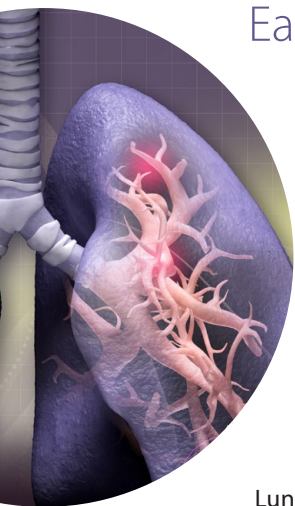



Early detection of lung cancer in primary care



The following questions can be used as discussion points for peer groups or self-reflection of practice.

 It is strongly recommended that the following article is read before considering the questions. **“Early detection of lung cancer in primary care”**

Lung cancer is a leading cause of cancer in New Zealand and accounts for the most cancer-related deaths. Lung cancer mortality rates in New Zealand are high compared to other countries with similar healthcare systems, likely due to factors relating late presentation and diagnosis and lack of access to funded treatments. Lung cancer incidence and mortality rates in Māori and Pacific peoples are two to three times higher than in other ethnic groups.

The stage at diagnosis is a major determinant of lung cancer prognosis. The earlier the stage the greater the chance of curative treatment, yet by the time most people are diagnosed the disease is already at an advanced stage. Patient-related factors that may contribute to the late presentation and diagnosis of lung cancer include the subtlety of symptoms, difficulties accessing care because of cost, location or other systemic barriers, and psychological factors such as denial or fear. Clinical barriers to early detection include the lack of specific symptoms, attributing symptoms to another respiratory condition or cause (e.g. smoking), and discontinuities in care.

There are a range of lifestyle, environmental, occupational and personal factors contributing to lung cancer risk. People considered at highest risk are those with:

- A current or previous history of smoking
- A history of asbestos exposure
- Pre-existing lung disease, such as chronic obstructive pulmonary disease or interstitial lung disease
- A personal history of any cancer
- A family history of lung cancer

As smoking is the major modifiable risk factor for lung cancer, smoking prevention and cessation should be encouraged and supported. The incidence of non-smoking-related lung cancer is also increasing, particularly in females and people

of East Asian ethnicity. Genetic susceptibility and/or current or past exposure to environmental or occupational pollutants may explain this trend.

The symptoms and signs of lung cancer can be variable and non-specific, which can lead to delays in early detection. Key symptoms and signs that may be suggestive of early stage lung cancer, particularly in those with known risk factors, include unexplained persistent (> 3 weeks) cough (new or changed), haemoptysis, chest or shoulder pain, unresolved or recurrent chest infection, breathlessness, hoarse voice and weight loss. Red flag symptoms and signs that should prompt immediate referral to the emergency department include massive haemoptysis, signs of airway or superior vena cava obstruction or symptoms of signs of spinal cord compression.

Clinical assessment of patients with suspected lung cancer should include a comprehensive history of the symptoms, documentation of the patient’s personal history of smoking, environmental or occupational exposures to known carcinogens, personal or family history of lung or other cancer, physical examination including basic observations (e.g. weight, heart rate, blood pressure, oxygen saturation) and a respiratory assessment. Recommended laboratory tests include full blood count, electrolytes and creatinine, calcium, liver function tests and coagulation screen. Chest x-ray is the first line investigation for people with suspected lung cancer, although this may not exclude a cancer diagnosis. Same day access is preferable, if available, but x-ray should ideally be completed, reported and reviewed within one week of the referral. If consolidation is found on chest x-ray, repeat after six weeks to confirm resolution; slowly resolving or unresolved consolidation can be suggestive of lung cancer. Urgent referral to a respiratory physician is indicated for patients with imaging suggestive of lung cancer, persistent or unexplained haemoptysis in those aged > 40 years in a high-risk group or if there is a high clinical suspicion of cancer based on symptoms, signs and risk factors, despite normal chest x-ray.

All people at high risk of lung cancer should undergo a respiratory assessment annually to determine if symptoms are present, therefore increasing the likelihood of early detection. If symptomatic, refer the patient for chest x-ray (if one has not been done in the previous 12 months) or new symptoms have developed since the last chest x-ray. There may be clinical scenarios where chest x-ray is indicated even though the patient has had one in the previous 12 months.

For more Peer Review topics see:

www.bpac.org.nz/PeerGroupDiscussions

Questions to consider:

1. Many people with lung cancer are not diagnosed until their disease is advanced. What do you think are some of the main patient-related factors and clinical barriers that contribute to late diagnosis? Are there any solutions that could be implemented in your practice (or that you have implemented) to address these factors or barriers?
2. People of Māori or Pacific ethnicity have higher rates of lung cancer and worse outcomes following lung cancer diagnosis. Various factors may explain this, including high rates of smoking, socioeconomic barriers to accessing care, and a higher incidence of small cell carcinoma, the more aggressive type of lung cancer. Can you identify any strategies that might help to address some of these factors?
3. The symptoms and signs of early lung cancer are non-specific and commonly encountered in primary care, such as cough. How do you differentiate the cause of cough and what is your threshold for considering or suspecting lung cancer, e.g. risk factors, new or worsening symptoms, symptoms without a likely explanation?
4. Chest x-ray is the first-line investigation for people with suspected lung cancer. Guidelines recommend prompt turnaround, i.e. no more than one week, and ideally same day, if available. How achievable is this goal in your region of practice? In your experience, what is the typical timeframe from chest x-ray referral to completion, report and review? Does this discourage you from attempting to access same day chest x-ray? After reading this article, will this change the way you refer for x-ray?
5. Ideally, all people at high risk of lung cancer should be reviewed periodically, e.g. annually, to assess for suggestive symptoms or signs. Do you think this is feasible in your practice? Have you found (or do you anticipate) difficulty accessing chest x-ray as part of reviewing symptomatic high-risk patients?
6. Public awareness of the link between smoking and lung cancer can contribute to delays in presentation to primary care, e.g. due to embarrassment or shame. How do you balance educating patients about the risks of smoking and encouraging cessation with positive messaging that focuses on the benefits of early detection of lung cancer? How frequently do you talk to patients at high risk of lung cancer about the important symptoms and signs to be aware of?