



## Diagnosing and Testing for Lung Cancer

Doctors gather information from their patient and then arrange tests that will give them a diagnosis (what's wrong with a person).

### How lung cancer is diagnosed



Doctors will ask about a person's medical history, how they've been feeling, their symptoms and will listen to their chest.

#### Imaging tests to help find lung cancer

Doctors arrange imaging tests to help find lung cancer. Imaging tests take pictures and video of the inside of the body. Doctors will see cancer show up on the images and scan results. They use imaging tests to see if cancer has spread, and if treatment is working. Doctors may use the tests below to see if cancer has spread to other parts of the body. These tests include:

- Computed tomography (CT) scan
- Positron emission tomography (PET) scan
- Bone scan.

To look at anything unusual they find in imaging tests, doctors look at tissue or fluid from the lung. Doctors use a few ways to remove cells from the body and look at them under a microscope to decide if they are cancer. These tests include:

- [Bronchoscopy](#)
- [Endobronchial ultrasound](#)
- [Endoscopic esophageal ultrasound](#)
- [Mediastinoscopy and mediastinotomy](#)
- [Thoracentesis](#)
- [Thoracoscopy](#)
- [Sputum cytology](#)
- [Fine needle biopsy \(FNA\).](#)

Many researchers are working to develop tests that can make a difference in early lung cancer screening and survival.

#### Lung Function Test (Spirometry)

Spirometry is a lung function test that measures the amount of air taken in (volume) and exhaled as a function of time.

If you think you are at risk for lung cancer or if you have any symptoms, talk to your doctor about tests to see if you have lung cancer.

### Staging



Staging is part of the diagnosis and helps shape your treatment plan. Staging means finding out if and how much the lung cancer has spread. This is important because your treatment and the general outlook for your recovery depend on the stage of your lung cancer.

[Learn more about lung cancer staging.](#)

### Tumour testing



Depending on the tumour type it is recommended that your lung cancer tumour be tested for certain DNA changes. These tests - sometimes called molecular, biomarker or genomic testing - look for changes (mutations) in the tumour's DNA and work out the levels of some proteins in the tumour. When doctors have this information, they may suggest treatment that targets the mutation in the cells.

For more information on PD-L1 testing and immunotherapy treatments see the resource - [Immunotherapy Treatment](#).

[Learn more about tumour testing.](#)



**Related content**

[American Lung Association \(2016\) "What Are The Symptoms of Lung Cancer?"](#)

[European Lung Foundation \(2016\) "Lung Cancer"](#)

[Lung Foundation Australia \(2012\) "Better Living with Lung Cancer: A Patient Guide"](#)

**About Lung Foundation New Zealand**

Lung Foundation New Zealand is a non-government organisation dedicated to promoting healthy lungs and early detection of lung disease (including lung cancer, New Zealand's biggest cancer killer). The Lung Foundation is devoted to supporting people affected by lung disease and provides a voice for patients and their families.

Lung Foundation New Zealand advocates on a range of issues, including access to more effective funded treatments, an increase in research funding and a commitment to making Aotearoa a smoke free nation by 2025.

**Support us**

Lung Foundation New Zealand is an independent organisation and is reliant on support from fundraising events, donations and bequests. This resource has been produced as the result of generous support provided by members of the public.

If you or a member of your family would like to support our work we would love to hear from you. Together we can save lives by increasing awareness about lung health and early detection of lung disease. Please visit our website [www.lungfoundation.org.nz](http://www.lungfoundation.org.nz) or contact Philip Hope, CEO on (+64) 021 959 450 or [philip.hope@lungfoundation.org.nz](mailto:philip.hope@lungfoundation.org.nz)

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**Expert Review Policy:** Our information was checked for accuracy and clarity by cancer specialists. This resource has been approved by Medical Director & Associate Professor of Oncology, Chris Atkinson of Christchurch; assisted by Dr Greg Frazer, Respiratory Physician, Christchurch Hospital; Catherine Smith, Clinical Nurse Specialist - Lung Cancer, Christchurch Hospital; and Anne Fraser, Oncology Nurse Practitioner, Auckland City Hospital. Lung Foundation New Zealand writes in plain English. We review our information every two years so it is kept up to date.

Thanks to the American Lung Association and the European Lung Foundation for allowing us to adapt their resources for our New Zealand readers. This information sheet is one in a series produced by Lung Foundation New Zealand on lung disease, its treatment and related issues and is correct at time of print. It is designed to be used as a guide only; it is not intended or implied to be a substitute for professional medical treatment. Please consult your family doctor or specialist if you have further questions relating to this information.