SmartXide DOT: Advanced Fractional Technology for Skin Rejuvenation and Dermatology

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Recent market demand has led to the development of photorejuvenation methods, some of which are not always effective, in an attempt to obtain significant results and reduce recovery time and possible undesirable side effects. The aim of Fractional Photothermolysis, originally introduced for non-ablative systems, has been to meet these market demands. This has led to the development of the Fractional CO_2 Laser Skin Resurfacing which produces results similar to those obtained with traditional CO_2 laser skin resurfacing, together with the typical advantages of non-ablative techniques.
SmartXide DOT is the fractional CO_2 laser system perfected by Deka (Florence – Italy), a leader in the cosmetic-medical field with over 20 years' experience in the production of CO_2 lasers for Dermatology.

Various fractional CO_2 laser systems are currently available on the market. Despite all being based on the same principle, they have considerable differences with regard to the values and the possibility of adjusting the significant parameters such as the power, dwell time, distance between single dots, and laser beam profile. These differences give rise to a wide variety of clinical results.



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

Dr Nicola Zerbinati, lecturer at the University of Insubria (Varese – Italy) and director of the Poly-specialist Medical Centre of Pavia – Italy, has been using SmartXide DOT for about two years:

"I chose SmartXide DOT as it allows me to adapt the treatment to the needs and expectations of each individual patient, thanks to the possibility of varying the output power, dwell-time and distance between the single dots. This means that I can pass over from a light, gentle skin resurfacing which has a minimal down-time, to traditional skin resurfacing if requested."
"We established in our preliminary trial that the dose ranges differ in the case of superficial pigmented lesions (equal to or less than 1.0 J/cm^2), wrinkles (from 2 to 5 J/cm^2) and pronounced fibrotic lesions (over 6 J/cm^2)."



Melasma. Before & after 4 sessions. (Parameters: 15W power, 1000 µm DOT spacing, 300 µs dwell time)
Photos courtesy of Nicola Zerbinati, M.D.

"Only a topical anesthetic is needed for the treatment and patients can immediately apply make-up after the procedure. In addition SmartXide DOT has no consumables."



Anne Le Pillouer – Prost, M.D.
Dermatologist
Marseille, France

Dr Anne Le Pillouer-Prost, Dermatologist at the Clairval private hospital in Marseilles – France:

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"The special emission called SmartPulse, which I've only found with Smartxide DOT, gives amazing skin tightening results which are visible even after the first session. The pulse consists of two parts, the first of which has a high power peak for rapid ablation of the epidermis and the initial layers of the derma, while the second part of the pulse has a lower power for heating the tissues in-depth and providing excellent stimulation of the neocollagenasis."



Fine wrinkles, texture & spots treatment. Before & after 3 sessions. (Parameters: 30W power, 500 μm DOT spacing, 1ms dwell time)
Photos courtesy of Anne Le Pillouer - Prost, M.D.

"The SmartXide DOT CO_2 laser has proved to be an extremely versatile instrument in dermatology. The results obtained are excellent and in nearly all cases have given rise to full patient satisfaction. By using the DOT mode, downtime is minimal and the moderate erythema allows the patient to use appropriate makeup immediately after the operation. The incidence of the typical side effects of Traditional Laser Skin Resurfacing is negligible provided the patient follows the simple recommendations given after the operation."



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

Dr Paolo Bonan, Professor at the University of Florence – Italy:
"Our histological data has revealed micro-lesions involving a tapering ablative area in the skin lined with a thin layer of eschar, surrounded by a thermal coagulation zone, all constituting the micro thermal zone. Interestingly, ablative fractional resurfacing demonstrates much more rapid re-epithelialization when compared to its non-fractional predecessors, irrespective of whether powered by Er:YAG or CO_2 lasers. The rapid healing re- epithelialization, demonstrated histologically, is indispensable for preventing the risk of prolonged downtime and bacterial infections, commonly associated with current ablative laser devices."



Jahanara Ferdous Khan, M.D.
Dermatologist
Dhaka, Bangladesh

Dr Jahanara Ferdous Khan, Consultant dermatologist at the Laser Medical Center of Dhaka – Bangladesh:
"I am very excited with the initials results. All of our patients have seen visible gains. What makes SmartXide DOT so special is its versatility. Skin resurfacing with CO_2 lasers has always been problematic with patients with phototypes IV and V due to the high risk of dyschromia after treatment. With SmartXide DOT I can work in a fractioned manner, and by carefully selecting the power, dwell time, and distance between the dots, I am finally able to treat my patients successfully and without any complications, even when they are phototypes IV and V".



Acne Scars. Before & after 1 session. (Parameters: 30W power, 600 μm DOT spacing, 500 μs dwell time)
Photos courtesy of Jahanara Ferdous Khan, M.D

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