

# Concurrent chemo-radiation with Mitomycin C and 5-fluorouracil (anal cancer)

Your treatment will be fully explained by your doctor or nurse, who will be happy to answer any questions. You will find it useful to refer to the booklet 'Chemotherapy: a guide for patients and their carers' which gives general information on chemotherapy and side effects. We will give you a booklet 'Radiotherapy to the pelvis for anal tumours' which gives general information on radiotherapy and side effects.

You have recently been diagnosed with anal cancer and your consultant has recommended chemotherapy and radiotherapy treatment. A way of combining the two treatments is to give radiotherapy at the same time as chemotherapy. This is called concurrent chemo-radiotherapy. The intention of treatment is to cure the cancer, however, it is not possible to guarantee a cure. The success of the treatment differs from patient to patient, so it is not possible to give precise details in this leaflet. Please discuss this with your consultant.

## Your treatment

The chemotherapy:

**Mitomycin C** will be given slowly into the vein over 5 to 10 minutes on Day 1 only. **5-Fluorouracil** will be given slowly into the vein through a drip in your arm over 96 hours at the hospital or as a slow infusion over 96 hours (at home) via a pump through a peripherally inserted catheter (PICC line). This chemotherapy will be given during the 1st week of treatment (Monday-Friday) and repeated on the 5th week (Monday-Friday).

**The radiotherapy treatment** will be delivered once a day, Monday to Friday, for 5 weeks and 3 additional days of the final week on a Monday, Tuesday and Wednesday. This will take around 15 minutes each day.

Chemotherapy and radiotherapy will start on the same day.

You will need 28 sessions of radiotherapy in total although this may change.

You will have a routine blood test every week. Occasionally we may not be able to go ahead with your treatment until your blood counts are back to a safe level. If this happens, your chemotherapy may be delayed a week. You will also have a one-off blood test to check for DPD deficiency and that it is safe for you to have this treatment. See page 2.

This treatment can have serious or possibly life-threatening side effects. It is very important that you report side effects straight away. Don't delay, if you feel unwell, please ring The Christie Hotline on **0161 446 3658**. The lines are open 24 hours a day.



## • Testing for DPD deficiency

The body makes enzymes which break down chemotherapy drugs so that chemotherapy doesn't build up in the body and cause severe side-effects. A very small percentage of the population (approximately 1 in 20), either don't produce or produce less of an enzyme called DPD which would normally break down the chemotherapy drugs 5FU and capecitabine. This is called DPD deficiency. Reduced production of DPD is not an issue in day-to-day life, but it might mean that some patients experience severe and sometimes life-threatening side effects after 5FU or capecitabine chemotherapy is given. Patients with DPD deficiency are more likely to develop severe mouth ulcers and diarrhoea and very low blood counts increasing vulnerability to life threatening infections.

In order to check that it is safe for you to have this treatment, your team will be arranging a one off blood test. This test checks for some of the commonest abnormalities which can cause DPD deficiency. Your medical team will discuss the test results with you and can confirm whether you will be able to go ahead with your planned chemotherapy, or whether any changes need to be discussed.

Although DPD testing identifies many patients who are at risk of severe side-effects from 5FU and capecitabine, it does not identify all at risk patients. Severe and sometimes life-threatening side-effects can occur in patients who have had a normal test result. Therefore it is important that patients receiving chemotherapy monitor their symptoms carefully and contact The Christie Hotline on **0161 446 3658** if they become unwell.

## Flu vaccinations

It's safe to have a flu jab but depending on the sort of chemotherapy you have had, it may not give quite as much protection against infection as usual. Some patients may need two vaccinations. However, if you're thinking of having any other vaccinations, do check with your Christie doctor first, because some vaccines should be avoided.

## COVID-19 vaccinations

We advise that all patients receive a COVID-19 vaccination when this is offered. Your doctor will discuss with you the best time to have this.

## Herbal medicines

Some herbal medicine including St John's Wort can affect the chemotherapy. You should let your doctor or nurse know if you are taking any herbal medication, complementary or alternative medicines, including vitamins, minerals and medicines purchased over-the-counter.

## Increased risk of serious infection

You are vulnerable to infection while you are having chemotherapy. Minor infections can become life-threatening in a matter of hours if left untreated. Symptoms of infection include fever, shivering, sweats, sore throat, diarrhoea, discomfort when you pass urine, cough or breathlessness. We recommend that you use a digital thermometer so you can check your temperature. You can buy one from your local chemist.

**If you feel unwell, you have symptoms of an infection or your temperature is 37.5°C or above, or below 36 °C contact The Christie Hotline straight away.**

## Possible side effects

Chemotherapy can cause many different side effects. Some are more likely to occur than others. Everyone is different and not everyone gets all the side effects. Most side effects are usually temporary, but in some rare cases they can be life-threatening. It is important to tell your hospital doctor or nurse about any side effects so they can be monitored and, where possible, treated.

## Common side effects (more than 1 in 10)

### • Mild nausea and vomiting (sickness)

You may have mild nausea and vomiting. The severity of this varies from person to person. You will be given anti-sickness tablets to take at home. If you continue to feel or be sick, contact your GP or this hospital, because your anti-sickness medication may need to be changed or increased.

### • Lethargy

Some chemotherapy may make you feel tired and lacking in energy. It can be frustrating when you feel unable to cope with routine tasks. If you do feel tired, take rest and get help with household chores. If necessary, take time off work. Gentle exercise such as walking can be beneficial.

### • Diarrhoea

Diarrhoea is a common side effect of your treatment. If you have watery diarrhoea you should immediately take the anti-diarrhoea treatment that the doctor has prescribed for you. This is the loperamide dispensed by The Christie pharmacy. Follow the doctor's instructions **EXACTLY**:

Take 2 loperamide capsules as soon as the first liquid stool occurs. Then take one capsule with each liquid loose stool. (The maximum dose of loperamide in a day is 8 capsules).

If you have an increase of more than 4 bowel movements each day compared to pre-treatment or any diarrhoea at night, please ring The Christie Hotline on **0161 446 3658** for advice.

### • Sore mouth

Your mouth may become sore or dry, or you may notice small mouth ulcers during this treatment. Drinking plenty of fluids and cleaning your teeth regularly and gently with a soft toothbrush can help to reduce the risk of this happening. We can prescribe a mouthwash for you to use during treatment. You can dilute this with water if your mouth is sore. Ask your doctor or nurse for further advice. There is also general mouth care information in the chemotherapy booklet. If you continue to have a sore mouth, please contact The Christie Hotline.

### • Skin changes

**PPE (palmar-plantar erythema):** The skin on your hands and feet may become very dry, red and sore with some cracking. If this happens, please tell your doctor. Cream and tablets can be prescribed to help. Your chemotherapy dose may need to change. Try to keep your hands and feet cool and if possible, uncovered.

**Hyperpigmentation:** Less commonly, your skin may appear darker in colour or lightly tanned, especially around the joints. This is known as hyperpigmentation. Asian and African-Caribbean people may develop noticeable light patches on their skin. The skin will return to normal when treatment is finished.

#### **Darkening of the veins:**

Fluorouracil can irritate the vein wall and can cause discolouration. So you may get brown marks along the course of the vein where the drip was inserted, and your arm can also become itchy. This will usually fade over time. Please tell your hospital doctor at your next appointment if you have any problems.

**Increased sensitivity to the sun:** Your skin will tan or burn in the sun more easily. Sit in the shade, avoid too much sun and use a high factor sun block cream and wear a hat.

## Uncommon side effects (less than 1 in 10)

- **Anaemia (low number of red blood cells)**

While having this treatment you may become anaemic. This may make you feel tired and breathless. Let your doctor or nurse know if these symptoms are a problem. You may need a blood transfusion.

- **Bruising or bleeding**

This treatment can reduce the production of platelets which help the blood clot. Let your doctor know if you have any unexplained bruising or bleeding, such as nosebleeds, bloodspots or rashes on the skin, and bleeding gums. You may need a platelet transfusion.

- **Hair thinning**

Some hair loss may occur during treatment, including body and facial hair. It is advisable to avoid perms, colours, use of hot brushes and vigorous frequent washing that could increase hair loss. Please remember that this is a temporary side effect and your hair will grow back when your treatment is completed. Very rarely, hair loss may be permanent.

The cancer information centre offers practical and emotional support about hair loss for men and women. They will also advise about headwear and access to the wig service. Drop in, contact **0161 446 8100/8107** or email [the-christie.informationcentre@nhs.net](mailto:the-christie.informationcentre@nhs.net).

- **Watery eyes**

Your eyes may also water often this will improve in time and needs no specific treatment. But if you have ongoing symptoms please discuss this with your doctor or nurse.

- **Extravasation**

Extravasation is when chemotherapy leaks outside the vein. If you develop redness, soreness or pain at the injection site at any time please let us know straight away

## Serious and potentially life threatening side effects

In a small proportion of patients, chemotherapy can result in very severe side effects which may rarely result in death. The team caring for you will discuss the risk of these side effects with you.

- **Effects on the lungs (Warning!)**

Lung changes can be an uncommon or rare side effect of mitomycin C, but can very rarely be severe or fatal. You should seek **urgent** medical advice if you develop a cough or breathing difficulties during treatment or following completion. In an emergency you should go to your local accident and emergency department.

- **Chest pain or stroke (Warning!)**

A small number of patients receiving 5-Fluorouracil (5-FU), can experience chest pain (angina) or rarely have a heart attack. Extremely rarely this may lead to death. Other complications such as stroke or mini-stroke can happen but are exceptionally rare. In an emergency you should go immediately to your nearest Accident and Emergency department.

- **Blood clots (Warning!)**

People with cancer are at a higher risk of developing bloods clots. The medical name for this is a thromboembolism or a deep vein thrombosis (DVT). The most common place to develop a clot is in the leg.

You must contact The Christie Hotline on **0161 446 3658** immediately if you experience any of the following:

- Pain, redness and swelling of your arm or leg(s). The area may feel warm to touch.
- Breathlessness, pain in your chest or upper back, light headedness, coughing up blood.

For any chest pain, please call **999** immediately.

You can help to prevent a clot by taking regular short walks to keep the blood moving, do simple exercises such as bending and straightening your toes every hour if you are unable to move around much and drink plenty of fluids. Most clots can be treated successfully using drugs to help thin the blood (anticoagulants).

- **Increased risk of serious infection**

As discussed earlier, chemotherapy results in an increased risk of serious infections which can be life-threatening.

## **Sex, contraception and fertility**

**Protecting your partner and contraception:** We recommend that you or your partner use a condom during sexual intercourse while you are having the course of chemotherapy. Chemotherapy is dangerous to unborn babies and this will also protect you and your partner from any chemotherapy drugs that may be present in semen and in the vagina. If you suspect that you may be pregnant please tell your doctor immediately.

**Fertility:** This chemotherapy may affect your ability to have children. Your doctor or nurse should have discussed this with you. If not, please ask them before you start treatment.

## **Late side effects**

Some side effects may become evident only after a number of years. In reaching any decision with you about treatment, the potential benefit you receive from treatment will be weighed against the risks of serious long term side effects to the heart, lungs, kidneys and bone marrow. With some drugs there is also a small but definite risk of developing another cancer. If any of these problems specifically applies to you, the doctor will discuss these with you.

## Contacts

If you have any general questions or concerns about your treatment, please ring the area when you are having treatment:

Administration enquiries - **0161 918 7606/7610**

Chemotherapy nurse - **0161 918 7171**

Clinical trials unit - **0161 918 7663**

Specialist radiographer - **0161 446 8169**

For advice ring The Christie Hotline on **0161 446 3658** (24 hours)

Your consultant is: .....

Your hospital number is: .....

Your key worker is: .....

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If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard. If you would like to have details about the sources used please contact **the-christie.patient.information@nhs.net**

For information and advice visit the cancer information centres at Withington, Oldham, Salford or Macclesfield. Opening times can vary, please check before making a special journey.



Contact The Christie Hotline for  
urgent support and specialist advice  
**The Christie Hotline: 0161 446 3658**  
Open 24 hours a day, 7 days a week