Ventral hernia repairs are performed on a regular basis at the University Hospital. Some patients experience post-operative complications, which require admission to the intensive care unit. It has been noted that of patients admitted to the ICU following similar complicated ventral hernia repairs there is roughly a 20% mortality rate. The goal of this research was to determine potential risk factors for poor outcomes, and to discover early clinical markers that indicate a poor prognosis. The intent was to define prognostic markers that can be applied to future patients in the SICU with hopes of decreasing mortality rates. A retrospective cohort chart study was performed using 18 patients, of whom 4 were deceased. All of the patients had undergone the same basic procedure (ventral hernia repair), the same surgeon performed all surgeries, and all of the patients were admitted to the SICU with similar post-operative complications. Specific data was collected for each patient, twice per day each day they were in the SICU. Data included, vitals, blood studies, serum chemistries, arterial blood gasses, input/output, ventilator data, and medications. Preliminary data suggests a strong correlation between blood glucose control, as well as kidney function (BUN/Creatinine) markers, and increased mortality. Other risk factors are being analyzed. Based on these early results, it is likely that closer monitoring and control of blood glucose levels, and kidney function will lead to decreased mortality rates.