Types of lung cancer

Cancer that starts in the lung is called primary lung cancer. Cancer that spreads to your lungs from somewhere else in your body is called secondary lung cancer.

There are different types of primary lung cancer and they are divided into 2 main groups:

- small cell lung cancer (SCLC)
- non-small cell lung cancer (NSCLC)

The most common type is non-small cell lung cancer. [26]

Treatment for lung cancer

Many hospitals have multidisciplinary teams (MDTs) that treat lung cancer. This team together will discuss and plan your treatment. Your treatment depends on several factors including the following:

- the type of lung cancer you have
- how big it is and whether it has spread (the stage)
- your age and general health
- if it is primary or secondary lung cancer

The most common types of treatment for lung cancer are:

- surgery
- radiotherapy
- chemotherapy
- immunotherapy
- targeted therapy

You may have a combination of treatments. You can also ask if you can take part in a clinical trial. [29], [30]

Smoking and lung cancer

Tobacco smoke contains more than 70 toxic substances that are carcinogenic (cancer-producing).

Your risk of developing lung cancer:

- is higher if you smoke or smoked
- gets higher the more you smoke
- gets higher the longer you smoke [27]
- if it is primary or secondary lung cancer

If you smoke, the best way to reduce your risk of lung cancer is to quit. Quitting can be hard but with the right help you can double your chances of success. The HSE offers free support and advice on the different options that help with nicotine withdrawal. Their team will support you every step of the way.

- Freephone 1800 201 203 for a free Quit plan
- Visit the HSE website to create your own Quit Smoking Plan Create your quit smoking plan - Quit.ie (hse.ie) [28]

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About the Marie Keating Foundation

Following their mother Marie's death from breast cancer in 1998, the Keating family promised to provide the people of Ireland with vital information, advice and support on the signs and symptoms of cancer and help to prevent cancer or detect it at its earliest stages. The Marie Keating Foundation was established in her memory and with this central ambition in mind.

The Foundation's mission is to make cancer less frightening by enlightening and our aim is to live in a world free from the fear of cancer.

Today, the Marie Keating Foundation are one of the leading voices in Ireland for cancer prevention, awareness, and support. We are committed to being there for people diagnosed with cancer, and their families at every step of this cancer journey, and our services reflect that. Through our information and support services, we reach thousands of people a year, giving education, information and advice focused on cancer prevention and early detection, as well as providing support services and financial assistance to those living with and beyond cancer.

For more information on Ireland's most common cancers or to engage with our support services visit www.mariekeating.ie

The Marie Keating Foundation has best-of-class corporate governance structures having continuously achieved the 'Triple Lock' standard for best practice governance in the charity sector and were awarded the Good Governance award in 2021.

"On February 2nd, 1998, our mother Marie died from breast cancer. At the time and all through her illness, we could do nothing to help our Mother who had, all our lives, done everything for us. We, the Keating family have set up this charity in her name to try to help and prevent others going through what Mam went through and what we are still going through to this day. This is also to show that such a wonderful mother and person did not die in vain."

Take care,

Marie Keating
FOUNDATION

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www.mariekeating.ie

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Lung Cancer

What you should know

Marie Keating
FOUNDATION

making cancer less frightening by enlightening

Lung Cancer the facts

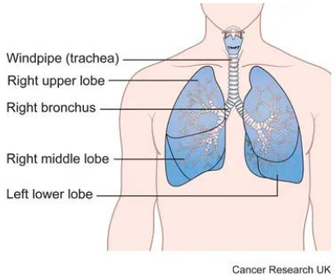
- **Lung cancer is the third most common cancer in Ireland, excluding non-melanoma skin cancer** [1]
- **Smoking tobacco is the most common cause of lung cancer and changes in smoking behaviours affect risk over time** [3]
- **Lung cancer starts in the windpipe (trachea), the main airway (bronchus) or the lung tissue** [2]
- **It is often diagnosed at advanced stages when treatment options are limited** [4]
- **Lung cancer is the leading cause of cancer death in both males and females in Ireland and also worldwide** [1] [4]
- **Screening high risk individuals has the potential to dramatically improve survival rates through early detection** [4]
- **Early detection of lung cancer can lead to better treatments and outcomes** [4]
- **Approximately 10–15% of lung cancers in Western countries occur in non-smokers** [17]

Structure and function of the lungs

Your lungs are 2 sponge-like organs in your chest that are separated into sections called lobes. Your right lung has 3 lobes and your left lung has 2 lobes. The left lung is smaller because the heart takes up more room on that side of the body.

When you inhale, air enters through your mouth or nose and goes into your lungs through the trachea (windpipe). The trachea divides into two tubes called bronchi, one enters each lung. These divide to form smaller branches called bronchioles. At the end of the bronchioles are tiny air sacs known as alveoli.

The alveoli absorb oxygen into your blood from the inhaled air and remove carbon dioxide from the blood when you exhale. A thin lining layer called the pleura surrounds and protects the lungs. [5]



Cancer Research UK

Taken from the patient information website of Cancer Research UK: http://www.cancerresearchuk.org/cancerhelp

Risks and causes of lung cancer

- **Age** - About 7 in 10 people diagnosed with lung cancer in Ireland are age 65 and older. It's rare in people younger than 40 but it can occur. [6]
- **Smoking tobacco** - Smoking tobacco is the leading cause of lung cancer, responsible for approximately 85% of all cases [4]
  - Even light or occasional smoking increases the risk of lung cancer. But your risk increases the more you smoke and the longer you smoke [7]
  - Using other types of tobacco products can increase your risk of lung cancer, e.g. cigars, pipe tobacco, snuff (a powdered form of tobacco) and chewing tobacco [9] [10]
  - Primary prevention (such as tobacco control measures and reducing exposure to environmental risk factors) can reduce the incidence of lung cancer and save lives [4]
- **Passive smoking** - Adults who do not smoke and are exposed to second-hand smoke have an increased risk of developing lung cancer by 20–30% [11]
- **Previous lung diseases** - Previous lung diseases can increase your risk of lung cancer. These risks are usually higher in smokers. Your risk of lung cancer is higher if you have Chronic Obstructive Pulmonary Disease (COPD). It is sometimes called emphysema or chronic bronchitis.
  - Idiopathic pulmonary fibrosis (IPF) also increases the risk of lung cancer developing. [19]
  - Tuberculosis (TB) at a young age is a risk factor for lung cancer, regardless of the underlying disease or smoking history [20]
- **Chemicals and workplace risks** - Some substances which people are exposed to in the workplace can increase the risk of lung cancer. These include asbestos, silica, and diesel exhaust, arsenic, beryllium, cadmium, coal and coke fumes and nickel [7], [10]
- **Exposure to radon** - Radon gas is a naturally occurring radioactive gas that comes from tiny amounts of uranium present in all rocks and soils that can increase the risk of lung cancer. Parts of Ireland have high amounts of radon. Your risk of getting lung cancer from radon is 25 times higher if you smoke than someone who has never smoked. [7], [10], [12]
- **Marijuana and lung cancer** - Smoking marijuana may raise your chances of lung cancer, but scientists aren't sure yet. Marijuana smoke has many of the same harmful substances as tobacco smoke, which could damage lung tissue and lead to cancer. Also most people who smoke cannabis mix it with tobacco, inhale more deeply and hold the smoke in their lungs for longer [10], [13]
- **Family history** - Your risk of lung cancer is higher if you have a close relative (such as a parent or sibling) who has had lung cancer [7]
- **Genetics** - Some experts estimate that a genetic predisposition to lung cancer contributes to approximately 8% of cases. Some of these genetic risk factors are inherited while others are not. Some studies suggests that an individual's genes are more likely to contribute to an increased chance of lung cancer if they are young and have never smoked. However, lung cancer can also run in families because of shared environmental factors and lifestyle habits [14]
  - Regardless of whether you carry a higher hereditary risk for lung cancer, doctors recommend that all people avoid tobacco smoke and other exposures that increase the risk of lung cancer. [15]

Does Vaping (using e-cigarettes) cause lung cancer?

Electronic cigarettes (e-cigarettes) are battery-powered devices. They heat nicotine mixed with flavourings and other chemicals to create an aerosol that the user inhales. [18]

Whilst long-term health effects of e-cigarette use are not fully known, we do know that they generate toxic substances, some of which are known to cause cancer and some that increase the risk of heart and lung disorders. [16]

Signs and Symptoms?

The most common symptoms of lung cancer are:

- having a new cough or a cough most of the time
- getting out of breath doing the things you used to do without a problem
- coughing up phlegm (sputum) with blood in it
- having an ache or pain in the chest or shoulder
- chest infections that keep coming back or a chest infection that doesn't get better
- feeling tired all the time (fatigue)
- losing your appetite
- losing weight [21]

Less common symptoms of lung cancer include:

- larger fingertips and curved nails (finger clubbing)
- finding it difficult to swallow (dysphagia) or feeling pain when swallowing
- wheezing
- hoarse voice
- swelling of your face or neck
- chest or shoulder pain that does not go away [22]

Some of these symptoms are very common and may not be caused by cancer, but you should see your GP to be sure.

How lung cancer is diagnosed

If you experience any of the above symptoms, see your GP without delay. Your GP will ask you about your general health and may also examine you.

They may feel your lymph nodes (glands) in your neck and under your arms and they may listen to your chest and breathing with a stethoscope. They might also ask you to breathe into a small device called a spirometer. The device measures the amount of air you breathe in and out and also measures how quickly you breathe. This test is called spirometry. Your GP might arrange for you to have blood tests and a Chest X-ray. If your GP is concerned about your symptoms and your test results they may refer you a Rapid Access Lung clinic. [23]

The aim of this clinic is to quickly establish whether lung cancer is present, to determine the extent of the disease and to have a multidisciplinary team of experts discuss your individual case. Tests carried out in the Rapid Access Lung clinic may include one or all of the following: chest X-ray, bronchoscopy and CT scans (CT or PET-CT). Commonly, a biopsy, or small piece of the lung tissue, will be obtained to confirm the diagnosis. Most often, this is obtained by a bronchoscopy or by a CT-guided biopsy. [24]

What is a CT scan?

A CT scan uses x-rays and a computer to create detailed images of the inside of your body. Before having a CT scan, you will receive an injection containing a special dye called contrast medium. This helps to improve the quality of the images. The scan is painless and takes 10 to 30 minutes. [25]

What is a PET-CT scan?

If the CT scan shows you have cancer, you may have a PET-CT. PET-CT stands for positron emission tomography-computerised tomography. The PET-CT scan can show where the active cancer cells are located and if the cancer has spread to other parts of your body. This can help your doctors with diagnosis and choosing the best treatment for you. Before having a PET-CT scan your doctor will inject you with a slightly radioactive material. They will ask you to lie down on a table. The table slides into the PET scanner. The scan is painless and takes 30 to 45 minutes. [25]

What is a Bronchoscopy?

A bronchoscopy is a type of endoscopy which is a test that lets your doctors look inside your body. Your doctor can use a bronchoscopy to see the inside of your airways and remove a small sample of cells (biopsy) which is then sent to a lab to test for cancer.