**Supplementary Digital Content 5 - Cox proportional hazard regression analysis – Dependent variable: Postoperative delirium**

|  | $\beta$ | Standard error | Wald | *HR* | 95%CI *HR* | *P*-value |
|---|---|---|---|---|---|---|
| **(A)  Model without baseline serum neurofilament light** | | | | | | |
| EuroSCORE II, % | 0.12 | 0.06 | 3.99 | 1.12 | 1.00, 1.26 | 0.046 |
| Global cognitive *z* score | -0.53 | 0.13 | 17.34 | 0.59 | 0.46, 0.76 | <0.001 |
| **(B)  Model including all the variables** | | | | | | |
| EuroSCORE II, % | 0.08 | 0.06 | 1.64 | 1.09 | 0.96, 1.23 | 0.200 |
| Global cognitive *z* score | -0.47 | 0.14 | 12.00 | 0.62 | 0.48, 0.82 | 0.001 |
| Baseline serum neurofilament light ($\log_{10}$) | 0.76 | 0.53 | 2.02 | 2.13 | 0.75, 6.04 | 0.155 |
| **(C)  Model without global cognitive *z* score** | | | | | | |
| EuroSCORE II, % | 0.12 | 0.06 | 3.73 | 1.13 | 1.00, 1.27 | 0.053 |
| Baseline serum neurofilament light ($\log_{10}$) | 1.31 | 0.48 | 7.59 | 3.70 | 1.46, 9.40 | 0.006 |

Abbreviation: EuroSCORE = European System for Cardiac Operative Risk Evaluation ; HR = Hazard Ratio