**Supplementary Table 2. Univariate analyses of factors associated with severe non-neurological**

**morbidity**

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| --- | --- | --- |
| **Parameters** | **n** | **Univariate analysis** |
|  |  | **Unadjusted Hazard Ratio** | **95% CI** | **p-value** |
| **Clinical characteristics** |  |  |  |  |
| Sex |  |  |  | 0.084 |
|  Male | 20 / 102 | 4.65 | 0.80-27.06 |  |
|  Female | 82 / 102 | 1 |  |  |
| Age at diagnosis (per unit, year) | 102 / 102  |  0.94 | 0.85-1.03 | 0.190 |
| Major cardiovascular morbidity |  |  |  | **0.029** |
|  Yes | 6 / 102 | 11.50 | 1.33-82.26 |  |
|  No | 96 / 102 | 1 |  |  |
| ASA Score (per unit) | 102 / 102 | 13.41 | 5.01-18.16 | **<0.001** |
| Modified Frailty Index (per unit) | 102 / 102 | 3.44 | 2.39-4.86 | **0.048** |
| Modified Charlson comorbidity Index (per unit) | 102 / 102 | 1.52 | 0.22-2.17 | 0.163 |
| Pre-operative cranial nerve deficits |  |  |  | 0.672 |
|  Yes | 78 / 102 | 1.58 | 0.24-30.98 |  |
|  No | 24 / 102 | 1 |  |  |
| Pre-operative long tract deficits |  |  |  | 0.427 |
|  Yes | 31 / 102 | 0.44 | 0.02-2.89 |  |
|  No | 71 / 102 | 1 |  |  |
| **Imaging characteristics** |  |  |  |  |
| Tumor volume (cm3) |  |  |  | 0.621 |
|  ≥ 30 | 23 / 73 | 1.61 | 0.20-10.50 |  |
|  < 30 | 50 / 73 | 1 |  |  |
| Peri-tumoral edema |  |  |  | 0.596 |
|  Yes | 51 / 73 | 1.79 | 0.25-36.07 |  |
|  No | 22 / 73 | 1 |  |  |
| Multiple involvement |  |  |  | 0.056 |
|  Yes | 47 / 73 | 1.82 | 0.88-29.00 |  |
|  No | 26 / 73 | 1 |  |  |
| Hydrocephalus |  |  |  | **0.048** |
|  Yes | 28 / 73 | 7.33 | 1.01-147.77 |  |
|  No | 45 / 73 | 1 |  |  |
| **Surgical characteristics** |  |  |  |  |
| Neurosurgeon experience (number of cases) |  |  |  | 0.424 |
|  < 50 | 50 / 102 | 0.50 | 0.07-2.69 |  |
|  ≥ 50 | 52 / 102 | 1 |  |  |
| Surgical approach |  |  |  | 0.701 |
|  Transpetrosal approach | 75 / 102 | 1 |  |  |
|  Combined approach | 27 / 102 | 1.42 | 0.19-7.75 |  |
| **Histopathological characteristics** |  |  |  |  |
| WHO grading |  |  |  | 0.715 |
|  Grade 1 | 90 / 102 | 1 |  |  |
|  Grade 2 / 3 | 12 / 102 | 1.55 | 0.08-10.83 |  |

95% CI: 95% Confidence interval; WHO : World Health Organization