Lung Cancer

Lung cancer originates from tissues of the lung, usually from cells lining the air passages.

Stages of Small Cell Lung Cancer

Doctors describe small cell lung cancer using two stages:

• **Limited stage**: Cancer is found only in one lung and its nearby tissues.
• **Extensive stage**: Cancer is found in tissues of the chest outside of the lung in which it began, or cancer is found in distant organs.

Stages of Non–Small Cell Lung Cancer

• **Occult stage**: Lung cancer cells are found in sputum or in a sample of water collected during bronchoscopy, but a tumor cannot be seen in the lung.
• **Stage 0**: Cancer cells are found only in the innermost lining of the lung. The tumor has not grown through this lining. A Stage 0 tumor is also called carcinoma in situ. The tumor is not an invasive cancer.
• **Stage I**: Cancer cells are limited to the lung. Tissue around the lung remains normal.
• **Stage II**: Cancer has spread to lymph nodes, chest wall, diaphragm, lining of the lungs, or the outer lining that surrounds the heart.
• **Stage III**: Cancer has spread to the lymph nodes in the area of the chest between the heart and lungs. Blood vessels in this area may also be affected. Cancer may also have spread to the lower neck.
• **Stage IV**: Cancer has spread to the other lung or to other areas in the body and cannot be removed with surgery.

**Treatment**

Depending on the stage of the lung cancer, the aims of treatment may be for cure, control of disease for prolongation of survival or management of symptoms and prevention of complications to improve quality of life. The following treatment modalities may be used singly or in combination:

• **Surgery** – Surgery for lung cancer involves the removal of tissues that contain the tumor and nearby lymph nodes.
• **Radiation Therapy** – Radiation therapy (also called radiotherapy) uses high energy rays to kill cancer cells. It affects cells only in the treated area.
• **Chemotherapy** – Chemotherapy uses anticancer drugs to shrink or kill cancer cells. The drugs enter the bloodstream and can affect cancer cells all over the body.
• **Targeted Therapy** – Targeted therapy uses drugs to block the growth and spread of cancer cells. The drugs enter the bloodstream and can affect cancer cells all over the body. Some people with non–small cell lung cancer that has spread may receive targeted therapy.

**What Kind of Support is Available?**

CanHOPE is a non-profit cancer counselling and support service provided by Parkway Cancer Centre, Singapore. CanHOPE consists of an experienced, knowledgeable and caring support team with access to comprehensive information on a wide range of topics in education and guidelines in cancer treatment.

CanHOPE provides:

• Up-to-date cancer information for patients including ways to prevent cancer, symptoms, risks, screening tests, diagnosis, current treatments and research available.
• Referrals to cancer-related services, such as screening and investigational facilities, treatment centres and appropriate specialist consultation.
• Cancer counseling and advice on strategies to manage side effects of treatments, coping with cancer, diet and nutrition.
• Emotional and psychosocial support to people with cancer and those who care for them.
• Support group activities, focusing on knowledge, skills and supportive activities to educate and create awareness for patients and caregivers.
• Resources for rehabilitative and supportive services
• Palliative care services to improve quality of life of patients with advanced cancer.

The CanHOPE team will journey with patients to provide support and personalised care, as they strive to share a little hope with every person encountered.

CanHOPE Counsellors contact:

Cancer counseling hotline: (65) 6738 9333
Email: enquiry@canhope.org
www.canhope.org
What is Lung Cancer?

Lung cancer originates from tissues of the lung, usually from cells lining the air passages. The two main types are small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC). These types are diagnosed based on how the cells look under a microscope. More than 80% of all lung cancers belong to the non-small cell type. The 3 major sub-types of non-small cell lung cancer are adenocarcinoma, squamous cell carcinoma and large cell carcinoma.

Lung cancer is the second most common cancer in men and the third most common cancer in women in Singapore. Men have a 3 times higher risk of lung cancer than women. Among the three major ethnic groups, the Chinese have the highest risk, followed by the Malays and Indians.

There are two main types of lung cancer:
- Non-small cell lung cancer (NSCLC)
  NSCLC is the more common type of lung cancer, and is less aggressive than SCLC. NSCLC tends to grow and spread more slowly. If discovered early, surgery and/or radiation therapy, chemotherapy may offer a chance of cure.
- Small cell lung cancer (SCLC)
  SCLC is fast-growing and rapidly spreads to the bloodstream and other parts of the body. Often, it is an advanced disease when diagnosed. It is usually treated with chemotherapy and not surgery.

What Causes It?

Doctors cannot always explain why one person develops lung cancer and another does not. However, we do know that a person with certain risk factors may be more likely than others to develop lung cancer.

Tobacco smoke is by far the most important and the main risk factor for lung cancer. It is responsible for more than 80% of all lung cancer worldwide. Harmful substances in smoke damage lung cells. Over time, the damaged cells may become cancerous. This is why smoking cigarettes, pipes, or cigars can cause lung cancer. Inhaling secondhand smoke can also cause lung cancer in non-smokers. The more a person is exposed to smoke, the greater the risk of lung cancer.

Other risk factors for lung cancer include radon (a radioactive gas), asbestos, arsenic, chromium, nickel and air pollution. People with family members who had lung cancer may be at increased risk of developing a second lung tumor. Most people are older than 65 years of age when diagnosed with lung cancer.

THE BEST WAY TO PREVENT LUNG CANCER IS TO QUIT, OR NEVER START, SMOKING!

Symptoms

Early lung cancer often does not cause symptoms. But as the cancer grows, common symptoms may include:
- A cough that gets worse or does not go away
- Breathing trouble, such as shortness of breath
- Constant chest pain
- Coughing up blood
- A hoarse voice
- Frequent lung infections, such as pneumonia
- Feeling very tired all the time
- Weight loss with no known cause

Most often, these symptoms are not due to cancer. Other health problems can cause some of these symptoms. Anyone with such symptoms should see a doctor to be diagnosed and treated as early as possible.

Screening

Screening tests may help doctors find and treat cancer early. Several methods of detecting lung cancer have been studied as possible screening tests. The methods under study include tests of sputum (mucus brought up from the lungs by coughing), chest x-rays, or spiral (helical) CT scans.

You may want to talk with your doctor about your own risk factors and the possible benefits and harms of being screened for lung cancer. Like many other medical decisions, the decision to be screened is a personal one. Your decision may be easier after learning the pros and cons of screening.

Diagnosis

If you have a symptom that suggests lung cancer, your doctor must find out whether it originates from cancer or other health conditions. You may be required to do some blood tests and diagnostic procedures:
- Physical Examination
- Chest X-ray
- Computed Tomography (CT) Scan

Your doctor may order one or more of the following tests to collect samples:
- Sputum cytology: Thick fluid (sputum) is coughed up from the lungs. The lab checks samples of sputum for cancer cells.
- Thoracentesis: The doctor uses a long needle to remove fluid (pleural fluid) from the chest. The lab checks the fluid for cancer cells.
- Bronchoscopy:
The doctor inserts a thin, lighted tube (a bronchoscope) through the nose or mouth into the lung. The doctor may take a sample of cells with a needle, brush, or other tool. The doctor also may wash the area with water to collect cells in the water.
- Fine-needle aspiration: The doctor uses a thin needle to remove tissue or fluid from the lung or lymph node.
- Open biopsy: In cases where the tumor tissue is difficult to obtain, direct biopsy of the lung tumor or lymph nodes through an incision in the chest wall may be needed.

How is Lung Cancer Assessed?

To plan the best treatment, your doctor needs to know the type of lung cancer and the extent (stage) of the disease. Staging is a careful attempt to find out whether the cancer has spread, and if so, to what parts of the body. Lung cancer spreads most often to the lymph nodes, brain, bones, liver, and adrenal glands.

What is the cause of lung cancer?