

## Retrospective Analysis of Radiological Recurrence Patterns in Glioblastoma, Their Prognostic Value And Association to Postoperative Infarct Volume

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**Supplemental Table 1 Multivariate survival analysis for the subgroup of patients with available MGMT-methylation status (n=95)**

| Parameter                                | Hazard Ratio | 95% CI       | P value |
|--|--------------|--------------|---------|
| <b>Overall survival</b>                  |              |              |         |
| Age                                      | 1.01         | 0.99-1.03    | 0.409   |
| Extent of resection (<90% vs. >90%)*     | 3.22         | 1.54-6.76    | 0.002   |
| No therapy for recurrent disease*        | 4.21         | 1.84-9.61    | 0.001   |
| KPS at recurrent disease (<80/>=80)      | 0.95         | 0.53-1.70    | 0.854   |
| MGMT-unmethylated*                       | 2.08         | 1.07-4.03    | 0.030   |
| Multifocal primary tumor                 | 0.89         | 0.49-1.65    | 0.721   |
| Primary tumor: contact to ventricle      | 1.39         | 0.70-2.73    | 0.345   |
| Multifocal recurrence                    | 1.47         | 0.75-2.86    | 0.262   |
| Recurrence: contact to ventricle         | 1.94         | 0.89-4.24    | 0.096   |
| Ependymal spread                         | 2.00         | 0.81-4.97    | 0.134   |
| Recurrence location (distant vs. local)  | 1.13         | 0.66-1.94    | 0.652   |
| <b>Progression free survival</b>         |              |              |         |
| Age                                      | 1.02         | 1.00-1.04    | 0.073   |
| Extent of resection (<90% vs. >90%)*     | 2.65         | 1.24-5.69    | 0.012   |
| No initial therapy*                      | 71.88        | 10.17-508.09 | <0.001  |
| Postoperative KPS (<80/>=80)             | 1.29         | 0.78-2.14    | 0.326   |
| MGMT-unmethylated                        | 2.20         | 1.28-3.78    | 0.004   |
| Multifocal primary tumor                 | 0.76         | 0.45-1.30    | 0.324   |
| Primary tumor: contact to ventricle      | 1.48         | 0.85-2.56    | 0.163   |
| Multifocal recurrence                    | 1.53         | 0.91-2.59    | 0.112   |
| Recurrence: contact to ventricle         | 0.71         | 0.38-1.35    | 0.296   |
| Ependymal spread                         | 1.49         | 0.70-3.19    | 0.305   |
| Recurrence location (distant vs. local)* | 0.59         | 0.36-0.95    | 0.028   |
| <b>Post-progression survival</b>         |              |              |         |
| Age                                      | 1.01         | 0.99-1.03    | 0.292   |
| No therapy for recurrent disease*        | 3.26         | 1.48-7.19    | 0.003   |
| KPS at recurrent disease (<80/>=80)      | 1.47         | 0.82-2.63    | 0.196   |
| MGMT-unmethylated                        | 1.75         | 0.90-3.42    | 0.102   |
| Multifocal primary tumor                 | 0.97         | 0.53-1.79    | 0.922   |
| Primary tumor: contact to ventricle      | 0.66         | 0.35-1.25    | 0.206   |
| Multifocal recurrence                    | 1.04         | 0.54-2.01    | 0.912   |
| Recurrence: contact to ventricle*        | 2.83         | 1.35-5.94    | 0.006   |
| Ependymal spread*                        | 4.44         | 1.77-11.11   | 0.001   |
| Recurrence location (distant vs. local)* | 2.08         | 1.22-3.55    | 0.007   |

CI: Confidence interval; \*  $P < .05$