

**Accelerator Design, Radiobiology & Quality Assurance,
Brachytherapy & Radiotherapy Verification Imaging**

Julian Bloom Lecture Theatre – Chelsea

Day 1: Tuesday 7th March 2017

08.30 - 08.55	Registration & Coffee	
09.00 - 09:10	Welcome & Introduction	Ms Margaret Bidmead
09.15 - 10.05	Medical electron Linear Accelerators	Dr Hamish Porter
10.10 - 11.10	Production of a Clinical Beam	Professor Philip Mayles
11.15	Refreshments	
11.35 – 12.20	Multileaf Collimators: Characteristics & Commissioning	Mr David King
12.25 – 13.25	Accuracy and Quality in Radiotherapy: An overview	Professor Philip Mayles
13.30	Lunch	
14.35 – 15.05	Extremes I: kV X-ray Units	Mr Matthew James
14.55 - 15.25	Extremes II: Cyberknife	Mrs Carole Meehan
15.30	Refreshments	
15.50 - 16.50	Extremes III(a): Tomotherapy Units/ Extremes III(b): Gamma Knife	Andrew Garton
16:55 – 17.55	Quality Control of Linacs	Mr Rollo Moore
18.30	Course Meal	

Day 2: Wednesday 8th March 2017

09.00-09.30	Introduction to Cell Biology	Dr Alex Backshall
09.35-10.35	Tumour Cell Radiobiology	Professor Alan Nahum
10.40	Refreshments	
11.00 - 11.50	Radiobiology of Normal Tissues	Dr Sarah Gulliford
11.55 - 12.50	Fractionation & Iso-effect in Radiotherapy	Professor Roger Dale
12:55	Lunch	
13.00 - 13.55	Modelling the probability of Tumour Control (TCP)	Professor Alan Nahum
14.00 – 15.00	Practical use of Radiobiology in Treatment Planning	Professor Philip Mayles
15.05	Refreshments	
15.25 – 16.15	Modelling Normal Tissue Complication Probability	Dr Sarah Gulliford

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16.20 - 17.00	Compensation for Treatment Gaps in Radiotherapy	Professor Roger Dale
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Day 3: Thursday 9th March 2017

09.00 – 09.30	Calibration and QA of Brachytherapy Sources	Ms Caroline Jones
09.35 – 10.05	Intracavitary Dosimetry	Ms Margaret Bidmead
10.10	Refreshments	
10.30 – 11.20	The Radiobiology of Brachytherapy	Professor Roger Dale
11.25 – 12.20	Gynaecology Cancers	Dr Alexandra Taylor
12.25	Lunch	
13.25 – 14.20	3D Image based Brachytherapy Planning	Professor Christian Kirisits
14.25 – 15.15	Transperineal Prostate Brachytherapy	Mr Peter Bownes
15.15	Refreshments	
15.40 – 16.25	Radiation Protection Issues in Brachytherapy	Mr Jim Thurston
16.30 – 17.15	Radiation Protection in External Beam Radiotherapy	TBA

Day 4: Friday 10th March 2017

09.00 – 09.30	Quality Assurance In Clinical Trials	Mrs Olivia Naismith
09.35 – 10.15	Image Guidance in Radiotherapy: Accuracy, Frequency & Dose	Dr Ellen Donovan
10.20	Refreshments	
10.45 – 11.30	Image Handling in Radiotherapy	Professor Marcel van Herk
11.35 – 12.20	IGRT Techniques	Dr Emma Harris
12.25	Lunch	
13.40 – 14.25	Errors & Margins in Image Guided Radiation Therapy	Professor Marcel van Herk
14.30 – 15.20	EPID Imaging in Routine Practice, Dosimetry & Quality Control	Dr Vibeke Hansen
15.25	Refreshments	
15.50 – 16.45	Clinical Indication for Brachytherapy	Dr Susan Lalondrelle
16.50 – 17.35	MR Linacs	Dr Simeon Nill
17.30	Cheese & Wine Evening	

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**Day 5: Saturday 12th March 2016
Workshop Sessions**

**Practical Workshop Sessions
Assembly Point: Radiotherapy Basement at 9.00 am**

	09.15	09.50	10.25	11.00	11.30	12.05
Basic QA Flatness & Symmetry Carlyle	1	2	3		4	5
MLC, EPID & QA Brunel	2	3	4		5	1
Brachytherapy Treatment Planning – CT and MRI image based Master Plan	3	4	5		1	2
Iodine seeds & ultrasound for Prostate and examples	4	5	1		2	3
Radiotherapy Patient Waiting Area HDR, QA & Source Calibration HDR Treatment Suite	5	1	2		3	4

**Evaluation forms will be collected during the refreshment break at 11am.
Please have them ready. Thank you**

End of the Course