Within the medical aesthetic field there is no shortage of energy-based devices that offer anti-aging and reparative treatments. Nevertheless, recognized as safe, effective and easy to use, microneedle therapy successfully treats a broad range of indications, including acne and scar clearance, fine lines, wrinkles, enlarged pores and stretch marks, delivering results comparable to more complex technology.

continued on page 3
By Jeffrey Frentzen, Executive Editor

Employing proprietary Automatic Oscillating Vertical Needling (AOVN™) technology, the microneedling technique found in Dermapen 3 from DermapenWorld (Fort Lauderdale, Fla.), can be used to fractionally rejuvenate the skin, as well as address a wide array of pigmentary issues and other problems found in structurally compromised skin. The Microderm treatment tip is comprised of 12 microneedles encased in a spring loaded, single use, sterile cartridge, allowing needle penetration depth to be attuned between 0 mm and 2.5 mm. As well, at shallower settings Dermapen 3 is benign enough to be delegated to ancillary staff.

With 12 needles and an automated vibrating function reaching a top speed of 108 revolutions per second, 1,296 puncture channels can be generated per second to create fractional rejuvenation of the skin. Treatment is often combined with topical nutrients that stimulate, repair and accelerate resurfacing results.

Offering scarless healing and increased production of normal woven collagen, Dermapen 3 works similar to fractional lasers, but without the side effects and downtime. Moreover, this device is safe to use on all skin types and colors, unlike many heat-based technologies that often carry the risk of post-inflammatory hyperpigmentation (PIH).

Some practitioners have even replaced many of their energy-based treatments, such as laser skin resurfacing and other corrective procedures, with the Dermapen. “For patients that have acne scars, wrinkles and any kind of textural issues on their face, Dermapen is our go-to treatment and is good for patients that are unwilling to tolerate the downtime and possible side effects of more aggressive treatments, such as CO₂,” stated Alex Kaplan, M.D., a cosmetic surgeon in Los Angeles, Calif.

“It’s great as an anti-aging treatment as well, for someone with mildly aged skin or superficial wrinkles who is looking for a treatment to maintain their youthful appearance,” Dr. Kaplan added. “There is very little risk, they’re not going to thin out their skin, they’re not prone to getting hyperpigmentation, and overall the treatment is very well tolerated.”

Compared with similar devices and even the earlier versions of Dermapen, the Dermapen 3 features an improved ergonomic design and comes with a more powerful motor that enables it to run longer in a clinical setting without the risk of overheating. In addition, this newest edition eliminates the pain and discomfort usually associated with microneedling, providing a fast, comfortable treatment.

According to Andrew R. Christie, director of education at DermapenWorld, “The Dermapen 3’s innovation was the creation of a needling device that
works at a 90° angle, enabling the needles to enter and exit the epidermis cleanly, so there is no ripping or laceration of the skin. The oscillation diffuses nerve sensation, allowing for comfortable treatment up to 1.0 mm, even without the use of a topical local anesthetic.”

For Shawana Vali, M.D., a cosmetic dermatologist in London, U.K., Dermapen 3 is a necessity in her practice. “Without a doubt, it works amazingly well across a spectrum of patients. It is incredibly versatile, and not only for people with scars,” she said. “It can provide skin rejuvenation, as well as tighten, brighten and reduce the size of pores. What’s more, we can achieve all of this within a single treatment, if done correctly with a patient that is educated and diagnosed properly for any underlying conditions.”

Dermapen treatments are effective via several mechanisms, noted Hasan El-Fakahany, M.D., associate professor of Dermatology and Andrology at Minia University in Minia, Egypt. “Microneedling produces wounds that aggregate platelets, which secrete growth factors to stimulate renewal of the skin. It also opens the pores to enhance drug delivery into the skin, maximizing effect and minimizing systemic side effects. In the scalp, it enhances new blood vessel formation,” he said.

After initially using Dermapen 3 for the treatment of scarring, especially post acne, Dr. El-Fakahany has also used it to eliminate milia and closed comedones. “My use of Dermapen has progressed to combining it with platelet-rich plasma (PRP) for treatment of alopecia, in addition to delivering anesthesia to the skin before minor dermatologic surgical procedures. I’ve also combined it with other drugs to treat vitiligo and hypertrophic scars,” he noted.

“At first, I used Dermapen 3 only for skin rejuvenation and performed treatments with hyaluronic acid,” said Marzena Lorkowska-Precht, M.D., a cosmetic dermatologist in Warsaw, Poland. “Then I moved to treatment of scars and alopecia and observed great results. Dermapen treatments also work really well in combination with PRP.”

Prior to adopting the Dermapen, Dr. Lorkowska-Precht used different types of dermal rollers, “But it was somewhat difficult to achieve good depth of penetration using those methods,” she continued. “With the Dermapen 3 I now have a very precise device, with which I can set different depths in different regions. It is even safe to perform treatments on eyelids.”

For Quita Lopez, M.D., a cosmetic surgeon in Fresno, Calif., the Dermapen 3 is a workhorse in her practice. “I used rollers for many years. When I switched to Dermapen I was very pleased with the results,” she shared. “I saw less injury to the skin compared with the rollers, and in terms of skin rejuvenation, it provided more dependable outcomes.”
For Dr. Vali, who uses a variety of energy-based systems, including Thermage® from Solta Medical (Hayward, Calif.) and Ultherapy from Ulthera, Inc. (Mesa, Ariz.), “Dermmapen is one of the most acceptable treatments for the patient that wants something natural with no side effects or downtime. With Dermmapen 3, I achieve the resurfacing, rejuvenation and tightening. It’s for the 20 year-old with acne scarring, up to the 35 year-old with large pores where resurfacing is needed. We use it consistently as a step in our medical grade facials. I’m very happy with it and I use it more than my lasers.”

Joseph F. Greco, Ph.D., P.A.-C, a hair transplantation and regenerative medicine specialist in Sarasota, Fla., combines Dermmapen 3 with PRP treatments to perform skin rejuvenation with growth factor injections. “In addition, for post-operative scars, it actually helps break down the thick collagen to rejuvenate the skin,” he reported. “We also use it for adipose derived stem cell injections, as well as hair transplantation and non-surgical injection treatments for male and female pattern hair loss. Dermmapen 3 provides the method of ‘stimulation’ in male and female hair loss treatments without destroying or extracting existing hair, especially long hair. It can also be used more aggressively to ‘traumatize’ the scalp during hair loss treatments by simply adjusting the depth of the needles.”

The micro-channels created by Dermmapen allow for easy infusion of actives, such as PRP and stem cells. “Rather than doing injections, a painting method can be highly effective,” Mr. Christie advised. “Other actives that may be infused include steroids for the treatment of keloid scar tissue, tretinoin and even TCA. Combination therapies with low-level laser can further intensify treatment results. Needling is no longer just about a scar treatment or for wrinkles or stretch marks. It can address an array of indications and can work as a stand-alone treatment, or with infusion and other modalities.”

In addition, Dermmapen 3 includes novel features that maintain sterility during treatment. The single use Microderm needle tip is discarded after each use, and a sheath covers the device throughout the actual procedure. Since no console or other hardware accompanies the Dermmapen 3, treatment speed and needle depth can be changed simply with the operator’s hand, removing the possibility of any cross contamination.

According to Dr. Kaplan, “One thing I’ve noticed, which is different than other microneedling devices I’ve looked at, is I do not see any contamination going up into the well of the pen. We disinfect them all before and after treatment, but I’ve yet to see any kind of bodily fluids inside the Dermmapen 3.”

In addition to the unit’s safety and sterility features, some practitioners noted its precision control qualities. “We did consider using dermal rollers when they first came out,” Dr. Kaplan shared, “but what I really didn’t like about those was the lack of depth control and evenness of treatments, and it seemed that you could possibly scar somebody with them and basically create gouges in
the skin that looked like nail scratches. Going over bone it penetrates deeper, but it didn’t penetrate deeply over soft areas. So, I shied away from those. I really liked the precise control and evenness possible with an electronic instrument like the Dermapen.”

A short time after adopting the device in his practice, Dr. Kaplan quickly observed the positive response from his patients. “The feedback we got was that the Dermapen results were much better than our laser-based fractional device. Our before and after photos will testify to that,” he reported. In addition, some patients simply are not good candidates for fractional laser treatments, he added. “Not everyone is willing to go through that process, with its extensive downtime and prolonged redness. Also, Dermapen 3 applications yield better results with less pain, and the treatment takes a little less time. Considering how much penetration it offers we have been impressed with how much can be done to resurface the skin at surprisingly very little risk, and with very little PIH. Our patients are extremely pleased with the results.”

Other practitioners reported equally high patient satisfaction. “All of the patients that were treated with Dermapen 3 after fractional erbium glass noticed a marked improvement with the treatments compared with the laser,” expressed Dr. El-Fakahany. “Some were angry at me for not giving them Dermapen as a first choice treatment. Patients that received only Dermapen stated that after six sessions they saw more than a 70% improvement in their scars. When treating vitiligo, I’ve observed that patient satisfaction has been terrific, sometimes only after a single session.”

“Afour to six treatments performed every two to four weeks, patients see their skin has visibly changed. It is tighter, the color is more even and minor scars are less noticeable,” Dr. Lorkowska-Precht noted. “Patients also notice remarkable changes in the shape of the lower face, such as improved skin laxity. Word-of-mouth patient referrals for Dermapen 3 have been excellent.”

Dr. Greco concurred, adding that his skin rejuvenation patients who were previously treated with rollers, say they have better results after Dermapen 3 treatments. “This device provides an ‘even stimulation’ that allows me to treat the folds and wrinkles better than with a roller,” he stated.

On top of everything else, outcomes can be further improved when using the firm’s DP Dermaceutical™ suite of skincare and other topical products in conjunction with Dermapen 3. For instance, The HylaFuse™ Complex hydrates the skin’s surface layer and maintains the movement of water, biologically active ingredients and small water-soluble molecules toward the skin’s deeper layers. This product can also increase the effectiveness of any formulation via its ability to deliver other active ingredients into deeper skin layers. In addition to having the benefits of the HylaFuse Complex, each DP Dermaceutical product addresses various treatment needs.
Dr. Kaplan uses the aftercare mask in his practice. “This has been very helpful for decreasing redness immediately post treatment. We have also used stem cell therapies after for a significant portion of the patients to improve results. For certain patients we also combine it with PRP since Dermapen creates the channels through which the PRP enters the skin.”

Physicians are excited about Dermapen 3’s future, as well, and look forward to seeing it move beyond being seen as just an anti-aging treatment or an exceptional way to address scar tissue, Dr. Greco indicated. “These are treatments that people are seeking because one can achieve good results with very minimal downtime and without the fear of permanent side effects,” he said. “It is an adjunctive therapy and option for patients who do not want a face-lift, or patients that have had a face-lift and now need skin rejuvenation. We have also observed a dramatic increase in hair restoration patients seeing Dermapen as an alternative to surgery, or an adjunctive treatment after surgery to improve and maintain all their existing hair.”

Alongside the clinical applications of the Dermapen 3, the company itself gets high marks for service and support. “DermapenWorld has been very supportive, solving technical issues, providing service for the product itself and coming up with advances, such as the aftercare masks, as well as innovations in the technology that make it more effective,” said Dr. Kaplan.

On the business side of things, the Dermapen 3 offers practitioners a profit generator that is, according to Dr. Vali, “Exceptional. In addition, I’ve tried other medical microneedling devices and the durability factor is really big with the Dermapen. Patients are so pleased. They come to me after I treat scars and the comment I get is, ‘I can’t believe my scar or acne is gone’."

“Buying the Dermapen 3 was one of the best investments I’ve ever made,” said Dr. Lorkowska-Precht. “I have done more than 1,000 treatments and I still have a working device. It needs no service, no spare parts and the tips are reliable.”

“I like the Dermapen 3. It is very sturdy, and a lot better than earlier versions,” Dr. Lopez stated. “When using it, the device is very smooth and slides nicely. It’s safe, easy to use, and my patients like the results. You don’t get hyperpigmentation with certain skin types, and you don’t lose pigmentation either.”

Dermapen 3 is the “dark horse” of the medical aesthetic field, concluded Dr. Kaplan. “It is such a unique device. When I think of the wide-range of ages that we treat with this device, including people in their 20s, 30s, 40s, right up to their 70s, it is simply amazing. We are very pleased about the variety of patients that can benefit from this product.”