

# Sexual Pain: Causes, Diagnosis, and Treatment

ISSWSH Annual Meeting 2024  
PreCourse

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# Financial Disclosures

- I have no financial disclosures.

# Objectives

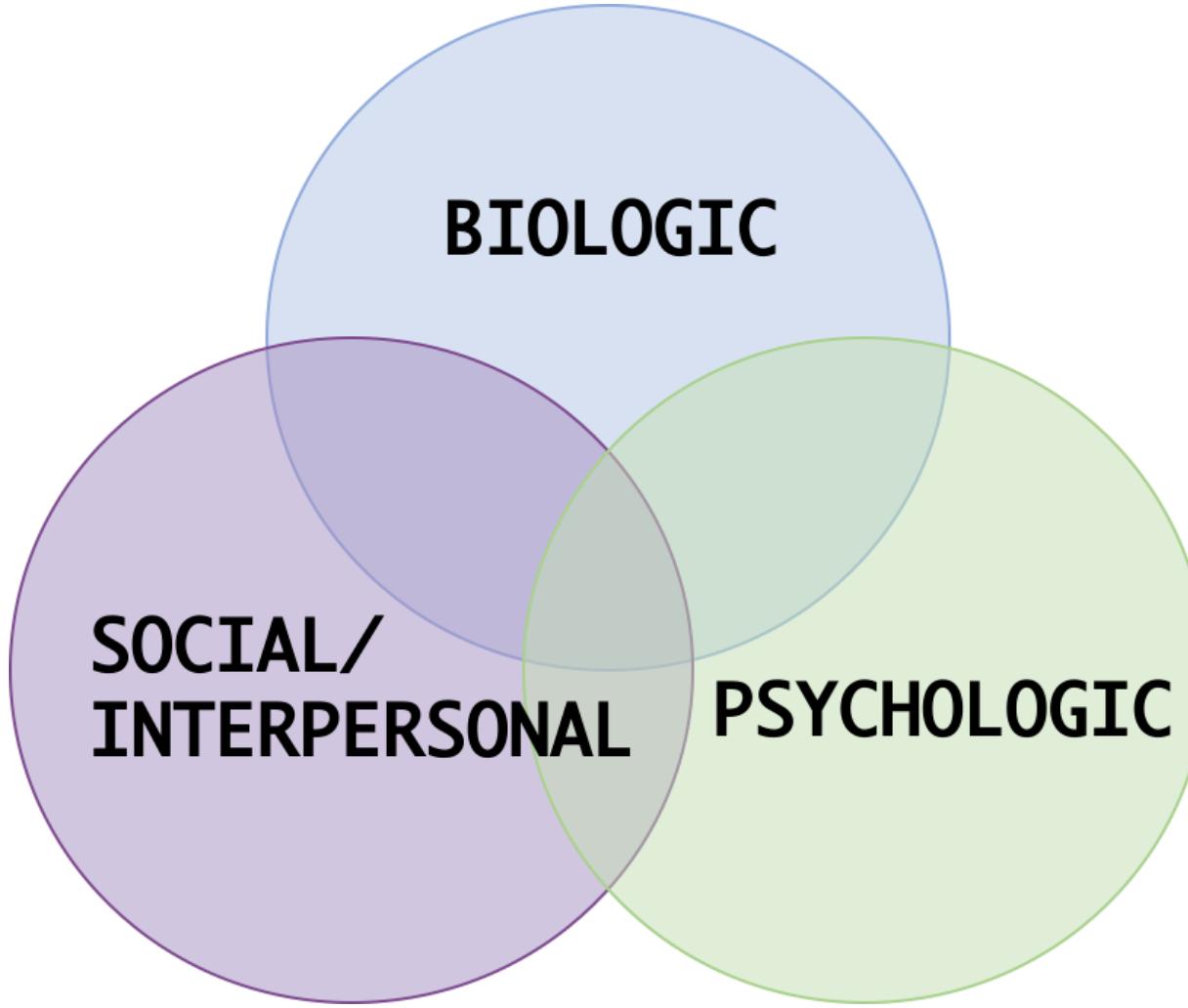
At the end of this 35 minute talk, you should be able to

1. Identify the main categories of sexual and genitopelvic pain disorders.
2. Use the presented framework to organize and interpret data from an evaluation to accurately diagnose a patient with a condition.
3. Identify appropriate treatment options for patients with genitopelvic pain conditions.

# Diversity, Equity, and Inclusion Statement



# THE BIOPSYCHOSOCIAL MODEL



**Table 3.** 2015 Consensus Terminology and Classification of Persistent Vulvar Pain and Vulvodynia

**A. Vulvar pain caused by a specific disorder\***

- Infectious (eg, recurrent candidiasis, herpes)
- Inflammatory (eg, lichen sclerosus, lichen planus, immunobullous disorders)
- Neoplastic (eg, Paget disease, squamous cell carcinoma)
- Neurologic (eg, postherpetic neuralgia, nerve compression, or injury, neuroma)
- Trauma (eg, female genital cutting, obstetrical)
- Iatrogenic (eg, postoperative, chemotherapy, radiation)
- Hormonal deficiencies (eg, genitourinary syndrome of menopause [vulvovaginal atrophy], lactational amenorrhea)

**B. Vulvodynia—vulvar pain of at least 3 months' duration, without clear identifiable cause, which may have potential associated factors.**

The following are the descriptors:

- Localized (eg, vestibulodynia, clitorodynia) or generalized or mixed (localized and generalized)
- Provoked (eg, insertional, contact) or spontaneous or mixed (provoked and spontaneous)
- Onset (primary or secondary)
- Temporal pattern (intermittent, persistent, constant, immediate, delayed)

**VULVODYNIA = persistent pain, at least 3 months duration with no clear cause**

Most commonly:  
Musculoskeletal  
Hormonal  
Nerve related

\*Women may have both a specific disorder (e.g., lichen sclerosus) and vulvodynia.  
Bornstein, et al 2016, JSM

# COMPREHENSIVE HISTORY

- “EVERYTHING WAS FINE UNTIL....”
- **WHO:** Know their context for sexual function (Partners? Trauma/Abuse? Religion? Culture?)
- **WHAT:** Describe the pain (burning, itching, rawness, cutting, tearing, throbbing, aching, heaviness)
- **WHERE:** Is it on the outside, at the entrance, or deeper inside?
- **WHEN:** Get a very detailed timeline (particularly in regard to timing of pain with potential causes such as pills, infections, injuries, or births).
- **WHY:** That's next...

# COMPREHENSIVE HISTORY

- Attitudes about sex/genitals
- Trauma history (big AND little T, physical and emotional/verbal)
- Anxiety/depression/OCD
- Anxious tendencies/ Type A personality
- Connective tissue disorders, POTS, MCAS
- Competitive sports, daily cycling, equestrian, heavy weight lifting
- Endometriosis/GYN surgery
- IBS/IBD

# COMPREHENSIVE PELVIC EXAM

## CONSENT

- "Offer" an exam
- Describe your plan
- Empower autonomy
- Is a speculum needed?

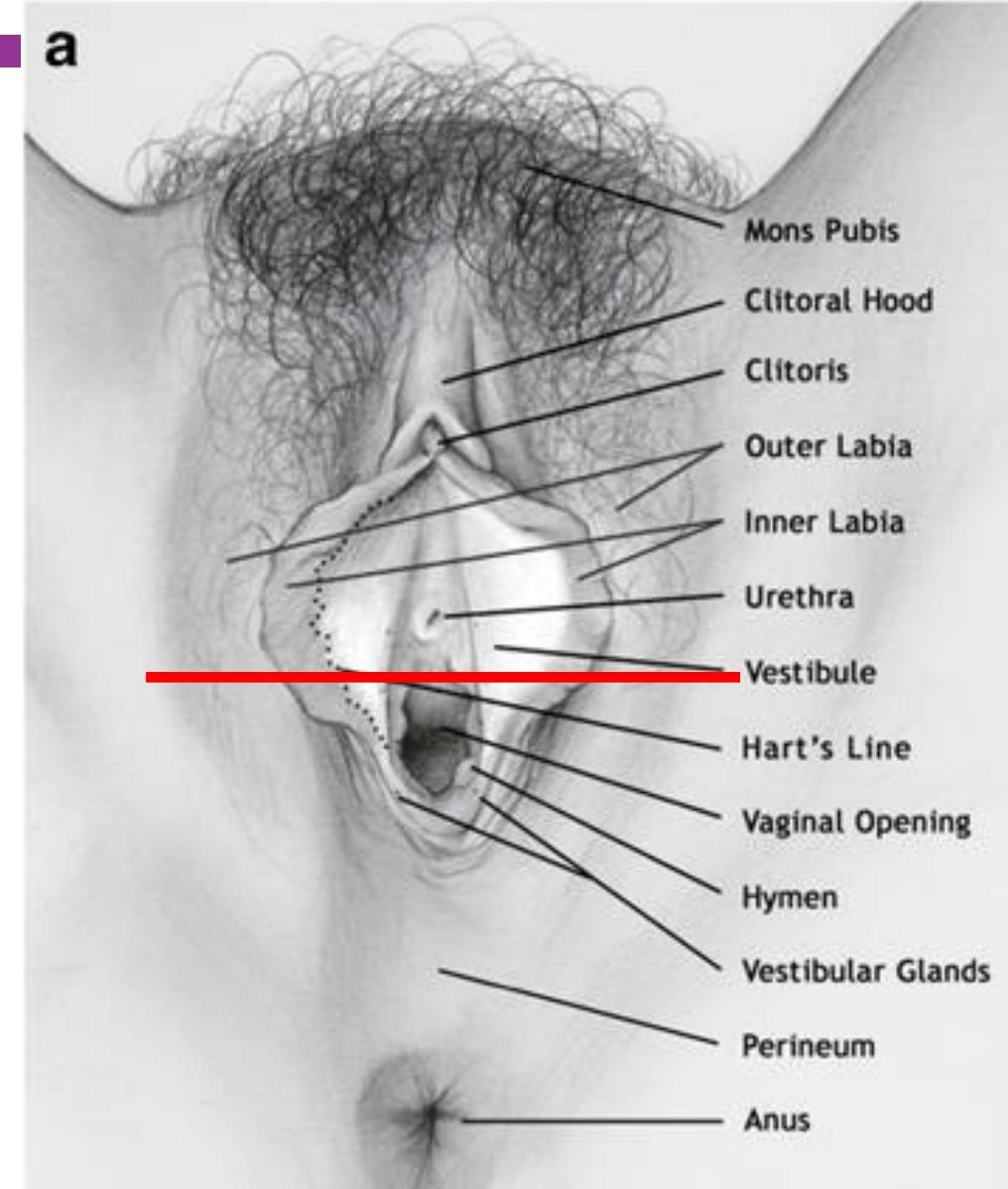


# Mirror mirror, in your hand!



# The Vestibule

- Divide it in half
- Many diagnoses are differentiated by eliciting pain on anterior vs posterior half.
  - Posterior only = muscle
  - Anterior + posterior = hormone/nerve



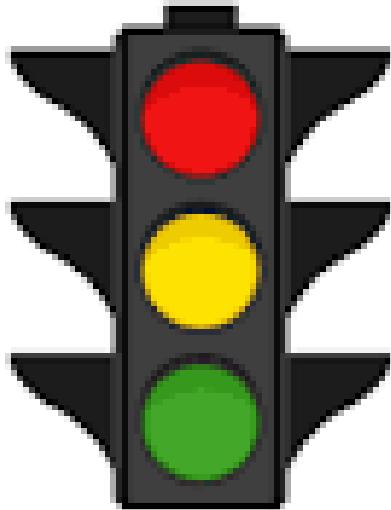
# “Q Tip Test”



# Q Tip Test (moistened with water or gel!)

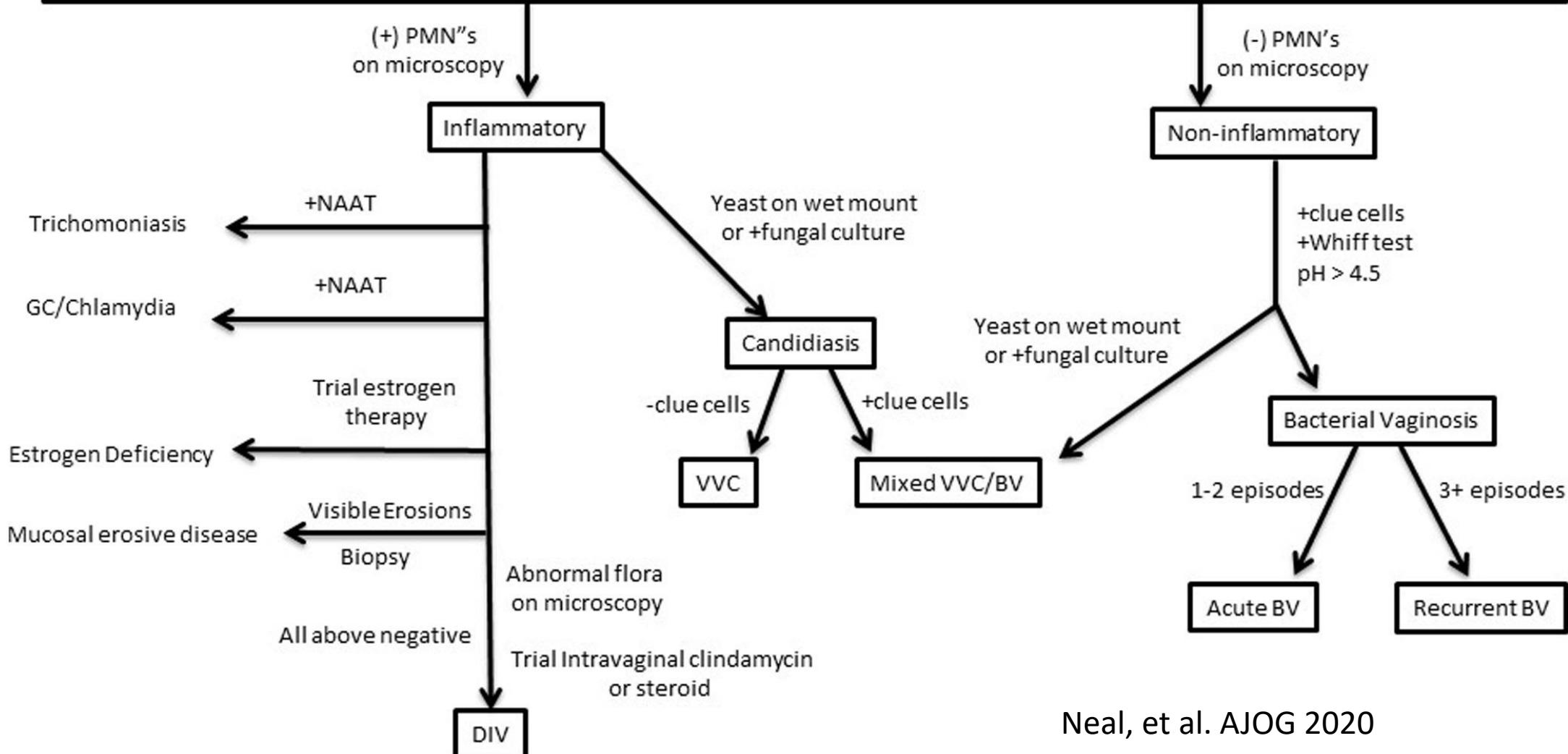
- Make sure to get baseline in remote areas such as inner thighs to allow patient to feel nonpainful touch.
- I tend to use more of a gentle swipe motion rather than a poke or touch (exception being when touching the posterior vestibule where the muscle insertion sites are)
- Use lots of anatomically correct language and a mirror to teach the patient about her anatomy.
- Always distinguish between normal “scratchy/sensitive” sensations and “PAIN” – descriptors are helpful
  - Burning, cutting, sharp, knife like, needles, stinging, hot, etc.

# DIAGNOSTIC TESTING



<b>HIGH YIELD</b>	<b>Wet mount (alternative: pH and whiff)</b>	
<b>MAYBE</b>	Genital culture	Ultrasound
	PCR-based vaginal testing	MRI
	Hormones (total testosterone, SHBG, FSH/LH, estradiol)	Pudendal block or topical anesthesia test
<b>LOW YIELD</b>	Repeat STI testing (if recently negative and no new risk factors)	
	HSV serum titers	

Vaginal Symptoms			
<b>Candidiasis</b> dyspareunia vulvar soreness vulvar itching curd-like discharge	<b>Trichomoniasis</b> purulent discharge (70%) vulvar itching/irritation dysuria strawberry cervix (2%)	<b>DIV</b> dyspareunia vulvar irritation vaginal erythema purulent discharge	<b>Bacterial Vaginosis</b> amine odor white-grey discharge coating vaginal walls & vestibule



Neal, et al. AJOG 2020

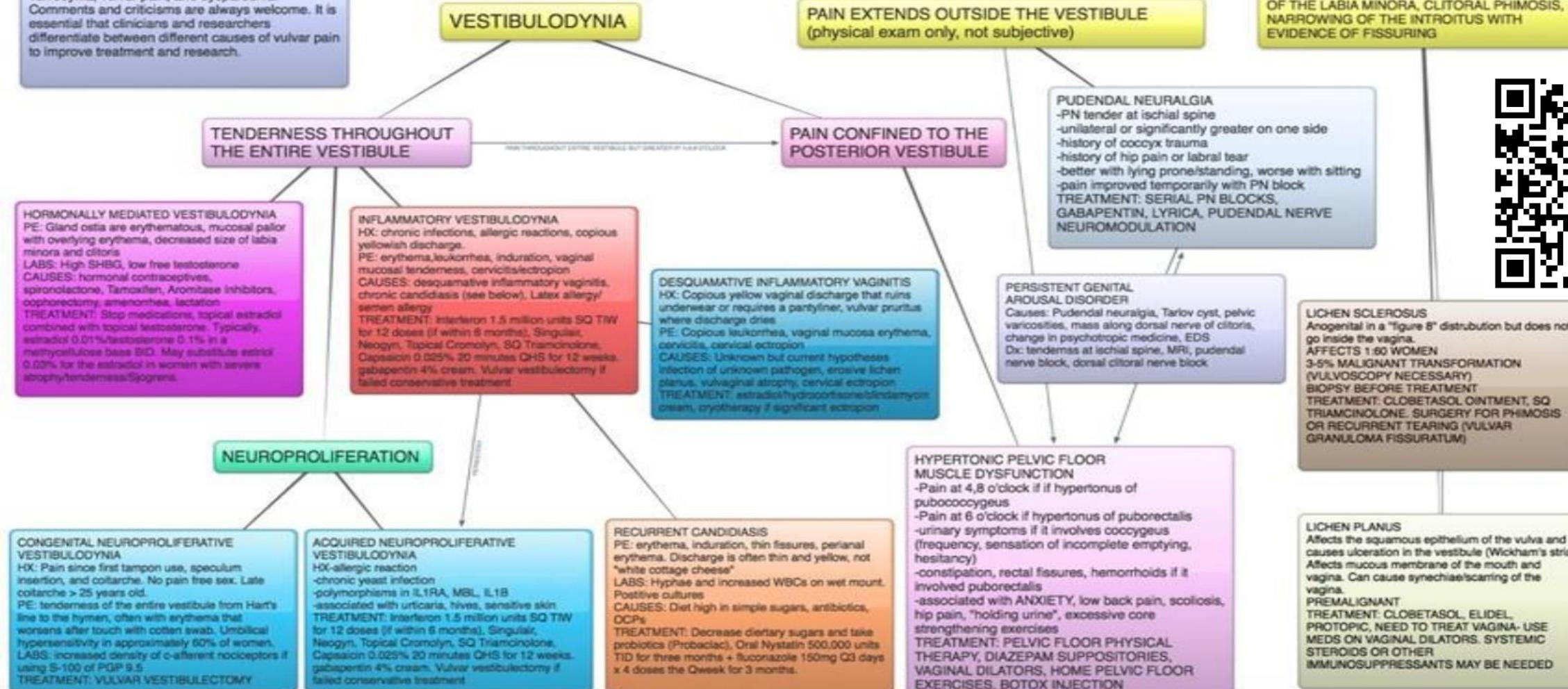


# Persistent Vulvar Pain: Diagnostic and Treatment Algorithm

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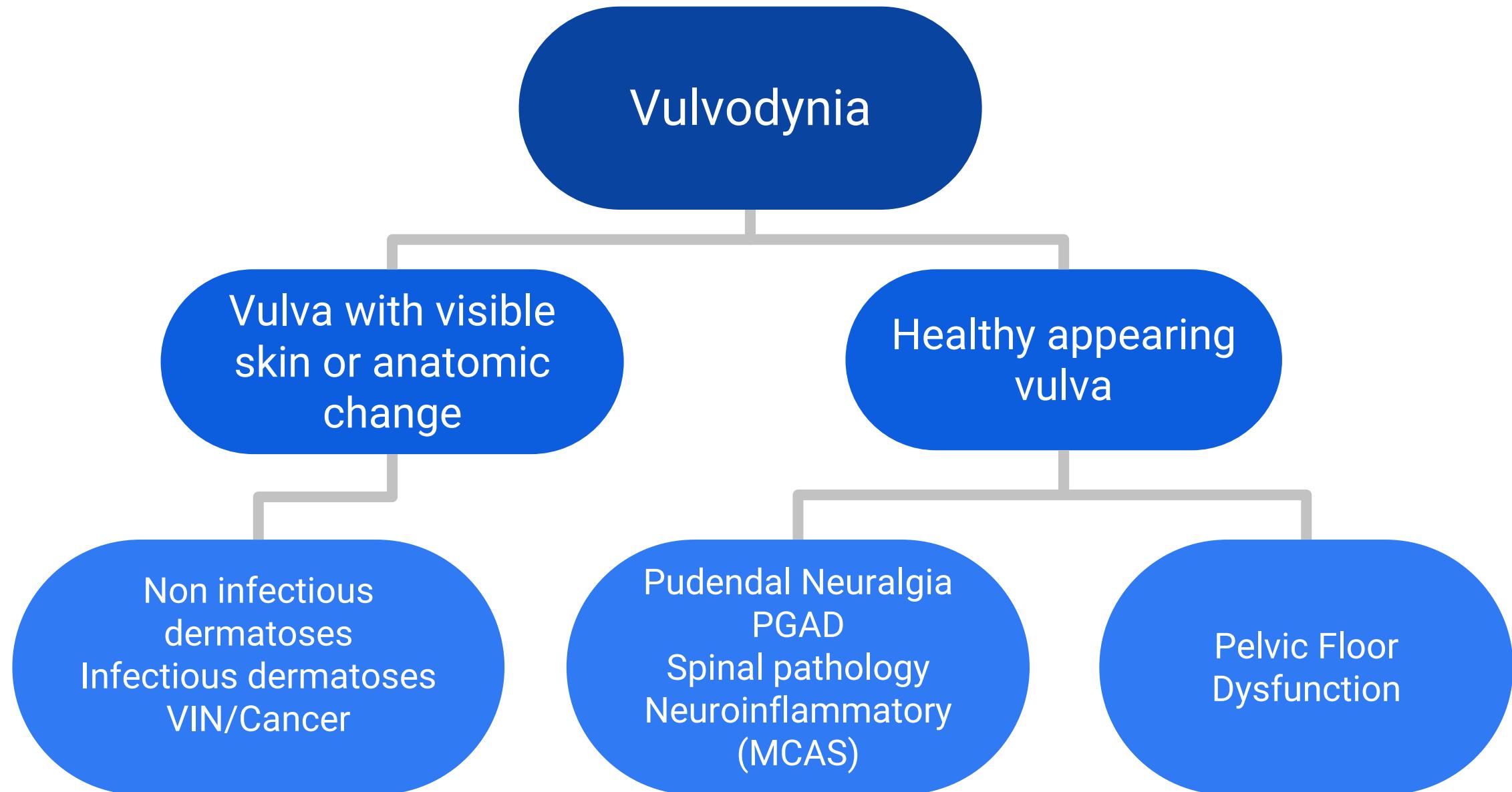
A proposed diagnostic and treatment algorithm for vulvodynia, vulvar pain, and dyspareunia. Comments and criticisms are always welcome. It is essential that clinicians and researchers differentiate between different causes of vulvar pain to improve treatment and research.

## INTROITAL DYSPAREUNIA & VULVAR PAIN: A diagnostic and treatment algorithm



# COMPREHENSIVE DIFFERENTIAL

- Vulva (mons, labia minora/majora, perineum)
- Vestibule
- Clitoris
- Urethra/Bladder

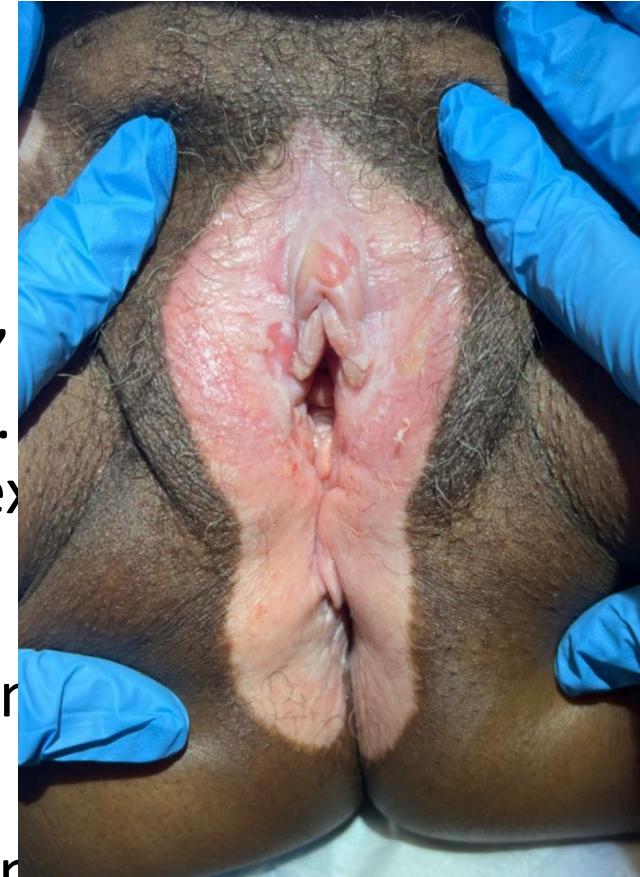


# Case 1

- 37yo nonbinary G1P1 AFAB presents for pain, itching, and “cuts” on vulva
- History: Both unprovoked and provoked pain. Difficult to wear tight clothing, sex is painful and tears even when exercising, lightening of skin
- Meds: none
- Med/Surg Hx: Vaginal birth 6 months ago, significant tearing, traumatic recovery. Still breastfeeding
- Exam: Keratinized skin with hypopigmentation (loss of melanin), lichenification thickening), tissue paper crinkled texture, phimosis, labial resorption, introital narrowing. Pelvic floor muscles tight and tender.
- Diagnoses?

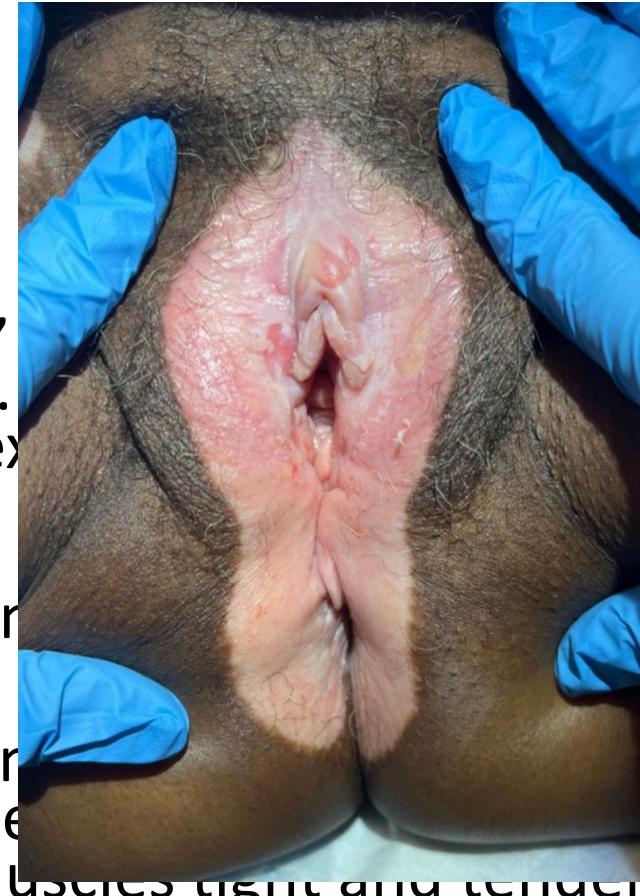
# Case 1

- 37yo nonbinary G1P1 AFAB presents for pain, vulva
- History: Both unprovoked and provoked pain. skin  
clothing, sex is painful and tears even when ex
- Meds: none
- Med/Surg Hx: Vaginal birth 6 months ago, significant recovery. Still breastfeeding
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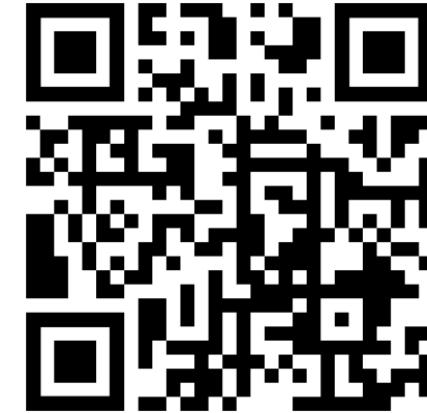
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- Diagnoses?
  - Lichen sclerosis
  - Genitourinary syndrome of lactation
  - Hypertonic pelvic floor muscles

## Treatment Plan:

- Clobetasol ointment 0.05% OUTSIDE
- Estradiol cream 0.01% INSIDE (vestibule and vagina)
- Pelvic floor physical therapy



# Lichen Sclerosus

- Autoimmune condition of the skin
  - Commonly in anogenital areas of women (but can also affect men)
- Characterized by severe inflammation, sclerotic tissue formation, and changes in vulvar architecture
- Symptoms include hypopigmentation, tearing, itching, fissures/pain, pain with vaginal penetration
- Increased risk of other autoimmune conditions:
  - Autoimmune thyroid diseases (Hashimoto thyroiditis and Graves' disease), alopecia areata, vitiligo, and pernicious anemia
- Can affect vulvas of ANY age
- Increased (4-6%) risk of vulvar carcinoma if not optimally treated

# Vestibulodynia

Anterior and  
Posterior

Posterior

Hormonally  
mediated

Low hormone status,  
esp Testosterone  
(OCPs, Lactation,  
Menopause,  
Medications, Surgeries)

Neuroproliferative

Acquired  
(chronic  
infection or  
allergen)

Congenital  
(lifelong, look for  
umbilical  
hypersensitivity)

Hypertonic pelvic  
floor muscle

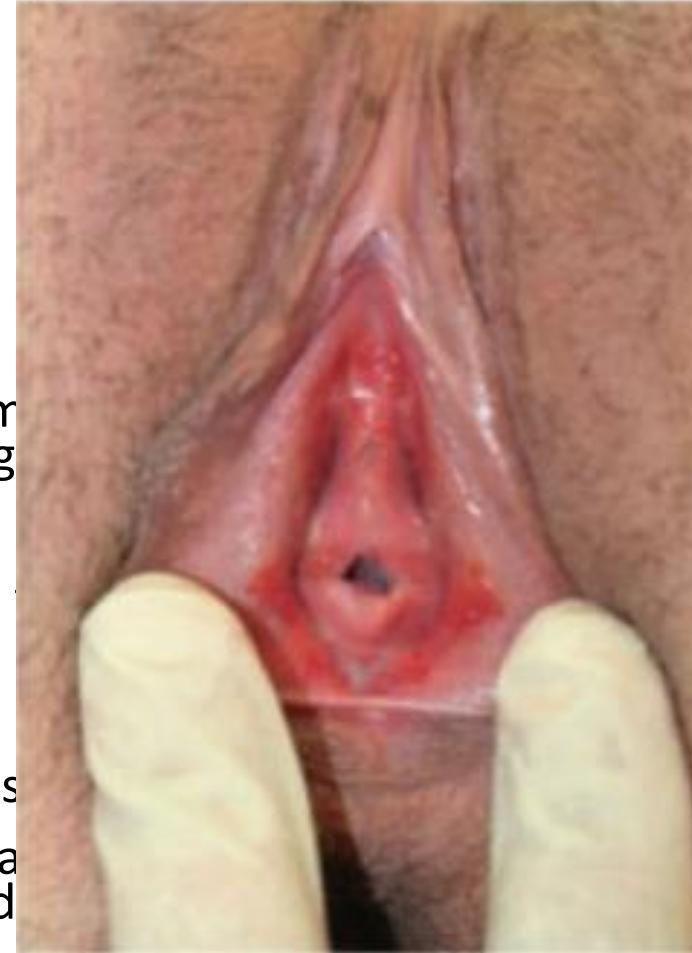
Pain can vary in  
severity, timing,  
and duration

# Case 2

- 24 year old G0 cis woman presents to you for annual exam, states she cannot have penis-vagina intercourse with her cis male partner, this began 1 year ago.
- Meds: combined OCPs for 2 years.
- Med/Surg Hx: She has mild anxiety that is addressed with therapy (and feels the pain is making her anxiety worse, not the reverse)
- Meds: OCPs (started 2 years ago)
- Med/Surg Hx: She frequently has constipation and anal fissures (had a workup with GI)
- Exam: Keratinized skin normal appearing. Vestibule is notable for severe erythema, especially around gland ostia. Pelvic floor muscles are tight and tender.
- Diagnoses?

# Case 2

- 24 year old G0 cis woman presents to you for annual exam. She has been having pain with vaginal intercourse with her cis male partner, this began 1 year ago.
- Meds: combined OCPs for 2 years.
- Med/Surg Hx: She has mild anxiety that is addressed with benzodiazepines. She has noticed that her anxiety is worse, not the reverse.
- Meds: OCPs (started 2 years ago)
- Med/Surg Hx: She frequently has constipation and anal fissures.
- Exam: Keratinized skin normal appearing. Vestibule is notably tender to palpation around gland ostia. Pelvic floor muscles are tight and tender.
- Labs: Free calculated testosterone = 0.2ng/dL
- Diagnoses?
  - Hormonally mediated vestibulodynia
  - Hypertonic pelvic floor dysfunction



## Treatment Plan:

- Estradiol 0.01% / Testosterone 0.1% in methylcellulose gel (compounded!)
  - Pelvic floor physical therapy
  - Psychotherapy



## Free & Bioavailable Testosterone calculator

These calculated parameters more accurately reflect the level of bioactive testosterone than does the sole measurement of total testosterone. Total testosterone is bound to specific plasma proteins (sex hormone-binding globulin SHBG) and weakly bound to nonspecific proteins such as albumin. This calculator measures the free fraction, bioavailable testosterone includes free plus weakly bound to albumin.

# How to calculate free testosterone?

This is not diagnostic but can be SUPPORTIVE of diagnosis

Albumin	<input type="text" value="4.3"/> g/dL	<input type="button" value="Calculate"/>	<a href="#">Explanation and examples</a>
SHBG	<input type="text" value="112"/> nmol/L		
Testosterone	<input type="text" value="28"/> ng/dL		
Free Testosterone	<input type="text" value="0.208 ng/dL"/> = 0.743 %		
Bioavailable Testosterone	<input type="text" value="4.88 ng/dL"/> = 17.4 %		

**Disclaimer:** Results from this calculator should NOT be solely relied upon in making (or refraining from making) a medical decision. The accuracy of the results depends on the accuracy of the input values. The calculator makes no guarantee as to the correctness or suitability for any given purpose.

**WARNING!** The calculated free and bioavailable testosterone are reliable in most clinical situations, but should not be used in women during pregnancy, in men during treatment inducing high levels of DHT (e.g. transdermal DHT, oral testosterone) or in men with a history of prostate cancer.

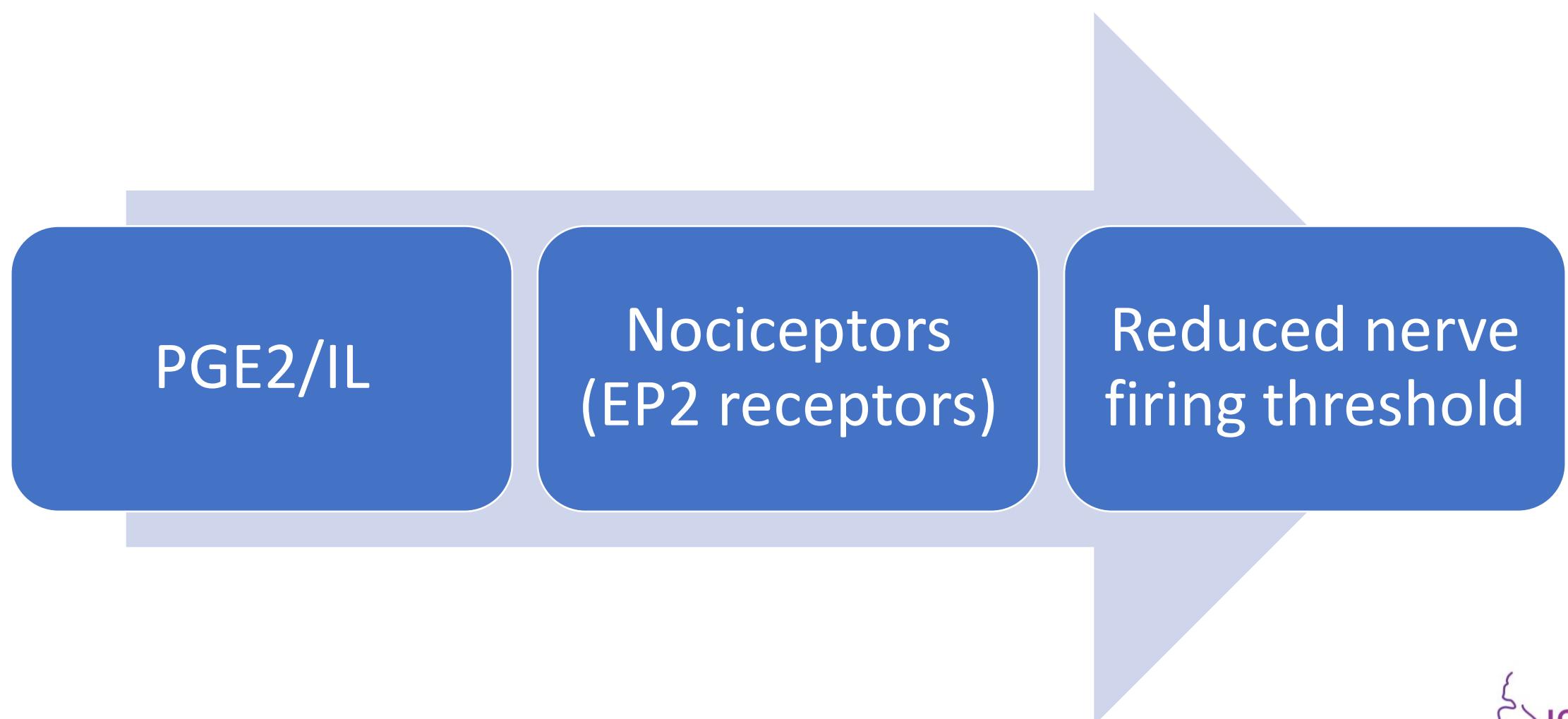
# Pro tips for vestibulodynia

- Start ET gel twice per day.
- Counsel patient's on timeline (slight change by 6 weeks, significant improvement by 3 months)
- Consider delaying physical therapy until active vulvar issue has been addressed and is not contributing to pain.
- Wean down once pain is significantly better, 2x per week for maintenance longer term. Total recommended duration is unknown.
- Check a total T 6-12 weeks after starting gel to ensure safe dosing.

# What about neuroproliferative?

- Must figure out timeline to determine how likely they have either
  - Acquired - triggered by chronic infection or irritant exposure
  - Congenital – born with increased density of C afferent nociceptors
- Vestibular tissue can appear erythematous but not always.

# Inflammation and Pain: What's the connection?



On vestibular pathology will see increased mast cells and density of C-afferent nociceptors

# Treatment Plan

- Therapy to work through anticipation of pain and fear of touch
- Hold off on pelvic floor PT until anterior vestibular pain is improved on repeat Qtip exam.

Topical	Oral	Injection	Surgical
4-6% Gabapentin cream	Gabapentin 300-900 mg IR or ER	Enoxaparin injection 40mg/d	Vestibulectomy with vaginal advancement flap
1% Amitriptyline cream	Tricyclic antidepressants	Interferon submucosal injection	
Cromolyn 5-10% cream	Montelukast 10 mg po qd		
Capsaicin 0.025% cream			



# Sources for regimens

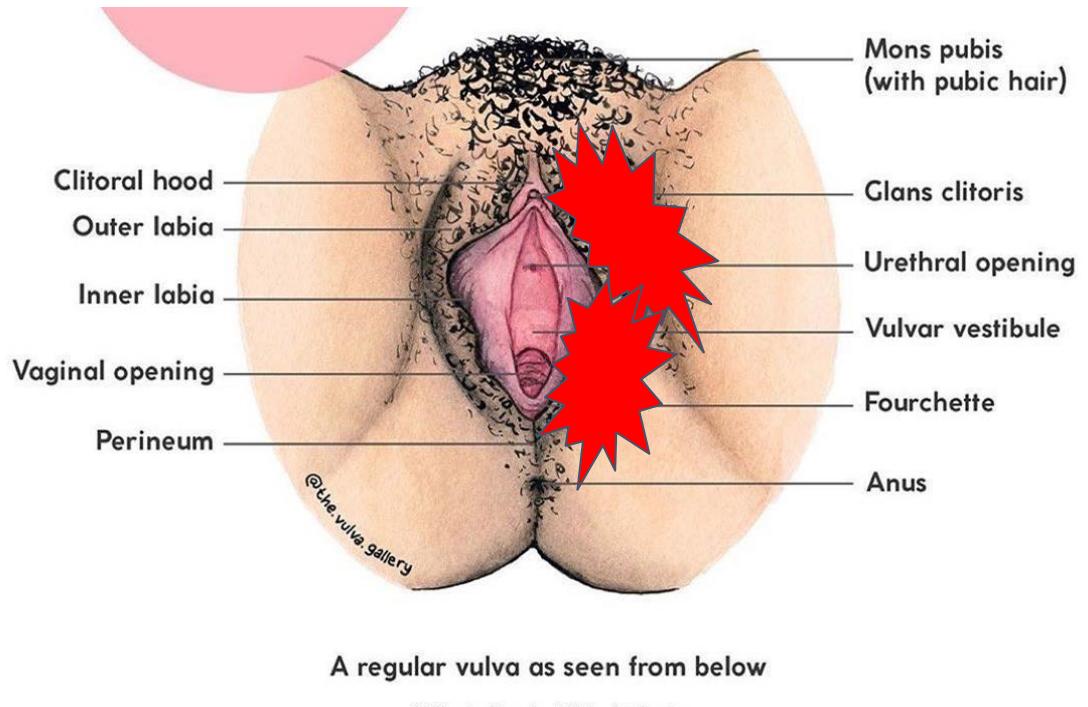
- Oral gabapentin 300-900 mg IR or ER or topical 6% Gabapentin cream
  - (Jeon Y et al, KJU 2013; Brown et al, 2018)
  - (Boardman et al, 2008, Obstet Gynecol)
- Montelukast 10 mg po qd
  - (Kamdar and Fisher, 2007; J Repro Med)
- Amitriptyline 1%/Ketamine .5% cream
  - (Poterucha et al, 2012; Pain Physician)
- Cromolyn 5-10% cream
  - (Nyirjesy et al .2001; Sex Trans Infect)
- Interferon submucosal injection
  - (Goldstein et al, 2016 J Sex Med)
- Enoxaparin injection 40mg/d
  - (Farajun et al, 2012, Obstet Gynecol)
- Capsaicin 0.025% cream
  - (Yenigun, Om 2019 UC Open Access)

# Case 3

- 41yo trans woman s/p vaginoplasty presents with vaginal bulge, unwanted genital arousal and pain for over a year.
- History: Symptoms worse when sitting for longer than 30minutes and riding a bike. Has had multiple imaging studies negative for a vaginal/pelvic mass. Pelvic floor physical therapy did not help.
- Meds: Systemic estradiol
- Surg/med hx: Vulvo/vaginoplasty 6 years ago, had a fall on stairs 2 years ago.
- Exam: Allodynia (abnormal sensation) on left labium majus, labium minus. Tender on palpation of left ischial spine, confirmed on rectal exam.
- Diagnoses?

# Case 3

- 41yo trans woman s/p vaginoplasty pre genital arousal and pain for over a year.
- History: Symptoms worse when sitting on bike. Has had multiple imaging studies & floor physical therapy did not help.
- Meds: Systemic estradiol
- Surg/med hx: Vulvo/vaginoplasty 6 years
- Exam: Allodynia (abnormal sensation) on left labium majus, labium minus. Tender on palpation of left ischial spine, confirmed on rectal exam.
- Diagnoses?
  - Pudendal neuralgia
  - Persistent Genital Arousal Disorder
  - Hypertonic pelvic floor muscles

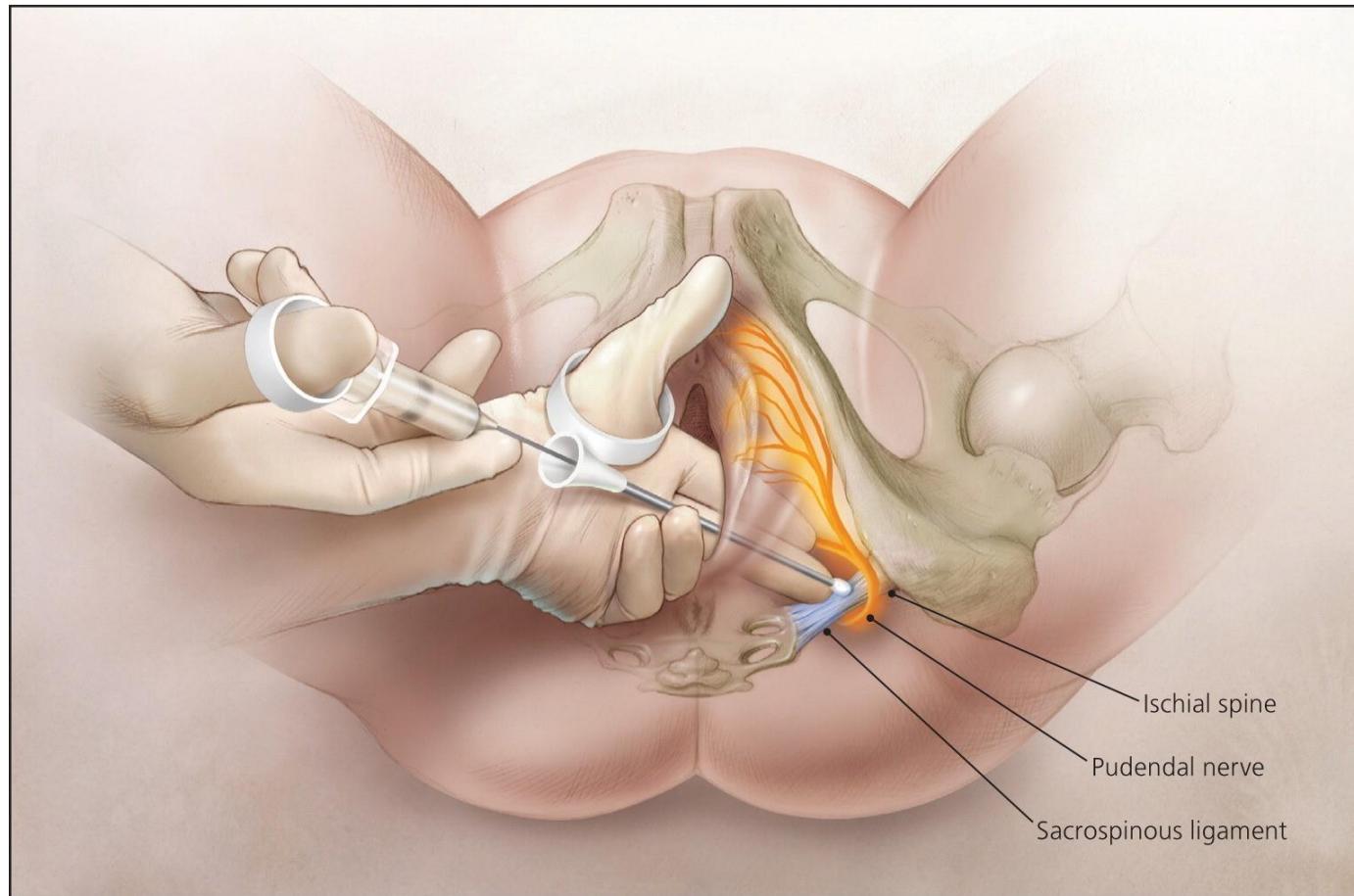


## Treatment Plan:

Serial pudendal nerve blocks x6 months  
+/- Pregabalin oral 50mg TID  
Pelvic floor physical therapy

# Pudendal nerve blocks

- Combination of steroid and anesthetic
- Commonly 5-10cc of bupivacaine or lidocaine with 10-40mg of triamcinolone.
- IF NERVE BLOCK DOES NOT RELIEVE AROUSAL, THEN NEED TO LOOK HIGHER IN SPINE WITH MRI FOR TARLOV CYSTS/HERNIATED DISCS. (REGION 3 OR 4)



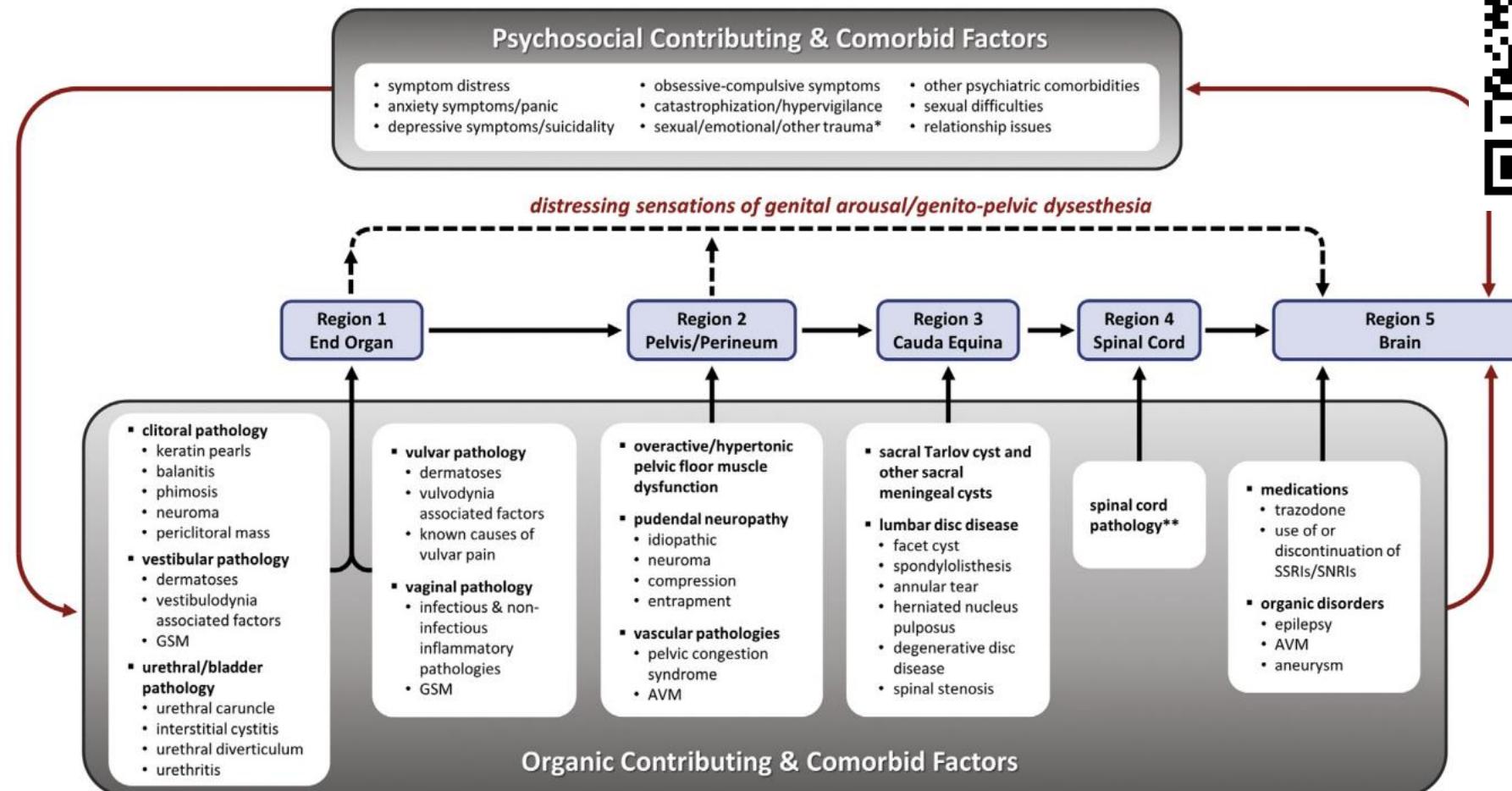


# ISSWSH Process for Care: PGAD/GPD

**Table 2.** ISSWSH consensus expert opinion on criteria and characteristics of persistent genital arousal disorder/genito-pelvic dysesthesia (PGAD/GPD)

Criteria	<p>persistent or recurrent, unwanted or intrusive, distressing sensations of genital arousal</p> <p>duration of <math>\geq 3</math> months</p> <p>may include other types of <b>genito-pelvic dysesthesia</b> (eg, buzzing, tingling, burning, twitching, itch, pain)</p> <p>most commonly experienced in the clitoris but also in other genito-pelvic regions (eg, mons pubis, vulva, vestibule, vagina, urethra, perineal region, bladder, and/or rectum)</p> <p>may include being on the verge of orgasm, experiencing uncontrollable orgasms, and/or having an excessive number of orgasms</p> <p>not associated with concomitant sexual interest, thoughts, or fantasies</p>
Associations	<p>limited resolution, no resolution, or aggravation of symptoms by sexual activity</p> <p>compromised orgasm quality (eg, aversive, impaired, altered frequency, intensity, timing, and/or pleasure)</p> <p>aggravation of genito-pelvic dysesthesia by certain circumstances (eg, sitting, car driving, music or sounds, general anxiety, stress, or nervousness)</p> <p>despair, emotional lability, catastrophization, and/or suicidality</p> <p>on physical examination, absent evidence of genital arousal (genital lubrication, swelling of clitoris or labia)</p>

Consensus Process of Care for PGAD/GPD



**Figure 2.** Biopsychosocial contributors and comorbid factors to PGAD/GPD. Factors are categorized as originating from 5 separate regions that may be successively modified through afferent nerve pathways. Pathology in Regions 3–5 may ultimately be interpreted by the brain as distressing sensations originating in Region 1 and/or Region 2 (dashed black arrows). Both psychosocial and organic factors modulate the nature and intensity of genito-pelvic sensations in the brain. Psychosocial factors may also influence organic factors in any of the 5 regions. AVM = arteriovenous malformation; GSM = genitourinary syndrome of menopause. \*Sexual trauma may also include physical trauma related to Regions 1–4. \*\*Spinal cord pathology may be a contributory factor, but cases associated with PGAD/GPD have yet to be reported in the peer-reviewed literature. Figure 2 is available in color online at [www.jsm.jsexmed.org](http://www.jsm.jsexmed.org).

# Clitorodynia

## Anatomic/ Mechanical

Phimosis/adhesions  
(keratin pearls, hair)  
Neuroma  
Sebaceous cyst/abscess  
Trauma

## Nerve related

Pudendal Neuralgia  
PGAD

## Hypertonic pelvic floor muscle

Ischiocavernosus  
muscle, levator ani,  
obturators

## Urethral/Bladder Pain

Painful Bladder Syndrome

Inflammation, treat early!  
(AUA guidelines!)

Overactive Bladder

Hypertonic pelvic  
floor muscles  
Detrusor muscle  
overactivity

Hormonal  
deficiency

GenitoURINARY  
syndrome of  
menopause

# Additional Causes of Genitopelvic Pain

- Endometriosis
- Adenomyosis
- Uterine Fibroids
- Pelvic Inflammatory Disease
- Connective tissue disorders (Ehlers Danlos, etc)
- GYN Surgery
- IBS/IBD

# A call to action from OUR patients

## 1. Taking our pain seriously can make all the difference.

"We've heard thousands of stories from patients whose pain was dismissed. They've been told things like,

**"you must have repressed sexual trauma,"**

**"it's a mental block, there's nothing causing your pain,"**

**"you're too young to have Lichen Sclerosus, only older women have that,"**

**"sometimes sex is painful and that's normal,"**

**"are you sure you're attracted to your husband?,"**

**"does your boyfriend know what he's doing?,"**

**"it could be because you're bisexual,"**

**"have you tried drinking some wine before sex?"...etc.**

As a provider, your words have a huge impact. Patients remember these comments, and, often, they don't seek care after they've been told something like this. Many of us even avoid necessary pap smears and exams because of being dismissed in the past. Believing that our pain is real, demonstrating curiosity about our experience and trying to understand how it's impacting us can make a huge impact on a patient's life."

## **2. It's okay not to know the answers.**

"We, as patients, know that there are gaps in education, training, and research on these conditions -- and we don't expect our medical providers to have all of the answers. **We really appreciate when medical providers are honest with us. Usually, we're looking for our medical providers to be partners with us in figuring out what's going on** and, if necessary, **refer** us to someone who has more expertise in treating these conditions"

### **3. Ask proactively about patients' symptoms, screen for pain with intercourse at check-up appointments.**

"Many patients don't realize that their pain is valid and that they need and deserve medical attention and care. Pain with sex is normalized in such a way in our society that many patients don't bring it up proactively with their doctors, and/or don't know how to talk about it. **If you ask your patients about their symptoms, you may save the patient years of pushing through the pain, consenting to sex that causes excruciating pain, and working through the courage to bring it up themselves.**"

## **4. Help us close the gaps in access to care.**

"It is extremely difficult for patients to find medical providers who treat these conditions who take insurance and are in a hospital network. A University of Minnesota study found that **over a third of vestibulodynia patients went to more than 15 doctor appointments before getting an accurate diagnosis**. The majority of patients **can't afford** to see an out-of-network specialist or provider. You can help us make this care more accessible by seeking out the education and tools so that **you can treat patients yourself** (rather than needing to refer to a specialist) and by **educating your colleagues!**"

# Take Aways

- LISTEN to your patient and THINK CRITICALLY when your knee-jerk reaction is disbelief, dismissive, or minimizing
- BE CREATIVE when making a plan with a patient. Each individual has unique needs and circumstances
- SEXUAL/GENITOPELVIC PAIN IS MULTISYSTEM AND MULTIDIPLINARY
  - Biopsychosocial!
  - Use your algorithms to help guide diagnosis
  - Refer to colleagues when needed

# Helpful Resources

Books	Clinician Orgs and Websites	Patient Orgs and Websites
<ul style="list-style-type: none"><li>• When Sex Hurts</li><li>• Come As You Are (look out for Come Together!)</li><li>• Becoming Cliterate</li><li>• What Happened To You?</li><li>• Menopause Manifesto</li><li>• Vagina Obscura</li><li>• I Love Female Orgasm</li></ul>	<ul style="list-style-type: none"><li>• ISSWSH (International Society for the Study of Women's Sexual Health)</li><li>• ISSM (International Society of Sexual Medicine)</li><li>• Scientific Network on Female Sexual Health and Cancer</li><li>• AASECT/STAR (Sex therapy/counseling)</li><li>• NAMS (North American Menopause Society)</li><li>• ACOG</li><li> </li><li>• <a href="https://www.academy.pelvicgloabal.com/">https://www.academy.pelvicgloabal.com/</a></li><li>• <a href="https://pelvicguru.com/">https://pelvicguru.com/</a></li></ul>	<ul style="list-style-type: none"><li>• Tight Lipped</li><li>• National Vulvodynia Association</li><li>• Pudendal Hope</li><li>• Lichen Sclerosus Support Network</li><li> </li><li>• OMGYes.com</li><li>• Rosy App</li><li>• <a href="https://www.sexlab.ca/">https://www.sexlab.ca/</a></li></ul>