**Dr. Okuno**

This summer I was privileged to work with Dr. Okuno in the oncology department where we performed a retrospective study of patients diagnosed with rhabdomyosarcoma from 2000-2015. Our goal was to gain knowledge of the history of adult rhabdomyosarcoma and to see its response to different chemotherapy regimens by doing a chart review and performing statistical data analysis using the JMP program. Before I could abstract any data however, I had to do a week of background research (literature review) on adult rhabdomyosarcoma. In addition, with the help of Dr. Okuno we submitted an IRB proposal hypothesizing our research, and its aims. I also had to train in IRB, privacy laws, and attend electronic medical record orientations in order to access patient information and shadow physicians. This took up the majority of my first 3 weeks here at Mayo.

For weeks 5-7, I then began abstracting and reviewing patient information using the Advance Cohort Explorer (ACE), which holds the clinical data repositories and Synthesis, which has the patients’ electronic medical records. During the last two and a half weeks I created and finalized my poster and prepared an abstract and manuscript for future publication. After this program, I will continue to write my papers. In terms of working atmosphere, I did the majority of my work independently in the Harwick building, in the Plummer building and in Dr. Okuno’s office.

Besides the research component of this internship, I was also able to shadow one to two physicians of various specialties every week. Dr. Okuno and his secretary Candy were amazing in that they scheduled all of my shadowing for me. Shadowing was a great way for me to learn more about medicine and allowed me to understand more of the complexities of healthcare. This internship also allowed me to attend many seminars, in addition to our own St. Olaf lecture series. The seminars were usually about an hour long. I usually went to the medicine grand rounds, the pediatric grand rounds and sometimes the center for health care and delivery grand rounds. They were very interesting and provided lunch to their attendants.

**Scott Kaese**

This summer, I worked in the Center for the Science of Health Care Delivery. I participated in three different projects. For a short while in the first couple of weeks, I collected RFID accuracy testing data in the Emergency Department. This involved a lot of strategic walking around the ED to see how well the RFID system recorded my location by reading a card in my ID badge holder. I also worked on a systematic review of surgeon workload in regards to laparoscopic and robotically­assisted surgery. It was great to learn a new skillset in regards to research, especially because systematic reviews are of growing prevalence. I had a role in abstract and full text screening, and I will continue to be a part of this project until the publication of the final paper next year. My third project was studying interruptions of nurses and their impact on cognitive workload in the Emergency Department through the ED CELL (Clinical Engineering Learning Lab). As a part of this study, I spent over 140 hours in the Emergency Department, including overnight. I partnered with others to do the data analysis for this project using R software. In total, these were three projects that gave me a broader perspective on healthcare and research and allowed me to collaborate with other interns and employees. Additionally, my mentor encouraged me to shadow physicians in response to my desire to be a physician. I spent approximately one half­day a week in a variety of different specialities.

**Dr. Allen**

First of all, I would say that each of us seemed to have had a fairly unique experience even though we were technically in the same program. For me personally, I had quite a bit of independence, which really works for me. I hate being in one spot and my schedule allowed me to work in a couple of different offices or be out in the clinic observing and shadowing. I was set up with a really thorough shadowing schedule in addition to my research, which allowed me to see a large variety of professionals in many different specialties within the clinic as well as the OR. Because of the reputation of the Mayo clinic, very interesting and rare cases are referred to them regularly, which allowed me the chance to see some major surgeries that probably wouldn’t have been possible in other places. In a lot of ways, I have been extremely spoiled by already getting the chance to witness some of the things I got to see here at Mayo.

Before I was able to start my research, I was given a handful of papers to read relating to Esophageal cancer. These ranged from more foundational concepts such as epidemiology of cancer, the classification system for esophageal cancer, and types of surgical procedures for the esophagus to more specific papers researching the effectiveness of neoadjuvant therapies and their outcomes. My actual research consisted of a great deal of data collection from Mayo’s electronic patient record. I actually was able to pick up on a bunch of medical terminology that I had never been exposed to before. Once I made my data set, I then worked on producing some preliminary results (as the project is still ongoing), which turned out to represent a very interesting trend. This was incredibly satisfying for me because if this trend continues to hold true with future data collection, patient care could be improved as a result.

 As far as the research experience goes, I was extremely happy with my overall project, it couldn’t have been better really. My project was actually the first time I was involved with any sort of real research at all, so I didn’t know what to expect. However, I believe it ended up being the most impactful part of my time at Mayo and potentially the most impactful thing I’ve ever done. It was the first time in my life where I felt like I was contributing to patient care and as a result, this whole summer has definitely inspired me to continue along this medical path.

**Dr. St. Louis**

Working in Dr. St Louis’ lab is a very fun and upbeat experience. A lot of the people you are working with are young and have the same interests as you, most of which are Ole alumni. In the beginning of the summer, I was trained in on how to find abnormal muscle activity in REM through polysomnography. The other lab members will support you through the process and are always there if you need to ask questions. Throughout the summer, weekly journal discussions are held to stay up to date with the current research that is similar to the research that we were doing. While research will keep you busy, shadowing is definitely still available. I shadowed about once a week and would always get it planned ahead of time with Dr. St. Louis. However, towards the end of the summer when my project was getting close to being due, I was unable to shadow as much. It is important to not shadow too much because the lab does need you to fulfill your duties. I was able to apply my knowledge of statistics and conduct original analysis on data I had analyzed through the summer, and toward the end of the summer during the last weeks, I created a poster for the annual presentation with the other summer students, faculty, and parents, and also prepared an abstract based on our research findings that will be the basis for future publications. After this program, I plan to complete the research begun during the summer over the coming year, and will have an opportunity to author future manuscripts and research presentations at national meetings. I hope to return to the lab and continue work there after graduation.

**Dr. Larson**

My position in the division of colorectal surgery was focused on working on two different projects. I utilized two different prospective datasets to perform two retrospective reviews for the department. I worked with my physician mentor, a pharmacist, and statistician to write the papers. My mentors helped me learn background information of the practice and literature needed for the projects. When not working on the projects, I was able to attend seminars and shadow a number of specialties to broaden my experiences.