

ICTR-PHE 2012

International Conference on Translational Research in Radiation Oncology | Physics for Health in Europe

International Conference Centre (CICG)
February 27 - March 2, 2012



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Organised in Collaboration with



Monday 27 February		Tuesday 28 February		Wednesday 29 February	
Registration		Registration		Registration	
Room 2		Room 2		Room 2	
Welcome		Prospects in detectors and medical imaging	ESTRO Lecture		
Radiobiology in therapy and space science			Plenary Lectures		
Lunch		Lunch		Lunch	
Radioisotopes in diagnostics and therapy	Novel Technologies in Radiation Therapy	Room 2		Room 3	
		Summary Session		Imaging and Treatment Planning (I)	
		Status and perspectives of ion therapy in Europe		Imaging and Treatment Planning (II)	
	CERN visit Public Talk		Gala Dinner		

Thursday 1 March			Friday 1 March		
Room 2: Plenary: G.H. Fletcher Lecture			Room 2	Room 3	Room 4
Room 2	Room 3	Room 4	Proffered Papers	Proffered Papers	Proffered Papers
Tumor micro-environment	Clinical radiation research	Mitigation/repair of radiation damage	Towards customized treatments: the H&N cancer example	Molecular biology and predictive markers	Hadron therapy
EORTC session	Oral Poster presentations	Proffered Papers Biology (I)	Repair mechanisms	Functional Imaging	Radiosensitivity modulation
Lunch			Lunch		
Room 2: Plenary: G. Adams Lecture			Room 2	Room 3	Room 4
Room 2	Room 3	Room 4	Improving precision in TP and delivery	Tumor hypoxia and tumor metabolism	Finding the target, restoring the vision
Biological and physical optimization of treatment plans	Targeting signalling pathways	Normal tissues	Proffered Papers Physics (II)	Proffered Papers Biology (III)	Proffered Papers Clinics (II)
Proffered Papers Physics (I)	Proffered Papers Biology (II)	Proffered Papers Clinics (I)	Room 2: European School of Oncology Plenary Session		
CERN Visit			E. van der Schueren Award		
			Closing session		

Monday 27 February

08:00 Registration and Welcome Coffee

Room 2

09:00 Welcome addresses:

- J. Bernier and M. Dosanjh, conference chairs
- R. Heuer, CERN Director General
- P.F. Unger, Président du Conseil d'État de Genève

09:10 Keynote speaker: R. Draghia-Akli Director for Health in DG Research and Innovation of the European Commission

Session 1: Radiobiology in therapy and space science (Chair: Marco Durante, Gillies McKenna)

- 09:30 A. Mazal (F) - tba
- 10:00 Abstract 10: U. Schneider (CH) - Cancer risk above 1 Gy and the impact for space radiation protection
- 10:15 Abstract 48: G. Dollinger (D) - Low LET radiation focused to sub-micrometer shows enhanced radiobiological effectiveness (RBE)
- 10:30 Abstract 206: S. van der Veen (NL) - ACE-inhibition ameliorates radiation pneumonitis by ameliorating acute cardiac damage

10:45 – 11:15 Coffee

- 11:15 P. O'Neill (UK) - Molecular basis for the relative biological effectiveness of densely ionizing radiation
- 11:45 Abstract 169: G. Russo (I) - The influence of RBE variations for protons in clinical treatments evaluated with a novel Treatment Planning System for radiotherapy
- 12:00 Abstract 200: M. Krämer (D) - Adaptive treatment planning with TRiP98
- 12:15 Abstract 295: A. Lühr (DK) - Strategies to overcome hypoxia – a roadmap to LET optimized treatment planning for ion therapy

- 12:30 Abstract 224: R. Delorme (F) - Modeling and experimental validation of the radiation - heavy elements interactions at a micrometer level in photon activation radiotherapy
- 12:45 Abstract 190: D. Abler (CERN) - Extending LEIR to provide ion-beams for bio-medical experiments

13:00 – 14:30 Lunch

Session 2: Radioisotopes in diagnostics and therapy (Chair: Jean-François Chatal, Ulli Köster)

- 14.30 M. Zalutsky (US) - Targeted alpha therapy
- 15:00 Abstract 177: C. Müller (CH) - Theranostics using Terbium-radiolabeled folate conjugates
- 15:15 Abstract 338: M. Jensen (DK) – Experimental verification of Auger emitter radiotoxicity using exotic radioisotopes
- 15:30 Abstract 146: T. Stora (CERN) - Recuperation of dumped CERN protons for the production of medical isotopes
- 15:45 Abstract 285: L. Maciocco (F) Experimental qualification of the Theranean accelerator-driven neutron activator for the production of activated nanoparticles for cancer
- 16:00 Abstract 157: S. Akulinichev (RUS) - Ytterbium sources for brachytherapy

16:15 – 16:45 Coffee

- 16:45 M. de Jong (NL) - Preclinical imaging and therapy
- 17:15 Abstract 270: K. Zhernosekov (CH) - ^{177}Lu quality analysis for an efficient preparation of ^{177}Lu -labeled compounds
- 17:30 Abstract 339: M. Miederer (D) - Small animal PET-imaging with ^{44}Sc -DOTATOC
- 17:45 Abstract 317: B. Ponsard (B) - $^{99}\text{Mo}/^{99\text{m}}\text{Tc}$ supply situation and new projects
- 18:00 Abstract 275/277: F. Haddad (F) - Radio-Isotope production at Arronax
- 18:15 Abstract 64: D. Le Guludec (F) - PET-CT in cardio-vascular diseases
- 18:30 Discussion: Supply of radioisotopes for medicine

18:45 End

Tuesday 28 February

Room 2

Session 3: Prospects in detectors and medical imaging (Chair: Alberto Del Guerra, Wolfgang Enhardt)

PART A – Hardware: Detectors

- 08:30 S. Ziegler (D) - The technology of solid state detectors in Nuclear Medicine
- 09:00 Abstract 182: D. Schaart (NL) - Prospects for achieving < 100 ps FWHM coincidence resolving time in time-of-flight PET
- 09:15 Abstract 272: M.G. Bisogni (I) - An innovative PET Detector concept for TOF-inbeam PET Dosimetry in hadrontherapy
- 09:30 Abstract 73: F. Sauli (I) A compact multi gap RPC detector for TOF-PET
- 09:45 Abstract 168: D. Thers (F) - Toward a new "gamma" medical imaging technique: the XEMIS project
- 10:00 Abstract 249: M. Martisikova (D) -Investigation of the Timepix detector for beam range verification in ion therapy

10:15-10:45 Coffee

PART B – Software and Systems

- 10:45 O. Ratib (CH) - Hybrid systems in Medical Imaging: from PET/CT to PET/MR
- 11:15 Abstract 47: P. Lecoq (CERN) - Goals and challenges of the EndoTOFPET-US FP7 project
- 11:30 Abstract 155: J. Krimmer (F) - Progress in using prompt gammas for ion range monitoring during hadrontherapy
- 11:45 Abstract 107: K. Laube (D) - Reconstruction of 4D in-beam PET data for quality control of moving target irradiation in ion beam therapy”
- 12:00 Abstract 129: C. Kurz (D) - First Steps towards 4D Offline PET-Based Treatment Verification at the Heidelberg Ion Beam Therapy Center
- 12:15 Abstract 202: L. Monno (I) - Structural MRI analysis and hippocampal segmentation in the assessment of Alzheimer's disease

12:30 – 14:00 Lunch

Session 4: Novel Technologies in Radiation Therapy (Chair: Ugo Amaldi, Ken Peach)

- 14:00 M. Schippers (CH) - Novel techniques in proton therapy
- 14:30 M. Pullia (I) - Gantries for carbon ion therapy
- 15:00 Abstract 164: L. Laschinsky (D) - Toward laser driven proton therapy: results of the basic translational steps
- 15:15 Abstract 166: B. Seitz (UK) -Radiotherapy with very high energy electrons generated by wakefield accelerators
- 15:30 Abstract 208: A. Degiovanni (I) -Feasibility study of a TULIP – a Turning Linac for Protontherapy
- 15:45 Abstract 163: S. Braccini (CH) - An Innovative Beam Monitor Detector for the New Bern Cyclotron Laboratory

16:00-16:30 Coffee

- 16:30 C. Bert (D) - Treating moving organs with particle beams
- 17:00 Abstract 175: S. Sellner (D) - Dose and LET painting with charged particles
- 17:15 Abstract 117: V. Patera (I) - Fragmentation measurements of ^{12}C ion on C and Au target with the FIRST experiment at GSI
- 17:30 Abstract 376: M. Karamitros (F) - The GEANT4-DNA project
- 17:45 Abstract 296: M. Pw Chin (CERN) - Candidate therapeutic ions: a physics account of interactions in and escapes out of the body

18:00 End

18:30 Public talk by S. M. Bentzen - Treating cancer in the XXI century: biology, physics and genomics

Wednesday 29 February (morning)

Room 2

ESTRO Lecture

Chair: J. Bourhis (F), S. Bodis (CH)

- 8:15 P. Lambin (NL) - Knowledge Engineering in Radiation Oncology: the start of a paradigm shift?

Plenary Lectures

Chairs: tba

- 8:45 J.P. Gerard (F) - Physics meets clinics
- 9:15 M. van Herk (NL) - Improving precision in imaging and treatment
- 9:45 R.P. Baum (D) - THERANOSTICS - From molecular imaging using PET/CT via individualized dosimetry to personalized therapy

10:15 - 10:45 Coffee

- 10:45 D. Packer (US) - Atrial fibrillation: 4/5D treatment planning for a moving target with IMRT and particle beams
- 11:15 E. Malinen (NOR) - Adapting biological feedback in radiotherapy
- 11:45 W. Enghardt (D) - In-room imaging
- 12:15 J.M. Gago (PT) - Bridging the gap between science and policy for improving health in Europe

12:45 - 14:15 Lunch

Wednesday 29 February (afternoon)

Room 2

Summary Session (Chair: S. Green (tbc), S. Myers)

- 14:15 Session 1 summary
- 14:40 Session 2 summary
- 15:05 Session 3 summary
- 15:30 Session 4 summary
- 15:55 S. Myers (CERN) – CERN: Three initiatives

Room 3

Imaging and Treatment Planning (I)

- 14:15 Abstract 91: K. Parodi (D) - Experimental characterization, modelling and in-vivo imaging to foster high precision beam therapy at HIT
- 14:30 Abstract 304: T.T. Böhlen (CERN) - Investigating the robustness of ion RT treatment plans to uncertainties in biological treatment parameters
- 14:45 Abstract 279: I. Torres-Espallardo (E) - Comparison of Prompt-gamma and Positron imaging for hadron-therapy monitoring
- 15:00 Abstract 235 F. Roellinghoff (B) - Real time proton beam range monitoring by means of prompt gamma detection with a collimated camera
- 15:15 Abstract 106: S. Helmbrecht (D) - A tool for semiautomatic evaluation of PET data for range verification in ion beam therapy
- 15:30 Abstract 111: G. Schettino (IRE) - Lethal and sub-lethal damage along and around pristine and spread out carbon beams
- 15:45 Abstract 241: E. Testa (F) - Real-time monitoring of the Bragg peak during ion therapy: a feasibility study of interaction vertex imaging
- 16:00 Abstract 248: I. Rinaldi (D) - Investigations on carbon ion radiography and tomography

16:15 Coffee

Status and perspectives of ion therapy in Europe
Chair: M. Dosanjh (CERN), J.P. Gerard (F)

Imaging and Treatment Planning (II)

- 16:40 E. Malinen (NOR) - Particle therapy - leveraging clinical performance?
- 17:00 J. Debus (D) - Translational approaches in carbon ion radiotherapy
- 17:20 R. Orecchia (I) – CNAO
- 17:40 R. Mayer (A) – MedAustron
- 18:00 J. Balosso (F) - ETOILE-France Hadron
- 16:45 Abstract 381: P. Keall (AUS) - Failure mode and effect analysis-based quality assurance for dynamic MLC tracking systems: Patient safety in the era of real-time radiotherapy
- 17:00 Abstract 322: T. Lomax (CH) - Intensity Modulated 'Grid' Proton Therapy. Trying to exploit 'spatial fractionation' with protons
- 17:15 Abstract 312: K. Haustermans (B) - Multimodality imaging for tumour targeting in prostate cancer
- 17:30 Abstract 219: D. Zips (D) - Bio-IGRT
- 17:45 Abstract 75: L. Cella (I) – An automated atlas-based method for definition of brain structures on segmented MRI in patients with primary brain neoplasms

18:40 End

Thursday 1 March

Room 2

Room 3

Room 4

Plenary: G.H. Fletcher Lecture
Chair: K.K. Ang (USA)

08:30 M. Baumann (D) Translating biology into high-technology radiotherapy

Tumor micro-environment
Chair: B. Wouters (CAN), M. Ozsahin (CH)

Clinical radiation research
Chair: R. Miralbell (CH), P. Lambin (NL)

Mitigation/repair of radiation damage: stem cells, modifiers, interventions
Chair: S. Powell (USA), R. Mirimanoff (CH)

- 09:00 C. Ruegg (CH) - Tumor microenvironmental reactions influencing response to radiotherapy
- 09:20 J.T. Erler (UK) - Remodeling and homeostasis of the extracellular matrix: implications for fibrotic diseases and cancer
- 09:40 W.G. McKenna (UK) - The tumour microenvironment in combined modality therapy
- 10:00 P. Borghetti (DK) - Has the quality of vessels a value in the treatment of Glioblastoma Multiforme? A study on the role of GLUT1 in neoangiogenesis

- 09:00 M. Krause (D) - Cancer stem cell-related biomarkers with predictive potential for radiotherapy
- 09:20 I. Vogelius (DK) - Learning from the past – normal tissue toxicity in retrospective studies
- 09:40 J.A. Langendijk (NL) - Open prediction of expected gain from proton therapy in individual patients based on NTCP predictive modeling: final results of ALLEGRO project
- 10:00 R. Miralbell (CH) - Dose-fractionation sensitivity of prostate cancer

- 09:00 S.A. Pringle (NL) - The development of salivary gland stem cell therapy for radiation-induced hyposalivation
- 09:20 S. Short (UK) - An RNAi screen of stem cell proteins identifies HOX genes as targets for radiosensitization in glioma
- 09:40 N. Cordes (D) - Cell adhesion mediated radioresistance: Novel insights into its impact on the repair of radiogenic DNA lesions
- 10:00 M. Hauer-Jensen (USA) - Decreasing the adverse effects of cancer therapy: guidance for clinical development of radiation injury mitigators

10:20 Coffee Break

EORTC session Chair: V. Gregoire (B)	Oral Poster presentations Chair: J. Bernier (CH)	Proffered Papers Biology (I) Chair: R. Komaki (USA)
• 10:50 V. Gregoire (B) - Opening of the session • 11:00 V. Gregoire (B) - Current and future clinical research in radiotherapy • 11:20 D. Lacombe (B) - Recent developments in imaging and translational research in radiotherapy • 11:40 D. Weber (CH) - Quality Assurance in radiotherapy: the EORTC experience • 12:00 A. Fairchild (B) - The EORTC ROG experience. Does quality of radiotherapy predict outcomes of multicenter clinical trials?	• 10:50 Abstract 271: S. Tomatis (I) - Predicting rectal bleeding with neural networks: late effects on patients treated for prostate cancer with 3DCRT • 10:56 Abstract 281: A. Hope (CAN) - Increased acute symptoms of radiation pneumonitis with concurrent chemoradiotherapy vs. radiotherapy alone in a murine model of fractionated sub-total thoracic IGRT • 11:02 Abstract 286: A. Konski (USA) - Dosimetric modeling of cardiac toxicity in patients with esophageal cancer receiving radiotherapy • 11:08 Abstract 135: A. Staab (D) - Hyperthermia radiosensitizes hypoxic HCT-116 human colorectal carcinoma cells in vitro • 11:14 Abstract 137: S. Gräf (D) - Robustness against the interfractional internal target movement in ion beam radiotherapy prostate treatment planning • 11:20 Abstract 154: A.O. Fontana (CH) - Proton versus photon radiotherapy: differential demands on the biological level • 11:26 Abstract 189: D. Abler (CH) - Meta-modelling Markov Model Simulations for cost effectiveness analyses • 11:32 Abstract 98: S. Ahmed (UK) - A radiation sensitivity and DNA damage responses in glioma stem cells • 11:38 Abstract 199: L. Brondum (DK) - Predictive and prognostic markers in serum/plasma in head and neck cancer patients • 11:44 Abstract 58: T. Meijer (NL) - Differences in metabolism between adeno- and squamous cell non-small cell lung carcinomas according to GLUT1 and MCT4 expression • 11:50 Abstract 28: F. Meyer (CAN) - Genetic sequence variants in relation to acute and late toxicities in patients with head and neck cancer treated with radiation therapy • 11:56 Abstract 109: L. Koi (D) - Tumour microenvironment and intratumoural distribution of therapeutic antibodies	• 10:50 Abstract 34: P.T. Tran (USA) - Hedgehog pathway inhibition and radiotherapy for non-small cell lung cancer • 10:59 Abstract 332: E. Ford (USA) - Localized radiation disrupts the migration of neural progenitor cells • 11:08 Abstract 93: H. Kunogi (JAP) - Prediction of radiosensitivity using phosphorylation of histone H2AX • 11:17 Abstract 74: M. Kriegs (D) - Inhibition of epidermal growth factor receptor enhances radiation-induced permanent G1 arrest solely in tumor cells with intact p53/p21 cell cycle regulation • 11:26 Abstract 121: G. Niedermann (D) - Delayed cell death associated with mitotic catastrophe in gamma-irradiated stem-like glioma cells • 11:35 Abstract 141: A. Maeda (CAN) - Photoacoustic imaging for monitoring vascular oxygen saturation in response to ionizing radiation • 11:44 Abstract 63: C. Toulas (F) - In vivo radiosensitizer effect of the HDAC inhibitor S78454 on orthotopic human glioblastoma. • 11:53 Abstract 311: U. Raju (USA) - Tumor microenvironment and integrins as effective therapeutic targets to improve radiotherapy outcome • 12:02 Abstract 209: A. Laprie (F) - MR Spectroscopy imaging (MRSI) for glioblastoma dose painting with intensity modulated radiation therapy comprising simultaneous integrated boost on specific targets

12:02 Abstract 152: N. Cordes (D) - Cetuximab is an efficient carrier of radionuclides to target EGFR-expressing tumor cells 12:08 Abstract 100: W. Kam (AUS) - The response of messenger RNA to ionizing radiation – mitochondrial genes are more susceptible 12:11 Abstract 105 : D. Viertl (CH) - A TAT-RasGAP derived peptide efficiently sensitizes cancer cells to radiotherapy, an in vitro and in vivo study		
12:20 Lunch		
Plenary: G. Adams Lecture Chair: W.G. McKenna		
13: 20 I. Stratford (UK) Translating chemical concepts into clinical treatments: Not a quick fix.		
Biological and physical optimization of treatment plans Chair: S.M. Bentzen (USA), T. Collen (CH)	Targeting signalling pathways Chair: D. Zips (D), E. Deutsch (F)	Normal tissues Chair: J. Overgaard (DK), N. Cordes (D)
14:00 A. Brahme (S) - A systems biology approach to radiation therapy optimization 14:20 D.A. Jaffray (CAN) - Automation in beam modelling and quality control 14:40 T. Bortfeld (USA) - Better IMRT: First clinical experience with multi-criteria optimization 15:00 G. Mageras (USA) Dose correction strategy for the optimization of volumetric modulated arc therapy	14:00 K. Harrington (UK) - Modulation of Chk1 signalling during radiation therapy 14:20 Z. Fuks (USA) - Epigenetic regulation by HRR by microvascular dysfunction determines tumor cure by SDRT 14:40 M. Pruschy (CH) - Regulation of paracrine signaling by microtubule stabilizing agents and ionizing radiation 15:00 Peter Rodemann (D) - Mechanisms of EGFR inhibitors.	14:00 F.A. Stewart (NL) - Cardiovascular mediated damage after irradiation 14:20 M.C. Vozenin (F) - Latest progresses on modulation of heart radiation side effects 14:40 S.L. Tucker (USA) - Lung toxicity: where to go from here? 15:00 C.N. Coleman (USA) - Scarce resources for nuclear detonation: project overview and challenges
15:20 Coffee		
Proffered papers: Physics (I) Chair: S. Bulling (CH)	Proffered papers: Biology (II) Chair: J. Cox (USA)	Proffered papers: Clinics (I) Chair: J. Bernier (CH)
16:00 Abstract 103: F. Fiedler (D) - Techniques for image based in-vivo dosimetry: from particle therapy PET to in-beam prompt gamma imaging	16:00 Abstract 316: K. Mizuno (JAP) - SRXRF analysis on the accumulation of DACHPt-loaded polymeric micelles in tumor before and after irradiation	16:00 Abstract 186: V. Carillo (I) - Correlating surrogates for bladder dosimetry with the dose-volume histogram of bladder wall defined on T2W-MRI imaging

- 16:10 Abstract 19: S. Devic (CAN) - FDG-based uptake volume histograms: avenue towards biological target volumes
- 16:20 Abstract 240: E. Rusten (NOR) - Spatial correlations between images derived from dynamic FDG-PET
- 16:30 Abstract 55: J. Wong (USA) - Real time image guided radiotherapy for pancreatic tumors - The Concept of dual modality monitoring using kV-CBCT and robot assisted ultrasound imaging
- 16:40 Abstract 65: J. Wong (USA) - Integrated on-board X-Ray and bioluminescence tomography to guide focal irradiation of soft tissue targets in small animals
- 16:50 Abstract 119: S. Broggi (I) - Quantitative parameters of parotid deformation during IMRT for head-neck cancer correlate with individually assessed clinical and dosimetry information
- 17:00 Abstract 110: F. Lakosi (B) - Comparison of respiration-related surgical clip and chest wall movement between prone and supine position in the adjuvant radiotherapy of breast cancer
- 17:10 Abstract 33: S. Devic (CAN) - Linearization of the radiochromic film dosimetry system dose response
- 17:20 Abstract 232: M. Chin (USA) - Hyperspectral imaging for detection of acute and chronic oxygenation and perfusion changes in irradiated skin
- 16:10 Abstract 184: M. Lando (NOR) - Loss of chromosome 3P leads to downregulation of RYBP, TMF1, and PSMD6 and poor outcome after chemoradiotherapy of cervical cancer
- 16:20 Abstract 80: T.E. Schmid (D) - Serum Hsp70 - a soluble, tumor-specific marker in xenograft tumor mouse models
- 16:30 Abstract 7: A. Sharma (USA) - Chemotherapeutic activity of s-nitrosoglutathione alone and in combination with cisplatin and radiation in head and neck cancer cells and mouse xenograft model
- 16:40 Abstract 43: M. Toulany (D) - Y-box binding protein-1 phosphorylation induced by ionizing radiation depends on EGFR kinase activity and K-RAS status
- 16:50 Abstract 53: P. Pedicini (I) - Combination of radiation and monoclonal antibody EGFR inhibitors in the Head and Neck tumors
- 17:00 Abstract 61: H. Stegeman (NL) - Effects of EGFR-inhibition and radiotherapy on hypoxia, proliferation and tumor growth delay in human tumor xenografts
- 17:10 Abstract 287: E. Sulman (USA) - Combining Molecular and Clinical Factors to Predict Survival of Patients with Glioblastoma and Validation using RTOG 0525
- 17:20 Abstract 125: J. Doyen (FR) - Prognostic value of chromosomal imbalances and the colon gene expression signatures in rectal cancer
- 16:10 Abstract 264: M. Thor (DK) - Bladder dose accumulation in prostate IMRT based on a biomechanical deformable image registration algorithm
- 16:20 Abstract 242: A. Erlend (NO) - Imaging parameters derived from dynamic contrast enhanced MRI of cervical cancers predict chemoradiotherapy outcome
- 16:30 Abstract 280: Herrera F (CH) - Simultaneous Integrated Boost in Cervix Cancer: Too Much Uncertainty
- 16:40 Abstract 193: K. Snipstad (NO) - repression of membranous moesin leads to evasion of the immune response and chemoradioresistance in cervical cancer
- 16:50 Abstract 267: T. Vuong (CAN) - Impact of timing of chemotherapy in the treatment of patients with operable rectal cancer: Preliminary results from a randomized phase II study
- 17:00 Abstract 178: N. Leroi (B) - Tailoring the timing of surgery based on the neoadjuvant radiotherapy schedule for decreasing tumor dissemination at the time of surgical procedure.
- 17:10 Abstract 145: T. Rancati (I) - Rectal toxicity 6 years after high-dose radiation for prostate cancer: clinical and dosimetric predictors
- 17:20 Abstract 35: M. Nagarajan (IND) - Resource Sparing Short Course Radiation Vs Long Course Radiation to Palliate Esophageal Cancer after Brachytherapy: A Report of Randomized Trial IAEA E33027

17:45 End

Friday 2 March

Room 2

Proffered papers

Chair: M. Durante (GSI), P. Lecoq (CERN)

- 08:30 Poster award Prospects in detectors and medical imaging
- 08:45 Poster award ICTR
- 09:00 Abstract 255: M.T. Rissi (N) - High resolution and high sensitivity PET imaging with COMPET
- 09:15 Abstract 104: T. Kormoll (D) - Imaging of point sources with a Compton camera for in-vivo dose monitoring of ion beam irradiation
- 09:30 Abstract 134: V. Zambrano (A) - A registration algorithm for dose correction in radiation therapy: validation of deformable registration using phantoms

Towards customized treatments: the H&N cancer example

Chair: M. Baumann (D), J.C. Horiot (CH)

- 09:45 D. Raben (USA) - New insights in DNA repair targeting and radiotherapy in head and neck cancer
- 10:05 V. Vandecaveye (B) - Diffusion-weighted MRI for early tumour response assessment during treatment
- 10:20 J. Overgaard (DK) - Hypoxic modification of radiotherapy: old challenges, new solutions?
- 10:40 J. Bourhis (F) - Chemoradiation versus induction chemotherapy in locally advanced head-and-neck carcinomas

Room 3

Proffered papers

Chair U. Amaldi (I), K. Peach (GB)

- 08:30 Poster award Novel Technologies in Radiation Therapy
- 08:45 Abstract 273: M. Desplanques (I) - Reliability of the optical tracking system for patient positioning at CNAO
- 09:00 Abstract 222: I. Martinez-Rovira (E) - Preparing the forthcoming MRT clinical trials: development of a MC calculation engine for dose computation.
- 09:15 Abstract 130: F. Taupin (F) – The role of Gadolinium nanoparticles in the tumoral cell's radiosensitization
- 09:30 Abstract 215: A. Costantinescu (D) - Non-invasive treatment of Atrial Fibrillation with a scanned carbon ion beam

Molecular biology and predictive markers

Chair: Z. Fuks (USA), D. Aebersold (CH)

- 09:45 G. Barnett (UK) - Candidate SNP vs genome-wide association scan of late radiotherapy toxicity: the RAPPER study
- 10:05 W. Dörr (D) - Molecular biology of radiation effects in normal tissues
- 10:20 R. Jeraj (USA) - Molecular imaging as a biomarker
- 10:40 M. Nordsmark (DK) - Tumor hypoxia assays – ready for clinical use?

Room 4

Proffered papers

Chair: D. Lewis (CERN), U. Köster (ILL)

- 08:30 Poster award Radiobiology in therapy and space science
- 08:45 Poster award Radioisotopes in diagnostics and therapy
- 09:00 Abstract 301: F. Davodeau (F) - Bismuth-213 radioimmunotherapy with an anti-mCD138 mAb in a multiple myeloma mouse model
- 09:15 Abstract 294 I. Kelson (IL) - Diffusing Alpha-Emitters Radiation Therapy
- 09:30 Abstract 293: M. Stachura (DK) - Radioisotopes for probing biomolecular functionality in living matter

Hadron therapy

Chair: D.R. Olsen (NOR), D. Weber (CH)

- 09:45 T.F. Delaney (USA) - The imperative to transition from passively scattered to scanned proton beam delivery
- 10:05 P.A.S. Johnstone (USA) Dose falloff in proton craniospinal irradiation: where and why?
- 10:20 R. Mohan (USA) Innovative and efficient dose calculation strategies for intensity modulated and passively scattered proton therapy
- 10:40 J.D. Cox (USA) Toxicity and patterns of failure of adaptive proton therapy

11:00 Coffee		
Repair mechanisms Chair: M. Hauer-Jensen (USA), A. Allal (CH)	Functional Imaging Chair: D. Brizel (USA), J. Bernier (CH)	Radiosensitivity modulation Chair: M. Verheij (NL), M. Pruschy (CH)
11:30 R.G. Bristow (CAN) - DNA repair targeting and radiotherapy. A focus on the therapeutic ratio 11:50 S.N. Powell (USA) - Enhancing radiotherapy through a greater understanding of homologous recombination 12:10 E. Dikomey (D) - Effect of epidermal growth factor receptor on double-strand break repair 12:30 E. Hammond (UK) - Targeting hypoxic cells through the DNA damage response	11:30 V. Grégoire (B) - Molecular imaging in planning head-and-neck cancer treatments 11:50 D. Brizel (USA) - The role of adaptive and functional imaging modalities 12:10 N. Wiedenmann (D) - Tumor hypoxia in head and neck cancer during radiochemotherapy evaluated with serial [18F]-fluoromisonidazole PET 12:30 C. Halle (NOR) - Visualizing an aggressive hypoxia phenotype of cervical cancer using DCE-MR imaging	11:30 J.M. Brown (USA) - Influence of circulating normal cells on tumor radiosensitivity 11:50 T. Rieckmann (D) - HNSCC cell lines positive for HPV and p16 possess an exceptionally high radiosensitivity 12:10 R. Meyn (USA) - Impact of epithelial-to-mesenchymal transition on tumor response to radiation and targeted agents 12:30 A.J. Chalmers (UK) - Overcoming resistance of glioblastoma to conventional cytotoxic therapies by the addition of PARP inhibitors
12:50 Lunch		
Improving precision in treatment planning and delivery Chair: M. van Herk (NL), L Cozzi (CH)	Tumor hypoxia and tumor metabolism Chair: I. Stratford (UK), C. Vrieling (CH)	Finding the target, restoring the vision Chair: J.M. Brown (USA), A. Chalmers (UK)
13:30 J.J. Sonke (NL) - Improving the precision of dose delivery in the clinic 13:50 C. Grau (DK) - Biology-guided adaptive radiation therapy: present and future 14:10 L. Dawson (CAN) - Stereotactic radiation therapy for hepatocellular carcinoma 14:30 S. Korreman (DK) - Dose painting using volumetric modulated arc optimization and delivery	13:30 B. Wouters (CAN) - Novel mechanisms of gene regulation by hypoxia 13:50 T. Robson (IRL) - FKBPL and peptide derivatives for angiogenesis inhibition 14:10 M. Horsman (DK) - Constitutive and induced hypoxia in tumours and their role in the interaction between vascular disrupting agents and radiation	13:30 E. Cohen-Jonathan Moyal (F) - Angiogenic inhibitors and radiotherapy 13:50 E. Deutsch (F) - Antiviral approaches to treat HPV-related tumors: the Institute Gustave Roussy experience from preclinical data to clinical trials 14:10 M. Verheij (NL) - Apoptosis-modulating strategies to enhance radiation efficacy 14:30 M. Koritzinsky (CAN) - Hypoxia inhibits disulfide bond formation and protein folding in the endoplasmic reticulum

Proffered papers: Physics (II) Chair: T. Bortfeld (USA)	Proffered papers: Biology (III) Chair: M. Nordsmark (DK)	Proffered papers: Clinics (II) Chair: J.C. Horiot (CH)
15:00 Abstract 314: Brock K. (USA) - Generation of a multi-modality anatomical atlas of preclinical animal models 15:09 Abstract 126: B. Reniers (NL) - In-vivo dosimetry for gynaecological brachytherapy using a novel detector system 15:18 Abstract 225: M. Casiraghi (CH) - A simulation and experimental based comparison of plan robustness for VMAT and IMPT treatments. 15:27 Abstract 333: I. Madani (B) - Volume changes by exploiting continuous adaptive radiotherapy for head and neck cancer 15:36 Abstract 36: M. Fix (CH) - Towards proton treatment planning using macro Monte Carlo 15:45 Abstract 72: M. Holzscheiter (D) - Antiprotons for radiobiology and cancer therapy: the AD-4/ACE experiment 15:54 Abstract 41: D. Nichiporov (USA) - Potential applications of a gas electron multiplier-based detector to small field dosimetry and imaging in proton therapy 16:03 Abstract 25: B. Jones (UK) - Physical Dose Distribution and Relative Biological Effect (RBE) Issues in Proton Beam Therapy of Medulloblastoma 16:12 Abstract 173: A. Rucinski (D) - Target Volume Optimization for Prostate Cancer Treatment in Carbon Ion Radiation Therapy in the Presence of Interfractional Motion	15:00 Abstract 77: N. Cordes (D) - Glioma cell migration in 3D is not impaired by ionizing radiation 15:09 Abstract 76: A. Broggin-Tenzer (CH) - Dynamic changes of the tumor micromilieu under treatment 15:18 Abstract 326: F. Paris (F) – Specific protection of gastro-intestinal side effect, but not aggressive tumors by injection of exogenous sphingosine 1 phosphate 15:27 Abstract 233: C. Bayer (D) - The influence of the heat shock protein 90 (Hsp90) inhibitor, NVP-AUY922, and hypoxia on the expression of and HIF-1? and HIF-2? in two head and neck cancer cell lines 15:36 Abstract 128: K. Toustrup (DK) - Hypoxic modification of radiotherapy with nimorazole in Head and neck squamous cell carcinomas: importance of combined hypoxia and HPV classification when distinguishing responders from non-responders 15:45 Abstract 44: M. Nijkamp (NL) – Involvement of the epidermal growth factor receptor in laryngeal cancer patients treated with hypoxia modification as an additive to accelerated radiotherapy 15:54 Abstract 195: H.B. Ragnum (NO) - Androgen deprivation therapy prior to irradiation of prostate cancer: Expression of hypoxia-induced proteins and changes in diffusion weighted MRI parameters 16:03 Abstract 14: S. Rademakers (NL) – Predictive value of CAIX expression and staining pattern in patients with laryngeal cancer treated in the phase III randomized ARCON trial 16:12 Abstract 18: S. Masunaga (JP) – Impact of employing 10B- carriers and manipulating intratumor hypoxia on local tumor response and lung metastatic potential in boron neutron capture therapy	15:00 Abstract 140: A. Fairchild (B) - Does quality of radiotherapy predict outcomes of multicentre cooperative group trials? A literature review 15:09 Abstract 49: R. Komaki (USA) - Phase II study erlotinib/RT and CHT/RT followed by consolidation of CHT for patients with stage III Non-small cell lung cancer (NSCLC): analysis of patients specimens for biomarkers 15:18 Abstract 81: D. Guest (UK) - Mathematical modelling of a radiobiologically optimised fractionation schedule for a heterogeneously differentiated cell model of glioblastoma 15:27 Abstract 198: A. Deviers (F) - Lactate detection with magnetic resonance spectroscopic imaging (MRSI) in glioblastoma multiforme before radiotherapy (RT): Characterization of hypoxia distribution and its impact on tumor response to RT 15:36 Abstract 90: J. Zeng (USA) - Combining anti-PD-1 immunotherapy with stereotactic radiosurgery in a mouse orthotopic glioblastoma model 15:45 Abstract 263: U.V. Elstrom (DK) - A direct comparison of cone-beam CT versus CT based radiotherapy planning in head and neck cancer 15:54 Abstract 147: K. Roe (NOR) - DCEMRI in assessment of tumor neovascularization after androgen-deprivation in experimental prostate cancer: correlation to quantitative immunohistochemistry 16:03 Abstract 291: J. Hammer (A) - Breast Cancer: Persisting risks in pre-menopausal women after breast conserving surgery, radiotherapy, +/- systemic therapies 16:12 Abstract 290: M. Carrara (I) - Predicting late faecal incontinence after high-dose radiotherapy for prostate cancer: application of artificial neural network classification on a longitudinal definition

European School of Oncology Plenary Session Chair: R. Valdagni (I)		
• 16:30 S.M. Bentzen (USA) - Hypofractionation in breast cancer irradiation • 16:55 R. Orecchia (I) - Intra-operative radiotherapy of early breast cancer		
E. van der Schueren Award (MD Anderson Cancer Center, Houston) Chair: R. Valdagni (I)		
• 17:20 K.K. Ang (USA) - Biomarkers in head and neck carcinoma		
Closing session		
• 17:50 J. Bernier and M. Dosanjh, conference chairs		
18:00 End		

Award Recipients

G.E. Adams Lecture	E. van der Schueren Award
Award funded by the CR-UK/MRC Gray Institute for Radiation Oncology & Biology, Oxford University. ICTR-PHE 2012 Recipient: I. Stratford, Manchester Previous G.E. Adams Lecturers: - ICTR 2000: J.M. Brown, San Francisco - ICTR 2003: L.J. Peters, Melbourne - ICTR 2006: R.H. Withers, Los Angeles - ICTR 2009: A. Begg, Amsterdam	Award funded by the European School of Oncology, Milano ICTR-PHE 2012 Recipient: M.D. Anderson Cancer Center, Houston Previous E. van der Schueren Recipients: - ICTR 2000: Department of Experimental Clinical Oncology, University of Aarhus - ICTR 2003: Gray Laboratory, Northwood - ICTR 2006: Institut Gustave Roussy, Villejuif - ICTR 2009: Memorial Sloan Kettering Cancer Center, New-York
ESTRO Lecture	G.H. Fletcher Lecture
Lecture funded by the European Society for Therapeutic Radiology and Oncology ICTR-PHE 2012 Recipient: P. Lambin, Maastricht Previous ESTRO Lecturers: - ICTR 2006: S.M. Bentzen, Madison - ICTR 2009: A. van der Kogel, Nijmegen	Lecture funded by the MD Anderson Cancer Center, Houston ICTR-PHE 2012 Recipient: M. Baumann, Dresden Previous G.H. Fletcher Lecturers: - ICTR 2000: H. Bartelink, Amsterdam - ICTR 2006: L. Milas, Houston - ICTR 2009: A. Lee, Hong Kong

List of posters on display

- Abstract 7: Chemotherapeutic activity of s-nitrosoglutathione alone and in combination with cisplatin and radiation in head and neck cancer cells and mouse xenograft model, Dr. Sharma, Anand, Translational Research in Radiation Oncology.
- Abstract 11: Geant4 studies of an active scanning system for hadrontherapy treatment of uveal melanomas, Prof. RIMOLDI, Adele; Dr. FONTANA, Andrea; Dr. RICCARDI, Cristina; Mr. PIROLA, Michele, Prospects in Medical Imaging; Novel Technologies in Radiation Therapy
- Abstract 12: Hydrogen: a novel radioprotective agent, Prof. GAO, Fu; Prof. LI, Bailong, Radiobiology in Therapy and Space; Others
- Abstract 13: Antisense STAT3 oligodeoxynucleotide enhances radiosensitivity of B16 melanoma cells, Prof. LI, Bailong; Prof. GAO, Fu, Translational Research in Radiation Oncology
- Abstract 24: Positron emitter beams produced by ^{12}C projectile fragmentation for improved accuracy in dose delivery verification, Ms. LAZZERONI, Marta, Prospects in Medical Imaging
- Abstract 27: Brachytherapy dosimetry for COMS eye plaque with two various ^{103}Pd seed models Dr. SAIDI BIDOKHTI, Pooneh, Others
- Abstract 28: Genetic sequence variants in relation to acute and late toxicities in patients with head and neck cancer treated with radiation therapy, Dr. MEYER, Francois, Translational Research in Radiation Oncology
- Abstract 30: Measurement of charged and neutral particles production from an 80 MeV/A hadron therapy carbon beam fragmentation, SARTI, Alessio; PATERA, Vincenzo; SCIUBBA, Adalberto; PAOLONI, Alessandro; VOENA, Cecilia; FACCINI, Riccardo; DI DOMENICO, Antonio; FIORE, Salvatore; GAUZZI, Paolo, Prospects in Medical Imaging; Novel Technologies in Radiation Therapy
- Abstract 31: Concepts of a novel twin-TLD technique for quench correction relevant to hadron therapy MUKHERJEE, Bhaskar, Novel Technologies in Radiation Therapy
- Abstract 32: Measurement of parasitic neutron field in the treatment environment of a Varian Clinac 2100 medical linac using superheated bubble detectors, MUKHERJEE, Bhaskar, Novel Technologies in Radiation Therapy
- Abstract 37: Modelling the relationship between cell cycling, radiation fraction sensitivity and relative biological effectiveness (RBE), JONES, Bleddyn; MARTIN, Joe, Radiobiology in Therapy and Space
- Abstract 39: Geant4 simulation of a 3D Compton imaging device, LENTI, Massimo; Dr. VELTRI, Michele, Prospects in Medical Imaging
- Abstract 42: Trimodality treatment of muscle invasive bladder cancer with deep-hyperthermia: first experience in Aarau, Dr. EBERLE, Brigitte, Translational Research in Radiation Oncology
- Abstract 52: Modeling motion artifact in PET imaging considering chest dynamic, Ms. JALAYER, Nikta, Prospects in Medical Imaging
- Abstract 58: Differences in metabolism between adeno- and squamous cell non-small cell lung carcinomas according to glut1 and mct4 expression, Ms. MEIJER, Tineke, Translational Research in Radiation Oncology

- Abstract 59: FKBPL and peptide derivatives for angiogenesis inhibition, Prof. ROBSON, Tracy, Translational Research in Radiation Oncology
- Abstract 60: Physical activity and the risk of acute complication in breast cancer patients receiving adjuvant radiotherapy for breast-conserving surgery, SAITO, Anneyuko, Translational Research in Radiation Oncology
- Abstract 62: Test of different pixel detectors for laser-driven accelerated particle beams, Mrs. REINHARDT, Sabine, Novel Technologies in Radiation Therapy
- Abstract 78: Autophagy induction during irradiation treatment in human oral cancer, WU, Szu-yuan, , Radiobiology in Therapy and Space
- Abstract 82: Submillimeter nuclear medical imaging with a Compton camera using triple coincidences of collinear beta+-annihilation photons and gamma rays, LANG, Christian, Radioisotopes in Diagnostics and Therapy; Prospects in Medical Imaging
- Abstract 83: Single shot high dose cell irradiations with laser-driven protons, HUMBLE, Nicole; ALLINGER, Klaus; Prof. ASSMANN, Walter; BIN, Jianhui; Prof. DOLLINGER, Günther; Dr. DREXLER, Guido A; Prof. FRIEDL, Anna A; HILZ, Peter; KIEFER, Daniel; Dr. MA, Wenjun; MICHALSKI, Dörte; Prof. MOLLS, Michael; REINHARDT, Sabine; Dr. SCHMID, Thomas E; Dr. ZLOBINSKAYA, Olga; Dr. SCHREIBER, Jörg; Prof. WILKENS, Jan J, Novel Technologies in Radiation Therapy
- Abstract 84: Analysis on volumetric and dosimetric accuracy of maximum-intensity projections based 4DCT for stereotactic body radiotherapy, Dr. VELLAIYAN, Subramani, Novel Technologies in Radiation Therapy
- Abstract 85: Can image-guided intensity modulated brachytherapy delivery be better than IMRT and classical brachytherapy methods for cervical cancer: A dosimetric analysis, Dr. VELLAIYAN, Subramani, Novel Technologies in Radiation Therapy
- Abstract 86: VMAT and step&shoot IMRT in head and neck cancer: A comparative plan-analysis, KNIPPEN, Stefan, Novel Technologies in Radiation Therapy
- Abstract 87: Evaluation of subtraction techniques for contrast-enhanced digital mammography, Mr. CRUZ BASTIDA, Juan Pablo, Prospects in Medical Imaging
- Abstract 89: Prompt gamma imaging with a slit camera for real time range control in proton therapy, SMEETS, Julien, Prospects in Medical Imaging
- Abstract 95: Automated detection of ion beam modifications in in-beam PET images, KUESS, Peter, Prospects in Medical Imaging
- Abstract 96: Is there an advantage in designing adapted, patient specific PTV margins in scanned proton therapy for prostate cancer?, Ms. GÓRA, Joanna, Novel Technologies in Radiation Therapy; Others
- Abstract 98: Radiation sensitivity and DNA damage responses in glioma stem cells, Mr. YILDIRIM, Salih/ Ahmed S, Translational Research in Radiation Oncology
- Abstract 100: The response of messenger RNA to ionizing radiation - mitochondrial genes are more susceptible, Dr. KAM, Winnie; Prof. BANATI, Richard, Translational Research in Radiation Oncology
- Abstract 101: A pencil beam algorithm for helium ion beam dose calculation, Mr. FUCHS, Hermann, Novel Technologies in Radiation Therapy
- Abstract 102: Gefitinib enhanced radiosensitivity of stem-like glioma cells by inhibition of EGFR-Akt-DNA-PK signaling, accompanied with inhibition of DNA double-strand break repair, Dr. KHONG BEE, Kang, Translational Research in Radiation Oncology
- Abstract 108: Cyclotron designs for hadrontherapy with cyclinacs, GARONNA, Adriano, Novel Technologies in Radiation Therapy

- Abstract 109: Tumour microenvironment and intratumoural distribution of therapeutic antibodies, KOI, Lydia, Translational Research in Radiation Oncology
- Abstract 112: Status report on the ULICE carbon ion gantry design, Dr. LANTE, Valeria; Dr. NECCHI, Maria Monica; Dr. SAVAZZI, Simone; Dr. OSORIO, Jhonnatan; Dr. PULLIA, Marco, Novel Technologies in Radiation Therapy
- Abstract 113: Monte-Carlo simulation to optimize SPECT-hardware dedicated to in-beam control of particle therapy, Ms. ROHLING, Heide, Prospects in Medical Imaging; Novel Technologies in Radiation Therapy
- Abstract 114: CMOS imagers as dosimetric devices in interventional radiology procedures, Dr. SERVOLI, Leonello, Others
- Abstract 115: Design, dosimetry characteristics and shielding assessment of a new mobile electron accelerator for intraoperative radiation therapy (IORT) developed using Monte Carlo methods, Dr. WYSOCKA-RABIN, Anna, Novel Technologies in Radiation Therapy
- Abstract 118: In-beam SPECT based in vivo dosimetry: from treatment planning to measured dose, Mr. MUELLER, Andreas, Prospects in Medical Imaging; Novel Technologies in Radiation Therapy
- Abstract 120: Role of the major vault protein in tumor cells and in response to ionizing radiation, ZIMMERMANN, Martina; Dr. HOLLENSTEIN, Andreas, Translational Research in Radiation Oncology
- Abstract 122: Conceptual design of the proton beam user laboratories at the ESS-Bilbao accelerator: Radiobiology applications, HUERTA PARAION, Monica, Radiobiology in Therapy and Space
- Abstract 123: Plastic scintillator based dosimeters for radiology, Prof. PERALTA, Luis, Others
- Abstract 124: Extended penumbra reduction and normal tissue sparing with intensity-modulated proton therapy in pediatric patients with cranial tumors Ms. BUBULA, Marta Elzbieta, Novel Technologies in Radiation Therapy
- Abstract 131: Metal micro-detectors for radiation therapy instrumentation, PUGATCH, Valery, Prospects in Medical Imaging; Novel Technologies in Radiation Therapy
- Abstract 132: Predisposal management of medical solid radioactive waste: the University General Hospital of Athens “Attikon” experience, Mr. STEFANOYIANNIS, Antonios, Radioisotopes in Diagnostics and Therapy
- Abstract 133: Modeling of the effect of 6 MeV side coupled standing wave cavity geometrical change due to lack of proper cooling on dose distribution using finite element method and Monte Carlo codes, Mr. AHMADIAN NAMINI, Sasan, Others
- Abstract 135: Hyperthermia radiosensitizes hypoxic HCT-116 human colorectal carcinoma cells in vitro, Dr. STAAB, Adrian, Translational Research in Radiation Oncology
- Abstract 136: Real-time monitoring of the Bragg peak during ion therapy: recent developments of the beam detection system, DE RYDT, Marieke, Novel Technologies in Radiation Therapy
- Abstract 137: Robustness against the interfractional internal target movement in ion beam radiotherapy prostate treatment planning, Mr. GRÄFS, Sebastian, Translational Research in Radiation Oncology
- Abstract 138: In vivo optical imaging of tumor and microvascular response to ionizing radiation, Ms. MAEDA, Azusa, Translational Research in Radiation

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- Abstract 142: Bystander effect studies at the Lund nuclear microprobe, Dr. ARTEAGA-MARRERO, Natalia, Translational Research in Radiation Oncology
- Abstract 143: A potential beam delivery system for radiotherapy with laser-driven proton and ion beams, Mr. SCHELL, Stefan; WILKENS, Jan, Novel Technologies in Radiation Therapy
- Abstract 144: Fusion between bone marrow and intestine stromal cells contributes to intestine fibrosis after radiation, CH'ANG, Hui-ju, Translational Research in Radiation Oncology
- Abstract 148: Real-time prompt gamma ray monitoring for proton and carbon therapy: Monte Carlo nuclear models evaluation and improvements, Dr. DEDES, George, Prospects in Medical Imaging; Novel Technologies in Radiation Therapy
- Abstract 149: 95MeV/u ^{12}C nuclear fragmentation measurements for hadrontherapy purposes, Mr. DUDOUET, Jeremie; LABALME, Marc, Others
- Abstract 151: The effect of simultaneous hypoxia and acidosis on cell metabolism and protein synthesis, SØRENSEN, Brita Singers, Radiobiology in Therapy and Space
- Abstract 152: Cetuximab is an efficient carrier of radionuclides to target EGFR-expressing tumor cells, CORDES, Nils, Radioisotopes in Diagnostics and Therapy
- Abstract 153: GATE simulations of a dedicated SPECT system for performing benchmark test of a fully automated software for quality control, KNÄUSL, Barbara, Prospects in Medical Imaging
- Abstract 154: Proton versus photon radiotherapy: differential demands on the biological level, Dr. GROSSE, Nicole; Mr. FONTANA, Andrea Orlando, Translational Research in Radiation Oncology; Others
- Abstract 156: TURNing LInac for Proton therapy – TULIP, Ms. KRAUS, Kim, Novel Technologies in Radiation Therapy
- Abstract 160: Stereotactic ablative radiotherapy reduces the invasive capacity of Cancer-Associated Fibroblasts isolated from human lung tumours, Dr. HELLEVIK, Turid, Radiobiology in Therapy and Space
- Abstract 161: Developing computational methods to view distributions of second cancer risk using Monte Carlo and voxel human phantoms, Mrs. ALSALEH, Wafa, Novel Technologies in Radiation Therapy
- Abstract 165: Position Sensitive Photon Detectors - from fundamental physics to healthcare applications, Dr. SEITZ, Bjoern, Prospects in Medical Imaging
- Abstract 170: Development and first applications of a SRAM based neutron detector for photon, proton and heavy ion therapy, Mr. YTRE-HAUGE, Kristian, Novel Technologies in Radiation Therapy
- Abstract 171: Do changes in nasal cavity filling significantly affect proton treatments?, BOLSI, Alessandra; VERENA, Maiwald, Others
- Abstract 172: Efficient Monte Carlo based electron beam model for MERT using a photon MLC, Mr. HENZEN, Dominik, Novel Technologies in Radiation Therapy
- Abstract 174: A 200 ps time-of-flight pixel imaging ASIC, TDCpix, KLUGE, Alex, Prospects in Medical Imaging
- Abstract 179: Robustness of proton treatment plans for cranial targets: The influence of setup errors as a function of beam arrangement, HOPFGARTNER, Johannes,

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- Abstract 180: Use of pixilated CMOS sensors for X and gamma ray imaging using single photon counting mode, Mr. BACHAALANY, Mario, Prospects in Medical Imaging
- Abstract 185: A dose calculation and verification method for a conformal small animal irradiator based on a MC dose engine and on-board imaging, Mr. GRANTON, Patrick V.; Mr. VERHAEGEN, Frank, Novel Technologies in Radiation Therapy
- Abstract 187: Verifying proton therapy irradiations with time-of-flight positron emission tomography, Dr. OXLEY, David, Novel Technologies in Radiation Therapy
- Abstract 188: Blood sample analysis for early cancer diagnosis KISELEV, Yury, Others
- Abstract 189: Meta-modelling Markov model simulations for cost effectiveness analyses, ABLER, Daniel, Translational Research in Radiation Oncology
- Abstract 191: Commissioning of ClearPEM-Sonic, the multimodal positron emission mammograph, FRISCH, Benjamin Armand, Prospects in Medical Imaging
- Abstract 192: Prototype studies of a novel PET Imaging System, based on Resistive-Plate Chambers (RPC), LITOV, Leandar, Prospects in Medical Imaging
- Abstract 196: A critical role of the PTEN/PDGF signaling network for the regulation of radio-sensitivity in adenocarcinoma of the prostate, CHRISTENSEN, Michael, Radiobiology in Therapy and Space
- Abstract 197: A novel microdosimeter for hadron therapy based on mono crystalline CVD diamond, MAGRIN, Giulio, Novel Technologies in Radiation Therapy
- Abstract 199: Predictive and prognostic markers in serum/plasma in head and neck cancer patients, Mrs. BRØNDUM, Line, Translational Research in Radiation Oncology
- Abstract 201: TraDeRa - Development of a Transparent Detector for Radiotherapy on-line beam monitoring: a simulation study, Mrs. FONTEILLE, Isabelle, Novel Technologies in Radiation Therapy
- Abstract 203: The TERA high gradient test program for hadrontherapy linacs, VERDU ANDRES, Silvia; GARLASCHE, Marco; BONOMI, Rossana; AMALDI, Ugo; DEGIOVANNI, Alberto, Novel Technologies in Radiation Therapy
- Abstract 204: Pediatric IDRA and Light-B, a multipurpose centre for protontherapy, Prof. AMALDI, Ugo; Mr. BERGESIO, Daniele; Mr. DEGIOVANNI, Alberto; Mr. MAGAGNIN, Paolo; Mr. GARLASCHE, Marco, Radioisotopes in Diagnostics and Therapy; Novel Technologies in Radiation Therapy
- Abstract 205: Alternative utilization of bolus in skin carcinomas cancers treated with high energy electron beams in order to optimize the dose prescription, Mr. CAMILLERI, Jérémy, Translational Research in Radiation Oncology
- Abstract 207: Production of radioisotopes with high specific activity by photonuclear reactions: from a “wild idea” to reality, Dr. KÖSTER, Ulli; Mr. GÜNTHER, Marc M.; Prof. HABS, Dietrich, Radioisotopes in Diagnostics and Therapy
- Abstract 210: Scintillating optical fiber dosimeter for low dose rate, Dr. MOUTINHO, Luis, Others
- Abstract 211: Epidemiological, in vitro and Monte Carlo modelled basic data in predicting and presenting risks associated with secondary cancers, ALSALEH, Wafa, Others
- Abstract 212: Response of human lung adenocarcinoma cells to proton radiation and Erlotinib, Prof. RISTIC-FIRA, Aleksandra, Translational Research in Radiation

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- Abstract 213: A detector for the measurement of nuclear cross sections for particle therapy, HERMES, Jan, Others
- Abstract 214: Development of an experimental beam-line for radiobiological studies relevant to particle radiotherapy and the importance of radiation track structure, Dr. NAGANO, Ai; Dr. HILL, Mark, Radiobiology in Therapy and Space
- Abstract 216: Radio-resistant human malignant cells after irradiations with ^1H and ^{12}C ions of different LET, Prof. PETROVIC, Ivan, Radiobiology in Therapy and Space
- Abstract 217: Investigation of the influence of different filter settings and permutations of iterations and subsets on the TrueX, RAUSCH, Ivo, Prospects in Medical Imaging
- Abstract 218: Beam Profiler based on scintillating fibers for hadrontherapy, POILLEUX, Patrick; HAGUENAUER, Maurice, Novel Technologies in Radiation Therapy
- Abstract 220: Preclinical research and systematic production of innovative medical radio-isotopes at ISOL@MYRRHA, PAUWELS, Dieter, Radioisotopes in Diagnostics and Therapy
- Abstract 221: Silicon photomultipliers in PET and hadrontherapy applications, LLOSA LLACER, Gabriela, Prospects in Medical Imaging
- Abstract 223: A framework for calculating and comparing radiobiological metrics for x-ray and charged particle radiotherapy plans, Mr. WARREN, Daniel, Radiobiology in Therapy and Space
- Abstract 226: Dosimetric influence of spot size variation on carbon-ion treatment plans, Ms. CHANRION, Marie-Anne, Novel Technologies in Radiation Therapy
- Abstract 227: CABOTO, a carbon ion linac for hadrontherapy, VERDU ANDRES, Silvia, Novel Technologies in Radiation Therapy
- Abstract 229: A novel technique to enable experimental validation of deformable dose accumulation, NIU, Carolyn, Novel Technologies in Radiation Therapy
- Abstract 231: Novel approaches to characterising a commercial detector array for dynamic IMRT and Rapidarc? Verification, Hussein, Mohammad, Others
- Abstract 234: Molecular background of radiation-induced telomere loss, Dr. HALYTSKIY, Volodymyr, Radiobiology in Therapy and Space; Others
- Abstract 237: Research and development activities on nuclear emulsion detectors for medical applications, Dr. GIACOPPO, Francesca, Others
- Abstract 239: Proton beam therapy for iris melanoma: review for 78 cases, Dr. MAMMAR, Hamid, Novel Technologies in Radiation Therapy
- Abstract 245: In-treatment dose calculation using in-treatment 4D kilovoltage cone-beam CT and in-treatment linac parameters during volumetric modulated arc therapy for a lung tumor, Dr. SAKUMI, Akira, Novel Technologies in Radiation Therapy
- Abstract 246: Effect of radiation on tumor vascular permeability and accumulation of nano-sized drugs toward chemoradiotherapy, Mr. FUJISAWA, Hiroshi, Prospects in Medical Imaging
- Abstract 247: Distinguishing between carbon ions and their fragments in therapeutic ion beams using the pixel detector Timepix, Ms. HARTMANN, Bernadette, Novel Technologies in Radiation Therapy; Others

- Abstract 250: In silico dosimetry, Monte Carlo web applications for simulations in advanced radiation therapy, radiation biology and radiation protection fields, BOURHALEB, Faiza, Radiobiology in Therapy and Space; Novel Technologies in Radiation Therapy
- Abstract 253: Secretory profile of Cancer-Associated Fibroblasts after exposure to ablative radiation doses and its impact on angiogenesis and tumor growth, Dr. HELLEVIK, Turid, Radiobiology in Therapy and Space; Translational Research in Radiation Oncology
- Abstract 254: Correction factors for ionization chamber dosimetry in TomoTherapy and Cyberknife, GAGO-ARIAS, Araceli, Novel Technologies in Radiation Therapy
- Abstract 256: Targeted radionuclide therapy for metastatic pituitary carcinoma, Dr. MACLEAN, Jillian, Radioisotopes in Diagnostics and Therapy
- Abstract 257: Simulation toolkit for detailed analysis of prompt gamma generation in hadron therapy, DIBLEN, Faruk, Novel Technologies in Radiation Therapy
- Abstract 258: A new approach to cope with autoimmune diseases: computer simulations and laboratory tests, LITOV, Leandar; IVANOV, Ivan, Translational Research in Radiation Oncology
- Abstract 259: Time-of-flight method for neutron rejection in prompt gamma imaging of beam range and density changes in proton therapy, Dr. BIEGUN, Aleksandra, Prospects in Medical Imaging
- Abstract 260: Impact of patient position on conventional, three dimensional conformal radiation therapy and intensity modulated radiation therapy: An assessment in the case of brainstem glioma, Ms. SHARMA, Seema, Translational Research in Radiation Oncology
- Abstract 261: Improving time-of-flight PET using silicon photomultipliers, Mr. BRUNNER, Stefan Enrico, Prospects in Medical Imaging
- Abstract 262: Prototype of semiconductor, position-sensitive gamma probe for intraoperative sentinel lymph node localization, Dr. NOWAK, Elzbieta, Prospects in Medical Imaging
- Abstract 265: Nuclear fragmentation in clinical heavy ion beams, should we Worry?, Dr. BASSLER, Niels; Dr. LÜHR, Armin, Radiobiology in Therapy and Space; Others
- Abstract 268: Development of ^{44}Sc production for radiopharmaceutical applications, BUNKA, Maruta, Radioisotopes in Diagnostics and Therapy
- Abstract 271: Predicting rectal bleeding with neural networks: late effects on patients treated for prostate cancer with 3DCRT, TOMATIS, Stefano, Translational Research in Radiation Oncology
- Abstract 274: Design of the compact shielding for the proton linac-booster, SMIRNOV, George, Novel Technologies in Radiation Therapy
- Abstract 275: Strontium-82 production at ARRONAX, Dr. BOURDEAU, Cecile, Radioisotopes in Diagnostics and Therapy
- Abstract 276: Production cross section measurements of ^{47}Sc and other residues in proton induced reactions from 18 MeV to 70 MeV, Mr. GARRIDO, Eric, Radioisotopes in Diagnostics and Therapy
- Abstract 278: Reconstructing Compton camera images for ion therapy monitoring - challenges and approaches facing them, SCHOENE, Sebastian, Prospects in Medical Imaging; Novel Technologies in Radiation Therapy
- Abstract 281: Increased acute symptoms of radiation pneumonitis with concurrent chemoradiotherapy vs. radiotherapy alone in a murine model of fractionated sub-

total thoracic IGRT, HOPE, Andrew, Translational Research in Radiation Oncology

- Abstract 282: Characterization of a new miniaturized Ce^{3+} doped scintillation detector for in vivo dosimetry in high dose rate brachytherapy, CARRARA, Mauro, Novel Technologies in Radiation Therapy
- Abstract 283: SPECT/CT evaluation of high precision heart irradiation in small animals, Dr. GASPARINI, Alessia, Novel Technologies in Radiation Therapy
- Abstract 284: Measurement of the dose averaged LET in mixed particle fields using alanine detectors, Mr. ROCHUS, Herrmann, Others
- Abstract 286: Dosimetric modeling of cardiac toxicity in patients with esophageal cancer receiving radiotherapy, KONSKI, Andre, Translational Research in Radiation Oncology
- Abstract 288: A response-driven NTCP model based upon global and local liver function measures, Dr. CAO, Yue, Novel Technologies in Radiation Therapy; Others
- Abstract 289: Investigation of a gated cone-beam CT technique to reduce respiratory motion blurring in abdominal sites, Dr. KINCAID, Russell, Novel Technologies in Radiation Therapy
- Abstract 293: Feasibility study of a ToF-PET prototype based on MRPCs, Dr. GABUSI, Michele; Dr. TAMBORINI, Aurora; Dr. VITULO, Paolo, Others
- Abstract 297: A treatment planning study comparing different radiobiological models for heavy ion therapy, GILLMANN, Clarissa, Others
- Abstract 300: A research tool for Monte Carlo-based treatment planning with protons and ions, Dr. MAIRANI, Andrea; Mr. BÖHLEN, Till, Novel Technologies in Radiation Therapy
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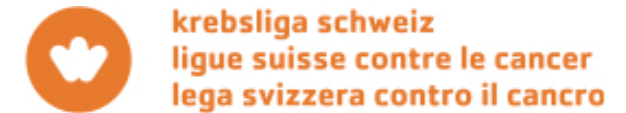
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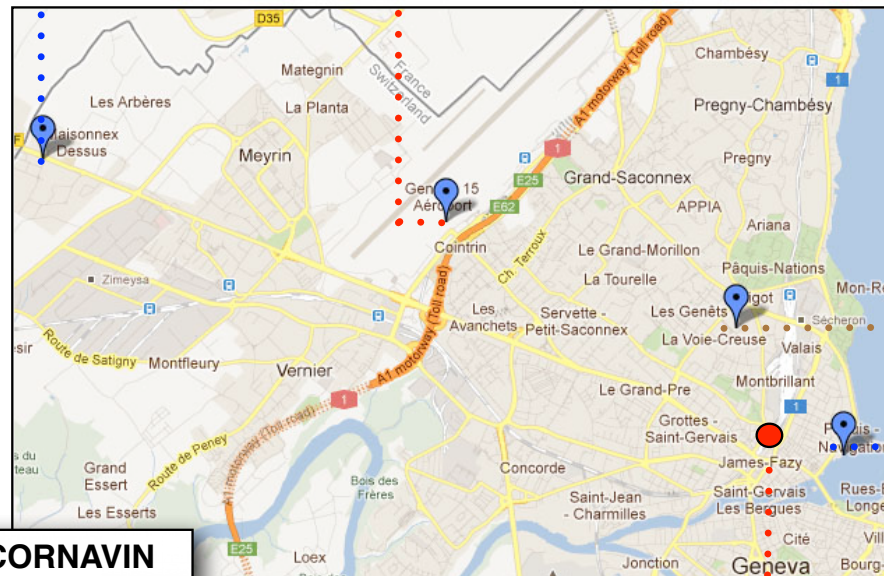


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