

What is Lung cancer: its symptoms, investigations and treatment

Lung cancers are malignant tumour that arise from the lungs. It is the leading cause of cancer related death in men and women. It is second most common type of cancer in men and women.

Risk factors for development of lung cancers:

The lung cancer incidence increases with increasing age. Smoking remains the biggest modifiable risk factor for development of cancer, about 80% of lung cancers are related to smoking. Other factors that play a role in development of lung cancers are passive smoking history, air pollution, biomass fuel smoke, organic volatile chemicals, radiation, asbestos, and exposure to certain chemotherapy drugs.

Many a times patients with lung cancer have other smoking related lung diseases, primarily **COPD**. The lung cancer risk is also increased in patients with inflammatory/interstitial lung diseases like IPF.

Symptoms of lung cancer:

Early lung cancer may not cause any significant symptoms. Rather early cancers are usually diagnosed on x-rays or scans done for other reasons. Later stage cancer can present with new or worsened cough, coughing up blood, chest pain, breathlessness, or fluid around the lungs. As cancer spreads further to other organs, it can cause organ specific symptoms, like bone pain, headache, abdominal pain etc.

Diagnostic Tests:

All patients with lung cancer need CT scan of the chest to localise the cancer and measure its exact size. It is also helpful to see if the tumour has gone beyond the lungs to the lymph nodes or other side. Other staging scans may include CT scan of abdomen, pelvis and brain. Many a times, we may need a PET scan too and in case of small cell lung cancer, we do MRI of the brain.

Lung cancer Staging:

Lung cancer is divided into four stages. Loosely these are described there.

1. Stage 1, less than 3 cm tumour with no further spread
2. Stage 2, 3-5 cm in size primary tumour with spread to local lymph nodes
3. Stage 3, 3-5 or >5 cm tumour but also involvement of central lymph nodes which cannot be removed surgically
4. Stage 4, when cancer has spread to other organs

All lung cancers need confirmation with biopsy. The ideal site and method of biopsy is chosen depending upon the scans. The usual methods are bronchoscopy, endobronchial ultrasound (EBUS) or CT guided biopsy. Former two are done by the pulmonologists whilst the last one is performed by the radiologists.

Treatment of lung Cancer:

The treatment depends on the staging of lung cancer. Stage 1 lung cancers are ideally treated with surgery where affected part of the lung is removed. Stage 2 lung cancers are also removed surgically but these patients may need chemotherapy or sometimes radiation therapy. Stage 3 cancers are usually treated with chemo and radiotherapy as these cancers cannot be removed by surgery. Stage 4 cancers are treated with chemotherapy only.

In recent periods, we have specific biological drugs which we can use to treat lung cancer and your oncologist will discuss the options.

Prognosis:

It depends largely on the type and stage of lung cancer. Stage 1 lung cancer are cured with a rate of 80% approximately (5 years cancer free survival), stage 2 has survival around 60%, stage 3 survival is around 40% and stage 4 cancers patients' 5 years survival is around 10%. There are many factors which guide us providing more definite answers depending upon type of tumour and response to initial treatment.

Preventive strategies:

The biggest risk factor is smoking, and one can reduce the change of developing lung cancer of either not smoking altogether or quitting as early as possible.

If you are concerned about any symptoms that may be related to lung cancer, you can visit us or any nearest pulmonologist for further assessment and diagnosis.

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