IOMP Webinar:

Biologically Targeted Radiotherapy: utilising imaging biomarkers to characterise tumour heterogeneity for precision radiation therapy

Tuesday, 22nd March 2022 at 11 am GMT; Duration 1 hour

سه شنبه ۲ فروردین ۱۴۰۰ ساعت ۱۴:۳۰ به وقت ایران

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Welcome! You are invited to join a webinar: IOMP Webinar: Biologically Targeted Radiotherapy: utilising imaging biomarkers to characterise tumour heterogeneity for precision radiation therapy. After registering, you will receive a confirmation email about

Prof Annette Haworth. Institute of Medical Physics, School of Physics, University of Sydney, NSW Intra-tumoral heterogeneity is largely ignored in radiation therapy (RT) treatment planning. Imaging biomarkers derived from quantitative MRI (qMRI) enable voxel-wise mapping of biological characteristics, providing an opportunity to

optimise RT dose distributions based on spatially defined Intra-tumoral biology. Mapping changes in qMRI post-treatment offers the opportunity for early identification of those at risk of recurrence. In this presentation I will showcase our work demonstrating how quantitative imaging may be used to produce 3-dimensional maps of tumour heterogeneity to facilitate a precision-based approach to biologically targeted RT treatment planning and treatment response.

NEW: A certificate of attendance will be provided to those who attend the session in full.

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Organizer: Eva Bezak, IOMP
Moderator: Eva Bezak, IOMP
Speaker: Annette Haworth

Prof Haworth is the Director of the Institute of Medical Physics at the University of Sydney and the course coordinator for the medical physics postgraduate program. She has more than 25 years experience as a clinical medical physicist having previously worked at the Peter MacCallum

Cancer Centre in Melbourne Australia before moving to Sydney in 2016. Annette's research interests have focused on novel approaches to brachytherapy and radiotherapy treatments, in particular using quantitative imaging for biological optimization of treatment planning and treatment response.

Abstract:

Intra-tumoral heterogeneity is largely ignored in radiation therapy (RT) treatment planning. Imaging biomarkers derived from quantitative MRI (qMRI) enable voxel-wise mapping of biological characteristics, providing an opportunity to optimise RT dose distributions based on spatially defined Intra-tumoral biology. Mapping changes in qMRI post-treatment offers the opportunity for early identification of those at risk of recurrence. In this presentation I will showcase our work demonstrating how quantitative imaging may be used to produce 3-dimensional maps of tumour heterogeneity to facilitate a precision-based approach to biologically targeted RT treatment planning and treatment response.