**Supplemental Table 1.** Distribution of Plasma Inflammation and Endothelial Activation Biomarker Concentrations among Children on ECMO Support (n=97)\textsuperscript{a}

| Biomarker             | ECMO day 1       | Peak                |
|-----------------------|------------------|---------------------|
| IFNγ, pg/ml           | 15.69 [7.65, 34.66] | 18.78 [10.33, 59.09] |
| IL-6, pg/ml           | 34.55 [13.45, 207.6] | 58.89 [19.14, 275.71] |
| IL-1β, pg/ml          | 0.35 [0.17, 0.72]   | 0.45 [0.23, 1.59]    |
| TNFα, pg/ml           | 3.93 [2.28, 6.46]   | 5.72 [3.98, 9.84]    |
| E-selectin, ng/ml     | 16.7 [10.74, 30.45] | 22.22 [15.43, 41.64] |
| P-selectin, ng/ml     | 95.52 [79.22, 132.85] | 146.61 [105.47, 184.84] |
| ICAM-3, ng/ml         | 0.32 [0.23, 0.41]   | 0.39 [0.33, 0.50]    |
| TM, ng/ml             | 5.13 [3.97, 6.95]   | 7.14 [5.47, 9.18]    |
| tPA, ng/ml            | 6.30 [4.23, 8.62]   | 8.87 [6.41, 12.75]   |
| PAI-1, ng/ml          | 119.43 [34.65, 310.59] | 165.86 [61.61, 373.02] |
| PAI-1/tPA molar ratio | 31.31 [12.45, 58.24] | 36.80 [16.68, 71.06] |

ECMO, extracorporeal membrane oxygenation; IFNγ, interferon gamma; IL-6, interleukin-6; IL-1β, interleukin 1 beta; TNFα, tumor necrosis factor alpha; ICAM-3, intercellular adhesion molecule-3; TM, thrombomodulin; tPA, tissue plasminogen activator; PAI-1, plasminogen activator inhibitor-1.

\textsuperscript{a} Median [interquartile range]

\textsuperscript{b} Highest plasma concentration observed during ECMO course. Plasma biomarker measurements were obtained on ECMO days 1, 2, 3, 5, 7 and every third day thereafter until ECMO decannulation if ECMO duration was longer than 7 days.
Distributions of ECMO day 1 and peak (highest level observed during ECMO course) PAI-1/tPA molar ratios stratified by primary ECMO indication, neuroimaging status, and survival to hospital discharge.

ECMO day 1 biomarker level for primary respiratory indication (black ●) vs non-respiratory indication (gray ●), Peak biomarker level for primary respiratory indication (black ▲) vs non-respiratory indication (gray ▲). ECMO day 1 biomarker level with normal neuroimaging (black ●) vs abnormal neuroimaging (gray ●), Peak biomarker level with normal neuroimaging (black ▲) vs abnormal neuroimaging (gray ▲). ECMO day 1 PAI-1/tPA molar ratios in those who survived (black ●) vs those who died (gray ●), Peak biomarker level in those who survived (black ▲) vs those who died (gray ▲). Wilcoxon rank sum p-values (** indicates p < 0.001) are presented contrasting differences in location between groups.