**Supplementary Digital Content 5.** Elaboration of the CranioScore. Example with 2 simulated patients.

**CranioScore formula**

CranioScore model (CS) = -4.8094 + (1.5149 \* [1 if Pre-operative Glasgow Coma Score ≤ 14, else 0]) + (1.0534 \* [1 if History of brain tumour neurosurgery YES, else 0]) + (0.00878 \* Greatest size of tumour, in mm) + (0.5114 \* [1 if Mid-line shift ≥ 3mm, else 0) + (0.5164 \* [1 if Transfusion of packed red blood cells and/or plasma and/or platelets YES, else 0]) + (0.0118 \* Maximum operative Systolic Arterial Pressure, in mmHg) – (0.0130 \* Minimum operative Systolic Arterial Pressure, in mmHg) + (0.2981 \* Duration of surgery, in hours)

$$CranioScore value \left(\%\right)= \frac{e^{CS}}{1+e^{CS}}×100$$

**Example of the CranioScore value with 2 simulated patients.**

|  |  |  |
| --- | --- | --- |
|  | Simulated patient N°1 | Simulated patient N°2 |
| Preoperative Glasgow Coma Score ≤14 | No | Yes |
| History of brain tumour surgery | No | Yes |
| Greater size of brain tumour at imaging (mm) | 23 | 30 |
| Mid-line shift in cerebral imaging ≥ 3mm | No | No |
| Transfusion of blood product during surgery (red blood cell/platelet/plasma) | No | No |
| Maximum of Systolic Arterial Pressure during surgery (mmHg) | 123 | 146 |
| Minimum of Systolic Arterial Pressure during surgery (mmHg) | 75 | 87 |
| Duration of surgery (hours) | 1.8 | 2.0 |
| Value of the CranioScore (%) | 2.7%Low risk patient | 31.0%High risk patient |