

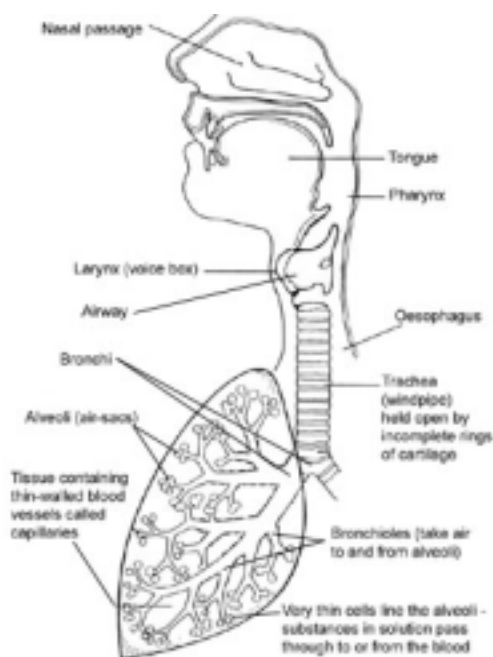
## Lung Cancer

Lung cancer is the fourth most common cancer in both Australian males and females and the most common cause of death from cancer. There are about 80 new cases of lung cancer diagnosed each year in the ACT and 9,180 in Australia, about 7,427 Australians die from lung cancer each year.

### The Lungs

The lungs are two sponge-like organs within the chest cavity. With each inhalation air passes through the trachea (or windpipe) into the two bronchi (or main air passages) supplying each lung. These bronchi divide into a large network of smaller branches known as bronchioles. At the end of the bronchioles are tiny air sacs called alveoli. These tiny air sacs are covered by a mesh of tiny blood vessels. The close relationship allows the exchange of oxygen from the air sacs to the blood.

The Human Airways



### What is lung cancer?

Lung cancer usually starts in the cells that line the airways of the lungs. There are different types of lung cancer (or carcinomas). They are classified by the types of cells involved and are divided into two main categories – small cell and nonsmall cell cancers.

Mesothelioma is not strictly speaking a lung cancer. It affects the pleura (the membranes that line the inside of the chest wall). It is commonly associated with exposure to asbestos.

### Small cell cancer

- is strongly associated with cigarette smoking
- often starts in the middle of the lungs
- has often spread before diagnosis
- accounts for about 20% of all lung cancers

### Non-small cell cancer

- affects the cells of the bronchi and other airways
- types include squamous cell carcinoma, adenocarcinoma, large cell carcinoma and bronchiolo-alveolar cell carcinoma
- accounts for about 80% of all lung cancers

### Causes

Up to 90% of all lung cancer can be attributed to smoking. Where smoking is not a factor, the causes of lung cancer are unclear.

Studies have shown that passive smoking (breathing in other people's tobacco smoke) can contribute to lung cancer in non-smokers.

There are other substances that are risk factors for small numbers of lung cancers which commonly occur after years of exposure in the workplace. They include asbestos, and the processing of steel, nickel, chromium and coal gas.

Exposure to radiation causes an increased risk of all cancers including lung cancer. Miners of uranium, fluorspar and haematite may be exposed to radiation by inhaling air contaminated with radon gas.

The most important way to avoid lung cancer is not to smoke. People who want to stop smoking can get help from the **Quitline 13 7848**, their GP or pharmacist.

### Symptoms

The signs and symptoms of lung cancer often only occur when the disease is at an advanced stage. Some people find out they have cancer after a chest infection or when they have a chest X-ray for other reasons.

Some possible signs of early lung cancer are:

- a cough that won't go away or a change in a chronic cough
- shortness of breath
- coughing up blood
- chest pain, often made worse by deep breathing
- recurring pneumonia or bronchitis.

Symptoms of more advanced cancer may include:

- fatigue (tiredness)
- weight loss and loss of appetite
- extreme shortness of breath

- hoarseness (a change in the voice)
- difficulty with swallowing
- abdominal pain

Having one or more of these symptoms does not always mean lung cancer is present but it is important to have them checked by a doctor.

### Diagnosis

If lung cancer is suspected a range of tests are used to make a diagnosis.

Imaging tests often used for diagnosis include:

- a chest X-ray to look for any spot on the lungs. It can identify tumours as small as 1 cm in diameter.
- CT scans and PET scans are all imaging tests that give more detailed information about the cancer's size, where it is and any enlarged lymph nodes. They can also be used to find out whether the cancer has spread to other parts of the body.

These tests are part of staging the disease. The results will help decide what treatments are most appropriate.

### Sputum cytology

A sample of phlegm coughed up from the lungs is examined under the microscope to see if cancer cells are present.

### Bronchoscopy

A lighted tube called a fibre optic bronchoscope is inserted through the nose or mouth into the bronchi to help locate tumours and to enable a biopsy or tissue sample to be taken.

### Fine-Needle Aspiration

This is done when tumours are accessible (in the outer parts of the lung). Not every tumour can be safely sampled this way.

A local anaesthetic is injected into the skin and, under the guidance of an x-ray machine, a needle is inserted through the chest wall and into the tumour. Cells are then withdrawn through the needle.

Other tests may be performed such as taking samples of lung or lymph tissue, blood or measures of lung capacity.

### Treatment

The type of treatment given for lung cancer depends on the type of cancer, where the cancer is located in the lung, whether it involves other parts of the chest cavity and whether it has spread to other parts of the body. Age, general health and lung function are taken into account before starting any treatment.

Lung cancers that are diagnosed early and are small and confined within the lung in otherwise healthy people have the best chance of being cured. Surgery can then be used to remove the cancer (either part or all of a lung).

Radiotherapy is the use of X-ray beams to kill cancer cells. It may be used to control some cancers. Radiotherapy can slow down cancer growth and lessen symptoms.

Chemotherapy is the use of drugs to kill cancer cells and stop them from reproducing. It can be used in treatment for lung cancer, either in combination with other treatments or alone. Other new treatments for lung cancer include targeted therapies. All treatments must be discussed with the treating doctor.

**For further information call the Cancer Council Helpline on 13 11 20.**

*This information sheet contains general information, for specific information regarding your cancer diagnosis or treatment, it is always best to talk to your doctor or health care team.*

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