

Automation in Radiotherapy Treatment Planning

Thursday 29th June 2023 – Sheffield

Morning

Session 1	Introduction and Planning	11:40 - 11:50	Knowledge-based planning site by site implementation process
10:00 - 10:05	Welcome		Miranda Frizzelle, University College London Hospital
10:05 - 10:25	Results of Survey	11:50 - 12:10	Panel Session (Speakers 1,2,3)
10:25 - 11:05	Automated Treatment Planning -- Past, Present and Future	12:10 - 12:20	An assessment of the accuracy of the organ at risk contours for five commercial AI contouring solutions
	Sebastiaan Breedveld, Erasmus MC Cancer Institute		Paul Doolan, German Oncology Center
11:05 - 11:20	Coffee	12:20 - 12:30	Evaluating the Safety and Utility of Auto-Segmentation Software using ProKnow
Session 2	Radiotherapy SIG		Alexandra Constantinou, Cambridge University Hospitals
11:20 - 11:30	Taking automated radiotherapy planning to the next level: automated batch planning via scripting	12:30 - 12:40	Panel Session (Speakers 4,5)
	Joshua Kirby, The Newcastle upon Tyne Hospitals NHS Foundation Trust	12:40 - 13:30	Lunch + Poster Session
11:30 - 11:40	Creation of a Deep Learning treatment planning model based on CHHiP trial		
	Timothy Atkins, Royal United Hospitals NHS Foundation Trust		

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Afternoon

Session 3		Session 4 - RT SIG	
13:30 - 14:00	Advancements and Integration: Exploring the Evolution of Automation in Radiotherapy Treatment Planning Gary Bee, GenesisCare Cancer Care UK Ltd	14:50 - 15:05	Automation within the Prostate Brachytherapy Workflow George Kirby, East and North Hertfordshire NHS Trust - Mount Vernon Cancer Centre
14:00 - 14:10	The evolution of the clinical treatment planning system scripting service over 7 years at the NCCC Joshua Kirby, The Newcastle upon Tyne Hospitals NHS Foundation Trust	15:05 - 15:20	Development, evaluation and widespread implementation of Pareto navigation guided automated planning in the clinic Philip Wheeler, Velindre NHS University Hospital Trust
14:10 - 14:20	Scripting with Varian's ESAPI: The Beginner's Experience Glen Whitten, Northern Ireland Cancer Centre, Belfast City Hospital	15:20 - 15:50	Interactive Session/Debate Scripting: Efficiencies and Risk - is it Worthwhile Overall?
14:20 - 14:30	Panel Session (Speakers 6,7)	15:50 - 16:00	Round Up Session
14:30 - 14:50	Coffee	16:00	Meeting Close

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Posters

Virginia Marin Anaya - A geometric analysis of Brainlab auto-contouring software for proton treatment planning of brain tumours

Matthew Jones - Feasibility of a simple KBP planning tool for head and neck radiotherapy planning

Marcus Tyyger - Automating 4D Manual Delineation Treatment Pathways

Marcus Tyyger - Reducing Region of Interest Export Errors Through Automation

Jack Miskell - Evaluation and clinical implementation of deep learning auto-segmentation across all clinical sites

Simon Temple - Failure rates and Quality Assurance of commercial AI auto-segmentation systems for head and neck cancer

Anna Vella - Automated Clinical Treatment Planning: from manual to auto-planning in Clinical Practise to reduce the patient pathway.

Ben Harris - Implementing an automated treatment plan checking script

Gavin Orchin - Automated Prostate Planning with ESAPI Scripting and RapidPlan

Ruairidh Howes - Automating the recalculation of clinical SABR treatment plans in an independent TPS to provide 3D dose evaluation at plan check

Samuel Ingram - An overview of treatment planning automation used for proton beam therapy at The Christie

Philip Wheeler - Comprehensive dosimetric evaluation of a CT scanner based deep learning auto-contouring solution for prostate radiotherapy

Megan Barrell - Assessing plan quality in the 'PLATO anal cancer trial 5' pilot phase with automated planning

Henry Carver - Automated Optimisation Structure Generation for Head and Neck Radiotherapy Planning

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