

**STable 1** The correlation between RPL4P4 and clinicpathologic characteristic in CCGA-glioma dataset.

| Characteristic                                      | Low expression of RPL4P4 | High expression of RPL4P4 | p                 |
|---|--------------------------|---------------------------|-------------------|
| n   | 481                      | 498                       |                   |
| <b>Grade, n (%)</b>                                 |                          |                           | <b>&lt; 0.001</b> |
| G2  | 111 (11.4%)              | 164 (16.8%)               |                   |
| G3  | 133 (13.6%)              | 192 (19.7%)               |                   |
| G4  | 237 (24.3%)              | 138 (14.2%)               |                   |
| <b>IDH status, n (%)</b>                            |                          |                           | <b>&lt; 0.001</b> |
| Mut   | 163 (17.5%)              | 344 (37%)                 |                   |
| WT  | 296 (31.8%)              | 127 (13.7%)               |                   |
| <b>1p/19q codeletion, n (%)</b>                     |                          |                           | <b>&lt; 0.001</b> |
| Codel   | 42 (4.6%)                | 161 (17.8%)               |                   |
| Non-codel   | 373 (41.2%)              | 329 (36.4%)               |                   |
| <b>PRS_type, n (%)</b>                              |                          |                           | <b>0.362</b>      |
| Primary   | 318 (32.6%)              | 312 (32%)                 |                   |
| Recurrent   | 152 (15.6%)              | 164 (16.8%)               |                   |
| Secondary   | 11 (1.1%)                | 18 (1.8%)                 |                   |
| <b>MGMTp_methylation_status, n (%)</b>              |                          |                           | <b>0.002</b>      |
| methyalted  | 200 (24.3%)              | 259 (31.5%)               |                   |
| un-methyalted                                       | 199 (24.2%)              | 164 (20%)                 |                   |
| <b>Age, median (IQR)</b>                            | <b>45 (37.75, 54.25)</b> | <b>41 (34, 49)</b>        | <b>&lt; 0.001</b> |
| <b>Gender, n (%)</b>                                |                          |                           | <b>0.027</b>      |
| Female  | 180 (18.4%)              | 221 (22.6%)               |                   |
| Male  | 301 (30.7%)              | 276 (28.2%)               |                   |
| <b>Radio_status (treated=1;un-treated=0), n (%)</b> |                          |                           | <b>0.080</b>      |
| 0   | 106 (11.2%)              | 87 (9.2%)                 |                   |
| 1   | 357 (37.8%)              | 394 (41.7%)               |                   |

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|--|--------------------------|---------------------------|-------|
| Chemo_status (TMZ treated=1;un-treated=0), n (%) |                          |                           | 0.772 |
| 0  | 130 (13.8%)              | 139 (14.7%)               |       |
| 1  | 335 (35.5%)              | 340 (36%)                 |       |