

DOT's Unique Power and Technology Improve Fractional Treatments



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Before Tx After DOT Tx
Photos courtesy of Deborah S. Sarnoff, M.D., F.A.A.D., F.A.C.P.



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By Sean McKinney, Contributing Editor

With the ability to independently control depth and thermal damage, the DOT laser from DEKA Medical, Inc. (San Francisco, Calif.), allows physicians to tailor treatments to any patient's needs. As a CO₂ fractional laser offering ablative and sub-ablative treatments, the DOT also uses a higher peak power than most other lasers in its class.

According to Dale Koop, Ph.D., CEO of DEKA Medical, the DOT provides a peak power per pulse of more than 200 watts in less than 80 microseconds, and reaches depths of up to 2 mm. "This combination provides efficient ablation with minimal damage, along with significant tissue tightening," he noted.

"The short contact time with tissue results in minimal conduction of thermal energy and better control of ablation," Dr. Koop explained. "DOT adds a low power adjustable duration pulse after the ablation pulse to deliver the desired amount of thermal energy and coagulation. DOT's cutting edge technology provides enhanced pulsing for both ablative and sub-ablative delivery in the same laser."

DOT's large volume laser tube enables this enhanced pulsing, as well as short pulses. Most other systems use radiofrequency (RF)-excited tubes, which only operate in gated continuous wave mode making enhanced pulsing unfeasible. However, "DOT delivers more than five times the ablative power to tissue than RF-excited laser systems," Dr. Koop continued. "It would cost us less to use RF-excited tubes, but they are not the best technology for fractional applications."

Furthermore, with the DOT, physicians can treat the full-face and chest

areas in less than 15 minutes. "The DOT is much easier to use," said Deborah S. Sarnoff, M.D., F.A.A.D., F.A.C.P., clinical professor of dermatology at NYU Langone Medical Center (New York, N.Y.), with a private practice in Greenvale, N.Y. "Other systems are cumbersome, requiring many passes back and forth, which can take as long as an hour."

Dr. Sarnoff, who has been using the DOT for more than two years, likes to customize treatments by controlling dwell time, energy and density from her handpiece. She uses the DOT to treat wrinkles on the face and neck, as well as crinkles and crêpey textural changes around the eyes. Photo-damaged, leathery and weather-beaten skin and lines around the mouth are also targeted.

"People come into our practice and right away I can tell they are home runs," she said. "Even the best of face-lifts can't take care of lines around the mouth."

Using a topical mixture of lidocaine, benzocaine and tetracaine, she treats without intravenous sedation. "I like that there is significantly less swelling at day one and two when using the DOT, compared to competing systems," she said. "There is no oozing and bleeding that you see with other systems. After a DOT treatment, a patient's face is red for approximately one week, compared to three months after a treatment with fully ablative systems," Dr. Sarnoff added.

"My patients are happy," Dr. Sarnoff said, "and I am known as the 'DOT doc.'" One patient tells the next and our practice is growing. People ask my patients if they have had a face-lift and they say, 'No! You need to go see the DOT doc.'"