# Capstone for Impact Submission | GY2019

**Project Title:** Renal Artery Malperfusion after Aortic Dissection: Clinical Diagnosis and Correlation with Acute Kidney Injury

**Student Name(s):** Hoogmoed, Ryan

**Advisor Names(s):** David Williams

**Branch:** Procedure Based Care

**Path of Excellence:**

**Handover/Transition:**
If this project can be continued by another UMMS student, you may contact them at the following email address/phone number (N/A if project cannot be handed over): **N/A**

**Summary:**

Retrospective analysis of 473 patients with aortic dissection who underwent aortic catheterization for the diagnosis and treatment of renal artery malperfusion. Objectives included assessing the association of AKI with renal artery malperfusion and assessing the clinical ability of physicians to identify renal malperfusion.

**Methodology:**

1. Reviewed the medical records of patients admitted to the University of Michigan between 1995 and 2018 with aortic dissection requiring aortic catheterization

2. Identified AKI using changes in serum creatinine levels according to the Kidney Disease: Improving Global Outcomes (KDIGO) criteria

3. Performed statistical analysis using chi-squared test or Fisher's exact test for dichotomous variables, and Student's t-test for continuous variables.

**Results/Conclusion:**

AKI is common among patients with aortic dissection and is associated with renal artery obstruction. However, clinical suspicion and AKI are poor predictors of renal artery obstruction. Future studies are needed to improve identification of renal artery malperfusion in patients with aortic dissection.

**Reflection/Lessons Learned:**

Project provided me with an appreciation for IRBs and the importance of developing a good research question.