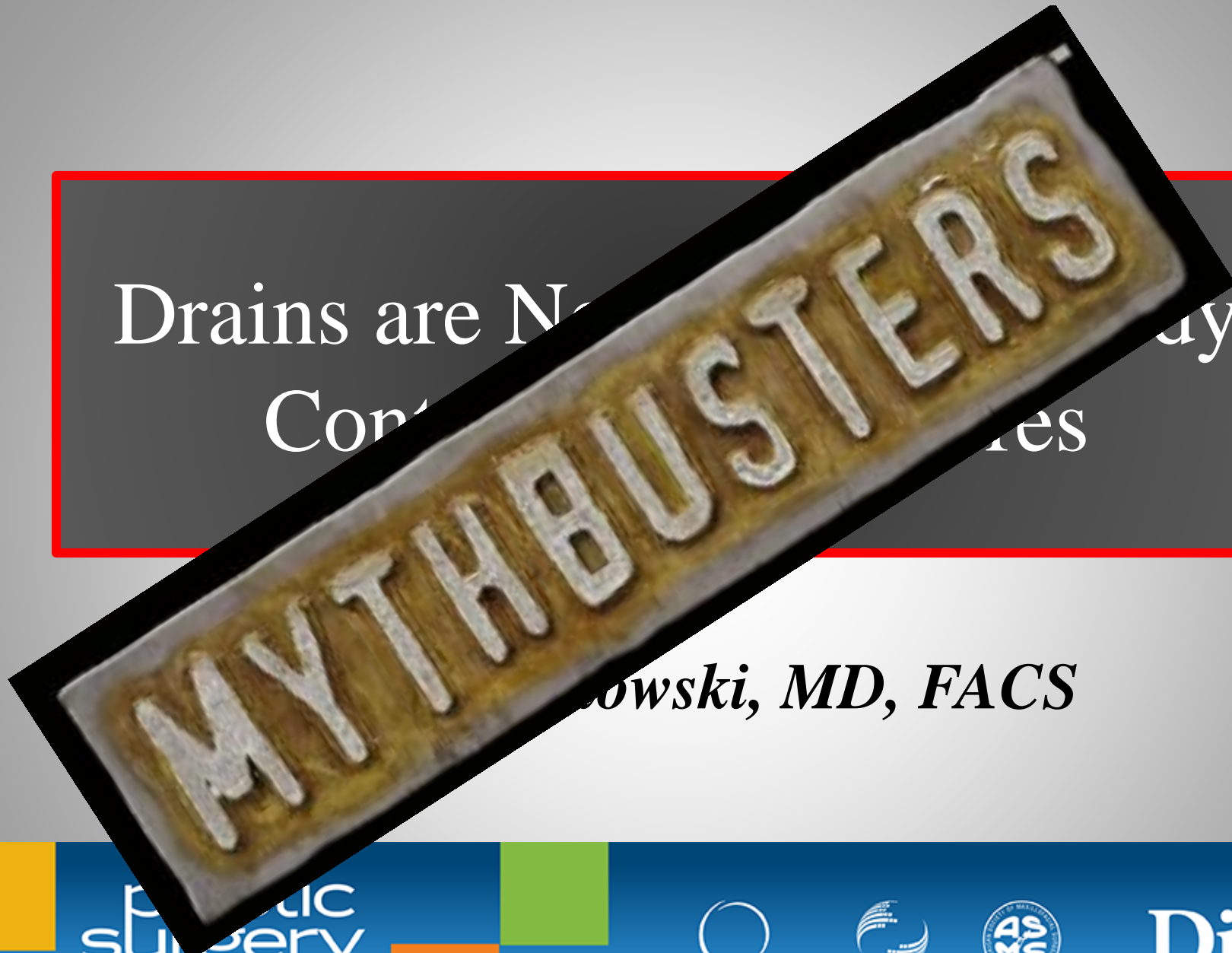


Drains are Not Needed in Body Contouring Procedures

Karol A Gutowski, MD, FACS

Drains are Not Necessary
Controversial Issues



owski, MD, FACS

Disclosures

The Doctors Company - Advisory Board

Angiotech/Quill - Advisory Board

Suneva Medical - Instructor

Viora - Speaker

Will not discuss off-label uses

Objectives

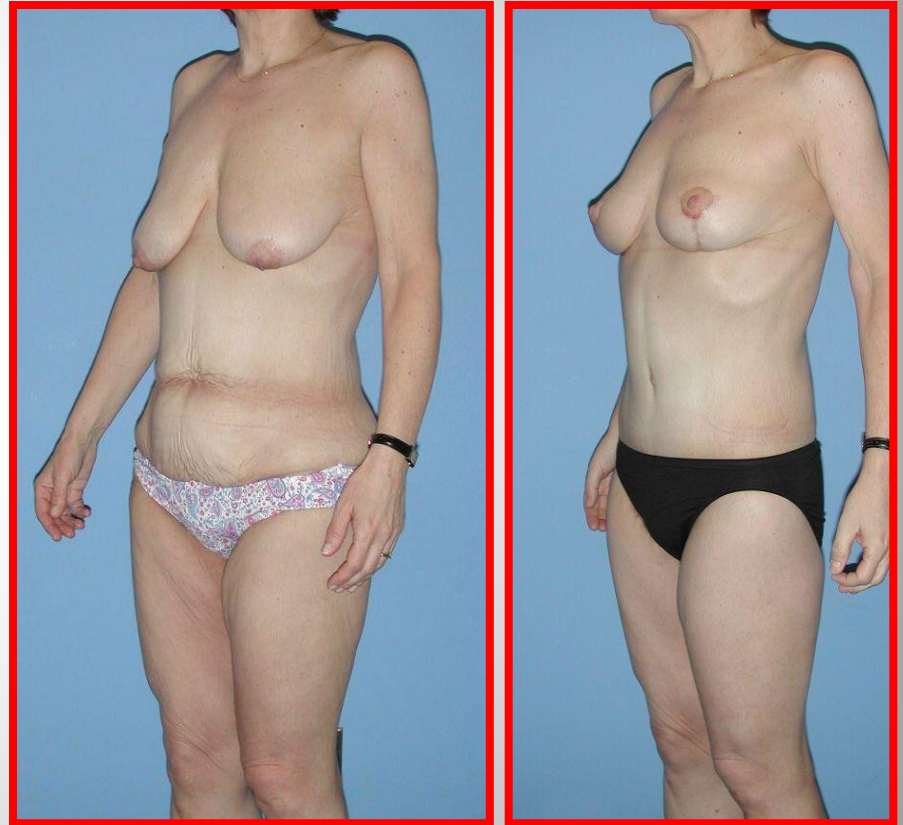
Rethink the use of routine subcutaneous drains in body contouring procedures

Make a change in your practice

Improve your patient's experience

Common Drain Sites

- Breast
 - Reduction
 - Mastopexy
 - Augmentation
- Trunk
 - Abdominoplasty
 - Body lift
- Extremity
 - Arm lift
 - Thigh lift



Drains

- “Standard of care” but no supporting evidence
 - Do not prevent hematomas
 - No evidence in reducing seromas (non-lymphatic cases)
- Risks
 - Entry point for pathogens
 - Patient discomfort & anxiety at removal
 - More home care & less patient mobility
 - Additional scarring

RECONSTRUCTIVE

Evidence-Based Value of Subcutaneous Surgical Wound Drainage: The Largest Systematic Review and Meta-Analysis

Aaron M. Kosins, M.D.,
M.B.A.
Thomas Scholz, M.D.
Mine Cetinkaya, B.S.
Gregory R. D. Evans, M.D.
Orange, Calif.; and Durham, N.C.

Background: The purpose of this study was to determine the evidenced-based value of prophylactic drainage of subcutaneous wounds in surgery.

Methods: An electronic search was performed. Articles comparing subcutaneous prophylactic drainage with no drainage were identified and classified by level of evidence. If sufficient randomized controlled trials were included, a meta-analysis was performed using the random-effects model. Fifty-two randomized controlled trials were included in the meta-analysis, and

Drains in Breast Reduction



AMERICAN SOCIETY OF
PLASTIC SURGEONS®

Evidence-based Clinical Practice Guideline: Reduction Mammoplasty

Drains. Although wound drains can minimize the amount of fluid at the surgical site, evidence indicates that the use of drains neither increases nor decreases postoperative complications, causes greater patient discomfort, and possibly increases the length of the hospital stay.²⁷⁻²⁹

Recommendation: In standard reduction mammoplasty procedures, evidence indicates that the use of drains is not beneficial.

However, if liposuction is used as an adjunctive technique, the decision to use drains should be left to the surgeon's discretion.

Level I, II Evidence: Grade A



Drains in Breast Augmentation

- No evidence to support drains in primary breast augmentation
- Drains may increase risk of capsular contracture 4x
- No guidelines for secondary cases with capsulectomy or with biological products



Patient's Perception of Drains

RealSelf Ratings Ask a Doctor Doctor Finder

Tummy Tuck : Reviews Photos Q&A Forum Doctors

Tummy Tuck Q&A

94% WORTH IT RATING
2,218 Reviews

[Average Tummy Tuck Cost: \\$8,331](#)
[Learn about Tummy Tuck](#)



[View Before and After](#)

[Ask a Question](#)

Tummy Tuck Without Drainage Vs. with Drains?

Does it make a difference on swelling? I notice that people who have Tummy Tucks without drainage seem to be more swollen than tummy tucks done with. What is the difference?

Tags: [COMPARISON](#) [DRAINAGE](#) [SWELLING](#)

[Answer this question](#)

10 answers to Tummy Tuck Without Drainage Vs. with Drains?

Tummy Tucks and Drains

Thanks for your question. Tummy tucks creates a large dead space above the belly button down to the incision. Fluid can accumulate in this space. In addition, incisions used to perform abdominoplasty divide small lymphatic vessels decreasing the body's ability to return fluid from tissue back into the circulation. Drains usually stay in from 4 days to two weeks. The drains are used to remove fluid that collects in the dead space created. When drain output is low enough (most surgeons... more

 **Steven H. Williams, MD** [Top](#)
San Francisco Plastic Surgeon

Tummy Tuck drainage at surgeon's discretion

To drain or not to drain is at the surgeon's discretion as there is no consensus. The majority of surgeon's drain, some for just a couple of day, some for weeks. Some try to suture the cavity closed thus obviating the need for drainage. The main purpose is to prevent small hematomas or seromas from forming. It usually does not prevent large bleeds from occurring and the amount of swelling should be less as bruising (which contributes to swelling) should also be less. However, it may be that... more

 **Robin T.W. Yuan, MD** [Top](#)
Beverly Hills Plastic Surgeon


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Tummy Tuck Q&A

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Is Drainless Tummy Tuck a Safe Procedure?

After consulting a board certified plastic surgeon, I was told that some physicians do not do the drainless procedure because it takes additional time in the O.R. (hence higher cost) or that the same risks exist when using drains. Is it safe?

I have heard conflicting views and am a bit concerned/confused about this. I must admit, no drains sounds very appealing to me as a patient.


Tags: [ABDOMEN](#) [COSTS](#) [DRAINAGE](#) [PLASTIC SURGEON](#)

[Answer this question](#)

16 answers to Is Drainless Tummy Tuck a Safe Procedure?

Tummy tuck can be done safely without a drain

According to answers posted on this site it seems that performing a tummy tuck without a drain is seldom recommended. There was a similar debate concerning drains after a facelift many years ago, and again surgeons divided into those that did drain and those that did not. Today very few surgeons consider using a drain in a facelift procedure, and my feeling is that in tummy tuck too in the future few surgeons will continue placing a drain. In our practice for the past nine years we have... more

 **Peter E. Johnson, MD**
Chicago Plastic Surgeon

Drainless works in experienced hands

Drain less Tummy Tuck operations are performed by Plastic Surgeons who use a quilting technique. In this procedure, multiple sutures are placed between the muscle and fat layer to quilt the skin like a down comforter. It requires a lot more time in the OR and needs an experienced physician. We perform more than 100 Tummy Tucks a year and still use drains. Our complication rate with drains is extremely low, so I see no reason to add the time to the procedure. While the idea of no drains... more

Patient's Perception of Drains

The screenshot shows a forum post on RealSelf. The post title is "Recovering MARCH Tummy Tuckers!". The author is "3boys 1princess" and the post is dated "07 Apr 2011". The post content, which is highlighted with a red box, reads: "Thought I would start another thread for recovery questions and comments. Here goes the first one... How long have you had your drains or how long did you have them? I am 10 days out and still have both. NOT happy about that. Think that I am doing too much, but LIFE goes on. Was supposed to get 1 out tomorrow but drainage jumped back up to 40 today. YUCK!! Hope everyone is recovering nicely and if you have any questions or comments POST THEM HERE!!". The forum post also includes a "94% WORTH IT RATING" and "2,218 Reviews". To the right of the text is a "View Before and Afters" link and a small image of a woman's abdomen. The RealSelf navigation bar at the top includes "Ratings", "Ask a Doctor", and "Doctor Finder".

Drains in Abdominoplasty

Techniques in Cosmetic Surgery

Progressive Tension Sutures: A Technique to Reduce Local Complications in Abdominoplasty

Harlan Pollock, M.D., and Todd Pollock, M.D.

Dallas, Texas

Drains in Abdominoplasty

Techniques in Cosmetic Surgery

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Dallas, Texas

IDEAS AND INNOVATIONS

Use of Absorbable Running Barbed Suture and Progressive Tension Technique in Abdominoplasty: A Novel Approach

Allen D. Rosen, M.D.
Montclair, N.J.

PRS 2010

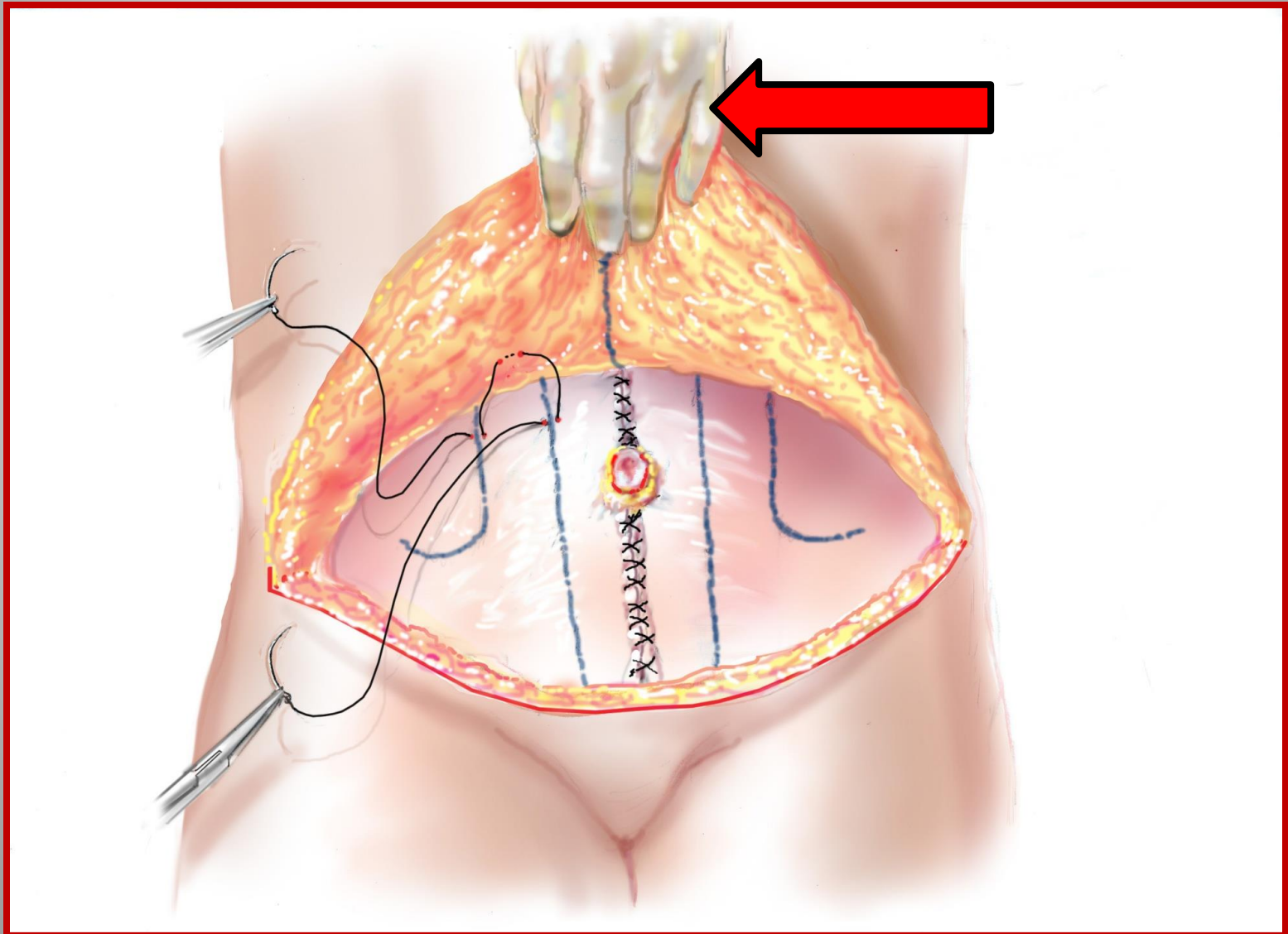
Body Contouring

Abdominoplasty With Progressive Tension Closure Using A Barbed Suture Technique

ASJ 2009

Jeremy P. Warner, MD; and Karol A. Gutowski, MD

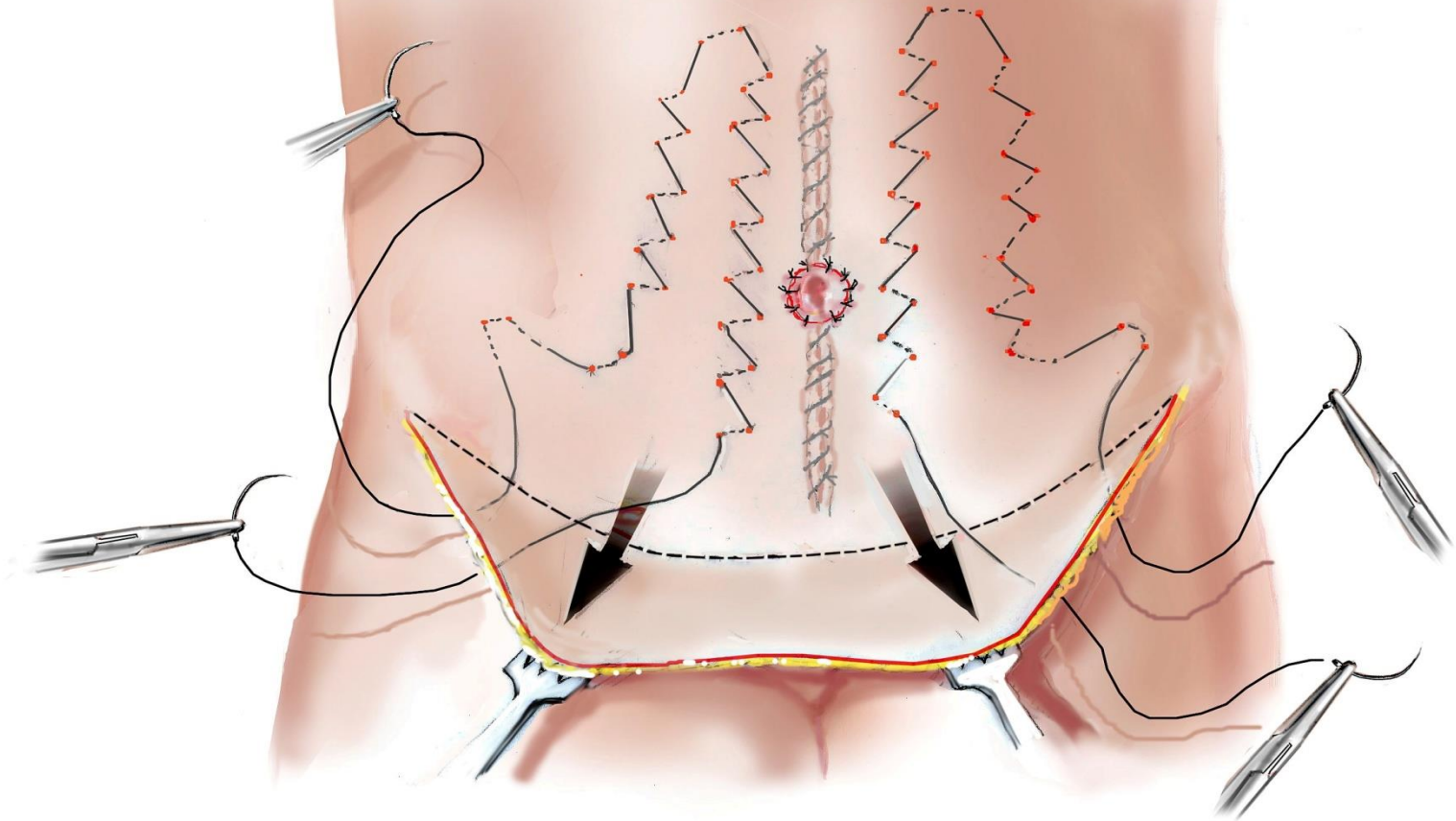
Barbed Progressive Tension Sutures



Barbed Progressive Tension Sutures

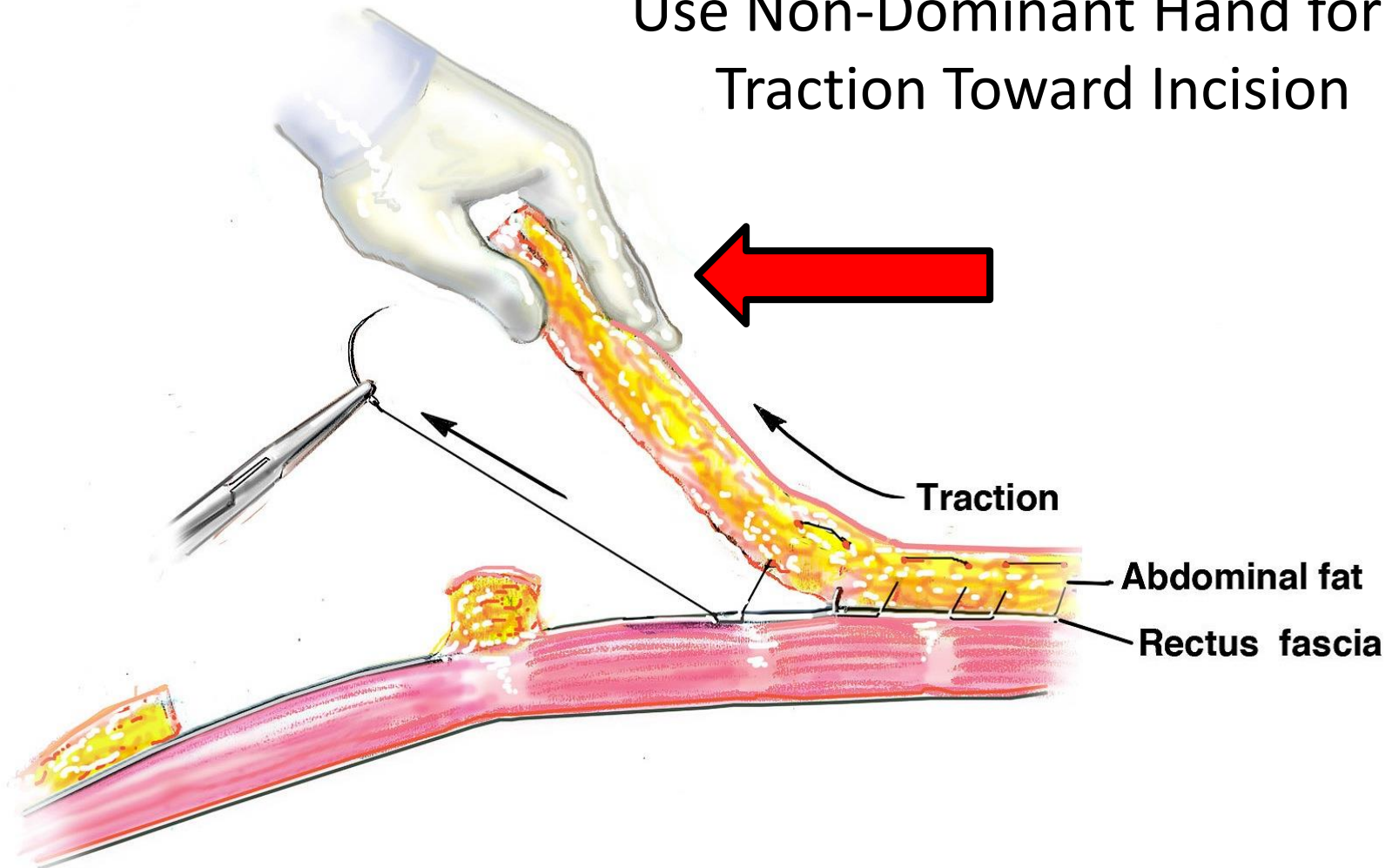
Finish lower abdominal PTS

Address the umbilical transposition



Barbed Progressive Tension Sutures

Use Non-Dominant Hand for
Traction Toward Incision



Body Lift

- Deep “3-point” interrupted sutures
 - Superficial fascia - deep tissue - superficial fascia
- or*
- Running barbed suture in superficial fascia
- Either method closes the posterior dead space
- Abdominal binder or compression garment

Arm Lift

- Medial or posterior incision
 - “3-point” interrupted suture
- or*
- Running barbed suture in superficial fascia
 - Moderate compression (ACE wrap or garment)

Thigh Lift

- Upper incision with or without medial incision
- Running barbed suture in superficial fascia
- Consider drain (remove next day if low output)
- Moderate compression (ACE wrap or garment)

Seroma Treatment

- Amount, location & timing
- Seroma treatment
 - Aspirate
 - Percutaneous drain (SeromaCath)
 - Sclerosing agent
 - Doxycycline 500 mg in 50 cc NS
 - Ethanol 95%
 - Seroma capsule excision

Breast Reduction (No Drains)

- Breast Reductions (481 patients, 910 breasts)
 - Tumescant infiltration (500 to 1000cc per breast)
 - 93% inferior pedicle with Wise pattern
 - 71% with lateral chest liposuction
- 4 hematomas (0.4%)
- 1 abscess (0.1%)
- 0 seroma

Abdominoplasty (No Drains)

- 177 Abdominoplasties + 34 Body lifts (211 patients)
 - Tumescant infiltration (1000 to 2000cc)
 - 78% with lateral truck liposuction
- Anterior barbed progressive tension sutures
- Posterior barbed running sutures
- Compression garments or binders
- Early ambulation

Abdominoplasty (No Drains)

Seroma	6	(3%)
Drained by single needle aspiration	4	
Drained by two needle aspirations	2	
Wound dehiscence (> 1 cm)	5	(2%)
Anterior & superficial (skin only)	2	
Posterior & superficial (skin only)	2	
Lateral & deep (Scarpa's fascia)	1	
Hematoma	0	(0%)

Arm & Thigh Lift (No Drains)

- **Arm lift** (51 patients, 102 arms)
 - Tumescent infiltration (100 to 300cc per arm)
 - 21% with posterior arm liposuction
 - 3 seromas (2 aspirated, 1 excised)
- **Thigh lift** (19 patients, 38 thighs)
 - Tumescent infiltration (400 to 800cc per thigh)
 - 44% with thigh liposuction
 - 7 no drain, 12 drain removed next day
 - 2 seromas (1 aspirated, 1 excised)

No Drain Body Contouring Patient

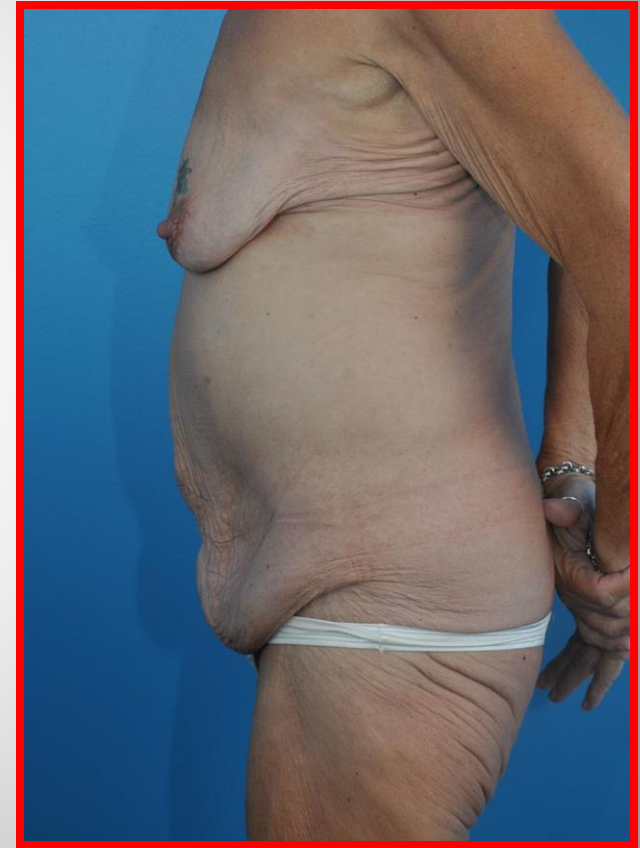


Arm lift

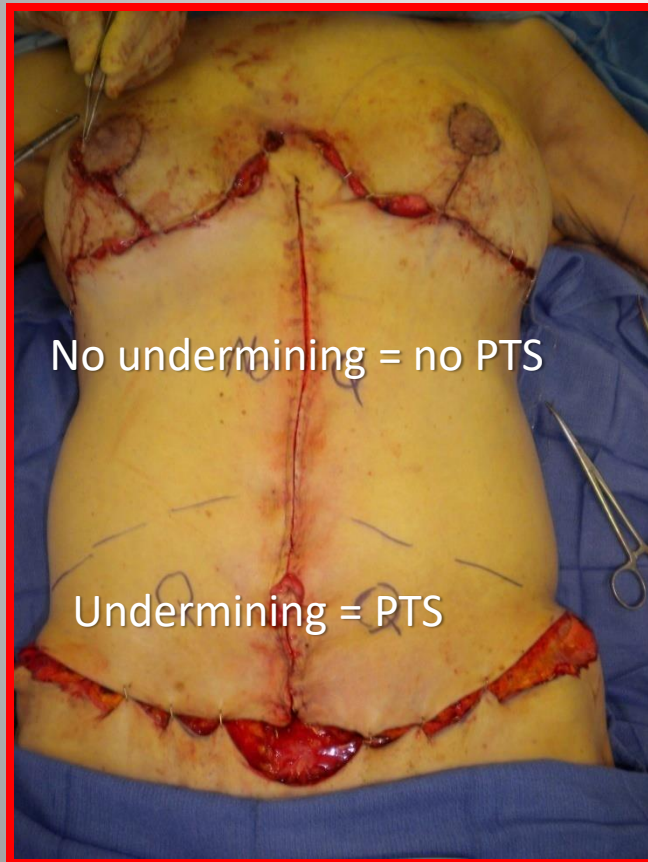
Mastopexy
with lateral auto-
augmentation

Body lift

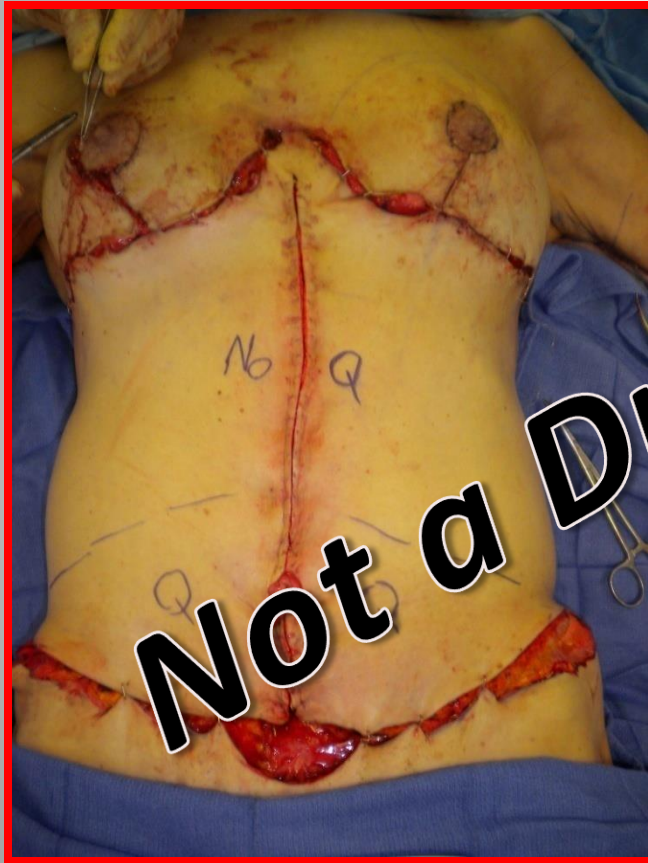
Thigh lift



No Drain Body Contouring Patient



No Drain Body Contouring Patient



No Drain Body Contouring Patient



No Drain Body Contouring Patient



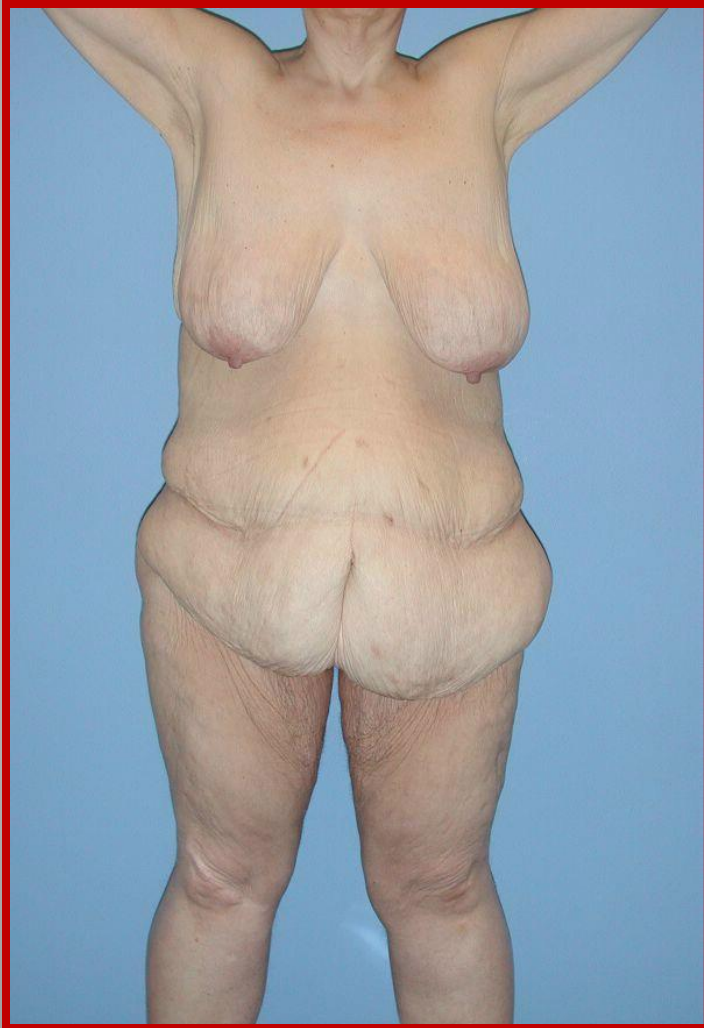
No Drain Body Contouring Patient



Summary

- Little evidence for drains in body contouring
- Surgical technique can eliminate need for drains
- Low seroma incidence when drains not used
- Personal experience
 - No patient every asked for a drain to be used
 - All patients were happy that drains weren't used

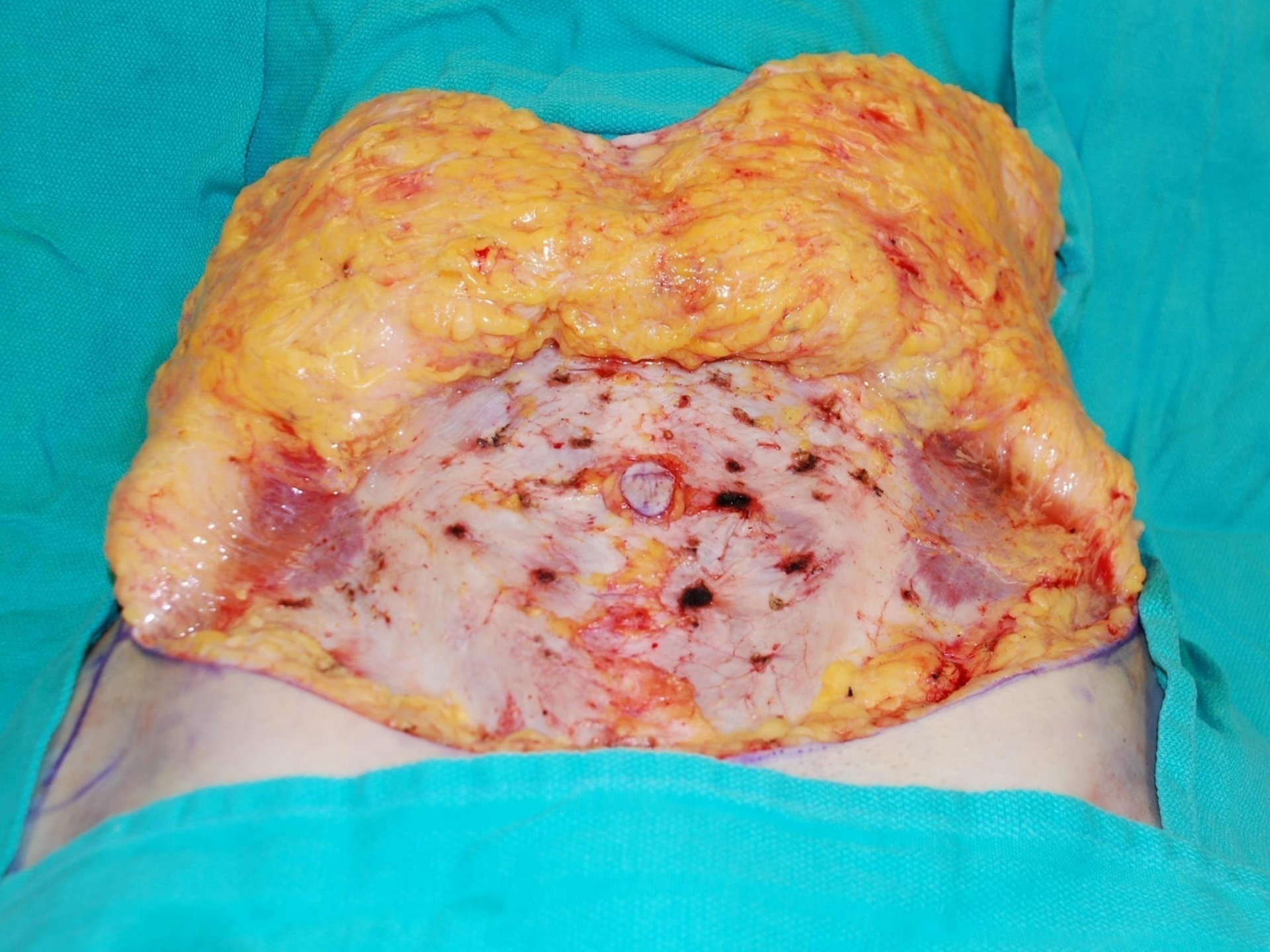
Not Using Drains is an Uplifting Experience!

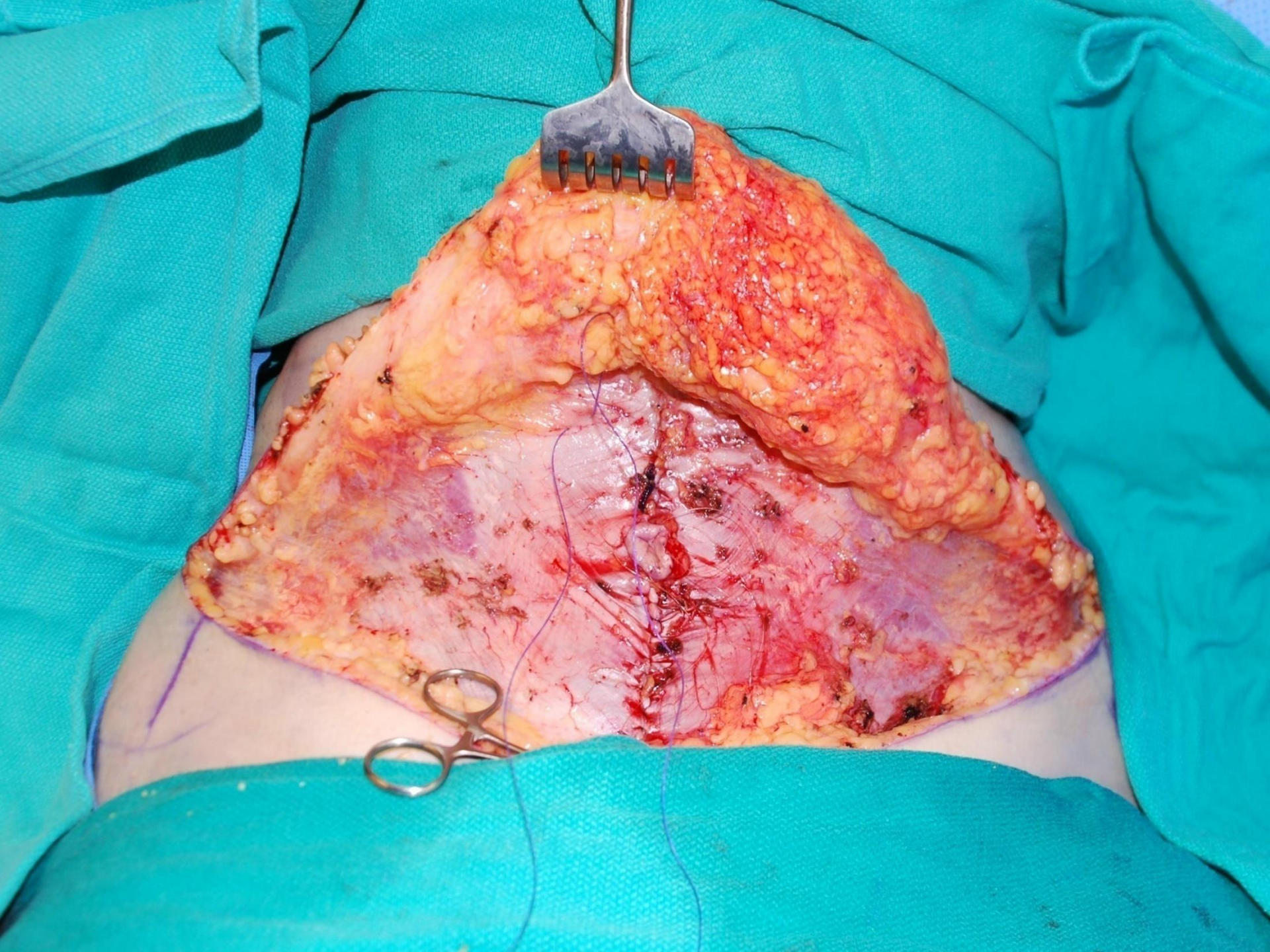


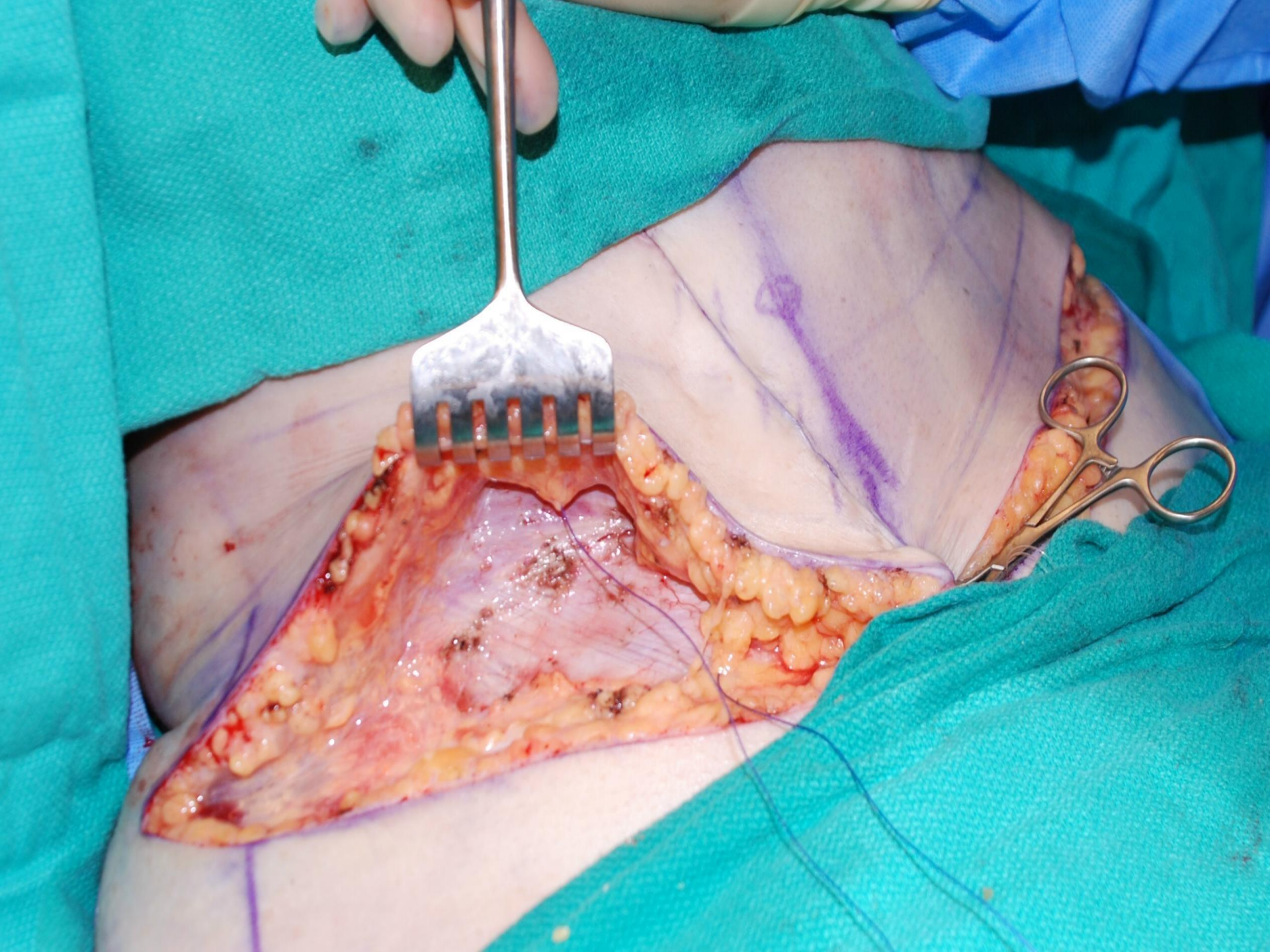
Drains are Not Needed in Body Contouring Procedures

Karol A Gutowski, MD, FACS

Karol@DrGutowski.com









BS-PTS Abdominoplasty (1 year)



BS-PTS Abdominoplasty (1 year)



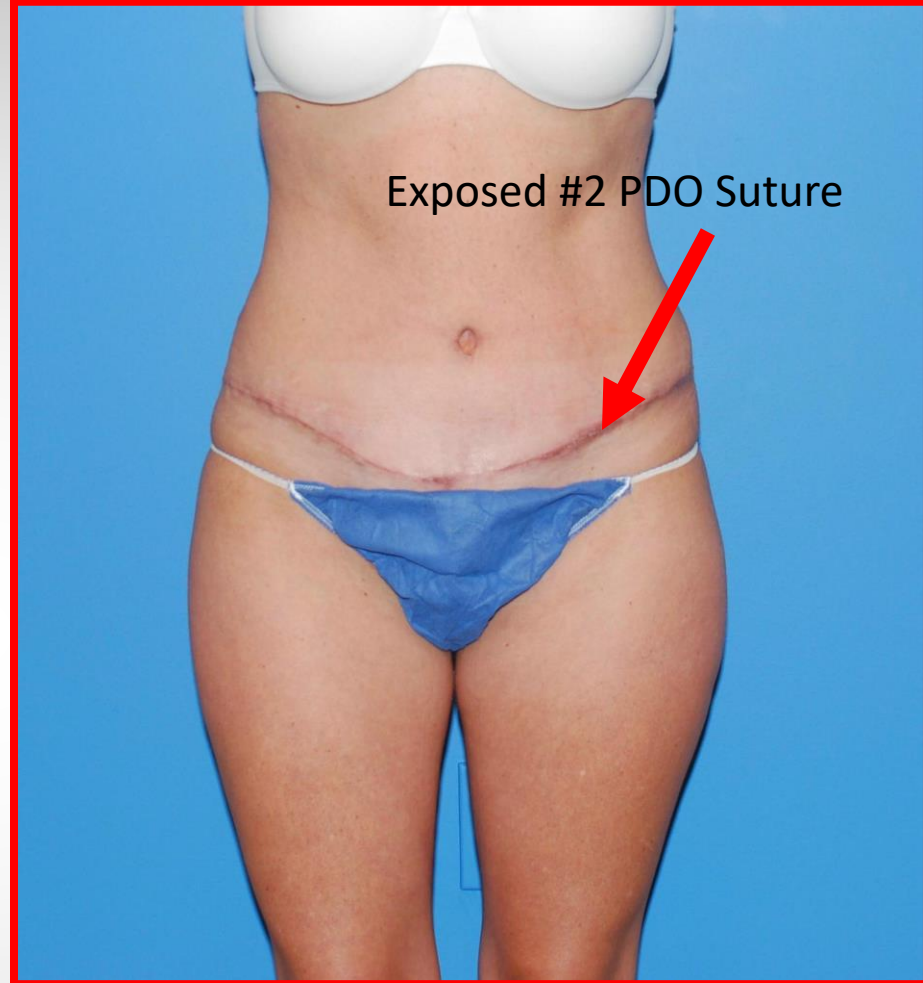
BS-PTS Abdominoplasty (5 months)



BS-PTS Abdominoplasty (5 months)



BS-PTS Abdominoplasty (5 months)



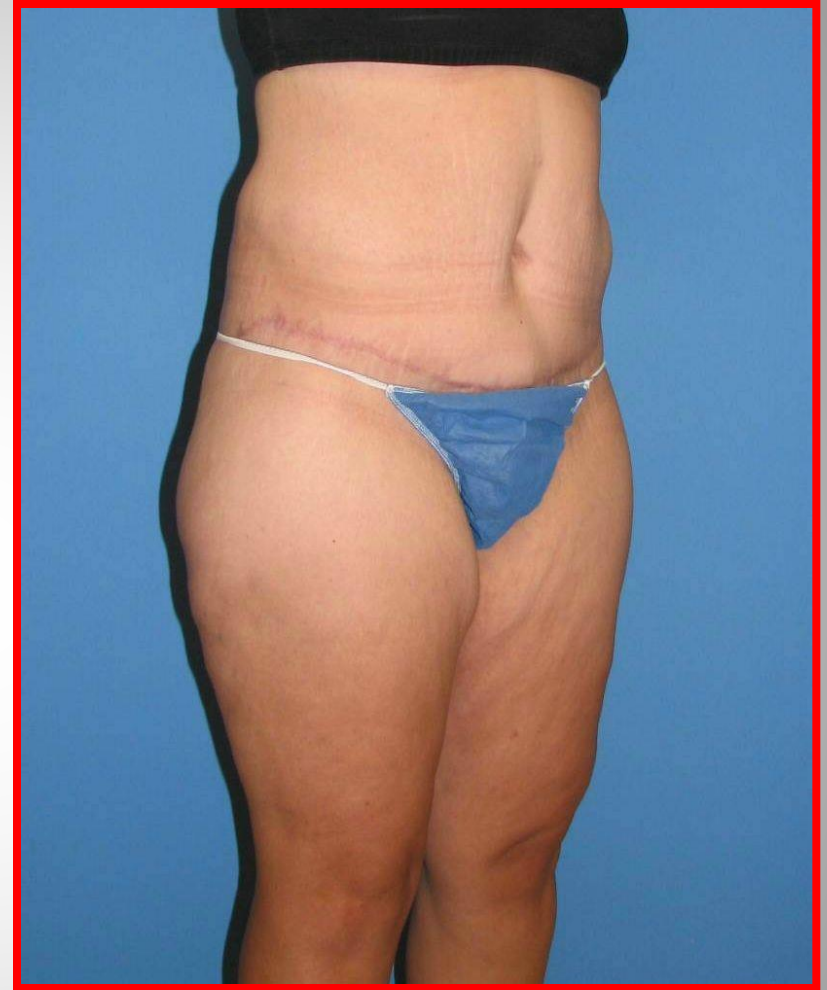
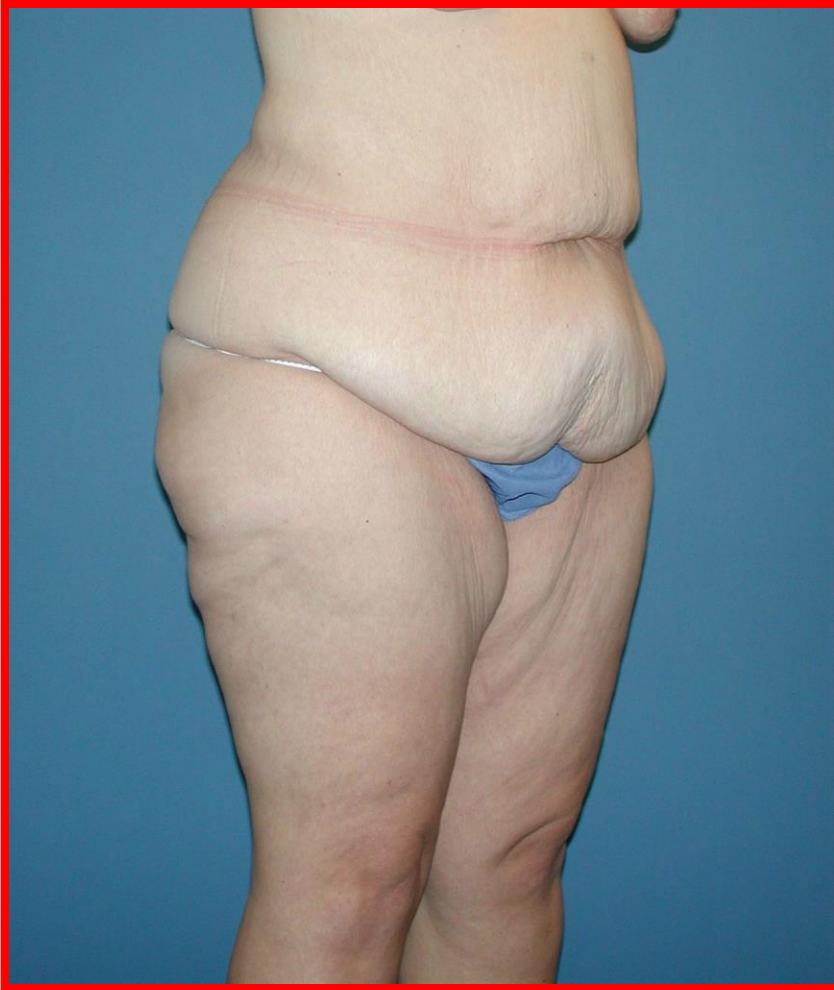
BS-PTS Abdominoplasty (7 weeks)



BS-PTS Abdominoplasty (7 weeks)



MWL BS-PTS Abdominoplasty & liposuction (4 months)



MWL BS-PTS Abdominoplasty & liposuction (4 months)



MWL BS-PTS Abdominoplasty & liposuction (4 months)



MWL BS-PTS Abdominoplasty & liposuction (4 months)

Video Presentation

