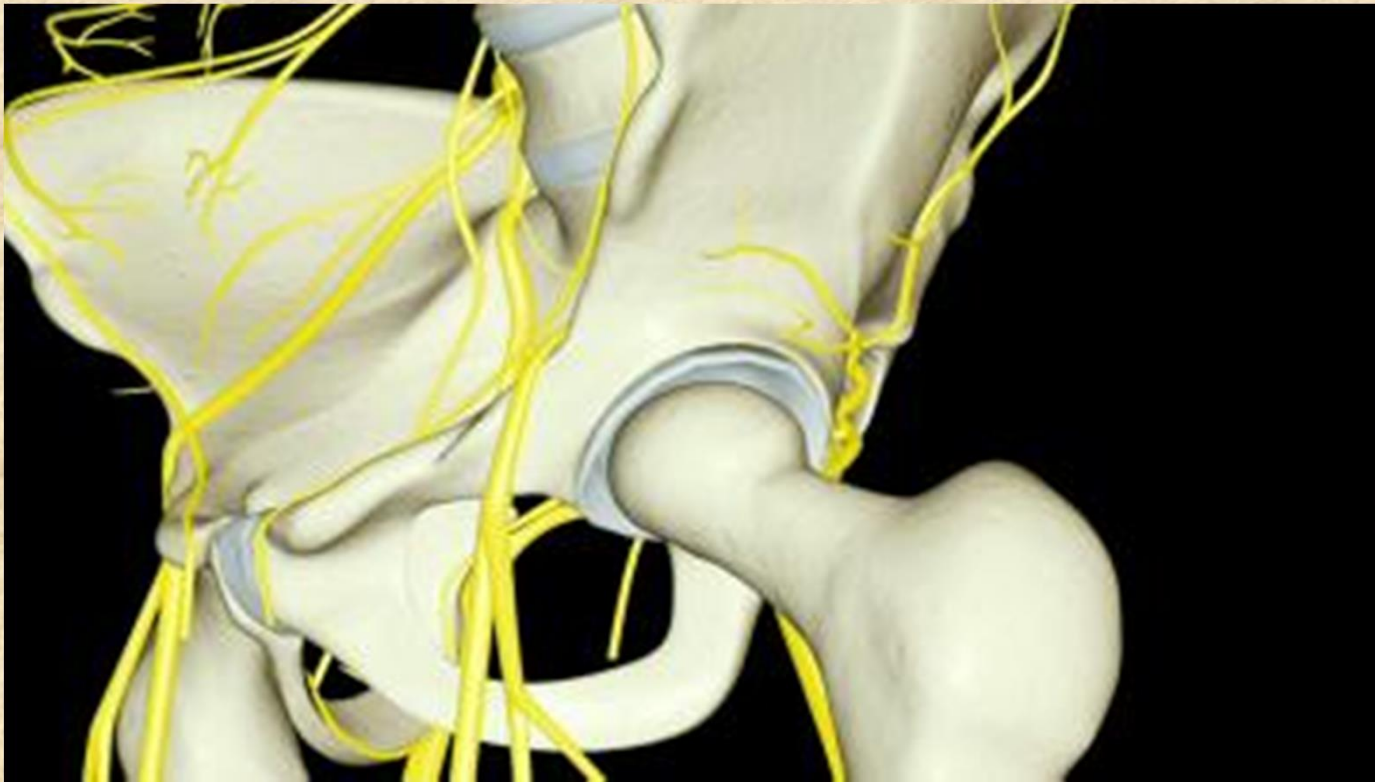


# Plexus lumbalis et sacralis



# Plexus lumbalis L1-L4

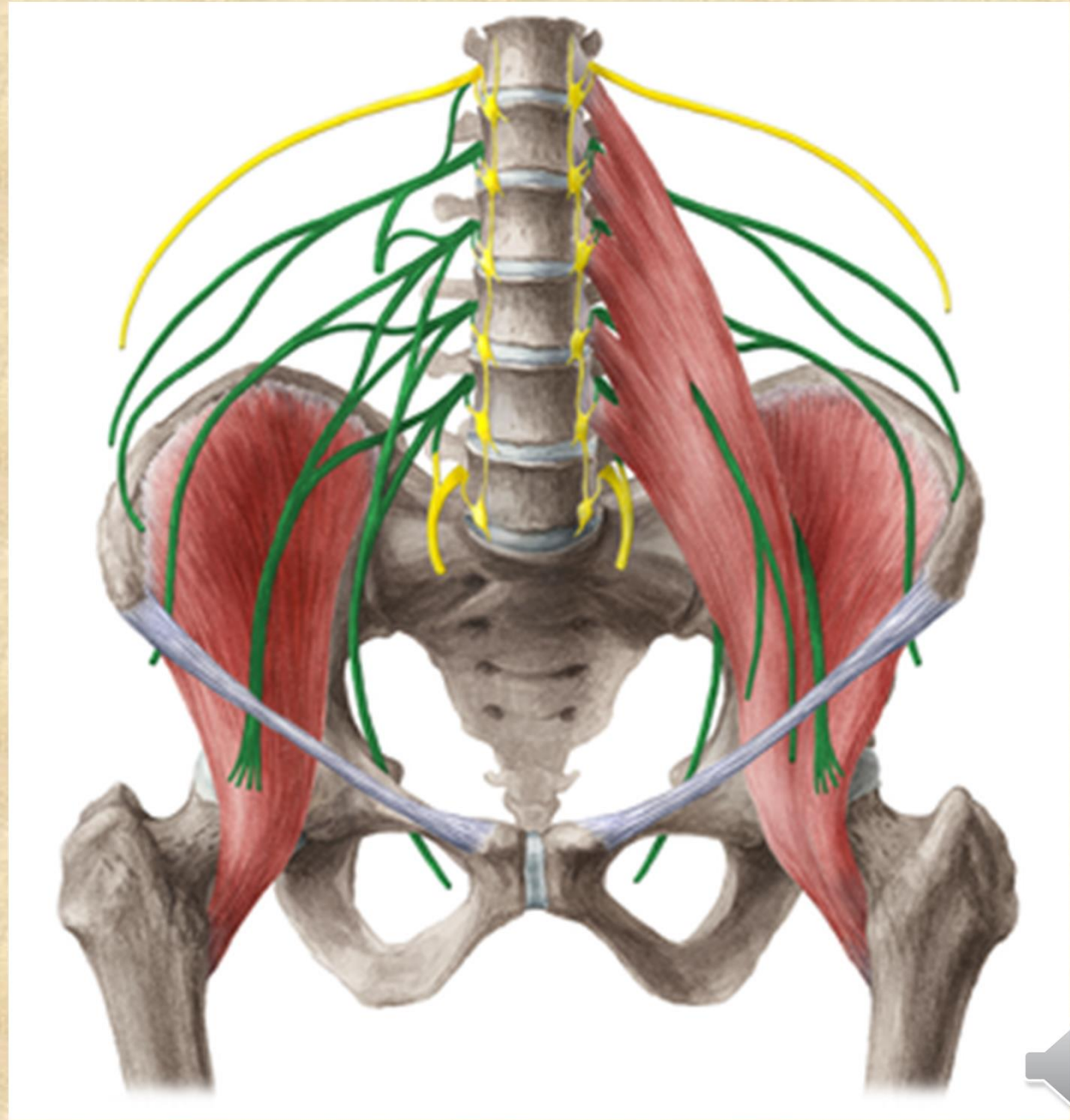
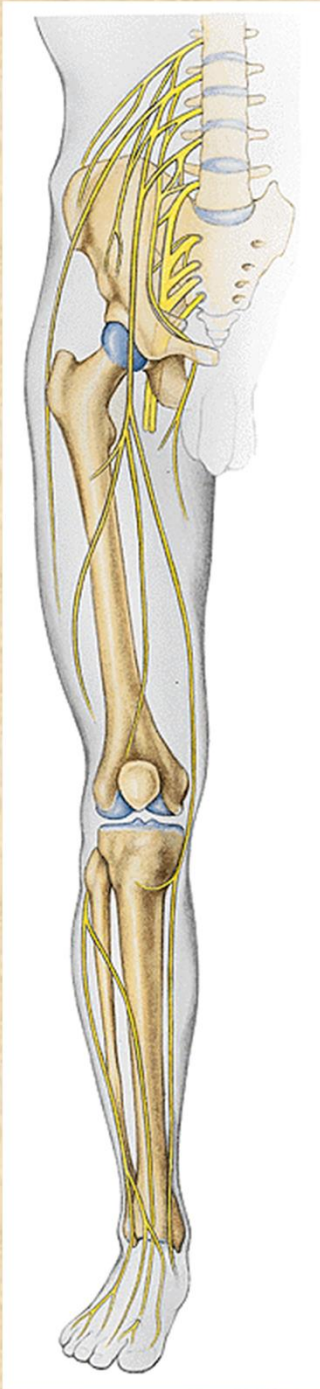
## Sensory innervation

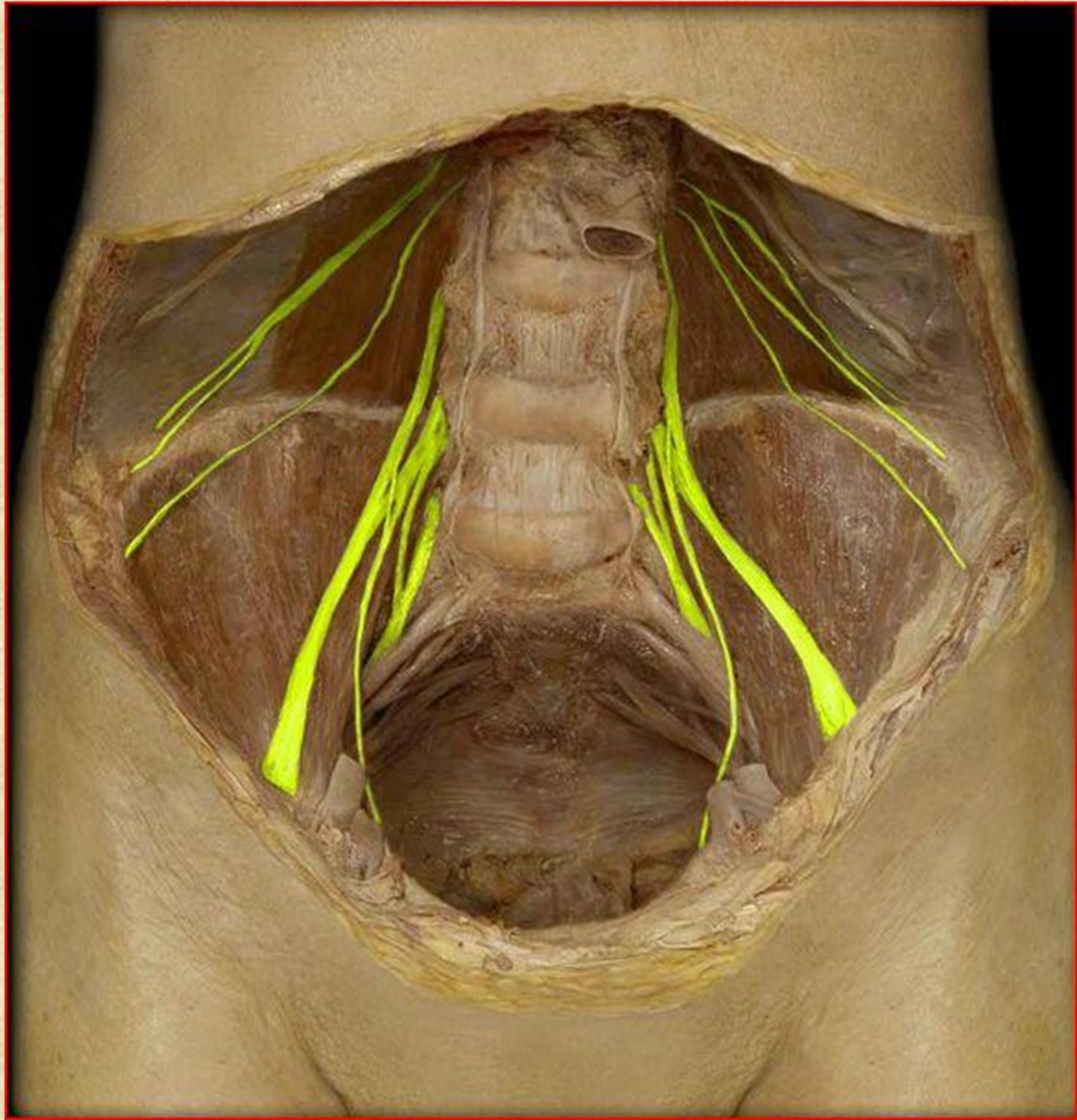
skin of the lumbar area and skin of anterior and medial surface of thigh and crus

## Motor innervation

posterior and partly lateral group of abdominal muscles, anterior group of hip muscles and anterior and medial group of thigh muscles

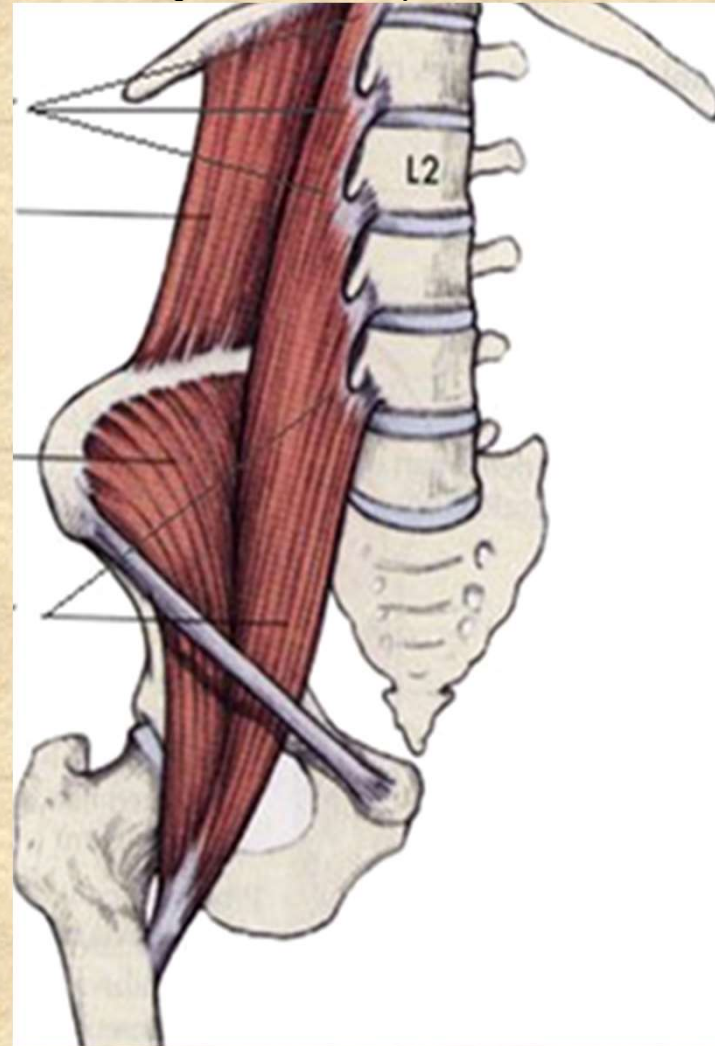




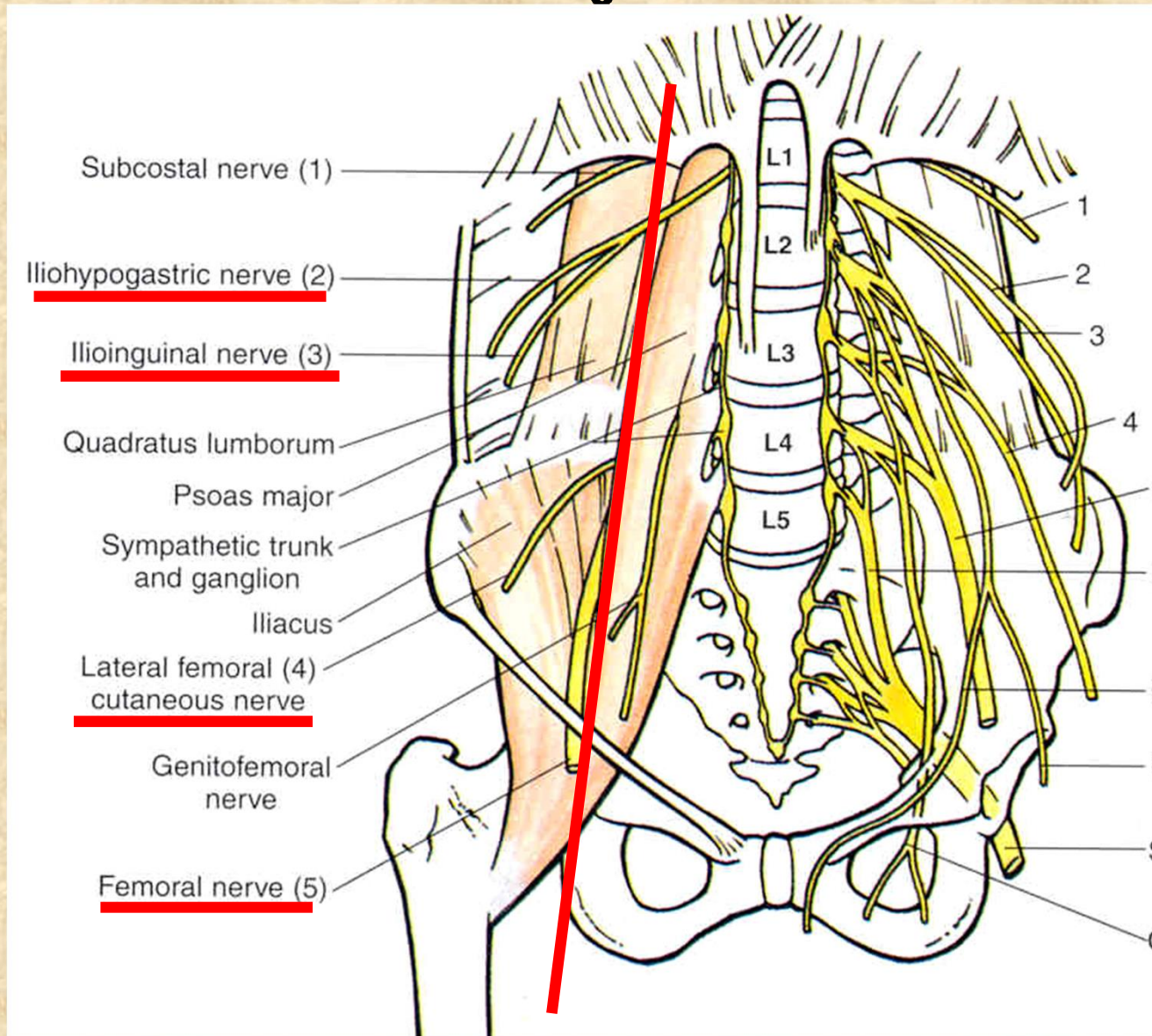


# The branches of lumbar plexus

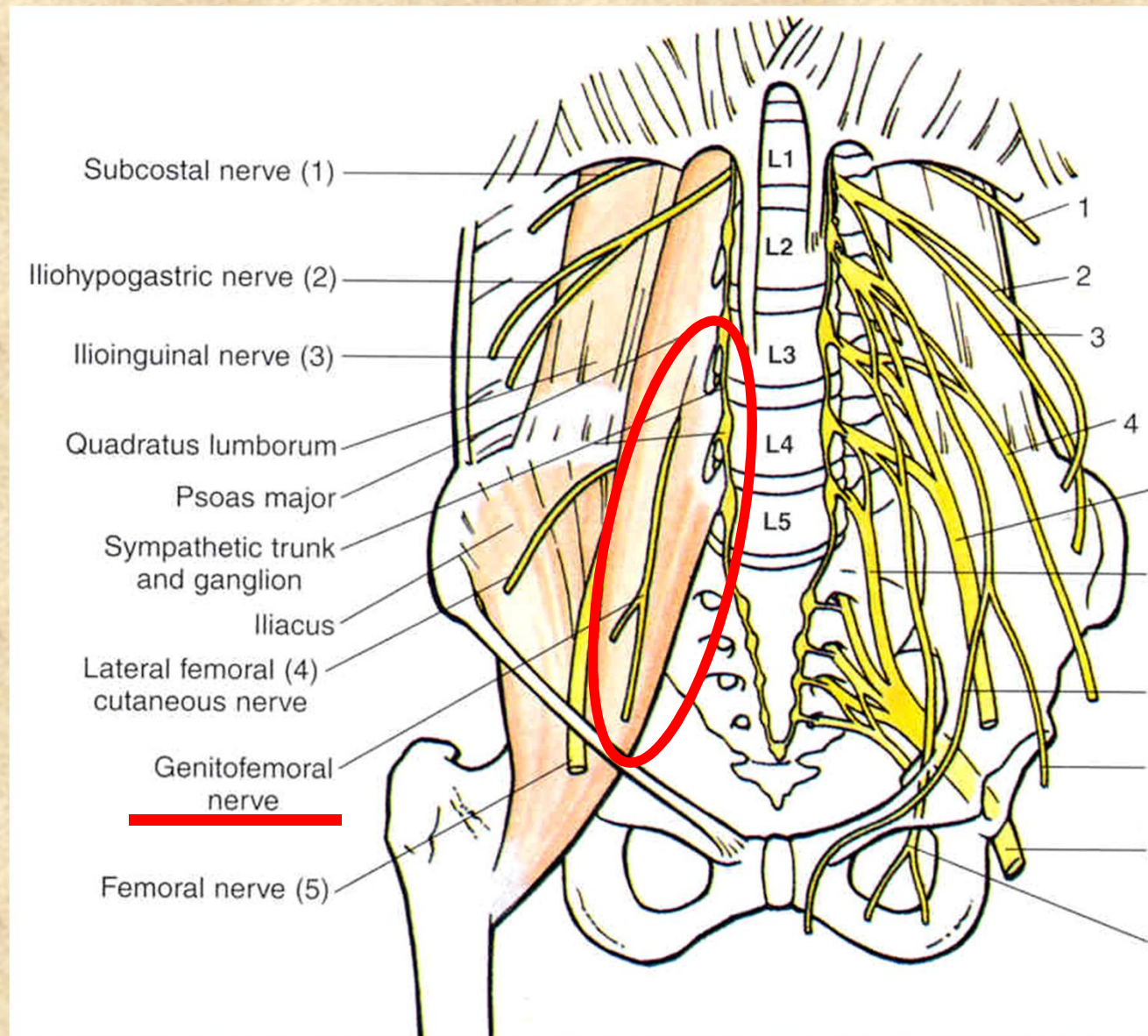
- Rr. musculares (m. psoas major, m. psoas minor, m. quadratus lumborum)



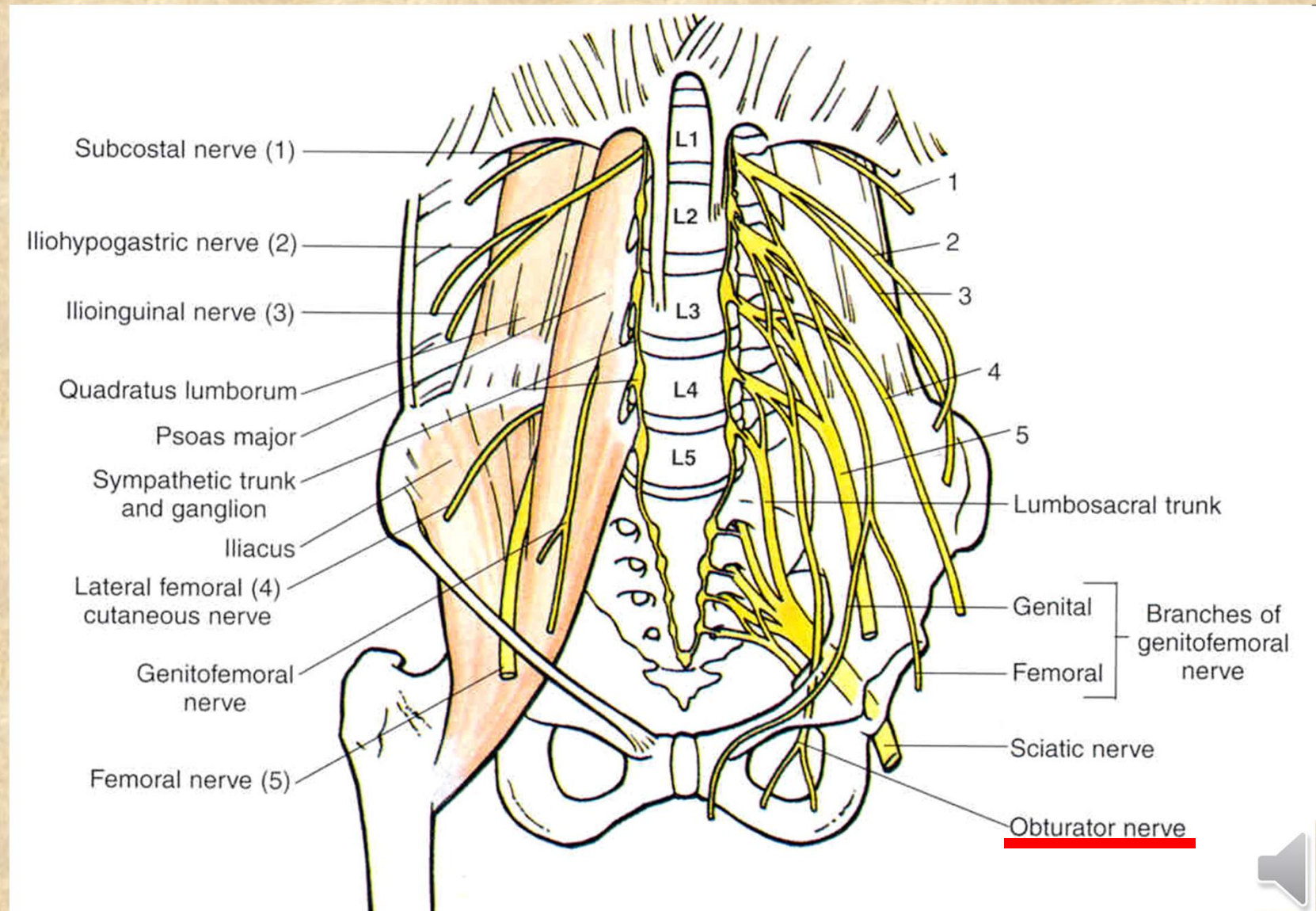
# 1. Branches arising laterally to m. psoas major



## 2. Branches passing through m. psoas major



### 3. Branches passing medially to m. psoas major

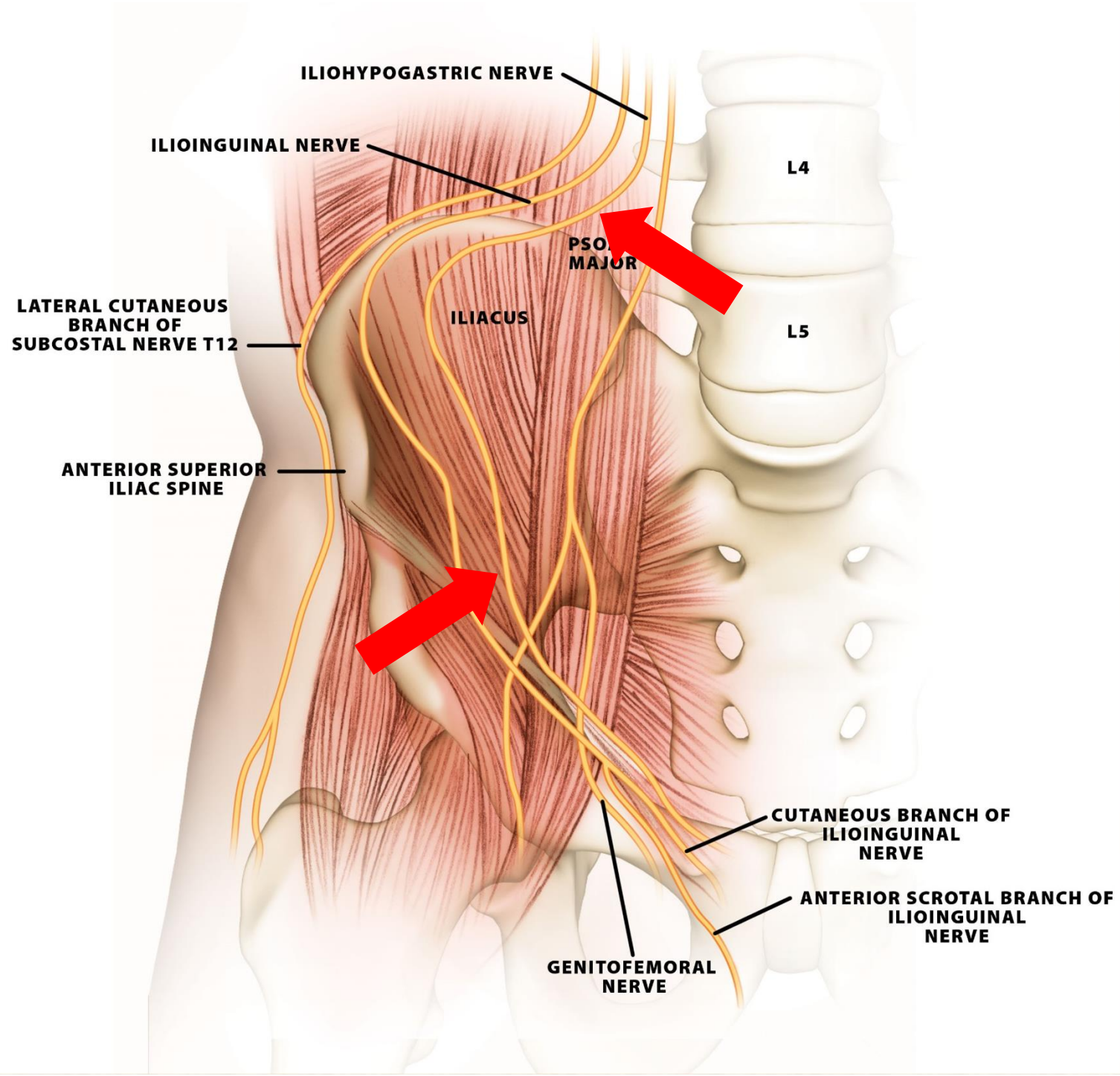


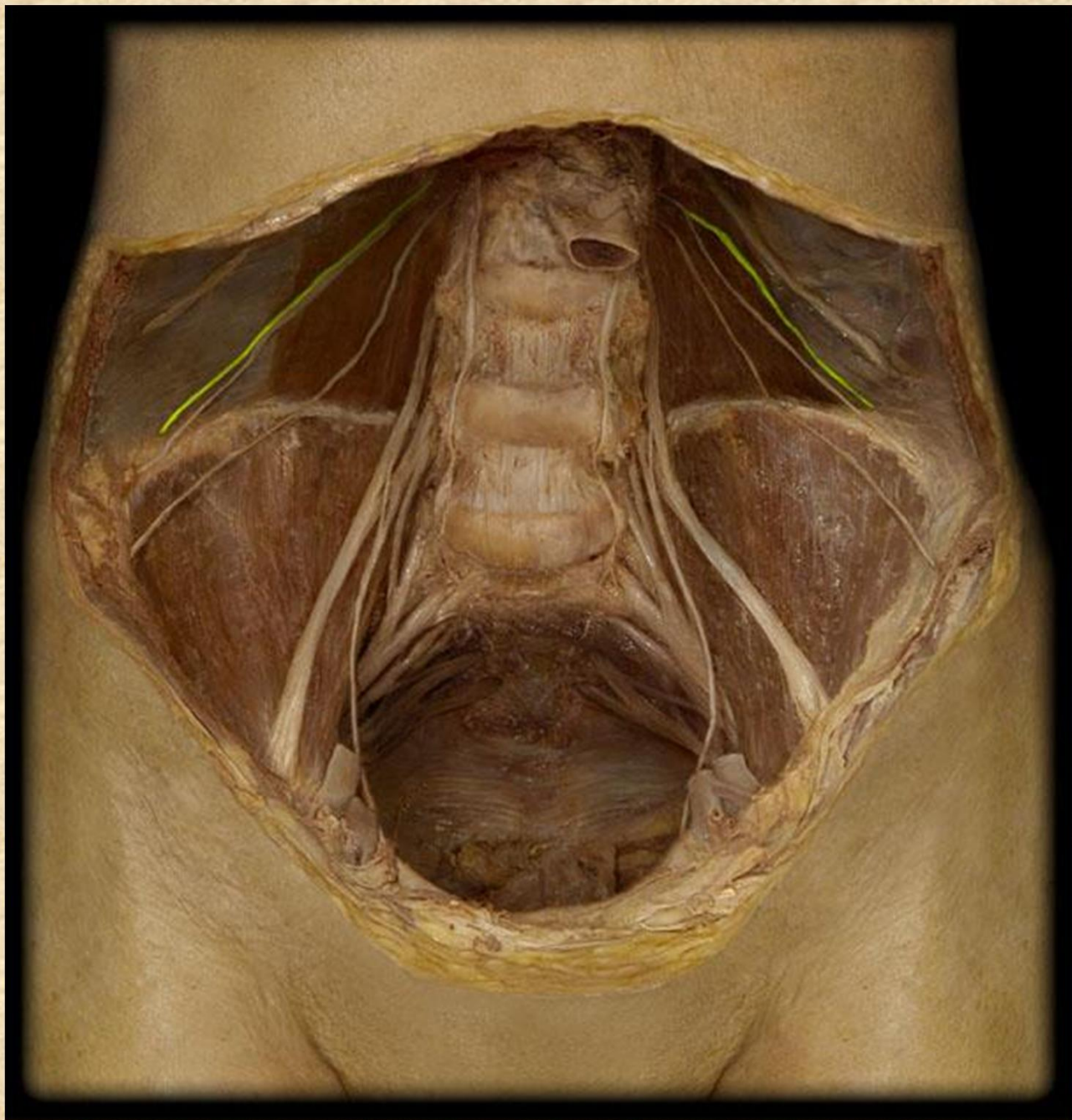


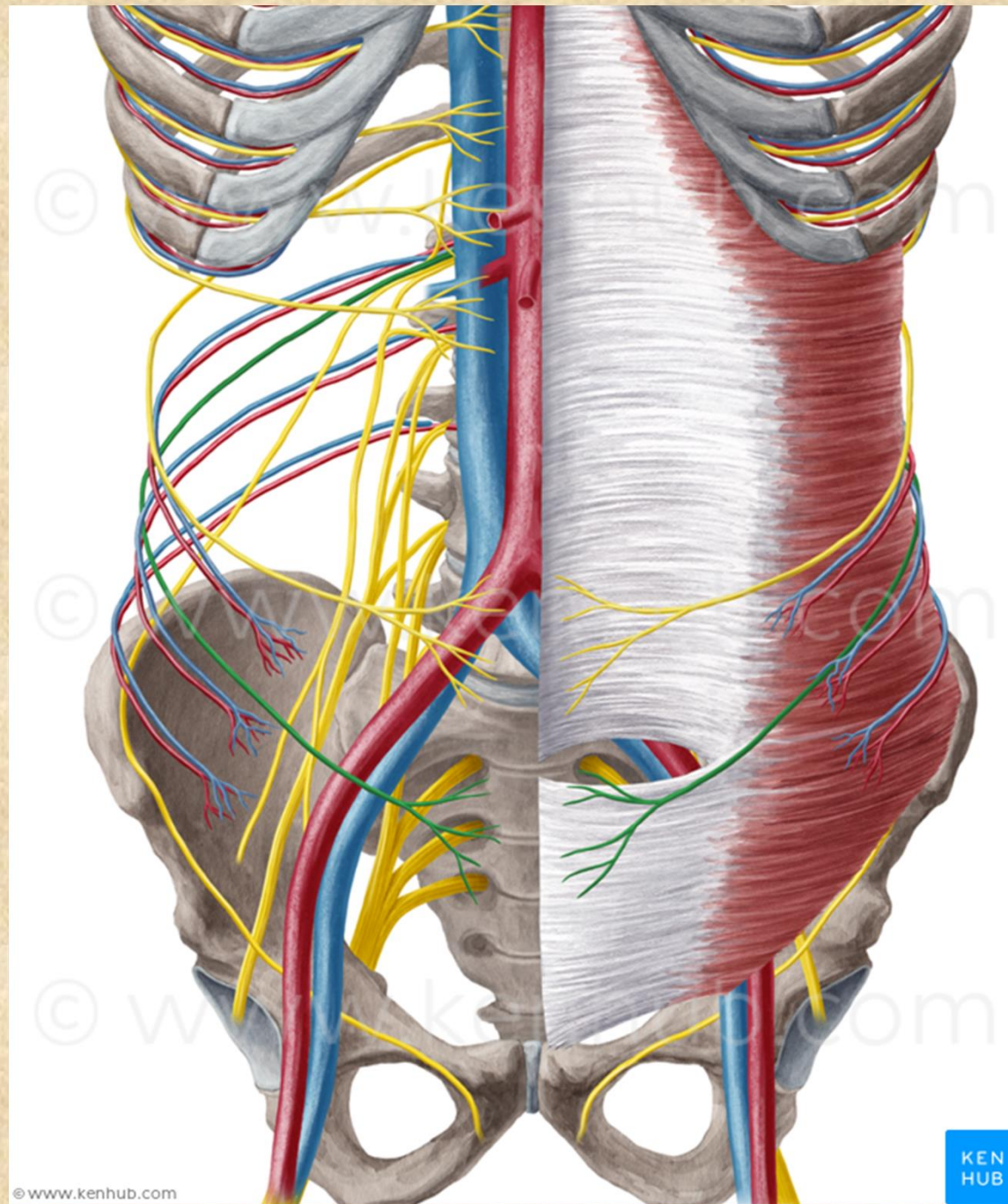
# Nervus iliohypogastricus Th12-L1

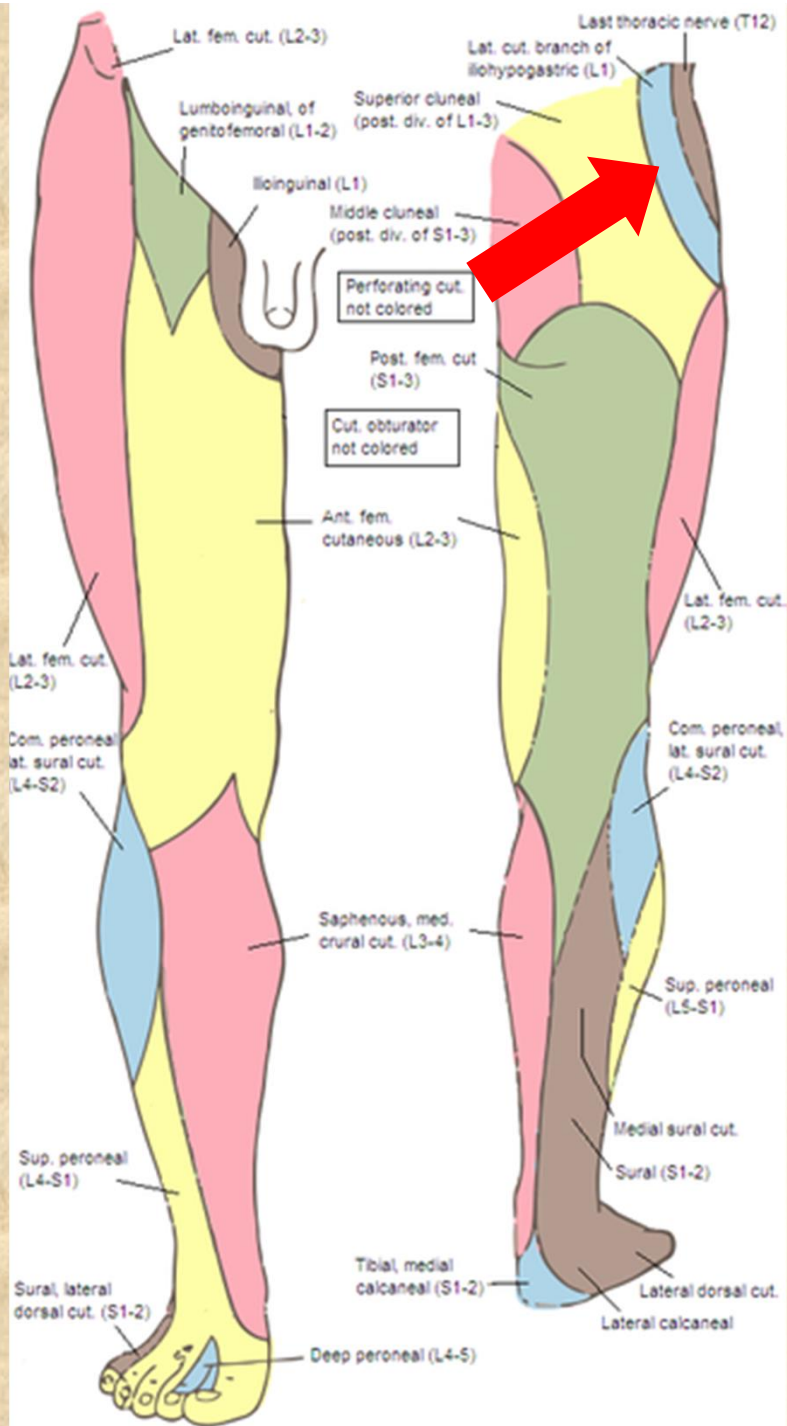
- **rr. musculares** (m. obliquus internus and externus, m. transversus abdominis)
- **r. cutaneus lateralis**  
skin around hip joint and lig. inguinale
- **r. cutaneus medialis**  
skin above lig. inguinale and pubical region







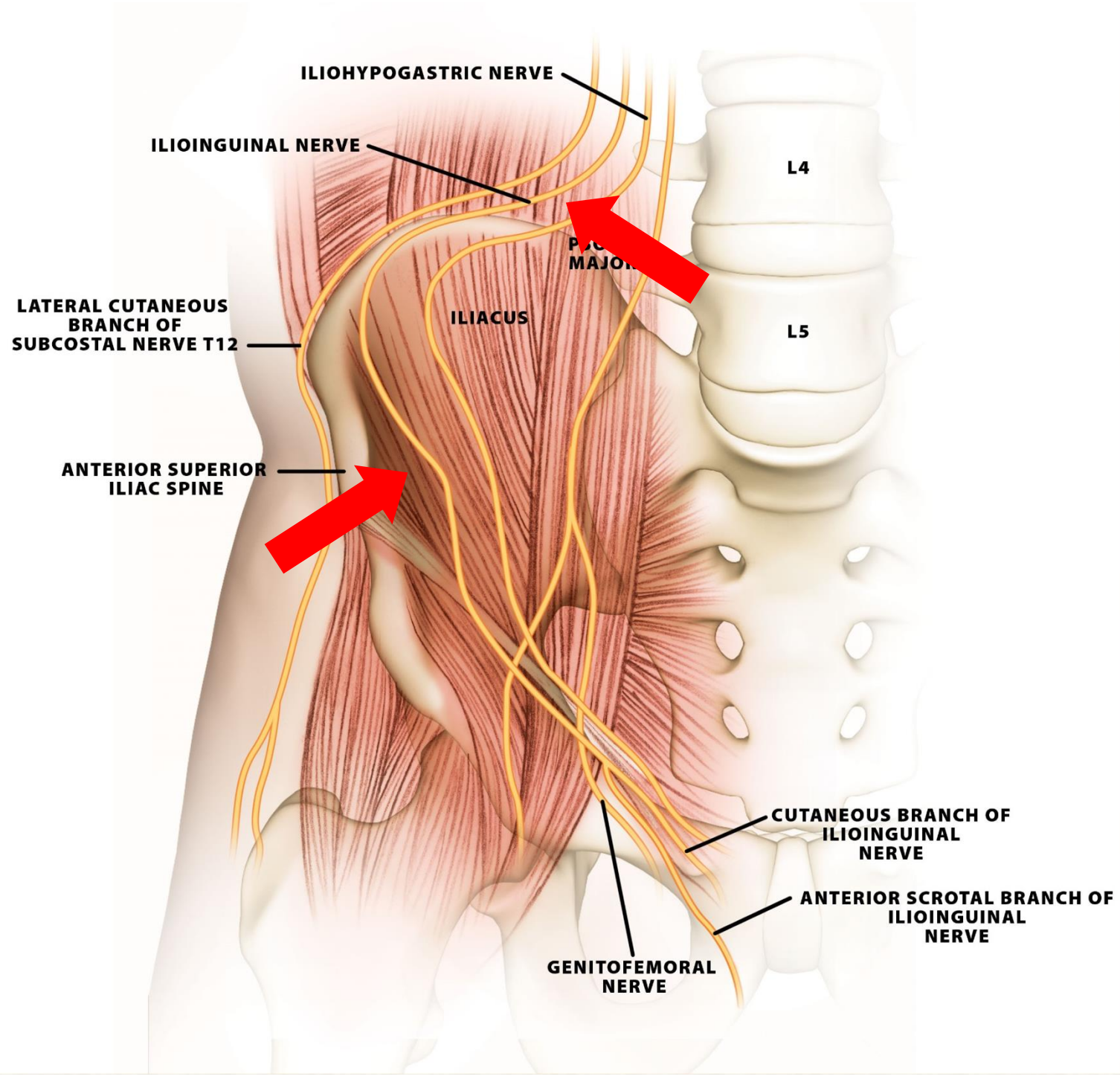


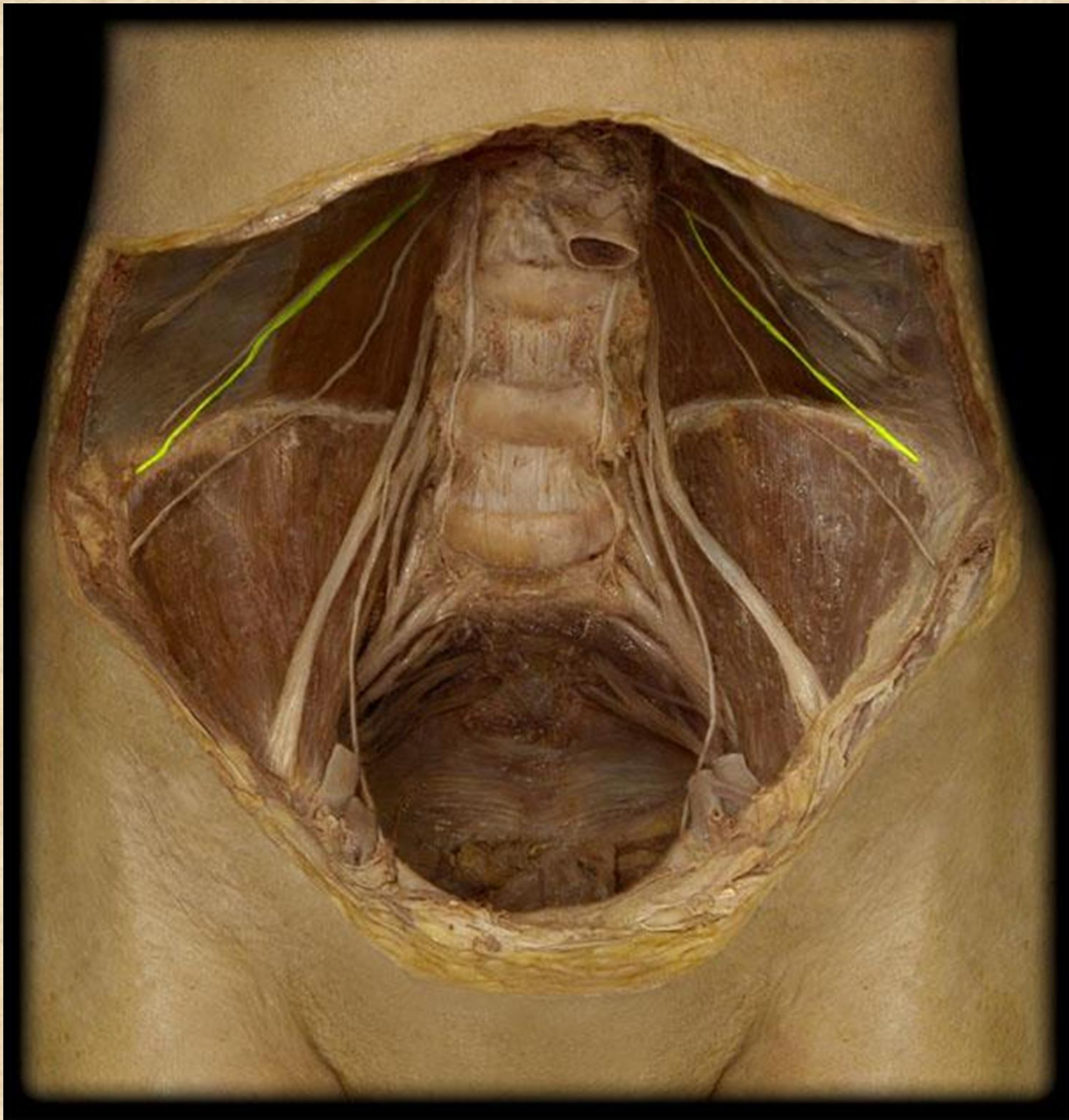


# Nervus ilioinguinalis L1

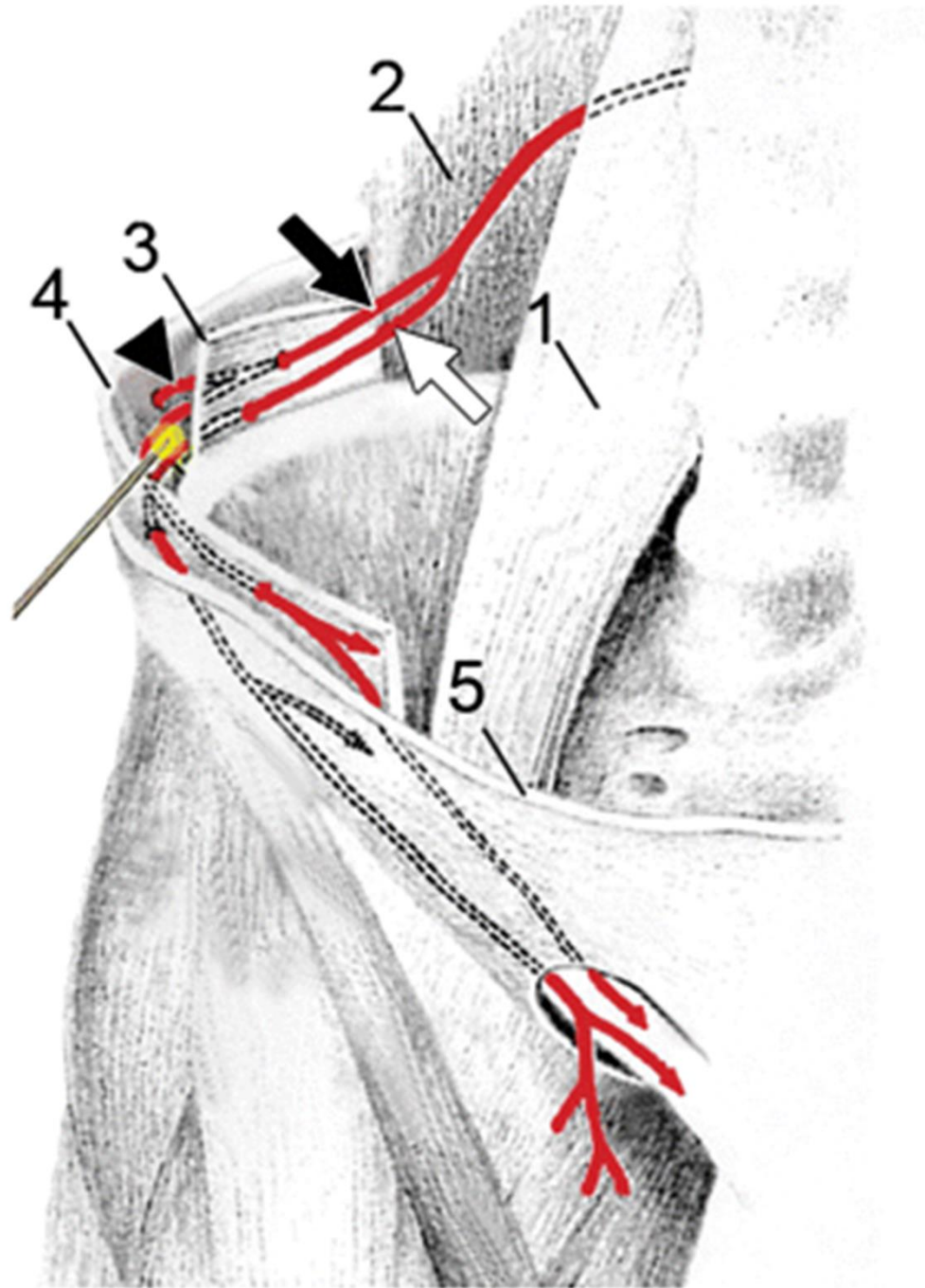
- **rr. musculares** (mm. obliquus internus, m. transversus abdominis, m. cremaster)
- it passes through the inguinal canal
- **nn. scrotales (labiales anteriores)**
- skin of inguinal region and of external genital organs

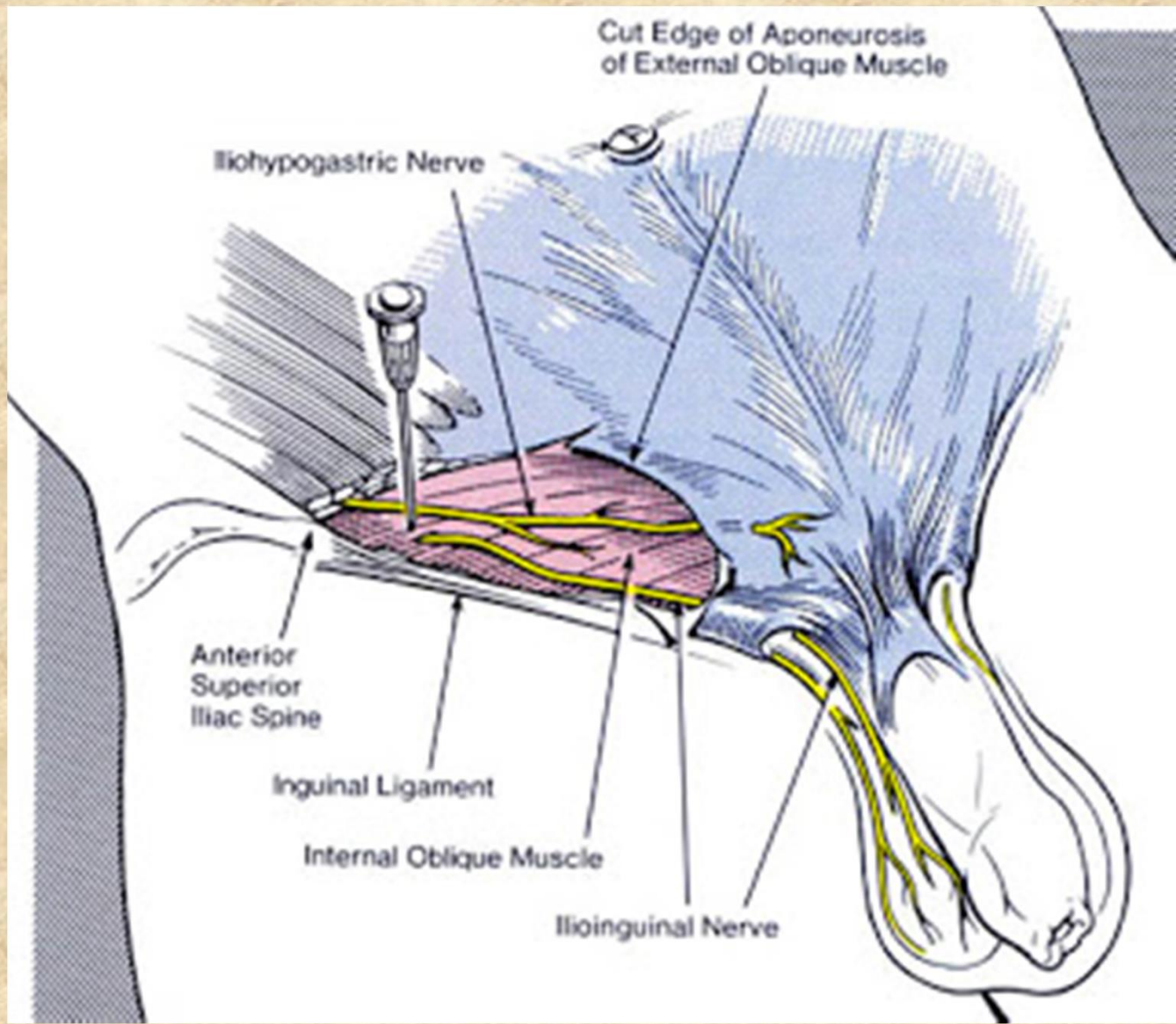


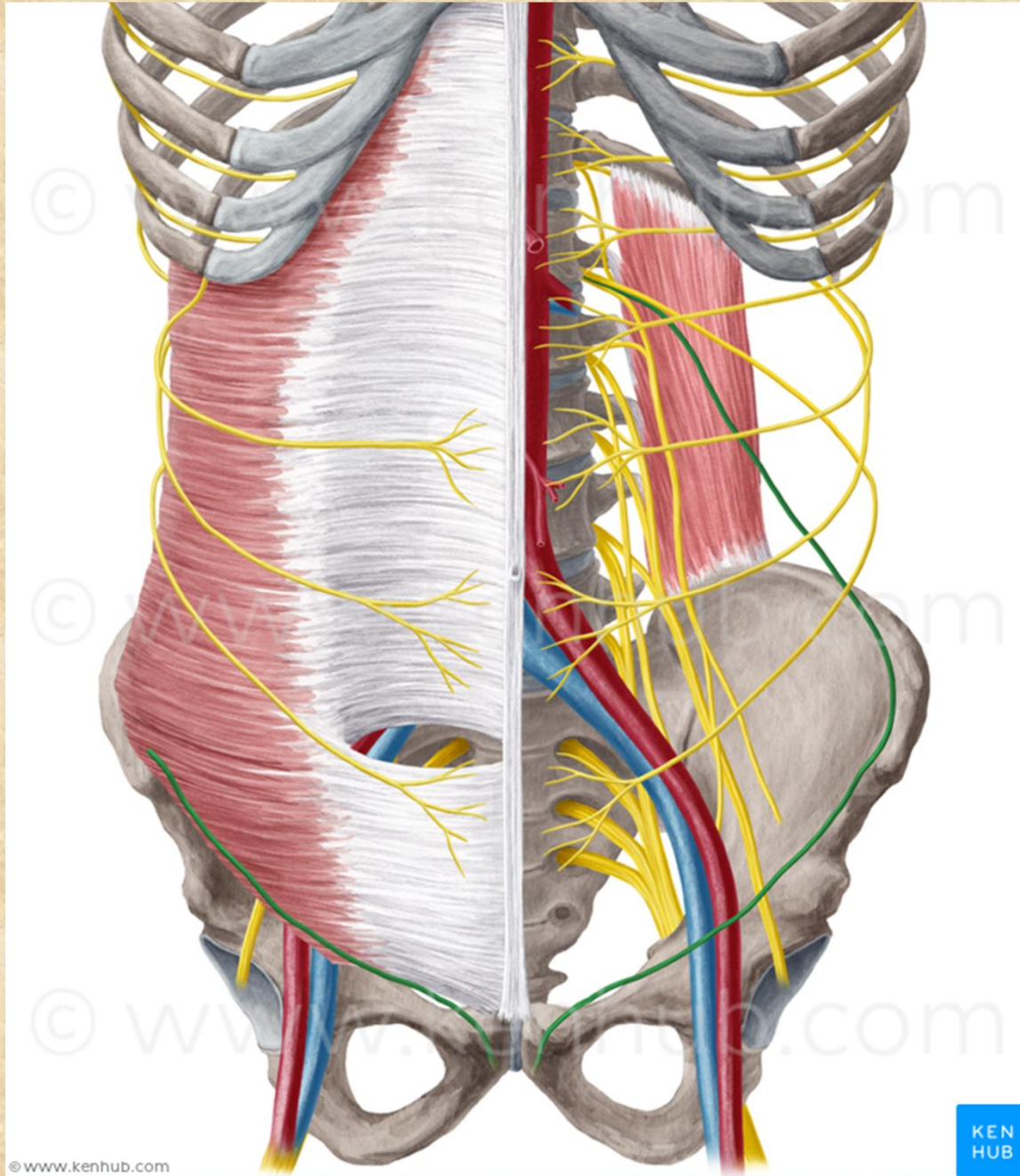








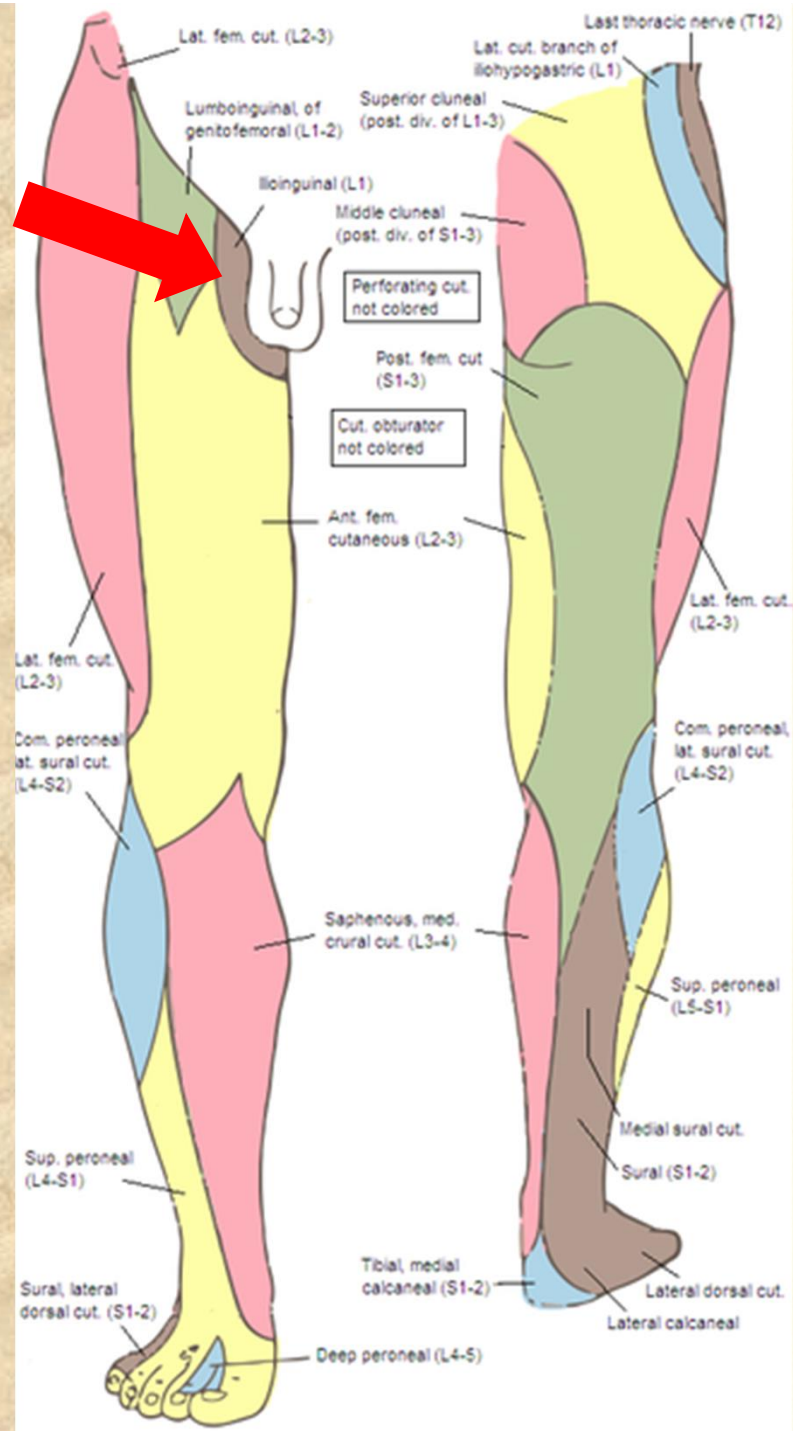




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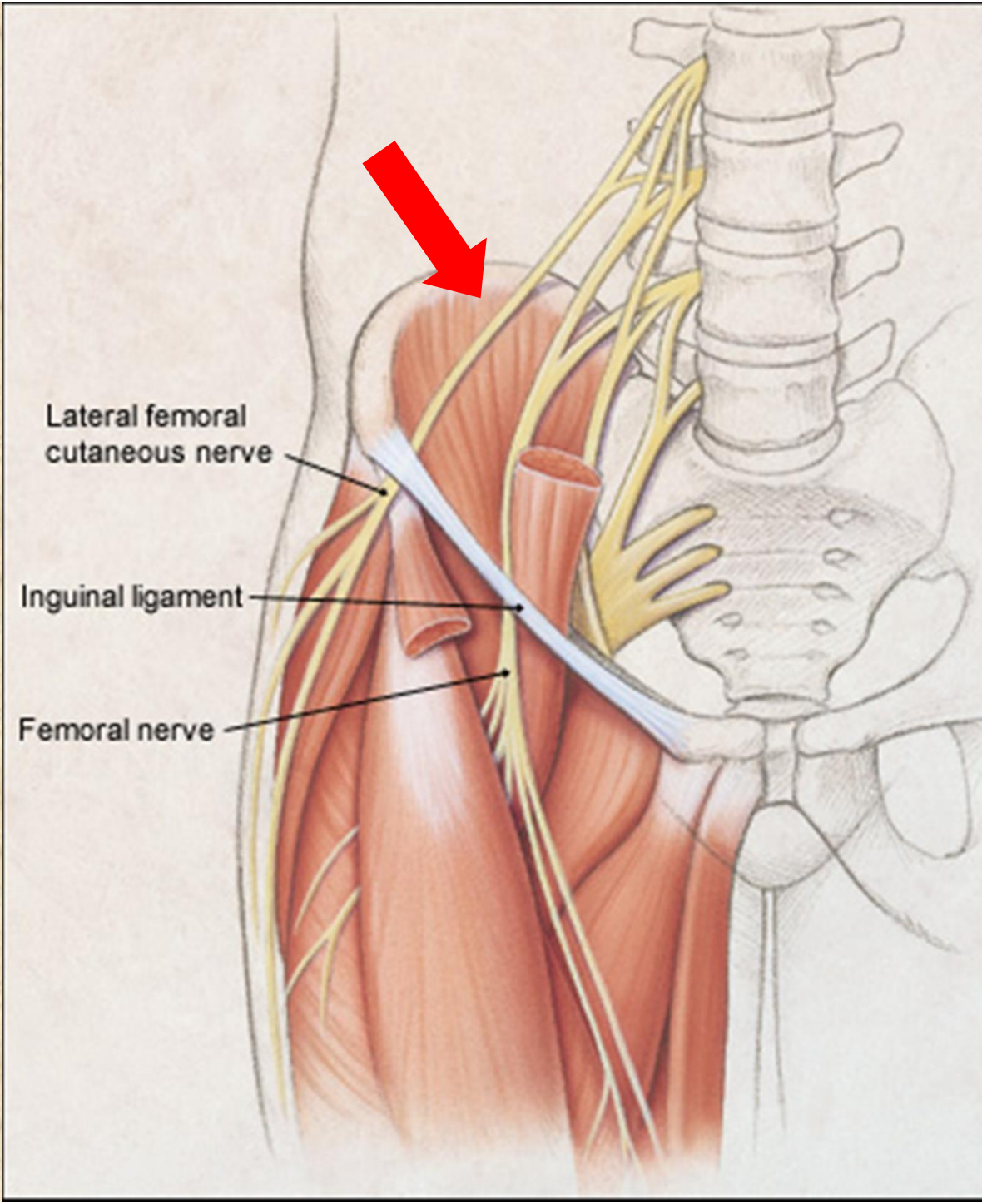




# Nervus cutaneus femoris lateralis L2-L3

- Purely sensory
- through lacuna musculorum, close to spina iliaca anterior superior
- Skin of the lateral side of thigh



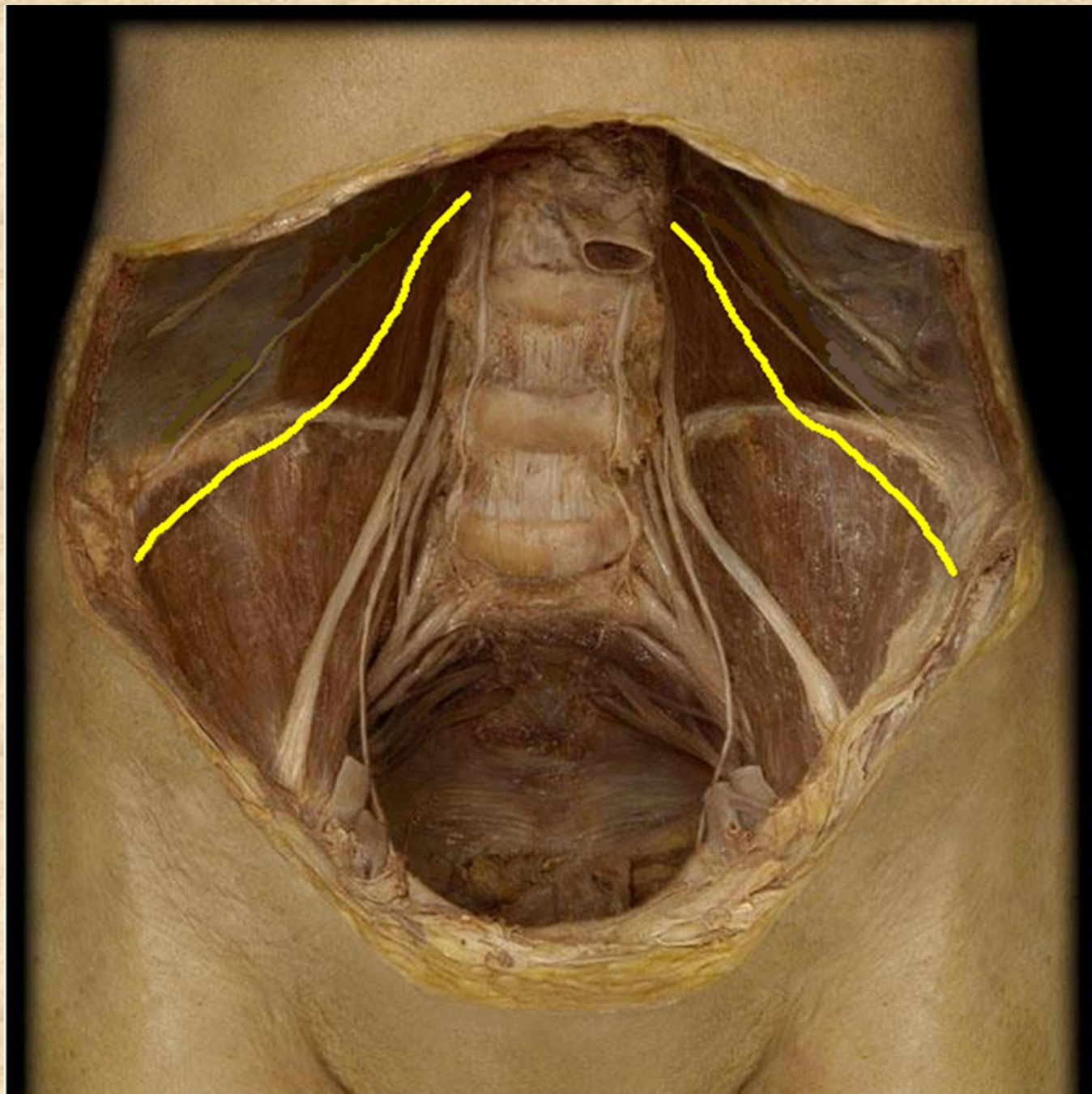


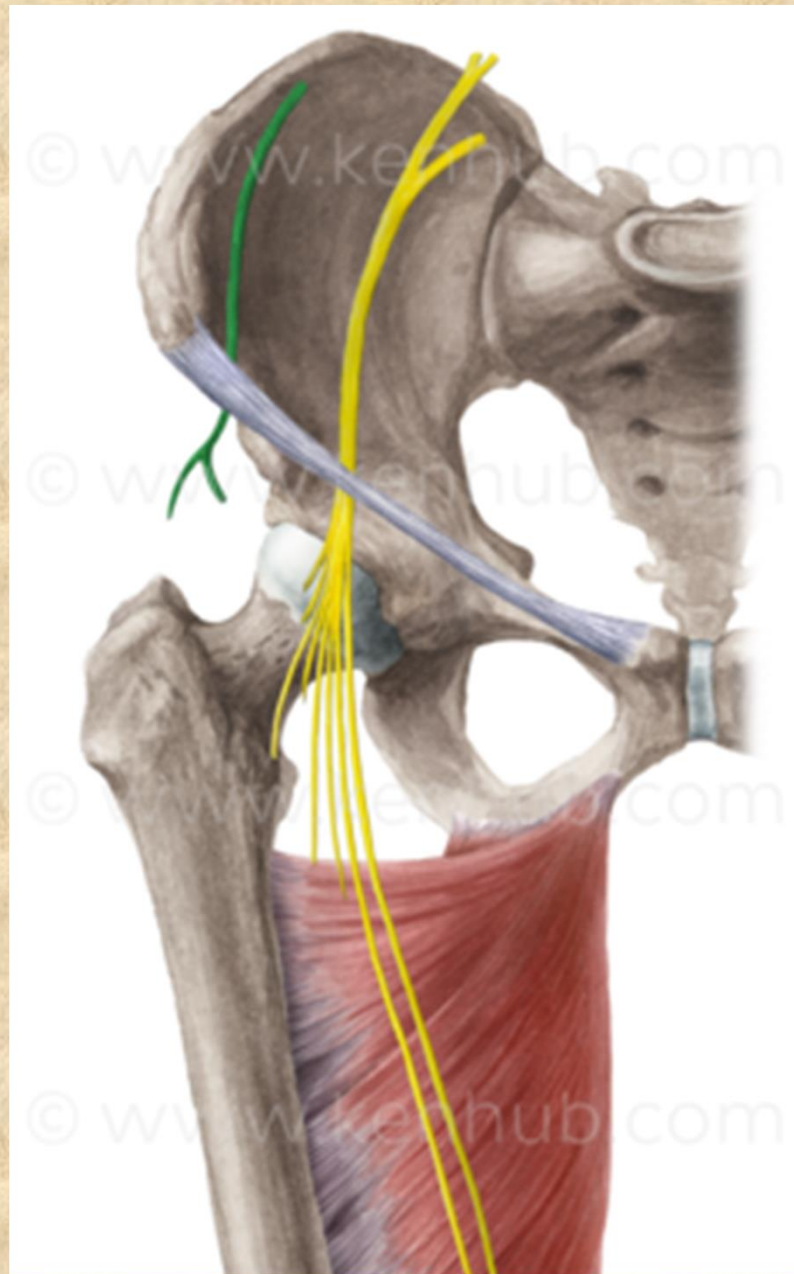
Lateral femoral cutaneous nerve

Inguinal ligament

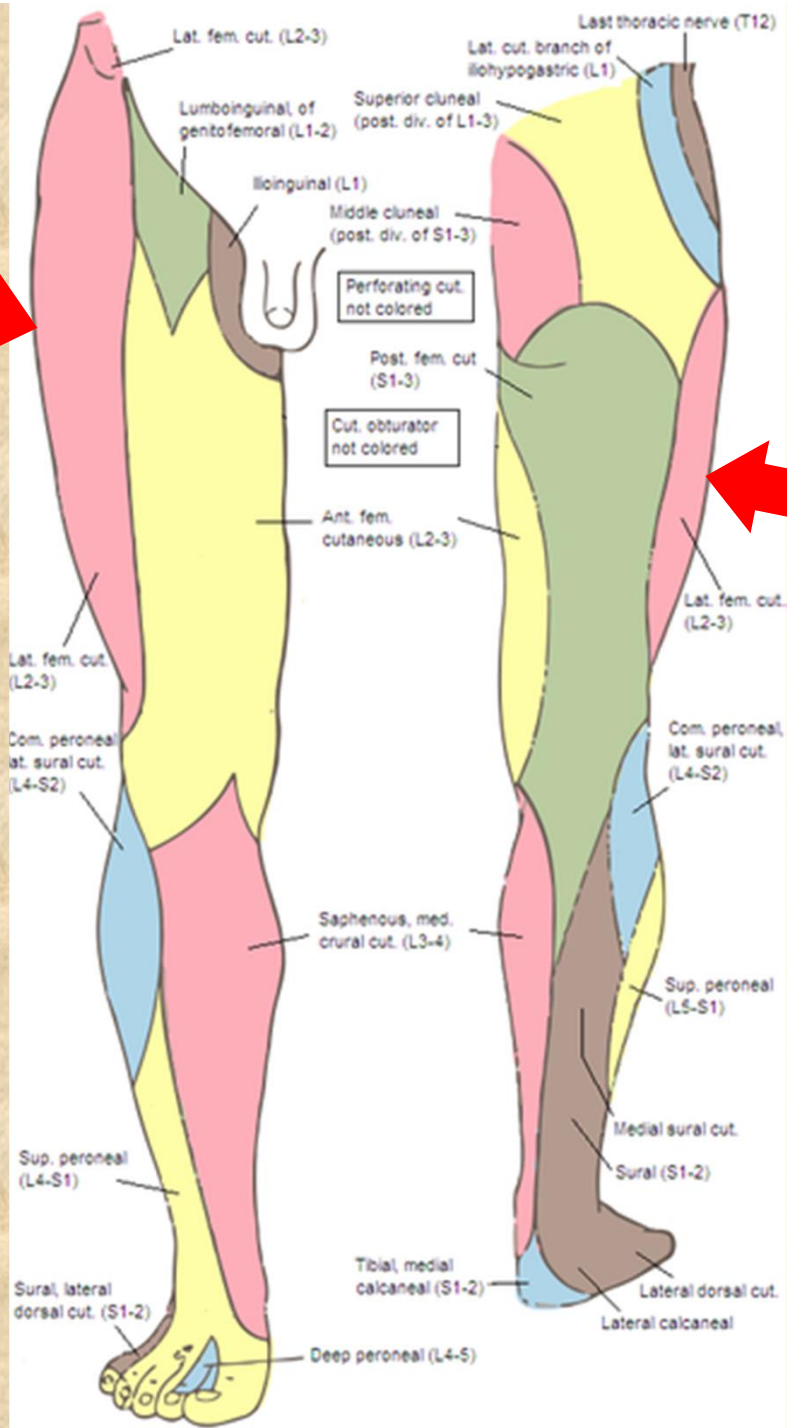
Femoral nerve

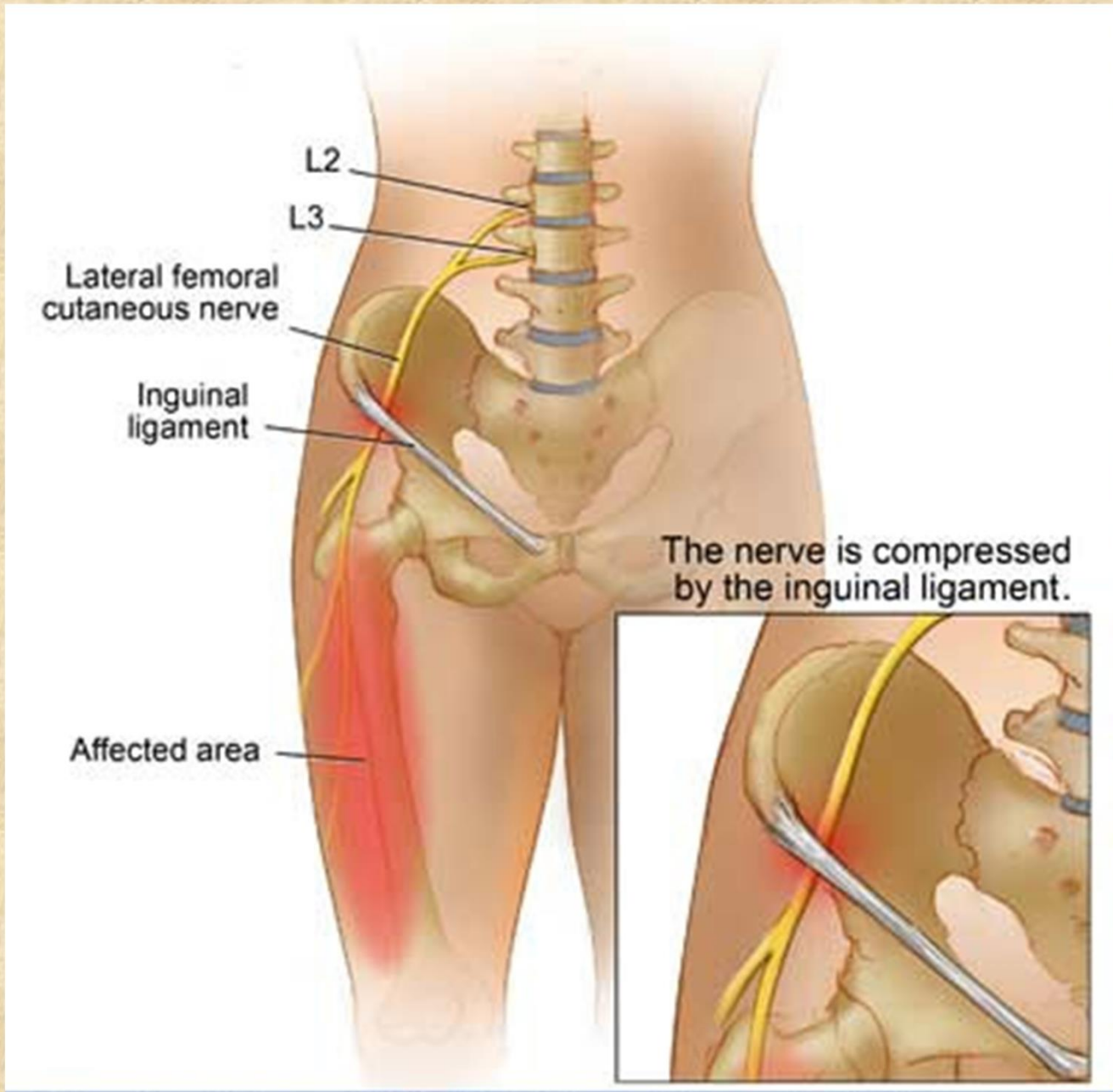












Meralgia paresthetica



# Nervus femoralis L2-L4

- **rr. musculares**

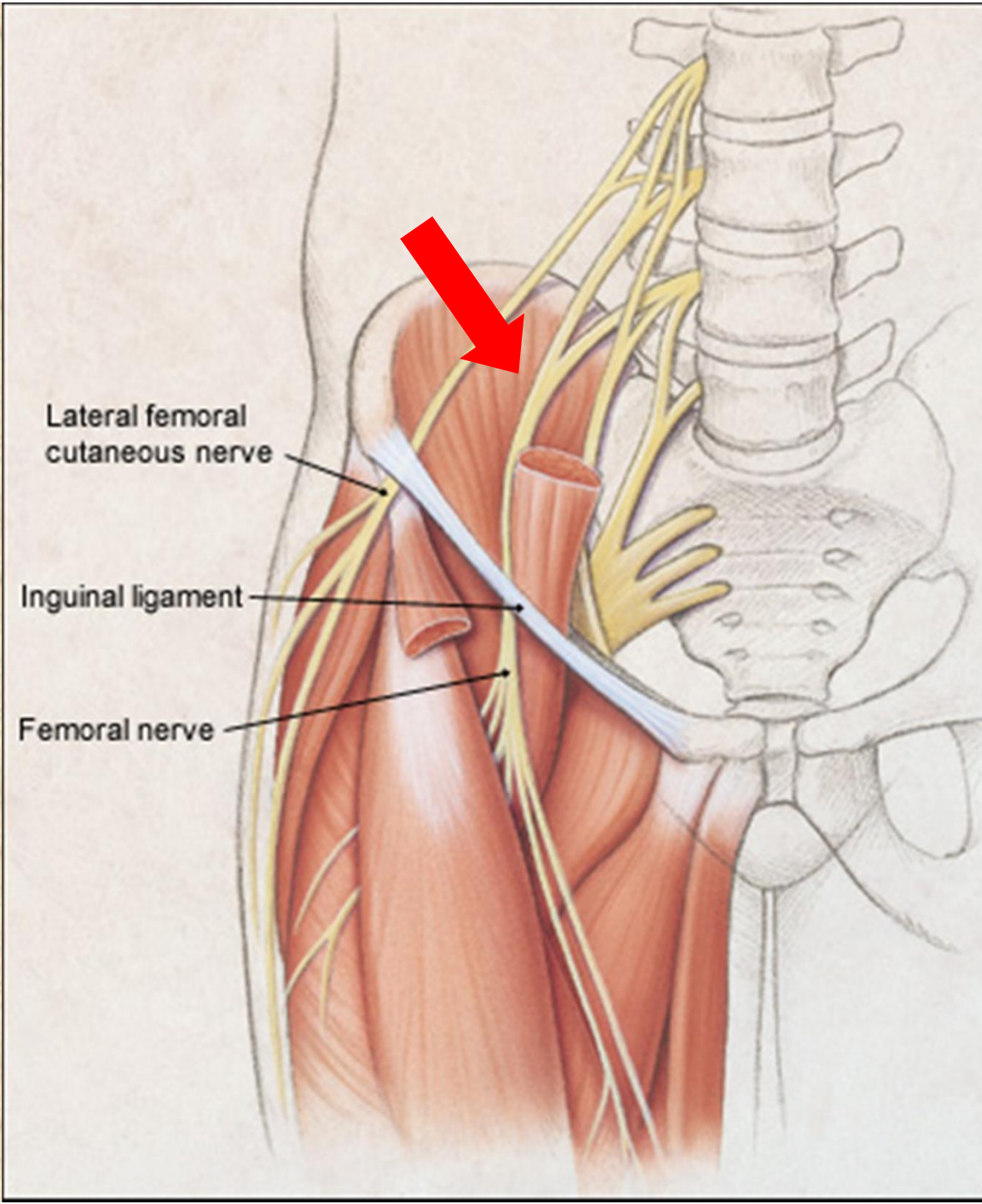
(m. iliopsoas, m. quadriceps femoris, m. articularis genus, m. sartorius a m. pectineus)

- **rr. cutanei anteriores** anterior surface of thigh

- **n. saphenus**

skin on the medial side of crus and in front of malleolus medialis



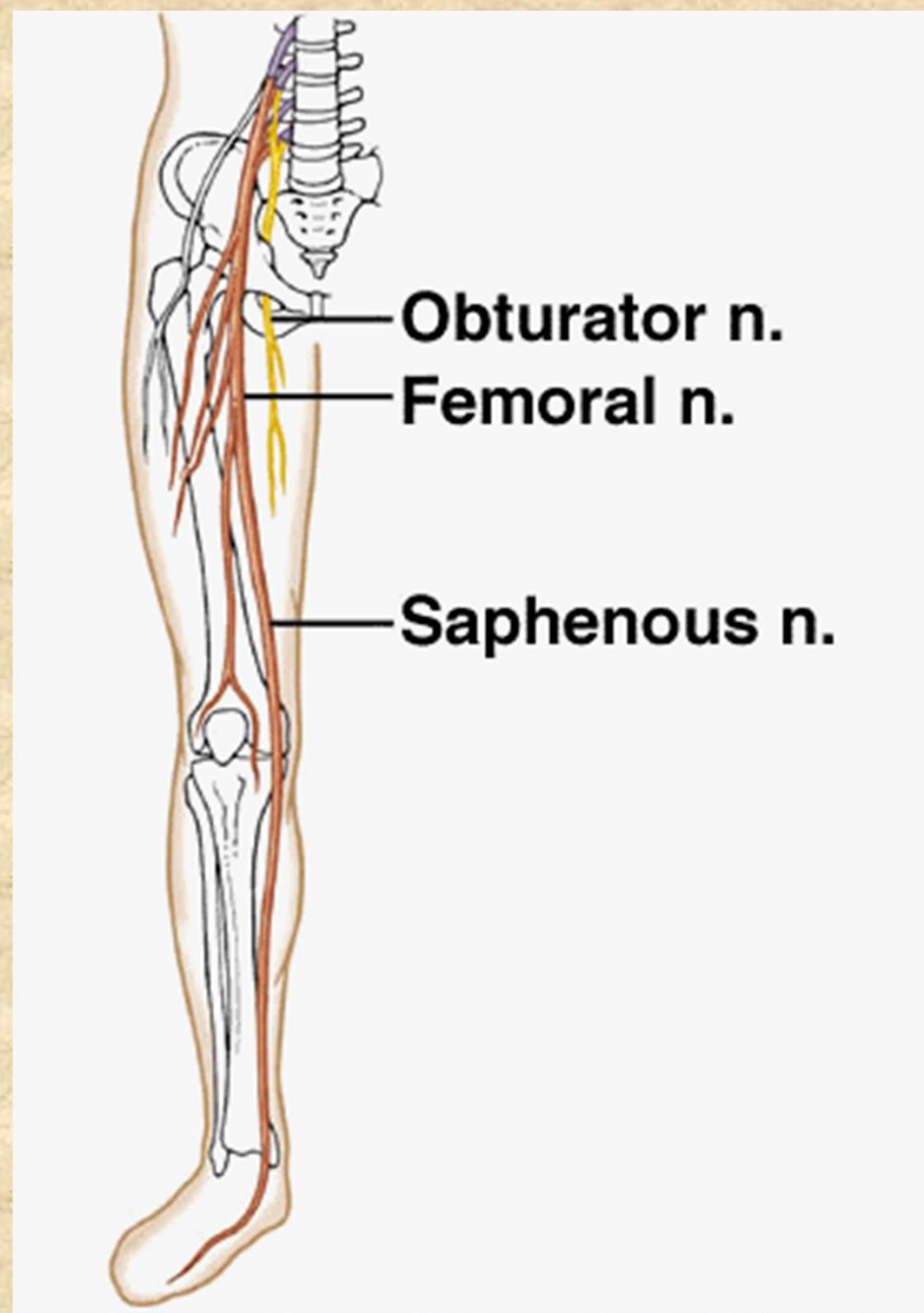


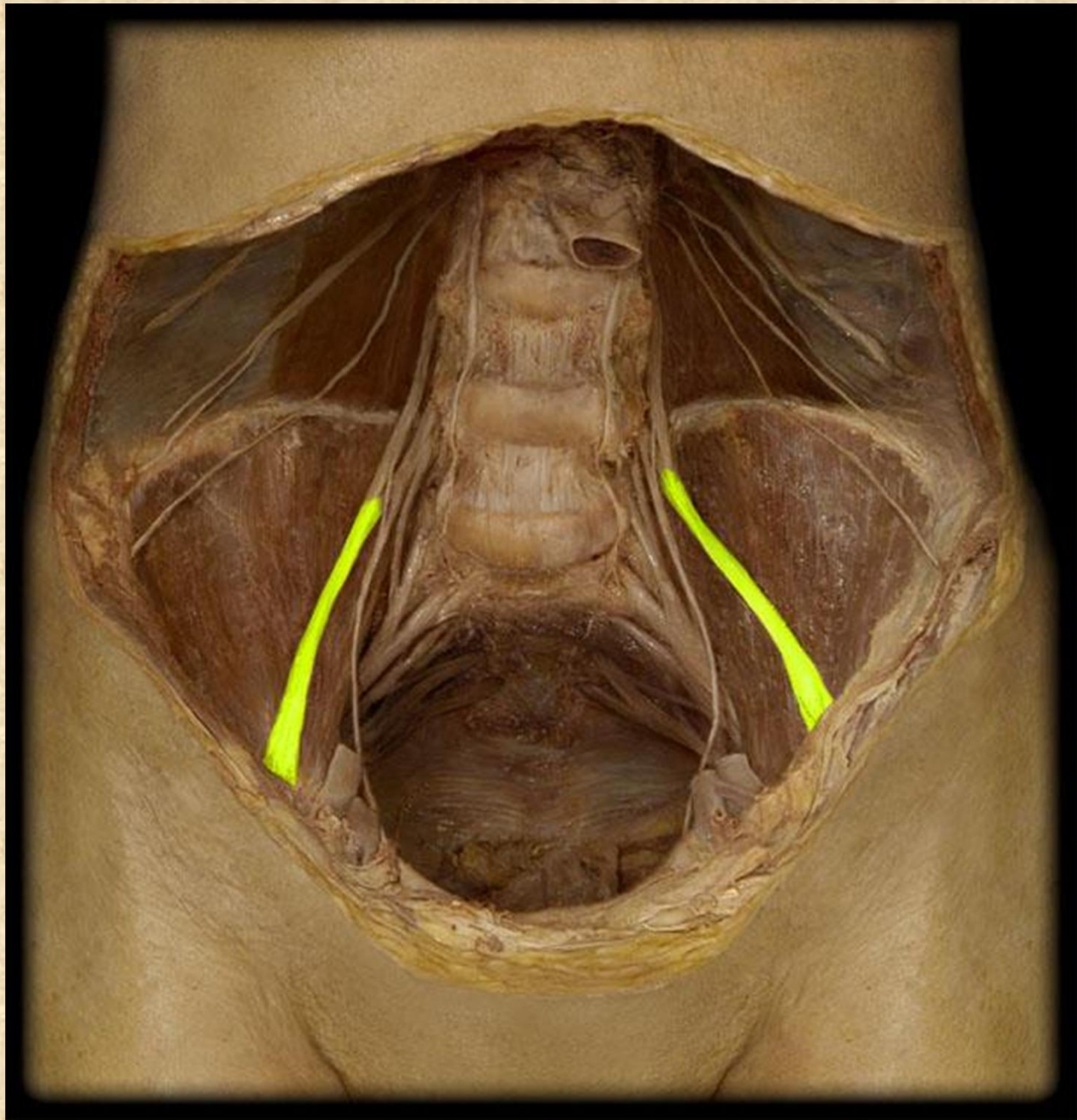
Lateral femoral cutaneous nerve

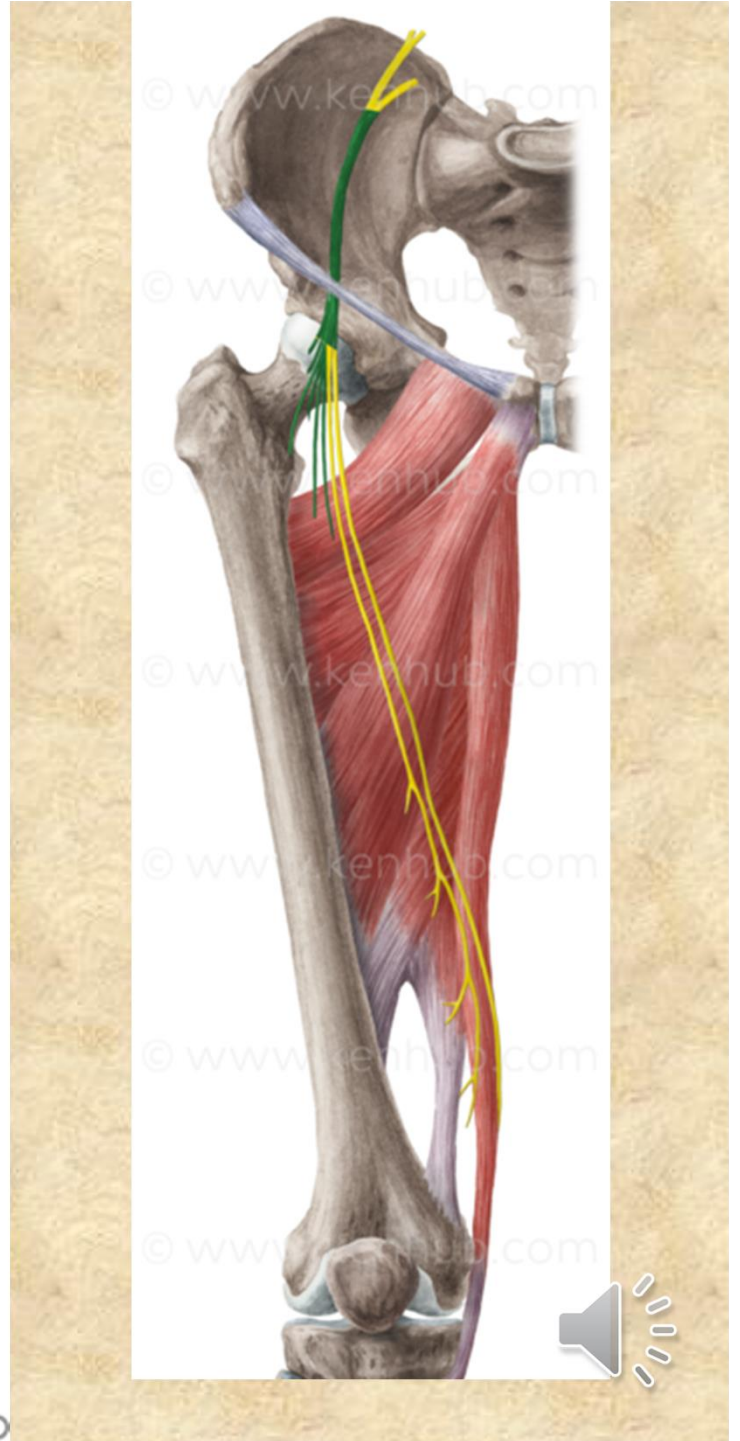
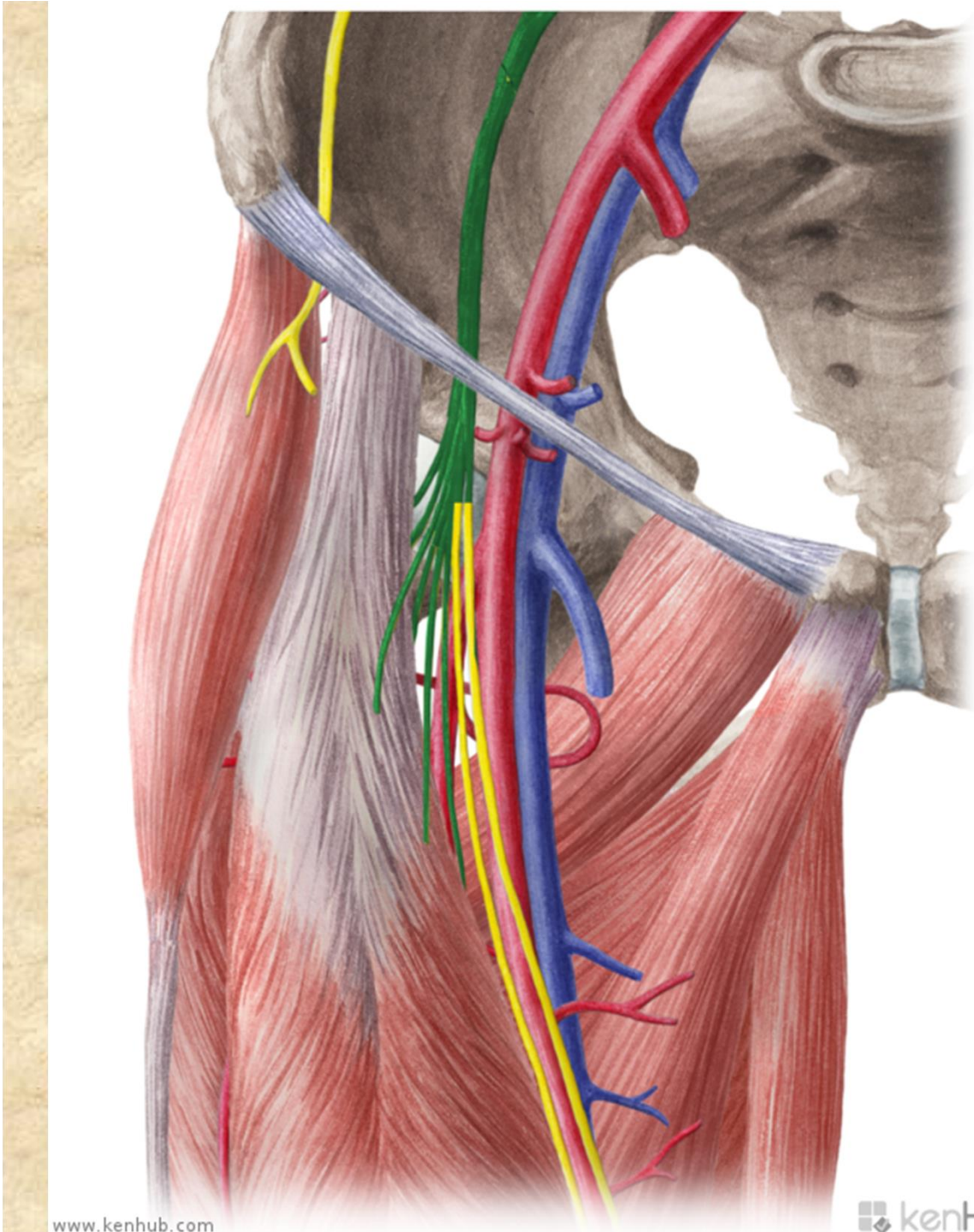
Inguinal ligament

Femoral nerve



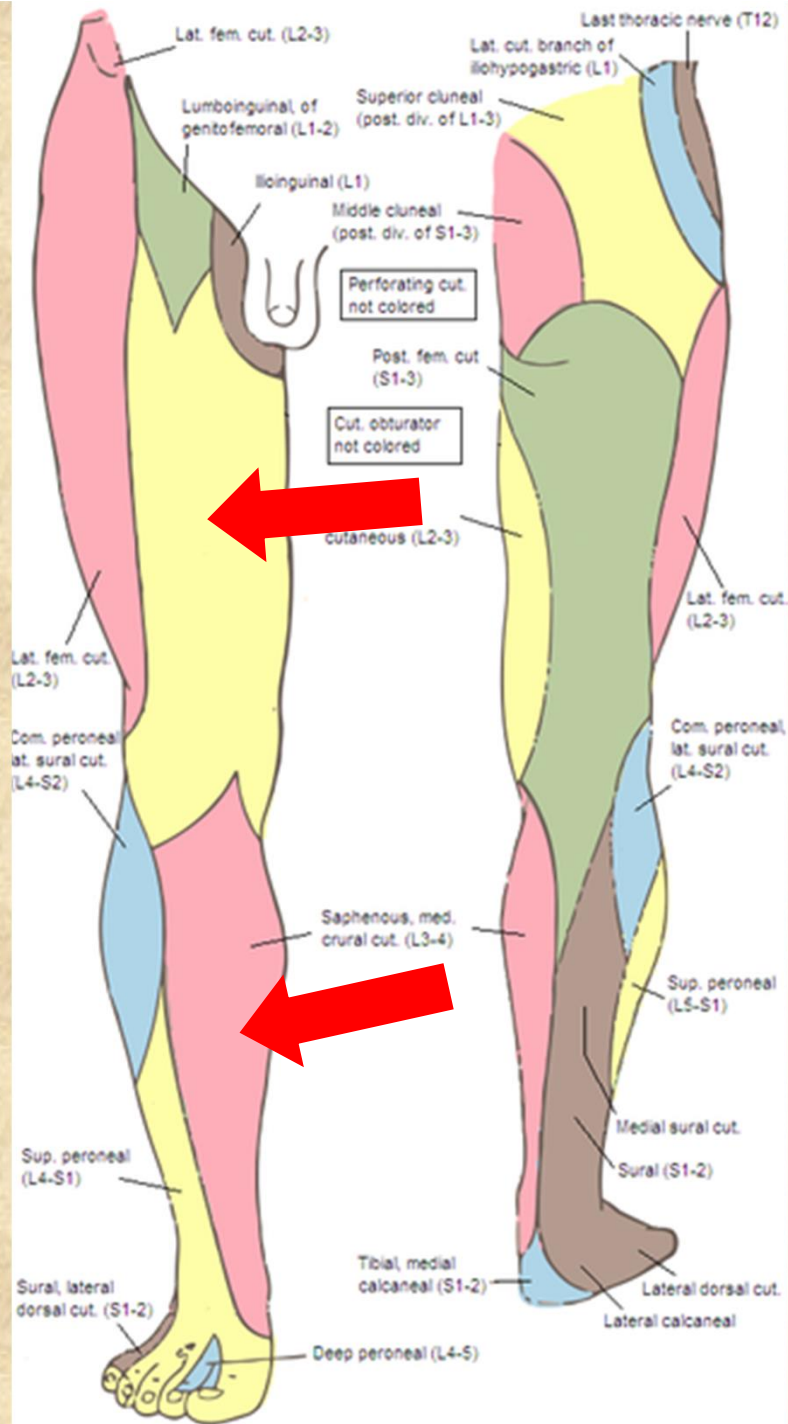
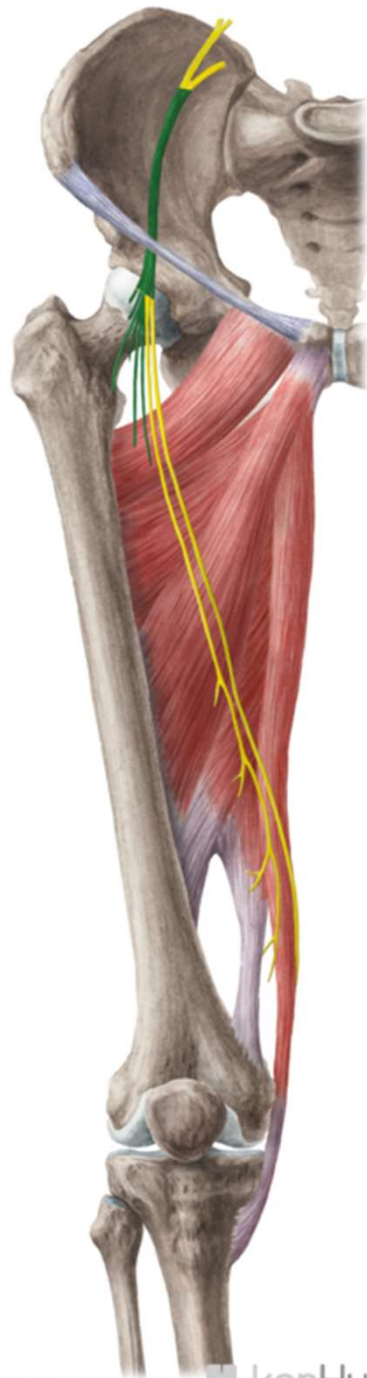






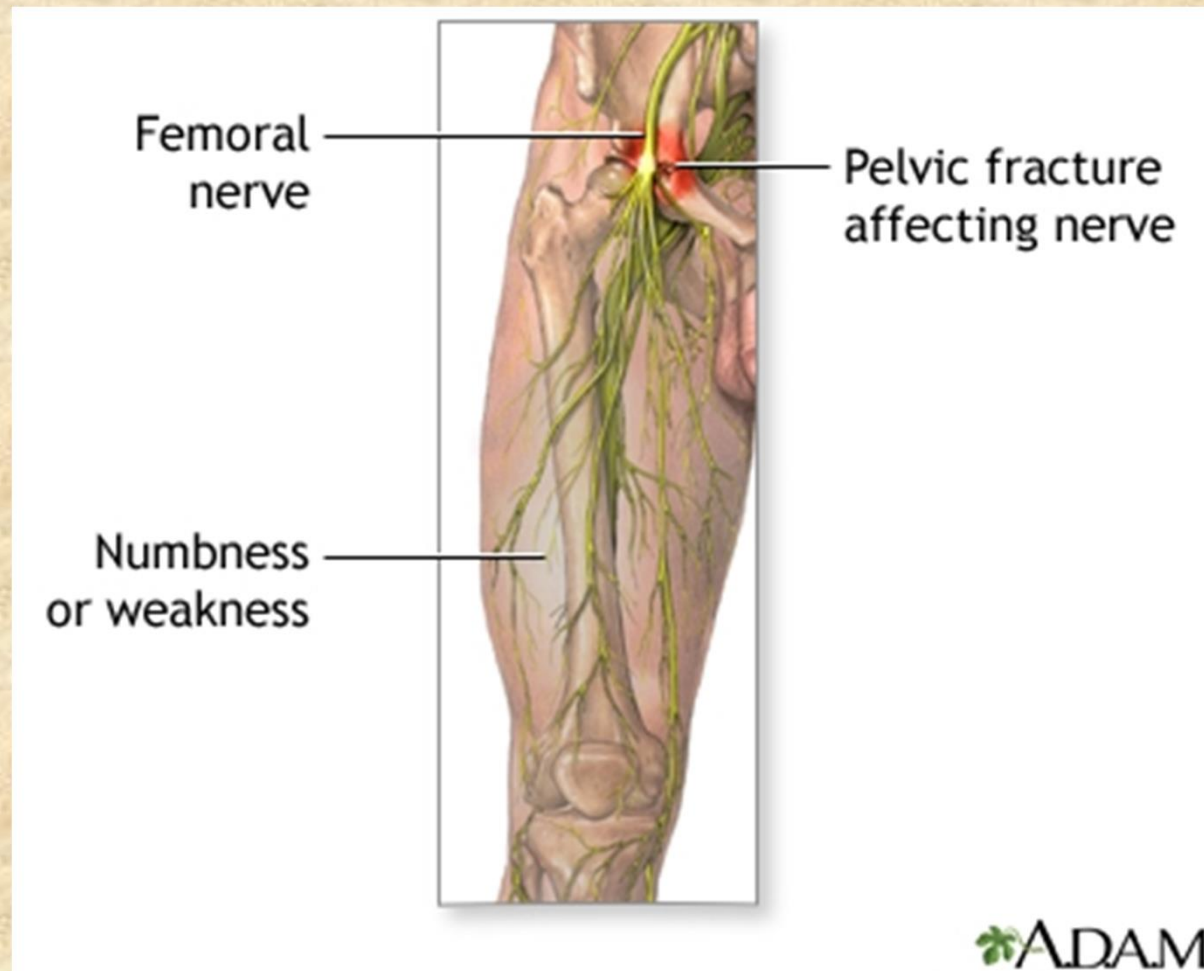
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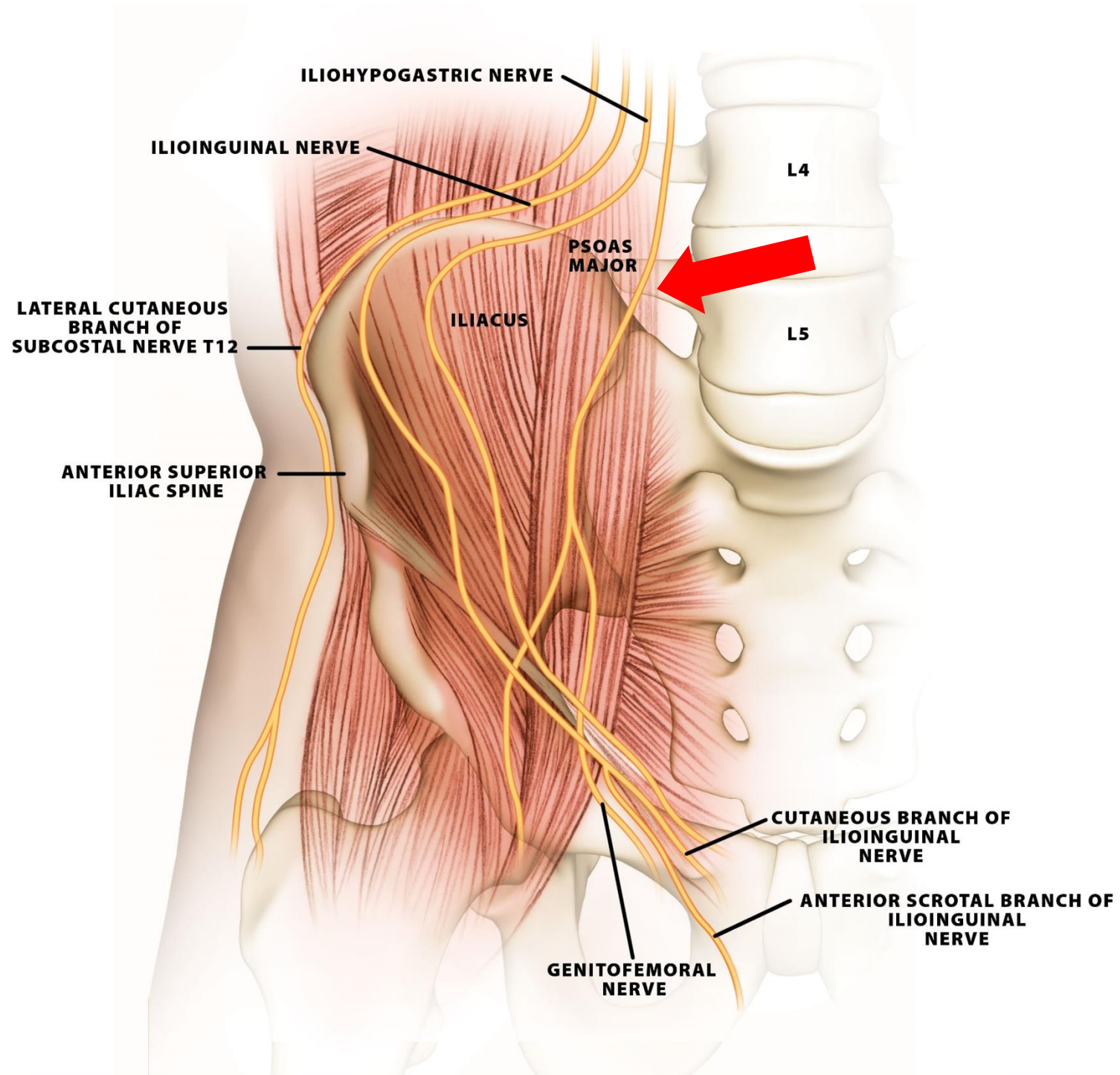
- **Palsy:** inability to extend the knee and flex the hip, disorders of sensitivity in the area of innervation, patellar reflex is missing

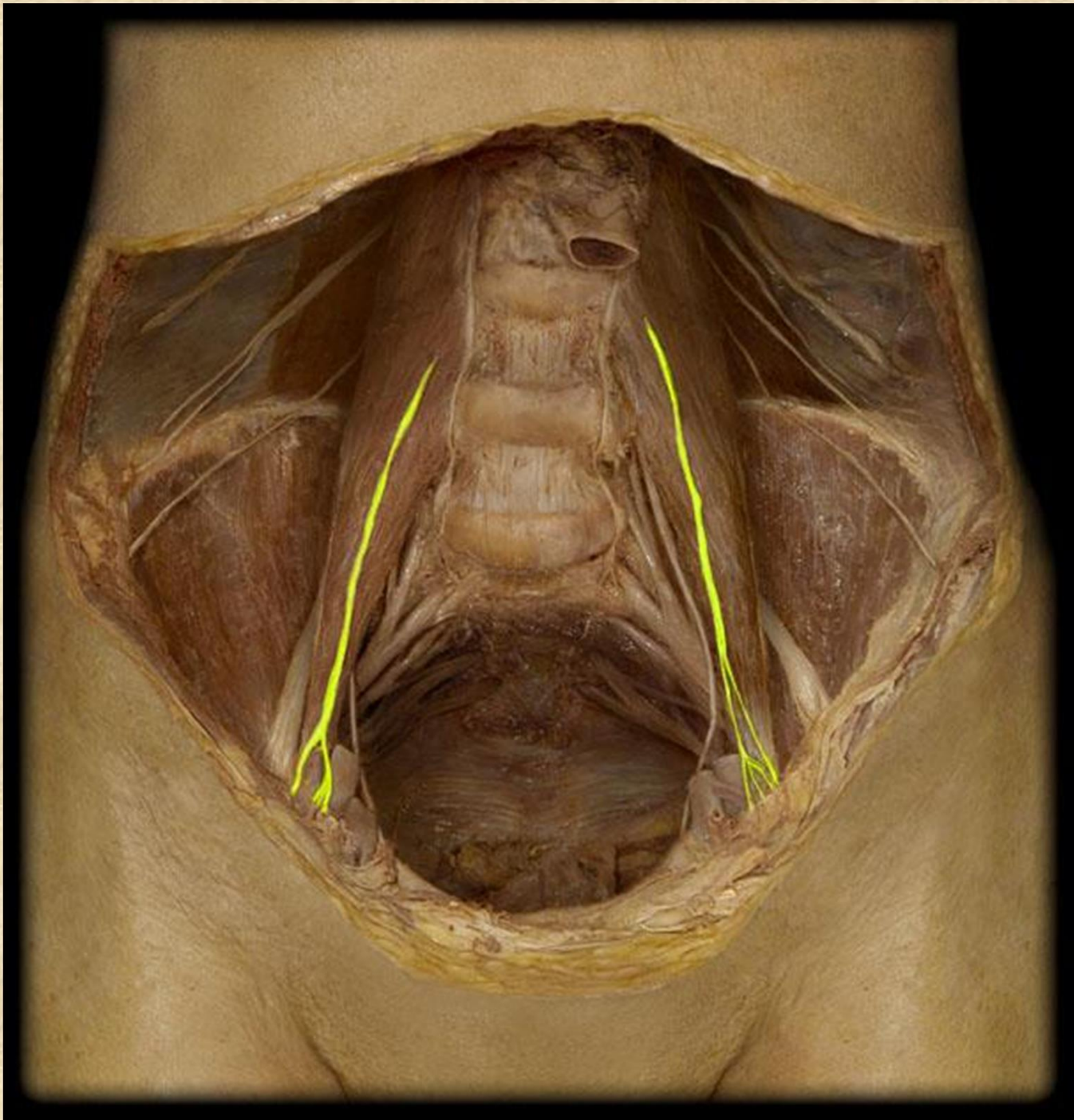


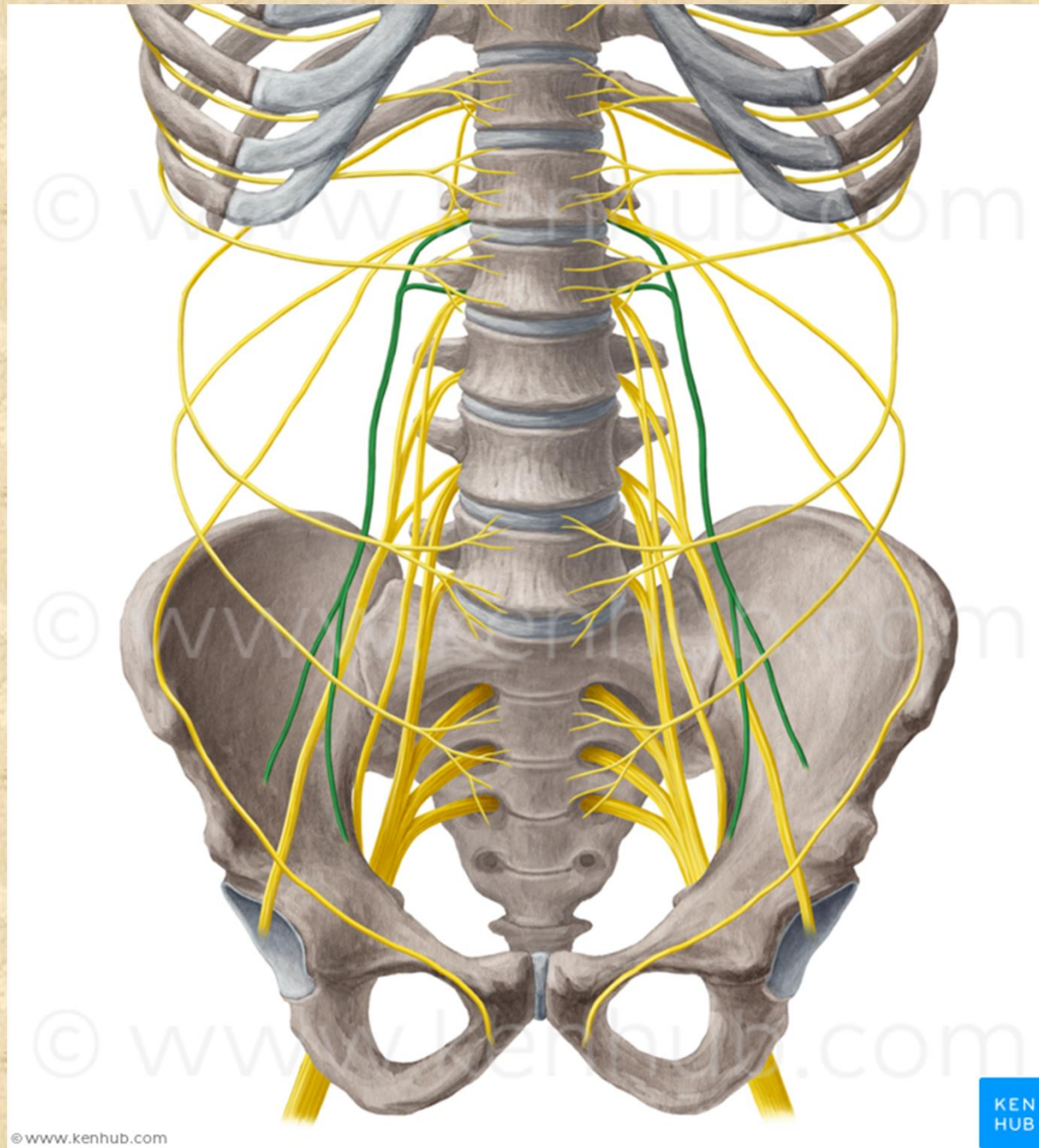
# Nervus genitofemoralis L1-L2

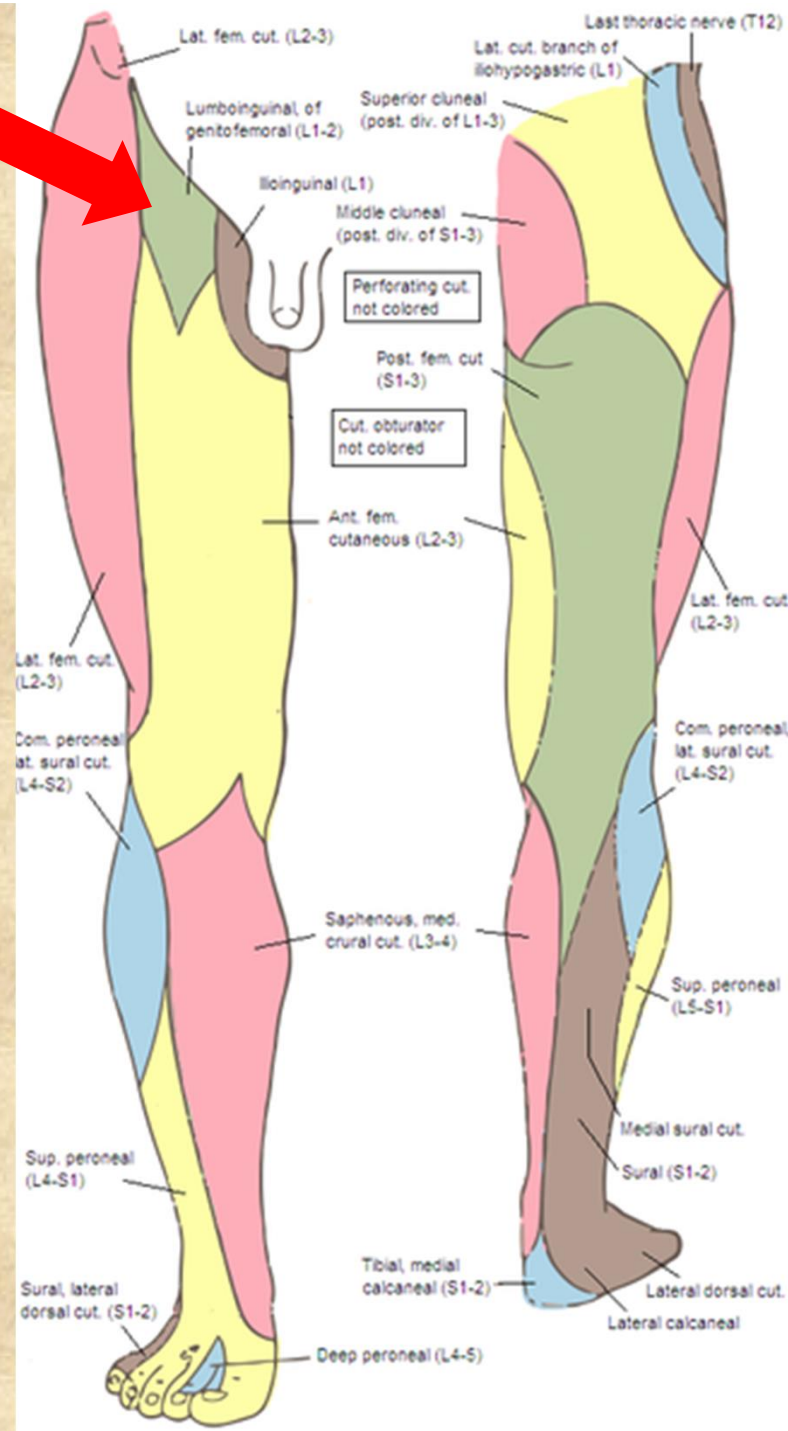
- **r. genitalis** (through canalis inguinalis), m. cremaster, skin of medial side of thigh
- **r. femoralis** - (through lacuna vasorum, skin of the anterior surface of thigh (below the inguinal ligament))









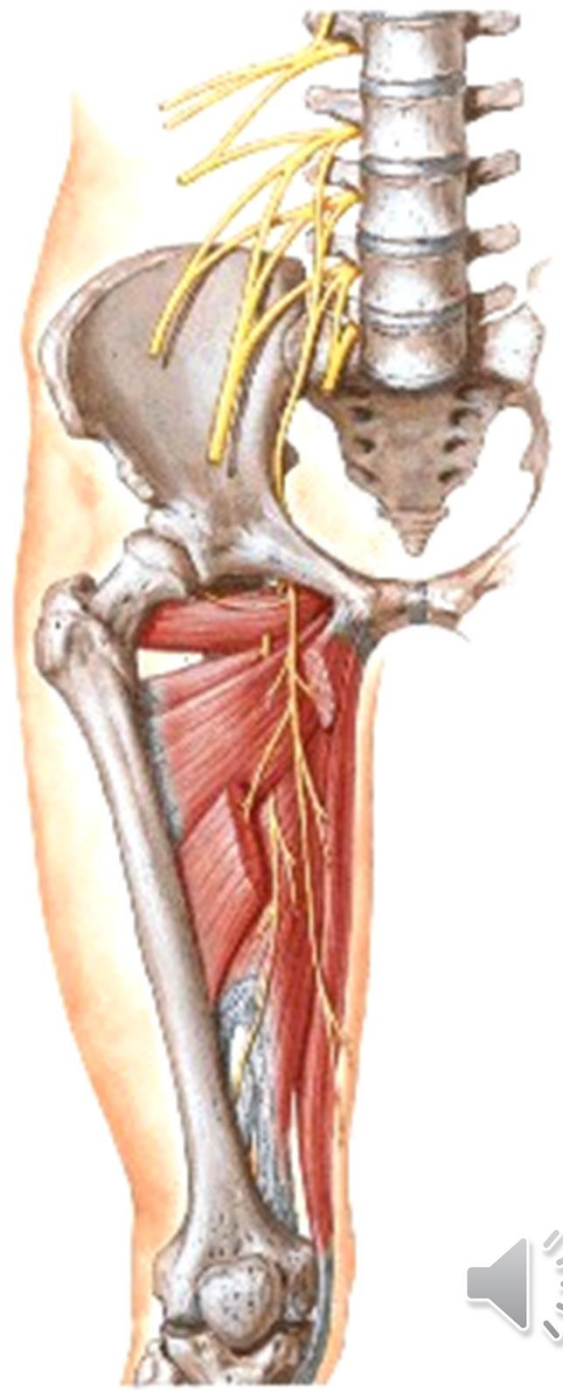
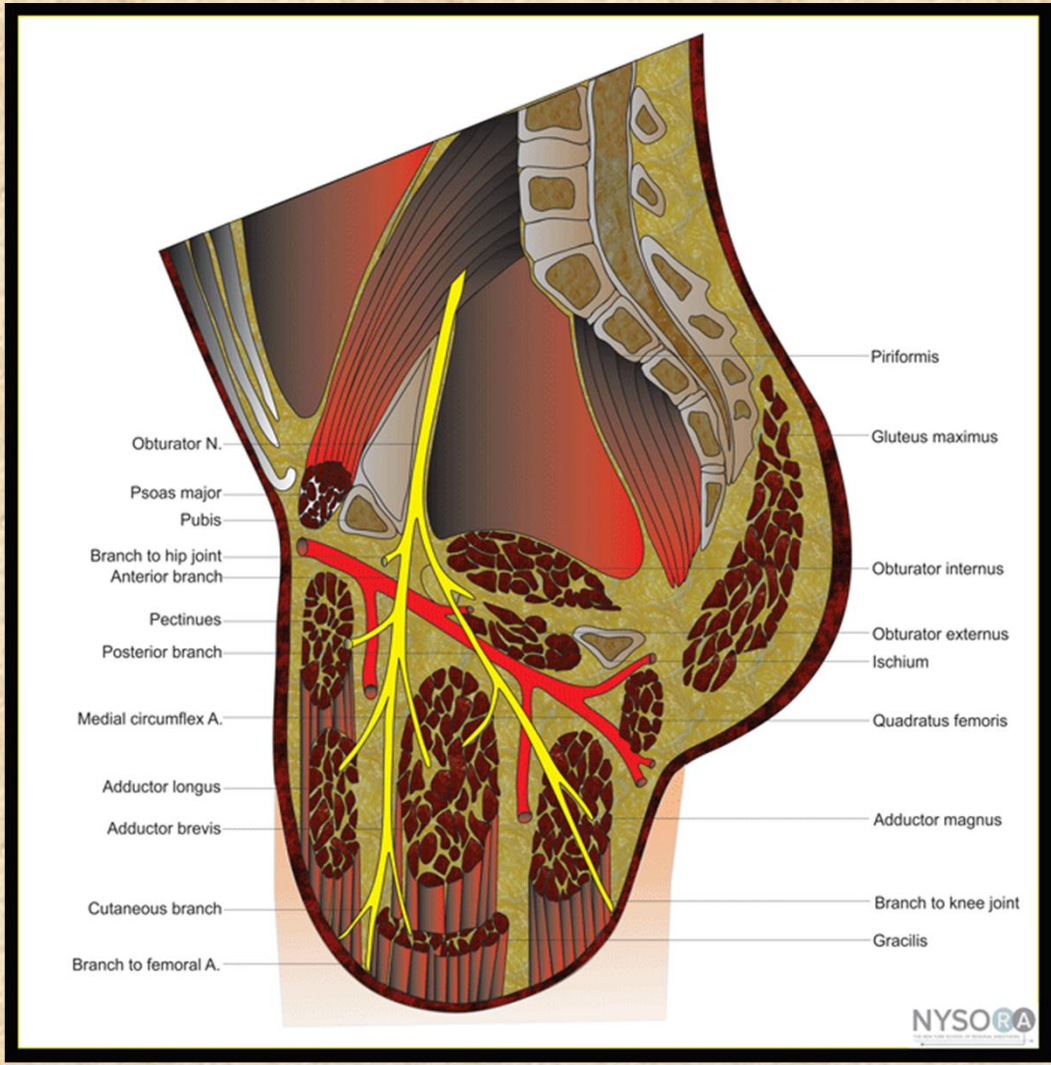


# Nervus obturatorius L2-L4

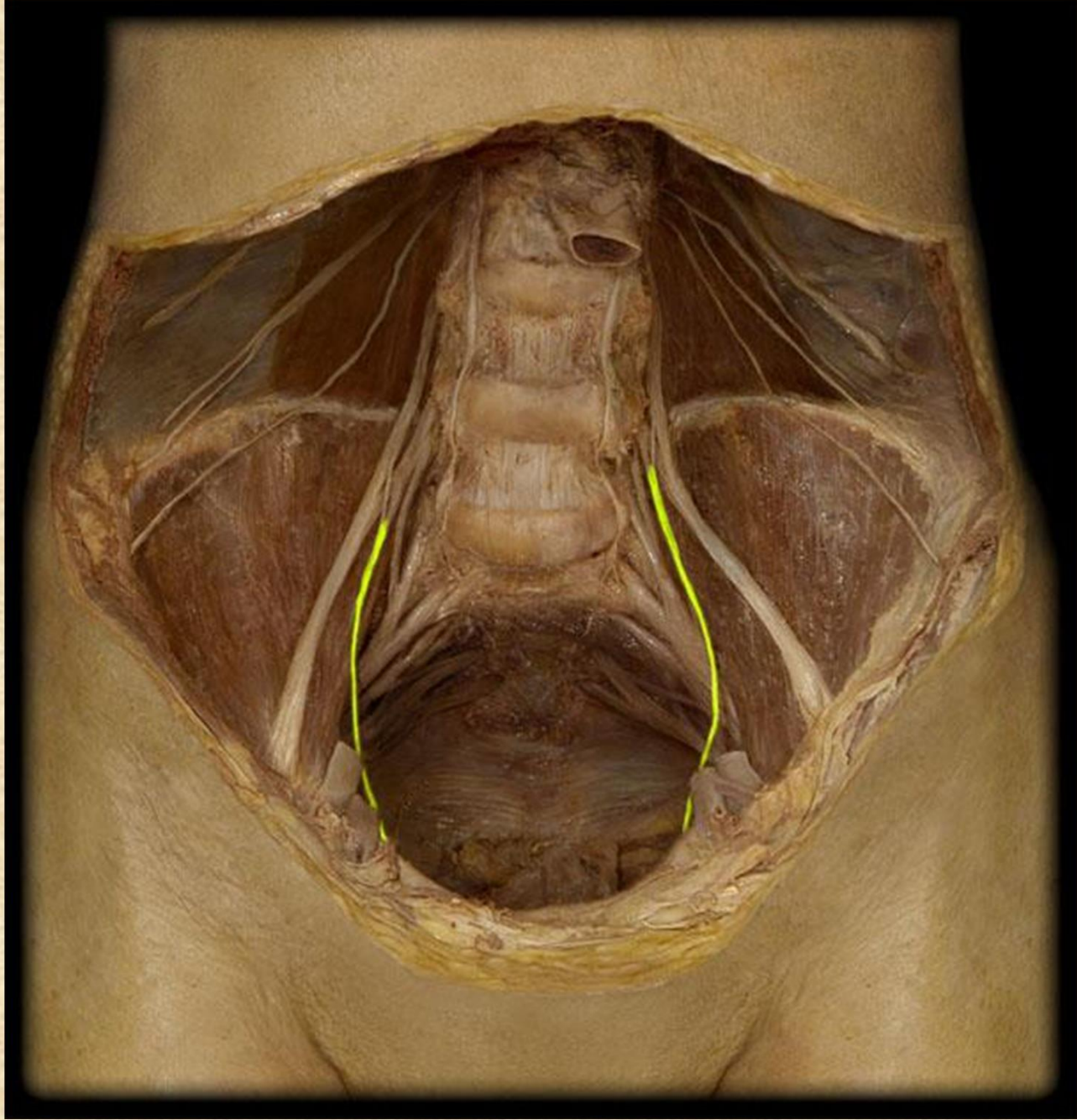
- **r. anterior - r. cutaneus**  
(m. pectineus, m. adductor longus, m. gracilis)
- **r. posterior - r. articularis**  
(m. obturatorius externus, m. adductor magnus, m. adductor brevis)

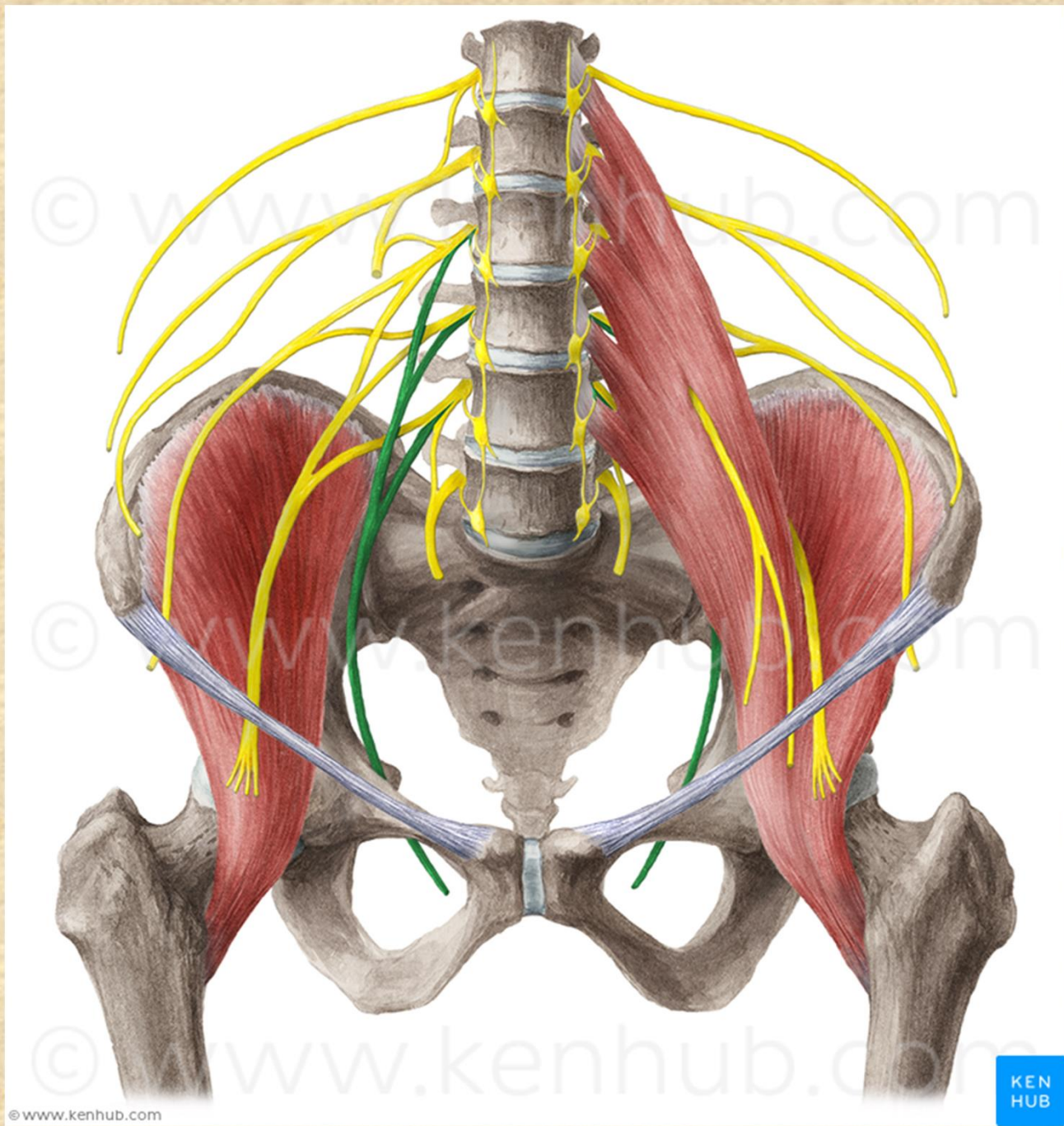
**Palsy:** inability to adduct













# Plexus sacralis L4-S4 (S5+Co)

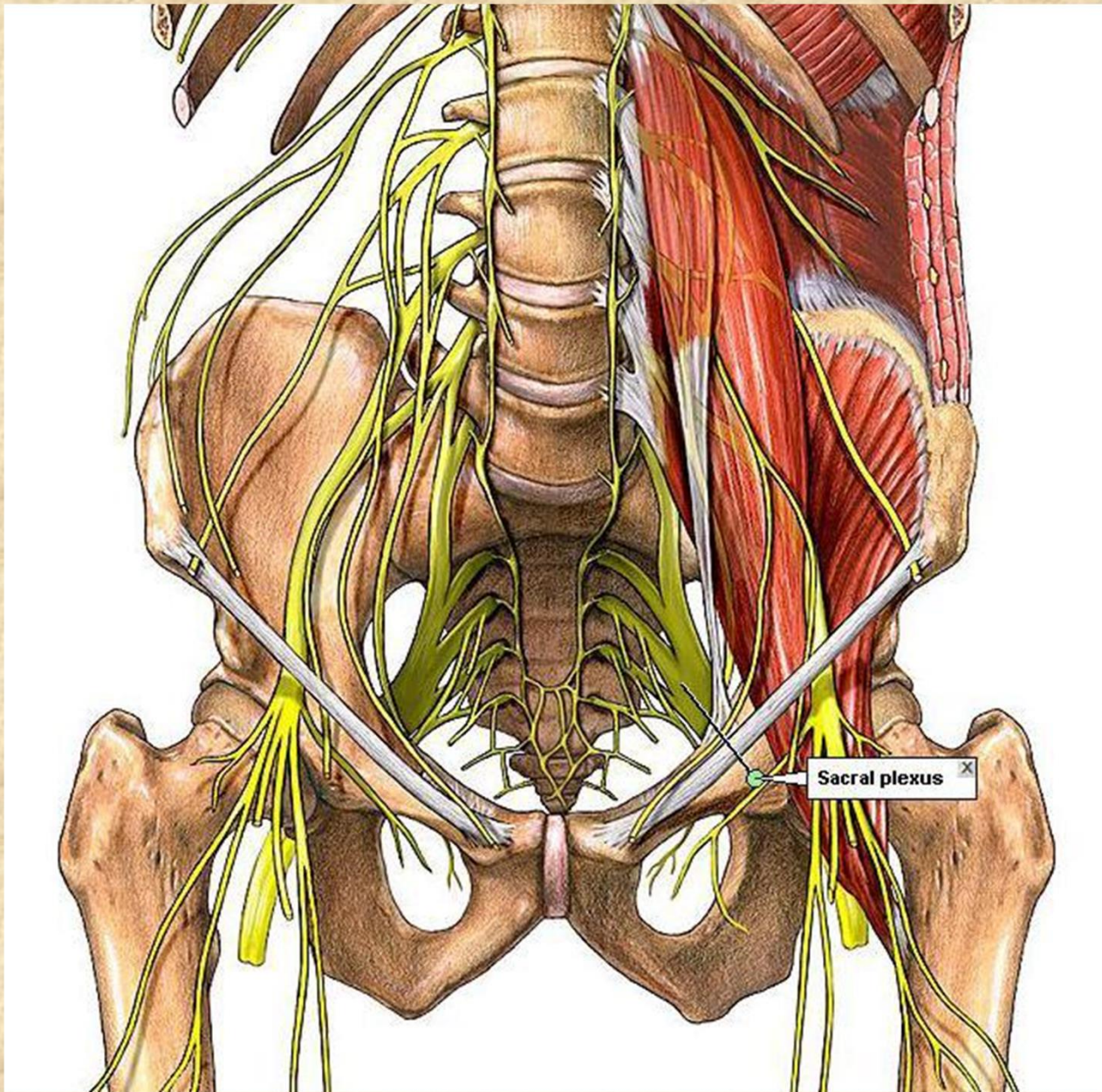
## Sensory innervation

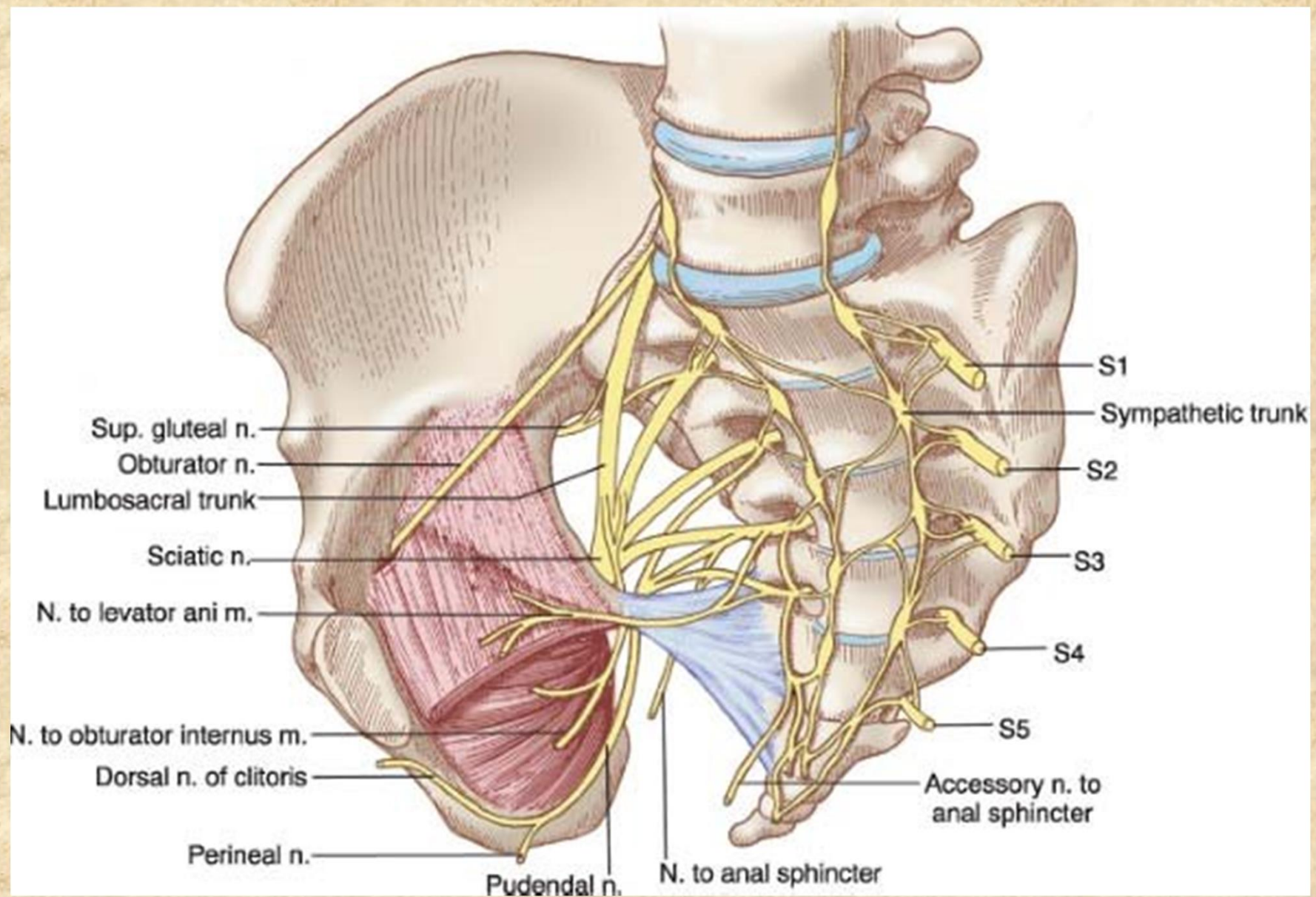
skin of the gluteal region, skin of the posterior surface of thigh and crus and skin of external genital organs

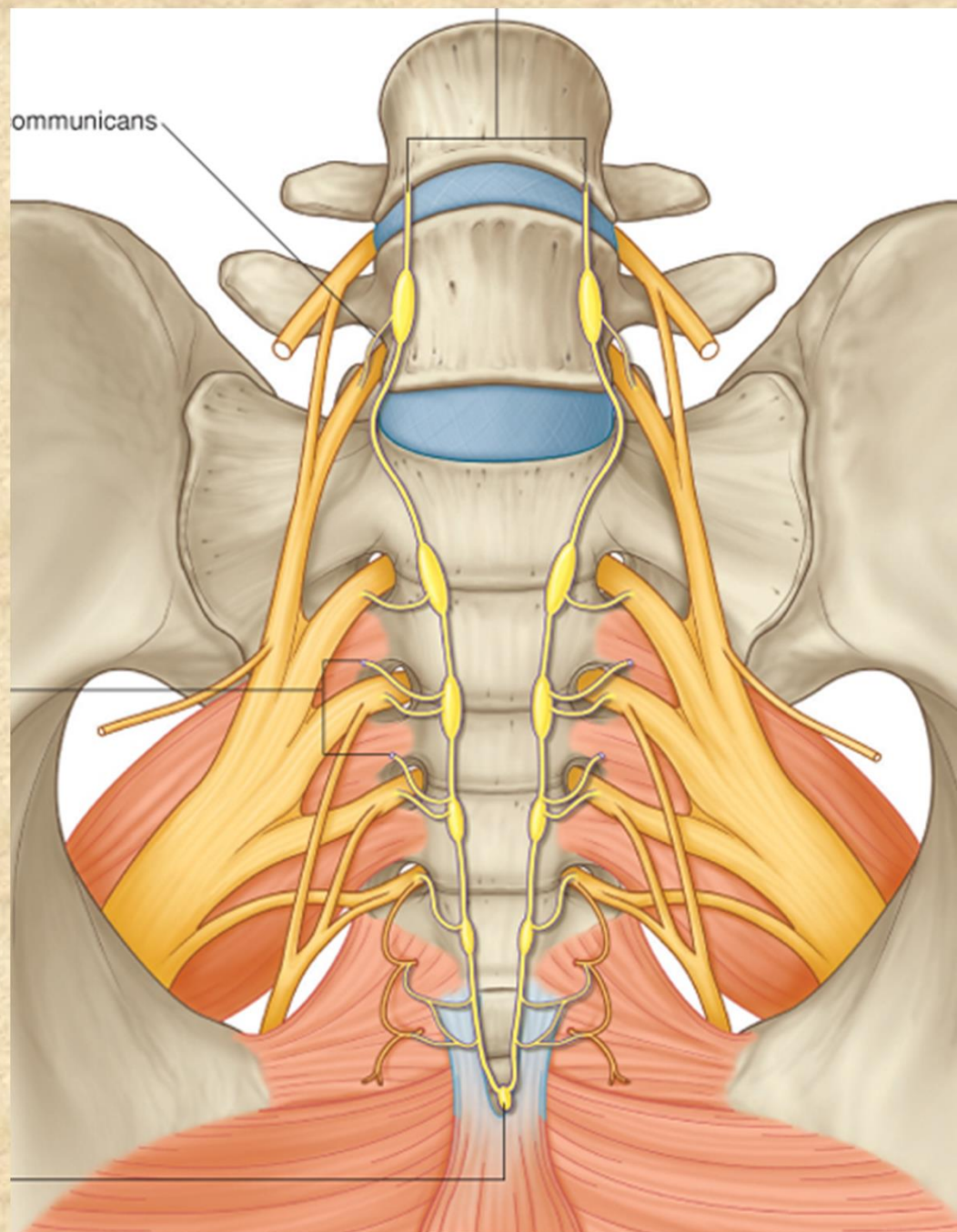
## Motor innervation

muscles of posterior group of pelvis and thigh and muscles of crus and foot



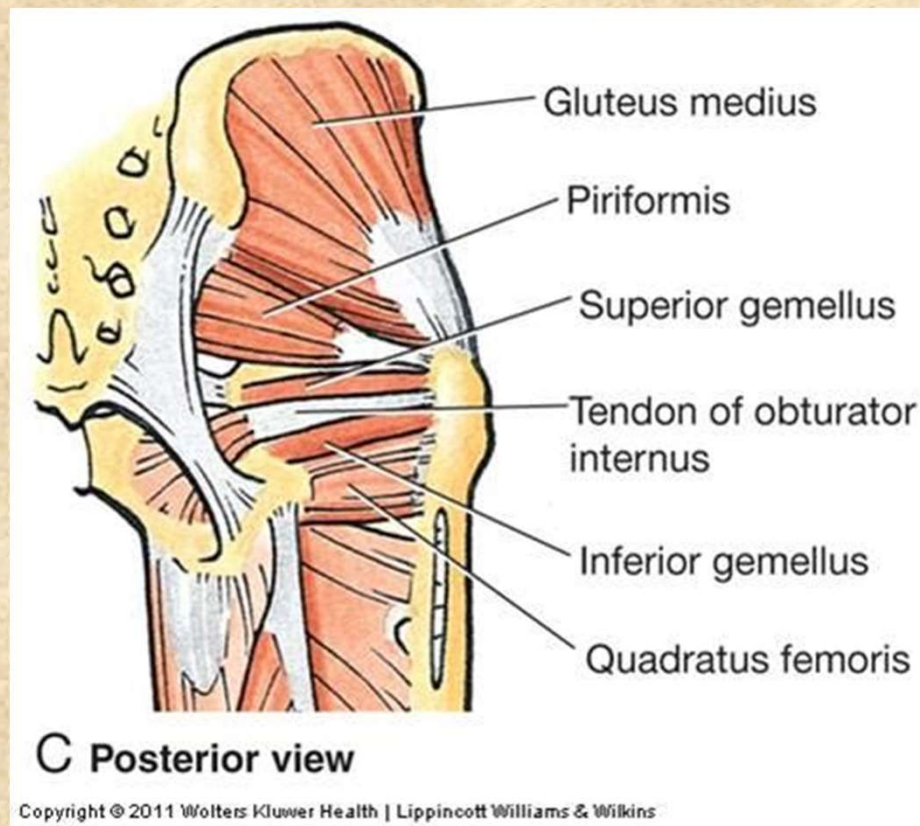




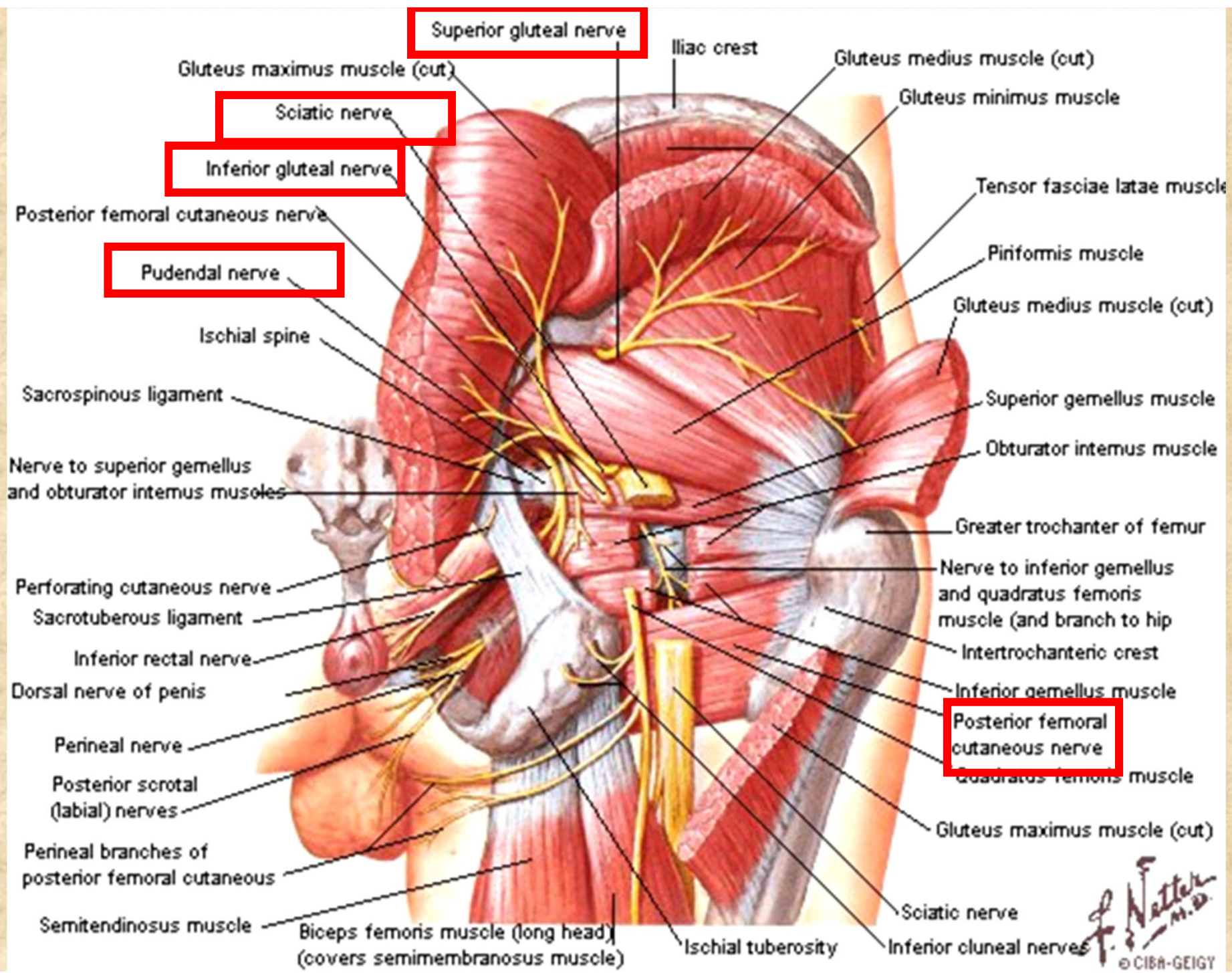


# Branches of plexus sacralis

- rr. musculares: **m. piriformis**,  
**m. obturatorius int.**, **m. quadratus femoris**, **mm. gemelli**



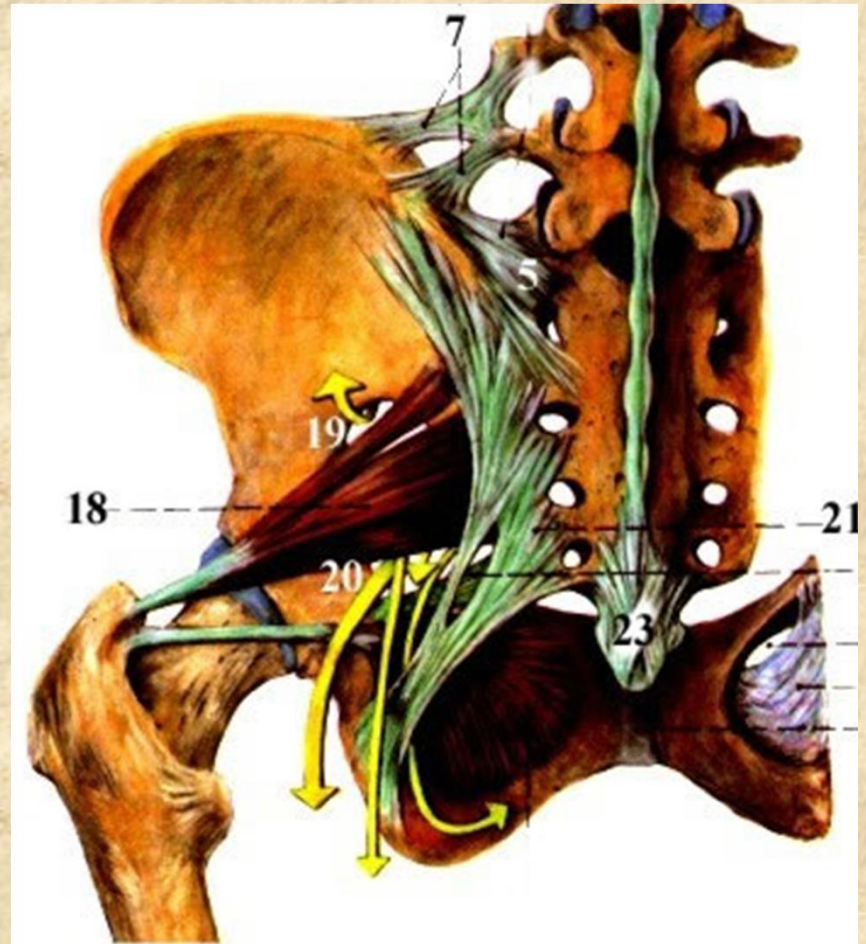


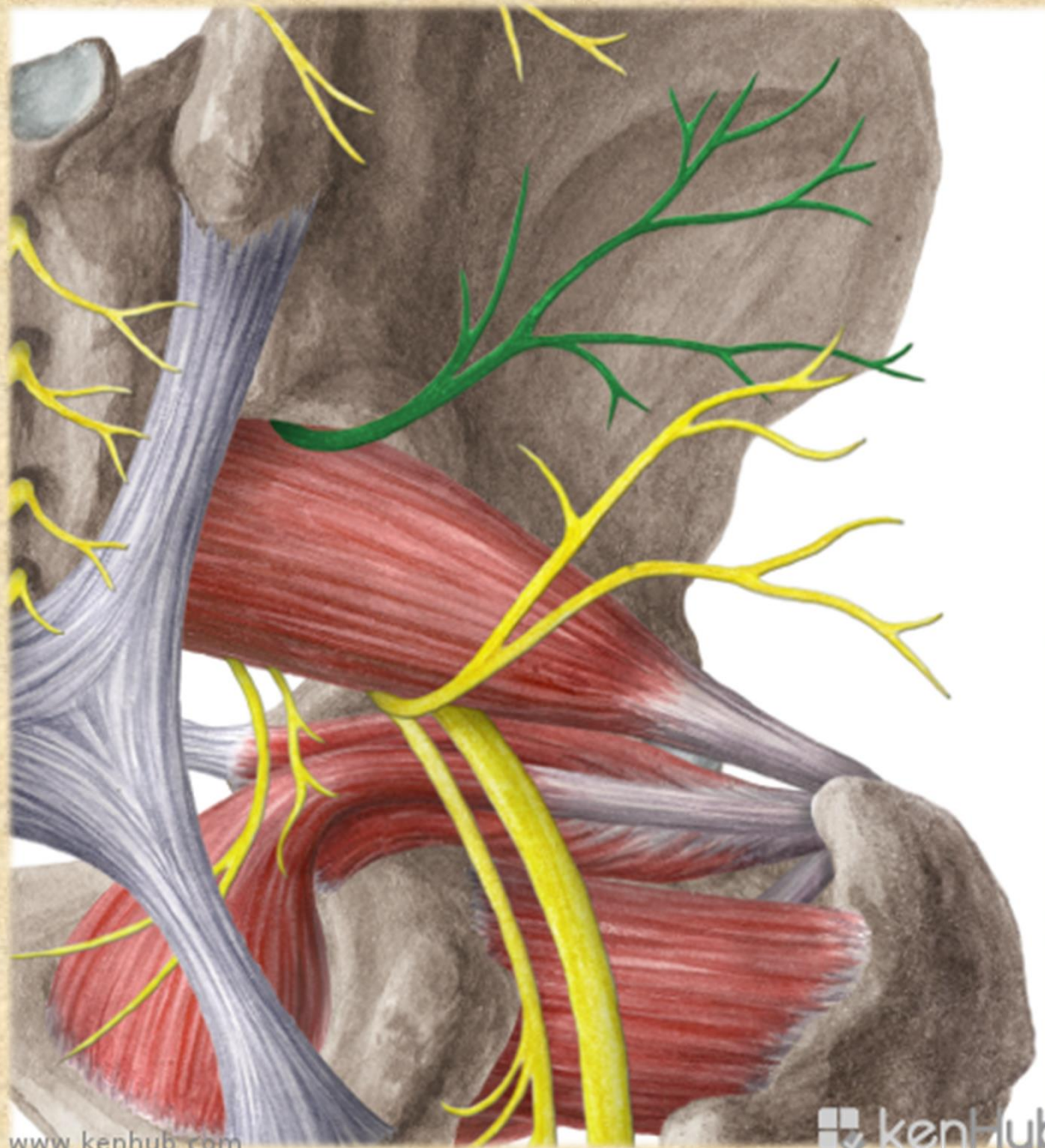


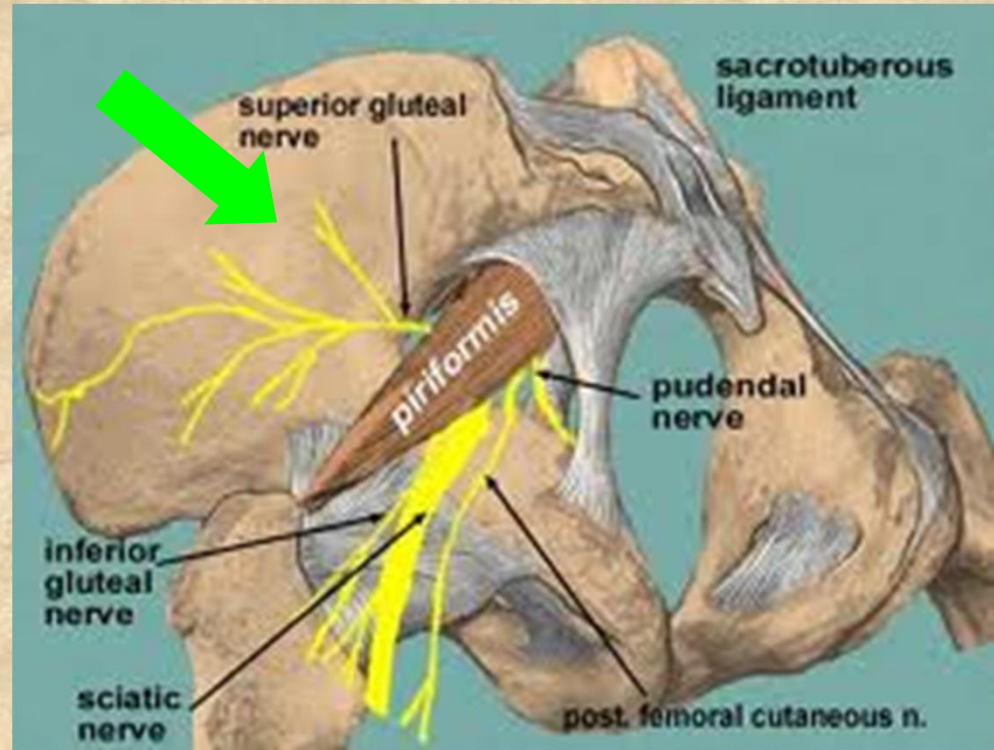
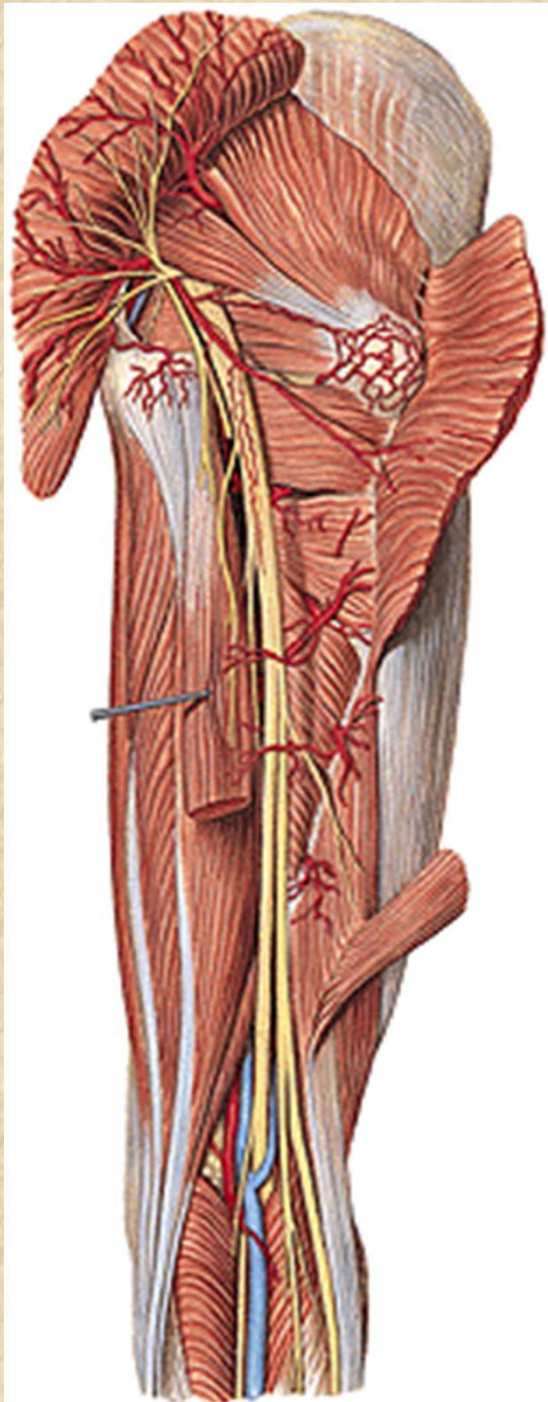
F. Netter M.D.  
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# Nervus gluteus superior L4-S1

- m. gluteus medius et minimus, m. tensor fasciae latae
- foramen suprapiriforme

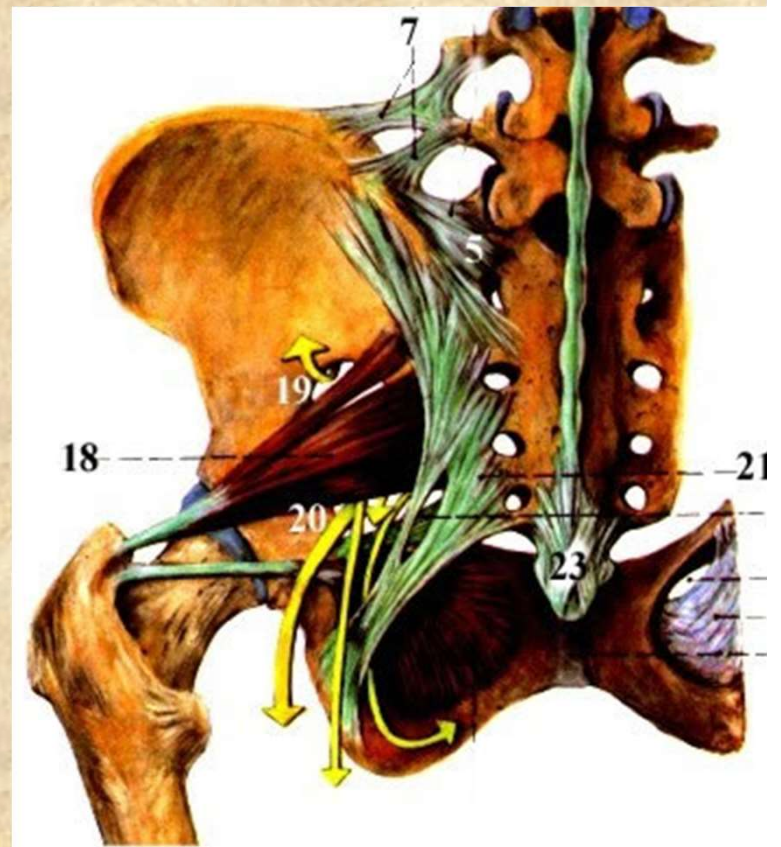


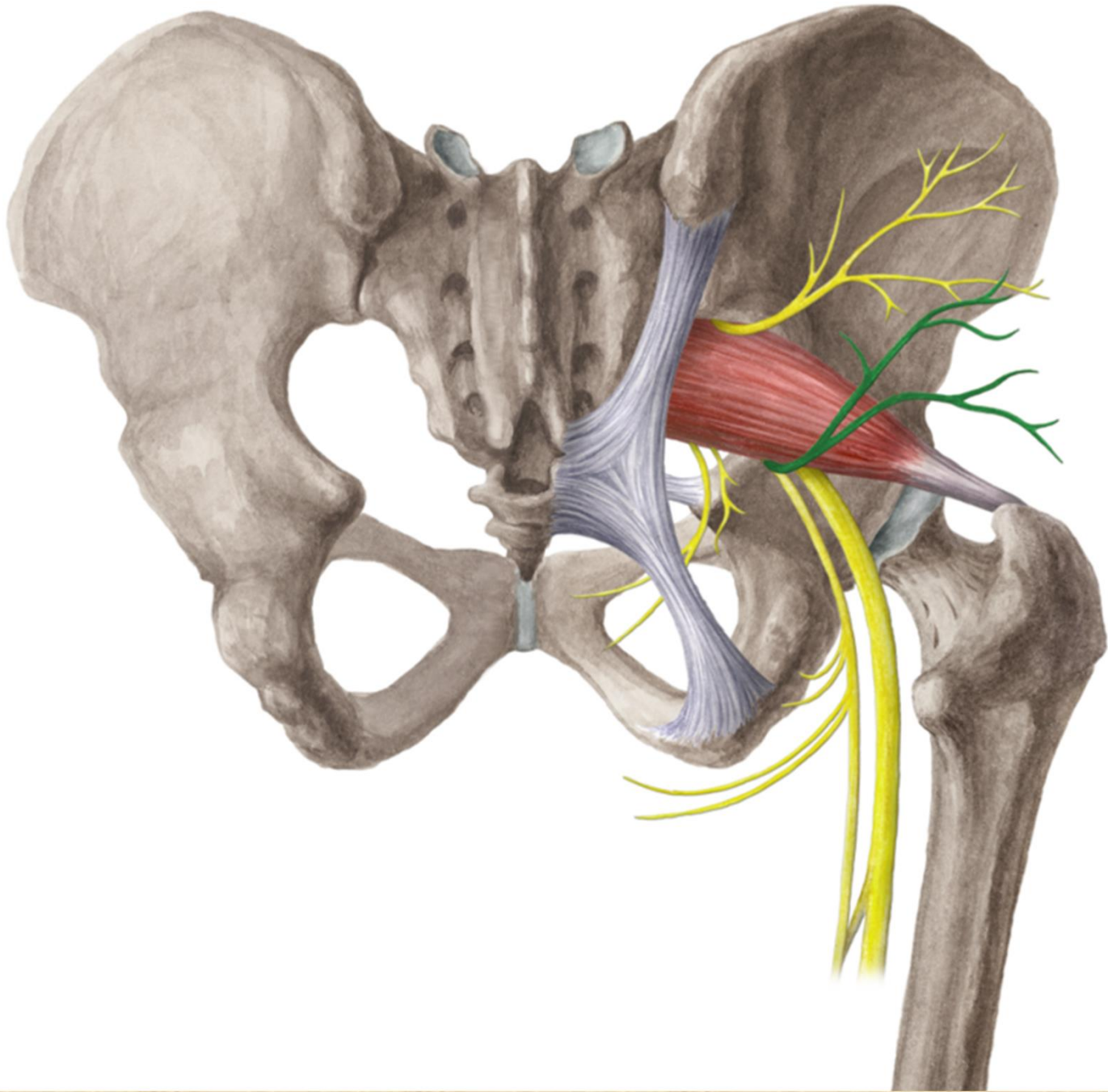


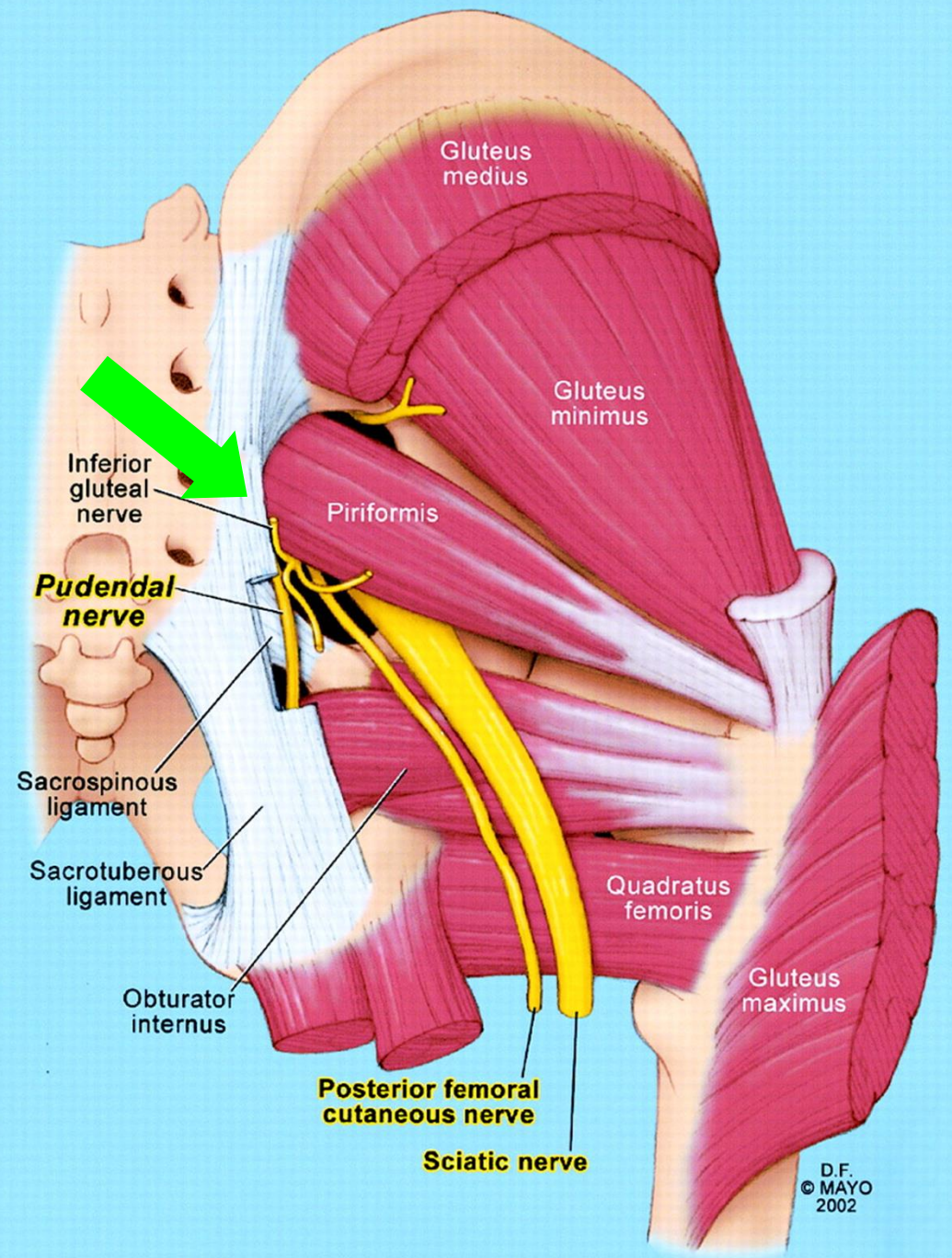


# Nervus gluteus inferior L5-S2

m. gluteus maximus, posterior part of  
articular capsule of hip joint  
foramen infrapiriforme







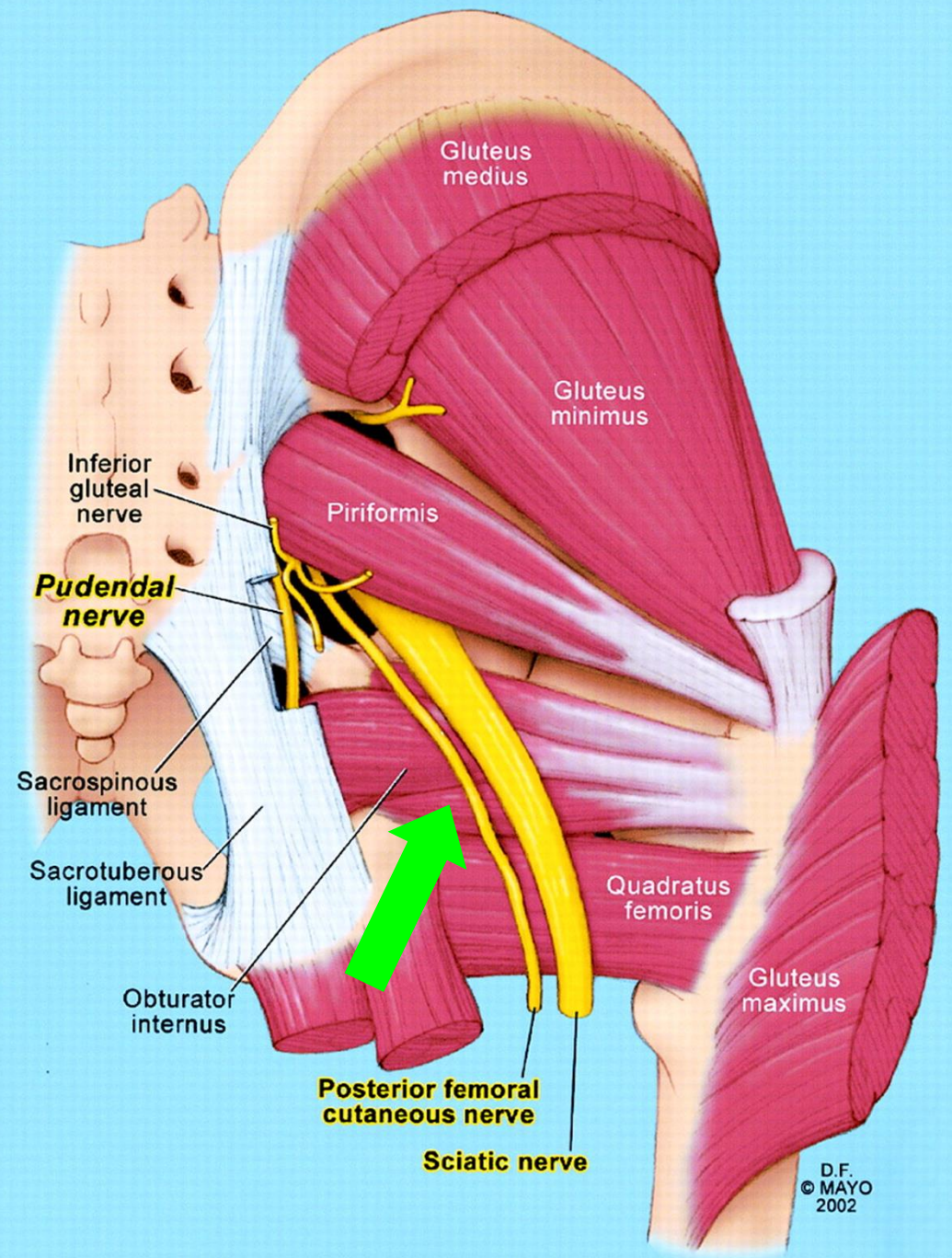
D.F.  
© MAYO  
2002

# Nervus cutaneus femoris posterior S1-S3

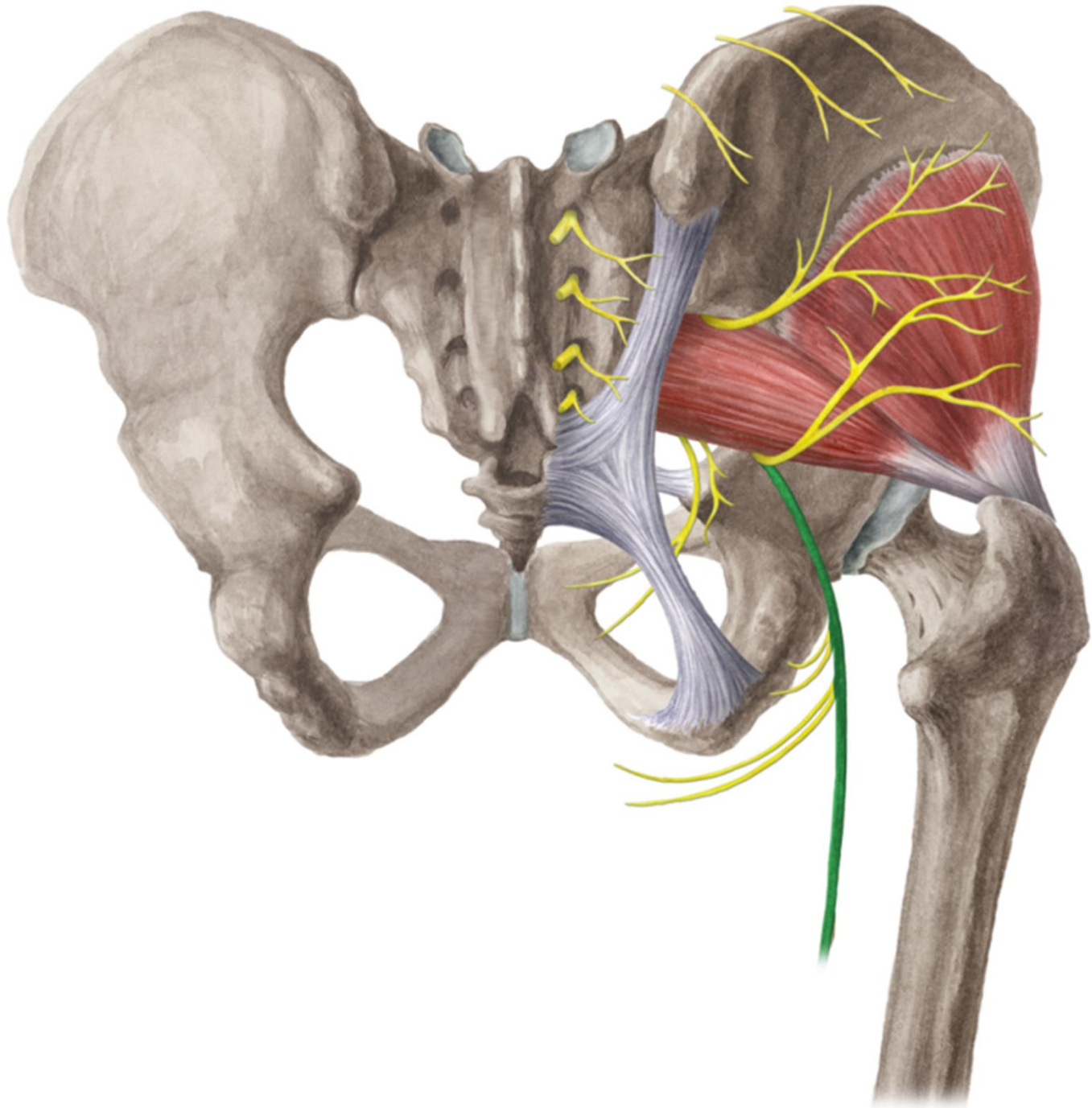
skin of the posterior side of thigh, popliteal fossa and proximal part of crus

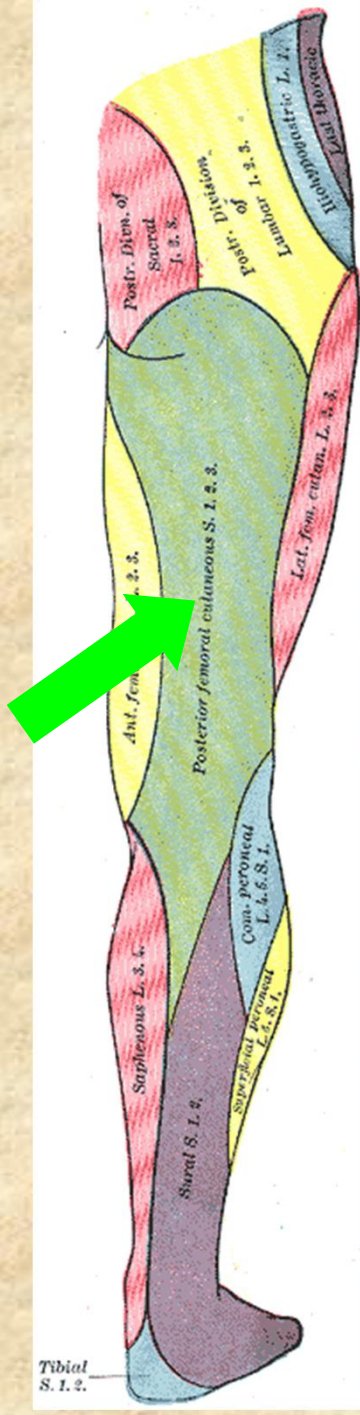
- **rr. perineales** - skin of perineum and scrotum (labia majora)
- **nn. clunium inf.** - skin of inferior part of gluteal region
- **rr. cutanei**- skin of regio femoris posterior





D.F.  
© MAYO  
2002





# Nervus ischiadicus L4-S3

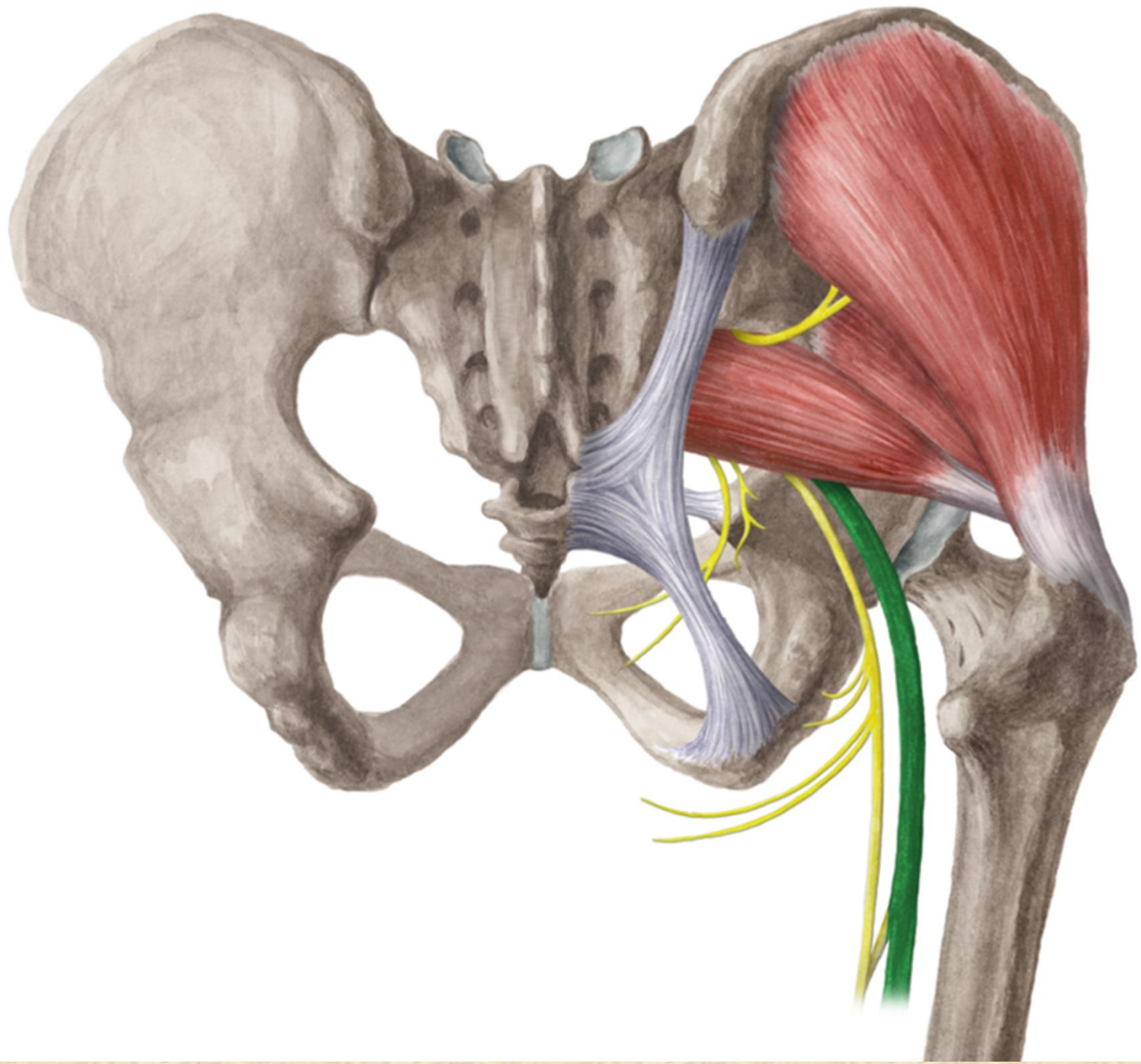
The thickest nerve of human body

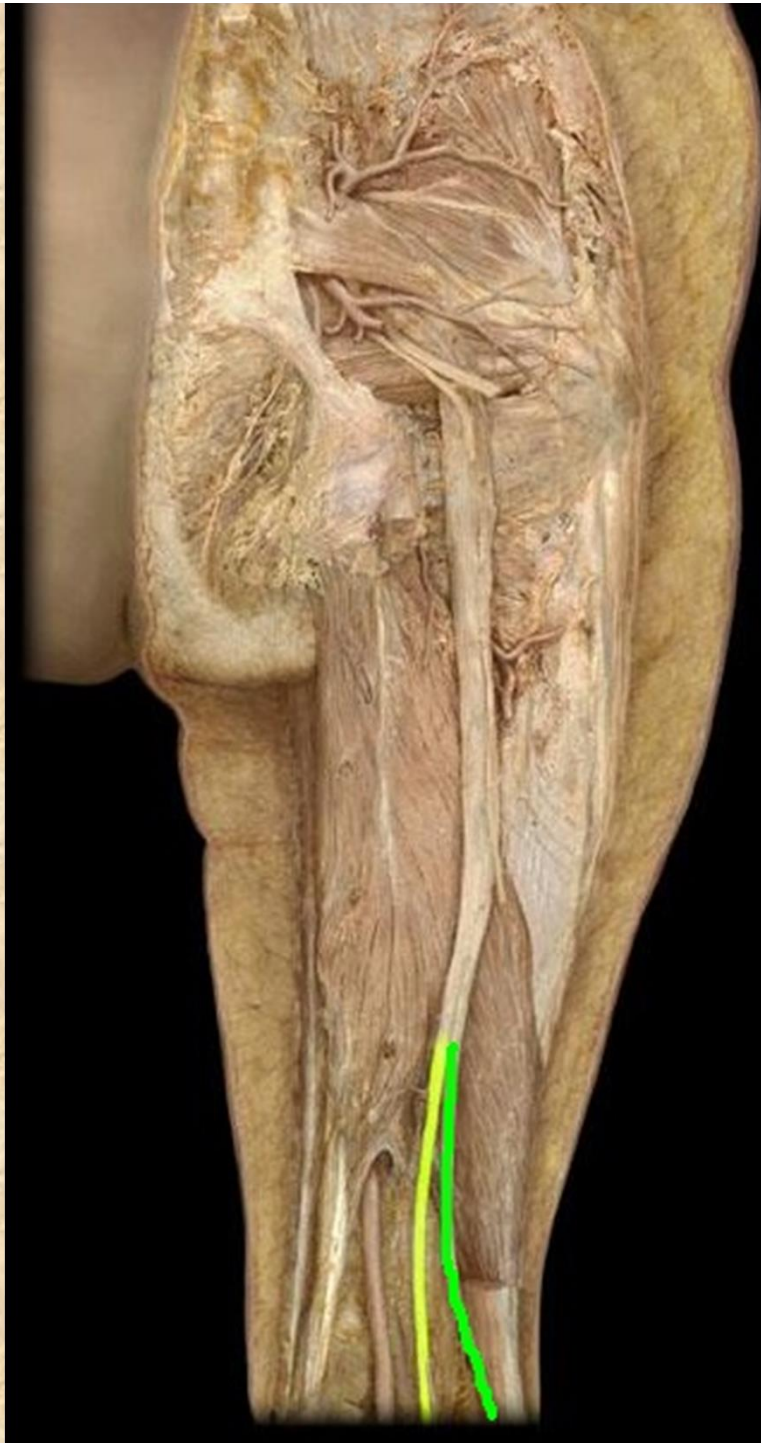
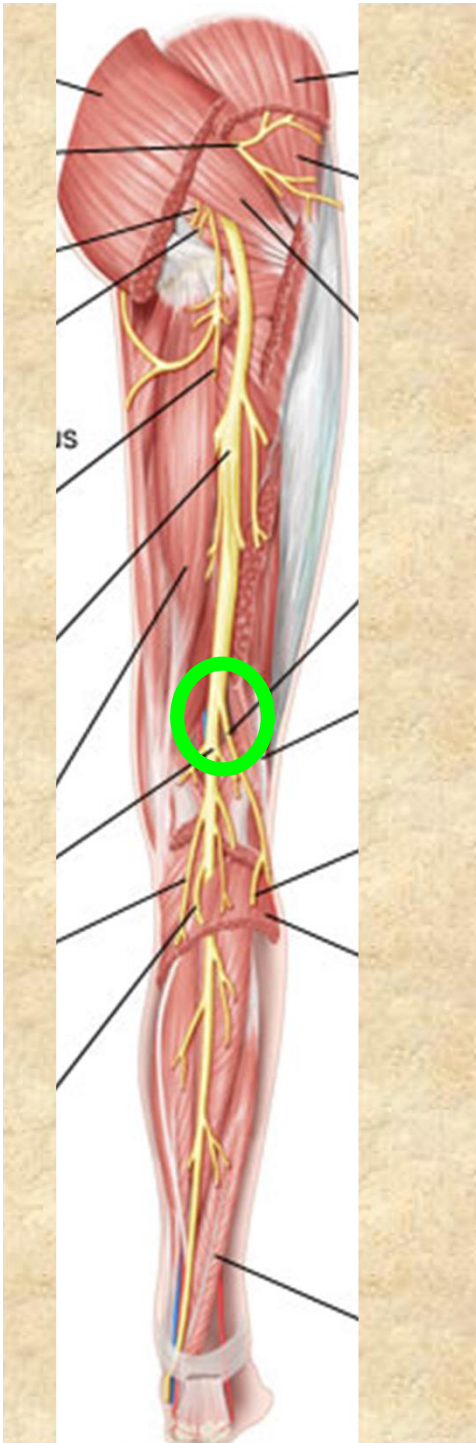
- **rr. musculares (posterior part of thigh + m. adductor magnus)**
- **rr. articulares (art. coxae)**

## **Terminal branches:**

- **n. fibularis communis**
- **n. tibialis**







# Nervus tibialis

- Direct continuation of n. ischiadicus (fossa poplitea, below arcus tendineus m. solei and further behind the malleolus medialis- canalis malleolaris - into planta pedis)

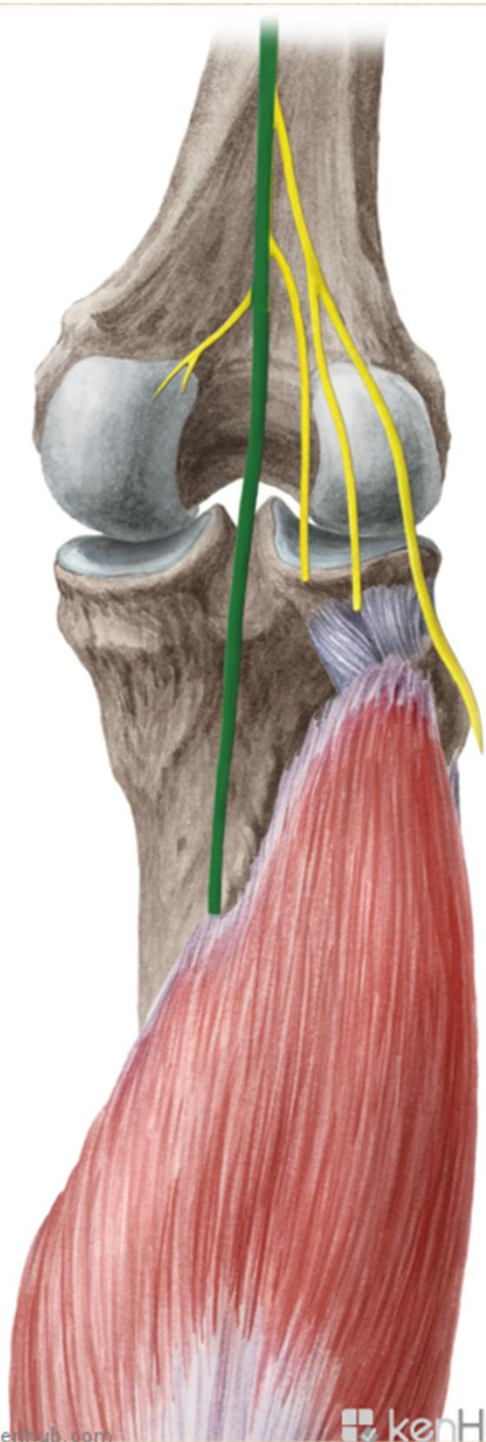
**n. cutaneus surae medialis** → r. communicans fibularis

**n. suralis**- adjacent skin of crus, behind malleolus lateralis

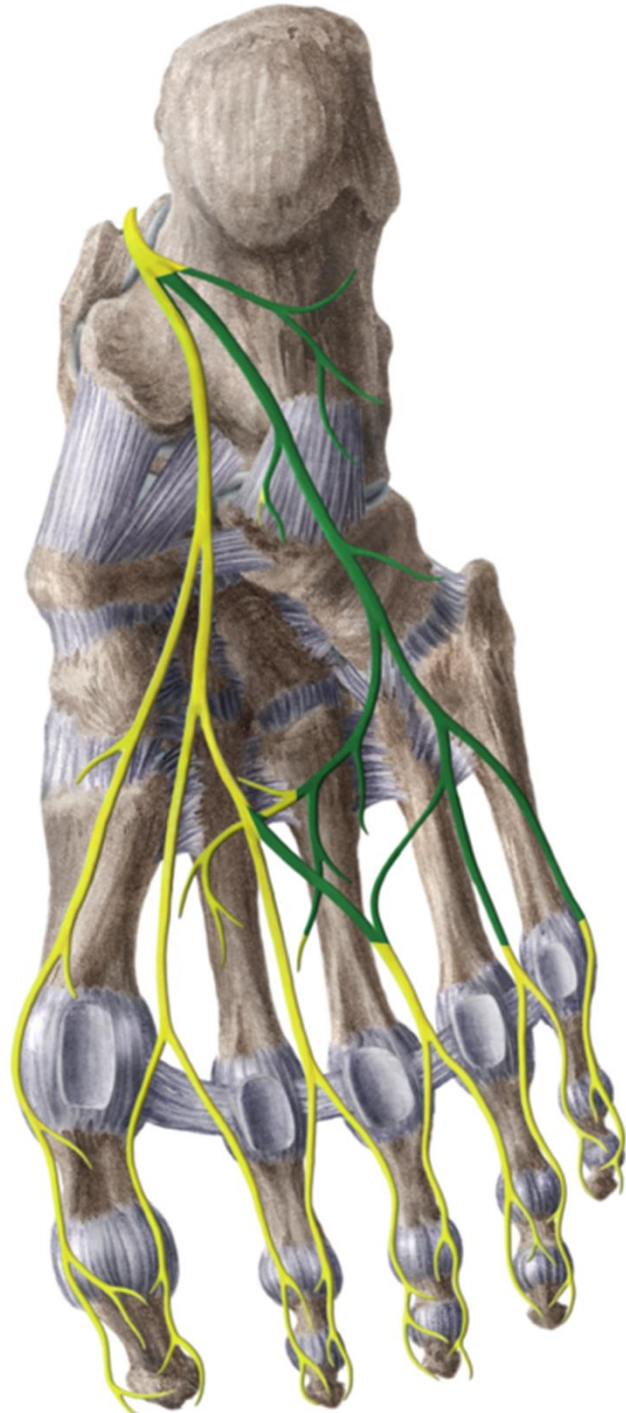
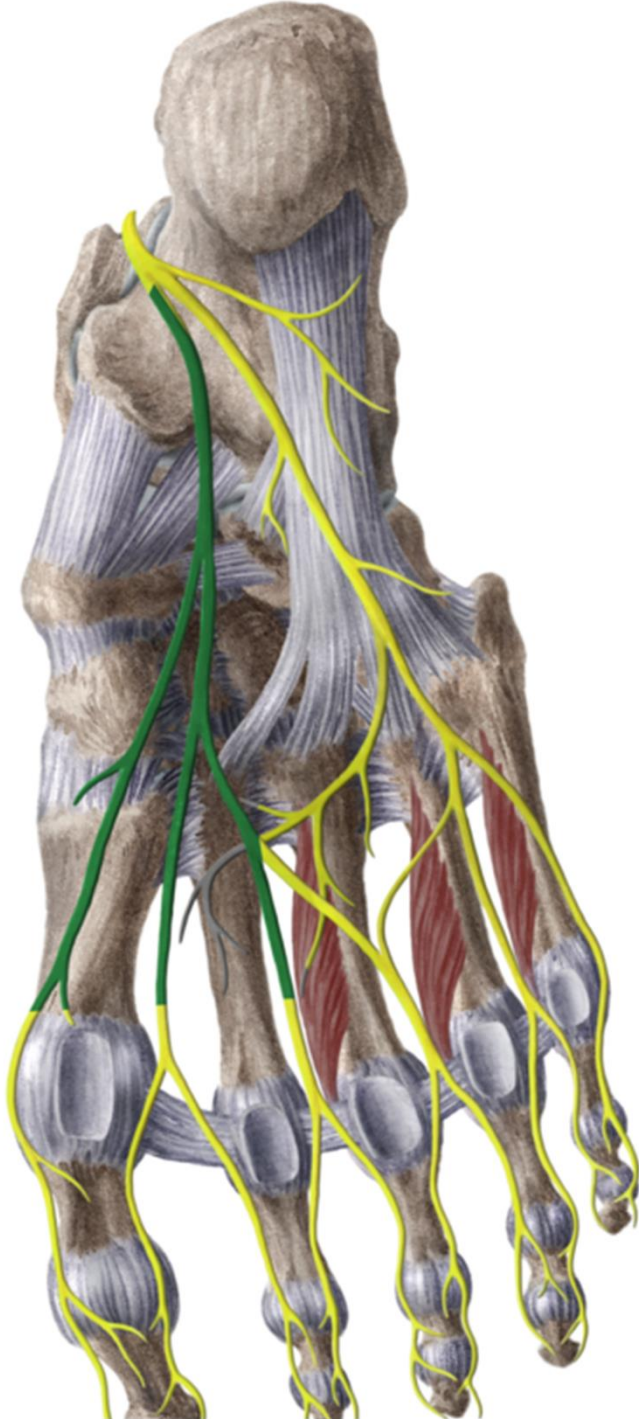
**rr. musculares** muscles of posterior group of crus

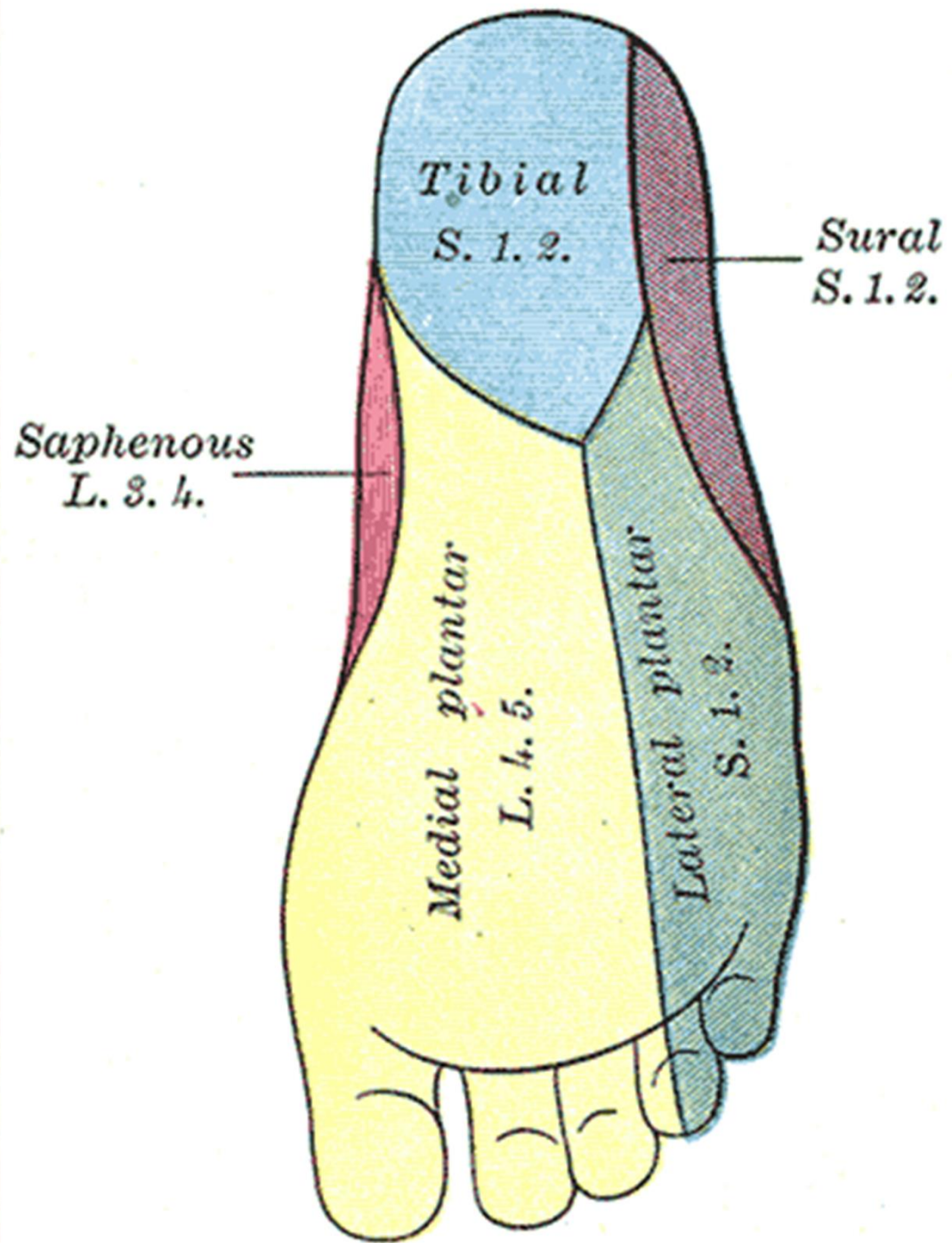
**rr. calcanei mediales**





- Terminal branches:
- **n. plantaris medialis**
- **rr. musculares:** m. abductor hallucis, m. flexor hallucis brevis, m. flexor digitorum brevis, 1st and 2nd m. lumbricalis
- **n. plantaris lateralis**
- **rr. musculares:** m. quadratus plantae, m. flexor dig. Min., m. abductor digiti minimi, m. opponens and flexor dig. min. brevis, mm. interossei, 3rd, 4th m. lumbricalis, m. adductor hallucis





- **Motor innervation:** posterior group of crural muscles, muscles of planta
- **Sensory innervation:** majority of posterior surface of crus, foot and plantar surface of fingers
- It can be injured within fossa poplitea or within sulcus malleolaris
- Palsy - pes calcaneus (predominance of extensors)

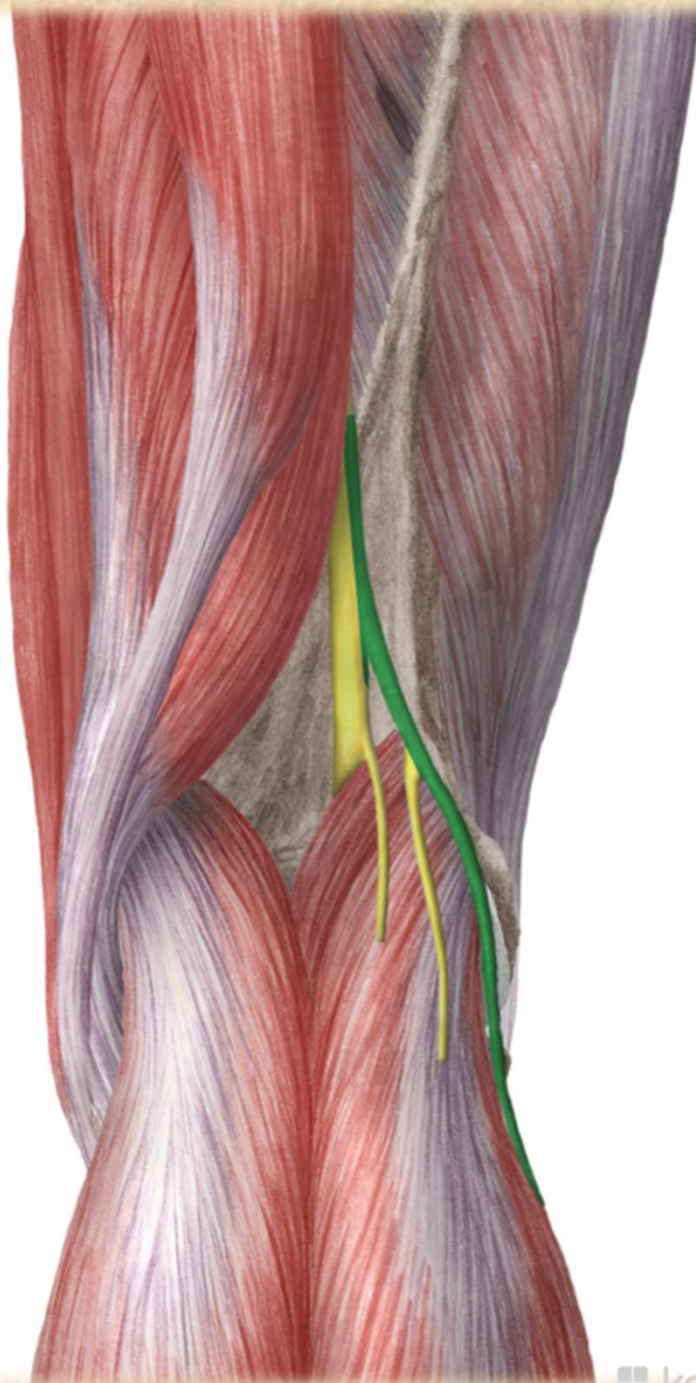


- pes calcaneus
- Congenital deformity

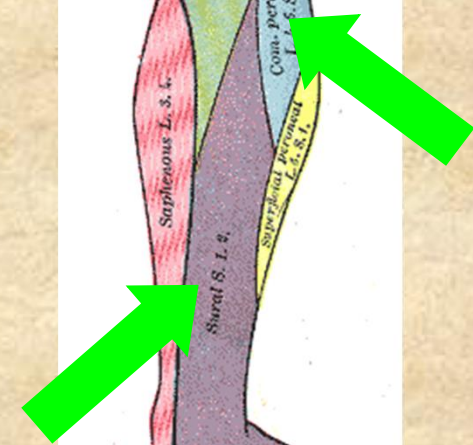
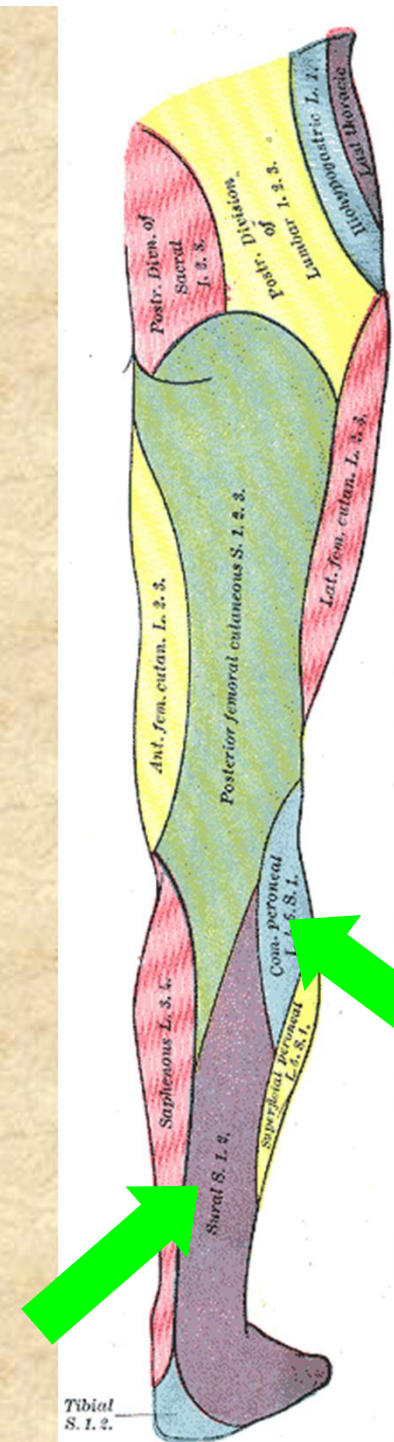
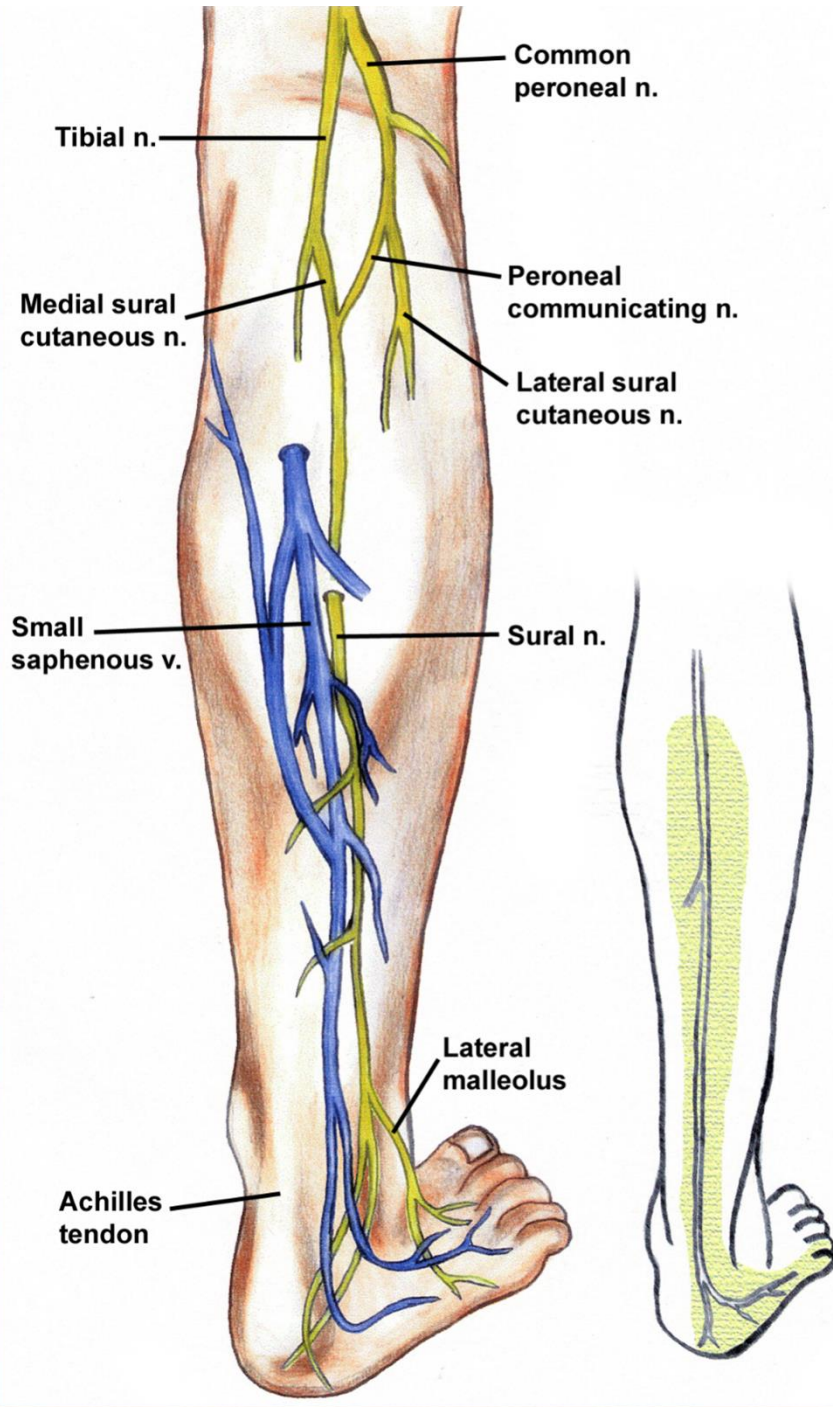


# Nervus fibularis communis

- rr. articulares
- *n. cutaneus surae lat.* - skin of lateral side of calf
  - *r. communicans fibularis* → into n. suralis

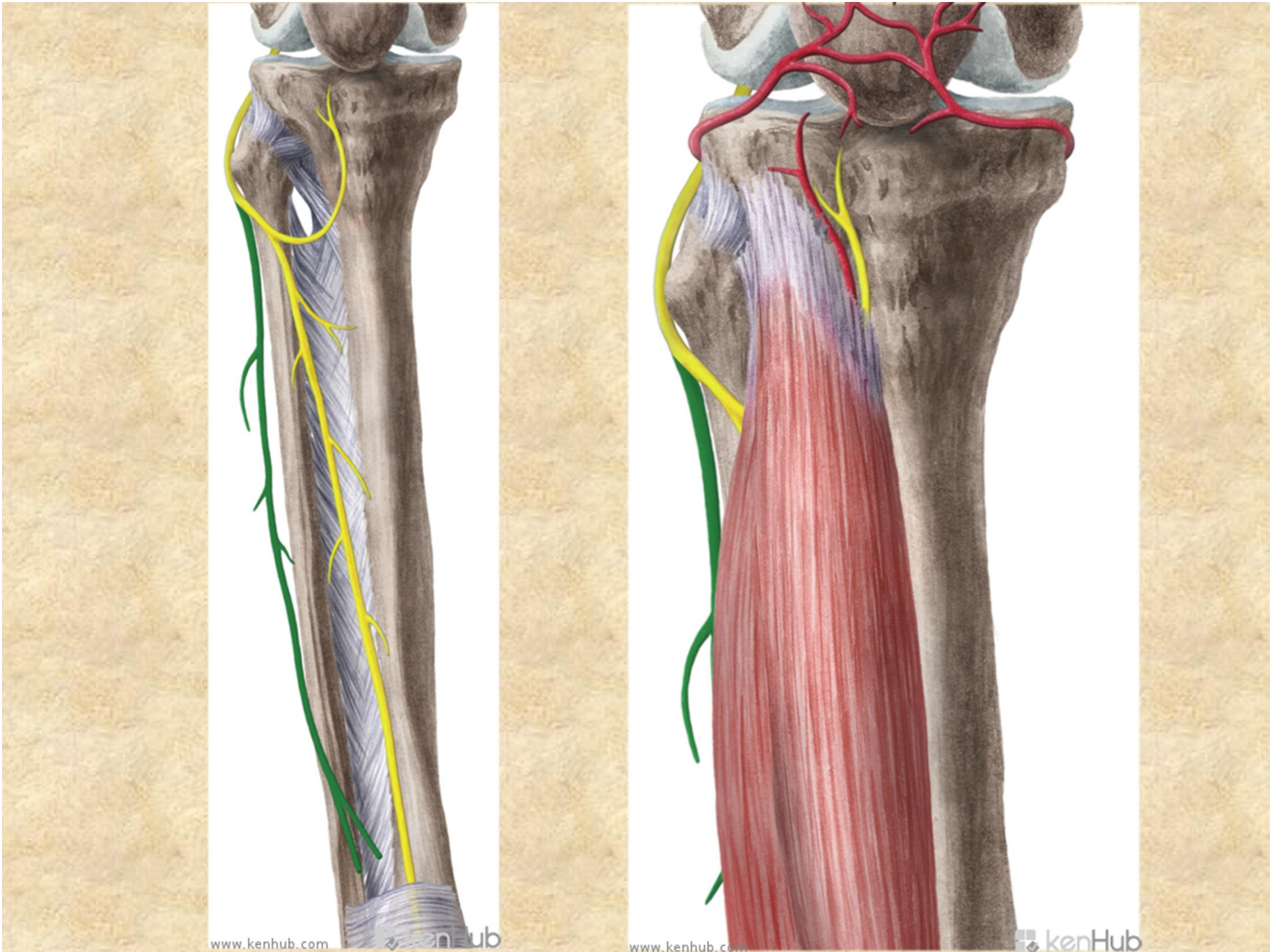


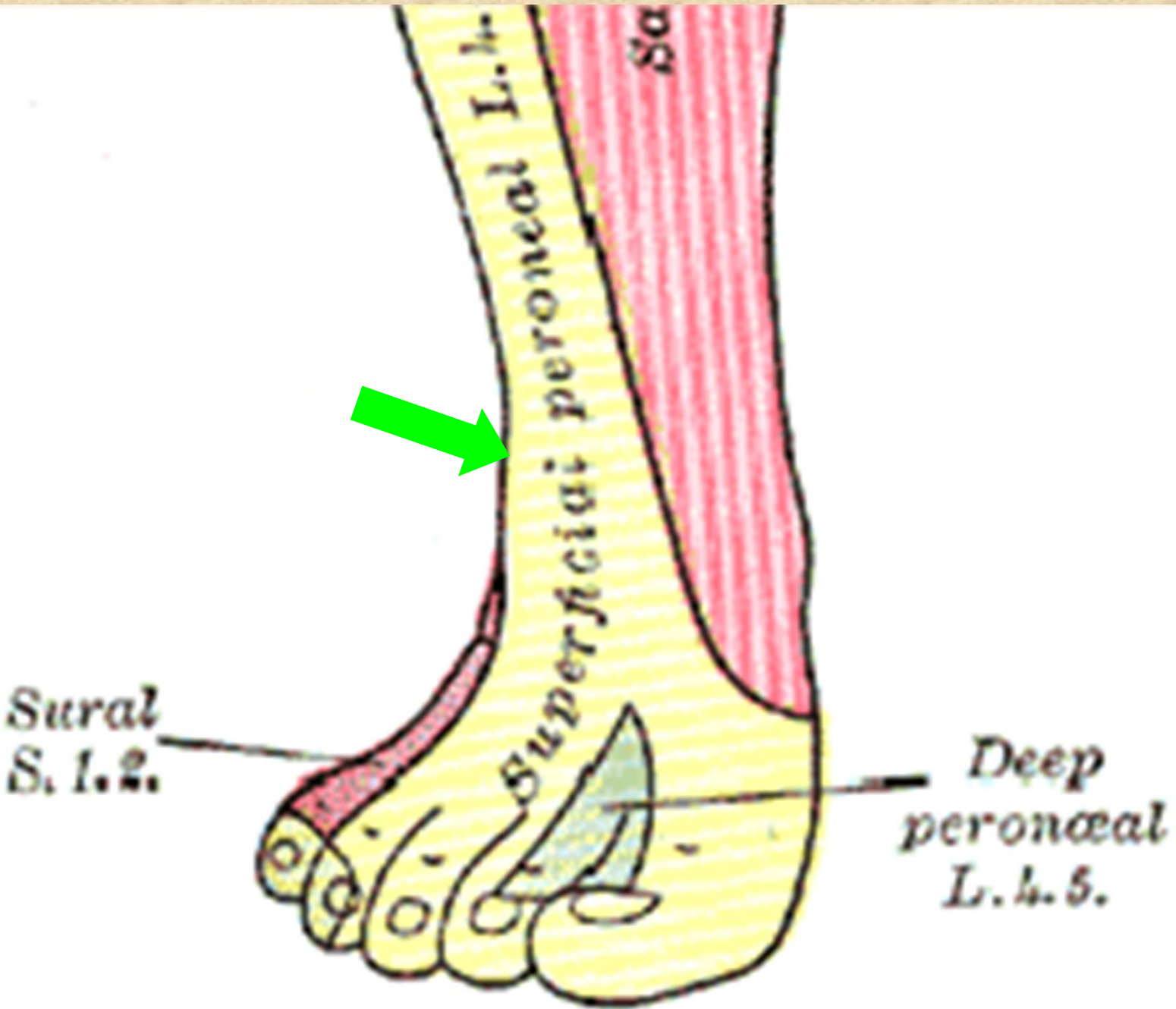




# Nervus fibularis superficialis

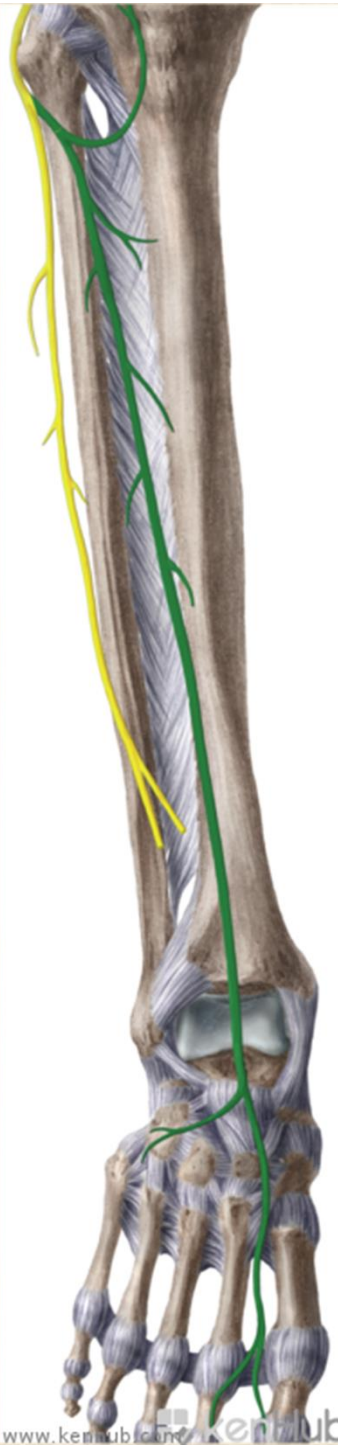
- **rr. musculares** - for mm. fibulares
- n. cutaneus dorsalis medialis
- n. cutaneus dorsalis intermedius

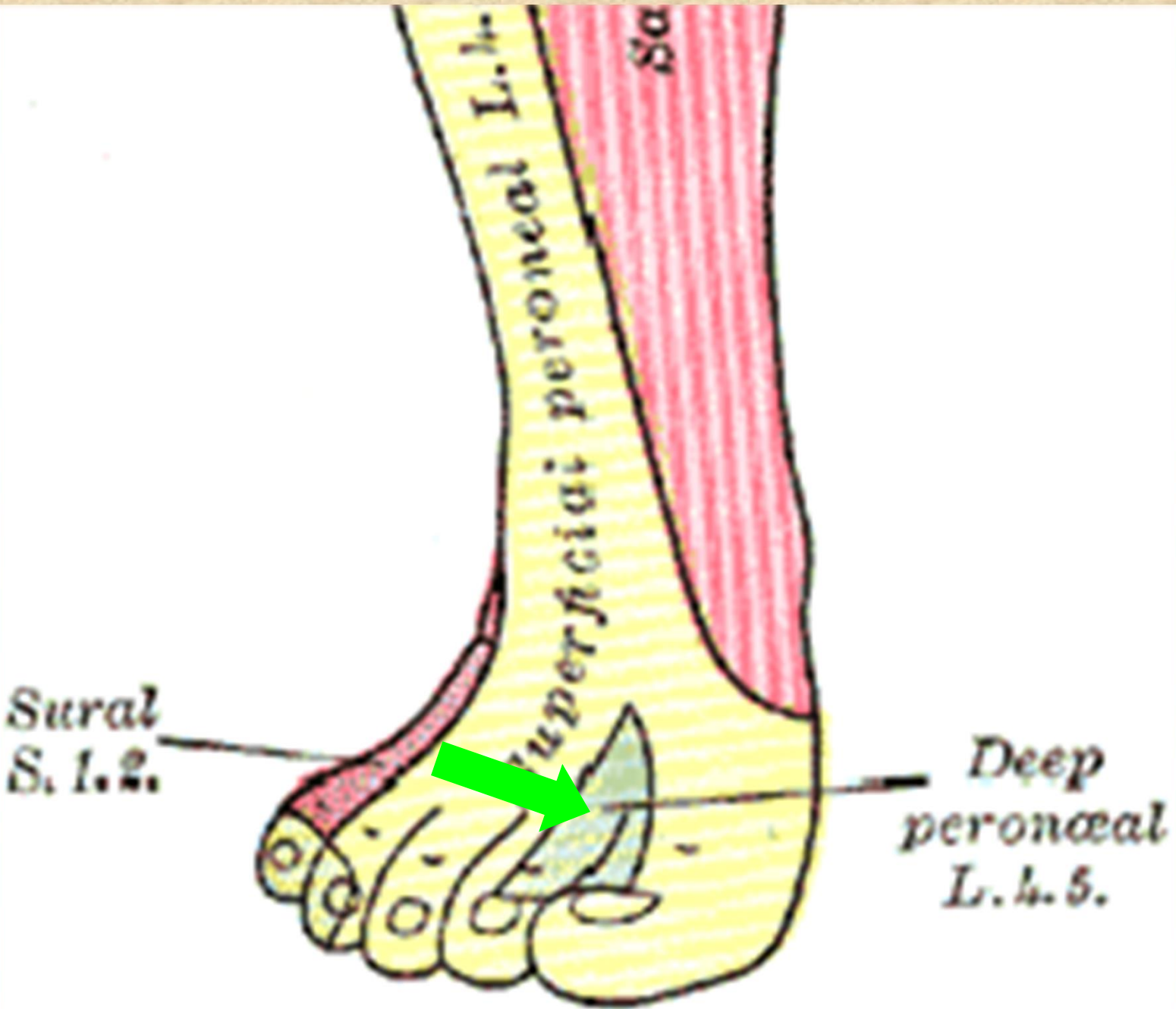




# Nervus fibularis profundus

- **Sensory innervation** of a small part of skin of dorsum pedis
- **rr. musculares** for long and short extensors of the foot

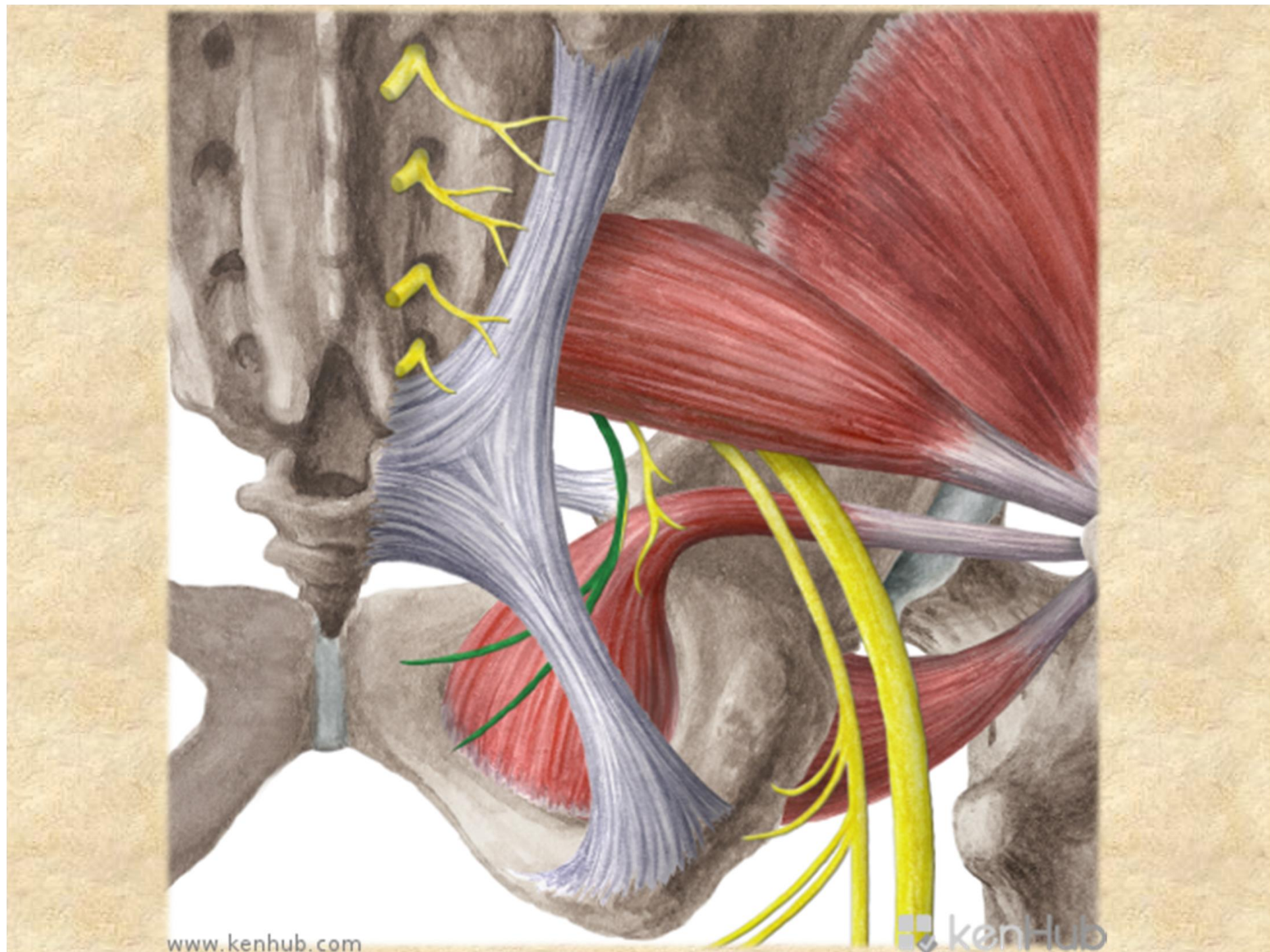


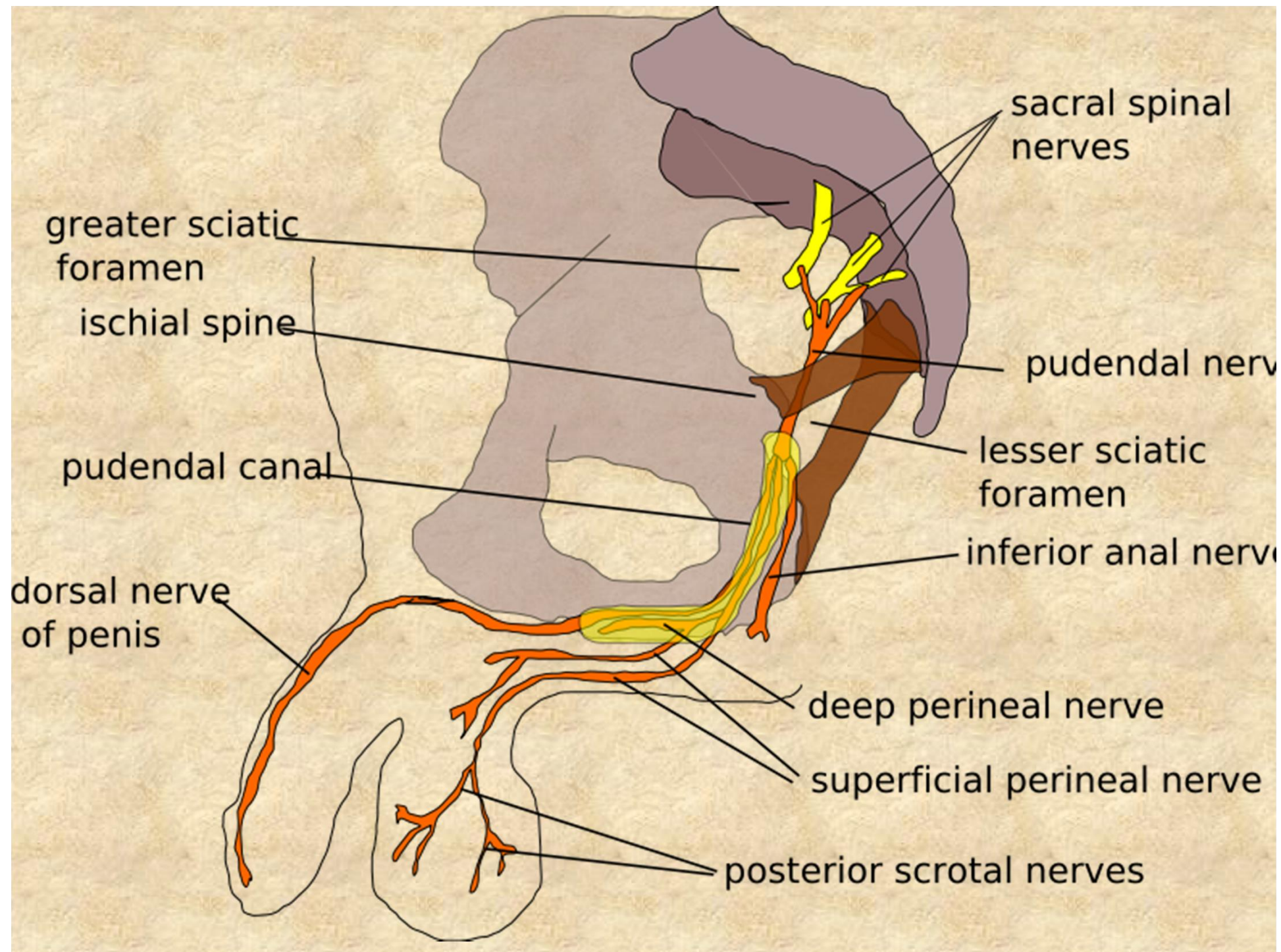


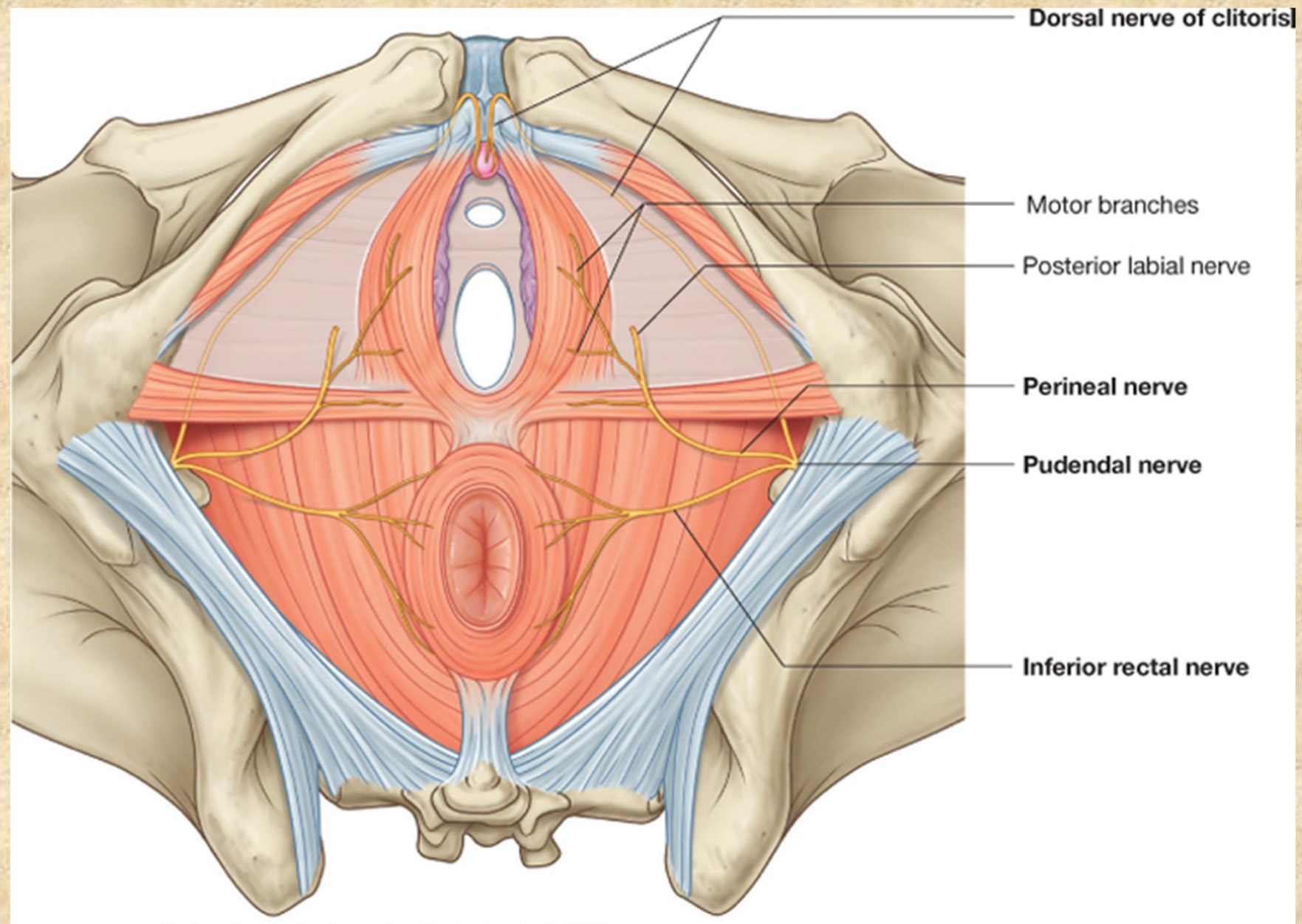
# Nervus pudendus S1-S5

- Through foramen infrapiriforme (along with artery) it turns around spina ischiadica → foramen ischiadicum minus → into fossa ischioirectalis → through canalis pudendalis and reaches to the symphysis
- For the muscles of pelvic diaphragm, perineum and muscles of genital organs
- For skin of perineum and scrotum (labia majora)
- n. dorsalis penis (clitoridis) - for skin of penis (clitoris) and mucosa of urethra









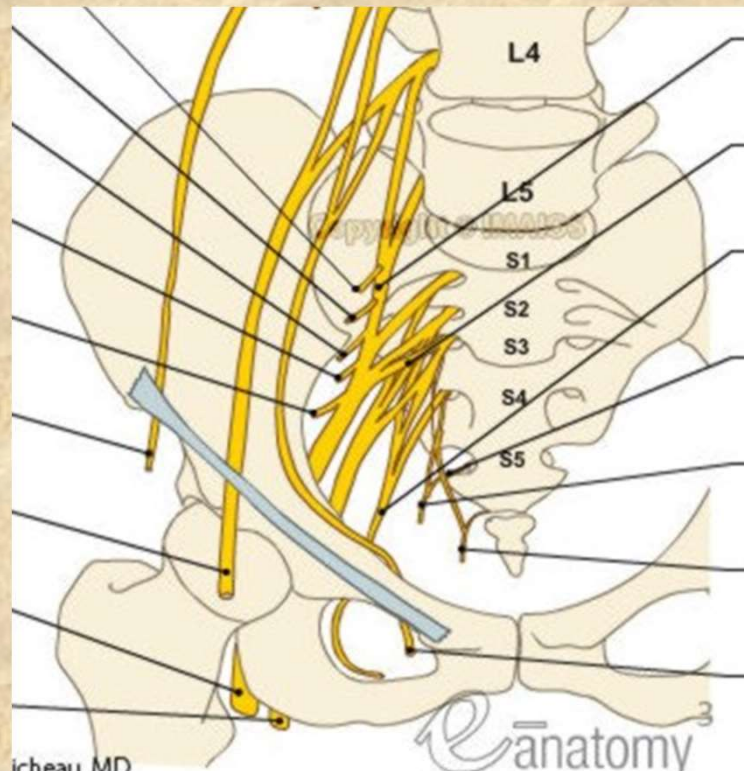
# Plexus coccygeus

Rami ventrales nn. spinalium S4-5, Co

is located on anterior surface of m. coccygeus,

**nn. anococcygei** - for adjacent skin and to posterior part of diaphragma pelvis

**rr. musculares**- m. levator ani, m. coccygeus



• Thank you for your attention!

