

Suppl\_Table\_1

| Patient_ID   | DSS_status | Months_of_DSS | 5YSS     | Grading | T-Stage | N-Stage | M-Stage | Count_Histo_L5 | Count_Histo_L10 | Count_Radiology | Entity_Radiology | Altered | VHL | PBRM1 | SETD2 | BAP1 | MTOR | KDM5C | PCLO | ATM | STAG2 | SPEN |
|--------------|------------|---------------|----------|---------|---------|---------|---------|----------------|-----------------|-----------------|------------------|---------|-----|-------|-------|------|------|-------|------|-----|-------|------|
| TCGA-B0-4698 |            | 11.380806786  | deceased | 4       | 4       | 2       | 0       | 100            | 31              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4712 |            | 143.95568268  | deceased | 3       | 3       | 2       | 1       | 485            | 147             | 3 CT            |                  | 1       | 1   | 1     | 1     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4713 |            | 16.641023112  | deceased | 2       | 3       | 2       | 0       | 425            | 127             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4821 |            | 140.43791301  | deceased | 2       | 3       | 0       | 0       | 291            | 87              | 3 MRI           |                  | 1       | 0   | 0     | 1     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4833 |            | 178.44297597  | living   | 2       | 1       | 0       | 0       | 381            | 116             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4839 |            | 053.88434099  | NA       | 2       | 1       | 0       | 0       | 329            | 100             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4843 |            | 110.52043265  | deceased | 3       | 3       | 0       | 0       | 338            | 98              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4845 |            | 165.29243515  | living   | 2       | 3       | 2       | 1       | 455            | 134             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-4849 |            | 12.268468291  | deceased | 2       | 3       | 2       | 0       | 305            | 91              | 3 MRI           |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5077 |            | 043.29815564  | NA       | 3       | 1       | 0       | 0       | 166            | 51              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 1     | 0    | 0   | 0     | 0    |
| TCGA-B0-5081 |            | 111.90123944  | deceased | 2       | 3       | 0       | 0       | 450            | 134             | 3 CT            |                  | 1       | 1   | 1     | 1     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5085 |            | 025.31479107  | NA       | 3       | 3       | 0       | 0       | 198            | 56              | 3 MRI           |                  | 1       | 1   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5088 |            | 018.5093862   | NA       | 3       | 1       | 0       | 0       | 374            | 107             | 3 CT            |                  | 1       | 1   | 0     | 0     | 1    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5099 |            | 115.94503074  | deceased | 3       | 3       | 2       | 0       | 337            | 98              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 0     | 1    | 0   | 0     | 0    |
| TCGA-B0-5106 |            | 052.53641056  | NA       | 2       | 1       | 0       | 0       | 389            | 123             | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 1     | 0    | 0   | 0     | 0    |
| TCGA-B0-5109 |            | 119.29841865  | deceased | 4       | 3       | 1       | 0       | 150            | 45              | 3 MRI           |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5110 |            | 066.04859125  | living   | 2       | 1       | 0       | 0       | 221            | 68              | 3 CT            |                  | 1       | 0   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5115 |            | 052.73366867  | NA       | 3       | 2       | 0       | 1       | 241            | 69              | 3 CT            |                  | 1       | 1   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5117 |            | 052.86517408  | NA       | 2       | 1       | 2       | 0       | 530            | 153             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5121 |            | 048.82138278  | NA       | 2       | 1       | 0       | 0       | 192            | 56              | 3 CT            |                  | 1       | 0   | 1     | 1     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5399 |            | 046.38853273  | NA       | 2       | 1       | 0       | 0       | 722            | 214             | 3 CT            |                  | 1       | 0   | 1     | 1     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5696 |            | 085.77440247  | living   | 4       | 3       | 0       | 0       | 219            | 66              | 3 CT            |                  | 1       | 1   | 1     | 1     | 1    | 1    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5697 |            | 086.46480587  | living   | 2       | 1       | 0       | 0       | 235            | 73              | 3 CT            |                  | 1       | 0   | 0     | 0     | 0    | 1    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5698 |            | 0119.3740343  | living   | 3       | 1       | 0       | 0       | 270            | 85              | 3 CT            |                  | 1       | 0   | 1     | 0     | 0    | 0    | 1     | 0    | 0   | 0     | 0    |
| TCGA-B0-5702 |            | 071.40743663  | living   | 2       | 1       | 0       | 0       | 266            | 80              | 3 CT            |                  | 1       | 0   | 0     | 1     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5703 |            | 073.84028668  | living   | 3       | 1       | 0       | 0       | 236            | 70              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 0     | 0    | 1   | 0     | 0    |
| TCGA-B0-5706 |            | 0105.3687083  | living   | 2       | 3       | 0       | 0       | 378            | 115             | 3 CT            |                  | 1       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 1    |
| TCGA-B0-5707 |            | 0123.089062   | living   | 3       | 1       | 0       | 0       | 147            | 47              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5709 |            | 0130.650623   | living   | 3       | 3       | 2       | 0       | 221            | 66              | 3 CT            |                  | 1       | 1   | 0     | 0     | 1    | 0    | 0     | 0    | 0   | 1     | 0    |
| TCGA-B0-5711 |            | 0131.1437683  | living   | 3       | 3       | 2       | 0       | 289            | 84              | 3 CT            |                  | 1       | 1   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B0-5712 |            | 089.48943025  | living   | 3       | 2       | 0       | 1       | 88             | 26              | 3 CT            |                  | 1       | 0   | 1     | 0     | 0    | 1    | 0     | 0    | 0   | 1     | 0    |
| TCGA-B0-5812 |            | 0126.0479337  | living   | 3       | 1       | 2       | 0       | 243            | 75              | 3 CT            |                  | 1       | 1   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4146 |            | 016.79981589  | NA       | 2       | 1       | 2       | 0       | 176            | 58              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4148 |            | 049.9720551   | NA       | 3       | 1       | 0       | 0       | 300            | 92              | 3 CT            |                  | 1       | 1   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4151 |            | 042.7063813   | NA       | 2       | 3       | 0       | 0       | 264            | 77              | 3 CT            |                  | 1       | 0   | 1     | 0     | 1    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4153 |            | 025.05178025  | NA       | 3       | 3       | 2       | 0       | 696            | 211             | 3 CT            |                  | 1       | 1   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4154 |            | 045.36936582  | NA       | 2       | 1       | 0       | 0       | 64             | 21              | 3 CT            |                  | 1       | 1   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4619 |            | 017.19433212  | NA       | 2       | 1       | 0       | 0       | 80             | 23              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4620 |            | 025.54492554  | NA       | 2       | 3       | 0       | 0       | 264            | 80              | 3 CT            |                  | 1       | 1   | 1     | 1     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4621 |            | 025.90656541  | NA       | 3       | 1       | 0       | 0       | 451            | 129             | 3 MRI           |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-4622 |            | 050.13643686  | NA       | 3       | 3       | 0       | 1       | 384            | 115             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5158 |            | 040.04339679  | NA       | 4       | 3       | 1       | 0       | 341            | 85              | 3 CT            |                  | 1       | 0   | 1     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 1    |
| TCGA-B8-5159 |            | 023.73672617  | NA       | 3       | 1       | 0       | 0       | 70             | 20              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5162 |            | 01.183548673  | NA       | 2       | 2       | 2       | 0       | 112            | 33              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5163 |            | 027.02436138  | NA       | 3       | 3       | 0       | 0       | 187            | 46              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5164 |            | 00.854785153  | NA       | 3       | 3       | 0       | 0       | 138            | 37              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5165 |            | 024.22987145  | NA       | 2       | 1       | 0       | 0       | 172            | 45              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5545 |            | 050.13643686  | NA       | 2       | 1       | 0       | 0       | 162            | 44              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5546 |            | 016.60255778  | NA       | 2       | 1       | 0       | 0       | 204            | 63              | 3 MRI           |                  | 1       | 0   | 0     | 0     | 0    | 0    | 0     | 1    | 0   | 0     | 0    |
| TCGA-B8-5549 |            | 06.378012296  | NA       | 3       | 1       | 0       | 2       | 287            | 88              | 3 CT            |                  | 1       | 1   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5550 |            | 048.52549561  | NA       | 3       | 3       | 0       | 0       | 447            | 133             | 3 CT            |                  | 1       | 0   | 0     | 0     | 1    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5551 |            | 00.526021633  | NA       | 3       | 1       | 0       | 0       | 223            | 67              | 3 CT            |                  | 1       | 1   | 0     | 0     | 1    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5552 |            | 034.38866423  | NA       | 2       | 1       | 2       | 0       | 241            | 73              | 3 MRI           |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-5553 |            | 014.30121314  | NA       | 2       | 1       | 0       | 0       | 122            | 35              | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-A54D |            | 027.28737219  | NA       | 2       | 3       | 2       | 2       | 180            | 53              | 3 CT            |                  | 1       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 1     | 0    |
| TCGA-B8-A54E |            | 029.884604    | NA       | 3       | 1       | 2       | 2       | 413            | 122             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-A54F |            | 017.06282671  | NA       | 2       | 1       | 2       | 2       | 542            | 160             | 3 CT            |                  | 0       | 0   | 0     | 0     | 0    | 0    | 0     | 0    | 0   | 0     | 0    |
| TCGA-B8-A54G |            | 01.742446658  | NA       | 3       | 1       | 2       | 2       | 253            | 71              | 3 CT            |                  | 1       | 0   | 1     | 0     | 1    | 0    | 0     | 0    | 0   | 0     | 0    |



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|              |               |          |   |   |   |   |     |     |       |   |   |   |   |   |   |   |   |   |   |   |
|--------------|---------------|----------|---|---|---|---|-----|-----|-------|---|---|---|---|---|---|---|---|---|---|---|
| TCGA-BP-4999 | 0 41.62146168 | NA       | 2 | 1 | 2 | 0 | 155 | 49  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5000 | 0 18.5093862  | NA       | 3 | 1 | 2 | 0 | 237 | 72  | 3 CT  | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| TCGA-BP-5001 | 0 38.69546635 | NA       | 2 | 1 | 2 | 0 | 257 | 78  | 3 CT  | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5004 | 0 37.0187724  | NA       | 3 | 1 | 2 | 0 | 354 | 105 | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5007 | 0 37.47904133 | NA       | 2 | 2 | 0 | 0 | 347 | 101 | 3 CT  | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5010 | 1 28.86543709 | deceased | 4 | 3 | 0 | 0 | 526 | 161 | 3 CT  | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| TCGA-BP-5168 | 0 48.09810303 | NA       | 2 | 1 | 0 | 0 | 366 | 108 | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5169 | 0 6.345135944 | NA       | 4 | 1 | 0 | 0 | 483 | 145 | 3 CT  | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| TCGA-BP-5173 | 0 2.038333827 | NA       | 2 | 1 | 2 | 0 | 511 | 149 | 3 MRI | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| TCGA-BP-5174 | 0 74.20192655 | living   | 2 | 1 | 2 | 0 | 257 | 77  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5175 | 0 30.6407601  | NA       | 3 | 1 | 2 | 0 | 166 | 51  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5178 | 1 62.8595851  | living   | 4 | 4 | 0 | 1 | 295 | 85  | 3 MRI | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5180 | 0 74.39918467 | living   | 2 | 1 | 2 | 0 | 180 | 54  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5183 | 0 42.44337048 | NA       | 3 | 3 | 2 | 0 | 115 | 34  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5184 | 0 37.24890686 | NA       | 3 | 1 | 2 | 0 | 241 | 72  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5185 | 0 37.21603051 | NA       | 3 | 1 | 2 | 0 | 423 | 126 | 3 MRI | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| TCGA-BP-5186 | 0 22.78331196 | NA       | 2 | 1 | 0 | 0 | 359 | 108 | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5187 | 0 13.34779893 | NA       | 2 | 1 | 2 | 0 | 207 | 62  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5189 | 1 27.02436138 | deceased | 4 | 1 | 2 | 0 | 349 | 104 | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| TCGA-BP-5190 | 0 33.23799191 | NA       | 3 | 1 | 2 | 0 | 283 | 84  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| TCGA-BP-5191 | 0 31.79143242 | NA       | 2 | 3 | 0 | 0 | 130 | 42  | 3 CT  | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| TCGA-BP-5192 | 0 23.47371536 | NA       | 2 | 1 | 2 | 0 | 271 | 80  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5194 | 0 13.41355163 | NA       | 2 | 1 | 2 | 0 | 404 | 124 | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5195 | 0 24.62438768 | NA       | 2 | 1 | 2 | 0 | 200 | 61  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| TCGA-BP-5196 | 0 33.46812638 | NA       | 2 | 1 | 2 | 0 | 203 | 60  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5198 | 0 19.82444028 | NA       | 3 | 3 | 0 | 0 | 379 | 109 | 3 MRI | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5200 | 0 34.94756222 | NA       | 4 | 2 | 2 | 0 | 89  | 27  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5201 | 0 31.26541079 | NA       | 4 | 3 | 0 | 1 | 245 | 69  | 3 MRI | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-BP-5202 | 0 0.953414209 | NA       | 2 | 3 | 2 | 0 | 131 | 39  | 3 CT  | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4635 | 0 46.55291449 | NA       | 3 | 1 | 2 | 0 | 169 | 48  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4636 | 0 63.25410133 | living   | 3 | 3 | 0 | 0 | 266 | 78  | 3 CT  | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4637 | 1 73.21563599 | living   | 4 | 2 | 2 | 1 | 186 | 54  | 3 CT  | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4641 | 1 54.60762074 | deceased | 4 | 3 | 2 | 1 | 242 | 77  | 3 CT  | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4643 | 0 58.94729921 | NA       | 3 | 2 | 0 | 0 | 206 | 58  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| TCGA-CJ-4870 | 0 49.24877536 | NA       | 2 | 3 | 2 | 0 | 202 | 58  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4871 | 0 79.65940099 | living   | 4 | 3 | 2 | 1 | 180 | 57  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4873 | 0 74.26767926 | living   | 3 | 3 | 0 | 0 | 279 | 82  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4876 | 0 64.27326824 | living   | 3 | 2 | 0 | 0 | 238 | 74  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4884 | 0 57.82950324 | NA       | 3 | 1 | 2 | 0 | 334 | 98  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4885 | 0 113.4562909 | living   | 3 | 3 | 2 | 1 | 363 | 108 | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4886 | 0 64.17463918 | living   | 3 | 1 | 2 | 0 | 122 | 37  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4887 | 1 30.6407601  | deceased | 3 | 3 | 2 | 1 | 131 | 40  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4889 | 0 63.97738107 | living   | 4 | 1 | 0 | 0 | 69  | 21  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4891 | 0 26.92573232 | NA       | 4 | 3 | 0 | 0 | 50  | 16  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4892 | 0 50.00493145 | NA       | 2 | 3 | 0 | 0 | 65  | 21  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4893 | 0 24.65726403 | NA       | 3 | 1 | 2 | 0 | 162 | 47  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4894 | 1 27.64901207 | deceased | 3 | 3 | 0 | 0 | 377 | 113 | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4895 | 1 39.45162245 | deceased | 4 | 3 | 2 | 1 | 331 | 100 | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4897 | 0 109.8398922 | living   | 3 | 4 | 2 | 0 | 288 | 84  | 3 CT  | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4899 | 0 50.23506592 | NA       | 2 | 1 | 2 | 0 | 98  | 30  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4900 | 1 56.3500674  | deceased | 3 | 4 | 1 | 1 | 190 | 57  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4901 | 0 47.67071046 | NA       | 3 | 3 | 2 | 0 | 207 | 63  | 3 CT  | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| TCGA-CJ-4902 | 0 49.9720551  | NA       | 3 | 3 | 2 | 0 | 145 | 44  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4903 | 0 51.28710918 | NA       | 3 | 1 | 2 | 0 | 208 | 63  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4904 | 0 108.5577144 | living   | 3 | 3 | 0 | 1 | 369 | 109 | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| TCGA-CJ-4905 | 0 49.18302265 | NA       | 2 | 1 | 2 | 0 | 195 | 59  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4907 | 0 49.28165171 | NA       | 3 | 3 | 2 | 0 | 301 | 92  | 3 CT  | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4908 | 0 50.33369497 | NA       | 2 | 1 | 2 | 0 | 79  | 24  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4912 | 0 54.47611533 | NA       | 3 | 2 | 2 | 0 | 181 | 55  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

Suppl\_Table\_1

|              |               |          |   |   |   |   |     |     |       |   |   |   |   |   |   |   |   |   |   |   |
|--------------|---------------|----------|---|---|---|---|-----|-----|-------|---|---|---|---|---|---|---|---|---|---|---|
| TCGA-CJ-4913 | 138.56396094  | deceased | 4 | 3 | 2 | 0 | 419 | 124 | 3 CT  | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| TCGA-CJ-4916 | 0.45.13923135 | NA       | 3 | 3 | 2 | 0 | 371 | 108 | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| TCGA-CJ-4918 | 13.05750074   | deceased | 4 | 3 | 0 | 1 | 113 | 32  | 3 CT  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| TCGA-CJ-4920 | 0.4.569812934 | NA       | 2 | 1 | 2 | 0 | 174 | 55  | 3 CT  | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-4923 | 118.80527337  | deceased | 4 | 3 | 2 | 1 | 235 | 71  | 3 CT  | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5671 | 0.131.0780156 | living   | 3 | 1 | 2 | 0 | 91  | 29  | 3 CT  | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5672 | 0.71.99921097 | living   | 3 | 1 | 2 | 0 | 68  | 22  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5675 | 0.129.4013216 | living   | 3 | 2 | 2 | 0 | 94  | 26  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5677 | 125.7093073   | deceased | 4 | 3 | 2 | 1 | 85  | 26  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5678 | 118.87102607  | deceased | 3 | 2 | 0 | 1 | 86  | 29  | 3 CT  | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5679 | 122.32304304  | deceased | 4 | 3 | 2 | 0 | 185 | 59  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5680 | 125.24903837  | deceased | 4 | 3 | 2 | 1 | 104 | 34  | 3 CT  | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5681 | 118.14774633  | deceased | 3 | 3 | 2 | 1 | 18  | 5   | 3 CT  | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5683 | 0.62.103429   | living   | 3 | 1 | 2 | 0 | 37  | 11  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-5686 | 0.67.00200546 | living   | 3 | 1 | 2 | 0 | 106 | 31  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| TCGA-CJ-6027 | 0.118.8480126 | living   | 4 | 1 | 2 | 0 | 184 | 56  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-6028 | 153.42407207  | deceased | 4 | 3 | 2 | 1 | 178 | 50  | 3 CT  | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-6030 | 0.75.58273334 | living   | 3 | 1 | 0 | 0 | 212 | 61  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-6031 | 0.62.66232699 | living   | 3 | 1 | 2 | 0 | 173 | 53  | 3 MRI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CJ-6033 | 1.7.364302857 | deceased | 4 | 3 | 0 | 1 | 281 | 84  | 3 CT  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-4857 | 1.47.07893612 | deceased | 3 | 3 | 0 | 1 | 125 | 31  | 3 MRI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-4858 | 1.69.20472104 | living   | 4 | 2 | 2 | 0 | 90  | 23  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-4859 | 0.58.7500411  | NA       | 2 | 1 | 0 | 0 | 100 | 24  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| TCGA-CZ-4860 | 1.6.77252852  | deceased | 4 | 4 | 2 | 1 | 175 | 48  | 3 MRI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-4861 | 1.14.66285301 | deceased | 2 | 2 | 2 | 0 | 62  | 16  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-4862 | 0.107.5385475 | living   | 2 | 1 | 2 | 0 | 76  | 18  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-4863 | 0.63.38560673 | living   | 3 | 3 | 0 | 0 | 108 | 24  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-4866 | 0.107.4070421 | living   | 3 | 1 | 2 | 0 | 134 | 35  | 3 CT  | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5451 | 0.63.41848309 | living   | 3 | 2 | 0 | 0 | 266 | 80  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| TCGA-CZ-5452 | 0.58.8157938  | NA       | 2 | 2 | 0 | 0 | 250 | 74  | 3 CT  | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5454 | 1.23.73672617 | deceased | 2 | 2 | 0 | 1 | 324 | 97  | 3 MRI | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5455 | 1.18.44363349 | deceased | 4 | 3 | 2 | 1 | 189 | 59  | 3 MRI | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5460 | 0.94.45375941 | living   | 3 | 3 | 2 | 1 | 269 | 80  | 3 MRI | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5462 | 1.10.22454548 | deceased | 3 | 1 | 2 | 1 | 245 | 80  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5464 | 0.69.96087714 | living   | 2 | 3 | 2 | 1 | 493 | 153 | 3 MRI | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5466 | 0.22.52030115 | NA       | 2 | 3 | 2 | 0 | 674 | 203 | 3 MRI | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| TCGA-CZ-5468 | 1.1.93970477  | deceased | 4 | 3 | 2 | 1 | 409 | 125 | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| TCGA-CZ-5984 | 0.67.95541967 | living   | 3 | 1 | 0 | 0 | 355 | 109 | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5985 | 0.65.65407502 | living   | 2 | 2 | 0 | 0 | 298 | 91  | 3 CT  | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| TCGA-CZ-5987 | 1.14.62997666 | deceased | 2 | 3 | 2 | 1 | 237 | 68  | 3 MRI | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5988 | 0.22.78331196 | NA       | 2 | 1 | 0 | 0 | 189 | 58  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-CZ-5989 | 0.62.62945064 | living   | 2 | 2 | 0 | 0 | 181 | 53  | 3 MRI | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-5565 | 0.43.69267186 | NA       | 2 | 1 | 2 | 0 | 103 | 30  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-5566 | 0.45.96114015 | NA       | 2 | 1 | 2 | 2 | 280 | 84  | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-5567 | 0.65.88420949 | living   | 2 | 1 | 2 | 0 | 172 | 50  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-5574 | 0.66.27872571 | living   | 2 | 1 | 2 | 0 | 230 | 68  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-5575 | 0.56.84321268 | NA       | 2 | 1 | 2 | 0 | 163 | 50  | 3 CT  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-5576 | 1.23.90110793 | deceased | 2 | 1 | 2 | 0 | 114 | 34  | 3 CT  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-A4VX | 1.53.45694842 | deceased | 4 | 3 | 0 | 2 | 414 | 122 | 3 MRI | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TCGA-DV-A4VZ | 0.11.9998685  | NA       | 2 | 1 | 2 | 2 | 109 | 36  | 3 MRI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-DV-A4W0 | 0.81.20458954 | living   | 2 | 1 | 2 | 2 | 739 | 223 | 3 CT  | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-G6-A5PC | 1.7.956077194 | deceased | 4 | 1 | 0 | 1 | 305 | 91  | 3 CT  | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-G6-ABL6 | 1.10.29029819 | deceased | 3 | 2 | 2 | 2 | 137 | 41  | 3 CT  | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCGA-G6-ABL7 | 0.70.1252589  | living   | 3 | 1 | 0 | 2 | 432 | 128 | 3 CT  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |