

# Male and Female Perineum



# SCRUBS

STUDENT COLLABORATIVE RESOURCES FOR UNDERSTANDING AND BRODY SUCCESS

# *Mission Statement*

**SCRUBS** is a student-driven initiative that aims to develop supplemental resources for current and future cohorts that will pass through Brody. Members of **SCRUBS** participate in a variety of sub-committees working to create resources for students, by students. These resources aim to offer unique perspectives from students that have walked in the same shoes, developing resources that we wish we had been exposed to during our time in the course.

The hope is this organization will become a staple of the Brody student body, exemplifying the unique collaborative community that Brody offers. If this is a mission that aligns with your goals and you have the desire to help those that will come behind you, as well as a goal to leave your mark on Brody as a whole, we invite you to join the team!



# *Disclaimer*

The resources that are included in this document are made by students and not the faculty. As such, there is the possibility for errors in our development, although this is mitigated via a team approach to development with multiple stages of vetting. If there is a contradiction with the coursework presented within your course, please go by the course documents. Additionally, **SCRUBS** aims to supply ***supplemental resources***, however these are in no way replacements to the instruction of the Brody faculty. Use these resources as a supplement, but not as your primary source for course material.



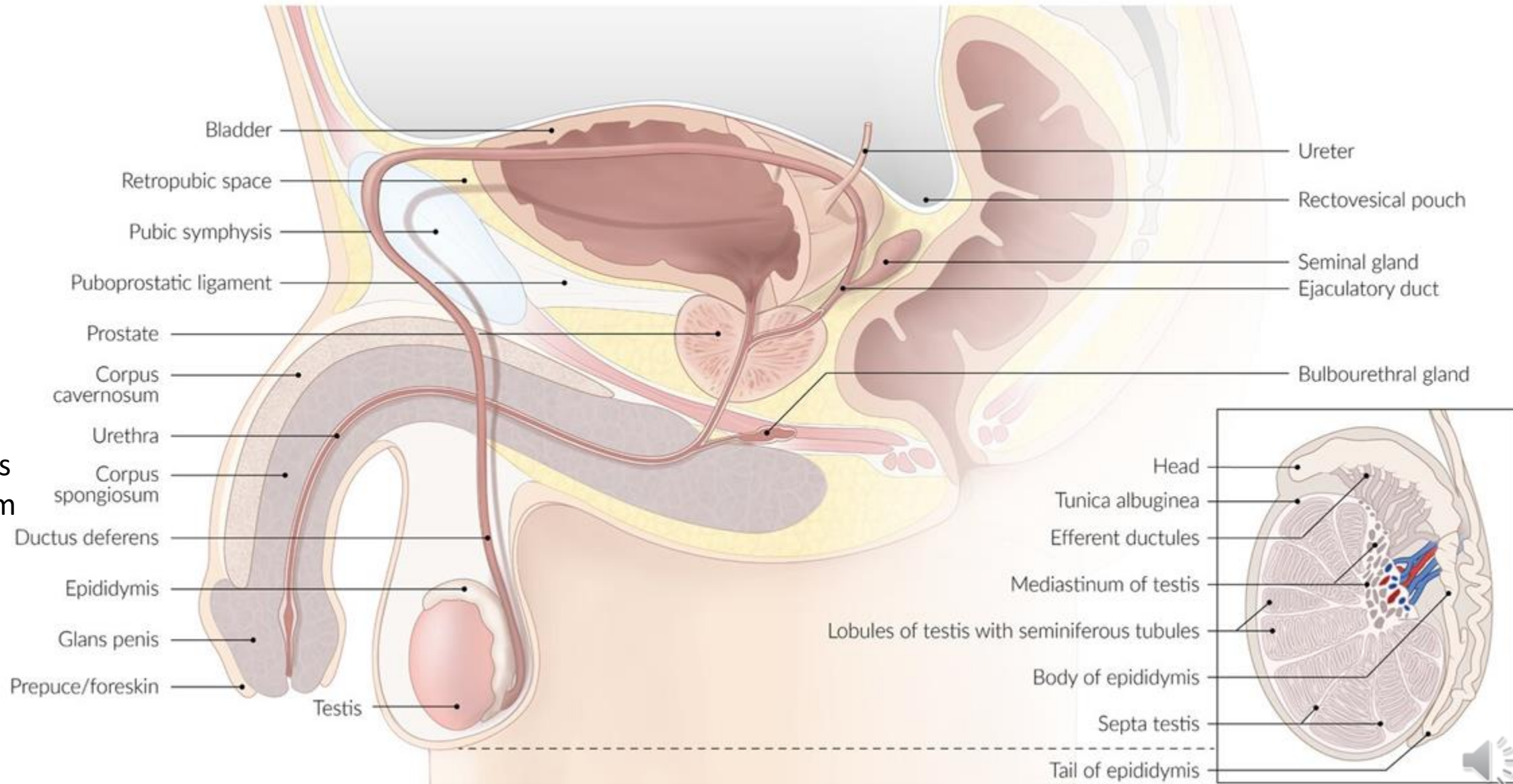
# Male Genitals

## Scrotum

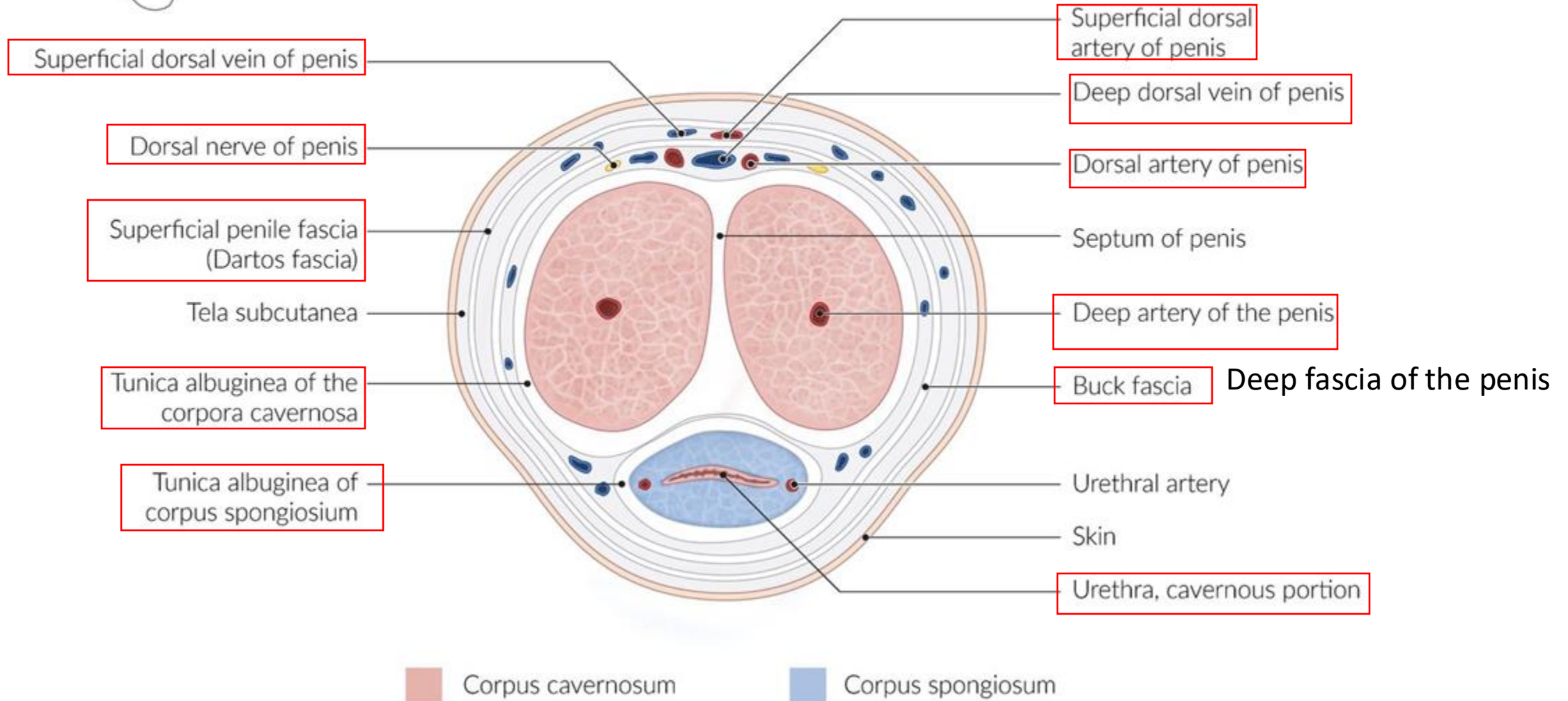
Skin +  
superficial  
perineal  
fascia,  
dartos  
muscle

## Penis

Corpa  
cavernosa,  
cura, corpus  
spongiosum  
, glans,  
external  
urethral  
orifice, bulb  
of penis,  
prepuce

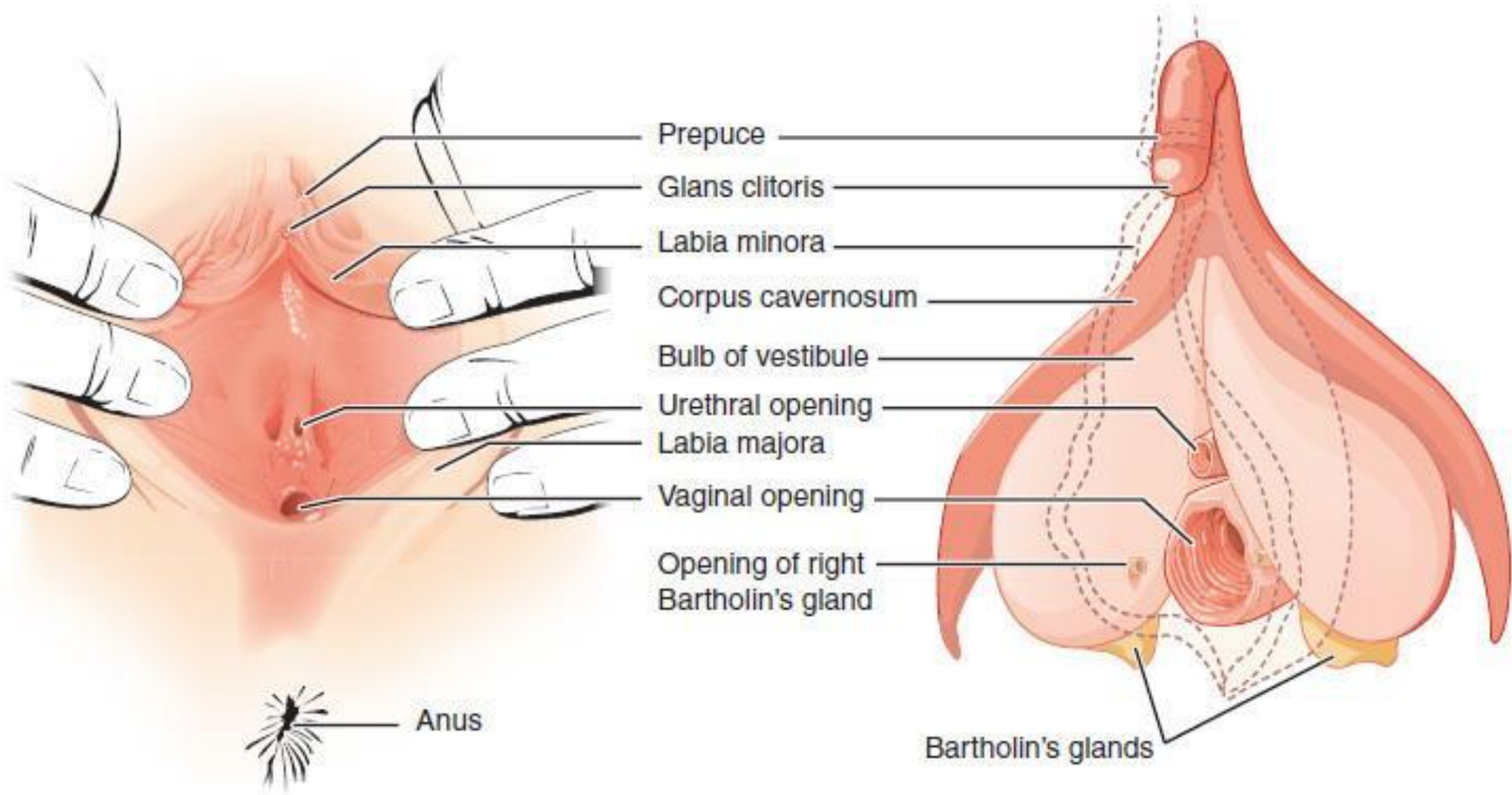


# Male Genitals





# Female Genitals



Vulva: External anterior view

Vulva: Internal anteriolateral view

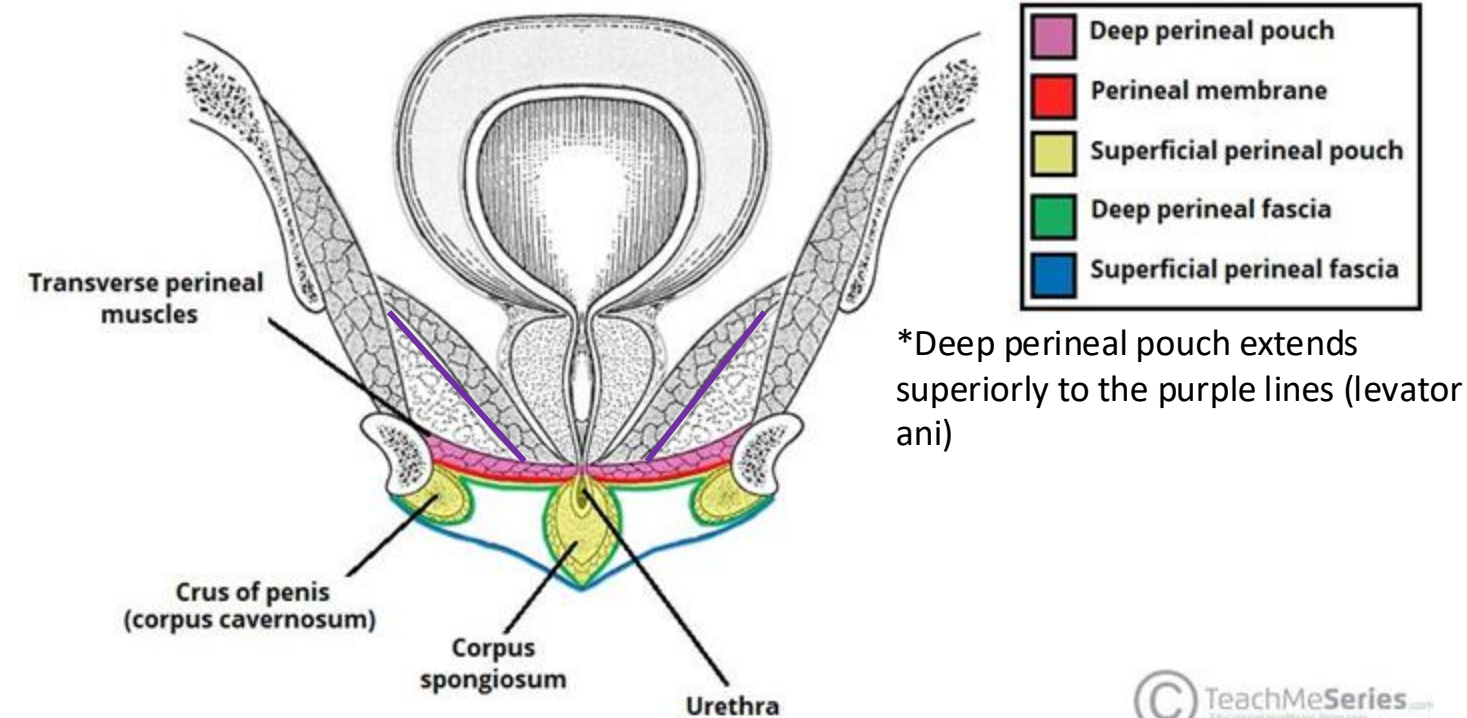


# Homologous Structures in Development

Male	Female
Testes	Ovaries
Epididymis, ductus deferens, seminal gland, ejaculatory duct	-----
Appendix of testes, seminal colliculus, prostatic utricle	Uterine tube, uterus, cervix, superior vagina
Prostate gland	Paraurethral glands
Bulbourethral glands	Greater vestibular glands
Penis	Clitoris
Scrotum	Labia majora
Penile raphe	Labia minora



# Perineal pouches



## Superficial perineal pouch

Crura	Ischiocavernosus
Bulb of penis	Bulbospongiosus
Vestibular bulbs	Greater vestibular glands
Superficial transverse perineal	Perineal body

## Deep perineal pouch

External urethral sphincter	Bulbourethral glands
Deep transverse perineal muscle (males)	Dorsal Neurovasculature of the penis/clitoris





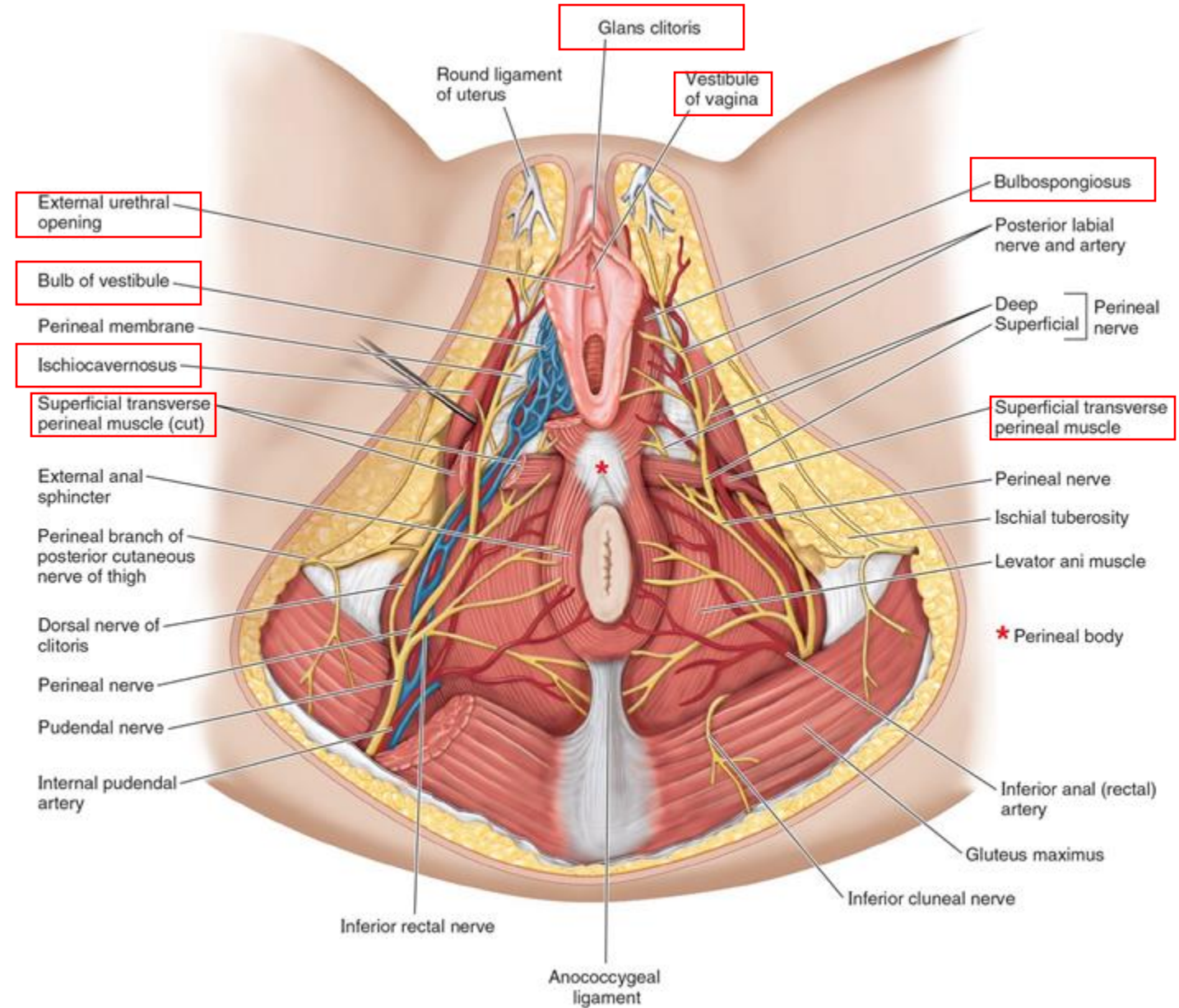
# Superficial perineal pouch

## Inferior border

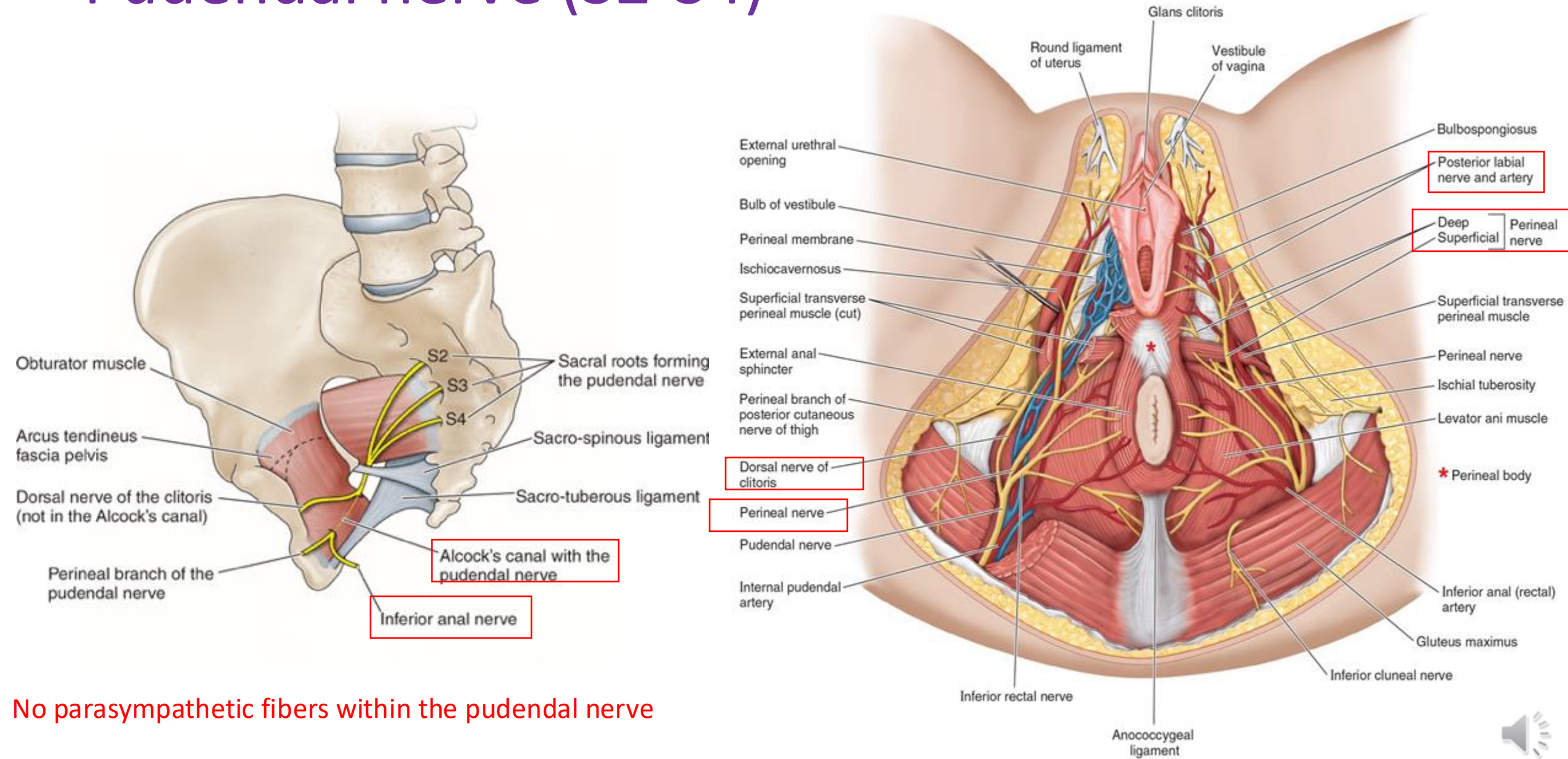
- Superficial perineal fascia (colles fascia)

## Superior border

- Perineal membrane



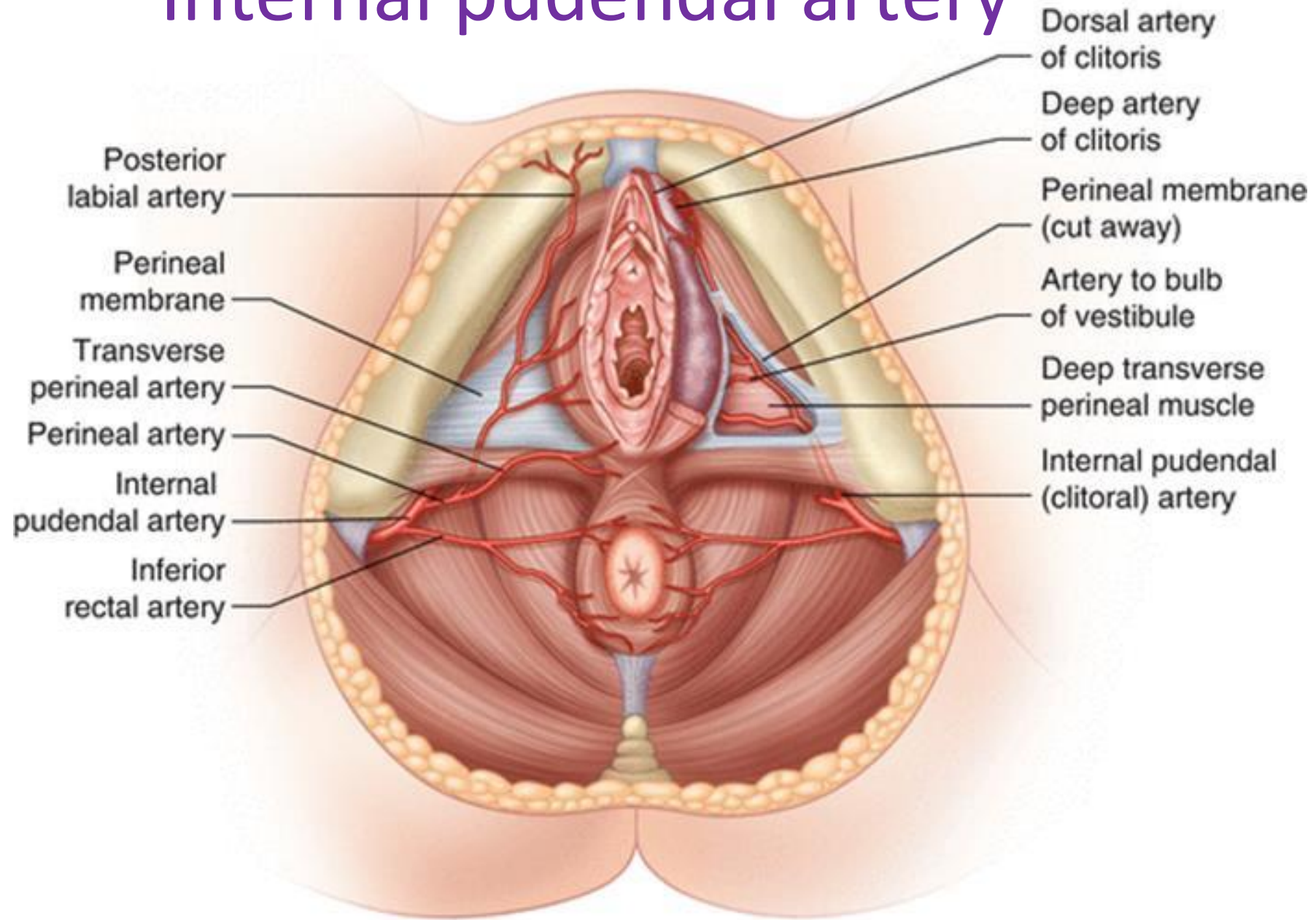
# Pudendal nerve (S2-S4)

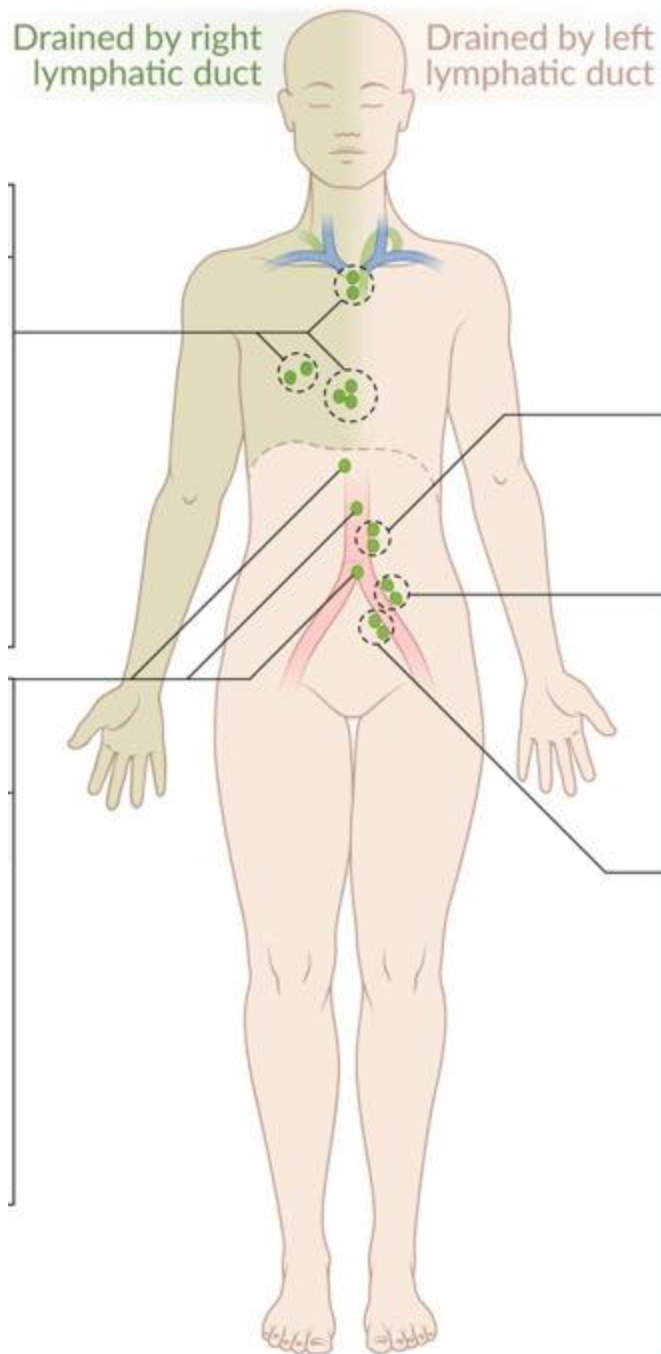


No parasympathetic fibers within the pudendal nerve



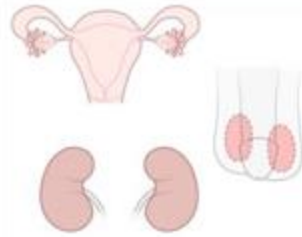
# Internal pudendal artery





### Para-aortic lymph nodes

#### Drained areas



#### Associated conditions

Endometrial cancer  
Ovarian cancer  
Testicular cancer  
Metastasis

### External iliac lymph nodes

#### Drained areas



#### Associated conditions

Sexually transmitted infections  
Metastasis

### Internal iliac lymph nodes

#### Drained areas



#### Associated conditions

Sexually transmitted infections  
Cervical cancer  
Bladder cancer  
Prostate cancer

### Superficial inguinal lymph nodes (horizontal group)

- Perineum (minus clitoris/glans penis)
- Inferior vagina
- Inferior anal canal

### Internal Iliac nodes

- Glans penis/clitoris
- Proximal cavernous bodies
- Deep perineal pouch
- Membranous urethra
- Superior vagina

### Para-aortic nodes

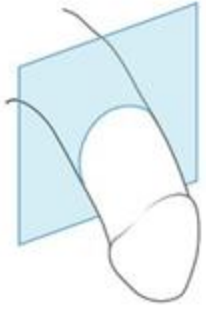
- Gonads



# Clinical Anatomy

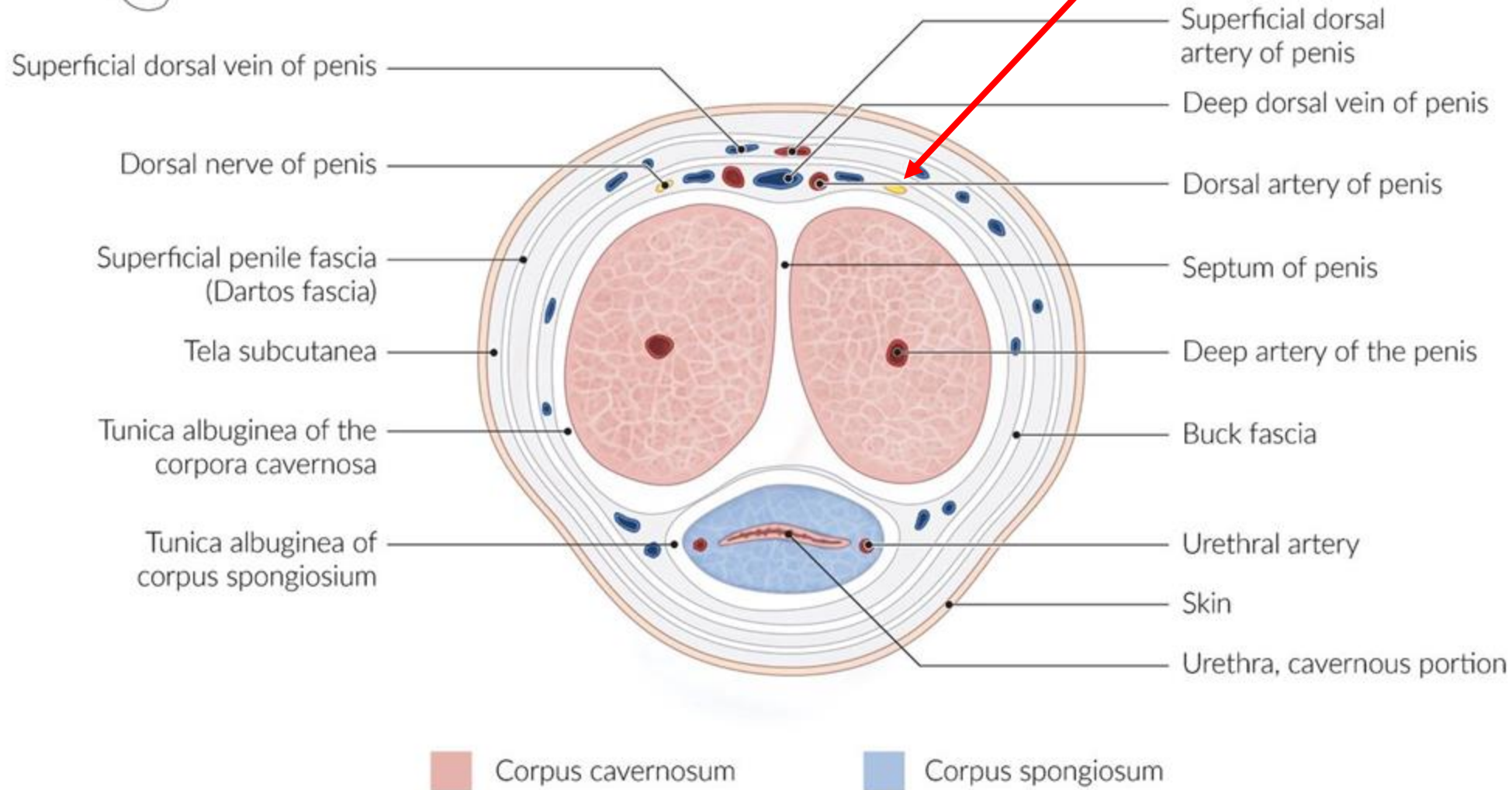






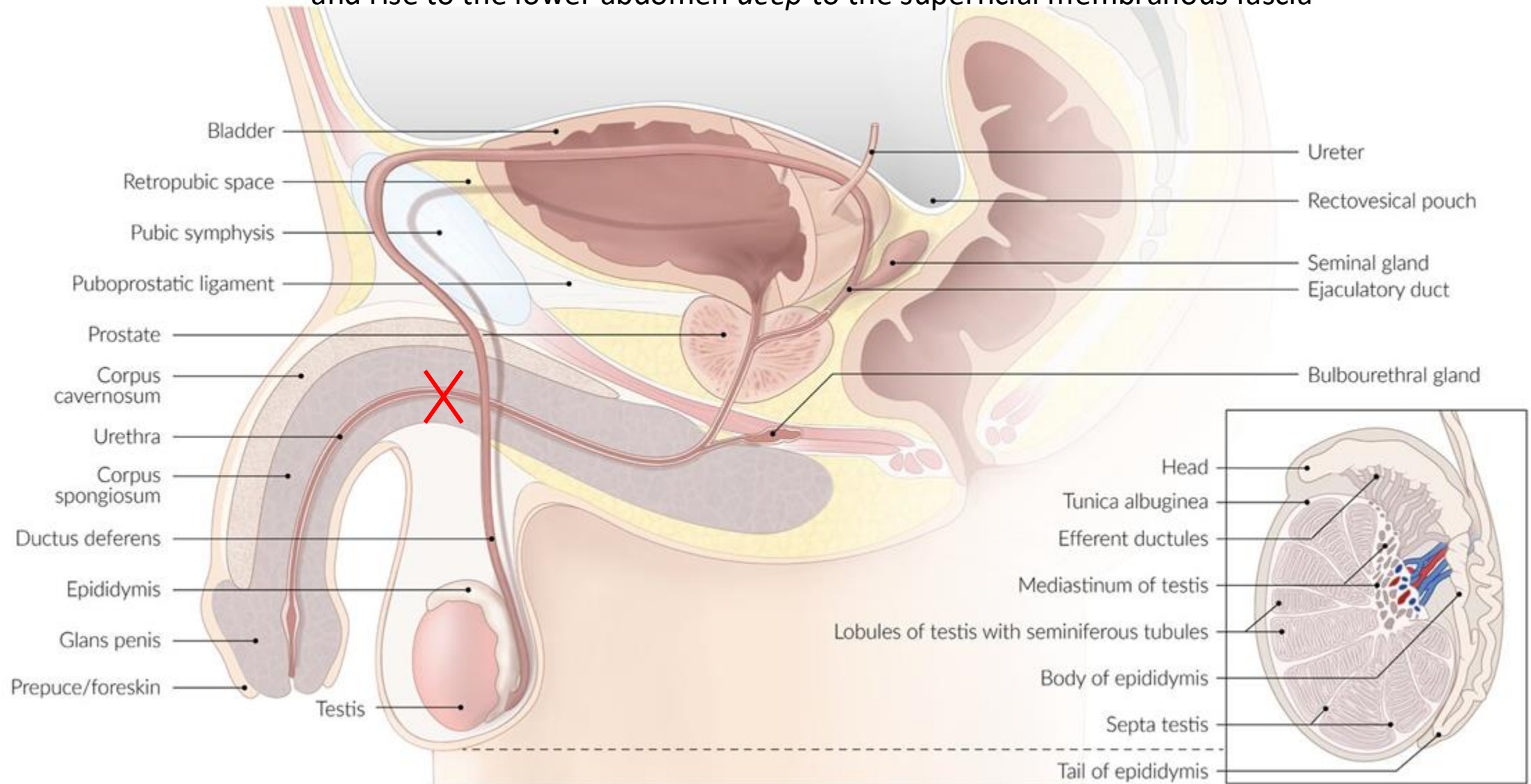
## Circumcision – Removal of the prepuce in males

\* Nerve block via *dorsal nerve of penis*, must insert laterally to avoid more medial artery and vein

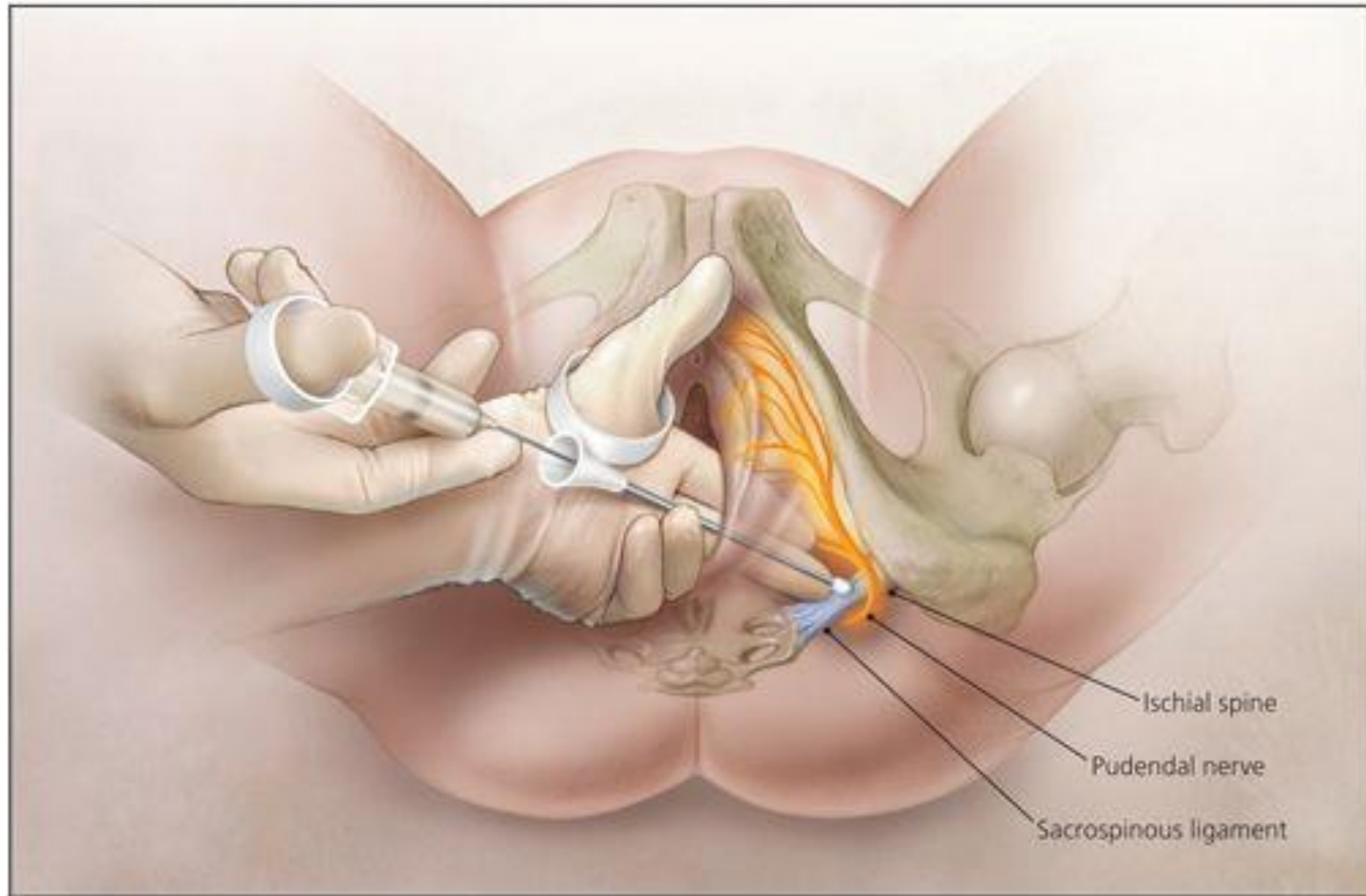


# Spongy Urethral Rupture

Leads to the accumulation of urine in the superficial perineal pouch. This may fill the scrotum and subcutaneous tissue and rise to the lower abdomen *deep* to the superficial membranous fascia



# Pudendal Nerve Block – Transvaginal



# Practice Questions



A patient presents to the clinic with a loss of sensation in the skin of the inferior anal region. It is determined that the nerve supplying this area is being compressed as it enters the perineum by a tendon passing through the same space. The compression is being caused by which of the following?

- A) Superior gemellus
- B) Piriformis
- C) Superficial transverse perineal muscle
- D) External anal sphincter
- E) Obturator internus





A patient presents to the clinic with a loss of sensation in the skin of the inferior anal region. It is determined that the nerve supplying this area is being compressed as it enters the perineum by a tendon passing through the same space. The compression is being caused by which of the following?

- A) Superior gemellus
- B) Piriformis
- C) Superficial transverse perineal muscle
- D) External anal sphincter
- E) Obturator internus



# Which of the following pairs of male and female structures are homologs?

- A) Crus of the penis – Vestibule of the vagina
- B) Bulbourethral glands – Paraurethral glands
- C) Scrotum – Labia minora
- D) Glans penis – clitoris
- E) Bulbospongious muscle – Greater vestibular glands



# Which of the following pairs of male and female structures are homologs?

- A) Crus of the penis – Vestibule of the vagina
- B) Bulbourethral glands – Paraurethral glands
- C) Scrotum – Labia minora
- D) Glans penis – clitoris
- E) Bulbospongious muscle – Greater vestibular glands



Silly Sally always makes fun of Little Jonny for being a poor lover. So Little Jonny makes a vow to research the female genitalia and “mythical” clitoris. After study, Little Jonny correctly states:

- A) The artery that supplies the glans clitoris runs through the superficial perineal pouch
- B) The vestibular bulbs are made of the same tissue as the corpus cavernosa of the penis
- C) The external urethral orifice is located within the opening of the vaginal canal
- D) The clitoris is located between the inferior and superior folds of the labia minora
- E) The lymph drainage of the lower vaginal canal is to the deep inguinal nodes



Silly Sally always makes fun of Little Jonny for being a poor lover. So Little Jonny makes a vow to research the female genitalia and “mythical” clitoris. After study, Little Jonny correctly states:

- A) The artery that supplies the glans clitoris runs through the superficial perineal pouch
- B) The vestibular bulbs are made of the same tissue as the corpus cavernosa of the penis
- C) The external urethral orifice is located within the opening of the vaginal canal
- D) The clitoris is located between the inferior and superior folds of the labia minora
- E) The lymph drainage of the lower vaginal canal is to the deep inguinal nodes

