

## Supplementary Material

### The impact of cognitive reserve on delayed neurocognitive recovery after major non-cardiac surgery: an exploratory substudy

Elena Kainz, Neelke Juilfs, Ulrich Harler, Ursula Kahl, Caspar Mewes, Christian Zöllner, Marlene Fischer\*

\* Correspondence: Marlene Fischer: mar.fischer@uke.de

#### Supplementary material 2. Lost to follow-up.

	Complete datasets n = 67	Lost to follow-up n = 26	p-value
<b>Age (years)</b>	67 (63-74)	69 (64-75)	0.810
<b>Sex</b>			0.068
<i>Female</i>	20 (29.9)	13 (50.0)	
<i>Male</i>	47 (70.1)	13 (50.0)	
<b>BMI (kg/m<sup>2</sup>)</b>	25.4 (23.3-28.1)	27.8 (25.6-29.7)	0.036
<b>Obesity</b>	9 (13.4)	5 (19.2)	0.525
<b>Arterial hypertension</b>	34 (50.7)	18 (69.2)	0.107
<b>Dyslipoproteinemia</b>	16 (23.9)	8 (30.8)	0.496
<b>Diabetes mellitus</b>	7 (10.4)	8 (30.8)	0.017
<b>Current smoking status</b>	14 (20.9)	10 (38.5)	0.082
<b>OSAS</b>	3 (4.5)	0 (0.0)	0.557
<b>ASA</b>			0.526
<i>I</i>	4 (6.0)	1 (3.8)	
<i>II</i>	30 (44.8)	8 (30.8)	
<i>III</i>	32 (47.8)	16 (61.5)	
<i>IV</i>	1 (1.5)	1 (3.8)	
<b>Education</b>			0.744
< <i>highschool</i>	44 (65.7)	18 (69.2)	
≥ <i>highschool</i>	23 (34.3)	8 (30.8)	
<b>CFQ</b>	22 (16-30)	16 (9-25)	0.028
<b>MMSE</b>	28 (28-29)	28 (27-29)	0.452
<b>Duration of surgery, min</b>	203 (150-305)	298 (190-425)	0.006
<b>Estimated blood loss, ml</b>	300 (50-700)	675 (100-1500)	0.014
<b>Epidural anesthesia</b>	42 (62.7)	19 (73.1)	0.344
<b>Sufentanil, µg</b>	75 (55-100)	93 (60-135)	0.072

<b>Type of anesthesia</b>			0.136
<i>Inhalational</i>	62 (92.5)	21 (80.8)	
<i>TIVA</i>	5 (7.5)	5 (19.2)	
<b>Surgical discipline</b>			0.027
<i>General surgery</i>	28 (41.8)	19 (73.1)	
<i>Urology</i>	32 (47.8)	4 (15.4)	
<i>Gynecology</i>	6 (9.0)	3 (11.5)	
<i>Traumatology</i>	1 (1.5)	0 (0.0)	
<b>Length of hospital stay, days</b>	10 (5-16)	13 (6-34)	0.141
<b>CRIq total score</b>	119 (110-132)	118 (105-125)	0.288
<b>CRIq subscore (leisure)</b>	121 (109-130)	122 (108-128)	0.807
<b>CRIq subscore (working)</b>	114 (103-129)	103 (98-122)	0.194
<b>CRIq subscore (education)</b>	111 (103-125)	108 (105-111)	0.253

**Supplementary material 2.** *ASA* American Society of Anesthesiologists, *BMI* Body mass index, *CFQ* Cognitive Failures Questionnaire, *CRIq* Cognitive Reserve Index questionnaire, *DNCR* Delayed neurocognitive recovery, *OSAS* Obstructive sleep apnea syndrome, *TIVA* Total intravenous anesthesia. For group comparisons (lost to follow-up vs. complete datasets) the Mann-Whitney U-test (continuous variables), Chi-square test, or Fisher's exact test (categorical variables) were used as appropriate. Continuous variables are presented as median with interquartile range. Categorical variables are presented as absolute and relative numbers.