AUA 2026
Washington, DC
MAY 15-18

013IC - 10 Must-Knows for Pelvic Pain - To Always Do and Never Miss

Friday, May 15

Faculty

Elise J. B. De, MD

Kenneth M. Peters, MD

Sijo J. Parekattil, MD

Brian M. Inouye, MD

Jennifer Pollard

10 Must-Knows for Pelvic Pain: 5 to Always Do 5 to Never Miss

2 hour Course
35 min Q and A

013 IC
May 15, 2026

Course Schedule – 2 Hours		
10 min	1 - Introduction of Speakers - Stated assumptions of audience knowledge	Elise De
15 min	2 - Always Do – **Identify HTPFD** Never Miss – **Pudendal neuralgia**	Ken Peters
15 min	3 - Always Do – **Look beyond IC** Never Miss – **Sacral pathology**	Elise De
15 min	4 - Always Do – **ID bladder centric pain pre- cystectomy** Never Miss – **Pyocystis**	Brian Inouye
15 min	Discussion, Q and A, Audience Cases	Audience and Faculty
10 min	5 - Always do – **Use targeted therapies prior to excision** Never miss - **Upper tract cause of scrotal content pain**	Sijo Parekattil
15 min	6 - Always Do – **Examine the vulva** Never Miss – **Endometriosis**	Jennifer Pollard
20 min	Facilitated Discussion, Q and A, Audience Cases	Audience and Faculty
5 min	7 - Tools for Practice	Elise De

Elise De MD

Always Do – Look Beyond IC
Never Miss – Sacral Pathology

Professor of Urology, Ob Gyn, Neurology
Medical Director
Multidisciplinary Pelvic Health
Albany Medical Center

www.facingpelvicpain.org
YouTube @facingpelvicpain

Ken Peters, MD

Always Do – Identify HTPFD
Never Miss – Pudendal Neuralgia

Corewell Health
Professor and Chairman of Urology,
Oakland University William Beaumont School of Medicine,
Chief of Urology, Beaumont Health
Royal Oak, Michigan

Disclosures:
Thermaquil, Inc: Consultant
Urovant: Consultant
Collamedix: Consultant
Iota Bioscience: Consultant
Coloplast: Consultant
Juro Sciences Inc: Consultant
Amber Therapeutics: Consultant
Johnson & Johnson: Consultant

Brian Inouye MD

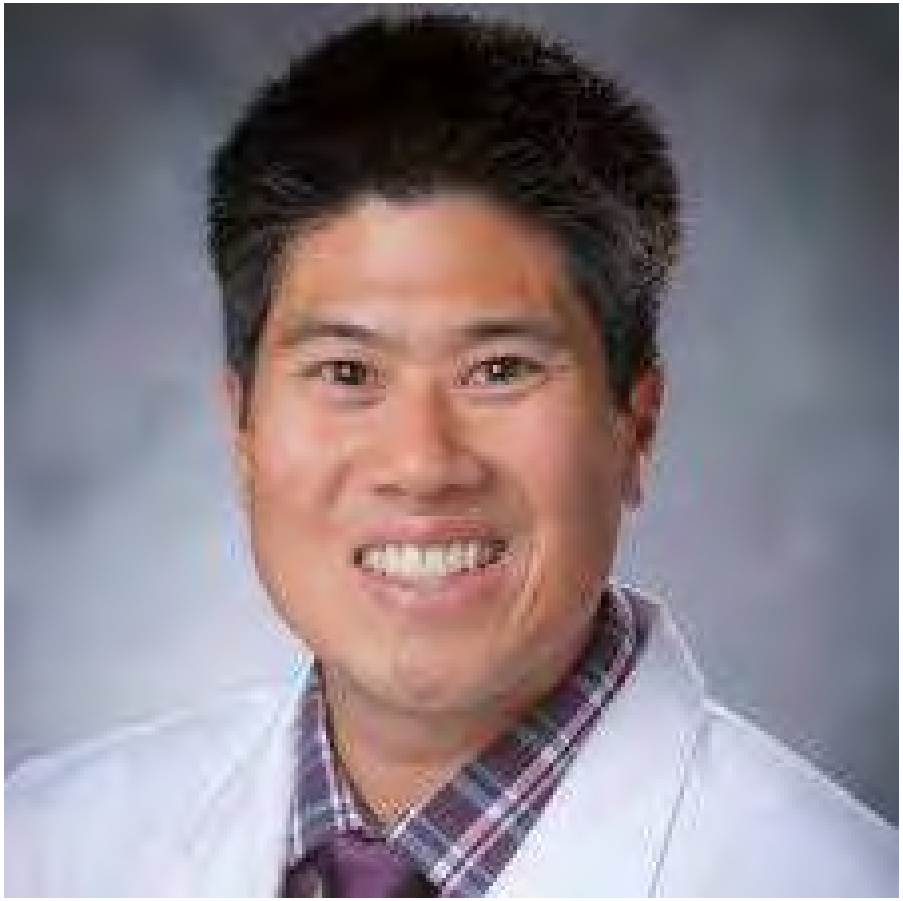
Always Do – Identify bladder-centric pain pre- cystectomy
Never Miss – Pyocystis

Chair Young GURS Committee
Assistant Professor Urology
Assistant Program Director

Albany Medical Center, Albany New York

@BrianInouyeMD

Disclosures: Consultant for Laborie Optolume



Sijo Parekattil MD

Always do – Use targeted therapies prior to excision
Never miss - Upper tract cause of scrotal content pain

Director, Avant Concierge Urology, Winter Garden, FL, USA
www.avanturol.com
@Nuttdoc

Disclosures: None

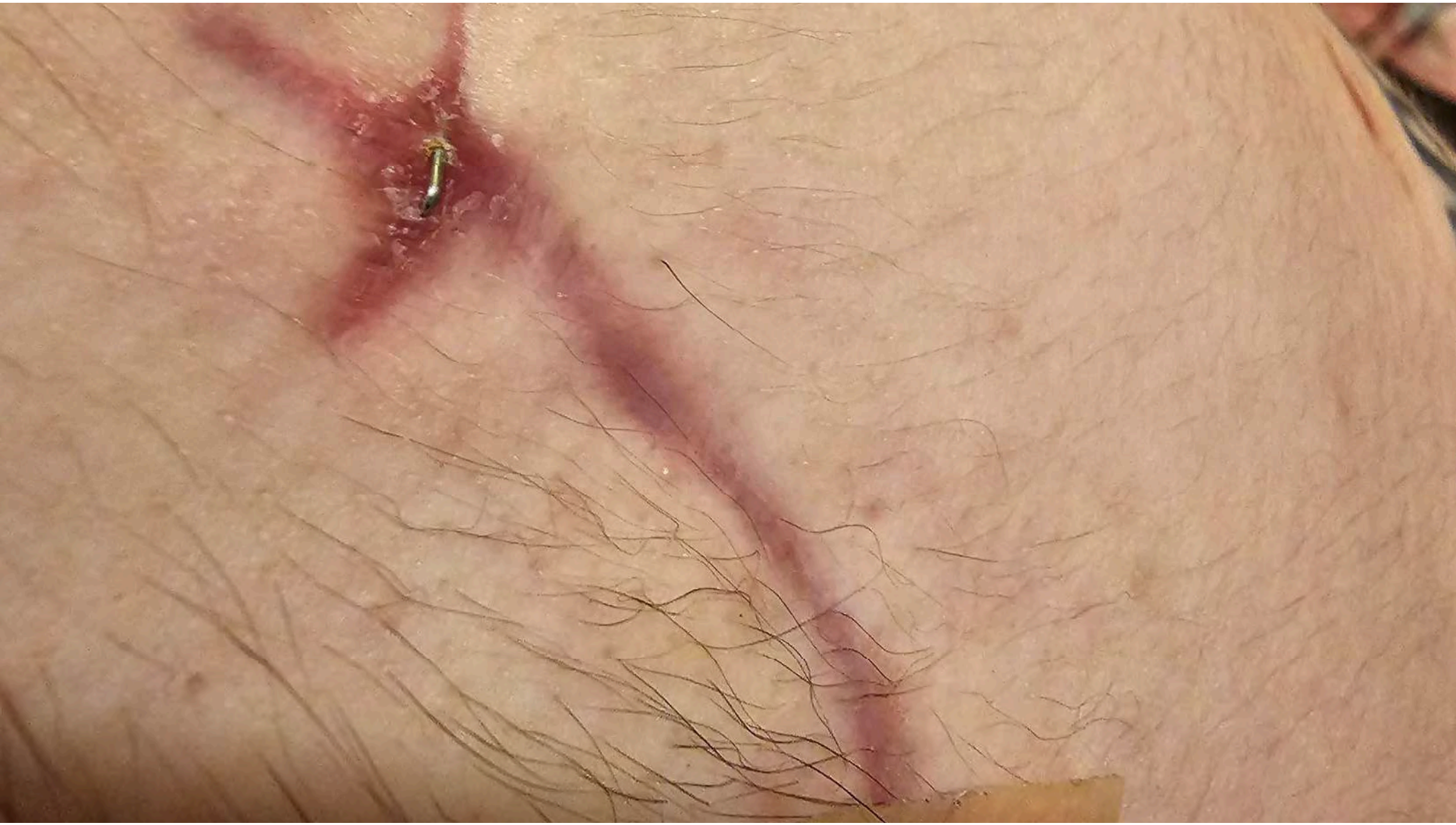
Jennifer Pollard, M.D.

Always Do – Examine the vulva

Never Miss – Endometriosis

Assistant Professor
Department of
Obstetrics and Gynecology
MIS, Sexual
Pain and Health

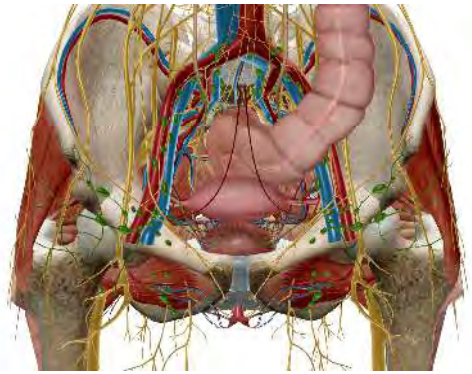
Disclosures: None



Treatment of Pelvic Pain depends on the:

Causes of Pain in Pelvis and Reasons for Pelvic Pain

LOCATION of PELVIC PAIN SYMPTOMS	POSSIBLE EXPLANATIONS of CHRONIC PELVIC PAIN SYNDROME
Vulvar pain Vulva and pelvic burning, burning in pelvic area	Infection Exposures (irritants) Vulvar atrophy (low estrogen) Low testosterone (can be caused by external hormones) Dermatologic conditions (e.g., lichen sclerosis) Neuropathy
Introital pain Entrance to vagina	Low testosterone Friction from sexual activity or clothing
Urethral pain Pain urinating	Vulvovaginal atrophy Urethral caruncle Friction Tight external sphincter muscle or stricture (turbulence) Skene's gland Stone at ureterovesical junction or urethra diverticulum Tumor Infection (ureaplasma/mycoplasma) or sexually transmitted infection Recurrent urinary tract infections
Pelvic floor muscles Heavy feeling in pelvic area, pelvis ache, pelvic pain from sitting, pelvic headache	Dysfunctional voiding Overactivity of muscles from pelvic strain, pelvic exercises or the kegel exercise
Gynecological pain Causes of pelvic pain in women, pain in pelvis female, symptoms of pelvic infection, sore pelvic area, pelvic discomfort, sore pelvis	Endometriosis symptoms(cramps in pelvis, pain in pelvis before period, pain in pelvis after period, extreme pelvic pain) Endometritis Adhesions in pelvis Uterine fibroids Ovarian venous abnormality Ovarian cysts, torsion, or other growths Ectopic pregnancy Sexually transmitted infection, inflammation in pelvis
Male organ pain	Prostatitis symptoms or epididymitis Testis mass, torsion, or nerve pain
Prostate pain, testis pain, groin pain, scrotum pain, pelvis pain men, pain in pelvis male	Ejaculatory duct or vas deferens obstruction Peyronie's Disease Sexually transmitted infection (STI, STD) Pelvic floor muscles, especially when prostatitis treatment has not been successful
Bladder pain	Interstitial cystitis Dietary triggers Bladder outlet obstruction
Gastrointestinal Pain Painful bowel movement, stomach cramps, blood in stool, cramps, bloating	Pelvic floor muscles: levator ani syndrome Proctalgia fugax / chronic proctalgia Unspecified functional anorectal pain Constipation –right pelvic pain, lower left side pelvic pain Anal Fissure Hemorrhoids Pruritis ani Anal cancer Paget's disease Warts Pelvic tumor Diverticulitis Appendicitis Adhesions in pelvis Hernia – pelvic pain sneezing Inflammatory bowel disease Irritable bowel syndrome – gas pain in pelvis
Vascular pain in lower pelvis Pelvis pain worse with standing	Pelvic venous disorder, pelvic venous congestion syndrome
Bone pain, Joint Pain Pelvic girdle pain, fractured pelvis symptoms, pelvic bone pain, pubic symphysis pain, pain in hips, pain in the pubic area, pelvic pain running	Back, knee, foot, or hip problem Injury to nerves, bones, ligaments, or tendons Inflammation of bone (osteitis or osteomyelitis) Muscle deficit (myopathy)
Nerve pain Burning pain in pelvis, burning sensation in pelvic area, pain that radiates down one leg, sharp pains in pelvic area	Upper motor neuron syndrome (upper spine/brain nerves) Spinal stenosis Herniated disc Multiple sclerosis Stroke Cerebral palsy
	Lower motor neuron syndromes (lower spinal cord) Cauda equina syndrome Tethered cord syndrome Tarlov Cyst Sacral plexus Peripheral nerve problem Pudendal neuropathy, pudendal neuralgia, or other nerve entrapment Peripheral neuropathy or neuroinflammation
Psychological	Loss of health Depression Anxiety History of sexual abuse/assault, PTSD Poor emotional coping/communication Personality disorders Couple distress
All-over pain Pain all over the body, pain everywhere, constant pain	Fibromyalgia Small fiber polyneuropathy Diabetic neuropathy Central sensitization Neuroinflammatory disease (e.g. Lyme disease) Rheumatologic disease Vasculitis



Differential Diagnosis of Pelvic Pain

www.facingpelvicpain.org

History Predicts Correct Diagnosis 70% of the time

ELSEVIER

The Lancet

Volume 250, Issue 6470, 30 August 1947, Pages 305-307

ORIGINAL ARTICLES

TWO ESSAYS ON THE PRACTICE OF MEDICINE

Robert Platt M.D. Sheff., F.R.C.P. (PROFESSOR OF MEDICINE, MANCHESTER UNIVERSITY)

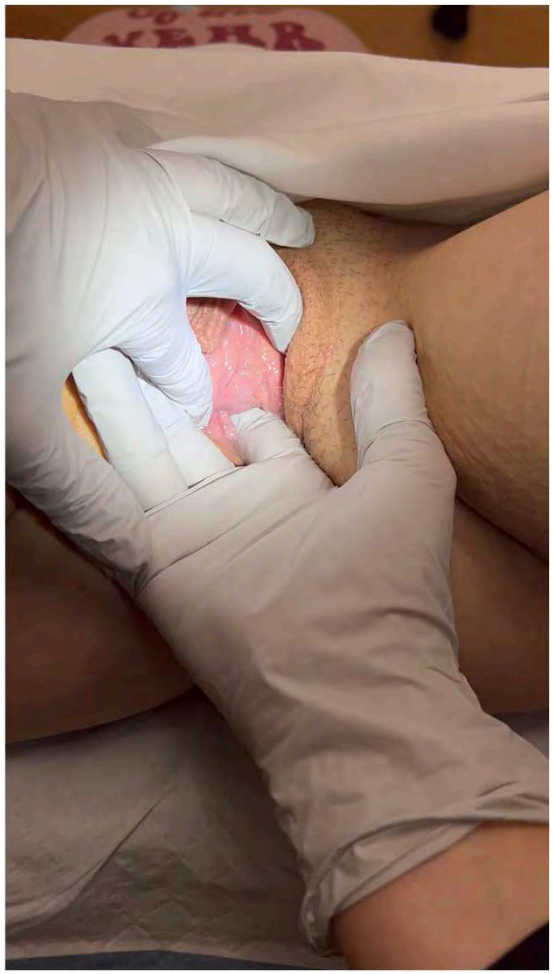
Contributions of the History, Physical Examination, and Laboratory Investigation in Making Medical Diagnoses

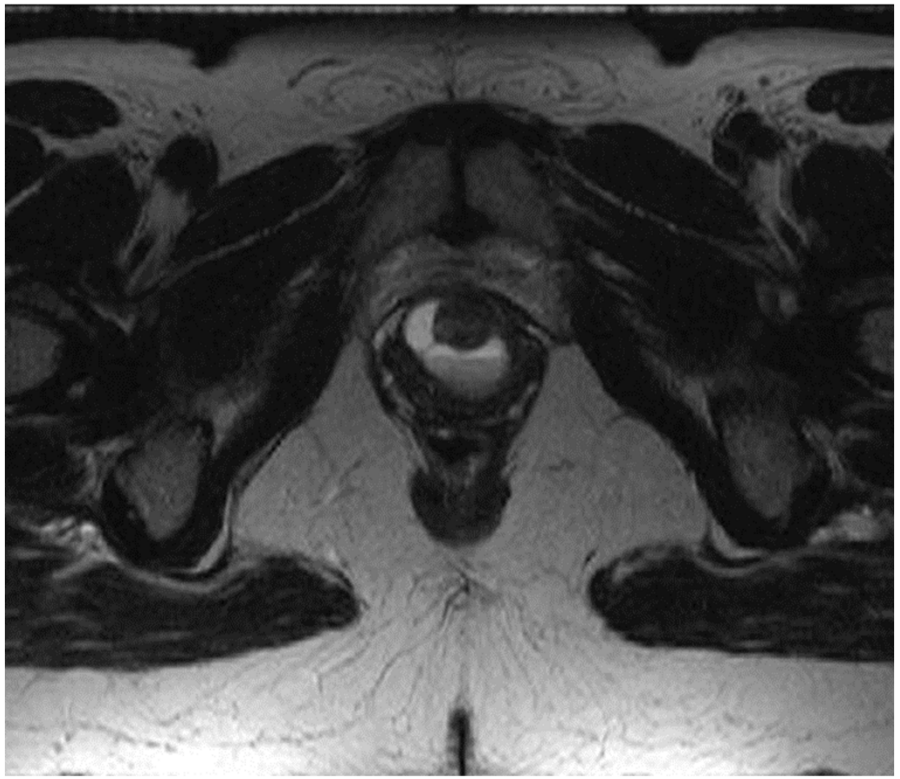
MICHAEL C. PETERSON, MD, *Morgantown, West Virginia;* JOHN H. HOLBROOK, MD; DE VON HALES, MD; N. LEE SMITH, MD; *and* LARRY V. STAKER, MD, *Salt Lake City, Utah*

We report an attempt to quantitate the relative contributions of the history, physical examination, and laboratory investigation in making medical diagnoses. In this prospective study of 80 medical outpatients with new or previously undiagnosed conditions, internists were asked to list their differential diagnoses and to estimate their confidence in each diagnostic possibility after the history, after the physical examination, and after the laboratory investigation. In 61 patients (76%), the history led to the final diagnosis. The physical examination led to the diagnosis in 10 patients (12%), and the laboratory investigation led to the diagnosis in 9 patients (11%). The internists' confidence in the correct diagnosis increased from 7.1 on a scale of 1 to 10 after the history to 8.2 after the physical examination and 9.3 after the laboratory investigation. These data support the concept that most diagnoses are made from the medical history. The results of physical examination and the laboratory investigation led to fewer diagnoses, but they were instrumental in excluding certain diagnostic possibilities and in increasing the physicians' confidence in their diagnoses.

(Peterson MC, Holbrook JH, Hales D, Smith NL, Staker LV: Contributions of the history, physical examination, and laboratory investigation in making medical diagnoses. West J Med 1992 Feb; 156:163-165)


“Tell me the story of why you are here today”





Review Records – Patient-Input Data and AI Help a Lot

TREATMENTS AND OUTCOME:

- SI joint injections and ablations with temporary improvement up to one month
- Lumbar medial branch blocks and radiofrequency ablation without durable benefit
- Piriformis muscle release without benefit
- Spinal cord stimulator trial with partial coverage of back pain only
- Long term opioid therapy in past with good effect, discontinued
- Vaginal estrogen and estradiol patches without benefit for dyspareunia or urinary symptoms

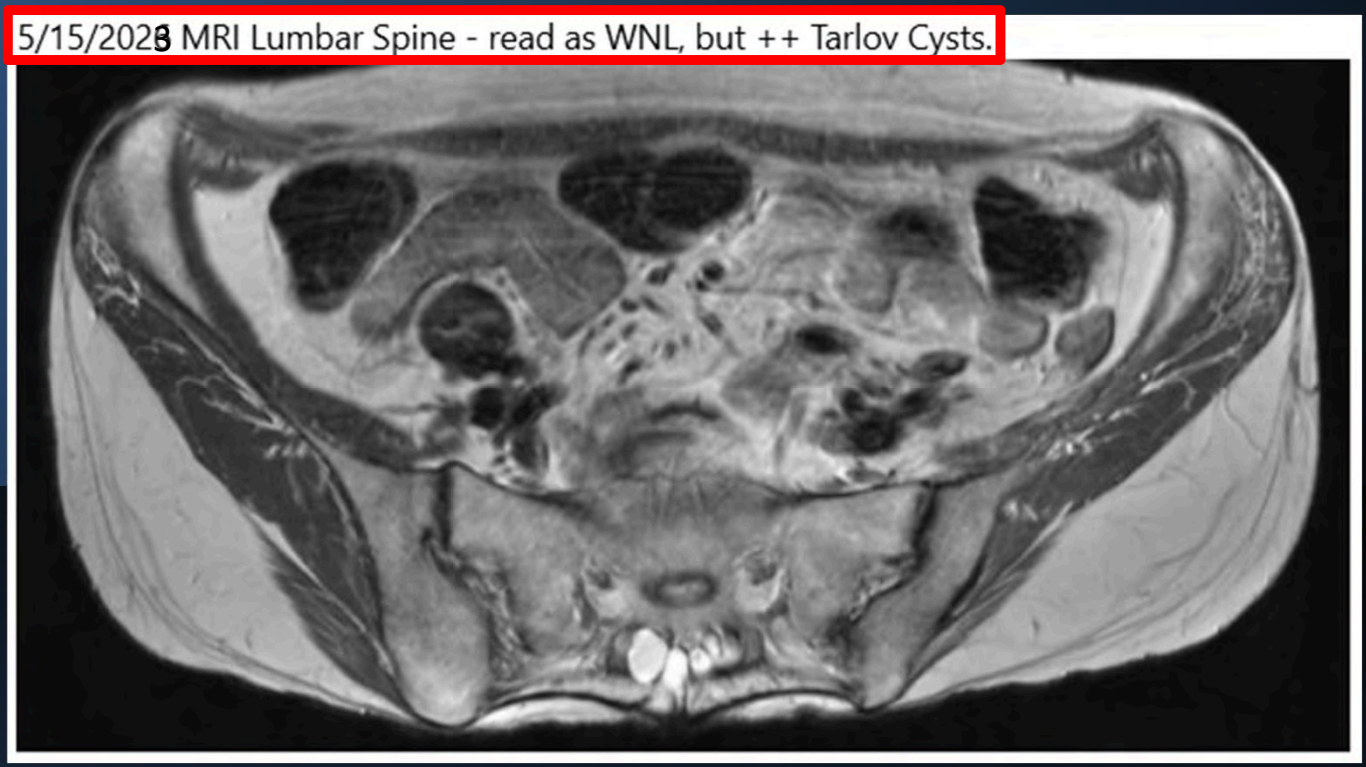
SELECT MEDICATIONS (PRIOR AND CURRENT):

- Vibegron 75 mg daily initiated
- Estradiol vaginal therapy previously, discontinued
- Duloxetine for chronic pain and mood
- Baclofen
- Alprazolam
- Movantik
- Trazodone
- Rosuvastatin
- Varenicline
- Ondansetron

LABS / IMAGING / TESTING / RESULTS:

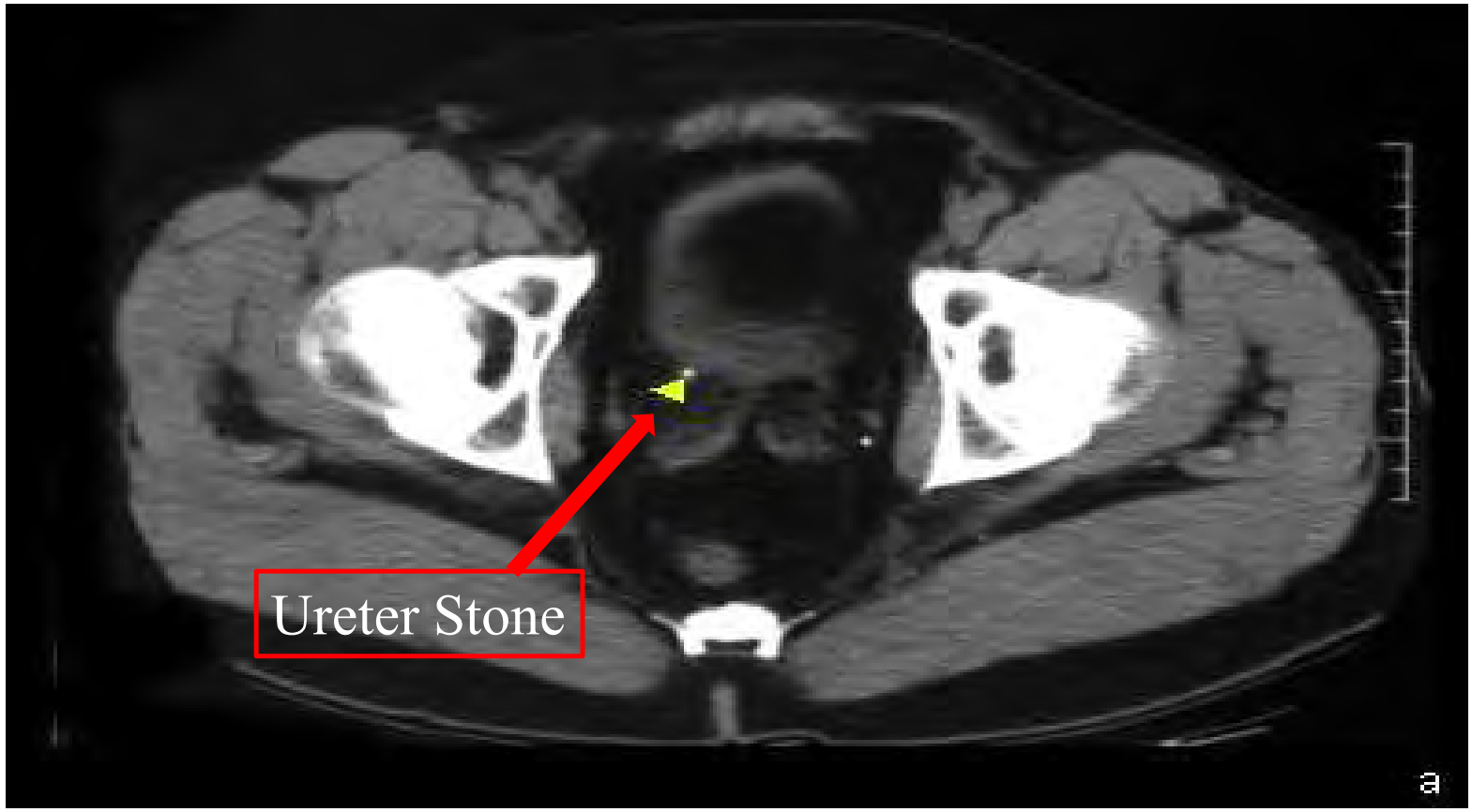
- Urine cultures: 01/19/2023 negative; 11/21/2023 positive for E coli >100K; 02/07/2024 negative; 02/10/2025 negative; 11/04/2025 NuSwab negative
- Ureaplasma and mycoplasma negative 02/10/2025
- MRI pelvis 05/15/2025 showing right sided Tarlov cyst; otherwise symmetric lower spine
- MRI pelvis 5/2024 reported muscle strain and edema
- MRI lumbar spine 05/15/2026 read as within normal limits with multiple Tarlov cysts noted
- CT lumbar spine 06/2025 showing L5-S1 postsurgical changes and spondylolisthesis
- Labs 02/25/2026 notable for hyperlipidemia; otherwise normal liver function and CK

Review Images



Her chronic pain history is significant for lumbar spondylolisthesis and prior lumbar fusion at L4-L5-S1 at ages 15 and 28. Pain worsened following a motor vehicle accident in May 2022, at which time symptoms began radiating down both legs, worse on the right. She has undergone SI joint injections, facet and caudal epidural injections, lumbar medial branch blocks and radiofrequency ablation, and piriformis muscle release, all with limited or no sustained benefit. A spinal cord stimulator trial using a Boston Scientific system in May 2023 improved back pain but did not address buttock or leg pain. She was told she has ischial tuberosity bursitis. Her primary limiting symptom at present is bilateral buttock pain, preventing sitting on hard surfaces, accompanied by numbness and weakness in the lower extremities. She previously used oxycodone for approximately 15 years with good effect; later opioid trials and fentanyl patch were poorly tolerated and ineffective. She is currently disabled due to pain and functional limitations.

Acute Onset Lateralizing Pain



Trauma Informed Care – 600 Pt Intake

"Is there a history of trauma/abuse you would like the team to be aware of?"

Measure	Self-Reported Trauma History (mean (N=54)	No Self-Reported Trauma History (mean (N=546)	p-value
Pelvic pain	71%	42%	<0.001
Autonomic sx score	9.91 ± 5.4	4.0 ± 4.4	<0.001
Neurological ROS	4.4 ± 2.9	2.0 ± 2.4	<0.001
PHQ-4	2.2 ± 2.1	1.0 ± 1.6	<0.001
AUA-QOL	4.17 ± 1.85	3.21 ± 2.19	<0.001
Sexual satisfaction	3.41 (N=49)	2.90 (N=354)	0.020
Orgasm intensity	2.79 (N=28)	2.49 (N=250)	0.260

Signs and Symptoms of a Traumatic Response

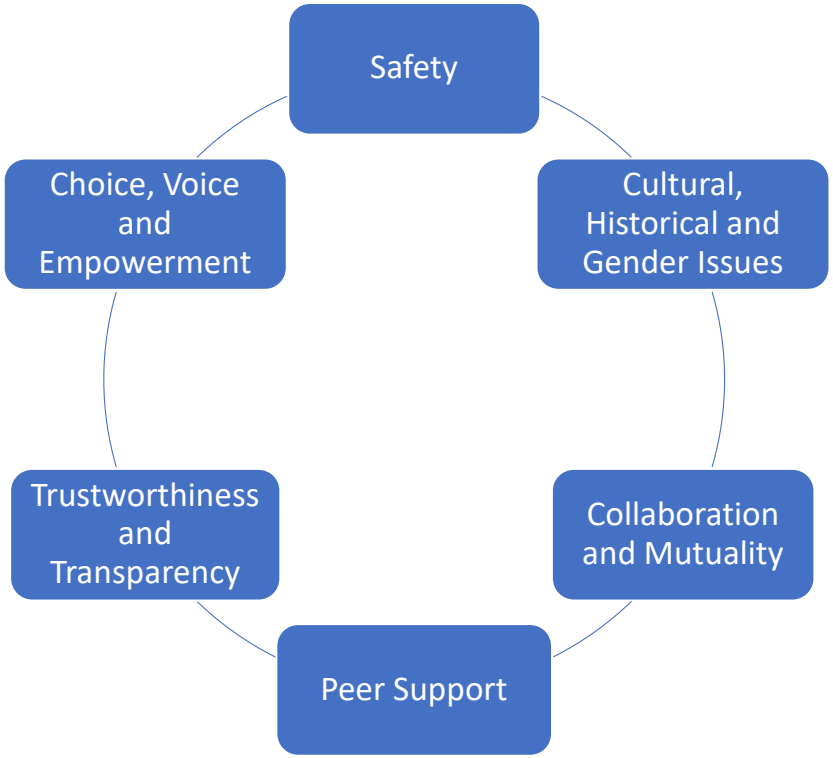
Rockville MD: SAMHSA 2014

- Agitation
- Irritability, emotional swings
- Anxiety, depression, fear
- Outbursts of ager
- Easily startled by noise or touch
- Sudden sweating and/or heart palpitations
- Flashbacks – re-experiencing the trauma
- Difficulty concentrating
- Difficulty trusting
- Self-blame, guilt or shame
- Feelings of disconnection or numb

Courtesy Nelly Faghani BScPT, MCISc

Principles of Trauma-Informed Approach

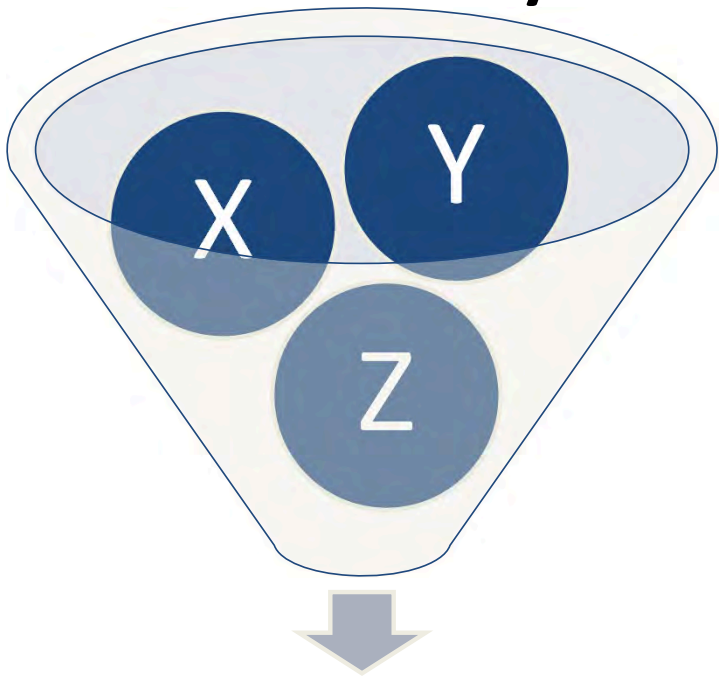
Substance Abuse and Mental Health Services Administration (SAMHSA) Trauma and Justice Strategies 2014



- **Create safe space**
  - Build therapeutic alliance and trust
  - Validate their experience
  - Non nociceptive approach (don't be the threat)
- **Choice and control**
  - Get consent before you start
  - Remind patients they can withdraw consent
  - Provide alternative treatment options
- **Be careful with your language and responses**
  - Be inclusive (cultural, historical and gender issue)
  - Be aware of your body language and fascial expression
  - Be aware of the nocebo effect

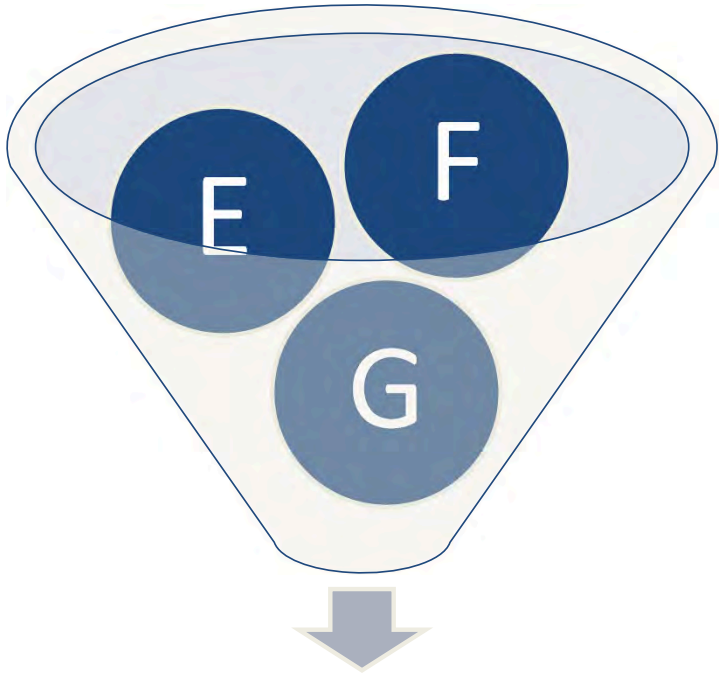
Courtesy Nelly Faghani BScPT, MCISc

Case – Always Do



Always ABC

Case – Never Miss



Never LMNOP

10 MUST-KNOWS FOR PELVIC PAIN- TO ALWAYS DO: EVALUATE FOR PELVIC FLOOR DYSFUNCTION AND NEVER MISS: PUDENDAL NEURALGIA

Kenneth M. Peters, MD
Professor and Chair of Urology
Oakland University William Beaumont School of Medicine
Corewell Health William Beaumont University Hospital

OUWB School of MEDICINE
OAKLAND UNIVERSITY WILLIAM BEAUMONT

Corewell Health™

William Beaumont University Hospital

DISCLOSURES

Thermaquil, Inc: Consultant
Purdue Pharma: Consultant
Paxos Medical: Consultant
Coloplast: Consultant
Amber Therapeutics: Consultant
Minze Health: Consultant
Juro Sciences: Consultant
Celldex Therapeutics: Consultant
Janssen Research and Development: Consultant

CHRONIC PELVIC PAIN

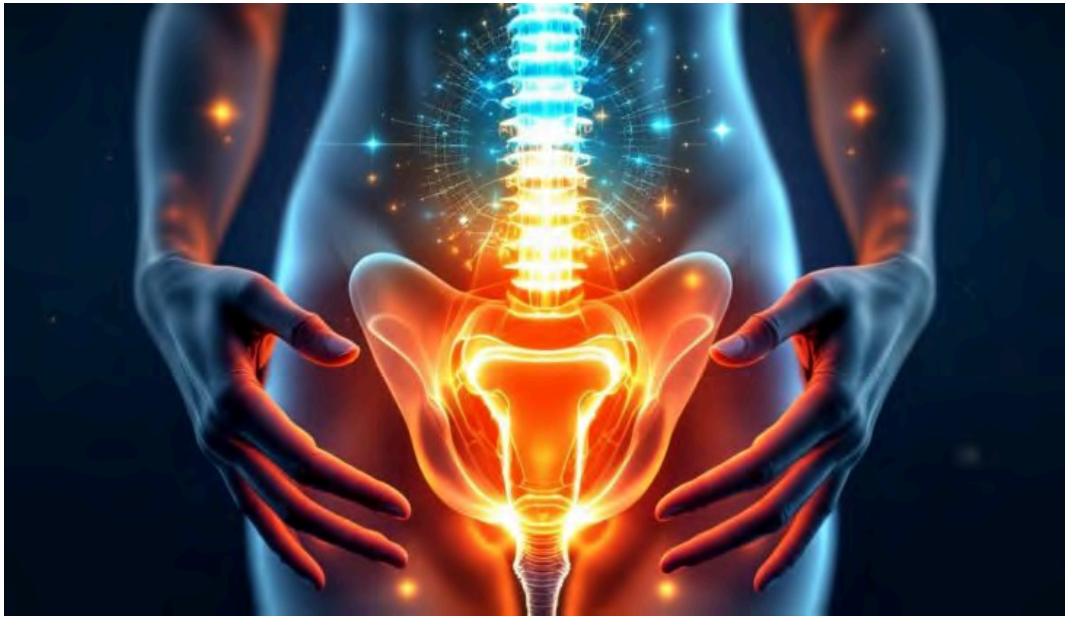
- 1 in 9 women have CPP
- Millions have been told they have IC
- Bladder often innocent bystander
- Pelvic floor dysfunction overlooked

- 10% of men suffer from CPP
- Most <50 yrs
- Told they have "prostatitis"
- Pelvic floor dysfunction overlooked

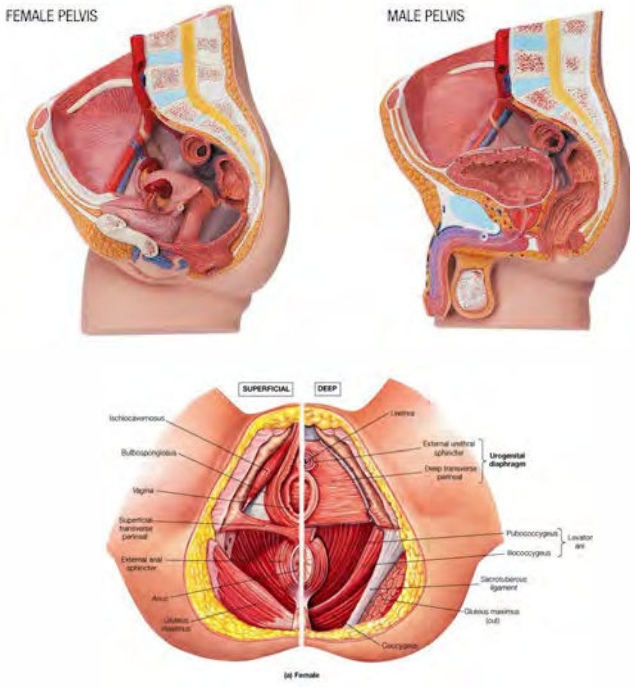
BACKGROUND

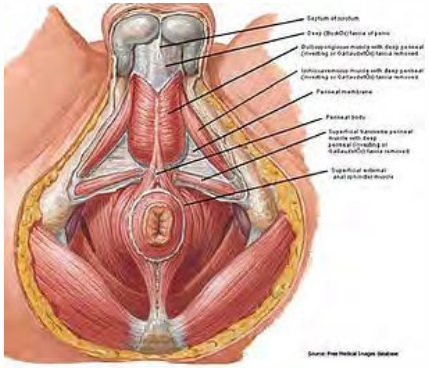
- Chronic pelvic pain difficult to manage
- Many have been labeled with “IC” or Chronic Prostatitis
- Bladder or Prostate directed therapy has poor outcomes
- Many patients with CPP suffer from Pelvic Floor Dysfunction
- Pudendal neuropathy has been identified as a culprit in the development of CPP
- Sexual dysfunction is common
- Early life trauma can be risk factor in men and women

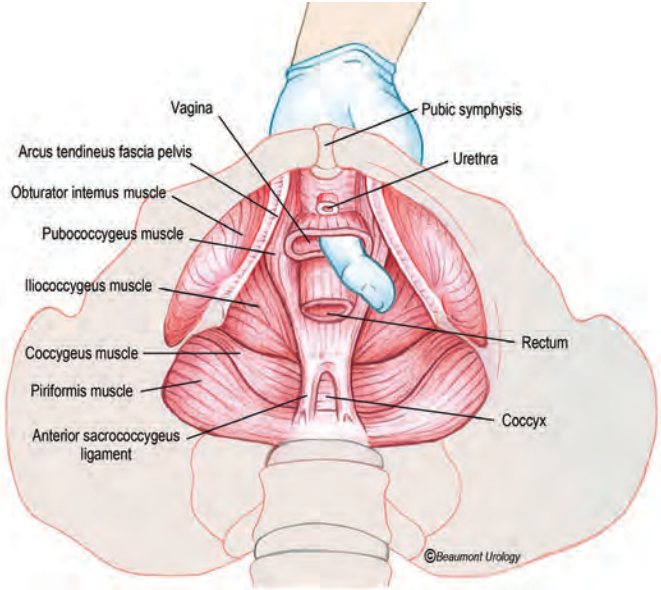
ALWAYS DO: EVALUATE FOR PELVIC FLOOR DYSFUNCTION



ANATOMY





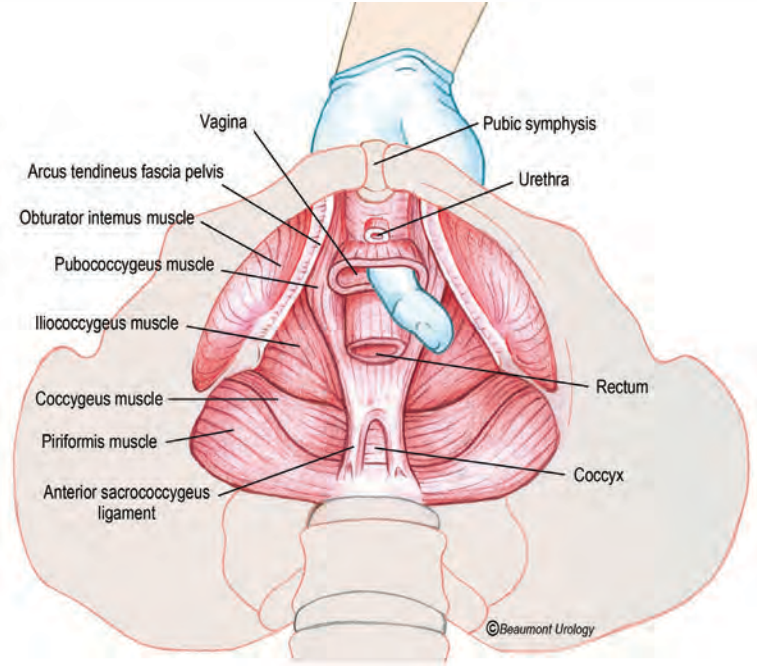


Always Do a Physical Exam

IC & PELVIC FLOOR DYSFUNCTION

- Approximately 70%-90% of patients with IC have pelvic floor dysfunction[1]

- Levator ani muscle myalgia can be a source of chronic pelvic pain.



- *1. Peters et al.* Urology. 2007 Jul;70(1):16-8

EFFECT OF PELVIC FLOOR ON IC/PBS

Randomized Multicenter Pilot Trial Shows Benefit of Manual Physical Therapies in the Treatment of Chronic Pelvic Pain

MP FitzGerald,[1] RU Anderson,[2] CK Payne,[2] JPotts,[3] KM Peters,[4] JQ Clemens, [5] L Cen[6] ,S Chuai[6],

JR Landis[6]

J Urol. 2009 Aug;182(2):570-80. Epub 2009 Jun 17.

RESULTS

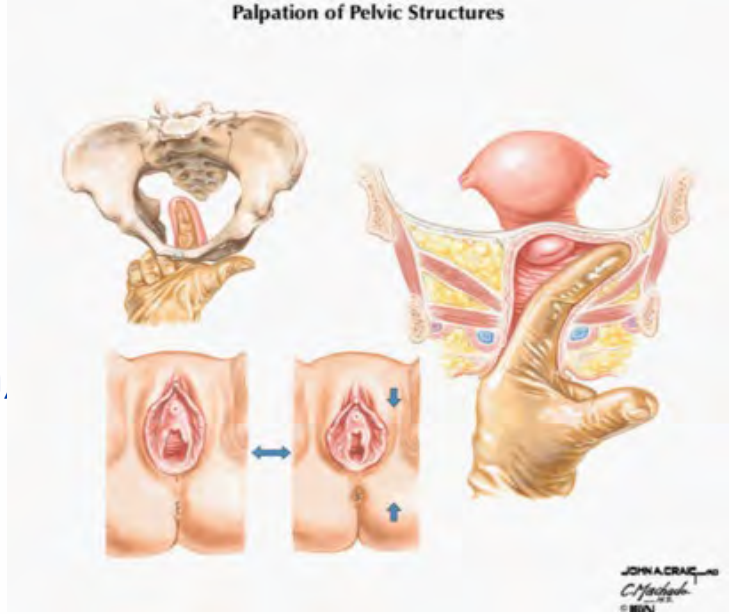
	GTM	MPT	Total
Number Randomized	24	23	47
Total (p= 0.03)			
Responders	5 (21%)	13 (57%)	18 (38%)

Similar findings in f/u study of 81 women: 59% PT vs 26% massage

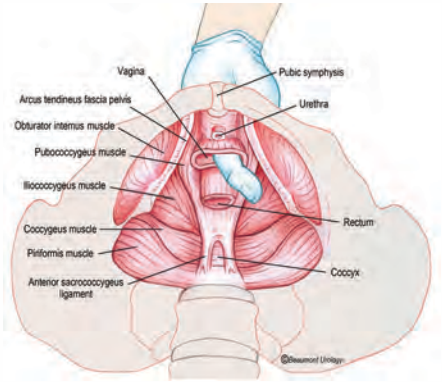
FitzGerald, et al J Urol. 2012 Jun;187(6):2113.

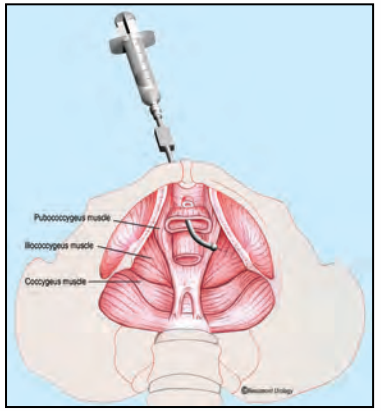
PHYSICAL THERAPY

- Pelvic floor physical therapists are crucial
- Should be specially trained in pelvic floor dysfunction related to these symptoms.
- Involves internal and external therapy
- Biofeedback
- Very successful in improving symptoms pelvic pain, dyspareunia, urgency, frequency

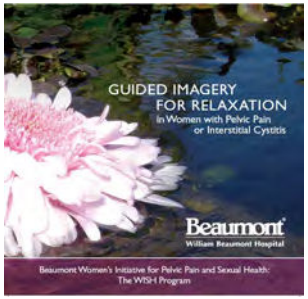


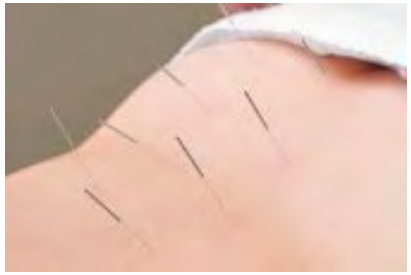
PELVIC FLOOR DYSFUNCTION

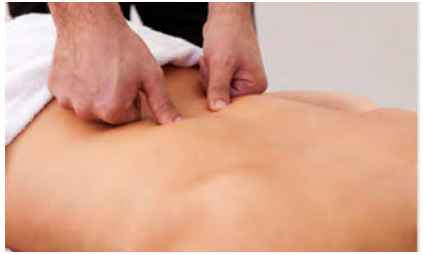




INTEGRATIVE MEDICINE



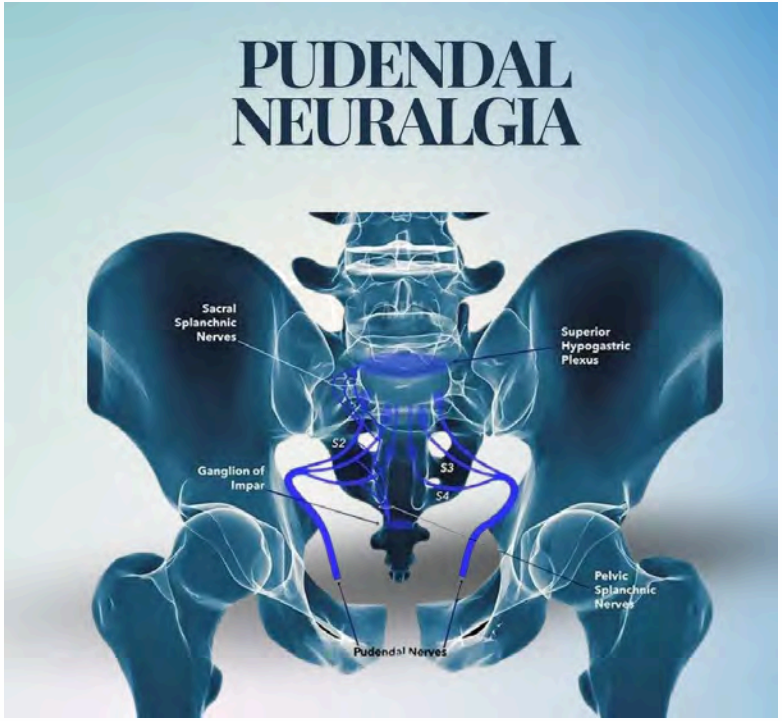




- Pain Psychology
- Guided Imagery
- Cognitive behavioral therapy
- Stress Reduction
- Increase water intake (dilute the urine)
- Dietary modifications
- Yoga/meditation
- Medical massage
- Accupuncture
- Reiki Therapy

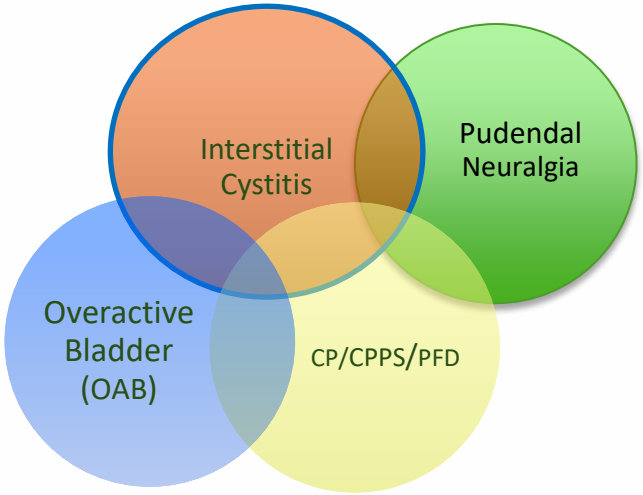
Guided Imagery

DON’T MISS: PUDENDAL NEURALGIA



IC, OAB, PUDENDAL NEURALGIA, CPP/PFD

Key difference between OAB and IC is **PAIN,**
but pain does not equal IC!

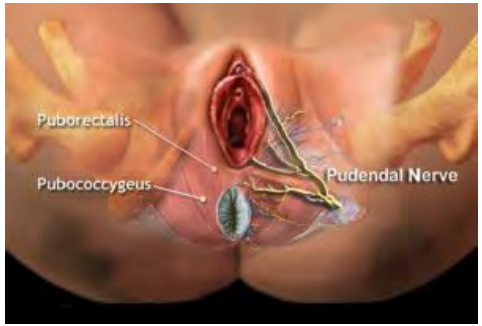


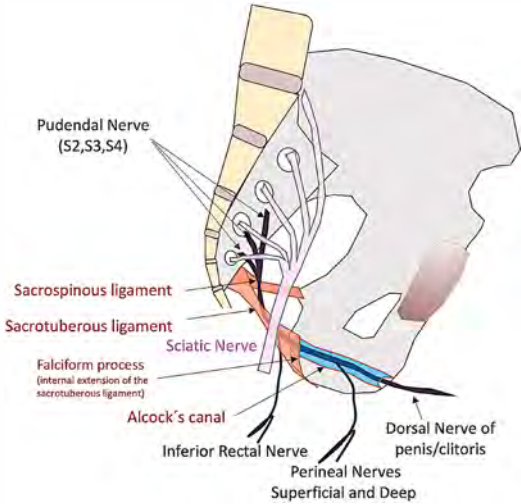
- They share some of the same symptoms
  - **Urgency**
  - **Frequency**
  - **Nocturia**
  - **Painful sex**
- Pudendal neuralgia
  - **Pain on sitting, relieved on standing, lying down, or sitting on a cutout cushion or toilet seat**
  - **Also, urinary symptoms**

PUDENDAL NEURALGIA

NANTES Criteria:

(1) Pain in the anatomical territory of the pudendal nerve
(2) Worsened by sitting.
(3) The patient is not woken at night by the pain
(4) No objective sensory loss on clinical examination.
(5) Positive anesthetic

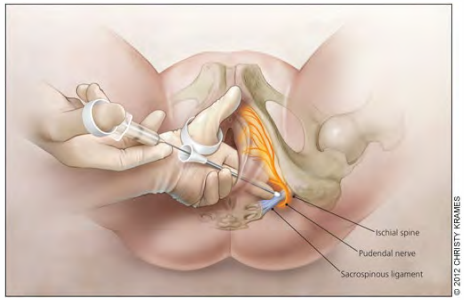




PUDENDAL NEURALGIA

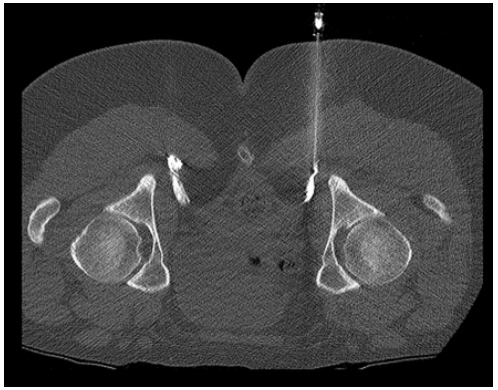
Pudendal Neuralgia must be in differential diagnosis of pelvic pain

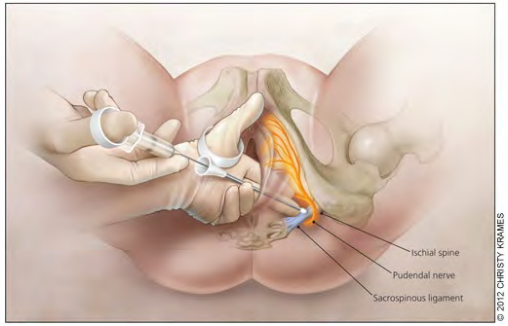
- Is patient standing when you enter the room?
- Pain worse with sitting, gone during sleep
- Careful history regarding distribution and character
- Triggers? Bike riding, pelvic injury, childbirth, fall
- Sexual dysfunction, voiding and bowel dysfunction?
- Pelvic floor pain on exam?
- Vulvar pain, scrotal pain, perineal pain, rectal pain?
- Pain at ischial spine with palpation



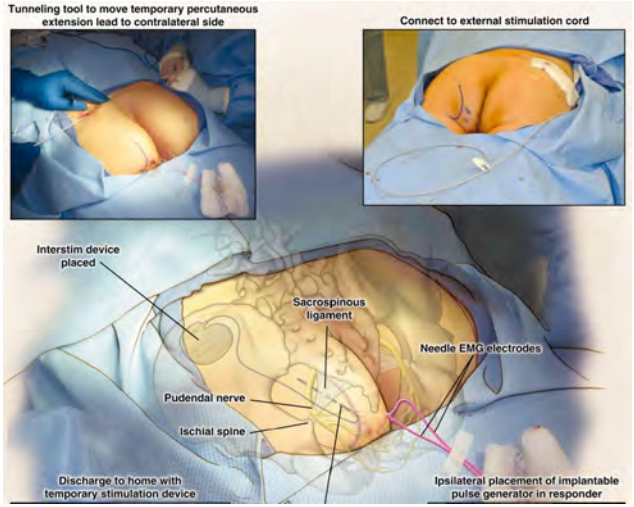
PUDENDAL NEURALGIA TREATMENTS

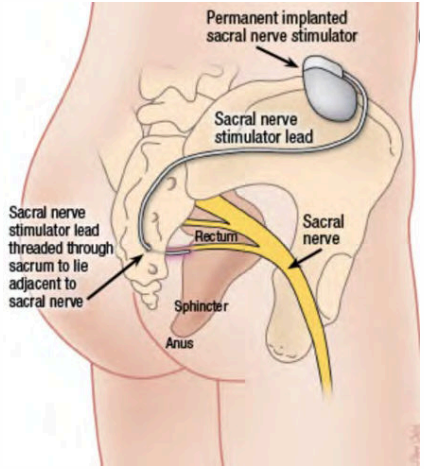
- Behavioral changes- pudendal pads, avoid biking, prolonged sitting, pelvic stretching, yoga, stress reduction….
- Physical therapy, shockwave therapy
- Diagnostic/Therapeutic Pudendal Nerve Blocks
- RFA of Pudendal Nerve
- Pudendal Neuromodulation
- Pudendal nerve entrapment surgery
  (European Urology 47 (2005) 403–408)





NEUROMODULATION

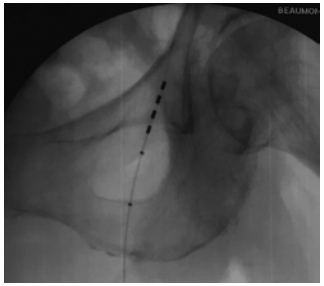


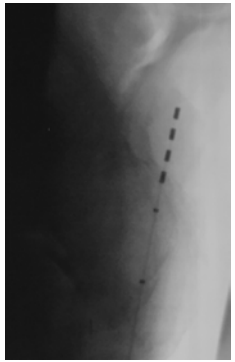


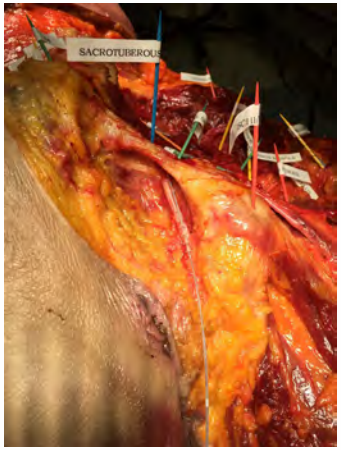
NEUROMODULATION

Pudendal Neuromodulation

- Stimulation of the 3rd sacral nerve has been shown to be effective in treating voiding/bowel dysfunction and off-label use for pain
- The pudendal nerve is a distal branch of S2, S3, and S4
- The potential benefit of pudendal nerve stimulation is increased afferent stimulation through the sacral nerve roots
- Pudendal neuropathy is a known cause of severe pelvic pain, voiding and bowel dysfunction and sexual dysfunction
- Beaumont Urology Developed Pudendal Neuromodulation

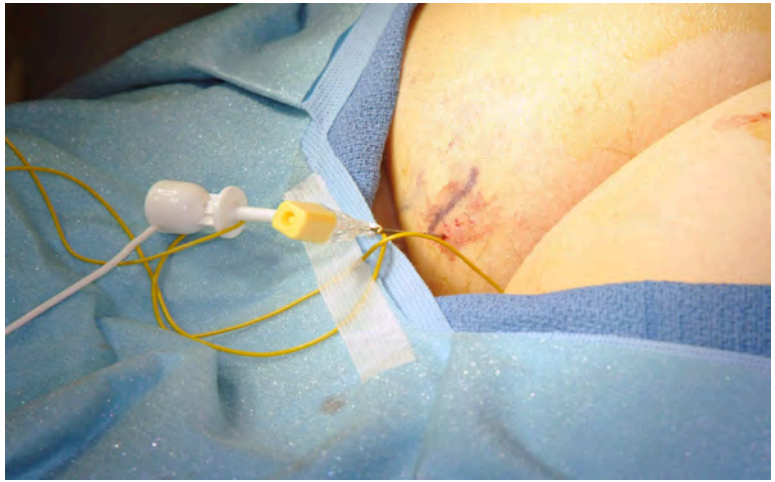




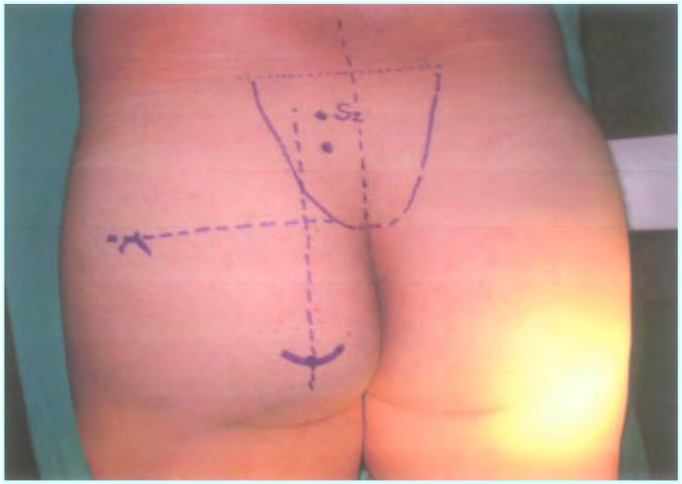


NEUROMODULATION

Locating the Pudendal Nerve



Peters KM et al. *Neurourol Urodyn.* 2005;24:643-647.



Spinelli M, et al. Neurourol Urodyn. 2005;24(4):305-9.

NEUROMODULATION

Sacral vs Pudendal Stimulation

- 30 subjects with refractory voiding dysfunction
- 48 years (26-70)
- Pudendal or sacral nerve stimulation in a blinded-randomized fashion, each for 7 days
- Successful placement of sacral and pudendal leads in all subjects
- Time to lead placement
  - Sacral: 25.9 min
  - Pudendal: 23.7 min (P=0.57)

Peters KM et al. *Neurourol Urodyn.* 2005:24:643-647

Ishio-rectal Pudendal Implant Video

SCAN QR CODE

OU WB School of MEDICINE
OAKLAND UNIVERSITY WILLIAM BEAUMONT

William Beaumont University Hospital

NEUROMODULATION

SACRAL VS PUDENDAL NERVE STIMULATION

79% FOUND PUDENDAL BETTER THAN SACRAL

(90% OF SACRAL FAILURES RESPOND TO PUDENDAL)

GRA:

Markedly-worse, Moderately-worse, Mildly-worse, Same, Mildly-improved, Moderately-improved, Markedly-improved

Pudendal > Sacral

Pelvic pain (p=0.0024)

Urgency (p=0.005)

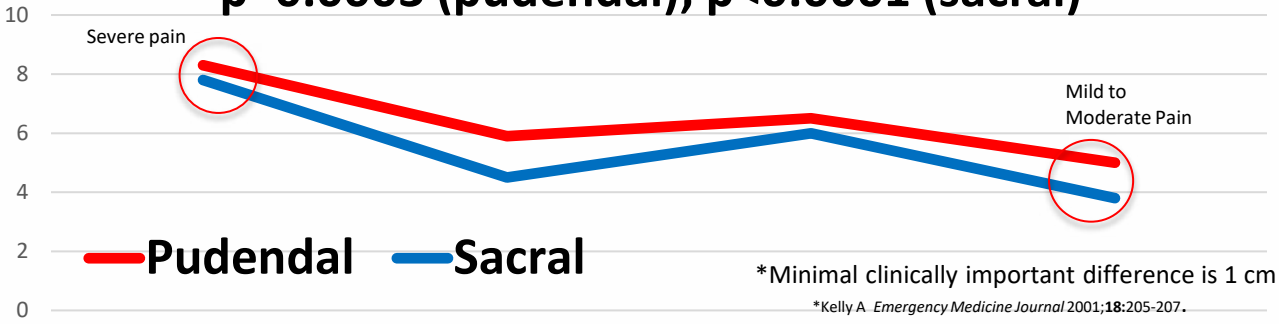
Frequency (p=0.007)

Bowel function (p=0.049)

Peters KM et al. *Neurourol Urodyn.* 2005:24:643-647

NEUROMODULATION

Change in Median Pelvic Pain Scores
10 cm VAS
p=0.0003 (pudendal); p<0.0001 (sacral)



Preimplant	3 months	6 months	12 months
N=34/20 (P/S); p=0.37	N=20/9 (P/S); p=0.58	N=17/9 (P/S); p=0.57	N=13/11 (P/S); p=0.42

Received: 24 January 2021 | Revised: 9 May 2021 | Accepted: 1 June 2021
DOI: 10.1002/nau.24733

CLINICAL ARTICLE

WILEY

Initial experience using a novel nerve stimulator for the management of pudendal neuralgia

Ly Hoang Roberts MD[1] | Annah Vollstedt MD[1] | Joshua Volin BS[1] | Teresa McCartney BSN, RN[2] | Kenneth M. Peters MD[1]

Trans-gluteal Pudendal Implant Video
SCAN QR CODE

N=13

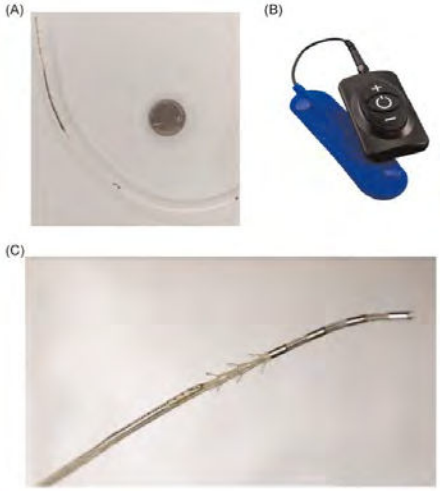


TABLE 3 Responses from follow up questionnaire administered via telephone call

Follow up questionnaire	
Overall, how have your symptoms changed since undergoing the StimWave® Device Implant?	*N* = 7
7 (markedly improved)	2
6 (moderately improved)	4
5 (slightly improved)	1
4 (no change)	0
3 (slightly worse)	0
2 (moderately worse)	0
1 (markedly worse)	0
Permanent lead setting at last follow up	
Pulse rate (Hz)	924.4 (779.5–1332.67)
Pulse width (ms)	105.7 (53.3–126.7)
Power (mA)	0.67 (0.5–1.25)

10/13 >50% improvement in pain

TABLE 2 Operative findings and reported patient symptoms after trial and permanent lead implantation at post-op visit

	Trial lead procedure	Permanent lead procedure	Follow up phone call
Intraoperative	*n* = 13	*n* = 9	*n* = 7
Procedure time (min)	54	57	N/A
Lead placement			
Unilateral	5	4	N/A
Bilateral	8	5	N/A
Complications	0	0	N/A
Postoperative			
Time from surgery to post-op visit/follow up phone call (days)	7.16 (range: 6–11)	26.56 (range: 6–83)	287 (range: 22–759)
Pain improvement			
100%	6	1	1
99%–80%	1	1	3
79%–70%	1	1	1
69%–50%	2	2	2
49%–1%	0	3	0
0%	3	1	0
Complications	0	4 did not tolerate (*n* = 1), lack of adequate response (*n* = 1), lead migration (*n* = 1), incorrect usage of equipment (*n* = 1)	§ Difficulty with external wearable antennae assembly (*n* = 2), lead migration (*n* = 2), broken wire (*n* = 1)

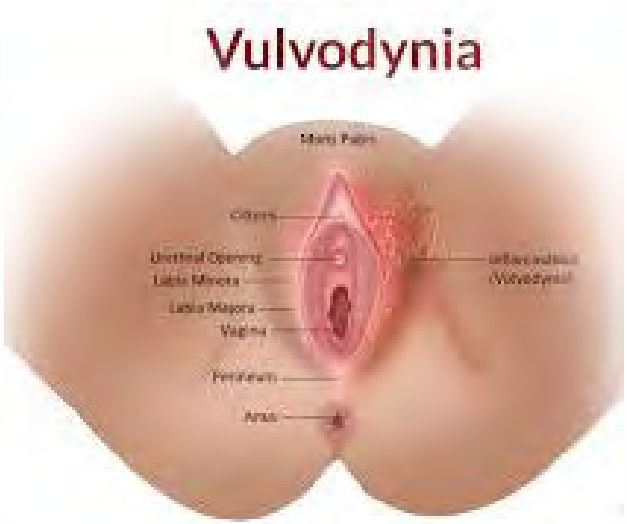
Note: Pain improvement at time of follow up phone call since permanent lead implantation.

OU WB School of MEDICINE
OAKLAND UNIVERSITY WILLIAM BEAUMONT

William Beaumont University Hospital

NEUROMODULATION

OTHER POTENTIAL BENEFITS OF NEUROMODULATION

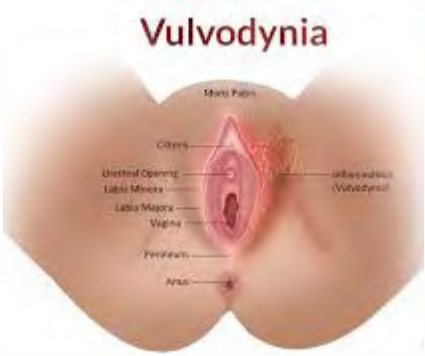


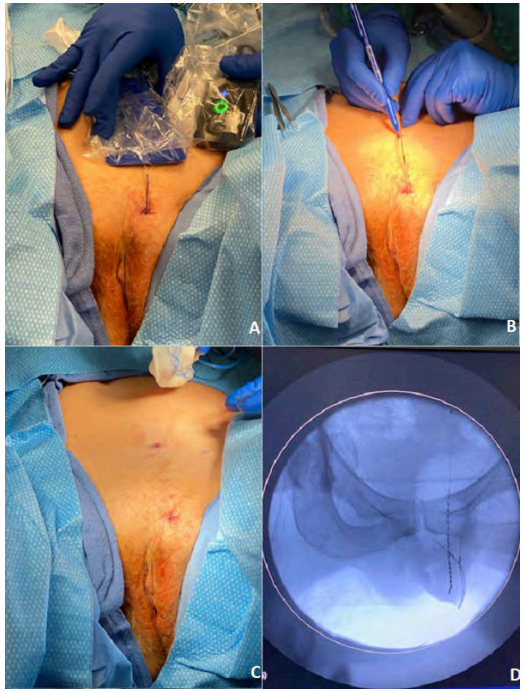
Post-Mesh Pain

NEUROMODULATION

PERIPHERAL NERVE STIMULATION

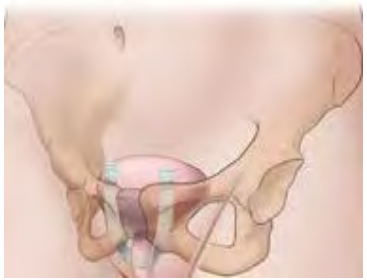
Curonix PNS System

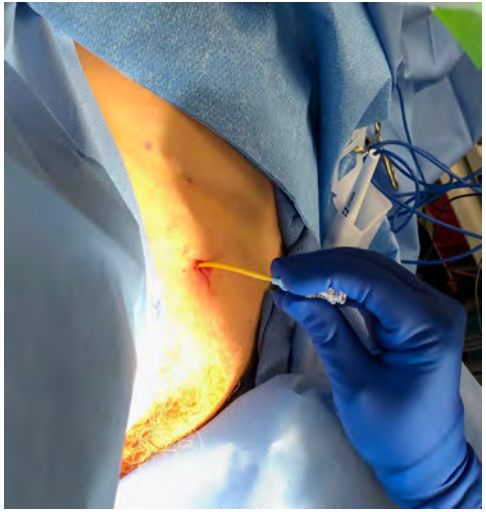


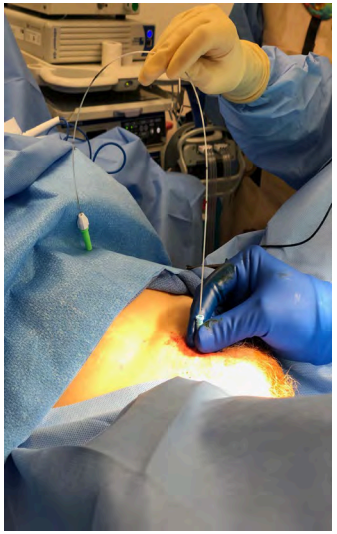


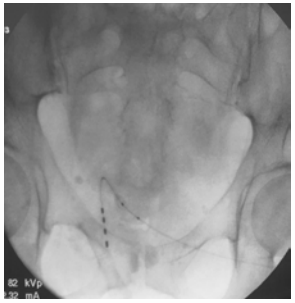
The Canadian Journal of Urology, 01 Feb 2022, 29(1):11032-11035

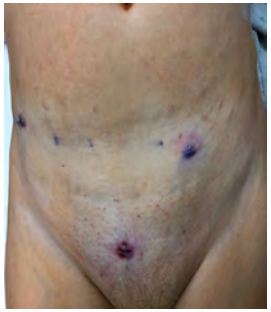
NEUROMODULATION

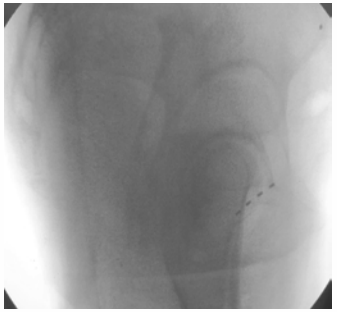












95% resolution of pain

Urology, Volume 137, 2020, Pages 196-199

NEUROMODULATION

PERSISTENT GENITAL AROUSAL DISORDER

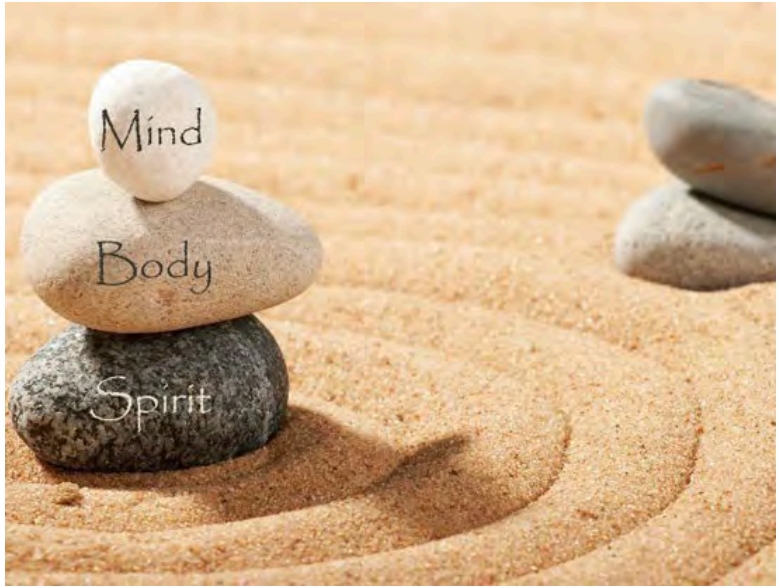
- Recently treated several woman with severe PGAD with pudendal stimulation
- Suffered for years, responded transiently to pudendal nerve blocks
- Chronically took multiple narcotics and antidepressants/day
- Remarkable improvement in symptoms were noted and were able to wean the majority off their medications

Definition: Persistent genital arousal disorder (**PGAD**), previously called **persistent sexual arousal** syndrome, is spontaneous, **persistent**, unwanted and uncontrollable **genital arousal** in the absence of **sexual** stimulation or **sexual** desire, and is typically not relieved by orgasm

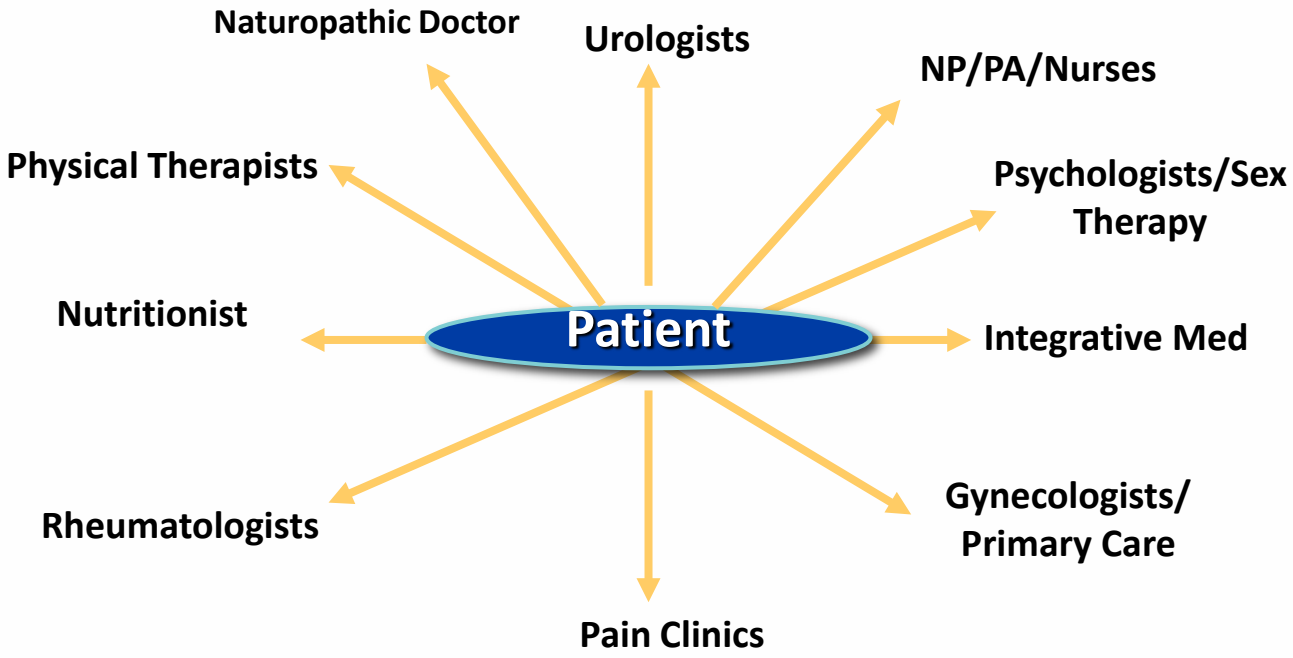
Pudendal Neuromodulation as a Treatment for Persistent Genital Arousal Disorder—A Case Series
Gaines, Natalie, MD*; Odom, Brian D., BS†; Killinger, Kim A., MSN*†; Peters, Kenneth M., MD*†
Female Pelvic Medicine & Reconstructive Surgery: July/August 2018 - Volume 24 - Issue 4 - p e1–e5

WORDS OF WISDOM

- Need to think beyond our specialties
- Must evaluate the whole patient
- Prioritize problems
- Life experiences may impact patient symptoms
- Triggers must be identified and managed
- Provide hope, education and support
- Start simple and advance therapy



A MULTIDISCIPLINARY TEAM APPROACH IS KEY TO SUCCESS



Thank You

OU WB School of MEDICINE
OAKLAND UNIVERSITY WILLIAM BEAUMONT

William Beaumont
University Hospital

Always Do – Look Beyond IC
Never Miss – Sacral Pathology

AUA Course 013 IC
Friday May 15, 2026
1:30 PM – 3:30 PM

Elise De MD
Professor of Urology, Ob/Gyn, Neurology
Medical Director
Multidisciplinary Pelvic Health
Albany Medical College

Disclosures

Twitter: @Dr_Elise_De
Instagram: elisede123
Facebook: elise.b.de
Linked In: elise-de-8a535a180

CLINICAL RESEARCH: PI, IRONWOOD PHARMACEUTICALS

CONSULTANT: FLUME CATHETERS, NIDDK DSMB EPPIC2201

STOCK: ERYP, DOXIMITY

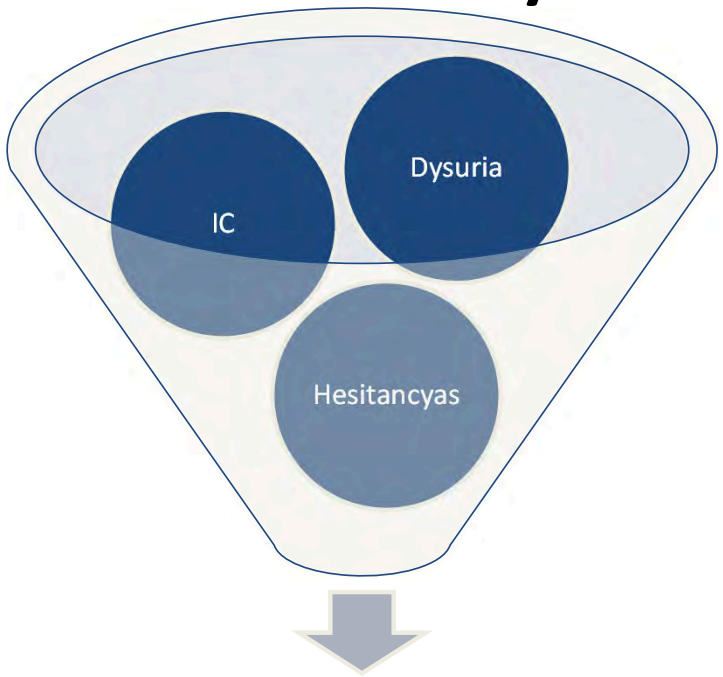
INNOVATION: WWW.RESTORATION-MEDICINE.COM

PELVIC ANSWERS LLC

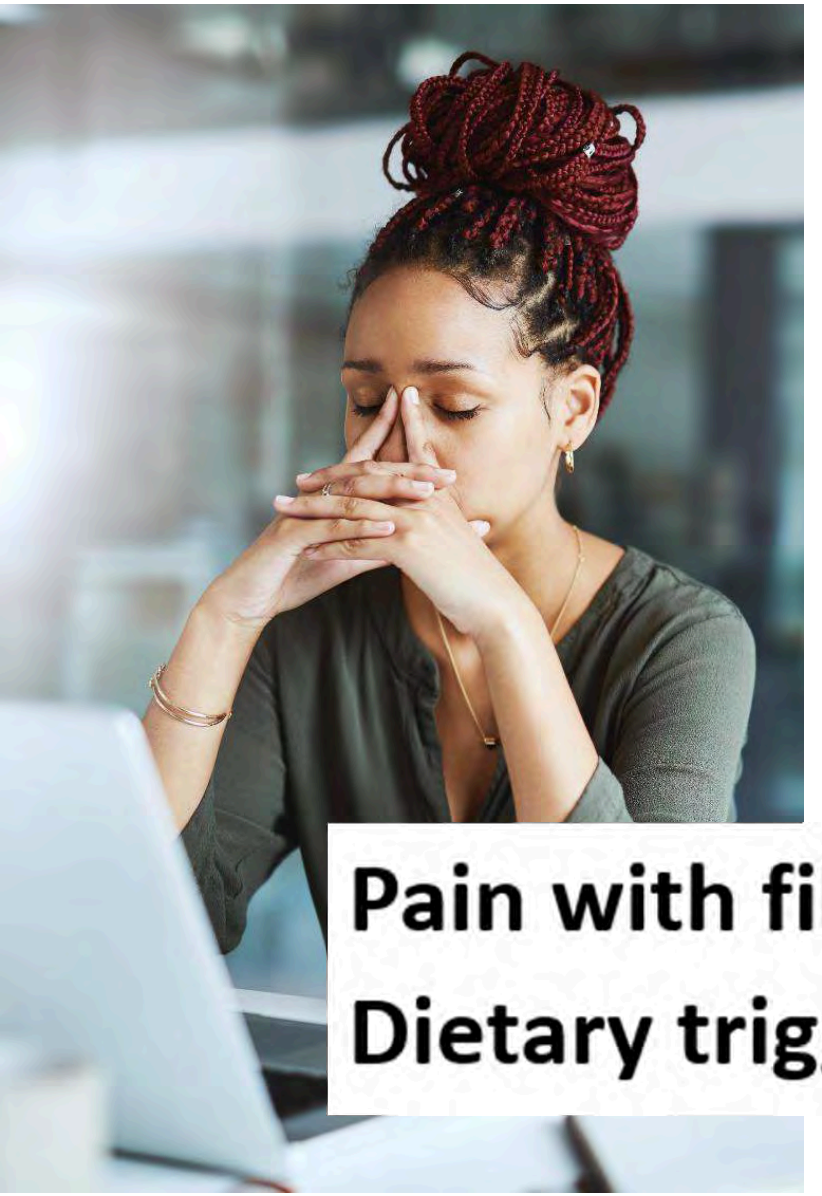
WEBSITE: WWW.FACINGPELVICPAIN.ORG

YOUTUBE: @FACINGPELVICPAIN

Case – Always Do



Always Reevaluate Presenting Diagnosis of IC



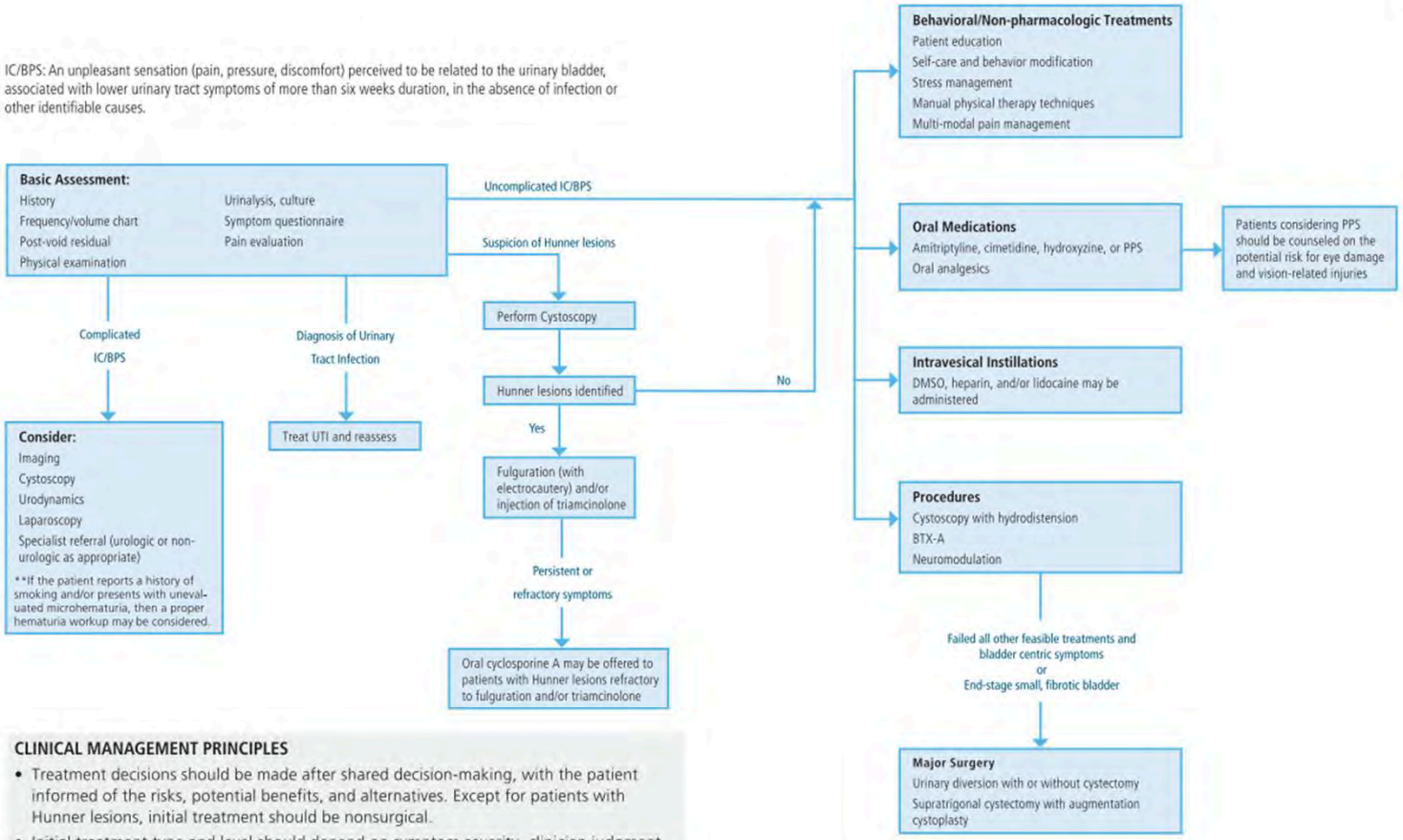
Case: “History of Interstitial Cystitis” (IC/BPS)

- 32 year old female
  - HTN
  - GERD
  - Interstim, CCY
  - G2P1 Vaginal, 7lbs
- Severe constant urgency, frequency

Pain with filling relieved by voiding

Dietary triggers

IC/BPS: An unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder, associated with lower urinary tract symptoms of more than six weeks duration, in the absence of infection or other identifiable causes.



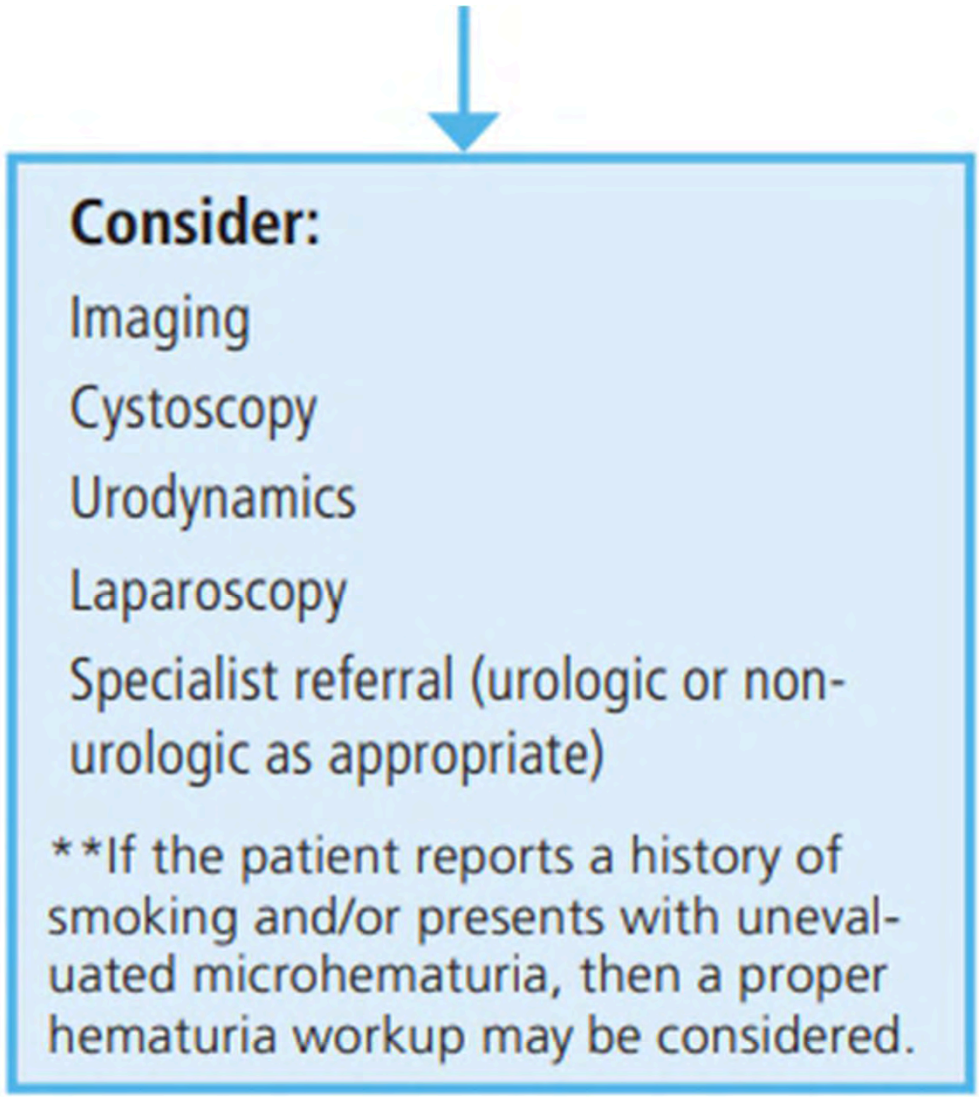
CLINICAL MANAGEMENT PRINCIPLES

- Treatment decisions should be made after shared decision-making, with the patient informed of the risks, potential benefits, and alternatives. Except for patients with Hunner lesions, initial treatment should be nonsurgical.
- Initial treatment type and level should depend on symptom severity, clinician judgment, and patient preferences.
- Multiple, simultaneous treatments may be considered if it is in the best interests of the patient.
- Ineffective treatments should be stopped.
- Pain management should be continually assessed for effectiveness.
- The IC/BPS diagnosis should be reconsidered if no improvement occurs after multiple treatment approaches.

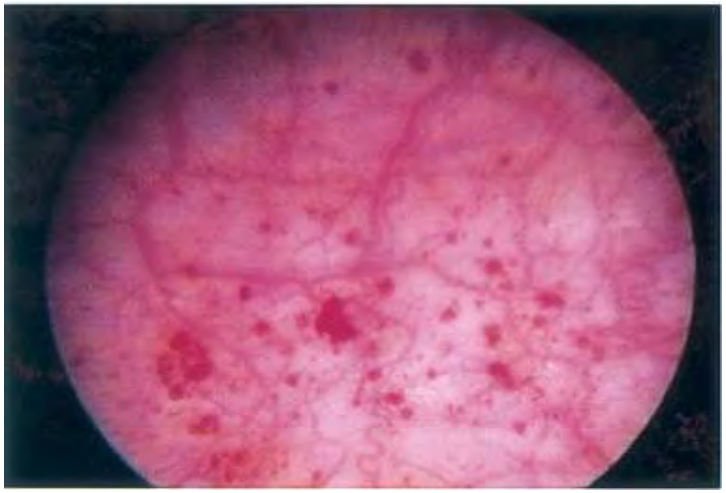
BTX-A: Onabotulinumtoxin A; DMSO: Dimethylsulfoxide; IC/BPS: Interstitial cystitis/bladder pain syndrome; PPS: Pentosan polysulfate; UTI: Urinary tract infection

The evidence supporting the use of Neuromodulation, Cyclosporine A and BTX-A for IC/BPS is limited by many factors including study quality, small sample sizes, and lack of durable follow up. None of these three therapies have been approved by the U.S. Food and Drug Administration for this indication. The panel believes that none of these interventions can be recommended for generalized use for this disorder, but rather should be limited to practitioners with experience managing this syndrome and willingness to provide long term care of these patients post intervention.

Figure. IC/BPS Diagnosis and Treatment Algorithm.

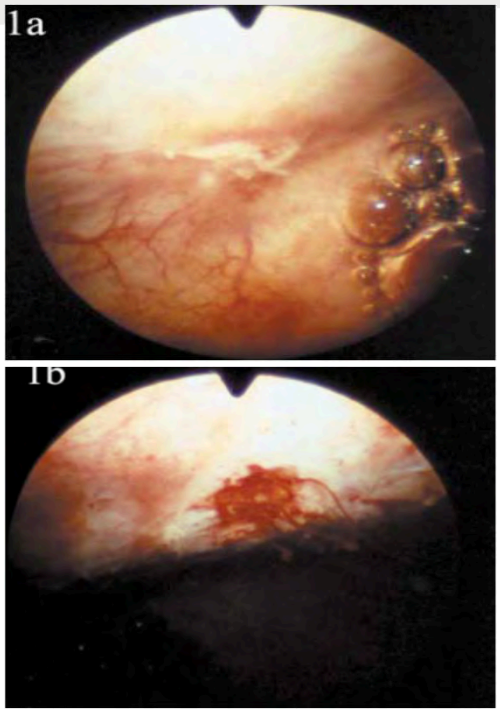

Consider:
Imaging
Cystoscopy
Urodynamics
Laparoscopy
Specialist referral (urologic or non-urologic as appropriate)
**If the patient reports a history of smoking and/or presents with unevaluated microhematuria, then a proper hematuria workup may be considered.

Interstitial Cystitis/Painful Bladder Syndrome Glomerulations and Hunner's Lesion



Anesthetic Capacity < 350 cc suspicious for IC

Campbell's Urology



Hunner's Lesion (Peeker Et Al 2000)

Reevaluation of Interstitial Cystitis - 69% NOT IC/PBS

O. Ilaka, R. Vancavage, S. Patel, S. Dharia, D. Pettijohn, Elise De

Confirmed Diagnoses of IC/BPS = 16	**Number (n) and Percentage of patients**
Interstitial cystitis remains most likely diagnosis	16/51 (31%) (of these 4, 25% with confirmed Hunner's lesions)
Confirmed Alternate Diagnoses = 35	**Number (n) and Percentage of patients**
NOT IC/BPS	35/51 (69%)
Small fiber neuropathy with autonomic dysfunction of the bladder	11/35 (31%)
Large fiber neuropathy	7/35 (20%), including 2 with MS, 2 with cervical spine stenosis, 3 with severe bilateral VUR
Bladder neck obstruction	7 (20%), including 3 with MTHFR mutation
Tarlov Cyst	2/35 (6%)
High tone levators with dysfunctional voiding and pelvic floor tension myalgia, resolved with physical therapy	2/35 (6%)
Post-chemo neuropathy	1/35 (3%)
Severe lumbar spinal stenosis with underactive bladder	1/35 (3%)
5 mm stone in distal ureter	1/35 (3%)
Prostatic obstruction	1/35 (3%)

Reevaluation of Interstitial Cystitis - 69% NOT IC/PBS

O. Ilaka, R. Vancavage, S. Patel, S. Dharia, D. Pettijohn, Elise De

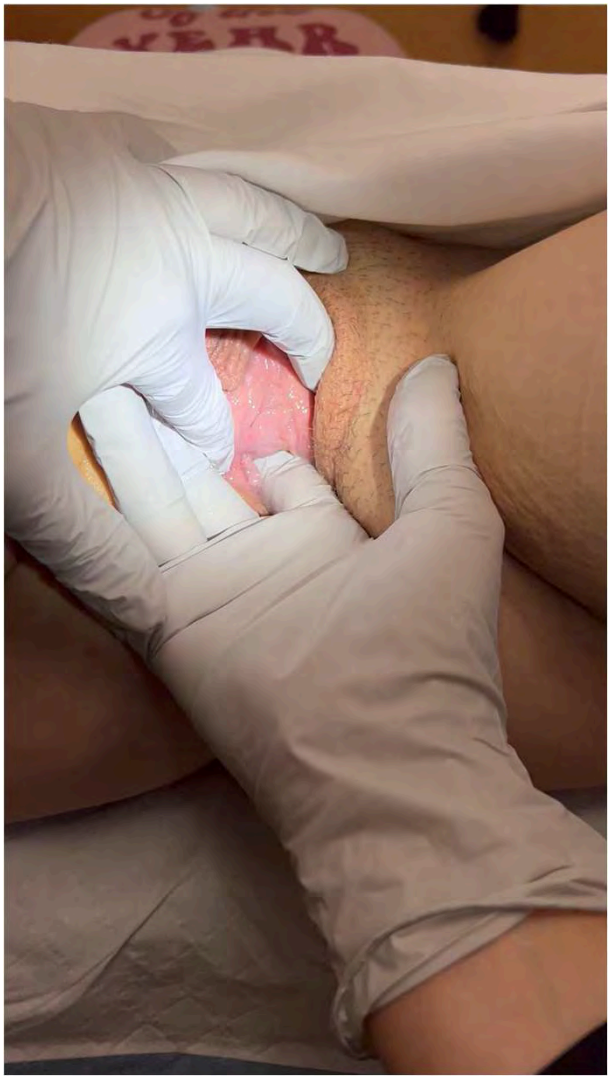
NOT IC/BPS	35/51 (69%)
Small fiber neuropathy with autonomic dysfunction of the bladder	11/35 (31%)
Large fiber neuropathy	7/35 (20%), including 2 with MS, 2 with cervical spine stenosis, 3 with severe bilateral VUR
Bladder neck obstruction	7 (20%), including 3 with MTHFR mutation
Tarlov Cyst	2/35 (6%)
5 mm stone in distal ureter	1/35 (3%)
Prostatic obstruction	1/35 (3%)

Case: “History of Interstitial Cystitis” (IC/BPS)

Post Void Dribbling

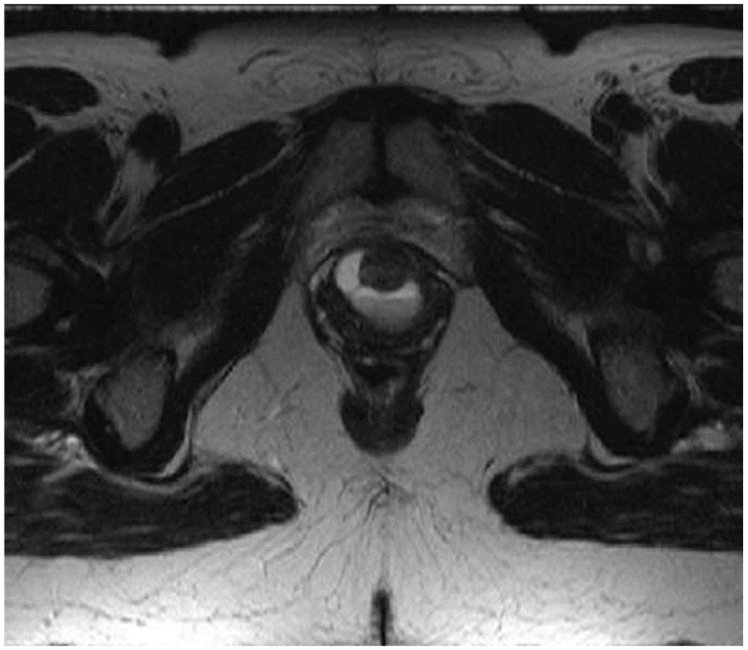
Recurrent UTI

Occasional Dysuria



Urethral Diverticulum

- Post Void Dribbling
- Pyuria/UTI
- Dyspareunia
- Cystic Exam
- Expressible fluid/ pus



Case: “History of Interstitial Cystitis” (IC/BPS)

- 32 year old female
  - Headaches
  - GERD
  - No PSH
  - G2P1 Vaginal, 7lbs

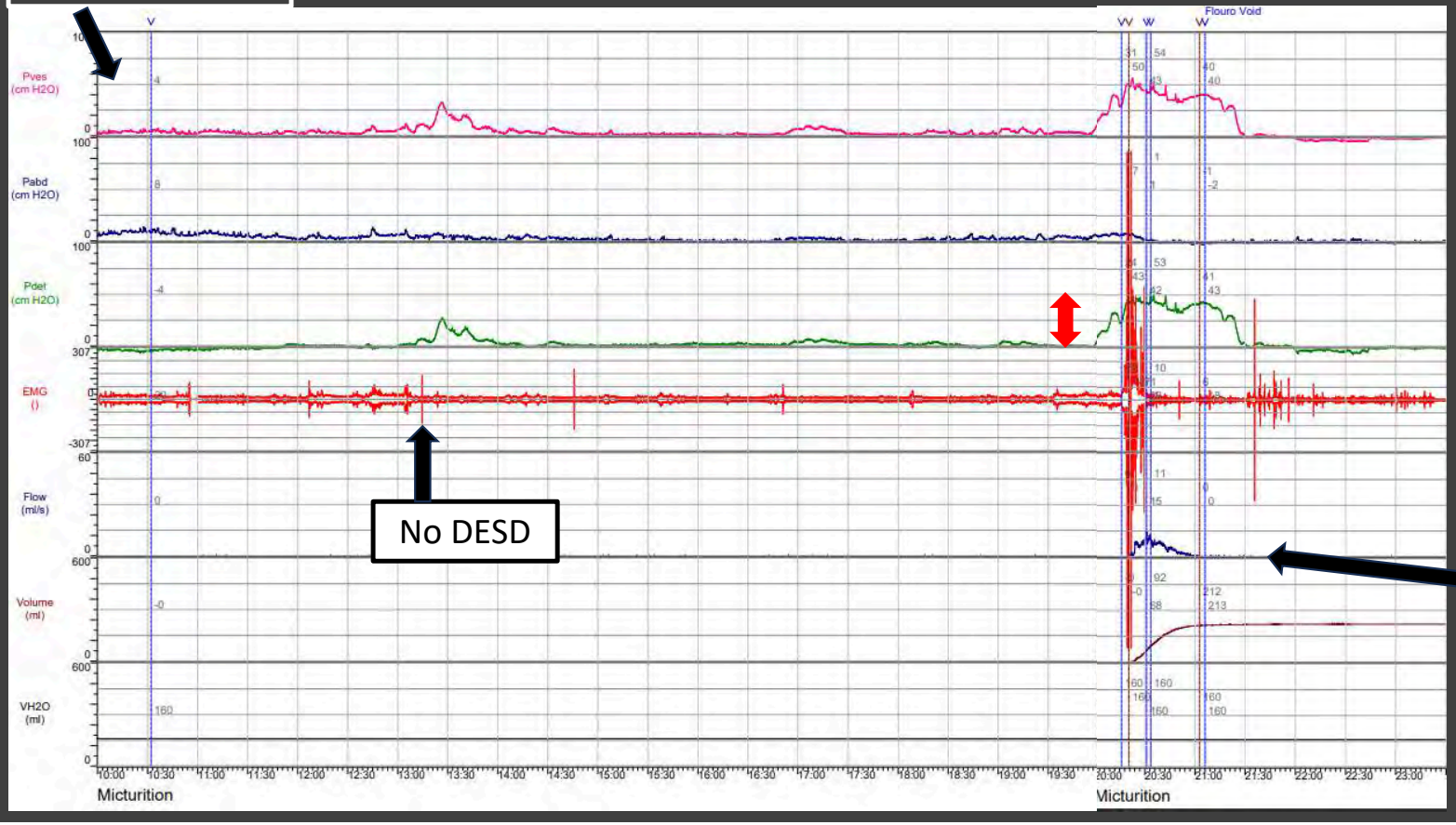
Hesitancy, intermittency, dysuria

PT unsuccessful

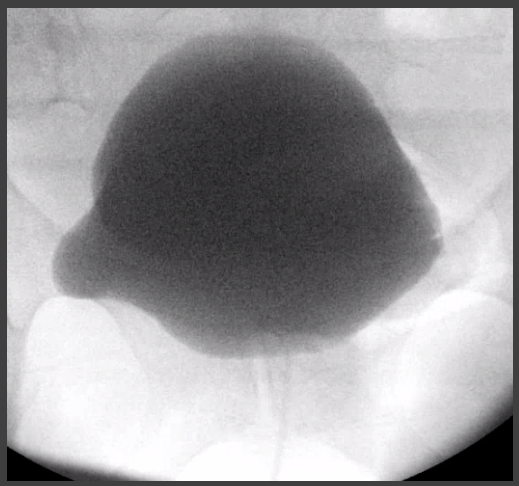
Botulinum toxin / anticholinergics made her worse

Case – “IC”, Hesitancy, Dysuria, “UTIs”

Permissive Void



No DESD



Severe Urethral Pain with Void
Bladder Neck Obstruction

Onabotulinumtoxin A to Bladder Neck

Minimally Invasive Treatment for Bladder Neck Obstruction

Rebecca A. Takele, DO; Elise J.B. De, MD, FACS

Albany Medical Center, Albany, New York

Music: https://soundcloud.com/ashamaluevmusic/inspirational-corporate-ambient

Patient Reported Outcomes Due to Bladder Neck Obstruction in Women Treated With Botulinum Toxin A Injection

Darrel Bibicheff[1] | Brittany Lee Roberts[2] | Dyer Pettijohn[3] | Priscilla Rodriguez[4] | Jessmehar Walia[5] | Elise J. B. De[6]

TABLE 2 | Global response assessment and visual analogue scale.

Reported improvement of symptoms on GRA	Number of participants (%)
Markedly Improved	6 (33%)
Moderately Improved	6 (33%)
Slightly Improved	2 (11%)
No Change	1 (6%)
Slightly Worse	0
Moderately Worse	0
Markedly Worse	2 (11%)
Questionnaire not Answered	1 (6%)
Reported Temporary Worsening of Symptoms Post Procedure ("Flare")	
Yes	6 (35%)
No	11 (65%)
Visual Analogue Scale	**Average Score**
Very Harmful (−10) to Very Helpful (10)	
Degree of Treatment Success All Comers ($N = 17$)	5.3
Degree of Treatment Success in Improved Patients ($N = 14$)	8.3

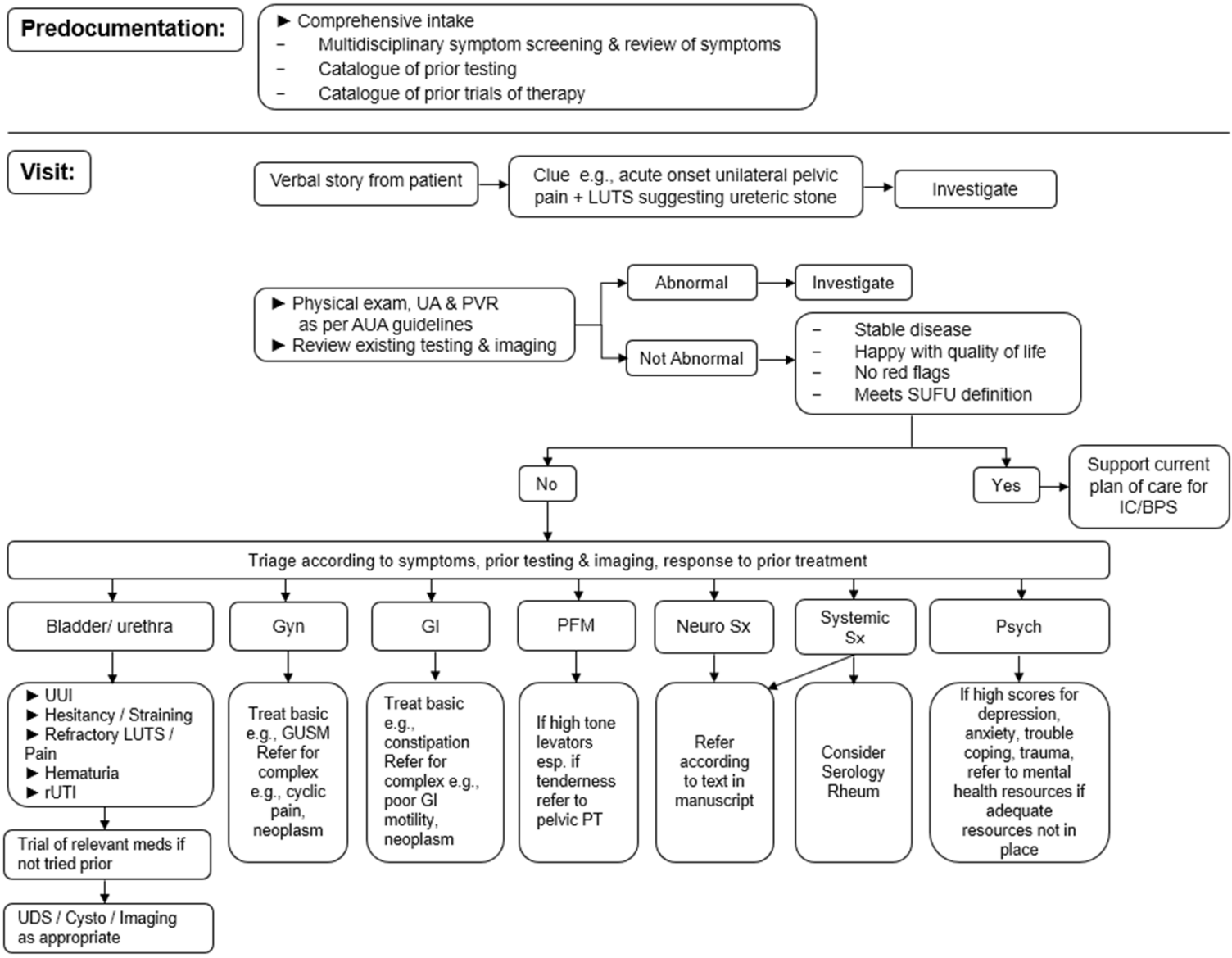
TABLE 3 | Patient reported symptom improvement.

Symptoms which improved	# participants out of 17 (%)
Feeling of Incomplete Emptying	11 (65%)
Difficulty Starting Stream	11 (65%)
Urethral Burning	10 (59%)
Pelvic Pain	9 (53%)
Pain with Urination	9 (53%)
Frequency	8 (47%)
Urgency	7 (41%)
Intermittent Stream	1 (6%)
Lower Abdominal Pain	1 (6%)
Bladder Sensitivity	1 (6%)
Decreased Urinary Tract Infection Frequency	1 (6%)

TABLE 5 | Concurrent procedures in 17 responders with reported improvement or worsening by VAS referable separately to that procedure in the patient's perception.

Site	Number of participants	Mean VAS (−10, very harmful, to +10, very helpful)
Pelvic Floor Muscles	10 (59%)	6
External Urethral Sphincter	1 (6%)	9
Bladder Detrusor Muscle	2 (12%)	8
Vulva	3 (18%)	10

Approach to Patients Labelled with IC

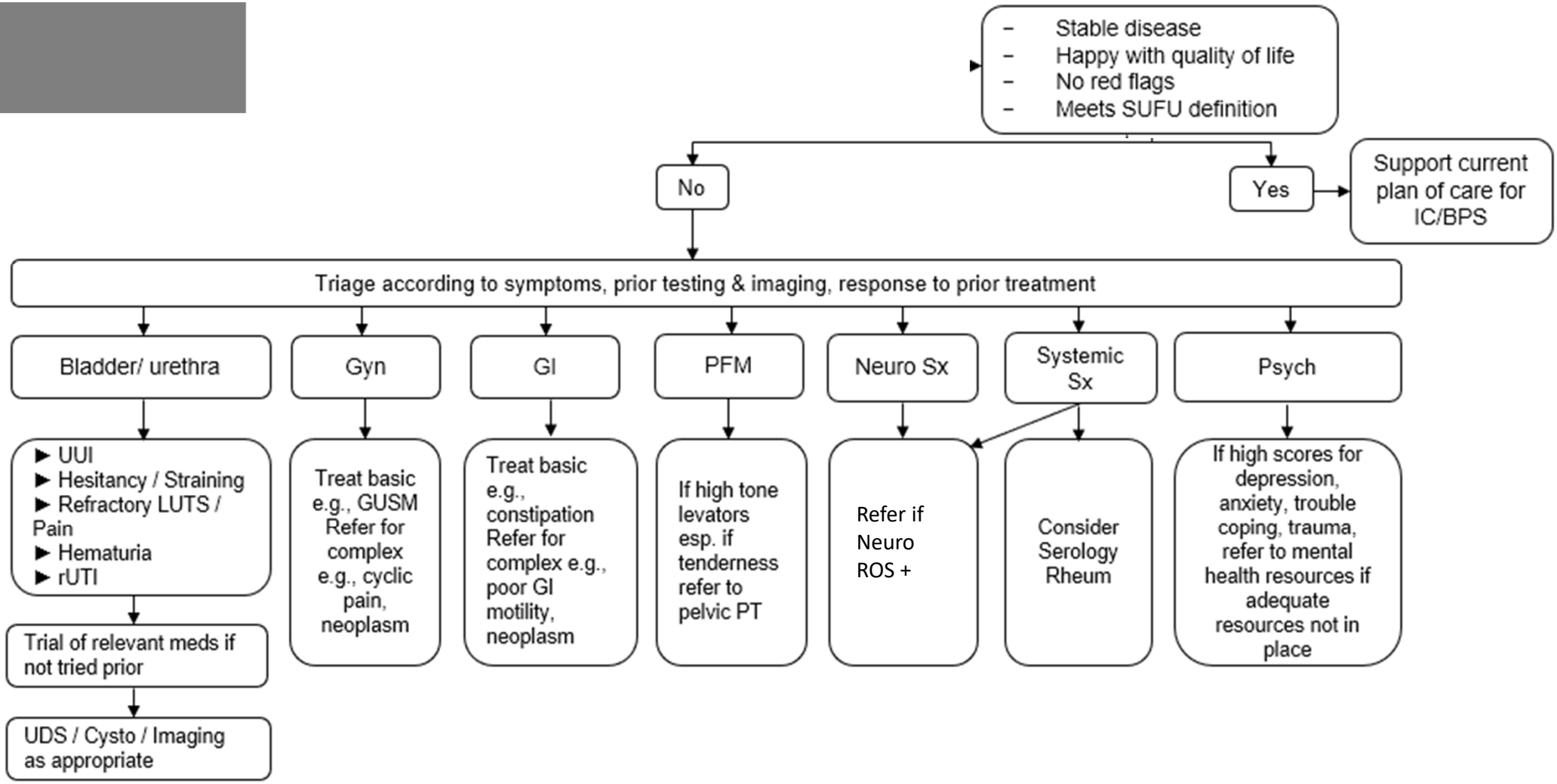


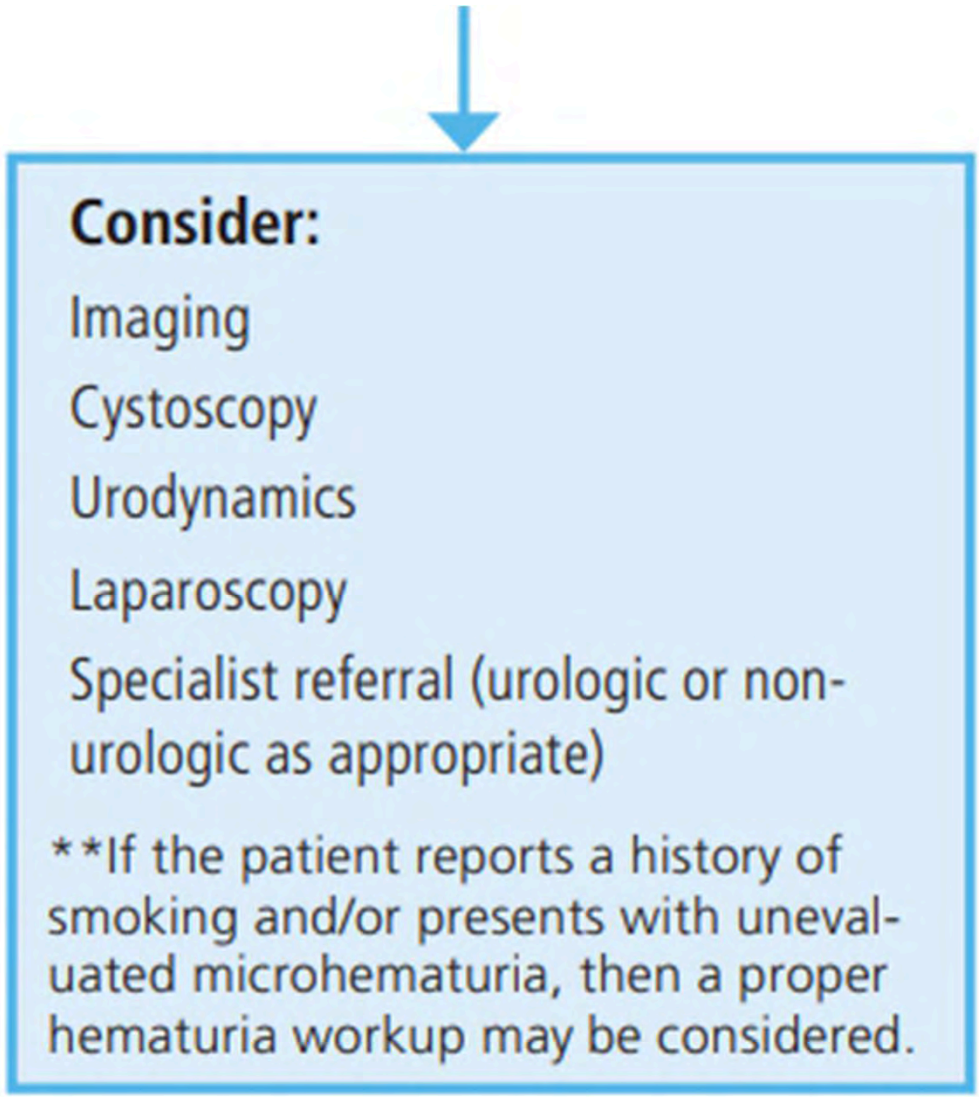
www.facingpelvicpain.org
The Treatment Map

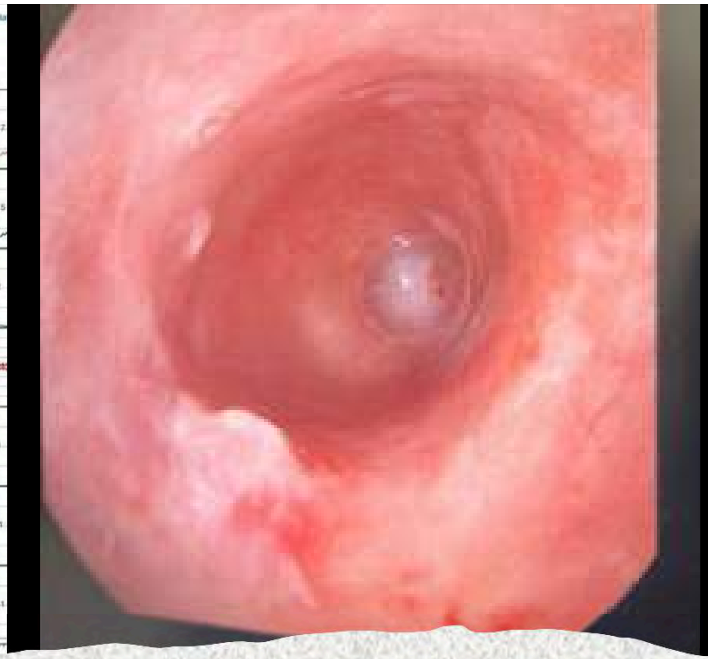
Vulvar / Vaginal Treatments	Tried?	Relief?	Still Using?
Avoidance of Irritants (select toilet paper, soap)			
☐ Steroid (clobetasol, hydrocortisone)			
☐ Diazepam (Valium®) vaginal Suppositories			
☐ Baclofen (Lioresel®)			
☐ Lidocaine			
☐ Gabapentin (Neurontin®)			
☐ Amitriptyline (Elavil®)			
☐ Tacrolimus (Prograf®)			
☐ Naltrexone - low dose (Vivitrol®)			
☐ Douches			
☐ Other Inserts			
☐ Wipes			
Hormonal Medications	**Tried?**	**Relief?**	**Still Using?**
Vaginal estrogen cream, tablet or ring			
Estrogen / progesterone pills or patches			
Hormone-secreting intrauterine device (Mirena®, Liletta®,			

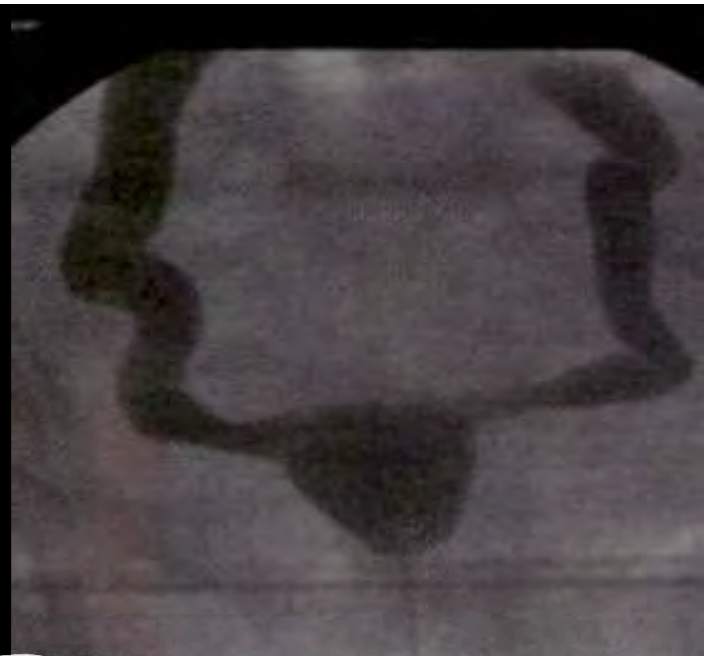
Predocumentation:

- ► Comprehensive intake
  - Multidisciplinary symptom screening & review of symptoms
  - Catalogue of prior testing
  - Catalogue of prior trials of therapy


- Stable disease
- Happy with quality of life
- No red flags
- Meets SUFU definition
No
Yes
Support current plan of care for IC/BPS
Triage according to symptoms, prior testing & imaging, response to prior treatment
Bladder/ urethra
Gyn
GI
PFM
Neuro Sx
Systemic Sx
Psych
► UUI
► Hesitancy / Straining
► Refractory LUTS / Pain
► Hematuria
► rUTI
Trial of relevant meds if not tried prior
UDS / Cysto / Imaging as appropriate
Treat basic e.g., GUSM Refer for complex e.g., cyclic pain, neoplasm
Treat basic e.g., constipation Refer for complex e.g., poor GI motility, neoplasm
If high tone levators esp. if tenderness refer to pelvic PT
Refer if Neuro ROS +
Consider Serology Rheum
If high scores for depression, anxiety, trouble coping, trauma, refer to mental health resources if adequate resources not in place


Consider:
Imaging
Cystoscopy
Urodynamics
Laparoscopy
Specialist referral (urologic or non-urologic as appropriate)
**If the patient reports a history of smoking and/or presents with unevaluated microhematuria, then a proper hematuria workup may be considered.

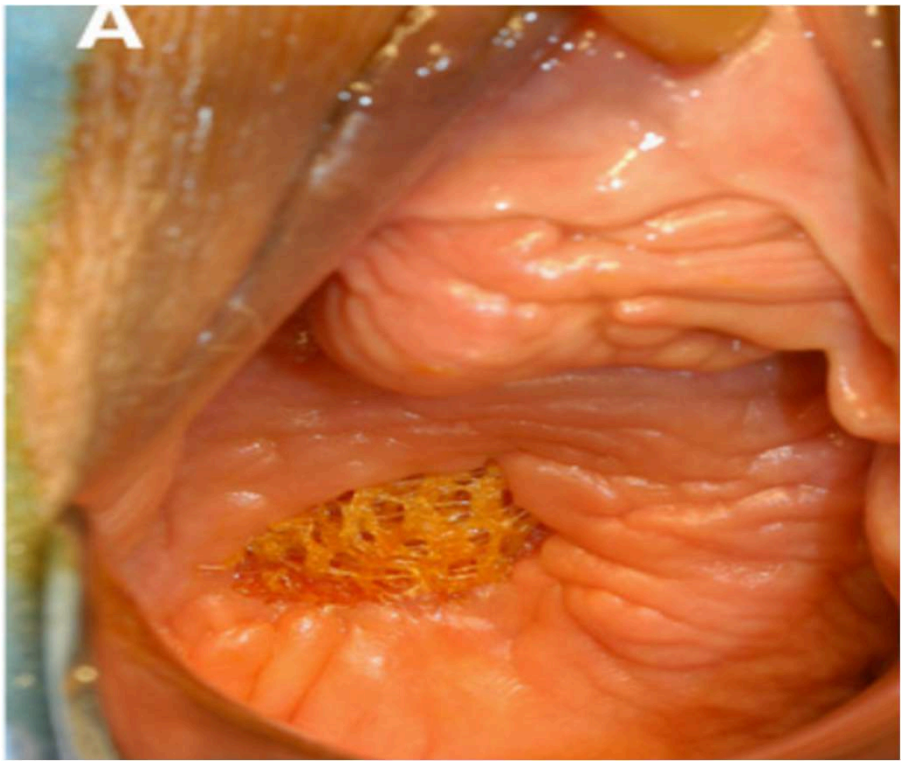


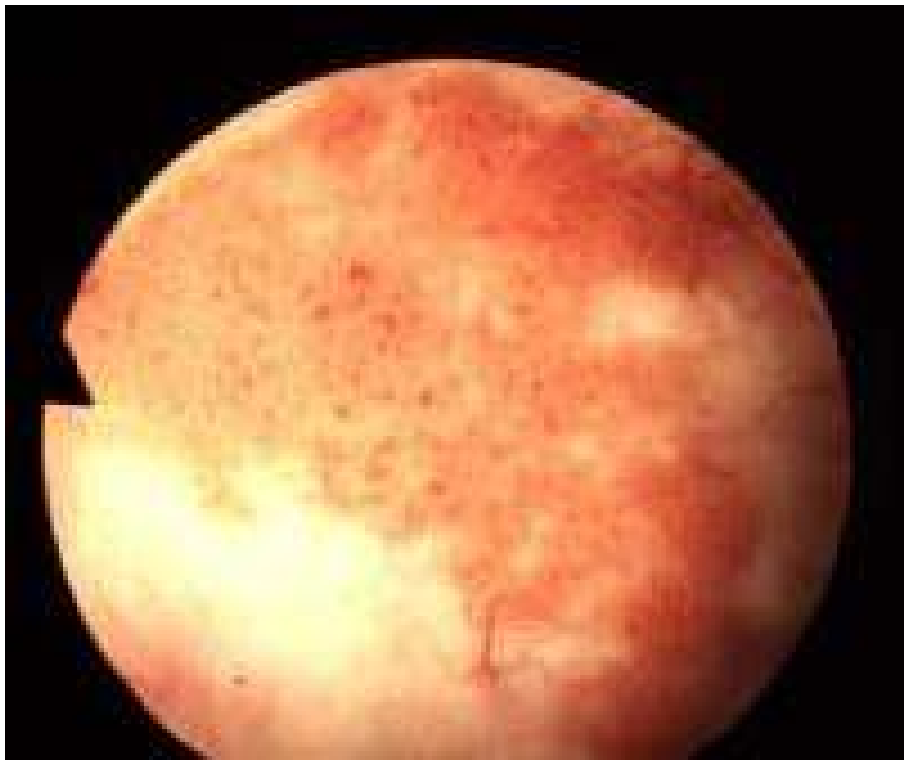


Recurrent UTIs, variable cultures with pyuria, low PVR, double voiding, failing vaginal estrogen and cranberry:

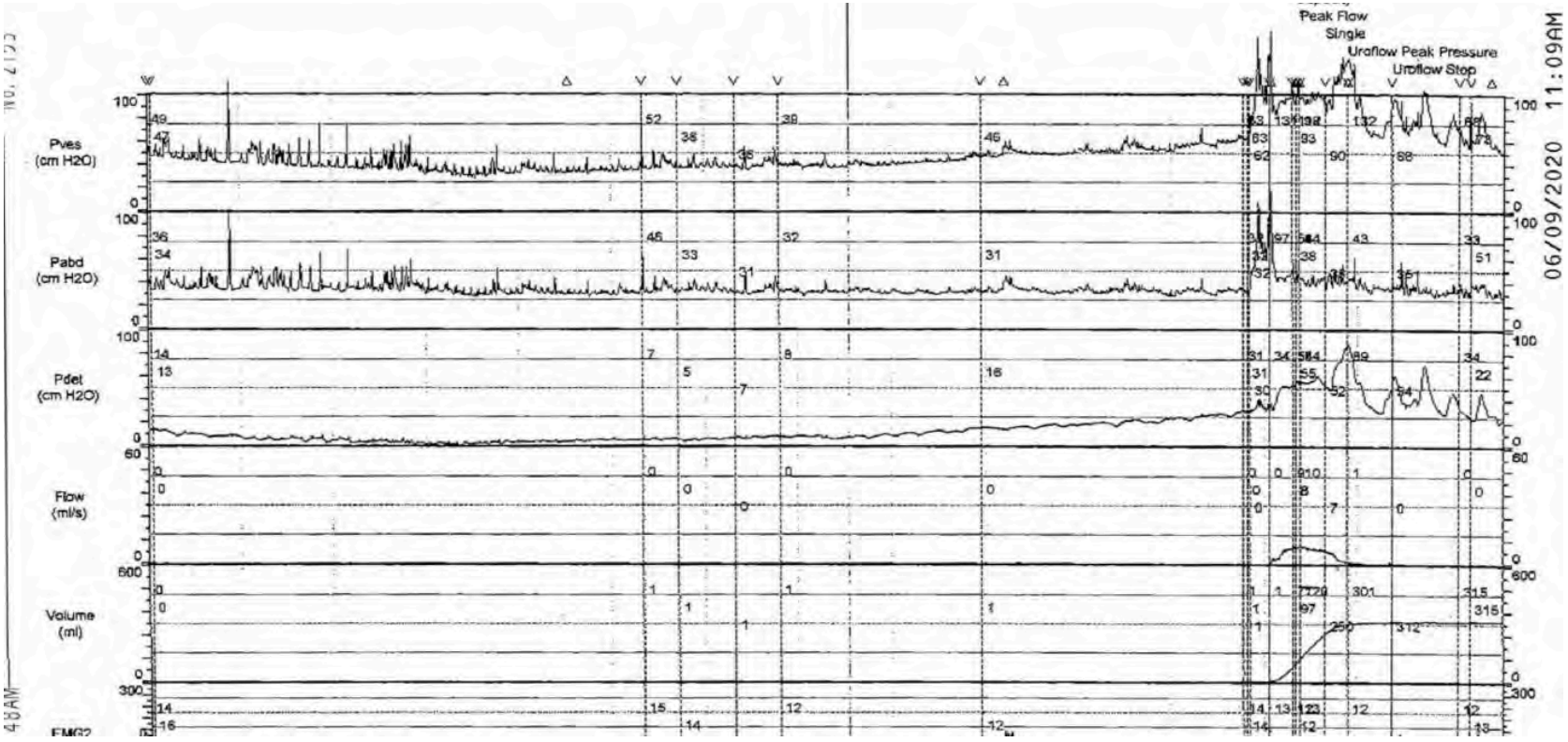
Not IC/BPS

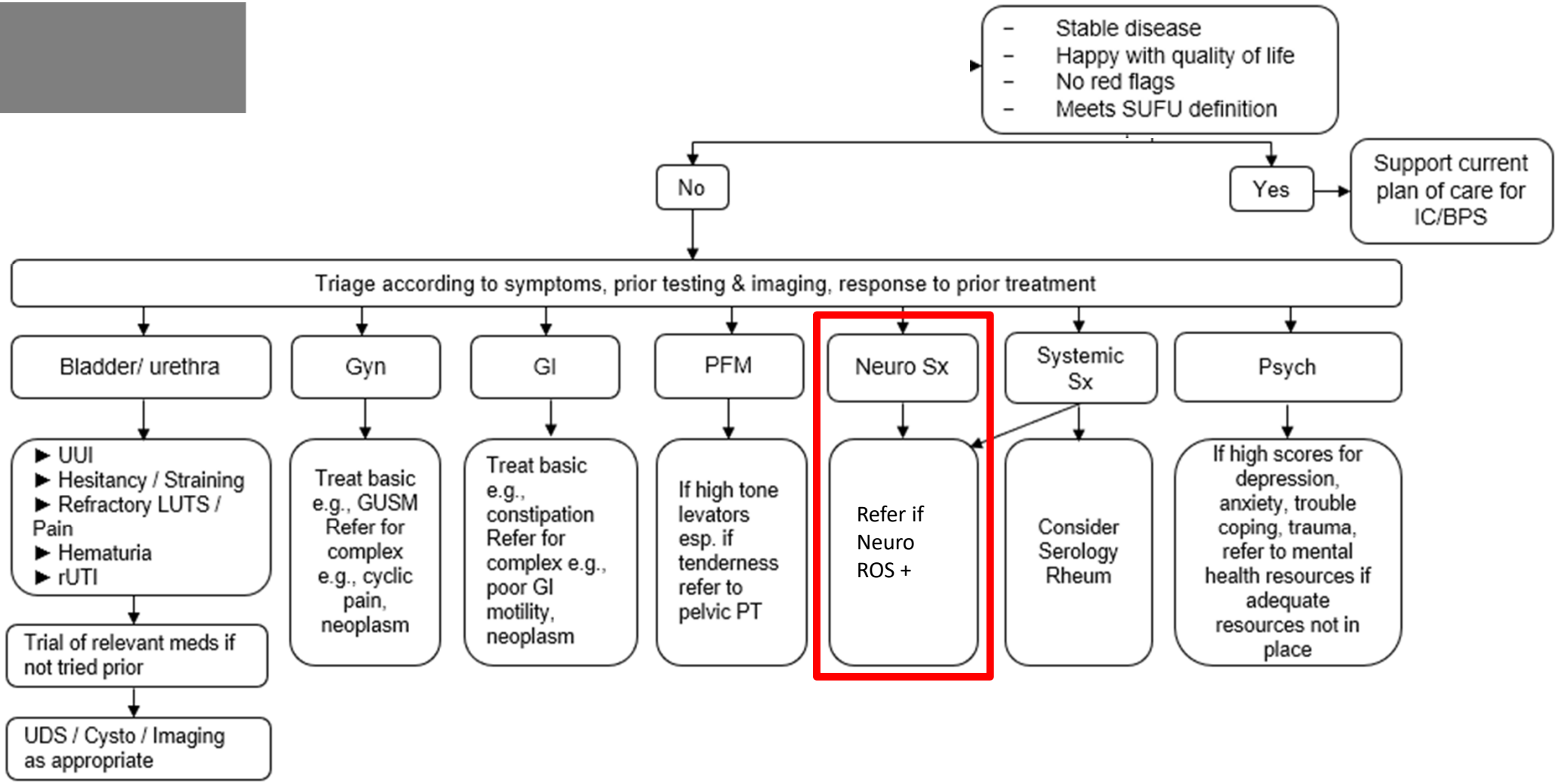
Refractory LUTS:
Not IC/BPS until proven otherwise



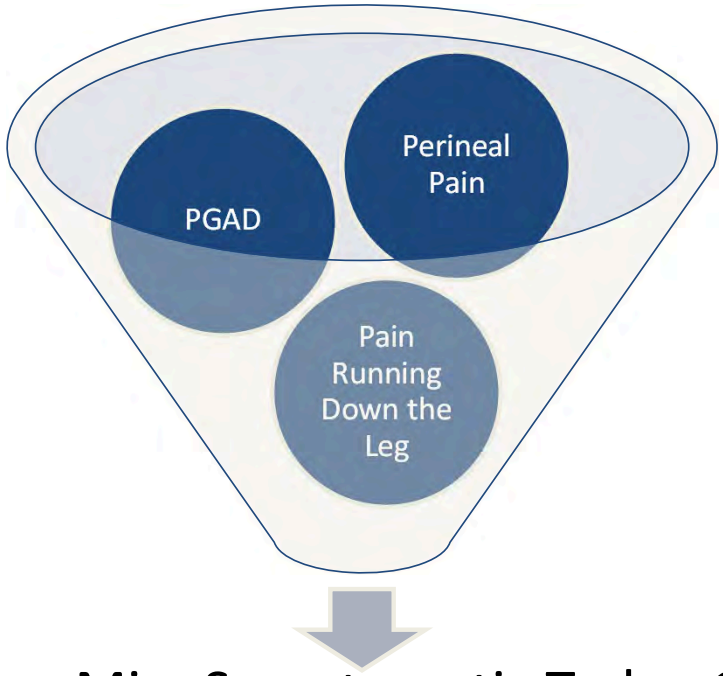


Pain with bladder filling since middle school
Poor Bladder Compliance, Tethered Cord
Not IC/BPS




- Stable disease
- Happy with quality of life
- No red flags
- Meets SUFU definition
No
Yes
Support current plan of care for IC/BPS
Triage according to symptoms, prior testing & imaging, response to prior treatment
Bladder/ urethra
Gyn
GI
PFM
Neuro Sx
Systemic Sx
Psych
► UUI
► Hesitancy / Straining
► Refractory LUTS / Pain
► Hematuria
► rUTI
Trial of relevant meds if not tried prior
UDS / Cysto / Imaging as appropriate
Treat basic e.g., GUSM Refer for complex e.g., cyclic pain, neoplasm
Treat basic e.g., constipation Refer for complex e.g., poor GI motility, neoplasm
If high tone levators esp. if tenderness refer to pelvic PT
Refer if Neuro ROS +
Consider Serology Rheum
If high scores for depression, anxiety, trouble coping, trauma, refer to mental health resources if adequate resources not in place

Case – Never Miss



Never Miss Symptomatic Tarlov Cyst

(and try to find Occult Neurological Disease in General)

Audience Poll

- Who knows what a Tarlov cyst is?
- Who has seen one on imaging?
- Who has been told it's incidental?

Sutter Health

Courtesy Rudolph Schrot MD

Continence 14 (2025) 101900

Contents lists available at ScienceDirect

Continence

journal homepage: www.elsevier.com/locate/cont

Undiagnosed neurologic disease in refractory chronic pelvic pain: High yield in screen-positive patients

Screening criteria for neurological eval in CPP:

- Pain or weakness in a nerve root, peripheral nerve, or CNS pattern
- Combination of bladder, bowel, sexual, pain symptoms referable to lumbosacral spine
- Balance or gait alteration, falls
- Abnormal reflexes or weakness on exam
- Upper motor neuron findings or unexplained hypotonia on urodynamics (e.g., neurogenic detrusor overactivity, DESD)
- Autonomic dysfunction
- Chronic Overlapping Pain Conditions
- Pelvic pain refractory to musculoskeletal and organ-based interventions

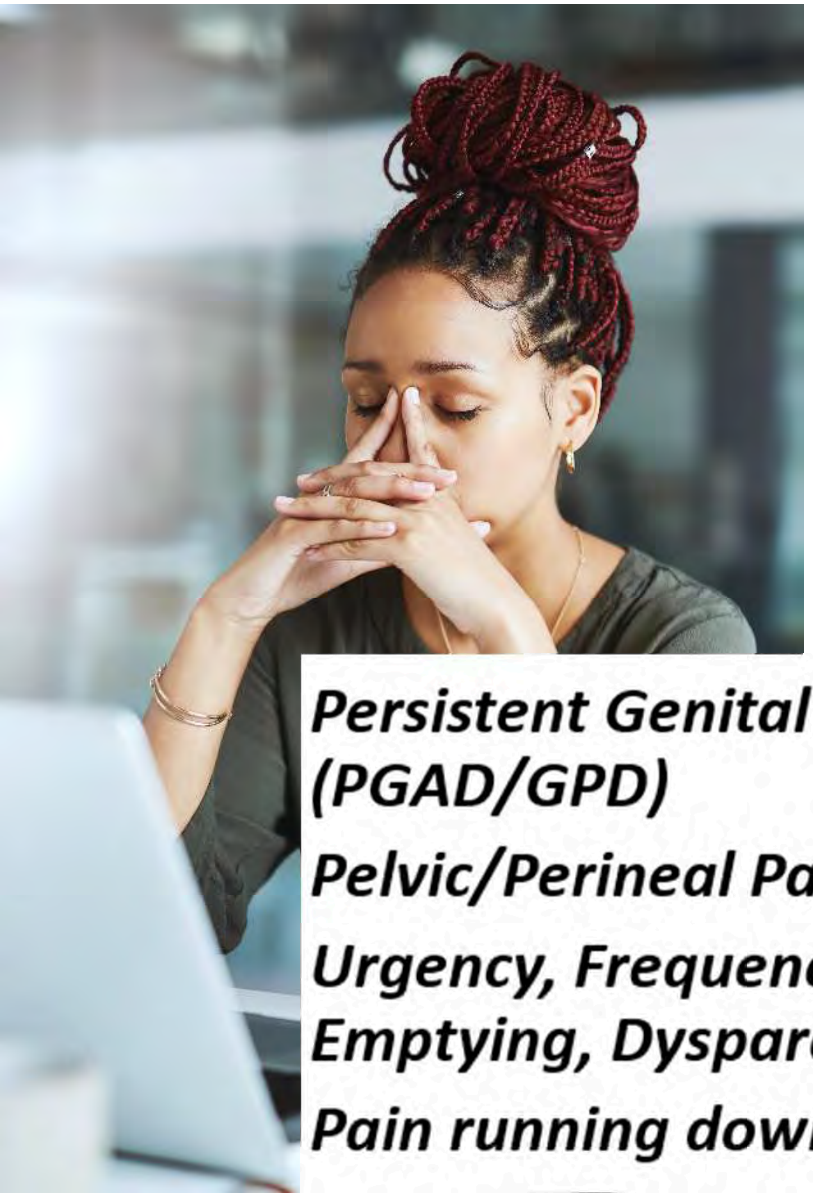
Table 1
Neurologic Evaluation Outcomes.

Confirmed Neurologic Diagnoses in Patients with Completed Evaluation	Number of Patients, n (%) of 126
Any neurologic diagnosis	92 (73%)
Small Fiber Neuropathy (SFN)	29 (23%)
Large Fiber Neuropathy (LFN)	21 (17%)
Lumbosacral Radiculopathy	18 (14%)
Severe Spinal Stenosis	14 (11%)
– Cervical/thoracic	5 (4%)
– Lumbosacral	10 (8%)
Tarlov Cyst Deemed Clinically Significant	7 (6%)
Herniated Disc Deemed Clinically Significant	6 (5%)
– Cervical/thoracic	1 (1%)
– Lumbosacral	6 (5%)
Vitamin B12 Deficiency	6 (5%)
Ankylosing Spondylitis	6 (5%)
MTHFR Mutation	5 (4%)
Chiari Malformation	2 (2%)
Multiple Sclerosis	2 (2%)
Cauda Equina Syndrome	1 (1%)
Guillain-Barre Syndrome	1 (1%)
Friedrichs Ataxia	1 (1%)
Cerebal Palsy	1 (1%)

What triggers suspicion for neurological factors?

Screening criteria for neurological eval in CPP:

- Pain or weakness in a nerve root, peripheral nerve, or CNS pattern
- Combination of bladder, bowel, sexual, pain sx referable to lumbosacral spine
- Balance or gait alteration, falls
- Abnormal reflexes or weakness on exam
- Upper motor neuron findings or unexplained hypotonia on urodynamics (e.g., neurogenic detrusor overactivity, DESD)
- Autonomic dysfunction (POTS, IBS, dry eyes, palpitations)
- Chronic Overlapping Pain Conditions (migraines, TMJ, vulvodynia, foot pain)
- Pelvic pain refractory to musculoskeletal and organ-based interventions



Hight Tone Pelvic Floor with Pain (Pelvic Floor Tension Myalgia) Refractory to PT

- 32 year old female
  - Headaches
  - GERD
  - No PSH
  - G2P1 Vaginal, 7lbs

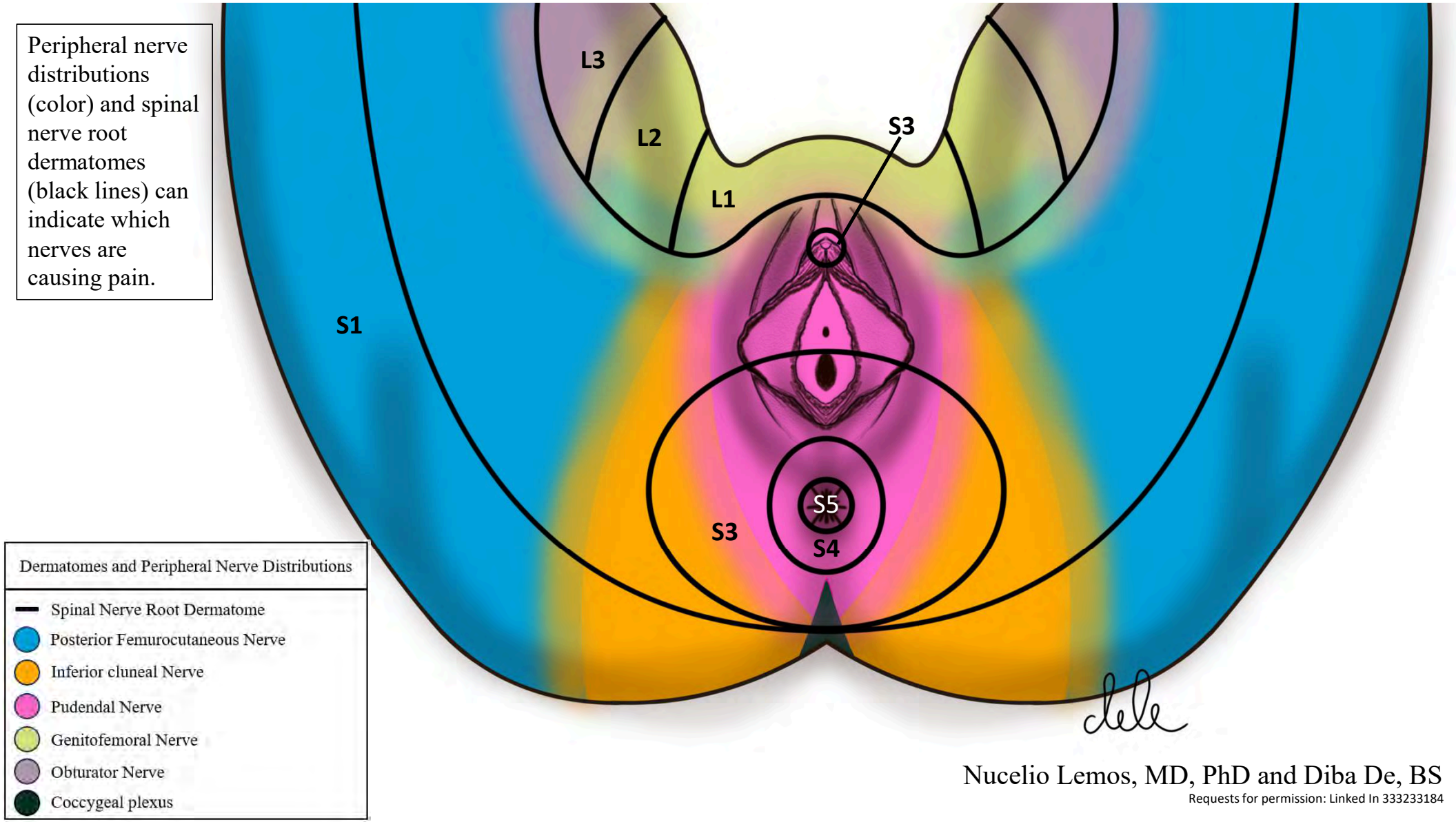
Persistent Genital Arousal Disorder/Genitopelvic Dysesthesia (PGAD/GPD)

Pelvic/Perineal Pain

Urgency, Frequency, Pelvic Pressure, Sensation of Incomplete Emptying, Dyspareunia

Pain running down the leg, worse as day goes on

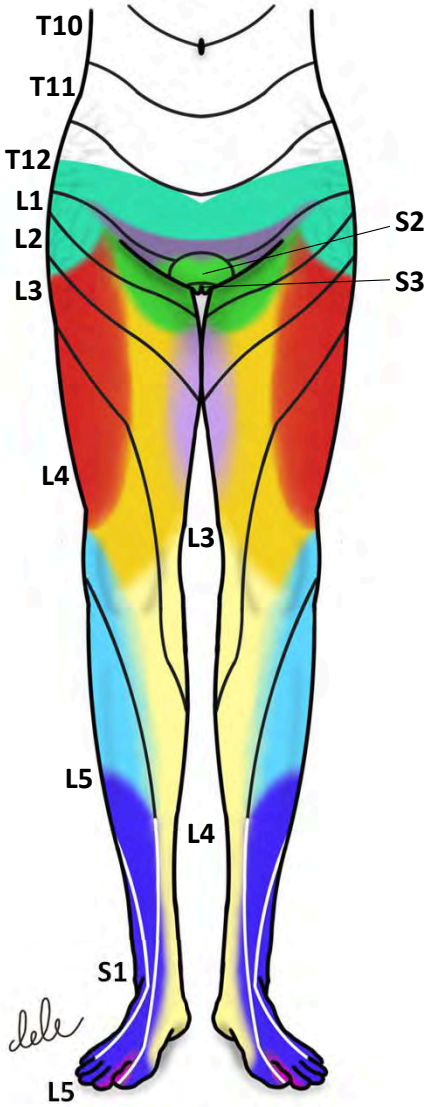
Peripheral nerve distributions (color) and spinal nerve root dermatomes (black lines) can indicate which nerves are causing pain.

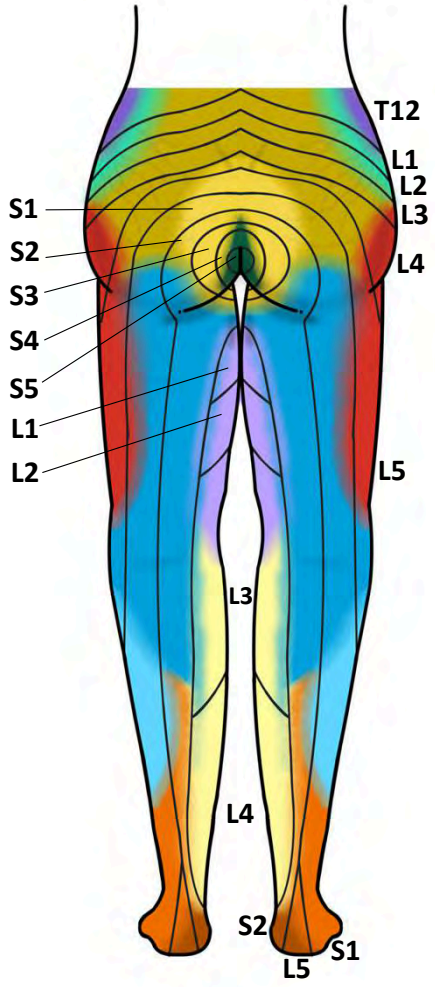


Nucelio Lemos, MD, PhD and Diba De, BS

Key of Spinal Nerve Root Dermatomes and Peripheral Nerve Distributions

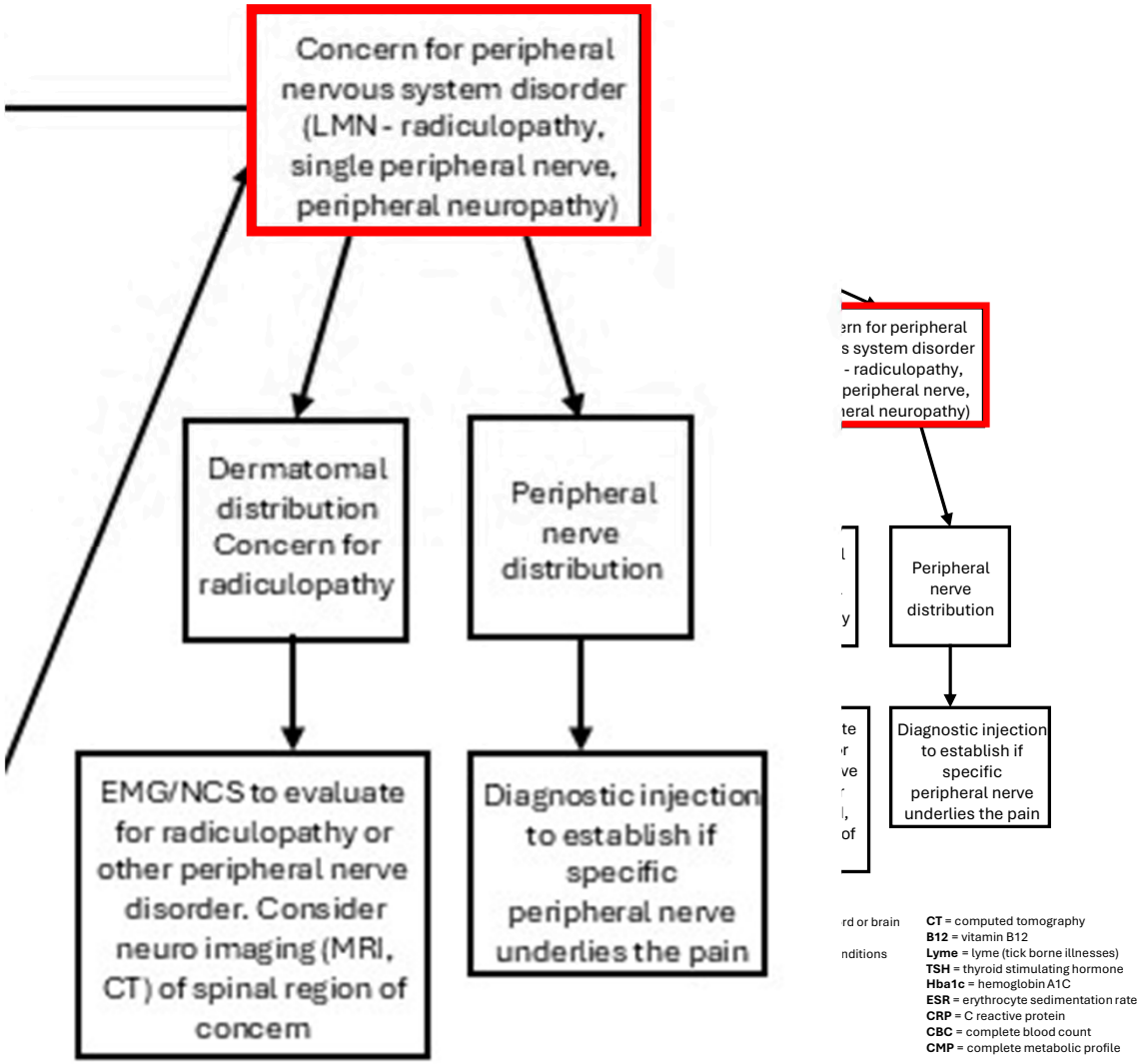
- Spinal Nerve Root Dermatome
- Iliohypogastric Nerve
- Ilioinguinal Nerve
- Genitofemoral Nerve
- Lateral Femoral Cutaneous Nerve
- Femoral Nerve
- Obturator Nerve
- Posterior Femorocutaneous Nerves
- Femoral Nerve (Saphenous Branch)
- Common Fibular Nerve (superficial)
- Common Fibular Nerve (deep)
- Posterior Femorocutaneous Nerves
- Superior Cluneal Nerve
- Middle Cluneal Nerve
- Tibial Nerve (Sural)
- Tibial Nerve
- Coccygeal Plexus



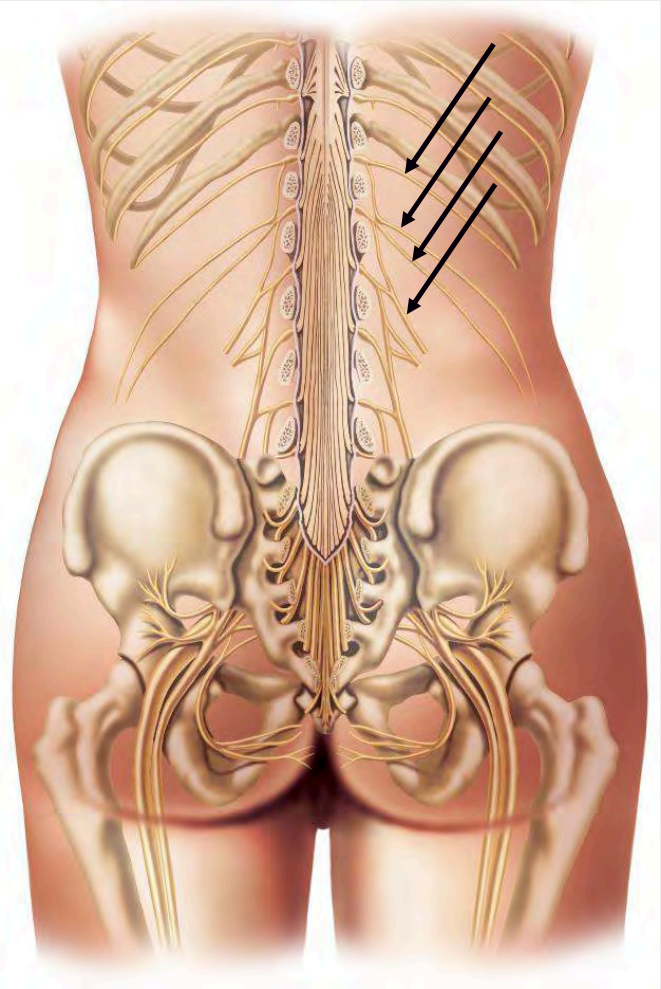


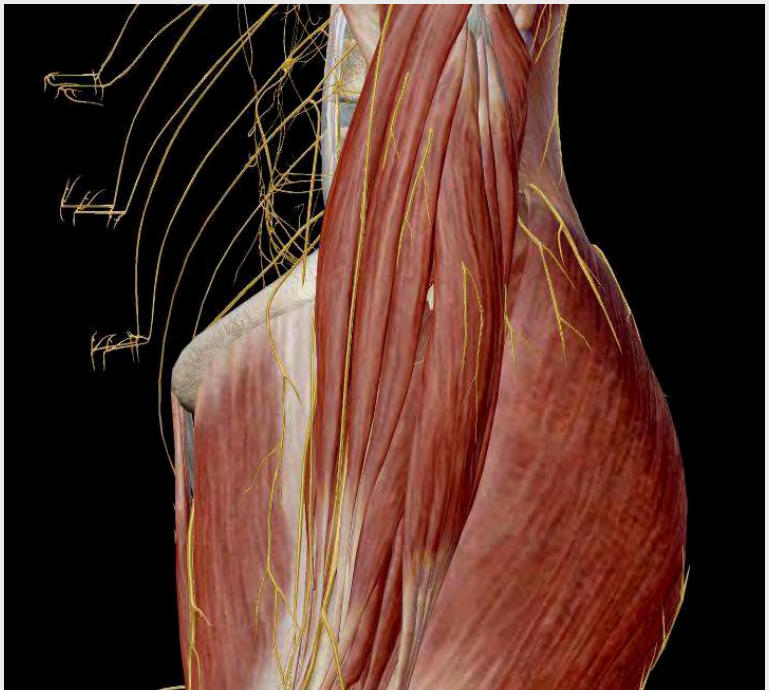
Nucelio Lemos, MD, PhD and Diba De, BS

Figure 2: Neurologist's Diagnostic Algorithm in people with CPP referred by pelvic health for a positive Neurological Screening. This is a basic guide, not to replace subspecialty neurological evaluation. Copyright retained by the authors.



Abdominal Wall Nerve Entrapment





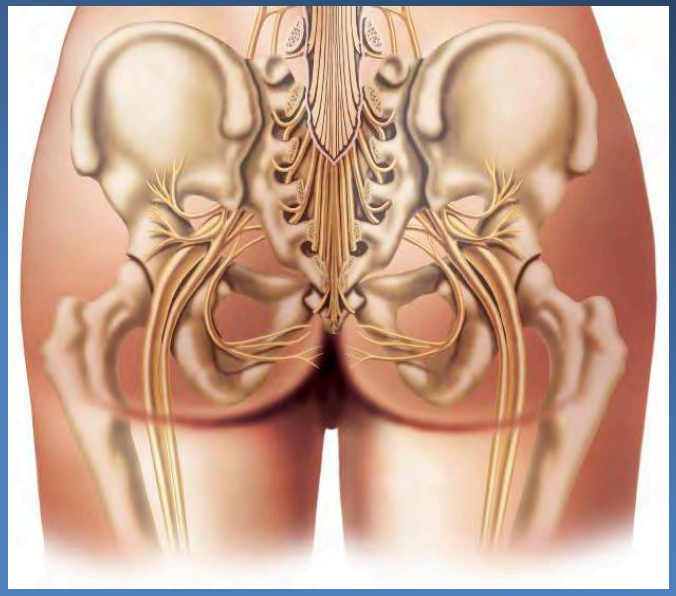
At a Glance: Sacral Process

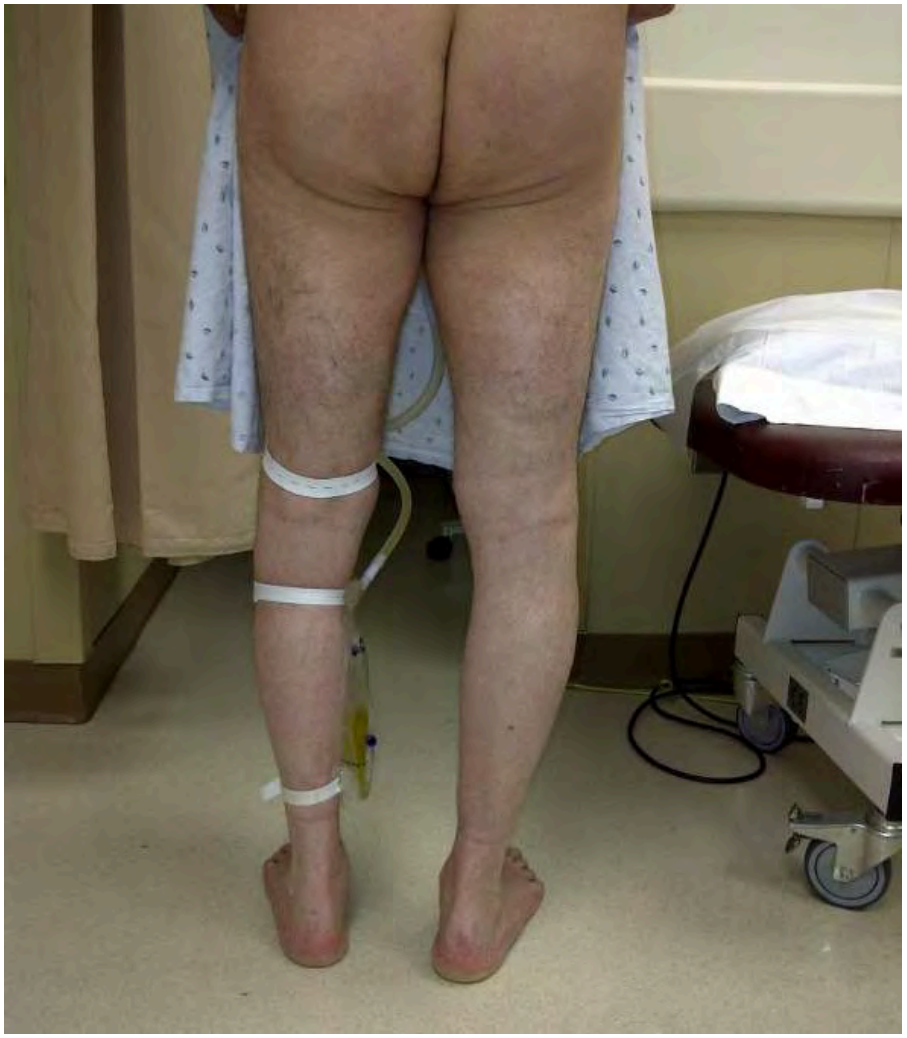
Adult Tethered Cord
- mixed UMN and LMN

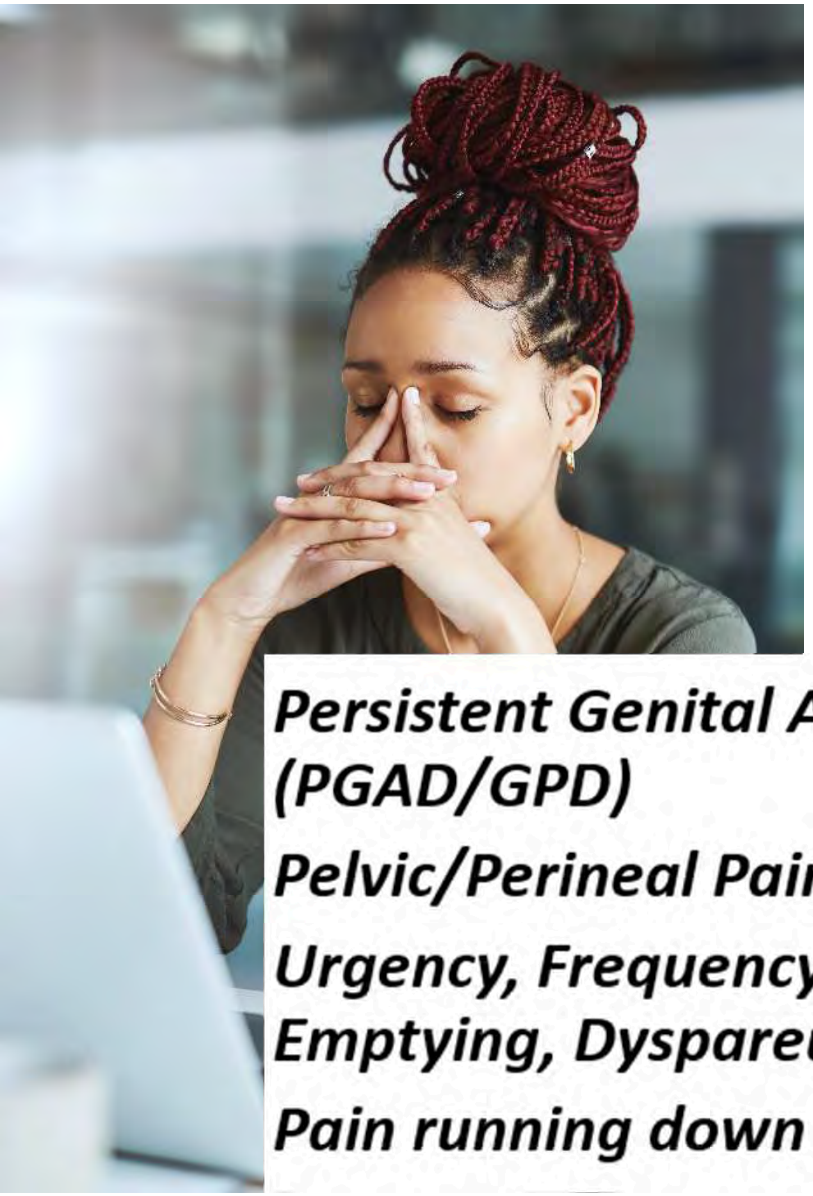
Sacral Chordoma

Syringomyelia

Bilateral Tarlov Cysts







Hight Tone Pelvic Floor with Pain (Pelvic Floor Tension Myalgia) Refractory to PT

- 32 year old female
  - Headaches
  - GERD
  - No PSH
  - G2P1 Vaginal, 7lbs

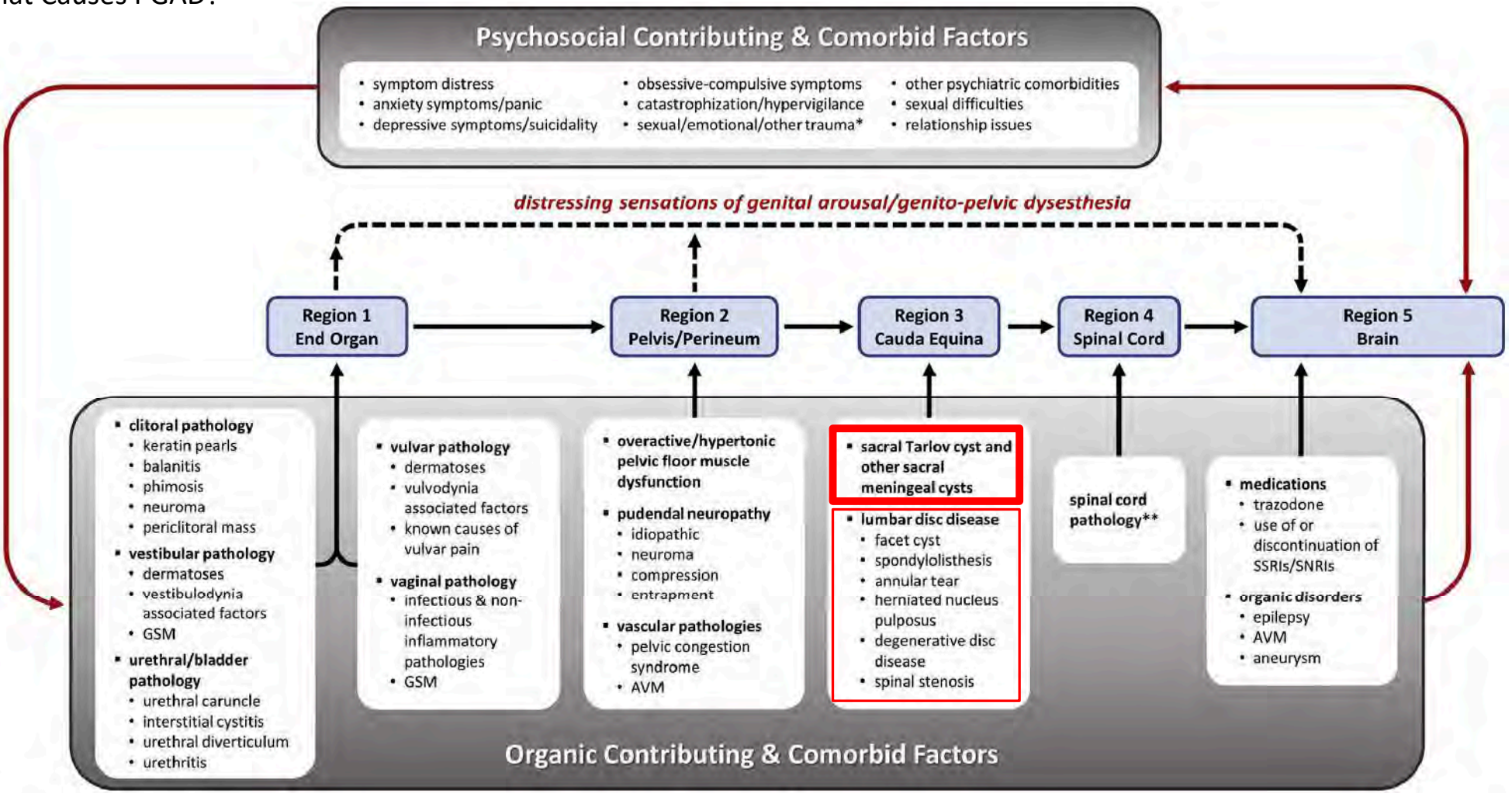
Persistent Genital Arousal Disorder/Genitopelvic Dysesthesia (PGAD/GPD)

Pelvic/Perineal Pain

Urgency, Frequency, Pelvic Pressure, Sensation of Incomplete Emptying, Dyspareunia

Pain running down the leg, worse as day goes on

What Causes PGAD?

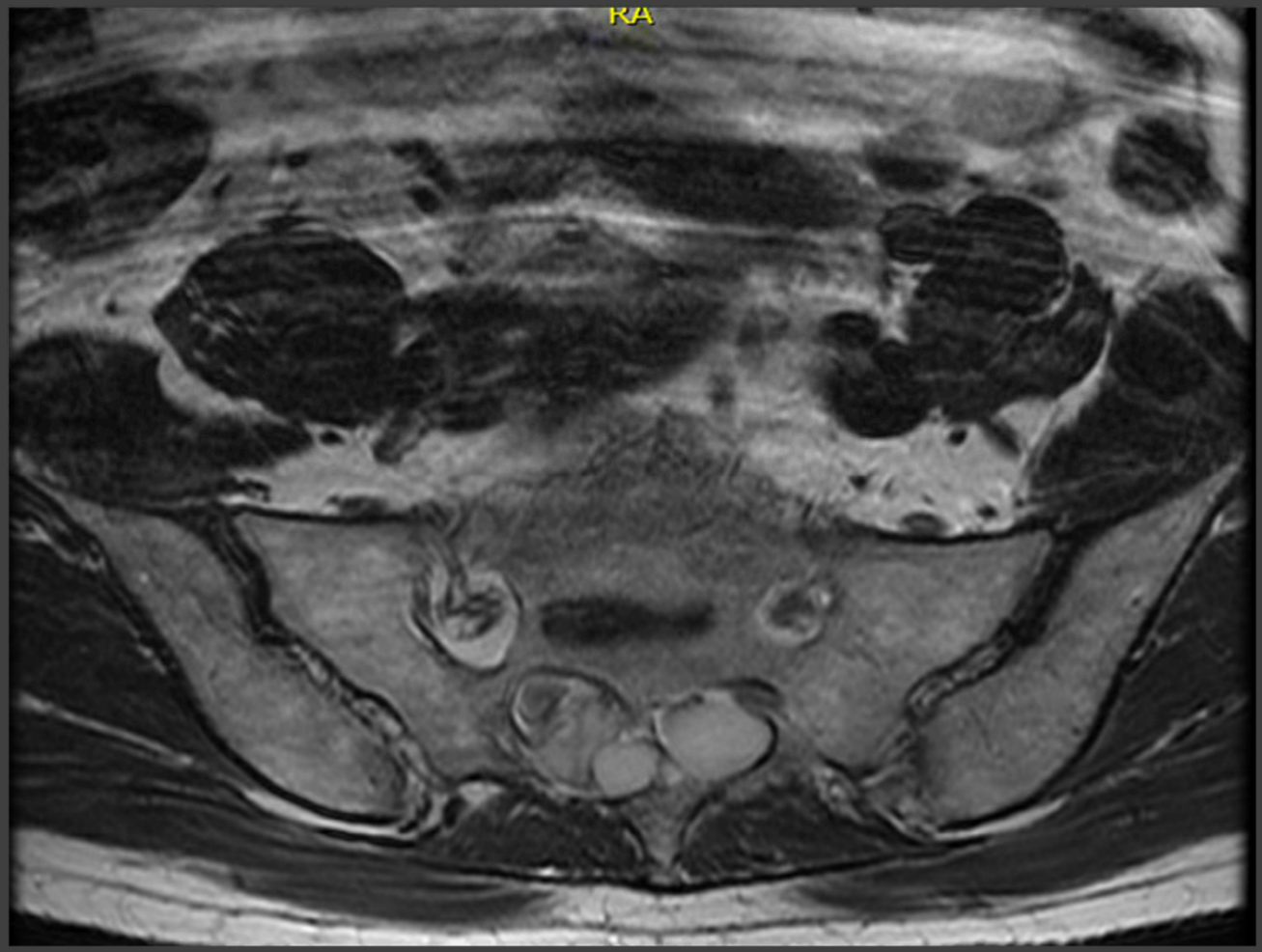


Goldstein I, Komisaruk BR, Pukall CF, Kim NN, Goldstein AT, Goldstein SW, Hartzell-Cushanick R, Kellogg-Spadt S, Kim CW, Jackowich RA, Parish SJ, Patterson A, **Peters KM**, Pfaus JG. International Society for the Study of Women's Sexual Health (ISSWSH) Review of Epidemiology and Pathophysiology, and a Consensus Nomenclature and Process of Care for the Management of Persistent Genital Arousal Disorder/Genito-Pelvic Dysesthesia (PGAD/GPD). J Sex Med. 2021 Apr;18(4):665-697. doi: 10.1016/j.jsxm.2021.01.172. Epub 2021 Feb 19. PMID: 33612417.

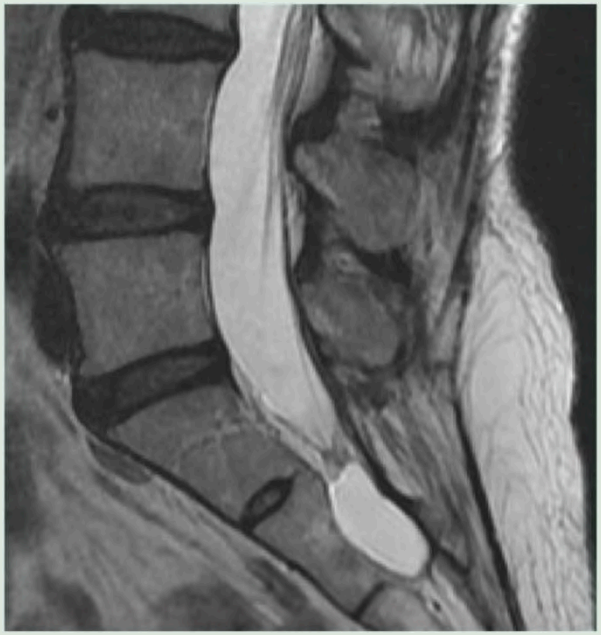
Tarlov
(Perineurial) Cyst

15% of population

15% Symptomatic



Case



32F with:

- Chronic pelvic/perineal pain
- Urinary urgency, dyspareunia
- Failed meds + pelvic PT
- Pelvic MRI: “normal”
- Sacral MRI: S2 Tarlov cyst

Key point: You have seen this patient

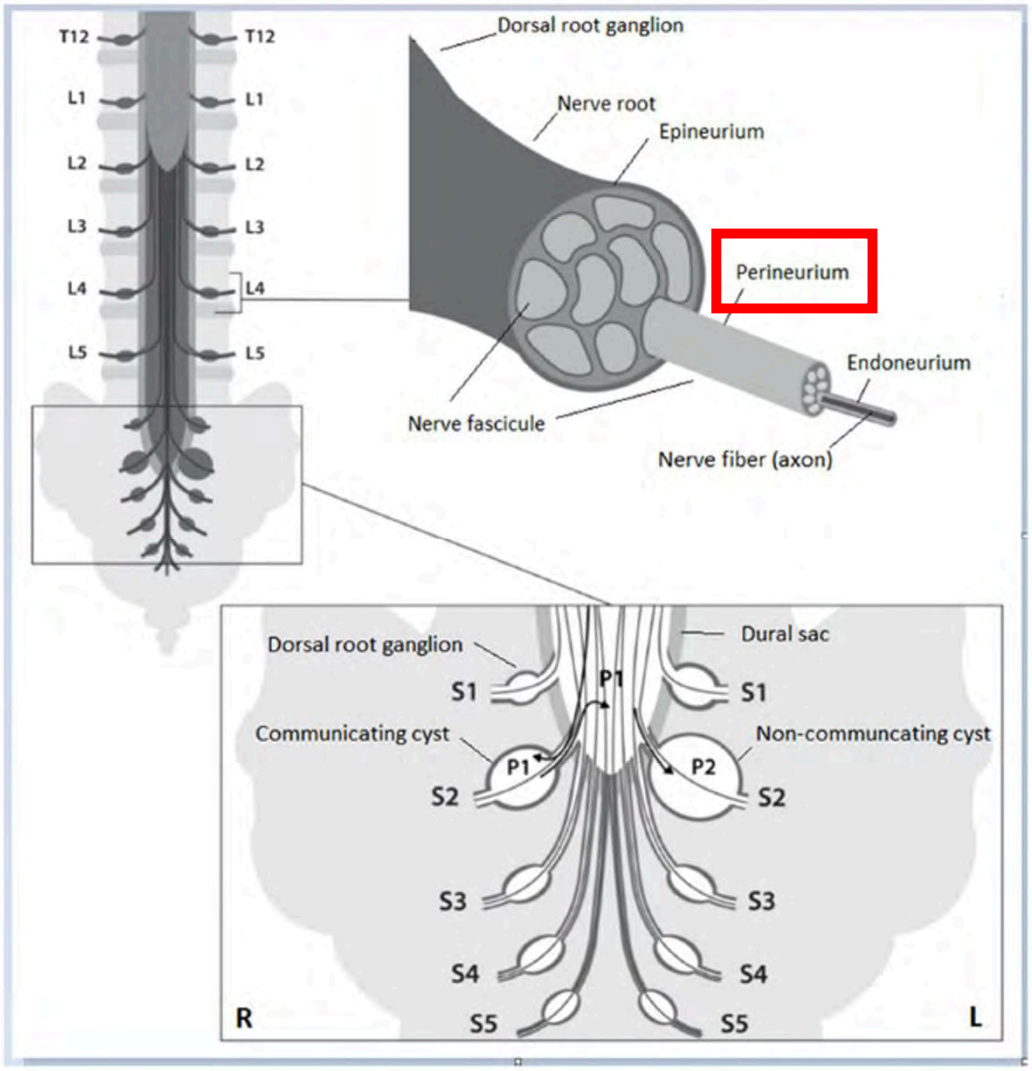
Courtesy Rudolph Schrot MD

Tarlov (Perineurial) Cyst Pathophysiology

- CSF pressure → cyst formation
- Axonal stretch and injury
- Neuropathic pain, autonomic dysfunction

Key:

Compression AND Stretch Injury



Courtesy Rudolph Schrot MD

Sacral Tarlov perineurial cysts: a systematic review of treatment options

Jan Alberto Paredes Mogica, MD,[1] Frank Feigenbaum, MD,[2] Julie G. Pilitsis, MD, PhD, MBA,[3] Rudolph J. Schrot, MD, MAS,[4] Anne Louise Oaklander, MD, PhD,[5] and Elise J. B. De, MD[6]

INCLUDE WHEN CITING Published online December 15, 2023; DOI: 10.3171/2023.9.SPINE23559.

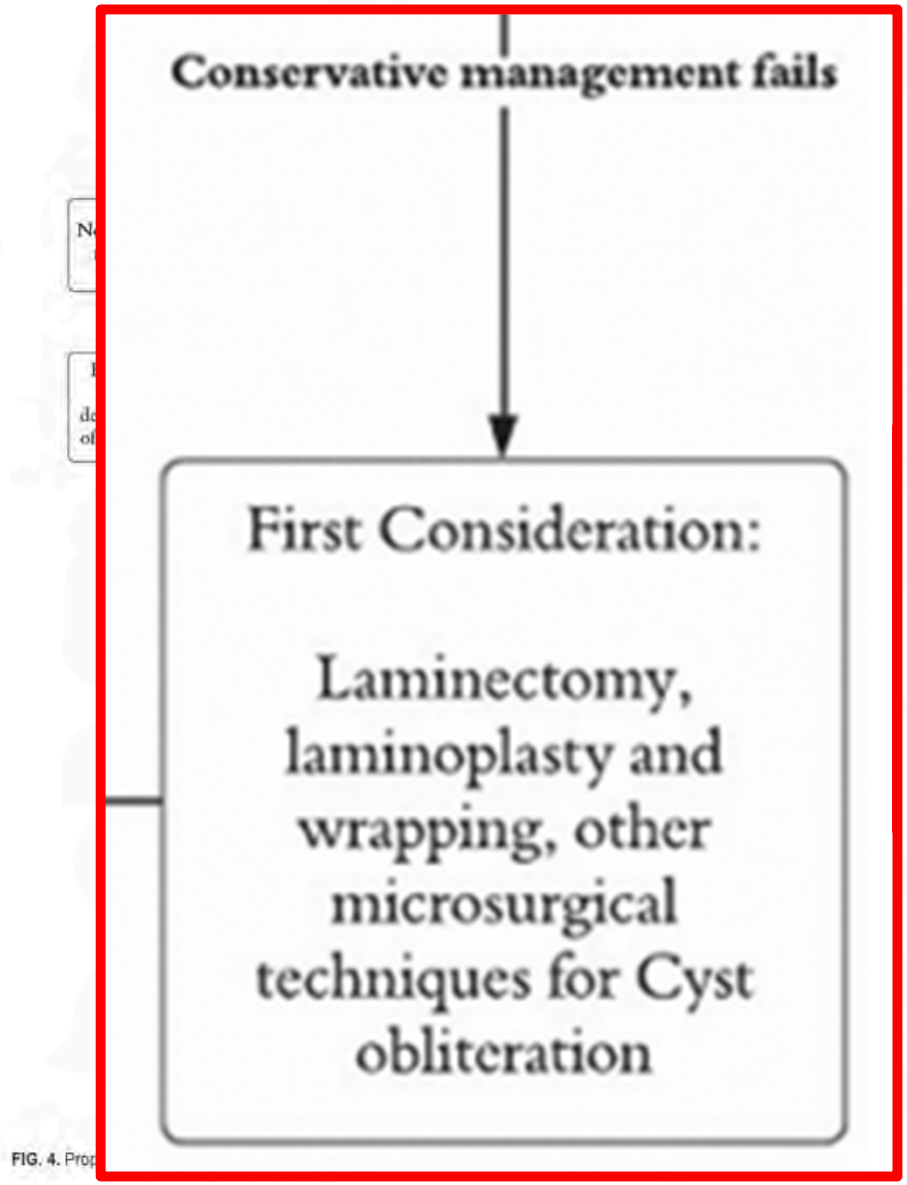
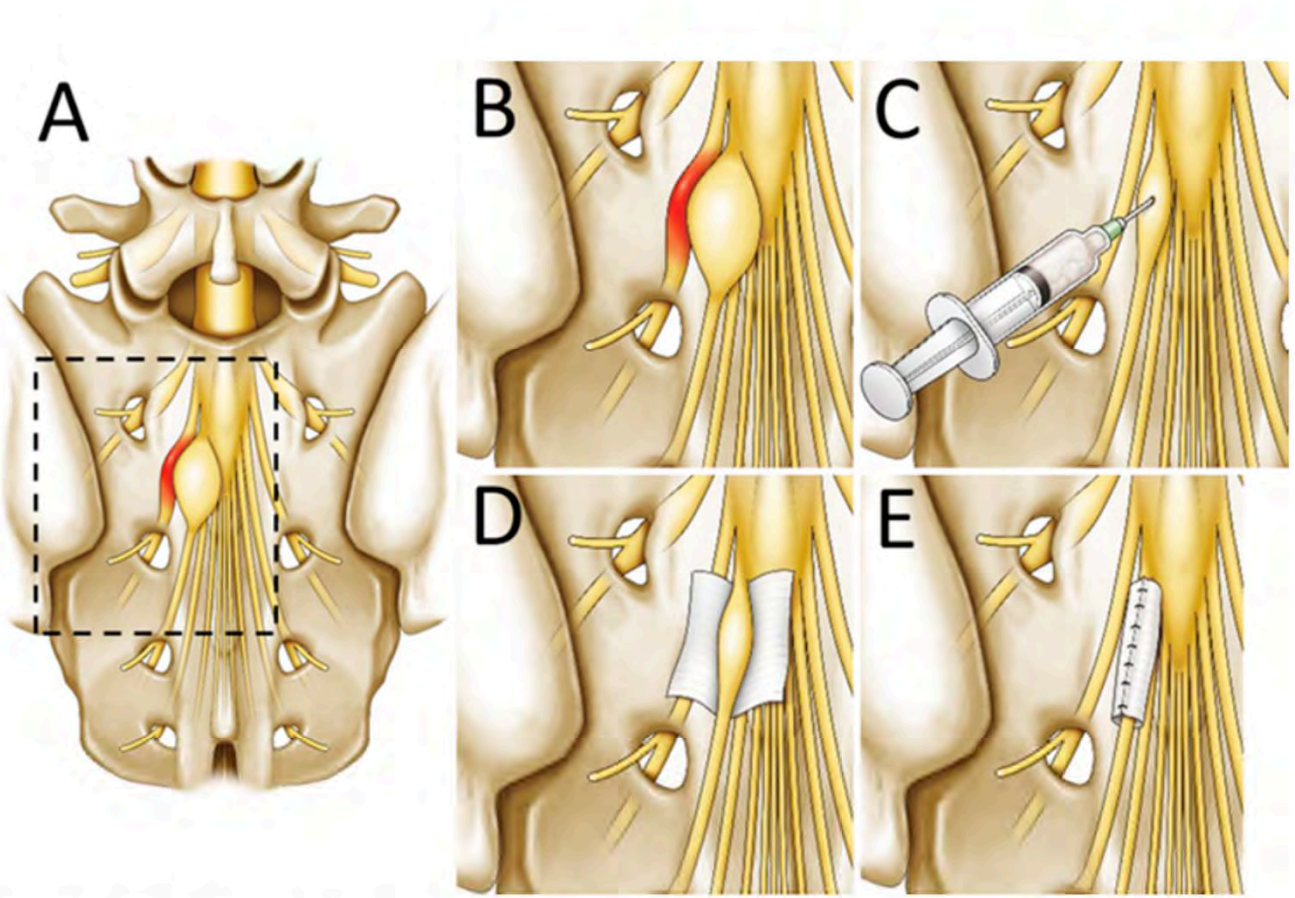


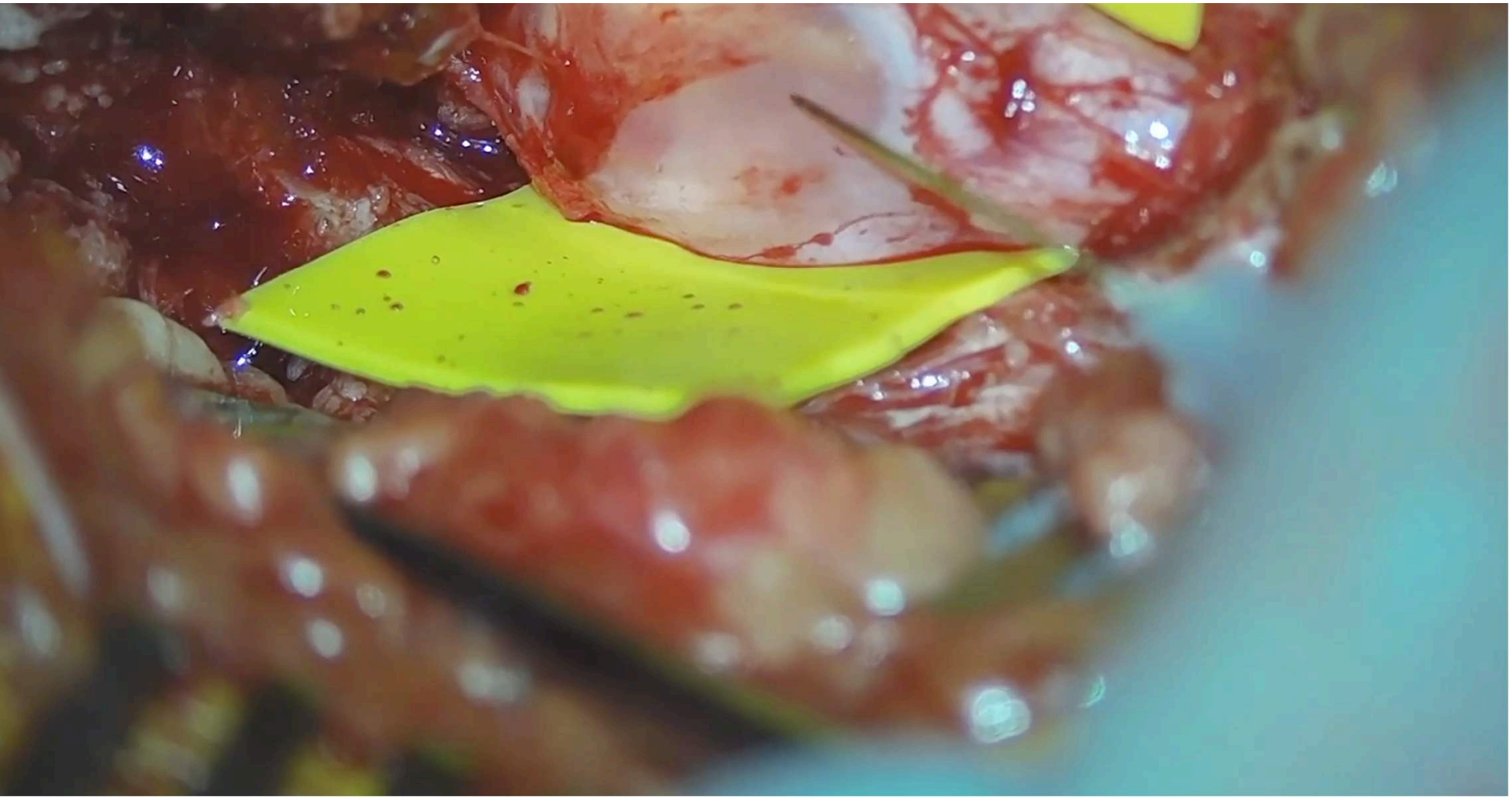
FIG. 4. Prop

Surgical Approach



Schematic drawings of the wrapping procedure for SPCs. **A:** The left S3 SPC compresses the left S2 nerve root laterally, causes the S2 radicular symptoms. **B:** Enlargement of the rectangular region enclosed by a *dotted line* in panel A. **C:** After alf sacral laminectomy, the cyst is punctured and the fluid is aspirated using a small needle. **D:** After a shrinkage of the cyst, nt nerve roots are separated from the cyst and an ePTFE membrane is wrapped around the cyst. **E:** The membrane is then ed to an adequate size and is closed with titanium nonpenetrating clips. Copyright Taku Sugawara. Published with permission.

Courtesy Rudolph Schrot MD

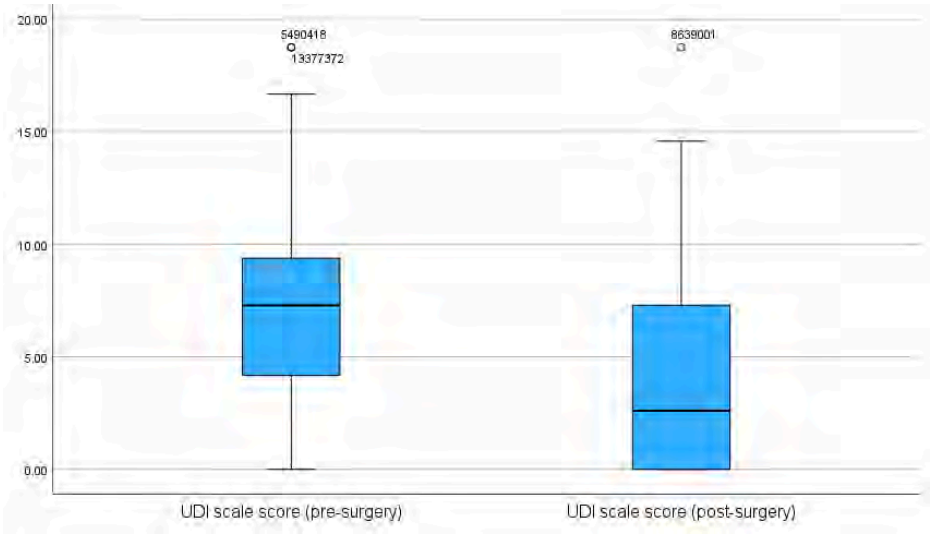


Courtesy Rudolph Schrot MD

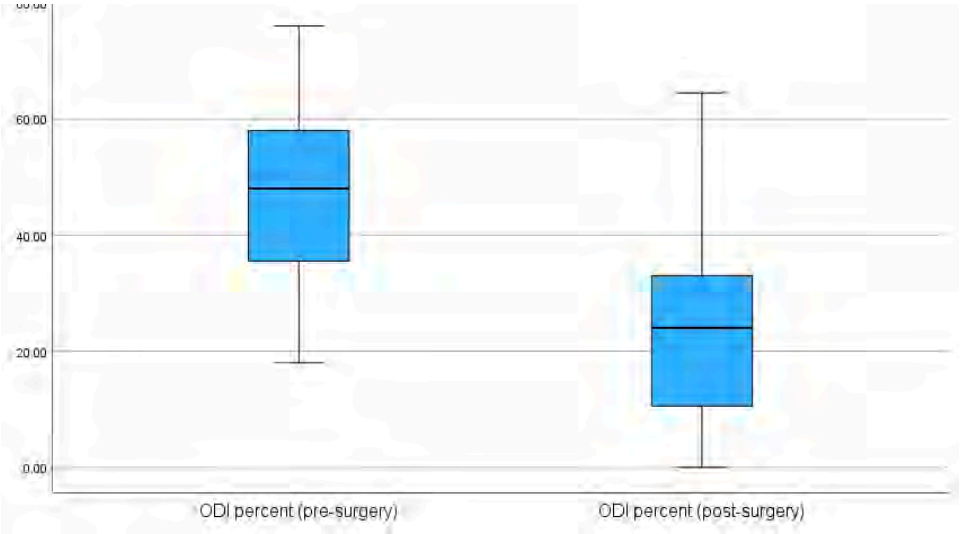
Tarlov Cyst Outcomes

- N=47
- Significant UDI-6 and ODI improvement
- 87% patient satisfaction, low complication rates

UDI-6



ODI



Sutter Health

Wallach S, Schrot RJ. Subjective Clinical Symptoms and Objective Urodynamic Findings in Female Patients with Symptomatic Tarlov Cysts. ICS abstract/poster. Courtesy Rudolph Schrot MD

Tarlov Cyst Outcomes – Tarlov Cyst Quality of Life Scale

TABLE 3. The Tarlov Cyst Quality-of-Life Item Scores

Item	Preoperative	3-mo postoperative	6-mo postoperative	1-y postoperative	2-y postoperative
Sacral pain	4.6 ± 1.8	2.5 ± 2.0	2.3 ± 1.9	2.1 ± 2.0	1.9 ± 2.1
Perineal pain	2.6 ± 2.2	1.5 ± 2.0	1.3 ± 1.8	1.2 ± 1.8	1.1 ± 1.8
Perineal numbness	1.5 ± 2.0	1.3 ± 1.7	1.1 ± 1.6	.9 ± 1.6	.9 ± 1.7
Persistent genital arousal disorder	.6 ± 1.7	.5 ± 1.4	.4 ± 1.2	.3 ± 1.0	.4 ± 1.1
Lower extremity pain	4.0 ± 2.0	2.3 ± 2.1	2.0 ± 2.0	2.0 ± 2.0	2.0 ± 2.1
Lower extremity weakness	3.1 ± 2.2	1.6 ± 1.9	1.4 ± 1.8	1.3 ± 1.9	1.5 ± 2.0
Lower extremity numbness	2.8 ± 2.2	1.5 ± 1.8	1.2 ± 1.6	1.3 ± 1.7	1.5 ± 1.9
Bladder function	2.7 ± 2.2	1.2 ± 1.6	1.1 ± 1.6	1.1 ± 1.5	1.2 ± 1.7
Bowel function	2.6 ± 2.2	1.3 ± 1.8	1.2 ± 1.7	1.1 ± 1.8	1.3 ± 1.8
Dyspareunia	2.3 ± 2.4	1.4 ± 1.8	1.0 ± 1.8	1.1 ± 1.8	1.1 ± 1.9
Discomfort while sitting	5.3 ± 1.4	3.2 ± 2.0	2.9 ± 2.0	2.6 ± 2.1	2.7 ± 2.1

Feigenbaum F, Parks SE, Chapple KM. World Neurosurg. 2022 Sep;165:e276-e281. doi: 10.1016/j.wneu.2022.06.033. Epub 2022 Jun 11. PMID: 35700862.
Feigenbaum F, et al. 2026 May 1;98(5):1156-1165. doi: 10.1227/neu.0000000000003758. Epub 2025 Sep 19. PMID: 40970698.

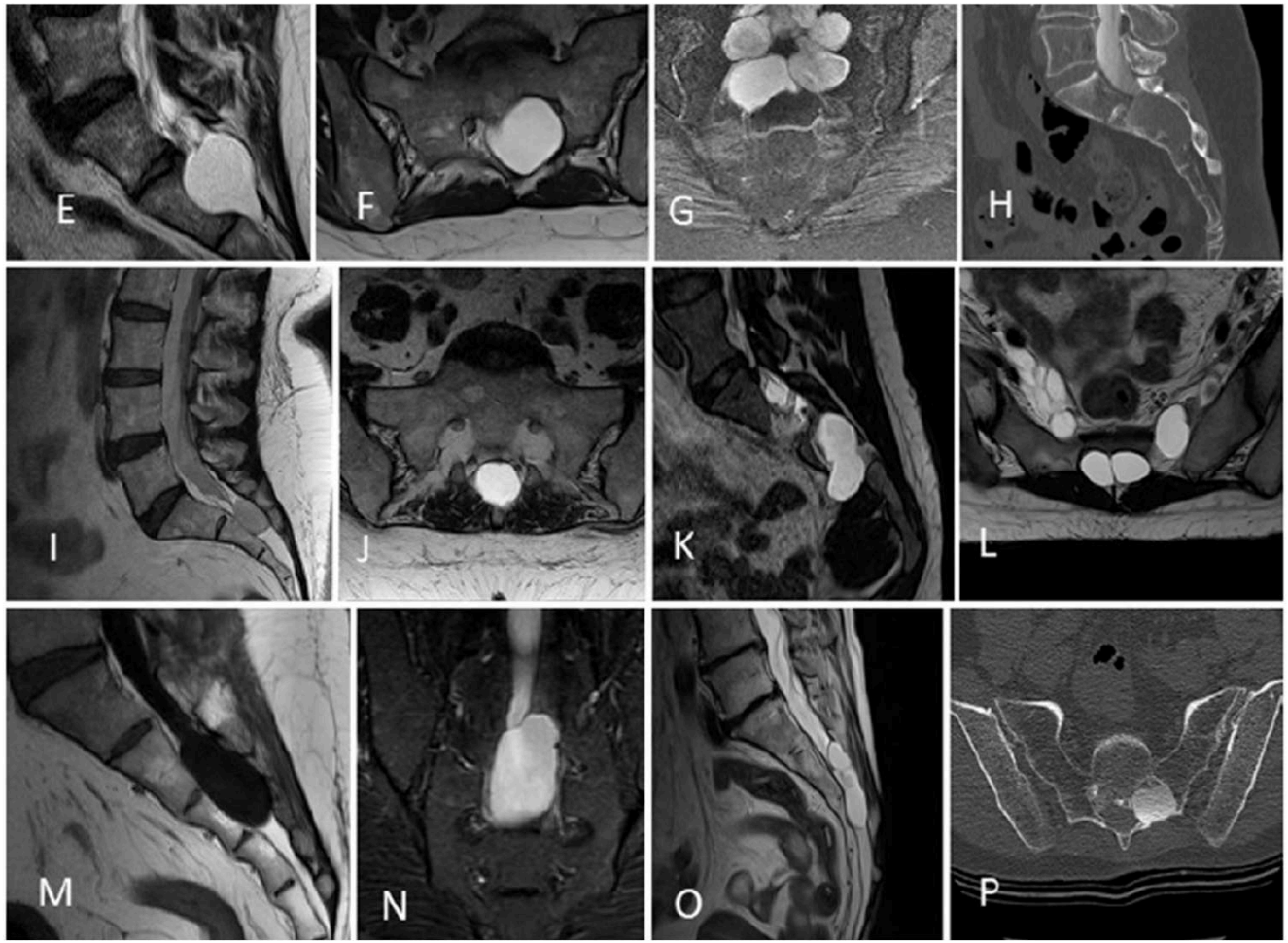
What to Do Differently

Note Red Flags for Sacral Pathology

- **Dermatomal patterns**
- **Sitting intolerance**
- **Perineal dysesthesia**
- **Bladder dysfunction (without anatomic cause)**
- **Bowel dysfunction**
- **Sexual dysfunction (dyspareunia, PGAD)**

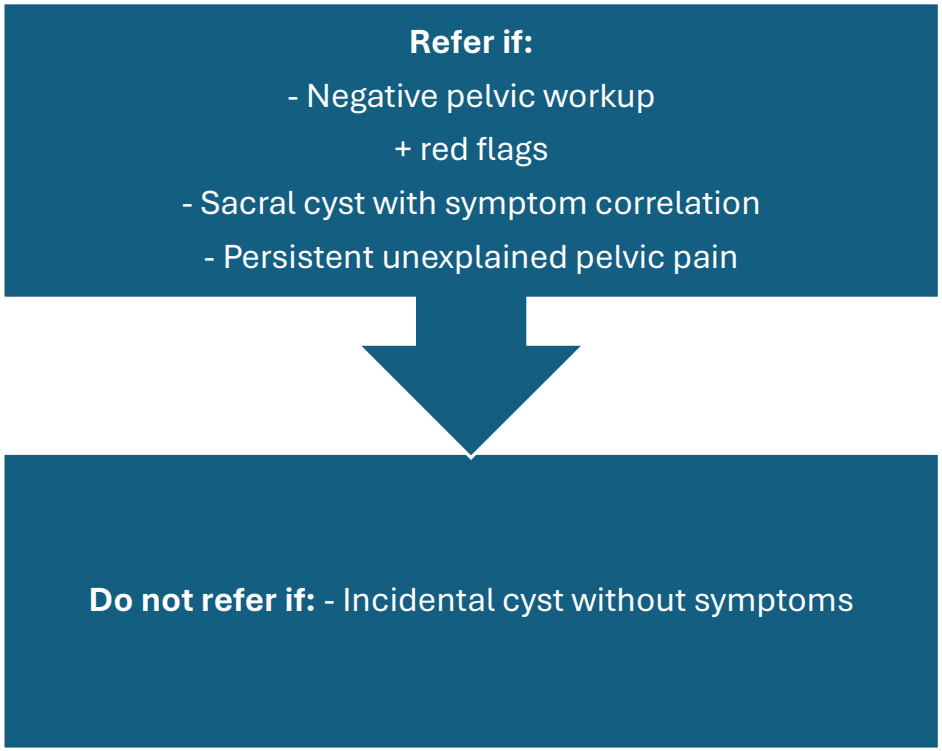
Change the workup

- **Look at MRI images yourself**
- **Order MRI sacrum (not just pelvis or lumbar)**
- **Note EMG poorly assesses S2–S4**



Courtesy Rudolph Schrot MD

When to Refer



Sutter Health

Courtesy Rudolph Schrot MD

Table 1a

Conditions with MULTILEVEL Impact

Inflammatory
- Elsberg syndrome (herpes)
- Myelin oligodendrocyte glycoprotein antibody disease (MOGAD, CNS)
- Multiple sclerosis (CNS)

Multiple System Atrophy (CNS)

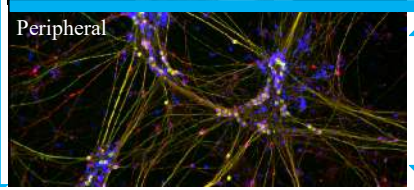
Tethered spinal cord

Neoplasm
- Glioblastoma (cortical)
- Ependymoma (more commonly spinal cord in adults)
- Sacral chordoma
- Others

Metabolic
- B12 deficiency
- Thyroid disorders

Infectious
- Lyme

Autoimmune
- Lupus
- Amyloidosis
- Sjogren's

Level	Conditions with SINGLE Level	Symptoms	Typical UDS Findings
 Suprapontine/ cortical lesions	Vascular: small vessel disease, stroke Neurodegenerative: MSA, Parkinson's Disease, Dementia with Lewy bodies Trauma (TBI) Tumors NPH	Storage symptoms Good emptying	Suprapontine – Detrusor overactivity – Opening of bladder neck – Opening of external urethral sphincter
	Chiari, craniocervical inst.	Storage symptoms	Infrapontine - detrusor overactivity, sphincter relaxation
Supraconal spinal cord	Spinal cord injury Cervical or thoracic spinal stenosis Herniated disc Dural arteriovenous fistula	Storage and voiding symptoms Incomplete emptying	Supraconal Spinal Cord – Detrusor overactivity – Detrusor external sphincter dyssynergia – Additionally, if the lesion is above T6, bladder neck dyssynergia and autonomic dysreflexia can be seen
Conus/ cauda equina PJ1	Cauda equina Lumbar spinal stenosis Spina bifida occulta Tarlov cyst (mixed) Sacral chordoma Mixed: Spina bifida occulta	Voiding symptoms Incomplete emptying Caveat: Tarlov cysts can also cause storage symptoms due to irritation of dorsal root afferent sensory fibers	Sacral S2-S4 - Detrusor areflexia - If Onuf's impacted, loss of external sphincter tone Tarlov Cyst, Spinal Bifida Occulta - Mixed picture (detrusor overactivity or underactivity)
 Peripheral	Pelvic surgery Diabetes Vasculitis Sjogren's syndrome Small fiber neuropathy	PJ4 Mixed picture 2◦ to impact on parasympathetic and sympathetic nerve fibers Storage symptoms Voiding symptoms Dysuria, pain	Peripheral Autonomic Neuropathy: Mixed Picture - Detrusor underactivity or overactivity - Bladder neck obstruction - Reactive pelvic floor muscle dysfunction Anatomic Lesion to Peripheral nerves - Detrusor areflexia - Intrapelvic/autonomic: Intact external urethral sphincter - Pudendal: loss of external sphincter tone

PJ2

Slide 47

PJ1 SUGGEST REPLACING
Sacral/
conus/
infrasacral/
cauda
equina

WITH

Conus/
cauda
equina
Panicker, Jalesh, 2026-03-18T09:45:49.768

PJ2 Duplication
Panicker, Jalesh, 2026-03-18T09:47:54.093

PJ3 Pelvic surgery is peripheral and not spinal and hence moved here
Panicker, Jalesh, 2026-03-18T09:48:15.484

PJ4 Adding a separate heading Peripheral is making this look more complicated- the dysfunction is quite similar between sacral/infrasacral and peripheral
Panicker, Jalesh, 2026-03-18T09:50:38.229

What triggers suspicion for neurological factors?

Screening criteria for neurological eval in CPP:

- Pain or weakness in a nerve root, peripheral nerve, or CNS pattern
- Combination of bladder, bowel, sexual, pain sx referable to lumbosacral spine
- Balance or gait alteration, falls
- Abnormal reflexes or weakness on exam
- Upper motor neuron findings or unexplained hypotonia on urodynamics (e.g., neurogenic detrusor overactivity, DESD)
- Autonomic dysfunction (POTS, IBS, dry eyes, palpitations)
- Chronic Overlapping Pain Conditions (migraines, TMJ, vulvodynia, foot pain)
- Pelvic pain refractory to musculoskeletal and organ-based interventions

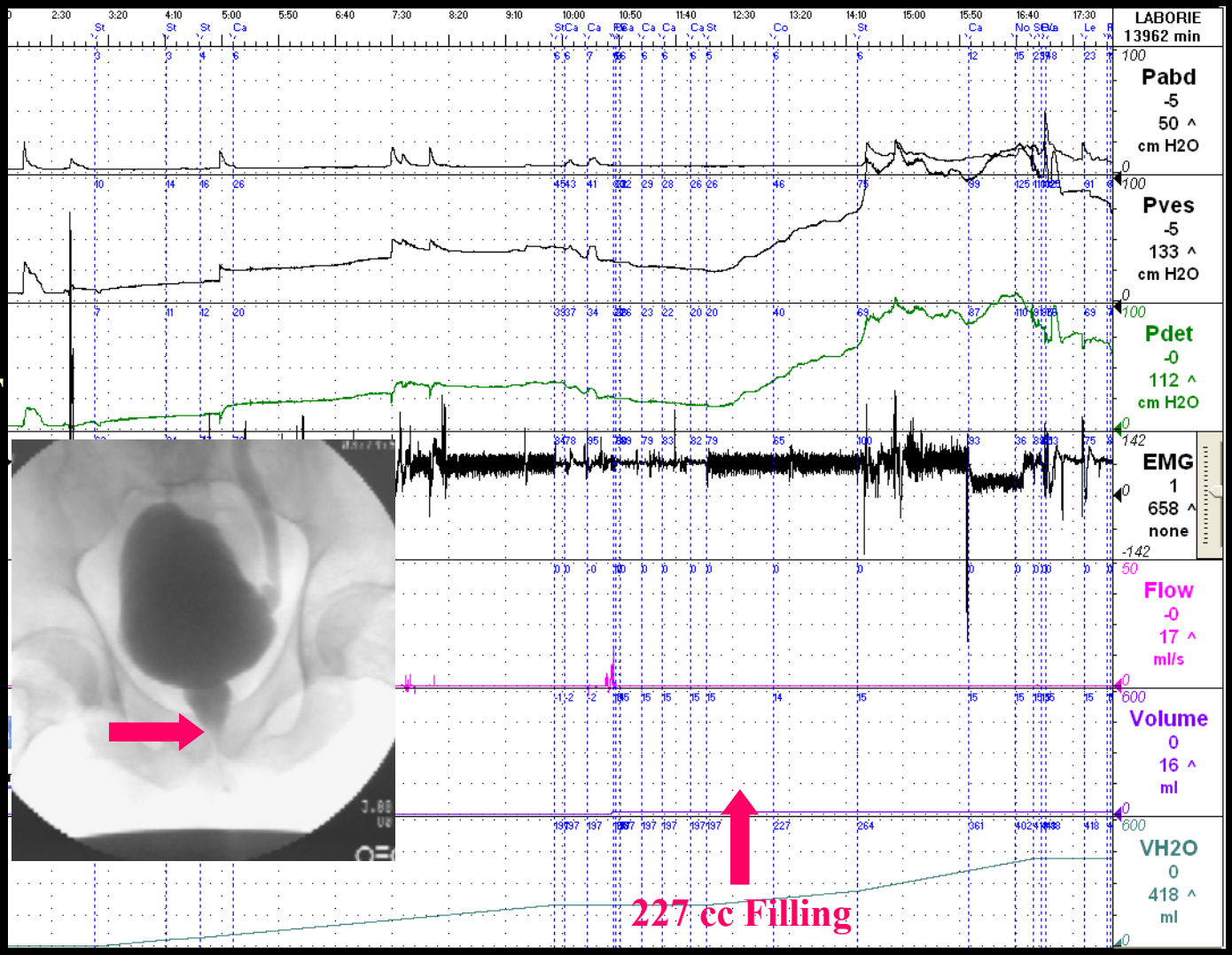
NEUROGENIC DETRUSOR OVERACTIVITY, LEFT VUR, DESD

p ABD

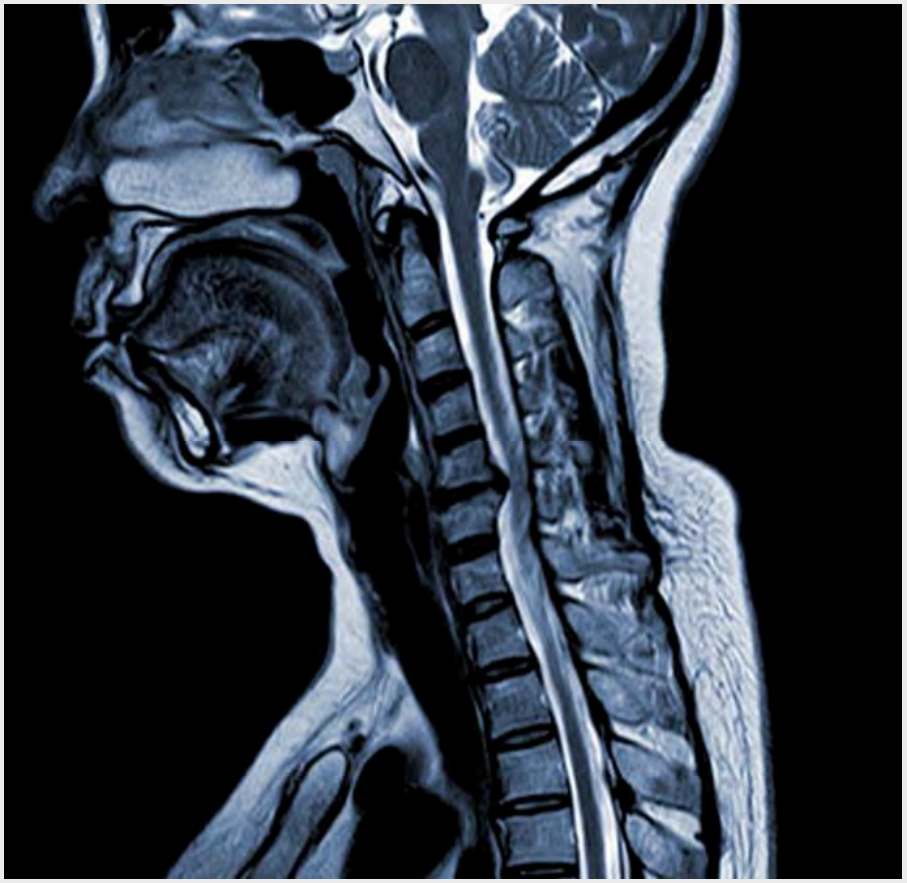
p VES

p DET

VOL IN



Central Nervous System – Large Fiber Neuropathy – Reflexes



1. Biceps and Brachioradialis C5/C6
2. Triceps C7
3. Patellar L2-L4
4. Ankle S1

Continence 14 (2025) 101900

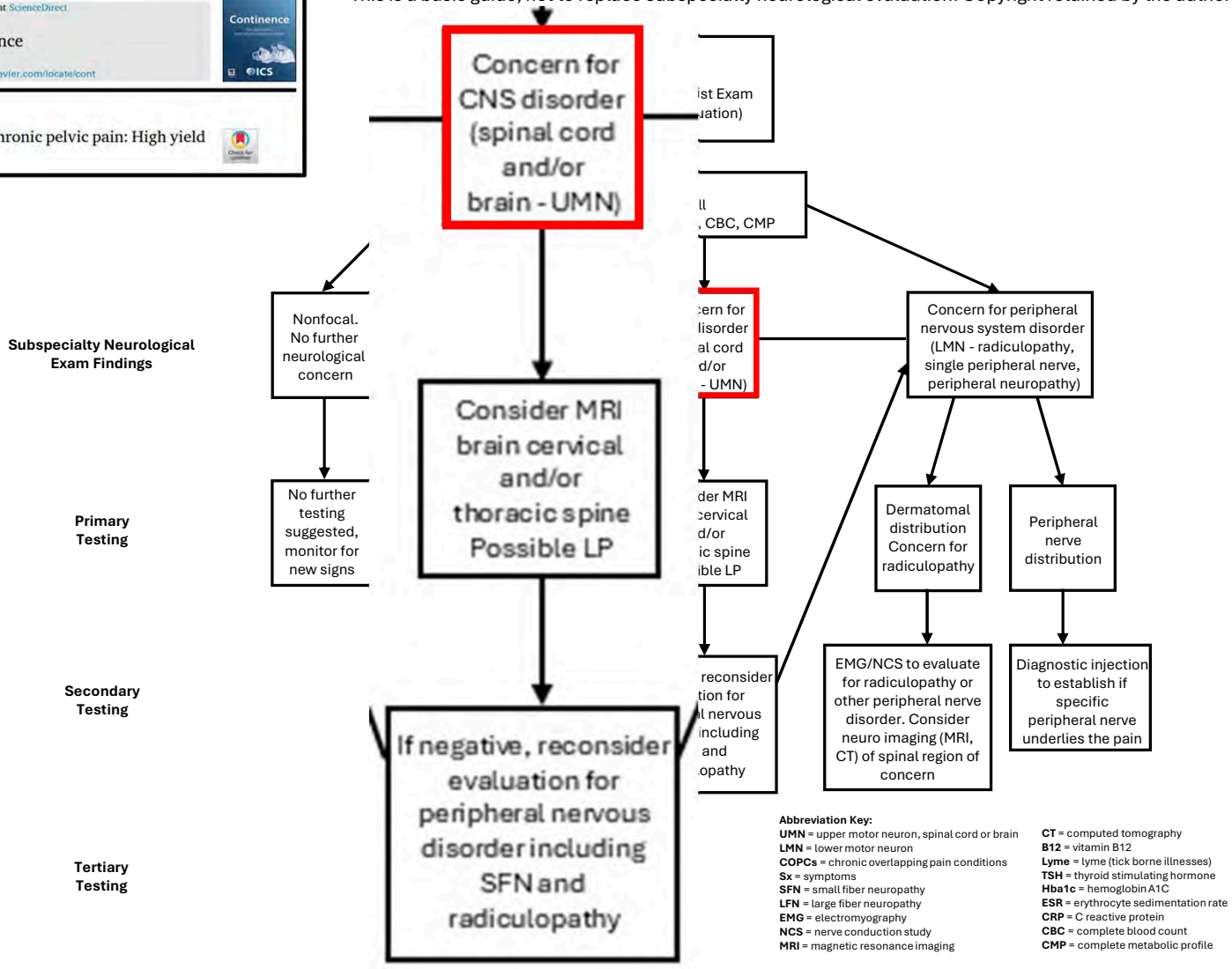
Contents lists available at ScienceDirect

Continence

journal homepage: www.elsevier.com/locate/cont

Undiagnosed neurologic disease in refractory chronic pelvic pain: High yield in screen-positive patients

Figure 2: Neurologist's Diagnostic Algorithm in people with CPP referred by pelvic health for a positive Neurological Screening.
This is a basic guide, not to replace subspecialty neurological evaluation. Copyright retained by the authors.



Abbreviation Key:
UMN = upper motor neuron, spinal cord or brain
LMN = lower motor neuron
COPCs = chronic overlapping pain conditions
Sx = symptoms
SFN = small fiber neuropathy
LFN = large fiber neuropathy
EMG = electromyography
NCS = nerve conduction study
MRI = magnetic resonance imaging
CT = computed tomography
B12 = vitamin B12
Lyme = lyme (tick borne illnesses)
TSH = thyroid stimulating hormone
Hba1c = hemoglobin A1C
ESR = erythrocyte sedimentation rate
CRP = C reactive protein
CBC = complete blood count
CMP = complete metabolic profile

= autonomic symptom

Case: Refractory Pain, Plus EDS, Poor GI Motility

- 32 year old female
  - Headaches
  - GERD
  - No PSH
  - G2P1 Vaginal, 7lbs
  - Urgency, Frequency, Pelvic Pressure, Sensation of Incomplete Emptying, Dyspareunia
- *Hesitancy, intermittency, severe dysuria*
- PT unsuccessful
- Bladder neck obstruction on UDS
- Alpha blockers lead to severe dizziness
- Botulinum to bladder neck
  - Severe flare
  - Significant benefit
- Still with pelvic pain and systemic symptoms

- EDS/Hypermobility
- 10 yr constipation - up to 8 wks w/o BM
- Infrequent urge
- Low abdominal bloating/pain
- Multiple hospital presentations
- Tinnitus
- Fibromyalgia

- Co-morbidity
  - 2008/2017 Bereavement counselling
  - 2015 Alcohol Dependence
  - 2016 PCOS
  - 2017 IBS –constipation predominant
  - 2019 Colonoscopy NAD
  - 2019 Raynaud's

- Medications
  - Doxycycline
  - Prucalopride
  - Linaclotide
  - Dolcolax

What triggers suspicion for neurological factors?

Screening criteria for neurological eval in CPP:

- Pain or weakness in a nerve root, peripheral nerve, or CNS pattern
- Combination of bladder, bowel, sexual, pain sx referable to lumbosacral spine
- Balance or gait alteration, falls
- Abnormal reflexes or weakness on exam
- Upper motor neuron findings or unexplained hypotonia on urodynamics (e.g., neurogenic detrusor overactivity, DESD)
- Autonomic dysfunction (POTS, IBS, dry eyes, palpitations)
- Chronic Overlapping Pain Conditions (migraines, TMJ, vulvodynia, foot pain)
- Pelvic pain refractory to musculoskeletal and organ-based interventions

Differential diagnosis- Widespread Autonomic Symptoms and Pain

Rheumatic

- Arthritis (OA, RA)
- Polymyalgia Rheumatica
- Osteomalacia
- Myopathy
- Spondyloarthropathies
- Systemic Lupus Erythematosus

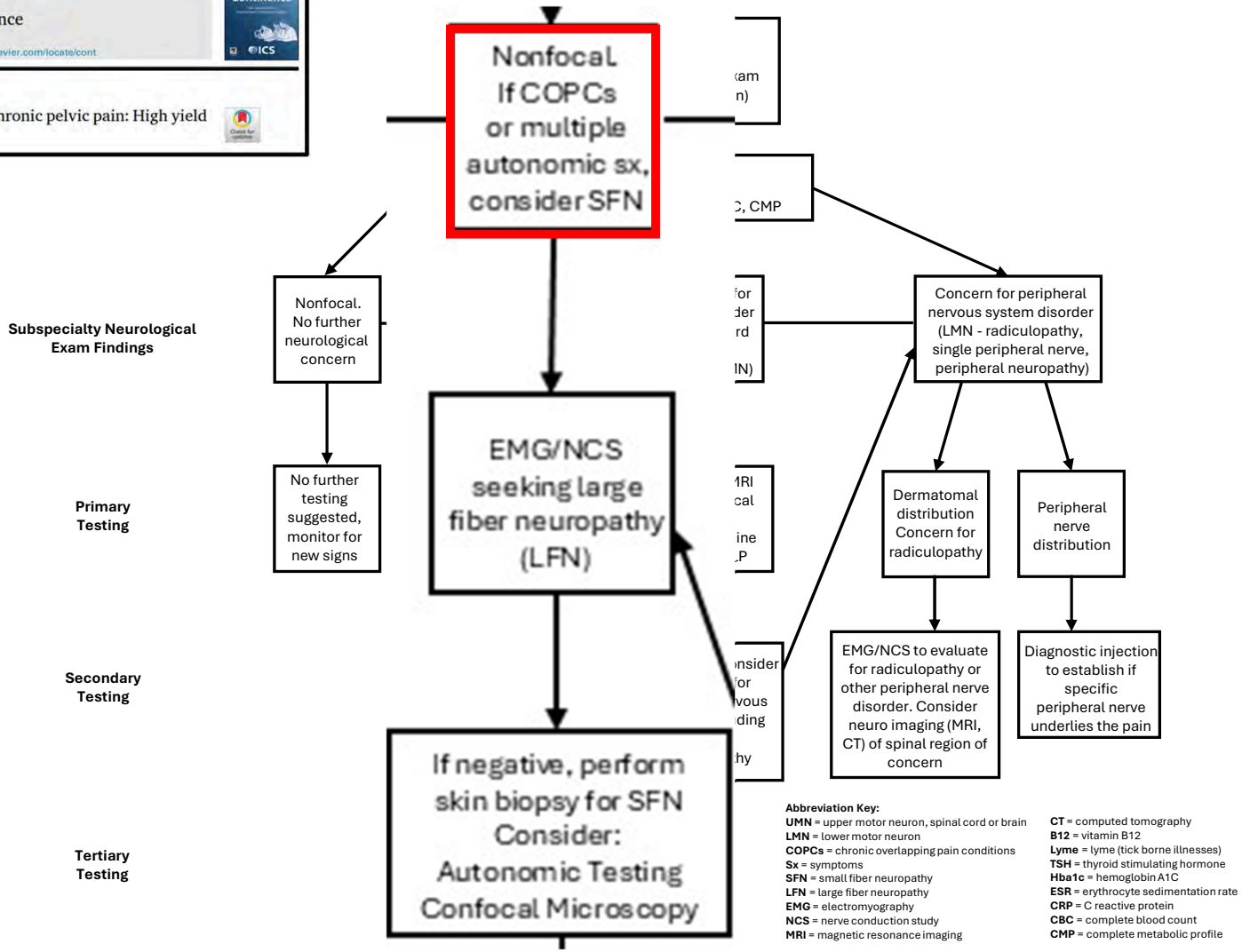
Endocrine

- Hypothyroidism
- Diabetes

Neurologic

- Multiple sclerosis
- Chiari malformation
- Spinal stenosis
- Radiculopathy
- Polyneuropathy
- Fibromyalgia
- SMALL FIBER POLYNEUROPATHY

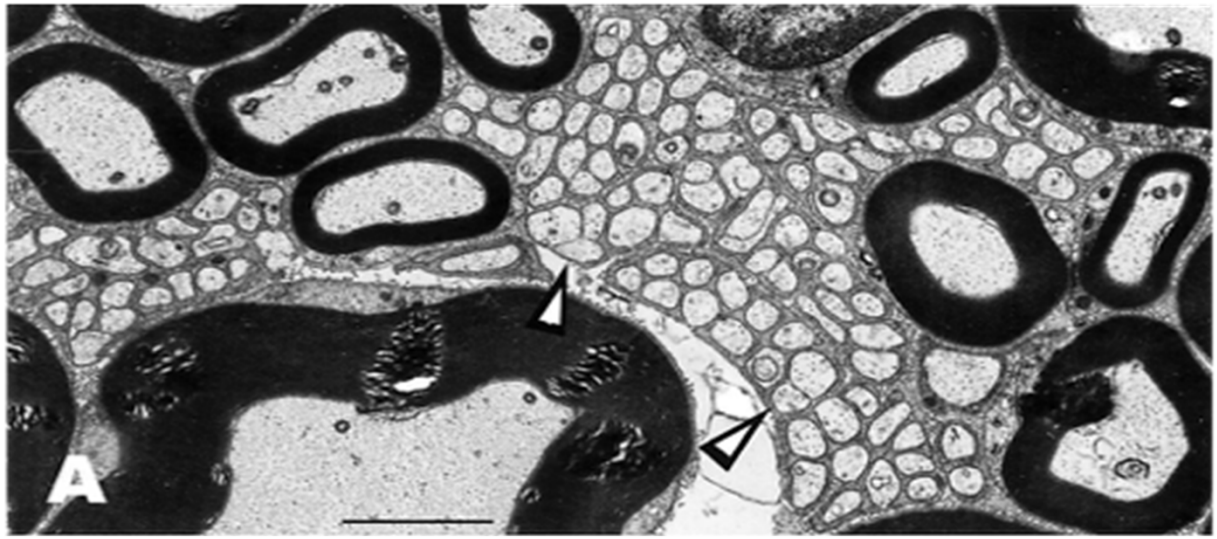
Figure 2: Neurologist's Diagnostic Algorithm in people with CPP referred by pelvic health for a positive Neurological Screening.
This is a basic guide, not to replace subspecialty neurological evaluation. Copyright retained by the authors.



Abbreviation Key:
UMN = upper motor neuron, spinal cord or brain
LMN = lower motor neuron
COPCs = chronic overlapping pain conditions
Sx = symptoms
SFN = small fiber neuropathy
LFN = large fiber neuropathy
EMG = electromyography
NCS = nerve conduction study
MRI = magnetic resonance imaging
CT = computed tomography
B12 = vitamin B12
Lyme = lyme (tick borne illnesses)
TSH = thyroid stimulating hormone
Hba1c = hemoglobin A1C
ESR = erythrocyte sedimentation rate
CRP = C reactive protein
CBC = complete blood count
CMP = complete metabolic profile

Small Fiber Polyneuropathy

Diabetes, Lyme Disease, Gluten Allergy, Sarcoid, Chemotherapeutics, Antibiotics



Journal of Neuropathology and Experimental Neurology Vol. 63, No. 3

Courtesy Khosro Farhad

Sensory Fiber type	Diameter (µm)	Velocity (m/s)	Function
A-δ (Thinly myelinated)	1-5	3-30	Light touch, acute pain and cold temperature
C (Unmyelinated)	<1	<2	Slow pain and heat , post-ganglionic autonomic fibers

Small fiber neuropathy occurs when injury to the peripheral nerves predominantly or entirely affects the small myelinated (Aδ) or unmyelinated C fibers

Diffuse Pain Suggests a Systemic Process

Brief Research Report

Small Fiber Polyneuropathy Is Prevalent in Patients Experiencing Complex Chronic Pelvic Pain

Annie Chen, BA,* Elise De, MD,[1,a] and Charles Argoff, MD[1]

Results. Twenty-five of 39 patients (64%) were positive for SFPN. Comorbid conditions noted in our population included gastroesophageal reflux dis-

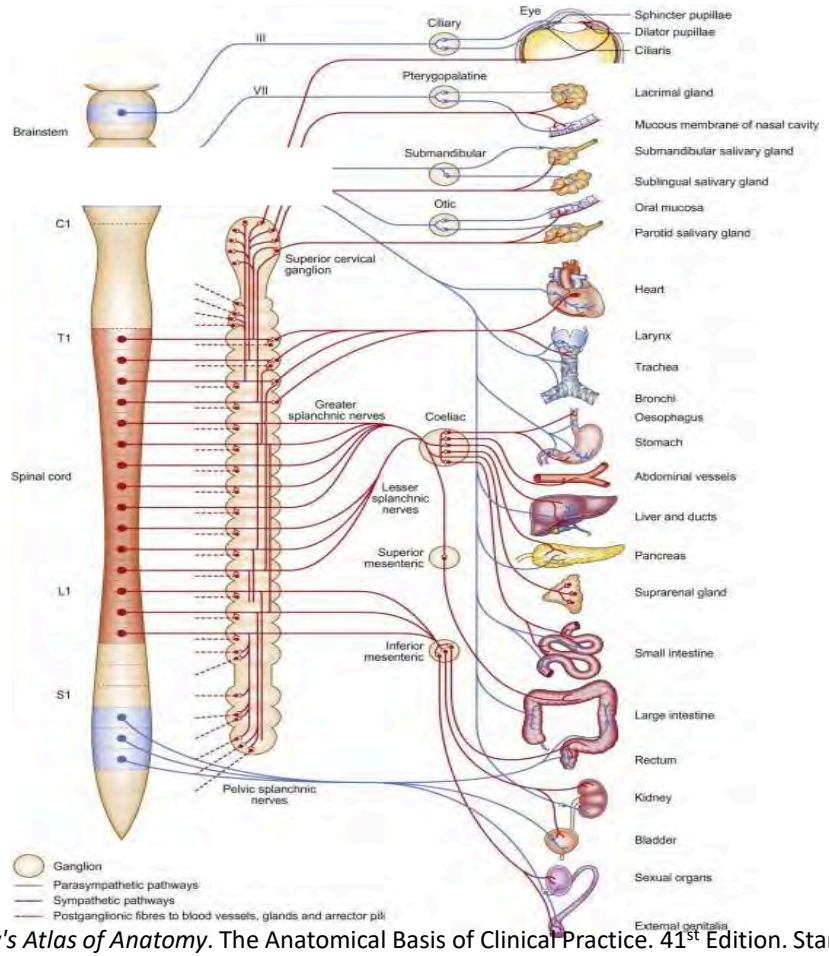
Pain Medicine 2018 doi: 10.1092/pm/pny001

64% (25 of 39) of patients with complex pelvic pain had + biopsy for SFPN

Table 6 Comorbidities in the current population with complex CPP (N = 39) by patient report or chart documentation

Comorbidities	
GERD	46%
Migraine	38%
IBS	33%
Lower back pain	33%
FM	28%
Endometriosis	15%
IC	18%
Vulvodynia	5%
Other chronic pain syndromes	36%

CPP = chronic pelvic pain; FM = fibromyalgia; GERD = gastroesophageal reflux disease; IBS = irritable bowel syndrome; IC = interstitial cystitis.



Gray's Atlas of Anatomy. The Anatomical Basis of Clinical Practice. 41st Edition. Standring, Susan MBE, PhD, DSc, FKC, Hon FRCS. Elsevier Limited. Gray's Anatomy. Standring, Susan, MBE, PhD, DSc, FKC, Hon FAS, Hon FRCS. Published January 1, 2016. Pages 225-237.e3. © 2016. Fig. 16.11

Small Fiber Neuropathy Causes

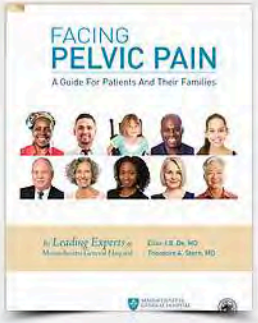
- **Metabolic :** Diabetes, borderline diabetes, thyroid dysfunction (untreated)
- **Autoimmune/inflammatory:** Sjogren's, SLE, RA, sarcoidosis, vasculitis, IBD, others
- **Vitamin/micronutrient related:** B12, B6, B1, E & copper deficiencies / B6 Toxicity
- **Celiac disease and gluten sensitivity, Mast Cell Activation Syndrome**
- **Toxic agents:** Chemotherapeutic agents (Platinum, Taxans, Bortezomib, Vinca Alcaloids), antibiotics (Nitrofurantoin, TMP-SMX, Fluoroquinolones), anti HIV meds, gout meds (Colchicine, Allopurinol), heavy metals (lead, arsenic, mercury, thallium), alcohol
- **Infectious agents:** Lyme, HIV, HSV, VZV, CMV, HCV, HBV, Leprosy
- **Monoclonal gammopathy and paraneoplastic**
- **Amyloidosis**
- **Genetic:** Sodium channel mutations (SCN9A, SCN10A, SCN11A), EDS, other genetic
- **Idiopathic** (30-50%)

Free Multidisciplinary One-Stop Resource
Providers and Patients

www.facingpelvicpain.org

Finding a specialist experienced specifically in pelvic pain can be challenging. But, don't give up! Here are some databases that will help you find the right medical care provider in your area (click the links below):

- American Urogynecological Society (AUGS)
- American College of Ob-Gyn
- American Physical Therapy Association
- Herman Wallace Institute
- Global Pelvic Health Alliance
- Endometriosis Association
- International Foundation for Functional Gastrointestinal Disorders
- Interstitial Cystitis Network
- Interstitial Cystitis Association
- International Pelvic Pain Society
- Vulvodynia Association
- Vulvar Pain Foundation
- Pudendal Neuralgia Association
- Neuropathy Commons



I need this book! >

Tell Me More!

Other Websites Helpful in Pelvic Pain and Pelvic Floor Conditions:

- World Federation for Incontinence and Pelvic Problems
- Urology Care Foundation
- Harvard Medical School Patient Education Center
- Continence Product Advisor

Elise De, MD

@facingpelvicpain

Cystectomy for Bladder Pain Syndrome:

A Two-Case Clinical Approach

CASE 1

Always Do:
Determine Pelvic Pain is
from Bladder Prior to Cystectomy

CASE 2

Never Miss:
Pyocystis after Cystectomy
With Peristent Pelvic Pain

Brian M. Inouye, MD

Associate Professor of Urology | Albany Medical Center

Reconstructive Urology & GU Cancer Survivorship | @BrianInouyeMD

Disclosures

Laborie: Consultant

Learning Objectives

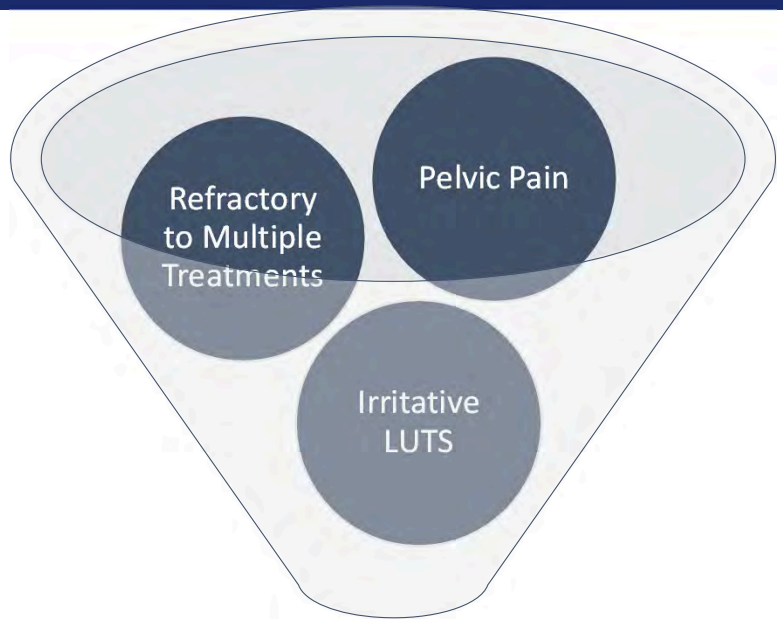
Case 1 — End-Stage IC/BPS

- Recognize critical importance of confirming bladder-origin pain before proceeding to cystectomy
- Apply the preoperative workup framework: PROMs, cystoscopy, urodynamics
- Identify good and poor prognostic factors for pain relief
- Understand my technique for supratrigonal cystectomy + ileal conduit

Case 2 — Persistent Pain After Cystectomy

- Construct a differential and workup for post-cystectomy persistent pelvic pain
- Recognize pyocystis as a diagnosis, its pathogenesis, incidence, and clinical presentation
- Discuss management options including antibiotic therapy, irrigation, and salvage cystectomy

Always Do!



Always Determine Symptoms are from Bladder Prior to Cystectomy

CASE 1

End-Stage IC/BPS: Is the Pain in the Bladder?

A 75yo Female with a 3-year history of refractory interstitial cystitis/bladder pain syndrome, having failed medical management, cysto fulguration x3, bladder botox, presents for surgical evaluation due to persistent pain, irritative LUTS, gross hematuria.

In last five years has seen 2 general urologists and 2 URPS-fellowship trained urologists.

Here to discuss cystectomy.

Before We Operate:

"Is the Pain Truly From the Bladder?"

PATIENT SELECTION IS KEY

Workup: History & Risk Stratification

Initial 1-hour consultation

- Co-morbidities requiring perioperative management:
  - Immunosuppression — must optimize prior to surgery
  - Smoking — cessation required
  - Obesity — BMI <34 associated with better outcomes
- Social history — support system for ostomy management
- NSQIP Risk Calculator — give estimate to patient at visit
- Patient completes PROMs

Build patient rapport!
Minimum 3 in-person visits (one multi-d) before OR

Workup: Localizing the Pain to the Bladder

Patient-Reported Outcomes Measures

- ICSI/ICPI (score 0-20, 0-16, LUTS/QoL)
  - BPS diagnosis threshold: ICSI ≥4
  - Surgical consideration: ICSI ≥7
- GUPI (score 0-45, assesses pain/LUTS/QoL)
  - No studies to establish threshold for treatment
- SF-12: Physical & Mental Composite Scores

Objective Localization

- Awake vs. asleep cystoscopy
  - Hunner lesions: 28/34 (82%) with lesions had symptom resolution vs. 3/13 (23%) without (Rössberger et al., 2007)
- Urodynamics
  - Pain reproduced on CMG or pressure-flow study confirms bladder origin
- Local anesthetic bladder instillation
  - Temporary relief = favorable prognostic sign

Also obtain: Cross-sectional imaging (hernia, hydronephrosis) | Albumin | Urine culture

Case 1: Key Findings During Workup

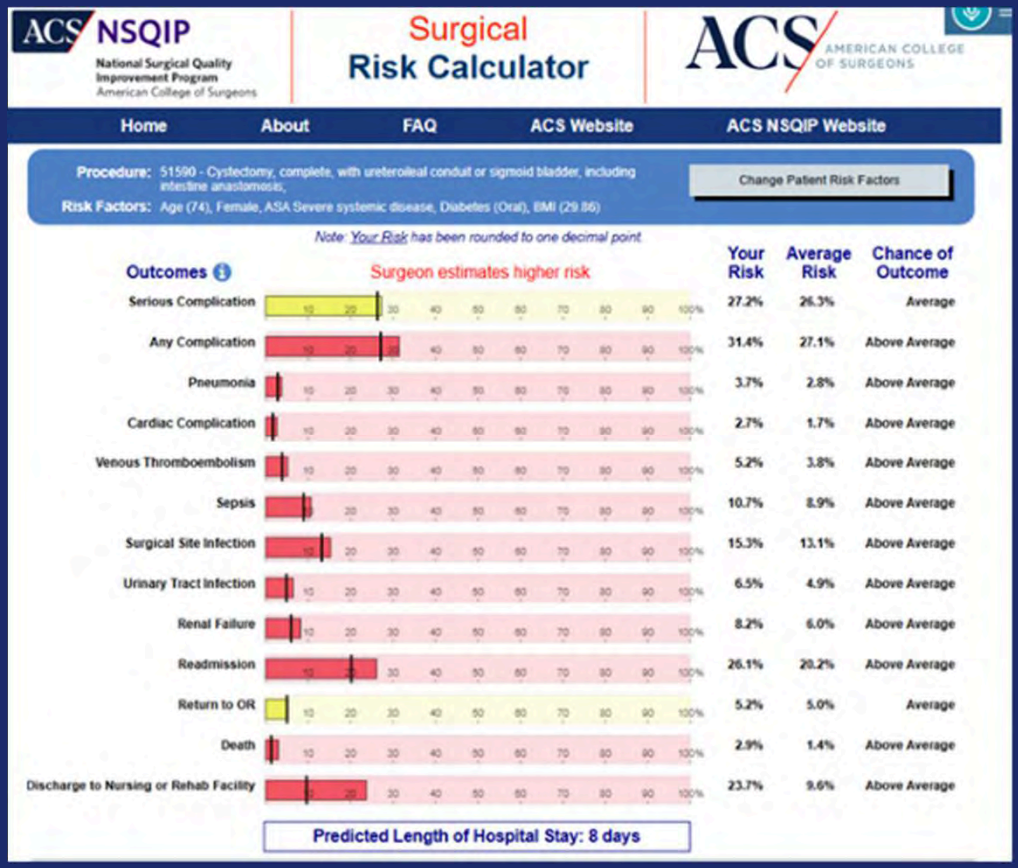
Healthy-ish and Bothered

- Only major co-morbidity: DM
- BMI: 29 | Albumin: 4.1

- ICSI score: 13 (threshold ≥7 for surgical consideration)
- SF-12 PCS: 27.7 / MCS: 50.7

Pain Localized to Bladder

- Cystoscopy: Small capacity, pain, +Hunner's lesions
- Bladder capacity under anesthesia: n/a
- Urodynamics: Increased sensation, normal compliance, reduced capacity secondary to pain with bilateral VUR



Prognostic Factors: Who Does Well?

✓ FAVORABLE

- **Must have EXHAUSTED all other treatment options**
- Hunner lesions present
  - 82% vs 23% symptom resolution (Rössberger 2007)
- End-stage fibrotic bladder (small capacity under anesthesia)
  - <200cc under anesthesia: 100% improvement with diversion (Redmond & Flood, 2017)
- Temporary pain relief with local anesthetic instillation

✗ UNFAVORABLE

- No Hunner lesions
- Large bladder capacity under anesthesia
- Long preoperative symptom duration
  - Pain after surgery: 12.1 yrs preop symptoms vs 5.4 yrs in improved patients (p=0.02)
- Unaddressed mental health / central sensitization
- Inadequate preoperative multidisciplinary team engagement

You Need a Team

- Primary Care
- Pain Management
- Neurology
- Psychiatry / Psychology
- Physical Medicine & Rehabilitation
- Pelvic Floor Physical Therapy

- Neuro-Urologist
- Geriatrician
- Wound Ostomy Nursing
- Infectious Disease (as needed)
- Nutrition / Dietetics

Charles Argoff, MD
Neurology

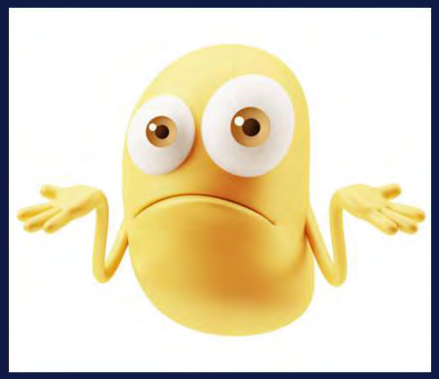
Elise De, MD
Neuro-urology

Andy Coates, MD
Geriatrics

Jody Scardillo, DNP
Wound Ostomy

Before We Operate:

“Which Surgical Option Should We Choose?”



Surgical Options: Comparing Approaches

Supratrigonal Cystectomy + Augmentation	Diversion Without Cystectomy	Cystectomy + Ileal Conduit (My Preference)
PRO Orthotopic voiding No ureteral work 77% combined success (170 pts, 11 studies)	**PRO** Fastest procedure 77% combined success (70 patients, 4 studies)	**PRO** Bladder removed 81% combined success (26 pts, 4 studies)
CON Metabolic changes Risk of perforation Possible CIC Persistent bladder	**CON** Persistent bladder Need for ostomy appliance/cathing Ureteral work 23% required secondary cystectomy for pyocystis or pain	**CON** Need for ostomy appliance/cathing Ureteral work Longer procedure

Even 34 high-volume BPS surgeons did not agree! (Gershbaum, Moldwin 2001)

My BPS Cystectomy + Ileal Conduit: Preoperative

- Perioperative antibiotics
  - Urine culture-directed, or cefazolin
- DVT prophylaxis: Heparin + SCDs
- Positioning
  - Supine (add frog-leg for urethral catheter in females)
- Tubes: Cap PCNs if present — leave perioperatively
- Skin prep: Chlorhexidine + isopropyl alcohol (ChloraPrep)

How I Do the Cystectomy

Choice of approach

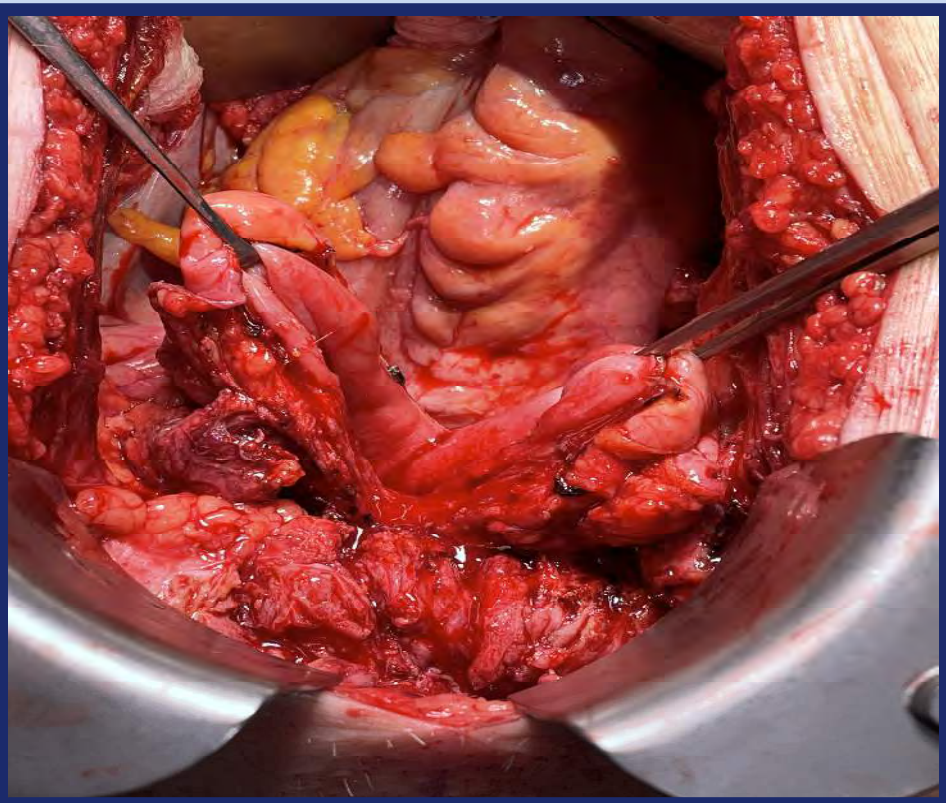
- Simple cystectomy: if not inflamed and can create retrovesical plane
- Supratrigonal cystectomy: significant inflammation, history of XRT / vaginal / bowel surgery

Supratrigonal technique

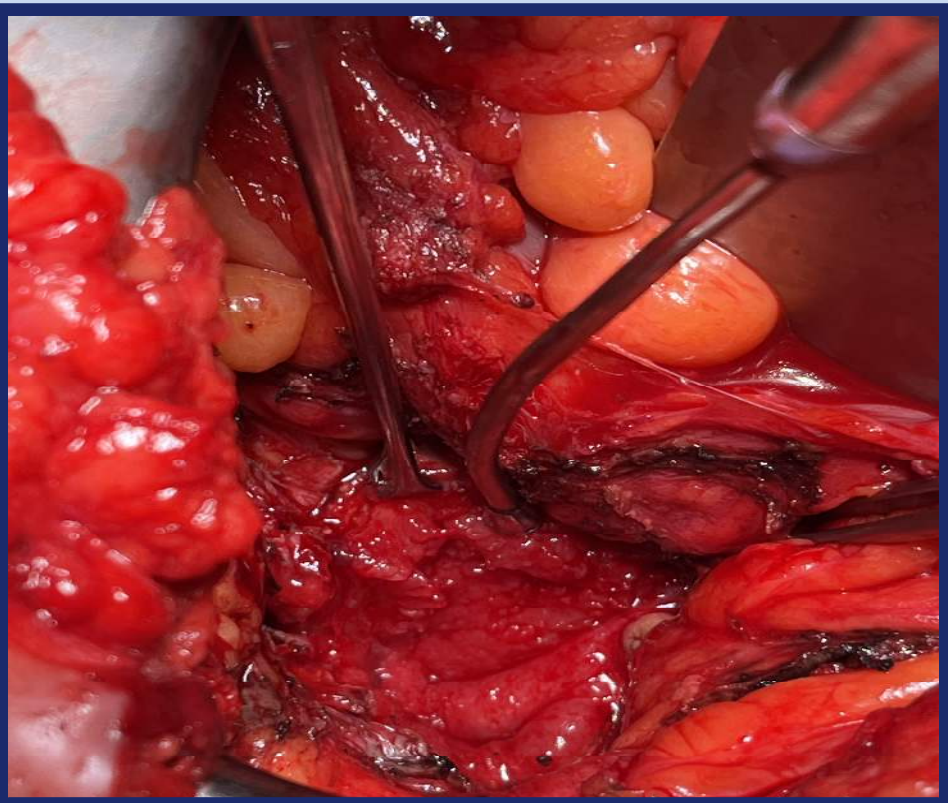
- Drop bladder, free posterior peritoneum
- Bivalve anterior then posterior bladder wall
- Remove bladder wings and any remaining posterior wall
- Sharply denude OR ablate remaining subtrigonal urothelium
- Close remaining detrusor to prevent postop leakage
- Omental or posterior peritoneal flap to fill pelvic fossa

- Ureters: Diagnostic bilateral ureteroscopy → Wallace anastomosis for ileal conduit

Intraoperative: Dropping the Bladder / Bivalve

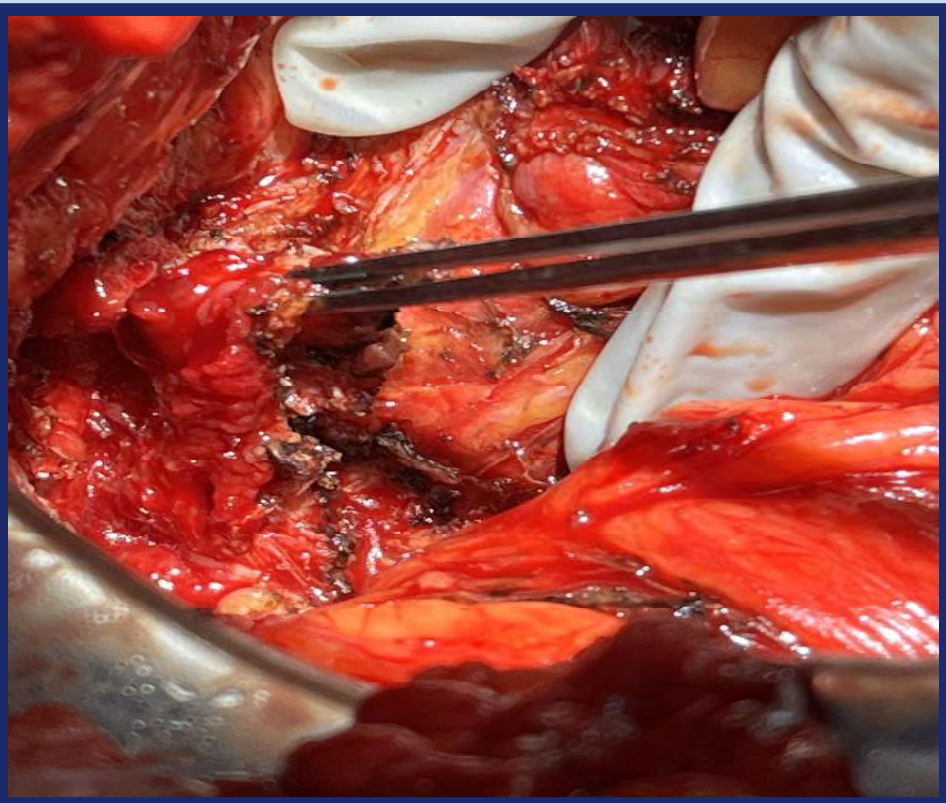


Dropping bladder, freeing posterior peritoneum

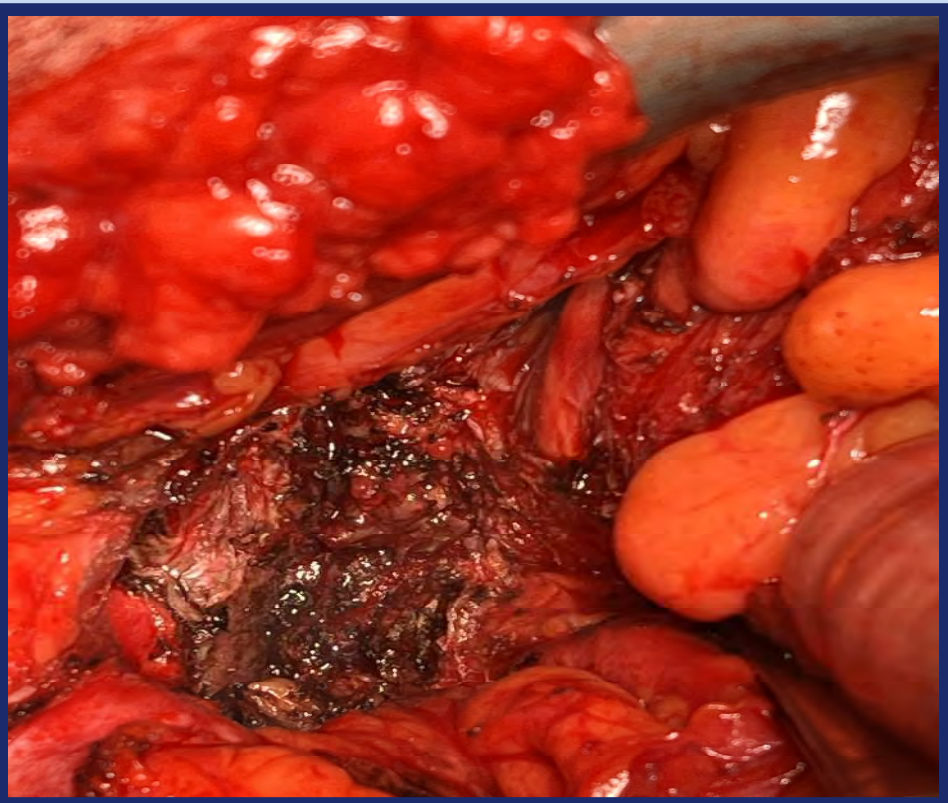


Bivalve — anterior & posterior bladder walls

Intraoperative: Removing Bladder Wings & Posterior Wall



Removing bladder wings

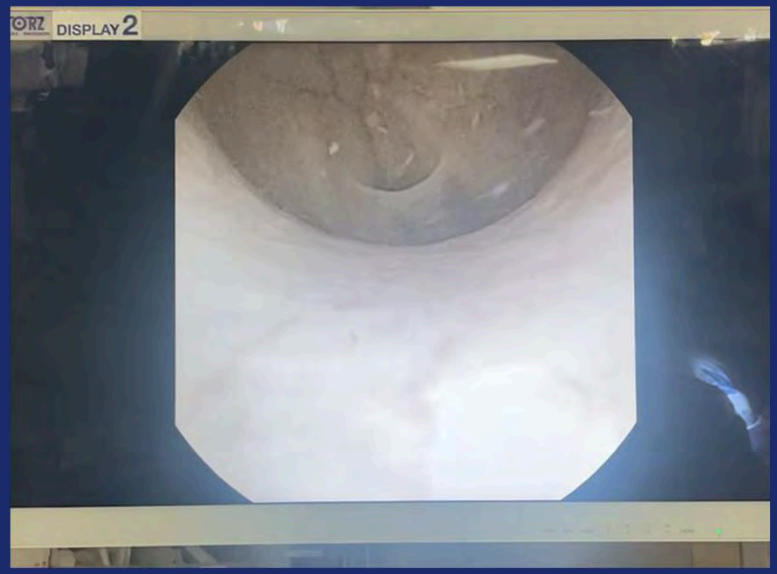


Ablating remaining urothelium

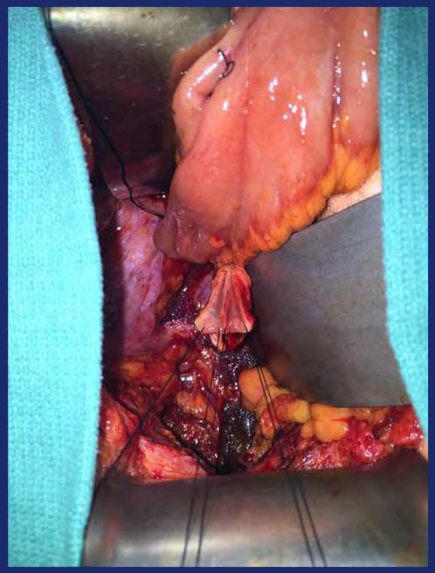
How I Manage Ureters

Step 1: Diagnostic bilateral ureteroscopy

- Evaluate urothelium prior to diversion



Step 2: Wallace anastomosis for ileal conduit



My BPS Cystectomy + Ileal Conduit: Postoperative

- ERAS protocol
- Typical LOS: 5–7 days

- Post-op visit: 2 weeks after discharge
- Remove ureteral stents at 2-week visit

- 1-month follow-up:
  - BMP, B12, Renal US, PROMs

Case 1: Postoperative Course Usually Rocky

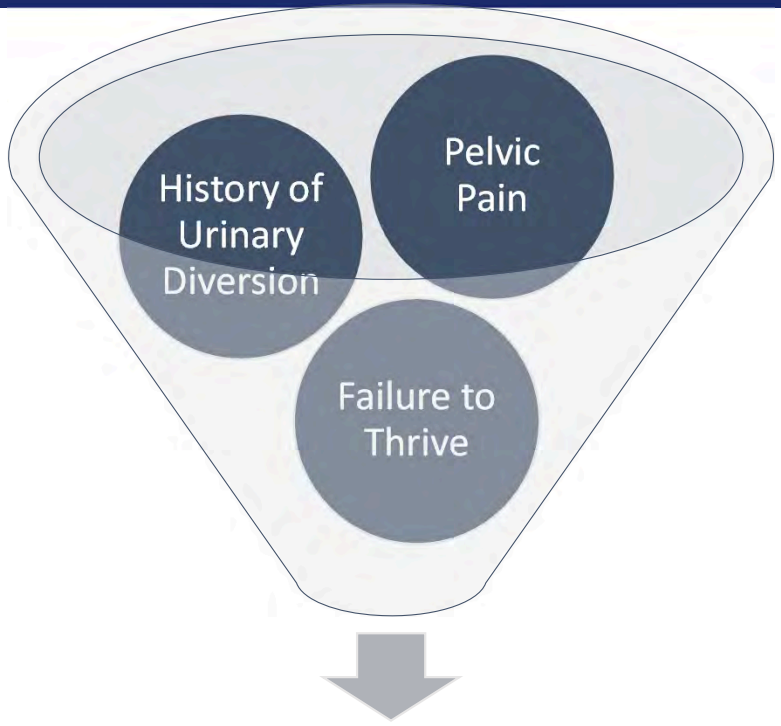
Postoperative course:

- POD 7: Discharged
- POD 28: ED presentation after slipping on bath mat and admitted for broken hip requiring surgery. Discharged to rehab 3 days later.
- POD 84: ED presentation for chills found to have UTI. New hydro with neg Lasix renal scan. Discharged 2 days later.

Teaching point: What made this patient the right candidate?

- Bothered
- Hunner lesions
- Small capacity bladder with reflux

Never Miss!



Rule Out Pyocystis

CASE 2

Persistent Pain After Cystectomy: Workup for Pyocystis

A 70yo Male presents to ED with prior supratrigonal cystectomy + ileal conduit for IC/BPS presents with 3 months of recurrent/persistent pelvic pain, urethral discharge, failure to thrive.

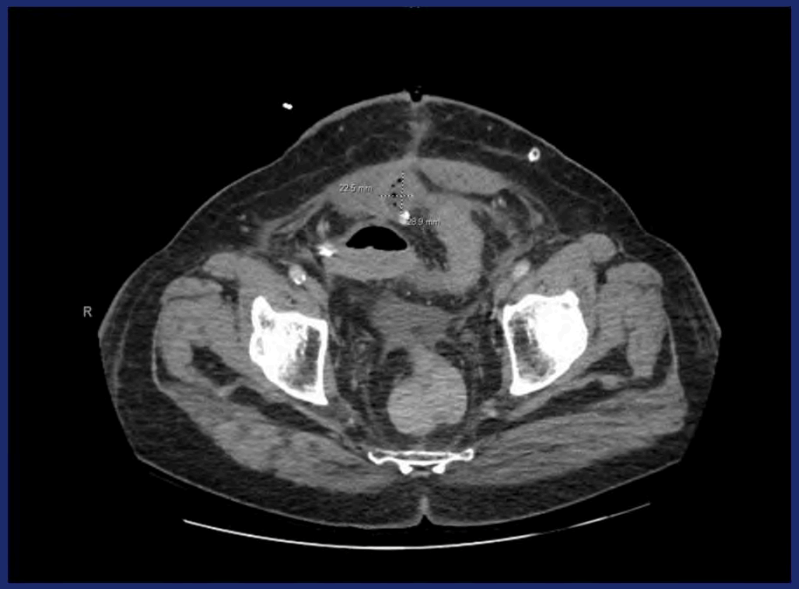
Case 2: What to Do Next?

Differential

- UTI/Pyelo
- Wound infection
- Pelvic hematoma/seroma
- Abscess
- Metabolic acidosis
- Pyocystis
- Osteomyelitis
- Bladder spasms
- Urothelial carcinoma
- Pelvic floor dysfunction

What to Do?

- Physical Exam: Normal
- UA/UCx: Mixed flora
- WBC: 13
- Blood cultures: Negative
- CT:



What Is Pyocystis?

Pyocystis (also: vesical empyema, empyema cystis)

- Infected, pus-filled defunctionalized bladder — a severe form of lower UTI

Pathogenesis

- Without urine flow, shed bladder epithelium accumulates and becomes infected
- Also: retrograde prostatic secretion pooling (men), osmotic water transfer

At-risk populations

- Supravesical urinary diversion with bladder left in situ (IC, neurogenic, radiation, hemorrhagic cystitis)
- End-stage renal disease with anuria
  - Higher risk: dialysis patients, immunosuppressed, prior Proteus mirabilis

Pyocystis: Incidence & Why It Matters

24%

Pyocystis incidence after ileal conduit for benign disease

Mankaryous et al. / ICS 2018 (n=81)

38%

Pyocystis incidence in updated cohort

ICS 2021 (n=106 pts, 1998–2019)

95%

of pyocystis cases ultimately required cystectomy

Conservative Tx almost always fails (ICS 2018)

3–67%

Reported incidence range across populations

Up to 67% in previously irradiated bladders

Onset typically at 42 months post-diversion (range 1–408 months) — always consider in late presentations

Pyocystis: Clinical Presentation

Classic symptom triad (ICS 2021 cohort, n=40 pyocystis cases):

- Urethral discharge — malodorous, purulent
  - 92.5% of pyocystis patients in ICS 2021 cohort
- Suprapubic pain with bladder spasms
  - 57.5% of patients (ICS 2021)
- Fevers / systemic sepsis
  - 30% developed acute infection or sepsis — can be fatal

Key clinical pearl:

- Patient or team may be unaware bladder remains in situ — always confirm anatomy before dismissing the bladder as a source in unexplained sepsis after diversion

Workup: Ruling Out Pyocystis

Step 1: Labs	Step 2: Imaging	Step 3: Cystoscopy of Remnant	Step 4: Drain Remnant
CBC (leukocytosis) CRP / ESR Blood cultures BMP / renal function	CT abdomen/pelvis — Thickened bladder wall — Fluid-debris level — Pelvic collection Renal ultrasound	Direct visualization Biopsy to rule out malignancy in defunctionalized bladder	Urethral or SP catheter Drain purulent content and send for: Culture Cytology

Consider malignancy in the defunctionalized bladder — risk increases over time without surveillance

Management of Pyocystis

Conservative (for mild/initial presentation)

- Broad-spectrum IV antibiotics (culture-directed when available)
- Urethral or suprapubic catheter drainage of remnant bladder
- Intermittent bladder irrigation / washout

Definitive (conservative almost always fails)

- Remnant bladder cystectomy — required in 95% of pyocystis cases (ICS 2018)

Case 2: Long-Term Drains Sometimes Work

Course:

- Cysto normal
- Perc drain by IR x4w with abx x6w
- Resolved, no recurrence

Teaching point: Even with history of pelvic pain, think infectious etiology after cystectomy

- Cysto and CT are mainstays of workup

Key Takeaways

CASE 1

- **Patient selection is KEY**
- Confirm bladder-origin pain before operating
- Hunner lesions: major favorable prognostic factor
- No best surgical technique for BPS
- Get a multidisciplinary team

CASE 2

- **Always confirm bladder anatomy after diversion**
- Diagnosis of pyocystis: CT, cysto, catheter drainage + culture, cystoscopy
- Treat conservatively but ultimately may require extirpative therapy

Thank You!

Questions?
inouyeb@amc.edu

AUA 2026
Washington, DC
MAY 15-18

Always do Targeted therapies for Chronic Scrotal Content Pain

Never miss Upper Tract Pathology

Sijo Parekattil MD

Avant Concierge Urology

Associate Professor. University of Central Florida

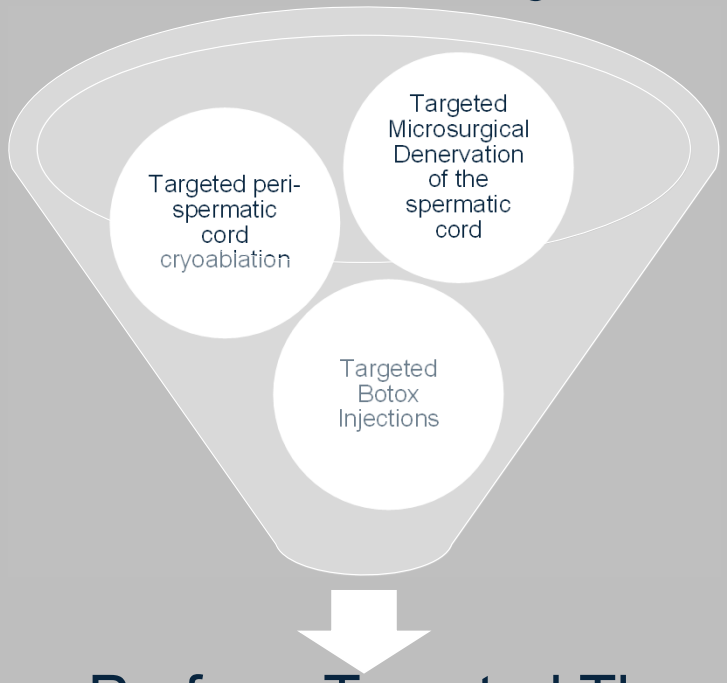
Associate Professor, Orlando College of Osteopathic Medicine

Past President, Florida Urological Society

Disclosures

None

Case – Always Do



Always Perform Targeted Therapies rather than extirpative surgeries

Case 1: Neuropathic Chronic Orchialgia

- 42 y/o male with chronic right testicular & groin pain since 2001, dull achiness in the testicle, more pronounced in the right epididymis
- Scrotal ultrasound: left varicocele
- CT abdomen/pelvis: negative
- s/p Right spermatic cord block – gave him temporary relief in his pain for a few hours
- COSI score: P15/17 S0/5 Q8/15

Pathophysiology

- Wallerian degeneration in peripheral nerves has been previously identified as a cause of chronic pain in other areas of the body such as the extremities[1]
- Thus, the ligation, ablation or neuro-modulation of these nerve fibers may explain the benefit of various targeted therapies in CSP patients
- Oka et al.[2] have performed an eloquent study illustrating the complex innervation of the spermatic cord - interplay of nerve branches from ilioinguinal, ilio-hypogastric, genitofemoral and inferior hypogastric nerves

[1]Ko et al., Int J Mol Sci. 2015
[2]Oka et al., J Urol. 2016

Pathophysiology

- Parekattil et al.,[1] identified a trifecta nerve complex that may explain the rational for pain in CSP patients
  - Study compared spermatic cord biopsy specimens of men undergoing MDSC (57 cases) for CSP versus a control group of men without pain undergoing spermatic cord surgery (10 cases: 4 varicocelectomies and 6 radical orchiectomies)
    - **84%** (48/57) of the CSP patients had Wallerian degeneration in at least one or more of these nerves
    - Only **20%** of the control group patients (2/10) had Wallerian degeneration, **(p=0.0008)**

[1]Parekattil et al., J Urol. 2013

Pathophysiology

- 3 primary locations (the trifecta nerve complex) for these changes:[1]
  - cremasteric muscle fibers
  - peri-vasal tissues and vasal sheath, and
  - posterior cord lipomatous tissues
- 3 human cadaver spermatic cord dissections were performed to confirm localization of the nerve distribution identified on pathology mapping[1]
- This is the first study to actually define a significant structural difference in the spermatic cord neuro-anatomy between CSP patients and non-CSP controls[1]

[1]Parekattil et al., J Urol. 2013

COSI Score

Chronic Orchialgia Symptom Index

Pain Symptoms

1. When you have testicle pain, do you also feel it in your groin (area above testicle)?
No __ (0) Yes __ (1)

2. Would you describe your testicle pain as burning?
No __ (0) Yes __ (1)

3. Does your testicular pain wake you up at night?
Never __(0), Sometimes __(1) Always __ (2)

4. In the past week how often did you feel pain in your testicle?
Never __(0), Occasionally __(1), Usually __(2), Always __(3)

5. What number best describes your MINIMUM (lowest) testicle pain in the past week?
0 __ 1 __ 2__ 3__ 4__ 5__
None Mild Worst pain imaginable

6. What number best describes your MAXIMUM (highest) testicle pain in the past week?
0 __ 1 __ 2__ 3__ 4__ 5__
None Mild Worst pain imaginable

Sexual Symptoms

7. In the past week how often have you had difficulty achieving or maintaining an erection?
Never (eg. you have normal erections) __ (0), Sometimes __(1), Always __(2)

8. In the past week, has your desire to have sex (libido) been lower than normal for you?
No __ (0), Yes __(1)

9. In the past week have sexual activities been painful?
No __ (0), Sometimes __(1), Always __(2)

Quality of Life

10. In the past week, how much has your testicular pain prevented you from working or doing your normal daytime activities?
0 __ 1 __ 2__ 3__ 4__ 5__
None A little Sometimes Often Usually Completely

11. In the past week, how much has your testicular pain prevented you from doing leisure activities you enjoy?
0 __ 1 __ 2__ 3__ 4__ 5__
None A little Sometimes Often Usually Completely

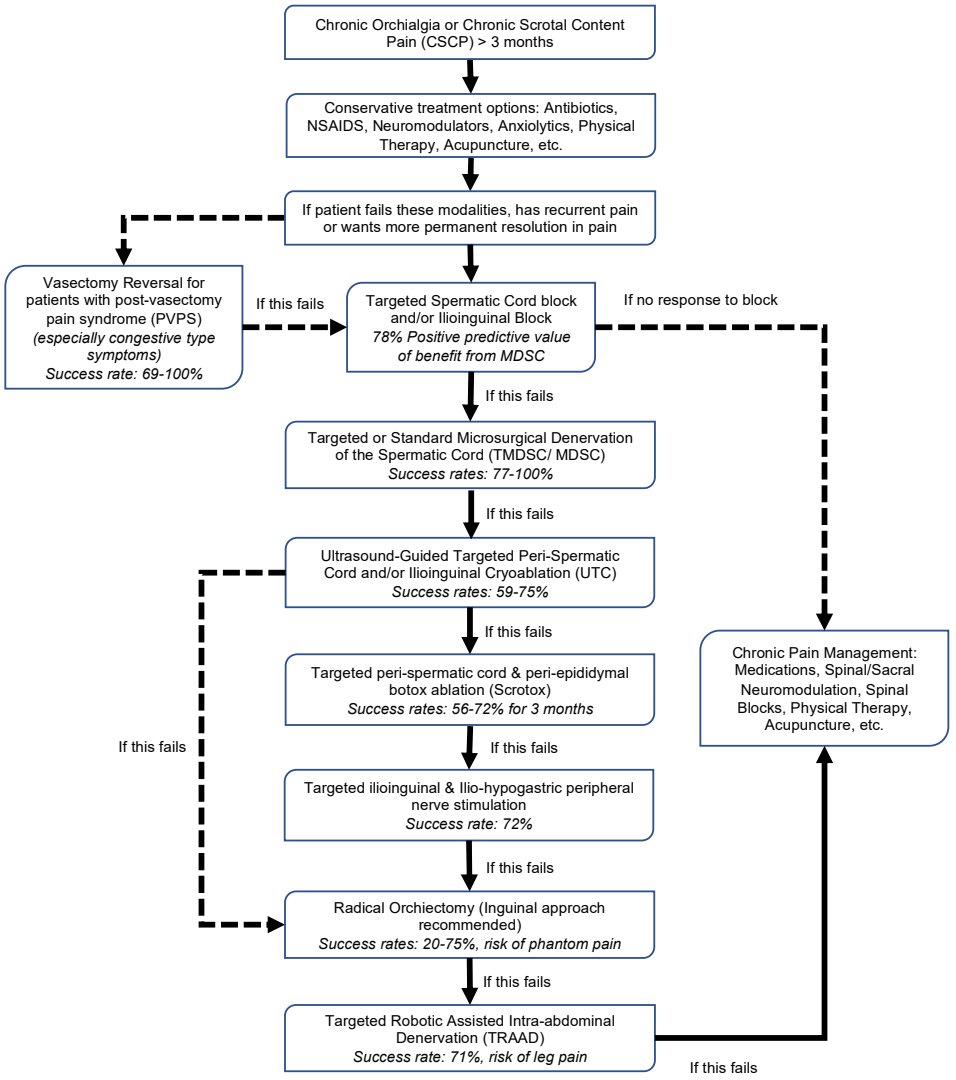
12. If nothing changed and your symptoms remained this way for the rest of your life, how would you feel?
0 __ 1 __ 2__ 3__ 4__ 5__
Delighted Pleased Mostly Satisfied Mixed Unhappy Miserable

Score: Pain (Q 1-6) ___ Sexual (Q 7-9) ___ QOL (Q 10-12) ___

Shoskes DA et al. **Urology** 2018;119:39–43.
Shoskes DA et al. **J Urol** 2018;199(S4):e1159.
Polackwich et al., Transl Androl Urol. 2018

AUA 2026
Washington, DC
MAY 15-18

Treatment Algorithm[1]



Posterior inferior scrotal denervation

Low intensity shock wave lithotripsy

[1]Parekattil et al., Research and Reports in Urology 2020

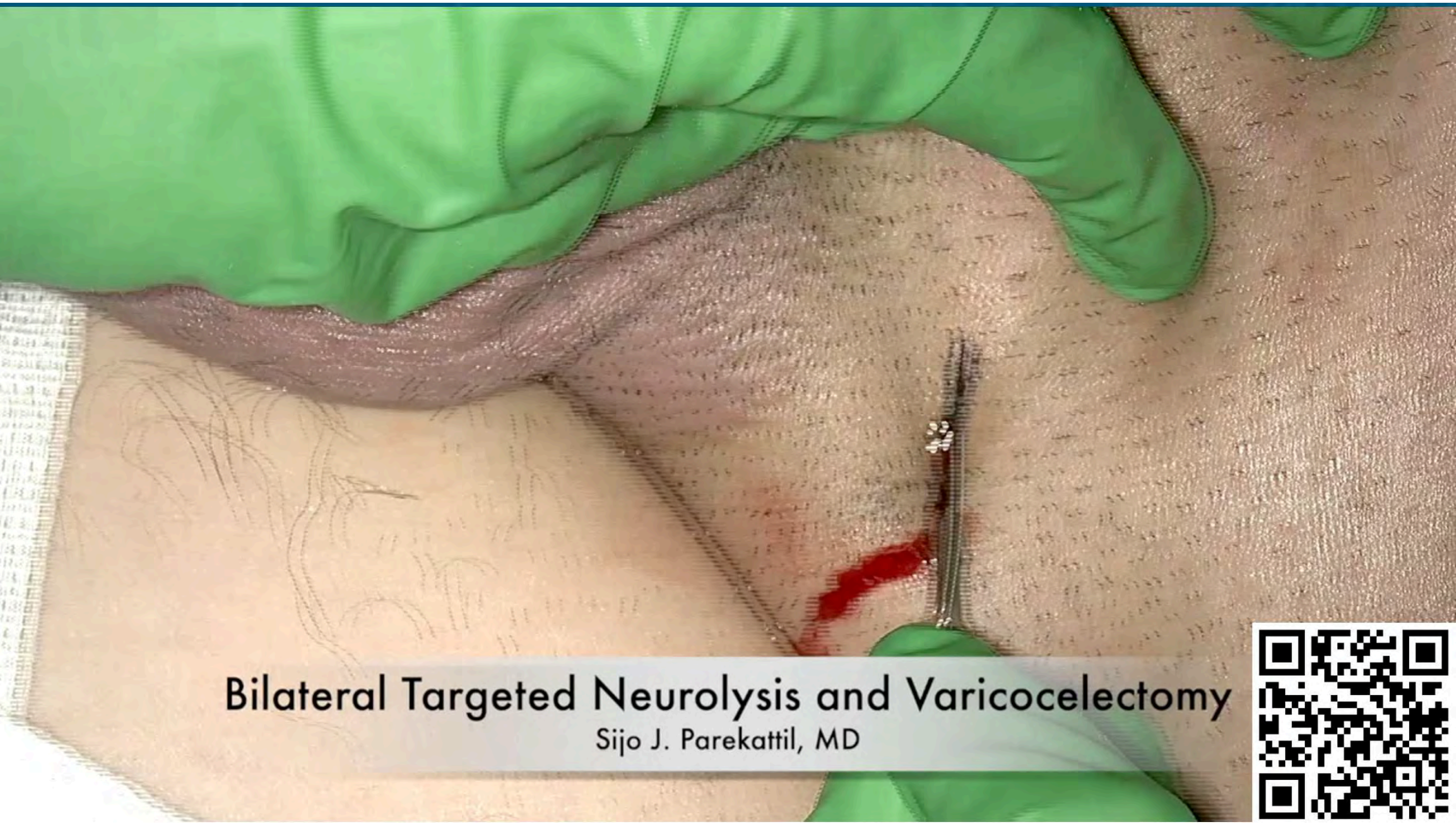
AVANT
CONCIERGE UROLOGY
www.avanturol.com

AUA 2026 Washington, DC MAY 15-18

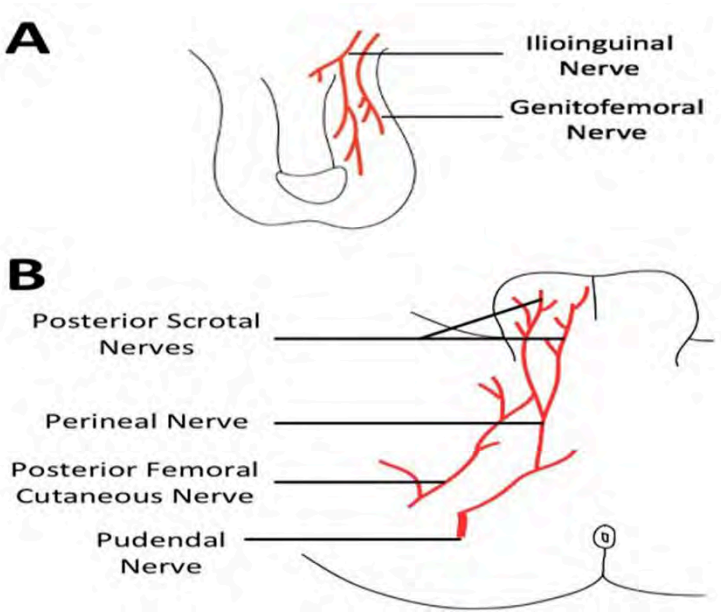
Office based Targeted Microsurgical Denervation of the spermatic cord

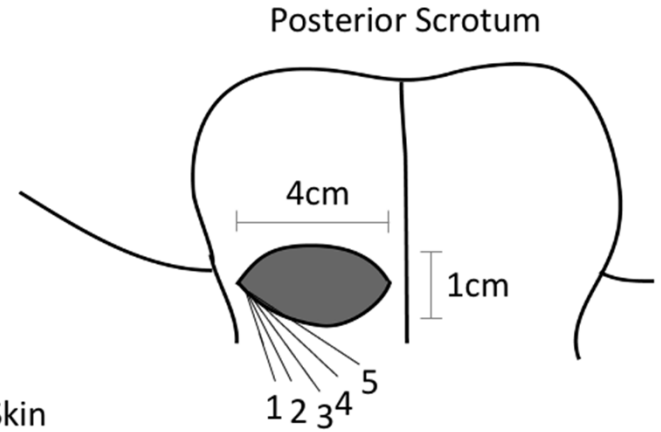
- Retrospectively review:
  - 244 cases who underwent office based targeted microsurgical denervation (OTMDSC) of the spermatic cord from November 2020 to October 2024
  - Median follow-up of 20 months (range 1 to 29)
  - **84%** showed a significant reduction in pain
    - 62% had complete resolution in pain
    - 22% had 50% or > reduction in pain
  - 16% had no change in pain by subjective visual analog scale scoring

AVANT
CONCIERGE UROLOGY
www.avanturol.com


Bilateral Targeted Neurolysis and Varicocelectomy
Sijo J. Parekattil, MD

Posterior-Inferior Scrotal Nerve Block (PISB) & Posterior-Inferior Scrotal Denervation (PISD)[1]





1. Skin
2. Dartos
3. External Spermatic Fascia
4. Cremasteric Muscle
5. Internal Spermatic Fascia

[1] Sergey Kravchick et al., 2023

AUA 2026 Washington, DC MAY 15-18

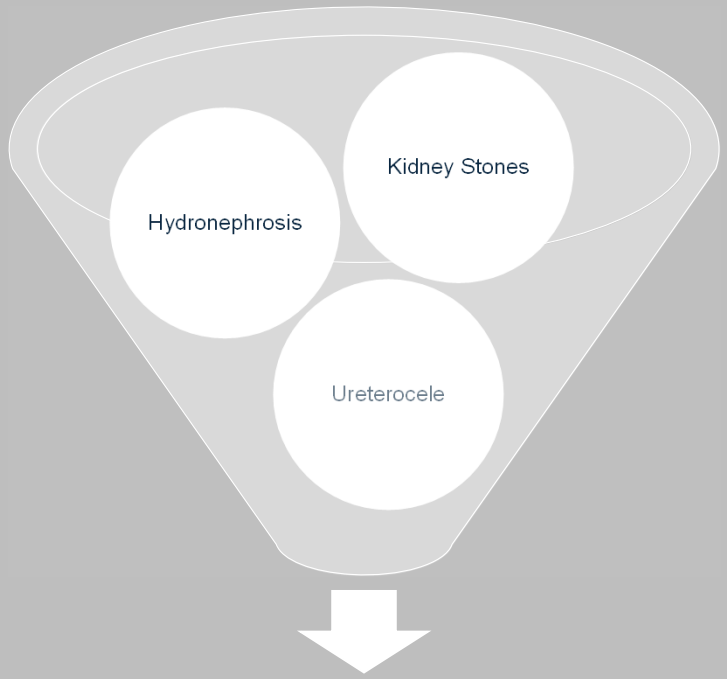
Office-Based Salvage Ultrasound-Guided Peri-Spermatic Cord Cryoablation

- Prospective cohort study:
  - 106 cases (82 patients): Jan 2021 to Oct 2024
    - Single office-based operating room under IV sedation
    - Single experienced surgeon
    - Pre- and post-op Chronic Orchialgia Symptom Index (COSI) scores were assessed
    - Cooper Surgical Cryo Plus Nitrous Gas System
      - -89 deg F freeze - one freeze/thaw cycle
    - Realtime ultrasound doppler imaging
- Results:
  - Mean follow-up time: 25 months (1 month - 45 months)
  - Mean preoperative COSI Score: 22
  - Mean postoperative COSI Score: 14
  - **76%** all of patients reported significant improvement in pain postop
  - Complications:
    - Localized postoperative wound infection (3 patients, 3.6%)

AVANT
CONCIERGE UROLOGY
www.avanturol.com


AVANT
CONCIERGE UROLOGY

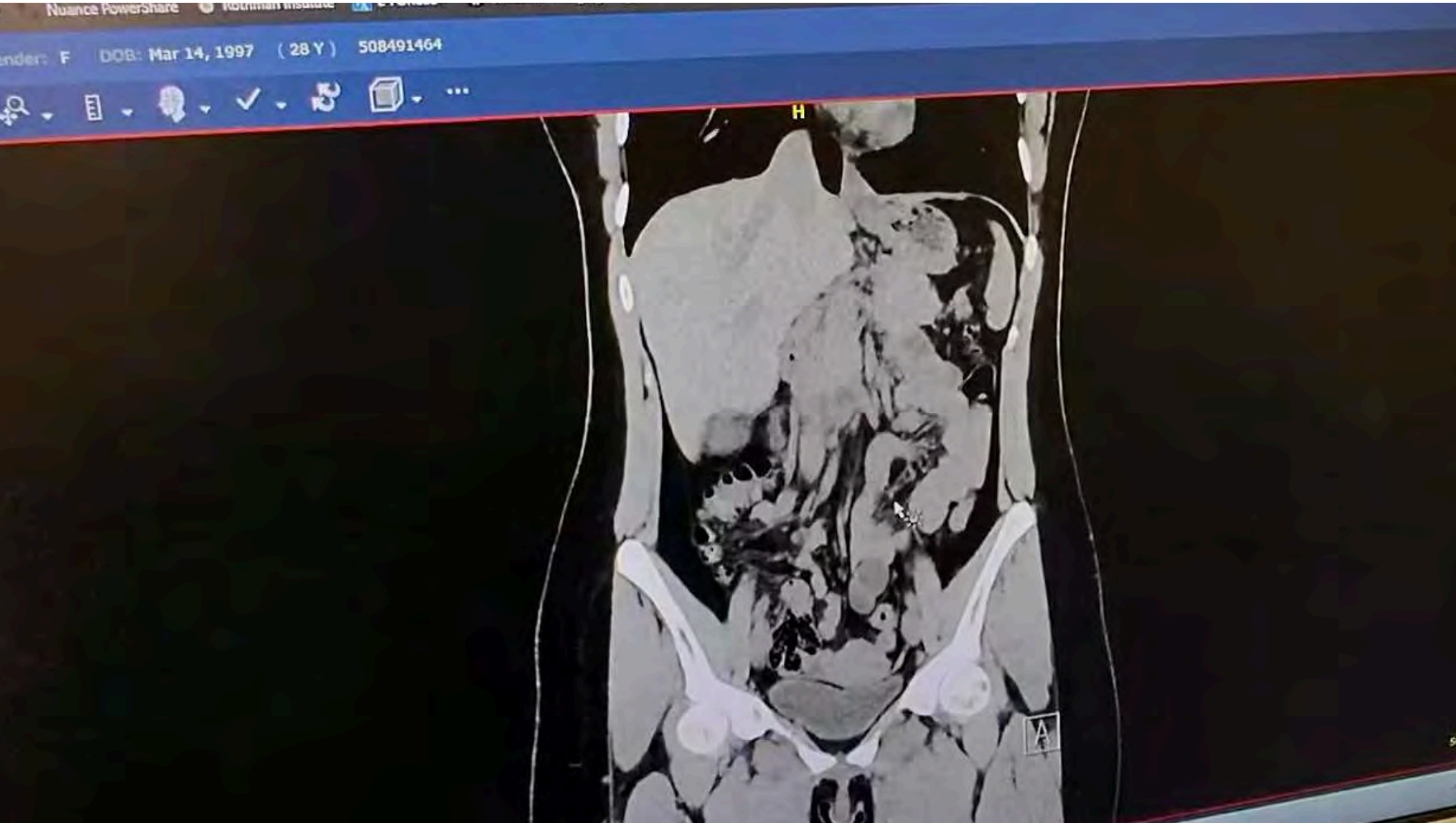
Case – Never Miss



Never Miss Upper Tract Pathology

Case 2: Referred Chronic Orchialgia

- 34 y/o male with Chronic left testicular/groin/pelvic pain, since 2023 after lifting heavy item, constant squeezing pain, worsening w/ physical activity and intercourse
- COSI P8 S4 Q8
- Scrotal ultrasound: left varicocele
- CT abdomen/pelvis: 7mm right mid ureteral stone with minimal hydronephrosis


Nuance PowerShare
nder: F DOB: Mar 14, 1997 (28 Y) 508491464
H
A

Sijo Parekattil MD
Avant Concierge Urology
Associate Professor. University of Central Florida
Associate Professor, Orlando College of Osteopathic Medicine
Past President, Florida Urological Society

@drparekattil

TIPS FROM THE GYNECOLOGIST

Jennifer Pollard, MD, FACOG

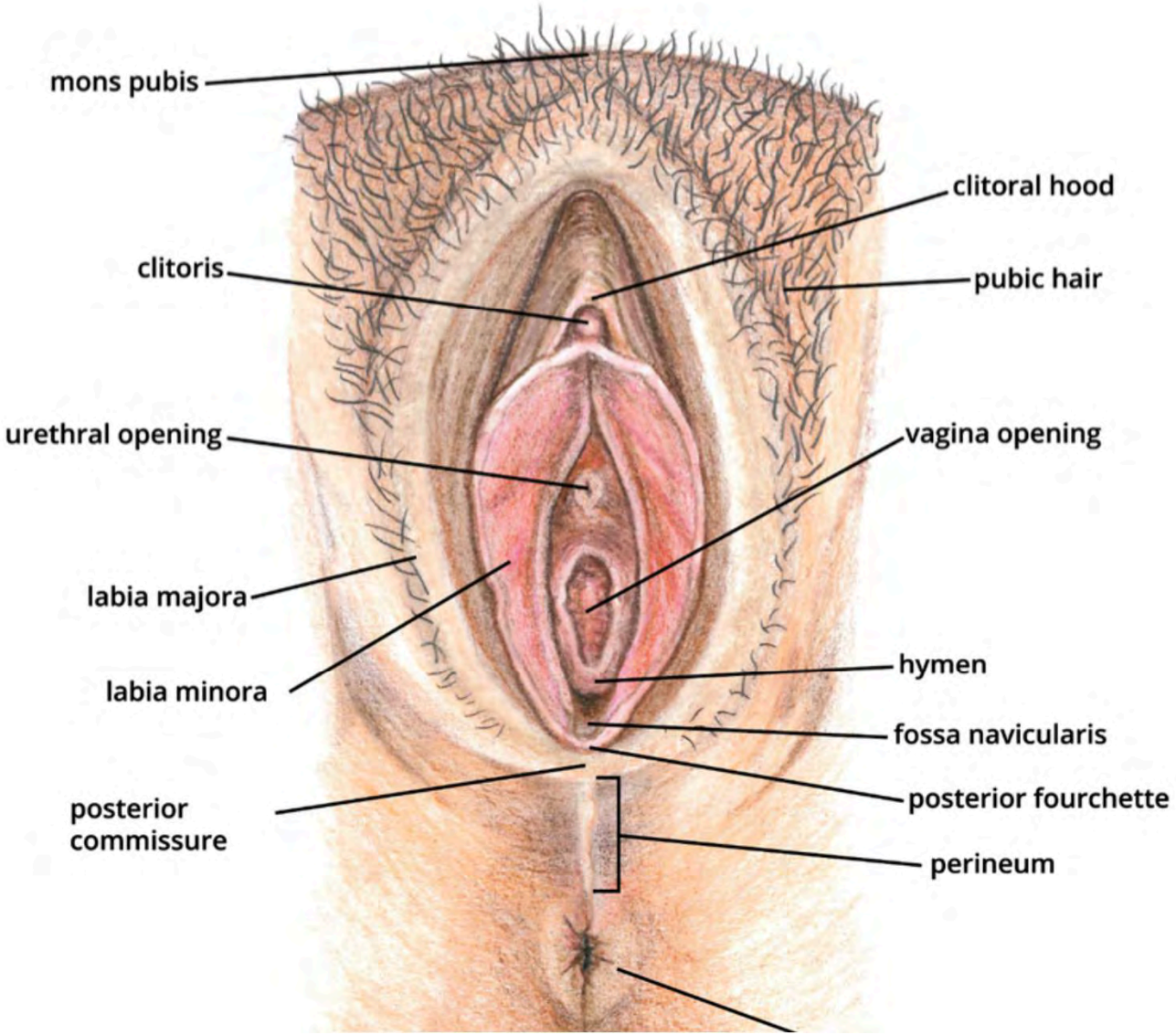
Assistant Professor

Albany Medical College

Department of Obstetrics & Gynecology

ALWAYS DO:

Examine the vulva



Vulvar Anatomy

Image from the Texas Evidence Collection Protocol –

Texas A&M University

Most common causes of vulvar pain

- Vulvovaginal candidiasis
- STIs (e.g. herpes virus)
- Contact dermatitis
- Vulvodynia
- Vulvovaginal atrophy
- Vulvar dermatoses

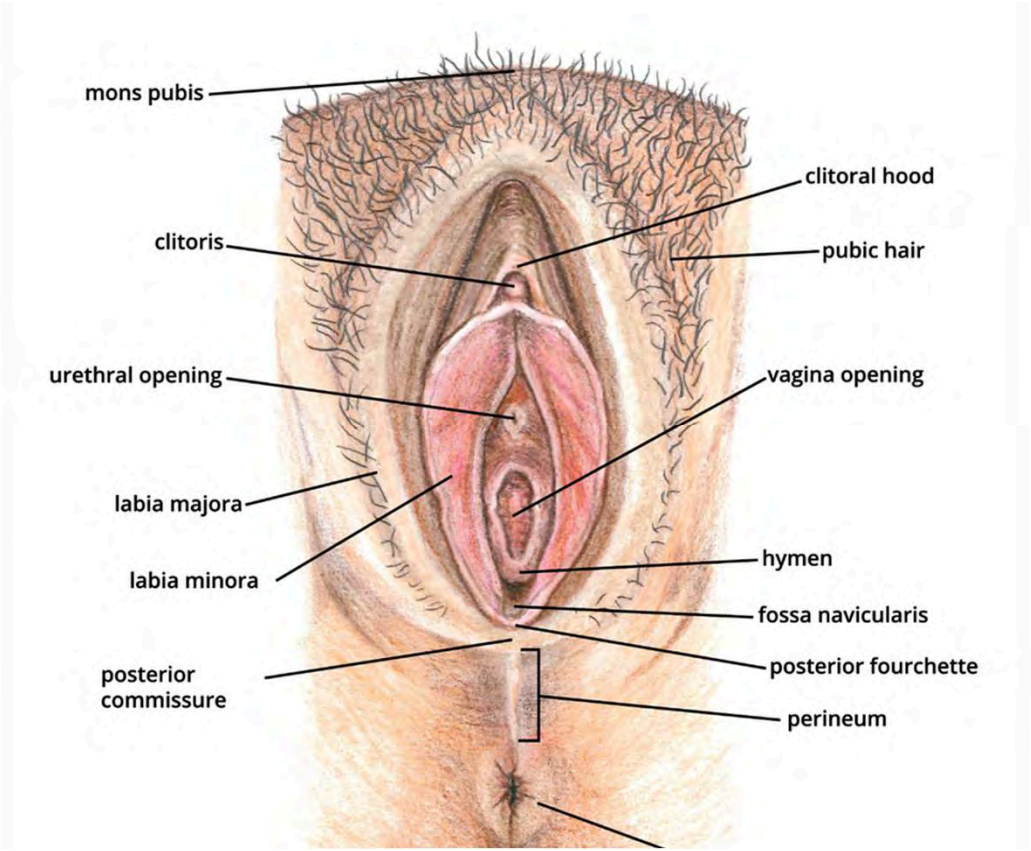


Image from the Texas Evidence Collection Protocol – Texas A&M University

Most common causes of vulvar pain

- Vulvovaginal candidiasis
- STIs (e.g. herpes virus)
- Contact dermatitis
- Vulvodynia → *diagnosis of exclusion*
- Vulvovaginal atrophy
- Vulvar dermatoses

Rule out infectious etiology:

Yeast culture

Herpes virus PCR (from lesion)

Gonorrhea, chlamydia, trichomonas PCR

Review proper vulvar hygiene practices

Thorough vulvar exam

Case: Vulvar Pain

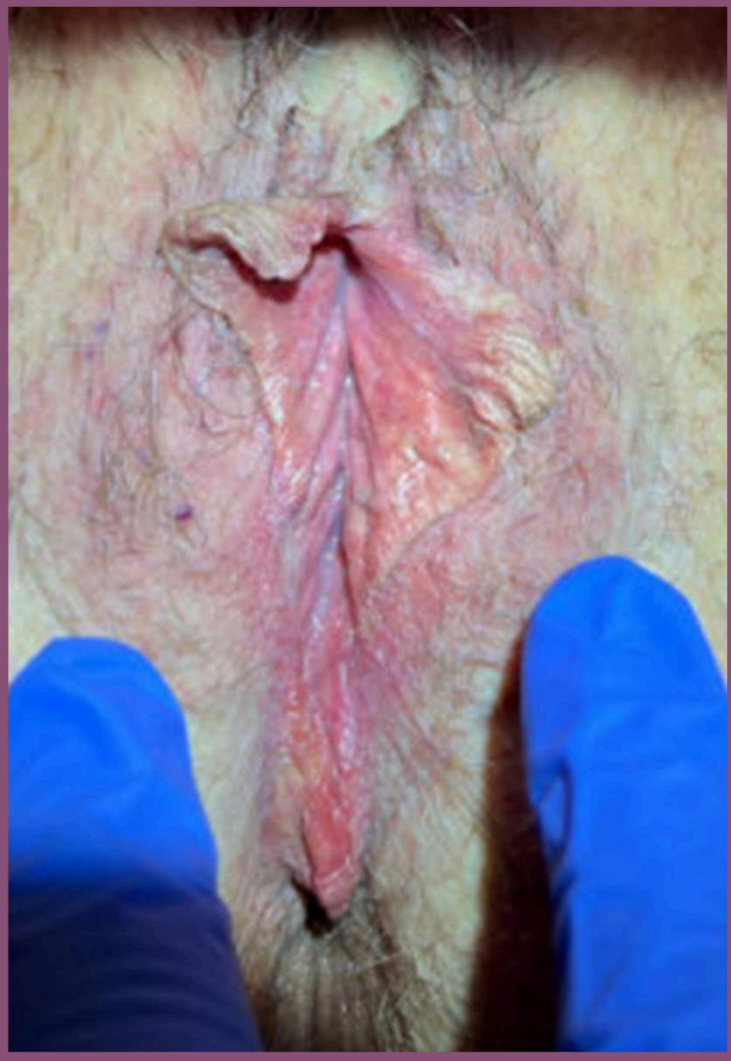
62 yo female presents with dysuria & vulvar/vaginal burning and itching.

VULVAR EXAM FINDINGS

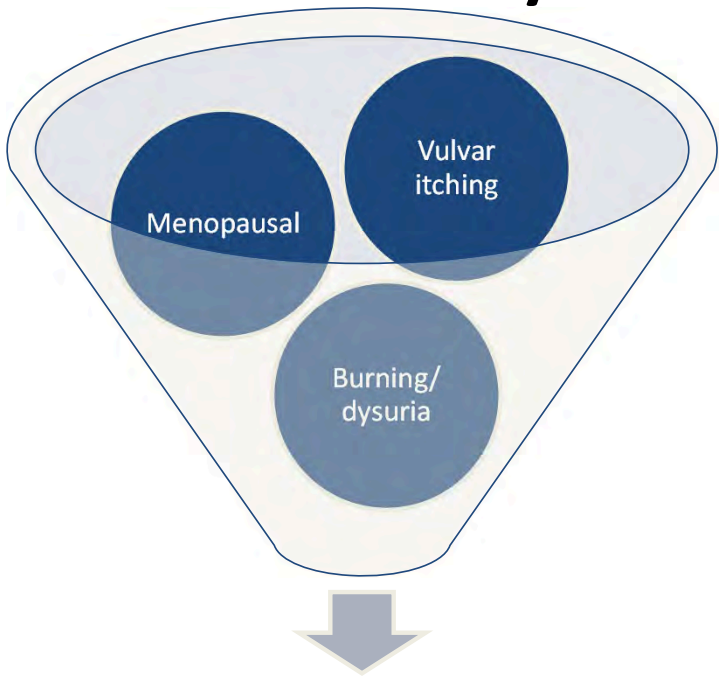
Skin whitening

Erythema

Skin thinning



Case – Always Do



Rule out lichen sclerosus

Lichen Sclerosus

SYMPTOMS

Vulvar, vaginal, and/or perianal itching (may be intense)

Pain, burning sensation

Anal discomfort

Skin damage, bleeding

Dysuria & dyspareunia

EXAM FINDINGS

Skin whitening

Erythema

Skin thinning

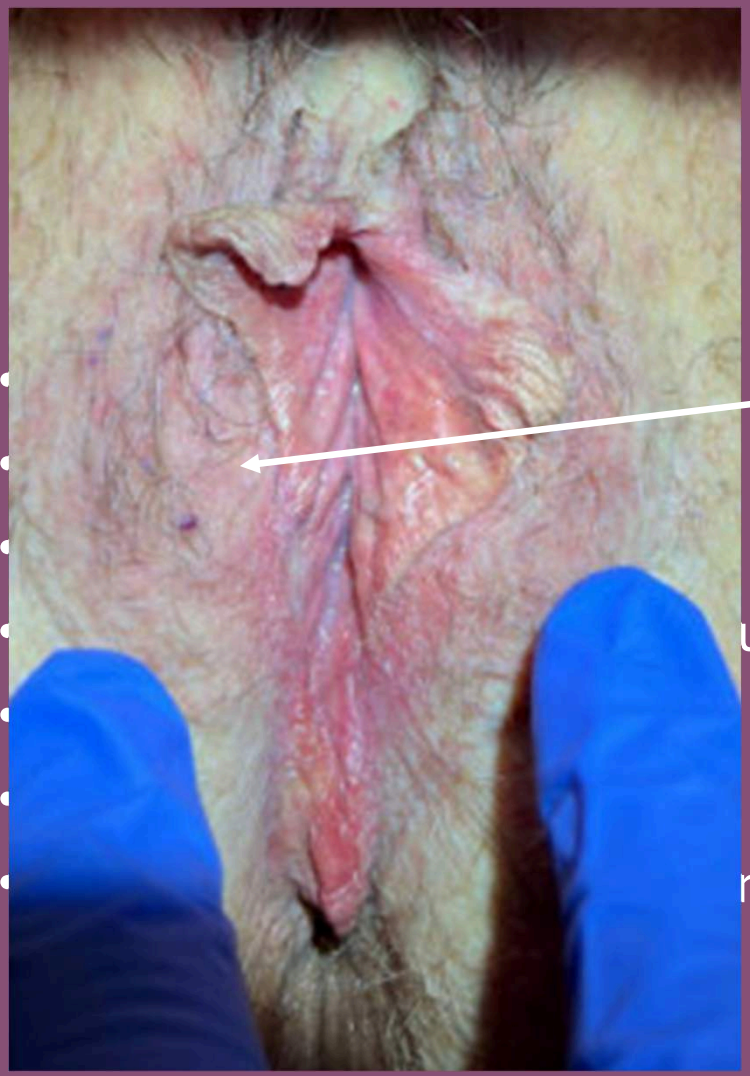
Fusion of labia minora with vulva

Atrophic clitoris

Narrowing of the introitus

Bridging of tissue at posterior fourchette

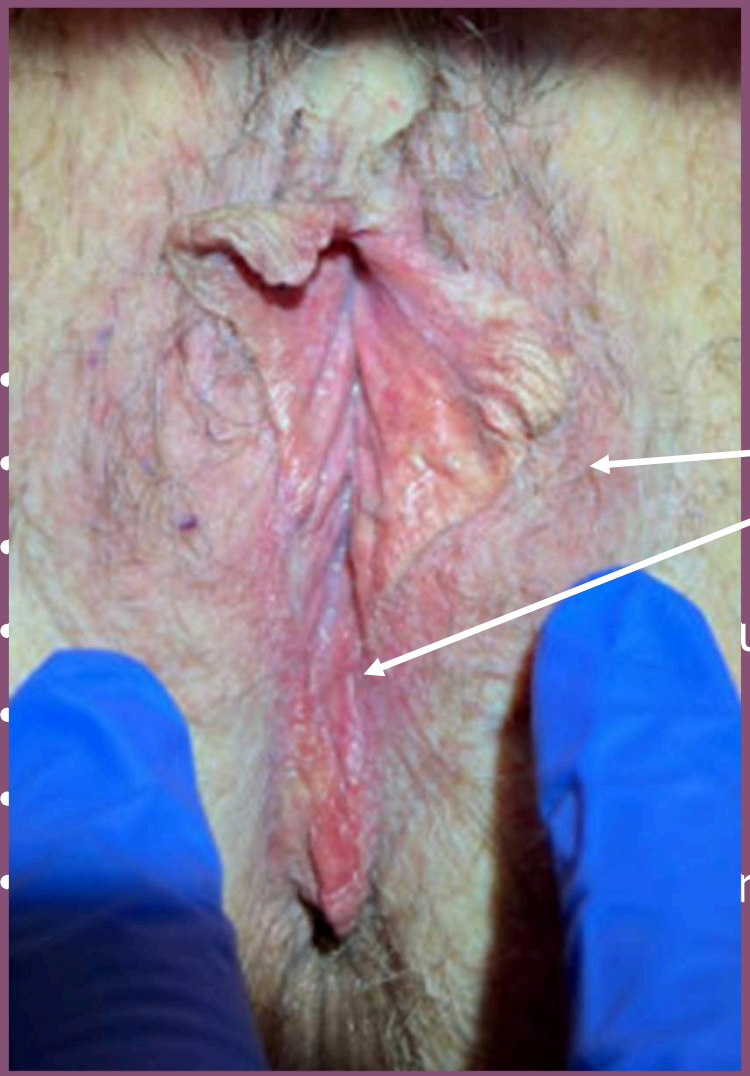
Lichen Sclerosus



Patient photo used with consent

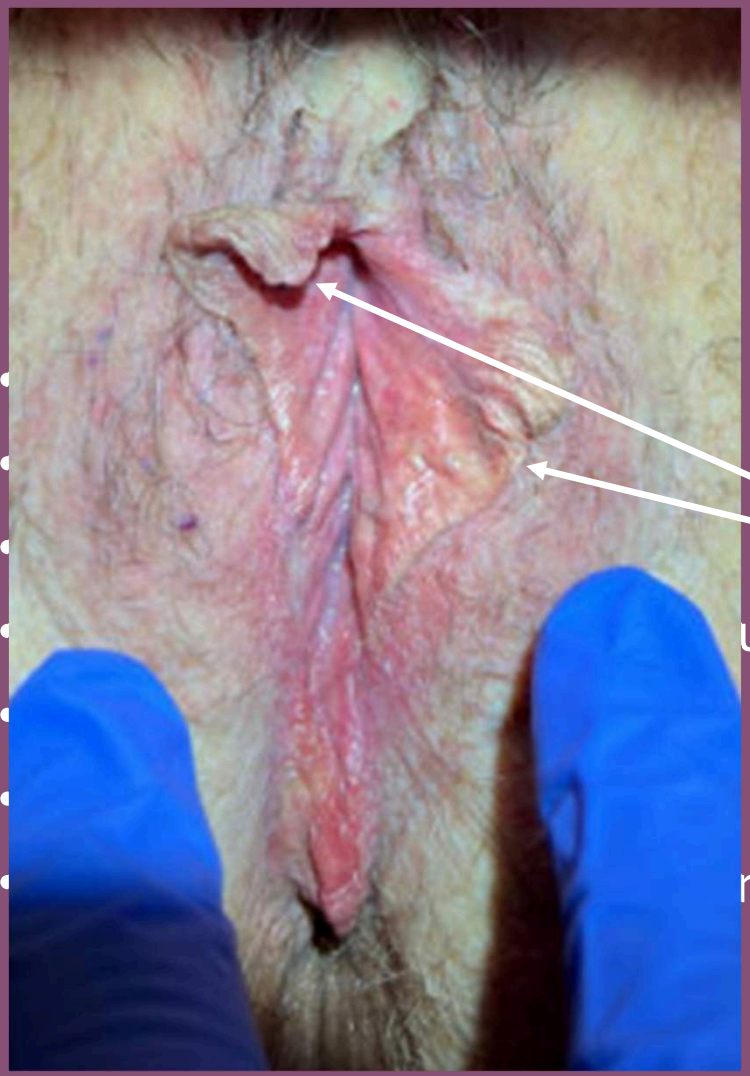
-
-
-
- ulva
-
-
- r

Lichen Sclerosus



Patient photo used with consent

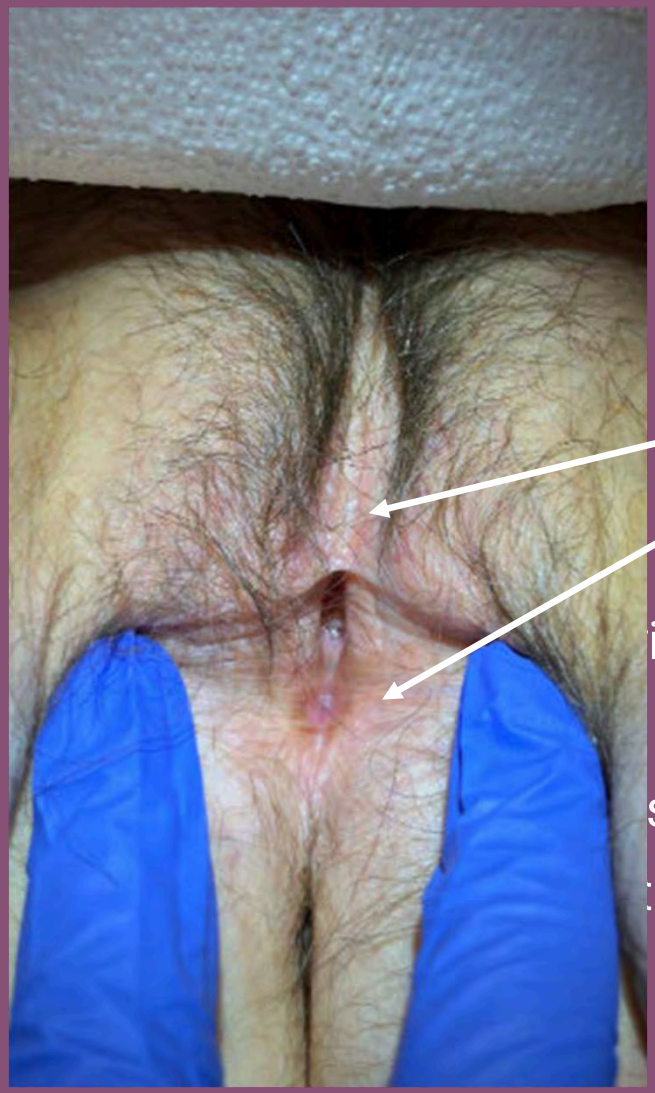
Lichen Sclerosus



Patient photo used with consent

- ulva
- r

Lichen Sclerosus



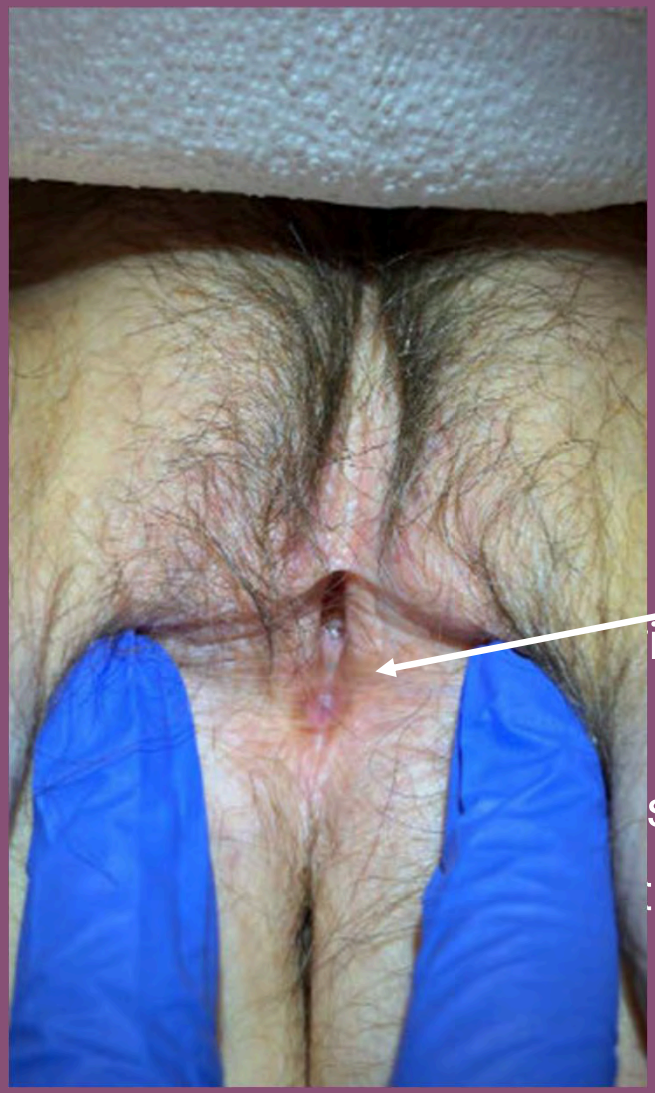
Patient photo used with consent

ith vulva

s

terior

Lichen Sclerosus



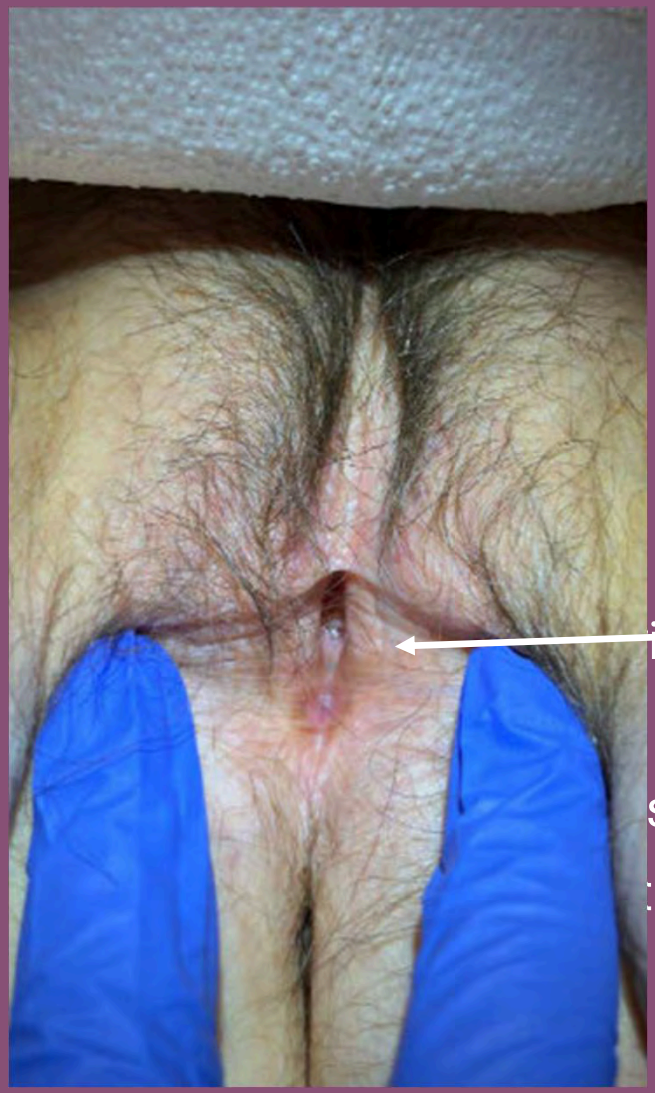
Patient photo used with consent

ith vulva

s

terior

Lichen Sclerosus



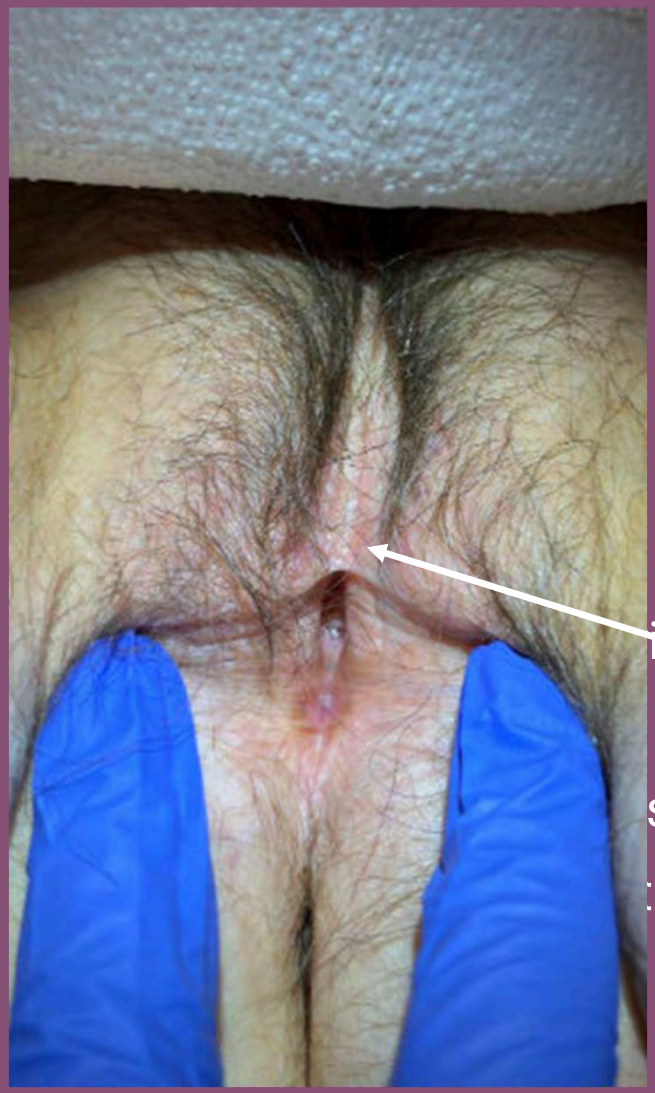
Patient photo used with consent

ith vulva

s

terior

Lichen Sclerosus



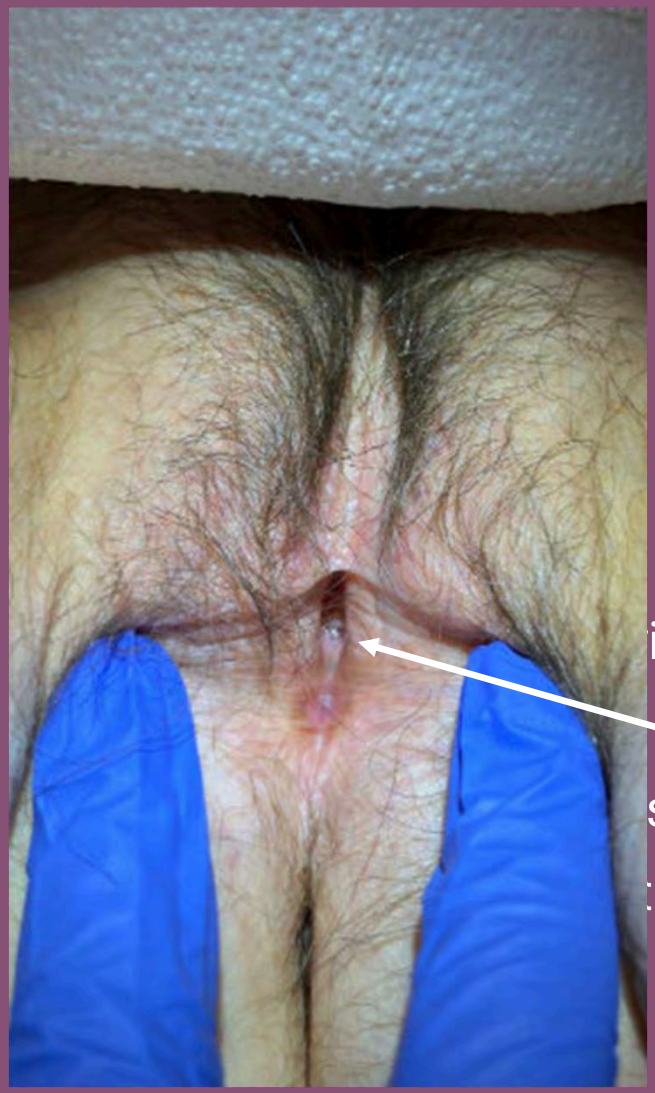
Patient photo used with consent

ith vulva

s

terior

Lichen Sclerosus



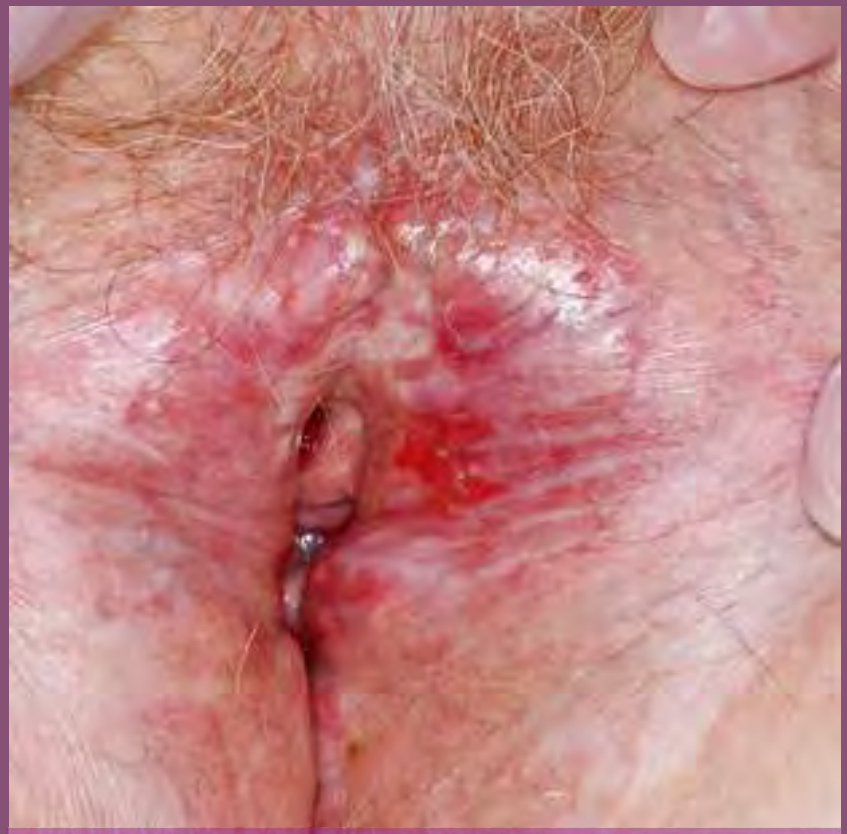
Patient photo used with consent

ith vulva

s

terior

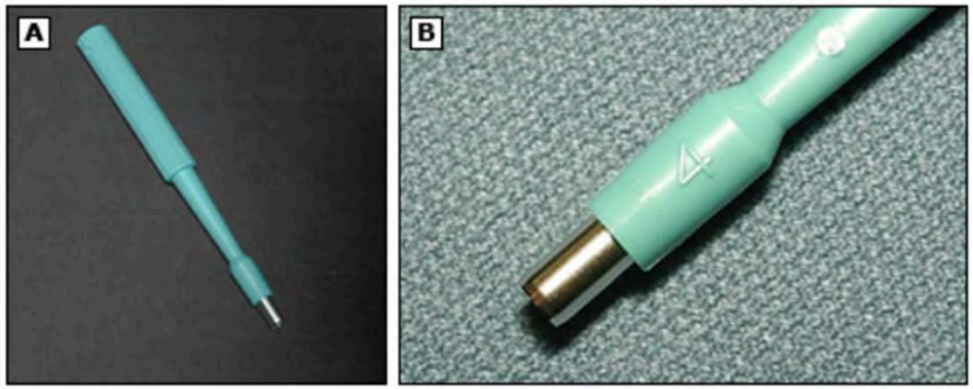
Advanced LS with fusion of the labia majora and bridging of posterior fourchette



Lichen sclerosus resulting in squamous cell carcinoma

You suspect lichen sclerosus… Now what?

- Refer to a gynecologist, or dermatologist comfortable with vulvar disorders
- Consider starting topical high potency corticosteroid (e.g. clobetasol propionate ointment 0.05%)
- Topical lidocaine and barrier ointment helpful for comfort
- Consider vulvar biopsy

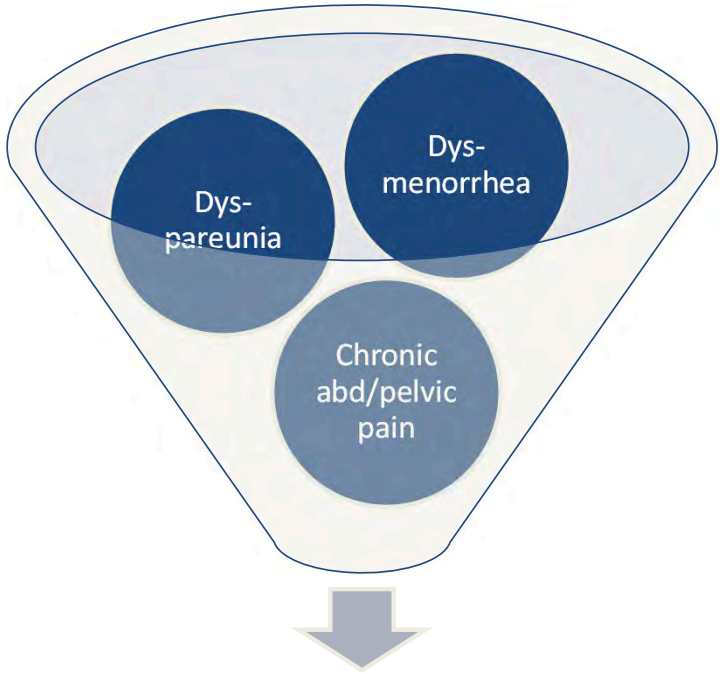


Keyes punch for vulvar biopsy

NEVER MISS:

Classic signs of endometriosis

Case – Never Miss



Never miss endometriosis

Case: Cyclic Pain

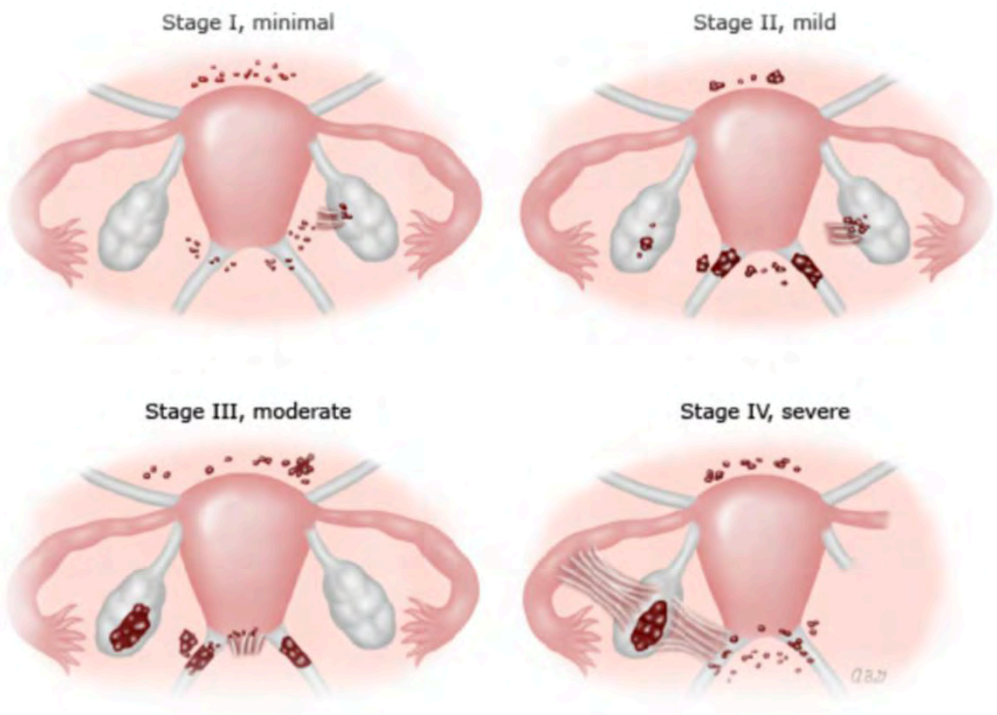
32 yo female presenting with chronic pelvic pain. Reporting:

- Urinary urgency
- Urinary frequency
- Pelvic Pressure
- Sensation of Incomplete Emptying (PVR 15)
- Dyspareunia
- Pelvic pain worse with menses

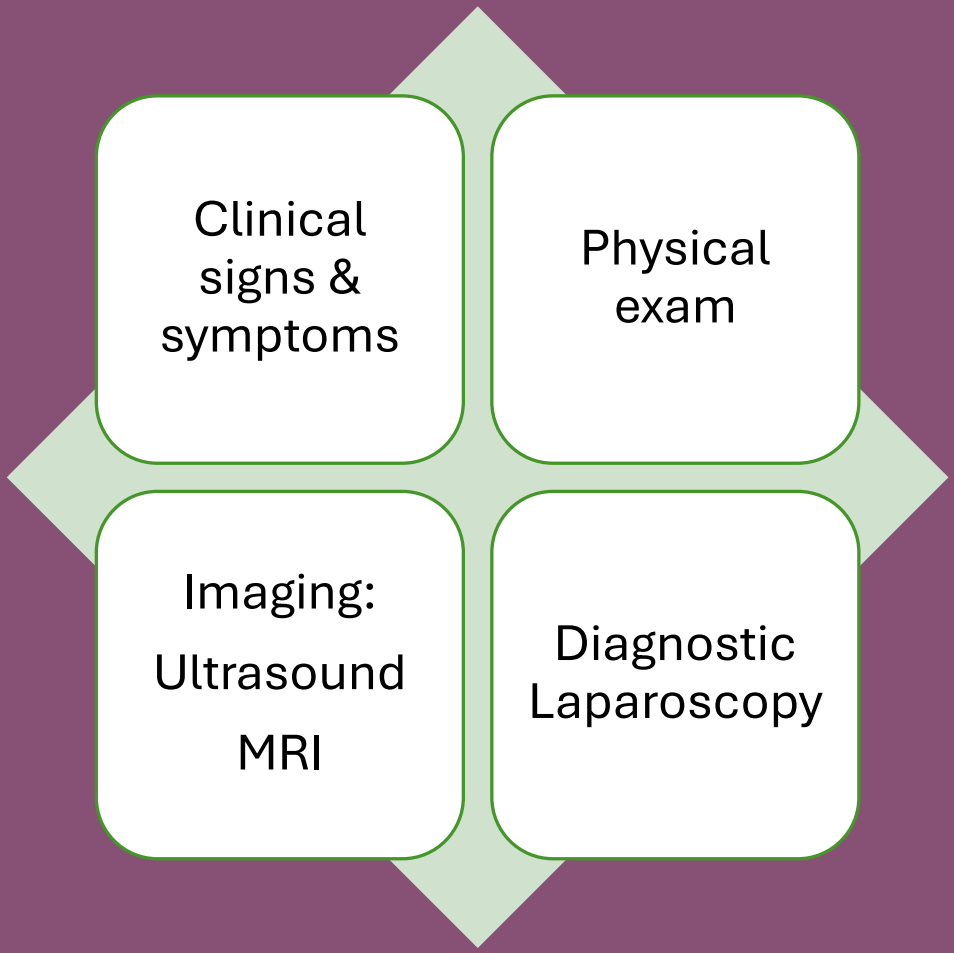
Endometriosis

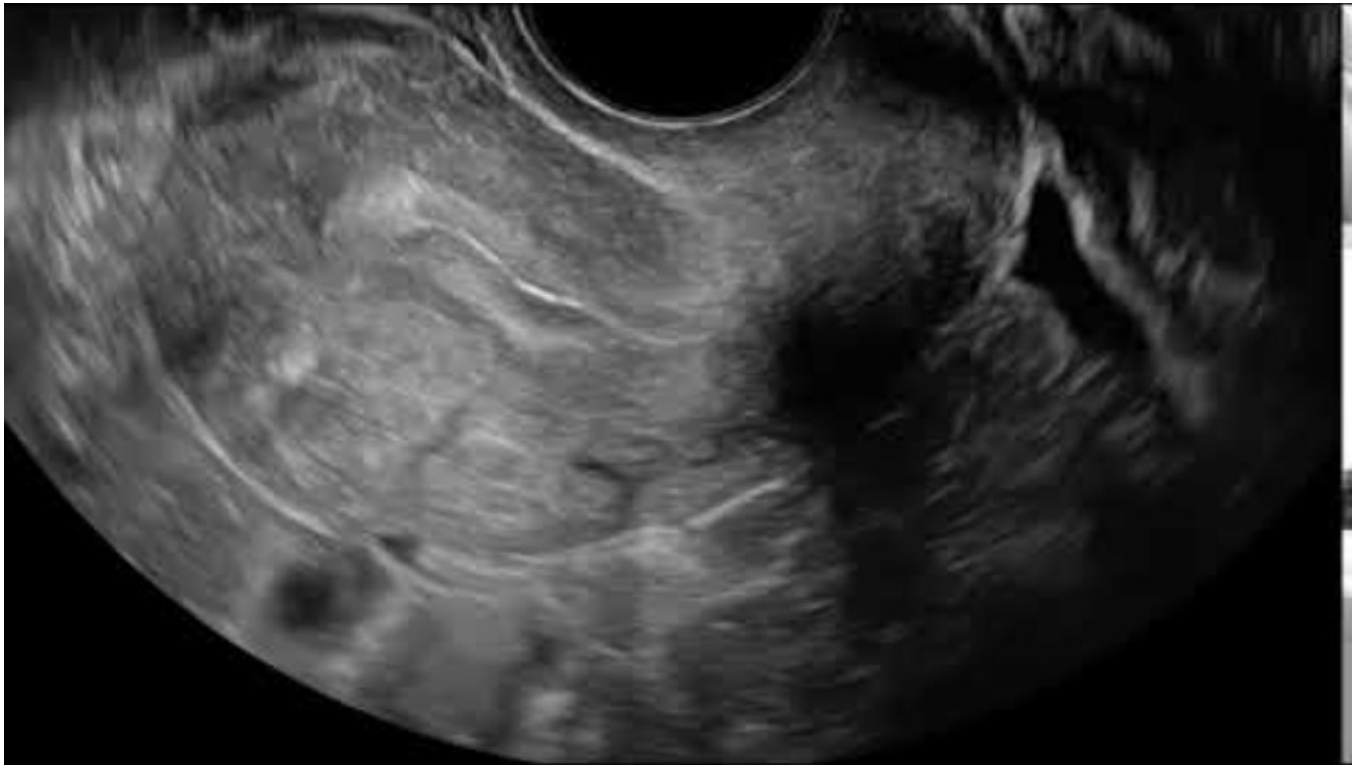
Characterized by:

- Painful menses
- Heavy menses
- Progressively worsening chronic pain
- May respond to NSAIDs and/or hormonal medications

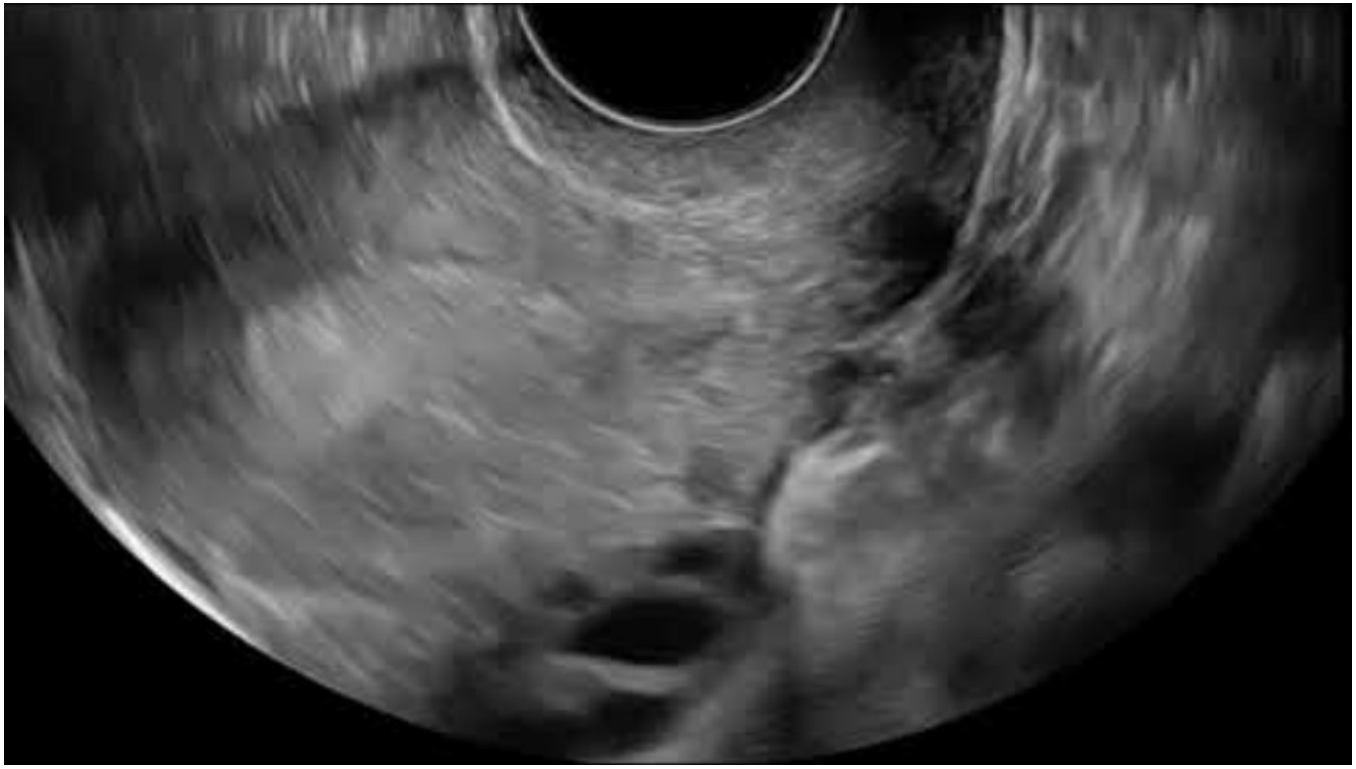


Diagnosing Endometriosis

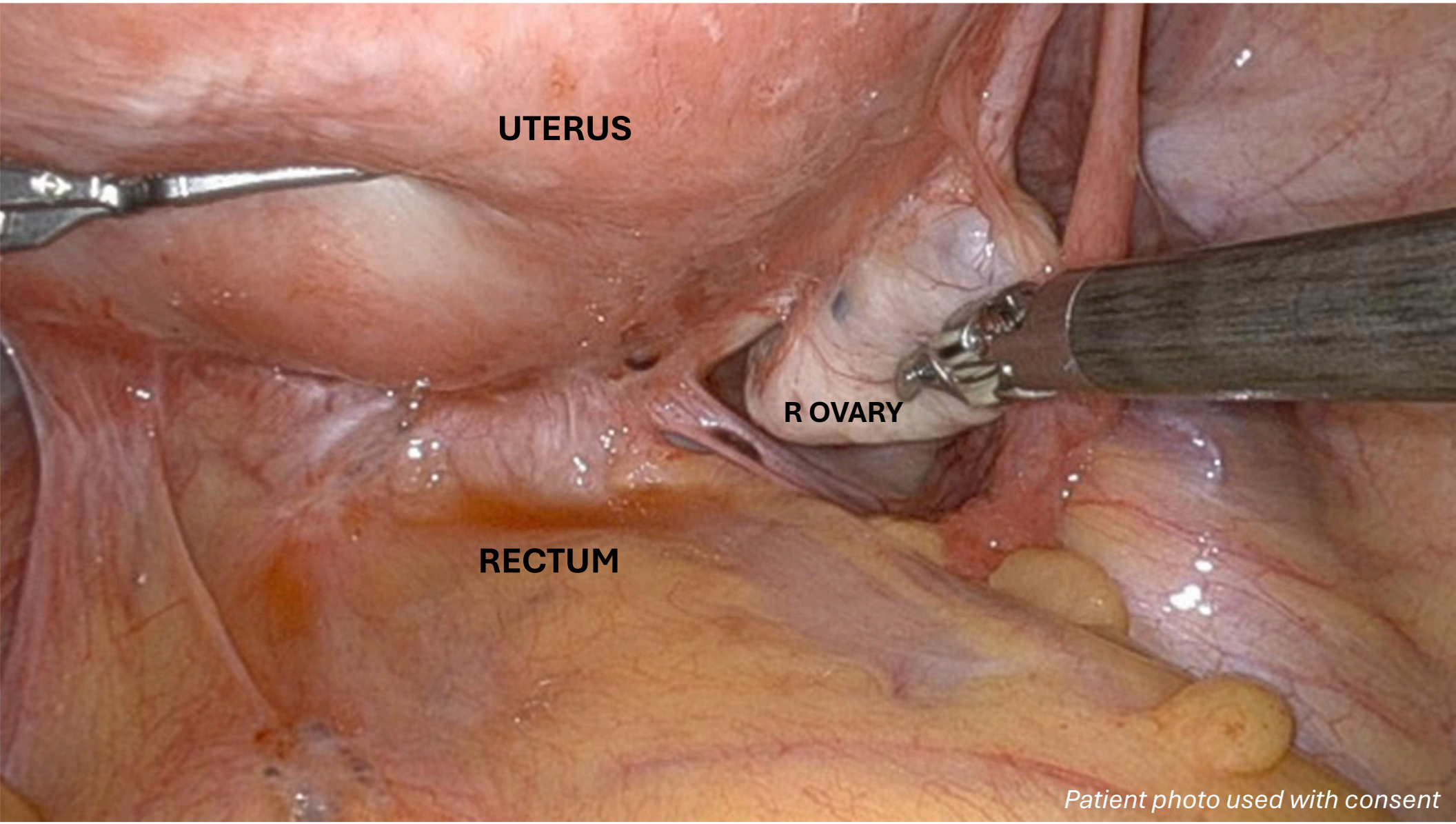




This video is part of a series from the article, 'Noninvasive ultrasound diagnosis of endometriosis,' by Mathew Leonardi, MD, and George Condous, MBBS. https://www.contemporaryobgyn.net/view/noninvasive-ultrasound-diagnosis-endometriosis



This video is part of a series from the article, 'Noninvasive ultrasound diagnosis of endometriosis,' by Mathew Leonardi, MD, and George Condous, MBBS. https://www.contemporaryobgyn.net/view/noninvasive-ultrasound-diagnosis-endometriosis


UTERUS
R OVARY
RECTUM
Patient photo used with consent

Treating Endometriosis
Patient-centered approach

→Goals of care &

→Education

→ Hormonal suppression:

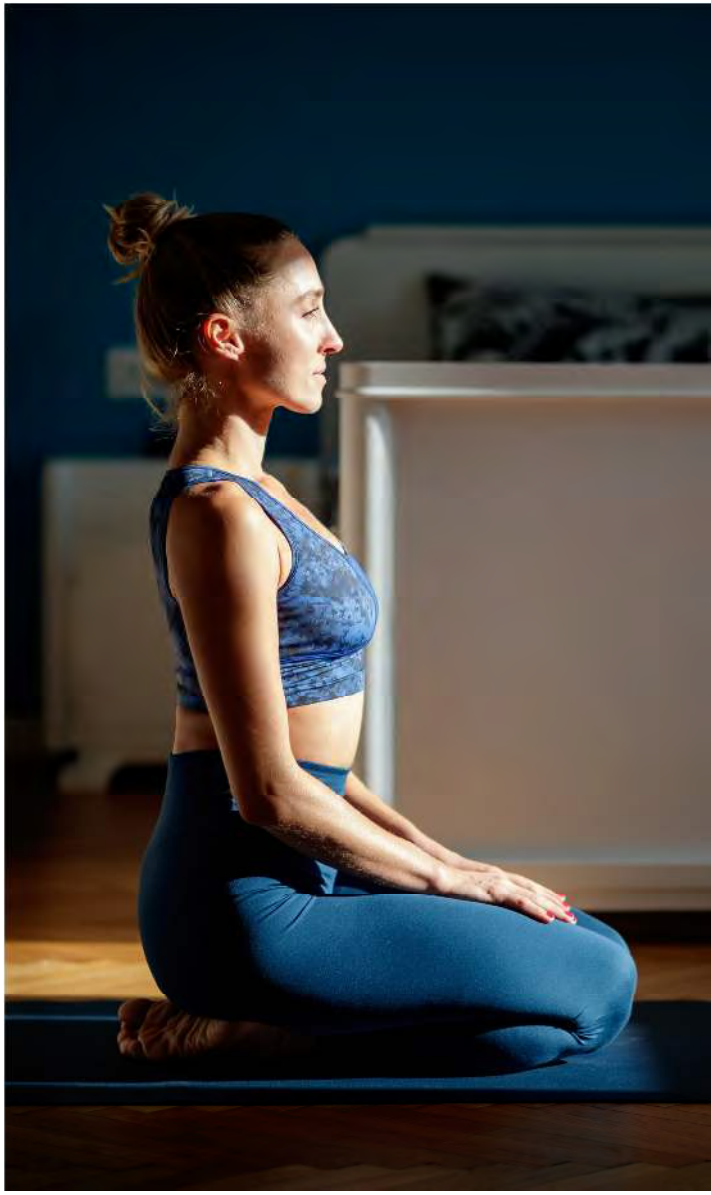
- Birth control pill
- Progesterone IUD
- Progesterone implant
- GnRH antagonist/agonist

→ Pain control:

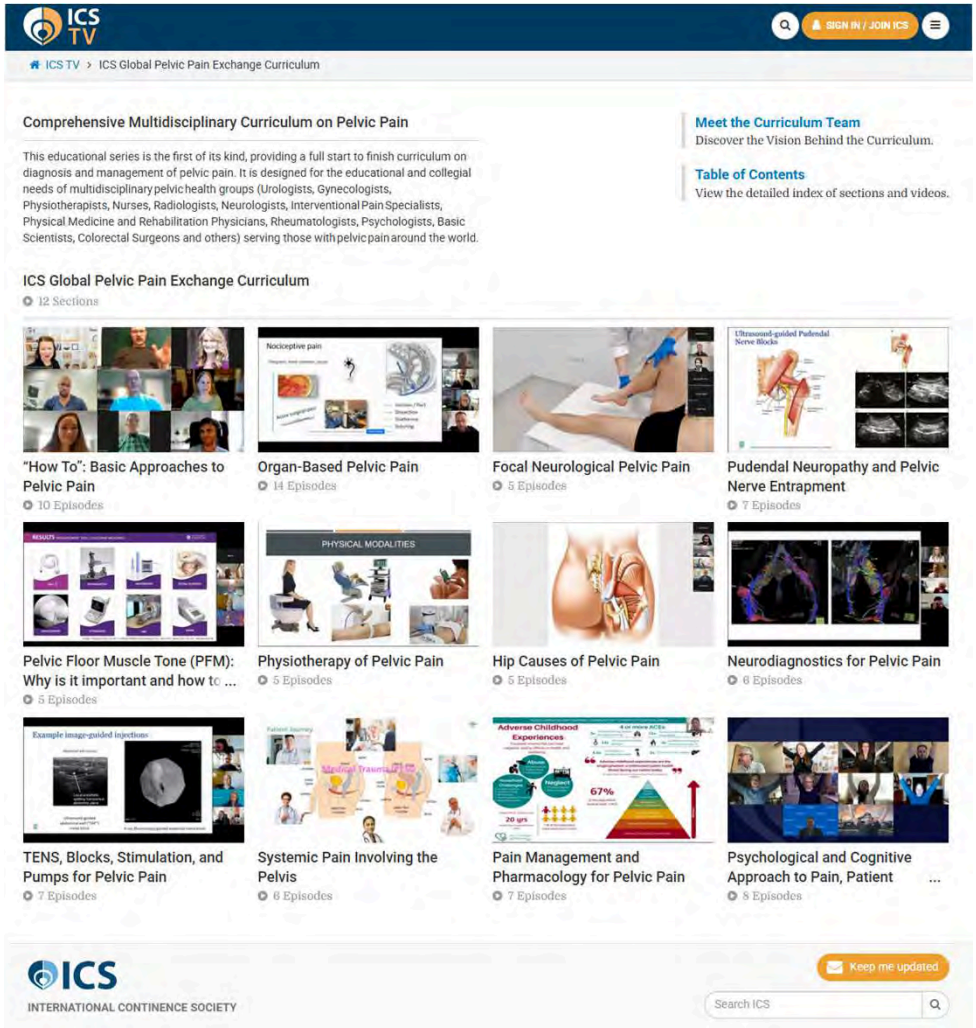
- NSAIDs
- Heat/ice
- TENS unit
- Other meds: Tylenol, muscle relaxers, gabapentin

→ Surgery

Tools for Practice
In
CPP



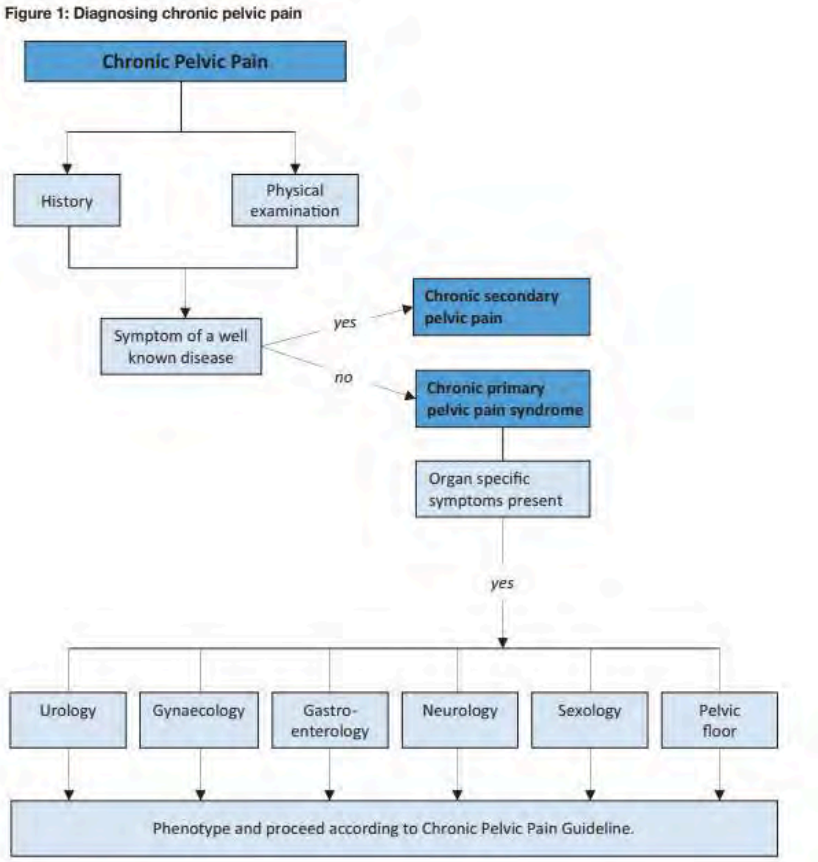
ICS Global Pelvic Pain Exchange Curriculum




American Urological Association
AWMF online
S2K-Leitlinie
Diagnostik und Therapie der Interstitiellen Cystitis (IC/BPS)
Deutsche Gesellschaft für Urologie
GUIDELINE
CUA guideline: Diagnosis and treatme
bladder pain syndrome
Methodology
D. Engeler (Chair), A.P. Baranowski, B. Berghmans,
J. Birch (Patient Advocate), J. Borovicka, A.M. Cottrell,
P. Dinis-Oliveira, S. Elneil, J. Hughes,
E.J. Messelink (Vice-chair), R.A. Pinto,
M.L. van Poelgeest (Patient Advocate), V. Tidman,
A.C. de C Williams
Guidelines Associates: P. Abreu-Mendes, S. Dabestani,
B. Parsons, J. Tornic, V. Zumstein
Guidelines Office: J.A. Darraugh
© European Association of Urology 2023
European Association of Urology
Royal College of Obstetricians & Gynaecologists
dder Pain Syndrome
cember 2016

uroweb.org

EAU Guidelines

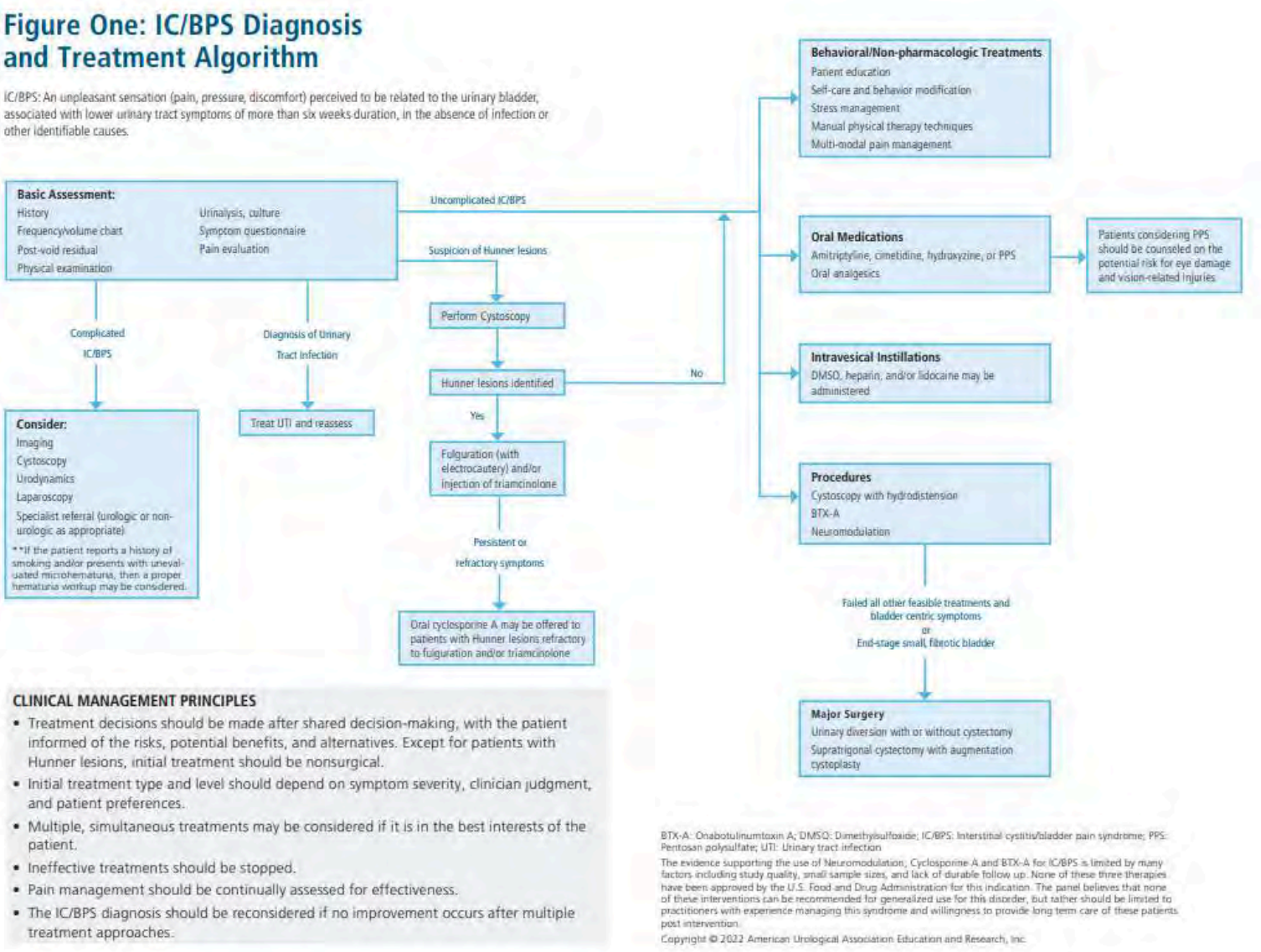


Journal of Urology April 17 2025

Diagnosis and Management of Male Chronic Pelvic Pain (Chronic Prostatitis/ Chronic Pelvic Pain Syndrome and Chronic Scrotal Content Pain): AUA Guideline: Part I

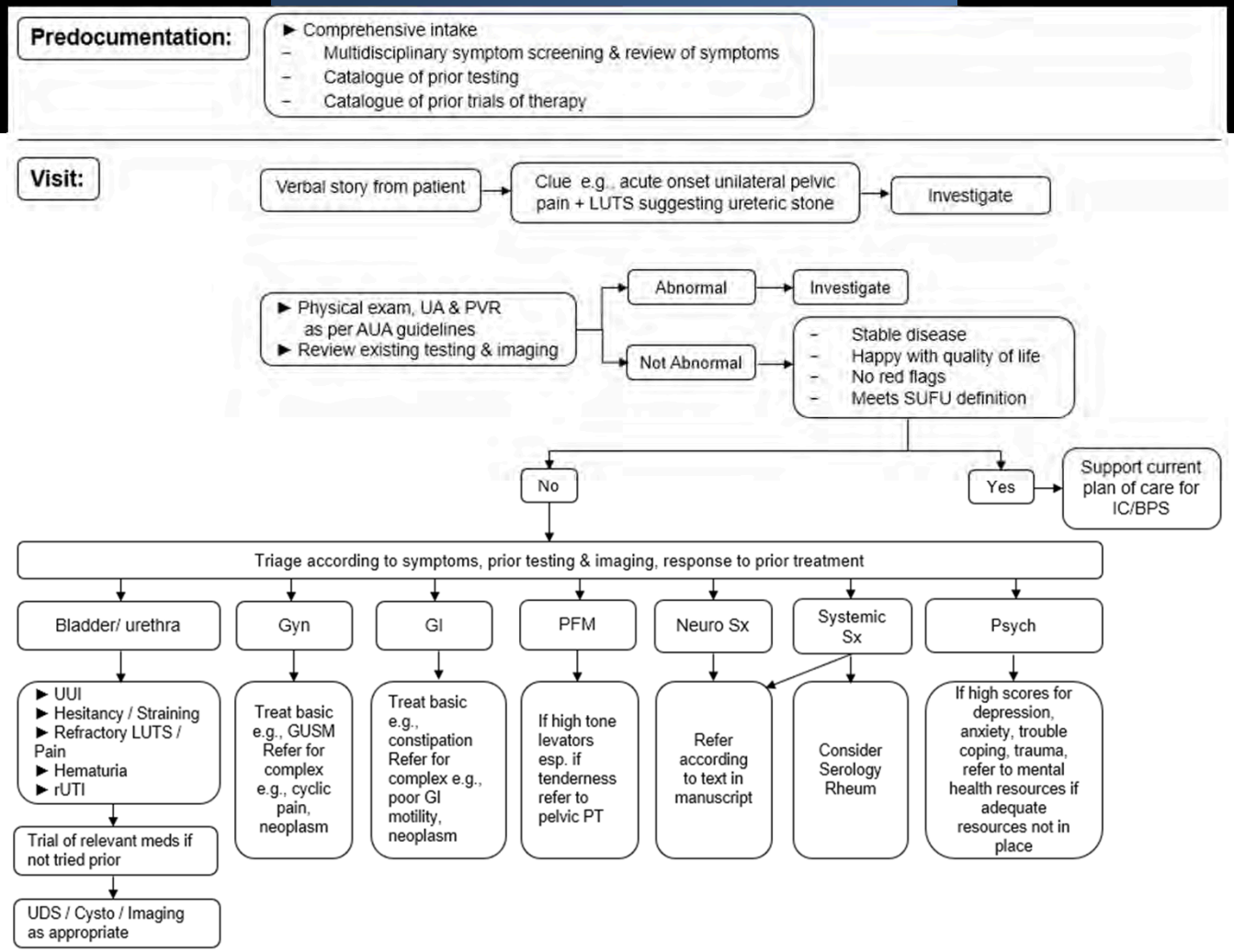
H. Henry Lai, MD; Michel A. Pontari, MD; Charles E. Argoff, MD; Larissa Bresler, MD, DABMA; Benjamin N. Breyer, MD; Roger Chou, MD; J. Quentin Clemens, MD, FACS, MSCI; Elise JB De, MD; R. Christopher Doiron, MD, MPH; Dane Johnson, MD; Erin Kirkby, MS; Susan M. MacDonald, MD; Jill H. Osborne, MA; Sijo J. Parekattil, MD; Beth Shelly, PT, DPT, WCS, BCB PMD

AUA Guideline IC/BPS



Clemens JQ, Erickson DR, Varela NP, Lai HH. Diagnosis and treatment of interstitial cystitis/bladder pain syndrome. J Urol. 2022;208(1):34-42

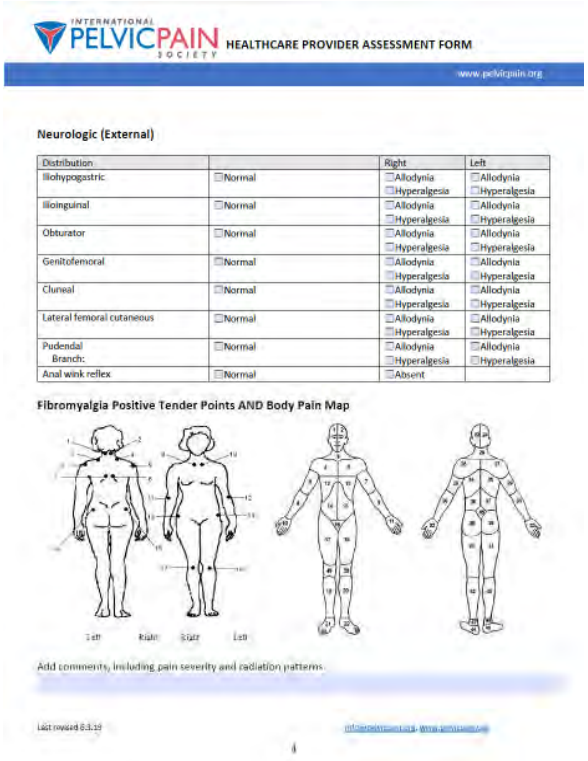
Approach to Patients Labelled with IC



Elise De MD

International Pelvic Pain Society
www.pelvicpain.org

Healthcare Provider Assessment Form



INTERNATIONAL PELVICPAIN SOCIETY HEALTHCARE PROVIDER ASSESSMENT FORM

www.pelvicpain.org

Neurologic (External)

Distribution		Right	Left
Iliohypogastric	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Ilioinguinal	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Obturator	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Genitofemoral	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Cluneal	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Lateral femoral cutaneous	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Pudendal Branch:	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Anal wink reflex	☐Normal	☐Absent	

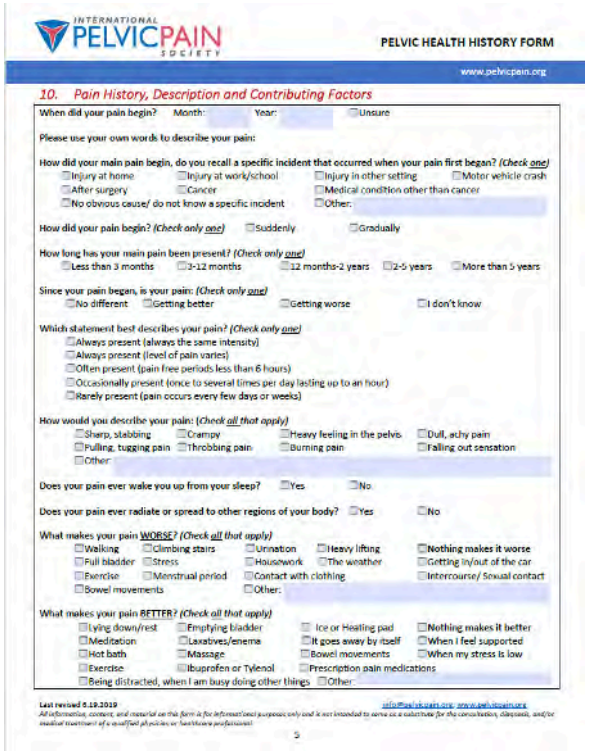
Fibromyalgia Positive Tender Points AND Body Pain Map

Left Right Right Left

Add comments, including pain severity and radiation patterns:

Last revised 8.5.19

Patient Pelvic Health History Form



INTERNATIONAL PELVICPAIN SOCIETY PELVIC HEALTH HISTORY FORM

www.pelvicpain.org

10. Pain History, Description and Contributing Factors

When did your pain begin? Month: Year: ☐Unsure

Please use your own words to describe your pain:

How did your main pain begin, do you recall a specific incident that occurred when your pain first began? *(Check one)*
☐Injury at home ☐Injury at work/school ☐Injury in other setting ☐Moter vehicle crash
☐After surgery ☐Cancer ☐Medical condition other than cancer
☐No obvious cause/ do not know a specific incident ☐Other:

How did your pain begin? *(Check only one)* ☐Suddenly ☐Gradually

How long has your main pain been present? *(Check only one)*
☐Less than 3 months ☐3-12 months ☐12 months-2 years ☐2-5 years ☐More than 5 years

Since your pain began, is your pain: *(Check only one)*
☐No different ☐Getting better ☐Getting worse ☐I don't know

Which statement best describes your pain? *(Check only one)*
☐Always present (always the same intensity)
☐Always present (level of pain varies)
☐Often present (pain free periods less than 6 hours)
☐Occasionally present (once to several times per day lasting up to an hour)
☐Rarely present (pain occurs every few days or weeks)

How would you describe your pain: *(Check all that apply)*
☐Sharp, stabbing ☐Crampy ☐Heavy feeling in the pelvis ☐Dull, achy pain
☐Pulling, tugging pain ☐Throbbing pain ☐Burning pain ☐Falling out sensation
☐Other:

Does your pain ever wake you up from your sleep? ☐Yes ☐No

Does your pain ever radiate or spread to other regions of your body? ☐Yes ☐No

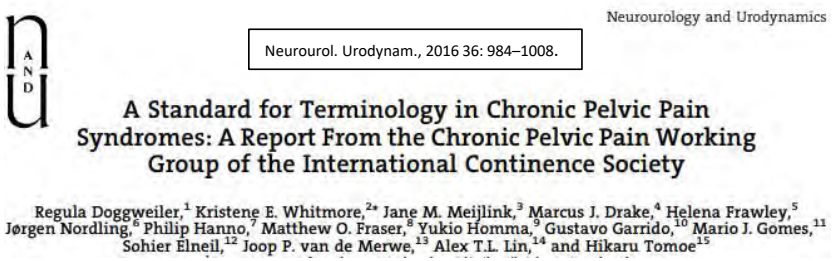
What makes your pain WORSE? *(Check all that apply)*
☐Walking ☐Climbing stairs ☐Urination ☐Heavy lifting ☐Nothing makes it worse
☐Full bladder ☐Stress ☐Housework ☐The weather ☐Getting in/out of the car
☐Exercise ☐Menstrual period ☐Contact with clothing ☐Intercourse/ Sexual contact
☐Bowel movements ☐Other:

What makes your pain BETTER? *(Check all that apply)*
☐Lying down/rest ☐Emptying bladder ☐Ice or Heating pad ☐Nothing makes it better
☐Meditation ☐Laxatives/enema ☐It goes away by itself ☐When I feel supported
☐Hot bath ☐Massage ☐Bowel movements ☐When my stress is low
☐Exercise ☐Ibuprofen or Tylenol ☐Prescription pain medications
☐Being distracted, when I am busy doing other things ☐Other:

Last revised 8.19.2019

www.ics.org/standards
www.ics.org/institute

- Definition – noncyclic CPP > 3 months
- Pain Characteristics – location, perception, modality
- Site specific versus central sensitization
- Identify inciting event – surgery, trauma, hormonal manipulation, major change in physical activity
- Comorbid conditions (e.g. autoimmune disease, XRT)
- Identify each pain generator and treat concurrently
- Domains of CPP – which organ systems are involved
    - Lower Urinary Tract Pain
    - Female Genital Pain
    - Male Genital Pain
    - Gastrointestinal Pain
    - Musculoskeletal Pain
    - Neuropathic Pain
    - Overlays:
        - Psychological
        - Sexual Aspects
        - Comorbidities


Neurourology and Urodynamics

Neurourol. Urodynam., 2016 36: 984–1008.

A Standard for Terminology in Chronic Pelvic Pain Syndromes: A Report From the Chronic Pelvic Pain Working Group of the International Continence Society

Regula Doggweiler,[1] Kristene E. Whitmore,[2*] Jane M. Meijlink,[3] Marcus J. Drake,[4] Helena Frawley,[5] Jørgen Nordling,[6] Philip Hanno,[7] Matthew O. Fraser,[8] Yukio Homma,[9] Gustavo Garrido,[10] Mario J. Gomes,[11] Sohier Elneil,[12] Joop P. van de Merwe,[13] Alex T.L. Lin,[14] and Hikaru Tomoe[15]

Received: 16 February 2021 | Accepted: 17 February 2021

DOI: 10.1002/nau.24658

SOUNDING BOARD

Neurourology Urodynamics ICS WILEY

An International Continence Society (ICS) report on the terminology for pelvic floor muscle assessment

Helena Frawley[1] | Beth Shelly[2,3] | Melanie Morin[4] | Stéphanie Bernard[5] | Kari Bø[6,7] | Giuseppe Alessandro Digesu[8] | Tamara Dickinson[9] | Sanchia Goonewardene[10] | Doreen McClurg[11] | Mohammad S. Rahnama'i[12,13] | Alexis Schizas[14] | Marijke Slieker-ten Hove[15,16] | Satoru Takahashi[17] | Jenniffer Voelkl Guevara[18]

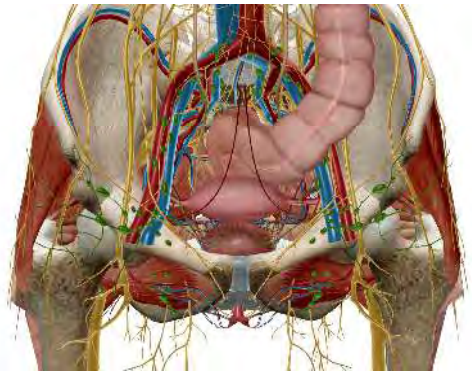
https://www.ics.org/standards

New Standardization Document

Treatment of Pelvic Pain depends on the:

Causes of Pain in Pelvis and Reasons for Pelvic Pain

LOCATION of PELVIC PAIN SYMPTOMS	POSSIBLE EXPLANATIONS of CHRONIC PELVIC PAIN SYNDROME
Vulvar pain Vulva and pelvic burning, burning in pelvic area	Infection Exposures (irritants) Vulvar atrophy (low estrogen) Low testosterone (can be caused by external hormones) Dermatologic conditions (e.g., lichen sclerosis) Neuropathy
Introital pain Entrance to vagina	Low testosterone Friction from sexual activity or clothing
Urethral pain Pain urinating	Vulvovaginal atrophy Urethral caruncle Friction Tight external sphincter muscle or stricture (turbulence) Skene's gland Stone at ureterovesical junction or urethra diverticulum Tumor Infection (ureaplasma/mycoplasma) or sexually transmitted infection Recurrent urinary tract infections
Pelvic floor muscles Heavy feeling in pelvic area, pelvis ache, pelvic pain from sitting, pelvic headache	Dysfunctional voiding Overactivity of muscles from pelvic strain, pelvic exercises or the kegel exercise
Gynecological pain Causes of pelvic pain in women, pain in pelvis female, symptoms of pelvic infection, sore pelvic area, pelvic discomfort, sore pelvis	Endometriosis symptoms(cramps in pelvis, pain in pelvis before period, pain in pelvis after period, extreme pelvic pain) Endometritis Adhesions in pelvis Uterine fibroids Ovarian venous abnormality Ovarian cysts, torsion, or other growths Ectopic pregnancy Sexually transmitted infection, inflammation in pelvis
Male organ pain	Prostatitis symptoms or epididymitis Testis mass, torsion, or nerve pain
Prostate pain, testis pain, groin pain, scrotum pain, pelvis pain men, pain in pelvis male	Ejaculatory duct or vas deferens obstruction Peyronie's Disease Sexually transmitted infection (STI, STD) Pelvic floor muscles, especially when prostatitis treatment has not been successful
Bladder pain	Interstitial cystitis Dietary triggers Bladder outlet obstruction
Gastrointestinal Pain Painful bowel movement, stomach cramps, blood in stool, cramps, bloating	Pelvic floor muscles: levator ani syndrome Proctalgia fugax / chronic proctalgia Unspecified functional anorectal pain Constipation –right pelvic pain, lower left side pelvic pain Anal Fissure Hemorrhoids Pruritis ani Anal cancer Paget's disease Warts Pelvic tumor Diverticulitis Appendicitis Adhesions in pelvis Hernia – pelvic pain sneezing Inflammatory bowel disease Irritable bowel syndrome – gas pain in pelvis
Vascular pain in lower pelvis Pelvis pain worse with standing	Pelvic venous disorder, pelvic venous congestion syndrome
Bone pain, Joint Pain Pelvic girdle pain, fractured pelvis symptoms, pelvic bone pain, pubic symphysis pain, pain in hips, pain in the pubic area, pelvic pain running	Back, knee, foot, or hip problem Injury to nerves, bones, ligaments, or tendons Inflammation of bone (osteitis or osteomyelitis) Muscle deficit (myopathy)
Nerve pain Burning pain in pelvis, burning sensation in pelvic area, pain that radiates down one leg, sharp pains in pelvic area	Upper motor neuron syndrome (upper spine/brain nerves) Spinal stenosis Herniated disc Multiple sclerosis Stroke Cerebral palsy
	Lower motor neuron syndromes (lower spinal cord) Cauda equina syndrome Tethered cord syndrome Tarlov Cyst Sacral plexus Peripheral nerve problem Pudendal neuropathy, pudendal neuralgia, or other nerve entrapment Peripheral neuropathy or neuroinflammation
Psychological	Loss of health Depression Anxiety History of sexual abuse/assault, PTSD Poor emotional coping/communication Personality disorders Couple distress
All-over pain Pain all over the body, pain everywhere, constant pain	Fibromyalgia Small fiber polyneuropathy Diabetic neuropathy Central sensitization Neuroinflammatory disease (e.g. Lyme disease) Rheumatologic disease Vasculitis



Differential Diagnosis of Pelvic Pain

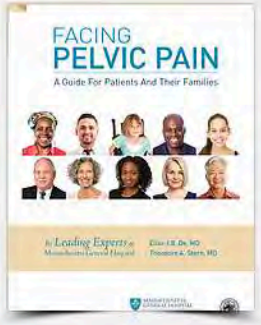
www.facingpelvicpain.org

Free Multidisciplinary One-Stop Resource
Providers and Patients

www.facingpelvicpain.org

Finding a specialist experienced specifically in pelvic pain can be challenging. But, don't give up! Here are some databases that will help you find the right medical care provider in your area (click the links below):

- American Urogynecological Society (AUGS)
- American College of Ob-Gyn
- American Physical Therapy Association
- Herman Wallace Institute
- Global Pelvic Health Alliance
- Endometriosis Association
- International Foundation for Functional Gastrointestinal Disorders
- Interstitial Cystitis Network
- Interstitial Cystitis Association
- International Pelvic Pain Society
- Vulvodynia Association
- Vulvar Pain Foundation
- Pudendal Neuralgia Association
- Neuropathy Commons



I need this book! >

Tell Me More!

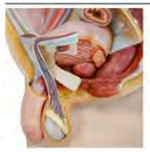
Other Websites Helpful in Pelvic Pain and Pelvic Floor Conditions:

- World Federation for Incontinence and Pelvic Problems
- Urology Care Foundation
- Harvard Medical School Patient Education Center
- Continence Product Advisor

Video - Nerve Blocks for Pelvic Pain

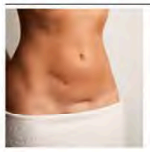
← Pain Specialists Alexandra Adler MD and Antje Barreveld MD, Explain the Roles of Diagnostic and Therapeutic Injections for Pelvic Pain
10 Minute Video

Images: iStock and http://www.elsevier.com



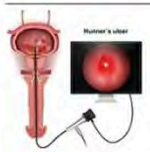
Video - Pelvic Floor Muscle PT in Men Explained

← Dr. Beth Shelly Explains What Happens in Pelvic PT for Men
6 Minute Video
Read the transcript



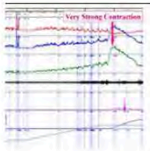
Video - Pelvic Floor Muscle PT in Women Explained

← Dr. Beth Shelly Explains What Happens in Pelvic PT for Women
6 Minute Video
Read the transcript



Video - Cystoscopy Explained

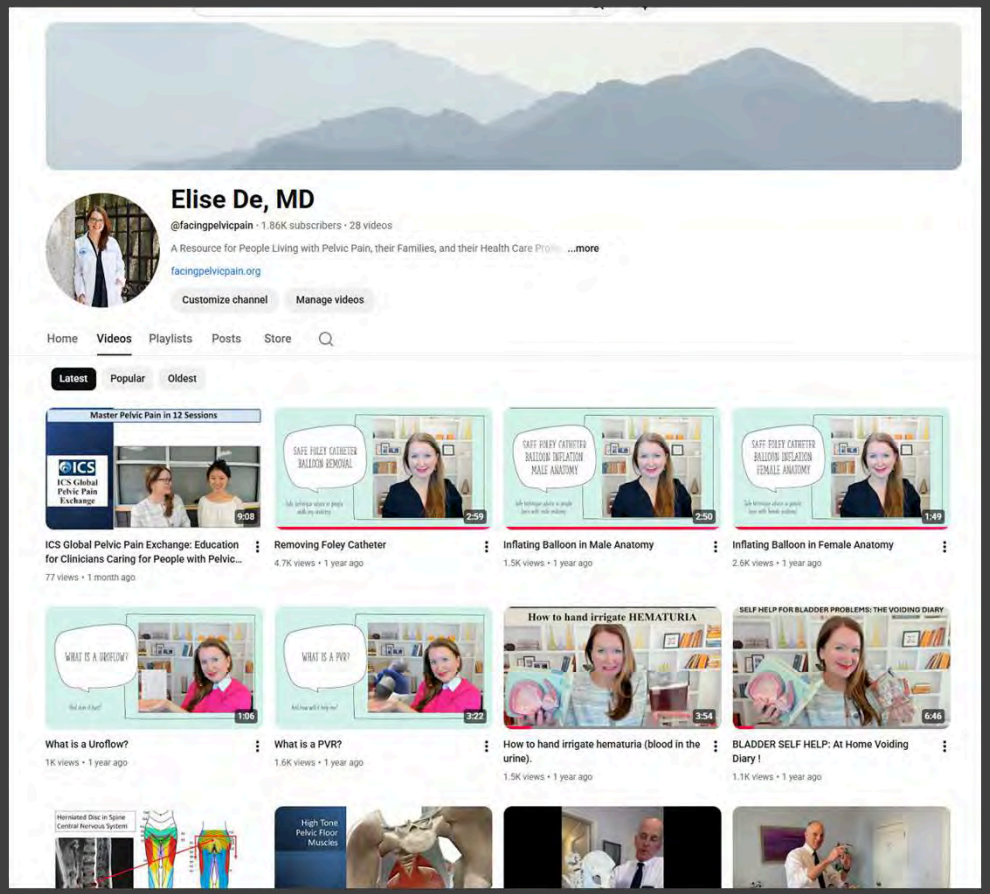
← Video Explaining "What is Cystoscopy?" (Office Camera Test of Bladder)
6 Minute Video
Read the transcript



Video - Urodynamic Testing Explained

← Video Explaining "What are Urodynamics?" (Pressure Test of Bladder)
6 Minute Video
Read the transcript

http://www.youtube.com/@facingpelvicpain



www.facingpelvicpain.org
The Treatment Map

Vulvar / Vaginal Treatments	Tried?	Relief?	Still Using?
Avoidance of Irritants (select toilet paper, soap)			
☐ Steroid (clobetasol, hydrocortisone)			
☐ Diazepam (Valium®) vaginal Suppositories			
☐ Baclofen (Lioresel®)			
☐ Lidocaine			
☐ Gabapentin (Neurontin®)			
☐ Amitriptyline (Elavil®)			
☐ Tacrolimus (Prograf®)			
☐ Naltrexone - low dose (Vivitrol®)			
☐ Douches			
☐ Other Inserts			
☐ Wipes			
Hormonal Medications	**Tried?**	**Relief?**	**Still Using?**
Vaginal estrogen cream, tablet or ring			
Estrogen / progesterone pills or patches			
Hormone-secreting intrauterine device (Mirena®, Liletta®,			

PROSAYLA
SUPPORTED BY ISSWSH

www.prosayla.com – Educational Resource for Women's Sexual Health

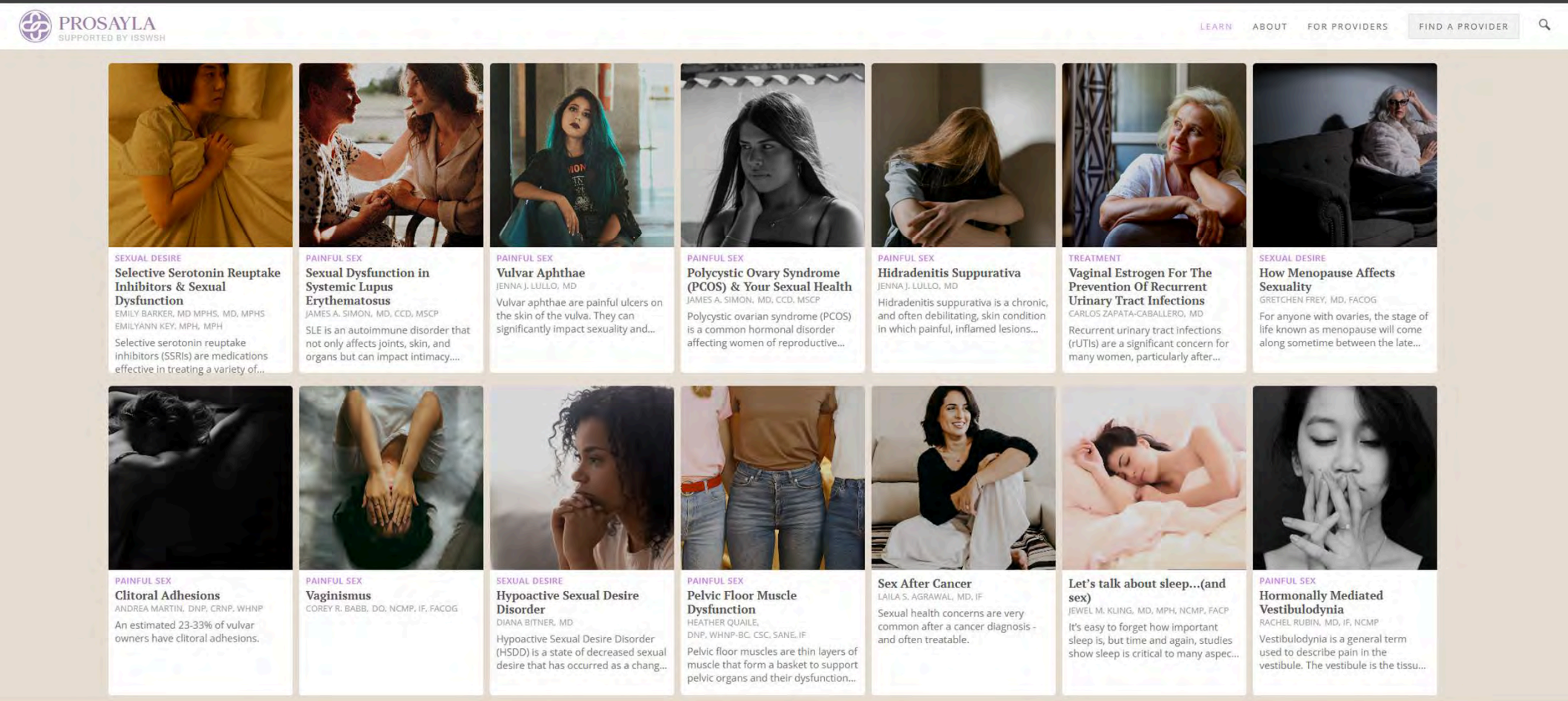
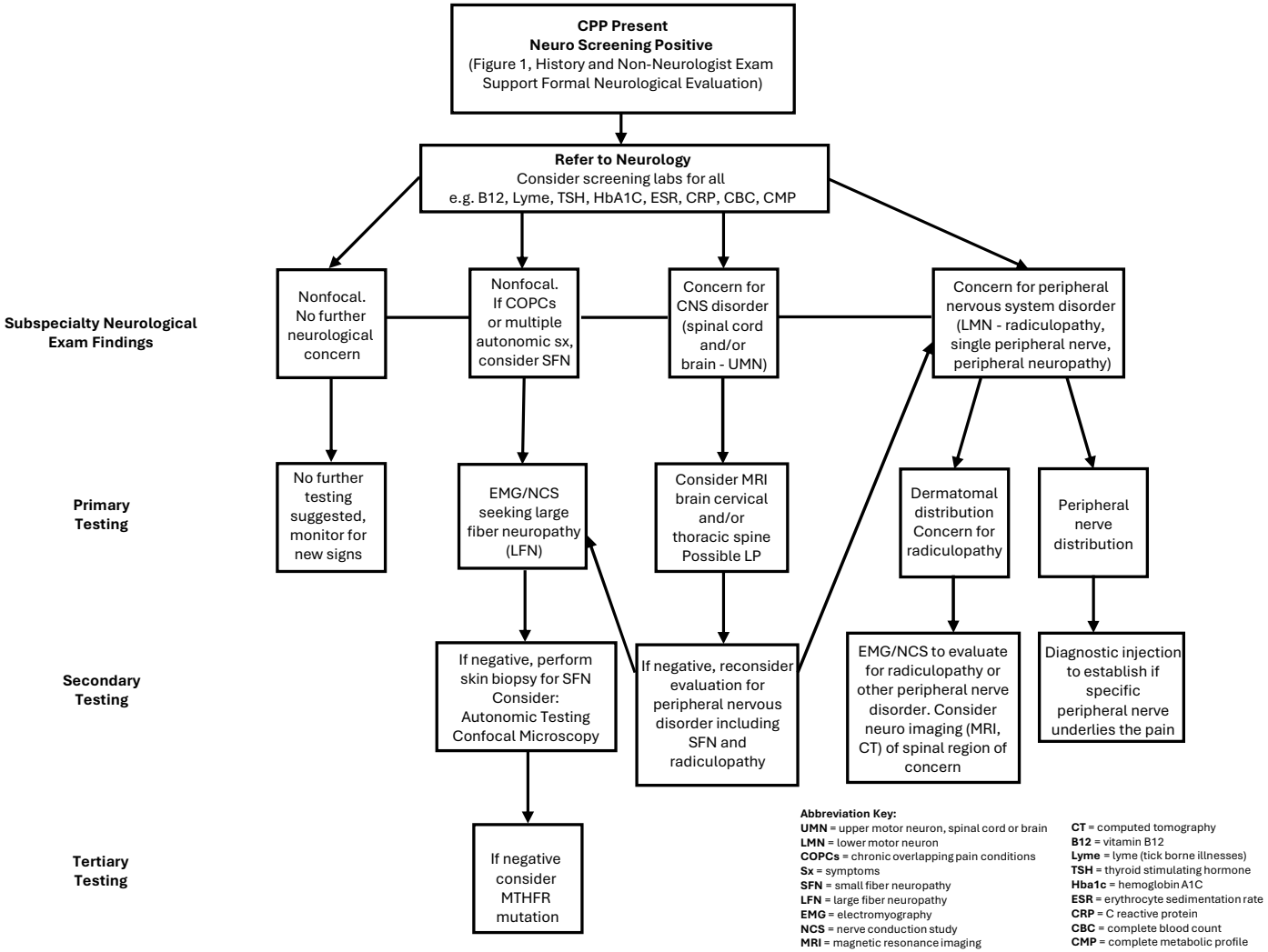


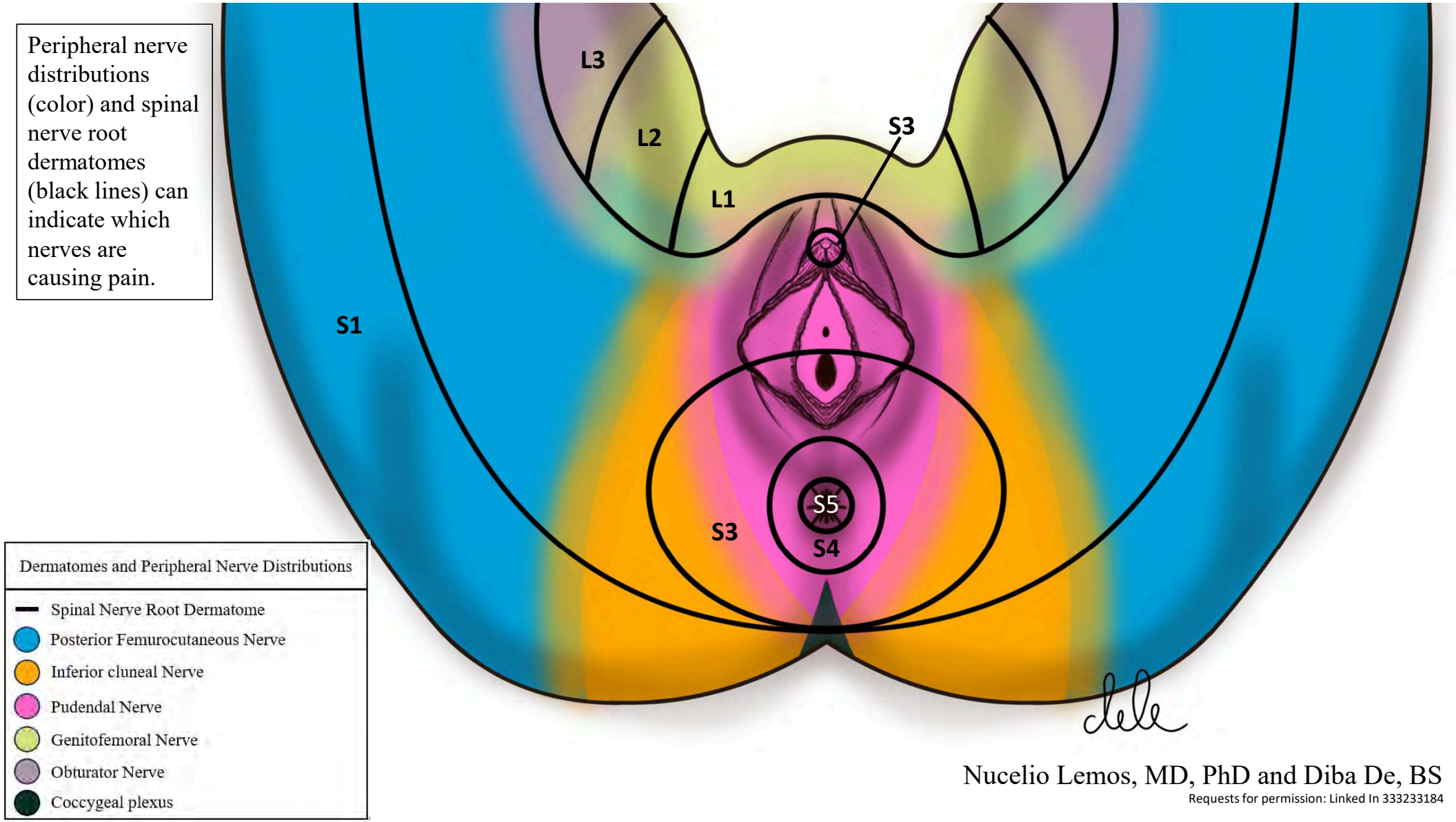
Figure 1: Screening criteria used to trigger referral of patients with CPP for neurological evaluation.

- Pain, sensory disturbance, or weakness referable to:
  - a specific nerve root
  - peripheral nerve distribution
  - a pattern consistent with a central nervous system etiology
- Combination bladder, bowel, sexual, or pain symptoms referable to lumbosacral spine pathology
- Balance or gait alteration
- Abnormal reflexes, sensation, or weakness on cursory neurological examination
- Upper motor neuron findings or unexplained hypotonia on urodynamics
- Evidence of autonomic dysfunction (including interstitial cystitis, irritable bowel syndrome, erectile dysfunction, persistent genital arousal disorder, arrythmia, postural orthostatic tachycardia syndrome), and/or chronic overlapping pain syndromes (COPCs, including pelvic pain, migraine, endometriosis, temporomandibular joint pain, sensitive feet, fibromyalgia)
- Pelvic pain refractory to musculoskeletal and organ-based interventions

Neurologist's Diagnostic Algorithm in people with CPP referred by pelvic health for a positive Neurological Screening.
This is a basic guide, not to replace subspecialty neurological evaluation.

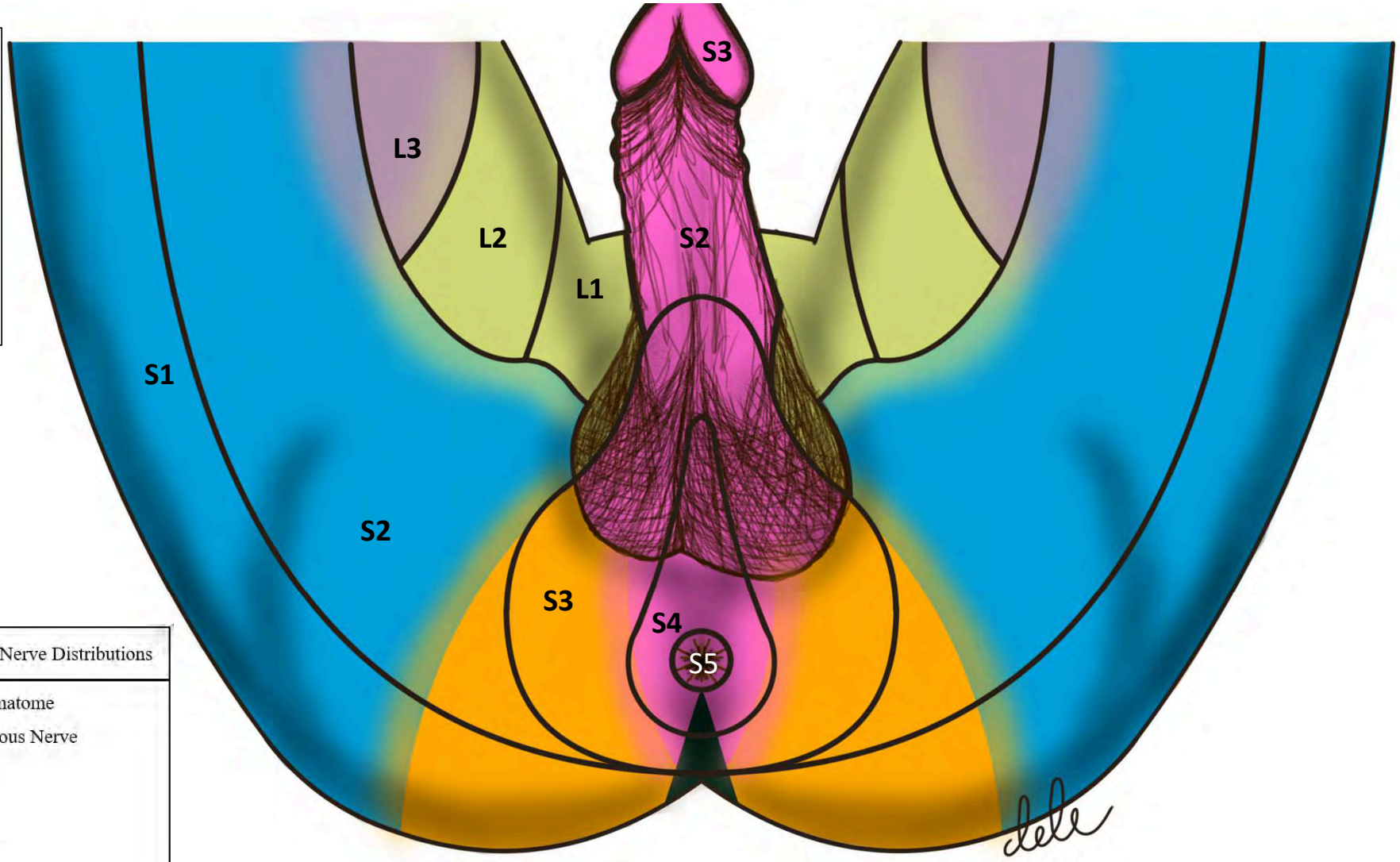


Peripheral nerve distributions (color) and spinal nerve root dermatomes (black lines) can indicate which nerves are causing pain.



Nucelio Lemos, MD, PhD and Diba De, BS

Peripheral nerve distributions (color) and spinal nerve root dermatomes (black lines) can indicate which nerves are causing pain.



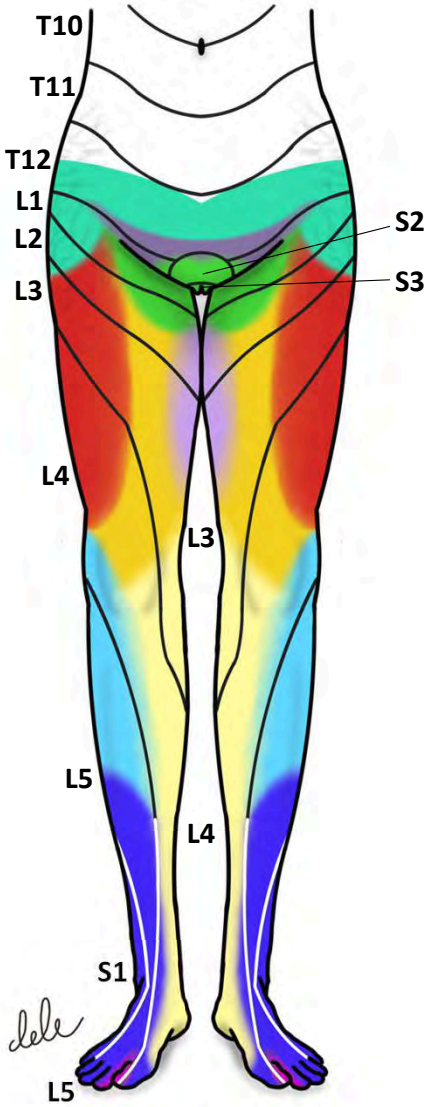
Dermatomes and Peripheral Nerve Distributions

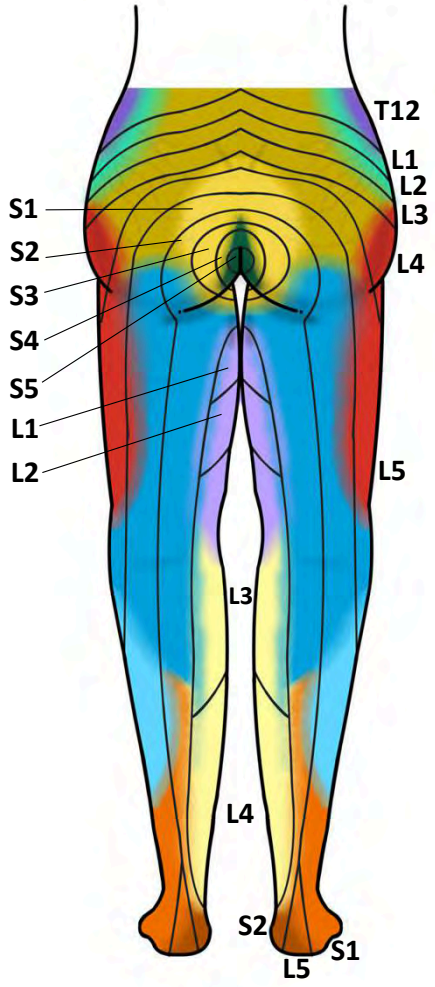
- Spinal Nerve Root Dermatome
- Posterior Femurocutaneous Nerve
- Inferior cluneal Nerve
- Pudendal Nerve
- Genitofemoral Nerve
- Obturator Nerve
- Coccygeal plexus

Nucelio Lemos, MD, PhD and Diba De, BS

Key of Spinal Nerve Root Dermatomes and Peripheral Nerve Distributions

- Spinal Nerve Root Dermatome
- Iliohypogastric Nerve
- Ilioinguinal Nerve
- Genitofemoral Nerve
- Lateral Femoral Cutaneous Nerve
- Femoral Nerve
- Obturator Nerve
- Posterior Femorocutaneous Nerves
- Femoral Nerve (Saphenous Branch)
- Common Fibular Nerve (superficial)
- Common Fibular Nerve (deep)
- Posterior Femorocutaneous Nerves
- Superior Cluneal Nerve
- Middle Cluneal Nerve
- Tibial Nerve (Sural)
- Tibial Nerve
- Coccygeal Plexus





Nucelio Lemos, MD, PhD and Diba De, BS

QR CODES
Online Videos of Dr. Peters'

Pudendal Nerve Implant Procedures

Ishio-rectal Pudendal
Implant Video
SCAN QR CODE

Trans-gluteal Pudendal
Implant Video
SCAN QR CODE

Sacral Tarlov perineurial cysts: a systematic review of treatment options

Jan Alberto Paredes Mogica, MD,[1] Frank Feigenbaum, MD,[2] Julie G. Pilitsis, MD, PhD, MBA,[3] Rudolph J. Schrot, MD, MAS,[4] Anne Louise Oaklander, MD, PhD,[5] and Elise J. B. De, MD[6]

INCLUDE WHEN CITING Published online December 15, 2023; DOI: 10.3171/2023.9.SPINE23559.

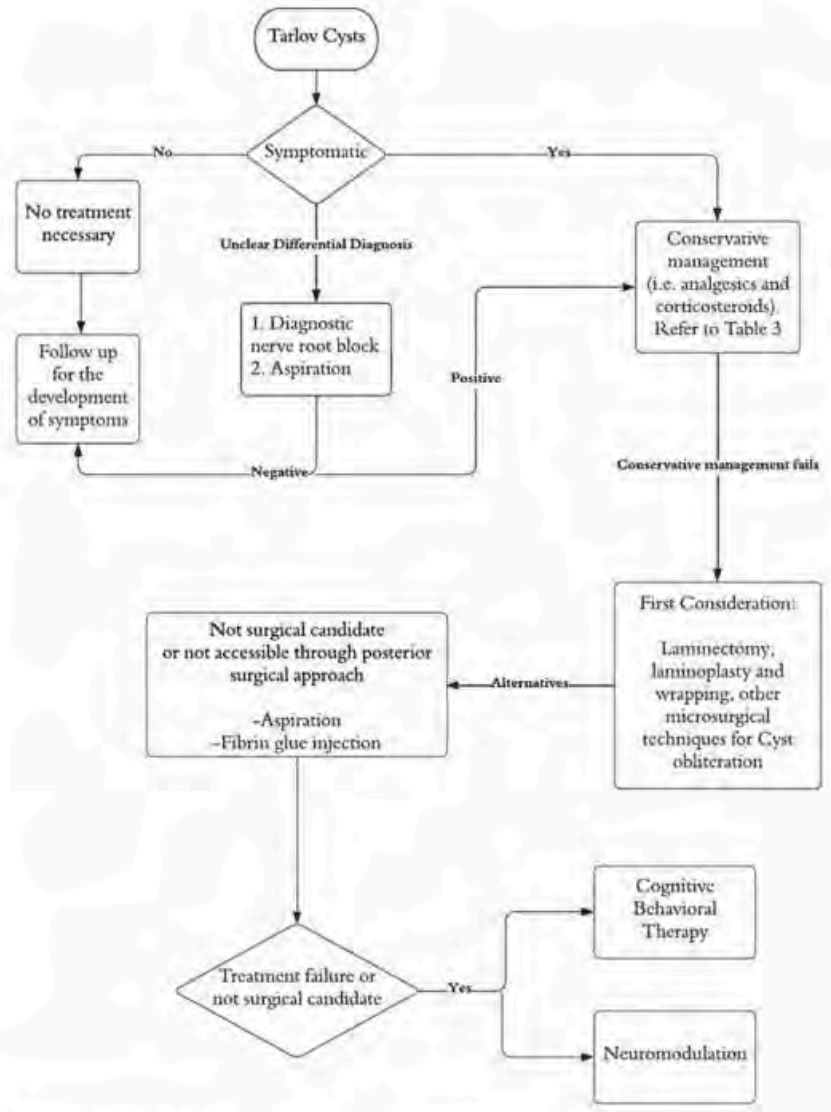


FIG. 4. Proposed algorithm for the management of TCs.

https://www.youtube.com/channel/UC-f3TlJ_cS_QGld9MVlB6sg
http://www.youtube.com/@AvantUrology

OUR SERVICES

5 CONSIDERATIONS IF YOU'RE THINKING ABOUT A VASECTOMY REVERSAL

December 17th, 2020 0 431

As the number of children in the average U.S. household continues to decrease while the costs associated with raising a...

READ MORE

CONFERENCE TALKS

MANAGING POST VASECTOMY PAIN SYNDROME

December 10th, 2020 0 845

Post vasectomy pain syndrome (PVPS) is a difficult condition to treat. Part of the problem is our lack of understanding...

READ MORE

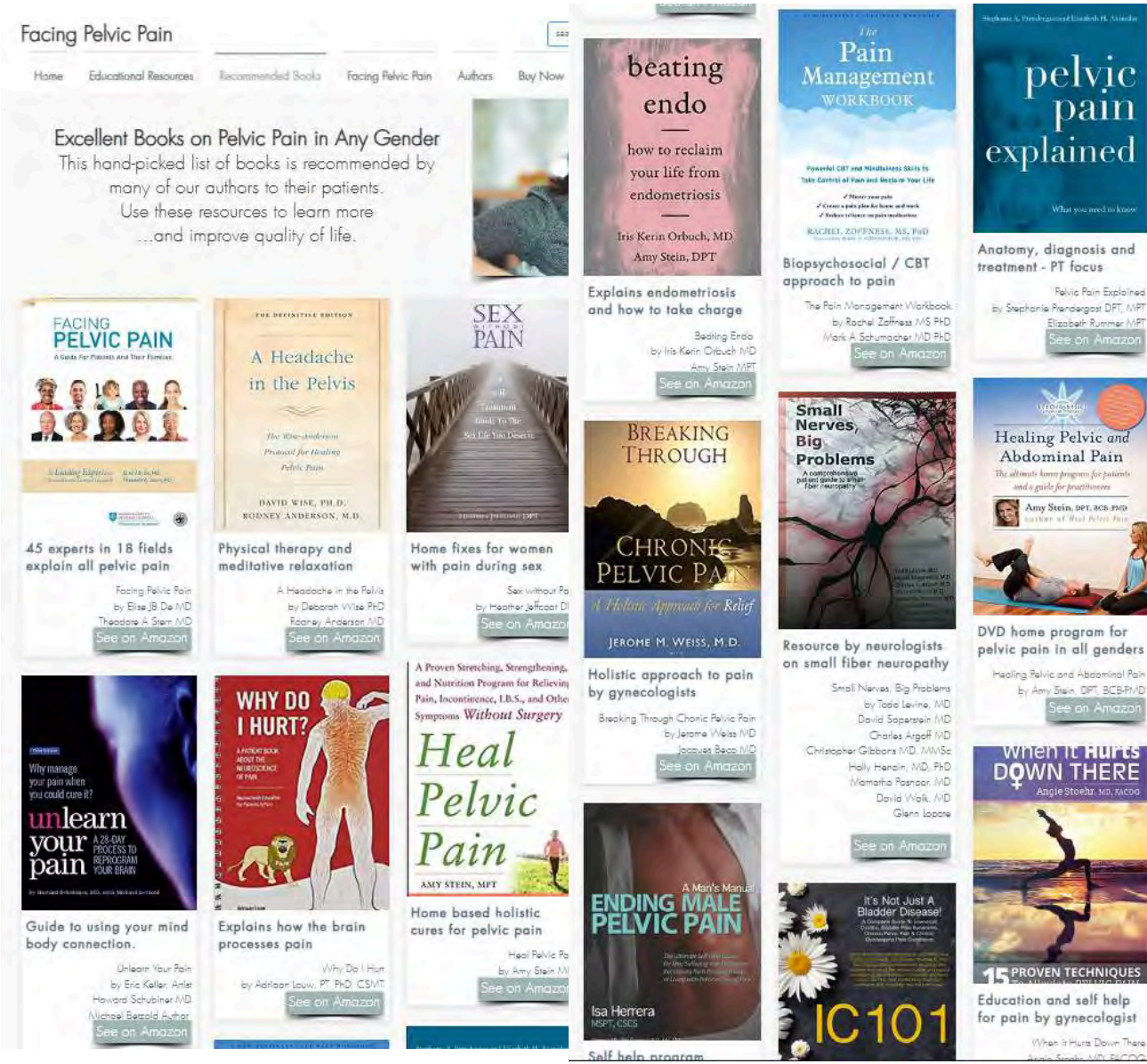
Search ... SEARCH

RECENT POSTS

- New Hope for Enlarged Prostate: Avant Enrolls World's First Patient in the ProVIDE Clinical Trial
- Erectile Dysfunction & Chronic Prostatitis
- September is National Prostate Health Month
- Avant Concierge Urology Officially Grand Opens with Ribbon-Cutting Ceremony
- Dr. Sijo Parekattil Named Among Top Physicians in

https://avanturol.com/managing-post-vasectomy-pain-syndrome/

Books


Facing Pelvic Pain
Home
Educational Resources
Recommended Books
Facing Pelvic Pain
Authors
Buy Now
Excellent Books on Pelvic Pain in Any Gender
This hand-picked list of books is recommended by many of our authors to their patients.
Use these resources to learn more
...and improve quality of life.
FACING PELVIC PAIN
45 experts in 18 fields explain all pelvic pain
Facing Pelvic Pain
by Elise JB De MD
Theodore A Stern MD
See on Amazon
A Headache in the Pelvis
DAVID WISE, PH.D.
RODNEY ANDERSON, M.D.
Physical therapy and meditative relaxation
A Headache in the Pelvis
by Deborah Wise PhD
Rodney Anderson MD
See on Amazon
SEX WITHOUT PAIN
Home fixes for women with pain during sex
Sex without Pa
by Heather Jeffcoat DI
See on Amazo
Why manage your pain when you could cure it?
unlearn your pain
A 28-DAY PROCESS TO REPROGRAM YOUR BRAIN
Guide to using your mind body connection.
Unlearn Your Pain
by Eric Keller, Artist
Howard Schubiner MD
Michael Bazold Author
See on Amazon
WHY DO I HURT?
Explains how the brain processes pain
Why Do I Hurt
by Adriaan Louw, PT, PhD, CSMT
See on Amazon
A Proven Stretching, Strengthening, and Nutrition Program for Relieving Pain, Incontinence, I.B.S., and Other Symptoms Without Surgery
Heal Pelvic Pain
AMY STEIN, MPT
Home based holistic cures for pelvic pain
Heal Pelvic Pa
by Amy Stein M
See on Amazo
beating endo
how to reclaim your life from endometriosis
Iris Kerin Orbuch, MD
Amy Stein, DPT
Explains endometriosis and how to take charge
Beating Endo
by Iris Kerin Orbuch MD
Amy Stein MPT
See on Amazon
The Pain Management WORKBOOK
Biopsychosocial / CBT approach to pain
The Pain Management Workbook
by Rachel Zoffness MS PhD
Mark A Schumacher MD PhD
See on Amazon
pelvic pain explained
Anatomy, diagnosis and treatment - PT focus
Pelvic Pain Explained
by Stephanie Prendergast DPT, MPT
Elizabeth Rummer MPT
See on Amazon
BREAKING THROUGH
CHRONIC PELVIC PAIN
A Holistic Approach for Relief
JEROME M. WEISS, M.D.
Holistic approach to pain by gynecologists
Breaking Through Chronic Pelvic Pain
by Jerome Weiss MD
Jacques Beca MD
See on Amazon
Small Nerves, Big Problems
Resource by neurologists on small fiber neuropathy
Small Nerves, Big Problems
by Todd Levine, MD
David Saperstein MD
Charles Argoff MD
Christopher Gibbons MD, MMSc
Holly Herolin, MD, PhD
Mamatha Pasnoor, MD
David Walk, MD
Glenn Lopate
See on Amazon
Healing Pelvic and Abdominal Pain
Amy Stein, DPT, BCB-PMD
DVD home program for pelvic pain in all genders
Healing Pelvic and Abdominal Pain
by Amy Stein, DPT, BCB-PMD
See on Amazon
A Man's Manual
ENDING MALE PELVIC PAIN
Isa Herrera
MSPT, CSCS
Self help program
It's Not Just A Bladder Disease!
IC101
When It Hurts DOWN THERE
Angie Stoehr, MD, FACOG
15 PROVEN TECHNIQUES
Education and self help for pain by gynecologist
When It Hurts Down There

Websites

- American Urogynecological Society (AUGS): https://www.voicesforpfd.org/
- American College of Ob-Gyn: https://www.acog.org/
- American Physical Therapy Association: https://www.apta.org/
- Herman Wallace Institute: https://pelvicrehab.com/
- Beth Shelly DPT: https://www.bethshelly.com/new-patients/pelvic-pain-and-spasms/
- Global Pelvic Health Alliance: https://pelvicguru.com/
- Endometriosis Association: https://endometriosisassn.org/
- National Health Service (NHS.UK):
  - https://www.nhs.uk/conditions/endometriosis/
  - https://www.nhs.uk/conditions/fibroids/
  - https://www.nhs.uk/conditions/vulvodynia/
  - https://www.nhs.uk/conditions/pelvic-inflammatory-disease-pid/
  - https://www.nhs.uk/conditions/pelvic-pain/
  - https://www.nhs.uk/conditions/pudendal-neuralgia/
- International Foundation for Functional Gastrointestinal Disorders: https://iffgd.org/
- Interstitial Cystitis Network: https://www.ic-network.com/
- Interstitial Cystitis Association: https://www.ichelp.org/
- International Pelvic Pain Society: https://www.pelvicpain.org/
  - https://www.pelvicpain.org/public/resources/educational-resources/informational-handouts
  - https://app.v1.statusplus.net/membership/provider/index?society=ipps&t=public
- Facing Pelvic Pain: Video and Written Resources on all Causes of Pelvic Pain:
  - https://www.facingpelvicpain.org/pain-in-pelvis-patient-education
- Toronto Academic Pain Medicine Institute:
  - https://tapmipain.ca/patient/managing-my-pain/
- World Federation for Incontinence and Pelvic Problems: https://wfipp.org/
- Vulvodynia Association: https://www.nva.org/
- Vulvar Pain Foundation: https://www.thevpfoundation.org/
- Pudendal Neuralgia Association: https://www.pudendalassociation.org/
- Pudendal HOPE: http://www.pudendalhope.info/
- Neuropathy Commons: https://neuropathycommons.org/

AUA Course 013IC - 10 Must-Knows for Pelvic Pain - To Always Do and Never Miss

Friday May 15, 2026 1:30 PM – 3:30 PM

Five experts impart what they want learners to ALWAYS CATCH and NEVER MISS in the approach to pelvic pain. These must-knows will be presented in clear, highly visual image and video-rich case vignettes, bringing medical and surgical pearls alive through real life case examples. The course is ideal for APPs and MDs to attend together for practice building, or for trainees to optimize efficiency in approach to pelvic pain. This year's course builds on the foundation of our 2025 course, carrying many of the same themes (differential diagnosis, multispecialty care, surgical versus medical management).

Objectives:

- Recognize 5 essential oft-missed situations with pelvic pain and address like an expert
- Manage 5 foundational causes of pelvic pain we know you can master
- Offer patients with pelvic pain relevant surgeries and procedures, diagnostics and medications.
- Triage multidisciplinary needs that fall outside of Urology according to guidelines.

Course Schedule – 2 Hours		
10 min	1 - Introduction of Speakers - Stated assumptions of audience knowledge	Elise De
15 min	2 - Always Do – **Identify HTPFD** Never Miss – **Pudendal neuralgia**	Ken Peters
15 min	3 - Always Do – **Look beyond IC** Never Miss – **Sacral pathology**	Elise De
15 min	4 - Always Do – **ID bladder centric pain pre- cystectomy** Never Miss – **Pyocystis**	Brian Inouye
15 min	Discussion, Q and A, Audience Cases	Audience and Faculty
10 min	5 - Always do – **Use targeted therapies prior to excision** Never miss - **Upper tract cause of scrotal content pain**	Sijo Parekattil
15 min	6 - Always Do – **Examine the vulva** Never Miss – **Endometriosis**	Jennifer Pollard
20 min	Facilitated Discussion, Q and A, Audience Cases	Audience and Faculty
5 min	7 - Tools for Practice	Elise De

Elise JB De, MD (she/her/hers)
Professor Urology, Ob Gyn, Neurology- Medical Director, MultiD Pelvic Health
Albany Medical Center, Albany New York
Instructional Course Director

Kenneth Peters, MD (he/him/his)
Professor and Chair of Urology
Oakland University William Beaumont School of Medicine

Brian Inouye MD (he/him/his)
Assistant Professor of Urology
Albany Medical Center, Albany New York

Sijo Parekattil, MD (he/him/his)
Avant Concierge Urology

Jennifer Pollard, MD (she/her/hers)
Assistant Professor of Obstetrics and Gynecology
Albany Medical Center, Albany New York

QR CODES to Link to online Videos of Pudendal Nerve Implant Procedures

Ishio-rectal Pudendal Implant Video
SCAN QR CODE

Trans-gluteal Pudendal Implant Video
SCAN QR CODE

ICS Global Pelvic Pain Exchange Curriculum: QR Codes

Main page
ics.org/pelvicpain

Table of Contents

Meet the Curriculum Team

“HOW TO”: BASIC APPROACHES TO PELVIC PAIN

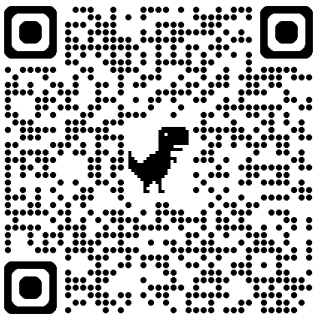
Link to entire section

1. Introduction to Basic Approaches to Pelvic Pain (1:27)
   Miklos Romics, MD, PhD, FEBU

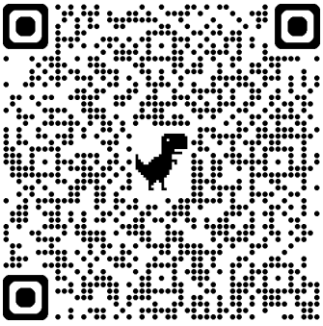
2. The Right Attitude for the Assessment of Pelvic Pain: Patient Perspective (13:06)
   JillOsborne, MA

3. Differential Diagnosis in Pelvic Pain (21:42)
   Elise De, MD

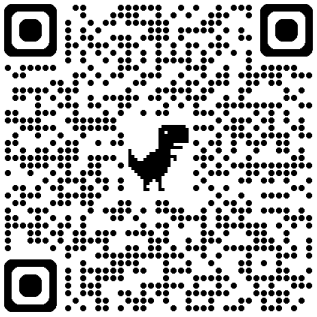
4. Questions and Comments – Basic Approaches – Part 1 (3:07)



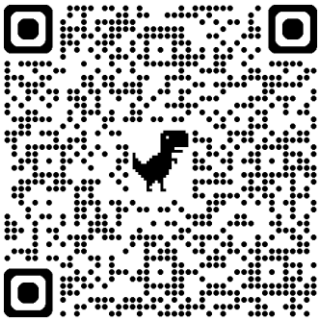
5. Basic Physical Exam Findings: Uro, Gyn, Colorectal, Ortho, and Neuro (19:38)
   Elise De, MD; Jennifer Pollard, MD; Peter Onody, MD; Andrew Dubin, MS, MD



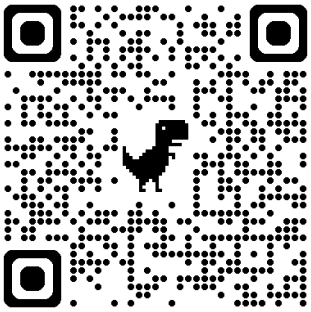
6. General Approach to Imaging Pelvic Pain (11:01)
   Mukesh Harisinghani, MBBS



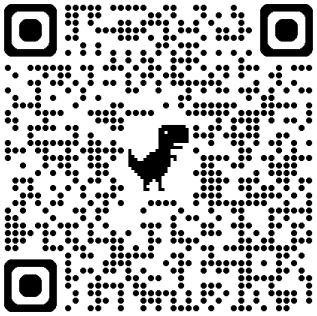
7. Multidisciplinary Care Team: Building Tools and Basic Approaches (5:00)
   Miklos Romics, MD, PhD, FEBU



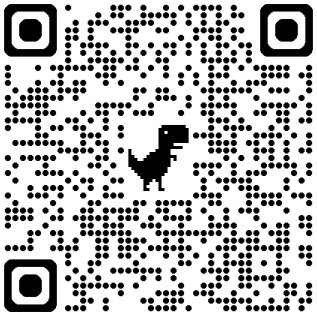
8. Trauma Informed Care (10:05)
   Nelly Faghani, PT



9. Questions and Comments - Basic Approaches – Part 2

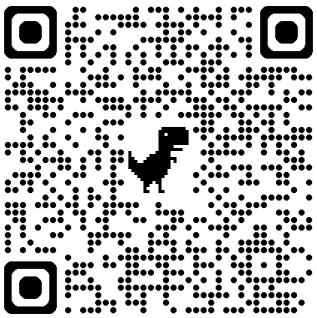


10. Closing and Resources for Pelvic Pain (1:20)
    Elise De, MD

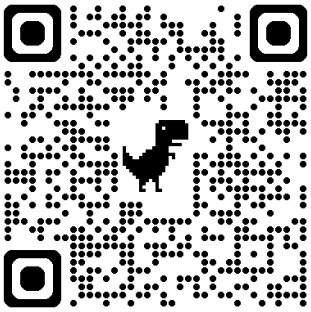


ORGAN-BASED PELVIC PAIN
Link to entire section

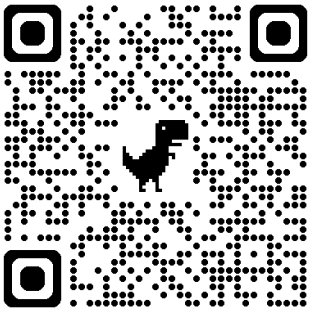
1. Introduction to Organ-Based Pain (2:08)
   Elise De, MD



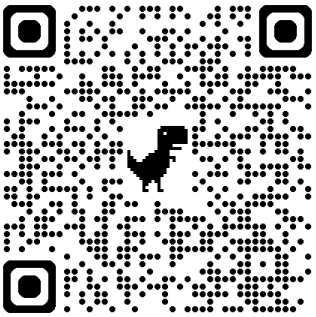
2. Gynecology: Internal Causes for Pain
   Augusta Morgado Ribeiro, MD



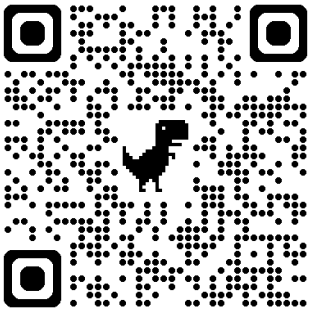
3. Gynecology: External Causes for Pain
   Rachel Rubin, MD



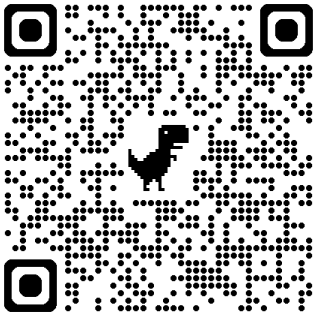
4. Questions and Comments – Organ-Based Pain – Part 1 (10:28)



5. Urological Causes for Pelvic Pain (12:23)
   Miklos Romics, MD, PhD, FEBU



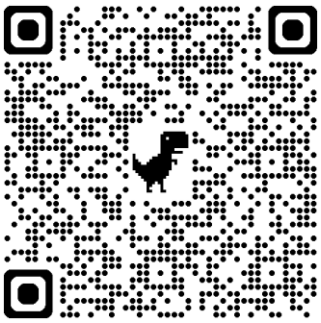
6. Scrotal Pain: Contemporary Management for Chronic Orchialgia (11:04)
   Sijo Parakattil, MD



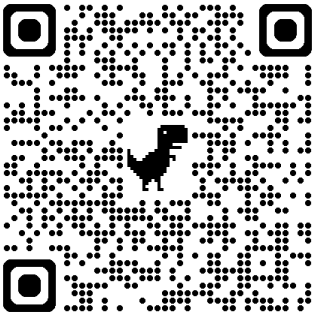
7. Intro to Colorectal Pain (2:24)
   Miklos Romics, MD, PhD, FEBU

8. Anorectal Pain (13:12)
   Peter Onody, MD

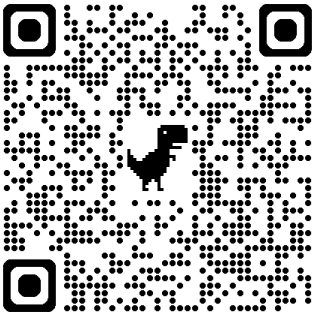
9. Case Presentation: Difficult Case Involving Cystocele and Prolapse (21:57)
   Peter Onody, MD



10. Multidisciplinary Diagnoses of Pelvic/Rectal Pain (23:31)
    Guillaume Meurette, MD, PhD

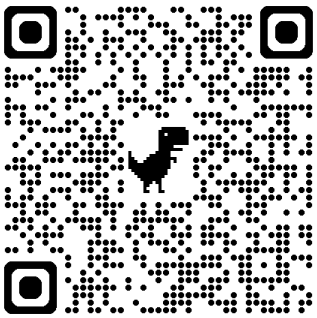


11. Anorectal Pain: GI/Neurograstroenterology Perspective (17:08)
    Barbara Nath, MD

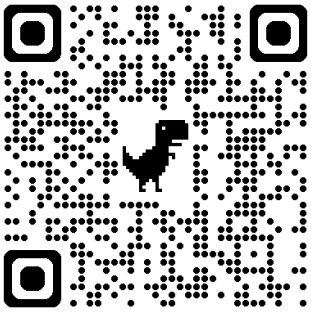


12. Imaging for Organ-Based Pelvic Pain (11:06)
    Mukesh Harisinghani, MBBS

13. Questions and Comments – Organ-Based Pain – Part 2 (8:28)

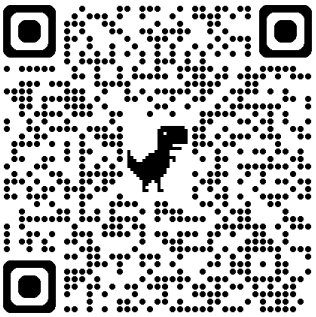


14. Closing and Spontaneous Case (5:56)
    Philip Bearn, MD

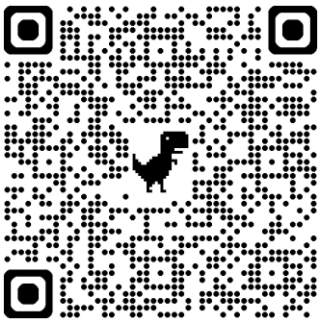


FOCAL NEUROLOGICAL PELVIC PAIN
Link to entire section

1. Basic Neurological Exam for Pelvic Pain (5:34)
   Daniel Milanovich, MD

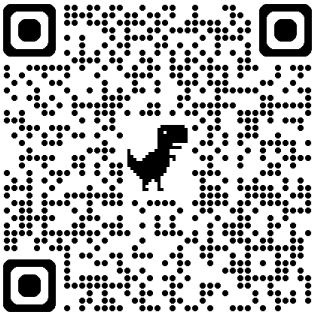


2. Neuropelveology Approach to Pelvic Pain: Intrapelvic Nerve Entrapments (16:13)
   Nucelio Lemos, MD, PhD

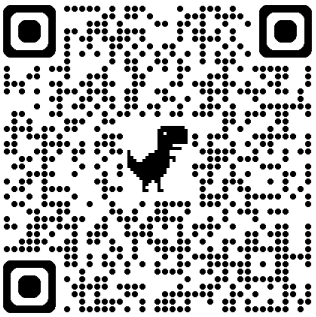


3. Role of Spinal Radiculopathy with a Focus on Tarlov Cysts (21:16)
   Rudolph Schrot, MD, MAS, FAANS

4. Complex Pelvic Pain: A Neurologic Perspective (15:00)
   Charles Argoff, MD



5. Questions and Comments – Focal Neurological Pain (20:42)



PUDENDAL NEUROPATHY AND PELVIC NERVE ENTRAPMENT

Link to entire section

1. Introduction to Pudendal Neuropathy and Pelvic Nerve Entrapment (1:47)
   Elise De, MD

2. Case Presentation: Difficult Case Involving Pudendal Neuropathy (4:18)
   Miklos Romics, MD, PhD, FEBU

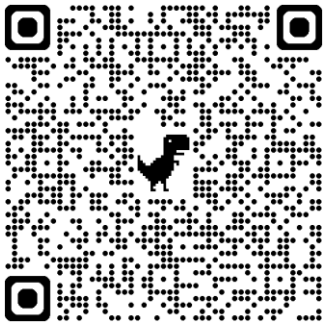
3. Interventional Options for Pudendal and Other Neuropathy (14:26)
   Antje Barreveld, MD, PhD

4. Neuropelveology Approach to Pelvic Pain: Focus on Pudendal Nerve (23:53)
   Nucelio Lemos, MD, PhD

5. Clues, Physical Exam, and Electrodiagnostics in Pudendal Neuropathy (18:38)
   Andrew Dubin, MD, MS

6. Case Presentation: Penile Frostbite – A Case We Solved with Complex Pharm (13:16)
   Andrew Dubin, MD, MS

7. Questions and Comments – Pudendal Neuropathy and Pelvic Nerve Entrapment (8:27)



PELVIC FLOOR MUSCLE TONE (PFM): WHY IS IT IMPORTANT AND HOW TO CHANGE IT

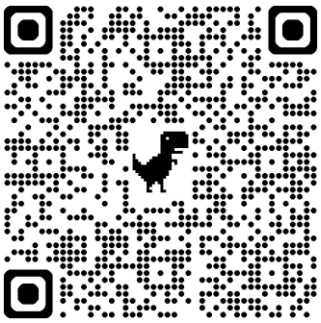
Link to entire section

1. Intro and the Big Picture: PFM Dysfunction and Myalgia (5:32)
   Beth Shelly, PT, DPT

2. Disorders of Skeletal Muscle Tone and Treatments (15:22)
   Andrew Dubin, MD, MS

3. PFM Tone Assessment: Role in Pelvic Pain and Conservative Treatments (30:09)

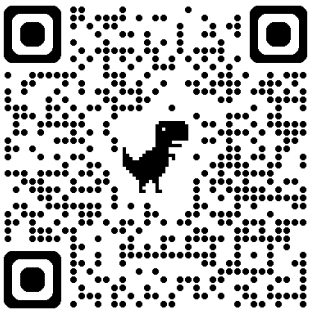
4. Questions and Comments – PFM Tone (7:40)



5. Case Presentation: Successful Case Involving Proctalgia, Tension Myalgia after Mesh Rectopexy (9:24)
   Sarina Niurkina, PT

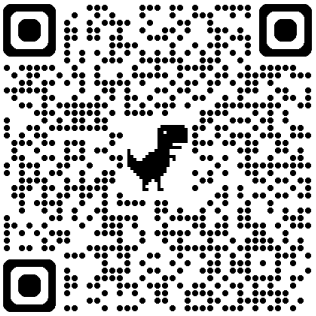
PHYSIOTHERAPY OF PELVIC PAIN
Link to entire section

1. Whom I Send for Pelvic PT (5:25)
   Andrew Dubin, MD, MS

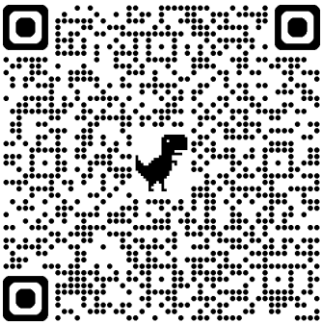


2. Case Presentation: Chronic Testicular/Penile Pain Refractory to PT (12:19)
   Liz O'Shaughnessy, PT, DPT

3. Beginner Pelvic PT for Chronic Pelvic Pain (20:48)
   Beth Shelly, PT, DPT



4. Case Presentation: Successful Case Involving Hypertonic Pelvic Floor in Multiple Sclerosis (12:56)
   Carin Cappadocia, PT, DPT



5. Pelvic Floor PT: Regional Difficulties and Opportunities (17:35)
   Marina Osokina, PT

HIP CAUSES OF PELVIC PAIN

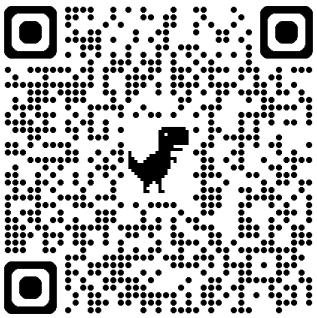
Link to entire section

1. Introduction: When to Suspect the Hip (7:31)
   Elise De, MD

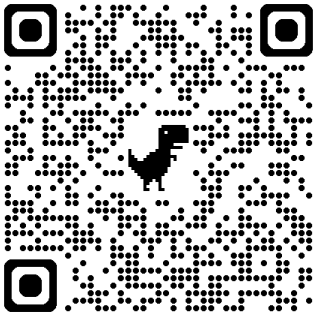
2. Case Presentation: Difficult Case Involving Dyskinesia Puborectalis (10:37)
   Benedetto Giardulli, MSc, PhD

3. Hip Without Prior Injury: Deep Gluteal Syndrome (18:43)
   Hal David Martin, DO, FAAOS

4. Case Presentation: Successful Case Involving Broken Coccyx (9:28)
   Tatiana Shmakova, MD

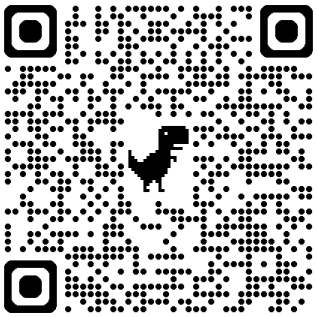


5. Hip/Pelvic Pain in Setting of Prior Injury (9:28)
   Andrew Dubin, MD, MS



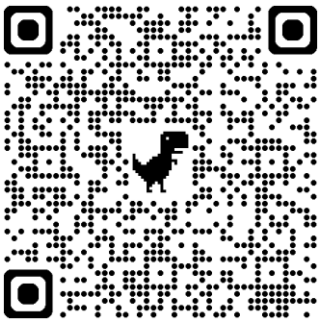
NEURODIAGNOSTICS FOR PELVIC PAIN
Link to entire section

1. Introduction to Neurodiagnostics for Pelvic Pain (1:13)
   Elise De, MD

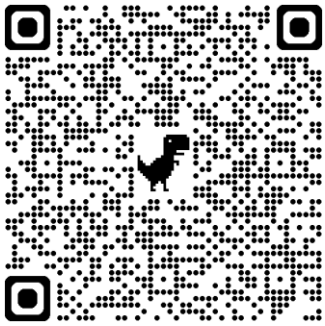


2. Case Presentation: Difficult Case Involving Endometriosis and S3 Nerve (6:19)
   Suzan Goldman, MD, PhD

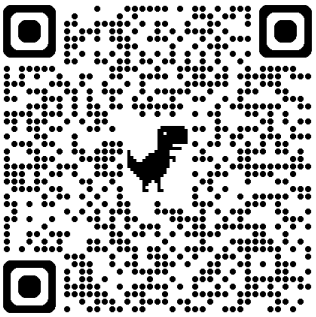
3. Indications for Neurodiagnostics in Chronic Pelvic Pain (14:22)
   Daniel Milanovich, MD



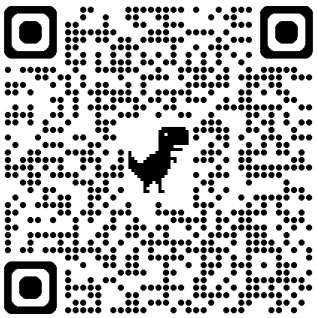
4. Case Presentation: Successful Case Involving Prostatitis, Bladder Outlet Obstruction, and Hernioplasty (8:41)
   Miklos Romics, MD, PhD, FEBU



5. Electrodiagnostics and Clinical Considerations (34:22)
   Andrew Dubin, MD, MS

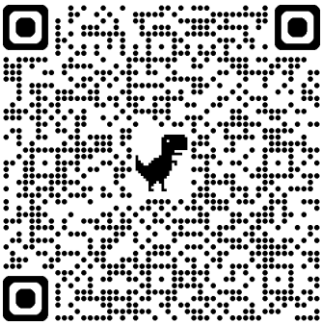


6. MRI Tractography on Pelvic Neuropathies (17:01)
   Suzan Goldman, MD, PhD

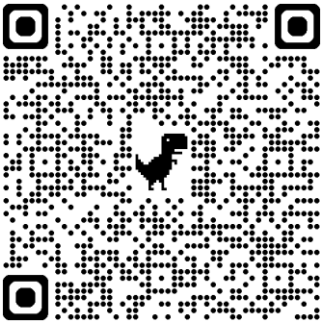


<u>TENS, BLOCKS, STIMULATION, AND PUMPS FOR PELVIC PAIN</u>
Link to entire section

1. Case Presentation: Difficult Case Involving Sjogren's Syndrome, Failed Interstim, and Botox (5:31)
   Elise De, MD

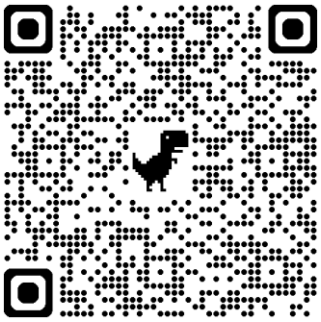


2. Noninvasive Stimulation: TENS in the Treatment of Chronic Pelvic Pain (7:32)
   Beth Shelly, PT, DPT



3. Percutaneous Neuromodulation: Peripheral Nerve Blocks “101” (11:37)
   Antje Barreveld, MD, PhD

4. Peripheral Neuromodulation for Chronic Pelvic Pain (11:12)
   Jason Gilleran, MD



5. Intraspinal Stimulation for Pelvic Pain: Info for Referring Providers (22:42)
   Kevin Mansfield, MD, FAANS

6. Infusion Pumps: The 5 W’s of INtrathecal Drug Delivery for Severe Chronic Pain (13:44)
   Charles Argoff, MD

7. Case Presentation: Successful Case Involving TENS Treatment (8:35)
   Marton Weidl, PhD

SYSTEMIC PAIN INVOLVING THE PELVIS
Link to entire section

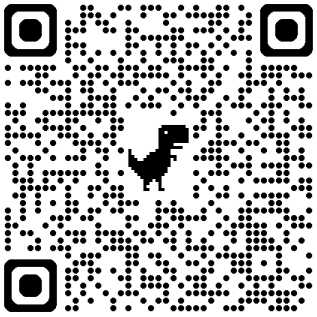
1. Introduction to Systemic Pain Involving the Pelvis (1:43)
   Miklos Romics, MD, PhD, FEBU

2. Case Presentation: Difficult Case Involving Spinal Stenosis Herniated Discs (11:35)
   Elise De, MD

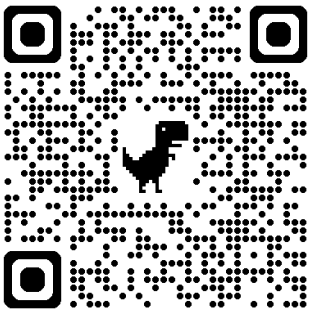
3. When is Chronic Pelvic Pain Associated with a Neurological or Systemic Disorder (15:16)
   Charles Argoff, MD

4. Case Presentation: Successful Case Involving Pelvic Dyssynergia and Stress-Induced Pelvic Pain (10:25)
   Beth Shelly, PT, DPT

5. Rheumatologic Perspective to Chronic Pelvic Pain (20:01)
   Richard Bryan, MD



6. Managing Pelvic Pain (24:55)
   Tania Di Renna, MD



PAIN MANAGEMENT AND PHARMACOLOGY FOR PELVIC PAIN

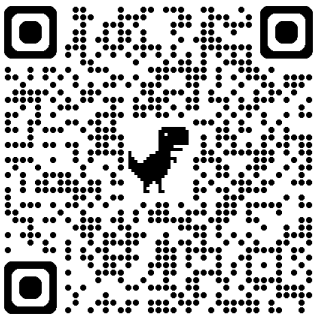
Link to entire section

1. Introduction to Pain Management and Pharmacology for Pelvic Pain (2:02)
   Elise De, MD

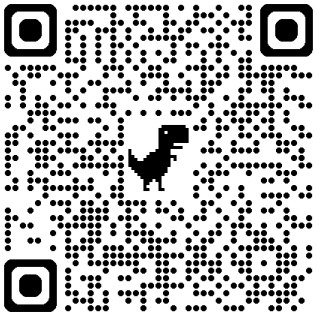
2. Pain Pathophysiology & Difficult Case Involving Hysterectomy and Adenomyosis (23:00)
   Tania Di Renna, MD

3. Case Presentation: Difficult Case Involving Medical Management (7:19)
   Balazs Laskoi, MD, FIPP

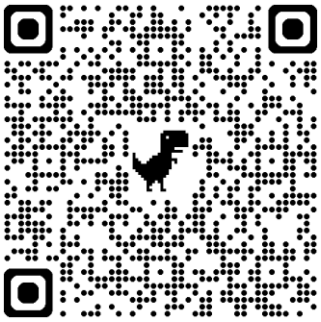
4. Pharmacotherapy in Pain Management (17:18)
   Charles Argoff, MD



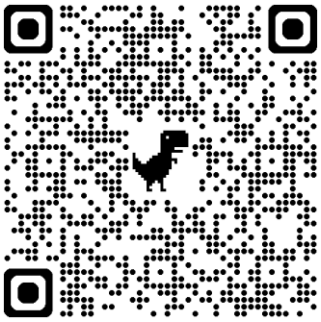
5. Pharmacology of Pain (17:50)
   Andrew Dubin, MD, MS



6. Questions and Comments – Pharmacology for Pain (12:17)



7. Questions and Comments – Pharm and Psych (3:11)



PSYCHOLOGICAL AND COGNITIVE APPROACH TO PAIN, PATIENT EMPOWERMENT

Link to entire section

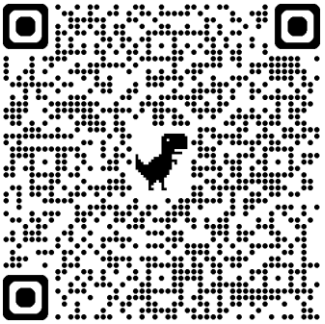
1. Cognitive Behavioral Therapy for Interstitial Cystitis/Bladder Pain Syndrome (13:40)
   Lindsey McKernan, PhD, MPH

2. Patient Empowerment in Pain (27:22)
   Derek Coe, MS

3. Patient Engagement (13:17)
   Jill Osborne, MA

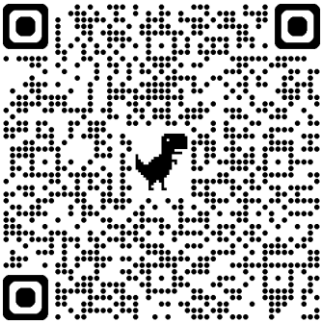
4. Psychological Aspects of Pelvic Pain (11:55)
   Anna Guttengeber, PhD

5. Yoga for Pelvic Pain and Chair Dwellers (14:51)
   Dustienne Miller, PT, MS, CYT



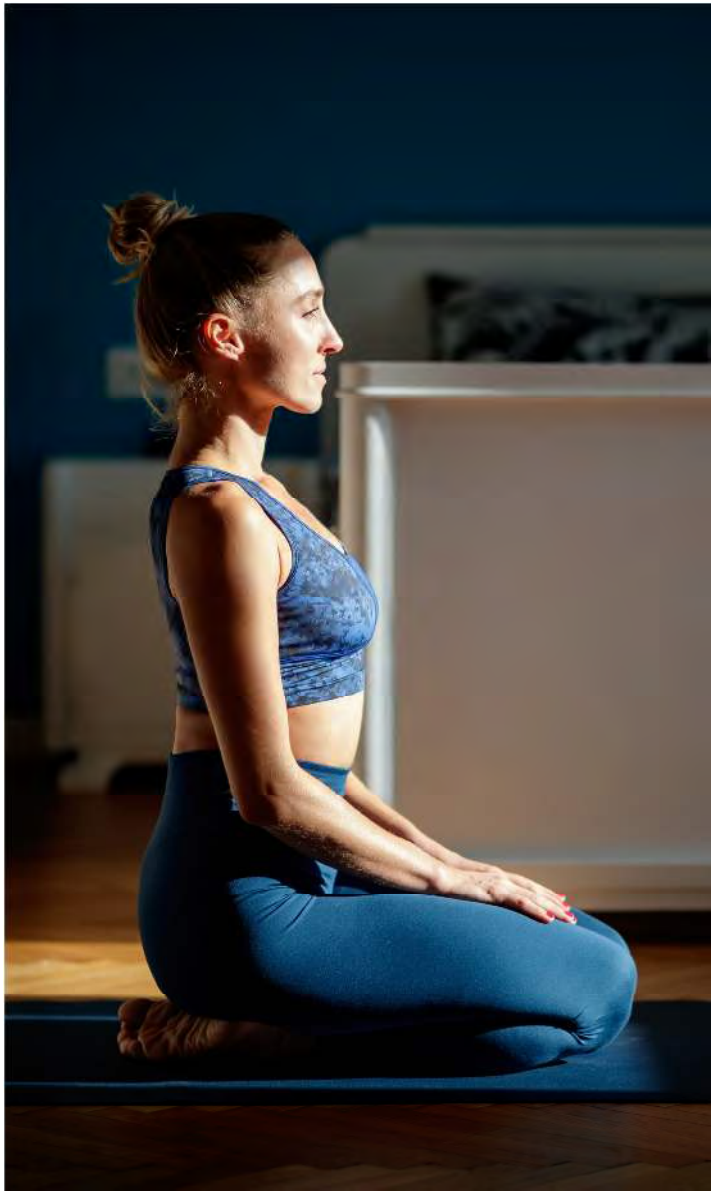
6. Case Presentation: Difficult Case Involving Acute Prostatitis and Nerve Block (25:57)
   Eva Pinter, PhD; Nora Nyilas, MD

7. Psychological Experience of Providers: Healing the Healer (31:17)
   Sue Morris, PsyD

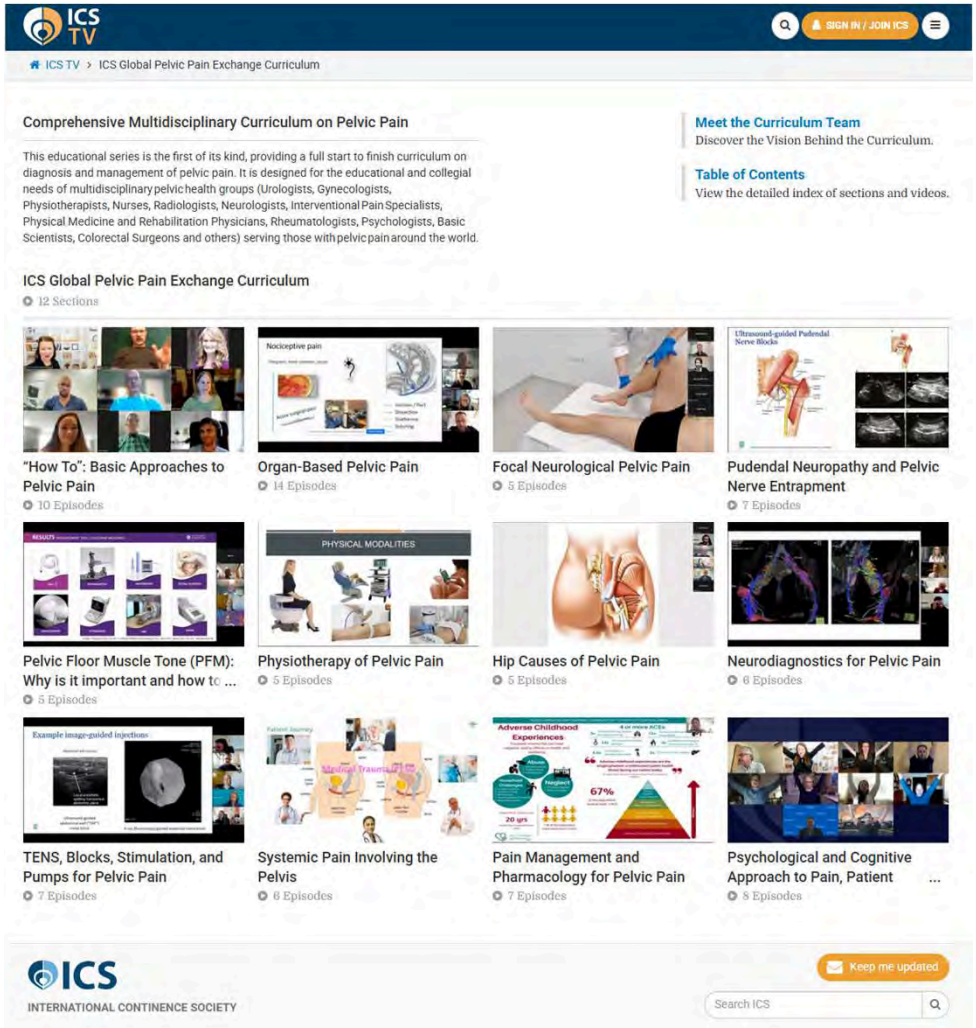


8. Closing and Resources (1:08)
   Elise De, MD

Tools for Practice
In
CPP



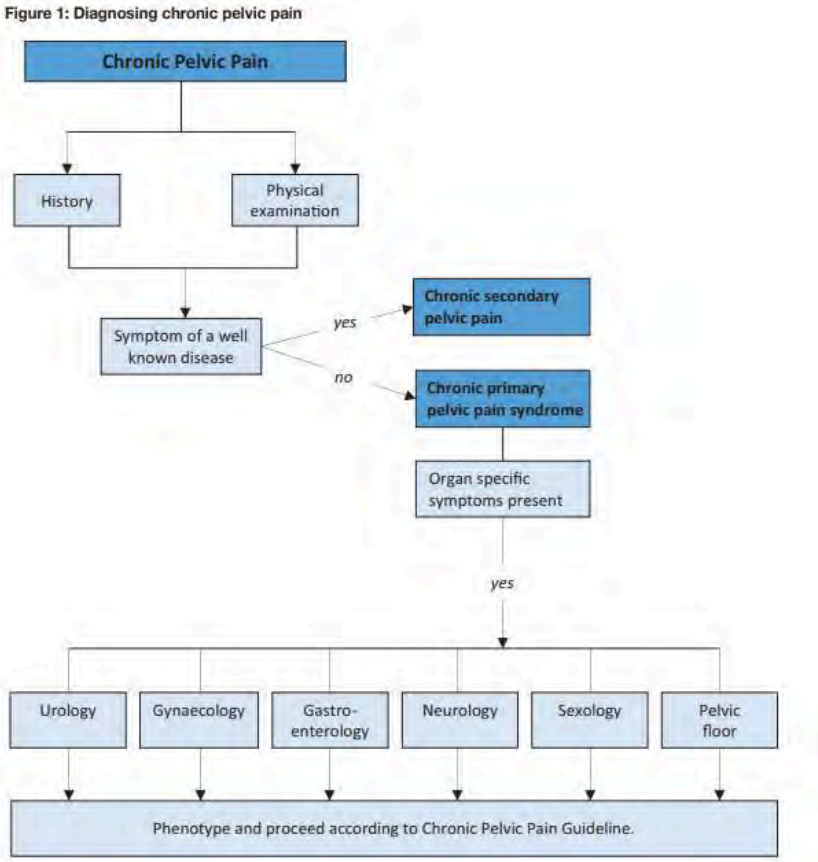
ICS Global Pelvic Pain Exchange Curriculum




American Urological Association
AWMF online
S2K-Leitlinie
Diagnostik und Therapie der Interstitiellen Cystitis (IC/BPS)
Deutsche Gesellschaft für Urologie
GUIDELINE
CUA guideline: Diagnosis and treatme
bladder pain syndrome
Methodology
D. Engeler (Chair), A.P. Baranowski, B. Berghmans,
J. Birch (Patient Advocate), J. Borovicka, A.M. Cottrell,
P. Dinis-Oliveira, S. Elneil, J. Hughes,
E.J. Messelink (Vice-chair), R.A. Pinto,
M.L. van Poelgeest (Patient Advocate), V. Tidman,
A.C. de C Williams
Guidelines Associates: P. Abreu-Mendes, S. Dabestani,
B. Parsons, J. Tornic, V. Zumstein
Guidelines Office: J.A. Darraugh
© European Association of Urology 2023
European Association of Urology
Royal College of Obstetricians & Gynaecologists
dder Pain Syndrome
cember 2016

uroweb.org

EAU Guidelines

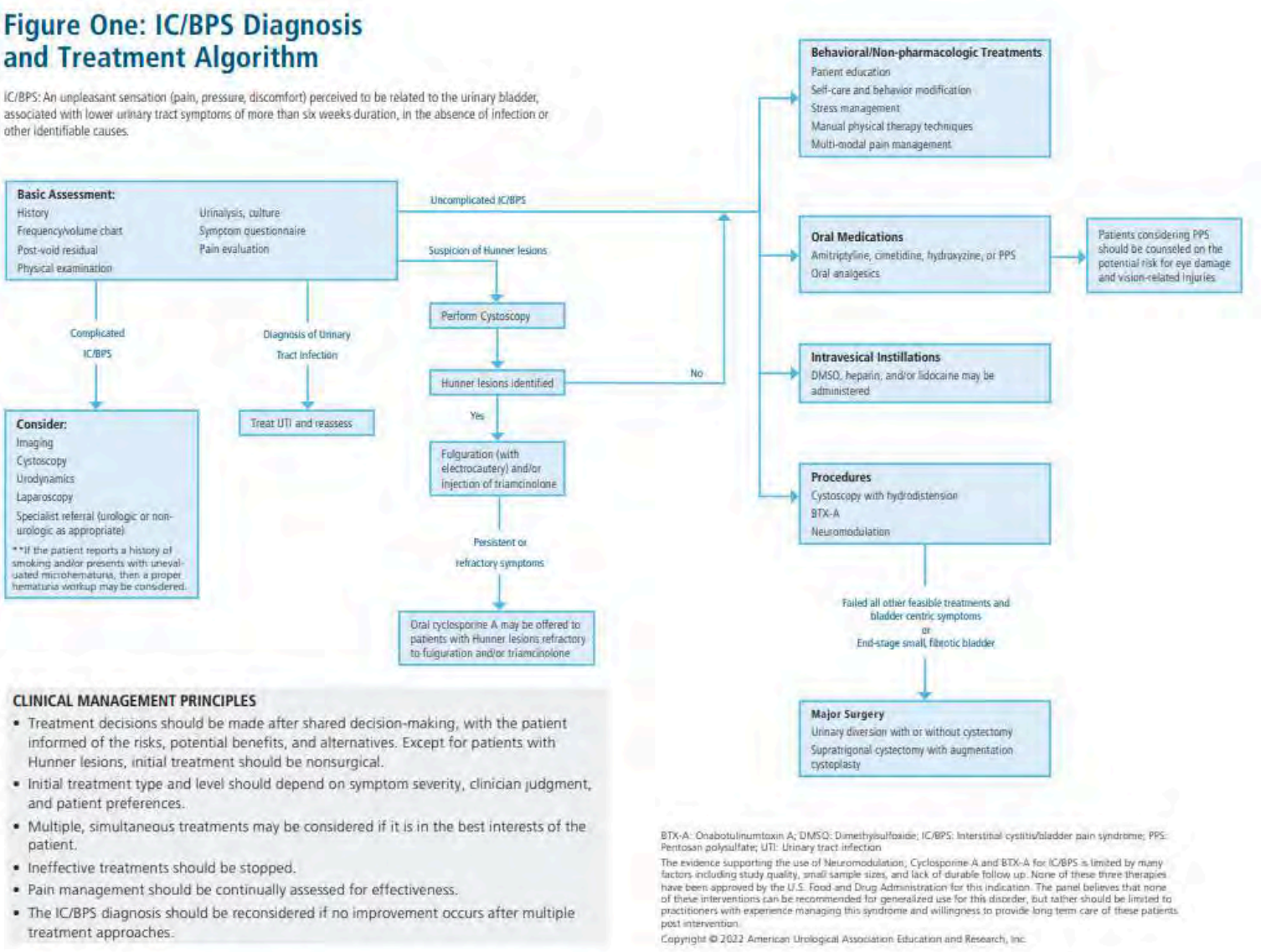


Journal of Urology April 17 2025

Diagnosis and Management of Male Chronic Pelvic Pain (Chronic Prostatitis/ Chronic Pelvic Pain Syndrome and Chronic Scrotal Content Pain): AUA Guideline: Part I

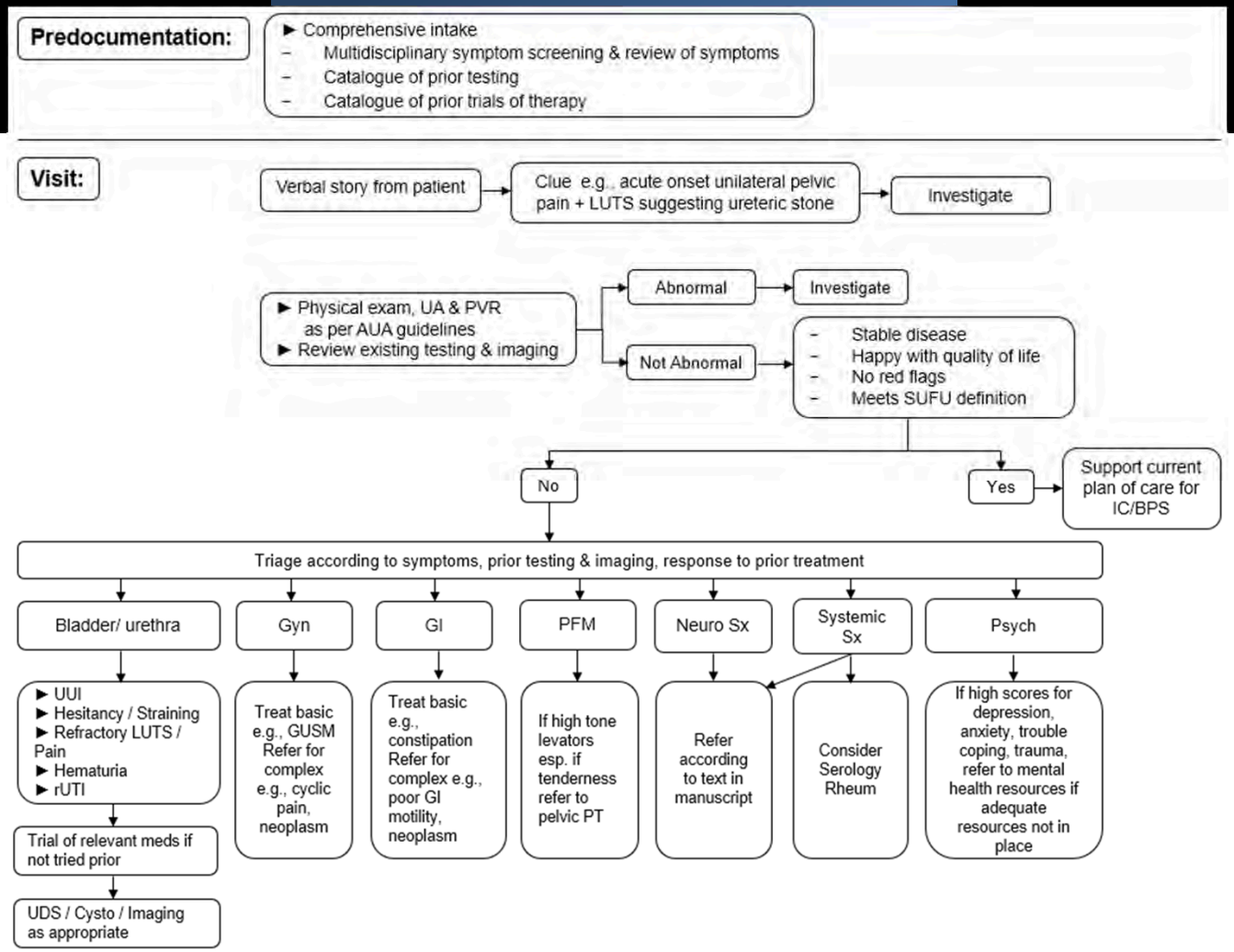
H. Henry Lai, MD; Michel A. Pontari, MD; Charles E. Argoff, MD; Larissa Bresler, MD, DABMA; Benjamin N. Breyer, MD; Roger Chou, MD; J. Quentin Clemens, MD, FACS, MSCI; Elise JB De, MD; R. Christopher Doiron, MD, MPH; Dane Johnson, MD; Erin Kirkby, MS; Susan M. MacDonald, MD; Jill H. Osborne, MA; Sijo J. Parekattil, MD; Beth Shelly, PT, DPT, WCS, BCB PMD

AUA Guideline IC/BPS



Clemens JQ, Erickson DR, Varela NP, Lai HH. Diagnosis and treatment of interstitial cystitis/bladder pain syndrome. J Urol. 2022;208(1):34-42

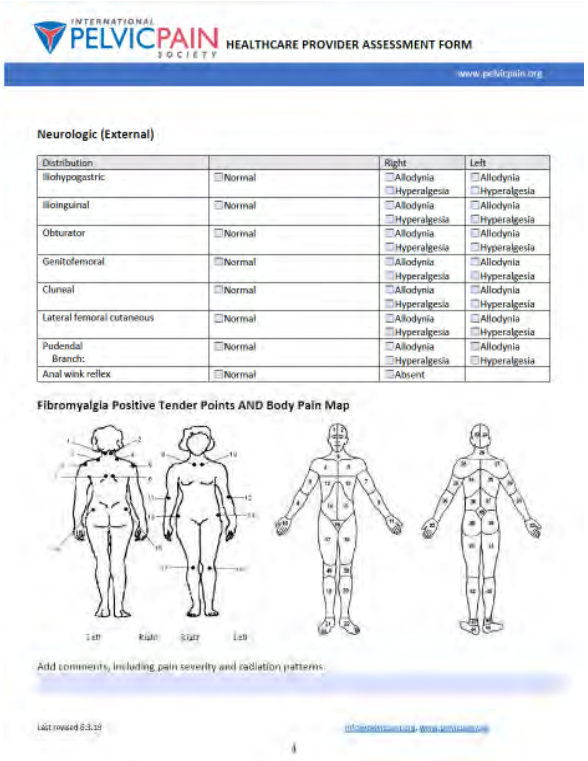
Approach to Patients Labelled with IC



Elise De MD

International Pelvic Pain Society
www.pelvicpain.org

Healthcare Provider Assessment Form



INTERNATIONAL PELVICPAIN SOCIETY HEALTHCARE PROVIDER ASSESSMENT FORM

www.pelvicpain.org

Neurologic (External)

Distribution		Right	Left
Iliohypogastric	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Ilioinguinal	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Obturator	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Genitofemoral	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Cluneal	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Lateral femoral cutaneous	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Pudendal Branch:	☐Normal	☐Allodynia ☐Hyperalgesia	☐Allodynia ☐Hyperalgesia
Anal wink reflex	☐Normal	☐Absent	

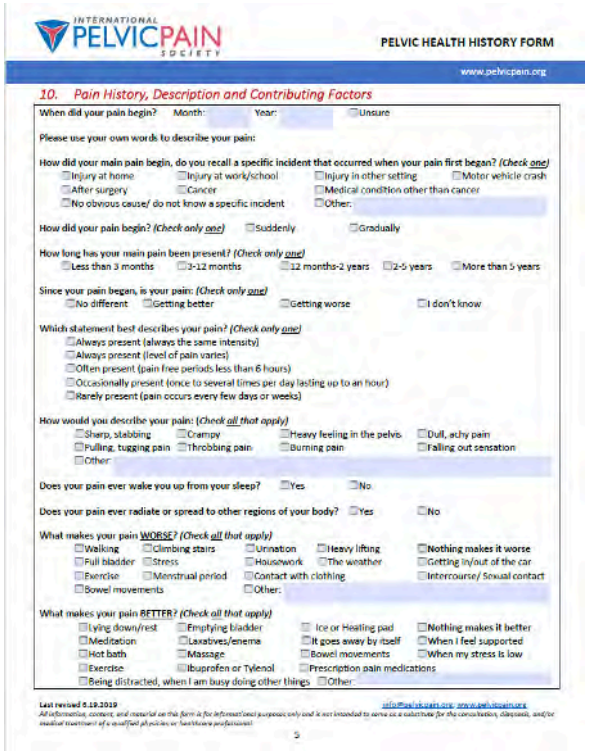
Fibromyalgia Positive Tender Points AND Body Pain Map

Left Right Right Left

Add comments, including pain severity and radiation patterns:

Last revised 8.5.19

Patient Pelvic Health History Form



INTERNATIONAL PELVICPAIN SOCIETY PELVIC HEALTH HISTORY FORM

www.pelvicpain.org

10. Pain History, Description and Contributing Factors

When did your pain begin? Month: Year: ☐Unsure

Please use your own words to describe your pain:

How did your main pain begin, do you recall a specific incident that occurred when your pain first began? *(Check one)*
☐Injury at home ☐Injury at work/school ☐Injury in other setting ☐Moter vehicle crash
☐After surgery ☐Cancer ☐Medical condition other than cancer
☐No obvious cause/ do not know a specific incident ☐Other:

How did your pain begin? *(Check only one)* ☐Suddenly ☐Gradually

How long has your main pain been present? *(Check only one)*
☐Less than 3 months ☐3-12 months ☐12 months-2 years ☐2-5 years ☐More than 5 years

Since your pain began, is your pain: *(Check only one)*
☐No different ☐Getting better ☐Getting worse ☐I don't know

Which statement best describes your pain? *(Check only one)*
☐Always present (always the same intensity)
☐Always present (level of pain varies)
☐Often present (pain free periods less than 6 hours)
☐Occasionally present (once to several times per day lasting up to an hour)
☐Rarely present (pain occurs every few days or weeks)

How would you describe your pain: *(Check all that apply)*
☐Sharp, stabbing ☐Crampy ☐Heavy feeling in the pelvis ☐Dull, achy pain
☐Pulling, tugging pain ☐Throbbing pain ☐Burning pain ☐Falling out sensation
☐Other:

Does your pain ever wake you up from your sleep? ☐Yes ☐No

Does your pain ever radiate or spread to other regions of your body? ☐Yes ☐No

What makes your pain WORSE? *(Check all that apply)*
☐Walking ☐Climbing stairs ☐Urination ☐Heavy lifting ☐Nothing makes it worse
☐Full bladder ☐Stress ☐Housework ☐The weather ☐Getting in/out of the car
☐Exercise ☐Menstrual period ☐Contact with clothing ☐Intercourse/ Sexual contact
☐Bowel movements ☐Other:

What makes your pain BETTER? *(Check all that apply)*
☐Lying down/rest ☐Emptying bladder ☐Ice or Heating pad ☐Nothing makes it better
☐Meditation ☐Laxatives/enema ☐It goes away by itself ☐When I feel supported
☐Hot bath ☐Massage ☐Bowel movements ☐When my stress is low
☐Exercise ☐Ibuprofen or Tylenol ☐Prescription pain medications
☐Being distracted, when I am busy doing other things ☐Other:

Last revised 8.19.2019

www.ics.org/standards
www.ics.org/institute

- Definition – noncyclic CPP > 3 months
- Pain Characteristics – location, perception, modality
- Site specific versus central sensitization
- Identify inciting event – surgery, trauma, hormonal manipulation, major change in physical activity
- Comorbid conditions (e.g. autoimmune disease, XRT)
- Identify each pain generator and treat concurrently
- Domains of CPP – which organ systems are involved
    - Lower Urinary Tract Pain
    - Female Genital Pain
    - Male Genital Pain
    - Gastrointestinal Pain
    - Musculoskeletal Pain
    - Neuropathic Pain
    - Overlays:
        - Psychological
        - Sexual Aspects
        - Comorbidities


Neurourology and Urodynamics

Neurourol. Urodynam., 2016 36: 984–1008.

A Standard for Terminology in Chronic Pelvic Pain Syndromes: A Report From the Chronic Pelvic Pain Working Group of the International Continence Society

Regula Doggweiler,[1] Kristene E. Whitmore,[2*] Jane M. Meijlink,[3] Marcus J. Drake,[4] Helena Frawley,[5] Jørgen Nordling,[6] Philip Hanno,[7] Matthew O. Fraser,[8] Yukio Homma,[9] Gustavo Garrido,[10] Mario J. Gomes,[11] Sohier Elneil,[12] Joop P. van de Merwe,[13] Alex T.L. Lin,[14] and Hikaru Tomoe[15]

Received: 16 February 2021 | Accepted: 17 February 2021

DOI: 10.1002/nau.24658

SOUNDING BOARD

Neurourology Urodynamics ICS WILEY

An International Continence Society (ICS) report on the terminology for pelvic floor muscle assessment

Helena Frawley[1] | Beth Shelly[2,3] | Melanie Morin[4] | Stéphanie Bernard[5] | Kari Bø[6,7] | Giuseppe Alessandro Digesu[8] | Tamara Dickinson[9] | Sanchia Goonewardene[10] | Doreen McClurg[11] | Mohammad S. Rahnama'i[12,13] | Alexis Schizas[14] | Marijke Slieker-ten Hove[15,16] | Satoru Takahashi[17] | Jenniffer Voelkl Guevara[18]

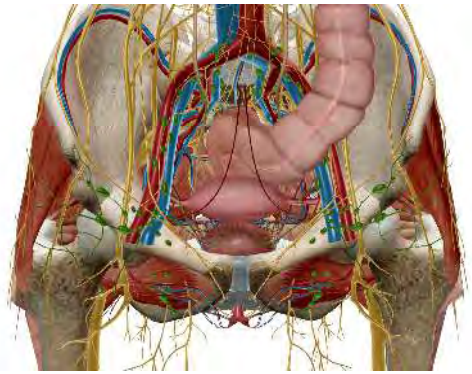
https://www.ics.org/standards

New Standardization Document

Treatment of Pelvic Pain depends on the:

Causes of Pain in Pelvis and Reasons for Pelvic Pain

LOCATION of PELVIC PAIN SYMPTOMS	POSSIBLE EXPLANATIONS of CHRONIC PELVIC PAIN SYNDROME
Vulvar pain Vulva and pelvic burning, burning in pelvic area	Infection Exposures (irritants) Vulvar atrophy (low estrogen) Low testosterone (can be caused by external hormones) Dermatologic conditions (e.g., lichen sclerosis) Neuropathy
Introital pain Entrance to vagina	Low testosterone Friction from sexual activity or clothing
Urethral pain Pain urinating	Vulvovaginal atrophy Urethral caruncle Friction Tight external sphincter muscle or stricture (turbulence) Skene's gland Stone at ureterovesical junction or urethra diverticulum Tumor Infection (ureaplasma/mycoplasma) or sexually transmitted infection Recurrent urinary tract infections
Pelvic floor muscles Heavy feeling in pelvic area, pelvis ache, pelvic pain from sitting, pelvic headache	Dysfunctional voiding Overactivity of muscles from pelvic strain, pelvic exercises or the kegel exercise
Gynecological pain Causes of pelvic pain in women, pain in pelvis female, symptoms of pelvic infection, sore pelvic area, pelvic discomfort, sore pelvis	Endometriosis symptoms(cramps in pelvis, pain in pelvis before period, pain in pelvis after period, extreme pelvic pain) Endometritis Adhesions in pelvis Uterine fibroids Ovarian venous abnormality Ovarian cysts, torsion, or other growths Ectopic pregnancy Sexually transmitted infection, inflammation in pelvis
Male organ pain	Prostatitis symptoms or epididymitis Testis mass, torsion, or nerve pain
Prostate pain, testis pain, groin pain, scrotum pain, pelvis pain men, pain in pelvis male	Ejaculatory duct or vas deferens obstruction Peyronie's Disease Sexually transmitted infection (STI, STD) Pelvic floor muscles, especially when prostatitis treatment has not been successful
Bladder pain	Interstitial cystitis Dietary triggers Bladder outlet obstruction
Gastrointestinal Pain Painful bowel movement, stomach cramps, blood in stool, cramps, bloating	Pelvic floor muscles: levator ani syndrome Proctalgia fugax / chronic proctalgia Unspecified functional anorectal pain Constipation –right pelvic pain, lower left side pelvic pain Anal Fissure Hemorrhoids Pruritis ani Anal cancer Paget's disease Warts Pelvic tumor Diverticulitis Appendicitis Adhesions in pelvis Hernia – pelvic pain sneezing Inflammatory bowel disease Irritable bowel syndrome – gas pain in pelvis
Vascular pain in lower pelvis Pelvis pain worse with standing	Pelvic venous disorder, pelvic venous congestion syndrome
Bone pain, Joint Pain Pelvic girdle pain, fractured pelvis symptoms, pelvic bone pain, pubic symphysis pain, pain in hips, pain in the pubic area, pelvic pain running	Back, knee, foot, or hip problem Injury to nerves, bones, ligaments, or tendons Inflammation of bone (osteitis or osteomyelitis) Muscle deficit (myopathy)
Nerve pain Burning pain in pelvis, burning sensation in pelvic area, pain that radiates down one leg, sharp pains in pelvic area	Upper motor neuron syndrome (upper spine/brain nerves) Spinal stenosis Herniated disc Multiple sclerosis Stroke Cerebral palsy
	Lower motor neuron syndromes (lower spinal cord) Cauda equina syndrome Tethered cord syndrome Tarlov Cyst Sacral plexus Peripheral nerve problem Pudendal neuropathy, pudendal neuralgia, or other nerve entrapment Peripheral neuropathy or neuroinflammation
Psychological	Loss of health Depression Anxiety History of sexual abuse/assault, PTSD Poor emotional coping/communication Personality disorders Couple distress
All-over pain Pain all over the body, pain everywhere, constant pain	Fibromyalgia Small fiber polyneuropathy Diabetic neuropathy Central sensitization Neuroinflammatory disease (e.g. Lyme disease) Rheumatologic disease Vasculitis



Differential Diagnosis of Pelvic Pain

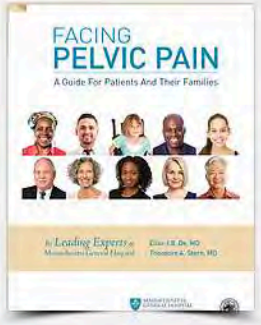
www.facingpelvicpain.org

Free Multidisciplinary One-Stop Resource
Providers and Patients

www.facingpelvicpain.org

Finding a specialist experienced specifically in pelvic pain can be challenging. But, don't give up! Here are some databases that will help you find the right medical care provider in your area (click the links below):

- American Urogynecological Society (AUGS)
- American College of Ob-Gyn
- American Physical Therapy Association
- Herman Wallace Institute
- Global Pelvic Health Alliance
- Endometriosis Association
- International Foundation for Functional Gastrointestinal Disorders
- Interstitial Cystitis Network
- Interstitial Cystitis Association
- International Pelvic Pain Society
- Vulvodynia Association
- Vulvar Pain Foundation
- Pudendal Neuralgia Association
- Neuropathy Commons



I need this book! >

Tell Me More!

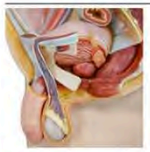
Other Websites Helpful in Pelvic Pain and Pelvic Floor Conditions:

- World Federation for Incontinence and Pelvic Problems
- Urology Care Foundation
- Harvard Medical School Patient Education Center
- Continence Product Advisor

Video - Nerve Blocks for Pelvic Pain

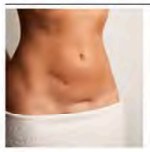
← Pain Specialists Alexandra Adler MD and Antje Barreveld MD, Explain the Roles of Diagnostic and Therapeutic Injections for Pelvic Pain
10 Minute Video

Images: iStock and http://www.elsevier.com



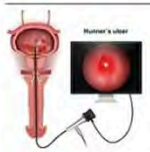
Video - Pelvic Floor Muscle PT in Men Explained

← Dr. Beth Shelly Explains What Happens in Pelvic PT for Men
6 Minute Video
Read the transcript



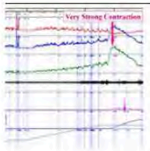
Video - Pelvic Floor Muscle PT in Women Explained

← Dr. Beth Shelly Explains What Happens in Pelvic PT for Women
6 Minute Video
Read the transcript



Video - Cystoscopy Explained

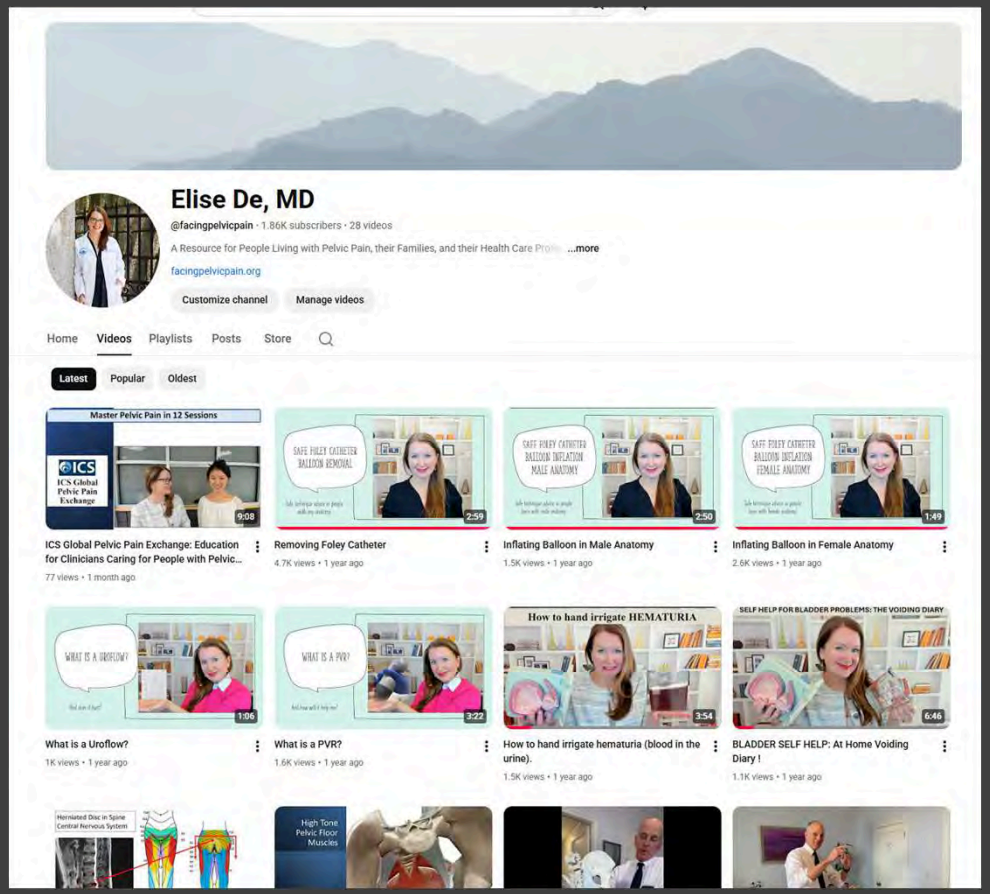
← Video Explaining "What is Cystoscopy?" (Office Camera Test of Bladder)
6 Minute Video
Read the transcript



Video - Urodynamic Testing Explained

← Video Explaining "What are Urodynamics?" (Pressure Test of Bladder)
6 Minute Video
Read the transcript

http://www.youtube.com/@facingpelvicpain



www.facingpelvicpain.org
The Treatment Map

Vulvar / Vaginal Treatments	Tried?	Relief?	Still Using?
Avoidance of Irritants (select toilet paper, soap)			
☐ Steroid (clobetasol, hydrocortisone)			
☐ Diazepam (Valium®) vaginal Suppositories			
☐ Baclofen (Lioresel®)			
☐ Lidocaine			
☐ Gabapentin (Neurontin®)			
☐ Amitriptyline (Elavil®)			
☐ Tacrolimus (Prograf®)			
☐ Naltrexone - low dose (Vivitrol®)			
☐ Douches			
☐ Other Inserts			
☐ Wipes			
Hormonal Medications	**Tried?**	**Relief?**	**Still Using?**
Vaginal estrogen cream, tablet or ring			
Estrogen / progesterone pills or patches			
Hormone-secreting intrauterine device (Mirena®, Liletta®,			

PROSAYLA
SUPPORTED BY ISSWSH

www.prosayla.com – Educational Resource for Women's Sexual Health

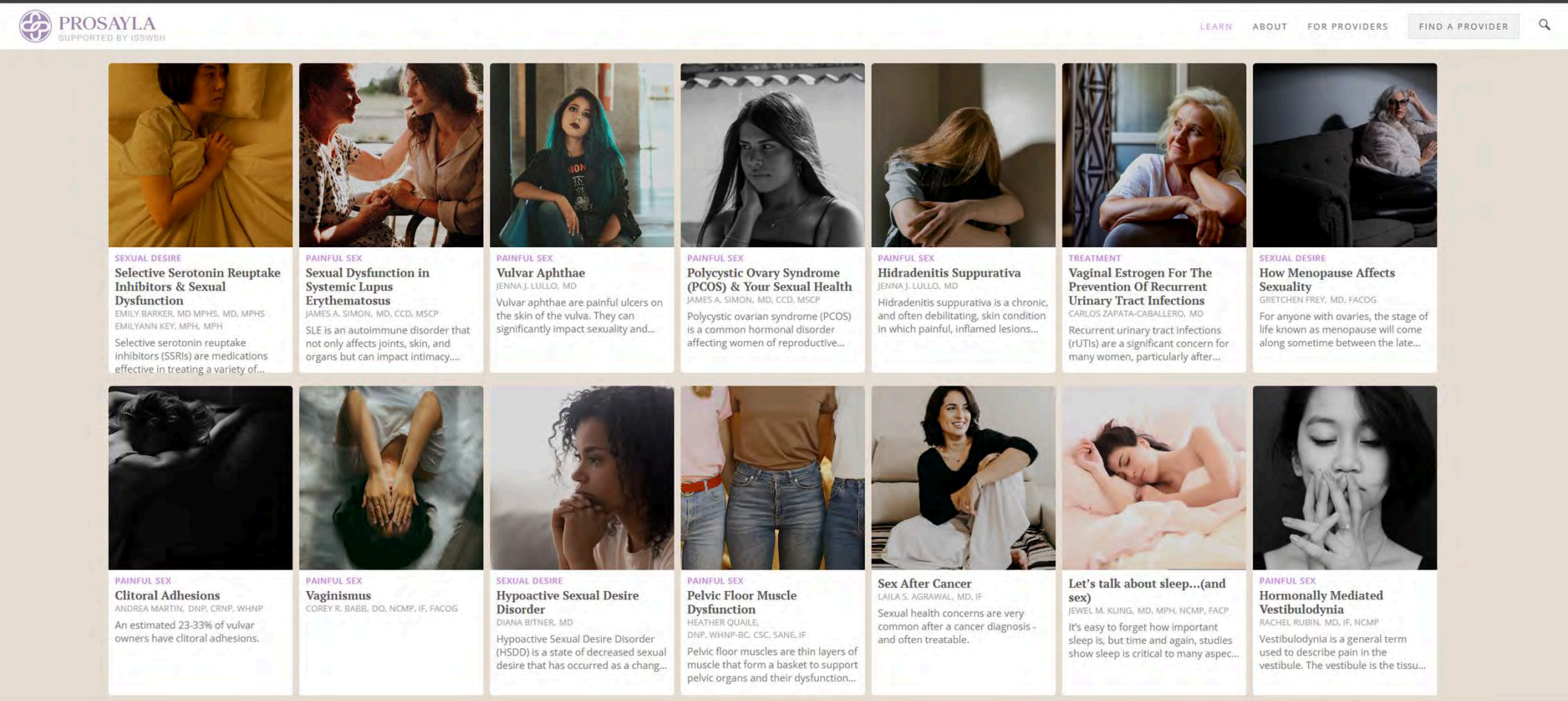
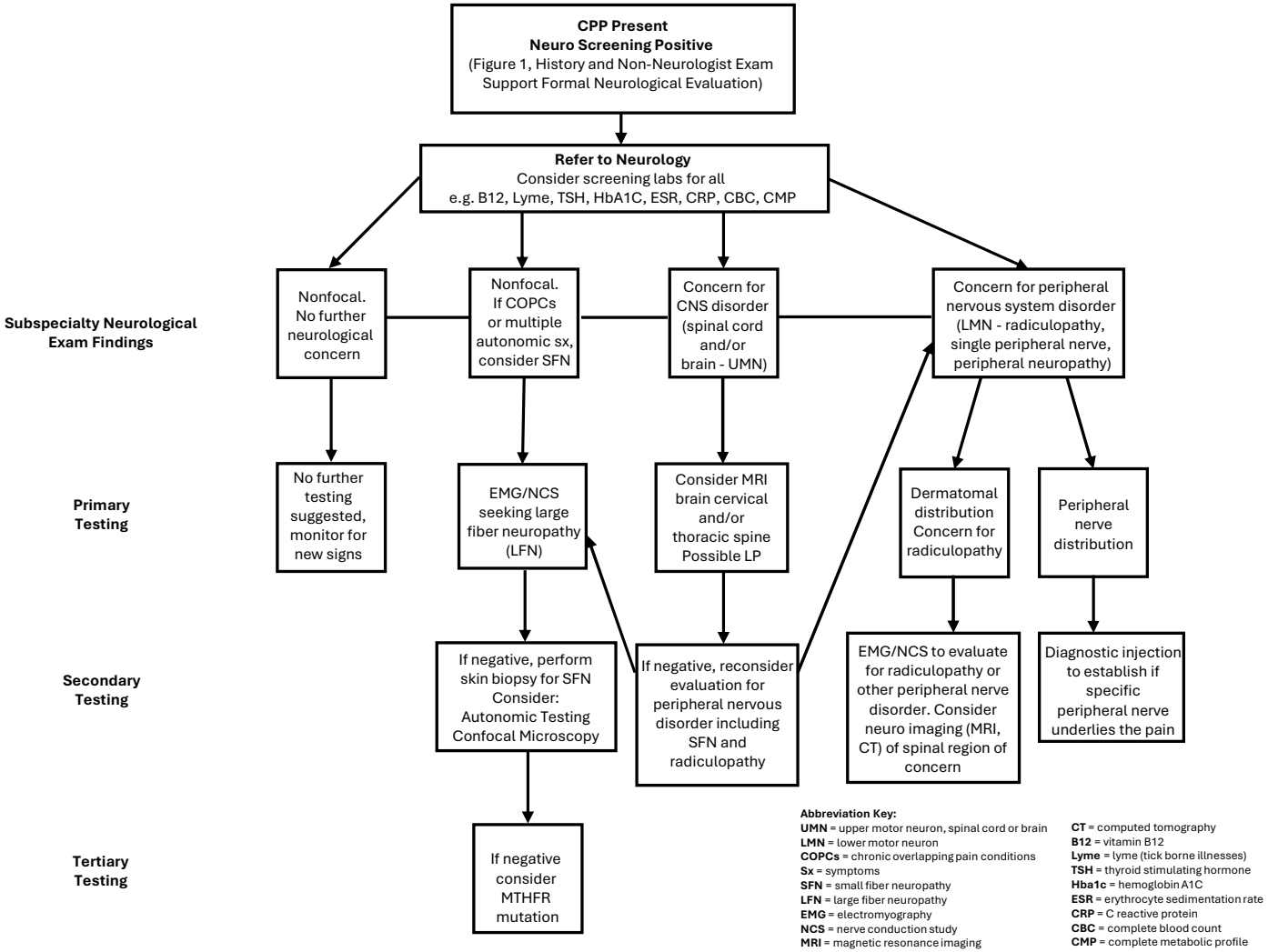


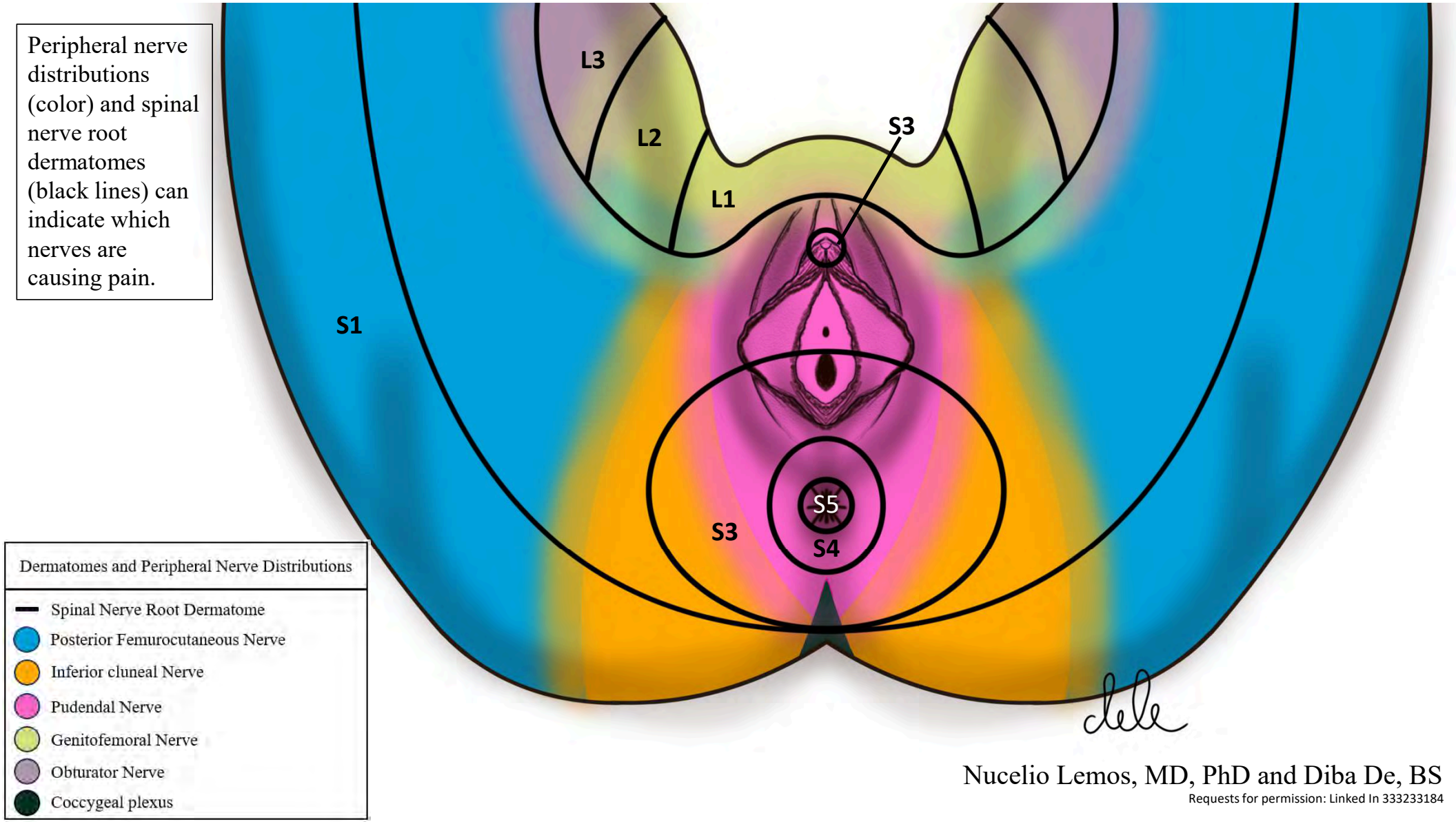
Figure 1: Screening criteria used to trigger referral of patients with CPP for neurological evaluation.

- Pain, sensory disturbance, or weakness referable to:
  - a specific nerve root
  - peripheral nerve distribution
  - a pattern consistent with a central nervous system etiology
- Combination bladder, bowel, sexual, or pain symptoms referable to lumbosacral spine pathology
- Balance or gait alteration
- Abnormal reflexes, sensation, or weakness on cursory neurological examination
- Upper motor neuron findings or unexplained hypotonia on urodynamics
- Evidence of autonomic dysfunction (including interstitial cystitis, irritable bowel syndrome, erectile dysfunction, persistent genital arousal disorder, arrythmia, postural orthostatic tachycardia syndrome), and/or chronic overlapping pain syndromes (COPCs, including pelvic pain, migraine, endometriosis, temporomandibular joint pain, sensitive feet, fibromyalgia)
- Pelvic pain refractory to musculoskeletal and organ-based interventions

Neurologist's Diagnostic Algorithm in people with CPP referred by pelvic health for a positive Neurological Screening.
This is a basic guide, not to replace subspecialty neurological evaluation.

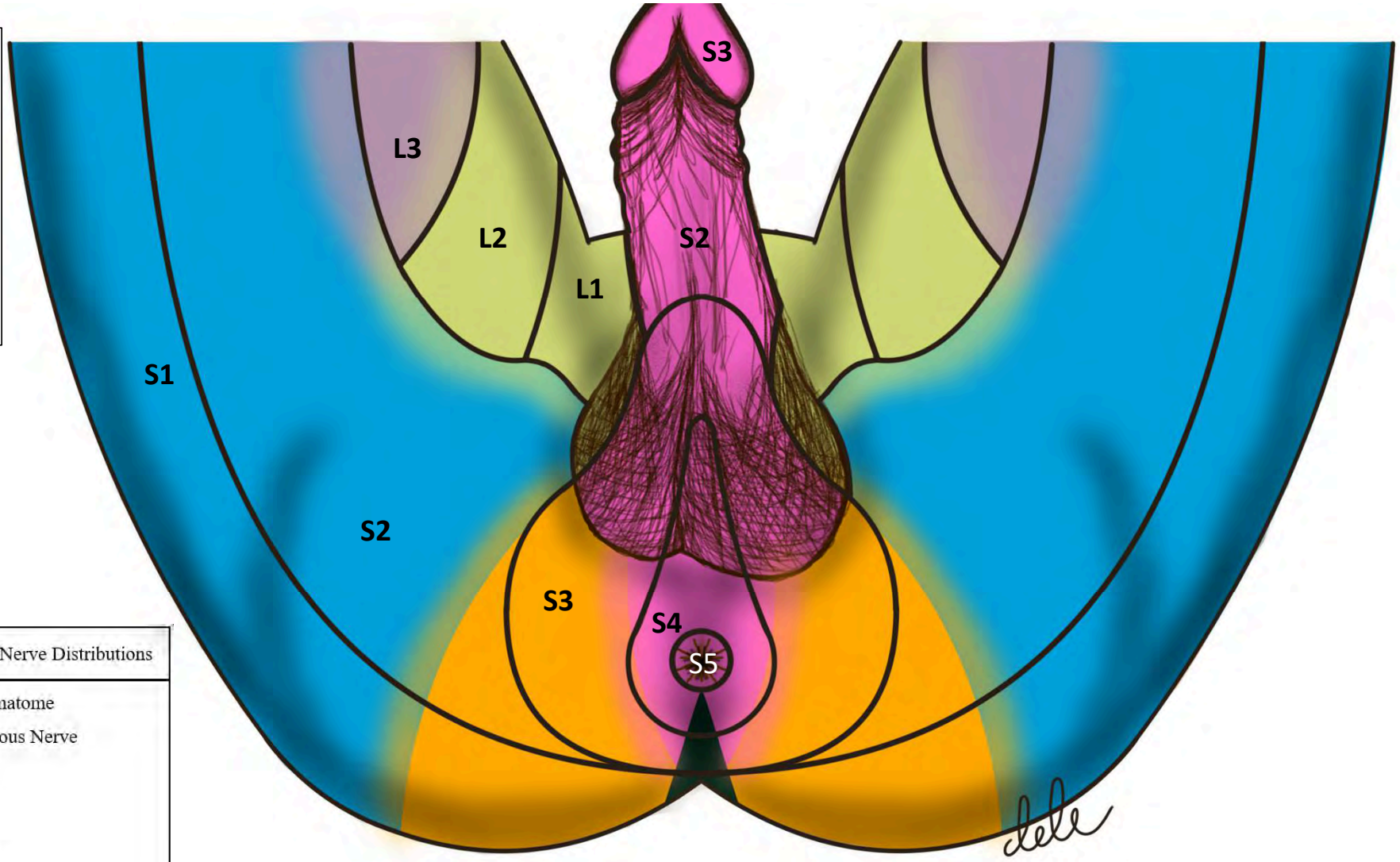


Peripheral nerve distributions (color) and spinal nerve root dermatomes (black lines) can indicate which nerves are causing pain.



Nucelio Lemos, MD, PhD and Diba De, BS

Peripheral nerve distributions (color) and spinal nerve root dermatomes (black lines) can indicate which nerves are causing pain.



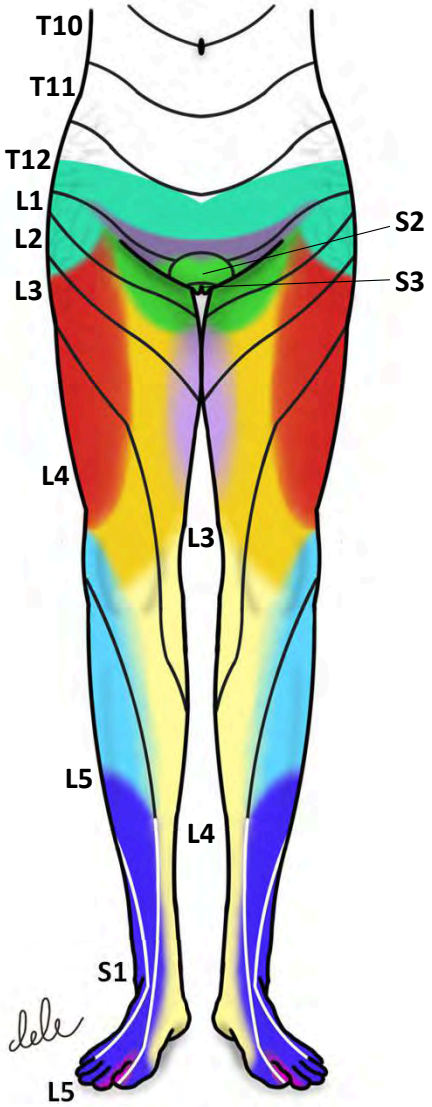
Dermatomes and Peripheral Nerve Distributions

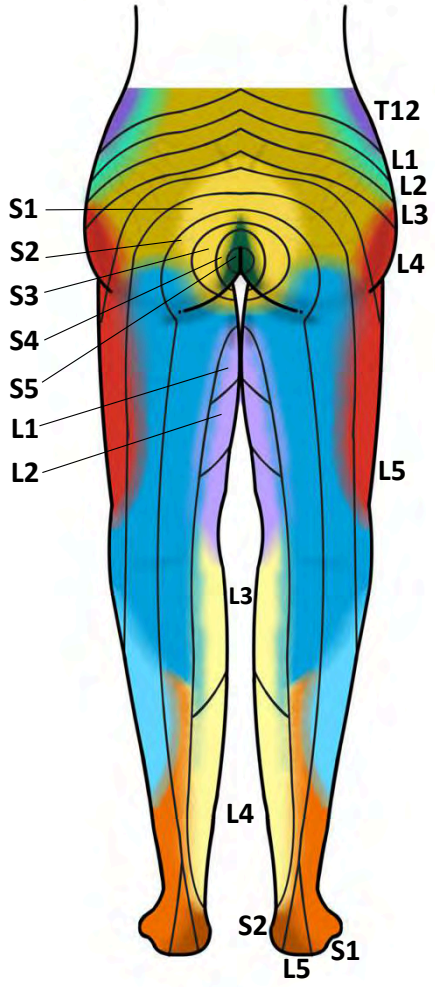
- Spinal Nerve Root Dermatome
- Posterior Femurocutaneous Nerve
- Inferior cluneal Nerve
- Pudendal Nerve
- Genitofemoral Nerve
- Obturator Nerve
- Coccygeal plexus

Nucelio Lemos, MD, PhD and Diba De, BS

Key of Spinal Nerve Root Dermatomes and Peripheral Nerve Distributions

- Spinal Nerve Root Dermatome
- Iliohypogastric Nerve
- Ilioinguinal Nerve
- Genitofemoral Nerve
- Lateral Femoral Cutaneous Nerve
- Femoral Nerve
- Obturator Nerve
- Posterior Femorocutaneous Nerves
- Femoral Nerve (Saphenous Branch)
- Common Fibular Nerve (superficial)
- Common Fibular Nerve (deep)
- Posterior Femorocutaneous Nerves
- Superior Cluneal Nerve
- Middle Cluneal Nerve
- Tibial Nerve (Sural)
- Tibial Nerve
- Coccygeal Plexus





Nucelio Lemos, MD, PhD and Diba De, BS

QR CODES
Online Videos of Dr. Peters'

Pudendal Nerve Implant Procedures

Ishio-rectal Pudendal
Implant Video
SCAN QR CODE

Trans-gluteal Pudendal
Implant Video
SCAN QR CODE

Sacral Tarlov perineurial cysts: a systematic review of treatment options

Jan Alberto Paredes Mogica, MD,[1] Frank Feigenbaum, MD,[2] Julie G. Pilitsis, MD, PhD, MBA,[3] Rudolph J. Schrot, MD, MAS,[4] Anne Louise Oaklander, MD, PhD,[5] and Elise J. B. De, MD[6]

INCLUDE WHEN CITING Published online December 15, 2023; DOI: 10.3171/2023.9.SPINE23559.

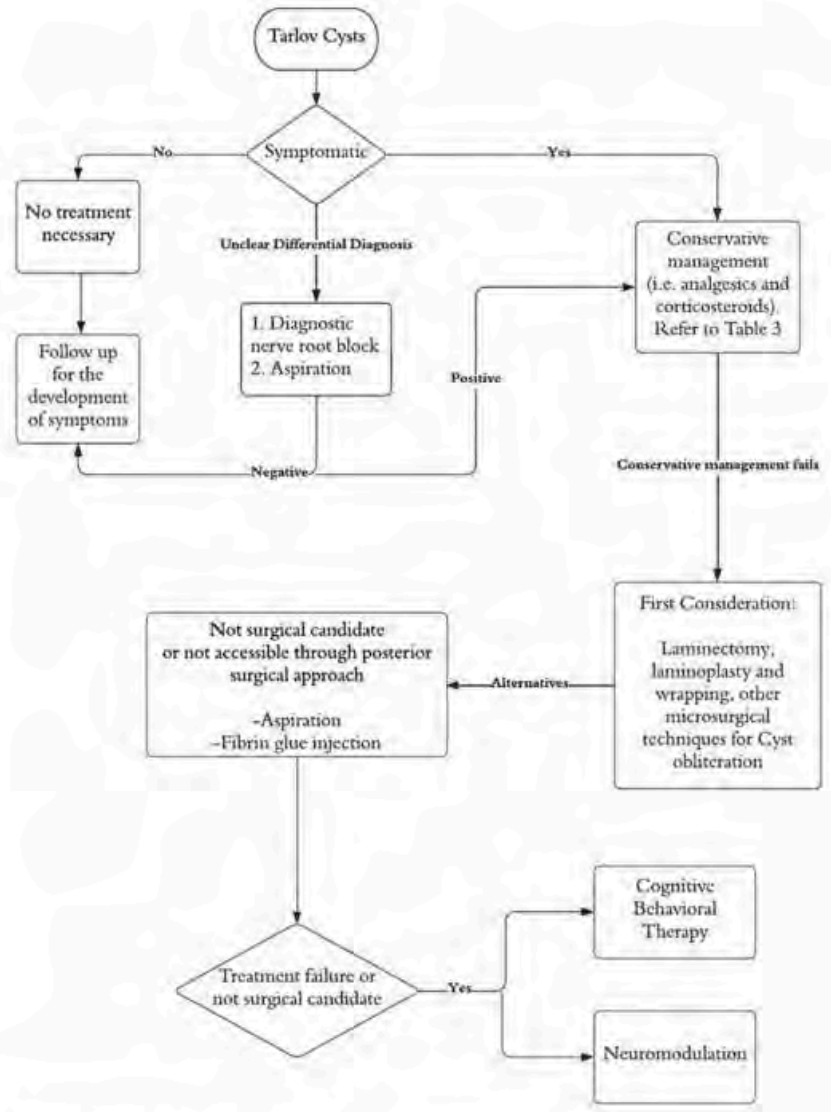


FIG. 4. Proposed algorithm for the management of TCs.

https://www.youtube.com/channel/UC-f3TlJ_cS_QGld9MVlB6sg
http://www.youtube.com/@AvantUrology

OUR SERVICES

5 CONSIDERATIONS IF YOU'RE THINKING ABOUT A VASECTOMY REVERSAL

December 17th, 2020 0 431

As the number of children in the average U.S. household continues to decrease while the costs associated with raising a...

READ MORE

CONFERENCE TALKS

MANAGING POST VASECTOMY PAIN SYNDROME

December 10th, 2020 0 845

Post vasectomy pain syndrome (PVPS) is a difficult condition to treat. Part of the problem is our lack of understanding...

READ MORE

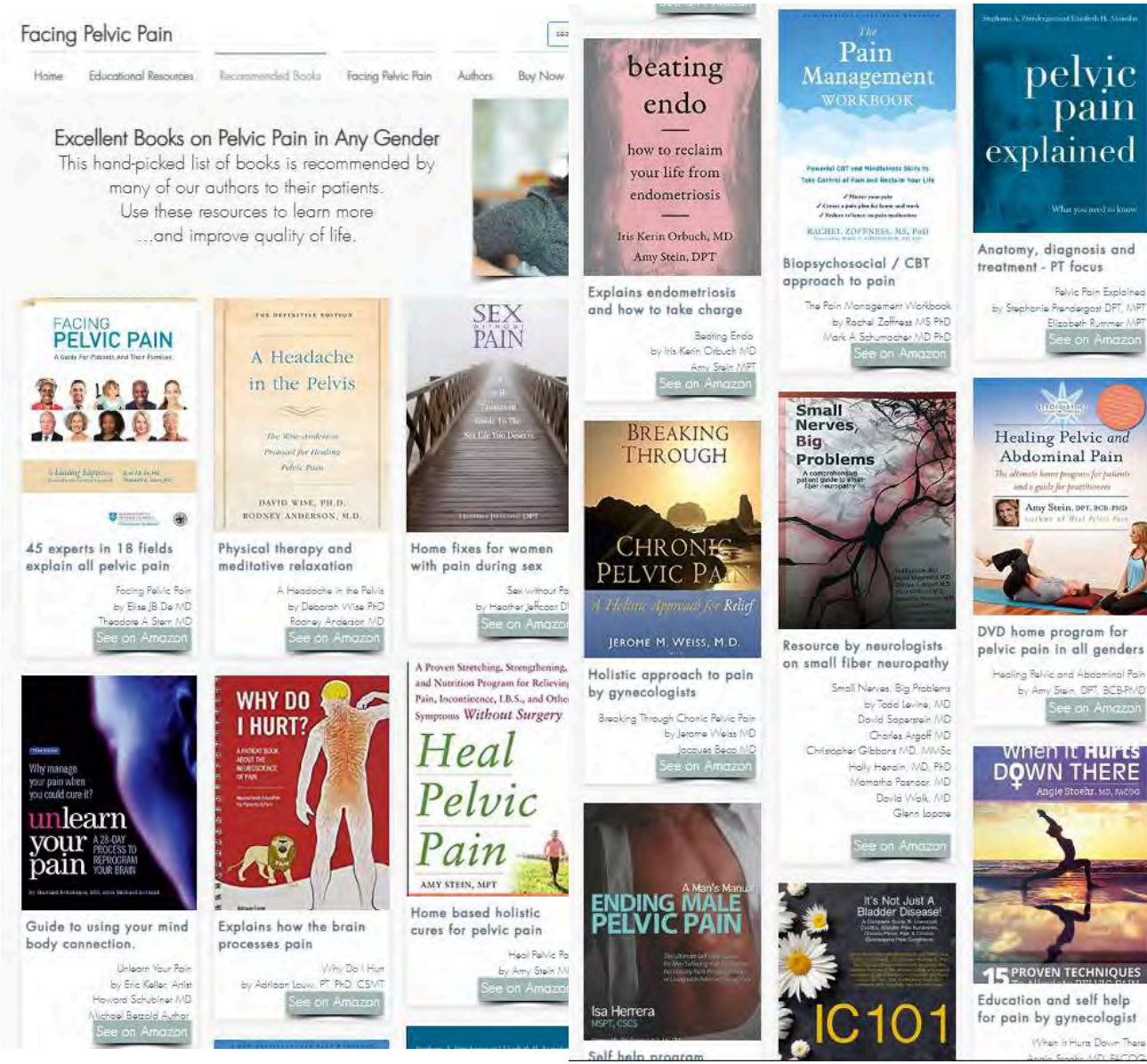
Search ... SEARCH

RECENT POSTS

- New Hope for Enlarged Prostate: Avant Enrolls World's First Patient in the ProVIDE Clinical Trial
- Erectile Dysfunction & Chronic Prostatitis
- September is National Prostate Health Month
- Avant Concierge Urology Officially Grand Opens with Ribbon-Cutting Ceremony
- Dr. Sijo Parekattil Named Among Top Physicians in

https://avanturol.com/managing-post-vasectomy-pain-syndrome/

Books


Facing Pelvic Pain
Home
Educational Resources
Recommended Books
Facing Pelvic Pain
Authors
Buy Now
Excellent Books on Pelvic Pain in Any Gender
This hand-picked list of books is recommended by many of our authors to their patients.
Use these resources to learn more
...and improve quality of life.
FACING PELVIC PAIN
45 experts in 18 fields explain all pelvic pain
Facing Pelvic Pain
by Elise JB De MD
Theodore A Stern MD
See on Amazon
A Headache in the Pelvis
DAVID WISE, PH.D.
RODNEY ANDERSON, M.D.
Physical therapy and meditative relaxation
A Headache in the Pelvis
by Deborah Wise PhD
Rodney Anderson MD
See on Amazon
SEX WITHOUT PAIN
Home fixes for women with pain during sex
Sex without Pa
by Heather Jeffcoat DI
See on Amazo
Why manage your pain when you could cure it?
unlearn your pain
A 28-DAY PROCESS TO REPROGRAM YOUR BRAIN
Guide to using your mind body connection.
Unlearn Your Pain
by Eric Keller, Artist
Howard Schubiner MD
Michael Bazold Author
See on Amazon
WHY DO I HURT?
Explains how the brain processes pain
Why Do I Hurt
by Adriaan Louw, PT, PhD, CSMT
See on Amazon
A Proven Stretching, Strengthening, and Nutrition Program for Relieving Pain, Incontinence, I.B.S., and Other Symptoms Without Surgery
Heal Pelvic Pain
AMY STEIN, MPT
Home based holistic cures for pelvic pain
Heal Pelvic Pa
by Amy Stein M
See on Amazo
beating endo
how to reclaim your life from endometriosis
Iris Kerin Orbuch, MD
Amy Stein, DPT
Explains endometriosis and how to take charge
Beating Endo
by Iris Kerin Orbuch MD
Amy Stein MPT
See on Amazon
The Pain Management WORKBOOK
Biopsychosocial / CBT approach to pain
The Pain Management Workbook
by Rachel Zoffness MS PhD
Mark A Schumacher MD PhD
See on Amazon
pelvic pain explained
Anatomy, diagnosis and treatment - PT focus
Pelvic Pain Explained
by Stephanie Prendergast DPT, MPT
Elizabeth Rummer MPT
See on Amazon
BREAKING THROUGH
CHRONIC PELVIC PAIN
A Holistic Approach for Relief
JEROME M. WEISS, M.D.
Holistic approach to pain by gynecologists
Breaking Through Chronic Pelvic Pain
by Jerome Weiss MD
Jacques Beca MD
See on Amazon
Small Nerves, Big Problems
Resource by neurologists on small fiber neuropathy
Small Nerves, Big Problems
by Todd Levine, MD
David Saperstein MD
Charles Argoff MD
Christopher Gibbons MD, MMSc
Holly Herolin, MD, PhD
Mamatha Pasnoor, MD
David Walk, MD
Glenn Lopate
See on Amazon
Healing Pelvic and Abdominal Pain
Amy Stein, DPT, BCB-PMD
DVD home program for pelvic pain in all genders
Healing Pelvic and Abdominal Pain
by Amy Stein, DPT, BCB-PMD
See on Amazon
A Man's Manual
ENDING MALE PELVIC PAIN
Isa Herrera
MSPT, CSCS
Self help program
It's Not Just A Bladder Disease!
IC101
When It Hurts DOWN THERE
Angie Stoehr, MD, FACOG
15 PROVEN TECHNIQUES
Education and self help for pain by gynecologist
When It Hurts Down There

Websites

- American Urogynecological Society (AUGS): https://www.voicesforpfd.org/
- American College of Ob-Gyn: https://www.acog.org/
- American Physical Therapy Association: https://www.apta.org/
- Herman Wallace Institute: https://pelvicrehab.com/
- Beth Shelly DPT: https://www.bethshelly.com/new-patients/pelvic-pain-and-spasms/
- Global Pelvic Health Alliance: https://pelvicguru.com/
- Endometriosis Association: https://endometriosisassn.org/
- National Health Service (NHS.UK):
  - https://www.nhs.uk/conditions/endometriosis/
  - https://www.nhs.uk/conditions/fibroids/
  - https://www.nhs.uk/conditions/vulvodynia/
  - https://www.nhs.uk/conditions/pelvic-inflammatory-disease-pid/
  - https://www.nhs.uk/conditions/pelvic-pain/
  - https://www.nhs.uk/conditions/pudendal-neuralgia/
- International Foundation for Functional Gastrointestinal Disorders: https://iffgd.org/
- Interstitial Cystitis Network: https://www.ic-network.com/
- Interstitial Cystitis Association: https://www.ichelp.org/
- International Pelvic Pain Society: https://www.pelvicpain.org/
  - https://www.pelvicpain.org/public/resources/educational-resources/informational-handouts
  - https://app.v1.statusplus.net/membership/provider/index?society=ipps&t=public
- Facing Pelvic Pain: Video and Written Resources on all Causes of Pelvic Pain:
  - https://www.facingpelvicpain.org/pain-in-pelvis-patient-education
- Toronto Academic Pain Medicine Institute:
  - https://tapmipain.ca/patient/managing-my-pain/
- World Federation for Incontinence and Pelvic Problems: https://wfipp.org/
- Vulvodynia Association: https://www.nva.org/
- Vulvar Pain Foundation: https://www.thevpfoundation.org/
- Pudendal Neuralgia Association: https://www.pudendalassociation.org/
- Pudendal HOPE: http://www.pudendalhope.info/
- Neuropathy Commons: https://neuropathycommons.org/