**RMDSC Practicum Project A**

**Start Date**: 14-May-2018 **End Date**: 31-Aug 2018

**Hours per week**: 35

The Lung Cancer Research group is seeking a highly motivated, detail-oriented student with medical training for a combination of a research and skills internship. Our group possesses a one-of-a-kind lung cancer data repository containing more than seven thousand records with 800 matched tissue cases which are interrogated for significant clinical as well as translational research findings.

The internship will focus on developing an analytical plan for a small cell lung cancer (SCLC) project, as well as performing data entry and quality control tasks. An ideal outcome will be the documentation, and implementation of standard operating procedures based on the SCLC project that can be applied to future analyses. Our team will also help the successful applicant build leadership and communication skills by providing opportunities to participate in method development and manuscript preparation.

**SCLC – Extensive vs. limited stage study**

The SCLC project is a perfect opportunity to build skills and knowledge in the real-world application of biostatistics methods by assisting the project lead in the creating an analytical plan and performing validations. It is hoped that a student will bring novel statistical methods that will expand the GLR team’s current repertoire.

Small cell lung cancer (SCLC) represents only 13 – 15% of lung cancers but has posed significant challenges due to minimal progress in therapeutics development prior to the recent advent of immunotherapy. Using the GLR database, our objective is to establish baseline characteristics and overall survival of limited and extensive stage SCLC patients diagnosed within a 5 year period at the Tom Baker Cancer Centre. We will define the clinical and demographic features of patients diagnosed with SCLC from 2010 to 2015, determine the rate of systemic treatment uptake, and investigate the impact of prophylactic cranial irradiation, curative intent, and palliative treatments on overall survival. This information will be crucial in assessing the effectiveness of novel anti-immune checkpoint treatment strategies.

**Data management**

Training will be provided by the GLR team for clinical data extraction from paper charts, microfiche as well as paper records. These activities will allow the intern to gain valuable experience with Alberta Health Services data acquisition processes, as well as how this information is extracted and transferred to the research database. The GLR team will share current processes for evaluating the integrity and reliability of the information we collect, and assign data cleaning and quality assurance tasks to build on clinical data entry skills. A workstation with our group will be provided with secure access to both AHS systems and the GLR database.

**Leadership**

An intern with GLR will have the opportunity to learn management and leadership skills by contributing to the development of improvement processes, and communicating the progress of this work to a variety of audiences.

Expanding on the analysis plan established for the SCLC project, a procedure will need to be created to aid the GLR team in applying similar analyses to future projects. It is expected that a student will suggest recommendations on our current data workflows as a result of this exercise. Another goal for GLR is to have a standardized statistical report that describes these methods in both technical and lay language.

Opportunities will be available over the course of this internship to communicate method development progress by the documentation of standard operating procedures, presenting at lab meeting, and preparing statistical methods for manuscripts.

In the end, the GLR hopes to establish a productive and long-lasting relationship, as well as provide mentorship to a future leader in cancer medicine.