

**Supplement Table 6.** Multivariable LASSO Regression Analysis In 10-17 Years Of Age Cohort With Documented One-Lung Ventilation “Start” And “End” Times.

N=828	<b>Hypoxemia OR (95% CI), P-value</b>	<b>Severe Hypoxemia OR (95% CI), P-value</b>	<b>Hypercarbia OR (95% CI), P-value</b>
<b>Age (years)</b>	0.95 (0.90 – 0.98), p= 0.046	0.89 (0.80, 0.98), p=0.031	0.81 (0.73, 0.89), p<0.001
<b>Male</b>	-	0.65 (0.37, 1.13), p=0.127	1.37 (0.81, 2.39), p=0.248
<b>ASA 3 or 4</b>	-	-	-
<b>Extremes of weight*</b>	2.25 (1.41, 3.52), p=0.001	3.44 (1.96, 5.98), p<0.001	1.03 (0.52, 1.90), p=0.930
<b>Type of Surgery</b>			
<b>1 Intrapulmonary**</b>			
<b>2 Mediastinal</b>	-	-	-
<b>3 Pleurodesis and/or Decortication</b>	-	-	-
<b>4 Other</b>	-	-	-
<b>5 Pneumothorax Surgery</b>	-	-	-
<b>Right-sided surgery</b>	2.20 (1.41, 3.51), p=0.001	2.97 (1.63, 5.75) p=0.001	0.99 (0.59, 1.68) p=0.977
<b>Bronchial blocker</b>	-	1.95 (0.68- 6.21), p = 0.362	-
<b>Video-assisted thoracoscopic surgery</b>	-	-	1.41 (0.79, 2.56), p=0.250
<b>Room air SpO<sub>2</sub> &lt;98%,</b>	2.79 (1.82, 4.27), p<0.001	3.27 (1.88, 5.66), p<0.001	1.04 (0.56, 1.86), p=0.885
<b>Low tidal volume ventilation (TV≤6 mL/kg+ ≥4 cmH<sub>2</sub>O PEEP)</b>	-	-	-
<b>One-lung ventilation duration (hr)</b>	1.06 (0.94, 1.19), p=0.305	0.99 (0.84, 1.16), p=0.894	1.15 (1.01, 1.31), p=0.034

The optimal Lambda Value for 10-17 year of age cohort was 0.0242, 0.0414, and 0.0422, respectively for hypoxemia, significant hypoxemia, and hypercarbia with an Alpha value of 1. - = Beta coefficient set to 0 by least absolute shrinkage and selection operator.

\*Extremes of weight = patient weight >95% or <5% for age according to the Centers for Disease Control and Prevention (Atlanta, Georgia) growth chart.

\*\*Intrapulmonary Surgery used as reference to estimate other odds ratios.

LASSO, least absolute shrinkage and selection operator; ASA, American Society of Anesthesiologists Physical Status; SpO<sub>2</sub>, oxygen saturation measured by pulse oximetry; TV, Tidal Volume; PEEP, Positive End Expiratory Pressure.