

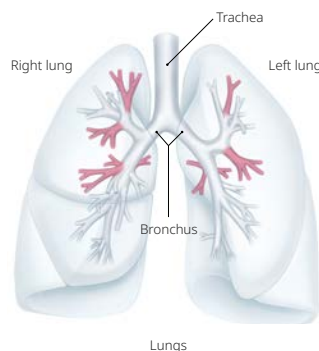
Respiratory

> Lung Cancer

Lung cancer consists of malignant tumors of the bronchial tubes and pulmonary epithelium. Instances are on the rise due to smoking and other causes. Lung cancer is the most common cause of cancer death worldwide*1.

> Benign Pulmonary Disease (COPD)

Refers to a group of diseases caused by inflammation or impaired function of the lungs and airways, rather than malignant tumors such as cancer. A representative example is chronic obstructive pulmonary disease (COPD), which includes emphysema, a disease in which the alveoli at the ends of the bronchi become enlarged and lose their function. Inhalation of harmful substances such as tobacco can cause inflammation of the lungs and bronchi, which leads to progressive shortness of breath.



Bronchoscope

Olympus reusable bronchoscope portfolio is designed for use in the diagnosis and treatment of respiratory conditions. The portfolio incorporates high-resolution imaging and ergonomic designs intended to support visualization of the central, segmental, and subsegmental airways. These bronchoscopes are used across diagnostic and therapeutic procedures to support procedural efficiency and clinical workflow.

The Olympus single-use bronchoscope portfolio offers a range of bronchoscope sizes and features intended to address varied clinical scenarios and patient needs. Single-use availability enables on-demand access and may complement reusable bronchoscopy programs by offering flexibility in scope selection and workflow across care settings.

Note: Single-use bronchoscope is available in the U.S. and selected European countries.



Bronchoscope



Single-use bronchoscopes and processor

EBUS Bronchoscope

This scope is equipped with an ultrasonic transducer (probe) at its tip and is used when performing endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA). With a small outer diameter and a wider angulation range, the peripheral EBUS bronchoscope extends EBUS-TBNA-guided tissue sampling for both lesion diagnosis and lymph-node staging in the peripheral zone that were not previously accessible by traditional EBUS bronchoscopes*2.

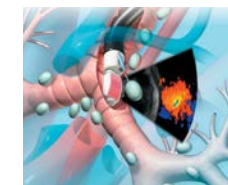


Peripheral EBUS bronchoscope

Diagnostic method for lung cancer

Endobronchial Ultrasound-Guided Transbronchial Needle Aspiration (EBUS-TBNA)

A technique mainly for the purpose of diagnosing enlarged lymph nodes in lung cancer, inflammatory or infectious diseases. The procedure uses ultrasonic images in real time to guide the insertion of a needle into the lymph node via the trachea and bronchus for the collection by aspiration of cell or tissue samples. The collected samples are observed and diagnosed in detail by pathological examinations before deciding on the next course of treatment.



EBUS-TBNA system

Radial EBUS

A technique used to localize small lung lesions to biopsy. Ultrasonic images guide a catheter or peripheral bronchoscope to find nodules outside of the airways. Most commonly looking for early stage lung cancer to diagnose it when it has not spread to lymph nodes.



Radial EBUS

*1 WHO cancer statistics: <http://www.who.int/news-room/fact-sheets/detail/cancer>

*2 Takashima Y, Shinagawa N, Shoji T, et al. Evaluating the Efficacy of Thin Convex-probe Endobronchial Ultrasound Bronchoscope in Cadaveric Models. J Bronchology Interv Pulmonol. 2025;32(3):e01015. Published 2025 May 21. doi:10.1097/LBR.0000000000001015

Respiratory

Main endotherapy device used

Aspiration Needle

This endotherapy device is designed for use with an ultrasound bronchoscope and enables the collection of cell or tissue samples from the trachea and bronchi through aspiration.

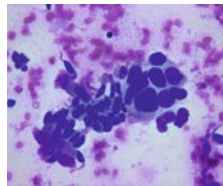


EBUS bronchoscope and aspiration needle

Diagnostic method for lung cancer

Cytology

Cytology is performed by observing collected cells under a microscope to detect malignant features consistent with lung cancer.



Cytology image of lung cancer cells

Example endotherapy device used

Cytology Brush

A brush for collecting cells from the bronchial tubes with narrow openings. The cytology brushes are 1-5mm in diameter and less than 10mm in length.



Cytology brush

Method of treatment for benign pulmonary disease (COPD)

Bronchoscopic Lung Volume Reduction

A minimally invasive procedure for severe emphysema. The procedure reduces lung volume by deploying a valve within the bronchial airway to block airflow to the diseased portion of the lung. Specifically, a small, umbrella-shaped valve is implanted in the lung's upper lobe bronchus via a catheter inserted into the instrument channel of a bronchoscope. The purpose is to redirect the airflow from the unhealthy part of the lung to the normal/healthy section.



Intrabronchial valve system

Main endotherapy device used

Endobronchial Valve

This valve is a therapeutic device for severe emphysema. It is used when medicines have no effect or in which neither a lung reduction procedure nor transplant surgery is not applicable. It is also used to treat postoperative prolonged air leaks arising from a pneumothorax or lung surgery.

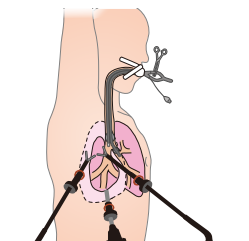


Endobronchial valve

Method of treatment for lung cancer

Pulmonary Resection

Lung cancers are now being surgically resected using endoscopes. Thoracoscopic partial lung resection surgery can be performed for removing tumors smaller than 3cm in diameter, and lung lobectomies performed for treating areas greater than 4cm in breadth.



Pulmonary resection (image)

Main therapeutic device used

Surgical Systems

Systems used in surgery are described on pages 17-18.