

From clip-based to clipless treatment

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The proton treatment of uveal melanoma is highly effective in terms of local control (5-year tumor control rates well over 90% are reported by major centers). It is arguably the presence of clips (a tumor surrogate) that significantly contribute to the outcome as they make the method robust. From this perspective, it may seem counterintuitive to derive the clipless treatment. On the other hand, such treatment would mean a significant improvement in patient comfort, reduce the cost of treatment, and obviate potential risks associated with the surgery.

The clips provide a geometrical reference for the tumor when constructing the geometric model of eye, and are consequently used for daily positioning to ensure the accurate alignment of the tumor in relation to the treatment beam.

In this talk, the author summarizes the current efforts to derive the clipless workflow. What has been achieved so far? Where are the current hurdles?