

## DRAFT PROGRAMME

Course Director  
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DAY 1 – SUNDAY 26 JUNE

Time	Lecture	Speaker
13.00 – 13.15	<b>Welcome &amp; Introduction</b> – Summary of the course	BP
13.15 – 13.45	<b>Radioactivity</b> – Radioactivity: What we need to know	ÅCT ( <i>Chair BP</i> )
13.45 – 14.25	<b>Time dose patterns</b> – Characteristics of LDR-PDR-HDR, radiobiological aspects, a/b-ratio and half time of repair, EQD2 concept	PH
14.25 – 14.55	<i>Coffee/Tea break</i>	
14.55 – 15.25	<b>Implantation rules</b> – Implantation and dosimetric rules, Paris system, ICRU 58	CC
15.25 – 15.55	<b>Bronchus brachytherapy</b> – Indication, tools and requirements, performing application, hazards, results	ASE
15.55 – 16.25	<b>Bladder</b> – Indication, tools and requirements, performing application, hazards, results	BP
16.25 – 16.55	<b>Oesophagus brachytherapy</b> – Indication, tools and requirements, performing application, hazards, results	ASE

## DRAFT PROGRAMME

DAY 2 – MONDAY 27 JUNE

Time	Lecture	Speaker
08.30 – 08.45	<b>Demonstration of prostate contouring homework</b> – Discussions of participants variances	ASE (Chair CC)
08.45 – 09.15	<b>Isotope characteristics</b> – Different isotopes, Specific activity, HVL, energy, half life	DB
09.15 – 09.55	<b>Prostate permanent implantations</b> – GEC-ESTRO recommendations, indication, tools and requirements, performing application, hazards, results	BP
09.55 – 10.25	<b>Prostate temporary implantations</b> – GEC-ESTRO recommendations, indication, tools and requirements, performing application, hazards, results	PH
10.25 – 10.55	<i>Coffee/Tea break</i>	
10.55 – 11.25	<b>Prostate treatment planning</b> – Automated treatment plan/ Building up a plan, peripheral positioning of sources, avoiding high urethra and rectum dose, source separation, stranded sources vs. loose sources	BP
11.25 – 12.05	<b>Dose calculation 1</b> – Basics of dose calculation, dose gradients, TG 43 and limitations – Part 1	ACT
12.05 – 12.35	<b>Uveal melanoma</b> – Eye plaque therapy, Indication, tools and requirements, hazards, results	ASE
12.35 – 13.35	<i>Lunch break</i>	
13.35 – 13.55	<b>Keloids</b> – Indication, tools and requirements, performing application, hazards, results	ASE (Chair PH)
13.55 – 14.00	<b>Keloid Video</b>	JGR
14.00 – 14.30	<b>Anal canal</b> – Indication, tools and requirements, performing application, hazards, results	BP
14.30 – 14.40	<b>Company presentation</b> – Demonstration of company activities (7 minutes)	Industry
14.40 – 15.40	<b>Practical session</b> – Demonstration of prostate and breast applicators and material for prostate and breast implantations	Faculty
15.40 – 16.10	<i>Coffee/Tea break</i>	
16.10 – 17.10	<b>Practical session</b> – Prostate HDR Treatment Planning on TPS (Make a treatment plan with planning aims)	Faculty
17.10 – 17.30	<b>Recontouring prostate ex.</b>	

## DRAFT PROGRAMME

DAY 3 – TUESDAY 28 JUNE

Time	Lecture	Speaker
08.30 – 09.00	<b>Demonstration of prostate recontouring example –</b> Demonstration of participants variances after recontouring	BP ( <i>Chair ASE</i> )
09.00 – 09.30	<b>Dose calculation 2</b> – Basics of dose calculation, dose gradients, TG 43 and limitations – Part 2	ÅCT
09.30 – 10.00	<b>Breast brachytherapy I</b> – Indication, tools and requirements, performing application (open wound, closed wound, after oncoplastic surgery), hazards, results	JGR
10.00 – 10.30	<b>Dose optimisation</b> – Manual / Geometric / Volume / Graphical / Inverse (penalties, weight function, dwell time gradient)	ÅCT
10.30 – 11.00	<i>Coffee/Tea break</i>	
11.00 – 11.30	<b>APBI</b> – GEC-ESTRO recommendations, indication, techniques (multicatheter, Mamosite, SAVI), results	JGR
11.30 – 12.00	<b>Endometrial</b> – Postoperative: Indication, tools and requirements, performing application, hazards, result	PH
12.00 – 12.40	<b>Skin cancer</b> – Indication, tools and requirements, performing application, hazards, results	JGR
12.40 – 12.45	<b>Nasal mold Video</b>	JGR
12.45 – 13.45	<i>Lunch break</i>	
13.45 – 13.55	<b>Breast Video</b>	JGR ( <i>Chair ÅCT</i> )
13.55 – 14.05	<b>Bladder Video</b>	BP
14.05 – 14.25	<b>Endometrial</b> – Definitive treatment: Indication, tools and requirements, performing application, hazards, results	PH
14.25 – 14.35	<b>Company presentation</b> – Demonstration of company activities (7 minutes)	Industry
14.35 – 15.35	<b>Practical session</b> – Demonstration of applicators: Oesophagus, Bronchus, Skin	Faculty
	<b>Physics session</b> – Practical issues on Dose Calculation	ÅCT
15.35 – 16.05	<i>Coffee/Tea break</i>	
16.05 – 17.05	<b>Practical session</b> – Applicator localisation on TPS (needle localization, activation of dwell times, optimisation)	Faculty

## DRAFT PROGRAMME

### DAY 4 - WEDNESDAY 29 JUNE

Time	Lecture	Speaker
08.30 - 08.45	<b>Demonstration of cervix contouring homework</b> - Demonstration of participants variances after recontouring	ASE (Chair ÅCT)
08.45 - 09.15	<b>Cervix</b> - Indication, tools and requirements, techniques, performing application	CC
09.15 - 09.45	<b>Cervix</b> - Hazards, results, complications	PH
09.45 - 10.15	<b>GEC-ESTRO recommendations and ICRU reporting</b> - Concept of $CTV_{IR}$ and $CTV_{HR}$ , ICRU 89 report	CC
10.15 - 10.45	<i>Coffee/Tea break</i>	
10.45 - 11.25	<b>Imaging</b> - Use of US, CT, and MR Imaging, slice thickness, MR sequences, MR distortions, dose evaluation	BP
11.25 - 11.55	<b>DVH</b> - How to use DVH, differential DVH, cumulative DVH, $D_{98}$ , $D_{90}$ , $V_{100}$ , $D2_{cm3}$	JGR
11.55 - 12.25	<b>Cervix treatment planning</b> - Applicator localisation on CT and MR, Applicator library, Optimisation	BP
12.25 - 13.25	<i>Lunch break</i>	
13.25 - 13.55	<b>Interstitial gynaecological implantations</b> - Vagina cancer, recurrence endometrial cancer or cervical cancer, indication, tools and requirements, performing application, hazards, results	CC (Chair JGR)
13.55 - 14.25	<b>Uncertainties</b> - All kind of uncertainties, applicator reconstruction errors, contouring uncertainties, source positioning errors, OAR movements, systematic errors, random errors, interfraction uncertainties, interapplication uncertainties, magnitude of uncertainties	ÅCT
14.25 - 14.35	<b>Company presentation</b> - Demonstration of company activities (7 minutes)	Industry
14.35 - 15.35	<b>Practical session</b> - Demonstration of gynaecological applicators and material for gynaecological implantations	Faculty
15.35 - 16.05	<i>Coffee/Tea break</i>	
16.05 - 17.05	<b>Practical session</b> - Cervix implantation Treatment Planning on TPS (Make a treatment plan with planning aims)	Faculty
17.05 - 17.20	<b>Recontouring cervix ex.</b>	

## DRAFT PROGRAMME

DAY 5 – THURSDAY 30 JUNE

Time	Lecture	Speaker
08.30 – 09.00	<b>Demonstration of cervix recontouring example</b> – Demonstration of participants variances after recontouring	ASE ( <i>Chair PH</i> )
09.00 – 09.30	<b>H &amp; N cancer</b> – GEC-ESTRO recommendations, indication, tools and requirements, performing application	JGR
09.30 – 10.00	<b>Radiation safety \ Radiation protection</b> – HVL, distance, inverse square law, controlling systems of the machines, Geiger teller, contamination, safe radioactive sources, requirements treatment rooms	ÅCT
10.00 – 10.30	<i>Coffee/Tea break</i>	
10.30 – 11.00	<b>H &amp; N cancer</b> – Hazards, complications, results	JGR
11.00 – 10.05	<b>Lip Video</b>	
11.05 – 11.10	<b>Nasopharynx Video</b>	
11.10 – 11.30	<b>Paediatrics</b> – RMS Orbit and H&N (AMORE)	BP
11.30 – 11.50	<b>Paediatrics</b> – Limb sarcomas, Sarcoma botryoides, prostate sarcoma	CC
11.50 – 12.30	<b>Final remarks and conclusion</b>	BP/Faculty