

# Lung Tumors: Types, Diagnosis and Treatment

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## DESCRIPTION

Lung cancer is a cancer that develops in the lungs and spreads throughout the body. When cells in the body started to grow more than that is needed, tumour develops. In normal person's chest, there are two sponge-like organs called lungs. The lobes of right lung are divided into three portions. Lung cancer, also known as lung carcinoma, is a malignant lung tumour defined by uncontrolled cell proliferation in lung tissues. There are two lobes in the left lung. Because the heart occupies more space on the left side of the body, the left lung is smaller. The major tasks of lungs are to take in oxygen and expel carbon dioxide. Lung malignancies begin in the cells that line the bronchi and other sections of the lung, such as the bronchioles and alveoli.

Lung cancer is divided into two categories, each of which is treated differently. About 98-99 percent of all lung malignancies are carcinomas. Lung carcinomas arise from epithelial cells that have been converted into malignant cells, or from tissues made up of epithelial cells.

### Non-Small Cell Lung Cancer (NSCLC)

NSCLC encountered about 80% to 85% of lung cancer cases. Adenocarcinoma, squamous cell carcinoma, and giant cell carcinoma are the three primary subtypes of NSCLC. Because their therapy and prognoses are typically similar, these subtypes, which start from distinct types of lung cells, are classed together.

#### Adenocarcinoma

Adenocarcinomas originate in cells that ordinarily release mucus or other substances. This type of lung cancer is most common in persons who smoke or have smoked in the past. It is also the most common type of lung tumour seen in non-smokers. It affects more women than males, and it is more common in younger individuals than other types of lung cancer. Adenocarcinoma is most commonly detected in the lungs' outer layers, and it is more likely to be found out before it has spread [1].

#### Squamous cell carcinoma

Squamous cell carcinomas arise in squamous cells, flat cells that line the lining of the lungs' airways. They are usually seen in the middle section of the lungs, near a main airway, and are associated to a history of smoking (bronchus).

#### Large cell (undifferentiated) carcinoma

Lung cancer, also known as large cell carcinoma, can develop in any area of the lungs. Big cell neuroendocrine carcinoma, a subtype of large cell carcinoma, is a fast-growing malignancy that is remarkably similar to small cell lung cancer [2].

### Small Cell Lung Cancer (SCLC)

SCLC is a type of lung cancer that accounts for 10% to 15% of all lung malignancies and is also known as oat cell carcinoma. This type of tumours grows and spreads more quickly than NSCLC. At the time of diagnosis, most of people with SCLC will have cancer that has already spread. Chemotherapy and radiation therapy work well for this cancer because it grows quickly. Unfortunately, the cancer will return for the majority of patients at some point.

## CONCLUSION

Other cancers that begin in other organs (such as the breast, pancreatic, kidney, or skin) can travel to the lungs (metastasize), but these are not considered as lung cancers. The location of the metastatic cancer in the lungs determines the treatment (the primary cancer site). The most effective strategy of prevention is to minimize risk factors such as smoking and air pollution. The type of cancer, the stage (degree of spread), and the person's overall condition all influence treatment and long-term prognosis. The majority of cases are incurable. There are several medications available that target molecular pathways in lung cancer, particularly for the treatment of advanced illness. Erlotinib, gefitinib, afatinib, dacomitinib, and osimertinib block the Epidermal Growth Factor Receptor's (EGFR) tyrosine kinase activity. These EGFR inhibitors may assist people with EGFR lung cancer prevent the spread of cancer cells and enhance their

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quality of life. Surgery is sometimes used to treat NSCLC, whereas chemotherapy and radiotherapy are frequently used to treat SCLC. The removal of a lobe of the lung (lobectomy) is the surgical therapy of choice in most cases of early-stage NSCLC [3]. If a full lobectomy is not possible, a smaller sublobar excision (wedge resection) may be performed. Wedge resection, on the other hand, has a higher recurrence rate than lobectomy. By the time patients notice symptoms and seek medical help; the cancer has often spread beyond the original spot. Palliative care, surgery, chemotherapy, and radiation therapy are all common therapy. For advanced lung cancer, targeted therapy is becoming increasingly important. In addition, quitting smoking and exercising are frequently recommended. VATS lobectomy and Video-Assisted Thoracoscopic Surgery (VATS) use a minimally invasive technique to lung cancer surgery [4].

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