MAYO CLINIC | School of Continuous Professional Development

97TH ANNUAL

CLINICAL REVIEWS

November 6-8, 2023



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MAYO CLINIC | School of Continuous Professional Development

APPROACHING PELVIC PAIN

Gynecologic Perspective

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DISCLOSURES

Relevant Financial Relationships

- None

Off-Label and/or Investigational Uses

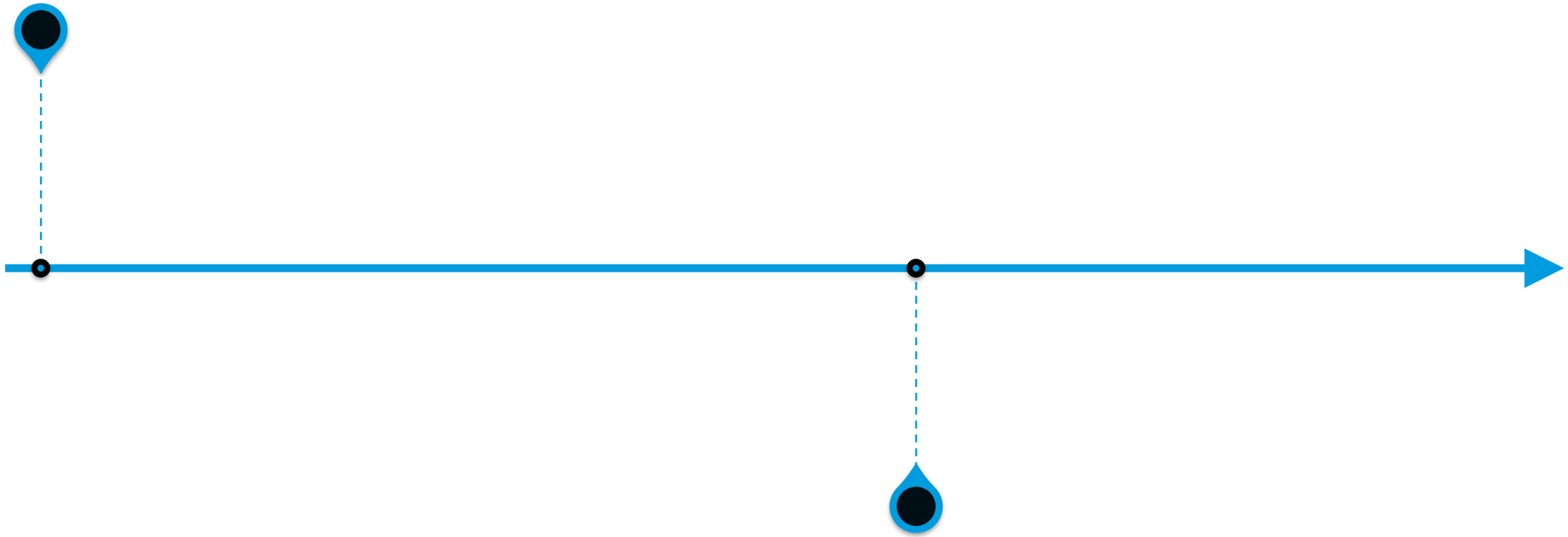
- Allergan; Botox®

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CHRONIC PELVIC PAIN (CPP)

>6 MONTHS



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LEARNING OBJECTIVES

1. **Describe a systematic approach to the evaluation and management of chronic pelvic pain**
2. **Identify communication tools and tips for navigating with a patient through an encounter for pelvic pain**

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LEARNING OBJECTIVES

1. Describe a systematic approach to the evaluation and management of chronic pelvic pain
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DIFFERENTIAL OF CHRONIC PELVIC PAIN

Musculoskeletal

- Abdominal wall myofascial pain (including trigger points)*
- Pelvic floor tension myalgia*
- Fibromyalgia*
- Coccygodynia*
- Piriformis syndrome

Neurologic

- Abdominal wall cutaneous nerve entrapment (ilioinguinal and iliohypogastric)*
- Pudendal neuralgia
- Central sensitization of pain*

Vascular

- Vulvar varicosities
- Pelvic congestion syndrome

* Conditions with level A evidence of a causal relationship to chronic pelvic pain.

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DIFFERENTIAL OF CHRONIC PELVIC PAIN

Gynecologic

- Endometriosis*
- Adenomyosis*
- Leiomyoma*
- Pelvic inflammatory disease*
- Pelvic adhesive disease
- Post-tubal pain syndrome

Urologic

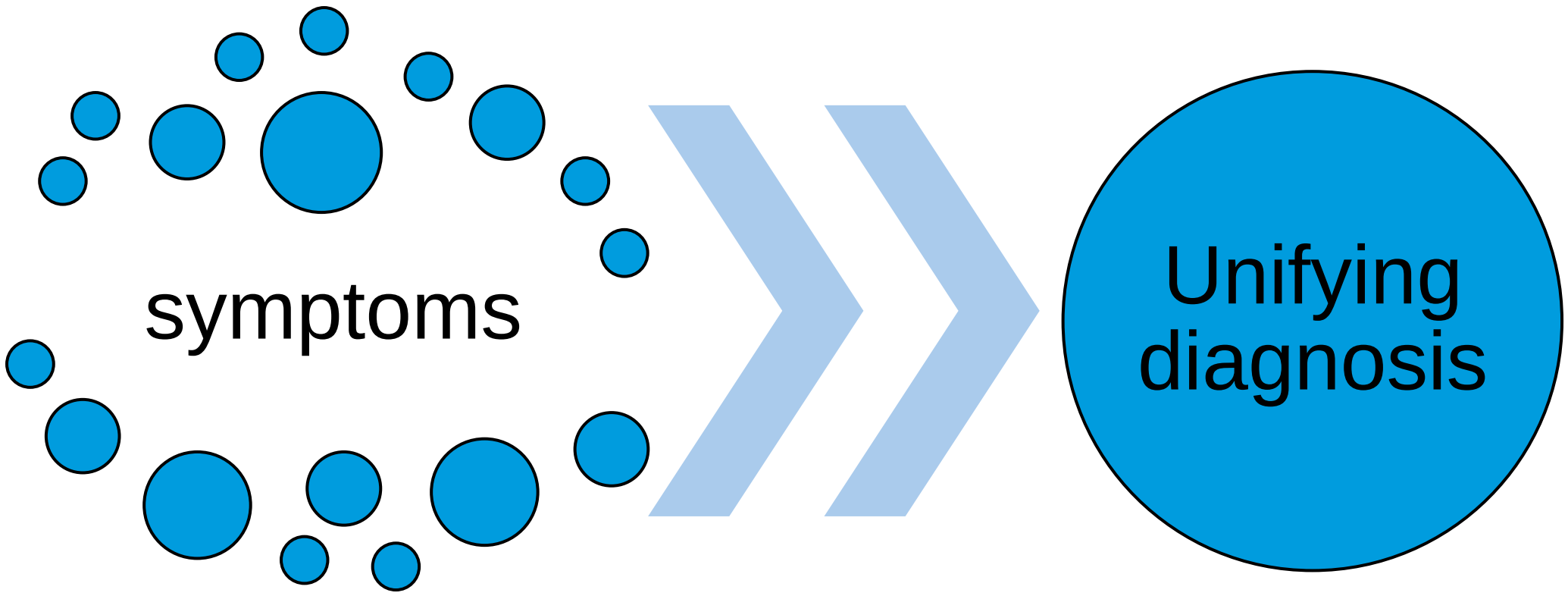
- Interstitial cystitis/painful bladder syndrome*
- Radiation cystitis*
- Bladder cancer*
- Urethral syndrome
- Recurrent cystitis
- Recurrent/chronic urolithiasis

Gastrointestinal

- Irritable bowel syndrome*
- Inflammatory bowel disease*
- Anal Fissures
- Colorectal carcinoma*
- Celiac disease
- Abdominal/pelvic hernias

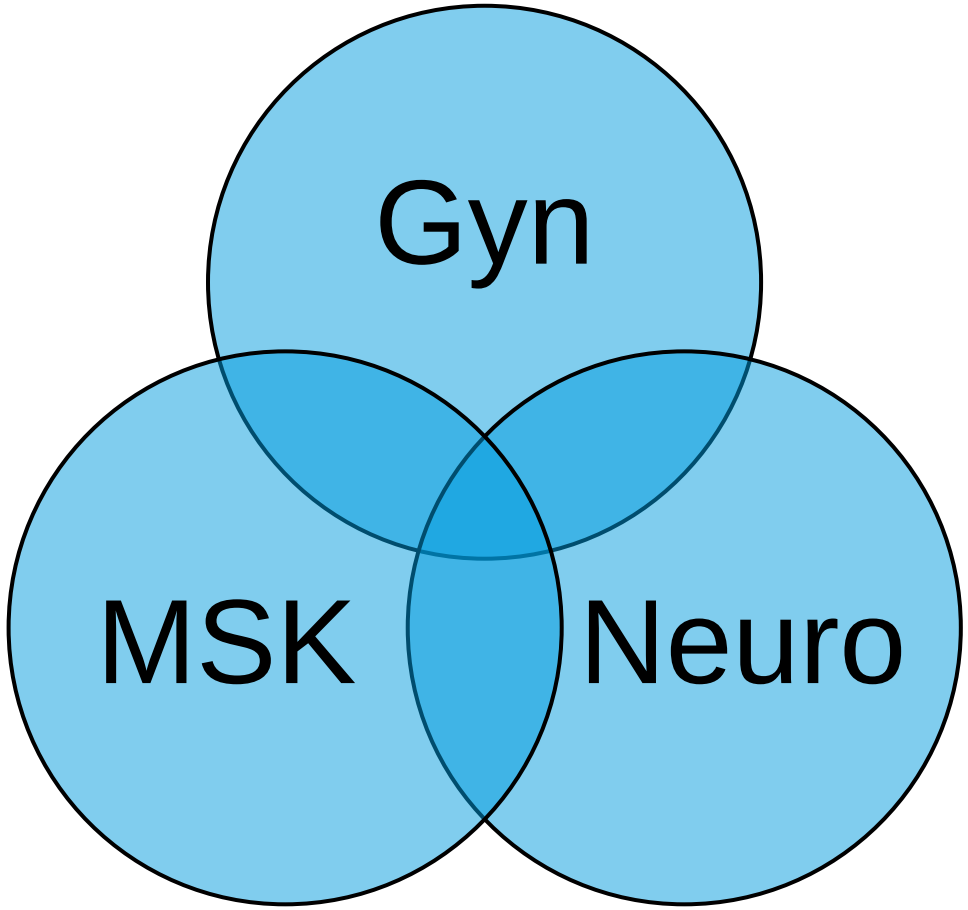
* Conditions with level A evidence of a causal relationship to chronic pelvic pain.

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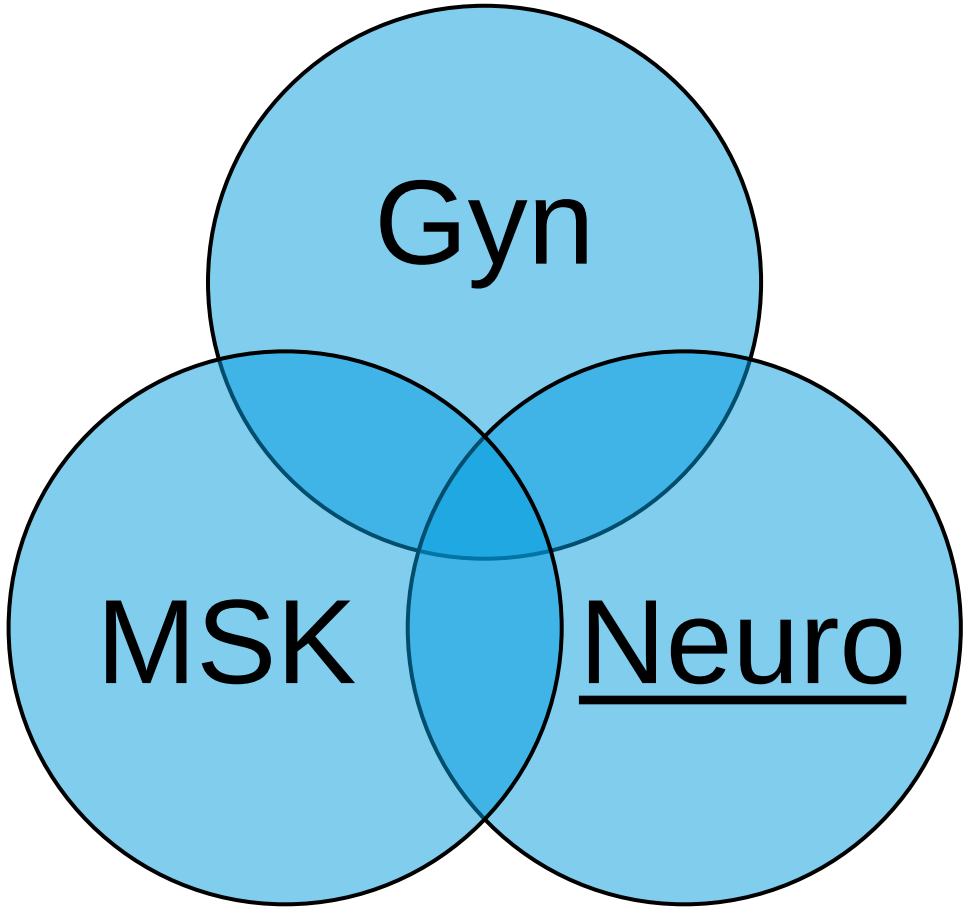
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MULTIFACTORIAL



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NEURO

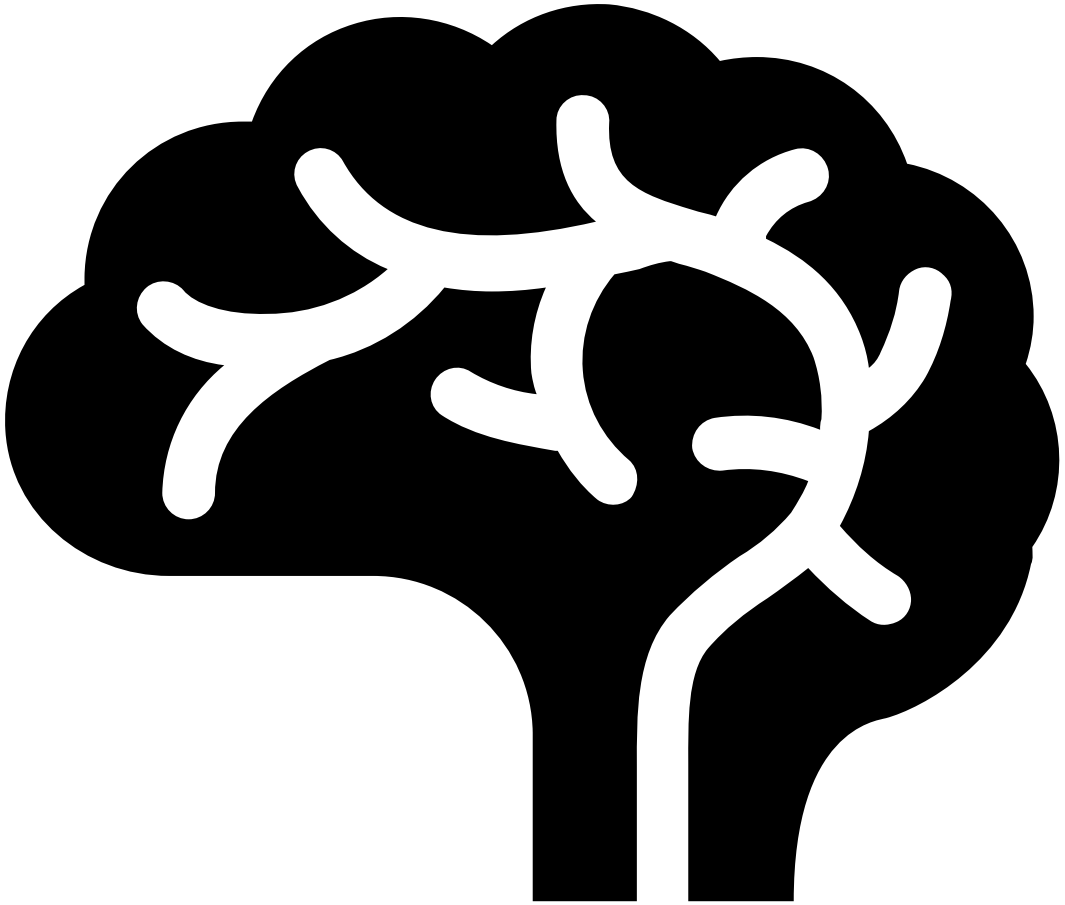


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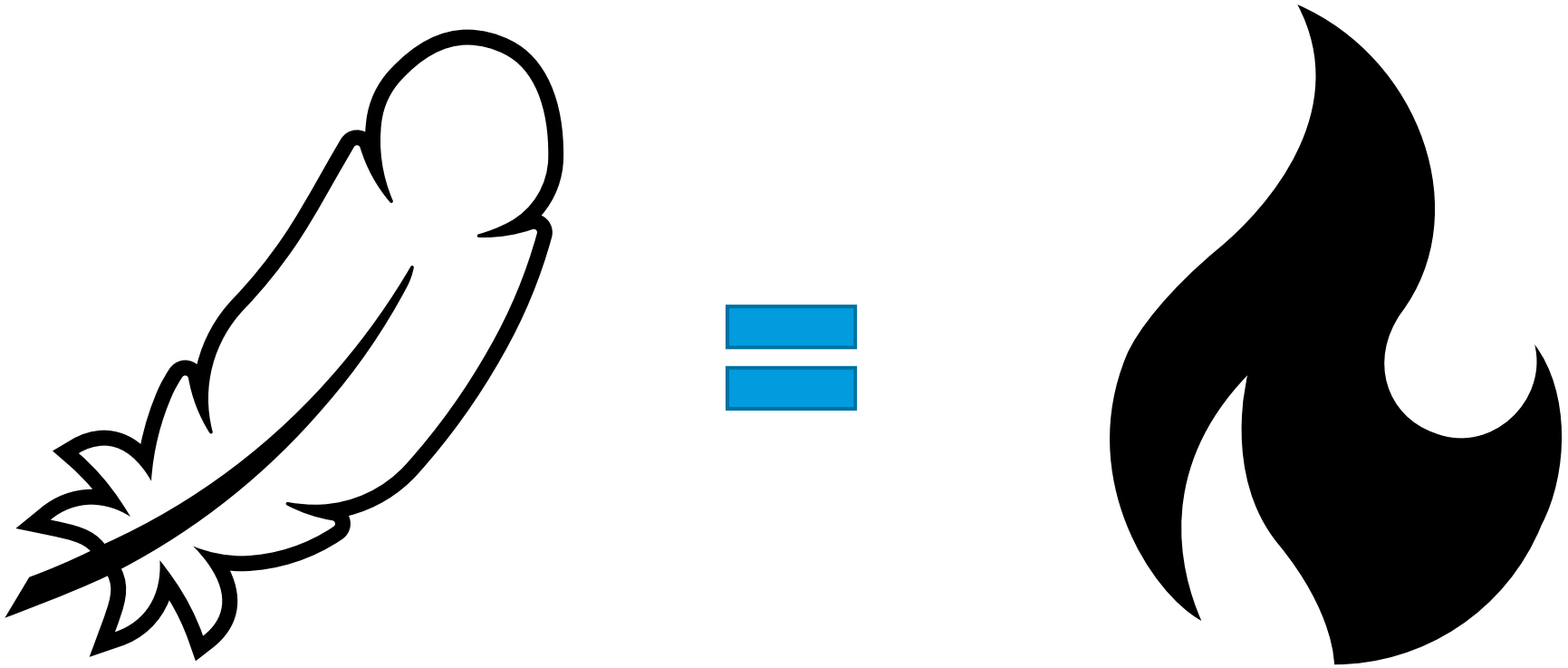
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NOCIPLASTIC pain



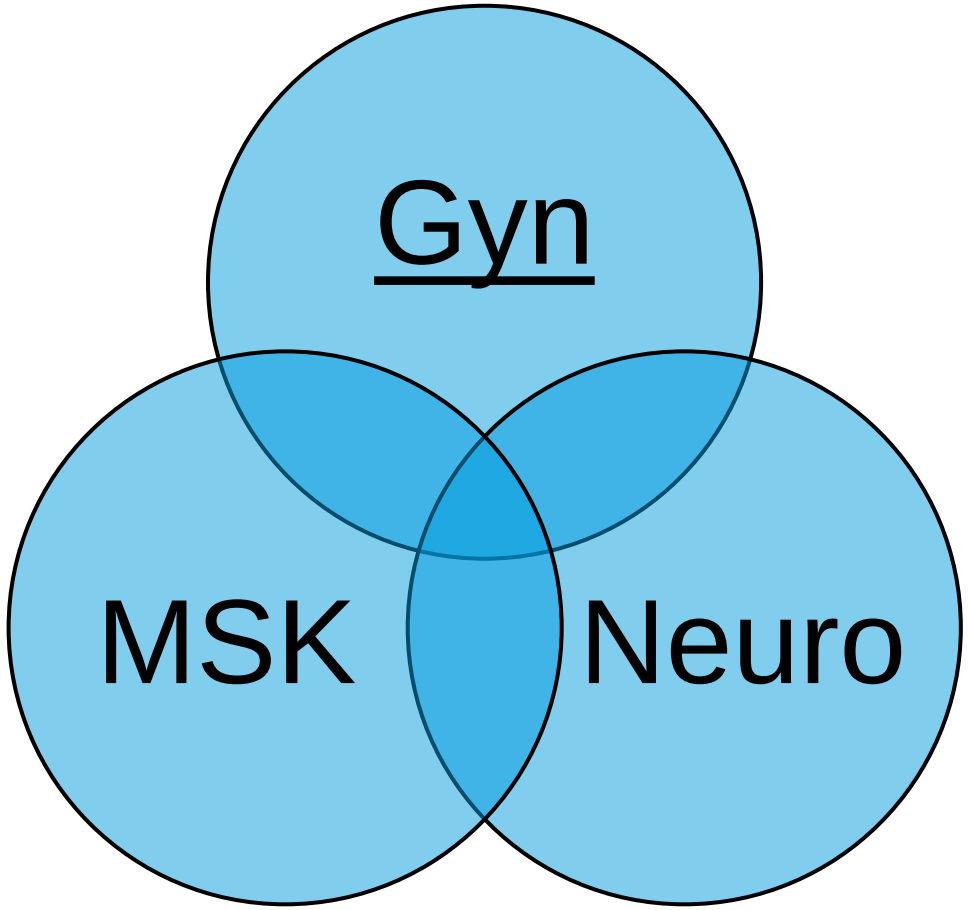
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HYPERALGESIA & ALLODYNIA



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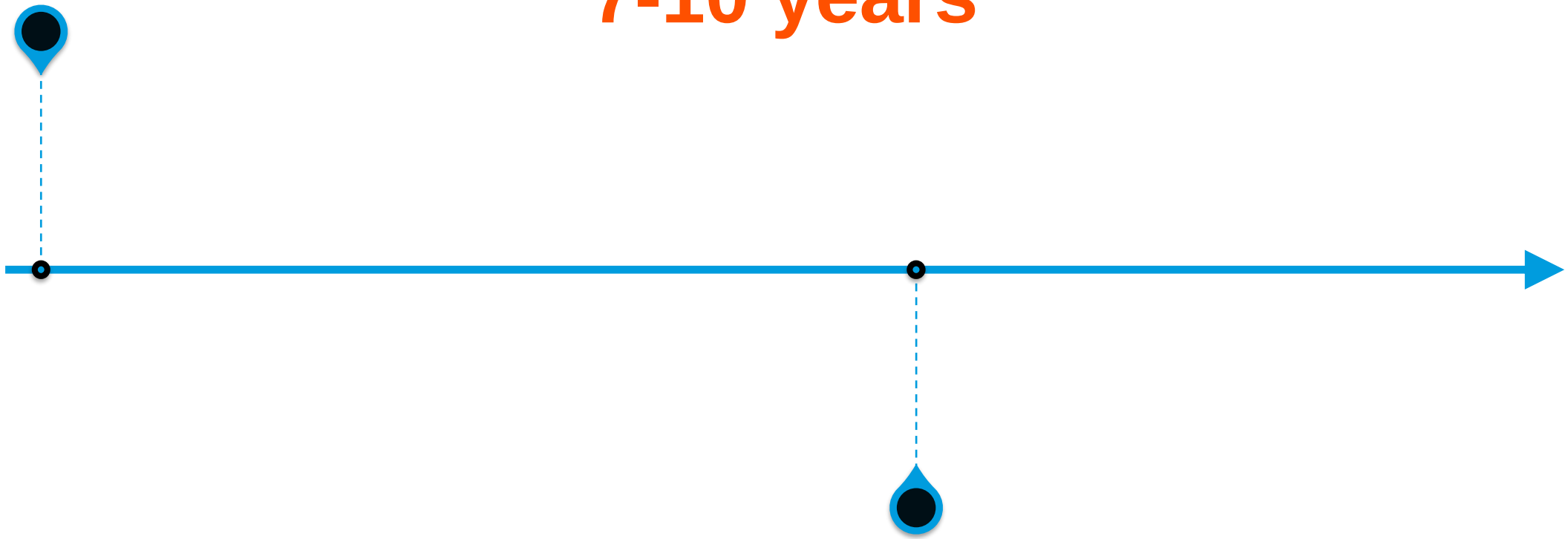
ENDO



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Delay in Diagnosis

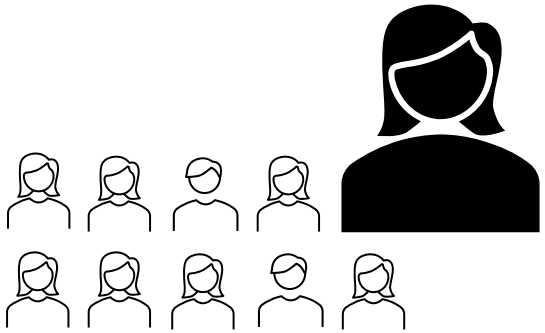
7-10 years

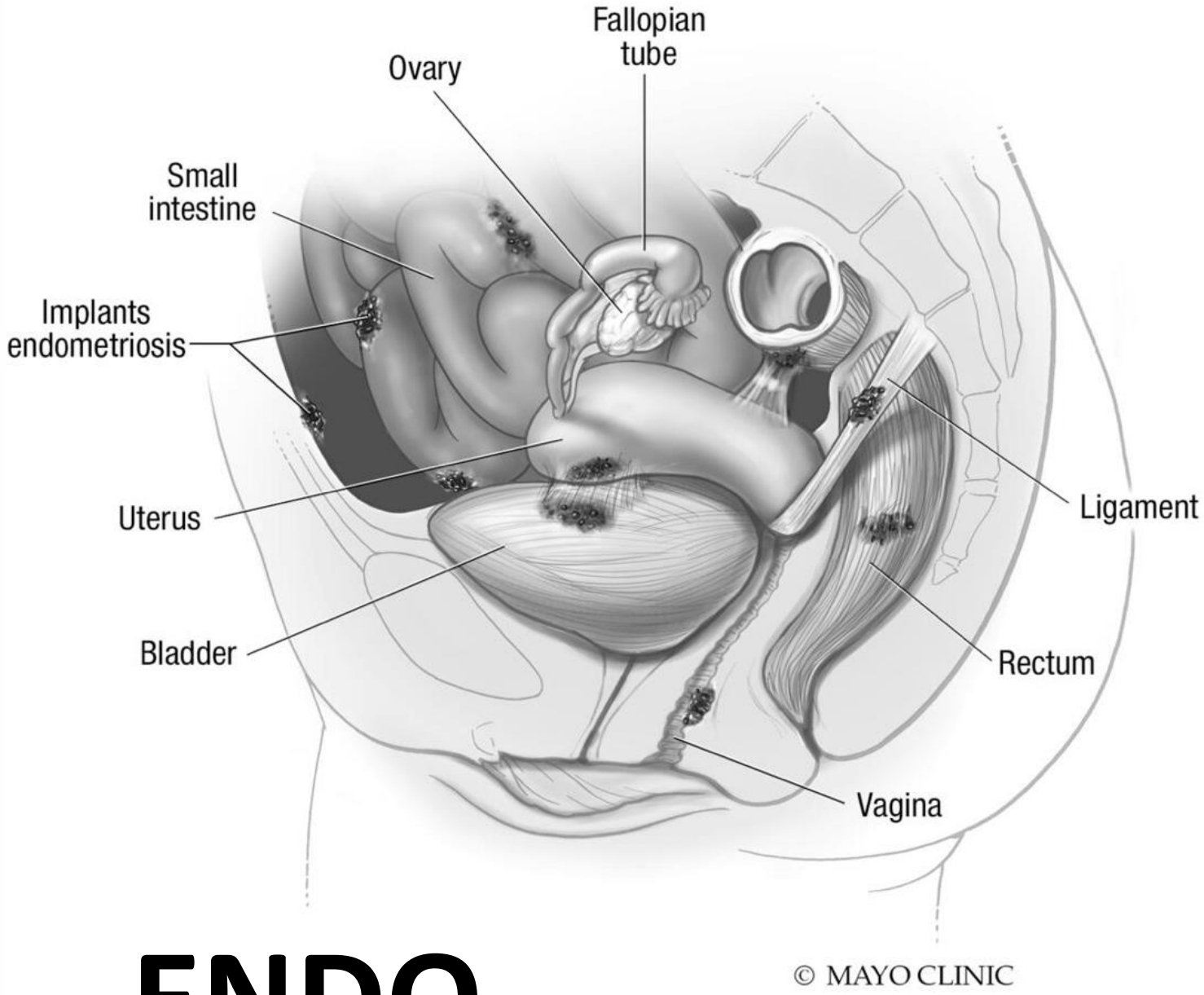


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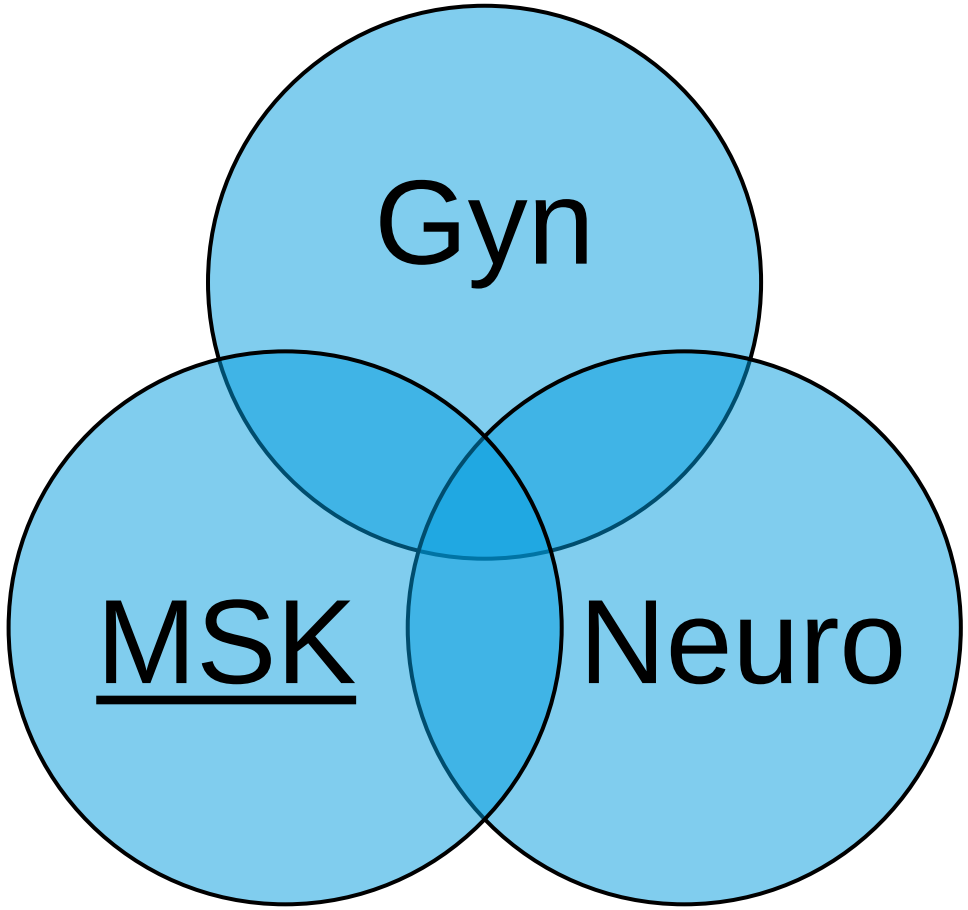
1 IN 10




Fallopian tube
Ovary
Small intestine
Implants endometriosis
Uterus
Bladder
Ligament
Rectum
Vagina
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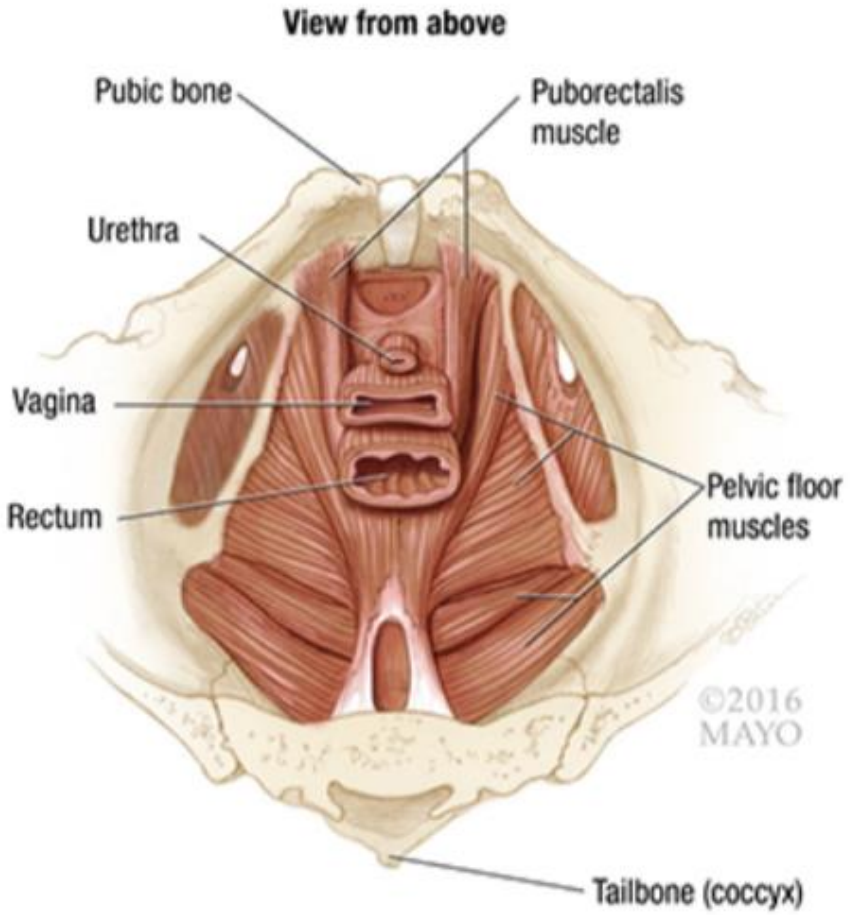
ENDO

MYOFASCIAL PAIN & PELVIC FLOOR DYSFUNCTION



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PELVIC FLOOR

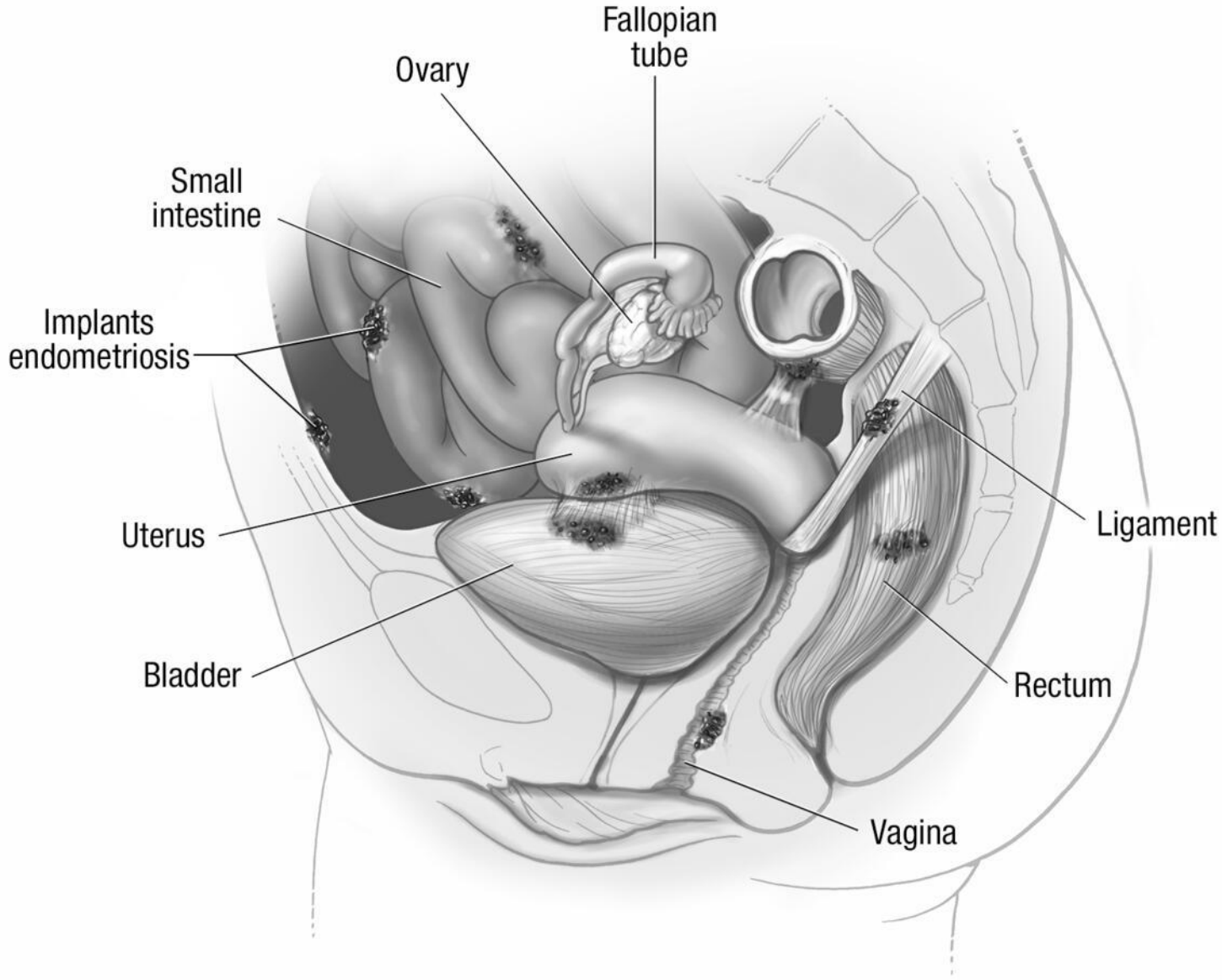


Female pelvic floor musculature

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VISCERAL HYPERALGESIA



Endometriosis

PELVIC FLOOR DYSFUNCTION (PFD)

HYPERtonic

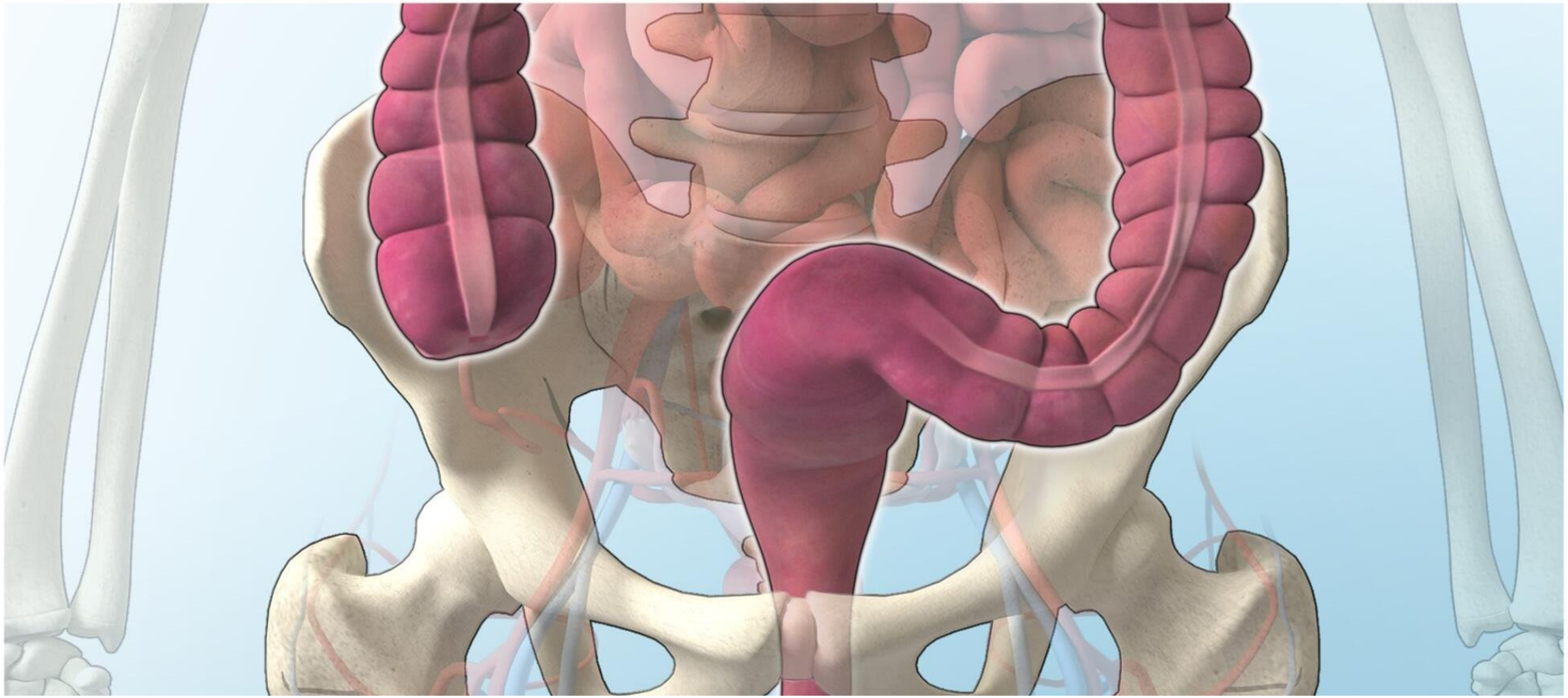


Other CAUSES

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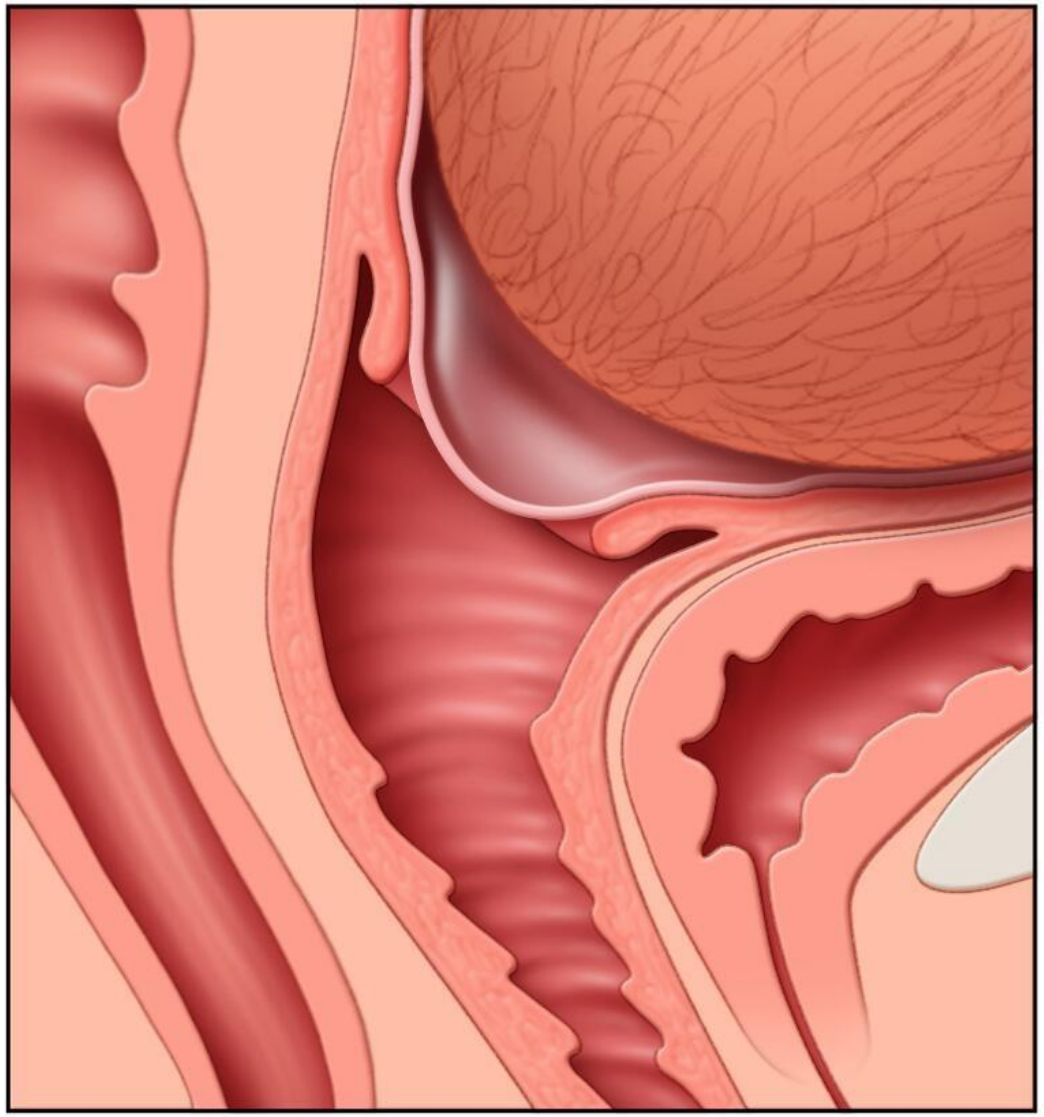
DYSFUNCTION VOIDING/DEFECATION

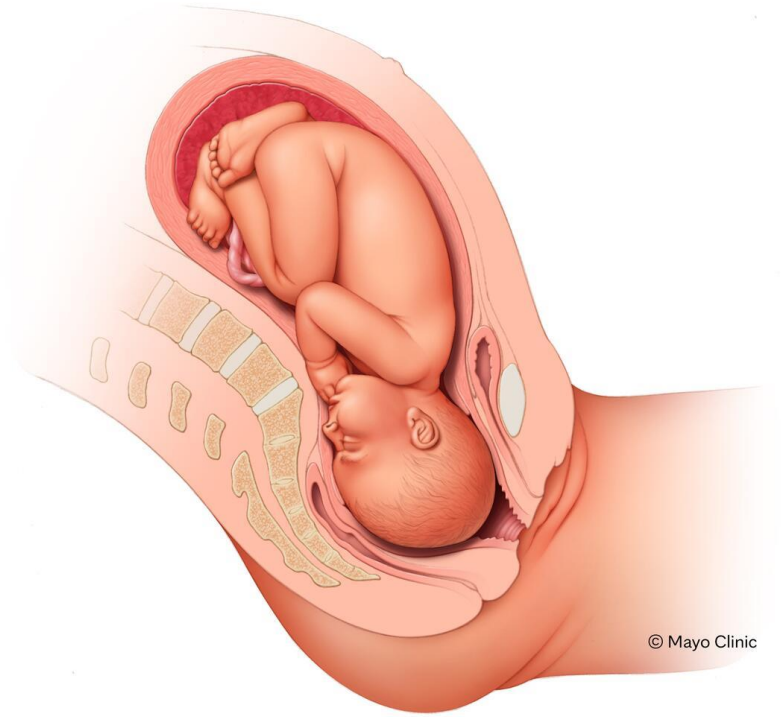


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INJURY





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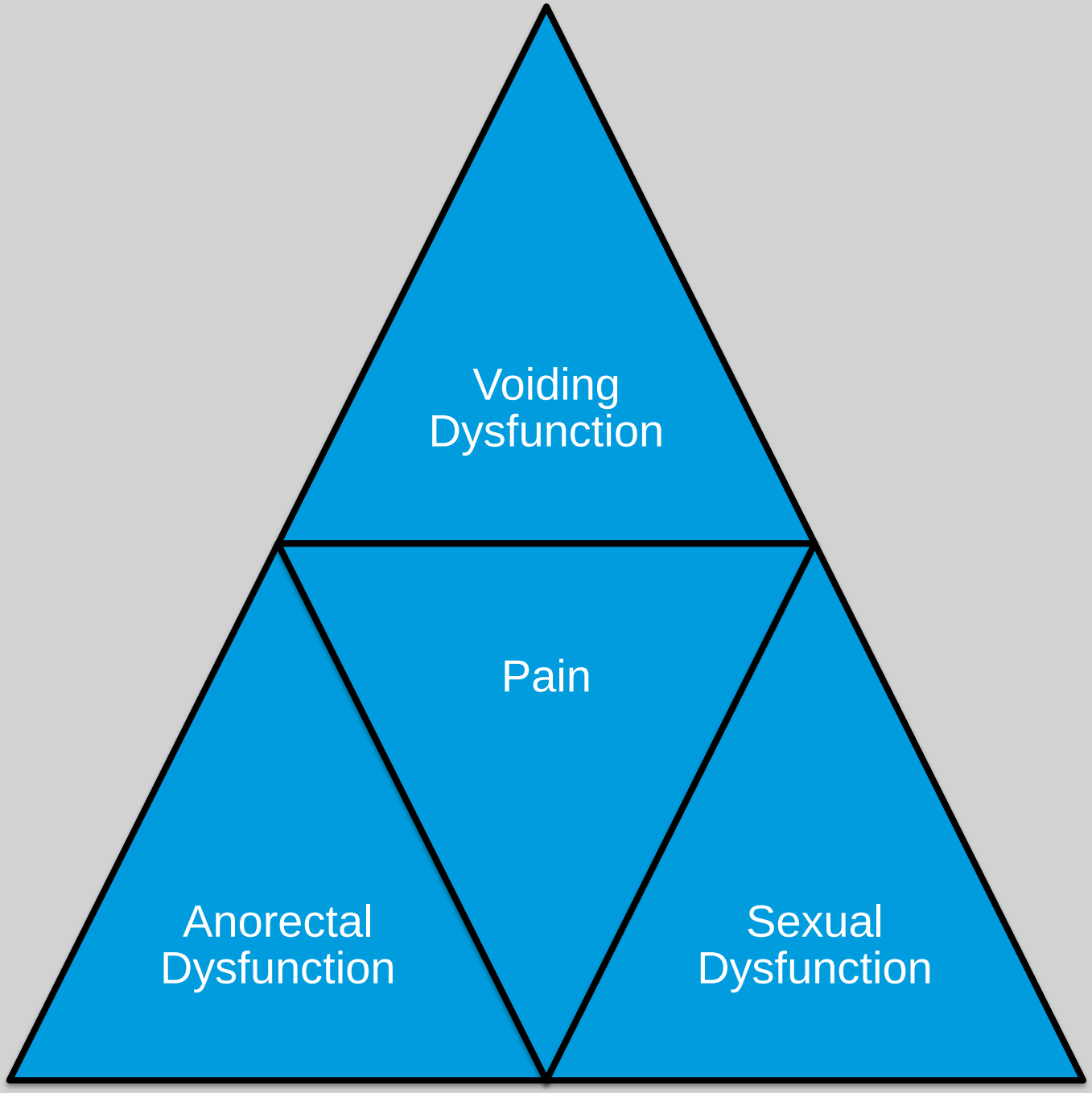
KINETICS



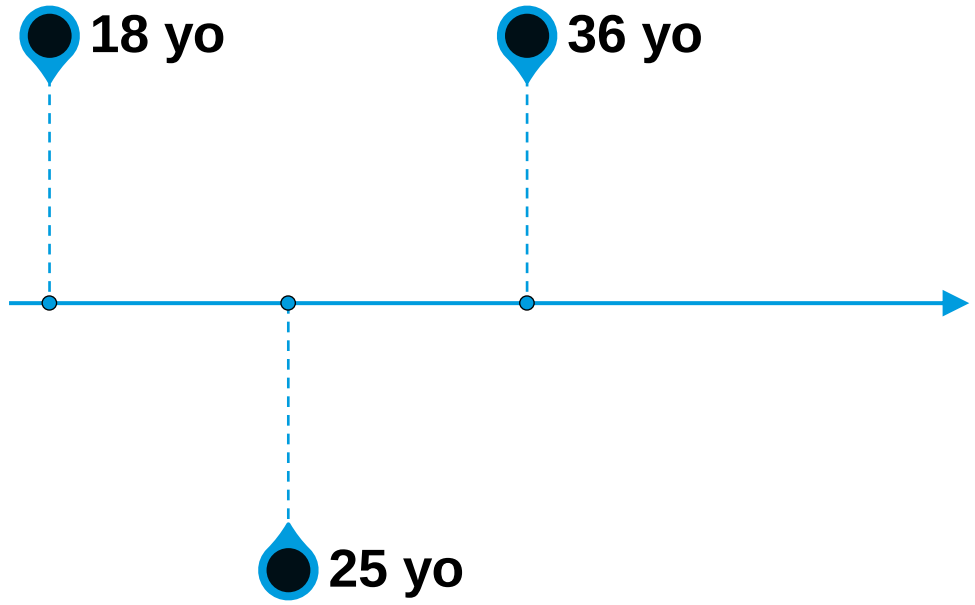
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HIGH TONE PELVIC FLOOR DYSFUNCTION



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LISTEN TO THEIR STORY



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18 YO HEAVY & PAINFUL PERIODS



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18 YO HEAVY & PAINFUL PERIODS



Dysmenorrhea OR Endo/Adeno

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18 YO HEAVY & PAINFUL PERIODS



- Diagnostic laparoscopy is not required for diagnosis/prior to first line treatment

Dysmenorrhea OR Endo/Adeno

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18 YO HEAVY & PAINFUL PERIODS

Pelvic ultrasound is normal

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BELIEVE



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18 YO HEAVY & PAINFUL PERIODS

Pelvic ultrasound is normal

- Normal ultrasound doesn't rule out endometriosis; BUT Endometrioma could be managed surgically

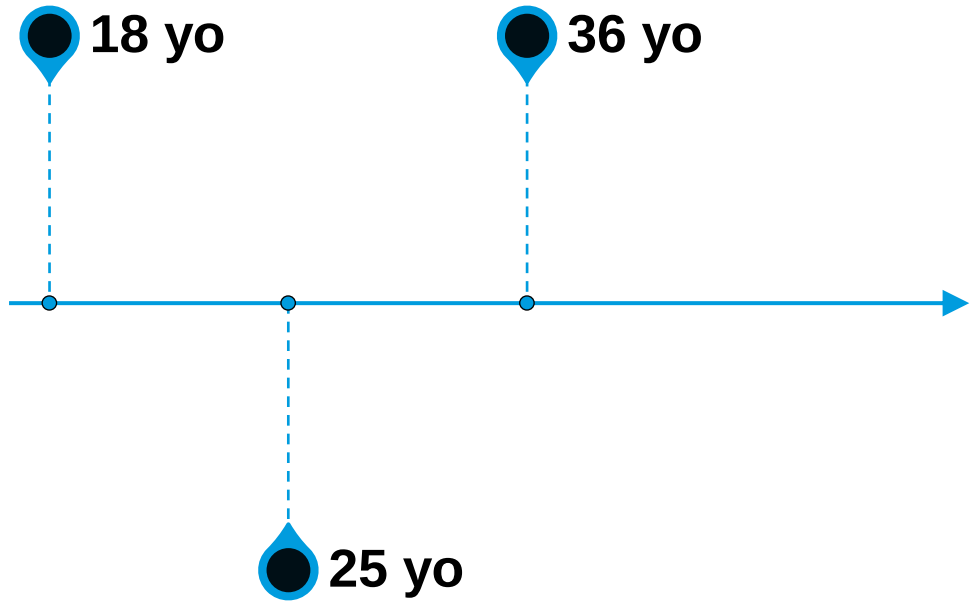
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18 YO HEAVY & PAINFUL PERIODS

Started on the pill; cyclic or continuous



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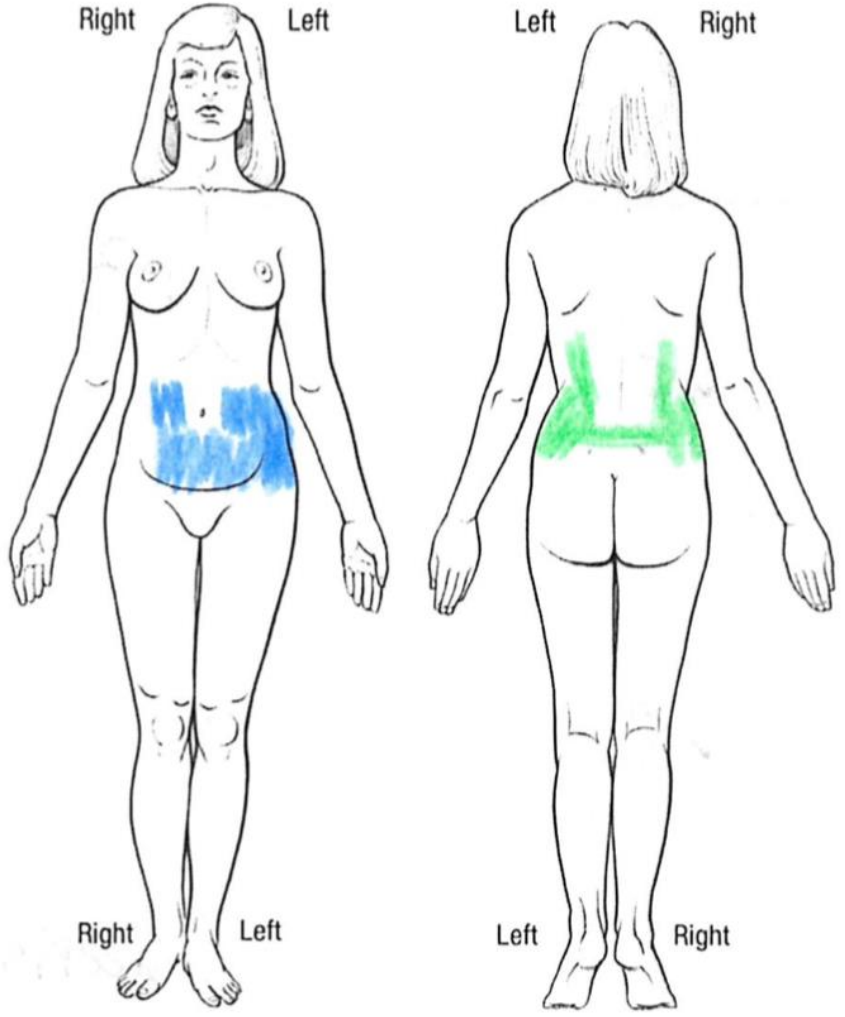


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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

Pain Maps

22. Please shade each area of pain with a separate color. In the te
each site of pain (10 = most severe pain imaginable), and desc
For example, red = 6 sharp, blue = 2 dull.



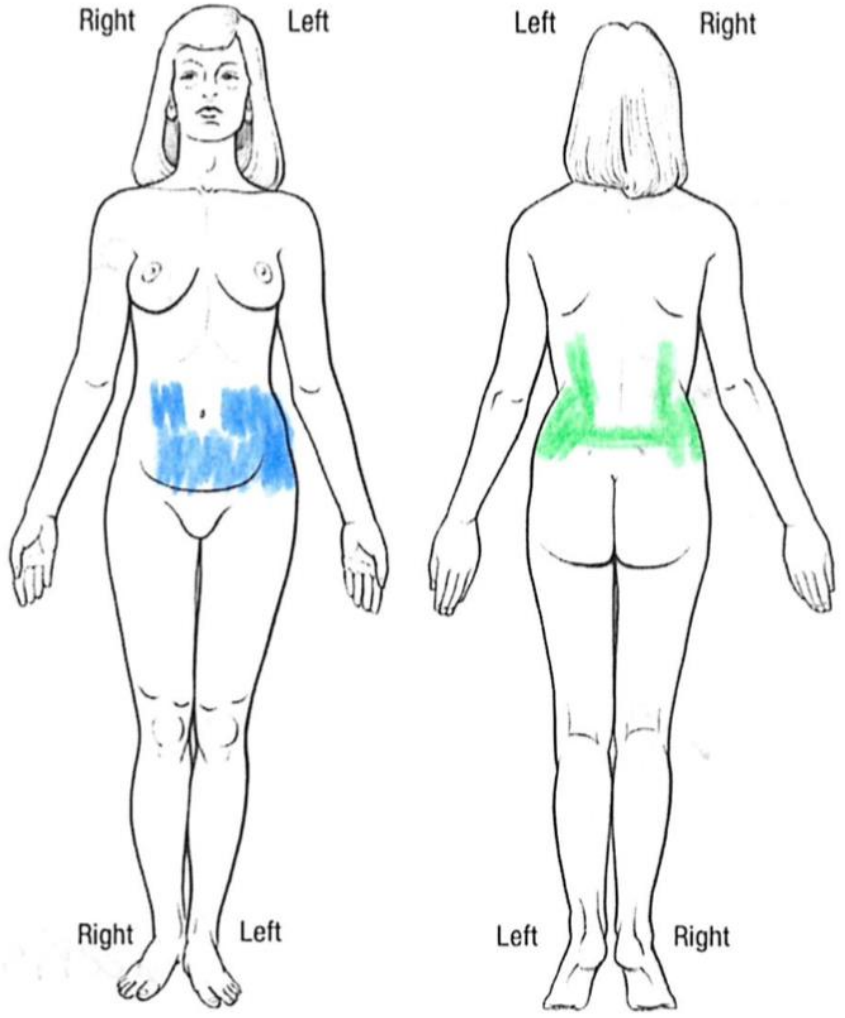
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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

- Pain outside of menses; or while on hormonal therapy **does not exclude** endometriosis

Pain Maps

22. Please shade each area of pain with a separate color. In the te
each site of pain (10 = most severe pain imaginable), and desc
For example, red = 6 sharp, blue = 2 dull.



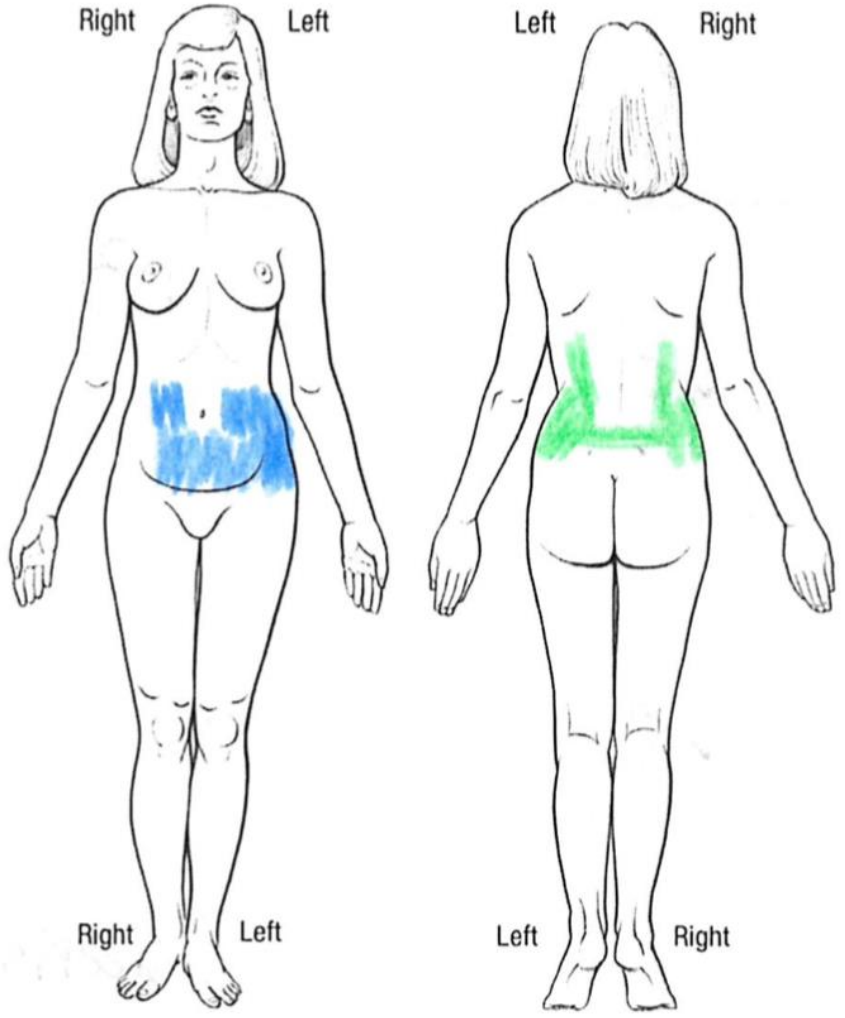
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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

- Think of more than 1 pain generator during evaluation

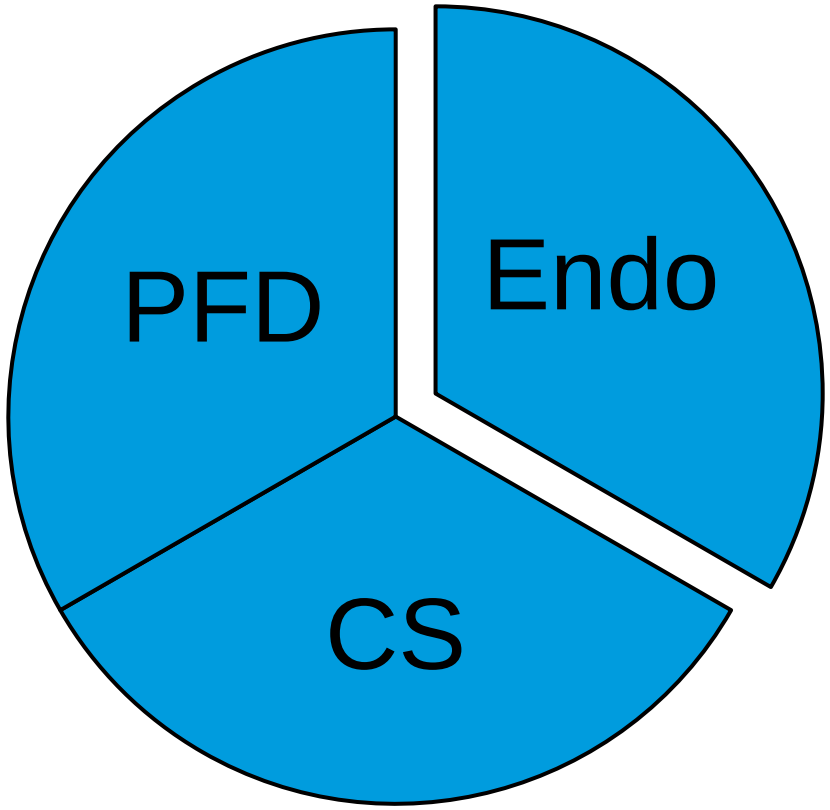
Pain Maps

22. Please shade each area of pain with a separate color. In the te
each site of pain (10 = most severe pain imaginable), and desc
For example, red = 6 sharp, blue = 2 dull.



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ENDOMETRIOSIS & PELVIC PAIN



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PELVIC FLOOR EXAM

PHYSICAL EXAM VIDEO LINK

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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

PF tenderness on exam

Cervical, uterine tenderness noted

Normal pelvic ultrasound

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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

✓ **Switch to continuous pill**

PF tenderness on exam

Cervical, uterine tenderness noted

Normal pelvic ultrasound

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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

- ✓ Switch to continuous pill
- ✓ **PT ordered**

PF tenderness on exam

Cervical, uterine tenderness noted

Normal pelvic ultrasound

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60-80%



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Mayo Patient Education Material

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PATIENT EDUCATION

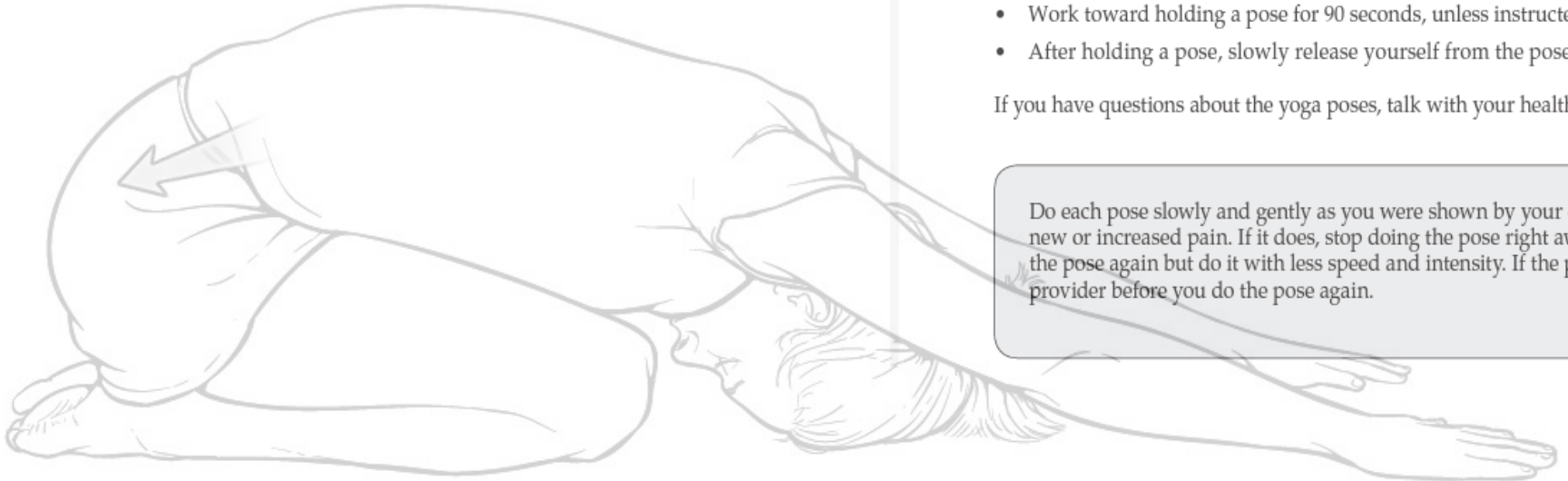
Yoga for Pelvic Pain

Your health care provider recommends that you do certain yoga poses one or two times a day to help with pelvic pain. The yoga poses are gentle stretches that help promote muscle relaxation and decrease pain.

- Move your body slowly and gently to get into each yoga pose.
- As you do each pose, think about the intention or reason you are doing the pose.
- Focus on relaxing your pelvic floor muscles as you keep your breathing relaxed and even.
- Work toward holding a pose for 90 seconds, unless instructed otherwise.
- After holding a pose, slowly release yourself from the pose to return to the starting position.

If you have questions about the yoga poses, talk with your health care provider.

Do each pose slowly and gently as you were shown by your care provider. A pose should not cause new or increased pain. If it does, stop doing the pose right away and relax. If the pain goes away, do the pose again but do it with less speed and intensity. If the pain does not go away, contact your care provider before you do the pose again.



Kneeling lumbar stretch

✓Find a specialist PT in pelvic pain

https://aptapelvichealth.org/ptlocator/

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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

- In women with MRI findings of endometriosis, US will have been normal 50% of the time

PF tenderness on exam

Cervical, uterine tenderness noted

Normal pelvic ultrasound

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Bartlett DJ et al. Abdom Radiol 2020

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25 YO
DAILY PAIN, PAINFUL PERIODS, PAIN W/ SEX

- ✓ Switch to continuous pill
- ✓ PT ordered
- ✓ **Pelvic MRI ordered**
- ✓ **Surgical consult**

PF tenderness on exam

Cervical, uterine tenderness noted

Normal pelvic ultrasound

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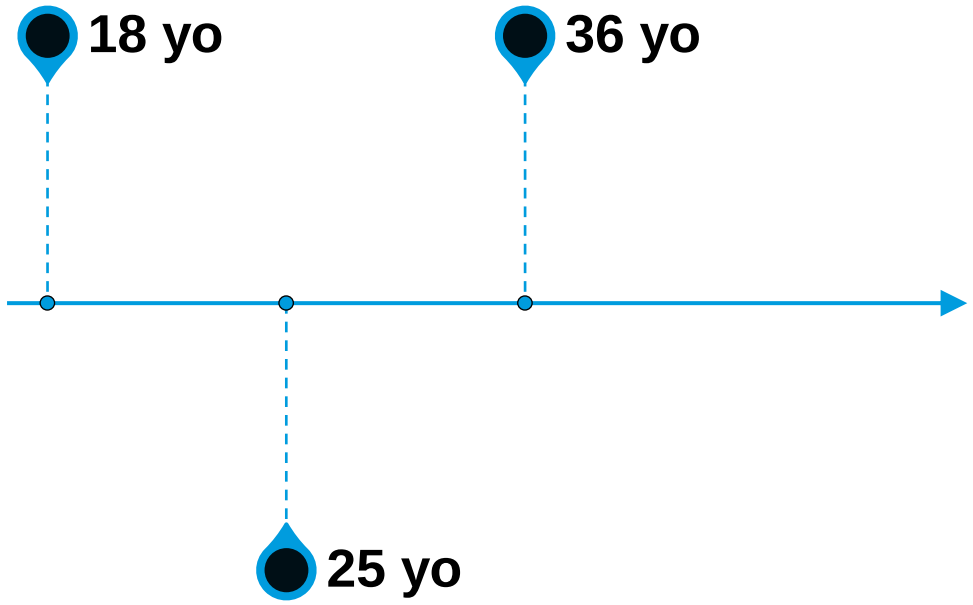
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EDUCATE



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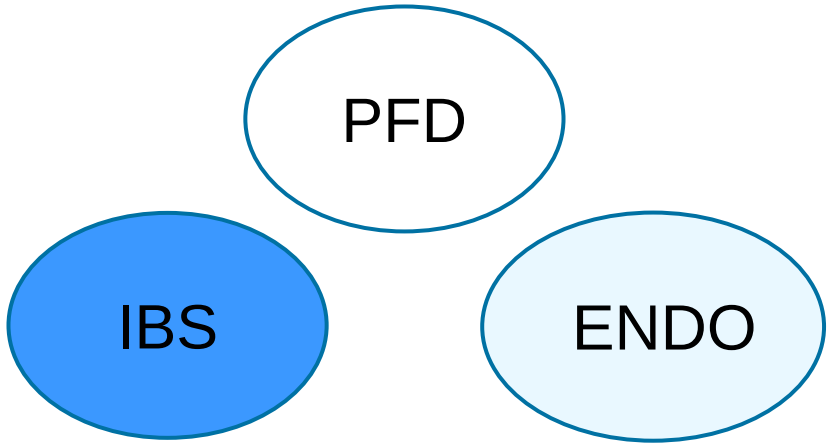


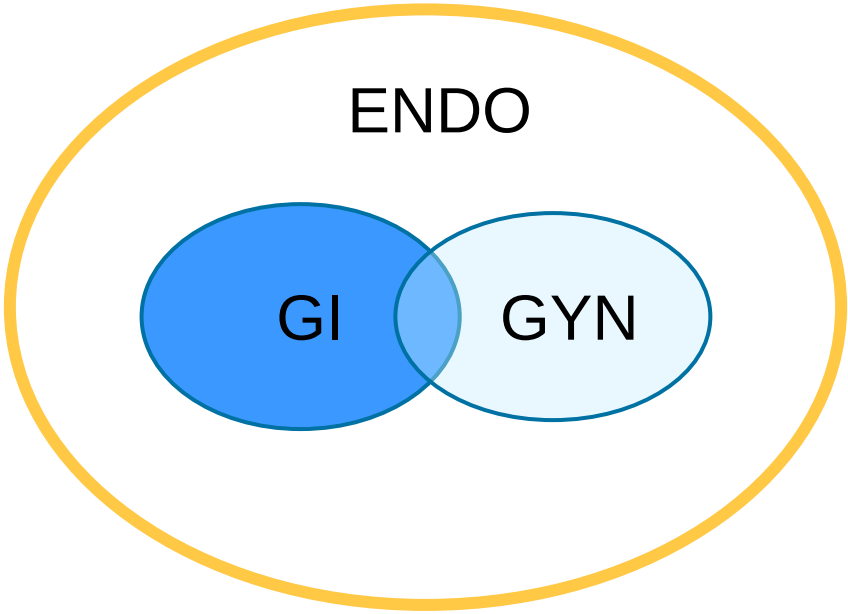
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36 YO ON PILL, DAILY PAIN, PAINFUL BOWEL MOV'T

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36 YO ON PILL, DAILY PAIN, PAINFUL BOWEL MOV'T

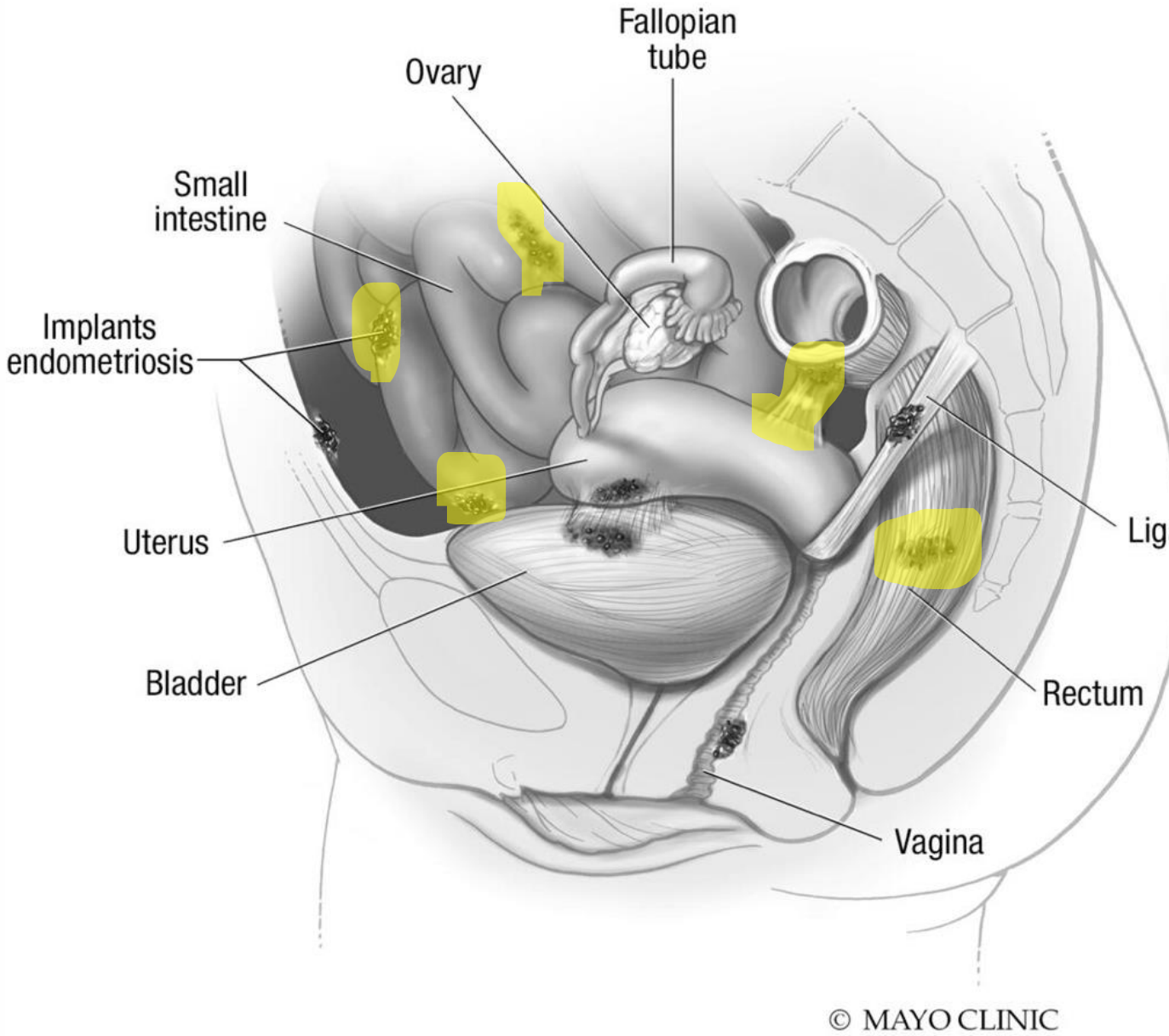




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BOWEL INVOLVEMENT WITH ENDOMETRIOSIS

10%



Endometriosis

36 YO ON PILL, DAILY PAIN, PAINFUL BOWEL MOV'T

PF nontender on exam

Lower abdominal tenderness

Uterine, adnexal, uterosacral tenderness

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36 YO ON PILL, DAILY PAIN, PAINFUL BOWEL MOV'T

✓ **Consider sensitization**

PF nontender on exam

Lower abdominal tenderness

Uterine, adnexal, uterosacral tenderness

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36 YO ON PILL, DAILY PAIN, PAINFUL BOWEL MOV'T

- ✓ Consider sensitization
- ✓ **GI consult**

PF nontender on exam

Lower abdominal tenderness

Uterine, adnexal, uterosacral tenderness

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36 YO ON PILL, DAILY PAIN, PAINFUL BOWEL MOV'T

- ✓ Consider sensitization
- ✓ GI consult
- ✓ **Surgical consult**
- ✓ **Pelvic MRI**

PF nontender on exam

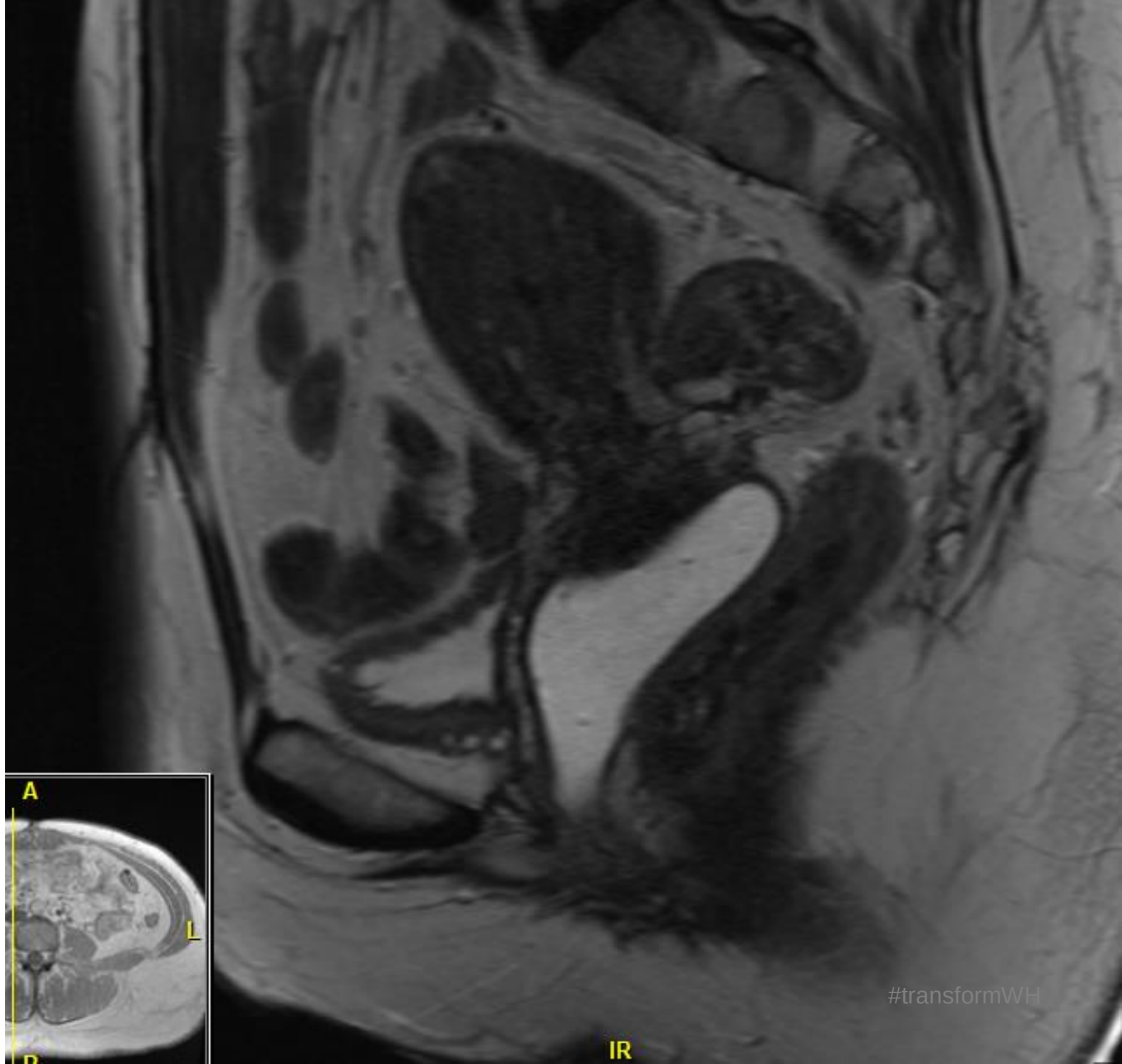
Lower abdominal tenderness

Uterine, adnexal, uterosacral tenderness

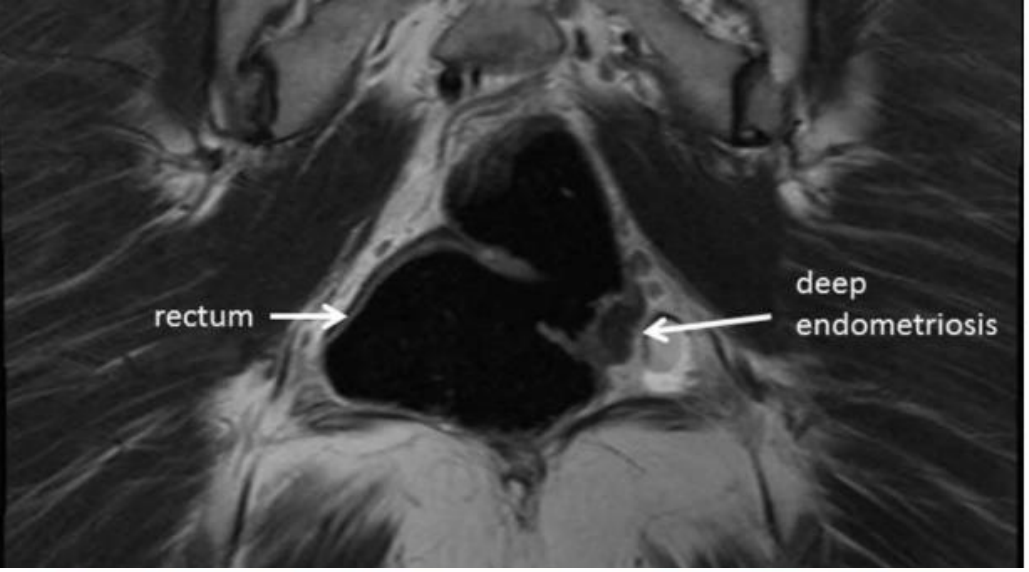
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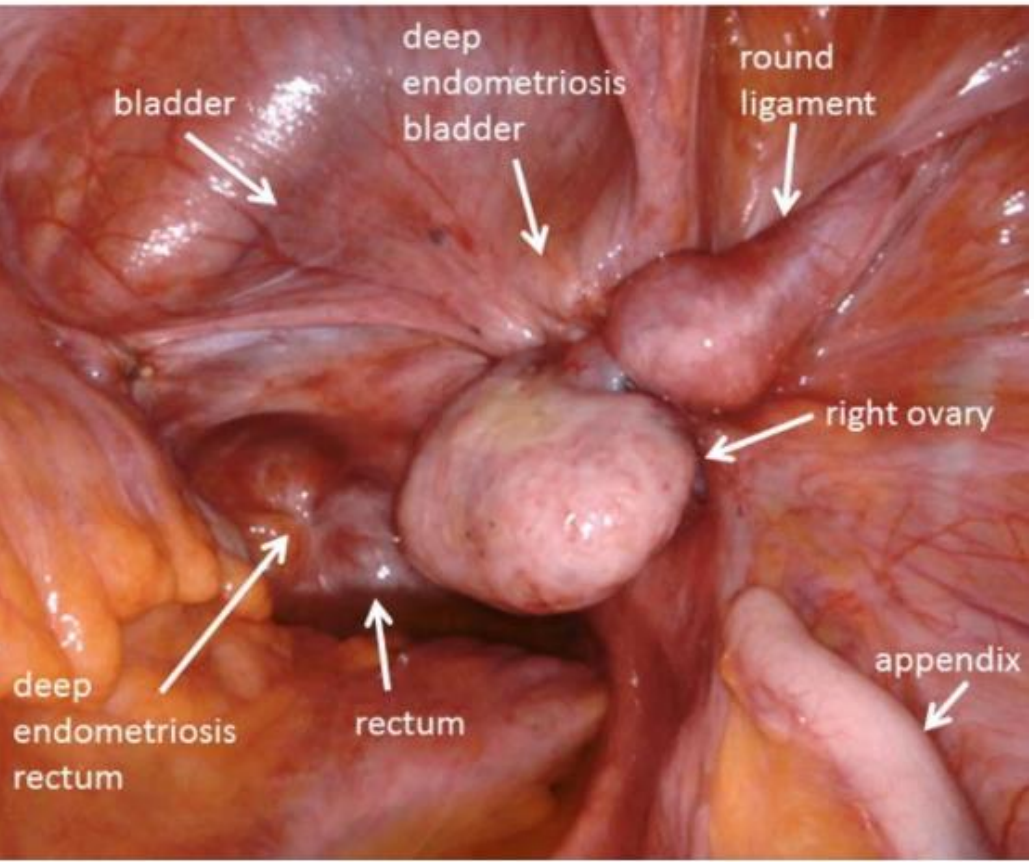
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PELVIC MRI



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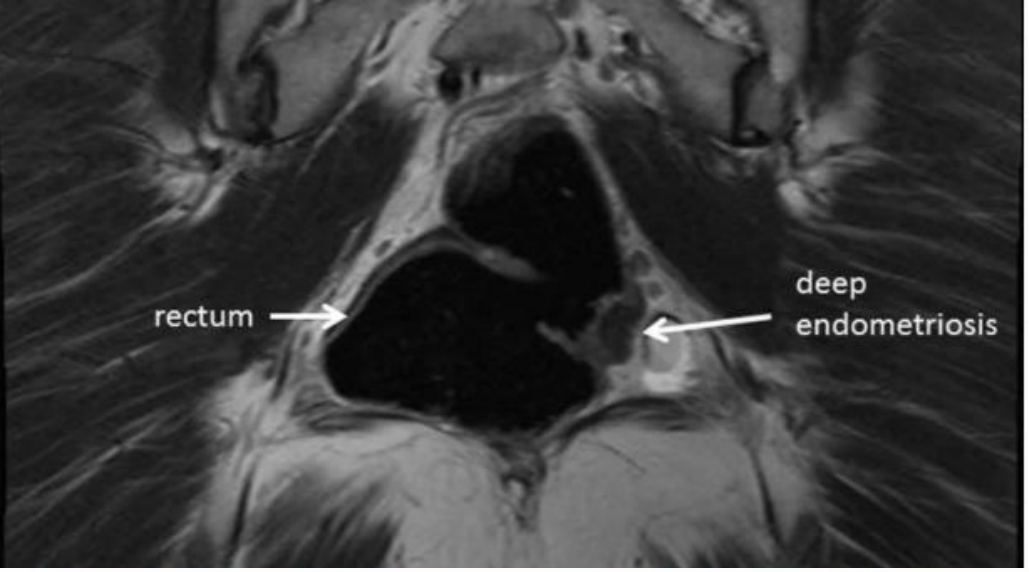


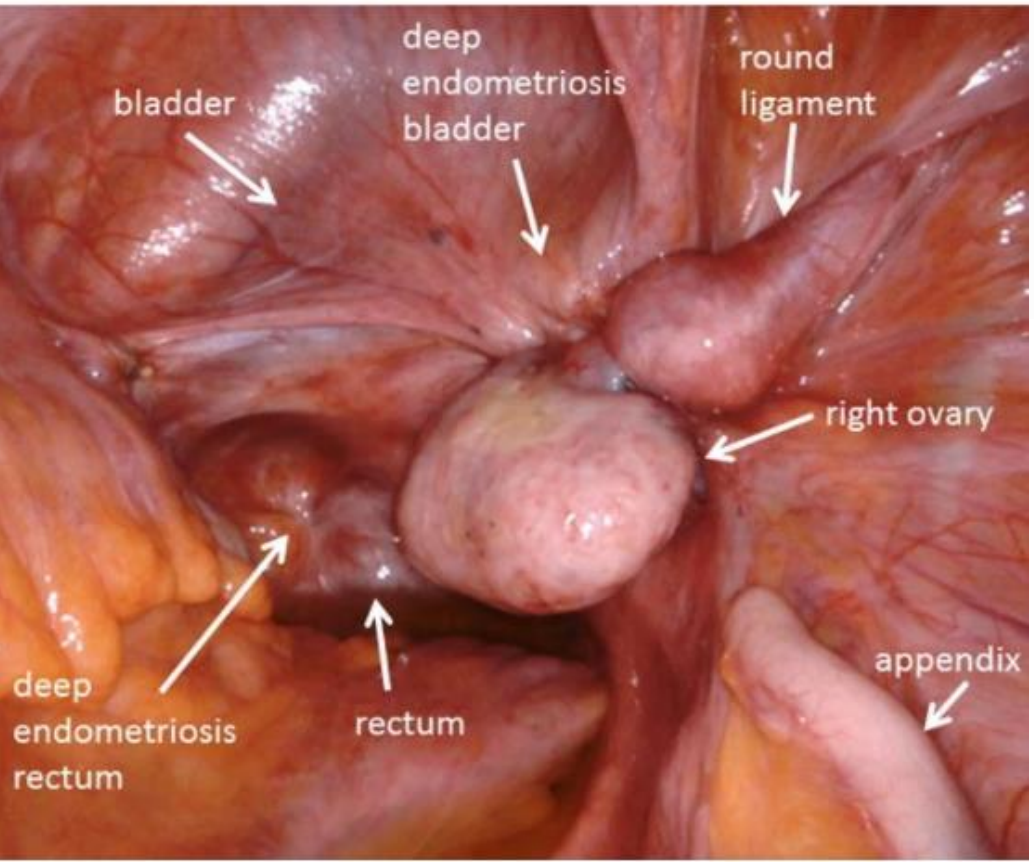
THEN…

- Bowel disease – shaving, discoid excision, segmental resection

Burnett et al. Abdominal Radiology. 2020

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THEN…

- Bowel disease – shaving, discoid excision, segmental resection

And then….co-treat other pain generators

Burnett et al. Abdominal Radiology. 2020

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APPROACHING PELVIC PAIN

- Search for Unifying Diagnoses
- Identify "other" Pain Generators

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EXAMPLE

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EXAMPLE:

A 79-year-old is referred for consideration of left oophorectomy.

She has been experiencing lower pelvic pain, left sided for the past 3 months.

She feels like it started after a left kidney stone.

WHAT would you order/rule out at this point?

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EXAMPLE:

A 79-year-old is referred for consideration of left oophorectomy.

She has been experiencing lower pelvic pain, left sided for the past 3 months.

She feels like it started after a left kidney stone.

Work-up has shown no recurrence of stones, and no urinary tract infection. Pelvic ultrasound show normal appearing atrophic ovaries. CT fails to demonstrate diverticular or other intrapelvic abnormalities.

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EXAMPLE

On further history:

The pain extends from her right flank down to her pelvis.

It seems worse when she is lying in bed and she has to lay on one side or her back.

She is also having some shooting pains in the vagina; they happen a few times per day.

The pain is limiting her ability to walk and garden.

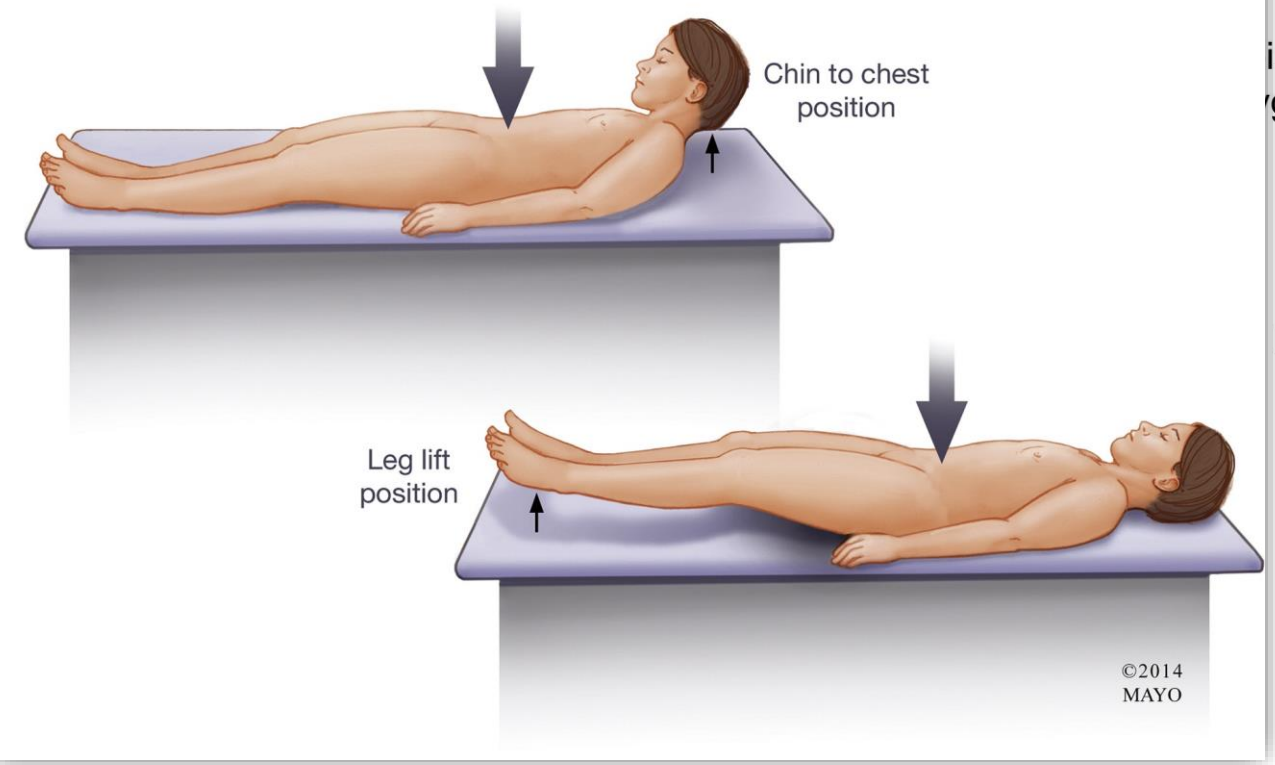
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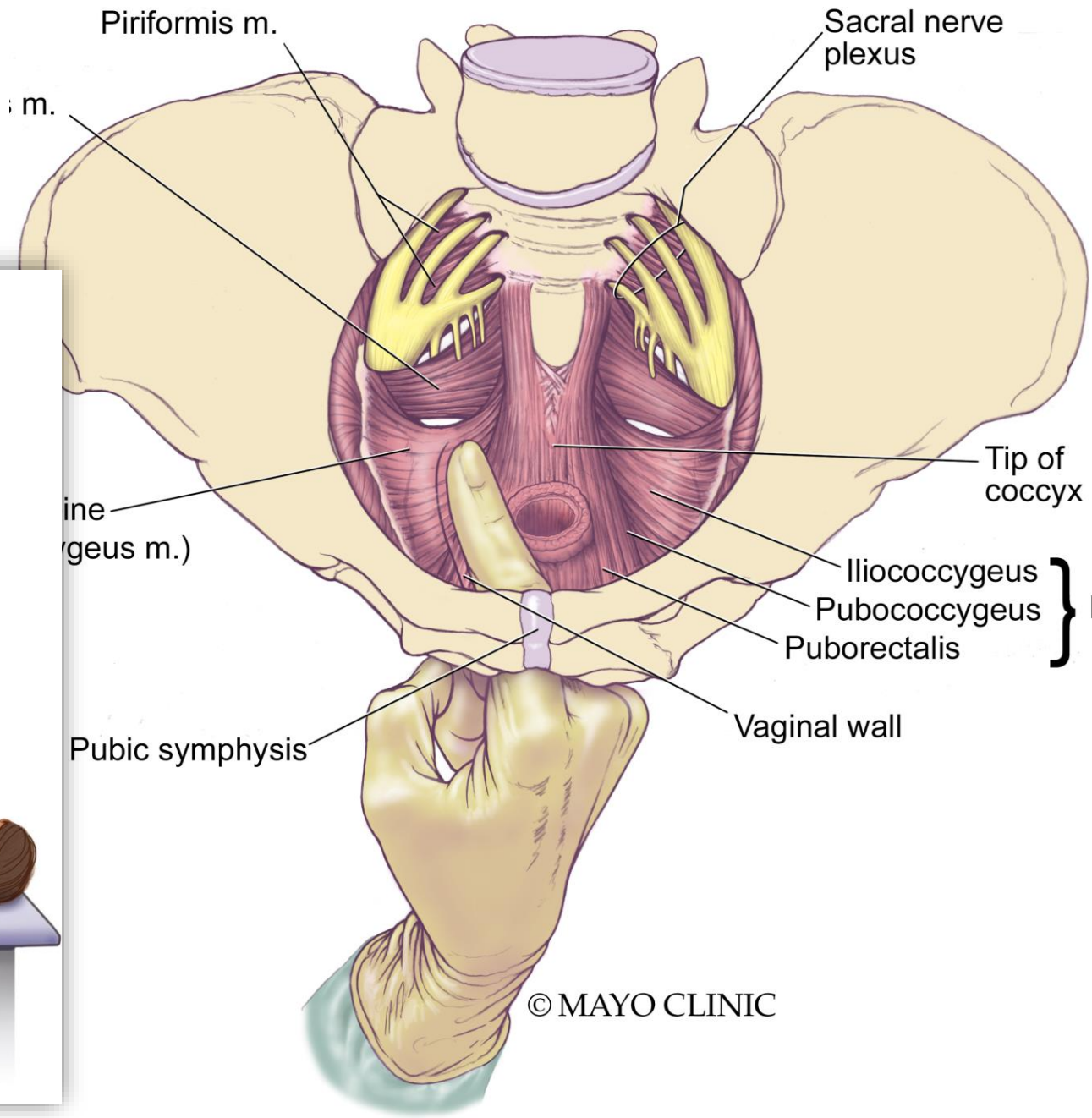
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EXAM

Carnett's Sign

1. Palpate site during flexed abdomen
2. If increased pain, source is likely abdominal wall
3. If no increased pain, source is likely visceral





EXAMPLE:

On exam she has a notable zone of tenderness in the left lower quadrant. Carnett sign is positive.

On pelvic exam there is atrophic changes of the external genitalia and introitus.

On single digit evaluation of the pelvic floor, the left levator ani muscle is tender, the left obturator internus is tender, and reproduces her “vaginal pain.”

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EXAMPLE:

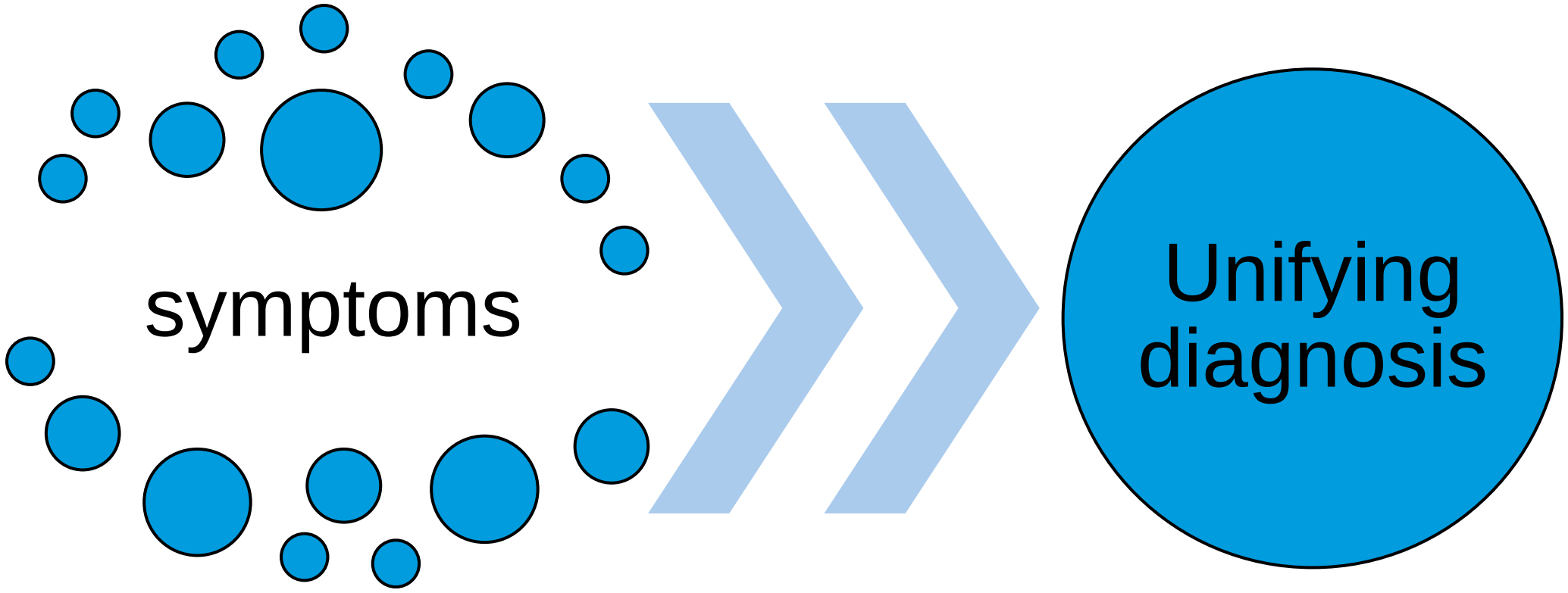
Diagnosis: Myofascial Pain of the abdominal wall and pelvic floor (PFD).

She has had other acute and emergent causes of pain evaluated prior to settling with this diagnosis.

Oophorectomy is not indicated.

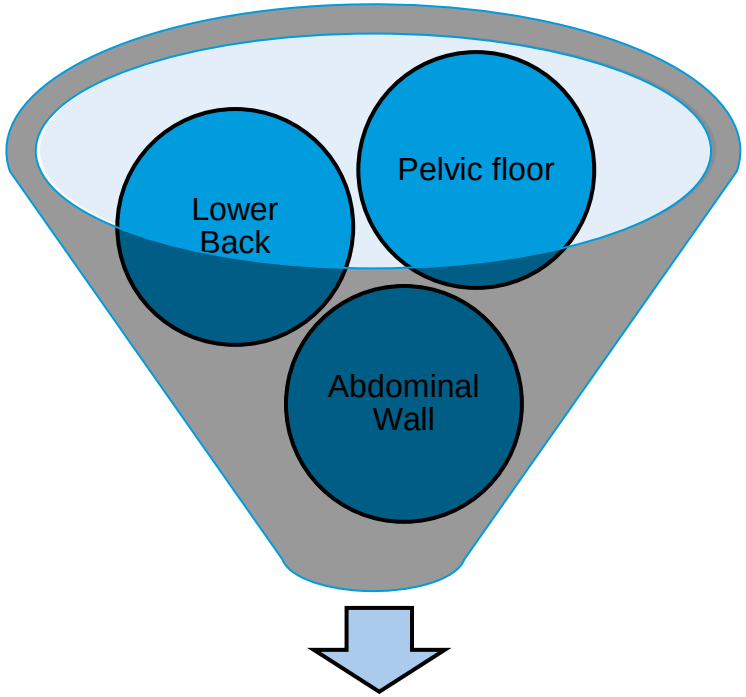
Abdominal wall and pelvic floor physical therapy, abdominal wall trigger point injection are prescribed.

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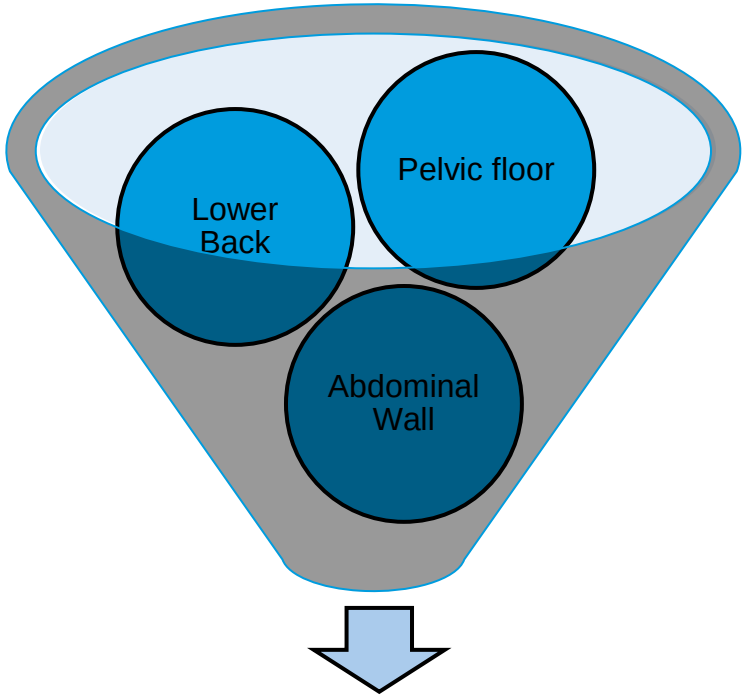
1ST LINE = PT



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2ND LINE TREATMENTS



- Biofeedback
- Sex Therapy- Pelvic Rest
- Neuropathic Modulators
- Trigger Point Injection
- Neuromodulation

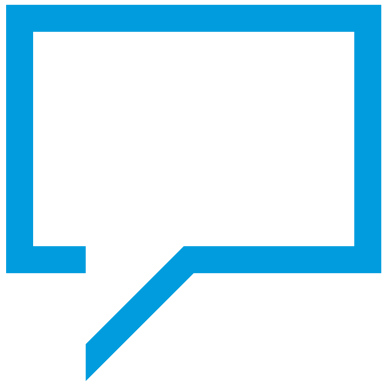
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TEAMWORK



QUESTIONS & DISCUSSION



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THANK YOU FOR JOINING US IN THIS COURSE



Rochester, Minnesota



Phoenix, Arizona



Jacksonville, Florida

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Further Reading & Resources

Faubion SS, Shuster LT, Bharucha AE. Recognition and management of nonrelaxing pelvic floor dysfunction. Mayo Clin Proc. 2012 Feb;87(2):187-93. PMID: 22305030

Wallace SL, Miller LD, Mishra K. Pelvic floor physical therapy in the treatment of pelvic floor dysfunction in women. Curr Opin Obstet Gynecol. 2019 Dec;31(6):485-493. PMID: 31609735.

Louis-Charles K, Biggie K, Wolfinbarger A, Wilcox B, Kienstra CM. Pelvic Floor Dysfunction in the Female Athlete. Curr Sports Med Rep. 2019 Feb;18(2):49-52.PMID: 30730341.

Spruijt MA, Klerkx WM, Kelder JC, Kluivers KB, Kerkhof MH. The efficacy of botulinum toxin a injections in pelvic floor muscles in chronic pelvic pain patients: a systematic review and meta-analysis. Int Urogynecol J. 2022 Nov;33(11):2951-2961. PMID: 35362767

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Supplemental Clinical Case Example

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EXAMPLE:

A 24-year-old athlete is seen for new lower pelvic discomfort she describes as cramping. This started about 9 months ago, and she was started on the pill as this was presumed to be menstrual. Pelvic ultrasound showed a 2 cm follicular cyst on the right ovary.

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EXAMPLE:

A 24-year-old athlete is seen for new lower pelvic discomfort she describes as cramping. This started about 9 months ago, and she was started on the pill as this was presumed to be menstrual. Pelvic ultrasound showed a 2 cm follicular cyst on the right ovary.

Over the next few months, she has noticed increased urinary frequency and urgency. In the past month, she now has pain during and after sex. She also has been feeling shooting pains in her vagina. She has not noted improvement with continuous oral contraceptive use. UA and STI screening have been negative repeatedly.

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EXAMPLE:

A 24-year-old athlete is seen for new lower pelvic discomfort she describes as cramping. This started about 9 months ago, and she was started on the pill as this was presumed to be menstrual. Pelvic ultrasound showed a 2 cm follicular cyst on the right ovary.

Over the next few months, she has noticed increased urinary frequency and urgency. In the past month, she now has pain during and after sex. She also has been feeling shooting pains in her vagina. She has not noted improvement with continuous oral contraceptive use. UA and STI screening have been negative repeatedly.

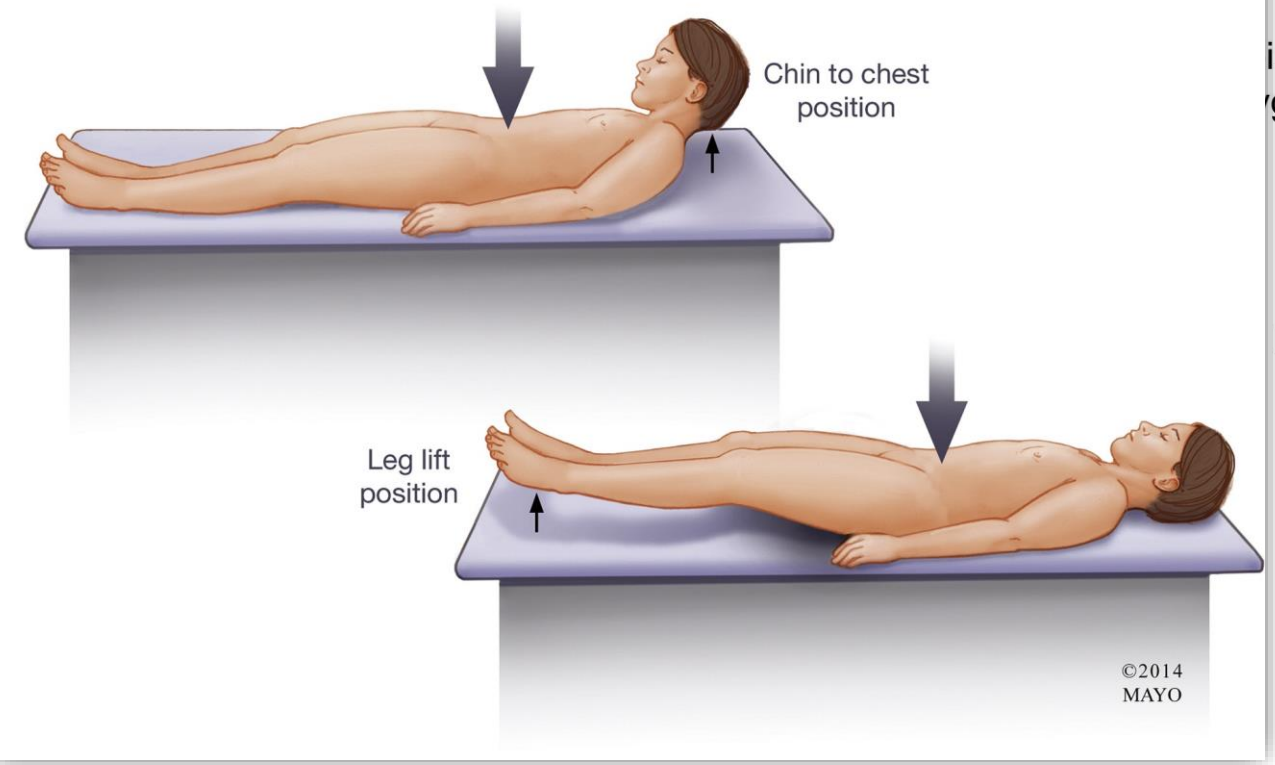
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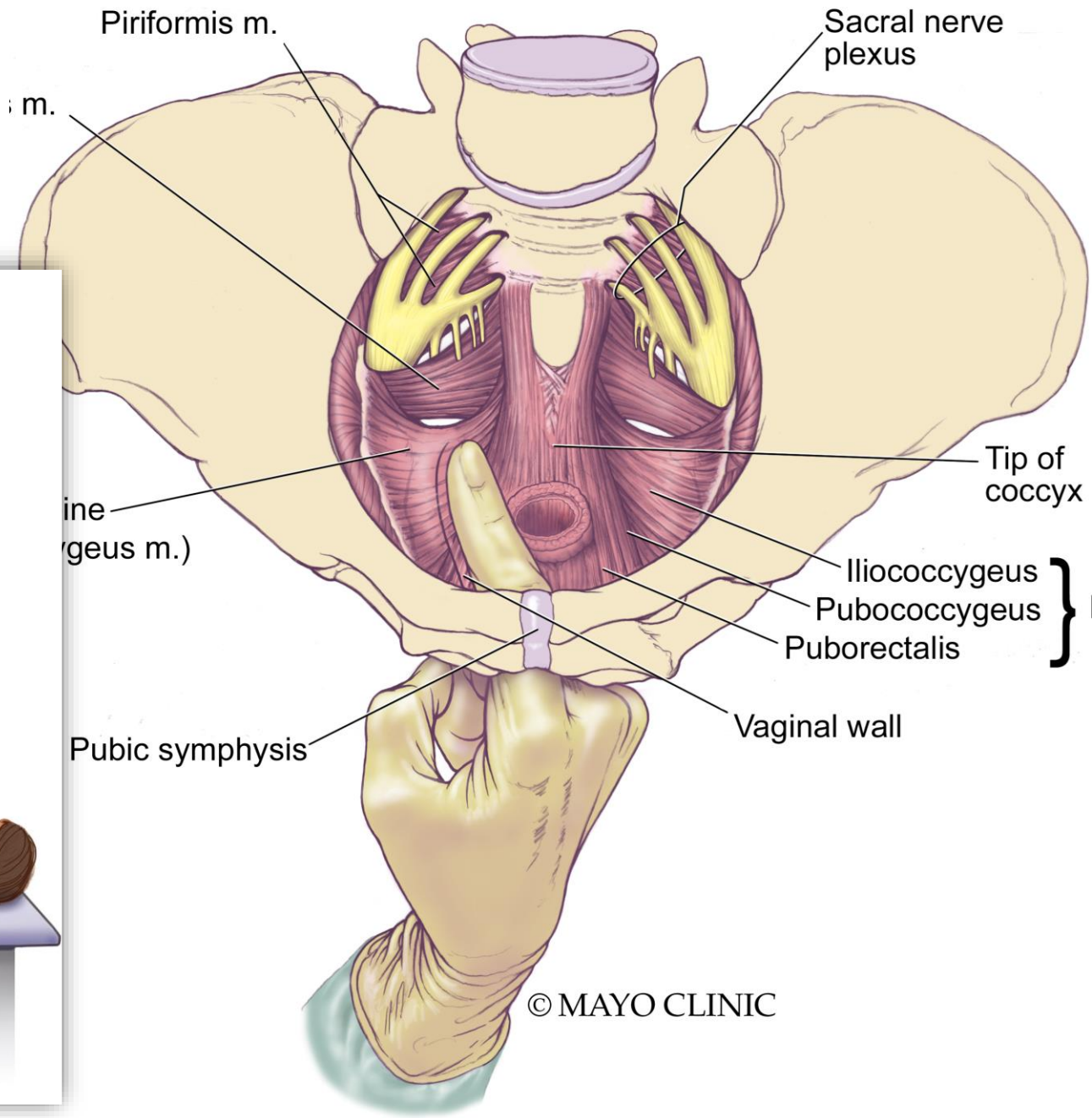
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EXAM

Carnett's Sign

1. Palpate site during flexed abdomen
2. If increased pain, source is likely abdominal wall
3. If no increased pain, source is likely visceral





QUESTION

You suspect high tone PFD. In addition to patient education, what will you order next?

A 24-year-old athlete was previously healthy. She is seen for new lower pelvic discomfort she describes as cramping. This started about 9 months ago, and she was started on the pill as this was presumed to be menstrual. Pelvic ultrasound showed a 2 cm follicular cyst on the right ovary.

Over the next few months, she has noticed increased urinary frequency and urgency. In the past month, she now has pain during and after sex. She also has been feeling shooting pains in her vagina. She has not noted improvement with continuous oral contraceptive use. UA and STI screening have been negative repeatedly.

A. CT Abdomen/Pelvis
B. Gyn consult for ovarian cyst
C. Pelvic Physical Therapy
D. Diagnostic X-Ray Lumbar Spine

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ANSWER

Answer: Pelvic Physical Therapy – First Line Treatment

✓Extended work up

✓Refer for evaluation and treatment

✓Find a specialist PT in pelvic pain

https://aptapelvichealth.org/ptlocator/

Reference: Wallace SL, Miller LD, Mishra K. Pelvic floor physical therapy in the treatment of pelvic floor dysfunction in women. Curr Opin Obstet Gynecol. 2019 Dec;31(6):485-493. PMID: 31609735.

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