

# SmartXide DOT's Enhanced Technology Provides Tx Versatility

By Bob Kronemyer, Associate Editor

Since 1990, DEKA (Firenze, Italy) has been producing effective CO<sub>2</sub> lasers. SmartXide DOT is their newest technology providing fractional skin resurfacing. Previously, ablative skin resurfacing procedures were most effective in treating chrono- and photo-aging skin disorders but a long amount of downtime, due to the thermal damage of the dermis, was associated with this method. SmartXide DOT is overcoming this by using SmartPulse, a sophisticated innovative scanner which separates the laser emission into spots (DOTs) with a proprietary pulse shape. SmartPulse features a high-energy component designed to offer char-free vaporization of the epidermis, thus allowing sub-ablative heating of the dermis.

"Laser and high-intensity light sources have progressed very rapidly over the past decades, but only in the last several years have we seen successful use of fractional lasers for many chrono- and photo-aging disorders, including hyperpigmentation, wrinkles, acne scars and other irregularities," noted Paolo Bonan, a professor of dermatology at Florence University (Florence, Italy). "Fractional lasers have gained widespread acceptance and enhanced technology in the dermo-cosmetic field."



**Professor Paolo Bonan**  
Professor of Dermatology  
Florence University  
Florence, Italy

Clinical improvement following SmartXide DOT resurfacing is due to sculpting by ablation and remodelling during healing — after controlled thermal injury — and to shrinking of dermal collagen with immediate tightening of the dermis. Other non-ablative lasers use an upside-down layering method of thermal injury, which spares the epidermis while the dermis is heated to denature collagen and stimulate a healing response. SmartXide DOT's fractional modality conjugates the efficacy of ablative therapies and safety of non-ablative techniques to produce a unique thermal damage pattern by heating the skin in columns rather than layers.

With SmartXide DOT the user can easily change



SmartXide DOT

important parameters such as pulse power, dwell time and DOT distance to adapt to dermal diseases and skin types. In addition, SmartXide DOT can reduce the DOT distance to zero and act as a traditional scanner. Furthermore, the SmartTrack mode enables a minimization of bulk thermal damage with its random movement of DOTs.



**Professor Nicola Zerbinati**  
Professor of Dermatology  
Insubria University  
Varese and Como, Italy

**"SmartXide's adaptable parameters provide the surgeon with a wide-range of possibilities for making the most suitable choice during treatment."**

According to Nicola Zerbinati, a professor of dermatology at Insubria University (Varese and Como, Italy), "SmartXide DOT's versatility is extremely effective in treating related skin problems. SmartXide's adaptable parameters provide the surgeon with a wide-range of possibilities for making the most suitable choice during treatment."

Deborah Sarnoff, M.D., a cosmetic dermatologic surgeon at Cosmetique Dermatology, Laser and Plastic Surgery in Greenvale, New York, U.S. agreed, "The SmartXide DOT is extremely versatile and flexible. By adjusting the settings for intensity of treatment, recovery time will vary from two to seven days, thus accommodating patient preference." Within a span of only a few months, the SmartXide DOT has become a popular modality to treat wrinkles, pigmented lesions and acne scarring in Dr. Sarnoff's practice. "The downtime and safety profile are much more favorable than traditional CO<sub>2</sub> lasers, and while you cannot, in a single session, obtain the same results of the older technology, I do believe that comparable results are achievable with a series of treatments."

"With the SmartXide DOT, we have yet to encounter hypopigmentation, hyperpigmentation or hypertrophic scarring, which were often seen when treating with older CO<sub>2</sub> lasers," noted Dr. Sarnoff. "Intuitively, I do not envision much of a problem with delayed

hypopigmentation because we are leaving bridges of normal skin between the microthermal zones."



**Deborah Sarnoff, M.D.**  
Cosmetic Dermatologic Surgeon  
Cosmetique Dermatology,  
Laser and Plastic Surgery  
Greenvale, NY, USA

"The dot of the SmartXide DOT really describes the technology," said Robert Gotkin, M.D., a plastic surgeon also at Cosmetique Dermatology, Laser and Plastic Surgery. "We are fond of saying to the patient that it is all about the DOT. Treatment is performed with DOTs rather than painting the entire surface. You can also set the space between the DOTs. The greater the space, the more rapid the healing, whereas the tighter the space, the more prolonged the healing and the more intense treatment."

Pigmented lesions (sun spots, age spots) should respond in a single session, according to Dr. Gotkin. "Fine, superficial or shallow wrinkles may also require one treatment only," he advised. Follow-up sessions for any of the three indications are normally spaced three to four weeks apart.



**Robert Gotkin, M.D.**  
Plastic Surgeon  
Cosmetique Dermatology,  
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"Results are better than I anticipated and are better than other fractional devices on the market," Dr. Sarnoff observed. "I was underwhelmed with the results of some other fractional systems. Results with the SmartXide DOT have approached the UltraPulse CO<sub>2</sub> laser from the 1990s, but without the lengthy downtime. The SmartXide DOT is also much more tunable, depending on the intensity of treatment."

"In this climate there is an increasing demand for an effective treatment with minimal



SmartXide DOT Scanner

downtime and low risk of side effects and the SmartXide DOT fractional laser offers a new choice and brilliant perspectives," Professor Zerbinati added.