

Patient Information

HORMONAL THERAPY

Hormones are chemical substances produced by specialized glands in the body and then carried by the bloodstream to various parts of the body to influence different functions. Some types of cancers, for example breast and prostate cancer, are partially hormone dependent and can be stimulated by hormones to grow.

Hormonal therapy is medication that is given to help block the stimulating effect of these hormones on the cancer cells in an effort to reduce cancer cell growth. It is a form of systemic therapy and because it is transported throughout the body it can be effective against cancer that has spread. It is sometimes used in combination with surgery, radiotherapy or chemotherapy to help control cancer that has spread or to help reduce the risk of cancer returning in earlier stage disease.

Prostate cancer: Prostate cancer is partially dependent on the male hormone testosterone for its growth. Testosterone is produced by the testicles and the adrenal glands. The effect of testosterone on prostate cancer can be reduced firstly by reducing the amount of testosterone in the body through the removal of the testicles in an operation (orchidectomy or castration). A similar effect to castration can be achieved chemically by receiving an injection every 3 months (LHRH agonist therapy). The effect of testosterone can also be reduced by blocking the testosterone from exerting its effect on the cancer cells. This can be done through the use of medication such as Casodex or Flutemide. Hormonal therapy can often control prostate cancer for two to three years and sometimes longer. Unfortunately prostate cancer eventually becomes resistant to hormonal therapy and can no longer be controlled with hormonal therapy alone. It is then that other systemic therapy is considered.

Breast cancer: Many breast cancers are also sensitive to hormonal stimulation by the female hormones oestrogen and progesterone. When tests on the cancer cells show that there are binding places (receptors), medication can be administered that blocks the effect of these hormones. This can be effective in shrinking existing cancer and reducing the risk of recurrence of earlier stage disease. Different ways of giving hormonal therapy for breast cancer include surgical removal of the ovaries, injections that stop the ovaries from producing oestrogen, tablets that stop oestrogen from joining to binding sites on cancer cells and medication that stops the production of oestrogen from a forerunner of oestrogen made in the adrenal glands in patients who are postmenopausal.

The side effects of hormonal therapy vary from patient to patient, but it is often associated with hot flushes, palpitations, general tiredness and sometimes weight gain.

Please note that this information brochure is meant as a brief overview and does not include all the possible side effects and other aspects of hormonal therapy. Please ask your doctor for more specific information about your particular hormonal therapy.

BLOOD AND INFECTIONS

Anaemia

Chemotherapy can reduce the bone marrow's ability to produce red blood cells. It can make you feel short of breath, very weak and tired. It could present itself as fatigue, dizziness or feeling faint, shortness of breath and a "pounding" of the heart. Report any of these symptoms to your doctor.

Things you can do if you are anaemic:

- Get plenty of rest.
- Limit your activities.
- Ask for help when you need it.
- Eat a well-balanced diet.
- When sitting, get up slowly. This will help prevent dizziness.

Infection

Your doctor will check your blood cell count regularly while you receive chemotherapy. There are medicines that help the recovery of white blood cells. Raising the white blood cell count greatly lowers the risk of serious infection.

How can I help to prevent infections?

- Wash your hands often during the day.
- Clean your rectal area gently but thoroughly after each bowel movement.
- Stay away from people who have illnesses you can catch, such as colds, flu, measles or chicken pox.
- Try to avoid crowds.
- Stay away from children who had recently received "live virus" vaccines.
- Do not cut or tear the cuticles of your nails.
- Be careful not to cut or nick yourself when using scissors, needles or knives.
- Use an electric shaver instead of a razor to prevent skin breaks.
- Maintain good mouth hygiene.
- Do not squeeze or scratch pimples.
- Take a warm bath, shower or sponge bath every day.
- Use lotion or oil to soften and heal your skin if it becomes dry and chaffed.
- Clean cuts and scrapes immediately.
- Avoid contact with animal litter boxes and waste.
- Avoid standing water.
- Wear protective gloves when gardening.
- Do not get any immunisations.
- Do not eat raw fish, seafood, meat or eggs.

Call your doctor immediately if any of the following occur:

- Fever of 38°C+
- Chills
- Sweating
- Loose bowel movements
- Frequent urgency to urinate or a burning feeling
- A severe cough
- Unusual vaginal discharge or itching
- Redness, swelling or tenderness
- Sinus pain or pressure
- Earaches, headaches or stiff neck
- Blisters on the lips or skin
- Mouth sores

Blood-clotting problems

If your blood does not have enough platelets, you may bleed or bruise more easily than usual, even without an injury.

Be aware of:

- Unexpected bruising
- Small, red spots under the skin
- Reddish or pinkish urine
- Black or bloody bowel movements
- Bleeding from your gums or nose
- Vaginal bleeding that is new or lasts longer than a regular period
- Headaches or changes in vision
- Warm to hot feeling of an arm or leg

Things you can do to help:

- Before drinking any alcoholic beverages, check with your doctor.
- Use a very soft toothbrush to clean your teeth.
- When cleaning your nose, blow gently into a soft tissue.
- Take extra care not to cut or nick yourself when using scissors, needles, knives or tools.
- Be careful not to burn yourself when ironing or cooking.
- Avoid contact sports and other activities that might result in injury.
- Ask your doctor if you should avoid sexual activity.
- Use an electric shaver instead of a razor.

IMMUNOTHERAPY

Immunotherapy (sometimes called biological therapy or biotherapy) is a relatively new addition to the family of cancer treatments that also includes surgery, chemotherapy and radiation therapy. Biological therapies use the body's immune system, either directly or indirectly, to fight cancer. The immune system is a complex network of cells and organs that work together to defend the body against attacks by "foreign" or "non-self" invaders. Immunotherapeutic agents include interferons, interleukins, monoclonal antibodies and vaccines.

They may be used to:

- Stop, control or suppress processes that permit cancer growth.
- Make cancer cells more recognizable, and therefore more susceptible, to destruction by the immune system.
- Boost the killing power of immune system cells.
- Block or reverse the process that changes a normal cell or a precancerous cell into a cancerous one.

Some immunotherapies are already a standard part of treatment for certain types of cancer, while others are still being studied in clinical trials. They are also being used in combination with other treatments, such as radiation therapy and chemotherapy, to increase therapeutic response. Cancer types for which they can be used as treatment include melanoma, kidney cancer and haematological malignancies like lymphomas and leukaemia.

As with other forms of cancer treatment, biological therapies can cause a number of side effects which can vary widely from patient to patient. Rashes or swelling may develop at the site where the agents are injected. Several immunotherapies, including interferons and interleukins, may cause flu-like symptoms, including fever, chills, nausea, vomiting and loss of appetite. Fatigue and depression are other common side effects. Blood pressure can also be adversely affected and careful monitoring is advised.

INTERNAL RADIATION – WHAT TO EXPECT

Internal radiation therapy may be used for cancers of the head and neck, breast, uterus, thyroid, cervix and prostate. Your doctor may suggest using both internal and external radiation therapy.

How is the implant placed in the body?

The type of implant and the method of placing it in the body depend on the size and location of the cancer. Implants may be placed into the tumor (interstitial radiation), in special applicators inside a body cavity or passage on the surface of a tumor, or in the area from which the tumor has been removed. Implants may be removed after a short time or left in place permanently. If they are to be left in place, the radioactive substance used will lose radiation quickly and become non-radioactive in a short time. For most types of implants, you will need to be in the hospital for a few days.

How are other people protected from radiation while the implant is in place?

To protect others while you are having implant therapy, the hospital will have you stay in a private room. Although the nurses and other people caring for you will not be able to spend a long time in your room, they will give you all of the care you need. There also will be limits on visitors while your implant is in place. Children younger than 18 years or pregnant women should not visit patients who are having internal radiation therapy.

What are the side effects of internal radiation therapy?

The side effects of implant therapy depend on the area being treated. You are not likely to have severe pain or feel ill during implant therapy.

How long does the implant stay in place?

Your doctor will decide on the duration that an implant is to be left in place. It depends on the dose (amount) of radiation needed for effective treatment. Your treatment schedule will depend on the type of cancer, where it is located, your general health and other cancer treatments you have had.

What happens after the implant is removed?

Usually, an anaesthetic is not needed when the doctor removes a temporary implant. Most implants can be removed in the patient's hospital room. Once the implant has been removed, there is no radioactivity in your body. The area that has been treated with an implant may be sore or sensitive for some time.

Radiation side effects can be divided into two categories. Your chances of experiencing these effects depend on the scheduling of your treatment, the area being irradiated and differences between patients.

The first group of side effects (*acute or early effects*) occurs during or within the first few days after completion of your radiation and is secondary to inflammation in the irradiated tissues. These symptoms are usually managed effectively with medication and are temporary in nature.

The second group of side effects (*chronic or late effects*) can be experienced for months or years after completion of therapy. These symptoms develop due to the formation of scarring tissue in the irradiated areas. The incidence of late effects is much less than those of acute effects, but it is more permanent in nature.

It is important to remember that the risk associated with the development of side effects is usually less than the risk associated with an untreated cancer. Your doctor will not advise you to undergo any treatment if the estimated benefit in terms of disease control or symptom relief is less than the possible side effects associated with the treatment.

Also remember that radiation is a local treatment; most of the side effects involve the area being irradiated.

Finally: External beam radiation will not cause your body to become radioactive. It is unnecessary to avoid other people because you are undergoing treatment; even hugging, kissing or sexual relations do not carry any risk of radiation exposure.

Which side effects could I experience while receiving radiation to the extremities?

General radiation side effects include:

1. Fatigue

Feeling tired and lacking energy is the most common symptom reported by cancer patients. The exact cause is not always known. It can be due to your disease, the radiation, preceding surgery or chemotherapy, low blood count, lack of sleep, pain, stress, traveling to the unit daily for your treatments or poor appetite. Most patients experience some tiredness after a few weeks of treatment. It usually resolves slowly and should clear up within four to six weeks after treatment has been completed.

How do I cope with fatigue?

- Plan your day so that you have time to rest; take short naps or breaks.
- Save your energy for the most important things.
- Try easier or shorter versions of activities you enjoy.
- Allow others to do some things for you that you usually do yourself.

- If you work fulltime, you may want to continue working your regular hours. Some patients prefer to take leave while undergoing radiotherapy; others work shorter hours.
- Take short walks or do light exercise.
- Eat as well as you can and drink plenty of fluids. Eat small amounts at a time.
- Limit the amount of caffeine and alcohol you drink.
- Try activities such as meditation, prayer, yoga, guided imagery, visualization, etc.
- Join a support group.
- Keep a diary of how you feel each day.
- Report any changes in energy levels to your doctor or nurse.

2. Skin reactions

You may notice that the skin in the irradiated area becomes red and irritated as if sun burnt. After a few weeks of treatment, your skin can also become very dry; in some cases superficial abrasion of the skin may occur. If this happens, the skin is usually wet and painful. It is important to let your doctor know if this happens. Most skin reactions secondary to radiation disappear within a few weeks after treatment completion. In some cases the irradiated skin remains a slightly darker colour and it may also be more sensitive to sun exposure than before.

During radiotherapy you should take special care of the skin in the treatment area:

- Ask your doctor about washing the affected area. If it is permitted, use lukewarm water without any soap; also avoid rubbing the skin and pat dry only.
- Avoid wearing tight clothes over the treatment area. If you are being treated for breast cancer, it's a good idea to go without your bra whenever possible or, if this makes you uncomfortable, wear a soft cotton bra without any underwires. This will help reduce skin irritation in the treatment area.
- Do not scratch, rub or scrub treated skin.
- Do not use any powders, creams, perfumes, deodorants, oils, ointments, toners or home remedies in the radiation area.
- Protect the treatment area from the sun. Do not apply sunscreen, but cover treated skin (with light clothing) before going outside.
- Do not use adhesive tape on treated skin. If bandaging is necessary, use paper tape and apply it outside of the treatment area.
- Use an electric razor if you must shave the treated area. Do not use a pre-shave lotion or hair removal products on the treated area