

DEPARTMENT OF RESPIRATORY & SLEEP MEDICINE

Dr Ben Kwan

Dr Con Archis

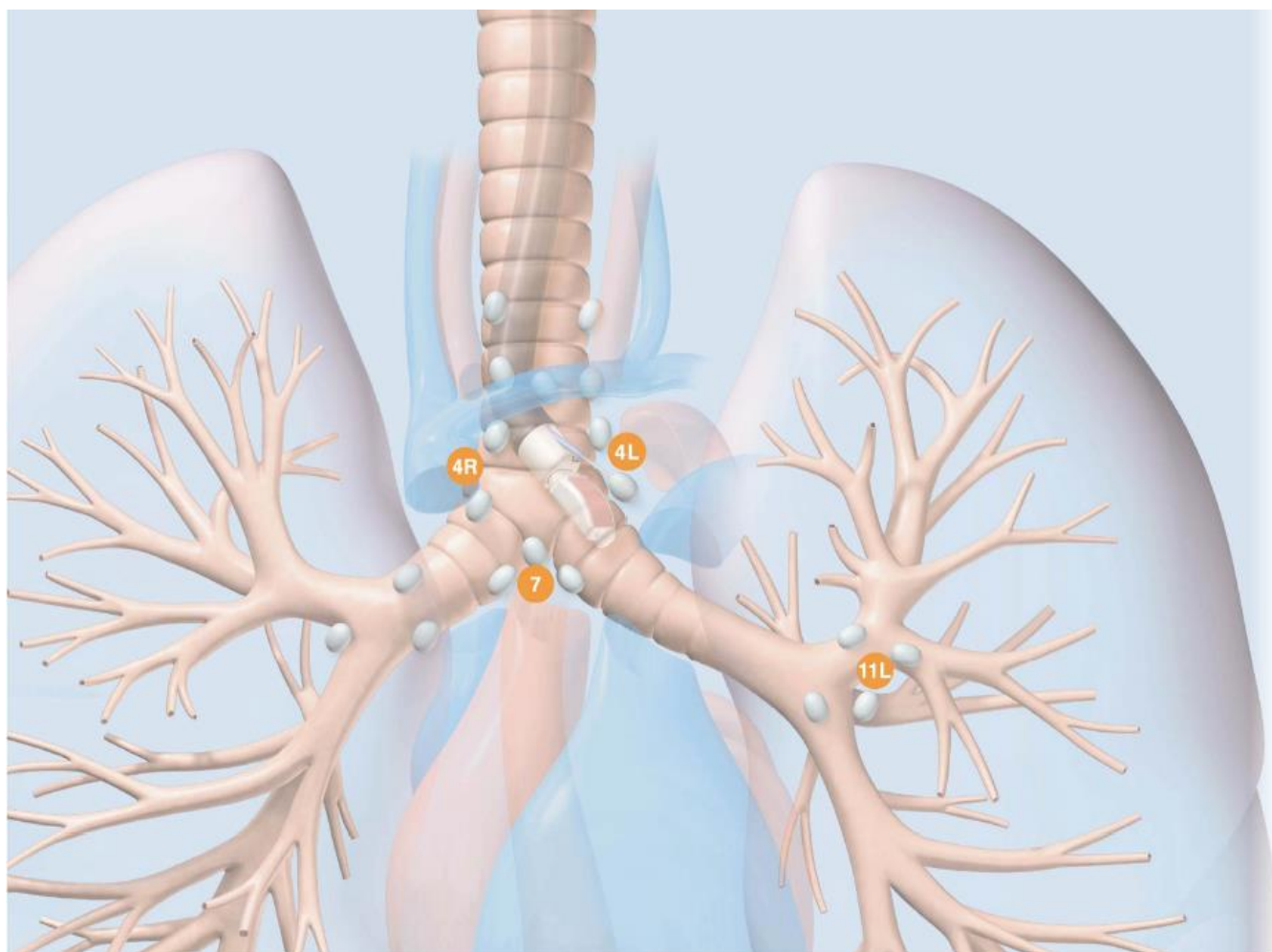
Dr Chin Goh

PATIENT INFORMATION SHEET

EndoBronchial Ultrasound-guided TransBronchial Needle Aspiration (EBUS-TBNA)

Your Respiratory or Cancer Specialist has recommended that you undergo an EBUS-TBNA. EBUS-TBNA is a bronchoscopic procedure. It requires a specialised bronchoscope, which is inserted through your mouth, into your breathing passages (airways of the lungs).

Like a standard bronchoscope, a mini-camera at its tip allows the doctor to look into the airways through a video monitor. In addition, EBUS scope has an ultrasound scan attached at the end of the bronchoscope. Under real-time ultrasound imaging guidance, samples from the glands or a mass outside the airways, could be taken by your doctor with a sampling needle.



OLYMPUS



The Sutherland Hospital
& Community Health Service

Department of Respiratory & Sleep Medicine

Locked Bag 21, Taren Point, NSW 2229

P. (02) 9540 4704 F. (02) 9540 7967

Website: www.seslhd.health.nsw.gov.au

1) Why do I need an EBUS-TBNA?

EBUS-TBNA is performed to obtain tissues from the gland located in the centre of your chest (mediastinum or hilar lymph nodes), or a mass next to the airways. There are a variety of reasons why these glands are enlarged, but the most common reasons to have EBUS-TBNA is to exclude cancer involvement, or confirmation of sarcoidosis (abnormal inflammation of lymph glands and lung tissues). Most of the time, this test would provide useful information for your treating doctor. Very occasionally, additional test may be required.

2) Are there any alternatives?

CT (Computer Tomography) and PET (Positron Emission Tomography) scans can give the doctor some information about the lungs and lymph glands, but EBUS-TBNA provides your doctor tissue samples to confirm or exclude a suspected disease.

EBUS-TBNA is a relatively new procedure to sample these glands in the centre of your chest. Alternatively, and in the past, a surgical procedure called mediastinoscopy is performed by a cardiothoracic surgeon to get to the same lymph glands groups. This involves general anaesthesia and longer recovery time. EBUS-TBNA is a simpler and less invasive test compared to mediastinoscopy.

3) What do I need to do to prepare for the bronchoscopy?

EBUS-TBNA is usually a day-only outpatient procedure.

You will receive instructions about when to not eat and drink (nil by mouth), taking your regular medicines, smoking and removing any dentures before the procedure. You are usually required to be nil by mouth for at least 4 hours before the test.

- Please let the doctor on blood thinning medications, any allergies or if you may be pregnant, a diabetic or recent heart attack (within 6 weeks).
- Please let us know if you suffer from asthma, or chronic obstructive pulmonary disease. Inhaled or nebulised medicine may be given to “open up” the airways prior to the procedure.
- Please bring along any relevant scans (films or imaging discs) on the day of procedure.
- Please let us know before you come for your procedure if you will need an interpreter.

On the day of the procedure, please come to the reception desk at Preadmission Clinic on Level 3, Sutherland Hospital; at the time you have been given. A nurse will greet you and make you comfortable and take your blood pressure, temperature and pulse, and ask you questions about your medical history. The nurse or doctor will insert a small plastic tube into your hand or arm so that we can give you sedation and any other medication during the procedure.

4) How is sedation achieved?

Procedural sedation involves the use of short-acting analgesic, muscle relaxants and sedative medications, given and supervised by an anaesthetist. Serious complications rarely occur and no deaths had been reported in multiple studies.

You will receive information from the anaesthetist prior to the procedure, whom will further explain and discuss these risks.

5) What happens during an EBUS-TBNA?

You will be lying down with the head of the bed tilted up slightly. The anaesthetist will also spray the back of your throat with local anaesthetic agents, to make it numb. Once adequate sedation is reached, the anaesthetist will place a breathing tube through your mouth into your throat, to help you breathe. An EBUS scope is then placed through the breathing tube into the airways. The doctor will be able to find the lymph gland or mass next to the airways with the EBUS scope, and take samples from them.

The procedure will take anywhere between 30 – 60 minutes, depending on how long it takes for the medicine to take effect, and how many lymph glands need to be sampled.

6) What are the risks?

EBUS-TBNA is a safe procedure, very similar to a bronchoscopy procedure. Serious risks, such as air leak or serious bleeding are uncommon and less than 5%. Other more common minor risks include:

(a) Minor complications

Discomfort and coughing – While the bronchoscope is passed through your throat into the lungs, it may cause some discomfort. It may also tickle your airways, causing a cough. A small number of patients are troubled by a sore throat after the procedure but this usually settles within 48 hours.

Infection – Many patients suffer from a fever and mild sweating, between 6-12 hours after the bronchoscopy. This goes away by itself without any treatment and is not a sign of an infection. Infection risk is approx. 2-3% and usually treated with a course of oral antibiotics.

Reduced oxygen – Your oxygen level will be continuously monitored during the procedure. The level of oxygen in the blood may fall during the procedure for several reasons. The bronchoscope may block the flow of air into the airway, or small amounts of liquid used during the test may be left behind. This drop is usually mild, and the level usually returns to normal without treatment. If the oxygen level remains the doctor will give extra oxygen or stop the test to allow for recovery.

(b) Moderate complications

Mediastinal infection – During the biopsy of the lymph glands in middle of your chest (mediastinum), a needle is passed through the airways into the glands. Potentially, infection inside the airways could be introduced into the mediastinum causing an infection (mediastinitis). If that occurs, you may experience chest discomfort and pain upon waking, as well as symptoms of infection such as fever and sweats. This is a rare occurrence but has been described in previous small case studies. If this occur, hospitalisation with intravenous antibiotics and close monitoring may be required.

Bleeding - Bleeding can occur after the doctor performs the biopsy. Usually bleeding is inside the lymph glands and will stop without treatment.

(c) Serious complications

Death - described as occurring in around 1 in 10,000 cases. Almost always, however, the patients who have died from bronchoscopy have been very ill in hospital beforehand, and have not been having the procedure as an outpatient.

7) What happens after the procedure?

Patients vary in their wake-up times. If you are an outpatient or a non-critically ill inpatient, you will need to stay in the recovery area for an hour or more before the sedative has worn off. You will also need to wait 60-120 minutes, or until the numbness wears off, before drinking any liquids. At this time a 'sip test' is performed to ensure there is no risk of choking or aspiration. If you are an outpatient, it is recommended that you bring someone along to drive you home.

Lab results take more time, usually 1–4 days or more depending on the specific test that is being done. You will be given an appointment with your specialist to discuss the results

Watch out for the abovementioned complications; contact your doctor immediately if you have any concern. You will be given on written instruction when you leave the Treatment Centre. Please follow these carefully.

SUMMARY GUIDE

You are scheduled to have a bronchoscopy, a procedure that your doctor performs to examine your airways or take samples from your lungs.

- Do not eat or drink before the procedure according to instruction given.
- Review your medication schedule and smoking activity with your doctor.
- After the procedure, do not drink for ½ to 1 hour or until the numbness completely wears off.
- Do not drive home by yourself after the procedure; arrange for a family member or friend to take you home.
- Contact your doctor immediately if you have shortness of breath or chest pain, or you cough up more than a few tablespoons of blood at home.

If you have any questions or concerns, please contact:

**Respiratory Consultant or Registrar On-call via the Sutherland Hospital Switchboard
on Telephone: 9540 7111**

8) Patient Instruction after Fibreoptic Bronchoscopy / EBUS-TBNA

The responsible adult escorting you home should also be aware of the following instructions:

- The effect of the sedation can take some time to wear off and your memory loss may persist longer than the sedation. Your escort needs to know that you may not carry out instruction even though you appear to acknowledge them.
- Your throat might be a little sore and this will wear off. You may also cough, and even cough up a small amount of blood and again this usually does not require treatment.
- You can resume eating a normal diet after the 'Sip Test' unless the doctor today advises otherwise.

SEDATION WILL AFFECT YOUR JUDGMENT FOR ABOUT 24 HOURS. DURING THIS TIME FOR YOUR OWN SAFETY AND IN SOME CASES LEGALLY:

- DO NOT drive any type of car, bike or other vehicle and take extra care as a pedestrian
- DO NOT operate machinery
- DO NOT drink alcohol
- DO NOT use cooking appliances or handle dangerous items such as boiling water
- DO NOT make critical decisions or sign a legal document
- DO NOT do activities that require coordination or balance
- Ensure that you have a responsible adult to care for you until tomorrow
- Rest at home for the remainder of the day

Your doctor may prescribe you medication for pain or other indications:

- Take medication prescribed

SEEK MEDICAL ADVICE FROM YOUR GP or HOSPITAL IF YOU NOTICE ANY OF THE FOLLOWING:

- Have trouble swallowing / breathing / speaking
- Sharp pain in the throat or chest
- Begin coughing up more than a few tablespoons of blood
- Have a high temperature or fever $>38^{\circ}\text{C}$
- Have redness, pain or swelling for more than 48 hours where you had the injection for sedation (hand or arm)
- Any symptoms that you think is related to today's procedure and is causing you serious concern

Please ensure you have an arranged follow up with your respiratory specialist within 2 weeks of the procedure.

If you have any questions or concerns, please contact:

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