

ST 10: Keynote: Online-Adaptive Particle Therapy

Time: Thursday 17:30–18:00

Location: ZEU/0146

Invited Talk

ST 10.1 Thu 17:30 ZEU/0146

Online-adaptive particle therapy: Current status and vision for the future — ●CHRISTIAN RICHTER — OncoRay - National Center for Radiation Research in Oncology, Faculty of Medicine and University Hospital Carl Gustav Carus, Technische Universität Dresden, Helmholtz-Zentrum Dresden - Rossendorf, Dresden, Germany — Department of Radiotherapy and Radiation Oncology, Faculty of Medicine and University Hospital Carl Gustav Carus, Technische Universität Dresden, Dresden, Germany — Helmholtz-Zentrum Dresden - Rossendorf, Institute of Radiooncology - OncoRay, Dresden, Germany

In this overview talk the following questions will be addressed: - What

is the status concerning fast adaptations in particle therapy also in relation to photon therapy?

- Why we need online-adaptive particle therapy (OAPT)?
- What are different approaches also in relation to different adaption speed?
- What are the different imaging approaches for OAPT?
- How can we verify the treatment delivery when no pre-treatment phantom QA is performed?
- What is the role of AI-based decision support?
- What initiatives exist on national and international level? Where do we stand?