



PRELIMINARY SCIENTIFIC PROGRAMME

Teaching Course on

Quantitative Research in Radiation Oncology Maastricht, The Netherlands

Time	Day 1 – Sunday 8 Oct.	Day 2 – Monday 9 Oct.	Day 3 – Tuesday 10 Oct.	Day 4 – Wednesday 11 Oct.
8:30 -9:00	Course Intro	Summary & intro	Summary & intro	Summary & intro
	Theme 1: Statistics I	Theme 3: Statistics II	Theme 5: Integrating research into clinical practice	Theme 7: Clinical endpoints
9:00-9:45	Intro – Hypothesis testing (IRV)	Parameter estimation/model fits (IRV)	Guest Lecture: Andre Dekker	Endpoints for treatment outcome (JAL)
9:45-10:30	Statistical estimation: Regression, correlation (SMB)	Survival statistics (SMB)	An infrastructure for clinical radiation research (JAL)	Systematic appraisal of scientific papers (SMB)
10:30-11:00	Coffee/tea	Coffee/tea	Coffee/tea	Coffee/tea
11:00-11:45	Sample size & power (IRV)	Cox PHM (SMB)	Models in clinical practice (PvL)	Competing risks (IRV)
11:45-12:30	Bayesian statistics (SMB)	Interactive data analysis: Cox (SMB,IRV)	Models in Clinical Decision Support (PL)	Imaging endpoints (PvL)
12:30-13:00	Diagnostic tests, PPV, NPV, sensitivity, specificity (FMB)		Hot topic: Protons v. photons (JAL,SMB))	Hot topic: Image features (PL)
13:00-14:00	Lunch	Lunch	Lunch	Lunch
	Theme 2: Clinical trials	Theme 4: Dose-response, NTCP	Theme 6: Study designs	Theme 8: Concluding sessions
14:00-14:45	Clinical trials in Radiation Oncology (JAL)	Dose-response models (IRV)	Ethics and regulatory oversight (Workshop)	Data presentation (IRV)
14:45-15:30	Comparing technologies (JAL)	NTCP (PvL)	Quantifying risks in clinical and epidemiological studies (FMB)	Pitfalls (SMB)
15:30-16:15	Meta-analysis (IRV)	Elective block TBD (w. coffee) Currently unscheduled. Example topics could be High dimensionality datasets, NTCP, Image analysis, clinical topic	Novel trial designs; adaptive designs, biomarker trials (SMB)	Course evaluation – END
16:15-16:45	Coffee/tea		Coffee/tea	Coffee/tea
16:45-18:00	Group exercise: Design a trial		Meet-the-professor (everybody)	

Faculty: Søren M. Bentzen, Francesca M. Buffa, Philippe Lambin, Johannes A. Langendijk, Peter van Luijk, Ivan R. Vogelius
Guest lecturer 2017: Andre Dekker