CPX_chr22_30  | 36533058  | 5176      | <CPX> | N     | 0.01044  | 0.01331  | 0.088023  | 1 | 0.664083 | 0.239958  | -0.4093481 |
| 22 | PD_CPX_chr22_4   | 18948079  | 532       | <CPX> | N     | 0.02515  | 0.02699  | 0.723965  | 1 | 0.943291 | 0.165306  | -0.0583805 |
| 22 | PD_CPX_chr22_53  | 49386590  | 1298      | <CPX> | N     | 0.009671 | 0.01241  | 0.9793    | 1 | 1.00644  | 0.247469  | 0.00641935 |
| 22 | PD_CPX_chr22_6   | 18971177  | 586       | <CPX> | N     | 0.07002  | 0.06819  | 0.141503  | 1 | 1.17031  | 0.106967  | 0.15726867 |
| 2  | PD_CPX_chr2_113  | 77091180  | 56        | <CPX> | N     | 0.04371  | 0.04408  | 0.770422  | 1 | 1.03869  | 0.130074  | 0.0379603  |
| 2  | PD_CPX_chr2_116  | 79197377  | 1400      | <CPX> | N     | 0.05609  | 0.05775  | 0.115779  | 1 | 0.832451 | 0.1166    | -0.1833809 |
| 2  | PD_CPX_chr2_214  | 152603405 | 1527      | <CPX> | N     | 0.04623  | 0.04642  | 0.86341   | 1 | 1.02135  | 0.122788  | 0.02112528 |
| 2  | PD_CPX_chr2_227  | 159238782 | 4787      | <CPX> | N     | 0.01741  | 0.01655  | 0.430991  | 1 | 1.16684  | 0.19594   | 0.15429924 |
| 2  | PD_CPX_chr2_278  | 195114661 | 5234      | <CPX> | N     | 0.05996  | 0.05757  | 0.75056   | 1 | 1.03585  | 0.110785  | 0.03522235 |
| 2  | PD_CPX_chr2_30   | 18724883  | 179       | <CPX> | N     | 0.2702   | 0.2796   | 0.486932  | 1 | 0.959396 | 0.0596258 | -0.0414514 |
| 2  | PD_CPX_chr2_321  | 223174982 | 178       | <CPX> | N     | 0.053    | 0.05616  | 0.123817  | 1 | 0.834616 | 0.117472  | -0.1807835 |
| 2  | PD_CPX_chr2_333  | 229978764 | 1564      | <CPX> | N     | 0.02998  | 0.03095  | 0.122585  | 1 | 1.26699  | 0.153266  | 0.23664401 |

|   |                 |           |        |       |       |          |         |           |   |          |           |            |
|---|-----------------|-----------|--------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 2 | PD_CPX_chr2_70  | 50538734  | 361    | <CPX> | N     | 0.0412   | 0.04048 | 0.571182  | 1 | 1.07669  | 0.13048   | 0.07389152 |
| 2 | PD_CPX_chr2_8   | 4157678   | 18210  | <CPX> | N     | 0.1735   | 0.1763  | 0.653245  | 1 | 1.0316   | 0.0692389 | 0.031111   |
| 2 | PD_CPX_chr2_83  | 61473617  | 2706   | <CPX> | N     | 0.3615   | 0.3544  | 0.339023  | 1 | 0.94775  | 0.0561283 | -0.0536645 |
| 3 | PD_CPX_chr3_127 | 82825601  | 428    | <CPX> | N     | 0.03424  | 0.03526 | 0.645333  | 1 | 1.06449  | 0.135778  | 0.06249581 |
| 3 | PD_CPX_chr3_151 | 103498236 | 132    | <CPX> | N     | 0.01182  | 0.0128  | 0.760482  | 1 | 1.07771  | 0.245499  | 0.07483842 |
| 3 | PD_CPX_chr3_186 | 127777672 | 1401   | <CPX> | N     | 0.113    | 0.106   | 0.597844  | 1 | 0.957309 | 0.0827077 | -0.0436291 |
| 3 | PD_CPX_chr3_268 | 188011108 | 540    | <CPX> | N     | 0.1209   | 0.1438  | 0.202878  | 1 | 0.905353 | 0.0780863 | -0.0994304 |
| 3 | PD_CPX_chr3_39  | 23319664  | 369    | <CPX> | N     | 0.08278  | 0.08603 | 0.28511   | 1 | 0.901842 | 0.0966557 | -0.1033159 |
| 3 | PD_CPX_chr3_67  | 37408437  | 234    | <CPX> | N     | 0.03308  | 0.03221 | 0.76921   | 1 | 1.04609  | 0.153559  | 0.0450594  |
| 3 | PD_CPX_chr3_8   | 7358352   | 740    | <CPX> | N     | 0.07466  | 0.06765 | 0.328205  | 1 | 1.10681  | 0.103794  | 0.101482   |
| 4 | PD_CPX_chr4_130 | 87153587  | 4626   | <CPX> | N     | 0.01547  | 0.01673 | 0.789137  | 1 | 1.05503  | 0.200307  | 0.0535692  |
| 4 | PD_CPX_chr4_16  | 9473358   | 499    | <CPX> | N     | 0.01589  | 0.01947 | 0.208245  | 1 | 0.771464 | 0.206185  | -0.2594653 |
| 4 | PD_CPX_chr4_167 | 115245751 | 10273  | <CPX> | N     | 0.04603  | 0.04948 | 0.464316  | 1 | 0.910696 | 0.127838  | -0.0935461 |
| 4 | PD_CPX_chr4_213 | 147032790 | 196    | <CPX> | N     | 0.04934  | 0.05112 | 0.42645   | 1 | 1.10184  | 0.121952  | 0.09698151 |
| 4 | PD_CPX_chr4_250 | 178333677 | 133    | <CPX> | N     | 0.1946   | 0.1967  | 0.0451492 | 1 | 1.14394  | 0.0671306 | 0.13447844 |
| 4 | PD_CPX_chr4_30  | 17703802  | 105    | <CPX> | N     | 0.03172  | 0.03077 | 0.265826  | 1 | 1.18888  | 0.155487  | 0.17301169 |
| 4 | PD_CPX_chr4_96  | 68827313  | 181776 | <CPX> | N     | 0.03462  | 0.03706 | 0.0840919 | 1 | 0.784119 | 0.140785  | -0.2431945 |
| 4 | PD_CPX_chr4_97  | 68883805  | 242723 | <CPX> | N     | 0.08956  | 0.08672 | 0.641992  | 1 | 1.04493  | 0.0945341 | 0.0439499  |
| 5 | PD_CPX_chr5_167 | 109626800 | 651    | <CPX> | N     | 0.008317 | 0.01421 | 0.32669   | 1 | 0.776748 | 0.257584  | -0.2526393 |
| 5 | PD_CPX_chr5_19  | 8255696   | 4901   | <CPX> | N     | 0.05416  | 0.05703 | 0.892055  | 1 | 0.984594 | 0.114412  | -0.0155259 |
| 5 | PD_CPX_chr5_212 | 141482755 | 190    | <CPX> | N     | 0.06074  | 0.0556  | 0.617745  | 1 | 1.0567   | 0.110511  | 0.05515084 |
| 5 | PD_CPX_chr5_216 | 144026519 | 3332   | <CPX> | N     | 0.01044  | 0.01241 | 0.982378  | 1 | 1.00514  | 0.231959  | 0.00512684 |
| 5 | PD_CPX_chr5_3   | 248187    | 94     | <CPX> | N     | 0.01296  | 0.01331 | 0.210206  | 1 | 0.746812 | 0.232994  | -0.2919418 |
| 5 | PD_CPX_chr5_63  | 28932543  | 2409   | <CPX> | N     | 0.4532   | 0.4516  | 0.634409  | 1 | 0.974695 | 0.0538996 | -0.0256307 |
| 6 | PD_CPX_chr6_121 | 74342232  | 285    | <CPX> | N     | 0.01393  | 0.01295 | 0.277308  | 1 | 1.26966  | 0.219763  | 0.23874915 |
| 6 | PD_CPX_chr6_163 | 102801959 | 725    | <CPX> | N     | 0.02224  | 0.02105 | 0.222571  | 1 | 1.23557  | 0.173429  | 0.2115324  |
| 6 | PD_CPX_chr6_168 | 109592125 | 243    | <CPX> | N     | 0.01373  | 0.01493 | 0.474645  | 1 | 0.846482 | 0.233119  | -0.1666663 |
| 6 | PD_CPX_chr6_243 | 163976418 | 313    | <CPX> | N     | 0.0147   | 0.01403 | 0.329865  | 1 | 1.24382  | 0.223922  | 0.21818729 |
| 6 | PD_CPX_chr6_43  | 29665345  | 492    | <CPX> | N     | 0.03308  | 0.03365 | 0.704403  | 1 | 1.05735  | 0.146996  | 0.05576578 |
| 7 | PD_CPX_chr7_115 | 70955983  | 17918  | N     | <CPX> | 0.3886   | 0.3697  | 0.166345  | 1 | 1.07694  | 0.0535575 | 0.07412369 |
| 7 | PD_CPX_chr7_137 | 85460302  | 1785   | <CPX> | N     | 0.06518  | 0.06261 | 0.805814  | 1 | 0.974599 | 0.104661  | -0.0257292 |
| 7 | PD_CPX_chr7_147 | 93906905  | 115    | <CPX> | N     | 0.05857  | 0.0573  | 0.507159  | 1 | 0.927145 | 0.11405   | -0.0756453 |
| 7 | PD_CPX_chr7_160 | 102081266 | 3492   | <CPX> | N     | 0.1826   | 0.1855  | 0.99289   | 1 | 0.999395 | 0.0679533 | -0.0006052 |
| 7 | PD_CPX_chr7_163 | 105520378 | 1085   | <CPX> | N     | 0.1793   | 0.1772  | 0.655428  | 1 | 0.969073 | 0.0704005 | -0.0314153 |
| 7 | PD_CPX_chr7_230 | 155088917 | 447    | <CPX> | N     | 0.3331   | 0.342   | 0.638006  | 1 | 1.02694  | 0.056492  | 0.02658351 |
| 7 | PD_CPX_chr7_235 | 156594383 | 7242   | <CPX> | N     | 0.1081   | 0.1112  | 0.891184  | 1 | 1.01177  | 0.0855197 | 0.01170127 |
| 7 | PD_CPX_chr7_237 | 156959338 | 165    | <CPX> | N     | 0.05513  | 0.05308 | 0.179683  | 1 | 1.16861  | 0.116129  | 0.15581501 |
| 7 | PD_CPX_chr7_53  | 30945761  | 96     | <CPX> | N     | 0.01683  | 0.02033 | 0.300761  | 1 | 0.820864 | 0.190759  | -0.1973978 |
| 7 | PD_CPX_chr7_76  | 47614207  | 1152   | <CPX> | N     | 0.0412   | 0.04174 | 0.583067  | 1 | 1.07272  | 0.127884  | 0.07019748 |
| 7 | PD_CPX_chr7_85  | 52728978  | 6484   | <CPX> | N     | 0.03868  | 0.03275 | 0.707248  | 1 | 1.05606  | 0.145231  | 0.054545   |
| 8 | PD_CPX_chr8_112 | 75858541  | 249    | <CPX> | N     | 0.1031   | 0.0968  | 0.167424  | 1 | 1.12895  | 0.0878572 | 0.121288   |

|    |                  |           |       |       |       |          |         |            |   |          |           |            |
|----|------------------|-----------|-------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 9  | PD_CPX_chr9_106  | 110262296 | 5514  | <CPX> | N     | 0.2004   | 0.2017  | 0.23005    | 1 | 0.921216 | 0.0683708 | -0.0820607 |
| 9  | PD_CPX_chr9_129  | 125174450 | 581   | <CPX> | N     | 0.008317 | 0.01511 | 0.00901374 | 1 | 0.515845 | 0.253472  | -0.6619489 |
| 9  | PD_CPX_chr9_54   | 40930116  | 59    | <CPX> | N     | 0.07845  | 0.07634 | 0.743097   | 1 | 0.968462 | 0.0977742 | -0.032046  |
| 9  | PD_CPX_chr9_97   | 105054355 | 711   | <CPX> | N     | 0.4793   | 0.4816  | 0.135179   | 1 | 1.08071  | 0.0519523 | 0.07761823 |
| 10 | D_DEL_chr10_1013 | 119394850 | 288   | <DEL> | N     | 0.0122   | 0.0126  | 0.909414   | 1 | 1.0272   | 0.235846  | 0.02683665 |
| 10 | D_DEL_chr10_1020 | 120467142 | 2149  | N     | <DEL> | 0.2366   | 0.2083  | 0.34989    | 1 | 0.94106  | 0.0649855 | -0.0607484 |
| 10 | D_DEL_chr10_1023 | 120941626 | 290   | <DEL> | N     | 0.4522   | 0.4563  | 0.227709   | 1 | 1.06506  | 0.0522513 | 0.06303114 |
| 10 | D_DEL_chr10_1028 | 121729673 | 306   | <DEL> | N     | 0.2079   | 0.2136  | 0.782162   | 1 | 1.01802  | 0.0645759 | 0.01785956 |
| 10 | D_DEL_chr10_1043 | 123693930 | 55    | <DEL> | N     | 0.03933  | 0.03967 | 0.229109   | 1 | 0.854588 | 0.130661  | -0.1571358 |
| 10 | D_DEL_chr10_1058 | 125167394 | 3432  | <DEL> | N     | 0.01026  | 0.0108  | 0.58293    | 1 | 0.868907 | 0.255903  | -0.1405192 |
| 10 | D_DEL_chr10_1059 | 125313852 | 2537  | <DEL> | N     | 0.01103  | 0.01223 | 0.0903371  | 1 | 1.4609   | 0.223811  | 0.37905268 |
| 10 | D_DEL_chr10_1061 | 6055423   | 482   | N     | <DEL> | 0.07099  | 0.06891 | 0.182532   | 1 | 0.870194 | 0.104305  | -0.1390391 |
| 10 | D_DEL_chr10_1061 | 125612231 | 117   | <DEL> | N     | 0.0271   | 0.03512 | 0.206515   | 1 | 0.823937 | 0.153314  | -0.1936612 |
| 10 | D_DEL_chr10_1063 | 126056626 | 789   | N     | <DEL> | 0.4433   | 0.4235  | 0.0264954  | 1 | 1.12364  | 0.052536  | 0.11657342 |
| 10 | D_DEL_chr10_1077 | 127714373 | 1099  | N     | <DEL> | 0.1654   | 0.1641  | 0.759466   | 1 | 0.978114 | 0.0722743 | -0.0221291 |
| 10 | D_DEL_chr10_1090 | 129038607 | 403   | <DEL> | N     | 0.382    | 0.3782  | 0.746786   | 1 | 1.01717  | 0.0527361 | 0.01702426 |
| 10 | D_DEL_chr10_1101 | 130573917 | 143   | N     | <DEL> | 0.3199   | 0.3154  | 0.199053   | 1 | 0.930331 | 0.0562309 | -0.0722148 |
| 10 | D_DEL_chr10_1111 | 6605642   | 1231  | <DEL> | N     | 0.02131  | 0.02054 | 0.957897   | 1 | 0.990472 | 0.181348  | -0.0095737 |
| 10 | D_DEL_chr10_1118 | 131639504 | 2350  | <DEL> | N     | 0.01296  | 0.01835 | 0.271547   | 1 | 0.786499 | 0.218428  | -0.2401638 |
| 10 | D_DEL_chr10_1156 | 132522062 | 52    | <DEL> | N     | 0.02732  | 0.0174  | 0.441985   | 1 | 0.871352 | 0.179112  | -0.1377093 |
| 10 | D_DEL_chr10_1161 | 132749288 | 51    | <DEL> | N     | 0.00853  | 0.01208 | 0.909261   | 1 | 0.97052  | 0.262547  | -0.0299233 |
| 10 | D_DEL_chr10_1199 | 133221839 | 138   | <DEL> | N     | 0.3975   | 0.3805  | 0.132535   | 1 | 1.08388  | 0.0535476 | 0.0805472  |
| 10 | D_DEL_chr10_1231 | 7751867   | 208   | N     | <DEL> | 0.1221   | 0.1254  | 0.608516   | 1 | 1.04197  | 0.0802697 | 0.04111315 |
| 10 | D_DEL_chr10_1241 | 7953922   | 1052  | <DEL> | N     | 0.1564   | 0.1498  | 0.292534   | 1 | 1.07999  | 0.0731084 | 0.07695178 |
| 10 | D_DEL_chr10_1321 | 8740029   | 315   | <DEL> | N     | 0.2504   | 0.2624  | 0.617831   | 1 | 0.970024 | 0.0609999 | -0.0304345 |
| 10 | D_DEL_chr10_1441 | 10108385  | 210   | <DEL> | N     | 0.2683   | 0.2672  | 0.485446   | 1 | 1.04288  | 0.0601896 | 0.04198612 |
| 10 | D_DEL_chr10_1501 | 10666580  | 309   | <DEL> | N     | 0.2525   | 0.2382  | 0.974394   | 1 | 1.00195  | 0.0607437 | 0.0019481  |
| 10 | D_DEL_chr10_1751 | 12775080  | 995   | <DEL> | N     | 0.01253  | 0.01264 | 0.0312502  | 1 | 1.67589  | 0.239728  | 0.51634437 |
| 10 | D_DEL_chr10_1761 | 13014293  | 4784  | <DEL> | N     | 0.01373  | 0.01134 | 0.162741   | 1 | 1.37914  | 0.230287  | 0.32146012 |
| 10 | D_DEL_chr10_1961 | 15490478  | 297   | N     | <DEL> | 0.4143   | 0.3949  | 0.440001   | 1 | 0.958009 | 0.0555544 | -0.0428981 |
| 10 | D_DEL_chr10_2121 | 18214147  | 513   | N     | <DEL> | 0.2048   | 0.1976  | 0.241641   | 1 | 0.926486 | 0.0652117 | -0.0763563 |
| 10 | D_DEL_chr10_2341 | 20378330  | 306   | N     | <DEL> | 0.4795   | 0.4552  | 0.799122   | 1 | 0.986313 | 0.0541532 | -0.0137815 |
| 10 | D_DEL_chr10_2360 | 20535523  | 115   | <DEL> | N     | 0.125    | 0.1319  | 0.21612    | 1 | 0.908265 | 0.0777902 | -0.0962191 |
| 10 | D_DEL_chr10_2360 | 20560000  | 12000 | <DEL> | N     | 0.2197   | 0.2352  | 0.481118   | 1 | 0.956642 | 0.0629185 | -0.044326  |
| 10 | D_DEL_chr10_3041 | 29629595  | 467   | <DEL> | N     | 0.1248   | 0.1177  | 0.11851    | 1 | 1.13304  | 0.0800128 | 0.12490429 |
| 10 | D_DEL_chr10_3080 | 30258923  | 297   | <DEL> | N     | 0.01262  | 0.01245 | 0.908696   | 1 | 1.02734  | 0.235165  | 0.02697294 |
| 10 | D_DEL_chr10_3151 | 30957818  | 5022  | <DEL> | N     | 0.1897   | 0.1889  | 0.755493   | 1 | 0.979217 | 0.0674413 | -0.021002  |
| 10 | D_DEL_chr10_3161 | 31154439  | 1496  | N     | <DEL> | 0.4356   | 0.4341  | 0.717237   | 1 | 0.980952 | 0.0531049 | -0.0192318 |
| 10 | D_DEL_chr10_3241 | 32264653  | 810   | <DEL> | N     | 0.02169  | 0.02341 | 0.905694   | 1 | 1.02149  | 0.179465  | 0.02126235 |
| 10 | D_DEL_chr10_3491 | 35444139  | 51    | <DEL> | N     | 0.01848  | 0.01246 | 0.898572   | 1 | 0.973399 | 0.211515  | -0.0269612 |
| 10 | D_DEL_chr10_3491 | 35518527  | 673   | <DEL> | N     | 0.01071  | 0.01176 | 0.649808   | 1 | 1.11806  | 0.245796  | 0.11159504 |

|    |                  |          |       |       |       |         |         |           |   |          |           |            |
|----|------------------|----------|-------|-------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 10 | D_DEL_chr10_374  | 41781267 | 564   | <DEL> | N     | 0.05519 | 0.06107 | 0.786204  | 1 | 0.969185 | 0.115393  | -0.0312998 |
| 10 | D_DEL_chr10_374  | 41781394 | 872   | <DEL> | N     | 0.06233 | 0.06867 | 0.733643  | 1 | 0.963902 | 0.108044  | -0.0367656 |
| 10 | D_DEL_chr10_376  | 41830167 | 876   | <DEL> | N     | 0.01342 | 0.01372 | 0.907749  | 1 | 0.974652 | 0.221566  | -0.0256748 |
| 10 | D_DEL_chr10_402  | 42100210 | 576   | N     | <DEL> | 0.4836  | 0.4732  | 0.755208  | 1 | 0.983424 | 0.0536127 | -0.0167149 |
| 10 | D_DEL_chr10_404  | 42167673 | 963   | <DEL> | N     | 0.0115  | 0.01411 | 0.497011  | 1 | 1.16498  | 0.224827  | 0.15270392 |
| 10 | D_DEL_chr10_415  | 42778763 | 321   | <DEL> | N     | 0.3776  | 0.367   | 0.144386  | 1 | 1.08639  | 0.0567664 | 0.08286027 |
| 10 | D_DEL_chr10_444  | 46776237 | 74    | <DEL> | N     | 0.01625 | 0.0185  | 0.887262  | 1 | 0.970699 | 0.209773  | -0.0297388 |
| 10 | D_DEL_chr10_460  | 49794644 | 409   | <DEL> | N     | 0.01219 | 0.01277 | 0.969527  | 1 | 0.991394 | 0.226267  | -0.0086432 |
| 10 | D_DEL_chr10_461  | 49795306 | 7702  | <DEL> | N     | 0.1036  | 0.1015  | 0.633432  | 1 | 1.04283  | 0.0879424 | 0.04193817 |
| 10 | D_DEL_chr10_469  | 50731413 | 88    | <DEL> | N     | 0.01141 | 0.01027 | 0.183738  | 1 | 1.36989  | 0.236761  | 0.31473044 |
| 10 | D_DEL_chr10_475  | 51443916 | 10546 | <DEL> | N     | 0.01199 | 0.01116 | 0.0474148 | 1 | 1.62552  | 0.245048  | 0.48582776 |
| 10 | D_DEL_chr10_479  | 51818726 | 313   | <DEL> | N     | 0.1061  | 0.1004  | 0.580877  | 1 | 1.04859  | 0.0859345 | 0.0474464  |
| 10 | D_DEL_chr10_491  | 53023782 | 5287  | <DEL> | N     | 0.2458  | 0.2602  | 0.0390892 | 1 | 0.882247 | 0.0607215 | -0.1252832 |
| 10 | D_DEL_chr10_531  | 56753318 | 13877 | <DEL> | N     | 0.05244 | 0.04788 | 0.0124466 | 1 | 1.34798  | 0.119481  | 0.29860718 |
| 10 | D_DEL_chr10_532  | 56837866 | 144   | <DEL> | N     | 0.02112 | 0.02091 | 0.642029  | 1 | 0.918983 | 0.181747  | -0.0844877 |
| 10 | D_DEL_chr10_605  | 65547176 | 8360  | <DEL> | N     | 0.3048  | 0.2972  | 0.0962019 | 1 | 1.10015  | 0.0573775 | 0.09544653 |
| 10 | D_DEL_chr10_627  | 67279542 | 922   | <DEL> | N     | 0.04163 | 0.0403  | 0.300192  | 1 | 0.872984 | 0.131121  | -0.1358381 |
| 10 | D_DEL_chr10_629  | 67563781 | 2529  | <DEL> | N     | 0.03234 | 0.03484 | 0.826788  | 1 | 0.968021 | 0.148527  | -0.0325015 |
| 10 | D_DEL_chr10_631  | 67740381 | 4303  | <DEL> | N     | 0.04971 | 0.0475  | 0.628352  | 1 | 1.0622   | 0.124663  | 0.06034223 |
| 10 | D_DEL_chr10_637  | 68494310 | 477   | <DEL> | N     | 0.05495 | 0.06477 | 0.361249  | 1 | 0.906608 | 0.107391  | -0.0980451 |
| 10 | D_DEL_chr10_644  | 69026605 | 951   | <DEL> | N     | 0.4286  | 0.4304  | 0.479804  | 1 | 1.03981  | 0.0552457 | 0.039038   |
| 10 | D_DEL_chr10_647  | 69521154 | 10167 | <DEL> | N     | 0.0863  | 0.08366 | 0.582932  | 1 | 1.05387  | 0.0955527 | 0.0524691  |
| 10 | D_DEL_chr10_648  | 69555216 | 93    | N     | <DEL> | 0.3634  | 0.3602  | 0.97949   | 1 | 1.00145  | 0.0564474 | 0.00144895 |
| 10 | D_DEL_chr10_656  | 70688984 | 2594  | <DEL> | N     | 0.2379  | 0.2294  | 0.499191  | 1 | 1.04479  | 0.0648573 | 0.04381591 |
| 10 | D_DEL_chr10_662  | 71496825 | 119   | N     | <DEL> | 0.3596  | 0.362   | 0.380841  | 1 | 0.953796 | 0.0539808 | -0.0473055 |
| 10 | PD_DEL_chr10_668 | 2495975  | 1147  | <DEL> | N     | 0.02188 | 0.02836 | 0.367723  | 1 | 0.85658  | 0.171866  | -0.1548076 |
| 10 | D_DEL_chr10_691  | 76495820 | 5441  | N     | <DEL> | 0.2002  | 0.1967  | 0.374042  | 1 | 0.943209 | 0.0657733 | -0.0584674 |
| 10 | D_DEL_chr10_711  | 79714368 | 30416 | <DEL> | N     | 0.3207  | 0.318   | 0.333375  | 1 | 1.05623  | 0.0565579 | 0.05470596 |
| 10 | D_DEL_chr10_713  | 79965541 | 2128  | <DEL> | N     | 0.03491 | 0.03193 | 0.752567  | 1 | 0.953383 | 0.151426  | -0.0477386 |
| 10 | D_DEL_chr10_714  | 80024332 | 7241  | <DEL> | N     | 0.01046 | 0.0108  | 0.145478  | 1 | 0.680907 | 0.264018  | -0.3843295 |
| 10 | D_DEL_chr10_721  | 80977995 | 305   | <DEL> | N     | 0.2806  | 0.2835  | 0.95427   | 1 | 0.99656  | 0.0600939 | -0.0034459 |
| 10 | D_DEL_chr10_722  | 81119660 | 11960 | <DEL> | N     | 0.02979 | 0.03149 | 0.192451  | 1 | 1.22324  | 0.154605  | 0.20150308 |
| 10 | D_DEL_chr10_722  | 81144901 | 253   | N     | <DEL> | 0.2596  | 0.2621  | 0.076132  | 1 | 1.11105  | 0.0593753 | 0.10530551 |
| 10 | D_DEL_chr10_733  | 82123780 | 5527  | <DEL> | N     | 0.01374 | 0.01602 | 0.353171  | 1 | 1.22978  | 0.222775  | 0.20683529 |
| 10 | D_DEL_chr10_737  | 82478233 | 476   | N     | <DEL> | 0.2513  | 0.258   | 0.76432   | 1 | 0.981844 | 0.0611126 | -0.0183228 |
| 10 | D_DEL_chr10_738  | 82641016 | 133   | N     | <DEL> | 0.1164  | 0.1062  | 0.623731  | 1 | 1.04109  | 0.0820908 | 0.04026824 |
| 10 | D_DEL_chr10_749  | 83866476 | 192   | N     | <DEL> | 0.3366  | 0.3516  | 0.38339   | 1 | 0.951892 | 0.0565622 | -0.0493037 |
| 10 | D_DEL_chr10_766  | 86192521 | 7611  | <DEL> | N     | 0.01161 | 0.01008 | 0.432681  | 1 | 1.22794  | 0.261711  | 0.20533797 |
| 10 | D_DEL_chr10_775  | 87516040 | 771   | N     | <DEL> | 0.3741  | 0.3521  | 0.64779   | 1 | 1.02507  | 0.054211  | 0.0247609  |
| 10 | D_DEL_chr10_787  | 89180759 | 7534  | <DEL> | N     | 0.03636 | 0.03293 | 0.674503  | 1 | 1.06213  | 0.143521  | 0.06027633 |
| 10 | PD_DEL_chr10_8   | 73523    | 996   | <DEL> | N     | 0.03386 | 0.03384 | 0.425198  | 1 | 1.12495  | 0.147651  | 0.11773859 |

|    |                   |           |       |       |       |          |          |            |   |          |           |            |
|----|-------------------|-----------|-------|-------|-------|----------|----------|------------|---|----------|-----------|------------|
| 10 | D_DEL_chr10_8010  | 90811356  | 576   | <DEL> | N     | 0.008511 | 0.01151  | 0.864348   | 1 | 0.955776 | 0.264755  | -0.0452317 |
| 10 | D_DEL_chr10_8147  | 92442794  | 2469  | <DEL> | N     | 0.01182  | 0.01225  | 0.624272   | 1 | 1.12745  | 0.244905  | 0.11995845 |
| 10 | D_DEL_chr10_8249  | 93785720  | 1018  | N     | <DEL> | 0.04797  | 0.04138  | 0.992431   | 1 | 0.998776 | 0.12907   | -0.0012247 |
| 10 | D_DEL_chr10_8349  | 95107435  | 7750  | <DEL> | N     | 0.04236  | 0.04264  | 0.930193   | 1 | 1.01164  | 0.13207   | 0.01157278 |
| 10 | D_DEL_chr10_8468  | 97275116  | 2524  | N     | <DEL> | 0.01779  | 0.009716 | 0.835048   | 1 | 1.0497   | 0.232928  | 0.04850441 |
| 10 | D_DEL_chr10_8479  | 97348534  | 317   | <DEL> | N     | 0.3718   | 0.3875   | 0.12833    | 1 | 0.918144 | 0.0561582 | -0.085401  |
| 10 | PD_DEL_chr10_8510 | 4247871   | 1619  | N     | <DEL> | 0.106    | 0.09212  | 0.818759   | 1 | 1.02066  | 0.0892533 | 0.02044948 |
| 10 | D_DEL_chr10_8550  | 98265379  | 317   | <DEL> | N     | 0.3447   | 0.3447   | 0.968402   | 1 | 0.997753 | 0.0567947 | -0.0022495 |
| 10 | D_DEL_chr10_8597  | 98928000  | 14368 | <DEL> | N     | 0.09725  | 0.08912  | 0.150485   | 1 | 1.1388   | 0.0903996 | 0.12997508 |
| 10 | D_DEL_chr10_8620  | 99302339  | 56    | <DEL> | N     | 0.03691  | 0.03336  | 0.144296   | 1 | 1.21797  | 0.135063  | 0.19718554 |
| 10 | D_DEL_chr10_9067  | 105296534 | 6065  | <DEL> | N     | 0.09014  | 0.1002   | 0.489106   | 1 | 1.06554  | 0.0917709 | 0.06348171 |
| 10 | D_DEL_chr10_9177  | 106270563 | 2220  | N     | <DEL> | 0.36     | 0.3665   | 0.825791   | 1 | 0.987947 | 0.0550914 | -0.0121262 |
| 10 | D_DEL_chr10_9260  | 107483946 | 158   | <DEL> | N     | 0.4418   | 0.4367   | 0.146611   | 1 | 1.08251  | 0.054616  | 0.07928242 |
| 10 | D_DEL_chr10_9407  | 108935805 | 612   | <DEL> | N     | 0.1504   | 0.1485   | 0.00155407 | 1 | 1.26187  | 0.0735034 | 0.23259475 |
| 10 | PD_DEL_chr10_9430 | 5118341   | 50    | <DEL> | N     | 0.4284   | 0.4306   | 0.296066   | 1 | 0.946226 | 0.0528985 | -0.0552738 |
| 10 | D_DEL_chr10_9443  | 109276636 | 303   | <DEL> | N     | 0.3667   | 0.3611   | 0.195608   | 1 | 1.07607  | 0.0566495 | 0.07331552 |
| 10 | D_DEL_chr10_9497  | 110029922 | 1078  | <DEL> | N     | 0.03019  | 0.02647  | 0.679487   | 1 | 1.06931  | 0.16219   | 0.06701358 |
| 10 | D_DEL_chr10_9829  | 115246555 | 304   | <DEL> | N     | 0.3402   | 0.3465   | 0.228141   | 1 | 0.935865 | 0.0550005 | -0.066284  |
| 10 | D_DEL_chr10_9989  | 117570738 | 183   | N     | <DEL> | 0.3095   | 0.3181   | 0.582763   | 1 | 0.970347 | 0.0547939 | -0.0301015 |
| 11 | D_DEL_chr11_1021  | 110060195 | 73    | N     | <DEL> | 0.2524   | 0.2496   | 0.362531   | 1 | 1.0572   | 0.0610883 | 0.0556239  |
| 11 | D_DEL_chr11_1027  | 4947000   | 9000  | <DEL> | N     | 0.4181   | 0.4314   | 0.289928   | 1 | 0.944249 | 0.0542066 | -0.0573654 |
| 11 | D_DEL_chr11_1037  | 5085744   | 237   | N     | <DEL> | 0.2429   | 0.2749   | 0.0128227  | 1 | 0.859471 | 0.0608515 | -0.1514382 |
| 11 | D_DEL_chr11_1077  | 5602059   | 768   | <DEL> | N     | 0.02018  | 0.02476  | 0.893091   | 1 | 1.02464  | 0.181145  | 0.02434133 |
| 11 | D_DEL_chr11_1088  | 119031507 | 2045  | <DEL> | N     | 0.01339  | 0.01548  | 0.158961   | 1 | 0.725072 | 0.228234  | -0.3214843 |
| 11 | D_DEL_chr11_1099  | 120516935 | 722   | <DEL> | N     | 0.05996  | 0.0612   | 0.482283   | 1 | 0.926647 | 0.108424  | -0.0761826 |
| 11 | PD_DEL_chr11_1110 | 190953    | 216   | N     | <DEL> | 0.01412  | 0.01367  | 0.724644   | 1 | 1.08277  | 0.225738  | 0.07952257 |
| 11 | D_DEL_chr11_1107  | 5763345   | 24707 | <DEL> | N     | 0.234    | 0.2272   | 0.292517   | 1 | 1.06786  | 0.0623722 | 0.06565665 |
| 11 | D_DEL_chr11_1112  | 122476876 | 1696  | N     | <DEL> | 0.1151   | 0.1013   | 0.92865    | 1 | 1.0075   | 0.0834074 | 0.00747201 |
| 11 | D_DEL_chr11_1118  | 123697069 | 72    | <DEL> | N     | 0.08779  | 0.08418  | 0.929692   | 1 | 0.991753 | 0.0938575 | -0.0082812 |
| 11 | D_DEL_chr11_1128  | 124960255 | 95    | N     | <DEL> | 0.1975   | 0.2069   | 0.797177   | 1 | 1.01714  | 0.0661257 | 0.01699477 |
| 11 | D_DEL_chr11_1130  | 125205508 | 10233 | <DEL> | N     | 0.01509  | 0.01169  | 0.0819903  | 1 | 1.50096  | 0.233493  | 0.4061049  |
| 11 | D_DEL_chr11_1153  | 128173078 | 310   | <DEL> | N     | 0.1623   | 0.1668   | 0.898106   | 1 | 0.990934 | 0.0711189 | -0.0091073 |
| 11 | D_DEL_chr11_1177  | 6551849   | 432   | <DEL> | N     | 0.02946  | 0.03262  | 0.67646    | 1 | 0.940766 | 0.146327  | -0.0610608 |
| 11 | D_DEL_chr11_1188  | 132213732 | 300   | <DEL> | N     | 0.4      | 0.4219   | 0.746899   | 1 | 0.982543 | 0.0545686 | -0.0176112 |
| 11 | D_DEL_chr11_1190  | 132688699 | 280   | <DEL> | N     | 0.4938   | 0.5045   | 0.554559   | 1 | 0.969237 | 0.0528755 | -0.0312461 |
| 11 | D_DEL_chr11_1195  | 133170495 | 55    | <DEL> | N     | 0.01569  | 0.01441  | 0.0869607  | 1 | 1.41557  | 0.203039  | 0.34753228 |
| 11 | D_DEL_chr11_1203  | 7113511   | 1762  | <DEL> | N     | 0.0647   | 0.07261  | 0.329051   | 1 | 0.902323 | 0.105307  | -0.1027827 |
| 11 | D_DEL_chr11_1210  | 134492246 | 3300  | <DEL> | N     | 0.08236  | 0.07516  | 0.383939   | 1 | 0.91664  | 0.0999709 | -0.0870405 |
| 11 | D_DEL_chr11_1213  | 134732088 | 5679  | <DEL> | N     | 0.149    | 0.1427   | 0.817261   | 1 | 0.982925 | 0.0745347 | -0.0172225 |
| 11 | D_DEL_chr11_1219  | 134934929 | 1221  | <DEL> | N     | 0.07975  | 0.07935  | 0.252499   | 1 | 1.11999  | 0.0990329 | 0.11331976 |
| 11 | D_DEL_chr11_1237  | 7407363   | 316   | <DEL> | N     | 0.3511   | 0.362    | 0.86911    | 1 | 1.00931  | 0.0562505 | 0.00926693 |

|    |                  |          |       |       |       |         |         |            |   |          |           |            |
|----|------------------|----------|-------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 11 | D_DEL_chr11_126  | 7789629  | 22202 | <DEL> | N     | 0.03482 | 0.02915 | 0.0819061  | 1 | 1.30069  | 0.151113  | 0.26289489 |
| 11 | D_DEL_chr11_130  | 8304521  | 127   | N     | <DEL> | 0.3934  | 0.4054  | 0.831658   | 1 | 1.01176  | 0.0549987 | 0.01169139 |
| 11 | D_DEL_chr11_146  | 10271199 | 1088  | N     | <DEL> | 0.464   | 0.4633  | 0.937409   | 1 | 0.995798 | 0.0536191 | -0.0042109 |
| 11 | D_DEL_chr11_198  | 18076034 | 2532  | <DEL> | N     | 0.08172 | 0.08201 | 0.141567   | 1 | 1.15517  | 0.0981279 | 0.14424752 |
| 11 | D_DEL_chr11_200  | 18452292 | 1382  | <DEL> | N     | 0.01915 | 0.01511 | 0.71476    | 1 | 0.931441 | 0.194331  | -0.0710224 |
| 11 | PD_DEL_chr11_210 | 631344   | 963   | <DEL> | N     | 0.05512 | 0.05346 | 0.0698483  | 1 | 1.23174  | 0.114969  | 0.2084278  |
| 11 | D_DEL_chr11_216  | 20823011 | 5390  | <DEL> | N     | 0.06039 | 0.06983 | 0.0929715  | 1 | 0.835035 | 0.107322  | -0.1802816 |
| 11 | D_DEL_chr11_237  | 23183837 | 5453  | <DEL> | N     | 0.02495 | 0.02303 | 0.641719   | 1 | 1.0848   | 0.174926  | 0.08139564 |
| 11 | D_DEL_chr11_246  | 24263597 | 3093  | <DEL> | N     | 0.01451 | 0.01745 | 0.774385   | 1 | 0.940588 | 0.213681  | -0.0612501 |
| 11 | D_DEL_chr11_248  | 24421607 | 9134  | <DEL> | N     | 0.04105 | 0.04377 | 0.905892   | 1 | 0.984628 | 0.131033  | -0.0154914 |
| 11 | D_DEL_chr11_261  | 25413688 | 66    | N     | <DEL> | 0.2857  | 0.2733  | 0.714874   | 1 | 1.02158  | 0.0584463 | 0.02135045 |
| 11 | D_DEL_chr11_262  | 25542940 | 327   | <DEL> | N     | 0.2301  | 0.2178  | 0.701688   | 1 | 1.02509  | 0.0646857 | 0.02478041 |
| 11 | D_DEL_chr11_268  | 25936913 | 57    | <DEL> | N     | 0.01917 | 0.02125 | 0.752866   | 1 | 0.945333 | 0.178548  | -0.056218  |
| 11 | D_DEL_chr11_284  | 27767989 | 280   | <DEL> | N     | 0.038   | 0.03589 | 0.933745   | 1 | 0.988303 | 0.141532  | -0.0117659 |
| 11 | D_DEL_chr11_295  | 28985416 | 5925  | N     | <DEL> | 0.3605  | 0.3544  | 0.53855    | 1 | 0.966754 | 0.0549775 | -0.0338112 |
| 11 | D_DEL_chr11_298  | 29117842 | 979   | <DEL> | N     | 0.2046  | 0.2144  | 0.963016   | 1 | 1.00292  | 0.062791  | 0.00291575 |
| 11 | D_DEL_chr11_329  | 32367443 | 1669  | <DEL> | N     | 0.2435  | 0.2487  | 0.443558   | 1 | 1.04809  | 0.0613071 | 0.04696946 |
| 11 | D_DEL_chr11_341  | 34026861 | 178   | <DEL> | N     | 0.2805  | 0.2985  | 0.605531   | 1 | 0.970539 | 0.0579018 | -0.0299037 |
| 11 | D_DEL_chr11_347  | 34706576 | 493   | <DEL> | N     | 0.2073  | 0.2063  | 0.345904   | 1 | 1.06293  | 0.0647505 | 0.06102925 |
| 11 | D_DEL_chr11_368  | 37427267 | 79    | N     | <DEL> | 0.4089  | 0.4072  | 0.690624   | 1 | 1.02123  | 0.0527856 | 0.02100778 |
| 11 | D_DEL_chr11_375  | 37940512 | 308   | <DEL> | N     | 0.1956  | 0.1906  | 0.650101   | 1 | 0.970643 | 0.0656849 | -0.0297965 |
| 11 | D_DEL_chr11_395  | 39764358 | 66    | N     | <DEL> | 0.1306  | 0.127   | 0.601578   | 1 | 1.04116  | 0.0772559 | 0.04033548 |
| 11 | D_DEL_chr11_412  | 41800745 | 312   | <DEL> | N     | 0.3354  | 0.3525  | 0.14185    | 1 | 0.920085 | 0.0567007 | -0.0832892 |
| 11 | D_DEL_chr11_416  | 42134614 | 314   | <DEL> | N     | 0.2006  | 0.2093  | 0.20441    | 1 | 0.918445 | 0.0670348 | -0.0850733 |
| 11 | D_DEL_chr11_422  | 42790871 | 6152  | <DEL> | N     | 0.2485  | 0.2495  | 0.147213   | 1 | 1.09327  | 0.0615205 | 0.08917321 |
| 11 | D_DEL_chr11_450  | 47036037 | 6123  | <DEL> | N     | 0.4474  | 0.4334  | 0.00926723 | 1 | 1.14926  | 0.0534658 | 0.13911826 |
| 11 | D_DEL_chr11_450  | 47504556 | 1838  | <DEL> | N     | 0.05048 | 0.0565  | 0.289126   | 1 | 0.885466 | 0.114751  | -0.1216412 |
| 11 | D_DEL_chr11_459  | 47866115 | 527   | <DEL> | N     | 0.4391  | 0.4428  | 0.6428     | 1 | 1.02533  | 0.0539345 | 0.02501451 |
| 11 | D_DEL_chr11_464  | 48305678 | 944   | <DEL> | N     | 0.04859 | 0.04426 | 0.349375   | 1 | 1.12623  | 0.127029  | 0.11887577 |
| 11 | D_DEL_chr11_469  | 48658835 | 946   | <DEL> | N     | 0.01064 | 0.01026 | 0.858206   | 1 | 1.04577  | 0.250514  | 0.04475346 |
| 11 | D_DEL_chr11_476  | 48788195 | 1594  | <DEL> | N     | 0.1705  | 0.1738  | 0.65268    | 1 | 0.96778  | 0.0727731 | -0.0327505 |
| 11 | D_DEL_chr11_478  | 48815449 | 2540  | <DEL> | N     | 0.02385 | 0.02867 | 0.471164   | 1 | 0.886388 | 0.167364  | -0.1206005 |
| 11 | D_DEL_chr11_479  | 48835526 | 5682  | <DEL> | N     | 0.01509 | 0.01727 | 0.0410812  | 1 | 0.652432 | 0.20906   | -0.4270484 |
| 11 | D_DEL_chr11_484  | 48907396 | 307   | N     | <DEL> | 0.4027  | 0.371   | 0.240195   | 1 | 1.06948  | 0.0571936 | 0.06717255 |
| 11 | D_DEL_chr11_489  | 48938733 | 2078  | <DEL> | N     | 0.0494  | 0.04518 | 0.304202   | 1 | 1.1382   | 0.125984  | 0.12944807 |
| 11 | D_DEL_chr11_497  | 49688250 | 47913 | <DEL> | N     | 0.05708 | 0.05128 | 0.227861   | 1 | 1.15281  | 0.117921  | 0.14220244 |
| 11 | D_DEL_chr11_511  | 50500880 | 935   | <DEL> | N     | 0.05463 | 0.05041 | 0.394061   | 1 | 1.10814  | 0.12048   | 0.10268293 |
| 11 | D_DEL_chr11_514  | 50619434 | 2165  | <DEL> | N     | 0.05532 | 0.05027 | 0.315283   | 1 | 1.12888  | 0.120719  | 0.12122599 |
| 11 | PD_DEL_chr11_517 | 1247132  | 94    | <DEL> | N     | 0.02541 | 0.0296  | 0.583434   | 1 | 0.911186 | 0.169606  | -0.0930082 |
| 11 | D_DEL_chr11_542  | 56940074 | 4784  | <DEL> | N     | 0.04709 | 0.04591 | 0.509685   | 1 | 0.921843 | 0.123429  | -0.0813804 |
| 11 | D_DEL_chr11_552  | 58195371 | 312   | <DEL> | N     | 0.4054  | 0.4068  | 0.281865   | 1 | 1.06199  | 0.05589   | 0.06014451 |

|    |                  |           |       |       |       |         |         |           |   |          |           |            |
|----|------------------|-----------|-------|-------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 11 | D_DEL_chr11_554  | 58453151  | 310   | <DEL> | N     | 0.4126  | 0.4313  | 0.869067  | 1 | 0.991431 | 0.0522092 | -0.0086059 |
| 11 | D_DEL_chr11_566  | 59631329  | 314   | <DEL> | N     | 0.05939 | 0.0534  | 0.15891   | 1 | 1.17884  | 0.116798  | 0.1645309  |
| 11 | D_DEL_chr11_567  | 59771237  | 166   | <DEL> | N     | 0.05863 | 0.05348 | 0.0912889 | 1 | 1.21645  | 0.116031  | 0.19593678 |
| 11 | D_DEL_chr11_571  | 60329868  | 626   | <DEL> | N     | 0.02678 | 0.02814 | 0.936535  | 1 | 1.01322  | 0.164901  | 0.01313338 |
| 11 | D_DEL_chr11_596  | 62744637  | 1027  | <DEL> | N     | 0.01867 | 0.02146 | 0.449405  | 1 | 1.1562   | 0.191878  | 0.14513877 |
| 11 | D_DEL_chr11_606  | 63800886  | 906   | <DEL> | N     | 0.01277 | 0.01403 | 0.643931  | 1 | 0.902511 | 0.221921  | -0.1025744 |
| 11 | D_DEL_chr11_628  | 65874640  | 1408  | N     | <DEL> | 0.3725  | 0.3454  | 0.653908  | 1 | 1.02568  | 0.0565556 | 0.02535581 |
| 11 | D_DEL_chr11_634  | 66536653  | 1050  | <DEL> | N     | 0.01163 | 0.01242 | 0.327005  | 1 | 0.79084  | 0.239408  | -0.2346596 |
| 11 | D_DEL_chr11_634  | 66537691  | 297   | <DEL> | N     | 0.02423 | 0.02652 | 0.580286  | 1 | 1.09668  | 0.166888  | 0.09228743 |
| 11 | D_DEL_chr11_644  | 67562615  | 2365  | <DEL> | N     | 0.02089 | 0.02159 | 0.572025  | 1 | 0.899877 | 0.186697  | -0.1054972 |
| 11 | D_DEL_chr11_648  | 67895036  | 79    | N     | <DEL> | 0.07988 | 0.06999 | 0.0874784 | 1 | 0.838627 | 0.102987  | -0.1759892 |
| 11 | D_DEL_chr11_654  | 68633812  | 5531  | <DEL> | N     | 0.0619  | 0.06693 | 0.239911  | 1 | 0.880402 | 0.108387  | -0.1273767 |
| 11 | D_DEL_chr11_673  | 70228144  | 9448  | <DEL> | N     | 0.0207  | 0.01799 | 0.467974  | 1 | 1.14876  | 0.191086  | 0.1386831  |
| 11 | D_DEL_chr11_691  | 71677939  | 77    | <DEL> | N     | 0.03592 | 0.03932 | 0.353518  | 1 | 0.881041 | 0.136508  | -0.1266511 |
| 11 | D_DEL_chr11_691  | 71765878  | 4846  | <DEL> | N     | 0.0501  | 0.0493  | 0.549043  | 1 | 0.931715 | 0.118038  | -0.0707283 |
| 11 | D_DEL_chr11_694  | 72164373  | 968   | <DEL> | N     | 0.01084 | 0.01368 | 0.299099  | 1 | 0.777878 | 0.241904  | -0.2511856 |
| 11 | D_DEL_chr11_698  | 72562941  | 61    | <DEL> | N     | 0.1115  | 0.1083  | 0.118776  | 1 | 0.878411 | 0.0831063 | -0.1296407 |
| 11 | PD_DEL_chr11_716 | 1941660   | 175   | N     | <DEL> | 0.4288  | 0.4394  | 0.0251168 | 1 | 0.886977 | 0.0535524 | -0.1199362 |
| 11 | D_DEL_chr11_728  | 77530157  | 50    | <DEL> | N     | 0.01885 | 0.02237 | 0.752052  | 1 | 1.05864  | 0.18036   | 0.05698507 |
| 11 | D_DEL_chr11_759  | 81789463  | 20833 | <DEL> | N     | 0.09207 | 0.09212 | 0.724896  | 1 | 1.03273  | 0.0915214 | 0.03220578 |
| 11 | D_DEL_chr11_764  | 82145368  | 6935  | <DEL> | N     | 0.112   | 0.1019  | 0.0409753 | 1 | 1.19389  | 0.0867119 | 0.17721688 |
| 11 | D_DEL_chr11_771  | 83126318  | 8844  | <DEL> | N     | 0.01025 | 0.01008 | 0.678357  | 1 | 1.12142  | 0.276339  | 0.11459574 |
| 11 | D_DEL_chr11_794  | 85551984  | 11747 | <DEL> | N     | 0.02108 | 0.0243  | 0.200127  | 1 | 0.796129 | 0.177956  | -0.227994  |
| 11 | D_DEL_chr11_799  | 86177892  | 10377 | <DEL> | N     | 0.02031 | 0.01997 | 0.580515  | 1 | 1.11406  | 0.195452  | 0.108011   |
| 11 | D_DEL_chr11_806  | 86930765  | 99    | <DEL> | N     | 0.04175 | 0.03206 | 0.104791  | 1 | 1.25762  | 0.141316  | 0.22922105 |
| 11 | PD_DEL_chr11_861 | 3217510   | 5346  | <DEL> | N     | 0.04959 | 0.05187 | 0.847991  | 1 | 1.02289  | 0.118058  | 0.02263195 |
| 11 | D_DEL_chr11_865  | 92512840  | 295   | <DEL> | N     | 0.4348  | 0.4198  | 0.521327  | 1 | 1.03416  | 0.0523735 | 0.0335895  |
| 11 | D_DEL_chr11_871  | 93286581  | 10159 | <DEL> | N     | 0.0323  | 0.02627 | 0.303061  | 1 | 1.17554  | 0.157032  | 0.16172762 |
| 11 | D_DEL_chr11_875  | 93950162  | 5236  | <DEL> | N     | 0.03424 | 0.03348 | 0.837797  | 1 | 1.03124  | 0.15026   | 0.03076196 |
| 11 | D_DEL_chr11_883  | 95207140  | 2839  | <DEL> | N     | 0.03424 | 0.02861 | 0.246358  | 1 | 1.18549  | 0.146784  | 0.17015619 |
| 11 | PD_DEL_chr11_889 | 3475145   | 50    | <DEL> | N     | 0.04235 | 0.04156 | 0.10797   | 1 | 1.2379   | 0.132772  | 0.2134164  |
| 11 | D_DEL_chr11_895  | 96499968  | 299   | <DEL> | N     | 0.2222  | 0.2285  | 0.876934  | 1 | 1.00975  | 0.0626759 | 0.00970278 |
| 11 | D_DEL_chr11_909  | 97646731  | 3368  | <DEL> | N     | 0.01992 | 0.01872 | 0.602535  | 1 | 1.10706  | 0.195307  | 0.10170785 |
| 11 | D_DEL_chr11_915  | 98393975  | 4199  | <DEL> | N     | 0.0147  | 0.01746 | 0.0657759 | 1 | 1.45656  | 0.204397  | 0.37607749 |
| 11 | D_DEL_chr11_929  | 99658624  | 133   | <DEL> | N     | 0.01858 | 0.0193  | 0.863073  | 1 | 1.03216  | 0.183545  | 0.03165369 |
| 11 | D_DEL_chr11_943  | 101419279 | 307   | <DEL> | N     | 0.2081  | 0.202   | 0.0600053 | 1 | 1.12837  | 0.0642177 | 0.12077411 |
| 11 | D_DEL_chr11_945  | 101546053 | 318   | <DEL> | N     | 0.3104  | 0.3221  | 0.361238  | 1 | 0.948766 | 0.0576036 | -0.0525931 |
| 11 | D_DEL_chr11_946  | 101573883 | 838   | <DEL> | N     | 0.01509 | 0.01763 | 0.303994  | 1 | 0.803262 | 0.213127  | -0.2190743 |
| 11 | PD_DEL_chr11_953 | 4242906   | 45444 | <DEL> | N     | 0.01995 | 0.02119 | 0.57628   | 1 | 0.903664 | 0.181268  | -0.1012977 |
| 11 | D_DEL_chr11_954  | 102880400 | 1672  | <DEL> | N     | 0.06422 | 0.06279 | 0.371818  | 1 | 0.909965 | 0.105645  | -0.0943491 |
| 11 | PD_DEL_chr11_956 | 4250923   | 55367 | <DEL> | N     | 0.01991 | 0.02057 | 0.518858  | 1 | 0.88829  | 0.183623  | -0.118457  |

|    |                  |           |       |       |       |          |         |           |   |          |           |            |
|----|------------------|-----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 11 | D_DEL_chr11_957  | 103217215 | 140   | N     | <DEL> | 0.07176  | 0.06855 | 0.137313  | 1 | 1.16629  | 0.103527  | 0.15382777 |
| 11 | D_DEL_chr11_964  | 104045522 | 2218  | <DEL> | N     | 0.1516   | 0.165   | 0.481012  | 1 | 0.951203 | 0.0709942 | -0.0500278 |
| 11 | D_DEL_chr11_969  | 104397023 | 5478  | N     | <DEL> | 0.3043   | 0.3102  | 0.575135  | 1 | 0.96827  | 0.0575271 | -0.0322443 |
| 12 | D_DEL_chr12_1016 | 117203167 | 2551  | <DEL> | N     | 0.1981   | 0.2028  | 0.545613  | 1 | 1.0408   | 0.0661721 | 0.03998965 |
| 12 | D_DEL_chr12_1020 | 117731321 | 129   | <DEL> | N     | 0.02889  | 0.03198 | 0.369312  | 1 | 1.14531  | 0.151129  | 0.13567534 |
| 12 | D_DEL_chr12_1036 | 119550739 | 4716  | <DEL> | N     | 0.02149  | 0.02267 | 0.803871  | 1 | 0.958368 | 0.171232  | -0.0425234 |
| 12 | D_DEL_chr12_1059 | 121593991 | 1385  | <DEL> | N     | 0.02636  | 0.03115 | 0.30946   | 1 | 0.852001 | 0.15759   | -0.1601676 |
| 12 | D_DEL_chr12_1110 | 124948788 | 80    | N     | <DEL> | 0.3988   | 0.3947  | 0.349333  | 1 | 1.05226  | 0.0544333 | 0.05094023 |
| 12 | D_DEL_chr12_1116 | 9450634   | 66    | <DEL> | N     | 0.01124  | 0.01118 | 0.337699  | 1 | 1.27146  | 0.250508  | 0.24016585 |
| 12 | D_DEL_chr12_1119 | 9480650   | 9600  | N     | <DEL> | 0.4168   | 0.4139  | 0.469741  | 1 | 0.961978 | 0.053622  | -0.0387637 |
| 12 | D_DEL_chr12_1121 | 126420570 | 299   | <DEL> | N     | 0.4779   | 0.4804  | 0.311038  | 1 | 1.05741  | 0.055102  | 0.05582252 |
| 12 | D_DEL_chr12_1122 | 126504395 | 16352 | <DEL> | N     | 0.02457  | 0.02789 | 0.7927    | 1 | 0.956218 | 0.170351  | -0.0447694 |
| 12 | D_DEL_chr12_1123 | 126509839 | 11507 | <DEL> | N     | 0.02399  | 0.02735 | 0.838504  | 1 | 0.965608 | 0.171718  | -0.0349973 |
| 12 | D_DEL_chr12_1123 | 126510880 | 17581 | <DEL> | N     | 0.01046  | 0.01476 | 0.255699  | 1 | 0.755241 | 0.246977  | -0.2807184 |
| 12 | D_DEL_chr12_1126 | 126715417 | 324   | <DEL> | N     | 0.1282   | 0.1251  | 0.0998215 | 1 | 1.13798  | 0.0785378 | 0.12925476 |
| 12 | D_DEL_chr12_1134 | 127553449 | 300   | <DEL> | N     | 0.352    | 0.366   | 0.421109  | 1 | 0.956731 | 0.0549816 | -0.044233  |
| 12 | D_DEL_chr12_1148 | 128745287 | 3354  | <DEL> | N     | 0.04281  | 0.04264 | 0.382928  | 1 | 0.891271 | 0.131925  | -0.1151067 |
| 12 | D_DEL_chr12_1156 | 129356152 | 304   | N     | <DEL> | 0.4524   | 0.4433  | 0.851465  | 1 | 0.98969  | 0.0553451 | -0.0103635 |
| 12 | D_DEL_chr12_1157 | 129399163 | 115   | <DEL> | N     | 0.01266  | 0.01211 | 0.303106  | 1 | 1.28185  | 0.241117  | 0.24830435 |
| 12 | D_DEL_chr12_1162 | 129856108 | 2911  | <DEL> | N     | 0.009914 | 0.01194 | 0.637925  | 1 | 0.8861   | 0.25696   | -0.1209255 |
| 12 | D_DEL_chr12_1211 | 10550902  | 313   | <DEL> | N     | 0.1612   | 0.1652  | 0.892487  | 1 | 0.990579 | 0.0700333 | -0.0094657 |
| 12 | D_DEL_chr12_1218 | 10660468  | 172   | N     | <DEL> | 0.4128   | 0.4117  | 0.827775  | 1 | 1.0115   | 0.052579  | 0.01143438 |
| 12 | D_DEL_chr12_1229 | 132298658 | 1921  | <DEL> | N     | 0.01162  | 0.01785 | 0.991941  | 1 | 1.0023   | 0.227554  | 0.00229736 |
| 12 | D_DEL_chr12_1256 | 11105938  | 301   | N     | <DEL> | 0.501    | 0.4876  | 0.298757  | 1 | 1.05829  | 0.0545179 | 0.0566544  |
| 12 | D_DEL_chr12_1272 | 133091352 | 4968  | <DEL> | N     | 0.009302 | 0.01172 | 0.816833  | 1 | 1.05971  | 0.25038   | 0.05799529 |
| 12 | D_DEL_chr12_1274 | 133263047 | 1690  | <DEL> | N     | 0.04408  | 0.05455 | 0.0809802 | 1 | 0.802422 | 0.126144  | -0.2201206 |
| 12 | D_DEL_chr12_1326 | 11873481  | 738   | <DEL> | N     | 0.411    | 0.423   | 0.768702  | 1 | 1.01551  | 0.0523431 | 0.01539095 |
| 12 | D_DEL_chr12_1371 | 12378259  | 11307 | <DEL> | N     | 0.04255  | 0.03922 | 0.0396015 | 1 | 1.32139  | 0.135424  | 0.27868421 |
| 12 | D_DEL_chr12_1421 | 757639    | 7978  | <DEL> | N     | 0.138    | 0.1399  | 0.970643  | 1 | 0.997181 | 0.0767065 | -0.002823  |
| 12 | D_DEL_chr12_1831 | 17741236  | 218   | N     | <DEL> | 0.08781  | 0.09284 | 0.434957  | 1 | 0.931101 | 0.0914362 | -0.0713875 |
| 12 | D_DEL_chr12_2021 | 1292984   | 137   | <DEL> | N     | 0.02372  | 0.02032 | 0.363545  | 1 | 1.17819  | 0.180465  | 0.16397936 |
| 12 | D_DEL_chr12_2350 | 23642806  | 298   | <DEL> | N     | 0.1893   | 0.1858  | 0.101253  | 1 | 1.11558  | 0.0667403 | 0.10937445 |
| 12 | D_DEL_chr12_2615 | 27495210  | 7020  | <DEL> | N     | 0.02362  | 0.02663 | 0.694863  | 1 | 0.935653 | 0.169556  | -0.0665106 |
| 12 | D_DEL_chr12_2638 | 27942524  | 2948  | <DEL> | N     | 0.04315  | 0.03796 | 0.710217  | 1 | 1.05104  | 0.133984  | 0.04978015 |
| 12 | D_DEL_chr12_2640 | 27943542  | 64    | <DEL> | N     | 0.02884  | 0.0286  | 0.694272  | 1 | 1.06434  | 0.158631  | 0.06235489 |
| 12 | D_DEL_chr12_2749 | 29127318  | 299   | <DEL> | N     | 0.3571   | 0.3728  | 0.208073  | 1 | 1.07088  | 0.0543986 | 0.06848074 |
| 12 | D_DEL_chr12_2831 | 30080770  | 146   | <DEL> | N     | 0.01961  | 0.01858 | 0.350995  | 1 | 1.19144  | 0.187808  | 0.17516266 |
| 12 | D_DEL_chr12_2831 | 30084312  | 6321  | <DEL> | N     | 0.09616  | 0.09989 | 0.0979143 | 1 | 1.16018  | 0.0897687 | 0.14857517 |
| 12 | D_DEL_chr12_2841 | 30218384  | 425   | N     | <DEL> | 0.4275   | 0.4228  | 0.0804611 | 1 | 1.09725  | 0.0530938 | 0.09280705 |
| 12 | D_DEL_chr12_2851 | 30325354  | 2702  | <DEL> | N     | 0.3634   | 0.4028  | 0.148192  | 1 | 0.925962 | 0.0531983 | -0.0769221 |
| 12 | D_DEL_chr12_2881 | 30765358  | 500   | <DEL> | N     | 0.2348   | 0.2483  | 0.364875  | 1 | 0.944636 | 0.0628569 | -0.0569556 |



|    |                  |          |       |       |       |          |         |            |   |          |           |            |
|----|------------------|----------|-------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 12 | D_DEL_chr12_301  | 31753852 | 5341  | <DEL> | N     | 0.02555  | 0.02828 | 0.290895   | 1 | 0.839032 | 0.166175  | -0.1755064 |
| 12 | D_DEL_chr12_302  | 31799247 | 2292  | <DEL> | N     | 0.1216   | 0.1184  | 0.83868    | 1 | 1.01687  | 0.0821653 | 0.01672928 |
| 12 | D_DEL_chr12_303  | 31898467 | 7941  | <DEL> | N     | 0.0138   | 0.01569 | 0.95687    | 1 | 0.988813 | 0.208011  | -0.01125   |
| 12 | D_DEL_chr12_307  | 32177326 | 5564  | <DEL> | N     | 0.01741  | 0.01259 | 0.0222892  | 1 | 1.64206  | 0.217008  | 0.49595155 |
| 12 | PD_DEL_chr12_310 | 2131693  | 17137 | <DEL> | N     | 0.04391  | 0.0538  | 0.535652   | 1 | 0.924735 | 0.126329  | -0.0782481 |
| 12 | D_DEL_chr12_315  | 33143625 | 10807 | <DEL> | N     | 0.2243   | 0.2318  | 0.270698   | 1 | 0.932949 | 0.0630114 | -0.0694047 |
| 12 | D_DEL_chr12_326  | 37985047 | 137   | <DEL> | N     | 0.01728  | 0.01928 | 0.631823   | 1 | 0.913581 | 0.188626  | -0.0903832 |
| 12 | D_DEL_chr12_336  | 38803790 | 3080  | <DEL> | N     | 0.03279  | 0.03482 | 0.493059   | 1 | 0.900489 | 0.152917  | -0.1048173 |
| 12 | D_DEL_chr12_337  | 39084129 | 5206  | <DEL> | N     | 0.02399  | 0.02269 | 0.999995   | 1 | 0.999999 | 0.179006  | -1.00E-06  |
| 12 | PD_DEL_chr12_362 | 2843767  | 415   | <DEL> | N     | 0.04921  | 0.04341 | 0.185485   | 1 | 1.18447  | 0.127859  | 0.16929542 |
| 12 | D_DEL_chr12_367  | 41844268 | 807   | N     | <DEL> | 0.1957   | 0.1977  | 0.50503    | 1 | 1.04472  | 0.0656366 | 0.04374891 |
| 12 | D_DEL_chr12_370  | 42304056 | 2243  | <DEL> | N     | 0.07451  | 0.0686  | 0.714636   | 1 | 0.962598 | 0.104254  | -0.0381194 |
| 12 | D_DEL_chr12_372  | 42626388 | 7267  | <DEL> | N     | 0.07588  | 0.08108 | 0.917856   | 1 | 1.01017  | 0.0981481 | 0.01011863 |
| 12 | D_DEL_chr12_376  | 43260626 | 323   | <DEL> | N     | 0.2458   | 0.2618  | 0.299077   | 1 | 1.0643   | 0.0600164 | 0.06231731 |
| 12 | D_DEL_chr12_378  | 43583657 | 2089  | N     | <DEL> | 0.09265  | 0.09716 | 0.790698   | 1 | 0.976412 | 0.0899396 | -0.0238707 |
| 12 | D_DEL_chr12_392  | 45509370 | 6786  | N     | <DEL> | 0.4099   | 0.3987  | 0.865865   | 1 | 1.00902  | 0.0531346 | 0.00897956 |
| 12 | D_DEL_chr12_392  | 45554593 | 68    | N     | <DEL> | 0.4822   | 0.4741  | 0.453644   | 1 | 0.961798 | 0.0519794 | -0.0389508 |
| 12 | D_DEL_chr12_405  | 47309072 | 58    | <DEL> | N     | 0.033    | 0.03591 | 0.0161102  | 1 | 0.701457 | 0.147355  | -0.3545957 |
| 12 | D_DEL_chr12_413  | 48314883 | 2184  | <DEL> | N     | 0.005062 | 0.01821 | 0.423301   | 1 | 1.2501   | 0.27878   | 0.22322355 |
| 12 | D_DEL_chr12_423  | 49315101 | 1640  | <DEL> | N     | 0.01702  | 0.01691 | 0.80922    | 1 | 1.04969  | 0.20088   | 0.04849488 |
| 12 | D_DEL_chr12_426  | 49687289 | 83    | <DEL> | N     | 0.06838  | 0.0706  | 0.719791   | 1 | 0.963756 | 0.102908  | -0.0369171 |
| 12 | D_DEL_chr12_427  | 49771184 | 94    | <DEL> | N     | 0.01226  | 0.01083 | 0.394629   | 1 | 1.23979  | 0.252498  | 0.21494201 |
| 12 | D_DEL_chr12_439  | 50822388 | 2293  | <DEL> | N     | 0.007546 | 0.01277 | 0.00602533 | 1 | 0.473926 | 0.271885  | -0.7467041 |
| 12 | D_DEL_chr12_471  | 54733523 | 59    | <DEL> | N     | 0.02131  | 0.02177 | 0.306281   | 1 | 0.834687 | 0.176626  | -0.1806985 |
| 12 | PD_DEL_chr12_478 | 3934517  | 1111  | <DEL> | N     | 0.02864  | 0.02628 | 0.900912   | 1 | 0.980205 | 0.160583  | -0.0199935 |
| 12 | D_DEL_chr12_520  | 59542015 | 17063 | <DEL> | N     | 0.1922   | 0.1957  | 0.696342   | 1 | 1.02676  | 0.0676751 | 0.02640821 |
| 12 | D_DEL_chr12_520  | 59542090 | 10701 | <DEL> | N     | 0.1921   | 0.1956  | 0.700465   | 1 | 1.02632  | 0.0675211 | 0.02597959 |
| 12 | D_DEL_chr12_530  | 60479624 | 5850  | <DEL> | N     | 0.02033  | 0.02593 | 0.116698   | 1 | 0.757087 | 0.177385  | -0.2782771 |
| 12 | D_DEL_chr12_544  | 61901264 | 172   | N     | <DEL> | 0.1913   | 0.1922  | 0.181856   | 1 | 1.09194  | 0.065881  | 0.08795593 |
| 12 | D_DEL_chr12_549  | 62513694 | 393   | <DEL> | N     | 0.125    | 0.1173  | 0.512006   | 1 | 1.05407  | 0.0803046 | 0.05265886 |
| 12 | D_DEL_chr12_550  | 62838638 | 311   | <DEL> | N     | 0.1494   | 0.1398  | 0.679517   | 1 | 0.969659 | 0.0745801 | -0.0308108 |
| 12 | D_DEL_chr12_596  | 68861999 | 738   | <DEL> | N     | 0.2054   | 0.215   | 0.143359   | 1 | 0.909726 | 0.0646523 | -0.0946118 |
| 12 | D_DEL_chr12_608  | 70478486 | 5951  | <DEL> | N     | 0.1663   | 0.1716  | 0.909327   | 1 | 0.991979 | 0.0707161 | -0.0080533 |
| 12 | D_DEL_chr12_619  | 71962796 | 1564  | N     | <DEL> | 0.1969   | 0.1616  | 0.649072   | 1 | 0.96928  | 0.0685664 | -0.0312018 |
| 12 | PD_DEL_chr12_651 | 6132272  | 6995  | <DEL> | N     | 0.04159  | 0.04048 | 0.0823354  | 1 | 0.793857 | 0.132881  | -0.2308519 |
| 12 | PD_DEL_chr12_656 | 6145307  | 6254  | <DEL> | N     | 0.06407  | 0.06088 | 0.158415   | 1 | 1.16634  | 0.109095  | 0.15387064 |
| 12 | D_DEL_chr12_674  | 77514891 | 308   | <DEL> | N     | 0.3518   | 0.3553  | 0.785873   | 1 | 1.01493  | 0.0545489 | 0.01481964 |
| 12 | PD_DEL_chr12_692 | 6397097  | 1829  | <DEL> | N     | 0.0205   | 0.02322 | 0.698385   | 1 | 0.929678 | 0.188172  | -0.072917  |
| 12 | D_DEL_chr12_729  | 83648505 | 298   | <DEL> | N     | 0.4627   | 0.4779  | 0.521474   | 1 | 0.966086 | 0.0538189 | -0.0345024 |
| 12 | PD_DEL_chr12_742 | 6798218  | 255   | <DEL> | N     | 0.2865   | 0.3104  | 0.156115   | 1 | 0.922891 | 0.056579  | -0.0802441 |
| 12 | D_DEL_chr12_758  | 86032326 | 6811  | <DEL> | N     | 0.114    | 0.1074  | 0.113742   | 1 | 1.14615  | 0.0862525 | 0.1364085  |

|    |                   |           |       |       |       |         |         |            |   |          |           |            |
|----|-------------------|-----------|-------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 12 | D_DEL_chr12_8009  | 90452612  | 187   | N     | <DEL> | 0.05996 | 0.05254 | 0.766522   | 1 | 1.03475  | 0.11504   | 0.03415985 |
| 12 | D_DEL_chr12_8319  | 94275572  | 307   | <DEL> | N     | 0.209   | 0.2068  | 0.127669   | 1 | 1.10573  | 0.0659944 | 0.10050575 |
| 12 | D_DEL_chr12_8349  | 94850250  | 421   | N     | <DEL> | 0.2959  | 0.3131  | 0.892753   | 1 | 0.992043 | 0.0592548 | -0.0079888 |
| 12 | D_DEL_chr12_8359  | 94950292  | 298   | <DEL> | N     | 0.4449  | 0.4431  | 0.195691   | 1 | 1.07123  | 0.0531761 | 0.06880752 |
| 12 | PD_DEL_chr12_8419 | 7680234   | 120   | <DEL> | N     | 0.4559  | 0.4574  | 0.899222   | 1 | 1.0066   | 0.0519417 | 0.00657832 |
| 12 | D_DEL_chr12_8700  | 98561625  | 3597  | <DEL> | N     | 0.07389 | 0.07899 | 0.339638   | 1 | 0.909095 | 0.0998094 | -0.0953057 |
| 12 | D_DEL_chr12_8750  | 99400170  | 8822  | <DEL> | N     | 0.1296  | 0.1264  | 0.419706   | 1 | 0.938593 | 0.0785392 | -0.0633733 |
| 12 | D_DEL_chr12_8760  | 99424417  | 1654  | <DEL> | N     | 0.01625 | 0.02015 | 0.679504   | 1 | 0.924257 | 0.19065   | -0.0787651 |
| 12 | D_DEL_chr12_8819  | 99894566  | 3443  | <DEL> | N     | 0.04932 | 0.06027 | 0.609684   | 1 | 0.942936 | 0.115091  | -0.0587569 |
| 12 | D_DEL_chr12_8879  | 100636745 | 702   | <DEL> | N     | 0.02931 | 0.03913 | 0.952758   | 1 | 1.00899  | 0.15104   | 0.00894983 |
| 12 | D_DEL_chr12_9169  | 104452740 | 1383  | <DEL> | N     | 0.04615 | 0.05461 | 0.0935161  | 1 | 0.81498  | 0.121989  | -0.2045917 |
| 12 | D_DEL_chr12_9359  | 107828783 | 303   | <DEL> | N     | 0.3557  | 0.3735  | 0.17084    | 1 | 0.926283 | 0.0559149 | -0.0765755 |
| 12 | PD_DEL_chr12_9369 | 8405325   | 32875 | N     | <DEL> | 0.01779 | 0.01367 | 0.293504   | 1 | 1.25399  | 0.215454  | 0.22633047 |
| 12 | D_DEL_chr12_9620  | 111538484 | 3720  | <DEL> | N     | 0.094   | 0.0941  | 0.0209281  | 1 | 1.22958  | 0.0894961 | 0.20667265 |
| 12 | D_DEL_chr12_9669  | 111858355 | 1018  | <DEL> | N     | 0.01554 | 0.03538 | 0.00092278 | 1 | 0.544359 | 0.18356   | -0.6081463 |
| 12 | D_DEL_chr12_9849  | 113611046 | 63    | <DEL> | N     | 0.02208 | 0.01745 | 0.0393165  | 1 | 1.47459  | 0.188457  | 0.38837999 |
| 12 | D_DEL_chr12_9899  | 114194274 | 5927  | <DEL> | N     | 0.01142 | 0.01691 | 0.0123838  | 1 | 0.563352 | 0.229447  | -0.5738506 |
| 13 | PD_DEL_chr13_1049 | 19768351  | 933   | <DEL> | N     | 0.01943 | 0.02633 | 0.493179   | 1 | 0.888541 | 0.172452  | -0.1181745 |
| 13 | D_DEL_chr13_1079  | 31389480  | 69    | N     | <DEL> | 0.4197  | 0.4172  | 0.907195   | 1 | 1.00613  | 0.0524417 | 0.00611129 |
| 13 | D_DEL_chr13_1109  | 31958511  | 6153  | <DEL> | N     | 0.06332 | 0.05996 | 0.875967   | 1 | 0.982778 | 0.111299  | -0.017372  |
| 13 | D_DEL_chr13_1209  | 33561593  | 9091  | <DEL> | N     | 0.1074  | 0.1053  | 0.795486   | 1 | 0.977852 | 0.0864113 | -0.0223969 |
| 13 | D_DEL_chr13_1319  | 34984500  | 6235  | <DEL> | N     | 0.06192 | 0.06657 | 0.34637    | 1 | 1.1061   | 0.10709   | 0.10084031 |
| 13 | D_DEL_chr13_1389  | 35864283  | 302   | <DEL> | N     | 0.2443  | 0.2368  | 0.031583   | 1 | 1.14011  | 0.0610002 | 0.13112475 |
| 13 | D_DEL_chr13_1529  | 37497806  | 13634 | <DEL> | N     | 0.3391  | 0.3541  | 0.0377686  | 1 | 0.890457 | 0.0558502 | -0.1160205 |
| 13 | D_DEL_chr13_1749  | 40696990  | 297   | <DEL> | N     | 0.2961  | 0.3082  | 0.0809368  | 1 | 1.10237  | 0.0558424 | 0.09746241 |
| 13 | D_DEL_chr13_1819  | 41580980  | 321   | <DEL> | N     | 0.1726  | 0.1772  | 0.255597   | 1 | 0.924894 | 0.0686767 | -0.0780761 |
| 13 | D_DEL_chr13_1869  | 42479090  | 687   | <DEL> | N     | 0.218   | 0.2229  | 0.978318   | 1 | 1.00172  | 0.0632214 | 0.00171852 |
| 13 | D_DEL_chr13_1899  | 42965673  | 1638  | N     | <DEL> | 0.3667  | 0.3629  | 0.684944   | 1 | 0.97815  | 0.0544513 | -0.0220922 |
| 13 | D_DEL_chr13_1959  | 43806186  | 329   | <DEL> | N     | 0.2166  | 0.2173  | 0.602261   | 1 | 0.966488 | 0.0654233 | -0.0340864 |
| 13 | PD_DEL_chr13_1989 | 20550567  | 50    | <DEL> | N     | 0.1421  | 0.1407  | 0.150038   | 1 | 1.11341  | 0.0746328 | 0.10742738 |
| 13 | D_DEL_chr13_2049  | 45293810  | 953   | <DEL> | N     | 0.01238 | 0.0126  | 0.546278   | 1 | 0.866003 | 0.238449  | -0.1438669 |
| 13 | D_DEL_chr13_2139  | 46145627  | 315   | <DEL> | N     | 0.2336  | 0.2364  | 0.513755   | 1 | 0.960048 | 0.0624374 | -0.040772  |
| 13 | PD_DEL_chr13_2239 | 20911960  | 907   | <DEL> | N     | 0.01181 | 0.01152 | 0.601425   | 1 | 1.14185  | 0.25394   | 0.13264975 |
| 13 | D_DEL_chr13_2259  | 47441595  | 94    | <DEL> | N     | 0.02174 | 0.02268 | 0.468061   | 1 | 1.13686  | 0.176772  | 0.12827008 |
| 13 | D_DEL_chr13_2309  | 48307293  | 1088  | <DEL> | N     | 0.02768 | 0.0297  | 0.960821   | 1 | 1.00793  | 0.16075   | 0.00789872 |
| 13 | D_DEL_chr13_2399  | 49621209  | 2024  | <DEL> | N     | 0.04816 | 0.04552 | 0.588003   | 1 | 1.06905  | 0.123258  | 0.0667704  |
| 13 | D_DEL_chr13_2489  | 50495214  | 5728  | N     | <DEL> | 0.2545  | 0.2661  | 0.0066636  | 1 | 0.850957 | 0.0594846 | -0.1613937 |
| 13 | D_DEL_chr13_2519  | 50977815  | 312   | <DEL> | N     | 0.2842  | 0.266   | 0.134446   | 1 | 1.09212  | 0.0588795 | 0.08812076 |
| 13 | D_DEL_chr13_2719  | 53660638  | 5478  | <DEL> | N     | 0.05909 | 0.06682 | 0.261552   | 1 | 0.885003 | 0.10881   | -0.1221642 |
| 13 | PD_DEL_chr13_2729 | 21155151  | 541   | <DEL> | N     | 0.127   | 0.1169  | 0.0707841  | 1 | 1.15973  | 0.0820116 | 0.14818722 |
| 13 | D_DEL_chr13_2749  | 53949948  | 307   | <DEL> | N     | 0.1779  | 0.1783  | 0.706355   | 1 | 0.974711 | 0.0679874 | -0.0256143 |

|    |                  |           |       |       |       |         |          |           |   |          |           |            |
|----|------------------|-----------|-------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 13 | D_DEL_chr13_288  | 55367047  | 286   | N     | <DEL> | 0.2812  | 0.2607   | 0.254561  | 1 | 1.0705   | 0.0597906 | 0.06812583 |
| 13 | D_DEL_chr13_291  | 55576963  | 121   | N     | <DEL> | 0.2592  | 0.2632   | 0.923881  | 1 | 1.00573  | 0.0597771 | 0.00571365 |
| 13 | D_DEL_chr13_305  | 56871172  | 3981  | <DEL> | N     | 0.01083 | 0.01044  | 0.802335  | 1 | 0.936934 | 0.260231  | -0.0651424 |
| 13 | D_DEL_chr13_308  | 57145751  | 541   | <DEL> | N     | 0.2358  | 0.2442   | 0.470437  | 1 | 0.955367 | 0.0632616 | -0.0456597 |
| 13 | D_DEL_chr13_308  | 57178406  | 36323 | <DEL> | N     | 0.1079  | 0.1075   | 0.774975  | 1 | 1.02488  | 0.0859597 | 0.02457553 |
| 13 | D_DEL_chr13_320  | 58015011  | 10645 | <DEL> | N     | 0.05074 | 0.05436  | 0.898816  | 1 | 0.984948 | 0.119273  | -0.0151664 |
| 13 | PD_DEL_chr13_348 | 21949392  | 317   | <DEL> | N     | 0.1258  | 0.1254   | 0.354934  | 1 | 0.929014 | 0.0795967 | -0.0736315 |
| 13 | D_DEL_chr13_355  | 62339679  | 52    | <DEL> | N     | 0.07101 | 0.06702  | 0.427025  | 1 | 1.08576  | 0.103596  | 0.0822802  |
| 13 | D_DEL_chr13_360  | 62859646  | 50    | <DEL> | N     | 0.04233 | 0.04544  | 0.021595  | 1 | 0.751437 | 0.124386  | -0.2857679 |
| 13 | D_DEL_chr13_361  | 62949683  | 303   | <DEL> | N     | 0.4586  | 0.4665   | 0.919903  | 1 | 1.00541  | 0.0536202 | 0.00539542 |
| 13 | D_DEL_chr13_367  | 63650505  | 12962 | <DEL> | N     | 0.04882 | 0.04842  | 0.406444  | 1 | 1.10717  | 0.122635  | 0.10180721 |
| 13 | D_DEL_chr13_373  | 63838659  | 1005  | <DEL> | N     | 0.01239 | 0.01224  | 0.701017  | 1 | 0.914512 | 0.232753  | -0.0893647 |
| 13 | D_DEL_chr13_398  | 66141319  | 5300  | <DEL> | N     | 0.06596 | 0.06675  | 0.548934  | 1 | 1.06642  | 0.107288  | 0.06430724 |
| 13 | D_DEL_chr13_401  | 66426484  | 52    | <DEL> | N     | 0.02537 | 0.02557  | 0.92923   | 1 | 1.01485  | 0.165987  | 0.01474082 |
| 13 | D_DEL_chr13_419  | 68403741  | 318   | <DEL> | N     | 0.3416  | 0.3492   | 0.83529   | 1 | 0.988561 | 0.0553319 | -0.0115049 |
| 13 | D_DEL_chr13_422  | 68670570  | 24055 | <DEL> | N     | 0.05807 | 0.05672  | 0.0358773 | 1 | 1.26682  | 0.112715  | 0.23650982 |
| 13 | PD_DEL_chr13_426 | 22751348  | 1706  | <DEL> | N     | 0.01683 | 0.01889  | 0.861405  | 1 | 0.966282 | 0.196464  | -0.0342996 |
| 13 | D_DEL_chr13_427  | 69263549  | 53    | <DEL> | N     | 0.02094 | 0.02383  | 0.500004  | 1 | 0.888595 | 0.175118  | -0.1181137 |
| 13 | D_DEL_chr13_479  | 76065146  | 318   | <DEL> | N     | 0.4712  | 0.4906   | 0.92077   | 1 | 1.00544  | 0.0545762 | 0.00542526 |
| 13 | D_DEL_chr13_496  | 78190834  | 2867  | <DEL> | N     | 0.02321 | 0.02375  | 0.796725  | 1 | 1.04606  | 0.174833  | 0.04503073 |
| 13 | D_DEL_chr13_498  | 78423516  | 1068  | <DEL> | N     | 0.2215  | 0.2162   | 0.308664  | 1 | 1.06824  | 0.0648462 | 0.06601243 |
| 13 | D_DEL_chr13_511  | 80104195  | 300   | <DEL> | N     | 0.3379  | 0.326    | 0.358651  | 1 | 1.0522   | 0.055428  | 0.05088321 |
| 13 | D_DEL_chr13_511  | 80106930  | 5281  | <DEL> | N     | 0.02786 | 0.03616  | 0.0174017 | 1 | 0.695959 | 0.152417  | -0.3624645 |
| 13 | PD_DEL_chr13_53  | 19195003  | 1793  | <DEL> | N     | 0.01238 | 0.02414  | 0.587317  | 1 | 0.890994 | 0.212662  | -0.1154176 |
| 13 | D_DEL_chr13_534  | 82605327  | 293   | N     | <DEL> | 0.4222  | 0.3843   | 0.426791  | 1 | 1.04445  | 0.0547262 | 0.04349043 |
| 13 | D_DEL_chr13_553  | 84482264  | 605   | <DEL> | N     | 0.03186 | 0.03506  | 0.829979  | 1 | 0.969258 | 0.145416  | -0.0312244 |
| 13 | D_DEL_chr13_594  | 88601215  | 311   | <DEL> | N     | 0.2594  | 0.2488   | 0.302224  | 1 | 1.06477  | 0.0608283 | 0.06275881 |
| 13 | D_DEL_chr13_598  | 88930410  | 58    | <DEL> | N     | 0.1053  | 0.106    | 0.861101  | 1 | 1.01488  | 0.0844326 | 0.01477038 |
| 13 | D_DEL_chr13_609  | 90074689  | 55    | <DEL> | N     | 0.081   | 0.07968  | 0.190061  | 1 | 1.13588  | 0.0972382 | 0.12740768 |
| 13 | D_DEL_chr13_611  | 90371777  | 3576  | <DEL> | N     | 0.01509 | 0.01511  | 0.752311  | 1 | 1.07078  | 0.216689  | 0.06838735 |
| 13 | D_DEL_chr13_612  | 90507799  | 234   | N     | <DEL> | 0.02147 | 0.01259  | 0.854135  | 1 | 1.03988  | 0.212707  | 0.03910532 |
| 13 | PD_DEL_chr13_620 | 25071063  | 304   | <DEL> | N     | 0.286   | 0.2881   | 0.893531  | 1 | 1.0079   | 0.0587949 | 0.00786896 |
| 13 | D_DEL_chr13_630  | 92592280  | 1434  | <DEL> | N     | 0.05184 | 0.04372  | 0.0469125 | 1 | 1.28145  | 0.124803  | 0.24799225 |
| 13 | D_DEL_chr13_644  | 94288828  | 86    | <DEL> | N     | 0.02551 | 0.02893  | 0.732398  | 1 | 0.94801  | 0.156141  | -0.0533902 |
| 13 | D_DEL_chr13_667  | 97451642  | 4512  | <DEL> | N     | 0.02573 | 0.02519  | 0.854936  | 1 | 0.970056 | 0.16629   | -0.0304015 |
| 13 | PD_DEL_chr13_673 | 25979052  | 53    | <DEL> | N     | 0.01123 | 0.009006 | 0.802082  | 1 | 1.06489  | 0.250832  | 0.06287151 |
| 13 | D_DEL_chr13_677  | 99026026  | 71    | N     | <DEL> | 0.466   | 0.4797   | 0.412179  | 1 | 0.957401 | 0.0530851 | -0.043533  |
| 13 | D_DEL_chr13_683  | 99852781  | 635   | <DEL> | N     | 0.01858 | 0.01944  | 0.641852  | 1 | 1.0941   | 0.193357  | 0.08993211 |
| 13 | PD_DEL_chr13_696 | 26475907  | 2142  | <DEL> | N     | 0.4159  | 0.4336   | 0.359732  | 1 | 0.951366 | 0.0544356 | -0.0498564 |
| 13 | D_DEL_chr13_708  | 103279302 | 306   | <DEL> | N     | 0.4095  | 0.4102   | 0.572251  | 1 | 1.0316   | 0.0550874 | 0.031111   |
| 13 | D_DEL_chr13_710  | 103439415 | 481   | N     | <DEL> | 0.094   | 0.1035   | 0.782842  | 1 | 1.02523  | 0.0904094 | 0.02491698 |

|    |                  |           |       |       |       |          |         |            |   |          |           |            |
|----|------------------|-----------|-------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 13 | D_DEL_chr13_7218 | 104721115 | 50    | <DEL> | N     | 0.03046  | 0.0343  | 0.555544   | 1 | 0.917773 | 0.145564  | -0.0858052 |
| 13 | D_DEL_chr13_7472 | 107908212 | 982   | <DEL> | N     | 0.1097   | 0.1277  | 0.850714   | 1 | 0.984315 | 0.0840012 | -0.0158093 |
| 13 | D_DEL_chr13_7528 | 108614844 | 59    | <DEL> | N     | 0.2832   | 0.2751  | 0.587256   | 1 | 1.03162  | 0.0573481 | 0.03113038 |
| 13 | D_DEL_chr13_7618 | 109569579 | 498   | <DEL> | N     | 0.07558  | 0.07787 | 0.927659   | 1 | 0.990961 | 0.100019  | -0.0090801 |
| 13 | D_DEL_chr13_7767 | 110907081 | 224   | N     | <DEL> | 0.01954  | 0.01835 | 0.916578   | 1 | 1.02107  | 0.199025  | 0.0208511  |
| 13 | D_DEL_chr13_8348 | 113377600 | 4464  | <DEL> | N     | 0.03342  | 0.03685 | 0.974574   | 1 | 0.995441 | 0.143364  | -0.0045694 |
| 14 | PD_DEL_chr14_104 | 19168297  | 52    | <DEL> | N     | 0.02084  | 0.02172 | 0.801153   | 1 | 0.956064 | 0.1784    | -0.0449304 |
| 14 | D_DEL_chr14_1163 | 31344672  | 172   | N     | <DEL> | 0.07679  | 0.07017 | 0.428225   | 1 | 1.08241  | 0.0999564 | 0.07919004 |
| 14 | D_DEL_chr14_1273 | 32922766  | 336   | <DEL> | N     | 0.3716   | 0.3712  | 0.432244   | 1 | 0.957551 | 0.0552315 | -0.0433763 |
| 14 | D_DEL_chr14_1387 | 34264498  | 55    | <DEL> | N     | 0.08194  | 0.08671 | 0.335645   | 1 | 0.914271 | 0.0930985 | -0.0896283 |
| 14 | D_DEL_chr14_1508 | 35136155  | 9684  | <DEL> | N     | 0.1675   | 0.1673  | 0.550695   | 1 | 0.959086 | 0.0700078 | -0.0417745 |
| 14 | D_DEL_chr14_1519 | 35329591  | 103   | <DEL> | N     | 0.0889   | 0.0843  | 0.558009   | 1 | 1.05562  | 0.0924055 | 0.05412827 |
| 14 | PD_DEL_chr14_172 | 20081713  | 6000  | N     | <DEL> | 0.2059   | 0.2074  | 0.707989   | 1 | 1.02519  | 0.0664086 | 0.02487796 |
| 14 | D_DEL_chr14_1736 | 37776046  | 200   | N     | <DEL> | 0.3319   | 0.3251  | 0.327112   | 1 | 0.946601 | 0.0560001 | -0.0548776 |
| 14 | D_DEL_chr14_1737 | 37778347  | 58    | <DEL> | N     | 0.04457  | 0.04743 | 0.542343   | 1 | 0.926006 | 0.126174  | -0.0768746 |
| 14 | D_DEL_chr14_1946 | 40140611  | 7857  | N     | <DEL> | 0.4603   | 0.4863  | 0.00948466 | 1 | 0.870881 | 0.0532947 | -0.1382499 |
| 14 | D_DEL_chr14_2053 | 41049669  | 118   | <DEL> | N     | 0.009739 | 0.01357 | 0.00973884 | 1 | 0.520901 | 0.252304  | -0.6521953 |
| 14 | D_DEL_chr14_2066 | 41139831  | 60630 | <DEL> | N     | 0.1983   | 0.2053  | 0.500866   | 1 | 1.04559  | 0.0662329 | 0.04458132 |
| 14 | D_DEL_chr14_2217 | 42409981  | 177   | <DEL> | N     | 0.05244  | 0.0528  | 0.438155   | 1 | 1.0961   | 0.118345  | 0.09175843 |
| 14 | D_DEL_chr14_2236 | 42518325  | 5404  | <DEL> | N     | 0.1128   | 0.1067  | 0.797258   | 1 | 0.978497 | 0.0846156 | -0.0217376 |
| 14 | D_DEL_chr14_2447 | 44244944  | 6931  | <DEL> | N     | 0.0118   | 0.01044 | 0.844321   | 1 | 1.0494   | 0.245545  | 0.04821857 |
| 14 | D_DEL_chr14_2464 | 44419030  | 57    | <DEL> | N     | 0.02943  | 0.02954 | 0.211506   | 1 | 1.19838  | 0.144845  | 0.18097064 |
| 14 | D_DEL_chr14_2754 | 47202810  | 6215  | <DEL> | N     | 0.01529  | 0.01529 | 0.801356   | 1 | 1.05615  | 0.217139  | 0.05463022 |
| 14 | D_DEL_chr14_2755 | 47238370  | 10272 | <DEL> | N     | 0.03172  | 0.03401 | 0.320982   | 1 | 0.863196 | 0.148234  | -0.1471135 |
| 14 | PD_DEL_chr14_294 | 21310028  | 214   | N     | <DEL> | 0.4824   | 0.4933  | 0.193298   | 1 | 0.934223 | 0.0523029 | -0.0680401 |
| 14 | PD_DEL_chr14_313 | 21484465  | 2038  | N     | <DEL> | 0.494    | 0.5032  | 0.157378   | 1 | 0.928139 | 0.0527415 | -0.0745738 |
| 14 | D_DEL_chr14_3147 | 51911626  | 558   | <DEL> | N     | 0.04896  | 0.04984 | 0.36988    | 1 | 0.900173 | 0.117285  | -0.1051683 |
| 14 | D_DEL_chr14_3166 | 52127963  | 299   | <DEL> | N     | 0.1121   | 0.1173  | 0.900498   | 1 | 1.0103   | 0.0819677 | 0.01024732 |
| 14 | PD_DEL_chr14_323 | 21561592  | 1868  | <DEL> | N     | 0.03754  | 0.04669 | 0.490148   | 1 | 0.911291 | 0.134613  | -0.092893  |
| 14 | D_DEL_chr14_3417 | 55284166  | 1136  | <DEL> | N     | 0.07405  | 0.07714 | 0.00581111 | 1 | 0.755548 | 0.101627  | -0.280312  |
| 14 | D_DEL_chr14_3687 | 59078595  | 292   | N     | <DEL> | 0.4329   | 0.412   | 0.923491   | 1 | 1.00518  | 0.0538381 | 0.00516663 |
| 14 | D_DEL_chr14_4013 | 63256715  | 1514  | <DEL> | N     | 0.007162 | 0.01678 | 0.463254   | 1 | 0.828149 | 0.257074  | -0.1885622 |
| 14 | D_DEL_chr14_4014 | 63256811  | 1418  | <DEL> | N     | 0.05538  | 0.06533 | 0.425855   | 1 | 1.09336  | 0.112084  | 0.08925552 |
| 14 | PD_DEL_chr14_409 | 22638931  | 2442  | <DEL> | N     | 0.01008  | 0.01532 | 0.0609626  | 1 | 0.627307 | 0.248867  | -0.4663192 |
| 14 | PD_DEL_chr14_411 | 22640223  | 1263  | <DEL> | N     | 0.03889  | 0.04141 | 0.0479829  | 1 | 0.757406 | 0.140507  | -0.2778558 |
| 14 | D_DEL_chr14_4197 | 65602297  | 8946  | <DEL> | N     | 0.01431  | 0.01709 | 0.923322   | 1 | 0.9794   | 0.216265  | -0.0208151 |
| 14 | D_DEL_chr14_4378 | 68136341  | 673   | N     | <DEL> | 0.2095   | 0.2035  | 0.997053   | 1 | 0.999756 | 0.066191  | -0.000244  |
| 14 | D_DEL_chr14_4399 | 68528677  | 59    | N     | <DEL> | 0.01838  | 0.01511 | 0.509225   | 1 | 1.14677  | 0.207487  | 0.13694929 |
| 14 | D_DEL_chr14_4459 | 69550279  | 5490  | <DEL> | N     | 0.1609   | 0.1616  | 0.325818   | 1 | 1.07294  | 0.0716633 | 0.07040254 |
| 14 | D_DEL_chr14_4507 | 70223351  | 172   | N     | <DEL> | 0.434    | 0.4262  | 0.874786   | 1 | 1.00822  | 0.051947  | 0.0081864  |
| 14 | D_DEL_chr14_4533 | 70611903  | 112   | <DEL> | N     | 0.01634  | 0.02189 | 0.142417   | 1 | 0.75451  | 0.192035  | -0.2816867 |

|    |                  |           |        |       |       |          |         |            |   |          |           |            |
|----|------------------|-----------|--------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 14 | D_DEL_chr14_455  | 70983593  | 1072   | <DEL> | N     | 0.04554  | 0.06176 | 0.0468111  | 1 | 0.787591 | 0.120109  | -0.2387764 |
| 14 | D_DEL_chr14_456  | 71167984  | 93     | <DEL> | N     | 0.02547  | 0.02096 | 0.00965292 | 1 | 1.56223  | 0.172377  | 0.44611429 |
| 14 | D_DEL_chr14_468  | 73060136  | 5077   | <DEL> | N     | 0.06035  | 0.06063 | 0.388475   | 1 | 1.10067  | 0.111222  | 0.09591909 |
| 14 | D_DEL_chr14_476  | 73575898  | 10270  | <DEL> | N     | 0.007588 | 0.01298 | 0.159612   | 1 | 0.690414 | 0.263418  | -0.3704639 |
| 14 | D_DEL_chr14_478  | 73772618  | 7615   | <DEL> | N     | 0.01161  | 0.01367 | 0.728952   | 1 | 0.92323  | 0.230513  | -0.0798769 |
| 14 | PD_DEL_chr14_511 | 23960380  | 34944  | <DEL> | N     | 0.01839  | 0.01835 | 0.59151    | 1 | 1.10918  | 0.193092  | 0.103621   |
| 14 | PD_DEL_chr14_515 | 24010059  | 5369   | <DEL> | N     | 0.04047  | 0.03515 | 0.374232   | 1 | 1.13067  | 0.138208  | 0.12281038 |
| 14 | D_DEL_chr14_517  | 78692806  | 6494   | <DEL> | N     | 0.01064  | 0.01241 | 0.920545   | 1 | 1.02576  | 0.25501   | 0.0254338  |
| 14 | D_DEL_chr14_522  | 79187599  | 83     | N     | <DEL> | 0.0147   | 0.01187 | 0.729445   | 1 | 0.921445 | 0.236544  | -0.0818122 |
| 14 | D_DEL_chr14_526  | 79639947  | 8759   | <DEL> | N     | 0.3638   | 0.3374  | 0.0303268  | 1 | 1.12756  | 0.0554348 | 0.12005601 |
| 14 | D_DEL_chr14_536  | 81002783  | 300    | <DEL> | N     | 0.3337   | 0.3627  | 0.0685483  | 1 | 0.905599 | 0.0544416 | -0.0991587 |
| 14 | D_DEL_chr14_550  | 82553272  | 266    | N     | <DEL> | 0.24     | 0.2199  | 0.165665   | 1 | 1.0935   | 0.0644765 | 0.08938356 |
| 14 | D_DEL_chr14_556  | 82968780  | 1923   | <DEL> | N     | 0.08673  | 0.09497 | 0.368525   | 1 | 0.918286 | 0.0947987 | -0.0852464 |
| 14 | D_DEL_chr14_558  | 83169509  | 630    | N     | <DEL> | 0.2551   | 0.2636  | 0.501787   | 1 | 0.961094 | 0.0590795 | -0.0396831 |
| 14 | D_DEL_chr14_561  | 83434066  | 71     | N     | <DEL> | 0.09342  | 0.0923  | 0.0889611  | 1 | 0.85596  | 0.0914405 | -0.1555316 |
| 14 | D_DEL_chr14_562  | 83576581  | 7259   | <DEL> | N     | 0.01064  | 0.01187 | 0.800309   | 1 | 1.06556  | 0.251045  | 0.06350048 |
| 14 | D_DEL_chr14_576  | 84830772  | 5039   | <DEL> | N     | 0.2681   | 0.2731  | 0.814724   | 1 | 1.0138   | 0.0584873 | 0.01370565 |
| 14 | PD_DEL_chr14_584 | 24860874  | 56     | <DEL> | N     | 0.02904  | 0.02414 | 0.588371   | 1 | 1.09134  | 0.161501  | 0.0874063  |
| 14 | D_DEL_chr14_585  | 85819101  | 27417  | <DEL> | N     | 0.02418  | 0.02627 | 0.306965   | 1 | 1.19939  | 0.177965  | 0.18181309 |
| 14 | D_DEL_chr14_588  | 85991380  | 31861  | <DEL> | N     | 0.01373  | 0.01403 | 0.281957   | 1 | 1.27214  | 0.223714  | 0.24070052 |
| 14 | D_DEL_chr14_645  | 93417487  | 4908   | <DEL> | N     | 0.02089  | 0.01961 | 0.125483   | 1 | 1.32457  | 0.183458  | 0.28108788 |
| 14 | D_DEL_chr14_648  | 93801103  | 54     | <DEL> | N     | 0.02133  | 0.02053 | 0.614813   | 1 | 1.09652  | 0.183107  | 0.09214153 |
| 14 | D_DEL_chr14_651  | 94172403  | 1135   | <DEL> | N     | 0.02843  | 0.02933 | 0.113428   | 1 | 0.787421 | 0.150977  | -0.2389922 |
| 14 | PD_DEL_chr14_663 | 25677909  | 342    | <DEL> | N     | 0.2275   | 0.2204  | 0.655638   | 1 | 1.02817  | 0.0622998 | 0.02778052 |
| 14 | D_DEL_chr14_714  | 102171230 | 2131   | <DEL> | N     | 0.02535  | 0.03275 | 0.102235   | 1 | 0.777137 | 0.154297  | -0.2521386 |
| 14 | PD_DEL_chr14_719 | 26232412  | 300    | N     | <DEL> | 0.3704   | 0.337   | 0.104042   | 1 | 1.09613  | 0.0564664 | 0.09178579 |
| 14 | D_DEL_chr14_720  | 102554038 | 380    | <DEL> | N     | 0.01073  | 0.00939 | 0.593385   | 1 | 1.15519  | 0.270183  | 0.14426483 |
| 14 | D_DEL_chr14_728  | 103297685 | 103    | <DEL> | N     | 0.3994   | 0.4131  | 0.221546   | 1 | 0.937808 | 0.0525267 | -0.06421   |
| 14 | D_DEL_chr14_731  | 103508472 | 52     | <DEL> | N     | 0.01049  | 0.01101 | 0.446882   | 1 | 1.21678  | 0.257958  | 0.19620803 |
| 14 | D_DEL_chr14_761  | 104948962 | 2475   | <DEL> | N     | 0.09466  | 0.1009  | 0.444082   | 1 | 0.932986 | 0.0906355 | -0.0693651 |
| 14 | D_DEL_chr14_800  | 105982940 | 1821   | <DEL> | N     | 0.1491   | 0.1587  | 0.350992   | 1 | 0.934492 | 0.0726435 | -0.0677522 |
| 14 | D_DEL_chr14_801  | 106018357 | 9530   | <DEL> | N     | 0.3609   | 0.3613  | 0.54725    | 1 | 1.0332   | 0.0542599 | 0.03266078 |
| 14 | D_DEL_chr14_802  | 106075078 | 1563   | N     | <DEL> | 0.4279   | 0.4271  | 0.817642   | 1 | 0.987947 | 0.0525914 | -0.0121262 |
| 14 | D_DEL_chr14_802  | 106077713 | 34000  | N     | <DEL> | 0.4274   | 0.4288  | 0.873579   | 1 | 1.00844  | 0.052803  | 0.00840458 |
| 14 | D_DEL_chr14_802  | 106082111 | 273257 | <DEL> | N     | 0.01318  | 0.01457 | 0.359397   | 1 | 0.813386 | 0.225364  | -0.2065495 |
| 14 | D_DEL_chr14_804  | 106333287 | 832    | N     | <DEL> | 0.3975   | 0.4039  | 0.222261   | 1 | 0.936349 | 0.0538839 | -0.065767  |
| 14 | D_DEL_chr14_805  | 106419713 | 64000  | <DEL> | N     | 0.169    | 0.1698  | 0.302002   | 1 | 1.07394  | 0.0691155 | 0.07133413 |
| 14 | D_DEL_chr14_809  | 106694173 | 46476  | N     | <DEL> | 0.3777   | 0.3678  | 0.351044   | 1 | 0.950841 | 0.0540533 | -0.0504084 |
| 15 | D_DEL_chr15_114  | 32518126  | 10059  | <DEL> | N     | 0.01143  | 0.01314 | 0.415558   | 1 | 0.820747 | 0.242636  | -0.1975404 |
| 15 | D_DEL_chr15_128  | 34437392  | 146151 | <DEL> | N     | 0.09246  | 0.09158 | 0.117492   | 1 | 0.86712  | 0.0910815 | -0.1425779 |
| 15 | D_DEL_chr15_135  | 35238827  | 4858   | <DEL> | N     | 0.01535  | 0.03734 | 0.2185     | 1 | 0.792661 | 0.188829  | -0.2323596 |

|    |                   |          |        |       |       |          |         |            |   |          |           |            |
|----|-------------------|----------|--------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 15 | D_DEL_chr15_1540  | 37252536 | 57     | <DEL> | N     | 0.4294   | 0.4304  | 0.929593   | 1 | 1.00458  | 0.0517101 | 0.00456954 |
| 15 | D_DEL_chr15_1707  | 39227912 | 329    | <DEL> | N     | 0.3596   | 0.3748  | 0.764414   | 1 | 0.983567 | 0.0552905 | -0.0165695 |
| 15 | D_DEL_chr15_1720  | 39452190 | 459    | N     | <DEL> | 0.2692   | 0.2708  | 0.575059   | 1 | 0.967127 | 0.0596235 | -0.0334255 |
| 15 | D_DEL_chr15_1730  | 39747028 | 53     | <DEL> | N     | 0.01355  | 0.01659 | 0.390733   | 1 | 1.20112  | 0.213516  | 0.18325445 |
| 15 | D_DEL_chr15_1875  | 41311826 | 406    | <DEL> | N     | 0.2538   | 0.2478  | 0.369469   | 1 | 1.0564   | 0.0611308 | 0.0548669  |
| 15 | D_DEL_chr15_1905  | 41559342 | 1781   | <DEL> | N     | 0.2774   | 0.2792  | 0.45155    | 1 | 1.04464  | 0.0580142 | 0.04367233 |
| 15 | D_DEL_chr15_2050  | 43368243 | 312    | <DEL> | N     | 0.3139   | 0.321   | 0.852314   | 1 | 1.01042  | 0.0556948 | 0.01036609 |
| 15 | D_DEL_chr15_2080  | 43844862 | 1792   | <DEL> | N     | 0.08301  | 0.08672 | 0.208334   | 1 | 0.886739 | 0.09554   | -0.1202046 |
| 15 | D_DEL_chr15_2160  | 44861918 | 5977   | <DEL> | N     | 0.02224  | 0.02035 | 0.165486   | 1 | 1.30297  | 0.190824  | 0.26464627 |
| 15 | D_DEL_chr15_2160  | 44931770 | 11272  | <DEL> | N     | 0.0381   | 0.03329 | 0.309465   | 1 | 1.16084  | 0.146745  | 0.14914388 |
| 15 | D_DEL_chr15_2190  | 45277858 | 127    | N     | <DEL> | 0.348    | 0.3354  | 0.242789   | 1 | 0.936436 | 0.056226  | -0.0656741 |
| 15 | D_DEL_chr15_2380  | 47428437 | 173    | N     | <DEL> | 0.4362   | 0.446   | 0.170758   | 1 | 0.931208 | 0.0520324 | -0.0712726 |
| 15 | D_DEL_chr15_2640  | 50653923 | 1257   | <DEL> | N     | 0.037    | 0.04215 | 0.0654631  | 1 | 0.773104 | 0.139707  | -0.2573417 |
| 15 | D_DEL_chr15_3140  | 56493111 | 55     | <DEL> | N     | 0.154    | 0.142   | 0.20383    | 1 | 1.09934  | 0.0745329 | 0.09471    |
| 15 | D_DEL_chr15_3140  | 56497665 | 11137  | <DEL> | N     | 0.04489  | 0.0477  | 0.982278   | 1 | 0.997251 | 0.123931  | -0.0027528 |
| 15 | D_DEL_chr15_3190  | 57294926 | 565    | <DEL> | N     | 0.03501  | 0.03384 | 0.492473   | 1 | 1.10255  | 0.142226  | 0.09762568 |
| 15 | D_DEL_chr15_3260  | 58304308 | 310    | <DEL> | N     | 0.3787   | 0.4145  | 0.00077042 | 1 | 0.837445 | 0.0527471 | -0.1773997 |
| 15 | D_DEL_chr15_3280  | 58620666 | 301    | <DEL> | N     | 0.3451   | 0.3566  | 0.646961   | 1 | 1.02569  | 0.0553861 | 0.02536556 |
| 15 | PD_DEL_chr15_3380 | 23284874 | 32526  | <DEL> | N     | 0.1242   | 0.1226  | 0.163112   | 1 | 1.11794  | 0.079941  | 0.11148771 |
| 15 | D_DEL_chr15_3400  | 60247817 | 52     | <DEL> | N     | 0.1746   | 0.1744  | 0.241186   | 1 | 0.922933 | 0.0684268 | -0.0801986 |
| 15 | PD_DEL_chr15_3410 | 23312217 | 121944 | <DEL> | N     | 0.01395  | 0.01187 | 0.595189   | 1 | 1.12475  | 0.221249  | 0.11756079 |
| 15 | D_DEL_chr15_3490  | 61394654 | 11966  | <DEL> | N     | 0.01799  | 0.02087 | 0.656953   | 1 | 0.917728 | 0.193312  | -0.0858542 |
| 15 | D_DEL_chr15_3680  | 64551590 | 424    | <DEL> | N     | 0.07007  | 0.06461 | 0.174847   | 1 | 1.15148  | 0.103961  | 0.14104807 |
| 15 | D_DEL_chr15_3750  | 65326077 | 396    | <DEL> | N     | 0.04318  | 0.04663 | 0.484854   | 1 | 1.0901   | 0.123508  | 0.08626944 |
| 15 | D_DEL_chr15_3860  | 66585336 | 728    | <DEL> | N     | 0.2322   | 0.2357  | 0.191416   | 1 | 0.918173 | 0.0653473 | -0.0853695 |
| 15 | PD_DEL_chr15_3890 | 23810230 | 6268   | <DEL> | N     | 0.0147   | 0.01458 | 0.486114   | 1 | 0.860117 | 0.216348  | -0.1506869 |
| 15 | D_DEL_chr15_3900  | 67242141 | 320    | <DEL> | N     | 0.237    | 0.2422  | 0.236289   | 1 | 0.928993 | 0.0621916 | -0.0736541 |
| 15 | PD_DEL_chr15_3980 | 23961921 | 298    | N     | <DEL> | 0.4867   | 0.4674  | 0.347923   | 1 | 1.05213  | 0.0541378 | 0.05081668 |
| 15 | D_DEL_chr15_3980  | 68420999 | 220    | N     | <DEL> | 0.2431   | 0.2368  | 0.292469   | 1 | 0.937165 | 0.0616465 | -0.0648959 |
| 15 | PD_DEL_chr15_4160 | 24151402 | 5250   | <DEL> | N     | 0.009091 | 0.01295 | 0.11273    | 1 | 0.668122 | 0.254271  | -0.4032845 |
| 15 | D_DEL_chr15_4160  | 71416270 | 5081   | <DEL> | N     | 0.4779   | 0.4867  | 0.482994   | 1 | 0.964002 | 0.0522624 | -0.0366619 |
| 15 | D_DEL_chr15_4170  | 71589230 | 1397   | <DEL> | N     | 0.3058   | 0.305   | 0.461522   | 1 | 0.959439 | 0.0562328 | -0.0414065 |
| 15 | PD_DEL_chr15_4360 | 24433570 | 50528  | <DEL> | N     | 0.1447   | 0.1344  | 0.253239   | 1 | 1.09186  | 0.0769177 | 0.08788266 |
| 15 | D_DEL_chr15_4370  | 74440643 | 63     | <DEL> | N     | 0.05148  | 0.04706 | 0.420498   | 1 | 1.10302  | 0.121723  | 0.09805187 |
| 15 | PD_DEL_chr15_4510 | 24594186 | 306    | <DEL> | N     | 0.2899   | 0.2881  | 0.370233   | 1 | 1.05541  | 0.0601844 | 0.05392932 |
| 15 | D_DEL_chr15_4530  | 76043898 | 10436  | <DEL> | N     | 0.02224  | 0.01835 | 0.0323255  | 1 | 1.50383  | 0.190629  | 0.40801519 |
| 15 | D_DEL_chr15_4560  | 76592256 | 12341  | N     | <DEL> | 0.4985   | 0.4996  | 0.785943   | 1 | 0.985926 | 0.0521912 | -0.014174  |
| 15 | D_DEL_chr15_4630  | 77552220 | 73     | <DEL> | N     | 0.01634  | 0.01894 | 0.252007   | 1 | 0.789246 | 0.206617  | -0.2366772 |
| 15 | PD_DEL_chr15_4750 | 24870558 | 1799   | <DEL> | N     | 0.01876  | 0.01709 | 0.541409   | 1 | 1.12531  | 0.193322  | 0.11805855 |
| 15 | PD_DEL_chr15_4760 | 24871770 | 1786   | <DEL> | N     | 0.3611   | 0.4051  | 0.988549   | 1 | 1.00082  | 0.057203  | 0.00081966 |
| 15 | D_DEL_chr15_4820  | 79599514 | 308    | <DEL> | N     | 0.359    | 0.3737  | 0.473693   | 1 | 0.960104 | 0.0568243 | -0.0407137 |

|    |                  |           |       |       |       |          |         |           |   |          |           |            |
|----|------------------|-----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 15 | D_DEL_chr15_483  | 79619260  | 296   | <DEL> | N     | 0.4043   | 0.4109  | 0.182173  | 1 | 0.929492 | 0.0548069 | -0.0731171 |
| 15 | PD_DEL_chr15_496 | 25087920  | 1186  | <DEL> | N     | 0.03656  | 0.03472 | 0.840464  | 1 | 1.02986  | 0.146146  | 0.02942287 |
| 15 | D_DEL_chr15_496  | 81720456  | 60    | <DEL> | N     | 0.01049  | 0.01137 | 0.551932  | 1 | 0.855512 | 0.262339  | -0.1560552 |
| 15 | PD_DEL_chr15_503 | 25171353  | 9675  | <DEL> | N     | 0.02044  | 0.03267 | 0.105816  | 1 | 0.76708  | 0.163956  | -0.2651642 |
| 15 | PD_DEL_chr15_506 | 25174789  | 10832 | <DEL> | N     | 0.02573  | 0.03401 | 0.258749  | 1 | 0.840741 | 0.153602  | -0.1734716 |
| 15 | D_DEL_chr15_507  | 83105131  | 319   | <DEL> | N     | 0.2912   | 0.3039  | 0.636773  | 1 | 0.972196 | 0.0597147 | -0.0281978 |
| 15 | D_DEL_chr15_526  | 85853460  | 503   | <DEL> | N     | 0.08525  | 0.08409 | 0.414495  | 1 | 0.922186 | 0.0992741 | -0.0810083 |
| 15 | D_DEL_chr15_527  | 85968033  | 9927  | <DEL> | N     | 0.01489  | 0.01511 | 0.572722  | 1 | 0.889797 | 0.207007  | -0.1167619 |
| 15 | PD_DEL_chr15_569 | 25686249  | 984   | <DEL> | N     | 0.3495   | 0.3444  | 0.19292   | 1 | 1.07345  | 0.0544384 | 0.07087776 |
| 15 | D_DEL_chr15_608  | 95148444  | 532   | <DEL> | N     | 0.06955  | 0.07156 | 0.241404  | 1 | 0.884243 | 0.105015  | -0.1230234 |
| 15 | D_DEL_chr15_611  | 95500321  | 2422  | <DEL> | N     | 0.01354  | 0.01151 | 0.143777  | 1 | 1.41524  | 0.237573  | 0.34729913 |
| 15 | D_DEL_chr15_619  | 96505634  | 108   | <DEL> | N     | 0.01085  | 0.01174 | 0.616448  | 1 | 1.13356  | 0.250273  | 0.12536312 |
| 15 | D_DEL_chr15_631  | 97683709  | 145   | <DEL> | N     | 0.4122   | 0.4122  | 0.427576  | 1 | 1.04381  | 0.054048  | 0.04287748 |
| 15 | D_DEL_chr15_647  | 99876459  | 6571  | <DEL> | N     | 0.2224   | 0.2197  | 0.711893  | 1 | 0.97676  | 0.0636693 | -0.0235143 |
| 15 | D_DEL_chr15_663  | 100801285 | 880   | <DEL> | N     | 0.07972  | 0.07325 | 0.712442  | 1 | 1.03727  | 0.0992886 | 0.03659226 |
| 16 | D_DEL_chr16_104  | 4828146   | 1541  | <DEL> | N     | 0.01122  | 0.0117  | 0.656207  | 1 | 1.11351  | 0.241527  | 0.10751719 |
| 16 | D_DEL_chr16_107  | 5130170   | 486   | <DEL> | N     | 0.08521  | 0.083   | 0.741519  | 1 | 0.969365 | 0.0943302 | -0.0311141 |
| 16 | D_DEL_chr16_138  | 8016620   | 311   | <DEL> | N     | 0.3828   | 0.3886  | 0.691077  | 1 | 1.02206  | 0.0549169 | 0.0218202  |
| 16 | D_DEL_chr16_146  | 8594311   | 1392  | <DEL> | N     | 0.06074  | 0.06027 | 0.880932  | 1 | 1.01668  | 0.110459  | 0.01654242 |
| 16 | D_DEL_chr16_146  | 8661303   | 1904  | <DEL> | N     | 0.01516  | 0.02398 | 0.779532  | 1 | 1.05795  | 0.201251  | 0.05633307 |
| 16 | D_DEL_chr16_146  | 8661439   | 1563  | <DEL> | N     | 0.1096   | 0.1092  | 0.219495  | 1 | 1.11261  | 0.0869055 | 0.10670861 |
| 16 | D_DEL_chr16_170  | 10831274  | 507   | <DEL> | N     | 0.03332  | 0.03841 | 0.170933  | 1 | 0.823559 | 0.141775  | -0.1941201 |
| 16 | D_DEL_chr16_176  | 11509887  | 1280  | <DEL> | N     | 0.009671 | 0.01241 | 0.110381  | 1 | 0.66201  | 0.258365  | -0.4124746 |
| 16 | D_DEL_chr16_177  | 11589903  | 1535  | <DEL> | N     | 0.3393   | 0.3537  | 0.265659  | 1 | 0.939838 | 0.0557428 | -0.0620478 |
| 16 | D_DEL_chr16_204  | 13981766  | 118   | N     | <DEL> | 0.2338   | 0.2202  | 0.736337  | 1 | 1.02115  | 0.0621554 | 0.02092944 |
| 16 | D_DEL_chr16_206  | 14359379  | 417   | <DEL> | N     | 0.05579  | 0.05528 | 0.965055  | 1 | 0.995135 | 0.111306  | -0.0048769 |
| 16 | D_DEL_chr16_232  | 16621281  | 1741  | <DEL> | N     | 0.009481 | 0.01169 | 0.988278  | 1 | 0.996294 | 0.252743  | -0.0037129 |
| 16 | D_DEL_chr16_259  | 19934232  | 22025 | <DEL> | N     | 0.1369   | 0.1461  | 0.130752  | 1 | 0.892407 | 0.0753288 | -0.113833  |
| 16 | D_DEL_chr16_263  | 20439652  | 997   | <DEL> | N     | 0.0207   | 0.02574 | 0.0318909 | 1 | 0.672403 | 0.184967  | -0.3968974 |
| 16 | D_DEL_chr16_279  | 22708066  | 51    | <DEL> | N     | 0.01687  | 0.015   | 0.849832  | 1 | 1.04137  | 0.214096  | 0.04053715 |
| 16 | D_DEL_chr16_302  | 25193356  | 3084  | <DEL> | N     | 0.01674  | 0.01839 | 0.891432  | 1 | 0.972453 | 0.20465   | -0.0279335 |
| 16 | D_DEL_chr16_302  | 25218721  | 1157  | <DEL> | N     | 0.02753  | 0.02736 | 0.961939  | 1 | 0.992362 | 0.160679  | -0.0076673 |
| 16 | D_DEL_chr16_303  | 25328790  | 3016  | N     | <DEL> | 0.2834   | 0.2801  | 0.989226  | 1 | 1.00076  | 0.0565894 | 0.00075971 |
| 16 | D_DEL_chr16_312  | 26372093  | 318   | <DEL> | N     | 0.1566   | 0.1635  | 0.636171  | 1 | 1.0347   | 0.0721072 | 0.03411153 |
| 16 | D_DEL_chr16_320  | 27038799  | 123   | N     | <DEL> | 0.04062  | 0.0385  | 0.221329  | 1 | 1.17586  | 0.132463  | 0.16199979 |
| 16 | PD_DEL_chr16_347 | 952878    | 594   | <DEL> | N     | 0.3103   | 0.2582  | 0.0725005 | 1 | 1.11204  | 0.059128  | 0.10619617 |
| 16 | D_DEL_chr16_371  | 32096335  | 57    | <DEL> | N     | 0.01824  | 0.01932 | 0.470123  | 1 | 0.869471 | 0.193651  | -0.1398703 |
| 16 | D_DEL_chr16_375  | 32508704  | 654   | <DEL> | N     | 0.01436  | 0.01664 | 0.626787  | 1 | 0.896889 | 0.2238    | -0.1088232 |
| 16 | D_DEL_chr16_379  | 33014027  | 61    | <DEL> | N     | 0.03231  | 0.03136 | 0.754792  | 1 | 1.04789  | 0.149787  | 0.04677862 |
| 16 | D_DEL_chr16_387  | 34062084  | 181   | N     | <DEL> | 0.4721   | 0.4798  | 0.748412  | 1 | 0.982676 | 0.0544877 | -0.0174758 |
| 16 | D_DEL_chr16_391  | 34086855  | 85    | <DEL> | N     | 0.01147  | 0.01101 | 0.746442  | 1 | 0.924976 | 0.241197  | -0.0779875 |

|    |                  |          |       |       |       |          |         |            |   |          |           |            |
|----|------------------|----------|-------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 16 | D_DEL_chr16_391  | 34087396 | 1132  | <DEL> | N     | 0.009302 | 0.01118 | 0.186715   | 1 | 0.701292 | 0.268738  | -0.3548309 |
| 16 | D_DEL_chr16_394  | 34102447 | 1536  | <DEL> | N     | 0.0202   | 0.02191 | 0.656264   | 1 | 0.92521  | 0.174653  | -0.0777345 |
| 16 | D_DEL_chr16_435  | 46399275 | 360   | N     | <DEL> | 0.04275  | 0.03077 | 0.217161   | 1 | 0.836903 | 0.144271  | -0.1780471 |
| 16 | D_DEL_chr16_451  | 48475035 | 2424  | <DEL> | N     | 0.4236   | 0.455   | 0.0754081  | 1 | 0.908494 | 0.0539753 | -0.095967  |
| 16 | D_DEL_chr16_455  | 49002177 | 119   | N     | <DEL> | 0.03424  | 0.04444 | 0.13872    | 1 | 0.809728 | 0.14255   | -0.2110569 |
| 16 | D_DEL_chr16_458  | 49465527 | 54    | <DEL> | N     | 0.0808   | 0.07924 | 0.848667   | 1 | 1.01893  | 0.098292  | 0.01875306 |
| 16 | D_DEL_chr16_461  | 49945499 | 300   | <DEL> | N     | 0.4348   | 0.4449  | 0.738361   | 1 | 1.01756  | 0.0521179 | 0.0174076  |
| 16 | D_DEL_chr16_476  | 52259651 | 836   | <DEL> | N     | 0.01219  | 0.01387 | 0.458144   | 1 | 0.844286 | 0.228147  | -0.169264  |
| 16 | PD_DEL_chr16_479 | 1289823  | 141   | <DEL> | N     | 0.1059   | 0.1038  | 0.892735   | 1 | 0.988706 | 0.084232  | -0.0113583 |
| 16 | D_DEL_chr16_489  | 54374100 | 11641 | <DEL> | N     | 0.009478 | 0.01331 | 0.34268    | 1 | 0.790928 | 0.247184  | -0.2345483 |
| 16 | D_DEL_chr16_509  | 57327989 | 846   | <DEL> | N     | 0.01201  | 0.01403 | 0.871079   | 1 | 0.96198  | 0.238841  | -0.0387616 |
| 16 | D_DEL_chr16_524  | 58767006 | 56    | <DEL> | N     | 0.07773  | 0.07107 | 0.348118   | 1 | 1.09688  | 0.0985582 | 0.09246979 |
| 16 | D_DEL_chr16_526  | 58911836 | 8472  | <DEL> | N     | 0.01025  | 0.01116 | 0.709961   | 1 | 1.10207  | 0.261327  | 0.09719023 |
| 16 | D_DEL_chr16_526  | 58911915 | 2795  | <DEL> | N     | 0.01006  | 0.01116 | 0.778475   | 1 | 1.07573  | 0.259509  | 0.0729995  |
| 16 | D_DEL_chr16_541  | 60521545 | 17458 | <DEL> | N     | 0.02362  | 0.02232 | 0.110113   | 1 | 1.32699  | 0.177078  | 0.28291322 |
| 16 | D_DEL_chr16_565  | 62510429 | 6335  | <DEL> | N     | 0.05138  | 0.05685 | 0.696266   | 1 | 0.955415 | 0.116839  | -0.0456095 |
| 16 | D_DEL_chr16_605  | 67263073 | 413   | <DEL> | N     | 0.01199  | 0.01295 | 0.498248   | 1 | 0.854185 | 0.232717  | -0.1576075 |
| 16 | D_DEL_chr16_636  | 70519121 | 305   | <DEL> | N     | 0.4104   | 0.418   | 0.474552   | 1 | 1.0401   | 0.0549819 | 0.03931686 |
| 16 | D_DEL_chr16_663  | 73947399 | 52    | <DEL> | N     | 0.01068  | 0.01463 | 0.471585   | 1 | 0.835658 | 0.249391  | -0.1795358 |
| 16 | D_DEL_chr16_670  | 74436737 | 1032  | <DEL> | N     | 0.02658  | 0.02668 | 0.437184   | 1 | 1.13426  | 0.162145  | 0.12598046 |
| 16 | D_DEL_chr16_697  | 77056446 | 2516  | <DEL> | N     | 0.2255   | 0.2073  | 0.0505166  | 1 | 1.13409  | 0.0643456 | 0.12583057 |
| 16 | D_DEL_chr16_731  | 80942608 | 6777  | <DEL> | N     | 0.09072  | 0.08585 | 0.976393   | 1 | 1.00272  | 0.0917149 | 0.00271631 |
| 16 | D_DEL_chr16_768  | 84467832 | 2677  | <DEL> | N     | 0.2039   | 0.2134  | 0.280743   | 1 | 0.931835 | 0.0654514 | -0.0705995 |
| 16 | D_DEL_chr16_777  | 85115831 | 616   | N     | <DEL> | 0.4269   | 0.3928  | 0.912112   | 1 | 0.993909 | 0.0553528 | -0.0061096 |
| 16 | D_DEL_chr16_799  | 86326060 | 67    | <DEL> | N     | 0.01009  | 0.01064 | 0.463755   | 1 | 0.825808 | 0.261223  | -0.191393  |
| 16 | D_DEL_chr16_848  | 88572124 | 3790  | <DEL> | N     | 0.02015  | 0.02988 | 0.00183031 | 1 | 0.576932 | 0.176492  | -0.5500309 |
| 16 | D_DEL_chr16_864  | 89011929 | 441   | <DEL> | N     | 0.02449  | 0.02604 | 0.921501   | 1 | 0.983357 | 0.170317  | -0.0167831 |
| 16 | D_DEL_chr16_908  | 90023591 | 368   | <DEL> | N     | 0.08113  | 0.08499 | 0.481083   | 1 | 0.93526  | 0.094997  | -0.0669307 |
| 16 | PD_DEL_chr16_917 | 3944612  | 52    | <DEL> | N     | 0.03866  | 0.0406  | 0.757116   | 1 | 1.04252  | 0.134654  | 0.04164086 |
| 17 | D_DEL_chr17_106  | 2816636  | 1287  | <DEL> | N     | 0.482    | 0.4915  | 0.243281   | 1 | 1.06352  | 0.0527813 | 0.06158416 |
| 17 | D_DEL_chr17_142  | 5367445  | 406   | <DEL> | N     | 0.01863  | 0.0199  | 0.458792   | 1 | 1.1585   | 0.198596  | 0.14712606 |
| 17 | D_DEL_chr17_146  | 5684382  | 954   | <DEL> | N     | 0.0596   | 0.05566 | 0.140811   | 1 | 1.177    | 0.110653  | 0.16296883 |
| 17 | D_DEL_chr17_146  | 5692324  | 1854  | <DEL> | N     | 0.05538  | 0.05293 | 0.67674    | 1 | 1.04943  | 0.115734  | 0.04824716 |
| 17 | D_DEL_chr17_150  | 6030297  | 306   | N     | <DEL> | 0.4623   | 0.4392  | 0.916666   | 1 | 0.994313 | 0.0545059 | -0.0057032 |
| 17 | D_DEL_chr17_157  | 6951951  | 1324  | <DEL> | N     | 0.02999  | 0.03043 | 0.517804   | 1 | 0.908075 | 0.149104  | -0.0964283 |
| 17 | D_DEL_chr17_157  | 6971417  | 298   | <DEL> | N     | 0.3559   | 0.3577  | 0.855831   | 1 | 0.990115 | 0.0546785 | -0.0099342 |
| 17 | D_DEL_chr17_163  | 7433014  | 1403  | <DEL> | N     | 0.07627  | 0.07593 | 0.221217   | 1 | 1.13033  | 0.100148  | 0.12250963 |
| 17 | D_DEL_chr17_177  | 8810052  | 1941  | <DEL> | N     | 0.02166  | 0.02069 | 0.932141   | 1 | 1.01567  | 0.182616  | 0.01554849 |
| 17 | D_DEL_chr17_201  | 11654073 | 301   | <DEL> | N     | 0.3509   | 0.3568  | 0.00704753 | 1 | 1.168    | 0.0576308 | 0.15529288 |
| 17 | D_DEL_chr17_220  | 13628181 | 1195  | <DEL> | N     | 0.1374   | 0.1375  | 0.166721   | 1 | 0.896635 | 0.0789016 | -0.1091064 |
| 17 | D_DEL_chr17_223  | 13784821 | 52    | <DEL> | N     | 0.01707  | 0.0128  | 0.864555   | 1 | 0.961403 | 0.230757  | -0.0393616 |



|    |                  |          |       |       |       |          |         |           |   |          |           |            |
|----|------------------|----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 17 | D_DEL_chr17_226  | 14286594 | 1644  | N     | <DEL> | 0.2528   | 0.2413  | 0.137807  | 1 | 0.912746 | 0.0615209 | -0.0912976 |
| 17 | PD_DEL_chr17_232 | 336022   | 61    | N     | <DEL> | 0.2395   | 0.2253  | 0.0483414 | 1 | 0.87991  | 0.0647985 | -0.1279356 |
| 17 | D_DEL_chr17_237  | 15886244 | 4226  | <DEL> | N     | 0.2781   | 0.2908  | 0.0229531 | 1 | 0.876023 | 0.0582017 | -0.1323629 |
| 17 | D_DEL_chr17_249  | 17327067 | 852   | N     | <DEL> | 0.4838   | 0.4845  | 0.829677  | 1 | 1.01136  | 0.0525284 | 0.01129596 |
| 17 | D_DEL_chr17_279  | 20707488 | 3764  | <DEL> | N     | 0.06197  | 0.0542  | 0.629586  | 1 | 1.05789  | 0.116676  | 0.05627636 |
| 17 | D_DEL_chr17_292  | 21852838 | 732   | <DEL> | N     | 0.0118   | 0.01475 | 0.707332  | 1 | 1.09131  | 0.232728  | 0.08737881 |
| 17 | D_DEL_chr17_301  | 21973044 | 603   | N     | <DEL> | 0.03385  | 0.03562 | 0.653311  | 1 | 0.935401 | 0.148675  | -0.06678   |
| 17 | D_DEL_chr17_310  | 22313990 | 8112  | <DEL> | N     | 0.01239  | 0.01313 | 0.361069  | 1 | 1.2393   | 0.234902  | 0.2145467  |
| 17 | D_DEL_chr17_312  | 22561138 | 6251  | <DEL> | N     | 0.01707  | 0.01639 | 0.401258  | 1 | 1.18558  | 0.202805  | 0.17023211 |
| 17 | D_DEL_chr17_333  | 29265911 | 1187  | <DEL> | N     | 0.01434  | 0.01296 | 0.99374   | 1 | 0.998213 | 0.227918  | -0.0017886 |
| 17 | D_DEL_chr17_340  | 29882530 | 77    | <DEL> | N     | 0.4913   | 0.5031  | 0.218825  | 1 | 0.93752  | 0.0524676 | -0.0645172 |
| 17 | PD_DEL_chr17_350 | 581902   | 846   | <DEL> | N     | 0.04848  | 0.04837 | 0.934055  | 1 | 0.98964  | 0.125861  | -0.010414  |
| 17 | D_DEL_chr17_391  | 36446544 | 12714 | <DEL> | N     | 0.1871   | 0.1956  | 0.0661839 | 1 | 0.88354  | 0.0673964 | -0.1238187 |
| 17 | D_DEL_chr17_412  | 39035323 | 2743  | <DEL> | N     | 0.0376   | 0.03906 | 0.723392  | 1 | 1.04859  | 0.134054  | 0.0474464  |
| 17 | D_DEL_chr17_420  | 39902659 | 388   | <DEL> | N     | 0.03968  | 0.04393 | 0.326032  | 1 | 0.880627 | 0.129433  | -0.1271211 |
| 17 | D_DEL_chr17_433  | 41265545 | 10341 | N     | <DEL> | 0.2685   | 0.2639  | 0.13564   | 1 | 1.0942   | 0.0603275 | 0.0900235  |
| 17 | D_DEL_chr17_443  | 42452256 | 122   | <DEL> | N     | 0.04157  | 0.03077 | 0.0815056 | 1 | 1.28059  | 0.141974  | 0.24732091 |
| 17 | D_DEL_chr17_488  | 47038568 | 17379 | <DEL> | N     | 0.0147   | 0.01602 | 0.543412  | 1 | 1.13984  | 0.21539   | 0.1308879  |
| 17 | D_DEL_chr17_493  | 47529687 | 922   | <DEL> | N     | 0.01148  | 0.01157 | 0.801463  | 1 | 0.939186 | 0.249514  | -0.0627417 |
| 17 | D_DEL_chr17_494  | 47557416 | 502   | <DEL> | N     | 0.08881  | 0.09528 | 0.907313  | 1 | 0.989188 | 0.0933716 | -0.0108709 |
| 17 | D_DEL_chr17_504  | 48827201 | 3050  | <DEL> | N     | 0.03794  | 0.03832 | 0.667122  | 1 | 0.941683 | 0.139703  | -0.0600866 |
| 17 | D_DEL_chr17_509  | 49274433 | 1331  | <DEL> | N     | 0.2141   | 0.2185  | 0.0968259 | 1 | 1.11423  | 0.0651398 | 0.10816358 |
| 17 | D_DEL_chr17_512  | 49749464 | 1029  | <DEL> | N     | 0.1502   | 0.153   | 0.533136  | 1 | 1.04633  | 0.072672  | 0.0452888  |
| 17 | D_DEL_chr17_527  | 51506803 | 50    | <DEL> | N     | 0.0122   | 0.01188 | 0.396649  | 1 | 1.22435  | 0.238798  | 0.20241009 |
| 17 | D_DEL_chr17_548  | 53775433 | 7938  | <DEL> | N     | 0.3522   | 0.3469  | 0.820046  | 1 | 1.01258  | 0.0549471 | 0.01250153 |
| 17 | D_DEL_chr17_550  | 54080885 | 9755  | <DEL> | N     | 0.04565  | 0.04228 | 0.0174988 | 1 | 1.37224  | 0.13318   | 0.31644444 |
| 17 | D_DEL_chr17_567  | 56082821 | 12775 | <DEL> | N     | 0.03926  | 0.04426 | 0.841212  | 1 | 1.02671  | 0.131569  | 0.02635952 |
| 17 | D_DEL_chr17_582  | 58130142 | 6106  | <DEL> | N     | 0.07953  | 0.08063 | 0.171077  | 1 | 0.876917 | 0.0959633 | -0.1313429 |
| 17 | D_DEL_chr17_600  | 59868704 | 639   | <DEL> | N     | 0.01006  | 0.01225 | 0.100609  | 1 | 1.52313  | 0.256265  | 0.42076743 |
| 17 | D_DEL_chr17_604  | 60334424 | 2292  | <DEL> | N     | 0.03947  | 0.03904 | 0.387187  | 1 | 1.12346  | 0.134627  | 0.11641321 |
| 17 | D_DEL_chr17_611  | 61041154 | 10277 | <DEL> | N     | 0.01702  | 0.01709 | 0.828004  | 1 | 1.045    | 0.202597  | 0.04401689 |
| 17 | D_DEL_chr17_661  | 67442220 | 5537  | <DEL> | N     | 0.008704 | 0.01169 | 0.931628  | 1 | 0.977096 | 0.270064  | -0.0231704 |
| 17 | D_DEL_chr17_664  | 67731255 | 259   | N     | <DEL> | 0.1779   | 0.1549  | 0.864722  | 1 | 1.01248  | 0.0728111 | 0.01240277 |
| 17 | D_DEL_chr17_705  | 72087381 | 51    | <DEL> | N     | 0.01113  | 0.01251 | 0.634045  | 1 | 1.12582  | 0.248955  | 0.11851166 |
| 17 | D_DEL_chr17_707  | 72320354 | 57    | <DEL> | N     | 0.0526   | 0.05676 | 0.0993444 | 1 | 0.826013 | 0.115983  | -0.1911448 |
| 17 | D_DEL_chr17_709  | 72565084 | 4917  | <DEL> | N     | 0.009865 | 0.01062 | 0.520395  | 1 | 1.1795   | 0.256858  | 0.16509062 |
| 17 | D_DEL_chr17_712  | 72819091 | 6130  | <DEL> | N     | 0.05919  | 0.0556  | 0.432836  | 1 | 1.09483  | 0.115509  | 0.0905991  |
| 17 | D_DEL_chr17_716  | 73192833 | 97    | N     | <DEL> | 0.5006   | 0.4852  | 0.358983  | 1 | 0.951145 | 0.0546047 | -0.0500888 |
| 17 | PD_DEL_chr17_717 | 1306064  | 728   | <DEL> | N     | 0.02513  | 0.02505 | 0.664234  | 1 | 1.07766  | 0.172302  | 0.07479202 |
| 17 | PD_DEL_chr17_718 | 1306271  | 136   | <DEL> | N     | 0.01598  | 0.01325 | 0.97326   | 1 | 1.00732  | 0.217623  | 0.00729334 |
| 17 | D_DEL_chr17_718  | 73373598 | 1068  | <DEL> | N     | 0.02711  | 0.02828 | 0.127212  | 1 | 0.788644 | 0.155679  | -0.2374403 |

|    |                  |          |       |       |       |         |         |           |   |          |           |            |
|----|------------------|----------|-------|-------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 17 | D_DEL_chr17_7270 | 74396983 | 127   | N     | <DEL> | 0.135   | 0.1285  | 0.490128  | 1 | 0.946505 | 0.0796678 | -0.054979  |
| 17 | D_DEL_chr17_7538 | 76283310 | 1237  | <DEL> | N     | 0.02343 | 0.02017 | 0.679436  | 1 | 0.926188 | 0.185557  | -0.076678  |
| 17 | D_DEL_chr17_7609 | 76787279 | 4996  | <DEL> | N     | 0.0761  | 0.07079 | 0.612011  | 1 | 1.05308  | 0.101974  | 0.0517192  |
| 17 | D_DEL_chr17_7756 | 77992217 | 299   | <DEL> | N     | 0.3338  | 0.3363  | 0.1802    | 1 | 0.927849 | 0.0558797 | -0.0748863 |
| 17 | D_DEL_chr17_7835 | 78509048 | 181   | <DEL> | N     | 0.3992  | 0.4032  | 0.765779  | 1 | 1.01631  | 0.0542935 | 0.01617842 |
| 17 | D_DEL_chr17_8218 | 80860886 | 665   | <DEL> | N     | 0.2269  | 0.2217  | 0.331432  | 1 | 1.06335  | 0.0632418 | 0.0614243  |
| 17 | PD_DEL_chr17_847 | 1698730  | 878   | <DEL> | N     | 0.05631 | 0.0507  | 0.396146  | 1 | 1.10836  | 0.121249  | 0.10288145 |
| 17 | D_DEL_chr17_885  | 83101713 | 1394  | <DEL> | N     | 0.2785  | 0.2893  | 0.593801  | 1 | 1.03268  | 0.0602964 | 0.03215736 |
| 18 | PD_DEL_chr18_124 | 828483   | 311   | <DEL> | N     | 0.02726 | 0.02468 | 0.321252  | 1 | 1.17303  | 0.160894  | 0.15959014 |
| 18 | D_DEL_chr18_132  | 14263581 | 19286 | <DEL> | N     | 0.01862 | 0.01604 | 0.928723  | 1 | 0.981765 | 0.205734  | -0.0184033 |
| 18 | D_DEL_chr18_132  | 14266462 | 19393 | <DEL> | N     | 0.01955 | 0.01692 | 0.938926  | 1 | 0.984969 | 0.197662  | -0.0151451 |
| 18 | D_DEL_chr18_132  | 14275243 | 19566 | <DEL> | N     | 0.2252  | 0.2376  | 0.957236  | 1 | 0.996674 | 0.0621253 | -0.0033315 |
| 18 | D_DEL_chr18_133  | 14280107 | 19511 | <DEL> | N     | 0.2263  | 0.2368  | 0.990543  | 1 | 1.00074  | 0.062214  | 0.00073973 |
| 18 | D_DEL_chr18_133  | 14285290 | 19498 | <DEL> | N     | 0.2251  | 0.2373  | 0.849424  | 1 | 0.988288 | 0.062052  | -0.0117811 |
| 18 | D_DEL_chr18_133  | 14296487 | 13166 | <DEL> | N     | 0.01009 | 0.0121  | 0.0616872 | 1 | 0.627181 | 0.249671  | -0.4665201 |
| 18 | D_DEL_chr18_135  | 14450642 | 9851  | <DEL> | N     | 0.04779 | 0.04678 | 0.0481433 | 1 | 1.27569  | 0.123214  | 0.24348721 |
| 18 | D_DEL_chr18_139  | 14798953 | 10887 | <DEL> | N     | 0.03199 | 0.03602 | 0.968758  | 1 | 1.00569  | 0.144879  | 0.00567387 |
| 18 | D_DEL_chr18_139  | 14844545 | 773   | <DEL> | N     | 0.01052 | 0.01306 | 0.863147  | 1 | 0.957753 | 0.25042   | -0.0431654 |
| 18 | D_DEL_chr18_144  | 15242038 | 60    | <DEL> | N     | 0.01084 | 0.01027 | 0.276649  | 1 | 1.32846  | 0.261075  | 0.28402038 |
| 18 | D_DEL_chr18_144  | 15242491 | 3556  | <DEL> | N     | 0.01011 | 0.01081 | 0.849324  | 1 | 0.951618 | 0.261032  | -0.0495916 |
| 18 | D_DEL_chr18_184  | 26991656 | 721   | <DEL> | N     | 0.3983  | 0.3938  | 0.084224  | 1 | 1.09751  | 0.0538848 | 0.09304398 |
| 18 | D_DEL_chr18_201  | 28692785 | 5663  | <DEL> | N     | 0.2416  | 0.2368  | 0.845302  | 1 | 1.01231  | 0.0627092 | 0.01223485 |
| 18 | D_DEL_chr18_209  | 29547739 | 50    | <DEL> | N     | 0.02343 | 0.02414 | 0.269208  | 1 | 1.20899  | 0.171769  | 0.1897853  |
| 18 | D_DEL_chr18_210  | 29624741 | 50    | N     | <DEL> | 0.3029  | 0.3113  | 0.712534  | 1 | 1.0208   | 0.0558775 | 0.02058663 |
| 18 | D_DEL_chr18_236  | 32308199 | 1328  | <DEL> | N     | 0.06134 | 0.06855 | 0.788416  | 1 | 1.02871  | 0.105465  | 0.02830559 |
| 18 | D_DEL_chr18_254  | 34790032 | 550   | <DEL> | N     | 0.09544 | 0.1073  | 0.257167  | 1 | 0.904171 | 0.0889026 | -0.1007368 |
| 18 | D_DEL_chr18_256  | 35082008 | 299   | <DEL> | N     | 0.1763  | 0.1766  | 0.0315568 | 1 | 0.861913 | 0.0691171 | -0.1486009 |
| 18 | D_DEL_chr18_260  | 35810277 | 340   | <DEL> | N     | 0.08741 | 0.0906  | 0.562662  | 1 | 1.0542   | 0.0911832 | 0.05278219 |
| 18 | PD_DEL_chr18_278 | 2472725  | 113   | N     | <DEL> | 0.02785 | 0.02339 | 0.46842   | 1 | 0.88174  | 0.173585  | -0.1258581 |
| 18 | D_DEL_chr18_296  | 40679929 | 6856  | <DEL> | N     | 0.2213  | 0.206   | 0.23141   | 1 | 1.07944  | 0.0638789 | 0.07644239 |
| 18 | D_DEL_chr18_302  | 41284815 | 3564  | N     | <DEL> | 0.03598 | 0.03472 | 0.190367  | 1 | 1.20616  | 0.143141  | 0.18744176 |
| 18 | D_DEL_chr18_319  | 43451587 | 976   | N     | <DEL> | 0.2081  | 0.1995  | 0.271662  | 1 | 1.07514  | 0.065908  | 0.07245089 |
| 18 | D_DEL_chr18_328  | 44396742 | 5367  | <DEL> | N     | 0.05023 | 0.05852 | 0.133376  | 1 | 0.84137  | 0.115081  | -0.1727238 |
| 18 | D_DEL_chr18_342  | 46802760 | 336   | <DEL> | N     | 0.0822  | 0.08132 | 0.884381  | 1 | 0.986011 | 0.0968811 | -0.0140878 |
| 18 | D_DEL_chr18_350  | 47853243 | 193   | N     | <DEL> | 0.4431  | 0.4478  | 0.319359  | 1 | 0.949491 | 0.0520492 | -0.0518292 |
| 18 | D_DEL_chr18_356  | 48632980 | 78    | N     | <DEL> | 0.2779  | 0.2726  | 0.642599  | 1 | 0.973364 | 0.0581746 | -0.0269972 |
| 18 | D_DEL_chr18_370  | 50324266 | 1062  | <DEL> | N     | 0.02072 | 0.02107 | 0.860207  | 1 | 1.03276  | 0.183041  | 0.03223483 |
| 18 | PD_DEL_chr18_414 | 3997031  | 440   | <DEL> | N     | 0.4317  | 0.4302  | 0.924419  | 1 | 0.99505  | 0.0523079 | -0.0049623 |
| 18 | D_DEL_chr18_424  | 56261799 | 1968  | <DEL> | N     | 0.01025 | 0.01062 | 0.0523698 | 1 | 0.603309 | 0.260466  | -0.5053258 |
| 18 | D_DEL_chr18_429  | 57279506 | 1980  | N     | <DEL> | 0.2242  | 0.2337  | 0.465783  | 1 | 0.956146 | 0.0614847 | -0.0448447 |
| 18 | D_DEL_chr18_436  | 58263870 | 6039  | <DEL> | N     | 0.01335 | 0.01349 | 0.86691   | 1 | 1.03823  | 0.223887  | 0.03751734 |

|    |                  |          |       |       |       |          |         |           |   |          |           |            |
|----|------------------|----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 18 | D_DEL_chr18_444  | 59374901 | 52    | <DEL> | N     | 0.05159  | 0.05692 | 0.612818  | 1 | 1.05954  | 0.114294  | 0.05783485 |
| 18 | D_DEL_chr18_456  | 61004939 | 673   | <DEL> | N     | 0.07978  | 0.07953 | 0.317623  | 1 | 1.1001   | 0.0954606 | 0.09540108 |
| 18 | D_DEL_chr18_476  | 63211792 | 812   | <DEL> | N     | 0.03137  | 0.02924 | 0.236274  | 1 | 1.2015   | 0.154994  | 0.18357078 |
| 18 | D_DEL_chr18_490  | 64718547 | 299   | <DEL> | N     | 0.3913   | 0.3926  | 0.798621  | 1 | 1.01405  | 0.0546836 | 0.01395221 |
| 18 | D_DEL_chr18_505  | 66056610 | 8515  | <DEL> | N     | 0.2563   | 0.2569  | 0.147161  | 1 | 1.09233  | 0.0609181 | 0.08831303 |
| 18 | D_DEL_chr18_514  | 66875709 | 305   | <DEL> | N     | 0.3967   | 0.403   | 0.765903  | 1 | 1.01582  | 0.0527178 | 0.01569617 |
| 18 | D_DEL_chr18_518  | 67291777 | 8247  | <DEL> | N     | 0.02187  | 0.02484 | 0.750405  | 1 | 0.946219 | 0.173784  | -0.0552812 |
| 18 | D_DEL_chr18_529  | 68414892 | 52    | <DEL> | N     | 0.0564   | 0.0657  | 0.105114  | 1 | 0.835675 | 0.110774  | -0.1795155 |
| 18 | D_DEL_chr18_535  | 69078361 | 11401 | <DEL> | N     | 0.03469  | 0.03494 | 0.403845  | 1 | 0.884275 | 0.14733   | -0.1229872 |
| 18 | D_DEL_chr18_539  | 69541120 | 9100  | <DEL> | N     | 0.04217  | 0.04176 | 0.896345  | 1 | 1.01736  | 0.132095  | 0.01721104 |
| 18 | D_DEL_chr18_544  | 70282374 | 313   | <DEL> | N     | 0.4263   | 0.4293  | 0.240841  | 1 | 1.06719  | 0.0554415 | 0.06502903 |
| 18 | D_DEL_chr18_572  | 73311627 | 299   | <DEL> | N     | 0.296    | 0.3017  | 0.107364  | 1 | 1.09787  | 0.0579899 | 0.09337194 |
| 18 | D_DEL_chr18_592  | 76189713 | 372   | <DEL> | N     | 0.2321   | 0.2267  | 0.392635  | 1 | 1.05474  | 0.0623489 | 0.05329429 |
| 18 | D_DEL_chr18_601  | 76695918 | 642   | <DEL> | N     | 0.0397   | 0.04534 | 0.875134  | 1 | 0.97936  | 0.132722  | -0.020856  |
| 18 | D_DEL_chr18_603  | 76895884 | 57    | <DEL> | N     | 0.01858  | 0.02038 | 0.372169  | 1 | 0.845765 | 0.187708  | -0.1675137 |
| 18 | D_DEL_chr18_662  | 79236780 | 554   | <DEL> | N     | 0.009724 | 0.01119 | 0.0977005 | 1 | 1.51951  | 0.252634  | 0.41838791 |
| 18 | PD_DEL_chr18_757 | 8372057  | 315   | <DEL> | N     | 0.01277  | 0.01171 | 0.763836  | 1 | 0.933371 | 0.229499  | -0.0689525 |
| 18 | PD_DEL_chr18_822 | 9385406  | 311   | <DEL> | N     | 0.4644   | 0.4942  | 0.543889  | 1 | 0.967851 | 0.0538391 | -0.0326771 |
| 19 | D_DEL_chr19_124  | 3716067  | 1299  | <DEL> | N     | 0.1372   | 0.1379  | 0.679096  | 1 | 0.968083 | 0.078409  | -0.0324375 |
| 19 | D_DEL_chr19_129  | 4030170  | 212   | <DEL> | N     | 0.03517  | 0.04293 | 0.164394  | 1 | 0.828316 | 0.135468  | -0.1883606 |
| 19 | D_DEL_chr19_143  | 4560574  | 2244  | <DEL> | N     | 0.04415  | 0.05135 | 0.489275  | 1 | 1.08981  | 0.124382  | 0.08600337 |
| 19 | D_DEL_chr19_174  | 6330160  | 1328  | <DEL> | N     | 0.01583  | 0.01662 | 0.269403  | 1 | 0.790034 | 0.213393  | -0.2356793 |
| 19 | D_DEL_chr19_177  | 6508155  | 725   | <DEL> | N     | 0.02192  | 0.024   | 0.920555  | 1 | 1.01781  | 0.177041  | 0.01765326 |
| 19 | D_DEL_chr19_183  | 6779019  | 1994  | <DEL> | N     | 0.06231  | 0.06351 | 0.595286  | 1 | 1.05959  | 0.10897   | 0.05788204 |
| 19 | D_DEL_chr19_195  | 7386179  | 3051  | <DEL> | N     | 0.01045  | 0.01044 | 0.520703  | 1 | 0.847618 | 0.25741   | -0.1653252 |
| 19 | D_DEL_chr19_209  | 8178160  | 1971  | <DEL> | N     | 0.09251  | 0.09181 | 0.824011  | 1 | 0.979446 | 0.0933853 | -0.0207682 |
| 19 | D_DEL_chr19_213  | 8346856  | 2741  | <DEL> | N     | 0.1611   | 0.156   | 0.262602  | 1 | 1.08401  | 0.0720066 | 0.08066713 |
| 19 | D_DEL_chr19_225  | 9112286  | 2147  | <DEL> | N     | 0.06252  | 0.06559 | 0.928657  | 1 | 1.00959  | 0.10665   | 0.00954431 |
| 19 | D_DEL_chr19_226  | 9163834  | 9916  | <DEL> | N     | 0.06054  | 0.05865 | 0.918064  | 1 | 1.01127  | 0.108914  | 0.01120697 |
| 19 | D_DEL_chr19_228  | 9408967  | 58    | N     | <DEL> | 0.3857   | 0.3899  | 0.20143   | 1 | 0.933789 | 0.0536243 | -0.0685048 |
| 19 | D_DEL_chr19_233  | 9820429  | 175   | <DEL> | N     | 0.05245  | 0.05596 | 0.9403    | 1 | 0.991306 | 0.116595  | -0.008732  |
| 19 | D_DEL_chr19_238  | 10101395 | 2496  | <DEL> | N     | 0.0164   | 0.02041 | 0.198901  | 1 | 0.77191  | 0.201518  | -0.2588873 |
| 19 | D_DEL_chr19_261  | 11928599 | 6522  | <DEL> | N     | 0.01838  | 0.01727 | 0.69942   | 1 | 0.9236   | 0.205842  | -0.0794762 |
| 19 | D_DEL_chr19_268  | 12446897 | 274   | <DEL> | N     | 0.2865   | 0.2812  | 0.889514  | 1 | 0.992018 | 0.0576897 | -0.008014  |
| 19 | PD_DEL_chr19_286 | 559996   | 591   | <DEL> | N     | 0.01907  | 0.02453 | 0.0262908 | 1 | 0.66672  | 0.182451  | -0.4053851 |
| 19 | PD_DEL_chr19_322 | 605301   | 3130  | <DEL> | N     | 0.08217  | 0.09423 | 0.518085  | 1 | 0.939929 | 0.095855  | -0.0619509 |
| 19 | D_DEL_chr19_333  | 17150571 | 437   | <DEL> | N     | 0.2648   | 0.268   | 0.689892  | 1 | 1.02386  | 0.0590932 | 0.0235798  |
| 19 | D_DEL_chr19_359  | 18935550 | 873   | <DEL> | N     | 0.03284  | 0.03645 | 0.417373  | 1 | 1.12617  | 0.146515  | 0.1188225  |
| 19 | D_DEL_chr19_362  | 19147213 | 270   | <DEL> | N     | 0.347    | 0.3352  | 0.387529  | 1 | 1.04811  | 0.0543772 | 0.04698854 |
| 19 | D_DEL_chr19_367  | 19690904 | 586   | <DEL> | N     | 0.05079  | 0.05043 | 0.491805  | 1 | 0.921123 | 0.119518  | -0.0821617 |
| 19 | D_DEL_chr19_369  | 19723637 | 5216  | <DEL> | N     | 0.3309   | 0.3163  | 0.375341  | 1 | 1.05148  | 0.0566283 | 0.0501987  |

|    |                  |          |        |       |       |         |          |           |   |          |           |            |
|----|------------------|----------|--------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 19 | D_DEL_chr19_378  | 20412753 | 122414 | <DEL> | N     | 0.06151 | 0.06063  | 0.097731  | 1 | 1.19659  | 0.108381  | 0.17947584 |
| 19 | D_DEL_chr19_382  | 20797193 | 357    | <DEL> | N     | 0.08067 | 0.0846   | 0.215731  | 1 | 0.883303 | 0.100235  | -0.124087  |
| 19 | PD_DEL_chr19_393 | 786556   | 139    | <DEL> | N     | 0.3323  | 0.3424   | 0.46945   | 1 | 0.960277 | 0.0560344 | -0.0405335 |
| 19 | D_DEL_chr19_412  | 22755938 | 824    | <DEL> | N     | 0.03154 | 0.02665  | 0.0485315 | 1 | 1.36719  | 0.158544  | 0.31275754 |
| 19 | D_DEL_chr19_414  | 22864114 | 503    | <DEL> | N     | 0.1592  | 0.1586   | 0.80816   | 1 | 1.01759  | 0.0717968 | 0.01743709 |
| 19 | D_DEL_chr19_417  | 23035336 | 5245   | <DEL> | N     | 0.02921 | 0.02843  | 0.0856068 | 1 | 0.761165 | 0.158754  | -0.2729051 |
| 19 | D_DEL_chr19_428  | 23710659 | 2063   | <DEL> | N     | 0.05573 | 0.05922  | 0.537834  | 1 | 1.07358  | 0.115245  | 0.07099886 |
| 19 | D_DEL_chr19_442  | 29027518 | 56     | <DEL> | N     | 0.02234 | 0.0246   | 0.0776056 | 1 | 0.736601 | 0.17323   | -0.3057089 |
| 19 | D_DEL_chr19_445  | 29459290 | 5970   | <DEL> | N     | 0.05493 | 0.03454  | 0.0256763 | 1 | 1.34822  | 0.13392   | 0.2987852  |
| 19 | D_DEL_chr19_461  | 30526443 | 300    | <DEL> | N     | 0.1455  | 0.1384   | 0.39901   | 1 | 1.06476  | 0.074404  | 0.06274942 |
| 19 | D_DEL_chr19_493  | 34628013 | 2659   | <DEL> | N     | 0.0178  | 0.01727  | 0.497551  | 1 | 1.14291  | 0.19692   | 0.13357764 |
| 19 | D_DEL_chr19_494  | 34869340 | 1043   | <DEL> | N     | 0.0608  | 0.06142  | 0.391275  | 1 | 0.908419 | 0.112037  | -0.0960496 |
| 19 | D_DEL_chr19_497  | 35170178 | 4716   | <DEL> | N     | 0.06327 | 0.06965  | 0.262084  | 1 | 1.1266   | 0.106291  | 0.11920425 |
| 19 | D_DEL_chr19_509  | 36349851 | 6319   | <DEL> | N     | 0.2003  | 0.1908   | 0.95494   | 1 | 1.00376  | 0.0663802 | 0.00375295 |
| 19 | D_DEL_chr19_523  | 37850725 | 4098   | <DEL> | N     | 0.09029 | 0.09863  | 0.145685  | 1 | 1.14097  | 0.090642  | 0.13187878 |
| 19 | D_DEL_chr19_546  | 39634065 | 81     | N     | <DEL> | 0.2398  | 0.2406   | 0.10447   | 1 | 0.905135 | 0.0613902 | -0.0996712 |
| 19 | D_DEL_chr19_549  | 39958143 | 831    | <DEL> | N     | 0.01069 | 0.01228  | 0.29682   | 1 | 0.771038 | 0.249231  | -0.2600176 |
| 19 | D_DEL_chr19_556  | 40647367 | 2732   | <DEL> | N     | 0.1394  | 0.1495   | 0.249939  | 1 | 0.916476 | 0.07581   | -0.0872194 |
| 19 | D_DEL_chr19_557  | 40855516 | 31730  | <DEL> | N     | 0.0218  | 0.02329  | 0.321638  | 1 | 0.837428 | 0.179013  | -0.17742   |
| 19 | D_DEL_chr19_568  | 41643872 | 2432   | N     | <DEL> | 0.4371  | 0.4183   | 0.115081  | 1 | 1.08601  | 0.0523649 | 0.08251043 |
| 19 | D_DEL_chr19_579  | 42788412 | 310694 | <DEL> | N     | 0.02322 | 0.02574  | 0.735324  | 1 | 0.94351  | 0.17201   | -0.0581483 |
| 19 | D_DEL_chr19_579  | 42812868 | 328562 | <DEL> | N     | 0.02286 | 0.02557  | 0.737194  | 1 | 0.943696 | 0.172693  | -0.0579512 |
| 19 | D_DEL_chr19_579  | 42881915 | 146762 | <DEL> | N     | 0.0229  | 0.02565  | 0.733993  | 1 | 0.943008 | 0.172683  | -0.0586805 |
| 19 | D_DEL_chr19_580  | 42916628 | 19253  | <DEL> | N     | 0.0236  | 0.02411  | 0.800646  | 1 | 1.04497  | 0.174199  | 0.04398818 |
| 19 | D_DEL_chr19_580  | 42916628 | 19253  | <DEL> | N     | 0.0236  | 0.02411  | 0.800646  | 1 | 1.04497  | 0.174199  | 0.04398818 |
| 19 | D_DEL_chr19_581  | 43003676 | 245516 | <DEL> | N     | 0.01258 | 0.01259  | 0.668333  | 1 | 0.905458 | 0.231806  | -0.0993144 |
| 19 | D_DEL_chr19_582  | 43082722 | 186862 | <DEL> | N     | 0.01047 | 0.009719 | 0.565206  | 1 | 0.852163 | 0.278162  | -0.1599775 |
| 19 | D_DEL_chr19_595  | 44546246 | 644    | N     | <DEL> | 0.02573 | 0.02141  | 0.516224  | 1 | 0.894098 | 0.172433  | -0.1119399 |
| 19 | D_DEL_chr19_601  | 44969848 | 1143   | <DEL> | N     | 0.04644 | 0.05382  | 0.0887875 | 1 | 0.812018 | 0.122358  | -0.2082328 |
| 19 | D_DEL_chr19_603  | 45229224 | 89     | <DEL> | N     | 0.04716 | 0.04182  | 0.102599  | 1 | 1.22674  | 0.125193  | 0.20436024 |
| 19 | D_DEL_chr19_615  | 46119481 | 5574   | <DEL> | N     | 0.01587 | 0.01187  | 0.506442  | 1 | 1.16248  | 0.226605  | 0.15055565 |
| 19 | D_DEL_chr19_629  | 47147305 | 1559   | <DEL> | N     | 0.01451 | 0.01349  | 0.587736  | 1 | 0.885676 | 0.223944  | -0.1214041 |
| 19 | D_DEL_chr19_663  | 49166195 | 911    | <DEL> | N     | 0.01245 | 0.009588 | 0.266432  | 1 | 1.33303  | 0.258659  | 0.28745455 |
| 19 | D_DEL_chr19_680  | 49942353 | 1698   | <DEL> | N     | 0.05725 | 0.05398  | 0.897043  | 1 | 1.0146   | 0.112033  | 0.01449445 |
| 19 | D_DEL_chr19_684  | 50331244 | 53     | <DEL> | N     | 0.0326  | 0.03291  | 0.20741   | 1 | 0.830254 | 0.147553  | -0.1860236 |
| 19 | D_DEL_chr19_690  | 50574634 | 4620   | <DEL> | N     | 0.1934  | 0.2004   | 0.260256  | 1 | 0.925412 | 0.0688556 | -0.0775162 |
| 19 | D_DEL_chr19_694  | 50903416 | 1643   | <DEL> | N     | 0.4542  | 0.4755   | 0.617689  | 1 | 0.97286  | 0.0551255 | -0.0275151 |
| 19 | D_DEL_chr19_697  | 50954220 | 308    | <DEL> | N     | 0.02176 | 0.03228  | 0.0738087 | 1 | 0.73674  | 0.170892  | -0.3055202 |
| 19 | D_DEL_chr19_698  | 51005528 | 2262   | <DEL> | N     | 0.01586 | 0.02106  | 0.126364  | 1 | 0.728943 | 0.20683   | -0.3161597 |
| 19 | D_DEL_chr19_700  | 51273153 | 294    | <DEL> | N     | 0.2538  | 0.2561   | 0.582655  | 1 | 1.03427  | 0.0613191 | 0.03369586 |
| 19 | D_DEL_chr19_704  | 51672684 | 1576   | N     | <DEL> | 0.1338  | 0.1187   | 0.185952  | 1 | 1.11121  | 0.0797264 | 0.10544951 |

|    |                   |           |        |       |       |          |          |            |   |          |           |            |
|----|-------------------|-----------|--------|-------|-------|----------|----------|------------|---|----------|-----------|------------|
| 19 | D_DEL_chr19_7110  | 52445718  | 104    | N     | <DEL> | 0.03849  | 0.04264  | 0.488237   | 1 | 0.911982 | 0.132929  | -0.092135  |
| 19 | D_DEL_chr19_7140  | 52578740  | 1465   | <DEL> | N     | 0.0221   | 0.02416  | 0.955278   | 1 | 0.989944 | 0.180215  | -0.0101069 |
| 19 | D_DEL_chr19_7141  | 52580875  | 118    | <DEL> | N     | 0.4012   | 0.4016   | 0.671352   | 1 | 1.02309  | 0.0538042 | 0.02282746 |
| 19 | D_DEL_chr19_7143  | 52592769  | 1586   | <DEL> | N     | 0.4385   | 0.4602   | 0.265995   | 1 | 0.942529 | 0.0532111 | -0.0591886 |
| 19 | D_DEL_chr19_7261  | 53185933  | 2765   | N     | <DEL> | 0.04603  | 0.03365  | 0.244077   | 1 | 0.853953 | 0.135535  | -0.1578791 |
| 19 | PD_DEL_chr19_7311 | 1950297   | 1580   | <DEL> | N     | 0.07497  | 0.07881  | 0.0887781  | 1 | 1.18289  | 0.0986932 | 0.1679606  |
| 19 | D_DEL_chr19_7491  | 54052300  | 5088   | <DEL> | N     | 0.2173   | 0.2045   | 0.553188   | 1 | 1.03965  | 0.065589  | 0.03888412 |
| 19 | D_DEL_chr19_7671  | 54786422  | 64567  | <DEL> | N     | 0.01547  | 0.01853  | 0.931288   | 1 | 1.01709  | 0.196555  | 0.01694561 |
| 19 | D_DEL_chr19_7681  | 54819267  | 33678  | <DEL> | N     | 0.0412   | 0.03868  | 0.117074   | 1 | 1.23847  | 0.136473  | 0.21387675 |
| 19 | D_DEL_chr19_7731  | 54958963  | 1701   | <DEL> | N     | 0.01638  | 0.01408  | 0.265648   | 1 | 1.27219  | 0.216272  | 0.24073982 |
| 19 | D_DEL_chr19_7733  | 54960885  | 1960   | <DEL> | N     | 0.01278  | 0.009183 | 0.00152495 | 1 | 2.2287   | 0.252822  | 0.80141846 |
| 19 | D_DEL_chr19_7800  | 55125625  | 625    | <DEL> | N     | 0.0157   | 0.01674  | 0.738502   | 1 | 0.932994 | 0.207756  | -0.0693565 |
| 19 | PD_DEL_chr19_8111 | 2278346   | 52     | <DEL> | N     | 0.02243  | 0.02513  | 0.116443   | 1 | 0.762392 | 0.172812  | -0.2712944 |
| 1  | D_DEL_chr1_10010  | 105473192 | 7583   | <DEL> | N     | 0.3311   | 0.3257   | 0.391389   | 1 | 1.04958  | 0.0564576 | 0.04839008 |
| 1  | D_DEL_chr1_10330  | 108824131 | 5206   | <DEL> | N     | 0.0147   | 0.01187  | 0.282549   | 1 | 1.26878  | 0.22153   | 0.23805581 |
| 1  | D_DEL_chr1_10350  | 109060015 | 653    | <DEL> | N     | 0.02612  | 0.03366  | 0.150609   | 1 | 0.799602 | 0.155591  | -0.2236412 |
| 1  | D_DEL_chr1_10400  | 109687515 | 24441  | N     | <DEL> | 0.2877   | 0.2865   | 0.359364   | 1 | 0.947728 | 0.0585745 | -0.0536877 |
| 1  | D_DEL_chr1_10460  | 110834219 | 12000  | <DEL> | N     | 0.0663   | 0.06939  | 0.502348   | 1 | 0.932103 | 0.104818  | -0.070312  |
| 1  | D_DEL_chr1_10500  | 111386206 | 5996   | <DEL> | N     | 0.01296  | 0.01116  | 0.0144671  | 1 | 1.8346   | 0.248145  | 0.60682647 |
| 1  | D_DEL_chr1_10550  | 112149170 | 12911  | <DEL> | N     | 0.3135   | 0.3109   | 0.659269   | 1 | 0.975602 | 0.0560206 | -0.0247006 |
| 1  | D_DEL_chr1_10740  | 114500909 | 301    | <DEL> | N     | 0.3532   | 0.3442   | 0.370964   | 1 | 1.04966  | 0.0541749 | 0.0484663  |
| 1  | D_DEL_chr1_10800  | 115385738 | 53     | <DEL> | N     | 0.03126  | 0.03125  | 0.861509   | 1 | 1.02682  | 0.151698  | 0.02646665 |
| 1  | D_DEL_chr1_10890  | 117548429 | 207    | N     | <DEL> | 0.1387   | 0.1281   | 0.924579   | 1 | 1.00749  | 0.0787958 | 0.00746209 |
| 1  | D_DEL_chr1_11240  | 143212650 | 162    | N     | <DEL> | 0.009091 | 0.01475  | 0.00906188 | 1 | 0.530774 | 0.242716  | -0.633419  |
| 1  | D_DEL_chr1_11241  | 143214681 | 536    | N     | <DEL> | 0.04526  | 0.02069  | 0.46595    | 1 | 0.89139  | 0.157695  | -0.1149732 |
| 1  | D_DEL_chr1_11242  | 143216909 | 522    | N     | <DEL> | 0.03346  | 0.03832  | 0.472295   | 1 | 0.899712 | 0.147033  | -0.1056806 |
| 1  | D_DEL_chr1_11243  | 143220876 | 515    | N     | <DEL> | 0.00735  | 0.02159  | 0.51472    | 1 | 0.844465 | 0.259479  | -0.169052  |
| 1  | PD_DEL_chr1_11410 | 3002470   | 332    | <DEL> | N     | 0.1079   | 0.1138   | 0.798846   | 1 | 0.978819 | 0.0840081 | -0.0214085 |
| 1  | PD_DEL_chr1_11460 | 143497300 | 471287 | <DEL> | N     | 0.1329   | 0.1301   | 0.0423429  | 1 | 1.1727   | 0.0784718 | 0.15930878 |
| 1  | PD_DEL_chr1_11570 | 3146352   | 503    | <DEL> | N     | 0.01112  | 0.0138   | 0.651689   | 1 | 0.896998 | 0.240802  | -0.1087016 |
| 1  | D_DEL_chr1_11760  | 146504996 | 51     | <DEL> | N     | 0.0113   | 0.01304  | 0.708799   | 1 | 0.913492 | 0.242269  | -0.0904807 |
| 1  | D_DEL_chr1_12270  | 152583066 | 32198  | N     | <DEL> | 0.3646   | 0.3694   | 0.772509   | 1 | 0.984406 | 0.0543669 | -0.0157169 |
| 1  | D_DEL_chr1_12280  | 152788587 | 9000   | <DEL> | N     | 0.3336   | 0.3366   | 0.942031   | 1 | 1.00411  | 0.056447  | 0.00410158 |
| 1  | D_DEL_chr1_12380  | 153988079 | 1228   | <DEL> | N     | 0.0117   | 0.02525  | 0.629224   | 1 | 0.90159  | 0.214564  | -0.1035954 |
| 1  | D_DEL_chr1_12560  | 155874478 | 742    | <DEL> | N     | 0.05749  | 0.05457  | 0.733293   | 1 | 1.03896  | 0.112168  | 0.03822021 |
| 1  | D_DEL_chr1_12610  | 156556931 | 2212   | N     | <DEL> | 0.03133  | 0.01295  | 0.347062   | 1 | 1.19423  | 0.188768  | 0.17750163 |
| 1  | D_DEL_chr1_12650  | 157049069 | 389    | <DEL> | N     | 0.01665  | 0.0135   | 0.88402    | 1 | 1.03201  | 0.21597   | 0.03150836 |
| 1  | PD_DEL_chr1_12660 | 3585050   | 188    | <DEL> | N     | 0.01306  | 0.01109  | 0.859694   | 1 | 0.95904  | 0.236603  | -0.0418225 |
| 1  | D_DEL_chr1_12770  | 158659597 | 312    | <DEL> | N     | 0.2519   | 0.2495   | 0.794017   | 1 | 1.01627  | 0.0618012 | 0.01613906 |
| 1  | D_DEL_chr1_12780  | 158757135 | 1084   | <DEL> | N     | 0.1316   | 0.1326   | 0.668077   | 1 | 0.967807 | 0.0763133 | -0.0327226 |
| 1  | D_DEL_chr1_12800  | 158991565 | 4846   | <DEL> | N     | 0.135    | 0.1358   | 0.301707   | 1 | 0.925957 | 0.0744856 | -0.0769275 |

|   |                  |           |       |       |       |          |         |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 1 | D_DEL_chr1_1292  | 160724455 | 345   | <DEL> | N     | 0.03101  | 0.03206 | 0.112348  | 1 | 1.26548  | 0.148295  | 0.2354515  |
| 1 | D_DEL_chr1_1294  | 160990405 | 138   | <DEL> | N     | 0.009868 | 0.0108  | 0.0918864 | 1 | 0.656774 | 0.249426  | -0.4204153 |
| 1 | D_DEL_chr1_1305  | 162260958 | 529   | <DEL> | N     | 0.1356   | 0.1385  | 0.987522  | 1 | 0.998781 | 0.0779759 | -0.0012197 |
| 1 | D_DEL_chr1_1305  | 162357536 | 438   | <DEL> | N     | 0.01761  | 0.01907 | 0.996601  | 1 | 1.00085  | 0.199991  | 0.00084964 |
| 1 | D_DEL_chr1_1325  | 165045630 | 56    | <DEL> | N     | 0.1127   | 0.1079  | 0.568728  | 1 | 1.04903  | 0.0839944 | 0.04786593 |
| 1 | D_DEL_chr1_1339  | 167102934 | 61    | <DEL> | N     | 0.2147   | 0.209   | 0.898957  | 1 | 1.00806  | 0.0632296 | 0.00802769 |
| 1 | D_DEL_chr1_1353  | 169256587 | 20000 | <DEL> | N     | 0.3863   | 0.3813  | 0.801031  | 1 | 1.01383  | 0.0544951 | 0.01373524 |
| 1 | D_DEL_chr1_1387  | 173975617 | 312   | <DEL> | N     | 0.2444   | 0.2539  | 0.929348  | 1 | 1.0054   | 0.0607653 | 0.00538547 |
| 1 | D_DEL_chr1_1393  | 174827422 | 5284  | <DEL> | N     | 0.1246   | 0.1214  | 0.778634  | 1 | 1.02296  | 0.0807637 | 0.02270039 |
| 1 | D_DEL_chr1_1395  | 175101700 | 6300  | <DEL> | N     | 0.1581   | 0.1609  | 0.250648  | 1 | 0.919484 | 0.0730716 | -0.0839426 |
| 1 | PD_DEL_chr1_1407 | 4095099   | 301   | <DEL> | N     | 0.3      | 0.308   | 0.0835424 | 1 | 1.10479  | 0.0575862 | 0.09965527 |
| 1 | D_DEL_chr1_1427  | 179360281 | 4347  | <DEL> | N     | 0.06588  | 0.06453 | 0.857795  | 1 | 1.01979  | 0.109371  | 0.01959672 |
| 1 | D_DEL_chr1_1430  | 179638146 | 687   | <DEL> | N     | 0.3578   | 0.362   | 0.429767  | 1 | 0.956719 | 0.056036  | -0.0442456 |
| 1 | D_DEL_chr1_1435  | 180780636 | 5621  | <DEL> | N     | 0.01373  | 0.01295 | 0.472014  | 1 | 0.845757 | 0.232929  | -0.1675232 |
| 1 | D_DEL_chr1_1442  | 182103969 | 67    | <DEL> | N     | 0.0124   | 0.01008 | 0.104281  | 1 | 1.47614  | 0.239735  | 0.38943057 |
| 1 | D_DEL_chr1_1482  | 187746975 | 6426  | <DEL> | N     | 0.476    | 0.4869  | 0.0446328 | 1 | 0.899334 | 0.0528362 | -0.1061008 |
| 1 | D_DEL_chr1_1492  | 188570325 | 773   | N     | <DEL> | 0.0646   | 0.06333 | 0.212996  | 1 | 0.874004 | 0.108137  | -0.1346703 |
| 1 | D_DEL_chr1_1497  | 189056972 | 5171  | <DEL> | N     | 0.01549  | 0.01494 | 0.776471  | 1 | 0.941573 | 0.212042  | -0.0602034 |
| 1 | D_DEL_chr1_1521  | 190868192 | 168   | N     | <DEL> | 0.1851   | 0.1871  | 0.866132  | 1 | 1.01163  | 0.0685937 | 0.01156289 |
| 1 | D_DEL_chr1_1534  | 191947318 | 2105  | <DEL> | N     | 0.05222  | 0.05146 | 0.67217   | 1 | 0.948511 | 0.124918  | -0.0528619 |
| 1 | D_DEL_chr1_1547  | 193266300 | 227   | N     | <DEL> | 0.02515  | 0.02987 | 0.775438  | 1 | 0.953409 | 0.16725   | -0.0477113 |
| 1 | PD_DEL_chr1_1551 | 5290853   | 363   | <DEL> | N     | 0.03444  | 0.03079 | 0.225589  | 1 | 1.1916   | 0.144662  | 0.17529694 |
| 1 | D_DEL_chr1_1561  | 194548478 | 259   | N     | <DEL> | 0.265    | 0.2467  | 0.664766  | 1 | 0.97474  | 0.0590405 | -0.0255845 |
| 1 | D_DEL_chr1_1564  | 194911893 | 50    | <DEL> | N     | 0.09557  | 0.09053 | 0.312284  | 1 | 1.09456  | 0.0894302 | 0.09035246 |
| 1 | D_DEL_chr1_1567  | 195070963 | 449   | <DEL> | N     | 0.01491  | 0.01296 | 0.273295  | 1 | 1.26076  | 0.211513  | 0.23171471 |
| 1 | PD_DEL_chr1_1581 | 5573630   | 296   | <DEL> | N     | 0.01897  | 0.01656 | 0.791041  | 1 | 1.05428  | 0.199502  | 0.05285807 |
| 1 | D_DEL_chr1_1583  | 196759600 | 84987 | <DEL> | N     | 0.209    | 0.2069  | 0.0820732 | 1 | 0.892331 | 0.0655161 | -0.1139181 |
| 1 | D_DEL_chr1_1596  | 198335526 | 5622  | <DEL> | N     | 0.04565  | 0.04318 | 0.459079  | 1 | 1.09893  | 0.127425  | 0.09433698 |
| 1 | D_DEL_chr1_1608  | 199469615 | 1490  | N     | <DEL> | 0.1952   | 0.1986  | 0.252008  | 1 | 0.92788  | 0.0653463 | -0.0748529 |
| 1 | D_DEL_chr1_1619  | 200855041 | 398   | <DEL> | N     | 0.012    | 0.01026 | 0.659663  | 1 | 1.11284  | 0.242781  | 0.10691531 |
| 1 | D_DEL_chr1_1657  | 205470730 | 166   | <DEL> | N     | 0.07249  | 0.0837  | 0.650054  | 1 | 0.956232 | 0.098646  | -0.0447547 |
| 1 | D_DEL_chr1_1661  | 205884452 | 106   | <DEL> | N     | 0.04998  | 0.05463 | 0.126341  | 1 | 0.831677 | 0.120568  | -0.1843111 |
| 1 | D_DEL_chr1_1662  | 205957921 | 490   | N     | <DEL> | 0.4712   | 0.4592  | 0.168663  | 1 | 1.07465  | 0.0523007 | 0.07199503 |
| 1 | D_DEL_chr1_1670  | 207119017 | 833   | N     | <DEL> | 0.3826   | 0.3685  | 0.44237   | 1 | 0.957096 | 0.0570831 | -0.0438516 |
| 1 | D_DEL_chr1_1673  | 207368568 | 3651  | N     | <DEL> | 0.505    | 0.4577  | 0.940294  | 1 | 1.00401  | 0.0533995 | 0.00400198 |
| 1 | D_DEL_chr1_1686  | 209761713 | 1018  | <DEL> | N     | 0.2242   | 0.235   | 0.776393  | 1 | 0.981926 | 0.0642184 | -0.0182393 |
| 1 | D_DEL_chr1_1687  | 209904710 | 7922  | N     | <DEL> | 0.4267   | 0.4275  | 0.941101  | 1 | 1.00394  | 0.0532411 | 0.00393226 |
| 1 | D_DEL_chr1_1703  | 212297811 | 1463  | N     | <DEL> | 0.3586   | 0.3579  | 0.304655  | 1 | 0.946489 | 0.0535756 | -0.0549959 |
| 1 | D_DEL_chr1_1709  | 212829029 | 11294 | <DEL> | N     | 0.03813  | 0.02951 | 0.28797   | 1 | 1.17417  | 0.151109  | 0.16056152 |
| 1 | D_DEL_chr1_1711  | 213119437 | 50    | <DEL> | N     | 0.01025  | 0.01026 | 0.679902  | 1 | 1.11023  | 0.25344   | 0.1045672  |
| 1 | PD_DEL_chr1_1719 | 6378113   | 7722  | <DEL> | N     | 0.01916  | 0.02213 | 0.490284  | 1 | 0.88123  | 0.18328   | -0.1264366 |

|   |                  |           |        |       |       |          |          |           |   |          |           |            |
|---|------------------|-----------|--------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 1 | D_DEL_chr1_1724  | 215059042 | 84     | <DEL> | N     | 0.009481 | 0.01116  | 0.773148  | 1 | 1.07823  | 0.261283  | 0.07532081 |
| 1 | D_DEL_chr1_1727  | 215319078 | 8573   | <DEL> | N     | 0.01122  | 0.01116  | 0.393376  | 1 | 1.24171  | 0.253646  | 0.21648946 |
| 1 | D_DEL_chr1_1744  | 217284629 | 429    | <DEL> | N     | 0.1146   | 0.125    | 0.473456  | 1 | 0.944523 | 0.079617  | -0.0570752 |
| 1 | D_DEL_chr1_1748  | 217744180 | 302    | N     | <DEL> | 0.4646   | 0.4322   | 0.990271  | 1 | 0.999345 | 0.0537675 | -0.0006552 |
| 1 | D_DEL_chr1_1765  | 220052684 | 81     | N     | <DEL> | 0.1321   | 0.1164   | 0.0836628 | 1 | 1.14798  | 0.079777  | 0.13800388 |
| 1 | D_DEL_chr1_1766  | 220112129 | 303    | <DEL> | N     | 0.3373   | 0.3561   | 0.921533  | 1 | 0.994711 | 0.0538379 | -0.005303  |
| 1 | D_DEL_chr1_1766  | 220115000 | 5587   | <DEL> | N     | 0.008918 | 0.01135  | 0.512709  | 1 | 1.17665  | 0.248489  | 0.16267142 |
| 1 | D_DEL_chr1_1766  | 220118022 | 2362   | <DEL> | N     | 0.008704 | 0.01187  | 0.665773  | 1 | 1.11187  | 0.245499  | 0.10604328 |
| 1 | D_DEL_chr1_1782  | 222200823 | 6374   | <DEL> | N     | 0.3193   | 0.3066   | 0.307899  | 1 | 1.06032  | 0.0574388 | 0.05857075 |
| 1 | D_DEL_chr1_1794  | 224059415 | 461    | N     | <DEL> | 0.02882  | 0.02933  | 0.81945   | 1 | 1.03831  | 0.164693  | 0.03759439 |
| 1 | D_DEL_chr1_1803  | 225068843 | 256    | N     | <DEL> | 0.07756  | 0.06117  | 0.3301    | 1 | 0.900182 | 0.107975  | -0.1051583 |
| 1 | D_DEL_chr1_1809  | 225815115 | 324    | <DEL> | N     | 0.2964   | 0.3059   | 0.794592  | 1 | 0.984722 | 0.059134  | -0.0153959 |
| 1 | D_DEL_chr1_1821  | 227294578 | 303    | <DEL> | N     | 0.291    | 0.2741   | 0.057115  | 1 | 1.11962  | 0.0593921 | 0.11298934 |
| 1 | D_DEL_chr1_1835  | 229237641 | 374    | <DEL> | N     | 0.2816   | 0.2915   | 0.817855  | 1 | 0.98609  | 0.0608239 | -0.0140077 |
| 1 | D_DEL_chr1_1838  | 229676790 | 8299   | <DEL> | N     | 0.2743   | 0.2747   | 0.954569  | 1 | 1.00337  | 0.0590195 | 0.00336433 |
| 1 | D_DEL_chr1_1840  | 229996891 | 1240   | <DEL> | N     | 0.1413   | 0.1502   | 0.739748  | 1 | 1.02571  | 0.0764321 | 0.02538506 |
| 1 | D_DEL_chr1_1842  | 230315356 | 100    | <DEL> | N     | 0.01375  | 0.009359 | 0.758166  | 1 | 0.92658  | 0.24767   | -0.0762549 |
| 1 | D_DEL_chr1_1849  | 231167330 | 295    | <DEL> | N     | 0.06782  | 0.06385  | 0.229265  | 1 | 0.883638 | 0.102896  | -0.1237078 |
| 1 | D_DEL_chr1_1873  | 234451465 | 301    | <DEL> | N     | 0.4244   | 0.4307   | 0.74162   | 1 | 1.01809  | 0.0543911 | 0.01792832 |
| 1 | D_DEL_chr1_1882  | 235373750 | 1284   | <DEL> | N     | 0.107    | 0.1144   | 0.639769  | 1 | 0.961705 | 0.0834314 | -0.0390475 |
| 1 | D_DEL_chr1_1893  | 236385803 | 2226   | N     | <DEL> | 0.1333   | 0.1353   | 0.317579  | 1 | 0.923736 | 0.0793728 | -0.079329  |
| 1 | D_DEL_chr1_1894  | 236420821 | 799    | <DEL> | N     | 0.1029   | 0.1105   | 0.916988  | 1 | 0.990893 | 0.0877745 | -0.0091487 |
| 1 | PD_DEL_chr1_1906 | 8192795   | 128    | <DEL> | N     | 0.01219  | 0.01134  | 0.905942  | 1 | 0.971748 | 0.242548  | -0.0286588 |
| 1 | D_DEL_chr1_1921  | 239959527 | 430    | <DEL> | N     | 0.05181  | 0.05319  | 0.769398  | 1 | 1.03471  | 0.116402  | 0.03412119 |
| 1 | D_DEL_chr1_1930  | 240932931 | 1090   | <DEL> | N     | 0.01726  | 0.01623  | 0.750766  | 1 | 0.935492 | 0.209937  | -0.0666827 |
| 1 | D_DEL_chr1_1946  | 242931175 | 1088   | <DEL> | N     | 0.04048  | 0.04702  | 0.586619  | 1 | 0.929751 | 0.133958  | -0.0728385 |
| 1 | D_DEL_chr1_1947  | 242964495 | 1418   | <DEL> | N     | 0.295    | 0.3056   | 0.0466499 | 1 | 0.888372 | 0.0594958 | -0.1183647 |
| 1 | D_DEL_chr1_1959  | 244792982 | 99     | <DEL> | N     | 0.3006   | 0.2996   | 0.320878  | 1 | 1.05891  | 0.0576637 | 0.05724008 |
| 1 | D_DEL_chr1_1967  | 245473476 | 11229  | <DEL> | N     | 0.02398  | 0.02573  | 0.494984  | 1 | 0.892542 | 0.16659   | -0.1136817 |
| 1 | D_DEL_chr1_1968  | 245614894 | 99     | <DEL> | N     | 0.0726   | 0.07448  | 0.877342  | 1 | 0.984271 | 0.102719  | -0.015854  |
| 1 | D_DEL_chr1_2001  | 247795750 | 51     | <DEL> | N     | 0.07301  | 0.07058  | 0.212792  | 1 | 1.13372  | 0.100732  | 0.12550426 |
| 1 | D_DEL_chr1_2003  | 247991203 | 1030   | <DEL> | N     | 0.0521   | 0.05177  | 0.916616  | 1 | 1.01323  | 0.125516  | 0.01314325 |
| 1 | D_DEL_chr1_2003  | 248044521 | 313    | <DEL> | N     | 0.14     | 0.1277   | 0.780506  | 1 | 1.02181  | 0.0774239 | 0.02157556 |
| 1 | D_DEL_chr1_2010  | 248563116 | 93248  | <DEL> | N     | 0.1252   | 0.1348   | 0.0293394 | 1 | 0.840537 | 0.0797257 | -0.1737143 |
| 1 | PD_DEL_chr1_2013 | 9063688   | 306    | <DEL> | N     | 0.04563  | 0.04248  | 0.566657  | 1 | 0.928756 | 0.128991  | -0.0739092 |
| 1 | PD_DEL_chr1_2065 | 9535583   | 2069   | <DEL> | N     | 0.1175   | 0.1233   | 0.91855   | 1 | 1.00873  | 0.0850215 | 0.00869211 |
| 1 | PD_DEL_chr1_215  | 1123533   | 50     | <DEL> | N     | 0.01995  | 0.02214  | 0.0147975 | 1 | 0.64193  | 0.181872  | -0.443276  |
| 1 | PD_DEL_chr1_2281 | 11622836  | 296    | N     | <DEL> | 0.2625   | 0.2177   | 0.217129  | 1 | 1.08276  | 0.0644215 | 0.07951334 |
| 1 | PD_DEL_chr1_2384 | 12799082  | 131900 | <DEL> | N     | 0.02553  | 0.02393  | 0.68038   | 1 | 1.07308  | 0.171217  | 0.07053302 |
| 1 | PD_DEL_chr1_2444 | 13384005  | 1102   | <DEL> | N     | 0.1041   | 0.117    | 0.977911  | 1 | 0.997647 | 0.0850947 | -0.0023558 |
| 1 | PD_DEL_chr1_2464 | 13447286  | 3572   | <DEL> | N     | 0.01452  | 0.01548  | 0.828901  | 1 | 1.04829  | 0.218234  | 0.04716027 |

|   |                  |          |       |       |       |         |          |            |   |          |           |            |
|---|------------------|----------|-------|-------|-------|---------|----------|------------|---|----------|-----------|------------|
| 1 | PD_DEL_chr1_2494 | 13673240 | 296   | <DEL> | N     | 0.02449 | 0.02641  | 0.0884884  | 1 | 0.755272 | 0.164772  | -0.2806773 |
| 1 | PD_DEL_chr1_259  | 1207339  | 421   | <DEL> | N     | 0.108   | 0.1073   | 0.499053   | 1 | 0.945183 | 0.0834    | -0.0563767 |
| 1 | PD_DEL_chr1_307  | 1316564  | 571   | <DEL> | N     | 0.01143 | 0.009723 | 0.52882    | 1 | 1.17295  | 0.253283  | 0.15952194 |
| 1 | PD_DEL_chr1_3091 | 21430606 | 3068  | <DEL> | N     | 0.01258 | 0.01026  | 0.752515   | 1 | 1.0776   | 0.237007  | 0.07473635 |
| 1 | PD_DEL_chr1_3092 | 21459927 | 270   | N     | <DEL> | 0.2584  | 0.251    | 0.814878   | 1 | 1.01411  | 0.0598446 | 0.01401138 |
| 1 | PD_DEL_chr1_3093 | 21461252 | 64    | N     | <DEL> | 0.2619  | 0.2533   | 0.66977    | 1 | 1.02592  | 0.0600056 | 0.02558977 |
| 1 | PD_DEL_chr1_323  | 1358759  | 56    | <DEL> | N     | 0.01259 | 0.01171  | 0.546445   | 1 | 1.15894  | 0.244575  | 0.14750579 |
| 1 | PD_DEL_chr1_3444 | 24832212 | 2806  | N     | <DEL> | 0.02901 | 0.01547  | 0.276751   | 1 | 0.822174 | 0.180025  | -0.1958032 |
| 1 | PD_DEL_chr1_3518 | 26133641 | 4637  | <DEL> | N     | 0.1768  | 0.1771   | 0.656185   | 1 | 1.03202  | 0.0708106 | 0.03151805 |
| 1 | PD_DEL_chr1_3675 | 27477617 | 313   | <DEL> | N     | 0.08778 | 0.09805  | 0.194093   | 1 | 0.888553 | 0.0909939 | -0.118161  |
| 1 | PD_DEL_chr1_374  | 1530547  | 303   | <DEL> | N     | 0.01934 | 0.0198   | 0.874522   | 1 | 1.03024  | 0.188672  | 0.02979178 |
| 1 | PD_DEL_chr1_3743 | 28224852 | 2690  | <DEL> | N     | 0.04197 | 0.03778  | 0.571477   | 1 | 1.07914  | 0.134588  | 0.07616443 |
| 1 | PD_DEL_chr1_3764 | 28353394 | 129   | <DEL> | N     | 0.3064  | 0.3091   | 0.540235   | 1 | 0.96566  | 0.0570546 | -0.0349435 |
| 1 | PD_DEL_chr1_3898 | 29556926 | 586   | <DEL> | N     | 0.06194 | 0.06438  | 0.968047   | 1 | 1.00425  | 0.105892  | 0.00424099 |
| 1 | PD_DEL_chr1_4321 | 34635821 | 10554 | <DEL> | N     | 0.1774  | 0.183    | 0.96942    | 1 | 1.00264  | 0.0686497 | 0.00263652 |
| 1 | PD_DEL_chr1_447  | 1724713  | 2211  | <DEL> | N     | 0.0123  | 0.01396  | 0.275323   | 1 | 0.779259 | 0.228632  | -0.2494118 |
| 1 | PD_DEL_chr1_4515 | 36958637 | 1510  | <DEL> | N     | 0.2263  | 0.2247   | 0.584757   | 1 | 0.966337 | 0.0626644 | -0.0342426 |
| 1 | PD_DEL_chr1_4616 | 38136562 | 2508  | <DEL> | N     | 0.02498 | 0.02699  | 0.706755   | 1 | 1.06446  | 0.166041  | 0.06246763 |
| 1 | PD_DEL_chr1_4644 | 38618310 | 1844  | <DEL> | N     | 0.06333 | 0.07091  | 0.707052   | 1 | 0.95917  | 0.110922  | -0.041687  |
| 1 | PD_DEL_chr1_4797 | 40555666 | 7240  | <DEL> | N     | 0.03114 | 0.04156  | 0.110519   | 1 | 0.801937 | 0.138311  | -0.2207252 |
| 1 | PD_DEL_chr1_4837 | 41295074 | 57    | <DEL> | N     | 0.0183  | 0.01843  | 0.858154   | 1 | 1.03554  | 0.195408  | 0.03492303 |
| 1 | PD_DEL_chr1_4931 | 42542542 | 310   | <DEL> | N     | 0.1582  | 0.1631   | 0.265355   | 1 | 0.920523 | 0.0743503 | -0.0828133 |
| 1 | PD_DEL_chr1_4976 | 43097069 | 54    | <DEL> | N     | 0.03501 | 0.03436  | 0.805983   | 1 | 1.03657  | 0.146235  | 0.03591719 |
| 1 | PD_DEL_chr1_5080 | 44357561 | 457   | <DEL> | N     | 0.04141 | 0.04177  | 0.931062   | 1 | 1.01163  | 0.133632  | 0.01156289 |
| 1 | PD_DEL_chr1_5193 | 45517817 | 94    | <DEL> | N     | 0.446   | 0.4521   | 0.577654   | 1 | 1.02972  | 0.0526048 | 0.02928692 |
| 1 | PD_DEL_chr1_5223 | 45741623 | 303   | <DEL> | N     | 0.3083  | 0.3093   | 0.937226   | 1 | 1.00441  | 0.0559331 | 0.0044003  |
| 1 | PD_DEL_chr1_5768 | 53128427 | 849   | <DEL> | N     | 0.2291  | 0.2092   | 0.0698484  | 1 | 1.1242   | 0.0645757 | 0.11707167 |
| 1 | PD_DEL_chr1_5907 | 54821889 | 307   | <DEL> | N     | 0.2112  | 0.2103   | 0.684496   | 1 | 0.974143 | 0.0644711 | -0.0261972 |
| 1 | PD_DEL_chr1_6133 | 58278241 | 909   | N     | <DEL> | 0.06402 | 0.06747  | 0.578762   | 1 | 0.943855 | 0.104076  | -0.0577827 |
| 1 | PD_DEL_chr1_6233 | 59583108 | 881   | <DEL> | N     | 0.1089  | 0.1042   | 0.117106   | 1 | 1.14238  | 0.0849452 | 0.13311381 |
| 1 | PD_DEL_chr1_6366 | 61647742 | 6106  | <DEL> | N     | 0.1593  | 0.1658   | 0.537548   | 1 | 1.04609  | 0.0730981 | 0.0450594  |
| 1 | PD_DEL_chr1_6415 | 62157050 | 1671  | <DEL> | N     | 0.07852 | 0.09224  | 0.324248   | 1 | 0.908512 | 0.0973325 | -0.0959472 |
| 1 | PD_DEL_chr1_6418 | 62189104 | 2412  | <DEL> | N     | 0.03745 | 0.04624  | 0.273188   | 1 | 0.865815 | 0.131494  | -0.144084  |
| 1 | PD_DEL_chr1_6671 | 66228896 | 61    | <DEL> | N     | 0.06435 | 0.06523  | 0.867496   | 1 | 0.982567 | 0.105411  | -0.0175867 |
| 1 | PD_DEL_chr1_6997 | 70302444 | 307   | <DEL> | N     | 0.09227 | 0.09386  | 0.850738   | 1 | 0.983267 | 0.089674  | -0.0168746 |
| 1 | PD_DEL_chr1_7164 | 72290013 | 8378  | <DEL> | N     | 0.1809  | 0.1698   | 0.0284143  | 1 | 1.1628   | 0.0688253 | 0.15083089 |
| 1 | PD_DEL_chr1_7165 | 72300641 | 45515 | N     | <DEL> | 0.3803  | 0.3636   | 0.00420151 | 1 | 1.17092  | 0.0551195 | 0.15778976 |
| 1 | PD_DEL_chr1_7696 | 78183479 | 5033  | <DEL> | N     | 0.06364 | 0.06855  | 0.197445   | 1 | 1.14887  | 0.107673  | 0.13877885 |
| 1 | PD_DEL_chr1_7852 | 79648500 | 304   | <DEL> | N     | 0.44    | 0.4602   | 0.210196   | 1 | 0.934336 | 0.054204  | -0.0679192 |
| 1 | PD_DEL_chr1_7872 | 79756097 | 1246  | <DEL> | N     | 0.4741  | 0.4806   | 0.189157   | 1 | 1.07322  | 0.0538175 | 0.07066348 |
| 1 | PD_DEL_chr1_8028 | 81222111 | 317   | <DEL> | N     | 0.4859  | 0.5032   | 0.811631   | 1 | 1.01278  | 0.0532681 | 0.01269902 |



|    |                  |           |       |       |       |          |          |           |   |          |           |            |
|----|------------------|-----------|-------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 1  | PD_DEL_chr1_8133 | 82576971  | 310   | N     | <DEL> | 0.3721   | 0.3309   | 0.492181  | 1 | 1.04003  | 0.0571407 | 0.03924956 |
| 1  | PD_DEL_chr1_8142 | 82660293  | 1593  | N     | <DEL> | 0.113    | 0.0968   | 0.786535  | 1 | 0.976729 | 0.0869465 | -0.023546  |
| 1  | PD_DEL_chr1_8208 | 83339110  | 11363 | <DEL> | N     | 0.01414  | 0.01385  | 0.375884  | 1 | 1.20741  | 0.21285   | 0.18847757 |
| 1  | PD_DEL_chr1_8415 | 86275303  | 711   | N     | <DEL> | 0.2478   | 0.2218   | 0.523689  | 1 | 1.04001  | 0.0615146 | 0.03923033 |
| 1  | PD_DEL_chr1_8784 | 91448554  | 439   | N     | <DEL> | 0.3956   | 0.3969   | 0.196037  | 1 | 1.07341  | 0.0547884 | 0.0708405  |
| 1  | PD_DEL_chr1_9986 | 105324161 | 261   | <DEL> | N     | 0.4574   | 0.4615   | 0.778076  | 1 | 0.984833 | 0.0542302 | -0.0152832 |
| 20 | D_DEL_chr20_110  | 12360674  | 2618  | <DEL> | N     | 0.01589  | 0.02037  | 0.568622  | 1 | 0.892323 | 0.199844  | -0.1139271 |
| 20 | D_DEL_chr20_150  | 16241117  | 578   | <DEL> | N     | 0.0526   | 0.05766  | 0.442306  | 1 | 0.917229 | 0.112454  | -0.0863981 |
| 20 | PD_DEL_chr20_169 | 1408502   | 1668  | N     | <DEL> | 0.4919   | 0.4786   | 0.803559  | 1 | 1.01305  | 0.0521287 | 0.01296558 |
| 20 | D_DEL_chr20_175  | 19154873  | 53    | N     | <DEL> | 0.3364   | 0.3406   | 0.111444  | 1 | 0.913282 | 0.0569886 | -0.0907106 |
| 20 | PD_DEL_chr20_183 | 1580441   | 33045 | N     | <DEL> | 0.218    | 0.2301   | 0.0805202 | 1 | 0.894345 | 0.0638924 | -0.1116637 |
| 20 | D_DEL_chr20_201  | 22674701  | 311   | <DEL> | N     | 0.2875   | 0.2902   | 0.837853  | 1 | 1.01227  | 0.0595898 | 0.01219533 |
| 20 | D_DEL_chr20_213  | 24407922  | 597   | <DEL> | N     | 0.02218  | 0.02168  | 0.972635  | 1 | 0.993992 | 0.175678  | -0.0060261 |
| 20 | D_DEL_chr20_214  | 24408077  | 842   | <DEL> | N     | 0.02738  | 0.02595  | 0.951088  | 1 | 1.00985  | 0.159734  | 0.0098018  |
| 20 | D_DEL_chr20_219  | 24923063  | 716   | N     | <DEL> | 0.2193   | 0.2231   | 0.301869  | 1 | 0.936594 | 0.0634475 | -0.0655054 |
| 20 | D_DEL_chr20_228  | 30474827  | 1752  | <DEL> | N     | 0.03773  | 0.0376   | 0.90641   | 1 | 1.01597  | 0.134772  | 0.01584382 |
| 20 | D_DEL_chr20_230  | 30661330  | 6637  | <DEL> | N     | 0.05029  | 0.04876  | 0.751741  | 1 | 1.039    | 0.120947  | 0.03825871 |
| 20 | D_DEL_chr20_240  | 30966456  | 3176  | <DEL> | N     | 0.01441  | 0.0107   | 0.0620885 | 1 | 1.5799   | 0.245147  | 0.45736155 |
| 20 | D_DEL_chr20_271  | 34228132  | 3287  | N     | <DEL> | 0.07176  | 0.06837  | 0.655952  | 1 | 1.04728  | 0.103685  | 0.04619633 |
| 20 | PD_DEL_chr20_287 | 2883370   | 307   | <DEL> | N     | 0.4812   | 0.5065   | 0.920806  | 1 | 0.994627 | 0.0541917 | -0.0053875 |
| 20 | D_DEL_chr20_294  | 36894431  | 1709  | <DEL> | N     | 0.01238  | 0.01044  | 0.945033  | 1 | 0.983593 | 0.239944  | -0.0165431 |
| 20 | PD_DEL_chr20_302 | 3032533   | 1100  | <DEL> | N     | 0.01571  | 0.01638  | 0.545904  | 1 | 1.13507  | 0.20979   | 0.12669432 |
| 20 | D_DEL_chr20_306  | 38122407  | 59    | <DEL> | N     | 0.0384   | 0.04104  | 0.878466  | 1 | 1.02043  | 0.132285  | 0.02022411 |
| 20 | D_DEL_chr20_308  | 38379524  | 7184  | <DEL> | N     | 0.01199  | 0.0108   | 0.621945  | 1 | 0.884472 | 0.248967  | -0.1227644 |
| 20 | D_DEL_chr20_317  | 39709005  | 122   | N     | <DEL> | 0.2507   | 0.253    | 0.787161  | 1 | 0.983902 | 0.0601089 | -0.016229  |
| 20 | D_DEL_chr20_330  | 41708516  | 3340  | <DEL> | N     | 0.012    | 0.008459 | 0.47051   | 1 | 1.19915  | 0.251667  | 0.18161297 |
| 20 | D_DEL_chr20_333  | 42278270  | 50    | <DEL> | N     | 0.01494  | 0.01121  | 0.219226  | 1 | 1.34281  | 0.239919  | 0.29476443 |
| 20 | D_DEL_chr20_339  | 42724854  | 1063  | <DEL> | N     | 0.009679 | 0.01403  | 0.677462  | 1 | 0.906977 | 0.234746  | -0.0976382 |
| 20 | D_DEL_chr20_342  | 43395972  | 1180  | N     | <DEL> | 0.3638   | 0.3514   | 0.0333452 | 1 | 1.12599  | 0.0557668 | 0.11866265 |
| 20 | PD_DEL_chr20_353 | 3378713   | 671   | <DEL> | N     | 0.02112  | 0.0211   | 0.986636  | 1 | 1.00316  | 0.188495  | 0.00315502 |
| 20 | PD_DEL_chr20_355 | 3394959   | 311   | <DEL> | N     | 0.0305   | 0.02587  | 0.292843  | 1 | 0.841454 | 0.164106  | -0.1726239 |
| 20 | D_DEL_chr20_358  | 45730773  | 112   | N     | <DEL> | 0.405    | 0.3926   | 0.816586  | 1 | 0.987299 | 0.0551117 | -0.0127823 |
| 20 | PD_DEL_chr20_389 | 3814093   | 713   | <DEL> | N     | 0.1321   | 0.1416   | 0.95346   | 1 | 1.00468  | 0.0799406 | 0.00466908 |
| 20 | PD_DEL_chr20_420 | 3914079   | 780   | <DEL> | N     | 0.01222  | 0.01188  | 0.63789   | 1 | 1.12063  | 0.241987  | 0.11389103 |
| 20 | D_DEL_chr20_421  | 52035094  | 2810  | <DEL> | N     | 0.008534 | 0.01208  | 0.124347  | 1 | 0.651263 | 0.279052  | -0.4288417 |
| 20 | PD_DEL_chr20_434 | 4056951   | 1761  | <DEL> | N     | 0.01277  | 0.01151  | 0.984369  | 1 | 0.995205 | 0.245324  | -0.0048065 |
| 20 | D_DEL_chr20_436  | 53668954  | 6397  | <DEL> | N     | 0.02675  | 0.02971  | 0.447679  | 1 | 0.884437 | 0.161735  | -0.122804  |
| 20 | D_DEL_chr20_438  | 53836166  | 765   | <DEL> | N     | 0.02724  | 0.02775  | 0.503921  | 1 | 1.11485  | 0.162674  | 0.10871987 |
| 20 | D_DEL_chr20_439  | 54030531  | 10932 | <DEL> | N     | 0.05455  | 0.04768  | 0.158286  | 1 | 1.18565  | 0.120703  | 0.17029115 |
| 20 | D_DEL_chr20_440  | 54083277  | 95    | <DEL> | N     | 0.02227  | 0.02252  | 0.820424  | 1 | 1.0392   | 0.169394  | 0.03845119 |
| 20 | D_DEL_chr20_443  | 54644901  | 66    | <DEL> | N     | 0.02393  | 0.02405  | 0.719065  | 1 | 1.06346  | 0.171062  | 0.06152774 |

|    |                  |          |       |       |       |         |         |            |   |          |           |            |
|----|------------------|----------|-------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 20 | D_DEL_chr20_456  | 55859567 | 5993  | <DEL> | N     | 0.0441  | 0.02375 | 0.139445   | 1 | 1.24693  | 0.149326  | 0.22068453 |
| 20 | D_DEL_chr20_468  | 57012329 | 495   | <DEL> | N     | 0.04178 | 0.04104 | 0.793739   | 1 | 0.966411 | 0.130677  | -0.0341661 |
| 20 | D_DEL_chr20_472  | 57504207 | 1311  | <DEL> | N     | 0.02505 | 0.02843 | 0.111909   | 1 | 0.767007 | 0.166864  | -0.2652594 |
| 20 | PD_DEL_chr20_484 | 4826485  | 1015  | <DEL> | N     | 0.04986 | 0.05259 | 0.824219   | 1 | 1.02736  | 0.121535  | 0.02699241 |
| 20 | D_DEL_chr20_485  | 59148400 | 323   | <DEL> | N     | 0.1154  | 0.1228  | 0.121754   | 1 | 0.880524 | 0.0822238 | -0.1272381 |
| 20 | D_DEL_chr20_486  | 59153624 | 58    | <DEL> | N     | 0.01532 | 0.02053 | 0.348895   | 1 | 0.835711 | 0.191593  | -0.1794724 |
| 20 | D_DEL_chr20_496  | 60351670 | 308   | <DEL> | N     | 0.04068 | 0.03456 | 0.0579677  | 1 | 1.28894  | 0.133875  | 0.25382018 |
| 20 | D_DEL_chr20_497  | 60536618 | 13190 | <DEL> | N     | 0.02321 | 0.01727 | 0.32541    | 1 | 1.19995  | 0.185353  | 0.18227989 |
| 20 | PD_DEL_chr20_508 | 5032341  | 4803  | <DEL> | N     | 0.04313 | 0.03958 | 0.920597   | 1 | 0.986643 | 0.134896  | -0.013447  |
| 20 | D_DEL_chr20_510  | 61399124 | 307   | <DEL> | N     | 0.3903  | 0.4023  | 0.751804   | 1 | 1.01722  | 0.0539901 | 0.01707342 |
| 20 | PD_DEL_chr20_551 | 5553901  | 374   | <DEL> | N     | 0.2075  | 0.2128  | 0.69051    | 1 | 1.02611  | 0.0647305 | 0.02577495 |
| 20 | PD_DEL_chr20_559 | 5648405  | 1312  | <DEL> | N     | 0.2433  | 0.2398  | 0.126409   | 1 | 1.10007  | 0.0623992 | 0.09537381 |
| 20 | D_DEL_chr20_576  | 63760746 | 505   | <DEL> | N     | 0.06335 | 0.06488 | 0.799853   | 1 | 0.973204 | 0.107129  | -0.0271616 |
| 20 | PD_DEL_chr20_597 | 6045003  | 1950  | <DEL> | N     | 0.13    | 0.1223  | 0.467403   | 1 | 1.0599   | 0.0800522 | 0.05817456 |
| 20 | D_DEL_chr20_598  | 64318079 | 9769  | <DEL> | N     | 0.1996  | 0.201   | 0.334452   | 1 | 0.937884 | 0.0664421 | -0.064129  |
| 20 | PD_DEL_chr20_826 | 8514462  | 57    | <DEL> | N     | 0.0101  | 0.01498 | 0.00598473 | 1 | 0.512665 | 0.24308   | -0.6681327 |
| 21 | D_DEL_chr21_101  | 10673466 | 50    | <DEL> | N     | 0.01227 | 0.0123  | 0.509576   | 1 | 0.848435 | 0.249222  | -0.1643618 |
| 21 | D_DEL_chr21_120  | 10760142 | 900   | <DEL> | N     | 0.02165 | 0.01791 | 0.0109693  | 1 | 1.60984  | 0.187184  | 0.4761348  |
| 21 | PD_DEL_chr21_126 | 6374502  | 493   | N     | <DEL> | 0.4062  | 0.3919  | 0.896171   | 1 | 1.007    | 0.0534889 | 0.00697561 |
| 21 | D_DEL_chr21_128  | 13117746 | 77    | <DEL> | N     | 0.01494 | 0.01155 | 0.981414   | 1 | 1.00543  | 0.232398  | 0.00541531 |
| 21 | D_DEL_chr21_184  | 18751578 | 300   | <DEL> | N     | 0.2112  | 0.2306  | 0.0995737  | 1 | 0.901075 | 0.0632496 | -0.1041668 |
| 21 | D_DEL_chr21_187  | 19021452 | 69    | <DEL> | N     | 0.4426  | 0.4419  | 0.426411   | 1 | 1.0431   | 0.0530531 | 0.04219705 |
| 21 | D_DEL_chr21_192  | 19464613 | 6396  | <DEL> | N     | 0.02848 | 0.02844 | 0.292638   | 1 | 0.84483  | 0.160231  | -0.1686199 |
| 21 | D_DEL_chr21_199  | 20213613 | 441   | <DEL> | N     | 0.06588 | 0.06728 | 0.460485   | 1 | 1.08107  | 0.105617  | 0.07795129 |
| 21 | D_DEL_chr21_199  | 20226429 | 91    | <DEL> | N     | 0.05159 | 0.0487  | 0.567461   | 1 | 1.06992  | 0.1182    | 0.06758388 |
| 21 | D_DEL_chr21_216  | 21561065 | 53    | <DEL> | N     | 0.05276 | 0.05013 | 0.245986   | 1 | 0.871885 | 0.118172  | -0.1370977 |
| 21 | D_DEL_chr21_223  | 22282580 | 11103 | <DEL> | N     | 0.06988 | 0.06999 | 0.584417   | 1 | 1.05851  | 0.103964  | 0.05686226 |
| 21 | D_DEL_chr21_249  | 24337874 | 417   | <DEL> | N     | 0.3478  | 0.3429  | 0.53429    | 1 | 1.03581  | 0.056608  | 0.03518373 |
| 21 | D_DEL_chr21_290  | 28841160 | 295   | <DEL> | N     | 0.01279 | 0.01441 | 0.0686991  | 1 | 1.52611  | 0.232215  | 0.42272201 |
| 21 | D_DEL_chr21_313  | 31544314 | 104   | <DEL> | N     | 0.4969  | 0.4896  | 0.565435   | 1 | 0.969849 | 0.0532622 | -0.0306149 |
| 21 | D_DEL_chr21_344  | 35642666 | 204   | N     | <DEL> | 0.1696  | 0.156   | 0.633901   | 1 | 0.967033 | 0.0703905 | -0.0335227 |
| 21 | D_DEL_chr21_353  | 36492151 | 309   | <DEL> | N     | 0.04322 | 0.04243 | 0.754708   | 1 | 0.959703 | 0.131653  | -0.0411314 |
| 21 | D_DEL_chr21_379  | 40149056 | 835   | <DEL> | N     | 0.03366 | 0.02971 | 0.199615   | 1 | 1.20778  | 0.147184  | 0.18878396 |
| 21 | D_DEL_chr21_379  | 40149406 | 148   | <DEL> | N     | 0.02922 | 0.02402 | 0.202898   | 1 | 1.22999  | 0.16257   | 0.20700604 |
| 21 | D_DEL_chr21_391  | 41540015 | 445   | <DEL> | N     | 0.1603  | 0.1653  | 0.685426   | 1 | 1.0294   | 0.0715216 | 0.02897611 |
| 21 | PD_DEL_chr21_416 | 8222089  | 503   | <DEL> | N     | 0.1497  | 0.1587  | 0.0153745  | 1 | 0.839358 | 0.0722601 | -0.175118  |
| 21 | D_DEL_chr21_416  | 43336697 | 844   | <DEL> | N     | 0.01263 | 0.01549 | 0.66096    | 1 | 0.906181 | 0.224622  | -0.0985162 |
| 21 | D_DEL_chr21_420  | 43739505 | 1488  | <DEL> | N     | 0.0238  | 0.01745 | 0.78216    | 1 | 1.05349  | 0.188438  | 0.05210846 |
| 21 | PD_DEL_chr21_423 | 8228135  | 65    | <DEL> | N     | 0.2338  | 0.2366  | 0.873924   | 1 | 0.990109 | 0.0626441 | -0.0099402 |
| 21 | PD_DEL_chr21_435 | 8233848  | 140   | N     | <DEL> | 0.03017 | 0.02231 | 0.494291   | 1 | 1.11764  | 0.162726  | 0.11121932 |
| 21 | PD_DEL_chr21_462 | 8419986  | 282   | N     | <DEL> | 0.02302 | 0.05146 | 0.00153581 | 1 | 0.627468 | 0.147124  | -0.4660626 |

|    |                   |           |      |       |       |         |         |           |   |          |           |            |
|----|-------------------|-----------|------|-------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 21 | D_DEL_chr21_485   | 46237438  | 1321 | <DEL> | N     | 0.4114  | 0.4068  | 0.245661  | 1 | 1.06292  | 0.0525615 | 0.06101984 |
| 21 | PD_DEL_chr21_611  | 9247064   | 399  | N     | <DEL> | 0.05261 | 0.01943 | 0.581405  | 1 | 0.919119 | 0.152973  | -0.0843397 |
| 21 | PD_DEL_chr21_648  | 9669643   | 111  | <DEL> | N     | 0.03517 | 0.03777 | 0.958717  | 1 | 0.993007 | 0.135561  | -0.0070176 |
| 21 | PD_DEL_chr21_746  | 10014855  | 159  | N     | <DEL> | 0.1807  | 0.185   | 0.555843  | 1 | 1.0395   | 0.0657749 | 0.03873983 |
| 21 | PD_DEL_chr21_973  | 10664259  | 564  | <DEL> | N     | 0.4371  | 0.4457  | 0.949622  | 1 | 0.996598 | 0.0539312 | -0.0034078 |
| 22 | D_DEL_chr22_1029  | 21453585  | 5647 | <DEL> | N     | 0.01122 | 0.01134 | 0.31931   | 1 | 1.28094  | 0.248617  | 0.24759418 |
| 22 | D_DEL_chr22_1157  | 22719027  | 393  | <DEL> | N     | 0.01044 | 0.01134 | 0.0482721 | 1 | 0.595983 | 0.262052  | -0.5175431 |
| 22 | D_DEL_chr22_1247  | 23712698  | 68   | N     | <DEL> | 0.3779  | 0.3791  | 0.415597  | 1 | 0.955734 | 0.0556157 | -0.0452756 |
| 22 | D_DEL_chr22_1337  | 24480463  | 573  | <DEL> | N     | 0.02515 | 0.0297  | 0.0701903 | 1 | 0.741538 | 0.165147  | -0.2990289 |
| 22 | D_DEL_chr22_1407  | 25054112  | 2573 | <DEL> | N     | 0.07563 | 0.08009 | 0.452437  | 1 | 0.927624 | 0.0999902 | -0.0751288 |
| 22 | D_DEL_chr22_1497  | 26495553  | 124  | <DEL> | N     | 0.4039  | 0.4093  | 0.308377  | 1 | 0.946314 | 0.0541711 | -0.0551808 |
| 22 | D_DEL_chr22_1649  | 28671635  | 70   | <DEL> | N     | 0.0122  | 0.0135  | 0.256783  | 1 | 1.30109  | 0.232097  | 0.26320237 |
| 22 | D_DEL_chr22_1669  | 28781346  | 304  | <DEL> | N     | 0.3075  | 0.2949  | 0.267442  | 1 | 1.06683  | 0.058331  | 0.06469163 |
| 22 | D_DEL_chr22_1759  | 29767416  | 2260 | <DEL> | N     | 0.07393 | 0.08069 | 0.82907   | 1 | 0.97814  | 0.102376  | -0.0221025 |
| 22 | D_DEL_chr22_1807  | 30341526  | 78   | <DEL> | N     | 0.2727  | 0.263   | 0.284377  | 1 | 1.06521  | 0.0590071 | 0.06317196 |
| 22 | D_DEL_chr22_1867  | 31023942  | 899  | <DEL> | N     | 0.1084  | 0.1191  | 0.596405  | 1 | 0.956094 | 0.0847822 | -0.044899  |
| 22 | D_DEL_chr22_2007  | 32305303  | 441  | <DEL> | N     | 0.05364 | 0.04933 | 0.209756  | 1 | 0.863385 | 0.117121  | -0.1468946 |
| 22 | D_DEL_chr22_2107  | 33359627  | 4491 | <DEL> | N     | 0.0766  | 0.07917 | 0.909978  | 1 | 0.988857 | 0.0991104 | -0.0112055 |
| 22 | D_DEL_chr22_2107  | 33384461  | 2891 | <DEL> | N     | 0.1414  | 0.1315  | 0.395805  | 1 | 0.938406 | 0.0748674 | -0.0635726 |
| 22 | D_DEL_chr22_2179  | 34328923  | 61   | <DEL> | N     | 0.0326  | 0.04313 | 0.371621  | 1 | 0.886202 | 0.135219  | -0.1208104 |
| 22 | D_DEL_chr22_2307  | 35694619  | 586  | <DEL> | N     | 0.01437 | 0.0137  | 0.984249  | 1 | 1.00433  | 0.218711  | 0.00432065 |
| 22 | D_DEL_chr22_2308  | 35737142  | 1056 | <DEL> | N     | 0.03953 | 0.04213 | 0.9907    | 1 | 1.00156  | 0.133611  | 0.00155878 |
| 22 | D_DEL_chr22_2399  | 36751060  | 669  | <DEL> | N     | 0.05993 | 0.06293 | 0.218395  | 1 | 0.873584 | 0.109807  | -0.135151  |
| 22 | D_DEL_chr22_2457  | 37348350  | 5638 | <DEL> | N     | 0.07543 | 0.07354 | 0.838555  | 1 | 1.02092  | 0.101637  | 0.02070418 |
| 22 | D_DEL_chr22_2588  | 38666193  | 69   | <DEL> | N     | 0.02149 | 0.02073 | 0.968382  | 1 | 1.00709  | 0.178174  | 0.00706498 |
| 22 | D_DEL_chr22_2979  | 42702648  | 364  | <DEL> | N     | 0.05873 | 0.06126 | 0.16466   | 1 | 0.85625  | 0.111684  | -0.1551929 |
| 22 | PD_DEL_chr22_3167 | 11720818  | 122  | <DEL> | N     | 0.01915 | 0.02157 | 0.772096  | 1 | 0.94795  | 0.184554  | -0.0534535 |
| 22 | D_DEL_chr22_3299  | 44856563  | 636  | <DEL> | N     | 0.1052  | 0.1125  | 0.526026  | 1 | 1.05446  | 0.0836286 | 0.05302879 |
| 22 | PD_DEL_chr22_3667 | 12332773  | 171  | N     | <DEL> | 0.03888 | 0.03742 | 0.971324  | 1 | 0.994925 | 0.141529  | -0.0050879 |
| 22 | D_DEL_chr22_3677  | 47300719  | 390  | <DEL> | N     | 0.1809  | 0.1791  | 0.68703   | 1 | 1.02861  | 0.0700153 | 0.02820838 |
| 22 | D_DEL_chr22_3897  | 48681814  | 276  | N     | <DEL> | 0.4828  | 0.4725  | 0.438029  | 1 | 1.0416   | 0.0525541 | 0.04075799 |
| 22 | PD_DEL_chr22_4167 | 12379424  | 591  | <DEL> | N     | 0.03429 | 0.0377  | 0.895355  | 1 | 0.982441 | 0.134681  | -0.017715  |
| 22 | D_DEL_chr22_4457  | 50639951  | 143  | <DEL> | N     | 0.01519 | 0.01718 | 0.959806  | 1 | 0.989364 | 0.212175  | -0.010693  |
| 22 | PD_DEL_chr22_5317 | 17404365  | 307  | <DEL> | N     | 0.03257 | 0.02966 | 0.630757  | 1 | 1.07567  | 0.15175   | 0.07294372 |
| 22 | PD_DEL_chr22_5357 | 17419506  | 64   | <DEL> | N     | 0.1191  | 0.1117  | 0.0927066 | 1 | 1.14652  | 0.0813245 | 0.13673127 |
| 2  | D_DEL_chr2_10099  | 108694098 | 1555 | <DEL> | N     | 0.4023  | 0.4082  | 0.227484  | 1 | 0.93717  | 0.0537676 | -0.0648906 |
| 2  | D_DEL_chr2_10129  | 109073218 | 5540 | <DEL> | N     | 0.0617  | 0.06081 | 0.392606  | 1 | 1.09862  | 0.110023  | 0.09405485 |
| 2  | D_DEL_chr2_10199  | 110818831 | 228  | <DEL> | N     | 0.4619  | 0.4701  | 0.429516  | 1 | 1.04195  | 0.0520164 | 0.04109396 |
| 2  | D_DEL_chr2_10579  | 116216959 | 3768 | <DEL> | N     | 0.2485  | 0.244   | 0.769952  | 1 | 0.982173 | 0.0615108 | -0.0179878 |
| 2  | D_DEL_chr2_10990  | 121299293 | 1137 | <DEL> | N     | 0.06804 | 0.07179 | 0.541636  | 1 | 1.06493  | 0.103075  | 0.06290907 |
| 2  | D_DEL_chr2_10999  | 121384054 | 91   | <DEL> | N     | 0.04982 | 0.05194 | 0.681458  | 1 | 1.05032  | 0.119598  | 0.04909488 |

|   |                  |           |       |       |       |         |          |            |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|----------|------------|---|----------|-----------|------------|
| 2 | D_DEL_chr2_1107  | 122612418 | 347   | <DEL> | N     | 0.2274  | 0.2276   | 0.262083   | 1 | 1.07176  | 0.0617915 | 0.06930216 |
| 2 | D_DEL_chr2_1108  | 122719618 | 5691  | <DEL> | N     | 0.105   | 0.1004   | 0.545742   | 1 | 1.05344  | 0.086176  | 0.052061   |
| 2 | D_DEL_chr2_1112  | 123133599 | 109   | <DEL> | N     | 0.02361 | 0.02089  | 0.169426   | 1 | 1.27639  | 0.177604  | 0.24403578 |
| 2 | D_DEL_chr2_1112  | 123231573 | 315   | <DEL> | N     | 0.08051 | 0.07698  | 0.421438   | 1 | 1.07954  | 0.0952057 | 0.07653502 |
| 2 | D_DEL_chr2_1116  | 123412680 | 330   | N     | <DEL> | 0.4631  | 0.4467   | 0.592247   | 1 | 0.971791 | 0.053426  | -0.0286145 |
| 2 | D_DEL_chr2_1136  | 125621012 | 6753  | <DEL> | N     | 0.0209  | 0.02593  | 0.707602   | 1 | 0.937408 | 0.172328  | -0.0646367 |
| 2 | D_DEL_chr2_1136  | 125685674 | 8580  | N     | <DEL> | 0.3327  | 0.3485   | 0.213867   | 1 | 0.933874 | 0.0550391 | -0.0684138 |
| 2 | D_DEL_chr2_1139  | 125920661 | 3776  | <DEL> | N     | 0.0176  | 0.01781  | 0.44829    | 1 | 1.16547  | 0.201941  | 0.15312444 |
| 2 | D_DEL_chr2_1146  | 126917182 | 2514  | N     | <DEL> | 0.1441  | 0.1369   | 0.547313   | 1 | 0.955185 | 0.0761893 | -0.0458502 |
| 2 | D_DEL_chr2_1154  | 127979504 | 84    | N     | <DEL> | 0.1248  | 0.1299   | 0.94504    | 1 | 1.00554  | 0.0801669 | 0.00552471 |
| 2 | D_DEL_chr2_1164  | 128880847 | 7782  | <DEL> | N     | 0.1744  | 0.1826   | 0.126087   | 1 | 0.901267 | 0.0679558 | -0.1039537 |
| 2 | D_DEL_chr2_1175  | 130197366 | 2448  | <DEL> | N     | 0.3828  | 0.3969   | 0.32582    | 1 | 0.948759 | 0.0535335 | -0.0526005 |
| 2 | PD_DEL_chr2_1176 | 3685215   | 5223  | <DEL> | N     | 0.05846 | 0.05364  | 0.739438   | 1 | 1.03884  | 0.114578  | 0.03810471 |
| 2 | D_DEL_chr2_1187  | 131577661 | 97    | N     | <DEL> | 0.01567 | 0.01601  | 0.964275   | 1 | 0.990526 | 0.212536  | -0.0095192 |
| 2 | D_DEL_chr2_1208  | 133637584 | 56    | <DEL> | N     | 0.09038 | 0.08545  | 0.916431   | 1 | 1.0099   | 0.0938482 | 0.00985132 |
| 2 | PD_DEL_chr2_1228 | 4165176   | 10628 | <DEL> | N     | 0.1687  | 0.174    | 0.782931   | 1 | 1.01962  | 0.0705405 | 0.01943001 |
| 2 | D_DEL_chr2_1238  | 137732552 | 370   | <DEL> | N     | 0.1825  | 0.1717   | 0.710835   | 1 | 0.973889 | 0.0713666 | -0.0264579 |
| 2 | D_DEL_chr2_1266  | 141042909 | 1968  | <DEL> | N     | 0.01006 | 0.01098  | 0.867125   | 1 | 0.956985 | 0.26279   | -0.0439676 |
| 2 | D_DEL_chr2_1275  | 142031333 | 210   | <DEL> | N     | 0.05888 | 0.04881  | 0.323582   | 1 | 1.11791  | 0.112919  | 0.11146087 |
| 2 | D_DEL_chr2_1311  | 146105053 | 14241 | <DEL> | N     | 0.4342  | 0.4404   | 0.570425   | 1 | 1.0307   | 0.0532848 | 0.03023818 |
| 2 | D_DEL_chr2_1321  | 147183779 | 5459  | <DEL> | N     | 0.01141 | 0.01026  | 0.83233    | 1 | 0.94625  | 0.260959  | -0.0552485 |
| 2 | D_DEL_chr2_1337  | 149770471 | 306   | <DEL> | N     | 0.3511  | 0.3822   | 0.170354   | 1 | 0.926582 | 0.0556157 | -0.0762527 |
| 2 | D_DEL_chr2_1340  | 150174624 | 7108  | <DEL> | N     | 0.0341  | 0.04084  | 0.908073   | 1 | 1.01654  | 0.142061  | 0.0164047  |
| 2 | D_DEL_chr2_1347  | 151046575 | 270   | N     | <DEL> | 0.0528  | 0.02987  | 0.844465   | 1 | 0.973054 | 0.139235  | -0.0273157 |
| 2 | D_DEL_chr2_1348  | 151184691 | 287   | <DEL> | N     | 0.4894  | 0.5068   | 0.153392   | 1 | 0.927581 | 0.0526565 | -0.0751752 |
| 2 | D_DEL_chr2_1364  | 153208066 | 92    | N     | <DEL> | 0.1271  | 0.125    | 0.156648   | 1 | 1.11762  | 0.0785049 | 0.11120142 |
| 2 | D_DEL_chr2_1371  | 154110267 | 79    | <DEL> | N     | 0.02078 | 0.02184  | 0.713794   | 1 | 0.936869 | 0.177803  | -0.0652118 |
| 2 | D_DEL_chr2_1403  | 158116853 | 5895  | <DEL> | N     | 0.01026 | 0.01529  | 0.00074334 | 1 | 0.449567 | 0.237015  | -0.7994704 |
| 2 | D_DEL_chr2_1406  | 158554013 | 199   | <DEL> | N     | 0.01103 | 0.009363 | 0.908206   | 1 | 0.971691 | 0.24906   | -0.0287174 |
| 2 | D_DEL_chr2_1406  | 158787547 | 60    | <DEL> | N     | 0.2977  | 0.3138   | 0.0324437  | 1 | 0.887052 | 0.0560344 | -0.1198517 |
| 2 | D_DEL_chr2_1409  | 159239339 | 4316  | <DEL> | N     | 0.01703 | 0.01638  | 0.544891   | 1 | 1.12912  | 0.200586  | 0.12143857 |
| 2 | D_DEL_chr2_1410  | 159283568 | 95    | N     | <DEL> | 0.4735  | 0.4705   | 0.894749   | 1 | 1.00714  | 0.0537522 | 0.00711463 |
| 2 | D_DEL_chr2_1410  | 159292615 | 2522  | N     | <DEL> | 0.0265  | 0.01511  | 0.635192   | 1 | 0.912818 | 0.192269  | -0.0912188 |
| 2 | D_DEL_chr2_1411  | 159433909 | 1469  | <DEL> | N     | 0.01529 | 0.01781  | 0.298241   | 1 | 0.807834 | 0.205149  | -0.2133987 |
| 2 | D_DEL_chr2_1435  | 162809911 | 302   | N     | <DEL> | 0.3663  | 0.3395   | 0.906062   | 1 | 0.993312 | 0.056867  | -0.0067105 |
| 2 | D_DEL_chr2_1443  | 163784687 | 5292  | <DEL> | N     | 0.07558 | 0.06999  | 0.336093   | 1 | 1.10097  | 0.1       | 0.09619161 |
| 2 | D_DEL_chr2_1453  | 164993646 | 15144 | <DEL> | N     | 0.01161 | 0.01295  | 0.851201   | 1 | 0.955939 | 0.240218  | -0.0450612 |
| 2 | D_DEL_chr2_1462  | 166191676 | 58    | <DEL> | N     | 0.023   | 0.02409  | 0.629384   | 1 | 1.08977  | 0.178129  | 0.08596666 |
| 2 | D_DEL_chr2_1481  | 168334194 | 102   | <DEL> | N     | 0.02116 | 0.0231   | 0.159446   | 1 | 0.774841 | 0.181314  | -0.2550974 |
| 2 | D_DEL_chr2_1483  | 168547485 | 59    | <DEL> | N     | 0.1208  | 0.1226   | 0.342534   | 1 | 1.07929  | 0.0803852 | 0.07630342 |
| 2 | D_DEL_chr2_1495  | 169785008 | 2433  | N     | <DEL> | 0.0207  | 0.008276 | 0.296861   | 1 | 1.29228  | 0.245794  | 0.2564081  |

|   |                  |           |       |       |       |         |         |            |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 2 | D_DEL_chr2_1498  | 170135515 | 296   | N     | <DEL> | 0.4536  | 0.4417  | 0.678316   | 1 | 1.02232  | 0.0532119 | 0.02207455 |
| 2 | D_DEL_chr2_1515  | 172139535 | 3211  | <DEL> | N     | 0.346   | 0.3347  | 0.0317796  | 1 | 1.12799  | 0.0560897 | 0.12043729 |
| 2 | D_DEL_chr2_1515  | 172283311 | 60    | N     | <DEL> | 0.1296  | 0.1279  | 0.756165   | 1 | 1.02465  | 0.0784071 | 0.02435109 |
| 2 | D_DEL_chr2_1522  | 173333870 | 306   | <DEL> | N     | 0.3391  | 0.3392  | 0.359349   | 1 | 1.05162  | 0.0549147 | 0.05033183 |
| 2 | D_DEL_chr2_1527  | 174225912 | 305   | <DEL> | N     | 0.4569  | 0.4723  | 0.665189   | 1 | 0.976731 | 0.0544046 | -0.023544  |
| 2 | D_DEL_chr2_1531  | 174594594 | 250   | <DEL> | N     | 0.3538  | 0.3525  | 0.483093   | 1 | 0.962603 | 0.0543448 | -0.0381142 |
| 2 | D_DEL_chr2_1543  | 176400917 | 6395  | N     | <DEL> | 0.2077  | 0.1896  | 0.00693245 | 1 | 1.19429  | 0.0657579 | 0.17755187 |
| 2 | PD_DEL_chr2_1553 | 7989567   | 7475  | <DEL> | N     | 0.01354 | 0.01026 | 0.174483   | 1 | 1.39357  | 0.244393  | 0.3318688  |
| 2 | D_DEL_chr2_1562  | 179200620 | 16211 | <DEL> | N     | 0.2636  | 0.2582  | 0.172705   | 1 | 1.08647  | 0.0608188 | 0.08293391 |
| 2 | D_DEL_chr2_1593  | 183220800 | 5418  | <DEL> | N     | 0.04767 | 0.05146 | 0.814646   | 1 | 0.972331 | 0.119687  | -0.028059  |
| 2 | D_DEL_chr2_1600  | 183929705 | 9598  | <DEL> | N     | 0.03791 | 0.04033 | 0.942336   | 1 | 0.989996 | 0.138996  | -0.0100544 |
| 2 | D_DEL_chr2_1606  | 184367750 | 52    | N     | <DEL> | 0.4791  | 0.4861  | 0.181365   | 1 | 0.930927 | 0.0535507 | -0.0715744 |
| 2 | D_DEL_chr2_1689  | 193533783 | 325   | <DEL> | N     | 0.08885 | 0.09416 | 0.48185    | 1 | 0.939279 | 0.0890658 | -0.0626427 |
| 2 | D_DEL_chr2_1691  | 193824778 | 9263  | N     | <DEL> | 0.09168 | 0.09572 | 0.718444   | 1 | 0.967513 | 0.0916015 | -0.0330264 |
| 2 | D_DEL_chr2_1709  | 195114662 | 4723  | <DEL> | N     | 0.05635 | 0.05457 | 0.546637   | 1 | 1.0744   | 0.119051  | 0.07176237 |
| 2 | D_DEL_chr2_1709  | 195114740 | 4700  | <DEL> | N     | 0.01605 | 0.02285 | 0.736643   | 1 | 0.935279 | 0.198959  | -0.0669104 |
| 2 | D_DEL_chr2_1711  | 195230669 | 857   | <DEL> | N     | 0.01317 | 0.01388 | 0.912754   | 1 | 1.02519  | 0.227048  | 0.02487796 |
| 2 | D_DEL_chr2_1720  | 196749908 | 316   | <DEL> | N     | 0.3145  | 0.3194  | 0.330463   | 1 | 1.05583  | 0.055828  | 0.05432719 |
| 2 | D_DEL_chr2_1739  | 199447732 | 224   | N     | <DEL> | 0.2741  | 0.2961  | 0.0350887  | 1 | 0.885566 | 0.057669  | -0.1215283 |
| 2 | D_DEL_chr2_1748  | 200826632 | 88    | N     | <DEL> | 0.4449  | 0.4568  | 0.526208   | 1 | 0.967003 | 0.0529399 | -0.0335537 |
| 2 | D_DEL_chr2_1765  | 203034180 | 5381  | <DEL> | N     | 0.1319  | 0.1286  | 0.111522   | 1 | 1.13394  | 0.0789849 | 0.12569829 |
| 2 | D_DEL_chr2_1772  | 204320531 | 64    | N     | <DEL> | 0.3397  | 0.3363  | 0.901053   | 1 | 0.993258 | 0.0544111 | -0.0067648 |
| 2 | D_DEL_chr2_1795  | 207486106 | 8539  | <DEL> | N     | 0.1797  | 0.1821  | 0.495144   | 1 | 1.04735  | 0.0678198 | 0.04626316 |
| 2 | D_DEL_chr2_1810  | 209078187 | 6015  | <DEL> | N     | 0.2878  | 0.2941  | 0.739857   | 1 | 1.01914  | 0.0570901 | 0.01895913 |
| 2 | D_DEL_chr2_1832  | 211768749 | 52    | <DEL> | N     | 0.04414 | 0.04186 | 0.572992   | 1 | 1.07817  | 0.133536  | 0.07526516 |
| 2 | D_DEL_chr2_1840  | 212318869 | 8418  | <DEL> | N     | 0.07427 | 0.06909 | 0.284125   | 1 | 1.11603  | 0.10249   | 0.10977775 |
| 2 | D_DEL_chr2_1843  | 212709962 | 291   | <DEL> | N     | 0.4161  | 0.416   | 0.789399   | 1 | 1.01444  | 0.0536902 | 0.01433674 |
| 2 | D_DEL_chr2_1851  | 213642624 | 221   | <DEL> | N     | 0.4029  | 0.3978  | 0.640422   | 1 | 1.02642  | 0.0558319 | 0.02607702 |
| 2 | D_DEL_chr2_1855  | 213910492 | 295   | N     | <DEL> | 0.3586  | 0.3192  | 0.46633    | 1 | 1.04307  | 0.0578931 | 0.04216829 |
| 2 | D_DEL_chr2_1874  | 216225220 | 2555  | N     | <DEL> | 0.1319  | 0.1243  | 0.79104    | 1 | 1.0213   | 0.0795395 | 0.02107633 |
| 2 | D_DEL_chr2_1874  | 216293625 | 379   | <DEL> | N     | 0.3416  | 0.3532  | 0.518719   | 1 | 0.963956 | 0.0568852 | -0.0367096 |
| 2 | PD_DEL_chr2_1923 | 11878902  | 3999  | <DEL> | N     | 0.02806 | 0.03005 | 0.973136   | 1 | 0.994678 | 0.158467  | -0.0053362 |
| 2 | D_DEL_chr2_1936  | 225174866 | 477   | N     | <DEL> | 0.4091  | 0.4264  | 0.978054   | 1 | 0.998551 | 0.05271   | -0.0014501 |
| 2 | D_DEL_chr2_1947  | 226152857 | 233   | N     | <DEL> | 0.4573  | 0.4642  | 0.150178   | 1 | 0.927347 | 0.0524203 | -0.0754275 |
| 2 | D_DEL_chr2_1948  | 226300710 | 5743  | <DEL> | N     | 0.3219  | 0.3302  | 0.198756   | 1 | 0.930836 | 0.0557717 | -0.0716722 |
| 2 | D_DEL_chr2_1950  | 226477710 | 5049  | <DEL> | N     | 0.01605 | 0.01439 | 0.267125   | 1 | 1.27447  | 0.218552  | 0.24253041 |
| 2 | D_DEL_chr2_1951  | 226531858 | 58    | <DEL> | N     | 0.1972  | 0.2073  | 0.484714   | 1 | 0.95525  | 0.0655308 | -0.0457822 |
| 2 | D_DEL_chr2_1958  | 227329670 | 953   | <DEL> | N     | 0.05341 | 0.05479 | 0.992951   | 1 | 0.998947 | 0.119247  | -0.0010536 |
| 2 | D_DEL_chr2_1989  | 231019404 | 1180  | <DEL> | N     | 0.03591 | 0.03732 | 0.854832   | 1 | 0.974591 | 0.140682  | -0.0257374 |
| 2 | D_DEL_chr2_1990  | 231131481 | 305   | <DEL> | N     | 0.3242  | 0.3383  | 0.858615   | 1 | 1.00998  | 0.0557409 | 0.00993053 |
| 2 | D_DEL_chr2_2023  | 233396915 | 649   | <DEL> | N     | 0.01009 | 0.01045 | 0.0851985  | 1 | 1.55435  | 0.256235  | 0.44105745 |

|   |                  |           |        |       |       |         |          |            |   |          |           |            |
|---|------------------|-----------|--------|-------|-------|---------|----------|------------|---|----------|-----------|------------|
| 2 | D_DEL_chr2_2067  | 237645372 | 5178   | <DEL> | N     | 0.01567 | 0.01493  | 0.785086   | 1 | 0.942209 | 0.218295  | -0.0595282 |
| 2 | D_DEL_chr2_2070  | 238053994 | 88     | <DEL> | N     | 0.3832  | 0.3825   | 0.179494   | 1 | 0.929809 | 0.0542166 | -0.0727761 |
| 2 | D_DEL_chr2_2137  | 241457301 | 116    | <DEL> | N     | 0.0152  | 0.009626 | 0.611104   | 1 | 0.886038 | 0.237948  | -0.1209954 |
| 2 | D_DEL_chr2_2138  | 241566387 | 1532   | <DEL> | N     | 0.2389  | 0.2313   | 0.744715   | 1 | 1.02108  | 0.064072  | 0.02086089 |
| 2 | D_DEL_chr2_2149  | 241911101 | 182526 | <DEL> | N     | 0.0432  | 0.04143  | 0.922857   | 1 | 0.98766  | 0.128222  | -0.0124168 |
| 2 | PD_DEL_chr2_2189 | 14564047  | 5945   | <DEL> | N     | 0.05072 | 0.05292  | 0.167204   | 1 | 1.17478  | 0.116622  | 0.1610809  |
| 2 | PD_DEL_chr2_2414 | 17403860  | 5483   | <DEL> | N     | 0.05715 | 0.05239  | 0.443571   | 1 | 0.916352 | 0.114013  | -0.0873547 |
| 2 | PD_DEL_chr2_2551 | 18821608  | 395    | <DEL> | N     | 0.1939  | 0.1832   | 0.00962063 | 1 | 1.19117  | 0.0675645 | 0.17493602 |
| 2 | PD_DEL_chr2_2730 | 21700326  | 331    | <DEL> | N     | 0.07046 | 0.07573  | 0.947909   | 1 | 0.993283 | 0.103159  | -0.0067397 |
| 2 | PD_DEL_chr2_2795 | 22465467  | 1635   | <DEL> | N     | 0.0184  | 0.01873  | 0.967084   | 1 | 1.00811  | 0.195735  | 0.00807729 |
| 2 | PD_DEL_chr2_2919 | 24376795  | 11841  | <DEL> | N     | 0.01547 | 0.01709  | 0.650776   | 1 | 0.913159 | 0.200681  | -0.0908453 |
| 2 | PD_DEL_chr2_2931 | 24464359  | 586    | <DEL> | N     | 0.03726 | 0.04093  | 0.1816     | 1 | 0.832962 | 0.136818  | -0.1827673 |
| 2 | PD_DEL_chr2_2960 | 24829707  | 627    | <DEL> | N     | 0.02367 | 0.02168  | 0.62911    | 1 | 1.0893   | 0.17709   | 0.08553529 |
| 2 | PD_DEL_chr2_3274 | 28497573  | 840    | <DEL> | N     | 0.02305 | 0.0256   | 0.665523   | 1 | 1.07859  | 0.175     | 0.07565463 |
| 2 | PD_DEL_chr2_3364 | 29776361  | 72     | N     | <DEL> | 0.06209 | 0.06711  | 0.0470429  | 1 | 0.805525 | 0.108897  | -0.216261  |
| 2 | PD_DEL_chr2_3457 | 31119875  | 299    | <DEL> | N     | 0.3727  | 0.3922   | 0.692546   | 1 | 1.02183  | 0.0546199 | 0.02159514 |
| 2 | PD_DEL_chr2_3593 | 32866671  | 3885   | <DEL> | N     | 0.4665  | 0.4818   | 0.530632   | 1 | 0.96771  | 0.0523459 | -0.0328228 |
| 2 | PD_DEL_chr2_3720 | 34470762  | 40738  | <DEL> | N     | 0.3714  | 0.3541   | 0.174034   | 1 | 1.07744  | 0.0548726 | 0.07458786 |
| 2 | PD_DEL_chr2_3731 | 34572561  | 3948   | <DEL> | N     | 0.03038 | 0.02987  | 0.268533   | 1 | 1.18021  | 0.149753  | 0.16569239 |
| 2 | PD_DEL_chr2_3761 | 34809384  | 231    | N     | <DEL> | 0.5058  | 0.4908   | 0.328677   | 1 | 1.05245  | 0.0523388 | 0.05112078 |
| 2 | PD_DEL_chr2_3853 | 35547200  | 53     | <DEL> | N     | 0.1311  | 0.1302   | 0.716335   | 1 | 0.97273  | 0.0760923 | -0.0276487 |
| 2 | PD_DEL_chr2_3873 | 35750918  | 21158  | <DEL> | N     | 0.4342  | 0.4298   | 0.23533    | 1 | 0.938278 | 0.0536837 | -0.063709  |
| 2 | PD_DEL_chr2_4288 | 40252870  | 270    | <DEL> | N     | 0.08294 | 0.09045  | 0.814232   | 1 | 1.02254  | 0.0948466 | 0.02228973 |
| 2 | PD_DEL_chr2_4340 | 40751010  | 321    | <DEL> | N     | 0.3721  | 0.3724   | 0.18185    | 1 | 1.07487  | 0.0540783 | 0.07219972 |
| 2 | PD_DEL_chr2_4365 | 41011229  | 11924  | <DEL> | N     | 0.07527 | 0.07197  | 0.151241   | 1 | 1.1583   | 0.102396  | 0.14695341 |
| 2 | PD_DEL_chr2_4417 | 41665758  | 50     | <DEL> | N     | 0.02331 | 0.02256  | 0.955565   | 1 | 0.990392 | 0.173265  | -0.0096545 |
| 2 | PD_DEL_chr2_4432 | 41746016  | 2709   | N     | <DEL> | 0.3143  | 0.297    | 0.437424   | 1 | 0.957051 | 0.0565306 | -0.0438986 |
| 2 | PD_DEL_chr2_4509 | 42605143  | 1169   | <DEL> | N     | 0.02879 | 0.02582  | 0.351512   | 1 | 1.16461  | 0.163566  | 0.15238627 |
| 2 | PD_DEL_chr2_4584 | 43431646  | 509    | <DEL> | N     | 0.112   | 0.1121   | 0.194558   | 1 | 1.11387  | 0.0831325 | 0.10784044 |
| 2 | PD_DEL_chr2_4708 | 44409100  | 68     | N     | <DEL> | 0.3366  | 0.3332   | 0.900472   | 1 | 1.00703  | 0.0560499 | 0.0070054  |
| 2 | PD_DEL_chr2_4724 | 44562842  | 723    | <DEL> | N     | 0.02166 | 0.02214  | 0.839987   | 1 | 1.03578  | 0.174114  | 0.03515477 |
| 2 | PD_DEL_chr2_4838 | 46206658  | 147    | N     | <DEL> | 0.3946  | 0.3931   | 0.707928   | 1 | 0.979518 | 0.0552381 | -0.0206947 |
| 2 | PD_DEL_chr2_5029 | 48554713  | 3015   | <DEL> | N     | 0.3184  | 0.3246   | 0.544972   | 1 | 1.03419  | 0.0555348 | 0.03361851 |
| 2 | PD_DEL_chr2_5042 | 48624053  | 6760   | <DEL> | N     | 0.2092  | 0.2047   | 0.384223   | 1 | 1.05943  | 0.0663478 | 0.05773103 |
| 2 | PD_DEL_chr2_5113 | 49305630  | 11360  | <DEL> | N     | 0.04473 | 0.04336  | 0.831366   | 1 | 1.02829  | 0.130981  | 0.02789723 |
| 2 | PD_DEL_chr2_5452 | 52522548  | 35584  | <DEL> | N     | 0.3062  | 0.3102   | 0.884003   | 1 | 1.00845  | 0.0576751 | 0.0084145  |
| 2 | PD_DEL_chr2_5554 | 53331061  | 1750   | <DEL> | N     | 0.02035 | 0.02917  | 0.736067   | 1 | 0.943428 | 0.172775  | -0.0582352 |
| 2 | PD_DEL_chr2_5620 | 54007139  | 91     | <DEL> | N     | 0.01752 | 0.01501  | 0.654107   | 1 | 1.09462  | 0.201772  | 0.09040727 |
| 2 | PD_DEL_chr2_5663 | 54466357  | 248    | <DEL> | N     | 0.4629  | 0.4687   | 0.167338   | 1 | 0.927008 | 0.0548906 | -0.0757931 |
| 2 | PD_DEL_chr2_5723 | 55275442  | 84     | <DEL> | N     | 0.02499 | 0.02665  | 0.217333   | 1 | 0.810482 | 0.170329  | -0.2101261 |
| 2 | PD_DEL_chr2_5759 | 55633365  | 150    | <DEL> | N     | 0.04908 | 0.04222  | 0.0589041  | 1 | 1.27128  | 0.127069  | 0.24002427 |

|   |                  |           |       |       |       |         |         |            |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 2 | PD_DEL_chr2_5826 | 56425167  | 3580  | <DEL> | N     | 0.4402  | 0.4311  | 0.904163   | 1 | 0.993716 | 0.0523518 | -0.0063038 |
| 2 | PD_DEL_chr2_6135 | 59396121  | 7792  | <DEL> | N     | 0.03075 | 0.03331 | 0.104944   | 1 | 0.783392 | 0.150571  | -0.2441221 |
| 2 | PD_DEL_chr2_6491 | 64252549  | 4822  | <DEL> | N     | 0.1227  | 0.1293  | 0.444831   | 1 | 0.940043 | 0.0809226 | -0.0618297 |
| 2 | PD_DEL_chr2_6580 | 65369653  | 55    | N     | <DEL> | 0.0501  | 0.052   | 0.221569   | 1 | 0.861507 | 0.121953  | -0.1490721 |
| 2 | PD_DEL_chr2_6653 | 65958834  | 11091 | <DEL> | N     | 0.05151 | 0.05218 | 0.166712   | 1 | 0.849419 | 0.11802   | -0.1632027 |
| 2 | PD_DEL_chr2_6976 | 69897921  | 512   | <DEL> | N     | 0.4222  | 0.4086  | 0.13174    | 1 | 1.08528  | 0.0542947 | 0.08183802 |
| 2 | PD_DEL_chr2_7310 | 74284163  | 316   | <DEL> | N     | 0.1776  | 0.1753  | 0.905579   | 1 | 1.00812  | 0.0682131 | 0.00808721 |
| 2 | PD_DEL_chr2_7449 | 76299386  | 2381  | N     | <DEL> | 0.0588  | 0.04462 | 0.624318   | 1 | 0.941763 | 0.122518  | -0.0600016 |
| 2 | PD_DEL_chr2_7602 | 77749658  | 307   | <DEL> | N     | 0.1461  | 0.1685  | 0.00358921 | 1 | 0.813511 | 0.0708852 | -0.2063958 |
| 2 | PD_DEL_chr2_8113 | 82839731  | 1379  | <DEL> | N     | 0.04623 | 0.04804 | 0.648664   | 1 | 1.05779  | 0.123312  | 0.05618183 |
| 2 | PD_DEL_chr2_8128 | 82886868  | 196   | <DEL> | N     | 0.01772 | 0.01869 | 0.271492   | 1 | 0.796096 | 0.207374  | -0.2280355 |
| 2 | PD_DEL_chr2_8248 | 83966708  | 429   | <DEL> | N     | 0.02263 | 0.02213 | 0.395711   | 1 | 0.860497 | 0.176904  | -0.1502451 |
| 2 | PD_DEL_chr2_8301 | 84691636  | 51    | <DEL> | N     | 0.052   | 0.05307 | 0.623132   | 1 | 0.944723 | 0.115714  | -0.0568635 |
| 2 | PD_DEL_chr2_8330 | 85008267  | 109   | <DEL> | N     | 0.04727 | 0.04911 | 0.497828   | 1 | 0.919194 | 0.124292  | -0.0842581 |
| 2 | PD_DEL_chr2_8343 | 85108247  | 305   | <DEL> | N     | 0.1473  | 0.1423  | 0.524462   | 1 | 1.04863  | 0.0746087 | 0.04748455 |
| 2 | PD_DEL_chr2_8348 | 85152653  | 83    | <DEL> | N     | 0.03148 | 0.03297 | 0.0857098  | 1 | 0.776114 | 0.147489  | -0.2534559 |
| 2 | PD_DEL_chr2_8651 | 88021451  | 245   | N     | <DEL> | 0.07795 | 0.07683 | 0.846538   | 1 | 1.01987  | 0.101676  | 0.01967517 |
| 2 | PD_DEL_chr2_8865 | 89843261  | 90    | <DEL> | N     | 0.06448 | 0.06236 | 0.342343   | 1 | 1.1096   | 0.109537  | 0.10399959 |
| 2 | PD_DEL_chr2_9061 | 90392652  | 248   | N     | <DEL> | 0.03772 | 0.03472 | 0.0010537  | 1 | 0.625784 | 0.143096  | -0.46875   |
| 2 | PD_DEL_chr2_9343 | 97187883  | 5653  | <DEL> | N     | 0.01277 | 0.0108  | 0.251882   | 1 | 0.75711  | 0.242842  | -0.2782467 |
| 2 | PD_DEL_chr2_9367 | 97521618  | 22000 | N     | <DEL> | 0.3378  | 0.3528  | 0.854081   | 1 | 0.989773 | 0.0558937 | -0.0102797 |
| 2 | PD_DEL_chr2_946  | 2795002   | 468   | N     | <DEL> | 0.365   | 0.3544  | 0.115258   | 1 | 1.09044  | 0.0549695 | 0.08658128 |
| 2 | PD_DEL_chr2_9572 | 101616122 | 1003  | <DEL> | N     | 0.1532  | 0.1623  | 0.211549   | 1 | 0.915127 | 0.0709929 | -0.0886924 |
| 2 | PD_DEL_chr2_9909 | 106263101 | 6358  | <DEL> | N     | 0.335   | 0.3418  | 0.161702   | 1 | 0.924328 | 0.0562315 | -0.0786883 |
| 2 | PD_DEL_chr2_9913 | 106314086 | 87    | N     | <DEL> | 0.4779  | 0.4793  | 0.289178   | 1 | 0.945209 | 0.0531636 | -0.0563492 |
| 2 | PD_DEL_chr2_9915 | 106322018 | 313   | <DEL> | N     | 0.01802 | 0.01424 | 0.942785   | 1 | 1.01532  | 0.211823  | 0.01520383 |
| 2 | PD_DEL_chr2_9946 | 106791799 | 193   | <DEL> | N     | 0.02889 | 0.02973 | 0.696865   | 1 | 0.940074 | 0.158634  | -0.0617967 |
| 2 | PD_DEL_chr2_9996 | 107309940 | 326   | <DEL> | N     | 0.1777  | 0.1807  | 0.611605   | 1 | 0.964926 | 0.0703123 | -0.0357039 |
| 3 | D_DEL_chr3_10006 | 126371147 | 60    | <DEL> | N     | 0.1337  | 0.1378  | 0.344014   | 1 | 0.930185 | 0.0764818 | -0.0723718 |
| 3 | D_DEL_chr3_10283 | 129938465 | 564   | <DEL> | N     | 0.1758  | 0.171   | 0.418548   | 1 | 1.05681  | 0.0683044 | 0.05525494 |
| 3 | D_DEL_chr3_10290 | 130044539 | 43363 | <DEL> | N     | 0.3961  | 0.4061  | 0.348659   | 1 | 0.951241 | 0.053338  | -0.0499878 |
| 3 | D_DEL_chr3_10399 | 131395488 | 156   | <DEL> | N     | 0.03623 | 0.03312 | 0.135521   | 1 | 1.2393   | 0.14373   | 0.2145467  |
| 3 | D_DEL_chr3_10408 | 131596340 | 307   | <DEL> | N     | 0.0832  | 0.09368 | 0.115524   | 1 | 0.866349 | 0.0911576 | -0.1434674 |
| 3 | D_DEL_chr3_10459 | 131989437 | 5103  | <DEL> | N     | 0.3052  | 0.3273  | 0.229712   | 1 | 0.934001 | 0.0568456 | -0.0682778 |
| 3 | D_DEL_chr3_10483 | 132270281 | 5925  | <DEL> | N     | 0.2885  | 0.2907  | 0.787553   | 1 | 0.984351 | 0.0585265 | -0.0157727 |
| 3 | D_DEL_chr3_10741 | 136302171 | 5186  | <DEL> | N     | 0.4203  | 0.4115  | 0.986523   | 1 | 1.00091  | 0.054104  | 0.00090959 |
| 3 | D_DEL_chr3_10824 | 137595470 | 2130  | <DEL> | N     | 0.04178 | 0.04246 | 0.65541    | 1 | 0.943572 | 0.130155  | -0.0580826 |
| 3 | D_DEL_chr3_10964 | 139979566 | 1542  | <DEL> | N     | 0.01064 | 0.01098 | 0.811807   | 1 | 1.0623   | 0.253826  | 0.06043637 |
| 3 | D_DEL_chr3_11034 | 140825566 | 2634  | <DEL> | N     | 0.33    | 0.3312  | 0.833622   | 1 | 1.01147  | 0.0542848 | 0.01140472 |
| 3 | D_DEL_chr3_11438 | 145428682 | 487   | <DEL> | N     | 0.1247  | 0.1284  | 0.428229   | 1 | 0.940087 | 0.0779863 | -0.0617829 |
| 3 | D_DEL_chr3_11441 | 145502587 | 93    | N     | <DEL> | 0.4963  | 0.5014  | 0.764699   | 1 | 0.984246 | 0.053052  | -0.0158794 |

|   |                  |           |        |       |       |          |          |           |   |          |           |            |
|---|------------------|-----------|--------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 3 | D_DEL_chr3_1155  | 146667403 | 9671   | N     | <DEL> | 0.3037   | 0.3046   | 0.320086  | 1 | 1.05792  | 0.0566269 | 0.05630472 |
| 3 | D_DEL_chr3_1165  | 147726655 | 1703   | <DEL> | N     | 0.05304  | 0.04791  | 0.137144  | 1 | 1.19613  | 0.120477  | 0.17909135 |
| 3 | D_DEL_chr3_1172  | 148563653 | 3979   | N     | <DEL> | 0.2671   | 0.2593   | 0.898108  | 1 | 0.992479 | 0.0589574 | -0.0075494 |
| 3 | D_DEL_chr3_1177  | 149245583 | 6338   | <DEL> | N     | 0.04218  | 0.04464  | 0.597426  | 1 | 0.93224  | 0.132863  | -0.070165  |
| 3 | D_DEL_chr3_1182  | 149867195 | 3917   | <DEL> | N     | 0.02265  | 0.02375  | 0.986085  | 1 | 0.997016 | 0.171339  | -0.0029885 |
| 3 | D_DEL_chr3_1194  | 151793744 | 39530  | <DEL> | N     | 0.01238  | 0.009536 | 0.123912  | 1 | 1.44826  | 0.24072   | 0.37036284 |
| 3 | D_DEL_chr3_1200  | 152593949 | 1417   | N     | <DEL> | 0.1491   | 0.1501   | 0.179415  | 1 | 0.905378 | 0.0740396 | -0.0994027 |
| 3 | D_DEL_chr3_1211  | 153668539 | 56     | <DEL> | N     | 0.2084   | 0.2198   | 0.0861307 | 1 | 0.896972 | 0.0633718 | -0.1087306 |
| 3 | D_DEL_chr3_1245  | 158771531 | 50     | <DEL> | N     | 0.01473  | 0.01479  | 0.83662   | 1 | 1.0457   | 0.216678  | 0.04468652 |
| 3 | D_DEL_chr3_1262  | 160978481 | 2101   | <DEL> | N     | 0.0118   | 0.01134  | 0.158491  | 1 | 1.41667  | 0.246999  | 0.34830905 |
| 3 | PD_DEL_chr3_1263 | 11604259  | 939    | <DEL> | N     | 0.1993   | 0.2063   | 0.624578  | 1 | 0.969064 | 0.0642139 | -0.0314246 |
| 3 | D_DEL_chr3_1269  | 161887255 | 210    | <DEL> | N     | 0.1407   | 0.1333   | 0.748189  | 1 | 1.02505  | 0.0770759 | 0.02474139 |
| 3 | D_DEL_chr3_1279  | 162794346 | 114200 | <DEL> | N     | 0.3101   | 0.3183   | 0.132034  | 1 | 0.916619 | 0.0578057 | -0.0870634 |
| 3 | D_DEL_chr3_1304  | 165323153 | 42421  | <DEL> | N     | 0.01335  | 0.01223  | 0.587885  | 1 | 0.882774 | 0.230089  | -0.1246861 |
| 3 | D_DEL_chr3_1308  | 165644918 | 440    | <DEL> | N     | 0.01257  | 0.01151  | 0.235311  | 1 | 0.758643 | 0.23275   | -0.276224  |
| 3 | PD_DEL_chr3_1314 | 12310463  | 299    | <DEL> | N     | 0.2585   | 0.2449   | 0.0609974 | 1 | 1.11976  | 0.0603756 | 0.11311438 |
| 3 | D_DEL_chr3_1361  | 171534137 | 2110   | <DEL> | N     | 0.01763  | 0.01764  | 0.0377592 | 1 | 1.52381  | 0.202756  | 0.42121378 |
| 3 | D_DEL_chr3_1367  | 172556438 | 2355   | <DEL> | N     | 0.02112  | 0.0191   | 0.105353  | 1 | 1.35593  | 0.188021  | 0.30448757 |
| 3 | D_DEL_chr3_1376  | 173522939 | 1171   | <DEL> | N     | 0.03762  | 0.04058  | 0.293143  | 1 | 0.867874 | 0.1348    | -0.1417087 |
| 3 | PD_DEL_chr3_1385 | 13099942  | 1140   | <DEL> | N     | 0.0971   | 0.1008   | 0.929382  | 1 | 1.00768  | 0.0863283 | 0.00765066 |
| 3 | D_DEL_chr3_1393  | 175361204 | 5010   | <DEL> | N     | 0.09458  | 0.09464  | 0.832428  | 1 | 1.0193   | 0.0903567 | 0.01911612 |
| 3 | D_DEL_chr3_1393  | 175362305 | 5032   | <DEL> | N     | 0.009671 | 0.01134  | 0.956353  | 1 | 1.01462  | 0.265268  | 0.01451416 |
| 3 | D_DEL_chr3_1402  | 176169412 | 27696  | <DEL> | N     | 0.01702  | 0.01512  | 0.306984  | 1 | 1.23774  | 0.208783  | 0.21328714 |
| 3 | D_DEL_chr3_1423  | 178178709 | 57     | N     | <DEL> | 0.4706   | 0.4565   | 0.204087  | 1 | 1.0685   | 0.052168  | 0.0662558  |
| 3 | D_DEL_chr3_1438  | 179936553 | 463    | N     | <DEL> | 0.4632   | 0.4955   | 0.650541  | 1 | 0.976817 | 0.0517789 | -0.023456  |
| 3 | D_DEL_chr3_1478  | 184407587 | 193    | N     | <DEL> | 0.3838   | 0.38     | 0.554243  | 1 | 1.03182  | 0.0529618 | 0.03132423 |
| 3 | D_DEL_chr3_1501  | 186863244 | 4251   | N     | <DEL> | 0.02843  | 0.01853  | 0.351747  | 1 | 0.843979 | 0.182159  | -0.1696277 |
| 3 | D_DEL_chr3_1504  | 187108877 | 304    | <DEL> | N     | 0.4652   | 0.4736   | 0.624879  | 1 | 1.02588  | 0.0522611 | 0.02555078 |
| 3 | D_DEL_chr3_1509  | 188015084 | 1964   | <DEL> | N     | 0.1139   | 0.1319   | 0.243525  | 1 | 0.909822 | 0.081036  | -0.0945063 |
| 3 | PD_DEL_chr3_1518 | 15272559  | 130    | <DEL> | N     | 0.01842  | 0.01819  | 0.27845   | 1 | 0.80779  | 0.196947  | -0.2134532 |
| 3 | D_DEL_chr3_1523  | 189645633 | 7477   | <DEL> | N     | 0.07392  | 0.0722   | 0.479359  | 1 | 1.07606  | 0.103634  | 0.07330622 |
| 3 | D_DEL_chr3_1530  | 190401242 | 68     | N     | <DEL> | 0.4776   | 0.4791   | 0.928948  | 1 | 0.995313 | 0.0526828 | -0.004698  |
| 3 | D_DEL_chr3_1531  | 190572861 | 286    | <DEL> | N     | 0.4478   | 0.4604   | 0.873097  | 1 | 1.00835  | 0.0520531 | 0.00831533 |
| 3 | D_DEL_chr3_1538  | 191346896 | 6982   | <DEL> | N     | 0.2383   | 0.2443   | 0.81991   | 1 | 1.01412  | 0.0615989 | 0.01402124 |
| 3 | D_DEL_chr3_1539  | 191423224 | 54     | <DEL> | N     | 0.08204  | 0.08666  | 0.222271  | 1 | 0.894251 | 0.0915751 | -0.1117688 |
| 3 | D_DEL_chr3_1540  | 191546435 | 1984   | <DEL> | N     | 0.09226  | 0.09773  | 0.301955  | 1 | 0.914023 | 0.0870904 | -0.0898995 |
| 3 | D_DEL_chr3_1545  | 192071195 | 872    | <DEL> | N     | 0.08614  | 0.08672  | 0.0544228 | 1 | 1.20294  | 0.0960617 | 0.18476856 |
| 3 | D_DEL_chr3_1550  | 192587090 | 7935   | <DEL> | N     | 0.02032  | 0.01853  | 0.645166  | 1 | 1.08938  | 0.185906  | 0.08560873 |
| 3 | D_DEL_chr3_1554  | 193059075 | 5734   | <DEL> | N     | 0.09152  | 0.09608  | 0.110203  | 1 | 0.866782 | 0.089507  | -0.1429678 |
| 3 | D_DEL_chr3_1555  | 193157543 | 10073  | N     | <DEL> | 0.3234   | 0.3159   | 0.296558  | 1 | 1.06039  | 0.056175  | 0.05863676 |
| 3 | D_DEL_chr3_1556  | 193255534 | 51     | <DEL> | N     | 0.02949  | 0.02507  | 0.349866  | 1 | 0.863123 | 0.157456  | -0.1471981 |



|   |                  |           |      |       |       |          |          |            |   |          |           |            |
|---|------------------|-----------|------|-------|-------|----------|----------|------------|---|----------|-----------|------------|
| 3 | D_DEL_chr3_1557  | 193417675 | 7471 | <DEL> | N     | 0.02108  | 0.02537  | 0.937932   | 1 | 0.986777 | 0.170943  | -0.0133112 |
| 3 | PD_DEL_chr3_1564 | 15803666  | 1563 | <DEL> | N     | 0.07911  | 0.07773  | 0.879679   | 1 | 1.01462  | 0.0958738 | 0.01451416 |
| 3 | D_DEL_chr3_1569  | 194634673 | 1247 | <DEL> | N     | 0.02154  | 0.02073  | 0.977362   | 1 | 1.00522  | 0.183625  | 0.00520642 |
| 3 | D_DEL_chr3_1605  | 195778890 | 398  | <DEL> | N     | 0.02097  | 0.02246  | 0.80452    | 1 | 0.954531 | 0.18802   | -0.0465352 |
| 3 | D_DEL_chr3_1620  | 195880515 | 867  | <DEL> | N     | 0.01207  | 0.01569  | 0.686501   | 1 | 0.91117  | 0.230486  | -0.0930258 |
| 3 | D_DEL_chr3_1628  | 196047041 | 1073 | <DEL> | N     | 0.04509  | 0.04734  | 0.300609   | 1 | 0.881719 | 0.12161   | -0.1258819 |
| 3 | D_DEL_chr3_1632  | 196222118 | 2303 | <DEL> | N     | 0.02248  | 0.02198  | 0.843539   | 1 | 1.03621  | 0.180232  | 0.03556983 |
| 3 | D_DEL_chr3_1642  | 196615231 | 1162 | <DEL> | N     | 0.02847  | 0.02826  | 0.8636     | 1 | 0.972822 | 0.16039   | -0.0275542 |
| 3 | PD_DEL_chr3_1643 | 17085740  | 52   | <DEL> | N     | 0.01261  | 0.01099  | 0.556193   | 1 | 0.869915 | 0.236803  | -0.1393598 |
| 3 | D_DEL_chr3_1659  | 197589955 | 50   | <DEL> | N     | 0.4209   | 0.4437   | 0.227606   | 1 | 0.935956 | 0.0548563 | -0.0661868 |
| 3 | D_DEL_chr3_1661  | 197640078 | 598  | <DEL> | N     | 0.018    | 0.0168   | 0.0544659  | 1 | 1.45689  | 0.195676  | 0.37630403 |
| 3 | PD_DEL_chr3_1683 | 17499452  | 4682 | <DEL> | N     | 0.01317  | 0.01134  | 0.491799   | 1 | 1.17942  | 0.240056  | 0.16502279 |
| 3 | PD_DEL_chr3_1712 | 17907061  | 305  | <DEL> | N     | 0.06298  | 0.06818  | 0.526299   | 1 | 0.935844 | 0.104639  | -0.0663065 |
| 3 | PD_DEL_chr3_183  | 1122349   | 840  | <DEL> | N     | 0.01335  | 0.007919 | 0.03992    | 1 | 1.71422  | 0.26232   | 0.53895817 |
| 3 | PD_DEL_chr3_1890 | 20040515  | 107  | <DEL> | N     | 0.007555 | 0.01278  | 0.00810851 | 1 | 0.480567 | 0.276784  | -0.7327886 |
| 3 | PD_DEL_chr3_1907 | 20269968  | 6263 | <DEL> | N     | 0.0341   | 0.03168  | 0.228954   | 1 | 0.837589 | 0.147314  | -0.1772278 |
| 3 | PD_DEL_chr3_1972 | 20968028  | 3983 | <DEL> | N     | 0.04139  | 0.0412   | 0.533001   | 1 | 0.919429 | 0.134742  | -0.0840025 |
| 3 | PD_DEL_chr3_2039 | 21681967  | 2507 | <DEL> | N     | 0.06761  | 0.0668   | 0.386638   | 1 | 0.913276 | 0.104787  | -0.0907171 |
| 3 | PD_DEL_chr3_2097 | 22237452  | 7473 | <DEL> | N     | 0.01412  | 0.01259  | 0.570179   | 1 | 1.14582  | 0.239737  | 0.13612054 |
| 3 | PD_DEL_chr3_2235 | 23722582  | 314  | <DEL> | N     | 0.4774   | 0.4869   | 0.280296   | 1 | 0.943646 | 0.0537246 | -0.0580042 |
| 3 | PD_DEL_chr3_2418 | 26082357  | 127  | N     | <DEL> | 0.1868   | 0.2022   | 0.321534   | 1 | 1.06738  | 0.0657828 | 0.06520705 |
| 3 | PD_DEL_chr3_2482 | 26745228  | 306  | N     | <DEL> | 0.3238   | 0.3271   | 0.626454   | 1 | 0.9723   | 0.0577146 | -0.0280909 |
| 3 | PD_DEL_chr3_2583 | 28125982  | 309  | <DEL> | N     | 0.2725   | 0.2806   | 0.516622   | 1 | 1.03993  | 0.0603635 | 0.0391534  |
| 3 | PD_DEL_chr3_2632 | 28768481  | 7836 | <DEL> | N     | 0.009478 | 0.01098  | 0.615007   | 1 | 0.878699 | 0.257113  | -0.1293129 |
| 3 | PD_DEL_chr3_2698 | 29494469  | 692  | <DEL> | N     | 0.01729  | 0.01826  | 0.417916   | 1 | 0.842312 | 0.211846  | -0.1716048 |
| 3 | PD_DEL_chr3_2864 | 31502184  | 291  | <DEL> | N     | 0.06065  | 0.06506  | 0.332356   | 1 | 0.900265 | 0.108385  | -0.1050661 |
| 3 | PD_DEL_chr3_2910 | 32060560  | 5831 | N     | <DEL> | 0.3128   | 0.3111   | 0.734829   | 1 | 0.980804 | 0.0572265 | -0.0193826 |
| 3 | PD_DEL_chr3_2919 | 32162385  | 266  | <DEL> | N     | 0.286    | 0.2869   | 0.574572   | 1 | 1.03331  | 0.0583973 | 0.03276724 |
| 3 | PD_DEL_chr3_293  | 1740316   | 6530 | <DEL> | N     | 0.02398  | 0.02645  | 0.11184    | 1 | 0.763028 | 0.170103  | -0.2704606 |
| 3 | PD_DEL_chr3_2930 | 32379095  | 128  | N     | <DEL> | 0.4161   | 0.4135   | 0.313993   | 1 | 1.05524  | 0.0534052 | 0.05376823 |
| 3 | PD_DEL_chr3_2967 | 32765254  | 1315 | N     | <DEL> | 0.2696   | 0.2326   | 0.301886   | 1 | 0.937144 | 0.0628807 | -0.0649183 |
| 3 | PD_DEL_chr3_2974 | 32796771  | 796  | <DEL> | N     | 0.02017  | 0.02006  | 0.904263   | 1 | 1.02225  | 0.182975  | 0.02200608 |
| 3 | PD_DEL_chr3_2975 | 32797008  | 129  | <DEL> | N     | 0.01068  | 0.0105   | 0.770078   | 1 | 0.926837 | 0.259953  | -0.0759776 |
| 3 | PD_DEL_chr3_3026 | 33511715  | 868  | <DEL> | N     | 0.307    | 0.3286   | 0.605338   | 1 | 0.970213 | 0.0585203 | -0.0302396 |
| 3 | PD_DEL_chr3_3392 | 37936926  | 8510 | <DEL> | N     | 0.08781  | 0.08312  | 0.100143   | 1 | 1.17103  | 0.0960295 | 0.1578837  |
| 3 | PD_DEL_chr3_3406 | 38113464  | 120  | <DEL> | N     | 0.2357   | 0.2435   | 0.111357   | 1 | 0.907472 | 0.0609833 | -0.0970926 |
| 3 | PD_DEL_chr3_349  | 2120345   | 64   | <DEL> | N     | 0.3462   | 0.3669   | 0.267663   | 1 | 0.942022 | 0.0538821 | -0.0597267 |
| 3 | PD_DEL_chr3_3667 | 41689694  | 2571 | <DEL> | N     | 0.01242  | 0.01442  | 0.904989   | 1 | 1.02893  | 0.238899  | 0.02851943 |
| 3 | PD_DEL_chr3_3697 | 41983169  | 2587 | <DEL> | N     | 0.02401  | 0.02105  | 0.795692   | 1 | 0.956047 | 0.173594  | -0.0449482 |
| 3 | PD_DEL_chr3_3742 | 42796881  | 2437 | N     | <DEL> | 0.04642  | 0.02735  | 0.97043    | 1 | 0.994524 | 0.148135  | -0.005491  |
| 3 | PD_DEL_chr3_3900 | 45501804  | 8762 | <DEL> | N     | 0.01006  | 0.01044  | 0.229939   | 1 | 0.718399 | 0.275491  | -0.3307302 |

|   |                  |          |        |       |       |          |         |           |   |          |           |            |
|---|------------------|----------|--------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 3 | PD_DEL_chr3_40   | 186799   | 5922   | <DEL> | N     | 0.2056   | 0.222   | 0.826838  | 1 | 1.0142   | 0.0644421 | 0.01410012 |
| 3 | PD_DEL_chr3_4034 | 47497419 | 61     | <DEL> | N     | 0.01339  | 0.01283 | 0.920568  | 1 | 0.97747  | 0.228523  | -0.0227877 |
| 3 | PD_DEL_chr3_4067 | 47943471 | 3138   | <DEL> | N     | 0.0155   | 0.01495 | 0.977077  | 1 | 1.00612  | 0.212393  | 0.00610135 |
| 3 | PD_DEL_chr3_425  | 3116976  | 59     | N     | <DEL> | 0.4607   | 0.4638  | 0.992596  | 1 | 0.999505 | 0.0533759 | -0.0004951 |
| 3 | PD_DEL_chr3_4284 | 49938730 | 778    | <DEL> | N     | 0.3903   | 0.4158  | 0.867658  | 1 | 0.990795 | 0.0554987 | -0.0092476 |
| 3 | PD_DEL_chr3_4301 | 50086318 | 1062   | <DEL> | N     | 0.05377  | 0.06351 | 0.412302  | 1 | 0.910049 | 0.114968  | -0.0942568 |
| 3 | PD_DEL_chr3_4482 | 52993132 | 11750  | <DEL> | N     | 0.09536  | 0.09698 | 0.576267  | 1 | 1.05157  | 0.0899712 | 0.05028429 |
| 3 | PD_DEL_chr3_4605 | 54921897 | 56     | <DEL> | N     | 0.02091  | 0.01947 | 0.22877   | 1 | 1.24321  | 0.180883  | 0.21769674 |
| 3 | PD_DEL_chr3_4706 | 56570672 | 255    | N     | <DEL> | 0.1348   | 0.1274  | 0.608634  | 1 | 1.04052  | 0.0775688 | 0.03972059 |
| 3 | PD_DEL_chr3_4892 | 59139507 | 313    | <DEL> | N     | 0.2285   | 0.2288  | 0.738802  | 1 | 1.02113  | 0.0626981 | 0.02090986 |
| 3 | PD_DEL_chr3_4995 | 60369095 | 108    | <DEL> | N     | 0.01374  | 0.0144  | 0.645982  | 1 | 1.10448  | 0.216336  | 0.09937464 |
| 3 | PD_DEL_chr3_5021 | 60699597 | 109    | <DEL> | N     | 0.03329  | 0.0349  | 0.993047  | 1 | 0.998725 | 0.146414  | -0.0012758 |
| 3 | PD_DEL_chr3_5193 | 63149181 | 452    | <DEL> | N     | 0.0418   | 0.04086 | 0.151192  | 1 | 0.829778 | 0.130003  | -0.1865971 |
| 3 | PD_DEL_chr3_5330 | 65132119 | 1901   | <DEL> | N     | 0.06562  | 0.07827 | 0.308674  | 1 | 0.898436 | 0.105205  | -0.1070998 |
| 3 | PD_DEL_chr3_5336 | 65203196 | 25877  | <DEL> | N     | 0.06809  | 0.06855 | 0.946105  | 1 | 1.00703  | 0.103679  | 0.0070054  |
| 3 | PD_DEL_chr3_5401 | 66063585 | 298    | <DEL> | N     | 0.312    | 0.3121  | 0.47516   | 1 | 0.959427 | 0.058001  | -0.041419  |
| 3 | PD_DEL_chr3_5573 | 68585622 | 5480   | <DEL> | N     | 0.3445   | 0.3381  | 0.527485  | 1 | 1.03542  | 0.0550809 | 0.03480714 |
| 3 | PD_DEL_chr3_5586 | 68690531 | 8181   | N     | <DEL> | 0.3586   | 0.3586  | 0.614356  | 1 | 1.02797  | 0.0547415 | 0.02758598 |
| 3 | PD_DEL_chr3_5599 | 68841064 | 280    | <DEL> | N     | 0.3747   | 0.3825  | 0.115826  | 1 | 0.919719 | 0.0532182 | -0.0836871 |
| 3 | PD_DEL_chr3_5683 | 69964325 | 411    | <DEL> | N     | 0.2764   | 0.2684  | 0.8881    | 1 | 0.991684 | 0.0593457 | -0.0083508 |
| 3 | PD_DEL_chr3_5829 | 72330575 | 280    | <DEL> | N     | 0.2515   | 0.2617  | 0.530985  | 1 | 0.963129 | 0.0599645 | -0.0375679 |
| 3 | PD_DEL_chr3_5980 | 74716275 | 309    | <DEL> | N     | 0.4818   | 0.5121  | 0.810794  | 1 | 0.987386 | 0.0530253 | -0.0126942 |
| 3 | PD_DEL_chr3_5981 | 74740734 | 61     | N     | <DEL> | 0.4963   | 0.4962  | 0.177218  | 1 | 0.931713 | 0.0524172 | -0.0707305 |
| 3 | PD_DEL_chr3_6049 | 75374533 | 218488 | <DEL> | N     | 0.07088  | 0.06965 | 0.779561  | 1 | 0.970717 | 0.106186  | -0.0297203 |
| 3 | PD_DEL_chr3_619  | 4997706  | 1448   | <DEL> | N     | 0.008897 | 0.01151 | 0.43005   | 1 | 0.803389 | 0.277424  | -0.2189162 |
| 3 | PD_DEL_chr3_6431 | 78373187 | 109    | <DEL> | N     | 0.03715  | 0.03464 | 0.893932  | 1 | 1.01896  | 0.140886  | 0.0187825  |
| 3 | PD_DEL_chr3_6450 | 78553780 | 56     | <DEL> | N     | 0.01357  | 0.01084 | 0.126985  | 1 | 0.6991   | 0.23456   | -0.3579615 |
| 3 | PD_DEL_chr3_6461 | 78638213 | 50     | <DEL> | N     | 0.04095  | 0.04436 | 0.696872  | 1 | 0.950486 | 0.130362  | -0.0507818 |
| 3 | PD_DEL_chr3_6465 | 78730273 | 295    | N     | <DEL> | 0.4948   | 0.4959  | 0.980809  | 1 | 1.00124  | 0.0516906 | 0.00123923 |
| 3 | PD_DEL_chr3_6657 | 80876163 | 1290   | N     | <DEL> | 0.08491  | 0.08006 | 0.0553194 | 1 | 0.835742 | 0.0936334 | -0.1794353 |
| 3 | PD_DEL_chr3_6706 | 81292189 | 57     | <DEL> | N     | 0.01495  | 0.01569 | 0.682201  | 1 | 1.09175  | 0.21439   | 0.08778191 |
| 3 | PD_DEL_chr3_6727 | 81546418 | 4096   | <DEL> | N     | 0.05399  | 0.0495  | 0.0143861 | 1 | 1.34498  | 0.121097  | 0.29637914 |
| 3 | PD_DEL_chr3_6836 | 82860081 | 2099   | <DEL> | N     | 0.009675 | 0.01044 | 0.489176  | 1 | 1.18412  | 0.244351  | 0.16899988 |
| 3 | PD_DEL_chr3_6844 | 82887507 | 299    | N     | <DEL> | 0.3528   | 0.335   | 0.828338  | 1 | 1.0125   | 0.0572748 | 0.01242252 |
| 3 | PD_DEL_chr3_6962 | 83803977 | 2221   | N     | <DEL> | 0.1325   | 0.1207  | 0.253575  | 1 | 1.09258  | 0.0775546 | 0.08854187 |
| 3 | PD_DEL_chr3_7063 | 84650361 | 3380   | <DEL> | N     | 0.08839  | 0.09302 | 0.795762  | 1 | 0.975847 | 0.0944597 | -0.0244495 |
| 3 | PD_DEL_chr3_7503 | 95397364 | 314    | <DEL> | N     | 0.3292   | 0.3401  | 0.889859  | 1 | 0.992149 | 0.0569182 | -0.007882  |
| 3 | PD_DEL_chr3_7539 | 95746924 | 4995   | <DEL> | N     | 0.3055   | 0.2983  | 0.933658  | 1 | 1.00498  | 0.0597173 | 0.00496764 |
| 3 | PD_DEL_chr3_7752 | 97716284 | 309    | <DEL> | N     | 0.018    | 0.018   | 0.482006  | 1 | 0.874689 | 0.190429  | -0.1338869 |
| 3 | PD_DEL_chr3_7759 | 97781298 | 53     | <DEL> | N     | 0.0184   | 0.01909 | 0.395231  | 1 | 0.844478 | 0.198827  | -0.1690366 |
| 3 | PD_DEL_chr3_7893 | 99180219 | 3326   | N     | <DEL> | 0.1884   | 0.1893  | 0.749513  | 1 | 0.97917  | 0.0659298 | -0.02105   |

|   |                  |           |       |       |       |         |         |            |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 3 | PD_DEL_chr3_7898 | 99224962  | 5709  | <DEL> | N     | 0.2124  | 0.2242  | 0.371282   | 1 | 0.944657 | 0.0636784 | -0.0569334 |
| 3 | PD_DEL_chr3_791  | 6608473   | 4531  | <DEL> | N     | 0.1614  | 0.1647  | 0.91565    | 1 | 0.992356 | 0.0724451 | -0.0076734 |
| 3 | PD_DEL_chr3_797  | 6659187   | 379   | <DEL> | N     | 0.3838  | 0.3915  | 0.371751   | 1 | 1.05106  | 0.0557499 | 0.04979918 |
| 3 | PD_DEL_chr3_81   | 530081    | 311   | <DEL> | N     | 0.01586 | 0.0126  | 0.118422   | 1 | 1.37692  | 0.204843  | 0.31984912 |
| 3 | PD_DEL_chr3_8462 | 106110017 | 2755  | <DEL> | N     | 0.1157  | 0.1109  | 0.140844   | 1 | 1.13082  | 0.0834842 | 0.12294303 |
| 3 | PD_DEL_chr3_854  | 7358877   | 1554  | <DEL> | N     | 0.07491 | 0.06752 | 0.438393   | 1 | 1.08293  | 0.102813  | 0.07967033 |
| 3 | PD_DEL_chr3_8918 | 111524807 | 5343  | <DEL> | N     | 0.2671  | 0.2681  | 0.899656   | 1 | 1.00759  | 0.0599455 | 0.00756134 |
| 3 | PD_DEL_chr3_9175 | 115305404 | 325   | <DEL> | N     | 0.2235  | 0.2119  | 0.460076   | 1 | 1.04709  | 0.0622946 | 0.04601489 |
| 3 | PD_DEL_chr3_9271 | 116485987 | 344   | <DEL> | N     | 0.1857  | 0.1889  | 0.582198   | 1 | 1.03752  | 0.0669528 | 0.03683325 |
| 3 | PD_DEL_chr3_937  | 8177193   | 5330  | <DEL> | N     | 0.01183 | 0.01172 | 0.214763   | 1 | 1.36112  | 0.248518  | 0.30830789 |
| 3 | PD_DEL_chr3_9389 | 117910401 | 198   | <DEL> | N     | 0.1055  | 0.1082  | 0.818585   | 1 | 0.980627 | 0.0852943 | -0.0195631 |
| 3 | PD_DEL_chr3_9533 | 119701072 | 424   | <DEL> | N     | 0.1297  | 0.1361  | 0.151821   | 1 | 0.89684  | 0.075972  | -0.1088778 |
| 3 | PD_DEL_chr3_9559 | 120175138 | 458   | N     | <DEL> | 0.094   | 0.1047  | 0.88008    | 1 | 1.01396  | 0.0918749 | 0.01386346 |
| 3 | PD_DEL_chr3_9726 | 122144436 | 53    | <DEL> | N     | 0.1011  | 0.1017  | 0.599451   | 1 | 1.04538  | 0.0845043 | 0.04438046 |
| 3 | PD_DEL_chr3_988  | 8676310   | 1743  | <DEL> | N     | 0.01547 | 0.0171  | 0.864014   | 1 | 1.03738  | 0.214279  | 0.0366983  |
| 3 | PD_DEL_chr3_9906 | 125171209 | 766   | N     | <DEL> | 0.06228 | 0.04912 | 0.251598   | 1 | 1.14408  | 0.117406  | 0.13460082 |
| 4 | D_DEL_chr4_1008  | 112548833 | 292   | N     | <DEL> | 0.4673  | 0.443   | 0.0409453  | 1 | 1.11705  | 0.0541502 | 0.11069128 |
| 4 | D_DEL_chr4_1020  | 114253972 | 8707  | <DEL> | N     | 0.4418  | 0.4455  | 0.31665    | 1 | 1.05476  | 0.053242  | 0.05331325 |
| 4 | D_DEL_chr4_1024  | 114586396 | 6312  | <DEL> | N     | 0.1387  | 0.1286  | 0.123322   | 1 | 1.12723  | 0.0777176 | 0.1197633  |
| 4 | D_DEL_chr4_1025  | 114703452 | 262   | N     | <DEL> | 0.05068 | 0.03275 | 0.0273397  | 1 | 0.738992 | 0.137072  | -0.3024682 |
| 4 | D_DEL_chr4_1031  | 115245751 | 10273 | <DEL> | N     | 0.0476  | 0.05004 | 0.593896   | 1 | 0.935568 | 0.12491   | -0.0666014 |
| 4 | D_DEL_chr4_1061  | 118375200 | 323   | <DEL> | N     | 0.2946  | 0.2931  | 0.697685   | 1 | 0.977581 | 0.0583719 | -0.0226741 |
| 4 | D_DEL_chr4_1076  | 120486505 | 310   | <DEL> | N     | 0.2774  | 0.2917  | 0.818258   | 1 | 0.986724 | 0.0581632 | -0.0133649 |
| 4 | D_DEL_chr4_1079  | 120887787 | 304   | <DEL> | N     | 0.3193  | 0.3179  | 0.762554   | 1 | 0.983368 | 0.0555131 | -0.0167719 |
| 4 | D_DEL_chr4_1081  | 121361097 | 7699  | <DEL> | N     | 0.05996 | 0.05488 | 0.18112    | 1 | 1.1625   | 0.112594  | 0.15057286 |
| 4 | D_DEL_chr4_1091  | 122716596 | 144   | <DEL> | N     | 0.3205  | 0.3177  | 0.375132   | 1 | 1.05246  | 0.0576523 | 0.05113028 |
| 4 | D_DEL_chr4_1105  | 124750597 | 305   | <DEL> | N     | 0.3139  | 0.3071  | 0.619895   | 1 | 1.02899  | 0.0576223 | 0.02857774 |
| 4 | D_DEL_chr4_1133  | 128665292 | 81    | <DEL> | N     | 0.03731 | 0.0411  | 0.00316486 | 1 | 0.675778 | 0.132788  | -0.3918907 |
| 4 | D_DEL_chr4_1142  | 129669776 | 280   | <DEL> | N     | 0.4849  | 0.4714  | 0.0153476  | 1 | 1.13247  | 0.0513209 | 0.12440109 |
| 4 | D_DEL_chr4_1151  | 130773683 | 236   | N     | <DEL> | 0.2443  | 0.2355  | 0.280975   | 1 | 0.935229 | 0.0621109 | -0.0669639 |
| 4 | D_DEL_chr4_1166  | 132259583 | 2245  | <DEL> | N     | 0.3307  | 0.3475  | 0.772135   | 1 | 1.0169   | 0.0578747 | 0.01675878 |
| 4 | D_DEL_chr4_1189  | 134511847 | 2699  | N     | <DEL> | 0.4671  | 0.473   | 0.468661   | 1 | 0.962231 | 0.0531298 | -0.0385007 |
| 4 | D_DEL_chr4_1196  | 135006396 | 306   | <DEL> | N     | 0.3379  | 0.3392  | 0.430016   | 1 | 1.04426  | 0.0548777 | 0.0433085  |
| 4 | D_DEL_chr4_1218  | 137170850 | 8627  | <DEL> | N     | 0.1619  | 0.1595  | 0.532213   | 1 | 1.04593  | 0.0718891 | 0.04490644 |
| 4 | D_DEL_chr4_1247  | 141309629 | 2279  | <DEL> | N     | 0.4132  | 0.4255  | 0.827212   | 1 | 1.01152  | 0.0524693 | 0.01145415 |
| 4 | D_DEL_chr4_1253  | 142108392 | 55    | N     | <DEL> | 0.365   | 0.3508  | 0.00072558 | 1 | 1.21384  | 0.0573388 | 0.19378889 |
| 4 | D_DEL_chr4_1278  | 145517661 | 1637  | <DEL> | N     | 0.4344  | 0.4631  | 0.123662   | 1 | 0.918119 | 0.0554877 | -0.0854283 |
| 4 | D_DEL_chr4_1282  | 145998429 | 8159  | <DEL> | N     | 0.3985  | 0.4016  | 0.357936   | 1 | 1.05074  | 0.0538389 | 0.04949468 |
| 4 | D_DEL_chr4_1289  | 146808715 | 1223  | <DEL> | N     | 0.05691 | 0.05472 | 0.85955    | 1 | 1.02049  | 0.114647  | 0.0202829  |
| 4 | D_DEL_chr4_1295  | 147537804 | 52    | <DEL> | N     | 0.2638  | 0.2654  | 0.678812   | 1 | 0.976014 | 0.0586307 | -0.0242783 |
| 4 | D_DEL_chr4_1332  | 151917838 | 60    | <DEL> | N     | 0.0176  | 0.01332 | 0.218465   | 1 | 1.28973  | 0.206754  | 0.25443289 |

|   |                  |           |       |       |       |         |         |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 4 | D_DEL_chr4_1333  | 152174246 | 867   | <DEL> | N     | 0.05851 | 0.05582 | 0.344884  | 1 | 0.897426 | 0.114577  | -0.1082246 |
| 4 | D_DEL_chr4_1359  | 156038191 | 14645 | <DEL> | N     | 0.02129 | 0.01997 | 0.729939  | 1 | 0.93753  | 0.186862  | -0.0645065 |
| 4 | D_DEL_chr4_1380  | 158878862 | 1366  | <DEL> | N     | 0.04328 | 0.04249 | 0.343775  | 1 | 0.881275 | 0.133497  | -0.1263856 |
| 4 | D_DEL_chr4_1400  | 160957882 | 5909  | <DEL> | N     | 0.1845  | 0.1788  | 0.83394   | 1 | 1.01443  | 0.0683485 | 0.01432688 |
| 4 | D_DEL_chr4_1414  | 162357224 | 3136  | <DEL> | N     | 0.01012 | 0.01102 | 0.762911  | 1 | 1.07317  | 0.234101  | 0.07061689 |
| 4 | D_DEL_chr4_1422  | 163203866 | 413   | <DEL> | N     | 0.1353  | 0.134   | 0.354242  | 1 | 0.93019  | 0.0781164 | -0.0723664 |
| 4 | D_DEL_chr4_1425  | 163580802 | 299   | <DEL> | N     | 0.4607  | 0.4624  | 0.62529   | 1 | 1.02621  | 0.0529801 | 0.0258724  |
| 4 | D_DEL_chr4_1443  | 165546874 | 287   | <DEL> | N     | 0.1594  | 0.1586  | 0.441937  | 1 | 0.94615  | 0.0719895 | -0.0553542 |
| 4 | D_DEL_chr4_1456  | 167188081 | 6193  | <DEL> | N     | 0.09188 | 0.09068 | 0.0752789 | 1 | 0.848222 | 0.0925436 | -0.1646129 |
| 4 | PD_DEL_chr4_1472 | 9102643   | 22637 | <DEL> | N     | 0.08994 | 0.08276 | 0.155198  | 1 | 1.14037  | 0.0924084 | 0.13135277 |
| 4 | D_DEL_chr4_1473  | 169229956 | 103   | <DEL> | N     | 0.1394  | 0.1265  | 0.246632  | 1 | 1.09266  | 0.0764832 | 0.08861509 |
| 4 | D_DEL_chr4_1474  | 169357313 | 417   | N     | <DEL> | 0.4849  | 0.4955  | 0.513006  | 1 | 1.03559  | 0.0534527 | 0.03497131 |
| 4 | D_DEL_chr4_1481  | 170346526 | 6212  | <DEL> | N     | 0.04391 | 0.04678 | 0.635192  | 1 | 0.941832 | 0.126316  | -0.0599284 |
| 4 | D_DEL_chr4_1504  | 172503881 | 8488  | N     | <DEL> | 0.1979  | 0.2082  | 0.985034  | 1 | 0.998784 | 0.0648852 | -0.0012167 |
| 4 | D_DEL_chr4_1521  | 174583785 | 423   | <DEL> | N     | 0.02032 | 0.02232 | 0.475077  | 1 | 0.878157 | 0.181912  | -0.1299299 |
| 4 | PD_DEL_chr4_1522 | 9571442   | 104   | N     | <DEL> | 0.08839 | 0.07863 | 0.239276  | 1 | 1.12211  | 0.0978997 | 0.11521084 |
| 4 | D_DEL_chr4_1522  | 174703801 | 2018  | <DEL> | N     | 0.1889  | 0.1993  | 0.556272  | 1 | 0.9616   | 0.0665493 | -0.0391567 |
| 4 | PD_DEL_chr4_1542 | 9687286   | 71    | N     | <DEL> | 0.2863  | 0.2902  | 0.704872  | 1 | 1.02206  | 0.057608  | 0.0218202  |
| 4 | D_DEL_chr4_1560  | 179166580 | 2330  | <DEL> | N     | 0.01342 | 0.01157 | 0.629797  | 1 | 0.88781  | 0.246876  | -0.1189975 |
| 4 | PD_DEL_chr4_1566 | 9950685   | 231   | <DEL> | N     | 0.481   | 0.4718  | 0.398605  | 1 | 1.04575  | 0.0530005 | 0.04473433 |
| 4 | PD_DEL_chr4_1568 | 9955210   | 305   | <DEL> | N     | 0.4182  | 0.4129  | 0.447271  | 1 | 1.04254  | 0.0548117 | 0.04166004 |
| 4 | D_DEL_chr4_1571  | 180396136 | 165   | N     | <DEL> | 0.1176  | 0.1218  | 0.0252878 | 1 | 0.833366 | 0.0814862 | -0.1822824 |
| 4 | PD_DEL_chr4_1592 | 10209643  | 23300 | N     | <DEL> | 0.3242  | 0.3363  | 0.156737  | 1 | 0.924273 | 0.0556075 | -0.0787478 |
| 4 | PD_DEL_chr4_16   | 127126    | 6140  | N     | <DEL> | 0.4557  | 0.4503  | 0.600377  | 1 | 1.02774  | 0.0522246 | 0.02736222 |
| 4 | PD_DEL_chr4_1609 | 10390806  | 9751  | <DEL> | N     | 0.252   | 0.2548  | 0.753666  | 1 | 0.981256 | 0.0602989 | -0.0189219 |
| 4 | D_DEL_chr4_1620  | 185277724 | 311   | <DEL> | N     | 0.4538  | 0.4563  | 0.416976  | 1 | 1.0431   | 0.0519851 | 0.04219705 |
| 4 | D_DEL_chr4_1622  | 185520483 | 2436  | N     | <DEL> | 0.1364  | 0.1308  | 0.541292  | 1 | 0.954154 | 0.0768273 | -0.0469302 |
| 4 | D_DEL_chr4_1644  | 187050103 | 1566  | <DEL> | N     | 0.06941 | 0.07202 | 0.0556646 | 1 | 0.820934 | 0.103108  | -0.1973126 |
| 4 | D_DEL_chr4_1653  | 188038216 | 118   | N     | <DEL> | 0.2712  | 0.2756  | 0.296508  | 1 | 0.940863 | 0.0583909 | -0.0609577 |
| 4 | D_DEL_chr4_1654  | 188066721 | 65    | <DEL> | N     | 0.07931 | 0.08755 | 0.578152  | 1 | 0.950232 | 0.0918009 | -0.0510491 |
| 4 | D_DEL_chr4_1660  | 188270860 | 95    | <DEL> | N     | 0.00969 | 0.01316 | 0.820359  | 1 | 0.94914  | 0.229866  | -0.052199  |
| 4 | D_DEL_chr4_1680  | 189270449 | 8859  | <DEL> | N     | 0.3574  | 0.3584  | 0.664121  | 1 | 1.02377  | 0.0540936 | 0.02349189 |
| 4 | D_DEL_chr4_1709  | 190181157 | 503   | N     | <DEL> | 0.02321 | 0.02303 | 0.403303  | 1 | 1.15348  | 0.170846  | 0.14278346 |
| 4 | PD_DEL_chr4_1724 | 11796581  | 71    | <DEL> | N     | 0.01536 | 0.01303 | 0.938855  | 1 | 1.01808  | 0.233647  | 0.0179185  |
| 4 | PD_DEL_chr4_2446 | 20079864  | 63    | <DEL> | N     | 0.07694 | 0.07673 | 0.877133  | 1 | 0.985021 | 0.0976182 | -0.0150923 |
| 4 | PD_DEL_chr4_2547 | 21263912  | 264   | <DEL> | N     | 0.2932  | 0.2927  | 0.987473  | 1 | 0.999098 | 0.0574764 | -0.0009024 |
| 4 | PD_DEL_chr4_2813 | 24501222  | 1392  | <DEL> | N     | 0.03894 | 0.03909 | 0.419106  | 1 | 1.11738  | 0.137366  | 0.11098666 |
| 4 | PD_DEL_chr4_2854 | 25239430  | 138   | N     | <DEL> | 0.4402  | 0.4288  | 0.782571  | 1 | 1.01461  | 0.0525638 | 0.0145043  |
| 4 | PD_DEL_chr4_2868 | 25495543  | 298   | N     | <DEL> | 0.329   | 0.323   | 0.758458  | 1 | 1.01759  | 0.0566982 | 0.01743709 |
| 4 | PD_DEL_chr4_297  | 1065732   | 264   | <DEL> | N     | 0.03156 | 0.0324  | 0.69519   | 1 | 1.06142  | 0.152134  | 0.05960763 |
| 4 | PD_DEL_chr4_3281 | 30149803  | 998   | <DEL> | N     | 0.01238 | 0.01385 | 0.328274  | 1 | 0.799516 | 0.228877  | -0.2237487 |

|   |                  |          |        |       |       |         |         |            |   |          |           |            |
|---|------------------|----------|--------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 4 | PD_DEL_chr4_3385 | 31336870 | 194    | N     | <DEL> | 0.1271  | 0.1322  | 0.423426   | 1 | 0.940273 | 0.0769343 | -0.061585  |
| 4 | PD_DEL_chr4_3402 | 31491245 | 432    | N     | <DEL> | 0.1704  | 0.1967  | 0.45538    | 1 | 1.05481  | 0.0714887 | 0.05336066 |
| 4 | PD_DEL_chr4_3460 | 31959094 | 85     | <DEL> | N     | 0.01298 | 0.0153  | 0.0435391  | 1 | 0.640581 | 0.220649  | -0.4453797 |
| 4 | PD_DEL_chr4_351  | 1280101  | 53     | <DEL> | N     | 0.0197  | 0.01956 | 0.193006   | 1 | 0.77606  | 0.194759  | -0.2535254 |
| 4 | PD_DEL_chr4_3685 | 34246231 | 50     | <DEL> | N     | 0.04588 | 0.04613 | 0.472078   | 1 | 1.09192  | 0.122288  | 0.08793761 |
| 4 | PD_DEL_chr4_3707 | 34530009 | 319    | <DEL> | N     | 0.17    | 0.1668  | 0.497366   | 1 | 1.04844  | 0.06971   | 0.04730335 |
| 4 | PD_DEL_chr4_3712 | 34552806 | 921    | <DEL> | N     | 0.03906 | 0.04164 | 0.890199   | 1 | 1.01873  | 0.134441  | 0.01855675 |
| 4 | PD_DEL_chr4_3738 | 34777998 | 49323  | <DEL> | N     | 0.2704  | 0.2792  | 0.340517   | 1 | 0.94496  | 0.0593955 | -0.0566127 |
| 4 | PD_DEL_chr4_3769 | 35145177 | 5439   | <DEL> | N     | 0.01026 | 0.01062 | 0.676955   | 1 | 1.1184   | 0.268591  | 0.11189909 |
| 4 | PD_DEL_chr4_3952 | 37124302 | 56     | <DEL> | N     | 0.06024 | 0.06581 | 0.974143   | 1 | 0.996567 | 0.106091  | -0.0034389 |
| 4 | PD_DEL_chr4_4059 | 38262686 | 1204   | <DEL> | N     | 0.1433  | 0.1432  | 0.671979   | 1 | 1.03319  | 0.0771186 | 0.0326511  |
| 4 | PD_DEL_chr4_4070 | 38484478 | 55     | <DEL> | N     | 0.02074 | 0.02179 | 0.889089   | 1 | 1.02499  | 0.176963  | 0.02468286 |
| 4 | PD_DEL_chr4_4122 | 39029470 | 268    | N     | <DEL> | 0.3468  | 0.321   | 0.694414   | 1 | 1.02225  | 0.0560093 | 0.02200608 |
| 4 | PD_DEL_chr4_4142 | 39398486 | 58     | <DEL> | N     | 0.1847  | 0.1856  | 0.729081   | 1 | 1.02326  | 0.0663994 | 0.02299361 |
| 4 | PD_DEL_chr4_4151 | 39537586 | 660    | <DEL> | N     | 0.0118  | 0.01062 | 0.11357    | 1 | 1.48215  | 0.248677  | 0.39349374 |
| 4 | PD_DEL_chr4_4175 | 39702832 | 9405   | <DEL> | N     | 0.01064 | 0.01008 | 0.396119   | 1 | 1.24432  | 0.257598  | 0.2185892  |
| 4 | PD_DEL_chr4_4304 | 40566316 | 7417   | <DEL> | N     | 0.01935 | 0.02393 | 0.509773   | 1 | 0.888836 | 0.178768  | -0.1178425 |
| 4 | PD_DEL_chr4_4337 | 40878049 | 59     | <DEL> | N     | 0.01821 | 0.01836 | 0.85927    | 1 | 0.966781 | 0.190539  | -0.0337833 |
| 4 | PD_DEL_chr4_4454 | 42760661 | 6864   | <DEL> | N     | 0.1935  | 0.1917  | 0.614536   | 1 | 1.03457  | 0.0674772 | 0.03398588 |
| 4 | PD_DEL_chr4_4494 | 43267106 | 760    | <DEL> | N     | 0.0271  | 0.02753 | 0.419102   | 1 | 0.880841 | 0.157031  | -0.1268781 |
| 4 | PD_DEL_chr4_4554 | 43749788 | 324    | N     | <DEL> | 0.4037  | 0.3933  | 0.821832   | 1 | 0.98798  | 0.0536992 | -0.0120928 |
| 4 | PD_DEL_chr4_4621 | 44505262 | 450    | N     | <DEL> | 0.02244 | 0.04156 | 0.77852    | 1 | 0.953166 | 0.170547  | -0.0479662 |
| 4 | PD_DEL_chr4_478  | 1601232  | 710    | N     | <DEL> | 0.4865  | 0.4491  | 0.551833   | 1 | 1.0331   | 0.0547338 | 0.03256399 |
| 4 | PD_DEL_chr4_5135 | 53699707 | 1986   | <DEL> | N     | 0.03736 | 0.03383 | 0.798324   | 1 | 0.963961 | 0.143643  | -0.0367044 |
| 4 | PD_DEL_chr4_5233 | 55132403 | 318    | <DEL> | N     | 0.2777  | 0.2892  | 0.00603124 | 1 | 0.851905 | 0.0583669 | -0.1602803 |
| 4 | PD_DEL_chr4_5356 | 56894770 | 1178   | <DEL> | N     | 0.02152 | 0.02292 | 0.115874   | 1 | 0.747322 | 0.185241  | -0.2912591 |
| 4 | PD_DEL_chr4_5741 | 60464388 | 3080   | N     | <DEL> | 0.3095  | 0.3057  | 0.202118   | 1 | 1.07565  | 0.0571718 | 0.07292513 |
| 4 | PD_DEL_chr4_5957 | 62686372 | 51     | <DEL> | N     | 0.1273  | 0.1241  | 0.153875   | 1 | 1.12023  | 0.0796156 | 0.11353402 |
| 4 | PD_DEL_chr4_5970 | 62803708 | 6700   | <DEL> | N     | 0.1971  | 0.2012  | 0.512848   | 1 | 1.04437  | 0.0663436 | 0.04341383 |
| 4 | PD_DEL_chr4_6058 | 63268590 | 20228  | <DEL> | N     | 0.08066 | 0.07917 | 0.844762   | 1 | 0.980913 | 0.0984187 | -0.0192715 |
| 4 | PD_DEL_chr4_6095 | 63576827 | 325    | <DEL> | N     | 0.2758  | 0.2783  | 0.324654   | 1 | 0.942402 | 0.0602306 | -0.0593233 |
| 4 | PD_DEL_chr4_6115 | 63828610 | 20054  | <DEL> | N     | 0.3041  | 0.3065  | 0.756479   | 1 | 1.01784  | 0.0570056 | 0.01768273 |
| 4 | PD_DEL_chr4_6215 | 64868815 | 324    | <DEL> | N     | 0.2275  | 0.2321  | 0.692747   | 1 | 0.97465  | 0.064982  | -0.0256768 |
| 4 | PD_DEL_chr4_622  | 2548656  | 929    | <DEL> | N     | 0.01786 | 0.0182  | 0.0508945  | 1 | 1.47563  | 0.199288  | 0.38908502 |
| 4 | PD_DEL_chr4_6349 | 66256041 | 1732   | <DEL> | N     | 0.1807  | 0.1863  | 0.213476   | 1 | 0.917563 | 0.0691559 | -0.086034  |
| 4 | PD_DEL_chr4_6376 | 66516493 | 59     | <DEL> | N     | 0.06716 | 0.06629 | 0.475697   | 1 | 1.0763   | 0.103092  | 0.07352923 |
| 4 | PD_DEL_chr4_645  | 2748646  | 100    | <DEL> | N     | 0.03613 | 0.0349  | 0.210958   | 1 | 0.837145 | 0.1421    | -0.177758  |
| 4 | PD_DEL_chr4_6523 | 68508089 | 117302 | <DEL> | N     | 0.3188  | 0.3204  | 0.832966   | 1 | 1.01202  | 0.0566742 | 0.01194833 |
| 4 | PD_DEL_chr4_6590 | 69257645 | 109017 | <DEL> | N     | 0.1366  | 0.127   | 0.907466   | 1 | 1.00914  | 0.078263  | 0.00909848 |
| 4 | PD_DEL_chr4_6617 | 69601740 | 5350   | <DEL> | N     | 0.2255  | 0.2109  | 0.560441   | 1 | 1.0379   | 0.0638929 | 0.03719944 |
| 4 | PD_DEL_chr4_670  | 3016493  | 171    | <DEL> | N     | 0.02372 | 0.01915 | 0.0421316  | 1 | 1.43782  | 0.178686  | 0.36312808 |

|   |                  |           |       |       |       |         |          |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 4 | PD_DEL_chr4_6760 | 71060700  | 144   | N     | <DEL> | 0.2557  | 0.2526   | 0.526164  | 1 | 0.961291 | 0.0622803 | -0.0394781 |
| 4 | PD_DEL_chr4_6902 | 72686123  | 9260  | <DEL> | N     | 0.03366 | 0.03041  | 0.489341  | 1 | 1.10961  | 0.150436  | 0.1040086  |
| 4 | PD_DEL_chr4_6973 | 73542950  | 670   | <DEL> | N     | 0.01362 | 0.01861  | 0.288751  | 1 | 0.797261 | 0.213577  | -0.2265732 |
| 4 | PD_DEL_chr4_7204 | 76042800  | 7353  | <DEL> | N     | 0.01298 | 0.01333  | 0.660096  | 1 | 1.10372  | 0.224393  | 0.09868629 |
| 4 | PD_DEL_chr4_7725 | 82992777  | 5588  | <DEL> | N     | 0.01238 | 0.01008  | 0.540792  | 1 | 1.17173  | 0.259122  | 0.15848129 |
| 4 | PD_DEL_chr4_7758 | 83300566  | 274   | N     | <DEL> | 0.3222  | 0.3044   | 0.144362  | 1 | 0.920261 | 0.0569262 | -0.083098  |
| 4 | PD_DEL_chr4_7906 | 85389370  | 307   | N     | <DEL> | 0.4615  | 0.4394   | 0.684778  | 1 | 0.97833  | 0.0539678 | -0.0219082 |
| 4 | PD_DEL_chr4_7918 | 85540993  | 173   | <DEL> | N     | 0.01392 | 0.01503  | 0.292745  | 1 | 0.794785 | 0.218306  | -0.2296836 |
| 4 | PD_DEL_chr4_7931 | 85643235  | 322   | <DEL> | N     | 0.2767  | 0.2918   | 0.666362  | 1 | 0.974974 | 0.058783  | -0.0253445 |
| 4 | PD_DEL_chr4_7975 | 86173945  | 54    | <DEL> | N     | 0.1488  | 0.1442   | 0.182182  | 1 | 1.10144  | 0.0724258 | 0.09661841 |
| 4 | PD_DEL_chr4_8006 | 86725000  | 5791  | <DEL> | N     | 0.1178  | 0.1195   | 0.601604  | 1 | 1.04327  | 0.0811426 | 0.04236001 |
| 4 | PD_DEL_chr4_8033 | 87153587  | 4462  | <DEL> | N     | 0.01338 | 0.01425  | 0.608167  | 1 | 1.11943  | 0.22006   | 0.11281963 |
| 4 | PD_DEL_chr4_8097 | 87854497  | 303   | <DEL> | N     | 0.2956  | 0.2987   | 0.797347  | 1 | 0.985299 | 0.0576772 | -0.0148101 |
| 4 | PD_DEL_chr4_8104 | 87999639  | 453   | <DEL> | N     | 0.06891 | 0.06153  | 0.413304  | 1 | 1.0896   | 0.104887  | 0.08581066 |
| 4 | PD_DEL_chr4_8275 | 90648514  | 62    | <DEL> | N     | 0.466   | 0.4613   | 0.330553  | 1 | 0.950808 | 0.0518431 | -0.0504431 |
| 4 | PD_DEL_chr4_8304 | 91010406  | 4279  | <DEL> | N     | 0.3665  | 0.3615   | 0.603954  | 1 | 0.972806 | 0.0531503 | -0.0275706 |
| 4 | PD_DEL_chr4_8307 | 91012564  | 2253  | <DEL> | N     | 0.346   | 0.3483   | 0.45322   | 1 | 0.958756 | 0.0561538 | -0.0421187 |
| 4 | PD_DEL_chr4_8318 | 91152723  | 7365  | <DEL> | N     | 0.01819 | 0.01692  | 0.478891  | 1 | 1.158    | 0.207172  | 0.14669438 |
| 4 | PD_DEL_chr4_8370 | 91623848  | 3184  | <DEL> | N     | 0.0266  | 0.03226  | 0.716744  | 1 | 0.943882 | 0.159183  | -0.0577541 |
| 4 | PD_DEL_chr4_8419 | 91984815  | 50    | <DEL> | N     | 0.0855  | 0.08026  | 0.540487  | 1 | 1.05845  | 0.0928033 | 0.05680557 |
| 4 | PD_DEL_chr4_8471 | 92471927  | 306   | <DEL> | N     | 0.3509  | 0.3589   | 0.161374  | 1 | 0.926414 | 0.0545779 | -0.0764341 |
| 4 | PD_DEL_chr4_849  | 4119776   | 31776 | <DEL> | N     | 0.2809  | 0.2852   | 0.90241   | 1 | 0.992925 | 0.0579013 | -0.0071001 |
| 4 | PD_DEL_chr4_8499 | 92652603  | 417   | <DEL> | N     | 0.06654 | 0.05998  | 0.446095  | 1 | 1.08548  | 0.107645  | 0.08202229 |
| 4 | PD_DEL_chr4_8523 | 92934376  | 6038  | <DEL> | N     | 0.1165  | 0.1239   | 0.59015   | 1 | 0.956613 | 0.0823524 | -0.0443564 |
| 4 | PD_DEL_chr4_8580 | 93517943  | 83    | N     | <DEL> | 0.4874  | 0.4698   | 0.120668  | 1 | 1.08301  | 0.0513817 | 0.0797442  |
| 4 | PD_DEL_chr4_8668 | 94860806  | 172   | <DEL> | N     | 0.01187 | 0.01067  | 0.275538  | 1 | 0.757881 | 0.254245  | -0.2772289 |
| 4 | PD_DEL_chr4_8803 | 96650963  | 307   | <DEL> | N     | 0.4354  | 0.4514   | 0.958006  | 1 | 0.997121 | 0.0547623 | -0.0028832 |
| 4 | PD_DEL_chr4_8821 | 96863634  | 5491  | <DEL> | N     | 0.01683 | 0.01997  | 0.33997   | 1 | 0.825626 | 0.200805  | -0.1916134 |
| 4 | PD_DEL_chr4_8849 | 97189506  | 313   | <DEL> | N     | 0.3224  | 0.3222   | 0.630779  | 1 | 0.972797 | 0.057382  | -0.0275799 |
| 4 | PD_DEL_chr4_8852 | 97212239  | 299   | <DEL> | N     | 0.3164  | 0.3222   | 0.344256  | 1 | 0.947794 | 0.0566912 | -0.0536181 |
| 4 | PD_DEL_chr4_8900 | 97669514  | 305   | N     | <DEL> | 0.4793  | 0.4644   | 0.881554  | 1 | 0.991859 | 0.0548616 | -0.0081743 |
| 4 | PD_DEL_chr4_9070 | 100323694 | 259   | N     | <DEL> | 0.1917  | 0.1914   | 0.827154  | 1 | 0.98527  | 0.0679626 | -0.0148396 |
| 4 | PD_DEL_chr4_9275 | 102857515 | 2412  | <DEL> | N     | 0.01919 | 0.01694  | 0.421626  | 1 | 1.17355  | 0.199144  | 0.16003334 |
| 4 | PD_DEL_chr4_9276 | 102857866 | 4623  | <DEL> | N     | 0.02205 | 0.01997  | 0.537978  | 1 | 1.12194  | 0.18682   | 0.11505933 |
| 4 | PD_DEL_chr4_94   | 618530    | 62    | <DEL> | N     | 0.02853 | 0.02623  | 0.964276  | 1 | 1.00704  | 0.156728  | 0.00701533 |
| 4 | PD_DEL_chr4_9505 | 105316397 | 626   | <DEL> | N     | 0.04344 | 0.04126  | 0.779507  | 1 | 1.03716  | 0.130326  | 0.03648621 |
| 4 | PD_DEL_chr4_9555 | 106135421 | 6784  | <DEL> | N     | 0.2565  | 0.2492   | 0.117194  | 1 | 1.0986   | 0.060021  | 0.09403664 |
| 4 | PD_DEL_chr4_9647 | 107142040 | 12848 | <DEL> | N     | 0.03037 | 0.03077  | 0.0435524 | 1 | 1.35812  | 0.151657  | 0.30610139 |
| 4 | PD_DEL_chr4_9655 | 107206671 | 3886  | N     | <DEL> | 0.01528 | 0.008996 | 0.214749  | 1 | 0.735093 | 0.248069  | -0.3077583 |
| 4 | PD_DEL_chr4_974  | 5833163   | 302   | <DEL> | N     | 0.2312  | 0.2313   | 0.226812  | 1 | 1.07843  | 0.0624703 | 0.07550628 |
| 4 | PD_DEL_chr4_9990 | 111316365 | 4891  | <DEL> | N     | 0.1275  | 0.1199   | 0.0574913 | 1 | 1.16967  | 0.0825143 | 0.15672166 |

|   |                  |           |       |       |       |          |         |          |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|----------|---------|----------|---|----------|-----------|------------|
| 5 | D_DEL_chr5_1015  | 113545733 | 306   | <DEL> | N     | 0.324    | 0.31    | 0.122939 | 1 | 1.09203  | 0.0570716 | 0.08803835 |
| 5 | D_DEL_chr5_1017  | 113820870 | 16232 | <DEL> | N     | 0.01219  | 0.01241 | 0.862885 | 1 | 0.959606 | 0.238749  | -0.0412325 |
| 5 | D_DEL_chr5_1019  | 113990908 | 10111 | <DEL> | N     | 0.01315  | 0.01493 | 0.105023 | 1 | 0.695434 | 0.224075  | -0.3632192 |
| 5 | D_DEL_chr5_1019  | 114123358 | 305   | <DEL> | N     | 0.3164   | 0.3332  | 0.530552 | 1 | 1.03655  | 0.0572366 | 0.03589789 |
| 5 | D_DEL_chr5_1028  | 114989663 | 9663  | <DEL> | N     | 0.07466  | 0.04678 | 0.811936 | 1 | 1.02775  | 0.115024  | 0.02737195 |
| 5 | D_DEL_chr5_1034  | 115633589 | 525   | <DEL> | N     | 0.3632   | 0.3669  | 0.677137 | 1 | 0.977555 | 0.0545211 | -0.0227007 |
| 5 | D_DEL_chr5_1054  | 118051404 | 6784  | <DEL> | N     | 0.08608  | 0.08988 | 0.238281 | 1 | 0.895916 | 0.0932019 | -0.1099086 |
| 5 | D_DEL_chr5_1061  | 118539730 | 1940  | <DEL> | N     | 0.007376 | 0.01279 | 0.270443 | 1 | 0.743104 | 0.269426  | -0.2969193 |
| 5 | D_DEL_chr5_1069  | 119121869 | 1101  | <DEL> | N     | 0.01142  | 0.01062 | 0.739283 | 1 | 1.08907  | 0.256376  | 0.08532412 |
| 5 | D_DEL_chr5_1074  | 119702382 | 3614  | <DEL> | N     | 0.0236   | 0.02195 | 0.403342 | 1 | 1.15035  | 0.167612  | 0.14006624 |
| 5 | D_DEL_chr5_1096  | 121723537 | 778   | N     | <DEL> | 0.03559  | 0.03113 | 0.395916 | 1 | 1.13119  | 0.145205  | 0.12327018 |
| 5 | D_DEL_chr5_1096  | 121757362 | 52    | <DEL> | N     | 0.03029  | 0.03247 | 0.853379 | 1 | 0.972276 | 0.152134  | -0.0281156 |
| 5 | PD_DEL_chr5_11   | 14086     | 6689  | <DEL> | N     | 0.04175  | 0.03601 | 0.70876  | 1 | 1.05215  | 0.136086  | 0.05083569 |
| 5 | PD_DEL_chr5_1107 | 3327208   | 307   | <DEL> | N     | 0.01398  | 0.01913 | 0.155733 | 1 | 0.751907 | 0.200865  | -0.2851426 |
| 5 | D_DEL_chr5_1133  | 126505444 | 191   | <DEL> | N     | 0.4369   | 0.4356  | 0.290599 | 1 | 0.943817 | 0.0547144 | -0.057823  |
| 5 | D_DEL_chr5_1141  | 127122686 | 437   | <DEL> | N     | 0.4559   | 0.4502  | 0.664424 | 1 | 1.02328  | 0.0530472 | 0.02301315 |
| 5 | D_DEL_chr5_1146  | 127836640 | 948   | N     | <DEL> | 0.3066   | 0.2917  | 0.287983 | 1 | 0.940957 | 0.0572745 | -0.0608578 |
| 5 | D_DEL_chr5_1148  | 128071604 | 3620  | <DEL> | N     | 0.2269   | 0.2227  | 0.626205 | 1 | 1.03204  | 0.0647472 | 0.03153743 |
| 5 | D_DEL_chr5_1159  | 129407924 | 56    | <DEL> | N     | 0.04903  | 0.04949 | 0.396939 | 1 | 1.10508  | 0.117947  | 0.09991773 |
| 5 | D_DEL_chr5_1191  | 133798987 | 1810  | <DEL> | N     | 0.2726   | 0.2755  | 0.874681 | 1 | 0.990712 | 0.0591642 | -0.0093314 |
| 5 | D_DEL_chr5_1206  | 135779507 | 5516  | N     | <DEL> | 0.489    | 0.4924  | 0.973596 | 1 | 1.00177  | 0.0533225 | 0.00176844 |
| 5 | D_DEL_chr5_1220  | 137686889 | 1308  | N     | <DEL> | 0.2493   | 0.2418  | 0.861226 | 1 | 1.01105  | 0.0628876 | 0.01098939 |
| 5 | D_DEL_chr5_1227  | 138471539 | 9631  | <DEL> | N     | 0.02205  | 0.01547 | 0.536177 | 1 | 1.13224  | 0.200772  | 0.12419797 |
| 5 | D_DEL_chr5_1228  | 138537921 | 388   | <DEL> | N     | 0.03763  | 0.0423  | 0.56632  | 1 | 0.926575 | 0.132978  | -0.0762603 |
| 5 | D_DEL_chr5_1238  | 139988062 | 1973  | <DEL> | N     | 0.01703  | 0.01674 | 0.930995 | 1 | 1.01802  | 0.206237  | 0.01785956 |
| 5 | D_DEL_chr5_1242  | 140717247 | 7254  | <DEL> | N     | 0.04165  | 0.04524 | 0.786479 | 1 | 1.03739  | 0.135527  | 0.03670794 |
| 5 | D_DEL_chr5_1243  | 140842552 | 16794 | <DEL> | N     | 0.09741  | 0.1098  | 0.374362 | 1 | 0.926244 | 0.0862492 | -0.0766176 |
| 5 | D_DEL_chr5_1250  | 142079635 | 305   | <DEL> | N     | 0.3901   | 0.3901  | 0.745268 | 1 | 0.982628 | 0.0539416 | -0.0175247 |
| 5 | D_DEL_chr5_1258  | 143336736 | 246   | <DEL> | N     | 0.02605  | 0.02979 | 0.48567  | 1 | 0.895375 | 0.158507  | -0.1105127 |
| 5 | D_DEL_chr5_1260  | 143555815 | 298   | N     | <DEL> | 0.3507   | 0.328   | 0.160144 | 1 | 1.08425  | 0.0575893 | 0.0808885  |
| 5 | D_DEL_chr5_1264  | 144026519 | 3248  | <DEL> | N     | 0.009671 | 0.01241 | 0.770388 | 1 | 0.930297 | 0.247549  | -0.0722514 |
| 5 | D_DEL_chr5_1274  | 145093711 | 366   | <DEL> | N     | 0.1047   | 0.09863 | 0.298622 | 1 | 1.095    | 0.0873276 | 0.09075436 |
| 5 | D_DEL_chr5_1291  | 147243089 | 432   | <DEL> | N     | 0.4178   | 0.4295  | 0.185842 | 1 | 0.93122  | 0.0538634 | -0.0712597 |
| 5 | D_DEL_chr5_1297  | 148082603 | 305   | N     | <DEL> | 0.4014   | 0.3714  | 0.919294 | 1 | 1.00574  | 0.05644   | 0.00572359 |
| 5 | D_DEL_chr5_1312  | 150062178 | 422   | <DEL> | N     | 0.1283   | 0.1219  | 0.588286 | 1 | 1.04323  | 0.0781757 | 0.04232167 |
| 5 | D_DEL_chr5_1315  | 150823598 | 20103 | <DEL> | N     | 0.09188  | 0.08456 | 0.709727 | 1 | 0.96568  | 0.093823  | -0.0349228 |
| 5 | D_DEL_chr5_1319  | 151410172 | 2893  | <DEL> | N     | 0.1592   | 0.1579  | 0.714766 | 1 | 1.02729  | 0.0736931 | 0.02692427 |
| 5 | D_DEL_chr5_1348  | 154744630 | 308   | <DEL> | N     | 0.07529  | 0.06503 | 0.593497 | 1 | 1.05644  | 0.102868  | 0.05490477 |
| 5 | D_DEL_chr5_1349  | 154936357 | 85    | N     | <DEL> | 0.0147   | 0.01529 | 0.280949 | 1 | 1.26423  | 0.217457  | 0.23446324 |
| 5 | D_DEL_chr5_1358  | 156049000 | 13100 | <DEL> | N     | 0.1937   | 0.1865  | 0.644966 | 1 | 0.969256 | 0.0677702 | -0.0312265 |
| 5 | D_DEL_chr5_1380  | 159468394 | 3304  | <DEL> | N     | 0.0617   | 0.06135 | 0.825652 | 1 | 1.02486  | 0.11148   | 0.02455602 |

|   |                  |           |       |       |       |          |         |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 5 | D_DEL_chr5_1389  | 160652395 | 322   | <DEL> | N     | 0.02756  | 0.0263  | 0.0842426 | 1 | 1.32286  | 0.162052  | 0.27979606 |
| 5 | D_DEL_chr5_1446  | 167458254 | 151   | <DEL> | N     | 0.0376   | 0.03552 | 0.18677   | 1 | 1.19905  | 0.137505  | 0.18152958 |
| 5 | D_DEL_chr5_1459  | 169315535 | 218   | N     | <DEL> | 0.1988   | 0.2067  | 0.857076  | 1 | 1.01178  | 0.0650508 | 0.01171116 |
| 5 | D_DEL_chr5_1464  | 170040690 | 255   | <DEL> | N     | 0.02205  | 0.01946 | 0.160356  | 1 | 1.29043  | 0.181622  | 0.2549755  |
| 5 | D_DEL_chr5_1467  | 170702852 | 1534  | <DEL> | N     | 0.01691  | 0.03532 | 0.348156  | 1 | 0.844678 | 0.179925  | -0.1687998 |
| 5 | D_DEL_chr5_1467  | 170731823 | 79    | N     | <DEL> | 0.2596   | 0.269   | 0.745572  | 1 | 0.980655 | 0.0602012 | -0.0195346 |
| 5 | D_DEL_chr5_1494  | 173273244 | 310   | <DEL> | N     | 0.2179   | 0.2307  | 0.284095  | 1 | 0.935044 | 0.0626998 | -0.0671617 |
| 5 | D_DEL_chr5_1495  | 173546011 | 1736  | <DEL> | N     | 0.2139   | 0.2232  | 0.593484  | 1 | 1.03464  | 0.0638008 | 0.03405354 |
| 5 | D_DEL_chr5_1537  | 177961747 | 12509 | <DEL> | N     | 0.01141  | 0.01026 | 0.39327   | 1 | 1.24296  | 0.254769  | 0.21749563 |
| 5 | D_DEL_chr5_1550  | 178679585 | 5253  | <DEL> | N     | 0.2217   | 0.2325  | 0.265438  | 1 | 0.93121  | 0.0639985 | -0.0712705 |
| 5 | D_DEL_chr5_1550  | 178682065 | 4345  | <DEL> | N     | 0.2147   | 0.2274  | 0.257818  | 1 | 0.927953 | 0.0660808 | -0.0747742 |
| 5 | D_DEL_chr5_1553  | 178841026 | 206   | <DEL> | N     | 0.01278  | 0.0144  | 0.535605  | 1 | 0.87206  | 0.22099   | -0.1368971 |
| 5 | D_DEL_chr5_1565  | 179640167 | 491   | <DEL> | N     | 0.1191   | 0.1187  | 0.132967  | 1 | 0.885784 | 0.0807204 | -0.1212822 |
| 5 | D_DEL_chr5_1575  | 180420459 | 1149  | <DEL> | N     | 0.09326  | 0.09444 | 0.0171177 | 1 | 1.23966  | 0.0901088 | 0.21483715 |
| 5 | D_DEL_chr5_1583  | 180948167 | 55469 | <DEL> | N     | 0.2981   | 0.3089  | 0.802598  | 1 | 1.01464  | 0.0581197 | 0.01453387 |
| 5 | PD_DEL_chr5_1588 | 8702248   | 46444 | <DEL> | N     | 0.0294   | 0.02699 | 0.924195  | 1 | 1.01532  | 0.159755  | 0.01520383 |
| 5 | D_DEL_chr5_1589  | 181252855 | 1558  | <DEL> | N     | 0.05715  | 0.05566 | 0.0466886 | 1 | 0.791714 | 0.117417  | -0.2335551 |
| 5 | PD_DEL_chr5_1695 | 9989987   | 212   | N     | <DEL> | 0.02012  | 0.02375 | 0.0157513 | 1 | 0.64331  | 0.18269   | -0.4411286 |
| 5 | PD_DEL_chr5_1895 | 12425987  | 2612  | <DEL> | N     | 0.01838  | 0.01745 | 0.310765  | 1 | 1.22669  | 0.201575  | 0.20431949 |
| 5 | PD_DEL_chr5_1896 | 12426916  | 1709  | <DEL> | N     | 0.01857  | 0.01763 | 0.293046  | 1 | 1.23419  | 0.200114  | 0.21041488 |
| 5 | PD_DEL_chr5_1940 | 12810907  | 9504  | <DEL> | N     | 0.4841   | 0.4757  | 0.965153  | 1 | 0.9977   | 0.0527122 | -0.0023026 |
| 5 | PD_DEL_chr5_2079 | 14308338  | 395   | <DEL> | N     | 0.03552  | 0.03743 | 0.818454  | 1 | 0.968809 | 0.138051  | -0.0316878 |
| 5 | PD_DEL_chr5_2262 | 16944127  | 67    | <DEL> | N     | 0.01804  | 0.01792 | 0.603051  | 1 | 1.10864  | 0.198325  | 0.10313404 |
| 5 | PD_DEL_chr5_2275 | 16982834  | 74    | <DEL> | N     | 0.2671   | 0.2569  | 0.694248  | 1 | 1.02338  | 0.0587799 | 0.02311087 |
| 5 | PD_DEL_chr5_2313 | 17342668  | 14379 | <DEL> | N     | 0.01586  | 0.01835 | 0.0281401 | 1 | 0.632151 | 0.20891   | -0.458627  |
| 5 | PD_DEL_chr5_2339 | 17580548  | 51000 | N     | <DEL> | 0.01006  | 0.01259 | 0.348868  | 1 | 0.801948 | 0.235604  | -0.2207115 |
| 5 | PD_DEL_chr5_2348 | 17610693  | 42319 | <DEL> | N     | 0.02768  | 0.02051 | 0.13239   | 1 | 1.29441  | 0.171492  | 0.25805499 |
| 5 | PD_DEL_chr5_2352 | 17618760  | 26676 | <DEL> | N     | 0.01336  | 0.01223 | 0.205445  | 1 | 1.35054  | 0.237331  | 0.30050451 |
| 5 | PD_DEL_chr5_2472 | 18643207  | 5174  | <DEL> | N     | 0.01044  | 0.01044 | 0.181006  | 1 | 1.40239  | 0.252813  | 0.33817792 |
| 5 | PD_DEL_chr5_2527 | 19078446  | 481   | <DEL> | N     | 0.07544  | 0.07307 | 0.971454  | 1 | 0.996448 | 0.0994498 | -0.0035583 |
| 5 | PD_DEL_chr5_2734 | 20907528  | 365   | <DEL> | N     | 0.01122  | 0.01098 | 0.577504  | 1 | 1.14749  | 0.246988  | 0.13757695 |
| 5 | PD_DEL_chr5_2747 | 20990877  | 195   | <DEL> | N     | 0.4097   | 0.3965  | 0.12316   | 1 | 1.08733  | 0.0543094 | 0.08372515 |
| 5 | PD_DEL_chr5_2775 | 21449767  | 2550  | <DEL> | N     | 0.3544   | 0.3717  | 0.918162  | 1 | 0.994209 | 0.0565267 | -0.0058078 |
| 5 | PD_DEL_chr5_2783 | 21478293  | 164   | N     | <DEL> | 0.1263   | 0.1132  | 0.680028  | 1 | 1.03357  | 0.0800668 | 0.03301883 |
| 5 | PD_DEL_chr5_2827 | 21710912  | 556   | <DEL> | N     | 0.008398 | 0.01543 | 0.456466  | 1 | 1.20014  | 0.244993  | 0.18243822 |
| 5 | PD_DEL_chr5_2935 | 22872802  | 896   | N     | <DEL> | 0.2807   | 0.2719  | 0.574735  | 1 | 1.03452  | 0.060491  | 0.03393755 |
| 5 | PD_DEL_chr5_2988 | 23470070  | 54    | <DEL> | N     | 0.01162  | 0.0117  | 0.269208  | 1 | 0.76002  | 0.248361  | -0.2744105 |
| 5 | PD_DEL_chr5_3082 | 24370433  | 2894  | N     | <DEL> | 0.1054   | 0.08744 | 0.414803  | 1 | 1.0746   | 0.0882311 | 0.0719485  |
| 5 | PD_DEL_chr5_3117 | 24777799  | 8119  | <DEL> | N     | 0.009284 | 0.01116 | 0.0867572 | 1 | 0.623674 | 0.275653  | -0.4721275 |
| 5 | PD_DEL_chr5_3264 | 26154126  | 60    | <DEL> | N     | 0.2731   | 0.2618  | 0.104141  | 1 | 1.09987  | 0.0585761 | 0.09519199 |
| 5 | PD_DEL_chr5_3349 | 26796592  | 5195  | <DEL> | N     | 0.3406   | 0.3481  | 0.357792  | 1 | 0.951224 | 0.0543788 | -0.0500057 |



|   |                  |           |       |       |       |         |          |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 5 | PD_DEL_chr5_3495 | 28356849  | 290   | <DEL> | N     | 0.3464  | 0.335    | 0.223337  | 1 | 1.06992  | 0.0554974 | 0.06758388 |
| 5 | PD_DEL_chr5_3653 | 29858563  | 59    | N     | <DEL> | 0.3778  | 0.3859   | 0.290479  | 1 | 1.05967  | 0.0548256 | 0.05795754 |
| 5 | PD_DEL_chr5_3807 | 31570381  | 55    | <DEL> | N     | 0.2165  | 0.2232   | 0.145789  | 1 | 0.912509 | 0.0629447 | -0.0915573 |
| 5 | PD_DEL_chr5_3889 | 32260035  | 1213  | <DEL> | N     | 0.01125 | 0.01278  | 0.134602  | 1 | 0.695732 | 0.242475  | -0.3627908 |
| 5 | PD_DEL_chr5_4122 | 35191048  | 321   | <DEL> | N     | 0.258   | 0.2612   | 0.400977  | 1 | 0.950156 | 0.0608769 | -0.0511291 |
| 5 | PD_DEL_chr5_438  | 836030    | 905   | <DEL> | N     | 0.05168 | 0.05668  | 0.40756   | 1 | 1.09958  | 0.114625  | 0.09492829 |
| 5 | PD_DEL_chr5_4453 | 39665017  | 93    | <DEL> | N     | 0.05334 | 0.05521  | 0.87271   | 1 | 0.982111 | 0.112671  | -0.0180509 |
| 5 | PD_DEL_chr5_4631 | 41603901  | 309   | <DEL> | N     | 0.1671  | 0.1702   | 0.98016   | 1 | 1.00175  | 0.0703447 | 0.00174847 |
| 5 | PD_DEL_chr5_4683 | 42165839  | 1828  | N     | <DEL> | 0.3056  | 0.2985   | 0.930268  | 1 | 1.00494  | 0.0563687 | 0.00492784 |
| 5 | PD_DEL_chr5_4951 | 45004718  | 9708  | <DEL> | N     | 0.2143  | 0.2192   | 0.222274  | 1 | 0.92471  | 0.0641339 | -0.0782751 |
| 5 | PD_DEL_chr5_5419 | 54459702  | 87    | N     | <DEL> | 0.1996  | 0.1967   | 0.34816   | 1 | 0.941063 | 0.0647493 | -0.0607452 |
| 5 | PD_DEL_chr5_5656 | 58027651  | 10300 | N     | <DEL> | 0.2039  | 0.2199   | 0.900943  | 1 | 1.00806  | 0.0645299 | 0.00802769 |
| 5 | PD_DEL_chr5_5829 | 60193397  | 7839  | <DEL> | N     | 0.03965 | 0.03652  | 0.904375  | 1 | 1.01699  | 0.14021   | 0.01684728 |
| 5 | PD_DEL_chr5_5861 | 60653531  | 2507  | <DEL> | N     | 0.02495 | 0.02177  | 0.767777  | 1 | 1.05247  | 0.173202  | 0.05113978 |
| 5 | PD_DEL_chr5_6044 | 63324877  | 303   | <DEL> | N     | 0.131   | 0.1386   | 0.396551  | 1 | 0.937909 | 0.0756175 | -0.0641023 |
| 5 | PD_DEL_chr5_6212 | 65319699  | 60    | <DEL> | N     | 0.01185 | 0.009744 | 0.301264  | 1 | 1.30195  | 0.255255  | 0.26386314 |
| 5 | PD_DEL_chr5_6275 | 66147474  | 870   | <DEL> | N     | 0.01122 | 0.01187  | 0.777005  | 1 | 0.933946 | 0.241283  | -0.0683367 |
| 5 | PD_DEL_chr5_6466 | 68810105  | 94    | <DEL> | N     | 0.311   | 0.31     | 0.297826  | 1 | 1.05978  | 0.0557687 | 0.05806134 |
| 5 | PD_DEL_chr5_6488 | 69023272  | 1841  | <DEL> | N     | 0.01278 | 0.01531  | 0.788804  | 1 | 1.06644  | 0.240148  | 0.064326   |
| 5 | PD_DEL_chr5_6502 | 69175270  | 52    | <DEL> | N     | 0.03624 | 0.03609  | 0.477038  | 1 | 1.10515  | 0.140606  | 0.09998107 |
| 5 | PD_DEL_chr5_6642 | 71861856  | 57    | N     | <DEL> | 0.346   | 0.3485   | 0.551729  | 1 | 0.966928 | 0.0565064 | -0.0336312 |
| 5 | PD_DEL_chr5_6738 | 73775881  | 51    | <DEL> | N     | 0.448   | 0.4574   | 0.753791  | 1 | 0.983595 | 0.0527398 | -0.0165411 |
| 5 | PD_DEL_chr5_7007 | 77766501  | 293   | N     | <DEL> | 0.4331  | 0.4088   | 0.860451  | 1 | 1.00978  | 0.0553777 | 0.00973249 |
| 5 | PD_DEL_chr5_7285 | 81389804  | 1001  | <DEL> | N     | 0.01587 | 0.01475  | 0.519502  | 1 | 1.14324  | 0.20783   | 0.13386634 |
| 5 | PD_DEL_chr5_7295 | 81455337  | 315   | <DEL> | N     | 0.3068  | 0.3129   | 0.143256  | 1 | 0.91846  | 0.0581078 | -0.0850569 |
| 5 | PD_DEL_chr5_7413 | 82860913  | 299   | <DEL> | N     | 0.3178  | 0.3321   | 0.377392  | 1 | 1.05061  | 0.0559347 | 0.04937095 |
| 5 | PD_DEL_chr5_7438 | 83186946  | 297   | <DEL> | N     | 0.4251  | 0.4363   | 0.797934  | 1 | 0.986149 | 0.0544805 | -0.0139478 |
| 5 | PD_DEL_chr5_7857 | 87060053  | 241   | <DEL> | N     | 0.01854 | 0.01449  | 0.14998   | 1 | 1.34457  | 0.205666  | 0.29607426 |
| 5 | PD_DEL_chr5_7897 | 87519313  | 949   | <DEL> | N     | 0.02363 | 0.03059  | 0.0287238 | 1 | 0.693807 | 0.167132  | -0.3655615 |
| 5 | PD_DEL_chr5_8163 | 91203958  | 2320  | N     | <DEL> | 0.1191  | 0.1096   | 0.980728  | 1 | 1.00202  | 0.0834373 | 0.00201796 |
| 5 | PD_DEL_chr5_8318 | 92969733  | 50    | <DEL> | N     | 0.08541 | 0.07717  | 0.802086  | 1 | 1.02412  | 0.0950885 | 0.02383371 |
| 5 | PD_DEL_chr5_8433 | 94773928  | 321   | <DEL> | N     | 0.4306  | 0.4261   | 0.0474271 | 1 | 1.11641  | 0.0555451 | 0.11011818 |
| 5 | PD_DEL_chr5_8558 | 96630834  | 823   | <DEL> | N     | 0.2355  | 0.2439   | 0.528518  | 1 | 0.960503 | 0.0639377 | -0.0402982 |
| 5 | PD_DEL_chr5_8630 | 97699550  | 327   | <DEL> | N     | 0.03871 | 0.03907  | 0.616854  | 1 | 0.934578 | 0.135236  | -0.0676602 |
| 5 | PD_DEL_chr5_8631 | 97712151  | 48303 | <DEL> | N     | 0.03114 | 0.03077  | 0.840561  | 1 | 1.03204  | 0.156763  | 0.03153743 |
| 5 | PD_DEL_chr5_8753 | 99009413  | 2365  | N     | <DEL> | 0.3122  | 0.3024   | 0.658801  | 1 | 0.975497 | 0.0561824 | -0.0248082 |
| 5 | PD_DEL_chr5_8882 | 100272460 | 295   | <DEL> | N     | 0.3489  | 0.3489   | 0.373369  | 1 | 1.04985  | 0.0546531 | 0.0486473  |
| 5 | PD_DEL_chr5_8926 | 100587843 | 291   | <DEL> | N     | 0.4809  | 0.4996   | 0.586033  | 1 | 1.02985  | 0.0540114 | 0.02941316 |
| 5 | PD_DEL_chr5_893  | 1924477   | 611   | N     | <DEL> | 0.1646  | 0.1733   | 0.0376106 | 1 | 0.864157 | 0.0702242 | -0.1460008 |
| 5 | PD_DEL_chr5_899  | 1941042   | 298   | <DEL> | N     | 0.4402  | 0.4637   | 0.687604  | 1 | 1.02186  | 0.0537784 | 0.0216245  |
| 5 | PD_DEL_chr5_902  | 1968299   | 3170  | N     | <DEL> | 0.2255  | 0.2332   | 0.336093  | 1 | 0.941488 | 0.0626812 | -0.0602937 |

|   |                  |           |      |       |       |         |          |            |   |          |           |            |
|---|------------------|-----------|------|-------|-------|---------|----------|------------|---|----------|-----------|------------|
| 5 | PD_DEL_chr5_9600 | 106892182 | 7141 | <DEL> | N     | 0.01432 | 0.01799  | 0.276036   | 1 | 0.797871 | 0.207305  | -0.2258083 |
| 5 | PD_DEL_chr5_9662 | 107634463 | 379  | <DEL> | N     | 0.1901  | 0.1794   | 0.049757   | 1 | 1.13878  | 0.0662347 | 0.12995751 |
| 5 | PD_DEL_chr5_967  | 2226269   | 595  | <DEL> | N     | 0.05263 | 0.05205  | 0.550763   | 1 | 1.07258  | 0.117443  | 0.07006696 |
| 5 | PD_DEL_chr5_9862 | 109944856 | 54   | <DEL> | N     | 0.03221 | 0.03205  | 0.729367   | 1 | 1.05279  | 0.148708  | 0.05144378 |
| 5 | PD_DEL_chr5_9866 | 109961405 | 301  | <DEL> | N     | 0.04292 | 0.04168  | 0.950337   | 1 | 1.00814  | 0.130222  | 0.00810705 |
| 6 | D_DEL_chr6_1007  | 116938536 | 51   | <DEL> | N     | 0.03555 | 0.03471  | 0.587926   | 1 | 1.0793   | 0.140838  | 0.07631268 |
| 6 | PD_DEL_chr6_1008 | 11616055  | 116  | N     | <DEL> | 0.04371 | 0.04372  | 0.0665825  | 1 | 0.78461  | 0.132227  | -0.2425685 |
| 6 | D_DEL_chr6_1024  | 119275290 | 314  | <DEL> | N     | 0.04191 | 0.0385   | 0.133473   | 1 | 1.22073  | 0.132915  | 0.19944904 |
| 6 | D_DEL_chr6_1083  | 125861668 | 4510 | <DEL> | N     | 0.1811  | 0.1833   | 0.282627   | 1 | 0.927842 | 0.0697056 | -0.0748938 |
| 6 | D_DEL_chr6_1107  | 128668686 | 319  | <DEL> | N     | 0.3255  | 0.3262   | 0.959304   | 1 | 1.00295  | 0.0577905 | 0.00294566 |
| 6 | D_DEL_chr6_1123  | 130638263 | 306  | <DEL> | N     | 0.215   | 0.2203   | 0.264506   | 1 | 0.932246 | 0.062888  | -0.0701586 |
| 6 | D_DEL_chr6_1125  | 131096862 | 933  | <DEL> | N     | 0.2667  | 0.2726   | 0.834821   | 1 | 0.987915 | 0.0583097 | -0.0121586 |
| 6 | D_DEL_chr6_1135  | 132386303 | 4979 | <DEL> | N     | 0.04181 | 0.04464  | 0.905777   | 1 | 0.984829 | 0.129152  | -0.0152873 |
| 6 | D_DEL_chr6_1147  | 133947842 | 744  | N     | <DEL> | 0.4308  | 0.437    | 0.64439    | 1 | 0.975972 | 0.0526922 | -0.0243214 |
| 6 | D_DEL_chr6_1149  | 134032421 | 50   | <DEL> | N     | 0.4803  | 0.4703   | 0.155018   | 1 | 1.07771  | 0.0526256 | 0.07483842 |
| 6 | D_DEL_chr6_1151  | 134268389 | 5204 | <DEL> | N     | 0.1083  | 0.1112   | 0.00236128 | 1 | 0.772544 | 0.0848741 | -0.2580663 |
| 6 | D_DEL_chr6_1164  | 135914489 | 298  | <DEL> | N     | 0.2736  | 0.2754   | 0.848759   | 1 | 1.01138  | 0.0593713 | 0.01131573 |
| 6 | D_DEL_chr6_1168  | 136559362 | 51   | <DEL> | N     | 0.1311  | 0.1337   | 0.796952   | 1 | 1.02019  | 0.0776848 | 0.01998888 |
| 6 | PD_DEL_chr6_1169 | 13882321  | 1300 | <DEL> | N     | 0.4395  | 0.4397   | 0.158344   | 1 | 1.07692  | 0.0525353 | 0.07410512 |
| 6 | D_DEL_chr6_1170  | 136992557 | 492  | N     | <DEL> | 0.0205  | 0.01871  | 0.195372   | 1 | 0.774123 | 0.197725  | -0.2560245 |
| 6 | D_DEL_chr6_1194  | 140631766 | 275  | N     | <DEL> | 0.4259  | 0.4018   | 0.588402   | 1 | 1.02881  | 0.0524871 | 0.02840279 |
| 6 | D_DEL_chr6_1216  | 142840297 | 86   | N     | <DEL> | 0.0352  | 0.03275  | 0.535182   | 1 | 1.09675  | 0.148923  | 0.09235126 |
| 6 | D_DEL_chr6_1265  | 150054178 | 1288 | <DEL> | N     | 0.03021 | 0.03045  | 0.318016   | 1 | 1.15784  | 0.146774  | 0.1465562  |
| 6 | D_DEL_chr6_1276  | 151185529 | 5720 | <DEL> | N     | 0.06095 | 0.05865  | 0.614594   | 1 | 0.947207 | 0.107715  | -0.0542376 |
| 6 | D_DEL_chr6_1291  | 153087116 | 56   | N     | <DEL> | 0.4248  | 0.4464   | 0.00258653 | 1 | 0.847202 | 0.0550331 | -0.1658161 |
| 6 | PD_DEL_chr6_1296 | 15666543  | 989  | <DEL> | N     | 0.0301  | 0.04258  | 0.435563   | 1 | 1.12108  | 0.146591  | 0.11429251 |
| 6 | D_DEL_chr6_1303  | 154379591 | 223  | <DEL> | N     | 0.012   | 0.009896 | 0.104812   | 1 | 1.47243  | 0.238548  | 0.3869141  |
| 6 | D_DEL_chr6_1330  | 157480795 | 52   | <DEL> | N     | 0.02346 | 0.02236  | 0.570929   | 1 | 1.10646  | 0.17853   | 0.10116573 |
| 6 | D_DEL_chr6_1331  | 157536824 | 291  | <DEL> | N     | 0.3876  | 0.4048   | 0.350512   | 1 | 1.05231  | 0.054615  | 0.05098775 |
| 6 | D_DEL_chr6_1335  | 158127250 | 784  | N     | <DEL> | 0.1493  | 0.1378   | 0.297492   | 1 | 0.924122 | 0.0757434 | -0.0789112 |
| 6 | PD_DEL_chr6_1339 | 16265605  | 76   | <DEL> | N     | 0.02676 | 0.0341   | 0.22821    | 1 | 0.832586 | 0.152051  | -0.1832188 |
| 6 | D_DEL_chr6_1340  | 158455059 | 313  | N     | <DEL> | 0.441   | 0.4293   | 0.144141   | 1 | 1.0808   | 0.0531993 | 0.07770151 |
| 6 | D_DEL_chr6_1346  | 158927434 | 1564 | <DEL> | N     | 0.0182  | 0.01997  | 0.227099   | 1 | 1.25763  | 0.189777  | 0.229229   |
| 6 | D_DEL_chr6_1347  | 158997701 | 1088 | <DEL> | N     | 0.02401 | 0.02483  | 0.271541   | 1 | 1.20554  | 0.170011  | 0.1869276  |
| 6 | D_DEL_chr6_1348  | 158998122 | 1177 | <DEL> | N     | 0.02178 | 0.02275  | 0.193501   | 1 | 1.26619  | 0.181509  | 0.23601239 |
| 6 | PD_DEL_chr6_1362 | 16614857  | 1078 | <DEL> | N     | 0.01915 | 0.02051  | 0.867509   | 1 | 0.968249 | 0.193413  | -0.032266  |
| 6 | D_DEL_chr6_1381  | 162162518 | 3258 | <DEL> | N     | 0.07443 | 0.07593  | 0.178748   | 1 | 0.872066 | 0.101806  | -0.1368902 |
| 6 | D_DEL_chr6_1411  | 165311180 | 7463 | <DEL> | N     | 0.4582  | 0.4565   | 0.442256   | 1 | 1.04134  | 0.0527229 | 0.04050835 |
| 6 | PD_DEL_chr6_1413 | 17376468  | 4579 | <DEL> | N     | 0.1348  | 0.1304   | 0.60234    | 1 | 1.04173  | 0.0784678 | 0.04088279 |
| 6 | PD_DEL_chr6_1414 | 17382698  | 58   | <DEL> | N     | 0.04344 | 0.03861  | 0.724385   | 1 | 1.04721  | 0.130831  | 0.04612948 |
| 6 | D_DEL_chr6_1427  | 167074582 | 1506 | <DEL> | N     | 0.4112  | 0.4295   | 0.291468   | 1 | 1.05747  | 0.052971  | 0.05587926 |

|   |                  |           |       |       |       |          |         |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 6 | D_DEL_chr6_1465  | 168560583 | 1780  | <DEL> | N     | 0.02081  | 0.02595 | 0.464598  | 1 | 0.880152 | 0.174568  | -0.1276607 |
| 6 | D_DEL_chr6_1478  | 168871048 | 2798  | <DEL> | N     | 0.02206  | 0.02466 | 0.513794  | 1 | 1.12344  | 0.178269  | 0.11639541 |
| 6 | D_DEL_chr6_1526  | 170266824 | 861   | <DEL> | N     | 0.09953  | 0.1002  | 0.458422  | 1 | 1.06896  | 0.0899359 | 0.06668621 |
| 6 | PD_DEL_chr6_1566 | 19040989  | 8166  | <DEL> | N     | 0.1685   | 0.18    | 0.469145  | 1 | 1.05125  | 0.0690477 | 0.04997993 |
| 6 | PD_DEL_chr6_1617 | 19675814  | 1313  | <DEL> | N     | 0.1048   | 0.1046  | 0.374535  | 1 | 1.08205  | 0.0888029 | 0.07885739 |
| 6 | PD_DEL_chr6_163  | 1318846   | 2167  | <DEL> | N     | 0.05054  | 0.06358 | 0.129062  | 1 | 0.843051 | 0.112483  | -0.1707278 |
| 6 | PD_DEL_chr6_1694 | 20765147  | 308   | <DEL> | N     | 0.4874   | 0.5061  | 0.590828  | 1 | 0.97158  | 0.0536268 | -0.0288317 |
| 6 | PD_DEL_chr6_1815 | 22227255  | 270   | N     | <DEL> | 0.0646   | 0.02969 | 0.563139  | 1 | 1.07887  | 0.131305  | 0.0759142  |
| 6 | PD_DEL_chr6_1859 | 22782439  | 305   | <DEL> | N     | 0.135    | 0.1391  | 0.875961  | 1 | 0.988185 | 0.0761489 | -0.0118854 |
| 6 | PD_DEL_chr6_1969 | 23685767  | 320   | <DEL> | N     | 0.3221   | 0.3251  | 0.941375  | 1 | 1.00426  | 0.0578312 | 0.00425095 |
| 6 | PD_DEL_chr6_2124 | 25529657  | 126   | <DEL> | N     | 0.4422   | 0.4424  | 0.35648   | 1 | 1.04934  | 0.0522326 | 0.0481614  |
| 6 | PD_DEL_chr6_2203 | 26746000  | 22000 | <DEL> | N     | 0.3977   | 0.4103  | 0.660885  | 1 | 0.97654  | 0.0541149 | -0.0237396 |
| 6 | PD_DEL_chr6_2338 | 28222429  | 325   | <DEL> | N     | 0.3729   | 0.3732  | 0.770966  | 1 | 0.983858 | 0.0559032 | -0.0162737 |
| 6 | PD_DEL_chr6_2492 | 29875745  | 5668  | N     | <DEL> | 0.3489   | 0.3561  | 0.617165  | 1 | 0.972724 | 0.0553343 | -0.0276549 |
| 6 | PD_DEL_chr6_2494 | 29883324  | 54844 | <DEL> | N     | 0.1045   | 0.1044  | 0.919682  | 1 | 0.991425 | 0.0854059 | -0.008612  |
| 6 | PD_DEL_chr6_2535 | 29986238  | 60    | <DEL> | N     | 0.06506  | 0.06711 | 0.909091  | 1 | 1.01201  | 0.104554  | 0.01193845 |
| 6 | PD_DEL_chr6_2672 | 31251392  | 10622 | <DEL> | N     | 0.009865 | 0.01134 | 0.351565  | 1 | 0.780322 | 0.266274  | -0.2480486 |
| 6 | PD_DEL_chr6_2683 | 31311016  | 9922  | <DEL> | N     | 0.1556   | 0.1616  | 0.276617  | 1 | 0.923584 | 0.0730668 | -0.0794935 |
| 6 | PD_DEL_chr6_2730 | 31453726  | 2883  | N     | <DEL> | 0.4818   | 0.4775  | 0.507637  | 1 | 0.965123 | 0.0535831 | -0.0354997 |
| 6 | PD_DEL_chr6_2979 | 32559070  | 204   | <DEL> | N     | 0.2874   | 0.3239  | 0.0017298 | 1 | 0.833928 | 0.0579807 | -0.1816082 |
| 6 | PD_DEL_chr6_3    | 171672    | 1935  | <DEL> | N     | 0.02363  | 0.02484 | 0.855575  | 1 | 1.03164  | 0.171139  | 0.03114977 |
| 6 | PD_DEL_chr6_3045 | 32624628  | 130   | <DEL> | N     | 0.4484   | 0.4718  | 0.17483   | 1 | 0.930336 | 0.0532185 | -0.0722095 |
| 6 | PD_DEL_chr6_3049 | 32632829  | 1063  | <DEL> | N     | 0.05357  | 0.06074 | 0.499412  | 1 | 0.925378 | 0.114823  | -0.077553  |
| 6 | PD_DEL_chr6_3062 | 32655746  | 1101  | N     | <DEL> | 0.4381   | 0.4171  | 0.318319  | 1 | 1.05689  | 0.0554426 | 0.05533063 |
| 6 | PD_DEL_chr6_3071 | 32675052  | 5133  | <DEL> | N     | 0.01373  | 0.01511 | 0.447937  | 1 | 0.842845 | 0.225302  | -0.1709722 |
| 6 | PD_DEL_chr6_3137 | 33157896  | 1170  | <DEL> | N     | 0.1719   | 0.168   | 0.481366  | 1 | 1.05199  | 0.0719795 | 0.05068361 |
| 6 | PD_DEL_chr6_3138 | 33161198  | 56    | <DEL> | N     | 0.1184   | 0.1181  | 0.528828  | 1 | 0.950321 | 0.0809073 | -0.0509555 |
| 6 | PD_DEL_chr6_3189 | 33604640  | 1867  | <DEL> | N     | 0.012    | 0.01027 | 0.854441  | 1 | 0.952996 | 0.262433  | -0.0481446 |
| 6 | PD_DEL_chr6_3541 | 37327196  | 304   | <DEL> | N     | 0.1441   | 0.1464  | 0.975477  | 1 | 1.00229  | 0.074407  | 0.00228738 |
| 6 | PD_DEL_chr6_3577 | 37851491  | 50    | <DEL> | N     | 0.04932  | 0.0604  | 0.0160636 | 1 | 0.753314 | 0.117665  | -0.2832731 |
| 6 | PD_DEL_chr6_3769 | 41436338  | 307   | N     | <DEL> | 0.4838   | 0.4755  | 0.0579572 | 1 | 0.902036 | 0.0543777 | -0.1031008 |
| 6 | PD_DEL_chr6_3784 | 41650963  | 582   | <DEL> | N     | 0.06866  | 0.06347 | 0.361951  | 1 | 1.10554  | 0.110054  | 0.1003339  |
| 6 | PD_DEL_chr6_4031 | 44879598  | 61    | <DEL> | N     | 0.01722  | 0.0153  | 0.133329  | 1 | 1.34393  | 0.196922  | 0.29559816 |
| 6 | PD_DEL_chr6_42   | 380340    | 79    | N     | <DEL> | 0.2085   | 0.1941  | 0.51666   | 1 | 1.043    | 0.0649225 | 0.04210118 |
| 6 | PD_DEL_chr6_4289 | 48318560  | 53    | <DEL> | N     | 0.01963  | 0.01878 | 0.551728  | 1 | 0.895314 | 0.185796  | -0.1105808 |
| 6 | PD_DEL_chr6_4354 | 48963309  | 7587  | <DEL> | N     | 0.1163   | 0.1192  | 0.0280914 | 1 | 1.19808  | 0.0822941 | 0.18072028 |
| 6 | PD_DEL_chr6_4638 | 51938305  | 5770  | <DEL> | N     | 0.03522  | 0.03547 | 0.504997  | 1 | 1.09824  | 0.140566  | 0.0937089  |
| 6 | PD_DEL_chr6_4879 | 54915524  | 312   | <DEL> | N     | 0.1762   | 0.1749  | 0.215545  | 1 | 1.0877   | 0.0678787 | 0.08406538 |
| 6 | PD_DEL_chr6_4888 | 54981590  | 5050  | <DEL> | N     | 0.06528  | 0.06592 | 0.464862  | 1 | 1.07989  | 0.105167  | 0.07685918 |
| 6 | PD_DEL_chr6_5013 | 55961159  | 20755 | <DEL> | N     | 0.02205  | 0.0171  | 0.462975  | 1 | 1.15056  | 0.191089  | 0.14024878 |
| 6 | PD_DEL_chr6_5099 | 57033689  | 60    | N     | <DEL> | 0.2485   | 0.2478  | 0.847321  | 1 | 0.988167 | 0.0618264 | -0.0119036 |

|   |                  |           |       |       |       |         |         |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 6 | PD_DEL_chr6_5140 | 57800091  | 22741 | <DEL> | N     | 0.09691 | 0.1004  | 0.431867  | 1 | 0.932564 | 0.0888263 | -0.0698175 |
| 6 | PD_DEL_chr6_5172 | 58097573  | 5013  | <DEL> | N     | 0.05307 | 0.05377 | 0.727448  | 1 | 1.04142  | 0.116452  | 0.04058517 |
| 6 | PD_DEL_chr6_5215 | 58441041  | 325   | <DEL> | N     | 0.04731 | 0.04618 | 0.703393  | 1 | 0.953127 | 0.126088  | -0.0480071 |
| 6 | PD_DEL_chr6_522  | 5661774   | 84    | <DEL> | N     | 0.01026 | 0.01026 | 0.159425  | 1 | 0.692571 | 0.261082  | -0.3673445 |
| 6 | PD_DEL_chr6_536  | 5898216   | 426   | <DEL> | N     | 0.2181  | 0.2279  | 0.587282  | 1 | 0.965781 | 0.0641477 | -0.0348182 |
| 6 | PD_DEL_chr6_5431 | 64475269  | 304   | <DEL> | N     | 0.3337  | 0.3456  | 0.642954  | 1 | 0.973981 | 0.0568702 | -0.0263635 |
| 6 | PD_DEL_chr6_5552 | 65550146  | 1982  | N     | <DEL> | 0.3186  | 0.3158  | 0.0528362 | 1 | 0.8983   | 0.0553909 | -0.1072512 |
| 6 | PD_DEL_chr6_5632 | 66298837  | 40186 | <DEL> | N     | 0.07779 | 0.0824  | 0.21242   | 1 | 0.887413 | 0.0957908 | -0.1194448 |
| 6 | PD_DEL_chr6_5659 | 66525382  | 330   | <DEL> | N     | 0.2845  | 0.2857  | 0.885539  | 1 | 1.00845  | 0.0584339 | 0.0084145  |
| 6 | PD_DEL_chr6_567  | 6277122   | 247   | N     | <DEL> | 0.3151  | 0.3213  | 0.366005  | 1 | 0.950935 | 0.0556537 | -0.0503096 |
| 6 | PD_DEL_chr6_6222 | 72118025  | 6676  | <DEL> | N     | 0.02689 | 0.02447 | 0.868909  | 1 | 1.02758  | 0.164831  | 0.02720652 |
| 6 | PD_DEL_chr6_6229 | 72154148  | 9689  | <DEL> | N     | 0.2662  | 0.2755  | 0.294633  | 1 | 0.939323 | 0.0597286 | -0.0625959 |
| 6 | PD_DEL_chr6_6345 | 73522131  | 515   | <DEL> | N     | 0.03574 | 0.03649 | 0.912478  | 1 | 1.0159   | 0.143563  | 0.01577492 |
| 6 | PD_DEL_chr6_6376 | 73882346  | 10377 | <DEL> | N     | 0.3433  | 0.3447  | 0.477385  | 1 | 0.961056 | 0.0559064 | -0.0397226 |
| 6 | PD_DEL_chr6_6379 | 73903891  | 6789  | <DEL> | N     | 0.2737  | 0.2825  | 0.726529  | 1 | 0.979752 | 0.0584879 | -0.0204558 |
| 6 | PD_DEL_chr6_6617 | 76387779  | 5145  | N     | <DEL> | 0.3687  | 0.3723  | 0.679966  | 1 | 0.977944 | 0.0540656 | -0.0223029 |
| 6 | PD_DEL_chr6_6649 | 76600211  | 17676 | <DEL> | N     | 0.01141 | 0.01116 | 0.357265  | 1 | 1.25365  | 0.245562  | 0.2260593  |
| 6 | PD_DEL_chr6_6655 | 76727509  | 21761 | <DEL> | N     | 0.2648  | 0.267   | 0.936128  | 1 | 1.00487  | 0.0605698 | 0.00485818 |
| 6 | PD_DEL_chr6_6818 | 78257246  | 69512 | <DEL> | N     | 0.2505  | 0.2571  | 0.0427666 | 1 | 0.883892 | 0.0609186 | -0.1234204 |
| 6 | PD_DEL_chr6_6865 | 78811370  | 9598  | <DEL> | N     | 0.1426  | 0.1517  | 0.412876  | 1 | 0.939933 | 0.0756514 | -0.0619467 |
| 6 | PD_DEL_chr6_6999 | 80574002  | 9858  | <DEL> | N     | 0.0528  | 0.04914 | 0.820389  | 1 | 0.972826 | 0.121343  | -0.02755   |
| 6 | PD_DEL_chr6_731  | 8227706   | 302   | <DEL> | N     | 0.3031  | 0.3203  | 0.45298   | 1 | 0.957685 | 0.0576136 | -0.0432364 |
| 6 | PD_DEL_chr6_7380 | 84975255  | 58    | <DEL> | N     | 0.0318  | 0.02865 | 0.314277  | 1 | 1.15998  | 0.147473  | 0.14840276 |
| 6 | PD_DEL_chr6_7387 | 85062033  | 56    | <DEL> | N     | 0.06394 | 0.06479 | 0.9144    | 1 | 1.01143  | 0.105769  | 0.01136517 |
| 6 | PD_DEL_chr6_749  | 8368006   | 1127  | <DEL> | N     | 0.03609 | 0.03686 | 0.406618  | 1 | 0.889518 | 0.141079  | -0.1170755 |
| 6 | PD_DEL_chr6_7602 | 87408477  | 111   | <DEL> | N     | 0.2832  | 0.2834  | 0.808706  | 1 | 1.01401  | 0.0574628 | 0.01391277 |
| 6 | PD_DEL_chr6_7753 | 89744413  | 441   | <DEL> | N     | 0.01006 | 0.01223 | 0.98574   | 1 | 0.995585 | 0.247589  | -0.0044248 |
| 6 | PD_DEL_chr6_7944 | 92200949  | 308   | <DEL> | N     | 0.313   | 0.3143  | 0.81336   | 1 | 0.986217 | 0.0587857 | -0.0138789 |
| 6 | PD_DEL_chr6_799  | 9014599   | 92    | N     | <DEL> | 0.4636  | 0.4646  | 0.540564  | 1 | 1.03204  | 0.051537  | 0.03153743 |
| 6 | PD_DEL_chr6_805  | 9075065   | 310   | <DEL> | N     | 0.2816  | 0.2845  | 0.913203  | 1 | 1.00637  | 0.0582666 | 0.0063498  |
| 6 | PD_DEL_chr6_8287 | 95251179  | 1737  | <DEL> | N     | 0.3062  | 0.3213  | 0.656449  | 1 | 0.974543 | 0.0579697 | -0.0257866 |
| 6 | PD_DEL_chr6_8295 | 95308422  | 8186  | <DEL> | N     | 0.02902 | 0.02828 | 0.793351  | 1 | 1.04276  | 0.15982   | 0.04187104 |
| 6 | PD_DEL_chr6_8436 | 97057177  | 304   | <DEL> | N     | 0.1598  | 0.1618  | 0.352128  | 1 | 1.06832  | 0.071027  | 0.06608732 |
| 6 | PD_DEL_chr6_8973 | 103289589 | 25425 | <DEL> | N     | 0.4578  | 0.4592  | 0.566504  | 1 | 0.969951 | 0.053227  | -0.0305097 |
| 6 | PD_DEL_chr6_8998 | 103491684 | 3661  | <DEL> | N     | 0.03114 | 0.03221 | 0.24426   | 1 | 0.837243 | 0.15256   | -0.1776409 |
| 6 | PD_DEL_chr6_9200 | 105909607 | 58    | N     | <DEL> | 0.4603  | 0.4764  | 0.682339  | 1 | 0.978593 | 0.0528738 | -0.0216395 |
| 6 | PD_DEL_chr6_9279 | 106986213 | 1113  | <DEL> | N     | 0.1526  | 0.1605  | 0.722823  | 1 | 0.974232 | 0.0736029 | -0.0261058 |
| 6 | PD_DEL_chr6_9406 | 108289198 | 4679  | <DEL> | N     | 0.02883 | 0.03314 | 0.655278  | 1 | 0.933482 | 0.154184  | -0.0688336 |
| 6 | PD_DEL_chr6_9518 | 110074849 | 18183 | <DEL> | N     | 0.01315 | 0.01727 | 0.198883  | 1 | 0.76145  | 0.212129  | -0.2725308 |
| 6 | PD_DEL_chr6_9546 | 110544500 | 52    | <DEL> | N     | 0.01183 | 0.01441 | 0.0296348 | 1 | 0.60271  | 0.232797  | -0.5063191 |
| 6 | PD_DEL_chr6_9634 | 111882664 | 301   | <DEL> | N     | 0.2569  | 0.2621  | 0.706281  | 1 | 0.977843 | 0.0594563 | -0.0224062 |

|   |                  |           |       |       |       |         |          |            |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|----------|------------|---|----------|-----------|------------|
| 6 | PD_DEL_chr6_9638 | 111903223 | 5231  | <DEL> | N     | 0.03733 | 0.03526  | 0.875428   | 1 | 0.977795 | 0.143238  | -0.0224552 |
| 6 | PD_DEL_chr6_996  | 11444120  | 298   | <DEL> | N     | 0.1399  | 0.1404   | 0.617081   | 1 | 0.962626 | 0.0761823 | -0.0380903 |
| 7 | D_DEL_chr7_1007  | 99434022  | 56    | <DEL> | N     | 0.02153 | 0.02467  | 0.195417   | 1 | 0.797133 | 0.175123  | -0.2267337 |
| 7 | D_DEL_chr7_1020  | 100729691 | 13373 | <DEL> | N     | 0.2315  | 0.237    | 0.700991   | 1 | 1.02391  | 0.0615278 | 0.02362863 |
| 7 | D_DEL_chr7_1020  | 100743328 | 2289  | <DEL> | N     | 0.02189 | 0.02035  | 0.990585   | 1 | 1.0022   | 0.186542  | 0.00219758 |
| 7 | D_DEL_chr7_1023  | 100935572 | 3036  | <DEL> | N     | 0.04514 | 0.04158  | 0.801363   | 1 | 0.96719  | 0.132602  | -0.0333603 |
| 7 | D_DEL_chr7_1034  | 101415907 | 1078  | <DEL> | N     | 0.2441  | 0.2393   | 0.221066   | 1 | 1.07759  | 0.061066  | 0.07472707 |
| 7 | D_DEL_chr7_1034  | 101438001 | 943   | <DEL> | N     | 0.04217 | 0.04408  | 0.828765   | 1 | 1.02731  | 0.124565  | 0.02694374 |
| 7 | D_DEL_chr7_1035  | 101467312 | 346   | <DEL> | N     | 0.03256 | 0.03475  | 0.474742   | 1 | 1.10725  | 0.14253   | 0.10187946 |
| 7 | D_DEL_chr7_1049  | 102711259 | 16341 | <DEL> | N     | 0.02227 | 0.0189   | 0.654607   | 1 | 1.08614  | 0.184693  | 0.08263013 |
| 7 | D_DEL_chr7_1049  | 102726253 | 7686  | <DEL> | N     | 0.03424 | 0.03257  | 0.467874   | 1 | 1.11206  | 0.146316  | 0.10621415 |
| 7 | D_DEL_chr7_1050  | 102848273 | 323   | <DEL> | N     | 0.3605  | 0.3462   | 0.799386   | 1 | 1.0146   | 0.0570322 | 0.01449445 |
| 7 | D_DEL_chr7_1061  | 104489080 | 268   | N     | <DEL> | 0.4043  | 0.4036   | 0.932808   | 1 | 0.995347 | 0.0553197 | -0.0046639 |
| 7 | D_DEL_chr7_1075  | 106093547 | 335   | <DEL> | N     | 0.4271  | 0.4379   | 0.724042   | 1 | 0.980785 | 0.0549522 | -0.019402  |
| 7 | D_DEL_chr7_1095  | 108861002 | 99    | N     | <DEL> | 0.05822 | 0.05811  | 0.153401   | 1 | 0.849464 | 0.114281  | -0.1631497 |
| 7 | PD_DEL_chr7_1101 | 3570809   | 8498  | <DEL> | N     | 0.01257 | 0.01026  | 0.950529   | 1 | 1.0158   | 0.252734  | 0.01567648 |
| 7 | D_DEL_chr7_1104  | 109591912 | 4033  | <DEL> | N     | 0.03293 | 0.03443  | 0.656669   | 1 | 0.936903 | 0.146621  | -0.0651755 |
| 7 | D_DEL_chr7_1106  | 109796632 | 17212 | <DEL> | N     | 0.3464  | 0.3339   | 0.129048   | 1 | 1.08828  | 0.0557349 | 0.08459847 |
| 7 | D_DEL_chr7_1114  | 110541911 | 6464  | <DEL> | N     | 0.3     | 0.3008   | 0.977174   | 1 | 0.998376 | 0.0567988 | -0.0016253 |
| 7 | D_DEL_chr7_1140  | 112999117 | 56    | <DEL> | N     | 0.01394 | 0.009176 | 0.00414809 | 1 | 2.04956  | 0.250334  | 0.71762514 |
| 7 | D_DEL_chr7_1171  | 116291588 | 9606  | <DEL> | N     | 0.09404 | 0.09179  | 0.917      | 1 | 0.990488 | 0.0917084 | -0.0095575 |
| 7 | D_DEL_chr7_1185  | 118253913 | 285   | <DEL> | N     | 0.4406  | 0.4689   | 0.0298934  | 1 | 0.891106 | 0.0530933 | -0.1152919 |
| 7 | D_DEL_chr7_1211  | 120663953 | 10494 | <DEL> | N     | 0.01161 | 0.008636 | 0.403139   | 1 | 1.24138  | 0.258629  | 0.21622366 |
| 7 | D_DEL_chr7_1217  | 121241062 | 318   | <DEL> | N     | 0.4199  | 0.4268   | 0.277714   | 1 | 1.06218  | 0.0555742 | 0.0603234  |
| 7 | PD_DEL_chr7_1242 | 4385008   | 1145  | <DEL> | N     | 0.01227 | 0.01534  | 0.132575   | 1 | 0.711177 | 0.226614  | -0.3408339 |
| 7 | D_DEL_chr7_1267  | 126405835 | 5558  | N     | <DEL> | 0.4611  | 0.4637   | 0.597576   | 1 | 1.02849  | 0.053213  | 0.02809171 |
| 7 | D_DEL_chr7_1281  | 128316064 | 51    | <DEL> | N     | 0.2946  | 0.2954   | 0.594647   | 1 | 1.03074  | 0.0568985 | 0.03027699 |
| 7 | D_DEL_chr7_1287  | 128912303 | 1270  | <DEL> | N     | 0.01034 | 0.01176  | 0.243081   | 1 | 1.36095  | 0.264008  | 0.30818299 |
| 7 | D_DEL_chr7_1325  | 134100250 | 13326 | <DEL> | N     | 0.336   | 0.3445   | 0.569643   | 1 | 0.968953 | 0.0554709 | -0.0315392 |
| 7 | D_DEL_chr7_1328  | 134665255 | 415   | <DEL> | N     | 0.4944  | 0.4903   | 0.984577   | 1 | 0.998987 | 0.0524266 | -0.0010135 |
| 7 | D_DEL_chr7_1333  | 135456062 | 3231  | <DEL> | N     | 0.01161 | 0.01062  | 0.372659   | 1 | 1.24262  | 0.243661  | 0.21722205 |
| 7 | D_DEL_chr7_1350  | 137149719 | 285   | <DEL> | N     | 0.3747  | 0.3715   | 0.515921   | 1 | 1.03547  | 0.0536542 | 0.03485543 |
| 7 | D_DEL_chr7_1350  | 137166878 | 296   | <DEL> | N     | 0.3687  | 0.3715   | 0.865938   | 1 | 0.9909   | 0.0541504 | -0.0091417 |
| 7 | D_DEL_chr7_1363  | 138673887 | 697   | <DEL> | N     | 0.01707 | 0.02143  | 0.627501   | 1 | 0.911567 | 0.19081   | -0.0925902 |
| 7 | D_DEL_chr7_1367  | 139057536 | 303   | N     | <DEL> | 0.4375  | 0.4154   | 0.0759069  | 1 | 0.906978 | 0.0550087 | -0.0976371 |
| 7 | D_DEL_chr7_1392  | 141791925 | 173   | <DEL> | N     | 0.4936  | 0.4948   | 0.559289   | 1 | 1.03099  | 0.0522688 | 0.03051951 |
| 7 | D_DEL_chr7_1396  | 142065661 | 29025 | <DEL> | N     | 0.193   | 0.1889   | 0.599552   | 1 | 1.03567  | 0.0667575 | 0.03504856 |
| 7 | D_DEL_chr7_1406  | 143127754 | 69060 | <DEL> | N     | 0.01373 | 0.01403  | 0.210394   | 1 | 1.3108   | 0.216084  | 0.27063764 |
| 7 | PD_DEL_chr7_1408 | 5295725   | 58    | <DEL> | N     | 0.2536  | 0.2578   | 0.638229   | 1 | 1.02837  | 0.059496  | 0.02797502 |
| 7 | D_DEL_chr7_1414  | 144664096 | 307   | <DEL> | N     | 0.04743 | 0.05327  | 0.515637   | 1 | 0.923497 | 0.122427  | -0.0795877 |
| 7 | D_DEL_chr7_1414  | 144685667 | 137   | N     | <DEL> | 0.08472 | 0.08924  | 0.368924   | 1 | 0.918699 | 0.0943772 | -0.0847967 |

|   |                  |           |       |       |       |         |          |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 7 | D_DEL_chr7_1421  | 145322558 | 319   | <DEL> | N     | 0.3928  | 0.4192   | 0.243778  | 1 | 0.940096 | 0.0529968 | -0.0617733 |
| 7 | D_DEL_chr7_1438  | 147061041 | 523   | <DEL> | N     | 0.01161 | 0.009899 | 0.632533  | 1 | 1.1313   | 0.258004  | 0.12336741 |
| 7 | D_DEL_chr7_1453  | 148973039 | 6634  | <DEL> | N     | 0.01413 | 0.01044  | 0.330206  | 1 | 1.27354  | 0.24833   | 0.24180042 |
| 7 | D_DEL_chr7_1453  | 149033344 | 964   | <DEL> | N     | 0.01644 | 0.02035  | 0.36016   | 1 | 0.836772 | 0.194746  | -0.1782036 |
| 7 | D_DEL_chr7_1462  | 149878840 | 165   | N     | <DEL> | 0.3526  | 0.3388   | 0.974761  | 1 | 1.00172  | 0.0543999 | 0.00171852 |
| 7 | D_DEL_chr7_1463  | 150017207 | 2303  | <DEL> | N     | 0.01705 | 0.01623  | 0.710105  | 1 | 0.925283 | 0.208912  | -0.0776556 |
| 7 | D_DEL_chr7_1469  | 150036669 | 1935  | <DEL> | N     | 0.01027 | 0.01116  | 0.920722  | 1 | 0.97551  | 0.249134  | -0.0247949 |
| 7 | D_DEL_chr7_1482  | 150603941 | 5797  | <DEL> | N     | 0.2315  | 0.2285   | 0.923061  | 1 | 0.993977 | 0.0625504 | -0.0060412 |
| 7 | D_DEL_chr7_1488  | 151360921 | 112   | N     | <DEL> | 0.3035  | 0.2909   | 0.663578  | 1 | 0.974534 | 0.0593047 | -0.0257959 |
| 7 | D_DEL_chr7_1493  | 151829371 | 1758  | <DEL> | N     | 0.01335 | 0.01601  | 0.444526  | 1 | 0.843455 | 0.222671  | -0.1702487 |
| 7 | D_DEL_chr7_1494  | 151854785 | 690   | <DEL> | N     | 0.01537 | 0.02039  | 0.319707  | 1 | 0.825531 | 0.19268   | -0.1917285 |
| 7 | D_DEL_chr7_1497  | 152320150 | 5159  | <DEL> | N     | 0.01161 | 0.01367  | 0.751717  | 1 | 0.924844 | 0.246953  | -0.0781302 |
| 7 | D_DEL_chr7_1498  | 152385330 | 314   | <DEL> | N     | 0.01398 | 0.01463  | 0.538251  | 1 | 1.14667  | 0.222376  | 0.13686209 |
| 7 | D_DEL_chr7_1500  | 152449848 | 757   | <DEL> | N     | 0.01026 | 0.01188  | 0.366858  | 1 | 0.800838 | 0.246125  | -0.2220966 |
| 7 | D_DEL_chr7_1502  | 152532359 | 1047  | <DEL> | N     | 0.03846 | 0.03807  | 0.683658  | 1 | 0.945841 | 0.136649  | -0.0556808 |
| 7 | D_DEL_chr7_1504  | 152622032 | 65    | N     | <DEL> | 0.3006  | 0.2895   | 0.327473  | 1 | 1.05729  | 0.0568958 | 0.05570903 |
| 7 | PD_DEL_chr7_1507 | 5842225   | 5941  | <DEL> | N     | 0.02905 | 0.02864  | 0.803605  | 1 | 0.961123 | 0.159455  | -0.0396529 |
| 7 | D_DEL_chr7_1508  | 152877738 | 5582  | <DEL> | N     | 0.05106 | 0.05398  | 0.941474  | 1 | 1.00876  | 0.118862  | 0.00872185 |
| 7 | D_DEL_chr7_1510  | 153011383 | 377   | <DEL> | N     | 0.1409  | 0.1282   | 0.494437  | 1 | 1.05347  | 0.0762291 | 0.05208948 |
| 7 | D_DEL_chr7_1515  | 153613053 | 679   | N     | <DEL> | 0.06538 | 0.05632  | 0.937976  | 1 | 1.00882  | 0.112896  | 0.00878133 |
| 7 | D_DEL_chr7_1516  | 153698470 | 285   | <DEL> | N     | 0.02366 | 0.02632  | 0.442229  | 1 | 0.881411 | 0.16427   | -0.1262312 |
| 7 | D_DEL_chr7_1524  | 154222108 | 2772  | <DEL> | N     | 0.01394 | 0.01421  | 0.512663  | 1 | 1.15967  | 0.226266  | 0.14813548 |
| 7 | D_DEL_chr7_1526  | 154456738 | 1247  | N     | <DEL> | 0.3542  | 0.3526   | 0.395501  | 1 | 0.954769 | 0.0544747 | -0.0462859 |
| 7 | D_DEL_chr7_1527  | 154600219 | 7854  | <DEL> | N     | 0.451   | 0.4493   | 0.9287    | 1 | 1.00473  | 0.0526958 | 0.00471885 |
| 7 | D_DEL_chr7_1532  | 154879298 | 305   | <DEL> | N     | 0.1378  | 0.136    | 0.512738  | 1 | 1.05191  | 0.0773178 | 0.05060756 |
| 7 | PD_DEL_chr7_1547 | 6097878   | 1630  | <DEL> | N     | 0.05169 | 0.05823  | 0.46789   | 1 | 0.915501 | 0.121616  | -0.0882838 |
| 7 | D_DEL_chr7_1560  | 156594441 | 7127  | <DEL> | N     | 0.1075  | 0.1126   | 0.695943  | 1 | 0.96713  | 0.0855228 | -0.0334224 |
| 7 | D_DEL_chr7_1568  | 157303394 | 926   | <DEL> | N     | 0.02323 | 0.0252   | 0.534555  | 1 | 0.898048 | 0.17314   | -0.1075318 |
| 7 | D_DEL_chr7_1618  | 158236790 | 966   | N     | <DEL> | 0.2954  | 0.2857   | 0.581051  | 1 | 1.03291  | 0.0586674 | 0.03238006 |
| 7 | D_DEL_chr7_1619  | 158253850 | 750   | N     | <DEL> | 0.3443  | 0.314    | 0.305034  | 1 | 0.944011 | 0.0561743 | -0.0576175 |
| 7 | D_DEL_chr7_1677  | 159324755 | 5280  | <DEL> | N     | 0.02301 | 0.02861  | 0.661878  | 1 | 0.928031 | 0.17079   | -0.0746901 |
| 7 | PD_DEL_chr7_1684 | 6861154   | 23119 | <DEL> | N     | 0.05213 | 0.05119  | 0.299947  | 1 | 1.13166  | 0.119321  | 0.12368558 |
| 7 | PD_DEL_chr7_1761 | 7502696   | 282   | <DEL> | N     | 0.3582  | 0.3823   | 0.290285  | 1 | 0.945255 | 0.0532397 | -0.0563005 |
| 7 | PD_DEL_chr7_2107 | 10464689  | 1817  | <DEL> | N     | 0.3406  | 0.3408   | 0.821138  | 1 | 0.98772  | 0.0546524 | -0.012356  |
| 7 | PD_DEL_chr7_2153 | 10795137  | 115   | <DEL> | N     | 0.481   | 0.4703   | 0.593574  | 1 | 0.97186  | 0.0534865 | -0.0285435 |
| 7 | PD_DEL_chr7_2189 | 11189630  | 466   | <DEL> | N     | 0.01499 | 0.01588  | 0.69271   | 1 | 1.0866   | 0.210171  | 0.08305356 |
| 7 | PD_DEL_chr7_2287 | 12019089  | 311   | <DEL> | N     | 0.3528  | 0.3525   | 0.0911626 | 1 | 1.09728  | 0.0549533 | 0.09283439 |
| 7 | PD_DEL_chr7_2314 | 12242085  | 314   | <DEL> | N     | 0.4114  | 0.4199   | 0.955958  | 1 | 0.997076 | 0.0530197 | -0.0029283 |
| 7 | PD_DEL_chr7_2391 | 12982480  | 6445  | <DEL> | N     | 0.01239 | 0.01332  | 0.844548  | 1 | 0.954094 | 0.239667  | -0.0469931 |
| 7 | PD_DEL_chr7_2394 | 13009971  | 1137  | <DEL> | N     | 0.01141 | 0.01062  | 0.120275  | 1 | 1.4489   | 0.238669  | 0.37080465 |
| 7 | PD_DEL_chr7_2399 | 13070558  | 174   | <DEL> | N     | 0.01259 | 0.01224  | 0.949716  | 1 | 1.01514  | 0.238307  | 0.01502653 |

|   |                  |          |       |       |       |          |         |            |   |          |           |            |
|---|------------------|----------|-------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 7 | PD_DEL_chr7_2458 | 13546023 | 5592  | <DEL> | N     | 0.01123  | 0.0108  | 0.2327     | 1 | 0.744686 | 0.247013  | -0.2947926 |
| 7 | PD_DEL_chr7_2469 | 13623568 | 262   | N     | <DEL> | 0.02766  | 0.01295 | 0.604588   | 1 | 1.10914  | 0.200044  | 0.10358494 |
| 7 | PD_DEL_chr7_2650 | 15190092 | 139   | N     | <DEL> | 0.4897   | 0.4942  | 0.125243   | 1 | 1.08808  | 0.0550594 | 0.08441468 |
| 7 | PD_DEL_chr7_2713 | 15547959 | 68    | <DEL> | N     | 0.0285   | 0.02955 | 0.990694   | 1 | 0.998232 | 0.151749  | -0.0017696 |
| 7 | PD_DEL_chr7_3168 | 20231173 | 7360  | <DEL> | N     | 0.01006  | 0.01116 | 0.96657    | 1 | 0.989345 | 0.255602  | -0.0107122 |
| 7 | PD_DEL_chr7_3517 | 24638323 | 306   | <DEL> | N     | 0.3288   | 0.3541  | 0.885602   | 1 | 1.0081   | 0.0560712 | 0.00806737 |
| 7 | PD_DEL_chr7_3590 | 25737274 | 120   | <DEL> | N     | 0.02883  | 0.02414 | 0.416188   | 1 | 1.13837  | 0.159397  | 0.12959741 |
| 7 | PD_DEL_chr7_3618 | 26097388 | 8487  | <DEL> | N     | 0.2091   | 0.1929  | 0.00051709 | 1 | 1.25829  | 0.0661783 | 0.22975366 |
| 7 | PD_DEL_chr7_3724 | 27474730 | 261   | <DEL> | N     | 0.4563   | 0.4325  | 0.167575   | 1 | 1.07466  | 0.0521755 | 0.07200433 |
| 7 | PD_DEL_chr7_3836 | 29437316 | 295   | <DEL> | N     | 0.2108   | 0.2     | 0.31746    | 1 | 1.06595  | 0.0638915 | 0.06386642 |
| 7 | PD_DEL_chr7_386  | 839531   | 287   | <DEL> | N     | 0.4348   | 0.4401  | 0.212911   | 1 | 1.06958  | 0.0540009 | 0.06726605 |
| 7 | PD_DEL_chr7_3946 | 31030975 | 314   | <DEL> | N     | 0.327    | 0.3329  | 0.979727   | 1 | 0.998531 | 0.0578378 | -0.0014701 |
| 7 | PD_DEL_chr7_3991 | 31550778 | 1510  | <DEL> | N     | 0.00896  | 0.02107 | 0.55964    | 1 | 0.869628 | 0.23945   | -0.1396897 |
| 7 | PD_DEL_chr7_40   | 151134   | 9423  | <DEL> | N     | 0.03104  | 0.02717 | 0.358182   | 1 | 1.16229  | 0.163678  | 0.1503922  |
| 7 | PD_DEL_chr7_4040 | 32350553 | 2947  | N     | <DEL> | 0.094    | 0.08762 | 0.828746   | 1 | 0.98001  | 0.0933497 | -0.0201925 |
| 7 | PD_DEL_chr7_4094 | 32735365 | 2749  | <DEL> | N     | 0.171    | 0.188   | 0.899758   | 1 | 0.991052 | 0.0713517 | -0.0089883 |
| 7 | PD_DEL_chr7_4323 | 35747657 | 59    | <DEL> | N     | 0.0211   | 0.02832 | 0.43608    | 1 | 0.881574 | 0.16184   | -0.1260463 |
| 7 | PD_DEL_chr7_4489 | 38468872 | 315   | <DEL> | N     | 0.2731   | 0.2789  | 0.993321   | 1 | 0.999503 | 0.0594366 | -0.0004971 |
| 7 | PD_DEL_chr7_4490 | 38473422 | 321   | <DEL> | N     | 0.2764   | 0.2837  | 0.881343   | 1 | 1.00875  | 0.0583909 | 0.00871194 |
| 7 | PD_DEL_chr7_4552 | 39506469 | 5760  | <DEL> | N     | 0.1141   | 0.1204  | 0.0395661  | 1 | 0.842135 | 0.0834762 | -0.1718149 |
| 7 | PD_DEL_chr7_4560 | 39552471 | 301   | <DEL> | N     | 0.05736  | 0.05986 | 0.661817   | 1 | 1.04854  | 0.108369  | 0.04739872 |
| 7 | PD_DEL_chr7_4796 | 43374526 | 262   | <DEL> | N     | 0.3389   | 0.3526  | 0.160754   | 1 | 0.925425 | 0.0552585 | -0.0775022 |
| 7 | PD_DEL_chr7_4803 | 43585023 | 7455  | <DEL> | N     | 0.04855  | 0.052   | 0.958786   | 1 | 1.00641  | 0.123698  | 0.00638954 |
| 7 | PD_DEL_chr7_4804 | 43585279 | 4304  | <DEL> | N     | 0.04739  | 0.05146 | 0.952781   | 1 | 0.992525 | 0.126712  | -0.0075031 |
| 7 | PD_DEL_chr7_4875 | 44560579 | 142   | <DEL> | N     | 0.481    | 0.4734  | 0.313942   | 1 | 0.948677 | 0.0523216 | -0.0526869 |
| 7 | PD_DEL_chr7_4962 | 45442298 | 6170  | <DEL> | N     | 0.03464  | 0.03313 | 0.809039   | 1 | 0.964403 | 0.149986  | -0.036246  |
| 7 | PD_DEL_chr7_509  | 1036688  | 3508  | <DEL> | N     | 0.1556   | 0.1623  | 0.0799368  | 1 | 0.881946 | 0.0717503 | -0.1256244 |
| 7 | PD_DEL_chr7_5125 | 47855593 | 306   | <DEL> | N     | 0.1795   | 0.1755  | 0.119918   | 1 | 1.1113   | 0.0678581 | 0.1055305  |
| 7 | PD_DEL_chr7_5180 | 48541329 | 11713 | <DEL> | N     | 0.02573  | 0.02861 | 0.260579   | 1 | 0.830998 | 0.164555  | -0.1851279 |
| 7 | PD_DEL_chr7_5207 | 48848790 | 58    | <DEL> | N     | 0.1183   | 0.1262  | 0.549388   | 1 | 0.953976 | 0.0787006 | -0.0471168 |
| 7 | PD_DEL_chr7_5258 | 49512479 | 308   | <DEL> | N     | 0.3404   | 0.3465  | 0.761631   | 1 | 1.01751  | 0.0572136 | 0.01735847 |
| 7 | PD_DEL_chr7_5356 | 51203222 | 253   | <DEL> | N     | 0.07925  | 0.07659 | 0.703502   | 1 | 0.963947 | 0.0964784 | -0.036719  |
| 7 | PD_DEL_chr7_5379 | 51538509 | 60    | <DEL> | N     | 0.03221  | 0.02816 | 0.557307   | 1 | 1.09368  | 0.152592  | 0.08954816 |
| 7 | PD_DEL_chr7_5385 | 51624213 | 309   | <DEL> | N     | 0.2102   | 0.2052  | 0.26084    | 1 | 1.07938  | 0.0679365 | 0.0763868  |
| 7 | PD_DEL_chr7_5414 | 52039424 | 304   | <DEL> | N     | 0.4673   | 0.4798  | 0.768438   | 1 | 1.01583  | 0.0533562 | 0.01570601 |
| 7 | PD_DEL_chr7_5427 | 52207269 | 622   | <DEL> | N     | 0.02585  | 0.0306  | 0.818686   | 1 | 0.964281 | 0.15867   | -0.0363725 |
| 7 | PD_DEL_chr7_5508 | 53199663 | 360   | <DEL> | N     | 0.4329   | 0.4485  | 0.190926   | 1 | 0.933274 | 0.0528016 | -0.0690564 |
| 7 | PD_DEL_chr7_5520 | 53308336 | 50    | N     | <DEL> | 0.02747  | 0.02663 | 0.607621   | 1 | 0.918115 | 0.166382  | -0.0854326 |
| 7 | PD_DEL_chr7_5576 | 53918506 | 53    | <DEL> | N     | 0.02323  | 0.0258  | 0.583002   | 1 | 1.09603  | 0.167022  | 0.09169456 |
| 7 | PD_DEL_chr7_5610 | 54302642 | 57    | <DEL> | N     | 0.009098 | 0.01242 | 0.0735359  | 1 | 0.645908 | 0.244259  | -0.4370982 |
| 7 | PD_DEL_chr7_5687 | 55166442 | 1193  | <DEL> | N     | 0.01362  | 0.02501 | 0.605058   | 1 | 1.11334  | 0.207614  | 0.10736451 |

|   |                  |           |       |       |       |          |          |           |   |          |           |            |
|---|------------------|-----------|-------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 7 | PD_DEL_chr7_5725 | 55608886  | 1209  | <DEL> | N     | 0.08301  | 0.07917  | 0.172798  | 1 | 1.14061  | 0.0965083 | 0.13156321 |
| 7 | PD_DEL_chr7_5905 | 56694291  | 7963  | <DEL> | N     | 0.1973   | 0.1857   | 0.409232  | 1 | 0.945965 | 0.0673127 | -0.0555497 |
| 7 | PD_DEL_chr7_5953 | 57097516  | 8328  | <DEL> | N     | 0.01393  | 0.01709  | 0.200087  | 1 | 0.761983 | 0.212152  | -0.271831  |
| 7 | PD_DEL_chr7_5978 | 57410174  | 8003  | <DEL> | N     | 0.275    | 0.2933   | 0.203394  | 1 | 0.92901  | 0.0578927 | -0.0736358 |
| 7 | PD_DEL_chr7_6140 | 57974651  | 3396  | <DEL> | N     | 0.01105  | 0.01261  | 0.376996  | 1 | 1.23488  | 0.238809  | 0.2109738  |
| 7 | PD_DEL_chr7_6548 | 62685833  | 16656 | <DEL> | N     | 0.07292  | 0.06909  | 0.937281  | 1 | 1.00824  | 0.104322  | 0.00820624 |
| 7 | PD_DEL_chr7_6619 | 62905671  | 3660  | <DEL> | N     | 0.4166   | 0.4185   | 0.966287  | 1 | 1.00228  | 0.0538574 | 0.0022774  |
| 7 | PD_DEL_chr7_6676 | 63369225  | 6009  | <DEL> | N     | 0.0124   | 0.009726 | 0.523868  | 1 | 1.17705  | 0.255753  | 0.16301131 |
| 7 | PD_DEL_chr7_6799 | 64666914  | 59    | <DEL> | N     | 0.0277   | 0.03609  | 0.1975    | 1 | 0.825817 | 0.148507  | -0.1913821 |
| 7 | PD_DEL_chr7_6813 | 64818681  | 53    | <DEL> | N     | 0.04926  | 0.0444   | 0.858448  | 1 | 1.02319  | 0.128556  | 0.0229252  |
| 7 | PD_DEL_chr7_6817 | 64855446  | 2234  | N     | <DEL> | 0.01315  | 0.008816 | 0.477179  | 1 | 0.828722 | 0.26429   | -0.1878705 |
| 7 | PD_DEL_chr7_6886 | 65388302  | 50    | <DEL> | N     | 0.07316  | 0.07541  | 0.535647  | 1 | 1.06468  | 0.101181  | 0.06267428 |
| 7 | PD_DEL_chr7_7276 | 68664085  | 120   | <DEL> | N     | 0.3079   | 0.3024   | 0.944669  | 1 | 1.00393  | 0.0565272 | 0.0039223  |
| 7 | PD_DEL_chr7_7492 | 70954779  | 6171  | N     | <DEL> | 0.396    | 0.3843   | 0.229832  | 1 | 1.06781  | 0.0546403 | 0.06560982 |
| 7 | PD_DEL_chr7_7503 | 71102091  | 311   | <DEL> | N     | 0.07121  | 0.06785  | 0.611696  | 1 | 1.05289  | 0.101521  | 0.05153876 |
| 7 | PD_DEL_chr7_7607 | 72227818  | 2259  | <DEL> | N     | 0.01064  | 0.009716 | 0.599145  | 1 | 0.872563 | 0.259347  | -0.1363204 |
| 7 | PD_DEL_chr7_7863 | 74414176  | 2759  | N     | <DEL> | 0.352    | 0.3345   | 0.93143   | 1 | 0.995198 | 0.055946  | -0.0048136 |
| 7 | PD_DEL_chr7_8036 | 76034727  | 3762  | <DEL> | N     | 0.09721  | 0.1001   | 0.360352  | 1 | 0.921137 | 0.0898079 | -0.0821465 |
| 7 | PD_DEL_chr7_8152 | 77072923  | 5877  | <DEL> | N     | 0.142    | 0.1466   | 0.360745  | 1 | 1.07177  | 0.0758395 | 0.06931149 |
| 7 | PD_DEL_chr7_8278 | 78728397  | 467   | <DEL> | N     | 0.07826  | 0.0754   | 0.315309  | 1 | 1.10837  | 0.102463  | 0.10289047 |
| 7 | PD_DEL_chr7_849  | 2201194   | 63    | <DEL> | N     | 0.1807   | 0.1857   | 0.499536  | 1 | 0.956272 | 0.0662191 | -0.0447129 |
| 7 | PD_DEL_chr7_8569 | 81729022  | 273   | N     | <DEL> | 0.2453   | 0.2319   | 0.971207  | 1 | 1.00224  | 0.0619063 | 0.00223749 |
| 7 | PD_DEL_chr7_8599 | 82099424  | 324   | <DEL> | N     | 0.4072   | 0.4156   | 0.470539  | 1 | 1.03977  | 0.0540465 | 0.03899953 |
| 7 | PD_DEL_chr7_8696 | 83317161  | 303   | <DEL> | N     | 0.4153   | 0.4286   | 0.411377  | 1 | 1.04649  | 0.0553167 | 0.04544171 |
| 7 | PD_DEL_chr7_872  | 2315261   | 947   | <DEL> | N     | 0.0268   | 0.02831  | 0.644129  | 1 | 1.07677  | 0.16012   | 0.07396582 |
| 7 | PD_DEL_chr7_9096 | 87308010  | 11774 | <DEL> | N     | 0.0265   | 0.03131  | 0.0322235 | 1 | 0.709996 | 0.159923  | -0.3424959 |
| 7 | PD_DEL_chr7_9149 | 88039299  | 4022  | <DEL> | N     | 0.009868 | 0.01475  | 0.312343  | 1 | 0.781025 | 0.244624  | -0.2471481 |
| 7 | PD_DEL_chr7_9320 | 89890340  | 10782 | <DEL> | N     | 0.07157  | 0.07233  | 0.455334  | 1 | 0.926258 | 0.102608  | -0.0766025 |
| 7 | PD_DEL_chr7_9364 | 90392836  | 304   | <DEL> | N     | 0.2089   | 0.1876   | 0.0319988 | 1 | 1.15635  | 0.067742  | 0.14526849 |
| 7 | PD_DEL_chr7_9469 | 91729157  | 1929  | <DEL> | N     | 0.009295 | 0.01152  | 0.0866917 | 1 | 0.649167 | 0.252211  | -0.4320653 |
| 7 | PD_DEL_chr7_9576 | 93365009  | 6947  | <DEL> | N     | 0.01238  | 0.01151  | 0.19548   | 1 | 1.37862  | 0.248031  | 0.321083   |
| 7 | PD_DEL_chr7_9595 | 93540696  | 96    | <DEL> | N     | 0.4807   | 0.4836   | 0.0116861 | 1 | 0.876461 | 0.052296  | -0.1318631 |
| 7 | PD_DEL_chr7_9606 | 93697622  | 5347  | <DEL> | N     | 0.2309   | 0.2352   | 0.738307  | 1 | 0.979312 | 0.0625727 | -0.020905  |
| 7 | PD_DEL_chr7_9833 | 96913723  | 3563  | <DEL> | N     | 0.3135   | 0.3035   | 0.857071  | 1 | 1.01028  | 0.0567844 | 0.01022752 |
| 8 | D_DEL_chr8_1006  | 114621672 | 12206 | <DEL> | N     | 0.1155   | 0.122    | 0.620562  | 1 | 1.04145  | 0.0820445 | 0.04061397 |
| 8 | D_DEL_chr8_1025  | 116961131 | 1952  | <DEL> | N     | 0.01346  | 0.01658  | 0.602183  | 1 | 0.889273 | 0.225128  | -0.117351  |
| 8 | D_DEL_chr8_1028  | 117211303 | 267   | N     | <DEL> | 0.1812   | 0.1617   | 0.630546  | 1 | 1.03549  | 0.0725145 | 0.03487474 |
| 8 | D_DEL_chr8_1033  | 117968533 | 336   | <DEL> | N     | 0.2513   | 0.242    | 0.623406  | 1 | 1.03121  | 0.0625877 | 0.03073287 |
| 8 | D_DEL_chr8_1044  | 119142305 | 6671  | <DEL> | N     | 0.1449   | 0.1442   | 0.634547  | 1 | 0.964909 | 0.0751492 | -0.0357215 |
| 8 | D_DEL_chr8_1055  | 120669445 | 306   | <DEL> | N     | 0.4147   | 0.434    | 0.498092  | 1 | 0.963812 | 0.0544048 | -0.036859  |
| 8 | D_DEL_chr8_1077  | 123642052 | 67    | N     | <DEL> | 0.2292   | 0.2119   | 0.0328674 | 1 | 1.14395  | 0.0630319 | 0.13448719 |



|   |                  |           |        |       |       |         |          |           |   |          |           |            |
|---|------------------|-----------|--------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 8 | D_DEL_chr8_1087  | 124801204 | 61     | <DEL> | N     | 0.1954  | 0.1937   | 0.149909  | 1 | 1.09926  | 0.0657345 | 0.09463723 |
| 8 | D_DEL_chr8_1091  | 125441201 | 454    | <DEL> | N     | 0.0351  | 0.03657  | 0.852594  | 1 | 0.974335 | 0.139931  | -0.0260001 |
| 8 | D_DEL_chr8_1092  | 125669145 | 317    | <DEL> | N     | 0.4623  | 0.4655   | 0.0167404 | 1 | 1.13925  | 0.0544927 | 0.13037015 |
| 8 | D_DEL_chr8_1117  | 128738981 | 13603  | <DEL> | N     | 0.02515 | 0.02825  | 0.0263413 | 1 | 0.693827 | 0.164571  | -0.3655326 |
| 8 | D_DEL_chr8_1117  | 128750275 | 3505   | <DEL> | N     | 0.2592  | 0.2494   | 0.173034  | 1 | 1.08525  | 0.0600435 | 0.08181038 |
| 8 | D_DEL_chr8_1131  | 130307206 | 52     | <DEL> | N     | 0.01007 | 0.01331  | 0.676811  | 1 | 0.899788 | 0.253337  | -0.1055961 |
| 8 | D_DEL_chr8_1137  | 131156054 | 295    | <DEL> | N     | 0.4731  | 0.4807   | 0.494941  | 1 | 1.03726  | 0.0536058 | 0.03658262 |
| 8 | D_DEL_chr8_1154  | 133317217 | 306    | <DEL> | N     | 0.294   | 0.2967   | 0.497878  | 1 | 1.04011  | 0.0580217 | 0.03932648 |
| 8 | PD_DEL_chr8_1175 | 4137359   | 456    | <DEL> | N     | 0.3756  | 0.3787   | 0.453529  | 1 | 0.958738 | 0.0562175 | -0.0421374 |
| 8 | D_DEL_chr8_1181  | 136668039 | 182090 | <DEL> | N     | 0.02244 | 0.02051  | 0.741283  | 1 | 0.940592 | 0.185506  | -0.0612458 |
| 8 | D_DEL_chr8_1191  | 137730724 | 894    | N     | <DEL> | 0.1128  | 0.1196   | 0.186095  | 1 | 0.897408 | 0.0818658 | -0.1082447 |
| 8 | PD_DEL_chr8_1199 | 4265216   | 2235   | N     | <DEL> | 0.3524  | 0.3463   | 0.363945  | 1 | 1.0514   | 0.0552064 | 0.05012261 |
| 8 | PD_DEL_chr8_122  | 644397    | 5017   | N     | <DEL> | 0.1799  | 0.1806   | 0.741059  | 1 | 1.0227   | 0.0679264 | 0.02244619 |
| 8 | D_DEL_chr8_1283  | 143521392 | 57     | <DEL> | N     | 0.2377  | 0.2413   | 0.73307   | 1 | 1.02076  | 0.0602554 | 0.02054745 |
| 8 | D_DEL_chr8_1285  | 143618072 | 14450  | <DEL> | N     | 0.1812  | 0.1835   | 0.643234  | 1 | 0.968838 | 0.0683481 | -0.0316579 |
| 8 | D_DEL_chr8_1305  | 144419879 | 2288   | <DEL> | N     | 0.0564  | 0.05918  | 0.277847  | 1 | 0.882773 | 0.114901  | -0.1246872 |
| 8 | PD_DEL_chr8_1310 | 5083713   | 285    | <DEL> | N     | 0.4631  | 0.4746   | 0.786628  | 1 | 0.985954 | 0.0522555 | -0.0141456 |
| 8 | D_DEL_chr8_1319  | 144817561 | 120    | N     | <DEL> | 0.3791  | 0.3809   | 0.55445   | 1 | 0.967994 | 0.0550322 | -0.0325294 |
| 8 | D_DEL_chr8_1325  | 145072462 | 5263   | <DEL> | N     | 0.01103 | 0.0108   | 0.862851  | 1 | 1.0463   | 0.262004  | 0.04526013 |
| 8 | PD_DEL_chr8_1382 | 5737994   | 10263  | <DEL> | N     | 0.08375 | 0.08138  | 0.317536  | 1 | 1.10005  | 0.095404  | 0.09535563 |
| 8 | PD_DEL_chr8_1499 | 6372232   | 1111   | <DEL> | N     | 0.05551 | 0.05441  | 0.614616  | 1 | 0.94122  | 0.120315  | -0.0605784 |
| 8 | PD_DEL_chr8_1569 | 6933349   | 322    | N     | <DEL> | 0.2155  | 0.1756   | 0.223203  | 1 | 1.08568  | 0.0674913 | 0.08220652 |
| 8 | PD_DEL_chr8_1715 | 9197468   | 7742   | <DEL> | N     | 0.01451 | 0.01187  | 0.231008  | 1 | 1.31612  | 0.229332  | 0.27468801 |
| 8 | PD_DEL_chr8_1758 | 9640025   | 3421   | <DEL> | N     | 0.1066  | 0.1115   | 0.498863  | 1 | 0.944055 | 0.0851281 | -0.0575709 |
| 8 | PD_DEL_chr8_1970 | 12375975  | 2649   | <DEL> | N     | 0.2747  | 0.28     | 0.725052  | 1 | 0.978809 | 0.060897  | -0.0214188 |
| 8 | PD_DEL_chr8_2131 | 13736973  | 146    | N     | <DEL> | 0.02592 | 0.02177  | 0.726852  | 1 | 1.06696  | 0.185544  | 0.06481348 |
| 8 | PD_DEL_chr8_2180 | 14100553  | 60     | <DEL> | N     | 0.02487 | 0.02396  | 0.969628  | 1 | 0.993902 | 0.160656  | -0.0061167 |
| 8 | PD_DEL_chr8_2319 | 15373788  | 439    | <DEL> | N     | 0.0205  | 0.02124  | 0.329923  | 1 | 0.837615 | 0.181877  | -0.1771967 |
| 8 | PD_DEL_chr8_2320 | 15373790  | 56     | <DEL> | N     | 0.02215 | 0.02078  | 0.394827  | 1 | 0.859533 | 0.17789   | -0.1513661 |
| 8 | PD_DEL_chr8_2393 | 16034520  | 337    | <DEL> | N     | 0.01045 | 0.01009  | 0.143555  | 1 | 1.48637  | 0.270965  | 0.39633691 |
| 8 | PD_DEL_chr8_2441 | 16343801  | 6223   | <DEL> | N     | 0.04669 | 0.04578  | 0.731446  | 1 | 1.04532  | 0.129132  | 0.04432306 |
| 8 | PD_DEL_chr8_2448 | 16404545  | 12630  | <DEL> | N     | 0.04468 | 0.04336  | 0.793842  | 1 | 1.03505  | 0.131835  | 0.03444973 |
| 8 | PD_DEL_chr8_2470 | 16687916  | 307    | <DEL> | N     | 0.02709 | 0.02146  | 0.509638  | 1 | 1.12081  | 0.17296   | 0.11405164 |
| 8 | PD_DEL_chr8_2471 | 16689254  | 85     | N     | <DEL> | 0.02089 | 0.02213  | 0.14254   | 1 | 0.761612 | 0.185706  | -0.272318  |
| 8 | PD_DEL_chr8_2492 | 16876233  | 3287   | <DEL> | N     | 0.01219 | 0.008276 | 0.0936527 | 1 | 1.53531  | 0.255741  | 0.42873232 |
| 8 | PD_DEL_chr8_2502 | 16964371  | 369    | <DEL> | N     | 0.276   | 0.2809   | 0.820065  | 1 | 0.986415 | 0.0601344 | -0.0136781 |
| 8 | PD_DEL_chr8_2510 | 17104713  | 306    | <DEL> | N     | 0.4157  | 0.4374   | 0.214254  | 1 | 0.934189 | 0.0548145 | -0.0680765 |
| 8 | PD_DEL_chr8_2518 | 17199570  | 84     | N     | <DEL> | 0.3569  | 0.3535   | 0.98799   | 1 | 0.999167 | 0.0553625 | -0.0008333 |
| 8 | PD_DEL_chr8_2529 | 17408106  | 310    | <DEL> | N     | 0.4733  | 0.4777   | 0.259527  | 1 | 1.06356  | 0.054649  | 0.06162177 |
| 8 | PD_DEL_chr8_2555 | 17723131  | 1160   | <DEL> | N     | 0.0331  | 0.03888  | 0.967329  | 1 | 1.00577  | 0.140432  | 0.00575342 |
| 8 | PD_DEL_chr8_2578 | 17893509  | 1513   | <DEL> | N     | 0.02805 | 0.03258  | 0.669889  | 1 | 0.936964 | 0.152733  | -0.0651104 |

|   |                  |          |        |       |       |         |          |            |   |          |           |            |
|---|------------------|----------|--------|-------|-------|---------|----------|------------|---|----------|-----------|------------|
| 8 | PD_DEL_chr8_2623 | 18618181 | 462    | <DEL> | N     | 0.05439 | 0.04984  | 0.425924   | 1 | 1.09498  | 0.113969  | 0.0907361  |
| 8 | PD_DEL_chr8_2640 | 18793948 | 967    | N     | <DEL> | 0.1861  | 0.1756   | 0.886394   | 1 | 1.00996  | 0.0694028 | 0.00991073 |
| 8 | PD_DEL_chr8_2652 | 18993375 | 14387  | <DEL> | N     | 0.0118  | 0.01529  | 0.045288   | 1 | 0.643908 | 0.219883  | -0.4401994 |
| 8 | PD_DEL_chr8_2805 | 21085893 | 402    | <DEL> | N     | 0.2174  | 0.2089   | 0.642016   | 1 | 1.03038  | 0.0643766 | 0.02992767 |
| 8 | PD_DEL_chr8_312  | 1029565  | 59     | <DEL> | N     | 0.01829 | 0.01265  | 0.0102037  | 1 | 1.76819  | 0.221872  | 0.56995642 |
| 8 | PD_DEL_chr8_3124 | 24287796 | 5775   | <DEL> | N     | 0.02478 | 0.02537  | 0.720539   | 1 | 1.0644   | 0.174467  | 0.06241126 |
| 8 | PD_DEL_chr8_3181 | 25114919 | 18509  | <DEL> | N     | 0.3642  | 0.339    | 0.00893594 | 1 | 1.1556   | 0.0553144 | 0.14461969 |
| 8 | PD_DEL_chr8_3195 | 25209169 | 3967   | N     | <DEL> | 0.1896  | 0.1927   | 0.168392   | 1 | 0.908856 | 0.0693842 | -0.0955686 |
| 8 | PD_DEL_chr8_3228 | 25553158 | 5961   | <DEL> | N     | 0.03542 | 0.02987  | 0.91491    | 1 | 1.01604  | 0.148948  | 0.01591272 |
| 8 | PD_DEL_chr8_3418 | 28486503 | 1020   | <DEL> | N     | 0.01103 | 0.009716 | 0.824795   | 1 | 0.943461 | 0.262894  | -0.0582003 |
| 8 | PD_DEL_chr8_3439 | 28789457 | 57     | <DEL> | N     | 0.07989 | 0.07584  | 0.601716   | 1 | 1.05164  | 0.0964709 | 0.05035085 |
| 8 | PD_DEL_chr8_3452 | 28896382 | 260    | <DEL> | N     | 0.1381  | 0.1355   | 0.9869     | 1 | 1.00126  | 0.0767745 | 0.00125921 |
| 8 | PD_DEL_chr8_3516 | 29960772 | 119    | <DEL> | N     | 0.01316 | 0.01333  | 0.714107   | 1 | 0.921899 | 0.221974  | -0.0813196 |
| 8 | PD_DEL_chr8_3529 | 30063915 | 2123   | <DEL> | N     | 0.01916 | 0.01961  | 0.944572   | 1 | 1.014    | 0.199912  | 0.01390291 |
| 8 | PD_DEL_chr8_3531 | 30066039 | 737    | <DEL> | N     | 0.01597 | 0.0149   | 0.630216   | 1 | 1.11083  | 0.218329  | 0.10510748 |
| 8 | PD_DEL_chr8_3532 | 30066798 | 2842   | <DEL> | N     | 0.01954 | 0.01926  | 0.760865   | 1 | 1.06146  | 0.195981  | 0.05964532 |
| 8 | PD_DEL_chr8_3613 | 30738658 | 703    | <DEL> | N     | 0.04111 | 0.04618  | 0.992233   | 1 | 0.998748 | 0.128682  | -0.0012528 |
| 8 | PD_DEL_chr8_3615 | 30746435 | 1629   | <DEL> | N     | 0.1591  | 0.1657   | 0.552846   | 1 | 1.04377  | 0.0721777 | 0.04283916 |
| 8 | PD_DEL_chr8_3909 | 34469880 | 75     | <DEL> | N     | 0.02058 | 0.02178  | 0.546651   | 1 | 0.89495  | 0.184124  | -0.1109874 |
| 8 | PD_DEL_chr8_4016 | 35487193 | 55     | <DEL> | N     | 0.02152 | 0.02142  | 0.739522   | 1 | 0.942296 | 0.178762  | -0.0594358 |
| 8 | PD_DEL_chr8_4076 | 36212612 | 7225   | <DEL> | N     | 0.02361 | 0.02321  | 0.407084   | 1 | 0.862982 | 0.17775   | -0.1473614 |
| 8 | PD_DEL_chr8_4345 | 39374555 | 155154 | <DEL> | N     | 0.4366  | 0.4203   | 0.0764881  | 1 | 1.09881  | 0.0531916 | 0.09422778 |
| 8 | PD_DEL_chr8_4430 | 40325337 | 6958   | <DEL> | N     | 0.06451 | 0.0556   | 0.968542   | 1 | 0.995601 | 0.111801  | -0.0044087 |
| 8 | PD_DEL_chr8_4469 | 40917114 | 5095   | N     | <DEL> | 0.4632  | 0.4543   | 0.270048   | 1 | 1.05903  | 0.0520016 | 0.05735339 |
| 8 | PD_DEL_chr8_4585 | 42520419 | 2370   | <DEL> | N     | 0.4689  | 0.4721   | 0.94058    | 1 | 0.995948 | 0.0544665 | -0.0040602 |
| 8 | PD_DEL_chr8_4858 | 50118531 | 7238   | <DEL> | N     | 0.2255  | 0.2209   | 0.237991   | 1 | 0.927354 | 0.0639139 | -0.0754199 |
| 8 | PD_DEL_chr8_4934 | 51148449 | 297    | <DEL> | N     | 0.3472  | 0.3588   | 0.303565   | 1 | 0.944408 | 0.0555949 | -0.057197  |
| 8 | PD_DEL_chr8_4981 | 51607635 | 998    | <DEL> | N     | 0.01649 | 0.01929  | 0.856264   | 1 | 1.03654  | 0.198124  | 0.03588824 |
| 8 | PD_DEL_chr8_5280 | 55746047 | 128    | N     | <DEL> | 0.3874  | 0.38     | 0.842513   | 1 | 1.01109  | 0.055501  | 0.01102896 |
| 8 | PD_DEL_chr8_5283 | 55763719 | 129    | N     | <DEL> | 0.0942  | 0.09752  | 0.449211   | 1 | 0.934967 | 0.088861  | -0.067244  |
| 8 | PD_DEL_chr8_5309 | 56054772 | 138    | N     | <DEL> | 0.3602  | 0.3613   | 0.513487   | 1 | 0.965433 | 0.0538386 | -0.0351786 |
| 8 | PD_DEL_chr8_5360 | 56685685 | 55     | <DEL> | N     | 0.01376 | 0.0126   | 0.131629   | 1 | 0.717703 | 0.220002  | -0.3316994 |
| 8 | PD_DEL_chr8_5383 | 57005756 | 11958  | <DEL> | N     | 0.01141 | 0.01098  | 0.445856   | 1 | 1.21095  | 0.251076  | 0.19140518 |
| 8 | PD_DEL_chr8_5556 | 59267215 | 52     | <DEL> | N     | 0.4816  | 0.4728   | 0.567081   | 1 | 0.96977  | 0.0536307 | -0.0306963 |
| 8 | PD_DEL_chr8_5649 | 60292438 | 306    | <DEL> | N     | 0.3679  | 0.3778   | 0.528353   | 1 | 1.03502  | 0.0545978 | 0.03442075 |
| 8 | PD_DEL_chr8_5772 | 62122393 | 5440   | <DEL> | N     | 0.03522 | 0.03616  | 0.0764505  | 1 | 1.28806  | 0.142883  | 0.25313721 |
| 8 | PD_DEL_chr8_5937 | 64150852 | 148    | <DEL> | N     | 0.04052 | 0.04291  | 0.0716939  | 1 | 0.794196 | 0.127939  | -0.230425  |
| 8 | PD_DEL_chr8_5938 | 64150860 | 132    | <DEL> | N     | 0.07229 | 0.07249  | 0.469229   | 1 | 0.927314 | 0.104269  | -0.075463  |
| 8 | PD_DEL_chr8_6148 | 67244034 | 5690   | <DEL> | N     | 0.02244 | 0.02213  | 0.615065   | 1 | 1.09415  | 0.178933  | 0.08997781 |
| 8 | PD_DEL_chr8_6332 | 69407654 | 5301   | <DEL> | N     | 0.01257 | 0.008999 | 0.341856   | 1 | 0.784844 | 0.254887  | -0.2422703 |
| 8 | PD_DEL_chr8_6339 | 69452039 | 75     | <DEL> | N     | 0.01183 | 0.01154  | 0.988345   | 1 | 1.00365  | 0.249331  | 0.00364335 |

|   |                   |           |       |       |       |         |         |           |   |          |           |            |
|---|-------------------|-----------|-------|-------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 8 | PD_DEL_chr8_6742  | 75225899  | 57    | N     | <DEL> | 0.4443  | 0.4419  | 0.910858  | 1 | 0.994055 | 0.0532555 | -0.0059627 |
| 8 | PD_DEL_chr8_7036  | 78265948  | 9579  | <DEL> | N     | 0.0118  | 0.01422 | 0.0405266 | 1 | 0.606182 | 0.244381  | -0.500575  |
| 8 | PD_DEL_chr8_719   | 1682386   | 1638  | <DEL> | N     | 0.03609 | 0.04212 | 0.930906  | 1 | 1.01185  | 0.135829  | 0.01178034 |
| 8 | PD_DEL_chr8_7303  | 82092998  | 449   | <DEL> | N     | 0.2513  | 0.2595  | 0.58526   | 1 | 1.03372  | 0.0607753 | 0.03316395 |
| 8 | PD_DEL_chr8_7536  | 84348735  | 8199  | <DEL> | N     | 0.03348 | 0.03097 | 0.0354791 | 1 | 1.36931  | 0.149467  | 0.31430696 |
| 8 | PD_DEL_chr8_7699  | 86176024  | 5490  | <DEL> | N     | 0.1503  | 0.145   | 0.877796  | 1 | 1.01154  | 0.0746486 | 0.01147392 |
| 8 | PD_DEL_chr8_7922  | 88580095  | 885   | <DEL> | N     | 0.02827 | 0.02737 | 0.0803271 | 1 | 1.33372  | 0.164669  | 0.28797203 |
| 8 | PD_DEL_chr8_8022  | 89456040  | 153   | <DEL> | N     | 0.3936  | 0.4273  | 0.628196  | 1 | 1.0262   | 0.0534057 | 0.02586266 |
| 8 | PD_DEL_chr8_8397  | 94712958  | 3020  | <DEL> | N     | 0.02186 | 0.02321 | 0.123649  | 1 | 0.7572   | 0.180645  | -0.2781279 |
| 8 | PD_DEL_chr8_8887  | 101004961 | 182   | <DEL> | N     | 0.02615 | 0.02826 | 0.911378  | 1 | 0.982562 | 0.158057  | -0.0175918 |
| 8 | PD_DEL_chr8_8982  | 102429238 | 409   | <DEL> | N     | 0.01728 | 0.01324 | 0.401734  | 1 | 1.20247  | 0.219887  | 0.18437777 |
| 8 | PD_DEL_chr8_9282  | 106009345 | 59    | <DEL> | N     | 0.4317  | 0.4241  | 0.544177  | 1 | 1.03208  | 0.0520559 | 0.03157618 |
| 8 | PD_DEL_chr8_9525  | 108717946 | 311   | <DEL> | N     | 0.196   | 0.1975  | 0.905512  | 1 | 0.992241 | 0.0656213 | -0.0077893 |
| 8 | PD_DEL_chr8_9562  | 109222490 | 333   | <DEL> | N     | 0.3708  | 0.3901  | 0.264351  | 1 | 1.06408  | 0.0556442 | 0.06211058 |
| 8 | PD_DEL_chr8_9580  | 109498091 | 309   | <DEL> | N     | 0.3721  | 0.3789  | 0.490259  | 1 | 1.03896  | 0.055401  | 0.03822021 |
| 8 | PD_DEL_chr8_986   | 2730797   | 4103  | <DEL> | N     | 0.01161 | 0.01169 | 0.0151379 | 1 | 1.81505  | 0.245408  | 0.59611302 |
| 8 | PD_DEL_chr8_9890  | 113028238 | 6300  | <DEL> | N     | 0.02754 | 0.02723 | 0.313033  | 1 | 1.18056  | 0.164525  | 0.1659889  |
| 9 | D_DEL_chr9_10160  | 134798569 | 84    | <DEL> | N     | 0.4959  | 0.4962  | 0.631153  | 1 | 0.975123 | 0.0524714 | -0.0251917 |
| 9 | D_DEL_chr9_10300  | 135316098 | 57    | <DEL> | N     | 0.3863  | 0.398   | 0.407388  | 1 | 0.957454 | 0.0524774 | -0.0434776 |
| 9 | D_DEL_chr9_10350  | 135587257 | 1096  | N     | <DEL> | 0.2112  | 0.1994  | 0.696262  | 1 | 0.97439  | 0.0664599 | -0.0259436 |
| 9 | D_DEL_chr9_10450  | 136162351 | 4805  | <DEL> | N     | 0.05017 | 0.04534 | 0.525881  | 1 | 1.08249  | 0.124955  | 0.07926394 |
| 9 | D_DEL_chr9_10470  | 136186067 | 57    | <DEL> | N     | 0.02464 | 0.02197 | 0.431491  | 1 | 1.14668  | 0.173989  | 0.13687081 |
| 9 | D_DEL_chr9_10630  | 136772879 | 9903  | <DEL> | N     | 0.03715 | 0.03241 | 0.0695638 | 1 | 1.30146  | 0.145193  | 0.26348671 |
| 9 | D_DEL_chr9_11010  | 137888619 | 2209  | <DEL> | N     | 0.1129  | 0.118   | 0.996076  | 1 | 0.999579 | 0.0856829 | -0.0004211 |
| 9 | D_DEL_chr9_11050  | 138125045 | 14186 | <DEL> | N     | 0.04996 | 0.05148 | 0.475941  | 1 | 0.920206 | 0.116656  | -0.0831577 |
| 9 | PD_DEL_chr9_13770 | 12556849  | 2797  | <DEL> | N     | 0.2269  | 0.2271  | 0.874619  | 1 | 1.00978  | 0.0616893 | 0.00973249 |
| 9 | PD_DEL_chr9_16420 | 15815311  | 6631  | <DEL> | N     | 0.4381  | 0.4554  | 0.976336  | 1 | 1.00159  | 0.0536788 | 0.00158874 |
| 9 | PD_DEL_chr9_170   | 1446532   | 5929  | <DEL> | N     | 0.01413 | 0.01494 | 0.413823  | 1 | 0.834186 | 0.221858  | -0.1812989 |
| 9 | PD_DEL_chr9_19020 | 18751844  | 274   | N     | <DEL> | 0.1851  | 0.1637  | 0.0487443 | 1 | 0.867374 | 0.0721955 | -0.142285  |
| 9 | PD_DEL_chr9_206   | 1798056   | 51    | <DEL> | N     | 0.01902 | 0.02072 | 0.876056  | 1 | 1.02987  | 0.188682  | 0.02943258 |
| 9 | PD_DEL_chr9_22500 | 22496528  | 7817  | <DEL> | N     | 0.4147  | 0.4063  | 0.187875  | 1 | 1.07364  | 0.0539597 | 0.07105474 |
| 9 | PD_DEL_chr9_23430 | 23362803  | 14884 | <DEL> | N     | 0.4052  | 0.416   | 0.329584  | 1 | 1.05398  | 0.0539225 | 0.05257347 |
| 9 | PD_DEL_chr9_23970 | 23985164  | 52    | <DEL> | N     | 0.01181 | 0.01118 | 0.578269  | 1 | 0.874261 | 0.241721  | -0.1343763 |
| 9 | PD_DEL_chr9_24420 | 24356437  | 301   | <DEL> | N     | 0.05202 | 0.05079 | 0.93377   | 1 | 1.00987  | 0.118185  | 0.00982161 |
| 9 | PD_DEL_chr9_25290 | 25099792  | 66    | <DEL> | N     | 0.01336 | 0.01351 | 0.516185  | 1 | 1.15209  | 0.21807   | 0.14157768 |
| 9 | PD_DEL_chr9_2750  | 2481695   | 53    | N     | <DEL> | 0.3462  | 0.3444  | 0.447547  | 1 | 0.958987 | 0.0551374 | -0.0418778 |
| 9 | PD_DEL_chr9_27700 | 27670563  | 64    | <DEL> | N     | 0.3019  | 0.2988  | 0.827075  | 1 | 0.9878   | 0.056192  | -0.012275  |
| 9 | PD_DEL_chr9_28680 | 28584937  | 76    | N     | <DEL> | 0.01006 | 0.01134 | 0.335686  | 1 | 0.77721  | 0.261804  | -0.2520447 |
| 9 | PD_DEL_chr9_29400 | 29092579  | 5437  | <DEL> | N     | 0.2004  | 0.2003  | 0.696604  | 1 | 0.974419 | 0.0664612 | -0.0259139 |
| 9 | PD_DEL_chr9_30980 | 30491300  | 296   | N     | <DEL> | 0.2567  | 0.2103  | 0.33696   | 1 | 0.940298 | 0.064111  | -0.0615584 |
| 9 | PD_DEL_chr9_31060 | 30543875  | 1045  | <DEL> | N     | 0.02363 | 0.02089 | 0.79208   | 1 | 1.04822  | 0.178644  | 0.04709349 |

|   |                  |          |       |       |       |          |         |           |   |          |           |            |
|---|------------------|----------|-------|-------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 9 | PD_DEL_chr9_3291 | 32315163 | 219   | N     | <DEL> | 0.1826   | 0.1859  | 0.505906  | 1 | 1.04549  | 0.0668727 | 0.04448568 |
| 9 | PD_DEL_chr9_3337 | 33213022 | 885   | N     | <DEL> | 0.493    | 0.4842  | 0.0720449 | 1 | 0.908674 | 0.0532394 | -0.0957689 |
| 9 | PD_DEL_chr9_3350 | 33423378 | 1278  | <DEL> | N     | 0.2109   | 0.2096  | 0.640877  | 1 | 1.03048  | 0.0643625 | 0.03002471 |
| 9 | PD_DEL_chr9_3451 | 34135108 | 803   | <DEL> | N     | 0.01721  | 0.02071 | 0.302666  | 1 | 0.820688 | 0.19172   | -0.1976123 |
| 9 | PD_DEL_chr9_3498 | 34549823 | 53    | <DEL> | N     | 0.02814  | 0.03391 | 0.954899  | 1 | 1.00865  | 0.152286  | 0.0086128  |
| 9 | PD_DEL_chr9_3813 | 38555863 | 9224  | <DEL> | N     | 0.02418  | 0.02321 | 0.827819  | 1 | 1.03896  | 0.17572   | 0.03822021 |
| 9 | PD_DEL_chr9_3827 | 38678630 | 355   | <DEL> | N     | 0.01007  | 0.01098 | 0.93783   | 1 | 1.02039  | 0.258733  | 0.02018491 |
| 9 | PD_DEL_chr9_3862 | 39568354 | 571   | <DEL> | N     | 0.05103  | 0.04896 | 0.308136  | 1 | 1.13336  | 0.122835  | 0.12518667 |
| 9 | PD_DEL_chr9_3933 | 40842086 | 3744  | <DEL> | N     | 0.02478  | 0.03342 | 0.581172  | 1 | 0.916595 | 0.157865  | -0.0870896 |
| 9 | PD_DEL_chr9_4099 | 41356844 | 69    | <DEL> | N     | 0.009973 | 0.01322 | 0.2743    | 1 | 0.757017 | 0.254634  | -0.2783696 |
| 9 | PD_DEL_chr9_4571 | 67045841 | 89    | <DEL> | N     | 0.086    | 0.09208 | 0.490922  | 1 | 0.938417 | 0.0922724 | -0.0635609 |
| 9 | PD_DEL_chr9_4584 | 67191417 | 149   | <DEL> | N     | 0.01047  | 0.01389 | 0.535141  | 1 | 0.864892 | 0.234048  | -0.1451506 |
| 9 | PD_DEL_chr9_4666 | 69050423 | 218   | N     | <DEL> | 0.02456  | 0.02105 | 0.71561   | 1 | 0.93742  | 0.177376  | -0.0646239 |
| 9 | PD_DEL_chr9_4677 | 69123206 | 5232  | N     | <DEL> | 0.3035   | 0.2994  | 0.64526   | 1 | 0.974072 | 0.0570652 | -0.0262701 |
| 9 | PD_DEL_chr9_4680 | 69163025 | 303   | <DEL> | N     | 0.417    | 0.435   | 0.934852  | 1 | 1.00439  | 0.0535501 | 0.00438039 |
| 9 | PD_DEL_chr9_4683 | 69189611 | 455   | <DEL> | N     | 0.4925   | 0.4888  | 0.988277  | 1 | 0.999205 | 0.0541481 | -0.0007953 |
| 9 | PD_DEL_chr9_4746 | 70146928 | 2080  | <DEL> | N     | 0.06004  | 0.06024 | 0.75904   | 1 | 0.96558  | 0.114189  | -0.0350263 |
| 9 | PD_DEL_chr9_4865 | 71654480 | 270   | N     | <DEL> | 0.2795   | 0.2809  | 0.0228013 | 1 | 0.874796 | 0.0587525 | -0.1337646 |
| 9 | PD_DEL_chr9_5000 | 73402734 | 9990  | <DEL> | N     | 0.02805  | 0.02663 | 0.229561  | 1 | 0.824401 | 0.160716  | -0.1930982 |
| 9 | PD_DEL_chr9_5171 | 75389380 | 7504  | <DEL> | N     | 0.1052   | 0.09165 | 0.127257  | 1 | 1.14583  | 0.0892634 | 0.13612927 |
| 9 | PD_DEL_chr9_5172 | 75397006 | 56    | <DEL> | N     | 0.01549  | 0.01695 | 0.370307  | 1 | 0.824804 | 0.21499   | -0.1926095 |
| 9 | PD_DEL_chr9_5232 | 76121819 | 303   | N     | <DEL> | 0.4901   | 0.4604  | 0.644395  | 1 | 1.02448  | 0.052392  | 0.02418517 |
| 9 | PD_DEL_chr9_5443 | 78963276 | 51    | <DEL> | N     | 0.05297  | 0.04763 | 0.833881  | 1 | 1.02503  | 0.117879  | 0.02472188 |
| 9 | PD_DEL_chr9_5562 | 80456743 | 407   | <DEL> | N     | 0.07679  | 0.07395 | 0.945687  | 1 | 1.00656  | 0.0959715 | 0.00653858 |
| 9 | PD_DEL_chr9_5591 | 80740865 | 59    | N     | <DEL> | 0.4582   | 0.4554  | 0.77962   | 1 | 1.01533  | 0.0543787 | 0.01521368 |
| 9 | PD_DEL_chr9_5645 | 81302786 | 56    | <DEL> | N     | 0.03354  | 0.03444 | 0.693347  | 1 | 0.945619 | 0.141803  | -0.0559155 |
| 9 | PD_DEL_chr9_5706 | 81862171 | 318   | <DEL> | N     | 0.2735   | 0.2881  | 0.811299  | 1 | 0.985618 | 0.0606762 | -0.0144864 |
| 9 | PD_DEL_chr9_5740 | 82418944 | 328   | <DEL> | N     | 0.2715   | 0.2593  | 0.697517  | 1 | 1.02394  | 0.0608565 | 0.02365793 |
| 9 | PD_DEL_chr9_5962 | 85807004 | 78    | <DEL> | N     | 0.01153  | 0.0109  | 0.880917  | 1 | 1.03682  | 0.241358  | 0.03615834 |
| 9 | PD_DEL_chr9_5983 | 86107422 | 2137  | <DEL> | N     | 0.006602 | 0.0136  | 0.335391  | 1 | 1.31615  | 0.285171  | 0.27471081 |
| 9 | PD_DEL_chr9_6153 | 88202088 | 5010  | <DEL> | N     | 0.01044  | 0.01098 | 0.973123  | 1 | 0.991357 | 0.257646  | -0.0086806 |
| 9 | PD_DEL_chr9_6158 | 88244081 | 1967  | N     | <DEL> | 0.1081   | 0.09968 | 0.120706  | 1 | 0.875009 | 0.0860417 | -0.1335211 |
| 9 | PD_DEL_chr9_6204 | 88625479 | 380   | <DEL> | N     | 0.04664  | 0.05062 | 0.624354  | 1 | 0.942787 | 0.120311  | -0.0589149 |
| 9 | PD_DEL_chr9_6226 | 88887086 | 57    | N     | <DEL> | 0.3377   | 0.3411  | 0.976354  | 1 | 1.00171  | 0.0575316 | 0.00170854 |
| 9 | PD_DEL_chr9_623  | 6700554  | 10070 | <DEL> | N     | 0.1224   | 0.1236  | 0.813203  | 1 | 1.01914  | 0.08025   | 0.01895913 |
| 9 | PD_DEL_chr9_6325 | 90217264 | 56    | <DEL> | N     | 0.01297  | 0.01333 | 0.783977  | 1 | 1.06108  | 0.216253  | 0.05928726 |
| 9 | PD_DEL_chr9_634  | 6711077  | 147   | <DEL> | N     | 0.1208   | 0.1221  | 0.62527   | 1 | 1.03997  | 0.08025   | 0.03919187 |
| 9 | PD_DEL_chr9_6400 | 91385894 | 306   | <DEL> | N     | 0.01472  | 0.01494 | 0.159768  | 1 | 1.35205  | 0.214548  | 0.30162196 |
| 9 | PD_DEL_chr9_642  | 6729122  | 984   | <DEL> | N     | 0.1731   | 0.1753  | 0.321617  | 1 | 0.933598 | 0.0693237 | -0.0687093 |
| 9 | PD_DEL_chr9_6421 | 91633535 | 7481  | <DEL> | N     | 0.01664  | 0.01871 | 0.191846  | 1 | 0.77424  | 0.19605   | -0.2558734 |
| 9 | PD_DEL_chr9_6693 | 95503733 | 317   | <DEL> | N     | 0.3282   | 0.3366  | 0.738402  | 1 | 1.01904  | 0.056486  | 0.01886101 |

|    |                  |           |      |       |       |         |          |           |   |          |           |            |
|----|------------------|-----------|------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 9  | PD_DEL_chr9_673  | 6888787   | 300  | N     | <DEL> | 0.4847  | 0.4919   | 0.614612  | 1 | 0.973236 | 0.0538797 | -0.0271287 |
| 9  | PD_DEL_chr9_6747 | 96300305  | 333  | <DEL> | N     | 0.1623  | 0.166    | 0.583517  | 1 | 0.96071  | 0.0731101 | -0.0400827 |
| 9  | PD_DEL_chr9_6899 | 98238047  | 798  | <DEL> | N     | 0.05465 | 0.06156  | 0.312497  | 1 | 0.892397 | 0.112717  | -0.1138442 |
| 9  | PD_DEL_chr9_6912 | 98447064  | 298  | <DEL> | N     | 0.1336  | 0.1421   | 0.482182  | 1 | 0.947752 | 0.0763555 | -0.0536624 |
| 9  | PD_DEL_chr9_6922 | 98585704  | 330  | N     | <DEL> | 0.3176  | 0.3087   | 0.118264  | 1 | 0.915748 | 0.0563434 | -0.0880141 |
| 9  | PD_DEL_chr9_7117 | 101681697 | 748  | N     | <DEL> | 0.05745 | 0.05775  | 0.0363172 | 1 | 0.785371 | 0.115412  | -0.2415991 |
| 9  | PD_DEL_chr9_7142 | 101952564 | 9635 | <DEL> | N     | 0.1795  | 0.1778   | 0.477328  | 1 | 1.05027  | 0.0690274 | 0.04904727 |
| 9  | PD_DEL_chr9_7350 | 103805980 | 1468 | <DEL> | N     | 0.2983  | 0.3017   | 0.91986   | 1 | 0.994232 | 0.0574942 | -0.0057847 |
| 9  | PD_DEL_chr9_7432 | 104638707 | 299  | <DEL> | N     | 0.2529  | 0.2589   | 0.53126   | 1 | 0.963524 | 0.0593492 | -0.0371579 |
| 9  | PD_DEL_chr9_7800 | 109667932 | 303  | N     | <DEL> | 0.4199  | 0.3926   | 0.483486  | 1 | 1.03931  | 0.0550298 | 0.03855703 |
| 9  | PD_DEL_chr9_7835 | 110262382 | 5227 | <DEL> | N     | 0.2047  | 0.2077   | 0.292043  | 1 | 0.932545 | 0.0662819 | -0.0698379 |
| 9  | PD_DEL_chr9_7902 | 110905273 | 1707 | <DEL> | N     | 0.04201 | 0.03651  | 0.0478536 | 1 | 1.3128   | 0.137549  | 0.27216226 |
| 9  | PD_DEL_chr9_7937 | 111403391 | 4060 | <DEL> | N     | 0.0118  | 0.01367  | 0.903997  | 1 | 1.02886  | 0.235875  | 0.02845139 |
| 9  | PD_DEL_chr9_7985 | 111890897 | 772  | <DEL> | N     | 0.02695 | 0.03167  | 0.28353   | 1 | 0.845183 | 0.156846  | -0.1682021 |
| 9  | PD_DEL_chr9_7994 | 111963297 | 1259 | <DEL> | N     | 0.01451 | 0.01367  | 0.697542  | 1 | 1.09275  | 0.228215  | 0.08869745 |
| 9  | PD_DEL_chr9_8039 | 112502365 | 91   | N     | <DEL> | 0.04971 | 0.04678  | 0.420785  | 1 | 1.10033  | 0.118764  | 0.09561013 |
| 9  | PD_DEL_chr9_8086 | 113015431 | 4490 | <DEL> | N     | 0.02708 | 0.02951  | 0.710635  | 1 | 0.943059 | 0.158022  | -0.0586264 |
| 9  | PD_DEL_chr9_8431 | 117834571 | 178  | <DEL> | N     | 0.03364 | 0.03685  | 0.271741  | 1 | 1.16195  | 0.136573  | 0.15009963 |
| 9  | PD_DEL_chr9_8567 | 119594817 | 217  | N     | <DEL> | 0.4749  | 0.4908   | 0.150456  | 1 | 0.928317 | 0.0517288 | -0.074382  |
| 9  | PD_DEL_chr9_8696 | 121879742 | 113  | N     | <DEL> | 0.3381  | 0.3293   | 0.187112  | 1 | 1.07921  | 0.0577835 | 0.07622929 |
| 9  | PD_DEL_chr9_8817 | 123913472 | 6195 | <DEL> | N     | 0.01161 | 0.008996 | 0.337097  | 1 | 1.30669  | 0.278665  | 0.26749722 |
| 9  | PD_DEL_chr9_9034 | 126758182 | 2784 | <DEL> | N     | 0.1494  | 0.1656   | 0.352808  | 1 | 0.935288 | 0.0720017 | -0.0669008 |
| 9  | PD_DEL_chr9_9204 | 128649722 | 4018 | <DEL> | N     | 0.01479 | 0.01635  | 0.298511  | 1 | 1.24261  | 0.208935  | 0.21721401 |
| 9  | PD_DEL_chr9_9231 | 128794281 | 1211 | <DEL> | N     | 0.02742 | 0.02667  | 0.991396  | 1 | 1.0018   | 0.166519  | 0.00179838 |
| 9  | PD_DEL_chr9_9310 | 129264421 | 1369 | N     | <DEL> | 0.27    | 0.2481   | 0.0567086 | 1 | 1.12673  | 0.0626191 | 0.11931963 |
| 9  | PD_DEL_chr9_9374 | 129661764 | 818  | <DEL> | N     | 0.03175 | 0.03081  | 0.0536204 | 1 | 1.34909  | 0.155153  | 0.29943029 |
| 9  | PD_DEL_chr9_9472 | 130507740 | 4293 | <DEL> | N     | 0.1578  | 0.1562   | 0.819831  | 1 | 1.01674  | 0.0728938 | 0.01660143 |
| 9  | PD_DEL_chr9_9569 | 131385144 | 5457 | <DEL> | N     | 0.0528  | 0.05218  | 0.486351  | 1 | 0.921354 | 0.117668  | -0.081911  |
| 9  | PD_DEL_chr9_9709 | 132747050 | 4951 | <DEL> | N     | 0.02304 | 0.02447  | 0.925388  | 1 | 0.983646 | 0.176079  | -0.0164892 |
| 9  | PD_DEL_chr9_9865 | 133760072 | 1073 | <DEL> | N     | 0.4923  | 0.4908   | 0.931195  | 1 | 1.00453  | 0.052343  | 0.00451977 |
| 9  | PD_DEL_chr9_992  | 9950442   | 316  | <DEL> | N     | 0.3822  | 0.3895   | 0.479519  | 1 | 1.04064  | 0.0563361 | 0.03983591 |
| 10 | D_DUP_chr10_151  | 27243062  | 51   | N     | <DUP> | 0.3689  | 0.339    | 0.748943  | 1 | 0.981903 | 0.0570641 | -0.0182628 |
| 10 | D_DUP_chr10_155  | 28493134  | 50   | <DUP> | N     | 0.2441  | 0.244    | 0.734689  | 1 | 0.979655 | 0.0606526 | -0.0205548 |
| 10 | D_DUP_chr10_200  | 41856705  | 142  | <DUP> | N     | 0.04159 | 0.0469   | 0.46104   | 1 | 0.908236 | 0.130574  | -0.096251  |
| 10 | D_DUP_chr10_248  | 47185005  | 157  | <DUP> | N     | 0.01414 | 0.0173   | 0.0120453 | 1 | 0.587809 | 0.211626  | -0.5313532 |
| 10 | D_DUP_chr10_307  | 2526177   | 55   | N     | <DUP> | 0.2886  | 0.2793   | 0.421484  | 1 | 0.954059 | 0.0585058 | -0.0470298 |
| 10 | D_DUP_chr10_308  | 2526524   | 55   | N     | <DUP> | 0.271   | 0.2743   | 0.121013  | 1 | 0.913248 | 0.0585267 | -0.0907478 |
| 10 | D_DUP_chr10_309  | 63234245  | 452  | <DUP> | N     | 0.01978 | 0.01883  | 0.773957  | 1 | 1.05897  | 0.199507  | 0.05729674 |
| 10 | D_DUP_chr10_379  | 76538452  | 78   | <DUP> | N     | 0.01171 | 0.01192  | 0.788267  | 1 | 1.06859  | 0.247014  | 0.06634002 |
| 10 | D_DUP_chr10_402  | 3949895   | 69   | <DUP> | N     | 0.02705 | 0.02565  | 0.531841  | 1 | 1.10629  | 0.161564  | 0.10101207 |
| 10 | D_DUP_chr10_405  | 80698975  | 68   | <DUP> | N     | 0.03091 | 0.02963  | 0.890713  | 1 | 0.979516 | 0.150626  | -0.0206967 |

|    |                 |           |       |       |       |          |          |           |   |          |           |            |
|----|-----------------|-----------|-------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 10 | D_DUP_chr10_426 | 86524713  | 96    | N     | <DUP> | 0.1352   | 0.1055   | 0.696352  | 1 | 0.967428 | 0.0848549 | -0.0331143 |
| 10 | D_DUP_chr10_443 | 89997133  | 50    | <DUP> | N     | 0.2979   | 0.3284   | 0.80127   | 1 | 1.01474  | 0.058119  | 0.01463242 |
| 10 | D_DUP_chr10_445 | 90644299  | 113   | <DUP> | N     | 0.4362   | 0.4366   | 0.286202  | 1 | 1.05737  | 0.0523063 | 0.05578469 |
| 10 | D_DUP_chr10_454 | 92660323  | 73    | <DUP> | N     | 0.03779  | 0.03949  | 0.564542  | 1 | 0.925235 | 0.134883  | -0.0777075 |
| 10 | D_DUP_chr10_485 | 99251498  | 97    | N     | <DUP> | 0.3361   | 0.3317   | 0.888654  | 1 | 1.00771  | 0.0548878 | 0.00768043 |
| 10 | D_DUP_chr10_514 | 103575639 | 87    | <DUP> | N     | 0.01542  | 0.0167   | 0.14726   | 1 | 0.735942 | 0.211556  | -0.306604  |
| 10 | D_DUP_chr10_536 | 109704728 | 68    | <DUP> | N     | 0.0615   | 0.06264  | 0.903787  | 1 | 0.987099 | 0.107419  | -0.0129849 |
| 10 | D_DUP_chr10_651 | 131883824 | 55    | <DUP> | N     | 0.3976   | 0.3972   | 0.185226  | 1 | 1.07441  | 0.0541759 | 0.07177167 |
| 10 | D_DUP_chr10_654 | 131917277 | 1724  | <DUP> | N     | 0.006423 | 0.01372  | 0.541897  | 1 | 0.838026 | 0.289708  | -0.1767062 |
| 10 | D_DUP_chr10_658 | 132139471 | 55    | <DUP> | N     | 0.04827  | 0.04953  | 0.912583  | 1 | 0.986981 | 0.119366  | -0.0131045 |
| 10 | D_DUP_chr10_679 | 133061430 | 74    | <DUP> | N     | 0.1181   | 0.1216   | 0.142119  | 1 | 1.12314  | 0.0791097 | 0.11612833 |
| 10 | D_DUP_chr10_716 | 10266252  | 264   | <DUP> | N     | 0.02735  | 0.02611  | 0.297529  | 1 | 1.18598  | 0.163737  | 0.17056944 |
| 11 | D_DUP_chr11_103 | 13032489  | 107   | <DUP> | N     | 0.02424  | 0.02667  | 0.985506  | 1 | 1.00295  | 0.162385  | 0.00294566 |
| 11 | D_DUP_chr11_148 | 24263214  | 3032  | <DUP> | N     | 0.0147   | 0.01781  | 0.661792  | 1 | 0.911448 | 0.211961  | -0.0927207 |
| 11 | D_DUP_chr11_149 | 24266242  | 127   | <DUP> | N     | 0.01376  | 0.01729  | 0.562911  | 1 | 0.882119 | 0.216808  | -0.1254283 |
| 11 | D_DUP_chr11_188 | 34877238  | 68    | <DUP> | N     | 0.01419  | 0.01444  | 0.46219   | 1 | 0.849082 | 0.222509  | -0.1635995 |
| 11 | D_DUP_chr11_201 | 37580172  | 107   | <DUP> | N     | 0.02149  | 0.01909  | 0.773101  | 1 | 0.948603 | 0.183008  | -0.0527649 |
| 11 | D_DUP_chr11_203 | 38150385  | 90    | <DUP> | N     | 0.03768  | 0.03981  | 0.498849  | 1 | 1.09593  | 0.135446  | 0.09160332 |
| 11 | D_DUP_chr11_258 | 48758401  | 776   | <DUP> | N     | 0.02319  | 0.0214   | 0.136516  | 1 | 1.30221  | 0.177355  | 0.26406282 |
| 11 | D_DUP_chr11_261 | 48830133  | 13654 | <DUP> | N     | 0.01383  | 0.009242 | 0.517776  | 1 | 0.857452 | 0.237779  | -0.1537901 |
| 11 | D_DUP_chr11_262 | 48834177  | 11027 | <DUP> | N     | 0.01309  | 0.008351 | 0.663     | 1 | 0.896378 | 0.251032  | -0.1093931 |
| 11 | D_DUP_chr11_308 | 60746307  | 50    | <DUP> | N     | 0.02329  | 0.02255  | 0.690385  | 1 | 0.933228 | 0.173489  | -0.0691057 |
| 11 | PD_DUP_chr11_32 | 202746    | 105   | <DUP> | N     | 0.03167  | 0.03586  | 0.494659  | 1 | 1.10409  | 0.144999  | 0.09902147 |
| 11 | D_DUP_chr11_359 | 66777043  | 77    | <DUP> | N     | 0.01678  | 0.02132  | 0.691161  | 1 | 0.926439 | 0.192326  | -0.0764071 |
| 11 | D_DUP_chr11_453 | 80513610  | 87    | <DUP> | N     | 0.07043  | 0.07798  | 0.385557  | 1 | 0.918166 | 0.098394  | -0.0853771 |
| 11 | D_DUP_chr11_461 | 82780946  | 52    | <DUP> | N     | 0.01245  | 0.01153  | 0.505944  | 1 | 0.855757 | 0.234181  | -0.1557688 |
| 11 | D_DUP_chr11_477 | 87154812  | 170   | <DUP> | N     | 0.3114   | 0.3239   | 0.161502  | 1 | 1.08175  | 0.0561303 | 0.0785801  |
| 11 | D_DUP_chr11_478 | 87629210  | 56    | <DUP> | N     | 0.01203  | 0.01353  | 0.0911041 | 1 | 0.672519 | 0.234804  | -0.3967249 |
| 11 | D_DUP_chr11_499 | 92962542  | 69    | <DUP> | N     | 0.3884   | 0.3652   | 0.0685235 | 1 | 1.10429  | 0.0544628 | 0.09920259 |
| 11 | D_DUP_chr11_527 | 100526054 | 418   | <DUP> | N     | 0.02898  | 0.02422  | 0.0973933 | 1 | 1.31659  | 0.165929  | 0.27504506 |
| 11 | D_DUP_chr11_538 | 103953140 | 78    | <DUP> | N     | 0.01397  | 0.01751  | 0.266652  | 1 | 0.786736 | 0.215937  | -0.2398625 |
| 11 | D_DUP_chr11_543 | 105524331 | 195   | N     | <DUP> | 0.06757  | 0.05662  | 0.432584  | 1 | 0.918617 | 0.108165  | -0.084886  |
| 11 | D_DUP_chr11_551 | 107781513 | 19412 | <DUP> | N     | 0.0298   | 0.02267  | 0.0031379 | 1 | 1.65629  | 0.17082   | 0.50458016 |
| 11 | D_DUP_chr11_592 | 116497264 | 150   | <DUP> | N     | 0.008537 | 0.01207  | 0.622149  | 1 | 1.14253  | 0.270381  | 0.1332451  |
| 11 | D_DUP_chr11_637 | 122836537 | 77    | N     | <DUP> | 0.4436   | 0.4487   | 0.653844  | 1 | 1.02389  | 0.0526507 | 0.0236091  |
| 11 | D_DUP_chr11_653 | 126140433 | 53    | N     | <DUP> | 0.1518   | 0.1395   | 0.405475  | 1 | 0.938143 | 0.0767611 | -0.0638529 |
| 11 | D_DUP_chr11_665 | 128226922 | 63    | <DUP> | N     | 0.3981   | 0.4079   | 0.411889  | 1 | 0.956038 | 0.0547883 | -0.0449576 |
| 11 | D_DUP_chr11_702 | 134341931 | 60    | <DUP> | N     | 0.1022   | 0.1005   | 0.18055   | 1 | 1.1238   | 0.0871634 | 0.1167158  |
| 11 | PD_DUP_chr11_72 | 419765    | 76    | <DUP> | N     | 0.013    | 0.01515  | 0.540193  | 1 | 0.878378 | 0.211711  | -0.1296783 |
| 12 | D_DUP_chr12_120 | 18974817  | 67    | <DUP> | N     | 0.0131   | 0.01596  | 0.384319  | 1 | 0.82465  | 0.221614  | -0.1927962 |
| 12 | D_DUP_chr12_137 | 23960482  | 63    | <DUP> | N     | 0.028    | 0.03237  | 0.432844  | 1 | 0.886131 | 0.154131  | -0.1208905 |

|    |                 |           |        |       |       |          |          |           |   |          |           |            |
|----|-----------------|-----------|--------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 12 | D_DUP_chr12_139 | 24277447  | 72     | <DUP> | N     | 0.4524   | 0.4975   | 0.698544  | 1 | 0.97936  | 0.0538508 | -0.020856  |
| 12 | D_DUP_chr12_194 | 39714094  | 60     | N     | <DUP> | 0.1274   | 0.0951   | 0.482928  | 1 | 0.942946 | 0.0837343 | -0.0587463 |
| 12 | D_DUP_chr12_212 | 44393488  | 69     | <DUP> | N     | 0.01444  | 0.01345  | 0.973859  | 1 | 0.992399 | 0.232835  | -0.00763   |
| 12 | D_DUP_chr12_219 | 45817526  | 57     | <DUP> | N     | 0.04887  | 0.05096  | 0.556556  | 1 | 0.933311 | 0.117384  | -0.0690168 |
| 12 | D_DUP_chr12_243 | 49898239  | 109    | <DUP> | N     | 0.3895   | 0.4078   | 0.152194  | 1 | 0.923114 | 0.0558745 | -0.0800025 |
| 12 | D_DUP_chr12_294 | 56577931  | 2590   | <DUP> | N     | 0.01045  | 0.01098  | 0.654621  | 1 | 0.891874 | 0.255794  | -0.1144304 |
| 12 | D_DUP_chr12_300 | 57291065  | 122    | <DUP> | N     | 0.01221  | 0.008462 | 0.0160447 | 1 | 1.95092  | 0.277545  | 0.66830106 |
| 12 | D_DUP_chr12_327 | 63917754  | 76     | <DUP> | N     | 0.01589  | 0.01423  | 0.991428  | 1 | 0.997713 | 0.21309   | -0.0022896 |
| 12 | D_DUP_chr12_337 | 67380408  | 75     | <DUP> | N     | 0.01353  | 0.01375  | 0.383363  | 1 | 1.21054  | 0.219183  | 0.19106654 |
| 12 | D_DUP_chr12_346 | 70032142  | 68     | <DUP> | N     | 0.1866   | 0.1938   | 0.319742  | 1 | 0.936325 | 0.0661243 | -0.0657926 |
| 12 | D_DUP_chr12_352 | 71887196  | 66     | <DUP> | N     | 0.06677  | 0.05983  | 0.891106  | 1 | 0.985831 | 0.104234  | -0.0142703 |
| 12 | D_DUP_chr12_378 | 4319789   | 91     | <DUP> | N     | 0.02229  | 0.01863  | 0.225209  | 1 | 1.24645  | 0.181648  | 0.22029951 |
| 12 | D_DUP_chr12_409 | 87050258  | 53     | <DUP> | N     | 0.03105  | 0.03022  | 0.417784  | 1 | 0.885219 | 0.150468  | -0.1219202 |
| 12 | D_DUP_chr12_412 | 88228576  | 62     | <DUP> | N     | 0.03164  | 0.03011  | 0.59865   | 1 | 1.08153  | 0.148903  | 0.07837671 |
| 12 | D_DUP_chr12_427 | 92562979  | 58     | <DUP> | N     | 0.05477  | 0.05875  | 0.403488  | 1 | 1.09808  | 0.111999  | 0.0935632  |
| 12 | D_DUP_chr12_435 | 94443167  | 79     | <DUP> | N     | 0.02833  | 0.02798  | 0.0524322 | 1 | 0.734158 | 0.15933   | -0.309031  |
| 12 | D_DUP_chr12_453 | 99425904  | 374    | <DUP> | N     | 0.01605  | 0.01925  | 0.989973  | 1 | 1.00255  | 0.202522  | 0.00254675 |
| 12 | D_DUP_chr12_479 | 105745006 | 71     | <DUP> | N     | 0.3468   | 0.3594   | 0.755837  | 1 | 0.982881 | 0.0555298 | -0.0172672 |
| 12 | D_DUP_chr12_496 | 108895233 | 70     | <DUP> | N     | 0.01732  | 0.01822  | 0.602338  | 1 | 1.10694  | 0.194991  | 0.10159945 |
| 12 | D_DUP_chr12_521 | 111639387 | 484    | <DUP> | N     | 0.01722  | 0.01529  | 0.698725  | 1 | 1.08394  | 0.208257  | 0.08060255 |
| 12 | D_DUP_chr12_529 | 113126950 | 68     | <DUP> | N     | 0.01241  | 0.01264  | 0.60933   | 1 | 0.885814 | 0.237263  | -0.1212483 |
| 12 | D_DUP_chr12_543 | 115112624 | 111    | <DUP> | N     | 0.4472   | 0.456    | 0.643546  | 1 | 1.02536  | 0.0541192 | 0.02504377 |
| 12 | D_DUP_chr12_544 | 115477252 | 66     | <DUP> | N     | 0.04037  | 0.04105  | 0.754991  | 1 | 0.958152 | 0.136986  | -0.0427488 |
| 12 | D_DUP_chr12_559 | 6828172   | 72     | <DUP> | N     | 0.02547  | 0.02332  | 0.302634  | 1 | 1.19149  | 0.169966  | 0.17520462 |
| 12 | D_DUP_chr12_629 | 129399363 | 61     | N     | <DUP> | 0.2539   | 0.2529   | 0.786035  | 1 | 0.983844 | 0.0599991 | -0.0162879 |
| 12 | D_DUP_chr12_637 | 130584715 | 84     | N     | <DUP> | 0.5068   | 0.4883   | 0.135514  | 1 | 1.08352  | 0.0537387 | 0.080215   |
| 12 | D_DUP_chr12_644 | 7817912   | 104961 | <DUP> | N     | 0.01342  | 0.0163   | 0.495265  | 1 | 0.85455  | 0.230484  | -0.1571803 |
| 12 | D_DUP_chr12_644 | 131312831 | 57     | N     | <DUP> | 0.08311  | 0.07169  | 0.364962  | 1 | 1.09406  | 0.0992245 | 0.08989555 |
| 12 | D_DUP_chr12_686 | 133232251 | 64     | <DUP> | N     | 0.4362   | 0.4572   | 0.151009  | 1 | 0.925513 | 0.0539054 | -0.0774071 |
| 13 | D_DUP_chr13_113 | 42417355  | 70     | N     | <DUP> | 0.4541   | 0.436    | 0.690118  | 1 | 1.02121  | 0.0526496 | 0.0209882  |
| 13 | D_DUP_chr13_135 | 47006216  | 53     | <DUP> | N     | 0.009769 | 0.01361  | 0.301997  | 1 | 0.77446  | 0.247626  | -0.2555893 |
| 13 | D_DUP_chr13_182 | 58580264  | 88     | <DUP> | N     | 0.05152  | 0.06391  | 0.214857  | 1 | 0.866719 | 0.115325  | -0.1430405 |
| 13 | D_DUP_chr13_233 | 74022454  | 74     | <DUP> | N     | 0.02681  | 0.03366  | 0.356968  | 1 | 0.867983 | 0.153702  | -0.1415831 |
| 13 | D_DUP_chr13_235 | 74358742  | 213    | <DUP> | N     | 0.02039  | 0.02379  | 0.85852   | 1 | 0.968293 | 0.180751  | -0.0322206 |
| 13 | D_DUP_chr13_240 | 76789088  | 179    | <DUP> | N     | 0.2801   | 0.2796   | 0.820375  | 1 | 0.987022 | 0.0575319 | -0.013063  |
| 13 | D_DUP_chr13_247 | 78798016  | 58     | <DUP> | N     | 0.02016  | 0.01784  | 0.212688  | 1 | 1.26699  | 0.189891  | 0.23664401 |
| 13 | D_DUP_chr13_256 | 81814319  | 66     | <DUP> | N     | 0.02754  | 0.03278  | 0.764822  | 1 | 1.04745  | 0.154978  | 0.04635864 |
| 13 | D_DUP_chr13_265 | 84220731  | 68     | <DUP> | N     | 0.02257  | 0.02023  | 0.269462  | 1 | 1.22087  | 0.180712  | 0.19956372 |
| 13 | D_DUP_chr13_284 | 89299372  | 50     | N     | <DUP> | 0.06306  | 0.06369  | 0.744525  | 1 | 1.03731  | 0.112404  | 0.03663082 |
| 13 | D_DUP_chr13_295 | 93765232  | 76     | N     | <DUP> | 0.4454   | 0.4393   | 0.402392  | 1 | 0.955954 | 0.053808  | -0.0450455 |
| 13 | D_DUP_chr13_312 | 98443847  | 51     | N     | <DUP> | 0.147    | 0.1249   | 0.786294  | 1 | 1.022    | 0.0802506 | 0.02176149 |

|    |                 |           |        |       |       |         |         |            |   |          |           |            |
|----|-----------------|-----------|--------|-------|-------|---------|---------|------------|---|----------|-----------|------------|
| 13 | D_DUP_chr13_360 | 110252655 | 54     | <DUP> | N     | 0.334   | 0.469   | 0.019281   | 1 | 0.873487 | 0.0578032 | -0.135262  |
| 13 | D_DUP_chr13_363 | 110479396 | 67     | N     | <DUP> | 0.2069  | 0.2098  | 0.622394   | 1 | 0.967701 | 0.0666694 | -0.0328321 |
| 13 | D_DUP_chr13_387 | 112455454 | 54     | <DUP> | N     | 0.02024 | 0.02026 | 0.546097   | 1 | 0.891215 | 0.190799  | -0.1151696 |
| 13 | D_DUP_chr13_388 | 112625050 | 111    | <DUP> | N     | 0.02975 | 0.02821 | 0.907283   | 1 | 1.01749  | 0.148899  | 0.01733881 |
| 13 | D_DUP_chr13_388 | 112627750 | 98     | <DUP> | N     | 0.01262 | 0.01228 | 0.77428    | 1 | 0.934633 | 0.235723  | -0.0676013 |
| 13 | D_DUP_chr13_413 | 113803881 | 71     | N     | <DUP> | 0.3589  | 0.332   | 0.262385   | 1 | 1.06399  | 0.0553393 | 0.06202599 |
| 13 | D_DUP_chr13_417 | 113945932 | 116    | <DUP> | N     | 0.1784  | 0.1832  | 0.452358   | 1 | 0.948949 | 0.0697285 | -0.0524002 |
| 13 | D_DUP_chr13_641 | 29696803  | 72     | <DUP> | N     | 0.4515  | 0.4878  | 0.768034   | 1 | 1.01646  | 0.0553922 | 0.016326   |
| 13 | D_DUP_chr13_841 | 35029171  | 138    | <DUP> | N     | 0.0129  | 0.01197 | 0.971544   | 1 | 1.00846  | 0.236204  | 0.00842441 |
| 14 | D_DUP_chr14_150 | 54117857  | 62     | <DUP> | N     | 0.08664 | 0.08375 | 0.471915   | 1 | 1.07098  | 0.0953215 | 0.06857412 |
| 14 | D_DUP_chr14_160 | 56200142  | 170    | <DUP> | N     | 0.4646  | 0.4691  | 0.0735169  | 1 | 1.10083  | 0.0536801 | 0.09606444 |
| 14 | D_DUP_chr14_165 | 57159099  | 70     | <DUP> | N     | 0.01807 | 0.01733 | 0.945552   | 1 | 1.01399  | 0.203381  | 0.01389304 |
| 14 | D_DUP_chr14_179 | 61081181  | 132    | <DUP> | N     | 0.3017  | 0.3022  | 0.474833   | 1 | 0.960233 | 0.056805  | -0.0405793 |
| 14 | D_DUP_chr14_179 | 61172784  | 121    | <DUP> | N     | 0.4617  | 0.4751  | 0.978125   | 1 | 1.00143  | 0.0522581 | 0.00142898 |
| 14 | D_DUP_chr14_227 | 70397966  | 68     | N     | <DUP> | 0.4534  | 0.4294  | 0.78137    | 1 | 0.984979 | 0.0545319 | -0.015135  |
| 14 | D_DUP_chr14_236 | 72444757  | 125    | N     | <DUP> | 0.2807  | 0.2757  | 0.463305   | 1 | 0.95876  | 0.0574218 | -0.0421145 |
| 14 | D_DUP_chr14_266 | 76407437  | 192    | <DUP> | N     | 0.01009 | 0.01282 | 0.647654   | 1 | 1.12164  | 0.251175  | 0.1147919  |
| 14 | D_DUP_chr14_312 | 23767166  | 74     | N     | <DUP> | 0.1581  | 0.1665  | 0.197235   | 1 | 0.909506 | 0.0735606 | -0.0948537 |
| 14 | D_DUP_chr14_318 | 23900201  | 205    | N     | <DUP> | 0.3157  | 0.3005  | 0.452314   | 1 | 0.956391 | 0.0593278 | -0.0445885 |
| 14 | D_DUP_chr14_343 | 93722621  | 146    | <DUP> | N     | 0.04149 | 0.04967 | 0.614526   | 1 | 0.938084 | 0.126912  | -0.0639158 |
| 14 | D_DUP_chr14_380 | 99811139  | 193    | <DUP> | N     | 0.018   | 0.01694 | 0.514396   | 1 | 1.13759  | 0.197714  | 0.12891199 |
| 14 | PD_DUP_chr14_40 | 18503048  | 6852   | <DUP> | N     | 0.03678 | 0.02916 | 0.83183    | 1 | 1.0312   | 0.144657  | 0.03072317 |
| 14 | D_DUP_chr14_403 | 102239370 | 68     | <DUP> | N     | 0.1376  | 0.1398  | 0.99385    | 1 | 1.00058  | 0.0756952 | 0.00057983 |
| 14 | D_DUP_chr14_417 | 103944150 | 70     | <DUP> | N     | 0.02498 | 0.02099 | 0.248022   | 1 | 1.22338  | 0.174535  | 0.20161752 |
| 14 | D_DUP_chr14_435 | 105015398 | 71     | N     | <DUP> | 0.2714  | 0.2624  | 0.109249   | 1 | 1.09798  | 0.0583635 | 0.09347213 |
| 14 | D_DUP_chr14_450 | 106000230 | 417295 | <DUP> | N     | 0.01122 | 0.01044 | 0.485707   | 1 | 1.18167  | 0.239439  | 0.16692869 |
| 14 | D_DUP_chr14_486 | 26986021  | 82     | <DUP> | N     | 0.03549 | 0.03399 | 0.291572   | 1 | 1.15968  | 0.140462  | 0.1481441  |
| 14 | D_DUP_chr14_904 | 36810878  | 81     | N     | <DUP> | 0.3871  | 0.3612  | 0.574265   | 1 | 1.03079  | 0.0539854 | 0.0303255  |
| 15 | D_DUP_chr15_240 | 58087843  | 79     | <DUP> | N     | 0.09907 | 0.1048  | 0.138064   | 1 | 0.878669 | 0.0872178 | -0.129347  |
| 15 | D_DUP_chr15_242 | 58484357  | 1127   | <DUP> | N     | 0.06797 | 0.08426 | 0.00399084 | 1 | 0.746883 | 0.101375  | -0.2918467 |
| 15 | D_DUP_chr15_303 | 68807365  | 53     | <DUP> | N     | 0.01245 | 0.01534 | 0.751714   | 1 | 0.927196 | 0.238925  | -0.0755903 |
| 15 | D_DUP_chr15_331 | 73896202  | 80     | <DUP> | N     | 0.4311  | 0.4387  | 0.913513   | 1 | 0.99431  | 0.0525775 | -0.0057062 |
| 15 | D_DUP_chr15_512 | 101387697 | 54     | N     | <DUP> | 0.3245  | 0.3182  | 0.0635134  | 1 | 0.899387 | 0.0571476 | -0.1060419 |
| 15 | D_DUP_chr15_517 | 27335126  | 88     | <DUP> | N     | 0.01205 | 0.01608 | 0.0289916  | 1 | 0.612822 | 0.224254  | -0.4896808 |
| 16 | D_DUP_chr16_144 | 919548    | 54     | <DUP> | N     | 0.2622  | 0.2629  | 0.756888   | 1 | 1.01825  | 0.0584357 | 0.01808547 |
| 16 | D_DUP_chr16_154 | 20613779  | 57     | <DUP> | N     | 0.3572  | 0.3409  | 0.0435673  | 1 | 1.11671  | 0.0546932 | 0.11038686 |
| 16 | D_DUP_chr16_168 | 23454521  | 1032   | <DUP> | N     | 0.1594  | 0.1589  | 0.703848   | 1 | 1.02852  | 0.073988  | 0.02812088 |
| 16 | D_DUP_chr16_194 | 28813578  | 1570   | <DUP> | N     | 0.02303 | 0.02645 | 0.928446   | 1 | 1.015    | 0.165752  | 0.01488861 |
| 16 | D_DUP_chr16_246 | 34076803  | 1058   | <DUP> | N     | 0.01771 | 0.01902 | 0.532779   | 1 | 1.12763  | 0.192571  | 0.12011809 |
| 16 | D_DUP_chr16_246 | 34077207  | 927    | <DUP> | N     | 0.05538 | 0.05718 | 0.980716   | 1 | 1.00277  | 0.114435  | 0.00276617 |
| 16 | D_DUP_chr16_249 | 34199633  | 6269   | <DUP> | N     | 0.0261  | 0.01103 | 0.370958   | 1 | 1.19181  | 0.196133  | 0.17547316 |



|    |                 |          |      |       |       |          |         |            |   |          |           |            |
|----|-----------------|----------|------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 16 | D_DUP_chr16_287 | 48992038 | 203  | <DUP> | N     | 0.02646  | 0.03437 | 0.145167   | 1 | 0.80294  | 0.150654  | -0.2194753 |
| 16 | D_DUP_chr16_400 | 69820782 | 4336 | <DUP> | N     | 0.3616   | 0.3587  | 0.268338   | 1 | 0.941315 | 0.0546656 | -0.0604774 |
| 16 | D_DUP_chr16_401 | 69919131 | 108  | N     | <DUP> | 0.3259   | 0.3222  | 0.69246    | 1 | 0.978097 | 0.0559928 | -0.0221464 |
| 16 | D_DUP_chr16_419 | 2939470  | 67   | <DUP> | N     | 0.04614  | 0.0409  | 0.158876   | 1 | 1.19324  | 0.125403  | 0.1766723  |
| 16 | D_DUP_chr16_446 | 78294719 | 58   | <DUP> | N     | 0.1256   | 0.1212  | 0.564869   | 1 | 0.955348 | 0.0793607 | -0.0456796 |
| 16 | D_DUP_chr16_486 | 84644229 | 53   | <DUP> | N     | 0.01477  | 0.01466 | 0.179668   | 1 | 1.3408   | 0.218566  | 0.29326645 |
| 16 | D_DUP_chr16_488 | 85004679 | 155  | <DUP> | N     | 0.02894  | 0.0318  | 0.782454   | 1 | 0.957466 | 0.157412  | -0.0434651 |
| 16 | D_DUP_chr16_536 | 88862544 | 60   | <DUP> | N     | 0.3344   | 0.3498  | 0.449937   | 1 | 1.04417  | 0.0572115 | 0.04322231 |
| 16 | D_DUP_chr16_537 | 88864106 | 84   | <DUP> | N     | 0.02165  | 0.02384 | 0.318286   | 1 | 1.18978  | 0.17412   | 0.17376842 |
| 16 | D_DUP_chr16_538 | 88953435 | 58   | <DUP> | N     | 0.009709 | 0.01102 | 0.978286   | 1 | 1.00714  | 0.261226  | 0.00711463 |
| 16 | D_DUP_chr16_541 | 89065587 | 82   | <DUP> | N     | 0.03951  | 0.04035 | 0.622625   | 1 | 1.06867  | 0.134948  | 0.06641488 |
| 16 | D_DUP_chr16_546 | 89448145 | 70   | <DUP> | N     | 0.01658  | 0.01948 | 0.159822   | 1 | 0.75886  | 0.196303  | -0.275938  |
| 17 | D_DUP_chr17_100 | 14852070 | 53   | <DUP> | N     | 0.3408   | 0.3525  | 0.354502   | 1 | 1.05187  | 0.0546182 | 0.05056953 |
| 17 | D_DUP_chr17_111 | 16837477 | 106  | <DUP> | N     | 0.03306  | 0.03321 | 0.645631   | 1 | 1.07016  | 0.147473  | 0.06780817 |
| 17 | D_DUP_chr17_175 | 29485512 | 2557 | <DUP> | N     | 0.1284   | 0.1376  | 0.729318   | 1 | 0.973813 | 0.0766872 | -0.026536  |
| 17 | D_DUP_chr17_216 | 36989996 | 51   | <DUP> | N     | 0.1591   | 0.1661  | 0.509837   | 1 | 1.04681  | 0.069417  | 0.04574744 |
| 17 | D_DUP_chr17_240 | 41375735 | 7247 | <DUP> | N     | 0.01625  | 0.01566 | 0.617054   | 1 | 1.11067  | 0.209918  | 0.10496344 |
| 17 | D_DUP_chr17_262 | 44984759 | 582  | <DUP> | N     | 0.008981 | 0.01101 | 0.033912   | 1 | 0.570795 | 0.264354  | -0.5607252 |
| 17 | D_DUP_chr17_334 | 1912936  | 1454 | <DUP> | N     | 0.01141  | 0.0108  | 0.234767   | 1 | 1.35746  | 0.257217  | 0.30561531 |
| 17 | D_DUP_chr17_341 | 59447575 | 6531 | <DUP> | N     | 0.01358  | 0.02447 | 0.00103798 | 1 | 0.523786 | 0.197154  | -0.6466721 |
| 17 | D_DUP_chr17_388 | 68680021 | 72   | <DUP> | N     | 0.02675  | 0.03474 | 0.249669   | 1 | 0.831075 | 0.160739  | -0.1850352 |
| 17 | D_DUP_chr17_389 | 2719770  | 100  | N     | <DUP> | 0.04603  | 0.03221 | 0.695105   | 1 | 0.94721  | 0.138375  | -0.0542345 |
| 17 | D_DUP_chr17_402 | 72685321 | 129  | <DUP> | N     | 0.3979   | 0.4168  | 0.750901   | 1 | 0.982652 | 0.0551281 | -0.0175002 |
| 17 | D_DUP_chr17_427 | 75766919 | 302  | <DUP> | N     | 0.02044  | 0.02078 | 0.902943   | 1 | 0.977826 | 0.183882  | -0.0224235 |
| 17 | D_DUP_chr17_449 | 78550343 | 71   | N     | <DUP> | 0.2254   | 0.2148  | 0.555402   | 1 | 0.96369  | 0.0627217 | -0.0369856 |
| 17 | D_DUP_chr17_471 | 80630098 | 9995 | <DUP> | N     | 0.01073  | 0.01249 | 0.696534   | 1 | 1.09843  | 0.240712  | 0.09388189 |
| 17 | D_DUP_chr17_660 | 7028436  | 62   | N     | <DUP> | 0.02321  | 0.01619 | 0.123446   | 1 | 0.731529 | 0.202937  | -0.3126184 |
| 18 | D_DUP_chr18_148 | 3272251  | 51   | N     | <DUP> | 0.03404  | 0.03672 | 0.152849   | 1 | 0.807965 | 0.149166  | -0.2132365 |
| 18 | D_DUP_chr18_150 | 38673707 | 59   | <DUP> | N     | 0.4529   | 0.4637  | 0.3443     | 1 | 0.95076  | 0.0533925 | -0.0504936 |
| 18 | D_DUP_chr18_157 | 41058698 | 90   | <DUP> | N     | 0.4003   | 0.41    | 0.922492   | 1 | 1.00514  | 0.052649  | 0.00512684 |
| 18 | D_DUP_chr18_159 | 41492754 | 52   | N     | <DUP> | 0.02921  | 0.02447 | 0.0739348  | 1 | 0.733998 | 0.173054  | -0.309249  |
| 18 | D_DUP_chr18_199 | 50030369 | 122  | <DUP> | N     | 0.02192  | 0.0218  | 0.853502   | 1 | 0.966372 | 0.185254  | -0.0342064 |
| 18 | D_DUP_chr18_216 | 54464670 | 70   | <DUP> | N     | 0.01916  | 0.0224  | 0.669109   | 1 | 1.08056  | 0.181295  | 0.07747943 |
| 18 | D_DUP_chr18_222 | 56262031 | 70   | N     | <DUP> | 0.4398   | 0.3847  | 0.619312   | 1 | 0.972665 | 0.055812  | -0.0277156 |
| 18 | D_DUP_chr18_253 | 6405607  | 75   | <DUP> | N     | 0.01618  | 0.01522 | 0.0829991  | 1 | 1.42789  | 0.205474  | 0.35619783 |
| 18 | D_DUP_chr18_260 | 64962204 | 72   | N     | <DUP> | 0.1386   | 0.1266  | 0.557862   | 1 | 0.953962 | 0.0804272 | -0.0471314 |
| 18 | D_DUP_chr18_272 | 68477963 | 80   | <DUP> | N     | 0.01862  | 0.02024 | 0.749799   | 1 | 1.06209  | 0.188903  | 0.06023866 |
| 18 | D_DUP_chr18_299 | 76067816 | 87   | <DUP> | N     | 0.01553  | 0.01676 | 0.526462   | 1 | 1.13432  | 0.198969  | 0.12603335 |
| 18 | D_DUP_chr18_321 | 78123624 | 100  | N     | <DUP> | 0.4105   | 0.379   | 0.80044    | 1 | 0.986494 | 0.0537933 | -0.013598  |
| 18 | D_DUP_chr18_322 | 78280911 | 131  | N     | <DUP> | 0.4908   | 0.4758  | 0.559078   | 1 | 1.03065  | 0.0516789 | 0.03018967 |
| 18 | D_DUP_chr18_324 | 78597944 | 63   | <DUP> | N     | 0.03481  | 0.03682 | 0.534017   | 1 | 0.917474 | 0.138501  | -0.086131  |

|    |                 |           |        |       |       |          |          |            |   |          |           |            |
|----|-----------------|-----------|--------|-------|-------|----------|----------|------------|---|----------|-----------|------------|
| 18 | D_DUP_chr18_343 | 79520244  | 73     | <DUP> | N     | 0.05545  | 0.0601   | 0.769927   | 1 | 1.03325  | 0.111824  | 0.03270917 |
| 19 | D_DUP_chr19_145 | 17331934  | 7824   | <DUP> | N     | 0.009895 | 0.01479  | 0.584089   | 1 | 0.877752 | 0.23819   | -0.1303912 |
| 19 | D_DUP_chr19_146 | 17444710  | 61     | <DUP> | N     | 0.03058  | 0.02854  | 0.228645   | 1 | 1.20524  | 0.155066  | 0.18667872 |
| 19 | D_DUP_chr19_189 | 23108882  | 148    | <DUP> | N     | 0.01318  | 0.01333  | 0.90963    | 1 | 0.974563 | 0.227     | -0.0257661 |
| 19 | D_DUP_chr19_190 | 23322950  | 534    | <DUP> | N     | 0.05205  | 0.05072  | 0.869693   | 1 | 1.02004  | 0.120932  | 0.01984184 |
| 19 | D_DUP_chr19_228 | 31676809  | 58     | <DUP> | N     | 0.01457  | 0.02159  | 0.125296   | 1 | 0.730725 | 0.204654  | -0.3137181 |
| 19 | D_DUP_chr19_247 | 35105392  | 86     | <DUP> | N     | 0.01818  | 0.01951  | 0.937883   | 1 | 0.985101 | 0.192615  | -0.0150111 |
| 19 | D_DUP_chr19_294 | 42749622  | 113357 | <DUP> | N     | 0.03462  | 0.04424  | 0.124509   | 1 | 0.812411 | 0.135243  | -0.2077489 |
| 19 | D_DUP_chr19_331 | 48990202  | 70     | <DUP> | N     | 0.01066  | 0.009417 | 0.765137   | 1 | 1.08369  | 0.269035  | 0.08037188 |
| 19 | D_DUP_chr19_341 | 50014429  | 107    | <DUP> | N     | 0.01941  | 0.01982  | 0.918012   | 1 | 1.01877  | 0.180617  | 0.01859602 |
| 19 | D_DUP_chr19_381 | 54758974  | 78926  | <DUP> | N     | 0.02012  | 0.01727  | 0.229718   | 1 | 1.25904  | 0.191788  | 0.23034953 |
| 19 | D_DUP_chr19_381 | 54765362  | 62563  | <DUP> | N     | 0.02014  | 0.01728  | 0.226769   | 1 | 1.26103  | 0.191877  | 0.23192885 |
| 19 | D_DUP_chr19_385 | 54955259  | 1382   | <DUP> | N     | 0.0277   | 0.03473  | 0.343924   | 1 | 0.862463 | 0.156337  | -0.147963  |
| 19 | D_DUP_chr19_386 | 55019218  | 522    | <DUP> | N     | 0.02555  | 0.02577  | 0.534645   | 1 | 1.10855  | 0.165966  | 0.10305286 |
| 19 | D_DUP_chr19_389 | 55186564  | 76     | <DUP> | N     | 0.4156   | 0.4289   | 0.0376601  | 1 | 0.891286 | 0.0553706 | -0.1150899 |
| 19 | D_DUP_chr19_729 | 5708407   | 99     | <DUP> | N     | 0.327    | 0.3423   | 0.0451755  | 1 | 1.12443  | 0.0585485 | 0.11727624 |
| 19 | D_DUP_chr19_738 | 5795045   | 446    | <DUP> | N     | 0.01297  | 0.01261  | 0.968355   | 1 | 0.990761 | 0.233978  | -0.0092819 |
| 19 | D_DUP_chr19_742 | 5849780   | 1881   | <DUP> | N     | 0.01956  | 0.02412  | 0.195253   | 1 | 0.788512 | 0.183453  | -0.2376077 |
| 19 | D_DUP_chr19_945 | 8429032   | 51     | <DUP> | N     | 0.01125  | 0.01424  | 0.00420653 | 1 | 0.523707 | 0.225984  | -0.6468229 |
| 1  | D_DUP_chr1_1035 | 201189207 | 66     | <DUP> | N     | 0.1335   | 0.1288   | 0.0649799  | 1 | 1.15575  | 0.0784379 | 0.14474948 |
| 1  | D_DUP_chr1_1061 | 204010623 | 89     | N     | <DUP> | 0.221    | 0.2122   | 0.511636   | 1 | 0.957871 | 0.0655835 | -0.0430422 |
| 1  | PD_DUP_chr1_108 | 822552    | 996    | <DUP> | N     | 0.04883  | 0.04816  | 0.938502   | 1 | 0.990377 | 0.125334  | -0.0096696 |
| 1  | D_DUP_chr1_1227 | 236516527 | 96     | <DUP> | N     | 0.02408  | 0.02132  | 0.593089   | 1 | 0.913136 | 0.170052  | -0.0908705 |
| 1  | D_DUP_chr1_1236 | 238577553 | 179    | <DUP> | N     | 0.01633  | 0.01836  | 0.227298   | 1 | 0.779952 | 0.205842  | -0.2485229 |
| 1  | D_DUP_chr1_1243 | 240655559 | 146    | <DUP> | N     | 0.01479  | 0.01955  | 0.829886   | 1 | 1.04292  | 0.195583  | 0.04202447 |
| 1  | D_DUP_chr1_1270 | 246080230 | 118    | <DUP> | N     | 0.05391  | 0.0639   | 0.0575912  | 1 | 0.806701 | 0.113126  | -0.2148022 |
| 1  | D_DUP_chr1_1279 | 247088813 | 57     | <DUP> | N     | 0.3215   | 0.3373   | 0.77852    | 1 | 1.0157   | 0.055383  | 0.01557803 |
| 1  | D_DUP_chr1_1389 | 13239707  | 62     | N     | <DUP> | 0.4787   | 0.4784   | 0.546819   | 1 | 1.03281  | 0.053601  | 0.03228324 |
| 1  | D_DUP_chr1_1571 | 16040454  | 22508  | <DUP> | N     | 0.01479  | 0.01211  | 0.0654315  | 1 | 1.52001  | 0.22728   | 0.41871691 |
| 1  | D_DUP_chr1_1630 | 16641248  | 81     | <DUP> | N     | 0.01633  | 0.01516  | 0.476686   | 1 | 1.16254  | 0.211631  | 0.15060727 |
| 1  | D_DUP_chr1_1771 | 18466045  | 69     | N     | <DUP> | 0.1662   | 0.1558   | 0.77126    | 1 | 0.979895 | 0.0698596 | -0.0203099 |
| 1  | D_DUP_chr1_2011 | 22082073  | 80     | <DUP> | N     | 0.01143  | 0.0117   | 0.220047   | 1 | 1.33484  | 0.235496  | 0.28881143 |
| 1  | PD_DUP_chr1_242 | 1565630   | 98     | <DUP> | N     | 0.3234   | 0.3252   | 0.868206   | 1 | 1.0093   | 0.0558067 | 0.00925702 |
| 1  | D_DUP_chr1_2667 | 30597753  | 72     | <DUP> | N     | 0.3313   | 0.3166   | 0.0786513  | 1 | 1.10383  | 0.0561766 | 0.09878595 |
| 1  | D_DUP_chr1_2778 | 32000751  | 122    | <DUP> | N     | 0.02237  | 0.02505  | 0.0989713  | 1 | 0.762807 | 0.164105  | -0.2707502 |
| 1  | D_DUP_chr1_2847 | 32728267  | 1997   | <DUP> | N     | 0.02883  | 0.03598  | 0.0936007  | 1 | 0.777598 | 0.150024  | -0.2515456 |
| 1  | D_DUP_chr1_3653 | 43938442  | 100    | <DUP> | N     | 0.01962  | 0.01859  | 0.771368   | 1 | 1.05387  | 0.180577  | 0.0524691  |
| 1  | PD_DUP_chr1_380 | 2189598   | 65     | <DUP> | N     | 0.01436  | 0.008829 | 0.931002   | 1 | 1.02046  | 0.233897  | 0.02025351 |
| 1  | D_DUP_chr1_3816 | 45927309  | 195    | <DUP> | N     | 0.008017 | 0.01198  | 0.443941   | 1 | 0.806113 | 0.281536  | -0.2155313 |
| 1  | D_DUP_chr1_4410 | 56341282  | 69     | <DUP> | N     | 0.01919  | 0.01749  | 0.942564   | 1 | 1.0142   | 0.195723  | 0.01410012 |
| 1  | D_DUP_chr1_5608 | 87315961  | 64     | <DUP> | N     | 0.01691  | 0.01517  | 0.92463    | 1 | 0.979746 | 0.216294  | -0.0204619 |

|    |                 |           |       |       |       |         |          |           |   |          |           |            |
|----|-----------------|-----------|-------|-------|-------|---------|----------|-----------|---|----------|-----------|------------|
| 1  | D_DUP_chr1_5711 | 89806291  | 63    | <DUP> | N     | 0.4009  | 0.4066   | 0.670376  | 1 | 1.02319  | 0.0538896 | 0.0229252  |
| 1  | D_DUP_chr1_5747 | 90826113  | 76    | <DUP> | N     | 0.02234 | 0.02513  | 0.772848  | 1 | 1.04971  | 0.16808   | 0.04851394 |
| 1  | PD_DUP_chr1_598 | 3408595   | 94    | <DUP> | N     | 0.01442 | 0.01821  | 0.63085   | 1 | 1.11059  | 0.218286  | 0.10489141 |
| 1  | D_DUP_chr1_6131 | 101784173 | 68    | <DUP> | N     | 0.05338 | 0.05879  | 0.792736  | 1 | 0.970895 | 0.11241   | -0.029537  |
| 1  | PD_DUP_chr1_619 | 3590825   | 76    | <DUP> | N     | 0.01278 | 0.01134  | 0.764164  | 1 | 0.931568 | 0.236272  | -0.0708861 |
| 1  | D_DUP_chr1_6629 | 111755128 | 55    | <DUP> | N     | 0.07279 | 0.0728   | 0.869599  | 1 | 0.983353 | 0.102259  | -0.0167871 |
| 1  | D_DUP_chr1_7601 | 147488594 | 107   | <DUP> | N     | 0.4575  | 0.4699   | 0.213213  | 1 | 1.06904  | 0.05363   | 0.06676105 |
| 1  | PD_DUP_chr1_772 | 5387173   | 206   | N     | <DUP> | 0.04547 | 0.03259  | 0.846641  | 1 | 0.972525 | 0.144044  | -0.0278595 |
| 1  | D_DUP_chr1_8103 | 152304720 | 4901  | <DUP> | N     | 0.0113  | 0.009068 | 0.705468  | 1 | 1.10846  | 0.272452  | 0.10297166 |
| 1  | D_DUP_chr1_8619 | 159888493 | 61    | <DUP> | N     | 0.02484 | 0.0227   | 0.882116  | 1 | 1.02514  | 0.167469  | 0.02482919 |
| 1  | D_DUP_chr1_8727 | 161579393 | 81554 | <DUP> | N     | 0.02496 | 0.0369   | 0.181031  | 1 | 0.803811 | 0.163273  | -0.2183911 |
| 1  | D_DUP_chr1_8781 | 162868611 | 119   | N     | <DUP> | 0.2969  | 0.2758   | 0.944496  | 1 | 1.00416  | 0.0595763 | 0.00415137 |
| 1  | D_DUP_chr1_8932 | 166176623 | 97    | <DUP> | N     | 0.01219 | 0.0135   | 0.521245  | 1 | 0.870717 | 0.215829  | -0.1384383 |
| 1  | D_DUP_chr1_9426 | 179174523 | 51    | <DUP> | N     | 0.01147 | 0.008838 | 0.562277  | 1 | 1.15759  | 0.25254   | 0.14634026 |
| 1  | D_DUP_chr1_9585 | 182533300 | 107   | <DUP> | N     | 0.04002 | 0.04255  | 0.972226  | 1 | 0.995471 | 0.130386  | -0.0045393 |
| 20 | D_DUP_chr20_125 | 30476103  | 525   | <DUP> | N     | 0.02868 | 0.02777  | 0.659317  | 1 | 0.931706 | 0.160457  | -0.070738  |
| 20 | D_DUP_chr20_129 | 30813318  | 122   | <DUP> | N     | 0.01788 | 0.02217  | 0.0464771 | 1 | 0.685009 | 0.190014  | -0.3783233 |
| 20 | D_DUP_chr20_178 | 3067778   | 93    | <DUP> | N     | 0.369   | 0.3758   | 0.386199  | 1 | 0.95326  | 0.0552407 | -0.0478676 |
| 20 | D_DUP_chr20_196 | 43325843  | 394   | <DUP> | N     | 0.02873 | 0.02464  | 0.675588  | 1 | 0.933897 | 0.163419  | -0.0683891 |
| 20 | D_DUP_chr20_216 | 46626830  | 51    | <DUP> | N     | 0.06165 | 0.0597   | 0.831252  | 1 | 0.977623 | 0.106206  | -0.0226312 |
| 20 | D_DUP_chr20_239 | 49784435  | 57    | <DUP> | N     | 0.01323 | 0.01443  | 0.858048  | 1 | 0.961615 | 0.218838  | -0.0391411 |
| 20 | D_DUP_chr20_272 | 56388093  | 61    | N     | <DUP> | 0.1393  | 0.1336   | 0.168618  | 1 | 1.10925  | 0.0753178 | 0.10368411 |
| 20 | D_DUP_chr20_336 | 63116075  | 68    | <DUP> | N     | 0.03969 | 0.0374   | 0.204254  | 1 | 1.19776  | 0.142146  | 0.18045315 |
| 20 | D_DUP_chr20_384 | 6852248   | 2321  | <DUP> | N     | 0.01412 | 0.01169  | 0.201838  | 1 | 1.32389  | 0.21983   | 0.28057437 |
| 20 | D_DUP_chr20_487 | 9850674   | 69    | <DUP> | N     | 0.01066 | 0.01117  | 0.752119  | 1 | 0.923586 | 0.251678  | -0.0794914 |
| 20 | D_DUP_chr20_632 | 14100743  | 68    | <DUP> | N     | 0.0129  | 0.01826  | 0.675178  | 1 | 0.91233  | 0.218954  | -0.0917535 |
| 20 | D_DUP_chr20_670 | 15096446  | 51    | <DUP> | N     | 0.04042 | 0.04298  | 0.73257   | 1 | 0.957169 | 0.128107  | -0.0437753 |
| 20 | D_DUP_chr20_678 | 15578584  | 56    | N     | <DUP> | 0.06615 | 0.07503  | 0.316549  | 1 | 0.901189 | 0.103877  | -0.1040403 |
| 21 | D_DUP_chr21_132 | 32482931  | 69    | N     | <DUP> | 0.03733 | 0.02447  | 0.428511  | 1 | 0.883149 | 0.156947  | -0.1242613 |
| 21 | D_DUP_chr21_141 | 34037057  | 50    | <DUP> | N     | 0.01007 | 0.01116  | 0.654294  | 1 | 1.12233  | 0.257723  | 0.11540688 |
| 21 | D_DUP_chr21_147 | 7926705   | 70    | N     | <DUP> | 0.2799  | 0.2726   | 0.957627  | 1 | 0.996829 | 0.0597698 | -0.003176  |
| 21 | D_DUP_chr21_153 | 36644632  | 53    | <DUP> | N     | 0.01555 | 0.01137  | 0.114064  | 1 | 1.41705  | 0.220592  | 0.34857725 |
| 21 | D_DUP_chr21_192 | 43292455  | 69    | N     | <DUP> | 0.325   | 0.3094   | 0.837275  | 1 | 0.988322 | 0.0571952 | -0.0117467 |
| 21 | D_DUP_chr21_194 | 7948098   | 89    | <DUP> | N     | 0.01975 | 0.0179   | 0.0995692 | 1 | 1.3757   | 0.193672  | 0.31896269 |
| 21 | D_DUP_chr21_196 | 43823145  | 78    | N     | <DUP> | 0.4601  | 0.4503   | 0.600564  | 1 | 0.971592 | 0.0550411 | -0.0288193 |
| 21 | D_DUP_chr21_198 | 44306059  | 54    | <DUP> | N     | 0.3332  | 0.3305   | 0.56925   | 1 | 1.03135  | 0.0542346 | 0.03086862 |
| 21 | D_DUP_chr21_222 | 45972856  | 68    | <DUP> | N     | 0.0818  | 0.08943  | 0.325882  | 1 | 1.09526  | 0.0926207 | 0.09099178 |
| 21 | D_DUP_chr21_237 | 46645208  | 107   | N     | <DUP> | 0.0416  | 0.01928  | 0.0244859 | 1 | 1.4574   | 0.167446  | 0.37665403 |
| 21 | D_DUP_chr21_377 | 10691702  | 54    | <DUP> | N     | 0.0126  | 0.01339  | 0.622492  | 1 | 0.891121 | 0.234145  | -0.1152751 |
| 21 | D_DUP_chr21_382 | 10694421  | 100   | <DUP> | N     | 0.01539 | 0.01769  | 0.489552  | 1 | 1.15101  | 0.203521  | 0.14063982 |
| 21 | D_DUP_chr21_548 | 13872664  | 19580 | <DUP> | N     | 0.2971  | 0.3078   | 0.321653  | 1 | 0.944419 | 0.0577009 | -0.0571854 |

|    |                 |           |       |       |       |          |          |            |   |          |           |            |
|----|-----------------|-----------|-------|-------|-------|----------|----------|------------|---|----------|-----------|------------|
| 21 | D_DUP_chr21_778 | 18684478  | 24231 | <DUP> | N     | 0.01567  | 0.01691  | 0.884447   | 1 | 1.03166  | 0.214475  | 0.03116916 |
| 21 | D_DUP_chr21_892 | 21559404  | 90    | <DUP> | N     | 0.01893  | 0.0188   | 0.262998   | 1 | 1.24364  | 0.1948    | 0.21804256 |
| 21 | D_DUP_chr21_931 | 22642560  | 61    | N     | <DUP> | 0.3893   | 0.391    | 0.614817   | 1 | 0.972747 | 0.054911  | -0.0276313 |
| 21 | D_DUP_chr21_982 | 23791016  | 76    | <DUP> | N     | 0.1027   | 0.1096   | 0.568538   | 1 | 0.952475 | 0.0853933 | -0.0486914 |
| 22 | D_DUP_chr22_112 | 30219963  | 83    | <DUP> | N     | 0.01561  | 0.01814  | 0.668755   | 1 | 0.916818 | 0.20298   | -0.0868463 |
| 22 | D_DUP_chr22_150 | 37067818  | 72    | <DUP> | N     | 0.3538   | 0.3637   | 0.602533   | 1 | 1.02916  | 0.0552033 | 0.02874294 |
| 22 | D_DUP_chr22_209 | 44926026  | 76    | <DUP> | N     | 0.3917   | 0.409    | 0.98778    | 1 | 1.00086  | 0.05583   | 0.00085963 |
| 22 | PD_DUP_chr22_24 | 10716988  | 118   | <DUP> | N     | 0.01446  | 0.01432  | 0.806195   | 1 | 0.945883 | 0.226776  | -0.0556364 |
| 22 | D_DUP_chr22_249 | 49748750  | 90    | <DUP> | N     | 0.009926 | 0.01067  | 0.448215   | 1 | 1.23043  | 0.273425  | 0.2073637  |
| 22 | D_DUP_chr22_357 | 19919729  | 63    | <DUP> | N     | 0.1481   | 0.1531   | 0.886914   | 1 | 1.0102   | 0.0713865 | 0.01014833 |
| 22 | D_DUP_chr22_409 | 20354676  | 7391  | <DUP> | N     | 0.05706  | 0.1168   | 0.358997   | 1 | 1.10397  | 0.107831  | 0.09891277 |
| 22 | D_DUP_chr22_604 | 21921187  | 83    | <DUP> | N     | 0.01067  | 0.01081  | 0.434095   | 1 | 1.22259  | 0.256931  | 0.20097156 |
| 22 | PD_DUP_chr22_63 | 10728991  | 69    | N     | <DUP> | 0.03598  | 0.02843  | 0.400626   | 1 | 0.876473 | 0.15687   | -0.1318494 |
| 22 | D_DUP_chr22_826 | 25068147  | 95    | <DUP> | N     | 0.01543  | 0.01924  | 0.771678   | 1 | 0.944122 | 0.198151  | -0.0574999 |
| 22 | D_DUP_chr22_875 | 26060912  | 77    | <DUP> | N     | 0.08904  | 0.08854  | 0.432389   | 1 | 0.930223 | 0.092128  | -0.0723309 |
| 2  | D_DUP_chr2_1044 | 220523716 | 92    | N     | <DUP> | 0.09702  | 0.08801  | 0.00522843 | 1 | 0.76998  | 0.093601  | -0.2613907 |
| 2  | D_DUP_chr2_1052 | 222915334 | 168   | <DUP> | N     | 0.009507 | 0.01172  | 0.342411   | 1 | 0.76943  | 0.276071  | -0.2621053 |
| 2  | D_DUP_chr2_1063 | 226656425 | 77    | N     | <DUP> | 0.03483  | 0.04374  | 0.177966   | 1 | 0.831052 | 0.137385  | -0.1850629 |
| 2  | D_DUP_chr2_1066 | 227376383 | 17280 | <DUP> | N     | 0.06474  | 0.07189  | 0.703469   | 1 | 0.961207 | 0.103945  | -0.0395655 |
| 2  | D_DUP_chr2_1073 | 229596912 | 81    | <DUP> | N     | 0.03276  | 0.03215  | 0.330312   | 1 | 1.15346  | 0.146658  | 0.14276612 |
| 2  | D_DUP_chr2_1102 | 233204789 | 55    | <DUP> | N     | 0.04561  | 0.05626  | 0.0662518  | 1 | 0.806602 | 0.11702   | -0.2149249 |
| 2  | D_DUP_chr2_1117 | 235910216 | 69    | N     | <DUP> | 0.1943   | 0.207    | 0.680677   | 1 | 0.973434 | 0.0654264 | -0.0269253 |
| 2  | D_DUP_chr2_1173 | 241016047 | 81    | <DUP> | N     | 0.02566  | 0.03116  | 0.293585   | 1 | 0.84545  | 0.159852  | -0.1678862 |
| 2  | D_DUP_chr2_1295 | 15428915  | 106   | <DUP> | N     | 0.01807  | 0.01622  | 0.552652   | 1 | 0.887068 | 0.201812  | -0.1198336 |
| 2  | PD_DUP_chr2_174 | 1111804   | 1330  | <DUP> | N     | 0.01598  | 0.008899 | 0.0378912  | 1 | 1.65928  | 0.243921  | 0.50638377 |
| 2  | D_DUP_chr2_2472 | 38728121  | 17160 | <DUP> | N     | 0.05846  | 0.06658  | 0.130172   | 1 | 1.18018  | 0.109471  | 0.16566697 |
| 2  | D_DUP_chr2_2580 | 41858783  | 97    | <DUP> | N     | 0.0117   | 0.01412  | 0.205081   | 1 | 1.34702  | 0.235081  | 0.29789475 |
| 2  | D_DUP_chr2_2608 | 42441732  | 54    | N     | <DUP> | 0.1335   | 0.1209   | 0.445116   | 1 | 0.940747 | 0.0799926 | -0.061081  |
| 2  | D_DUP_chr2_3066 | 50538793  | 302   | <DUP> | N     | 0.03645  | 0.03608  | 0.389197   | 1 | 1.13147  | 0.143447  | 0.12351767 |
| 2  | D_DUP_chr2_3146 | 52100121  | 58    | N     | <DUP> | 0.4428   | 0.4368   | 0.649206   | 1 | 0.976166 | 0.0530332 | -0.0241226 |
| 2  | D_DUP_chr2_3228 | 54400050  | 66    | N     | <DUP> | 0.3658   | 0.3649   | 0.363893   | 1 | 0.94998  | 0.0565157 | -0.0513143 |
| 2  | D_DUP_chr2_3420 | 59542453  | 71    | N     | <DUP> | 0.1517   | 0.1527   | 0.595673   | 1 | 0.961157 | 0.0746607 | -0.0396175 |
| 2  | D_DUP_chr2_3642 | 63550707  | 74    | <DUP> | N     | 0.01852  | 0.02186  | 0.481366   | 1 | 1.14422  | 0.191336  | 0.13472318 |
| 2  | PD_DUP_chr2_389 | 1751728   | 53    | <DUP> | N     | 0.2924   | 0.3221   | 0.389949   | 1 | 0.952289 | 0.0568637 | -0.0488867 |
| 2  | PD_DUP_chr2_402 | 1831183   | 64    | <DUP> | N     | 0.03613  | 0.0352   | 0.912044   | 1 | 1.01542  | 0.138534  | 0.01530232 |
| 2  | D_DUP_chr2_4067 | 71662936  | 105   | N     | <DUP> | 0.3058   | 0.2924   | 0.219088   | 1 | 1.07505  | 0.0588734 | 0.07236717 |
| 2  | PD_DUP_chr2_483 | 2645735   | 73    | <DUP> | N     | 0.2687   | 0.2789   | 0.639283   | 1 | 0.972822 | 0.0587878 | -0.0275542 |
| 2  | D_DUP_chr2_5148 | 96001109  | 8004  | <DUP> | N     | 0.02882  | 0.03041  | 0.678251   | 1 | 0.938045 | 0.154168  | -0.0639574 |
| 2  | D_DUP_chr2_6322 | 118136413 | 113   | N     | <DUP> | 0.3131   | 0.2755   | 0.341636   | 1 | 1.05816  | 0.0594475 | 0.05653155 |
| 2  | D_DUP_chr2_6901 | 128721564 | 368   | <DUP> | N     | 0.01202  | 0.01134  | 0.629712   | 1 | 1.12191  | 0.238594  | 0.11503259 |
| 2  | D_DUP_chr2_7035 | 130451336 | 2449  | <DUP> | N     | 0.03496  | 0.03017  | 0.119419   | 1 | 0.785935 | 0.154687  | -0.2408812 |

|   |                 |           |       |       |       |          |          |           |   |          |           |            |
|---|-----------------|-----------|-------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 2 | D_DUP_chr2_7273 | 133893002 | 57    | <DUP> | N     | 0.4565   | 0.4453   | 0.0244386 | 1 | 1.12668  | 0.0530065 | 0.11927526 |
| 2 | PD_DUP_chr2_738 | 6067293   | 68    | <DUP> | N     | 0.3366   | 0.342    | 0.351937  | 1 | 0.950363 | 0.0546944 | -0.0509113 |
| 2 | D_DUP_chr2_7523 | 140426461 | 5675  | <DUP> | N     | 0.01528  | 0.02177  | 0.197843  | 1 | 0.776889 | 0.19605   | -0.2524578 |
| 2 | D_DUP_chr2_7954 | 154675603 | 296   | <DUP> | N     | 0.01997  | 0.02179  | 0.626688  | 1 | 1.09523  | 0.187021  | 0.09096439 |
| 2 | D_DUP_chr2_8068 | 158548494 | 150   | <DUP> | N     | 0.07054  | 0.07649  | 0.273668  | 1 | 0.896591 | 0.099717  | -0.1091555 |
| 2 | D_DUP_chr2_8170 | 161074763 | 471   | <DUP> | N     | 0.174    | 0.1736   | 0.887671  | 1 | 0.99015  | 0.0700782 | -0.0098988 |
| 2 | D_DUP_chr2_8173 | 161226860 | 69    | N     | <DUP> | 0.1899   | 0.1886   | 0.811863  | 1 | 0.984282 | 0.0665613 | -0.0158428 |
| 2 | D_DUP_chr2_8699 | 176330346 | 79    | <DUP> | N     | 0.01907  | 0.02802  | 0.504708  | 1 | 0.891719 | 0.171795  | -0.1146042 |
| 2 | D_DUP_chr2_8776 | 178252182 | 57    | N     | <DUP> | 0.4332   | 0.4292   | 0.748798  | 1 | 0.983251 | 0.0527842 | -0.0168909 |
| 2 | D_DUP_chr2_8909 | 182289079 | 201   | <DUP> | N     | 0.01341  | 0.01424  | 0.330487  | 1 | 1.24726  | 0.227051  | 0.22094915 |
| 2 | D_DUP_chr2_9140 | 190137821 | 86    | N     | <DUP> | 0.02418  | 0.02267  | 0.406606  | 1 | 0.864459 | 0.175509  | -0.1456514 |
| 2 | D_DUP_chr2_9174 | 191154731 | 176   | <DUP> | N     | 0.02295  | 0.02108  | 0.825944  | 1 | 1.03961  | 0.176637  | 0.03884564 |
| 2 | D_DUP_chr2_9196 | 191699453 | 54    | <DUP> | N     | 0.01222  | 0.01099  | 0.935563  | 1 | 1.01909  | 0.233894  | 0.01891007 |
| 2 | D_DUP_chr2_9316 | 194353929 | 80    | N     | <DUP> | 0.1285   | 0.1293   | 0.26669   | 1 | 0.913085 | 0.0818629 | -0.0909263 |
| 2 | D_DUP_chr2_9543 | 200869962 | 56    | <DUP> | N     | 0.02691  | 0.02546  | 0.635733  | 1 | 1.08332  | 0.168958  | 0.0800304  |
| 2 | D_DUP_chr2_9814 | 206797589 | 6031  | <DUP> | N     | 0.01238  | 0.01151  | 0.587209  | 1 | 1.1413   | 0.243455  | 0.13216796 |
| 2 | D_DUP_chr2_9935 | 209955510 | 72    | <DUP> | N     | 0.008527 | 0.01263  | 0.369567  | 1 | 0.787969 | 0.265576  | -0.2382965 |
| 3 | D_DUP_chr3_1301 | 25249850  | 74    | <DUP> | N     | 0.3016   | 0.3075   | 0.63996   | 1 | 0.973881 | 0.0566037 | -0.0264662 |
| 3 | D_DUP_chr3_1576 | 33001152  | 50    | <DUP> | N     | 0.01245  | 0.01497  | 0.363721  | 1 | 0.816372 | 0.223368  | -0.2028851 |
| 3 | D_DUP_chr3_1766 | 37710037  | 1742  | <DUP> | N     | 0.01051  | 0.009903 | 0.482158  | 1 | 1.20213  | 0.261938  | 0.18409498 |
| 3 | D_DUP_chr3_2102 | 44531981  | 108   | <DUP> | N     | 0.01339  | 0.01116  | 0.147816  | 1 | 1.37113  | 0.218088  | 0.31563522 |
| 3 | D_DUP_chr3_2119 | 44722641  | 91    | <DUP> | N     | 0.01181  | 0.009366 | 0.341729  | 1 | 1.2606   | 0.243581  | 0.2315878  |
| 3 | D_DUP_chr3_2248 | 47192287  | 23606 | <DUP> | N     | 0.012    | 0.01692  | 0.0763036 | 1 | 0.667933 | 0.227676  | -0.4035674 |
| 3 | D_DUP_chr3_2428 | 49246180  | 1657  | <DUP> | N     | 0.05254  | 0.06281  | 0.203107  | 1 | 0.862335 | 0.116371  | -0.1481115 |
| 3 | D_DUP_chr3_2756 | 53423275  | 60    | <DUP> | N     | 0.02924  | 0.02404  | 0.316483  | 1 | 1.17211  | 0.158539  | 0.15880554 |
| 3 | D_DUP_chr3_2809 | 54519020  | 84    | N     | <DUP> | 0.3296   | 0.3228   | 0.526448  | 1 | 1.03644  | 0.0565096 | 0.03579176 |
| 3 | PD_DUP_chr3_284 | 6276226   | 19129 | <DUP> | N     | 0.01277  | 0.01241  | 0.574618  | 1 | 1.1384   | 0.23095   | 0.12962377 |
| 3 | D_DUP_chr3_2906 | 56596483  | 52    | <DUP> | N     | 0.04767  | 0.04174  | 0.255167  | 1 | 0.864615 | 0.127843  | -0.145471  |
| 3 | D_DUP_chr3_2921 | 56921364  | 71    | <DUP> | N     | 0.08908  | 0.08974  | 0.616766  | 1 | 1.04661  | 0.0910269 | 0.04555637 |
| 3 | D_DUP_chr3_3101 | 60280991  | 52    | N     | <DUP> | 0.0648   | 0.05793  | 0.854722  | 1 | 1.02026  | 0.109561  | 0.0200575  |
| 3 | D_DUP_chr3_3114 | 60860060  | 78    | <DUP> | N     | 0.2897   | 0.3203   | 0.388821  | 1 | 0.951867 | 0.057243  | -0.04933   |
| 3 | D_DUP_chr3_3330 | 66713348  | 138   | <DUP> | N     | 0.3976   | 0.4117   | 0.997454  | 1 | 1.00017  | 0.0536533 | 0.00016999 |
| 3 | D_DUP_chr3_3390 | 69171654  | 137   | <DUP> | N     | 0.01142  | 0.01026  | 0.234656  | 1 | 0.751072 | 0.240864  | -0.2862538 |
| 3 | D_DUP_chr3_3700 | 75840100  | 267   | <DUP> | N     | 0.01825  | 0.01752  | 0.335583  | 1 | 1.21536  | 0.202552  | 0.19504033 |
| 3 | D_DUP_chr3_3723 | 76418455  | 121   | <DUP> | N     | 0.01105  | 0.01459  | 0.255604  | 1 | 0.765708 | 0.23482   | -0.2669544 |
| 3 | D_DUP_chr3_3767 | 77291229  | 5092  | <DUP> | N     | 0.01855  | 0.01523  | 0.808978  | 1 | 0.951968 | 0.203617  | -0.0492239 |
| 3 | D_DUP_chr3_3825 | 78638222  | 51    | <DUP> | N     | 0.01851  | 0.01609  | 0.261138  | 1 | 1.2554   | 0.202413  | 0.22745425 |
| 3 | D_DUP_chr3_3830 | 78904666  | 61    | <DUP> | N     | 0.01147  | 0.01082  | 0.106782  | 1 | 1.50186  | 0.252167  | 0.40670434 |
| 3 | D_DUP_chr3_4104 | 87322421  | 52    | <DUP> | N     | 0.05242  | 0.04701  | 0.0931317 | 1 | 1.22288  | 0.11983   | 0.20120873 |
| 3 | PD_DUP_chr3_426 | 9086713   | 95    | <DUP> | N     | 0.3337   | 0.3633   | 0.427647  | 1 | 1.04635  | 0.0571144 | 0.04530792 |
| 3 | D_DUP_chr3_4296 | 99333358  | 50    | <DUP> | N     | 0.02314  | 0.02246  | 0.536891  | 1 | 0.896973 | 0.176073  | -0.1087295 |

|   |                 |           |       |       |       |          |         |            |   |          |           |            |
|---|-----------------|-----------|-------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 3 | D_DUP_chr3_4469 | 105167832 | 76    | <DUP> | N     | 0.01949  | 0.02371 | 0.365303   | 1 | 0.846277 | 0.184367  | -0.1669085 |
| 3 | D_DUP_chr3_4492 | 105608295 | 52    | N     | <DUP> | 0.2232   | 0.2022  | 0.483248   | 1 | 1.04607  | 0.06424   | 0.04504029 |
| 3 | D_DUP_chr3_4738 | 113320519 | 68    | <DUP> | N     | 0.01212  | 0.01338 | 0.409237   | 1 | 1.21402  | 0.235011  | 0.19393717 |
| 3 | D_DUP_chr3_4767 | 114133615 | 66    | N     | <DUP> | 0.04818  | 0.0439  | 0.325659   | 1 | 1.1386   | 0.132059  | 0.12979944 |
| 3 | D_DUP_chr3_4985 | 120222954 | 134   | N     | <DUP> | 0.04487  | 0.02285 | 0.102959   | 1 | 1.28203  | 0.152359  | 0.24844476 |
| 3 | D_DUP_chr3_5019 | 121204608 | 80    | <DUP> | N     | 0.03971  | 0.04052 | 0.181118   | 1 | 0.837927 | 0.132223  | -0.1768243 |
| 3 | D_DUP_chr3_5496 | 128661930 | 33919 | <DUP> | N     | 0.03863  | 0.03512 | 0.804914   | 1 | 1.03552  | 0.141324  | 0.03490372 |
| 3 | D_DUP_chr3_5508 | 128716258 | 537   | <DUP> | N     | 0.01689  | 0.01658 | 0.531041   | 1 | 1.13208  | 0.198043  | 0.12405665 |
| 3 | PD_DUP_chr3_592 | 10745276  | 119   | <DUP> | N     | 0.003329 | 0.02706 | 0.00437143 | 1 | 0.441704 | 0.286703  | -0.8171153 |
| 3 | D_DUP_chr3_6132 | 141159466 | 58    | N     | <DUP> | 0.1464   | 0.1546  | 0.976485   | 1 | 1.0021   | 0.071005  | 0.0020978  |
| 3 | D_DUP_chr3_6289 | 144320529 | 150   | <DUP> | N     | 0.02281  | 0.02495 | 0.325301   | 1 | 0.841429 | 0.175528  | -0.1726536 |
| 3 | D_DUP_chr3_6364 | 146672617 | 4761  | N     | <DUP> | 0.2816   | 0.2859  | 0.723004   | 1 | 1.02031  | 0.0567195 | 0.0201065  |
| 3 | D_DUP_chr3_6449 | 149707861 | 83    | <DUP> | N     | 0.01226  | 0.01537 | 0.341017   | 1 | 0.81236  | 0.218254  | -0.2078117 |
| 3 | D_DUP_chr3_7025 | 167911293 | 269   | <DUP> | N     | 0.01997  | 0.01891 | 0.320704   | 1 | 0.827408 | 0.19079   | -0.1894574 |
| 3 | D_DUP_chr3_7054 | 168949600 | 62    | <DUP> | N     | 0.01714  | 0.01773 | 0.99853    | 1 | 1.00037  | 0.199818  | 0.00036993 |
| 3 | D_DUP_chr3_7210 | 173119774 | 63    | <DUP> | N     | 0.1227   | 0.1361  | 0.0647597  | 1 | 0.864737 | 0.0786877 | -0.1453299 |
| 3 | D_DUP_chr3_7224 | 173521481 | 51592 | <DUP> | N     | 0.02264  | 0.02339 | 0.297722   | 1 | 0.833148 | 0.175298  | -0.182544  |
| 3 | D_DUP_chr3_7243 | 173878654 | 73    | <DUP> | N     | 0.01476  | 0.01517 | 0.615055   | 1 | 0.89411  | 0.222576  | -0.1119265 |
| 3 | D_DUP_chr3_7304 | 175337120 | 51    | <DUP> | N     | 0.0188   | 0.01692 | 0.962856   | 1 | 0.991275 | 0.188169  | -0.0087633 |
| 3 | D_DUP_chr3_7361 | 176518923 | 345   | <DUP> | N     | 0.01414  | 0.01425 | 0.160127   | 1 | 1.35749  | 0.217589  | 0.30563741 |
| 3 | D_DUP_chr3_7399 | 177258245 | 3963  | <DUP> | N     | 0.01676  | 0.01608 | 0.872097   | 1 | 0.967245 | 0.20686   | -0.0333035 |
| 3 | D_DUP_chr3_7559 | 181544727 | 69    | <DUP> | N     | 0.1166   | 0.1072  | 0.19548    | 1 | 1.1105   | 0.0809606 | 0.10481036 |
| 3 | D_DUP_chr3_7584 | 182153133 | 130   | N     | <DUP> | 0.04799  | 0.02825 | 0.666024   | 1 | 1.06565  | 0.147328  | 0.06358494 |
| 3 | D_DUP_chr3_8269 | 195059732 | 54    | <DUP> | N     | 0.2402   | 0.2356  | 0.0391533  | 1 | 1.13801  | 0.0626795 | 0.12928112 |
| 3 | D_DUP_chr3_8306 | 195337898 | 85    | <DUP> | N     | 0.01639  | 0.01919 | 0.84317    | 1 | 0.960389 | 0.204291  | -0.0404169 |
| 3 | D_DUP_chr3_8563 | 196002219 | 1041  | <DUP> | N     | 0.01575  | 0.01213 | 0.492603   | 1 | 0.857181 | 0.224588  | -0.1541062 |
| 3 | D_DUP_chr3_8574 | 196096892 | 53    | N     | <DUP> | 0.05783  | 0.05221 | 0.485047   | 1 | 0.920976 | 0.117903  | -0.0823213 |
| 3 | D_DUP_chr3_8727 | 197387452 | 3562  | <DUP> | N     | 0.01319  | 0.01715 | 0.014639   | 1 | 0.58034  | 0.2229    | -0.5441411 |
| 3 | D_DUP_chr3_8839 | 198072022 | 135   | <DUP> | N     | 0.09575  | 0.0961  | 0.116692   | 1 | 1.1472   | 0.0875365 | 0.13732419 |
| 4 | PD_DUP_chr4_1   | 10000     | 18500 | N     | <DUP> | 0.0195   | 0.01644 | 0.230226   | 1 | 1.27743  | 0.204079  | 0.24485025 |
| 4 | D_DUP_chr4_1114 | 12887563  | 437   | <DUP> | N     | 0.02189  | 0.0233  | 0.914753   | 1 | 1.01945  | 0.179957  | 0.01926327 |
| 4 | D_DUP_chr4_1143 | 13940762  | 72    | <DUP> | N     | 0.02285  | 0.02714 | 0.824571   | 1 | 1.03883  | 0.171864  | 0.03809508 |
| 4 | D_DUP_chr4_1434 | 23278696  | 52    | <DUP> | N     | 0.02202  | 0.025   | 0.469482   | 1 | 0.883587 | 0.171108  | -0.1237655 |
| 4 | D_DUP_chr4_1539 | 25554984  | 23859 | <DUP> | N     | 0.01208  | 0.01225 | 0.208185   | 1 | 1.36838  | 0.249192  | 0.31362756 |
| 4 | D_DUP_chr4_1611 | 27206381  | 184   | N     | <DUP> | 0.2986   | 0.2757  | 0.449291   | 1 | 1.04627  | 0.0597881 | 0.04523146 |
| 4 | D_DUP_chr4_1693 | 30739113  | 57    | <DUP> | N     | 0.01378  | 0.01534 | 0.441474   | 1 | 1.18088  | 0.216     | 0.16625992 |
| 4 | D_DUP_chr4_1921 | 36486702  | 56    | <DUP> | N     | 0.02751  | 0.02506 | 0.00167088 | 1 | 1.67701  | 0.164484  | 0.51701245 |
| 4 | D_DUP_chr4_2357 | 46762928  | 56    | <DUP> | N     | 0.01424  | 0.01286 | 0.466648   | 1 | 1.1821   | 0.229817  | 0.16729252 |
| 4 | D_DUP_chr4_2416 | 52081945  | 147   | N     | <DUP> | 0.04603  | 0.02681 | 0.803571   | 1 | 1.03676  | 0.145124  | 0.03610047 |
| 4 | D_DUP_chr4_2534 | 55501366  | 67    | <DUP> | N     | 0.04311  | 0.04522 | 0.413384   | 1 | 1.11129  | 0.129004  | 0.1055215  |
| 4 | D_DUP_chr4_2921 | 65764398  | 66    | <DUP> | N     | 0.4983   | 0.4857  | 0.114266   | 1 | 1.08683  | 0.0527213 | 0.0832652  |

|   |                 |           |       |       |       |          |          |            |   |          |           |            |
|---|-----------------|-----------|-------|-------|-------|----------|----------|------------|---|----------|-----------|------------|
| 4 | D_DUP_chr4_3067 | 70336687  | 226   | <DUP> | N     | 0.05372  | 0.05895  | 0.258862   | 1 | 0.879774 | 0.113446  | -0.1280902 |
| 4 | D_DUP_chr4_3478 | 80902445  | 53    | <DUP> | N     | 0.01719  | 0.01464  | 0.772602   | 1 | 0.942706 | 0.204173  | -0.0590008 |
| 4 | D_DUP_chr4_3573 | 83128923  | 114   | <DUP> | N     | 0.0123   | 0.01158  | 0.833175   | 1 | 0.948815 | 0.249446  | -0.0525414 |
| 4 | D_DUP_chr4_3773 | 89180719  | 5524  | <DUP> | N     | 0.109    | 0.09585  | 0.194375   | 1 | 1.11993  | 0.0872776 | 0.11326618 |
| 4 | D_DUP_chr4_3805 | 90147142  | 74    | <DUP> | N     | 0.03612  | 0.04801  | 0.00931884 | 1 | 0.703847 | 0.135068  | -0.3511943 |
| 4 | PD_DUP_chr4_382 | 2802610   | 60    | <DUP> | N     | 0.02007  | 0.02494  | 0.435321   | 1 | 0.871293 | 0.176611  | -0.137777  |
| 4 | D_DUP_chr4_3838 | 91202754  | 59    | N     | <DUP> | 0.4183   | 0.4157   | 0.2494     | 1 | 1.06469  | 0.0544249 | 0.06268368 |
| 4 | D_DUP_chr4_3993 | 95902202  | 54    | <DUP> | N     | 0.009292 | 0.01153  | 0.572096   | 1 | 0.861567 | 0.263737  | -0.1490025 |
| 4 | D_DUP_chr4_4263 | 103665240 | 64    | <DUP> | N     | 0.0554   | 0.05803  | 0.692958   | 1 | 1.04516  | 0.111879  | 0.04416998 |
| 4 | D_DUP_chr4_4533 | 112427370 | 63    | <DUP> | N     | 0.02063  | 0.02299  | 0.982076   | 1 | 0.995995 | 0.178611  | -0.004013  |
| 4 | D_DUP_chr4_4758 | 118694943 | 61    | <DUP> | N     | 0.02297  | 0.02279  | 0.740607   | 1 | 0.942028 | 0.180396  | -0.0597203 |
| 4 | D_DUP_chr4_4838 | 121855851 | 64    | <DUP> | N     | 0.3038   | 0.3186   | 0.98806    | 1 | 0.999153 | 0.0566116 | -0.0008474 |
| 4 | D_DUP_chr4_5979 | 154189481 | 59    | N     | <DUP> | 0.08862  | 0.08942  | 0.690386   | 1 | 0.963117 | 0.0943455 | -0.0375804 |
| 4 | D_DUP_chr4_6018 | 155198561 | 53    | <DUP> | N     | 0.295    | 0.3032   | 0.616435   | 1 | 1.02985  | 0.0587155 | 0.02941316 |
| 4 | PD_DUP_chr4_603 | 5263225   | 64    | <DUP> | N     | 0.03564  | 0.03822  | 0.875486   | 1 | 1.0228   | 0.143878  | 0.02254396 |
| 4 | D_DUP_chr4_6174 | 160350250 | 84    | <DUP> | N     | 0.007819 | 0.01496  | 0.20502    | 1 | 0.719393 | 0.259865  | -0.3293475 |
| 4 | D_DUP_chr4_6427 | 166969486 | 68    | <DUP> | N     | 0.07522  | 0.07485  | 0.836891   | 1 | 1.02053  | 0.0987146 | 0.0203221  |
| 4 | D_DUP_chr4_6480 | 167924032 | 68    | <DUP> | N     | 0.03183  | 0.03098  | 0.51547    | 1 | 0.90979  | 0.145372  | -0.0945415 |
| 4 | D_DUP_chr4_6522 | 169349333 | 55    | <DUP> | N     | 0.03147  | 0.02886  | 0.132939   | 1 | 1.26348  | 0.155642  | 0.23386982 |
| 4 | D_DUP_chr4_6652 | 173399527 | 141   | <DUP> | N     | 0.4893   | 0.5069   | 0.57552    | 1 | 0.970876 | 0.0527855 | -0.0295565 |
| 4 | D_DUP_chr4_6813 | 177970725 | 81    | <DUP> | N     | 0.4824   | 0.5067   | 0.555708   | 1 | 0.969587 | 0.0524168 | -0.0308851 |
| 4 | D_DUP_chr4_6825 | 178229824 | 85    | N     | <DUP> | 0.01547  | 0.006477 | 0.842059   | 1 | 0.945519 | 0.281143  | -0.0560213 |
| 4 | D_DUP_chr4_6995 | 182937983 | 52    | <DUP> | N     | 0.02086  | 0.01725  | 0.508143   | 1 | 0.8783   | 0.196104  | -0.1297671 |
| 4 | D_DUP_chr4_7127 | 185063739 | 159   | <DUP> | N     | 0.1033   | 0.1004   | 0.154296   | 1 | 1.13004  | 0.0858229 | 0.12225303 |
| 4 | D_DUP_chr4_7191 | 186465481 | 64    | N     | <DUP> | 0.04662  | 0.02591  | 0.541701   | 1 | 0.91062  | 0.15343   | -0.0936296 |
| 4 | D_DUP_chr4_7261 | 187957764 | 62    | <DUP> | N     | 0.03594  | 0.03122  | 0.838641   | 1 | 1.02952  | 0.14289   | 0.02909267 |
| 4 | D_DUP_chr4_7358 | 188869461 | 96    | N     | <DUP> | 0.3486   | 0.3298   | 0.143593   | 1 | 1.08551  | 0.0561032 | 0.08204992 |
| 4 | D_DUP_chr4_7427 | 189508175 | 154   | N     | <DUP> | 0.4023   | 0.3942   | 0.893054   | 1 | 0.992927 | 0.0527961 | -0.0070981 |
| 4 | D_DUP_chr4_7490 | 190108939 | 321   | <DUP> | N     | 0.0144   | 0.01687  | 0.339157   | 1 | 0.813601 | 0.215817  | -0.2062852 |
| 4 | PD_DUP_chr4_808 | 7625720   | 80    | <DUP> | N     | 0.0267   | 0.03038  | 0.461841   | 1 | 0.893691 | 0.152749  | -0.1123952 |
| 4 | PD_DUP_chr4_923 | 8552375   | 121   | <DUP> | N     | 0.3743   | 0.409    | 0.295045   | 1 | 0.944438 | 0.0545931 | -0.0571652 |
| 5 | D_DUP_chr5_1193 | 14995225  | 5768  | <DUP> | N     | 0.01122  | 0.01151  | 0.207873   | 1 | 1.33878  | 0.231661  | 0.29175875 |
| 5 | D_DUP_chr5_1504 | 24001016  | 75    | <DUP> | N     | 0.009339 | 0.01103  | 0.679365   | 1 | 1.11625  | 0.266063  | 0.10997485 |
| 5 | D_DUP_chr5_1700 | 29456780  | 67    | <DUP> | N     | 0.01934  | 0.02066  | 0.732255   | 1 | 1.06615  | 0.187212  | 0.06405403 |
| 5 | D_DUP_chr5_1707 | 29843871  | 170   | <DUP> | N     | 0.1107   | 0.1142   | 0.825621   | 1 | 1.01848  | 0.0831304 | 0.01831132 |
| 5 | D_DUP_chr5_1790 | 32106096  | 61574 | <DUP> | N     | 0.02263  | 0.01692  | 0.00336215 | 1 | 1.78871  | 0.198291  | 0.58149469 |
| 5 | D_DUP_chr5_2206 | 43378023  | 79    | <DUP> | N     | 0.01708  | 0.0164   | 0.682099   | 1 | 0.920623 | 0.201916  | -0.0827047 |
| 5 | PD_DUP_chr5_23  | 91218     | 75    | <DUP> | N     | 0.03277  | 0.02662  | 0.58198    | 1 | 1.08685  | 0.151287  | 0.0832836  |
| 5 | D_DUP_chr5_2407 | 53426438  | 102   | <DUP> | N     | 0.02556  | 0.02047  | 0.645606   | 1 | 1.0804   | 0.168148  | 0.07733134 |
| 5 | D_DUP_chr5_2594 | 58870045  | 62    | <DUP> | N     | 0.4713   | 0.4683   | 0.988691   | 1 | 0.999265 | 0.0519224 | -0.0007353 |
| 5 | D_DUP_chr5_3392 | 76023643  | 84    | <DUP> | N     | 0.01267  | 0.01813  | 0.777587   | 1 | 0.940359 | 0.217703  | -0.0614936 |

|   |                 |           |       |       |       |          |          |           |   |          |           |            |
|---|-----------------|-----------|-------|-------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 5 | D_DUP_chr5_3545 | 79753746  | 2177  | <DUP> | N     | 0.1251   | 0.1218   | 0.895952  | 1 | 0.989849 | 0.0780197 | -0.0102029 |
| 5 | D_DUP_chr5_3674 | 83192164  | 51    | <DUP> | N     | 0.03036  | 0.04147  | 0.117869  | 1 | 0.804517 | 0.139095  | -0.2175132 |
| 5 | D_DUP_chr5_3822 | 87066584  | 287   | <DUP> | N     | 0.02228  | 0.01676  | 0.0941215 | 1 | 1.37428  | 0.189915  | 0.31792996 |
| 5 | D_DUP_chr5_4037 | 93362243  | 60    | <DUP> | N     | 0.01319  | 0.01172  | 0.820039  | 1 | 1.05458  | 0.233616  | 0.05314258 |
| 5 | D_DUP_chr5_5215 | 128319469 | 65    | <DUP> | N     | 0.01085  | 0.01008  | 0.39215   | 1 | 1.24532  | 0.256381  | 0.21939253 |
| 5 | D_DUP_chr5_6181 | 143433394 | 70    | <DUP> | N     | 0.03231  | 0.03571  | 0.165421  | 1 | 1.22409  | 0.145771  | 0.20219771 |
| 5 | D_DUP_chr5_6196 | 144108491 | 433   | <DUP> | N     | 0.02186  | 0.02235  | 0.244681  | 1 | 0.819218 | 0.171404  | -0.1994051 |
| 5 | D_DUP_chr5_6330 | 148268759 | 85    | <DUP> | N     | 0.02566  | 0.02682  | 0.779097  | 1 | 0.955021 | 0.164075  | -0.0460219 |
| 5 | D_DUP_chr5_6581 | 152131192 | 3998  | <DUP> | N     | 0.1613   | 0.1634   | 0.332375  | 1 | 0.932169 | 0.0724625 | -0.0702412 |
| 5 | D_DUP_chr5_7211 | 167690966 | 4646  | <DUP> | N     | 0.02205  | 0.02123  | 0.50673   | 1 | 0.88844  | 0.178161  | -0.1182882 |
| 5 | D_DUP_chr5_7412 | 170841729 | 61    | N     | <DUP> | 0.4237   | 0.4266   | 0.910559  | 1 | 0.994016 | 0.0534303 | -0.006002  |
| 5 | D_DUP_chr5_7605 | 173422753 | 67    | <DUP> | N     | 0.01092  | 0.01139  | 0.514397  | 1 | 1.16918  | 0.23973   | 0.15630265 |
| 5 | D_DUP_chr5_8056 | 178551134 | 56    | N     | <DUP> | 0.3202   | 0.2926   | 0.639383  | 1 | 1.02712  | 0.0571218 | 0.02675877 |
| 5 | D_DUP_chr5_8265 | 180748921 | 19645 | <DUP> | N     | 0.02961  | 0.03497  | 0.0673782 | 1 | 0.761651 | 0.148849  | -0.2722668 |
| 6 | PD_DUP_chr6_115 | 1233848   | 59    | N     | <DUP> | 0.3986   | 0.3998   | 0.669213  | 1 | 0.977441 | 0.0534079 | -0.0228173 |
| 6 | D_DUP_chr6_1216 | 24497467  | 96    | <DUP> | N     | 0.01979  | 0.01949  | 0.527452  | 1 | 0.888661 | 0.186802  | -0.1180394 |
| 6 | D_DUP_chr6_1217 | 24513645  | 68    | <DUP> | N     | 0.02749  | 0.02625  | 0.46759   | 1 | 0.89038  | 0.159838  | -0.1161069 |
| 6 | D_DUP_chr6_1244 | 25091703  | 54    | N     | <DUP> | 0.2268   | 0.2007   | 0.278644  | 1 | 1.07217  | 0.0643207 | 0.06968463 |
| 6 | D_DUP_chr6_2908 | 44296944  | 51    | N     | <DUP> | 0.04894  | 0.03796  | 0.5063    | 1 | 1.0927   | 0.133391  | 0.0886517  |
| 6 | D_DUP_chr6_2967 | 45797451  | 123   | <DUP> | N     | 0.0105   | 0.01031  | 0.354027  | 1 | 0.778616 | 0.27      | -0.2502373 |
| 6 | D_DUP_chr6_3016 | 46951329  | 2325  | <DUP> | N     | 0.008527 | 0.01314  | 0.125713  | 1 | 0.662698 | 0.268697  | -0.4114359 |
| 6 | D_DUP_chr6_3158 | 51325985  | 59    | <DUP> | N     | 0.111    | 0.1171   | 0.645408  | 1 | 0.963109 | 0.0816874 | -0.0375887 |
| 6 | PD_DUP_chr6_409 | 6984155   | 66    | <DUP> | N     | 0.01321  | 0.01569  | 0.832789  | 1 | 0.955083 | 0.217674  | -0.045957  |
| 6 | D_DUP_chr6_4109 | 82897764  | 288   | <DUP> | N     | 0.01401  | 0.007762 | 0.197073  | 1 | 1.42572  | 0.27496   | 0.35467695 |
| 6 | D_DUP_chr6_4247 | 87810654  | 88    | <DUP> | N     | 0.01318  | 0.01261  | 0.870869  | 1 | 0.962038 | 0.238081  | -0.0387013 |
| 6 | D_DUP_chr6_4250 | 87869372  | 56    | N     | <DUP> | 0.1297   | 0.1196   | 0.941159  | 1 | 0.994047 | 0.0808939 | -0.0059708 |
| 6 | D_DUP_chr6_4383 | 90774901  | 74    | <DUP> | N     | 0.1183   | 0.1131   | 0.770549  | 1 | 1.02388  | 0.0809007 | 0.02359933 |
| 6 | D_DUP_chr6_4601 | 96634375  | 57    | <DUP> | N     | 0.01296  | 0.01514  | 0.792816  | 1 | 1.05776  | 0.213781  | 0.05615346 |
| 6 | D_DUP_chr6_4828 | 103263024 | 62    | <DUP> | N     | 0.03425  | 0.0314   | 0.644672  | 1 | 1.06971  | 0.146114  | 0.06738758 |
| 6 | D_DUP_chr6_4830 | 103434370 | 90    | <DUP> | N     | 0.03368  | 0.02639  | 0.0254114 | 1 | 1.41477  | 0.155235  | 0.34696697 |
| 6 | D_DUP_chr6_4912 | 106481841 | 195   | <DUP> | N     | 0.09609  | 0.09089  | 0.30259   | 1 | 1.09678  | 0.0896098 | 0.09237861 |
| 6 | PD_DUP_chr6_496 | 8901934   | 58    | N     | <DUP> | 0.1092   | 0.1076   | 0.317219  | 1 | 0.918382 | 0.0851254 | -0.0851419 |
| 6 | D_DUP_chr6_5451 | 120443670 | 107   | N     | <DUP> | 0.1446   | 0.1395   | 0.170175  | 1 | 1.10577  | 0.073314  | 0.10054192 |
| 6 | D_DUP_chr6_5453 | 120504095 | 181   | N     | <DUP> | 0.5029   | 0.4888   | 0.507535  | 1 | 0.964979 | 0.053795  | -0.0356489 |
| 6 | D_DUP_chr6_5489 | 121840524 | 106   | N     | <DUP> | 0.06828  | 0.05883  | 0.987385  | 1 | 1.00175  | 0.110636  | 0.00174847 |
| 6 | D_DUP_chr6_5680 | 128445206 | 68    | <DUP> | N     | 0.05062  | 0.05726  | 0.730124  | 1 | 0.960629 | 0.11644   | -0.040167  |
| 6 | PD_DUP_chr6_570 | 10616177  | 112   | <DUP> | N     | 0.01065  | 0.0137   | 0.118385  | 1 | 0.680362 | 0.246629  | -0.3851303 |
| 6 | D_DUP_chr6_5759 | 131738509 | 86    | <DUP> | N     | 0.01259  | 0.009935 | 0.12105   | 1 | 1.48766  | 0.256201  | 0.39720442 |
| 6 | D_DUP_chr6_5929 | 136151712 | 70    | <DUP> | N     | 0.4333   | 0.433    | 0.484876  | 1 | 0.964247 | 0.0521248 | -0.0364078 |
| 6 | D_DUP_chr6_6381 | 148915834 | 134   | <DUP> | N     | 0.06014  | 0.06096  | 0.290929  | 1 | 0.890634 | 0.109678  | -0.1158217 |
| 6 | D_DUP_chr6_6816 | 158221347 | 80    | <DUP> | N     | 0.01226  | 0.01209  | 0.792911  | 1 | 1.06219  | 0.229809  | 0.06033281 |



|   |                 |           |      |       |       |          |          |            |   |          |           |            |
|---|-----------------|-----------|------|-------|-------|----------|----------|------------|---|----------|-----------|------------|
| 6 | D_DUP_chr6_6875 | 158998012 | 1201 | <DUP> | N     | 0.02271  | 0.02345  | 0.175242   | 1 | 1.27051  | 0.176623  | 0.23941839 |
| 6 | D_DUP_chr6_6978 | 160728280 | 109  | N     | <DUP> | 0.14     | 0.1448   | 0.883972   | 1 | 0.989256 | 0.0740215 | -0.0108021 |
| 6 | D_DUP_chr6_7437 | 167651305 | 655  | N     | <DUP> | 0.04236  | 0.03149  | 0.0383064  | 1 | 1.35567  | 0.146893  | 0.3042958  |
| 6 | D_DUP_chr6_7527 | 168276734 | 70   | <DUP> | N     | 0.3943   | 0.3871   | 0.717927   | 1 | 1.02017  | 0.0552995 | 0.01996928 |
| 6 | D_DUP_chr6_7664 | 169028975 | 53   | <DUP> | N     | 0.03186  | 0.02902  | 0.915294   | 1 | 1.01633  | 0.15229   | 0.0161981  |
| 6 | D_DUP_chr6_7700 | 169269309 | 74   | <DUP> | N     | 0.01319  | 0.01244  | 0.73909    | 1 | 1.0799   | 0.230806  | 0.07686844 |
| 7 | D_DUP_chr7_1310 | 19655479  | 65   | <DUP> | N     | 0.01301  | 0.01404  | 0.0899189  | 1 | 0.682768 | 0.225023  | -0.3816002 |
| 7 | D_DUP_chr7_1390 | 21900387  | 51   | <DUP> | N     | 0.2302   | 0.2393   | 0.406064   | 1 | 0.948084 | 0.0641672 | -0.0533122 |
| 7 | D_DUP_chr7_2239 | 40915751  | 243  | <DUP> | N     | 0.1088   | 0.1148   | 0.0830261  | 1 | 0.864078 | 0.0842812 | -0.1460922 |
| 7 | D_DUP_chr7_2419 | 44623496  | 117  | <DUP> | N     | 0.4082   | 0.4101   | 0.181597   | 1 | 1.07238  | 0.0523084 | 0.06988048 |
| 7 | D_DUP_chr7_2792 | 51957359  | 138  | <DUP> | N     | 0.1095   | 0.1066   | 0.0812425  | 1 | 1.15657  | 0.0834268 | 0.14545873 |
| 7 | D_DUP_chr7_2968 | 55854677  | 412  | <DUP> | N     | 0.08652  | 0.09018  | 0.400595   | 1 | 1.08314  | 0.0950125 | 0.07986423 |
| 7 | PD_DUP_chr7_299 | 1489294   | 51   | N     | <DUP> | 0.0412   | 0.02735  | 0.116768   | 1 | 0.787756 | 0.1521    | -0.2385669 |
| 7 | D_DUP_chr7_3131 | 57388095  | 67   | <DUP> | N     | 0.007758 | 0.01244  | 0.00714564 | 1 | 0.495912 | 0.26073   | -0.7013568 |
| 7 | D_DUP_chr7_3231 | 57950035  | 589  | <DUP> | N     | 0.02074  | 0.02581  | 0.140375   | 1 | 0.7713   | 0.176127  | -0.2596779 |
| 7 | D_DUP_chr7_3377 | 62442448  | 3574 | <DUP> | N     | 0.01872  | 0.01289  | 0.584313   | 1 | 0.886697 | 0.219801  | -0.120252  |
| 7 | PD_DUP_chr7_384 | 2003003   | 59   | N     | <DUP> | 0.1019   | 0.09698  | 0.617926   | 1 | 0.956411 | 0.0893509 | -0.0445675 |
| 7 | D_DUP_chr7_3864 | 67078245  | 2153 | <DUP> | N     | 0.02228  | 0.01709  | 0.718739   | 1 | 1.06861  | 0.184262  | 0.06635874 |
| 7 | D_DUP_chr7_4094 | 72367619  | 76   | <DUP> | N     | 0.01456  | 0.01533  | 0.58514    | 1 | 0.892572 | 0.208189  | -0.1136481 |
| 7 | D_DUP_chr7_4123 | 72868447  | 1548 | <DUP> | N     | 0.05906  | 0.05618  | 0.233374   | 1 | 1.14519  | 0.113762  | 0.13557056 |
| 7 | D_DUP_chr7_4619 | 78035304  | 53   | <DUP> | N     | 0.05371  | 0.05445  | 0.264814   | 1 | 0.880129 | 0.114509  | -0.1276868 |
| 7 | D_DUP_chr7_4937 | 87380245  | 150  | N     | <DUP> | 0.2082   | 0.176    | 0.142983   | 1 | 1.10602  | 0.0687928 | 0.10076799 |
| 7 | PD_DUP_chr7_535 | 4031622   | 54   | <DUP> | N     | 0.01261  | 0.01422  | 0.253985   | 1 | 1.28168  | 0.217555  | 0.24817172 |
| 7 | D_DUP_chr7_5522 | 101033950 | 2157 | <DUP> | N     | 0.04034  | 0.06067  | 0.676748   | 1 | 0.948753 | 0.126184  | -0.0526068 |
| 7 | D_DUP_chr7_5523 | 101034004 | 2456 | <DUP> | N     | 0.08262  | 0.09676  | 0.386843   | 1 | 1.08594  | 0.0952697 | 0.08244597 |
| 7 | D_DUP_chr7_5699 | 104194929 | 51   | <DUP> | N     | 0.0592   | 0.05674  | 0.57925    | 1 | 1.06363  | 0.111251  | 0.06168759 |
| 7 | D_DUP_chr7_5881 | 108247550 | 75   | <DUP> | N     | 0.01726  | 0.01677  | 0.441801   | 1 | 1.1583   | 0.191062  | 0.14695341 |
| 7 | D_DUP_chr7_5887 | 108538510 | 61   | <DUP> | N     | 0.1838   | 0.1921   | 0.104902   | 1 | 0.896833 | 0.0671492 | -0.1088856 |
| 7 | D_DUP_chr7_5919 | 109447844 | 84   | <DUP> | N     | 0.001357 | 0.0249   | 0.00120803 | 1 | 0.269435 | 0.40514   | -1.3114281 |
| 7 | D_DUP_chr7_6383 | 126218975 | 269  | <DUP> | N     | 0.03477  | 0.03222  | 0.379947   | 1 | 1.13566  | 0.14489   | 0.12721398 |
| 7 | D_DUP_chr7_6509 | 128414326 | 1106 | <DUP> | N     | 0.01141  | 0.009356 | 0.0931788  | 1 | 1.54736  | 0.260028  | 0.43655025 |
| 7 | D_DUP_chr7_6837 | 134190878 | 68   | N     | <DUP> | 0.4282   | 0.4067   | 0.352041   | 1 | 1.05014  | 0.0525669 | 0.04892349 |
| 7 | D_DUP_chr7_7054 | 138678906 | 1551 | <DUP> | N     | 0.03057  | 0.02924  | 0.605895   | 1 | 1.08485  | 0.157854  | 0.08144173 |
| 7 | PD_DUP_chr7_769 | 6198156   | 150  | <DUP> | N     | 0.04951  | 0.05108  | 0.956688   | 1 | 1.00632  | 0.11605   | 0.00630011 |
| 7 | PD_DUP_chr7_78  | 259492    | 73   | <DUP> | N     | 0.4708   | 0.4826   | 0.58746    | 1 | 0.972342 | 0.0516991 | -0.0280477 |
| 7 | D_DUP_chr7_8272 | 156264985 | 1218 | <DUP> | N     | 0.01631  | 0.01787  | 0.274195   | 1 | 0.803054 | 0.200592  | -0.2193333 |
| 7 | D_DUP_chr7_8709 | 158387515 | 60   | N     | <DUP> | 0.03077  | 0.02195  | 0.353396   | 1 | 1.16885  | 0.168123  | 0.15602036 |
| 7 | D_DUP_chr7_8749 | 158637510 | 62   | N     | <DUP> | 0.1124   | 0.09517  | 0.809929   | 1 | 1.02137  | 0.0879247 | 0.02114486 |
| 7 | D_DUP_chr7_8770 | 158795773 | 62   | <DUP> | N     | 0.09674  | 0.1057   | 0.34117    | 1 | 0.920452 | 0.0870835 | -0.0828904 |
| 8 | D_DUP_chr8_1148 | 14325582  | 63   | <DUP> | N     | 0.01614  | 0.01531  | 0.564857   | 1 | 1.12819  | 0.209538  | 0.12061458 |
| 8 | D_DUP_chr8_1290 | 18220701  | 79   | <DUP> | N     | 0.02528  | 0.02792  | 0.618026   | 1 | 0.922226 | 0.162368  | -0.080965  |

|   |                 |           |       |       |       |          |         |            |   |          |           |            |
|---|-----------------|-----------|-------|-------|-------|----------|---------|------------|---|----------|-----------|------------|
| 8 | D_DUP_chr8_1413 | 21196660  | 66    | <DUP> | N     | 0.2552   | 0.2706  | 0.110623   | 1 | 0.908705 | 0.0600066 | -0.0957348 |
| 8 | PD_DUP_chr8_145 | 961082    | 201   | <DUP> | N     | 0.01162  | 0.01351 | 0.048504   | 1 | 0.636314 | 0.229134  | -0.4520631 |
| 8 | D_DUP_chr8_1453 | 21452145  | 602   | <DUP> | N     | 0.05399  | 0.05598 | 0.430719   | 1 | 1.09307  | 0.112935  | 0.08899025 |
| 8 | D_DUP_chr8_1561 | 22645575  | 58    | <DUP> | N     | 0.02515  | 0.02927 | 0.77359    | 1 | 1.04785  | 0.162468  | 0.04674045 |
| 8 | PD_DUP_chr8_232 | 1345207   | 55    | <DUP> | N     | 0.4031   | 0.403   | 0.10059    | 1 | 1.09461  | 0.0550516 | 0.09039814 |
| 8 | D_DUP_chr8_2614 | 50270590  | 11718 | <DUP> | N     | 0.0209   | 0.02015 | 0.803175   | 1 | 1.04759  | 0.186526  | 0.04649229 |
| 8 | D_DUP_chr8_2714 | 52581917  | 58    | <DUP> | N     | 0.09184  | 0.09332 | 0.881934   | 1 | 0.986928 | 0.088595  | -0.0131582 |
| 8 | D_DUP_chr8_2889 | 57259868  | 492   | <DUP> | N     | 0.09828  | 0.09232 | 0.361889   | 1 | 1.0856   | 0.0900864 | 0.08213283 |
| 8 | D_DUP_chr8_2967 | 59145799  | 53    | <DUP> | N     | 0.01297  | 0.01459 | 0.662657   | 1 | 0.904133 | 0.231012  | -0.1007788 |
| 8 | D_DUP_chr8_3069 | 61468104  | 7340  | <DUP> | N     | 0.01277  | 0.01673 | 0.380712   | 1 | 0.831001 | 0.211188  | -0.1851243 |
| 8 | D_DUP_chr8_3489 | 72851133  | 88    | N     | <DUP> | 0.0617   | 0.06353 | 0.982783   | 1 | 0.997643 | 0.109326  | -0.0023598 |
| 8 | D_DUP_chr8_3700 | 78989460  | 4507  | <DUP> | N     | 0.01376  | 0.01476 | 0.916742   | 1 | 0.977872 | 0.214046  | -0.0223765 |
| 8 | D_DUP_chr8_3978 | 88294378  | 59    | <DUP> | N     | 0.0105   | 0.01318 | 0.945892   | 1 | 0.983554 | 0.244347  | -0.0165827 |
| 8 | D_DUP_chr8_4458 | 100674447 | 2444  | <DUP> | N     | 0.01741  | 0.01835 | 0.948867   | 1 | 0.98712  | 0.20214   | -0.0129637 |
| 8 | D_DUP_chr8_4501 | 101317672 | 76    | <DUP> | N     | 0.01568  | 0.01367 | 0.50945    | 1 | 1.14617  | 0.206806  | 0.13642595 |
| 8 | D_DUP_chr8_4568 | 102943488 | 732   | <DUP> | N     | 0.01568  | 0.01026 | 0.185511   | 1 | 1.3608   | 0.232686  | 0.30807276 |
| 8 | D_DUP_chr8_4679 | 106125885 | 50    | <DUP> | N     | 0.01455  | 0.0159  | 0.874098   | 1 | 0.967802 | 0.206545  | -0.0327278 |
| 8 | D_DUP_chr8_4852 | 112525871 | 66    | <DUP> | N     | 0.01268  | 0.01513 | 0.507211   | 1 | 0.863273 | 0.221694  | -0.1470243 |
| 8 | D_DUP_chr8_5062 | 119497737 | 68    | <DUP> | N     | 0.4063   | 0.424   | 0.963516   | 1 | 0.997533 | 0.0540036 | -0.00247   |
| 8 | D_DUP_chr8_5095 | 120280928 | 196   | <DUP> | N     | 0.02378  | 0.03312 | 0.261949   | 1 | 0.83788  | 0.157676  | -0.1768804 |
| 8 | D_DUP_chr8_5128 | 121526619 | 69    | <DUP> | N     | 0.0223   | 0.01873 | 0.770959   | 1 | 1.05451  | 0.182301  | 0.0530762  |
| 8 | D_DUP_chr8_5792 | 137619464 | 60    | <DUP> | N     | 0.01483  | 0.0125  | 0.719662   | 1 | 1.08643  | 0.230962  | 0.08289709 |
| 8 | D_DUP_chr8_5955 | 139881638 | 92    | <DUP> | N     | 0.009503 | 0.01622 | 0.955216   | 1 | 0.986682 | 0.238752  | -0.0134075 |
| 8 | D_DUP_chr8_6055 | 141172993 | 65    | <DUP> | N     | 0.3088   | 0.3308  | 0.938271   | 1 | 0.995745 | 0.0550647 | -0.0042641 |
| 8 | D_DUP_chr8_6065 | 141246484 | 123   | N     | <DUP> | 0.2989   | 0.2587  | 0.809896   | 1 | 0.985711 | 0.059827  | -0.0143921 |
| 8 | D_DUP_chr8_6098 | 141517262 | 78    | <DUP> | N     | 0.4659   | 0.4678  | 0.390754   | 1 | 0.956024 | 0.0524    | -0.0449723 |
| 9 | D_DUP_chr9_1041 | 27011360  | 93    | <DUP> | N     | 0.01846  | 0.01918 | 0.559389   | 1 | 0.894695 | 0.190618  | -0.1112724 |
| 9 | D_DUP_chr9_1117 | 29111861  | 76    | <DUP> | N     | 0.3285   | 0.3332  | 0.542357   | 1 | 1.03493  | 0.0563492 | 0.03433379 |
| 9 | D_DUP_chr9_1989 | 60518646  | 2284  | <DUP> | N     | 0.01603  | 0.01379 | 0.716605   | 1 | 0.921483 | 0.225263  | -0.081771  |
| 9 | PD_DUP_chr9_234 | 4737078   | 78    | <DUP> | N     | 0.01779  | 0.01652 | 0.170181   | 1 | 1.3251   | 0.205223  | 0.28148793 |
| 9 | D_DUP_chr9_2468 | 66818594  | 88761 | <DUP> | N     | 0.00883  | 0.01501 | 0.00050754 | 1 | 0.420235 | 0.249354  | -0.8669412 |
| 9 | D_DUP_chr9_2848 | 74723807  | 65    | <DUP> | N     | 0.01048  | 0.0119  | 0.463389   | 1 | 1.1933   | 0.241009  | 0.17672258 |
| 9 | D_DUP_chr9_2895 | 76218595  | 150   | <DUP> | N     | 0.01685  | 0.01675 | 0.181959   | 1 | 1.31144  | 0.203131  | 0.27112577 |
| 9 | D_DUP_chr9_2930 | 77155055  | 7222  | <DUP> | N     | 0.04392  | 0.04378 | 0.989025   | 1 | 1.00178  | 0.129359  | 0.00177842 |
| 9 | D_DUP_chr9_2960 | 77975772  | 905   | <DUP> | N     | 0.05596  | 0.06174 | 0.89212    | 1 | 0.984999 | 0.111445  | -0.0151147 |
| 9 | D_DUP_chr9_3105 | 81303105  | 62    | <DUP> | N     | 0.02336  | 0.0231  | 0.135666   | 1 | 1.29141  | 0.171388  | 0.25573464 |
| 9 | D_DUP_chr9_3195 | 83500401  | 119   | <DUP> | N     | 0.05721  | 0.05642 | 0.253256   | 1 | 1.13781  | 0.113003  | 0.12910536 |
| 9 | PD_DUP_chr9_337 | 6978401   | 257   | <DUP> | N     | 0.04321  | 0.03885 | 0.392599   | 1 | 1.11755  | 0.130005  | 0.11113879 |
| 9 | PD_DUP_chr9_345 | 7214373   | 115   | <DUP> | N     | 0.01768  | 0.02092 | 0.0185248  | 1 | 0.638518 | 0.190494  | -0.4486054 |
| 9 | D_DUP_chr9_3577 | 90841401  | 60    | <DUP> | N     | 0.4067   | 0.398   | 0.83243    | 1 | 1.01165  | 0.0547204 | 0.01158266 |
| 9 | D_DUP_chr9_3635 | 92428684  | 151   | <DUP> | N     | 0.03516  | 0.04578 | 0.486733   | 1 | 0.910176 | 0.13532   | -0.0941173 |

|    |                  |           |       |                |       |         |          |            |   |          |           |            |
|----|------------------|-----------|-------|----------------|-------|---------|----------|------------|---|----------|-----------|------------|
| 9  | PD_DUP_chr9_38   | 358642    | 69    | <DUP>          | N     | 0.0118  | 0.0126   | 0.661773   | 1 | 1.11078  | 0.24017   | 0.10506247 |
| 9  | D_DUP_chr9_3848  | 96356588  | 95    | <DUP>          | N     | 0.04517 | 0.03481  | 0.00878017 | 1 | 1.40209  | 0.12897   | 0.33796398 |
| 9  | PD_DUP_chr9_401  | 8586041   | 154   | <DUP>          | N     | 0.01423 | 0.01087  | 0.0456291  | 1 | 1.62764  | 0.243711  | 0.48713111 |
| 9  | D_DUP_chr9_4402  | 109767912 | 78    | <DUP>          | N     | 0.3778  | 0.3928   | 0.0406256  | 1 | 0.893132 | 0.0552038 | -0.1130209 |
| 9  | D_DUP_chr9_4412  | 109953835 | 541   | <DUP>          | N     | 0.01348 | 0.01716  | 0.545471   | 1 | 0.879932 | 0.211577  | -0.1279106 |
| 9  | D_DUP_chr9_4544  | 112890776 | 60    | <DUP>          | N     | 0.02223 | 0.02376  | 0.863407   | 1 | 1.03138  | 0.179612  | 0.03089771 |
| 9  | D_DUP_chr9_4699  | 115819294 | 9399  | <DUP>          | N     | 0.03501 | 0.03168  | 0.17949    | 1 | 1.21697  | 0.146291  | 0.19636416 |
| 9  | D_DUP_chr9_4856  | 119839931 | 75    | <DUP>          | N     | 0.01415 | 0.01338  | 0.422739   | 1 | 1.19816  | 0.225511  | 0.18078705 |
| 9  | D_DUP_chr9_5001  | 122695444 | 57    | <DUP>          | N     | 0.03993 | 0.04275  | 0.86674    | 1 | 1.02222  | 0.130964  | 0.02197673 |
| 9  | D_DUP_chr9_5009  | 122773805 | 61    | N              | <DUP> | 0.02515 | 0.02465  | 0.268865   | 1 | 0.826576 | 0.172259  | -0.1904634 |
| 9  | D_DUP_chr9_5221  | 126297361 | 55    | <DUP>          | N     | 0.3754  | 0.3843   | 0.531329   | 1 | 1.03368  | 0.0529187 | 0.03312525 |
| 9  | D_DUP_chr9_5724  | 131742348 | 4240  | <DUP>          | N     | 0.0883  | 0.1053   | 0.0892518  | 1 | 0.858569 | 0.0897328 | -0.1524882 |
| 9  | D_DUP_chr9_5812  | 133060720 | 20444 | <DUP>          | N     | 0.02981 | 0.03706  | 0.868521   | 1 | 0.976003 | 0.146732  | -0.0242896 |
| 9  | D_DUP_chr9_5910  | 133872565 | 124   | <DUP>          | N     | 0.0107  | 0.01047  | 0.240527   | 1 | 1.35591  | 0.259422  | 0.30447282 |
| 9  | D_DUP_chr9_5978  | 134376586 | 66    | N              | <DUP> | 0.2288  | 0.2192   | 0.666169   | 1 | 0.972528 | 0.0645711 | -0.0278564 |
| 9  | D_DUP_chr9_6207  | 135982656 | 73    | N              | <DUP> | 0.02767 | 0.01296  | 0.497523   | 1 | 1.1416   | 0.195213  | 0.13243079 |
| 9  | D_DUP_chr9_6476  | 138127946 | 84    | <DUP>          | N     | 0.01051 | 0.01209  | 0.462074   | 1 | 0.826869 | 0.258498  | -0.190109  |
| 9  | PD_DUP_chr9_667  | 15984100  | 97    | <DUP>          | N     | 0.4166  | 0.4348   | 0.849629   | 1 | 1.01007  | 0.0528304 | 0.01001964 |
| 9  | PD_DUP_chr9_689  | 16285318  | 70    | <DUP>          | N     | 0.01499 | 0.01466  | 0.166674   | 1 | 0.74377  | 0.214049  | -0.2960234 |
| 9  | PD_DUP_chr9_758  | 18209009  | 182   | <DUP>          | N     | 0.01491 | 0.01764  | 0.910348   | 1 | 0.977783 | 0.199535  | -0.0224675 |
| 9  | PD_DUP_chr9_925  | 22903888  | 112   | N              | <DUP> | 0.09288 | 0.09914  | 0.663484   | 1 | 0.962306 | 0.0883068 | -0.0384228 |
| 10 | D_INS_chr10_1381 | 45393415  | 257   | <INS>          | N     | 0.01315 | 0.01583  | 0.170962   | 1 | 0.734856 | 0.225021  | -0.3080807 |
| 10 | D_INS_chr10_1742 | 56610905  | 104   | <INS:ME:ALU>   | N     | 0.01721 | 0.01777  | 0.59104    | 1 | 0.894157 | 0.208205  | -0.1118739 |
| 10 | D_INS_chr10_2662 | 85112542  | 227   | <INS>          | N     | 0.4911  | 0.4897   | 0.954051   | 1 | 1.00305  | 0.0528395 | 0.00304536 |
| 10 | D_INS_chr10_2676 | 85483297  | 1583  | <INS:ME>       | N     | 0.01122 | 0.009176 | 0.699795   | 1 | 0.902439 | 0.266221  | -0.1026542 |
| 10 | D_INS_chr10_2701 | 86469249  | 61    | N              | <INS> | 0.0381  | 0.03724  | 0.077698   | 1 | 0.785842 | 0.136606  | -0.2409995 |
| 10 | D_INS_chr10_2801 | 89957889  | 6010  | <INS:ME:LINE1> | N     | 0.09923 | 0.1013   | 0.491509   | 1 | 1.06403  | 0.0902165 | 0.06206359 |
| 10 | D_INS_chr10_2884 | 92811576  | 280   | <INS:ME:ALU>   | N     | 0.112   | 0.1178   | 0.58897    | 1 | 1.04672  | 0.0845122 | 0.04566147 |
| 10 | D_INS_chr10_2887 | 92948085  | 548   | <INS>          | N     | 0.01173 | 0.01453  | 0.583298   | 1 | 0.881283 | 0.230373  | -0.1263765 |
| 10 | D_INS_chr10_3513 | 114936773 | 324   | <INS>          | N     | 0.03825 | 0.03887  | 0.326258   | 1 | 1.14376  | 0.136824  | 0.13432108 |
| 10 | PD_INS_chr10_395 | 9854422   | 109   | N              | <INS> | 0.04855 | 0.05254  | 0.0552838  | 1 | 0.792874 | 0.121093  | -0.232091  |
| 10 | D_INS_chr10_3979 | 130450514 | 442   | <INS>          | N     | 0.01957 | 0.01845  | 0.974349   | 1 | 1.00645  | 0.200036  | 0.00642929 |
| 10 | D_INS_chr10_4006 | 131176841 | 149   | N              | <INS> | 0.05203 | 0.02699  | 0.225219   | 1 | 1.1987   | 0.149442  | 0.18123764 |
| 10 | PD_INS_chr10_61  | 1229703   | 150   | N              | <INS> | 0.4025  | 0.38     | 0.717049   | 1 | 1.02002  | 0.0547088 | 0.01982223 |
| 10 | PD_INS_chr10_73  | 1483712   | 158   | <INS>          | N     | 0.3364  | 0.3442   | 0.214272   | 1 | 0.933875 | 0.055087  | -0.0684127 |
| 10 | PD_INS_chr10_757 | 21399310  | 280   | <INS:ME:ALU>   | N     | 0.01484 | 0.01463  | 0.993758   | 1 | 1.00181  | 0.230661  | 0.00180836 |
| 10 | PD_INS_chr10_916 | 26672158  | 185   | <INS>          | N     | 0.4317  | 0.4284   | 0.320222   | 1 | 0.947468 | 0.0542875 | -0.0539621 |
| 11 | D_INS_chr11_1652 | 58397888  | 196   | <INS>          | N     | 0.36    | 0.3672   | 0.965842   | 1 | 0.997656 | 0.0548076 | -0.0023468 |
| 11 | PD_INS_chr11_169 | 5114183   | 180   | <INS>          | N     | 0.3642  | 0.3634   | 0.934213   | 1 | 0.995506 | 0.0545678 | -0.0045041 |
| 11 | D_INS_chr11_2009 | 71563063  | 293   | <INS>          | N     | 0.02053 | 0.02723  | 0.251927   | 1 | 0.821751 | 0.171354  | -0.1963178 |
| 11 | D_INS_chr11_2116 | 74556417  | 59    | N              | <INS> | 0.3671  | 0.3559   | 0.740608   | 1 | 1.01807  | 0.0541011 | 0.01790868 |

|    |                  |           |     |              |                |          |          |           |   |          |           |            |
|----|------------------|-----------|-----|--------------|----------------|----------|----------|-----------|---|----------|-----------|------------|
| 11 | D_INS_chr11_2634 | 91498563  | 111 | <INS>        | N              | 0.2903   | 0.4106   | 0.207596  | 1 | 0.924827 | 0.062013  | -0.0781486 |
| 11 | PD_INS_chr11_275 | 8201353   | 248 | <INS:ME:ALU> | N              | 0.01389  | 0.01142  | 0.326637  | 1 | 1.26163  | 0.236929  | 0.23240454 |
| 11 | D_INS_chr11_2751 | 95850233  | 280 | <INS:ME:ALU> | N              | 0.01929  | 0.01826  | 0.742277  | 1 | 0.940809 | 0.185548  | -0.0610151 |
| 11 | PD_INS_chr11_276 | 8201383   | 257 | <INS:ME:ALU> | N              | 0.0139   | 0.01142  | 0.326384  | 1 | 1.26176  | 0.23691   | 0.23250757 |
| 11 | D_INS_chr11_2809 | 97646721  | 138 | <INS:ME>     | N              | 0.0205   | 0.01943  | 0.555301  | 1 | 1.11685  | 0.187356  | 0.11051222 |
| 11 | D_INS_chr11_3154 | 106968777 | 100 | N            | <INS>          | 0.1298   | 0.1247   | 0.575854  | 1 | 1.04597  | 0.0803337 | 0.04494468 |
| 11 | D_INS_chr11_3442 | 116975263 | 280 | <INS:ME:ALU> | N              | 0.02586  | 0.03024  | 0.238748  | 1 | 0.831077 | 0.157058  | -0.1850328 |
| 11 | D_INS_chr11_3592 | 122182860 | 279 | <INS:ME:ALU> | N              | 0.04007  | 0.04297  | 0.450107  | 1 | 1.10508  | 0.132299  | 0.09991773 |
| 11 | PD_INS_chr11_361 | 10802035  | 76  | N            | <INS>          | 0.04507  | 0.04534  | 0.305857  | 1 | 0.872281 | 0.133447  | -0.1366437 |
| 11 | D_INS_chr11_3654 | 123747628 | 280 | <INS:ME:ALU> | N              | 0.01314  | 0.01249  | 0.904267  | 1 | 0.971535 | 0.240107  | -0.028878  |
| 11 | D_INS_chr11_3659 | 123747628 | 333 | <INS>        | N              | 0.01371  | 0.01231  | 0.763332  | 1 | 0.930236 | 0.240171  | -0.072317  |
| 11 | D_INS_chr11_3809 | 129046369 | 263 | <INS:ME:ALU> | N              | 0.01339  | 0.01209  | 0.914678  | 1 | 0.975136 | 0.235006  | -0.0251783 |
| 11 | D_INS_chr11_3987 | 134435748 | 294 | N            | <INS:ME:LINE1> | 0.05401  | 0.04716  | 0.349661  | 1 | 1.11805  | 0.119314  | 0.1115861  |
| 11 | PD_INS_chr11_475 | 15880561  | 274 | <INS:ME:ALU> | N              | 0.0152   | 0.01664  | 0.901612  | 1 | 1.02621  | 0.209308  | 0.0258724  |
| 11 | PD_INS_chr11_748 | 25087022  | 281 | <INS:ME:ALU> | N              | 0.0152   | 0.02098  | 0.043631  | 1 | 0.673445 | 0.195948  | -0.3953489 |
| 12 | D_INS_chr12_1051 | 29726426  | 279 | <INS:ME:ALU> | N              | 0.02608  | 0.02969  | 0.412201  | 1 | 0.875948 | 0.161517  | -0.1324486 |
| 12 | D_INS_chr12_1069 | 30434620  | 249 | <INS:ME>     | N              | 0.008155 | 0.01301  | 0.100853  | 1 | 0.656891 | 0.256128  | -0.4202372 |
| 12 | D_INS_chr12_1332 | 42623014  | 304 | <INS:ME>     | N              | 0.03768  | 0.03659  | 0.869511  | 1 | 0.977613 | 0.137826  | -0.0226414 |
| 12 | D_INS_chr12_1649 | 53290716  | 141 | N            | <INS>          | 0.04932  | 0.03203  | 0.834024  | 1 | 0.972189 | 0.134602  | -0.028205  |
| 12 | D_INS_chr12_1669 | 53930530  | 90  | N            | <INS>          | 0.3745   | 0.333    | 0.0504012 | 1 | 1.11618  | 0.0561771 | 0.10991214 |
| 12 | D_INS_chr12_2099 | 67835558  | 324 | <INS>        | N              | 0.01545  | 0.01542  | 0.921911  | 1 | 1.02053  | 0.207311  | 0.0203221  |
| 12 | D_INS_chr12_2094 | 67835558  | 279 | <INS:ME:ALU> | N              | 0.01545  | 0.01542  | 0.921911  | 1 | 1.02053  | 0.207311  | 0.0203221  |
| 12 | D_INS_chr12_2259 | 72808167  | 304 | <INS:ME>     | N              | 0.04623  | 0.0449   | 0.855303  | 1 | 1.02395  | 0.129815  | 0.0236677  |
| 12 | D_INS_chr12_2506 | 79989298  | 117 | N            | <INS>          | 0.04894  | 0.04768  | 0.920819  | 1 | 0.9873   | 0.128581  | -0.0127813 |
| 12 | D_INS_chr12_2744 | 86783455  | 325 | <INS>        | N              | 0.01416  | 0.01243  | 0.818137  | 1 | 1.05547  | 0.234784  | 0.05398617 |
| 12 | D_INS_chr12_2749 | 86783455  | 280 | <INS:ME:ALU> | N              | 0.01246  | 0.01013  | 0.475922  | 1 | 1.19504  | 0.249945  | 0.17817966 |
| 12 | D_INS_chr12_3081 | 97026308  | 280 | <INS:ME:ALU> | N              | 0.01768  | 0.02293  | 0.0365638 | 1 | 0.676499 | 0.186946  | -0.3908243 |
| 12 | D_INS_chr12_3234 | 101484151 | 318 | <INS:ME:SVA> | N              | 0.01425  | 0.01576  | 0.664565  | 1 | 0.911324 | 0.214144  | -0.0928568 |
| 12 | D_INS_chr12_3241 | 101637051 | 76  | N            | <INS>          | 0.4443   | 0.4512   | 0.429385  | 1 | 0.957524 | 0.0549253 | -0.0434045 |
| 12 | D_INS_chr12_3302 | 103360655 | 329 | <INS>        | N              | 0.01837  | 0.02192  | 0.581937  | 1 | 0.905001 | 0.181306  | -0.0998192 |
| 12 | D_INS_chr12_3684 | 117056382 | 68  | <INS>        | N              | 0.01362  | 0.008561 | 0.676235  | 1 | 1.11349  | 0.257425  | 0.10749923 |
| 12 | D_INS_chr12_3711 | 118133185 | 60  | <INS>        | N              | 0.2648   | 0.2571   | 0.94696   | 1 | 0.996021 | 0.0599349 | -0.0039869 |
| 12 | D_INS_chr12_3740 | 119763290 | 112 | N            | <INS>          | 0.2031   | 0.2046   | 0.132513  | 1 | 0.904234 | 0.0669212 | -0.1006671 |
| 12 | D_INS_chr12_4112 | 130660325 | 470 | N            | <INS>          | 0.3638   | 0.3634   | 0.117522  | 1 | 0.918669 | 0.0541953 | -0.0848294 |
| 12 | D_INS_chr12_4172 | 132133106 | 281 | <INS>        | N              | 0.03878  | 0.03978  | 0.569196  | 1 | 1.08127  | 0.137263  | 0.07813628 |
| 12 | PD_INS_chr12_628 | 18529138  | 298 | <INS:ME:ALU> | N              | 0.0119   | 0.009931 | 0.416961  | 1 | 1.22784  | 0.252872  | 0.20525653 |
| 13 | D_INS_chr13_1171 | 51070890  | 130 | N            | <INS>          | 0.3383   | 0.3433   | 0.085314  | 1 | 1.10105  | 0.055946  | 0.09626427 |
| 13 | PD_INS_chr13_12  | 19251652  | 428 | N            | <INS>          | 0.0234   | 0.02303  | 0.318555  | 1 | 0.837296 | 0.178034  | -0.1775776 |
| 13 | D_INS_chr13_1331 | 56445708  | 75  | N            | <INS>          | 0.4031   | 0.4021   | 0.854392  | 1 | 1.00996  | 0.054003  | 0.00991073 |
| 13 | D_INS_chr13_1462 | 60037034  | 131 | N            | <INS>          | 0.2439   | 0.2451   | 0.9001    | 1 | 0.992406 | 0.0607198 | -0.007623  |
| 13 | D_INS_chr13_1659 | 65127913  | 320 | <INS>        | N              | 0.01248  | 0.01322  | 0.750135  | 1 | 1.07786  | 0.235442  | 0.07497759 |

|    |                  |           |     |                |       |          |          |            |   |          |           |            |
|----|------------------|-----------|-----|----------------|-------|----------|----------|------------|---|----------|-----------|------------|
| 13 | D_INS_chr13_1654 | 65127913  | 280 | <INS:ME:ALU>   | N     | 0.01248  | 0.01322  | 0.750135   | 1 | 1.07786  | 0.235442  | 0.07497759 |
| 13 | D_INS_chr13_1759 | 68249660  | 108 | N              | <INS> | 0.3683   | 0.3613   | 0.467253   | 1 | 1.04181  | 0.0563434 | 0.04095959 |
| 13 | D_INS_chr13_1942 | 72653255  | 213 | N              | <INS> | 0.08781  | 0.07845  | 0.642635   | 1 | 1.04691  | 0.098799  | 0.04584297 |
| 13 | D_INS_chr13_1993 | 74095384  | 280 | <INS:ME:ALU>   | N     | 0.02266  | 0.01848  | 0.171518   | 1 | 1.29758  | 0.190517  | 0.26050099 |
| 13 | D_INS_chr13_1994 | 74095384  | 280 | <INS:ME:ALU>   | N     | 0.02247  | 0.01883  | 0.188089   | 1 | 1.28508  | 0.190559  | 0.25082097 |
| 13 | D_INS_chr13_2138 | 78150703  | 53  | <INS>          | N     | 0.2824   | 0.2834   | 0.810792   | 1 | 0.985787 | 0.0597925 | -0.014315  |
| 13 | D_INS_chr13_2289 | 81973308  | 109 | N              | <INS> | 0.4015   | 0.418    | 0.655084   | 1 | 0.976504 | 0.0532256 | -0.0237764 |
| 13 | D_INS_chr13_2300 | 82251826  | 320 | <INS>          | N     | 0.009735 | 0.01103  | 0.819186   | 1 | 0.942316 | 0.259913  | -0.0594146 |
| 13 | D_INS_chr13_2827 | 97329654  | 113 | N              | <INS> | 0.03636  | 0.03077  | 0.781823   | 1 | 1.04295  | 0.151858  | 0.04205324 |
| 13 | D_INS_chr13_3050 | 104756293 | 199 | N              | <INS> | 0.05203  | 0.03508  | 0.487939   | 1 | 0.908533 | 0.138301  | -0.0959241 |
| 13 | D_INS_chr13_3132 | 107292497 | 279 | <INS:ME:ALU>   | N     | 0.02107  | 0.02919  | 0.554204   | 1 | 0.903818 | 0.17098   | -0.1011273 |
| 13 | D_INS_chr13_3133 | 107292497 | 333 | <INS>          | N     | 0.02107  | 0.02919  | 0.554213   | 1 | 0.903818 | 0.17098   | -0.1011273 |
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| 13 | PD_INS_chr13_499 | 32100122  | 342 | <INS>          | N     | 0.02744  | 0.02652  | 0.18636    | 1 | 1.23421  | 0.159243  | 0.21043109 |
| 13 | PD_INS_chr13_705 | 38856755  | 300 | <INS:ME:ALU>   | N     | 0.02202  | 0.02214  | 0.722307   | 1 | 1.06585  | 0.179455  | 0.0637726  |
| 14 | D_INS_chr14_1019 | 48142151  | 63  | <INS>          | N     | 0.1706   | 0.1756   | 0.600176   | 1 | 0.963221 | 0.0714925 | -0.0374724 |
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| 14 | PD_INS_chr14_150 | 22703923  | 91  | N              | <INS> | 0.1561   | 0.1538   | 0.93598    | 1 | 1.0059   | 0.0732725 | 0.00588266 |
| 14 | D_INS_chr14_1658 | 66968912  | 256 | <INS>          | N     | 0.0167   | 0.01606  | 0.953411   | 1 | 1.01193  | 0.203012  | 0.0118594  |
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| 14 | D_INS_chr14_2797 | 104764084 | 145 | <INS>          | N     | 0.06376  | 0.06072  | 0.0745361  | 1 | 1.20505  | 0.104591  | 0.18652106 |
| 14 | PD_INS_chr14_308 | 28155550  | 280 | <INS:ME:ALU>   | N     | 0.02138  | 0.01714  | 0.15677    | 1 | 1.31838  | 0.195198  | 0.27640371 |
| 14 | PD_INS_chr14_527 | 34378448  | 94  | <INS:ME:ALU>   | N     | 0.01319  | 0.01351  | 0.288268   | 1 | 1.27024  | 0.225255  | 0.23920586 |
| 14 | PD_INS_chr14_814 | 42074349  | 61  | <INS:ME:LINE1> | N     | 0.01383  | 0.01988  | 0.0714613  | 1 | 0.683525 | 0.211091  | -0.380492  |
| 15 | D_INS_chr15_1035 | 54602885  | 101 | N              | <INS> | 0.282    | 0.3003   | 0.269145   | 1 | 0.939263 | 0.0567038 | -0.0626598 |
| 15 | D_INS_chr15_1425 | 66864649  | 164 | <INS>          | N     | 0.3426   | 0.3481   | 0.113135   | 1 | 0.916867 | 0.0547848 | -0.0867929 |
| 15 | D_INS_chr15_1526 | 70124478  | 277 | <INS:ME:ALU>   | N     | 0.01165  | 0.008832 | 0.00433051 | 1 | 2.10301  | 0.260555  | 0.74336965 |
| 15 | D_INS_chr15_1631 | 74160253  | 344 | <INS>          | N     | 0.01548  | 0.01919  | 0.71343    | 1 | 0.925751 | 0.210072  | -0.07715   |
| 15 | D_INS_chr15_1632 | 74160253  | 339 | <INS>          | N     | 0.01548  | 0.01919  | 0.71279    | 1 | 0.925581 | 0.210083  | -0.0773336 |
| 15 | D_INS_chr15_1886 | 83903924  | 78  | <INS>          | N     | 0.2141   | 0.2166   | 0.148285   | 1 | 1.09921  | 0.0654317 | 0.09459174 |
| 15 | PD_INS_chr15_210 | 27193308  | 304 | <INS:ME>       | N     | 0.0211   | 0.01728  | 0.828755   | 1 | 1.04197  | 0.190061  | 0.04111315 |
| 15 | D_INS_chr15_2271 | 96206580  | 51  | <INS>          | N     | 0.01656  | 0.01644  | 0.991663   | 1 | 0.997873 | 0.203787  | -0.0021293 |
| 15 | D_INS_chr15_2304 | 97415716  | 690 | <INS:ME>       | N     | 0.05891  | 0.05133  | 0.0622965  | 1 | 1.23976  | 0.11529   | 0.21491781 |
| 15 | PD_INS_chr15_387 | 34214912  | 281 | <INS:ME:ALU>   | N     | 0.01469  | 0.0161   | 0.400302   | 1 | 1.20133  | 0.218085  | 0.18342928 |
| 15 | PD_INS_chr15_446 | 36140766  | 333 | <INS>          | N     | 0.01265  | 0.01192  | 0.34489    | 1 | 1.25421  | 0.239803  | 0.22650589 |
| 15 | PD_INS_chr15_447 | 36140766  | 281 | <INS:ME:ALU>   | N     | 0.01246  | 0.01121  | 0.368777   | 1 | 1.24497  | 0.243793  | 0.21911143 |
| 15 | PD_INS_chr15_454 | 36380495  | 279 | <INS:ME:ALU>   | N     | 0.01057  | 0.01048  | 0.669454   | 1 | 1.11833  | 0.26197   | 0.1118365  |
| 16 | D_INS_chr16_1098 | 52378510  | 51  | <INS>          | N     | 0.2899   | 0.3008   | 0.564689   | 1 | 0.96713  | 0.0580363 | -0.0334224 |
| 16 | D_INS_chr16_1168 | 54849806  | 134 | <INS>          | N     | 0.01525  | 0.008514 | 0.00988676 | 1 | 1.94161  | 0.257202  | 0.66351753 |
| 16 | D_INS_chr16_1189 | 55687191  | 110 | N              | <INS> | 0.0207   | 0.03059  | 0.00065746 | 1 | 0.559454 | 0.170484  | -0.580794  |
| 16 | D_INS_chr16_1287 | 59663326  | 92  | N              | <INS> | 0.441    | 0.4629   | 0.0919541  | 1 | 0.912076 | 0.0546127 | -0.092032  |

|    |                  |           |     |                |          |          |          |           |   |          |           |            |
|----|------------------|-----------|-----|----------------|----------|----------|----------|-----------|---|----------|-----------|------------|
| 16 | D_INS_chr16_1440 | 64070914  | 77  | <INS>          | N        | 0.4654   | 0.4725   | 0.128125  | 1 | 0.919729 | 0.0549944 | -0.0836762 |
| 16 | PD_INS_chr16_171 | 4457143   | 324 | <INS>          | N        | 0.02965  | 0.03168  | 0.599192  | 1 | 1.08202  | 0.149988  | 0.07882966 |
| 16 | D_INS_chr16_1714 | 74287700  | 123 | <INS>          | N        | 0.2745   | 0.2836   | 0.545707  | 1 | 0.964974 | 0.0590094 | -0.0356541 |
| 16 | D_INS_chr16_1959 | 82909531  | 280 | <INS:ME:ALU>   | N        | 0.01767  | 0.01736  | 0.521371  | 1 | 1.12667  | 0.186     | 0.11926638 |
| 16 | PD_INS_chr16_427 | 12452370  | 83  | N              | <INS>    | 0.4282   | 0.4345   | 0.595612  | 1 | 0.97108  | 0.0552946 | -0.0293464 |
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| 17 | D_INS_chr17_1414 | 50588359  | 111 | <INS>          | N        | 0.3654   | 0.3552   | 0.0209512 | 1 | 1.13579  | 0.0551462 | 0.12732844 |
| 17 | D_INS_chr17_1534 | 54378997  | 110 | <INS:ME:ALU>   | N        | 0.009773 | 0.01483  | 0.0230073 | 1 | 0.578269 | 0.240933  | -0.5477161 |
| 17 | PD_INS_chr17_442 | 14272573  | 280 | <INS:ME:ALU>   | N        | 0.009515 | 0.01101  | 0.706779  | 1 | 1.10181  | 0.257735  | 0.09695428 |
| 17 | PD_INS_chr17_858 | 32572183  | 280 | <INS:ME:ALU>   | N        | 0.01719  | 0.0181   | 0.89959   | 1 | 1.02585  | 0.202235  | 0.02552154 |
| 17 | PD_INS_chr17_859 | 32572183  | 312 | <INS>          | N        | 0.01719  | 0.0181   | 0.89959   | 1 | 1.02585  | 0.202235  | 0.02552154 |
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| 18 | D_INS_chr18_1638 | 56386985  | 280 | <INS:ME:ALU>   | N        | 0.01147  | 0.01374  | 0.872145  | 1 | 0.962549 | 0.237178  | -0.0381703 |
| 18 | D_INS_chr18_1684 | 57553232  | 242 | <INS:ME:ALU>   | N        | 0.009375 | 0.0114   | 0.312778  | 1 | 0.769895 | 0.259063  | -0.2615011 |
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| 18 | PD_INS_chr18_209 | 5036973   | 326 | <INS>          | N        | 0.01252  | 0.01269  | 0.712341  | 1 | 1.09274  | 0.24053   | 0.0886883  |
| 18 | D_INS_chr18_2187 | 71722929  | 323 | <INS:ME:LINE1> | N        | 0.01072  | 0.01088  | 0.669493  | 1 | 0.894542 | 0.26109   | -0.1114434 |
| 18 | PD_INS_chr18_661 | 25858713  | 279 | <INS:ME:ALU>   | N        | 0.01028  | 0.01099  | 0.312025  | 1 | 1.29277  | 0.254     | 0.2567872  |
| 18 | PD_INS_chr18_897 | 32613130  | 243 | <INS>          | N        | 0.3571   | 0.3496   | 0.645566  | 1 | 1.02546  | 0.0546724 | 0.02514129 |
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| 19 | PD_INS_chr19_58  | 1631283   | 311 | <INS>          | N        | 0.01072  | 0.01215  | 0.515908  | 1 | 0.845389 | 0.25853   | -0.1679584 |
| 19 | PD_INS_chr19_785 | 28747838  | 68  | N              | <INS>    | 0.4068   | 0.3827   | 0.267296  | 1 | 1.06371  | 0.0556806 | 0.0617628  |
| 1  | PD_INS_chr1_1088 | 39796906  | 112 | <INS:ME>       | N        | 0.02785  | 0.02645  | 0.503407  | 1 | 0.895575 | 0.164824  | -0.1102893 |
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| 1  | PD_INS_chr1_2341 | 79805471  | 140 | N              | <INS>    | 0.1793   | 0.1772   | 0.160768  | 1 | 0.906811 | 0.0697478 | -0.0978212 |
| 1  | PD_INS_chr1_2351 | 80079572  | 203 | N              | <INS>    | 0.2021   | 0.2074   | 0.912344  | 1 | 0.992718 | 0.066391  | -0.0073086 |
| 1  | PD_INS_chr1_2399 | 81194666  | 188 | N              | <INS:ME> | 0.3601   | 0.3422   | 0.132387  | 1 | 1.08793  | 0.0560048 | 0.08427681 |
| 1  | PD_INS_chr1_2601 | 88395035  | 95  | N              | <INS>    | 0.02785  | 0.02591  | 0.837623  | 1 | 1.03627  | 0.173869  | 0.03562773 |
| 1  | PD_INS_chr1_2727 | 91815300  | 62  | <INS>          | N        | 0.2048   | 0.2112   | 0.766697  | 1 | 0.980771 | 0.0654413 | -0.0194163 |
| 1  | PD_INS_chr1_2784 | 93053223  | 54  | <INS>          | N        | 0.1075   | 0.1142   | 0.656824  | 1 | 1.03803  | 0.0840088 | 0.03732469 |
| 1  | PD_INS_chr1_2883 | 96402065  | 279 | <INS:ME:ALU>   | N        | 0.03875  | 0.04093  | 0.356659  | 1 | 0.879729 | 0.139024  | -0.1281414 |
| 1  | PD_INS_chr1_3127 | 103272220 | 108 | N              | <INS>    | 0.02689  | 0.02645  | 0.295537  | 1 | 0.835435 | 0.171887  | -0.1798027 |
| 1  | PD_INS_chr1_3947 | 157265952 | 95  | <INS:ME:ALU>   | N        | 0.01554  | 0.01477  | 0.930912  | 1 | 1.01937  | 0.22131   | 0.01918479 |
| 1  | PD_INS_chr1_4032 | 160531136 | 308 | <INS>          | N        | 0.0188   | 0.02193  | 0.239639  | 1 | 1.25515  | 0.193265  | 0.22725509 |
| 1  | PD_INS_chr1_4138 | 164206886 | 102 | N              | <INS>    | 0.348    | 0.355    | 0.552301  | 1 | 0.967259 | 0.0560121 | -0.033289  |
| 1  | PD_INS_chr1_489  | 16089599  | 60  | <INS>          | N        | 0.2515   | 0.2569   | 0.313018  | 1 | 0.941977 | 0.059247  | -0.0597744 |
| 1  | PD_INS_chr1_4920 | 190033726 | 118 | <INS>          | N        | 0.4845   | 0.4665   | 0.382688  | 1 | 0.954783 | 0.0530048 | -0.0462712 |

|    |                  |           |     |                |       |          |         |           |   |          |           |            |
|----|------------------|-----------|-----|----------------|-------|----------|---------|-----------|---|----------|-----------|------------|
| 1  | PD_INS_chr1_4953 | 190827530 | 80  | <INS>          | N     | 0.4648   | 0.4789  | 0.140412  | 1 | 0.924675 | 0.0531204 | -0.078313  |
| 1  | PD_INS_chr1_5219 | 198506695 | 268 | <INS>          | N     | 0.3058   | 0.2904  | 0.236548  | 1 | 1.07147  | 0.0583232 | 0.06903154 |
| 1  | PD_INS_chr1_6169 | 232312114 | 83  | <INS>          | N     | 0.4671   | 0.4755  | 0.55999   | 1 | 0.96923  | 0.0536207 | -0.0312533 |
| 1  | PD_INS_chr1_6236 | 233987520 | 322 | <INS>          | N     | 0.01381  | 0.01216 | 0.813563  | 1 | 1.05482  | 0.226321  | 0.05337014 |
| 1  | PD_INS_chr1_6237 | 233987520 | 279 | <INS:ME:ALU>   | N     | 0.01381  | 0.01216 | 0.813564  | 1 | 1.05482  | 0.226321  | 0.05337014 |
| 1  | PD_INS_chr1_6289 | 235635572 | 169 | N              | <INS> | 0.3855   | 0.3804  | 0.701417  | 1 | 0.978715 | 0.056115  | -0.0215148 |
| 1  | PD_INS_chr1_6432 | 240512504 | 177 | N              | <INS> | 0.4774   | 0.5009  | 0.270805  | 1 | 0.944274 | 0.0520686 | -0.0573389 |
| 20 | D_INS_chr20_1360 | 50781678  | 307 | <INS>          | N     | 0.02106  | 0.02015 | 0.47127   | 1 | 1.14353  | 0.186173  | 0.13411997 |
| 20 | D_INS_chr20_1379 | 51732659  | 321 | <INS>          | N     | 0.02166  | 0.0183  | 0.0946184 | 1 | 1.3721   | 0.189253  | 0.31634241 |
| 20 | D_INS_chr20_1527 | 55916055  | 144 | N              | <INS> | 0.2542   | 0.2578  | 0.517403  | 1 | 1.0408   | 0.0617729 | 0.03998965 |
| 20 | D_INS_chr20_1619 | 59138387  | 280 | <INS:ME:ALU>   | N     | 0.01113  | 0.0156  | 0.555486  | 1 | 0.877639 | 0.221385  | -0.1305199 |
| 20 | PD_INS_chr20_420 | 13472071  | 759 | <INS:ME>       | N     | 0.01463  | 0.01503 | 0.685377  | 1 | 1.09342  | 0.220451  | 0.0893104  |
| 22 | D_INS_chr22_1013 | 49373097  | 219 | <INS>          | N     | 0.01779  | 0.01709 | 0.81479   | 1 | 1.04664  | 0.194589  | 0.04558503 |
| 22 | PD_INS_chr22_493 | 32179921  | 207 | <INS:ME:ALU>   | N     | 0.2981   | 0.2997  | 0.344332  | 1 | 1.05606  | 0.0576758 | 0.054545   |
| 22 | PD_INS_chr22_582 | 35397424  | 264 | <INS:ME:ALU>   | N     | 0.0467   | 0.05181 | 0.695043  | 1 | 1.05017  | 0.124879  | 0.04895206 |
| 2  | PD_INS_chr2_1079 | 34928913  | 415 | <INS>          | N     | 0.05581  | 0.0558  | 0.632693  | 1 | 1.05605  | 0.114101  | 0.05453553 |
| 2  | PD_INS_chr2_1104 | 35848199  | 91  | <INS>          | N     | 0.1344   | 0.1304  | 0.186757  | 1 | 0.902619 | 0.0776032 | -0.1024547 |
| 2  | PD_INS_chr2_1363 | 43183577  | 66  | N              | <INS> | 0.2478   | 0.2359  | 0.653558  | 1 | 0.973081 | 0.060799  | -0.027288  |
| 2  | PD_INS_chr2_1384 | 43860097  | 114 | <INS:ME:LINE1> | N     | 0.05342  | 0.053   | 0.801836  | 1 | 0.96985  | 0.12198   | -0.0306139 |
| 2  | PD_INS_chr2_1630 | 51768840  | 280 | <INS:ME:ALU>   | N     | 0.02655  | 0.02626 | 0.96114   | 1 | 1.00777  | 0.15878   | 0.00773997 |
| 2  | PD_INS_chr2_1775 | 56398281  | 59  | <INS>          | N     | 0.4667   | 0.4478  | 0.258926  | 1 | 1.06415  | 0.055079  | 0.06217636 |
| 2  | PD_INS_chr2_1777 | 56504597  | 178 | N              | <INS> | 0.4602   | 0.4773  | 0.438005  | 1 | 0.958595 | 0.0545236 | -0.0422866 |
| 2  | PD_INS_chr2_186  | 4511696   | 245 | <INS:ME:ALU>   | N     | 0.02299  | 0.0281  | 0.826936  | 1 | 1.03853  | 0.172937  | 0.03780625 |
| 2  | PD_INS_chr2_1959 | 63416497  | 68  | <INS>          | N     | 0.413    | 0.4275  | 0.489586  | 1 | 0.962938 | 0.0546572 | -0.0377663 |
| 2  | PD_INS_chr2_2088 | 67122829  | 157 | N              | <INS> | 0.3292   | 0.3318  | 0.547776  | 1 | 0.966952 | 0.0559079 | -0.0336064 |
| 2  | PD_INS_chr2_2307 | 74870493  | 126 | <INS:ME:ALU>   | N     | 0.01188  | 0.01028 | 0.925632  | 1 | 1.02498  | 0.264381  | 0.0246731  |
| 2  | PD_INS_chr2_2349 | 76556976  | 172 | N              | <INS> | 0.2721   | 0.2899  | 0.155159  | 1 | 0.917225 | 0.0607807 | -0.0864025 |
| 2  | PD_INS_chr2_2802 | 97268198  | 89  | <INS:ME>       | N     | 0.01907  | 0.01898 | 0.0944929 | 1 | 0.716777 | 0.199138  | -0.3329905 |
| 2  | PD_INS_chr2_2808 | 97880151  | 324 | <INS>          | N     | 0.01643  | 0.01776 | 0.290217  | 1 | 0.805624 | 0.204358  | -0.2161381 |
| 2  | PD_INS_chr2_3082 | 108195777 | 280 | <INS:ME:ALU>   | N     | 0.01286  | 0.01018 | 0.169287  | 1 | 1.41932  | 0.254767  | 0.35017788 |
| 2  | PD_INS_chr2_3188 | 113402632 | 140 | <INS:ME>       | N     | 0.01227  | 0.01123 | 0.362811  | 1 | 0.792209 | 0.255964  | -0.23293   |
| 2  | PD_INS_chr2_3490 | 123536439 | 206 | <INS:ME>       | N     | 0.01149  | 0.01698 | 0.0251197 | 1 | 0.58142  | 0.242138  | -0.5422819 |
| 2  | PD_INS_chr2_3541 | 125293529 | 280 | <INS:ME:ALU>   | N     | 0.01287  | 0.01126 | 0.222407  | 1 | 1.32777  | 0.232346  | 0.28350084 |
| 2  | PD_INS_chr2_3542 | 125293529 | 319 | <INS>          | N     | 0.01363  | 0.01302 | 0.359735  | 1 | 1.22582  | 0.222312  | 0.20361001 |
| 2  | PD_INS_chr2_373  | 10685912  | 174 | <INS:ME>       | N     | 0.3126   | 0.3082  | 0.310397  | 1 | 1.06182  | 0.0591312 | 0.05998442 |
| 2  | PD_INS_chr2_4925 | 172009489 | 280 | <INS:ME:ALU>   | N     | 0.009769 | 0.01066 | 0.991573  | 1 | 1.00286  | 0.270868  | 0.00285592 |
| 2  | PD_INS_chr2_4976 | 173864136 | 280 | <INS:ME:ALU>   | N     | 0.01481  | 0.01251 | 0.110915  | 1 | 1.45438  | 0.234977  | 0.37457969 |
| 2  | PD_INS_chr2_5257 | 183424250 | 280 | <INS:ME:ALU>   | N     | 0.0121   | 0.01053 | 0.374064  | 1 | 1.24658  | 0.247957  | 0.2204038  |
| 2  | PD_INS_chr2_5436 | 188871317 | 280 | <INS:ME:ALU>   | N     | 0.02119  | 0.02204 | 0.168181  | 1 | 1.27164  | 0.174381  | 0.24030741 |
| 2  | PD_INS_chr2_5635 | 194109612 | 61  | N              | <INS> | 0.0176   | 0.01187 | 0.788989  | 1 | 0.943747 | 0.216338  | -0.0578972 |
| 2  | PD_INS_chr2_5647 | 194362310 | 181 | N              | <INS> | 0.03733  | 0.03958 | 0.303524  | 1 | 0.864888 | 0.141077  | -0.1451553 |

|   |                  |           |      |                |       |         |         |           |   |          |           |            |
|---|------------------|-----------|------|----------------|-------|---------|---------|-----------|---|----------|-----------|------------|
| 2 | PD_INS_chr2_5911 | 202334672 | 181  | <INS>          | N     | 0.1081  | 0.1045  | 0.518059  | 1 | 1.05474  | 0.0824542 | 0.05329429 |
| 2 | PD_INS_chr2_6028 | 206877517 | 51   | <INS>          | N     | 0.16    | 0.1731  | 0.206958  | 1 | 0.913624 | 0.0715831 | -0.0903362 |
| 2 | PD_INS_chr2_6132 | 209956309 | 213  | N              | <INS> | 0.0499  | 0.03634 | 0.901314  | 1 | 0.982965 | 0.138559  | -0.0171818 |
| 2 | PD_INS_chr2_6536 | 223723285 | 109  | N              | <INS> | 0.4979  | 0.5007  | 0.327242  | 1 | 0.950254 | 0.0520837 | -0.051026  |
| 2 | PD_INS_chr2_6749 | 230499508 | 223  | N              | <INS> | 0.152   | 0.1303  | 0.92882   | 1 | 1.00681  | 0.0760275 | 0.00678692 |
| 2 | PD_INS_chr2_6851 | 234017120 | 1240 | <INS:ME:SVA>   | N     | 0.01458 | 0.01557 | 0.640186  | 1 | 0.905605 | 0.212117  | -0.0991521 |
| 2 | PD_INS_chr2_6966 | 237828883 | 300  | <INS:ME:ALU>   | N     | 0.02344 | 0.02651 | 0.47884   | 1 | 0.883415 | 0.175042  | -0.1239602 |
| 2 | PD_INS_chr2_814  | 26851336  | 198  | <INS>          | N     | 0.4199  | 0.4174  | 0.88947   | 1 | 1.00746  | 0.053483  | 0.00743231 |
| 2 | PD_INS_chr2_846  | 27831218  | 280  | <INS:ME:ALU>   | N     | 0.0232  | 0.01814 | 0.453523  | 1 | 1.14483  | 0.180453  | 0.13525615 |
| 3 | PD_INS_chr3_1074 | 34818288  | 104  | N              | <INS> | 0.2752  | 0.2927  | 0.220895  | 1 | 0.930753 | 0.0586216 | -0.0717613 |
| 3 | PD_INS_chr3_1257 | 40562291  | 246  | <INS:ME:ALU>   | N     | 0.01794 | 0.02031 | 0.551741  | 1 | 0.88824  | 0.199131  | -0.1185133 |
| 3 | PD_INS_chr3_1349 | 43524289  | 146  | N              | <INS> | 0.07021 | 0.06099 | 0.582147  | 1 | 1.06205  | 0.109411  | 0.060201   |
| 3 | PD_INS_chr3_1681 | 57355498  | 264  | <INS:ME:ALU>   | N     | 0.02673 | 0.02713 | 0.647402  | 1 | 1.07821  | 0.164641  | 0.07530226 |
| 3 | PD_INS_chr3_1831 | 61738292  | 70   | <INS>          | N     | 0.1414  | 0.147   | 0.534062  | 1 | 1.04925  | 0.0773129 | 0.04807562 |
| 3 | PD_INS_chr3_2114 | 71327318  | 243  | N              | <INS> | 0.02882 | 0.03167 | 0.924395  | 1 | 1.015    | 0.156856  | 0.01488861 |
| 3 | PD_INS_chr3_2617 | 85946259  | 190  | <INS:ME>       | N     | 0.01127 | 0.01049 | 0.717989  | 1 | 1.09748  | 0.257556  | 0.09301664 |
| 3 | PD_INS_chr3_2983 | 104163460 | 115  | N              | <INS> | 0.05455 | 0.0547  | 0.191315  | 1 | 0.856823 | 0.118256  | -0.1545239 |
| 3 | PD_INS_chr3_3101 | 108001366 | 133  | <INS>          | N     | 0.37    | 0.3798  | 0.112326  | 1 | 0.91663  | 0.0548245 | -0.0870514 |
| 3 | PD_INS_chr3_3145 | 109529328 | 79   | <INS>          | N     | 0.4681  | 0.478   | 0.51385   | 1 | 0.96533  | 0.0540474 | -0.0352853 |
| 3 | PD_INS_chr3_3507 | 121192983 | 451  | <INS:ME>       | N     | 0.1598  | 0.1614  | 0.69136   | 1 | 1.02956  | 0.0733801 | 0.02913153 |
| 3 | PD_INS_chr3_3614 | 125910279 | 54   | <INS>          | N     | 0.1969  | 0.192   | 0.143313  | 1 | 1.10342  | 0.0672459 | 0.09841445 |
| 3 | PD_INS_chr3_3907 | 137284416 | 111  | N              | <INS> | 0.1495  | 0.1501  | 0.375259  | 1 | 0.935686 | 0.0749719 | -0.0664753 |
| 3 | PD_INS_chr3_3944 | 139066424 | 588  | <INS:ME>       | N     | 0.06684 | 0.05773 | 0.0962799 | 1 | 1.20574  | 0.112502  | 0.18709349 |
| 3 | PD_INS_chr3_4017 | 141351721 | 327  | <INS>          | N     | 0.0294  | 0.03077 | 0.377753  | 1 | 1.14502  | 0.153529  | 0.1354221  |
| 3 | PD_INS_chr3_4042 | 141977092 | 53   | <INS>          | N     | 0.1044  | 0.1062  | 0.156632  | 1 | 1.12954  | 0.0859958 | 0.12181047 |
| 3 | PD_INS_chr3_4157 | 145548693 | 99   | N              | <INS> | 0.493   | 0.4989  | 0.557037  | 1 | 0.969537 | 0.0526814 | -0.0309366 |
| 3 | PD_INS_chr3_4265 | 148690215 | 319  | <INS>          | N     | 0.01266 | 0.01574 | 0.98758   | 1 | 1.00349  | 0.223962  | 0.00348392 |
| 3 | PD_INS_chr3_4301 | 149875900 | 106  | N              | <INS> | 0.1275  | 0.1277  | 0.201175  | 1 | 0.903069 | 0.0797647 | -0.1019563 |
| 3 | PD_INS_chr3_470  | 15737523  | 144  | N              | <INS> | 0.2874  | 0.2953  | 0.694425  | 1 | 0.977904 | 0.0568742 | -0.0223438 |
| 3 | PD_INS_chr3_4714 | 162409897 | 4279 | <INS:ME:LINE1> | N     | 0.05648 | 0.05883 | 0.785465  | 1 | 1.03163  | 0.114397  | 0.03114008 |
| 3 | PD_INS_chr3_4860 | 166460253 | 258  | <INS:ME:ALU>   | N     | 0.01166 | 0.01122 | 0.115069  | 1 | 1.46021  | 0.240247  | 0.37858026 |
| 3 | PD_INS_chr3_4957 | 169441744 | 53   | <INS>          | N     | 0.2279  | 0.2389  | 0.696609  | 1 | 0.975673 | 0.0631653 | -0.0246278 |
| 3 | PD_INS_chr3_4960 | 169552816 | 279  | <INS:ME:ALU>   | N     | 0.02166 | 0.02354 | 0.0782864 | 1 | 0.734081 | 0.175574  | -0.3091359 |
| 3 | PD_INS_chr3_4961 | 169552816 | 327  | <INS>          | N     | 0.02166 | 0.02354 | 0.0782888 | 1 | 0.734081 | 0.175575  | -0.3091359 |
| 3 | PD_INS_chr3_4989 | 170233236 | 328  | <INS>          | N     | 0.3449  | 0.3597  | 0.253197  | 1 | 0.940219 | 0.0539481 | -0.0616425 |
| 3 | PD_INS_chr3_5628 | 188595253 | 279  | <INS:ME:ALU>   | N     | 0.02659 | 0.03302 | 0.157062  | 1 | 0.804882 | 0.153396  | -0.2170596 |
| 3 | PD_INS_chr3_5714 | 191115783 | 337  | <INS:ME>       | N     | 0.1689  | 0.1803  | 0.442047  | 1 | 0.948361 | 0.0689745 | -0.05302   |
| 3 | PD_INS_chr3_5885 | 195699900 | 132  | N              | <INS> | 0.3805  | 0.3755  | 0.691099  | 1 | 0.978873 | 0.0537363 | -0.0213534 |
| 3 | PD_INS_chr3_793  | 25627426  | 280  | <INS:ME:ALU>   | N     | 0.02472 | 0.02371 | 0.512053  | 1 | 1.11642  | 0.167966  | 0.11012714 |
| 3 | PD_INS_chr3_861  | 28070405  | 279  | <INS:ME:ALU>   | N     | 0.00936 | 0.01106 | 0.616918  | 1 | 0.869822 | 0.278812  | -0.1394667 |
| 3 | PD_INS_chr3_862  | 28070405  | 327  | <INS>          | N     | 0.01012 | 0.01248 | 0.380412  | 1 | 0.79423  | 0.262653  | -0.2303822 |



|   |                  |           |     |              |       |          |          |            |   |          |           |            |
|---|------------------|-----------|-----|--------------|-------|----------|----------|------------|---|----------|-----------|------------|
| 3 | PD_INS_chr3_986  | 32187923  | 281 | <INS:ME:ALU> | N     | 0.01755  | 0.01936  | 0.490844   | 1 | 0.8699   | 0.202298  | -0.139377  |
| 3 | PD_INS_chr3_998  | 32397310  | 195 | <INS:ME:ALU> | N     | 0.0627   | 0.06069  | 0.17435    | 1 | 1.16411  | 0.11187   | 0.15195685 |
| 4 | PD_INS_chr4_1017 | 32788925  | 55  | <INS>        | N     | 0.1174   | 0.1148   | 0.107602   | 1 | 1.14674  | 0.0850954 | 0.13692313 |
| 4 | PD_INS_chr4_1376 | 43895791  | 337 | <INS:ME>     | N     | 0.0122   | 0.009543 | 0.285223   | 1 | 1.31092  | 0.253337  | 0.27072918 |
| 4 | PD_INS_chr4_1402 | 44805355  | 96  | <INS>        | N     | 0.4      | 0.4075   | 0.921903   | 1 | 1.00518  | 0.0527387 | 0.00516663 |
| 4 | PD_INS_chr4_1425 | 45121420  | 70  | N            | <INS> | 0.4747   | 0.4604   | 0.19017    | 1 | 1.07386  | 0.0543924 | 0.07125963 |
| 4 | PD_INS_chr4_3092 | 97549018  | 268 | N            | <INS> | 0.4573   | 0.4547   | 0.216247   | 1 | 0.934853 | 0.054478  | -0.067366  |
| 4 | PD_INS_chr4_3164 | 100567916 | 280 | <INS>        | N     | 0.01497  | 0.01829  | 0.712956   | 1 | 0.92644  | 0.207689  | -0.076406  |
| 4 | PD_INS_chr4_3266 | 104007755 | 215 | <INS:ME:ALU> | N     | 0.026    | 0.02539  | 0.681626   | 1 | 1.07052  | 0.166107  | 0.06814451 |
| 4 | PD_INS_chr4_3267 | 104007755 | 268 | <INS:ME:ALU> | N     | 0.02692  | 0.02711  | 0.727215   | 1 | 1.05819  | 0.162137  | 0.0565599  |
| 4 | PD_INS_chr4_4057 | 128037852 | 279 | <INS:ME:ALU> | N     | 0.009328 | 0.01377  | 0.0363331  | 1 | 0.585163 | 0.256005  | -0.5358648 |
| 4 | PD_INS_chr4_4152 | 131253298 | 150 | N            | <INS> | 0.2012   | 0.1812   | 0.963644   | 1 | 0.996748 | 0.0714528 | -0.0032573 |
| 4 | PD_INS_chr4_4313 | 136115942 | 280 | <INS:ME:ALU> | N     | 0.02531  | 0.02552  | 0.677544   | 1 | 0.933359 | 0.165857  | -0.0689654 |
| 4 | PD_INS_chr4_4441 | 139314995 | 51  | <INS>        | N     | 0.01464  | 0.01509  | 0.76058    | 1 | 0.937035 | 0.213425  | -0.0650346 |
| 4 | PD_INS_chr4_4508 | 141760487 | 280 | <INS:ME:ALU> | N     | 0.01716  | 0.02009  | 0.88849    | 1 | 0.973062 | 0.194758  | -0.0273075 |
| 4 | PD_INS_chr4_4876 | 154646324 | 67  | <INS>        | N     | 0.4545   | 0.4626   | 0.834705   | 1 | 0.988821 | 0.0538745 | -0.011242  |
| 4 | PD_INS_chr4_5045 | 159798809 | 319 | <INS>        | N     | 0.01504  | 0.01705  | 0.491972   | 1 | 1.14679  | 0.199324  | 0.13696674 |
| 4 | PD_INS_chr4_5046 | 159798809 | 280 | <INS:ME:ALU> | N     | 0.01636  | 0.01931  | 0.803995   | 1 | 1.04855  | 0.191035  | 0.04740826 |
| 4 | PD_INS_chr4_5131 | 161672772 | 280 | <INS:ME:ALU> | N     | 0.01209  | 0.01267  | 0.821613   | 1 | 1.05598  | 0.241595  | 0.05446925 |
| 4 | PD_INS_chr4_5132 | 161672772 | 319 | <INS>        | N     | 0.01209  | 0.01267  | 0.821613   | 1 | 1.05598  | 0.241595  | 0.05446925 |
| 4 | PD_INS_chr4_5254 | 164534286 | 83  | N            | <INS> | 0.453    | 0.4476   | 0.715144   | 1 | 0.980356 | 0.0543602 | -0.0198395 |
| 4 | PD_INS_chr4_5546 | 172601806 | 281 | <INS:ME:ALU> | N     | 0.0158   | 0.01419  | 0.472285   | 1 | 1.17233  | 0.221201  | 0.15899322 |
| 4 | PD_INS_chr4_5666 | 176129862 | 280 | <INS:ME:ALU> | N     | 0.01208  | 0.01251  | 0.71713    | 1 | 0.915886 | 0.242519  | -0.0878634 |
| 4 | PD_INS_chr4_5884 | 183133025 | 50  | <INS>        | N     | 0.03332  | 0.03573  | 0.179123   | 1 | 1.21476  | 0.144812  | 0.19454653 |
| 4 | PD_INS_chr4_5899 | 183622651 | 245 | <INS>        | N     | 0.4215   | 0.4349   | 0.890634   | 1 | 0.992547 | 0.0544038 | -0.0074809 |
| 4 | PD_INS_chr4_594  | 19220493  | 280 | <INS:ME:ALU> | N     | 0.02228  | 0.02333  | 0.138856   | 1 | 1.29495  | 0.174637  | 0.25847208 |
| 4 | PD_INS_chr4_6040 | 187813732 | 50  | <INS>        | N     | 0.1317   | 0.1324   | 0.632076   | 1 | 0.962285 | 0.0802924 | -0.0384446 |
| 4 | PD_INS_chr4_6115 | 189172462 | 177 | <INS>        | N     | 0.4905   | 0.4935   | 0.52994    | 1 | 1.03373  | 0.0528119 | 0.03317362 |
| 4 | PD_INS_chr4_642  | 20514734  | 327 | <INS>        | N     | 0.0105   | 0.01138  | 0.867577   | 1 | 1.04569  | 0.267935  | 0.04467695 |
| 4 | PD_INS_chr4_900  | 28958614  | 290 | <INS:ME>     | N     | 0.05304  | 0.05209  | 0.845342   | 1 | 0.976991 | 0.119335  | -0.0232778 |
| 5 | PD_INS_chr5_1223 | 35752663  | 164 | N            | <INS> | 0.03578  | 0.03472  | 0.0293409  | 1 | 0.722178 | 0.149381  | -0.3254836 |
| 5 | PD_INS_chr5_1465 | 43416743  | 268 | <INS>        | N     | 0.01868  | 0.0238   | 0.00747829 | 1 | 0.614538 | 0.182029  | -0.4868845 |
| 5 | PD_INS_chr5_1689 | 55991603  | 279 | <INS:ME:ALU> | N     | 0.0113   | 0.01139  | 0.922841   | 1 | 0.975445 | 0.256683  | -0.0248615 |
| 5 | PD_INS_chr5_1742 | 57534907  | 280 | <INS:ME:ALU> | N     | 0.02234  | 0.01901  | 0.922747   | 1 | 0.981901 | 0.188343  | -0.0182648 |
| 5 | PD_INS_chr5_1743 | 57534907  | 311 | <INS>        | N     | 0.02234  | 0.01901  | 0.922747   | 1 | 0.981901 | 0.188343  | -0.0182648 |
| 5 | PD_INS_chr5_1745 | 57556978  | 84  | <INS:ME:ALU> | N     | 0.01667  | 0.01622  | 0.294822   | 1 | 0.804165 | 0.208047  | -0.2179508 |
| 5 | PD_INS_chr5_1970 | 64637103  | 328 | <INS>        | N     | 0.03259  | 0.03313  | 0.407229   | 1 | 0.884152 | 0.148564  | -0.1231263 |
| 5 | PD_INS_chr5_1971 | 64637103  | 280 | <INS:ME:ALU> | N     | 0.03149  | 0.03228  | 0.434857   | 1 | 0.888953 | 0.150736  | -0.1177109 |
| 5 | PD_INS_chr5_2120 | 68864767  | 94  | N            | <INS> | 0.3207   | 0.3176   | 0.507749   | 1 | 1.03838  | 0.0568681 | 0.03766181 |
| 5 | PD_INS_chr5_2683 | 87301477  | 212 | <INS:ME:ALU> | N     | 0.01052  | 0.0103   | 0.490926   | 1 | 1.198    | 0.262257  | 0.1806535  |
| 5 | PD_INS_chr5_2815 | 91735209  | 280 | <INS:ME:ALU> | N     | 0.01446  | 0.01865  | 0.0230409  | 1 | 0.621063 | 0.20958   | -0.4763228 |

|   |                  |           |     |                |       |          |          |           |   |          |           |            |
|---|------------------|-----------|-----|----------------|-------|----------|----------|-----------|---|----------|-----------|------------|
| 5 | PD_INS_chr5_301  | 7887306   | 317 | <INS>          | N     | 0.01875  | 0.01763  | 0.540976  | 1 | 0.887078 | 0.196     | -0.1198224 |
| 5 | PD_INS_chr5_3440 | 109910262 | 322 | <INS>          | N     | 0.01463  | 0.01518  | 0.0593399 | 1 | 0.665784 | 0.215728  | -0.40679   |
| 5 | PD_INS_chr5_3441 | 109910262 | 280 | <INS:ME:ALU>   | N     | 0.01387  | 0.01324  | 0.167033  | 1 | 0.733101 | 0.224686  | -0.3104718 |
| 5 | PD_INS_chr5_3518 | 112938180 | 258 | <INS:ME:ALU>   | N     | 0.09787  | 0.1002   | 0.542301  | 1 | 0.946404 | 0.0904033 | -0.0550857 |
| 5 | PD_INS_chr5_3658 | 117214479 | 133 | <INS>          | N     | 0.3553   | 0.3548   | 0.109936  | 1 | 0.916676 | 0.0544275 | -0.0870012 |
| 5 | PD_INS_chr5_3836 | 121617258 | 74  | <INS:ME:ALU>   | N     | 0.01092  | 0.0107   | 0.478005  | 1 | 1.19884  | 0.255599  | 0.18135442 |
| 5 | PD_INS_chr5_4071 | 129226590 | 317 | <INS>          | N     | 0.01595  | 0.01515  | 0.725488  | 1 | 1.07703  | 0.211333  | 0.07420725 |
| 5 | PD_INS_chr5_4073 | 129362151 | 298 | <INS>          | N     | 0.008346 | 0.01154  | 0.457443  | 1 | 0.82232  | 0.26327   | -0.1956257 |
| 5 | PD_INS_chr5_4445 | 144135488 | 379 | N              | <INS> | 0.2663   | 0.2663   | 0.456424  | 1 | 0.957488 | 0.0583316 | -0.0434421 |
| 5 | PD_INS_chr5_4486 | 145654970 | 294 | <INS:ME>       | N     | 0.02312  | 0.02957  | 0.383746  | 1 | 0.859855 | 0.173351  | -0.1509915 |
| 5 | PD_INS_chr5_4724 | 153722274 | 280 | <INS:ME:ALU>   | N     | 0.01126  | 0.01063  | 0.381764  | 1 | 1.25268  | 0.257572  | 0.22528526 |
| 5 | PD_INS_chr5_4781 | 155923235 | 80  | <INS>          | N     | 0.009865 | 0.01062  | 0.531112  | 1 | 0.851558 | 0.256563  | -0.1606877 |
| 5 | PD_INS_chr5_486  | 13165544  | 222 | <INS>          | N     | 0.01089  | 0.009196 | 0.636045  | 1 | 1.1274   | 0.253393  | 0.1199141  |
| 5 | PD_INS_chr5_4984 | 162321158 | 74  | N              | <INS> | 0.2774   | 0.2762   | 0.5397    | 1 | 1.03715  | 0.0594752 | 0.03647657 |
| 5 | PD_INS_chr5_5407 | 177025409 | 280 | <INS:ME:ALU>   | N     | 0.009148 | 0.0121   | 0.518253  | 1 | 0.8465   | 0.257948  | -0.1666451 |
| 5 | PD_INS_chr5_5408 | 177025409 | 332 | <INS>          | N     | 0.009148 | 0.0121   | 0.518253  | 1 | 0.8465   | 0.257948  | -0.1666451 |
| 5 | PD_INS_chr5_594  | 16470227  | 331 | <INS>          | N     | 0.02032  | 0.0185   | 0.356471  | 1 | 1.18991  | 0.188562  | 0.17387767 |
| 5 | PD_INS_chr5_595  | 16470227  | 280 | <INS:ME:ALU>   | N     | 0.02032  | 0.0185   | 0.356471  | 1 | 1.18991  | 0.188562  | 0.17387767 |
| 6 | PD_INS_chr6_1007 | 31058837  | 280 | <INS:ME:ALU>   | N     | 0.02286  | 0.02685  | 0.344974  | 1 | 0.851346 | 0.170415  | -0.1609367 |
| 6 | PD_INS_chr6_1461 | 44830895  | 280 | <INS:ME:ALU>   | N     | 0.01542  | 0.01826  | 0.914094  | 1 | 1.02259  | 0.207103  | 0.02233862 |
| 6 | PD_INS_chr6_1462 | 44830895  | 326 | <INS>          | N     | 0.01542  | 0.01843  | 0.995913  | 1 | 1.00106  | 0.206174  | 0.00105944 |
| 6 | PD_INS_chr6_1779 | 54251553  | 163 | <INS>          | N     | 0.06518  | 0.1128   | 0.667493  | 1 | 0.958359 | 0.0990085 | -0.0425328 |
| 6 | PD_INS_chr6_1798 | 54907607  | 274 | <INS:ME:ALU>   | N     | 0.02121  | 0.02368  | 0.609418  | 1 | 0.914643 | 0.174634  | -0.0892215 |
| 6 | PD_INS_chr6_1920 | 58220462  | 140 | <INS:ME:LINE1> | N     | 0.01209  | 0.0107   | 0.614777  | 1 | 1.12515  | 0.234295  | 0.11791636 |
| 6 | PD_INS_chr6_2037 | 65689189  | 411 | <INS:ME:LINE1> | N     | 0.04797  | 0.045    | 0.186393  | 1 | 1.18429  | 0.128012  | 0.16914344 |
| 6 | PD_INS_chr6_2081 | 67072270  | 201 | N              | <INS> | 0.1294   | 0.1207   | 0.674854  | 1 | 1.03441  | 0.0806541 | 0.03383122 |
| 6 | PD_INS_chr6_2242 | 71330395  | 279 | <INS:ME:ALU>   | N     | 0.05076  | 0.04297  | 0.0782911 | 1 | 1.24873  | 0.126159  | 0.22212703 |
| 6 | PD_INS_chr6_230  | 7274361   | 70  | <INS>          | N     | 0.009533 | 0.01105  | 0.68304   | 1 | 0.897421 | 0.265063  | -0.1082302 |
| 6 | PD_INS_chr6_2368 | 74792300  | 280 | <INS:ME:ALU>   | N     | 0.009899 | 0.01443  | 0.579192  | 1 | 0.869842 | 0.251447  | -0.1394437 |
| 6 | PD_INS_chr6_2465 | 78466694  | 346 | <INS>          | N     | 0.02458  | 0.0237   | 0.576545  | 1 | 1.09935  | 0.169615  | 0.0947191  |
| 6 | PD_INS_chr6_2690 | 84654213  | 280 | <INS:ME:ALU>   | N     | 0.01073  | 0.009761 | 0.102088  | 1 | 1.53179  | 0.260848  | 0.42643699 |
| 6 | PD_INS_chr6_2691 | 84654213  | 314 | <INS>          | N     | 0.01149  | 0.01065  | 0.132022  | 1 | 1.46088  | 0.251658  | 0.37903899 |
| 6 | PD_INS_chr6_2767 | 87380766  | 54  | <INS>          | N     | 0.02638  | 0.02671  | 0.206735  | 1 | 0.816259 | 0.160799  | -0.2030236 |
| 6 | PD_INS_chr6_3207 | 99933031  | 268 | <INS:ME:ALU>   | N     | 0.02694  | 0.02843  | 0.0780038 | 1 | 1.32956  | 0.161627  | 0.28484806 |
| 6 | PD_INS_chr6_3304 | 101972594 | 280 | <INS:ME:ALU>   | N     | 0.01378  | 0.01463  | 0.593757  | 1 | 0.889029 | 0.22052   | -0.1176254 |
| 6 | PD_INS_chr6_3458 | 106384888 | 72  | <INS>          | N     | 0.2836   | 0.2924   | 0.0790402 | 1 | 0.900101 | 0.0599269 | -0.1052483 |
| 6 | PD_INS_chr6_3495 | 107626805 | 317 | <INS>          | N     | 0.01209  | 0.01048  | 0.79687   | 1 | 1.06944  | 0.260803  | 0.06713515 |
| 6 | PD_INS_chr6_3762 | 115585565 | 204 | <INS>          | N     | 0.318    | 0.3154   | 0.650044  | 1 | 1.02547  | 0.0554324 | 0.02515104 |
| 6 | PD_INS_chr6_3917 | 120340702 | 53  | <INS>          | N     | 0.2644   | 0.2593   | 0.164505  | 1 | 1.08687  | 0.0599279 | 0.08330201 |
| 6 | PD_INS_chr6_4003 | 122238102 | 105 | N              | <INS> | 0.2868   | 0.2945   | 0.382524  | 1 | 0.95072  | 0.0578699 | -0.0505357 |
| 6 | PD_INS_chr6_4203 | 128012980 | 323 | <INS>          | N     | 0.01131  | 0.01124  | 0.994129  | 1 | 0.998134 | 0.253762  | -0.0018677 |

|   |                  |           |     |                |       |         |          |            |   |          |           |            |
|---|------------------|-----------|-----|----------------|-------|---------|----------|------------|---|----------|-----------|------------|
| 6 | PD_INS_chr6_4204 | 128012980 | 279 | <INS:ME:ALU>   | N     | 0.01017 | 0.01089  | 0.651953   | 1 | 0.888698 | 0.261607  | -0.1179978 |
| 6 | PD_INS_chr6_4205 | 128012980 | 322 | <INS>          | N     | 0.01131 | 0.01106  | 0.563069   | 1 | 1.15978  | 0.25632   | 0.14823033 |
| 6 | PD_INS_chr6_433  | 13893770  | 195 | <INS>          | N     | 0.3787  | 0.3615   | 0.583743   | 1 | 0.970656 | 0.054357  | -0.0297831 |
| 6 | PD_INS_chr6_4586 | 140672535 | 326 | <INS>          | N     | 0.01166 | 0.01119  | 0.213937   | 1 | 0.734779 | 0.247974  | -0.3081855 |
| 6 | PD_INS_chr6_4587 | 140672535 | 280 | <INS:ME:ALU>   | N     | 0.01071 | 0.009772 | 0.551161   | 1 | 0.8554   | 0.262047  | -0.1561861 |
| 6 | PD_INS_chr6_5056 | 156128769 | 53  | <INS>          | N     | 0.1853  | 0.1869   | 0.469915   | 1 | 1.0517   | 0.0697513 | 0.0504079  |
| 6 | PD_INS_chr6_5085 | 157238333 | 431 | N              | <INS> | 0.01857 | 0.01493  | 0.481986   | 1 | 0.867833 | 0.201613  | -0.141756  |
| 6 | PD_INS_chr6_5128 | 158262948 | 95  | <INS>          | N     | 0.3737  | 0.3895   | 0.396476   | 1 | 0.955083 | 0.0541989 | -0.045957  |
| 6 | PD_INS_chr6_5411 | 165823549 | 51  | <INS>          | N     | 0.2849  | 0.2803   | 0.773661   | 1 | 0.98344  | 0.0580626 | -0.0166986 |
| 6 | PD_INS_chr6_780  | 24053992  | 576 | <INS>          | N     | 0.02979 | 0.02987  | 0.597785   | 1 | 0.918423 | 0.161296  | -0.0850972 |
| 6 | PD_INS_chr6_818  | 25124591  | 316 | <INS>          | N     | 0.0107  | 0.01408  | 0.00440876 | 1 | 0.507393 | 0.238283  | -0.6784694 |
| 6 | PD_INS_chr6_819  | 25124591  | 279 | <INS:ME:ALU>   | N     | 0.0107  | 0.01408  | 0.00440876 | 1 | 0.507393 | 0.238283  | -0.6784694 |
| 7 | PD_INS_chr7_1093 | 31066606  | 280 | <INS:ME:ALU>   | N     | 0.0123  | 0.01178  | 0.748216   | 1 | 1.07932  | 0.237809  | 0.07633121 |
| 7 | PD_INS_chr7_1331 | 37956224  | 66  | N              | <INS> | 0.06383 | 0.06513  | 0.0925033  | 1 | 0.836689 | 0.105985  | -0.1783028 |
| 7 | PD_INS_chr7_1506 | 44043564  | 148 | <INS>          | N     | 0.2002  | 0.2152   | 0.227624   | 1 | 0.921945 | 0.0673594 | -0.0812697 |
| 7 | PD_INS_chr7_154  | 4097262   | 60  | <INS>          | N     | 0.2282  | 0.2215   | 0.513807   | 1 | 1.04289  | 0.0643134 | 0.04199571 |
| 7 | PD_INS_chr7_2094 | 65749508  | 302 | <INS>          | N     | 0.02892 | 0.02693  | 0.785123   | 1 | 1.04581  | 0.164266  | 0.0447917  |
| 7 | PD_INS_chr7_2163 | 67475053  | 186 | N              | <INS> | 0.04313 | 0.0349   | 0.0764734  | 1 | 0.777469 | 0.142087  | -0.2517115 |
| 7 | PD_INS_chr7_2581 | 81255230  | 220 | N              | <INS> | 0.4472  | 0.4345   | 0.118771   | 1 | 1.08963  | 0.0550259 | 0.08583819 |
| 7 | PD_INS_chr7_2635 | 82886407  | 280 | <INS:ME:ALU>   | N     | 0.03647 | 0.03928  | 0.527198   | 1 | 1.09195  | 0.139131  | 0.08796509 |
| 7 | PD_INS_chr7_2683 | 84056167  | 280 | <INS:ME:ALU>   | N     | 0.01284 | 0.01359  | 0.131004   | 1 | 0.711427 | 0.225462  | -0.3404825 |
| 7 | PD_INS_chr7_2684 | 84056167  | 320 | <INS>          | N     | 0.01284 | 0.01359  | 0.131007   | 1 | 0.711427 | 0.225464  | -0.3404825 |
| 7 | PD_INS_chr7_3048 | 95741492  | 345 | <INS>          | N     | 0.2369  | 0.2361   | 0.325456   | 1 | 1.06429  | 0.0633609 | 0.06230791 |
| 7 | PD_INS_chr7_3093 | 97217818  | 280 | <INS:ME:ALU>   | N     | 0.02236 | 0.02095  | 0.989761   | 1 | 1.00233  | 0.181168  | 0.00232729 |
| 7 | PD_INS_chr7_3114 | 97765960  | 607 | <INS:ME:LINE1> | N     | 0.1545  | 0.1538   | 0.585822   | 1 | 1.04179  | 0.0751414 | 0.04094039 |
| 7 | PD_INS_chr7_3193 | 100958514 | 111 | N              | <INS> | 0.02476 | 0.04174  | 0.17104    | 1 | 0.805044 | 0.158422  | -0.2168583 |
| 7 | PD_INS_chr7_3541 | 112310477 | 67  | <INS>          | N     | 0.01066 | 0.009899 | 0.0768979  | 1 | 0.637147 | 0.254813  | -0.4507549 |
| 7 | PD_INS_chr7_3832 | 120463404 | 280 | <INS:ME:ALU>   | N     | 0.01654 | 0.01629  | 0.279974   | 1 | 0.797743 | 0.20916   | -0.2259688 |
| 7 | PD_INS_chr7_3833 | 120463404 | 315 | <INS>          | N     | 0.01578 | 0.01541  | 0.197969   | 1 | 0.759735 | 0.213449  | -0.2747856 |
| 7 | PD_INS_chr7_4018 | 125734913 | 189 | <INS:ME:ALU>   | N     | 0.05177 | 0.05098  | 0.0605579  | 1 | 1.25332  | 0.12032   | 0.22579603 |
| 7 | PD_INS_chr7_4041 | 126510649 | 69  | N              | <INS> | 0.2437  | 0.2512   | 0.99164    | 1 | 0.999335 | 0.0635046 | -0.0006652 |
| 7 | PD_INS_chr7_4157 | 130313590 | 325 | <INS>          | N     | 0.02236 | 0.0215   | 0.562759   | 1 | 1.1102   | 0.180636  | 0.10454018 |
| 7 | PD_INS_chr7_4158 | 130313590 | 281 | <INS:ME:ALU>   | N     | 0.02236 | 0.0215   | 0.562759   | 1 | 1.1102   | 0.180636  | 0.10454018 |
| 7 | PD_INS_chr7_4519 | 141614607 | 327 | <INS>          | N     | 0.01332 | 0.01539  | 0.2913     | 1 | 0.782161 | 0.232828  | -0.2456947 |
| 7 | PD_INS_chr7_4874 | 152523412 | 176 | N              | <INS> | 0.4675  | 0.4482   | 0.0481102  | 1 | 1.11549  | 0.0552994 | 0.10929377 |
| 7 | PD_INS_chr7_4896 | 153278368 | 227 | N              | <INS> | 0.02766 | 0.01457  | 0.220153   | 1 | 0.788984 | 0.1933    | -0.2370092 |
| 7 | PD_INS_chr7_625  | 16387572  | 280 | <INS:ME:ALU>   | N     | 0.01148 | 0.01175  | 0.318892   | 1 | 0.775322 | 0.255309  | -0.2544769 |
| 7 | PD_INS_chr7_626  | 16387572  | 327 | <INS>          | N     | 0.01148 | 0.01175  | 0.318892   | 1 | 0.775322 | 0.255309  | -0.2544769 |
| 7 | PD_INS_chr7_93   | 1887871   | 105 | N              | <INS> | 0.3665  | 0.3406   | 0.790909   | 1 | 0.985732 | 0.0542024 | -0.0143708 |
| 7 | PD_INS_chr7_979  | 27064274  | 269 | <INS:ME:ALU>   | N     | 0.1474  | 0.1358   | 0.609691   | 1 | 1.04009  | 0.076997  | 0.03930725 |
| 8 | PD_INS_chr8_1330 | 41425359  | 50  | <INS>          | N     | 0.1358  | 0.1387   | 0.457822   | 1 | 0.942364 | 0.0799581 | -0.0593637 |

|    |                  |           |      |              |                |          |          |            |   |          |           |            |
|----|------------------|-----------|------|--------------|----------------|----------|----------|------------|---|----------|-----------|------------|
| 8  | PD_INS_chr8_1386 | 48148272  | 78   | <INS>        | N              | 0.1126   | 0.1139   | 0.50489    | 1 | 0.944659 | 0.0853775 | -0.0569313 |
| 8  | PD_INS_chr8_2367 | 80340270  | 278  | <INS:ME:ALU> | N              | 0.02367  | 0.02004  | 0.347368   | 1 | 1.18181  | 0.177763  | 0.16704716 |
| 8  | PD_INS_chr8_251  | 5971760   | 595  | N            | <INS:ME:LINE1> | 0.3229   | 0.3125   | 0.26508    | 1 | 1.06394  | 0.0556158 | 0.061979   |
| 8  | PD_INS_chr8_2572 | 86302811  | 91   | N            | <INS:ME:LINE1> | 0.2251   | 0.2159   | 0.259966   | 1 | 1.07571  | 0.0647907 | 0.07298091 |
| 8  | PD_INS_chr8_2824 | 94491116  | 167  | <INS>        | N              | 0.05901  | 0.05874  | 0.482413   | 1 | 1.08059  | 0.11035   | 0.07750719 |
| 8  | PD_INS_chr8_2868 | 95461700  | 280  | <INS:ME:ALU> | N              | 0.02241  | 0.02588  | 0.268122   | 1 | 0.833485 | 0.164475  | -0.1821396 |
| 8  | PD_INS_chr8_2978 | 99145584  | 330  | <INS:ME>     | N              | 0.1723   | 0.1607   | 0.0478731  | 1 | 1.15007  | 0.0706724 | 0.13982281 |
| 8  | PD_INS_chr8_3162 | 105441455 | 52   | <INS>        | N              | 0.2104   | 0.213    | 0.213598   | 1 | 0.921696 | 0.0655609 | -0.0815398 |
| 8  | PD_INS_chr8_3482 | 114491300 | 280  | <INS:ME:ALU> | N              | 0.009769 | 0.01034  | 0.892179   | 1 | 1.038    | 0.275147  | 0.03729578 |
| 8  | PD_INS_chr8_3861 | 126074685 | 113  | N            | <INS>          | 0.1147   | 0.1207   | 0.283255   | 1 | 0.913963 | 0.0838413 | -0.0899652 |
| 8  | PD_INS_chr8_4041 | 132713208 | 267  | <INS>        | N              | 0.01404  | 0.0176   | 0.307389   | 1 | 0.803263 | 0.214627  | -0.2190731 |
| 8  | PD_INS_chr8_4396 | 144356290 | 64   | <INS>        | N              | 0.3952   | 0.4      | 0.472543   | 1 | 1.04069  | 0.0555168 | 0.03988395 |
| 8  | PD_INS_chr8_762  | 22709292  | 158  | N            | <INS>          | 0.01857  | 0.006297 | 0.527308   | 1 | 1.1922   | 0.278119  | 0.17580034 |
| 9  | PD_INS_chr9_1114 | 31978483  | 273  | <INS>        | N              | 0.4424   | 0.457    | 0.0596148  | 1 | 0.901373 | 0.0551253 | -0.1038361 |
| 9  | PD_INS_chr9_1149 | 32818844  | 64   | N            | <INS>          | 0.02282  | 0.02825  | 0.329939   | 1 | 0.856127 | 0.159445  | -0.1553365 |
| 9  | PD_INS_chr9_1404 | 41047840  | 764  | N            | <INS:ME:LINE1> | 0.04611  | 0.03744  | 0.00148532 | 1 | 0.643535 | 0.138717  | -0.4407789 |
| 9  | PD_INS_chr9_1741 | 75045331  | 280  | <INS:ME:ALU> | N              | 0.01013  | 0.01175  | 0.0913186  | 1 | 0.638875 | 0.265355  | -0.4480465 |
| 9  | PD_INS_chr9_1816 | 77036879  | 267  | <INS:ME:ALU> | N              | 0.009945 | 0.01302  | 0.404911   | 1 | 0.81927  | 0.23934   | -0.1993416 |
| 9  | PD_INS_chr9_1817 | 77036879  | 269  | <INS:ME:ALU> | N              | 0.01033  | 0.01302  | 0.50065    | 1 | 0.852097 | 0.237659  | -0.1600549 |
| 9  | PD_INS_chr9_1818 | 77036879  | 277  | <INS:ME:ALU> | N              | 0.01033  | 0.0132   | 0.399438   | 1 | 0.818254 | 0.238045  | -0.2005825 |
| 9  | PD_INS_chr9_2125 | 87845050  | 1587 | <INS:ME:SVA> | N              | 0.0115   | 0.0114   | 0.390762   | 1 | 1.23433  | 0.245301  | 0.21052831 |
| 9  | PD_INS_chr9_2131 | 87894622  | 280  | <INS:ME:ALU> | N              | 0.02052  | 0.02415  | 0.416966   | 1 | 0.865927 | 0.177351  | -0.1439547 |
| 9  | PD_INS_chr9_2568 | 102731897 | 279  | <INS:ME:ALU> | N              | 0.0308   | 0.02696  | 0.0725215  | 1 | 1.31877  | 0.154078  | 0.27669948 |
| 9  | PD_INS_chr9_295  | 8219579   | 155  | <INS>        | N              | 0.3708   | 0.375    | 0.548858   | 1 | 0.967952 | 0.0543362 | -0.0325728 |
| 9  | PD_INS_chr9_3149 | 119968525 | 319  | <INS>        | N              | 0.02546  | 0.02078  | 0.411875   | 1 | 1.14932  | 0.169597  | 0.13917046 |
| 9  | PD_INS_chr9_3231 | 123347685 | 469  | N            | <INS>          | 0.05474  | 0.03239  | 0.787282   | 1 | 0.963321 | 0.138483  | -0.0373686 |
| 9  | PD_INS_chr9_427  | 11315236  | 280  | <INS:ME:ALU> | N              | 0.00954  | 0.01319  | 0.582046   | 1 | 0.864316 | 0.264929  | -0.1458168 |
| 9  | PD_INS_chr9_483  | 12976511  | 280  | <INS:ME:ALU> | N              | 0.01076  | 0.01178  | 0.699793   | 1 | 0.905697 | 0.256875  | -0.0990505 |
| 9  | PD_INS_chr9_53   | 1182474   | 53   | <INS>        | N              | 0.04054  | 0.03228  | 0.465509   | 1 | 1.10601  | 0.138068  | 0.10075894 |
| 9  | PD_INS_chr9_603  | 16896141  | 212  | N            | <INS>          | 0.0207   | 0.02195  | 0.388932   | 1 | 1.1644   | 0.176666  | 0.15220593 |
| 9  | PD_INS_chr9_97   | 2298288   | 192  | N            | <INS>          | 0.4584   | 0.4757   | 0.599669   | 1 | 0.972736 | 0.0526645 | -0.0276426 |
| 10 | PD_INV_chr10_12  | 73659955  | 197  | <INV>        | N              | 0.1569   | 0.1589   | 0.360024   | 1 | 1.0683   | 0.0721847 | 0.0660686  |
| 12 | PD_INV_chr12_8   | 39466254  | 276  | <INV>        | N              | 0.1847   | 0.1961   | 0.020489   | 1 | 0.857793 | 0.0661955 | -0.1533925 |
| 14 | PD_INV_chr14_7   | 65375819  | 829  | <INV>        | N              | 0.2714   | 0.2731   | 0.707879   | 1 | 1.02186  | 0.0576998 | 0.0216245  |
| 1  | PD_INV_chr1_2    | 21203905  | 852  | <INV>        | N              | 0.04313  | 0.043    | 0.0491951  | 1 | 1.28876  | 0.128973  | 0.25368052 |
| 21 | PD_INV_chr21_6   | 26648315  | 1091 | N            | <INV>          | 0.4985   | 0.4795   | 0.205151   | 1 | 1.06776  | 0.0517487 | 0.065563   |
| 4  | PD_INV_chr4_10   | 40233406  | 2033 | <INV>        | N              | 0.1366   | 0.136    | 0.603699   | 1 | 1.03983  | 0.075237  | 0.03905724 |
| 4  | PD_INV_chr4_4    | 16915408  | 445  | <INV>        | N              | 0.01973  | 0.02051  | 0.942575   | 1 | 1.01314  | 0.181231  | 0.01305442 |
| 6  | PD_INV_chr6_14   | 62781970  | 153  | <INV>        | N              | 0.02302  | 0.004678 | 0.0133776  | 1 | 1.97354  | 0.274838  | 0.67982888 |

**Supplementary Table 5: Rare variants only present in cases within reported PD causal or high risk genes (not validated)**

| Chr   | Start     | SV ID             | Length       | Type | PD gene | Allele count in cases (0 alleles in controls) | Validated? |
|-------|-----------|-------------------|--------------|------|---------|---|------------|
| chr6  | 162075963 | PD_INS_chr6_5262  | 5473         | INS  | PRKN    | 5   | no         |
| chr6  | 162450242 | PD_DUP_chr6_7070  | 172          | DUP  | PRKN    | 4   | no         |
| chr15 | 61862737  | PD_DEL_chr15_3519 | 5700         | DEL  | VPS13C  | 3   | no         |
| chr6  | 161717179 | PD_DEL_chr6_13750 | 4315         | DEL  | PRKN    | 3   | no         |
| chr6  | 161747555 | PD_DEL_chr6_13758 | 454797       | DEL  | PRKN    | 3   | no         |
| chr6  | 162090733 | PD_DEL_chr6_13807 | 284912       | DEL  | PRKN    | 3   | no         |
| chr6  | 162618986 | PD_DUP_chr6_7080  | 10344        | DUP  | PRKN    | 3   | no         |
| chr6  | 162075963 | PD_INS_chr6_5261  | 5473         | INS  | PRKN    | 3   | no         |
| chr6  | 162075334 | PD_DEL_chr6_13805 | 10586        | DEL  | PRKN    | 2   | no         |
| chr6  | 162144897 | PD_DEL_chr6_13814 | 65           | DEL  | PRKN    | 2   | no         |
| chr6  | 162219198 | PD_DEL_chr6_13833 | 120          | DEL  | PRKN    | 2   | no         |
| chr6  | 162226958 | PD_DEL_chr6_13837 | 199743       | DEL  | PRKN    | 2   | no         |
| chr6  | 162585812 | PD_DEL_chr6_13908 | 2850         | DEL  | PRKN    | 2   | no         |
| chr1  | 65380647  | PD_INS_chr1_1860  | 280          | INS  | DNAJC6  | 2   | no         |
| chr15 | 62029798  | PD_INS_chr15_1297 | 280          | INS  | VPS13C  | 2   | no         |
| chr6  | 161796397 | PD_INS_chr6_5245  | 280          | INS  | PRKN    | 2   | no         |
| chr6  | 162382916 | PD_INS_chr6_5280  | 77           | INS  | PRKN    | 2   | no         |
| chr1  | 153476402 | PD_CPX_chr1_207   | 203321<br>2  | CPX  | GBA     | 1   | no         |
| chr21 | 23636156  | PD_CPX_chr21_23   | 157774<br>14 | CPX  | SYNJ1   | 1   | no         |
| chr1  | 65259807  | PD_DEL_chr1_6606  | 19201        | DEL  | DNAJC6  | 1   | no         |

|       |           |                   |        |     |        |   |    |
|-------|-----------|-------------------|--------|-----|--------|---|----|
| chr12 | 40280778  | PD_DEL_chr12_3482 | 246    | DEL | LRRK2  | 1 | no |
| chr12 | 40305278  | PD_DEL_chr12_3487 | 319    | DEL | LRRK2  | 1 | no |
| chr15 | 61962874  | PD_DEL_chr15_3526 | 6126   | DEL | VPS13C | 1 | no |
| chr2  | 232711618 | PD_DEL_chr2_20147 | 6000   | DEL | GIGYF2 | 1 | no |
| chr2  | 232724102 | PD_DEL_chr2_20149 | 481    | DEL | GIGYF2 | 1 | no |
| chr21 | 32698139  | PD_DEL_chr21_3222 | 1036   | DEL | SYNJ1  | 1 | no |
| chr21 | 32701662  | PD_DEL_chr21_3223 | 164    | DEL | SYNJ1  | 1 | no |
| chr22 | 38133155  | PD_DEL_chr22_2526 | 1801   | DEL | PLA2G6 | 1 | no |
| chr22 | 38150534  | PD_DEL_chr22_2528 | 284    | DEL | PLA2G6 | 1 | no |
| chr4  | 89734140  | PD_DEL_chr4_8207  | 87     | DEL | SNCA   | 1 | no |
| chr6  | 161552826 | PD_DEL_chr6_13729 | 3032   | DEL | PRKN   | 1 | no |
| chr6  | 161568790 | PD_DEL_chr6_13732 | 6000   | DEL | PRKN   | 1 | no |
| chr6  | 161645168 | PD_DEL_chr6_13737 | 54     | DEL | PRKN   | 1 | no |
| chr6  | 161748423 | PD_DEL_chr6_13759 | 335647 | DEL | PRKN   | 1 | no |
| chr6  | 161796690 | PD_DEL_chr6_13760 | 587    | DEL | PRKN   | 1 | no |
| chr6  | 161856485 | PD_DEL_chr6_13761 | 363    | DEL | PRKN   | 1 | no |
| chr6  | 161949814 | PD_DEL_chr6_13777 | 14346  | DEL | PRKN   | 1 | no |
| chr6  | 162002000 | PD_DEL_chr6_13785 | 64790  | DEL | PRKN   | 1 | no |
| chr6  | 162033387 | PD_DEL_chr6_13798 | 5419   | DEL | PRKN   | 1 | no |
| chr6  | 162034265 | PD_DEL_chr6_13799 | 201384 | DEL | PRKN   | 1 | no |
| chr6  | 162039267 | PD_DEL_chr6_13800 | 1399   | DEL | PRKN   | 1 | no |
| chr6  | 162052790 | PD_DEL_chr6_13801 | 174340 | DEL | PRKN   | 1 | no |
| chr6  | 162070757 | PD_DEL_chr6_13804 | 1362   | DEL | PRKN   | 1 | no |
| chr6  | 162109710 | PD_DEL_chr6_13808 | 141280 | DEL | PRKN   | 1 | no |

|      |           |                   |        |     |      |   |    |
|------|-----------|-------------------|--------|-----|------|---|----|
| chr6 | 162111409 | PD_DEL_chr6_13809 | 242890 | DEL | PRKN | 1 | no |
| chr6 | 162113862 | PD_DEL_chr6_13810 | 1948   | DEL | PRKN | 1 | no |
| chr6 | 162121442 | PD_DEL_chr6_13811 | 259592 | DEL | PRKN | 1 | no |
| chr6 | 162149508 | PD_DEL_chr6_13815 | 15253  | DEL | PRKN | 1 | no |
| chr6 | 162167769 | PD_DEL_chr6_13821 | 290874 | DEL | PRKN | 1 | no |
| chr6 | 162171863 | PD_DEL_chr6_13823 | 143358 | DEL | PRKN | 1 | no |
| chr6 | 162174064 | PD_DEL_chr6_13824 | 32253  | DEL | PRKN | 1 | no |
| chr6 | 162199999 | PD_DEL_chr6_13830 | 78846  | DEL | PRKN | 1 | no |
| chr6 | 162215327 | PD_DEL_chr6_13832 | 190011 | DEL | PRKN | 1 | no |
| chr6 | 162220681 | PD_DEL_chr6_13835 | 159342 | DEL | PRKN | 1 | no |
| chr6 | 162227931 | PD_DEL_chr6_13838 | 238525 | DEL | PRKN | 1 | no |
| chr6 | 162229020 | PD_DEL_chr6_13839 | 78     | DEL | PRKN | 1 | no |
| chr6 | 162235983 | PD_DEL_chr6_13840 | 189935 | DEL | PRKN | 1 | no |
| chr6 | 162246220 | PD_DEL_chr6_13843 | 1644   | DEL | PRKN | 1 | no |
| chr6 | 162251287 | PD_DEL_chr6_13844 | 6376   | DEL | PRKN | 1 | no |
| chr6 | 162254355 | PD_DEL_chr6_13845 | 288585 | DEL | PRKN | 1 | no |
| chr6 | 162258574 | PD_DEL_chr6_13847 | 102807 | DEL | PRKN | 1 | no |
| chr6 | 162299108 | PD_DEL_chr6_13851 | 236473 | DEL | PRKN | 1 | no |
| chr6 | 162302274 | PD_DEL_chr6_13852 | 687    | DEL | PRKN | 1 | no |
| chr6 | 162313437 | PD_DEL_chr6_13857 | 61     | DEL | PRKN | 1 | no |
| chr6 | 162313496 | PD_DEL_chr6_13858 | 9706   | DEL | PRKN | 1 | no |
| chr6 | 162316450 | PD_DEL_chr6_13859 | 172265 | DEL | PRKN | 1 | no |
| chr6 | 162334685 | PD_DEL_chr6_13863 | 109718 | DEL | PRKN | 1 | no |
| chr6 | 162365311 | PD_DEL_chr6_13870 | 158269 | DEL | PRKN | 1 | no |

|       |           |                   |        |     |         |   |    |
|-------|-----------|-------------------|--------|-----|---------|---|----|
| chr6  | 162371541 | PD_DEL_chr6_13871 | 111    | DEL | PRKN    | 1 | no |
| chr6  | 162382236 | PD_DEL_chr6_13875 | 2503   | DEL | PRKN    | 1 | no |
| chr6  | 162440000 | PD_DEL_chr6_13883 | 14790  | DEL | PRKN    | 1 | no |
| chr6  | 162442763 | PD_DEL_chr6_13884 | 166    | DEL | PRKN    | 1 | no |
| chr6  | 162444717 | PD_DEL_chr6_13885 | 102550 | DEL | PRKN    | 1 | no |
| chr6  | 162480193 | PD_DEL_chr6_13892 | 137587 | DEL | PRKN    | 1 | no |
| chr6  | 162510025 | PD_DEL_chr6_13899 | 4287   | DEL | PRKN    | 1 | no |
| chr6  | 162670965 | PD_DEL_chr6_13914 | 1767   | DEL | PRKN    | 1 | no |
| chr1  | 16989078  | PD_DUP_chr1_1640  | 72169  | DUP | ATP13A2 | 1 | no |
| chr1  | 20639135  | PD_DUP_chr1_1915  | 44975  | DUP | PINK1   | 1 | no |
| chr15 | 61885826  | PD_DUP_chr15_2618 | 156    | DUP | VPS13C  | 1 | no |
| chr15 | 62009699  | PD_DUP_chr15_2624 | 85     | DUP | VPS13C  | 1 | no |
| chr6  | 161364041 | PD_DUP_chr6_7023  | 290    | DUP | PRKN    | 1 | no |
| chr6  | 161480293 | PD_DUP_chr6_7030  | 59     | DUP | PRKN    | 1 | no |
| chr6  | 161567720 | PD_DUP_chr6_7032  | 517940 | DUP | PRKN    | 1 | no |
| chr6  | 161756556 | PD_DUP_chr6_7038  | 63     | DUP | PRKN    | 1 | no |
| chr6  | 162070917 | PD_DUP_chr6_7046  | 53     | DUP | PRKN    | 1 | no |
| chr6  | 162117364 | PD_DUP_chr6_7050  | 129117 | DUP | PRKN    | 1 | no |
| chr6  | 162145143 | PD_DUP_chr6_7051  | 2537   | DUP | PRKN    | 1 | no |
| chr6  | 162461124 | PD_DUP_chr6_7073  | 252647 | DUP | PRKN    | 1 | no |
| chr6  | 162472576 | PD_DUP_chr6_7074  | 30675  | DUP | PRKN    | 1 | no |
| chr6  | 162634964 | PD_DUP_chr6_7081  | 44885  | DUP | PRKN    | 1 | no |
| chr15 | 89325139  | PD_INS_chr15_2041 | 54     | INS | POLG    | 1 | no |
| chr15 | 89325150  | PD_INS_chr15_2042 | 50     | INS | POLG    | 1 | no |



|       |           |                  |              |     |         |   |    |
|-------|-----------|------------------|--------------|-----|---------|---|----|
| chr21 | 32695626  | PD_INS_chr21_886 | 1240         | INS | SYNJ1   | 1 | no |
| chr22 | 38197259  | PD_INS_chr22_656 | 55           | INS | PLA2G6  | 1 | no |
| chr3  | 132504888 | PD_INS_chr3_3782 | 73           | INS | DNAJC13 | 1 | no |
| chr6  | 161633443 | PD_INS_chr6_5237 | 281          | INS | PRKN    | 1 | no |
| chr6  | 161760074 | PD_INS_chr6_5240 | 279          | INS | PRKN    | 1 | no |
| chr6  | 161915409 | PD_INS_chr6_5256 | 280          | INS | PRKN    | 1 | no |
| chr6  | 162008375 | PD_INS_chr6_5259 | 5219         | INS | PRKN    | 1 | no |
| chr6  | 162195488 | PD_INS_chr6_5267 | 279          | INS | PRKN    | 1 | no |
| chr6  | 162361022 | PD_INS_chr6_5279 | 280          | INS | PRKN    | 1 | no |
| chr6  | 162468687 | PD_INS_chr6_5287 | 393          | INS | PRKN    | 1 | no |
| chr6  | 162662596 | PD_INS_chr6_5295 | 85           | INS | PRKN    | 1 | no |
| chr6  | 162725077 | PD_INS_chr6_5298 | 192          | INS | PRKN    | 1 | no |
| chr2  | 63322247  | PD_INV_chr2_13   | 395482<br>08 | INV | HTRA2   | 1 | no |
| chr4  | 39626057  | PD_INV_chr4_9    | 176377<br>55 | INV | UCHL1   | 1 | no |

## Supplementary material:

### Acknowledgements

**AMP-PD:** Data used in the preparation of this article were partly obtained from the Accelerating Medicine Partnership® (AMP®) Parkinson's Disease (AMP PD) Knowledge Platform. For up-to-date information on the study, visit <https://www.amp-pd.org>. The AMP® PD program is a public-private partnership managed by the Foundation for the National Institutes of Health and funded by the National Institute of Neurological Disorders and Stroke (NINDS) in partnership with the Aligning Science Across Parkinson's (ASAP) initiative; Celgene Corporation, a subsidiary of Bristol-Myers Squibb Company; GlaxoSmithKline plc (GSK); The Michael J. Fox Foundation for Parkinson's Research; Pfizer Inc.; Sanofi US Services Inc.; and Verily Life Sciences.

ACCELERATING MEDICINES PARTNERSHIP and AMP are registered service marks of the U.S. Department of Health and Human Services. Clinical data and biosamples used in preparation of this article were obtained from the Michael J. Fox Foundation (MJFF) and National Institutes of Neurological Disorders and Stroke (NINDS) BioFIND study, Harvard Biomarkers Study (HBS), the NINDS Parkinson's disease Biomarkers Program (PDBP) and MJFF Parkinson's Progression Marker Initiative (PPMI). BioFIND is sponsored by The Michael J. Fox Foundation for Parkinson's Research (MJFF) with support from the National Institute for Neurological Disorders and Stroke (NINDS). The BioFIND Investigators have not participated in reviewing the data analysis or content of the manuscript. For up-to-date information on the study, visit [michaeljfox.org/news/biofind](http://michaeljfox.org/news/biofind). The Harvard NeuroDiscovery Biomarker Study (HBS) is a collaboration of HBS investigators [full list of HBS investigator found at <https://www.bwhparkinsoncenter.org/biobank/> and funded through philanthropy and NIH and Non-NIH funding sources. The HBS Investigators have not participated in reviewing the data analysis or content of the manuscript. PPMI – a public-private partnership – is funded by The Michael J. Fox Foundation for Parkinson's Research and funding partners, a full list of the PPMI funding partners can be found at [www.ppmi-info.org/fundingpartners](http://www.ppmi-info.org/fundingpartners). The PPMI Investigators have not participated in reviewing the data analysis or content of the manuscript. For up-to-date information on the study, visit [www.ppmi-info.org](http://www.ppmi-info.org). Parkinson's Disease Biomarker Program (PDBP) consortium is supported by the National Institute of Neurological Disorders and Stroke (NINDS) at the National Institutes of Health. A full list of PDBP investigators can be found at <https://pdbp.ninds.nih.gov/policy>. The PDBP Investigators have not participated in reviewing the data analysis or content of the manuscript. **Wellderly:** This work is supported by Scripps Research Translational Institute, an NIH-NCATS Clinical and Translational Science Award (CTSA; 5 UL1TR002550). **UKBEC:** Consortium members include; Juan A. Botía , University of Murcia & UCL Great Ormond Street Institute of Child Health, Karishma D'Sa, Crick Institute, Paola Forabosco, Istituto di Ricerca Genetica e Biomedica, Italy, Sebastian Guelfi , Verge Genomics & UCL Great Ormond Street Institute of Child Health, Adaikalavan Ramasamy , Singapore Institute for Clinical Sciences, Regina H. Reynolds , UCL Great Ormond Street Institute of Child Health, Colin Smith , The University of Edinburgh, Daniah Trabzuni , UCL Queen Square Institute of Neurology, Robert Walker, The University of Edinburgh, Michael E. Weale, Genomics Plc, Oxford UK. This work was supported by the UK Dementia Research Institute which receives its funding from DRI Ltd, funded by the UK Medical Research Council, Alzheimer's Society and Alzheimer's Research UK. Medical Research Council (award number MR/N026004/1) and Medical Research Council (award number MR/N026004/1). **BLSA:** We would like to thank the Baltimore Longitudinal Study of Aging (BLSA) for providing control genomes and clinical data ([www.blsa.nih.gov](http://www.blsa.nih.gov)). The BLSA is currently supported by the Intramural Research Program of the NIH, National Institute on Aging. **LNG Path confirmed:** We are grateful to the Banner Sun Health Research Institute Brain and Body Donation Program of Sun City, Arizona for the provision of human biological materials (or specific description, e.g., brain tissue, cerebrospinal fluid). The Brain and Body Donation Program has been supported by the National Institute of Neurological Disorders

and Stroke (U24 NS072026 National Brain and Tissue Resource for Parkinson's Disease and Related Disorders), the National Institute on Aging (P30 AG19610 Arizona Alzheimer's Disease Core Center), the Arizona Department of Health Services (contract 211002, Arizona Alzheimer's Research Center), the Arizona Biomedical Research Commission (contracts 4001, 0011, 05-901 and 1001 to the Arizona Parkinson's Disease Consortium) and the Michael J. Fox Foundation for Parkinson's Research. We thank the NIH NeuroBioBank for the provision of tissue samples. **NABEC:** We thank members of the North American Brain Expression Consortium (NABEC) for providing samples derived from brain tissue. Brain tissue for the NABEC cohort were obtained from the Baltimore Longitudinal Study on Aging at the Johns Hopkins School of Medicine, the NICHD Brain and Tissue Bank for Developmental Disorders at the University of Maryland, the Banner Sun Health Research Institute Brain and Body Donation Program, and from the University of Kentucky Alzheimer's Disease Center Brain Bank. This research was supported, in part, by the Intramural Research Program of the National Institutes of Health (National Institute on Aging, National Institute of Neurological Disorders and Stroke; project numbers 1ZIA-NS003154, Z01-AG000949-02, Z01-ES101986, and UK ADC NIA P30 AG072946.