PROTON THERAPY CENTER

PATIENT WELCOME BOOKLET

University campus / *Campus universitaire*

Building 101 / *Bâtiment 101*

Institut Curie

Radiation Oncology Department / *Département de Radiothérapie oncologique*

91898 Orsay cedex - France

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institutCurie

Together, let's beat cancer.

CHARTER OF PATIENTS' RIGHTS

1 Each patient is free to choose the health care institution they want to take care of them, subject to the limitations of each institution. The public hospital service is accessible to everyone, in particular to the most needy persons and, in the event of emergency, to persons without social security cover. It is adapted to handicapped persons.

2 Health care institutions must guarantee the quality of reception, treatment and care. They must be attentive to pain relief and do everything possible to ensure everyone is treated with dignity, particularly at the end of life.

3 Information given to the patient must be accessible and reliable. The hospitalised patient can participate in the choice of treatment. They can be assisted by a trusted support person that they freely choose.

4 A medical procedure can only be conducted with the free and informed consent of the patient. The latter has the right to refuse all treatment. Any adult can express their wishes as to the end of their life in advance directives.

5 Specific consent is needed for patients participating in biomedical research, the donation and use of parts and products of the human body and for screening procedures.

6 A patient who is asked to participate in biomedical research must be informed of the expected benefits and the foreseeable risks. Their agreement must be given in writing. Their refusal will not have any effect on the quality of care that they receive.

7 The hospitalised patient can, unless otherwise provided for by the law, leave the institution at any time after having been informed of any risks incurred.

8 The hospitalised patient must be treated with consideration. Their beliefs must be respected. They must be ensured privacy and peace and quiet.

9 Respect of privacy is guaranteed to every patient, as well as confidentiality of personal, administrative, medical and social information concerning them.

10 The hospitalised patient (or their legal representatives) benefits from direct access to health information concerning them. Under certain conditions, in the event of death, their beneficiaries benefit from the same right.

11 The hospitalised patient can express their views on the care and reception provided. In each institution, a commission for relations with users and the quality of care given ensures that the rights of users are respected. Every patient has the right to be heard by a manager of the institution to express them grievances and request compensation for harm to which their believe they have been subjected within the context of an amicable settlement procedure for disputes and/or before the courts.

French ministry of health *(© DHOS)*

The complete Hospitalised Patients' Charter document and general principles are accessible in seven languages on the website: ***www.curie.fr***

WELCOME TO THE INSTITUT CURIE PROTON THERAPY CENTER

This booklet is designed to make your stay easier in Orsay, at the Proton Therapy Center of the Radiation Oncology Department. It will give you practical and useful information.

Information booklets with a specific presentation of the Institut Curie Hospital Group are provided to patients treated at the Institut.

A team of specialists at your service

In every hospital department of the Institut Curie, care is provided by teams of specialists that ensure high performance and quality treatment.

You are unique, and your disease is also unique. That is the reason why our specialists will do everything possible to tailor your treatment to your needs. The team of the Proton Therapy Center works in relation with your referring physician and other specialists that follow you, in a multidisciplinary collaborative framework.

Each person involved in the process wears an identification badge and you can ask for his or her name and function anytime.

Radiation oncologist

Working in close collaboration with radiation physicists, assistants and technicians, the physicians of the Proton Therapy Center are radiation oncologists, in other words oncologists who use radiation to treat malignant tumors and, in some cases, benign tumors. They establish the indication for treatment, determine the dose that is to be administered and the target that is to be treated, as well as the surrounding organs that should be protected. They will see you in consultation before treatment, in order to have better knowledge of your medical background and give you information about the treatment procedures and effects. During treatment, a weekly consultation will enable to monitor the efficiency and your tolerance of radiation therapy, and it will also provide you with an opportunity to have your questions answered.

After treatment, radiation oncologists will be regularly involved in your follow-up, either by receiving you in consultation, or by getting information about clinical and radiological findings from your other physicians. They inform your referring physician and specialist physicians about the procedures for your treatment. Physicians of the Proton Therapy Center are on duty on a daily basis. Do not hesitate to contact them for urgent issues.

Radiation physicists

As specialists of radiation physics applied to medical treatment, they determine the best irradiation ballistics in collaboration with your referring radiation therapist and dosimetry technicians. They ensure the quality of the radiation beam and its reproducibility, and they control the beam shaping systems. They are involved in the daily internal activities that aim at improving the accuracy, comfort and quality of your treatment.

Chief therapist

The chief therapist organizes patient support in collaboration with the medical team and the physics team. He or she manages the team of medical technicians and assistants under his or her supervision, and is also the contact person of patients and relatives for treatment organization issues.

Technicians

As soon as you arrive at the Proton Therapy Center, technicians assist you and provide you with information about the different stages of your treatment. They manufacture the restraint system that will help you to stay immobile. They ensure your daily positioning with great accuracy, they control beam quality and participate in the establishment of dosimetry. They have comprehensive knowledge of your record and follow you throughout the treatment.

Anesthetics team: anesthetists and specialized nurses

General anesthetic may be necessary for younger children who cannot remain immobile. A pre-operating check-up (blood collection, electrocardiogram, radiography, etc.) is performed before the first proton therapy session. A consultation with an anesthetist enables to prepare the operation and guarantee security.

Medical assistant

She manages your whole record. She monitors administrative procedures and helps you with accommodation bookings. The medical assistant is available to help you throughout your treatment and communicates your information, with your prior agreement and that of the Proton Therapy Center physician, to the various physicians that follow you.

Information desk hostess

She welcomes you to the Proton Therapy Center upon arrival, organizes your appointments, helps you find your way in the center, communicates your weekly appointment schedule, as well as your transportation reimbursement documents.

Technical team (engineers/technicians/computer scientists)

The technical service is in charge of the development and maintenance of the machine and treatment rooms. It ensures real time control of the proton beam. Mechanical engineers make the custom personal accessories used for treatment and participate in the development of beam shaping systems.

Pain management team

Pain management is a priority at the Institut Curie. Do not hesitate to talk to the staff about your pain. In Paris, a consultation, an emergency service and hospital beds are dedicated to pain management activities, which are coordinated by a pain management committee (Clud).

Consultations take place on the Paris site from Monday to Friday:

Tel. +33(0)1 44 32 46 44 / 42 78 or 41 96

Interdisciplinary oncological patient care and support department (Disspo)

In Paris, it brings together the social service, the continuous mobile support and care unit and the dietetics, physical rehabilitation and psycho-oncology units. All contact information is available at the information desk.
Socio-beauticians offer free facial and hand care, from Monday to Friday, in an aesthetics booth at the Institut Curie Hospital (Paris 5th arrondissement). For more information, go to the Proton Therapy Center information desk.

Most partner centers of the Proton Therapy Center have similar specialized teams.

Help and information

The website of the Proton Therapy Center of the Radiation Oncology Department provides information about the missions and activities of the Institut Curie.

protontherapie.curie.fr

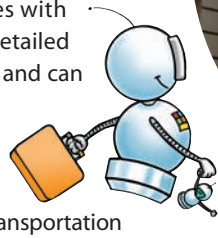
Meeting and information areas (Eri – "Espaces de rencontres et d'information"), a patients' house and a users' house are available in the specialized institutions, in particular at the Institut Curie (Paris and Saint-Cloud) and the Institut Gustave-Roussy (Villejuif). Contact information is available at the Proton Therapy Center information desk of the Radiation Oncology Department. A phone information line is available to all:

Cancer info service +33 (0) 810 810 821 ***(Azur number, local call rate)***

During your treatment

Medicalized transportation

Depending on your health and your level of dependency, your physician can write a prescription for adapted transportation. Note: In certain cases, coverage of transportation costs may require prior agreement of your health insurance fund, in addition to the physician's prescription. Health insurance covers only rides with cab services under agreement. A detailed information document is available and can be sent on request.



For patients covered by French social security

The health insurance fund covers transportation costs only after agreement on your personal record. You may benefit from an agreement established with your health insurance, in which case you do not have to pay for expenses in advance.

For foreign patients

Transportation is at your own expense.

Accommodation

Accommodation is at your own expense. However, if you contribute to a mutual health insurance, a request can be made for coverage of accommodation costs.

Contact your mutual health insurance for more information.

For children and their parents

– The Irène-Joliot-Curie Parents' House

Located near the Institut Curie Hospital in Paris (5th arrondissement). It enables young children and their parents to live in Paris during treatment. This house also offers assistance, as well as psychological and material support services for families.

13 rue Tournefort – 75005 Paris, France
Phone: +33(0)1 47 07 21 50

– Ronald-McDonald House for parents

The Ronald-McDonald House is located on the site of the Institut Gustave-Roussy. Bookings cannot be made directly with the house. Admissions in the house for parents are directly managed by the Pediatrics service of the Institut Gustave-Roussy.

39 rue Camille Desmoulins
94805 Villejuif cedex, France
Phone: +33(0)1 49 58 10 00

Mobile phones may interfere with ultra-sensitive medical equipment. Therefore, mobile phones must be switched off within the institution's premises.

Waiting rooms

In each waiting room, you will find a range of regularly renewed periodicals. Children have their own specific waiting room with games, children's books and magazines.

A cafeteria space is also available with a vending machine with hot and cold drinks.

As we are committed to always improve the quality of our reception, you will find a free expression notebook where you can make suggestions to improve our service.

Meals

Your examinations may be scheduled early in the morning or during meal times. You have access to a cafeteria (coffee, sandwiches, fruits…).

You can also have lunch at the university campus restaurant, which is located close to the Proton Therapy Center of the Radiation Oncology Department. To have access to this restaurant, you simply need to ask the information desk hostess for a form. Meals are at your expenses.

To improve the quality of care

At the end of your treatment, please take some time to fill in the satisfaction questionnaire that was handed out during the preparation of your treatment. You can return it at the information desk after your final session.

Your comments are very helpful for us to better meet your expectations.

Administrative procedures

Upon your first arrival, you will be asked to provide some information:

If you are covered by French social security, you need to present:

• a copy of your carte Vitale attestation.

If you no longer have the attestation, you need to ask for a copy from your health insurance fund;

• a copy of your ID.

If you are a foreign national and are affiliated with a health insurance scheme in your home country, you need to present:

• your European Health Insurance Card or/and an E112 form (European citizens) specifying "Institut Curie Proton Therapy Center", indicating the dates of preparation and treatment or coverage by your private insurance or the relevant state body in your home country.

• a copy of your identity papers.

Also available at the information desk of the Proton Therapy Center of the Radiation Oncology Department

• list of possible accommodations near the Proton Therapy Center;

• list of transportation services under agreement.

If you are a resident of the European Union, the E112 form provides coverage for transportation with transportation vouchers and travel receipts.

If you are a resident of a country which is not a member of the European Union, your health insurance may provide financial support. Contact your insurance scheme for more information. A cost estimate will be sent to your home.

The Institut Curie informs you about…

Your rights

In addition to your first essential right, which is the right to receive high-quality care under the strictest safety conditions, the Institut Curie is committed to the respect of its patients' rights. *(Please refer to the Patient's Charter at the start of this booklet).*

Information given to you as a patient

• Everyone has the right to be informed about their state of health. This information must be clear and easily understandable and must include mention of the available treatments, associated risks and possible side effects.

• The care team in most of our medical units will provide you with information sheets about the various situations and difficulties you may be confronted with. These information sheets will help you participate more actively in your treatment but are no substitute for the in-depth discussions you will have with your attending physician and other members of the care team.

Confidentiality

To respect your right to confidentiality, we strictly adhere to the privacy laws concerning your medical information (physician-patient confidentiality), intimate personal details and religious beliefs throughout your hospital stay. You can also request that your presence at the Institut Curie will not be disclosed.

Information given to your family and friends

• Quite understandably, your family and friends will be concerned about your state of health. All your personal information is confidential. Nevertheless, if you agree, we can release certain information to your family and friends.

• You must provide us with the name of a person to contact in case of necessity.

• You can also name a "medical proxy" (a family member, close friend or your family doctor, for example). The medical proxy can be present during your medical consultations and examinations and may help you make choices and decisions. He/she can act as your "spokesperson" and will be consulted if you are not able to understand information or express your wishes. This written designation may be withdrawn at any time.

Consenting to treatment

A medical act can only be performed if you have freely given your informed consent. The biological samples needed for diagnosis and/or treatment are used immediately to generate a test result. However, part of these samples can be stored for use in bio-medical research. The physicians will then provide you with detailed information on any such research and will request your specific consent for this use.

Your medical records

On arrival, you will be told that your administrative and medical records will be computerized. This electronic health record can be accessed by all those involved in your care. The goal is to centralize all your personal health data to optimize your medical care: your name, personal details, state of health, check-up and test results, medical notes, etc.

This information will be available only to people involved in your care (caregivers and medical assistants) who are bound by their professional code of conduct to keep this information confidential. You can also specify that only certain physicians, within or outside the Institut Curie, will be allowed to consult your medical records.

Your medical records are kept in compliance with the current legislation in France.

Accessing your medical records

You or your legal representatives or beneficiaries may access your medical records directly if so desired.

In compliance with the legislation, you can: see a copy of your medical records sent to the physician of your choice; consult them on site at the Institut Curie; or ask for a copy to be sent to your home.

To request access to some or all of your personal health information, you must write (enclosing a photocopy of your passport or identity papers) to the **Directeur de la Section médicale de l'Institut Curie, 26 rue d'Ulm – 75248 Paris cedex 05, France.**

Giving physicians Internet access to your health records

To ensure continuity of your care once you have left the Institut Curie, and while waiting for the implementation of a nationwide, single electronic medical record scheme in France, your electronic health record can be made available to your family doctor or other designated physicians, so that they can have access to information on your state of health by internet. This access is highly secure and guarantees total confidentiality of your medical records. If you subsequently wish to withdraw the authorization of access for one or all of the designated physicians, you can simply write to the medical secretary of your Institut Curie consultant, who will take the necessary measures immediately.

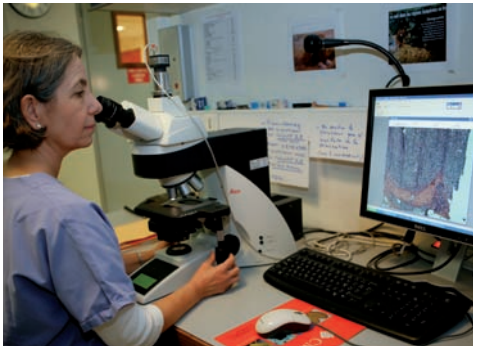
Your right to access and rectify your personal information

The objective of France's 1978 Data Processing and Civil Liberties Act is to ensure that computer processing of personal data does not intrude into your private life or infringe your individual or collective civil liberties.

In compliance with this legislation, the electronic health records held at the Institut Curie have been approved by the French National Commission for Data Protection (Commission Nationale de l'Informatique et des Libertés, CNIL) as protecting your individual civil liberties (as is the case for all nominative files managed by the Institute). Under the terms of the 1978 Act, you have the right to access and rectify this information by writing to the: **Directeur de la Section médicale de l'Institut Curie, 26 rue d'Ulm – 75248 Paris cedex 05, France.**

Biomedical research

During your stay at the Institut Curie, a physician may invite you to participate in biomedical research involving a drug, a laboratory test, a medical device, medical equipment or a therapeutic or diagnostic strategy, with a view to improving medical knowledge for the benefit of all patients.



France's legislation on the protection of persons participating in biomedical research defines the conditions under which you may participate if you so wish. Before the research starts, the investigator must provide you with full information on the study objectives and procedures and will ask you to sign an informed consent form. You are free to refuse to participate in the research; refusal will not have any impact on the nature or quality of your subsequent treatment. If you do agree to participate in the research, you can withdraw your consent at any time; again, this withdrawal will not have any effect on the quality of your subsequent treatment.

The research may be performed by the Institut Curie alone or in partnership with other French or international centers. The Institut Curie may be the sponsor of the research study or one of the investigating centers.

The research protocols are designed by groups of experts and then validated by independent bodies, including the Institut Curie's Protocol and clinical research programs review committee *(Commission des études et de la recherche clinique)*.

Your medical care will be of the same high quality, regardless of whether or not you agree to participate in any research studies. Any additional constraints related to participation in these research protocols will be clearly indicated in advance, to aid your decision.

Participation in research may enable you to receive innovative treatments which, it is hoped, could better control your disease and/or cause less marked side effects. These studies are conducted under optimal safety conditions. Participation in research is also an altruistic action: today's "standard" treatments have been developed thanks to the many patients who participated in previous research studies demonstrating these beneficial effects. If you wish, we can keep you informed of the results of the trial in which you have participated.

Special regulations apply if the research participant is a child or a protected adult.

The Patient Services and Care Quality Council

If you encounter any problems during your stay at the Institut Curie, consult your attending physician or the service manager. They will try to satisfy your needs and answer your questions as rapidly as possible.

If you are not satisfied with this response, you can:

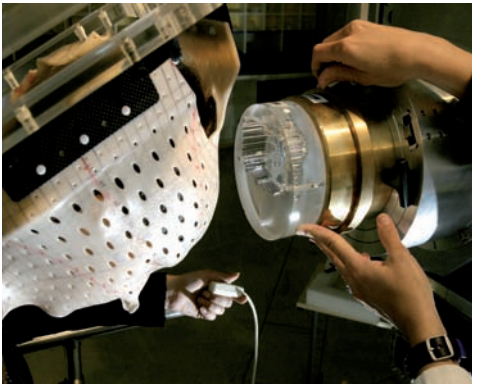
• state your concerns in writing and send them to the **Directeur de la Section médicale de l'Institut Curie, 26 rue d'Ulm – 75248 Paris cedex 05, France,** who will examine your request.

• contact the Patient Services and Care Quality Council (Commission des relations avec les usagers et de la qualité de la prise en charge).
This Council makes sure that patients' rights are respected and helps improve the institute's policy for dealing with patients and their visitors.

The Council meets regularly and establishes guidelines on improving patient care. In particular, it examines comments from patient discharge questionnaires and satisfaction surveys as well as the written complaints sent to the hospital's management team.

If you think you have been poorly treated or have not been able to resolve a problem on site with your correspondents or the Proton Therapy Center staff, you can send a letter to the **Directeur de la Section médicale de l'Institut Curie, 26 rue d'Ulm – 75248 Paris cedex 05, France** who will reply to you directly and may submit your complaint to the Council.

A list of the Council members is available at ***protontherapie.curie.fr/en***



Your participation in research

For research purposes and under strict confidentiality conditions (approved by the French National Commission for Data Protection), the Institut Curie may send patient data to local cancer registries.

In compliance with the applicable French legislation, you may ask for your personal health data not to be sent to these registries. You also have the right to access and rectify any information which is initially sent with your approval.

For any of the above reasons, you are free to contact the **Médecin responsable du Service de biostatistique, Institut Curie, 26 rue d'Ulm – 75248 Paris cedex 05, France.**

Risk management

The Institut Curie strives to reduce risks related to hospital operating procedures. However, it is important to note that there is no such thing as "zero risk" in a hospital. The institute has set up systems to reduce risks in all areas of its activity.

Preventing and monitoring hospital-acquired infections

The institute has set up a special committee (the CLIN, see page 16) to lead the fight against nosocomial (hospital-acquired) infections. A nosocomial infection is one which is contracted during a stay in a healthcare establishment. It may be specifically related to the treatment or transmitted during hospitalisation. These infections may come from three different sources:

- the patient's own germs already present on his/her skin, in his/her digestive tract, etc.
- germs transmitted by the caregivers,
- germs from the environment (water, air or surfaces).

Strict hygiene rules decrease the risk of infection during care provision. To maintain good hygiene, we recommend that you wash your hands after everyday activities and have good personal hygiene. Your visitors should do the same.

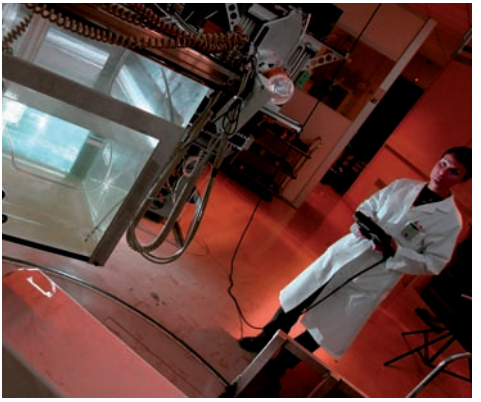
Your care team can give you advice on these and other matters (your pre-surgery shower, wearing a mask, etc.). Some public hygiene measures may lead to the patient being nursed in isolation, although this has no relationship to the severity of his/her illness.

Haemovigilance

The Haemovigilance and Transfusion Safety Commission coordinates the management of blood transfusion-related risks.

Materials vigilance

The Materials Vigilance Commission overseas the management of risks related to the use of medical devices.



Pharmacovigilance

The Medication Committee is responsible for pharmacovigilance and ensures optimal drug use by minimizing the side effects.

Radiation protection

In compliance with the current legislation and regulations, the institute does everything possible to keep exposure to ionizing radiation to the therapeutic minimum.

The Nosocomial Disease Control Committee (CLIN)

The Institut Curie's Nosocomial* Disease Control Committee (CLIN) is made up of managers and physicians, other medical professionals and a patient representative. It defines the establishment's infection prevention strategy and hygiene policy. A Hygiene Unit is in charge of implementing this policy through a network of medical and paramedical correspondents in each hospital service.

The CLIN's role is to continuously monitor infections, promote staff training, develop care procedures and evaluate clinical practice and the application of guidelines. As part of the French national campaign against nosocomial infections, healthcare establishments have to send a summary report of actions they have taken in this field to the Ministry of Health. This report can be accessed via the Ministry's web site ***www.sante.gouv.fr.***

During your treatment, you can obtain additional information from the "Hygiene Correspondent" physician or the service manager. The CLIN's annual report is available for consultation.

** Hospital-acquired*

Learn more about proton therapy

Treated pathologies

Proton therapy is a type of radiation therapy that uses proton beams. Several types of diseases can be treated at the Proton Therapy Center of the Radiation Oncology Department. Treatment protocols are validated by national or international therapeutic trials. Other protocols are currently under validation within a strict regulatory framework. Subject to acceptance of your file during a decision meeting bringing together several medicotechnical experts, the following types of tumors can be treated:

Intra-cranial tumors

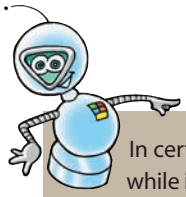
- chordomas
- chondrosarcomas
- some rare bone tumors
- aggressive, malignant or benign meningiomas located in critical areas
- nasopharyngeal tumors
- craniopharyngiomes
- ependymomas
- some gliomas
- medulloblastomas
- some other specific primary brain tumors
- some recurring or new tumors in previously irradiated areas

Ophthalmologic tumors

- melanomas of the choroid, the iris and the conjunctiva
- localized choroidal hemangiomas
- orbital rhabdomyosarcomas
- adenoid cystic carcinomas and other orbital tumors
- some retinoblastomas

Extra-cranial tumors

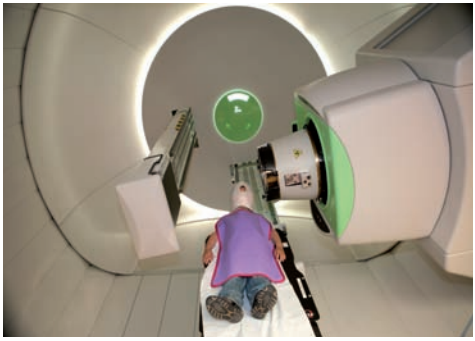
- medulloblastomas
- spinal and paraspinal sarcomas
- some thoracic, abdominal and pelvic tumors, in children, adolescents and young adults



In certain cases, treatment involves the exclusive use of protons (in particular for children), while in other cases, a combination of protons and photons is used (the part of the treatment involving photons is then performed on another equipment at the Institut Curie or in one of our partner centers). Irradiation of very young children may require a general anesthesia, resulting in specific preparation and treatment procedures.

The effects of radiation

Exposure to radiation treatment produces DNA strand breaks in both healthy and malignant cells. This process prevents cells from multiplying. However, all cells have the ability to repair broken DNA strands. The DNA repair ability is much stronger in healthy cells than in malignant cells. Cancer cells are thus more fragile.



Fractionating treatment enables to leave sufficient time for healthy cells to repair their DNA between two sessions, and not enough time for cancer cells to do the same.

Cancer cells then accumulate DNA breaks, eventually resulting in their destruction.

High-tech facilities

The Proton Therapy Center has three treatment rooms:

- the first room is dedicated to ophthalmological and intra-cranial treatments, for which the patient is seated;
- the second room, where the patient could be seated or lying, is used only for intra-cranial treatments;
- the third room, equipped with an isocentric arm, adapted to perform treatments on patients in lying position for intra-cranial tumors and/or tumors located in other parts of the body.

The proton accelerator

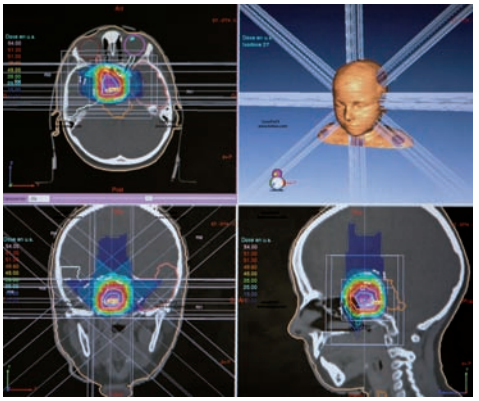
The proton accelerator is a cyclotron. It is a circular accelerator. The source of protons is hydrogen plasma located at the center of the acceleration chamber. Protons are accelerated using an intense electrical field to reach an energy of 235 MeV (mega electron volts), before they are steered into vacuum towards one of the treatment rooms.

In two of the treatment rooms, the proton beam is fixed and horizontal. Therefore, it is the patient who is positioned according to the beam and not the opposite. In order to choose the beam orientation for the lesion, the patient is positioned on a table or a robotized chair enabling ultra-precise positioning.

The room with the isocentric arm enables to deliver the beam at all angles. In this room, the patient is in lying position on a table and it is the beam that is delivered according to an ultraprecise orientation.

The "physical" interest of protons

The interest of protons is mainly ballistic. Protons are heavy charged particles and they deliver that energy along their trajectory before stopping abruptly at some point, where it delivers maximum energy.



Beyond this point, tissues receive essentially no radiation. In addition, the protons are heavy particles which tend to go straight (little lateral side scatter), resulting in only a small dose delivered in surrounding tissues and organs at risk (OAR).

Clinical advantages of protons

To eliminate a tumor and kill the tumor cells, a so-called "tumoricide" dose needs to be delivered. However, some lesions are situated close to radiation-sensitive organs. These tumors cannot be treated using X-rays with the optimal dose, because of the high dose to optimal radiation therapy (OAR).

Therefore in this cases we use protons to deliver safely the optimal radiation dose with main advantages beeing to reduce the risk of subsequent side effects that may appear between a few weeks and several years after irradiation.

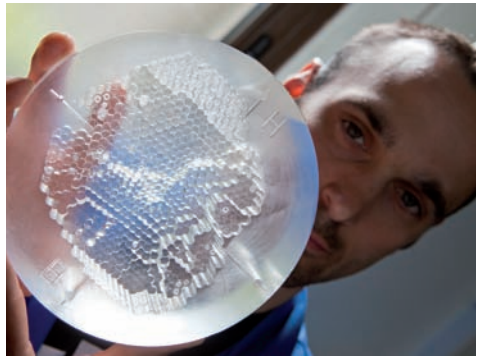
Beam shaping

The proton beam is shaped using mechanical systems installed along the beam line. At the end of the beam line, a telescopic nozzle is used to attach the custom accessories for your treatment:

• The **collimator** is used to protect healthy tissues located on the side of your tumor. Each collimator is unique, machined according to the shape of your lesion. It is a unique accessory, identified and checked for each patient.

• The **compensator** is used to adjust the depth of penetration of protons in each point of your lesion. It is an individual disposal, identified and checked for each patient.

This accessory is not used for ophthalmological treatments where it is replaced, if necessary, by a plexiglas filter. Other beam shaping options enable to perform tumor location scanning, either in a plane or in a volume. Such options are particularly interesting for the treatment of complex tumoral volumes.



The Institut Curie's missions

The Institut Curie (founded in 1909) is based on a model initiated by Marie Curie: "from fundamental research to innovative care". It is a French government accredited charitable foundation comprising 3,000 researchers, physicians and nursing staff dedicated to the fight against cancer – a major public health issue with 320,000 new cases each year in France.

A state-of-the-art hospital group for cancer care

The Institut Curie's hospital group is a leading center for the treatment of breast cancer, eye tumors and paediatric cancers. At the same time, the Institut Curie is continuing to diversify its activities in the treatment of patients suffering from gynaecological, prostate, digestive, head & neck, lung and haematological cancers, sarcoma, lymphoma, central nervous system tumours and skin cancer.

By always adopting a multidisciplinary approach, the Institut Curie uses the best available skills and high-performance techniques to continuously provide comprehensive, individualized patient care at all stages of the disease and with the ever-present goal of improving quality of life.

As the birthplace of radiotherapy and a pioneer in conservative treatment and pain management, the Institut Curie continues to innovate in complex techniques and treatment procedures (high-precision radiotherapy, proton therapy, brachytherapy, imaging, oncoplasty, oncogenetics, etc.) as well as developing its clinical research activities.

The Proton Therapy Center (part of the Radiation Oncology Department) has treated over 5,000 patients since its creation in 1991 and is the fifth largest in the world.
Rapid beam switching between treatment rooms, introduced in 2005, means that more patients can be treated simultaneously and has thus increased the center's capacity. The center can also treat very young children thanks to special equipment for general anaesthesia.

In 2010, the synchrocyclotron was replaced by a very compact new-generation, high-energy accelerator. The addition of an isocentric arm has extended the range of beam angles enabling treatment of any target in the body.
These major innovations are used to treat new indications (such as tumors in the spinal column, thorax, abdomen and pelvis) as well as the center's longstanding targets (eye tumors and tumors at the base of the skull) in adults and children.
A number of hospitals work closely with the Proton Therapy Center: in particular, the Institut Gustave-Roussy and the Paris Public Hospitals Group (AP-HP) help prepare and perform part of the therapy in certain cases.

Since January 1st, 2010, the Institut Curie has extended its management to two hospitals: one in Paris and Orsay (just south of Paris) and the other in Saint-Cloud (just west of Paris). The group is accredited by France's High Authority for Healthcare.

One of the largest European cancer research center

The Institut Curie's research center comprises 84 teams in 15 units associated with French national research institutes and local universities. It is staffed by biologists, chemists, physicists, bioinformatics specialists and physicians.

This multidisciplinary research aims at understanding how both normal and cancer cells work to improve cancer prevention, diagnosis and treatment.

The research groups rely on cutting-edge technical facilities for cell imaging, bioinformatics, genomics and proteomics.

By accelerating the transfer of scientific innovation into a clinical setting, **translational research,** is an essential gateway between research, industry and medicine. It validates the concepts underlying the development of new diagnostic techniques and safer, more effective therapies.

Furthermore, the Institut Curie's teams all **disseminate medical and scientific knowledge and innovations worldwide** via high-level teaching, training and exchange programmes.

Financial support from donors is essential to ensure rapid progress: it enables the Institut Curie to invest in innovative programmes, bring together the best medical and scientific skills and thus improve the patient's quality of life.

The **Proton Therapy Center** is part of the Institut Curie's Radiation Oncology Department. Thanks to a wide range of technical facilities (9 linear particle accelerators, 2 tomotherapy machines, 4 brachytherapy source projectors and a low-energy X-ray system), the center enables the physician to choose the type of radiotherapy which best suits each patient and his/her disease.

Key figures

- 3,000 physicians, caregivers, researchers, technicians and administrative staff
- 10,900 patients treated each year (new and ongoing)
- 160,000 consultations per year
- 84 research groups
- 105,000 square meters of hospital facilities and laboratory space
- 625 articles published in international scientific and medical journals each year
- Total 2010 budget (estimate): € 298 m, including 9% from public donations
- 190,000 active donors

(Sept. 2010 data)

A few dates

2010
The Proton Therapy Center is refurbished as the Radiation Oncology Department is upgraded.

2006
The first proton therapies under general anaesthesia.

2004
The Institut Curie takes over the management and administration of the Proton Therapy Center.

1993
The first intra-cranial treatments at the Proton Therapy-Center.

1991
The Proton Therapy Center opens at Orsay and dispenses its first ophthalmological treatments.

1979
Opening of the Irène Joliot-Curie's Parent House after a public fundraising campaign.

1935
Irène* and Frédéric Joliot-Curie win the Nobel Prize in chemistry for the discovery of artificial radioactivity.

1920
Creation of the first ever cancer treatment center, the Fondation Curie, obtaining charitable status the following year.

1911
Marie Curie wins the Nobel Prize in Chemistry.

1909
Following the award of the 1903 Nobel Prize in Physics for the discovery of natural radioactivity, Marie Curie (with Professor Claudius Regaud) founds the Radium Institute (later to become the Institut Curie).

** Pierre and Marie Curie's first child*

How to help The Institut Curie

As a registered charity, the Institut Curie is authorized to receive donations and legacy gifts. This generosity helps accelerate innovation in research and patient care. "Together, let's beat cancer".

Making a donation

By donating to the Institut Curie, you help it achieve its objectives. French taxpayers can tax-deduct 66% of the donated amount.

Send a cheque

Send a cheque (drawn on a French bank account) for the amount of your choice to: **Institut Curie, Service relations donateurs, 26 rue d'Ulm 75248 Paris cedex 05, France**

You can also make a donation online at **https://soutenir.curie.fr**

As a charitable foundation, the Institut Curie is authorized to receive donations from French residents who pay personal wealth tax (Impôt de solidarité sur la fortune, ISF). 75% of the amount of the donation can be deducted (up to a limit of € 50,000, i.e. a donation of € 66,667).

Make a regular donation by direct debit

Regular, long-term support from our donors is decisive for making major progress in the fight against cancer and helping cancer patients. Make a long-term commitment to the Institut Curie by choosing to donate via direct debit.

→ If you have any questions on making a donation, do not hesitate to contact:
Yves Congal, *Donor Relations Manager*
on **+33 (0)1 56 24 55 66**

Thanks to the generosity of our donors – thanks to you – we can make decisive progress in cancer treatment and research.

Make a donation, arrange a legacy gift or take out a life assurance contract

By drawing up a notarized deed, you can arrange to leave all or part of your personal assets to the Institut Curie. You can also take out a life assurance contract with the Institut Curie as the beneficiary.

You can tax-deduct 66% of the amount donated (carried over for 5 years).

You can name the Institut Curie in your will as the beneficiary of all or part of your personal assets. The amount will not be subject to inheritance tax.

Whatever method you choose, your donation to the Institut Curie will go to cancer research.

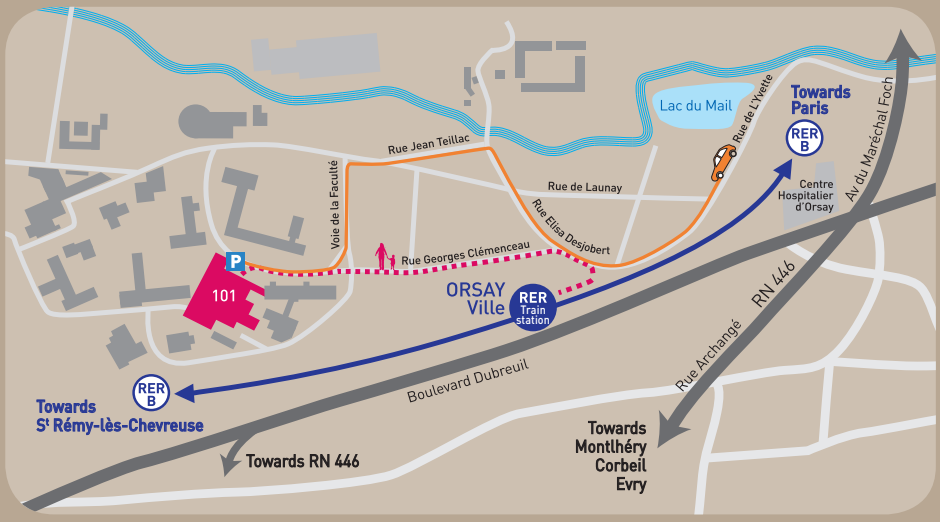
→ For strictly confidential, personal advice, contact: Isabelle Le Roi, *Legacies Relations Manager*
on **+33 (0)1 56 24 55 01**

HOW TO GET TO THE PROTON THERAPY CENTER

Building 101
University campus of Orsay

Tel. +33 (0)1 69 29 87 00
Fax +33 (0)1 69 07 55 00

protontherapie.curie.fr



PRACTICAL INFORMATION

By car, from Paris

1 ■ Via the A6 motorway south from Paris

- Follow the signs to "Nantes, Bordeaux" and continue on the A10 (signposted Chartres, Orleans").
- Take the exit signposted "Bures-Orsay"and continue along the RN 188, which passes through woodland for 3 km.
- Take the exit signposted "Orsay", continue along the RN 118 dual carriageway for 200 meters (towards "Paris/Porte de St-Cloud") and then take the exit signposted "Orsay".

2 ■ Via the Pont de Sevres bridge

- Take the RN 118 (signposted "Chartres, Orleans, Tours").
- Take the exit signposted "Orsay" (and not the exit signposted "Centre Universitaire")

By rail, from Paris

Take the **RER** suburban train **(line B)** get off at the "Orsay-Ville" station and follow the sign to "Centre de Protonthérapie"

Satnav/GPS
Enter: **rue Jean Teillac**
91400 ORSAY

institutCurie
Together, let's beat cancer.

The Institut Curie Patient Information Group, Institut Curie, 26 rue d'Ulm, F-75248 PARIS CEDEX 05, France – protontherapie.curie.fr/en – Edited by Actipress, Design Dominique Hamot / Production MAD Illustrations : www.patricklarme.com © Pedro Lombardi, Noak / Le bar Floreal, Cécile Chaire / Institut Curie. Printed with FSC-approved, plant-based inks. Imprim'Vert – January 2011