

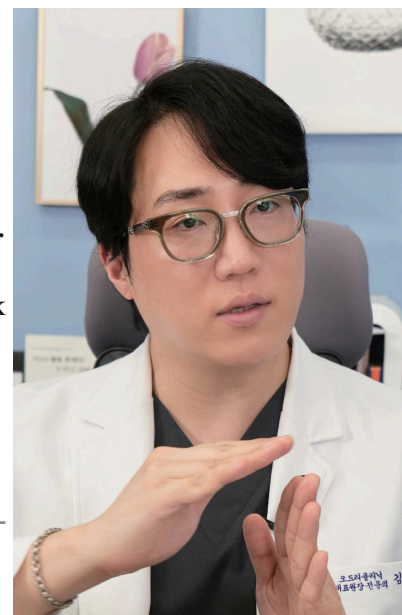
The Right Mix Of Single Pulse And Water Cooling

Dr. Jung-Soo Kim, Audrey Clinic”

Innovation is one of the most critical factors determining the success of aesthetic medical devices. To become an essential tool in clinical practice, a device must demonstrate clear differentiation and deliver consistently high levels of patient satisfaction.

Among the devices frequently used at Audrey Clinic, directed by Dr. Jung-Soo Kim, **VOLNEWMER** has emerged as a core system. The defining characteristics of VOLNEWMER are its **single-pulse monopolar radiofrequency (RF)** technology and **water-based cooling system**. Dr. Kim emphasizes that this innovative combination effectively achieves bulk heating of the dermis—the key mechanism for collagen regeneration—resulting in excellent lifting and tightening outcomes.

In this article, we analyze the features and clinical applications of VOLNEWMER through Dr. Kim’s clinical experience.



When Did You First Introduce VOLNEWMER?

VOLNEWMER was introduced at Audrey Clinic in March 2023. Notably, the device was installed without a prior in-house demonstration. At the time, patient volume was so high that scheduling a demo was not feasible, which itself reflects the level of trust and expectation placed in the device.

Given Classys’ reputation as a medical device manufacturer, Dr. Kim remarked, “I felt confident that the device would not have been released unless it was exceptionally well made.” This confidence led to immediate adoption.

Media exposure also played a significant role. During a period of heightened public interest driven by extensive advertising campaigns featuring celebrity models, attention toward VOLNEWMER increased rapidly. Despite already operating a monopolar RF device, the clinic placed an early order, believing that VOLNEWMER would not merely add another device, but meaningfully enhance patient satisfaction.

The Importance of Water-Based Cooling in Monopolar RF

The role of cooling in monopolar RF treatment deserves careful consideration. The primary objective of monopolar RF therapy is to induce collagen production by delivering sufficient thermal energy to the dermis, thereby improving skin elasticity and texture. However, because RF energy must traverse the epidermis to reach deeper tissue layers, protecting the epidermis is a critical challenge.

Prevention of epidermal burns or injury is essential, as is management of pain and post-treatment edema. Epidermal cooling contributes significantly through the reverse thermal gradient effect, which facilitates deeper penetration of RF energy into the dermis. As a result, a greater amount of



heat can be delivered to target tissues, enhancing collagen stimulation.

In RF devices, the most commonly employed cooling methods are dynamic cooling device (DCD) systems and water-based cooling. DCD systems use a plastic plate to indirectly cool the epidermis and create a pulsed cooling effect by controlling cryogen spray timing between RF pulses. This intermittent cooling helps regulate epidermal temperature.

In contrast, water-based cooling utilizes chilled water to provide continuous cooling, maintaining a stable epidermal surface temperature throughout the procedure. Compared with DCD systems, water-based cooling offers more consistent thermal control. The fundamental distinction lies in pulsed cooling versus continuous cooling.

Cooling Performance Compared With Other RF Devices

When evaluating cooling performance alone, premium “original” RF devices may provide the strongest cooling, sometimes sufficient to cause frosting of the skin surface. However, this performance comes at a significantly higher cost, which elevates patient expectations. When results fall short of those expectations, dissatisfaction can be more pronounced.

Moreover, many high-intensity RF treatments require sedation to achieve patient comfort, which may increase the risk of adverse events.

In contrast, VOLNEWMER’s water-based cooling system is advantageous in achieving and maintaining a stable target temperature. Even without extremely high energy settings, practitioners can reliably reach the desired thermal endpoint at specific tissue depths. By selecting appropriate energy levels and allowing sufficient resting intervals, patients can undergo treatment comfortably with minimal discomfort.

Clinical Significance of Single-Pulse RF

According to Dr. Kim, the greatest advantage of VOLNEWMER is its ability to naturally reach the desired thermal threshold. This is primarily enabled by its single-pulse RF delivery.

While multi-pulse RF systems increase temperature by generating multiple thermal peaks, single-pulse RF elevates tissue temperature in a more uniform, bulk manner without significant temperature drop. Based on clinical experience, Dr. Kim does not believe that multi-pulse RF provides any particular advantage in lifting, tightening, or collagen induction.

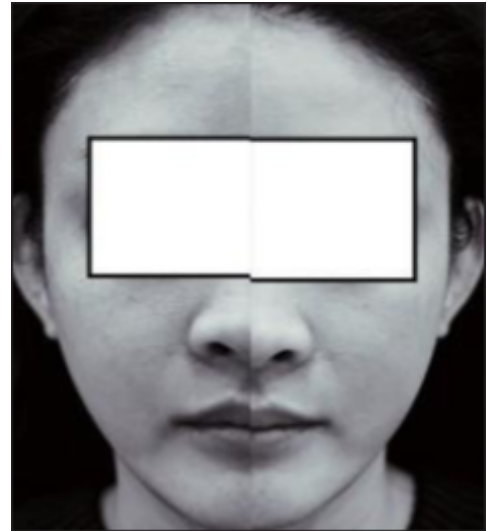


When combined with a relatively high cooling temperature range of 12–20°C, VOLNEWMER minimizes unnecessary heat loss while ensuring stable delivery of sufficient thermal energy to the dermis. This approach allows effective collagen stimulation while managing risks such as epidermal injury, pain, and edema—demonstrating the technical precision of Classys’ design.

Comparison With Long-Pulsed Laser Techniques

This principle is comparable to the advantage of long-pulsed lasers in Genesis techniques. Effective collagen generation depends not only on reaching the target temperature, but also on maintaining it appropriately. Just as long-pulsed lasers deliver deeper and more sustained heat to dermal targets, single-pulse RF is similarly advantageous in RF-based treatments.

Rapid temperature elevation is relatively easy to achieve with RF; however, delivering sufficient thermal energy without increasing the risk of adverse effects requires technical refinement. Dr. Kim considers VOLNEWMER to be a safer and more effective modality for deep tissue heating than long-pulsed lasers.



The Concept of “Resting” in VOLNEWMER Treatment

When performing a full-face VOLNEWMER treatment with 400 shots, Dr. Kim recommends delivering 100 shots to one side of the face, followed by 100 shots to the opposite side. The practitioner then returns to the initial side for another 100 shots and completes treatment with the remaining side.

The absolute number of shots is not the critical factor; even 50 shots are sufficient to elevate tissue temperature. The key principle is allowing adequate time intervals between treatment passes. These resting periods enable uniform heat distribution throughout the dermis and help maintain a stable thermal environment.



This concept can be likened to cooking a steak: attempting to cook meat rapidly at excessively high temperatures may overcook the surface while leaving the interior undercooked. Allowing time for heat to diffuse inward results in more even cooking. Similarly, controlled RF heating with appropriate resting intervals leads to safer and more effective clinical outcomes.

Patient Selection and Indications

For patients whose primary goal is lifting and tightening alone, RF systems utilizing DCD cooling may be appropriate. However, for patients who require overall skin rejuvenation in addition to lifting and tightening, VOLNEWMER is preferred.

Because thermal energy is evenly distributed across the epidermis and dermis, results can be observed relatively quickly. VOLNEWMER is also suitable for patients with decreased skin elasticity beginning at the surface layer.

One notable feature of VOLNEWMER is its effectiveness in patients with concerns such as melasma or enlarged pores. By improving both the dermal and papillary dermal environments, VOLNEWMER offers high versatility as part of combination therapy and should not be considered solely a lifting and tightening device.

Combination Therapy With SHURINK

Dr. Kim typically performs VOLNEWMER treatment first to raise overall tissue temperature, followed by SHURINK to create precise thermal coagulation points. When tissue temperature is already elevated, coagulation points form more readily, producing a synergistic effect—similar to performing HIFU after Genesis treatment.

However, careful assessment of facial morphology is essential. In patients with globally low facial volume or pronounced hollowing, VOLNEWMER monotherapy may be preferable, and HIFU should be avoided in volume-deficient areas.

VOLNEWMER also demonstrates synergy with skin boosters. Dr. Kim actively uses polymer-based boosters to enhance volumization. When skin boosters are administered on the same day—typically in the sequence of skin booster followed by VOLNEWMER—RF-generated heat and pressure facilitate more uniform particle distribution. In such cases, treatment sessions required for satisfactory volumization may be reduced from three to a single session.