

An information booklet **for patients undergoing** **chemotherapy**

Translated by Cancer Support France –

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We have produced this booklet to accompany you throughout your treatment, and to help you have a better understanding of chemotherapy, the various ways in which it is administered and the side effects which you may experience.

This booklet will be a help to you during your various treatments in hospital as well as at home, and will aid the circulation of information, both medical and paramedical, concerning your care.

You will find some practical advice, some answers to questions that you may need to ask, and information about the management of side effects of treatment.

This translation should be used in conjunction with the “Carnet d’information et de suivi destine aux patients sous chimiothérapie”. Please note that not all the booklet has been translated – please refer to page numbers indicated

WHAT IS CHEMOTHERAPY?

(Qu'est-ce que la chimiothérapie – Page 11)

It is simply the use of chemical medicines to a therapeutic end. Whilst most chemotherapy can only be administered by intravenous injection, some can be given by mouth. The major chemotherapy treatments being administered intravenously will consist of from 1 to 4 different combined substances. It can also be accompanied by surgery and/or radiotherapy.

Chemotherapy often involves known unpleasant side effects (nausea, sickness, loss of hair, digestive problems...). These are frequently, but not always, present. They are very variable and disappear, with greater or lesser rapidity, at the end of the treatment. However, progress has recently been made and complimentary treatments exist to combat these unpleasant side effects and render them less difficult.

THE ROLE OF CHEMOTHERAPY:

The aim of chemotherapy is to block the further multiplication of cancerous cells:

- It also slows the development of the tumour and reduces its mass:
- It stops the spread of the cancer and destroys cancer cells which have become spread throughout the body:
- It also reduces the symptoms associated with the illness.

CHEMOTHERAPY IN PRACTICE:

Where?

The first course of chemotherapy will take place in a hospital or day case unit to adjust the doses and to observe any reactions.

Further treatments will continue to be administered at the hospital or clinic. Some treatments can be administered at home.

It is your doctor who will decide where treatment will take place, depending on the nature of the treatment and taking into account your preferences and conditions at home and also the geographical considerations of where you live.

Frequency?

Chemotherapy acts by killing abnormal cells and stopping their reappearance. It also has an effect on normal cells which have a greater ability to regenerate than abnormal cells.

It is this differential effect which makes chemotherapy useful, but it has to be administered in several cycles. These will take place every 2, 3 or 4 weeks and are separated by periods of rest, of 3-4 weeks generally.

These chemotherapies are usually administered in a day. If the treatments are to be over several days, chemotherapy can be done in a day visit if the treatment is rapid or as an inpatient spending one or more nights in hospital.

The timing of the treatments varies according to the different drugs needed, with a total time of treatments often being from 3-6 months.

How?

Chemotherapy is administered by intravenous injection allowing a rapid diffusion of the drugs throughout the body. The length of each session depends on which drug is being administered. They can be injected rapidly using an electrically driven syringe in a few minutes: other drugs require a period of between one and several hours. Chemotherapy is administered in conjunction with a diluting solution which slows down the speed of the infusion, helps the body tolerate the treatment and washes the vein afterwards to eliminate the residual drugs. Most of the chemotherapy drugs have a toxic effect on the veins and can cause irritation, which is sometimes very painful. This can arise several days after the perfusion and continue sometimes for weeks. The risk of painful veins becomes more likely with each session of chemotherapy and with certain stronger drugs. It is to bypass the problem that we often suggest the placing of a central catheter, the details of which are explained later in the leaflet.

If you experience the slightest pain during a session of chemotherapy by intravenous injection, you must inform the nurse at once who will stop the injection, rinse the site and check that there has not been an extravasation i.e. that there has not been an escape of the product outside the vein.

INTRATHECAL CHEMOTHERAPY:

Some chemotherapy (particularly in the case of large cell lymphomas) is administered as intrathecal treatment. This means that the drugs are introduced directly via a lumbar puncture (epidural) into the spinal fluid (cephalic), because intravenous chemotherapy does not spread well in the central nervous system. These injections are given in your room, with you in a seated position. The injection is not in itself painful, provided you are in the correct position and are relaxed.

However, it is very important that after this intervention you remain lying down for at least 2-3 hours in the hospital, then on returning home lie down and drink plenty of fluids. It is possible, even a week after the intrathecal injection, for you to experience headaches which can be violent when standing. These headaches are not serious, but can be disabling. They can be prevented by resting lying down and drinking plenty of fluids.

THE CENTRAL VEIN CATHETER

What is it?

This is when the tube of the catheter, which is used for the administration of drugs via the veins, is placed into a large deep vein, like the one beneath the collar bone.

Three types of catheter can be put in place:

- A tube catheter, which has an external exit and which needs a special visible dressing and must be kept germ free. It is used for short term treatments or for the administration of a large volume of a drug at a steady, rapid speed.
- A sleeve catheter which is identical but fixed more securely and cannot come out.
- A portacath or implanted box, which is the type used most often in day hospitals. This catheter is joined to a small container which is placed just under the skin: the skin is then closed with 3 stitches, thus there is nothing visible on the surface. This catheter is used by puncturing the skin with a needle. After the perfusion (apart from the protuberance due to the 'box') there is no external trace of the catheter and the

patient can wash, shower etc as usual. This system is used for long term treatments.

The type of catheter used will be decided by your doctor, and may depend on the type of treatment you receive. The catheter will remain in place for the duration of the treatment and may be removed after the review at the end of treatment.

In what circumstances are they used?

A central vein catheter may be used:

- If the arm veins have been damaged by a treatment that must continue.
- When the treatment is aggressive for the arm veins, which are thin and fragile.
- When the treatment has to be continuously administered over several days.
- When the state of the patient necessitates intravenous feeding.

How to care for central vein catheters at home

These systems can be used in hospital or at home. To ensure that they do not become blocked, the catheter must be carefully rinsed through by your doctor or nurse, with the physiological solution after each use. The dressing covering the tubular catheter must be changed every 3-4 days. The implanted catheter needs no dressing

What to do if.....

The dressing comes undone: *Call your doctor or nurse who will change it.*

One of the stitches comes undone: *call your doctor who will put in another stitch.*

You notice something abnormal with the skin at the site of the 'box': *immediately call your doctor.*

You have pain or a swelling which appears under the skin during a perfusion or a rinsing: *your doctor or nurse must stop the treatment immediately. The implanted catheter must be checked under x-ray control.*

SECONDARY OR SIDE EFFECTS

(Les effets secondaires – page 17)

EFFECTS ON BLOOD CELLS

Chemotherapy involves the ‘destruction’ of rapidly multiplying cells: this is the case with cancer cells, but also for blood cells. It is for this reason that your doctor requires tests to check on your blood count. The frequency of these tests depends on your treatment; it can vary from twice a week to a control once a month.

Blood consists of different types of cells which are produced permanently in the bone marrow.

Red cells: transport oxygen and carbon dioxide to the lungs.

- The reduction in the quantity of haemoglobin (the molecule in the red blood cells which permits the transport of oxygen) is known as anaemia. Your medical team will suggest ways to cope.

Symptoms of anaemia	What do do about these symptoms
<ul style="list-style-type: none"> ➤ Fatigue, vertigo, dizziness ➤ Chest pain, breathlessness, palpitations ➤ Pallor 	<ul style="list-style-type: none"> ➤ Tell your doctor ➤ Take periods of rest from your activities ➤ Have a balanced diet and drink plenty of water

White cells: fight against infections and pathological organisms which invade our bodies. The ones mostly affected by chemotherapy are the polymorphonuclear neutrophils.

- Their reduction, neutropenia, appears a week to 10 days after a session of chemotherapy. It doesn’t last long but can be responsible for infections (viral or bacteriological).

Symptoms of neutropenia - contact your doctor within 24-48 hours	
<ul style="list-style-type: none"> ➤ Fever (>38.5C) ➤ Flu-like symptoms - shivers and sweating ➤ Cough, sore throat ➤ Burning on urinating 	<ul style="list-style-type: none"> ➤ Painful mouth ulcers ➤ Diarrhoea ➤ Unusual vaginal discharge

Fever is one of the first signs of infection. This is why it is important to take your temperature regularly during your treatment (following the frequency indicated by your doctor). You are advised to use the under arm position (in which case one must add 0.5 C to the temperature recorded) in the morning before rising. Fever becomes worrying from 38.5 C and in the case of a fever in excess of 40 C, hospitalisation is urgently required.

How to prevent infection

- Frequently wash your hands, particularly after visiting the toilet and before meals
- Use a soft tooth brush to avoid injuring your gums and use a mouth wash regularly.

- Take care of your skin: use a hydrating agent in case of dryness; use an electric razor not a blade, disinfect cuts or scratches.
- Have a shower every day.
- Cook your food properly and wash all fruits and vegetables well before eating them.
- Avoid unpasteurised cheeses and seafood.
- If you garden, don't forget your gardening gloves.

Things to avoid

- Pricking yourself or cutting yourself with sharp objects.
- Picking or scratching acne.
- Taking any anti-infection medicines without them being prescribed by your doctor.
- Cutting or tearing at skin around your nails.
- Being vaccinated without the agreement of your doctor.
- Being in contact with anyone with a cold or other infection (flu, gastroenteritis...)
- All activity with a risk of injury (gardening, with gloves...)
- Sunshine

Platelets: These cause the blood to coagulate when bleeding occurs. The reduction in the number of platelets, thrombocytopenia, can cause bleeding or haematomas. In certain specific cases, your doctor may prescribe a transfusion of platelets if their count is very low

Symptoms of thrombopenia	How to avoid bleeding
<ul style="list-style-type: none"> ➤ Heavy nose bleeds ➤ Bleeding gums after brushing your teeth ➤ Blood in faeces or urine ➤ Heavy menstruation 	<ul style="list-style-type: none"> ➤ Use a soft toothbrush, lip balm and don't use dental floss ➤ Blow your nose gently ➤ Use an electric razor ➤ Don't use tampons during menstruation ➤ Don't take any medicines without medical advice (eg Aspirin)

HAIR LOSS

The hair follicles are made up of cells which reproduce rapidly, and they can be affected by chemotherapy. There can be hair loss during the weeks which follow certain chemotherapies. This hair loss is temporary and may be either partial or total depending on the drugs used for the chemotherapy. Hair will start to grow back again once the chemotherapy is finished and it becomes normal within some months. In some cases, if the drug potentially leads to hair loss, this

may be prevented by the wearing of a refrigerated cap, provided the dose of chemotherapy is not too strong.

If your doctor tells you that you will probably lose your hair

- Remember it is transitory and will re-grow.
- Follow the advice of your medical team; cutting your hair short before treatment will help you overcome this stage.
- Avoid colouring your hair, use a gentle shampoo, warm not hot water and a soft brush.
- To get past this stage you can wear a hat or cap or for women a wide bandeau or headscarf. You can also buy a wig before the chemotherapy, choosing one of the same colour and style as your hair. This will be partly reimbursed by the securite social.
- In certain cases wearing a refrigerated cap during the perfusion can limit the hair loss.
- If the treatment permits you to keep your hair, avoid colouring or perming it during the whole period of treatment. Avoid using an electric hair dryer.

SICKNESS AND VOMITING

Nausea and vomiting are common but do not always occur. The use of nausea controlling drugs (anti-emetics) generally given just before treatment, allows this side effect to be effectively reduced.

How to limit nausea and vomiting

- Breathe slowly and deeply when you start to feel ill.

- Eat in small quantities, frequently, avoiding sugary, fatty or fried foods and the smell of cooking.
- For morning sickness, eat something dry (plain biscuits...) before rising. (However not when you have a dry mouth or sore throat).
- Drink unsweetened fruit juice (apple or grape...) or still drinks.
- Try ginger tea and fresh or preserved ginger.
- Wear loose clothing that does not constrict your waist.

DIARRHOEA AND CONSTIPATION

Digestive tract problems can be linked to the cancer itself, to the chemotherapy or other drugs and also stress. If you notice changes in your bowel movements over 2 or 3 days, contact your doctor or nurse. Do not take any treatment without your doctor's advice.

Problems associated with diarrhoea	Things that can help diarrhoea
<ul style="list-style-type: none"> ➤ Pain and fatigue ➤ Loss of appetite ➤ Weight loss and dehydration ➤ Chemical imbalance 	<ul style="list-style-type: none"> ➤ Eat plain food, with a diet based on rice and carrots ➤ Avoid smoking ➤ Drink plenty, avoiding coffee, tea, alcohol and milk ➤ Wash your hands well after

	going to the toilet and before each meal
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Problems associated with constipation	Things that may help constipation
<ul style="list-style-type: none"> ➤ Pain and fatigue ➤ Loss of appetite ➤ Nausea and sickness ➤ Blockages ➤ Haemorrhoids and anal damage 	<ul style="list-style-type: none"> ➤ Eat plenty of fruit and vegetables, with a diet rich in fibre ➤ Drink plenty, particularly fruit juices ➤ Take gentle exercise eg walking

DEVELOPMENT OF MUCOSITIS OR MOUTH ULCERS

(Mucositis - Inflammation of the mucous membrane in the mouth and digestive tract)

The mucosa of the mouth, throat and digestive tract can be affected by chemotherapy. Lesions such as mouth ulcers, inflammation in the mouth or digestive tract can follow.

These problems can be prevented or alleviated with the use of a mouth wash and, in the case of severe mucositis, may need to be treated with the help of anti-fungicides and anti-herpetics if this becomes necessary. If the mucositis becomes very severe, making eating difficult, you may need to be admitted to hospital.

Things to do to prevent the development of mucositis

<ul style="list-style-type: none"> ➤ Before the start of chemotherapy visit your dentist to arrange for any dental treatment to be carried out. Dental problems can themselves be the cause of mucositis. ➤ Frequent regular mouth washes will limit the damage to the mucous membranes. ➤ Frequently rinse your mouth with a mouth wash suggested by your doctor and brush your teeth three times a day. ➤ Your doctor can prescribe a treatment which will reduce the pain and enable easier eating. ➤ Avoid acid, spicy or salty foods, tomatoes and hard food (e.g. toast...). ➤ Favour luke-warm or cold meals, avoid hot food and drink. ➤ If eating becomes too difficult, try liquids or semi-liquid (soup, yogurt, purees and milk shakes...) ➤ Avoid smoking
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WEIGHT VARIATIONS

Many factors, like stress and nausea can provoke a loss or gain in weight during chemotherapy. For this reason a balanced diet is essential.

Some advice
<ul style="list-style-type: none"> ➤ A balanced diet is essential to maintain normal weight and to help minimise undesirable side effects. Talk to the nutritionist or dietician suggested by your medical team to enable you to balance your meals.

- If you are not able to eat well, adapt your meals so as to eat what you fancy
- A moderate weight gain is better than weight loss. However, if the gain is too much, speak to your doctor or medical team.

PAIN

Certain people experience swelling, irritation and tingling in their feet and hands. This is known as neuropathy.

What to do in case of pain

- Inform your doctor about the pain. Contact him/her rapidly in the case of sudden and unusual pain particularly in your chest or when breathing.
- Describe the pain that you are experiencing to your doctor: position, intensity, frequency...so that he/she can prescribe a specific treatment.
- Don't self medicate, consult your doctor

STERILITY

The risk of sterility is greater in men. This is why younger men wishing to have children are offered the collection and freezing of sperm before chemotherapy begins, if the general state of health and the degree of urgency will permit.

For women, the risk of sterility is less and they are advised to continue to practice contraception during chemotherapy to preclude the risk of pregnancy.

For specific problems concerning sterility you need to talk to your doctor with a view to knowing the risks involved with the particular treatment that you are having and specifically how long the effect might last.

SKIN CHANGES

Abnormal skin colouration may appear following the line of veins or after exposure to the sun, which should be avoided during chemotherapy. Nails can become fragile and brittle, with sometimes brown lines along the line of the finger, or in the worst case, nails which break.

INFECTIONS

These have been described with the problems of the white blood cells, but they remain a major problem with chemotherapy. This is why the blood count is checked regularly and, in certain protocols, an anti-infection drug may be proposed with the aim of avoiding some severe respiratory infections which can be suffered by patients undergoing chemotherapy. All fevers with a temperature of over 38.5 C, with a lowered white cell count should be notified at once to your doctor, who will prescribe a course of antibiotics.

PSYCHOLOGICAL EFFECTS

(Effets psychiques – page 25)

Fatigue is frequently associated with cancer. It is mainly due to the illness, to the drugs prescribed and to the secondary effects suffered as a result. It can equally be due to anaemia (lowered level of Hb). Fatigue is felt as extreme tiredness when trying to make a physical or intellectual effort, provoked by intense effort or by an illness, or without apparent cause.

In the same way, a lessening of libido can be experienced during treatment. This diminution is always reversible.

There are two type of fatigue:

- **Physical fatigue:** fatigue after a day at work or physical exercise which is evidenced by a desire to lie down, to rest and to be silent.
- **Emotional fatigue:** this is felt as a loss of energy, of interest with a feeling of depression, of impatience, of irritability.

There are simple ways to reduce one's energy use during the day and thus control one's fatigue. It is best to remain active as inactivity can increase the sensation of fatigue. In general one needs to prioritise tasks and plan them.

To maintain one's morale it is important to be well supported by one's family, friends and near ones. Don't hesitate to talk about your psychological problems with the team caring for you –there will be psychologists and psychiatrists in the team to help with specific problems.

The continuation of one's professional or educational life (if possible) can help with living through this period.

Some advice	
To wash:	Use a stool to sit on and a bathrobe rather than a towel to get dry
To care for the body:	A brush or comb with a long handle will be less tiring to use. The toilet seat can be raised. Installing a grab handle or a ramp can also help with movement.
Dressing:	Prepare your clothes on the bed and sit down to dress. Wear shoes that are easy to put on, without laces to avoid having to bend down, clothes which fasten in the front rather than pullovers which are difficult to put on and take off.
Mobility:	Flat shoes are more stable and comfortable. Don't hesitate to use a wheelchair for longer distances. Think about putting chairs around the house (and garden) to take a short pause. Sleep on the ground floor if you have several floors to our house, it is more practical and limits risks.
Housework:	Don't do everything in one day, but spread the jobs out over the week. Don't hesitate to employ assistance in the house if possible. Many household activities can be carried out seated, peeling vegetables or ironing (the

ironing board must be the correct height).

Shopping: To avoid wasting time, make a list aisle by aisle. Use home delivery if possible. Avoid peak shopping times as crowds can cause great fatigue and stress.

CHEMOTHERAPY AND EVERYDAY LIFE

(Chimiothérapie et vie courante – page 27)

YOUR DIET

During chemotherapy, it is important to eat well (when possible) because one has need of more energy. You need a balanced diet, at regular times, without missing a meal and in sufficient quantity because you need to maintain your healthy weight during the whole of your treatment. Make mealtimes pleasant with appetising dishes!

Be wary of strong alcohol and acidic or highly spiced dishes – these risk irritating your digestive tract. Remember to drink adequately; from 1.5 litres a day – water, fruit juices etc. Drinking plenty during chemotherapy will aid in the elimination of the chemicals and prevent kidney and bladder problems.

Foods rich in protein

Proteins are the constituents of muscles. They occur in milk, milk products (cheese and yogurt etc) fish, chicken and meat.

Food rich in sugars (glucides)

Cereals, pastas, fruits and vegetables are good sources of sugars, which provide energy over a long period.

In case of loss of appetite

It is best to eat 3 meals a day with a snack mid-morning and mid-afternoon.

Eat what you fancy! Drink at least 1.5 litres a day. If you are nauseated drink carbonated cold water. When you have problems eating speak to your doctor who may be able to offer some valuable help.

Don't hesitate to ask for advice from the nurses, a dietician or a doctor who will help to create nutritional meals.

- **Blood in vomit**
- **Mucositis preventing you from eating**
- **Serious diarrhoea**
- **New breathlessness**

ADMINISTRATIVE ADVICE

(Conseils administratifs – page 45)

Certain illnesses, like cancers, are recognised as long term illnesses and are thus covered **100% by the French healthcare system**. This cover only concerns the care directly associated with the cancer. The medicines known as ‘confort’ (with a blue label) which are normally reimbursed at 35% can also be covered by the 100% reimbursement, after obtaining the notification of exoneration (ticket modérateur). To obtain such an exoneration, a document completed by your doctor or the hospital who has made the initial diagnosis should be presented to the security social office (Caisse Maladié).

Your journeys undertaken for examinations and treatment of your illness will also be covered by your medical assurance. Whatever the mode of transport decided by your doctor (ambulance or private vehicle or other form of public medical transport) it must be medically prescribed. For all journeys of more than 150 kms a special agreement is required with the security social.

If your treatment can be carried out at home, there is a choice from the following:

- A district nurse
- A team of nurses who specialise in home care
- A special home hospitalisation team. In this case certain material is available for rental (injection pumps, breathing equipment, specialist beds etc), and others can be purchased (prostheses, orthopaedic equipment etc) The caisse d’assurance maladie are there to give all the information needed.

Time off work: The formalities vary depending on your work status (civil servant, private employee, self-employed, job seeker, student etc) The right to daily reimbursement for lost income is dependent on certain conditions of duration of employment. If one has paid extra contributions to a private insurance, it is possible to obtain a salary top-up.

The special case for students: A temporary interruption in studies can mean difficulties with grants. One must find out the situation from the relevant authorities, university or school.

Before starting back at work full time a period of part time work should be considered. It is necessary to have a doctor’s letter for this. The agreement of the Medical Advisor of the Security Social is necessary to create a post of part-time work within the business together with the agreement of the Doctor of Occupational Health.

If you do not go back to work, there are the following different types of help:

- Allocation aux Adultes Handicapés (AAH): in the case of at least 80% permanent incapacity recognised by the authorities, and recognition by COTOREP (Commission Technique d'Orientation et de Reclassement Professionnel)) that it will be impossible to get a job because of your handicap.
- Professional reclassification by COTOREP depending on the degree of handicap.
- Invalidity pension from the security social for salaried people, attributed with conditions, decided by your medical advisor, depending on one's incapacity to work. one's age and previous salary.

To remember:

The social assistant is there to help with problems as are the medical charities. Don't hesitate to contact the Personnel Department.

If the person involved (or person having rights for them) cannot fulfil the conditions needed to get all their legal benefits, funds may provide help exceptionally (under the title of Health and Social welfare), taking account of the social situation of the person involved (help with transport costs, daily payments in the case of a parent having to stop work to care for an ill child, help with the employment of a home help).

GLOSSARY

(Glossaire – page 47)

Adenopathie	Adenopathy - Enlarged lymph glands
Allogreffe	Allograft - Taking bone marrow from one person (donor) to inject into a recipient (The donor and recipient must be compatible)
Alopecie	Alopecia - Loss of hair, partial or total
Anaemie	Anaemia - Lowered red blood cells in the blood, often causing fatigue
Antalique	Anti-pain treatment
Anticorps	Antibody - A substance created by the body following the introduction of an antigen, alongside the immune response

Antigene	Antigen - A substance which, when introduced into the body, causes the formation of anticorps	Cephalees	Headache
Antiemetique	Antiemetic - Treatment to stop sickness	Chambre, port-a-cath	Container implanted under the skin, connected into a deep vein, with allows the injection of drugs
Aplasia	Aplasia - Temporary reduction in the production by the bone marrow of red blood cells, white blood cells (neutropenia) and of platelets (thrombopenia)	Implant site, capsule	Chemotherapy - Treatment designed to destroy cancer cell by the administration of chemical substances. This is a generalised treatment, as opposed to a more localised treatment like surgery or radiotherapy
Asthenie	Asthenia - State of fatigue	Chimiotherapie	
Autogreff	Autograft - The removal and freezing of a patient's bone marrow to reinject it after strong chemotherapy	Circulation lymphatique	Lymphatic circulation - Circulation of lymph via a special machine
Biopsie	Biopsy - Removal of a fragment of an organ or tissue in order to examine it to enable a diagnosis of the disease	Curietherapy	A form of radiotherapy using a small source of radioactivity placed temporarily in contact with the zone to be treated
Cancer	Illness characterised by an abnormal and uncontrolled growth of certain cells	Dyspnee	Dyspnoea - Breathing difficulty, with a feeling of discomfort or oppression
Catheter	Thin tube inserted in a vein to enable intravenous perfusions In the management of chemotherapy it is often linked to a box implanted below the skin just above the thorax and into which the liquid for the perfusion is injected.	Echographie	Echocardiography - Diagnostic method using ultrasound reflected off the organs
Cellule cancreuse	Cancer cells - Abnormal cell which proliferates uncontrollably and invades surrounding tissue	Endocrine Gland	Gland which secretes the product it produces and its hormones directly into the blood
CECOS	Centre for the study and conservation of eggs and sperm	Endogene	Endogenous - That which comes from the interior, from the body
		Endoscopie	Endoscopy - The introduction into an organism of material which transmits images and permits extremely sophisticated interventions

Exerese	Excision - Surgery consisting of removal of the whole tumour (tumorectomie)	Hemopathie	Blood disease
Exogene	Exogenous - That which comes from the outside	Hemostase	Haemostasis - The stopping of a haemorrhage
Facteurs de croissance hematopoiétiques	Haemopoetic growth factors - Normal substances produced by the body used as a treatment to stimulate the production of blood cells by the bone marrow (for white cells and red cells)	Hormonotherapie	Hormone therapy - Treatment with hormones of specific hormone dependant cancers
Ganglion (lymphatique)	The lymphatic system, composed of vessels and lymph glands acts as a filter and a barrier permitting the organism to fight against infections and tumours	Immunotherapie	Immunotherapy - Treatment consisting of stimulation or augmentation of the immunity of the organism by the injection of antibodies or antigens
Globules blancs or leucocytes	White blood cells which protect the body against infections	Injection	Administering a drug or medicine in a syringe. It may be: Intramusculaire (intramuscular): injection directly into the muscle Intraveineuse (intravenous): injection into a vein Sous-cutanee (sub-cutaneous): injection just under the skin
Globules rouge or erthrocytes or hematies	Red blood cells containing haemoglobin which transport oxygen round the body	Invasif	Invasive - A tumour which enlarges and invades surrounding tissue
Guersion	Certainty of the complete clearance of the illness	IRM	MRI - Radiology examination using magnetic fields (Imagerie par Resonnance Magnetique) to obtain internal images of the body
Hematologie	Haematology - Medical speciality in problems of the blood and bone marrow	Leucemie	Leukemia - Cancer of the blood caused by an over production of white blood cells
Hemoglobine	Haemoglobin - Pigment of the red blood cells assuring the transport of oxygen and carbon dioxide between the lungs and the cells of the body	Leucopenie	Leukopenia - Lowering of the white blood cell count
		Lymphocytes	Small white cells (leucocytes) present in the blood, bone marrow and lymph tissue. They

	play an essential role in the immune reactions of the body		
Lymphome	Lymphoma - Tumour composed of lymph tissue (cells and organs which have their roles in the specific defence of the organism to infection) which develops in organs containing such tissue (spleen, ganglion...) or in organs that are deprived of it	Myelosuppression	Reduction in the numbers of red and white cells and platelets produced by the bone marrow
Marquers tumoraux	Tumour markers - Substance secreted by tumorous cells. Their quantity in the blood can indicate the development of certain tumours	Neutropenie	Neutropenia - Diminution in the numbers of polymorphonuclear neutrophils in the blood (a type of white blood cell) often caused by chemotherapy. This can lead to infections
Mastectomie	Mastectomy - The removal of the breast by surgery	Numeration Formule Sanguine (NFS)	Full blood count - The count of the number of red cells, white cells and platelets in the blood
Melanome	Melanoma - Tumour which forms in the cells which make the melanin (pigment) in the skin	Oncologie	Oncology - The study of tumours
Metabolisme	Metabolism - The various processes by which the cells and the organism transform matter and energy	Per-Os	Medicines given by mouth (orally)
Metastase	Metastasis - The spread of cancer from one part of the organism to another	Pet Scan	(Positron Emission Tomography Scanner) Medical imaging machine which allows the localisation of pathological sites showing a raised metabolic activity
Moelle osseuse	Bone marrow, tissue contained within the bones which produces the platelets, red blood cells and white blood cells from the stem cells	Plaquettes or Thrombocytes	Platelets - Parts of the blood which play an essential role in coagulation
Mucite	Mucositis - Inflammation of the mucous membranes of the mouth and intestines	Protocole	Protocol - Compilation of all the examinations and rules of treatment for a cancer of a specific type. This evolves with scientific progress
		Prurit	Pruritis - Unpleasant, strong irritation, itching
		Radiographie	Radiography - Imaging technique using X-rays
		Radiothérapie	Radiotherapy - Type of treatment designed to destroy tumorous cells by exposing them to ionised radiation. The x-rays are directed at the tumour zone and it is thus a localised treatment

Rechute	Relapse - Reappearance of the illness and its symptoms after a period of improvement
Recidive	Relapse - Reappearance of the tumour after a period of remission
Remission	Complete or partial disappearance of symptoms after treatment. In the absence of any further symptoms this can be assumed to be a cure (complete neutralisation of the illness)
Scanner (TDM: Tomodensitometrie)	Radio diagnostic tool which permits discovery and investigation by the use of images of sections through the body
Scintigraphie	Imaging technique allowing the viewing of an organ or tissue by using an ingested or injected radioactive substance
Septicemie	A generalised infection due to the circulation of microbes in the blood
Stade	Stage - Classification of a tumour with regard to its size
Thrombocytopenie or Thrombopenie	Thrombocytopenia - Reduction in the number of platelets in the blood. This increases the risk of bleeding and reduces the capacity of the blood to coagulate
Thyroïde	Thyroid - Endocrine gland (situated at the level of the trachea) which secretes several hormones and intervenes in growth and general metabolism

Tumeur	Tumour - A mass of abnormal tissue which can be benign (a non-serious tumour and not cancerous) or malign (a tumour which can invade other parts of the body and be dangerous)
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