

## Case study: Centre GRAY in Maubeuge, France

# UPGRADING PATIENT CARE WITH RAYPLAN



Centre GRAY in Maubeuge, France

Pursuit of the highest-possible quality of patient care is the objective of medical professionals the world over and advanced radiation therapy equipment represents a significant investment for any clinic. All too often, software is an afterthought rather than an integral aspect, capable of realizing the full potential of equipment and getting the best return on investment.

France is among the leading countries in the world in the fight against cancer. According to the Société Française Radiation Oncology, some of the country's oncology centers are over two centuries old and are renowned for providing quality treatment options for all kinds of cancer patients with increasingly positive survival rates.

Centre GRAY in Maubeuge has made innovative cancer treatment available to 300,000 inhabitants of the Sambre-Avesnois region for more than 20 years. The clinic belongs to the Amethyst Radiotherapy Group, a fast-growing private cancer treatment institution that also has clinics in Austria, Italy, Poland and Romania.

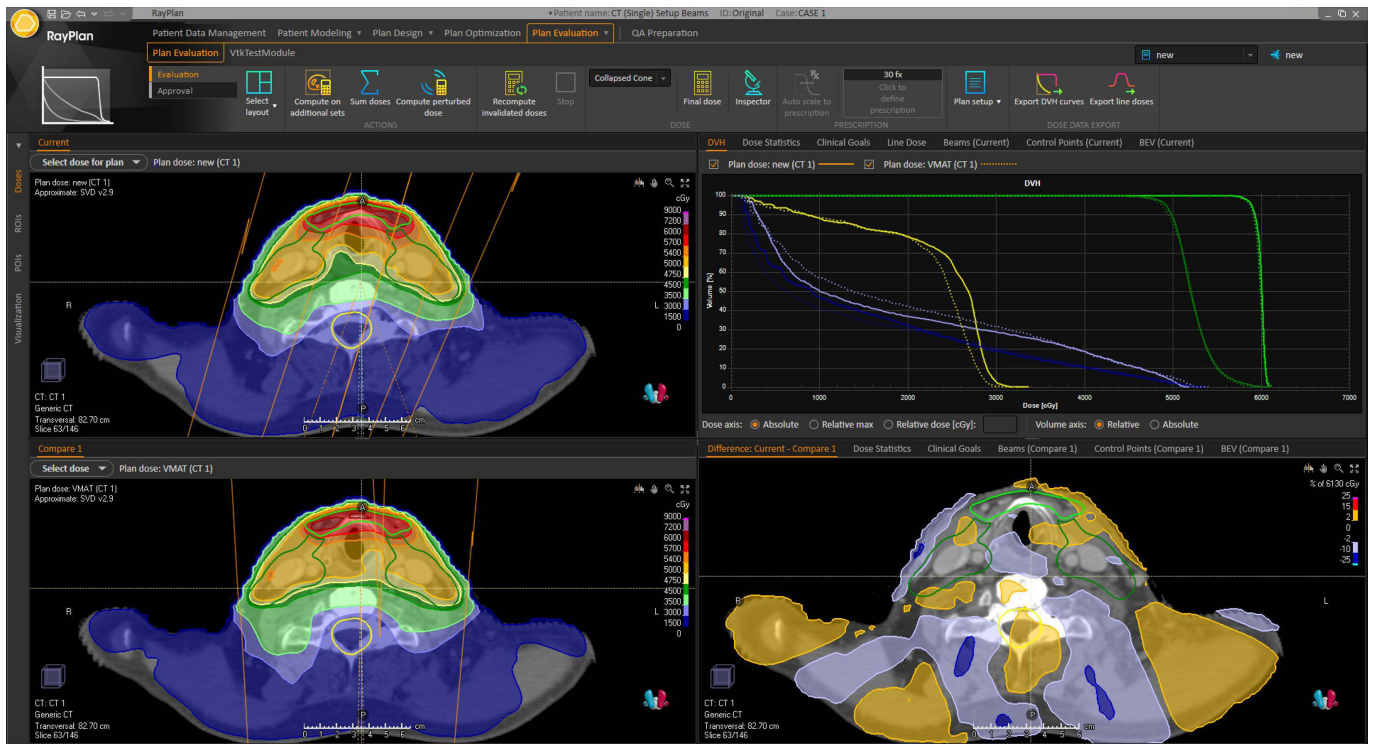
Technological innovation is at the heart of the Centre GRAY's drive for excellence in cancer treatment and patient care. Medical physicists, radiotherapists and dosimetrists at the center pride themselves on the quality of their technical platform, which means that upgrading and modernizing is crucial to maintaining high degrees of quality care.



*RayPlan has enabled us to have better treatment planning in less time and ensure the best quality care for our patients."*

*— Fadi Abboud, medical physicist at Centre GRAY, which adopted RayPlan®\* to realize the full potential of Versa HD™ from Elekta and deliver best-in-class cancer treatment planning to the inhabitants of the Sambre-Avesnois region.*

\*Subject to regulatory clearance in some markets.



Plan comparison in RayPlan offers clinicians all the tools they need to select the most suitable plan for each patient.

When the time came to upgrade one of the clinic's medical linear accelerators, a thorough evaluation process resulted in the purchase of Versa HD from Elekta. It was chosen for its ability to provide stereotactic treatments with anatomically guided accuracy and installed in 2017. Treatment planning system RayPlan®\* from RaySearch was selected and installed in 2019 as it offers outstanding compatibility with linacs, oncology information systems and third-party QA.

RayPlan makes clinically proven, innovative treatment planning system RayStation®\* technology accessible to clinics in search of a cost-effective and streamlined solution.

Fast, efficient and straightforward to use, RayPlan supports the full range of treatment planning activities for 3D-CRT, IMRT, VMAT, TomoTherapy and electron beam radiation therapy.

After software installation and training, beam modeling was performed at Centre GRAY under the watchful eyes of RaySearch experts visiting the clinic. Compatibility between beam models, measured PDDs and profiles was evaluated using a 2% global normalization / 2mm gamma dose difference/ distance-to-agreement acceptance criterion for open fields and also for wedged fields.

Model commissioning was performed following recommendations published by Task Group 119. Some physics parameters were adjusted for better agreement between measurements and calculations. All pre-treatment quality assurance local gamma index (3%/3mm Threshold 10) passed above 95%. Treatment planning using RayPlan for clinical cases started in early December 2019.

RayPlan is more than just software. It incorporates the knowledge and experience of a team of experts dedicated to bringing scientific advancements in cancer treatment faster to the clinical world. RaySearch continuously enhances the system, paying as much attention to small improvements as to major additions. Every development is designed to help cancer clinics to secure better outcomes and improved access to care.

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# *Congratulations*



*Fadi Abboud, Amethyst - Centre GRAY in France*

WINNER OF THE 2019 RADIATION KNOWLEDGE  
PLAN COMPETITION USING  RayPlan

## TREATMENT PLANNING COMPETITION

The unrivaled computation speed of RayPlan can radically transform the treatment planning process. As the computation time is measured in seconds rather than minutes, clinicians can efficiently produce several competing treatment plans to assess different tradeoff situations and avoid interruptions. This has been shown to contribute to overall plan quality.

RayPlan was put to the test in 2019 when Fadi entered and won the Radiotherapy Plan Competition, organized by Radiation Knowledge and recognized by the International Atomic Energy Agency. The competition seeks to encourage radiotherapy professionals to share practical knowledge as a way of ensuring that cancer patients receive the best-possible quality of treatment regardless of geographic location.

*"I used another treatment planning system for three years and came 29th out of 1,700 participants in 2018. As a new user of RayPlan, I expected it would be difficult for me to get a good position in 2019, but I won the competition!" Fadi Abboud*

## ADVANCING CANCER TREATMENT

RaySearch is a committed pioneer of oncology software. Since 2000, we have worked in close cooperation with leading centers to improve life and outcomes for patients. We develop all our products from the ground up and continuously revise every aspect, from algorithms to user interface designs. Medical science never stands still, and neither does RaySearch — our relentless drive to do things better leads us to ever-higher performance, accuracy, safety and usability. And this is just the beginning.

We believe software is the driving force for innovation in oncology. Our systems use groundbreaking automation and machine learning to create new possibilities. RayCare\*, the next-generation oncology information system, will enable one workflow for all the oncology disciplines, ensuring fluid coordination of tasks and optimal use of resources. RayStation harmonizes treatment planning, providing one point of control for all planning needs — any equipment, any scale.

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For more information on RayStation and RayCare or to see a demo please contact [sales@raysearchlabs.com](mailto:sales@raysearchlabs.com)