

# SmartXide DOT Provides Novel Advancement in Non-Surgical Eye Lifts

By Sean McKinney, Contributing Editor

Physicians now have the ability to remove dark circles and wrinkles around the eyes, as well as elevate the brow non-surgically with the SmartXide DOT™ fractional CO<sub>2</sub> system from DEKA Medical, Inc. (San Francisco, Calif.). This new technique called the Madonna Lift is gaining popularity by achieving significant skin tightening results without the risks associated with surgery.

Bruce Katz, M.D., director of Juva Skin and Laser Center / Medispa in New York, N.Y., and inventor of this new technique, completed a study of the Madonna Lift procedure on 100 patients, finding that it achieved significant skin tightening with results that lasted up to one year.\* “The Madonna Lift accomplishes all that an eye lift does, without involving any surgical risks,” he reported. “Additionally, patient downtime is minimized; there is only a little redness and swelling for a day or two and there are no side effects.”

“DOT’s Smart Pulse™ technology allows us to increase the dwell time of each pulse so that we get more peripheral spread of non-ablative energy,” Dr. Katz explained. “This leads to a controlled increase of residual thermal damage around the columns of ablation. With this unique feature, ablation leads to skin tightening in adjacent areas and overall faster results.”

Dr. Katz completes a treatment in about seven minutes, after waiting 10 to 15 minutes for topical anesthetic to take effect. He uses the laser over the entire upper and lower lid surface, right up to the lashes, while protecting the eye with a metal shield. He typically treats the same patient once every two to three weeks, for a total of three to five treatments. “The number of treatments depends on the wrinkles and the thickness of the eyelid or extent of sun damage,” he said.



**Bruce Katz, M.D.**  
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Dr. Katz uses the Madonna Lift for all skin types, including IV, V and VI. “For darker skin, we do a test spot in the temple area and wait a week to see if there are changes in pigmentation,” he explained. “So far, we have

seen no problems.” Versatility is made possible by a feature that allows the practitioner to stack multiple pulses for tightening thicker skin.

The DOT provides peak power per pulse of more than 200 Watts in less than 80 microseconds reaching depths of up to 2 mm. This combination provides efficient ablation with minimal damage and the best tissue tightening ability. Short contact time with tissue results in minimal conduction of thermal energy and better control of ablation. A low power adjustable duration pulse after the ablation pulse delivers the desired amount of thermal energy and coagulation. DOT is unique in offering this enhanced pulsing for both ablative and sub-ablative delivery.

Dr. Katz usually starts a patient with settings of 12 to 13 Watts, 400 microseconds of dwell time, and a dot pitch (space between the laser dots) of 500 microns. “With each session, we increase that energy. It depends on how much downtime the person can afford,” he advised. That flexibility and reduction of downtime have produced patients who are “uniformly and extremely satisfied,” said Dr. Katz. “I am now doing five to ten procedures per day.”

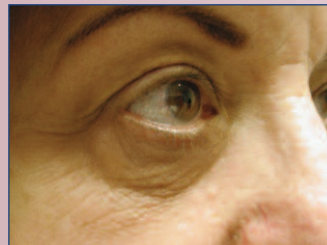
\*Ancona D, Katz BE. A prospective study of the improvement in periorbital wrinkles and eyebrow elevation with a novel fractional CO<sub>2</sub> laser—the fractional eyelift. *J Drugs Dermatol.* 2010 Jan;9(1):16-21.



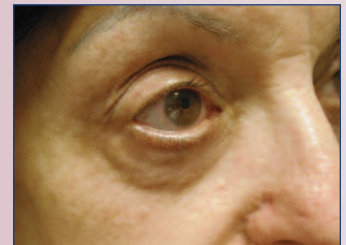
Patient before Tx



Patient after three DOT fractional CO<sub>2</sub> laser treatments for the Madonna Lift  
Photos courtesy of Bruce Katz, M.D.



Patient before Tx



Patient after four DOT fractional CO<sub>2</sub> laser treatments for the Madonna Lift  
Photos courtesy of Bruce Katz, M.D.