

Project Title: Relationship between multiparametric MRI and prostate cancer aggressiveness

Abstract: Active surveillance is increasingly recognized as a way to limit morbidity associated with the diagnosis and treatment of low-risk prostate cancer. We currently lack non-invasive imaging modalities to characterize prostate cancer aggressiveness or prognosis for men undergoing active surveillance. Multi-parametric (MP)-MRI has been shown to correlate with physiologic processes and may relate to tumor grade. In this study, we propose to first relate MP-MRI findings to paired biopsy findings to determine whether the MRI can predict un-sampled higher-grade disease. For the second Aim, we will explore how tumor whole-transcriptome mRNA expression relates to MP-MRI findings. These data will be crucial in determining how to integrate MP-MRI in the care of men undergoing active surveillance for prostate cancer. The funding of this pilot grant will be essential in integrating MP-MRI into a developed but not yet opened DF/HCC active surveillance protocol.