**Abstract**

***Background*** Renal dysfunction serves as both a cause and a complication of heart failure through multiple mechanisms. Studies have shown that the serum level of creatinine, a substance readily filtered out by healthy kidneys, acts as an indicator of kidney function yet haven’t clearly delineated the capability of serum creatinine level to predict mortality for cases of heart failure. This project hence sought to investigate the association between serum creatinine level and survival time length as well as 30-day survival among heart failure patients.

***Methods*** A dataset consisting of 299 patients of heart failure enrolled from April 2015 to December 2015 was studied. Serum creatinine level was first treated as a continuous variable then classified into two different categories (normal vs. abnormal) with multivariable-adjusted Cox proportional hazards models used to estimate hazard ratios (HR) and 95% confidence intervals (CI). Logistic regression models which included the effects of other variables and effect modification on serum creatinine level were also fitted, and model selection was performed.

***Results***

***Conclusion***

**Keywords**: Heart failure; Serum creatinine level; Survival; Time to event; Multivariable-adjusted Cox proportional hazards models; Logistic regression models; Model selection