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Autor(en) des Beitrags: Specht, Hanno M; Neff, Teresa; Reuschel, Waltraud; Wagner, Franz M; Kämpfer, Severin; Wilkens, Jan J; Petry, Winfried; Combs, Stephanie E

Titel des Beitrags: Paving the Road for Modern Particle Therapy - What Can We Learn from the Experience Gained with Fast Neutron Therapy in Munich?

Abstract: While neutron therapy was a highly topical subject in the 70s and 80s, today there are only a few remaining facilities offering fast neutron therapy (FNT). Nevertheless, up to today more than 30,000 patients were treated with neutron therapy. For some indications like salivary gland tumors and malignant melanoma, there is clinical evidence that the addition of FNT leads to superior local control compared to photon treatment alone. FNT was available in Munich from 1985 until 2000 at the Reactor Neutron Therapy (RENT) facility. Patient treatment continued at the new research reactor FRM II in 2007 under improved treatment conditions, and today it can still be offered to selected patients as an individual treatment option. As there is a growing interest in high-linear energy transfer (LET) therapy with new hadron therapy centers emerging around the globe, the clinical data generated by neutron therapy might help to develop biologically driven treatment planning algorithms. Also FNT might experience its resurgence as a combinational partner of modern immunotherapies.

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