

BBB seminar (BMED380)



Thursday, December 7. 14:30 at the BBB, Auditorium 4

Radiosensitization of radioresistant cancers

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More than 50% of patients diagnosed with cancer will need radiation therapy during the course of the disease. Radiation therapy may be administered externally or internally, focally or systemically, as photons or particles, in single or multiple fractions and specifically to the tumor or including healthy surrounding tissue. The goal of radiation therapy is to achieve local tumor control with minimal normal tissue damage. However, some tumors are more radioresistant than others. Primary malignant brain tumor, glioblastoma, and brain metastases from melanoma, renal and colorectal cancer are known to respond more poorly to radiation than for instance lung and breast cancer. Despite the use of high radiation doses, the prognosis for these patients is therefore dismal and the few long-term survivors suffer from devastating neurocognitive side effects. Radiation therapy therefore needs to be improved. Research in our lab aims to enhance the effect of radiation selectively in radioresistant tumors by counteracting mechanisms of radioresistance. During the seminar, I will discuss the mechanism of radiation damage, radioresistance and radiosensitization with emphasis on brain tumors. Our previous and ongoing experimental and clinical research will be presented including how preclinical investigations led to the first clinical trial repurposing sulfasalazine as radiosensitizer for stereotactic radiation of recurrent glioblastoma, a phase 1 trial which has showed encouraging results.

Chairperson: Per Øyvind Enger, Department of Biomedicine