

# Your guide to diagnosing lung cancer early

A quick guide for GPs to support with the recognition and referral of suspected lung cancer. We delve into the challenges of lung cancer diagnosis, cover NICA guidance, diagnostic investigations and key safety netting tips. We also have a spotlight on lung cancer in people who've never smoked, supported by a case study.

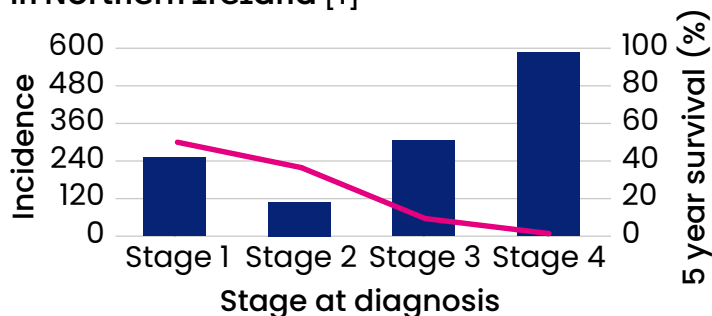


## Why is early diagnosis of lung cancer so important?

Acting as soon as there is a suspicion of lung cancer can lead to better treatment options and outcomes for patients.

Early diagnosis is vital as lung cancer survival is highly dependent on the stage of diagnosis. In Northern Ireland (NI), only 1 in 5 lung cancers are diagnosed at the earliest stage [1].

### Lung cancer incidence and survival in Northern Ireland [1]



## Your involvement is key

GPs play a vital role in identifying signs and symptoms of lung cancer and promptly referring patients for tests. But diagnosing lung cancer can be challenging:

- Non-specific symptoms such as weight loss, fatigue and a cough can easily be attributed to common respiratory conditions, particularly in patients who smoke [2,3,4].
- Comorbidities such as asthma and COPD can make it difficult for patients and GPs to differentiate between new symptoms and those related to an underlying condition [5].



## Recognition and referral of suspected lung cancer

**NICA guidance** for suspected lung cancer recommends:

- **an urgent chest x-ray for patients with**
  - haemoptysis
  - an unexplained or persistent (longer than 3 weeks) lung cancer symptom, including a cough, chest/shoulder pain and shortness of breath
- **a red flag referral**
  - following a chest x-ray which indicates lung cancer
  - following a normal chest x-ray, where high suspicion of lung cancer remains
  - if a patient is presenting with persistent haemoptysis (in smokers or ex-smokers aged 40 or older)
  - if the patient is presenting with a history of asbestos exposure and lung cancer symptoms

Guidance shouldn't override your clinical judgement, formed through history-taking and patient examination. Make sure you're also aware of specific local guidance and pathways.

Lung cancer screening was recommended by the UK National Screening Committee in 2022, but no commitments to rolling out a programme have been made in Northern Ireland yet [6].



## Robust safety netting is vital

Chest x-rays have the advantage of being less expensive and readily accessible, with faster turnaround times for reporting compared to other diagnostic tests. However, chest x-rays are not perfect and may miss lung cancer in at least 20% of cases [7, 8]. Prompt ordering of a chest x-ray should be accompanied by safety netting for potentially false negative results.

Take action if you still suspect lung cancer following a negative chest x-ray:

- Follow up with patients until their symptoms are explained or resolved.
- Repeat examinations and history taking.
- Tell patients when they should book another appointment if their symptoms reoccur, worsen or new symptoms develop.

When you send people for follow-up investigations or referrals, reassure them of safety netting precautions in place in primary and secondary care.



## Lung cancer in people who've never smoked

Smoking is still the biggest cause of lung cancer in the UK. But this association can mean that lung cancer in people who've never smoked is under-recognised, due to lower awareness of risk and urgency to seek help [9,10,11].

In Northern Ireland, 5.5% of lung cancer patients with a recorded smoking status were non-smokers [12]. Make sure you're aware of signs and symptoms of lung cancer, even in people who've never smoked, and safety net them until their symptoms are explained or resolved.

If you have any comments or useful information about this guide, please contact [SEinbox@cancer.org.uk](mailto:SEinbox@cancer.org.uk)

## Case study

Denise is 72 years old and has never smoked. Denise presents to her GP with chest pain and a dry, persistent cough she's had for at least a month.



### Would you order an urgent chest x-ray?

You could order an urgent chest x-ray, as Denise has been coughing for over three weeks. You could also order a chest x-ray based on her chest pain only, if it has lasted longer than three weeks.

### The chest x-ray result is normal. What are your next steps?

Denise is advised to return if the symptoms don't resolve after four to six weeks. Two months later, Denise presents again with the same symptoms as well as weight loss and shortness of breath.

### What could you do next?

Exercising clinical judgement is critical. NICA guidance highlights a red flag referral can be completed if a chest x-ray is normal but there's still a high suspicion of lung cancer. Your next steps could include:

- ordering another chest x-ray
- completing a red flag referral if clinical suspicion is high
- having a discussion with the respiratory medicine team

### Diagnosis

Denise was diagnosed with lung cancer. Her case highlights the importance of safety netting and being alert to the risk of lung cancer in all patients with respiratory and non-specific symptoms.

January 2024

## References

1. Survival (cancers diagnosed 2011-2015, followed up to 2020). Incidence (cancers diagnosed 2015-2019): Northern Ireland Cancer Registry, Queens University Belfast, Cancer incidence, survival, mortality and prevalence data
2. Koo et al. Neoplasia, 2018.
3. Walter et al. Br J Cancer, 2015.
4. Chowienzyk et al. Br J Gen Pract, 2020.
5. McCutchan et al. BMJ Open, 2019
6. [cruk.org/lungcancerscreening](http://cruk.org/lungcancerscreening)
7. Bradley et al. Br J Gen Pract, 2021.
8. Bhartia et al. Eur J Radiol, 2021.
9. Shan et al. Respir Res, 2022.
10. Os et al. Psycho-Oncology, 2021.
11. Walabyeki et al. PLOS ONE, 2017.
12. Northern Ireland Cancer Registry, Care of lung cancer patients in Northern Ireland diagnosed 2014