LUNG CANCER | 肺癌

What you need to know about preventing, detecting and treating Lung Cancer

Singapore Cancer Society
15 Siglap Road, Realty Centre #04-01, Singapore 070914
4231 9578
www.singaporecancer.org
www.singaporecancer.org/society
Follow us on Facebook

The information provided is for your general knowledge only. The should seek medical advice or treatment for your specific condition.

What is Lung Cancer?

Lung cancer is among the deadliest cancers, second only to prostate cancer, as a cause of death in men and colorectal cancer, as a cause of death in women. It is often associated with smoking, but is also linked to air pollution and occupational exposure.

Two main types of lung cancer are:

- Non-small cell lung cancer
- Small cell lung cancer

Non-small cell lung cancer makes up about 85% of all lung cancers and is further divided into adenocarcinoma, squamous cell carcinoma and large cell carcinoma. Small cell lung cancer makes up about 15% of all lung cancers.

Non-small cell lung cancer is further divided into three types:

I adenocarcinoma
II squamous cell carcinoma
III large cell carcinoma

Non-small cell lung cancer is divided into stages:

I limited-stage
II locally-advanced
III metastatic

Small cell lung cancer is divided into stages:

I limited-stage
II locally-advanced
III extensive-stage
IV metastatic

Non-small cell lung cancer is divided into stages based on the TNM classification system. Staging is a system that describes the extent or stage of non-small cell lung cancer.

The T classification

T1: Cancer is less than 3 centimeters in diameter
T2: Cancer is 3 to 6 centimeters in diameter
T3: Cancer is greater than 6 centimeters in diameter
T4: Cancer has spread to bone, liver, or to other parts of the body

The N classification

N0: No lymph node involvement
N1: Cancer has spread to lymph nodes near the lung
N2: Cancer has spread to lymph nodes in the lung
N3: Cancer has spread to lymph nodes in the chest or other parts of the body

The M classification

M0: No distant metastases
M1: Cancer has spread to other parts of the body

Staging is important because it helps determine the type of treatment that is best for you. The treatment for early-stage non-small cell lung cancer is usually surgery or radiation therapy.

Non-small cell lung cancer is treated with surgery, radiation therapy, chemotherapy, or a combination of these treatments.

Small cell lung cancer is usually treated with chemotherapy and/or radiation therapy.

Non-small cell lung cancer is usually treated with surgery, radiation therapy, chemotherapy, or a combination of these treatments.

Small cell lung cancer is usually treated with chemotherapy and/or radiation therapy.
What is Lung Cancer?
The lungs are two large sponge-like organs in our chest that store air and breathe it in and out. We take in oxygen-rich air through our nose, via the windpipe (trachea) into air sacs of the lungs where gaseous exchange takes place. Oxygen is taken into the body and carbon dioxide escapes into the air.

Lung cancer is the uncontrolled growth of abnormal cells which come from lungs, usually from the cells that line the air passages. What is Lung Cancer? 

Do You Know?

There are two major types of lung cancer: small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC). SCLC makes up about 10-15% of all lung cancer cases. It is a kind of aggressive cancer, which grows quickly and spreads early to other parts of the body. The type of lung cancer is strongly associated with cigarette smoking. NSCLC is not as aggressive as SCLC, but more common. It tends to grow and spread less quickly than SCLC. NSCLC includes squamous cell carcinoma, large cell carcinoma and adenocarcinoma.

Are You at Risk?

Cigarette Smoking is the number one risk factor of lung cancer among non-smokers. How to prevent cancer is monitored by the number of cigarettes smoked each day and the duration of smoking.

Second-Hand Smoke (Passive Smoking) is a minor risk factor of lung cancer among non-smokers. There is a strong relationship between the amount of exposure to second-hand smoke and the risk of lung cancer.

Age: Lung cancer incidences is strongly related to age, with higher instances of lung cancer among older men and women.

Exposure To Cancer-Causing Chemicals increases the risk of lung cancer. e.g. asbestos, coal gas, chromium, nickel, arsenic, vinyl chloride, mustard gas and radon.

Personal History Of Lung Cancer: another lung cancer, especially for patients who have had lung cancer.

How to Prevent?

Reduce or avoid tobacco smoking: This is the most effective method to minimize the risk of having lung cancer.

Avoid second-hand smoke

Screening: When lung cancer is diagnosed in the early stages, patients have a much higher chance of survival. Low-dose CT scan is used for the screening for lung cancer in individuals at higher risk. How to screen is not perfect, and one needs to be prepared for false positive results (abnormal CT scan results which are eventually proven to be benign after further testing).

What are the Signs and Symptoms?

Often, there may be no symptoms of lung cancer at an early stage. However, common symptoms of lung cancer includes:

- General weakness, tiredness and unexplained weight loss
- Persistent cough that worsens over time
- Blood in sputum (Haemoptysis)
- Shortness of breath, wheezing, or hoarseness
- Recurring chest infection and fever
- Chest pain
- Loss of appetite
- Symptoms from metastases of lung cancer – swollen liver, palpation, swelling of lymph nodes

How is Lung Cancer Diagnosed?
The diagnosis is made using one or more of these tests:

- History and physical examination
- Chest X-ray
- Sputum cytology: Examination of the sputum under the microscope may reveal cancer cells. As a result of a negative test, other further tests might still be required if it is negative and there is strong suspicion of lung cancer.
- Bronchoscopy: A flexible fiberoptic tube with a light-source is inserted through the nose into the airways. Suspicious lumps can be biopsied – a small piece of the lump is taken for microscopic examination. A light source and local anaesthesia can be used. Bronchoscopy can be performed in the chest and abdomen, near the lymph nodes administered to the back of the throat before the procedure.
- CT and MRI scans are performed to determine the extent of the cancer.
- Palpation: detection of masses or lumps.
- Ultrasound: a high-frequency sound wave is passed through the body to create images of the internal organs.

Stage Extent of Spread 5 Years 5 Years

<table>
<thead>
<tr>
<th>Stage</th>
<th>Extent of Spread</th>
<th>5 Years ASOS (Male)*</th>
<th>5 Years ASOS (Female)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Cancer is confined to the lung and surrouned by normal tissue</td>
<td>54%</td>
<td>65%</td>
</tr>
<tr>
<td>II</td>
<td>Cancer has spread to nearby lymph nodes</td>
<td>33%</td>
<td>45%</td>
</tr>
<tr>
<td>III</td>
<td>Cancer has spread to the chest wall, diaphragm, nearby organs, blood vessels, lymph nodes in the mediastinum or the other side of the chest or neck</td>
<td>11%</td>
<td>20%</td>
</tr>
<tr>
<td>IV</td>
<td>Cancer has spread to more distant sites in the body</td>
<td>3%</td>
<td>5%</td>
</tr>
</tbody>
</table>

*ASOS – Age-Standardised Observed Survival rate

Small Cell Lung Cancer (SCLC)

As SCLC is an aggressive cancer and tends to spread early to other organs, it is usually treated with chemotherapy. If the cancer is still localised with one lung and the lymph nodes of the lung, radiotherapy can be combined with chemotherapy to effectively treat the cancer and remove the cancer cells. Surgery is usually not recommended for SCLC.

Non-Small Cell Lung Cancer (NSCLC)

Non-Small Cell Lung Cancer (NSCLC) includes squamous cell carcinoma, adenocarcinoma, large cell carcinoma and adenocarcinoma. Surgery for patients with early-stage NSCLC may be used to treat NSCLC. As NSCLC tends to grow and spread slowly, surgery or radiotherapy may offer a chance of cure if discovered early. Depending on the staging of NSCLC, the treatments are:

How is Lung Cancer Treated?

Stages Treatment

Stage I & II
- If patient is fit, surgery is the treatment of choice to remove the cancer.
- Sometimes after surgery, further chemotherapy may be recommended to reduce the risk of cancer recurrence.

Stage III
- Combination of radiation with a second chemotherapy is the usual treatment.
- Chemotherapy or targeted therapy may be needed.

Stage IV
- Mainly supportive i.e. relief of pain, treatment of blood loss and various obstructions.
- Chemotherapy or targeted therapy may be needed.

Lung Cancer Support Group

The Lung Cancer Support Group is a patient support and advocacy for people living with lung cancer and those at risk for the disease. It provides a platform to meet, interact, receive support and offer an opportunity to share with others who have “been there,” and experienced the array of emotions that come with a diagnosis of cancer. Members meet every 3rd Thursday of the month from 3.30 pm – 5.30 pm at Belian Junction B.

The latest Singapore Cancer Registry Annual Report (2019-2020) indicates that lung cancer is the 2nd most common cancer in males and 3rd in females.