**Supplementary Table 1.** **Clinical characteristics of patients in TCGA-LGG cohort**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Subtype 1** | **Subtype 2** | **P value** | **Overall** |
| **(N=389)** | **(N=99)** | **(N=488)** |
| **Age (years)** |   |   |   |   |
| Mean (SD) | 42.7 (13.3) | 45.3 (14.0) | 0.0911 | 43.2 (13.4) |
| Median [Min, Max] | 41.0 [14.0, 87.0] | 44.0 [22.0, 74.0] |   | 41.0 [14.0, 87.0] |
| **Gender [No. (%)]** |   |   |   |   |
| Female | 168 (43.2%) | 49 (49.5%) | 0.31 | 217 (44.5%) |
| Male | 221 (56.8%) | 50 (50.5%) |   | 271 (55.5%) |
| **Histological type [No. (%)]** |   |   |   |   |
| Astrocytoma | 141 (36.2%) | 40 (40.4%) | 0.727 | 181 (37.1%) |
| Oligoastrocytoma | 105 (27.0%) | 24 (24.2%) |   | 129 (26.4%) |
| Oligodendroglioma | 143 (36.8%) | 35 (35.4%) |   | 178 (36.5%) |
| **Grade [No. (%)]** |   |   |   |   |
| 2 | 196 (50.4%) | 40 (40.4%) | 0.0921 | 236 (48.4%) |
| 3 | 192 (49.4%) | 59 (59.6%) |   | 251 (51.4%) |
| Missing | 1 (0.3%) | 0 (0%) |   | 1 (0.2%) |
| **Laterality [No. (%)]** |   |   |   |   |
| Left | 189 (48.6%) | 50 (50.5%) | 0.309 | 239 (49.0%) |
| Midline | 4 (1.0%) | 3 (3.0%) |   | 7 (1.4%) |
| Right | 191 (49.1%) | 46 (46.5%) |   | 237 (48.6%) |
| Missing | 5 (1.3%) | 0 (0%) |   | 5 (1.0%) |
| **IDH status [No. (%)]** |   |   |   |   |
| Mutant | 320 (82.3%) | 75 (75.8%) | 0.209 | 395 (80.9%) |
| Wild type | 67 (17.2%) | 23 (23.2%) |   | 90 (18.4%) |
| Missing | 2 (0.5%) | 1 (1.0%) |   | 3 (0.6%) |
| **1p 19q codeletion [No. (%)]** |   |   |   |   |
| codel | 134 (34.4%) | 25 (25.3%) | 0.105 | 159 (32.6%) |
| non-codel | 255 (65.6%) | 74 (74.7%) |   | 329 (67.4%) |
| **MGMT promoter status [No. (%)]** |   |
| Methylated | 327 (84.1%) | 78 (78.8%) | 0.273 | 405 (83.0%) |
| Unmethylated | 62 (15.9%) | 21 (21.2%) |   | 83 (17.0%) |
| **TERT promoter status [No. (%)]** |   |
| Mutant | 88 (22.6%) | 33 (33.3%) | 1 | 121 (24.8%) |
| Wild type | 108 (27.8%) | 40 (40.4%) |   | 148 (30.3%) |
| Missing | 193 (49.6%) | 26 (26.3%) |   | 219 (44.9%) |
| **ATRX status [No. (%)]** |   |   |   |   |
| Mutant | 135 (34.7%) | 41 (41.4%) | 0.246 | 176 (36.1%) |
| Wild type | 252 (64.8%) | 57 (57.6%) |   | 309 (63.3%) |
| Missing | 2 (0.5%) | 1 (1.0%) |   | 3 (0.6%) |
| **Primary therapy response [No. (%)]** |  |  |  |  |
| Response | 152 (39.1%) | 21 (21.2%) | <0.001 | 173 (35.5%) |
| Non-response | 154 (39.6%) | 66 (66.7%) |  | 220 (45.1%) |
| Missing | 83 (21.3%) | 12 (12.1%) |  | 95 (19.5%) |
| **Follow-up treatment response [No. (%)]** |  |  |  |  |
| Response | 94 (24.2%) | 11 (11.1%) | 0.002 | 105 (21.5%) |
| Non-response | 170 (43.7%) | 59 (59.6%) |  | 229 (46.9%) |
| Missing | 125 (32.1%) | 29 (29.3%) |  | 154 (31.6%) |