CLASSYS

QUADESSY
Dr. Woo Chul Han, Chengdam Arden Clinic

“QUADESSY: Targeting Both Facial Contours and Skin Texture"

Dr. Woo Chul Han of Cheongdam Arden Clinic considers both facial contours and skin texture when planning lifting and tightening treatments. Even within the same face, he distinguishes areas requiring intensive scar treatment from those where volume preservation is a priority, selecting treatment tips and energy delivery settings according to specific treatment goals.
Dr. Han uses QUADESSY, which combines non-invasive bipolar RF and microneedle RF, to address enlarged pores, uneven skin texture, and superficial atrophic scars. For patients with more pronounced skin laxity, he also considers combining QUADESSY with VOLNEWMER. His guiding principle is that the additional benefits of introducing another device into a treatment plan should be clearly defined. We spoke with Dr. Han about his decision to adopt QUADESSY, tip selection and practical clinical applications, his assessment of the ECC technology, his experience combining QUADESSY with VOLNEWMER, and the clinical considerations involved in preserving facial volume.



Dr. Han emphasized, “QUADESSY uses non-invasive bipolar RF to preheat the tissue, followed by microneedle RF to induce thermal coagulation. It enables simultaneous treatment of scars and wrinkles while promoting dermal remodeling.”

What prompted you to adopt QUADESSY?

When performing lifting and tightening treatments, I consider both facial contours and skin texture. Even when facial contours are improved, patients may not perceive sufficient overall improvement if enlarged pores, scars, and fine lines remain prominent. This was one of the main reasons I decided to adopt QUADESSY, as I wanted to address these concerns together. QUADESSY combines non-invasive bipolar RF with microneedle RF. What particularly attracted me was its ability to adjust treatment tips and energy delivery settings according to the skin condition of each treatment area, allowing for a more individualized approach. When I first adopted the device, my primary expectations were focused on treating enlarged pores and atrophic scars.
Today, I place greater emphasis on recognizing that different areas of the same face require different treatment approaches. Areas with prominent scars are treated more intensively, while treatment intensity is reduced or treatment is avoided in areas with thin skin or insufficient volume. Currently, I primarily use QUADESSY to address enlarged pores, uneven skin texture, and superficial atrophic scars.

My trust in the company also played a significant role in my decision to adopt QUADESSY. Over the many years I have worked with CLASSYS, I have come to recognize the company's strong clinical expertise. Its philosophy of developing scientifically grounded devices that deliver meaningful benefits to patients aligns closely with my own approach to clinical practice. This confidence led me to adopt QUADESSY immediately, without even requesting a demonstration

How are you using QUADESSY to address treatment challenges that were previously difficult to manage?

One of the most challenging situations in treatment planning is when different skin concerns coexist within the same facial area. A typical example is a patient with enlarged pores and superficial scars in the central cheeks, fine lines in the surrounding areas, and thin, sunken skin in the lateral cheeks. Devices with limited flexibility in adjusting energy levels and treatment depths can make it difficult to address these concerns effectively. This is because areas requiring broad skin texture improvement need to be treated differently from those requiring targeted scar treatment.
QUADESSY allows adjustments not only in tip selection but also in needle depth and RF settings. It also offers a feature that enables presetting treatment depths and energy delivery parameters. These capabilities allow me to tailor treatment plans to the specific needs of each facial area.
With conventional treatments, adjusting treatment depth has sometimes been challenging. One of QUADESSY's key advantages, in my opinion, is the ability to select between insulated and non-insulated tips while also adjusting needle depth.

Which patients do you primarily consider for QUADESSY treatment?

I primarily consider QUADESSY for patients whose main concerns are enlarged pores, uneven skin texture, and superficial atrophic scars. When evaluating enlarged pores, I also carefully assess sebum production, inflammatory lesions, and the elasticity of the surrounding skin. It is important to determine whether sebum production and inflammation should be controlled first or whether greater emphasis should be placed on dermal remodeling.
For scars, I assess not only their morphology and depth but also the presence of tissue adhesions. In cases of rolling scars with significant tethering, I consider whether subcision may be necessary. Similarly, for deep ice-pick scars or well-defined boxcar scars, I evaluate whether additional lesion-specific treatments are required. I do not simply increase needle depth or RF energy levels based solely on scar depth.
If a patient has an active infection or dermatitis, I prioritize stabilizing the condition before proceeding with treatment. I also assess whether the skin has adequately recovered from previous procedures and whether any factors could interfere with wound healing. Facial volume is another important consideration. Even when patients describe their concern as a loss of skin firmness, clinical examination may reveal that volume deficiency is the more significant issue. In such cases, rather than insisting on RF treatment, I first explain which concerns should be addressed to achieve the patient's desired aesthetic outcome.

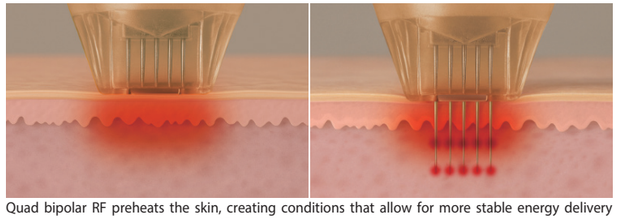
What is the clinical significance of combining bipolar RF and microneedle RF?

The key advantage of this combination is that bipolar RF preheats the tissue, creating conditions that may facilitate thermal coagulation during the subsequent microneedle RF treatment. Bipolar RF first delivers bulk heating to the treatment area, followed by energy delivery into the dermis through needle electrodes. Thermal coagulation depends not only on the applied power but also on the actual temperature reached within the tissue and how long that temperature is maintained. From a mechanistic perspective, preheating the tissue may help microneedle RF reach the temperature required for thermal coagulation. In other words, bulk heating initially raises the tissue temperature, while microneedle RF subsequently induces localized thermal coagulation at the targeted depth.
Dermal remodeling can then be expected during the subsequent healing process. In areas of thermal coagulation, the wound-healing response promotes collagen remodeling and elastic fiber regeneration, providing a biological basis for potential improvements in skin firmness and fine lines. Personally, I primarily utilize QUADESSY's hybrid RF technology to focus on dermal remodeling. I believe this represents the core principle of its dual-layer treatment approach, combining bipolar RF and microneedle RF.

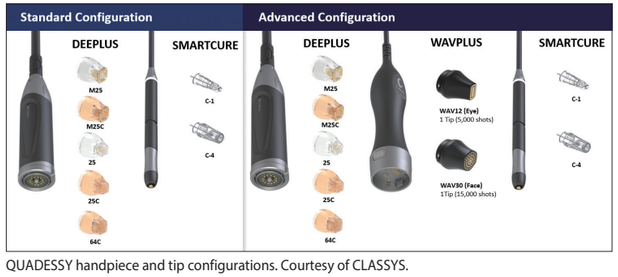
How do you evaluate ECC in clinical practice?

ECC (Energy Cruise Control) is a technology designed to ensure consistency in energy delivery. It adjusts RF power in response to changes in skin impedance, helping to deliver energy more consistently according to the parameters selected by the pradictioner. However, constant power control does not necessarily mean temperature control. Even at the same power level, tissue responses can vary depending on the energy delivery duration, electrode configuration, and contact conditions. The presence of an automatic control function does not mean that the same settings should be applied across the entire face. During treatment, it is essential to ensure that the needles are properly inserted and that the tip maintains uniform contact with the skin. The practitioner must also continuously monitor whether energy is being repeatedly delivered to the same area.

If a patient reports an unusual or different type of pain, treatment should be stopped temporarily to identify the cause. Under anesthesia, pain alone may not be a reliable indicator, so careful observation of skin responses and tip contact conditions is always necessary.
ECC cannot replace the clinical judgment of the practitioner. Rather, it is a function that helps deliver energy consistently according to the treatment parameters determined by the practitioner. To use a driving analogy, even a vehicle equipped with electronic cruise control cannot completely replace the driver's judgment, as it is not an autonomous driving system. ECC in QUADESSY can be understood in a similar way. Nevertheless, I believe that QUADESSY's ability to measure tissue impedance and adjust RF output accordingly to maintain consistent

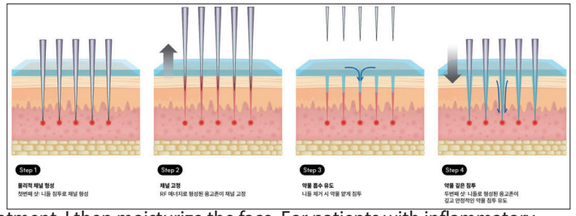


Quad bipolar RF preheats the skin, creating conditions that allow for more stable energy delivery during subsequent microneedle RF (MNRF) treatment. MNRF energy is then delivered to the preheated tissue to induce fractional coagulation within the dermis.
Courtesy of CLASSYS.



QUADESSY handpiece and tip configurations. Courtesy of CLASSYS.

energy delivery is a distinctive technological advantage that is difficult to replicate.



Could you describe your preferred QUADESSY treatment protocol?

As a pretreatment step, I typically perform exfoliation using HydraFacial or another device with exfoliating capabilities before RF treatment. I then moisturize the face. For patients with inflammatory lesions, I sometimes apply exosomes, while for those with enlarged pores, I may apply PLLA or PDLA. I believe that maintaining adequate hydration across the entire face is beneficial for enhancing energy delivery from RF devices, including microneedle RF. This is why I incorporate these steps into my treatment protocol. Let me explain using an example of a patient with enlarged pores and superficial boxcar scars on the cheeks. The first step is to clearly define the treatment areas. I distinguish between areas requiring broader treatment for enlarged pores and uneven skin texture and those requiring more focused scar treatment. Areas with thin or sunken skin are identified as regions where treatment intensity should be reduced. Once the treatment areas have been determined, I select the appropriate tips and treatment settings.

The tip I use most frequently is the Multi Silver tip. By setting a slightly greater needle depth, I can target enlarged pores while simultaneously applying bipolar RF energy to induce collagen remodeling through bulk heating.

It is also possible to activate Quad Fusion mode while turning off bipolar RF energy. I find it particularly useful that Quad Fusion mode can be used exclusively for drug delivery. For lifting and tightening treatments, as well as enlarged pore treatment, I frequently use the Multi Silver tip because it allows me to incorporate bulk heating when needed.

How do you assess immediate post-treatment changes and long-term outcomes?

I make a clear distinction between the appearance of the skin immediately after treatment and the results observed over time. Even if the skin appears slightly firmer or smoother on the day of treatment, I never attribute these immediate changes to collagen remodeling. Remodeling is a gradual process that should be evaluated over time as the tissue heals.

In the early post-treatment period, I primarily monitor how erythema, edema, and pain subside, as this is the stage when we need to ensure that the skin is recovering normally. An initial follow-up assessment can be performed approximately one month after treatment, followed by a comparison of pre- and post-treatment outcomes at two to three months. For patients undergoing repeated treatments, I also document the time elapsed since the final session. The timing of assessments is adjusted according to the number of treatment sessions and the patient's recovery status.

For enlarged pores and scars, I compare clinical photographs taken under consistent lighting conditions and from the same angles. When necessary, I also use scar assessment scales or 3D imaging as supplementary evaluation tools. In addition, I separately assess patients' subjective perceptions of changes in their skin during daily life through direct conversations and follow-up discussions.

When monopolar RF treatments such as VOLNEWMER are combined with QUADESSY, I evaluate changes in skin texture and scars separately from improvements in overall skin laxity. This allows me to identify which areas may require further improvement during subsequent treatments. Follow-up assessments are not simply a means of evaluating treatment outcomes; they are also an essential part of the clinical examination that guides decisions about future treatments.

How do you determine whether to use QUADESSY alone or combine it with VOLNEWMER?

I first assess whether any concerns would remain even after improving enlarged pores and scars. If the primary concerns are enlarged pores and superficial scars, without significant overall skin laxity, I focus on QUADESSY treatment and monitor the outcomes. In such cases, the priority is to improve localized skin texture.



Dr. Han performing a QUADESSY treatment. He explained that he selects treatment tips according to lesion characteristics and target tissues, while adjusting needle depth and RF settings accordingly.

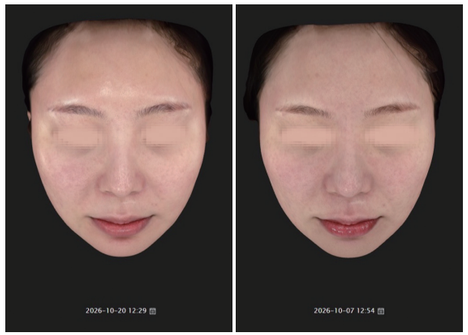
However, if the patient has noticeable skin laxity in the cheeks and lower face in addition to enlarged pores and scars, I consider combining QUADESSY with VOLNEWMER. Even if the pores and scars improve, the sagging skin that concerns the patient may remain. Therefore, I explain these two issues separately. Not all patients who appear to have sagging skin should be approached in the same way. It is important to distinguish whether the appearance is caused by actual skin laxity, shadows resulting from volume loss, or differences in fat distribution. For patients with insufficient facial volume, preserving existing volume may take priority over increasing the intensity of lifting and tightening treatments. Monopolar RF targets the dermis at a depth of approximately 3 mm. By inducing bulk heating, it can be highly effective in improving skin laxity, enlarged pores, and skin texture. However, what patients actually perceive is not the condition of the dermis itself, but the visible appearance of the skin surface. Some patients may have significant acne or particularly prominent pores, especially around the nose and the butterfly zone.

Treating the nose with monopolar RF can be challenging, which is one reason why combining it with microneedle RF is beneficial. Certain facial areas, particularly the T-zone, can be more effectively addressed with microneedle RF. Some patients undergoing monopolar RF treatment may also feel uncomfortable with the number of shots required on the forehead. In such cases, incorporating microneedle RF can help maximize the overall treatment benefits.

How do you determine the respective roles of VOLNEWMER and QUADESSY, as well as the intervals between treatment sessions?

With VOLNEWMER, I plan lifting and tightening treatments over relatively broad areas of the face, while QUADESSY is used to target areas where enlarged pores and scars are more prominent. In other words, I use VOLNEWMER's monopolar RF and QUADESSY's microneedle RF to address different treatment goals.

For patients with thin or sensitive skin, or those requiring more intensive scar treatment, I consider scheduling the procedures separately from the outset. Treatment intervals are not determined solely by a fixed schedule. I assess whether erythema, edema, tenderness, or hypersensitivity reactions have sufficiently resolved before deciding when to proceed with the next treatment.
In my usual protocol, I perform the initial VOLNEWMER and QUADESSY sessions on the same day. This is followed by two additional QUADESSY sessions at two-month intervals, with the overall treatment course spanning approximately six months. In general, microneedle RF treatments seem to follow a standard protocol of three sessions at one-month intervals. However, I take a slightly different approach.



Before-and-after clinical photographs from Dr. Woo Chul Han's live treatment demonstration. Courtesy of Dr. Han.

If monopolar RF is used to promote remodeling in relatively deeper tissue layers, I believe QUADESSY or other microneedle RF treatments can then be used to address concerns involving the skin surface. After all, if you are building a house, repeatedly applying paint alone will not necessarily make the house look better. I believe four weeks, or one month, is somewhat too short a period for patients to fully appreciate the changes and provide meaningful feedback on their treatment outcomes.

Dose combining the two devices place an excessive thermal energy burden on patients?

At our clinic, we frequently perform monopolar RF treatments, including VOLNEWMER, using 900 or even 1,200 shots, and the clinical responses have been very favorable. When treatments are performed using the standard energy settings recommended by the manufacturer, I do not consider approximately 600 shots to be excessive for an adult face.
To achieve the comprehensive facial improvement and lifting and tightening effects that patients expect, treatment needs to extend beyond the face to include the neck, submental area, areas behind the ears, forehead, and hairline. Realistically, I do not believe that 300 or even 600 shots are sufficient to cover all these areas adequately. Therefore, I do not consider adding microneedle RF treatment to a patient-acceptable number of monopolar RF shots to be excessive.
For VOLNEWMER, I typically use an energy setting of 2.55 and deliver up to 1,200 shots across the face, including the forehead and submental area. For QUADESSY, I generally consider approximately 650–700 shots appropriate for an adult face when performing two passes.

What improvements or developments would you like to see from CLASSYS in the future?

I would like CLASSYS to develop more detailed clinical guidelines that practitioners can readily refer to in daily practice. Even when treating the same concerns, such as enlarged pores or scars, clinical decisions may vary depending on skin thickness, facial volume, and previous treatment history. Beyond recommended treatment settings, I would like these guidelines to address specific situations in which treatment intensity should be reduced, which areas should be avoided, and what types of skin reactions should prompt treatment discontinuation. These considerations are extremely important in actual clinical practice. For monopolar and bipolar RF, I do not believe there is a strong need to develop many additional protocols, as the existing protocols are already well established. In contrast, although microneedle RF has been available for many years, treatment approaches still vary considerably among practitioners. There are many aspects of treatment that continue to rely heavily on individual clinical judgment. It would be particularly helpful to have comprehensive guidelines that address tip selection, needle depth, RF power, energy delivery duration, treatment volume, and clinical outcomes according to the anatomical area being treated.

Live Treatment Demonstration

We move to the treatment room for a live demonstration. Today's patient is a 30-year-old woman whose primary concern is skin sagging. I begin with VOLNEWMER, a monopolar RF device, to perform lifting and tightening across the entire face, including the forehead, with the goal of promoting collagen remodeling. Immediately after VOLNEWMER treatment, I proceed with QUADESSY, a microneedle RF device. The patient is also concerned about enlarged pores around the butterfly zone and nose, so I plan to apply PLLA to achieve potential pore-reducing effects.
First, I check the impedance. VOLNEWMER uses a water-cooling system that can lower the temperature to 12°C when the cooling function is activated. The key is to safely cool the skin surface while delivering energy evenly into the deeper dermal layers. I begin by performing approximately two passes across the entire face using the stacking technique.
Collagen levels begin to decline from around the age of 25. Women, in particular, may start to experience concerns about skin firmness around the mouth. Therefore, I extend the treatment to the perioral area and nasolabial folds, taking particular care when treating areas near the mental nerve. After performing two to three passes using the stacking technique, I assess the patient's pain level. Based on her response, I decide whether to switch to the rolling technique or continue with stacking. I ask the patient about her discomfort, and if she reports that the pain remains tolerable, I perform an additional pass using the stacking technique.
Immediately after completing VOLNEWMER treatment, I proceed with QUADESSY. For today's procedure, I have prepared the Silver Multi tip, which delivers bipolar RF energy alongside microneedle RF energy. By combining bulk heating with localized thermal coagulation from microneedle RF, this tip can provide favorable effects on enlarged pores. The Silver Multi tip also supports Quad Fusion mode. Using this function, I deliver PLLA into the skin. As PLLA is absorbed, additional collagen remodeling and improvement in enlarged pores may be expected. It is important to apply sufficient pressure to ensure that the tip maintains firm contact with the skin. Treatment should also extend to the jawline, as improving firmness along the jawline is important for achieving meaningful lifting effects in the anterior cheeks. Although it is extremely rare for the needles to penetrate to the depth at which facial nerves run, practitioners should remain mindful of the underlying anatomy. Areas near the mental nerve and infraorbital nerve may be more sensitive to pain, so additional care is necessary when treating these regions.
I then perform another pass across the entire face, rather than limiting treatment to areas with enlarged pores. Afterward, I apply PLLA again and switch the device settings to Quad Fusion mode. Quad Fusion is a technique in which the needles penetrate the same treatment area twice. It uses both negative and positive pressure to facilitate deeper penetration of skin boosters.
When performing Quad Fusion treatment, it is essential to ensure that the needles have fully penetrated the treatment area twice before moving to the next location. If the treatment interval feels too fast, particularly for practitioners who are not yet familiar with the technique, slowing down the interval setting can be a useful practical tip.