

Principals in modern Radiotherapy – Radiophysics

Tuesday 20 October

18:00 - 18:15 Welcome and introduction

18:15 - 19:30 Social activity and dinner

Wednesday 21 October

Chair Anna Bäck

08:00 - 08:10 Good morning from the faculty

Anna Bäck

08:10 - 08:15 Sponsor presentation

08:15 - 09:15 The linear accelerator, beam characteristics and other treatment machines

Magnus Gustavsson

09:15 - 10:00 Imaging for treatment planning

Sofie Ceberg

10:00 - 10:30 Tea & Coffee break

10:30 - 11:15 Daily management of geometrical uncertainties

Sofie Ceberg

11:15 - 11:45 Quiz & Reflections

Anna Bäck, Jens Engleson

11:45 - 13:15 Lunch

Chair Eva Onjukka

13:15 - 14:00 Motion management

Sofie Ceberg

14:00 - 14:45 Physics of particle therapy

Anna Bäck

14:45 - 15:15 Tea & Coffee break

16:45 - 17:15 Quiz & Reflections

Eva Onjukka, Karolina Vernmark

15:15 - 16:45 Safe radiation therapy – Presentation of assignment

Vanessa Panettieri, Magnus Gustavsson, Jonas Scherman, Eva Onjukka

Thursday 22 October

Chair Anna Bäck

08:15 - 09:00 NTCP modelling and the volume effect

Eva Onjukka

09:00 - 09:45 The LQ model - discussing homework and recorded lecture

Eva Onjukka, Anna Bäck

09:45 - 10:15 Tea & Coffee break

10:15 - 11:00 Dose constraints – evidence, strategy and tradition

Eva Onjukka

11:00 - 11:45 TCP modelling, target coverage and dose homogeneity

Ivan Vogelius

11:45 - 12:15 Quiz + Reflections

Anna Bäck, Jens Engleson

12:15 - 13:45 Lunch

Chair Eva

13:45 - 14:30 Basic photon treatment planning – degrees of freedom in 3DCRT and VMAT

Anna Bäck

14:30 - 15:15 Plan quality – dose distribution evaluation

Ivan Vogelius

15:15 - 15:20 Group photo

15:20 - 15:45 Tea & Coffee break

15:45 - 16:30 Plan quality – dose uncertainties, complexity and robustness

Anna Bäck

16:30 - 17:00 Quiz & Reflections

Eva Onjukka, Karolina Vernmark

Friday 23 October

Chair Sofie

08:15 - 09:00 Basic AI and clinical applications

Ivan Vogelius

09:00 - 09:45 Quality assurance and accidents

Jonas Scherman

09:45 - 10:15 Tea & Coffee break

10:15 - 11:00 Treatment technique comparisons

Magnus Gustavsson

11:00 - 11:45 Clinical impact of errors and uncertainties

Vanessa Panettieri

11:45 - 12:15 Quiz & Reflections, Evaluation

Sofie Ceberg, Jens Engleson

12:15 - 13:45 Lunch