



*"When you can't breathe...
nothing else matters"*

Lung Cancer

Lung cancer is a common disease which can be difficult to diagnose. Some people may be diagnosed after a routine check-up, while others may present with signs and symptoms.

Lung cancer does not discriminate; it occurs most commonly in smokers but can also affect people who have never smoked. Nowadays, lung cancer is found more commonly in former smokers or never smokers than in current smokers.

So far, there are no organised early screening programs for lung cancer. It is therefore important to discuss any symptoms with your doctor. Symptoms may include: persistent or changed cough, coughing blood, breathlessness, chest pain, fatigue, or weight loss. If you have ongoing concerns about the possibility of lung cancer, maybe consider a second opinion.

What is Lung Cancer?

Lung cancer is a term used to describe a growth of abnormal cells in the lung - these cells continue to grow in an uncontrolled way. The abnormal cells stick together and can produce a growth in the lung. Doctors call this abnormal cluster of cells a "tumour". These abnormal cells grow and divide uncontrollably and eventually, spread throughout the body.

Cancer that starts in the lung is known as a primary lung cancer. Sometimes, cancer can spread to the lungs having started as a "primary" in another part of the body such as the breast, bowel, or prostate – these cancers are called lung "secondaries" or "metastases".

What causes lung cancer?

Lung cancer is caused by DNA damage in genes of the lung cells. Tobacco smoke is the biggest cause of lung cancer; with additional risk factors including asbestos, radiation and others such as a family history. For some people the cause of their cancer cannot be identified.

Types of lung cancer

There are two main types of lung cancer: non-small cell lung cancer (NSCLC) is more common and makes up more than 80% of all lung cancers, and small cell lung cancer (SCLC), which makes up about 15% of lung cancers. In addition, there are 'subtypes' of NSCLC; the most common being Adenocarcinoma, Squamous Cell Carcinoma and Large Cell Carcinoma.

Recently, it has become clear that lung cancers are more complex and can be grouped according to the type of DNA damage that causes the lung cancer. This type of genetic or molecular testing can help doctors identify if your lung cancer will be able to be treated by medicines that target these DNA changes.

How is lung cancer diagnosed?

Lung cancer can be difficult to diagnose and may take many different tests to confirm your diagnosis. Your doctor will work with you to choose the most useful tests to identify the type of lung cancer. These could include a chest x-ray or a CT scan. Sometimes a bronchoscopy needs to be performed; this is a procedure where a slim tube is inserted through the nose or mouth and down the trachea (windpipe) to get a sample of the lung cancer tissue.

Sometimes, a biopsy is obtained by passing a very fine needle, under local anaesthetic, through the chest wall. A pathologist will then confirm if there are any cancer cells and the type of cancer that can be seen under the microscope.

Stages of lung cancer

In addition to making the diagnosis of lung cancer, your doctor will also check if and where the cancer has spread outside the lung to identify the “stage” of the lung cancer. “Stage” refers to the extent of the cancer, and describes the size and location of the cancer in the lung, and if it has spread to lymph nodes (glands), other parts of the lung or to other parts of the body.

The tests commonly used to stage lung cancer include x-rays, CT scans, PET scans, bone scans, MRIs and sometimes more biopsies are taken to test for cancer cells. Your doctor will work out with you the most appropriate combination of tests.

Lung cancer is staged as:

Stage I - small cancer, no spread;

Stage II - slightly larger cancer or spread to nearby lymph nodes;

Stage III - locally advanced – confined to the chest, but attached to other structures or spread to more distant lymph nodes;

Stage IV - involving spread to other parts of the body.

Sometimes, SCLC is staged as:

Limited - chest only;

Extensive - spread beyond the chest.

Who will treat lung cancer?

Your team should consist of your GP, specialists, nurses and allied health professionals, known as a multidisciplinary team, working together with you, your family and carers. Ideally, specialists may include a lung specialist, lung surgeon, medical oncologist, radiation oncologist, lung cancer nurse, social worker, dietitian, psychologist and others if needed, such as palliative care teams.

Your preferences and those of your family/carers are very important to your healthcare team. It is important to feel comfortable with your team, that you ask questions and that you express your feelings and wishes in your discussions with your team.

Treatment of lung cancer

The treatment of lung cancer should include treating the cancer and your other needs as appropriate. You should not hesitate to discuss any physical, emotional, spiritual, practical and financial needs with your healthcare team.

Your doctors will work with you to choose

the most suitable cancer treatment for you, considering the type and stage of the lung cancer, your fitness and wishes.

Early stage (stage I, II) NSCLC is usually treated by surgery to remove the cancer where possible. Sometimes, if a person is not fit or declines surgery, treatment with radiotherapy, (sometimes with chemotherapy) may be considered.

Advanced NSCLC (stage III, IV) is not usually treated with surgery. Different treatments will be considered including chemotherapy, radiotherapy and newer targeted therapies. For SCLC, chemotherapy is usually the standard treatment and in some cases, radiotherapy may be offered.

In addition to specific anti-cancer treatment, other measures can be used if required to relieve symptoms and discomfort, and to optimise quality of life. For all stages of lung cancer the aim is to optimise your quality of life and to maintain hope.

Outcome of lung cancer

The outcome from lung cancer will largely depend on the type and stage and the general health of the person with lung cancer. It is important to remember that each person is different and results from statistics may not always be relevant to the person concerned. Better ways to detect and treat lung cancer are emerging all the time; research is continuing to identify effective screening methods and better treatments for the individual, so called personalised medicine.

Accessing new treatments via clinical trials may be an option for you – you can discuss this with your doctor.

Living with lung cancer

There is no 'right' way to cope with a diagnosis of lung cancer. Many people find it very hard to deal with the physical and emotional stress.

It is important to have a good network of medical support. It is very helpful to know where to turn to for advice and help – a GP can be most helpful in this regard.

Outside the healthcare system, for many, family, carers and friends are an important source of help and support. Some people find joining a support group can be helpful (such as one linked with a local cancer service, Lung Foundation Australia or the local Cancer Council).

Others find that having a good understanding of the cancer, keeping positive and generally healthy is helpful for them. If you smoke, it would be beneficial for you to work with your healthcare team to stop smoking so you can breathe better, put less strain on your heart and body, and help the treatments work better. Your medical team may provide helpful advice for you as you consider all of these matters.

Glossary

CT Scan

Computerised tomography (CT) uses x-rays, to produce cross-sectional pictures of the body including the bones and soft tissues.

PET Scan

Positron emission tomography (PET) is a scanning technique which produces a picture of the activity of cells, particularly cancer cells in the body. To conduct the scan, a short-lived radioactive substance, is injected.

Bone Scan

A bone scan is a nuclear scanning test to find abnormalities in bone.

MRI

Magnetic Resonance Imaging (MRI) is most commonly used to see the internal structure and function of the body. MRI provides much greater contrast between the different soft tissues of the body than CT does, making it especially useful in cancer imaging; however its use in the chest is limited because of breathing.

Biopsy

A biopsy is a medical test involving the removal of cells or tissues for examination under a microscope by a pathologist, to confirm or rule out cancer.

Radiotherapy

Radiotherapy uses high doses of x-rays to kill the cancer cells and may be used for cure or relief of unpleasant symptoms.

Chemotherapy

Chemotherapy usually means using drugs which kill cancer cells. These drugs are mostly given intravenously (in a drip), or occasionally by mouth.

Targeted Therapy

Targeted therapy is a type of medicine that blocks the growth of cancer cells by interfering with specific genes needed for tumor growth. Targeted cancer therapies work differently from chemotherapy and some can be taken orally.

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