Lung Cancer Diagnosis Pathway Map
Version 2021.03

Disclaimer: The pathway map is intended to be used for informational purposes only. The pathway map is not intended to constitute or be a substitute for medical advice and should not be relied upon in any such regard. Further, all pathway maps are subject to clinical judgment and actual practice patterns may not follow the proposed steps set out in the pathway map. In the situation where the reader is not a healthcare provider, the reader should always consult a healthcare provider if he/she has any questions regarding the information set out in the pathway map. The information in the pathway map does not create a physician-patient relationship between Ontario Health (Cancer Care Ontario) and the reader.
Target Population

- Patients who present with signs or symptoms suspicious of lung cancer.

Pathway Map Considerations

- Any disease site-specific information that applies throughout the pathway map can go at the top of the Considerations. The following text is boilerplate and should be mostly uniform across all pathway maps, though there may be some variation.
- Primary care providers play an important role in the cancer journey and should be informed of relevant tests and consultations. Ongoing care with a primary care provider is assumed to be part of the pathway map. For patients who do not have a primary care provider, Health Care Connect is a government resource that helps patients find a doctor or nurse practitioner.
- Throughout the pathway map, a shared decision-making model should be implemented to enable and encourage patients to play an active role in the management of their care. For more information see Person-Centered Care Guideline and EBS 19-2 Provider-Patient Communication.
- Hyperlinks are used throughout the pathway map to provide information about relevant Ontario Health (Cancer Care Ontario) tools, resources and guidance documents.
- The term ‘health care provider’, used throughout the pathway map, includes primary care providers and specialists, e.g. family doctors, nurse practitioners, and emergency physicians.
- Multidisciplinary Cancer Conferences (MCCs) may be considered for all phases of the pathway map. For more information on Multidisciplinary Cancer Conferences, visit MCC Tools.
- For more information on wait time prioritization, visit Surgery.
- Clinical trials should be considered for all phases of the pathway map.
- Psychosocial oncology (PSO) is the interprofessional specialty concerned with understanding and treating the social, practical, psychological, emotional, spiritual and functional needs and quality-of-life impact that cancer has on patients and their families. Psychosocial care should be considered an integral and standardized part of cancer care for patients and their families at all stages of the illness trajectory. For more information, visit EBS #19-3. *
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**Screen for psychosocial needs, and assessment and management of symptoms.** [Click here for more information about symptom assessment and management tools](#)

Consider the introduction of palliative care, early and across the cancer journey. [Click here for more information about palliative care](#)

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**Visit to Health Care Provider**

- **Underlying chronic respiratory problems presenting with unexplained changes in existing symptoms**
  - **EB5 864-2**

- **Patient presenting with any of the following:**
  - Stridor
  - Massive hemoptysis
  - New neurological signs suggestive of brain metastases or spinal cord compression including seizure
  - EB5 854-2

- **Visit to emergency department**
  - These are emergency situations and the patient should be seen in the ER (if not presenting there) and referred emergently to specialist

- **Imaging as appropriate**
  - Cancer Imaging Guidelines

- **Treatment for presenting symptoms**

- **Lung cancer suspected?**
  - No
  - Follow-up with appropriate specialist
  - Proceed to Page 4
  - Yes
    - R*
    - Proceed to Page 4

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**Visit to Emergency Department**

- **Chest imaging CT (or chest x-ray)**
  - Cancer Imaging Guidelines

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**Patient presenting with any of the following signs suspicious for cancer:**

- Hemoptysis (single episode)
- New finger clubbing
- Suspicious lymphadenopathy (e.g., cervical, supraclavicular)
- Dysphagia
- Features of metastatic lung cancer (e.g., weight loss >5 kg, focal skeletal pain, headaches)
- Features suggestive of paraneoplastic syndromes

Or

**Patient presents with any of the following unexplained symptoms for >3 weeks (or sooner if patient has known risk factors):**

- Cough
- Weight loss/loss of appetite
- Dyspnea
- Thrombocytosis, anemia, and leukocytosis

**Suspicious lymphadenopathy**

**New neurological signs suggestive of brain metastases or spinal cord compression including seizure**

**Features suggestive of paraneoplastic syndromes**

**Features of metastatic lung cancer**

**Suspicious lymphadenopathy**

**New neurological signs suggestive of brain metastases or spinal cord compression including seizure**

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1 Refer to the American College of Chest Physicians Clinical Practice Guideline, Chest, 132, 149-160 for features of a standardized evaluation for systemic metastases and a list of paraneoplastic syndromes associated with lung cancer.

2 The following factors have been shown to increase the risk of lung cancer: current or previous smoking of tobacco in/through cigarettes, cigars, dry pipe or water pipe (bong, vaping), second hand exposure to tobacco smoke, lung Diseases (chronic obstructive pulmonary disease, asthma, pulmonary fibrosis), previous exposure to asbestos or other known carcinogens, occupational exposure to: dust or other microscopic particles, diesel engine emissions, or chlorinated solvents, personal or family history of cancer (especially lung, head & neck), infections (HPV 16/18 of the respiratory tract, previous pneumonia, HIV), other illnesses or health issues (sarcoidosis, tuberculosis, lupus, rheumatoid arthritis, systemic sclerosis, diabetes, periodontal disease, blood lipid levels, increased abdominal obesity), occupations (miners, painters, iron and steel workers, bricklayers, welders), environmental (in-home burning of coal and/or biomass, unventilated cooking over high heat, air pollution, low socioeconomic status, high caffeine intake).

3 These patients should be accepted by the organized lung diagnostic assessment program if it can facilitate a diagnosis within one week.

4 An abnormal chest x-ray or an abnormal CT scan of chest suspicious of lung cancer is required with each organized lung diagnostic assessment program referral. A CT scan of the chest is not required for acceptance of an organized lung diagnostic assessment program referral if the chest x-ray is abnormal but a CT scan chest is required prior to assessment at the program. Patient history should be mandatory as part of the referral and include, at a minimum: comorbidities, medications, allergies major health issues and symptoms that prompted the referral to the program.
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1 Evaluation of patients with high suspicion of lung cancer may be performed within structures facilitating organized diagnostic assessment.
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Obtain sufficient tissue sample for histological and molecular diagnosis via least invasive, most accessible and most likely to up-stage the patient. Cancer Imaging Guidelines

Tests on pleural fluid:
- Cytology (cell block should be obtained)
- Lactate dehydrogenase
- Protein concentration
- Glucose
- Amylase
- Cell count and differential
- Culture and sensitivity

Cancer Imaging Guidelines

Suspected stage IV based on scans and/or patient history

Thoracentesis
Perform procedure promptly. Can be done for diagnosis or for symptom relief. Note: If malignant cells found, this condition makes the patient inoperable.

Cytology\(^7\) (cell block should be obtained)
And/Or Pathology\(^8\)

Thoracic Surgery
For diagnostic purposes

Cytology\(^7\) Cell block should be obtained
And/Or Pathology\(^8\)

Positive for cancer (Stage IV)

Susceptible or negative but high level of clinical suspicion

Repeat biopsy, thoracentesis or other diagnostic testing As appropriate

Thoracic Surgery
For diagnostic purposes

Results

Negative and low level of clinical suspicion

Follow-up by specialist

Results

Stable

Return to primary care provider for follow up

Change in result

Positive for cancer

Return to primary care provider for follow up

Negative for cancer

Results go to ordering and referring physician and family physician.

For more information about biomarkers, refer to the Lung Cancer Tissue Pathway.

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