

UKRC

[illegible]

BIR
The British
Institute of
Radiology





12-14 JUNE 2017 ■ MANCHESTER CENTRAL

President's Welcome



Welcome to the 2nd integrated UKRC and UKRO congress, the largest and only truly multidisciplinary congress that recognises the knowledge, skills and contribution of all professional groups and industry within diagnostic imaging and radiation oncology.

Over the last decade, we have been bombarded with new and advancing technologies in both our social and professional lives. Multi-media technologies and powerful computer interactions have transformed how we undertake everyday tasks. We readily adopt new technologies and app's to enhance our life experiences, monitor our compliance with exercise programmes and advise us on new books, meal ideas or products from websites that are able to learn our consumer preferences through our online activity. So how have these technological advancements been adopted within diagnostic imaging and radiation oncology? Have we embraced digital technologies and media to streamline our work practices and optimise the patient experience? Or are we trying to retain traditional diagnostic and therapeutic work patterns, battling against technology rather than engaging with it? Are we flexible and agile in our roles, work routines and practices to ensure we don't undermine the positive potential of technology? Have we achieved service efficiencies because of, or despite, new technologies? Has computerisation become a barrier to personalised healthcare and patient centeredness, or is it a facilitator? Despite all these questions, new and advancing technologies have without doubt expanded the potential contribution of imaging to diagnostic and radiotherapy treatment pathways, but without changing our techniques, that is how we use these technologies, we are also at risk of service overload with demand far exceeding capacity.



We will be considering all of these aspects in the exciting scientific and education programme developed by both UKRC and UKRO organising committees. We also have the AXREM supported 'Dose Aware' day taking place on Tuesday 13th June with many opportunities for open learning both in the programme and in the exhibition hall. Check the education programme to identify activities that are open access – look for the open lock symbol.

We are delighted that, once again, presentations from International and UK experts are an integral part of the programme and this year we have continued to expand our portfolio of workshops using the OsiriX workstations to give delegates opportunity to apply learning and engage in clinical decision making and discussion of complex diagnostic imaging cases which will include elements of oncology. We also have a series of hands-on ultrasound workshops and demonstrations and are pleased to welcome back the interactive anatomical workstation to showcase the role of imaging data in education and learning. In addition, there will be opportunities within the exhibition demo zone for you to engage with emerging technologies. We would like to thank all those involved for their time and commitment in putting together such a diverse and inclusive programme which will make this congress without doubt, the UK Imaging and radiation oncology event of the year.

Of course, we could not provide these opportunities without the support of our industry partners and I am delighted to report once again increasing manufacturer and industry presence. Please do join us in the exhibition hall for a welcome reception, drinks and nibbles, on Monday evening to meet both delegates and exhibitors. It's free to all delegates and day visitors and a great opportunity to catch up with old friends, make new contacts and explore the future of imaging with our exhibitors.

This joint congress of UKRC and UKRO represents cohesion in diagnostic imaging and radiation oncology across professional disciplines and industry and our final words must be to thank everyone involved in developing, sponsoring, organising and supporting the event, both front of stage and behind the scenes. On behalf of everyone, we hope you have a wonderful congress!

Maryann Hardy, Congress President, UKRC 2017
Angela Baker, Congress President, UKRO 2017



Who should attend?

- Radiologists
- Radiographers
- Sonographers
- Radiotherapists
- Radiobiologists
- Oncologists
- Medical physicists
- Dosimetrists
- Clinical engineers
- Clinical scientists
- Clinical technologists
- Consultants
- Imaging nurses
- Commissioners
- PACS and IT managers
- Image service managers
- Procurement managers
- Industrialists
- Imaging academics
- Students
- Trainees















REGISTER ONLINE AT www.ukrco.org.uk



🔓 Sessions with the open padlock are opened to all including day visitors

We have colour-coded the streams to allow you to follow your favourite topics. The colour will also continue on the onsite programme at the congress.

Tuesday 13 June Dose awareness day								Ultrasound	FRCR	Demo zone	Exhib Lecture	
08.00-18.00 Registration open												
08:00 08:10 08:20 08:30 08:40 08:50	5A Elekta symposium 	5B Optimising CT 	5C Cross organisational working	5D Imaging in elite sport	5E Neuro radiology 1	5F OsiriX introduction					08:00 08:10 08:20 08:30 08:40 08:50	
09:00											09:00	
09:10								EXHIBITION OPENS 09.00				09:10
09:20	Plenary session Debate - The end is nigh.... AI-enabled machines have placed imaging and oncology professionals on the path to extinction Chair: <i>Phil Hammond</i> Panel: <i>Andy Beavis, Eliot Siegel, Shaona Ghosh, Steven Tolle</i>										09:20	
09:30											09:30	
09:40											09:40	
09:50											09:50	
10:00											10:00	
10:10											10:10	
10:20	Coffee, poster tours, exhibition and education on stands										10:20	
10:30											10:30	
10:40											10:40	
10:50											10:50	
11:00							MSK ultrasound		Bayer	11:00		
11:10	6A Global radiotherapy challenges	6B Adaptive IGRT	6C Harnessing technology to improve paediatric clinical & fiscal efficiency	6D Proffered papers: Science/education/ rad prot  	6E Neuro radiology 2	6F Advances in cardiac MRI	6G Enabling imaging research to 2030 	6H Obs & Gynae OsiriX	FRCR drop in sessions		11:10	
11:20										11:20		
11:30										11:30		
11:40										11:40		
11:50										Dose radiation 	11:50	
12:00											12:00	
12:10											12:10	
12:20											12:20	
12:30											12:30	
12:40											12:40	
12:50										Virtual reality true 3D	12:50	
13:00	 BIR Toshiba Mayneord lecture A 21st century NHS - delivering tomorrow's medicine, today - <i>Keith McNeil, Chief Clinical Information Officer for Health and Social Care, NHS, UK</i>			Lunch, exhibition and education on stands				6I Cardiac OsiriX			Siemens	13:00
13:10											13:10	
13:20											13:20	
13:30											OSL	13:30
13:40											13:40	
13:50											13:50	
14:00											14:00	
14:10	7A MRI imaging for clinicians physicians and radiographers	7B Blood and guts INTERACTIVE	7C Exisiting technology evolving applications	7D MSK intervention	7E CARS and emerging technology	7F Proffered papers: Clinical	7G Breast imaging academy				14:10	
14:20											14:20	
14:30											14:30	
14:40											14:40	
14:50								7H Neuro OsiriX			Imaging optimisation 	14:50
15:00									15:00			
15:10									15:10			
15:20									15:20			
15:30								MSK ultrasound			15:30	
15:40									15:40			
15:50									Are you dose ready? 	15:50		
16:00									16:00			
16:10	Refreshments, poster tours, exhibition and education on stands										16:10	
16:20											16:20	
16:30	8A SABR for oligometastases – the great debate	8B Martine Jackson Memorial lecture 	8C History session	8D Rapid reporting upper and lower limb INTERACTIVE	8E Molecular imaging with novel tracers	8F Advances in Cardiac CT Imaging	8G RPS masterclass: Dose optimisation 	8H Paediatric OsiriX	FRCR drop in sessions		16:20	
16:40												16:30
16:50											16:40	
17:00											16:50	
17:10		9A Proffered papers								17:00		
17:20								17:10				
17:30								17:20				
17:40								17:30				
17:50										17:40		
18:00										17:50		
										18:00		

Plenary	Society keynote	Joint UKRC & UKRO	UKRO	Information tech & informatics	Service innovation & optimisation	Education & research	RPS Masterclass	Proffered papers	Osirix	Urology
UKRC Clinical Streams	MSK	Head & Neck	Neuro	Obs & Gynae	Breast	Cardiac	Trauma & Emergency medicine	Chest	Paeds	GI and Hep

Wednesday 14 June										Ultrasound	FRCR	Demo zone	Exhib Lecture
08.00-16.00 Registration open													
08:00	10A	10B	10C	10D	10E	10F							08:00
08:10	Varian symposium	Benchmarking and driving improvement in UK radiology	Cross sectional - biliary dilatation OsiriX	Technological advances in thoracic imaging	Proffered papers: Clinical	Proffered papers: Clinical							08:10
08:20	08:30	08:40	08:50										08:20
08:30	08:40	08:50											08:30
08:40	08:50												08:40
08:50													08:50
09:00													09:00
09:10													09:10
09:20													09:20
09:30													09:30
09:40													09:40
09:50													09:50
10:00													10:00
10:10	11A	11B	11C	11D	11E	11F	11G	10G					10:10
10:20	Protons	Changing pathways, cancer and beyond	Technological innovations in radiography education	Whats new in rectal cancer	Emergency head and spine imaging INTERACTIVE	Post op orthopaedic imaging	SMRT session - Clinical Education Forum	Chest OsiriX					10:20
10:30													10:30
10:40													10:40
10:50													10:50
11:00													11:00
11:10													11:10
11:20													11:20
11:30													11:30
11:40													11:40
11:50													11:50
12:00	Closing Plenary												12:00
12:10	Rt Hon the Lord Robert Winston of Hammersmith, UK												12:10
12:20													12:20
12:30													12:30
12:40													12:40
12:50													12:50
13:00													13:00
13:10	SCOR William Stripp				IPEM John Mallard Lecture		11H	Schools engagement programme and exhibition					13:10
13:20	Shoulder imaging - Amanda Martin, Lead Radiographer, Royal Bolton Hospital, UK						Proffered papers						13:20
13:30													13:30
13:40													13:40
13:50													13:50
14:00													14:00
14:10	12A	12B	12C	12D	12E	12F	12G						14:10
14:20	Immunotherapy	BAMRR MRI in contemporary practice	Practical approaches to motion tracking	Neuroendocrine tumours - imaging and therapy	Thoracic malignancy	The foot	Proffered papers						14:20
14:30													14:30
14:40													14:40
14:50													14:50
15:00													15:00
15:10													15:10
15:20													15:20
15:30													15:30
15:40													15:40
15:50													15:50
16:00													16:00
16:10													16:10
16:20													16:20
16:30													16:30
16:40													16:40
16:50													16:50
17:00													17:00

Plenary and Keynote Lecture Programme

Monday 12 June

10.10 - 11.10		Will robots replace surgeons? <i>Shafi Ahmed, Consultant General, Laparoscopic and Colo-rectal Surgeon, Associate Dean and Honorary Senior Lecturer, Barts and the London Medical School</i>
10.10 - 11.10		Machine learning and AI <i>Eliot Siegel, Professor and Vice Chair Research Informatics, University of Maryland, USA</i>
13.10 - 14.00		SCOR Stanley Melville Memorial Lecture - Coming out in healthcare <i>Amanda Bolderston, Provincial Professional Practice and Academic Leader, British Columbia Cancer Agency, Canada</i>

Tuesday 13 June

09.30 - 10.30		The end is nigh.... AI-enabled machines have placed imaging and oncology professionals on the path to extinction <i>Chair: Phil Hammond, GP and Presenter</i> Panel: • Andy Beavis, Radiotherapy Physicist and Chief Scientific Officer, Virtual • Eliot Siegel, Professor and Vice Chair Research Informatics, University of Maryland, USA • Shaona Ghosh, Postdoctoral Researcher, University of Cambridge • Steven Tolle, Global Vice President for Imaging, IBM Watson Health
13.00 - 13.50		BIR Toshiba Mayneord Lecture - A 21st century NHS - delivering tomorrow's medicine, today <i>Keith McNeil, Chief Clinical Information Officer for Health and Social Care, NHS</i>
16.20 - 17.10		SCoR Martine Jackson Memorial Lecture - Specialists posts, special radiographers and patient care <i>Sairanne Wickers, Consultant Radiographer, University College London Hospital</i>

Wednesday 14 June

12.00 - 12.50		Closing Plenary <i>Rt Hon the Lord Robert Winston of Hammersmith</i>
13.10 - 14.00		SCOR William Stripp - Shoulder imaging <i>Amanda Martin, Lead Radiographer, Royal Bolton, Hospital</i>
13.10 - 14.00		IPEM John Mallard Lecture <i>Speaker tbc</i>



Opening plenary

Will robots replace surgeons?



Shafi Ahmed, Consultant General, Laparoscopic and Colo-rectal Surgeon, Associate Dean and Honorary Senior Lecturer, Barts and the London Medical School

Shafi Ahmed is a surgeon, teacher, futurist, innovator, entrepreneur and an evangelist in Augmented and

Virtual Reality. He currently works as a laparoscopic colorectal surgeon at The Royal London and St Bartholomew's Hospitals. As a dedicated trainer, educator, and Associate Dean of Bart's Medical School, he was awarded the Silver Scalpel award in 2015 as the best national trainer in surgery by the Association of Surgeons in Training. He is currently serving as an elected member of council of the Royal College of Surgeons of England, sits on a number of advisory panels for government and also serves as a civilian advisor for the Royal Air Force.

Dr. Ahmed is always looking at ways of translating technology into clinical practice with a mission to provide affordable and accessible surgical training to anyone and everyone using the power of connectivity to allow equitable surgical care.

Shafi made world headline news in 2014 by streaming a live operation using Google Glass to 14,000 students and trainees across 132 countries. On April 14th, 2016 he performed the world's first virtual reality operation which was watched by 55,000 people in 140 countries, and reached 4.6 million on Twitter. In December 2016 he used the Snapchat spectacles to record and teach surgery across the globe which has had over 100 000 downloads and viewed by over 2 million people and reached 54 million people on twitter.

Machine learning and AI



Eliot Siegel, Professor and Vice Chair Research Informatics, University of Maryland, USA

Dr Siegel is Professor and Vice Chair Research Informatics at the University of Maryland School of Medicine, Department of Diagnostic Radiology, as well as Chief of Radiology and Nuclear Medicine for the Veterans Affairs Maryland Healthcare System, both in Baltimore, MD. Dr. Siegel is also responsible for the NCI's National Cancer Image Archive and is Workspace Lead of the National Cancer Institute's caBIG In Vivo Imaging Workspace.

Under his guidance, the VA Maryland Healthcare System became the first filmless healthcare enterprise in the United States. He has written over 200 articles and book chapters about PACS (Picture Archiving and Communication Systems) and digital imaging, and has edited six books on the topic, including Filmless Radiology and Security Issues in the Digital Medical Enterprise. He has made more than 1,000 presentations throughout the world on a broad range of topics involving the use of computers in medicine. He has been named as Researcher of the Year, received multiple awards for innovation, including the Smithsonian award, and was selected as runner up Educator of the Year for Diagnostic Radiology. The readers and editorial board of Medical Imaging have selected Dr. Siegel as one of the top ten radiologists for the past two years. He was symposium chairman for the Society of Photo-optical and

Industrial Engineers (SPIE) Medical Imaging Meeting for three years, is currently chair of Publications for the Society of Computer Applications in Radiology (SIIM) and has been honored as a fellow in that organization. He is chairman of the RSNA's Medical Imaging Resource Committee. His areas of interest and responsibility at both the local and national levels include digital imaging and PACS, telemedicine, the electronic medical record, and informatics.

Joint UKRC/UKRO plenary debate

The end is nigh.... AI-enabled machines have placed imaging and oncology professionals on the path to extinction

This debate is not about arguing the need for AI, it's about arguing whether AI can deliver on its promises or not. We have exactly what machines need to learn from – binary data. You can use this right now, in your own home. With an online tutorial, you can train a programme to find patterns in plain films. Using convoluted neural networks it is possible to get a first read from a machine and an explanation of what it thinks is the diagnosis and why. Intelligent machines can also direct image acquisition and treatment sequences for defined disease pathways. So if machines have the capacity to do all this, will we need imaging and oncology professionals in the future? Or an army of computers operated by unqualified staff and supervised by specialist medical computer scientists?

Chair: *Phil Hammond, GP and Presenter*

Panel:

- *Andy Beavis, Radiotherapy Physicist and Chief Scientific Officer, Virtual*
- *Eliot Siegel, Professor and Vice Chair Research Informatics, University of Maryland, USA*
- *Shaona Ghosh, Postdoctoral Researcher, University of Cambridge*
- *Steven Tolle, Global Vice President for Imaging, IBM Watson Health*

Closing Plenary



Rt Hon the Lord Robert Winston of Hammersmith

Truly a 'Renaissance Man', Lord (Robert) Winston is a doctor, scientist, politician and television presenter.

Widely regarded as our pre-eminent expert in reproductive medicine, Lord Winston is Professor of Science and Society and Emeritus Professor of Fertility Studies at Imperial College. He runs a gene transplant research programme in the Institute of Reproductive and Developmental Biology, where the team have achieved significant advances, particularly in endocrinology, IVF and genetics.

Lord Winston has been Chancellor of Sheffield Hallam University and Chairman of the Council of the Royal College of Music. In the field of politics, he sits on the Labour benches and speaks regularly in the House of Lords, particularly on science, education, medical ethics and the arts. He is chairman of the House of Lords Select Committee on Science and Technology. A seasoned and popular television presenter, Lord Winston wrote and presented Superhuman, The Secret Life of Twins, Child of Our Time and the BAFTA Award winning The Human Body. He presented five series of Your Life in Their Hands for the BBC. In addition to his science-based programmes, Lord Winston displayed his musical abilities in Play It Again, where he learned to play a saxophone, from scratch, in five months. He has even appeared in an episode of The Archers, as a fertility expert.

A regular contributor to Any Questions, Question Time and the Today programme, Lord Winston has also appeared on Have I Got News For You, Start The Week and Desert Island Discs. He has contributed articles to all the national newspapers and to journals ranging from The Spectator to Good Housekeeping. Much in demand as a conference speaker, Lord Winston explains how the human mind is expanding exponentially and advocates greater trust in scientists, in everything from food scares to climate prediction.

Society Keynote lectures

SCOR Stanley Melville Memorial Lecture

Coming out in healthcare



Amanda Bolderston, Provincial Professional Practice and Academic Leader, British Columbia Cancer Agency, Canada

Amanda is the Provincial Professional Practice and Academic Leader for the British Columbia Cancer Agency in Canada. She trained in the UK at the Oxford Regional School of Radiography in the 1980s, and subsequently has worked in the UK, Holland, Ontario and BC as a clinician, researcher, educator and leader. Amanda has authored numerous articles and presented extensively nationally and internationally. She is the Associate Editor for Qualitative Research for the Canadian Journal of Medical Imaging and Radiation Sciences and an editorial board member for Radiotherapy in Practice in the UK. She is a Fellow of the Canadian Association of Medical Radiation Technologists as well as a past president. She has been involved in the development of advanced practice in Canada for over 15 years, initially with the Canadian Specialist Radiation Therapist project and the subsequent national certification framework, and now in BC with the development of local roles. Recently she has taken to Twitter, and helped found the popular MedRad Journal Club which hosts monthly international research chats. She is currently a graduate student in the University of British Columbia's education doctorate program, studying educational leadership and policy. Her talk today reflects on her doctoral work, as well as her personal story as an out health care professional, to examine the experiences of lesbian, gay, bisexual, transgendered and queer (LGBTQ) patients in the health care system. She will discuss how sexual orientation and gender identity impacts healthcare – and how we can provide care to this stigmatised population in a culturally competent way.

BIR Toshiba Mayneord Lecture

A 21st century NHS - delivering tomorrow's medicine, today



Keith McNeil, Chief Clinical Information Officer for Health and Social Care, NHS

An internationally recognised expert in the fields of lung transplantation and pulmonary vascular disease, Keith was appointed as the NHS's first CCIO in July 2016. He took up this role having previously served as CEO at Addenbrookes Hospital in Cambridge and prior to that as CEO of one of the largest health services in Australia - Metro North Health Service in Brisbane. In his new role, he is overseeing the implementation of the national digital agenda for health IT. He is committed to ensuring patients receive high quality, safe care in a sustainable system construct, through the digital transformation of the National Health Service. Keith spent two years as a senior transplant fellow at Papworth Hospital and a further five years working jointly at Papworth and CUH as a cardio-pulmonary transplant and respiratory physician and director of the pulmonary vascular disease unit. During this time, Keith was pivotal in establishing the UK's centre for pulmonary endarterectomy at Papworth and was an adviser to the Department of Health on

pulmonary hypertension. Keith began his chief executive career in 2007 in his native Australia at the Royal Brisbane and Women's Hospital, a 980-bed teaching hospital, one of the largest teaching hospitals in the southern hemisphere. In 2008 he was appointed Professor of Medicine at the University of Queensland. Keith also served in the Australian Special Forces where he was trained in survival techniques and as a weapons expert.

SCoR Martine Jackson Memorial Lecture

Specialists posts, special radiographers and patient care

Sairanne Wickers, Consultant Radiographer, University College London Hospital

After qualifying as a therapeutic radiographer in 2002, Sairanne specialised in pre-treatment a few years later, and more specifically in breast and PET-CT planning in 2009. Sairanne became a consultant breast radiographer in January 2016. As well as managing her autonomous practice in the treatment of early breast cancer, Sairanne has a keen interest in radiographer-led research and driving forward best practice.

SCOR William Stripp Lecture

Shoulder imaging



Amanda Martin, Lead Radiographer, Royal Bolton Hospital

Amanda qualified in 1986 and started her Radiography career at Bolton Royal Infirmary. Shortly afterwards, she took up employment as a senior radiographer at Booth Hall Children's Hospital where she was the SoR Union Representative for a number of years. In 1995 Amanda was part of a pilot study to assess the ability of Radiographers to report musculoskeletal radiographic images. This developed into a postgraduate programme, and she achieved a MSc in Clinical Reporting of Trauma and Orthopaedics in 1999. Amanda then returned to her roots, and took a Clinical Tutor post at the Royal Bolton Hospital, combining this with a lecturers post at the University of Salford, where she was programme lead for the MSc Advanced Practice in Reporting. During her time as a lecturer practitioner, Amanda completed her PgC Teaching and Learning in Higher Education and commenced on the Professional Doctorate Health and Social Care programme. In 2007, she moved back into a full time post at Bolton when she was appointed as Clinical Manager. Completing her DProf in 2011 on the topic of service improvement methodologies within the NHS. Amanda opted to return into a clinical post rather than remain in management. She is now Lead Radiographer for the Trust, and audit lead and lead reporting radiographer within the department. She has a number of reporting sessions each week, where she reports musculoskeletal images from a wide range of sources and works closely with the ED in ensuring that patients requiring musculoskeletal imaging leave the department with the correct diagnosis and treatment at all times. Amanda also holds an annual contract with the University of Salford where she teaches image evaluation and interpretation to a wide range of professions. Her passion is in primary imaging of musculoskeletal conditions, and the impact that radiographers can have on supporting clinicians in achieving a good outcome for the patient.

IPEM John Mallard Lecture

The John Mallard Lecture is given annually at the UK Radiological Congress (UKRC) to recognise the outstanding contribution and leadership of Professor John Mallard in the field of Medical Imaging.

John Mallard's career spanned more than 40 years, during which advances in medical imaging facilitated huge improvements in the diagnosis and management of disease.

He pioneered many of the technologies which have become standard in health care throughout the world including Radionuclide Imaging, Magnetic Resonance Imaging and Positron Emission Tomography.

The speaker of 2017 is yet to be confirmed but in keeping with previous years, this will be a highly educational and scientific presentation delivered by an eminent professional.






08.30 – 09.50	
08.30 – 09.30 1A UKRO	Building a world class UK radiotherapy service for the 21st century <i>Chairs: Angela Baker, President, UKRO & Andy Beavis, Past-president, UKRO, UK</i> Challenges and strategy for implementation of a sustainable radiotherapy service - Nick Slevin, Consultant Clinical Oncologist, The Christie NHS Foundation Trust, UK Developing an internationally competitive radiotherapy research programme - Anthony Chalmers, Professor of Clinical Oncology, University of Glasgow, UK
08.30 – 09.50 1B Service Innovation & optimisation	Closing the gap - radiographers contribution to image interpretation in 2017 <i>Chair: Bev Snaith, Lead Consultant Radiographer, Mid Yorkshire Hospitals NHS Trust, UK</i> Reducing the potential for error and miscommunication in the emergency department - can Australian radiographers reach new heights? - Michael Neep, Metro South Health, Queensland, Australia Radiographers and lung cancer: An opportunity for change? - Nick Woznitza, Clinical Academic Reporting Radiographer, Homerton NHS Trust & Canterbury Christ Church University, UK The radiologists view - Nicholas Spencer, Consultant Radiologist, Mid Yorkshire Hospitals NHS Trust, UK The managers view: A DGH journey from start to finish...why a consultant radiographer? - Mark Buckley, Professional Lead, Rotherham Foundation Trust, UK
08.30 – 09.50 1C Imaging technologies & informatics	New imaging approaches in neurosurgery & neuro-oncology <i>Chair: John Ridgway, Head of MR Physics, Leeds Teaching Hospitals NHS Trust, UK</i> Advanced MR imaging techniques for neurosurgical planning - a neurosurgeon's perspective - John Goodden, Consultant Neurosurgeon, Leeds Teaching Hospitals NHS Trust, UK Advanced MR Imaging techniques for neurosurgical planning - a clinical scientist's perspective - Arshad Zaman, Clinical Scientist, Leeds Teaching Hospitals NHS Trust, UK Dose verification for proton - a radiologist's/oncologist's perspective - Speaker tbc
08.30 – 09.50 1D MSK 1 PRACTICAL SESSION	The Italian job <i>Chair: Nicki Delves, Specialist MSK Sonographer, Royal Surrey County Hospital, UK</i> Median nerve - Sonia Airaldi, Resident Radiologist, University of Genoa, Italy Ulnar nerve - Federico Zaottini, Resident Radiologist, University of Genoa, Italy Radial nerve - Carlo Martinoli, Professor of Radiology, University of Genoa, Italy Group discussion and live demo
08.30 – 09.50 1E Head and neck	Soft tissues <i>Chair: Rhian Rhys, Consultant Radiologist, Cwm Taf University Health Board, UK</i> Thyroid nodules - an epidemic! - Steve Colley, Consultant Radiologist, University Hospital Birmingham NHS Trust, UK Parathyroid imaging update - Polly Richards, Consultant Radiologist, Barts NHS Trust, UK Salivary stones, baskets and balloons - Nick Drage, Consultant Dental and Maxillofacial Radiologist, University Hospital of Wales, UK Sialendoscopy and minimally invasive salivary surgery - Katherine George, Consultant Oral and Maxillofacial Surgeon, King's College Hospital, Guy's & St Thomas' NHS Foundation Trust, UK
08.30 – 09.50 1F Urology	Urology <i>Chair: Alison Bradley, Consultant Radiologist, University Hospital of South Manchester, UK</i> Imaging of prostate cancer. Current status - Peter Beddy, St James Hospital, Dublin, Ireland Staging of renal cancer - Grainne Govender, Consultant Radiologist, St James Hospital, Dublin Ireland Scrotal tumours - Navin Ramachandran, Consultant Radiologist, University College Hospital, London, UK
08.30 – 09.50 1G OsiriX	Introduction to OsiriX for beginners Introductory workshop with MAC workstations loaded with OsiriX, to enable participants to look at case studies.
10.10-11.10	Opening plenary <i>Chair: Maryann Hardy, President, UKRC, UK</i> Will robots replace surgeons? - Shafi Ahmed, Consultant General, Laparoscopic and Colorectal Surgeon, Associate Dean and Honorary Senior Lecturer, Barts and the London Medical School, UK Machine learning and AI - Eliot Siegel, Professor and Vice Chair Research Informatics, University of Maryland, USA
11.30 – 13.20	
11.20-11.50 Interactive demo	Virtual reality True 3D This session will give attendees the opportunity to view CT and MRI data sets in True 3D. Patient specific anatomy will be visible in the open 3D space on top of the monitor screen using the EchoPixel True 3D software. Participants will be able, in small groups, to interact with the full DICOM data set in real-time, enabling them to reach in, grasp, dissect and interact with the key clinical features in a truly 3D form, as if they were the real physical objects.
11.30 – 12.50 2A UKRO	Advancing techniques and technologies in brachytherapy <i>Chair: Chris Lee, Consultant Clinical Scientist, Radiotherapy, Head of Brachytherapy Physics, The Clatterbridge Cancer Centre NHS Foundation Trust, UK and Peter Hoskin, Professor of Clinical Oncologist, East and North Hertfordshire NHS Trust, UK</i> Advancing techniques and technologies in modern brachytherapy - Bradley Pieters, Department of Radiation Oncology, Academic Medical Centre, University of Amsterdam, Netherlands Physics & technology in brachytherapy: Is something new? - Dimos Baltas, Professor for Medical Physics in Radiation Oncology, Head Division of Medical Physics, Medical Center, University of Freiburg, Germany Brachy HERO - Peter Hoskin, Professor of Clinical Oncologist, East and North Hertfordshire NHS Trust, UK Proffered papers

11.30 – 12.50 2B Proffered papers	Proffered papers - clinical <i>Chair: Vikas Shah, Consultant Radiologist, University Hospitals of Leicester, UK</i> Interpretation of TMJ pathology - a jaw-dropping review - Gary Cross, London Deanery, UK Assessing the appropriateness of requests for Lumbar spine radiography for low back pain in the community - Ken-win To, Kettering General Hospital NHS Foundation Trust, UK Optimisation of adequate phase of contrast enhancement on CT - an audit report and literature review - Waqas Ahmad, Shaikat Khanum Memorial Cancer Hospital, Pakistan Renal disease in Northern Territory, Australia - a matter of life choices? - Tu Anh Dao, Alice Springs Hospital, Northern Territory, Australia Mature and immature ovarian teratomas: a spectrum of features and multimodality problem solving - Kelsey Watt, Plymouth Hospitals NHS Trust, UK MRI-TRUS fusion - guided prostate biopsy - initial clinical experience - Maeve O'Sullivan, AMNCH, Ireland MRI characterisation of incidentalomas in the liver: Is intravenous contrast required? - Vincent Leung, University Hospitals of North Midlands, UK Aunt Minnies of uroradiology - Jonathan Bevan, Salford Royal Foundation Trust, UK
11.30 – 12.50 MSK ultrasound	MSK ultrasound Hands on demonstration sessions with live models in the exhibition hall.
11.50 – 13.10 2C Joint session 1	Short and long term implications of cancer treatments <i>Chair: Gerry Hanna, Senior Lecturer and Consultant in Clinical Oncology, Queen's University of Belfast, UK and Julian Kabala, Consultant Radiologist, University Hospital Bristol, UK</i> Cancer risk estimates from diagnostic medical radiation exposures in young people - Mark Pearce, Professor of Applied Epidemiology, Institute of Health & Society, Newcastle University, UK Impact of target volumes on 2nd cancer risk from lymphoma radiotherapy - Robin Prestwich, Consultant Clinical Oncologist, Leeds Teaching Hospital, UK Late GI side-effects following abdominal or pelvic radiotherapy - Clare Donnellan, Consultant Gastroenterologist, St. James's University Hospital, Leeds, UK Late radiological changes following thoracic radiotherapy - Lynne Armstrong, Consultant Radiologist, University Hospital Bristol
11.50 – 13.10 2D MSK	Bone and soft tissue tumours and their imaging <i>Chair: tbc</i> Bone tumours in the appendicular skeleton - Prudencia Tyrrell, Consultant Radiologist, Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, UK Bone tumours in the axial skeleton - Bernhard Tins, Consultant Radiologist, Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, UK Soft tissue tumours - Naomi Winn, Consultant Radiologist, Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, UK Tumour mimics - Jaspreet Singh, Consultant Radiologist, Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, UK
11.50 – 13.10 2E Obstetrics & gynaecology	Functional topics in gynaecology <i>Chair: Katherine van Ree, Consultant Radiologist, Imperial College NHS Trust, UK</i> PET CT in gynaecological malignancies - Tara Barwick, Consultant Radiologist, Imperial College NHS Trust, UK Functional tumours of the ovary - Anju Sahdev, Consultant Radiologist, St Bartholomew's Hospital, UK
12.00 – 13.20 2F Breast	Emerging technologies and strategies <i>Chair: Tamara Suaris, Consultant Radiologist, St Bartholomew's Hospital, London, UK</i> Contrast spectral mammography - Sarah Tennant, Consultant Radiologist, Nottingham University Hospitals NHS Trust, UK Updates on digital breast tomosynthesis - Juliet Morel, Consultant Radiologist, King's College Hospital, London, UK Surgical updates - Andrew Baidham, Consultant Oncoplastic Surgeon, St Bartholomew's Hospital, London, UK
12.00 – 13.20 2G RCR Trainees	Tips for portfolio development and preparing for a consultant career <i>Chair: Janarthan Suntharanathan, Radiology Specialty Registrar, Health Education North West, UK and Caroline Parkin, Consultant Breast Radiologist, Nightingale Centre, University of South Manchester NHS Foundation Trust, UK</i> Thinking about consultancy - what's right for you? - Diana Rosof Williams, Consultant Radionuclide Radiologist, Lancashire Teaching Hospitals NHS Foundation Trust, UK Designing and seizing your consultant post - how you do it? - Kate Downey, Consultant Breast Radiologist and Cancer Imaging Specialist, The Royal Marsden NHS Foundation Trust, UK Transitioning from trainee to consultancy: Leadership and management - P Najran, Consultant Radiologist, The Christie NHS Foundation Trust, UK Creating a successful CV - Alex Weller, Consultant Radiologist, Northwick Park NHS Foundation Trust, UK Training LTFT: The best of both worlds - Tharsi Sarvananthan, Radiology Specialty Registrar, Frimley Health NHS Foundation Trust, Health Education Kent, Surrey and Sussex, UK
12.00 – 13.20 2H Head & neck Osirix	Head and neck Osirix Workshop with MAC workstations loaded with Osirix, to enable participants to look at head and neck case studies. Rhian Rhys, Consultant Radiologist, Cwm Taf University Health Board, UK Steve Colley, Consultant Radiologist, University Hospital Birmingham NHS Trust, UK
13.10-13.55	SCoR Keynote: Stanley Melville Lecture Coming out in healthcare Amanda Bolderston, Provincial Professional Practice and Academic Leader, British Columbia Cancer Agency, Canada
13.20 – 14.20 FRCR drop in session	FRCR drop in session FRCR VIVA teaching tutorial run by experienced FRCR tutors.

13.20 – 13.50 Exhibition Lecture BIR/PRDA	Pelvic radiation disease a late effect of radiotherapy
14.00 – 15.40	
14.00-14.20 DEMO ZONE Oncology Systems Ltd	IBA's Dolphin® - Advanced pre-treatment VMAT QA and online-ready treatment monitoring system
14.00 – 15.20 MSK ultrasound	MSK ultrasound Hands on demonstration sessions with live models.
14.10-15.30 3A UKRO	Measuring toxicity <i>Chair: Kevin Franks, Consultant Clinical Oncologist, St James' Institute of Oncology (SJIO), Leeds Cancer Centre & Honorary Clinical Associate Professor, University of Leeds, UK</i> Measuring toxicity in pelvic radiotherapy patients - Alexandra Gilbert, Clinical Research Fellow, University of Leeds, UK Assessment of Patient Reported Outcomes (PROs) in clinical trials of cancer therapy developing validated PROs - Professor Dame Lesley Fallowfield, Director of Sussex Health Outcomes Research & Education in Cancer, Brighton and Sussex Medical School, University of Sussex, UK Patient reported outcomes, what's important to patients? - Margaret Grayson, Chair, Northern Ireland Cancer Research Consumer Forum, UK
14.10 – 15.40 3B UKRO	Molecular radiotherapy <i>Chair: Glenn Flux, Head of Radioisotope Physics, Royal Marsden Hospital & Institute of Cancer Research, UK</i> The changing landscape of molecular radiotherapy - Glenn Flux, Head of Radioisotope Physics, Royal Marsden Hospital & Institute of Cancer Research, UK Toward personalised treatment planning for molecular radiotherapy - Lidia Strigari, Medical Physicist, Laboratory of Medical Physics and Expert Systems, Regina Elena National Cancer Institute, Italy Beyond volume delineation: Theragnostic PET imaging to predict response to radium-223 molecular radiotherapy - Iain Murray, Principal PET Physicist, Joint Department of Physics, Royal Marsden NHS Foundation Trust, UK
14.10 – 15.30 3C Imaging technologies & informatics INTERACTIVE	Clouds & bunkers: PACS up in the air, extreme collaboration and staying prepared <i>Chair: Anant Patel, IM+T Advisory Group, Society and College of Radiographers, UK</i> New collaborative cloud systems - <i>Speaker tbc</i> Closer to home: The European cloud - Fredrik Gustavsson, Sectra Best practice disaster recovery - Huw Shermer, CCIO Wales, Medical Director, NHS Wales Informatics Service, UK Business continuity in a 24/7 industry - <i>Speaker tbc</i>
14.10 – 15.30 3D Obstetrics & gynaecology	Imaging of pelvic pain <i>Chair: Katherine van Ree, Consultant Radiologist, Imperial College NHS Trust, UK</i> The diagnosis of chronic pelvic pain - how to triage patients with US - Susanne Johnson, Associate Specialist in Gynaecology, Princess Anne Hospital, Southampton, UK Pelvic congestion syndrome - imaging and treatment - Kate Waters, Consultant Radiologist, University Hospitals of Leicester, UK
14.20 – 15.40 3E Head & neck	Skull and neck <i>Chair: Polly Richards, Consultant Radiologist, Barts NHS Trust, UK</i> Temporal bone - cholesteotoma - Ravi Lingham, Consultant Radiologist, Northwick Park & Central Middlesex Hospitals, UK Temporal bone - if it's not cholesteotoma... - Matt Bull, Consultant Radiologist, NHS Frimley Park Foundation Trust, UK Central skull base - pearls and pitfalls - Gitta Madhani, Consultant Radiologist, Imperial College Healthcare NHS Trust, UK Intracranial complications of ENT disease - Gillian Potter, Consultant Neuroradiologist, Salford Royal NHS Foundation Trust, UK
14.20 – 15.40 3F Breast	Multidisciplinary meeting <i>Chair: Tamara Suaris, Consultant Radiologist, St Bartholomew's Hospital, London, UK</i> Speakers Juliet Morel, Consultant Radiologist, King's College Hospital, London, UK Sarah Tennant, Consultant Radiologist, Nottingham University Hospitals NHS Trust, UK Louise Jones, Consultant Histopathologist, St Bartholomew's Hospital, London, UK Andrew Baildham, Consultant Oncoplastic Surgeon, St Bartholomew's Hospital/ Manchester, UK
14.20 – 15.40 3G Education & research	Research as a successful component of radiographer career development <i>Chair: Rachel Harris, Professional and Educational Manager, SCoR, Steering Group Chair of CAHPR, UK</i> Dual registration improves image guidance in head and neck radiotherapy: An implementation study - Simon Goldsworthy, Senior Radiographer, Taunton and Somerset NHS Foundation Trust, UK The only way is ethics! - Julie Woodley, Senior Lecturer, University of the West of England, UK Inter-observer variation in quality assurance of sonographer performed non-obstetric ultrasound - Peter Cantin, Consultant Sonographer, Plymouth Hospitals NHS Trust, UK Supporting allied health professional involvement in research - Jen Pearson, Chair, CAHPR (Council for Allied Health Professional Research), UK
15.10 – 16.10 FRCR drop in session	FRCR drop in session FRCR VIVA teaching tutorial run by experienced FRCR tutors.

15.50 – 17.20	
15.50 – 17.10 4A UKRC/O Joint session	Beyond competition: Collaboration between the NHS and the private sector <i>Chair: Peter Sharpe, Chief Executive Officer, Cobalt Health</i> Community imaging provision: Experience from the Sussex MSK service - Ian Francis, Consultant Radiologist and Director, Medical Imaging Partnership, UK Commissioning to enable pathway transformation in the NHS - TBC Sussex commissioner Outsourced reporting service: Ensuring service continuity - Charles House, Consultant Radiologist, Divisional Director, University College London, UK Integrating the independent sector provision in cancer treatment - TBC from Genesis, UK
15.50 – 17.10 4B RPS	RPS Masterclass <i>Chair: Graham Hart, RPA/LPA, Your RPA</i> Revision of Ionising radiations regulations - James Taylor, Principal Specialist Inspector, Health & Safety Executive, UK
15.50 – 17.10 4C Urology	Urology <i>Chair: Navin Ramachandran, Consultant Radiologist, University College Hospital, UK</i> Developing diagnostic imaging strategies for investigating haematuria - Nigel Cowan, Consultant Uroradiologist, Queen Alexandra Hospital, Portsmouth, UK Imaging the uroepithelium - Michael Maher, Professor of Radiology, Cork University Hospital and University College Cork, Ireland Benign renal lesions - Alison Bradley, Consultant Radiologist, University Hospital of South Manchester, UK
15.50 – 17.10 4D Education & research	New models of education to promote positive developments in healthcare <i>Chair: Janice St John Matthews, Associate Head of Department, Allied Health Professions, University of the West of England, UK</i> Utilising an adapted 'world café' method to teach integrated care concepts to postgraduate healthcare students - Kerry Mills, Senior Lecturer - Diagnostic Imaging, The University of the West of England, UK How can education help to ensure radiographers are at the heart of the changing NHS - Ben Roe, Deputy Chief Operating officer, Taunton & Somerset NHS Trust, UK Multi qualification radiographers at threshold - the Finnish multi qualification - Päivi Wood, CEO, Radiography Professional Body in Finland, UK A model for collaborative development of the workforce - Petra Jacobs, Deputy Radiotherapy Services Manager, University Hospital Bristol, UK
15.50 – 17.10 Head & neck Ultrasound	Head and neck ultrasound Hands on demonstration sessions with live models in the exhibition hall Rhian Rhys, Consultant Radiologist, Cwm Taf University Health Board, UK Steve Colley, Consultant Radiologist, University Hospital Birmingham NHS Trust, UK
16.00 – 17.30 4E UKRO	Data <i>Chair: Colin Baker, Head of Radiotherapy Physics, Royal Berkshire NHS Foundation Trust</i> Possibilities and pitfalls of big data analysis in radiotherapy - Marcel van Herk, Professor, University of Manchester, Manchester Academic Health Science Centre and The Christie NHS Trust, UK The VoxTox programme – recent outcomes, updates and implications - Neil Burnet, Professor of Radiation Oncology, Cambridge University Department of Oncology, Addenbrooke's Hospital, UK SABR outcomes analysis: A prototype for a centralised UK registry of radiotherapy plan information and clinical outcomes - Gareth Webster, Operational Lead Physicist, Worcestershire Oncology Centre, UK Governance issues concerning the sharing of data in radiotherapy - Andrew Reilly, Head of Radiotherapy Physics, North West Cancer Centre, UK Proffered papers
16.10-17.10 4F UKRO	UKRO proffered papers
16.00 – 17.20 4G Proffered papers	Proffered papers - service optimisation and innovation <i>Chair: Nicholas Spencer, Consultant Radiologist, Mid Yorkshire Hospitals NHS Trust, UK</i> On call provisional CT reporting - are we getting it right? - Jaymini Patel, London North West Healthcare Trust, UK Automatically populated worklist enhances safety of on call CT scan checking systems - Rajiv Patel, London North West NHS Trust, UK An audit of waiting times for patients with known or suspected malignancy undergoing CT-guided percutaneous biopsy - Frances Sheehan, East and North Hertfordshire NHS Trust, UK The consultant breast radiographer - a role innovation exemplar - Anne-Marie Culpan, University of Leeds, UK A five year longitudinal evaluation of the impact of a bespoke professional development programme for consultant radiographers - Julie Nightingale, University of Salford, UK Is radiography ready for apprenticeships? A critical review of the evidence and reflection on its implications - Denise Baker, School of Radiology, UK An audit on the impact of a regional collaborative out of hours service on trainee feedback - Christopher Keegan, Mersey Variations in reporting radiographer report structure - Anthony Manning-Stanley, University of Liverpool, UK
16.00 – 17.20 4H Breast	Breast tomography workshop Tamara Suaris, Consultant Radiologist, St Bartholomew's Hospital, London, UK
17.00-19.00	
Exhibition hall	
17.00 – 18.00 Exhibition hall	Radiology fellowships networking event At this networking event trainees interested in doing fellowships can meet with representatives from units that offer fellowships. It will help trainees identify their current and future options, expand their network of contacts and gather information.
17.20 – 17.30 Exhibition Lecture	The doctorate den Calling all radiography Doctorate students, perspective Doctorate students and newly completed Doctorate students. In 2016, the Society & College of Radiographers released the "Research Strategy 2016-2021" and pledged 1% of the profession would hold Doctorates by 2021. This is an informal networking opportunity for those who share this ambition. Be part of the growing community of "Radiographers' undertaking Doctorates" to advance the profession. Learn how you can stay connected over the duration of your studies through social media.



08.00-09.20	
08.00 - 09.00 5A UKRO	Elekta symposium The new and exciting role of MR imaging in radiotherapy 
08.00 - 09.20 5B Service innovation & optimisation 	Optimising CT <i>Chair: Bev Snaith, Lead Consultant Radiographer, Mid Yorkshire Hospitals NHS Trust, UK</i> Optimising access in stroke: STEMO - the CT ambulance - <i>Speaker tbc</i> Optimising clinical pathways - <i>Martine Harris, Research Radiographer, Mid Yorkshire Hospitals, UK</i> Optimising dose - implementing the COMARE 16 report - <i>Paul Charnock, Scientific Officer, Integrated Radiological Services, UK</i> Optimising staffing - generalist, specialist, neither or both? The modern CT radiographer - <i>Janice St John Matthews, Associate Head of Department, Allied Health Professions, University of West of England, UK</i> 
08.00 - 09.20 5C Imaging technologies & informatics	Cross organisational working in IT <i>Chair: Kevin Tucker, National Officer for Wales, Society and College of Radiographers, UK</i> Integration plans in Northern Ireland - <i>Julie Moss, PACS Manager, Belfast Health & Social Care Trust, UK</i> Shared services for radiology in Scotland - <i>Linda Kerr, Programme Manager for Radiology & Medical Physics, NHS Scotland Shared Services, UK</i> Welsh clinical portal - imaging in the valleys - <i>Rob Jones, Head of Applications Design & Rhidian Hurle, Medical Director, NHS Wales Informatics Service, UK</i> Cross organisational working in practice - <i>Andy Kinnear, Director of Digital Transformation, NHS South, Central and West CSU, UK</i>
08.00 - 09.20 5D MSK ultrasound	Imaging in elite sport <i>Chair: Gajan Rajeswaran, Consultant Musculoskeletal Radiologist, University College Hospital London, UK</i> MRI interpretation in elite sport - <i>Sarath Bethapudi, Consultant Radiologist, County Durham and Darlington Hospitals, UK</i> Pre-signing MRI: What it involves and what the radiologist's role is - <i>Andrew Dunn, Consultant Musculoskeletal Radiologist, Royal Liverpool University Hospital, UK</i> Is grading muscle, tendon and ligament injury important? - <i>Waqar Bhatti, Professor & Consultant MSK and Sport Radiologist, University Hospital of South Manchester, UK</i> Lower limb sports injuries: The good, the bad & the ugly - <i>Steven James, Consultant Musculoskeletal Radiologist, The Royal Orthopaedic Hospital, UK</i>
08.00 - 09.20 5E Neuro	Neuroradiology <i>Chair: Maneesh Patel, Consultant Neuroradiologist, Imperial College NHS Trust, UK</i> Brain tumour update - <i>Adam Walman, Consultant Neuroradiologist, Edinburgh University, UK</i> Update on stroke imaging - <i>David Summers, Consultant Neuroradiologist, Edinburgh, UK</i>
08.00 - 09.20 5F OsiriX	Introduction to OsiriX for beginners Introductory workshop with MAC workstations loaded with OsiriX, to enable participants to look at case studies.
09.30-10.30	Plenary debate Introduction - <i>Angela Baker, President, UKRO, UK</i> The end is nigh...AI-enabled machines have placed imaging and oncology professionals on the path to extinction <i>Chair: Dr Phil Hammond, GP and Presenter, UK</i> Panel members Against: <i>Eliot Siegel, Professor and Vice Chair Research Informatics, University of Maryland, USA; Andy Beavis, Radiotherapy Physicist and Chief Scientific Officer, Virtual, UK</i> For: <i>Steven Tolle, Vice President/Chief Strategist Watson Health Imaging, UK; Shaona Ghosh, Postdoctoral Researcher, University of Cambridge, UK</i>
10.20-11.10	Refreshments and exhibition, poster viewing, demo sessions
10.40-12.40	
10.40 - 11.10 Exhibition Lecture Bayer	Update on Gd presence in the brain after repetitive administration of GBCA Bayer have funded an exhibition stand and symposium at this meeting.
10.40 - 12.00 MSK ultrasound	MSK ultrasound Hands on demonstration sessions with live models in the exhibition hall.
11.20 - 12.40 6A UKRO	Global radiotherapy challenges <i>Chairs: Gerry Hanna, Senior Lecturer and Consultant in Clinical Oncology, Queen's University of Belfast, UK and Angela Baker, President, UKRO, UK</i> Key challenges on providing radiotherapy services in low to middle income countries - <i>Elena Fidarova, Radiation Oncologist, Division of Human Health, International Atomic Energy Agency, Austria</i> Teaching and training of radiotherapy in low and middle income countries: a hands-on experience in Africa - <i>Jeannette Parkes, Professor & Head of Department Radiation Oncology, Groote Schuur Hospital and University of Cape Town, South Africa</i> Radiotherapy cost effectiveness - <i>Clive Peedell, Consultant Clinical Oncologist, James Cook University Hospital, UK</i>
11.20 - 12.40 6B UKRO	Adaptive IGRT <i>Chairs: Helen McNair, Research Lead Radiographer, The Royal Marsden NHS Foundation Trust, UK</i> The current status of adaptive therapy - <i>Kevin Franks, Consultant Clinical Oncologist, St James' Institute of Oncology (SJIO), Leeds Cancer Centre & Honorary Clinical Associate Professor, University of Leeds, UK</i> Future developments in adaptive therapy - <i>Uwe Oelfka, Professor, The Institute of Cancer Research, UK</i> Proffered papers



11.20 – 12.40 6C Paediatrics	Harnessing technology to improve clinical and fiscal efficiency <i>Chair: Marina Easty, Consultant Paediatric Radiologist, Great Ormond Street Hospital, UK</i> More than PACS - Anant Patel, IM+T Advisory Group, Society and College of Radiographers, UK Clinical networks - Mark Griffiths, Consultant Radiologist, University Hospital Southampton, UK Neonatal radiography - tackling persistent problems - Christina Pedersen, Radiographer, Aarhus University, Hospital, Denmark dREAMS - Amaka Offiah, Reader in Paediatric Musculoskeletal Imaging, University of Sheffield, UK Group discussion
11.20 – 12.40 6D Proffered papers	Proffered papers - science, education and radiation protection <i>Chair: Sarah Allen, Head of Nuclear Medicine Physics, Guy's and St Thomas' NHS Foundation Trust, UK</i> Writing about radiation in your IRAS application - Andrea Shemilt, Nottingham University Hospitals NHS Trust, UK An audit into radiation awareness and a qualitative assessment into requesting and interpretation of common imaging modalities - a junior doctor and final year medical student survey - Sam Booth, University of Birmingham, UK Radiation safety culture initiatives in X-ray imaging optimisation - Hugh Wilkins, University of Exeter, UK A review of MR labeling information related to IEC 62570 labeling requirements of commercially available MRI accessories - Gina Stateczny, MRI-Tec Improving from an ir(me)r inspection - Toni Hall, Oxford University Hospitals NHS Foundation Trust, UK Image quality: Old vs new - Stephen Wolstenhulme, Leeds Teaching Hospitals, UK A method to model the influence of beam quality on image noise in a digitally reconstructed radiograph (DRR) based computer simulation for optimisation of digital radiography - Craig Moore, Hull & East Yorkshire Hospitals NHS Trust, UK The efficacy of routine radiographer QA testing - Natalie Thring, Radiation Consultancy Services Ltd, UK
11.20 – 12.40 6E Neuro	Neuroradiology <i>Chair: Maneesh Patel, Consultant Neuroradiologist, Imperial College NHS Trust, UK</i> Encephalitis-infection and beyond - Bryn Jones, Consultant Neuroradiologist, Imperial College NHS Trust, UK Brain tumour mimics - some interesting cases and clues - Priya Bhatnagar, Consultant Neuroradiologist, Royal Victoria Infirmary, Newcastle upon Tyne Hospitals NHS Foundation Trust, UK
11.20 – 12.40 6F Cardiac	Advances in cardiac Magnetic Resonance Imaging <i>Chair: Stephen Harden, Consultant Radiologist, Southampton University Hospital, UK</i> MRI with implantable electrical devices - Bobby Agrawal, Consultant Radiologist, Papworth Hospital, UK Advances in aortic imaging with MRI - Ben Holloway, Consultant Radiologist, University Hospitals Birmingham NHS Foundation Trust, UK Hyperpolarised carbon in CMR - Ferdia Gallagher, Consultant Radiologist, University of Cambridge, UK Group discussion
11.20 – 12.40 6G ROC Research	Trends and challenges - enabling imaging research to 2030 Setting the scene - how NIHR is channelling efforts in support of imaging research - Stephen Smye, Honorary Professor, University of Leeds & NIHR Specialty Cluster Lead, UK How the demands on Imaging capacity and capability will be influenced by advances in research - <i>Speaker tbc</i> Big data and radiomics - <i>Speaker tbc</i> Imaging research workforce - what all this means for our people - <i>Speaker tbc</i>
11.20 – 12.40 6H Obstetrics & gynaecology OsiriX	Obstetrics and gynaecology OsiriX Facilitator: Victoria Stewart, Stream Lead, UK
11.20 – 12.20 FRCR drop in session	FRCR drop in session FRCR VIVA teaching tutorial run by experienced FRCR tutors.
11.50 – 12.30 Dose awareness session	Radiation dose An open access session promoting multidisciplinary knowledge of dose awareness.
12.40 – 13.10 Interactive demo	Virtual reality True 3D This session will give attendees the opportunity to view CT and MRI data sets in True 3D. Patient specific anatomy will be visible in the open 3D space on top of the monitor screen using the EchoPixel True 3D software. Participants will be able, in small groups, to interact with the full DICOM data set in real-time, enabling them to reach in, grasp, dissect and interact with the key clinical features in a truly 3D form, as if they were the real physical objects.
12.50 – 13.20 Exhibition Lecture Siemens Healthineers	Improving outcomes through partnership; The Radiology Performance Management Service (RPMS) - John Wilkinson, Healthcare Consultant, Enterprise Services & Solutions - GB&I
13.00 – 14.20 6I Cardiac OsiriX	Cardiac OsiriX <i>Swamy Gedela, Consultant Radiologist, Basildon, UK</i> <i>Bobby Agrawal, Consultant Radiologist, Papworth Hospital, UK</i>
12.30 – 14.00	Lunch and exhibition, poster viewing, demo sessions




13.00 – 13.50	BIR/Toshiba Mayneord Memorial Lecture A 21st century NHS - delivering tomorrow's medicine, today - Keith McNeil, Chief Clinical Information Officer for Health and Social Care, NHS, UK
13.30 – 14.00 Demo zone OSL	Multi-parametric MR analysis for prostate cancer detection and treatment with Watson elementary - Susan Barley, Lead Clinical Scientist, Oncology Systems Limited, UK
14.10 – 16.50	
14.10 – 15.30 7A UKRC/O Joint session	MR imaging for clinicians, physicists and radiographers Chair: Helen McNair, Research Lead Radiographer, The Royal Marsden NHS Foundation Trust, UK and Julian Kabala, Consultant Radiologist, University Hospital Bristol, UK Parameters and trade off - Robert Johnstone, King's College London, UK MRI imaging: Image weighting and Pulse sequences with clinical application - Tamas Schiszler, Consultant Radiologist at the University Hospitals Bristol, UK MRI imaging: Applied to radiotherapy planning - Speaker tbc Artefacts and reduction - Jill McKenna, MR/CT Superintendent Radiographer, Freeman Hospital, Newcastle Upon Tyne & Past President, British Association of Radiographers, UK
14.10 – 15.30 7B Emergency & trauma INTERACTIVE	Case based 'Blood and guts' Chair: Roland Watura, Radiology Consultant, North Bristol NHS Trust, UK Find the bleeding point! - Elizabeth Dick, Lead for Emergency Radiology, Imperial College London, UK The role of the interventionalist in trauma - Graham Collins, Radiology Consultant, North Bristol NHS Trust, UK The acute abdomen - Christopher Schelvan, Consultant Radiologist, Imperial College London, UK Postoperative acute abdomen - Priya Healy, Royal Liverpool and Broadgreen University Hospitals NHS Trust, UK
14.10 – 15.30 7C Paediatrics	Existing technology - evolving applications Chair: Samantha Negus, Paediatric Radiologist, UK CT dose reduction - how low is low? - Marcel Dijkshoorn, Research Radiographer, Erasmus MC, Rotterdam, Netherlands Functional MRI of the lungs in children - Jim Wild, Professor of Magnetic Resonance Physics, NIHR Research Professor in Pulmonary Imaging, University of Sheffield, UK Advances in PET imaging in children - Marina Easty, Consultant Paediatric Radiologist, Great Ormond Street Hospital, UK
14.10 – 15.30 7D MSK	MSK intervention Chair: Rajat Chowdhury, Consultant Musculoskeletal Radiologist, Nuffield Orthopaedic Centre, Oxford University Hospitals, UK Hydrodilatation for the frozen shoulder - what's the best approach? - Subhasis Basu, Consultant Musculoskeletal Radiologist, Wrightington Hospital, Lancashire, UK MSK intervention in the hand - changing the surgical landscape - Benjamin J Robertson, Consultant Interventional and Musculoskeletal Radiologist, Chelsea and Westminster Hospital, UK The perils of consent in MSK intervention - Rowena Johnson, Consultant Musculoskeletal Radiologist, Nuffield Orthopaedic Centre, Oxford University Hospitals, UK Image guided intervention in the elite athlete - does it really work? - Justin Lee, Consultant Musculoskeletal Radiologist, Fortius Clinic, London, UK
14.10 – 15.30 7E Imaging technologies & informatics	Computer Assisted Radiology and Surgery (CARS) and emerging technology Chair: Liz Beckmann, Regional Director, EchoPixel, UK The future challenge for imaging - a challenge from surgery - Nicholas Haden, Neurosurgeon, Plymouth Hospitals NHS Trust The evolution of the digital operating theatre for the next 5-10 years - Heinz Lemke, Director, CARS Emerging technology - solutions for the future - Stefan Vilsmeier, President & CEO, Brainlab
14.10 – 15.30 7F Proffered papers	Proffered papers - clinical Chair: Nick Woznitza, Clinical Academic Reporting Radiographer, Homerton NHS Trust & Canterbury Christ Church University, UK A service evaluation of a V/Q SPECT service - Amit Parekh, Royal United Hospital, UK Value of invasive angiography following negative CT angiogram in the haemodynamically unstable patient with pelvic trauma - Jen-Jou Wong, Aintree Hospital, UK The current state of MRI in vascular access imaging - Conor MacDonald, University of Dundee, UK MRI evaluation of epicardial adipose tissue in patients with cardio-metabolic disease: Potential pathophysiological links with inflammation and vascular dysfunction - Shaween Al-Talabany, University of Dundee, UK Nebulised 18F-fluorodeoxyglucose (18F-FDG) assessment of pulmonary drug deposition: Proof of concept Shamsuddeen - Ahmad Aliyu, Hull York Medical School, University of Hull, UK Low-dose CT screening for lung cancer: Are we truly achieving a low-dose? - Carolyn Horst, University College London, UK Ipsilateral dual-site, same-sitting percutaneous lung biopsy: A feasibility study - Joseph Barnett, Royal Free NHS Trust, UK
14.10 – 15.30 7G Education & research / Breast Joint session	The breast imaging academy: An innovative workforce solution Chair: Caroline Parkin, Consultant Breast Radiologist, University Hospital of South Manchester, UK Introduction - Paula Stavrinou, Project Manager, The Breast Imaging Academy, UK Radiography training - Lyndsay Kinnear, Radiographer and Megan Bydder, Consultant Breast Radiologist, University Hospital of South Manchester, UK Breast clinician training - Mary Wilson, Consultant Breast Radiologist, University Hospital of South Manchester, UK Breast radiology training - Soujanya Gadde, Consultant Breast Radiologist, University Hospital of South Manchester, UK
14.20 – 15.10 Dose awareness session	How to run an imaging optimisation team An open access session promoting multidisciplinary knowledge of dose awareness.
14.40 – 16.00 7H Neuro OsiriX	Neuro Farah Alobeidi, Consultant Neuroradiologist, Imperial College NHS Trust, UK





15.20 - 16.10	Refreshments, exhibition, poster viewing and demo sessions	
15.30 - 16.50 MSK ultrasound	MSK ultrasound Hands on demonstration sessions with live models in the exhibition hall.	
15.40 - 16.10 Dose awareness session	Are you dose ready? An open access session promoting multidisciplinary knowledge of dose awareness.	
16.20 - 18.00		
16.20 - 17.20 8A UKRO	SABR for oligometastases - the great debate Chair: Kevin Franks, Consultant Clinical Oncologist, St James' Institute of Oncology (SJIO), Leeds Cancer Centre & Honorary Clinical Associate Professor, University of Leeds, UK Motion: Level 1 randomised clinical trials evidence is needed before we implement SABR as a routine service in the NHS For: Stephen Harrow, National Research Scotland Fellow, Beatson West of Scotland Cancer Centre, UK Against: Alison Tree, Consultant Clinical Oncologist, Royal Marsden Hospital, UK	
16.20 - 17.10 8B 	SCoR Martine Jackson Memorial Lecture Specialist posts, special radiographers and patient care Chair: Steve Herring, President, Society of Radiographers, UK Sairanne Wickers, Consultant Radiographer, University College London Hospital, UK	
16.20 - 17.40 8C History	History Chair: Liz Beckmann, British Society for the History of Radiology, UK Sebastian Gilbert Scott (1879-1941) and the treatment of ankylosing spondylitis - Adrian Thomas, Canterbury Christ Church University, UK Neville Samuel Finzi (1881-1968) - a radiotherapy pioneer and radiology benefactor - Arpan Banerjee, British Society for the History of Radiology, UK Philately and Tuberculosis - Adrian Thomas, Canterbury Christ Church University, UK	
16.20 - 17.40 8D MSK INTERACTIVE	Rapid reporting of the upper and lower limb: Plain films and beyond Chair: tbc Rapid reporting, upper limb: Test yourself - Chand Thorning, Consultant Radiologist, Epsom and St Helier University Hospitals NHS Trust, UK Rapid reporting, lower limb: Test yourself - Kausik Mukherjee, Consultant Musculoskeletal Radiologist, University Hospital Wales, UK	
16.20 - 17.40 8E Imaging technologies & informatics	Molecular imaging with novel tracers Chair: Heather Williams, Senior Medical Physicist, Central Manchester University Hospitals, UK Hyperpolarised MRI - Ferdia Gallagher, CRUK Clinician Scientist Fellow, University of Cambridge, UK Combined MR/PET tracers - Eric O Aboagye, Professor of Cancer Pharmacology and Molecular Imaging, Imperial College London, UK Bringing novel tracers into clinical use - a radiopharmacist's perspective - Eric O Aboagye, Professor of Cancer Pharmacology and Molecular Imaging, Imperial College London, UK Group discussion	
16.20 - 17.40 8F Cardiac	Advances in cardiac Imaging Chair: Bobby Agrawal, Consultant Radiologist, Papworth Hospital, UK The impact of the new NICE guidelines of cardiac CT demand and provision - Swamy Gedela, Consultant Radiologist, Basildon and Thurrock University Hospitals NHS Foundation Trust, UK Perfusion CT... the future? - Michelle Williams, The University of Edinburgh, UK Advances in cardiac perfusion CMR - James Moon, Professor of Cardiac Imaging, Barts Heart Centre, UK Group discussion	
16.20 - 17.40 8G RPS 	RPS Masterclass Chair: Graham Hart, RPA/LPA, Your RPA, UK Dose optimisation - Matthew Dunn, Head of Radiology Physics, Medical Physics and Clinical Engineering, Nottingham University Hospitals NHS Trust, UK	
16.20 - 17.40 8H Paediatrics	Paediatrics OsiriX Workshop with MAC workstations loaded with OsiriX, to enable participants to look at paediatric case studies.	
11.20 - 12.20 FRCR drop in session	FRCR drop in session FRCR VIVA teaching tutorial run by experienced FRCR tutors.	
17.20 - 18.00 9A UKRO	UKRO proffered papers	
19.30	AXREM Dinner Science and Technology theme Principal Manchester Hotel	

08.00 – 11.00	
08.10 – 09.10 10A UKRO	Varian Medical Systems symposium – Innovation in radiotherapy 
08.00 – 09.20 10B Service innovation & optimisation	Benchmarking and driving improvement in UK radiology NHS benchmarking and its application in radiology - Stephen Watkins, Director, NHS Benchmarking, UK Service review and radiology advisory services: An independent perspective - Peter Cavanagh, Radiologist, UK Insights from another service specialty: A&E - Kevin Reynard, Clinical Director (North), Emergency Care Improvement Programme, NHSI, UK GIRFT principles, application to improve cancer pathways in the NHS - T Briggs, Royal National Orthopaedic Hospital, Stanmore and GIRFT Lead, NHS Improvement, UK
08.00 – 09.20 10C GI & Hep OsiriX	Cross-sectional evaluation of biliary dilatation Siobhan Whitley, Consultant Radiologist, Addenbrooke's Hospital, UK James Tanner, Radiology Trainee, Addenbrooke's Hospital, UK During this session we will review the differential diagnosis of biliary dilatation using cross-sectional imaging. Using case studies gleaned from a tertiary referral centre for hepatobiliary surgery we include stone disease, biliary tumours, congenital causes and some complications. We will review optimisation of surgical planning and the use of MR.
08.00 – 09.20 10D Chest	Technological advances in thoracic imaging Chair: Mary Roddie, Imperial College Healthcare NHS Trust Reduction in radiation dose - how low can we go? - Michelle Williams, Borders General Hospital, Scotland, UK What's new in chest radiography? - Nicolas Screaton, Consultant Radiologist, Addenbrooke's Hospital, UK Dual energy CT - ready for prime time? - Sarah Sheard, Radiology Registrar, St George's Hospital, UK Quantitative pulmonary CT - new horizons - Joe Jacob, Royal Free Hospital
08.00 – 09.20 10E RPS	RPS Masterclass Chair: Graham Hart, RPA/LPA, Your RPA, UK Revision of medical exposure regulations - Steve Ebdon-Jackson, Public Health England, UK
08.00 – 09.20 10F Proffered papers	Proffered papers - clinical Chair: Sam Negus, Paediatric Radiologist, UK The hitchhiker's guide to childhood body tumours: 3 year experience of a tertiary referral centre for paediatric oncology - Linda Stephens, Royal Manchester Children's Hospital, UK Diagnostic paediatric imaging out of hours: A quality improvement project - Sara Zafar, Chelsea & Westminster Hospital, UK Quantitative and qualitative values for the different T2W image sequences used for fetal MRI - Rodwan Tumi, University of Sheffield, UK Development of an instrument to assess trauma radiograph interpretation performance - Michael Neep, Metro South Health, Australia 3D CT based orthopaedic reconstructive software - David Liston, Sectra Ltd, UK High index of suspicion aided with musculoskeletal ultrasound can resolve complex midfoot and hindfoot problems, which can be otherwise sometimes labelled as - non-specific footpain: Review of literature with pictorial review of differential diagnosis - Saayija Kumarachandran, London Northwest Healthcare NHS Trust, UK Do radiologists and radiographers need to know about osteoporosis? - Amit Gupta, Bradford Teaching Hospitals NHS Foundation Trust, UK Gout imaging with dual energy CT: Imaging protocol, post-processing techniques and its limitations - Wei Ling Chuang, Singapore General Hospital, UK
09.40 – 11.00 10G Chest	Chest OsiriX Workshop with MAC workstations loaded with OsiriX, to enable participants to look at chest and lung case studies.

10.00 – 11.50	
10.00 – 11.20 11A UKRO	Protons <i>Chair: Julia-Claire Handley, Radiotherapy Physics Group Leader, The Christie NHS Foundation Trust, UK</i> Overview of the national proton programme - Ed Smith, Consultant Clinical Oncologist, The Christie NHS Foundation Trust, UK Improving proton therapy through advanced imaging - Tracey Underwood, Research Fellow, Department of Medical Physics & Biomedical Engineering, University College London, UK Where next for particle therapy in the UK - Stuart Green, Director of Medical Physics, University Hospitals Birmingham NHS Foundation Trust, UK Operational aspects of Proton Beam Therapy: Challenges of planning for a new UK service - Hazel Pennington, Lead Radiographer, Proton Beam Therapy Project, The Christie NHS Foundation Trust, UK
10.00 – 11.20 11B UKRC/O Joint session	Changing pathways, cancer and beyond <i>Chair: Nicholas Spencer, Consultant Radiologist, Mid Yorkshire Hospitals NHS Trust, UK</i> Opinion leadership in healthcare: Ghanaian experience and its possible application in cancer care - Carole South-Winter, Assistant Professor, University of South Dakota, USA Opportunities to translate the Danish Cancer pathway to enable NHS transformation - Sean Duffy, Programme Director West Yorkshire & Harrogate Cancer Alliance, UK Improving effectiveness of cancer multidisciplinary teams - Rose Gray, Policy Advisor, Cancer Research UK, UK
10.00 – 11.20 11C Education & research	Technological innovations in radiography education <i>Chair: Viv Gibbs, Head of Department, Allied Health Professions, The University of the West of England, UK</i> I'd say it's quite likely that we just didn't read it...: Developing an alternative to the standard programme handbook - Peter Walker Birch & Mark Widdowfield, Senior Lecturers, Teesside University, UK Computer science for digital radiography - what should radiographers know? - Peter Phillips, Computer Scientist, University of Cumbria, UK Enhancing radiographer threshold clinical competencies through CT simulation - Martine Harris, Research Radiographer, Mid Yorkshire Hospitals NHS Trust, UK Experiences of using virtual reality to enable clinicians to experience the patient journey first hand - Nick Peres, Technologies R+D Specialist, Torbay, UK
10.00 – 11.20 11D Gastroenterology	What's new in rectal cancer? <i>Chair: Vikas Shah, Consultant Radiologist, University Hospitals of Leicester, UK</i> A revolution in rectal cancer surgery - Manish Chand, Consultant Surgeon, University College London Hospitals, UK Modern oncology options for rectal cancer - Tom Richards, Consultant Oncologist, University College London Hospitals, UK Colorectal controversies that regularly challenge the MDT - Gina Brown, Consultant Radiologist, Royal Marsden NHS Foundation Trust, UK
10.10 – 11.10 FRCR drop in session	FRCR drop in session FRCR VIVA teaching tutorial run by experienced FRCR tutors.
10.20 – 11.40 11E Emergency & trauma INTERACTIVE	Case-based: Emergency head and spine imaging <i>Chair: Elizabeth Dick, Lead for Emergency Radiology, Imperial College London, UK</i> The 'normal' CT head - or is it? - Alex Mortimer, Radiology Consultant, North Bristol NHS Trust, UK Essentials of spine trauma from C1 to sacrum - Roland Watura, Radiology Consultant, North Bristol NHS Trust, UK
10.20 – 11.40 11F MSK	Post-op orthopaedic imaging <i>Chair: tbc</i> Particle disease following orthopaedic surgery - Michael Khoo, Consultant Radiologist, Royal National Orthopaedic Hospital, Stanmore, UK Post-op shoulder arthroplasty and complications: What the surgeon wants to know - Ian Pressney, Consultant Radiologist, Royal National Orthopaedic Hospital, Stanmore, UK Post-op spinal imaging including novel and complex orthopaedic techniques - Philippa Tyler, Consultant Radiologist, Royal National Orthopaedic Hospital, Stanmore, UK Investigation of suspected arthroplasty infection: The evolving role of radiology - Rikin Hargunani, Consultant Radiologist, Royal National Orthopaedic Hospital, Stanmore, UK
10.30 – 11.50 11G SMRT	The Society for MR Radiographers & Technologists - Clinical Education Forum Education forum delivered by European and National Radiography experts in their field - Lorraine Whyte, Practice Education Radiographer, Beatson Cancer Charity, UK MR challenges in Europe, from a radiographic perspective - Filip De Ridder, Chief Technologist, UZ Brussel, Belgium
12.50 – 13.50 FRCR drop in session	FRCR drop in session FRCR VIVA teaching tutorial run by experienced FRCR tutors.
13.00 – 14.00 11H UKRO	UKRO proffered papers
12.00 – 12.50	Closing plenary - Can you teach an old dog new tricks? <i>Rt Hon the Lord Winston of Hammersmith, UK</i>

12.50 – 13.10 Demo zone	CT simulation This session will demonstrate CT simulation for undergraduate competency development.
13.10-14.00	SCoR William Stripp Memorial Lecture Shoulder imaging - <i>Amanda Martin, Lead Radiographer, Royal Bolton Hospital, UK</i>
13.10-14.00	IPEM John Mallard Lecture
13.20 – 13.50 Demo zone	Virtual reality with Google Cardboard Learn how cost effective, accessible virtual reality technology is helping transform the medical education classroom. In this workshop we look at its use in aiding humanities learning from the patient perspective.
14.10-15.30	
14.10 – 15.30 12A UKRO	Immunotherapy <i>Chairs: Gerry Hanna, Senior Lecturer and Consultant in Clinical Oncology, Queen's University of Belfast, UK and Angela Baker, President, UKRO, UK</i> Radiotherapy and immunotherapy – mechanisms for synergy and potential applications - <i>Louise Murray, Cancer Research UK Clinical Research Fellow, University of Leeds, St James's Institute of Oncology, UK</i> SABR/Immunotherapy combinations - <i>Fiona McDonald, Consultant Thoracic Clinical Oncologist, The Royal Marsden NHS Foundation Trust, UK</i> Radiotherapy and immunotherapy combinations – the translational considerations - <i>Alan Melcher, Professor of Translational Immunotherapy, Team Leader, Translational Immunotherapy Team, The Institute of Cancer Research, UK</i>
14.10 – 15.30 12B BAMRR	BAMRR - MRI in contemporary practice <i>Chair: Paola Griffiths, President, British Association of MRI Radiographers (BAMRR), UK</i> This session will cover current MRI issues and techniques. It will be aimed at all levels of radiographers with a special interest in MRI.
14.10 – 15.30 12C Imaging technologies & informatics	Practical approaches to motion tracking and correction <i>Chair: John Ridgway, Leeds Teaching Hospitals NHS Trust, UK</i> MRI-based motion tracking: Applications in lung and liver - <i>Martin Fast, Postdoctoral Researcher, The Netherlands Cancer Institute, Amsterdam, Netherlands</i> Image-based motion tracking for PET - <i>Harry Tsoumpas, Lecturer in Medical Imaging, University of Leeds, UK</i> Use of gaming technology for motion tracking - <i>Philip Noonan, Research Associate, Imperial College London, UK</i>
14.10-15.30 12D Hepatobiliary	Neuroendocrine tumours: An update on imaging and therapy <i>Chair: Vikas Shah, Consultant Radiologist, University Hospitals of Leicester, UK</i> Neuroendocrine tumours: setting the multidisciplinary scene - <i>Juan Valle, Consultant Oncologist, The Christie NHS Foundation Trust, UK</i> CT, MRI and EUS of NETs - <i>Edmund Godfrey, Consultant Radiologist, Addenbrooke's Hospital, UK</i> NETs: Molecular imaging update - <i>Prakash Manoharan, Consultant Radiologist, The Christie NHS Foundation Trust, UK</i> The role of interventional radiology in the management of NET - <i>Dominic Yu, Consultant Radiologist, Royal Free Hospital, UK</i>
14.10 – 15.30 12E Chest	Challenges in thoracic malignancy <i>Chair: Mary Roddie, Imperial College Healthcare NHS Trust, UK</i> Latest lung cancer staging update: What's new in the 8th edition? - <i>Nick Watson, Consultant Radiologist, University Hospitals of North Midlands, UK</i> Differentiating lung metastases from lung cancer in patients with extra-thoracic malignancy - <i>Sisa Grubnic, Consultant Radiologist, St George's Hospital, UK</i> Pulmonary complications of cancer therapies - <i>Nina Tunariu, Consultant Radiologist, Royal Marsden Hospital, UK</i> Thoracic lymphoproliferative disorders - <i>Sam Hare, Consultant Thoracic Radiologist, Royal Free Hospital, UK</i>
14.10 – 15.30 12F MSK	The foot <i>Chair: tbc</i> Heel pain - a one stop shop - <i>Matthew Solan, Consultant Foot and Ankle Orthopaedic Surgeon, Royal Surrey County Hospital, UK</i> Imaging of pes planus - <i>Chintu Gadmesetty, Consultant Musculoskeletal Radiologist, Royal Surrey County Hospital, UK</i> Ultrasound of metatarsalgia - <i>Nicki Delves, Senior Musculoskeletal Sonographer, Royal Surrey County Hospital, UK</i> The diabetic foot - <i>Susan Cross, Consultant Musculoskeletal Radiologist, Barts Health, UK</i>
14.10 – 15.30 12G Proffered papers	Proffered papers <i>Chair: Viv Gibbs, Head of Department, Allied Health Professions, The University of the West of England, UK</i> The use of eye tracking technology to assess radiographer interpretation of X-ray images - <i>Laura McLaughlin, Ulster University, UK</i> Formulating and implementing a robust feasibility governance pathway for clinical research within the imaging department - <i>Rachel Sutton, University Hospitals of North Midlands and David Wells, University Hospitals of North Midlands, UK</i> The views of radiology service managers concerning professionalism and the ability of newly qualified graduate radiographers to cope with working in contemporary clinical contexts - <i>Charles Sloane, University of Cumbria, UK</i> Evaluation of interprofessional learning workshop involving radiographers, vascular surgeons and theatre staff - <i>Brooke Reeve, Royal Free London NHS Foundation Trust, UK</i> Pulmonary artery hypertension - making the diagnosis - <i>Rose Pantou, Portsmouth Hospitals NHS Trust, UK</i> CT sinus and facial bones reporting by radiographers - <i>Paul Lockwood, Canterbury Christ Church University, UK</i> Constructing the "Ideal" first-post sonographer: Mapping the views of ultrasound department leads in the UK - <i>Lorelei Waring, University of Cumbria, UK</i>

Close of congress

EXHIBITION

The exhibition

With over 100 exhibition stands, including the top companies in the industry, this is the largest joint clinical imaging exhibition in the UK.



It provides a wealth of information for a multi-disciplinary audience, a great opportunity to network, learn of all the latest developments, source relevant product information and technical updates. The trade exhibition is complimented by a large poster display, consoles to view ePosters and access the internet and a programme of education on the stands.

A directory of exhibitors will be available within the congress handbook by product and/or service to help you identify organisations you wish to engage with. Delegates for both events are invited to visit all exhibition stands.

Demo zone

This year we have demo pods within the exhibition showcasing product demonstrations, product launches, tips and techniques, research and other innovations.

NEW FOR 2017!

Poster displays



There will be a display of nearly 300 posters from a variety of disciplines for both UKRC and UKRO. This vast source of latest information will demonstrate cutting edge research, service innovations, results of local intervention schemes and much more. Poster tours of award winning posters will be organised during the congress breaks.

ePosters

In addition to the paper posters there will be a large number of ePosters which can be accessed on site through a number of computer consoles, or viewed at leisure after the event through the website or even on your phone. Different ePosters will be featured daily.

Education on the stands

This popular initiative provides delegates and exhibition visitors with an opportunity to gain an insight into the latest technologies and methods. Exhibition day visitors will be able to attend CPD Now accredited 'education on the stands' presentations from industry partners. The education on the stands programme will be released nearer to the event, so do check the website and app for up-to-date information.



Satellite symposia and eponymous lectures

The satellite symposia and eponymous lectures are open to all delegates including exhibition visitors, providing an opportunity to get updates. The symposia programme is subject to change with additional sessions to come – please check the website and congress app for up-to-date details.

Remember!

Access is free for exhibition day visitors to the plenary, satellite and eponymous lectures, with eminent speakers nominated by the SCoR, BIR and IPEM.



Radiopaedia case of the day



Radiopaedia and UKRC are collaborating for the first time to bring a Case of the Day competition to this year's conference. Everyone in the world will have an opportunity to submit a radiology case for the UKRC 2017 Case of the Day competition, with prizes on offer for those whose case is selected as a Case of the Day. Each day during the conference, there will be 2 cases to review in the dedicated Radiopaedia zone and online. Each delegate winner will receive FREE entry passes to UKRC 2018 and 12 months online access to Radiopaedia's Adult Brain MRI review course and Neuroradiology Update 2016 course. Each non-delegate winner will receive 12 months of online access to Radiopaedia's Adult Brain MRI review course and Neuroradiology Update 2016 course.

Dose Awareness Day

On Tuesday 13 June AXREM is sponsoring a dedicated Dose awareness day at the congress.



This will include dedicated sessions and workshops that will raise awareness of the issue of dose optimisation and dose awareness. Sessions will provide attendees with the knowledge and skills to manage and optimise their dose. It will support the implementation of the COMARE 16 report and

DH working party response along with discussing the implications of the forthcoming regulations.

Please check the programme for the symbol.



Giant touchscreen table

Full programme of interactive workshops using a giant touchscreen table – these sessions will focus on medical education using clinical case studies and demonstrate the role of the table in the Multi-Disciplinary Team setting. Come visit us in the Exhibition Hall to learn more about this technology and see it in action. Places are limited with a mixture of beginner and advanced sessions.



Facilitated by:

- James Chambers, Clinical Radiology Trainee, The Royal Liverpool and Broadgreen University Hospitals NHS Trust
- Jamie Beck, Lecturer in Radiography, University of Bradford
- Dina Hikmat, Clinical Radiology Trainee, Mersey School of Radiology
- Radhika Prasad, Mersey School of Radiology



MOBILE APP

The new mobile app will have an interactive floor plan, integrated social media in addition to up-to-date programme information, speaker biographies, exhibitor and sponsor information, general information and poster abstracts, all easily navigable. Further information will be sent soon.

REGISTRATION FEES

What's included?

Registration fees include VAT at the prevailing rate, complimentary refreshments, lunch (on the days you are attending) and congress materials. If you are attending the exhibition only, they do not include lunch and congress materials.

Group booking discount:

If you have five or more delegates attending from the same department, a 10% discount on the same category fee is applicable. Please return all forms for the delegates and discount will be removed at point of registration. Only one invoice can be raised. **Please contact us for further details.**

NHS Flexi ticket:

We are pleased to continue, the cost-saving NHS Flexible Ticket. This full congress ticket allows up to three delegates from the same NHS department to register for UKRC and share the ticket. Only one person can attend at any one time but the other delegates can attend on different days or even for different sessions. This could save your department up to £850, whilst also ensuring no-one misses the sessions that are important to them.



BOOKING FORM



How to book:

Online: www.ukrco.org.uk



Email: jointcongress@profileproductions.co.uk



Post: UKRCO C/O Profile Productions Ltd,
Boston Manor House, Boston Manor Rd, London,
Brentford, Middlesex, TW8 9JJ



Telephone: 020 3725 5840



Fax: 0844 507 0578

Delegate fee categories:

A: Consultants and senior managers

B: Other medical/scientific staff and medical trainees

C: Radiographers, nurses, AHP's support staff, radiology trainees & FY1/2 doctors

D: Full time students, retired delegates, and individuals on bursaries

E: *NHS Flexible Ticket

Registration fees (Please select the tick box)

All prices include VAT @20%

Category	Duration	Earlybird Before 18 April	Standard 19 April - 09 June	Last minute 10 June onwards
A	Full Congress	£420	£470	£490
A	2 day - Monday & Tuesday	£355	£389	£409
A	2 day - Tuesday & Wednesday	£355	£389	£409
A	1 day - Monday	£190	£225	£245
A	1 day - Tuesday	£190	£225	£245
A	1 day - Wednesday	£190	£225	£245
B	Full Congress	£310	£342	£362
B	2 day - Monday & Tuesday	£270	£299	£319
B	2 day - Tuesday & Wednesday	£270	£299	£319
B	1 day - Monday	£145	£160	£180
B	1 day - Tuesday	£145	£160	£180
B	1 day - Wednesday	£145	£160	£180
C	Full Congress	£260	£285	£305
C	2 day - Monday & Tuesday	£199	£218	£238
C	2 day - Tuesday & Wednesday	£199	£218	£238
C	1 day - Monday	£123	£135	£155
C	1 day - Tuesday	£123	£135	£155
C	1 day - Wednesday	£123	£135	£155
D	Full Congress	£95	£97	£117
D	2 day - Monday & Tuesday	£80	£85	£105
D	2 day - Tuesday & Wednesday	£80	£85	£105
D	1 day - Monday	£52	£55	£75
D	1 day - Tuesday	£52	£55	£75
D	1 day - Wednesday	£52	£55	£75
E*	NHS Flexi ticket	£445	£495	
Exhibition only		<input type="checkbox"/> Monday	<input type="checkbox"/> Tuesday	<input type="checkbox"/> Wednesday

Congress Streams (delegates only)

1A	1B	1C	1D	1E	1F	1G	2H	
2A	2B	2C	2D	2E	2F	2G	2H	
3A	3B	3C	3D	3E	3F	3G	4H	
4A	4B	4C	4D	4E	4F	4G	4H	
5A	5B	5C	5D	5E	5F			
6A	6B	6C	6D	6E	6F	6G	6H	6I
7A	7B	7C	7D	7E	7F	7G	7H	
8A	8B	8C	8D	8E	8F	8G	8H	9A
10A	10B	10C	10D	10E	10F	10G	10H	
11A	11B	11C	11D	11E	11F	11G	11H	
12A	12B	12C	12D	12E	12F	12G		

Social and Networking events

	Number of tickets
Bar and music night, <i>Monday 12 June</i>	£15 <input type="checkbox"/>
AXREM Congress Dinner, <i>Tuesday 13 June</i>	£35 <input type="checkbox"/>

Booking form

Personal details

Title Dr/Prof/Mr/Mrs/

Full name (as you would like it to appear on your badge)

Job title

Employing organisation

Address

Postcode

Telephone

Email (this is predominately our main method of contact)

Which organisation do you belong to? ☐ BIR ☐ IPEM ☐ SCOR ☐ RCR ☐ Other, please state

Additional requirements

Dietary: ☐ Vegetarian ☐ Vegan ☐ Gluten free/Coeliac ☐ Other (please state)

☐ Wheelchair access ☐ Hearing loop ☐ Restricted mobility ☐ Other (please state)

☐ Please do not publish my details in the delegate list (name, job title, place of work).

☐ Please do not contact me about other healthcare conferences.

Payment

☐ I enclose a cheque made payable to **ROC Events UKRC** for the sum of £

☐ Please send me an invoice for the sum of £

PO Number

(Please note no invoicing is permitted after the 14 April. Bookings after this date will only be accepted with a valid credit/debit card or cheque payment)

☐ Please debit my credit/debit card for the sum of £

We accept all major cards except American Express

Card no: / / /

Issue No: Expiry: / Security No:

Name and address of cardholder if different to delegate attending

Name

Address

Postcode

By signing this form I have read and agreed to the terms and conditions below:

Signature

Name

Date

Terms and conditions for delegates:

1. Registration fees include VAT at the prevailing rate, complimentary refreshments, lunch and congress materials (if attending as a delegate). They do not include accommodation. If you are attending the exhibition only, they **do not** include lunch and congress materials.

2. In order for your booking to be processed you must sign the terms and conditions. Your place is not guaranteed until you have received email confirmation and joining instructions from Profile Productions Ltd. If you do not receive confirmation within 24 hours of your booking being made, you should contact Profile Productions by email at jointcongress@profileproductions.co.uk.

3. Without exception, all fees must be paid in full prior to the event. Any delegates arriving at the congress with their payment outstanding will be asked to guarantee. Any delegates registering within 28 days of the event **MUST** include a valid credit card for payment on the registration form. Bank transfer charges are the responsibility of the payer.

4. Cancellations received prior to the 9 May 2017 will be refunded but will be subject to a £45 administration fee. If a cancellation is received within one month of the event we regret that no
- refund can be made. A substitute delegate is welcome at no extra charge but we require you to advise us of any substitutions 72 hours prior to the event. Any cancellations that still have payment outstanding will be liable for either the administration fee or the full registration fee, dependent on the time of the cancellation. Cancellations will need to be made in writing to jointcongress@profileproductions.co.uk.

5. Changes to any aspect the congress (including speakers) may be necessary due to events outside the control of Profile Productions and ROC Events Ltd. The organisers therefore reserve the right to make any necessary amendments to the programme or timings of the event.

6. The details of registered delegates (name, place of work and occupation) will be placed on the attendee list which will be given to sponsoring companies and exhibitors and made available to delegates. Delegates who do not wish to be included on this list should advise at the time of booking.

7. There will be photography and/or video production taking place during the congress and the resulting images may be used for promotional purposes on-line and/or in printed materials.
- Delegates who do not wish their images to be included in this material should contact the organisers by email at jointcongress@profileproductions.co.uk prior to the event.

8. Attendance fees will not be refunded in the event or threat of war, terrorism or other circumstances outside of the organisers' control.

9. Exhibition visitor tickets permit entry to the exhibition and any educational sessions taking place in the exhibition hall **ONLY**. A full delegate ticket must be purchased if access to all congress sessions is required. Exhibition visitors must purchase refreshments and lunch separately. Exhibition visitors are not permitted to conduct any commercial activity such as promoting or selling products, distributing literature or information pertaining to their business or attempting to obtain contact information of any other attendee. Any exhibition visitor caught carrying out these activities onsite will be asked to leave the event and may be prohibited from attending future events.

10. We may contact you via email in the future to tell you about upcoming events. If you do not wish to be contacted, please inform us by emailing jointcongress@profileproductions.co.uk.



The British Institute of Radiology is the international membership organisation for everyone working in imaging, radiation oncology and the underlying sciences.

- We aim to:
- Support the work of our members and their colleagues to achieve professional excellence
 - Provide continuing professional development for our multidisciplinary community
 - Publish cutting edge research for our authors and readers across the world
 - Influence and connect with the wider professional sector.

The College of Radiographers is the charitable and educational subsidiary of the Society of Radiographers, the chosen membership body for over 27,000 radiographers and other professionals in clinical imaging, radiation therapy and oncology. In addition he Society has over 2,000 student members. It provides, through monthly subscription, a full range of services, including professional indemnity insurance, professional and employment advice and support and workplace representation. The College of Radiographers exists for public benefit, with objects directed towards education, research and related activities. An important part of the College's strategy is engaging with and listening to patients. A major initiative to support research in radiography is the College of Radiographers Industry Partnership Scheme (CoRIPS), which currently has 28 partners. The Society and College work towards raising standards across the spectrum of clinical imaging, radiotherapy, oncology practice and education, and the College provides a comprehensive approval and accreditation programme for all pre and post-registration education provision, as well the accreditation of individual practitioners. Technical and professional guidance, a comprehensive website, publications, journals (including the internationally acclaimed peer reviewed journal Radiography), seminars and conferences are examples of just some of the benefits available to our members.



The College of Radiographers is the charitable and educational subsidiary of the Society of Radiographers, the chosen membership body for over 27,000 radiographers and other professionals in clinical imaging, radiation therapy and oncology. In addition he Society has over 2,000 student members. It provides, through monthly subscription, a full range of services, including professional indemnity insurance, professional and employment advice and support and workplace representation. The College of Radiographers exists for public benefit, with objects directed towards education, research and related activities. An important part of the College's strategy is engaging with and listening to patients.

A major initiative to support research in radiography is the College of Radiographers Industry Partnership Scheme (CoRIPS), which currently has 28 partners. The Society and College work towards raising standards across the spectrum of clinical imaging, radiotherapy, oncology practice and education, and the College provides a comprehensive approval and accreditation programme for all pre and post-registration education provision, as well the accreditation of individual practitioners. Technical and professional guidance, a comprehensive website, publications, journals (including the internationally acclaimed peer reviewed journal Radiography), seminars and conferences are examples of just some of the benefits available to our members.



The Institute of Physics and Engineering in Medicine (IPEM) is a professional association with around 4,300 members who are physicists, engineers and technologists working with applications of physics and engineering applied to medicine and biology. Our members work in hospitals, academia and industry, and IPEM has a unique role in linking the three areas.

As a charity, IPEM's aim is to advance the application of physics and engineering to medicine for the public benefit and to advance public education in this field. We do so by supporting and publishing research, and supporting the dissemination of knowledge and innovation through project funding and scientific meetings; and by setting standards for education, training and continuing professional development for healthcare scientists and clinical engineers. We also produce information for the public about the role of physicists and engineers in their healthcare services. Benefits of membership include a free CPD scheme, discounts on journals, reports and conference fees, bursaries and prizes, access to job vacancies, and a wide support network at every stage of career progression.

VENUE

Manchester Central

Manchester Central is an award-winning venue in the heart of one of Europe's most vibrant cities.

Its vaulted arches and station clock have made Manchester Central an iconic city feature for over 130 years. With its historic architecture balanced with state-of-the-art facilities, it provides the perfect venue for large events such as UKRC 2017 – and one of the most professional and versatile event spaces in the UK.

For further information please visit www.manchestercentral.co.uk



Accommodation

Manchester offers a wide range of accommodation to suit all budgets and requirements. Several hotels are located very near to the MCC including the Jury's Inn, Radisson and Midland Hotels. Hotel reservations are being handled through Reservation Highway, who have negotiated special rates during the event. Please view: www.reservation-highway.co.uk/ukrc17 or call 01423 525577 for offers and to book accommodation.

Please note rooms are very limited due to other events taking place in Manchester, so please book in advance to avoid disappointment.

Getting to Manchester



By air

Manchester Airport is a major international hub just nine miles (14.5km) from the city centre. It serves more than 200 destinations worldwide including direct routes to nine US cities. From the airport, the city is approximately 25 minutes away by taxi or just 20 minutes via the half-hourly express rail service (tickets £3.00-£4.00). Information on Manchester Airport can be found at: www.manchesterairport.co.uk



By rail

It takes a little over two hours to reach Manchester from London and Manchester also has direct connections to most major UK cities. Services arrive at Piccadilly or Victoria stations where passengers can connect with Metrolink trams for easy access to the city centre. Manchester Central is a 20 minute walk from Piccadilly Station or just five minutes by taxi. Alternatively, catch a connecting train to Oxford Road Station - just five minutes from Manchester Central on foot.



By road

Manchester is at the heart of a comprehensive motorway network. Manchester's M60 orbital motorway provides easy access from north, south, east and west.

SOCIAL AND NETWORKING EVENTS

Monday 12 June

Welcome reception

The welcome reception will be held within the exhibition. Free for all to attend, delegates are encouraged to take this excellent opportunity to meet with exhibitors, society representatives and colleagues.

Time: 17.00-19.00

Free for all to attend

Bar and music night

THE MILTON CLUB

Join colleagues for an informal social event including drinks and live music at the exclusive Milton Club. The venue is situated on Deansgate in the heart of the city, a short distance from Manchester Central.

Time: 20:30-01:00

Dress code: Smart/Casual

Tickets: Delegates £15 (Price includes VAT @ 20%)

Tuesday 13 June

AXREM Congress Dinner

AXREM

SPONSORS



The Congress Dinner will be held at Principal Manchester - a magnificent Grade II listed building. The hotel has a history dating back to 1890, when it first opened as The Refuge Assurance Company headquarters. The Congress Dinner is organised and hosted by AXREM and will provide a fantastic opportunity to network, relax and have fun with other delegates and industry partners. The theme this year is 'Science and Technology' - Manchester was the first global industrialised city and as such, has a long history of innovation and exploiting science and technology. Tickets include a drinks reception, three course dinner with wine and an exciting line up of entertainment. Early booking is advised to avoid disappointment.

Time: 19:30 - 00.00

Theme: Science and Technology

Dress code: Cocktail dresses and lounge suits

Tickets: Delegates £35 (Price includes VAT @ 20%)

