



IBA, Fred Hutchinson Cancer Center and the University of Washington engage in a bench-to-bedside research program for FLASH Proton Therapy

Louvain-la-Neuve, Belgium, August 2, 2022, IBA (Ion Beam Applications S.A., EURONEXT), the world leader in particle accelerator technology, Fred Hutchinson Cancer Center and the University of Washington (UW), Seattle, announced a multi-year research collaboration today on ConformalFLASH^{®1} Proton Therapy. Under this collaboration, IBA will equip the proton therapy system and the proton gantry treatment room at the Fred Hutchinson Cancer Center with ConformalFLASH[®] research functionality, which will enable preclinical research on FLASH therapy. In the future this could lead to a new clinical functionality for patients.

Radiation therapy has advanced drastically in the last few decades because of continued technological innovation, allowing for safer and more accurate methods to treat a comprehensive range of solid tumors. FLASH radiation, defined as the delivery of radiation at ultra-high dose rates (40-60Gy/s), has been shown to spare to normal tissue toxicity while maintaining an equivalent anti-tumor efficacy^{2,3}. FLASH is expected to dramatically change the landscape of radiotherapy and patient cancer care by enhancing the therapeutic window with less toxicity, allowing shorter treatment times and potential for dose escalation on radioresistant tumors for improved tumor control. IBA's ConformalFLASH[®] approach combines the biological sparing effects of FLASH with the use of the spatial selectivity of the Proton Bragg peak.

As part of this collaboration, UW School of Medicine scientists will lead a comprehensive bench-to-bedside program at the Fred Hutchinson Cancer Center to analyze FLASH-Radiotherapy (FLASH-RT) in pre-clinical models to optimally deployed FLASH-RT for cancer patients. The focus would be to evaluate the optimal physical parameters for proton FLASH irradiation, including Pencil Beam Scanning (PBS) FLASH dose rates and FLASH effects in the Spread-Out Bragg Peak (SOBP).

Swati Girdhani, Director, Research Collaborations at IBA, said: “In the last few years, IBA has been working closely with customers to support innovation, leading to breakthrough technologies like ConformalFLASH[®]. In this era of value-centered medicine, ConformalFLASH[®] has the potential to advance radiotherapy towards increased use of ultra-hypofractionation while significantly improving the therapeutic index. We are delighted to be working with the University of Washington, one of the leading centers for research in the United States to bring ConformalFLASH[®] technology to patients.”

*** Ends ***

¹ ConformalFLASH[®] is a registered brand of IBA's Proton FLASH irradiation solution currently under research and development phase.

² Diffenderfer et al IJROBP 2020 “Design, Implementation, and in Vivo Validation of a Novel Proton FLASH Radiation Therapy System”.

³ Velalopoulou et al Cancer Research 2021 “FLASH Proton Radiotherapy Spares Normal Epithelial and Mesenchymal Tissues While Preserving Sarcoma Response”.



About IBA

IBA (Ion Beam Applications S.A.) is the world leader in particle accelerator technology. The company is the leading supplier of equipment and services in the field of proton therapy, considered to be the most advanced form of radiation therapy available today. IBA is also a leading player in the fields of industrial sterilization, radiopharmaceuticals and dosimetry. The company, based in Louvain-la-Neuve, Belgium, employs approximately 1,600 people worldwide. IBA is a certified B Corporation (B Corp) meeting the highest standards of verified social and environmental performance.

IBA is listed on the pan-European stock exchange EURONEXT (IBA: Reuters IBAB.BR and Bloomberg IBAB.BB).

More information can be found at: www.iba-worldwide.com

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