

Technology developments in Intra Operative Radiation Therapy

European Institute of Oncology and Inventa cooperate for better cancer treatment

MILAN, ITALY, May 7, 2023 /EINPresswire.com/ -- EIO (European Institute of Oncology) takes part in Inventa Technologies' FLASH [IORT](#) through Scientific Cooperation.

EIO and Inventa Technologies have signed a scientific cooperation agreement for the final development of Hi-Beam, the first Accelerator specifically designed for IORT with Flash Technology. This cooperation is to cover the "last mile" before the sale of Hi-Beam worldwide.

"We are very happy to put our knowledge and our expertise in the fields of Radiobiology Physics and Clinical for the development of Hi-Beam"-says Scientific Director of EIO Professor Roberto Orecchia- "as we have always been pioneers of the IORT technique producing the largest case studies worldwide. IORT technique is in our DNA, and we are happy to support the final development of this new product."

"We are very proud that EIO decided to help us in the final steps of the clinical development of Hi-Beam" -says Ernesto G. Lanzotti, project leader of Hi-Beam-. "This is the first, and only, native Flash IORT with modern features and totally new design for this kind of equipment. We wanted to have a modern and user-friendly unit, and we think we achieved our goal thanks to the intensive use of composite material and state-of-the-art electronics."

This Scientific Cooperation Agreement has been signed in order to complete the process of testing and compliance of Hi-Beam. The support of EIO will also help the final design and handling of the unit in the Operation Theaters, in order to smooth the operations and allow a faster and easier use of the accelerator.

About EIO:

European Institute of Oncology, EIO (Istituto Europeo di Oncologia, IEO) National Institute of Recovery and Cure (Istituto di Ricovero e Cura a carattere Scientifico, IRCCS), is a non profit comprehensive cancer centre, active in three areas: Clinical, Research and Education.

Founded in 1991 from Professor Umberto Veronesi, EIO created an innovative model for the treatment of cancer based on the care for the patient, integration between laboratory research and clinical research, and prevention of cancer, as main objective. EIO's goal is to reach a level of

excellence in the field of prevention, of diagnosis and the cure of cancer through the constant development of clinical scientific research and throughout a global innovation focusing on the quality of the services to the patients. At present time is reknown to be one of the most important Institutes of its kind in the world.

About Inventa Technologies:

Inventa Technologies is the medical Spin-off Elemento SEI, a holding active in the research and development, innovation technology and production of composite materials for the Automotive, Aerospace and Medical fields.

Founded in 2018, the company has been always very active in the Medical field with the sales and service of Radiology and Radiation Oncology equipment and in providing services of high Radiology mobile equipment.

The experience in Radiation Oncology has been central in the mission of the company even before the grounding of Inventa, as the founders have more than 20 year experience in the field. Thanks to this expertise, an innovative product like the Hi-Beam, could be created.

About FLASH-RT:

FLASH radiotherapy (FLASH-RT) is a novel radiotherapy technology defined as a single ultra-high dose-rate) radiotherapy. Compared with conventional dose-rate irradiation, FLASH irradiation is 400-fold more rapid than conventional irradiation

FLASH radiotherapy (FLASH-RT) is a new technique, involving treatment of tumors at ultra-high dose rates which actually reduces the trauma to normal tissue around the tumor, whilst equaling the anti-tumor effect of conventional dose rate radiotherapy

Radiotherapy (a non-invasive radiation treatment which damages and kills tumor cells) forms part of the treatment in 30-50% of these cases. Unfortunately, radiotherapy also damages the healthy tissue surrounding the tumor.

Recent outcomes show that FLASH radiotherapy (FLASH-RT) can reduce radiation-induced damage in healthy tissue without decreasing antitumor effectiveness. The very short radiotherapy time compared to that of conventional dose-rate radiotherapy is another advantage of FLASH-RT.

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