





## "Volumetric Optical Imaging for Imaged Guided Therapies"

## Robert Weersink, PhD

Affiliate Scientist, Techna Institute, University Health Network /
Assistant Professor, Departments of Radiation Oncology & Medical Biophysics
& Institute of Biomedical Engineering
University of Toronto, Toronto, Ontario

## Abstract:

Optical technologies are effective alternatives to traditional radiological imaging and therapies. This presentation discusses two methods of using optical imaging in treating cancer. First, the registration of endoscopy imaging to radiological imaging has the potential to improve contouring in radiation therapy for head and neck cancers. We discuss progress and challenges in the development of this technique. Second, minimally-invasive phototherapies can be used to treat localized cancer. We present how optical techniques are being developed to simultaneously localize cancer lesions and monitor treatment response.