

COLLECTIVE
EXPERTISE
TO **FIGHT**
CANCER

**ACTIVITY
REPORT
2024**



INSTITUT UNIVERSITAIRE
DU CANCER DE TOULOUSE
Oncopole



FOREWORD

The “Oncopole”, as patients and the general public know it, brings together on a single site more than 2,000 professionals committed to the fight against Cancer, divided between the Toulouse-Oncopole University Cancer Institute (IUCT-Oncopole) and the Toulouse Cancer Research Center (CRCT). The Oncopole Claudius Regaud (Comprehensive Cancer Center) and the Toulouse University Hospital (CHU) join forces as the IUCT-Oncopole, sharing their expertise and excellence in missions of care, research, and teaching.

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EDITORIAL

2024 marks the tenth anniversary of the opening of the Oncopole site: a decade of progress in oncology made possible by exceptional collaboration between healthcare professionals, researchers, patients, and partners. Together, with all the teams present on this unique site in France, we have accelerated cancer research and its transfer to care. Clinical research activity has doubled, the number of patients included in clinical trials has tripled, and publication in prestigious scientific journals continues at a steady pace.

This year, the excellence of the Oncopole collective and the quality and innovation of its patient support have been recognized in leading circles in France and around the world: French National Authority for Health (HAS) certifications, nominations, collective recognition, Clarivate rankings, and the French weekly magazine Le Point's rankings. These distinctions testify to the confidence placed in our expertise and

the renown of this site. We invite you to look through this report where you will discover the major advances in all of our specialties, the rise of immunotherapy and early phase clinical trials, the contribution of AI to prediction, and much more. Ten years of innovation to leaf through, for a better glimpse of the future.

Enjoy your reading.

Prof. Jean-Pierre Delord
General Manager of the Oncopole
Claudius Regaud and Administrator
of the GCS IUCT-Oncopole

Jean-François Lefebvre
General Manager of the Toulouse University
Hospital (CHU) and President of the General
Assembly of the GCS IUCT-Oncopole

Dr. Pierre Cordelier
Manager of the CRCT



RESEARCH IN 2024

576

PUBLICATIONS

50

INTERNATIONAL
PUBLICATIONS
with an impact factor > 20

20

RESEARCH
TEAMS

154

RESEARCHERS

27

NATIONALITIES
among the different
researchers

8

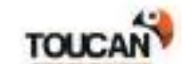
TECHNICAL
RESEARCH
PLATFORMS

126

ENGINEERS
AND RESEARCH
TECHNICIANS

1

LABORATORY
OF EXCELLENCE:
LABEX TOUCAN



2

ERC GRANT



LESS THAN **6** MONTHS

for a discovery by the CRCT to be translated
into a clinical trial at the IUCT-Oncopole



CLINICAL TRIALS IN 2024

364

CLINICAL TRIALS
opened for inclusions in 2024

44%

EARLY PHASE
TRIALS

2,879

NEW PATIENT
included in 2024

INCLUSIONS IN 2024

49.6%

SPONSORED
BY THE IUCT-ONCOPOLE

36.8%

SPONSORED
BY ACADEMIA

13.6%

SPONSORED
BY INDUSTRY

Since the creation of the Oncopole:

x2

the number of clinical
trials has doubled

x3

the number of patients
included has tripled



INCLUDING



11,959
HOSPITALIZED PATIENTS

40,753
PATIENTS TREATED

INCLUDING
5,308
NEW PATIENTS hospitalized

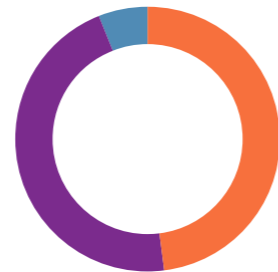
NEW PATIENTS



DISTRIBUTION
40% Men
60% Women



AGE GROUPS:
0-14 years: **0.4%**
15-25 years: **2.8%**
26-74 years: **75.5%**
75 years and older: **21.3%**



GEOGRAPHIC ORIGIN:
Haute-Garonne : **47.2%**
Occitanie-Pyrénées
(excluding Haute-Garonne): **41.3%**
Other origins (France and international): **11.5%**



CANCER CARE ACTIVITIES IN 2024

the **1st**

HOSPITAL PHARMACY IN FRANCE
in terms of chemotherapy preparations

132,573
CHEMOTHERAPY PREPARATIONS

57,471
RADIOTHERAPY SESSIONS

3,861
patients treated with ORAL THERAPIES

669
patients received VECTORIZED INTERNAL RADIOTHERAPY

109
patients received BRACHYTHERAPY

81
patients treated with CAR-T CELLS, **10% more** than in 2023

203
TRANSPLANTS PERFORMED, including **111** autologous and **92** allogenic grafts

8,239
OPERATIONS

including **4,688** anesthesia procedures (excluding local)

2,792 implantable port or central venous catheter insertions

2,828 LBP (Labile blood products) transfusion sessions

30 total body irradiation sessions

119,587
HOSPITAL STAYS, **+4.23%** compared with 2023

85.3%
OUTPATIENTS in hospital wards

308
BEDS including 103 day-hospital beds

6.5 days
AVERAGE LENGTH OF STAY in full hospitalization

THE ONCOPOLE'S 10TH ANNIVERSARY: A DECADE OF INNOVATION



The heads of departments and organ coordination committees at the Oncopole.

For the past decade, grouping together on a single site clinical, scientific, and technological expertise has fostered a collaborative and multidisciplinary dynamic leading to major advances in the fight against cancer. Thanks to this synergy, teams have contributed to new care pathways, new surgical techniques and innovative treatments — such as CAR-T cell therapies and immunotherapy — that have significantly advanced patient care. The creation of a dedicated supportive care department has also enabled Oncopole teams to improve patients' quality of life by offering them personalized support from diagnosis through post-cancer care.

Building on this momentum, the Oncopole is entering its second decade full of ambition. In a context of demographic, epidemiological, and technological transition, 2024 saw the Oncopole undertake the first stages of an ambitious expansion project to better respond collectively to current and future challenges in cancer care. Based on a joint medical project of the Toulouse University Hospital and the Oncopole Claudius Regaud, the expansion is an integral part of each establishment's development plan. It aims to improve patient care pathways and medico-nursing organizations, increase bed capacity, modularize spaces, and integrate quality of life at work and environmental issues.

Since the creation of the Oncopole:

x2

**NEW PATIENTS
TREATED PER YEAR:
NEARLY 12,000 NEW PATIENTS
IN 2024
COMPARED WITH 6,000 IN 2014**

x2

**THE NUMBER
OF CLINICAL TRIALS**

x3

**THE NUMBER
OF PATIENTS INCLUDED
IN A CLINICAL TRIAL**

On April 8, 2014, the IUCT-Oncopole welcomed its first patients. Ten years later, this unique site, bringing together patient care, research, academic activities, and projects carried out with patients, their families and caregivers, has established itself in France and internationally as a symbol of innovation and collaboration.

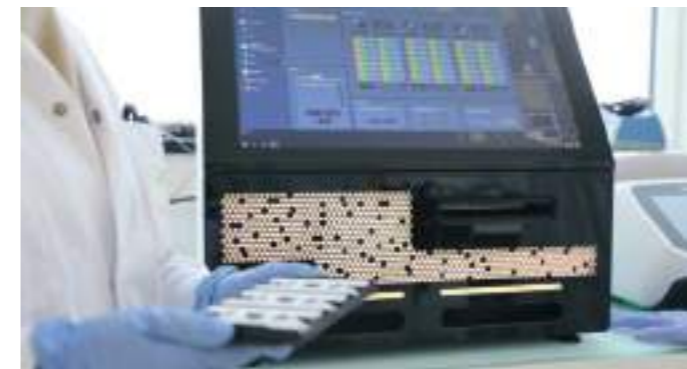
THE ONCOPOLE MODERNIZES ITS TECHNICAL PLATFORMS

The Oncopole invested nearly 6 million euros in acquiring new state-of-the-art equipment to modernize its technical platforms.

- In radiotherapy, a new, faster and more accurate scanner incorporates innovative technologies, reducing examination time.
- In imaging, the arrival of a third latest-generation PET scanner has paved the way for faster and more accurate diagnosis.
- The operating room has also modernized with state-of-the-art interventional radiology equipment.
- The Cancer Biology Laboratory (LBMO) strengthened its technical platforms with three recent pieces of equipment: a spectral flow cytometer, a new mass spectrometer, and new digital PCR equipment for the biology sector. In parallel, medico-technical teams have accompanied this modernization with skills development. In a context of growing regional demographics, this dynamic lies at the heart of the Oncopole's medico-scientific strategy to streamline patient pathways, support their welcome and care, promote access to innovation, and pave the way for the expansion project in 2030.



Commissioned in January 2024 in radiotherapy, this scanner offers increased image acquisition speed and maximum image quality.



The LBMO's prospective biology sector replaced its digital PCR equipment.



The imaging platform was further strengthened with the implementation of a third PET scanner in October 2024.



The LBMO's pharmacology analytics platform acquired a fifth mass spectrometer to replace its first device.



This new cytometer allows for more in-depth exploration of rare samples, such as tumor biopsies.

COLLECTIVE PROJECTS IN THE SPOTLIGHT



In 2024, the Bristol Myers Squibb Foundation (BMS) supported 3 promising projects.

- **Colorectal cancer:** "Targeting intestinal immunity to fight metastasis in colorectal cancer," this project led by **Christel Devaud** and **Virginie Feliu** from the CRCT's T2i team explores the role of intestinal CD8 T lymphocytes in fighting colorectal cancer metastasis. This promising step forward could not only better target patients responding to immunotherapy, but also reactivate immunity in non-responders.
- **Melanoma:** "Immunotherapy for melanoma in home hospitalization (HAD: dedicated care pathway)", this project led by **Dr. Cecile Pagès-Laurent**, onco-dermatologist at the Oncopole, improves patients' quality of life while optimizing coordinated care.
- **Lung cancer:** "Non-small cell lung cancer: study of sociodemographic factors affecting access to and effectiveness of immunotherapy in the general population," led by **Laetitia Daubisse-Marliac** and **Sébastien Lamy**, epidemiologists at the Tarn Cancer Registry at the Oncopole. This project highlights inequalities in access to and effectiveness of immunotherapy, paving the way for more equitable medicine.

These projects illustrate the synergy between science, clinical innovation, and societal impact.



The work of hematology and internal medicine teams honored in San Diego

The hematology and internal medicine teams from the Oncopole distinguished themselves at the 66th *American Society of Hematology (ASH)* Annual Meeting & Exposition 2024 in San Diego. With **156 co-authored abstracts (+46% compared with 2023)**, six experts, physicians, and researchers from the Oncopole presented and highlighted their research on multiple myeloma, acute myeloid leukemia (AML), new therapeutic targets, and pathological mechanisms. This major scientific mobilization demonstrates the dynamism and excellence of the clinical and translational research conducted at the Oncopole.

CONCRETE ACTIONS TO MOBILIZE AND RAISE AWARENESS

Remarkable mobilization for pediatric cancer research with "La Jeannette"

Congratulations to the association "7 animés", organizer of "La Jeannette", a charity race held in September in memory of Jeanne, who died at the age of nine from a glioblastoma. This 5th edition saw record participation, with more than 1,500 runners of all ages, volunteers, partners, and donors raising over €50,000 for the Oncopole and Gustave Roussy.

See you on September 27, 2025, in Toulouse for the 6th edition!



Together with the Oncopole and Inserm ToNIC teams, we fight every day - through radiotherapy and research - against the most common cancer in children, brain tumors, so that more children can be cured and suffer fewer side effects. We thank "La Jeannette" for this donation that will help us fund researchers' time, publications, and analyses, allowing us to be agile and responsive - essential in our research.

Prof. Anne Laprie

Oncopole radiotherapist and researcher with the Inserm ToNIC team.

Launch of the 1st "Head and Neck Cancer Patients" Day

A successful 1st edition. The "Head and Neck Cancer Patients" Day at the Oncopole, held on April 24, 2024, brought together more than sixty patients, families, and caregivers. They were able to learn about the role of supportive care, dentistry, and onco-rehabilitation throughout the care pathway, as well as share their experiences and exchange with health professionals and associations.

The day was co-organized by the head and neck organ coordination committee, the CORASSO patient's association, the Occitanie Association of Laryngectomees and Voice-Impaired Individuals, and CAMI Sport & Cancer.



On the same day, a team from ICI Occitanie was on site to cover the event live with **Prof. Sébastien Vergez** and **Agnès Dupret-Bories**, **Dr. Anouchka Modesto**, as well as **Sabrina Le Bars**, President of CORASSO, and **Maguelone Arribaud**, a patient treated at the Oncopole.



"BEFORE YOUR VERY EYES" ("SOUS VOS YEUX") WINS 7 AWARDS

The ad raising awareness about the symptoms of head and neck cancers was rewarded by communications professionals:



2 GOLD awards and 1 SILVER award



1 GOLD award



2 SILVER awards



1 SILVER award

A total of seven prizes were awarded, including three Gold Grand Prizes for the film that has generated nearly 1.2 million views.

The excellence of our teams was especially recognized by the medical and scientific community in 2024. These distinctions and awards testify to the trust placed in their expertise and the renown of our institution in leading circles.

Individual recognition



Prof. Gilles Favre
Scientific Director of the Oncopole and Director of the Signather team, Science award from the Occitanie Academy of Sciences



Dr. Gwénaél Ferron
Oncological surgeon, elected President of the SFCO (Francophone Society of Oncological Surgery)



Dr. Chloé Lamesa
Radiopharmacist, elected President of SOFRA (French Society of Radiopharmacy) and appointed to the board of the National Professional Council of Pharmacy



Prof. Alejandra Martinez
Surgical oncologist, elected member of the Scientific Committee of the ESGO (European Society of Gynaecological Oncology)



Prof. Julien Mazières
Head of the Pneumology department at the Toulouse University Hospital. Listed among the most cited researchers in 2024



Prof. Christian Recher
Head of the Hematology department at the Oncopole. Listed among the most cited researchers in 2024



Dr. Roxana Khazen
Researcher, DynAct Team - Young Researcher Award - Rolland Garrigou Foundation



Alexia Delbaere
Researcher, RADOPT Team - Article of the month in the journal *Physics in Medicine & Biology* and Prize for the Best Dissertation from the GEETS Doctoral School No. 323



Alice Desprairies
PhD student, RNAreg Team - Poster Award at the 2024 RNA Society Congress



Charline Ogier
Researcher, Micropanc Team - Prize for Best Oral Presentation at the 2024 Congress of the Digestive Epithelial Cells Study Club (CECED)



Romain Pfeifer
PhD student, R'n Blood Team, Best Poster Award, 2024 Congress of the Hematopoiesis and Oncogenesis Club



Dr. Anne-Cécile Brunac
Pathologist Selected for the Academy of the European Society of Pathology

Collective recognition



Dr. Salvatore Valitutti - Director of the DynAct team,
Dr. Brienne Mckenzie - Researcher, DynAct team,
& **Kévin Cortacero** - PhD student, DynAct team
received the "Humies Awards" Gold Medal at the 2024 Congress of the Genetic and Evolutionary Computation Conference (GECCO).



The Oncopole's anesthesia unit was accredited by the French College of Anesthesiologist-Resuscitators (CFAR) and the French National Authority for Health (HAS) for its teamwork, improved practices and safety of care.



The Department of Nuclear medicine obtained the new Level 1 accreditation as a "Qualified Theranostic Center of Excellence" from the European Association of Nuclear Medicine. The Oncopole is the third French center to receive this accreditation.

Double national quality certification

The French National Authority for Health (HAS) certified the Oncopole Claudius Regaud cancer center, located on the Oncopole site, as "High Quality Care". The highest level of French certification possible, this is a remarkable recognition for all the work carried out by our teams.

The HAS awarded "Confirmed Quality of Care" certification to the Toulouse University Hospital. This recognition testifies to teams' ongoing commitment to providing high-quality healthcare to patients.

These results also prove that the model and organization of the Oncopole site encourage innovation and collaboration at all levels.



The French weekly magazine Le Point's annual ranking of hospitals and clinics: the Oncopole stands out

Ten years after its creation, in 2024 the Oncopole confirms its leadership by maintaining its place among the top French healthcare facilities for all of the pathologies it treats.

In 2024, the Oncopole was:

- 2nd for uterine cancers (6th in 2021)
- 3rd for head and neck cancers (2nd in 2021)
- 3rd for breast cancers (5th in 2021)
- 4th for ovarian cancers (5th in 2021)
- 4th for adult leukemia (5th in 2021)
- 6th for thyroid cancers (new ranking in 2024)
- 6th for lymphomas and myelomas (5th in 2021).
- 7th for soft tissue sarcoma surgery (12th in 2021)
- 7th for skin cancers (9th in 2021)





PAVING THE WAY FOR NEW THERAPEUTIC STRATEGIES



FROM RESEARCH TO TREATMENT



The proximity between fundamental research and clinical research teams on the Oncopole site fosters a unique collaborative dynamic. This organization accelerates the transfer of discoveries “right up to the patient’s bedside”, strengthens the links between researchers and healthcare professionals, and optimizes diagnostic and therapeutic choices, directly benefiting patients and the quality of care.

HEMATOLOGY

Cells responsible for B-cell leukemia identified

B-cell leukemia develops in stages, starting with cells that accumulate genetic abnormalities. The IGAALD team, led by **Prof. Eric Delabesse**, has identified dormant “pre-leukemic” cells that are resistant to conventional treatments and that activate abnormal survival programs. These cells cause the disease; more clearly understanding them will help unlock the mechanisms of resistance, particularly in children. This unique model now makes it possible to screen thousands of chemical compounds to identify new molecules targeting these initiator cells. This integrated approach, combining fundamental and translational research, paves the way for innovative treatments for B-cell leukemia.

Fregona V. et al., J Exp Med, PMID 37930337, Jan 2024

LUNG CANCER

A new combination therapy to prevent resistance to treatment

Bronchial cancer is the leading cause of cancer mortality. Targeted therapies have transformed patient care with key gene alterations (EGFR, ALK, ROS1, etc.), but their effectiveness is limited by resistance. The SIGNATHER team, co-led by **Prof. Gilles Favre** and **Dr. Olivier Sordet**, has shown that at the start of treatment, tumor cells stop proliferating and enter a transient state. Some, however, then reactivate their growth, causing relapse. This mechanism depends on proteins activated by farnesyltransferase, a target enzyme. Its inhibition blocks tumor recurrence. Two patents have been filed and early clinical trials are underway to test these innovative strategies.

Figarol S. et al., Nat Commun., PMID 38937474, June 2024

PANCREATIC CANCER

Cytidine deaminase protects cancer cells from DNA-targeting drugs

Research by the ImPact team, led by **Dr. Pierre Cordelier**, has revealed an unexpected role for cytidine deaminase (CDA), a very abundant protein in pancreatic tumors. CDA promotes cancer cell proliferation and resistance to chemotherapy. By studying how this happens, the researchers discovered that it protects the DNA of tumor cells, thereby contributing to their survival. Targeting this enzyme could weaken these cells and improve the effectiveness of existing treatments. These findings pave the way for new therapeutic strategies against pancreatic adenocarcinoma, a particularly aggressive and difficult-to-treat cancer.

Lumeau A. et al., Cancer Res, PMID 38294491, Jan 2024



PREDICTING & FORECASTING: THE ROLE OF AI

Artificial Intelligence (AI) is emerging as an essential lever for transforming medicine. At the Oncopole, it is already enriching research projects and strengthening collaborations with partners, experts in their field. This dynamic focusing on innovation and co-construction is paving the way for more precise, more personalized, and resolutely forward-looking medicine.

Medical physics and Artificial Intelligence: a unique partnership with Airbus and Accuray

In September 2024, the Oncopole, Airbus, and Accuray signed a cooperation agreement to improve the availability and maintenance of radiotherapy equipment through Artificial Intelligence. The goal is to develop AI-based solutions to predict performance issues in radiotherapy systems possibly leading to delays in treatment. By anticipating and preventing potential downtime, it will be possible to optimize equipment availability, thereby ensuring better continuity of treatment. This unique co-construction, combining medical expertise and cutting-edge technology, demonstrates the Oncopole’s ambition to constantly improve the safety and effectiveness of patient care.



AI as a diagnostic aid tool

Winner of the National Cancer Institute’s (INCa) AGIR-Santé Publique 2024 call for projects and funded to the tune of €159,000, the “COL-IA” project, led and coordinated at the Oncopole by pathologist **Dr. Guillaume Bataillon**, integrates AI into anatomical pathology. COL-IA combines the digitization of histological slides from uterine biopsies with the development of AI algorithms capable of determining the presence or absence of precancerous and cancerous lesions on the cervix. Designed



as a daily diagnostic aid tool, this initiative will assist pathologists, reduce analysis time, and improve diagnostic reliability. This project paves the way for new research to better understand cervical lesions and refine prevention and treatment strategies. It could also serve as a model for analyzing biopsies of common pathologies, such as those in the digestive system, breast, or prostate.

Correcting AI biases for improved accuracy



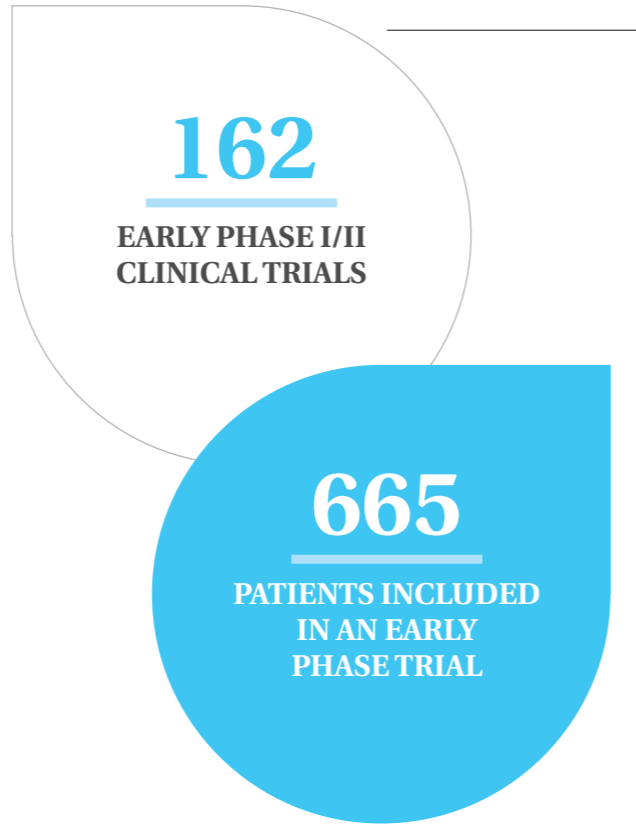
As part of his PhD dissertation, **Dr. Camille Franchet**, pathologist and member of the Oncopole’s breast cancer organ coordination committee, focused on one of the main difficulties associated with the use of AI in pathology: biases related to variability in tissue staining. He developed two innovative methods, AugmentHE (color enhancement) and HEnorm (H&E image normalization), to improve the robustness of AI models and their ability to function on images from different healthcare facilities. These tools were tested on a multicenter breast cancer dataset, showing a clear improvement in diagnostic performance. Indeed, using AugmentHE during the model training phase improved AI performance on data from other centers by 14%, while the HEnorm tool proved to be up to 78 times faster than conventional methods with equivalent efficiency. These results, obtained using a reproducible and shared method, represent a significant step forward toward reliable integration of AI into pathologists’ daily practice, particularly in the field of breast cancer. *Franchet C. et al., Comput Biol Med., PMID 38387381, March 2024.*



EARLY PHASE CLINICAL TRIALS

The Oncopole has reached a new milestone in the development of early-phase clinical trials. Nearly half of all trials are dedicated to these key phases of therapeutic development.

This dynamic is driven by the exceptional commitment of research teams, but also by the growing use of cutting-edge technologies: integration of Artificial Intelligence to accelerate data analysis, use of advanced molecular profiling tools, and investment in new-generation biological equipment. In 2024, the work carried out by early-phase research teams resulted in 162 medical and scientific publications in international journals and numerous oral and poster presentations at leading conferences, including ASCO, AACR, ASH, and ESMO...



PERSONALIZED CANCER VACCINE The Oncopole enrolls the world's first patient in Phase II

In May 2024, as part of its personalized vaccine trials, the Oncopole launched phase II and enrolled the first patient in this new stage. A major step forward in this research project, it offers hope to patients with non-HPV-induced head and neck cancer. This new stage confirms the Oncopole's leadership as a driving force in this international clinical research program. The positive results from phase I made it possible to launch the second phase, whose objective is to confirm the medical benefit of the vaccine against cancer relapse, particularly for head and neck cancers. Six new investigative centers have joined the first four, including the Oncopole, and the number of patients to be included has been increased to forty-six (from thirty-two).

Lalanne A. et al., American Association for Cancer Research, April 2024

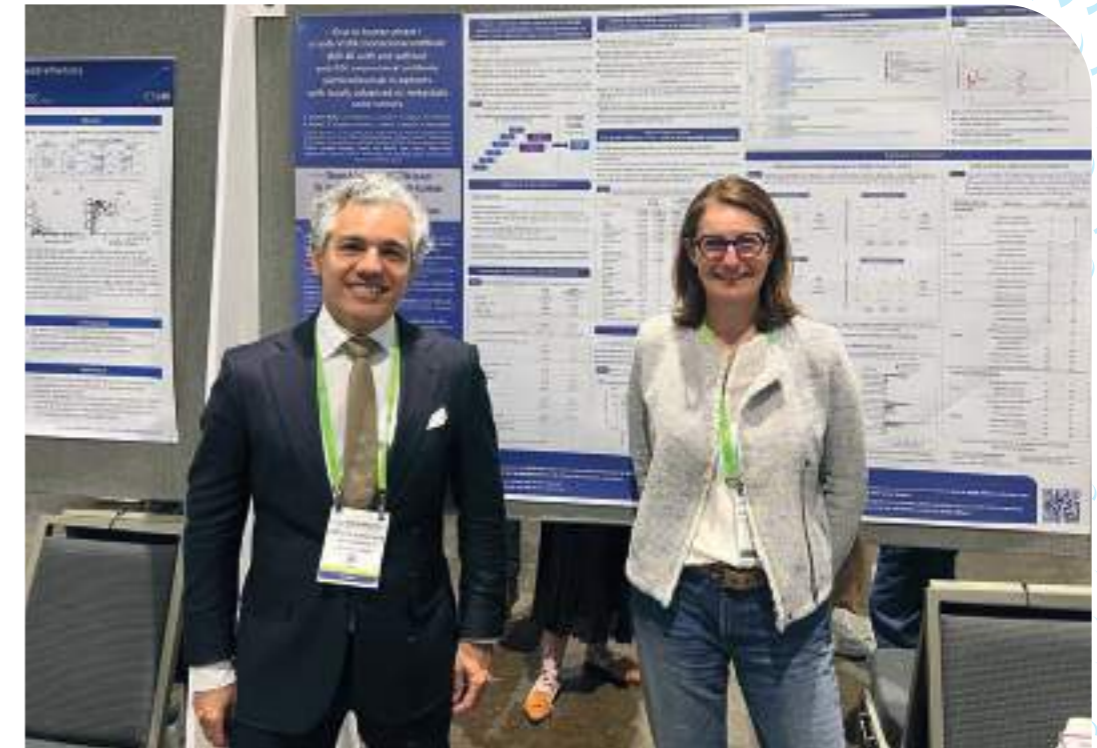
Dr. Victor Sarradin, Prof. Maha Ayyoub, Prof. Jean-Pierre Delord

IMMUNOTHERAPY

An early trial generates new knowledge

An early-phase study coordinated by **Dr. Carlos Gomez-Roca** has led to major advances in understanding the mechanisms of resistance to immunotherapy in colorectal and pancreatic cancers. The researchers focused on the hypothesis that immunotherapy could be made more effective by targeting specific immune cells - M2 macrophages, suspected of inhibiting antitumor response - by using two drugs with complementary roles: pexidartinib (CSF1R inhibitor) and durvalumab (anti-PD-L1 antibody). Clinical efficacy was limited, but the study of tumor samples revealed a deleterious effect of pexidartinib on the development of dendritic cells (antigen-presenting cells) through FLT3 inhibition. This discovery, presented at the American Association for Cancer Research conference (AACR 2024), will serve as a basis for optimizing combination therapies.

Voissière A. et al., Sci Transl Med., PMID 38266104, Jan. 2024



Dr. Carlos Gomez-Roca, Geneviève Gueguen-Dorbes

HIGHLIGHT

In 2024, the Oncopole obtained its INCa certification renewal for the next five years as an "Expert Center for Early-Phase Clinical Trials in Oncology" (CLIP²).





HEMATOLOGY

5 YEARS OF CAR-T CELLS

Transforming the therapeutic landscape

« FOR THE LAST FIVE YEARS AT THE ONCOPOLE, CAR-T CELLS HAVE BEEN TRANSFORMING PATIENTS' JOURNEYS AND CARE MANAGEMENT »

Hematologist, Dr. Pierre Bories has participated since 2019 in implementing CAR-T cell treatments, a rapidly developing cellular immunotherapy strategy.



What conclusions can you draw from implementing this breakthrough treatment at the Oncopole?

Very positive ones. CAR-T cells have transformed the therapeutic landscape. We currently treat 80 patients per year for six different indications in the context of B-cell lymphomas. Since 2019, more than 200 patients have been treated at the Oncopole, and we will soon reach 300.

Can we call it a revolution?

Yes, it is a revolution for certain patients who are now cured, although only a minority. It also highlights the need to continue researching other innovative strategies. The increase in indications, and therefore in the number of patients, is a significant development. It is also an organizational revolution. When the procedure was set up, it meant coordinating all the players involved as well as coping with the influx of patients before bed capacity could increase. So we worked to reduce the median stay at the Oncopole by outsourcing, as of 2023, the pre-CAR-T cell conditioning to centers in the Onco-Occitanie-Ouest network close to patients' residence. Beyond the benefits for patients and the transplant unit, the centers overwhelmingly approved this organization and their participation in these innovative care pathways.

What are the prospects?

Industrial developments of CAR-T cells will enable us to offer them in increasingly early stages of treatment. We will have new CAR-T cells with, we hope, new therapeutic targets. New therapeutic fields will be involved, such as solid tumors and autoimmune diseases, and we must keep pace with these developments. Care pathways will also evolve, a necessity after five years. The idea is to move toward more decentralized outpatient care while maintaining the same high standards in terms of quality of care and patient safety. We will need to evaluate these pathways - the aim of the CARAVAGE study launched in 2024 at Toulouse University Hospital.

FOCUS ON THE CARAVAGE STUDY

Adoptive immunotherapy using CAR-T cells is a major treatment in hematology, available at the Oncopole since 2019. To confirm its effectiveness at the regional level along with further patient-centered research, **Dr. Pierre Bories**, Oncopole hematologist, is coordinating the CARAVAGE study. This research will make it possible to evaluate the efficiency of outpatient and/or inter-institutional care pathways, to study patients' quality of life in relation to access to supportive cancer care (physical activity, nutrition, etc.), and to measure social and regional health inequalities and their impact on the future of patients eligible for CAR-T cells.



ACUTE MYELOID LEUKEMIA (AML)

Comparison of two treatment strategies

In recent work by Oncopole Hematology department head Prof. Christian Recher and his teams, two post-remission strategies for acute myeloid leukemia (AML) patients over the age of 60 are compared: intensive chemotherapy versus a lighter outpatient treatment. Published in the prestigious *American Journal of Hematology*, results show comparable efficacy, with a significant reduction in healthcare consumption. These data reinforce the curative potential of chemotherapy while paving the way for less toxic, better tolerated approaches incorporating new therapeutic options under development.

Recher C. et al., Am J Hematol, PMID 39555737, Nov. 2024



Predictive AI to guide treatment choice

In the current context of acute myeloid leukemia (AML) management, clinicians must make difficult choices between a number of treatment intensities and drug combinations, all the while integrating a large number of variables to make the right decision. In this context, Artificial intelligence (AI) could help hematologists inform their decision-making. A study on this subject conducted in part by the hematology teams at the Oncopole and the Toulouse Research Institute in Information Technology (IRIT) was recently published in the journal *Leukemia Research*. This research has led to the development of AI-based prediction models using 52 diagnostic variables from 3,687 patients. A neural network predicted overall survival with 68.5% accuracy for intensive chemotherapy and 62.1% for azacitidine. An algorithm selected the most relevant variables, simplifying clinical practice.

Didi I. et al., Leuk Res, PMID 38215555, Jan. 2024

MULTIPLE MYELOMA

Infectious events encountered after treatment with bispecific antibodies

Bispecific antibodies (BsAbs) are an effective treatment used in relapsed or refractory multiple myeloma. Despite a reassuring safety profile in clinical trials, the occurrence of infectious events came as a surprise during initial real-world use. In response, the hematology research teams at the Oncopole initiated a retrospective, multicenter study. Its main objective was to describe the incidence of infections requiring hospitalization, specific treatment, or BsAb administration adjustment. This collaborative work between the hematology and infectious disease groups at the IFM and G2I was presented by **Dr. Elise Cellerin** in an oral communication at the French Society of Hematology Congress (SFH 2024) and was recently published in the journal *Clinical Microbiology and Infection*.

Jourdes A. et al., Clin Microbiol Infect, PMID 38432433, June 2024



Natural Killer lymphocytes in the spotlight

Dr. Anne Huynh, hematologist at the Toulouse University Hospital on the IUCT-Oncopole site and recently-elected President of the Francophone Society for Bone Marrow Transplantation and Cell Therapy, successfully organized a fascinating conference evening on the theme of "Natural Killer lymphocytes in onco-hematology." With presentations by **Prof. Michel Duval**, an expert onco-hematologist from Sainte-Justine University Hospital (Montreal), and **Dr. Ludovic Martinet**, a researcher with the CRCT GENIM team, this event brought together more than 130 healthcare and research professionals, both live and via replay, demonstrating the keen interest in this promising topic. The evening provided a unique opportunity to deepen knowledge and discuss the prospects offered by natural killer lymphocytes in the fight against blood cancers

HEAD AND NECK CANCERS



BIOFACE, a future surgical procedure for facial reconstruction

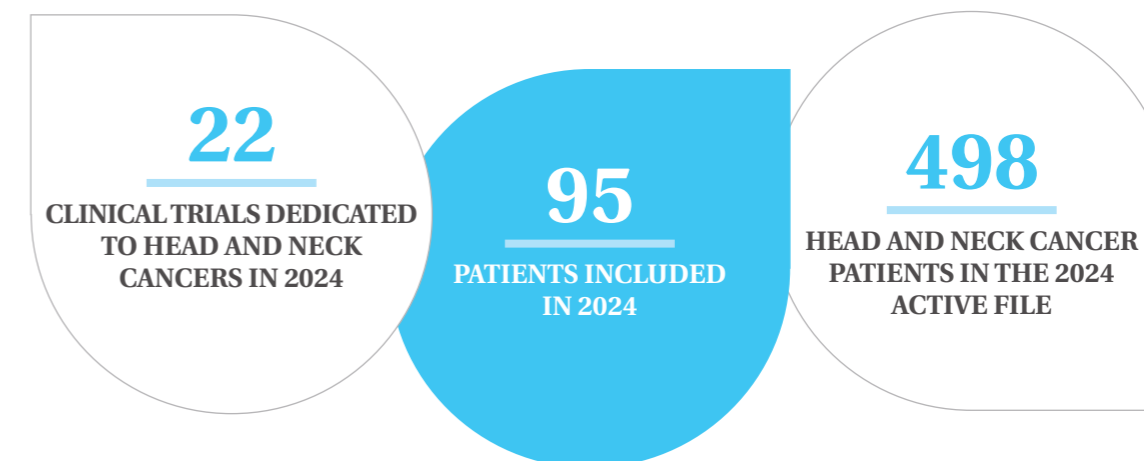


Launched in June 2024, the BIOFACE project, winner of the RHU6 call for projects as part of the France 2030 plan, is coordinated by Prof. Agnès Dupret-Bories, Oncopole surgical oncologist.



With a total budget of €13 million over five years, including more than €4.3 million of public funding, BIOFACE aims to transform facial bone reconstruction in head and neck cancers thanks to four innovative and personalized medical devices (3D printing). This new process will enable immediate and customized facial reconstruction without using a bone flap, while limiting complications associated with the procedure. From digital modeling to clinical trials, the research team was reinforced to carry out this large-scale project. Another objective of BIOFACE is to develop a new concept in pre-clinical trials by limiting the use of animal experimentation (*One Health/One Medicine approaches*).

BIOFACE brings together seven academic, hospital, and industrial partners (CIRIMAT, Inserm U1121, CERHUM, Materialise, Spartha Medical, OCRvet/Clinaxel, IUCT-Oncopole) with the active support of the CORASSO patients' association.



Multicenter study on rare head and neck cancers

A retrospective multicenter study on salivary carcinomas of the base of the tongue shows that surgery, particularly robotic (TORS), offers good local control and satisfactory functional results. Despite tumor heterogeneity and a high metastatic risk, this approach reduces the need for tracheostomy and gastrostomy. This study, the subject of **Dr. Valentine Poissonnet's** medical dissertation, was conducted with the French network of expertise on rare head and neck cancers (REFCOR) and members of the Oncopole head and neck organ coordination committee.

V. Poissonnet et al., Oral Oncol., PMID 39432991, Dec. 2024 / V. Poissonnet et al., Int J Cancer., PMID 39301840, Jan. 2025 / V. Poissonnet et al., J Robot Surg., PMID 40234274, April 2025

Retrospective study to adjust surgical protocols

Conducted by the Oncopole teams, a single-center retrospective study analyzed 223 patients undergoing surgery for squamous cell carcinoma of the tongue between 2017 and 2021. The results indicate that the wider the margin of tissue removed around the tumor (at least three to five millimeters depending on the size of the tumor), the better the chance of avoiding relapse. Tissue depth matters more than surface area. Through this research, surgeons will be able to adapt their protocols to improve patients' overall survival.

V. Poissonnet et al., Head Neck., PMID 38884458, Dec. 2024

Multidisciplinary study evaluating brachytherapy in treating facial skin cancers

Recent research carried out at the Oncopole has evaluated the effectiveness of high-dose-rate (HDR) brachytherapy in conservative treatment of facial skin cancers. Results show good local control (87% at three years), satisfactory tolerance and quality of life. For healthcare professionals, this is an interesting therapeutic option as an alternative to often disfiguring facial surgery, particularly for elderly patients.

Monge-Cadet J. et al., Cancers (Basel), PMID 39123471, August 2024



ONCO-GYNECOLOGY

930

PATIENTS
(ACTIVE FILE 2024)

21

DEDICATED
ONCO-GYNECOLOGY
CLINICAL TRIALS

+ than 40

MEDICO-SCIENTIFIC
PUBLICATIONS

ABDOMINAL CANCERS

See2cure focuses on fluorescence



This ambitious research project results from scientific collaboration between the IPBS-Toulouse Institute of Pharmacology and Structural Biology, the University of Toulouse, and the Oncopole. See2cure, a startup incubated on the Oncopole site, is developing fluorescence-based technology to improve surgery for abdominal cancers (including ovarian) and locate microscopic cancerous lesions invisible to the naked eye. The startup is the only biotech company in the world to have patented this innovative technology. Soon to be produced in large quantities, the See2cure probe will undergo a phase I clinical trial involving 15 to 25 patients treated at the Oncopole for ovarian cancer. Led by **Dr. Gwénaél Ferron**, surgical oncologist and co-founder of See2Cure, the project also includes **Prof. Laurent Paquereau** and **Dr. Mathilde Coustets**.



Prof. Laurent Paquereau, Dr. Mathilde Coustets, Dr. Gwénaél Ferron.

HIGHLIGHT

The IUCT-Oncopole is also a regional RENAPE (REseau NAtional de prise en charge des tumeurs rares du PEritoin) center of excellence.



ENDOMETRIAL CANCER

New treatment option

Endometrial cancers with defective DNA repair systems (dMMR) are particularly sensitive to immunotherapy, as demonstrated by study results in cases of relapse. The KEYNOTE-B21 phase III study, in which the Oncopole participated, evaluated the benefits of introducing immunotherapy (pembrolizumab) early-on in combination with standard chemotherapy at initial diagnosis in patients considered high risk after surgery. Results have shown that adding immunotherapy to conventional chemotherapy substantially improves relapse-free survival in this patient population. **Dr. Laurence Gladieff** is the penultimate author of a publication presenting these encouraging results. *Slomovitz B. et al., J Clin Oncol., PMID 39411812, Oct. 2024*



CERVICAL CANCER

Sexual health and quality of life

Co-authored by **Dr. Gwénaél Ferron**, this study presents the secondary results of the SHAPE trial on quality of life and sexual health in patients with early-stage, low-risk cervical cancer. The data confirm that less invasive simple hysterectomy is no less effective in oncological terms. The study also reports better results in terms of urological and sexual health. *Ferguson S. et al., J Clin Oncol., PMID 39353164, Oct. 2024*



NEURO-ONCOLOGY AND RADIOTHERAPY



At the intersection of radiotherapy and neuro-oncology, the Oncopole is developing innovative approaches to better understand, predict, and treat brain tumors, thus strengthening its position as a leader in precision medicine.

BRAIN TUMORS

A new approach to predicting prognosis

The DRIM project (*Disentangled Representations from Incomplete Multimodal data*) proposes an innovative method for predicting the prognosis of brain tumors by integrating heterogeneous data from MRI imaging, histopathology, and patients' genomic profiles. Using advanced *deep learning* techniques, this approach, developed by teams at the Oncopole, effectively combines these different modalities, even when data is missing — a common challenge in healthcare. DRIM aims to better estimate tumor aggressiveness, paving the way for more personalized and accurate care for patients with brain cancers. Under the supervision of **Prof. Elizabeth Moyal**, Head of the Radiotherapy department, and **Ahmad Berjaoui**, AI Manager at the Saint-Exupéry Technological Research Institute (IRT), Oncopole PhD student **Lucas Robinet** presented this work at the MICCAI 2024 international conference, a leading event in the field of artificial intelligence applied to medicine. *Robinet L et al., Cancers, PMID 37190181, Avril 2023 + <https://papers.miccai.org/miccai-2024/246-Paper1276.html>*



GLIOBLASTOMA

Neuro-Oncology

The SPECTRO-GLIO Study

Based on the results of a previous clinical trial conducted by the Oncopole (STEMRI), the multicenter phase III SPECTRO-GLIO trial recently evaluated whether intensifying the dose of radiotherapy, guided by magnetic resonance spectroscopy imaging (MRSI), could improve overall survival in newly diagnosed patients. The 180 participants were randomly distributed between one group receiving the standard dose (60 Gy) and another receiving a higher dose (72 Gy) targeting metabolic abnormalities identified by MRSI. After a median follow-up of 43.9 months, this dose increase was well tolerated, but no significant improvement in overall or progression-free survival was observed in the high-dose group. However, in patients with MGMT gene methylation, a trend toward prolonged survival was noted, suggesting that this subgroup of patients may benefit from this dose increase. *Laprie A. et al., Neuro-Oncology, PMID 37417948, Jan. 2024*

RESISTANCE MECHANISMS

Cell Death Discovery

The EXOFIELDS study

In 2024, the Oncopole reached a new milestone with the launch of the EXOFIELDS clinical trial, the result of research conducted by **Prof. Elizabeth Moyal** and two researchers from her team, **Dr. Valerie Gouaze-Andersson** and **Dr. Pauline Deshors**. Open for enrollment since September 2024, this trial aims to validate their discoveries on resistance mechanisms to low-intensity electric fields (TTFields), an innovative therapeutic approach in treating certain aggressive cancers such as glioblastoma, the most common primary brain tumor. The research has highlighted the key role of fibroblast growth factor receptors (FGFR) in glioblastoma stem cell resistance to TTFields and the potential efficacy of their inhibition. EXOFIELDS, with 38 patients already enrolled, will make it possible to identify tumor or blood triggers, paving the way for targeted and personalized therapeutic strategies to counter this phenomenon. *Deshors P. et al., Cell Death Discov., PMID 40467542, June 2025*



BREAST CANCER

Through its research work and involvement in international-scope projects, the Oncopole confirms its leading role in breast cancer research and reaffirms its commitment to precision medicine for the benefit of patients. These projects reflect the Oncopole teams' ambition to offer each patient a tailored treatment based on the latest scientific knowledge.



Dr. Eva Jouve, Prof. Florence Dalenc, Prof. Charlotte Vaysse

2,800

PATIENTS treated at the Oncopole

1 cancer out of 4

TREATED AT THE ONCOPOLE IS BREAST CANCER

34

CLINICAL TRIALS CONDUCTED EN 2024

INFLUENCE IN STRATEGIC BODIES

At the initiative of the French Society of Breast Cancer and Pathology (SFSPM), Prof. Florence Dalenc coordinated the drafting of new national recommendations on the systemic treatment of early-stage triple-negative cancers that were published in the fall by INCa.

Prof. Charlotte Vaysse's participation in the CNGOF's National Breast Cancer Commission and her associate membership of the National Academy of Surgery make it possible, as in 2024, to regularly issue national recommendations on various topics and to organize the various breast cancer sessions of the Paris-Santé Femme congress and the national Octobre Rose campaign. Lavoue V. et al., *Breast.*, PMID: 38547580, June 2024



FUNDAMENTAL RESEARCH

€2 million to launch a new chair in breast cancer research

The OncoBreast Chair, focused on research into triple-negative breast cancer, was launched in September 2024. Thirty-six-year-old Dr. Lorenzo Scipioni, previously affiliated with the University of California, Irvine, was recruited to head the project. The chair is funded by the Toulouse Cancer Santé Foundation, Inserm, TotalEnergies, and the Oncopole. Based at the CRCT, the team will conduct a five-year research program aiming to better understand the role of organelles (mitochondria, lysosomes, lipid droplets, etc.) in breast carcinogenesis and resistance to therapy.



Prof. Jean-Pierre Delord, Sylvain Bourgoïn, Prof. Gilles Favre, Dr. Lorenzo Scipioni, Dr. Pierre Cordelier, Jacques-Emmanuel Saultnier.

CIRCULATING TUMOR CELLS

Research is progressing

Determined to further understand the mechanisms of carcinogenesis, the breast cancer team continued its DP-META BREAST study, aiming with a simple blood test to detect the presence of large, "double-positive" cells in metastatic breast cancer patients to confirm their tumor origin and understand their role in disease progression. Furthermore, in collaboration with other cancer centers, the work indicates that the number of circulating tumor cells may affect the therapeutic strategy in metastatic breast cancer patients with hormone receptor expression.

Bidard FC et al., *J Clin Oncol*, PMID: 37931185, Feb. 2024

PI3K/AKT/M-TOR PATHWAY

New practices

This cell signaling pathway is highly activated in one third of breast cancers expressing hormone receptors. It is the target of drugs both in the early stages to reduce the risk of relapse and in the metastatic phase. Prof. Florence Dalenc, medical oncologist and co-head of the breast cancer organ coordination committee at the Oncopole, coordinated a study that changed practices with the introduction of capivasertib, a drug targeting a protein present in this PI3K/AKT/M-TOR pathway.

Penault-Llorca F et al, *ESMO Open*, PMID 38692082, May 2024 // Oliveira m et al., *The Lancet*, PMID 39214106, Sept. 2024

ADCs

A leading team in therapeutic sequencing

Antibody-drug conjugates (ADCs) are a major new therapeutic class in oncology and breast cancer treatment. They consist of a target that recognizes an antigen expressed by tumor cells. This target is linked to a cytotoxic agent delivered in higher concentrations within the tumor cell for greater efficacy. In 2024, the Oncopole breast cancer team published the results of the largest multicenter retrospective study reporting the efficacy of one ADC after another in metastatic breast cancer to inform future therapeutic strategies. The team's work continues focusing on the search for biomarkers of resistance to these treatments and the creation of an international cohort.

Poumeaud F et al., *Br J Cancer*, PMID 38918555, Sept. 2024



INNOVATING TO SUPPORT EACH PATIENT



INNOVATING TO PROVIDE BETTER TREATMENT AND CARE

At the Oncopole, supportive care is an essential and integral part of the care pathway. Led by a multidisciplinary team under the direction of **Dr. Nathalie Caunes-Hilary**, the Interdisciplinary Department of Supportive Care for Oncology Patients (DISSPO), in collaboration with medical oncology teams, deploys innovative and personalized approaches to meet the needs of patients and their families, from diagnosis to post-cancer care. In 2024, several key innovative projects were launched, illustrating a constant drive to improve patients' quality of life.

Focus on these initiatives making a difference.

The Enhanced post-Surgery Recovery program (RAAC)

As part of its commitment to innovation in serving patients, the Oncopole has implemented the Enhanced post-Surgery Recovery program (RAAC) to favor **faster and safer rehabilitation**. Since September, a dedicated nurse coordinator has overseen this structured pathway, from the preoperative phase to the patient's return home. The RAAC program is based on enhanced coordination between the hospital and the community and includes nursing consultations, remote monitoring, and anticipating hospital discharge. Currently offered for minimally invasive gynecological surgery, the program will gradually be expanded. RAAC improves patients' quality of life, reduces hospital stays, and limits the risk of rehospitalization.



The RAAC care team.

Launch of the regional network of speech therapists: Strengthening the link between the community and the hospital

The PR30 project (Regional Platform for Speech Therapy Referral and Organization) represents a major step forward in supportive care. Launched in 2023 on the initiative of the Oncopole, PR30 offers structured **support to community speech therapists to optimize care for patients with cancers of the upper aerodigestive tract** after their return home. In 2024, new training tools were deployed, and the digital platform simplified access to both medical documents (reports, imaging, etc.) and telecare. Unique in France, PR30 strengthens the link between communities and hospitals and guarantees high-quality follow-up throughout the country.

2 powerful initiatives, 1 dynamic approach to personalized patient care

Pain management: since 2024, the Supportive Care team has offered photobiomodulation — a non-medicinal light therapy with no side effects. Intended for patients suffering from neuropathic pain following surgery or radiotherapy, this innovative approach, offered in consultation or day-hospitalization, aims to improve patients' comfort and quality of life over the long term.

Sleep disorders: a new consultation dedicated to sleep disorders with hospital psychiatrist **Dr. Pierre Rigal** welcomes patients from the Oncopole. This innovative initiative aims to better diagnose and treat sleep disorders related to cancer. Ultimately, polysomnography will be performed on site to better target treatment.



Undernutrition Awareness Week, a fun and educational event

In mid-November, during National Undernutrition Awareness Week, the Oncopole organized three workshops for patients and caregivers. Led by the dietetics team, the stoma therapy nurse, and the CAMI Sport & Cancer association, these exchanges raised awareness about food enrichment, enteral nutrition, and adapted physical activity. More than fifty participants took part in the fun activities and tastings offered by the catering team and went home with booklets of adapted recipes. This collective initiative illustrates the Oncopole's strong commitment to comprehensive and personalized care, implemented in the fall when the first enteral nutrition day-hospitals opened.



Dr. Nafissa Saadoune



Carole Notrel, Mireille Delanghe, Marion Zamith-Chavant

Bull'enfants: A space for children facing the illness of a family member

Two Wednesdays a month, Bull'enfants welcomes children whose loved ones are being treated at the Oncopole. Run by two health professionals, this supportive space allows children to express their questions and emotions. Designed as a place for exchange and support, it complements the psychological support offered to families. "Hospitals are often frightening for children, but Bull'enfants is a space designed for them to feel welcome," says Oncopole psychologist Mireille Delanghe. Twenty-seven children and their families have been welcomed into this cozy space to help them navigate the care process together.



Mireille Delanghe, Carole Notrel.



27 children have been welcomed in the Bull'enfants space



89

NEW PATIENTS
BENEFITED
IN 2024

589

SESSIONS
ORGANIZED

The “Sport & Cancer” Program

In 2024, the Sport & Cancer program continued its commitment with 89 new patients benefiting from adapted physical activity sessions. A total of 589 sessions took place, illustrating the growing popularity of this recognized sports therapy. For seven years, this program, co-financed by the Oncopole, Malakoff Humanis mutual health insurance, and the Stade Toulousain (Rugby club) Endowment fund, has enabled patients, particularly those with breast, blood, and head and neck cancers, to engage in physical activity supervised by CAMI professionals in high-quality facilities. The benefits are considerable: 67% of the beneficiaries report a significant reduction in fatigue and improved resistance to treatment.



Dr. Nathalie Caunes-Hilary,
Head of the Oncopole
Supportive Care Department

This program confirms its essential role in comprehensive cancer care by combining medical progress with improved quality of life. We also mobilize healthcare professionals to support and integrate this practice into care journeys.

Handicap & Cancer

The Handicap & Cancer program, co-piloted by the Oncopole and the ASEI Association, continues its commitment to provide an inclusive care pathway for cancer patients with disabilities. In 2024, the team led interactive workshops at the regional meeting on “Care pathways and patient education” and launched an open professional media library with over 60 tools and practical information sheets. These awareness-raising initiatives that promote adapting practices have been shared within the Unicancer network. In 2025, new tools, including an e-learning module, will further enhance this inclusive approach and strengthen support for healthcare professionals.



Find out more



“Le chemin des aidants” (The Caregivers’ Path), the Oncopole’s first podcast

In 2024, the Oncopole launched its first podcast: “Le chemin des aidants” (The Caregivers’ Path). This unique project gives a voice to those who support a loved one with cancer to highlight their fundamental role in the care journey. In six themed episodes hosted by Chloé, caregivers and experts share their experiences, candidly addressing everyday issues such as mental health, working life, intimacy, and relationships with healthcare professionals. This podcast is part of an effort to recognize, listen to, and support these often invisible but essential actors. Thanks to Charlotte, Mickaël, and Florian for sharing their stories.

The podcast was produced with institutional support from AstraZeneca, Daiichi-Sankyo, MSD and Novartis.



Listen to
“Le chemin des aidants”
(The Caregivers’ Path)



IFAQ* Projects

2024 marked the fifth edition of this unique internal competition in France, where a jury composed of health professionals, patients, and user representatives rewards five projects proposed by the Oncopole’s care teams aimed at improving patient care and comfort. Budgeted to be implemented in 2025, the projects received a total of €0,000 through the IFAQ program. Congratulations to the five winning teams!

- “A cocooning moment” - Hospital hotel staff offers comforting breakfast trays for patients before their day of treatment.
- “A bra for everyone” - The surgical team provides all mastectomy patients with specially adapted bras.
- “Instillézen” - The day-hospital service creates a relaxing environment to reduce patient anxiety during intravesical instillation.
- “AromaZen” - The Imaging department improves patient care before invasive examinations thanks to aromatherapy sticks.
- “Got your ruler?” - The mobile Pain Management and Palliative Care team provides pain assessment rulers for healthcare professionals as a reminder that pain is a major concern in patient care.

* Financial Incentive for Quality Improvement (IFAQ) – funded by the French National Authority for Health (HAS)

Every year for the past five years, the jury members have paid tribute to the ongoing commitment and creativity of Oncopole teams who work every day to make real improvements in patients’ welcome and comfort and in providing them with a listening ear.

Myriam Promé,
Communication and User Relations Manager

The 1st Forum for Associations, mobilizing to serve patients

Organized by the Supportive Care department, the first Forum for Associations was held on March 12, 2024, in the main hall of the Oncopole. Open to patients, family caregivers, and healthcare professionals, this event enabled around 20 partner associations to present their missions through information stands. The day also highlighted the ongoing commitment of volunteers who support patients and their families throughout the year with meetings, listening sessions, and activities. The success of this first edition led to its renewal in 2025.





SHARING KNOWLEDGE



EXCHANGING PERSPECTIVES AND SHARING KNOWLEDGE



Prof. Klaus Pantel.



11
EVENTS ORGANIZED

3
EVENINGS DEDICATED TO MAJOR MEDICAL AND SCIENTIFIC CONFERENCES IN ONCOLOGY

2,300
PARTICIPANTS (+74% SINCE 2023)

30%
OF EXTERNAL PARTICIPANTS

Led by the medico-scientific steering committee, the "Oncopole Tuesdays" program illustrates the dynamics of knowledge dissemination in oncology. Every month, themed conferences and post-symposia presentations provide an opportunity to share medical and scientific advances. These events promote multidisciplinary and international perspectives by welcoming renowned experts such as **Prof. Klaus Pantel** (University of Hamburg), **Prof. Henri Montaudié** (Nice University Hospital) and **Prof. Michel Duval** (Sainte-Justine University Hospital, Montreal), thus reinforcing the Oncopole's attractiveness and excellence in research and innovation.



Replays of these conferences are also available on the Oncopole YouTube channel.



DRIVING THE ECOSYSTEM FORWARD FROM THE HEART OF THE ACTION

5th National Congress on Therapeutic Patient Education (ETP) in Oncology

Last November, the Oncopole hosted the two-day 5th National Congress on Therapeutic Patient Education (ETP) in oncology, organized by its Cross-functional ETP Team. This event brought together experts and caregivers around a strong ambition: to make ETP a central lever in cancer support. Backed by more than ten years of commitment and a strong regional dynamic, the Oncopole is developing a partnership-based, multidisciplinary approach placing patients at the heart of care journeys. These two days illustrated the vitality and maturity of a project framing the focus on educational innovation and patients' quality of life.



14th edition of the Supportive Cancer Care Reference Framework

On December 12 and 13, 2024, the Francophone Association for Supportive Care (AFSOS) organized the 14th edition of the Supportive Cancer Care Reference Framework at the Oncopole. This collaborative event brought together professionals and patients to develop, update, and validate reference guidelines to improve comprehensive patient care. Topics covered included patient partnership, acupuncture, vaccination, febrile neutropenia, burnout, skin and gynecological toxicities, and the role of caregivers. This event confirms the Oncopole's commitment to providing appropriate supportive care based on real-world practices and needs.



Sharing surgical excellence

In early October, part of the Oncopole surgical team hosted an exclusive webinar on the Oncostream platform dedicated to open and laparoscopic surgery in gynecological cancer. More than 400 professionals logged on to watch live surgical procedures performed in the Oncopole operating room. **Dr. Charlotte Chollet**, **Dr. Giulio Ricotta**, **Prof. Alejandra Martinez**, **Dr. Elodie Gauroy**, **Dr. Gwénaél Ferron**, and **Dr. Tanguy Le Gac** shared their expertise during this theoretical and practical training session.



XXXIst Franco-Catalan Meetings in Radiotherapy

In 2024, the Oncopole hosted the XXXIst edition of the Catalonia-Occitanie Oncology Group (GOCO) conference, led by radiotherapist **Prof. Anne Laprie**. This Franco-Catalan gathering of radiation therapy professionals promotes training, collaborative research, and interprofessional exchanges. The congress highlighted current practices, innovations in radiotherapy, and the impact of the specialty on the environment. Special attention was paid to young radiotherapists and advanced practice registered nurses and technicians, emphasizing the importance of teamwork in the evolution of cancer care.



Partnership with the Toulouse School of Economics



Renewed for two years, the partnership between the Oncopole and the Toulouse School of Economics illustrates a 100% Toulouse-based multidisciplinary collaboration bringing together physicians, economists, and social scientists. The aim is to collaboratively develop new tools to assess the benefits of treatments beyond their cost, by measuring their impact on patients' lives and on society. For Professor Jean-Pierre Delord and Pierre Dubois, director of the TSE Health Center, this collaboration is essential to pool knowledge for the benefit of patients.





MOBILIZING FORCES

TOGETHER FOR NEW VICTORIES AGAINST CANCER

€1,616,010
COLLECTED IN 2024

**64%
DONATIONS
AND
36%
BEQUESTS**

The Oncopole is part of a collective dynamic where every show of support counts. Thanks to numerous individual donors and to the collective involvement of the Oncopole Ambassadors - associations, local authorities, companies, patients, and family caregivers - ambitious research projects can be carried out and concrete actions undertaken to improve patients' daily lives. Together, they speak on behalf of the Oncopole's work, raising awareness and bringing people together around the values of solidarity, innovation and hope. All of the Oncopole teams warmly thank the donor community and partners for their trust, generosity and commitment.



Gym La Capulette



Phil'Anthrope



Eveil et Loisir



La Sein Go Rose



Rando pour une Maman



El Magnifico



Bel Horizon



MP Résilience



Enzo One Life

A big thank you also to all the associations and their volunteers*

AERO ANTI-CANCER - VIVRE AVEC (AVA) - BENOIT UN SOURIRE POUR LA VIE - CHOEUR LITHURGIQUE OECUMÉNIQUE DE L'ARIZE (CLO) - CORPO ARSENAL - CRBP RAID 31 - ENTENTE CORDIALE GAILLACOISE - RIEUX VOLVESTRE - GYM PLUS RISCLOISE - HYPERPOMME SUD OUEST - L GARDE LA FORME - LE MARATHON DE LAURIE - LES AMIS DE L'ONCOPELE - LES COURBES DU 31 - LES POUMPILS DE CABARDÈS - POUR CORENTIN - SO SPORT ENTREPRISE - TENNIS CLUB ALBIASSAIN - TRIPLE'N'ROSES - VIVE LES VOISINS -

*List of organizations that have donated more than €1,500 to the Oncopole to further cancer research

Our collaboration with the Oncopole, on the occasion of its tenth anniversary, is much more than a partnership: it is a source of real pride. Seeing players, staff, and fans rallying together for research and the well-being of patients, especially the youngest ones, shows that soccer also plays an essential role off the playing fields. Thanks to the Oncopole teams and the entire violet family for this exemplary mobilization symbolizing our commitment and the strength of the violet heart.

Cindy Johnson,
Legal Director and Head
of the Toulouse Football Club Foundation
and Endowment Fund



At i-Run, we offer our employees the opportunity to thrive through physical activity, highlighting the benefits of sport. The Oncopole Sports Challenge we took part in in 2024 allowed them to give meaning to their training while supporting a cause that matters to us: the fight against cancer. Sponsorship is part of our CSR policy, and we are proud to actively support the Oncopole's research projects and teams.

Sarah Legrand,
Project manager CSR i-run



They accompany us, support our projects, our research teams, and our healthcare services

Inserm – CNRS – University of Toulouse - UNICANCER - National Cancer Institute – ANR – Occitanie Region – Investments for the Future – Cancéropôle Grand Sud-Ouest – French Blood Establishment – European Union – Foundation for Medical Research - ARC Foundation for Cancer Research - National League Against Cancer - League Against Cancer 31 - Carnot Opale Institute - Pierre Fabre Chair – Fondation de France – RITC Foundation – Bettencourt Schueller Foundation – Laurette Fugain – GIRCI SOHO – Amgen Foundation – Bristol Myers Squibb Foundation – Riney Foundation

Thanks to the companies rallying around the Oncopole, including:



INNOVATING TO RAISE AWARENESS AMONG ALL AUDIENCES

Pink October: new mobilizations

To mark its tenth anniversary, the Oncopole combined mobilization and music for the first time! The “Pink October, Pink City, Same Fight” campaign kicked off from the month of August at the Rose Festival, the first musical event to support the Oncopole. Over four days, more than 3,000 festival-goers visited the information stand to meet healthcare teams and share messages of support, smiles, and balloons of hope. A wave of emotion and commitment continued in October with concerts by Thibault Cauvin and Mathieu Chedid at the Halle aux Grains and at the Zénith for several shows. Thank to the teams from the Rose Festival, Bleu Citron, La Dépêche du Midi, and the Zénith.



Video of the event

Solidarity haircuts

An original hair donation initiative imagined by Pierre Fabre Laboratories in collaboration with René Furterer. For this first edition, 84 people from the Oncopole agreed to have their hair cut to donate it to the Fake Hair Don't Care association to create natural wigs. Thanks to everyone who took part in this successful first edition. See you in October 2025!



Video of the event

Turquoise September: a month to raise awareness among all audiences about gynecological cancers



For this latest edition, a 360° campaign was rolled out around the “Let’s break down preconceived ideas” initiative, the second Turquoise Day for patients and caregivers, and a medico-scientific evening lecture that brought together 145 healthcare professionals to discuss the latest developments in gynecological oncology.

The starting signal was given on World Ovarian Cancer Day on May 8 with the third Turquoise Challenge. To reach a wider audience, a collective of colorists organized a live event on YouTube that same day, bringing together international illustrators. In the end, more than 52 works were collected and exhibited throughout the month of September in the main lobby. Thank you to our partners, MSD, AstraZeneca, GSK, Pharma& and Tisséo Collectivités for their support and involvement!

And also



Kidney cancer

Information and awareness stand on kidney cancer with the ARTuR association, with institutional support from IPSEN.



Red September

Organization of a photo booth for hematology teams as part of Blood Cancer Awareness Month, with institutional support from AstraZeneca.

2024, SPORTSMANSHIP AND THE OLYMPIC SPIRIT AT THE ONCOPOLE

Throughout 2024, buoyed by the momentum of the Olympic Games, the Oncopole strengthened its commitment to sport and health. Numerous sporting events punctuated the year thanks to our partners’ mobilization. A collective momentum in tune with the values of sport: solidarity and surpassing oneself.

2nd edition of the Sports Challenge



The 2nd edition of the Oncopole Sports Challenge brought together nearly 700 participants, covering 90,252 km to raise €24,000 for sarcoma research and the Sport & Cancer program set up for Oncopole patients. Thanks to the support of our partners i-Run, eXcent, Toulouse Métropole, BA France, E-santé Occitanie

SNCF Réseau, Alltricks Escalquens, and United Bicycle, this event also raised awareness of the importance of daily physical activity.

First mobilization with the Toulouse Football Club for teenage and young adult patients



The Toulouse Football Club (TFC) and its foundation, Toulouse Football Coeur, supported the Oncopole throughout the month of November:

- TFC vs Reims match
- Charity run by young people from the training center
- Sports classes for healthcare professionals
- Call for donations from club supporters
- Solidarity ticket sales for November matches

The funds raised were dedicated to research and improving the comfort and well-being of adolescent and young adult (AJA) patients.

First partnership with Supertri and Toulouse Triathlon Métropole

Supertri League (an international triathlon competition organization) and the Toulouse Triathlon Métropole (TTM) sports association chose to support and honor the Oncopole during the Supertri Toulouse Triathlon race. From October 4 to 6, Olympic triathletes Cassandre Beaugrand, Dorian Coninx, Léonie Periault, and Emma Lombardi came to meet patients and professionals at the Oncopole for a tour of the facility and an autograph session. Before the official triathlon, TTM organized a charity race from the Oncopole to the Place du Capitole in the city centre involving around 30 Oncopole staff members.





FOCUSING ENERGIES



IUCT-ONCOPOLE COLLECTIVE EXPERTISE



For over ten years, the IUCT-Oncopole has brought together on a single site the Claudius Regaud Cancer Center and several teams from the Toulouse University Hospital to fulfill three missions: care, research, and teaching.

Symbolizing this continuum of care and research, a walkway links the Oncopole to the Toulouse Cancer Research Center (CRCT) to complement expertise and conduct fundamental and translational research programs. In total, more than 2,000 professionals combine their skills to accelerate cancer research and provide the best possible support to patients and their families.



11 YEARS AFTER ITS OPENING, THE ONCOPOLE OFFERS TWICE AS MANY CLINICAL TRIALS TO PATIENTS AND PRODUCES TWICE AS MANY PUBLICATIONS IN INTERNATIONAL SCIENTIFIC JOURNALS.

The site, comprising the IUCT-Oncopole and the CRCT, is certified as a *Comprehensive Cancer Center* by the Organisation of European Cancer Institutes (OECI). This label of excellence attests to expertise in oncology and highlights the multidisciplinary approach to patient care and the high degree of integrated clinical practice and research.

The strength of this model - a pioneer in France - lies in the pooling of skills of care and research teams working together on a daily basis to ensure that patients benefit from comprehensive, cutting-edge care.



ORGANIZATION

The IUCT-Oncopole brings together more than twenty care units and medico-technical platforms. The organization is structured around eighteen medico-clinical departments and fourteen Organ Coordination Committees (CCOs), in collaboration with three other CCOs at the Toulouse University Hospital's Rangueil and Purpan sites.



Pr Jean-Pierre Delord,
General Manager of the Oncopole Claudius Regaud,
Administrator of the GCS IUCT-Oncopole



Jean-François Lefebvre,
General Manager of the Toulouse University Hospital (CHU), & President of the General Assembly of the GCS IUCT-Oncopole

The GCS IUCT-Oncopole

The IUCT-Oncopole is organized as a healthcare consortium (Groupe de Coopération Sanitaire, GCS) set up under private law as an equal partnership between the Oncopole Claudius Regaud (OCR) and the Toulouse University Hospital (CHU). The General Manager of the CHU presides over the General Assembly, and the General Manager of the OCR acts as GCS director. Internal rules of procedure specify the division of disciplines and competencies.

This cooperation is unique in France. Its aim:

- Coordinate **public cancer care at the OCR and the CHU**. The three sites, IUCT-Oncopole (CHU-OCR site), IUCT-Purpan (CHU site) and IUCT Rangueil/Larrey (CHU site), allocate patient care pathways without duplication.
- Pool skills and heavy medical equipment at the IUCT-Oncopole.
- Develop joint research programs with the National Institute of Health and Medical Research (Inserm) and the University to make scientific advances more rapidly available.

Together, the two establishments have drawn up a new Medico-Scientific Project (PMS) for 2023-2028 committing the IUCT-Oncopole to an expansion program.



Focus on the Oncopole expansion project

Against a backdrop of demographic, epidemiological, and technological change, the Oncopole began the first stages of an ambitious expansion project in 2024 to better respond collectively to current and future challenges in cancer care. Part of the Toulouse University Hospital's and the Oncopole Claudius Regaud's respective development plans, the expansion is based on a joint medical project. The aim is to improve patient care pathways and medico-nursing organizations, increase bed capacity, modularize spaces, and integrate quality of life at work and environmental issues.

14,000 m²
OF CONSTRUCTION
AND RENOVATION

+108
HOSPITAL
BEDS



THE TOULOUSE CANCER RESEARCH CENTER

The only research center in Toulouse dedicated entirely to cancer research, the CRCT (Inserm Joint Research Unit 1037, University of Toulouse, CNRS joint research unit 5071) brings together over 400 people in 20 research teams, 8 technology platforms and 1 support service. Each team integrates on-site clinicians, and all translational research projects are led by researcher/clinician duos.



From left to right: Sébastien Guibert (General secretary), Dr. Pierre Cordelier (Manager), Prof. Elizabeth Moyal (Deputy manager), Dr. Frédéric Lopez (Technology Cluster Manager).

The multidisciplinary expertise of the CRCT teams is organized around four thematic axes, all of which aim to better characterize the mechanisms of oncogenesis and better understand and target the mechanisms of tumor cell resistance to different treatments.

- **Oncogenic signaling, from modeling toward targeted therapy.** The aim is to better understand and target oncogenic mechanisms within cells or their immediate environment.
- **RNA & cancer.** The mechanisms of RNA deregulation are explored in order to better identify their role in tumor initiation and progression to the metastatic stage.
- **Tumor microenvironment and metabolism.** Here, the challenge is twofold: on the one hand, to better understand the dialogue between tumor cells and stroma, and on the other, the role of metabolism in tumor growth and cellular resistance to treatment.
- **Onco-immunology.** The aim is to characterize the molecular and cellular determinants involved in the anti-tumor immune response to improve its effectiveness.

20

RESEARCH
TEAMS

9

TECHNOLOGY
PLATFORMS
AND 1
SUPPORT SERVICE



To further encourage collaboration between CRCT members and researchers from a wide range of disciplines, the CRCT has signed two partnerships with the Systems Analysis and Architecture Laboratory (LAAS-CNRS) and the Toulouse Research Institute in Information Technology (IRIT). These partnerships aim to broaden the scope of cancer research and offer innovative solutions to better understand and more effectively fight the disease. With LAAS researchers, the CRCT, in particular, explores the importance of physical constraints in oncogenesis and therapeutic responses, and develops tomorrow's theranostic approaches. With IRIT researchers, some of whom work on site, CRCT researchers use Artificial Intelligence to model living organisms, better understand tumor biology, optimize treatments, and develop future digital assistants for clinical decision-making. Finally, the CRCT is also committed to industrial development, hosting the NeoVirTech start-up on its premises.

Technology cluster news

For ten years, the CRCT Technology Cluster has provided technological support for CRCT and IUCT-Oncopole research teams and, more broadly, for the regional and even national scientific community. Equipped with a substantial range of instruments, it benefits from the technological and administrative know-how and skills of a team of fifteen people spread across eight technical platforms.

The Technology Center benefits from a double quality certification (ISO 9001:2015 and NFX 50-900), as well as the GénoToul environment (a Toulouse-based network of life sciences research platforms) to carry out its three missions: expertise, training, and R&D.

In 2024, it undertook an active recruitment program, won funding, installed new equipment, created a new platform, and organized scientific events.



COMPLEMENTARY ON-SITE EXPERTISE



Onco-Occitanie

Located within the IUCT-Oncopole (in Western Occitanie), Onco-Occitanie has a mission to support, structure, and federate all cancer care professionals in Occitanie to improve and harmonize the quality of cancer patients' care pathways. In this role, Onco-Occitanie:

- helps coordinate regional organization of healthcare provision and improve its visibility,
- promotes and improves the quality of care,
- participates in informing and training healthcare professionals and facilitates access to innovation and expertise,
- participates in patient information,
- evaluates organizations and practices in oncology.

To carry out its missions, Onco-Occitanie works closely with all stakeholders in the ecosystem (care facilities, healthcare professionals, regional cancer coordination centers, etc.).

Patients' associations

Several patients' associations are also involved on a daily basis with patients at the IUCT-Oncopole. Some of them are based on the campus.



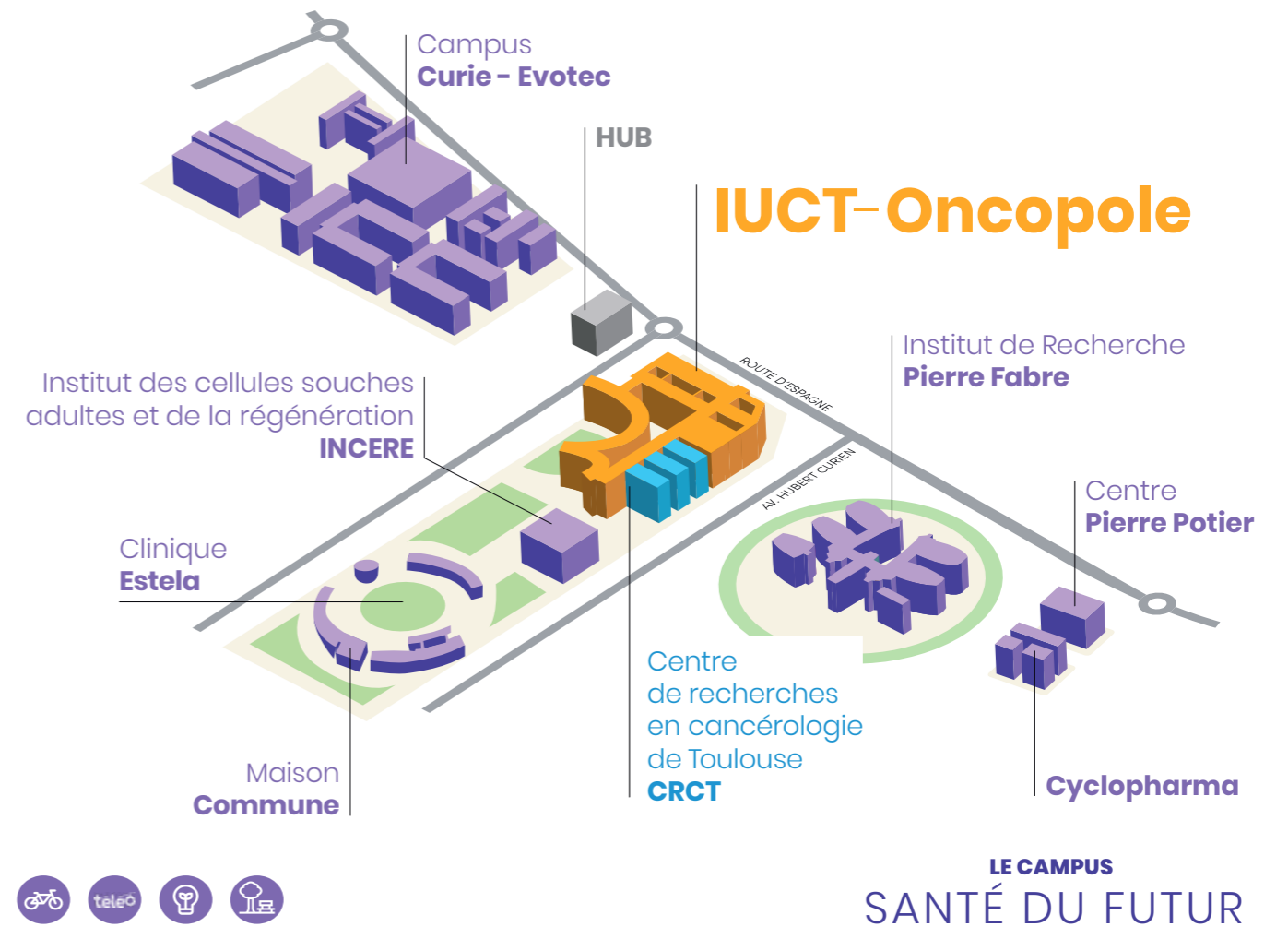
French National Blood Service

On site, the **Etablissement français du sang – EFS** (French National Blood Service) houses a hematopoietic stem cell collection unit (CSH) for adults to meet the needs of the IUCT-Oncopole, as well as a cell therapy unit to prepare and store bone marrow and stem cell samples and respond to regional, national, and international needs.



AT THE HEART OF THE "SANTÉ DU FUTUR" CAMPUS

The IUCT-Oncopole and the CRCT are located on the "Santé du Futur" Campus, bringing together academic, scientific, medical, clinical, industrial, public and private expertise striving for the same goal – the fight against cancer. More than 6,000 professionals work together every day on this 220-hectare campus. Beyond the buildings, the IUCT-Oncopole offers patients and visitors 3,000 m2 of landscaped green spaces.



The IUCT-Oncopole is accredited by (OEI)



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