

RESEARCHERS OPTIMIZE 980 NM LASER FOR VASCULAR PROCEDURES

By Bob Kronemyer, Associate Editor

The Ceralas D 980 nm diode laser from biolitec, Inc. (East Longmeadow, Mass.) may very well be the optimum wavelength for treating chronic venous insufficiency. Dr. Antonio del Giglio of Verona, Italy chose the Ceralas D for use in his practice based on the properties of the 980 nm wavelength and has been performing endovenous occlusion of leg veins since 1998. In addition, Dr. del Giglio has a device and method patent for minimally invasive under the skin laser treatment. Dr. del Giglio presented his findings at the American College of Phlebology meeting in Palm Springs, Calif. this past November.

WHILE OTHER LASER wavelengths are also being used for treating venous insufficiency, an understanding of photobiology and physics leads to a preference for the 980 nm wavelength, according to a Ceralas D user. "Although the 810 nm diode laser has been used for endovenous treatment, I feel it is not the best wavelength, as it does not absorb well in water," observed John Mauriello, M.D., a phlebologist in private group practice with offices in Charlotte and Durham, North Carolina. On the other hand, the "940 nm diode laser is better than the 810 nm because it is on the up-slope of the water absorption curve," Dr. Mauriello said. "But my research convinces me that 980 nm is the perfect wavelength because it is right on the peak of the water absorption curve."

Dr. Mauriello is achieving a 95% plus success rate with the biolitec laser. "Other investigators have also reported better than 95% success," he said. "These are much better results than any surgical stripping procedure." The 980 nm wavelength may also cause less postoperative patient discomfort with enhanced recovery time because of less trauma to adjacent tissue.

ONCE APPROVED in the U.S., the biolitec vein closure procedure will be branded as: EVOLVESM (EndoVenous Occlusion of Leg Veins). "This certainly describes the procedure," Dr. Mauriello noted. "These catheter procedures should make vein

stripping obsolete, along with minimal patient downtime."

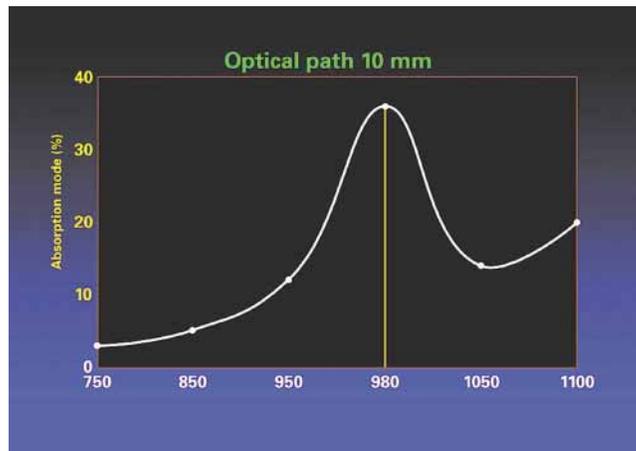
The VNUS Closure procedure is also a minimally invasive alternative to vein stripping, that uses radio frequency energy. However, "that catheter heats up to 190 degrees inside the vein and indiscriminately heats up everything around it," Dr. Mauriello cautioned. "So you cannot use VNUS Closure if the vein is close to the surface because the skin will burn." Also, the catheter for a radio frequency procedure costs \$725 as opposed to a biolitec laser fiber that costs only \$95. "So there is a big cost savings to the insurance company and to the patient when you use a laser fiber," Dr. Mauriello said.

Dr. Mauriello envisions a bright future for the Ceralas D diode laser from biolitec. "Because the laser fiber is very small and because the heat remains inside the vein, we can start doing smaller vessels on the surface of the leg – something that the radio frequency catheter simply cannot do," he said.

Lowell Kabnick, M.D., a vascular surgeon in private group practice in Morristown, New Jersey, has extensive experience with VNUS Closure procedure. Additionally, "I did my first laser case in August with the Diomed laser," Dr. Kabnick said. Then in November, he purchased the Ceralas D laser. "I have been doing at least one case per week," he reported.

ECHOING DR. MAURIELLO, Dr. Kabnick also believes that the biolitec 980 nm wavelength "is superior for water absorption, which translates into a probable better success rate." And compared to VNUS Closure, the Ceralas D laser "is less expensive and faster," Dr. Kabnick said. He also appreciates the fact that the company manufactures its own laser and fibers. "It's more of a package deal, which makes it that much more economical, and with better quality control," he noted. Aside from one-stop shopping, "the lasers are made and serviced here in the United States, so you don't need to send them to Europe." The cost of shipping a laser back and forth overseas is avoided.

The biolitec laser is currently cleared by the FDA for a number of procedures, including: photocoagulation of vascular lesions, debridement of wounds, and excision of keloids and neuromas. "Wound healing is also now being studied," Dr. Kabnick said. "This laser is truly diverse in its applications."



Water Absorption Spectrum