

Affirm Offers Next Generation Fractional Technology

BY BOB KRONEMYER, ASSOCIATE EDITOR

The combined apex pulse (CAP) technology of the new Affirm laser system from Cynosure, Inc. (Mass., U.S.) produces varying levels of heat distribution in the skin for impressive microthermal rejuvenation and perioral and periocular wrinkle reduction. Unlike some other fractional resurfacing technologies, most patients do not require time consuming topical anesthesia and there is no application of dye.

“Patient discomfort is also minimal,” said Robert Weiss, M.D., an associate professor of dermatology at Johns Hopkins University School of Medicine (Md.,



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U.S.). The combined apex pulse technology “combines microthermal heating with larger zone heating, all in the same pulse. I think the advantage of this technology is that it combines the best of the new concept of fractional resurfacing with the older concept of more bulk heating.”

Dr. Weiss is the senior author of a 20 patient clinical study of the 1440 nm Nd:YAG Affirm laser that was presented in April at the annual meeting of the *American Society for Laser Medicine and Surgery* (ASLMS). Patients received at least three treatments at four week intervals, and 90% of patients completed at least five sessions. Treatment areas received generally one to three passes.

Overall, 78% of patients achieved observer-graded improvements of 50%. Treatments were also well tolerated, with subjects reporting an average discomfort level of 2.3 (moderate discomfort), on a scale of zero to five (five being the worst).

“The Affirm laser has proven to be a good compromise between full ablative and previous non-ablative infrared resurfacing devices,” stated Dr. Weiss, who has treated Asian/darker skin types with the Affirm. “We have seen very nice improvement in acne scarring and

very little post-inflammatory hyperpigmentation.” Dr. Weiss has not observed any side effects with the Affirm, other than expected erythema that commonly lasts for about 12 hours.

“Compared to the Fraxel SR laser which creates a million microthermal zones per treatment, the Affirm laser has greatly reduced prep time,” said Dr. Weiss. “There is much less need for topical anesthesia. There is also no application or removal of blue dye. These requirements typically add 60 to 90 minutes to each Fraxel procedure. There is an actual 50% reduction in treatment time with the Affirm.”

According to Dr. Weiss, about 75% of his Affirm patients do not use topical anesthesia. In addition, “pain levels are markedly reduced compared to the Fraxel. We think this is due to the more even spacing of the tiny fractional zones. The Affirm employs a stamped method as opposed to the scan method of the Fraxel laser. The 1440 wavelength is also absorbed a bit more strongly by water than the 1550 wavelength of the Fraxel, which appears to cause less discomfort.”

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“I’m extremely excited about the Affirm’s capability for fractional resurfacing,” said Brian Biesman, M.D., an ocular plastic surgeon in private practice in Nashville, Tenn. (U.S.). “I have used the laser to treat photo-aging and surgical scars. It can also be effectively used at relatively low fluences to the point where cold-air cooling is sufficient to allow the treatment to be performed without topical anesthesia. This allows you to reduce the

waiting time by 45 to 60 minutes. You also don't have the added expense of the anesthetic."

Dr. Biesman typically schedules four sessions of the Affirm, spaced three to four weeks apart. "So far, we are seeing very nice results," he reported. "There

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has been an improvement in lentigines, skin quality, overall skin appearance and the reduction of fine wrinkling." Dr. Biesman has also been using the Affirm in the periocular region, and starting in July he plans on beginning to treat the eyelids.

The duration of a patient's visit for full face (minus the eyelids) with the Affirm is from 45 to 60 minutes. "This compares to a couple hours with the Fraxel laser," Dr. Biesman said. Moreover, the Affirm requires only one operator because the lightweight and ergonomically designed handpiece slides easily into



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the Zimmer cold-air device. "Therefore, you have cold air and laser being delivered to the skin simultaneously. But with the Fraxel laser, an extra hand is needed for supplemental cold-air cooling."

The 10 mm spot size of the Affirm at 1.5 Hz is "entirely sufficient. Patient discomfort is mild," Dr. Biesman conveyed. "Overall, I feel the Affirm is a well engineered device. There are also some potential future applications with the Affirm platform that could make it even more versatile than it is now."

"I believe the Affirm laser symbolizes the new generation of fractional resurfacing," said Bruce Katz, M.D., director of JUVA Skin and Laser Center in New York City (N.Y., U.S.). "Like the Fraxel laser, the Affirm creates microthermal zones. However, the Affirm also uses CAP technology, which allows about 20% to 50% of the energy to be delivered between the microthermal zones. This energy between the microthermal zones actually causes collagen stimulation. So the Affirm represents the next step after Fraxel."

Dr. Katz usually treats every two weeks with the Affirm, for a total of three or four sessions. "We've seen significant improvement in wrinkling of the face and pigmentation. We've also been testing the Affirm on melasma, where we have seen improvement. Up until now, we really haven't had any lasers that have been



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effective for melasma. Acne scarring is another promising application of the Affirm."

By using topical anesthetics, "patients tolerate treatment perfectly well," Dr. Katz said. "Patients don't need anesthesia initially, when using the lower energies, but they do as we increase energy settings in the second or third session. Affirm treatment is definitely less painful than Fraxel treatment."

In addition, actual treatment time with the Affirm is often "slightly faster," Dr. Katz conveyed. "A patient visit is only 35 to 40 minutes, as opposed to about 90 minutes with the Fraxel laser. Patients are much happier. They tell me the Affirm is a breeze compared to the Fraxel. The blue dye of the Fraxel can create a mess on the patient's hair and clothing. I predict that the Affirm will become more popular than the Fraxel. It is more convenient for the doctor because the patient spends less time in the office and patient backups are reduced." ■