The ROYAL MARSDEN
NHS Foundation Trust

Folionic acid, fluorouracil and irinotecan (FOLFIRI) chemotherapy for bowel cancer

GI Unit

Patient Information

NHS

Introduction

Your doctors have suggested that you may benefit from a course of irinotecan and fluorouracil chemotherapy treatment. They have weighed the expected benefits in terms of controlling the cancer and its symptoms, against the possibility of side effects. Your doctor will have discussed these with you.

Although this treatment may result in the cancer shrinking and/or prolonging your life, it is unlikely to get rid of the cancer entirely. However, the benefits you may receive from treatment may last for some time. It is not possible to predict, before you start treatment, how your cancer will respond or for how long treatment will be beneficial. If you are still unsure about the benefits, then please ask. This leaflet explains what you can expect from the chemotherapy you will receive.

Treatment plan

The treatment consists of a combination of three drugs – irinotecan, fluorouracil and folinic acid.

Irinotecan is given as an infusion over 60 minutes, once every two weeks. Each two week period is called a cycle.

5-fluorouracil (5FU) is given as an initial injection followed by an infusion into a vein over 46 hours.

Folinic acid increases the effectiveness of 5FU and is given as an injection before the 5FU.

You will need to have a central venous access device so that the chemotherapy can be given into one of your larger veins. Please see The Royal Marsden booklet *Central venous access devices* for further information. This device is usually a peripherally inserted central catheter (PICC) or a skin-tunnelled catheter (STC). It will be connected to a pump which drips in the 5FU continuously for 46 hours. The pump is small enough to be worn on a belt and is quite easy to use. One of the specialist nurses will teach you how to manage your pump and chemotherapy infusion while you are at home.

The doctors in clinic will see you before each treatment and you will have a blood test to check the effects of the chemotherapy on your blood. Treatment may be delayed if your blood count is not at a suitable level.

You will also have a CT scan every nine to 12 weeks. The doctors will examine the scans and blood test results to assess how you are responding to the treatment. If the CT scan shows that your tumour is not responding, this treatment will stop and your doctor will discuss further treatment options with you.

DPD testing before treatment

Before starting this treatment, you should have a blood test to check whether you have low levels of dihydropyrimidine dehydrogenase (DPD). This is called DPD deficiency.

People who have low DPD levels could make the side effects of certain chemotherapy drugs worse and this could develop into serious or life-threatening side effects. These group of drugs are called fluoropyrimidines such as fluorouracil (5FU) and capecitabine.

You will not know if you have DPD deficiency without a test, as there are no symptoms. You can talk to your cancer doctor about your risk of having DPD deficiency before you start treatment.

Side effects

All drugs can have some side effects and this includes irinotecan and 5FU chemotherapy. These vary and for some people they may not occur.

The more common side effects are:

- **Low blood count** – chemotherapy temporarily reduces the rate at which blood cells are produced in your bone marrow.

This may cause:

  - anaemia (low red cell count) – you may need blood transfusions

  - neutropenia (low white cell count), which may increase your risk of developing an infection
  - thrombocytopenia (low platelet count), which may increase your tendency to bruising and bleeding – you may need platelet transfusions.

If you feel unwell at any time or have a temperature (37.5ºC / 99.5ºF or higher), you should contact the hospital immediately as you may need to be admitted for intravenous antibiotics. For further information, please refer to The Royal Marsden booklet *Chemotherapy; your questions answered.*

- **Nausea and vomiting** – chemotherapy sometimes causes this. It can usually be managed with anti-sickness (anti-emetic) drugs.
- **Hair loss (alopecia)** – temporary hair loss usually happens. It can occur on all parts of the body, including the head, face, arms and legs, underarms, and pubic area. You may want to ask for information on wigs. For further information, please refer to the Macmillan booklet *Coping with hair loss.*
- **Increased sweating, production of saliva, watery eyes, stomach cramps and diarrhoea during the infusion** – this collection of side effects is known as 'acute cholinergic syndrome'. To help reduce these side effects, you will be given an injection of a drug called atropine under the skin, before the irinotecan is given after the infusion.
- **Diarrhoea** – a few days after irinotecan, you may develop severe diarrhoea. You will be given medication for this and you need to follow these instructions:
  - Take loperamide 4mg after the first loose stool followed by loperamide 2mg every loose stool. Do not take more than the maximum daily dose of 16 mg of loperamide.

  - If you experience four episodes of diarrhoea, please contact The Royal Marsden Macmillan Hotline out of hours to be advised before starting ciprofloxacin 250mg tablets, twice a day for seven days after you have been advised to do so by the hospital. You should not take loperamide for longer than 48 hours.
  - Please contact the hospital for advice as soon as diarrhoea starts. If it continues beyond 48 hours or you also have a fever or nausea or vomiting, then you may need to be admitted to hospital. You may become dehydrated if you have a lot of diarrhoea and may need intravenous fluids.
- **Tiredness and lethargy** – during your chemotherapy, you may become tired more easily after normal activities. This is quite normal and usually occurs with all types of chemotherapy. Your tiredness should resolve in time.
- **Sore mouth and mouth ulcers** – keep your mouth clean and healthy by drinking plenty of fluids and carrying out good oral hygiene. If you develop a sore mouth, we can prescribe mouthwash to help with this.
- **Taste changes** – you may find taste changes affect your appetite. However, it is important to make sure you drink plenty of fluids, at least 10 glasses or cups a day, and eat well.

The less common side effects are:

- **Soreness and redness of the hands and feet (palmar-plantar syndrome)** – 5FU can cause this. You may find that the palms of your hands and the soles of your feet become sore and red or dark. The skin may become dry, itchy and peel. A simple moisturiser, such as emollient cream, will help prevent dryness. Tell your doctor or nurse if this becomes a problem.

- **Chest pain** – patients receiving 5FU have reported episodes of chest pain, discomfort or a feeling of tightness or heaviness across the centre of the chest and/or palpitations (a sensation of a racing and irregular heartbeat). These symptoms may occur suddenly and the duration can vary. Sometimes they resolve within minutes although they may last for longer. The chest pain is caused by a temporary narrowing of the blood vessels supplying the heart. This is reversible once the chemotherapy is stopped. This type of chest pain has the similar symptoms as angina and can lead to a heart attack. It may be common in people with a history of heart disease, but can occur in anyone. Always let your doctor know if you have a history of problems with your heart.

  There are many different causes of chest pain, most of which are unrelated to the chemotherapy. If you develop any of these symptoms, you should stop taking these tablets and go immediately to your nearest accident and emergency department and take this leaflet with you. Please inform your team or call The Royal Marsden Macmillan Hotline.

It is important that you inform your doctor at your next hospital visit, if you experience any of these side effects. With certain side effects, a treatment break or dose reduction may be necessary. If you have any concerns regarding these side effects, you may contact your hospital team at The Royal Marsden (see contact details on page 8).

Fertility, pregnancy and breastfeeding

- **Fertility** – chemotherapy can damage the testis or ovary. This may affect your ability to conceive (or father a child). Infertility can be temporary or permanent. Sometimes, in women, chemotherapy can lead to premature menopause. If relevant to you, you may wish to discuss the issue of fertility with your doctor before treatment is started.

- **Pregnancy** – during chemotherapy and for up to a year afterwards, if sperm or eggs are produced they may be abnormal. Treatment can also harm an unborn child. We recommend that you or your partner use a barrier method of contraception (such as condoms) during treatment and for one year afterwards. If you know you are pregnant before starting treatment or become pregnant during treatment, you must tell your doctor immediately.
- **Breastfeeding** – there is a risk of harm to a child who is being breastfed since the drug may be concentrated in the milk. It is very important that women do not breastfeed while receiving chemotherapy.

Blood clots

Some cancers increase the risk of developing blood clots. Chemotherapy drugs can also cause an increase in the risk of patients developing blood clots whilst they are on treatment. The most common place for blood clots to form is in the calf. This is called a deep vein thrombosis (DVT) and causes the leg to swell. If a part of the clot breaks free, it may travel to the lungs, causing shortness of breath or chest pain. This is called a pulmonary embolus (PE).

Blood clots can be life threatening and treatment with blood-thinning drugs (anti-coagulants) is usually given to help ‘dissolve’ the clot and prevent further problems. Please inform your doctor immediately if you are worried you may have a blood clot.

Airline travel is also associated with an increased risk of blood clots. It is important that you inform your hospital team of any travel plans whilst you are on treatment.

We have listed the most common side effects of this chemotherapy. You may experience some or several of these side effects listed above and they may be mild, moderate or severe. Some can occasionally be life-threatening or lead to death and occur in 0.5-5% of cases (less than one in 100 people). All side effects will be discussed with you, however please raise any questions that you may have with your medical team or Clinical Nurse Specialist (CNS).

As with all drugs, there may be other side effects not mentioned here that you may experience. Because of the risk of side effects, it is important that you:

- **Always** tell your doctor if you suffer from any of these side effects, or if you have experienced any new symptoms since your last visit. Your doctor can help you by giving you medication or advice, to reduce or stop these side effects from occurring in the future.
- **Always** tell your doctor about any other medicine you are taking or planning to take, including herbal and complementary therapies.
- **Always** consult your doctor before having any other procedure, for example, dental work or vaccinations.

Contact details

Please contact us if you have any concerns or queries:

Sutton

Medical Day Unit 020 8661 3174 (NHS patients)

Clinical Nurse Specialist/Key worker

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Tel: ....

Chelsea

Private Patient Day Unit 020 7808 8092 (Private patients)

Clinical Nurse Specialist

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Tel: ....

Pharmacy Medicines Helpline: via the Hotline below
(Monday to Friday, 9am – 5pm)

or

Email: *medicines.information@rmh.nhs.uk* giving full details of your enquiry and a contact telephone number.

Alternatively, please call:

The Royal Marsden Macmillan Hotline: 020 8915 6899
(available 24 hours a day, 7 days a week)

References

This booklet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this booklet are available on request from:

The Royal Marsden Help Centre
Telephone: Chelsea 020 7811 8438 / 020 7808 2083
Sutton 020 8661 3759 / 3951
Email: patientcentre@rmh.nhs.uk

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Should you require information in an alternative format, please contact The Royal Marsden Help Centre.

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