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Title: “Integrative Omics Analysis of Sepsis: Biomarkers for Improved Patient Management”

Synopsis: Sepsis is a leading cause of death in the ICU and costs billions for patient health care; however, biomarkers that inform patient therapy, pharmaceutical intervention or outcome prediction have severely lagged behind. This is likely based on a poor understanding of biomarkers and how they relate to mechanism, pathophysiology. Our data suggests that patients die from organ dysfunction that is resultant of mitochondrial dysfunction similar to the Warburg effect (glycolysis to maintain the cell despite adequate oxygenation). The biomarkers we have identified represent an underlying pathophysiology that is independent of hypoxia yet remains predictive of sepsis outcomes.