The Lung Cancer Diagnosis Patient Pathway (Pathway) is to be used for informational purposes only. It is not a substitute for medical advice. You should always consult a doctor if you have any questions regarding the information set out in the Pathway. All of the steps outlined here are subject to clinical judgment and your journey may not follow the steps set out in the Pathway. The information in the Pathway does not create a physician-patient relationship between Cancer Care Ontario (CCO) and you.

The Lung Cancer Diagnosis Patient Pathway (Pathway) will guide you through four main steps in order to either rule out lung cancer or confirm that you do have lung cancer: Suspicion, Initial Presentation and Imaging, Diagnostic Tests and Staging. It is recommended to bring a family member or friend with you to your appointments throughout your journey for support and to take notes.
unexplained symptoms that last for more than three weeks such as coughing, weight loss, shortness of breath, chest and/or shoulder pain, hoarse or rough voice

Your doctor may become suspicious of a lung abnormality based on your symptoms and must find out whether it is due to cancer or some other cause.

Your family doctor will send you for a chest X-ray if you have any of the following symptoms or signs:

- coughing up blood or blood-stained mucus (hemoptysis)
- repeated trouble swallowing (dysphagia)
- ongoing breathing problems and unexplained changes in your existing symptoms
- changes in fingernails, such as swelling or softening (finger clubbing)
- unusual swelling in the lymph nodes – found throughout the body (lymphadenopathy)

**Suspicion** is the time from when you share your symptoms with your family doctor to the time that you are sent (or referred) to a lung specialist (such as a surgeon, respirologist or other specialist).
**Initial Presentation & Imaging**

**Initial Presentation and Imaging** is the time from when you take your first imaging tests (such as a chest X-ray) to the time that your doctor either rules out lung cancer or confirms lung cancer.

The first step is a chest X-ray. Your doctor looks at your chest X-ray report in order to determine the next steps in your diagnosis. There are **THREE** potential outcomes:

1. **Your doctor does not suspect lung cancer.** In this case, you may have an infection in your lungs or some other condition that is not cancer. You may be sent to a specialist for further investigation.

2. **Your doctor suspects that fluid has built up in your lungs (consolidation) or that excess fluid or air has built up in the space that surrounds your lungs (pleural effusion).**

3. **Your doctor suspects lung cancer based on the chest X-ray result or his/her clinical judgment.** He/she may refer you to a specialist such as a:
   - **Diagnostic Assessment Program – DAP**
     where a nurse navigator will coordinate healthcare team members (respirologists, thoracic surgeons, and administrative staff) to work together to coordinate the care of patients with suspected lung cancer from referral to diagnosis.
   - **OR**
   - **Respirologist**
     a doctor who specializes in the diagnosis and treatment of lung disease
   - **Thoracic Surgeon**
     (a doctor who performs operations on the lungs or other structures in the chest)

If your doctor needs more information to make a diagnosis, he/she may request follow-up X-rays or a CT scan (a more detailed imaging process) of the chest and/or upper abdomen. Your specialist may also suggest other tests.
STEP 3 Diagnostic Tests

Diagnostic Tests are tools used by your specialist to take a closer look at a suspected mass in order to make a diagnosis of cancer or other disease.

Your specialist may remove a tissue sample of the abnormal area (perform a biopsy).

A pathologist (a doctor who identifies diseases by studying cells and tissues) will then look at the tissue sample under a microscope.

If NO cancer cells are found as a result of your biopsy, the specialist may order further tests to figure out the cause of the mass.

If cancer cells ARE found in the sample, a lung cancer diagnosis may be confirmed. If you are diagnosed with lung cancer, the next step is to determine the stage of your cancer.

You may need a PET/CT scan. A PET/CT scan uses two types of imaging techniques to create a three-dimensional computerized picture of the body.
Staging describes the severity of your cancer and whether it has spread or not. This is important because it helps your doctor to determine treatment options. Most tumours can be described as stage 0, stage 1, stage 2, stage 3, or stage 4 based on the extent of spread of the cancer.

Once cancer cells are seen, your doctor will need to learn more about the lung cancer and where it is in your body before you can begin treatment. This involves running more tests, which may include:

- An imaging test that takes a series of pictures of areas inside the body from different angles and uses a computer to make a detailed 3-D picture (PET/CT Scan).
- A scan that takes a series of detailed pictures of areas inside the body taken from different angles (CT Scan). The pictures are created by a computer linked to an X-ray machine.
- Radio waves and a powerful magnet linked to a computer are used to create detailed pictures of areas inside the body (MRI).
- A nuclear medicine scan that shows new areas of bone growth or breakdown (Bone Scan).
- Surgery on your lungs or chest to help make the diagnosis (thoracic surgery).

Once your doctor has determined the stage of your cancer, the next step is deciding on appropriate treatment options together with your doctor.

The two main types of lung cancer are non-small cell lung cancer and small cell lung cancer. The cells are different in each type of cancer, which means that each type of lung cancer will be treated differently.

Non–small cell lung cancer (NSCLC) is the most common type of lung cancer. It grows more slowly than small cell lung cancer.

Small cell lung cancer (SCLC) grows quickly and often spreads to distant parts of the body.