

# Capsular Contracture: Prevention & Treatment

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*Private Practice*

*University of Illinois & University of Chicago*



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CAESARS PALACE LAS VEGAS



PROGRAM CO-CHAIRS:  
Amy Alderman, MD  
Dennis Hammond, MD  
James Zins, MD

# Disclosures

Merz

Syneron/Candela

May use brand names due to lack of  
distinguishing generic names

# Disclaimers

- Limited to augmentation
  - More variables in reconstruction
  - Same principles may apply
- Focus on more recent studies
  - Newer generation implants
  - More likely to use current techniques
- Individual surgeon's case series
  - Tend to under report CC
- Variability in reporting technique details
  - Pocket irrigation
  - No touch technique
  - Pocket dissection

# Etiology

- Bacterial contamination in 2/3rds of Baker III/IV capsules
- Emerging evidence of biofilms
- Nonbacterial causes
  - Hematoma
- Common inflammatory pathway



# Baker Grade

<u>Grade</u>	<u>Feel</u>	<u>Appearance</u>
I	Soft	Natural
II	Little firm	Normal
III	Firm	Abnormal
IV	Hard, cold, painful	Distorted

Unless otherwise mentioned, will only refer to Grade III & IV

# Capsular Contracture

- Common cause of reoperation
  - Saline (Mentor & Allergan)      Augmentation      up to 20%  
   Reconstruction      up to 30%
  - Gel (Mentor & Allergan)      Augmentation      up to 40%  
   Reconstruction      up to 14%
- Common cause of implant removal
  - Saline (Mentor & Allergan)      Augmentation      up to 15%  
   Reconstruction      up to 30%
  - Gel (Mentor & Allergan)      Augmentation      up to 33%  
   Reconstruction      up to 21%

# Capsular Contracture Over Time

COSMETIC

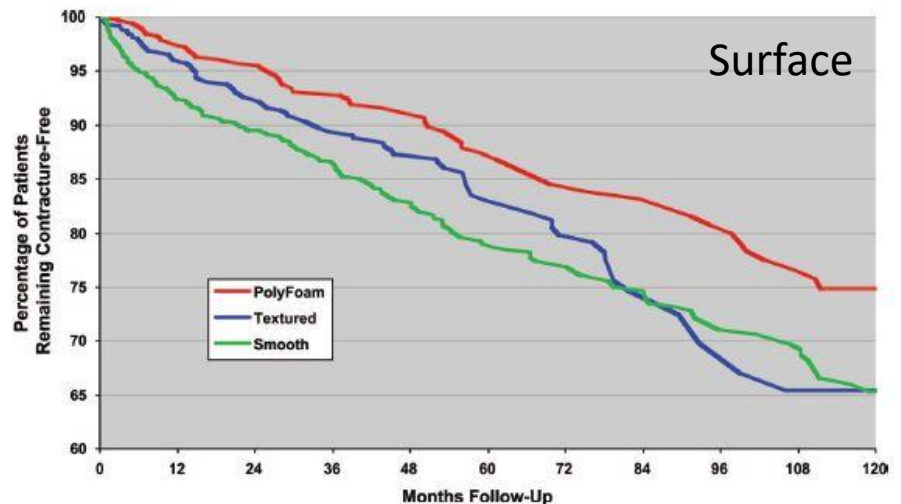
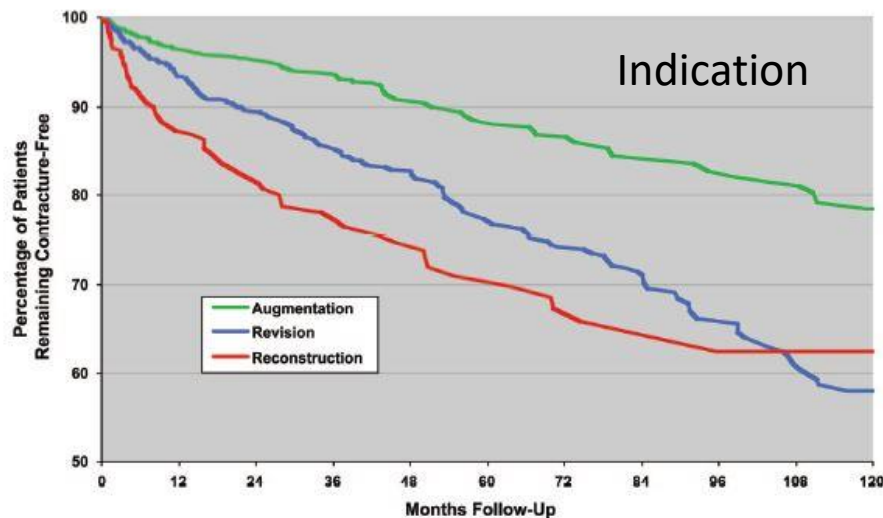
## A Long-Term Study of Outcomes, Complications, and Patient Satisfaction with Breast Implants 2006

Neal Handel, M.D.  
Tracy Cordray, M.D.  
Jaime Gutierrez, M.D.  
J. Arthur Jensen, M.D.

*Los Angeles, Calif.*

**Background:** Breast implants have been used worldwide for more than 40 years. Despite extensive clinical experience, there is continued concern about the safety of these devices. The purpose of this study was to compare the efficacy, complication rates, frequency of reoperation, and degree of patient satisfaction with different types of implants.

3495 saline or silicone gel implants in 1529 women for any indication





# Capsular Contracture Over Time

COSMETIC

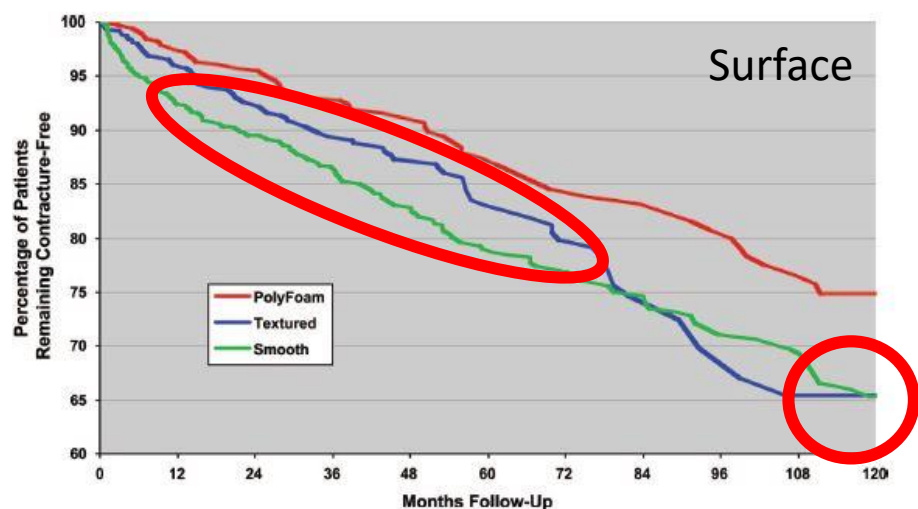
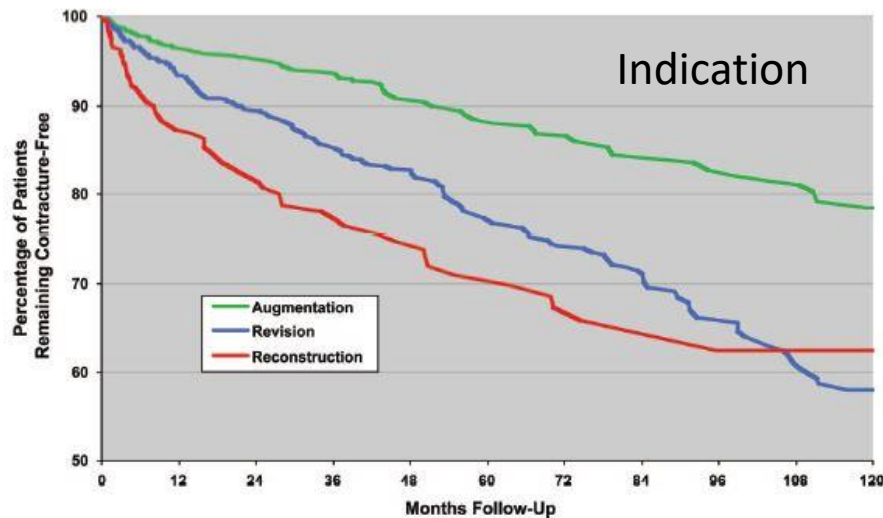
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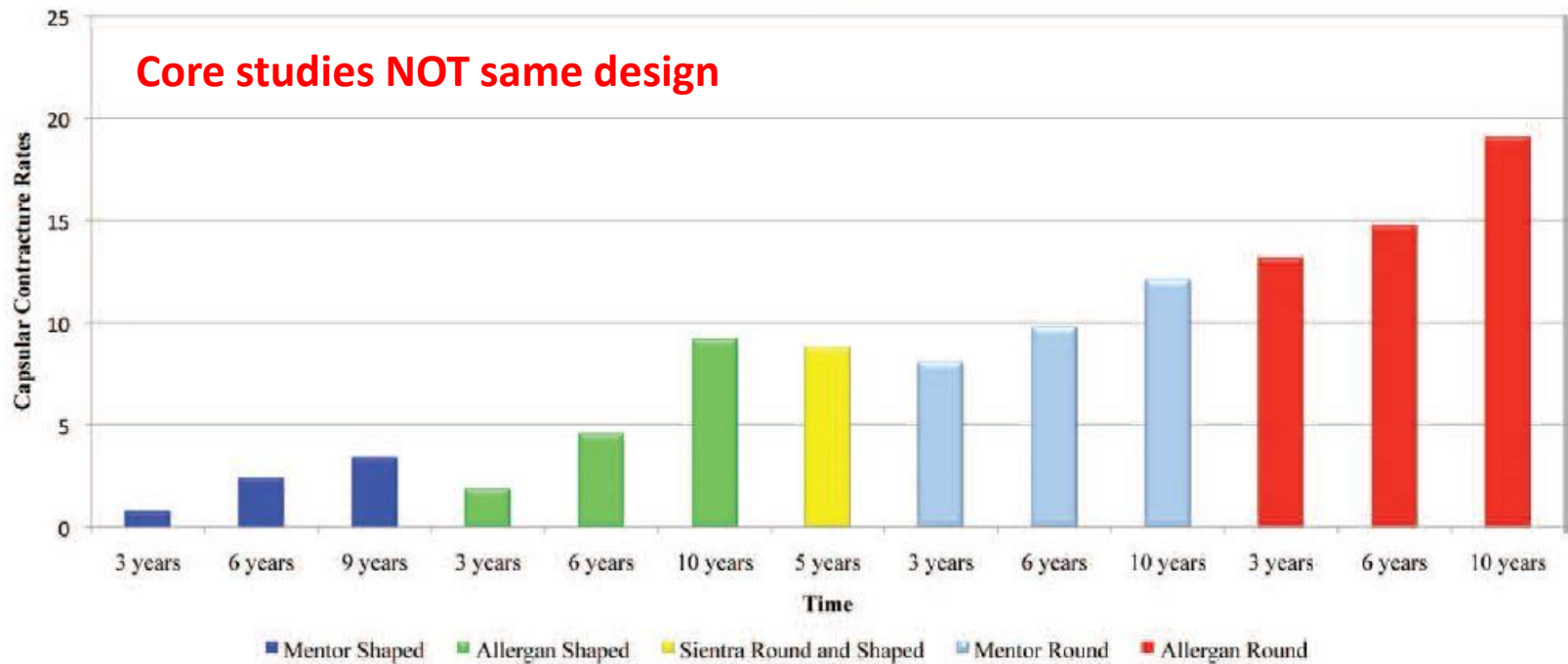
Is capsular contracture inevitable?





# Core Studies Summary: CC

**Capsular Contracture Rates following Primary Breast Augmentation**



2015

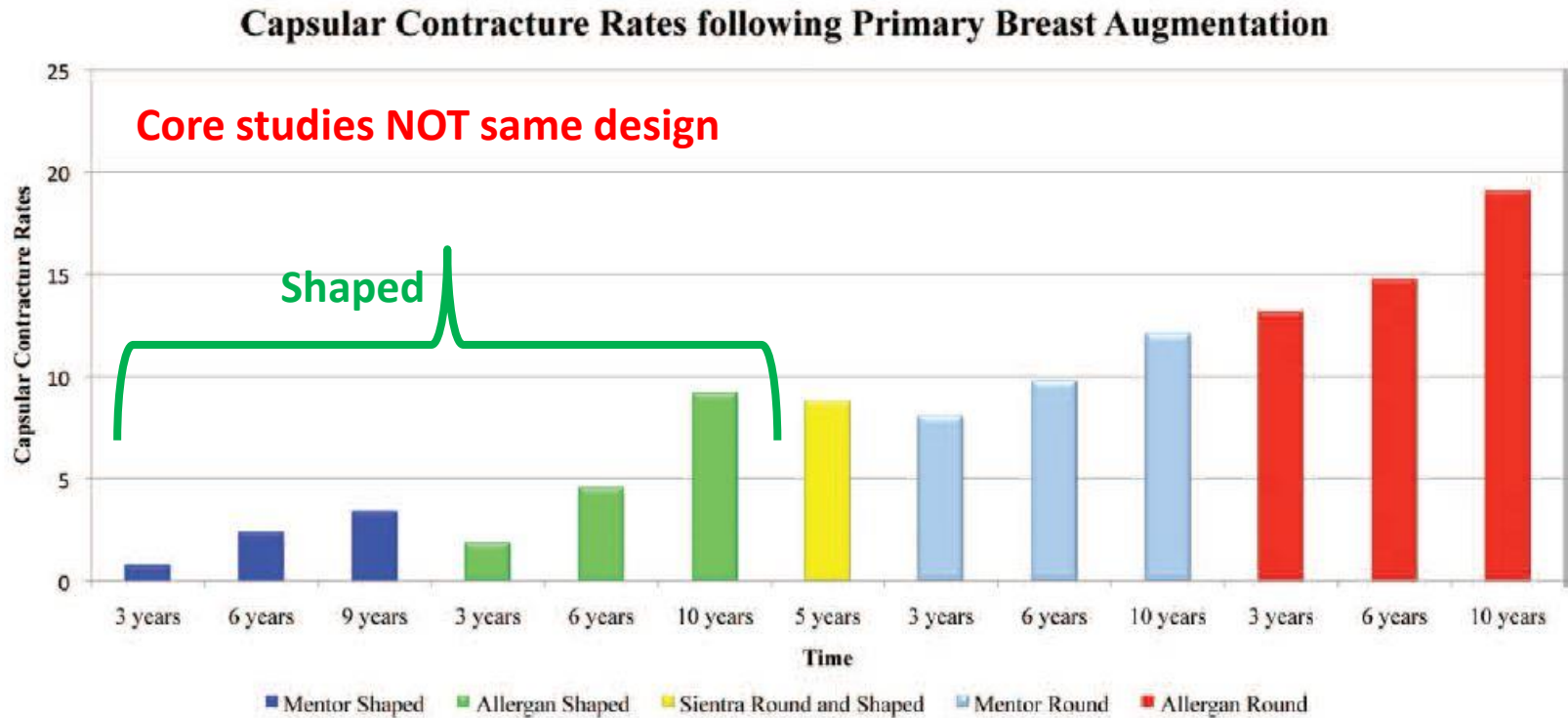
SPECIAL TOPIC

## Textured Silicone Breast Implant Use in Primary Augmentation: Core Data Update and Review

Brian M. Derby, M.D.  
Mark A. Codner, M.D.  
Atlanta, Ga.

**Summary:** Evolution of silicone breast implant design has focused primarily on advances in implant fill, surface texture, and shape. Fifth-generation, shaped, form-stable, silicone breast implants from all three major implant manufactur-

# Core Studies Summary: CC



2015

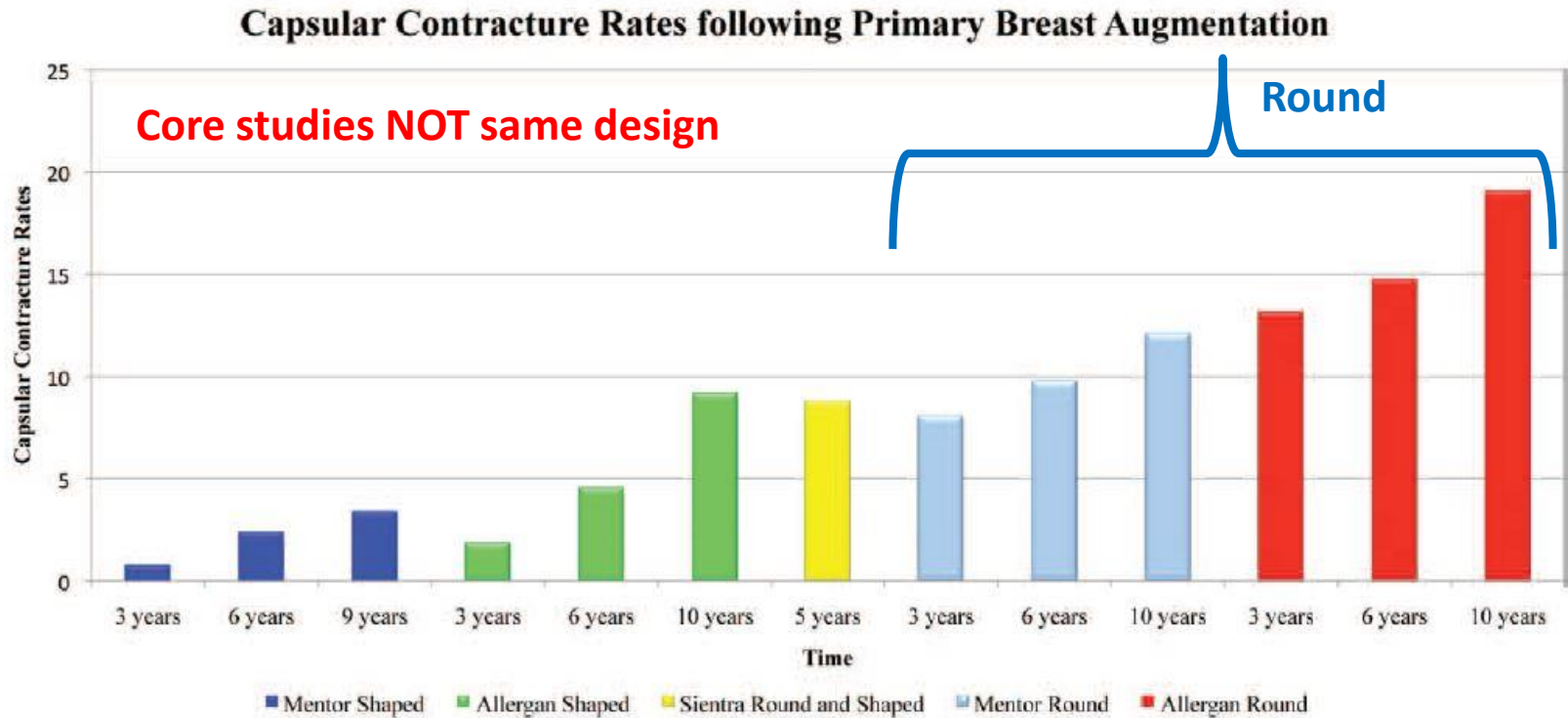
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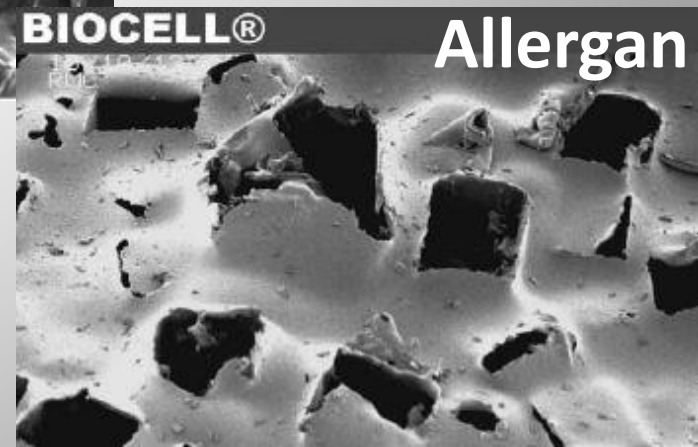
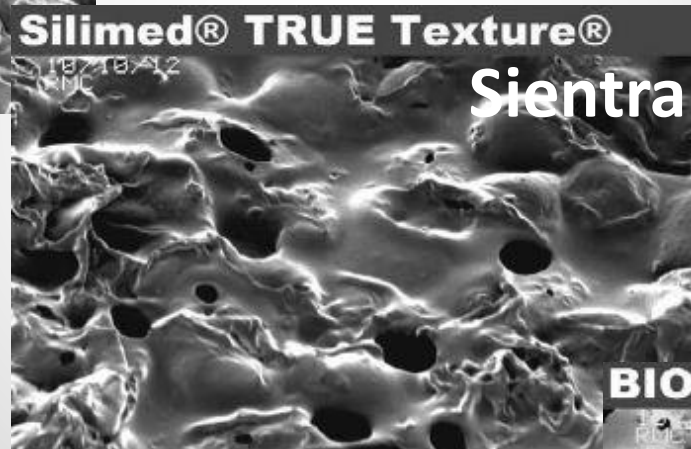
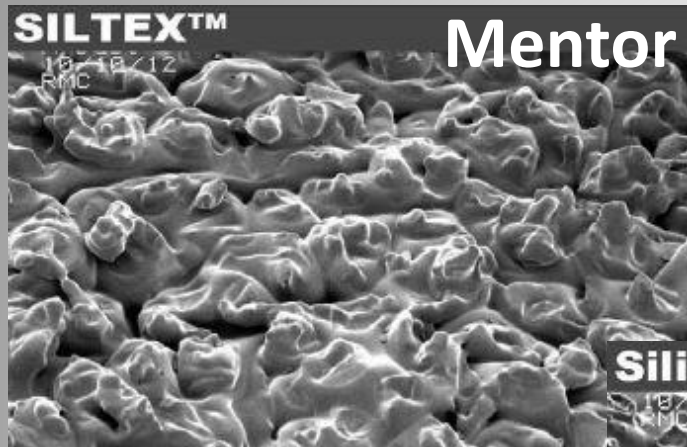
## Prevention

- Implant choice
  - Smooth vs textured
  - Shaped vs round
- Incision choice
- Implant pocket
- Pocket irrigation
  - Betadine
  - Antibiotics
- Surgical technique
  - No touch methods

## Treatment

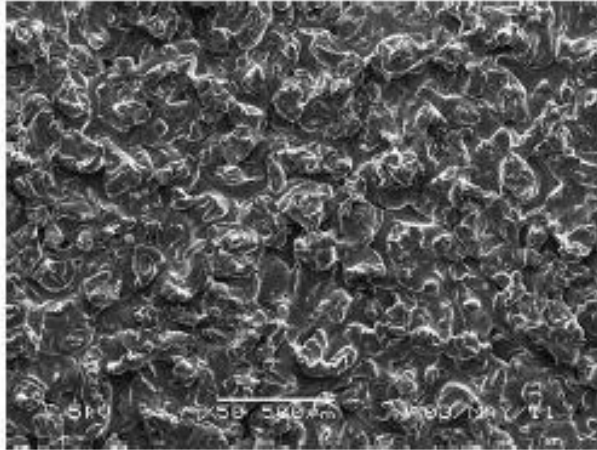
- Nonsurgical
  - Medication
  - Ultrasound
- Capsule modification
  - Closed capsulotomy
  - Anterior vs complete capsulectomy
- Pocket site change
- ADM placement
- Different implant
- Prevention

# Textured Surfaces NOT the Same

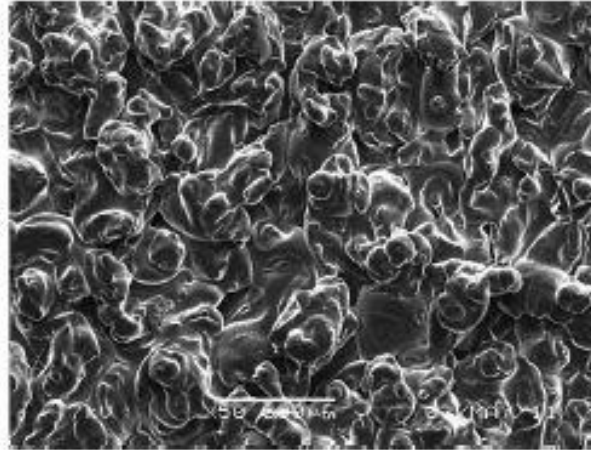




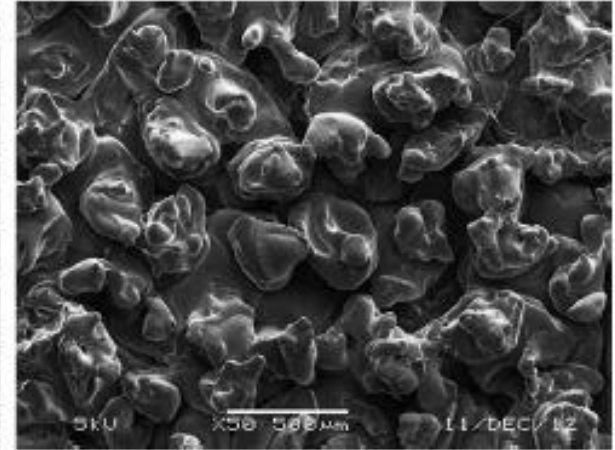
# Differences in Same Manufacturer



**Mentor  
Round  
MemoryGel  
100 pores/inch**



**Mentor  
Shaped  
MemoryShape  
65 pores/inch**



**Mentor  
CPX  
Tissue Expander  
45 pores/inch**

 **COSMETIC**

2014

The Design and Engineering of the  
MemoryShape Breast Implant

M. Bradley Calobrace, MD  
*Louisville, Ky.*

**Summary:** The recent approval of MemoryShape implant by the Food and Drug Administration introduces a novel implant available to the surgeon for cosmetic

# Textured for Subglandular Placement

 COSMETIC

2006

## Capsular Contracture in Subglandular Breast Augmentation with Textured versus Smooth Breast Implants: A Systematic Review

Chin-Ho Wong, M.R.C.S.  
Miny Samuel, M.Sc., Ph.D.  
Bien-Keem Tan, F.R.C.S.  
Colin Song, F.R.C.S.  
*Singapore*

**Background:** There are conflicting recommendations in the literature regarding the use of textured implants to reduce capsular contracture in subglandular breast augmentation. The authors reviewed the literature to evaluate the effectiveness of surface texturization in reducing capsular contracture.

**Methods:** The electronic databases MEDLINE, EMBASE and the Cochrane

Recommendation: Use textured implants for subglandular placement  
Smooth implants may be appropriate for submuscular placement



# No Recommendations

## SPECIAL TOPIC

2010

### Capsular Contracture with Breast Implants in the Cosmetic Patient: Saline versus Silicone—A Systematic Review of the Literature

Timothy A. Schaub, M.D.  
Jamil Ahmad, M.D.  
Rod J. Rohrich, M.D.

**Background:** Capsular contracture is one of the most common and trying complications associated with the placement of breast prostheses. The authors hypothesized that silicone implants have a higher rate of capsular contracture

- Lack of current prospective data comparing saline & silicone implants
- Therefore can't make data-driven recommendations regarding:
  - Pocket, fill type, surface
- Textured implants (saline and silicone) have tendency for less contracture
- Submuscular plane (saline and silicone) has tendency for less contracture

# Should we Use Textured Implants?

## ■ BREAST

### Current Risk Estimate of Breast Implant–Associated Anaplastic Large Cell Lymphoma in Textured Breast Implants

David J. Collett, MBBS  
Hinne Rakhorst, MD, PhD  
Peter Lennox, FRCSC  
Mark Magnusson, MBBS,

**Background:** With breast implant–associated anaplastic large cell lymphoma (BIA-ALCL) now accepted as a unique (iatrogenic) subtype of ALCL directly associated with textured breast implants, we are now at a point where a sound epidemiologic profile and risk estimate are required. The aim of this article is

- |                         |                   |
|-------------------------|-------------------|
| • Silimed Polyurethane  | 23 Relative Risk* |
| • Allergan Biocell      | 17                |
| • Mentor Siltex         | 1                 |
| • <b>Mentor Smooth*</b> | <b>0</b>          |

# Adams *et al* 14 Point Plan + 1

1. IV antibiotic prophylaxis before skin incision
2. Inframammary incision
3. Nipple shields
4. Atraumatic dissection
5. Prospective hemostasis
6. Avoid dissection into the breast parenchyma
7. Dual-plane pocket
8. Pocket irrigation with triple antibiotic +/- Betadine

# Adams *et al* 14 Point Plan + 1

9. Minimize skin contamination (insertion sleeve)
10. Minimize implant open time and sizers
11. Change surgical gloves
12. No drains
13. Layered skin closure
14. Antibiotic prophylaxis for future invasive procedures
15. Leukotriene Inhibitor x 3 months post op

# Incision Site

- 183 primary augmentations, mean follow-up 1.2 years
- Betadine + triple antibiotic irrigation + IV antibiotics
- CC rates:
  - 6.4% transaxillary
  - 2.4% periareolar
  - 0.5% inframammary

## Breast Surgery

### Effect of Incision Choice on Outcomes in Primary Breast Augmentation

2012



Jeffrey M. Jacobson, MD; Margaret E. Gatti, MD, MPH;  
Adam D. Schaffner, MD; Lauren M. Hill, MD; and Scott L. Spear, MD

# Incision Site

- 856 primary augmentations, mean follow-up 1.4 years
- Variable pocket irrigation
- Overall CC 2.8%
  - Antibiotic irrigation decreased CC (3.9% vs 0.4%)
  - Tobacco users had more CC (5.5% vs 1.9%)
  - Saline implants had more CC than silicone gel (4.3% vs 1.3%)
- Recommend IMF & submuscular placement, antibiotic irrigation

## Breast Surgery

### Capsular Contracture Rate in a Low-Risk Population After Primary Augmentation Mammoplasty

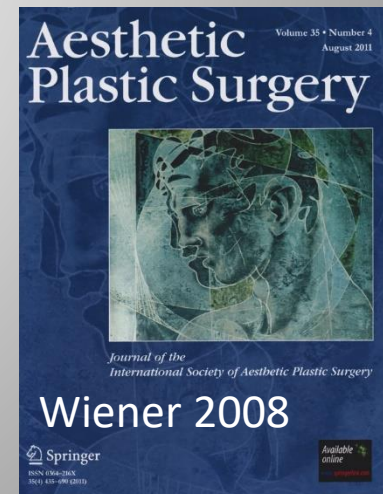
2013



Andrew L. Blount, MD; Matthew D. Martin, MD; Kyle D. Lineberry, BS; Nicolas Kettaneh, BS; and David R. Alfonso, MD

# Incision Site

- Inframammary incision CC: 0.59%
- Periareolar incision CC: 9.5%
- Periareolar mastopexy CC: 8%
- “due to an increase in contamination of the breast pocket with intraductal material colonized by bacteria.”





# Pocket Irrigation: Betadine

- Betadine rinse followed by saline (FDA OK)
- Leaving Betadine in the pocket (FDA NOT OK)
- Intraluminal Betadine (FDA NOT OK)
- FDA concerns of implant shell compromise
  - **Studies suggest it is safe**

SCIENTIFIC FORUM

2002

Mechanical Analysis of Explanted  
Saline-filled Breast Implants Exposed to  
Betadine Pocket Irrigation

Harold J. Branden, DSc; V. Leroy Young, MD; Kenneth L. Jerina, DSc;  
Clarence J. Wolf, PhD; William P. Adams, Jr, MD; and Maria E. Watson

Experimental

2004

Effect of Povidone Iodine on Silicone Gel  
Breast Implants In Vitro: Implications for  
Clinical Practice

George J. Zambacos, M.D., Dai Nguyen, M.D., and Robert J. Morris, F.R.C.S.(Plast.)

BREAST

2007

The Role of Betadine Irrigation in  
Breast Augmentation

Thomas C. Wiener, M.D.  
Houston, Texas

**Background:** In the spring of 2000, the U.S. Food and Drug Administration issued a ban on the use of Betadine (povidone-iodine; Purdue Frederick, Stamford, Conn.) for irrigation of breast implants.

# Pocket Irrigation: Betadine + Abx

- 330 inframammary dual-plane augmentations
  - **Group A:** Cephalothin 1.5 g IV + cephalexin 750 mg PO BID x 7 days
  - **Group B:** Cefuroxime 750 mg IV + levofloxacin 500 mg PO QD x 5 days + pocket irrigation
    - 25 mL 10% povidone-iodine + cefuroxime 750 mg + gentamicin 80 mg in 15 mL saline
- CC at 2 year follow up
  - Group A: 6%
  - Group B 0.6%

## Breast Surgery

Povidone-Iodine Combined With Antibiotic Topical Irrigation to Reduce Capsular Contracture in Cosmetic Breast Augmentation: A Comparative Study

2013

Salvatore Giordano, MD; Hilikka Peltoniemi, MD, PhD; Peter Lilius, MD, PhD; and Asko Salmi, MD, PhD



# Betadine Irrigation

- Meta-analysis of four studies
  - 1191 patients Betadine irrigation
  - 595 patients saline irrigation
- Less CC with Betadine
  - 2.3% vs 8.9%
- Implant rupture <1%
- Low study methodologic quality limits recommendation for standard of practice

2015

COSMETIC



Efficacy and Safety of Povidone-Iodine Irrigation in Reducing the Risk of Capsular Contracture in Aesthetic Breast Augmentation: A Systematic Review and Meta-Analysis

Georgia C. Yalanis, M.Sc.,  
B.S.  
En-Wei Liu, M.D.  
Hsu-Tang Cheng, M.D.

**Background:** Capsular contracture is common and distressing after aesthetic breast augmentation. The precise cause of capsular contracture is not well established. This systematic review investigates current available evidence regarding perioperative povidone-iodine irrigation safety and efficacy in reduc-

# Triple Antibiotic Irrigation

- 335 patients, mean follow-up 14 months (6 - 75 months)
- No control group – compared to historical controls
- 50,000 U bacitracin + 1 g cefazolin + 80 mg gentamicin in 500 cc NS
- No touch techniques + postop antibiotics
- CC rates:
  - 1.8% primary breast augmentation (n=248)
  - 0% augmentation-mastopexy (n=24)
  - 9.5% breast reconstruction (n=63)

Cosmetic

2001

## Optimizing Breast Pocket Irrigation: An in Vitro Study and Clinical Implications

William P. Adams, Jr., M.D., W. Chad H. Conner, B.A., Fritz E. Barton, Jr., M.D.,  
and Rod J. Rohrich, M.D.

COSMETIC



## Enhancing Patient Outcomes in Aesthetic and Reconstructive Breast Surgery Using Triple Antibiotic Breast Irrigation: Six-Year Prospective Clinical Study

2006

William P. Adams, Jr., M.D.  
Jose L. Rios, M.D.  
Sharon J. Smith, R.N.

**Background:** Capsular contracture remains one of the most commonly reported complications in aesthetic and reconstructive breast patients. Previous in vitro studies from the authors' laboratory have recommended a new triple

# Postoperative Antibiotics

- 605 implants: 1° or 2° breast augmentation
- 1% CC at mean 3.8 year follow up
- Protocol:
  - 1 g cefazolin IV (or clindamycin)
  - Bacitracin irrigation
  - Smooth Mentor saline or silicone gel implants
  - 3 days of antibiotics (52%) vs none (48%)
- No reduction in CC, infection, or complication rate

## Breast Surgery

Evaluating the Role of Postoperative Prophylactic Antibiotics in Primary and Secondary Breast Augmentation: A Retrospective Review

2015



Michael N. Mirzabeigi, MS; Alexander F. Mericli, MD; Timothy Ortlip, MS; Gary A. Tuma, MD; Steven E. Copit, MD; James W. Fox IV, MD; and John H. Moore Jr., MD, FACS

# Electrocautery vs Blunt Dissection

## Brief Communication

- 615 cases
- 51% visualized dissection with electrocautery
  - CC 0.64%
- 49% blind Dingman blunt dissection
  - CC 6.4%

**The Role of Pocket Dissection in  
Breast Implant Contracture: A Single  
Surgeon's Review**

Jason Jacoby, B.S.  
Sean T. Lille, M.D

2011



# Combined Augmentation Mastopexy

## Breast Surgery

### One-Stage Augmentation Mastopexy: A Review of 1192 Simultaneous Breast Augmentation and Mastopexy Procedures in 615 Consecutive Patients

2.4% CC

2014



W. Grant Stevens, MD, FACS; Luis H. Macias, MD; Michelle Spring, MD; David A. Stoker, MD, FACS; Carlos O. Chacón, MD, MBA; and Seth A. Eberlin, MD

COSMETIC

Outcomes Article

3.0% CC

### A Systematic Review of Single-Stage Augmentation-Mastopexy

2014

Nima Khavanin, B.S.  
Sumanas W. Jordan, M.D.,  
Ph.D.  
Aksharananda Rambachan,  
B.A.  
John Y. S. Kim, M.D.  
*Chicago, Ill.*

**Background:** The safety of single-stage augmentation-mastopexy remains controversial given the dual purpose of increasing breast volume and decreasing the skin envelope. Currently, the literature is relatively sparse and heterogeneous. This systematic review considered complication profiles and pooled summary estimates in an attempt to guide surgical decision-making. **Methods:** Multiple databases were queried for combined augmentation-mastopexy outcomes. Whenever possible, meta-analysis of complication rates was performed.

3.9% CC

COSMETIC

2013

### Simultaneous Augmentation/Mastopexy: A Retrospective 5-Year Review of 332 Consecutive Cases

M. Bradley Calobrace, M.D.  
Donald R. Herdt, B.S.  
Kyle J. Cothron, M.D.

**Background:** Of all mastopexies performed in the authors' facility, approximately 77 percent of patients have an implant placed simultaneously. The unique challenges and safety concerns associated with the simultaneous aug-



- Does not appear to dramatically increase risk of CC?
- Place implant, close pocket, then do mastopexy



# Nipple Shield

## Breast Surgery

### Risk of Breast Implant Bacterial Contamination From Endogenous Breast Flora, Prevention With Nipple Shields, and Implications for Biofilm Formation



2012

Roger N. Wixtrom, PhD, DABT; Ross L. Stutman, MD; Renee M. Burke, MD;  
Amy K. Mahoney, BS; and Mark A. Codner, MD

- NAC covered with adhesive shield
- 35% had + bacterial cultures



### LOP15: Nipple shields as additional tool to pocket irrigation in reducing capsular contracture after cosmetic breast augmentation

\*S. Giordano<sup>1</sup>, A. Salmi<sup>1</sup>

<sup>1</sup>Turku University Hospital, Plastic Surgery, Turku, Finland

2015

No Shield: 5% CC, n=60  
Shield: 0% CC, n=105

# Skin Barrier



## IDEAS AND INNOVATIONS

### A Simple Barrier Drape for Breast Implant Placement

Kenneth C. Shestak, M.D.

Morad Askari, M.D.

*Pittsburgh, Pa.*

# Insertion Funnel



Keller Funnel & Inplant Funnel

# Keller Funnel

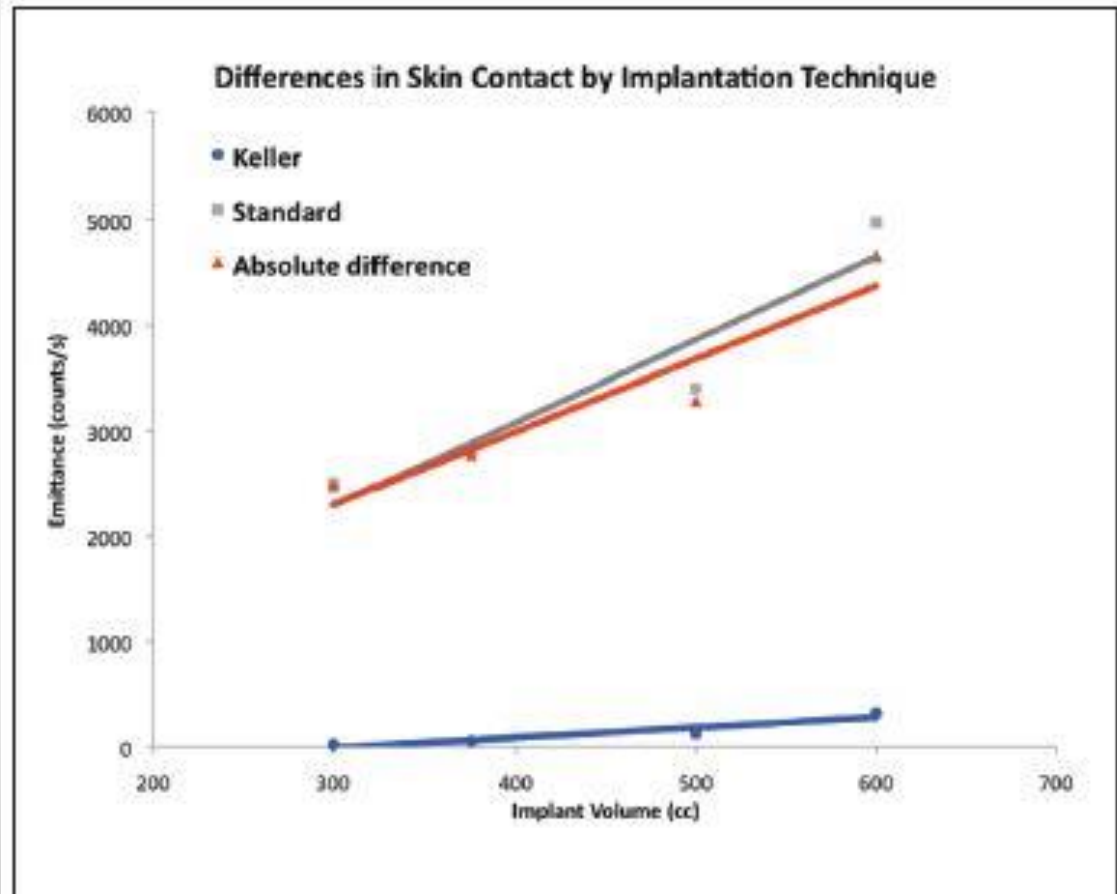
27-fold reduction  
in skin contact

## Breast Surgery

Contamination in Smooth Gel Breast Implant  
Placement: Testing a Funnel Versus Digital  
Insertion Technique in a Cadaver Model

2012

Hunter R. Moyer, MD; Bahair Ghazi, MD; Neil Saunders, MD;  
and Albert Losken, MD



# Keller Funnel

## Breast Surgery

### Preliminary Report

## Does Implant Insertion with a Funnel Decrease Capsular Contracture? A Preliminary Report

Nicholas A. Flugstad, MD; Jason N. Pozner, MD; Richard A. Baxter, MD; Craig Creasman, MD; Sepehr Egrari, MD; Scot Martin, MD; Charles A. Messa III, MD; Alfonso Oliva, MD; S. Larry Schlesinger, MD; and Bill G. Kortesis, MD, FACS

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www.aestheticsurgeryjournal.com

**OXFORD**  
UNIVERSITY PRESS

2016

1177 patients **no** funnel      1.49% CC reoperation

1620 patients with funnel      0.68% CC reoperation

54% reduction ( $P = 0.004$ )

All sites that used same techniques had same or lower CC rate when using funnel



# Postoperative Leukotriene Inhibitor

## COSMETIC

### Prevention of Capsular Contracture Using Leukotriene Antagonists

Ruth Graf, Ph.D.  
Adriana S. K. Ascenço, M.D.  
Renato da S. Freitas, Ph.D.  
Priscilla Balbinot, M.Sc.  
Carolina Peressutti, M.D.  
Diogo F. B. Costa, M.D.  
Fábio de H. C. R.

**Background:** Capsular contracture is a common occurrence in plastic surgery, with a prevalence varying from 0.5 percent up to 30 percent. Although the standard treatment is capsulectomy, alternative treatments have been studied, such as the use of leukotriene inhibitors. These drugs have recently been evaluated in the prophylaxis of contracture. The authors aimed to assess the efficacy of montelukast (Singulair) in the prevention of capsular contracture in patients undergoing mammoplasty with textured silicone prostheses.

- 4.6% CC in control group vs 0% in Singulair group at 2 years

# Postoperative Leukotriene Inhibitor

OPEN

COSMETIC

## Prophylactic Leukotriene Inhibitor Therapy for the Reduction of Capsular Contracture in Primary Silicone Breast Augmentation: Experience with over 1100 Cases

Stephen D. Bresnick, M.D.  
*Encino, Calif.*

**Background:** The role of leukotriene inhibitors used immediately postoperatively to potentially influence the development of capsular contracture is unknown. The purpose of this study was to evaluate the incidence of capsular contracture among women undergoing primary smooth silicone gel breast augmentation, with or without postoperative leukotriene inhibitor therapy.

- No LTI 5.0% CC
- Accolate 2.2% CC ( $p < 0.05$ )
- Singulair 3.3% CC
- Mentor smooth gel implants, DP, Abx irrigation
- LTI x 3 months



# Capsular Contracture: Prevention & Treatment

## Prevention

- Implant choice
  - Smooth vs textured
  - Shaped vs round
- Incision choice
- Implant pocket
- Pocket irrigation
  - Betadine
  - Antibiotics
- Surgical technique
  - No touch methods

## Treatment

- Nonsurgical
  - Medication
  - Ultrasound
- Capsule modification
  - Closed capsulotomy
  - Anterior vs complete capsulectomy
- Pocket site change
- ADM placement
- Different implant
- Prevention

# Montelukast (Singulair)

- 19 patients with existing CC
- Singulair (10 mg QD) + massage BID
  - 11% worse
  - 16% no change
  - 26% improved
  - 37% completely improved
  - 11% prevented from having CC formation (given after surgery for CC)
- Baker II had better improvement than III & IV

## Breast Surgery

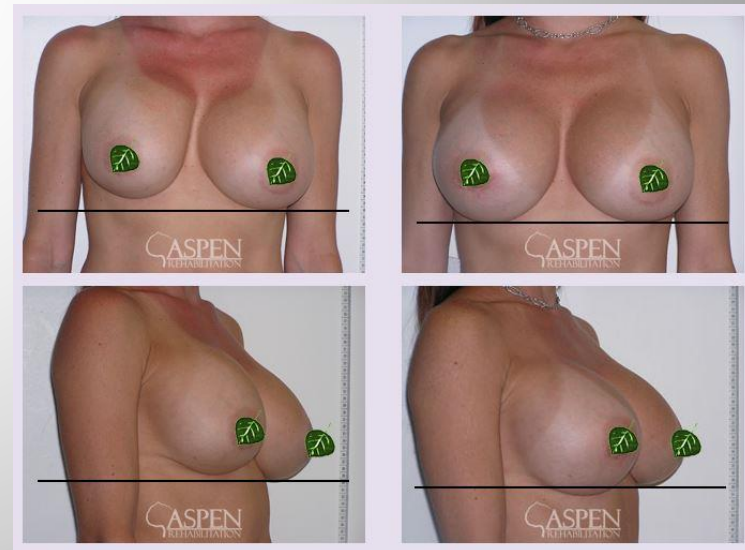
### Effects of Singulair (Montelukast) Treatment for Capsular Contracture

Catherine K. Huang, MD; and Neal Handel, MD

2010

# Ultrasound

- Specific protocol
- Disrupts biofilm
- Allows antibiotic to work
- Not as useful for Baker 4
- No good published studies
- Prophylaxis trials



# Capsular Contracture Surgery

Do something different

- Remove capsule
- New implant
- New pocket
- Use all other techniques
- Add ADM?
- Recurrent CC
  - When to stop & remove implant
  - Offer fat grafting?

# Closed Capsulotomy

## **Not recommended**

- Implant rupture
- Hematoma
- Implant pseudoherniation
- Low success long-term

# Open Capsulotomy

OPEN



ORIGINAL ARTICLE

Breast

## Open Capsulotomy: An Effective but Overlooked Treatment for Capsular Contracture after Breast Augmentation

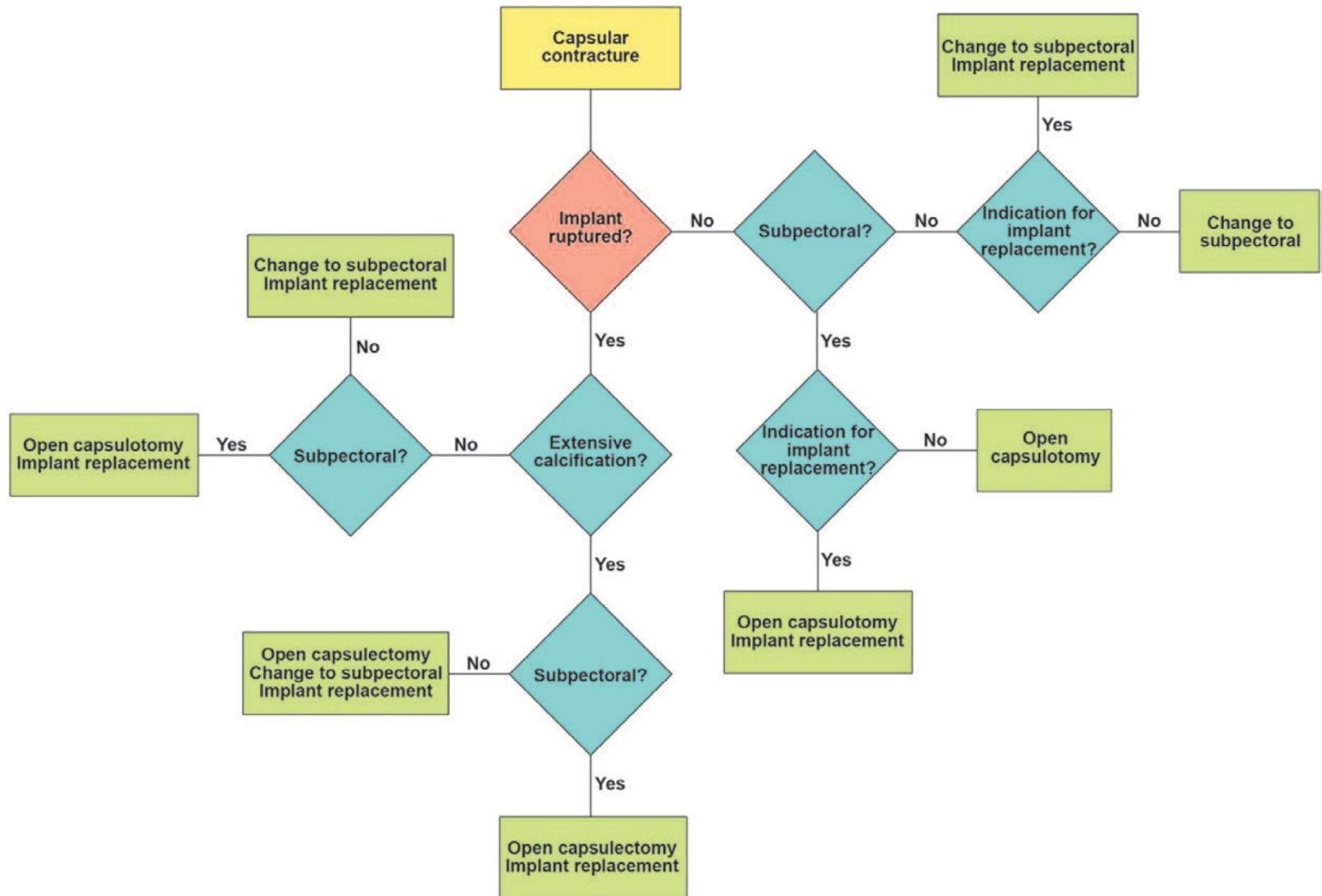
Eric Swanson, MD

**Background:** The prevailing theory for capsular contracture after breast augmentation is a subclinical capsular infection. A capsulectomy, site change, and implant

- Replacements were smooth & round, 93% saline
- 23% developed recurrent capsular contracture
  - 3% experienced second recurrence
- Patients with ruptured gel implants had greater risk of recurrence
- Capsular contracture corrected with
  - 1 procedure in 77% of patients
  - 2 procedures in 97% of patients
- **Short follow up period**



# Swanson Capsulotomy Algorithm

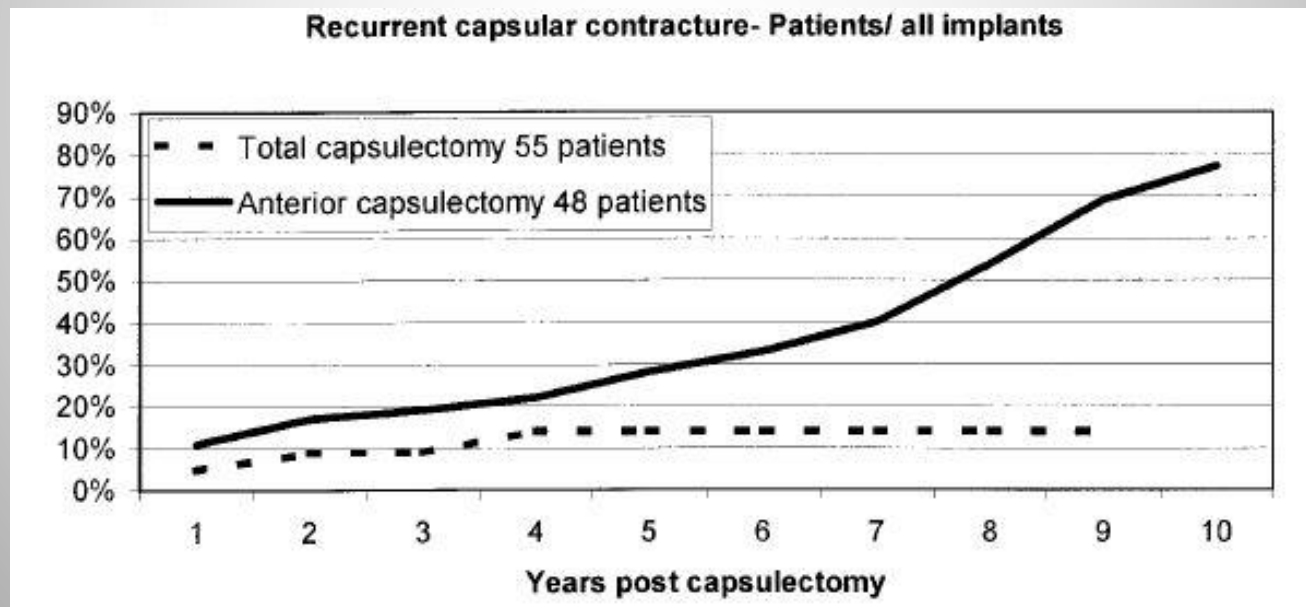


# Capsulectomy

## Recurrence of Subglandular Breast Implant Capsular Contracture: Anterior versus Total Capsulectomy

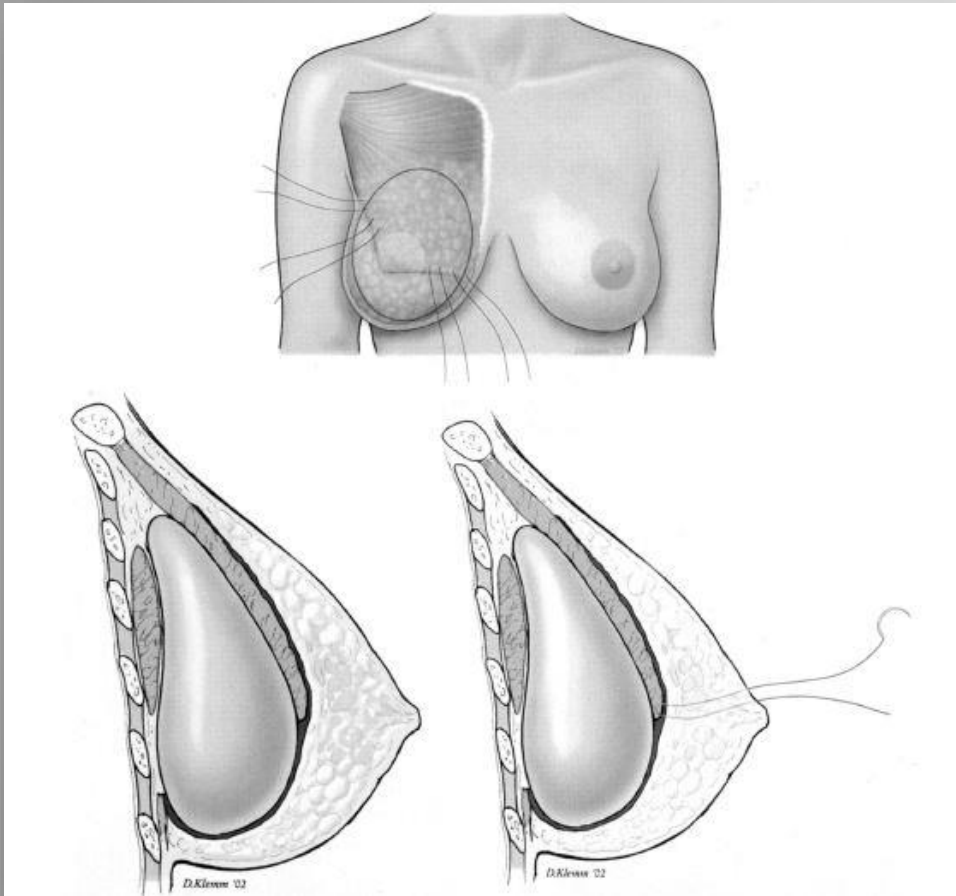
Nicholas Collis, B.Sc., F.R.C.S.(Ed.), and David T. Sharpe, O.B.E., M.A., F.R.C.S.  
*West Yorkshire, England*

2000



Total (vs anterior) capsulectomy when possible

# Pocket & Capsule



- If subglandular
  - Capsulectomy
  - Submuscular pocket
  - Muscle sutures
  - ADM?

2003

COSMETIC

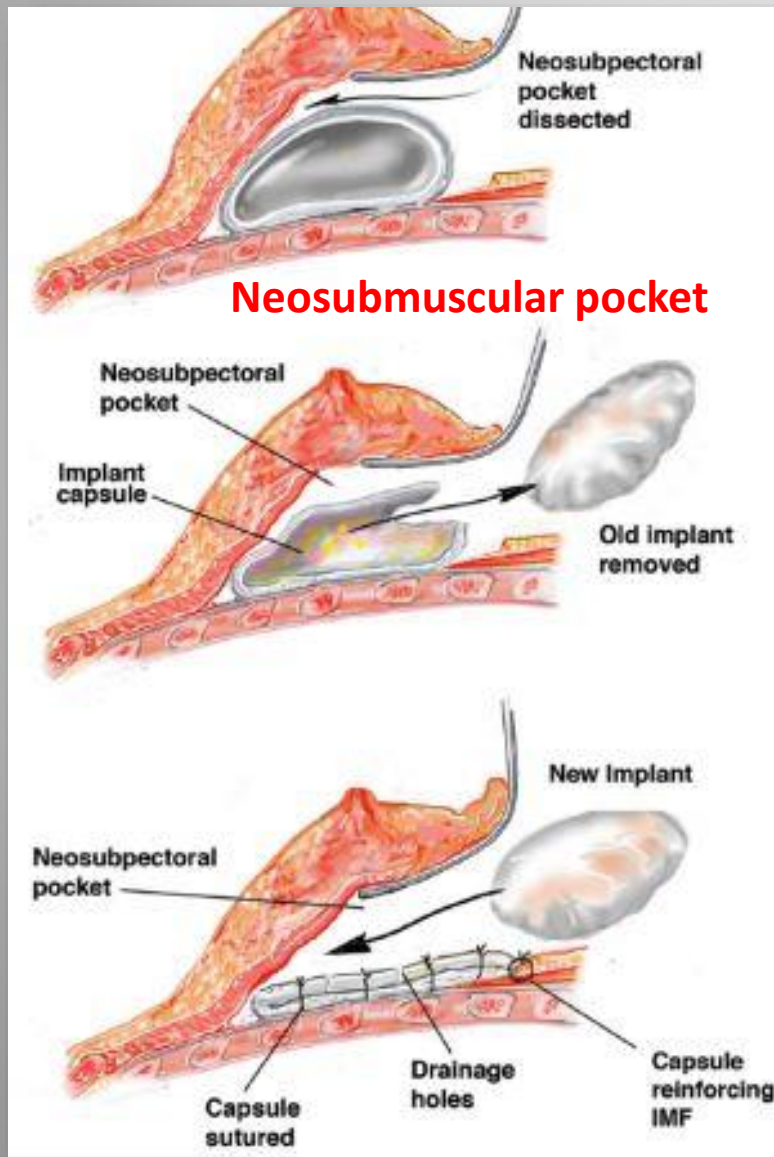
## The Correction of Capsular Contracture by Conversion to “Dual-Plane” Positioning: Technique and Outcomes

Scott L. Spear, M.D.  
Mary Ella Carter, M.D.  
Jason C. Ganz, M.D.

Washington, D.C.

Little has been published regarding the treatment of patients with long-established capsular contracture after previous submuscular or subglandular breast augmentation. This study reviews 7 years of experience in treating established capsular contracture after augmentation mammoplasty by relocating implants

# New Pocket & Leave the Capsule



- If submuscular
  - Anterior capsulectomy

**versus**

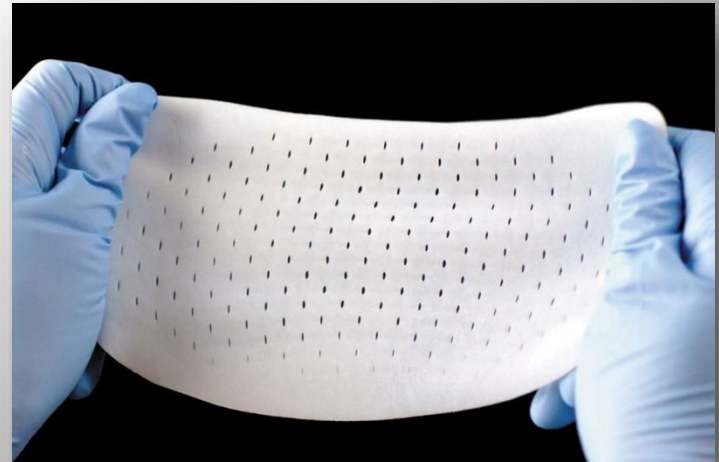
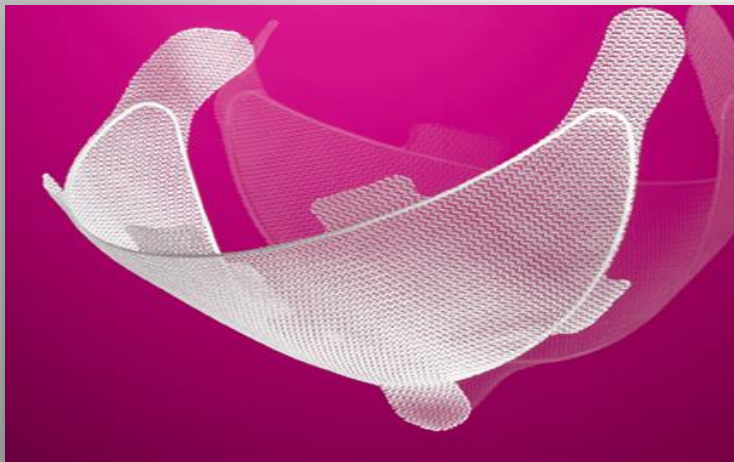
- Complete capsulectomy

**versus**

- Neosubmuscular pocket
  - Between muscle & anterior capsule
  - Avoids intrathoracic penetration
- ADM?

# Patient Discussion on Intraoperative Decision Making

- Prepare patient for change in operative plan
- May not be a full capsulectomy
- May be a pocket change
- May be a neosubpectoral pocket
- May need tissue support – cost!





# Site Change & New Implant

- Site change + new implant seems to give lowest recurrence
- Additional cost may be worth recurrence





# ADM Evidence

- Most studies in reconstructive surgery
- Mostly short term case reports for aesthetic breast surgery
- Significant cost – not my first line option

2012

## The Role of Acellular Dermal Matrices in Capsular Contracture: A Review of the Evidence

C. Bob Basu, M.D., M.P.H.  
Lynn Jeffers, M.D.  
*Houston, Texas; and Oxnard, Calif.*

**Summary:** Despite advances in breast implant surgery, capsular contracture remains a challenging sequela of reconstructive and cosmetic breast implant surgery. Although there are established modalities for treatment, most recently, acellular dermal matrix products have been suggested to have a role in preventing or diminishing the pathologic process of capsular contracture. In this article, the author presents a review of the literature to highlight the level of evidence on the role of acellular dermal matrices in the treatment of capsular contracture. (*Plast. Reconstr. Surg.* 130 (Suppl. 2): 118S, 2012.)

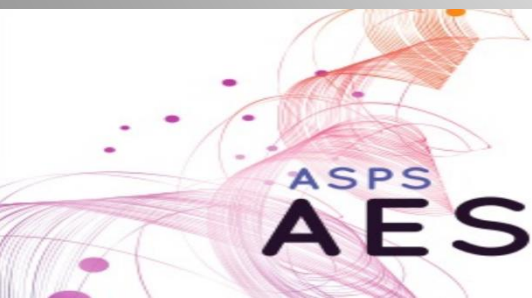
# Capsular Contracture: Prevention & Treatment

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**Presentation Available Next Week**

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