**CIHR Lay abstract**

Lay Title: Effects of exercise on tumor progression in men with low-risk prostate cancer who are not receiving treatments

Lay Abstract: Prostate cancer is the most common cancer in Canadian men. Most prostate cancer patients immediately receive expensive treatments including surgery, radiation therapy, and hormonal therapy that may cause serious side effects such as urinary or sexual dysfunction. To avoid these negative impacts, a clinical practice called “active surveillance” has been introduced for low-risk prostate cancer patients. In active surveillance, men do not receive any treatments unless or until their prostate cancer becomes clinically significant. Unfortunately, about a half of men eventually do need medical treatments due to tumour progression and/or fear of cancer progression. Interventions designed to slow tumour growth and reduce fear of cancer progression would represent a major advance in the care of these men. Exercise has been shown to delay the progression of prostate tumours in animal models by increasing immune function, however, no studies have been done in men with prostate cancer. Moreover, exercise can help manage some symptoms in prostate cancer patients but no study has examined fear of cancer progression. Right now, prostate cancer patients on active surveillance receive limited advice concerning exercise. The aims of this study are to provide evidence on the effects of exercise on (1) aerobic fitness, (2) fear of cancer progression and quality of life, and (3) tumour progression and cancer-related biomarkers in prostate cancer patients undergoing active surveillance. Active surveillance is the preferred way of managing men with low-risk prostate cancer but many men still eventually need treatments. Exercise is a low cost intervention that may help men with prostate cancer remain on active surveillance longer by delaying tumour progression and reducing their fear of cancer progression. Ultimately, exercise may play an important role in improving long-term clinical outcomes and save significant medical costs related to prostate cancer treatment in Canada.