

**Supplementary Table 4.** Results of univariate and multivariate analyses of factors associated with OS of 44 patients with brainstem astrocytoma

| Variable   | Univariate analysis |       | Multivariate analysis |                    |          |
|--|---------------------|-------|-----------------------|--------------------|----------|
|  | <i>p</i>            | HR    | 95% CI                | Median OS (months) | <i>p</i> |
| Age (≥55 years vs. <55 years)                      | 0.001               |       |                       |                    | 0.107    |
| Sex (female vs. male)                              | 0.446               |       |                       |                    |          |
| Grade (HGG vs. LGG)                                | <0.001              | 8.138 | 1.825–36.299          | 11.4 vs. 34.0      | 0.006    |
| KPS (≥70 vs. <70)                                  | 0.005               | 0.253 | 0.103–0.621           | 17.5 vs. 9.5       | 0.003    |
| Course of disease (≥3 months vs. <3 months)        | 0.003               | 0.381 | 0.176–0.825           | 17.5 vs. 11.0      | 0.014    |
| Diameter (≥2 cm vs. <2 cm)                         | 0.357               |       |                       |                    |          |
| Location (pons vs. midbrain vs. medulla)           | 0.901               |       |                       |                    |          |
| Tumor enhancement (yes vs. no)                     | 0.002               | 3.699 | 1.542–8.730           | 11.0 vs. 17.0      | 0.003    |
| Chemotherapy (yes vs. no)                          | 0.017               |       |                       |                    | 0.767    |
| <i>IDH</i> (mutant vs. wild type)                  | 0.177               |       |                       |                    | 0.691    |
| <i>MGMT</i> promoter (methylated vs. unmethylated) | 0.716               |       |                       |                    |          |
| 1p/19q (LOH vs. intact)                            | 0.891/0.713         |       |                       |                    |          |
| <i>TERT</i> promoter (mutant vs. wild type)        | 0.215               |       |                       |                    |          |
| <i>TP53</i> (mutant vs. wild type)                 | 0.653               |       |                       |                    |          |
| <i>PTEN</i> (mutant vs. wild type)                 | 0.033               |       |                       |                    | 0.370    |
| <i>ATRX</i> (mutant vs. wild type)                 | 0.130               | 0.156 | 0.035–0.697           | 22.0 vs. 12.5      | 0.015    |
| <i>NF1</i> (mutant vs. wild type)                  | 0.566               |       |                       |                    |          |
| <i>PIK3CA</i> (mutant vs. wild type)               | 0.739               |       |                       |                    |          |
| <i>EGFR</i> amplification (yes vs. no)             | 0.308               |       |                       |                    |          |

CI: confidence interval, HGG: high-grade glioma, HR: hazard ratio, KPS: Karnofsky performance status, LGG: low-grade glioma, LOH: loss of heterozygosity, OS: overall survival.