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# BENEV Treatment Trio Sets Standard in the Regenerative Space

By Kevin A. Wilson, Contributing Editor

With the rapid growth in regenerative aesthetics driven by scientific and technological advancement on one side, and increasing patient demand on the other, aesthetic practitioners are making pivotal decisions on how to integrate new treatment approaches into their practice.

## Next-Generation Treatments

Increased demand for minimally invasive and non-invasive procedures has practitioners seeking a multi-layer approach to rejuvenative and regenerative anti-aging treatments. “For the first time in aesthetics, there is finally a multidisciplinary approach to bring skin rejuvenation and anti-aging to the next level,” said Diane Duncan, MD, director of Plastic Surgical Associates (Fort Collins, Colo.). “The go-to regenerative approach in my practice involves my trusted and true trifecta from BENEV Company; Sylfirm X Ultimate Edition, which offers the next generation of a radiofrequency (RF) microneedling device; Exosome Regenerative Complex + powered by ExoSCRT, providing me with the premiere post-treatment solution utilizing exosome technology; and MIRACU PDO threads, superior threads for full face and body treatments.”

BENEV Company, Inc., is a leading U.S. FDA registered manufacturing facility based in Southern California, and a premier skin solution brand for medical professionals globally.

## Sylfirm X Ultimate Edition

Unique in featuring both pulse wave (PW) and continuous wave (CW) RF microneedling, as well as a new 300 micron depth, Sylfirm X Ultimate Edition, manufactured by ViOL (Gyeonggi-do, South Korea) and

distributed in the U.S. by BENEV Company, boasts eight different continuous and pulse wave bipolar RF delivery modes. It uses bipolar non-insulated microneedle RF electrodes to uniformly treat the entire skin layer, maximizing treatment results and global skin improvements, specifically scars, melasma, rosacea and post-inflammatory hyperpigmentation (PIH) with the PW modes; and fine lines, wrinkles and skin tightening with the CW modes.

JongJu Na, MD, PhD, of South Korea worked to develop a device that targeted pigmentation and anti-aging for all skin types, with reduced treatment time and little to no pain or downtime. Sylfirm was the result, featuring not only traditional adjustable-depth CW delivery but his patented PW modes as well, treating both the face and body. The safety, versatility, and the subsequent outcomes, are supported by 22 publications.

“Out with the old and in with new,” said Richard Goldfarb, MD, director of the Center for Smart Lipo in Philadelphia, Pa. “Patients do not want downtime. My patient demographic is anywhere from 21 to 70 years of age, and the needs of each are different and sometimes unexpected. The versatility of Sylfirm X Ultimate Edition improves my ability to treat a wider range of patients.”

Undoubtedly the most profound advantage seen with Sylfirm X Ultimate Edition is the ‘Na Effect,’ named for its inventor and detailed in a 2015 study<sup>1</sup> of tissue reactions to bipolar RF microneedling. Na and colleagues performed *in vivo* treatment of micropig skin and *ex vivo* treatment of bovine liver tissue with RF microneedling, (continued on page 6)



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**J.D. McCoy, ND**  
Medical Director  
Contour Medical  
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Before and after treatment with Sylfirm X Ultimate Edition to tighten and lift the buttocks  
Photos courtesy of Trina Barr

varying needle insertion depth and conduction time in both cases. Tissue reactions in and around thermally induced coagulation columns were carefully noted via histologic examination.

Overall, Na and colleagues found that by using uninsulated needles and two-second conduction times with minimal surface penetration, individual regions of thermal coagulation around each pointed needle tip converged with nearby coagulation zones. This rapidly produced a pronounced effect at the surface, limiting depth of coagulation to 300 microns and reducing treatment time to less than 20 minutes. Damage but not destruction of vascular tissue in the treatment area was noted, while preserving the surrounding skin. Furthermore, Sylfirm X can penetrate from 300 microns to 4 mm, thus enabling treatment of all skin layers – the epidermis, basal membrane and papillary dermis – as well as superficial blemishes to deeper structures, promoting color correction and collagen remodeling while utilizing a single tip.

Supported by six published clinical trials, stable RF delivery using CW modes will create wide, independent coagulation around each electrode, harnessing the Na Effect for overall dermal rejuvenation and regeneration. For pigmentation and vascularity, Sylfirm X's unique PW modes provide softer, more selective coagulation in the basal membrane and vascular structures, targeting abnormal, small blood vessels while leaving surrounding tissue

virtually unaffected. Recovery after this selective coagulation and dermal remodeling is rapid. The efficacy and mechanism of action are currently confirmed by ten studies.

“I didn’t want an ordinary RF device,” said Richard Jin, MD, PhD, director of RJ Clinical Institute and Cellum BioMedical (Mission Viejo and Temecula, Calif.). “I needed a device that could allow me to do more, and better control the outcome.”

My problem has been patients that need both pigmentation and skin laxity addressed, and we see all different Fitzpatrick skin types in my clinics, so I needed a device that could cater to that,” Dr. Jin continued. “The Sylfirm X Ultimate Edition does more by providing me with a 300-micron depth for pain-free, no downtime treatments, which encourage patient compliance. My patients now come in consistently, allowing us to give them results in less time. Patients trust me with their treatment and it is my responsibility to offer them the best option available.”

“The ability to tailor treatments based on what the patient wants and what their skin needs, using just one device, is the definition of ‘advancement’ in the regenerative space. With this device I target skin pigmentation as well as aging on the face and body. The technology, pulse wave and continuous wave delivery options, plus pain free treatment at the optimal depth of 300 microns, is all I need in a device,” Dr. Goldfarb expressed.

“This is my go-to device, it has replaced all other microneedling and RF devices in my practice,” said Dr. Duncan. “Patients report feeling no pain, and love the fact that their treatments do not involve downtime. For what this device does and for what it replaces, the price is a steal.”

### **BENEV Exosome Regenerative Complex +**

Derived from adipose tissue, BENEV Exosome Regenerative Complex +, powered by ExoSCRT, is revolutionizing

the regenerative aesthetic market for the skin and scalp. Featuring the same dual action complex and formula as the original Exosome Regenerative Complex favored by thousands of medical practitioners throughout North America, this new product contains twice the volume of exosomes to deliver faster more powerful results. It is a dual action complex, formulated to absorb quickly into the skin delivering the concentrated power of more than five billion stem cell-derived lyophilized exosomes, potent growth factors, peptides, coenzymes, minerals, hyaluronic acid, amino acids and vitamins. This exosome-based product was designed and developed in tandem by BENEV and ExoCoBio (Seoul, South Korea), the fourth largest exosome research company in the world. ExoCoBio is an equity investor of BENEV Company Inc.

ExoSCRT is the moniker for the patented purification method by which ExoCoBio separates and refines 0.1% pure exosomes from stem cell conditioned media and lyophilizes it to maximize stability before freeze drying. This allows for easy, predictable reconstitution as well.

The patented paraben free, steroid free and hypoallergenic technologies and ingredients are clinically proven to rejuvenate and regenerate the skin and scalp. Harnessing the therapeutic benefits of exosomes for procedures with this product is a clinically proven, non-invasive therapy for fine lines, wrinkles, age spots, redness and irritation, lesions and scars, texture and pore size, as well as overall brightness and hydration of skin. By addressing the scalp the way one would treat skin, this product improves the overall health of the scalp and helps to restore the healthy growth cycle of hair, allowing it to become fuller and denser in the treatment area.

To fully understand this product and its capabilities, the key is to first understand the significance of exosomes and the role they play. According to Randy B. Miller, MD, medical director of Miller Plastic Surgery in Miami, Fla., exosomes are responsible for cell-to-cell communication

and are thus vital to the regenerative process at the cellular level much more directly than seen with PRP and growth factor concentrations. The nanoparticles are naturally able to penetrate the stratum corneum so they are ideal for topical use as well as adjunctively with other therapies. Overall, this promotes the production of healthier, more youthful tissue.

“Exosomes are definitely the future of aesthetic and general medicine,” Dr. Miller stated. “Exosomes derived from stem cells activate the mechanisms we are looking to harness, and adipose tissue is the richest source available. With BENEV Exosome Regenerative Complex + we see 180% greater fibroblast production and 300% greater neocollagenesis, significantly beyond what one could achieve using something like PRP.”

While PRP will remain useful for quite some time, Dr. Jin discussed just how powerful exosomes are, stimulating the regenerative cascade while minimizing inflammation. “BENEV Exosome Regenerative Complex + delivers a variety of more than 50 active components, including growth factors, directly to cells in the treatment area using the very mechanisms of natural intercellular communication. This makes BENEV Exosome Regenerative Complex + the ultimate addition to the regenerative aesthetics armamentarium by itself or as supplementation to any therapy. The potential applications



Before and after treatment with Syllfirm X Ultimate Edition to firm and lift the face  
Photos courtesy of Viol





Before and after treatment of acne and pigmentation with Sylfirm X Ultimate Edition and post-treatment application of BENEV Exosome Regenerative Complex +  
Photos courtesy of Trina Barr

across the entire field of medicine are staggering.”

According to J.D. McCoy, ND, medical director of Contour Medical (Gilbert, Ariz.), BENEV Exosome Regenerative Complex + powered by ExoSCRT is also unique in that no other product is stable enough for reconstitution at the time of use. For him it is a go-to for augmenting hair restoration therapy. “The product is powerful and aggressive, but still natural with clinically proven safety and efficacy,” he reported. “Its utility is impressive. You can use it as a stand-alone therapy but BENEV Exosome Regenerative Complex + excels when added to your existing treatment protocols to improve healing, reduce recovery time and maximize onset of results. It is also relatively affordable. Anyone who doesn’t adopt this is missing out.”

### MIRACU PDO Threads

Polydioxanone (PDO) absorbable threads have shaken up the scene because they provide a minimally invasive lifting alternative while encouraging a regenerative reaction in the body, stimulating neocollagenesis and acting as a sort of biodegradable scaffold for it at the same time. PDO threads have been around for a while but not as widely adopted as other technologies for a variety of reasons, Dr. Duncan noted. “There were too many hassles associated with them; threads not

pre-loaded in their cannulas, purchasing from re-packagers not the manufacturers, not enough of a variety of threads for me to address patient concerns, thinner threads not providing the level of correction I was comfortable with, often breaking in the packaging, rendering them useless, and patients reporting that they could feel thicker threads – another problem of its own.”

MIRACU PDO Threads manufactured by DongBang Medical Co. Ltd. (Sunnam, Korea), the largest PDO and cannula manufacturer in the world, is distributed by their joint venture partner DBM Corporation, Inc. in North America, Canada and Mexico. Innovative MIRACU PDO are FDA-cleared for soft tissue approximation where an absorbable suture is appropriate. These competitively priced specialty threads offer tensile strength ten to twenty times greater than others, with sterile individual packaging. “They received FDA approval for both the threads and insertion cannulae before launch, which appealed to me considerably and is unique as far as I know,” Dr. Duncan stated. “This reflects the care and extensive research and development that went into MIRACU PDO Threads.”

There are two recently added lines of MIRACU PDO Threads – Elastic Line and Elastic Meshfill. Together with their Barb and Forte lines of PDO threads the company now offers 17 types of barbs, 20 types of Elastic microcannulae and seven types of Elastic Meso Needles, which translates into more options, better results and fewer insertions requiring less overall product, treatment time and cost. DBM is the only company in the space to offer an extensive variety of cannula tips (FC, FC45, FCL, FCN and FCV) and innovative pre-loaded cannulae.

The Elastic Line of threads are manufactured via unique methods to provide a high polymer double coating. The exclusive FCV cannula tip is carefully positioned to reduce resistance from the fixing anchor



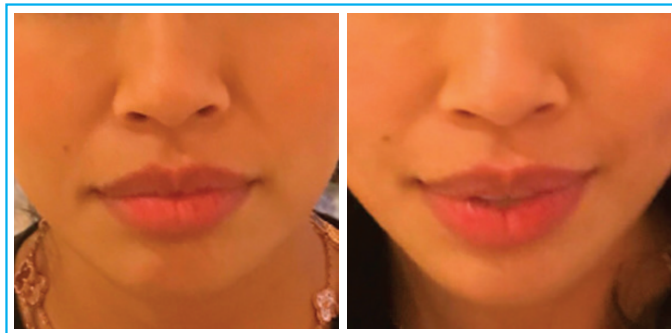
Before and after microneedling treatment with post-treatment application of BENEV Exosome Regenerative Complex +  
Photos courtesy of JD McCoy, ND

during insertion to minimize scarring. The anchor itself is designed and placed at the entrance tip of the cannula to maximize fixation to the muscle and thus optimize lifting. This provides optimal correction without ‘pushing’ skin tissue. The shape of each Deep Cog hook is also designed for strong fixation and powerful lifting; conversely, traditional molded cogs have shallower hooks and comparatively weaker fixation.

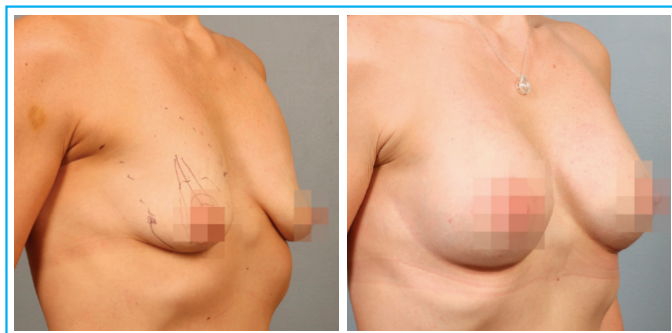
With the Elasty Meshfill products 16 lines of mono threads are woven together to create a hollow cylindrical mesh thread ideal for volumization and rejuvenation. This means a stronger, softer thread with greater elasticity than alternative mesh threads. According to Dr. Jin, Elasty Meshfill was designed to be more scaffold-like than traditional threads to provide better support. “After insertion between the submuscular aponeurotic system (SMAS) and the dermis, it takes about two weeks for soft tissue to fill in the gaps created by the scaffold provided by Elasty Meshfill threads,” he advised.

Dr. Duncan uses Elasty Meshfill with autologous fat and fillers to occupy a particular niche in her armamentarium, and also uses Elasty Line threads. “I was searching for some kind of injectable implant for a few years before I found MIRACU PDO Threads. They offer outstanding, customizable correction when used for treatments on the face and body. I specifically use the Elasty Line thread and Forte thread when performing my signature Perky Thread Lift for the breast area, as it provides the lift my patients are looking for without the downtime.

When combined with fillers there is a synergistic effect. Once implanted the 16-line mono mesh thread reduces diffusion and migration when filler material is injected along the insertion vector for better results using less filler, Dr. Goldfarb indicated. “This is classic regenerative aesthetics,” he said. “The PDO threads stimulate collagen production in addition



Before and after PDO thread lift treatment with MIRACU Barb, Forte and Elasty Meshfill  
Photos courtesy of Michael Schreiber, DO, FAAFP, FABS, DAASEM



Before and after PDO thread lift treatment with MIRACU Elasty Line threads  
Photos courtesy of Diane Duncan, MD, FACS

to any filler-related correction, so when implementing this kind of protocol, we use less filler product, but get up to 40% improvement in longevity of the outcomes. It reduces costs because we use less filler product and get a better, longer lasting result. You can augment the treatment further by adding PRP, and it is also a standout alternative to implanting larger volumes of filler in hard-to-treat locations.”

With these three pioneering product lines and continued development, BENEV and DBM are driving innovation, paving the way for others in the field of regenerative aesthetics.

#### Reference:

1. Na, J; Zheng, Z; Dannaker, C; *et al.* Electromagnetic initiation and propagation of bipolar radiofrequency tissue reactions via invasive non-insulated microneedle electrodes. *Sci Rep* 2015;5:16735.