

Lung cancer

Lung cancer is one of the most common and deadliest cancers worldwide. The most important cause of lung cancer is smoking, as it leads to the inhalation of various toxic substances and is responsible for over 75% of lung cancer cases. The use of various tobacco products such as pipes and cigars also increases the incidence of lung cancer. In addition, environmental exposure to radon, asbestos and cadmium, as well as passive smoking can increase the incidence of lung cancer.

Symptoms of lung cancer vary and include cough, difficulty breathing, pain when coughing or recurrent infections.

For patients who smoke more than 30 pack-years (packs of cigarettes multiplied by years of smoking), there is a recommendation to perform a high-definition chest Computed Tomography (CT) scan every year for secondary prevention of lung cancer.

Depending on the type of cells that undergo malignant transformation, lung cancer is divided into non-small cell carcinoma, which is more common, and small cell carcinoma, which is less common but more aggressive.

Diagnosis can be made by imaging (chest X-ray, chest CT scan, PET/CT scan). Subsequently, a specimen of the primary tumor is taken for biopsy either by bronchoscopy or guided by CT. If the cancer is metastatic to another site (e.g., liver) a biopsy can be taken from the site of metastasis.

In recent years, the treatment of lung cancer has shown great progress and the median survival of patients has increased significantly. Surgical treatment and radiotherapy are established treatments for early stages. Immunotherapy, which activates the cells of the immune system to act against cancer, has shown benefit in early stages as a preoperative treatment in combination with chemotherapy. In addition, immunotherapy has demonstrated a survival benefit in locally advanced inoperable lung cancer depending on the expression of biomarkers (PD-L1 biomarker expression) and in metastatic lung cancer. Finally, a variety of targeted therapies increase patient survival if specific gene mutations are present in the tumor (e.g. in the EGFR, ALK, KRAS, BRAF, ROS1, RET, MET genes). These mutations are found in tumor samples by various methods, such as PCR (polymerase chain reaction) and Next Generation Sequencing (NGS).

Our oncology team treats a large number of patients with lung cancer and participates in clinical trials for early, locally advanced and metastatic lung cancer that enable patients to receive new, effective treatments. In addition, Attikon Hospital has a great team of thoracic surgeons specialized in lung cancer and a fully equipped department of Radiation Oncology.