

# Abstract Topics

Main topic	Clinics
Subtopic	Challenging clinical scenario: Why or why not particle therapy
Subtopic	Clinical implementation of adaptive particle therapy
Subtopic	Combined particle therapy with novel systemic therapy: efficacy and toxicities
Subtopic	Comparative effectiveness and cost-effectiveness analysis
Subtopic	Complementary therapy in particle therapy (rehabilitation)
Subtopic	General clinical results and patient reported outcome
Subtopic	LET and variable RBE based particle therapy
Subtopic	Long-term complications and image changes after particle therapy
Subtopic	Novel treatment strategies using particle therapy
Subtopic	Particle therapy -based stereotactic radiotherapy and hypo-fractionated radiotherapy
Subtopic	Particle therapy-based re-irradiation
Main topic	Physics
Subtopic	Beam delivery and nozzle design
Subtopic	Dosimetry
Subtopic	Imaging
Subtopic	Motion management and adaptive therapy
Subtopic	New approaches (e.g. ultra-high dose rate, spatially fractionated therapy)
Subtopic	Outcome modelling
Subtopic	Quality assurance
Subtopic	Treatment planning – algorithms and methods
Subtopic	Treatment planning – applications

Main topic	Biology
Subtopic	Biological advantages of CPRT vs XRT
Subtopic	Biomarkers of CPRT response
Subtopic	BNCT
Subtopic	FLASH and mini-beam biology
Subtopic	Immune therapy with CPRT
Subtopic	Integrating biology in treatment planning: RBE and beyond
Subtopic	Mathematical modeling & simulations of charged particle radiotherapy
Subtopic	Targeted agents with CPRT