

# Surgical Management of Stress Urinary Incontinence in Men

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*Part of Dalhousie's Bicentennial Celebrations*

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# Objectives

## 1. Evaluation on incontinence in men

- Which is it?

## 2. Surgical options

- Artificial urinary sphincter
- Slings

## 3. Special considerations in the elderly

# Dear doctor

*Please see this 81 yo man with urinary incontinence. He leaks “all the time” and has to rush to the bathroom. He has a constant rash in his groin. His daughters think he should consider moving into assisted living because of the leakage. His wife is struggling with cleaning his clothes.*

*Is there anything you can do?*

*Is he too old for surgery?*



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28239523  
Anahusamorphology | Dreamstime.com

# Mr. Solomon Gundy

Interview him and his wife/family – assess LUTS

## Storage

- F – q2-3 hr
- N - 2-3x
- Urgency – mod
- Mixed incontinence
  - Urgency UI –1-2x daily
  - Stress UI is worse

## Voiding

- “good” stream
- empties well
- post void dribble

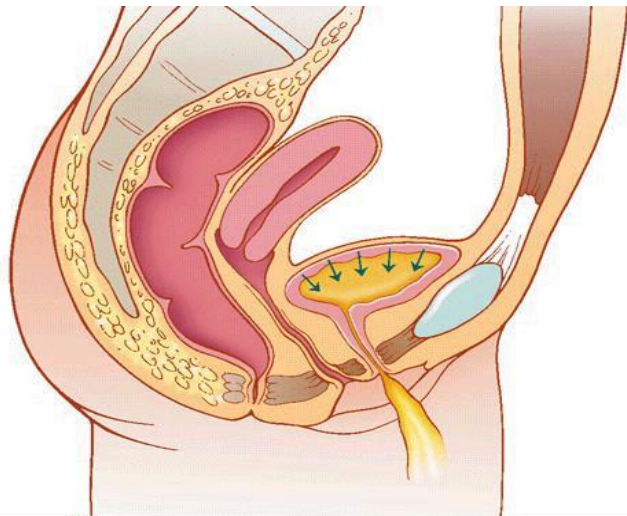
## Pad usage

- 3 “depends” in day
- 1 at night

# Characterize the Incontinence

## Urgency Urinary Incontinence

- Involuntary loss of urine preceded by or associated with the feeling of urgency

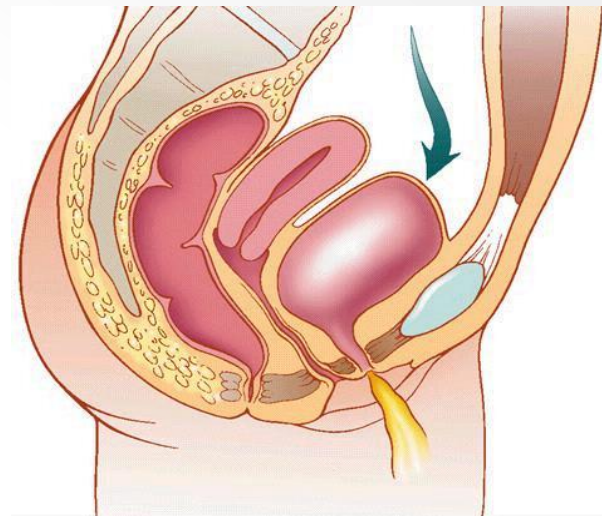


Medscape ©

<http://www.medscape.com>

## Stress Urinary Incontinence

- involuntary loss of urine associate with cough, sneeze, or exertion



Medscape ©

<http://www.medscape.com>

Overflow



Bladder

## Other causes

- Overflow
  - Associated with urinary retention
  
- Others:
  - Nocturnal enuresis
    - Occurring during sleep
  - Other types
    - Post void dribble

# Assess contributing factors in Mr SG

## PMH

- DM, HTN, OA, **Radical Prostatectomy** 12 yrs ago, no radiation

## MEDS

- ASA 81 mg
- **Ramipril 7.5 mg**
- **Hydrochlorothiazide 25 mg**
- Metformin 500 mg TID
- Fesoterodine 8mg OD

# Social

- lives with wife
- drives his car
- does ADLs
- gets help with meals.



# Examination

- BMI 28
- Abd – soft, bladder not palpable
- Scrotum – dermatitis from urine, candidiasis



# Storage LUTS following Radical Prostatectomy

- De novo detrusor overactivity: **2-63%**
  - Generally reported as **20-30%**
- Urgency Urinary Incontinence: **6-10%**
- Detrusor Underactivity: **29-61%**  
**(25% at 3 yr)**

Biers S, Sievert K, Thiruchelvam N. Curr Opin Urology 2017; 3:307-313.  
Hozier GW, Tennankore KK, Himmelman JG. Urology 2016;94:193-197.

# Stress Urinary Incontinence

## Post prostatectomy incontinence:

- Open RRP: **7-40%**
- Lap RRP: **5-34%**
- Robotic RRP: **4-31%**

Biers S, Sievert K, Thiruchelvam N. Curr Opin Urology 2017; 3:307-313.

# Quantifying Incontinence

- Degree of leakage
  - pad test – rarely used
  - leak in supine?
  - leak with minimal exertion?
  - number/type of pads
- **MILD vs MODERATE vs SEVERE**
  - (1-2)                      (3-4)                      (5+)

# Special “extra” considerations

- Does he have a “good” flow, and does he empty?
- Radiation?
- Recurrent UTIs?
- Cognitive status?
- How is his manual dexterity?
- Belly size?
- degree of bother

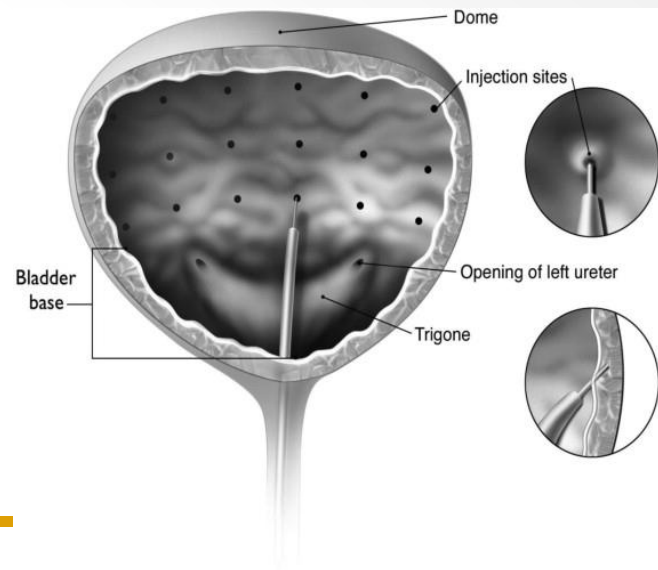


# Surgical Treatment Options

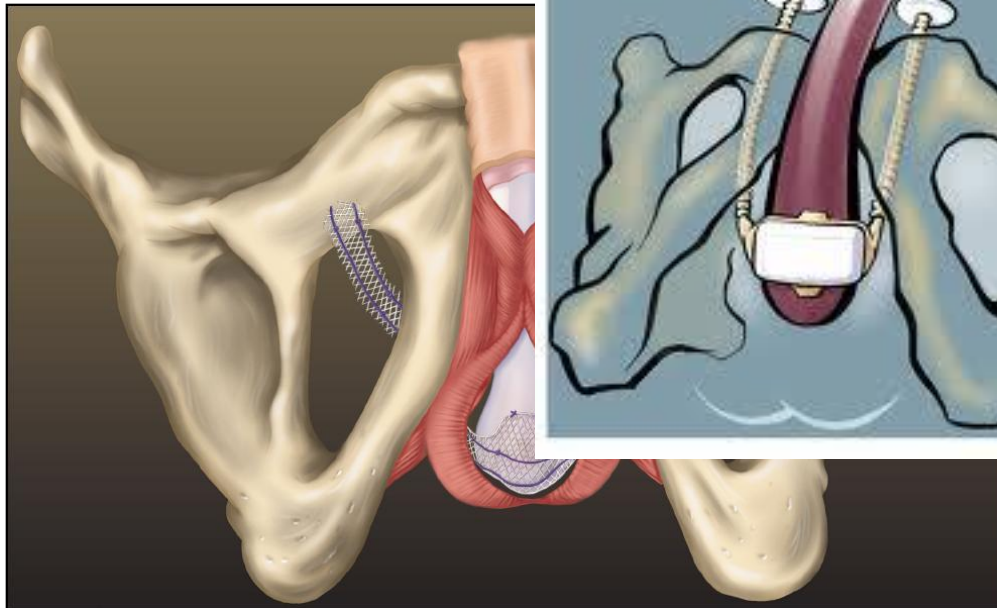
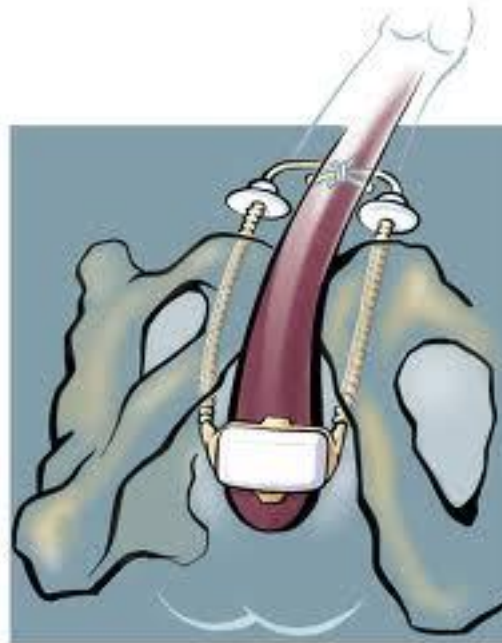
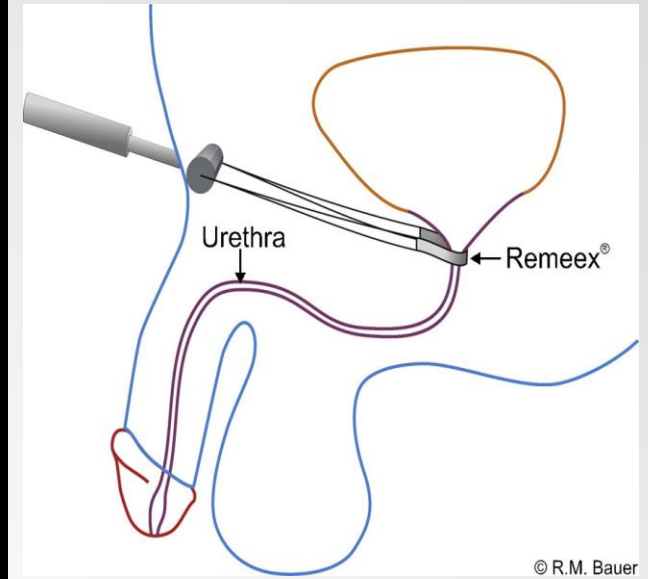
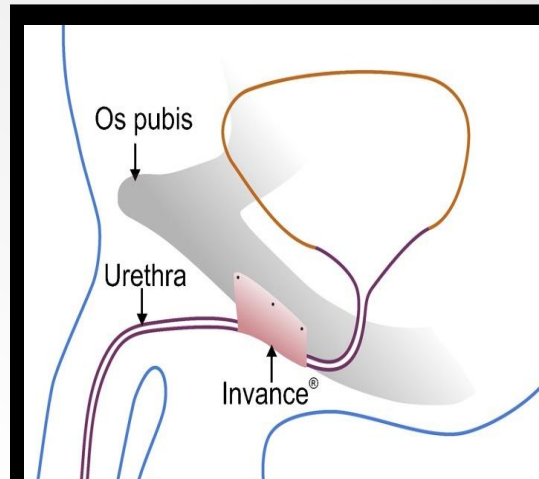
- Artificial Urinary Sphincter (AUS)
- Slings
  - Fixed slings
  - Adjustable slings
- Bulking agents
  - not recommended

# Botox in older men

- effective in treating refractory OAB in healthy older men
- treatment success lower in frail older men
- urinary retention more likely in older men
  - **11.5% vs 6.3%** <sup>1</sup>



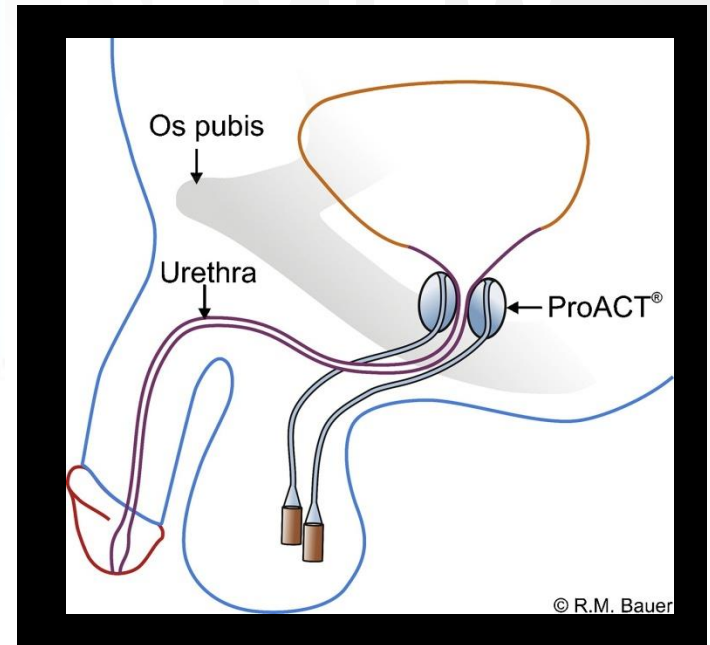
1. Liao et al. J Urol 2013;189:1804-1810.



auer

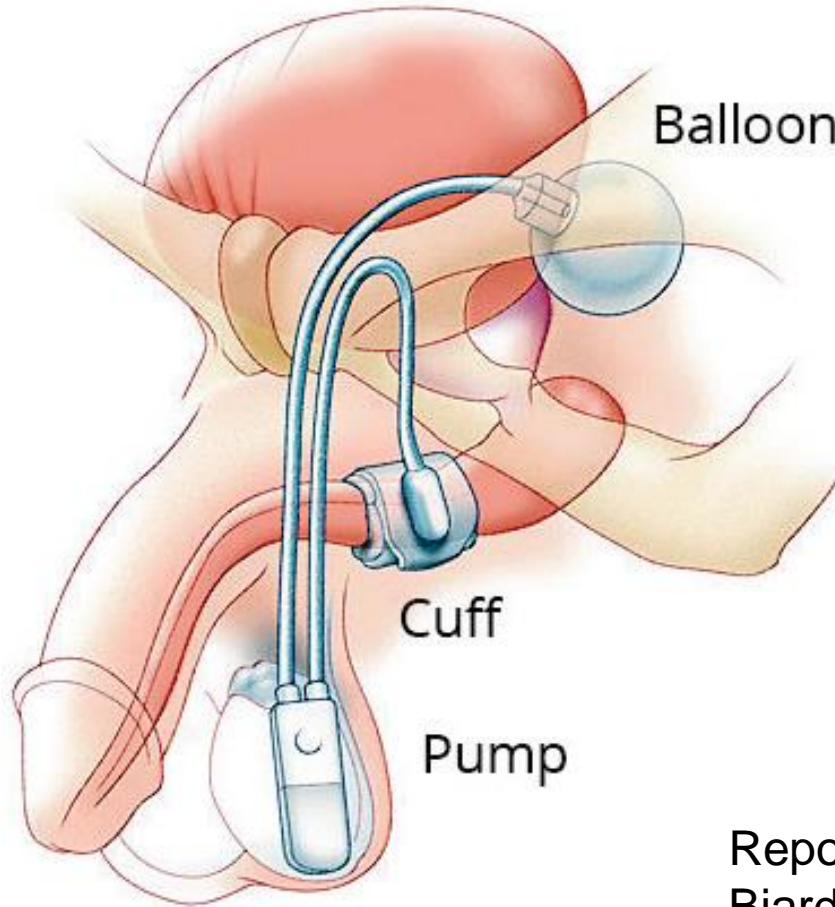
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PREVIEW



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# 1. Artificial Urinary Sphincter “Gold Standard”



- Mod/severe : >3 ppd
- With or without radiation
- Not earlier than 6 mo post op
- Open bladder neck
- Adequate manual dexterity and cognitive function

(Grade A recommendation)

Report of the 2015 Consensus Conference  
Biardeau et al. Neuro Urodynam. 2016. 35:S8-S24



# Results of AUS

## Radiated Patients

- 0-1 pad/day: 80%
- Satisfaction rate: 87-90%
- Revision rate: 22-55% at 5 years
- erosion rate: 5-10%
  
- High satisfaction rate!

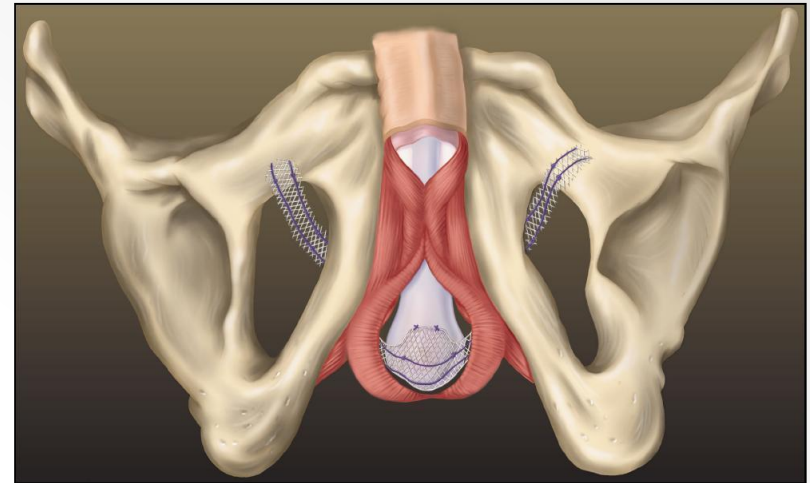
Goldman et al. Incontinence 6<sup>th</sup> Ed, 2016

# Contraindications of AUS

- cognitive dysfunction
- recurrent UTI
- recurrent bladder cancer
- need for regular cystoscopy
- poor manual dexterity
- poorly compliant(stiff) bladder

# 1. Fixed Transobturator Sling

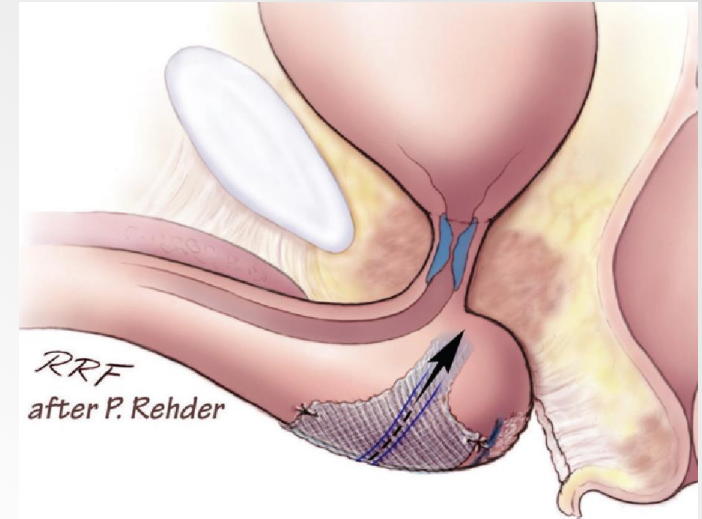
- *AdVance™* – 2006
  - *Advance XP™* – 2010
- (Boston Scientific, USA)



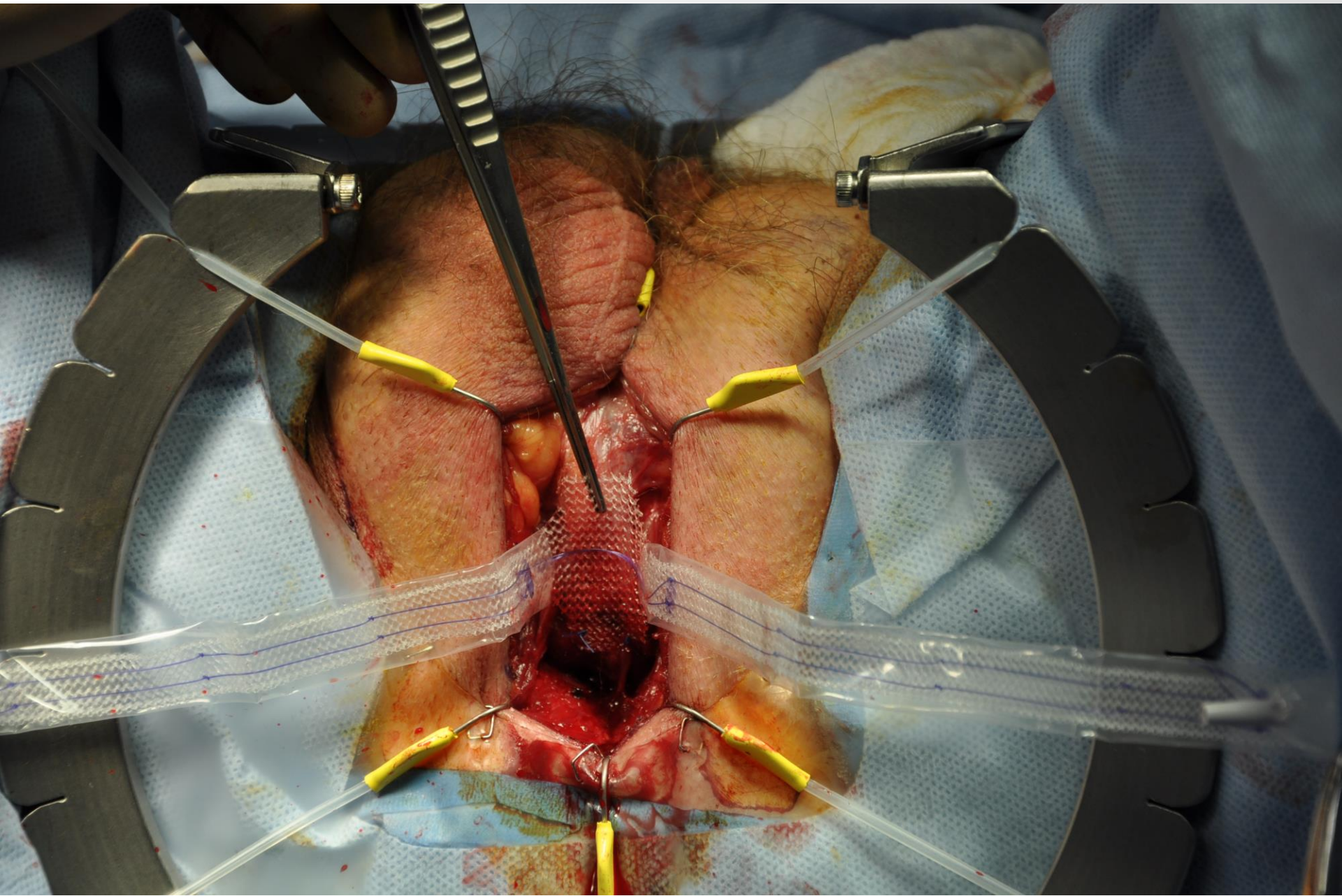
# Retro-urethral Sling: Advance XP

## Unradiated Success:

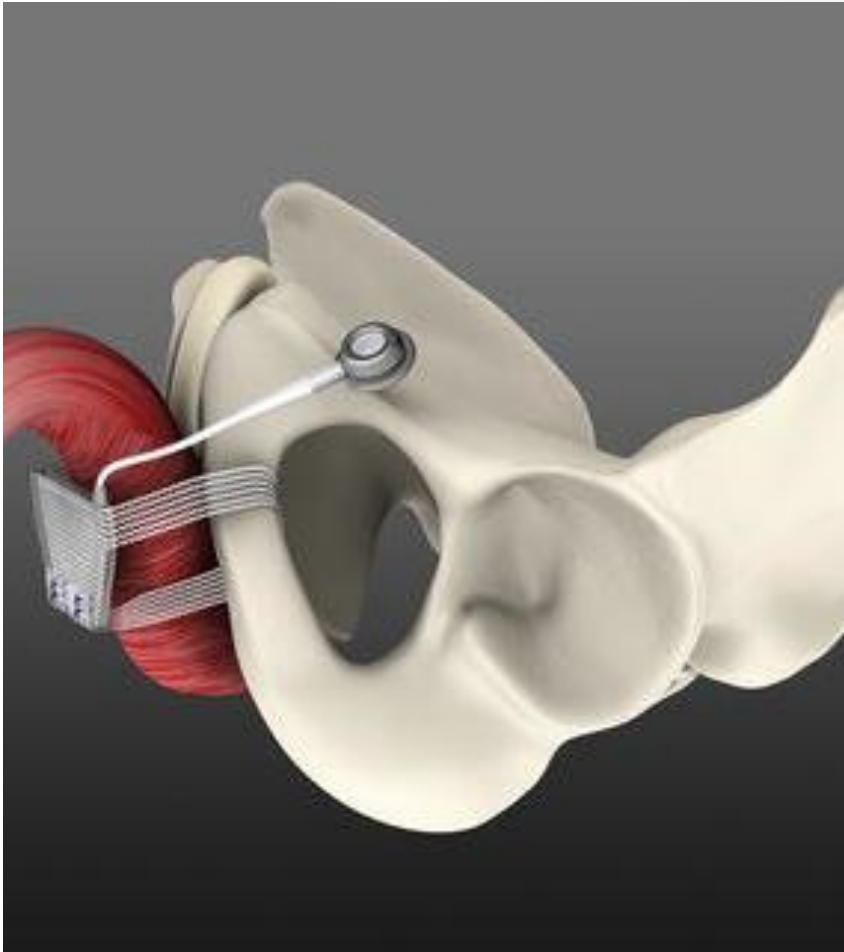
- Dry/cure rates: 50-75%
- Improved: 20-30
- 1 ppd - >90%
- 2-3 ppd - 75%
- > 3ppd – 50%
- diminished efficacy over time
- **Radiation therapy –predictor of failure**







## 2. Adjustable Slings

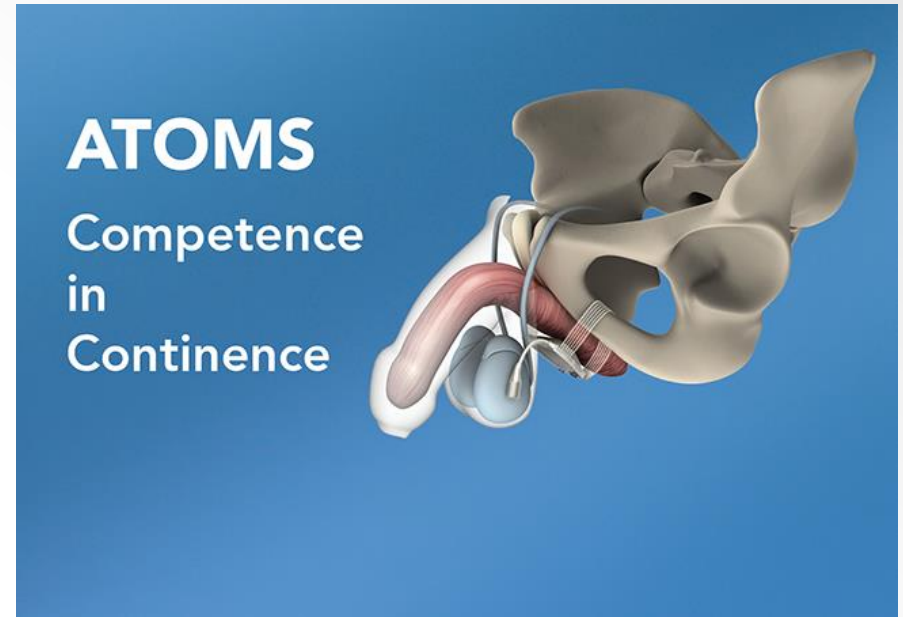


### ATOMS® Sling (AMI, Austria)

- Transobturator suburethral
- adjustable cushion, via implantable titanium port
- adjustable in clinic

# THE EARLY CANADIAN EXPERIENCE WITH ATOMS FOR POST- PROSTATECTOMY INCONTINENCE: A MULTICENTRE STUDY

- Trevor Haines<sup>1</sup>,  
Genevieve Nadeau<sup>2</sup>, Le-  
Mai Tu<sup>3</sup>, Julie Morisset<sup>4</sup>,  
Stephen Steele<sup>5</sup>, Chris  
Doiron<sup>5</sup>, Luc Valiquette<sup>6</sup>,  
Dean Elterman<sup>7</sup>, Conrad  
Maciejewski<sup>8</sup>, Keith  
Rourke<sup>1</sup>



# RESULTS: Continence

<b>Continence Rate</b>	<b>124/155 (80.0%)</b>
<b>Improvement Rate (&gt;50%)</b>	<b>137/156 (87.8%)</b>
<b>Post-operative pad usage</b>	
No pad / Rescue pad	<b>104/155 (67.1%)</b>
Mild (1-2 pads)	<b>33 (21.3%)</b>
Moderate (3-4 pads)	<b>10 (6.4%)</b>
Severe (5 or more pads)	<b>8 (5.2%)</b>



# What surgery do I choose?

**Mild to mod** (1-3 pads), good bladder power

1. Fixed sling
2. Adjustable sling

**Mod to severe** (>3 pads), good bladder power, with or without rads

1. AUS
2. Adjustable sling (with reservation)

**Mild, mod, or severe,** + detrusor

underactivity

1. AUS

# Detrusor Underactivity - DU

“contraction of reduced strength and/or duration, resulting in prolonged bladder emptying within a normal period.”

- true incidence not known (40%?)
- Avoid slings in these patients

# This Case

- 3 – 4 pads/depends (mod-sev)
- SUI on history, leaks when supine
- Mild-mod OAB, occasional UUI
- Good manual dexterity

AUS is recommended

Can discuss sling as inferior alternative

# Conclusions

1. Must distinguish between Urgency and Stress Urinary Incontinence
2. Good surgical options exist for men with SUI, with low morbidity.
3. The AUS remains the most predictably successful surgery in patients with moderate to severe stress incontinence

# Conclusions

4. Slings are a good option with low rates of complications in patients with mild to mod SUI, who have not had radiation
5. Must consider cognition, dexterity, and other potential complicating factors in older men
6. “Overall” assessment more important than age alone