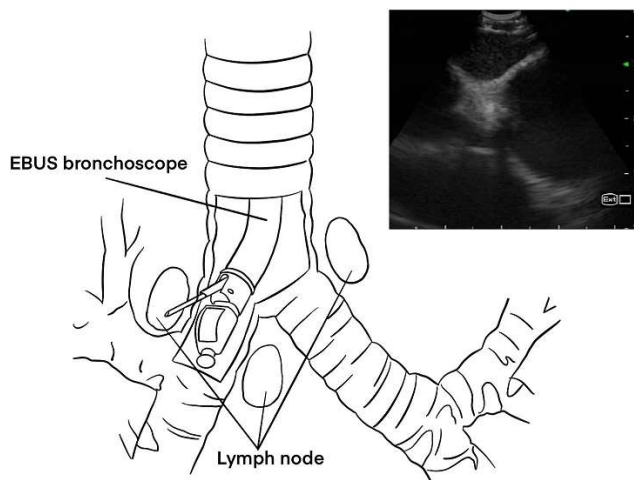




**Endobronchial Ultrasound Transbronchial Needle Aspiration (EBUS-TBNA)**  
**Procedure Information Sheet**

**What is Endobronchial Ultrasound Transbronchial Needle Aspiration (EBUS-TBNA)?**

EBUS-TBNA is a procedure that allows the doctor to look into your airways (breathing passages) and take samples from your lymph nodes (glands) or abnormal lumps in the mediastinum (centre of your chest) with the aid of an ultrasound (using sound waves). It is done using a thin tube-like instrument called an EBUS bronchoscope with a mini camera and a small ultrasound probe at the tip.



**Why do I need this procedure?**

EBUS-TBNA is commonly done to investigate the cause of enlarged lymph nodes in the mediastinum without surgery. It can diagnose infections such as tuberculosis, and inflammatory conditions, as well as the diagnosis and staging of cancer.

**What are the preparations?**

You are advised not to eat or drink for at least six hours before the procedure. However, you should continue to take your prescribed medication(s) for high blood pressure, heart condition(s) or asthma until the morning of your scheduled appointment for the procedure. If you are diabetic or on blood thinners, your doctor will advise you to consume your medication(s) accordingly.



### **How is the procedure performed?**

You will need to lie down for about 60 to 90 minutes during the procedure. Moderate sedation, a drug-induced state of reduced consciousness, may be used before and/or during the procedure to help ease discomfort, pain and anxiety. You will be given medicine through an intravenous line. Your heart rate, breathing and blood pressure will be closely watched throughout the procedure. While most will fall asleep during sedation, some people may be drowsy but have periods of awareness during the procedure. You should feel little or no pain. You may not remember the procedure at all or have a vague memory of it. Moderate sedation is generally safe. The risks are rare and some possible side effects are: decreased rate of breathing, changes in heart rate and blood pressure, headache, nausea and vomiting, and inhalation of stomach contents into the lungs.

Local anaesthetic, which can taste bitter, will be sprayed into your nose and the back of your throat to numb the area. A tube may also be placed into your nostril to provide a greater oxygen supply.

In some cases, patients may be given the option of general anaesthesia. Your doctor will then discuss with you and provide you with the necessary information.

The EBUS bronchoscope will be introduced gently through the mouth, past the vocal cords (voice box), down the trachea (windpipe) and into the bronchi (branches of the airways) of both lungs. You may experience mild discomfort in your throat and air passages. Your doctor will be able to see within your lungs through the mini camera at the bronchoscope's tip. Your breathing and blood pressure will also be monitored closely throughout the procedure.

The small ultrasound probe at the tip allows the doctor to visualise the structures in the mediastinum. Tissue samples will then be obtained via a needle from the scope under direct vision.

### **What are the risks and complications of the procedure?**

EBUS-TBNA is a safe procedure but is associated with some complications such as bleeding, abnormal heart rhythm and other heart problems, low blood pressure, reduced oxygen, air leak (pneumothorax), infection and wheezing. However, the risk of these complications is less than 1.5%. The reported mortality rate is up to 1 in 1,000. Your doctor will advise you accordingly based on your medical condition.

### **What do I expect after the procedure?**

Once the procedure is completed, the nurses will monitor you while you rest. Since your throat is numb from the local anaesthetic, you should not eat or drink unless otherwise advised by the doctor.

After the procedure, there may be blood stains on your sputum, and you may also experience a mild fever. Usually, these symptoms will subside within 24 to 48 hours and soreness of your throat or hoarse voice will be resolved within 1 day. A nurse or doctor will review if you are suitable to be discharged 4 hours after the procedure.



### **What do I expect after the procedure? (continued)**

If sedation was administered, you may feel slightly drowsy for a short period after the procedure. Considering that the effects of the medication(s) may take some time to wear off, you are advised to seek the help of a family member or friend to accompany you once you are discharged. You are also advised not to drive any vehicle, drink alcohol, operate machinery, take sedatives (except those prescribed by the doctor), or sign any legal documents during this period.

### **What are the other Options?**

Although there are other tests and procedures such as X-rays and Computed Tomography (CT) scans that are capable of giving the doctor information about your lungs, the EBUS-TBNA allows the doctor to look inside the lungs and obtain the tissue samples. There may also be other methods of obtaining tissue samples, such as radiologically-guided tissue biopsy (biopsy through the chest wall) or mediastinoscopy (a form of surgery involving an incision/cut made above your breastbone).

### **What will happen if I do not undergo the procedure?**

If you choose not to undergo this procedure, your doctor may not be able to obtain essential information to determine the cause of your condition and/or plan the treatment for your medical problem. Your doctor will discuss with you the other available options and the possible consequences that may arise should you decide not to undergo the EBUS-TBNA.

**DISCLAIMER:** This information sheet mentions some of the more common or important risks of surgery/ procedure. This list is **NOT** meant to be, and **CANNOT** be exhaustive.

