

There are many methods of testing for lung cancer. Remember that each patient is treated as an individual and therefore your doctor will only choose the most appropriate tests for you. Below is a list of tests used for the diagnosis and management of lung cancer.

**Blood test:** Can help in finding out about your general health and possible spread of lung cancer. Can provide information on many aspects of health including:

- How well your kidneys and liver are working (Creatinine/LFT's).
- If your body's biochemistry is balanced (for example, enough calcium and protein).
- Ongoing/vulnerability to infection (white cell count).
- Anaemia/lack of circulating oxygen (haemoglobin).
- Susceptibility to bruising/bleeding (platelets).

**Bone scan:** A scan where a small amount of radioactive material is injected into a vein to highlight any areas of the bones that have been affected by cancer, trauma, or inflammation. Normally done on an outpatient basis.

**Bronchoscopy:** Allows the doctor to examine, photograph and take a tiny sample (biopsy) of tissue from the inside of your lungs/airways. Before this test, your throat will be sprayed to make it numb and a relaxing sedative will be given to you. A narrow flexible tube with a tiny camera on the front will then be inserted through your nose or mouth and down into your lungs. If any abnormal areas are seen tiny biopsy samples will be taken. If the sample is found to be cancerous it is called malignant, if not it is called benign. At this point the cell type of lung cancer you have may be established. This test is not painful but it may leave you with a sore throat for a few days. A bronchoscopy is usually performed as a day case procedure which means that you will go home at the end of the day.

**Chest x-ray:** A simple x-ray of the chest which can sometimes show abnormalities such as inflammation, infection, scarring or growths.

**CT guided biopsy:** A test done as an outpatient using a CT scan. Local anaesthetic is used to freeze the skin on the front or back of the chest. A thin needle is then passed through the chest wall and into the lung. The CT scan is used to guide the needle into the correct position to allow the biopsy to be taken. The doctors will take a sample of tissue or fluid to be tested for cancer. The biopsy is sometimes slightly uncomfortable, but it only takes a few minutes. After the procedure you will need to stay in hospital for a few hours to ensure that the lung has not been damaged.



**CT scan (computerised tomography):** A scan that gives a 3D picture of your body's organs. Can help to determine whether the cancer has spread to other organs and if it is affecting any of the lymphatic nodes (glands) or blood vessels. Sometimes an injection or drink (gastrografen) is given to highlight some of the organs in the gut. The scan is painless but you might feel slightly boxed in as it rotates around your body. If you suffer from claustrophobia you should tell the staff as they will be able to reassure you throughout the scan.

**Endobronchial ultrasound (EBUS):** A test that allows the doctor to look into your lungs (similar to a bronchoscopy) and allows them to take samples from the glands in the centre of your chest (mediastinum) with the help of an ultrasound scan. Before this procedure you will be given a sedative to make you sleepy. A narrow flexible tube with a tiny ultrasound machine on the end is inserted through your mouth into your airways. Using the ultrasound, the doctor is able to see the glands in the centre of the chest (mediastinum). A needle is then passed through the wall of the airway to take samples from the lymph nodes. These are then tested to see if the cancer has spread. This test is not painful and taking the samples does not hurt but you may have a sore throat for a few days.

**Endoscopic ultrasound (EUS):** It is usually performed as an outpatient meaning that most people go home the same day. A test which is very similar to an endoscopy. Before this procedure you will be given a sedative to make you sleepy. A narrow flexible tube with a tiny ultrasound machine on the end is inserted into your mouth and into your oesophagus (gullet). Using the ultrasound, the doctor is able to see the glands in the centre of the chest (mediastinum). A needle is then passed through the wall of the oesophagus to take samples from the lymph nodes. This test is not painful and taking samples does not hurt. You may have a sore throat for a few days. It is usually performed as an outpatient meaning that most people go home the same day.

**Lung function tests:** These are tests to establish how well your lungs are working (air/oxygen capacity). May help decide if you are fit enough for surgery, radiotherapy, or if you have any ongoing lung conditions, such as emphysema. These simple tests usually involve blowing into a mouth-piece.

**Lung perfusion scan:** A scan that produces a picture of blood flow to the lungs. Measures the ability of the lungs to take in air. A small amount of radioactive protein is injected into a vein in your hand or arm. You will then be positioned under a special camera that can detect the protein and a series of photographs are made of the chest. Normally done on an outpatient basis.



**Mediastinoscopy:** A surgical procedure for examining lymph nodes under the breastbone (will leave a small scar). This test requires a general anaesthetic and a short stay in hospital. It is often part of surgical assessment to ensure the cancer is operable.

**MRI scan (magnetic resonance imaging):** A painless but noisy scanning machine which is similar to a CT scanner but gives a different type of 3D image using magnets instead of x-rays. No jewellery must be worn during the scan, as it will be attracted to the magnet inside the machine. If you suffer from claustrophobia you should tell the staff as they will be able to reassure you throughout the procedure.

**PET scan (positron emission tomography):** A scan that gives pictures showing where there is active cancer throughout the body. A PET scan should be used before lung cancer surgery and radical radiotherapy, to make sure that curative treatment is possible (a PET scan is more accurate than a CT scan for this purpose). A PET scan can also be used to investigate a suspected cancer, if diagnosis has not been possible using other tests. An injection containing a radiotracer is given to highlight any active cancer cells. The scan is painless and quiet and you will not be fully encased during the examination. Modern PET scans are usually combined with a CT scan which is performed at the same time – a PET-CT scan.

**Sputum (spit):** A sample may assist in establishing if you have any infections or blood present. Your hospital or GP can perform this test.

**Ultrasound:** This is a painless scan that uses soundwaves to create an image of the inside of your body. It may be used to examine inside the kidneys, liver and lung. It is frequently used to pinpoint fluid in the lung.

## **GIVING HELP AND HOPE**

The charity has two aims:

**Supporting people living with lung cancer** - Working closely with lung cancer nurses, we provide information, run lung cancer support groups and offer telephone and online support. Our patient grants offer some financial help to people affected by lung cancer.

**Saving lives** - We fund lung cancer research, campaign for better treatment and care for people who have lung cancer, and raise awareness of the importance of early diagnosis. Our lung cancer prevention work helps people to quit smoking and encourages young people not to start smoking.

**Call us on 0333 323 7200 (option 2)**

This information has been taken from the following source:  
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