

# SMART<sup>M</sup>

EVLT

...BE SMART... YOU CAN HEAL AS WELL !



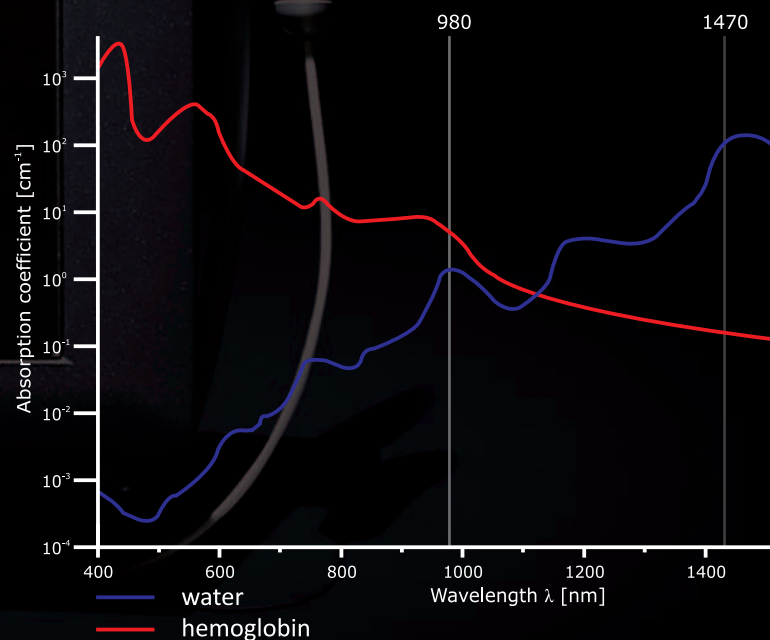


HANDY GRIP



TOUCH SCREEN INTERFACE

POWER  
LASER  
ALARM



## WHAT WAVELENGTH IS RECOMMENDED ?

We offer lasers with 980 nm radiation or 1470 nm for EVLT. As seen on the chart the absorption coefficient is higher for hemoglobin than for water for 980 nm radiation. For 1470 nm the situation is opposite and water absorbs the radiation better than hemoglobin. Both of these media are components of human tissues, including blood and walls of the veins.

Lasers with 980 nm radiation are used widely for over 15 years for EVLT and the appropriate power for a treatment with this wavelength is about 10-12 W. Using 1470 nm radiation less power is needed, it occurs that about 6-8 W is enough, what makes lasers with this wavelength more safe.



EVLTL disposable optical bare fiber, SMA905 connector/ open-ended, 600µm fiber core, 300cm long



EVLTL radial disposable SLIM, optical fiber, SMA905 connector, 600 and 400µm fiber core



Lock Adapter for EVLTL Catheter



Catheter set for bare fibers



Catheter set for radial fibers



Safety glasses for the doctor, patient and attendant



SMART<sup>key</sup> - database, manual and safety key in one



Footswitch



Complete set: laser and its accessories



Convenient carrying case



Emergency stop



Comfortable workstation

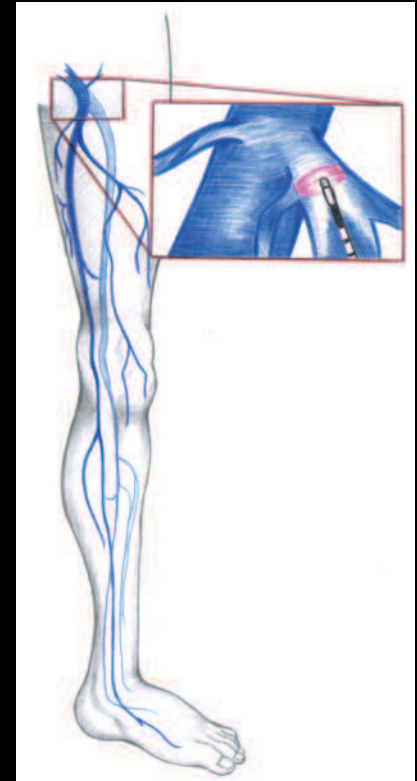
# UNIQUE LASER TECHNOLOGY AT YOUR FINGERTIPS

SMART <sup>SM</sup> CONFIGURATION	SMART <sup>SM</sup> 15W-980nm	SMART <sup>SM</sup> 15W-1470nm
<b>EQUIPMENT PACKAGE</b>		
EVLTL disposable optical bare fiber, SMA905 connector/ open-ended, 600µm fiber core, 300cm long	●	○
EVLTL Catheter set for bare fibers	●	○
EVLTL Radial disposable SLIM optical fiber, SMA905 connector/ radial tip, 400µm fiber core, 300cm long	○	●
EVLTL Catheter set for radial fibers	○	●
Safety glasses for patient	●	●
SMART <sup>KEY</sup> - USB key, manual and personal patient database	●	●
Foot switch	●	●
Power cord	●	●
AC adapter	●	●
Transportation case	●	●
Comfortable workstation	○	○

○ - optional

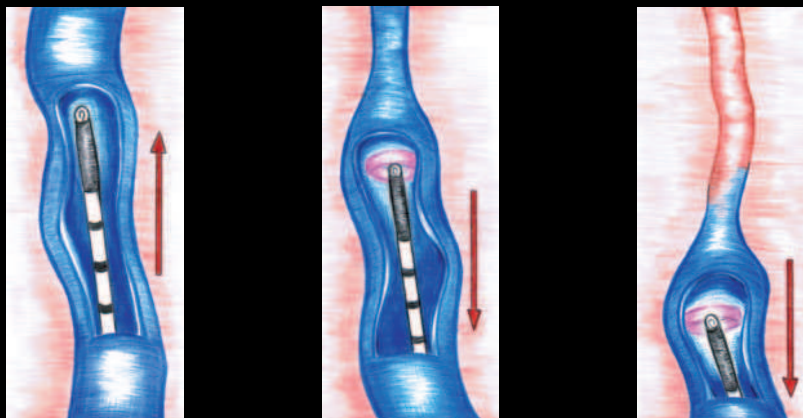
# VASCULAR THERAPY BREAKTHROUGH

EVLT (Endovenous Laser Treatment) is a procedure leading to occlusion of varicose veins. It involves putting a fiber optic into a saphenous vein through a catheter. Then the laser is turned on and slowly withdrawn from the vein. Thanks to light-tissue interaction mainly thermal effects occur, the tissue is heated and the walls of the vein shrink, because of alteration of endothelium and contraction of collagen. There are two possibilities of performing the treatment: with pulsed and continuous-wave laser operation. Using the pulsed operation also the fiber is withdrawn step by step. A better choice is to use continuous-wave laser and to withdraw the fiber also continuously, what provides more homogenous illumination of the vein, less tissue damaged outside the vein and better results. The therapy is just a beginning of the occlusion process. After the treatment the veins are shrinking for several days or weeks. That's why in the long-period observation very good results are obtained.



The main advantage of EVLT is that it's a non-invasive technique in contrast to surgical treatments. It also doesn't involve hospital stay and can be performed in an ambulatory conditions with local anesthesia and lasts for less than 1 hour. After the procedure patient doesn't have any unsightly incisions and scars.

Thanks to radial illumination the maximum energy density is directed to the walls of the vein near the fiber and cause immediate occlusion. The simple bare fiber is also possible to use, but it is less effective more traumatic and requires more optical power.



## WHY LASOTRONIX ?

- Over twenty years of experience in laser technology.
- **SMART<sup>m</sup>** provides choice of 2 possible wavelengths: 980 nm or 1470 nm, and 2 types of fibers: with open end or radial.
- Cutting edge technology.
- Extendable database of predefined therapy protocols which can be modified and assigned to a patient.
- Lowest operating costs.
- Very compact and small-sized device.
- Flexibility of development other customized parameters and OEM products.



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