| 0.98 (0.32)   | 1.04 (0.08)  | 1.05 (0.37)  | 1.05 (0.27) | 1.12 (0.46) | Atypical Teratoid Rhabdoid Tumor      |
|---------------|--------------|--------------|-------------|-------------|---------------------------------------|
| 1 (0.98)      | 0.93 (0.05)  | 0.98 (0.82)  | 1.05 (0.75) | 0.48 (0.2)  | CRANIO, ADAM                          |
| 1 (0.98)      | 0.93 (0.05)  | 0.98 (0.82)  | 1.05 (0.75) | 0.48 (0.2)  | Craniopharyngioma                     |
| 1 (0.82)      | 1 (0.66)     | 1.03 (0.07)  | 1.01 (0.34) | 1.04 (0.68) | DMG, H3 K28                           |
| 1.03 (0.02*)  | 0.98 (0.13)  | 0.87 (0.21)  | 0.97 (0.43) | 0.92 (0.67) | Ependymoma                            |
| 1.01 (0.77)   | 0.97 (0.08)  | 1.02 (0.89)  | 0.94 (0.3)  | 0.83 (0.44) | EPN, PF A                             |
| 1.08 (<0.01*) | 0.99 (0.84)  | 0.4 (0.03*)  | 0.99 (0.86) | 1.12 (0.73) | EPN, ST ZFTA                          |
| 0.62 (1)      | 1.53 (1)     | 3.48 (1)     | NA (NA)     | 0 (1)       | Germ cell tumor                       |
| NA (NA)       | NA (NA)      | NA (NA)      | NA (NA)     | NA (NA)     | GNG/GNT, BRAF V600E                   |
| 0.82 (0.75)   | 1.24 (0.7)   | 1 (1)        | 1.38 (0.67) | 0.66 (0.69) | GNG/GNT, Other alteration             |
| 1.01 (0.6)    | 0.98 (0.22)  | 0.98 (0.47)  | 0.98 (0.31) | 0.8 (0.09)  | HGG, H3 WT                            |
| 1.01 (0.36)   | 1 (0.76)     | 1.01 (0.46)  | 1 (0.71)    | 0.89 (0.09) | High-grade glioma  OS Hazard Ratio  4 |
| 0 (0.4)       | 0.09 (1)     | 0 (0.99)     | 0 (1)       | NA (NA)     | LGG, BRAF fusion                      |
| NA (NA)       | 1.15 (1)     | NA (NA)      | 0.12 (1)    | 1.93 (1)    | LGG, BRAF V600E                       |
| 1.11 (<0.01*) | 0.89 (0.02*) | 0.85 (0.33)  | 0.98 (0.69) | 1.14 (0.81) | LGG, Other alteration                 |
| 1 (NA)        | 1 (NA)       | 1 (NA)       | 1 (NA)      | 1 (NA)      | LGG, WT                               |
| 1.05 (<0.01*) | 0.97 (0.19)  | 0.82 (0.04*) | 0.97 (0.54) | 1.23 (0.62) | Low-grade glioma                      |
| 0.96 (0.46)   | 1.01 (0.72)  | 0.89 (0.13)  | 1.11 (0.09) | 1.01 (0.96) | MB, Group3                            |
| 1.01 (0.37)   | 1 (0.86)     | 0.98 (0.75)  | 0.98 (0.69) | 1.07 (0.76) | MB, Group4                            |
| 0.96 (0.34)   | 1.01 (0.74)  | 1.09 (0.31)  | 0.95 (0.18) | 1.33 (0.4)  | MB, SHH                               |
| 1.05 (0.84)   | 3.8 (0.43)   | 1.12 (0.82)  | NA (NA)     | 0.17 (0.35) | MB, WNT                               |
| 1 (0.77)      | 1.01 (0.6)   | 0.97 (0.48)  | 1.02 (0.46) | 1.04 (0.77) | Medulloblastoma                       |
| 0.85 (0.75)   | 1.39 (0.58)  | 1.12 (0.58)  | NA (NA)     | 0.59 (0.55) | Meningioma                            |
| 1.11 (<0.01*) | 1 (0.96)     | 0.93 (0.31)  | 1 (0.93)    | 0.99 (0.98) | Mesenchymal tumor                     |
| 0.93 (0.73)   | 1.72 (0.33)  | 1.07 (0.77)  | 1.61 (0.45) | 0.29 (0.16) | Mixed neuronal-glial tumor            |
| 0.8 (1)       | 1.44 (1)     | 3 (1)        | NA (NA)     | 0.27 (1)    | Schwannoma                            |
| PC1           | PC2          | PC3          | PC4         | PC5         | _                                     |