

Ultherapy Offers Visionary Solution for Skin Tightening

By Ilya Petrou, M.D., Contributing Editor

Aesthetic treatments with Ultherapy® from Ulthera, Inc. (Mesa, Arizona, U.S.) can safely and effectively achieve a significant lifting of the tissues in the face and neck, representing a paradigm shift in the way cosmetic surgeons manage this common indication. Powered by state-of-the-art, micro-focused ultrasound technology, the Ultherapy device allows surgeons to visualize and precisely deposit coagulation points deep in the tissues. By directly targeting the facial dermal tissues and the deep subdermal structures such as the superficial musculo-aponeurotic system (SMAS), physicians achieve non-invasive lifting and tightening of these tissues.

With the help of Ulthera's patented DeepSEE™ Precise Focused Ultrasound technology with Visualization (PFUV), the physician is able to visualize the target area in real-time during the procedure. This novel therapeutic feature provides the capacity to precisely deliver acoustic energy deep into the soft tissue with unparalleled precision, while sparing the intervening tissue.



Fabrizio Castagnetta, M.D.
Plastic Surgeon
Rome, Italy

For Fabrizio Castagnetta, M.D., a plastic surgeon in Rome, Italy, "Ultherapy allows the operator to have heightened control and achieve unprecedented results by depositing energy in the soft tissue. We can also create pin-point thermal coagulation."

Patients that may benefit most from Ultherapy include those exhibiting mild-to-moderate skin laxity, often seen in the face and neck regions such as around the brow, eyelids and the neck, as well as the submental area. Though surgical face-lifting remains the gold standard treatment approach in patients with extensive skin laxity, Ultherapy represents a non-invasive treatment option and solution for those patients who may not require, desire or are contraindicated for invasive cosmetic surgery. Ultherapy treatment typically takes less than an hour and leaves the patient with no downtime.

"Surely Ultherapy can replace a face-lift in patients with moderate skin laxity," stated Dr. Castagnetta. "Unlike surgical face-lifts that only improve the tightening of tissues, Ultherapy will effect an improvement in the texture of the skin, which will be more effective biologically. While we have seen remarkable aesthetic results in elderly patients with this device, those patients who have large amounts of excess skin and advanced skin laxity would likely benefit most from a traditional surgical face-lift."

Ultherapy is currently FDA approved for treatments of the face and submental neck area, and has a specific indication for eyebrow lifting. Significant aesthetic lifting and improvements can be achieved in periorbital wrinkles, lower eyelid skin laxity and puffiness under the eye, as well as mid and lower face skin laxity, marionette lines, jowls and submental laxity. Other currently off-label, non-facial indications on the body are being evaluated.



Before Tx



140 days after Ultherapy Tx

Photos courtesy of Fabrizio Castagnetta, M.D.

Offering several advantages over other skin tightening devices and technologies, Ultherapy provides a more targeted therapy and less painful treatments. While micro-focused ultrasound is not received without some varying degree of discomfort, the treatments are usually well tolerated and managed with any number of pharmacologic or non-pharmacologic options.



Before Tx



Four months after Ultherapy Tx
Photos courtesy of Fabrizio Castagnetta, M.D.

"The various layers of the skin cannot tolerate the amount of heat required to coagulate tissue using radiofrequency (RF), so the energy must be limited," noted Dr. Castagnetta. "With limited thermal energy, once the RF reaches the maximum depth of 3 mm to 4 mm, the tissue will only be vibrated, and without coagulation, the amount of neocollagenesis is marginal. Fractional lasers and pulsed light are excellent for skin resurfacing, but the maximum depth reached is about 1 mm, not deep enough to promote tightening and lifting."

Ulthera uses micro-focused ultrasound at a consistent depth of up to 4.5 mm, creating an array of thermal injuries in the SMAS, platysma and connective tissue layers, Dr.

Castagnetta explained. Ultherapy affects only the tissue at the focal point, leaving other tissues (including the skin surface) unchanged, all under ultrasound-based, real-time imaging.

A single Ultherapy treatment will set the regeneration process into motion. According to Dr. Castagnetta, the immediate treatment effect has about 20% to 30% efficacy due to shrinkage of the elastic fibers triggered by heat, but the full tissue remodeling effect will be seen gradually over three or four months when the synthesis of new collagen and elastin starts. This process explains the improvements seen in skin texture with a tangible effect of the overall rejuvenation.

Typically, a complete facial treatment with Ultherapy may take between 30 to 40 minutes. "Studies have shown that topical anesthesia is not a requirement, but an option, as treatments are not typically painless, but well-tolerated due to our comfort management protocol," Dr. Castagnetta said. "Topical anesthetic gel can be applied to the treatment area just prior to the procedure or sometimes we use a cooling device during the procedure to make treatments even more comfortable for patients."

"There is minimal to no downtime with Ultherapy and because the ultrasound energy bypasses the epidermis, treatments are safe," Dr. Castagnetta advised. "In my experience, approximately 10% of patients may develop a transient and mild erythema in the targeted area immediately after treatment, usually seen in the medial part of the lower face; however, this will typically subside within hours after the treatment."

In terms of skin tightening and lifting, the longevity of results may last up to at least two years, depending on the degree of skin laxity and lifting needed prior to the procedure. However, some patients may require a touch-up or maintenance treatment, particularly in elderly patients with extensive baseline skin laxity. Though most aesthetic patients requiring

facial lifting and skin tightening can benefit from Ultherapy treatment, Dr. Castagnetta feels that the best and most lasting results may be seen in those patients who are thin and have a clear complexion.

"Ultherapy delivers skin tightening and rejuvenation treatment effectively with consistent results thanks to its technology and ultrasound imaging capability," Dr. Castagnetta added. "As every cosmetic physician knows, there is an ever-increasing demand for even more non-invasive treatments; however, the current modalities often do not deliver in terms of poor and/or controversial results. In my opinion, Ulthera fulfills this void in a very elegant and efficient way."



Before Tx



One year after Ultherapy Tx
Photos courtesy of Fabrizio Castagnetta, M.D.