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# Combo MNRF Device Enhances Minimally Invasive Skin Rejuvenation

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Adding radiofrequency (RF) to traditional microneedling devices represents an advance in skin tightening treatment outcomes compared to microneedling alone, according to a recent literature review.[1] Additionally, fractional microneedling RF (MNRF) has been used to treat various dermatologic indications, including acne, facial pore size, wrinkles, atrophic scars, hypertrophic scars, keloids and more.

Combining these two technologies into one, Secret RF (CLASSYS; Seoul, South Korea) is a fractional bipolar RF system that employs microneedles to penetrate the skin at a preset depth ranging from 0.5-3.5 mm. It has been shown to precisely deliver energy to the target site and has adjustable energy levels that enable the treatment of various body areas for different indications.

Before and after eight Secret RF sessions performed at two-week intervals
Photos courtesy of Classys, Inc.

"Secret RF is a non-invasive treatment with minimal downtime, ensuring safety," according to Jae Yoon Jung, MD, a dermatologist at the Oaro Dermatology Clinic in Seoul, Korea.

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"It is not only effective for treating skin conditions such as hyperhidrosis, acne and stretch marks but also is widely used for aesthetic purposes, including improving skin texture, tone and elasticity," he explained.

Fractional MNRF creates vertical channels and stimulates migration and the proliferation of keratinocytes. The combined technologies heat the dermis, producing a bulk heating effect that induces the release of several growth factors, which results in dermal remodeling.

**Enhanced Efficacy and Comfort**

Ablative fractional lasers are typically linked to longer durations of post-treatment erythema and a higher incidence of post-inflammatory hyperpigmentation when compared to MNRF treatments, according to expert reviews. In addition, pain levels are generally more pronounced in both ablative and non-ablative fractional lasers than in MNRF treatments.

With Secret RF, the needles are mechanically inserted into the skin and promptly withdrawn at a rate of 1:1000 seconds. RF stimulation is applied in brief intervals, lasting only a few thousandths of a second, to prevent thermal damage after being delivered to the targeted area. While within the skin, the needles maintain a cold temperature.

The RF energy is precisely concentrated at the edge or tip of the microneedles, resulting in minimal damage to the surrounding epidermis. This reduces both downtime and pain for the patient, especially when compared to traditional laser-based fractional treatments, according to expert users.

Before and one month after ten Secret RF sessions at four-week intervals
Photos courtesy of Classys, Inc.

### MNRF Differentiators

MNRF handpieces can be differentiated based on two key features. The first is the mode of insertion into the skin. Secret RF's microneedle insertion operating mechanism uses a stepping motor, which provides a smoother needle insertion into the skin compared to other MNRF devices that use solenoid motors. Smoother needle insertion results in minimal pain and downtime, minimal trauma to the epidermis and no bleeding.

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The second differentiating feature involves needle quality — needle sharpness and coating material. Secret RF features a needle with a smooth and even surface for precise processing, which helps to ensure uniform energy delivery while preventing unintended damage to surrounding tissue.

RF intensity, duration and interval can be manually adjusted with the Secret RF device, allowing for a customized treatment tailored to the patient and the specific location. This flexibility enhances the overall therapeutic effectiveness, according to expert users.

Secret RF is equipped with tips in various configurations, including 1-pin, 25-pin and 64-pin options. The 25-pin tip is further subdivided into insulated, semi-insulated and smaller tip sizes, allowing for tailored use across a range of indications.

The single-pin needle is specifically designed for the treatment of acne and periorbital wrinkles. With a length of 1.5 mm and an insulated upper section, it effectively coagulates the sebaceous glands while protecting the epidermal layer from damage.

Before and one month after five Secret RF sessions at four-week intervals
Photos courtesy of Classys, Inc.

## Clinical Results

Researchers found that combination therapy with Secret RF and fractional $CO_2$ laser is a safe treatment protocol with a positive therapeutic effect on striae distensae.[2] Subjects who received combined treatment exhibited clinical improvement in both skin texture and width. In particular, combination treatment markedly increased the number and thickness of collagen fibers in the dermis, likely due to greater expression of TGF-β1 and stratifin.

Combined use of Secret RF and non-ablative fractional laser has also demonstrated definitive synergistic effects compared with non-ablative fractional laser for acne scars, with reasonable safety profiles, according to another study.[3] The investigators reported that the combination regimen induces greater increases in the extent and thickness of interstitial fibers throughout the whole dermis, compared with non-ablative fractional laser alone.

Axillary hyperhidrosis is yet another studied indication for Secret RF, highlighting its wide-ranging effectiveness and versatility.[4]

**References:**


1. Shauly O, Marxen T, Menon A, et al. Radiofrequency Microneedling: Technology, Devices, and Indications in the Modern Plastic Surgery Practice. *Aesthet Surg J Open Forum*. 2023;5:ojad100. Published 2023 Nov 6. doi:10.1093/asjof/ojad100

2. Ryu HW, Kim SA, Jung HR, et al. Clinical improvement of striae distensae in Korean patients using a combination of fractionated microneedle radiofrequency and fractional carbon dioxide laser. *Dermatol Surg*. 2013;39(10):1452-1458. doi:10.1111/dsu.12268

3. Kwon HH, Park HY, Choi SC, et al. Combined Fractional Treatment of Acne Scars Involving Non-ablative 1,550-nm Erbium-glass Laser and Micro-needling Radiofrequency: A 16-week Prospective, Randomized Split-face Study. *Acta Derm Venereol*. 2017;97(8):947-951. doi:10.2340/00015555-2701

4. Schick KS, Hashmonai M. Radiofrequency Thermotherapy for Treating Axillary Hyperhidrosis. *Dermatol Surg*. 2016;42(5):624-630. doi:10.1097/DSS.0000000000000703

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Lisette Hilton loves covering medicine, health, wellness and fitness, and has been a reporter following her passion for more than 25 years.