

## Supplemental Digital Content 1

**Table 1. Demographic and Clinical Characteristics of Missing Patients vs. Patients in the PERISCOPE Cohort**

	Missing Patients	PERISCOPE Cohort	<i>P</i>
	(N=285)	(N=5,099)	
Age (yr), median (IQR)	54.4 (38.7 – 68.2)	59.1 (44.9 – 70.9)	<0.001
Age (yr)			0.001
≤ 50	130 (45.6)	1,763 (34.6%)	
51 – 80	139 (48.8)	2,944 (57.7%)	
> 80	16 (5.6)	392 (7.7%)	
Sex , male	127 (44.6)	2,606 (51.1%)	0.033
Body mass index (kg/m <sup>2</sup> ), median (IQR)	25.7 (22.8 – 29.1)	26.2 (23.4 – 29.4)	0.104
Smoking status			0.542
Never smoker	159 (55.8)	2674 (52.5%)	
Former smoker	64 (22.5)	1,245 (24.4%)	
Current smoker	62 (21.8)	1,180 (23.1%)	
COPD	21 (7.4)	517 (10.1%)	0.154
Functional status			0.411
Independent	262 (91.9)	4,561 (89.4%)	
Partially/totally dependent	23 (8.1)	538 (10.6%)	
Hypertension	97 (34.0)	2,191 (43.0%)	0.003
Heart failure	41 (14.4)	800 (15.7%)	0.615
Coronary artery disease	30 (10.5)	647 (12.7%)	0.313
Cerebrovascular disease	24 (8.4)	654 (12.8%)	0.028
Liver disease	17 (6.0)	292 (5.7%)	0.794
Chronic kidney disease	8 (2.8)	258 (5.1%)	0.092
Respiratory infection in the last month	11 (3.9)	287 (5.6%)	0.283

Preoperative SpO <sub>2</sub> (%), median (IQR)	98 (97 – 99)	97 (96 – 99)	<i>&lt;0.001</i>
Preoperative SpO <sub>2</sub>			<i>0.199</i>
≤ 90%.	1 (0.4)	65 (1.3%)	
91% – 95%	20 (7.0)	903 (17.7%)	
≥ 96%	136 (47.7)	4,131 (81.0%)	
Anemia (< 10 g/dl)	6 (2.1)	223 (4.4%)	<i>0.648</i>
ASA physical status			<i>0.002</i>
1	89 (31.2)	1,115 (21.8%)	
2	134 (47.0)	2,604 (51.1%)	
3	56 (19.6)	1,280 (25.1%)	
4	6 (2.1)	100 (2.0%)	
Anesthesia			<i>0.017</i>
General and combined*	235 (82.5)	3,890 (76.3%)	
Neuraxial/regional	50 (17.5)	1,209 (23.7%)	
Emergency surgery	43 (15.1)	566 (11.1%)	<i>0.043</i>
Surgical specialty			<i>&lt;0.001</i>
Orthopedic	66 (23.2)	998 (19.6%)	
General and digestive	65 (22.8)	1,362 (26.7%)	
Urology	28 (9.8)	674 (13.2%)	
Gynecology	26 (9.1)	426 (8.4%)	
Ear, nose, throat	15 (5.3)	307 (6.0%)	
Vascular	10 (3.5)	201 (3.9%)	
Breast	8 (2.8)	153 (3.0%)	
Cardiac	6 /2.1)	161 (3.2%)	
Thoracic	3 (1.1)	142 (2.8%)	
Neurosurgery	13 (4.6)	320 (6.2%)	
Other	45 (15.8)	355 (7.0%)	
Surgical incision			<i>0.054</i>
Peripheral	222 (77.9)	2,695 (72.5%)	
Upper abdominal	54 (18.9)	1,092 (21.4%)	

Intrathoracic/cardiac	9 (3.2)	312 (6.1%)	
Duration of surgery (h) median (IQR)	1.3 (0.8 – 2.0)	1.3 (0.8 – 2.3)	<i>0.108</i>
Duration of surgery (h)			<i>0.027</i>
≤ 2.	219 (76.8)	3,657 (71.7%)	
>2 – 3.	43 (15.1)	748 (14.7%)	
> 3.	23 (8.1)	694 (13.6%)	
Postoperative length of stay (d), median (IQR)	3 (2 – 6)	4 (2 – 7)	<i>0.026</i>
Postoperative pulmonary complications	12 (4.2)	404 (7.9%)	<i>0.022</i>
In-hospital mortality	1 (0.4)	45 (0.9%)	<i>0.516</i>

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Data are number of patients (%) unless otherwise stated.

\* This category included general anesthesia alone and general anesthesia combined with regional blockade.

ASA = American Society of Anesthesiologists; COPD = chronic obstructive pulmonary disease; IQR = interquartile range; PERISCOPE= Prospective Evaluation of a Risk Score for postoperative pulmonary COMplications in Europe; SpO<sub>2</sub> = oxyhemoglobin saturation measured by pulse oximetry breathing air in supine position.

**Table 2. Distribution of Missing Variables between European Regions**

	PERISCOPE	Spain	WE	EE
No. Of patients	5,384	2,057	1,652	1,675
Patients with missing data	285 (5.3)	57 (2.8)	114 (6.9)	114 (6.8)
Variables for which data was missing				
Respiratory infection in the last month	2 (0.03)	0 (0)	2 (0.12)	0 (0)
Preoperative SpO <sub>2</sub>	128 (2.4)	36 (1.8)	39 (2.4)	53 (3.2)
Anemia (< 10 g/dl)	167 (3.1)	22 (1.1)	79 (4.8)	66 (3.9)

Data are number of patients (%)

EE = Eastern Europe; PERISCOPE= Prospective Evaluation of a Risk Score for postoperative pulmonary

COmplications in Europe; SpO<sub>2</sub> = oxyhemoglobin saturation measured by pulse oximetry breathing air in supine position; WE= Western Europe.