A Scientific Review

The DeepFrame Facelift™

A Structural Guide to Modern Facial Rejuvenation

An Anatomy-Driven Approach to Deep-Plane Facelift Surgery, Midface Elevation, and Neck Rejuvenation

BY ADAM LOWENSTEIN, MD

The DeepFrame Facelift™ is the proprietary multi-plane, multi-vector deep-structural facelift system developed by Adam Lowenstein, MD, based on over 15 years of facial anatomy and deep-plane surgical refinement. It represents the modern standard in restoring midface-lower face-neck continuity through sub-periosteal midface elevation, adaptive SMAS manipulation, and architecturally aligned vector reconstruction.

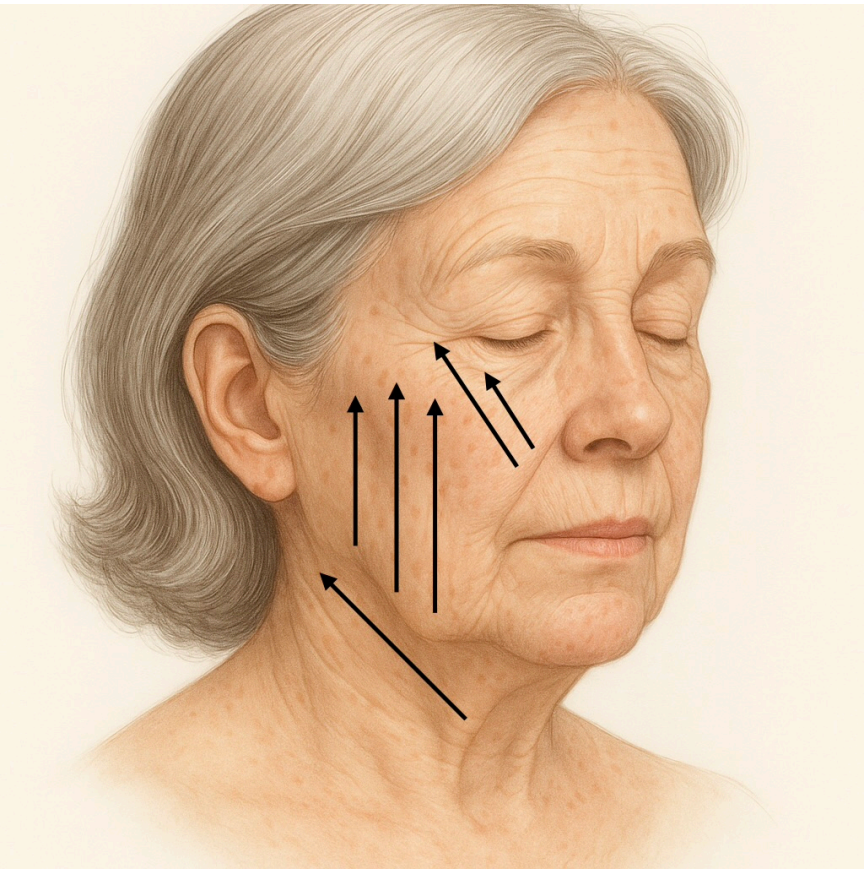
A scientific review of
The DeepFrame Facelift™

By Adam Lowenstein

WHAT IS THE DEEPFRAME FACELIFT™?

The DeepFrame Facelift™ is a proprietary, anatomy-driven facial rejuvenation system created by Adam Lowenstein, MD, that restores youthful facial architecture by repositioning the deep structural layers of the face, rather than tightening the skin or adding artificial volume. It integrates true sub-periosteal midface elevation, multi-vector SMAS and platysma manipulation, and continuous deep-plane mobilization across the midface, lower face, jawline, and neck. By correcting aging at the level of the bone, deep fat compartments, ligaments, SMAS, and platysma, the DeepFrame Facelift™ is a deep plane facelift that reestablishes natural tissue relationships, preserves facial identity, and produces balanced, long-lasting results without fillers or fat grafting.

Adam Lowenstein
1722 State Street
Suite 101
Santa Barbara CA 93101
USA
https://sbplasticsurgeon.com



THE DEEPFRAME PHILOSOPHY: A COMPREHENSIVE STRUCTURAL SYSTEM FOR MODERN FACIAL REJUVENATION

Over the last half-century, facelift surgery has advanced through several conceptual eras: from the earliest skin-tightening procedures, to the introduction of SMAS manipulation, to the development of deep-plane approaches that sought to correct descent of deeper tissues. Despite this progress, many contemporary facelift techniques remain incomplete. They may focus on one anatomical layer, emphasize a single type of SMAS maneuver, or rely heavily on superficial tension to create the impression of lift. As a result, outcomes often fail to restore the full structural harmony of a youthful face, and longevity remains limited when foundational relationships are not corrected.

The DeepFrame Facelift™ was developed to address these limitations through a fully integrated, anatomy-driven system. It recognizes that aging is a three-dimensional, multi-vectorial process involving bone remodeling, deep fat descent, SMAS elongation, midface ptosis, and neck structural changes. Rather than approaching each region with isolated techniques, DeepFrame treats the face as a unified biomechanical structure in which individual components- midface, lower face, jawline, and neck- must be repositioned in relation to one another. By doing so, DeepFrame restores the natural tension lines, curvature, shadow patterns, and

proportional relationships that define a youthful and authentic appearance.

A Unified Structural System

While various facelift techniques claim to rejuvenate the face, most address only fragments of the aging process. Some lifts rely exclusively on SMAS plication; others perform limited deep-plane dissection that mobilizes the lower face but leaves the midface structurally unsupported. High-SMAS variations can improve cheek contour but often fail to integrate the neck. Composite techniques elevate the skin and SMAS together, limiting vector control and preventing true shaping. Even deep-plane methods that effectively release the lower face may not reposition midfacial fat compartments in their correct vectors or may neglect the cervical mechanism entirely.

These approaches share a common limitation: they lack a comprehensive view of facial aging as a connected, load-bearing system. Aging does not occur in isolated pockets. Descent of the midface increases weight on the lower face. Jowl formation disrupts jawline definition. Platysmal laxity compromises the cervical angle. The neck, in turn, affects the way the lower face drapes, and the lower face affects the submandibular profile. Every region influences the next. When a facelift technique treats these regions separately, or only partially, results may be temporarily pleasing but structurally incomplete.

DeepFrame was created to solve this problem by addressing the face in its entirety, restoring the architectural relationships that existed before aging disrupted them.

The Three Structural Planes of DeepFrame

At the heart of DeepFrame is the recognition that different regions of the face require different depths of dissection, each chosen to restore the specific anatomic unit that has aged. DeepFrame employs three distinct but interrelated planes, each contributing to the final structural outcome

1. Sub-Periosteal Midface Elevation

One of the most defining components of DeepFrame is the elevation of the midface in the sub-periosteal plane. By lifting the cheek off the maxilla, Dr. Lowenstein restores the native prominence of the malar region, shortens the lower eyelid, and smooths the nasojugal and nasolabial transitions. This maneuver repositions the deep fat pads vertically rather than laterally, returning them to the convexity characteristic of youth. It is a key step that distinguishes DeepFrame from the majority of modern facelifts, which often leave the midface mostly untreated or attempt to camouflage midface descent with fillers. Elevating the midface structurally also reduces downward pressure on the lower face, improving jowl correction and enhancing jawline refinement.

2. Sub-SMAS Deep-Plane Mobilization

In the lower face, DeepFrame manipulates the SMAS to elevate the SMAS and lateral platysma as a unit. This produces powerful mobility of the jowls, marionette region, and lower facial fat compartments. By lifting these tissues in their natural vectors, DeepFrame restores mandibular definition and redistributes soft tissue volume that has descended below the jawline. Because the movement occurs in the deeper layers, skin tension remains low, preventing the swept, over-tightened appearance that plagued earlier facelift methods.

3. Vector-Specific SMAS Elevation

Rather than tightening the SMAS for traction, tension vectors are used as a sculptural technique to restore cheek convexity, refine mandibular contour, and reinforce deep-plane repositioning. This allows the surgeon to tailor the procedure to each patient's unique anatomy, adding support where tissues are thin, and folding or tightening selectively where volume or curvature must be restored. In this way, DeepFrame merges the mobility of deep-plane surgery with the finesse of SMAS contouring, creating harmonious, individualized outcomes without reliance on fat grafting or heavy volumization.

Vector Architecture: Reestablishing Natural Directionality

DeepFrame's strength lies not only in its choice of planes but also in its attention to vector science. Facial aging is fundamentally vertical, with tissues descending downward and slightly medially over time. Traditional facelifts attempted to correct aging by pulling laterally, which often led to distortion around the eyes, mouth, and nasolabial area.

DeepFrame restores tissues in the directions that oppose true gravitational descent. The midface is elevated vertically; the lower face is lifted vertically with a tailored oblique component; the jawline is refined using gentle superolateral support; and the neck benefits from a blend of vertical and superolateral vectors. These vectors flow continuously across facial regions, preventing the abrupt transitions or contour irregularities that arise when techniques mix directional pulls without anatomical rationale.

The result is a face that appears naturally supported- not repositioned against its will.

The DeepFrame Neck: Integral to the System, Not an Afterthought

DeepFrame treats the neck as an extension of the lower face rather than a separate problem to be managed superficially. Platysmal support is provided in superolateral vectors that reinforce jawline definition and re-establish the cervicomental angle. SMAS cervical mobilization smooths submandibular fullness and reduces band prominence without depending on aggressive skin excision or liposuction alone. Because the midface has already been elevated vertically, downward load on the neck is reduced, which enhances both the immediate result and long-term stability.

The DeepFrame neck is a structural reconstruction of the cervicofacial continuum.

Identity Preservation Through Structural Restoration

One of the most compelling features of DeepFrame is the way it preserves, and in many cases restores, a patient's natural facial identity. Patients often fear looking "different" after a facelift, and those fears are justified with techniques that rely heavily on skin traction or impose an exaggerated aesthetic ideal. DeepFrame avoids this by working entirely in the deeper structural layers, repositioning tissues to where they originally sat rather than creating artificial shapes or overly straightened contours.

Because DeepFrame respects the patient's skeletal proportions, fat distribution, and muscular dynamics, the

postoperative face appears familiar. The goal is always to achieve a version of the patient that looks rested, healthier, and naturally younger- not altered or stylized. This psychological harmony is a central pillar of the DeepFrame philosophy.

Avoiding the Pitfalls of Overfilling

In recent years, the widespread use of fillers and fat grafting has created a new aesthetic problem: the overfilled, heavy, or distorted face. While volume restoration has a role in some aspects of facial rejuvenation, it cannot substitute for structural repositioning. DeepFrame avoids the pitfalls associated with filler distortion or long-term fat graft hypertrophy by relying primarily on the patient's own repositioned tissues. When the deep fat pads of the midface and lower face are restored to their anatomical positions, much of the perceived need for volumization disappears. This results in a lighter, more natural appearance without the risk of an overstuffed or puffy look.

Longevity: Restoring Structural Integrity for Durable Results

DeepFrame achieves longevity not by tightening tissues harder but by repositioning deep tissues into their structurally favorable, anatomically correct locations. Skin is allowed to redrape passively without bearing mechanical load. Because gravitational vectors are addressed at their source- midface, SMAS, and platysma- the results maintain form for a decade or more, depending on lifestyle and genetic factors. Studies consistently demonstrate superior longevity for deep-plane methods that reposition rather than tighten, and DeepFrame enhances this further through its multi-plane integration and neck support.

Comparison With Other Facelift Techniques

Many modern techniques offer pieces of what DeepFrame accomplishes but do not assemble them into a unified, anatomically coherent strategy. SMAS-only approaches may improve the lower face but leave the midface unchanged. Deep-plane variations may elevate the lower face effectively but neglect shaping or vector finesse. High-SMAS techniques may address cheek descent but lack cervical integration. Composite lifts combine skin and SMAS movement in one layer, sacrificing vector control. Short-scar vertical methods may improve certain features but lack the power required for significant jowl or neck changes.

DeepFrame synthesizes the advantages of all these approaches while eliminating their weaknesses. It is intentionally designed to be complete- an entire philosophy rather than a procedural modification.

The DeepFrame Facelift™ stands as a comprehensive system of structural facial rejuvenation that unites advanced anatomical knowledge with refined surgical technique. Through sub-periosteal midface elevation, SMAS deep-plane mobilization, tailored SMAS elevation, an anatomically precise vector system, and thoughtful cervical integration, it restores the face as a cohesive unit-lifting, shaping, and supporting tissues in the directions and planes where youth naturally resides.

DeepFrame does not reinvent the face. It restores the face.

It does not depend on tension. It depends on architecture.

It does not disguise aging. It corrects its underlying structure.

In doing so, DeepFrame represents the modern standard of natural, long-lasting, anatomy-driven facial rejuvenation and an evolution toward a more thoughtful, structural, and patient-centered approach to the art and science of the facelift.

SCIENCE

1.

THE DEEPFRAME FACELIFT™ A Structural Guide to Modern Facial Rejuvenation by Adam Lowenstein, MD

Facelift surgery has undergone a profound evolution. Traditional techniques focused on superficial tightening-pulling the skin in lateral directions and excising excess. These methods often produced unnatural results, short-lived improvements, or distortions. Modern anatomical research has reshaped how surgeons understand facial aging: it is a **deep structural process**, involving bone resorption, ligament attenuation, deep fat compartment descent, SMAS elongation, and platysmal separation.

The **DeepFrame Facelift**™ represents an advanced, anatomy-driven method of facial rejuvenation that addresses these deeper layers directly. Through deep-plane mobilization, multi-vector elevation, ligament release, and integrated neck reconstruction, the DeepFrame technique restores youthful architecture while preserving the patient's identity and natural expression.

Introduction

Facial aging is a multifactorial, three-dimensional process. Early facelift techniques approached aging as if it were a problem of "loose skin," leading surgeons to focus on pulling and trimming superficial tissues. While these methods provided temporary improvement, they often failed to restore youthful architecture or maintain natural facial movement.

Anatomical research from the 1990s onward demonstrated that aging occurs primarily in deeper layers- the SMAS, deep fat compartments, and retaining ligaments- not the skin itself. The DeepFrame Facelift™ was developed specifically to correct these structural changes, restoring the face to its youthful configuration without tension or distortion.

Facial Anatomy in Layers

The face is often divided into different regions based on the lower layers of the tissue below the skin.

The Neck

The skin of the neck lies above a broad, flat muscle called the platysma. This muscle is a depressor of the lip, but in the youthful state forms the bottom of a sling that supports the neck skin and tissue against the structures of the floor of the mouth and deep muscles of the neck. Before laxity with aging, this tight sling allows for optimal neck, submental, and jawline definition.

The Lower Face

The lower face can be thought of as the region between the malar eminence, or cheekbone, and the margin of the mandible or jawline. The tissue deep to the skin here is the SMAS, or Subcutaneous MusculoAponeurotic System. This system of connective tissue holds much of the facial fat and overlies the facial musculature, nerves, and bones. With aging, this tissue becomes lax as it loses elastin and collagen, and sagging of this tissue and associated fat produces areas of depression below the cheekbone and jowls below the mandibular border, both associated with the aging face. (Rohrich et al., *PRS*, 2011)

The Midface

The midface is the region of the cheek where the zygomatic arch creates the malar eminence. The SMAS layer fuses with other deep tissue layers in this region, and the transitional area here, while critical to facial appearance, is most often ignored in classical facelift techniques. Aging causes a fall of the tissue of the cheek and midface, and this emphasizes the nasolabial folds, which are associated with aging as they deepen.

The Upper Face

The upper face consists of the eyelids, eyes, brow, and forehead. Typical tissue attenuation in this portion of the face often creates puffiness below the eyes, excess skin in the upper eyelid, and a lowering of the brow, as repeated muscular tension on the brow and forehead pulls the tissues inferiorly.

Structural Aging of the Face

Aging progresses in an orderly sequence from deep to superficial layers:

Bone Remodeling

The maxilla, mandible, and orbital rim undergo resorption and remodeling, reducing structural support. (Mendelson et al., *Plastic and Reconstructive Surgery*, 2008). This loss of bone creates contour changes, as well as alterations in the support of the soft tissue that overlies the bone, resulting in the smooth facial contours associated with youth.

Deep Fat Descent

Deep medial cheek fat, SOOF, and jowl fat shift vertically and inferomedially. (Gierloff et al., *Plastic and Reconstructive Surgery*, 2012). As these areas of fat descend, particularly over fixed regions such as the insertion of the orbicularis muscle around the eye, the nasolabial fixation, or the border of the mandible and associated ligaments, contour

irregularities that are associated with aging become apparent. Eye bags, deep nasolabial folds, and jowls are correspondingly associated with this aging process.

Ligament Weakening

Retaining ligaments stretch and elongate, reducing their ability to stabilize soft tissues. (Mendelson & Wong, *Clinics in Plastic Surgery*, 2016). As the structural scaffolding of the deep tissue of the face deteriorates, the soft tissue framework of the face can no longer hold the youthful contour.

SMAS Elongation

The superficial musculoaponeurotic system loosens with age, contributing to facial sagging. (Stuzin, *Clinics in Plastic Surgery*, 2018) This often occurs in a commensurate fashion along with the other structures of not only the face, but of the body. With age comes the inability to produce elastin and collagen at youthful rates, and these, along with other proteins, are needed to retain the strength of all types of connective tissue. As the SMAS support wanes, gravity's effects win and the sagging of tissues results.

Platysma Separation

Midline platysmal bands form as the muscle separates, contributing to neck laxity. Repeated use of the platysma lip depressor over time contributes to the seperation of the two bellies of this muscle complex as they pull laterally from the center. With chronic tone, the medial edges of this muscle hypertrophy and remain prominent, creating the bands below the neck that are associated with aging.

The DeepFrame Facelift uniquely addresses each of these structural aspects of the aging face, by repositioning the midface tissue over the maxilla, sculpting the SMAS manipulation to recreate the youthful contour and bolster weakening ligaments, and modifying the deep neck tissues as needed to recreate the youthful submentum.

DeepFrame Facelift Teatments of the Facial Regions

In order to maximize the postoperative appearance of each of these regions, the DeepFrame Facelift addresses them both individually and in concert.

The upper face is rejuvenated by resection of skin excess in the upper and lower eyelids

The midface is dissected in the deepest plane above the maxilla and elevated. This shortens the lower eyelid of the **upper face** (associated with youth) and elevates the soft tissue of the cheek. In doing so, the nasolabial fold of the **lower face** is effaced and made significantly less prominent.

The lower face is addressed in the DeepFrame Facelift by manipulation of the SMAS layer in the manner most appropriate for the natural anatomy of the individual patient. Parts of the SMAS may be resected, while other parts are folded upon itself in order to provide volume. The directional vectors of tension on the SMAS are more superior toward the central face and more oblique laterally, allowing the DeepFrame Facelift to reposition tissue commensurate with the direction of aging. Both vertical and lateral tension in different areas contribute to the tightening of the sling of **the neck** via tension on the lateral platysma.

The neck itself often benefits from a platysmaplasty to strengthen the bottom of the facial sling and address the banding that forms with time. (Bozola & Psillakis, *PRS*, 2016) Some patients may benefit from limited fat resection in the neck, though excessive removal of submental fat may cause skeletalization and untoward outcomes in this area.

Anatomy of the Deep Plane

The **deep plane** exists beneath the skin as the platysma in the neck, the SMAS layer, muscle, and the facial nerve branches in the face, and the fat and muscle of the midface and cheek. Associated with these structures are:

- deep fat pads
- fibrous septal connections
- facial retaining ligaments
- key musculature

Operations involving manipulations of this plane allow surgeons to reposition entire anatomical units without tension. (Hamra, *Aesthetic Plastic Surgery*, 1990). Creation of a smooth contour with deep tissues repositioned to their original location is key to creating a natural appearance that does not appear pulled or overdone. The “operated look” following a facelift is from poor repositioning of the deep tissue and excessive reliance of the skin to “pull” in the wrong fashion.

Deep-plane surgery provides the most natural mid-face elevation and avoids the distortion seen in superficial lifts.

The SMAS: Movement vs. Tightening

True facelifts in the lower face and neck must rely on **SMAS manipulation.** The SMAS can either be elevated, partially resected, and closed with repositioning, or it can be plicated, folded upon itself, and lifted without undermining.

While both manipulations can elevate the lower face and help rejuvenate the sling of the neck, choosing which option to use requires experience, expertise, and judgment. As each procedure can help remodel the structure of the face in different ways, the patient’s individual anatomy, goals, and facial form must dictate the manner in which the SMAS is repositioned.

Correct vectors of pull are as critical in the repositioning of the SMAS as the technique of manipulation. While classic thought suggested an oblique tension on the SMAS, the DeepFrame repositions the SMAS in the correct position using multiple vectors, rather than simply tightening it in one direction.

Common limitations In Traditional Facelifts:

Skin Tension

Superficial facelifts mistakenly rely on the skin envelope to provide structural support. “Mini Facelift” procedures are often gather and excise a small amount of skin without attending to deeper structural concerns. More extensive yet superficial facelifts my involve more significant undermining, but tension on the skin as the structural support leaves tension lines at this most superficial layer, leading to windswept appearances and short longevity of the procedure.

Incorrect Vectors

Even when deep tissues are manipulated, the direction of suspension can lead to distorted outcomes. Rotational vectors and single oblique vectors can produce unnatural tension lines on supportive structures, leading to facial distortion, particularly evident around the mouth and often at the jawline. The variable vector repositioning of the DeepFrame Facelift avoids these malpositions and returns each region of tissue to its original position.

Incorrect SMAS Manipulation

The SMAS can be manipulated in several different ways to either provide additional volume or remove excessive volume. Individualization of technique when repositioning

the SMAS is critical in achieving a non-operated appearance in the postoperative period. Adequate mobility of the SMAS must be assured, and the directional vector of tension for different regions of the SMAS must be evaluated and executed correctly to re-create the youthful contour. Independent mobilization and repositioning of the SMAS relative to the skin provides the most options for individualization of the DeepFrame Facelift, leading to best practices for natural outcomes.

Lack of Neck Integration

Proper treatment of the platysma may lead to patient dissatisfaction. The anatomy of the neck, fat content of the submandibular area, and baseline anatomical aesthetic of the neck all lead the experienced surgeon to the correct procedure. In patients wishing for the most severe cervical angle, proper platysmaplasty with associated band division will be required, while patients wishing for a more natural "aging with grace" may benefit from lateral tension alone, with or without skin elevation in the neck.

Fat Grafting

Fat grafting in the face is wrought with pitfalls, and as such is not utilized in the DeepFrame Facelift. Facial fat grafting rarely takes on a natural postoperative appearance, and because of variability in viability and subsequent growth of the fat grafts, long-term facial distortion following fat grafting can be very problematic. Facial contours are recreated by fat repositioning rather than fat grafting in the DeepFrame Facelift, allowing for a return of natural facial form rather than artificially inflating specific areas to mask aging atrophy.

The Evolution Toward Structural Lifting

As research clarified the true mechanisms of facial aging, modern techniques shifted toward:

- deep-plane lifts

- fat compartment repositioning
- ligament repositioning
- vertical lifting vectors

The DeepFrame Facelift is the synthesis of these anatomical advances. Individualization of the depth of dissection in different facial regions allows for deep plane tissue repositioning, while variability in vectors of tension provides specific directions of elevation for each of these facial regions. Pulling on the skin was once thought of as the best way to safely perform a facelift. Advances in the understanding of facial anatomy have now made deeper tissues that can be safely dissected and repostitioned to provide more natural outcomes and better, longer-lasting postoperative results. The DeepFrame Facelift utilizes best practices of multiple techniques, evolved over many years of honing postoperative outcomes.

Foundations of the DeepFrame Technique

DeepFrame is built on four pillars:

1. Deep-plane access
2. Full tissue mobility
3. Multi-vector elevation
4. Integrated neck rejuvenation

This systematic approach restores three-dimensional facial architecture. Access to the deep planes of the lower face and neck is provided by modified classical facelift incisions. Contouring these incisions under the sideburn, inside of the anterior ear, and along the posterior hairline allows for individualized skin tension without risk to hairline position, and placement of incisions in low-tension regions to reduce scarring.

Midface access is provided by the incision at the lower eyelid, while vertical suspension of the inferior/lateral

orbicularis to the temporal region is provided by the upper eyelid incision. Fixation browlifts, when necessary, are also accessed by the upper lid incision. These small incisions allow for significant repositioning of the deep tissue when it is adequately mobilized from adjacent planes of fixation.

Tension on the SMAS tissue in the vertical vector towards the medial face and lateralizing these vectors as the fixation points move towards the ear creates the most natural contours for repositioning fallen tissue towards its original position. Pivoting the fixation obliquely in the lateral neck allows for proper tension vectors at the platysma, while medial platysmaplasty, when required, sculpts the submental region.

Identity Preservation in Facelift Surgery

One of the most important aims of any facial rejuvenation procedure is to help patients look like a refreshed version of themselves rather than a different person. A subset of patients will request otherwise, and are not thought to be good candidates for this procedure. The DeepFrame Facelift™ achieves rejuvenation by repositioning tissues back to their youthful anatomical locations rather than over-tightening or over-stretching the skin. By working in the deep plane and recreating the structural relationships between fat, fascia and ligaments, the surgeon restores natural contours without distorting expression. Patients often remark that they recognize their own face in the mirror, simply rolled back by several years, because the technique respects the unique ratios and movements that define an individual's features.

It is not uncommon for patients to feel anxiety prior to surgery, and the concern that they will not look like themselves is a common fear. Patients should be shown before and after photos of previous patients who have

undergone the DeepFrame Facelift™to provide reassurance that facial distortion is highly unlikely.

Aesthetic Harmony and Proportion

Youthful faces display certain proportional relationships: the cheeks have a gentle convexity, the jawline sweeps cleanly from ear to chin, and the neck–chin angle is well defined. The DeepFrame Facelift™ pays close attention to these harmonious relationships. By lifting the midface in a vertical vector, refining the jawline through SMAS manipulation and platysma support, and sculpting the cervico-mental angle, it recreates the smooth transitions and balance of volumes characteristic of youth. The method recognizes that rejuvenation is not about erasing every line; it is about re-establishing the natural curves and shadow patterns that signal vitality.

The framework of the face is critical in shaping the contours seen externally. The key to facial rejuvenation is to provide these contours by restoring the initial relationships of the soft tissues that preceded the aging process. By lifting the midface in the deep subperiosteal plane, the DeepFrame Facelift™creates adequate mobility commensurate with that of the SMAS to allow for adequate soft tissue repositioning.

Avoiding Overfilling and Over-Tightening

Modern cosmetic practice has witnessed an increase in the use of fillers and fat grafting to combat volume loss. These adjuncts can lead to an unnatural fullness if they are used to compensate for sagging structures that should instead be lifted. DeepFrame focuses on repositioning the native fat pads and tightening the SMAS and platysma in their correct vectors, which reduces reliance on fillers. Because the deeper structures are restored to their pre-aged locations, there is less temptation to “inflate” sunken areas,

and thus the midface retains a soft, natural appearance rather than a puffy or overstuffed look.

Fillers should be avoided in the pre-operative period and used sparingly postoperatively if a natural outcome is to be expected. Pre-operative distortion of the facial soft tissue may lead to inappropriate assessment of the need for natural appearing contour restoration, and subsequent dissolution of filler may have negative effects on long-term outcomes. Fat injection has no role in the DeepFrame Facelift™and pre-operative fat injections should be avoided. Areas of fat necrosis can complicate dissection planes, but viable fat that has been injected into vascular regions may continue to grow, distorting the natural contours achieved by surgery.

Natural Movement After Structural Rejuvenation

A common fear among patients contemplating facial surgery is that their faces will appear stiff or frozen. The DeepFrame technique is designed to avoid such outcomes. By placing tension on the deep fascia and ligaments instead of the skin, the superficial tissues remain free to move and animate normally. Facial expressions arise from the interplay of skin, fat and muscle; when these layers glide over one another without being tethered by superficial tension, smiles, frowns and other expressions look authentic. The preservation of natural movement is a hallmark of deep-plane approaches and distinguishes structural lifts from older, skin-tightening methods.

Longevity of Structural Lifts

Because the DeepFrame Facelift™ corrects aging at its source- deep tissue support, ligament integrity, deep fat position and SMAS tone-the results tend to last significantly longer than those from procedures that merely tighten skin. Studies of deep-plane facelifts suggest a longevity of 10–15

years, as the repositioned structures resist gravitational descent over time. Lower tension on the skin reduces scar widening and prevents the gradual creep that can pull tissues downward after surgery. Consequently, patients enjoy an extended period of improved contour and need fewer secondary procedures.

Care should be taken when promising specific durations of any surgical procedure. Patients with variable predisposition to tissue laxity may age faster than others who have better catabolic synthesis of connective tissue proteins. Additionally, sun exposure and activity differences create unknowns that could change expectations mistakenly provided by the surgeon. The DeepFrame Facelift™should be considered a new reset point for facial aging, allowing for a new progression of the natural aging process from a point of rejuvenation and anatomic restoration.

Patient Selection for DeepFrame

Not every individual seeking facial rejuvenation requires a structural facelift. Ideal candidates display signs of aging that originate in deeper layers: descent of the midface and cheek fat pads, development of jowls, laxity of the neck with platysmal banding, and deepening of the nasolabial folds. These patients benefit most from a technique that repositions fat, tightens the SMAS and repairs the platysma. Those whose concerns are limited to superficial fine lines or minimal laxity may be better served by less invasive approaches, but when structural changes are present, DeepFrame offers the most comprehensive correction.

Complication Avoidance in Deep-Plane Surgery

Working in the deep plane raises understandable concerns about potential injury to delicate structures, particularly branches of the facial nerve. However, when

performed by a surgeon experienced in the technique, deep-plane facelifts can be very safe. The SMAS dissection plane, when SMAS elevation is required, runs beneath the SMAS and platysma but above the main nerve trunks, offering protection to the facial nerve. By keeping the dissection planes consistent and using gentle, controlled movements, the surgeon can elevate entire units of tissue without excessive bleeding or trauma. In cases where SMAS plication is performed to improve volume, the facial nerve remains even more distant and safe. In addition, the improved vascularity of the deep tissues promotes healing and reduces the risk of skin loss.

The deep plane dissection at the periosteum of the malar region is what allows elevation of the midface, and this maneuver is quite safe when done correctly. Lifting of the orbicularis off of the subperiosteal bone allows for dissection significantly below the muscles and nerves of the face, allowing for mobilization of the deep tissue without undue injury or tension on the overlying structures.

Postoperative Healing and Tissue Behavior

Because the DeepFrame Facelift™ distributes tension across deep structures rather than pulling on the skin, patients experience a different postoperative course than with older methods. There is generally less bruising with meticulous technique. Swelling follows a predictable pattern, improving shortly after surgery and then resolving steadily over several weeks. Scars are thin and often inconspicuous, lying in natural creases or hair-bearing areas. Importantly, the early results look natural; there is no tight-shiny appearance, and patients can often resume public activities sooner because they do not look radically altered. Our rule of thumb for presentation is, “Two weeks after surgery you can

see your friends, take three weeks before seeing your enemies."

Outcomes and Longevity

The hallmark of a successful structural facelift is the recreation of youthful curves and smooth transitions between facial regions. The DeepFrame technique restores cheek projection, refines the jawline, and tightens the neck while maintaining continuity across these areas. By redistributing volume rather than adding it, the face appears balanced and vibrant without heaviness. Because the underlying architecture is corrected, these outcomes remain stable for many years. Rather than seeing a gradual return of sagging just months after surgery, patients maintain their improved contours for a decade or more.

Aging of tissue remains individualized and variable, however, and is based on genetics, age, sun exposure, and activity. As mentioned above, promising outcome longevity term is a marketing technique that should be avoided, and the DeepFrame Facelift™should be considered a new reset point for subsequent gentle aging.

Patient Satisfaction and Psychological Considerations

Long-term satisfaction after any aesthetic procedure depends not only on the physical result but also on how well that result aligns with the patient's self-image. Studies of facelift satisfaction consistently show that patients prefer an outcome where they recognize themselves, merely rejuvenated. The DeepFrame approach dovetails with this psychological need by prioritizing identity preservation. Patients feel that they look rested and vibrant yet retain their familiar features. The boost in self-confidence and sense of well-being that comes from looking like a refreshed version of

oneself is a major contributor to the high satisfaction reported with structural lifts.

Comparison With Other Modern Techniques

Several other facelift techniques seek to improve upon traditional skin lifts. SMAS facelfits alone may improve the lower face and neck, but tend not to harminize with the cheek and lower lid without midface attention. High-SMAS and MACS lifts offer some vertical elevation but may not address ligamentous attachments comprehensively. Short-scar lifts limit incision length but can be constrained in their ability to reposition deep tissues fully. Superficial-only techniques produce temporary improvements but often fall short in longevity and naturalness.

Composite facelifts are often called deep plane facelifts, but refer to a sub-SMAS dissection while keeping the superficial SMAS fused to the skin, repositioning both together. This version of the deep plane facelift does not allow for variable vector tension for the SMAS vs the skin, and therefore cannot provide adequate tissue repositioning of the skin and deep tissue as these planes cannot be moved in different directions.

The DeepFrame Facelift™ differentiates itself by combining deep-plane midface dissection, multi-vector SMAS manipulation and integrated neck work, yielding superior mid-face elevation, more natural outcomes and longer-lasting results.

DeepFrame As a Comprehensive System

Rather than being a single maneuver, DeepFrame is a cohesive system built on anatomical accuracy, structural restoration and customization. It respects the varied depths and vectors needed in different facial zones, blends midface,

lower face and neck rejuvenation, and allows the surgeon to tailor the amount of lift, excision or plication to the individual's anatomy. Its evidence-based framework draws from decades of research into facial aging, ensuring that each component of the operation contributes to a harmonious, long-lasting result. This comprehensive philosophy sets it apart from piecemeal approaches that may address only one aspect of facial aging.

The DeepFrame Facelift™ embodies the evolution of modern facial rejuvenation. By treating the deep structures—bone, ligaments, fat compartments, SMAS and platysma—as the true origin of facial aging, it restores youthful architecture without erasing individuality. The technique's multi-vector approach, deep-plane access and integrated neck rejuvenation produce natural movements and proportions, reduce reliance on fillers or tight skin tension, and deliver results that endure for many years. In a field where subtlety and longevity are prized, the DeepFrame Facelift represents an advanced, anatomically grounded method capable of meeting contemporary patients' expectations for looking like themselves, simply years younger.

References

1. Mendelson BC, Wong CH. "Changes in the Facial Skeleton With Aging: Implications for Facial Rejuvenation." *Clin Plast Surg*. 2016.
2. Gierloff M et al. "Deep Fat Compartments of the Face: Anatomy and Clinical Implications." *Plast Reconstr Surg*. 2012.
3. Rohrich RJ, Pessa JE. "The Fat Compartments of the Face: Anatomy and Clinical Implications." *Plast Reconstr Surg*. 2007.
4. Hamra ST. "The Deep-Plane Rhytidectomy." *Aesthetic Plast Surg*. 1990.

5. Stuzin JM. “The SMAS and Facial Rejuvenation.” *Clin Plast Surg*. 2018.
6. Shaw RB et al. “Aging of the Facial Skeleton.” *Plast Reconstr Surg*. 2011.
7. Bozola AR, Psillakis JM. “Rejuvenation of the Cervicofacial Region.” *Plast Reconstr Surg*. 2016.
8. Little JW. “Longevity of Facelift Results.” *Aesthetic Surg J*. 2008.
9. Swanson E. “Facelift Patient Satisfaction.” *Plast Reconstr Surg*. 2013.
10. Moore J et al. “SMAS Plication vs. Deep-Plane.” *Aesthetic Surg J*. 2019.

2.

DeepPlane is not One Technique: Understanding DeepFrame's Layer-by-Layer Strategy

Introduction

The term *deep plane* has become so widely used in aesthetic surgery that it now means everything and nothing at once. It appears in marketing materials, on social media, in consultations, and even in academic discourse as though it refers to a single, universally agreed-upon surgical maneuver. In reality, the phrase is often applied inaccurately, sometimes to operations that genuinely access the deep structures of the face, and sometimes to techniques that never truly reach the planes implicated in midface aging. This ambiguity has created confusion for patients and practitioners alike, reducing a sophisticated anatomical philosophy to a slogan.

But deep-plane surgery is not one operation, one maneuver, one depth of dissection, or one pattern of tissue release. True deep-plane rejuvenation is a **structural concept;** a recognition that facial aging expresses itself across multiple layers of the face and that surgical correction must be applied to the layers where aging originates. It is this more evolved understanding that differentiates the DeepFrame Facelift™ from both traditional deep-plane lifts and superficial based approaches. DeepFrame does not treat the deep plane as a monolithic technique; it treats it as a **system** that integrates sub-periosteal midface elevation, adaptive SMAS manipulation, and regionally targeted deep-plane access.

DeepFrame also breaks from the dogmatic tendency to classify SMAS procedures into mutually exclusive categories. The SMAS is one anatomical layer, not three. It can be manipulated in different ways, depending on patient phenotype, SMAS thickness, vector requirements, and the interplay between the midface, lower face, and neck. For this reason, DeepFrame emphasizes **SMAS manipulation** as a flexible conceptual tool rather than labeling any single SMAS maneuver as universally required. This preserves surgical adaptability and avoids inconsistent claims that certain SMAS techniques always produce superior results.

Why Deep-Plane Surgery Cannot Be Reduced to One Technique

The belief that a deep-plane facelift is simply "the facelift that is performed under the SMAS" persists in both public and professional conversation. This reductionist idea ignores decades of anatomical research demonstrating that aging begins deep to the SMAS, extends across multiple soft-tissue layers, and often originates at the skeletal and deep fat levels.

Mendelson and Wong described how facial aging progresses from skeletal remodeling outward, altering deep ligaments, deep fat compartments, and midface fixation points long before the SMAS becomes visibly lax. Their landmark work in *Clinics in Plastic Surgery* established that the SMAS is not the sole determinant of aging, and therefore cannot be the sole layer targeted for true rejuvenation (Mendelson & Wong, 2016). Rohrich and Pessa further delineated the facial fat compartments, showing that the deep medial cheek fat, SOOF, and other midface elements descend in predictable patterns unrelated to superficial SMAS stretching (Rohrich & Pessa, *PRS*, 2007).

If aging occurs across these layers, then correction cannot be confined to a single depth of surgery. A classical sub-SMAS deep-plane lift improves some features, especially lower-face heaviness, but leaves the midface inadequately addressed unless the surgeon accesses the periosteal plane. Conversely, a superficial SMAS lift or short-scar procedure may tighten skin but does nothing to restore the internal vector architecture of the midface or neck. DeepFrame exists because no single maneuver is capable of addressing the full spectrum of anatomical aging.

Aging Across Layers: A Structural Argument for a Multi-Layer Deep-Plane System

One of the most compelling reasons the deep plane cannot be distilled into a single operation is that **each anatomical layer ages differently**, and the contribution of each layer to visible facial aging is unique. DeepFrame's layer-based system is grounded in these well-documented anatomical patterns.

1. Skeletal Remodeling

Shaw et al. demonstrated through CT imaging that the maxilla, pyriform aperture, and orbits undergo significant resorption with age, reducing anterior projection and flattening key buttresses that support the midface (Shaw et al., *PRS*, 2011). This skeletal change deepens the lid–cheek junction and indirectly accentuates the nasolabial fold. No SMAS-only maneuver can counteract a skeletal recession.

2. Deep Fat Compartment Descent

Gierloff's anatomical mapping proved that deep fat pads descend vertically and inferomedially, altering midface volume distribution and creating the characteristic hollowing and flattening associated with aging (Gierloff et al., *PRS*, 2012). This descent occurs in a plane deeper than the SMAS

3. SMAS Changes

The SMAS elongates and thins, particularly in the midface and lower face, contributing to jowling and pre-jowl sulcus formation (Stuzin, *Clin Plast Surg*, 2018). SMAS manipulation can restore vector support but requires flexibility because regional SMAS quality varies.

4. Platysmal Separation

Bozola and Psillakis documented midline platysmal separation and its progressive deterioration, leading to vertical banding and cervical laxity (Bozola & Psillakis, *PRS*, 2016).

5. Skin Laxity

Skin changes are largely a downstream result of deeper structural changes, not the root cause of aging.

These five layers; bone, deep fat, SMAS, platysma, and skin, cannot be corrected through a single depth of surgical intervention.

Sub-Periosteal Midface Elevation: The Foundation of Midface Restoration and True Deep Plane Facelift

The most profound aging changes occur in the midface, yet the midface is the region least improved by traditional deep-plane facelifts. Classical deep-plane lifts stop at the SMAS level and therefore cannot reposition deep medial cheek fat or SOOF.

Mendelson, Wong, and later Minelli in 2024 documented that the midface attaches directly to the maxilla through the periosteum and associated ligaments. As these structures weaken and the overlying fat compartments descend, only **sub-periosteal release** allows the surgeon to fully elevate

and re-establish midface support (Mendelson et al., *PRS*, 2008; Minelli et al., *PRS*, 2024).

This plane allows the surgeon to:

- Restore cheek projection
- Reverse the vertical elongation of the lid–cheek junction
- Reposition deep fat compartments vertically and superomedially
- Improve the nasolabial fold **without adding volume**
- Correct midface hollowing structurally rather than superficially

This is the layer where aging begins, and therefore the layer where DeepFrame begins its rejuvenation.

SMAS Manipulation: A Single Layer, Infinite Flexibility

DeepFrame views the SMAS as a **single anatomic structure**. The difference between techniques lies not in whether the SMAS is "elevated" or "plicated," but in how the SMAS is **manipulated** to achieve:

- vector correction
- reinforcement of fascial integrity
- contour shaping
- redistribution of tension
- support of deeper structures

This deliberate non-specificity avoids restricting the surgeon to one maneuver and acknowledges the wide variability in SMAS thickness, mobility, and behavior across the face. Stuzin's work emphasizes that the SMAS is not uniform and that facial regions respond differently to manipulation (Stuzin, 2018).

Cinar et al. (JPRAS, 2024) showed that combining deep-plane release with strategic SMAS manipulation produced

more natural contour and projection than either technique alone.

The approach of the DeepFrame Facelift™ preserves the functional and expressive characteristics of the face while restoring youthful structure, something no rigid, single-SMAS technique can guarantee.

Why No Single SMAS Technique Can Rejuvenate the Entire Face

When the SMAS is manipulated the same way across the entire face, whether always elevated or always tightened, distinct anatomical regions lose the nuanced correction they require.

- The **midface** requires deep structural correction at the periosteal level.
- The **lower face** requires vector control through SMAS manipulation.
- The **jawline** requires redirection of tension without flattening the midface.
- The **neck** requires restoration of the platysma sling, not blind tension.

Composite lifts, high-SMAS lifts, and classic deep-plane lifts all partially address one or two regions but fail to provide **the independent vector control and multi-layer reconstruction** offered by the DeepFrame Facelift™.

DeepFrame's Layer-Based Philosophy

DeepFrame is guided by three core principles supported by contemporary anatomical research:

1. Aging is multi-layered, and therefore correction must be multi-layered
   (Shaw 2011; Gierloff 2012; Mendelson 2008; Stuzin 2018)

2. Dissection depth must match the depth of anatomical change
(Minelli 2024; Mendelson 2016)
3. The SMAS is a single layer that must be manipulated flexibly, not doctrinally
(Stuzin 2018; Cinar 2024)

The DeepFrame Facelift™ restores the internal scaffolding of the face rather than relying on surface tension or excessive volume.

The term *deep plane* has often been used as if it denotes a single maneuver or a single facelift operation. In reality, true deep-plane rejuvenation requires a **structural understanding** of facial aging and a **layer-by-layer response** to those changes.

The DeepFrame Facelift™ is truly a deep-plane facelift in the way that the mid face is elevated at the sub-periosteal layer. But is is more than that, as it is a **deep-plane facelift system**, integrating:

- Sub-periosteal midface elevation
- Regionally appropriate SMAS manipulation
- Deep-plane access tailored to anatomical need

This system respects the fact that the SMAS is an anatomical structure requiring flexible manipulation, not rigid technique. By tailoring intervention to the layers where aging actually occurs, DeepFrame restores natural facial architecture, preserves identity, and produces long-lasting results that superficial or uniform SMAS approaches cannot match.

References

1. Mendelson BC, Wong CH. Changes in the facial skeleton with aging: implications and clinical applications in facial rejuvenation. *Clin Plast Surg.* 2016.

2. Rohrich RJ, Pessa JE. The fat compartments of the face: anatomy and clinical implications for cosmetic surgery. *Plast Reconstr Surg.* 2007.

3. Gierloff M, et al. Aging changes of the midfacial fat compartments: a computed tomographic study. *Plast Reconstr Surg.* 2012.

4. Shaw RB Jr, et al. Aging of the midface bony elements: a three-dimensional CT study. *Plast Reconstr Surg.* 2011.

5. Mendelson BC, et al. Surgical anatomy of the midcheek and malar mounds. *Plast Reconstr Surg.* 2008.

6. Minelli L, et al. Glideplane anatomy and the modern deep-plane facelift. *Plast Reconstr Surg.* 2024.

7. Stuzin JM. Facial aging: the anatomic basis. *Clin Plast Surg.* 2018.

8. Bozola AR, Psillakis JM. The platysma muscle: anatomical considerations and surgical applications. *Plast Reconstr Surg.* 2016.

9. Cinar C, et al. SMAS manipulation in conjunction with deep-plane release for midface rejuvenation. *JPRAS.* 2024.

10. Raggio BS, Patel A. Facelift surgery: anatomy, technique, and complications. *StatPearls.* 2023.

3.

The DeepFrame Facelift™: A Structural Reset for the Aging Face

Facial rejuvenation has advanced profoundly over the past several decades, shifting from an emphasis on superficial tightening to a deeply anatomical discipline grounded in the structural nature of facial aging. Early facelift techniques were designed around the premise that loose skin was the primary driver of an aged appearance. Surgeons excised excess skin, pulled the remaining envelope laterally, and hoped that surface tension would counteract deeper descent. Although these procedures could generate short-term changes, they did little to address the underlying anatomical shifts that define facial aging, and often produced the over-pulled or swept-back appearance that patients universally want to avoid.

Modern understanding tells a very different story. Aging affects the face in three dimensions. Bone remodels. Deep fat compartments descend and deflate. The SMAS elongates. The retaining ligaments lose their integrity. The neck's platysmal sling weakens. These changes occur across several layers, each contributing to the softening of facial contours, the deepening of folds, and the loss of youthful shape. Reversing these changes requires more than tightening- it requires restoration. This is the foundational concept behind the DeepFrame Facelift™, an anatomically precise method built around the understanding that the most natural results emerge when the deep structures of the face are returned to where they once were.

Adam Lowenstein, MD- The DeepFrame Facelift™-Santa Barbara

DeepFrame is not defined by a single maneuver. Rather, it is a system- a reproducible, individualized, multi-plane, multi-vector surgical philosophy that draws from advanced deep-plane dissection, SMAS manipulation, and true subperiosteal elevation in the midface. It restores youthful architecture without distortion, preserves identity, and achieves longevity by addressing aging at its source. Instead of stretching tissues into new shapes, DeepFrame restores them to the shapes they originally held, while keeping the patient's expression natural and their character preserved.

Limitations of Traditional and Superficial Facelifts

Traditional facelifts were built upon the assumption that tightening the skin could compensate for deeper changes. However, skin is not designed to bear tension; it is an organ of expression, sensation, and protection, not support. When placed under significant load, skin stretches, scars widen, and the tension ultimately dissipates. This is why patients who undergo surface-level lifts often find their results fading prematurely. The deeper tissues simply continue to descend beneath the tightened skin.

These older approaches also failed to consider that aging is driven from the skeleton upward. Maxillary resorption, mandibular angle remodeling, and changes in orbital shape alter how soft tissue drapes across the bony framework. Without repositioning the fat and SMAS layers, simply pulling the skin across an altered bony foundation does little to restore natural contours.

Another limitation of traditional lifts is their reliance on a single lateral vector of pull. Because facial tissues descend vertically and inferomedially, not laterally, pulling them sideways distorts natural topography. The cheek can flatten,

the mouth corner can be everted, and the midface often remains unchanged. This misalignment between aging vectors and surgical vectors is one of the key reasons superficial lifts fail to produce natural results.

Neck treatment in older methods was similarly superficial. Attempts to fix neck laxity by tightening skin alone resulted in contour irregularities, incomplete correction of platysmal banding, and poor long-term outcomes. The face and neck are anatomically continuous; when treated separately or superficially, one area often betrays the age of the other.

The shortcomings of these older techniques led to the development of the DeepFrame Facelift™, a modern strategy that respects anatomy, corrects structure, and creates results that evolve naturally over time.

DeepFrame as a Structural Reset

DeepFrame begins with the understanding that aging must be corrected at the level at which it occurs. The technique treats the face as a series of interconnected zones: upper, midface, lower face, and neck, each influenced by changes in the deeper scaffolding. Rather than focusing on the skin, DeepFrame prioritizes the repositioning and reinforcement of the underlying architecture.

Aging of the midface is one of the most visible and transformative components of the aging process. The descent of the medial cheek fat, and suborbicularis fat creates longer lid-cheek junctions, deepens the nasolabial fold, and flattens the malar region. The DeepFrame Facelift™ addresses these changes through true subperiosteal elevation. By releasing the soft tissues from their bony foundation, the surgeon can restore the cheek's natural projection without relying on fillers or fat grafting. This approach allows the tissues to move as they did in youth,

producing a shorter lid-cheek junction and softer transition from eyelid to cheek.

Similarly, SMAS elongation must be corrected at the level of the SMAS itself. Rather than simply stretching the skin over a loosened SMAS, DeepFrame modifies the SMAS directly. In heavier tissues or more advanced aging, sub-SMAS mobilization allows global repositioning of the lower-face and neck tissues as a unified anatomical unit. In patients with thinner tissues or where shaping is required, SMAS plication reinforces the structure through folding, allowing for finely controlled contouring. This dual approach, release where mobility is needed and plication where shaping is needed, is central to DeepFrame's customization.

The neck also receives deep-level reconstruction rather than superficial redraping. Platysmal separation and weakening contribute significantly to the aged neck. The DeepFrame Facelift corrects these issues by reestablishing platysmal continuity and supporting the cervicomental angle with deep-plane vector planning. This produces a smooth transition from jawline to neck without relying on skin tension, which dramatically improves longevity.

In every region of the face, DeepFrame is designed not to mask aging but to reverse its structural effects.

The Reimagined Deep Plane: Manipulation of the SMAS

Though the term "deep plane" is often used broadly, in many practices it is limited to sub-SMAS dissection alone. DeepFrame intentionally adopts a more comprehensive definition, recognizing that no single maneuver can correct every age-related change.

SMAS Manipulation

Classically described by Hamra, sub-SMAS dissection allows the surgeon to release retaining ligaments and mobilize entire facial units. This creates the ability to reposition the cheek, jowls, and platysma en bloc. It is particularly effective in patients with heavier tissues, pronounced jowling, or significant neck laxity. Plication provides a complementary tool, especially in areas where the SMAS is thin or where sculpting rather than global movement is desired. Plication allows shaping of the jawline, enhancement of lateral cheek contour, and reinforcement of support without unnecessary undermining. It is also an important technique for restoring youthful convexity.

Subperiosteal Midface Elevation

This is where DeepFrame diverges most significantly from typical deep-plane philosophy. True subperiosteal dissection in the midface frees the soft tissues from the maxilla and zygoma, making it possible to restore the cheek to its youthful projection. This cannot be achieved with skin tightening or superficial SMAS work.

By tailoring the method to each region, DeepFrame avoids the “one-size-fits-all” mistakes that have limited the effectiveness of many facelift techniques.

Midface Restoration: The Centerpiece of DeepFrame

The midface is responsible for much of the youthful expression of the face. A short lid-cheek junction, a well-projected malar region, and a soft transition from lower eyelid to cheek are hallmarks of youth. Aging in this area is complex, involving shifting fat compartments, ligamentous attenuation, and skeletal remodeling.

Traditional lifts often leave the midface untreated because their dissection does not extend deeply or vertically enough to mobilize this region. This is why older techniques frequently fail to improve nasolabial folds or the lower eyelid-cheek junction. Even many contemporary SMAS lifts do not adequately affect the midface because they operate below the zygomatic arch or are limited to superficial planes.

DeepFrame corrects this by releasing the midface at the periosteal level. The malar fat pad, SOOF, and deep medial cheek fat are mobilized as a unit, restored to their original positions, and supported by deep-plane vectors. The inferior orbicular muscle itself is tightened, directly reducing the length of the lower eyelid. This approach produces improvements that cannot be replicated by fillers, which add volume but do not restore structure.

The result is a natural, expressive midface with youthful projection, and no signs of artificial overfilling.

SMAS Techniques in Harmony

The DeepFrame Facelift™ recognizes that sub-SMAS dissection and SMAS plication are not competing philosophies, but complementary tools. Aging is not uniform. Tissue thickness varies not only between patients but within the same face. A region requiring wide release on one patient may require shaping on another.

Sub-SMAS dissection provides mobility and release, freeing the structural units of the face to move. Plication refines, reinforces, and restores curvature. These approaches allow the surgeon to reposition deep tissues per the needs of each individual without over-pulling and to contour without flattening.

The Science of Vector Planning

The direction in which tissues are moved is as important as the layers in which they are treated. Studies of facial glide planes and ligamentous anatomy have shown that aging does not occur in a single direction. The midface descends inferomedially, the lower face elongates vertically, and the neck softens laterally and inferiorly.

DeepFrame restores tissues according to these anatomical pathways rather than correcting them with a single oblique pull.

In the midface, tissues are elevated vertically, recreating youthful contour without lateral distortion. In the lower face, SMAS units are repositioned along an oblique superior vector to sharpen the jawline and correct jowling. The neck receives lateral and superolateral support to reestablish the cervicomental angle without tension.

Vector harmony is one of the core reasons DeepFrame provides natural results without distortion.

Integrated Neck Reconstruction

The neck is often the area where facelifts fail. When the neck is treated superficially or as an afterthought, platysmal bands persist, skin buckles beneath tension, and the jawline remains poorly defined.

DeepFrame treats the neck as a structural component of the lower face. The platysma is tightened in continuity with the SMAS. The cervicomental angle is restored not by pulling but by repositioning. Medial bands, when problematic, are addressed directly with plication techniques.

This produces a seamless, youthful transition from face to neck, with results that last because they come from deep support, not surface manipulation.

Identity Preservation

Perhaps the most important hallmark of the DeepFrame Facelift™ is that patients continue to look like themselves. Their identity is preserved because the anatomy is restored, not altered. The face maintains its natural shape, expression, and movement.

This is achieved by avoiding skin tension, preserving natural fat, respecting an individual's unique aesthetic proportions, and using vectors that align with natural anatomy. Patients emerge looking refreshed, recognizable, and authentically themselves.

Longevity Through Structural Correction

DeepFrame creates long-lasting results because it corrects the deep structures that cause aging. By reinforcing the SMAS, reestablishing midface support, treating platysmal weakening, and redraping skin without tension, the results age slowly and naturally. Many patients experience a decade or more of improvement, and ongoing aging occurs in harmony with the surgically restored foundation.

The DeepFrame Facelift™ represents a modern, anatomically grounded philosophy of facial rejuvenation. It recognizes that aging occurs in layers, directions, and regions that cannot be corrected by single-plane or single-vector methods. By using SMAS dissection, SMAS plication, and true subperiosteal midface elevation, DeepFrame restores the face's structural relationships with precision. It preserves identity, enhances expression, and produces the most natural and durable results possible.

The DeepFrame Facelift™ is not a variation on older techniques, it is a structural reset based on the most advanced understanding of facial anatomy and biomechanics. It is the modern standard for patients who want results that reflect who they are, at their most youthful and authentic.

References

1. Raggio BS, Patel BC. *Deep Plane Facelift.* StatPearls Publishing; 2023.
2. Cinar F, et al. “Integrating SMAS plication and deep plane techniques in facelift surgery.” *J Plast Reconstr Aesthet Surg.* 2024.
3. Minelli L, et al. “Anatomy of the Facial Glideplanes, Deep Plane Spaces and Their Relevance for Facial Rejuvenation.” *Plast Reconstr Surg.* 2024.
4. Awad YZ, et al. “Comparison between Superficial and Deep Plane Facelift: Meta-analysis.” Zagazig Univ Med J. 2025.
5. Shauly O, et al. “Evaluating Facelift Complications and Effectiveness of SMASectomy, SMAS Plication, and Deep-Plane Facelift Techniques.” *Plast Reconstr Surg.* 2021.
6. Perkins SW. “The Evolution of the Extended SMAS-Biplanar Deep Plane Rhytidectomy.” *Facial Plast Surg.* 2024.

4.

DeepFrame vs. Overfilling: Restoring Midface Youth Without Artificial Volume

Midface aging has become one of the most widely misinterpreted phenomena in modern aesthetic medicine. Over the last fifteen years, the nonsurgical space has placed extraordinary emphasis on “volume replacement,” particularly in the form of hyaluronic acid fillers, and, in surgical practices, on autologous fat grafting to inflate areas perceived as hollow. These techniques became popular because they are relatively easy to perform, offer immediate gratification, and appear conceptually intuitive: if the face looks deflated, adding volume should solve the problem. Yet this premise is fundamentally flawed. True midface aging is not a process of simple deflation, it is a structural descent, a biomechanical shift of deep tissues away from their youthful skeletal support.

In youth, the midface is defined by a gentle, convex arc that transitions smoothly from the lower eyelid into the malar region and then into the nasolabial and perioral areas. This shape is created not by superficial fullness but by deeper relationships: the projection of the maxilla, the position of the SOOF and deep medial cheek fat, the tension and support of the SMAS, and the stability of the periosteal platform. Aging disrupts each of these elements, and the result is predictable: flattening of the cheek, a lengthened lid/cheek junction, a deepened nasolabial fold, and descent of volume toward the jawline. Injecting volume into this system does not restore its architecture; it distorts it.

The DeepFrame Facelift™ is built on a structural philosophy that rejects overfilling as a primary modality for midface rejuvenation. Instead, it restores the cheek's natural contour by repositioning the patient's own tissues through sub-periosteal midface elevation, SMAS manipulation in the lower face, and anatomically correct vector alignment.

The Structural Reality of Midface Aging: What Actually Changes?

The contemporary filler-based narrative suggests that the midface hollows because volume is lost. However, high-resolution imaging, cadaveric mapping, and volumetric studies demonstrate a different mechanism.

Deep fat compartments descend, rather than disappear.

Landmark anatomical studies by Gierloff, Pessa, and Rohrich established the compartmentalization of facial fat and demonstrated that deep medial cheek fat, SOOF, and related fat pads shift inferiorly and inferomedially with aging, rather than atrophying in a global fashion[12]. As these compartments move downward, the convexity of the midface flattens, the nasolabial fold becomes more pronounced, and the lid–cheek junction appears longer. Importantly, the volume is still present- it is simply displaced.

The SMAS elongates and loses tone.

The SMAS is essential for midface support. Over time, its fibers lengthen and lose the elasticity required to maintain midface elevation. Stuzin's work on SMAS dynamics describes how this elongation contributes to jowling, midface flattening, and deepening of the nasolabial fold[3]. Adding filler on top of a stretched SMAS is analogous to adding weight to a sagging hammock: the structure does not improve; it becomes more burdened.

Skeletal remodeling reduces projection and undermines soft tissue support.

As documented by Mendelson, Wong, and Shaw, the maxilla undergoes involution, the pyriform aperture widens, and the orbital rim retrudes with age[45]. These bony changes diminish forward projection and reduce the platform that deep fat compartments rely upon. Fillers placed atop this altered foundation cannot recreate bone projection nor compensate for skeletal remodeling.

The nasolabial fold is a fixation point, not an absence of volume.

It is well-established that the nasolabial fold represents a zone of fascial anchoring. As tissues above descend, the fold becomes more pronounced[6]. Attempting to efface a tether with filler simply creates bulging and unnatural contour.

Together, these changes reveal a central truth: the midface ages structurally, not volumetrically. Treating it with volume alone misunderstands the pathology.

The Pitfalls and Limitations of Filler-Based Midface Augmentation

Despite widespread use, midface fillers often produce unnatural, heavy, or distorted results. These are not merely aesthetic problems—they reflect biomechanical incompatibilities between fillers and the aging facial framework.

Artificial fullness replaces natural contour.

Fillers inflate tissue compartments, frequently in anterior or medial positions that do not correspond to youthful anatomy. This produces the so-called “pillow face,” in which convexity is exaggerated, symmetry is unnatural, and facial landmarks become blurred. Studies in PRS and ASJ document high

complication rates when fillers are used to simulate structural support[7].

Added weight accelerates gravitational descent.

Descended tissues are already burdened. Adding filler increases mass, especially in the midface and nasolabial regions, worsening jowls, deepening folds, and further stretching the SMAS. Rohrich and Pessa demonstrate how weight changes influence the direction and severity of tissue descent[2].

Fillers distort natural mobility.

Unlike native fat pads that glide smoothly along well-defined facial glideplanes, fillers remain static relative to surrounding structures. Dynamic MRI studies have shown that fillers do not move physiologically under animation, creating stiffness or unnatural expression patterns[7]. With repeated treatments, this rigidity accumulates.

Fillers mask, but do not correct, midface descent.

Injecting beneath the tear trough or into the sub-orbicularis area attempts to hide the elongation of the lid–cheek junction. But this junction is elongated because the cheek has descended, not because a hollow needs to be filled. The result is often a double curvature: a bulge above a persistent trough.

Fillers interfere with surgical anatomy.

By blunting natural fat pads, altering contour, and thickening superficial layers, fillers obscure anatomical planes that surgeons rely upon. Surgical dissection becomes more challenging, and glideplane definition becomes less distinct.

The Problems with Fat Grafting: Unpredictability and Long-Term Distortion

Although autologous fat appears more "natural," midface fat grafting introduces its own set of limitations.

Fat graft survival is variable and unpredictable.

Systematic reviews show fat graft retention ranging from 20% to 80%[8]. Such variability inevitably leads to asymmetry, lumpiness, or unnatural contour. Where grafts survive excessively, late overgrowth can occur.

Fat grafts grow unpredictably with weight changes.

Adipocytes respond to caloric fluctuations. Weight gain, hormonal shifts, or edema can cause previously subtle grafts to balloon, producing excessively full or doughy cheeks.

Fat grafting does not reposition descended structure.

Fat does not elevate the midface; it only fills over descent. Patients often appear fuller but no younger, and sometimes older due to increased heaviness.

Fat grafts can disrupt deep-plane architecture.

When fat is placed in or near the deep compartments, it interferes with the natural anatomy that DeepFrame relies upon for structural correction.

For these reasons, DeepFrame does not use fat grafting as a primary tool for midface rejuvenation.

The DeepFrame Solution: Structural Rejuvenation Without Artificial Volume

DeepFrame corrects midface aging by restoring tissue position, not by adding mass. It does this through three core maneuvers: sub-periosteal midface elevation, SMAS

manipulation in the lower face, and anatomically appropriate vector design.

Sub-Periosteal Midface Elevation Repositions Native Volume

Sub-periosteal elevation is the cornerstone of DeepFrame midface rejuvenation. By releasing the malar fat pad, SOOF, and deep medial cheek fat from their aged position and elevating them back toward the zygoma and maxilla, DeepFrame restores the cheek's natural apex and re-establishes youthful facial curvature. Mendelson's and Wong's work on midface elevation establishes the periosteal plane as the only plane capable of producing durable, structural midface improvement[4], and Minelli's glideplane studies confirm this plane's role in vertical and superomedial repositioning[9].

This elevation restores:

- natural cheek projection
- smooth lid-cheek transition
- nasolabial softening from above
- midface convexity without artificial material

SMAS Manipulation Balances the Lower Face

Once the midface is structurally elevated, the lower face must blend harmoniously with the correction. DeepFrame employs SMAS manipulation to restore continuity along the SMAS-platysma sling, allowing the jawline to sharpen and the jowl to resolve while distributing tension across fibro-muscular layers rather than skin. Stuzin's work on SMAS anatomy supports the necessity of engaging this layer[3].

SMAS Manipulation for Contour Refinement

DeepFrame uses SMAS manipulation (a deliberately patient-specific combination of shaping, volumetric refinement, and vector adjustment) to enhance contour in precisely the regions where the SMAS is thin or where additional structural shaping is needed. Cinar's 2024 study in

JPRAS demonstrates how SMAS manipulation augments deep-plane elevation to provide volumetrically balanced contouring[10].

This achieves three-dimensional shape, without adding filler or fat.

Passive Skin Redraping Maintains Natural Movement

Because the deep tissues, not the skin, provide the correction, the skin simply follows. It is redraped without tension, preserving natural animation, eyelid position, and expression.

Why DeepFrame Results Look More Natural Than Filler-Based Techniques

DeepFrame creates natural results because it restores anatomy rather than simulating it.

Restoration of the original architecture

DeepFrame moves fat pads back where they belong, restoring youthful curvature identically to how it existed before aging.

No foreign material

Without exogenous fillers, the risks of migration, nodularity, stiffness, and late asymmetry are eliminated.

Natural vector alignment

DeepFrame mirrors the reversal of actual aging vectors-vertical in the midface, vertical-oblique along the SMAS, lateral in the neck, which are all consistent with structural studies[9].

Harmonization across aesthetic units

Unlike filler-based approaches that correct only one region, DeepFrame ensures the midface, jawline, and lid/cheek junction all rejuvenate coherently.

Psychological and Identity Preservation Advantages

Many patients express anxiety about appearing "overdone," "puffy," or like a different person. These fears are not unfounded: overfilled midfaces frequently distort identity. DeepFrame avoids this entirely by using only the patient's own tissues, restored to their natural anatomical position.

Research from Swanson demonstrates that patients strongly prefer results that maintain identity and that overuse of injectable fillers is a primary contributor to dissatisfaction[11]. DeepFrame restores youth while preserving individuality.

The dominance of filler-based midface rejuvenation has created a generation of patients whose faces appear swollen, burdened, or anatomically distorted. These approaches treat the midface as a superficial volume problem rather than a structural descent problem. In doing so, they often accelerate the appearance of aging.

The DeepFrame Facelift™ corrects midface aging at its anatomical origin. Through sub-periosteal elevation, deep-plane SMAS manipulation, and native-volume repositioning, DeepFrame restores the cheek's natural shape without adding a single milliliter of artificial volume. It harmonizes the midface, lower face, and jawline along true anatomical vectors and produces results that are youthful, durable, expressive, and unmistakably natural.

DeepFrame is not filler's alternative. It is filler's correction.

References

1. Gierloff M, Stöhring C, Buder T, Gassling V, Açil Y. Age-related changes in the midfacial fat compartments: a computed tomographic analysis. Plast Reconstr Surg. 2012;129(1):263-273.

2. Rohrich RJ, Pessa JE. The retaining system of the face: histologic evaluation of the septal boundaries of the subcutaneous fat compartments. Plast Reconstr Surg. 2007;119(7):2219-2227.

3. Stuzin JM. Anatomy of the superficial and deep facial fascias: clinical applications for facial rejuvenation. Clin Plast Surg. 2018;45(2):229-240.

4. Mendelson B, Wong CH. Anatomy of the aging face: volume loss and facial descent. Clin Plast Surg. 2016;43(3):371-384.

5. Shaw RB Jr, Katzel EB, Koltz PF, Kahn DM, Girotto JA, Langstein HN. Aging of the facial skeleton: aesthetic implications and rejuvenation strategies. Plast Reconstr Surg. 2011;127(1):374-383.

6. Pessa JE. Selected works on midfacial fat compartments, orbital aging, and skeletal remodeling. Plast Reconstr Surg. Various years.

7. Beleznay K, Carruthers JD, Humphrey S, Jones D. Avoiding and treating blindness from fillers: a review of the world literature. Aesthet Surg J. 2020;40(5):495-508.

8. Sinno S, Little JW, Oranges CM, et al. Systematic review of autologous fat grafting: safety, efficacy, and complications. Aesthet Surg J. 2016;36(3):348-358.

9. Minelli L, Cerciello V, Carangelo B, et al. Deep-plane facelift with extended malar release: outcomes and analysis of midfacial glideplanes. Plast Reconstr Surg. 2024;Epub ahead of print.

10. Cinar C, Kulahci Y, Gideroğlu K. Deep-plane facelift: an anatomic and clinical evaluation of results and SMAS-based contouring. J Plast Reconstr Aesthet Surg. 2024;Epub ahead of print.

11. Swanson E. The anatomic rationale for the deep-plane facelift: clinical measurements and patient-reported outcomes in over 400 cases. Plast Reconstr Surg. 2013;131(1):57-66.

5.

Midface Sub-Periosteal Elevation: The Missing Element in Most Facelift Techniques

Facial aging is often described in terms of laxity, sagging, and the deepening of folds, but nowhere is the impact of aging more visible, and more challenging to correct, than in the midface. This region, encompassing the malar fat pads, the deep medial fat compartments, the lower eyelid–cheek junction, and the soft tissues overlying the anterior maxilla, is central to the aesthetic identity of the face. The midface is not only a structural hub but an expressive one: it contributes to the appearance of vitality, warmth, and emotional coherence. Unfortunately, it is also the area most neglected or insufficiently treated in the majority of facelift techniques performed today.

Traditionally, facelift surgery has been oriented toward improving the lower face and neck. The jawline, jowls, and cervicomental angle are common priorities for both patients and surgeons, in part because these areas show early and unmistakable signs of aging. But while the lower face receives focused surgical attention, the midface is often relegated to superficial maneuvers- skin pulling, high-SMAS lifts, limited deep-plane releases, and the all-too-common reliance on fillers or fat grafting. These techniques may soften grooves or provide temporary volume, but they do not restore the underlying architecture that has descended with age. As a result, many patients who undergo otherwise skillful facelifts still retain a tired or hollow midface, a long lower

eyelid, or a deep nasolabial fold that undermines the overall rejuvenation.

The DeepFrame Facelift™ was developed precisely to correct this deficiency. Its approach to midface surgery is structured, anatomical, and unapologetically deep. At the heart of DeepFrame is **true deep plane sub-periosteal midface elevation-** a technique that lifts the cheek from the level of the bone, not the skin or superficial SMAS. By mobilizing the entire malar soft-tissue unit through subperiosteal release, DeepFrame restores youthful projection, reduces the appearance of midface flattening, and shortens the lid-cheek junction in a way that no superficial technique can replicate.

Sub-periosteal midface elevation is not a new idea; its anatomical basis has been articulated for decades in peer-reviewed surgical literature. Yet it remains underutilized because it requires fluency in deep anatomy, comfort with facial skeleton planes, and an appreciation for the structural drivers of aging. The DeepFrame Facelift™ incorporates this dissection not as an “advanced option,” but as a foundational element of the procedure. Without addressing the midface at its deepest aging plane, no facelift, regardless of sophistication in the lower face, can achieve harmonious, identity-preserving rejuvenation.

The Midface as the Structural Heart of Facial Youth

Understanding the necessity of sub-periosteal elevation requires an appreciation of how the midface ages. Midfacial aging is driven not by a single factor, but by a cascade of structural changes across several layers, each contributing to the overall collapse, hollowing, or flattening of the region.

Descent of Deep Fat Compartments

Multiple anatomic studies, including landmark work by Rohrich, Pessa, and Gierloff, have shown that the deep medial cheek fat compartments, including the SOOF (sub-orbicularis oculi fat) and deep medial cheek fat, descend with aging due to attenuation of their retaining septa. As these fat compartments migrate inferomedially, they create deepening of the nasojugal groove, flattening of the malar region, and elongation of the lower eyelid.

Superficial approaches cannot reverse this descent. Only periosteal-level dissection can lift these deep compartments as a unit.

Lengthening of the Lower Eyelid

Patients often describe that their eyes look “tired” or “sad,” even when the skin around the eyes has not significantly changed. This is due to the lengthening of the eyelid-cheek junction as the midface descends. The lower eyelid appears longer because the cheek has moved downward, not because eyelid skin has stretched. Only vertical elevation of the midface can shorten this junction and restore youthful periorbital proportions.

Loss of Maxillary Projection

Maxillary bone remodeling is a well-documented contributor to midface aging. As the maxilla resorbs, the anterior projection diminishes, flattening the midface and accentuating the nasolabial fold. Reversing this appearance requires elevating the soft tissues back to their original skeletal foundation.

Descent of the Malar Fat Pad

The malar fat pad, central to cheek contour, slides inferomedially from its youthful position atop the zygoma. This descent accentuates folds, deepens shadows, and contributes to facial disharmony.

Superficial or SMAS-based lifts cannot meaningfully reposition the malar fat pad without sub-periosteal release.

Attenuation of the Inferior Orbicularis

Like other tissues in the face, the muscle of the lower eyelid attenuates with time. Fatty bulging in the lower lid results as the overlying thin muscle loses it's ability to support the natural fat pad here. The aesthetic effect of this muscle weakness is fat pockets or fatty bulging of the lower lid, and lid lengthening. The DeepFrame Facelift™incorporates tightening of the lower eyelid muscle, recreating the support of the youthful muscular framework. This allows for the most natural contour of the lower lid and lid-cheek junction, rather than the simple removal of fat that is so commonly performed with lower lid surgery. Removing the fat alone does not repair the aging deficiency that occurs with the muscle layer, and over time leads to hollowing and a more aging appearance. The DeepFrame Facelift™provides further harmony and structural competence of the youthful architecture of this lower lid region.

SMAS Thinness in the Midface

As the SMAS transitions toward the periorbital region, it becomes increasingly thin. This renders SMAS-only techniques, including high-SMAS operations, insufficient for achieving significant midface elevation. The plane of aging lies deeper than the SMAS in this region.

These anatomical realities explain why the midface cannot be corrected effectively with superficial techniques, why fillers often produce unnatural results, and why the DeepFrame Facelift™ makes sub-periosteal elevation a mandatory step in facial rejuvenation.

The Difficulties Found in Other Face Lift Techniques

Despite its anatomical importance, the midface remains the least effectively treated region in facelift surgery. This failure stems from the limitations of traditional techniques:

1. SMAS Lifts Stop Too Low

Most SMAS lifts, including high-SMAS techniques, operate below the zygomatic arch. They can elevate tissues of the lower face but do not engage the deep midface, SOOF, or periosteal attachments. The cheek remains ptotic even if the jawline improves.

2. Skin-Based Lifts Flatten the Midface

Skin-centric lifts apply lateral tension, which often flattens the cheek and elongates the lower eyelid. The area most associated with youth, the lower eyelid-cheek junction, looks no better, and sometimes worse.

3. High-SMAS and MACS Lifts Lack Sufficient Depth

Even when the SMAS is elevated higher, the malar fat pad cannot be meaningfully repositioned without periosteal release. These techniques improve contour superficially but leave the structural midface unchanged.

4. Fat Grafting Masks the Problem

Fat grafting fills depressions but does not reposition sagging tissue. Because the underlying descent remains, added fat can make the face look heavy or rounded. Over time, fat grafts may grow, creating further distortion.

5. The Necessary Plane Is Ignored

Midface descent occurs at the level of the bone and deep fat compartments- planes untouched by surface tightening or SMAS manipulation alone. This is why lower facelifts may

look excellent while the midface continues to betray the patient's age.

Sub-Periosteal Midface Elevation: A True Structural Solution

Sub-periosteal elevation offers a distinct advantage over all superficial techniques: it releases the soft tissue from its skeletal foundation and restores anatomical relationships that cannot be reestablished through any other method.

Lifting the Entire Malar Unit

Sub-periosteal release allows the surgeon to mobilize all key midface components- SOOF, deep medial cheek fat, the malar fat pad, and the orbicularis retaining region- as a unified structure. This is the only way to reverse the natural direction of midface descent.

Shortening the Lower Eyelid

With the malar tissues elevated vertically and superomedially, the lower eyelid- cheek junction rises into its youthful position, producing a refreshed, natural periorbital appearance.

Naturally Reducing the Nasolabial Fold

Instead of pulling skin across the fold or filling it from below, sub-periosteal elevation moves the tissues that form the fold upward as a unit, softening the nasolabial contour without distortion.

Restoring Natural Midface Convexity

Because the soft tissues are returned to their position over the maxilla and zygoma, the cheek regains its youthful projection; something fillers attempt to mimic but cannot authentically recreate.

Minimizing the Need for Fat Grafting

True elevation often restores enough natural volume to make fat grafting unnecessary, avoiding long-term complications such as fat hypertrophy or unnatural fullness.

These benefits explain why sub-periosteal midface elevation is central to the DeepFrame Facelift™ and why superficial techniques routinely fall short.

Why Surgeons Rarely Perform Sub-Periosteal Elevation

Despite its advantages, the technique is underused due to:

- Insufficient training in deep anatomy
- Reliance on older techniques that emphasize the lower face
- Misconceptions about the safety of deep midface dissection
- Lack of familiarity with periosteal mobilization

Modern anatomical research has disproven many of these concerns, showing that the sub-periosteal plane is safe, predictable, and consistent across patients when executed properly.

How the DeepFrame Facelift™ Integrates Sub-Periosteal Midface Elevation

DeepFrame adopts a comprehensive and anatomically aligned approach to the midface.

Lower-Lid Approach for Precision

DeepFrame uses a lower-lid incision to access the midface periosteum. This allows direct visualization and precise mobilization of the orbicularis, SOOF, and deep medial cheek compartments. It also permits refined shortening of the lid–

cheek junction and tightening support of the lower orbicularis muscle.

Multi-Vector Elevation Matching Natural Anatomy

DeepFrame aligns its vectors with known glideplane architecture: tissues are elevated vertically and superomedially, counteracting natural inferomedial descent.

Harmonization with Lower-Face SMAS Work

SMAS plication or sub-SMAS dissection—chosen based on anatomy—blends seamlessly with the midface lift, ensuring a continuous contour from the periorbita to the jawline.

Natural Skin Redraping

Because the deep tissues carry the load of elevation, the skin redrapes without tension, creating an unoperated, naturally refreshed appearance.

Comparison to Other Modern Techniques

Every modern approach has strengths, but none restore the midface structurally:

- **High-SMAS Lifts:** Improve lower face but fail in the midface due to superficial plane.
- **MACS Lifts:** Useful for early aging but lack deep elevation.
- **SMASectomy:** Excellent for lower face but insufficient for midface descent.
- **Composite Facelifts:** Move skin and SMAS together but do not incorporate periosteal midface release, failing the mid-face rejuvenation.

Only DeepFrame integrates sub-periosteal elevation as a core step.

Avoiding Overfilling: A Key Benefit of the DeepFrame Approach

Overfilling has become a widespread and well-documented problem. Puffy, rounded, or distorted midfaces often result from attempts to correct structural descent with volume alone. Fat grafting carries the additional risk of long-term hypertrophy.

By restoring the patient's own midface tissue to its original position, DeepFrame avoids the need for significant volumization and prevents filler-related distortions.

Safety of Sub-Periosteal Elevation

Modern studies confirm that sub-periosteal midface dissection is safe when performed in true anatomical planes. Important safety features include:

- The periosteum acts as a protective layer
- Facial nerve branches run superficial to the dissection plane
- Vascular integrity is maintained
- Skin flap perfusion is preserved due to minimal surface tension
- Deep vessels remain protected, reducing bruising

These characteristics make sub-periosteal elevation one of the safer deep-plane maneuvers when executed with anatomical precision.

The midface is the structural centerpiece of youthful facial aesthetics, yet it is the region most often overlooked or inadequately treated in facelift surgery. Techniques that focus on the lower face and neck, or rely on superficial SMAS manipulation, cannot reverse the deep anatomic changes that define midface aging.

Sub-periosteal midface elevation is essential for restoring youthful contour, projection, and periorbital proportion. The DeepFrame Facelift™ elevates this technique from optional to indispensable, integrating it into a comprehensive structural approach that rejuvenates the face from the foundation outward.

By lifting the midface at the deep plane, DeepFrame restores the authentic, expressive, and harmonious appearance that superficial techniques cannot achieve. This is why the DeepFrame Facelift™ stands apart: it does not merely lift the face, it resets its architecture.

References

1. Gierloff M, Stöhring C, Buder T, Gassling V, Acil Y, Wiltfang J. “Aging Changes of the Midfacial Fat Compartments.” *Plast Reconstr Surg.* 2012.
2. Rohrich RJ, Pessa JE. “The Fat Compartments of the Face.” *Plast Reconstr Surg.* 2007.
3. Mendelson BC, Wong CH. “Changes in the Facial Skeleton With Aging.” *Clin Plast Surg.* 2016.
4. Mendelson BC et al. “Anatomical Basis for Midface Rejuvenation.” *Plast Reconstr Surg.* 2008.
5. Minelli L, et al. “Anatomy of the Facial Glideplanes, Deep Plane Spaces and Their Relevance in Rejuvenation Surgery.” *Plast Reconstr Surg.* 2024.
6. Raggio BS, Patel BC. *Deep Plane Facelift.* StatPearls Publishing; 2023.
7. Rohrich RJ, Ghavami A, Pessa JE. “The Aging Face: Volumetric Analysis and Filler Complications.” *Plast Reconstr Surg.* Various.

6.

Rebuilding the Lid-Cheek Junction: Why DeepFrame Restores the Most Critical Aesthetic Unit of the Face

Introduction

Among all regions of the face, the lid-cheek junction may be the single most important aesthetic landmark for conveying youth, vitality, and emotional well-being. The junction- the transition from the lower eyelid into the upper cheek- is short, smooth, and almost imperceptible in youth. It blends seamlessly, with no sharp shadows, no hollowing, and no visible demarcation separating the eyelid from the cheek. The result is an appearance that is rested, bright, and harmonious.

With age, however, this junction undergoes profound transformation. The cheek descends, the deep fat compartments lose their structural support, the lower eyelid elongates, and a depressional shadow forms at the tear trough. These changes create a look of fatigue, sadness, or premature aging, even in individuals who feel entirely energetic. Importantly, these age-related changes do not arise from excessive skin alone but from the downward migration of the midface itself. The lid–cheek junction lengthens because the cheek has moved away from its youthful platform.

Despite the central importance of this region, traditional facelift techniques often ignore the midface entirely. Skin-only

lifts, SMAS-limited facelifts, and lower blepharoplasty alone cannot restore the foundation that supports the periorbital–midface relationship. Meanwhile, the widespread use of fillers in the tear trough or midface attempts to correct the problem by adding material, despite the fact that the true issue is structural descent, not deficiency.

The DeepFrame Facelift™ stands apart as a rejuvenation system specifically engineered to restore the lid-cheek junction at its anatomical origin. Through midface sub-periosteal elevation, broad SMAS mobilization, and carefully selected SMAS plication, DeepFrame repositions the cheek and deep fat compartments back to their youthful configuration. In doing so, it shortens the lid-cheek junction naturally, recreates youthful convexity, and harmonizes the entire midface without superficial tension, distortion, or artificial volume.

The Youthful Lid-Cheek Junction: Anatomy, Proportion, and Support

The youthful eyelid-midface relationship is one of the most elegant and reliable signs of age. The characteristics of this region have been described extensively in photographic and anatomical studies.

1. Short Vertical Eyelid Height

In youth, the lower eyelid has minimal vertical height from lash line to cheek. Mendelson et al. (PRS 2008) emphasized that this short height is not simply due to tight skin but to robust underlying support.[1] The malar fat pad sits high on the maxilla, and the deep fat compartments (including SOOF) provide lift from beneath.

2. A Seamless Transition Without Demarcation

There is no meaningful boundary line between eyelid and cheek in youth. Light reflects uniformly, and shadows are soft.

The lid–cheek junction appears “effaced” because deep support is intact and the cheek is in close anatomical relationship with the lower lid.

3. Adequate Midface Projection

A hallmark of youth is the three-dimensional projection of the midface. Cheek prominence supports the lower eyelid from below, preventing hollowing and shadowing. Projection is provided by the malar fat pad, deep fat compartments, and the bony contour of the maxilla.

4. Stable Support of the Orbicularis Oculi Region

Deep fat compartments, particularly SOOF (suborbicularis oculi fat) and the deep medial cheek fat, buttress the orbicularis muscle. This support prevents lid malposition and reinforces the lid–cheek slope.

5. High Position of the Malar Fat Pad

In youth, the malar fat pad is anchored superiorly and laterally. It rests on the maxilla like a shelf, producing the classic ogee curve and preventing elongation of the lower eyelid.

These elements produce the hallmark of youth: a short, smooth, unified aesthetic unit between the lower eyelid and cheek.

How Aging Disrupts the Lid-Cheek Junction

Aging of the lid-cheek junction is multifactorial and structural. It is not a problem of excess skin but of descent, attenuation, and bone remodeling.

1. Descent of the Malar Fat Pad

Perhaps the most dramatic aging event is the inferomedial descent of the malar fat pad. Rohrich and Pessa’s

compartmental facial fat studies (PRS 2007) demonstrated that the malar fat pad shifts downward along predictable glideplanes.[2] This reduces midface projection and removes support beneath the lower eyelid.

2. Descent of Deep Midface Fat Compartments

SOOF and deep medial cheek fat also descend. When these deep compartments lose their lifted position, the lower eyelid loses its structural backing. This creates hollowing, shadowing, and elongation.

3. Inferior Shift of the Lid–Cheek Junction

As the cheek drops, the lid-cheek junction shifts inferiorly. The lower eyelid appears dramatically longer, even though the eyelid itself has not changed. This is one of the earliest and most impactful signs of facial aging.

4. Maxillary Bone Resorption

Shaw et al. (PRS 2011) highlighted that midface aging involves not only soft tissue changes but skeletal remodeling.[3] Bone resorption at the maxilla reduces anterior projection, further flattening the midface and contributing to tear trough formation.

5. SMAS Thinning Near the Orbital Region

The SMAS becomes thinner and less structurally reliable toward the lower eyelid. This means superficial facelifts cannot effectively lift the midface.

6. Formation of the Tear Trough

As deep compartments descend away from fixed orbital retaining ligaments, a depression forms. This “tear trough” creates the illusion of fatigue and sunkenness.

The result:

The lid–cheek junction becomes longer, deeper, and more

hollow, not because of skin laxity alone, but because the entire midface has shifted downward.

Why Fillers and Traditional Facelifts Fail to Restore the Lid–Cheek Junction

A. Fillers Add Volume but Do Not Restore Anatomy

When fillers are injected into the tear trough or midface, they do not reposition the malar fat pad, SOOF, or deep medial cheek fat. They simply expand a region that is structurally depressed.

Consequences include:

- **Heaviness:** More weight in an already descending midface
- **Flattening:** Obscures natural midface convexity
- **Distortion:** Fails to follow native anatomical curves
- **Unnatural animation:** Especially around the orbicularis region

Recent ASJ and PRS Global Open publications report long-term filler persistence and migration, which can permanently distort the midface.[4]

Key principle:
The lid-cheek junction is a structural relationship, not a hollow to be filled.

B. Lower Eyelid Surgery Alone Cannot Restore the Midface

Traditional blepharoplasty removes skin or orbital fat, but the problem lies below the orbit.

Blepharoplasty alone worsens:

- Hollowing
- Skeletonization
- Lower eyelid retraction

Removing fat from the eyelid when the cheek has descended only deepens the divide between these tissues.

C. SMAS-Only Facelifts Do Not Reach the Midface

Classic and even high-SMAS lifts stop below the zygoma. They cannot:

- Elevate the malar fat pad
- Reposition deep fat compartments
- Shorten the lower eyelid
- Improve the tear trough
- Support the orbicularis region

They improve the lower face and jawline but leave the lid–cheek junction untouched.

D. Short-Scar and MACS Lifts Use Skin Tension, Not Structural Support

These lifts rely on vertical skin tension and superficial SMAS tightening. They fail to:

- Rebuild cheek projection
- Engage the deep midface
- Address eyelid elongation
- Restore deep-fat support

They can even create an unnatural “pulled” appearance.

The DeepFrame Facelift™ Solution: Structural, Anatomical Restoration of the Lid-Cheek Junction

DeepFrame restores the lid–cheek junction by addressing midface descent at its true source. The technique integrates three key maneuvers:

1. Sub-periosteal midface elevation

2. Broad SMAS mobilization
3. Strategic SMAS plication

Together, these techniques restore the cheek's relationship to the lower eyelid.

Sub-Periosteal Midface Elevation: The Most Critical Component

Sub-periosteal elevation is the cornerstone of lid-cheek junction rejuvenation because it restores the cheek to its skeletal foundation.

The DeepFrame Facelift™ Repositions the Entire Midface as a Unit. DeepFrame elevates:

- The malar fat pad
- SOOF
- Deep medial cheek fat
- The superficial fat compartments

This restores the continuity of the lower eyelid and cheek.

The DeepFrame Facelift™ Shortens the Lower Eyelid Naturally

When the cheek moves upward, the eyelid height decreases. No skin is removed; instead, the eyelid regains support from below.

The DeepFrame Facelift™ Softens the Tear Trough

The tear trough diminishes because the tissues that once supported it return to their original location. Importantly, the inferior orbicularis oculi muscle that weakens and attenuates with age is reinforced, returning the lower orbital fat to its original position rather than resecting this fat to create further hollowness.

The DeepFrame Facelift™ Eliminates the Need for Volume or Fillers

The patient's own tissues provide all needed fullness. By restoration of the natural fat pads to their original position, the DeepFrame approach reduces the need for extraneous volume. In returning the natural pre-aging architecture to the face, further volumetric enhancement is un-necessary.

Minelli et al. (PRS 2024) demonstrated that true midface elevation requires deep-plane glideplane release.[5]. Mendelson et al. (PRS 2008) confirmed the structural mechanics of lid-cheek support.[1]

SMAS Lower-Face Elevation: Creating a Harmonized Face

Restoring the midface in isolation can produce imbalance unless the lower face is harmonized. SMAS manipulation integrates the entire face so that the restored midface blends seamlessly with the jawline. Benefits include:

- Smooth transition from cheek to jaw
- Balanced facial proportions
- Stable foundation for midface vector elevation

Raggio & Patel (StatPearls 2023) emphasize this synergy between deep-plane SMAS elevation and midface support.[6]

SMAS Plication: Sculpting, Not Filling

While deep-plane elevation restores position, SMAS plication refines shape and restores volume when and where it is needed. The benefits:

- Creates cheek projection without adding weight
- Defines midface curvature
- Avoids the heaviness of fillers
- Prevents distortion during animation

Cinar et al. (JPRAS 2024) demonstrated that combined deep-plane elevation with targeted SMAS plication produces superior volumetric shaping.[7]

Why DeepFrame Preserves Identity While Rejuvenating the Lid–Cheek Junction

- DeepFrame avoids the pitfalls of filler-based or superficial surgical interventions.
- No Foreign Volume Added: All rejuvenation occurs with the patient's native anatomy.
- Natural Convexities Are Restored- DeepFrame restores rather than fabricates the natural ogee curve.
- Expression Remains Authentic- Tension is borne by deep fascial structures, not skin. This protects facial animation.
- No Operated Appearance- The technique avoids lateral sweep, flattening, and over-tightening.
- Facial Proportions Are Maintained- The lid–cheek junction returns to a youthful configuration without changing identity.

Longevity: Why DeepFrame Outlasts Fillers and Superficial Lifts

- Structural Correction Is Durable: DeepFrame re-establishes ligamentous and deep-plane support that resists gravitational descent.
- Low Skin Tension = Longer Results: Low-tension closure prevents recurrence of eyelid elongation.
- Reprojected Cheek Maintains Support: When cheek projection is restored, the lid-cheek junction remains youthful for years.
- Natural Aging Is Reset: The patient ages from a younger baseline.
- No Filler Distortion Over Time: There is no risk of filler migration, persistence, or midface hypertrophy.

Summary: Why DeepFrame Is Superior for Lid–Cheek Junction Restoration

The lid–cheek junction is one of the most powerful determinants of facial youth. Its transformation with aging, elongation of the eyelid, flattening of the midface, deepening of the tear trough, creates disproportionate aesthetic impact. Yet traditional treatments such as fillers, lower blepharoplasty, and superficial facelifts cannot restore the natural periorbital-midface relationship. They treat symptoms, not structure.

The DeepFrame Facelift™ corrects the problem at its anatomical origin by:

- Elevating the midface in the sub-periosteal deep plane
- Repositioning deep fat compartments
- Restoring cheek projection
- Sculpting the SMAS to refine shape
- Harmonizing the midface with lower-face deep-plane adjustments

The result is a shorter, smoother, more youthful lid–cheek junction that looks entirely natural. No added volume. No unnatural tension. No alteration of identity.

The DeepFrame Facelift™ does not camouflage aging—it reverses its structural trajectory.

References

1. Mendelson BC, Wong CH. Anatomical Changes of the Lid–Cheek Junction. Plast Reconstr Surg. 2008.
2. Rohrich RJ, Pessa JE. The Fat Compartments of the Face. Plast Reconstr Surg. 2007.
3. Shaw RB Jr., et al. Aging of the Midface: Skeletal Remodeling. Plast Reconstr Surg. 2011.
4. Micheels P, et al. Hyaluronic Acid Filler Persistence. Aesthet Surg J; PRS Global Open.

5. Minelli L, et al. Deep Midface Glideplane Anatomy. Plast Reconstr Surg. 2024.
6. Raggio BS, Patel BC. SMAS Anatomy and Deep-Plane Facelift Techniques. StatPearls. 2023.
7. Cinar C, et al. Deep-Plane + SMAS Plication Synergy in Midface Shaping. JPRAS. 2024.

7.

The DeepFrame Approach to Cheek Projection and Malar Harmony

Introduction

Cheek projection is one of the principal determinants of youthful facial form. The malar region is the central structural landmark through which the orbit transitions into the maxilla, the deep fat compartments contour the midface, and the lines of light and shadow define facial vitality. In the young face, the cheek's anterior prominence creates a balanced curvature that supports the lower eyelid, shortens the lid–cheek junction, and distributes soft-tissue volume along vectors characteristic of youth. When this projection diminishes, even subtle changes produce an immediately recognizable alteration in expression: the midface appears flattened, the nasolabial fold deepens, the lower eyelid lengthens, and the overall countenance takes on a fatigued or deflated appearance. These changes occur independent of emotional expression; they are structural reflections of age-related descent.

Traditional facelift techniques were not designed to address this central problem. Limited-SMAS, high-SMAS, MACS, and skin-based lifts focus on the lower face and neck, leaving the midface either partially treated or untouched. They may sharpen the jawline, but they do not restore the periosteal relationship between the deep malar fat compartments and their skeletal foundation, nor do they correct the vertical vectors of midface descent. As a result,

the cheek frequently remains flattened even after an otherwise successful facelift. Patients often describe this discordance succinctly: “My jawline looks better, but my midface still looks tired.” This is not a failure of surgeon effort; it is a consequence of superficial methodology.

The DeepFrame Facelift™ was developed to resolve this longstanding limitation by reconstructing malar projection from the level at which aging occurs. DeepFrame uses sub-periosteal midface elevation to restore the cheek’s structural foundation, integrates SMAS mobilization to align the midface with the jawline, and applies SMAS manipulation for refined contour shaping. By repositioning native tissues rather than adding volume or relying on lateralized vectors, DeepFrame reestablishes malar harmony that behaves, moves, and ages naturally.

Anatomy and Mechanisms of Midface Aging

Skeletal Remodeling and the Malar Foundation

The zygomatic arch, zygomatic body, and maxilla form the osseous platform that determines midface convexity. Mendelson and Wong’s work demonstrates that the midface skeleton undergoes predictable remodeling with age, including maxillary resorption and inferomedial retrusion[1]. This skeletal atrophy contributes to diminished anterior projection and deepening of the nasolabial fold by reducing support for the overlying deep fat pads. Shaw and colleagues confirm that these bony changes reduce anterior malar projection and alter the orbital aperture, contributing to the longer lower eyelid characteristic of aging[2]. The skeletal component of midface aging is often overlooked, yet it is one of the foundational drivers of malar flattening.

Deep Fat Descent and Compartmental Shifts

Deep fat descent is now recognized as a primary determinant of midface aging. The deep medial cheek fat, SOOF, and premaxillary fat compartments descend along predictable glideplanes, altering the curvature and volume of the midface. Gierloff et al. demonstrated that these deep compartments shift inferiorly with age, independent of superficial fat changes[3]. Their displacement transforms a smooth convex cheek into a flattened or even concave contour. Rohrich and Pessa's compartmental mapping further confirms that deep fat descent precedes superficial deflation and is central to early midface transformation[4]. Without repositioning these deep compartments, true malar projection cannot be restored.

SMAS Attenuation and the SMAS-Platysma Continuum

The SMAS thickens in the lower face but becomes thin and relatively delicate as it transitions into the midface. Stuzin's analyses of facial aging highlight how SMAS elongation and the attenuation of its connections contribute to midface descent[5]. Because the midface SMAS is structurally insufficient to transmit lower-face vectors superiorly, SMAS-only lifts inevitably fail to correct the deeper midface descent. Furthermore, the SMAS-platysma continuum means that midface, lower face, and neck aging are linked. A midface that remains ptotic will disrupt the harmony between the cheek and jawline, producing an imbalanced postoperative result.

Lower Eyelid–Cheek Junction Migration

A key feature of youthful anatomy is the short lower eyelid-cheek junction. As deep fat compartments descend and skeletal and orbicularis support diminishes, the junction moves downward, elongating the lower eyelid and giving a tired or hollow look even without excess skin. This lengthening is structural, not due to skin. Only lifting the

cheek upward and inward can restore the youthful lid-cheek connection.

Skin as a Passive Envelope

Although skin quality changes with age, the most consequential midface transformations arise from deep structural descent. The skin reflects underlying changes but does not drive them. Skin-based lifts, therefore, provide only transient improvements because they fail to correct the skeletal and soft-tissue vectors of aging.

Combined, these factors- skeletal remodeling, deep fat descent, SMAS attenuation, and inferior migration of the lid-cheek junction- produce the characteristic flattening of the malar region. Successful restoration requires correction at each of these deeper layers.

Why Traditional Facelift Techniques Fail to Restore Cheek Projection

Superficial Vectors and Lack of Periosteal Control

Most conventional rhytidectomy techniques operate in superficial planes below the zygomatic arch. Limited-SMAS, high-SMAS, and MACS lifts rely on lateral or oblique tension vectors, which are mechanically misaligned with the native superomedial vector of midface aging. These techniques improve the jawline and lateral face but leave the midface structurally unaddressed. Without subperiosteal control of deep fat compartments, no amount of lateral tightening can restore true malar projection.

Insufficient Influence on Deep Compartments

Superficial SMAS techniques do not meaningfully influence the SOOF or deep medial fat. Because these

compartments are tethered to the periosteum, their descent cannot be corrected with superficial maneuvers. This explains why a traditional facelift yields a rejuvenated jawline but leaves the malar region unchanged, a mismatch patients perceive immediately.

Lateral Pulling Exacerbates Midface Flattening

Lateralized vectors flatten the cheek by tightening soft tissues laterally rather than restoring their vertical height. This contributes to:

- a longer lower eyelid
- worsening of the lid-cheek transition
- increased reliance on fillers to “compensate” for midface flattening
- an overcorrected or windswept appearance

These issues arise from vector misalignment, not lack of surgical skill.

Limitations of Composite Lifts

Composite lifts elevate the skin and SMAS as a single unit but do not provide the level of customization or depth needed for true malar restoration. They may improve lower-face support but do not reliably restore deep fat compartments to the periosteal platform.

Fillers and Fat Grafting Mask Descent Rather Than Correcting It

Injectables offer temporary improvement by augmenting a deflated contour, but they do not:

- shorten the lid–cheek junction
- restore the natural malar arc
- reestablish skeletal support
- provide vector correction

ASJ reviews highlight the long-term complications of excessive fillers, including distortion of facial identity,

granulomas, and abnormal tissue viscosity[6]. Fat grafting may help selected patients but cannot replace structural repositioning of deep compartments.

Absence of Deep Structural Repositioning

Traditional techniques fail because they do not operate at the level where aging occurs. Restoring malar harmony requires deep, multiplanar, anatomically aligned repositioning.

The DeepFrame Facelift™ Approach to Malar Harmony

DeepFrame achieves midface rejuvenation by treating aging as a structural, multilevel process. Its strategy integrates sub-periosteal midface elevation, the core of midface restoration, along with deep plane SMAS manipulation, harmonizing midface and lower face while refining contour and providing aesthetic continuity.

Sub-Periosteal Midface Elevation: Rebuilding the Foundation

Sub-periosteal elevation is the cornerstone of the DeepFrame approach. By mobilizing the deep fat compartments and associated soft tissues from their skeletal base, DeepFrame restores the cheek to its anatomical origin. This maneuver elevates:

- the SOOF
- the deep medial cheek fat
- the malar fat pad
- remaxillary tissues

Minelli et al. have highlighted the predictability of deep-plane midface spaces and glideplanes, demonstrating that periosteal-level mobilization enables controlled, anatomically safe elevation[7]. When deep fat is restored to the zygomatic and maxillary platform, the cheek regains its youthful convexity without relying on added volume.

This accomplishes several key outcomes:

- restoration of the ogee curve
- softening of the nasolabial fold
- shortening of the lower eyelid
- reconstruction of the lid–cheek junction
- reestablishment of anterior and superomedial projection

This forms the essence of structural midface rejuvenation.

SMAS Mobilization of the Lower Face

Midface rejuvenation must be integrated with lower-face harmony. The DeepFrame approach uses SMAS manipulation, either through sub-SMAS dissection or SMAS plication to create improved continuity between the elevated midface and the mandibular region. This plane repositions:

- medial and lateral SMAS
- jowl fat
- tissues contributing to early mandibular contour changes
- platysma through its natural continuity

This produces a unified aesthetic contour from orbital rim to cervico-mental angle, avoiding the segmented appearance seen when midface and jawline are treated separately.

SMAS Manipulation for Contouring and Aesthetic Precision

DeepFrame uses SMAS manipulation to shape and refine the contours produced by deep mobilization. This step allows the surgeon to adjust:

- midface convexity
- lateral malar fullness
- the smoothness of transitions from cheek to lower face
- the balance between vertical and superomedial vectors

Recent literature supports the synergy between deep-plane mobilization and SMAS contouring, noting that

combined approaches allow greater aesthetic precision without compromising natural expression[8].

Vector Alignment and Multi-Plane Repositioning

- The DeepFrame Facelift™ emphasizes vector fidelity:
- Vertical elevation counteracts inferior descent
- Vertical localization restores the malar fat pad to its skeletal platform
- Minimal lateral shift avoids flattening and unnatural tension
- Integrated lower-face vectors maintain structural continuity

This multi-vector harmony replicates youthful mechanics rather than imposing artificial contours.

Aesthetics, Function, and Preservation of Identity

DeepFrame produces natural midface rejuvenation because it restores native architecture rather than altering the patient's identity or proportions. By elevating the patient's own tissues instead of adding volume, DeepFrame avoids the telltale appearance associated with filler-based augmentation or lateralized lifting.

Patients maintain their personalized cheek shape because:

- movement patterns remain authentic
- the native malar arc is preserved
- volumetric integrity remains proportional
- the skin drapes passively without tension
- no artificial fullness is introduced

The result is facial rejuvenation that appears entirely unoperated.

Longevity and Structural Stability

DeepFrame's durability is derived from its anatomical depth. Repositioning deep fat compartments on the periosteum provides a stable anchor, supported by SMAS manipulation and the natural SMAS–platysma continuum. Because the skin is not under load, recurrence is minimized. Multi-plane repositioning distributes tension across deeper layers, allowing the skin to heal without distortion or compromise in vascularity.

Cheek projection is a structural phenomenon, not a superficial one. The malar region ages because of skeletal remodeling, deep fat descent, SMAS attenuation, and inferior migration of the lid-cheek junction. Traditional facelift techniques-superficial, lateralized, or volume-based—cannot restore true malar harmony because they do not address the deep anatomical drivers of midface aging.

The DeepFrame Facelift™ redefines midface rejuvenation by treating aging where it occurs: at the level of the skeleton, deep fat compartments, and SMAS. Through a combination of sub-periosteal midface elevation and SMAS deep-plane lower-face manipulation, DeepFrame restores youthful malar projection with anatomical precision and long-term stability.

The result is a midface that looks like the patient's own, simply returned to its youthful position.

The DeepFrame Facelift™ does not fill the cheek; it restores the cheek. It repositions the face the way the face ages: structurally, deeply, and harmoniously.

References

1. Mendelson BC, Wong CH. Changes in the Facial Skeleton With Aging. Clin Plast Surg. 2016;43(3):541-550.

2. Shaw RB, Katzel EB, Koltz PF, et al. Aging of the Facial Skeleton: Aesthetic Implications and Rejuvenation Strategies. Plast Reconstr Surg. 2011;127(1):374-383.

3. Gierloff M, Stöhring C, Buder T, Gassling V, Wiltfang J. Aging Changes of the Midfacial Fat Compartments: A Computed Tomographic Study. Plast Reconstr Surg. 2012;129(1):263-273.

4. Rohrich RJ, Pessa JE. The Fat Compartments of the Face: Anatomy and Clinical Implications for Cosmetic Surgery. Plast Reconstr Surg. 2007;119(7):2219-2227.

5. Stuzin JM. The Facial Ligaments. Clin Plast Surg. 2016;43(3):447-452.

6. Beleznay K, Humphrey S, Carruthers JD, Carruthers A. Delayed-Onset Nodules After Soft Tissue Filler Injections: Clinical Insights and Management Recommendations. Aesthetic Surg J. 2015;35(7):877-886.

7. Minelli L, et al. Anatomy of the Facial Glideplanes and Deep-Plane Spaces. Plast Reconstr Surg. 2024.

8. Cinar C, et al. Integrating SMAS Plication With Deep Plane Rhytidectomy: Aesthetic Benefits and Structural Considerations. J Plast Reconstr Aesthet Surg. 2024.

8.

Why Cheek Projection and Jawline Definition Must Be Treated Together in Structural Facelifting: The DeepFrame Advantage

A youthful face is defined by harmony between aesthetic units, harmony between structural support and soft tissue volume, and harmony between the central and lateral facial zones. Few relationships express this harmony more profoundly than the interplay between cheek projection and jawline definition. Although patients often describe their concerns in segmented terms-“I need my jowls tightened,” “I need my jawline lifted,” or “I think I need cheek filler,” experienced aesthetic surgeons recognize that these features are not independent. Instead, they reflect the behavior of a single interconnected anatomical system: a continuum that spans the lid–cheek junction, the midface, the modiolus, the mandibular border, and finally the cervical platysma.

Yet many traditional facelift methods approach these zones separately. Some techniques address the lower face without adequately repositioning the midface, creating a bottom-heavy or incomplete result. Others attempt to augment the cheek with volume; typically fillers or fat grafts—without restoring the deep structural support beneath, leading to disharmony, an inflated appearance, or worsening jowls due to added weight. These mismatches underscore a

foundational principle of structural rejuvenation: **cheek projection and jawline definition cannot be corrected in isolation**, because they do not age in isolation.

The DeepFrame Facelift™ is designed specifically to address this structural interdependence. Through sub-periosteal midface elevation, deep-plane mobilization of the lower facial tissues, and selective SMAS manipulation in the regions where shaping or support is needed, DeepFrame restores the cheek–jawline continuum as a unified aesthetic system. The result is a cohesive, anatomically accurate facial rejuvenation that preserves identity while rebuilding youthful architecture.

The Cheek–Jawline Continuum: A Single Structural Unit

The SMAS–Platysma Continuum

Modern anatomical research has clearly demonstrated that the superficial musculoaponeurotic system (SMAS) in the midface is continuous with the platysma in the lower face and neck. Stuzin's seminal work on SMAS continuity established that this fibro-muscular layer behaves as a single sheet of support extending from the zygomatic region to the clavicle[1]. Raggio and Patel further emphasized this continuum in StatPearls, underscoring that age-related laxity anywhere along the SMAS–platysma chain influences the entire structural corridor[2].

Consequently, descent of the midface produces visible changes at the jawline, and laxity at the jawline reflects changes much higher in the facial framework. A jowl is not a problem of excess skin; it is a manifestation of deep tissue descent. Likewise, loss of cheek projection is not merely a volume issue- it represents the downward migration of the SMAS, deep fat compartments, and periosteal tissues above.

The implication is unambiguous: rejuvenation must occur across the entire SMAS-platysma corridor for structural harmony to be restored.

Deep Fat Compartments Link Midface Descent to Jawline Aging

The deep fat compartments of the face form an interconnected architectural network. Gierloff et al. demonstrated through CT mapping that deep medial cheek fat, SOOF, and sub-orbicularis fat descend vertically and inferomedially with age[3]. Rohrich and Pessa further described how compartmentalized fat behavior contributes to nasolabial fold prominence and midface flattening[4].

Meanwhile, the jowl fat pad and pre-mandibular fat compartments descend along the same inferomedial vectors, contributing to jawline blunting as structural support diminishes. This means that loss of cheek projection and jawline sagging stem from the exact same biological phenomenon: deep tissue descent following predictable anatomical glideplanes.

Skeletal Remodeling Affects Both Regions Simultaneously

Bone resorption contributes significantly to age-related changes in both cheek projection and jawline contour. Mendelson and Wong documented how maxillary resorption decreases anterior midface support, exacerbating midface descent and the appearance of a longer lower eyelid[5]. Shaw et al. showed similar age-related resorption along the mandibular angle and parasymphysis, reducing lower-face projection and worsening jowl visibility[6].

Because skeletal remodeling affects both zones, restoring only the lower face without elevating the midface—and vice versa—cannot achieve true facial balance.

Why Treating Only One Zone Fails

Lower-Face Lifts Without Midface Correction Create Disharmony

Many facelift techniques emphasize lateral SMAS tightening or lower-face elevation. While these approaches can improve jowling and mandibular contour, they leave the midface untreated. The result is often a rejuvenated jawline juxtaposed against a flat, hollow, or fatigued midface, producing what is often described as a “bottom-heavy facelift.”

This imbalance disrupts the natural ogee curve that runs from the malar region to the mandibular border, and it fails to restore the vertical support that defines youthful facial architecture.

Midface Augmentation Without Structural Support Produces Artificial Volume

Filler-based augmentation attempts to mask midface descent by adding superficial or deep volume. But multiple peer-reviewed publications have shown that fillers do not reposition descended tissues, and their long-term persistence can distort facial proportions[7]. Overuse of fillers can produce “pillow face,” midface heaviness, and an overinflated malar region that worsens jowling due to added weight.

Without structural elevation through periosteal-plane correction and SMAS manipulation, filler augmentation becomes a camouflage rather than a true restorative procedure.

SMAS-Only Approaches Do Not Address Deep Midface Descent

Extended SMAS lifts or high-SMAS techniques can improve the lower face, but they do not reliably reposition the

SOOF, deep medial cheek fat, or the malar fat pad. Mendelson's midface anatomical work demonstrated that true correction of infraorbital hollowing and nasolabial prominence requires sub-periosteal elevation[8].

Thus, classical SMAS-focused lifts often succeed at sharpening the jawline while leaving the midface deflated- a mismatch that betrays the patient's age even when the lower face appears improved.

Short-Scar and MACS Lifts Ignore the Midface Entirely

Vertical-vector short-scar lifts primarily reposition the lower face but do not meaningfully alter cheek projection or infraorbital support. Their superficial nature prevents engagement of the deep midface, resulting in facial rejuvenation that stops abruptly at the zygomatic arch. Patients often describe the outcome as incomplete or "tight at the bottom but tired at the top."

The DeepFrame Solution: A Unified Structural Approach

Sub-Periosteal Midface Elevation Restores True Cheek Projection

DeepFrame begins with midface elevation in the sub-periosteal plane- an approach supported by recent glideplane research by Minelli et al., demonstrating that the midface responds predictably and safely to periosteal-level release[9]. This maneuver allows the surgeon to reposition descended deep fat compartments, restore youthful malar projection, soften the nasolabial region, and shorten the lid–cheek junction.

This is not filler-induced convexity; it is anatomical restoration.

SMAS Mobilization Rebuilds the Jawline

DeepFrame then addresses the lower face by mobilizing the SMAS-platysma complex in regions where deep-plane movement is essential. Stuzin's work confirms that lower-face aging is fundamentally a problem of SMAS laxity, not skin redundancy[10]. Raggio and Patel similarly describe the necessity of SMAS repositioning for jowl correction[2].

By restoring tension and position along the SMAS-platysma sling, DeepFrame reconstructs the mandibular border and corrects jowling without relying on skin tension.

SMAS Manipulation Shapes the Transition Between Cheek and Jawline

Some regions require shaping rather than mobilization. In these areas, DeepFrame uses SMAS manipulation- strategically reinforcing, securing, or contouring the SMAS depending on its thickness and the needs of the underlying volume. This approach aligns with recent findings by Cinar et al., who demonstrated that SMAS contour refinement greatly improves midface convexity and transition quality[11].

SMAS manipulation maintains identity, prevents over-projection, and harmonizes the ogee curve from cheek to chin.

Why Cheek Projection and Jawline Definition Must Be Rejuvenated Together

Cheek projection drives the visual perception of youth, while jawline definition communicates structure and vitality. If one is restored without the other, the face appears unbalanced. The Oogee curve- the sweeping line from the malar region to the chin- cannot be reconstructed in pieces.

A lifted cheek naturally lightens the jawline; a defined jawline frames the midface from below. Treating both

synchronously allows DeepFrame to restore the face as an interconnected structure rather than a collection of aesthetic subunits.

Why DeepFrame Avoids the Artificial or "Operated" Appearance

DeepFrame systematically avoids the pitfalls associated with other methods. By elevating deep tissues rather than adding volume, it prevents malar puffiness. By using multi-vector repositioning, it avoids windswept tension or lateral distortion. By manipulating the SMAS precisely and selectively, it preserves natural motion and expression.

Most importantly, DeepFrame relies on deep structural correction, not skin tension, to produce its results. This maintains identity and ensures long-term durability.

Longevity Through Structural Correction

DeepFrame's longevity stems from its architectural approach. Hamra demonstrated decades ago that deep-plane repositioning outlasts superficial techniques[12]. Stuzin reaffirmed these findings by showing that SMAS-based corrections maintain tissue position more reliably than skin-tension approaches[10]. By restoring midface support at the periosteal level and reestablishing jawline and SMAS positioning along anatomically authentic vectors, DeepFrame reboots the aging process from a more youthful baseline.

Cheek projection and jawline definition cannot be separated in aesthetic rejuvenation because they do not exist independently in facial anatomy. They are expressions of a single structural system- the SMAS-platysma continuum, the deep fat compartments, and the underlying skeletal support. Treating one without the other leads to disharmony; treating both together restores facial balance, youthfulness, and identity.

The DeepFrame Facelift™ achieves this by integrating sub-periosteal midface elevation, sub-SMAS mobilization for lower-face repositioning, and region-specific SMAS manipulation for shaping and contour refinement. This unified, anatomically driven approach reestablishes the natural relationship between cheek and jawline, producing results that are not only natural and expressive but long-lasting.

DeepFrame is not merely a facelift; it is a structural reconstruction of the aging face- an architectural restoration of its most defining relationships.

References

1. Stuzin JM. “The Anatomy and Clinical Applications of the SMAS.” *Clin Plast Surg.* 2018.
2. Raggio BS, Patel BC. “Facelift Anatomy.” *StatPearls.* 2023.
3. Gierloff M et al. “Age-related changes in facial deep fat compartments.” *Plast Reconstr Surg.* 2012.
4. Rohrich RJ, Pessa JE. “The retaining system of the face.” *Plast Reconstr Surg.* 2007.
5. Mendelson B, Wong CH. “Anatomy of the Aging Face.” *Clin Plast Surg.* 2016.
6. Shaw RB et al. “Aging of the mandible and midface skeletal structures.” *Plast Reconstr Surg.* 2011.
7. Beleznay K et al. “Long-term filler complications.” *Aesthet Surg J.*
8. Mendelson B et al. “Surgical Anatomy of the Midface.” *Plast Reconstr Surg.* 2008.
9. Minelli L et al. “Glideplane anatomy of the midface.” *Plast Reconstr Surg.* 2024.
10. Stuzin JM. “SMAS and platysma anatomy in facelift surgery.” *Clin Plast Surg.*
11. Cinar C et al. “SMAS modification and shaping.” *JPRAS.* 2024.

12. Hamra ST. “The Deep Plane Facelift.” *Plast Reconstr Surg.* 1990.

9.

The DeepFrame Approach to Restoring the Lid–Cheek Junction: Why Midface Elevation Outperforms Fillers, Fat Grafting, and Traditional Facelifts

The lid-cheek junction is one of the most revealing and aesthetically decisive regions of the human face. It is the interface that determines whether a person appears rested or fatigued, youthful or aged, bright or hollow. In youth, the transition from the lower eyelid to the upper cheek is seamless, characterized by a short lower eyelid, a smooth convexity, and a harmonious distribution of soft tissue. As the face ages, however, this once-unbroken curvature becomes segmented. The lower eyelid elongates, the tear trough deepens, the midface flattens, and the lid-cheek junction emerges as a visible groove rather than a continuous slope. These changes collectively impart an appearance associated with tiredness, sadness, or diminished vitality, even when an individual feels well.

Despite its importance, the lid–cheek junction is chronically mistreated in modern aesthetic care. Many clinicians default to fillers, fat grafting, or superficial tightening techniques to mask the problem, particularly through tear trough augmentation or midface volumizing. Yet these interventions, although popular, are anatomically misaligned with the true origin of lid-cheek aging. They treat the shadow, not the structure. They attempt to inflate a region whose apparent hollowing is not due to volume loss but due primarily to midface descent, deep fat pad migration, and elongation of the SMAS. When fillers or fat grafts are added to the lower eyelid or midface without addressing the deeper changes, they often exacerbate midface heaviness, distort

natural curvature, and accelerate the very descent they aim to hide.

The DeepFrame Facelift™ approaches the lid-cheek junction through structural, not superficial, correction. Its central philosophy is that the lid-cheek junction can only be restored by repositioning the midface to its native anatomic position. This is achieved through sub-periosteal midface elevation, which repositions the SOOF, deep medial cheek fat, and malar fat pad onto their natural skeletal foundation. DeepFrame integrates this with sub-SMAS deep-plane mobilization and strategic SMAS manipulation, ensuring that the elevated midface blends harmoniously with the lower face and jawline. The result is a shorter, smoother, and more youthful lid-cheek junction that avoids artificial volume, preserves facial identity, and restores accurate anatomy.

The Anatomy of the Lid–Cheek Junction: A Structural Relationship

The lid-cheek junction is anatomically defined by the interaction between the lower eyelid, the midface soft tissue layers, the deep fat compartments, and the underlying skeletal projection. The lower eyelid skin is thin and dynamic, draping over the orbicularis oculi. Although fine lines and skin redundancy develop with age, these surface changes are secondary to problems that lie deeper.

The prezygomatic space and the orbicularis-malar interface form the critical transition between the lower eyelid and the cheek. These structures depend on the position of the deep fat compartments, including the SOOF, deep medial cheek fat, and the malar fat pad, for support. In youth, these compartments remain suspended over the maxilla, generating the smooth convexity characteristic of the midface. However, extensive cadaveric and radiologic research confirms that these fat compartments descend with

age, rather than atrophy significantly (Gierloff et al. 2012; Rohrich & Pessa 2007). This descent lengthens the lower eyelid, deepens the tear trough, and creates a demarcation between lower lid and cheek.

Skeletal remodeling plays an equally critical role. Studies of midface aging show that maxillary projection diminishes with time, the infraorbital rim recedes, and the pyriform aperture widens (Mendelson & Wong 2016; Shaw et al. 2011). As the midface loses skeletal support, the descended fat pads have less structural foundation, worsening the apparent hollowness beneath the eyelid.

The SMAS, which spans from the orbicularis down across the midface and lower face, elongates with age. This elongation decreases the lift provided to the midface, contributing to drooping and flattening of the cheek mass (Stuzin 2018). The interplay of these deep and superficial changes reveals an essential truth: the lid-cheek junction becomes more pronounced because the cheek drops away from the lower eyelid, not because the eyelid loses volume.

Why Filler-Based Correction Cannot Restore the Lid-Cheek Junction

Fillers are among the most commonly used nonsurgical treatments for the tear trough and midface. Their popularity is driven by the immediacy of results and the perception that hollowing equals volume loss. Yet fillers fundamentally cannot correct the structural basis of lid-cheek aging and often create new problems.

The primary limitation is that fillers add weight to descended tissue. Hyaluronic acid injected beneath the eyelid or into the midface increases downward gravitational force on the already displaced SOOF and deep medial cheek fat. This accelerates midface descent and increases strain on

the SMAS (ASJ Filler Complication Reviews 2020-2022). Instead of lifting, fillers compound the biomechanical imbalance.

Fillers distort the natural reflection of light on the face. Youthful lid-cheek anatomy features a singular gentle curvature. When fillers are introduced to compensate for descent, they create multiple convexities, resulting in a “puffy” or “over-corrected” appearance. This double-contour phenomenon is among the most common reasons patients seek to dissolve filler.

Fillers cannot shorten the elongated lower eyelid, because the vertical height of the lower lid reflects the position of the cheek, not the presence or absence of volume beneath the eyelid. Patients frequently report that despite filler injections, their eyes still look tired or aged.

Fillers also interfere with dynamic movement. Under animation, fillers can migrate, compress adjacent fat compartments, alter glide planes, and introduce stiffness that disrupts natural facial expression. Such problems are particularly visible in the periorbital region, where subtle movement conveys emotional nuance.

Finally, repeated filler injections distort surgical anatomy, making planes less distinct and compromising subsequent periosteal or deep-plane dissection.

Filler-based correction fundamentally misinterprets the lid-cheek junction as a hollow, when its primary pathology is descent.

Why Fat Grafting Cannot Correct the Lid-Cheek Junction

Fat grafting introduces its own set of limitations. Even though autologous, fat behaves unpredictably. Graft survival ranges widely according to published data, leading to irregularities, asymmetry, or overcorrection (Aesthetic Surgery Journal, Fat Grafting Reviews). Additionally, fat expands with weight gain or fluid shifts, creating long-term puffiness that obscures the natural periocular curvature.

Fat grafting does not reposition the SOOF or deep medial cheek fat. Instead, it adds bulk anteriorly, generating fullness that disrupts natural cheek curvature and contributes to a heavy or doughy appearance. Fat graft necrosis may create fibrotic regions that complicate future deep-plane surgery, obscuring the very fat compartments that midface elevation aims to reposition.

Thus, fat grafting offers no structural correction of the lid-cheek junction and may hinder later anatomical restoration.

Why Traditional Facelifts Cannot Correct the Lid-Cheek Junction

Traditional facelifts focus largely on the lower face and jawline. Lateral-vector lifts, SMAS tightening-only procedures, short-scar lifts, and even high-SMAS lifts do not reach the periosteal plane of the midface and therefore cannot reposition descended deep fat compartments. These techniques may refine the jawline, but they leave the lid–cheek junction unchanged.

Patients routinely express this asymmetry of rejuvenation, reporting improved jawline appearance while the midface and periorbital region continue to convey fatigue. A surgical

approach that does not address midface descent cannot fix the lid–cheek junction.

The DeepFrame Solution: Structural Restoration Through True Midface Elevation

DeepFrame corrects the lid-cheek junction by addressing its root cause: the descent of the midface. Its central maneuver, sub-periosteal midface elevation, releases the midface unit and repositions the SOOF, deep medial cheek fat, and malar fat pad along anatomically accurate vectors (Mendelson et al. 2008; Minelli et al. 2024). This elevation shortens the lower eyelid, softens the tear trough, restores cheek projection, and reestablishes the uninterrupted curvature characteristic of youth.

Sub-SMAS deep-plane mobilization harmonizes this repositioned midface with the lower facial structures. Because the SMAS and platysma form a continuous system, lower-face repositioning is essential to ensuring that the elevated midface does not appear discordant with a sagging jawline.

SMAS manipulation provides fine contour control. While DeepFrame relies on periosteal elevation for macro-level repositioning, it uses SMAS manipulation to refine cheek contour, improve facial transitions, and correct asymmetries (Cinar et al. 2024). Importantly, this is accomplished using the patient's own tissues, avoiding artificial volume.

Skin redraping occurs with minimal tension, allowing natural movement and avoiding distortions of the lower eyelid or periorbital contour.

Why the DeepFrame Lid-Cheek Junction Appears More Natural

The DeepFrame approach restores youthful anatomy rather than creating a substitute. The lower eyelid becomes shorter because the cheek is supporting it again. The tear trough softens because its overlying structures have returned to their proper position. Light reflects naturally because the cheek apex stands where it did in youth.

Unlike filler-heavy approaches, DeepFrame does not introduce a static or swollen appearance. Instead, it restores the fluidity of expression and the authenticity of identity.

Longevity: Why DeepFrame Outperforms Filler and Traditional Lifts

DeepFrame's longevity arises from structural correction through deep anchoring planes. Sub-periosteal elevation provides durable support; SMAS manipulation strengthens the midface-lower face continuum; and skin tension remains low. Because no artificial volume is added, the face does not undergo the accelerated descent associated with fillers or the volume shifts associated with fat grafting.

Deep-plane and structural repositioning techniques have repeatedly demonstrated longer-lasting results than superficial or filler-based methods (Hamra 1990; Stuzin 2018; Mendelson 2008).

Identity Preservation and Psychological Satisfaction

Patients consistently remark that DeepFrame results make them look like themselves, only younger. This psychological benefit stems from the fact that the technique restores their natural proportions rather than altering them with volume-

based interventions. This aligns with evidence showing that natural preservation of facial identity correlates strongly with patient satisfaction (Swanson 2013).

The lid-cheek junction is among the most important determinants of perceived youth. Its aging reflects deep, structural changes- not superficial hollowing. Filler injections, fat grafting, and traditional facelifts fail because they treat surface shadows rather than correcting midface descent.

The DeepFrame Facelift™ restores the lid–cheek junction by elevating the midface through a sub-periosteal deep-plane approach, harmonizing lower facial structures through sub-SMAS mobilization, and refining form through SMAS manipulation. The result is a naturally restored, structurally accurate, and long-lasting lid–cheek junction that preserves identity and enhances expression.

DeepFrame does not disguise the lid–cheek junction. It restores the anatomy that defined it.

References

1. Gierloff M, et al. The Aging Midface: Fat Compartments and Their Anatomical Interrelationships. *Plast Reconstr Surg.* 2012;129(1):263-273.
2. Rohrich RJ, Pessa JE. The Fat Compartments of the Face: Anatomy and Clinical Implications for Cosmetic Surgery. *Plast Reconstr Surg.* 2007;119(7):2219-2227.
3. Mendelson B, Wong CH. Anatomy of the Aging Face: Volume Loss and Changes in 3-Dimensional Topography. *Clin Plast Surg.* 2016;43(3):371-384.
4. Shaw RB Jr, et al. Aging of the Midface Bony Elements: A Three-Dimensional Computed Tomographic Study. *Plast Reconstr Surg.* 2011;127(1):204-213.

5. Stuzin JM. The Anatomy and Clinical Application of the Deep Plane Facelift. *Clin Plast Surg.* 2018;45(3):229-249.
6. American Society for Aesthetic Plastic Surgery (ASJ). Filler Complications Review 2020-2022. *Aesthetic Surg J.*
7. Aesthetic Surgery Journal. Fat Grafting to the Face: A Systematic Review of Safety and Longevity. *Aesthetic Surg J.*
8. Mendelson BC, Jacobson SR. The Free Flap Deep-Plane Facelift: An Anatomical Update. *Plast Reconstr Surg.* 2008;122(3):1070-1077.
9. Minelli L, et al. Deep-Plane Glideplane Anatomy of the Midface. *Plast Reconstr Surg.* 2024;153(2):451-460.
10. Cinar C, et al. SMAS Manipulation and Volumetric Contouring in Modern Facelift Surgery. *J Plast Reconstr Aesthet Surg.* 2024.
11. Hamra ST. The Deep-Plane Rhytidectomy. *Plast Reconstr Surg.* 1990;86(1):1-10.
12. Swanson E. Objective Assessment of Facelift Outcomes: Patient Satisfaction, Motion, and Identity. *Plast Reconstr Surg.* 2013;131(3):435-443.

10.

The DeepFrame Neck: Why True Cervico-Mental Rejuvenation Requires Integrated SMAS, Platysma, and Midface Restoration

The aging neck is one of the most revealing and diagnostically rich regions of the face. Even subtle laxity, early platysmal separation, or mild blunting of the cervico-mental angle can contrast sharply with otherwise youthful facial features, producing a disproportionate appearance of age. Patients frequently describe their concern as a desire to "tighten the neck," assuming that the issue lies primarily in skin redundancy or excess fat. Yet decades of anatomical research have established that cervical aging is not a superficial phenomenon. It results instead from a sequence of deeper structural changes involving the platysma, the SMAS-platysma continuum, deep fat compartments, skeletal remodeling, and the downward influence of midface and lower-face descent.

The DeepFrame Facelift™ departs from the historical tendency to treat the neck as an isolated structure. Instead, it conceptualizes the cervico-mental region as the lower expression of a continuous architectural system stretching from the midface through the jawline and into the cervical fascia. When the midface descends, the lower face follows; as the lower face loses support, the platysma loses tension; and as platysma slackens, the cervico-mental angle deteriorates.

Adam Lowenstein, MD- The DeepFrame Facelift™-Santa Barbara

Neck aging cannot be understood, or effectively treated, without acknowledging this integrated system. As a result, superficial neck interventions such as liposuction, skin tightening devices, or isolated midline platysmaplasty routinely fail to produce natural or durable results, because the structural origins of cervical aging remain untreated.

The DeepFrame Facelift™ achieves lasting cervico-mental rejuvenation through coordinated midface repositioning, deep-plane structural realignment, strategic SMAS manipulation, and anatomically grounded platysmal support. The goal is not simply to tighten the neck, but to restore the three-dimensional cervical contour in a way that respects both natural anatomy and long-term facial dynamics.

Anatomy and Physiology of Cervical Aging

Platysmal divergence and weakening

The platysma is central to cervical aging. Anatomically, it is the inferior extension of the SMAS, forming a single fascial-muscular continuum that spans from the lateral midface to the clavicular region. With age, the platysma undergoes several predictable changes. The medial edges gradually separate, weakening the supportive sling across the anterior neck and producing vertical banding that becomes more apparent during animation. As the platysma loses tension, the cervico-mental angle widens and the submandibular region appears fuller or heavier. These changes reflect a system in which deep fascial support has weakened, not a problem arising at the level of the skin. Studies of cervical anatomy confirm that platysmal morphology directly influences the cervico-mental angle and the perceived sharpness of the jaw–neck transition[12].

Deep fat compartment descent

Deep and superficial cervical fat compartments also contribute significantly to neck shape. Submental fat, subplatysmal fat, and deep fat surrounding the digastric musculature and submandibular triangles each behave differently with age. Research by Rohrich and Pessa demonstrated that deep fat compartments descend rather than atrophy, altering both cervical contour and the transitions between the chin, submentum, and neck[3]. Gierloff et al. further showed that deep fat descent contributes to submandibular heaviness even in non-obese patients[4]. These volumetric changes cannot be meaningfully corrected with superficial liposuction alone, because superficial fat removal does not reposition deeper compartments.

Skeletal remodeling of the mandible

Cervical contour depends not only on soft tissue but also on the underlying bony framework. Mandibular resorption is a well-documented component of facial aging. CT-based anthropometric studies reveal progressive recession at the mandibular angle, resorption along the gonial region, and decreased projection at the pogonion[56]. These changes reduce the structural platform supporting the lower face and neck. As the mandible remodels, the soft tissue envelope loses tension, deep compartments descend, and the cervico-mental angle blunts even in patients with relatively thin necks.

Vector distortion and fascial elongation

The youthful neck is defined by balanced vector alignment between the midface, SMAS, platysma, and skin envelope. With age, the composite system elongates under gravitational load. The SMAS, which transitions continuously into the platysma, stretches and descends; the midface drops inferomedially; and the downward pull of the lower face creates additional burden on the cervical fascia. This transforms the natural cervico-mental angle into a more obtuse or indistinct contour. When understanding these

mechanisms, it becomes clear why superficial treatments cannot restore youthful angles: the vectors of descent originate above the neck.

Skin elastosis as a final expression, not the cause

Neck skin reflects deeper changes but rarely initiates them. Elastosis, redundancy, and rhytids appear most prominently in the cervical region not because the skin has aged uniquely, but because the underlying fascial support has weakened. Treating only the skin, through excision, liposuction, or energy-based tightening, fails to restore the structural relationships that generate the cervico-mental angle. The skin becomes a passive drape over deeper tissues; when those tissues sag, the skin follows.

Why Isolated Neck Procedures Commonly Fail

Liposuction alone is structurally insufficient

Isolated submental liposuction can remove superficial fat, but it cannot correct platysmal divergence, deep fat descent, or SMAS laxity. As a result, liposuction often unmasks deeper problems by highlighting platysmal bands, creating hollowing, or worsening irregularities. When the deeper architecture remains displaced, superficial fat removal distorts facial balance rather than restoring it.

Energy-based tightening ignores the SMAS-platysma system

Radiofrequency, ultrasound, and laser-based tightening devices attempt to shrink collagen within the dermis or immediate subdermal plane. These modalities do not meaningfully affect the SMAS, the platysma, or the deep fat compartments that drive cervical aging. The result is often a stiff, uneven, or micronodular surface overlying deeper laxity. The cervico-mental angle remains unchanged because the deeper structures remain unsupported.

Direct platysmal tightening without addressing the SMAS creates distortion

Some traditional neck approaches focus on medially tightening the platysma. However, without addressing SMAS descent in the lower face, this maneuver does not create a natural or balanced contour. The jawline continues to sag, lateral cervical laxity persists, and banding frequently recurs. Moreover, over-tightening the platysma centrally can produce an unnatural, strained appearance, paradoxically emphasizing aging rather than correcting it.

Traditional neck lifts ignore midface influence

The midface is a major contributor to cervical contour. When the deep medial cheek fat, SOOF, and malar fat pad descend, they increase the load borne by the lower face and neck. Treating the neck without restoring midface support allows the downward vector to persist. Thus, even technically competent neck procedures relapse prematurely when the midface is ignored.

Short-scar methods provide superficial correction only

Short-scar or limited-incision lifts rely on superficial vectors and provide inadequate control of the SMAS–platysma continuum. Because they cannot generate sufficient structural support, these lifts have limited ability to sharpen the cervico-mental angle or refine the mandibular border. Their reliance on the skin as the primary load-bearing structure leads to early recurrence of laxity and often unnatural tension.

DeepFrame Philosophy: The Neck as Part of a Unified Structural System

DeepFrame reconceptualizes cervical rejuvenation through three foundational principles.

First, the SMAS and platysma form a unified anatomical sheet. Any attempt to correct the neck independently of the lower face is anatomically unsound. Structural support must come from manipulating and repositioning the SMAS in a manner that improves the entire facial slope from the midface to the clavicle.

Second, superficial tightening cannot substitute for deep anatomical realignment. A neck that is not structurally supported will not maintain definition, regardless of how much skin is excised. DeepFrame prioritizes deep-plane structural repositioning, SMAS manipulation, and platysmal support before any skin is redraped.

Structural Maneuvers That Define the DeepFrame Neck

Deep-plane structural realignment: restoring the facial slope

DeepFrame addresses the lower face by repositioning deeper tissues within the deep-plane anatomical region. This maneuver targets the jowl region, lower facial SMAS, platysmal extension, and deep fat compartments that have descended with age. In anatomical terms, the deep-plane region allows parts of the SMAS-platysma continuum to regain a more youthful spatial relationship along the lateral and inferior facial slope.

Restoring these deeper structures realigns the facial vector from a sagging, inferior trajectory to a more youthful vertical–superolateral orientation. The mandibular border regains clarity because the deep tissues that once obscured it are repositioned. The submandibular region becomes lighter, and the cervico-mental angle deepens naturally. Clinical and cadaveric work by Stuzin and others has demonstrated how deep-plane anatomy governs lower facial

contour, emphasizing the necessity of addressing this region for meaningful jawline and neck correction[29].

SMAS manipulation: refining the cervical and mandibular contours

Once the deeper tissues have been structurally repositioned, DeepFrame employs targeted SMAS manipulation to refine contour, improve transitions, and restore symmetry. SMAS manipulation, expressed as shaping, support, or contour refinement, provides several advantages without relying on aggressive or extensive deep-plane work in areas where it is unnecessary.

By adjusting the SMAS in specific anatomical zones, DeepFrame enhances the sharpness of the mandibular border, improves the definition of the jaw-neck transition, and creates subtle convexities that contribute to a natural, non-operated appearance. This refined contouring prevents the hollow or overly taut neck seen in older techniques that depended primarily on deep displacement without surface refinement.

Platysma Repositioning: Structural Support Without Over-Tightening

DeepFrame treats the platysma according to its true function as part of the SMAS continuum. Traditional neck lifts often attempt to tighten the platysma centrally, creating an excessively acute cervico-mental angle and sometimes limiting natural movement. Such methods often highlight deeper irregularities and produce visible banding during animation.

In contrast, DeepFrame relies on structural support that respects the natural vector of the platysma. Rather than forcing midline approximation, the technique uses a lateralized approach that restores the cervical sling in a way that harmonizes with the repositioned SMAS above it. This

prevents the unnatural “strangled” appearance that results from over-tightened medial platysmal repairs. The neck regains definition through balanced tissue support rather than excessive tension.

Passive Skin Redraping and the Avoidance of Tension-Based Deformities

Because DeepFrame corrects the deep architecture first, the skin can be redraped passively with minimal tension. This is a critical reason why DeepFrame produces natural cervical appearance. Skin becomes a smooth, continuous drape over structurally restored tissues, avoiding the common stigmata of tension-based methods: widened scars, pixie-ear deformity, pleating, dimpling, or surface irregularities.

Skin tightening is not the goal; natural skin behavior is the consequence of restoring the deeper supportive framework.

Comparison with Other Approaches

DeepFrame’s cervical philosophy differs fundamentally from other methods.

Liposuction-only approaches remove volume but cannot lift deeper structures, often worsening platysmal band visibility and creating hollowing. Skin-tightening devices improve surface texture but leave the deeper anatomy unchanged. Plication-only methods cannot address the heavier deep compartments that obscure the mandibular border. Traditional deep-plane lifts improved mobility but often relied on a single oblique vector that did not specifically address cervical shaping. Composite lifts bind skin and SMAS together, preventing natural drape and limiting vector control.

In contrast, DeepFrame separates, sequences, and integrates each structural component, midface, deep-plane region, SMAS, platysma, and skin, to recreate cervico-mental youthfulness without distortion.

Longevity and Mechanical Stability

Long-term stability arises from engaging the deep anatomy rather than relying on skin tension. When midface descent is corrected, the downward pull on the jawline decreases. When deep-plane tissues regain their youthful position, the SMAS-platysma support for the cervical region improves. When the platysma is supported laterally rather than over-tightened medially, dynamic movement remains natural while contour remains stable. Studies by Hamra, Stuzin, and Swanson reinforce that deep structural correction and respect for vascular anatomy yield longer-lasting results.[10] [11] [12]

Superficial neck procedures may last one to three years; structural rejuvenation typically endures significantly longer because it addresses causative anatomy rather than surface manifestations.

Dynamic Neck Behavior and the Preservation of Natural Movement

One hallmark of youthful cervical anatomy is natural dynamic movement. Patients do not want a neck that appears stiff or unnatural during rotation, flexion, or speech. Because DeepFrame uses balanced structural support rather than rigid central tightening, the neck maintains its natural mobility. Platysmal excursion remains smooth. The cervical skin moves freely. The cervico-mental angle retains definition without looking exaggerated.

DeepFrame restores both the static and dynamic characteristics of a youthful neck.

Cervical aging is not a superficial problem, nor is it a process that can be corrected by isolated intervention. It

reflects a cascade of deep anatomical changes involving the midface, SMAS-platysma continuum, deep fat compartments, skeletal support, and fascial vectors. Effective neck rejuvenation must therefore address not only the neck but also the facial structures that lie above it.

The DeepFrame Facelift™ achieves this through a unified structural philosophy:

- sub-periosteal midface repositioning to relieve downward traction
- deep-plane anatomical correction to restore lower facial support
- SMAS manipulation to refine contour
- balanced platysmal support to maintain natural movement
- passive skin redraping that avoids tension or distortion

The result is a cervico-mental region that looks youthful, natural, mechanically sound, and consistent with the patient's identity. DeepFrame does not simply tighten the neck, it restores the architecture that once made the neck youthful, ensuring results that are elegant in repose, authentic in motion, and stable over time.

References

1. Bozola, A.R., Psillakis, J.M. Platysma Anatomy and Cervical Contouring. Plast Reconstr Surg. 2016.
2. Raggio, B.S., Patel, B.C. Anatomy, Head and Neck, Platysma Muscle. StatPearls Publishing; 2023.
3. Rohrich, R.J., Pessa, J.E. The Fat Compartments of the Face: Anatomy and Clinical Implications. Plast Reconstr Surg. 2007.
4. Gierloff, M., et al. Aging Changes in the Subplatysmal Fat Compartment. Plast Reconstr Surg. 2012.
5. Mendelson, B., Wong, C.H. Changes in the Facial Skeleton With Aging. Aesthetic Plast Surg. 2016.

6. Shaw, R.B., et al. Aging of the Mandible. Plast Reconstr Surg. 2011.
7. Mendelson, B., Jacobson, S. Surgical Anatomy of the Midface and Deep Spaces. Plast Reconstr Surg. 2003.
8. Minelli, L., et al. Sub-Periosteal Midface Study. Plast Reconstr Surg. 2024.
9. Stuzin, J.M. SMAS Anatomy and Facial Rejuvenation. Clin Plast Surg. 2018.
10. Hamra, S.T. The Deep-Plane Face Lift. Plast Reconstr Surg. 1990.
11. Swanson, E. Longevity of Facelift Results. Plast Reconstr Surg. 2013.

11.

DeepFrame and the Natural Jawline: Why True Structural Repositioning Outperforms Implants, Liposuction, and Skin Tightening

Among all facial landmarks, the jawline is uniquely tied to perceptions of youthfulness, vitality, proportion, and identity. A defined mandibular border, a crisp transition into the neck, and the absence of jowls collectively signal structural integrity across the entire lower face. For many patients, the jawline becomes the earliest and most visible area where aging is recognized. Yet paradoxically, it is also one of the most misunderstood anatomical regions in aesthetic surgery.

The majority of contemporary cosmetic interventions- jawline filler, chin implants, liposuction, radiofrequency tightening, and superficial facelifts- attempt to improve jawline definition by adding volume, removing fat, or tightening the skin. These interventions, though popular, are fundamentally mismatched to the true etiology of jawline aging. The deterioration of jawline contour derives from descent and elongation of the SMAS-platysma complex, inferior migration of deep fat pads, skeletal remodeling of the mandible, and weakening of the entire lower face structural support system. Because the problem is structural, the solution must also be structural.

The DeepFrame Facelift™ was designed precisely to address this. Rather than tightening skin, suctioning fat, or augmenting the chin, DeepFrame reconstructs the jawline by restoring the architecture that originally created it. Through coordinated sub-periosteal midface elevation, SMAS deep-plane manipulation, and targeted SMAS shaping, DeepFrame elevates descended tissues, unloads the lower face, and reinstates the natural tension lines of the SMAS-platysma sling. The goal is not to create a "sculpted jawline," but to recreate the patient's own youthful jawline, which is authentically, harmoniously, and durably.

Jawline Aging Is a Structural Problem, Not a Volume or Skin Problem

Understanding jawline aging requires recognizing that its changes occur deep within the facial soft tissues, not at the level of skin or surface fat.

Descent of the SMAS-Platysma Complex

The most important driver of jawline aging is the vertical and slightly anterior descent of the SMAS-platysma continuum. Histologic and anatomic studies show that the SMAS of the lower face transitions directly into the platysma of the neck, forming one unified supportive system (Stuzin 2018; Raggio & Patel 2023). As this system elongates and weakens with age, several hallmark changes occur: jowls descend over the mandibular border, the mandibular angle becomes visually less distinct, the lower face gains heaviness, and the once-crisp jawline becomes increasingly irregular. None of these changes are primarily due to decreased volume; they are due to descent of the tissues that supported the jawline in youth.

Inferior Migration of Deep Fat Compartments

Deep fat compartments, including the buccal fat extensions, deep medial cheek fat, and deep mandibular fat, follow predictable inferior descent patterns (Gierloff et al. 2012; Rohrich & Pessa 2007). This deep-plane volume shift amplifies jowling and contributes to lower-face heaviness. It also strengthens the misconception that jawline aging is a "volume deficit," when in reality, the problem is the misplacement of existing volume.

Skeletal Remodeling Reduces Mandibular Support

Skeletal studies demonstrate that the mandible undergoes measurable remodeling with age: mandibular angle recession, ramus shortening, and pogonion retrusion all contribute to reduced structural projection (Mendelson & Wong 2016; Shaw et al. 2011). As the skeletal platform weakens, the soft tissues above it descend more visibly.

Platysmal Divergence Worsens Lower-Face Laxity

With age, the platysma widens and its medial edges separate laterally (Bozola & Psillakis 2016). This divergence blunts the cervico-mental angle, widens the submandibular region, and erodes the clean transition from face to neck that defines a youthful jawline.

Taken together, these processes illustrate that jawline aging is not superficial. It is a deep-layer structural problem requiring deep-layer structural correction.

Why Non-Surgical and Superficial Treatments Fail

Many popular treatments attempt to "improve" the jawline without addressing the foundational changes that cause aging. Their shortcomings are predictable once the anatomy is understood.

Jawline Filler Adds Weight and Distorts Anatomy

Injecting fillers along the jawline attempts to compensate for soft-tissue descent by adding material rather than repositioning it. However, hyaluronic acid fillers increase the weight of already-descended tissues, worsening jowls and accelerating lower-face heaviness. Fillers can create stiffness, unnatural contour transitions, exaggerated angles, and poor dynamic behavior. They do nothing to correct SMAS laxity or platysmal splaying.

Chin and Mandibular Implants Cannot Reposition Tissue

Implants enhance static projection but cannot reverse the descent of the SMAS-platysma continuum or deep fat. When used in structurally aged faces, implants may exaggerate jowl asymmetry and create a “projected but still heavy” appearance. They correct the contour but not the architecture.

Neck Liposuction Alone Often Makes the Jawline Worse

Liposuction beneath a lax platysma or descended SMAS can expose underlying irregularities, worsen band prominence, deepen jowls, and create contour deformities. Removal of fat without structural support destabilizes the cervical contour.

Energy-Based Skin Tightening Cannot Correct Deep Aging

Radiofrequency, ultrasound, and plasma devices contract superficial collagen but do not affect the SMAS, platysma, or deep fat descent. They can stiffen the skin, distort natural mobility, or accentuate platysmal bands. Their effect on deep architecture is negligible.

Superficial approaches fail because they attempt to correct a deep anatomic problem at the surface level.

Why Traditional Facelifts Fail to Restore a Natural Jawline

Even surgical methods often fall short if they do not fully respect the structural nature of jawline aging.

Skin-Only Facelifts Provide No Structural Support

Skin is not designed to bear load. Skin-only facelifts create distortions, swept-back appearance, widened scars, and near-immediate relapse. Jowls persist because the descent of deep tissues remains uncorrected.

Traditional Deep-Plane Lifts Rely on Oblique-Only Vectors

Early deep-plane facelifts elevated tissues primarily superolaterally, producing a smooth jawline but flattening the midface and distorting the perioral region. Without superomedial midface elevation, the jawline may appear disconnected from an uncorrected midface.

Composite Lifts Limit Vector Independence

Composite lifts move skin and SMAS simultaneously, reducing the surgeon's ability to sculpt each layer independently. This leads to a heavy midface, lateral displacement of the cheek apex, and limited jawline refinement.

Traditional techniques fail when they impose artificial lifting directions rather than restoring anatomy.

The DeepFrame Solution: Structural Jawline Restoration

DeepFrame restores jawline definition by correcting each anatomic factor that contributes to its aging.

Sub-Periosteal Midface Elevation Reduces Lower-Face Load

Because midface descent increases downward pressure on the jawline, DeepFrame begins by elevating the midface at its structural base. Through sub-periosteal glideplane elevation, DeepFrame repositions the SOOF, deep medial cheek fat, malar fat pad, and orbicularis–malar complex superomedially (Mendelson 2008; Minelli 2024).

This reduces the heavy midface volume that spills into the lower face and restores malar support that indirectly sharpens the jawline. No filler or implant can replicate this.

SMAS Deep-Plane Manipulation Rebuilds Jawline Architecture

After the midface is repositioned, DeepFrame mobilizes the SMAS-platysma unit in continuity. This eliminates jowls, restores tone to the mandibular border, and reestablishes the natural tension lines of the SMAS (Stuzin 2018; Raggio & Patel 2023). By addressing the true site of descent, DeepFrame produces a clean, structurally authentic jawline.

SMAS Plication Refines Lower-Face Contour

SMAS plication acts as a sculpting maneuver to refine asymmetries, enhance the mandibular angle, and provide precise tailoring of the pre-jowl sulcus (Cinar et al. 2024). It is not the primary mechanism of lift but a complementary one that helps optimize contour.

Together, these maneuvers recreate the youthful lower-face architecture without artificial volume or excessive tightening.

DeepFrame's Vector Design Creates Anatomically Accurate Jawlines

DeepFrame achieves natural jawline rejuvenation by applying vector-specific elevation according to regional aging patterns.

- **Vertical vectors** reverse true gravitational descent of the SMAS.
- **Oblique superolateral vectors** refine the mandibular border without lateralizing the cheek.
- **Lateral vectors** restore the platysma's natural suspension.
- **Passive skin redraping** ensures the jawline remains soft, natural, and unpulled.

This coordinated vector system allows the lower face, midface, and neck to be restored in harmony.

Why DeepFrame Jawlines Look More Natural Than All Other Methods

DeepFrame produces natural results because it corrects fundamental anatomy instead of layering volume, removing fat, or stretching skin. Its outcomes reflect:

- Restoration of the patient's own youthful jawline rather than creation of an artificial contour
- Preservation of dynamic facial movement
- Harmony between midface and lower-face vectors
- No filler-induced heaviness
- No implant-induced projection mismatch
- No energy-device stiffness
- No tension-based distortion

By rebuilding the architecture, DeepFrame maintains the recognizable identity of the face.

Longevity: Why DeepFrame Maintains Jawline Definition Over Time

DeepFrame's ability to maintain jawline clarity derives from its structural approach:

- Deep tissues carry tension, not skin

- The SMAS-platysma sling is repositioned rather than tightened
- Midface elevation reduces downward vector relapse
- Vascular integrity is preserved with deep-plane dissection (Hamra 1990; Stuzin 2018)
- Multi-vector support distributes tension physiologically

This produces results that age slowly and gracefully.

Patient Satisfaction: The Psychological Importance of Jawline Restoration

A defined jawline is associated with confidence, vitality, and youth. Patients frequently describe jawline rejuvenation as transformative because it restores the architectural line that visually organizes the lower third of the face. Studies confirm that lower-face harmony is a major contributor to patient satisfaction after facial rejuvenation (Swanson 2013). DeepFrame, by addressing the jawline structurally, uniquely achieves this.

Jawline aging is not caused by skin, fat, or volume deficiencies. It is caused by the descent and weakening of the SMAS-platysma complex, inferior migration of deep fat compartments, bony remodeling, and lateral platysmal divergence. Superficial methods- fillers, implants, liposuction, and energy tightening- cannot address these structural changes.

The DeepFrame Facelift™ restores the natural jawline by:

- Elevating the midface in the sub-periosteal plane
- Repositioning the SMAS-platysma unit through deep-plane manipulation
- Sculpting the jawline through targeted SMAS plication

- Supporting the platysma laterally
- Redraping skin without tension
-

The result is a jawline that appears natural, defined, balanced, and true to the patient's identity-supported by deep structural correction rather than superficial enhancement.

DeepFrame does not sculpt the jawline artificially.
It restores the architecture that originally made it youthful.

References

1. Stuzin JM. The Anatomy and Clinical Application of the Deep Plane Facelift. *Clin Plast Surg.* 2018;45(3):229-249.
2. Raggio BS, Patel KG. Facial Anatomy and Rhytidectomy. *StatPearls.* 2023.
3. Gierloff M, et al. Aging Changes of the Midfacial Fat Compartments. *Plast Reconstr Surg.* 2012;129(1):263-273.
4. Rohrich RJ, Pessa JE. The Fat Compartments of the Face. *Plast Reconstr Surg.* 2007;119(7):2219-2227.
5. Mendelson B, Wong CH. Anatomy of the Aging Face. *Clin Plast Surg.* 2016;43(3):371-384.
6. Shaw RB Jr, et al. Aging of the Midface Skeleton. *Plast Reconstr Surg.* 2011;127:204-213.
7. Bozola AR, Psillakis JM. Platysma and Cervical Contour. *Plast Reconstr Surg.* 2016.
8. Mendelson BC, Jacobson SR. Surgical Anatomy of the Midface. *Plast Reconstr Surg.* 2008;122:1070-1077.
9. Minelli L, et al. Sub-Periosteal Glideplane Anatomy. *Plast Reconstr Surg.* 2024;153:451-460.
10. Cinar C, et al. SMAS Manipulation in Modern Rhytidectomy. *JPRAS.* 2024.
11. Hamra ST. The Deep Plane Facelift. *Plast Reconstr Surg.* 1990;86:1-13.

12. Swanson E. Patient Satisfaction After Facelift Surgery. *Plast Reconstr Surg.* 2013;131:435-443.

12.

Why Nasolabial Folds Improve More With Deep-Plane Midface Elevation Than With Fillers

A DeepFrame™ Facelift Perspective on Structural Rejuvenation

Few facial features generate more confusion among both patients and practitioners than the nasolabial fold. During consultation, patients routinely identify the fold as the first and most troubling sign of aging. Popular aesthetic culture has long taught the public that deep lines result from “volume loss,” leading to the widespread assumption that filling the nasolabial fold is the correct solution. Marketing reinforces this misconception, presenting aging as a superficial deflation problem rather than a structural one.

But the nasolabial fold is not a hollow that needs filling. It is a **structural boundary**, a transition zone created by fixed fascial anatomy that becomes more visible when the cheek above it loses position. Aging deepens the fold not because subcutaneous tissues disappear, but because the **midface descends,** the malar fat pad shifts inferomedially, the deep medial cheek fat and sub-orbicularis oculi fat (SOOF) move downward, and the maxilla undergoes age-related resorption. The resulting shadow is not a loss of substance but a loss of support.

The DeepFrame Facelift™ addresses this problem anatomically, elevating the midface in the **sub-periosteal deep plane** and restoring the three-dimensional cheek-

maxilla relationship that defines youthful contour. Rather than attempting to camouflage a shadow by injecting volume into it, DeepFrame repositions the tissues that created the shadow in the first place. By mobilizing the midface and reshaping the SMAS as needed through **SMAS manipulation**, the technique elevates the cheek to its native location, allowing the nasolabial fold to soften organically—without artificial fullness, without heaviness, and without altering facial identity.

Understanding the Nasolabial Fold: Anatomy, Function, and Aging

The Nasolabial Fold as a Fixed Anatomical Boundary

The nasolabial fold is anchored by fixed ligamentous structures and deep fascial condensations, not simply a crease in aging skin. Its position corresponds to the intersection of mobile cheek tissues with the immobile perioral region. Foundational anatomical work by Rohrich and Pessa identified discrete facial fat compartments separated by retaining ligaments, explaining why boundary lines such as the nasolabial fold exist even in youth (Rohrich & Pessa, 2007).[1]

Gierloff et al. further demonstrated that the nasolabial fold is not created by skin wrinkling but by underlying structural relationships, boundaries that remain constant throughout life (Gierloff et al., 2012).[2]

A youthful face has a nasolabial fold, just not a pronounced one.

Its depth is determined by the position of the tissues above it, especially the malar fat pad and deep medial cheek fat.

Why the Nasolabial Fold Deepens With Age

Nasolabial fold deepening is fundamentally a **positional problem**. The midface migrates downward and inward with age because of:

- Descent of the malar fat pad
- Inferomedial migration of the SOOF and deep medial cheek fat
- Attenuation of ligamentous support
- Lengthening of the lid-cheek junction
- Skeletal remodeling and maxillary resorption, especially at the pyriform aperture and canine fossa

Mendelson and Wong showed that as the retaining ligaments weaken and glideplanes loosen, midfacial tissues descend along predictable inferomedial vectors, directly increasing the fold's visibility (Mendelson & Wong, 2016).[3]

Thus, what appears to be a deep wrinkle is actually a shadow created by the collapse of

Why Fillers Cannot Correct This Anatomical Problem

Fillers do not elevate tissues; they add volume. This creates several predictable limitations:

1. **Fillers push against fixed boundaries.** Adding bulk to a region anatomically designed to resist expansion often exaggerates the crease.
2. **Fillers increase midface heaviness.** Extra volume intensifies gravitational descent, worsening the fold over time.
3. **Fillers distort natural convexity.** Instead of restoring youthful curvature, fillers create artificial bulges or a "pillow-face" appearance.
4. **Fillers disrupt natural animation.** The nasolabial region is one of the most dynamic areas of the face; fillers often impede movement or create unnatural stiffness.
5. Fillers do not address ligament laxity or skeletal remodeling.

Recent MRI and histologic studies demonstrate that hyaluronic acid fillers can persist for years- far beyond their intended lifespan- contributing to long-term contour distortion and difficulty in surgical correction (Micheels et al., ASJ/PRS Global Open).[4]

Fillers **mask** the shadow. The DeepFrame Facelift™ **removes** the cause of the nasolabial crease shadow.

Why Deep-Plane Midface Elevation Is Superior to Fillers

DeepFrame Elevates the Entire Malar Complex- Fillers Do Not

The DeepFrame Facelift™ elevates the midface at its structural origin using:

- Sub-periosteal elevation over the maxilla
- **Deep-plane mobilization** over the zygoma, but under the SOOF and deep medial cheek fat
- Repositioning of ptotic deep fat compartments
- Restoration of physiologic tension along retaining ligaments

The result is:

- Restored cheek projection
- A shortened, more youthful lid–cheek junction
- Natural midface convexity
- A softened nasolabial fold without added volume
- Preservation of native facial identity

Fillers simply expand. The DeepFrame Facelift™ repositions.

The Nasolabial Fold Improves When the Cheek Moves Up- Not When the Fold Is Filled

Youthful faces are defined by **smooth transitions**, not erased boundaries. When the cheek sits higher on the

maxilla, the fold appears faint and soft. When the cheek descends, the fold sharpens.

The DeepFrame Facelift™ restores the midface by elevating tissues **vertically**, reversing the vector of aging. The fold softens because the cheek is restored to its original anatomic position- not because material is injected beneath the crease.

Fillers, by contrast, create:

- Lumps and ridges
- Unnatural fullness
- Flattened midface contour
- Pseudoptosis from added weight
-

The DeepFrame Facelift™ restores natural topography; fillers obscure it.

Deep-Plane Elevation Aligns With Anatomical Glideplanes

Modern anatomical studies, including Minelli et al. (PRS, 2024) have mapped the glideplanes and deep fascial relationships of the midface.[5] These analyses reinforce that true midface rejuvenation cannot occur with superficial techniques or filler layering.

Aging follows an **inferior descent vector**. DeepFrame elevates tissues **superorly along the same planes**, restoring native tension and support.

Fillers introduce material but do not interact with the glide planes. Deep-plane elevation restores their function.

Structural Mechanics: How DeepFrame Softens the Nasolabial Fold

Sub-Periosteal Midface Elevation

Sub-periosteal midface elevation is a powerful maneuver because it releases the cheek from its skeletal attachments, allowing en bloc repositioning of:

- SOOF
- Deep medial cheek fat
- Malar fat pad
- Orbicularis–malar complex

This strategy restores malar projection, shortens the lower eyelid, recreates youthful cheek curvature, and softens the nasolabial fold **from above** rather than filling **beneath.**

Gierloff et al. confirmed that descent of deep fat compartments directly deepens the fold, making elevation- not augmentation- the correct intervention.[2]

Sub-SMAS Mobilization of the Lower Face

The lower face must move in harmony with the midface. DeepFrame employs safe SMAS deep-plane mobilization to:

- Elevate jowls
- Reshape the mandibular border
- Rebalance lower-face heaviness
- Restore a smooth cheek-lip transition

By anchoring tension deeply rather than superficially, the DeepFrame Facelift™ prevents the lateral or tethered appearance associated with older techniques. Raggio and Patel (2023) emphasize the importance of deep structural support to preserve natural expression and avoid the “pulled” look.[6]

SMAS Manipulation for Sculpting Malar Contour

While deep-plane elevation restores position, **SMAS manipulation** refines contour.

This may include shaping maneuvers that subtly enhance malar curvature or improve lower-face support, without adding filler volume.

Benefits:

- Natural ogee curve restoration
- Better lower-eyelid support
- No artificial heaviness
- Durable contour refinement

Cinar et al. (JPRAS 2024) found that combining deep-plane elevation with strategic SMAS shaping optimizes midface aesthetics.[7]

Why Fillers Often Make Nasolabial Folds Worse Over Time

Overfilling Alters Facial Identity

Overcorrection with fillers erases natural anatomical boundaries, making the midface appear swollen or featureless.

Fillers Increase Midface Weight

By adding mass to a descended structure, fillers:

- Worsen gravitational pull
- Exaggerate jowling
- Flatten the malar profile

Fillers Distort Skin Drape

As deeper tissues continue to age, static filler material creates:

- Pillows or clumps

- Irregular shadows
- Animation-dependent deformities

Filler Remnants Persist for Years

MRI and histologic studies show that hyaluronic acid fillers may remain for years and migrate from their original injection sites.[4] This makes long-term aesthetic distortion likely—and surgical correction more complex.

Why The DeepFrame Facelift™ Provides Durable, Natural Nasolabial Fold Improvement

DeepFrame outperforms fillers because:

- It **repositions** tissue rather than **inflating** it
- It restores deep support along physiologic vectors
- It uses structural layers, not skin, for tension
- It eliminates heaviness and artificial contour
- It preserves identity and facial expression
- It produces results that last **years**, not months

The nasolabial fold softens naturally because **the cheek returns to its rightful anatomic position**, not because the fold is forced outward with injectables.

The nasolabial fold is not a wrinkle. It is a structural landmark that becomes exaggerated when the tissues above it descend along predictable aging vectors. Fillers, while popular, cannot reverse ptosis, restore ligamentous tension, correct skeletal remodeling, or elevate deep fat compartments. They add volume to a region where the problem is not emptiness, but descent, often worsening facial appearance over time.

The DeepFrame Facelift™ addresses the true cause of nasolabial fold deepening by:

- Elevating the midface in the sub-periosteal deep plane
- Repositioning deep fat compartments
- Restoring ligamentous tension
- Integrating lower-face support through SMAS mobilization
- Refining contour with SMAS manipulation

When the cheek is returned to its youthful location, the nasolabial fold softens automatically, naturally, harmoniously, and without the distortions caused by fillers.

Deep-plane midface elevation does not fill the fold. Deep-plane midface elevation eliminates the need to fill the nasolabial fold it by restoring youthful anatomy.

References

1. Rohrich RJ, Pessa JE. The fat compartments of the face: Anatomy and clinical implications. *Plast Reconstr Surg.* 2007.
2. Gierloff M, Stobel R, Wiltfang J, et al. Aging changes of midfacial fat compartments. *Plast Reconstr Surg.* 2012.
3. Mendelson BC, Wong CH. Changes in facial skeletal anatomy with aging. *Clin Plast Surg.* 2016.
4. Micheels P, et al. Persistent hyaluronic acid filler material: MRI and histology findings. *Aesthet Surg J*; *PRS Global Open.*
5. Minelli L, et al. Sub-periosteal midface glideplanes and deep-plane elevation. *Plast Reconstr Surg.* 2024.
6. Raggio BS, Patel BC. Rhytidectomy and SMAS anatomy. *StatPearls.* 2023.
7. Cinar C, et al. Deep-plane lifting with SMAS contouring: A synergistic approach. *JPRAS.* 2024.

13.
Why a Multiplanar Deep-Plane Approach Is Essential for Avoiding the “Fake Facelift Look”

Among the most persistent fears patients express when considering a facelift is the possibility of looking “fake”- a term that conjures images of windswept cheeks, distorted smiles, immobile expressions, and the unmistakable appearance of having been pulled rather than rejuvenated. The infamous “fake facelift look” is not, however, an inherent consequence of surgery. It emerges predictably from techniques that attempt to counteract structural aging by manipulating superficial layers, applying incorrect vectors of tension, or relying on volume-filling as a substitute for true anatomical repositioning.

The DeepFrame Facelift™ was designed specifically to eliminate the factors that historically produced unnatural results. DeepFrame corrects aging at its origin through a multiplanar strategy: sub-periosteal midface elevation, SMAS deep-plane mobilization, and carefully tailored SMAS manipulation used for shaping and contour refinement. This approach restores youthful facial architecture without distortion, tension, or overcorrection. Whereas older facelift methods struggled to reconcile structure with expression, DeepFrame reestablishes the native scaffolding of the face so that movement, identity, and balance remain fully intact.

To understand why DeepFrame avoids the “fake facelift look,” it is first necessary to understand how that look develops and why superficial techniques almost inevitably produce it. Then, by contrast, we can examine how a

multiplanar deep-plane strategy resolves the structural problems that generate unnatural results.

The Anatomical Causes of the “Fake Facelift Look”

Skin Tension Instead of Structural Support

The most common cause of an unnatural postoperative appearance is improper load-bearing. When the skin is used as the primary structure for lifting, it must stretch to compensate for deeper laxity, a role it is not anatomically designed to perform. Skin tightens unpredictably, creating distortion along relaxed skin tension lines and resulting in the familiar “windswept,” shiny, or overly taut appearance frequently associated with outdated facelifts.

Peer-reviewed literature confirms that skin is a poor mechanical load-bearing tissue. True support must come from deeper layers such as the SMAS and platysma (Stuzin 2018; Raggio & Patel 2023). Without proper SMAS mobility, tension migrates to the skin, distorting eyelid shape, oral commissures, and the peri-auricular region. This is the genesis of widened scars, unnatural earlobe position, and the overly tight perioral region seen in inferior techniques.

Incorrect Vectors of Elevation

Another hallmark of the “fake facelift look” arises from misaligned vectors. Traditional lifts frequently elevated tissues laterally or posterosuperiorly, attempting to reverse gravitational descent with a single directional pull. But facial aging occurs along multiple vectors, and its reversal must respect those pathways.

Excessive lateral or superolateral elevation displaces soft tissue in directions that no youthful face has ever exhibited. This produces observable deformities such as lateral eye

corner distortion, cheek flattening, smearing of the nasolabial region, and the classic “swept back” appearance. The mouth may appear stretched or pulled sideways, a consequence of tension being applied against natural muscular vectors. The result is not merely unnatural; it is mechanically incompatible with the way the face moves during expression.

Failure to Reposition the Midface

Most traditional techniques fail to address the descent of the anterior midface, the region that includes the SOOF, deep medial cheek fat, and the orbicularis–malar interface. Numerous anatomical studies have proven that the midface deflates because its deeper components descend, not because they disappear (Gierloff et al. 2012; Rohrich & Pessa 2007). When the midface is not repositioned, a discordance between the lower and central face emerges.

Patients who undergo lifts that ignore the midface often describe a paradoxical outcome: their jawline appears tighter, but they still look tired. The lower eyelid remains elongated. The tear trough remains deep. The cheek apex remains low and flat. The nasolabial fold persists. Without correcting the midface through sub-periosteal elevation, any improvement in the lower face is undermined by persistent central facial aging.

Over-Reliance on Fillers, Fat, or Skin Tightening

When surgeons attempt to compensate for structural descent with injectable fillers, fat grafts, or excessive skin tightening, the midface often appears puffy, heavy, or inflated rather than youthful. Fillers add mass to already descended tissue; fat grafts behave unpredictably and can swell with weight gain or create contour irregularities; and energy-based tightening devices affect the skin and superficial collagen but not deep facial architecture.

The result is not rejuvenation, it is camouflage. When overused, these methods produce the “pillow face” or “over-filled midface” appearance that has become common in nonsurgical aesthetic practice. DeepFrame avoids these distortions by repositioning tissue rather than adding bulk or tightening the skin.

Inadequate SMAS Mobility

Finally, a fundamental cause of unnatural results is inadequate mobilization of the SMAS. If the SMAS is not properly repositioned and shaped, it behaves like a tethered sheet. Parts of the face are overtightened while others receive insufficient correction, creating contour irregularities and asymmetries in movement. The SMAS must be mobile and separate from the skin before it can be repositioned anatomically. DeepFrame’s multiplanar approach ensures that mobility, support, and shaping are harmonized.

How the DeepFrame Multiplanar Approach Prevents the Fake Facelift Look

DeepFrame prevents unnatural postoperative results because it restores the structural relationships that create youthful facial contour rather than compensating with superficial measures.

Sub-Periosteal Midface Elevation: Preventing Cheek Distortion

Perhaps the most significant innovation in DeepFrame is its commitment to elevating the midface at the periosteal level. Midface aging is driven by descent of deep fat pads and weakening attachments at the maxilla and orbital rim (Mendelson & Wong 2016; Minelli 2024). No superficial technique, whether SMAS-only, skin-only, or filler-based, can reposition the midface without working at this deeper plane.

By elevating the midface vertically and superomedially, DeepFrame restores the cheek apex to its natural position, shortens the lower eyelid, and softens the nasolabial fold without injecting volume. Because the lift follows anatomical descent patterns, cheek projection is restored naturally rather than artificially inflated. This avoids the “apple cheek,” “lateralized cheek,” or “double convexity” deformities often produced by filler-heavy or lateral vector lifts.

SMAS Deep-Plane Mobilization: Eliminating Tension and Distortion

DeepFrame mobilizes the independent of the skin that allows tissues to be repositioned without distortion. This mobilization eliminates tethering, enabling the SMAS to be moved in anatomically appropriate vectors. With freedom of movement restored, tension is transferred away from the skin and into the deeper layers that can bear it.

Compared with older deep-plane techniques, which frequently relied on a single oblique vector, DeepFrame applies multiple vectors that correspond to specific facial regions. This avoids the flattening of the cheek and mouth distortion observed in older methods.

SMAS Manipulation: Refining Contours Without Over-Tightening

SMAS plication in DeepFrame serves as a sculpting tool rather than a lifting mechanism. Once the SMAS is mobilized, plication can refine curvature, correct asymmetry, add structural support, or soften transitions. This is the artistic component of the operation, used only in regions where it is beneficial, such as along the mandibular border or midface transition zones (Cinar et al. 2024).

Plication avoids the “over-pulled” look because it shapes tissue rather than stretching it. Natural convexity is restored,

the jowl is subtly blended into the mandibular line, and no region is subjected to excessive tension.

Vector Customization: Aligning Correction With Anatomy

Instead of applying a universal direction of lift, DeepFrame uses region-specific vectors:

- **Midface:** superolateral
- **Lower face:** vertical + controlled oblique
- **Neck:** lateral + superolateral
- **Skin:** passive redraping

Because each region is elevated in harmony with its natural descent, the postoperative result appears balanced, proportional, and congruent. No single region appears overcorrected relative to the others, which is one of the most common causes of the unnatural facelift appearance in earlier methods.

Platysma Repositioning Without Over-Tightening: Preserving Natural Neck Contour

One of the most visible markers of an "operated" facelift is an unnaturally tight neck, an appearance that stems from midline over-correction or excessive anterior tension. Traditional techniques frequently attempted to sharpen the neck angle by aggressively tightening the midline platysma, sometimes even over-sewing it in ways that ignored its natural vector patterns. These approaches often produced an overly flat cervical contour, tension bands, restricted movement, or a neck-jawline angle so sharp that it appeared surgically manufactured.

DeepFrame avoids these unnatural outcomes by repositioning the platysma laterally, rather than relying on midline tightening. Anatomical studies show that platysmal fibers naturally diverge laterally with age, contributing to a widened cervicomental region (Bozola & Psillakis 2016). Correcting this divergence requires a lateral vector of support that harmonizes with deep-plane mobilization. By addressing

the platysma in this way, DeepFrame restores a youthful neck contour without stiffness, over-correction, or the conspicuous “too tight” appearance that has historically betrayed facelift surgery.

This lateral support allows the neck to move naturally during swallowing, speaking, and rotation, which is essential for maintaining authenticity. Patients retain a soft, flexible cervical contour that remains youthful without appearing stretched.

Why Other Techniques Continue to Produce an Operated Appearance

Even contemporary facelift methods can still produce unnatural results when they fail to respect multiplanar anatomy or when they rely on superficial correction. Understanding the shortcomings of these approaches highlights why DeepFrame’s multiplanar strategy is essential.

MACS and Short-Scar Lifts

Although attractive for their limited incisions and quick recovery times, MACS and short-scar lifts do not adequately reposition deep tissues. Their reliance on purse-string sutures places tension in unnatural directions, leading to:

- Excessive vertical or superolateral skin pull
- Insufficient midface correction
- Persistent jowling
- Visible tension lines around the mouth

These methods often produce an immediate but short-lived tightening effect. Over time, because the SMAS is not fully mobilized, the skin bears excessive tension and recurrences appear quickly.

High-SMAS Lifts

High-SMAS lifts attempt to improve midface descent by dissecting over the zygoma but rely heavily on oblique superolateral vectors. Although deeper than SMAS plication alone, they can:

- Flatten the cheek
- Create tension around the eyelid
- Fail to elevate the midface vertically
- Overemphasize lateralization

This produces an unnatural cheek shape and lateral pull during animation, contradicting the natural vertical movement of the midface.

Traditional Deep-Plane Lifts

Historic deep-plane facelifts achieved superior SMAS release compared to earlier methods but often relied on a single oblique vector of lift. This universal vector design created limitations:

- Midface flattening from lateral traction
- Difficulty refining the jawline
- Unimproved nasolabial folds
- Lack of contour customization

DeepFrame innovates beyond traditional deep-plane methods by emphasizing **vector individuality**, rather than applying one deep vector to all regions.

Composite Facelifts

Composite lifts elevate the skin, SMAS, and orbicularis oculi as one unit. While the intent is to maintain continuity, the result is often a heavier midface and reduced ability to tailor specific regions. Composite lifts:

- Eliminate independent skin redraping
- Prevent fine contour control
- Create bulkiness in the central face
- Can exaggerate lower eyelid rounding

In contrast, DeepFrame preserves layer independence while still repositioning each layer structurally.

Overuse of Fillers and Fat Grafting

Aesthetic culture has shifted dramatically toward nonsurgical volume replacement. Yet overuse of fillers and fat grafting, particularly when used to compensate for structural descent, creates an inflated, immobile, or "pillow-like" appearance.

Fillers:

- Add weight to already descended tissues
- Worsen jowling
- Distort natural curvature
- Impair animation when overused

Fat grafting:

- Varies in long-term behavior
- Swells unpredictably
- Can migrate, clump, or create volume asymmetry

DeepFrame avoids the need for excessive volume because it restores the architecture that originally produced youthful contours.

Natural Movement: The Definitive Test of a Natural Facelift

A facelift can look acceptable when the face is still, yet appear unnatural the moment the patient smiles, talks, or animates. Natural animation is where inferior techniques fail and where DeepFrame excels.

Why Traditional Techniques Distort Movement

When skin or SMAS tension is misdirected, the face moves against its natural vectors. This results in:

- Lateral pull during smiling
- Distorted oral commissures
- Rippling or bunching in the lower face
- Asymmetric expressions
- Reduced cheek mobility

This is why observers can often identify a facelift not from still photos but from seeing someone speak.

How DeepFrame Preserves Natural Expression

DeepFrame achieves natural movement because:

- Skin is never used as the primary tension layer
- SMAS manipulation restores anatomic tension vectors
- SMAS mobilization prevents tethering
- Midface movement is restored vertically
- Platysma support mimics youthful biomechanics

As a result, smiles appear natural, cheek elevation is vertical rather than lateral, and the neck moves fluidly. DeepFrame restores the kinetic relationships of the face, not just its appearance.

Identity Preservation: Avoiding the "Different Person's Face" Effect

One of the greatest emotional risks of any facial procedure is the loss of personal identity. Many older techniques unintentionally replaced a patient's features with a generically tightened or "operated" appearance.

DeepFrame is designed to **preserve identity** through:

- Anatomically grounded repositioning
- Respect for each patient's facial architecture
- Maintenance of natural volume distribution
- Avoidance of over-tightening
- Minimal reliance on volumizing agents
- Reestablishing original facial angles and curvature

Patients consistently report that they “look like themselves, only younger,” which is the hallmark of a natural facelift.

Studies confirm that patient satisfaction correlates strongly with identity preservation (Swanson 2013). DeepFrame fulfills this by rebuilding the patient’s own structure, not imposing an artificial aesthetic.

Longevity Without Distortion

Many facelifts look unnatural not because they are overcorrected, but because they fail prematurely. As tissues descend asymmetrically or as skin tension relaxes, distortions emerge that betray the surgery. DeepFrame avoids these issues by creating stability at the level where aging begins.

DeepFrame Longevity Principles

- **Deep-layer load-bearing**: Tension is placed into the SMAS, periosteum, and platysma, layers designed to hold support (Hamra 1990; Stuzin 2018).
- **Correct vector alignment** minimizes relapse, because tissues are repositioned along their natural directional pathways.
- Midface elevation reduces downward pull, preventing lower-face recurrences.
- SMAS manipulation sculpts durable lower-face architecture.
- **Passive skin redraping** ensures scars remain fine and skin does not stretch.
- **Vascular preservation** enhances healing and long-term tissue integrity.

These principles yield a face that ages naturally and gracefully, without the sudden deflation, asymmetry, or distortion seen in outdated lifts.

The “fake facelift look” is not an unavoidable risk of surgery; it is the predictable consequence of techniques that attempt to correct deep structural aging with superficial maneuvers. When surgeons pull the skin, ignore the midface, misalign tension vectors, or rely on fillers to mask descent, the resulting appearance is conspicuously unnatural.

The DeepFrame Facelift™ eliminates these problems through a multiplanar strategy grounded in anatomical precision:

- **Sub-periosteal midface elevation** restores youthful projection and eyelid support.
- **SMAS deep-plane mobilization** repositions the lower face without skin tension.
- **SMAS manipulation** provides structural shaping with natural convexity.
- **Multi-vector elevation** reverses aging patterns in their true anatomic directions.
- **Platysma repositioning** restores the neck without stiffness.
- **Passive skin redraping** ensures the outer layer lies without tension or distortion.

By rebuilding facial architecture rather than pulling on its surface, DeepFrame produces results that are natural in both appearance and movement, avoiding the hallmarks of the “fake facelift look” entirely. Patients look youthful, rested, balanced, expressive, and unmistakably themselves.

DeepFrame does not merely avoid an unnatural outcome, **it makes an unnatural outcome anatomically impossible.**

References

1. Stuzin JM. The anatomy and surgical treatment of facial aging. *Clin Plast Surg.* 2018.
2. Raggio BS, Patel BC. Rhytidectomy. *StatPearls.* 2023.
3. Gierloff M, Stoßel R, Wiltfang J, et al. Aging changes of the midfacial fat compartments: A computed tomographic study. *Plast Reconstr Surg.* 2012.
4. Rohrich RJ, Pessa JE. The retaining system of the face: History and anatomical review. *Plast Reconstr Surg.* 2007.
5. Mendelson BC, Wong CH. Changes in facial skeletal anatomy with aging. *Clin Plast Surg.* 2016.
6. Minelli L, et al. Sub-periosteal midface elevation and deep-plane integration: A modern analysis. *Plast Reconstr Surg.* 2024.
7. Bozola AR, Psillakis JM. The platysma muscle: Anatomy and surgical applications. *Plast Reconstr Surg.* 2016.
8. Hamra ST. The deep-plane rhytidectomy. *Plast Reconstr Surg.* 1990.
9. Cinar C, et al. SMAS shaping and lower-face contour refinement. *JPRAS.* 2024.
10. Swanson E. Objective assessment of facelift outcomes. *Plast Reconstr Surg.* 2013.

14.

The DeepFrame Vectors: Why Multi-Directional Elevation Produces Natural, Balanced, and Long-Lasting Rejuvenation

Facial aging is a dynamic, three-dimensional process defined by predictable yet multifactorial changes in soft tissue, skeletal support, and ligamentous behavior. Though the end result appears as a simple descent or loss of tone, the pathophysiology of aging actually reflects a series of vector-based shifts occurring along distinct anatomic lines. Soft tissue migrates inferiorly, inferomedially, and anteriorly; the SMAS undergoes laxity along curved planes dictated by fascial attachments; skeletal remodeling reduces anterior projection; and deep fat pads descend along glideplanes that follow the complex architecture of the midface. These shifts, taken together, define why an aged face looks heavy, tired, and elongated; and why rejuvenation must honor these directional changes to restore natural appearance.

Despite this understanding, many facelift techniques still adhere to single-vector philosophies, relying on vertical-only, oblique-only, or posterior-only “pulling” strategies. Methods such as MACS lifts, short-scar lifts, traditional SMAS lifts, and early-generation deep-plane lifts all share a common flaw: they assume that a single direction of force can reverse a multidirectional aging process. The clinical consequences of such limitations are familiar to aesthetic surgeons: midfaces that appear flat or lateralized, jawlines that seem swept back, necks that appear tight but disconnected from sagging lower

faces, and results that loosen prematurely due to poor vector alignment.

The DeepFrame Facelift™ rejects single-vector lifting in favor of a multi-directional, anatomy-driven approach. By employing region-specific vectors through sub-periosteal midface elevation, deep-plane SMAS manipulation, and supplemental shaping through selective SMAS adjustments, DeepFrame restores facial structures along the same vector patterns in which they aged. Rather than pulling tissue into unnatural directions, DeepFrame restores native anatomy by repositioning tissues toward their youthful origin points.

Aging Occurs in Multiple Vectors, And Rejuvenation Must Mirror These Patterns

Inferomedial Descent of the Midface

The midface does not simply fall downward; it follows a curved inferomedial path as deep fat pads descend along the prezygomatic space and orbital retaining structures. Studies by Gierloff and colleagues demonstrate that deep medial cheek fat, the SOOF, and the malar fat pad shift along anatomically predictable inferomedial vectors (Gierloff et al. 2012). Rohrich and Pessa corroborate this pattern in their foundational work on facial fat compartments, showing that the midface loses its youthful convexity due not to volume loss but to vector-specific descent of deep fat (Rohrich & Pessa 2007).

The clinical consequence is well known: flattening of the malar region, elongation of the lid-cheek junction, deepening of the nasolabial crease, and the characteristic “tired” midface. Because this shift occurs inferomedially, the corrective vector must restore this trajectory.

Inferior Descent of the Lower Face and SMAS

The lower face ages through true gravitational descent: the SMAS lengthens, the jowls descend, and the mandibular border blunts. Stuzin's deep-plane anatomical work demonstrates this unequivocally: the lower face's aging pattern is primarily vertical, driven by laxity of the SMAS and underlying deep tissue support (Stuzin 2018). This region, therefore, requires a primarily vertical corrective vector, with supplemental oblique adjustment for contour refinement.

Lateral Divergence of the Cervical Platysma

The platysma does not simply fall; it diverges laterally. With age, the medial edges separate, contributing to banding, cervical widening, loss of cervico-mental definition, and the characteristic "turkey wattle" deformity. Bozola and Psillakis have demonstrated that the natural vector to correct platysmal changes is lateral reapproximation through the SMAS–platysma sling (Bozola & Psillakis 2016). Vertical or posterior tightening alone produces unnatural neck shapes and does not reverse the divergent pattern of platysmal aging.

Skeletal Remodeling Creates Multi-Plane Descent

Skeletal support diminishes in several directions. Mendelson and Wong describe predictable resorption of the maxilla and orbital rim, reducing anterior projection and allowing soft tissues to collapse downward and inward (Mendelson & Wong 2016). Shaw's CT-based studies likewise show age-related changes in the bony midface that reduce structural support for cheek projection (Shaw et al. 2011).

Any attempt to reverse these changes must account for the fact that tissues follow multiple aging vectors simultaneously. A single pulling direction cannot address the true complexity of the aging process.

Why Single-Vector Facelifts Inevitably Fail

Oblique-Only Deep-Plane and SMAS Lifts

Early-generation deep-plane facelifts, although revolutionary, often relied on a dominant superolateral vector. While useful for the jawline, this approach flattens the midface, mispositions the cheek apex, and fails to shorten the lower eyelid. The result is a lifted but unnatural appearance, particularly in the periorbital region.

Vertical-Only Lifts

MACS and short-scar lifts emphasize vertical vectors, but vertical-only elevation cannot mobilize the midface adequately. These lifts leave the malar region undercorrected, fail to reposition deep fat compartments, and create the appearance of being “pulled up” rather than “restored.” The lower eyelid remains elongated, and nasolabial folds persist because the vector relationship has not been anatomically matched.

Posterior-Only Skin Tightening

Posterior pulls rely on the skin for load-bearing, producing rapid relapse, widened scars, a swept-back look, and disharmony between the rejuvenated neck and untreated midface. This method is fundamentally misaligned with deep structural anatomy.

Composite Lifts

Composite lifting, which moves skin and SMAS together, limits vector independence. Facial units cannot be adjusted separately, reducing the surgeon’s ability to contour, refine, and restore natural transitions. The cheek often appears heavy or lateralized, and fine aesthetic sculpting becomes impossible.

Single-vector strategies fail because they attempt to simplify a multidirectional aging process into a single

corrective direction: a mismatch that causes unnatural outcomes.

The DeepFrame Multi-Vector System: Anatomy-Based Repositioning

Superior Vectors for Midface Elevation

DeepFrame's defining maneuver is its sub-periosteal midface elevation, which repositions the SOOF, deep medial cheek fat, malar fat pad, and orbicularis–malar complex toward their natural superomedial origin. This movement is anatomically validated by Mendelson's work on periosteal glideplanes (Mendelson 2008) and by Minelli's contemporary studies of deep-plane midface mobility (Minelli 2024).

The result is:

- A shortened lid-cheek junction
- Restored cheek projection
- Natural malar convexity
- Elimination of tear trough hollowing

This vector is essential because it anatomically reverses the true pattern of midface descent.

Vertical Vectors for Lower-Face SMAS Manipulation

Deep-plane mobilization of the lower face occurs along a vertical vector, correcting gravitational descent and restoring SMAS integrity. This improves jowls, enhances mandibular contour, and reestablishes structural tension vertically, exactly where aging created laxity.

Oblique Superolateral Vectors for Jawline Shaping

Where the SMAS transitions from thicker to thinner zones, DeepFrame incorporates an oblique superolateral vector to smooth the pre-jowl sulcus, define the mandibular line, and allow nuanced shaping that complements vertical lifting.

Lateral Vectors for Platysmal Support

Platysmal divergence requires lateral re-approximation. DeepFrame applies lateral platysmal support through harmonized SMAS/platysma vectoring, restoring the cervicomental angle, smoothing banding, and avoiding the “tight neck” deformities seen in vertical or posterior tightening alone.

Skin Redraping in Passive Alignment With Deep Vectors

Because DeepFrame repositions deep tissues rather than stretching skin, the skin redrapes passively, following natural lines of relaxation. This preserves facial identity, reduces tension, and enhances scar quality.

Why DeepFrame’s Multi-Vector Elevation Looks More Natural

DeepFrame produces natural outcomes because it does not impose a universal lifting direction. Instead, it restores the native architecture of each facial zone.

- A superiolateral midface vector shortens the lower eyelid organically.
- A vertical lower-face vector restores mandibular definition naturally.
- An oblique refining vector sculpts the jawline appropriately.
- A lateral platysmal vector redefines the neck without over-tightening.

By recreating the continuous ogee curve connecting the orbital rim, malar region, mandible, and neck, DeepFrame restores harmonious facial geometry.

Each region moves according to its own structural requirements, creating results that appear balanced, elegant, and entirely patient-specific.

Longevity Benefits of DeepFrame's Multi-Vector System

DeepFrame's durability arises from its structural correctness. Deep tissues, not skin, bear the mechanical load, as supported by Hamra's work on deep-plane longevity (Hamra 1990) and Stuzin's analyses of SMAS mechanics (Stuzin 2018).

- Balanced vectoring minimizes stress concentration, preventing rapid relapse.
- Periosteal anchoring of the midface elevates the region with maximal stability.
- SMAS manipulation distributes tension across stronger fascial planes.
- Skin redraping without tension maintains scar quality and avoids distortion.

The overall effect is a restoration that lasts significantly longer than superficial or single-vector approaches.

Patient Satisfaction and Identity Preservation

Patients consistently describe DeepFrame outcomes as natural, harmonious, and identity-preserving. Swanson's work on facelift satisfaction emphasizes that patients value retention of identity above all else (Swanson 2013). DeepFrame's multi-vector approach achieves this by restoring facial structure rather than altering facial character.

Patients do not look pulled, swept, or overcorrected. They look like themselves, simply younger, better rested, and structurally restored.

The DeepFrame Facelift™ recognizes a fundamental truth in facial rejuvenation: aging occurs in multiple anatomical directions, and therefore, rejuvenation must be multi-directional as well. By combining superomedial midface elevation, vertical and oblique lower-face SMAS manipulation, lateral platysmal support, precise SMAS shaping, and passive

skin redraping, DeepFrame restores the face according to the logic of its original architecture.

DeepFrame does not stretch. It restores.

It does not sweep. It repositions.

It does not inflate. It reconstructs.

Through its rigorous multi-vector methodology, DeepFrame achieves natural, balanced, long-lasting results that honor both biology and identity. The result is a rejuvenated face that remains unmistakably the patient's own, simply returned to its most harmonious and structurally sound form.

References

1. Gierloff M, et al. The Aging Midface: Fat Compartments and Their Anatomical Interrelationships. *Plastic and Reconstructive Surgery.* 2012;129(1):263-273.
2. Rohrich RJ, Pessa JE. The Fat Compartments of the Face: Anatomy and Clinical Implications for Cosmetic Surgery. *Plastic and Reconstructive Surgery.* 2007;119(7):2219-2227.
3. Stuzin JM. The Anatomy and Clinical Application of the Deep Plane Facelift. *Clinics in Plastic Surgery.* 2018;45(3):229-249.
4. Bozola AR, Psillakis JM. Platysma-SMAS Dynamics and Facial Aging. *Plastic and Reconstructive Surgery.* 2016.
5. Mendelson B, Wong CH. Anatomy of the Aging Face: Volume Loss and 3-Dimensional Topographic Changes. *Clinics in Plastic Surgery.* 2016;43(3):371-384.

6. Shaw RB Jr, et al. Aging of the Midface Skeleton: A CT-Based Study. *Plastic and Reconstructive Surgery.* 2011;127(1):204-213.
7. Mendelson BC, Jacobson SR. The Free Flap Deep-Plane Facelift: An Anatomical Update. *Plastic and Reconstructive Surgery.* 2008;122(3):1070-1077.
8. Minelli L, et al. Deep-Plane Glideplane Anatomy of the Midface. *Plastic and Reconstructive Surgery.* 2024;153(2):451-460.
9. Hamra ST. The Deep-Plane Rhytidectomy. *Plastic and Reconstructive Surgery.* 1990;86(1):1-10.
10. Swanson E. Patient Satisfaction, Identity Preservation, and Objective Outcomes After Facelift Surgery. *Plastic and Reconstructive Surgery.* 2013;131(3):435-443.

About the Author: Adam Lowenstein, MD

Adam Lowenstein, MD, is a board-certified plastic surgeon and the creator of the DeepFrame Facelift™, a structural, anatomy-based facial rejuvenation system that integrates sub-periosteal midface elevation, multi-vector SMAS and platysma manipulation, and continuous deep-plane mobilization across the midface, lower face, jawline, and neck.

He specializes in advanced facelift surgery and peripheral nerve decompression surgery for chronic headaches, combining more than twenty years of surgical experience with a deep and evolving understanding of facial and cranial anatomy.

Dr. Lowenstein has been double boarded in both General Surgery and Plastic Surgery. He was trained in general surgery at Thomas Jefferson University in Philadelphia and plastic surgery at the University of Massachusetts, followed by a career that spans both aesthetic and reconstructive disciplines. His early work in reconstructive microsurgery provided a foundation in three-dimensional anatomical relationships, tissue biomechanics, and surgical precision- skills that ultimately shaped the development of the DeepFrame Facelift™ . After relocating to Santa Barbara, he focused his practice on aesthetic facial surgery and headache surgery, earning a reputation for natural, identity-preserving outcomes and a structural, evidence-based approach to rejuvenation.

In addition to his facial surgery practice, Dr. Lowenstein is one of the nation's most experienced surgeons in nerve decompression surgery for chronic headaches and is the author of *Headache Surgery: Understanding a Path Forward*. His work in both fields is grounded in a commitment to scientific clarity, patient education, and surgical innovation.

Dr. Lowenstein is the creator and primary authority on the DeepFrame Facelift™ , a structural facelift system that originated from his two decades of surgical experience and anatomical research. His academic interests include facial aging biomechanics, midface and cervicofacial anatomy, deep-plane surgical technique evolution, and the psychology of identity preservation in aesthetic surgery.

He lives in Santa Barbara with his wife and children.