

**Chemotherapy**

**Patient information leaflet**



# Important facts about chemotherapy

The purpose of this leaflet is to provide general information about cancer treatment involving chemotherapy.

Any questions about the treatment involved in your particular case should be directed to the doctor responsible for your treatment.

## What is chemotherapy?

Chemotherapy is a treatment involving chemical agents or drugs used to fight and kill cancer cells. Chemotherapy can be used for different purposes:

- To cure cancer
- To reduce the size of the tumour before surgery or radiotherapy
- To kill remaining cancer cells in other parts of the body after surgery or radiotherapy
- To prevent the cancer from spreading and prevent or alleviate symptoms caused by the tumour(s).

## How does chemotherapy work?

Chemotherapy drugs are delivered to the cancer cells via the blood stream. The drugs are absorbed in the cancer cells, where they inhibit or block cell growth. The cancer cells are destroyed, and lose the ability to reproduce.

A chemotherapy regime is often made up by a combination of several different chemotherapy drugs. Each drug targets the cancer cells in different ways. The choice of chemotherapy regimen for each individual patient depends on the type of cancer and its level of progress.

## **How is chemotherapy administered?**

- Intravenously (into a vein)
- Orally, as tablets or capsules
- Intrathecally (into the spine)

Chemotherapy drugs are usually administered intravenously. A nurse will insert a thin, peripheral cannula into a vein on your forearm, or you will be scheduled for the placement of a central venous catheter (venous access port or Hickman catheter). The chemotherapy is then administered through a plastic tube, usually with the help of an infusion pump. The duration of the treatment can vary from a few minutes up to several hours or days.

## **POSSIBLE SIDE EFFECTS**

Chemotherapy also affects the normal cells of the body, in particular cells which reproduce rapidly (i.e. cells in the hair, bone marrow and mucous membranes). Normal cells are able to self-repair to a greater extent than cancer cells, so the side effects are transient.

Different types of chemotherapy agents can cause different side effects. The severity of the side effects is prone to individual variation, and is difficult to predict in each individual case. Before you start treatment, your doctor and nurse will inform you of the possible side effects you may experience.

### **Effects on the bone marrow**

The effect on the bone marrow is temporary. Usually the production of red and white blood cells and platelets reaches a low point approx. 7-12 days after chemotherapy, after which the production starts to improve again.

**White blood cells** (leukocytes), the body's defence against bacteria and viruses. A low count of white blood cells means the body is prone to infections. During this phase, you should avoid people who are suffering from colds or other infections. Proper hand hygiene is important to avoid infections.

**Contact the Oncology Dept. on tel. 55 97 20 10 if you experience any of the following:**

- **a fever (body temperature above 38 °C)**
- **chills**
- **feeling weak, lethargic**

**Red blood cells** (erythrocytes), which deliver oxygen to the body's tissues via the blood flow. Chemotherapy can lead to a decreased production of red blood cells and may cause anaemia. You may feel weak and/or dizzy. At times a blood transfusion may be required.

**Platelets** (thrombocytes), whose primary function is to stop bleeding. Chemotherapy can lead to a decreased production of platelets in the bone marrow. You may experience bruising and/or bleeding, especially from your skin and mucous membranes (mouth and nose).

### **Hair loss**

Chemotherapy can damage the cells in the root of the hair. This may lead to hair loss – including body hair, eyelashes, eyebrows and facial hair. The degree of hair loss depends on the combination of drugs used. Some drugs will not result in hair loss. Your hair will grow back, but it may take a few months after the end of treatment.

The social services (NAV) offer financial assistance to help cover the cost of a wig or other headwear. A medical certificate from your doctor is required.

### **Effects on the digestive system**

Some chemotherapy regimens can cause nausea and more seldom vomiting.

Effective drugs against nausea and vomiting will be administered in connection with the chemotherapy and for some time afterwards.

Some chemotherapy drugs can affect the digestive system and cause constipation. We have a brochure called “Preventing constipation while undergoing chemotherapy and using anti emetics”.

Other types of chemotherapy drugs can cause diarrhoea. Bland, low-fibre foods and plenty of fluids are important. You can also take certain medications to treat diarrhoea.

If your bowel function changes during treatment, do not hesitate to bring this up with your doctor or nurse.

### **Effects on the mucous membranes**

Several chemotherapy drugs affect the mucous membranes, and you may experience a sore nose, mouth and throat a few days after the treatment.

It is important to maintain good oral hygiene using a soft toothbrush and to see your dentist regularly. Contact your doctor or place of treatment if eating or drinking becomes a problem.

A white film or coating in the mouth maybe a sign of a yeast infection.

Contact your doctor to prescribe antifungal medications. Soreness in the eyes may cause excessive secretion of tears or feel like sand in the eyes.

The treatment can also irritate the mucous membranes of the urinary bladder and vagina.

### **Nerves/muscles**

During treatment you may experience that your muscles are weaker or you have reduced sensitivity in your hands and feet. This too is transient although it may, in some cases, take time.

It is important that you inform your doctor of the side effects you experience between treatments.

### **Effects on the testes and ovaries**

Chemotherapy can damage the reproductive cells of both men and women. The degree of how much the reproductive cells are damaged, whether transient or permanent, depends on several factors. The type of chemotherapy, the number of treatments, previous chemotherapy and your age are contributing factors. The treatment may cause alterations to the female hormone balance, causing periods to become irregular or stop. Some women may go in to menopause.

The production of sperm in the testicles is also affected, leading to reduced fertility in men. The effect varies depending on the chemotherapy drug in question, and can be permanent or temporary.

Pregnancy should be avoided, as chemotherapy can cause damage to the genetic material in egg cells and sperm. You should use contraceptives during the treatment and for the subsequent year.

Men have the option of freezing and storing sperm before the start of treatment. For women, an experimental method of freezing ovarian tissue is available.

Some time after chemotherapy is completed, it is possible for many to conceive naturally. You can discuss your options and timing with the doctor responsible for your treatment.

## **LIFESTYLE**

You should continue to lead as normal a life as possible between treatments. Fresh air, physical activity and a varied, healthy diet are recommended for their beneficial effect on both mind and body. It is also important to drink plenty of fluids, to help your body eliminate waste resulting from the chemotherapy treatment.

### **Activity and exercise**

Even though many benefit from exercise there are certain restrictions as some types of treatment do not allow hard physical exertion. Discuss with your doctor if there are any restrictions related to your treatment.

The Oncology Department's Training and Rehabilitation Centre (KOR) offer a wide range of activities including individual counseling, group counseling, nutrition classes and physical exercise. Ask your doctor for a referral if you are interested in such activities. The Centre also offers lectures which are open for all patients and their relatives.

### **Sun exposure**

Certain chemotherapy drugs can cause skin reactions after sun exposure. You may become more sensitive to sunlight and

thereby easily sunburned. Some chemotherapy drugs can cause pigment changes.

Enjoy the sun, but avoid getting sunburnt. We recommend using sunscreen with a high SPF (sun protection factor) and wearing a protective head garment.

Consult your doctor for advice on which precautions to take.

## **Nutrition**

Your appetite may be diminished during treatment. Some feel nauseous and many experience an altered sense of taste. A reduced intake of food is not a problem for short periods of time. You should, however, drink enough fluids preferably 2 litres per day. If you have difficulties eating food over several days, contact your nurse or doctor. We have several brochures with many helpful hints.

## **Alcohol**

You do not have to refrain from alcohol. Excessive amounts of alcohol should however be avoided, as the chemotherapy in itself is taxing on the body.

## **Waste products**

After chemotherapy treatment, the by-products of chemotherapy are excreted from the body through urine and faeces. During the first 48 hours after the treatment you should take certain precautions to protect those around you.

- Flush twice after using the toilet. Men should sit when using the toilet.
- Wash your hands thoroughly after using the toilet using soap and running water.
- Seal used sanitary towels or diapers in a plastic bag.



- If you spill vomit, urine or faeces, use paper to wipe the spillage, and then wash the area with soap and water.

If you observe these precautions, you can safely socialize and have close contact with others – even children and pregnant women.

Chemotherapy is also excreted through the sweat glands, but this is minimal. You do not need to take any precautions concerning sweat.

### **Sexual relations**

Chemotherapy treatment does not require sexual abstinence. Cancer is not contagious, and intimacy does not carry any risk of infection.

However, the treatment may cause tiredness and lack of energy, and as such you may experience decreased sexual desire and ability. Partners of patients who are undergoing treatment should try to be patient and understanding.

It is recommended to use a condom during intercourse for the first 48 hours after treatment.

The Oncology Department's Training and Rehabilitation Centre (KOR) has a sexologist available for consultations. Ask your doctor for a referral if you would like a consultation with a sexologist.

### **Alternative/complementary treatment**

If you use complementary treatment you can usually continue to do so alongside chemotherapy treatment. Please be aware that some combinations of conventional and alternative treatments can give unpleasant or serious side-effects. Talk to your doctor about any complementary treatments you are using.

## Department of Oncology and Medical Physics

**Tel.: 55 97 20 10**

Outpatient clinic \_\_\_\_\_ press 1

Outpatient clinic nurse \_\_\_\_\_ press 2

Ward 1 \_\_\_\_\_ press 4

Ward 2 \_\_\_\_\_ press 5

After 15.30 your call will be redirected directly to the inpatient wards.

Recommended web sites for further information:

<http://www.helse-bergen.no/omoss/avdelinger/kreft/Sider/enhet.aspx>

[www.kreftforeningen.no](http://www.kreftforeningen.no)

[www.oncolex.no](http://www.oncolex.no)

<http://kreftlex.no/>

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