**Supplemental Table 1**. Univariate analysis of categorical variables

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| --- | --- | --- | --- |
| **Variable** | **Odds ratio** | **95% CI** | ***P* value** |
| **Pneumothorax rate** |  |  |  |
| Type of procedure | 0.35 | 0.10 – 1.25 | 0.09 |
| Sex | 2.13 | 0.54 – 8.37 | 0.34 |
| Mechanical ventilation | 0.29 | 0.04 – 2.30 | 0.30 |
| Mode of ventilation |  |  | 0.64 |
| Provider |  |  | 0.30 |
| Ultrasound guidance | 0.13 | 0.02 – 0.89 | 0.02 |
| Low platelets | 0 |  | 0.37 |
| High INR | 0.55 | 0.11 – 2.67 | 0.73 |
| High PTT | 0 |  | 0.37 |
| **All complications** |  |  |  |
| Type of procedure | 0.5332 | 0.18 – 1.54 | 0.24 |
| Sex | 1.83 | 0.61 – 5.48 | 0.27 |
| Mechanical ventilation | 0.40 | 0.09 – 1.79 | 0.21 |
| Mode of ventilation |  |  | 0.94 |
| Provider |  |  | 0.03 |
| Ultrasound guidance | 0.09 | 0.01 – 0.66 | <0.01 |
| Low platelets | 0 |  | 0.12 |
| High INR | 0.55 | 0.15 – 2.00 | 0.36 |
| High PTT | 0 |  | 0.11 |
| **Bleeding** |  |  |  |
| Type of procedure | 0.36 | 0.02 – 5.87 | 0.46 |
| Sex | 0 |  | 0.50 |
| Mechanical ventilation | 2.67 | 0.16 – 43.16 | 0.47 |
| Mode of ventilation |  |  | 0.98 |
| Provider |  |  | 0.07 |
| Ultrasound guidance | 0 |  | 0.51 |
| Low platelets | 0 |  | 1 |
| High INR | 2.27 | 0.14 – 36.67 | 0.52 |
| High PTT | 0 |  | 1 |
| **Malposition** |  |  |  |
| Sex | 1.80 | 0.16 – 20.02 | 0.63 |
| Mechanical ventilation | 1.33 | 0.12 – 14.85 | 0.82 |
| Mode of ventilation |  |  | 0.64 |
| Provider |  |  | 0.16 |
| Ultrasound guidance | 0 |  | 0.26 |
| Low platelets | 0 |  | 0.50 |
| High INR | 0 |  | 0.56 |
| High PTT | 0 |  | 0.49 |