**Group Progress Report**

**Group**: Jocelyn Corey, Gauri Prasad, Tim Hoer

**Project**: Needle Localizer

**Date: 10/21/17**

**Goals for the past week** (copied from last progress report)

1. IP patent research
2. Shadow Dr. Polascik
3. Think of and sketch initial prototype designs
4. Research engineering knowledge for the device (ex: more about how metal detection works, electromagnetics)
5. Create mechanical prototype with cheap materials

**For each goal above, comment on your progress**:

1. We completed the IP patent research and found multiple patents that introduced new methods of localizing items in the body during surgery. This helped expand our solution ideas for our problem as well as imposed limits on current intellectual property that we must be aware of.
2. Jocelyn shadowed Dr. Polascik Thursday morning during a robotic kidney surgery in which he was removing a tumor from the underside of a kidney. She observed intraoperative ultrasound among many other surgical methods and talked to the surgeons and nurses in the room to gather more information.
3. Tim and Gauri created an initial prototype design in class Thursday.
4. We looked into current metal detectors on the market as well as the various size limits of metal detectors. In lab, we built a Hall Effect sensor PCB which is actually a possible circuit we could use in our metal detectors.
5. See point 3. The prototype was sketched and prepared before this.

**Goals for this week**:

1. Begin developing a project illustration and prepare for the first oral prototype demo
2. Narrow down design ideas and start combining ideas to develop a robust solution
3. Work on finger tremor counter project for lab

**Are there any difficulties with which you need assistance?**

We need more information on how to create the PCB for the finger tremor project. We could use more design time in class or just consulting time with a professor to look into the feasibility of certain design solutions and how to best implement them.

**Other comments:**

N/A