Invited Talk

25 years of intra ocular proton therapy at HZB — • Jens Heufelder¹,², Dino Cordini¹,², Roland Stark¹,², Andreas Weber¹,², Johannes Gollrad³, Georgios Kourkafas⁴, Oliver Zeitz², Andrea Denker⁴, Daniel Zips³, and Antonia Joussen²


For 25 years, the Department of Ophthalmology of the Charité - Universitätsmedizin Berlin has been successfully irradiating intra-ocular tumors at the Helmholtz-Zentrum Berlin für Materialien und Energie in close cooperation with the Charité’s Department of Radiation Oncology and Radiotherapy. During this period, over 4600 patients, mainly from Germany, were treated. The primary indication is uveal melanoma (90%). Other indications are iris melanoma and intra-ocular hemangiomas. For choroidal melanomas, the tumor control rate is over 96% and the eye preservation rate 94%. These successes are based on excellent interdisciplinary cooperation between all departments involved and the continuous further development of the procedures and methods used.

This article provides an insight into the technical and clinical developments of the last 25 years in areas such as radiation planning, dosimetry, application and research (flash therapy).