

Principal Investigator: Dr. Rachel Murphy

Lifestyle and Cancer: Identifying new risk factors for the most common cancers in Canada

In Canada, 1 in 2 people will be diagnosed with cancer during their lifetime, with lung and prostate cancer being two of the most common cancers diagnosed. Many of these cancers may be prevented through lifestyle changes, including changes to diet and physical activity levels. However, the link between lifestyle and cancer is poorly understood. Only age, race and family history are well-known risk factors for prostate cancer and little is known about modifiable risk factors for lung cancer beyond smoking. The project aims to carry out a series of studies to identify the lifestyle, environmental, and genetic factors that may increase the risk that a person will be diagnosed with lung or prostate cancer. Using data from the Canadian Partnership for Tomorrow Project, we aim to investigate known and potentially new risk factors for prostate and lung cancer collected from physical measurements, questionnaires, and blood samples, including medical history, lifestyle (diet, body size, sleep, physical activity), and environmental factors (e.g. exposure to toxins). Cancer development was determined over 9 years, during which time more than 800 lung and prostate cancers were diagnosed. People who were diagnosed with cancer will be matched with a person of the same age, sex, race, and family history of cancer for comparison. Statistical modeling will be used to identify new risk factors that may help identify people who are at risk of developing cancer. This information will inform the design of interventions to prevent these cancers in the future and improve the health of Canadians.