Gustave Roussy and DOSIsoft collaborate on Big Data and Radiomics applied to Radiation Oncology

Gustave Roussy and DOSIsoft SA collaborate on **Big Data** and **Radiomics** applied to radiation oncology.

Big Data, Machine Learning and Radiomics

New emerging IT technologies such as **Big Data** and **Machine Learning**, combined together with the extraction of additional information from patient images used in radiation therapy, and their correlation with other clinical or genomic information, are opening new horizons in the prognostic, improvement and personalization of radiation therapy treatments. This is the **radiomics** principle.

Being the first Cancer Center in Europe, Gustave Roussy is actively pursuing such research activities, with the objective to personalize cancer treatments, in particular for patients not responding to a standard radiation therapy. The first types of cancer included in this research are the ENT, head and neck, cervical cancers and brain cancers.

DOSIsoft develops cutting-edge software solutions for Radiation Oncology and Nuclear Medicine. As part of its innovation programs, DOSIsoft carries out preliminary research and scientific collaborations on quantitative index and biomarker computation from multimodality imaging. DOSIsoft is a leader in multimodality imaging software and treatment planning systems (TPS) for radiation oncology.

Deployed at Gustave Roussy, these systems have led to the extraction of more than 11 000 patient files from past several years. Such a patient cohort, unique compared to current studies, should lead to significant progress in this domain.

« *We are enthusiastic about the potential of the therapeutic improvement of these technologies. They will eventually allow a more precise identification of non-responding patients and a personalization of treatment plans* » said Professor Eric Deutsch, head of the Radiation Oncology Department at Gustave Roussy.

DOSIsoft's CEO, Marc Uszynski, mentions « *this is an exciting and promising area, fully in line with our cutting-edge imaging and oncology solutions, our innovation and research programs, and our collaboration projects with Gustave Roussy and other leading centers in France and worldwide* ».

About Gustave Roussy

Gustave Roussy is the leading Cancer Centre in Europe. It is a centre where all the skills in cancer care are focused on the patient. It comprises 3,000 professional staff who are engaged in care, research and teaching. **www.gustaveroussy.fr/en**

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 160 hospital centers in 18 countries around the world. DOSIsoft constantly innovates in partnership with the major cancer institutes and research centers. **www.dosisoft.com**