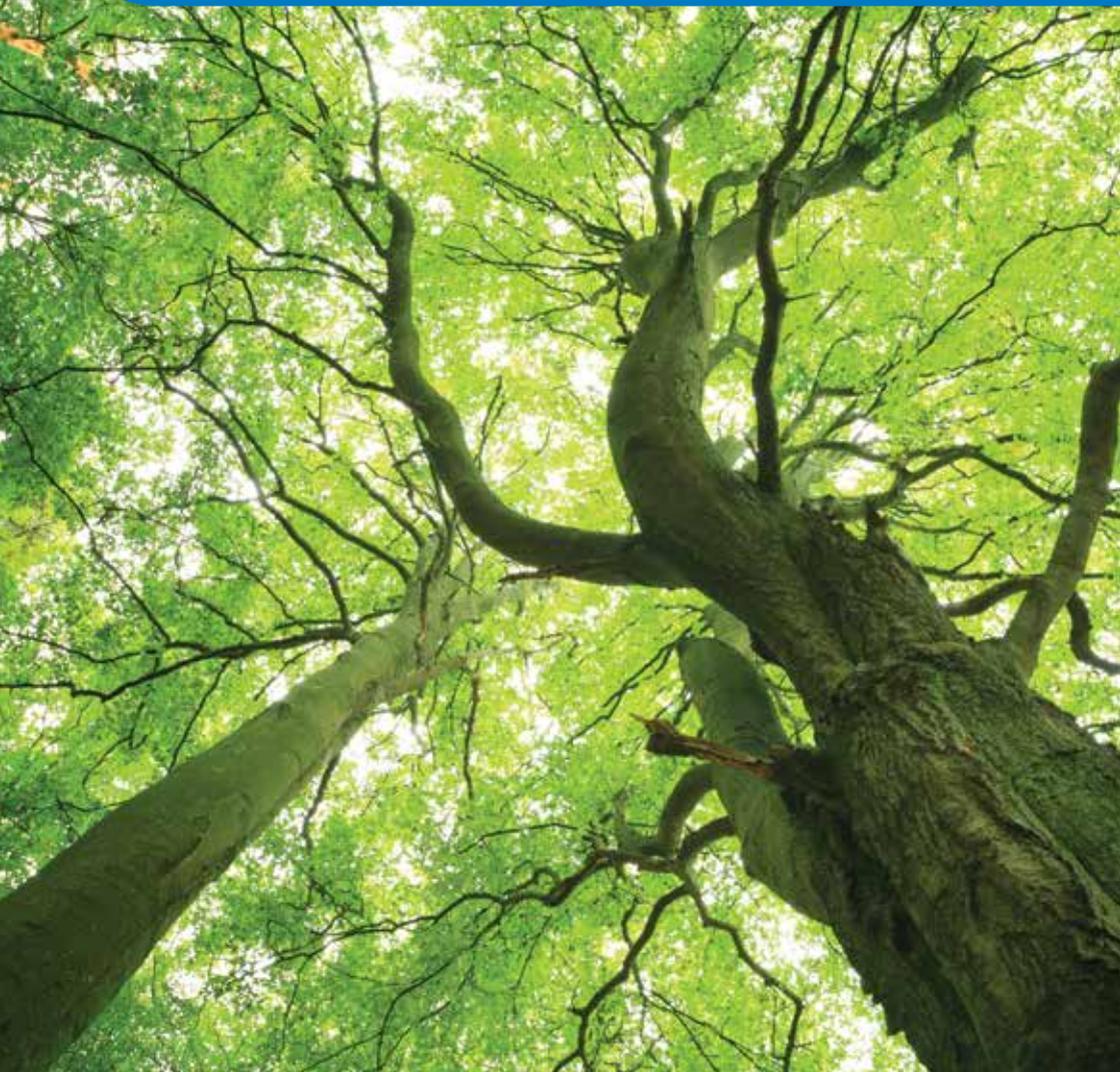


VATS lung biopsy

Information for patients



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

This booklet will explain the reasons for the operation, the procedure itself and potential risks involved. It will also explain the care you will need before and after the operation.

The lungs are divided into lobes; you have two lobes on your left lung and three lobes on your right lung.

You have been referred to a thoracic (chest) surgeon for investigation of the symptoms you have been experiencing, such as shortness of breath or to determine the nature of an abnormality found in the lung.

During an outpatient appointment the surgeon will discuss the reasons for offering surgery, risks and benefits and what is involved.

The operation involves removing a small piece of lung in order to make a diagnosis. This is known as a biopsy.

Depending on the result of the biopsy you may need other treatment at a later time.

It is your decision whether you have surgery or not. The doctors and nurses will be available to offer information, advice and support, please feel free to ask any questions and discuss concerns you may have.

VATS lung biopsy

The operation is done under a general anaesthetic.

It is routine practice to check the airway for any abnormality. This is done by introducing a bronchoscope (surgical telescope) via your mouth into the windpipe.

You will then be positioned on your side with your arm above your head.

The surgeon will make one to three small cuts on your chest, about two to four centimetres long.

One cut will be for a telescope with a camera on the end to look around inside

your chest. The other two will be for the special instruments to perform the operation. Using a special stapling device, the surgeon will separate and remove a small piece of lung. This will be sent to the laboratory for analysis.

At the end of the operation two of the wounds will be closed using absorbable stitches under the skin. The other will be used for a chest tube, which will drain any air and fluid after the operation.

The operation usually takes between 45 minutes and an hour.

Changes to the planned surgery

For technical reasons the surgeon may be unable to do your operation using the VATS method and may have to extend one of the cuts or make a new longer cut. This is called a mini-thoracotomy or open operation.

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

Preparation for surgery

If you smoke we strongly recommend that you give up smoking before your operation.

To reduce the risk of infection, you will need to have a shower in an antiseptic solution the night before your operation. We will give you this special liquid soap.

You must not eat anything after midnight the night before your operation. After midnight you can only drink water, and you must stop this at 6am.

If you take any medications the nurses will advise you which you may take before your operation.

You may be admitted to hospital the day before your operation, or on the day itself.

On admission you may need to have the following tests:

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

On the morning of your operation you will need to 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. We will also give you compression stockings to wear, which help to prevent you developing blood clots in your legs.

All patients are screened for MRSA on admission.

A nurse will need to complete some paperwork with you and a doctor or nurse specialist/practitioner will take a medical history and do an examination. This may have already been done in a pre-admission clinic.

The anaesthetist will see you to discuss having a general anaesthetic. We do not routinely give pre-medications; however if you are particularly anxious then please mention this to the anaesthetist.

If you need other tests specific to you these will be explained.

The procedure will be explained to you again and any questions you may have will be answered.

Once everything has been completed a doctor will ask you to sign a consent form giving your permission (consent) for the operation to take place.

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.

We will give you two name bands to wear, with the ward, your name, date of birth and hospital number. If you are allergic to anything you will also need to wear a red band. Please let a member of staff know if you lose one, or if 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 the operation

After the operation you will be taken to the recovery room. The staff will constantly monitor you and make you comfortable. Once they are happy with your condition you will return to the ward. You would normally stay in recovery for about two to three hours after your operation. Some patients will have a chest x-ray.

When you get back to the ward you will go to an area where we can closely monitor you for the first part of your recovery.

You will have oxygen via a mask, which will need to stay on for at least the first few hours.

You will not be able to drink for four hours after your operation. You will have fluids given by a tube going into a vein until you can drink freely.

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

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

You will be shown how to do breathing exercises and how to cough to prevent a chest infection, as well as exercises to prevent getting a frozen shoulder or a blood clot. It is very important to do these exercises as they will help with your recovery.

Pain relief

After 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. You may also have some local anaesthetic infused into your wound for some time after surgery 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 to begin with but gradually you will be able to do more for yourself.

You can eat 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 walking around on the first day after their operation. Gradually as you recover you will be expected to move more, but be careful not to overdo it. The nurses will help you decide how much you should do.

The dressings over your wounds 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 they are still oozy then a light dressing will be put on and you will be advised about changing it.

We would hope that by the time you go home you will be comfortable and walking slowly around the ward. Your pain should be controlled on tablets, and you should be able to shower or wash yourself, 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 please do so.

Expect to stay in hospital for three to five days, but don't worry if you need longer, you will recover at your own pace.

Side effects, risks and possible complications

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

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.

Let the doctors know if you have any loose teeth, crowns or bridges before your operation.

Changes to 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 either be asked to drink more or you may need to have fluids through a tube into a vein in your arm.

Coughing up blood

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

Shortness of breath

It is normal to feel short of breath after chest surgery, particularly if this was one of your symptoms before surgery. You will be given oxygen for as long as you need it. The doctors, nurses and physiotherapists will be there to support and monitor your condition at this time.

Chest infection

Breathing exercises, early mobilisation and adequate pain relief can help reduce the risk of a chest infection. 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. You will have regular pain relief to control the pain and it should settle in a few weeks. Very occasionally pain does not settle and 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 and is usually minimal. However, very occasionally a blood transfusion is necessary. If this is the case, we will give you more information. Very occasionally patients will need to return to theatre to control the bleeding.

Wound infection

Showering in an antiseptic solution before surgery, frequent hand washing and using the alcohol rubs provided all help 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.

Blood clots

These can occur in the legs and then travel to the lung. The risk is greatly reduced by wearing compression stockings, 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. It usually settles within a few days but will mean that the chest drain has to stay in until the air stops leaking. If it is taking longer to settle the surgeon will discuss what can be done about it.

Pneumothorax

Very occasionally the lung will not fully inflate following this surgery and you may need a chest drain for longer. Sometimes once the drain has been removed the lung will partially collapse. This will either resolve on its own or need a 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 surgery takes place.

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

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

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 more tired than before surgery 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. Restrict any activities that cause pain or wear you out.

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 and 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.

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, within your own limits, to maintain mobility and help with your recovery. Carry on with what you have been doing in hospital and increase steadily.

You should carry on wearing the compression stockings after you leave hospital, until you are fully recovered. If you experience any pain or discomfort in your calves (lower legs) or they become swollen please contact your GP for advice.

Remember to do your breathing exercises, these are very important, and move your shoulder regularly. Be aware of your limits and rest between activities.

Walking is a good form of exercise, which you can do at your own pace and increase gradually.

Please ask if there is anything you are unsure about.

If you feel tired or have pain while exercising stop and rest.

Medication

We will give you back any medication you brought into hospital with 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 pain relief.

All medication will be labelled with instructions on how and when it should be taken. Please ensure you are clear about the instructions before you leave hospital.

Pain relief

It is important to take your pain relief regularly to begin with. This allows you to cough, take deep breaths and move about 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 one to three weeks. Once your pain is improving, reduce your pain relief gradually. You may 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 types. 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 may have a stitch/stitches that will need to be removed by your practice nurse or district nurse seven to ten days after the drain/s are removed. You will be given a letter for the practice nurse, and instructions about when to make an appointment.

Occasionally you will have more than one stitch which will be explained to you.

You may still have a light dressing over your wound on discharge. You will be given instructions about this but usually all dressings are removed before going home.

You may shower/bath daily, but do not soak the wounds if you have a bath. Do not use very hot water as this may make you 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.

Wounds should not be exposed to direct sunlight for at least six months after surgery.

You may 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.

If you are worried at any time about the healing of your wound, if it becomes more painful, red, inflamed or oozy phone the thoracic nurse specialist or the 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 leave hospital.

Smoking

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

Driving

You will normally be able to drive two to four weeks after your surgery.

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 approx 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.

It may well be that due to the symptoms you had before surgery you are not able to return to work until you have had treatment for your condition.

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

After your surgery you will need someone to be at home with you for the first few days. You will need help with heavier 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 appointments

Before you leave hospital we will tell you how you will get your results. Normally your results will be sent back to the doctor who referred you to the surgeon. That doctor will see you in outpatients to discuss results, any treatment required and to answer any questions you may have face to face. Please note we do not give results over the phone.

Further information

If you have any concerns or questions once you are home then please feel free to contact the following for advice:

- Thoracic nurse specialist: **023 8120 8457**
- Hospital switchboard on **023 8077 7222** and ask for bleep **2949**
- E4 ward: **023 8120 6498**
- Consultant's secretary on
- 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

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
Company Limited by Guarantee No 5924982

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



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

University Hospital Southampton NHS Foundation Trust

Southampton General Hospital

Tremona Road

Southampton

SO16 6YD

Main switchboard telephone: **023 8077 7222**

Produced with the support of
Wessex Heartbeat, the charity
providing support to the
Wessex Cardiac Centre, its
patients and their loved ones.



**If you need a translation of this document,
an interpreter or a version in large print,
Braille or on audio tape, please telephone
023 8120 4688 for help.**

www.uhs.nhs.uk