Recent Data Support the Versatility of Lasers in a Range of Settings

Advancements in wavelengths and vacuum-assisted suction are carving new avenues in the application of lasers and other devices in dermatology.

LONG-PULSED DIODE LASER EFFECTIVE FOR LONG-TERM HAIR REMOVAL
A long-pulsed diode (800-810-nm) laser with a large spot size and vacuum-assisted suction is a viable option for long-term hair removal, a new study finds. Researchers evaluated 35 patients in a study receiving three treatments using a long-pulsed diode laser with a large spot size and vacuum-assisted suction at four- to six-week intervals, with follow-up visits six and 15 months after the last treatment. Results indicated statistically significant hair clearance at the six- (54 percent) and 15-month (42 percent) follow-up visits. Remaining hairs were thinner and lighter at the 15-month follow-up visit. The majority of patients reported feeling no more than mild to moderate pain during treatment without the use of pretreatment anesthesia or skin cooling.


FRACTIONATED LASER RESURFACING CORRECTS INAPPROPRIATE UVB RESPONSE IN GERIATRIC SKIN
Fractionated laser resurfacing therapy was shown to decrease the occurrence of senescent fibroblasts in geriatric dermis, increase the dermal expression of IGF-1, and correct the inappropriate UVB response observed in untreated geriatric skin, a new study shows. These responses to fractionated laser resurfacing were equal to the effects seen previously using the more aggressive wounding of dermabrasion. Furthermore, the investigators noted that fractionated laser resurfacing was equally effective in both sun-protected and sun-exposed skin. The ability of fractionated laser resurfacing treatment to protect against the occurrence of UVB-damaged proliferating keratinocytes indicates the potential of fractionated laser resurfacing to reduce or prevent aging-associated non-melanoma skin cancer, they concluded.


NEW WAVELENGTH SHOWS EFFICACY IN TREATMENT OF MELASMA
Melasma can be effectively treated with the new 1,927nm wavelength added to the 1,550nm erbium-doped fiber laser, findings from a new pilot study show. The wavelength possesses a higher absorption coefficient for water than the 1,550nm, conferring greater ability to target epidermal processes such as dyschromia. Researchers evaluated 14 patients who underwent three to four laser treatments (at four-week intervals) at pulse energies of 10 to 20 mJ and...
Researchers observed a statistically significant 51 percent reduction in Melasma Area Severity Index (MASI) score at one month after three to four laser treatments. Additionally, a 33 percent and 34 percent reduction in MASI score was observed at the three- and six-month follow-up visits, respectively. Regarding adverse events, moderate erythema and mild edema were observed, and there was no evidence of scarring or post-inflammatory hyper- or hypopigmentation. They concluded that the 1,927nm fractional thulium fiber laser is a safe, effective treatment for melasma.