# Facelift

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# Facelift
## Panel Discussion, Controversies, and Techniques

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## KEYWORDS

- Facelift • Cosmetic surgery • Surgery techniques • Facelift candidate • Facelift results
- Minimally invasive surgery • Facial surgery mastery

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**Facelift Panel Discussion**

*Gaylon McCollough, Stephen Perkins, and J. Regan Thomas address questions for discussion and debate:*

1. Who is not a candidate for facelift?

2. Of the various approaches to facelift, do any truly add advantages to an SMAS technique (ie, deep plane facelift)?

3. What techniques are most effective in managing the neckline in face-lifting and in what sequence should these be performed?

4. Which, if any, face-lifting techniques have been proved to provide the longest lasting result?

5. To start, develop, and maintain a busy face-lifting practice, is it necessary or even beneficial to offer some sort of minimalist facelift procedure or even a noninvasive substitute procedure?

6. *Analysis:* Over the past 5 years, how has your technique or approach changed, or what is the most important thing you have learned in performing facelifts?

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▶ **Stephen Perkins presents videos of his facelift technique: Sequential Submental Excision and Plication of Subplatysmal Fat and Platysma; Undermining post auricular neck skin flap in rhytidectomy; Submentalplasty in Rhytidectomy; SMAS imbrication; and Submental and Jowl Liposuction in Rhytidectomy. Available at: http://www.facialplastic.theclinics.com**

## *Who is not a candidate for facelift?*

### McCOLLOUGH

Patients who are not in good physical and/or mental health or those who present to a facial plastic surgeon with unrealistic expectations are not good candidates for any appearance-

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altering surgery. On a more global scale, a patient whose face requires more—or less—than what a "one-size-fits-all" facelift can provide is not a candidate for such a procedure…except in certain circumstances.

Some lifestyle habits affect eligibility for certain types of facelifts and ancillary procedures. Patients who use nicotine in any form are not good candidates for procedures that require extensive skin undermining. However, nicotine use should not automatically disqualify patients from rejuvenation procedures. Short flaps (ie, minimal skin elevation in the appropriate anatomic regions) with suspension of the underlying superficial muscular aponeurotic system (SMAS) and

minimal tension on the skin may be an acceptable alternative, as long as the patient understands that by limiting the procedure the overall result will be compromised.

Nicotine users must also understand that flap necrosis and unsightly scars are known risks and must be willing to accept them, in advance of surgery. In all cases, the surgeon should stress abstinence from nicotine for a minimum of 2 weeks before, and after, surgery. Oral niacin (in doses that produce a flush 4 times daily) and topical nitroglycerine paste applied over the undermined areas may be beneficial, especially should the blood supply to *any* facial flap become questionable.

## THOMAS

The ideal candidate for a facelift would be an individual whose facial appearance is characterized best by a strong angular bony skeleton with a normal or high positioned hyoid complex. The patient should be at near ideal weight with minimal facial and submental fat and appropriate facial skin elasticity. The ideal patient would have relatively

smooth non-sun-damaged skin and be without deep rhytids. Certainly the ideal patient would be a healthy individual without systemic disease and would be psychologically realistic and well motivated, whose goal for surgery is improvement and not perfection. Thus the patient who is *not* an ideal candidate for facelift would be a patient who



**Fig. 1.** A 57-year-old woman who desired face and neck rejuvenation but is a recalcitrant 2-pack-per-day cigarette smoker.

**Fig. 2.** A 60-year-old woman who is markedly overweight and recently underwent bariatric surgery who desires a neck-lift. At present, this obese patient is not a candidate for facelift surgery until she loses her proposed weight.



**Fig. 3.** A 57-year-old preoperative facelift patient with microgenia and a very low hyoid is a poor candidate for facelift surgery.

does not fulfill these ideal patient characteristics in a significant manner. Also note that it is important that the patient stop taking medications that would have an anticoagulant effect, including aspirin or nonsteroidal antiinflammatory drugs and vitamin E. Smoking has been demonstrated to impede healing, and the patient should quit smoking for at least 3 to 6 months before surgery.

## PERKINS

Individuals who are not candidates for facelift include

- Active smokers (**Fig. 1**)
- Patients who could be in the middle of a life-changing situation (ie, divorce) or who are emotionally unstable and unrealistic and feel that the surgery will improve their life situation
- Obese patients, particularly those who are not controlling their weight and have large fluctuations or plan a significant weight loss in the next 3 to 6 months following surgery (**Fig. 2**)
- Patients unable to tolerate either deep sedation or general anesthesia or who are medically not cleared for surgery for cardiac or other reasons
- Patients who have active vasculitis or autoimmune diseases specifically related to the facial skin, such as facial scleroderma
- Patients on chemotherapy or a chemotherapeutic type medication controlling their autoimmune disease
- Patients with a history of full course radiation to the preauricular and infra-auricular neck skin, that is, those who have compromised vascularity due to chronic radiation or long-term previous chronic radiation exposure

The additional category of poor candidates for facelift should also be noted:

- Patients with a low hyoid, producing a very obtuse cervicomental angle, may not achieve a result or one that they expect to obtain. This is true in addition to patients who have markedly weak chins, small mandibles, or thick heavy skin (**Figs. 3** and **4**). Those patients who have extremely ptotic submandibular glands may be disappointed in their neckline result after facelift because of these glands becoming more obvious.
- Patients with very deep nasolabial grooves and prominent cheek mounds and folds are not ideal for this procedure because the facelift procedure itself does not adequately correct this and the patient may well feel that this is what a facelift does when it, in fact, does not improve that region (see **Figs. 2** and **3**).

A facelift can safely be performed on patients who are poor candidates as long as structural augmentation is added and/or they are completely realistic and are shown the results that are obtainable with their anatomy before the surgery.
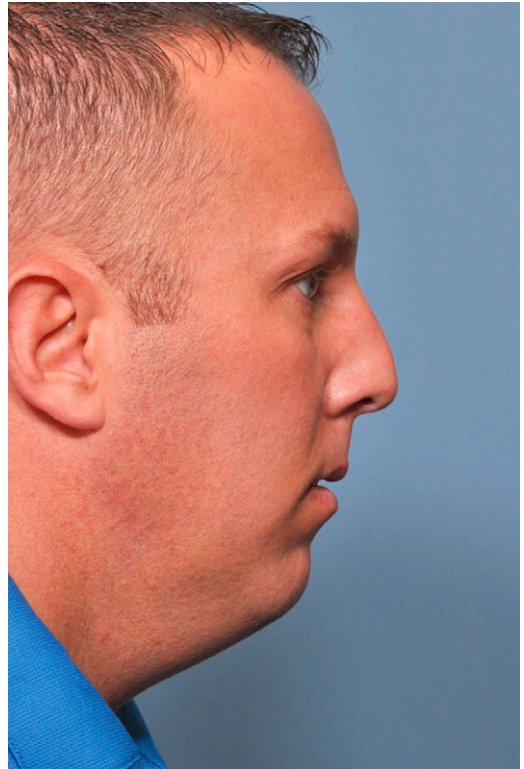


**Fig. 4.** A 42-year-old man with a weak chin and a low hyoid desires a "sharp" neckline. He remains a poor candidate for significant improvement in his neck from facelift surgery.

## Of the various approaches to facelift, do any truly add advantages to an SMAS technique (ie, deep plane facelift)?

### McCOLLOUGH

The so-called deep plane facelift has created confusion within plastic surgical circles, for it is, simply, an extension of the same SMAS suspension procedures that many facial plastic surgeons have been performing since the late 1970s. The principle difference in the most well-known version of the technique is that the sub-SMAS dissection is carried farther into the cheek and neck than was described in articles published by this author, and others, in the early 1980s.

In all primary lifts, and in every subsequent lift in which it is possible to raise an SMAS flap, the SMAS should be freed beyond the anterior border of the parotid gland and far enough anteriorly and inferiorly to allow for upward and backward movement of the cheek, lower face, and neck (refer to **Fig. 36** in the section "Facelift Approaches and Techniques from the Masters").

When the posterior margin of the newly developed SMAS flap is tugged on with surgical forceps, the surgeon should witness upward and backward movement of the cheek and neck tissues. In my experience, any dissection beyond this point of mobilization is fruitless and increases the risk of injury to branches of the facial nerve.

### THOMAS

Having tried other approaches through the years, including deep plane facelift, it was my personal observation that an SMAS facelift with 2 vector approach with appropriate submental correction gives the best results. These observations have been documented by others in the literature, including, more recently, the study by Bassichis and Becker in *Archives of Facial Plastic Surgery*. I describe my techniques at the end of the panel discussion.

## PERKINS

There are a few advantages to performing facelift techniques that do not require wider subcutaneous skin undermining. The rate of hematoma is not as high with a limited subcutaneous flap like that used in a deep plane classic technique. In addition, the vascular side of the skin flap is a little bit more robust with a shorter skin undermining and a deeper elevation of the SMAS. This may be an advantage in prior smokers. These advantages, however, in my opinion, do not outweigh the benefits of an extended SMAS approach, which takes advantage of not only extended elevation of the SMAS like the deep plane does but also adequate skin undermining for a second vector redraping.

Although the SMAS imbrication technique can dramatically improve the jowl, it provides minimal improvement in the melolabial fold of the midface. Claims of midface-lifting improving this area have not been found to be true. The midface can be defined as the portion of the cheek that encompasses the area between the lower eyelid and the level of the oral commissure.[1] Injectable fillers are advantageous in improving this area. A midfacelift is a procedure that may improve it somewhat but not much.[2]

Extended SMAS facelift with the modified deep plane technique can incorporate dissection just below the zygomatic buttress up over the malar eminence, releasing malar dermal attachments superficial to the zygomaticus muscle and into the midcheek if necessary. Not all patients require elevation of the SMAS in this region. Once good mobilization of the jowl and midcheek tissues has been accomplished with extended SMAS undermining, further dissection into the midcheek may not be necessary. Theoretically, extending the dissection in this region increases the risk of injury to the zygomatic and buccal branches of the facial nerve.

## What techniques are most effective in managing the neckline in face-lifting and in what sequence should these be performed?

### McCOLLOUGH

As is the case for other areas for which a facelift is indicated, diagnosis precedes treatment. The etiology of an undesirable neckline must be determined. Is it caused by loose skin? Is fat involved? How does the anatomic relationship of the hyoid and thyroid cartilage to the mandible contribute to the cervicomental angle?

If the hyoid bone and thyroid cartilage are titled forward, producing an obtuse cervicomental angle, there is not a lot that can be done (safely) to correct it. If, however, these structures have a vertical orientation, and it is determined that fat is contributing to the problem, fat should be removed with direct excision and/or liposuction. In some cases, it is helpful to remove subplatysmal fat as well.

If the edges of platysmal muscles are divergent (producing platysmal banding), a platysmaplasty (suturing the divergent edges together in the midline) is the most reliable method of correcting the problem. In some cases, a myectomy (removing a V-shaped portion of the muscle perpendicular to the leading edge of the platysmal muscle) may be sufficient. Whenever platysmaplasty is performed, the skin of the neck should be undermined from side to side, connecting the submental wound with the postauricular dissection on each side of the face; otherwise a "cobra deformity" is likely to be noted after swelling subsides.

In virtually all facelifts performed by this author, SMAS suspension in the cheek and posterior neck regions is performed, providing additional improvement in the cervicomental angle. In this author's experience, to obtain optimal improvement of the cervicomental angle, the postauricular incision should be carried posteriorly and inferiorly along the occipital hairline. Experience has shown that when the postauricular incision does not extend to this point, SMAS is not supported to the occipital fascia and the skin is not undermined (as is advocated in some short scar facelifts); as much as 7 cm of skin can be left behind, leading to inadequate treatment of the skin of the neck.

When the neck needs to be addressed at the time of face-lifting, I address it first, performing the procedures mentioned earlier. Then, I perform a cheek/neck-lift with SMAS suspension and skin removal.

The bottom line is that minimally invasive techniques do not provide long-term improvement of the anterior neck, requiring that the surgeon (or a colleague) will often be asked by the patient to perform additional surgery within months after the first surgery.

**Fig. 5.** The patient has areas of attention in the submental area marked in the preoperative room with the patient in the upright animated position.



**Fig. 6.** A variety of liposuction instruments are available, but the author prefers small diameters of 2 to 4 mm in size.

## THOMAS

Most patients benefit from a combination of submental liposuction, removing the adipose content of the mandibular line and submental area combined with tightening of the platysmal layer. These are the 2 maneuvers that most frequently contribute to an aesthetic neckline (**Figs. 5–7**).

## PERKINS

Surgery to improve the neckline requires operating on the neckline itself. Facelift techniques that do not directly approach the anterior neck often fail to improve the neck in most patients. Platysmal laxity, cervical liposis, and midline submental fat cannot be adequately addressed solely through a preauricular incision of any type. The foundation for a pleasing cervical mental angle is the platysmal "sling" that is created by midline platysmal placation and posterior anchoring of the platysmal/SMAS flap (**Fig. 8**). This is a key element in achieving an excellent and a lasting cervical mental angle and good neckline in face-lifting. Often this is really important for patients who are seeking rejuvenation of their face and neck.

I prefer to perform submental/jowl liposuction and corset platysmaplasty at the beginning of the case for several reasons. This is very important because I have tried to do the platysmal tightening after having posteriorly pulled the platysmal and have had many lateral recurrent platysmal bands occur because of inadequate formation of the corset with subsequent sling. I always elevate the neck skin before making the preauricular incision. With this technique, it is easier to approximate the muscles in the midline before they have been pulled posteriorly. Also, extremely important, I prefer to have a strong platysmal "unit" before advancing the platysmal posteriorly. I use the platysmal portion of the SMAS-platysma f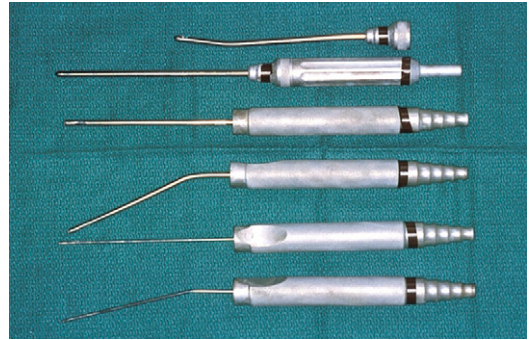lap as a sling and do not excise it. I attach it to the posterior mastoid periosteum, as described in the synopsis of my procedure section.

As noted in the face-lifting article by Patel and Perkins,[2] this sequential cauterization, excision, and suturing of the platysmal and submental fat from the mentum and submental incision, posteriorly to the submental angle, creates a firm anterior corset that sets the stage for bilateral posterior suspension and imbrication of the platysma.[3] Some contouring at the cervical mental angle from the wedge excision of the platysmal and subplatysmal fat in this area only may be required in heavier necks to actually create the angle.

The senior author (S.P.) has found that aggressive techniques in the region of the neck have



**Fig. 7.** Cannulas that have a single hole on one side is preferable and the spatula-shaped tip is often helpful.
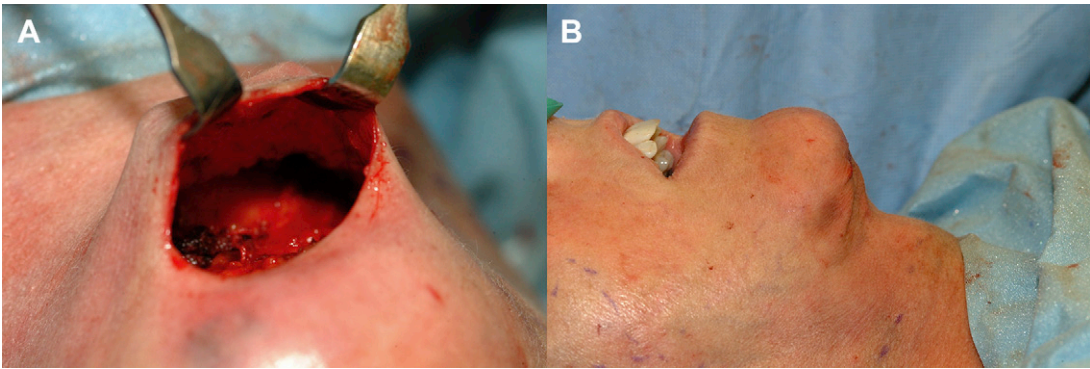
**Fig. 8.** (*A*) Completed anterior suture imbrication of the anterior borders of the platysma from the submentum down to the cervical mental angle where bilateral "wedges" of platysma have been excised. (*B*) Intraoperative result of a patient after liposuction of the neck and Perkins' Kelly clamp technique for anterior corset platysmaplasty has been completed before posterior sling/suspension.

dramatically improved the overall initial long-term results for the neck portion of the rhytidectomy[2] with thus a much happier patient population overall.

Liposuction of the neck and jowls is an essential part of creating a sharp neckline (**Fig. 9**). Overzealous liposuctioning can create contour irregularities and an oversculpted look; however, most women have some cervical liposis and fat in the jowl region that cannot be corrected with SMAS and platysmal work alone. When performed correctly, liposuction is an excellent additional technique to improve the results not only of the neckline but also of the jawline in face-lifting.



**Fig. 9.** A 43-year-old woman who underwent liposuction only of the neck, jowl, and jawline, producing a very noticeable result without any platysmaplasty or facelift technique.

## Which, if any, face-lifting techniques have been proved to provide the longest lasting result?

### MᴄCOLLOUGH

After having performed more than 5000 facelifts, I do believe that some variations of the procedure (particularly those that suspend the deeper tissues in the face and neck with fascia-fascia sutures) enhance both short- and long-term results. Other techniques and principles that are beneficial include the following:

1. Selective low-pressure crisscross liposuction (**Fig. 10**) along the mandibular margins to remove fatty tissue in the jowl region
2. Excisional lipectomy and low-pressure liposuction in the submental region to remove unwanted fat
3. Anterior platysmaplasty in necks with prominent platysmal banding and in necks with an obtuse cervicomental angle (**Fig. 11**)
4. In virtually all facelifts, I excise a strip of fat and fascia overlying the parotid gland (**Fig. 12**), lift the leading edge of the distal edge of the defect, dissect the SMAS free from the underlying tissues (as described in question number 1), and use fascia-to-fascia closure of the resulting defect with multiple (10–12) interrupted 2-0 Vicryl sutures (refer to **Fig. 36** in the Approaches and Techniques section). Placement of each of these suspension sutures is critical. An "accordion" technique is used to gain a purchase of the distal SMAS advancement flap. The proximal purchase of each stitch incorporates the proximal edge of the defect that was created with the initial fat/SMAS excision (refer to **Fig. 36** in the "Approaches and Techniques from the Masters" section). Suture placement is repeated 10 to 12 times, until a semicircular row of interrupted sutures has been created, securing the distal SMAS flap to fascia, including that overlying the occipital muscles, particularly in patients at stages III to V. Except for point-specific contouring purposes, avoid suturing fat to fat, regardless of the suturing technique used. If suspension of facial and neck tissues is the objective, sutures placed in fat are effective but for a short time and eventually pull through, causing the surgical anastomosis to break down and distal tissues to sag more rapidly
5. When planning surgical incisions for face-lifting, make sure that the postauricular incision is extended along the posterior hairline to allow removal of the excess skin from the neck after posterior suspension of the platysma with its enveloping SMAS has been accomplished, especially in patients with class IV and class V conditions. So-called short scar and other minimally invasive proprietary lifts that do not include postauricular and occipital hairline incisions often leave behind from 4 to 7 cm of skin that could have been removed from the neck and, therefore, are destined for disappointment in patients with class III, IV, and V conditions.

### THOMAS

In my opinion, the longest lasting result is variable with the technique used and the skill of the surgeon as well as with the physical characteristics of the patient. There is no question that those
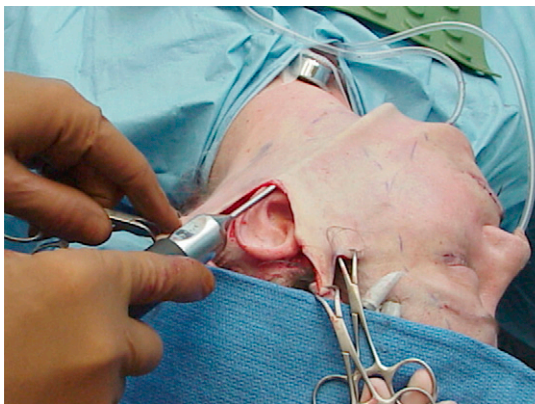


**Fig. 10.** (*Left* and *right*) Multidirectional low-pressure suction-assisted lipectomy.

**Fig. 11.** An example of anterior platysmaplasty with side-to-side elevation of neck flaps in a patient coded as SQ-3, V-2, CH-3, Mar-2, Ne-4, DL-3, FX-2, WR-2.
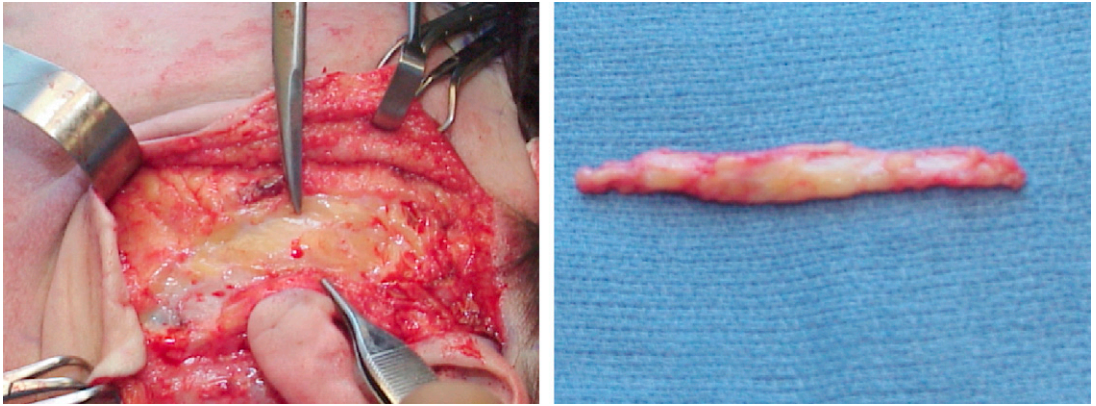
**Fig. 12.** (*Left*) Excision of fat and SMAS over parotid gland. Note free edges of fascia. (*Right*) Strip of fat and fascia removed.

patients with better muscle tone and skin tone and who tend to be at a somewhat younger age and with less UV exposure tend to do better. Similarly, there is a familial and genetic variation of elastic and collagen fibers of the skin and their ability to respond to the aging process. Finally, of course as noted, it is difficult to compare results from one practitioner to another based on individual skill levels and multiple variations of technique. Nevertheless, it is my opinion, and that of others, that no other technique other than properly done SMAS technique seems to provide a longer lasting result. I describe my face-lifting techniques at the end of the panel discussion.



**Fig. 13.** A 64-year-old woman with a 3-year result of facelift with midline corset platysmaplasty.

**Fig. 14.** A 62-year-old woman with full-extended SMAS facelift with platysmaplasty and minimal improvement in melolabial folds 2 years postoperatively.

## PERKINS

Performing a midline corset platysmaplasty, as described in the previous discussion, is the foundation for excellent, natural, and long-lasting results in the neck (**Fig. 13**). On the other hand, there is no technique at all that has been proved to provide long-term results in the jowl region or the melolabial folds (**Fig. 14**). Some additional maneuvers to vertically lift the jowl tissues have helped prevent the lateral swoop look that can be a telltale sign of previous facelift surgery. Vertical vectors to the SMAS tissues help to alleviate this problem and also enhance the midface.

## *To start, develop, and maintain a busy face-lifting practice, is it necessary or even beneficial to offer some sort of minimalist facelift procedure (ie, short scar) or even a noninvasive substitute procedure?*

## McCOLLOUGH

For a beginning surgeon, the best answer for this question is to exercise good judgment and operate within the scope of his or her training and experience. If a "minimalist" facelift procedure (ie, short scar lift) is the only technique that a surgeon feels qualified to perform, that is the procedure he/she should perform. However (and this advice is as important as any that I can offer), patients should be informed, in advance, by the operating surgeon that the facelift he or she is offering is a minimalist facelift and that the results will not achieve what more invasive procedures can accomplish.

Otherwise the legal burden of informed consent, covering alternatives of treatment, will not have been met.

- Patients should also be told that additional minimalist procedures can be performed from time to time to address recurrent sagging. In some cases, multiple less invasive procedures could be a viable alternative to more extensive surgery, especially in nicotine users and in patients with advanced cardiovascular disease or diabetes.
- Trying to venture beyond one's expertise and perform maximally invasive techniques when one is not experienced in such procedures invites disasters—the kinds of disasters that a growing practice simply cannot afford.
- Promising more than some minimally invasive or nonsurgical techniques can deliver, however, will quickly bring a surgeon's credibility into question and destroy a fledgling practice before it has a chance to get off the ground.
- Nonsurgical procedures can never accomplish what well-advised and well-executed surgery can achieve. Patients must always be told the truth about any treatment; otherwise patients lose confidence in the surgeon and are quick to tell their friends about their own disappointing experiences. Unhappy patients will not fail to provide the name of their surgeon to anyone who will listen.
- The following is the bottom line for the surgeon: investigate the advantages and disadvantages of each and every technique, device, or material that one intends to incorporate into his or her practice and make sure that it can achieve the claims made by those promoting it; then, operate within one's limitations and refer when indicated.



**Fig. 15.** A postauricular widened scar created by the surgeon closing with too much tension.

## THOMAS

Regardless of whether the surgeon is developing a new practice or maintaining an ongoing established practice, the key is to have good results with a happy patient population. To suggest that some minimalist procedures are a good way to start and then move on into more involved procedures simply fails to recognize that the procedure should be selected to best correct the individual patient problems. Importantly, in an aesthetic elective procedure such as facelift, it is essential to pursue a procedure that not only gives good results but also minimizes the risk of complication (**Figs. 15–20**). Noninvasive treatments such as fillers, Botox, or other resurfacing procedures certainly can be important adjuncts to the facelift procedure. However, so-called liquid facelifts and other similar marketing-orientated descriptors may be misleading to patients and should instead be thought of as treatments for those individuals who do not require surgical intervention or as adjuncts to facelift.
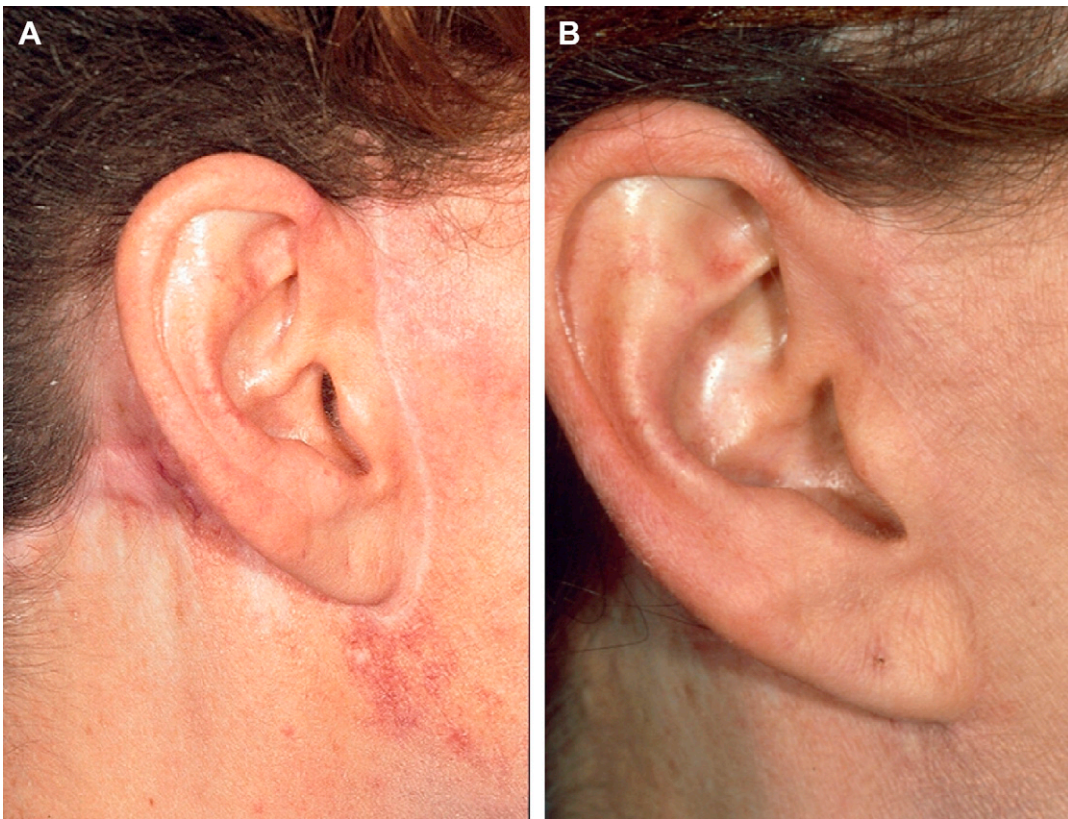
Fig. 16. (*A*) Inappropriate placement of the incisional scar by the original surgeon. (*B*) The patient after excision of the scar and advancement of skin to create a posttragal incision line and a scar position better camouflaged at the cheek/ear junction.
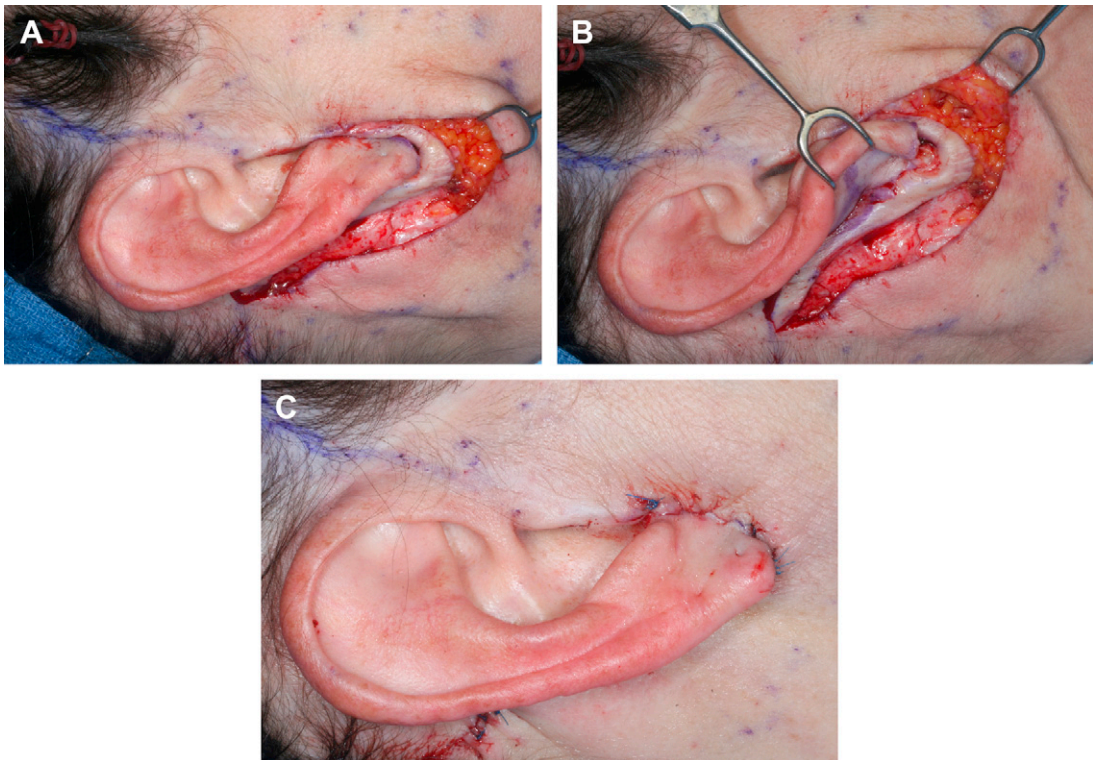


Fig. 17. (*A*) Correction of the auricular scar begins with reincision distal to the scar. (*B*) The scar and intervening skin is excised. (*C*) The skin flap is advanced and closed in proper position.

**Fig. 18.** The "pixie" ear deformity following the surgeons closure with too much skin tension in the infra-auricular region.



**Fig. 20.** An example of the surgeon advancing and overcorrecting the temporal area, creating hairline deformity.
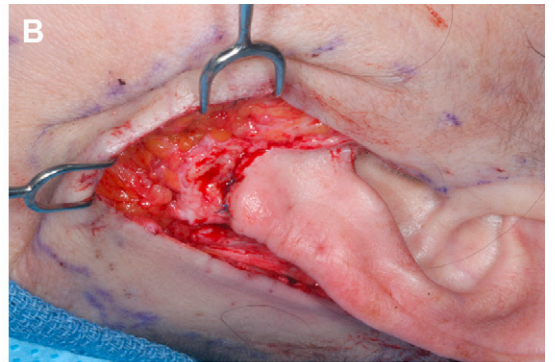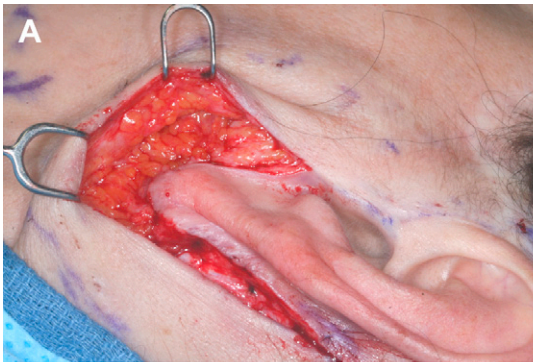


**Fig. 19.** (*A*) Correction of the "pixie" deformity begins with incision adjacent to the earlobe. (*B*) The skin flap is elevated, and the scarred earlobe is sharply released from underlying scar. (*C*) The flap is elevated to create an earlobe cleft, and the lobe is repaired.

## PERKINS

Providing a lesser operation for patients who need facelift is detrimental to developing a successful face-lifting practice. The goal of any cosmetic procedure is to provide pleasing, long-lasting, and natural results, resulting in happy satisfied patients. Patients who need a facelift deserve a complete operation, not a minimalist operation that either fails to provide the result they desire or has very short-term benefits. Compromising with a short scar procedure may be an attractive marketing tool, but it leads to suboptimal results and dissatisfied patients (**Fig. 21**). This is an antithesis to building a reputation as a good facelift surgeon in one's community. Doing the proper operation, resulting in happy patients who refer other patients to their surgeon because of the good results achieved, not only in the face but also in the neckline, and having scars that are minimally noticeable, is a stronger marketing tool than any other technique that can be used to attract patients. In fact, trying to short cut the facelift operation results in either a minimal improvement or so much tension on the skin that there are widened, visible scars and pulled-down earlobes, giving the patient cosmetic deformities that are not only telltale signs of having had a facelift but also need to be corrected or camouflaged. These patients will seek care elsewhere or refer their friends elsewhere. If their friends see those kinds of scars or results, they may choose not to have a facelift at all.

Similarly, I do not believe there is any noninvasive substitute for patients who actually need a facelift. There are modalities that heat the tissues, which creates some temporary tightening of the deep dermal layer and subcutaneous tissues. These often need to be repeated and are usually performed with expensive lasers using infrared wavelength techniques. Radiofrequency heat is similarly bulk heating and creates temporary effects with a fair amount of pain. There are some ultrasonic techniques and machines available to create true subcutaneous wounding, and current modalities are being tested to actually



**Fig. 21.** A woman in her late 60s who underwent a short-incision facelift and received a very minimal result in the cheek and no result in the neckline. In addition, she now has visible scars that cannot be camouflaged by makeup or hairstyle.

heat the subdermis in a fractionated manner. These show some promise for at least some visible results that may last 1 to 2 years (**Fig. 22**) for patients who are waiting to have a facelift or who are, at this point, not ready to commit to having a standard facelift operation; but there is no substitute to a well-done facelift with a good foundation because it serves the patient well for many, many years. Unfortunately, there are patients, young and old, who have undergone Ulthera treatment and have either no result or minimal visible results (**Fig. 23**).

**A**



**B**



**Fig. 22.** (*A*) A woman in her late 50s who underwent high-frequency profractional sound wave subdermal treatment to the cheek and jawline and was happy with the minimal results. (*B*) A woman in her late 20s with neck and jawline lipoptosis who had a noticeable improvement from Ulthera (high-frequency–focused sound wave energy delivered in a linear manner in subcutaneous and subdermal tissues).
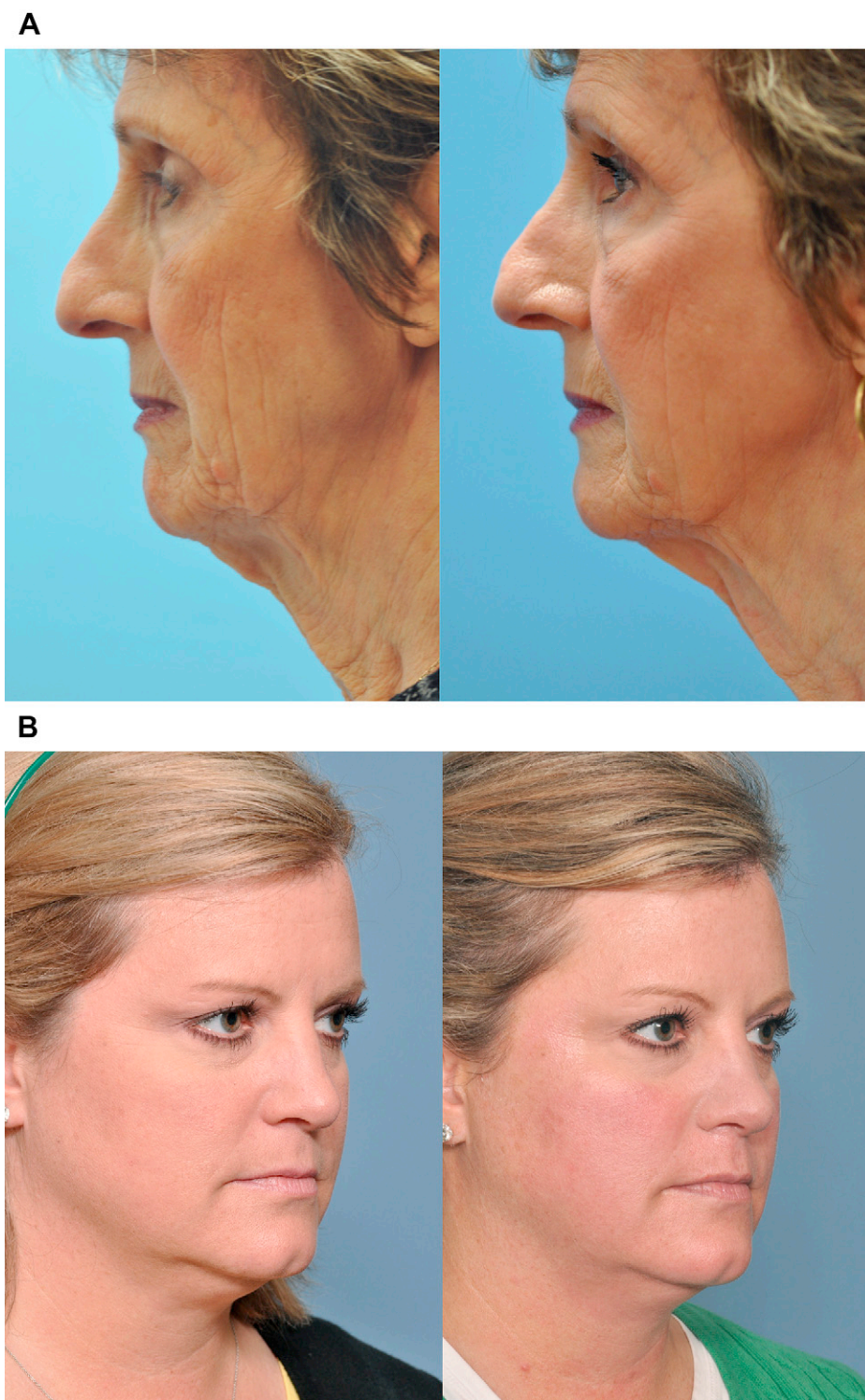
Fig. 23. (A) A woman in her late 50s with significant loss of elasticity who insisted on a noninvasive technique and refused to have a standard facelift. She underwent Ulthera treatment with minimal results. (B) A woman in her early 40s with jowl and neck lipoptosis who underwent 2 Ulthera treatments and received no appreciative results.

## Analysis: Over the past 5 years, how has your technique or approach changed or what is the most important thing you have learned in performing facelifts?

### McCOLLOUGH

I still perform the facelift operation very much as I have over the past 30 years. The major change

would be that, in the stage IV or stage V neck with large amounts of fat and an obtuse



**Fig. 24.** Example of neck-lift, incorporating suction-assisted lipectomy, anterior platysmaplasty, and chin augmentation.

cervicomental angle, I have found that anterior platysmaplasty (suturing the leading borders of the muscles together, along with midline subplatysmal fat excision) and side-to-side undermining of the skin flaps provide a better result (**Fig. 24**).

I also continue to be superimpressed by trichophytic face-lifting incisions, made in a beveled fashion a millimeter or so behind the hairline in the forehead, sideburn, and postauricular region. When incisions are made in this manner, hairlines are preserved and, when the technique is performed properly, hair grows through the scars to provide camouflage (**Figs. 25** and **26**).

From my own teachers and mentors, I learned that it pays to rely on techniques that comply with the basic principles of surgery—truisms learned by every physician while attending medical school. In my own practice, I affirmed many of those same tenets.

The following list of ruminations is offered in hopes that they may be of benefit to my colleagues and the patients for whom they care:

1. One of the greatest obstacles for patients contemplating facial rejuvenation to overcome is the fear of looking "pulled" or "stretched." If a surgeon can demonstrate that he or she only performs surgery and ancillary procedures designed to produce a natural appearance, patients are much more likely to go forward with treatment.
2. The only reliable closure of deep tissue defects is one that approximates fascia to fascia, and multiple interrupted sutures are more reliable than a single continuous suture.
3. The most reliable method of avoiding permanent injury to a nerve, blood vessel, or anatomic structure is to refrain from dissecting or cauterizing close to it.
4. The aging process is a continuum and varies from patient to patient. The best facelift can be improved upon at a future date by maintenance procedures that are designed to address many of the same conditions treated at the time of the initial surgery.
5. The length of time between an initial facelift and the need for a "tuck" or maintenance procedure are not always under a surgeon's control. Factors that speed the aging process and cause tissues to prematurely sag include emotional stress, poor nutrition, genetics-based life expectancy, illness (either in the patient or in someone close to the patient), or the death of a loved one.
6. Better is the enemy of "good." Every operation, and every nonsurgical treatment, follows the gaussian bell-shaped curve. There is a point of maximum benefit, beyond which risks outweigh benefits.
7. New is not necessarily better. It takes 5 to 7 years before any new technique or modification of an existing technique can be said to be better than the one currently in use.
8. In evaluating candidates for facial rejuvenation, chronologic age is irrelevant. It is the biological age of the skin, face, and neck that matters most.
9. No practice-building scheme has ever come close to the time-honored one based on word of mouth. Satisfied patients tell their friends and family about a good experience and a natural-looking result. They are also quick to share unpleasant experiences with everyone they meet.
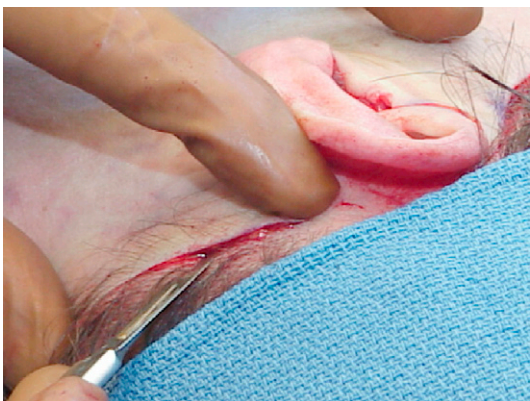


**Fig. 25.** (*Left*) Postauricular and occipital beveled trichophytic incision. (*Right*) Temporal sideburn beveled trichophytic incision.

**Fig. 26.** Patient after trichophytic temporal and occipital incisions. Note hair growing through and below the scars.

10. Being honest with patients is the best way to earn, and maintain, their trust and respect.
11. Being honest with one's self and working within the limitations of one's training and experience minimizes the likelihood of disastrous outcomes.
12. Referring a difficult case to a colleague who has more experience (or expertise) in handling such conditions will help build the referring doctor's own practice much more rapidly than turning out substandard results.
13. Respect for the teachings of great minds and giving credit where credit is due earn a physician the respect and admiration of his/her colleagues.
14. Initiate change with skepticism. Only fools believe everything they hear—or read. Check out the claims of too-good-to-be-true schemes, products, or techniques and investigate the reputation of the people making them.
15. Incorporate the "lagniappe" or "baker's dozen" philosophy in your practice. Whenever possible offer something extra…at no extra charge. Deliver more than patients bargain for.
16. When uncertainty raises its head, the way forward lies within the Golden Rule.

## THOMAS

The technique I have described has evolved over the past 30 years of practice. Over that period, I have tried several other alternative approaches, including deep plane facelift. However, the procedure described here and that I refer to my trainees as the safety facelift has given me overall consistently happy patients and avoided complications. I describe my techniques at the end of the panel discussion.

## PERKINS

Over the past 5 years, I have made several subtle modifications to my facelift approach. I have been less aggressive with submental liposuction and more aggressive with midline platysmaplasty. The reason I became a little less aggressive with submental liposuction is because I had created a few dermal bands at the cervical mental angle. A layer of fat needs to be left on the skin, both subcutaneously as well as deeply, to avoid creating dermal bands that are difficult to eradicate. In addition, submandibular liposuction, if overdone, can actually create visible submandibular glands, which, in my opinion, should not be excised. One has to accept the fact that, occasionally, a more ptotic submandibular gland becomes more visible after face-lifting but should not overaggressively perform liposuction and create the problem, if possible. I continue to be extremely pleased with the midline platysmaplasty in creating a neckline that lasts. There is still a 1% to 2% submentoplasty tuck-up rate in my practice on an annual basis taking all patients as a collective group. This is an acceptable submental reoperation rate that is dramatically less than it was before the corset platysmaplasty that I now perform.

I have significantly increased the use of prejowl implants in patients with heavy jowls and/or deep preoperative prejowl sulci (**Fig. 27**). This has been a wonderful addition to face-lifting not only in the initial contour and visible appearance but

**Fig. 27.** A woman in her early 50s who desired improvement in her jowls and neckline and presented with a hypoplastic mentum and deep prejowl sulcus. She successfully underwent a standard SMAS rhytidectomy with Mersilene mesh chin implant and a Silastic Mittelman[10] prejowl implant.

also in the prevention of or early recurrence of the jowling appearance in patients who are bound to have settling in this region. Patients tolerate this extremely well, and I have had no complications with prejowl implants. Chin augmentation is performed as necessary but as a separate augmentation of the mandible issue.

I have greatly increased the use of hyaluronic acid fillers in the nasolabial folds and marionette folds at the time of surgery. I even use some calcium hydroxyapatite in weak chin-cheek regions to bolster this area because it is not improved with a standard facelift procedure. Downward turn of the oral commissure of the mouth is not improved without some filling or improvement of this groove directly.

I no longer perform temporal incisions (see previous discussion). I did this many years trying to achieve smoothing in the temporal region and obtained a minimal effect in lifting the lateral brow. I was constantly trying to make sure I did

not raise an already high hairline and made several modifications in the inferior sideburn region. I finally gave up using temporal incision entirely. If a temporal lift is required, it is a separate incision that is performed as a separate operation. The cheek portion of the facelift does not require any temporal extension. In this sense, my scar has shortened dramatically and the amount of dissection in the temporal region is essentially none.

I have also increased the number of combined midfacelifts with facelifts (**Fig. 28**); however, I do not perform midfacelifts on greater than 10% of my facelift population because the vertical pull of the SMAS adequately treats the midface in most patients.

Fortunately, the fundamental technique I use for performing facelifts has not changed over the last 15 to 20 years. It has provided excellent natural long-term results with happy patients, the ultimate measure of success for any surgeon. Videos showing technique for facelift are available online:

**Fig. 28.** A woman in her early 60s desiring facial rejuvenation presented with significant midface soft tissue atrophy and descent and successfully underwent a standard SMAS rhytidectomy in addition to a midfacelift.

## FACELIFT APPROACHES AND TECHNIQUES FROM THE MASTERS

### McCollough: A Synopsis of My Approach to Facelift, Addressing Controversies

For generations, facial plastic surgeons, including I, searched for the ideal facelift. In the early part of the twenty-first century, however, it occurred to me that there is a reason why the holy grail of facial rejuvenation has not been discovered. We surgeons have been looking in all the wrong places. We have been quick to follow colleagues promoting procedures, and practices, that ignore the time-honored canons of surgery. Cleverly titled one-size-fits-all-faces techniques have only added further confusion. A growing number of doctors are joining commercial ventures that offer too-good-to-be-true solutions to an unsuspecting public.

Realizing that there was a need to redirect the profession's focus back toward reason, I set out on a mission to develop a condition-specific classification system and algorithm that could be used for facial rejuvenation. Initially, I began to use the system in my own practice. Then, my thoughts and experience were offered to colleagues during presentations at scientific meetings. In 2010, my work was published in the peer-reviewed medical literature (**Figs. 29** and **30**).

The system I created is based on measurable parameters that help determine the biological age of each anatomic region of the face and neck. By doing so, I am able to create a condition-specific treatment plan and rely on that plan to recommend, and perform, the right combination of procedures for each patient, regardless of the patient's chronologic age.

For example, a younger (stage I-A) face (**Fig. 31**) might only require suction-assisted lipectomy along the lower jawline and neck. A cheek or temporal lift (with or without liposuction) might be indicated in patients in stage 2-A (**Fig. 32**), whereas in a stage IV face, a forehead, temporal, cheek, and neck-lift with or without liposuction and platysmaplasty and a subsequent skin resurfacing procedure might be indicated (**Fig. 33**). No one-size-fits-all face-lifting technique can provide this kind of versatility, even if the term *extended* is added to its title. Also, so-called short scar procedures leave behind several centimeters of skin in the neck (**Fig. 34**). Although a vertical vector cheek-lift tightens sagging neck tissues in the short run, the effect is short lived. It is, therefore, my conclusion that the most reliable method of addressing the neck (with a facelift) is to extend the incision behind the ear and along the occipital hairline.

Like skin incisions, the extent of skin undermining varies from stage to stage and is determined

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"Face lift" is the term commonly used to describe a surgical procedure better known in medical circles as "rhytidectomy" (removal of loose, wrinkled skin of the face and neck). The procedure is designed to re-create the firmer, smoother face of youth. However, not all *face lifts* are the same – nor should they be! The reason is: *not all faces are the same*. And, at different ages the same face is a different face.

Dr. McCollough's system is comprised of five (5) general treatment plans:

**STAGE I (The Less Than Thirty Face Lift)**:  for the younger individual who has little or no loose skin and may require only liposuction to remove unwanted fat and bulges.

**STAGE II (The Thirty-Something Face Lift)**:  for the patient who is beginning to notice sagging of the brows and cheeks, *but not the neck*.  Whenever sagging tissues are present, facial muscles and fat must be repositioned into their more youthful relationships.  In such cases a small amount of loose skin is removed.

**STAGE III (The Forty-Something Face Lift)**: for the patient who exhibits sagging brows, cheeks and neck.  Some of these patients may or may not need liposuction for contouring jowls and fullness under the chin.  All, however require suspension techniques to muscles and fat .

**STAGE IV (The Fifty-Something Face Lift)**: for the patient with *generalized* facial and neck sagging, with – or without – jowls and wrinkles around the mouth. With more obvious muscle, fat, and skin laxity, more suspension of these structures is required.

**STAGE V (The Sixty-Plus Face Lift)**: for the patient with *advanced* aging, coupled with sagging of all facial areas, including the forehead, brows, cheeks, and neck. At this stage in the aging process, deep folds develop in the groove between the nose and face, jowls droop below the jaw line, and the muscles of the neck often produce string-like bands that run vertically from the chin to the upper chest.  Many of these patients are also beginning to exhibit wrinkles and blemishes over most of the face

**Fig. 29.** The McCollough Face-Lifting Classification System.

## MCCOLLOUGH CONDITION-SPECIFIC FACIAL REJUVENATION CLASSIFICATION

PATIENT'S NAME: _____  RECORD NUMBER: _____  DOB: _____  ☐ MALE  ☐ FEMALE

EVALUATOR: _____  ☐ ATTENDING  ☐ FELLOW  ☐ OTHER _____

☐ INITIAL CONSULT  ☐ FOLLOW-UP  DATE OF EVALUATION _____

PREVIOUS PROCEDURES: _____

### FACE LIFT CLASSIFICATION

| STAGES | ASA | PSY | FH | T | CH | NE | PL | ML | MAR | EAR R | EAR L | up-1/3 | mid-1/3 | V Buc | V Lip-up | V Lip-low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | | | | |
| I | | | | | | | | | | | | | | | | |
| II | | | | | | | | | | | | | | | | |
| III | | | | | | | | | | | | | | | | |
| IV | | | | | | | | | | | | | | | | |
| V | | | | | | | | | | | | | | | | |
| SURGEON'S RECOMMENDATION | | | | | | | | | | | | | | | | |
| PATIENT'S DECISION | | | | | | | | | | | | | | | | |

(low-1/3 spans Buc, Lip-up, Lip-low)

FACELIFT ANNOTATIONS:
ASA: American Society of Anesthesiologist Physical Status
PSY: Psychological Readiness
FH: Forehead
T: Temporal
CH: Cheek
NE: Neck
PL: Platysmal Banding
ML: Melo-labial Groove
MAR: Marionette Groove
EAR: Earlobe
V: Volume
R/L: Right/Left
V: Soft Tissue Volume
up: Upper
mid: Middle
low: Lower
1/3: Da Vinci's Horizontal Thirds
Buc: Buccal Fat Pad
Lip-up: Upper Lip
Lip-low: Lower Lip

### UPPER EYELIDS (UEL)

| STAGES | FX R mfp | FX R nfp | FX L nfp | FX L mfp | SX R | SX L |
|---|---|---|---|---|---|---|
| 0 | | | | | | |
| I | | | | | | |
| II | | | | | | |
| III | | | | | | |
| IV | | | | | | |
| V | | | | | | |
| SURGEON'S REC | | | | | | |
| PATIENT'S DECISION | | | | | | |

### LOWER EYELIDS (LEL)

| STAGES | FX R ofp | FX R mfp | FX R nfp | FX L nfp | FX L mfp | FX L ofp | SX R | SX L |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| I | | | | | | | | |
| II | | | | | | | | |
| III | | | | | | | | |
| IV | | | | | | | | |
| V | | | | | | | | |
| SURGEON'S REC | | | | | | | | |
| PATIENT'S DECISION | | | | | | | | |

EYELID ANNOTATIONS:
FX: Fat Excess
SX: Skin Excess
ofp: Orbital/Lateral Fat Pad
mfp: Middle Fat Pod
nfp: Nasal Fat Pod

RESURFACING ANNOTATIONS:
GSS: Global Skin Score (the mean of all SQ & WR scores)
UPORB: Upper Peri-Orbital
LPORB: Lower Peri-Orbital
UPORL: Upper Peri-Oral
LPORL: Lower Peri-Oral
NOS: Nose
GLA: Glabella

### SKIN RESURFACING CLASSIFICATION

| STAGES | GSS | SQ FH | SQ T | SQ CH | SQ UPORB | SQ LPORB | SQ UPORL | SQ LPORL | SQ NOS | WR FH | WR T | WR CH | WR UPORB | WR LPORB | WR UPORL | WR LPORL | WR GLA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | | | | | |
| I | | | | | | | | | | | | | | | | | |
| II | | | | | | | | | | | | | | | | | |
| III | | | | | | | | | | | | | | | | | |
| IV | | | | | | | | | | | | | | | | | |
| V | | | | | | | | | | | | | | | | | |
| SURGEON'S REC | | | | | | | | | | | | | | | | | |
| PATIENT'S DECISION | | | | | | | | | | | | | | | | | |

DATE OF SURGERY: _____  SURGEON: _____

**Fig. 30.** The McCollough Condition-Specific Facial Rejuvenation Classification.

by the degree of biological aging in each anatomic region (see **Fig. 29**). Except in stage I-A lifts, SMAS suspension is performed. If the SMAS is to be a part of a lifting procedure, it is important to free it from its underlying tissue attachments far enough anteriorly and inferiorly to allow mobilization and suspension of the muscles of the cheek and neck. Anatomically, sub-SMAS elevation should be carried just anterior to the parotid gland (**Fig. 35**). I can see no logic behind dissecting far enough into the cheek to expose branches of the facial nerve, especially for surgeons who do not already have a vast amount of experience in performing the facelift operation.

**Fig. 31.** Stage I-A (The Less Than Thirty Facelift): for the younger individual who has little or no loose skin and may require only liposuction to remove unwanted fat and bulges. Before and after suction assisted lipectomy of cheeks and neck.

**Fig. 32.** Using the McCollough Condition-Specific Facial Rejuvenation System, the patient in the photographs would be coded as SQ-2, V-1, FH-2, CH-2, Mar-2, Ne-1, PL-1, FX-2, WR-1. This patient underwent a temporal cheek-lift with SMAS suspension. No eyelid surgery or resurfacing was performed.

**Fig. 33.** Stage IV patient who underwent temporal cheek and neck-lift with suction-assisted lipectomy of cheeks and neck and upper and lower eyelid blepharoplasty. Coding score was SQ-3, V-3, CH-4, Mar-3, Ne-4, PL-2, FX-3, WR-3.

**Fig. 34.** (*Left*) Patient undergoing stage IV temporal cheek neck-lift. (*Right*) Cadaver dissection after a MAC's lift had been performed. Extension of postauricular incision with SMAS suspension in the neck allowed for 7 additional centimeters of skin removal.

I make every attempt to see that the SMAS advancement flap is anchored, proximally, to fascia that has been denuded of its overlying fat. I do not adhere to the school of thought that fat-to-fat plication results in the kind of favorable healing that suspends the tissues of the face and neck for an appreciable length of time.

Multiple (8–10) interrupted, absorbable sutures (with a half-life of at least 6–8 weeks) are used for SMAS suspension (**Figs. 36** and **37**). Within 6 weeks, a sheet of favorable scarring (that becomes incorporated with SMAS-fascia) should provide the strength needed to support the tissues of the face and neck.

Postoperatively, compression dressings are used over undermined areas. I am not an advocate of drains and/or tissues sealants. All dressings are removed the morning after surgery. Detailed printed instructions for aftercare are given to patients and their caregivers.

In short, the McCollough Condition-Specific Classification System is rooted in fundamental surgical principles and uses an algorithmic approach to address the conditions at hand. In time, I predict that such a condition-specific system will supplant one-size-fits-all facelift methodologies and allow surgeons to select and perform the right combination of procedures for the right patient, at the right time in a patient's life.

## Thomas: Personal Approach to Facelift

Like all facial plastic surgery procedures, there are a variety of approaches and techniques available to the surgeon. Selection of these techniques and approaches are related both to the surgeon's preference and experience and to the specific goals and requirements of the patient. Although my approach to any specific patient is tailored to

the anatomic needs and the aesthetic goals of that patient, I typically use a 2-vector SMAS facelift technique that uses specific steps to avoid possible complications while achieving an acceptable result. Because of these 2-fold goals, I often refer to this approach as the safety facelift when discussing this with fellow surgical colleagues
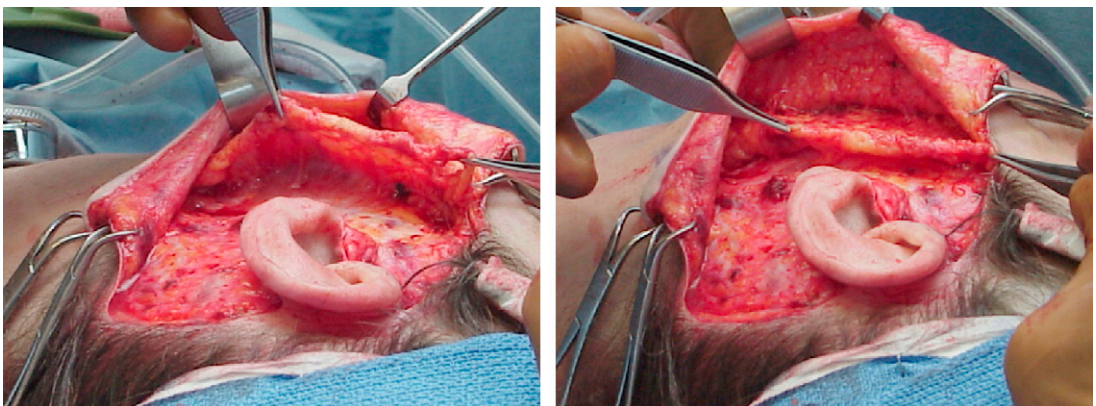


**Fig. 35.** (*Left*) SMAS flap elevation. (*Right*) Advancement of SMAS flap.
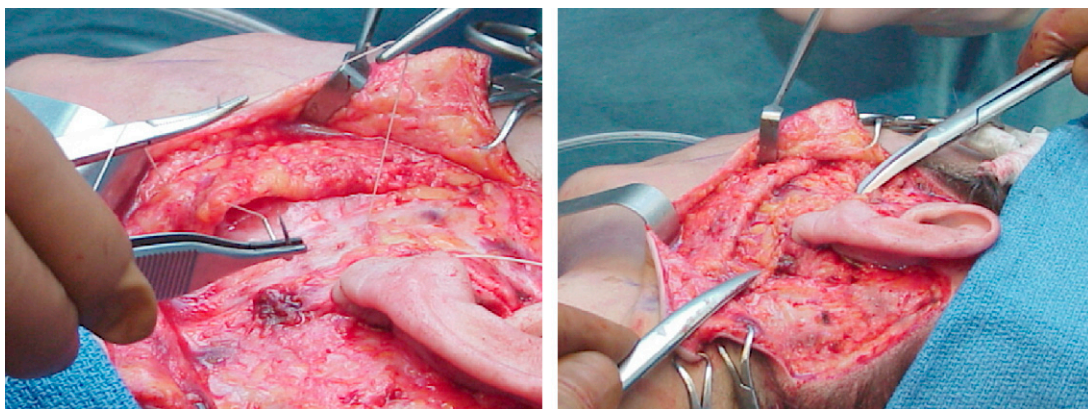
**Fig. 36.** (*Left*) Placement of SMAS suspension suture. (*Right*) Anastomosis of facial edges after placement of ten 2-0 Vicryl interrupted sutures.

and trainees. This technique uses, as noted, an SMAS level facelift where each basic step of the facelift technique has been examined, the alternatives for each of those steps explored, and an alternative is selected that provides appropriate results while creating comparatively less risk for possible complication. This is done for each step of the facelift as identified in the overall operation and results in the procedure as described.[4]

The anatomy and physiology of facial aging is well understood and documented. The clinical changes observed are further influenced by genetic background as well as by environmental influences, including UV exposure and smoking. These anatomic changes and predictable variables create what is seen in terms of clinical appearance in the aging face. There are, of course, variables with each patient based on those noted factors as well as the patient's age during evaluation and while providing surgical recommendations.[5] There are several procedures described for facelift, and each of these procedures has strong proponents who have a variety of perceptions as to what serves the patient best. Through
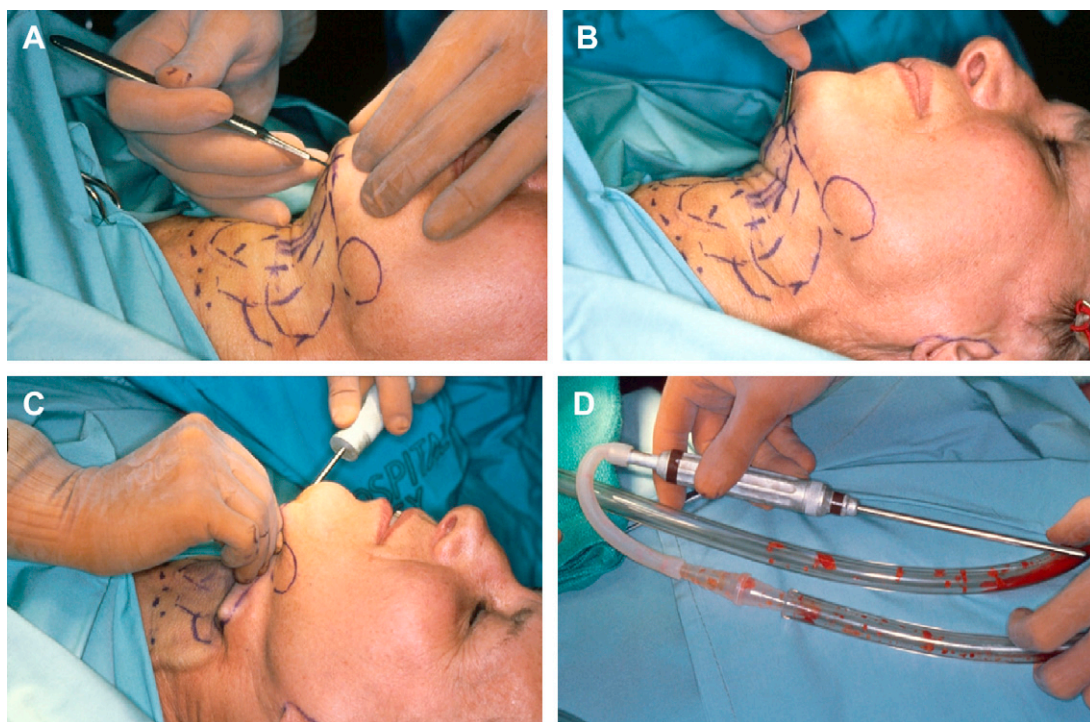


**Fig. 37.** (*A*) A small incision is initially made in the submental line to initiate liposuction. (*B*) The precise subcutaneous plane is initially created with small scissors. (*C*) Liposuction is performed with a to-and-fro action of the cannula with gentle manipulation of the cutaneous tissue with the surgeon's opposite hand. (*D*) Often significant adipose tissue is removed through this technique.

the years, my personal approach has evolved around the 2-vector SMAS facelift, with attention to specific steps in regard to safety as described here. This approach may be altered in certain situations, including the relatively young patient with early changes that would benefit from a less invasive procedure with smaller incisions or the patient in whom a secondary facelift needs to be performed who eventually requires a touch-up revision after initial procedure previously. This technique evolved after experiences with a variety of other techniques and a realistic evaluation of the results. This personal experience has been reinforced by the observations of others, including several reported in the literature.[6,7]

What these observations all demonstrate in similar fashion is that the ultimate results from an SMAS facelift were comparable to the results of a deep plane facelift technique. Likewise, evaluation of various surgical steps involved would also argue that an SMAS-type technique has less morbidity and less risk of complication. Again, the ultimate goal for a facelift procedure should be an appropriate level of improvement along with minimum risk to the patient for complication in this elective aesthetic procedure.[8]

### Steps in Facelift: Thomas

The basic steps of facelift have been established as:

1. Incision planning
2. Submental correction
3. Flap elevation
4. SMAS elevation
5. Closure.

For each of these key steps, various differing techniques have been evaluated, and the one with the least potential risk for complication while accomplishing appropriate improvement has been selected. The first of these is incision planning.

---

**Incision Planning for Facelift: Thomas**

In addition to developing access to the tissues, the placement of incisions should avoid visibility of the scars and is of key importance to the patient. Although, as is true for each step, incision planning is based to some degree on physician preference. The one typically selected by this author's experience is to adapt the most inconspicuous and yet utilitarian incision for the individual.

- In the temple area, it is important to hide the incision while giving access to the upper portion of the facelift procedure.
- Attention should be given to avoiding shifting of the hairline as well as making the incision less visible.
- It is preferable to avoid a pretrichael incision because of the potential visibility. Although pretrichael incisions have the potential advantage of avoiding the shift of the hair tuft and temporal hair-bearing area, the visibility of the scar is always potentially present.
- A curvilinear incision starting above the ear and behind the hairline in the temporal region has proved to be superior in most situations. This hides the incisional scar within the hair-bearing skin. A curvilinear incision rather than a straight vertical incision helps interrupt the forces of contracture while avoiding significant shift of the hairline. This incision typically begins 2 to 4 cm above the superior helix and is designed in a C-shaped manner.
- The preauricular portion of the incision is typically a posttragal incision to further hide the scar, which then curves around the auricular lobule and tucks tightly up into the earlobe cleft of that region.
- If the patient has an earlobe anatomic configuration that does not have an inferior earlobe cleft, it is created for the patient to further hide the scar.
- The incision then follows an area on the postauricular concha above the sulcus by 3 to 5 mm. This incision tends to shift postoperatively to fall precisely within the postauricular sulcus and thus hide the incision.
- The incision continues in the postauricular area to the point that would correspond to the superior portion of the external auditory canal and then crosses the sulcus to go into the posterior hairline.
- A small dart or "V" configuration is made over the sulcus to allow for the tissue to fall within that depression and avoid any contracted bridging scar. This incision falls into the posterior occipital hairline and is positioned in a curvilinear manner with attention to positioning the incision so it falls parallel to the hair follicles and thus encourages hair growth postoperatively.

**Submental Correction: Thomas**

Following decisions on incision placement, typically the first step addresses the submental area. This includes removing adipose tissue through liposuction and, in most patients, plicating the submental platysmal bands and often excising some small amount of submental redundant skin.[9]

- Patients with poor chin projection may benefit from an augmentation chin implant, which may be done through this same incision to further enhance individual appearance and help create a cervical angle.

- Liposuction is accomplished using a small liposuction cannula through the submental incision and done in a radial manner. This is extended into the jowl area to further enhance the jawline. Typically, the initial liposuction is done through a small incision smaller than 1 cm to help maintain negative pressure.

- Following completion of the liposuction, the incision is enlarged and a submental flap in the subcutaneous plane is elevated. This exposes the platysma musculature. The medial margins or bands of the platysma, if redundant, can be excised.

- A subplatysmal flap is then created to allow for advancement and plication of the platysmal muscles in the midline, which is done with a 4.0 absorbable suture.

- A key step is the development of the cervical angle. The platysma is divided at the desired level of the cervical angle, and the margins of the divided muscle are cauterized in a horizontal manner for 1.5 to 2 cm on either side. This division of platysma is often referred to as breaking up the verticality of the platysmal bands. At this point, the flap can be advanced, and usually a small amount of redundant or excess skin is excised before closure.

- Closure is done in 2 layers with a 5.0 absorbable suture in the dermis and 6.0 polypropylene sutures for closure.

- Hemostasis has been maintained throughout this procedure with bipolar cautery, and typically there is no drain used.

**Flap Elevation and SMAS Correction: Thomas**

- Using the incision designed as described, the facelift flap is then elevated. The flap is elevated in the subcutaneous plane and extended out into the midface area with what has been described as an intermediate flap (**Fig. 38**).
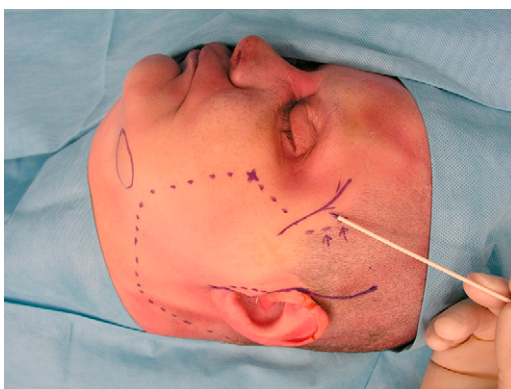


**Fig. 38.** The typical degree of intermediate flap undermining is indicated on this cadaver specimen. Note that the path of the frontal branch of the seventh nerve is indicated and is carefully avoided with flap elevation.

- This degree of flap elevation contrasts with a short flap that elevates a few centimeters in the preauricular and periauricular area. It likewise is elevated to a lesser extent than a long flap that may extend medially toward the midline of the face into and beyond the nasolabial folds and perhaps connect submentally to the opposite side.

The concept of intermediate flap is that it allows excellent exposure to SMAS layer, allows appropriately draped skin, yet avoids the dissection in the region in which the facial nerve would be more superficial

and at greater risk for injury. It also has the effect of minimizing the amount of potential dead space postoperatively and thus decreases the likelihood of hematoma. This again is an operative step in which multiple alternatives to flap elevation are present. This particular approach allows for appropriate surgical correction, while at the same time minimizing the exposure of possible complications.

- This flap extends to the level of the maximal projection of the maxilla and is essentially midway in the face between the auricle and the nasolabial fold.
- The underlining continues inferiorly past the mandible to the neck inferiorly below the inferior portion of auricle and extends postauricularly into the occipital hairline.
- Hemostasis is maintained throughout the procedure with bipolar cautery.
- It is important to stay below the level of the hair follicles in the occipital and temporal areas.
- In the temporal area, the preferable level is deep to the hair follicles and superficial to the temporal fascia and within the loose plane over that fascia.
- Elevation and spreading with scissors often accomplishes most of this elevation in this region.

## SMAS Elevation: Thomas

With elevation of the flap, the SMAS is now exposed and available for treatment (**Fig. 39**).
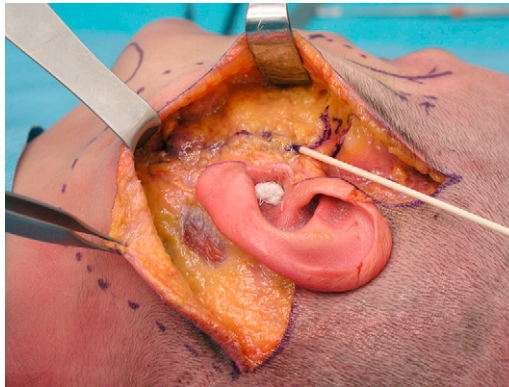


**Fig. 39.** Following elevation of the skin flap in the subcutaneous plane, the SMAS is evident. The position of the SMAS incision is indicated on this specimen.

- Typically the SMAS layer is elevated with scissor-spreading dissection. Judgment is made as to how much redundant SMAS is available and the dissection is not advanced beyond that point. Once again this ensures the safety of the deeper structures (**Fig. 40**).



**Fig. 40.** A distinct SMAS layer is identified and elevated.

- The redundant or excess SMAS is excised, and the remaining SMAS is advanced and tightened, typically in 2 directions or vectors. Thus the 2-vector approach gives appropriate elevation of the SMAS and improves facial support.

- Typically the SMAS in the preauricular area is elevated superiorly, whereas the lower vector beneath the ear and cervical area is projected more posteriorly.
- The SMAS flap is secured in this area with interrupted buried 3.0 absorbable sutures.
- Once the SMAS has been secured, the skin flap is redraped. This allows for tension at the SMAS area and avoids tension in the skin flap. That tension, should it occur in the skin flap rather than in the SMAS, may create tension lines that are unsightly and nonaesthetic. Tension on the skin closure may potentially lead to a widened or lesser appropriate scar (**Fig. 41**).



**Fig. 41.** Following SMAS elevation and plication, the redundant skin is excised with edge-to-edge apposition minimizing tension on the wound. Note the 2 vectors of correction, with the preauricular skin being corrected in a posterior direction vector and the postauricular skin closed in a superior directional vector.

- The skin at this point is excised with edge-to-edge apposition and closed in 2 layers using interrupted 5.0 absorbable sutures in the dermis layer.
- Skin closure in the preauricular areas is with the running subcuticular 5.0 polypropylene suture.
- The posttragal portion is typically closed with a running 6.0 fast-absorbing gut and the postauricular portion closed with 5.0 fast-absorbing gut suture.
- Hair-bearing areas of the temporal and occipital regions are closed with small stainless steel staples (**Fig. 42**).



**Fig. 42.** Careful attention is paid to realigning the hairlines without creating a step-off deformity.

- Because of the precise hemostasis with bipolar cautery throughout the procedure and because of the intermediate flap elevation and the smaller potential for hematoma, routinely a drain is not required.
- At completion of the procedure, the incisional areas are cleaned, antibiotic ointment is applied to all regions, and a nonadherent gauze strip is then applied to the incisions.
- This is followed by a gauze wrap and an elastic dressing for the final layer.
- The dressing is changed the following morning and the patient inspected for hematoma.
- If all is appropriate on inspection, a similar dressing is reapplied for another 24 hours.
- Following removal the next day, the patient is given an elastic chin support to use throughout the remaining week.
- Sutures are removed at 1 week.

*Stephen W Perkins, with Assisting Authors Jaspreet K Prischmann and Jonahtan Y Tinj:*
*A Synopsis of My Approach to Facelift, Addressing Controversies*

Following is a synopsis of my approach and controversies I think exist related to my approach versus other facelift techniques and other surgeons' philosophies.

The term facelift has some connotations that are perceived by many patients as negative. A facelift is a standard rhytidectomy procedure that involves improving the neck and jawline and somewhat the midfacial tissues. Many patients desiring improvement in their aging characteristics are particularly bothered by the changes they see in their neck. Therefore, many of them present for consultation requesting a neck-lift and "not a facelift." Although I do agree that the main focus of a facelift is improving the neck and jawline, it inherently involves improving the jowl and cheek tissues simultaneously with adequate and excellent improvement in the neckline. Conversely, improving only the cheek tissues does not necessarily equate with a good facelift procedure because the neckline can often be neglected depending on the technique, and the results will be less than satisfactory.

Therefore, a facelift is, in my opinion, to a greater extent, all about the neck and less about the cheek and jowls. There are exceptions to this in the sense that many patients do have jowling or heavy jowling and cheek tissues as their primary concern, with the neck being a secondary issue for them. Patients must be educated as to what a facelift is and what a neck-lift is and must be able to determine that they are often a combined procedure. They also must be educated as to what a facelift will do and what it will not do. A facelift is a procedure that is imperfect by its nature yet treats certain underlying aging anatomic issues that exist with almost every patient presenting for midface to lower face rejuvenation.

If the patient is primarily interested in improving his/her smile creases or cheek-lip grooves, then a facelift may not even be the operation for them. There may be other alternatives of treatment that are much more beneficial and more directly productive in terms of improving the issue that concerns them.

There are also patients who have such anatomic heaviness to the midcheek and jowl tissues that a facelift is, at best, a mediocre answer to resolving what bothers them. In fact, they may well need to accept that their preexisting anatomic condition is not significantly improved by any known and proven present-day surgical techniques that we have available to choose from.

It is, however, critically important to diagnose and effectively treat whatever conditions exist in the submental, submandibular, and lower neck to achieve a truly long-lasting and satisfactory result in face-lifting. Improving the cheek and jawline may in fact require more structural surgical

**A**

**B**



**Fig. 43.** (*A*, *B*) Characteristics and example of a type I facelift patient.

A

B



Fig. 44. (*A, B*) Characteristics and example of a type II facelift patient.

approaches, such as chin augmentation, prejowl implant,[10] and fillers to the midface rather than the standard or a choice of a variety of known facelift techniques.

Therefore, it is important to understand and educate each patient that a facelift is inherently an operation that has definitively known benefits and some lasting results but is doomed to some degree of failure in every case from the short or long term, depending on the patient's preexisting anatomy, heredity and elasticity, social interactions, and overall health condition.

Having said that, facelift is also a very gratifying procedure that helps improve the quality of life for many patients, no matter what their preexisting anatomic, hereditary, or aging condition is. It is my opinion that a facelift operation begins with how to most effectively manage the neck and, secondarily, how one can improve and enhance the jawline, jowling, and midfacial tissues. Therefore, I classify the type and fee for the facelift based on the degree and extent of work required in the neck to achieve an excellent and long-lasting neckline (**Figs. 43–45**).

A

B



Fig. 45. (*A, B*) Characteristics and example of a type III facelift patient.

### Technique: Perkins

It is my philosophy and standard modus operandi in face-lifting to treat the neck first. The neck is treated at the start of the operation to set the stage for maximum improvement of the neckline before any kind of posterior elevation and SMAS suspension is performed. This is somewhat controversial in that there are physicians who believe that posterior elevation and suspension is indicated before any kind of anterior platysma treatment. I personally have approached the operation initially with that sequence and have been more than often frustrated or disappointed in the recurrence of midline and/or lateral platysmal bands based on having not approximated the anterior platysma before posterior suspension.

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#### Liposuction: Perkins

A 2.5- to 3-cm incision is made in the submental crease, depending on the anatomy of the patient, and the skin is elevated for 5 to 10 mm in the subcutaneous layer to allow the introduction of a small, 3-mm, round liposuction cannula. It has become somewhat controversial as to whether or not liposuction is indicated at all in treatment of the neck, but I believe it is crucial to the maximum improvement I can achieve for any given individual patient. I perform some degree of liposuction in more than 97% to 98% of all my facelift patients. A 3-mm round cannula is used with 3 holes lined up on one side to remove fat in a minimalist manner, yet I do move to a larger 5-mm and 7-mm cannula, if required, depending on the amount of fat and the density of tissue in the submental region.

See Video: Submental and jowl liposuction in rhytidectomy.

- Initially, I pretunnel the skin over the jowl overlying the mandibular margin all the way in a radial manner from the anterior border of the sternocleidomastoid down past the cervical mental angle to the other jowl region without any suction applied (**Fig. 46**).



**Fig. 46.** Pretunneling the neck and jowl with a 3-mm round 3-"holed" liposuction cannula.

- Once I have pretunneled with the 3-mm cannula, I use a regular liposuction machine that creates 1 atm of negative pressure to remove the excess and redundant fatty tissue.
- The lipoptosis that exists, in the jaw, submandibular, submental and full neck areas, is grasped with my nondominant hand and fed into the cannula as I rotate the cannula 270° to the left and to the right.
- Judicious liposuction is used in the jaw area, but I still believe that it is important to defat this area to get the maximum improvement and the long-term longevity to the facelift. Care is taken not to overdo removal of fat, so as not to get dimpling.
- Similarly, despite aggressive liposuction in the submental area, which is required with even a large cannula, is imperative not to injure the dermis or cross the cervical mental angle with any aggressive liposuction so as not to create dermal banding in the postoperative period.
- Injury to the marginal mandibular nerve is avoided on a routine basis by picking up the soft tissue and skin, platysma, and fat and pulling it away from the mandibular margin before introducing the liposuction cannula and performing liposuction.
- Care is taken to avoid overzealous suctioning in the submandibular area to skeletonize the submandibular gland and make it more visible.[11]

## Submental Platysmaplasty: Perkins' Kelly Technique

To adequately treat the neck and be able to predictably create excellent long-lasting necklines, I prefer the Perkins' Kelly clamp technique for submental platysmaplasty with every facelift. See Video: Sequential submental excision and plication of subplatysmal fat and platysma: Kelly clamp platysmaplasty.[1] I perform this before any posterior SMAS-platysmal elevation and posterior superior suspension. There are differences in opinion as to whether the platysmaplasty should be performed before the posterior pull of the platysma and superior posterior pull of the SMAS. In my opinion, the platysmaplasty technique sets the stage for the ability to create a natural sling of the patient's own soft tissues to suspend the neck and create the sharpened neckline. See Video: Submentalplasty in rhytidectomy: Wide skin undermining and Kelly clamp platysmaplasty. If one were to perform the platysmaplasty after the posterior pull, it occasionally prevents the ability to plicate and imbricate the platysma in the midline and one loses the effective and natural sling suspension. In addition, when inevitable relaxation occurs, the laterally displaced anterior borders of the platysma become lateral platysmal bands and give the illusion of a "cobra" deformity.

- I favor the use of a 5-in curved Kelly clamp for the submental platysmaplasty because it provides safe reliable results without prepredicting the amount of platysma to be excised.
- Complete undermining of the neck skin with a Kahn beveled facelift dissection scissors is required to separate the skin from the platysma and perform the platysmaplasty through the submental incision. See Video: Undermining post auricular neck skin flap in rhytidectomy.
- The elevation is carried across the cervical mental angle and the anterior border of the sternocleidomastoid bilaterally.
- The loose anterior platysmal bands and the redundant midline subplatysmal fat are then cross-clamped with this large curved Kelly clamp in the anterior midline.
- Then, starting from the level of the incision in the submentum, sequential cauterization, direct excision with Metzenbaum scissors, and immediate buried suture imbrication of the platysmal borders is accomplished with 3-0 Vicryl sutures (Ethicon, Somerville, NJ, USA) (**Fig. 47**). One can do this in an interrupted manner or by using figure-of-eight sutures. Occasionally this is supplemented by 2 buried 3-0 Tevdek sutures that are permanent in nature if the patient has a neck that is very heavy or particularly adipose.

Plication versus imbrication is a matter of definition. There is really no foldover of the platysma. It is an end-to-end approximation of the predetermined excision, which is grasped between the Kelly clamp at the beginning of the procedure. The sequential excision suturing is done from the submental crease down to the cervical mental angle.

See Video: SMAS imbrication: undermining, advancement, and suturing of the SMAS/platysma as a sling suspension in rhytidectomy.

- A wedge of platysma and fatty tissue is excised at the angle on either side of the imbrication laterally. This takes care of any platysma bands that are extending down more inferiorly in the neck and allows a sharp angle to be created.
- Occasionally, subplatysmal fat in this region is excised and this is the only area where subplatysmal fat is directly excised that is not within the clamp initially. A firm anterior corset is thus created, setting the stage for bilateral posterior suspension and imbrication of the platysma.[3]
- The neck skin is undermined completely to redrape these tissues in a posterosuperior manner, and the neck skin is moved in a different vector.
- Inferior sideburn and preauricular and postauricular incisions are then created, first on the right side of the face and then on the left. It is imperative that one takes care to maintain the preauricular tuft of hair following the preauricular curvature of the helix from its superior insertion to its root inferiorly.
- Incision is not carried into the temporal hairline tuft. It either is at the inferior aspect of the sideburn tuft of hair or creates a new inferior aspect of the sideburn tuft at the level of insertion of the helical/anterior helical rim.
- Incision is then carried posttragally in all female patients and even some male patients. Incision then continues around the earlobe. The postauricular incision rises slightly above the sulcus in the medial aspect of the auricle to allow for postoperative settling of the scar in the postauricular sulcus.
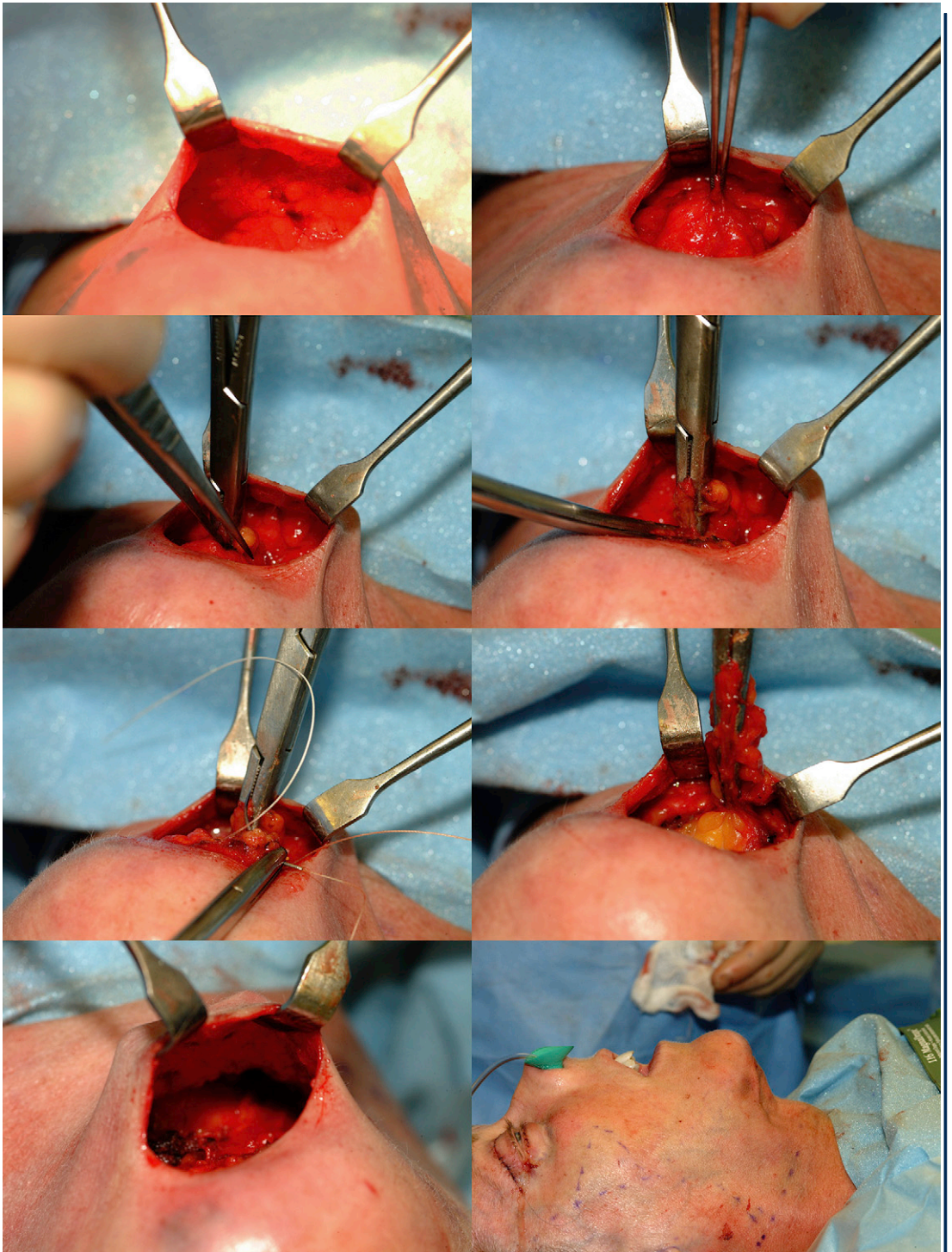
**Fig. 47.** Perkins' Kelly clamp corset platysmaplasty technique.

- At the level of the eminence of the concha postauricularly, the incision is curved gently toward the hairline at about the level of where the helical rim touches the posterior hairline. It crosses the non-hair-bearing portion very high, so the resultant scar is not visible.
- It extends either horizontally and then inferiorly into the occipital scalp for patients with minimum to moderate skin laxity (**Figs. 48** and **49**) or occasionally will be brought down and along the postauricular hairline before the tail of the incision is brought back into the occipital scalp. This is done for patients with greater skin laxity and redundancy in the neck.[12] It is much more common that I prefer placing the incision into the posterior occipital scalp so as to hide it completely, and the patient can wear their hair in any style, a ponytail, or otherwise on top of their head.



**Fig. 48.** My preferred outline of preauricular and postauricular incisions for a typical facelift patient.
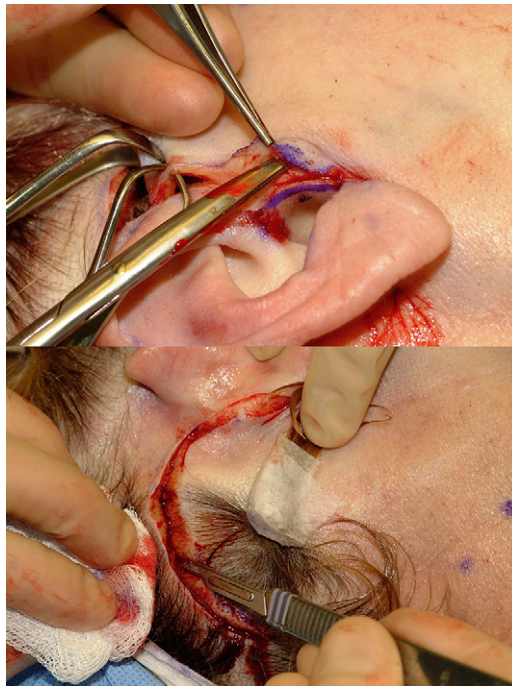


**Fig. 49.** Making the preauricular and postauricular incisions for a face-lift.

## Skin Flap and SMAS Elevation

Attention is then turned to skin flap elevation.

- Using a blunted Kahn beveled facelift scissors with the tips up in an advancing, spreading technique, the skin flap can be elevated, ensuring the dissection is in the proper plane, a plane that leaves fat under the surface of the skin flap but on top of the SMAS and platysma (**Fig. 50**).
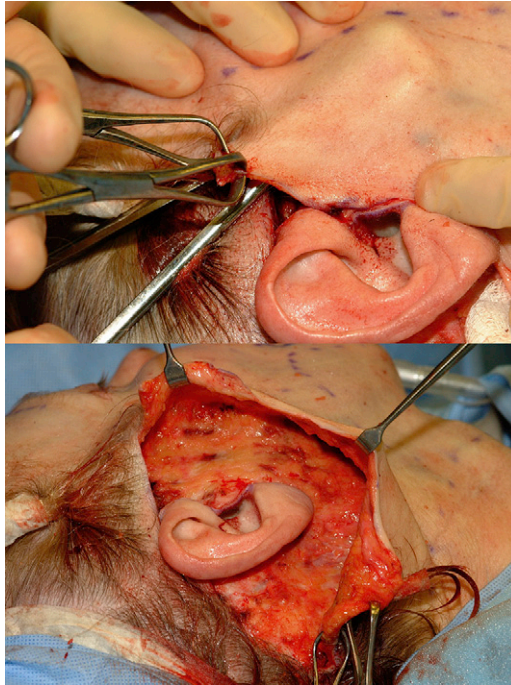


**Fig. 50.** Scissor elevation of the preauricular and postauricular skin flap for a facelift.

- A postauricular skin flap is first elevated in a plane deep to the hair follicles and superficial to the fascia of the sternocleidomastoid muscle and then immediately more superficial into the immediate subcutaneous plane. This is to ensure that the elevation does not pass deep to the fascia or the sternocleidomastoid muscle, which could then allow injury to the greater auricular nerve. By staying superficial to the fascia, the greater auricular nerve is preserved. This dissection is a bit more difficult because of the attenuation of the fat in this area and the stronger dermal attachments of the skin to the fascia.

- Once past this region, dissection is carried easily into the subcutaneous intra-adipose plane, moving the elevated neck skin flaps from the submental incision elevation.

- Elevation of these skin flaps allows visualization down inferiorly beyond the mandibular margin of the neck. The skin flaps are elevated between 4 and 6 cm preauricularly and again continuously from ear to ear across the neck.

- Separating the skin flap from the platysma is imperative because the suspension, anterior imbrication, corset platysmaplasty, and posterior sling suspension are performed as a separate layer vector than the redraping of the skin. No bunching or dimpling occurs.

- The skin flap is left in continuity with the SMAS in the midface and anterior face so as to allow elevation of the midfacial tissues and jowl when the SMAS is suspended.[12]

- Once hemostasis is obtained, the incision is made starting at the inferior border of the zygomatic arch at the level of the lateral malar prominence. It is extended diagonally from this position to the bottom of the earlobe and continues inferiorly 1 cm in front of the anterior border of the sternocleidomastoid (**Fig. 51**).
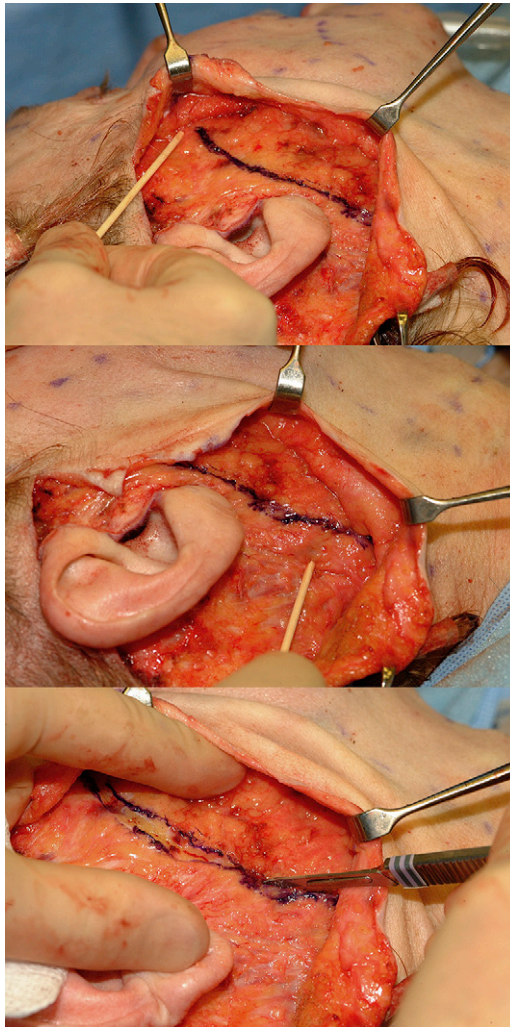
**Fig. 51.** The incision through the SMAS and posterior platysmal in the preauricular region and anterior to the sternocleidomastoid muscle.

- Once the incision is made in the SMAS, dissection is performed with a Metzenbaum scissors in a first horizontal spreading manner, separating the SMAS and platysma from the superficial layer of the deep investing fascia of the parotid gland. Dissection is carried up to 3 to 4 cm beneath the platysmal muscle. The marginal mandibular nerve can be visualized occasionally but is below the fascia investing the masseter muscle.

Attention is then turned to the midcheek region and elevation of the SMAS of the cheek.

- Dissection begins just below the zygomatic-malar maxillary buttress in the sub-SMAS plane, extending to the inferior aspect of the orbicularis muscle. This dissection frequently requires release of strong dermal attachments to the malar eminence, and the dissection is extended superficial to the zygomaticus major muscle and further into the midcheek if necessary.

- Not all patients require full SMAS elevation of the midcheek, as has been reported with a standard defined deep plane facelift.[13] I elevate the SMAS in this region just far enough to allow mobilization of the SMAS 3 to 4 cm superiorly and posteriorly, gaining good cheek elevation.

- Once good dissection inferior to the malar area is in a separate deeper plane, deep to the zygomaticus muscle but inferior and superficial to the zygomatic and buccal branches of the facial nerve, I extend the dissection on top of the masseter muscle just far enough to get good sufficient mobilization of the jowl tissues. This modification of the deep plane technique increases safety by decreasing the risk of injury to the zygomatic and buccal branches of the nerve, as they are under direct visualization.

It is an extended SMAS elevation imbrication technique combined with a separate skin flap elevation with partial deep plane connections to the skin flap as one extends past 4 to 6 cm in the preauricular region.

## Suspension of Midface and Jowl: Perkins

At this stage, suspension of the midface and jowl tissues is accomplished by advancing the SMAS in a superior and slightly posterior manner. The superior vector to the SMAS is critical while elevating the jowl and even submental deeper tissues. There is partial elevation of the platysmal muscle in this vector, but the strong elevation is of the cheek tissues. Some posterior movement is also obtained in the preauricular area.

- *The SMAS is not excised.* The superior slip or a significant portion of the SMAS is left intact and suspended to the dense preauricular tissues near the periosteum of the posterior aspect of the zygoma. This is about the level of the helical insertion, and a 0 Vicryl suture is used for the strength of this firm suspension. Tremendous movement in the jowl or midcheek tissues occurs with this one suspension suture.

- At the level of the earlobe and just slightly superior to this, a cut is made into the SMAS-platysma flap, and it is split. The inferior aspect of the flap, which is primarily platysma and some SMAS, is then suspended in a more posterior and somewhat superior manner.

- *The platysmal flap is not excised*! See **Fig. 52**. A 0 Vicryl suture is used to suspend this platysmal flap, sliding over the sternocleidomastoid and fascia to the periosteum of the mastoid. This sharpens the neckline tremendously because the now natural corset sling platysmaplasty is completed.
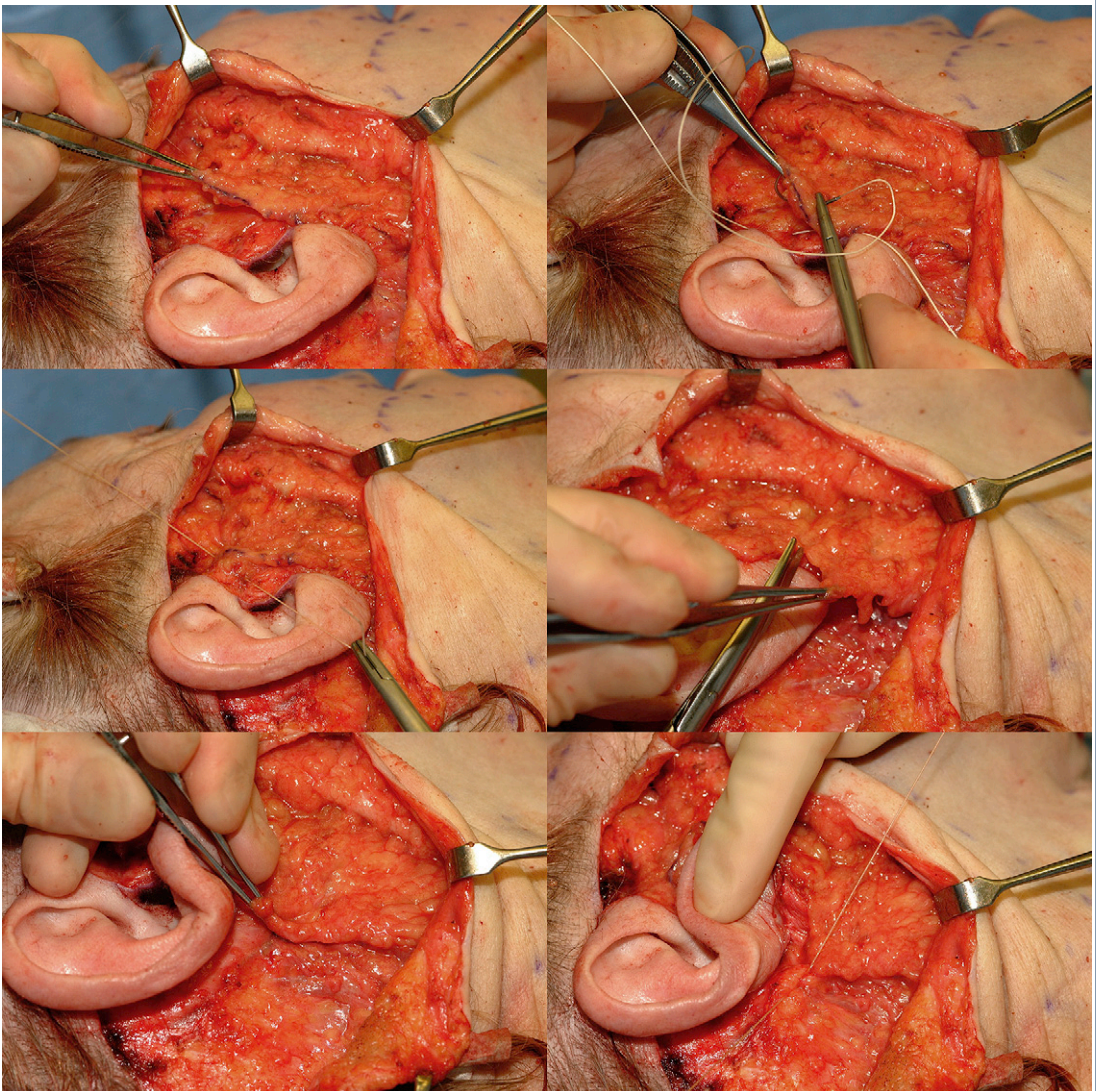


**Fig. 52.** Sling suspension of the SMAS preauricularly and the platysma to the mastoid periosteum.

- There is occasionally some redundant fat and the posterior border of the platysma flap that is trimmed extending more inferiorly into the neck. The redundant portion of the SMAS in the preauricular region, which is about 2 to 3 cm long and 1.5 to 2.0 cm redundant, is trimmed with the Metzenbaum scissors.

- The SMAS in this region is imbricated end to end with 3-0 monocryl dissolvable sutures (3-0 polydioxyl suture; Ethicon, Somerville, NJ, USA), as is the posterior edge of the platysma flap, as it is draped over and sutured to the posterior fascia investing the sternocleidomastoid muscle.

- The skin flap is easily advanced superior and posteriorly up and on the auricle and in a more posterior vector, the check, leaving only about 2 to 3 cm of undermined skin in the preauricular region.

- The skin of the neck is advanced more superiorly and slightly posteriorly, taking great care to align the posterior hairline so as not to get a step-off deformity (**Fig. 53**).
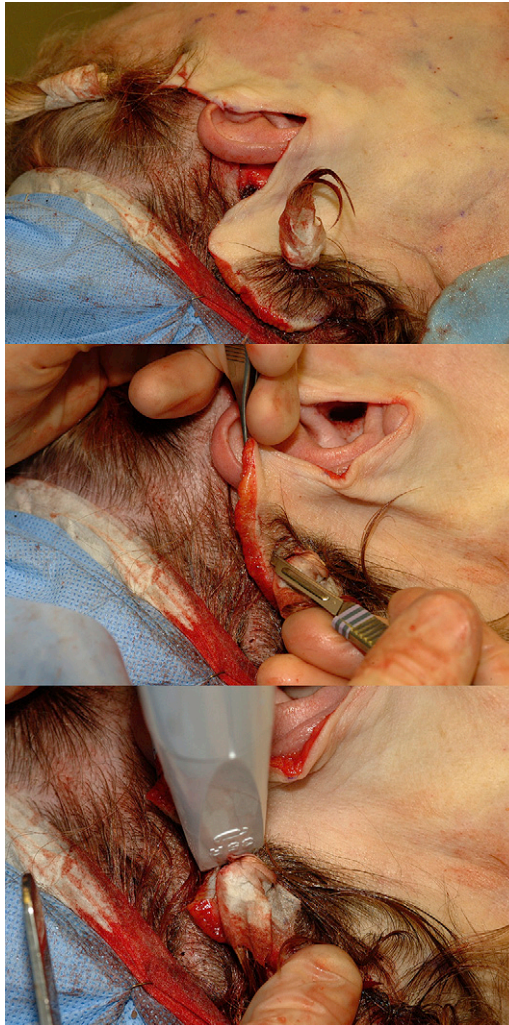


**Fig. 53.** Advancing the skin flap and aligning the postauricular hairline.

- These 3 different vectors are achieved in an effect similar to that described by Baker with a triplane rhytidectomy.[14]

- The hair-bearing portions of the scalp, just at the inferior aspect of the sideburn and postauricularly from the posterior hairline back into the occipital scalp, are closed with staples.

- The skin is closed with a few buried 5-0 monocryl sutures and running interlocking 5-0 plain catgut suture.

- Two 6-0 nylon sutures are placed at the bottom of the earlobe and left in for 10 days to assure good healing of the earlobe because it swells and is under some upward tension to prevent a satyr ear deformity or pixie ear.
- The preauricular skin is moved into a more posterior and superior vector to avoid any undue movement in the temporal tuft or sideburn hair and not chasing a dog-ear anteriorly.
- Redundant preauricular skin is trimmed, creating a tragal flap that is redundant and sutured under no tension in a running interlocking manner with 5-0 plain catgut suture. There is some thinning of this flap if there is fat underlying this, so as not to make the tragus too fat. The tragus will then not be pulled forward, and the patient will have no preauricular scar as a telltale sign of the facelift.
- Before closing the earlobe portion of the wound and the postauricular portion of the wound with 5-0 plain catgut suture, a 7-mm ribbed drain is placed and brought out the postauricular scalp and placed on each side of the lower anterior neck, about 6 cm.
- It is then connected to a closed suction bulb drainage (**Fig. 54**). This has reduced rates of seromas and hematomas significantly in my practice compared with not using drains.[15] This also allows a light compression dressing consisting of an ABD or abdominal dressing combined with a light Kerlix wrap.



**Fig. 54.** A 7-mm ribbed drain in place in the neck connected to closed system bulb suction before application of light compression dressing.

- A nonstick dressing is placed around the ear with antibiotic ointment before placement of the mild compression dressing. There is no pressure on the skin flaps whatsoever so as to avoid venous congestion, which increases the possibilities of infection and skin flap failure.
- All sutures and staples, except the earlobe sutures, are out and removed at 7 days.

## CONTROVERSIES AND COMPLICATIONS IN FACELIFT

### Stephen Perkins Addresses Additional Controversies and Complications Related to Extended SMAS Rhytidectomy

The art and science of face-lifting involves performing enough surgery to create the desired results. Each procedure is tailored to the individual patient's preexisting anatomy, inherent elasticity, and desired and needed improvement. There is no one facelift procedure that fits all, but some standard tenants do apply. Proven, safe, reliable techniques supersede all other modifications to the facelift procedure. Proponents of limited, minimally invasive, or short scar operations generate, in my opinion, limited; minimal; short-term; or, in some cases, untoward negative results.

### Controversy 1: Does Elevating the Subcutaneous Flap Create Contour Irregularities?

Wide undermining of a subcutaneous flap creates some temporary contour irregularities during the immediate postoperative period. Most of the time, undermining just a bit further, smoothing out any dimpling or irregularity at the time of the surgery, prevents many of these. Fortunately, any irregularities that do exist in the immediate postoperative period usually dissipate within the first 1 to 3 weeks. Small persistent irregularities can be treated with in-office intralesional steroid

injections. They are hardly ever permanent. Proponents of deep plane and short scar face-lifting are often made to manage unsightly "bunching" in the preauricular and postauricular regions, respectively. In my estimation, this is much less of an initial aesthetic outcome than redraping the skin and tailoring it appropriately and adjusting the length of the skin incision based on the elasticity and needs of the patient.

## Controversy 2: Does an Extended SMAS Rhytidectomy Have Enough Vertical Pull?

My technique for rhytidectomy allows for advancement in multiple vectors. The preauricular SMAS flap is advanced significantly superiorly and then superolaterally. It incorporates the vertical pull of other so-called vertical facelifts, such as the MACS lift. The postauricular SMAS flap is advanced posterolaterally, a great deal posteriorly, and some superiorly. Similarly, but in a different plane, the preauricular skin is advanced, tension free, mostly laterally and slightly superiorly.

The postauricular skin is advanced somewhat posteriorly and superolaterally and a bit anteriorly. This multiple-vector technique creates consistently natural, lasting results and maintains hairline continuity in all cases.

## Controversy 3: Should Subcutaneous Undermining Continue to the Melolabial Fold? Are There Any Techniques That Improve This Area?

I do not perform undermining subcutaneously to the melolabial fold. Such wide undermining can create an unnatural, "pulled skin" look that is difficult to correct or that may never relax. This gives face-lifting a "bad name," leaving people looking unnatural and as though they are too taut or as if standing in front of a fan. Despite some believing that a deep plane facelift improves the melolabial fold, I am unaware of any short- and long-term studies that have corroborated this claim. This region can only be improved with adjunctive procedures, that is, midfacelift to some degree, mostly fillers, and occasionally direct excision of the fold.

## Controversy 4: Is it Necessary to Extend the Facelift Incision into the Hairline Posteriorly? Is a Temporal Extension Necessary Anteriorly?

It is absolutely necessary to extend the facelift incision into the posterior hairline. In my opinion, at least extending the incision across to the hairline and down the postauricular hairline before tucking the end into the hairline is required to redrape the skin and take as much neck skin redundancy away as possible. There is no other way to redrape the neck skin without creating bunching or "dog-ears." Folds in the postauricular area take a long time to settle down, and there is minimum ability to remove skin when stopping the incision high in the postauricular sulcus and not extending it posteriorly. Advocates of short scar procedures must deal with redundant postauricular skin. Where does this skin really go? It does not go anywhere and is not really removed.

Extending the incision into the hairline requires precise realignment of the postauricular hairline at the time of closure. It does not generate additional complications or downtime. On the contrary, it prevents unsightly postauricular bunching, and an incision in the postauricular scalp is not an issue. The only issue is the scar that goes down to the nape of the neck, and, even if one follows the postauricular hairline for most postauricular scars, it still needs to be posteriorly directed into the scalp so that it is not visible with any hairstyle in which the hair can be brought posteriorly, as in a ponytail or with the hair up on the head. A well-designed scar brought up as high as the helical rim, touching the postauricular hairline, and then posteriorly into the scalp allows women to wear any hairstyle they so choose.

I rarely perform a temporal incision. It not only raises the hairline but also takes additional time and dissection. I have not found it to be useful in lifting the temporal region, or lateral brow, to any great extent. It certainly adds nothing specifically to the facelift if the proper skin redraping is performed. If one pulls too vertically on the cheek flap, one will have folds in the temporal region that have to be addressed. The answer to this is to not raise the skin in that vertical direction and not create the folds.

### Controversy 5: Are Dressings or Drains Necessary After Facelift? Are Fibrin Sealants Advantageous?

Over the past 28 years, I have tried numerous postoperative regimens. My current regimen, which is one I have used most of the nearly 30 years I have been performing facelift, involves a light kerlix dressing and, in the past 20 years, includes the use of drains. I have found that very light pressure dressings are helpful not only for hemostasis but also for camouflaging and cushioning the surgical field. I have tried to avoid drains but have consistently found anywhere from 4 mL to 6 mL of drainage collecting in the first 12 hours at some place under undermined skin flap. This is particularly true with the degree of undermining I believe is required in the neck skin to create a bi-planar vector to maximize the neck results. The skin is separated from the platysmal muscle completely. The use of drains has minimized the creation of hematomas and seromas to approximately 3% to 4% of patients, and the use of a light compression dressing has minimized any kind of venous congestion or endangerment of the viability of the flap. Tight compression dressings have a significant risk of creating some areas of focal necrosis.

Fibrin sealants, of which I have tried every brand several times, in my hands, have resulted in an unacceptable incidence of seromas. About 85% to 90% of facelifts in which I used fibrin sealants resulted in at least small, if not multiple, seromas. I no longer use fibrin sealants. One other issue with fibrin sealants is the cost involved in using the sealants in a private practice setting. There is a cost associated with drains, but it is about one-fifth the cost of fibrin sealants at this time.

## SUPPLEMENTARY DATA
Supplementary data related to this article can be found online at http://dx.doi.org/10.1016/j.fsc.2012.02.001.

## SUGGESTED READINGS: McCOLLOUGH

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