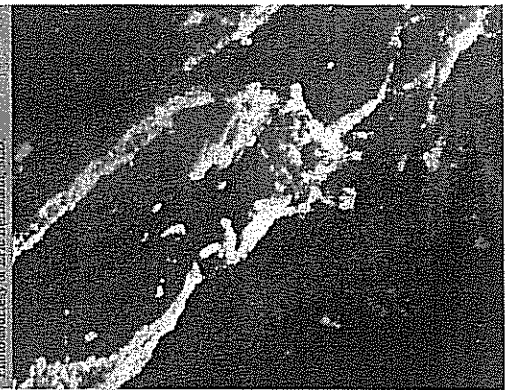


# Aesthetic Buyers Guide<sup>®</sup>

*The Leading Cosmetic Practice Resource*

Photography of Dr. J. Benjamin, M.D.



## Cynergy Workstation Utilizes Dual Wavelength Tx

The Cynergy III Aesthetic Workstation from Cynosure, Inc. (Chelmsford, Mass.) combines a high-powered 595 nm pulsed dye laser with a high-powered 1064 nm Nd:YAG laser, along with a small portable intense pulsed light (IPL) unit. This system has FDA approval for all vascular applications, hair reduction in all skin types (including tanned skin) and treatment of pigmented lesions.



Before Tx

**The Nd:YAG component** is similar to Cynosure's Acclaim 7000 for hair reduction, whereas the pulsed dye laser is the company's V-Star. The IPL source is a xenon flashlamp.

"This is the first system that offers these three technologies in the same box. There is tremendous diversity," said David Goldberg, M.D., a clinical professor of dermatology at Mount Sinai School of Medicine in New York City. "The user has the benefit of many wavelengths. For instance, one can treat hair in all skin types with the 1064 nm laser. One can also treat small spider veins on the leg with the same laser. Conversely, one can use the pulsed dye laser for all the indications of a pulsed dye laser. Major indications are port-wine stains and a variety of vascular lesions."



After Tx

**The IPL source** is highly versatile. "The wavelength ranges from about 550 nm to 1000 nm," Dr. Goldberg explained. "Although it overlaps the pulsed dye laser, IPL is mostly used for photorejuvenation of the skin – to make the skin less red, less brown, and improve the quality of the skin."

But more unique than three technologies incorporated into the Cynergy III is that by combining the pulsed dye laser with the 1064 Nd:YAG laser "you have the ability to treat vascular lesions like we've never been able to do before," Dr. Goldberg stated. "When using a pulsed dye laser to treat any vascular lesion, there is absorption of that laser wavelength. But you also convert, in the blood vessel that is being treated, hemoglobin into methemoglobin (a particular type of hemoglobin that is altered so that it is useless for carrying oxygen and delivering it to tissues throughout the body). However, methemoglobin

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Suzanne Kilmer, M.D.

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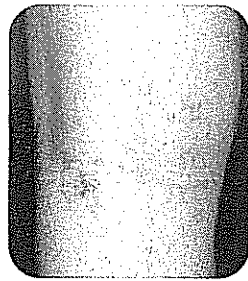
is very well absorbed by 1064 nm Nd:YAG laser light. So you convert the hemoglobin of the pulsed dye laser into methemoglobin, then hit it again with the 1064 laser. This leads to optimal results when treating vascular lesions. We've never been able to do this before. This is the most efficient and effective way to treat vascular lesions because you can use two wavelengths in the same session."

**Telangiectasis are normally** able to be effectively treated in one procedure. "In contrast, port-wine stains still require many sessions, but fewer than before," said Dr. Goldberg, who typically schedules monthly treatments. "In the past, we've had to treat port-wine stains up to 40 sessions, often once a month. But by using the two wavelengths, we can potentially reduce the number of sessions by one half." Each session lasts five minutes.

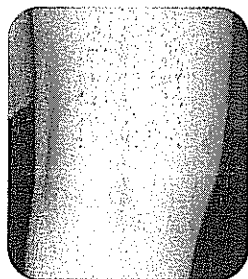
The high-powered pulsed dye laser "has an excellent safety profile. In fact, it is the treatment of choice in infants," commented Marina Kamenakis, vice president of marketing at Cynosure. "I also think the Cynergy III places the best vascular wavelengths into one unit. It provides flexibility to the physician to treat a variety of conditions and a variety of skin types. To date, the reception of the Cynergy III has been excellent because this is the first time ever that these very useful wavelengths have been combined into one system. This minimizes the footprint and increases a physician's return on investment."

**At Dr. Goldberg's practice,** hair removal in ethnic skin types is the most popular indication to treat. "The patient protocol is no different than the protocol with any other Nd:YAG laser. You schedule about five to eight sessions at four to six week intervals," Dr. Goldberg said. "There is generally at least a 50% to 75% clearance of hair."

His second most popular application is skin photorejuvenation with the IPL source. "Generally, there are five treatment sessions at about one month intervals. After a series of sessions, patients can expect significantly decreased redness of their skin, significantly decreased brown colors of their skin, and better quality to their skin." The third most popular indication is treating vascular lesions by combining the pulsed dye laser and the 1064 nm Nd:YAG laser.



Before Tx



After Tx

"Patients have been very happy with results for all three of these indications," Dr. Goldberg reported. "Having several light sources in one box makes life a lot simpler for both physicians and patients."

According to Emil Tanghetti, M.D., a clinical professor of cosmetic dermatology at the University of California, Davis, "By hitting a vessel with a 1064 nm laser after the pulsed dye laser, you can go deeper. The absorption of methemoglobin is also 10 to 15 times higher than oxyhemoglobin at 1064 nm."

**Dr. Tanghetti has** also treated some patients with bleb port-wine stains. "We first go over the area with the pulsed dye laser at a subpurpuric dose. An example is a 40 ms pulse duration with a 10 mm spot size at 10 to 11 J/cm<sup>2</sup>. After waiting 30 to 60 seconds, we treat with the Nd:YAG laser. This protocol works fairly well in patients with difficult to treat port-wine stains because the methemoglobin does not flow away from these blebs very quickly."

At last year's annual meeting of *Controversies and Conversations in Cutaneous Laser Surgery*, Dr. Tanghetti reported "seeing a response in a few patients with bleb port-wine. This is just scratching the tip of the iceberg. Someday, I believe it will be feasible to combine the two wavelengths. But we do have some data on them as separate devices. I use 595 nm as a single wavelength all the time for facial vessels and

**"By hitting a vessel with a 1064 nm laser after the pulsed dye laser, you can go deeper. The absorption of methemoglobin is also 10 to 15 times higher than oxyhemoglobin at 1064 nm."**

scars. Similarly, we use the 1064 nm for hair and leg veins. IPL is also popular. For a physician with limited space and resources, the Cynergy III makes sense."

**Roy G. Geronemus, M.D.,** who is also participating in the multi-center study commented: "I look forward to investigating this unique combination of laser technologies in an effort to improve the treatment of vascular lesions."

"It is a very user-friendly machine, mostly because these are commonly used lasers and other light-based systems. Practitioners are already comfortable with them," Dr. Goldberg added. "Cynosure has designed the system so that everything is right there in front of you. The control panel is simple to use. The company has also been around for a long time and technical service is good. Overall, it is a reliable system. I particularly think the combination of wavelengths represents the wave of the future for treating vascular lesions." ■