

RevLite EO Q-switched Nd:YAG Laser Features PhotoAcoustic Therapy Pulse

BY BOB KRONEMYER, ASSOCIATE EDITOR



Michael H. Gold, M.D.
Gold Skin Care Ctr.,
Tennessee Clinical Research Ctr.
Clinical Assistant Professor
Vanderbilt University School
of Medicine
Nashville, TN

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Bruce Saal, M.D.
Dermatologist
Private Practice
Los Gatos, CA

Maximum versatility and power are achievable with the RevLite EO (electro-optic) Q-switched Nd:YAG laser from HOYA ConBio (Fremont, Calif.), thanks in large part to proprietary PhotoAcoustic Therapy Pulse (PTP) technology. “The RevLite absolutely represents the next generation of Q-switched technology,” said Bruce Saal, M.D., a dermatologist in private practice in Los Gatos, Calif. According to Dr. Saal, the difference is noticed in a variety of applications, especially tattoo removal. “Although the vast majority of tattoos can be completely removed with other Q-switched lasers, there is a tremendous variability in tattoos. Some tattoos are very hardy and extremely difficult to change, while other tattoos come out pretty easily.”

The EO Q-switch provides an extremely high-speed shutter to produce rapid pulses that “enable us to break up the ink more effectively, and therefore probably clear the ink more quickly,” Dr. Saal noted. “The pulse is in the nanosecond domain, followed by a second nanosecond pulse. This double vibration is helpful for removing pigmentation and removing tattoos. However, patient discomfort is no more than with traditional Q-switched technology.”

The PTP technology is responsible for producing very narrow pulse widths at extreme peak energy, thus creating vibrations. “The tattoo ink is broken into smaller pieces,” Dr. Saal explained. “In turn, these smaller pieces are more easily engulfed or picked up by the body’s white blood cells.”

For tattoo removal, Dr. Saal generally uses the 6 mm spot size (one of four sizes from 2 mm to 8 mm in the MultiSpot handpiece). “One of the advantages of having so much power is that you can use a larger spot for better forward scatter,” Dr. Saal said. “The RevLite is also reliable and the results are reproducible.”

Besides tattoo removal, Dr. Saal uses the RevLite to treat pigimentary disorders, certain types of nevi and for photorejuvenation. Results for acne scarring and superficial wrinkling “have been very good,” he said.

Dr. Saal is involved in an ongoing clinical study comparing traditional Q-switching to RevLite’s EO Q-switching with PTP. The clinical work indicates PTP technology is both safe and comfortable. “Preliminarily, most of the conditions I treat respond more quickly with the RevLite. I see faster results,” Dr. Saal said. “Overall, I believe patients need fewer treatment sessions with the RevLite and are definitely more satisfied.”

The intuitive touch screen interface includes a number of preset programs labeled by indication (wrinkle reduction, tattoo removal, dermal lesions, laser peel, hair removal, etc.), as well as the option to customize settings into preset buttons.

The RevLite is built on the same reliable foundation as the MedLite series of lasers from HOYA ConBio, according to Michael Gold, M.D., owner of Gold Skin Care Center in Nashville, Tenn. “The RevLite is easy to use and features a new handpiece and a new software design,” he said. “Everything from pigmented lesions to some hair removal can be treated.”

Dr. Gold is in the midst of a fairly large multi-center trial of the RevLite’s PTP technology for wrinkle reduction. “In the past, Q-switched lasers have had limited use for rejuvenation,” he said. “We are seeing promising results. Delivering more energy in a shorter period of time is better.” For the RevLite PTP study, patients were treated once a week for four weeks. The investigators used 10 Hz at 3.8 J/cm², along with the 6 or 8 mm spot.