OLYMPUS

Solutions for Bronchoscopy

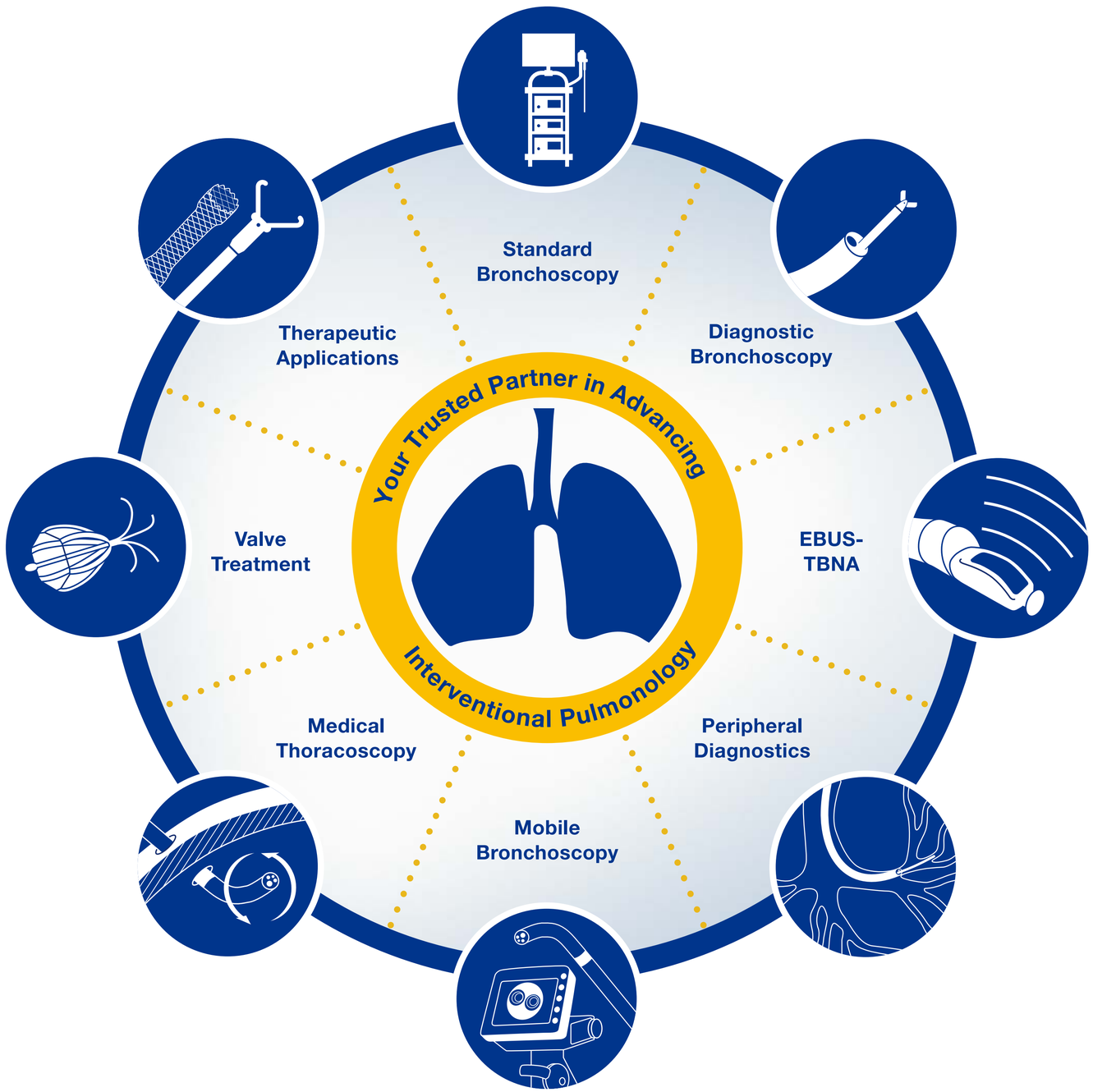
Elevating the Standard of Interventional Pulmonology

#Love
For
Lungs

Contents

Please click on the page of interest below

Solutions for Interventional Pulmonology



As the world leader in endoscopy, Olympus provides cutting-edge medical technology to health-care professionals around the globe in their quest to elevate the standard in interventional pulmonology.

In the respiratory field, Olympus provides a wide range of innovative solutions – not only bronchoscopes but also solutions for endobronchial ultrasound, peripheral and pediatric bronchoscopy, and a semiflexible thoracoscope for the exploration of the thoracic cavity.

Olympus continually innovates in order to provide the most advanced equipment to support progress in respiratory diagnosis and treatment.

Your Trusted Partner in Interventional Pulmonology

Understanding and delivering solutions for flexible bronchoscopy needs.

The treatment possibilities of respiratory diseases are increasingly linked to reliable and effective endoscopic diagnostics. Olympus offers the widest portfolio for diagnostic and therapeutic bronchoscopy.

Innovations such as EBUS-TBNA, dedicated solutions for diagnostics of peripheral lung cancer and a portfolio of optical imaging modes (TXI, NBI, RDI) using selected, specific light bands can be applied to conquer the challenging tasks, elevating the standard in interventional pulmonology. Equally important, we have designed solutions to make bronchoscopy more ergonomic and more powerful, for example with the rotation function, touch display, native HDTV image resolution and opto-digital enhancements. Smartly enhanced illumination, tissue texture and color differentiation are broadening the possibilities for interventional pulmonologists.

EVIS X1 — a unified platform with broad compatibility.
One dedicated platform: EVIS X1 merges the two worlds of EVIS EXERA III and EVIS LUCERA ELITE into one — resulting in an extended portfolio of compatible endoscopes.

14310

Elevating the Standard of Bronchoscopy

Standard Bronchoscopy

Learn more in the video

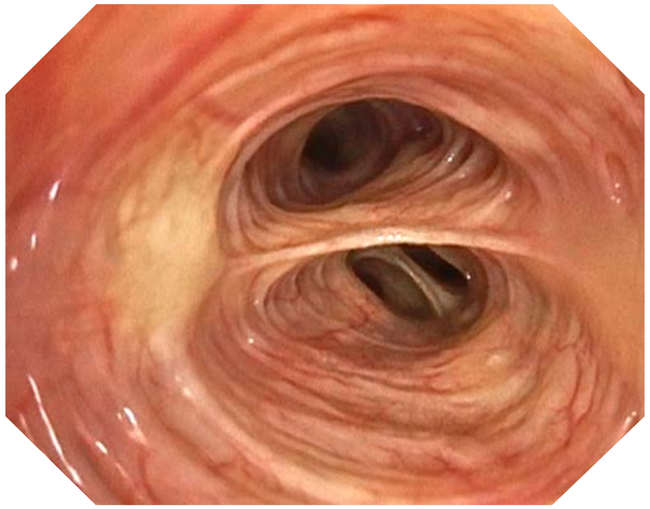
Ease of Use

EVIS X1 introduces a range of new, easy-to-use technologies that aim to revolutionize the way pulmonary disorders can be detected, characterized and sampled. We want to support every endoscopist. In every procedure. Every day.

EVIS X1

Elevating the Standard of Bronchoscopy

Standard Bronchoscopy



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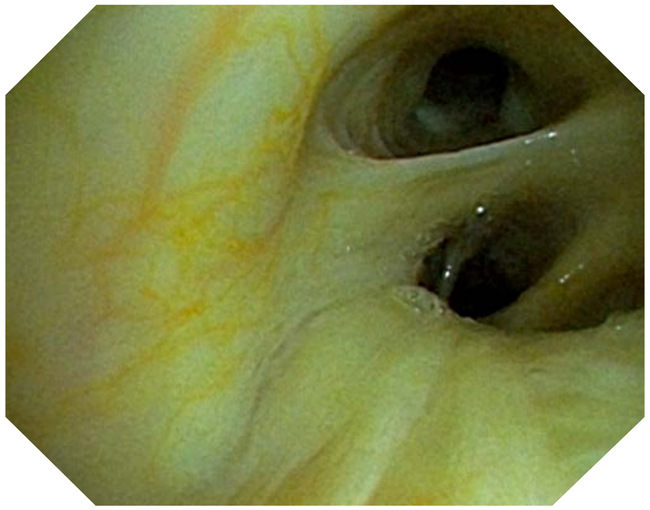
TXI view



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RDI view

BAI-MAC — The Confidence to See Further

Illumination inside the bronchial anatomy is crucial in order to also anticipate deeper structures. With BAI-MAC dark, distant areas of the image become brighter without overexposing the foreground.

TXI — The New White Light

TXI technology aims to enhance the visibility of potentially suspicious tissue, which includes inflammations and flat or depressed lesions. This new imaging modality provides an almost three-dimensional experience during bronchoscopy.

RDI — The Safeguard for Endoscopic Therapy

Internal bleeding in general can be a serious challenge. Consequently, prevention and the fast management of bleeding are both crucial. RDI is designed to enhance the visibility of blood vessels in the deeper mucosal layers. By making superficial bleeding less prominent, RDI can help to locate bleeding spots.

Elevating the Standard of Bronchoscopy

Standard Bronchoscopy

High Imaging Performance

To get the most out of every endoscopic image, the new EVIS X1 endoscopy system uses innovative technologies:

- Native HDTV image resolution in standard bronchoscopes with further reduced diameters.
- Narrow band technology for superficial (NBI) or deeper (RDI) mucosal blood vessel analysis.
- Digital image enhancement for evenly illuminated images (BAI-MAC), stronger tissue texture and improved color enhancement support detecting the most subtle mucosal changes (TXI).

Ergonomics

The EVIS X1 system and its range of bronchoscopes are the ideal tools for facing even challenging bronchoscopies.

The bronchoscopes' rotation function as well as the system's easily adjustable configuration supports the examiner's needs.

CV-1500 helps to reduce the acoustic noise level. Full-screen imaging provides one more option to adjust to the requirements.

Outstanding Image Resolution Supporting Precise Observation and Treatment

Standard Bronchoscopy

Olympus has designed new sensors in the distal tips of the new flagship bronchoscopes BF-H1100 and BF-1TH1100.

Olympus has defied some of the contradictions in bronchoscope design, as these tools are now even slimmer and come with an increased working channel diameter as compared to their predecessors.

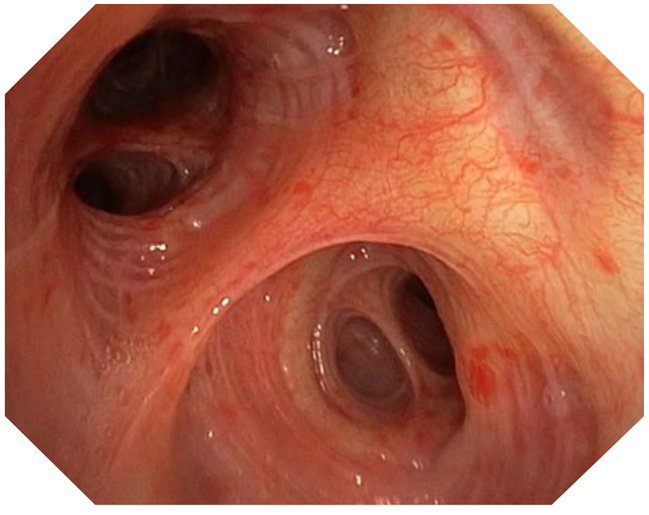
The new video bronchoscopes BF-H1100 and BF-1TH1100 in conjunction with EVIS X1 CV-1500 provide native HDTV imaging in:

- White Light (WL).
- Narrow Band Imaging (NBI).
- Red Dichromatic Imaging (RDI).
- Tissue and Texture Enhancement Imaging (TXI).

These bronchoscopes also offer an electronically zoomed full-screen image (16:9 aspect ratio), supporting the preferences of a variety of examiners.

Routine Bronchoscopy

BF-H1100 is the perfect combination of the former H190 and Q190 bronchoscopes. With an outer diameter of 4.9 mm, the BF-H1100 enables HDTV resolution diagnostics to be performed in deeper bronchial areas as well.



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BF-H1100

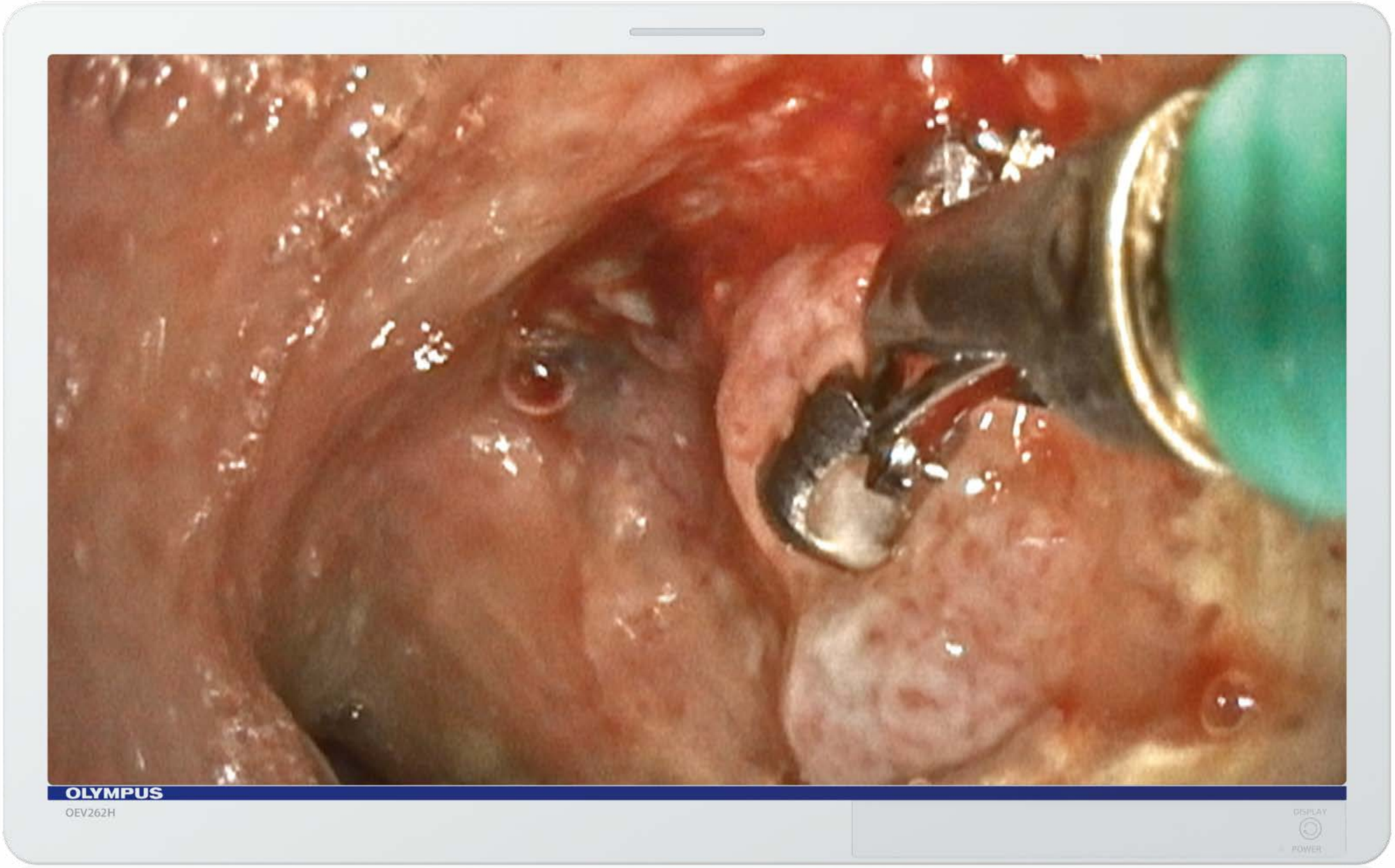
With its 2.2 mm working channel for better suction and maneuverability of EndoTherapy devices, the BF-H1100 also shows high interventional capabilities.

Slim Design True Videoscopes

The very slim chip-on-the-tip video-bronchoscopes (BF-P190/BF-XP190) provide stunning image quality while offering compatibility with a wide range of EndoTherapy instruments, improving diagnoses in the thinner bronchial lumina.

Outstanding Image Resolution Supporting Precise Observation and Treatment

Standard Bronchoscopy



Full-screen image captured with BF-1TH1100 prior forceps biopsy of a neoplastic lesion using FB-211D

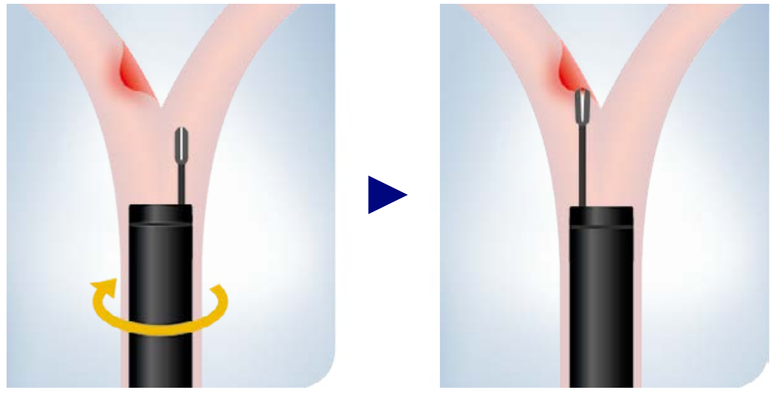
The Advantage of Ergonomic Scopes

Standard Bronchoscopy

Our endoscopic systems are designed to create a safe, comfortable and productive workspace.

Repetitive and prolonged gestures can result in musculoskeletal problems or even work-related injuries. To prevent these ergonomic challenges to the greatest extent possible, we have equipped our bronchoscope with an insertion tube rotation function.
This function allows the bronchoscope handle and insertion tube to be rotated up to 120 degrees in both directions. Thus, the examiner can adopt a more ergonomic posture. Especially when targeting the left upper lobe, the insertion tube rotation function significantly improves ergonomic scores.[1]

(1) Gilbert et al, Assessment of Ergonomic Strain and Positioning During Bronchoscopic Procedures, J Bronchol Intervent Pulmonol 2020; 27:58-67



Improved therapeutic capability

Improved Therapeutic Capability

With the insertion tube rotation function, it is easy to adjust the position of the distal end of the bronchoscope. Simply keep the handle in a fixed position and rotate the insertion tube and working channel opening to the position most suitable for the biopsy.
This facilitates selecting the bronchi and targeting biopsy sites with EndoTherapy devices.

Easy Access

As the operation of EndoTherapy devices involves both the bronchoscopist and the assistant, the insertion tube rotation function can also be used to adjust the bronchoscope to the most convenient and simple-to-reach position. Keep the insertion tube rotation ring in a fixed position and simply rotate the handle with the working channel inlet towards the assistant.

The Advantage of Ergonomic Scopes

Standard Bronchoscopy

BF-H1100

Endoscopic Sampling

Forceps and Brushes | **Needles** | **Peripheral Diagnostics**

BF-XP190 with cytology brush BC-203D-2006

Microbristle cytology brush

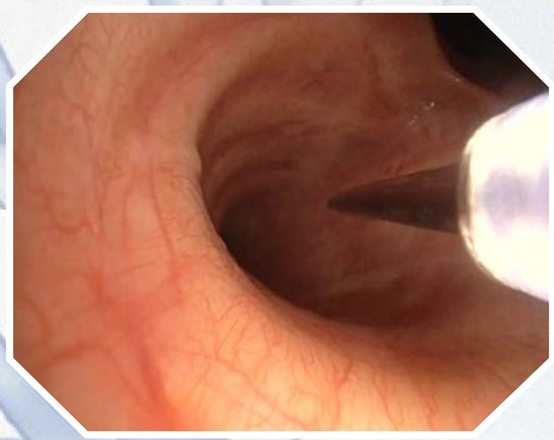
Full flexibility within the 1.2 mm working channel: biopsy forceps, cytology brushes, grasping forceps

EndoJaw biopsy forceps

Endoscopic Sampling

Forceps and Brushes | **Needles** | Peripheral Diagnostics

SmoothShot TBNA needles. Decades of experience in the field of classical TBNA: Only excellent aspiration needles can provide excellent yield



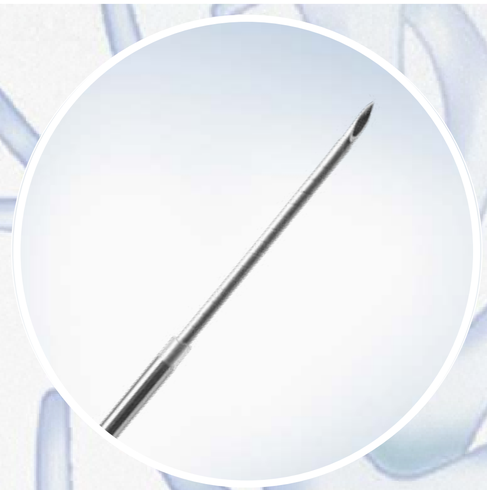
BF-H190 with TBNA needle NA-601D-1519

EBUS-TBNA needles in 19G, 21G, 22G and 25G for lymph node staging

Metal sheath TBNA needles

Endoscopic Sampling

Forceps and Brushes | Needles | Peripheral Diagnostics



PeriView FLEX 21G TBNA needle supporting diagnostic yield for lesions with or without a bronchi leading to the lesion

BF-P190

The GuideSheath technique allows repeated access to peripheral lesions. Studies confirm:
A combination of different sampling methods help to increase yields and diagnostic success

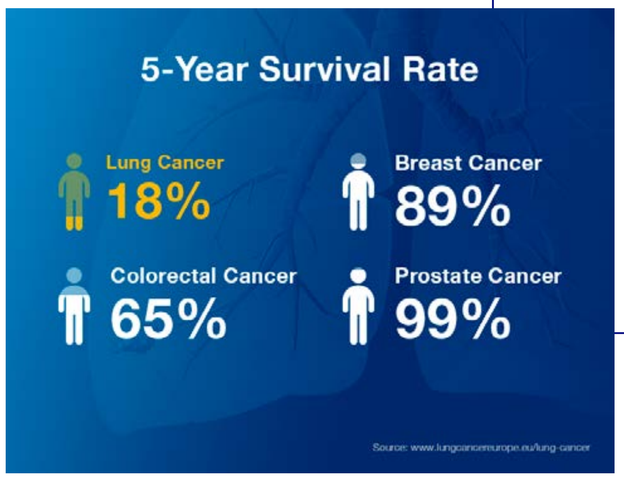
Lung Cancer Diagnosis and Staging

EBUS-TBNA and Peripheral Bronchoscopy

Lung cancer causes practically no early symptoms and is therefore usually diagnosed very late. Early detection can make a big difference. It means a curative treatment can be performed to counteract disastrous lung cancer statistics, give patients more hope and reduce medical costs. When detecting lung cancer, an accurate assessment of the progression of the disease is essential for defining the following treatment.

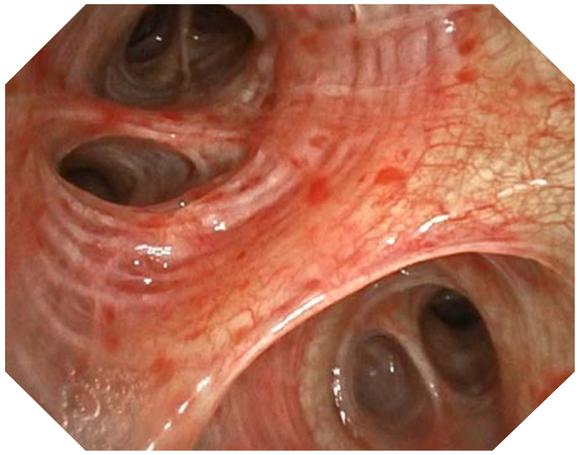
Endoluminal

Endoscopic detection and confirmation of early cancer is in many cases challenging using white light endoscopy alone. Consequently, Olympus continues to develop optical as well as digitally enhanced imaging modalities – such as TXI and NBI.



5-Year Survival Rate

The five-year survival rate tells you what percentage of people live at least five-years after cancer is found. Unfortunately, lung cancer has the lowest five-year survival rate among most common cancers.[1]



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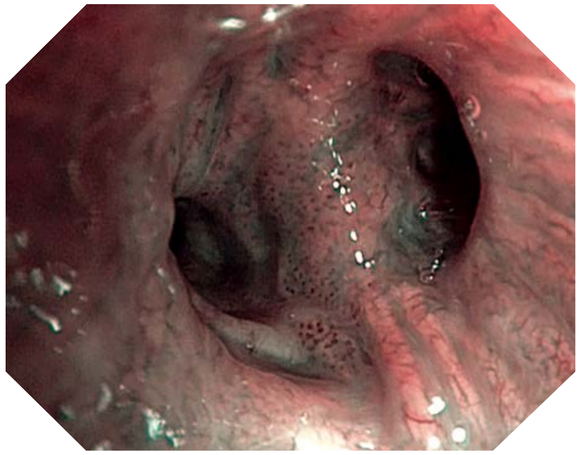
TXI — Texture and color enhancement imaging: detection of mucosal changes



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NBI — Narrow Band Imaging: detection of neoplastic vessel formation

[1] Source: www.lungcancereurope.eu/lung-cancer/

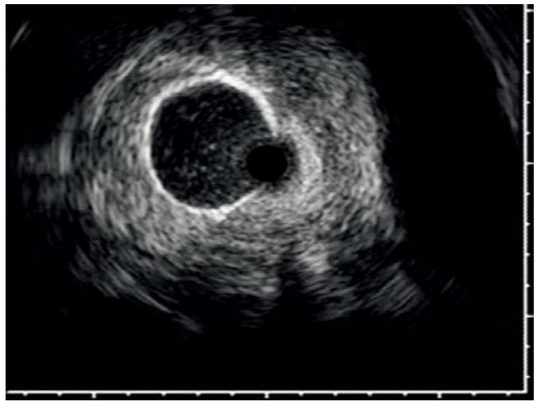
Lung Cancer Diagnosis and Staging

EBUS-TBNA and Peripheral Bronchoscopy

Extraluminal

EBUS — linear and radial. Be it for SPN confirmation, T- or N-staging or benign disease, radial and linear endobronchial ultrasound is mandatory to complement your diagnostic tool kit. For looking beyond the bronchial wall, endobronchial ultrasound transbronchial needle aspiration has become the leading minimally invasive method for the staging of mediastinal and hilar lymph nodes.

Linear EBUS image of a needle aspiration



Radial EBUS image of SPN

Enhance Your Impact – Reach Further

EBUS-TBNA and Peripheral Bronchoscopy

The diagnosis of peripheral pulmonary nodules has been a challenge over the past decades, and there is a wide range of diagnostic procedures. Bronchoscopy, with a reported pneumothorax rate of only 1.5%, is the least invasive approach to peripheral lesions[1]. Olympus offers a broad portfolio supporting the minimally invasive bronchoscopic approach:

[1] Wang Memoli, J.S., Nietert, P.J., Silvestri, G.A. Meta-Analysis of Guided Bronchoscopy for the Evaluation of the Pulmonary Nodule. Chest. 2012 Aug;142(2):385-393. doi: 10.1378/chest.11-1764. PMID: 21980059; PMCID: PMC3425336.

Access the Periphery

1

Identify Nodule Location

2

Sampling of SPNS for Diagnosis

3

Real-Time Linear Endobronchial Ultrasound

4

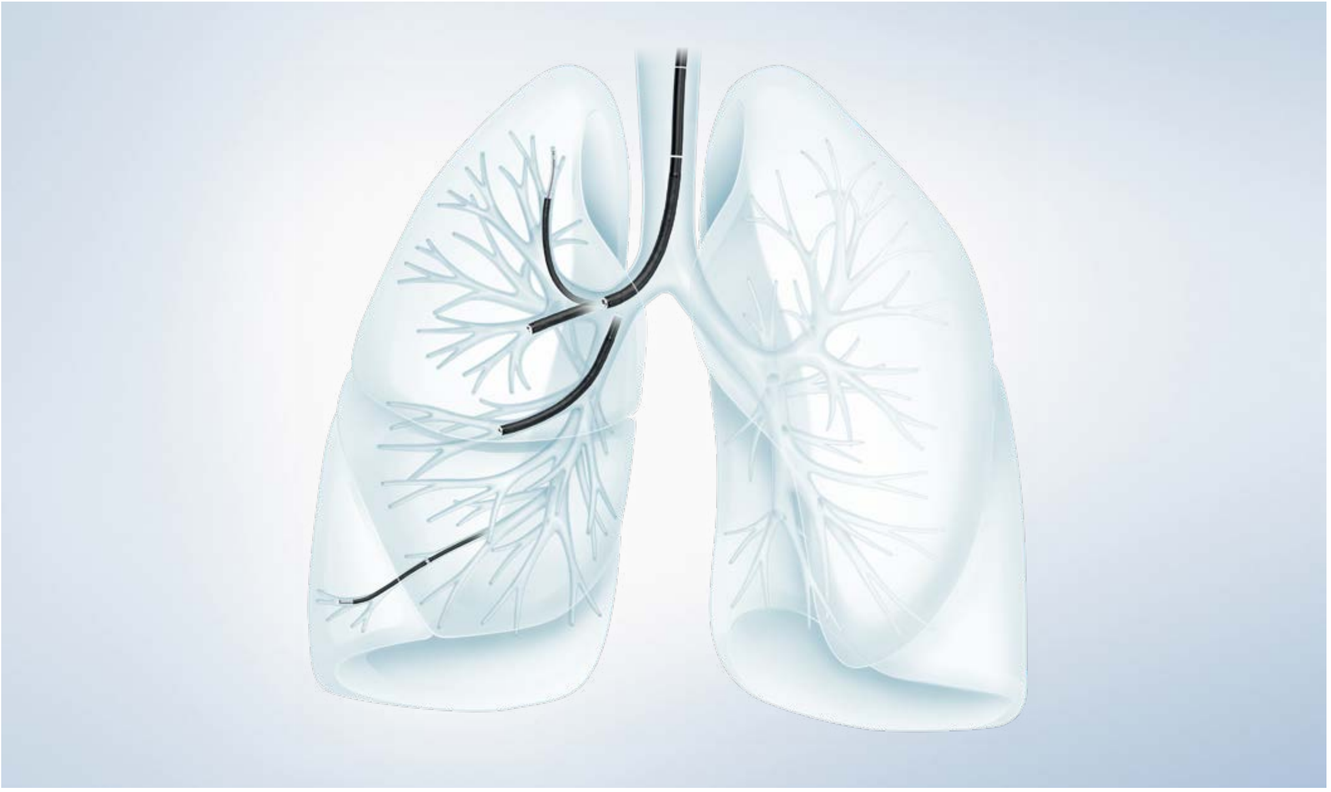
Lymph Node Sampling for Staging

5

www.olympus-europa.com/spn

Enhance Your Impact – Reach Further

EBUS-TBNA and Peripheral Bronchoscopy



Ultrathin 3 mm bronchoscope with 1.7 mm working channel (BF-MP190F) is compatible with the radial EBUS miniprobe

Access - Localizing the Lesion with Confidence:

As the world leader in endoscopy, Olympus offers a choice of two bronchoscopic sampling solutions: The combination of a scope and the GuideSheath Kit 2 or the ultrathin BF-MP190F scope.

Direct access to the periphery with the ultrathin BF-MP190F

Enhance Your Impact – Reach Further

EBUS-TBNA and Peripheral Bronchoscopy

Accessing lung lesions in the periphery remains a clinical challenge. The exceptional GuideSheath Kit helps to improve diagnosis of peripheral lung lesions. Its clinical value has been demonstrated in over 50 clinical publications.

The GuideSheath is advanced and positioned under X-ray or with ultrasonic guidance at the center of a solitary pulmonary nodule. Once positioned at the target site, the GuideSheath acts like an extended working channel, allowing safe and repeated access to the lesion for taking biopsies and cytology-brushing.

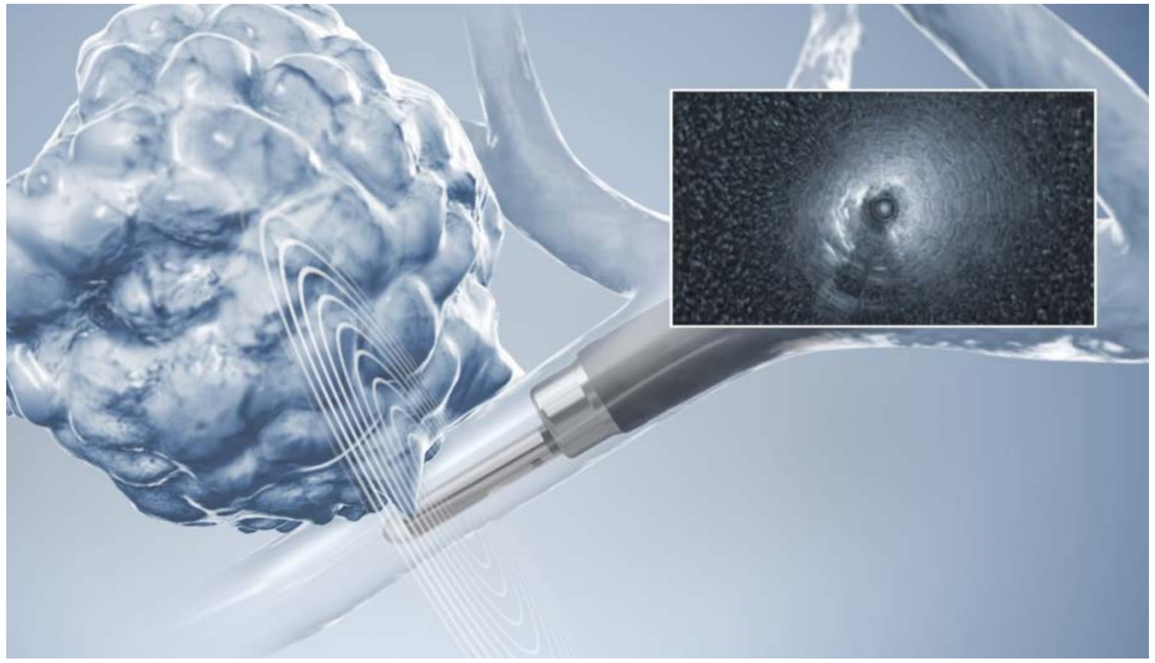
Accessing the periphery with the GuideSheath approach.

Thin 4.2 mm bronchoscope with 2.0 mm working channel (BF-P190) is compatible with the GuideSheath

The CC-220DR guiding device is designed to provide improved insertion and steer the GuideSheath to reach the target lesion

Enhance Your Impact – Reach Further

EBUS-TBNA and Peripheral Bronchoscopy



Identify – Real-Time Lesion Confirmation:

The clinical value of utilizing radial EBUS miniprobes in localizing peripheral pulmonary nodules has been proven in numerous studies.

BF-MP190F
The UM-S20-17S radial EBUS Miniprobe can be used with both the BF-MP190F ultrathin scope and the GuideSheath. Studies report that the combination of either the GuideSheath[1] or BF-MP190F[2] with the ultrasound probe achieves over 90% lesion identification.

UM-S20-17S
Designed to access even the narrowest lumina. This radial ultrasonic miniature probe with an insertion tube of just 1.4 mm diameter and an operating frequency of 20 MHz generates high-resolution 360º ultrasonic images.

UM-S20-20R
This radial ultrasonic miniature probe allows detailed, high-resolution, 360º examination of narrow lumina with an operating frequency of 20 MHz, while being compatible with the 2.6 mm diameter GuideSheath.

(1) Alexander Chen, et al, Radial probe endobronchial ultrasound for peripheral pulmonary lesions. A 5-year institutional experience, AnnalsATS, Volume 11, Number 4

(2) Masahide Oki, et al, Endobronchial ultrasound-guided transbronchial biopsy using novel thin bronchoscope for diagnosis of peripheral pulmonary lesions, Journal of Thoracic Oncology Volume 4, Issue 10, October 2009

Enhance Your Impact – Reach Further

EBUS-TBNA and Peripheral Bronchoscopy

Sampling – Dedicated Devices for the Periphery:

The Olympus peripheral Sampling portfolio provides established biopsy forceps and brushes as well as a 21G flexible aspiration needle designed to improve clinical outcomes.

NA-403D-2021
The PeriView FLEX 21G biopsy needle is designed to help to increase the diagnostic yield in the periphery as well as to improve access to target sites thanks to enhanced needle flexibility. It is compatible with the BF-MP190 and the GuideSheath.

FB-433D
Dedicated single-use peripheral biposy forceps with oval shaped cups for 1.7 mm working channel or GuideSheathKit 2.

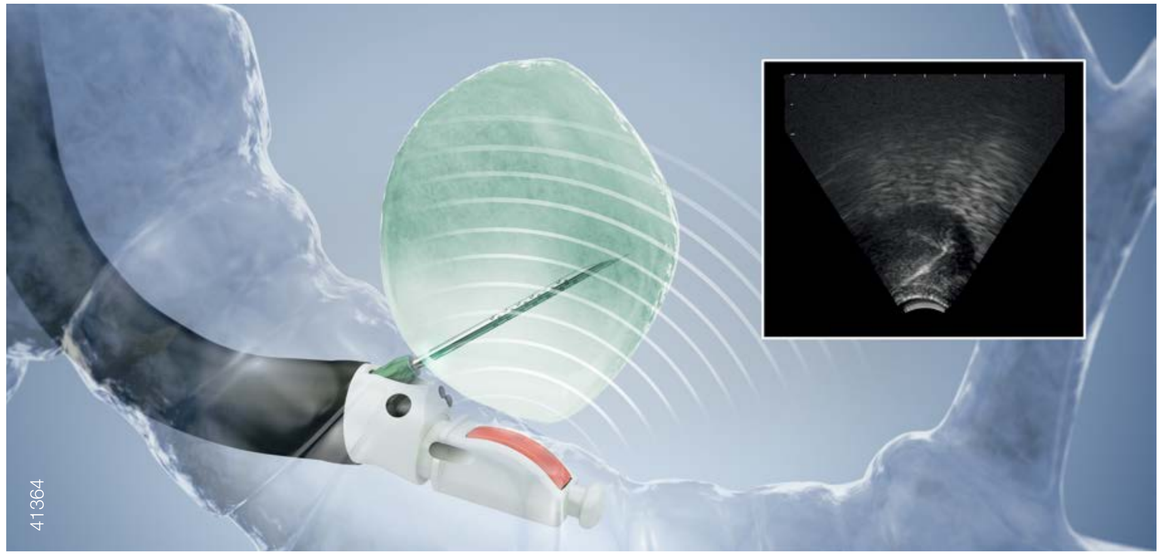
BC-205D-2010
Dedicated single-use peripheral cytology brush for 1.7 mm working channel or GuideSheathKit 2.

Expand Your Possibilities in EBUS-TBNA

EBUS-TBNA and Peripheral Bronchoscopy

Endobronchial ultrasound transbronchial needle aspiration (EBUS-TBNA) is a reliable and well-established technique that enables the visualization and sampling of mediastinal, central and hilar lesions and lymph nodes within the tracheobronchial tree. With the EBUS bronchoscope (BF-UC190F) inserted into the trachea or the esophagus, the accessible lymph node stations can be explored and the lesions outlined while offering you the freedom to select from different EBUS needle lineups and sizes depending on your needs.

EBUS-TBNA has proven to be of great value not only for lymph node staging (N-staging) but also for the strategic use of cytology and histology samples for molecular analysis. The acquired specimen can be used to obtain a reliable diagnosis as well as for cell-block preparation, immunochemistry and molecular studies.



EBUS-TBNA is the gold standard for mediastinal lymph node staging (N-staging)

Slim EBUS Bronchoscope

www.olympus.eu/ebus-tbna

Expand Your Possibilities in EBUS-TBNA

EBUS-TBNA and Peripheral Bronchoscopy

ViziShot

The ViziShot portfolio offers a wider field of application with the four available needle sizes 19G, 21G, 22G and 25G. While the entire portfolio offers the already established safety mechanisms and excellent ultrasound visibility, ViziShot 2 provides a green sheath supporting visualization during endoscopic observations, a sharper needle tip design for the smooth penetration of the bronchial wall and an ergonomic handle design for better needle control.

EBUS needles: ViziShot, ViziShot 2 (25G), ViziShot 2 and ViziShot 2 FLEX (19G)

ViziShot 2 FLEX

ViziShot 2 FLEX is outstanding with its large 19G diameter — now with FNA and FNB indication. The improved sample size enables enhanced diagnostic capabilities and targeted lung cancer therapy. It supports histological sampling for suspected sarcoidosis and lymphoma but also helps to procure more tissue for advanced molecular analyses. ViziShot 2 FLEX is an ally for special indications and whenever superior flexibility is needed.

ViziShot 2 EBUS needles

Expand Your Possibilities in EBUS-TBNA

EBUS-TBNA and Peripheral Bronchoscopy

EBUS-TBNA with Olympus EU-ME3 — compatible with EBUS radial miniature probes for peripheral bronchoscopy

EBUS-TBNA with Hitachi Arietta 850 — compatible with extracorporeal ultrasound probes

Selecting the Right Tools for Therapeutic Interventions

Therapeutic Bronchoscopy

Designed to facilitate therapeutic procedures, Olympus offers a variety of therapeutic video bronchoscopes and a broad selection of therapeutic instruments.

The new BF-1TH1100 comes with a smaller outer diameter than its predecessor and offers an enlarged working channel of 3.0 mm to increase suction capabilities and contribute to better visualization in the bronchial airways. This scope also features the rotation function: The distal end of the bronchoscopes can be rotated to the left and right, facilitating easy access to the bronchi.
A 3.2 mm diameter working channel can be utilized when working with the BF-XT190. For emergency interventions requiring mobility, the MAF-TM2 mobile scope with its integrated LED light source and adjustable monitor is an option.

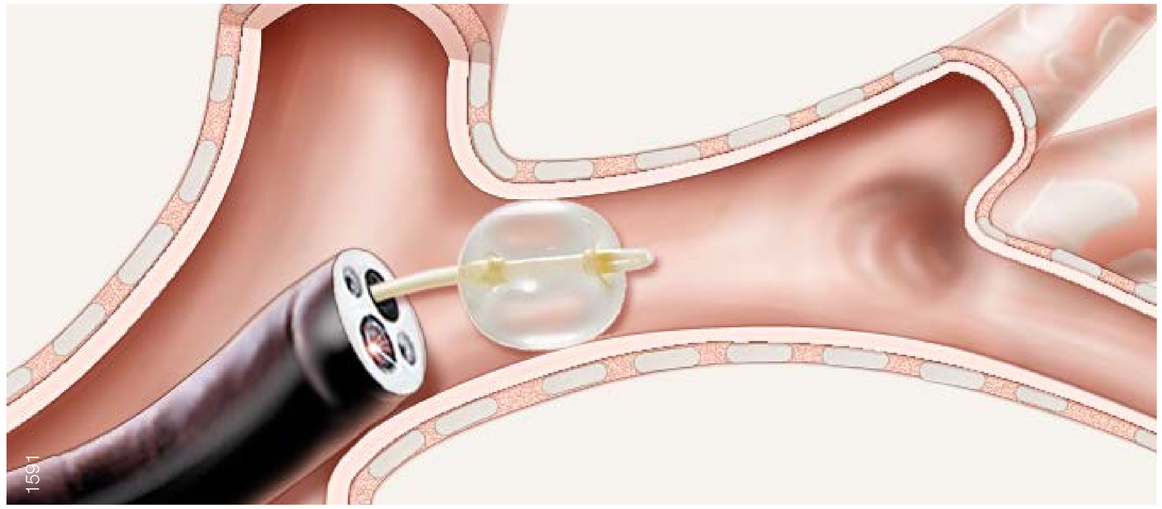
A broad selection of therapeutic devices can be used with these bronchoscopes, ranging from grasping forceps for foreign-body removal, electrosurgical instruments and APC probes for hemostasis and tissue devitalization, as well as tracheobronchial stents.

Argon plasma coagulation electrode (PA-210K), hot biopsy forceps (FD-231C), grasping forceps (FG-804L and FG-232L), Hanaro tracheobronchial stent (left to right)

Selecting the Right Tools for Therapeutic Interventions

Therapeutic Bronchoscopy

B5-2C



Emergency short-time hemostasis tamponade with the B5-2C balloon catheter

In case of an acute bronchial occlusion, foreign-body retrieval is possible with V-shaped or rat tooth grasping forceps

Grasping forceps

Selecting the Right Tools for Therapeutic Interventions

Therapeutic Bronchoscopy

Stricture Management: From Tumor Removal to Stent Placement

The Olympus portfolio offers everything you need for obstructed airways. The electrosurgical unit ESG-300 and the Argon plasma unit allow in combination with HF instruments and APC probes enable users to resect and coagulate with confidence.

The HANAROSTENT tracheobronchial metallic stents are complement the product lineup and are available as fully covered versions indicated for use in tracheobronchial strictures and tracheoesophageal fistulas.

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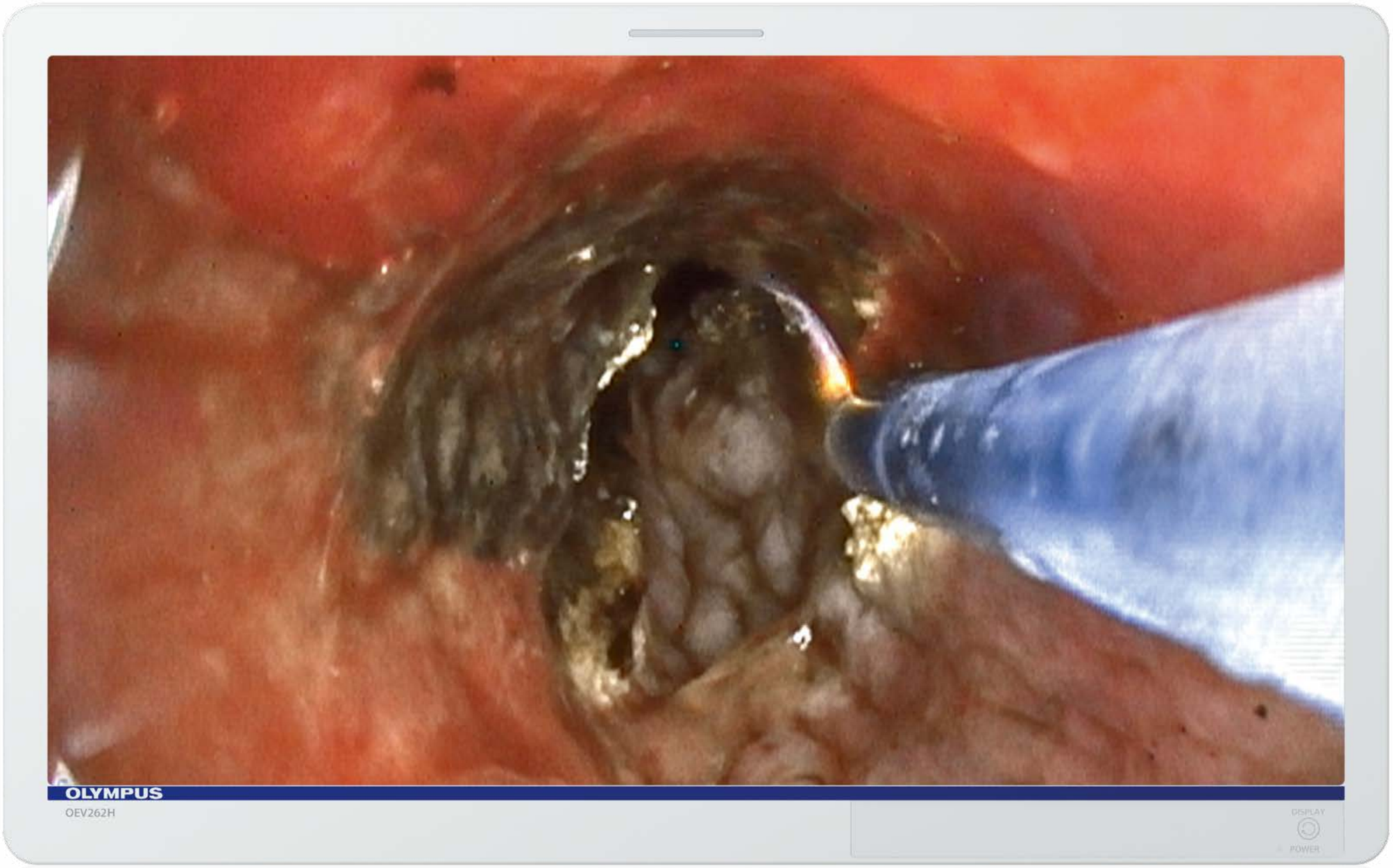
BF-H1100 with hot biopsy forceps FD-231C

4239

BF-1TH1100 with Hanaro tracheobronchial stent

Selecting the Right Tools for Therapeutic Interventions

Therapeutic Bronchoscopy



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BF-1TH1100 with APC probe for tissue devitalization

Emphysema and Air Leak Treatment

Therapeutic Bronchoscopy

Bronchial valve therapy with the Spiration Valve System (SVS) is a promising approach for treating a diseased lung in emphysematous patients or a damaged lung resulting in air leaks.

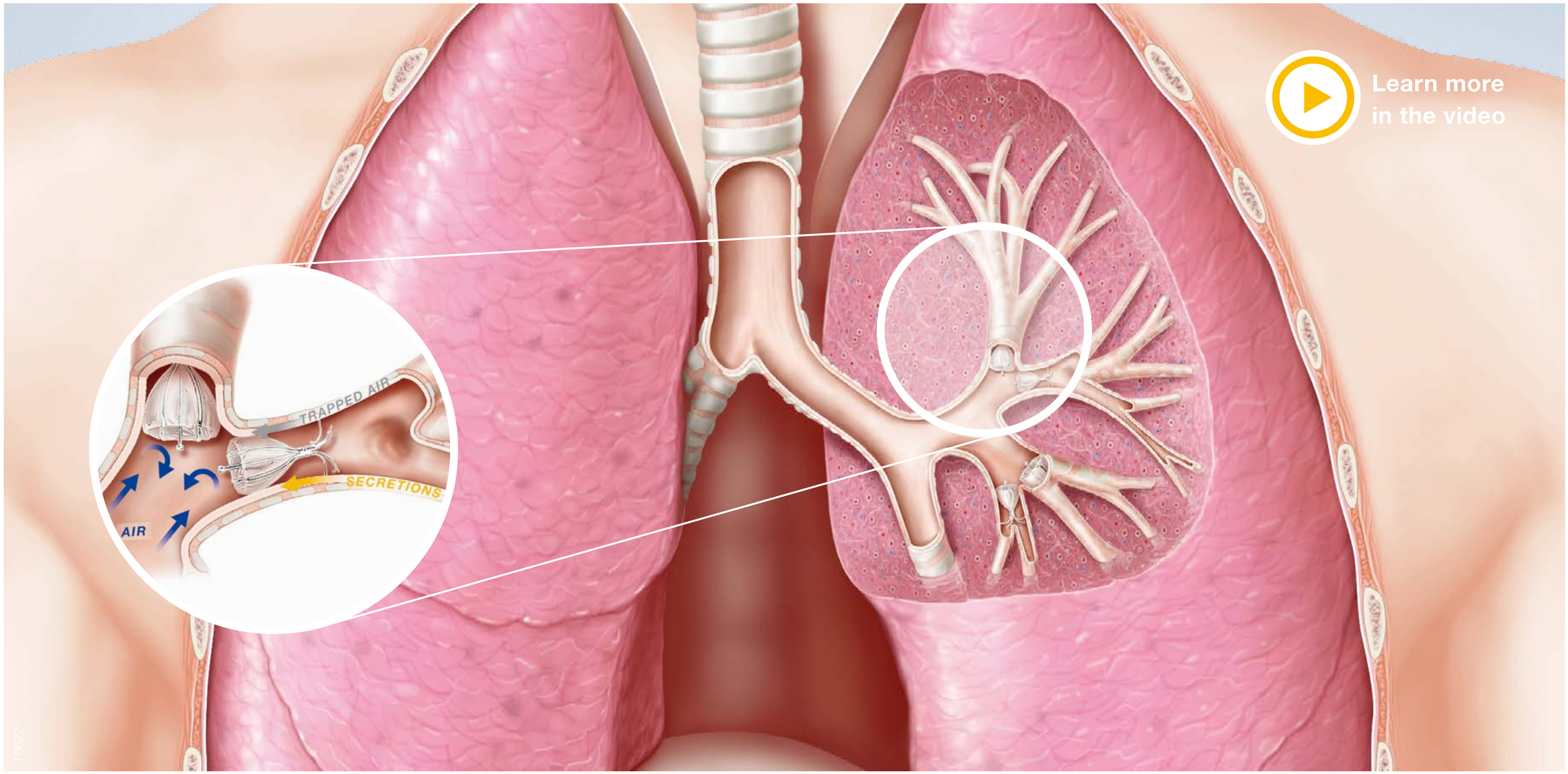
The patented one-way SVS valve is a device placed in selected lung airways where it self-expands and limits the airflow to the occluded areas of the lung while still allowing mucus and trapped air to pass by outside of the valve in the proximal direction. SVS valves are available in four different sizes, from 5 mm to 9 mm to make the perfect fit for every airway. Two catheter sizes for 2 mm and 2.6 mm working channels are available to reach even difficult-to-access airways. The BF-1TH1100 supports an ergonomic and comfortable procedure. The enlarged working channel still allows great suction capabilities even with inserted instruments, and the rotation function facilitates easy access even to very angulated airways. For the treatment of emphysema, the valves enable the total occlusion of single lobes resulting in atelectasis. In a recent RCT trial, statistically significant improvements were seen in target-lobe volume reduction, hyper inflations, health status and dyspnea.[1] For the treatment of air leaks, the valve limits airflow to injured tissue. Prolonged postsurgical and persistent air leaks as well as spontaneous secondary air leaks have been treated successfully. Published case reports showed a 94% success rate of treatment of the prolonged air leaks. [2, 3, 4]

1 Crainer, G.J., et al. AJRCCM 2019;200(11):1354-1362. doi:10.1165/rrcm.201902-0383oc.
2 Wood, D., et al. [Abstract] European Respiratory Society Congress. September 2010. Abstract nr P4145.
3 Mahajan, A.K., et al. J Thorac Cardiovasc Surg. 2013 Mar;145(3):626-30. doi: 10.1016/j.jtcvs.2012.12.003.
4 Firlinger, I., et al. Ann Thorac Surg. 2013 Apr;95(4):1243-9. doi: 10.1016/j.athoracsur.2012.12.036.

Spiration Valve System (SVS)

Emphysema and Air Leak Treatment

Therapeutic Bronchoscopy



The valve allows mucus and air movement in the proximal direction

Emphysema and Air Leak Treatment

Therapeutic Bronchoscopy

10601

BF-1TH1100 with an SVS valve

Observation of the Thinnest Bronchi

Pediatric Bronchoscopy

Flexible bronchoscopy is widely used in the diagnosis of respiratory pathologies in children of all ages.

Given its ultraslim specifications, the BF-XP190 can be used in pediatric bronchoscopy with ease. The chip-on-the-tip design produces stunning image quality, while maintaining an ultraslim 3.1 mm distal end outer diameter and a 1.2 mm instrument channel.

Biopsies, bronchial brushing and foreign-body removal present common challenges that can be met by the selection of the appropriate techniques and instruments. Olympus offers a full lineup of instruments for flexible pediatric bronchoscopy that is compatible with the 1.2 mm working channel. This range covers grasping forceps and baskets for foreign bodies of different shapes and surfaces and biopsy forceps and cytology brushes for diagnoses even from the small bronchi.

The single-use mini biopsy forceps (FB-456D) allows for successful sampling even with the slimmest-channel bronchoscopes. Their elongated rat tooth cups enable a reliable biopsy. An optimized cytological yield can be obtained with the single-use mini cytology brush (BC-203D-2006) with a brush diameter of 2.0 mm.

For the retrieval of inhaled foreign objects in children, Olympus offers different removal baskets for safe and easy retraction.

Observation of the Thinnest Bronchi

Pediatric Bronchoscopy

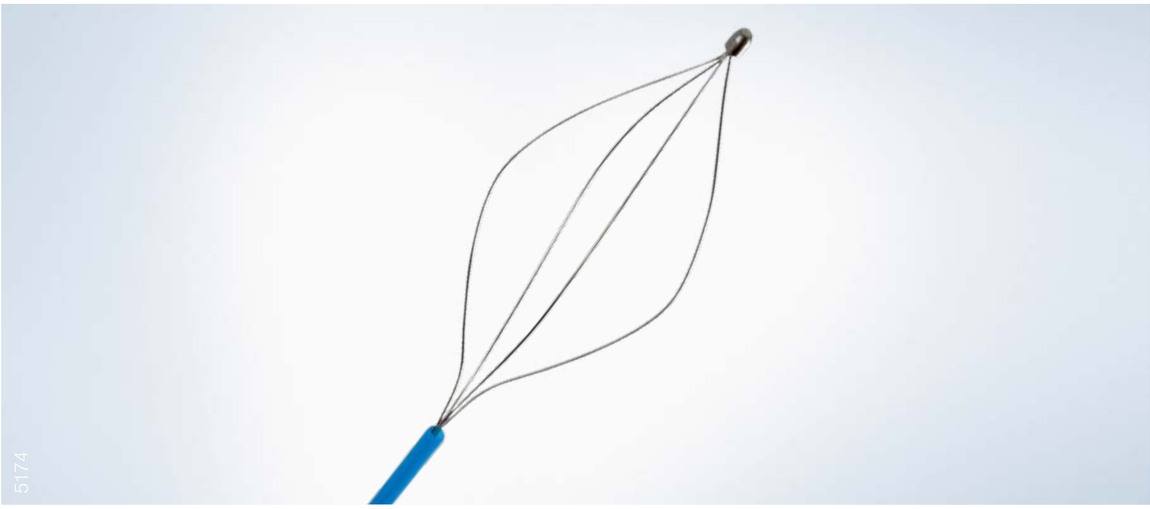
BF-XP190

Observation of the Thinnest Bronchi

Pediatric Bronchoscopy

FB-456D
Single-use mini oval rat tooth biopsy forceps

BC-203D-2006
Single-use mini cytology brushes



FG-55D
Single-use mini grasping baskets

FG-54D
Single-Use mini three prong grasping forceps

Portable and Flexible Bronchoscopy Anytime, Anywhere

Mobile Bronchoscopy and Intubation

Respond to requests from the ward, the ICU or emergency room with ease and flexibility for local anesthesia, sputum removal, foreign-body removal, emergency hemostasis, and intubation.

The complete standalone design incorporates a 3.5-inch monitor, an LED light source, battery and storage capability of still images and video sequences in a single unit. This family of versatile endoscopes enables observation without peripherals or cables, providing an unprecedented level of mobility.

The 3.5-inch monitor can be tilted to adjust the orientation — this enables observation and control operations in a single view

Portable and Flexible Bronchoscopy Anytime, Anywhere

Mobile Bronchoscopy and Intubation

MAF-TM2 — the mobile bronchoscope
MAF-GM2/MAF-DM2 — the mobile intubation scopes

Exploring the Thoracic Cavity

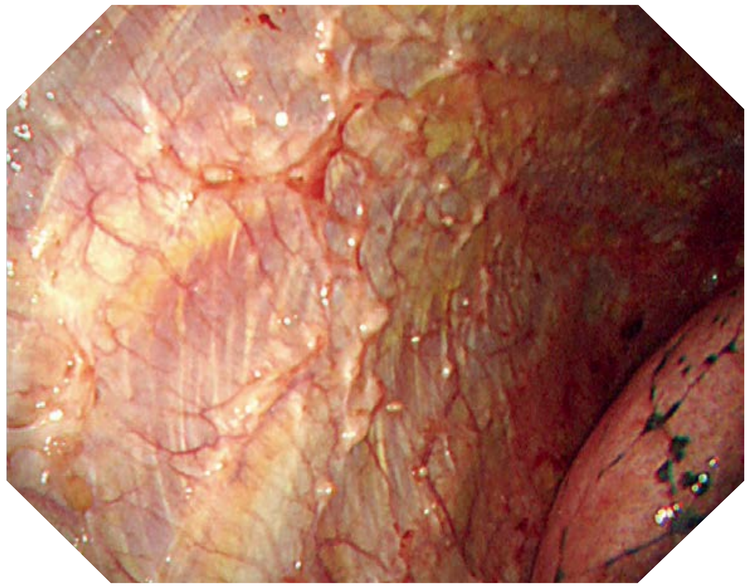
Medical Thoracoscopy

Medical thoracoscopy is a minimally invasive procedure that allows access to the pleural space using a combination of viewing and working instruments. It also allows for diagnostic and therapeutic procedures to be performed safely.

The main indications for medical thoracoscopy are: diagnosis of pleural effusions of indeterminate origin, staging of lung cancer with pleural effusion, diffusion of malignant mesothelioma and talc poudrage.

With a high-quality HDTV video chip, the new semi-flexible LTF-H290 delivers clearer, brighter images, contributing to more reliable observation, diagnosis and treatment in the thoracic cavity. In addition, the LTF-H290 is equipped with a large 3.0 mm diameter working channel that helps maintain a clearer view when suctioning pleural fluid or blood after biopsy. In contrast to rigid thoracoscopes, the LTF-H290 has a large angulation range of 180 degrees at the flexible distal end. Thanks to this, inspection of the thoracic cavity is possible with an excellent all-round view right up to the entry point of the endoscope.

91645



Posterior parietal pleural surface

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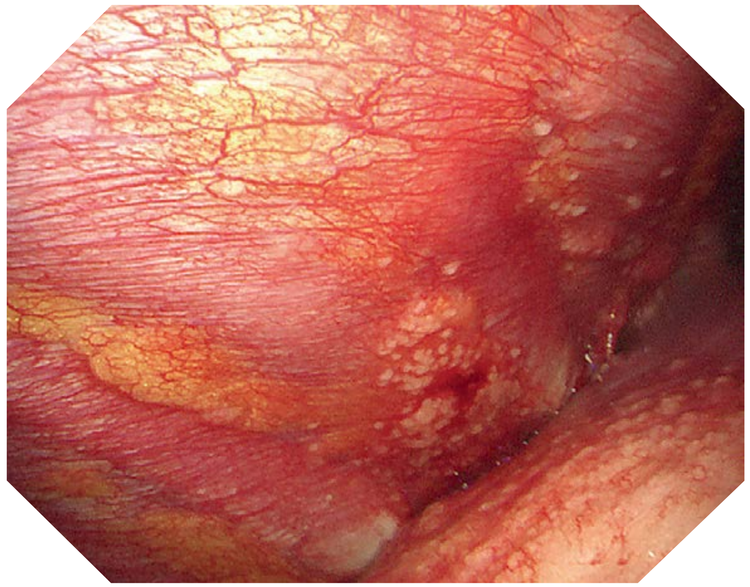
Lateral chest wall

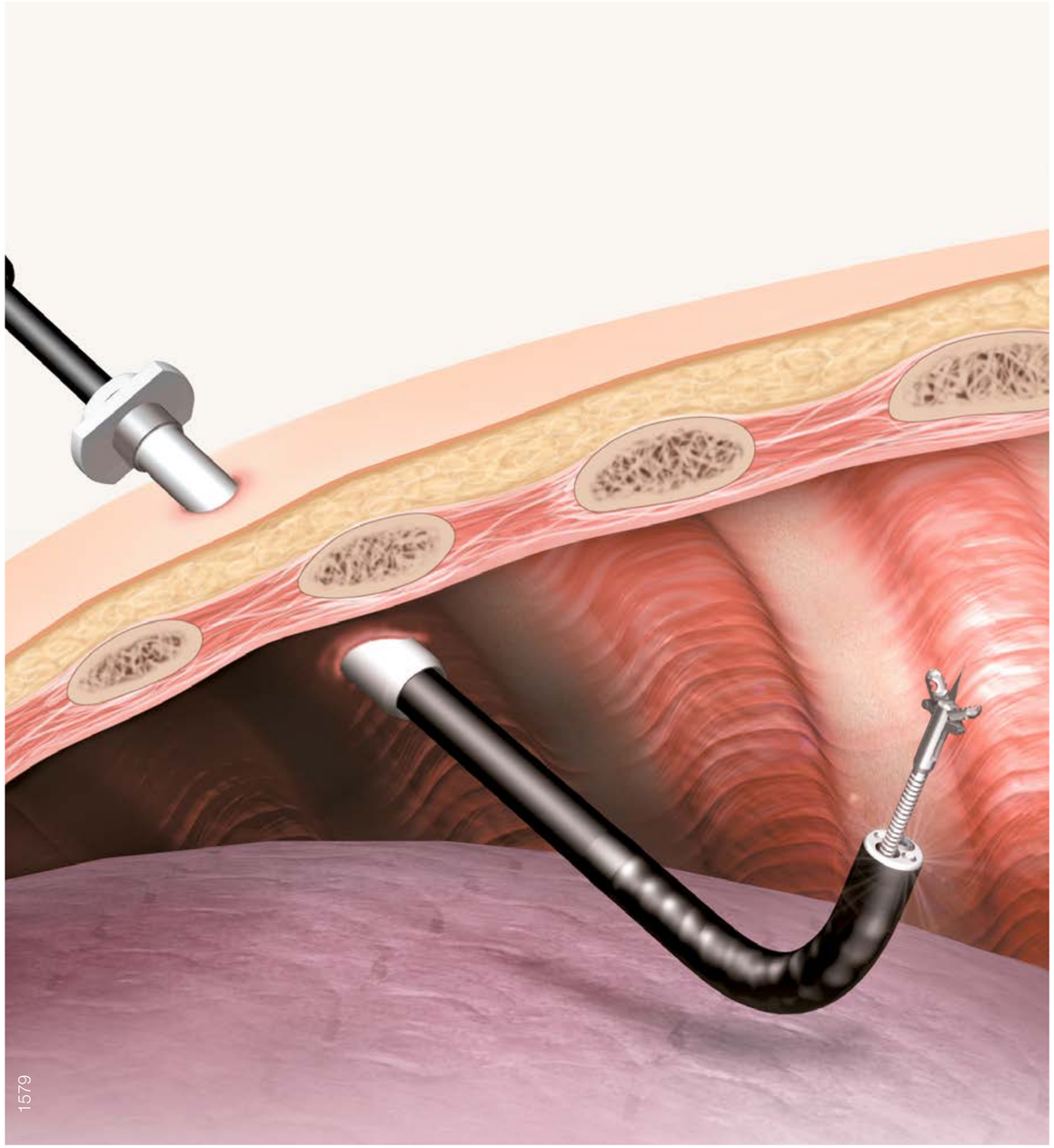
91646



Costophrenic angle

Exploring the Thoracic Cavity

Medical Thoracoscopy



LTF-H290 Pleura Videoscope

Excellent Devices for a Wide Range of Applications

Portfolio Overview

Product	Insertion Tube OD (mm)	Distal End OD (mm)	Channel ID (mm)	Bending (up/down)	Rotation Function (left/right)	IEE[1]	Comments
Video bronchoscopes							
BF-XT190*	6.3	6.1	3.2	180°/130°	120°/120°	NBI, TXI**, RDI**	OT
BF-1TH1100*	6.1	5.8	3.0	180°/130°	120°/120°	NBI, TXI**, RDI**	HDTV, OT, FULL SCREEN**
BF-1TH190*	6.0	6.2	2.8	180°/130°	120°/120°	NBI, TXI**, RDI**	HDTV, OT
BF-H1100*	4.9	4.9	2.2	210°/130°	120°/120°	NBI, TXI**, RDI**	HDTV, OT, FULL SCREEN**
BF-H190*	5.1	5.5	2.0	210°/130°	120°/120°	NBI, TXI**, RDI**	HDTV, OT
BF-Q190*	4.9	4.8	2.0	210°/130°	120°/120°	NBI, TXI**, RDI**	OT
BF-P190*	4.1	4.2	2.0	210°/130°	120°/120°	NBI, TXI**, RDI**	OT
BF-MP190F*	3.7	3.0	1.7	210°/130°	120°/120°	TXI**	OT
BF-XP190*	2.8	3.1	1.2	210°/130°	120°/120°	NBI, TXI**	OT
Mobile airway scopes							
MAF-TM2	5.2	5.1	2.6	180°/130°	-	-	Fibervideoscope
MAF-GM2	4.1	3.9	1.5	120°/120°	-	-	Fibervideoscope
MAF-DM2	3.1	3.1	1.2	120°/120°	-	-	Fibervideoscope
Pleura videoscope							
LTF-H290**	7.0	7.3	3.0	180°/130°	-	NBI, TXI**, RDI**	OT

* with CV-190 (PLUS) and CV-1500

** with CV-1500

[1] Image-Enhanced Endoscopy

OT = One-touch connector

HDTV = HDTV resolution native

FULL SCREEN = electronic zoom to 16:9 display size

Excellent Devices for a Wide Range of Applications

Portfolio Overview

Product	Insertion Tube OD (mm)	Distal End OD (mm)	Channel ID (mm)	Bending (up/down)
Ultrasonic endoscopes for EBUS-TBNA				
BF-UC190F	6.3	6.6	2.2	160°/70°
	Frequency (MHz)	**Working Length (mm)**	**OD (mm)**	**Min. Working Channel (Ø)**
Ultrasonic probes for EBUS				
UM-S20-17S*	520	2,150	max. 1.7	1.7
UM-S20-20R	20	2,050	max. 2.0	2.2
	Insertion Tube OD (mm)	**Distal End OD (mm)**	**Channel ID (mm)**	**Bending (up/down)**
Fiber bronchoscopes				
BF-1T60	6.0	5.9	3.0	180°/130°
BF-P60	5.0	4.9	2.2	180°/130°
BF-XP60	2.8	2.8	1.2	180°/130°
BF-N20	2.2	1.8	-	160°/90°
BF-TE2	6.0	5.9	2.8	180°/130°
BF-PE2	5.0	4.9	2.2	180°/130°

Pediatric Instruments

Product	Model	Article No.	Min. Working Channel Ø	Specifications
Biopsy forceps	FB-456D	N6008330	1.2 mm	rat tooth cups, reusable
Cytology brush	BC-203D-2006	N1077030	1.2 mm	brush: 2 mm diameter, 6 mm length, single-use
	BC-201C-1006	026103	1.2 mm	brush: 1 mm diameter, 6 mm length, single-use
Grasping forceps	FG-51D	N5402630	1.2 mm	four-wire basket, single-use
	FG-52D	N5402730	1.2 mm	three-wire basket, single-use
	FG-54D	026742	1.2 mm	three-prong grasper, single-use
	FG-55D	026746	1.2 mm	four-wire basket, single-use

* Compatible with GuideSheathKit

Excellent Devices for a Wide Range of Applications

Portfolio Overview

Diagnostic Instruments

Product	Model	Article No.	Min. Working Channel Ø	Specifications
Biopsy forceps	FB-211D	N5431830	2.0 mm	swinging alligator cups, fenestrated, single-use
	FB-221D	N5431930	2.0 mm	swinging alligator cups, fenestrated, with needle, single-use
	FB-231D	N5355230	2.0 mm	swinging alligator cups, fenestrated, single-use
	FB-241D	N5432130	2.0 mm	swinging oval cups, fenestrated, with needle, single-use
Biopsy forceps for Medical Thoracoscopy	FB-420K	N6154850	2.8 mm	swinging alligator cups, fenestrated, with needle, single-use
Cytology brushes	BC-202D-2010	026049	2.0 mm	brush: 2 mm diameter, 10 mm length, single-use
	BC-202D-3010	026050	2.0 mm	brush: 3 mm diameter,10 mm length, single-use
SmoothShot TBNA needles	NA-401D-1321	N1880630	2.0 mm	21G, 13 mm length, single-use
	NA-401D-1521	N1880730	2.0 mm	21G, 15 mm length, single-use
	NA-411D-1321	N1880830	2.0 mm	21G, 13 mm length, side hole, single-use
	NA-411D-1521	N1880930	2.0 mm	21G, 15 mm length, side hole, single-use
	NA-601D-1519	N2369930	2.0 mm	19G, 18 mm length, trocar type, single-use
SmoothShot Plus	NA-421C-1321	N6012030	2.0 mm	21G, TBNA needle, single-use
Metal sheath TBNA needles	NA-431C-1321	N6012130	2.0 mm	21G, TBNA needle, single-use
EBUS-TBNA needles	NA-201SX-4021	N5432630	2.0 mm	21G, 40 mm length, single-use
	NA-201SX-4022	N5432330	2.0 mm	22G, 40 mm length, single-use
	NA-U401SX-4021	EGNA-U401SX4021	2.0 mm	21G, 40 mm length, single-use
	NA-U401SX-4022	EGNA-U401SX4022	2.0 mm	22G, 40 mm length, single-use
	NA-U403SX-4019	EGNA-U403SX4019	2.2 mm	19G, 40 mm length, single-use
	NA-U401SX-4025N	N5782330	2.0 mm	25G, 40 mm length, single-use
Instruments for diagnosing SPN	CC-220DR	N5767130	2.0 mm	bendable and rotatable guiding device, single-use
	K-401	N6000630	2.0 mm	GuideSheathKit 2: sheath, forceps, brush, single-use
	K-403	N6000830	2.6 mm	GuideSheathKit 2: sheath, forceps, brush, single-use
	NA-403D-2021	EGNA-403D-2021	1.7 mm	flexible TBNA needle, 21G, single-use
	FB-433D	N5767330	1.7 mm	oval-cup biopsy forceps, single-use
	BC-205D-2010	N5767430	1.7 mm	brush: 2 mm diameter, 10 mm length, single-use

Excellent Devices for a Wide Range of Applications

Portfolio Overview

Therapeutic Instruments

Product	Model	Article No.	Min. Working Channel Ø	Specifications
Foreign-body removal	FG-214P	N6008530	2.0 mm	rat tooth grasping forceps, single-use
	FG-232L	N6008730	2.8 mm	rat tooth grasping forceps, single-use
	FG-220P	N6009930	2.0 mm	rubber-tipped grasping forceps, single-use
	FG-804L	N6008430	2.0 mm	V-shaped grasping forceps, single-use
Electrosurgery	FD-231C	N5780730	2.0 mm	hot biopsy forceps/coagulation electrode, single-use
	PA-210K	WA94001A	2.0 mm	Argon plasma coagulation probe, single-use
	PA-231U	WA94007A	2.8 mm	Argon plasma coagulation probe, single-use
	PA-211U	WA94002A	2.8 mm	Argon plasma coagulation probe, single-use
Injection needles	NM-4L-1	026536	2.8 mm	23G, 4 mm length, single-use
	MAJ-67	026991	2.8 mm	sheath, for use with NM-4L-1, reusable
Balloon catheters	B5-2C	N3530530	2.0 mm	for lavage, blocking, tamponade and sizing, single-use
	B7-2C	026921	2.8 mm	for lavage, blocking, tamponade, single-use
Spiration valve system	IBV-V5	N3495330	-	bronchial valve, 5 mm, single-use
	IBV-V6	N3495430	-	bronchial valve, 6 mm, single-use
	IBV-V7	N3495530	-	bronchial valve, 7 mm, single-use
	IBV-V9	N5381200	-	bronchial valve, 9 mm, single-use
	IBV-C20	N3521830	2.0 mm	deployment catheter for bronchial valve, single-use
	IBV-C26N	N5381300	2.6 mm	deployment catheter for bronchial valve, single-use
	IBV-VSK	N5534500	-	airway sizing kit for bronchial valve, single-use
Trocar for Medical Thoracoscopy	MAJ-1058	N1002130	-	compatible to LTF-160, LTF-260 and LTF-H290 pleura videoscopes

Bronchoscopy Integration

Solutions for workflow improvements

Reprocessing Area

Hygiene procedures accompany the endoscope's workflow with full traceability and documentation of all relevant reprocessing steps.

- ETD Double and ETD4 washer disinfectors.
- EDC Plus drying and storage cabinets.

Recovery Area

Patient comfort and safety in perfection — a central overview of the status of the rooms facilitates smooth processes and a stress-less atmosphere.

- Patient-care documentation for recovery nurse.
- Monitoring of the procedure status of the endoscopy room.

Bronchoscopy Integration

Solutions for workflow improvements

We endeavor to support every endoscopist. In every procedure. Every day.

Olympus provides the holistic integration solution for bronchoscopy, consisting of modular components that are combined to meet the individual needs of the hospital. The utmost support is ensured throughout the workflow, from patient reception, the examination, reprocessing and recovery areas to the doctor's office and training room facilities.

Examination Room

Superior ergonomics, efficiency and communication in a modern and friendly ambience.

- Optimized workspace and patient comfort.
- Integrated HD documentation system.
- Saves space and examination and cleaning times.

Bronchoscopy Integration

Solutions for workflow improvements

Doctor's Office and Meeting Room

Computer access to all data, images and the reporting system. From the office or meeting room but with an optimal audio/video connection to the examination rooms.

- Access to centralized patient/procedure information
- Audio/video connection to examination rooms.
- IP audio/video routing and multidisplay functionality.
- Advanced video management, including live video and bidirectional communication from examination rooms.
- Tools for activity and cost analysis.

Training

Olympus organizes training courses with health-care experts and leading hospitals. These courses will enable you to improve your medical skills and professional excellence in a comprehensible manner in order to improve patient care.

- Strengthen your procedure skills and learn the safe and effective use of Olympus products.

OLYMPUS CONTINUUM
Elevating Patient Care. Together.

Lung-Term Learning

Our New Digital FAQ Series

Leading Experts from EMEA Answer Procedure-Related FAQs.

There's nothing quite as effective as learning from experts in their respective fields. With our new Lung-Term Learning initiative, we want to further elevate the standard of care by creating a pulmonology community and broaden our offer for education beyond our medical expert trainings.

We would like to invite you to watch our "Lung-Term Learning" videos, where renowned experts will be sharing procedure and education-related tips and tricks on how to further improve procedural outcomes.

Check out the first episode of our FAQ series and stay tuned for upcoming videos.

Lung-Term
Learning

Learn more in the videos

www.olympus.eu/pulmonology

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