

DETAILS | By Garry R. Lee, MD



BEFORE



AFTER

Mid-Face Volume Replacement

Injecting JUVÉDERM VOLUMA XC with a blunt-tipped microcannula for mid-face lifting.

The quest for a longer-lasting hyaluronic acid (HA) cosmetic injectable wrinkle filler is over with the FDA's recent approval of JUVÉDERM VOLUMA XC (or simply, VOLUMA). The advantage of a long-lasting HA-based filler is that patients can be sculpted even months after injection—and if too much product is injected, it can be dissolved with hyaluronidase.

VOLUMA is FDA-approved to add volume to the midface. Though it is only indicated for patients with significant mid-face volume deficits, lifting the cheeks with VOLUMA can help to diminish the nasolabial fold and tear trough areas. In fact, investigators in clinical trials found an impressive 32% improvement in the Nasolabial Fold (NLF) Severity Scale—even though there was no treatment at all in the NLF's. Another serendipitous finding was that 53% of subjects reported moderate or better improvement of the tear trough area—again without specific treatment.

PATIENT SELECTION

At my practice, I begin by screening patients for contraindications such as multiple severe allergies, allergies to gram positive bacteria, and allergies to lidocaine—which is incorporated directly into VOLUMA. I then analyze the cheek to assess the *Ogee Curve*—the S-shaped curve from the cheekbone to the mid-cheek hollow. As we age, we lose this natural youthful curve. The midface flattens, the skin sags, and bony landmarks and concavity become prominent.

Next, I clean the skin and apply the topical anesthetic of choice for 10 or more minutes. Then, I wipe it off and use a surgical marker to draw in *Hinderer's Lines* to indicate the malar prominence and precisely mark the areas to place VOLUMA. *Hinderer's Lines* are two distinct lines which cross on the midface to delineate four areas: The first line is from the lateral canthus to the oral commissure; the second is from the tragus of the ear to the upper alar lobule of the nose (see photo 1). This results in four distinct zones and four distinct injection sites per Allergan's VOLUMA protocol.

Injection sites 1 and 2 are in the Zygomatic Arch above the periosteum. They lift the cheek laterally, setting an anchor point and establishing a fuller, rounder upper cheek. Injection site 3 is in the Anteromedial area, and injection site 4 is in the Submalar area. These injections sequentially add volume as needed.

It is important to inject in sequence because less product will be needed medially and below if the structural framework laterally and above is first established. To help pinpoint the precise injection sites, I like to apply traction just above the injection site and visually estimate the effect immediately below, a process I call *Traction Estimation*.

INJECTION TECHNIQUE

The injection process varies based on the type of needle used: traditional sharp needle or blunt-tipped microcannula. Whichever tool is used, the greater depth of injection to the



Photo 1: Hinderer's Lines are used to highlight the four distinct injection zones.

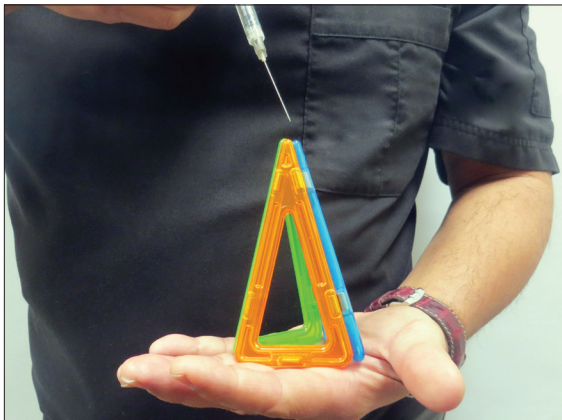


Photo 2: The Pyramid Technique maximizes stability at the base to fill out the cheeks and improve nasolabial folds and the tear trough area.

periosteum increases the risk of intravascular cannulation of blood vessels and resulting necrosis and embolization, so I recommend aspirating the syringe before injecting VOLUMA. Then wait three seconds to allow the lidocaine to take effect before completing additional injections.

Allergan recommends VOLUMA be placed a certain way to exact the greatest G' lifting ability: VOLUMA is injected supra-periosteal in injection sites 1 and 2 upwards to subcutaneous depth, much like a tent pylon holding up a pup-tent. Having tried the traditional approach as well as the pylon, the pylon wins hands down in delivering the greatest cosmetic filling for a given amount of VOLUMA.

For injection, I now exclusively use TSK Laboratories' Air-Tite STERIGLIDE MicroCannula instead of the traditional needle, because the blunt-tipped cannulas are less likely to penetrate blood vessels, nerves and muscle, resulting in far less bruising, swelling and pain. The MicroCannula has a blunt tip with a tiny port near the end where

cosmetic filler is extruded—and the tip is tapered for easier entry, with the port close to the tip for better placement precision. Beginners may experience an initial learning curve to insert the cannula smoothly without repeated and painful efforts to enter the Pilot opening, but once the technique is mastered, I know of no injector who regressed back to the traditional needle.

For VOLUMA, I use a larger 21-gauge 1-inch pilot needle to create an opening through the dermis, and then introduce the 27-gauge 1½-inch STERIGLIDE MicroCannula through it. I inject enough VOLUMA to sufficiently lift to 100% of the desired volume correction at the base of our chosen sites, instead of the usual horizontal superficial dermal/SQ junction fanning technique.

Typically, I do a vertical fan with a single pilot hole for each site, which I call the *Pyramid Technique* (photo 2). Instead of a straight up and down pylon or tent peg shape, I prefer to introduce the Pilot needle at the tip of the pyramid and fan downwards just above the periosteum in the shape of a miniature pyramid. This technique seems to maximize stability at the base, without creating a palpable presence superficially.

After aspirating the syringe, I inject retrograde as I withdraw the cannula to permeate VOLUMA into multiple tissue layers to create a more stable foundation. Finally, without removing the cannula from the subcutaneous plane, I fan downwards to repeat the process twice more

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at equal intervals to complete the pyramid. A fourth equidistant fan may also be added. After the injections, I massage and mold the VOLUMA to the shape desired for maximal aesthetic effect.

Alternatively, one may use a traditional needle instead of the blunt-tipped cannula, though I would make sure to use a 27-gauge 1-inch needle instead of the 27-gauge 1½-inch needle included with VOLUMA to better reach the periosteum. The traditional needle has the advantage of penetrating more readily so you do not have to create a tunnel (as with the microcannula), but the risk of cannulation is higher with the needle, and I find it causes more pain, swelling and bruising. I would also aspirate carefully before any needle injection using only minimal massage, as this will markedly increase patient bruising and swelling.

POST-TREATMENT CARE

After treatment, I apply ice for 30 to 60 minutes and ask patients to avoid self-massage and excessive exercise, heat and alcohol for at least one day. Common side effects include redness, tenderness and lumps. To prevent bruising and accelerate healing, I now recommend all my patients use Cearna OcuMend Anti-Bruising Healing Gels (cearna.com). Nevertheless, depending upon the amount of injection trauma to tissue, it may take a few days for one's appearance to be socially acceptable, especially for television, modeling or special occasions. A brief follow-up appointment a week later may be helpful for additional sculpting.

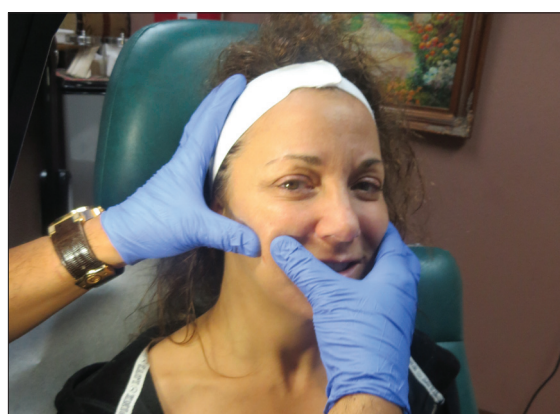
One VOLUMA treatment should lift the patient's cheeks for two years—unlike other cosmetic injectable fillers, which would require two or three treatments to last as long. My VOLUMA patients love their results and the potential longevity of treatment. But, the higher initial cost has led many of them to remain with JUVÉDERM Ultra Plus XC. Moreover, each practice will need to balance their initial income from VOLUMA patients against their absence from additional cosmetic filler treatments over the next two years.

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My clinical assessment of Allergan's hot new product? The handling characteristics are similar to JUVÉDERM Ultra Plus XC, but VOLUMA does require a trifle more pressure for extrusion. Being thicker, it is less malleable to massage but because it is injected well below the dermis—ranging from the supra-periosteum to subcutaneous plane—there is less need for sculpting. And it is this same stiffness that allows us to build the structural foundation we need.

The tradeoff with VOLUMA is that the deeper you go, the more natural the appearance, but you may need more product to achieve the desired effect. This may be off-set with better placement techniques. As I suspected, it works beautifully with the STERiGLIDE MicroCannula, which allows for precision placement with minimal patient discomfort and bruising.

The key with VOLUMA is that you need to carefully select your injection sites and master your injection technique to create the desired effect, or you will consume far too much product for the results obtained. My clinical impression is that VOLUMA is superior in its ability to hold



The vertical fan injection technique provides lift without creating a palpable superficial presence of filler. After injection, the physician can sculpt the VOLUMA to achieve the desired aesthetic effect.

its shape—but less hydrophilic than Allergan's JUVÉDERM Ultra Plus XC and Medicis' Perlane and Restylane, resulting in a bit less volume per syringe. Of course, the singular advantage is that results may remain for up to two years. **ME**

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