

2014/2015 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on **4 July 2014**

Supervisor Information (First named supervisor will be the contact):

Supervisor's Name(s): Dean Harris

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Research Category (Choose one category only – to be used for judging the students' presentations):

Clinical X

Laboratory

Community

Project Title (20 words MAXIMUM):

Prognostication in hepatic resection for colorectal metastases in Christchurch New Zealand

Project Description:

In New Zealand in 2012 3012 people were diagnosed with colorectal cancer, 43 people in every 100,000 New Zealanders each year. The liver represents the most frequent site for colorectal cancer to spread to with 20-30% of patients having liver metastases at presentation and a similar proportion will have metastatic liver disease develop after resection of their colorectal primary. Surgical resection of liver only disease has been associated with improved survival with 5 year survival rates between 30-50%. Only 10-20% of patients will however have liver disease amenable to resection with a small number being able to be converted to operability with chemotherapy. Liver resection is being applied to an increasing pool of patients and it is important to identify those most likely to benefit from this expensive procedure and those who could be spared its potential morbidity. Several prognostic scores are in use around the world and the Memorial Sloan-Kettering Cancer Centre (MSKCC) have also produced a nomogram for predicting survival after liver resection.

We will assess all 225 patients who underwent liver resection in Christchurch since 2005 for colorectal metastases. The patients are recorded in a current database and hospital notes will be pulled prior to start allowing the project to be easily completed within the time frame. Patient notes will be reviewed and the Fong and Iwatsuki prognostic scores will be applied as well as a MSKCC nomogram. We hope to assess these scores and see which best suits our population as well as validating the MSKCC score for a New Zealand population. This work will also look at the survival outcomes of this population and may identify other factors to be considered such as the role of PET scanning. It is hoped this will feed into a current molecular study looking at digital PCR techniques for measuring cell free tumour DNA in the blood stream of patients, a so called "liquid biopsy". The addition of such molecular markers may further still enhance the prediction of survival in this cohort of patients.

The student will learn to identify and enter data from clinical notes, compile an excel database, learn the basics of medical statistics, acquire a good understanding of the management of metastatic colorectal cancer with a focus on liver resection and leave the project with the modern key clinical skill of audit. They will know that the data produced will interlink with other ongoing projects on the management of colorectal liver metastases as well as possibly acting as a catalyst for further investigative avenues.

