







Module 1

Image-Guided Brachytherapy for Cervix Cancer

Module Editor

Dr Li Tee Tan, Consultant Oncologist, Cambridge University Hospitals

Session	Author(s)	Target Audience
Fundamentals		
 IGBT Cervix Terms and Definitions 	Li Tee Tan	All professionals
 Techniques and Equipment 	Li Tee Tan	All professionals
 Dose Targets and OAR Constraints 	Li Tee Tan Peter Hoskin	Oncologists, physicists & dosimetrists
Dose Prescription	Li Tee Tan	Oncologists, physicists & dosimetrists
Commissioning IGBT Cervix	Diane Whitney	Physicists
Contouring		
 MRI-based Contouring of High-Risk CTV 	Li Tee Tan	Oncologists
 CT-based Contouring of High-Risk CTV 	Li Tee Tan	Oncologists
 Contouring Organs at Risk Using CT and MRI 	Li Tee Tan	Oncologists
CT-MR Fusion for Contouring	Li Tee Tan	Oncologists & physicists
Dosimetry		
 Applicator Reconstruction 	Sarah Brooke	Physicists & dosimetrists
 Methods of Dose Optimisation 	Gerry Lowe	Physicists & dosimetrists
Dose Optimisation - Tandem-Ring	Li Tee Tan Gerry Lowe	Dosimetrists, physicists & oncologists
Dose Optimisation - Interstitial Needles	Li Tee Tan Gerry Lowe	Dosimetrists, physicists & oncologists
Plan Evaluation and Dose Modification	Li Tee Tan	Oncologists, physicists & dosimetrists
Patient Care		
 Logistics 	Li Tee Tan	All professionals
 Role of the Advanced Practitioner 	Katie Bradshaw	Radiographers
Feminine Aftercare	Lisa Punt	Radiographers



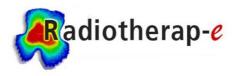












Margaret Bidmead	Head of Physics	Royal Marsden Hospital	C, R
Dr Peter Blake	Consultant Oncologist	Royal Marsden Hospital	R
Dr Peter Bliss	Consultant Oncologist	Royal Devon and Exeter Hospital	R
Katie Bradshaw	Advanced Practitioner	Cambridge University Hospitals	Α
Sarah Brooke	Physicist	Cambridge University Hospitals	Α
Dr Neil Burnet	Consultant Oncologist	Cambridge University Hospitals	R
Dr Charlotte Coles	Consultant Oncologist	Cambridge University Hospitals	C, R
Dr Radi Counsell	Consultant Oncologist	Cheltenham General Hospital	R
Michael Graveling	Superintendent Radiographer	Northampton General Hospital	R
Dr Debbie Gregory	Consultant Oncologist	Cambridge University Hospitals	R
Nicki Groom	Physicist	Mount Vernon Cancer Centre	С
Dr Gerry Hanna	SpR in Oncology	Belfast City Hospital	R
Prof Peter Hoskin	Consultant Oncologist	Mount Vernon Cancer Centre	A, R
David Inchley	Physicist	Mount Vernon Cancer Centre	С
Dr Charles Kelly	Consultant Oncologist	Newcastle Cancer Centre	R
Mike Kirby	Head of Physics	Christie Hospital, Manchester	R
Keith Langmack	Head of Physics	Nottingham University Hospitals	R
Chris Lee	Head of Brachytherapy Physics	Clatterbridge Centre for Oncology	C, R
Marian Lenane	Dosimetrist	Cambridge University Hospitals	R
Glenda Logsdail	Advanced Practitioner	Northampton General Hospital	R
Gerry Lowe	Head of Brachytherapy Physics	Mount Vernon Cancer Centre	A, R
Philip Mayles	Head of Physics	Clatterbridge Centre for Oncology	R
Dr Seamus McAleer	Consultant Oncologist	Belfast City Hospital	R
Dr Ursula McGivern	SpR in Oncology	Belfast City Hospital	R
Julia Nevinson	Head of Brachytherapy Physics	Southampton General Hospital	C, R
Dr Aileen Patterson	Consultant Pathologist	Cambridge University Hospitals	С
Lisa Punt	Consultant Radiographer	Cambridge University Hospitals	Α
Dr Evis Sala	Consultant Radiologist	Cambridge University Hospitals	C, R
Dr Mohamed Shehata	SpR in Oncology	Nottingham University Hospitals	R
Dr Ruchi Sinnatamby	Consultant Radiologist	Cambridge University Hospitals	R
Dr Alex Stewart	Consultant Oncologist	Royal Surrey County Hospital	R
Adele Stewart-Lord	Lecturer, Therapeutic Radiography	London South Bank University	R
Simon Thomas	Head of Physics	Cambridge University Hospitals	R
Dr Carys Thomas	Consultant Oncologist	Kent Oncology Centre	R
Diane Whitney	Head of Brachytherapy Physics	Cambridge University Hospitals	A, R
Dr Michael Williams	Consultant Oncologist	Cambridge University Hospitals	R
Katie Woods	Dosimetrist	Cambridge University Hospitals	R
Dr Cathryn Woodward	Consultant Oncologist	Cambridge University Hospitals	R
Dr Mark Zahra	Consultant Oncologist	Western General Hospital, Edinburgh	R



















Target Audience



e-learning for advanced radiotherapy techniques

Module 2

Intensity Modulated Radiotherapy

Author(s)

Module Editors

Session

Simon **Thomas**, Head of Physics, Cambridge University Hospitals Dr Li Tee **Tan**, Consultant Oncologist, Cambridge University Hospitals

Session	Author(s)	rarget Addience
Fundamentals		
 Introduction to IMRT 	Hannah Chantler	All professionals
Target Volume Definition	Li Tee Tan Neil Burnet	Oncologists
 Introduction to Objective Functions 	Simon Thomas	All professionals
Gamma Index for Clinicians	Jonny Lane	Oncologists, dosimetrists & radiographers
Gamma Index for Physicists	Simon Thomas	Physicists
Dosimetry		
 Mathematics of Optimisation Forward Planned IMRT Inverse Planned IMRT IMRT Reporting and Prescribing Practical Aspects of IMRT QA 	Simon Thomas Tony Geater Sam Tudor Simon Thomas Clare Hart Jo Barraclough Helen Hughes	Physicists Dosimetrists & radiographers Oncologists & dosimetrists All professionals Physicists
Tumour sites		
Breast ContouringBreast IMRT	Charlotte Coles Charlotte Coles Sam Tudor Ellen Donovan	Oncologists & radiographers All professionals
 Paediatric Cranio-spinal RT 	Gail Horan	Oncologists
Pelvic & Para-aortic Nodes	Simon Russell Li Tee Tan	Oncologists
 Prostate Contouring 	Richard Benson	Oncologists
 Head and Neck Contouring 	Sarah Jefferies	Oncologists



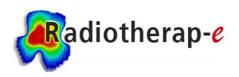












Joanna Barraclough	Physicist	Cambridge University Hospitals	Α
Dr Richard Benson	Consultant Oncologist	Cambridge University Hospitals	Α
Dr Neil Burnet	Consultant Oncologist	Cambridge University Hospitals	Α
Hannah Chantler	Physicist	Cambridge University Hospitals	Α
Jemma Chapman	Superintendent Radiographer	Cambridge University Hospitals	С
Dr Charlotte Coles	Consultant Oncologist	Cambridge University Hospitals	Α
Joanne Cook	Lead Radiotherapy Dosimetrist	Peterborough City Hospital	С
Ellen Donovan	Physicist	Royal Marsden Hospital	Α
Kylie Duffy	Radiographer	Cambridge University Hospitals	С
Katie Eyre	Physicist	Cambridge University Hospitals	С
Tony Geater	Head of Radiotherapy Planning	Cambridge University Hospitals	Α
Michael Graveling	Superintendent Radiographer	Northampton General Hospital	R
Dr Debbie Gregory	Consultant Oncologist	Cambridge University Hospitals	R
Dr Gerry Hanna	Consultant Oncologist	Belfast City Hospital	R
Emma Harris	Physicist	Royal Marsden Hospital	С
Clare Hart	Physicist	Cambridge University Hospitals	Α
Dr Gail Horan	Consultant Oncologist	Cambridge University Hospitals	Α
Helen Hughes	Physicist	Cambridge University Hospitals	Α
Dr Sarah Jefferies	Consultant Oncologist	Cambridge University Hospitals	Α
Dr Anna Kirby	Consultant Oncologist	Royal Marsden Hospital	С
Jonny Lane	Physicist	Cambridge University Hospitals	Α
Keith Langmack	Head of Physics	Nottingham University Hospitals	C, R
Marian Lenane	Dosimetrist	Cambridge University Hospitals	С
Gerry Lowe	Head of Brachytherapy Physics	Mount Vernon Cancer Centre	R
Philip Mayles	Head of Physics	Clatterbridge Centre for Oncology	R
Nyssa Muskett	Senior Therapy Radiographer	Cambridge University Hospitals	С
Andrew Poynter	Head of Physics	Peterborough City Hospital	C, R
Dr Yvonne Rimmer	Consultant Oncologist	Cambridge University Hospitals	C, R
Dr Simon Russell	Consultant Oncologist	Cambridge University Hospitals	Α
Adele Stewart-Lord	Lecturer, Therapeutic Radiography	London South Bank University	R
Sam Tudor	Physicist	Cambridge University Hospitals	Α
Nikki Twyman	Deputy Head of Physics	Cambridge University Hospitals	C, R
Dr Elizabeth Whipp	Consultant Oncologist	University Hospitals Bristol	С
Dr Michael Williams	Consultant Oncologist	Cambridge University Hospitals	R
Dr Cathryn Woodward	Consultant Oncologist	Cambridge University Hospitals	R
Prof John Yarnold	Consultant Oncologist	Royal Marsden Hospital	С
Dr Mark Zahra	Consultant Oncologist	Western General Hospital, Edinburgh	R





















Module 3

Stereotactic Radiotherapy

Module Editor

Philip Mayles, Head of Physics, Clatterbridge Cancer Centre

Session	Author(s)	Target Audience
Fundamentals		
 Introduction to Stereotactic RT Fiducial Systems for Brain RT Small Field Dosimetry for SRT Imaging for SRT 	Philip Mayles Martin Sheen Alison Scott John Brunt	All professionals Physicists Physicists Physicists & radiographers
Image Segmentation for SRT	John Brunt Helen Mayles	All professionals
Brain		
Clinical Indications for Brain SRTImmobilisation Systems for Brain SRT	Philip Mayles Angela Baker Kieran Woods Ruth Clements	All professionals All professionals
• Treatment Process for Brain SRT	Helen Mayles Alison Scott	All professionals
 Linac Preparation, Plan Checking and Treatment Process for Cranial SRS and SRT 	Martyn Gilmore	Physicists & radiographers
Body		
 Clinical Rationale and Contouring for Lung SRT 	Pooja Jain Alison Scott	Oncologists
Immobilisation Systems for Body RTTreatment Planning for Lung SRT	Angela Baker Alison Scott Julie Kirk	All professionals All professionals



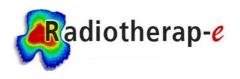












Tania Avgoulea	Physicist	Clatterbridge Cancer Centre	С
Angela Baker	Lead Research Radiographer	Clatterbridge Cancer Centre	A
Erika Blackmore	Superintendent Radiographer	Northampton General Hospital	R
John Brunt	Physicist	Clatterbridge Cancer Centre	A
Kate Burton	Consultant Radiographer	Cambridge University Hospitals	R
Rachel Bussey	Superintendent Radiographer	Northampton General Hospital	R
Ruth Clements	Stereotactic Clinical Specialist	Clatterbridge Cancer Centre	A
Ann Cooke	Deputy Clinical Specialist in MRI	Clatterbridge Cancer Centre	R
Martyn Gilmore	Physicist	Clatterbridge Cancer Centre	A
Michael Graveling	Superintendent Radiographer	Northampton General Hospital	R
Dr Gerry Hanna	Consultant Oncologist	Belfast City Hospital	R
Dr Brian Haylock	Consultant Oncologist	Clatterbridge Cancer Centre	A
Vicky Hughes	Radiographer	Clatterbridge Cancer Centre	R
Dr David Husband	Consultant Oncologist	Clatterbridge Cancer Centre	C
Julie Kirk	Physicist	Clatterbridge Cancer Centre	A
Dr Pooja Jain	Consultant Oncologist	Clatterbridge Cancer Centre	A
Dr Sarah Jefferies	Consultant Oncologist	Cambridge University Hospitals	R
Geoff Lawrence	Head of Imaging Physics	Clatterbridge Cancer Centre	R
Helen Mayles	Head of Clinical Radiotherapy Physics	Clatterbridge Cancer Centre	A
Mark McJury	Clinical Scientist	Beatson Cancer Centre, Glasgow	C
Petrina O'Halloran	Clinical Specialist in CT	Clatterbridge Cancer Centre	R
Helen Purslow	Clinical Specialist in MRI	Clatterbridge Cancer Centre	R
Jennifer Rushbrooke	Superintendent Radiographer	Northampton General Hospital	R
Alison Scott	Physicist	Clatterbridge Cancer Centre	A
Martin Sheen	Physicist	Clatterbridge Cancer Centre	A
Simon Thomas	Physicist	Cambridge University Hospitals	R
Julien Uzan	Physicist	Clatterbridge Cancer Centre	С
Kieran Woods	Superintendent Radiographer	Clatterbridge Cancer Centre	A
Susan Wright	Clinical Specialist in MRI	Clatterbridge Cancer Centre	R





















Module 4

Prostate Brachytherapy

Module Editors

Gerry **Lowe**, Head of Brachytherapy Physics, Mount Vernon Cancer Centre Prof Peter **Hoskin**, Consultant Oncologist, Mount Vernon Cancer Centre

	Session	Author(s)	Target Audience
• I	ntroduction to Prostate Brachytherapy	Peter Hoskin	All professionals
• I	maging Modalities and Volume Definition	Peter Hoskin	All professionals
• I	mplantation Technique	Gerry Lowe	All professionals
• L	DR Planning	Dave Inchley Gerry Lowe	Physicists & dosimetrists
• H	HDR Planning - Catheter Reconstruction	Gerry Lowe	Physicists & dosimetrists
	HDR Planning: Plan Optimisation and Evaluation	Gerry Lowe	Dosimetrists & physicists
• L	Logistics	Peter Hoskin Gerry Lowe	All professionals
• (Commissioning and QA	Gerry Lowe	Physicists















Clare Anderson	Physicist	Mount Vernon Cancer Centre	С
Peter Bownes	Physicist	St James's Institute of Oncology, Leeds	С
Sarah Brooke	Physicist	Cambridge University Hospitals	R
Melanie Cunningham	Physicist	Royal Surrey County Hospital	С
Claire Hardiman	Physicist	Mount Vernon Cancer Centre	С
David Inchley	Physicist	Mount Vernon Cancer Centre	Α
Glenda Logsdail	Consultant Radiographer	Northampton General Hospital	R
Danny Robinson	Physicist	Mount Vernon Cancer Centre	С
Tania Simnor	Physicist	Mount Vernon Cancer Centre	С
Diane Whitney	Physicist	Cambridge University Hospitals	R
Rachel Wills	Physicist	Mount Vernon Cancer Centre	С





















Module 5

Image-Guided Radiotherapy

Module Editor

Dr Ann Henry, Consultant Oncologist, St James's Institute of Oncology, Leeds

Session	Author(s)	Target Audience
Fundamentals		
 Fundamentals of IGRT 	Ann Henry	All professionals
Imaging Techniques and Technologies	Emma Harris Ellen Donovan	All professionals
 Image Quality and Optimisation 	Ellen Donovan Emma Harris	All professionals
Geometric Error and Impact	Helen McNair Emma Harris Ellen Donovan	Physicists
Reducing Geometric Errors	Julie Stratford Catherine Holborn Ann Henry	Radiographers
Tumour sites		
IGRT for Head and Neck	Ann Henry Amy Woolley	All professionals
 IGRT for Lung 	Alan Needham	All professionals
 IGRT for Prostate and Bladder Cancers 	Ann Henry	All professionals



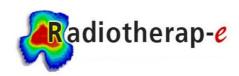












Erika Blackmore	Superintendent Radiographer	Northampton General Hospital	R
Ellen Donovan	Physicist	Royal Marsden Hospital	Α
Dr Kevin Franks	Consultant Oncologist	St James's Institute of Oncology, Leeds	С
Michael Graveling	Superintendent Radiographer	Northampton General Hospital	R
Emma Harris	Physicist	Royal Marsden Hospital	A
Dr Paul Hatfield	Consultant Oncologist	St James's Institute of Oncology, Leeds	С
Catherine Holborn	Senior Lecturer	Sheffield Hallam University	Α
Helen McNair	Radiographer	Royal Marsden Hospital	Α
Alan Needham	Radiographer	St James's Institute of Oncology, Leeds	Α
Dr Yvonne Rimmer	Consultant Oncologist	Cambridge University Hospitals	R
Donna Routsis	Radiographer	Cambridge University Hospitals	R
Julie Stratford	Radiographer	Christie Hospital, Manchester	Α
Helen Summers	Radiographer	St James's Institute of Oncology, Leeds	С
Stuart Wilson	Dosimetrist	St James's Institute of Oncology, Leeds	С
Amy Woolley	Radiographer	St James's Institute of Oncology, Leeds	Α











