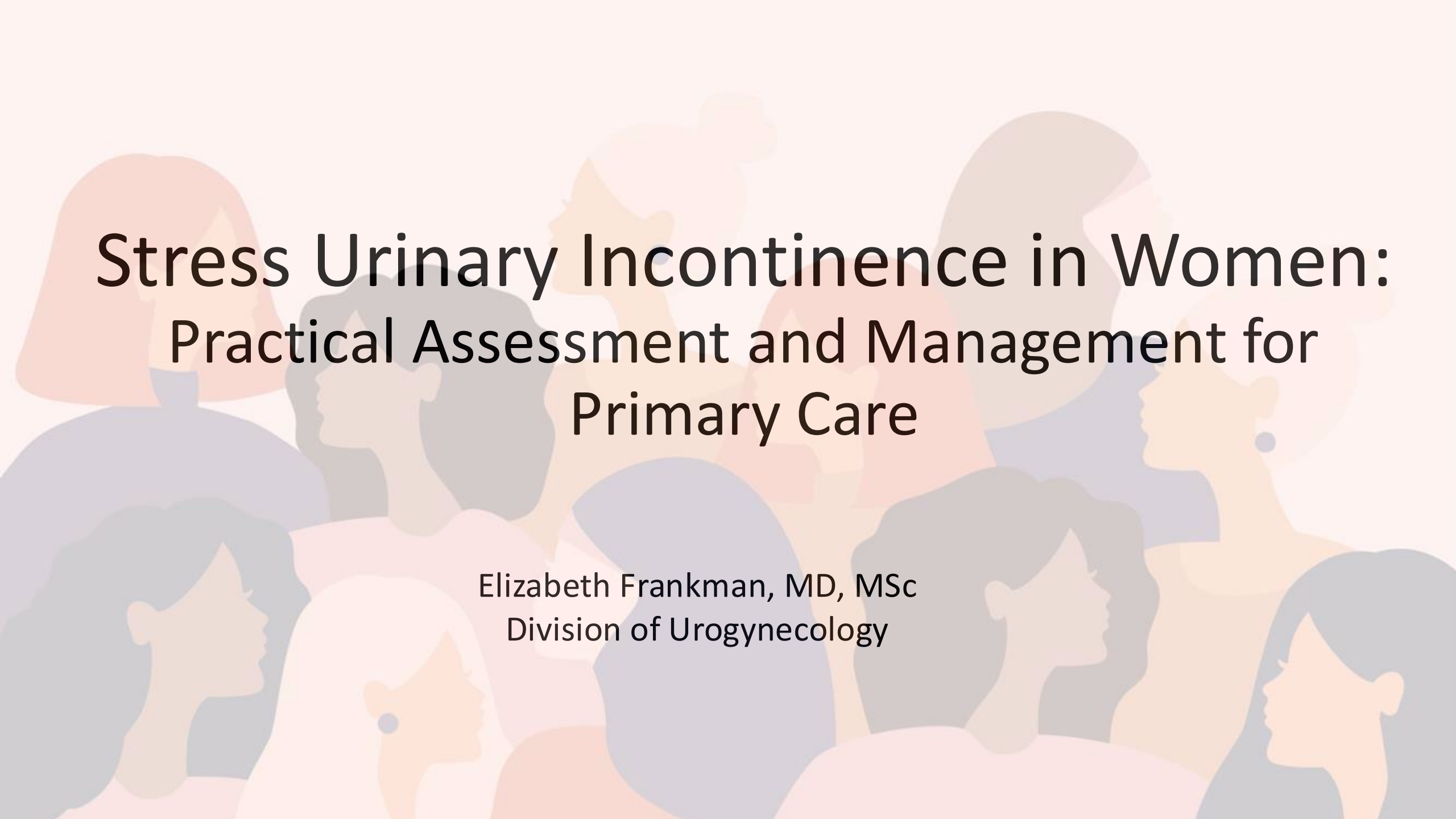

Stress Urinary Incontinence in Women:
Practical Assessment and Management for Primary Care

Elizabeth Frankman, MD, MSc
Division of Urogynecology

Disclosures

Elizabeth Frankman, MD, MSc is a fellowship-trained, board-certified Urogynecologist. She practices at XXX Health.

DISCLOSURE POLICY

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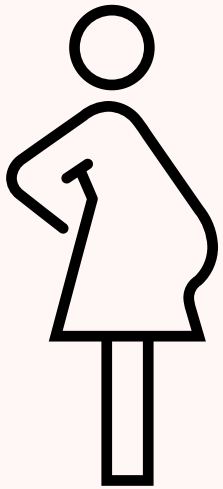
Learning Objectives

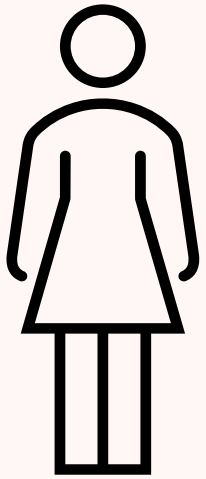
By the end of this presentation, you will be able to:

- Differentiate uncomplicated stress urinary incontinence from urgency and mixed urinary incontinence.
- Initiate evidence-based first-line therapies for stress urinary incontinence.
- Compare nonsurgical and surgical management options.
- Determine when referral to a specialist is appropriate.

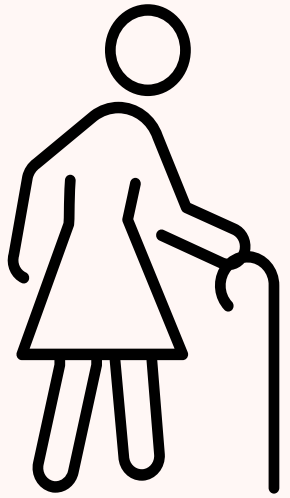
Prevalence of Urinary Incontinence (UI)



25% of young women[1]



44-57% of middle-aged and postmenopausal women[2,3]



75% of older women[4]

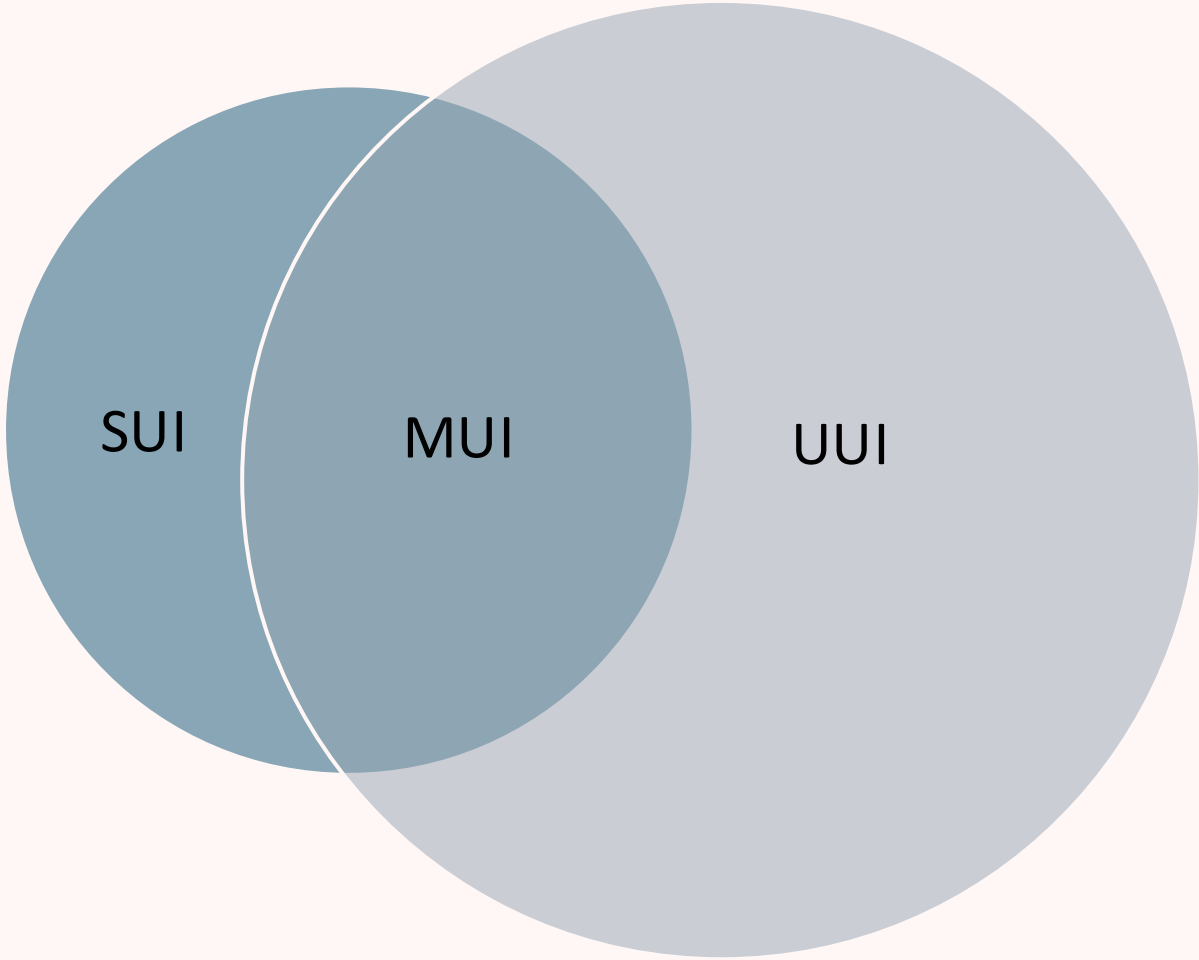
[1] Carls C. Urol Nurs. 2007;27(1):21-24, 39.
[2] Kinchen KS et al. J Womens Health (Larchmt). 2007;16(3):415-422.
[3] Boyington JE et al. Nurs Res. 2007;56(2):97-107.
[4] Shamliyan T et al. Agency for Healthcare Research and Quality (US); 2012 Apr. Report No.: 11(12)-EHC074-EF.

Most Common Types of UI

Stress urinary incontinence (SUI)

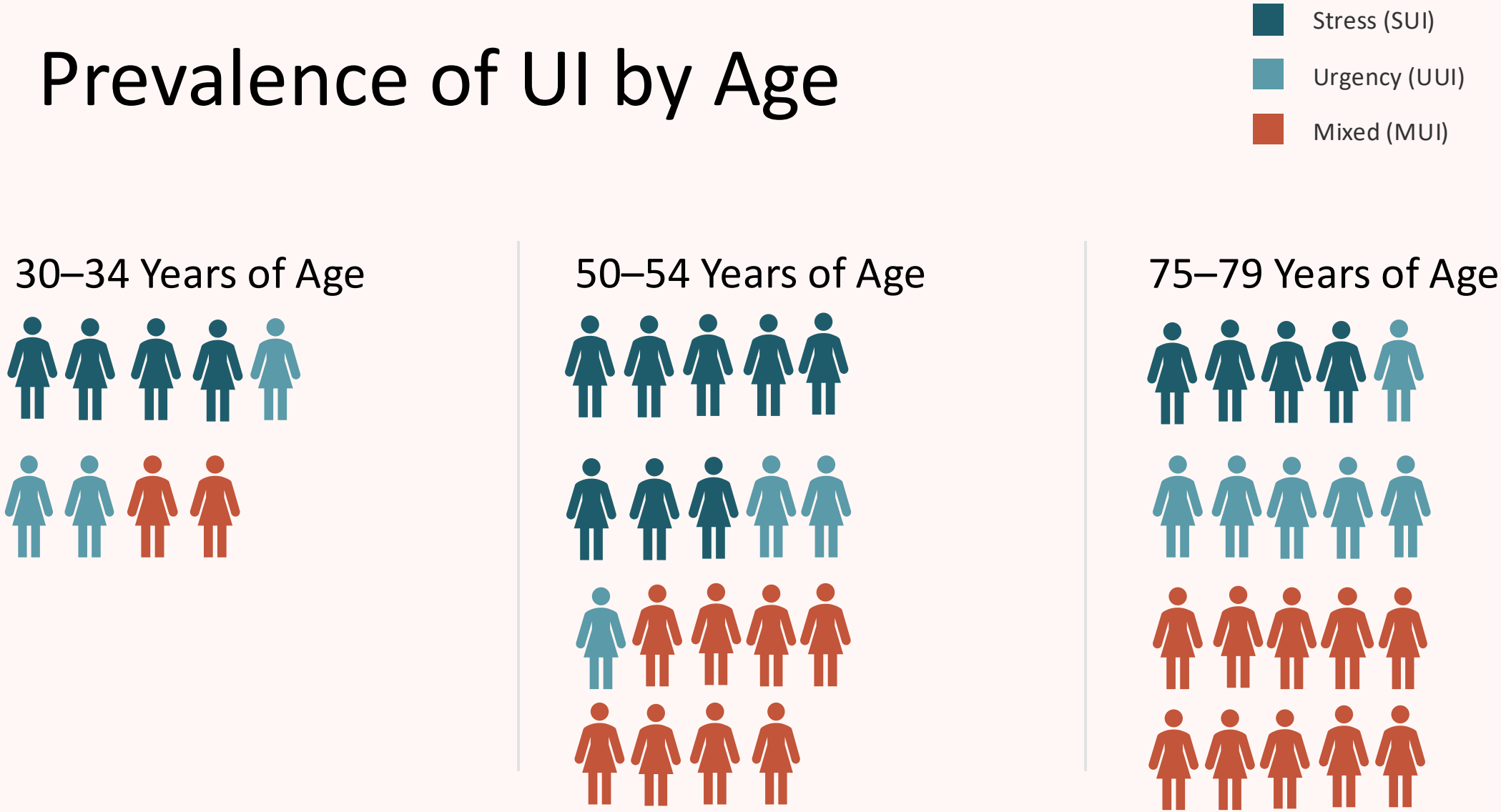
Urgency urinary incontinence (UUI)

Mixed urinary incontinence (MUI)



Abufaraj M et al. Am J Obstet Gynecol. 2021;225(2):166.e1-166.e12.

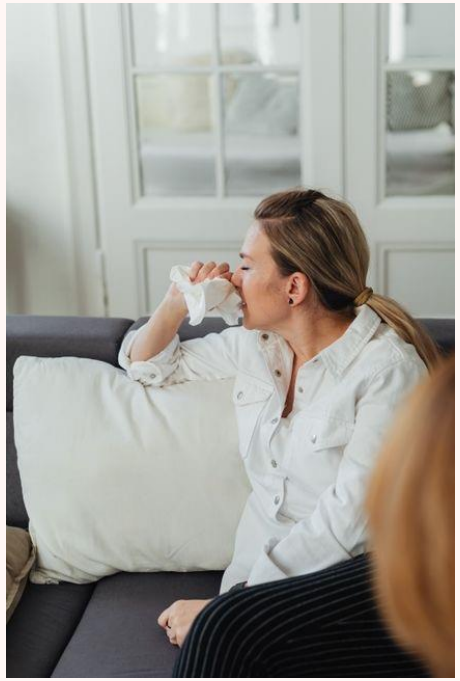
Prevalence of UI by Age

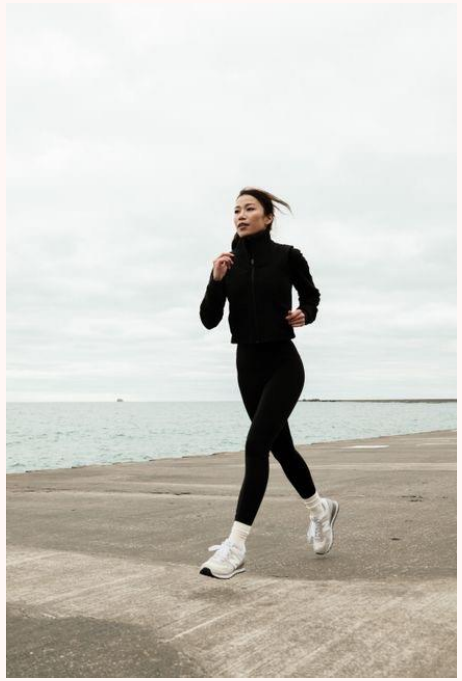
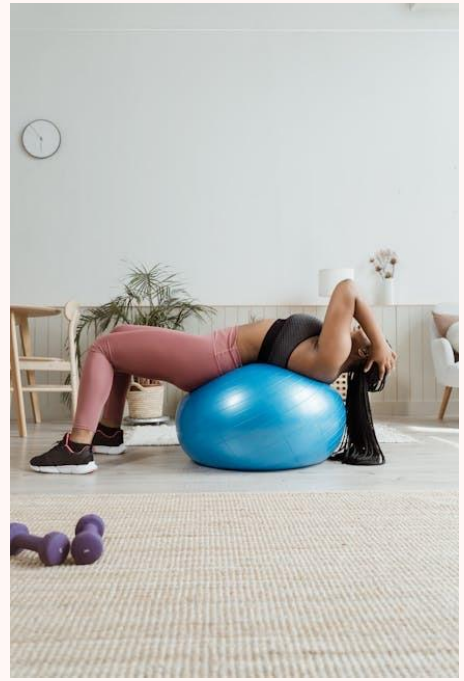


Adapted from Aoki Y et al. Nat Rev Dis Primers. 2017;3:17042.

Stress Urinary Incontinence (SUI)

- Involuntary loss of urine with effort or physical exertion or when coughing or sneezing



Haylen BT et al. Int Urogynecol J. 2010;21(1):5-26.

SUI: Underrecognized and Underreported

- Fewer than 40% of women with SUI symptoms seek care[1]
- 55% of women reported that clinician never asked about symptoms[1]
- May interfere in daily life
- Often contributes to physical, emotional, and social distress[2]
  - Shame
  - Embarrassment
  - Depression
  - Social isolation

[1] Waetjen LE et al. Menopause. 2018;25(1):29-37.

[2] Landefeld CS et al. Ann Intern Med. 2008;148(6):449-458.

Risk Factors for SUI

Demographic
- Age[1]
- Family history[4]

Obstetric
- Pregnancy[1]
- Vaginal delivery[2]
- Higher parity[5]

Medical
- Obesity (BMI ≥ 30 kg/m^2)[1]
- Chronic cough[6]
- Chronic constipation[6]
- Diabetes[6]

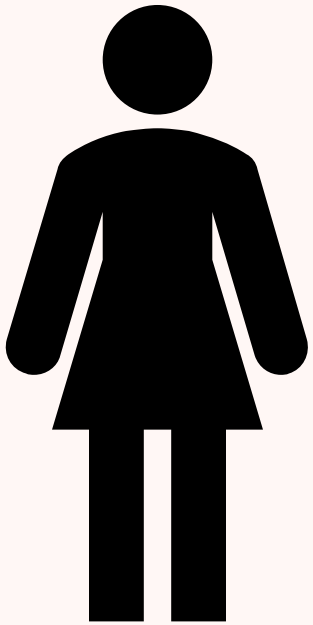
Lifestyle
- High-impact exercise[3]
- Smoking[6]

[1] Abufaraj M et al. Am J Obstet Gynecol. 2021;225(2):166.e1-166.e12.
[2] Tähtinen RM et al. Eur Urol. 2016;70(1):148-158.
[3] Pires T et al. J Hum Kinet. 2020;73:279-288.
[4] Hannestad YS et al. BMJ. 2004;329(7471):889-891.
[5] Rortveit G et al. Obstet Gynecol. 2001;98(6):1004-1010.
[6] Pang H et al. BJOG. 2022;129(4):580-589.

I leak when I cough and sneeze.

I can’t play with my kids the way I want to.

When I have a cold, it’s really bad. I have to wear a thick pad.



I leak when I run. I can only wear dark shorts. Otherwise, it’s too embarrassing!

Trampolines? No way!

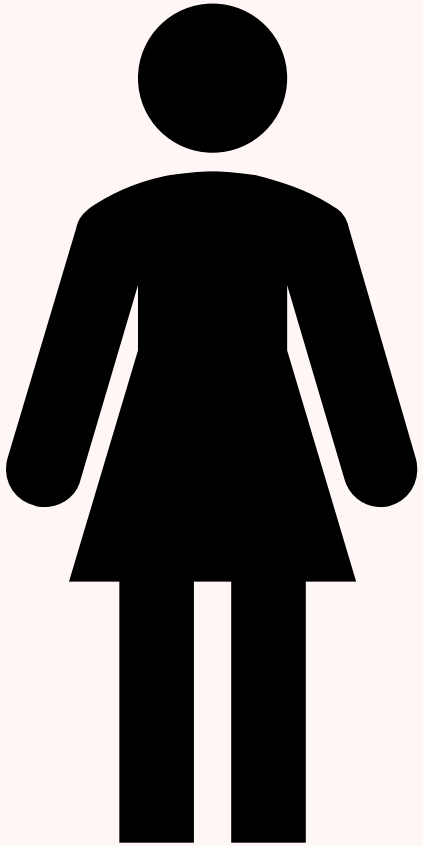
Urgency Incontinence

- Involuntary loss of urine associated with urgency
- Often part of overactive bladder syndrome (OAB)
  - Urinary urgency: sudden, compelling desire to pass urine which is difficult to defer
  - Urinary frequency: 8 or more voids in a 24-hour period, which is bothersome to the patient
  - Nocturia: more than 1 trip to the bathroom during typical sleeping hours

Haylen BT et al. Int Urogynecol J. 2010;21(1):5-26.

I go to the bathroom ALL THE TIME.

I'm fine when I leave my office and my drive is only 15 minutes, but once I see the driveway, it's all over.



Once I see the toilet, the urine just starts coming out. I can't stop it!

When I have to go, I have to GO.

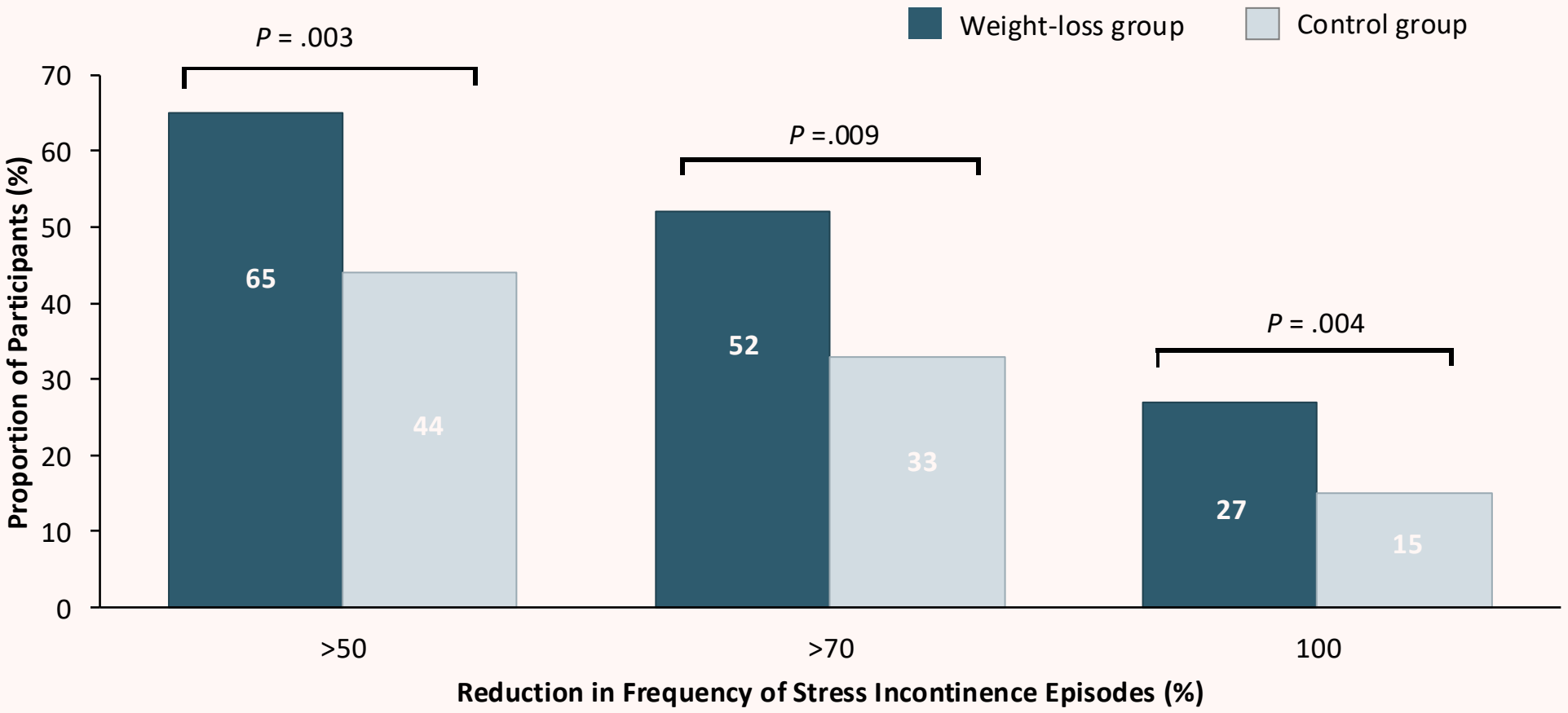
Mixed Urinary Incontinence

- SUI and UUI/OAB symptoms are present
- Clinical history guides treatment
- Treat the most bothersome symptoms first

What is your current approach to care of women with urinary incontinence symptoms?

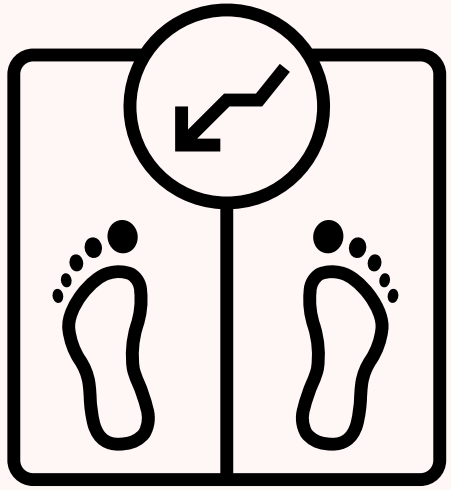
Treatment for SUI

Weight Loss Reduces Frequency of Stress Incontinence Episodes



Adapted from Subak LL et al. N Engl J Med. 2009;360(5):481-490.

Modest Weight Loss Reduces Symptoms



5-10% weight loss

15-18% reduction in prevalence of SUI

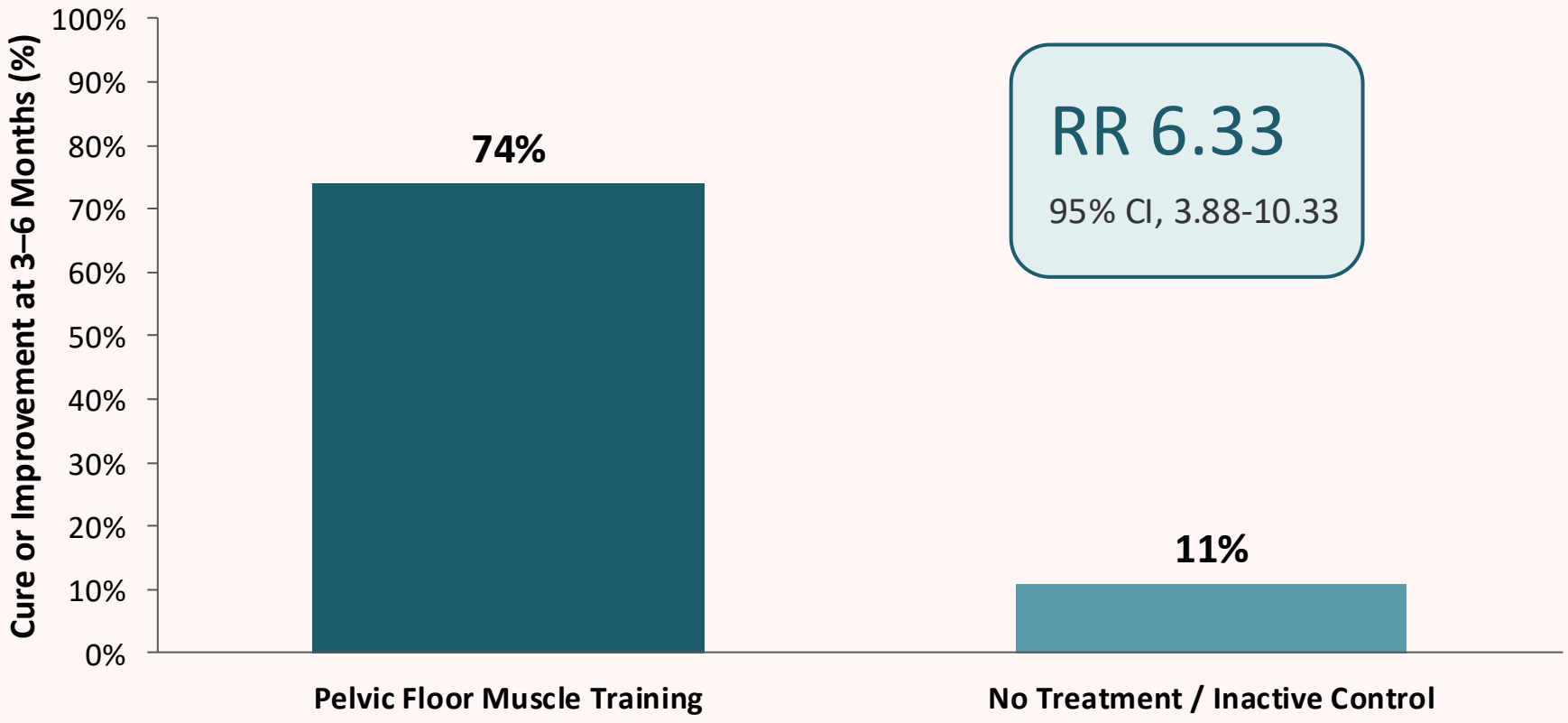
Yazdany T et al. Female Pelvic Med Reconstr Surg. 2020;26(1):16-29.

Pelvic Floor Physical Therapy (PFPT)

- Strong pelvic floor muscles compensate for the sphincter that isn't working well
- Many women have difficulty contracting their pelvic floor muscles independently – even when they believe they are doing it correctly
- Unclear if supervised PFPT provides greater benefit to all patients[1]
- When exam shows an inability to contract pelvic floor muscles, supervised PFPT likely beneficial

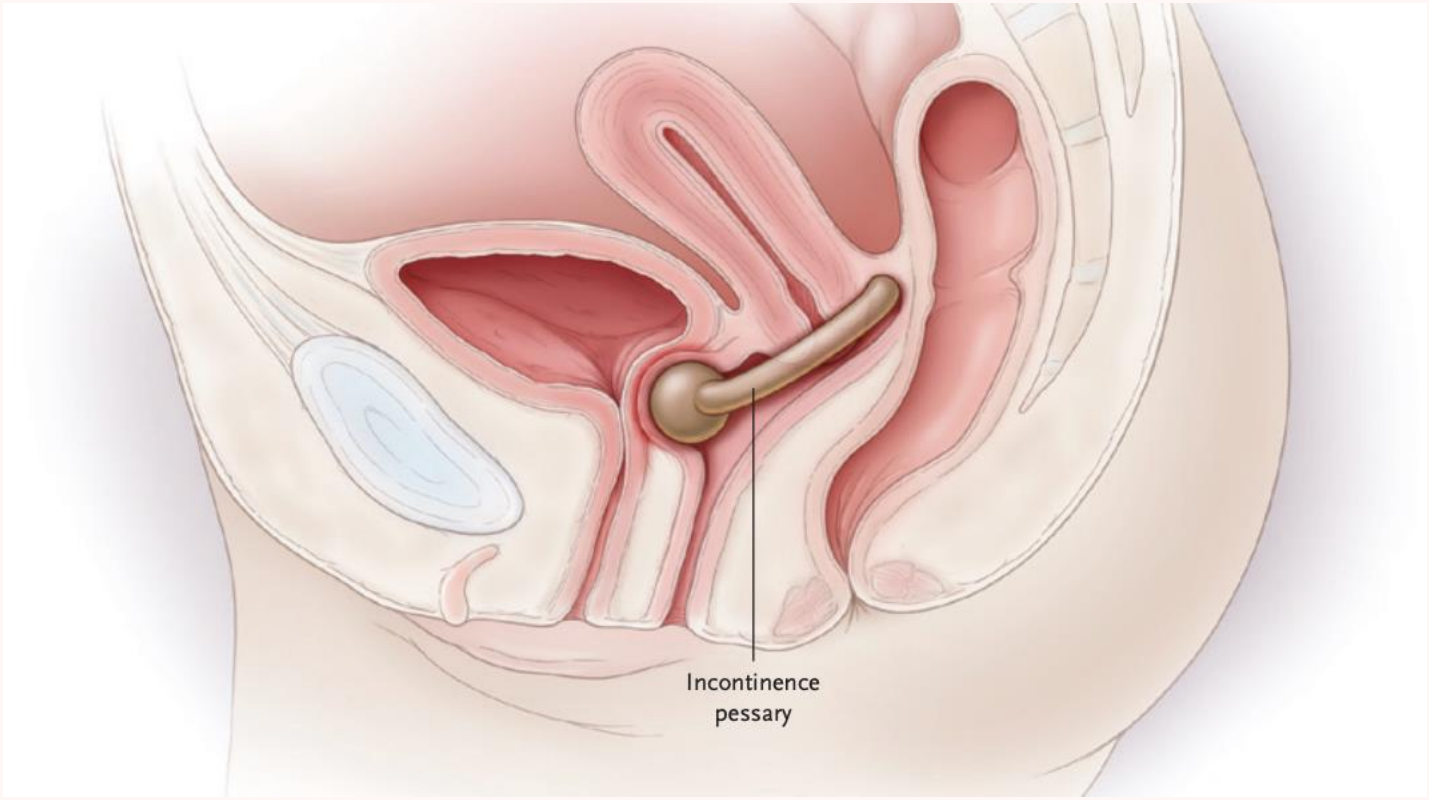
[1]Hay-Smith EJC et al. Cochrane Database Syst Rev. 2024;(12):CD009508.

PFPT Improves Stress Urinary Incontinence



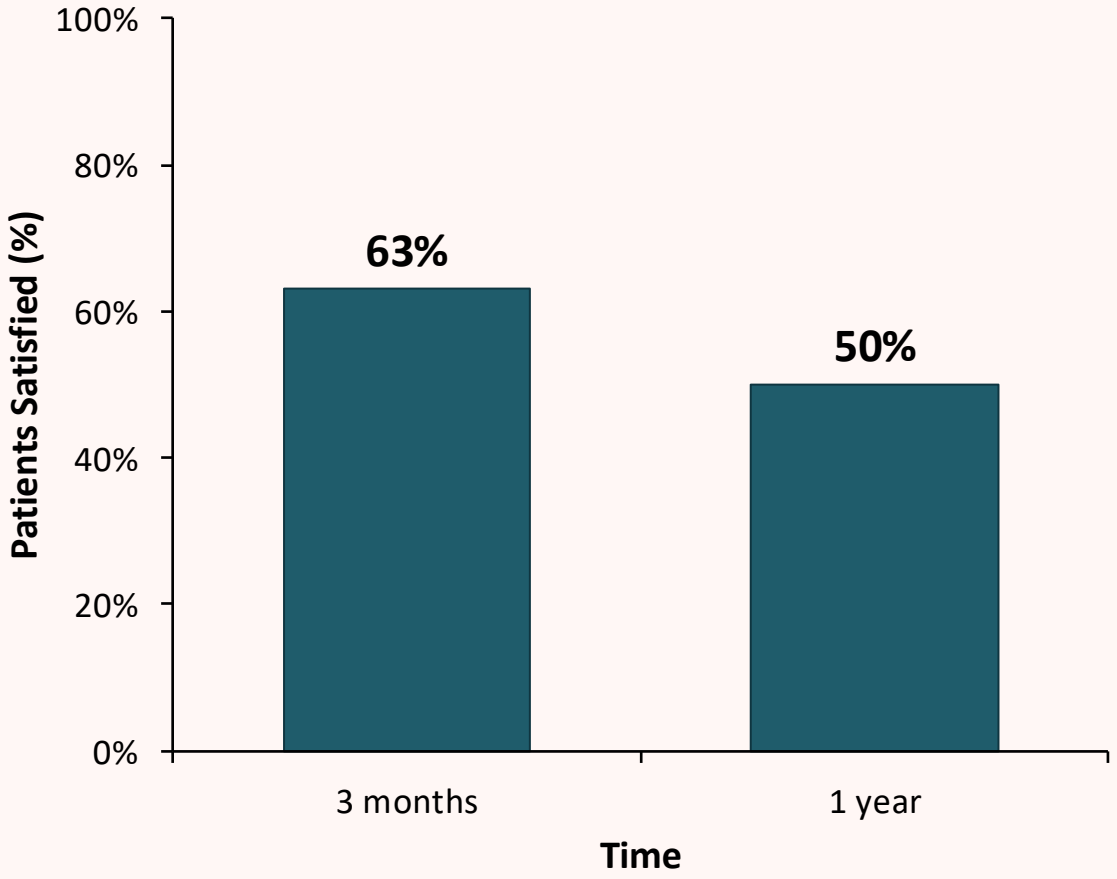
Adapted from Dumoulin C et al. Cochrane Database Syst Rev. 2018;10(10):CD005654.

Incontinence Pessary



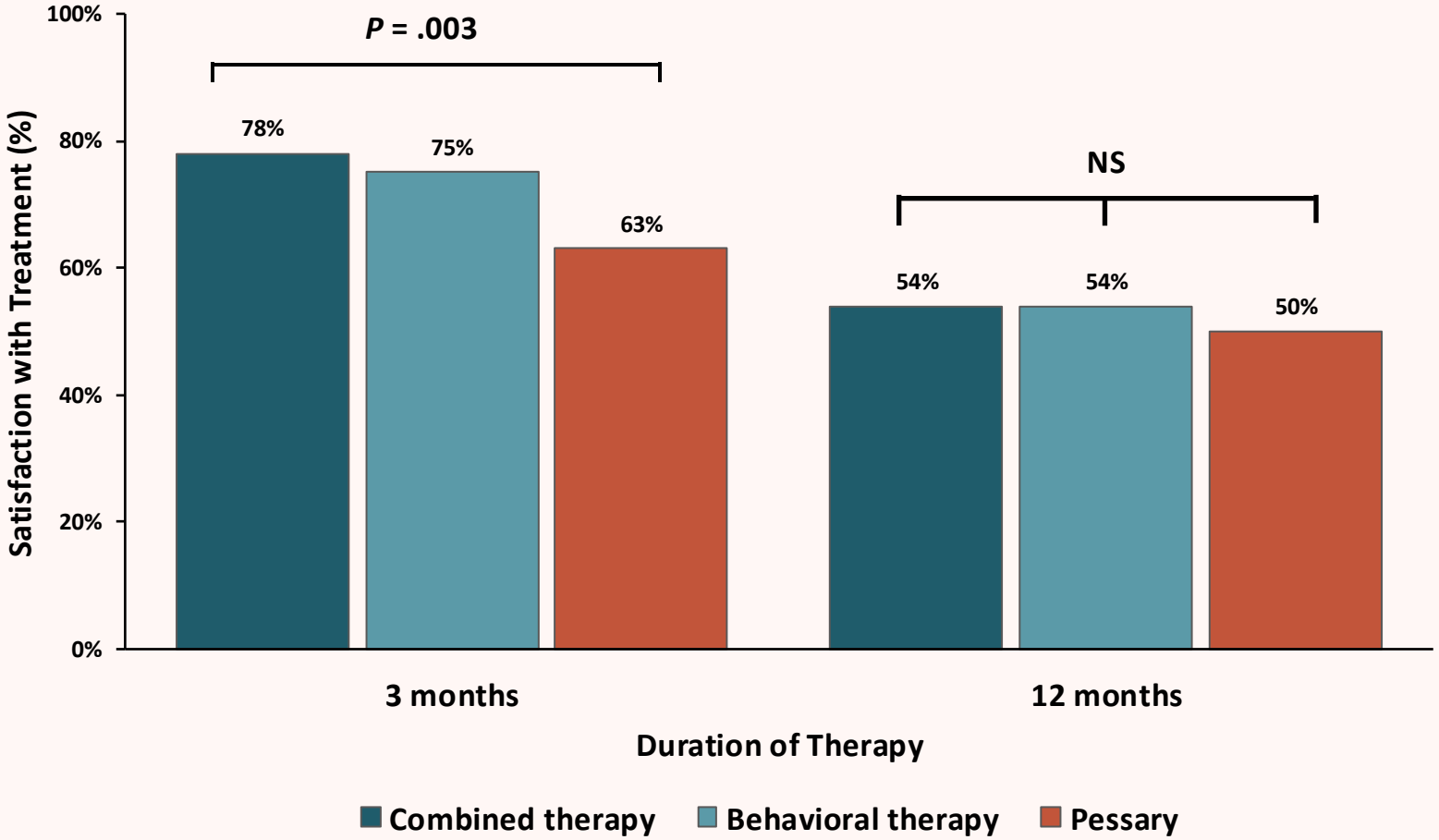
Wu JM. N Engl J Med. 2021;384(25):2428-2436.

Patient Satisfaction with Incontinence Pessary



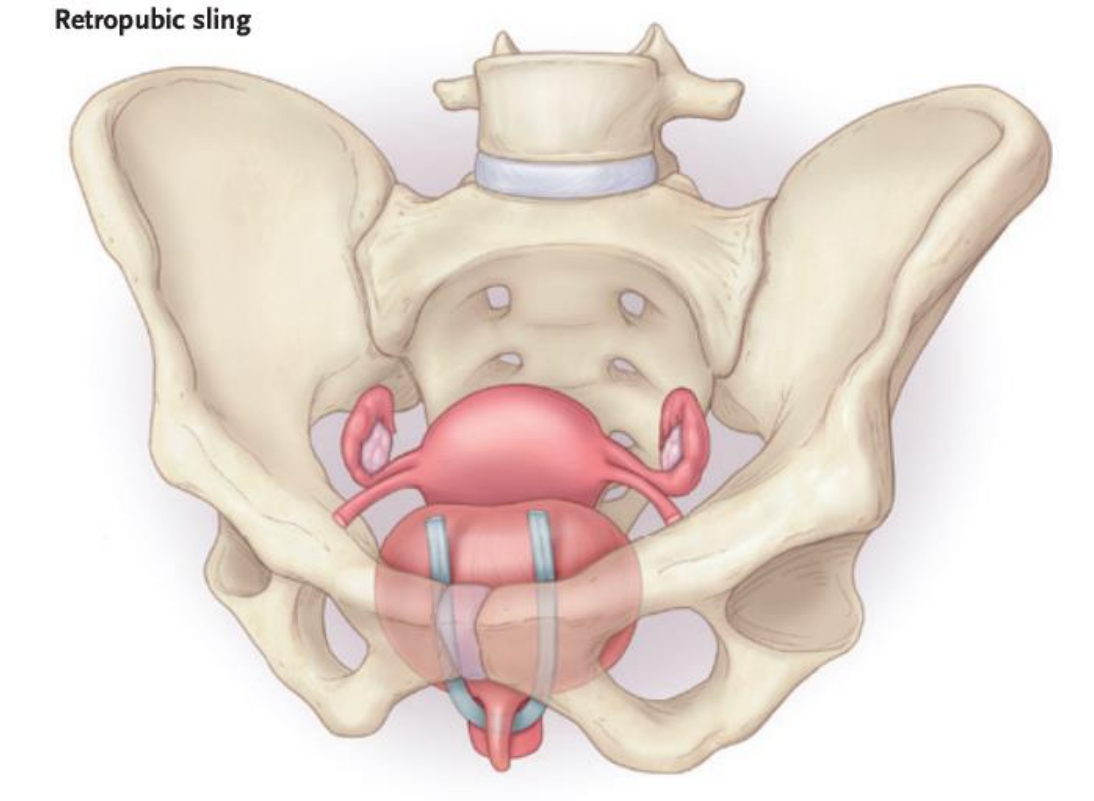
Adapted from Richter HE et al. Obstet Gynecol. 2010;115(3):609-617.

Patient Satisfaction Not Different with Combined Therapy at 12 Months



Adapted from Richter HE et al. Obstet Gynecol. 2010;115(3):609-617.

Midurethral Sling (MUS)



Wu JM. N Engl J Med. 2021;384(25):2428-2436.

Effective

- 71-97% subjective cure rate at 1 year after surgery[1,2]

Durable

- 89% subjective cure, 91% objective cure at 17 years after surgery[3]
- 1.5% reoperation rate at >5 years[1]

High satisfaction

- 89% patient-reported satisfaction[4]

[1] Imamura M et al. BMJ. 2019;365:l1842.

[2] Ford AA et al. Cochrane Database Syst Rev. 2017;(7):CD006375.

[3] Braga A et al. BJU Int. 2018;122:113-117.

[4] Wai CY et al. Obstet Gynecol. 2013;121(5):1009-1016.

MUS: Serious Adverse Events

Serious Adverse Event	No. of Events/No. of Patients (%)
Bladder Perforation	15/15 (5.0%)
Urethral Perforation	1/1 (0.3%)
Vaginal Epithelial Perforation	6/6 (2.0%)
Postoperative Bleeding	1/1 (0.3%)
Mesh Exposure	10/9 (3.0%)
Mesh Erosion	1/1 (0.3%)
Voiding Dysfunction Requiring Surgery and/or Catheter Use	9/9 (3.0%)
Recurrent UTI	3/3 (1.0%)
Neurologic Symptoms	3/3 (1.0%)
Total Serious Adverse Events	**49/46 (15.4%)**

N = 298. Some patients experienced more than one event.

Adapted from Brubaker L et al. Am J Obstet Gynecol. 2011;205(5):498.e1-498.e6.

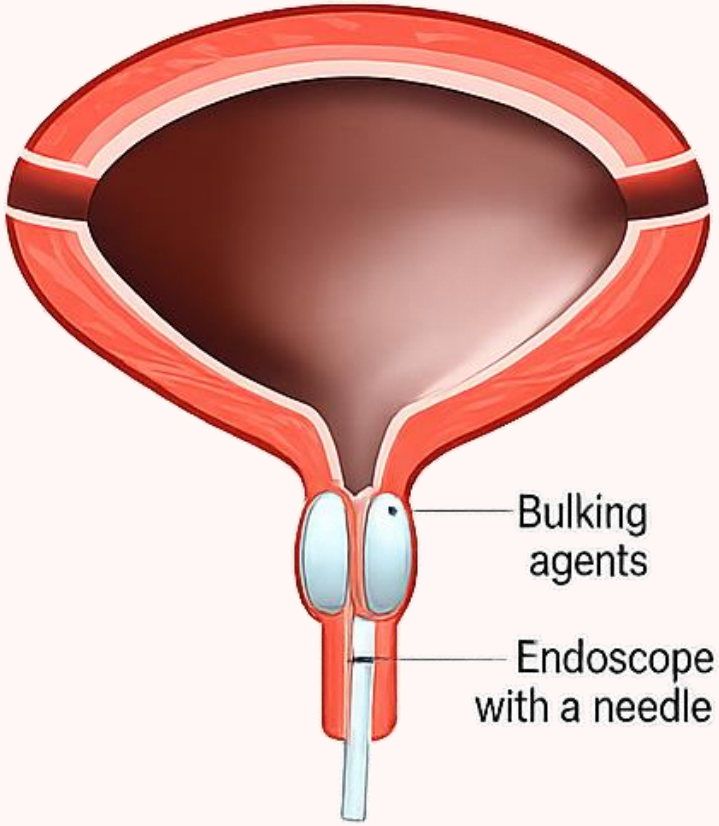
MUS: Contraindications ⚠

- Intraoperative urethral injury
- Concomitant urethral diverticulectomy
- Concomitant urethrovaginal fistula repair
- Current or prior urethral mesh erosion
- Increased risk of poor wound healing*
- Desires future childbearing*

**Relative contraindication; patient and surgeon should engage in a discussion of risks, benefits, and alternatives and utilize shared decision-making.*

Kobashi KC et al. J Urol. 2023;209(6):1091-1098.

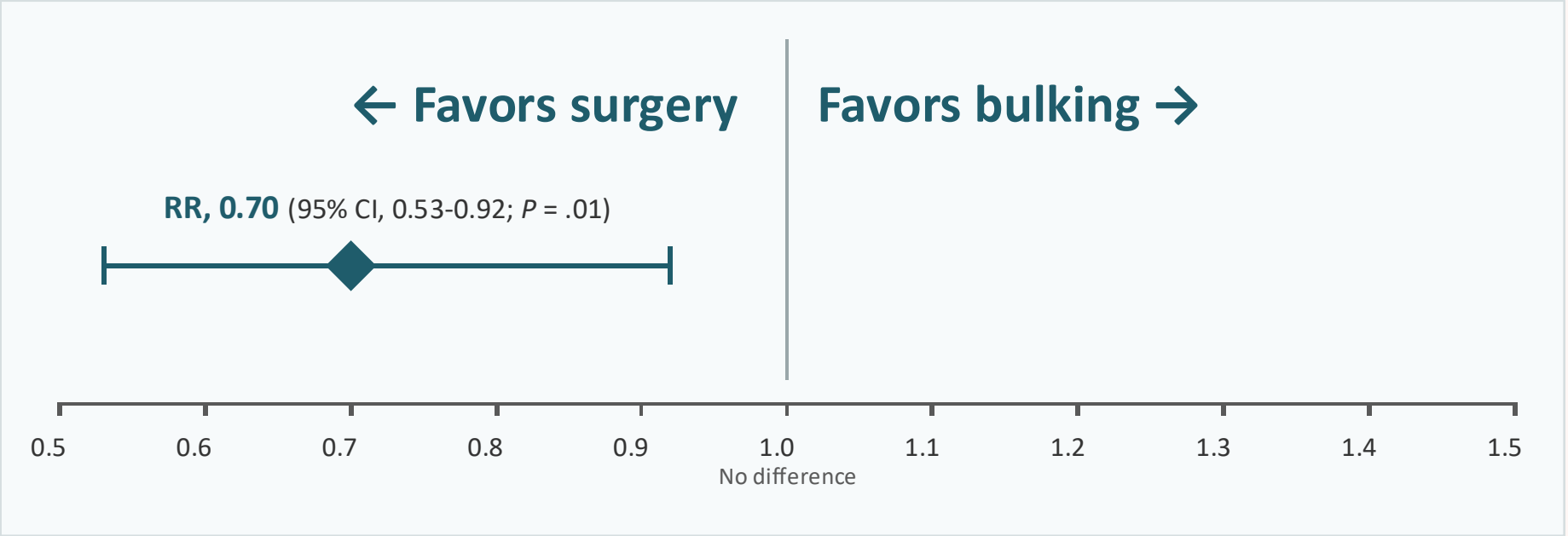
Urethral Bulking



- 67% cure rate when used as a primary procedure[1]
- 23%-57% subjective improvement when used for recurrent/persistent symptoms after midurethral sling[2,3]
- Adverse events are uncommon (0.4%)[4]

[1] Brosche T et al. Neurourol Urodyn. 2021;40(1):502-508.
[2] Myhr SS et al. Int Urogynecol J. 2022;33(4):1017-1022.
[3] Zivanovic I et al. Neurourol Urodyn. 2017;36(3):722-726.
[4]Capobianco G et al. Maturitas. 2020;133:13-31.

Urethral Bulking Yields Less Subjective Improvement Than Surgery

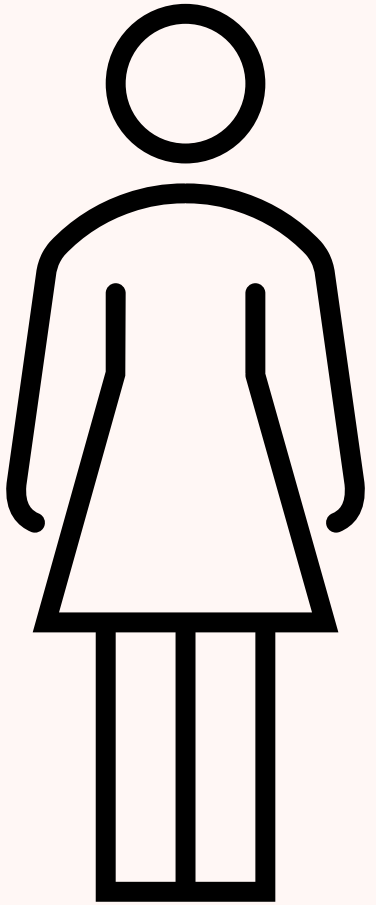


Adapted from Pivazyan L et al. Int Urogynecol J. 2022;33(4):777-787.

Clinical Scenario

☑ History

A 50-year-old woman presents to your office with concerns about urinary incontinence. She reports feeling spurts of urine come out when she coughs and sneezes. She also reports that she can no longer run for exercise because of the volume of leakage with this activity. She denies urinary frequency symptoms and states she does not need to rush to the bathroom “unless I’ve waited too long”. She denies any difficulty making it to the bathroom when she has the urge to void.

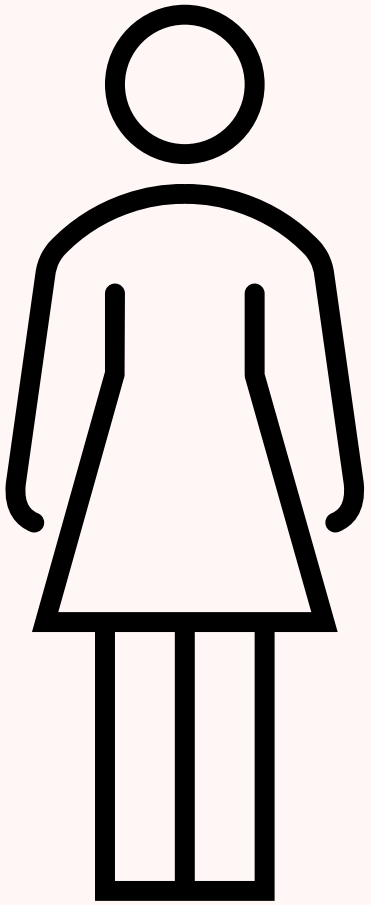


What is your working diagnosis?

UI diagnosis is based primarily on the clinical history.

☑ Physical Exam

The patient is noted to have a BMI in the obese range (31 kg/m^2). Pelvic examination shows no evidence of periurethral or suburethral masses. There is no overt pelvic organ prolapse. She is not able to voluntarily contract her pelvic floor muscles.



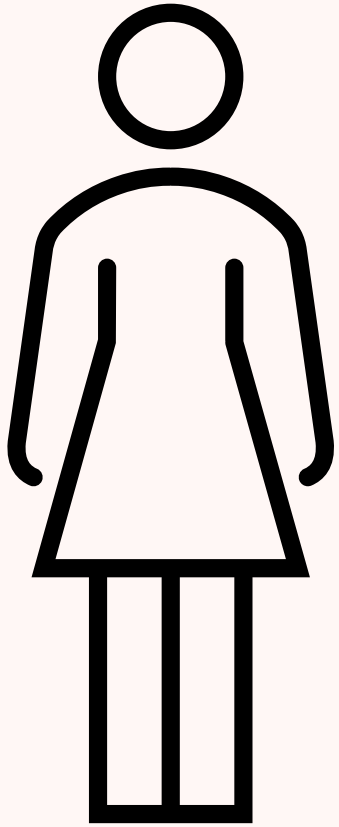
☑ Urinalysis

Urinalysis is negative for urinary tract infection.

50-year-old Female with Urinary Incontinence

- [x] History
- [x] Physical Exam
- [x] Urinalysis

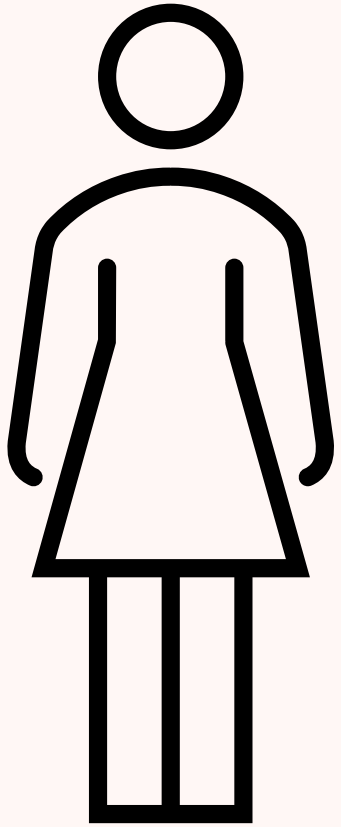
Diagnosis: ???



50-year-old Female with Urinary Incontinence

- [x] History
- [x] Physical Exam
- [x] Urinalysis

Diagnosis: Stress urinary incontinence



Next Steps:

Address obesity as a modifiable risk factor

Initiate PFPT

- Verbal/written instructions OR
- Supervised therapy with a pelvic floor physical therapist

Refer to Urogynecology if:

- Uncertain about diagnosis
- PFPT does not improve symptoms to patient satisfaction
- Patient desires intervention

Key Points

- Stress urinary incontinence is common
- Lack of screening keeps many women from seeking treatment
- Treatment of obesity and PFPT are first-line therapies
- Pessaries improve symptoms for some patients
- Midurethral sling is effective, durable, and associated with a high satisfaction rate
- Urethral bulking is less effective than a midurethral sling

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Boyington JEA, Howard DL, Carter-Edwards L, et al. Differences in resident characteristics and prevalence of urinary incontinence in nursing homes in the southeastern United States. *Nurs Res*. 2007;56(2):97-107. doi:10.1097/01.NNR.0000263969.08878.51

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