**Supplementary Information**

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**Comparison of Mainstream End Tidal Carbon Dioxide on Y-Piece Side Versus Patient Side of Heat and Moisture Exchanger Filters in Critically Ill Adult Patients: a prospective observational study**

**Content**

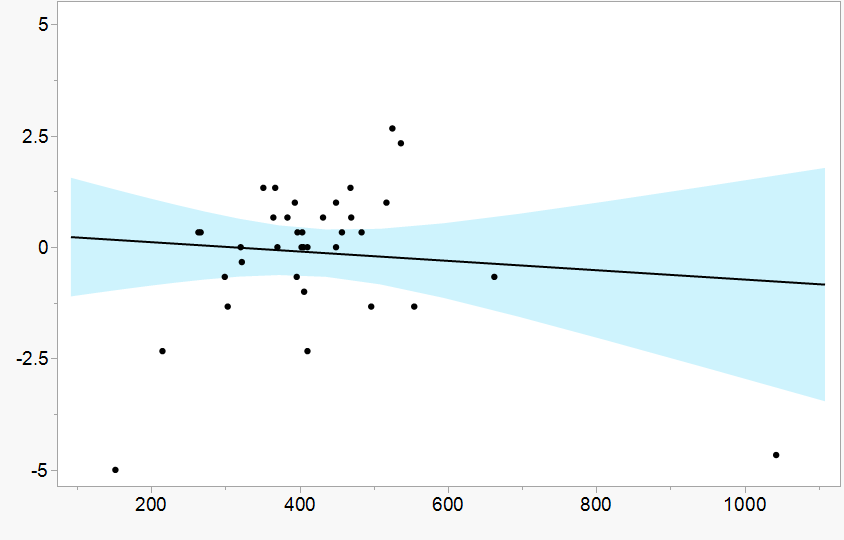
**Supplemental Table 1:** Mean differences and 95% limits of agreement in Bland-Altman analyses.

**Supplemental Figure 1:** The relationship between tidal volume and differences in Y-piece side EtCO2 and patient side EtCO2.

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| **Supplemental Table 1. Mean differences and 95% limits of agreement in Bland-Altman analyses.** | | | | | |
| **Difference** | **Mean difference (95% CI)** | **SD of difference** | **LOA** | **Lower LOA 95% CI** | **Upper LOA 95% CI** |
| PaCO2 - EtCO2 on Y-piece side (mm Hg) | 0.99 (-0.66–2.63) | 4.93 | -8.67 to 10.65 | -11.51– -5.84 | 7.82–13.49 |
| PaCO2 - EtCO2 on patient side (mm Hg) | 0.87 (-0.80–2.54) | 5.00 | -8.93 to 10.67 | -11.81– -6.06 | 7.80–13.55 |

CI, confidence interval; SD, standard deviation; LOA, limits of agreement; EtCO2, End-tidal carbon dioxide.

**Supplemental Figure 1**. The relationship between tidal volume and differences in Y-piece side EtCO2 and patient side EtCO2.



Correlation coefficient = -0.096

Linear regression coefficient = -0.001 (95% CI, -0.005–0.003)

Y-piece side EtCO2 - patient side EtCO2

(mm Hg)

Tidal volume (mL)

Differences between Y-piece side EtCO2 and patient-side EtCO2 were plotted against tidal volume. The tidal volume was the average of tidal volume at the time of the Y-piece side EtCO2 measurement and tidal volume at the time of the patient side EtCO2 measurement. Pearson’s correlation coefficient and regression coefficient of unadjusted linear regression of EtCO2 differences on tidal volume are presented. The fitted regression line with 95% CI (blue-tinged area) is presented. EtCO2, end-tidal carbon dioxide.