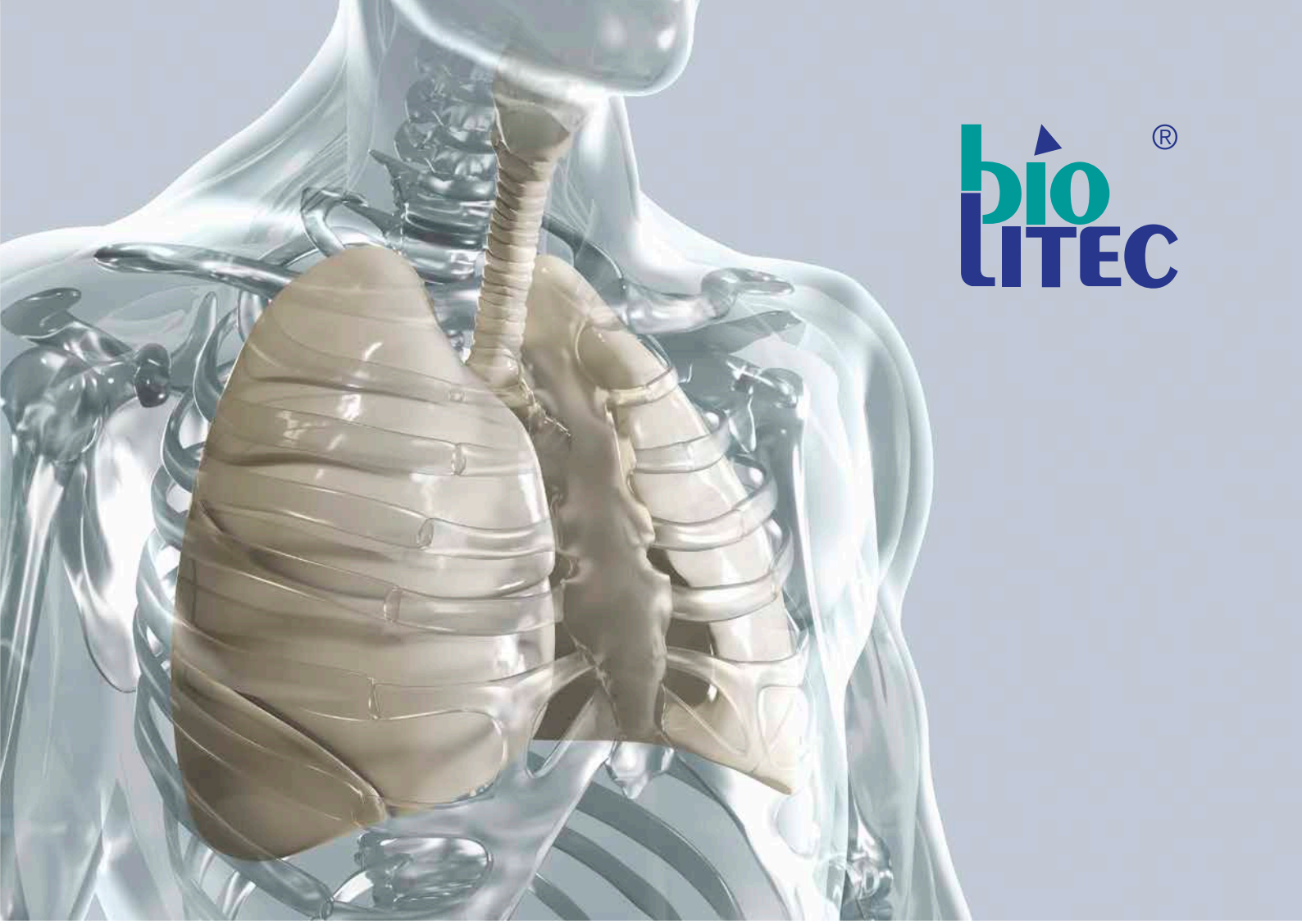
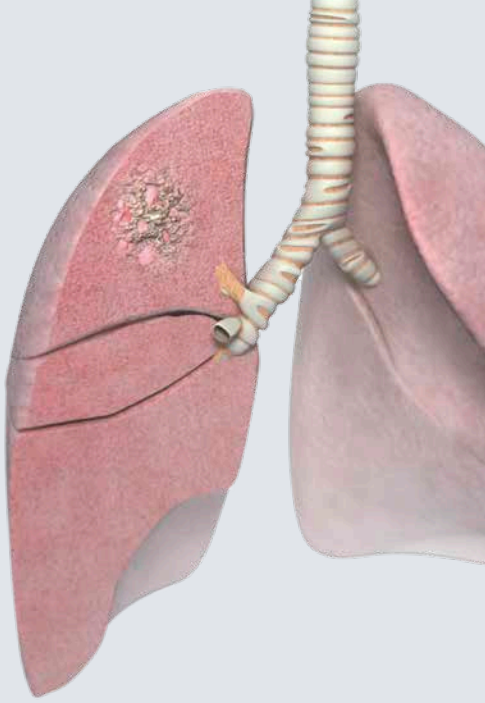


THORACIC SURGERY AND INTERVETIONAL PULMONOLOGY

MINIMALLY INVASIVE LASER SURGERY FOR LUNG METASTASES AND BRONCHIAL TUMORS

Technology
meets Anatomy

Highly developed diode laser technology from biolitec®



Why?

LEONARDO® DUAL wavelength diode lasers offer a combination of advantages. The 980 nm wavelength provides equal light absorption in both hemoglobin and water which offers an excellent coagulation effect. The 1470 nm wavelength is highly absorbed in water to generate an excellent cutting and vaporization.

The LEONARDO® DUAL 100-watt laser allows the clinician to direct a laser beam with mixed wavelengths onto or into lung tissue that has very high water content and low density. Users are able to observe that the laser achieves high ablation rates in the lung and tumor tissue with a simultaneously low and elastic coagulation zone to minimize post-operative side effects such as an unacceptable outflow rate.

Easy Guide Fiber

GLC Fiber

Bare Fiber

Advantages

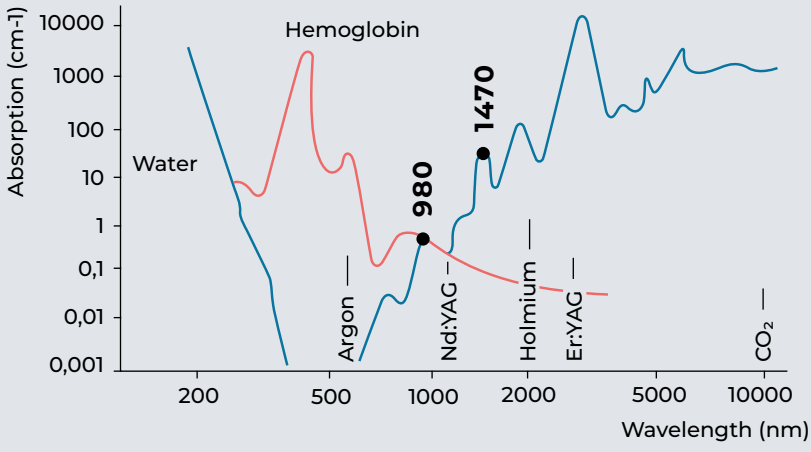
- Simultaneous cutting and coagulation
- Sealing properties for a smooth tissue surface
- Parenchyma and lung lobe preservation
- Deep and centrally positioned metastases can be uncovered
- Follow-up treatment possible in recurring metastases
- Precise resection of multiple metastases in only one procedure
- Best hemostasis
- Post-operative drains can be removed shortly after the treatment

Laser technology for thoracic surgery and interventional pulmonology

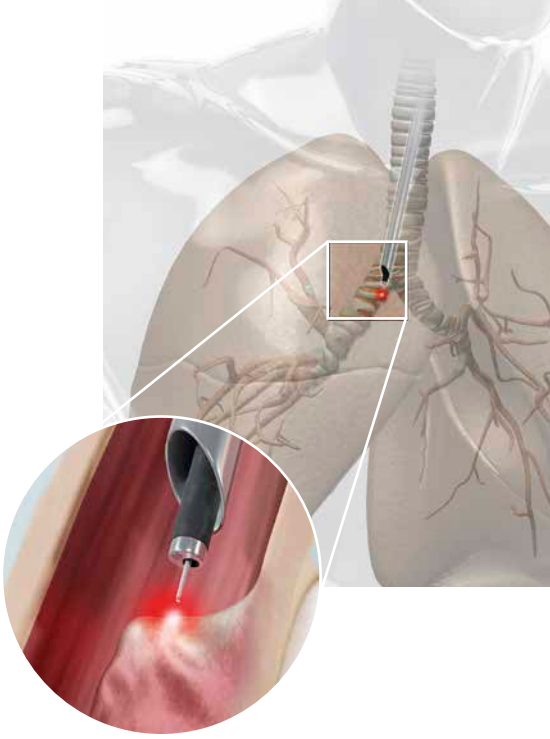
The use of laser technology in thoracic surgery has proven to be clinically effective and beneficial for the patient. During the last decades, laser development with modern semiconductor technology has demonstrated excellent performance with wavelengths in the range of 1318 – 1350 nm. This laser wavelength has proven ideal for parenchymal tissue (lungs and kidney). biolitec® has followed its tradition of developing new minimally invasive treatment methods to join the proven results of the 1350 nm laser. By combining the dual wavelength mixture of 980 nm and 1470 nm, a new clinical approach with supurb intra-operative efficiency and excellent post-operative outcome has resulted. The dual wavelength diode laser system is characterized by high economic efficiency and reliability with high quality fiber optic fibers to provide secure and cost-efficient care for patients by the medical specialists.

New Approach and Progress in Thoracic Surgery

DUAL Wavelength 980 + 1470 nm



Applications



Open surgery and laser-supported VATS / Uniportal VATS

- Metastasectomy
- Vaporization of tumors
- Wedge excision of lung tissue
- Resection of multiple and deep lung metastases
- Recurring metastases and tumors
- Hemostasis and fistula sealing
- Adhesiolysis
- Tissue resection for histological examination

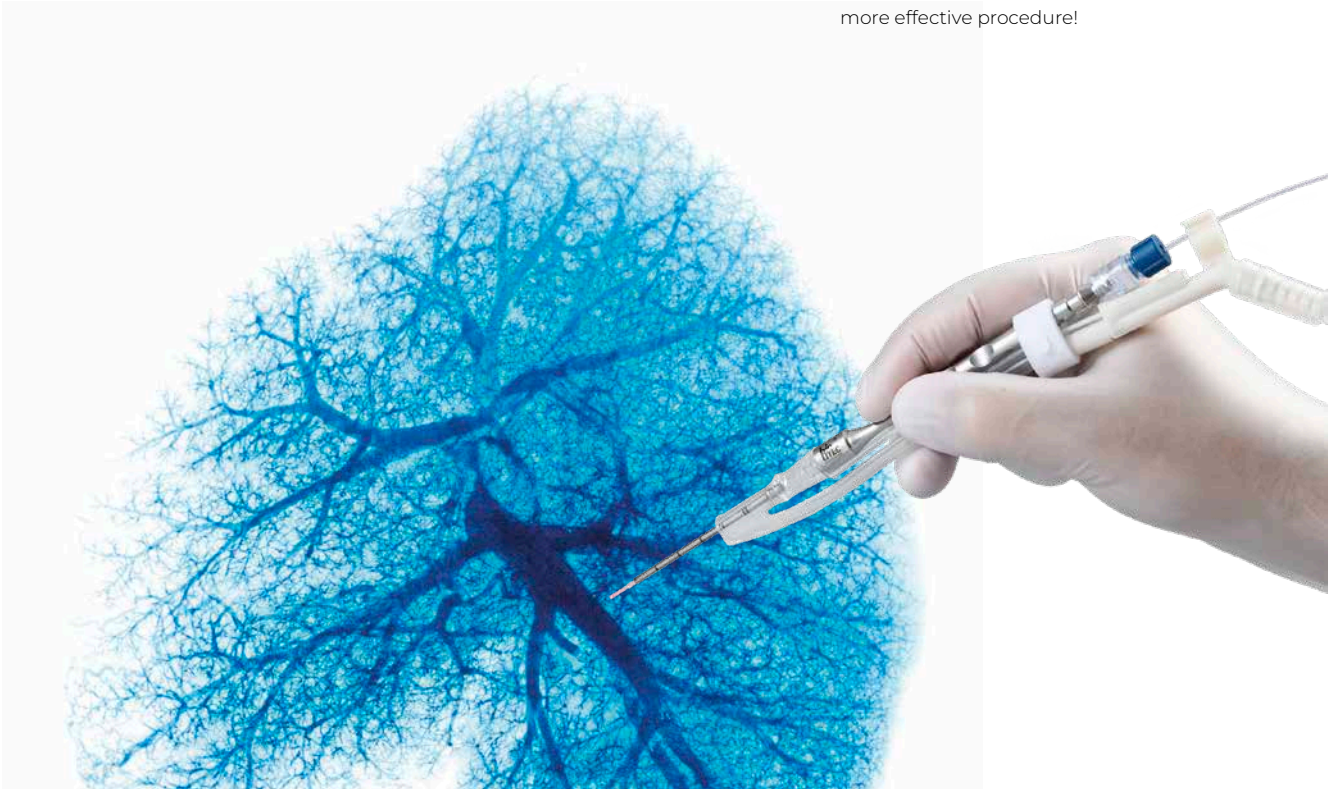
Interventional Pulmonology

- Coagulation and ablation of endobronchial tumors and stenoses
- Removal of bronchial obstructions and fistulas
- Separation of tracheal stenoses (all procedures are performed with rigid or flexible endoscopes)

Advantages of biolitec® Laser Systems

- Multi-disciplinary use for numerous surgical applications
- Simple set-up (no additional external cooling or high voltage necessary)
- Reliable diode technology
- Low maintenance costs
- User-friendly

Discover the new Laparoscopic Bending Instrument,
which allows you to direct the laser fiber where it is needed – for an even more effective procedure!



LEONARDO® DUAL

Technical Specifications

Model	LEONARDO® DUAL 100 Set	LEONARDO® DUAL 45 Set
REF	SL980+1470nm100W	SL980+1470nm45W
Wavelength	980 nm and 1470 nm	980 nm and 1470 nm
Max. power	100 Watt (1470 nm/15 Watt + 980 nm/ 85 Watt), individually adjustable	45 Watt (1470 nm/15 Watt + 980 nm/ 30 Watt), individually adjustable
Fiber diameter	≥ 360 µm	≥ 360 µm
Aiming beam	532 nm and 635 nm, green 1 mW, rot 4 mW, individually adjustable	532 nm and 635 nm, green 1 mW, rot 4 mW, individually adjustable
Treatment mode	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode
Pulse duration /-break	0.01 to 60 sec/0.01 to 60 sec	0.01 to 60 sec/0.01 to 60 sec
Power supply	110 to 240 VAC, 50/60 Hz, 600 VA	110 to 240 VAC, 50/60 Hz, 450 VA
Dimensions (H×W×D)	28 cm × 37 cm × 9 cm	28 cm × 37 cm × 9 cm
Weight	8.5 kg	8.5 kg

All the laser sets described above (REF No.) include 3 pairs of safety goggles, foot switch, interlock connector, power cord and manual in a transport case.

Fibers

REF	Product	Length [m]	AD ø [µm]
Thoracic Surgery			
503300415	Bare Fiber 1000 µm, Flat Tip, Adj. Luer, ID (1 × 6 h)	3	1400
503100460	Easy Guide Fiber, IC	3	860
Interventional Pneumonology			
503200525	GLC 180 Gas-, Liquid Cooled fiber, ID (1 × 6 h)	3	1800
503200744	Bare Fiber 400 µm, Flat Tip, IC	2.6	750
503200745	Bare Fiber 600 µm, Flat Tip, Adj. Luer, ID (1 × 6 h)	2.6	860

Handpieces and Instruments

REF	Product
400400120	LAPAROSCOPIC BENDING INSTRUMENT
500400370	Instrument for Thoracoscopy, with smoke suction adapter, for 600 – 1000 µm fibers
400100100	Universal Dual Luer Handpiece, for 600 – 1000 µm fibers

Accessories

REF	Product
MP0003	LEONARDO Laser Cart
LA7209	Laser safety goggle 950 – 980 DLB5/980 – 1400 DLB6/1400 – 11500 DLB4
AB2594	Biopsy needle 14 G, 6 cm with cm markings, sterile, PU. 20 pcs

Flue Gas Exhaustion

REF	Product
MP0025	Smoke evacuation FUMOVAC 700 Comlete unit 220/240 V, 50/60 Hz, HM57525420
MP0026	Smoke evacuation filter for FUMOVAC 700 twin pack
MP0027	Tube set single use / holding device HP, 3 m length, sterile, REF 57525332, PU. 10 pcs
MP0028-1	Speculum tube set 2.44 m, sterile, 5 / Box, REF 57525334

The LEONARDO® laser systems are classified as Class 3R and Class 4 laser pr oducts according to IEC 60825-1 / EN 60825-1. Avoid eye or skin exposure to direct or scattered radiation. Refer to the user manual for detailed safety instructions. All our here described products are MDR certified.

CONTACT US

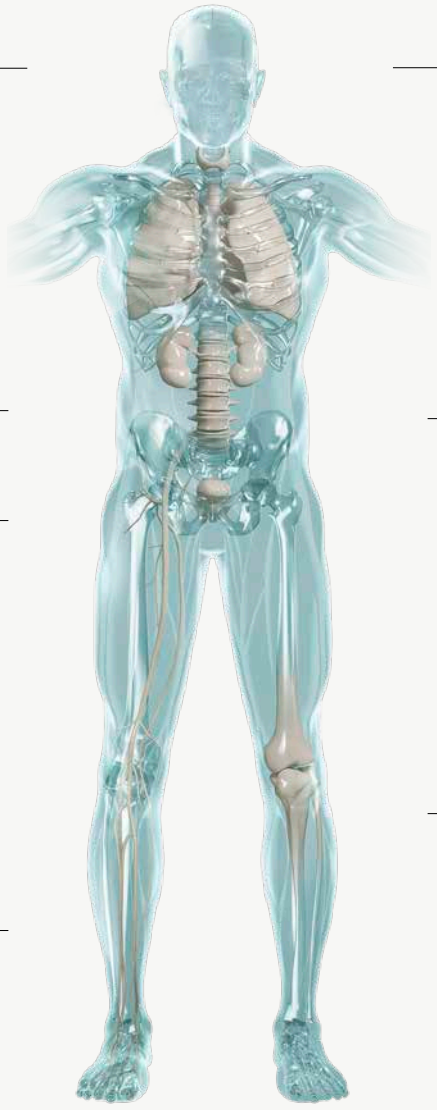
To Learn More About a Whole New World of Minimally Invasive Laser Therapies

ENT

Aesthetics

Thyroid Treatment

Thoracic Surgery



Aesthetics

Orthopaedics & Pain Management

Urology

Gynaecology

Proctology

Orthopaedics & Pain Management

Phlebology

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