BHPA 2024

Friday February 2nd 2024

08:00-08:45	Registration and coffee
	Big Cinema Room
08:45-09:00	**Symposium opening** (Emy Van Aert / Hannelore Van Dyck)
Geert De Kerf / Nicolas Hermand	**AI segmentation and automation session**
09:00-09:30	**Automating autocontouring: monitoring & QA (Charlotte Brouwer, UMCG, NL)**
09:30-09:42	DIVE-ART: towards Dosimetrically Informed Volume Editions of automatically segmented volumes (Benjamin Roberfroid, UCL)
09:42- 9:54	Evaluation of deep learning based commercial solution for head&neck organ at risk automatic contouring (Alain Sottiaux, CHU Charleroi)
09:54-10:06	OpenTPS: an open-source treatment planning system designed to foster research and innovation. (Ana Barragan, UC Louvain)
10:06-10:18	Comparison of toxicity induced by online adaptive proton therapy and online adaptive radiotherapy (Rodin Noël Koffeing, UC Louvain) YP
10:18-10:33	Hypersight: A Revolution in Resolution (Frederik Vanhoutte, UZ Gent) **Sponsored by VARIAN**
10:33-11:00	Coffee break
Nico Buls/ Frederik Vanhoutte/ Kristof Baete	**Optimization Projects, the FANC's input**
11:00-11:30	**Optimisation projects: context and framework (Katrien Van Slambrouck, FANC/AFCN)**
11:30-12:00	Debate on application in 3 disciplines
12:00-12:12	Computed Tomography image quality using a volumetric channelized Hotelling observer approach for Energy Integrating and Photon-counting CT scanners. (Dimitar Petrov, UZ Leuven)
12:12-12:24	Global Noise Level as Noise Metric for Low-Dose Chest CT in Lung Cancer Screening (Kwinten Torfs, KU Leuven) YP
12:24-13:30	Lunch
Manuela Burghelea	**Poster Session**
13:30-14:00	Poster presentations at location
Alain Sottiaux / Younes Jourani	**Automated planning**
14:00-14:45	**Automated treatment planning: Clinical feedback on an a priori-MCO algorithm (Marie-Claude Biston, Centre Léon Bérard, Lyon, France)**
14:45-14:57	PARROT: An end-to-end open source platform of AI-assisted treatment planning and decision support (Margerie Huet Dastarac, MIRO UCL) YP
14:57-15:09	Optimizing Prostate External Radiation Plans through Automated Fine-Tuning (Thierry Rondagh, KU Leuven) YP
15:09-15:24	Brainlab Elements: consistency and efficiency through automation and standardization in precision radiotherapy and radiosurgery planning. (Thierry Gevaert, UZ Brussel) **Sponsored by BrainLAB**
15:30-16:00	Coffee break
16:00-18:00	General Assembly

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	Small room 1
Bruno Vanderlinden / Stijn De Schepper	**Nuclear Medicine**
09:00-09:30	**Segmentation of Whole-body PET/CT for Automated Assessment of Total Metabolic Tumour Load and Prognosis Prediction (Ine Dirks, VUB)**
09:30-09:42	Impact of primary type and treatment cycle on tumor dosimetry after 177Lu- DOTATATE (Rachele Danieli, IJ Bordet) YP
09:42-09:54	Position dependence of recovery coefficients in 177Lu SPECT images (Wies Claeys, KU Leuven) YP
09:54-10:06	Are You Normal? A case on the impact of Reconstruction Algorithms on PET Neuroimaging Reference Data (Laurens Raes, UZ Brussel) YP
10:06-10:18	Nephron Morphology Influences the Dosimetry of Microscopic Renal Tissues of Non-Uniform Activity Distributions of Alpha Particle and Low Energy Electron Emitters (Michelle Andersson, SCK-ULB) YP
10:18-10:33	Theranostic by Hermes Medical Solution (Markus Diemling, Head of Product Management, Hermes) **Sponsored by Hermes Medical Solutions**
10:33-11:00	Coffee break
	QM Session
11:00-12:30	QMRT meeting
12:30-13:30	Lunch
Manuela Burghelea	**Poster Session**
13:30-14:00	Poster presentations at location
	QM session
14:00-14:15	FMEA automation (Koen Snijders)
14:15-14:45	Semi-Automated billing with ARIA (Jan Verstraete)
14:45-15:00	Bow-tie risk analysis on cyberattacks (Séverine Cucchiaro)
15:00-15:30	Artificial Intelligence to define quality indicators (Lidia-Sara Da Silva)
15:30-16:00	

BHPA 2024

Friday February 2nd 2024

	Small room 2
Caro Frank / Jennifer Dhont	**AI in Radiology**
09:00-09:30	**AI in Radiology: From Hype to Reality (Sade Faneyte, Maasstad Ziekenhuis, NL)**
09:30-09:42	Validation of an artificial intelligence software for automatic pulmonary nodule detection and volumetry using µCT-determined ground truth nodule volumes (Louise D'Hondt, U Gent) YP
09:42-09:54	Cascade UNets for Kidney and Kidney Tumor Segmentation (Konstantinos KouKoutegos, UZ Leuven) YP
09:54-10:06	Transfer Learning for Image-Based Breast Cancer Risk Prediction (Tobias Wagner, KU Leuven) YP
10:06-10:18	Development and application of a feature based explainable AI method (XAI) for trustworthy breast cancer risk prediction using the Mirai model (Yao-Kuan Wang, UZ Leuven) YP
10:18-10:30	Validation of an open source automatic segmentation tool for personalized dosimetry (Jeff Rutten, U Gent) YP
10:30-11:00	Coffee break
11:00-12:30	No session planned in this room
12:30-13:30	Lunch
Manuela Burghelea	**Poster Session**
13:30-14:00	Poster presentations at location
13:15-15:30	**ABR/BVS session**
13:15-13:20	Introduction
13:20-13:50	Evaluation of medical exposure to ionising radiation (UNSCEAR report 2020/2021) (Petra Willems, FANC)
13:50-14:30	European epidemiological study on health effects of CT (EPI-CT) in children/adolescents: brain tumours and haematological tumours (Marie-Odile Bernier, IRSN)
14:30-15:00	Dosimetric aspects of the EPI-CT study (Jérémie Dabin, SCK CEN)
15:00-15:30	Coffee break
15:30-16:10	Belgian Medical Imaging Platform (BELMIP) and Belgian Medical Imaging Plan (Nils Reynders-Frederix, Ministry of Health)
16:10-16:30	EU “Harmonic project” (Marie-Odile Bernier, IRSN)
16:30	Closing remarks

Poster presentations

POSTER 1 - Evaluation of the cumulative imaging radiation dose for brain cancer patients treated with radiotherapy (Jeff Rutten, U Gent) YP

POSTER 2 - Continuous improvement based on integrated risk management for the cranial stereotactic treatment process (Anitha Batamuriza-Almasi, CH Epicura)

POSTER 3 - Comparative study of management of internal movements by two control system : Sentinel and RPM (Coralie Meurisse, CH Mouscron) YP

POSTER 4 - 1x1 cm² clinical field validation, for TrueBeam photon beam (Gabriele De Gaetano, CHU Tivoli) YP

POSTER 5 - Prediction model for defects in lead and lead-free aprons (Pieter Jan Kellens, U Gent) YP

POSTER 6 - Towards faster quality control of lead and lead-free aprons using CT scout or a dedicated biplanar radiography device (Pieter Jan Kellens, U Gent) YP

POSTER 7 - Implementation of a Hidden Target Test for SRS multiple brain metastases (multimets) treatments (Chloé Dumont, EpiCURA) YP

Saturday February 3rd 2024

08:00-09:00	Registration and coffee
	Big Cinema Room
Nadine Linthout / Jan Vandecasteele	
09:00-09:45	**From stress to resilience: Getting and keeping grip on myself during stressful situations. (Sonja Reckers, FlyConsult)**
09:45-10:15	**Impact of the new medical device regulation for software developed in health institution (David Dechambre, UCL)**
10:15-10:30	Synchrony® dynamic motion tracking on the Radixact® system: Experience from Ospedale Molinette (Dr Francesca Romana Giglioli, Ospedale Molinette, Turin, Italy) **Sponsored by Accuray**
10:30-11:00	Coffee break
Liesbeth Vandewinckele / Wouter Crijns	**Medical Devices**
11:00-11:30	**Risks of automating radiotherapy processes (Koen Snijders, GZA)**
11:30-11:42	Design and extensive validation of a 3D-printed patient-specific head & neck immobilization device (Bertrand Dewit, KU Leuven)
11:42-11:54	Aim to develop a user independent daily QA of surface scanning system (Jana Decraene, Iridium, RT) YP
11:54-12:09	Improving patient care using an EPID-Based in-vivo monitoring solution (Margo Vandenbossche, CHM, Mouscron) **Sponsored by PEO**
12:12-13:30	Lunch
Manuela Burghelea	**Poster Session**
13:30-14:00	Poster presentations at location
Michaël Claessens / Bram Malfroy	**Flow your QA/QC**
14:00-14:12	Extending the MLC QA of the Unity using the Delta4 phantom. (Kevin Tihon, IJ Bordet) YP
14:12-14:24	Upgrade of the Multi-Leaves Collimator Quality Control of an Infinity linac (Elekta) at CUSL (Benjamin Rollus, CHU Namur) YP
14:24-14:36	Towards a more comprehensive patient-specific QA: the implementation of a secondary dose verification (Kyra Dierinck, UZ Brussel) YP
14:36-14:48	A Step Towards Clinical Class Solution PSQA with an energy dependent OSL film (Marco Caprioli, UZ Leuven) YP

14:48-15:00	Patient specific bolus positioning with surface guidance (Laurence Delombaerde, UZ Leuven)
15:00-15:30	Coffee break
15:30-15:42	Clinical Implementation of total body irradiation technique using VMAT (Palakpreet Singh, Iridium) YP
15:42-15:54	Implementation and future of a RayCare based Radiotherapy clinical workflow (Ahmed Taieb Mokaddem, Iridium) YP
15:54-16:06	Safety and efficiency in a RaySearch - IBA ProteusOne facility: the PARTICLE workflow (Antoine Delor, PARTICLE-UZL-UCL)
16:15-16:30	**Closing and Award Session**

Saturday February 3rd 2024

	Small room 1
09:00-10:30	No session planned in this room
10:30-11:00	Coffee break
Antoine Delor / Dirk Verellen	**Protons and Flash**
11:00-11:12	The Double Gap Ionization Chamber: Preliminary tests on a proton beam in Ultra High Dose Rate conditions (Marina Orts Sanz, UC Louvain) YP
11:12-11:24	ELF-DORADO – First comparison data on two UHDR ElectronFlash systems (Alessia Gasparini, Iridium)
11:24-11:36	Secondary Neutron Dose Assessment for a Conformal FLASH PT compact system Nozzle Prototype (Andrea Matamoros Ortega, SCK) YP
11:36-11:48	A two-dimensional real-time dosimetry system for (pre)clinical UHDR electron irradiations. (Verdi Vanreusel, SCK) YP
11:48-12:00	The influence of Monte Carlo radiation transport codes and hadron physics models on stray neutron dose estimations in proton therapy: an extended intercomparison (Dries Colson, NuTeC) YP
12:00-12:12	Can manufacturing tolerances on ionization chambers influence the outcome of a quality control in proton therapy ? (Guillaume Houyoux, IJ Bordet) YP
12:12-13:30	Lunch
Manuela Burghelea	**Poster Session**
13:30-14:00	Poster presentations at location
Michel Mathot / Gert Van Gompel	**Commissioning and staff dose**
14:00-14:12	Towards a frameless stereotactic treatment process (Geert Pittomvils, UZGent)
14:12-14:24	Off-axis hidden target QA: use of a homemade phantom and evaluation of a new module from Qualiformed®(Anne Monseux, Humani)
14:24-14:36	Implementation of an MRI QC for SRS purposes. (Noémie Johnston, CHU Liège) YP
14:36-14:48	Evaluation of the dosimetric error associated with bulk density CT compared to deformed CT in a MR-Linac workflow (Antoine Simon, ULB) YP

14:48-15:00	Experimental determination of beam quality correction factors using water calorimetry (Lies Verpoest, UCLouvain) YP
15:00-15:30	Coffee break
15:30-15:42	Commissioning of a tabletop EPR spectrometer for alanine/EPR dosimetry (Burak Yalvac, U Hasselt)
15:42-15:54	Additional filtration for fluoroscopy spectrum optimization with Monte Carlo simulations: staff and patient dose metrics (Rodrigo Massera, KU Leuven) (RX presentation)
15:54-16:06	Multicentric study on the relation between perceived department radiation shielding policies and staff radiation shielding conscientiousness (Pieter Jan Kellens, U Gent) (RX presentation) YP

Saturday February 3rd 2024

	Small room 2
09:00-10:30	No session planned in this room
10:30-11:00	Coffee break
Klaus Bacher / Michiel Dehairs	**Radiology for breast and extremities**
11:00-11:12	Investigation of small detail detectability with the newest Siemens digital breast tomosynthesis system (Katrien Houbrechts, UZ Leuven) YP
11:12-11:24	Automated dose and noise assessment as a guide for harmonization of abdominal CT protocols across multiple scanners (Janne Vignero, UZ Leuven)
11:24-11:36	Automated Extraction of Hemodynamic Parameters for Computer-Assisted Diagnosis in Peripheral Arterial Disease Using 4D-CTA. (Pieter Boonen, VUB)
11:36-11:48	Multi-Contrast Imaging: Photon-Counting CT energy binning vs. Dual-Energy CT material decomposition (Emma Verelst, VUB) YP
11:48-12:00	Dynamic CT scanning of the knee: Combining weight bearing with real-time motion acquisition. (Benyameen Keelson, UZ Brussel)
12:00-12:12	The Impact of Cartilage Damage on Knee joint functionality using Dynamic CT — an ex-vivo study (Manou Acke, UZ Brussel) YP
12:12-13:30	Lunch
Manuela Burghelea	**Poster Session**
13:30-14:00	Poster presentations at location
	RT-24
14:00-16:00	RT-24 meeting

Poster presentations

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