

# VATS Lobectomy

## Information for patients



## **VATS stands for video-assisted thoracoscopic surgery. This is the equipment used for minimal access surgery or keyhole surgery.**

This leaflet will explain about the operation, why it is normally done, how it is done and any risks involved. It will also explain about the care you will need before and after the operation. After reading this leaflet please feel free to ask any questions you may have. The doctors and nurses are available to support you at this time.

Most patients are referred to a thoracic (chest) surgeon because they have an abnormal shadow on a chest x-ray or CT scan. These may raise concerns that the shadow is a lung cancer.

Your lungs are divided into lobes; two lobes on your left lung and three lobes on your right lung. A VATS lobectomy is an operation where one of the lobes is removed.

Lobes of the lung can also be removed by open operation (thoracotomy). There are advantages and disadvantages for both procedures and your surgeon will provide guidance as to what is appropriate for you.

Worldwide studies have shown that if lung cancer is confined to one area of the lung then an operation to remove it offers the best chance of a cure, although this is not a guarantee. Some patients may also need further treatment after the surgery.

Occasionally patients are not fit enough for surgery, or do not want to have an operation when alternative treatments can be offered.

You will meet your surgeon at a clinic appointment, where they will discuss the following with you:

- The types of surgery performed to remove lung tumours
- Why VATS surgery is recommended
- What the surgery involves
- The risks and benefits
- Alternative treatments such as chemotherapy and radiotherapy

## **VATS lobectomy**

The operation is done under a general anaesthetic and takes between two and four hours.

It is routine practice to check your airway for any abnormality. This is done using a bronchoscope (surgical telescope) put into your windpipe, via your mouth. You will then be positioned on your side, with your arm above your head.

The surgeon will make three small cuts on your chest about 2-4cm long. One cut will be for a telescope to look around inside your chest. The other two will be for the instruments to perform the operation. Using a stapling device, the surgeon will separate the lobe of the lung with the tumour in from the rest of the lung. This lobe will then be completely enclosed in a sealed bag and removed through one of the cuts in the chest. Two of the cuts will be stitched closed. The other will be used for a chest tube, which will drain any air and fluid after the operation. The lobe of lung removed will be sent to the laboratory for analysis. This normally takes seven to ten days.

## **Changes to the planned surgery**

Depending on what the surgeon finds when they look into your chest they may have to make some changes to the planned surgery.

The surgeon may need to remove more or less lung tissue than discussed.

For technical reasons the surgeon may be unable to do your operation using the VATS method, so may have to convert to an open operation (thoracotomy).

Very occasionally, if there is bleeding during the operation that cannot be controlled through the VATS incisions, then the surgeon will need to make one of the incisions larger to gain direct vision and control the bleeding.

Very rarely the surgeon may find during the operation that the cancer is too extensive to be able to remove it completely. In this case it will not be removed. Your surgeon will explain about other treatments available to you, these may include chemotherapy and radiotherapy.

The surgeon will only do what is appropriate to your condition. If they have to alter the operation they will always explain to you what they have done and why.

## Preparation for surgery

We strongly recommend that you stop smoking prior to surgery.

You will usually be admitted to hospital the day before your operation. On admission you may need to have the following tests:

- Blood tests
- ECG – heart tracing
- Chest x-ray
- Pulmonary function – breathing tests
- A full set of observations – blood pressure, pulse, oxygen levels, temperature, respiratory rate, weight and height

All patients are screened for MRSA on admission, so you will have swabs taken from your nose and groin.

A nurse will need to complete some documentation. A doctor or nurse specialist/practitioner will take a medical history and do an examination. (This may have already been done in pre-admission clinic). The anaesthetist will see you to discuss having a general anaesthetic.

You may need other tests specific to you; if so, these will be explained. The procedure will be explained to you again and any questions you may have answered. Once everything has been completed a doctor will ask you to sign a consent form giving your permission for the operation to take place.

To reduce the risk of infection, you will need to have a shower or full wash in an antiseptic solution the day before your operation. You can't have anything to eat and drink for a few hours prior to your operation.

On the morning of your operation you will have a shower, or full wash and a hair wash in the antiseptic solution. After this you will be asked to put on a hospital gown. You will also need to wear special support stockings, which help prevent you developing blood clots (DVT) in your legs due to being immobile during and after the operation.

If you take any medicines the nurses will advise you which you may take before your operation. Pre-medications are not routinely given; however if you are particularly anxious, then please mention this to the anaesthetist.

Before your operation a doctor will mark the side you are to be operated on. Please let a member of staff know if this gets washed off.

You will need to wear two name bands displaying the ward, your name, your date of birth and hospital number. In addition, if you are allergic to anything you will need to wear a red band. Please let a member of staff know if you lose one or any of the information is incorrect.

Before going to theatre the nurses will complete a checklist with you, this will be repeated several times when you go to theatre. This is for your safety.

## After your operation

After the operation you will be taken to the recovery room. The staff will constantly monitor you and ensure you are comfortable. Once they are happy with your condition you will return to the ward. You would normally stay in recovery for about two hours after your operation.

On returning to the ward you will go to an area where we can monitor you more closely for the first part of your recovery. Your oxygen will need to stay on for at least the first few hours depending on your oxygen levels. You will be given fluids via a tube going into a vein until you can drink freely. You will not be able to drink for four hours after your operation.

The chest drain normally stays in for 24-48 hours depending on how much drainage there is and if there is an air leak. If an air leak is present the drain will need to stay in until it stops. The nurses will be measuring the amount of drainage from your drain/s. With this information and a chest x-ray the doctors will decide when the drain/s can be removed.

You may have a tube in your bladder to measure your urine; this would normally be taken out the next morning.

Physiotherapists will instruct you how to do breathing exercises and help you to cough to expand your lungs to prevent a chest infection. They will show you shoulder exercises to prevent you getting a frozen shoulder. You will be encouraged to move your legs regularly. It is very important to do these exercises as they will help with your recovery.

You may initially need to wear Flowtron boots that help with your circulation, support stockings and have daily injections of a blood-thinning drug until you are more mobile. These are all to help prevent a blood clot forming after your surgery.

### **Pain relief**

Following your operation you will need to have some pain relief. This is normally by patient controlled analgesia (PCA), a device designed to ensure you receive safe levels of pain relief. It consists of a syringe containing pain relief medication, attached to a vein in your arm. When you require pain relief you press a button to release a dose.

Initially you will have some local anaesthetic infused around your wound to help with the pain. As your pain improves you will be given tablets and the PCA and local anaesthetic will be stopped. The nursing staff will be monitoring your pain levels so please tell them if your pain is not controlled.

### **General care**

You will need help with washing to begin with but gradually you will be able to do more for yourself.

You can start eating the following day but expect to have a poor appetite to begin with.

The majority of patients having this surgery will find they are able to start mobilising (moving around) on the first day after their operation. Gradually, as you recover you will be expected to mobilise (move) more, be careful not to overdo it. The nurses and physiotherapists will help you decide how much you should do.

You will have dressings over your wounds that will be removed 24 to 48 hours after the operation. If the wounds are clean and dry they will be left without a dressing. If however they are still oozy then a light dressing will be put on and changed daily until no longer needed.

We would hope that by the time you go home you will be comfortable and gently moving around the ward. Your pain should be controlled on tablets, and you should be able to wash yourself or have a shower and get yourself dressed. (You may still need some help to wash your back and feet).

The doctors will come and see you every day to discuss your progress. If you have anything you wish to ask them, then please do so.

Expect to stay in hospital for three to five days, don't worry if you need longer, you will recover at your own pace. Most patients are able to go home one to three days after surgery.

## **Risks, side effects and possible complications**

With any surgical procedures, there are certain risks attached. The risks will depend on how well you were before undergoing the operation. The surgeon will discuss the risks with you.

### **Conversion to open operation**

For technical reasons the surgeon may be unable to do your operation using the VATS method, so may have to convert to an open operation (thoracotomy).

### **Sore throat**

It is normal to have a sore throat from being anaesthetised, this should settle in a few days.

### **Damage to teeth**

Teeth can sometimes be damaged from the anaesthetic and bronchoscopy instruments. The surgeon and anaesthetist will try very hard to prevent this. Please ensure you let the doctors know if you have any loose teeth, crowns or bridges.

### **Changes in blood pressure**

Sometimes your blood pressure may be lower after an anaesthetic. This is normally due to not having anything to drink for a while. You will be asked to drink more or you may need to have fluids through a tube into a vein in your arm.

### **Changes to voice**

On rare occasions there may be a change in your voice after surgery. Speak to your doctor for more information about this.

### **Coughing up blood**

It is normal to cough up a little blood for the first few days after lung surgery. The nurses and physiotherapists will help with breathing exercises after your surgery to clear this. It will gradually get less over time.

### **Chest infection**

This occurs in about 5% of patients (5 in a 100) having VATS lobectomy. Physiotherapy, early mobilisation and adequate pain relief can help reduce this risk. If you do develop a chest infection you may need physiotherapy and sometimes treatment with antibiotics. You may need to stay in hospital for a little while longer.

### **Pain**

It is normal to have pain after this operation. Regular pain relief will be given to control the pain and it should settle in a few weeks. Very occasionally pain does not settle. If this is the case you may need to see a specialist at a pain clinic.

### **Painful shoulder**

This is very common after chest surgery. It can be eased with pain relief and moving the shoulder regularly.

### **Bleeding**

Following lung surgery some blood loss into your chest drains is normal. Occasionally a blood transfusion will be required. If this is necessary information will be given to you. A small percentage of patients having a VATS lobectomy will need to return to theatre to control the bleeding.

### **Wound infection**

Showering in an antiseptic solution before your surgery, frequent hand washing and using the alcohol rubs provided helps to prevent this risk. A small percentage of patients having this surgery will develop a wound infection requiring antibiotics and wound dressings. This may require help from the district nurses to dress the wound once you are discharged.

### **Empyema**

This occurs rarely, it is an infection between the lung and chest wall and will require longer-term drainage.

### **Blood clots**

These can occur in the legs and then travel to the lung. The risk is greatly reduced by wearing support stockings, Flowtron boots, having daily injections of a blood-thinning drug, and early mobilisation.

### **Faster heartbeat**

This can occur following lung surgery and may be treated with drugs to slow down the heart.

### **Air leak**

This is when the cut surface of the lung leaks air and is a frequent occurrence following lung surgery. It usually settles within a few days but will mean that the chest drain has to stay in your chest while it settles. If it is taking longer to settle the surgeon will discuss what can be done about it.

### **Pneumothorax**

Very occasionally the remaining lung will not fully inflate following this surgery and so may mean having the chest drain in for longer. Sometimes once the drain has been removed the lung will partially collapse. This will either resolve on its own or need a new chest drain to be put back in until it resolves.

### **Heart attack or stroke**

This can occur during or after any surgery. The risk is higher in patients with a cardiac history or undiagnosed cardiac disease. For this reason, every patient will have investigations and be fully assessed before any surgery. On rare occasions this risk is too great and will mean surgery is not recommended.

### **Disorientation**

Some patients whilst recovering from an operation might be disorientated with the ward and people around them. They may behave differently than normal and temporarily have some loss of memory. This is often a reaction to anaesthetic drugs and strong pain relief. Full recovery is usually expected within a few days.

### **Risk of death**

Any surgery carries a degree of risk and this can include a risk of death. The risk will vary from patient to patient. Your surgeon and anaesthetist will discuss specific risks that apply to you.

Please remember you may ask any questions and voice any concerns you or your family may have with the doctors and nurses looking after you.

## Benefits of VATS lobectomy

The probable benefits of having a VATS lobectomy are:

- A shorter hospital stay of usually two days.
- Pain and discomfort is less and normally settles sooner although, as with thoracotomy, some patients experience pain for longer periods.
- Recovery normally takes two to four weeks compared to four to six weeks with a thoracotomy.
- The skin incisions are smaller leading to less obvious scars.
- You are normally able to return to normal activities sooner.

## Going home

Once your consultant feels you are able to go home a member of staff will discuss your ongoing recovery with you.

### Rest

It is normal to feel very tired for at least the first week after discharge and often longer. Rest is a very important part of your recovery, so ensure that you have several rest periods during the day between activities.

Don't be surprised at how tiring activities can be at first; increase them gradually as you feel able to. You will find you need less rest as you progress. Restrict any activities that cause pain or wear you out until you feel better. Try to go to bed at a regular, reasonable time and don't rush to get up in the morning.

It is nice to see visitors when you are at home but it can be very tiring. Try to restrict visitors to begin with and don't be afraid to excuse yourself from company if you feel tired and want to rest.

Tiredness and sometimes periods of feeling low in mood are all part of your recovery and a natural reaction to surgery. Try to maintain a positive attitude and remember your recovery will not happen overnight. Try not to compare yourself with anyone else; you will recover at your own pace. Once you are discharged, if you have concerns about how you are recovering, please contact the thoracic nurse specialists, the ward or your GP.

### Mobility and exercise

It is important to exercise following your surgery to maintain mobility and help with your recovery. Carry on with what you have been doing in hospital and increase steadily. Remember to do your breathing exercises and move your shoulder regularly. You should carry on wearing the compression stockings after you leave hospital until you are fully recovered. If you experience discomfort in your calves (lower legs) or they become swollen, please contact your GP for advice.

Be aware of your limits and rest in between activities. Please ask if there is anything you are unsure about. Walking is a good form of exercise, which you can do at your own pace and increase gradually. Your body will tell you what you can and cannot do. If you feel tired or have pain whilst exercising, stop and rest.

### Medication

Any medication you brought into hospital will be returned to you, unless it has been stopped by your doctors during your admission. On discharge you will be given a seven day supply of medication. This will include any of your own supply that has run out and any new tablets that you have been started on, such as painkillers. All medication will be labelled with instructions on how and when they should be taken. Please ensure you are clear about the instructions before you are discharged.

### Pain relief

It is important to take your pain relief regularly to begin with. This allows you to cough, breathe deeply and move in order to aid your recovery. Do not try to stop your pain relief too soon.

Most patients need to take some form of pain relief for two to four weeks. Once your pain is improving, reduce your pain relief medicines gradually. You will need to get further supplies from your GP. If you find that your pain relief is not as effective as it was to begin with, speak to your GP about trying different ones. Do not exceed the stated dose.

## **Wound care**

The ward staff will give you advice about your wound before you go home. Your wound will normally take two to four weeks to heal.

You will have a stitch or stitches that will need to be removed by your practice nurse or district nurse seven days after the drains are removed. You will be given a letter for the practice nurse, and instructions about when to make an appointment. Usually all dressings will be removed before going home, but if you still have a light dressing over your wound you will be given instruction about this.

You may shower/bath daily, but do not soak the wounds if you have a bath. Avoid very hot water as this may cause you to feel faint. Ensure there is someone in your home with you when you bath or shower in case you need some help.

Take care when washing around your wounds and pat dry carefully. Do not put any lotions or talcum powder on your wounds until they are fully healed.

It is normal to have some numbness, tingling and pins and needles around your wounds and at the front of your chest. This will normally settle over the next few weeks but on occasion may take several months. Occasionally patients are left with a numb area permanently, but this is very rare.

If you are worried at any time about the healing of your wound, if it becomes more painful, red, inflamed or oozy please phone the thoracic nurse specialists or ward for advice, or see your practice nurse or GP.

## **Diet**

A balanced diet is important following any surgery to help with your recovery.

It is normal to have a poor appetite to begin with, this should improve as you become more active. In the meantime, have small, frequent meals. Ensure you are drinking sufficient fluids.

## **Alcohol**

Alcohol can sometimes react with medication you may be on, so always check with a member of the ward staff before you are discharged.

## **Smoking**

We strongly advise you not to smoke following your surgery and to avoid smoky environments. There are some leaflets available on the ward with advice and help on quitting smoking.

## **Driving**

You will normally be able to drive two to four weeks after your surgery, depending on your levels of wound discomfort and mobility. Always check with your insurance company first. In some instances it may be necessary to inform the DVLA.

If when you first drive you find it difficult due to pain and restrictions in your mobility then leave it for a few days before trying again. It is always a good idea to take a competent driver with you the first time you go out.

## **Returning to work**

Depending on your job and how quickly you recover you will need approximately two to four weeks off work. If you have a very physical job you may need a bit longer. Please ask for advice before you leave hospital. If you need a medical certificate please ask for one before going home. You may need to get further certificates from your GP.

## **Help at home**

Following your surgery you will need someone to be at home with you for the first few days. You will need help with the heavier type housework such as hoovering, changing the bed, loading and unloading the washing machine, hanging up washing, shopping and mowing the lawn. Family and friends are often very willing to help, so please ask them and accept their help. However, if you live alone and have no one to provide support please tell the ward nurses on admission.

## Outpatients appointment

You will be seen in outpatients four to six weeks after going home. You will have a chest x-ray and the surgeon will discuss with you your operation and your recovery. You will be able to ask any questions or voice any concerns you have at this time.

Any further treatment required and future follow up plans will also be discussed.

If you have any questions about this information please discuss with a member of staff before discharge. However, if you have any concerns or questions once you are home then please feel free to contact the following for advice:

Thoracic nurse specialists: **023 8120 8457** (8am to 4pm)

Hospital switchboard: **023 8077 7222** ask for bleep **2949**

E4 ward: **023 8120 6498**

Your consultant: .....

Your GP



## The story so far...

Wessex Heartbeat is a registered charity dedicated to providing support to the Wessex Cardiac Centre (WCC), its patients and their loved ones so they can receive the best possible care and support.

Wessex Heartbeat has raised over £13 million, helping the WCC become and remain a Centre of Excellence for cardiac care in the UK. We receive no funding of any type and rely solely on the donations of our generous supporters.

## Key Services

We fund Heartbeat House; a home from home providing free accommodation for the Wessex Cardiovascular and Thoracic Centre patients' relatives, located just a few minutes walk from the hospital. For information about staying at Heartbeat House please ask the Ward Sister.

Wessex Heartbeat are continually funding projects to ensure the Centre remains at the forefront of cutting edge services. Wessex Heartbeat continues to help patients, loved ones and medical staff in many ways, including:

- Funding specialist equipment
- Providing patient literature
- Funding educational and training grants for medical staff

We are also taking the message of keeping healthy out to the community through our 'Healthy Heart' campaign, offering on the spot health checks to staff at businesses and organisations.

It is thanks to the generosity of many individuals and organisations that we are able to fund these projects past and present.

With an increasing number of patients being treated by the WCC, there are always more ways in which Wessex Heartbeat can help and ensure that the cardiac care these patients receive continues to get even better.

Our next major projects will be the development of a Cardiac Day Case Lounge and Heart Failure service.

For more information on our work please visit our website at [www.heartbeat.co.uk](http://www.heartbeat.co.uk)

**With your help, however large or small, we can continue to make a difference and change the lives of the people in our community.**

## Thank You

Registered Charity No 1116510  
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## Please help Wessex Heartbeat make a difference

Mr/Mrs/Ms First name ..... Surname .....

Address .....

..... Postcode .....

Telephone ..... Email .....

### I would like to receive more information on:

Events WHB Community Groups Healthy Heart Campaign

## How to make a donation

### 1 By Cheque

I enclose a cheque for £.....  
made payable to Wessex Cardiac Trust.  
Please send cheques to the address at the bottom of this form.

### 2 By Credit or Debit Card

To make a donation by debit/credit card please call the Fundraising Team on **023 8070 6095**. We regret that we cannot accept American Express or Diners Club cards.

### 3 Direct Debit Mandate

We are very grateful for any amount you are able to give. Please complete the Direct Debit section below.



I / we wish to pay Wessex Heartbeat the amount of £..... monthly / quarterly / annually, until further notice.

### Instructions to your Bank or Building Society to pay by Direct Debit

Bank name.....

Bank address .....

Account name(s).....

Account number..... Branch sort code .....

Starting on..... Signature..... Date .....

By completing your details below, we can reclaim an extra 25p for each pound you donate.



I am a United Kingdom taxpayer and want this donation and all future donations to be treated as Gift Aid until I notify you otherwise.

Signature ..... Date .....

### Please send this form to:

Wessex Heartbeat, PO Box 270,  
Southampton General Hospital,  
Southampton SO16 6GE

T **023 8070 6095**

E [info@heartbeat.org.uk](mailto:info@heartbeat.org.uk)



All data is protected under the Data Protection Act and not shared with any other organisation. Wessex Heartbeat would like to keep you updated with our work. If you do not wish to receive information from us please tick the box



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Main switchboard telephone: **023 8077 7222**

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patients and their loved ones.



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