

EarlyCDT Lung

EarlyCDT Lung is the world's most thoroughly validated blood test for the detection of lung cancer. It detects lung cancer on average four years, and up to nine years, before standard clinical diagnosis.

Lung cancer has the highest mortality rate and one of the worst five-year survival rates of all cancers. It is especially deadly because symptoms are non-specific. Therefore, by the time people seek medical attention, tumours have often already exceeded a critical size, and the cancer cells may have attacked the lymph nodes or metastasized (spread to other parts of the body). However, if lung cancer is detected early *before* it causes symptoms, the chances for curative treatment to work are good. When lung cancer is detected in the earliest stages, the five-year survival rate can be as high as 90%.

The NHS have implemented some screening using CT scanners to detect nodules in the lungs, which are then biopsied to see if the nodule is malignant. However, there are limited resources for UK-wide screening, and CT scans do not give a definite answer - if a nodule is within 4-20mm it's called an Indeterminate Pulmonary Nodule (IPN), which is too small to justify biopsy. Patients with IPNs are put on a watchful waiting list and will have regular CT scans, but by the time the nodule has grown large enough to be biopsied, it can be too late for curative treatment.

EarlyCDT Lung test is a simple blood test that looks for 7 circulating autoantibodies. These are molecules in the blood which are generated by the body's immune system as a defence against lung cancer at the earliest stages of the disease.

EarlyCDT has two uses:

- Screening for lung cancer
- Assessment of IPNs to triage for biopsy

It requires only a small volume of blood, which can be taken in a clinic or at home using a finger-prick test kit.

FAQs

What does EarlyCDT measure?

EarlyCDT analyses the blood to look at levels of the 7 autoantibodies which are linked to lung cancer. Autoantibodies are produced by the body when lung cancer initially starts to form, to try and fight it. Therefore, increased presence of these autoantibodies indicates that there is higher chance that you have lung cancer.

How accurate is the test?

EarlyCDT has a 99.3% Negative Predictive Value (NPV), meaning lung cancer is correctly ruled out 99.3% of the time. In comparison, the NPV of CT scanning varies from 90% - 100% across different studies.

Who can use EarlyCDT?

EarlyCDT is recommended for people aged 45+ who are smokers/have history of smoking, or have any other risk factors including: exposure to secondhand smoke, radiation therapy, exposure to radon gas, exposure to asbestos and other carcinogens, family history of lung cancer, an occupation which increases risk of lung cancer (e.g., welding, refinery, sanding, hairdressing, drivers/mechanics, construction, insulation fitters, bricklaying), people who live in high-pollution areas, history of COPD or IPF. People younger than 45 can take the test, although this is outside the validated range so the result may be slightly less accurate.

What do the results tell me?

The results tell you whether your level of each autoantibody tested is low (no significant level), moderate or high. It then gives an overall result for Low, Moderate or High risk. Your test provider will report these findings to you. Scan the QR code for a sample results report:



How do I get an EarlyCDT test?

Ask your doctor/nurse to contact Cambridge Clinical Laboratories to order an EarlyCDT test for you. They will then organise an appointment for you to have bloods taken, or organise an at-home finger-prick test kit.

What happens after I receive my results?

Your doctor/nurse will contact you to give you your results. If you are using the test for screening or as part of a regular health check and you have a high-risk result, it's recommended that you have a CT scan. A CT scan will check your lungs for cancer nodules. If the scan shows any nodules, you will then have a biopsy to determine whether the nodules are cancerous. If your result is Moderate, you should consider retesting annually/biannually with EarlyCDT to monitor for any increases in risk. If your result is Low risk, this means that at present you have a very small risk of having lung cancer. However, it doesn't rule out lung cancer developing in the future, so you should test again in the future and be aware of symptoms associated with lung cancer.

If you have previously had a CT scan which found IPNs, and you are using EarlyCDT to help determine whether these IPNs are cancerous, you should now have a biopsy if your result is high-risk.

Do I have to pay for EarlyCDT?

Unfortunately, EarlyCDT is not yet covered by the NHS so you will need to pay for the test. Your doctor/nurse can discuss the costs with you.

Why does the NHS not use this test?

EarlyCDT is still a fairly new test, therefore it is not yet included in the NICE guidelines, which are followed by the NHS. However, the NHS did complete a large-scale trial (ECLS trial) using EarlyCDT which had excellent results. In the trial, late-stage diagnosis of lung cancer was reduced by 36%, which highlighted the importance of using EarlyCDT to detect lung cancer earlier. You can read more about the trial here:

<https://www.camclinlabs.co.uk/earlycdt-lung>