

# Aesthetic Buyers Guide®

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January / February 2004

## New GentleYAG Provides Multipurpose Aesthetic Tool

As the result of a well considered product development project, the new GentleYAG laser system from Candela Corporation (Wayland, Mass.) has emerged as a powerful multipurpose tool for vascular treatments, wrinkle reduction and hair removal. The new design features higher power, variable pulse durations, multiple spot sizes and a patented dynamic cooling device (DCD) for epidermal protection. This 1064 nm Nd:YAG laser received FDA clearance in November for the treatment of vascular lesions and facial rhytides. GentleYAG is also cleared for permanent hair reduction in all skin types.

**“The novelty in** this version of the GentleYAG laser is the variable pulse,” said E. Victor Ross, M.D., residency program director in dermatology at Scripps Hospital in San Diego, Calif. “The pri-



Before Tx



Eight weeks after GentleYAG Tx

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mary goal was to see if we could establish optimal parameters for treating leg veins with a variable pulse YAG laser equipped with the DCD.” The previous GentleYAG laser was locked into one pulse duration: 3 ms. “There was no variability,” Dr. Ross explained. In contrast, the new GentleYAG has a pulse duration ranging from .250 ms up to 300 ms. In addition, spot sizes vary from 1.5 to 6 mm for vascular lesions.

A tiny 0.5 mm vessel in the leg should ideally be treated with a small spot size (1-1.5 mm), along with a pulse duration of roughly 20 ms and a fluence of around 350 J/cm<sup>2</sup>. “You are using high fluences and small spots to treat very small vessels,” Dr. Ross explained. “This is the optimal approach for treating small vessels with a YAG laser. You limit not only the side effect profile, but pain as

well. Smaller spots, typically used with smaller vessels, result in less pain. You want to titrate the spot size to the size of the vessel.” During the study, the DCD provided predictable epidermal protection and a degree of analgesia.

**In an early** clinical study protocol for leg veins, Dr. Ross treated patients only once with the new GentleYAG. “We normally used spot sizes of 3 to 6 mm, and we hoped to avoid purpura by using somewhat longer pulses. Longer pulses resulted in less bruising overall, particularly when comparing 3 ms to 40 ms.” Overall, there was a 50% to 70% improvement in the vessels with one treatment. The only side effect observed was hyperpigmentation. “This tended to occur in larger vessels (1.5 to 2.5 mm),” Dr. Ross noted.

In clinical practice, Dr. Ross has achieved even better results by scheduling a second treatment eight to ten weeks later. “Besides having a laser that is good for hair, we now have a nice, all-purpose vascular laser,” he stated.

**“The new GentleYAG** laser will certainly augment our leadership position in the aesthetic market,” predicted Lou Amberg, Candela’s product manager for the GentleLASE. “Candela’s strategy has always been to build the best laser for its primary application.” For example, “we can deliver



Dany Touma, M.D.

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greater fluence at more spot sizes in more pulse durations than any other laser on the market today,” Amberg said. “The GentleYAG has a peak power that dwarfs any other Nd:YAG.”

Nd:YAG technology has grown rapidly over the past few years because “it is not only effective for hair reduction in all skin types, but effectively treats vascular anomalies,” according to Amberg. “With an Nd:YAG, hemoglobin absorption remains sufficiently high while melanin absorption drops significantly. You can treat vascular leg veins and lesions much more aggressively, without concern of epidermal complications.”

**According to** Dany Touma, M.D., director of The Boston University Center for Cosmetic and Laser Surgery, “The most exciting thing about the GentleYAG is that we can treat all skin types, particularly those patients with very dark skin to black skin. Previously, we were unable to treat these patients.” Typically, Dr. Touma recommends four to six sessions, spaced at four to six week intervals. “We usually achieve close to 80% hair reduction,” reported Dr. Touma, who has been using the GentleYAG for close to three years. “The new version will provide physicians more versatility in hair removal, including the ability to treat pseudofolliculitis barbae (PFB), or beard bumps, a condition that disproportionately affects ethnic skin.”

Dr. Touma has also found success treating deep, vascular malformations (e.g. hemangiomas, deep port wine stains). “This new laser will allow us to treat a wider range of vascular targets,” he said. In addition, “larger spot sizes result in more efficient treatment and deeper penetration. Less fluence can be used to achieve the same results; therefore, treatment is often safer. And the cooling device provides consistent and predictable cooling of the epidermis.”

**Candela had four** major objectives when developing the new GentleYAG laser system: meet or exceed any individual specification of any existing Nd:YAG laser on the market; offer greater treatment versatility with broader specifications; facilitate treatments and ease of use; and document improved treatment efficacy, safety and comfort. “With our technology, we were able to satisfy all of these objectives,” said Candela senior scientist Yacov Domankevitz.

According to Domankevitz, “the new GentleYAG is the most powerful Nd:YAG laser system currently available. It is the only laser that can produce up to 70 J/cm<sup>2</sup> through a 12 mm spot size at pulse durations ranging from as short as 3 ms up to 300 ms. For the first time, 15 mm and 18 mm spot sizes are now available on an Nd:YAG laser. The ability to deliver higher energy densities through larger spot sizes over a range of pulse durations and at higher repetition rates is important in hair removal because it significantly reduces treatment time, permits the laser energy to penetrate deeper into the skin, and allows for the treatment of a wider variety of hair diameters.” ■