The ROYAL MARSDEN
NHS Foundation Trust

Surgery for cancer in the liver

GI Unit

Patient Information

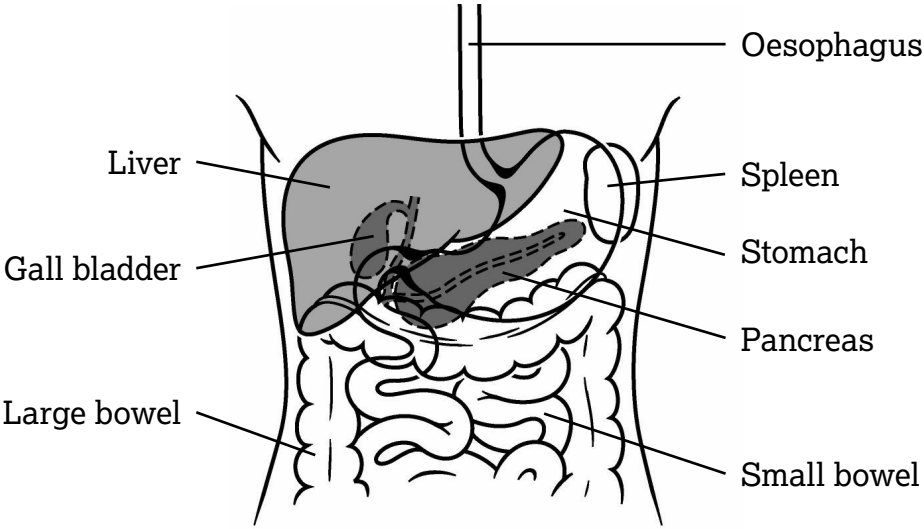
NHS

Introduction

Your doctor has recommended that you have an operation to remove the cancer in your liver. This operation is called a liver resection. It may be recommended that a procedure called open radio frequency or microwave ablation is performed at the time of surgery (see page 2). If this is planned, your surgeon will discuss it with you. You will be in hospital for between 7–10 days.

This leaflet explains your operation and answers some common questions.

Diagram showing the position of the liver

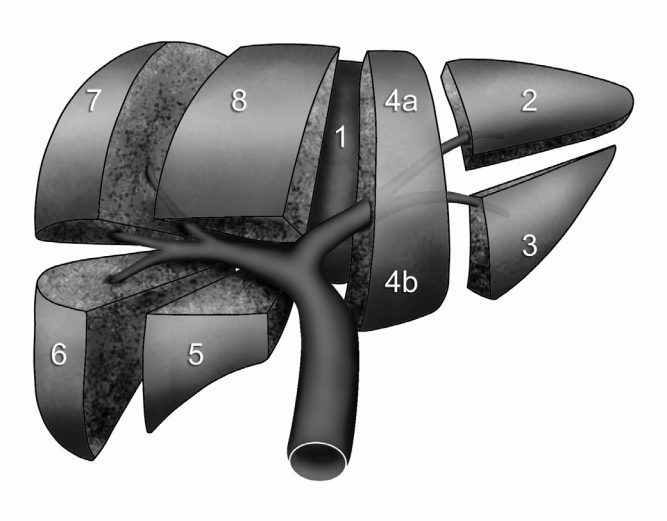


How much of my liver will need to be removed?

Liver resection is recommended because you have one or more cancerous tumours in your liver. Your surgeon will explain where the tumour(s) is and how much of the liver you need to have removed. The liver is an organ that is able to re-grow and the remaining healthy liver will grow in six to 12 weeks after surgery.

If a large part of your liver needs to be removed, you may need a procedure called portal vein embolisation before your liver resection. This will encourage the healthy part of your liver to become bigger in preparation for the removal of the part of liver affected by cancer.

Diagram to show the segments of the liver



We will give you separate information about portal embolisation.

What is open radiofrequency/microwave ablation?

Radio frequency ablation is a treatment to destroy the cancer by heat. A radiologist (a doctor who specialises in using x-rays and scans) will attend your operation and perform this procedure. The radiologist will use an ultrasound scan to guide them to the location of the cancer within the liver. A special needle containing an electrode is inserted into the cancer. A radio frequency current is then passed through the electrode to heat the cancer near the needle tip. The heat also closes up the small blood vessels nearby and reduces the risk of bleeding.

What are the risks and complications of surgery?

Any surgical operation on the liver is a major operation, which can lead to complications and may even carry a small risk of death. The more common risks are listed below. Your consultant, or a senior doctor from the team, will discuss these with you along with any other risks specific to you.

Inability to remove the cancer

Sometimes at the time of the operation, the surgeon may find that they cannot remove the cancer safely either because of its size, spread or position. It is not always possible to see these problems in advance from a CT or MRI scan.

Bleeding (haemorrhage)

The liver is well supplied with blood and haemorrhage is one of the major risks. You will lose some blood during the operation and will need to have blood transfusions. Occasionally bleeding may happen after the operation and, if this cannot be controlled or stopped, a further operation may be needed.

If you do not wish to have a blood transfusion or receive any other blood products, you must tell your surgical team and anaesthetist **before** your operation.

Bile leak

The liver produces bile and this can leak from the cut surface of the liver or from any connections (anastomoses) the surgeon has had to make in the liver. If a bile leak cannot be controlled, a further operation may be needed. One or two tubes will be put in to drain the leaking bile into a bag outside your body. The leak slowly heals and the drains will then be removed.

Liver decompensation

If the cancerous tumour(s) is large or widely spread within the liver, a large part of your liver may need to be removed. At first you will have a smaller liver but it will grow over the next few weeks. During this time your remaining liver may struggle to do everything that it is meant to do for your body.

This may cause your skin to become yellow (jaundiced) and you may have a build-up of fluid in your abdomen. The jaundice usually settles down after one or two weeks.

Infection

There is an increased risk of developing an infection after the operation. This may affect your chest, urinary tract, wound or inner organs. If you develop an infection, you will be treated quickly, usually with antibiotics.

Blood clot (thrombosis)

The risk of developing a deep vein thrombosis (a blood clot in the leg) or a pulmonary embolism (a blood clot in the lung) increases after an operation. We will provide special stockings for you to wear while you are in hospital to prevent this.

What happens before my operation?

We will invite you to attend a pre-assessment clinic before your operation. The aim of the clinic is for you to meet your anaesthetist who will assess your fitness to have a liver resection. If you have specific medical conditions or problems, more tests or medicines may be needed to try and reduce any risks during your operation. Occasionally the anaesthetist, or your doctor, may decide it is not safe to go ahead with the liver resection. If this is the case, your doctor will discuss the reasons with you and recommend an alternative treatment plan.

The pre-assessment clinic is also an opportunity for you and your family to meet other members of the team and you can visit the critical care unit and the ward. Your appointment in the clinic may last two to four hours.

What happens immediately after the operation?

After your operation, you will be taken to the critical care unit (CCU) where you will be watched closely for one or two days and the nurses will make you as comfortable as possible.

Only two visitors are allowed at any one time so that you, and other patients, can recover after the operation. Visiting times in the CCU are not limited but the unit is very busy between 8am –10.30am. We may ask visitors not to come until after this time. Flowers are not allowed on the unit because of the risk of infection but they can be kept on the ward for you to enjoy when you return there.

During your stay on the CCU you will have a number of different tubes in place. These all help the staff to monitor your progress and provide you with fluid and medicines when you need them. The alarms on some of the monitors and pumps may go off every now and then – this does not usually mean something is wrong.

You may have the following tubes in place:

Intravenous cannulae

These allow fluids and medication to be given directly into a vein. One is usually inserted into a vein in the side of your neck and another into a vein in your arm.

Nasogastric tube

This tube passes through the nose into the stomach. It is used to drain away secretions from the stomach. It can also help prevent nausea and vomiting.

Urinary catheter

Immediately after the operation, it can be difficult to pass urine while lying in bed. This tube goes into your bladder and automatically drains your urine into a bag.

Epidural catheter

An epidural catheter is a small plastic tube placed into the spinal column. Pain relief (analgesia) is slowly and continuously pumped through it. The epidural will be stopped when members of the specialist pain control team feel you no longer need it. This is usually about three to five days after your surgery. Once the epidural has been stopped, you can take pain medicines by mouth until you no longer need them.

All these catheters and tubes are easily removed and all of them will be taken out before you go home.

Will I have physiotherapy?

Physiotherapy is an important part of your recovery and helps to reduce the risk of some complications.

Your physiotherapist will help you with breathing exercises and moving about from the first day after your operation. You will usually be helped to sit out of bed from the first day after your operation.

You will gradually begin to increase your level of activity each day with the help of the physiotherapist and nurses. You will also be shown exercises that will help you regain muscle strength and joint movement.

When can I start eating and drinking?

Usually you will be able to drink and eat a light diet the day after your operation.

What happens when I return to the ward?

Everyone recovers from the operation at their own pace. At first, on return to the ward, patients often say they feel 'washed out' and lack energy. Full recovery takes time. During your time on the ward the aim is to build on your strength and mobility and to help you to return to your normal diet. Eating a good diet will encourage your liver to re-grow.

The physiotherapist will see before you are discharged home from the ward to:

- discuss any possible problems with moving around at home
- practise going up and down stairs, if necessary
- teach you exercises for shoulder movement and abdominal strength
- give you advice about your posture
- discuss increasing your activity.

How will I feel when I go home?

Although you are well enough to go home, it will be a few months before you recover fully. We will give you contact names and phone numbers of your specialist nurse and doctors so you can continue to receive information and support. Please call them if you have any problems once you are at home. District nurses and any other support you need will be arranged by the ward nurses before you go home.

You may still need to take some pain relief tablets when you go home, if you have discomfort or pain at the site of your operation. We will give you a supply of these before you go home. Your ward nurse will explain what all your tablets are and when to take them before you leave. Please ask questions if you do understand anything. If you need another prescription after discharge home, you can contact your family doctor (GP).

When will I be able to start doing normal daily activities?

Recovering your strength and increasing your level of activity

This will be a gradual process. For the first few days at home, you should rest much the same as you did in hospital. Try to alternate periods of gentle activity, such as walking around, climbing stairs or walking outside, with resting on a chair or in bed. Do not be surprised if you continue to feel tired. Your body needs time to recover. Gradually increase your activity every couple of days. Continue to take your pain relief, as prescribed, so that you are able to move around easily, breathe deeply and cough.

Try to maintain good posture when sitting, standing and walking. Avoid long periods of stooping or sitting slumped in a chair as this may cause back pain later on.

Lifting, housework and gardening

The general rule is to go gently for the first six weeks after your operation while your wound and muscles have time to heal. Do not do anything that includes pushing, pulling, stretching or twisting activities. You should not lift anything heavier than 1kg – equivalent to a bag of sugar.

From six to 12 weeks you may gradually increase your activity. Always be careful with your posture when you bend to lift anything – bend your knees, keep your back straight and hold the object close to you. Always stop lifting if you notice any pain.

Do not do any of the following for the first six weeks:

- carry heavy shopping
- lift children
- lift wet washing
- iron clothes
- vacuum
- move furniture.

After this time, introduce these activities gradually and slowly build up the amount you do.

Returning to work or study

When you return to work or study, will depend on your job and how quickly you recover from your operation. Your doctor or specialist nurse will be able to advise you.

If you have any financial worries, Macmillan Cancer Support offers benefits advice. Alternatively, contact your local Citizens Advice Bureau via *www.citizensadvice.org.uk*

Leisure and sport

Again, discuss this with your doctor, specialist nurse or physiotherapist who will be able to advise you. When you resume these activities, start slowly and build up exercise gradually. If you have difficulties, stop. If you need further advice, contact the physiotherapy department (see page 11).

Driving

You may start driving after about six weeks, once you are able to move freely and quickly, turn and move adequately in the car, concentrate sufficiently and tolerate the pressure of the seat belt over your wound. You should be able to do an emergency stop without discomfort. Start by going somewhere quiet and take someone with you in case you become tired.

Check that your insurance is valid after major surgery before you resume driving.

Sexual relationships

This is a very personal and individual issue. You may start, or resume, sexual activities as soon as you feel ready. You may feel very tired and rather sore for the first few weeks. After your operation you may need to try different positions until you find one that is comfortable for you and your partner. If you are tired, you may want to set aside time for sex after a period of rest. Do talk to your partner about how you are feeling.

If you have any concerns, you may find it helpful to talk to your doctor or specialist nurse.

Are there any complications that may occur when I'm at home?

Complications do not usually occur. However, if you have any of the following symptoms, report them immediately so that they can be treated quickly:

- possible infection: a fever of 38°C or flu-like shivers
- possible blood clot: pain, tenderness, swelling, redness, heat in the lower legs or calves, severe chest pain or difficulty in breathing.

You should always ask for medical advice but if any of these symptoms are severe, call an ambulance for immediate help.

When will I return to the hospital for a check up?

We will give you an outpatient appointment for a few weeks after you have gone home, where we will ask you how you are feeling and how you think your recovery is progressing. You will have some tests and we will explain your results. We may also give you follow up appointments with your medical oncologist – your consultant surgeon will discuss this with you.

Often you may have questions you wish to ask. Writing these down beforehand may help you to remember them. You are also welcome to bring someone with you to your appointments.

Contact details

Your Consultant

Name .....

Tel .....

Registrar

Tel 020 7352 8171 Ext 1783

Senior House Officer (SHO)

Tel 020 7352 8171 Ext 1505

Your Clinical Nurse Specialist (Key Worker)

Name .....

Tel 020 7811 8063

Physiotherapist

Name .....

Tel .....

Ward

Name .....

Tel .....

Ward Sister/Charge Nurse

Name .....

Tel .....

Alternatively, please contact:

The Royal Marsden Hotline: 020 8915 6899

You can ring the hotline 24 hours a day, 7 days a week.

Call us straight away if you are feeling unwell or are worried about the side effects of cancer treatments.

This service provides specialist advice and support to all Royal Marsden patients, as well as to their carers, and both hospital and community-based doctors and nurses caring for Royal Marsden patients.

For further information and support on living with cancer, please talk to your specialist nurse or contact Macmillan Cancer Support via *www.macmillan.org.uk*

Notes and questions

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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The ROYAL MARSDEN Cancer Charity

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