



Overview of Lung Adenocarcinoma

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Lung adenocarcinoma accounts for about 40% of all lung cancers. In addition to existing treatment approaches, promising new treatment approaches are being developed.

Lung adenocarcinoma is a subtype of non-small cell lung cancer (NSCLC). Lung adenocarcinoma is categorized as such by how the cancer cells look under a microscope. Lung adenocarcinoma starts in glandular cells, which secrete substances such as mucus, and tends to develop in smaller airways, such as alveoli. Lung adenocarcinoma is usually located more along the outer edges of the lungs. Lung adenocarcinoma tends to grow more slowly than other lung cancers

Lung adenocarcinoma accounts for 40% of all lung cancers. It is found more often in women. Younger people (aged 20-46) who have lung cancer are more likely to have lung adenocarcinoma than other lung cancers. Most lung cancers in people who have never smoked are adenocarcinomas.

For more information about the signs and symptoms that might indicate lung adenocarcinoma, see the Signs & Symptoms section. Note that lung adenocarcinoma may not cause any symptoms, especially early on in its development, and that the signs and symptoms are not specific to lung adenocarcinoma and may be caused by other conditions.

Diagnosing lung cancer is a complex process. In addition to determining whether a patient has lung cancer, diagnosing includes categorizing lung cancers in ways that help to determine the best treatment plan.

Lung Adenocarcinoma Diagnosed

Different tests are used to diagnose lung cancer and determine whether it has spread to other parts of the body. Some of these tests can also help to decide which treatments might work best. Steps and tests used in diagnosing lung adenocarcinoma include:

Imaging tests

Laboratory tests

Biopsies (A tissue biopsy is the only way to confirm a diagnosis of lung cancer.)

The diagnostic approaches used for an individual will depend on medical history and condition, symptoms, location of the nodule(s), and other test results.

For more information about the different steps and tests for making a lung cancer diagnosis, see the Diagnosing Lung Cancer section.

Stages of Lung Cancer

Staging is a way of describing where the cancer is located, if or where it has spread, and whether it is affecting other parts of the body. Doctors use diagnostic tests to determine the cancer's stage, so staging may not be complete until all of the tests are finished. Knowing the stage helps the doctor to recommend a treatment plan. Lung cancer is treatable at all stages.

The staging system used for lung adenocarcinoma is the TNM system, where the combination of the values assigned to a patient's cancer on three measures—T (tumor), N (node), and M (metastasis)—determine the cancer's stage. Stages range from 0 to IV. The higher the stage number, the more advanced the cancer. Only stage IV is

metastatic.^{6,7}

The Lung Cancer Staging section provides more information about how stages are determined and the characteristics of each stage.

Biomarkers

Biomarkers are features of a cancer that predict how it will respond to certain treatments. They are helpful in the determination of the most appropriate treatment for the cancer.

Biomarkers currently used in determining treatments for lung adenocarcinoma are:

Driver mutations within the cancer DNA

Levels of the PD-L1 protein

A patient's lung adenocarcinoma may have one of the many known driver mutations changes in the patient's DNA that lead to lung adenocarcinoma or cause it to progress. In biomarker testing (also called mutation, genomic, or molecular testing), the patient's DNA is analysed to determine whether any of these driver mutations is present. Five of these driver mutations have FDA-approved therapies that specifically target them. Per National Comprehensive Cancer Network (NCCN) guidelines, it is recommended that all patients with advanced-stage NSCLC have a type of biomarker testing called comprehensive biomarker testing. Patients should discuss biomarker testing with their doctor.

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