

# Matjes in de urogynaecologie: indicaties, resultaten, risico's of terug naar de Burch?

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# Disclosures

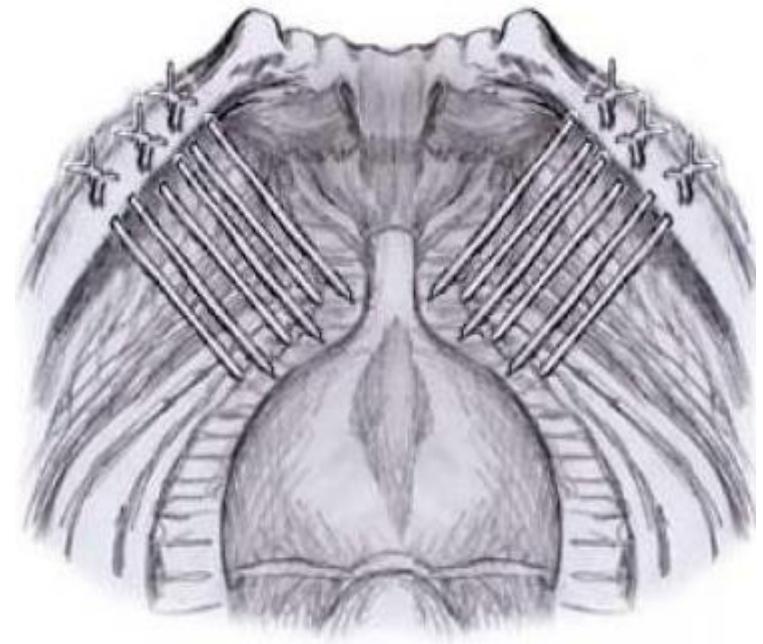
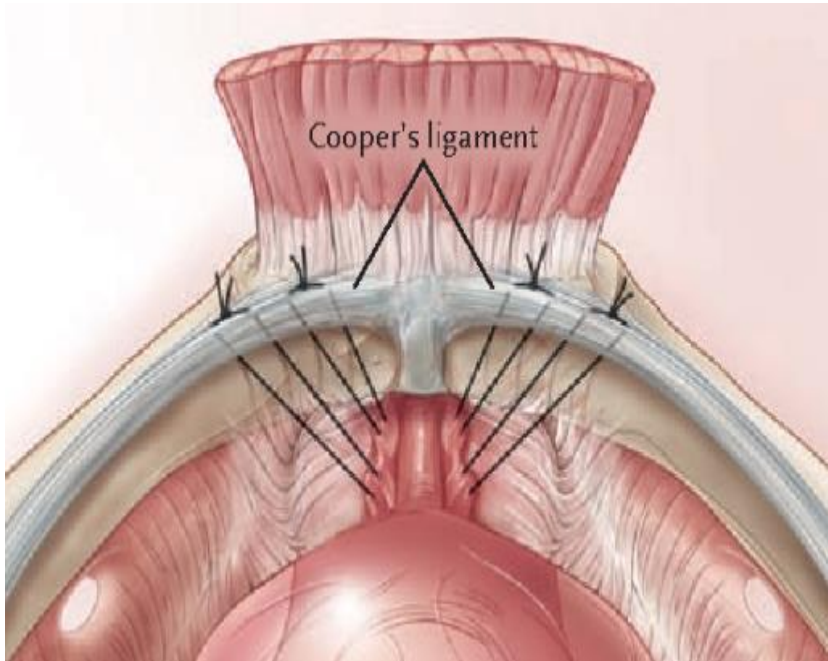
Grants, honoraria to institution from Ferring, Medtronic, Astellas

Frederik Paulsen chair

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Minority shareholder P2solutions (smart textiles) without salary

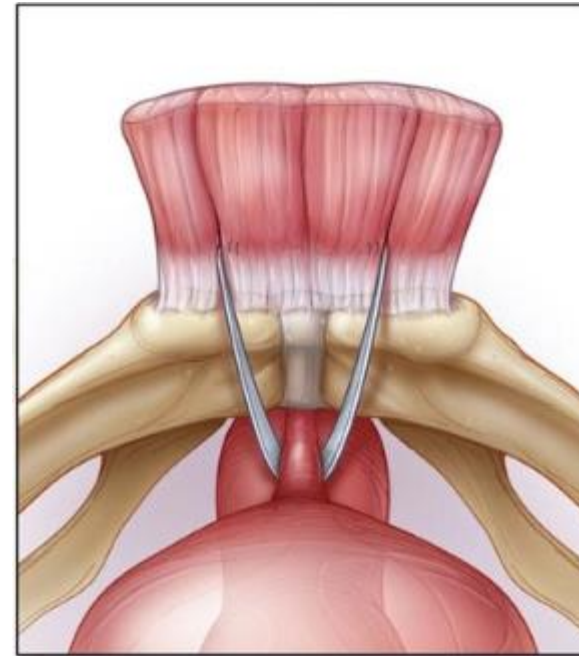
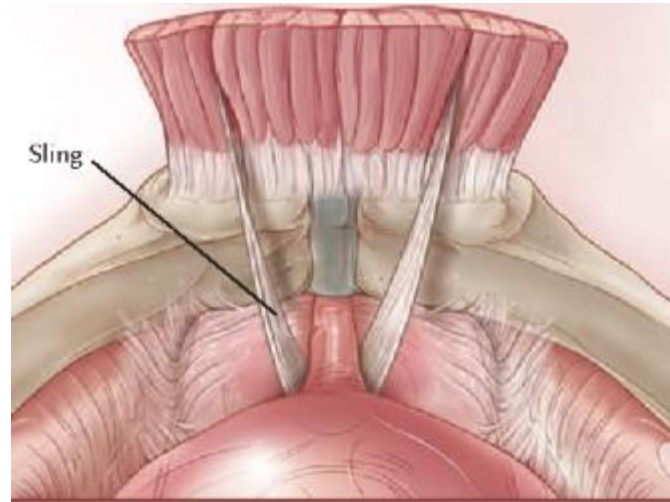
# MMK, Burch....



Burch has a learning curve which is significant higher than MUS, however is not based on EBM but on common sense.

Volume and experience seem to matter

# Pubo-Vaginal Sling (PVS)



# 1998: TVT revolution, MUS



# 1998: TVT revolution: Mid urethral slings (MUS)

Minimal invasive, almost no-scalpel

Local anesthesia possible

Short operating time and day-stay clinic possible

See 1 do 1 principal

Short learning curve: TOT/TVT: 10-30d

Success was the “tension free” principle

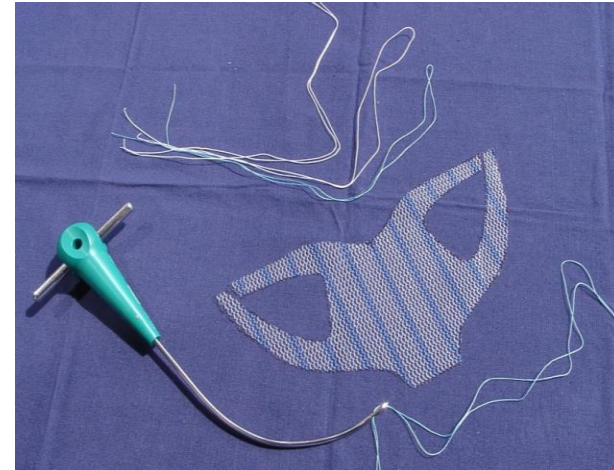
Burch colposuspension and pubovaginal slings disappeared

Mesh systems started in **2000** with TVM

**2004-2005**

Update of mesh systems

Better understanding what  
to do, what not to do



Variety of mesh systems have been on the market

**4000 à 5000** Prolapse repairs annually...

# 2014

## MESH POSITION STATEMENT

NZAGS [Position Statement](#) on Hernia Mesh Repairs by Steven Kelly, General Surgeon, Christchurch on behalf of the Executive, New Zealand Association of General Surgeons (NZAGS)

## Interview on surgical mesh on Radio New Zealand

Another “unfortunate experiment” is how one woman is describing New Zealand’s handling of surgical mesh. Yesterday MedSafe announced that from January 4 mesh implants will not be used for pelvic organ prolapse or urinary incontinence because of the risks. It will still be used for other surgeries, including hernia repair. ACC has paid out more than \$13 million in injury claims to hundreds of patients who had problems with the mesh in the past decade. Some of the injuries include the mesh eroding in the body, binding with other tissue, and causing extreme pain. Co-founder of the “Mesh Down Under” online support group Carmel Berry joins us. [Listen Here](#)





## Bekkenbodematjes: Ernstige complicaties vereisen terughoudend gebruik transvaginale mesh

Na onderzoek naar problemen met de behandeling van bekkenbodempverzakkingen met transvaginale mesh roept de Inspectie voor de Gezondheidszorg (IGZ) gynaecologen, urologen en chirurgen op terughoudend te zijn bij het gebruik van deze mesh.

## Berichtgeving FDA over vaginale bekkenbodematjes en de gevolgen daarvan voor Nederland

Op woensdag 17 april 2019 maakt de Amerikaanse toezichthouder FDA bekend dat alle transvaginale bekkenbodematjes (mesh) in de Verenigde Staten van de markt gehaald moeten worden

<https://www.fda.gov/medical-devices/implants-and-prosthetics/urogynecologic-surgical-mesh-implants>

Infecties en pijn

## 'Hoop is weg' voor honderden vrouwen met bekkenbodematjes

22 november 2019 17:25

Aangepast: 14 februari 2020 14:51



## New Zealand bans vaginal mesh implants

Ministry of Health asks suppliers to stop marketing the mesh until they have proven its safety



▲ Vaginal mesh implants have been banned in New Zealand pending further investigation. Photograph: Emily Critchfield/Duke Health

NWS Hoofdpunten Regio Kijk Luister Net binnen Zoeken



Kristien Bormsma

Christ'l kreeg een bekkenbodematje ingeplant, maar dat liep fout: "Ik kan niet meer zitten, stappen of fietsen"

# Mesh shrinkage, what is this?

Mesh retraction, also known as mesh shrinkage or mesh contraction

Reduction of the surface area of the original implanted mesh

# Mesh shrinkage, what is this?

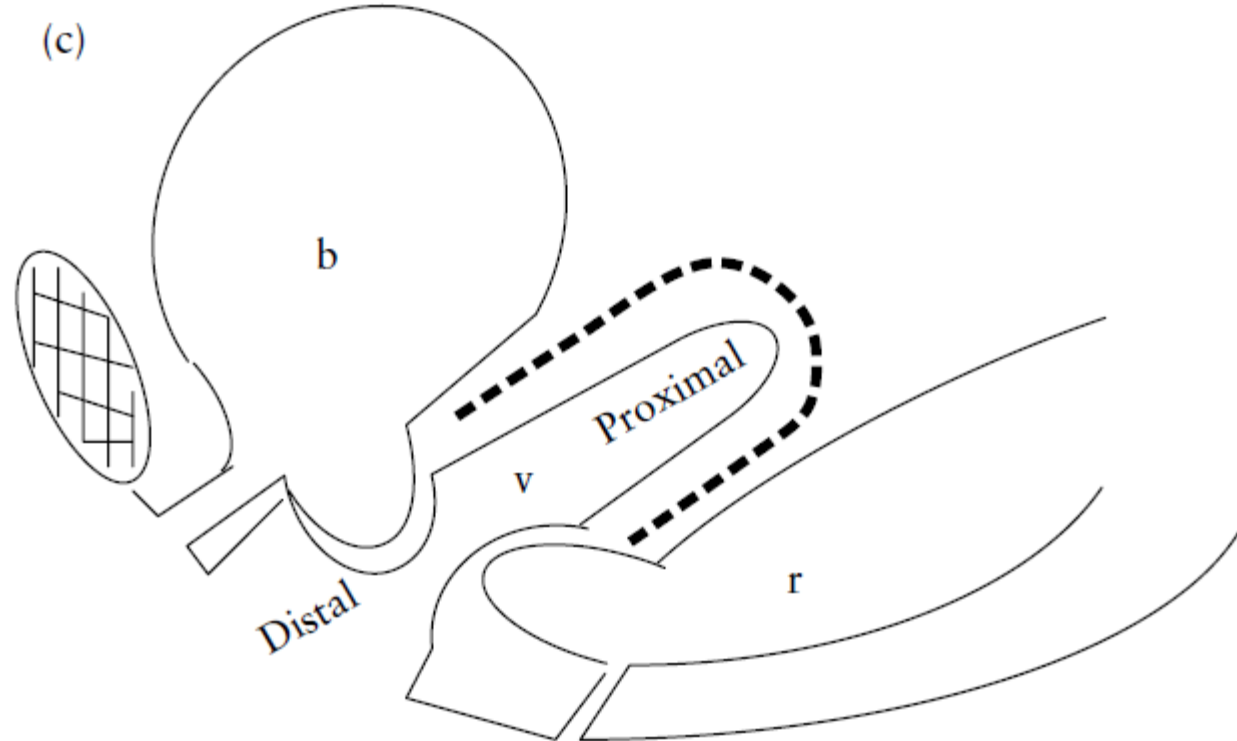
- Any foreign body inserted in our tissues generates chronic inflammation
- Inflammatory reaction depends on:
  - Individual
  - Type of foreign material
  - Mono/polyfilament
  - Amount of foreign body
  - Mesh size
  - Pore size
  - Erosion and/or infection
- This inflammatory response is suggested to be the cause of mesh shrinkage

# Mesh shrinkage, consequences?

- Pain and dyspareunia  
due to inflammation and folding
- Recurrence of prolapse  
due to diminished mesh-coverage and folding
- Folding happens where lateral traction is seen

# Prevalence of shrinkage according to literature

Mostly caudal recurrence of prolapse



## How to treat shrinkage

- 1) Close erosions early to decrease inflammation
- 2) Anti-inflammatory drug?
- 3) Alleviate traction by cutting i.e. 1 mesh arm to decrease traction
- 4) **Mesh excision :**  
location of the pain ++  
removal of the body of the mesh if needed  
often major surgery!

## How to prevent shrinkage, prevent inflammation

Inflammatory reaction depends on:

Individual

Type of foreign material

Mono/polyfilament

Amount of foreign body/Mesh size

Pore size

Erosion and/or infection

### Conclusion:

use type 1 monofilament, macroporous and low weight prolene

avoid opening vagina and erosions (estrogens, abdominal technique, subtotal hysterectomy)

## How to prevent shrinkage, prevent traction

Correct placement is necessary, appropriate training

Avoid mesh-arm lateral traction

Avoid mesh bends, folds, during placement,  
mesh must lie flat

Avoid mesh fixation with traction

Mesh fixation with absorbable sutures to prevent  
folding at shrinkage



# Mesh or no mesh, if yes make abdominal approach (open, laparoscopic, robotic)

Mesh only in failures:

YES because this makes risks acceptable

NO because second surgery is less blood vessels,  
higher risk of erosion and infection

NO because i.e. urologists are used to perform  
sacrocolpopexy with mesh as a primary  
solution and this surgery is considered the  
gold standard in the literature

Mesh or no mesh, if yes make abdominal approach (open, laparoscopic, robotic)

AGE:

Older women need mesh

Less risk of dyspareunia

More risk erosion

Younger women need mesh

Less risk erosion

More risk dyspareunia

More need for strong repair

# Genitale prolaps: prothesemateriaal gebruiken of herstel met lichaamseigen weefsel?<sup>1</sup>

K. EVERAERT<sup>2, 5</sup>, A.S. GOESSAERT<sup>2</sup>, T. HAMERLYNCK<sup>3</sup>, D. VAN DE PUTTE<sup>4</sup>, P. PATTYN<sup>4</sup>, S. WEYERS<sup>3</sup>

## *Beslisboom heekundig prolaps herstel.*

Prolaps uteri: graad 2 < 3 en de patiënte staat open voor een hysterectomie

- Hysterectomie, bij voorkeur langs de vaginale weg of laparoscopisch

Prolaps uteri: graad 2 < 3 en de patiënte wenst geen hysterectomie

- Hysteropexie met prothesemateriaal
- Bij een gecombineerde cysto- of rectocele: bij voorkeur vaginaal
- Indien enkel prolaps uteri: laparoscopische hysteropromontoriopexie

Prolaps uteri: graad  $\geq 3$

- Vaginale hysterectomie met colposuspensie langs de vaginale weg, ofwel subtotale hysterectomie laparoscopisch met colpopromontoriopexie (voorkeur bij seksueel actieve vrouwen)
- Indien geen coïtusactiviteit en/of uitgesproken atrofie: bij voorkeur colposuspensie door middel van sacrospinosumfixatie

Topprolaps: graad 2-4

- Laparoscopische colpopromontoriopexie met prothesemateriaal
- Indien geen coïtusactiviteit en/of uitgesproken atrofie: bij voorkeur vaginale sacrospinosumfixatie

Cystocele: graad 2-3

- Vaginale colporrhaphia anterior, bij voorkeur zonder mesh
- Prothesemateriaal overwegen bij actieve vrouwen en/of vrouwen < 50 jaar en/of cystocele graad 3 of hoger
- Prothesemateriaal zeker overwegen bij recidief of een uitgesproken lateraal defect

Rectocele: graad 2-3

- Vaginale colporrhaphia posterior, bij voorkeur zonder prothesemateriaal
- Prothesemateriaal overwegen bij actieve vrouwen en/of vrouwen < 50 jaar
- Prothesemateriaal zeker overwegen bij recidief
- Geassocieerde enterocele en/of intussusceptie en/of rectumprolaps: open of laparoscopische ventrale rectopexie

Enterocele: graad 2-3

- Vaginale enterocelecorrectie, bij voorkeur met prothesemateriaal
- Indien geen coïtusactiviteit en/of uitgesproken atrofie: bij voorkeur sacrospinosumfixatie

Totaalprolaps

- Vaginale hysterectomie met colporrhaphia anterior/posterior en sacrospinosumfixatie
- Indien nog seksueel actief: bij voorkeur laparoscopische subtotale hysterectomie met colpopromontoriopexie met prothesemateriaal

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# Easy for prolapse but what with surgery for SI: Back to the Burch?

- 1) Long record of publications and long follow up (+/-50y)
- 2) Treats cystocele up to grade 2 in same operation
- 3) No mesh needed
- 4) Can be done laparoscopic or robotic

# Burch, MMK, Cochrane 2017

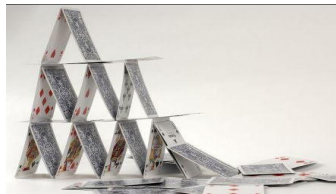
Open retropubic colposuspension is an effective treatment modality for stress urinary incontinence especially in the long term. Within the first year continence rate is 85% to 90%. After five years, approximately 70%.

Newer MUS sling procedures look promising in comparison with open colposuspension but their long-term performance is limited and closer monitoring of their adverse event profile must be carried out.

Burch colposuspension is associated with a lower risk of voiding dysfunction compared to traditional PVS-sling surgery and the retention risk is comparable to MUS.

Laparoscopic/robotic colposuspension should allow speedier recovery but its relative safety and long-term effectiveness is not yet known, although most studies confirm its efficacy and safety.

**BUT :**  
Burch colposuspension is associated with a higher risk of secondary pelvic organ prolapse compared to sling operations and anterior colporrhaphy: Rectocele has been noted in 11-25% and enterocele in 4-10% of patients followed-up 10-20 years.



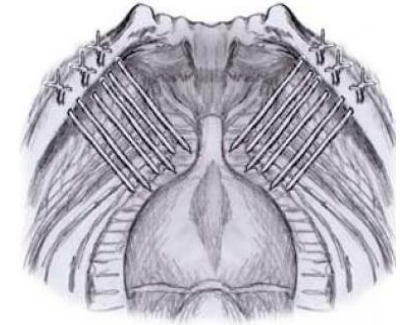
# What are the surgical issues with this type of surgery

## Intra-operative:

Bleeding (correct opening Retzius, bleeding pelvic veins best solved by putting Burch sutures)

Hitting the bladder with non-resorbable sutures

Overcorrection and its consequences: retention, internalization meatus  
“fingerspitzengefühl”

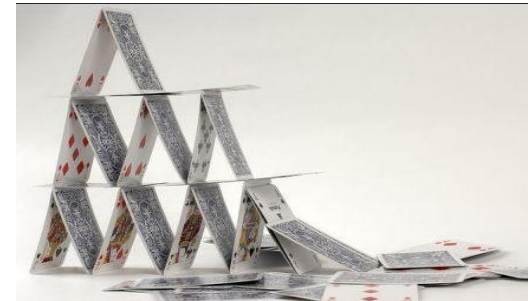


## Postoperative

Reducing anterior compartment prolapse and consequences (1/4-1/5)

DVT, lung embolism

Osteitis pubis (use transverse fascia instead of Cooper/periostum, up to 2.5% after MMK)



# Indications today, impact on need for training?

## High volume centers today:

Burch replacing MUS if legal or insurance based needed or if MUS is too expensive (UK, US, New Zealand, ASIA, Africa)

## Most EU-centers today are low volume centers:

To solve mesh sling complications (bladder/urethral erosion)  
After or when present urethral diverticula or other urethral surgery  
Patients anxious for mesh

**So rare indications, little opportunities to learn it**



# Burch, PVS, MUS, injectables....

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PHD THESIS

DANISH MEDICAL JOURNAL

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## **Surgical treatment for urinary incontinence in women**

### **- Danish nationwide cohort studies**

*Margrethe Foss Hansen*

This review has been accepted as a thesis together with two previously published papers one manuscript by University of Southern Denmark 31 October and defended on 9 December 2016.

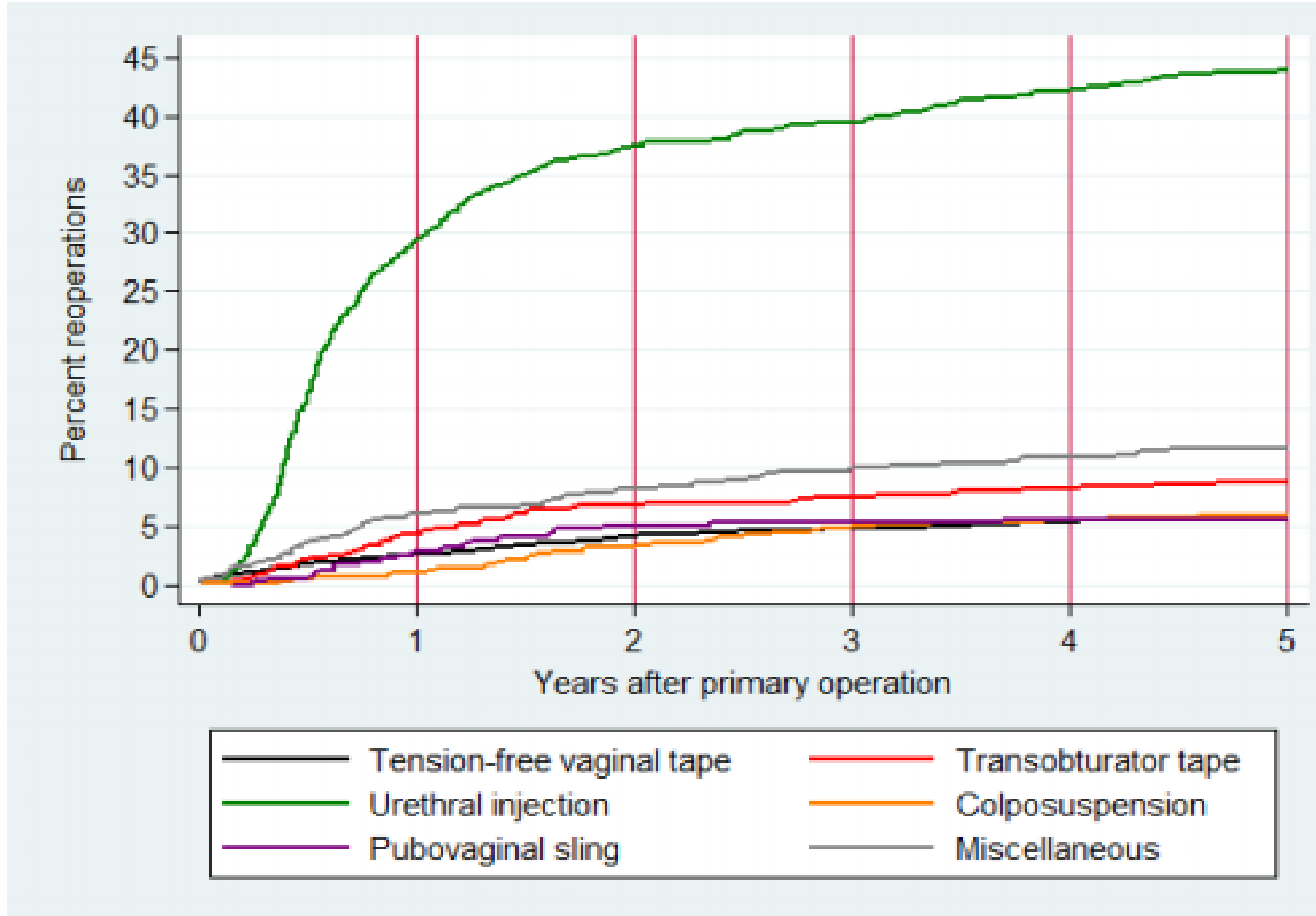
Tutors: Kim Oren Gradel, Gunnar Lose and Ulrik Schiøler Kesmodel.

Official opponents: Sigurd Kulseng-Hanssen, Lars Alling-Møller & Lars Lund.

Correspondence: , Center of Clinical Epidemiology, Odense University Hospital, Sdr. Boulevard 29, Entrance 216, 5000 Odense C

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# Burch, PVS, MUS, Injectables....



# Burch, PVS, MUS, injectables....

**Table 9 Uni- and multivariate analyses of variables potentially involved in cure, ICIQ-SF (Frequency, Amount and Impact)**

Variables	Frequency		Amount		Impact	
	Univariate analysis	Multivariate analysis	Univariate analysis	Multivariate analysis	Univariate analysis	Multivariate analysis
	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)
Surgeon volume						
Low	Reference	Reference	Reference	Reference	Reference	Reference
Medium	2.25 (0.86-5.88)	1.95 (0.57-6.58)	0.44 (0.17-1.1)	0.39 (0.15-1.04)	1.3 (0.49-3.46)	1.03 (0.3-3.58)
High	2.59 (1.11-5.99)	4.51 (1.21-16.82)	0.86 (0.39-1.9)	0.64 (0.17-2.25)	1.42 (0.61-3.33)	1.83 (0.48-6.94)
Department volume						
Low	Reference	Reference	Reference	Reference	Reference	Reference
High	0.84 (0.47-1.50)	0.96 (0.26-3.58)	1.01 (0.57-1.78)	1.5 (0.42-5.29)	0.82 (0.44-1.50)	0.72 (0.19-2.7)

Women treated by a medium- (adjusted OR 1.82; 95% CI 1.01-3.28, "frequency") or high-volume surgeon (1.98; 1.18-3.32, "frequency") had an increased probability of cure compared with women treated by a low-volume surgeon.

# Open / Laparoscopic / Robotic


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**REVIEW ARTICLE**

WILEY   

## **Burch colposuspension**

**Nikolaus Veit-Rubin MD, MBA<sup>1,2</sup> ** | **Jean Dubuisson MPDD<sup>2,3</sup>** | **Abigail Ford MD<sup>4</sup> ** |  
**Jean-Bernard Dubuisson MD<sup>2</sup>** | **Sherif Mourad MD<sup>5</sup>** | **Alex Digesu MD, PhD<sup>4</sup>**

Burch has a learning curve which is significant higher than MUS, however is not based on EBM but on common sense Training in both open and laparoscopic Burch colposuspension should nowadays be provided in fellowship and training programs worldwide.

The NICE guidelines include amongst their recommendations that laparoscopic Burch colposuspension is not recommended as a routine procedure for the treatment of SUI in women. It was highlighted, that the procedure should be performed only by surgeons with appropriate training as well as expertise working in a multidisciplinary team, and women should be advised about the limited evidence.

# Conclusion

Do not mix up abdominal versus vaginal mesh implants.

Do not mix up prolapse mesh versus stress incontinence mesh.

Mesh prolapse surgery indications are well understood, if mesh is used do the abdominal approach and do not open the vagina.

Mesh always tension free.

MUS (TVT/TOT) is the golden standard for treating SI with a short learning curve.

Burch and PVS for limited series of indications (MUS complications, post urethral surgery, urethral diverticula, post radiotherapy).

Surgery like open/lap/Robotic Burch colposuspension has a learning! It is major surgery and has significant complications.

**I do not believe that we can return to good old Burch colposuspension without educational programs and I doubt we need to move back from MUS to Burch. Both types of surgery have their indications.**