


Monday 10 February					
		Session - Room 2	Chair	Title	Speaker
12:00	13:00	<i>Lunch</i>			
13:00	13:30	Welcome address: Jacques Bernier & Manjit Dosanjh (Conference chairs) Rolf Heuer (CERN Director General) Representative of the Geneva state			
13:30	14:00		Jacques Bernier Rolf-Dieter Heuer	The Higgs boson and our life	Fabiola Gianotti (CERN)
14:00	14:30	Radiobiology	<i>Marco Durante Kevin Prise</i>	Ion Beam Radiobiology: From the Lab to the Clinic	Eleanor Blakely (US)
14:30	15:00			International Cancer Expert Corps (ICEC)	Norman Coleman (US)
15:00	15:15			New challenges for biologically adapted ion beam treatment planning: single and multi-ion approaches	Emanuele Scifoni (DE)
15:15	15:30			RBE and DNA damage variation along monoenergetic and modulated Bragg peaks of a 62 MeV therapeutic protons beam	Kevin Prise (UK)
15:30	15:45			Influences of aberrant mitochondrial DNA in cancer and cancer therapy	Marike van Gisbergen (NL)
15:45	16:00			Hpv Status and Effect on Radiosensitivity in Head and Neck Cancer Tumor Xenografts	Brita Singers Sørensen (DK)
16:00	16:30	 <i>Coffee break</i> Coffee break sponsored by UNIQA			

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16:30	16:45	Radiobiology	<i>Marco Durante Kevin Prise</i>	Rectal cancer and fractionation sensitivity in the neo-adjuvant radiation therapy setting: a project of meta-analysis and radiobiological modeling from individual patient data in randomized and observational data-sets	Raymond Miralbell (CH)
16:45	17:00			A Biomedical Research Facility at CERN based on the Low Energy Ion Ring	Adriano Garonna (CERN)
17:00	17:30	Nuclear Medicine	<i>Ulli Köster Irene Virgolini</i>	Radiochemical aspects of radionuclide therapies	Helmut Maecke (DE)
17:30	17:45			²¹² Pb-labeled mAbs targeting CEA or HER2 during α -RIT of small peritoneal carcinomatosis – Dose effect relationship?	Jean-Pierre Pouget (FR)
17:45	18:00			152/161Tb-DOTA-RM6 biodistribution studies in prostate cancer bearing SCID mice and 149Tb sources from CERN-MEDICIS	Thierry Stora (CERN)
18:00	18:15			A radionuclide generator of Erbium-165, an isotope for Auger Therapy	Gregory Severin (DK)

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Tuesday 11 February					
		Session - Room 2	Chair	Title	Speaker
08:30	09:00	Nuclear Medicine	<i>Ulli Köster Thomas Beyer</i>	Clinical experience with radionuclide therapies	Irene Virgolini (AT)
09:00	09:15			From bench to bedside: development and early clinical results of ¹⁸⁸ Re-SSS/Lipiodol for HCC treatment	Nicolas Lepareur (FR)
09:15	09:30			PIP: a compact recirculating accelerator for the production of medical isotopes	Adina Toader (UK)
09:30	09:45			Gamma Probe Based on Scintillation Crystal and Silicon Photomultiplier	Konstantin Zhukov (RU)
09:45	10:00			Preclinical studies and radiopharmaceutical developments with ⁶⁴ Cu produced by ARRONAX facility	Mickael Bourgeois (FR)
10:00	10:30	<i>Coffee break</i>			
10:30	11:00	Detectors & Imaging	<i>Denis Dauvergne Alberto Del Guerra</i>	From CERN to PET/MR	David Townsend (SG)
11:00	11:30			Software challenges and opportunities for multidisciplinary PET/CT and PET/MR imaging	Dimitris Visvikis (FR)
11:30	11:45			Prompt gamma imaging of proton pencil beams at clinical beam current	Julien Smeets (BE)
11:45	12:00			Prediction of β ⁺ -activity distributions from PT-PET by means of a yield approach	Stephan Helmbrecht (DE)
12:00	12:15			ProXY – High performance monolithic pixel tracker for proton tomography	Piero Giubilato (IT)

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12:15	12:30			The recent developments of the FLUKA Monte Carlo code oriented to its applications in Hadrontherapy	Paola Sala (IT)
12:30	13:30	<i>Lunch</i>			
13:30	13:45	Detectors & Imaging	<i>Denis Dauvergne Alberto Del Guerra</i>	Different detector concepts for several imaging scenarios: from hadrontherapy monitoring to clinical imaging	Paola Solevi (ES)
13:45	14:00			An integrated monitoring system for the on-line assessment of particle therapy treatment accuracy	Vincenzo Patera (IT)
14:00	14:15			Development of Advanced Quality Assurance Instrumentation for Hadrontherapy	David Watts (TERA)
14:15	14:45	New Technologies	<i>Wolfgang Enghardt Antony Lomax</i>	Novel detectors for range assessment in particle therapy	Peter Thierolf (DE)
14:45	15:00			The ELIMED (Multidisciplinary and Medical applications at the ELI-Beams) network perspectives for laser driven beam applications	Andrea Attili (IT)
15:00	15:15			Harnessing laser-plasma accelerated ion beams for applications using Gabor lenses	Christopher Hughes (UK)
15:15	15:30			Positron emission tomography (PET) isotope production from laser-driven proton	John Wong (US) for Kai Ding (US)

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15:30	15:45			A novel TOF-PET detector based on organic scintillators	Pawel Moskal (PL)
15:45	16:15	<i>Coffee break</i>			
16:15	16:45	<i>New Technologies</i>	<i>Wolfgang Enghardt Antony Lomax</i>	Requirements from Oncology to Imaging Technologies	Heinz-Peter Schlemmer (DE)
16:45	17:00			Potential of Detection of fast Cherenkov Photons for Improved Time of Flight Positron Emission Tomography	Stefan Brunner (AT)
17:00	17:15			Experimental characterization of acoustic detection and imaging for Bragg peak localization in proton therapy	Katia Parodi (DE)
17:15	17:30			A new elastic image fusion model for lung deformation simulation in 4D dose calculations	Stefan Milz (DE)
18:30	19:30	Public talk			

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Wednesday 12 February


		Session - Room 2	Chair	Title	Speaker			Session - Room 3	Chair	Title	Speaker
08:30	09:00	ESTRO lecture	Jean Bourhis	Individualized Radiation Oncology – harnessing clinics, biology and high technology	Michael Baumann (DE)						
09:00	09:30	Plenary session	Jacques Bernier Manjit Dosanjh	Health implications and applications in space	Christer Fuglesang (SE)						
09:30	10:00			The convergence of science - the way to develop novel radiation oncology technologies for the future	Dag Rune Olsen (NO)						
10:00	10:30	<i>Coffee break</i>									
10:30	11:00	Plenary session	Jacques Bernier Manjit Dosanjh	Current status of Carbon Ion Radiotherapy at NIRS	Hirohiko Tsujii (JP)						
11:00	11:30			Radioisotopes - the "fuel" for nuclear medicine	Ulli Köster (FR)						
11:30	12:00			Medical applications at CERN	Steve Myers (CH)						
12:00	13:00	 <i>Lunch</i> Lunch time seminar sponsored by IBA: Status and perspectives of protontherapy with Pencil Beam Scanning - Marco Schwarz (IT)									
13:00	13:25	Symposium: New Insights into molecular mechanisms of radio-curability	Conchita Vens	New insights into the complexities of NHEJ and HR repair	Simon N Powell (US)		Symposium: Optimizing treatment planning and delivery	Radhe Mohan	New insights in IGRT for prostate cancer	Marcel Van Herk (NL)	
13:25	13:50			Homologous recombination deficiency and radio-curability in mouse models for BRCA1/2-deficient breast cancer	Sven Rottenberg (NL)				Adaptive radiotherapy	Vincent Gregoire (BE)	
13:50	14:15			Mechanism of HR dysfunction in single dose radiotherapy	Zvi Fuks (US)				New health technologies and evidence-based medicine	Søren M Bentzen (US)	
14:15	14:45	<i>Coffee break</i>									
14:45	15:10	Symposium: Hadrons	Norman Coleman Manjit Dosanjh	Carbon Ion Therapy: Actual and Future Strategies at HIT	Jürgen Debus (DE)	14:45	14:55	Proffered papers: Physics I (Imaging)	Thomas Beyer David Townsend	The development of a low energy facility for clinical trials of Boron Neutron Capture Therapy	Rob Edgecock (UK)
15:10	15:35			Present status of CNAO	Roberto Orecchia (IT)	14:55	15:05			Interstitial Detectors for Synchronized Radiation Quality	Giulio Magrin (AT)
15:35	16:00			Proton Radiation Therapy: Current Status of Clinical Trials	Thomas DeLaney (US)	15:05	15:15			An innovative on-line beam-monitoring detector based on the emission of secondary electrons	Saverio Braccini (CH)
16:00	16:25			France HADRON: national infrastructure for hadrontherapy research including ETOILE, ARCADE and protontherapy centers	Jacques Balosso (FR)	15:15	15:25			Radiotherapy Dose Monitoring to Low-Dose Morphologic Imaging with Scanned Megavoltage X-rays	Paulo Crespo (PT)
						15:25	15:35			Data models for the Compton camera acquisition and their influence on the reconstructed images	Voichita Maxim (FR)
						15:35	15:45	Detection of ionizing radiation by intrinsic optical fiber sensors: preliminary results	Laura Cella (IT)		
						15:45	15:55	First investigations of Ultra-Thin 3D silicon detectors as microdosimeters	Celeste Fleeta (ES)		

Thursday 13 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	<i>Ritsuko Komaki</i>	Host and Tumor Immunity: Local and Systemic Opportunities to Enhance Tumor Curability by Radiotherapy	Ralph Weichselbaum (US)														
08:50	09:15	Symposium: From new therapeutic targets to personalized treatment	<i>Søren M Bentzen</i>	Identification of new therapeutic targets	Conchita Vens (NL)	Symposium: Hypoxic modification of radiotherapy	<i>Marianne Nordmark</i>	Hypoxia-induced gene expression	Marianne Koritzinsky (CA)										
09:15	09:40			Single-dose radiotherapy: from learning curve to long-term clinical outcome	Carlo Greco (PT)			Impact of tumor autophagy on solid tumors response to IR: role of the tumor stroma	Eric Deutsch (FR)										
09:40	10:05			From bench to bedside: experience of the glioblastoma model for the optimization of radiosensitization	Elizabeth C Moyal (FR)			Hypoxia: where to go from here?	Jens Overgaard (DK)										
10:05	10:30	<i>Coffee break</i>																	
10:30	10:40	Symposium: EORTC	<i>Philippe Maingon, Sofia Rivera</i>	The new business model of the EORTC	Emad Shash (BE)	Proffered papers: Biology II	<i>Wolfgang Dörr Raj Jena</i>	Enhanced RBE of sub-micrometer focused low-LET protons	Thomas Schmid (DE)	Proffered papers: Physics III	<i>Denis Dauvergne Ken Peach</i>	Ultimate Time Resolution in Time-of-Flight PET	Paul Lecoq (CERN)						
10:40	10:50				The Radiation Oncology Group of the EORTC: from the past to the future			Philippe Maingon (FR)	Expression of common or species specific DNA damage-repair pathway related genes in thymus of low-dose-rate irradiated AKR/J and ICR mice			Hee Sun Kim (KR)	Ultrafast PET Detectors Based on Digital SiPMs and Their Use in In-Situ PET and Prompt Gamma Ray Imaging	Dennis Schaart (NL)					
10:50	11:00							The new drug and radiotherapy working party	Conchita Vens (NL)			[18F] HX4 PET imaging of tumour hypoxia in HNSCC patients	Karen Zegers (NL)	4D Dose calculations and 4D PET image reconstruction using deformable tetrahedral models of moving organs	Petre Manescu (FR)				
11:00	11:10								An example of the integrated model: the EORTC DAHANCA-1219 trial			Vincent Gregoire (BE)	Inhibition of tumour growth using the small molecule Cathepsin L inhibitor, KGP94	Thomas Wittenborn (DK)	Motion compensated reconstructions in PET-based ion beam treatment verification for moving target	Chiara Gianoli (DE)			
11:10	11:20											Modelling acute urinary toxicity after radiotherapy for prostate cancer	Tiziana Rancati (IT) for Viviana Caillo (IT)	Delayed and Persistent Response of Human Mitochondria after Single Exposure to 0.5 to 4 Gy of Gamma Radiation	Winnie Kam (CN)	Usage of long axial crystals for PET applications: the AX-PET demonstrator and beyond	Chiara Casella (CH)		
11:20	11:30												Mediators associated to the inflammatory response in prostate cancer patients undergoing RT: preliminary results	Bedini Nice (IT)	Dosimetric considerations to determine the optimal technique for localized prostate cancer	Peter Kuess (AT)	Realistic on-the-fly dose calculation for low energy X-rays Intra-Operative Radiation Therapy	Marie Vidal (ES)	
11:30	11:40													Daily variation in rectal size and position during prostate radiotherapy measured from helical tomotherapy CT scans	Jessica Scaife (UK)	Auger electron emitters labeled to monoclonal antibodies trigger cell membrane-mediated bystander effects	Jean-Pierre Pouget (FR)	A single device for mechanical and radiation Quality Assurance measurements of medical accelerators	John Wong (US) for Esteban Velarde (US)
11:40	11:50														Oxygen ions achieve better tumour control probability in hypoxic tumours than carbon ions do	Niels Bassler (DK)	Comparing Ion Computed Tomography under clinical constraints	David Hansen (DK)	A combined electrical impedance tomography and cone beam CT for radiation therapy monitoring
11:50	12:00	Direct evaluation of ion beam radiobiological parameters from clinical data: an alternative approach to the RBE	Andrea Attili (IT)	Oxygen ions achieve better tumour control probability in hypoxic tumours than carbon ions do		Niels Bassler (DK)	TOF-PET scanner configurations for quality assurance in proton therapy: a patient case study			Peter Dendooven (NL)									
12:00	12:00		Equivalent uniform dose (EUD) based biological optimization for carbon ion therapy		Sarah Brüningk (DE)	Implementation of a GPU Monte Carlo protons transport code for dose calculations: methods and challenges	Daniel Maneval (CA)												
12:10	12:20				Proffered papers: Radiotherapy I		<i>Marcel Verheij</i>	Proffered papers: Biology III		<i>Wolfgang Dörr Raj Jena</i>	Proffered papers: Physics IV (Hadrons)					<i>Sandro Rossi</i>	Fast pencil beam dose calculation for hadron therapy on GPU	Joakim Da Silva (UK)	

12:20	12:30			Clinical experience with adaptive radiotherapy for muscle invasive bladder cancer	Anne Vestergaard (DK)			Variance Based Sensitivity Analysis of Biological Uncertainties in Carbon Ion Therapy	Florian Kamp (DE)			Parameterization of lateral dose profiles for proton therapy application at CNAO	Martina Mori (IT)	
12:30	13:30	Lunch												
13:30	14:00	ESO Session - E. van der Schueren Award	Alberto Costa	The ART of translation	Marcel Verheij (NL)									
14:00	14:25	Symposium in honour of Prof. Kian K. Ang-Translational research: the example of head and neck cancer	Ritsuko Komaki	Eulogy of Professor Kian K. Ang	James D Cox (US)									
14:25	14:50			Milestones of Pr Kian Ang's scientific contribution	Jacques Bernier (CH)									
14:50	15:15			Molecular biology of head and neck carcinomas: old challenges, new insights	Kevin Harrington (UK)									
15:15	15:45	Coffee break												
15:45	15:55	Proffered papers: Radiotherapy II	David Brizel	The REQUITE project: validating predictive models and biomarkers of radiotherapy toxicity to reduce side-effects	Tiziana Rancati (IT)	Proffered papers: Biology IV	Manjit Dosanjh Kevin McMullen	Vimentin (EMT Marker Protein) Score As One of Predictors Resistance to Erlotinib and Radiotherapy for Patients with Stage III Non-Small Cell Lung Cancer on A Prospective Phase II Trial	Ritsuko Komaki (US)	Proffered papers: Physics V (Detectors)	Ulli Köster Paul Lecoq	Verification of dynamictjectory radiotherapy based on Monte Carlo	Michael Fix (CH)	
15:55	16:05			Potential of radiation response by a novel EGFR/DNA targeting molecule in a triple negative breast cancer model	Beatrice Fournier (CA)			Towards simpler and better prediction of relative biological effect (RBE)	Bleddyn Jones (UK)			Development of a transparent photon detector for the online monitoring of IMRT beams	Rachel Delorme (FR)	
16:05	16:15			Studying inter- and intrafraction motion mitigation with sequential 4D CTs of lung tumor patients	Romain Brevet (DE)			Combined Radiochemotherapeutical Strategies for Microtubule Stabilizing Agent (MSA)-Resistant Tumors	Angela Broggin-Tenzer (CH)			An Intensity Modulated Radiotherapy Beam Monitoring System using a Monolithic Active Pixel Sensor	Johannes Velthuis (UK)	
16:15	16:25			Time resolved portal dosimetry for Volumetric Modulated Arc Therapy (VMAT) in lung cancer patients with atelectasis	Mark Podesta (NL)			Preclinical Assessment of Efficacy of Radiation Dose Redistribution Based on Intratumoral FDG-PET Uptake	Ludwig Dubois (NL)			Geant4 simulation of a dedicated beam line at the CNAO facility for the study of uveal melanomas	Edoardo Farina (IT)	
16:25	16:35			Spot-scanning Proton Therapy for Pediatric Parameningeal Rhabdomyosarcomas: Clinical Outcome of 39 Patients Treated at PSI	Carmen Ares (CH)			Fat percentage and hand grip strength in lung cancer: the influence on survival and toxicity	Kim Smits (NL)			EndoTOFPET-US: A multimodal ultrasound and time of flight PET endoscope for developing new biomarkers for the prostate and pancreatic cancers.	Etiennette Auffray (CERN)	
16:45				CERN visit										

Friday 14 February

Session - Room 2		Chair	Title	Speaker			Session - Room 3		Chair	Title	Speaker	Session - Room 4		Chair	Title	Speaker
08:30	08:55	Symposium: Radiosensitivity modulation: new angles of attack	Richard Kolesnick	Growth factor and integrin receptor targeting - there is more to it than just inhibition	Nils Cordes (DE)			Panel discussion: Clinical trials in particle therapy	Vikram Bhadrasain Manjit Dosanjh			Jürgen Debus (DE) Roberto Orecchia (IT) James D Cox (US) Hirohiko Tsujii (JP)				
08:55	09:20			Notch and radiotherapy: does it matter?	Marc Vooijs (NL)											
09:20	09:45			Head-and-neck cancers: towards new, intriguing fractionation schedules	Jean Bourhis (CH)											
09:45	10:15	 <p style="text-align: center;">Coffee break Coffee break sponsored by Indiana University Health Proton Therapy Center</p>														
10:15	10:30	Proffered papers: Biology V	Vikram Bhadrasain Tim Maughan	Radiosensitization of Non-Small Cell Lung Cancers by Targeting Ionizing Radiation-Induced Activation of ADAM17	Martin Pruschy (CH)	10:15	10:25	Proffered papers: Biology VI	Norman Coleman Kevin Prise	Radiobiological Considerations for Retreatment of Central Nervous System Tumours	Bleddyn Jones (UK)	Proffered papers: Physics VI (Hadrons)	Ugo Amaldi Hirohiko Tsujii	Intra-fraction tumor tracking based on a surrogate-driven 4D CT motion model in particle radiation therapy	Guido Baroni (IT)	
10:30	10:45			Do physiological relevant doses of biguanides have any role in cancer treatment?	Morten Busk (DK)	10:25	10:35			Gadolinium based nanoparticles for radiosensitization of head and neck squamous cell carcinoma	Lucie Sancey (FR)			Prompt Gamma Imaging at MGH with LaBr ₃ Scintillating Crystals	Joao Seco (US)	
10:45	11:00			Oral mucosal radiation response (mouse) - relevance of ceramide-induced apoptosis?	Wolfgang Dörr (AT)	10:35	10:45			Noninvasive Imaging of Radiation-Induced Lung Inflammation with Positron Emission Tomography (PET) in a Murine Model	Ken Kang Hsin Wang (US) for Jin Zhang (US)			Nanoparticles and protontherapy: disentangling possible physical effects	Yolanda Prezado (FR)	
11:00	11:15			A phase I/II study of proton and hyperthermia in primary unresectable and recurrent adult soft tissue sarcoma	Niloy Datta (CH)	10:45	10:55			The use of 'planned overshoot' for reducing dose to healthy tissue and improve treatments robustness for scanned proton beams	Francesca Albertini (CH)			95 MeV/A carbon fragmentation studies for hadrontherapy: measurements and comparisons with GEANT4 simulations	Marc Labalme (FR)	
11:15	11:30					10:55	11:05			Clinical testing of an in-room imaging system for patient setup verification in particle therapy	Guido Baroni (IT)			Properties of therapeutic He, Li and O beams studied with Geant4	Lucas Burigo (DE)	
11:30	11:45					11:05	11:15			Reduced side effects by proton microchannel radiotherapy – study in a human skin model	Stefanie Girst (DE)			Automatic beam dose profiler for scanned pencil beams (protons and carbon ions) at the CNAO hadrontherapy facility	Aurora Tamborini (IT)	
						11:15	11:25			Entervision Wp4. Biological Dosimetric Phantom. Proof Of Concept Preliminary Results	Thiago V.M. Lima (CERN)			Proton Interaction Vertex Imaging for carbon therapy quality control	Regina Rescigno (FR)	
				11:25	11:35	A knowledge exchange case study: computational radiotherapy at Cambridge	Michael Simmons (UK)	Dual energy CT to reduce range uncertainties in hadrontherapy	Guillaume Landry (DE)							
				11:35	11:45			Research and development of a TOF-based multi-slit collimated camera for online hadrontherapy monitoring	Marco Pinto (FR)							
11:45	12:45	Lunch														
12:45	13:10	Symposium: Imaging	Philippe Lambin	Hypoxia Imaging	Marianne Nordmark (DK)			Symposium: Tumor vascularization	Jens Overgaard	Hypoxia modification in experimental tumours	Daniel Zips (DE)	Symposium: Hadrons	Roberto Orecchia	Evolution of technology to optimize the delivery of proton therapy: the third generation	Thomas Bortfeld (US)	
13:10	13:35			Functional image-based target definition	Robert Jeraj (US)					The vascular supply and microenvironment of tumours and their significance for cancer therapy	Michael Horsman (DK)			Robust optimization of IMPT dose distributions	Radhe Mohan (US)	
13:35	14:00			Predictive and prognostic role of functional imaging of head and neck squamous cell carcinomas	David Brizel (US)					Targeting hypoxia through autophagy	Kasper Rouschop (NL)			Proton clinical correlates of patient throughput and cyclotron availability	Kevin McMullen (US)	

14:00	14:20	Symposium: Modulation of tumor and normal tissue response to radiation	Simon Powell	Carbonic Anhydrase IX inhibitors: a new class of targeted agents	Philippe Lambin (NL)	14:00	14:25	Symposium: Biomarker driven individualization of radiotherapy - from preclinical validation to clinical trials?	Michael Baumann	Biomarker for stratification in radiotherapy - preclinical and early clinical models	Mechthild Krause (DE)
14:20	14:40			Immunosensitization by radiotherapy: the example of immunocytokines	Ludwig Dubois (NL)	14:25	14:50			Imaging for prescription function	Daniela Thorwarth (DE)
14:40	15:00			Novel strategies to spare normal tissues from radiation damage	Marie-Catherine Vozenin (FR)	14:50	15:15			How will we develop the evidence base for biologically individualized radiotherapy?	Tim Maughan (UK)
15:00	15:20			Intestinal Stem Cells are Radiation Resistant	Richard Kolesnick (US)						
15:20	15:40			Concluding remarks		Jacques Bernier (CH), Manjit Dosanjh (CERN)					