

Monday 15 February					
		Session - Room 2	Chair	Title	Speaker
12:00	13:00	<i>Lunch</i>			
13:00	13:30	Welcome address and opening: Jacques Bernier & Manjit Dosanjh (Conference chairs) Eckhard Elsen (Director for Research and Computing, CERN)			
13:30	14:00	Radiobiology	<i>Marco Durante Kevin Prise</i>	A comprehensive omics approach for development of prognostic or predictive biomarkers in squamous cell carcinoma of the head and neck treated with radiation	Michael Story (US)
14:00	14:30			What are the Dominant Radiobiological Mechanisms at Play in Stereotactic Radiotherapy?	David Brenner (US)
14:30	14:45			The symbiosis of science of radiation biology with immunology: Impact on basic and translational research	Ahmed Mansoor (US)
14:45	15:00			The relevance of DNA damage clustering on the nanometer and micrometer scale for the quantitative prediction of radiation effects	Michael Scholz (DE)
15:00	15:15			Correlation of Particle Traversals with Clonogenic Survival Using Cell-Fluorescent Ion Track Hybrid Detector	Ivana Dokic (DE)
15:15	15:30			Radiation induced DNA damage in human uveal melanoma cells	Katarzyna Jasińska (PL)
15:30	16:00	<i>Coffee break</i>			
16:00	16:15	Radiobiology	<i>Marco Durante Kevin Prise</i>	Quantum dots imaging tests on SPAD for nanodosimetric applications	Alberto Quaranta (IT)
16:15	16:30			Disruption of telomere equilibrium sensitises human cancer cells to DNA repair inhibition and radiation	Prakash Hande (AT)
16:30	16:45			Investigating the impact of a variable RBE on proton dose fractionation across an actively scanned spread-out Bragg peak	Kevin Prise (GB)
16:45	17:15	Nuclear Medicine	<i>Thomas Beyer Osman Ratib</i>	Molecular imaging for theranostics	Wim Oyen (GB)
17:15	17:30			Early variation of FDG-PET radiomics features in NSCLC is related to overall survival - the "delta radiomics" concept	Ralph Leijenaar (NL)
17:30	18:00			How to produce scandium-44 and scandium-43 efficiently?	Charlotte Duchemin (FR) Katharina Domnanich (CH) Jerzy Jastrzębski (PL)

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Tuesday 16 February					
		Session - Room 2	Chair	Title	Speaker
08:30	09:00	Nuclear Medicine	<i>Thomas Beyer Osman Ratib</i>	Quantitative Theranostics in Nuclear Medicine	Michael Lassmann (DE)
09:00	09:15			Manufacturing and Nuclear Medicine Applications of the Novel Isotope Sn-117m	Nigel Stevenson (US)
09:15	09:30			Contribution of direct and bystander effects to therapeutic efficacy of alpha-RIT using ²¹² Pb-labeled mAbs	Jean-Pierre Pouget (FR)
09:30	09:45			⁶⁴ Cu-Labeled Folate Radioconjugate for PET Imaging of Folate Receptor-Positive Tumors	Renata Farkas (CH)
09:45	10:00			Radiolabeled Acridine Orange (AO) Derivatives as DNA-Targeted Probes for Auger Therapy	Antonio Paulo (PT)
10:00	10:30	<i>Coffee break</i>			
10:30	11:00	Detectors & Imaging	<i>Denis Dauvergne Alberto Del Guerra</i>	Imaging for online control of particle therapy	Thomas Bortfeld (US)
11:00	11:30			First clinical application of a prompt gamma based in vivo proton range verification using a knife-edge slit camera	Christian Richter (DE)
11:30	11:45			New Results with Monolithic Scintillators for Time-of-Flight PET	Dennis Schaart (NL)
11:45	12:00			Development of a High Resolution Module for PET scanners	Gianluca Stringhini (CERN)
12:00	12:15			J-PET: a novel TOF-PET scanner based on plastic scintillators	Pawel Moskal (PL)
12:15	12:30			Development of a radioguided surgery technique with beta- decays in brain tumor resection	Riccardo Faccini (IT)
12:30	13:30	<i>Lunch</i>			
13:30	13:45	Detectors & Imaging	<i>Denis Dauvergne Alberto Del Guerra</i>	Range Verification with Ionoacoustics: simulations and measurements at a clinical proton synchro-cyclotron	Sebastian Lehrack (DE)
13:45	14:00			Measurement of Acoustic Emissions Generated by a Pulsed Proton Beam from a Hospital-Based Clinical Cyclotron	Kevin Jones (US)
14:00	14:15			Fast Beam Profile Monitors for Microbeam Radiation Therapy	Bjarne Stugu (NO)

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14:15	14:45	New Technologies	<i>Wolfgang Enghardt Hans-Peter Meinzer</i>	MRI for external beam radiotherapy guidance	Jan Lagendijk (NL)
14:45	15:00			MRI Guided Proton Therapy: pencil beam scanning in an MRI fringe field	Brad Oborn (AU)
15:00	15:15			Nanoparticle Enhanced MRI-Guided Radiation Therapy: Final proof of concept before phase I trial	Shady Kotb (FR)
15:15	15:30			Hadron minibeam radiation therapy: feasibility study at the Heidelberg Ion-Beam Therapy Center (HIT)	Immaculada Martínez-Rovira (FR)
15:30	15:45			Evaluation of long-term effects of synchrotron-generated microbeams on rat hippocampal neurogenesis	Alberto Bravin (FR)
15:45	16:15	<i>Coffee break</i>			
16:15	16:45	New Technologies	<i>Wolfgang Enghardt Hans-Peter Meinzer</i>	Big Data in Radiation Oncology: data gathering, data processing, algorithms and clinical impact	Klaus Maier-Hein (DE)
16:45	17:00			Expert knowledge and data-driven Bayesian Networks to predict post-RT dyspnea and 2-year survival	Timo Deist (BE)
17:00	17:15			Dosimetry of ultra high dose rate irradiation for studies on the biological effect induced in normal brain and GBM	Kristoffer Petersson (CH)
17:15	17:30			Geant4 coupled with Comsol heat transfer simulations to determine correction factors of a novel micro-calorimeter	Kamran Fathi (GB)
Public talk introduction by Fabiola Gianotti (Director-General, CERN)					
18:30	19:30	Public talk - Sound for Health - Domenico Vicinanza			

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Wednesday 17 February

		Session - Room 2	Chair	Title	Speaker	Session - Room 3	Chair	Title	Speaker			Session - Room 4	Chair	Title	Speaker
08:30	09:00	ESTRO lecture	Yolande Lievens	How emerging trends in basic research & technology will shape clinical research?	Eric Deutsch (FR)										
09:00	09:30	Plenary session	Ugo Amaldi Norman Coleman	Is Distributed learning the solution for Rapid Learning Health Care?	Philippe Lambin (NL)										
09:30	10:00			Biological stratification in times of highly conformal radiotherapy - status and perspectives	Michael Baumann (DE)										
10:00	11:00	Coffee and poster viewing													
11:00	11:30	Plenary session	Ugo Amaldi Norman Coleman	Biological issues and their clinical implications in proton therapy	Radhe Mohan (US)										
11:30	12:00			Single particle detection for spectroscopic CT and tracking in hadron therapy using Medipix chips	Michael Campbell (CH)										
12:00	13:00	Lunch Exhibitor presentations													
13:00	13:25	Novel approaches in imaging	Philippe Lambin	New hypoxia probe development based on mass spectrometry	Brad Wouters (CA)	Particle therapy (I) Session sponsored by 	Jürgen Debus Hirohiko Tsujii	Proton Radiation Therapy: Current Status at Massachusetts General Hospital	Thomas DeLaney (US)	13:00	13:15	Proffered papers-clinical	Carlo Greco	Urethra-sparing SBRT for prostate cancer: dosimetric optimization with VMAT vs. IMRT and the learning curve effect	Thomas Zilli (CH)
13:25	13:50			The role of functional imaging for radiation oncology – The whole translational chain from animals to clinics	Esther Troost (DE)			MedAustron - status and vision	Eugen Hug (AT)	13:15	13:30			A novel method to predict a priori the toxicity reduction of a prostate-rectum spacer: Virtual Rectum Spacer	Ben Vanneste (NL)
13:50	14:15			Is dual energy CT the next standard imaging modality for radiotherapy?	Wouter van Elmpt (NL)			Particle therapy centre in Shanghai	Zhen Zhang (CN)	13:30	13:45			Local Tumor Flare Following Radiosurgery and Ipilimumab (Ipi) for Melanoma Brain Metastases: Increased Immune Response?	Caroline Chung (CA)
14:15	14:40	Panel discussion Therapeutic targets: towards the cutting edge	Karin Haustermans	The Biology of Single Dose Radiotherapy	Zvi Fuks (US)	Panel discussion Optimizing treatment planning and delivery	Søren Bentzen Hans Langendijk	Current and future strategies developed at Paul Scherrer Institute	Alessandra Bolsi (CH)	13:45	14:00	Oral poster presentation-Physics/Biology	Dag-Rune Olsen	Response-based Bayesian Network Approaches for Adaptive Radiotherapy of Non-Small Cell Lung Cancer (NSCLC)	Randall Ten Haken (US)
14:40	15:05			Are there common signaling pathways among highly radioresistant tumors? The examples of high grade gliomas and sarcomas	Elizabeth Moyal (FR)			Optimizing prostate cancer irradiation: from technology to fractionation	Raymond Miralbell (CH)	14:00	14:15			Further Development of Spinal Tissue Radiotherapy Re-treatment Modelling, with inclusion of Hadrontherapy	Bleddyn Jones (GB)
15:05	15:30			HIF-related therapeutic windows	Amato Giaccia (US)			Technological advancement in radiation oncology	Hak Choy (US)	14:15	14:25			Proton Minibeam Radiation Therapy (pMBRT): implementation at a clinical center	Cécile Peucelle (FR)
15:30	15:55			Vascular disrupting agents: a new avenue of research	Michael Horsman (DK)			Main challenges in adaptive radiotherapy	Jan-Jakob Sonke (NL)	14:25	14:35			Investigation of the use of inhomogeneous fractional dose distributions in IMPT to improve the therapeutic index	Lorenzo Manganaro (IT)
15:55	16:30			Coffee break											

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16:30	16:55	Novel strategies to overcome cancer (I): Immunology-based attacks	<i>Marcel Verheij</i>	Oncolytic viruses	Kevin Harrington (GB)	Novel strategies to overcome cancer (II): Enhancing the ratio between tumor cell killing and normal tissue protection	<i>Raymond Miralbell</i>	Pelvic tumor irradiation: new tools to reduce toxicity: from technology to drugs	Karin Haustermans (BE)	16:30	16:45	Proffered papers - Emerging technologies	<i>Vincenzo Patena Marco Silari</i>	Geometrical interpretation of TOF PET raw data in commercial PET-CT scanner for SNR optimization	Chiara Gianoli (DE)
16:55	17:20			Synergy of radiotherapy and cancer vaccines in HPV-positive tumors	Eric Deutsch (FR)			Towards a new type of irradiation	Jean Bourhis (CH)	16:45	17:00			Characterization and test beam results of a LaBr3 Compton Telescope for treatment monitoring	Gabriela Llosá (ES)
17:20	17:45			Radiotherapy and the immunocytokine L19-IL2: a perfect match for an abscopal effect with long-lasting memory	Ludwig Dubois (NL)			Treatment outcome in patients treated with single-dose irradiation (SDRT) for oligometastatic disease	Carlo Greco (PT)	17:00	17:15			Small Large Momentum Acceptance Gantries for Proton and Carbon Cancer Therapy	Dejan Trbojevic (US)
										17:15	17:30			X-Ray Phase contrast micro-imaging in neuroscience	Giacomo Barbone (DE)
										17:30	17:45			Water based 3D optical dose imaging for particle therapy	Oksana Kavatsyuk (NL)
19:00	Gala dinner with Keynote by Vytenis Andriukaitis, EC Health Commissioner														

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Thursday 18 February

		Session - Room 2	Chair	Title	Speaker			Session - Room 3	Chair	Title	Speaker			Session - Room 4	Chair	Title	Speaker		
08:15	08:50	GH Fletcher Lecture	James Cox	Multimodality Precision Medicine	Søren Bentzen (US)														
08:50	09:15	Panel discussion Clinical Trials for particle therapy	Vikram Bhadrasain Roberto Orecchia	Trials in USA	James Cox (US)			Genomics	Simon Powell	The search for genetic predictors of radiotherapy response	Dirk De Ruyscher (BE)								
09:15	09:40			Trials in Germany	Jürgen Debus (DE)							RSI: A genomic signature of radiosensitivity	Peter A. Johnstone (US)						
09:40	10:05			Clinical trials for carbon-ion radiotherapy in Japan	Hirohiko Tsujii (JP)							Radiomics in Liquid Biopsies	Frederic Zenhausern (US)						
10:05	10:30	<i>Coffee break</i>																	
10:30	10:52	EORTC session	Wilfried Budach Sofia Rivera	Radiotherapy quality assurance platform of the EORTC	Damien Weber (CH)	10:30	10:45	Proffered papers - Detectors and Imaging	Paul Lecoq Katia Parodi	Study of the radiation produced by therapeutic He, C and O ion beams impinging on a PMMA target	Alessio Sarti (IT)	10:30	10:45	Proffered papers - Radiobiology	Ulli Köster Mechthild Krause	The effect of fractionated administration of thalidomide at γ -ray irradiation on tumor response and lung metastasis	Shin-ichiro Masunaga (JP)		
10:52	11:02				André Branquinho (BE)	10:45	11:00			Short-lived Positron Emitters in Beam-on PET Imaging During Proton Therapy	Tom Buitenhuis (NL)	10:45	11:00			Predictive Biomarkers for Improving Radiation Therapy	Pataje Prasanna (US)		
11:02	11:24			Synergy of targeted agents and radiotherapy	Sofia Rivera (FR)	11:00	11:15			DoPET: an in-treatment monitoring system for particle therapy	Valeria Rosso (IT)	11:00	11:15			Targeted Radionuclide Therapy with ¹⁶¹ Tb: Investigation of Anti-Tumor Effects and Undesired Side Effects	Cristina Müller (CH)		
11:24	11:46			Lessons from translational research in EORTC Glioma trials	Monika Hegi (CH)	11:15	11:30			Commissioning of a Compton camera for ion beam range verification via prompt gamma detection using low-energy and clinical particle beams	Saad Aldawood (DE)	11:15	11:30			The relationship between absorbed dose and DNA Damage in Lymphocytes after radionuclide therapy	Uta Eberlein (DE)		
11:46	12:10			Data from the EORTC Cancer Survivorship Task Force	Conny Vrieling (CH)	11:30	11:45			Prompt Gamma-ray Timing experiment during different modalities of proton beam delivery	Thomas Kormoll (DE)	11:30	11:45			Modeling the effect of symmetrical division of cancer stem cells on tumour response to radiation	Loredana Marcu (RO)		
12:00	13:00	<i>Lunch</i> Start-up presentations																	
13:00	13:30	European School of Oncology - E. van der Schueren Award	Fedro Peccatori	Tackling Phenotypic Diversity to Increase Cures	Brad Wouters (CA)														
13:30	13:55	Revisiting RBE	Jens Overgaard	In-vitro RBE	Marco Durante (DE)			Novel strategies to overcome cancer: Tumor cell radiosensitivity modulation	Jacques Bernier Jean Bourhis	Novel anti-tumor agents targeting cell membrane	Marcel Verheij (NL)	13:30	13:45	Proffered papers - Physics	Thomas Bortfeld	Towards analytic dose calculation for MR guided particle beam therapy	Hermann Fuchs (AT)		
13:55	14:20			Carbon ion radiotherapy: do we understand each other? How to compare different RBE-weighted dose systems in the clinical setting.	Piero Fossati (IT)	13:45	14:00			Stroma mediated wound healing signals and cell response to radiation	Marie-Catherine Vozenin (CH)	14:00	14:15			Experimental dosimetric comparisons of protons, helium, carbon and oxygen ion beams	Thomas Tessonier (DE)		
14:20	14:45			Physics and RBE	Tony Lomax (CH)	14:15	14:30			Targeting tumor heterogeneity	Gerben Borst (NL)	14:15	14:30			Implementation of an analytical solution to lateral dose prediction in a proton therapy treatment planning system	Valentina Elettra Bellinzona (IT)		
14:45	16:15	<i>Coffee and poster viewing</i> Coffee break sponsored by RaySearch																	



Coffee and poster viewing
Coffee break sponsored by RaySearch

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16:15	16:40	Particle therapy (II)	<i>Jacques Balosso Damien Weber</i>	Current status of particle therapy at CNAO	Roberto Orecchia (IT)
16:40	17:05			Integration of economic data in clinical trials	Yolande Lievens (BE)
17:05	17:30			Current status of particle therapy in The Netherlands	Hans Langendijk (NL)

Emerging challenges in combating cancer	<i>Vincent Grégoire</i>	The International Cancer Expert Corps (ICEC): Implementing a global force to address the catastrophic rise in cancer in the developing world	Norman Coleman (US)	16:15	16:30	Proffered papers - Biology	<i>Amato Giaccia Michael Horsman</i>	Radiation treatment monitoring using multifunctional imaging in prostate tumour xenografts	Natalia Arteaga-Marrero (NO)
		Targeted Treatment for the Non-Small Cell Lung Cancer	Ritsuko Komaki (US)	16:30	16:45			Robustness and reliability of PET-based identification and quantification of tumor hypoxia, using simple static or more complex scan acquisitions	Morten Busk (DK)
				16:45	17:00			Variable RBE in proton therapy: comparison of model predictions and their impact on clinical-like cranial lesions	Julia Bauer (DE)
Magnetic resonance temperature imaging in clinical hyperthermia: past experience and prospects	Peter Wust (DE)	17:00	17:15	Inhibiting the actions of cathepsin L effects both tumour initiation and metastasis formation	Thomas Wittenborn (DK)				
				17:15	17:30			Plerixafor Improves Local Control and Reduces Metastases in Cervical Cancer Treated with Radiotherapy and Chemotherapy	Michael Milosevic (CA)

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Friday 19 February

Session - Room 2		Chair	Title	Speaker			Session - Room 3		Chair	Title	Speaker			Session - Room 4		Chair	Title	Speaker	
08:30	08:55	Biomolecular mechanisms driving modulation of tumor cell sensitivity	Zvi Fuks Martin Pruschy	Genetic and pharmacological inhibition of autophagy after irradiation	Kasper Rouschop (NL)	08:30	08:40	MEDICIS - PROMED program	Osman Ratib Thierry Stora	MEDICIS-PROMED : a ITN Marie-Curie network on nuclear medicine and 11C-based hadron-therapy	Johanna Pitters (AT)	08:30	08:40	Oral poster presentation- Detectors and Imaging	Michael Campbell Mike Walig órski	Comparison of Arterial Input Functions by Magnitude and Phase Signal Measurement in DCE MRI of brain cancer patients	Catherine Coolens (CA)		
						08:40	09:05			MEDICIS-PROMED: MEDICIS-Produced Radioisotope Beams for Medicine an Innovative Training Network		John Prior (CH)	08:40			08:50		Fast calibration of the range of Carbon ions with in-beam PET of Boron-8 nuclei	Caterina Cuccagna (CH)
08:55	09:20			Oncometabolite lactate promotes tumour growth	Pierre Sonveaux (BE)	09:05	09:02			Recurrent glioblastoma multiforme – targeted alpha therapy with 213Bi-DOTA-Substance P	Frank Bruchertseifer (DE)	09:00	09:10			An online beam monitor detector for medical applications of ion beams	Saverio Braccini (CH)		
						09:10	09:20			Medical isotope production at TRIUMF and future collaboration with MEDICIS-PROMED		Yann Seimbille (CA)	09:10			09:20	The GEMPIX detector for energy deposition measurements in Hadrontherapy	Fabrizio Murtas (IT)	
						09:20	09:45			Determining cell radiosensitivity using assays in ex vivo irradiated tumour specimens	Daniel Zips (DE)		09:25			09:45			09:20
09:30	09:40											09:30	09:40			Measurements and simulations of in-phantom neutron dose from a proton pencil beam	Kristian Ytre-Hauge (NO)		
09:45	10:15	<i>Coffee break</i>																	
10:15	10:40	Panel discussion OPENMED	Manjit Dasanjh Jens Overgaard	Conceptual Design report for OpenMED	Ghislain Roy (CERN)	10:15	10:25	Oral poster presentation- Clinics	Esther Troost	The use of ¹⁴⁹ Tb and ¹⁵² Tb in preclinical investigations: an update on its mass separation and subsequent application for imaging and therapy	Nicholas van der Meulen (CH)	10:15	10:25	Oral poster presentation - Miscellaneous	Jan Alsner Alessandra Balsi	Clinical validation of the MSL lung Computer-Assisted Detection system	Piergiorgio Cerello (IT)		
						10:25	10:35			Design of electronic data processing system for radiotherapy study: lessons learned from VoxTox		Marina Romanchikova (GB)	10:25			10:35	Tuning of a 4D ML reconstruction strategy for treatment verification in ion beam radiotherapy	Katia Parodi (DE)	
10:40	11:05			OPENMED: Topics, Issues and Wishes	Mike Walig órski (PL)	10:35	10:45			Assessment tool to quantify and visualize treatment plan robustness regarding patient setup	Michael Fix (CH)	10:35	10:45			Differential cross sections measurements for hadrontherapy: 50 MeV/n 12C reactions on H, C, Al, O and natTi targets	Clovis Divay (FR)		
						10:45	10:55			A Hypercellular Component of Glioblastoma Identified by High b-value Diffusion Weighted Imaging	Yue Cao (US)	10:45	10:55			Metal implanted multi-functional nanovectors for targeted radiotherapy and diagnostics of cancer	Asénath Etilé (FI)		
11:05	11:30			Role of the CERN International Strategy Committee in the LEIR initiative: Biology	Philippe Lambin (NL)	10:55	11:05			Treatment of moving targets with active scanning carbon ion beams	Piero Fossati (IT)	10:55	11:05			The Malthus Project - updated predictions of national radiotherapy demand to 2030	Thomas Mee (GB)		
						11:05	11:15			Distributed learning: predictive models based on data from multiple hospitals without data leaving the hospital	Arthur Jochems (NL)	11:05	11:15			The use of radiobiological TCP and NTCP models to validate the dose calculation algorithm and readjust the prescribed dose	Jacques Balosso (FR)		

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