

**- Title of abstract**

The less painful lifting and volume recovering effect of the new and first strategy mono polar RF (VOLNEWMER®) using the water cooling method

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In order to improve skin sagging and elasticity, various surgeries, procedures, and chemical peels have been used in the past. However, they often involve long recovery periods and carry the risk of complications. As a result, research on anti-aging treatments using energy-based devices (EBDs) such as lasers, radiofrequency (RF), and ultrasound has been actively conducted since the 2000s. Among them, RF, particularly high-frequency RF, has been reported to improve wrinkles in the facial area by applying heat to the dermis. This led to a significant advancement in laser research and development, with monopolar RF laser receiving its first FDA approval as a treatment for facial wrinkle improvement in 2002.

To effectively deliver the appropriate heat to the dermis using monopolar RF, it is crucial to do so without causing burns to the epidermis. To rapidly lower the temperature of the epidermis, conventional monopolar RF devices utilize a gas cooling method. The specific feature distinguishing monopolar RF devices lies in when they apply cryogen spray from the gas cooling device, known as the dynamic cooling device (DCD), during the monopolar RF treatment—whether it is applied at the beginning, middle, or end. While gas cooling can cause a rapid decrease in temperature in the epidermis and upper dermis, it overlooks the significant role of the upper dermis. Until now, anti-aging treatments have mainly focused on how to increase collagen and elastin in the deep dermis, leading to the development of lasers in that direction.

VOLNEWMER® of Classys focuses on water cooling rather than the conventional gas cooling method. Instead of rapidly lowering the temperature of the epidermis, the goal is to lower the epidermal temperature to a level that protects it from burns while forming an appropriate thermal gradient between the upper and lower layers of the dermis, leading to an ultimate lifting and tightening effect. During the lecture, I am going to take a look at mono polar RF (VOLNEWMER®) using the water cooling method.