Lung Cancer Screening Pilot for People at High Risk

**Importance of lung cancer screening**

Lung cancer is the leading cause of cancer death in Ontarians. It is usually diagnosed at an advanced stage, when treatment options are limited. Low-dose computed tomography (LDCT) screening can find lung cancer at an early stage, when treatment is more likely to be successful.

**Evidence to support lung cancer screening**

The National Lung Screening Trial: Was a randomized controlled trial with 53,000+ participants. Compared 3 annual screens with LDCT vs. chest X-ray in people at high risk. Found that people who got 3 annual screens with LDCT had a 20% reduction in lung cancer mortality over 6 years.

**Potential benefits and harms of lung cancer screening**

**Potential benefits**
- Finding lung cancer at an early stage, when treatment is more likely to be successful
- Reducing lung cancer mortality

**Potential harms**
- Radiation exposure
- False-positive results
- Over-diagnosis

Cancer Care Ontario recommends using LDCT to screen people at high risk of getting lung cancer through an organized screening program.

**The Lung Cancer Screening Pilot for People at High Risk**

Cancer Care Ontario introduced a pilot in April 2017 for people at high risk of developing lung cancer:
- The pilot is located at The Ottawa Hospital and Renfrew Victoria Hospital
- Eligible participants are offered LDCT screening
- Evaluation data collected over 2 years will inform a provincial program

**Lung cancer screening pilot pathway**

- **Referral by physician**
- **Risk assessment by screening navigator**
  - Eligibility for screening determined by risk score
  - Smoking cessation support offered to all current smokers who complete a risk assessment
- **Screening visit**
  - Discussion of the benefits, harms and limitations of screening
  - Smoking cessation support
    - Offered at every screening visit
- **LDCT and communication of results**
  - Follow-up of incidental findings is the responsibility of the referring physician
- **Negative scan** (Lung-RADS™ 1 or 2)
  - Recall for annual screening
- **Probably benign positive scan** (Lung-RADS™ 3)
  - Follow-up LDCT in 6 months
- **Suspicious positive scan** (Lung-RADS™ 4A, 4B or 4X)
  - Referral to Lung Diagnostic Assessment Program
    - Additional imaging, workup, biopsy, etc.
  - Return to screening as per recommendation
- **Staging and treatment**
  - If cancer is found

Pilot site screening navigators book appointments, coordinate smoking cessation support, provide screening results and facilitate next steps.
# Lung Cancer Screening Pilot for People at High Risk

## People can be referred if they are:
- Ages 55 to 74, and
- Current or former smokers who smoked cigarettes daily for at least 20 years (not necessarily consecutive years)

## People should not be referred if they:
- Were previously diagnosed with lung cancer
- Are under surveillance for lung nodules
- Have had hemoptysis of unknown etiology in the past year, or
- Have had unexplained weight loss of more than 5 kg in the past year
- If a patient has lung cancer symptoms, follow the Program in Evidence-Based Care’s guidelines for referral of suspected lung cancer

## People must have a physician’s referral to participate
Primary care providers and some specialist physicians play a role in identifying people who may benefit from lung cancer screening.

- A physician must sign a completed referral form to authorize LDCT
  - If a patient self-presents to a pilot site and is eligible for screening, the pilot site will contact their **primary care provider** to get a signed referral form

The **referring physician**
- Authorizes the pilot to coordinate recall and follow-up of suspicious findings
- Is responsible for appropriate management of incidental findings (e.g., aortic calcification, emphysema, pleural plaques)

## Pilot sites determine screening eligibility
After referral, a screening navigator completes a risk assessment with the potential participant by telephone to determine eligibility.

Information collected on smoking and other relevant factors (e.g., body mass index, chronic obstructive pulmonary disease, personal history of cancer and family history of lung cancer) is entered into a lung cancer risk prediction model.

People with a ≥2% risk of developing lung cancer **over the next 6 years** are eligible to participate.

Not all people referred will be eligible for lung cancer screening.

For more information and resources, visit [ottawahospital.on.ca/lungscreening](http://ottawahospital.on.ca/lungscreening)

Need this information in an accessible format?
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Created Mar. 2017