



Population screening study  
for lung cancer

# Brief overview

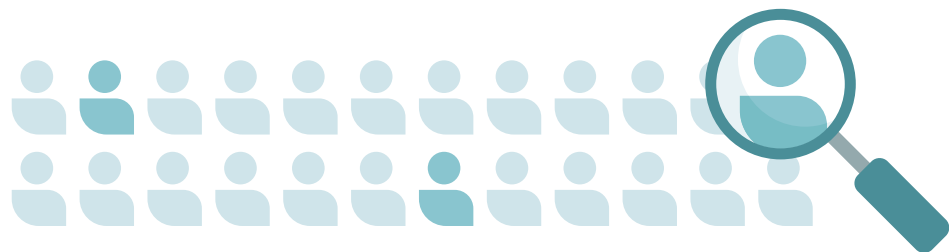
4-IN-THE-LUNG-RUN

Scientific research into the early detection of lung cancer in Europe



### What is a lung cancer screening study?

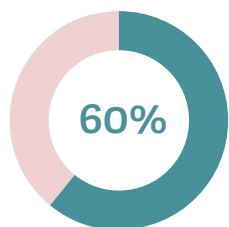
Lung cancer screening involves detecting lung cancer in people before symptoms are encountered. This is also referred to as population screening.



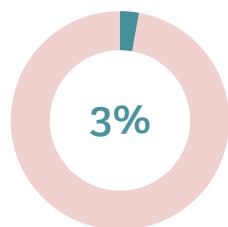
### Why a lung cancer screening study?

Lung cancer is the most common and deadly form of cancer. Approximately 1 in 5 people with cancer will die from lung cancer. In the Netherlands, over 10,000 people die from lung cancer each year.

A screening study would make it possible to detect lung cancer at an earlier stage more often: stage I. In Stage I, there are often more possibilities for treating lung cancer. The treatment also tends to be less invasive. Without screening, lung cancer is normally discovered in a late stage, such as stage IV. Very few people can be treated effectively at this point.

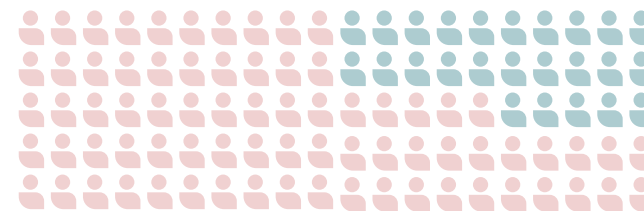


Lung cancer discovered in stage I  
60% still alive after 5 years



Lung cancer discovered in stage IV  
3% still alive after 5 years

When screening leads to lung cancer being discovered and treated sooner, 25% fewer people die from lung cancer.



Of 100 deaths due to lung cancer, 25 deaths could be avoided by detecting lung cancer at an early stage.

Research into the early detection of lung cancer is new. We would like to know the best way to introduce it into Europe. We also think it is safe to perform a CT scan, on the lungs of people who are at risk, every 2 years instead of every year. This significantly reduces the number of CT scans, thus also the disadvantages associated with the examination. "4-IN-THE-LUNG-RUN" is a European study into lung cancer and was started for that specific purpose.

### It is free to take part in the screening for lung cancer

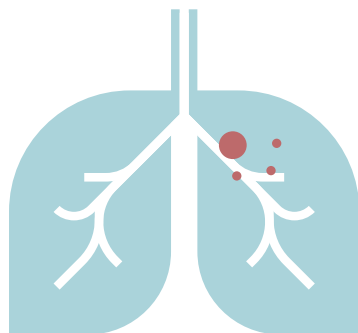
The CT scans for this survey are all paid for by the European research committee.



This study may demonstrate that further examination is needed in the hospital. From the moment that your GP refers you to a lung specialist at the hospital, the examinations will no longer be classed as part of this study. From that moment, costs will be covered by your health insurance. You may be expected to use your deductible or personal contribution.

## What is lung cancer?

Lung cancer is a condition where malignant cells are able to multiply freely in the lungs. This is referred to as a malignant tumour. This tumour can spread to other parts of the lungs, but can also metastasise to other parts of the body.



## For whom is this study intended?

This study is mainly useful for people with a high risk of developing lung cancer. Many factors determine the risk of you getting lung cancer. For instance, your age but also how much and for how long you have smoked. All these factors jointly determine the risk.

For this scientific study, we are looking for people between 60 and 79 years old, who have smoked for a long time (and possibly still smoke). For instance, have you smoked at least 1 pack a day for 25 years? Or perhaps at least 2 packs for 15 years? And if you have stopped smoking, did you do so after 2005? If so, you may be eligible for this study. Are you younger and have you smoked less? Then you cannot take part in this study. However, this does not mean you cannot get lung cancer. If you have symptoms, always ask your GP for advice.

**Consult your GP if you suffer symptoms that are associated with lung cancer. A screening study is intended for people without symptoms. Are you suffering from the symptoms below? Do not hesitate; make an appointment with your GP immediately.**

- A persistent tickling cough, that lasts for longer than 9 weeks
- Bits of blood in your mucus
- Inflammation of the respiratory passages, which persists despite antibiotics
- Increased mucus-forming
- Shortness of breath
- Hoarseness without throat pain
- Pain in the chest
- Swelling in the face and neck



## How did we get your details?

The Ministry of the Interior provided consent for your personal details to be used for a one-off invitation. We will destroy your details if you do not become a participant in this study.

## The study in 5 steps

### Step 1 The information package

It is important for you to know exactly what the study entails. Then you can decide whether or not you want to participate. A lot of information can be found in the brochure and on our website. Please read this information carefully. Do you have any questions? Please feel free to ask the study team.



### Step 2 The questionnaire and informed consent

The questionnaire will be used to estimate your risk of lung cancer. From all questionnaires, we will select people with a certain risk of lung cancer. A signed informed consent is needed if you want to participate. Without your consent, we cannot invite you to participate in the study.



### Step 3 The draw

Participants will be drawn into one of the 2 study groups. Everyone has the same chance of joining each group.



### Step 4 The CT scan examination

A CT scan is an examination that is based on X-rays. You will lie on an examination bed while an x-ray tube creates images. It is possible to create a few images within a couple of seconds. You will not feel anything during the examination. You will not be administered medicines or an intravenous drip. You can continue to use your medication as usual.

#### Radiation

A CT scan is performed using X-rays. Radiation is also encountered in everyday life. However, because radiation can cause cancer, we try to minimise its use. These days, the amount of radiation needed is so low that there is very little risk of cancer.

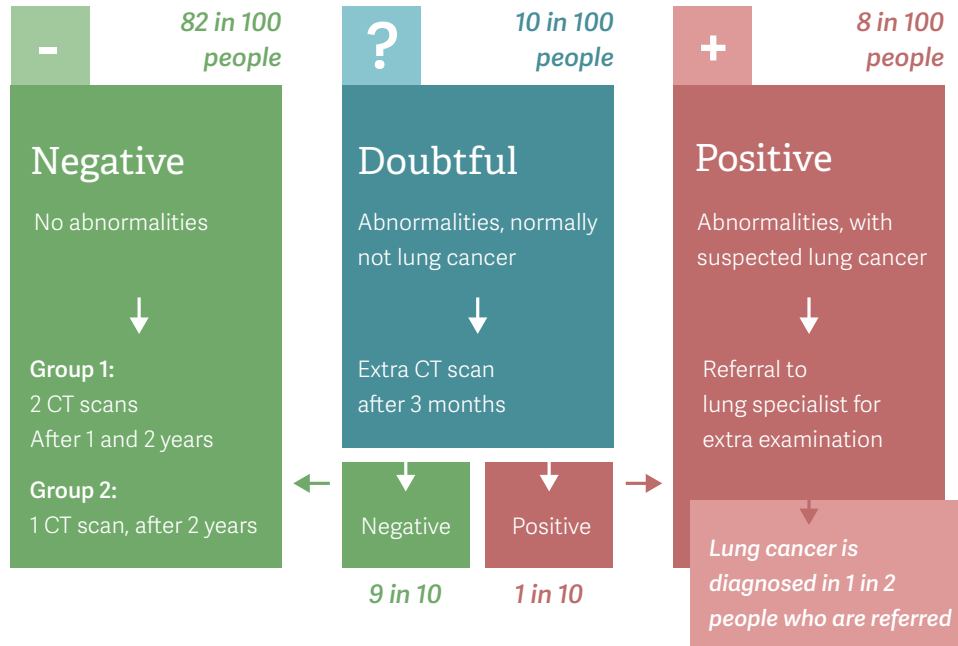
#### Coincidental abnormalities

When reviewing the CT scan, the radiologist may coincidentally find an abnormality that has nothing to do with lung cancer. In some cases, the doctor may believe that the encountered abnormality is bad for your health. If you agree, we would like to inform your GP about such cases. Your GP will refer you to the hospital for further examination. You may feel anxious as long as the nature of the abnormality is not known.



## Step 5 The result

There are 3 possible results:



If the result is positive, it will be followed by examinations by the lung specialist. If it turns out to be lung cancer, the lung specialist will start treatment in consultation with you. If it is not lung cancer, you can decide to take part in the rest of the study.

### What happens after the very first CT scan?

After the first scan, people that have been allocated to group 1 will undergo a total of 2 more CT scans. One scan after 1 year and another one after 2 years. The people in group 2 will undergo 1 more CT scan. This will take place after 2 years.

### Useful info

#### You are free to decide whether or not you want to participate!

A screening study into lung cancer can have advantages as well as disadvantages. You can personally decide if you wish to participate. Participation is voluntary. In any case, it is important for you to consider the following:

#### ✓ Advantages

- Early detection of lung cancer reduces the risk (by approximately 24%) of dying from lung cancer
- Your prospects will improve if lung cancer is treated at an early stage
- Treatment is often less invasive if lung cancer is discovered early
- The CT scan is painless and is completed within 10 minutes. A contrast medium is not used

#### ✗ Disadvantages

- You may start worrying or feel anxious when being examined or waiting for the result
- Even after further examination, it may transpire that you do not have lung cancer
- A CT scan is based on X-rays
- Lung cancer may be discovered that is growing so quickly that treatment is no longer possible
- Lung cancer may be discovered that is growing so slowly that it will not have caused you any inconvenience during your life

## ✓ Would you like to take part in the study?

Would you like to take part in the study? Then complete the questionnaire and the informed consent. The study team will carefully examine the questionnaire and the informed consent. If you meet the criteria for participation, you will be able to take part in the study.

Participation is always voluntary. You can decide to stop at any moment. There is no need to mention a reason in this case.

## ✗ Do you not want to take part in the study?

Then you do not have to do anything. We will not approach you again. If you do not participate, this will have no consequences for the medical care you receive.

## Available brochures

Information about the study is available in various languages. You can request the brochure in Dutch, Turkish, Arabic or Italian.

Visit [www.lungscreening.eu](http://www.lungscreening.eu) or phone the free help desk of I&O Research (**0800-0191**).

## Contact

Would you like to know more? Feel free to visit the website for more detailed information. Please feel free to contact us if you have questions or comments. We will be pleased to assist you.



**0800-0191** (free help desk of I&O Research)



[4.in.the.lung.run@erasmusmc.nl](mailto:4.in.the.lung.run@erasmusmc.nl)



[www.lungscreening.eu](http://www.lungscreening.eu)



With help from  
Longkanker Nederland



## Participating centres

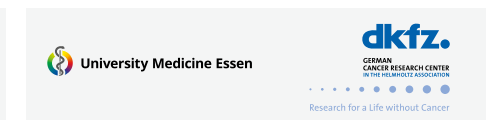
### The Netherlands



### England



### Germany



### Spain



### France



### Italy



