**Supplemental Table 1: Respiratory Parameters in the Anesthetized Pig (n=6)**

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| **Spontaneous Effort Titration** |
| **Position** | **PEEP** | **Paralysis** | **∆Pes -2.5** | **∆Pes -5** | **∆Pes -7.5** | **∆Pes -10** |
| **Peak airway pressure, cmH2O**  |
| Supine | Low | 33.2±4.7 | 32.8±5.1 | 31.7±5.3 | 30.7±6.6 | 30.3±7.6 |
| High | 31.4±1.5 | 30.7±2.4 | 27.4±2.4§ | 25.5±3.3§ | 24.7±3.7§ |
| Prone | Low | 30.2±3.4 | 31.1±3.8 | 29.9±3.7 | 27.4±5.2 | 26.6±5.0§ |
| High | 31.9±2.6 | 29.9±4.3 | 26.5±2.4§ | 23.7±2.4§ | 22.6±2.5§ |
| **Plateau airway pressure, cmH2O** |
| Supine | Low | 27.6±3.5 | 29.6±3.4§ | 29.9±3.4§ | 29.7±3.4§ | 29.6±3.6§ |
| High | 28.3±1.8 | 28.4±1.8 | 28.3±1.7 | 28.1±1.7 | 27.7±1.6 |
| Prone | Low | 26.1±3.1 | 27.3±3.4 | 27.3±2.9 | 27.4±2.1 | 27.5±2.0§ |
| High | 28.7±2.7 | 28.8±2.4 | 27.9±2.1 | 27.7±2.3 | 28.0±2.5 |
| **Positive end-expiratory pressure, cmH2O**  |
| Supine | Low | 7.6±2.4 | 7.6±2.4 | 7.6±2.4 | 7.6±2.4 | 7.6±2.4 |
| High | 15.8±1.9\* | 15.8±1.9\* | 15.8±1.9\* | 15.8±1.9\* | 15.8±1.9\* |
| Prone | Low | 7.4±2.1 | 7.4±2.1 | 7.4±2.1 | 7.4±2.1 | 7.4±2.1 |
| High | 16.0±2.4\* | 16.0±2.4\* | 16.0±2.4\* | 16.0±2.4\* | 16.0±2.4\* |
| **Driving pressure, cmH2O**  |
| Supine | Low | 20.1±4.4 | 22.0±4.1§ | 22.3±4.2§ | 22.1±4.1§ | 22.0±4.6§ |
| High | 12.5±2.4\* | 12.6±2.3\* | 12.5±2.1\* | 12.3±2.3\* | 11.9±3.0\* |
| Prone | Low | 18.5±3.8 | 19.7±4.3§ | 19.7±3.5 | 19.8±2.7 | 20.0±2.7§ |
| High | 12.7±2.0\* | 12.8±2.1\* | 12.0±2.3\* | 11.7±2.6\* | 11.9±2.0\* |
| **Tidal volume, mL/kg** |
| Supine | Low | 6.7±0.6 | 6.7±0.6 | 6.7±0.5 | 6.7±0.6 | 6.8±0.7 |
| High | 6.9±0.5 | 6.9±0.5 | 7.0±0.6 | 7.1±0.5 | 7.1±0.5 |
| Prone | Low | 6.8±0.5 | 6.8±0.5 | 6.8±0.5 | 6.9±0.4 | 7.0±0.4 |
| High | 6.9±0.5 | 6.9±0.5 | 7.0±0.5 | 7.1±0.6 | 7.0±0.6 |
| **Plateau transpulmonary pressure, cmH2O**  |
| Supine | Low | 15.2±3.2 | 15.3±3.0 | 15.8±3.3 | 15.6±3.4 | 15.4±3.7 |
| High | 13.1±3.4 | 13.1±3.0† | 13.0±3.5† | 12.9±3.5† | 12.7±3.7† |
| Prone | Low | 16.4±3.4 | 17.2±3.7 | 16.9±3.5 | 16.5±3.3 | 16.4±2.9 |
| High | 16.7±1.5 | 16.7±1.8 | 16.1±1.6 | 16.3±1.5 | 17.2±1.8 |
| **Expiratory transpulmonary pressure, cmH2O**  |
| Supine | Low | -1.2±2.5‡ | -1.1±2.3‡ | -1.4±2.3† | -1.6±2.1‡ | -1.5±2.0‡ |
| High | 3.2±2.6 | 3.1±2.3 | 2.6±2.6 | 2.4±2.7§ | 2.3±2.4§ |
| Prone | Low | 2.6±2.4 | 3.0±2.9 | 2.3±2.6 | 2.0±2.4 | 2.2±2.4 |
| High | 6.7±2.0† | 6.7±1.7 | 6.9±2.1‡ | 6.5±2.2‡ | 6.4±2.6‡ |
| **Change in esophageal pressure, cmH2O**  |
| Supine | Low | 5.1±0.8 | -2.9±0.6§ | -4.7±0.9§ | -7.8±0.5§ | -10.3±0.8§ |
| High | 3.6±0.9 | -2.7±0.8§ | -5.0±0.4§ | -7.3±0.6§ | -9.7±0.6§ |
| Prone | Low | 4.5±1.3 | -3.0±0.6§ | -5.6±0.3§ | -7.6±0.6§ | -9.8±1.1§ |
| High | 3.6±0.9 | -2.9±0.7§ | -5.5±0.5§ | -7.9±0.6§ | -10.1±0.8§ |

**Abbreviations**: PEEP = positive end-expiratory pressure.

\*p < 0.05 compared with Low PEEP groups; †p <0.05 compared with Low PEEP + Prone; ‡p <0.05 compared with other groups; §p <0.05 compared with paralysis within groups.