

Compartment Syndrome Diagnosis using pH or glucose

Client: **Dr. Christopher Doro**

Advisor: **Dr. Jeremy Rogers**

Team: **Alex Goodman, Kelsey Murphy, Mark Austin, Will Bacon**

Date: **September 13, 2018**

Problem Statement

Acute compartment syndrome (ACS) impacts many trauma patients and presents medical providers with perplexing dilemmas regarding the diagnosis and treatment of this condition. ACS diagnosis is most frequently based on clinical examination findings, but traditional measurements of intracompartmental (IC) pressure are unreliable and therefore commonly lead to misdiagnosis and unnecessarily invasive procedures. The goal of this project is to create a diagnostic tool that accurately, continuously, and easily quantifies biochemical marker associated with ACS. These markers – pH, glucose, or pyruvate – may expedite ACS diagnosis and prevent patients from experiencing a misdiagnosis or undergoing an unnecessary procedure.

Last Week's Goals

N/A

Summary of Design Accomplishments

- Reviewed work of past groups on this project
- Met with representative from Spring 2018 group to learn about their approach/future work

This Week's Goals

- To contact our client, Dr. Doro, and set up a meeting time with him
- To formulate questions for our client regarding design specifications and previous project work
- To begin researching current compartment syndrome diagnosis techniques and issues with these techniques
- To look over prior BME design team projects to see what work has been done in the past
- To prepare for our advisor meeting

Project Difficulties

N/A