

Second thoughts about proton therapy facilities

Prof. Dr. med. Wolfgang Sauerwein

Universitätsklinikum Essen, Germany

In many developed countries dedicated proton facilities are either in use or in a planning phase. Despite the rapid growth of these centers in recent years, there are little known aspects of proton therapy that may render these facilities less effective than expected, to the extreme that some of them have been shut down. The hypothetical benefit derived from the characteristic absorbed dose distribution obtained from protons has not yet translated into a better clinical outcome. Even in situations for which proton therapy is widely accepted, such as uveal melanoma or pediatric patients, no clinical trial has shown a clear superiority over other techniques. The initial feeling of some influential radiation oncologists that clinical trials were not necessary because of the obviously better dose distribution obtained with protons has been disproved by a more complex reality. The relevance of overcoming this lack of evidence will be discussed and it will be shown that more accurate methods and software tools are warranted.



Prof. Dr. med. Wolfgang Sauerwein

Medical Faculty of the University Duisburg-Essen, Visiting Professor at the Okayama University. He has ample experience in radiotherapy using conventional beams as well as protons, neutrons and carbon ions. He is a world renowned expert in the treatment of ocular malignancies and in its Monte Carlo simulation. He is author of more than 300 scientific publications.

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**Aula Capella, Escola Tècnica Superior
d'Enginyeria Industrial
de Barcelona (ETSEIB)**

Av Diagonal 647, 08028 Barcelona
Universitat Politècnica de Catalunya

Contact: josep.sempau@upc.es



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