

Radiobiology

Monday 5th of November		
	Introduction	
09:00-10:00	Physics of radiation interaction	Anders Brahme
10:00-12:00	Microdosimetical aspects	Lennart Lindborg
	Molecular radiobiology	
13:00-17:00	Molecular basis of radiation response: - Genetic pathways - DNA response - Apoptosis and checkpoints	Adrian Begg
Tuesday 6th of November		
09:00-12:00	Molecular approaches to radiation therapy	Adrian Begg
	Basic radiobiology	
13:00-15:00	Clonogenic cells, cell death and survival	Margareta Edgren
15:00-17:00	Repair of radiation damage and dose-rate effect	Bo Stenerlöv
Wednesday 7th of November		
09:00-10:30	LET and RBE	Anders Brahme
10:30-12:00	Biological dosimetry	Mats Harms-Ringdahl
13:00-15:30	Models of radiation cell killing: - LQ - RCR - Models of cell killing for light and heavy ions irradiation - Binomial and Poisson models	Bengt Lind
	Clinical radiobiology	
15:30-17:00	Clinical response of normal tissue	Ingela Turesson
Thursday 8th of November		
09:00-11:00	Time, dose and fractionation in radiation therapy	Iuliana Dasu
11:00-14:30 (lunch break 12:00-13:00)	Oxygen effect and tumour hypoxia	Iuliana Dasu
14:30-16:00	Treatment strategies to overcome tumour radioresistance - Ion therapy	Anders Brahme
16:00-17:00	Treatment strategies to overcome tumour radioresistance - Radiosensitizers and bioreductive drugs	Margareta Edgren
Friday 9th of November		
09:00-10:30	Dose-response relationships from clinical data	Panayiotis Mavroidis
10:30-12:00	Radiation induced damage in long term survivors	Alexandru Dasu
	Biologically based treatment optimisation	
13:00-14:00	Subcellular radiation biology	Bengt Lind
14:00-15:00	Systems biology of radiation therapy optimisation	Anders Brahme
15:00-16:00	BIOART (Predictive assay based radiation therapy)	Anders Brahme
16:00-17:00	Application of BIOART concept	Iuliana Dasu and Johan Uhrdin

Lecturers:

Prof. Adrian Begg, Division of Experimental Therapy, Netherlands Cancer Institute, The Netherlands

Prof. Anders Brahme, Medical Radiation Physics, Karolinska Institutet, Sweden

Dr. Alexandru Dasu, Department of Radiation Physics, Norrland University Hospital, Sweden

Dr. Iuliana Dasu, Medical Radiation Physics, Stockholm University and Karolinska Institutet, Sweden

Dr. Margareta Edgren, Medical Radiation Physics, Karolinska Institutet, Sweden

Prof. Mats Harms-Ringdahl, Department of Genetics, Microbiology and Toxicology, Stockholm University, Sweden

Dr. Bengt Lind, Medical Radiation Physics, Karolinska Institutet, Sweden

Prof. Lennart Lindborg, Medical Radiation Physics, Karolinska Institutet, Sweden

Dr. Panayiotis Mavroidis, Department of Medical Physics, University Hospital of Larissa, Greece

Dr. Bo Stenerlöw, Biomedical Radiation Sciences, Uppsala University, Sweden

Prof. Ingela Turesson, Department of Oncology, Uppsala University, Sweden

Johan Uhrdin, RaySearch Laboratories, Sweden