Second Workshop on Particle Minibeam Therapy



Contribution ID: 52

Type: Oral presentation

Medical applications of Particle Minibeam Therapy

Purpose:

Particle Minibeam Radiotherapy is a novel technique for tumor treatment using an array of parallel thin beams resulting in an outstanding increase in the therapeutic ratio in pre-clinical studies. Nevertheless, the use of Particle Minibeam Radiotherapy has not been yet reported in humans. This presentation aims to address the clinical evaluation process and potential medical applications of Particle Minibeam Therapy. Methods:

A comprehensive review was conducted on the one hand, on early clinical results and evidence of clinical benefit of other innovative radiotherapy techniques such as FLASH, GRID/Lattice and MR-Linac, and on the other hand, on pre-clinical data of Particle Minibeam Radiotherapy with potential translation into human care.

Results:

Methods of evaluation of the interest of other innovative and already in use radiotherapy techniques are put in perspective with Particle Minibeam Radiotherapy. Potential indications of Particle Minibeam Radiotherapy are presented focusing on brain tumors with poor prognosis.

Conclusion:

Particle Minibeam Therapy is promising in multiple unmet oncology needs. A systematic evaluation of clinical benefits of this new technique is encouraged.

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