Contemporary Management of Pelvic Organ Prolapse

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Disclosures

- None

Objectives

- Discuss incidence and epidemiology of Pelvic Organ Prolapse (POP)
- Review Risk factors
- Describe proper evaluation of a patient with POP
- Identify treatment options for POP
- Discuss management options for prolapse with concurrent OAB, or stress incontinence

Pelvic Organ Prolapse

The descent of the anterior vaginal wall, posterior vaginal wall, uterus or the apex of the vagina (vaginal vault after hysterectomy)

loss of support for uterus, bladder, colon, or rectum leading to prolapse of one or more of these organs into the vagina

Int Urogynecol J. 2010 Jan;21(1):5-26. doi: 10.1007/s00192-009-0976-9. Epub 2009 Nov 25.

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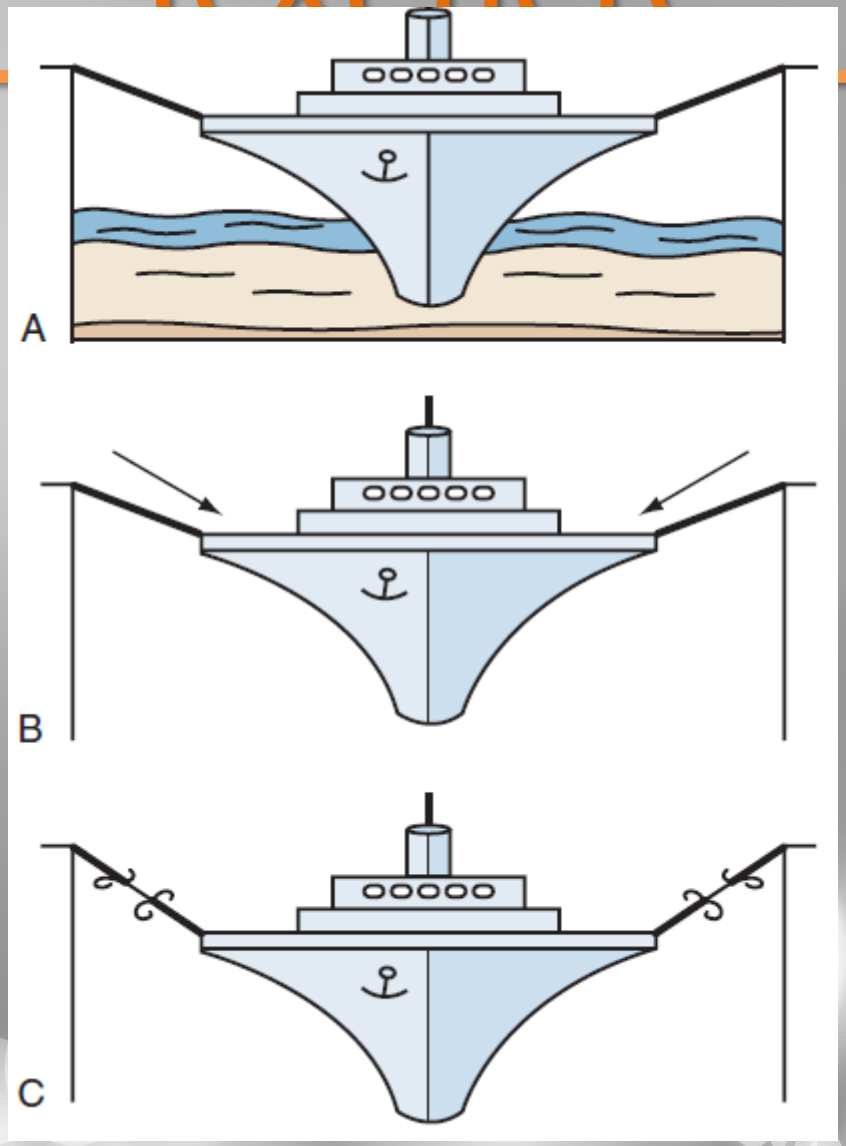

Risk Factors

Childbirth

- Vaginal deliveries
- Larger babies
- Higher parity
  - 8x risk with 2 deliveries
  - 12x risk with 4 or more deliveries
  - Only 4% of women with POP have not had a pregnancy or delivery

Pelvic surgery

- Hysterectomy

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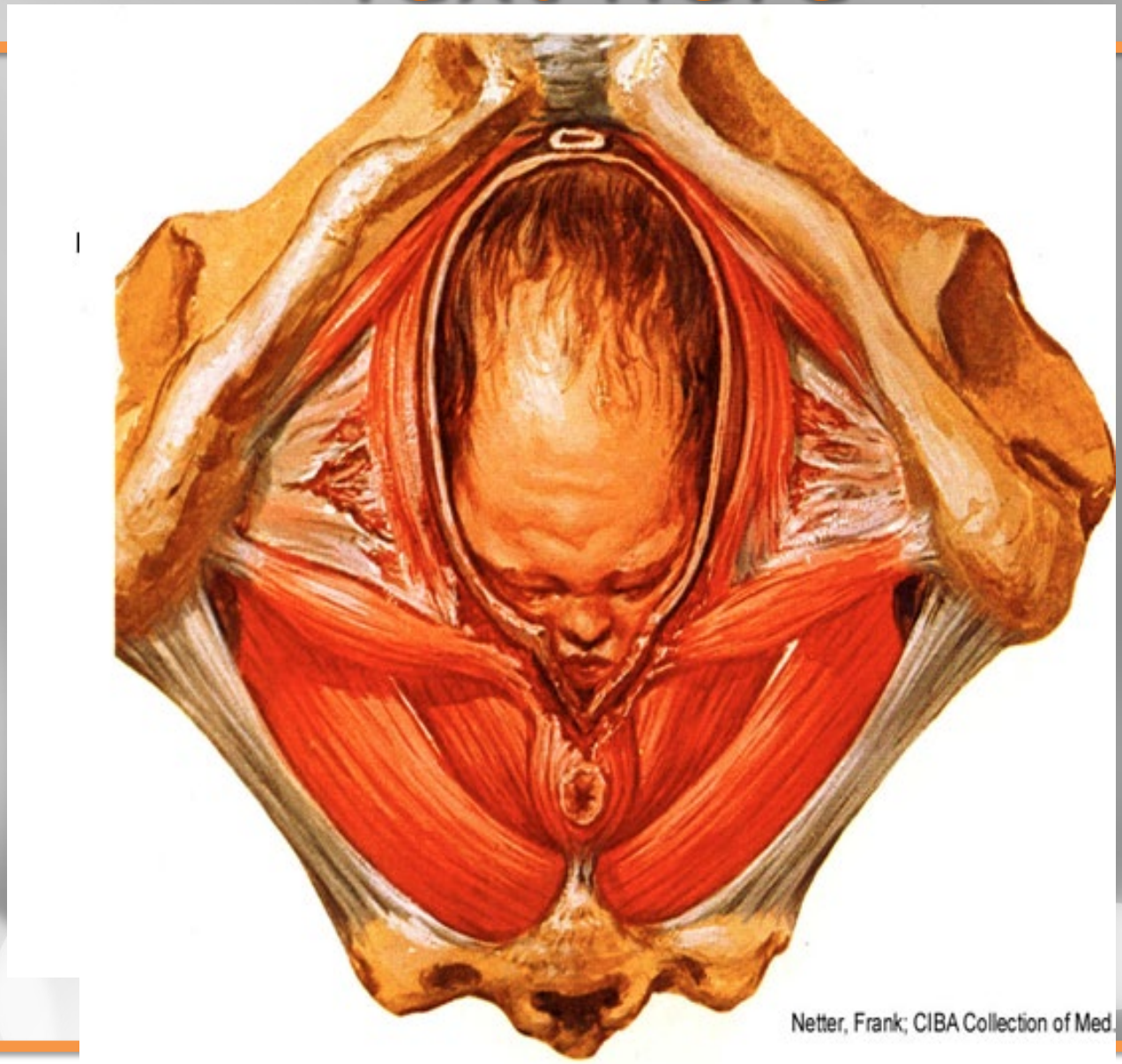
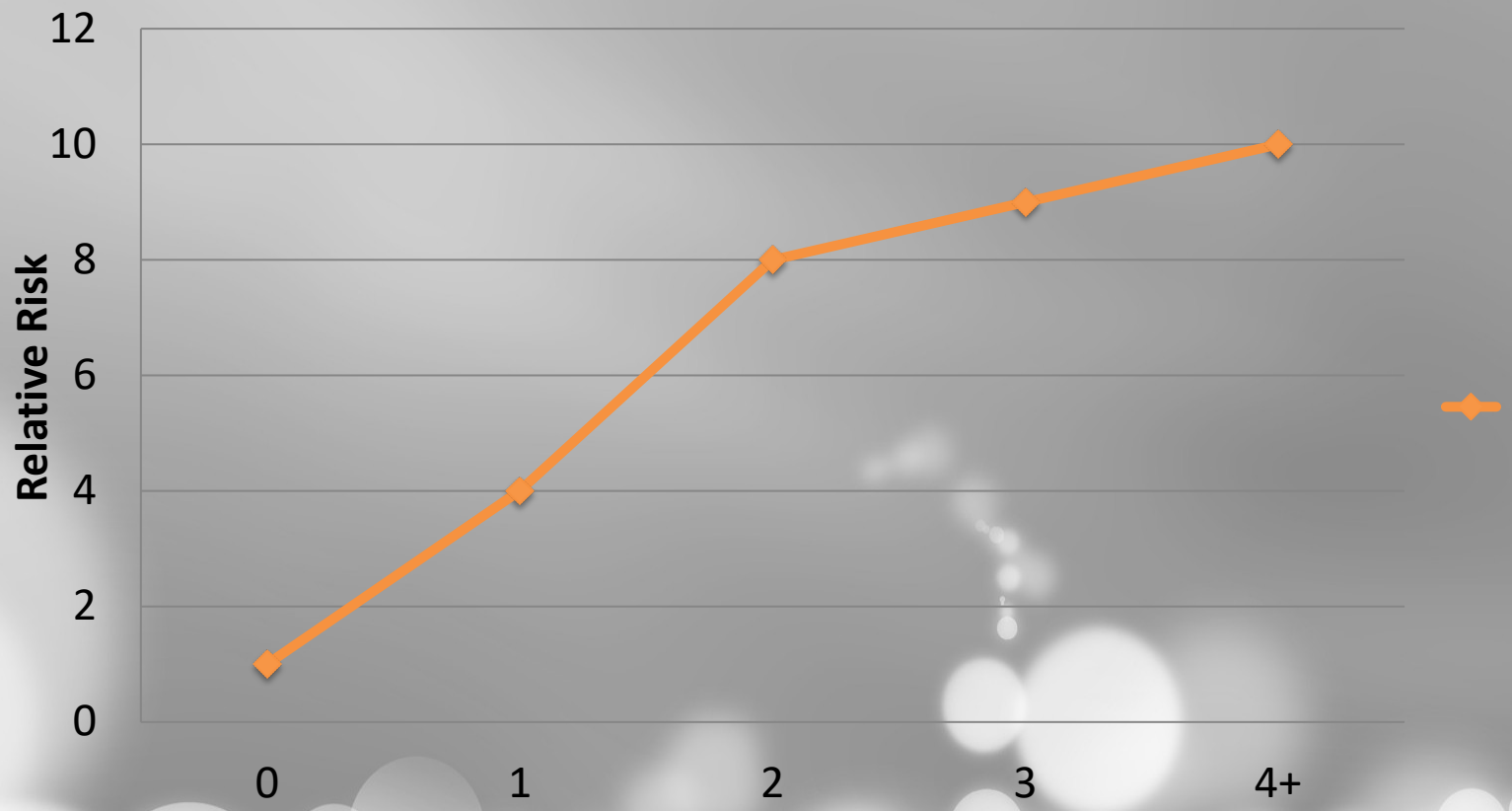


Prolapse and Parity



Childbirth and Pelvic musculature

- Vaginal delivery leads to
  - Decreased muscle mass
  - Impaired muscle function
  - Segmental muscle atrophy

- Muscle tearing and stretching
- Neurological injury
  - Likely leads to some degree of muscle dysfunction
  - Demonstrated in nerve latency studies
  - May not be apparent until years later

Nature vs Nurture

- Family history
- Race and Ethnicity
- Age
- Collagen disorders
- Neuromuscular disease

- Hysterectomy
- Prior prolapse repair
- High BMI
- Smoking
- Chronic cough
- Occupation
- Socioeconomic status

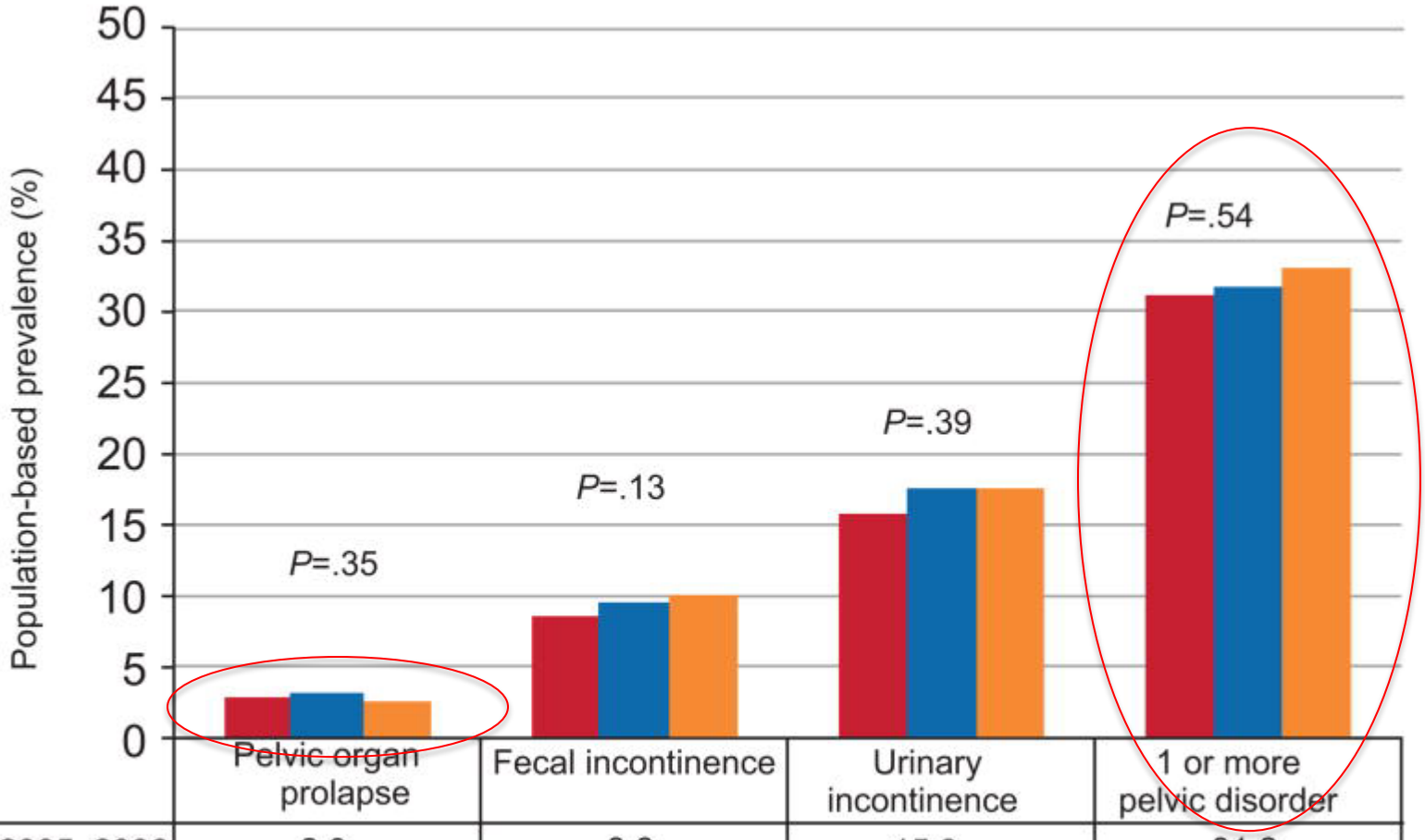
Incidence and Epidemiology

- Prevalence: Historically 5% to 10%
  - Based on sensation of mass bulging into the vagina
  - More recent studies place prevalence higher
- Lifetime risk of undergoing a single operation for POP and incontinence was 11.1% by age 80

Annually over 600,000 surgeries performed for FPFD in the U.S. alone

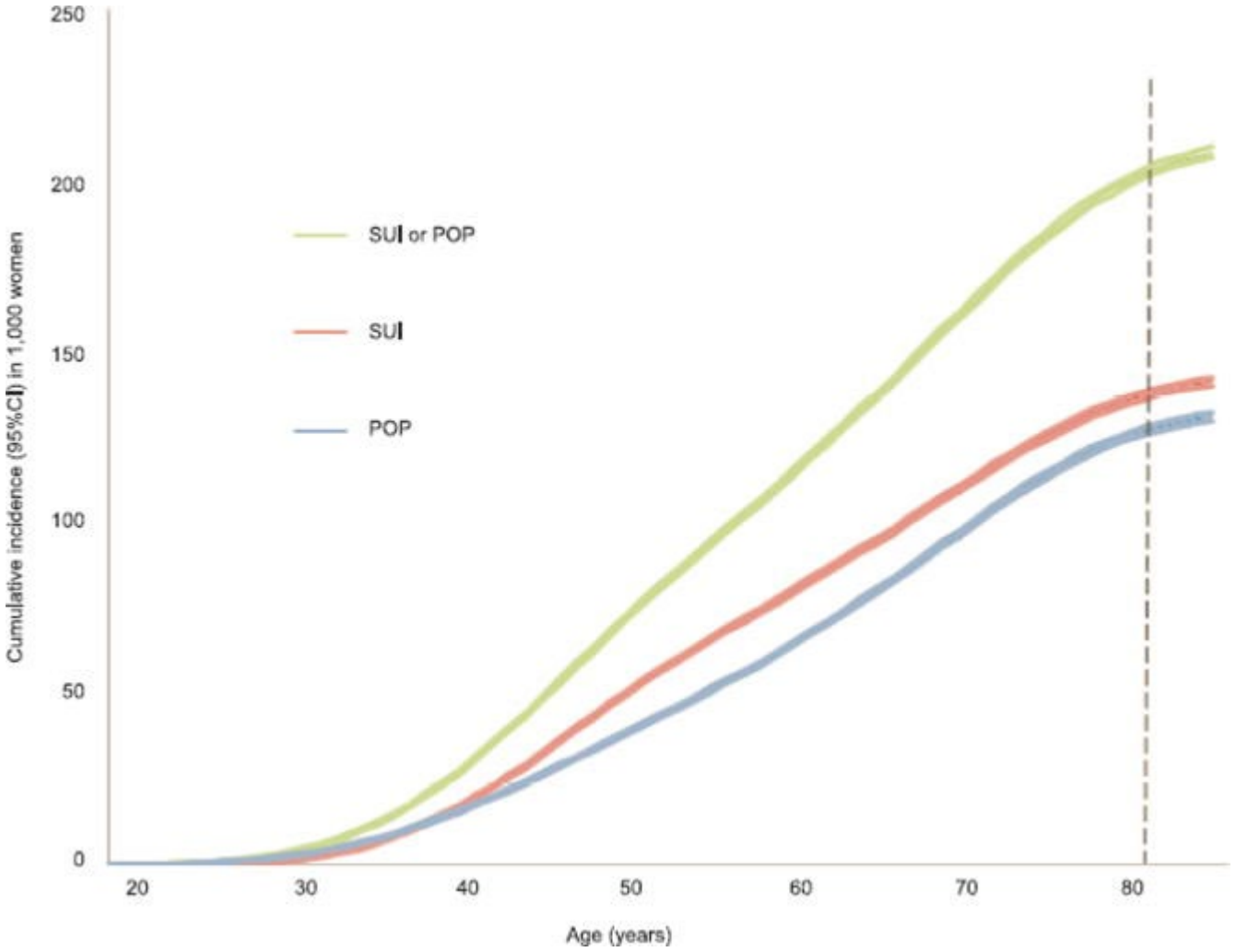
Accounts for $26 billion US Health Care dollars annually

Olsen, et al, Obstet Gynecol, 1997



	Pelvic organ prolapse	Fecal incontinence	Urinary incontinence	1 or more pelvic disorder
2005–2006	2.9	8.6	15.8	31.2
2007–2008	3.2	9.5	17.6	31.8
2009–2010	2.6	10.1	17.8	33.1

Obstet Gynecol. 2014 Jan; 123(1): 141–148.



Curr Opin Obstet Gynecol. 2015 Oct; 27(5): 380–384.

Text here

- Though many adult women have POP it is only symptomatic in a minority

Evaluation

Is the patient symptomatic?

History

Is POP present?

Physical Exam

What is prolapsing

Physical exam/Imaging

Is there associated incontinence?

History, exam, urodynamics/stress test

Appropriate Treatment

History

- Length of time symptomatic?
- How bothered is the patient?
- Obstetrical history
  - Number of pregnancies, delivery mode, complications
- Gynecologic history
  - Pre or post menopausal
  - Any abnormal bleeding
- Is patient sexually active?
  - If not currently, possibly in future?
- Family history
  - Gynecologic malignancies

Common symptoms

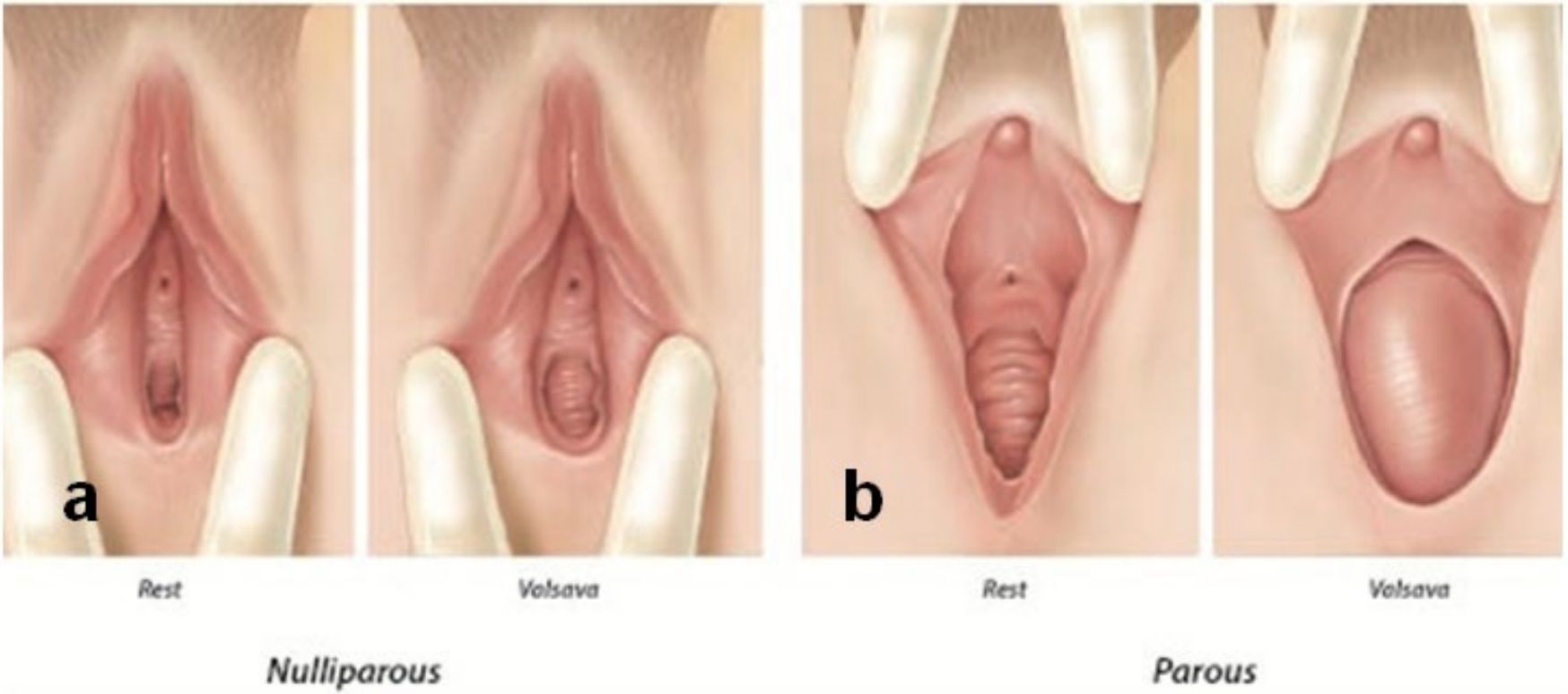
- **Vaginal**
  - Bulging sensation
  - Visualization
  - Bleeding
- **Urinary**
  - Incontinence
  - OAB complaints
  - Incomplete emptying
  - Straining to void
  - Manual reduction to void
- **GI**
  - Constipation
  - Fecal Incontinence
  - Incomplete defecation
  - Manual Reduction or perineal pressure to defecate
- **Sexual**
  - Dyspareunia
  - Coital Incontinence
- **Other**
  - Pelvic discomfort
  - Lowe back discomfort

Am J Obstet Gynecol. 2001 Dec; 185(6):1332-7; discussion 1337-8

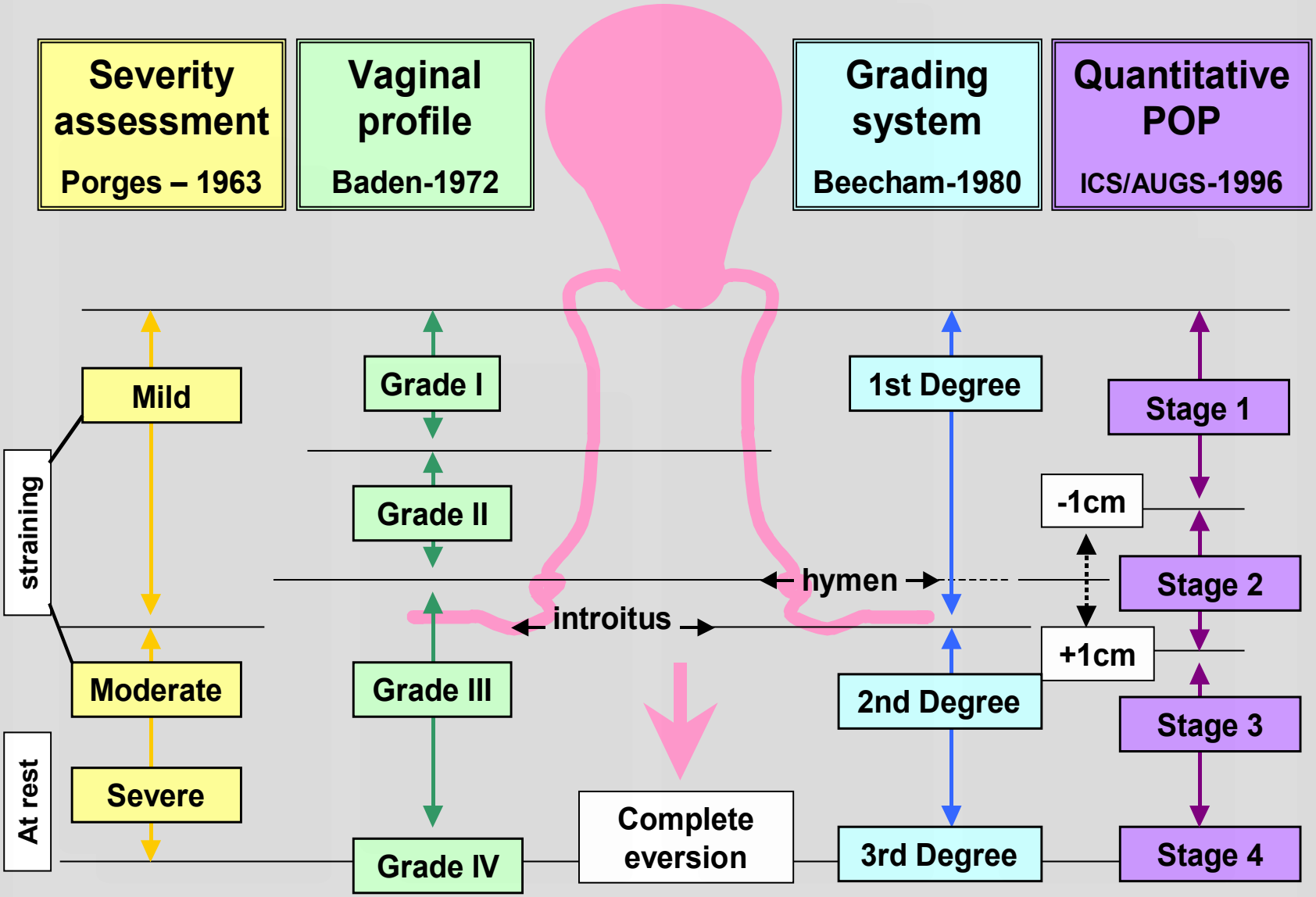
Exam

- Technique
  - Use of ½ speculum
  - Lithotomy position and when standing
- Degree and type of POP - Grading
  - Baden-Walker
    - By relation of prolapse to introitus
  - POP-Q
    - Specific numeric measurements of all compartments
- Evaluate all compartments
- “Potential” SUI- reduce prolapse and see if it unmasks SUI
- PVR Assessment ??

Pelvic Exam



Visual examination of the pelvic floor at rest and with Valsalva in (a) nulliparous woman with no prolapse and (b) parous woman with apical and anterior vaginal wall descent.


Severity assessment
Porges – 1963
Vaginal profile
Baden-1972
Grading system
Beecham-1980
Quantitative POP
ICS/AUGS-1996
straining
At rest
Mild
Moderate
Severe
Grade I
Grade II
Grade III
Grade IV
hymen
introitus
Complete eversion
1st Degree
2nd Degree
3rd Degree
-1cm
+1cm
Stage 1
Stage 2
Stage 3
Stage 4

AUGS

Pelvic Organ Prolapse: An Interactive Guide

Help

Home | POP-Q | Halfway System

Assessment Image | Normal Anatomy | Reference Diagram

Interactive Prolapse Evaluation

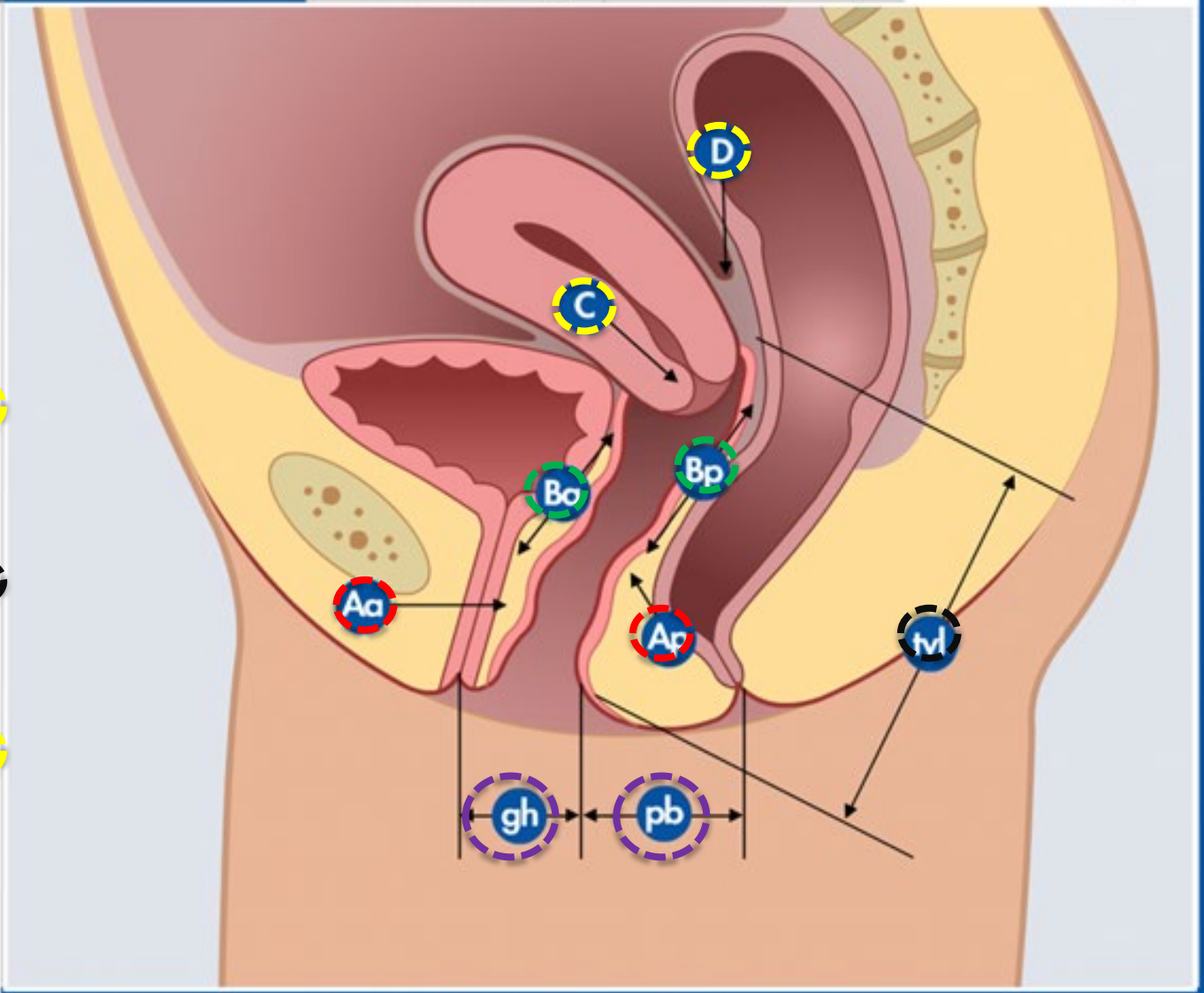
Choose an Example

Exam Date: 7/ 26/ 2016

Uterus: (•) Yes ( ) No

anterior wall	anterior wall	cervix or cuff
-3 (Aa)	-3 (Ba)	-8 (C)
genital hiatus	perineal body	total vaginal length
2 (gh)	3 (pb)	10 (tvl)
posterior wall	posterior wall	posterior fornix
-3 (Ap)	-3 (Bp)	-10 (D)

Cancel | Done



Close

POP-Q

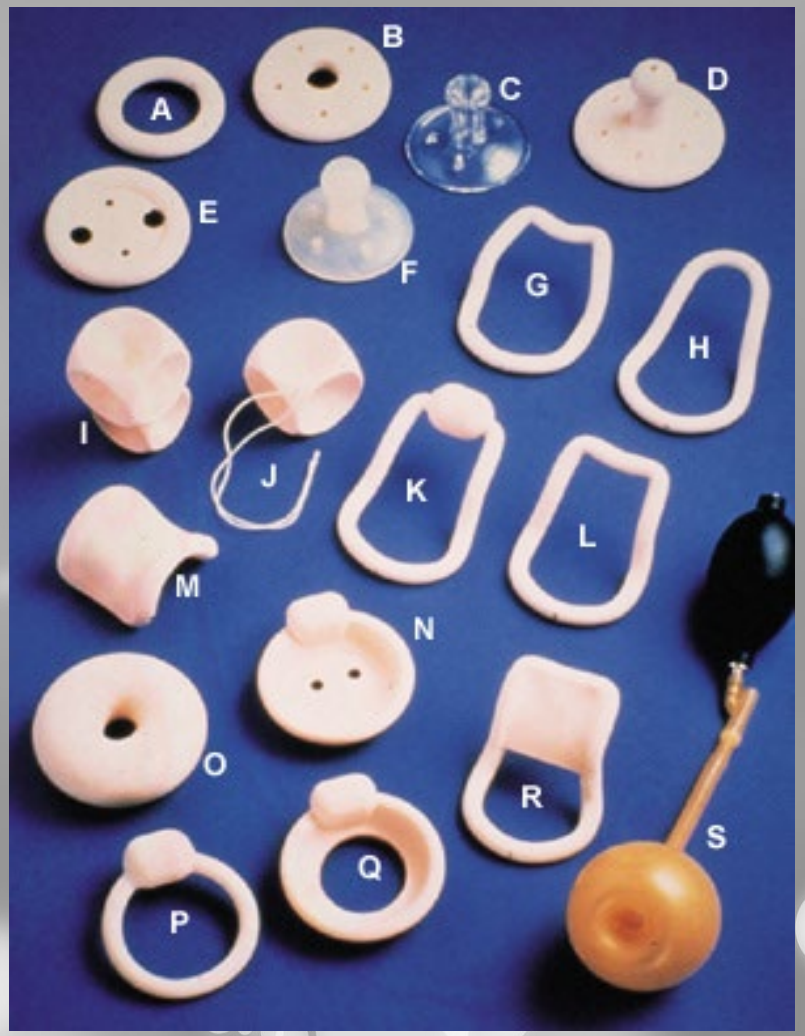
- Stage 0
  - No prolapse
- Stage 1
  - Some prolapse
  - Most distal point is > 1 cm above hymen
- Stage II
  - Most distal point is within 1 cm above or below hymen
- Stage III
  - Furthest distal point is >1cm beyond hymen but < TVL-2cm
- Stage IV
  - Complete eversion (i.e., most distal point is *>TVL-2cm*)

Treatment

- Things to know
  - Future plans for child bearing
  - Sexually active or not?
  - Degree of Bother

Non Surgical Treatment

- Pessary
- Non Surgical management
  - Could simulate post surgical repair
- Choice of pessary dependent on prolapse compartment
- Contraindications
  - Pelvic infection
  - Non compliance
  - Ulcerated vagina
  - Silicone/Latex allergy
- Trial fitting often required



Pessary

- Success rates vary from 41% to 74%
  - 2 to 3 trials may be needed before successful fitting
- Long term use varies
  - Age of patient
  - Type of pessary
  - From 76% at 1year to 53% at 3 years
- Erosion is most common long term complication
- Follow ups should be scheduled to prevent complications

Physical Therapy

Pelvic Floor Muscle training

- To reduce the symptoms
- Patient involvement and compliance is key
- Competent and well-trained pelvic floor therapist.

- biofeedback, to teach pelvic floor muscle awareness, bladder retraining, posture re-education, exercises for the abdominals and other ‘core’ muscles

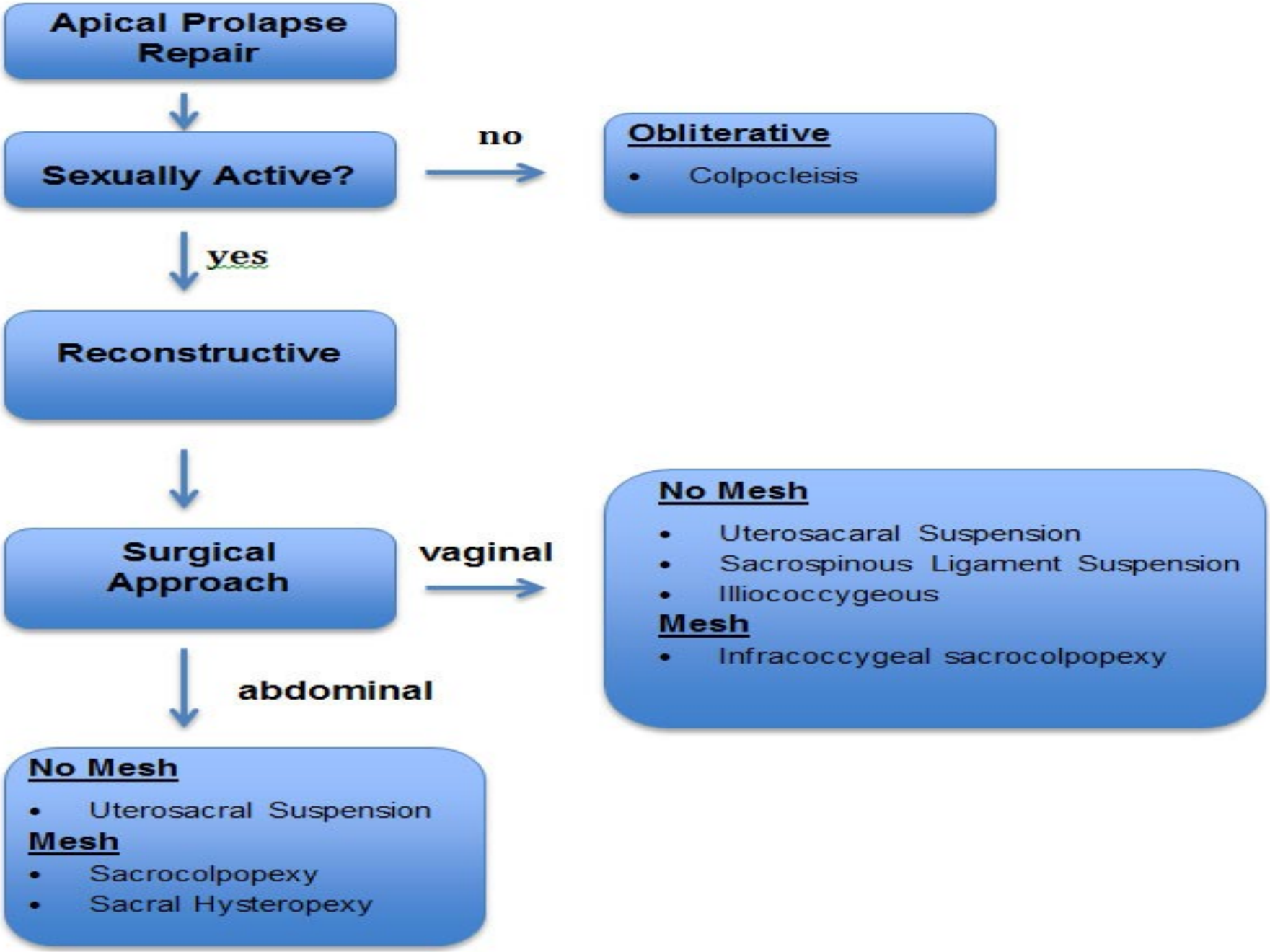
Individualised pelvic floor muscle training in women with pelvic organ prolapse (POPPY): a multicentre randomised controlled trial

*Suzanne Hagen, Diane Stark, Cathryn Glazener, Sylvia Dickson, Sarah Barry, Andrew Elders, Helena Frawley, Mary P Galea, Janet Logan, Alison McDonald, Gladys McPherson, Kate H Moore, John Norrie, Andrew Walker, Don Wilson, on behalf of the POPPY Trial Collaborators**

- 225 to the intervention group and 222 to the control group.
- The key inclusion criterion was symptomatic prolapse (stages I –III)
- PFMT vs advise leaflet
- primary outcome was prolapse symptoms at 12 months
- 295 (66%) of participants completed the study at 12months
- Prolapse symptoms were significantly less in the intervention group, by 1.5 units (95% CI 0.5 to 2.6 units)
- no difference between the groups in change of their prolapse stage

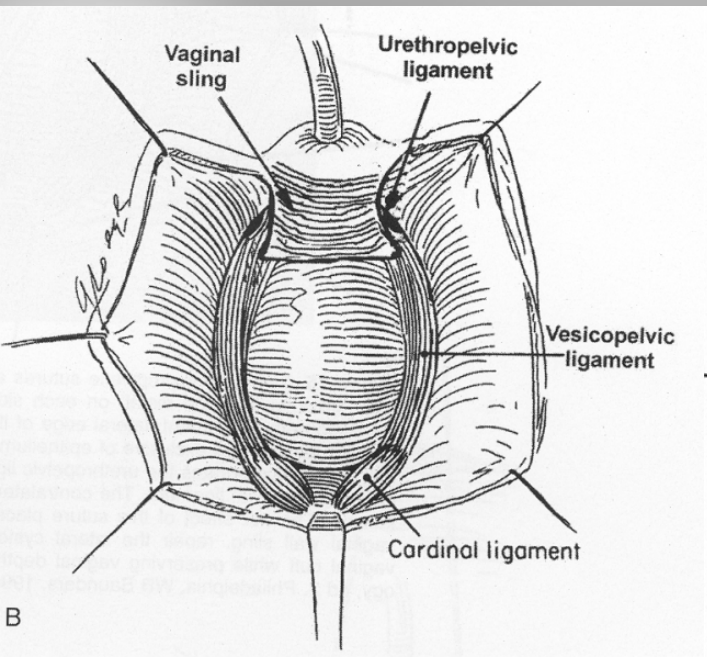
Surgical Repair

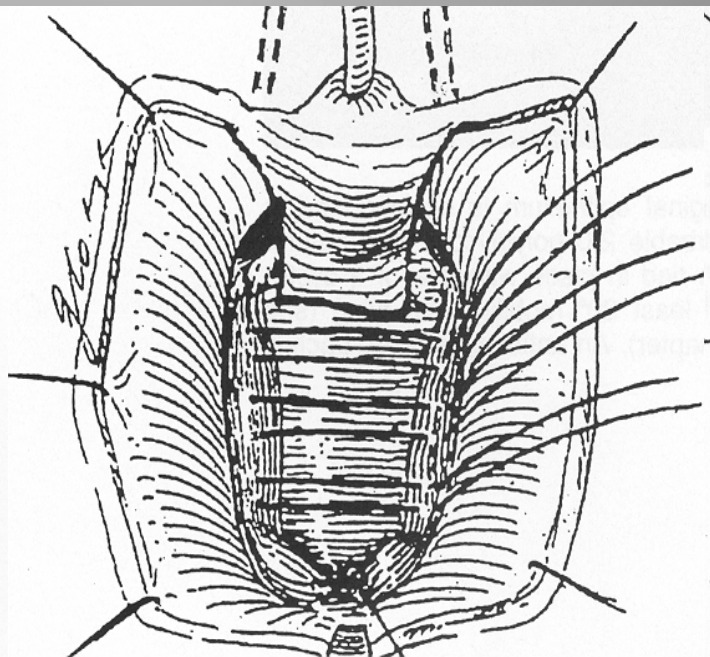
- Apical/Uterine prolapse of any significance must be recognized
- An anterior and/or posterior repair leaving apical prolapse unrepaired is almost always doomed to fail
- Preoperative imaging is not necessary
- Have more than one trick in the bag

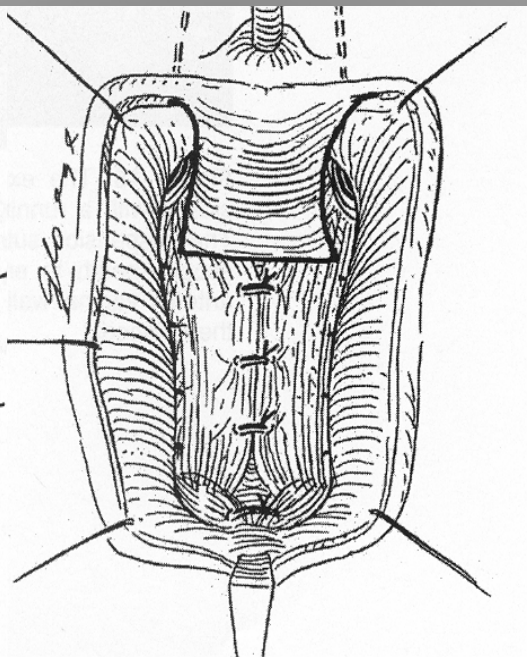

Apical Prolapse Repair
Sexually Active?
no
Obliterative
Colpocleisis
yes
Reconstructive
Surgical Approach
vaginal
No Mesh
Uterosacaral Suspension
Sacrospinous Ligament Suspension
Illiococcygeous
Mesh
Infracoccygeal sacrocolpopexy
abdominal
No Mesh
Uterosacral Suspension
Mesh
Sacrocolpopexy
Sacral Hysteropexy

Colporrhaphy

- Anterior compartment
  - Anterior colporrhaphy w/wo mesh
- Success rates range from 59% to 97%
- Mean follow up of 5 to 60 months

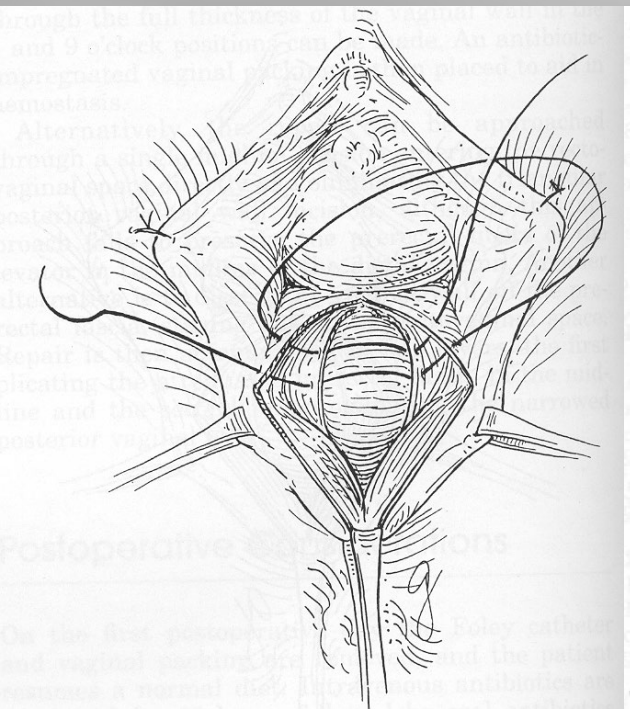


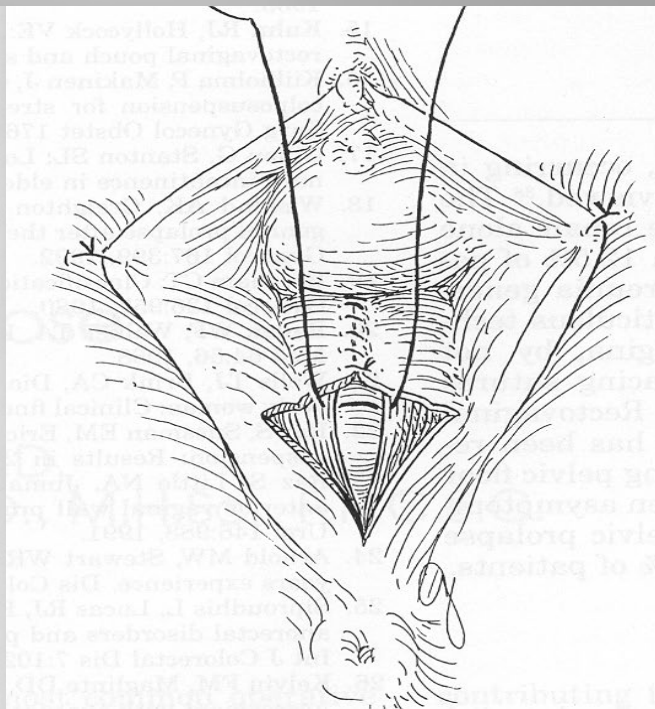


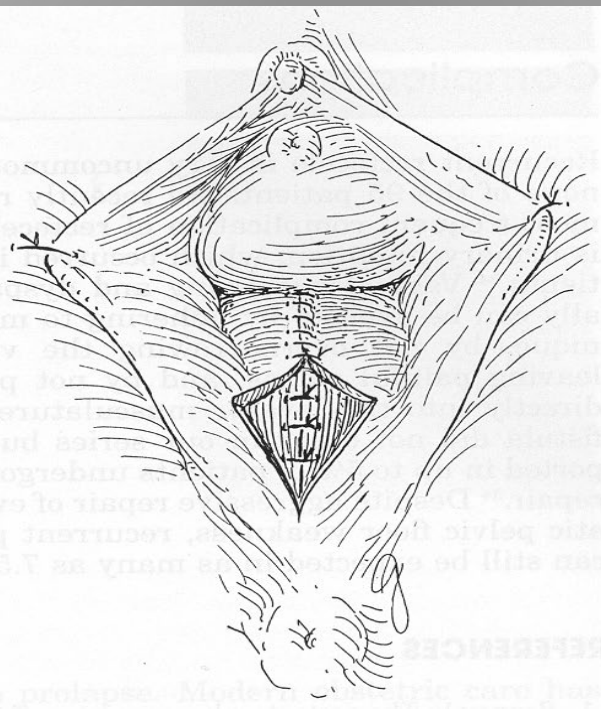


Colporrhaphy

- Posterior Compartment
  - Posterior colporrhaphy w/wo mesh
  - Perineorraphy
- 56% to 96% success rates
- 3 to 61 month f/u







Surgical repair

- **Apical Compartment**

Vaginal Approach

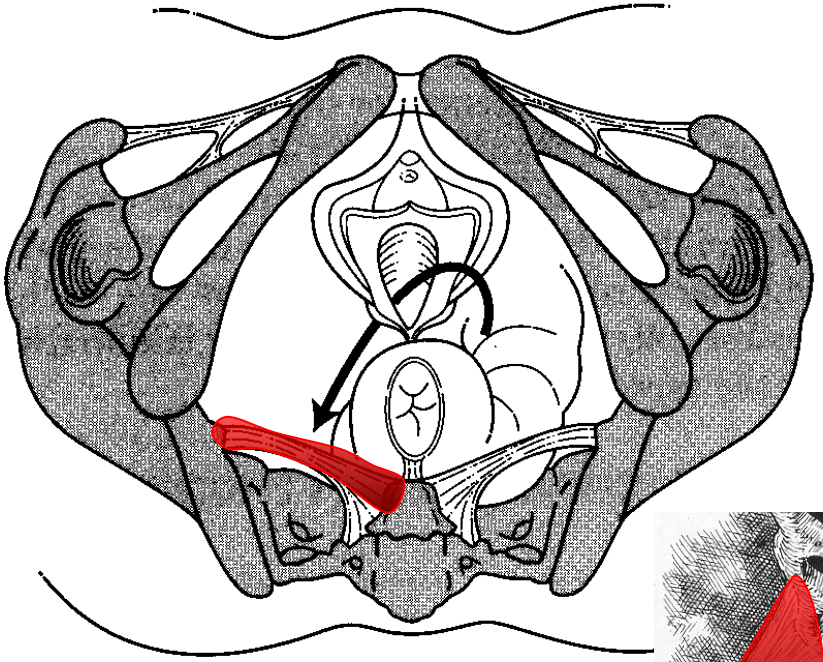
  - Uterus preserving
    - Sacrospinous Hysteropexy
  - Non uterus preserving (concomitant hysterectomy)
    - Uterosacral ligament suspension.
  - Obliterative
    - Lefort Colpocleisis
    - Colpectomy

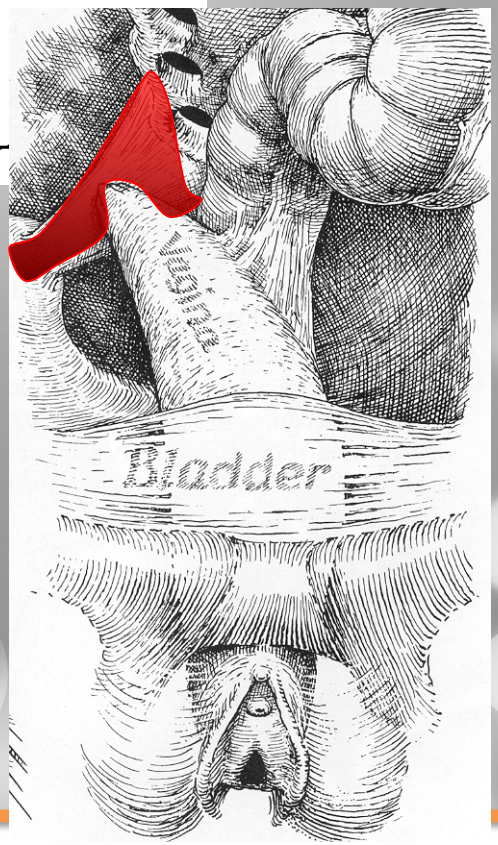
Surgical repair

- **Apical Compartment**

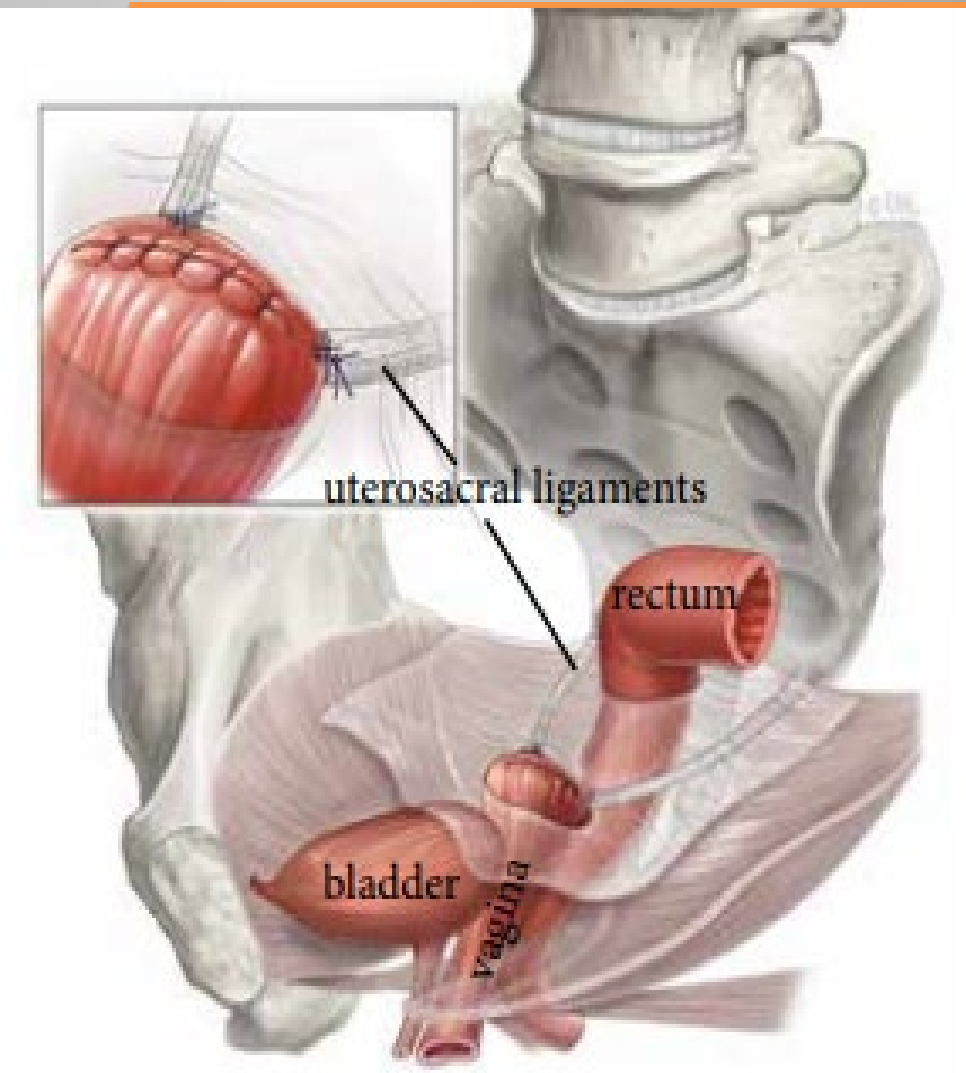
Abdominal Approach (Open or Laparoscopic/Robotic)

- Uterus preserving
  - Sacro -Hysteropexy
- Non uterus preserving (concomitant hysterectomy)
  - Sacrocolpopexy

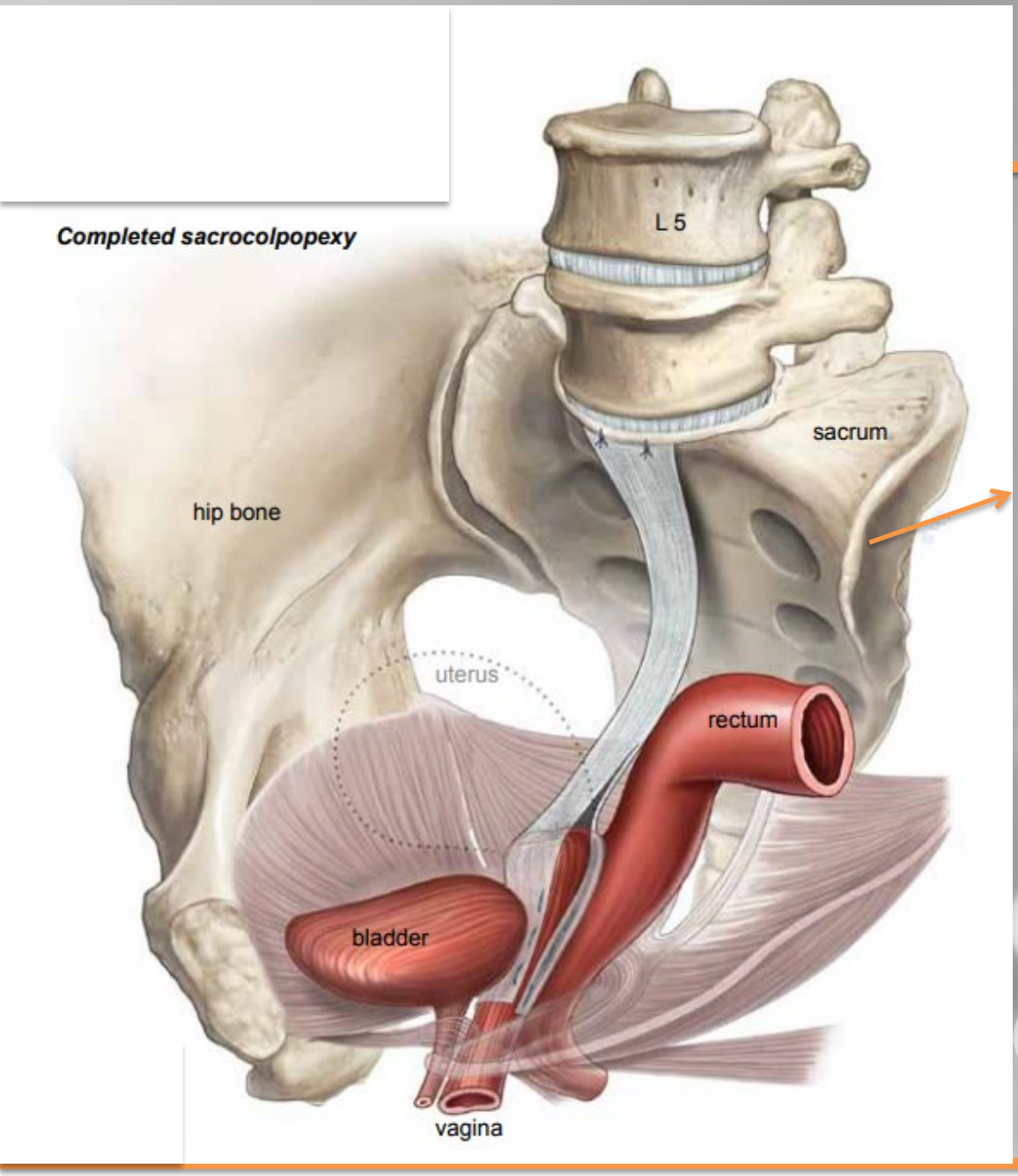




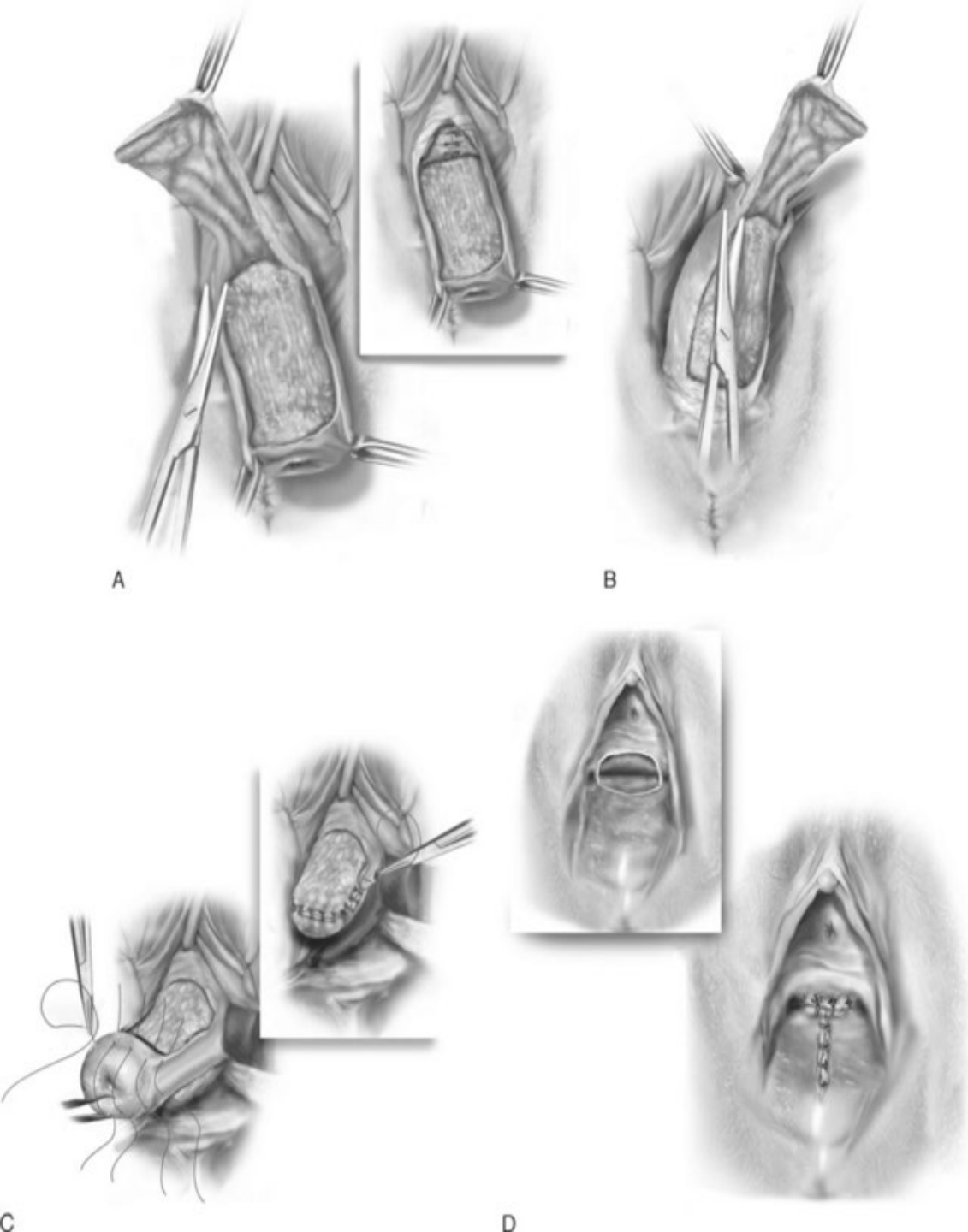
- Sacrospinous suspension
- Success rates of 61% to 97%
- F/u 12 to 73 months



- **Uterosacral ligament suspension**
  - Often done at time of hysterectomy
- 84% to 100% success rates
- 60 to 90 months f/u



- Success rates consistently in 90% range
- Use of minimally invasive techniques decrease morbidity significantly



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Colpocleisis

- Success rates 88% to 100%
- f/u 1 to 161 months
- High satisfaction rates reported.

What about mesh?

Cochrane study 2016

- Awareness of prolapse at one to three years
  - less likely after mesh repair (risk ratio (RR) 0.66, 95% confidence interval (CI) 0.54 to 0.8
- Rates of repeat surgery for prolapse
  - lower in the mesh group (RR 0.53, 95% CI 0.31 to 0.88)
- Repeat surgery for the combined outcome of prolapse, stress incontinence, or mesh exposure
  - More women in the mesh group required(RR 2.40, 95% CI 1.51 to 3.81)

What about mesh?

- 2008- FDA issued warning about adverse side effects associated with transvaginal mesh
- 2011- FDA update: serious adverse events are not rare, vaginal mesh does not provide benefit over traditional repair
- 2016- The FDA issued one order to reclassify these medical devices from class II, which generally includes moderate-risk devices, to class III high-risk devices

- 2017- New Zealand : Transvaginal Mesh banned
- 2017- UK (NICE) : Transvaginal mesh should only be used in research.

POP + other pelvic/bladder dysfunction

- Overactive bladder
- Stress incontinence
- Sexual dysfunction
- Defecatory dysfunction
- Pelvic pain

Prolapse and OAB

- Treat OAB first, and if this fails, next step is correct symptomatic POP
  - If prolapse correction does not correct OAB, next step is 3rd line OAB therapies

Prolapse and OAB

2014 Meta analysis on POP and OAB

- 175 patients with OAB and Prolapse
  - 133 underwent anterior repair, 24 posterior
  - OAB improved significantly in both groups, although more in anterior > posterior
- 6/7 studies show significantly improved OAB
- 1/7 studies showed no improvement
- Data minimum 12 months

DeBoer et al, Neurourology and Urod 2010
Dieter, et al. FPMRS Journal, July 2014

Occult SUI

- Reduction of prolapse may “unmask” stress urinary Incontinence
- Assess for occult SUI during initial exam for POP
  - Urodynamics may be necessary
- If occult SUI is present then informed patient decision regarding anti incontinence procedure advised

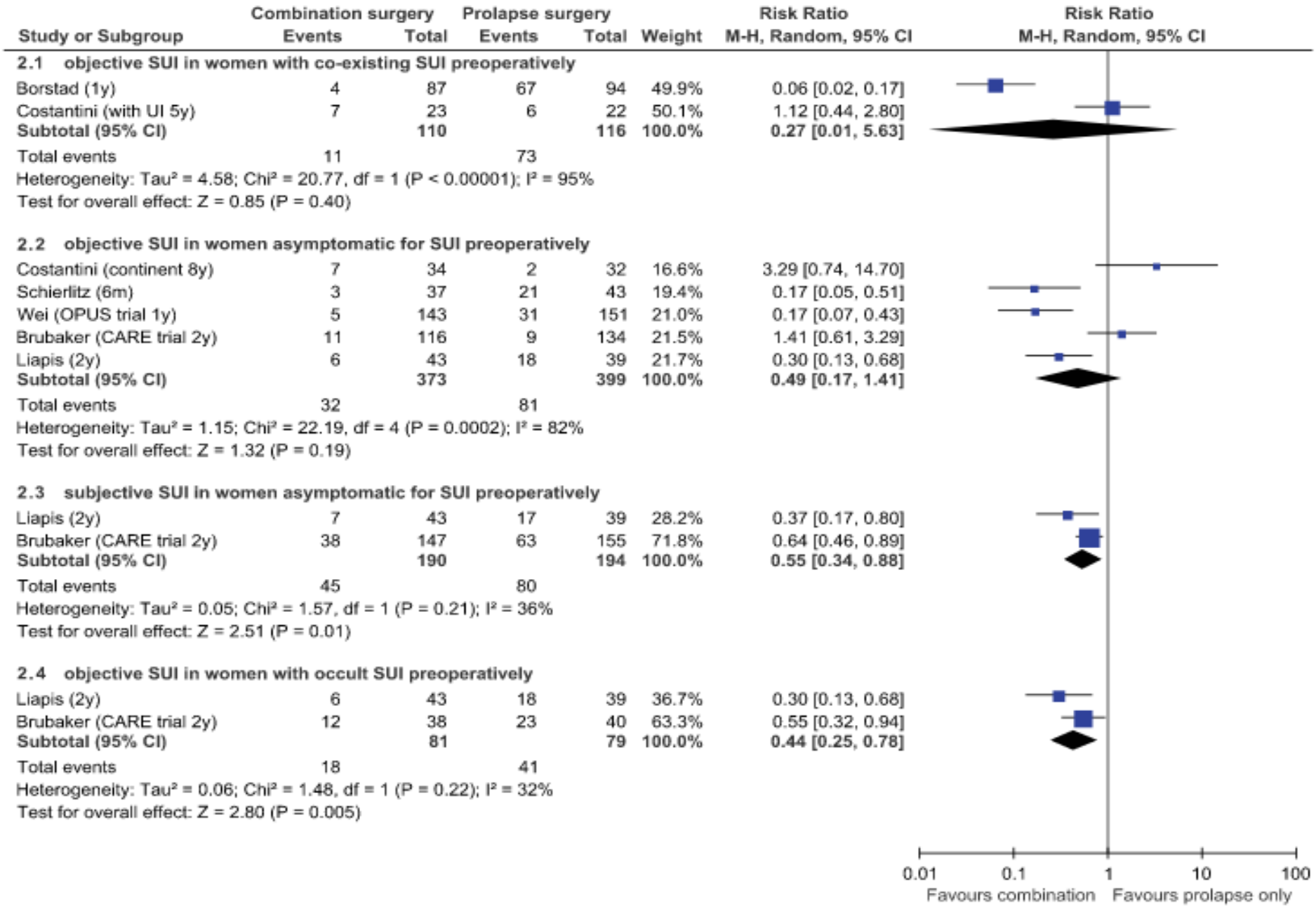


Figure 2. Postoperative stress urinary incontinence (SUI) after combination surgery versus prolapse surgery only.

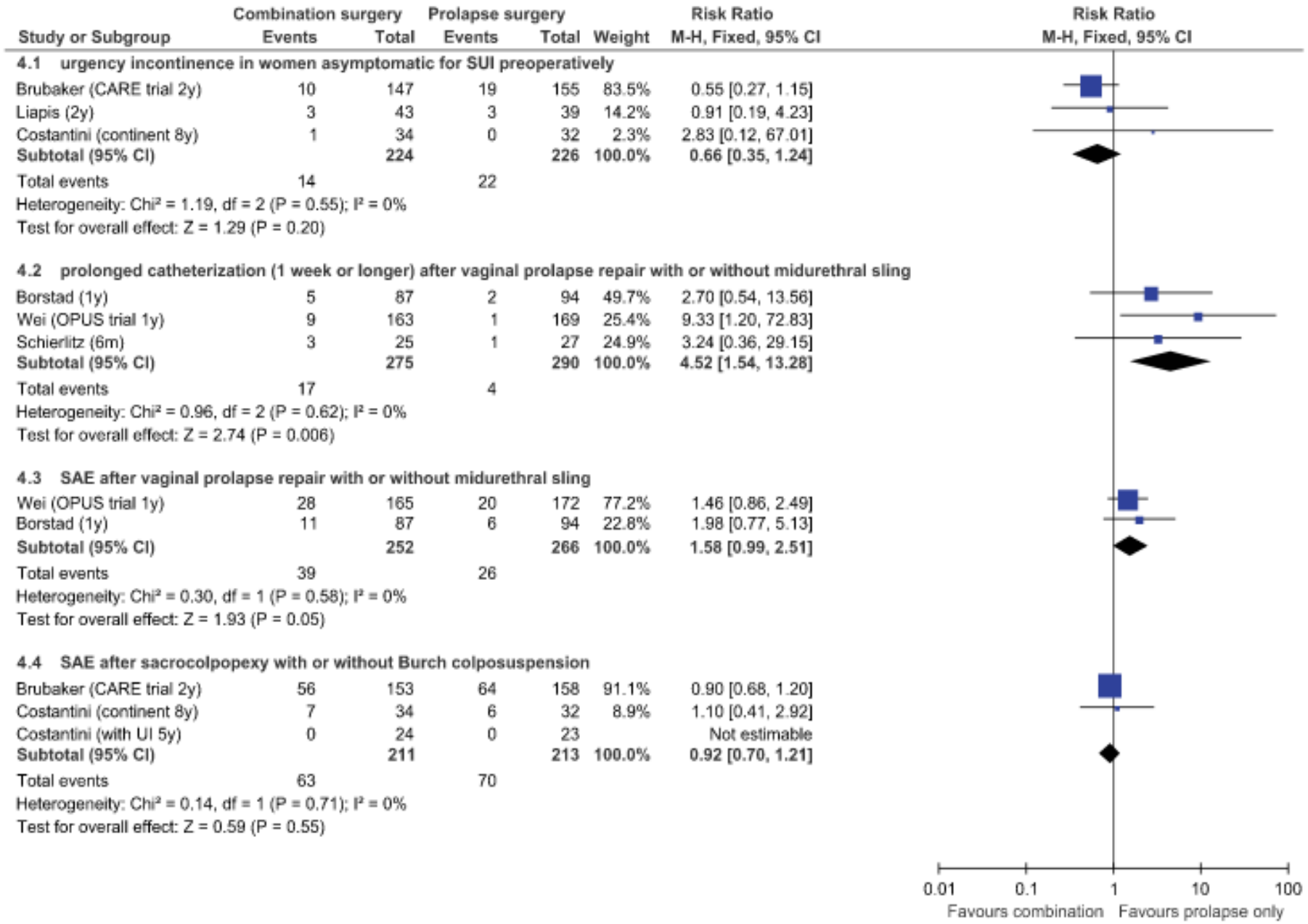


Figure 4. Adverse events after combination surgery versus prolapse surgery only. SAE, serious adverse event.

Occult SUI

- Combination surgery could prevent need for reoperation for stress incontinence
- Patient's who get a sling get more adverse advents

Bottom Line:

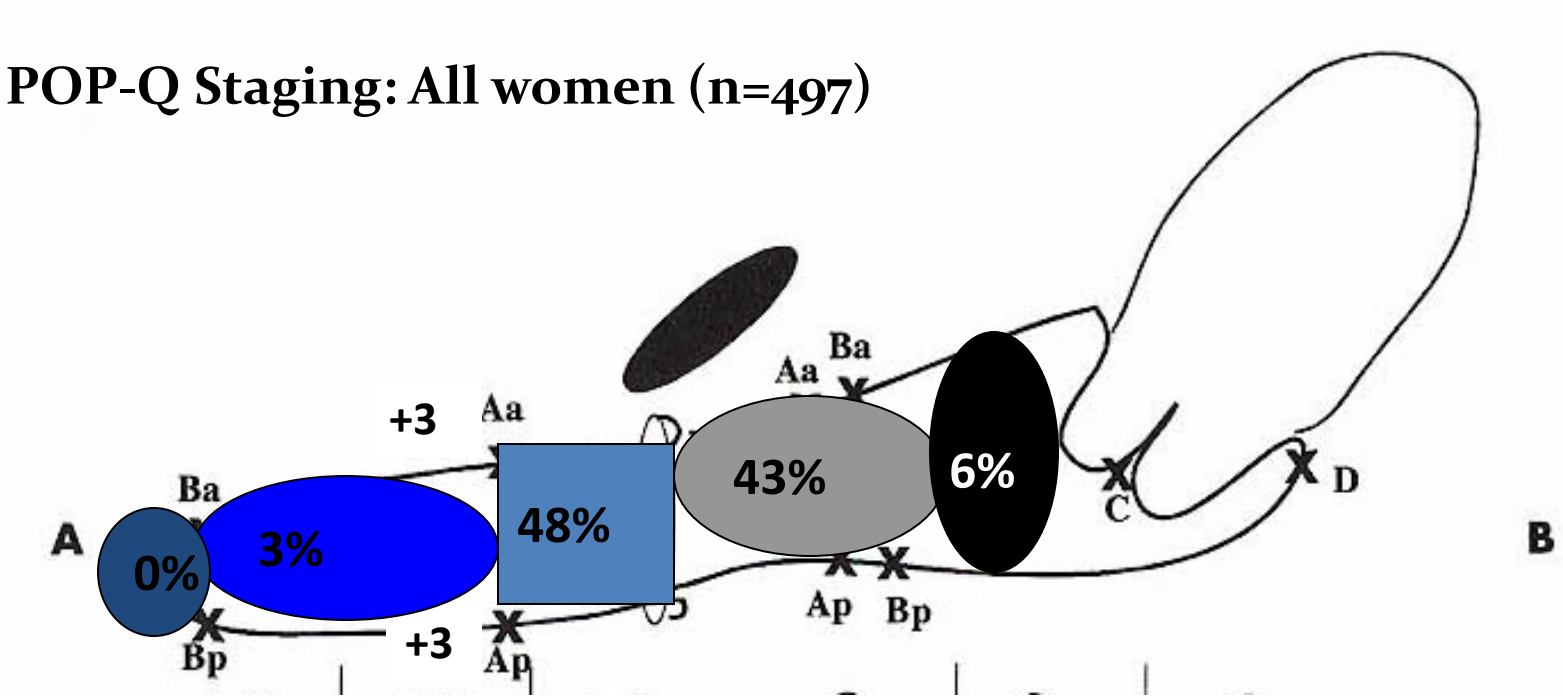
Talk to the patient and manage expectations.

Define Success

- Some degree of loss of anatomic support is normal
- Perfect anatomic support is associated w/ worse HRQOL (PFIQ 10pts worse for Stage 0 than Stage 1 or greater)
- Symptomatic cure is more clinically relevant that anatomic cure
- Definitions of anatomic success commonly used are too strict and often not clinically relevant

POP Q in Clinical setting

Nearly half would not meet NIH definition for “optimal” or “satisfactory” anatomic outcome



(Swift S et al, 2005)

Outcomes

- What is best measure?
  - Symptoms
  - Bulge
  - Anatomic measurement (i.e. Baden-Walker or POP-Q)
  - Satisfaction
  - Physician assessment

- Just because bulge is gone, does not mean all is ok
  - Incontinence
  - Defecatory dysfunction
  - Sexual dysfunction
  - Mesh complication
- *Re-assess patient outcomes and goals and expectations*

Conclusions

- Recognize women with symptomatic POP
- Differentiate between types of POP
  - Don't miss apical prolapse
- Identify other associated issues
- History and physical exam is the cornerstone of the evaluation
- Be familiar with treatment options
- Not everyone needs surgery
  - Reassurance
  - pessary

Conclusions

- The success rate of anterior colporrhaphy varies considerably depending upon the definition of treatment success used.
- When strict anatomic criteria are used, the success rate is low.
- When more clinically relevant criteria are used, treatment success is better
- Patient outcomes , experience and expectations should be reviewed

Questions?

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