

# Cynosure's Affirm CO<sub>2</sub> Modernizes CO<sub>2</sub> Treatments

By Bob Kronemyer, Associate Editor

According to Bruce Katz, M.D., director at JUVA Skin and Laser Center in New York City, N.Y., the Affirm CO<sub>2</sub> Workstation from Cynosure, Inc. (Westford, Mass.) provides micro ablative treatment with a wide-range of settings for "incredible flexibility." Dr. Katz schedules everything from superficial wrinkle treatments to deep CO<sub>2</sub> laser resurfacing – but with minimal recovery time ranging from one to five days. Acne scarring, pigmentary disorders, skin texture, surgical scars and traumatic scars can also be improved with this next-generation micro ablative technology.



**Bruce Katz, M.D.**  
Director  
JUVA Skin and Laser Center  
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"I think we'll even be able to treat photo-damage, such as actinic keratoses," Dr. Katz noted. Treatment is effective because micro ablative resurfacing creates micro-channels, leaving normal skin between these channels, "therefore you have much faster healing than was possible with older ablative CO<sub>2</sub> devices, which basically ablates the entire skin surface."

Furthermore, since the Affirm is CO<sub>2</sub> based rather than erbium or non-ablative, "you are bound to achieve much better results and some noticeable skin tightening due to collagen rejuvenation which we were not able to really observe with erbium micro ablative lasers," Dr. Katz advised. "The current trend is definitely toward CO<sub>2</sub> lasers for micro ablative treatments. We can achieve 70% to 80% of the results we previously attained

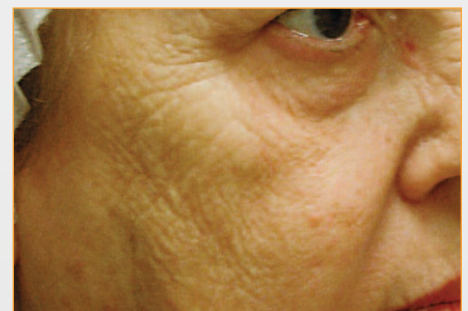
with ablative CO<sub>2</sub> lasers, but with a much shorter recovery time and less likelihood of complications such as hypopigmentation, occasional infections and scarring. These adverse events should be extremely rare, if not non-existent, with micro ablative CO<sub>2</sub>."

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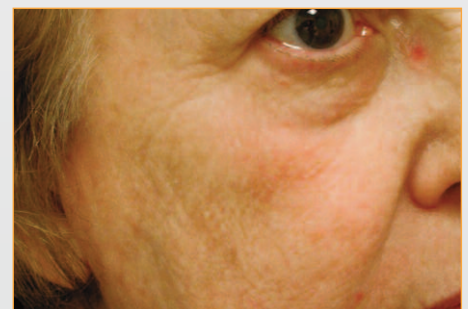
For superficial wrinkles, three or four sessions may be required with the Affirm CO<sub>2</sub>, spaced two to three weeks apart. For this indication, Dr. Katz initially uses 15 watts of electrical power, along with a dwell time of about 500 microseconds and a pitch (distance between the individual dots or micro ablative channels) of approximately 500 microns. Topical anesthetic is used for patient discomfort, "which is really adequate for a majority of these treatments and eliminates systemic risks from anesthesia. However, for really deep treatment, we might use some regional nerve blocks." After a series of treatments for superficial wrinkles, "we virtually achieve full clearance of the

wrinkles. Patients are red and puffy for about one day." Results should last several years. More aggressive treatment parameters may lead to more dramatic outcomes in fewer sessions with the trade-off of a longer downtime period of up to five days approximately.

For acne scarring, depending on scar depth, four to six sessions may be necessary, again at two to three week intervals. Settings are 20 watts, a 700 to 800 microsecond dwell time and a pitch of about 400 microns. "Patients can expect anywhere from 60% to 80% clearance," Dr. Katz conveyed. "There is probably two days of downtime with redness and swelling. However, the results are likely permanent."



Before Tx



After Affirm Tx

Photos courtesy of Bruce Katz, M.D.

For patients with deep wrinkles and some skin laxity, Dr. Katz uses between 20 and 25 watts, a 1,000 microsecond dwell time and a pitch ranging from 200 to 300 microns. "Patients should see a 70% to 80% improvement."

Dr. Katz is the principal investigator of an ongoing study evaluating the Affirm CO<sub>2</sub> Workstation in 15 patients with moderate-to-severe wrinkling and/or photo-damage. "After only one session, people are reporting visible improvement, but we have to wait to complete the entire series of sessions," he said. The single-site study consists of one to three sessions at three week intervals.

Dr. Katz recommends that physicians start out at lower wattages until they feel comfortable with the response from their patients, however, the Affirm CO<sub>2</sub> is a fairly easy laser to use. "There is not a steep learning curve. You have a lot of flexibility in adjusting the pulse duration. You also need to ask the patient how much downtime he can afford." Patients desiring only one day of downtime should be treated with the appropriate settings for more superficial changes, whereas patients who agree to three or four days

of downtime can be treated with higher settings "for deeper penetration of the laser and faster results." Dr. Katz also suggests test spots for skin types IV to VI.

According to Dr. Katz, many people have heard about micro ablative technology, therefore "it's pretty easy to talk to patients about the Affirm CO<sub>2</sub>. Many of my patients have been eager to try it. To be honest, it is a technology that sells itself. People are intrigued with the concept of treating a fraction of the skin with normal healing between the micro-channels."

Dr. Katz also feels that the Affirm CO<sub>2</sub> is great for treating the eyelids alone

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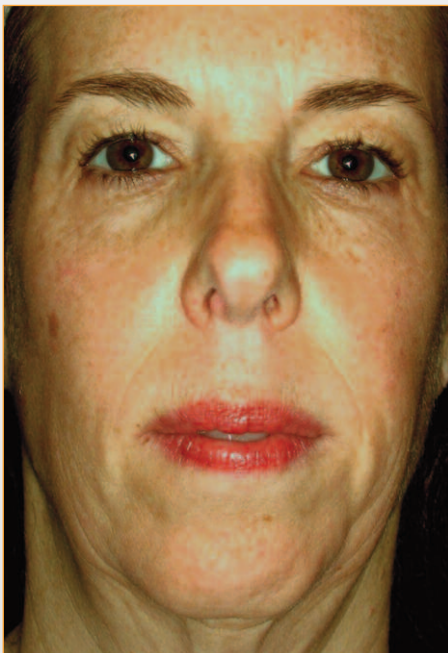
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(rejuvenating the upper and lower eyelids), with only a few days of downtime. "Many women who are not ready for an eyelift right now find this treatment very appealing." After just two treatments one of Dr. Katz's female patients in her early fifties "was thrilled with the results. Wrinkling and laxity significantly improved. She was pleasantly surprised." Dark rings on the lower eyelids can also be treated effectively with the Affirm CO<sub>2</sub>.

Dr. Katz has treated his 81 year old mother's deeper wrinkles with the Affirm CO<sub>2</sub>. "Living in Florida, my mother had significant wrinkles. After two sessions they were much improved." Overall, "you can treat any age – from patients in their thirties who have a lot of sun damage from when they were kids, all the way up to patients in their eighties who have wrinkles, pigmentation changes and textural irregularities. Some of these older patients may also have acne scars.

Off-face areas, including the neck, décolleté area of the chest and backs of the hands can also be treated with the Affirm CO<sub>2</sub>. "With the original CO<sub>2</sub> laser, these were areas we would not tread upon due to the risk of scarring," Dr. Katz explained. "Now we can use micro ablative CO<sub>2</sub> on these areas with very nice results." Two or three treatments, spaced two to three weeks apart, will typically produce good results in non-facial areas. One example is Dr. Katz's observation of significant improvement in wrinkling between the breasts with the Affirm CO<sub>2</sub> Workstation. "Up until now, we haven't been able to do much for these wrinkles. Women are very happy. Many have started to wear low-cut dresses again."

"Treating non-facial areas with the Affirm is becoming increasingly popular. Compared to micro ablative erbium lasers, micro ablative CO<sub>2</sub> allows us to penetrate deeper and achieve more substantial results."



Before Tx  
Photos courtesy of Bruce Katz, M.D.



After Affirm Tx