



# The Medical Power of Light

## EVLA - Endovenous Laser Ablation

Higher success rates, shorter recovery

- 45 minutes outpatient procedure
- Lower risk of complications
- No hospitalization required
- No general anesthetic required
- Shorter recovery time
- Minimal patient discomfort
- More than 98% initial success rate

**Fotona**  
choose perfection



Courtesy of dr. Šikovec

## What is EVLA?

Fotona's Endovenous Laser Ablation (EVLA) works on the principle of ablation and photocoagulation of the vein inner layers by laser induced thermal effects. Because laser treatments have proven less invasive, with a lower complication rate, and exceptional patient tolerability, EVLA is increasingly replacing classical surgical stripping and ligation.

## How does EVLA work?

In Fotona's EVLA treatment an optical fiber is inserted into the to-be-treated vein, and QCW Nd:YAG laser energy is directed into the interior of the vein. The vein contracts as the vein wall is destroyed while the optical fiber is slowly withdrawn. This leads to occlusion of the vein and the healthy veins that surround the closed vein can then restore the normal flow of blood to the treated area.

The procedure is performed under local anesthetic and can be completed in just under an hour, depending on the size and number of varicose veins. The general steps of the treatment are as follows:

**Step 1 - ACCESS:** Puncturing of the vein with G19 needle under ultra sound control creates an entry hole in order to allow the laser fiber to be inserted into the vein through a catheter. Ultrasound is also used in order to properly position the fiber in the vein.

**Step 2 - PROTECT:** Tumescant anesthesia is delivered through a syringe or by using a special pump. Tumescant anesthesia has analgesic and vasoconstrictor effects, also it creates a cold shield in the vein to protect the surrounding tissue.

**Step 3 - OCCLUDE:** Laser energy from 1064 nm Nd:YAG laser is delivered to the desired location inside the vein by using a bare laser fiber inside a catheter. The laser is repeatedly fired

as it is gradually withdrawn, depositing the thermal energy into the blood and vein wall.

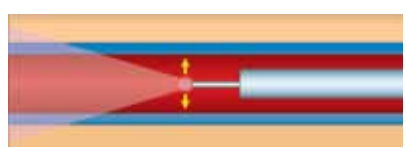


Fig. 1: QCW Nd:YAG laser light effectively occludes the vein

## Why is the Fotona QCW Nd:YAG perfect for EVLA?

Fotona's QCW\* Nd:YAG wavelength has the ability to optimally deliver laser energy into vein walls. Its high precision and level of absorption in hemoglobin limits undesirable mechanical and thermal effects in the surrounding tissues.

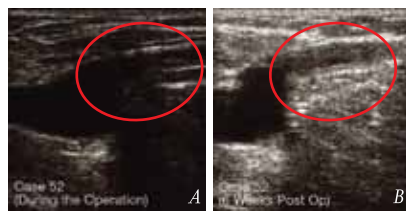


Fig. 2A: During operation - catheter with fiber visible in vein.

Fig. 2B: 6 weeks post-op - the vein has been completely occluded and is fully overgrown by surrounding tissue. (Courtesy of dr. Šikovec)

## Advantages of EVLA for You and Your Patients

A growing number of surgeons consider Fotona's QCW Nd:YAG to be the laser of choice for endovascular treatments, especially in terms of treatment efficacy, speed, patient comfort and cost. Fotona's laser systems have a user-interface that is designed from a surgeon's perspective, offering a full view of

all treatment parameters on one screen. At the touch of a button, the laser system accommodates laser parameters to the application, providing unrivalled convenience.



Fig. 3: Fotona's EVLA Tx have exceptional success rates and shorter recovery times

The high performance, selectivity and precision (limiting thermal effects to the target tissue) of Fotona's EVLA treatment allow for minimal patient discomfort, exceptional success rates and shortened recovery times. Additionally, because the procedure can be performed through a small incision, it won't leave any scarring.

## Getting started with EVLA

EVLA can be performed with any Fotona QCW Nd:YAG laser system. Fotona additionally offers an EVLA Upgrade Kit, giving practitioners the necessary knowledge, accessories and tools to confidently and skillfully perform Endovenous Laser Ablation on their patients. Training in EVLA is provided through Fotona's partnership with the Laser and Health Academy, where participants cover basic laser physics and gain an in-depth understanding of laser-tissue interaction. Live demonstrations give participants an insight in EVLA and other surgical procedures that can be performed with Fotona lasers.

\*QCW is available with the following Fotona laser systems: XP-2 Focus, SP and XP Dynamis, SP and XP Spectro

To learn more about **Endovenous Laser Ablation** and what Fotona lasers can do for your practice contact **Fotona** at [info@fotona.com](mailto:info@fotona.com) today.