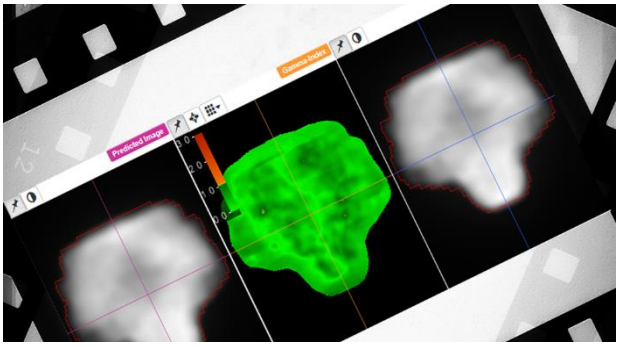
PRESS RELEASE

Securing the radiation therapy patient treatment path: Experimentation results of the "EPIbeam" quality assurance Solution

April 17th, 2018, Paris - DOSIsoft, leading provider of advanced software solutions for Radiation Therapy, and Unicancer, which groups together all French Comprehensive Cancer Centers (FCCCs), established a scientific partnership with EPIbeam software aiming to optimize patient safety in Radiation Therapy. An experiment in real conditions was carried out successfully in 2017 in 7 FCCCs to accelerate transfer of new products to clinical routine. On the occasion of the ESTRO 37 annual meeting, Unicancer and DOSIsoft present the results of this experimentation.

Modernizing and improving the radiation therapy patient treatment safety

Developed by DOSIsoft and based on the use of electronic portal imaging device (EPID), EPIbeam is a software solution dedicated to **verifying radiation therapy beams prior to patient treatments** by comparing the delivered dose, reconstructed from electronic portal images, with the planned dose computed by the treatment planning system (TPS). This software completes the regulatory quality and safety controls, currently carried out on the linear accelerators, and thus will contribute to guarantee high-precision treatments for the patients with the latest generation of equipment.



"In addition to other quality control technologies (phantoms, detectors, etc), EPIbeam is an automated and independent patient Quality Assurance solution for pretreatment verification of irradiation beam. It is fully compatible with any medical linear accelerator and all current treatment techniques: 3D-CRT, IMRT, VMAT, SBRT and standard or FFF (flattening filter free) beam fluence modes." says Marc Uszynski, CEO of DOSIsoft.

Convincing results out of the Partnership project between Unicancer and the innovative French SME

During 9 months in 2017, 7 FCCCs- Jean-Perrin Center, Georges-François Leclerc Center, the Jean-Godinot oncology Institute, the Curie Institute (Paris and Saint Cloud), the Oncology University Institute of Toulouse and the Léon Bérard Center - participated in an experiment in real conditions to validate EPIbeam's robustness and usability. This project was undertaken successfully under the framework of the "iNNOV'Up Experimentation" program, led by the French Paris Region. Comparable Results to the other existing pretreatment control devices have demonstrated the accuracy and ability of EPIbeam to reliably perform pretreatment controls in clinical routine. The ease of implementation as well as its user-friendly and ergonomic web interface were also highlighted as strong points of the solution.

Compared to the traditional QA methods like phantom-based measurements (which require manipulations in the treatment room and a TPS calculation of hybrid plans), EPIbeam drastically reduces the time spent on beam controls. The time-saving advantage results from the use of EPID, already integrated into all conventional linear accelerators and therefore directly operational. In addition, the current available EPIDs have intrinsic dosimetric performance, including an excellent spatial resolution key for precision measurements.

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Natural integration into the radiotherapy workflow

Resulting from its ease of use, another main advantage of the solution is its natural integration into the radiotherapy workflow. This allows automatic and systematic controls: the verification tasks can also be allocated to "non-expert" staff so as to integrate them into the daily planning of treatment machines.

"*Unicancer promotes a model for oncology based on multidisciplinarity, personalization of treatments and a research-to-care continuum… As a major player in patient care and research in oncology, our objective with this experimentation is to obtain an increase in quality for patient care in radiation therapy, while ensuring treatment safety for* the patient. The results of this experimentation are very encouraging," said Christian Cailliot, R&D Director of Unicancer.

"In addition to the quality and safety procedures used by the medical teams, this software solution has the advantage of providing immediately data regarding treatment quality, by connecting to the existing equipment and without any need for additional hardware investment. This experimentation is part of the scientific partnerships carried out along the Research and Development axes with the FCCCs and defined within the global radiation therapy offer of Unicancer," underlines Luc Delporte, Purchasing Director of Unicancer.

About DOSIsoft

Founded in 2002, DOSIsoft develops cutting-edge software solutions for Radiation Oncology and Nuclear Medicine. 15 years of innovation and R&D investments have led to world leading software solutions used successfully in over 170 hospital centers in 18 countries around the world. Spin-off of Gustave Roussy and Institut Curie, DOSIsoft constantly innovates in partnership with the major cancer institutes and research centers in the world. www.dosisoft.com

DOSIsoft will participate in the Annual Meeting of ESTRO 37 from April 20th to 24th, 2018 in Barcelona, Spain. Come visit us in booth #7000.

About Unicancer

Unicancer groups together all the French Comprehensive Cancer Centres (FCCCs). These 20 private, non-profit health establishments are exclusively dedicated to care, research and education in cancer. Unicancer also aims to facilitate the pooling of resources, expertise and best practice between FCCCs in the areas of research, care, hospital management, and procurement. Its mission is to enable FCCCs to stay ahead and innovate together, and always for the benefit of their patients.
As a clinical research sponsor, Unicancer has shored up its position as a major French player in oncology. It is accredited by the Ministry of Health and is eligible for public grants. Its research unit is tasked with implementing Unicancer's overall research strategy, which involves promoting access to innovation and improving care for patients with cancer. In 2016, 5,400 patients were included in Unicancer sponsored clinical trials within 270 healthcare establishments, 20% of which abroad.

***The Unicancer Translational Research and Development in Radiation Oncology** (UNITRAD) Group's goal is to promote innovative and strategic radiotherapy research programmes, and to develop collaborative networks. Its experts work on numerous of topics such as brachytherapy, imaging, modelling and radiomics, radiobiology and radiopotentiation, ionising radiation, quality assurance and methodology.*

***Unicancer key figures:** 20 healthcare establishments, 20,000 employees, €2.4 billion in revenue, more than 500 ongoing clinical trials, over 140,000 patients hospitalized per year.*

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