

Innervation of upper limb

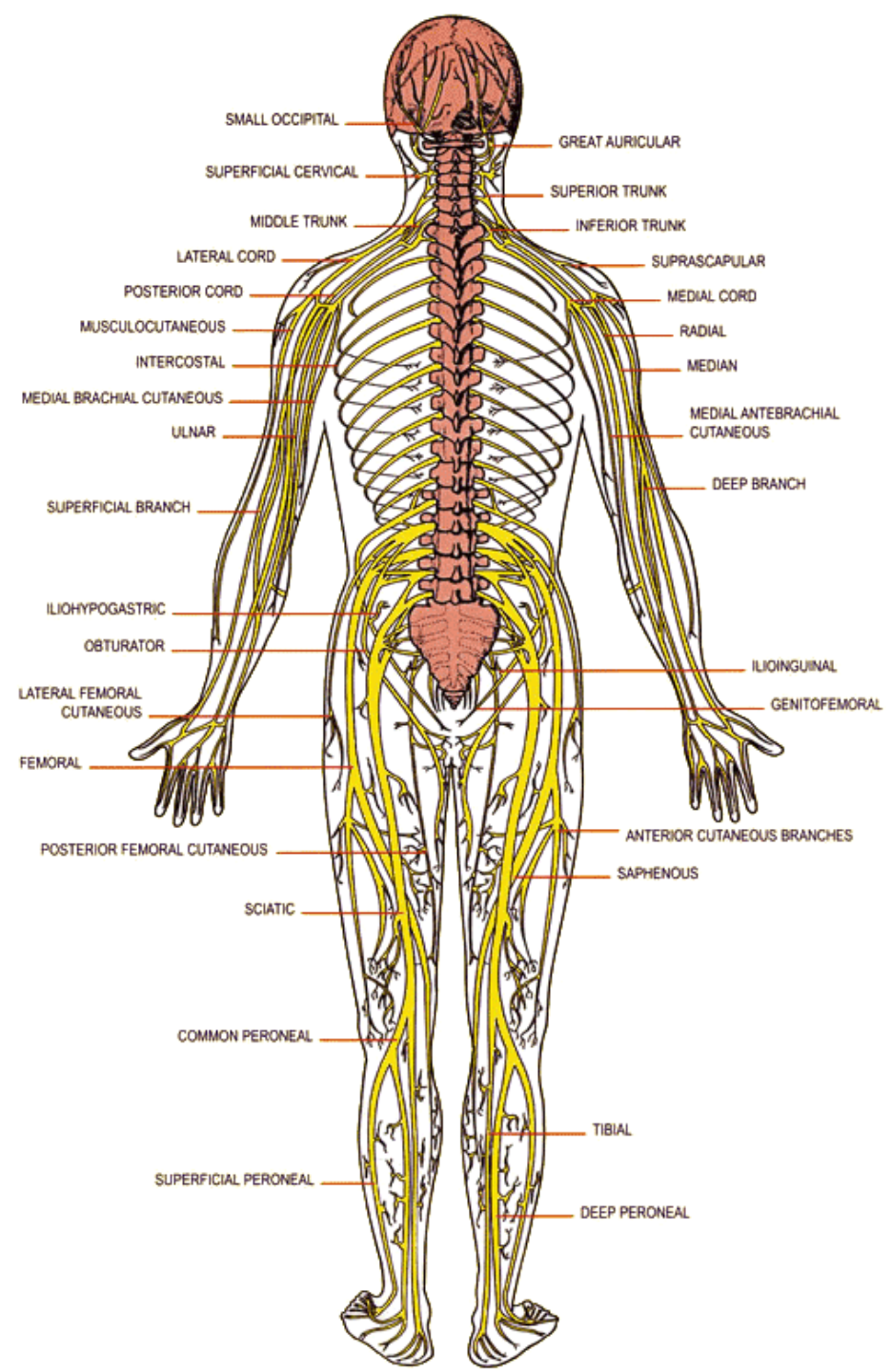
Plexus brachialis

Cranial nerves

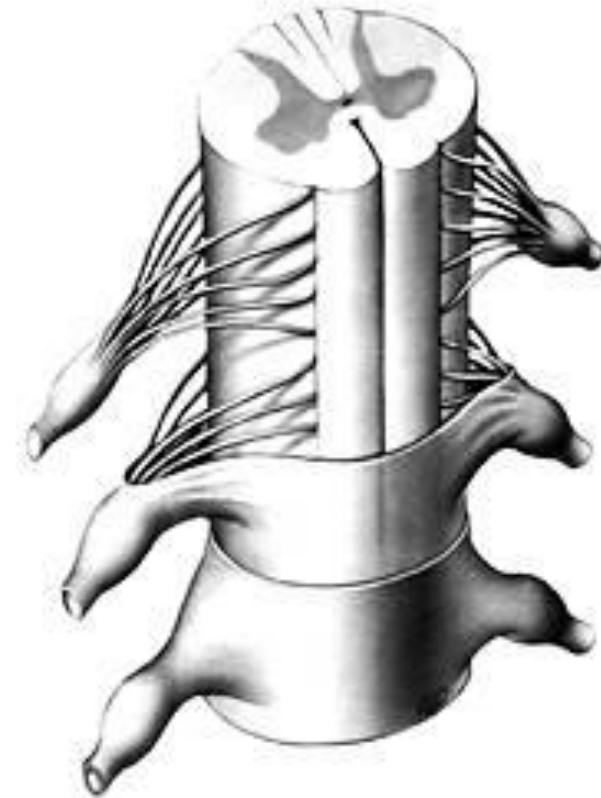
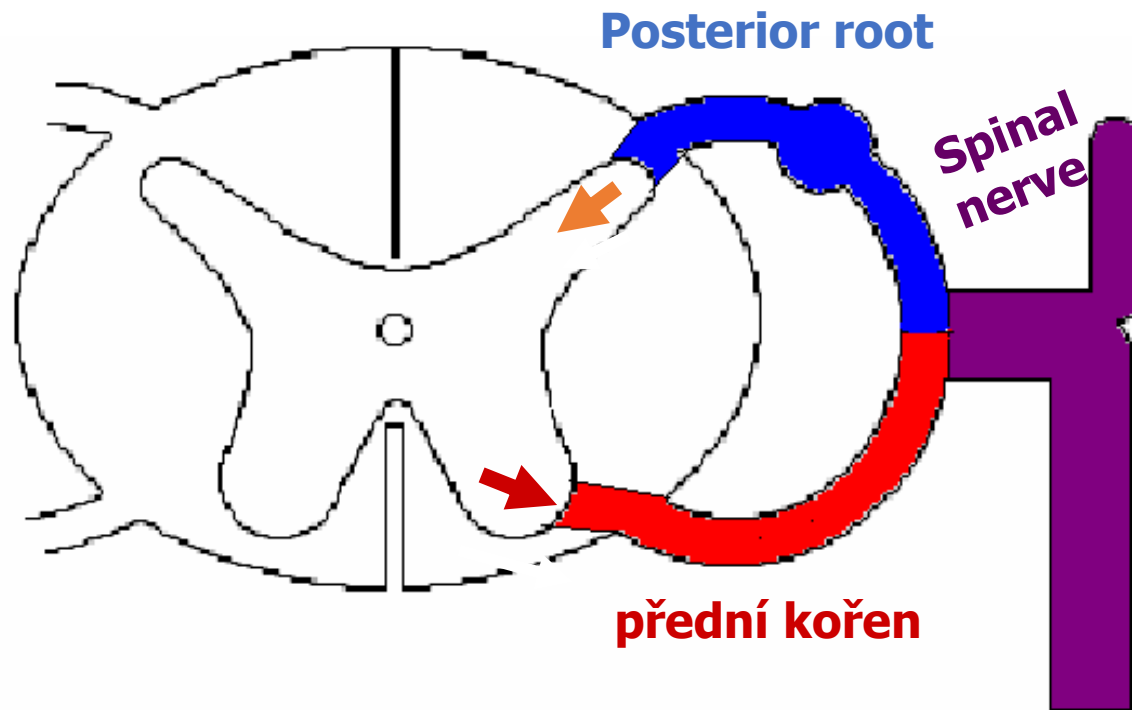
10 pairs

Spinal nerves

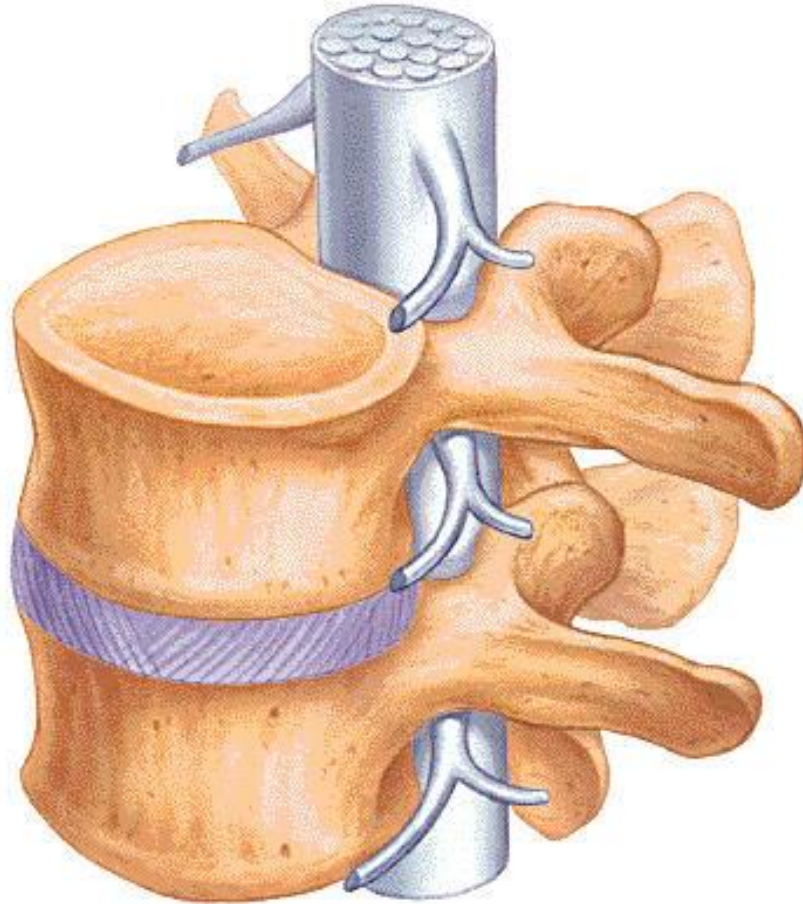
31 pairs



anterior motor
posterior aferent



spinal nerv – mixed (motor and aferent fibers)



1) Posterior ramus

Inervation of the back

2) Anterior ramus

Inerv. of the ventral side of the trunk

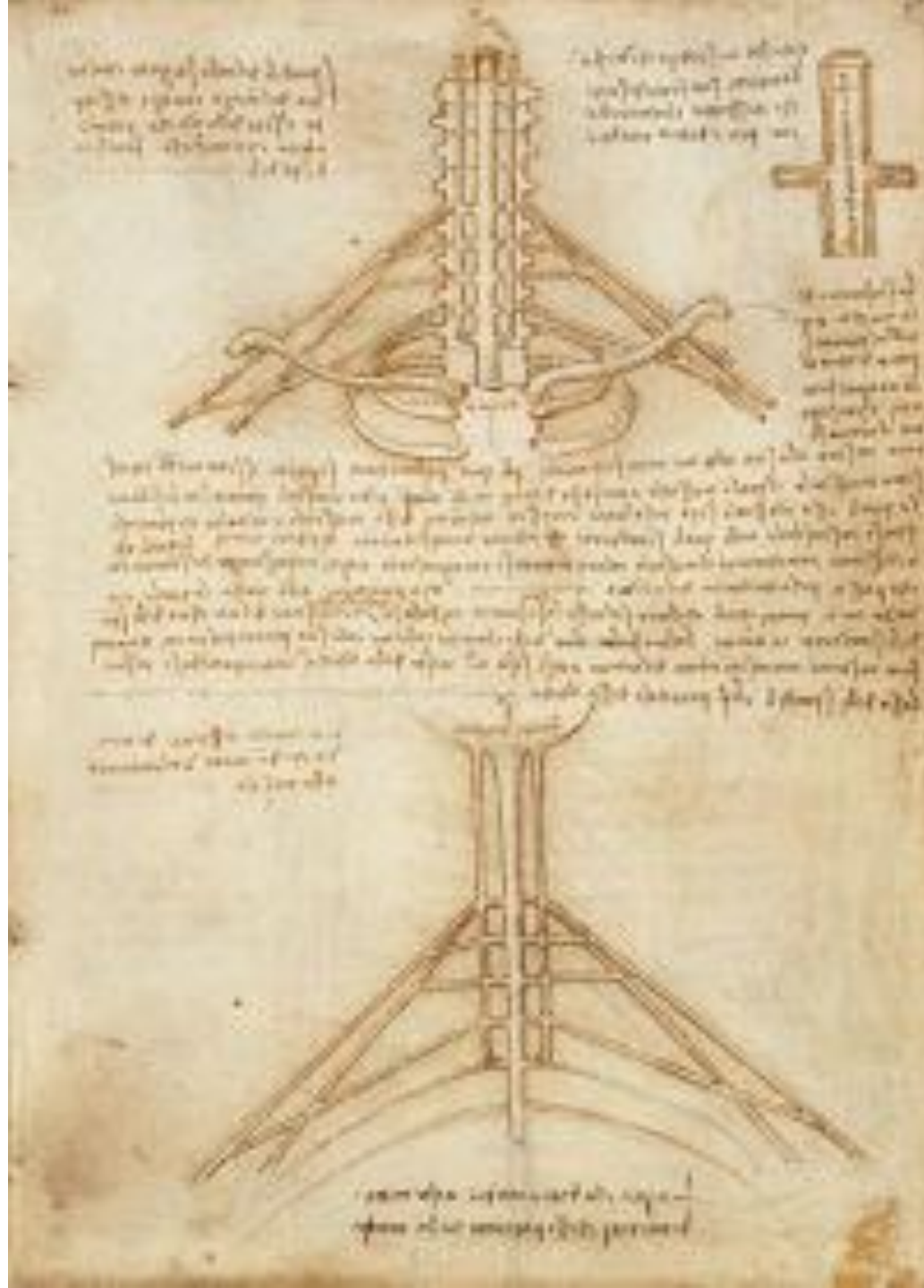
Plexus: cervicalis

brachialis

nn. intercostales

lumbalis

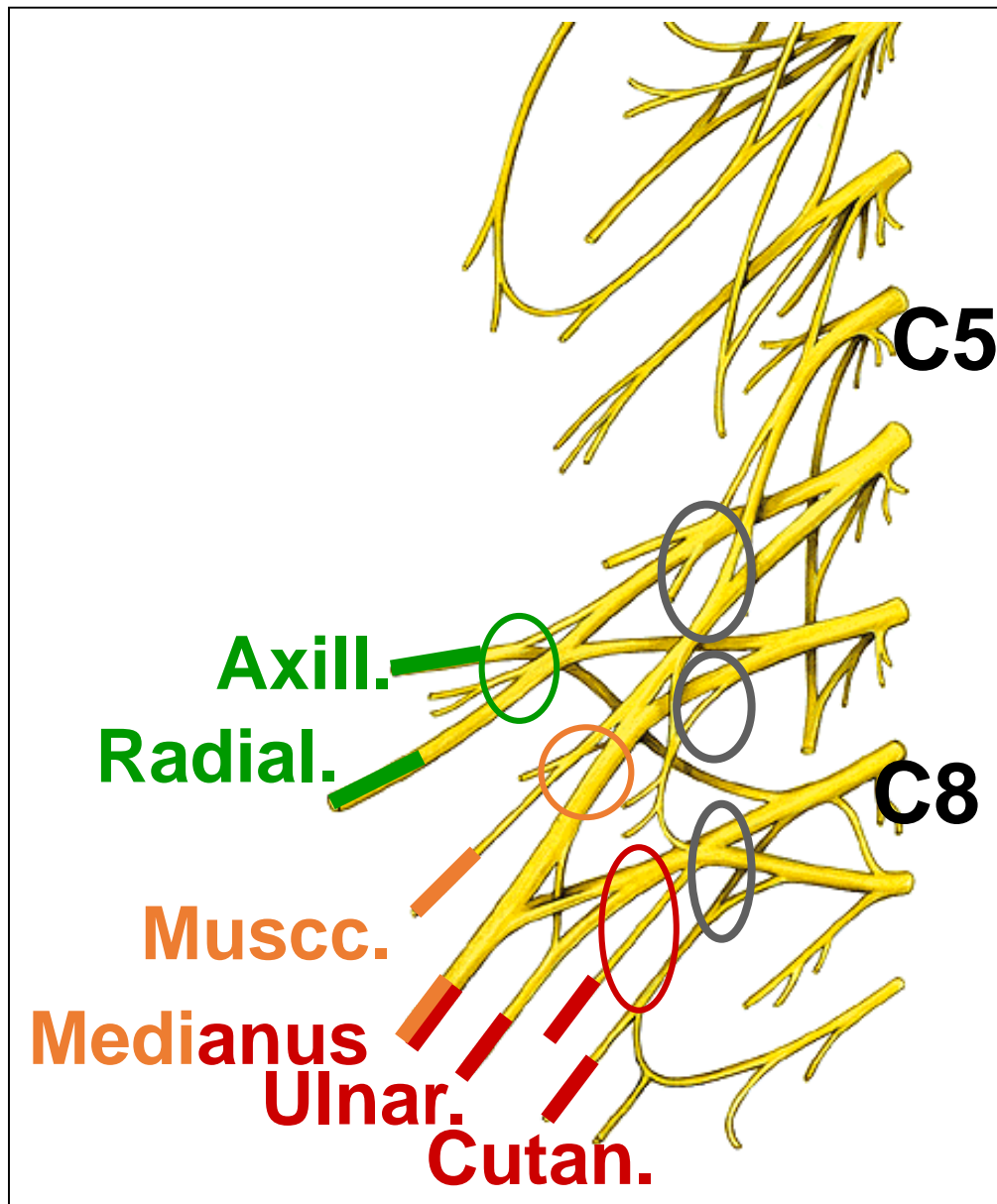
sacralis



Plexus brachialis

ventral rami of
spinal nerves
C5 (C4) - C8 (T1/2)

Inervation of UL:
Aferentní
Motorická



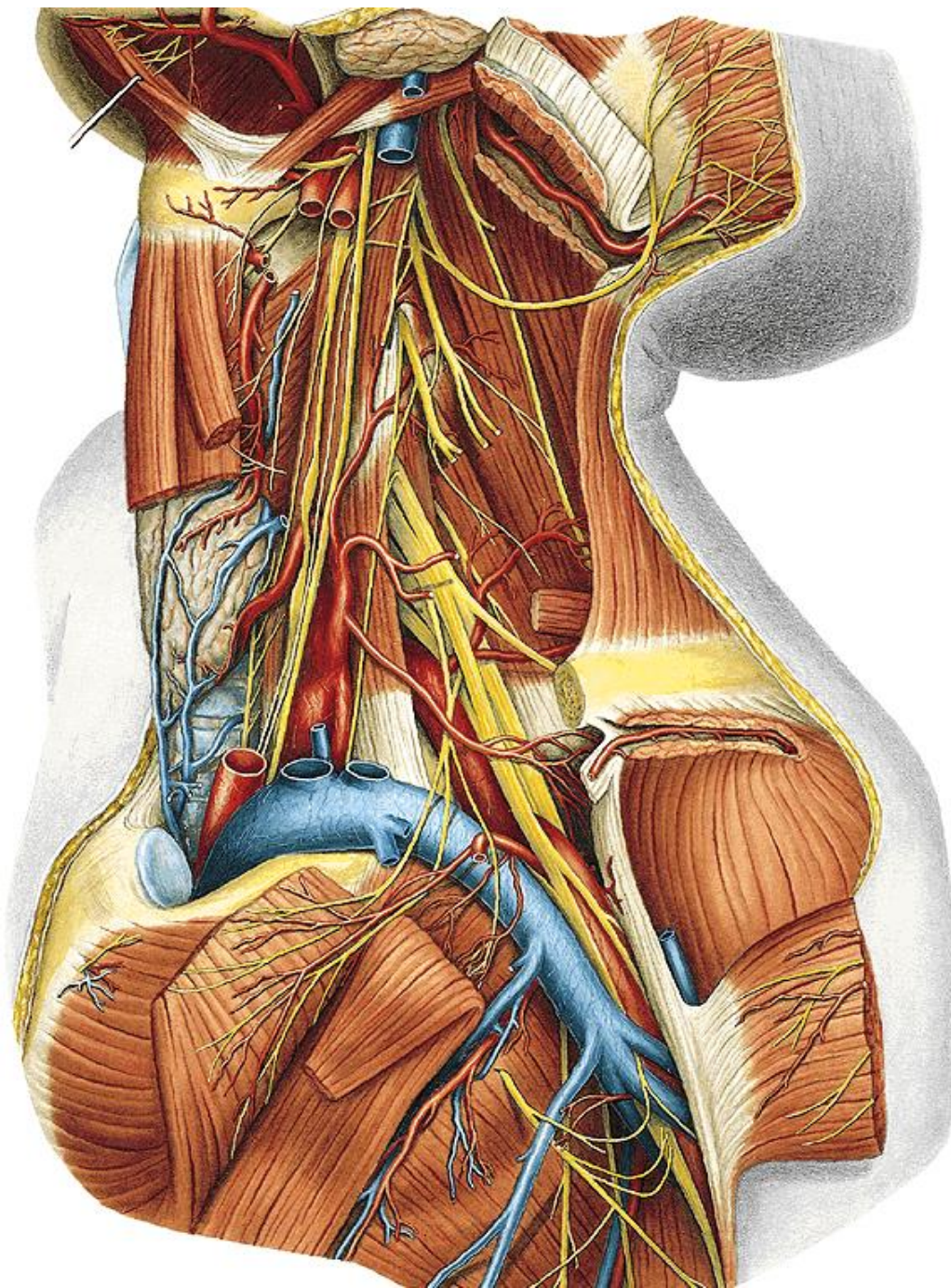
Prim. bundles - trunci
Truncus: superior
medius
inferior

through
fissura scalenorum

below
clavicle

To the axilla:
Second. bundles - cords

posterior
lateralis
medialis

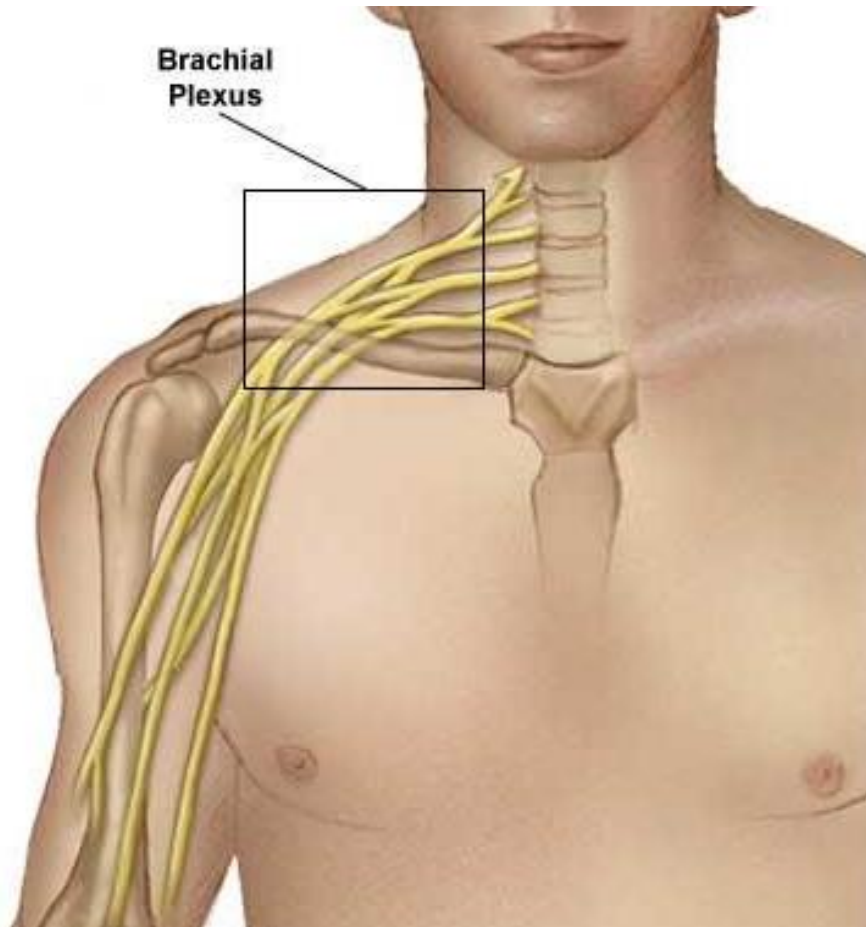


V. subclavia

Fissura scalenorum:

a. subclavia

plx. brachialis



P. supra_clavicularis

Rr. musc.:

m. subclavius - n. subclavius

m. serratus ant. – n. thoracicus longus

mm. pectorales - nn. pectorales

m. latissimus dorsi – n. thoracodorsalis

n. supra et infraspinatus - n. suprascapularis

m. levator scapulae – n. dorsalis scapulae

mm. homboidei

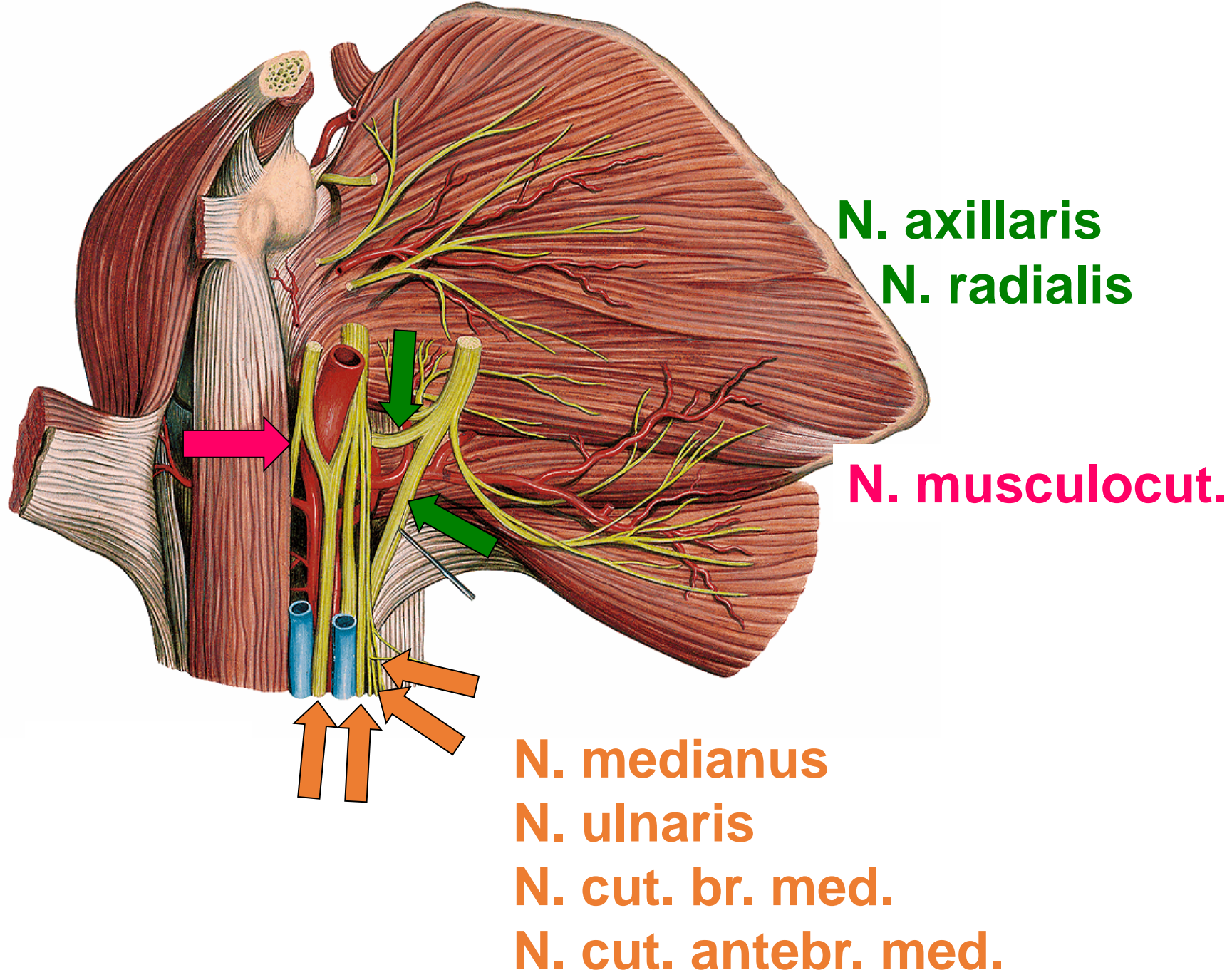
rr. Musculares – scaleni, m.colli

P. infra_clavicularis

Fasciculus posterior

medialis

lateralis



FASC. POSTERIOR

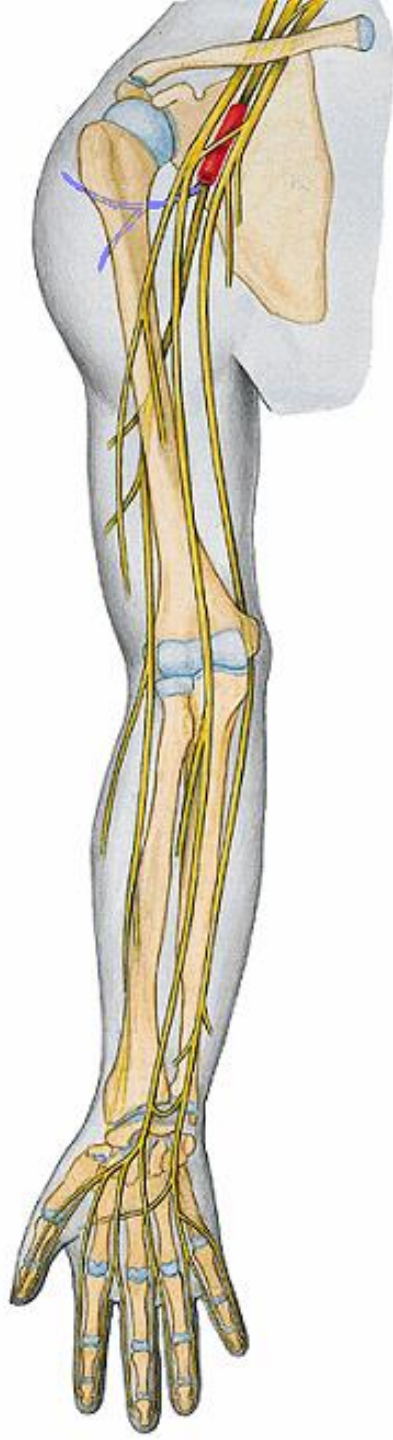
N. axillaris

through for. humerotricipitale
below m. deltoideus

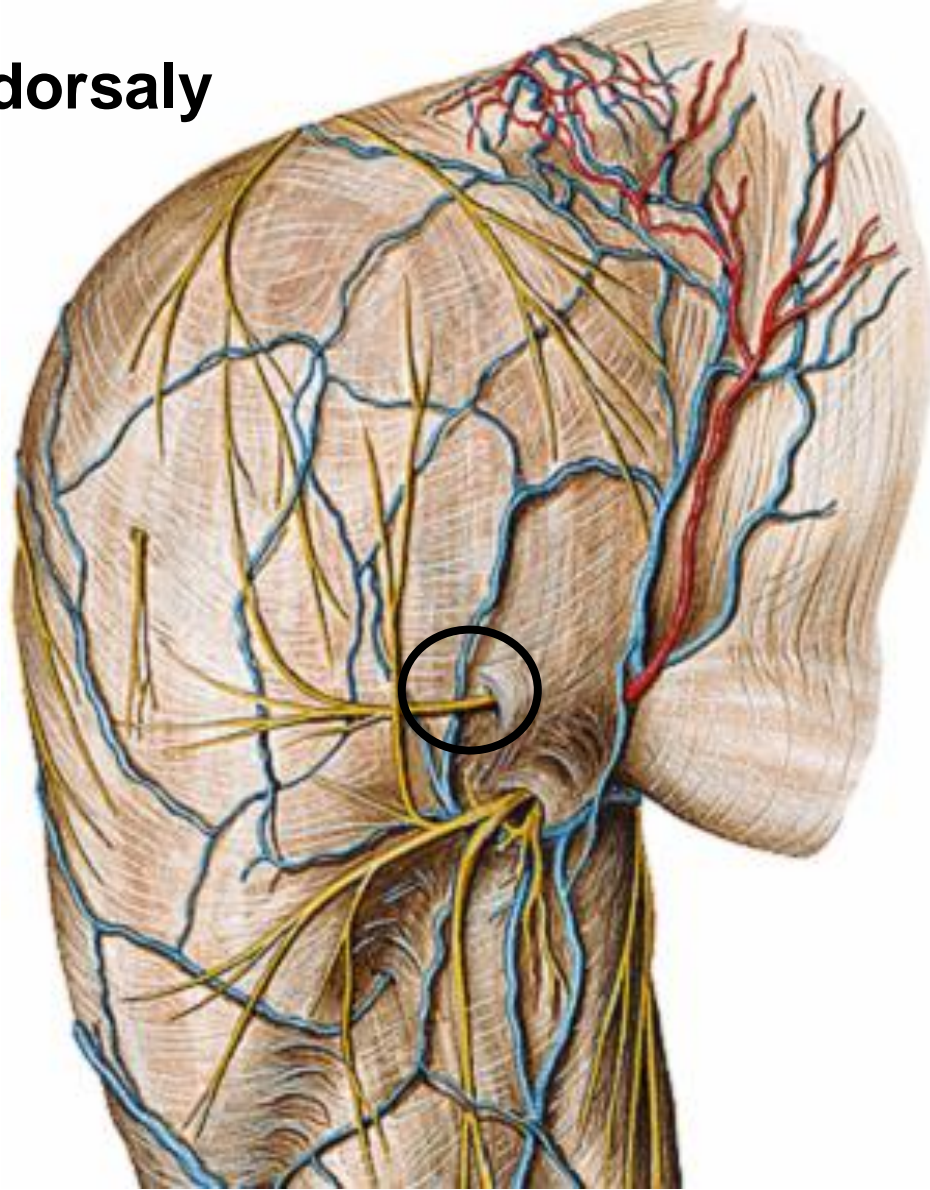
Rr. muscul.: m. deltoideus
m. teres minor

R. cutaneus (n. cut. br. lat. sup.)

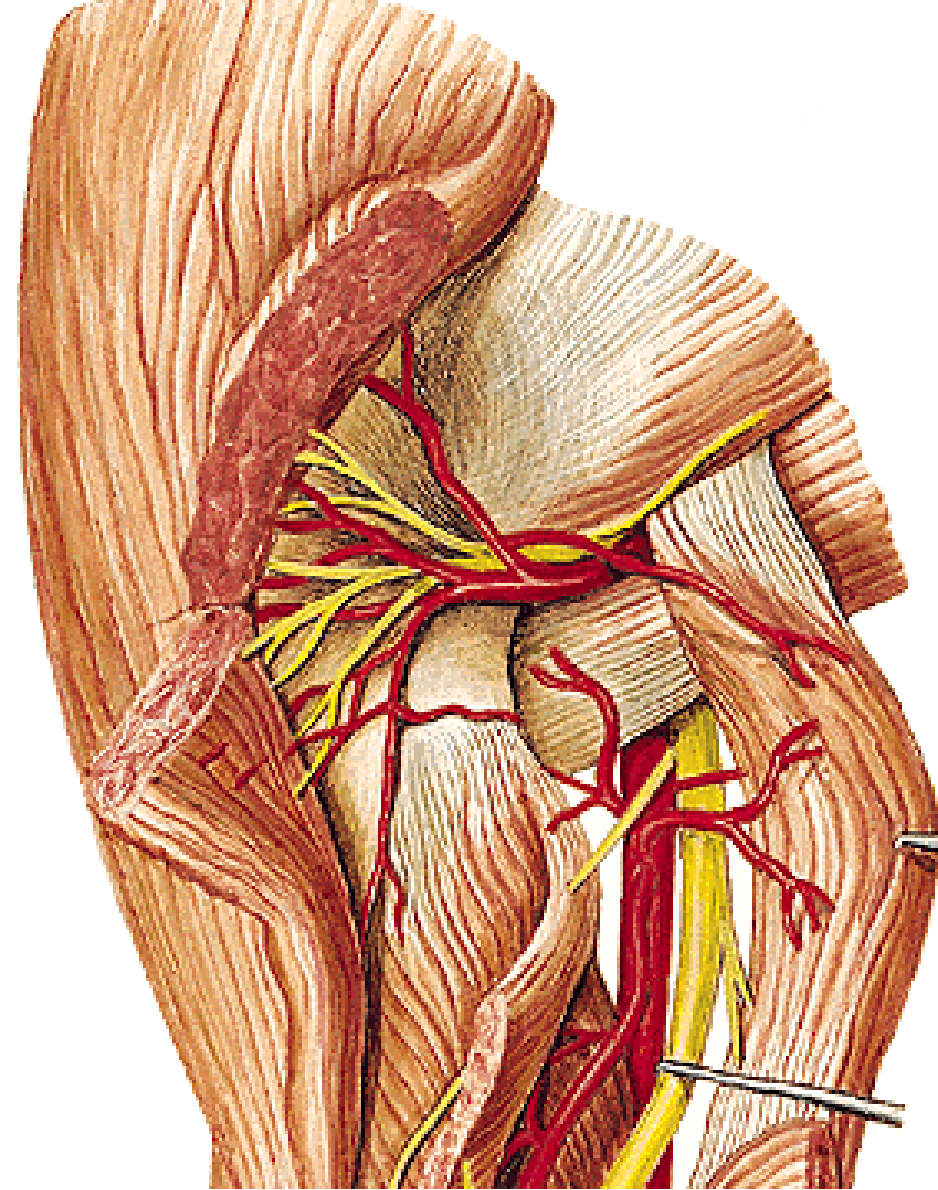
Rr. articulares



dorsaly



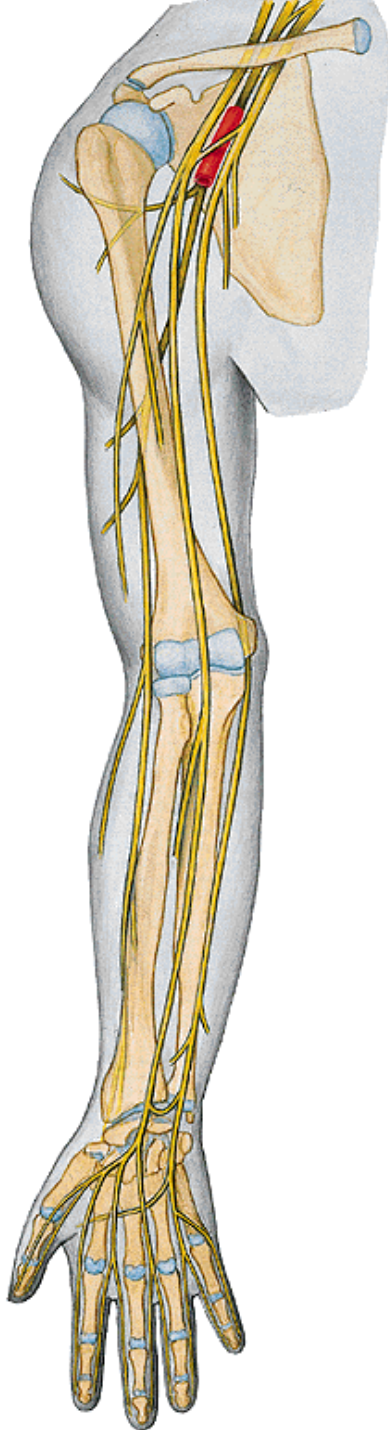
R. cutaneus



Rr. musculares

FASC. POSTERIOR

N. radialis



- in sulcus n. radialis
- through intermusc. lat. anteriorly
- between m. brachialis a brachiorad.
- divided:

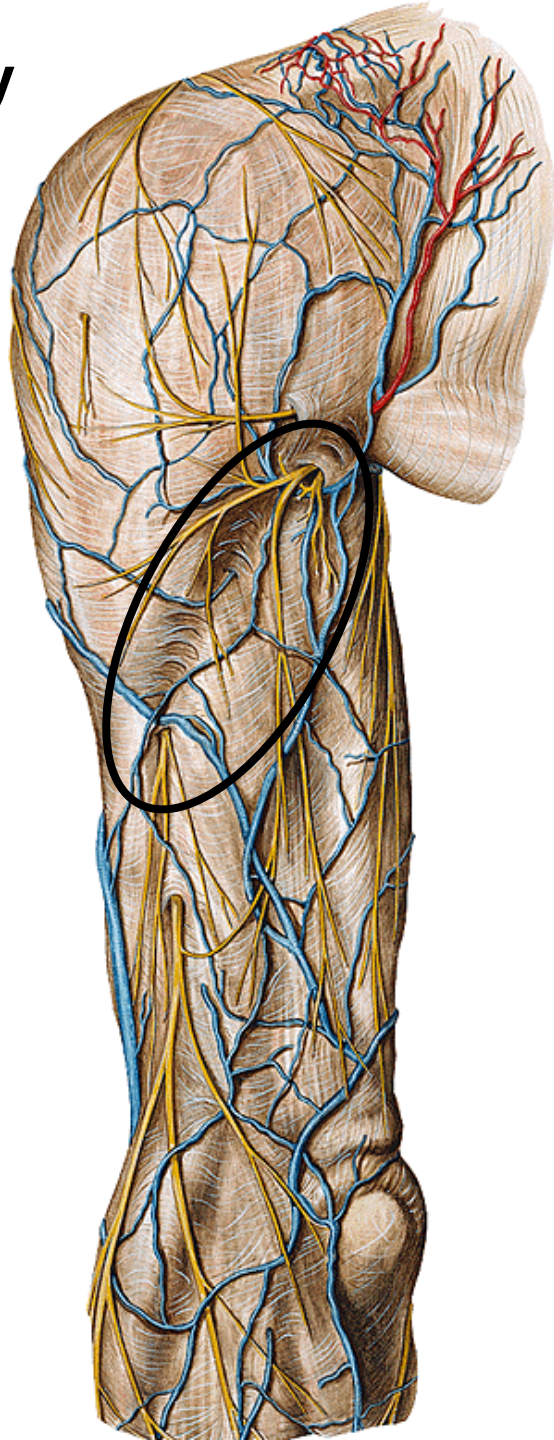
R. prof. over m. supinator

→ regio antebr. post.

R. spf. below m. brachiorad.

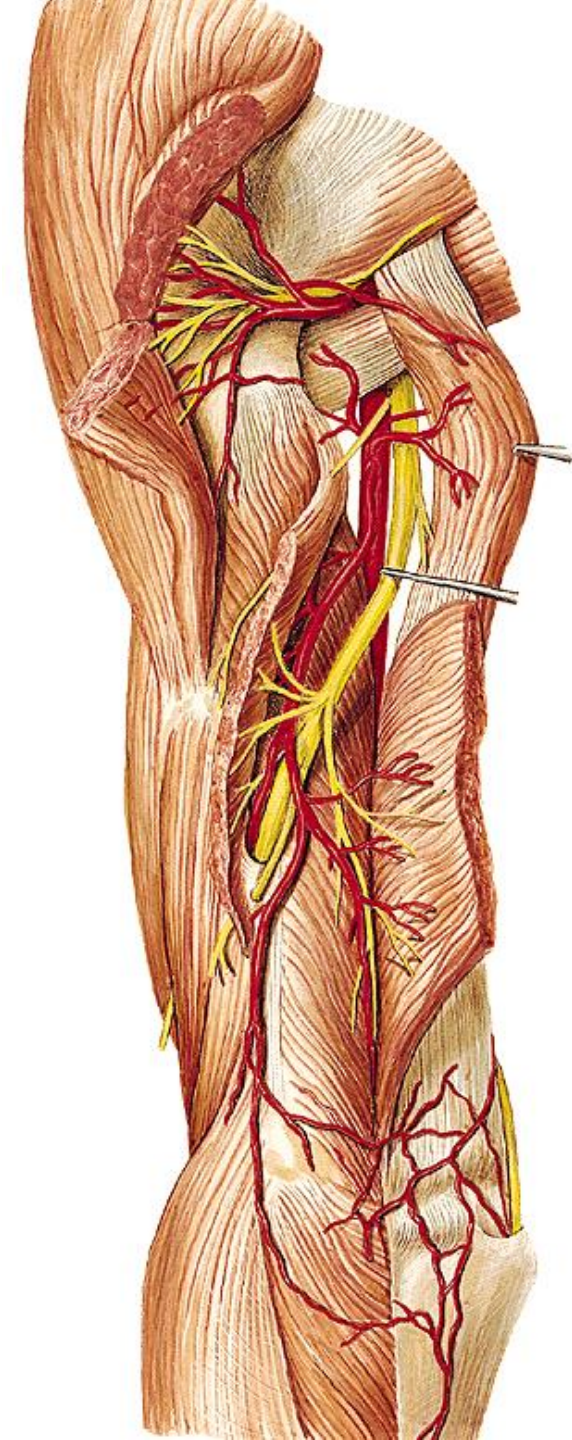
→ dorsum manus

dorsaly



Rr. cutanei

Rr. musc.:





R. cutaneus

N. cut. antebr. post.

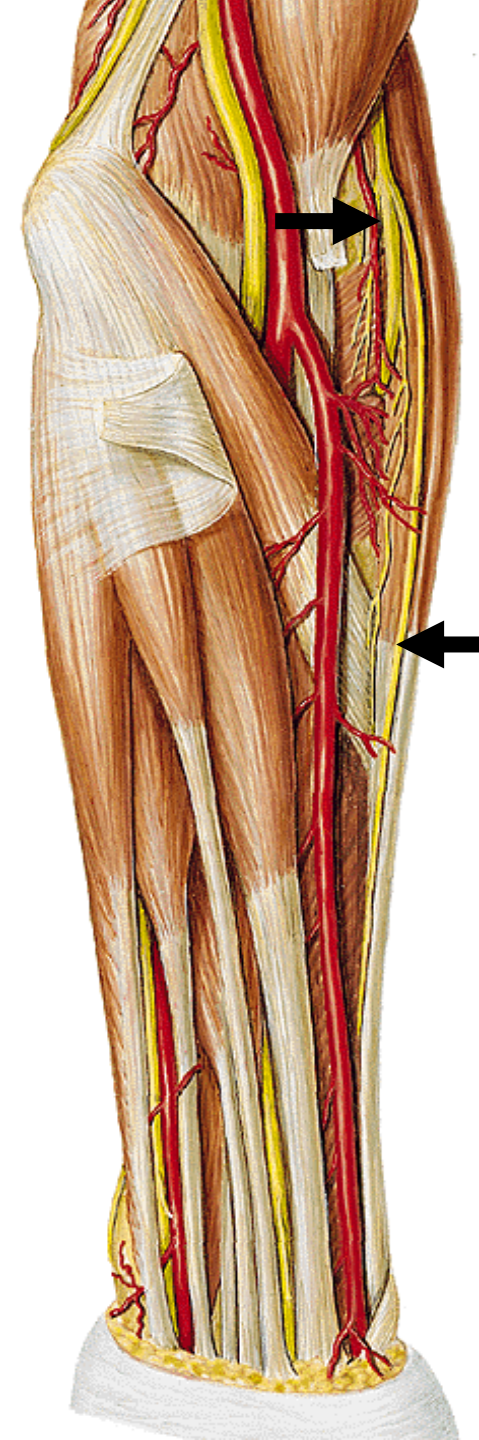
Rr. musc.:

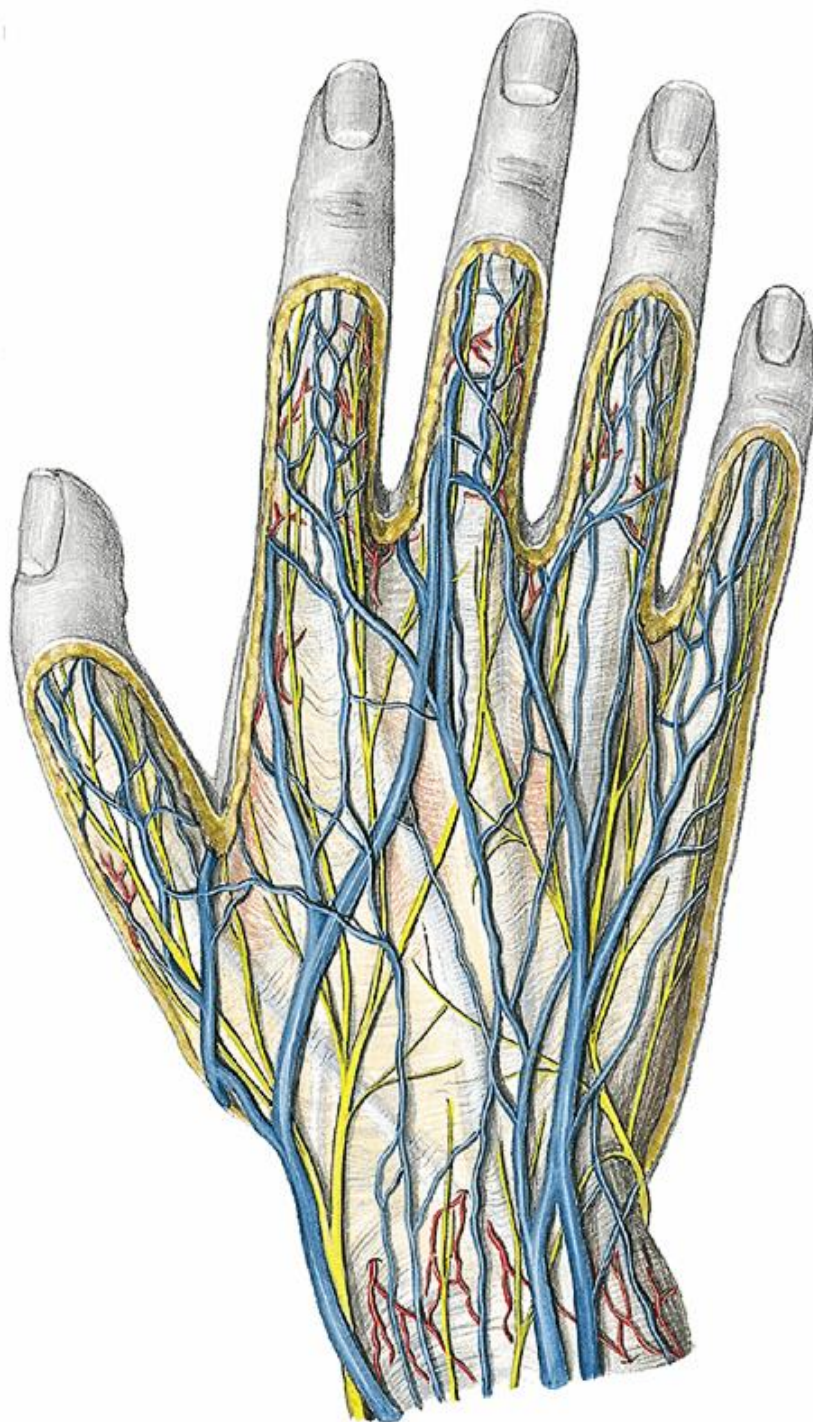
lateral group of muscles

R. profundus posterior
group of muscles

N. interos. post.

R. superf.





R. superf.

**Nn. digitales dors.
1, 2, 1/2 3. finger**

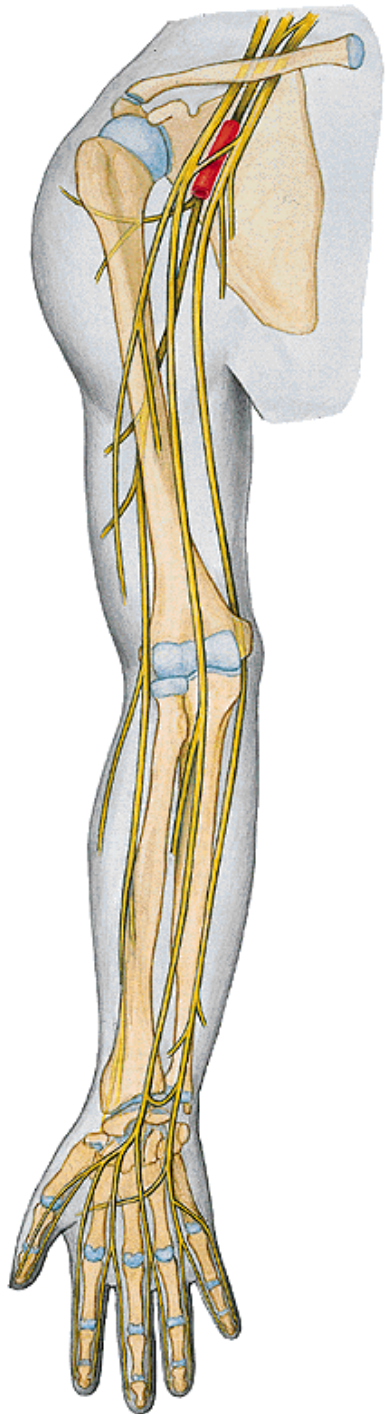


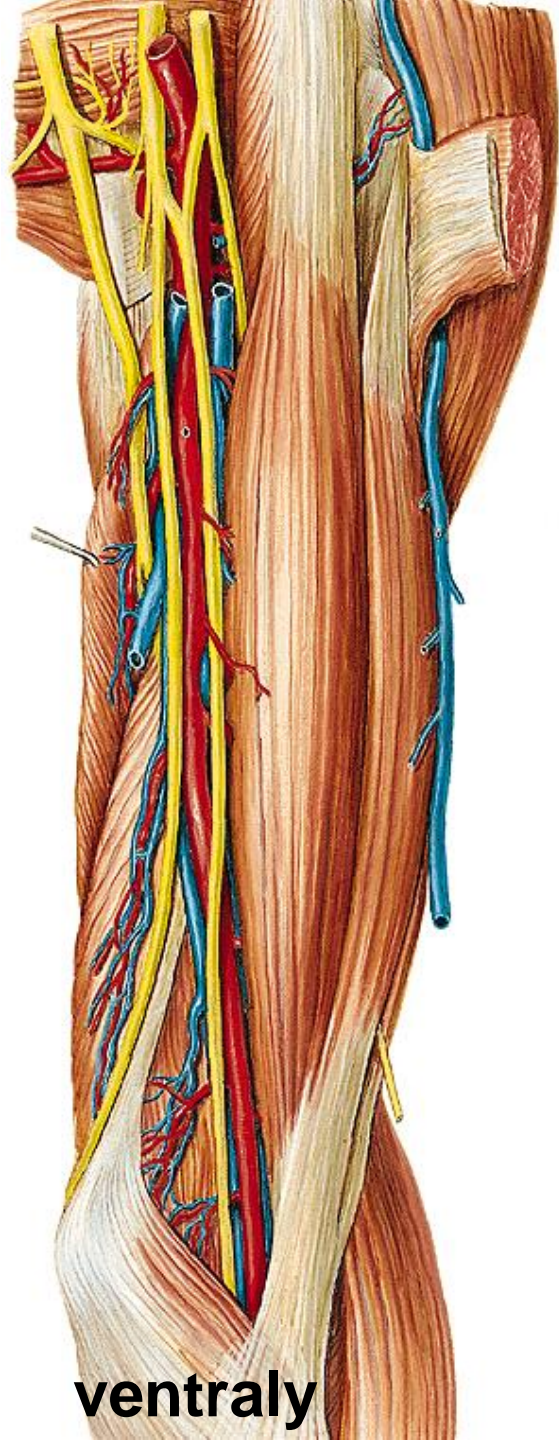
R adialis

FASC. LATERALIS

N. musculocutaneus

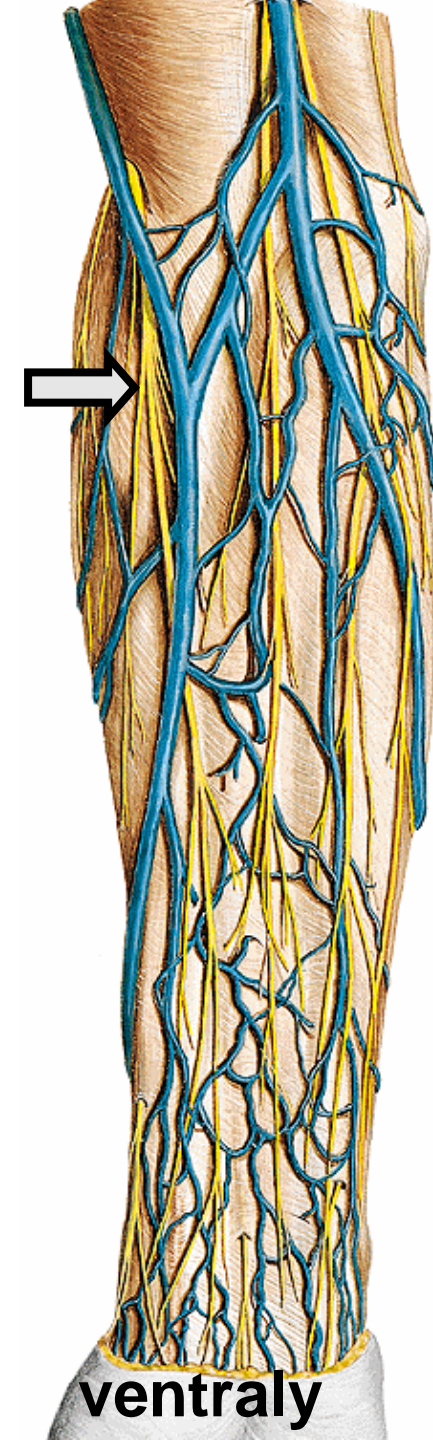
- through m. coracobrachialis
 - between anterior group of arm muscles
 - between m. biceps + brachiorad.
- lat. side of forearm





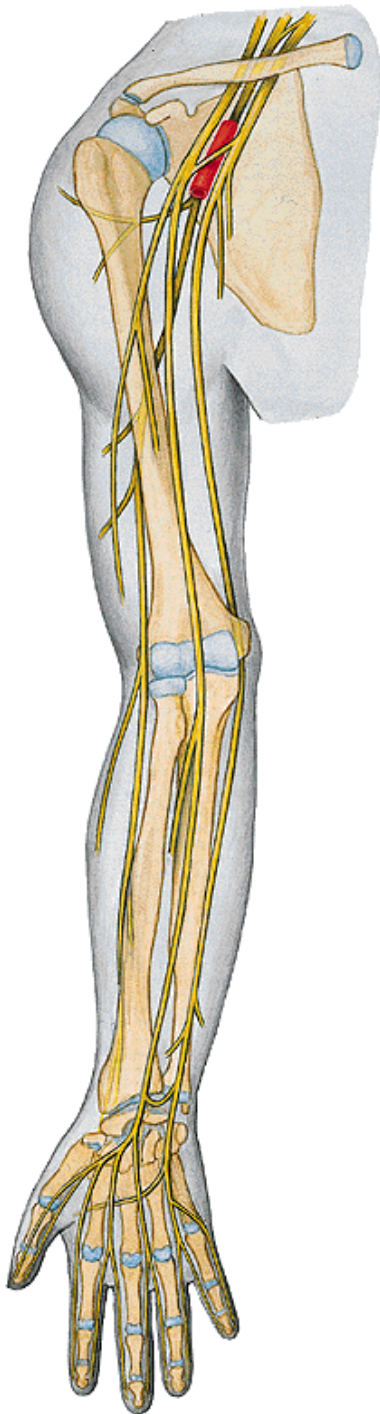
Rr. musc.:
m. biceps
m. brachialis
m. coracobrach.

R. cutaneus



FASC. MEDIALIS

N. ulnaris



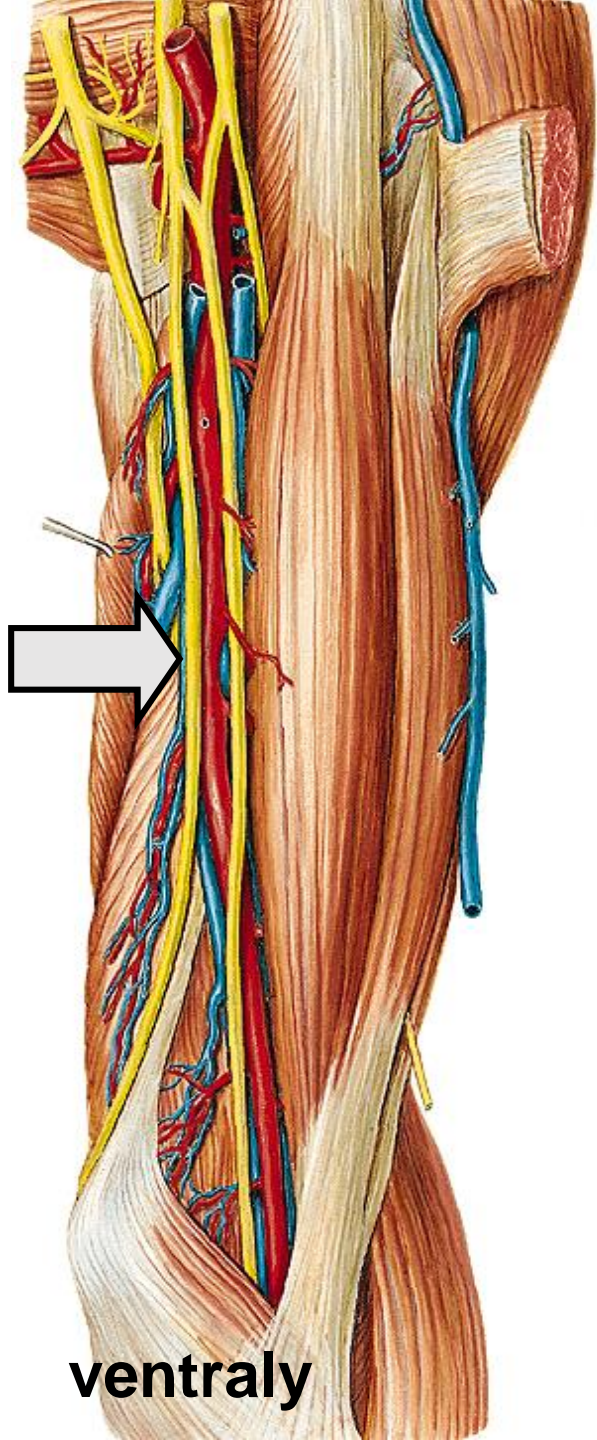
- sulcus bicipitalis med.
through septum intermusc. med. to the back
> behind epicondylus med.

- between m. flx. carpi uln. + digit. prof.

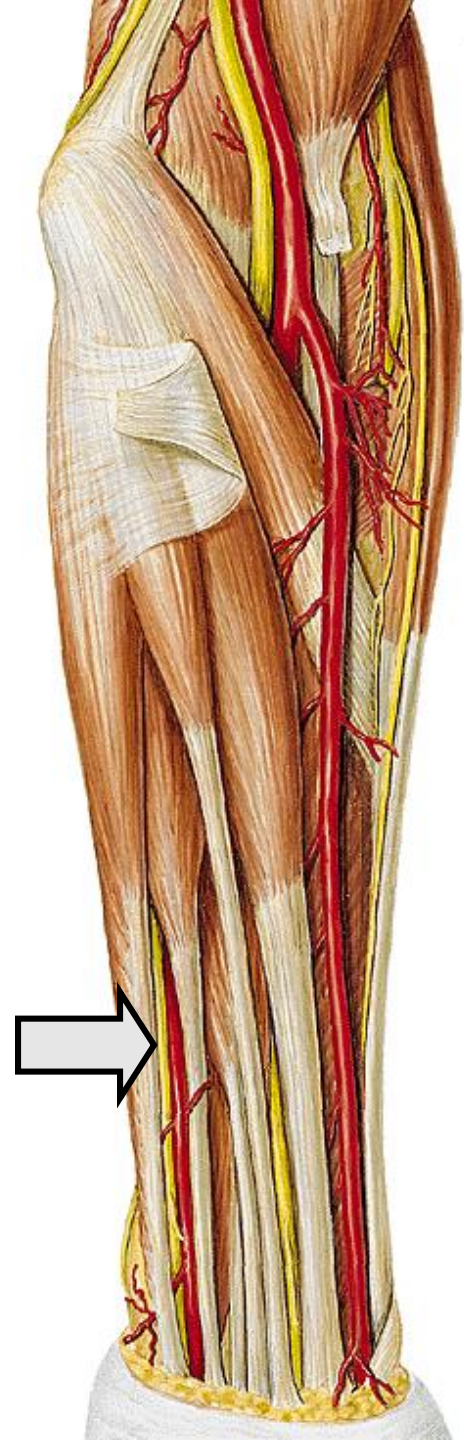
R. spf.

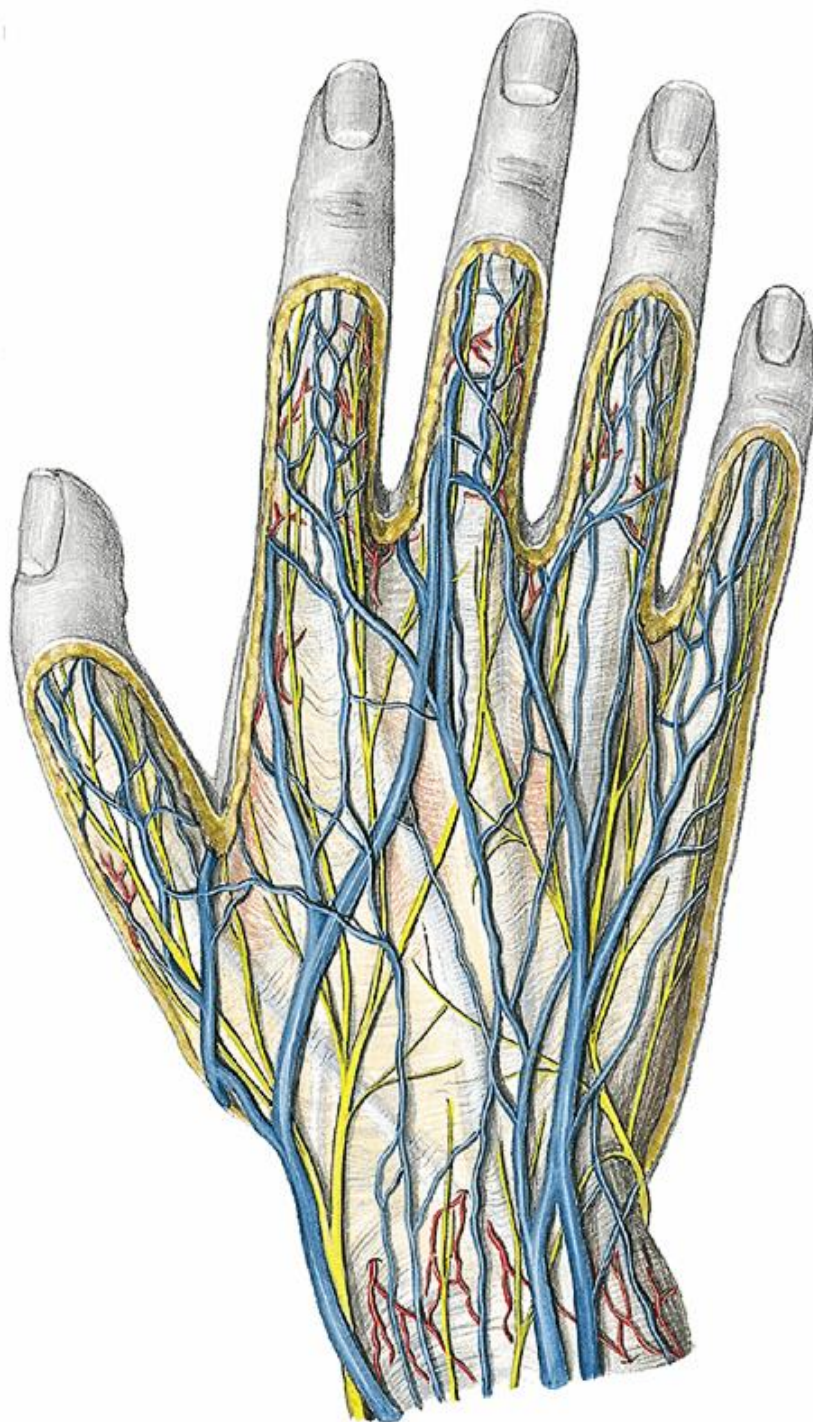
R. prof.

→ palma et dorsum manus



Rr. musc.:





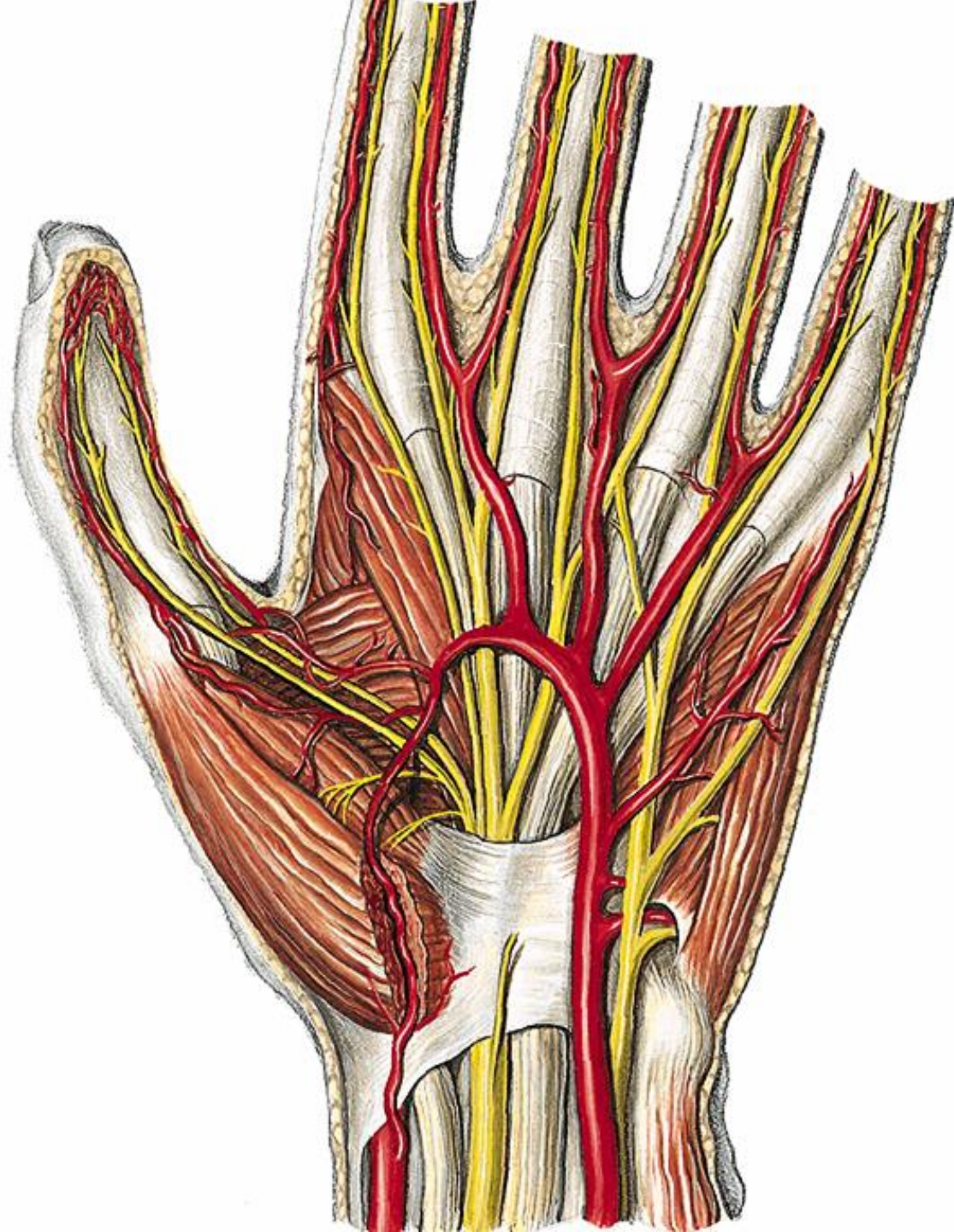
R. cutaneus

- r. dorsalis:

Nn. digit. dorsales

5, 4., ½ 3. finger



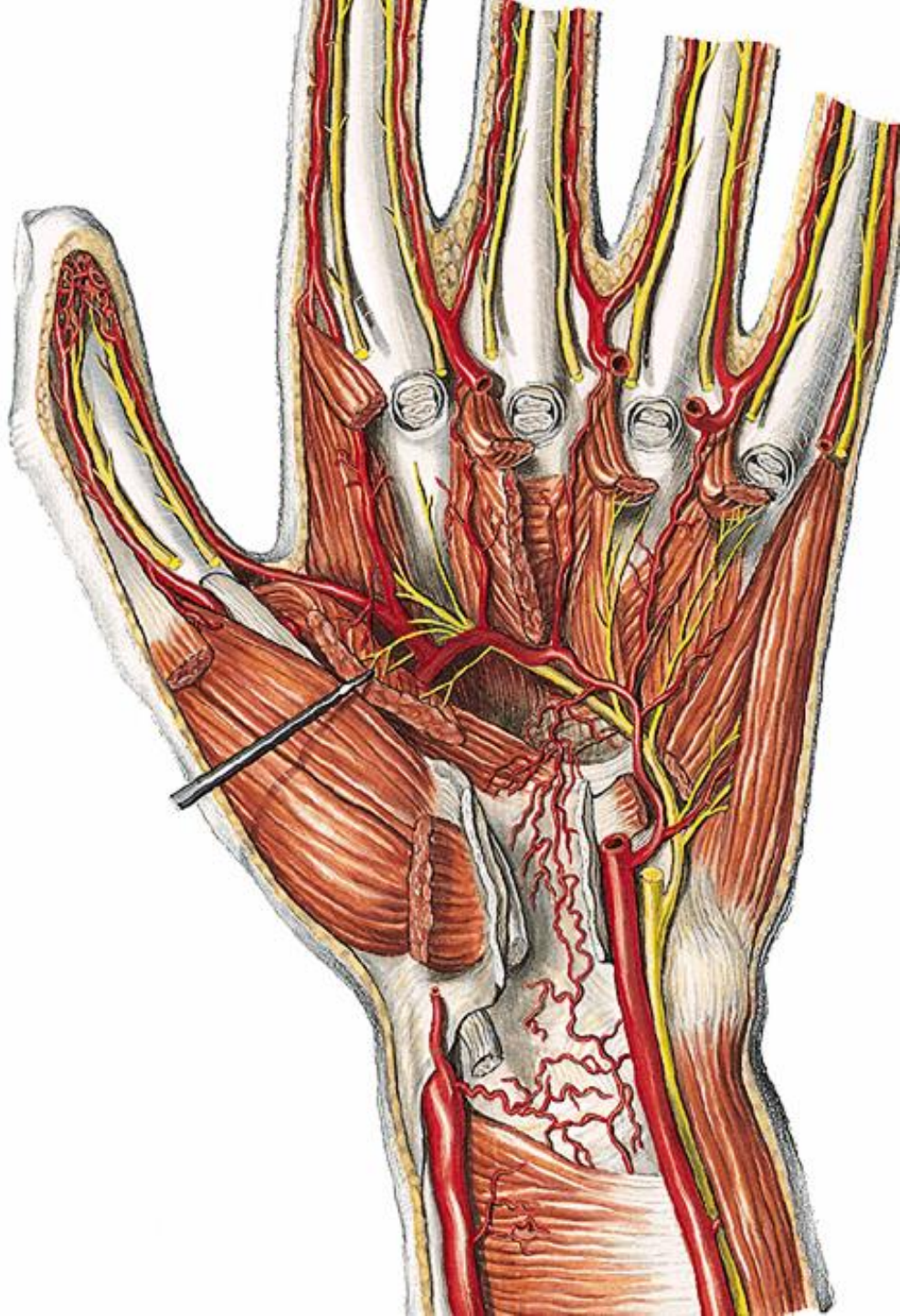


R. superficialis

Rr. cutanei

Nn. digit. palmares

5. finger, $\frac{1}{2}$ 4.



R. profundus

Rr. musculi:

hypothenar muscles

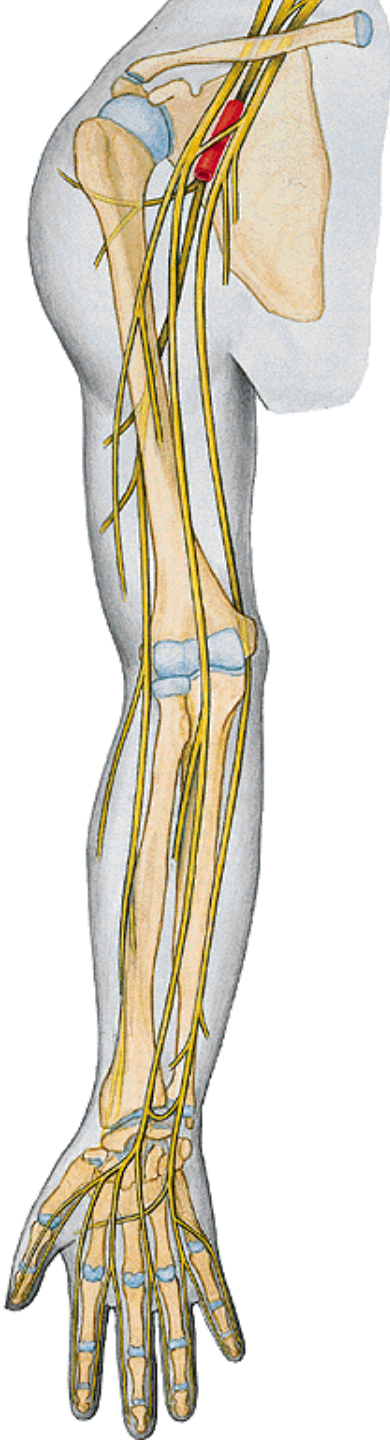
mm. interossei

mm. lumbricales 3.,4

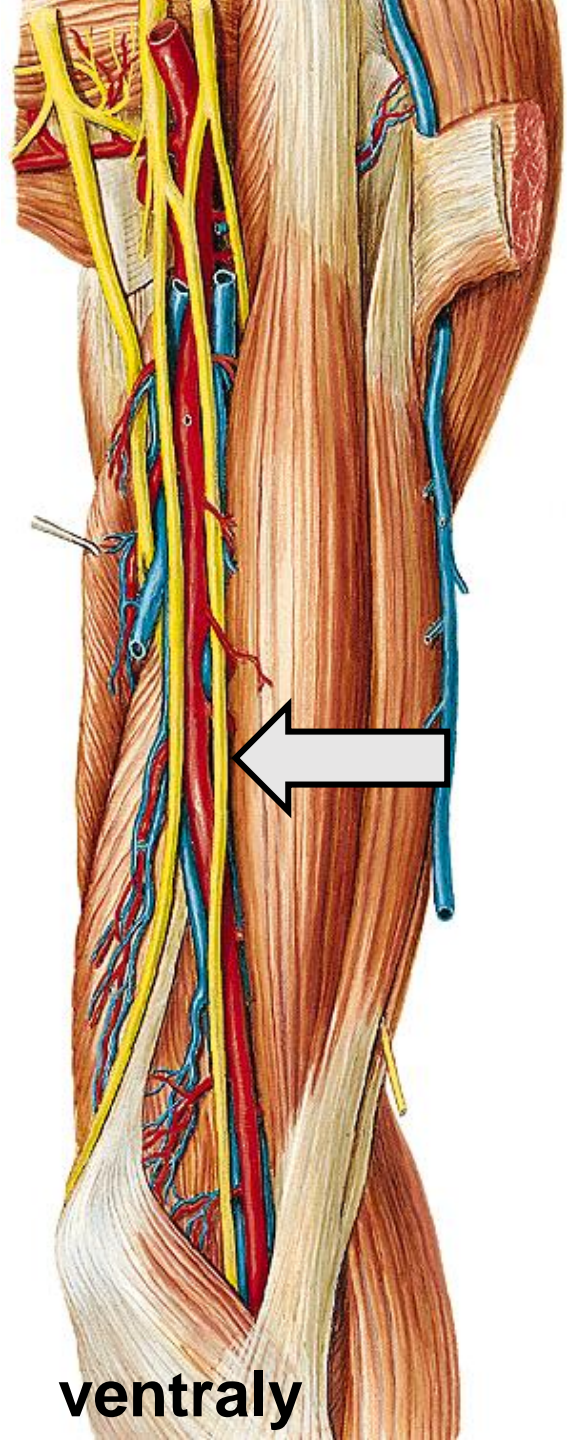
deep muscles of the thumb

FASC. MEDIALIS

N. medianus

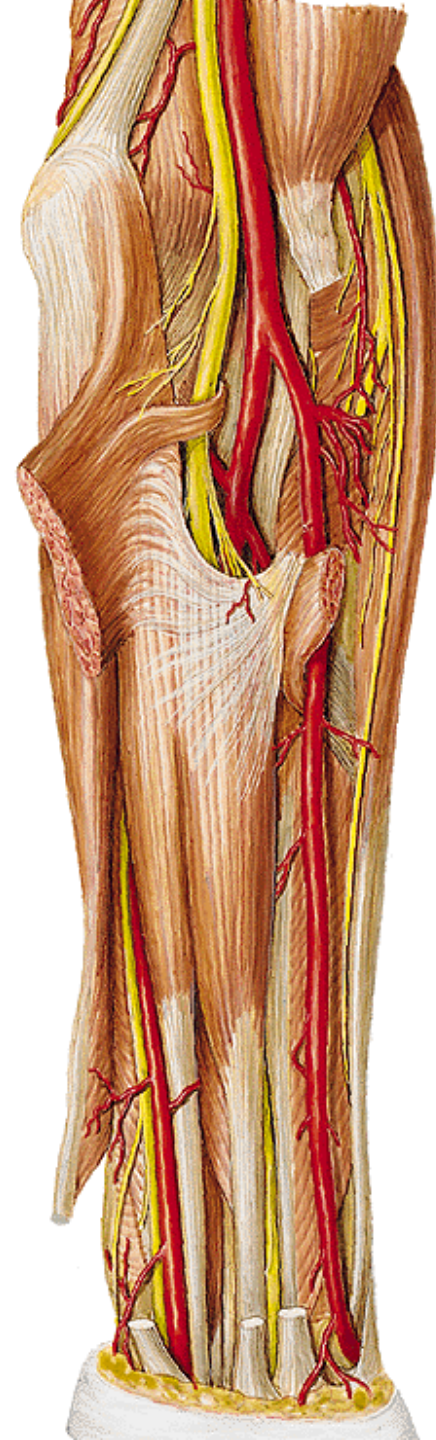


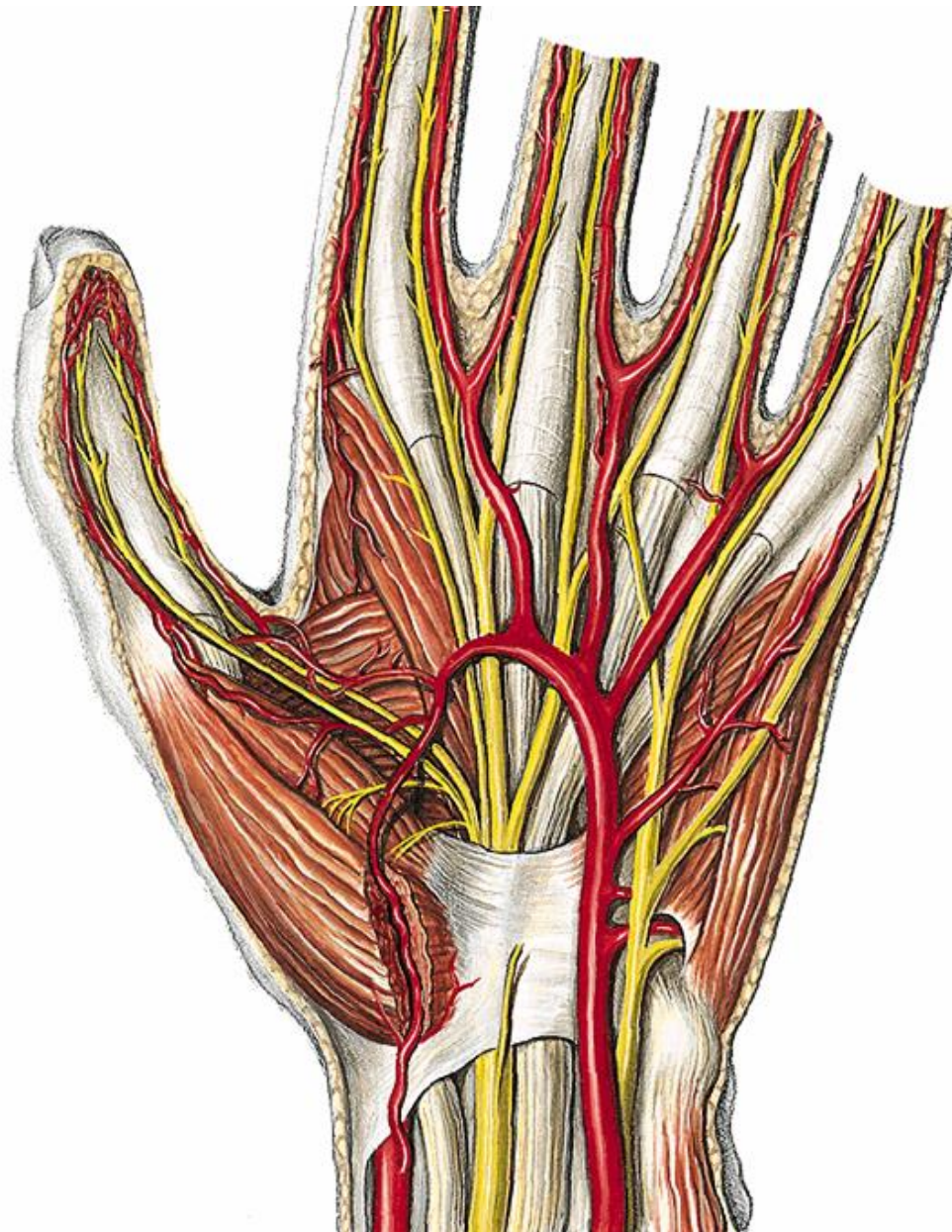
- sulcus bicipitalis med.
 - m. pronator teres
 - between m. flx. digit. spf. et prof.
 - through canalis carpi
- palma manus



ventrally

Rr. musc.
N. interos. ant.





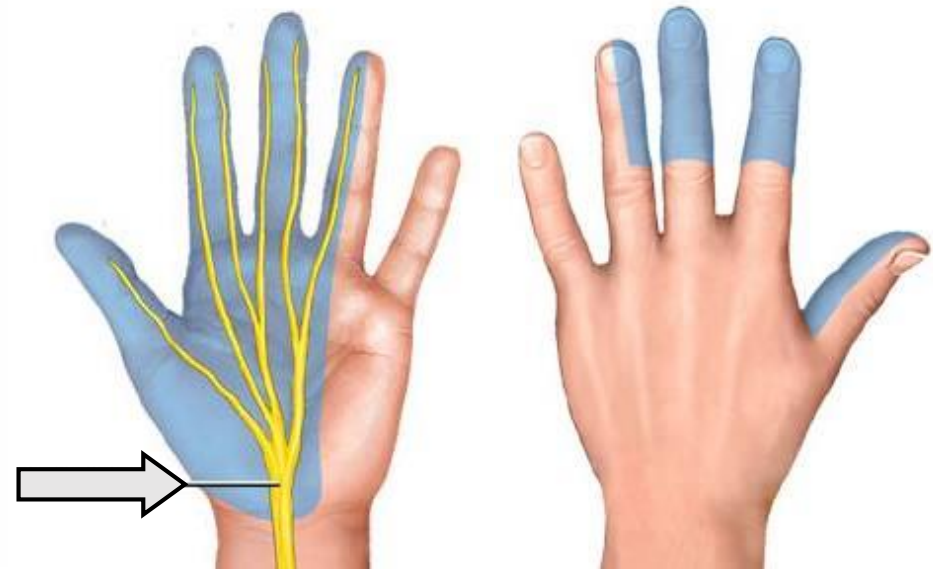
Rr. musculi:

superficial thumb
muscles

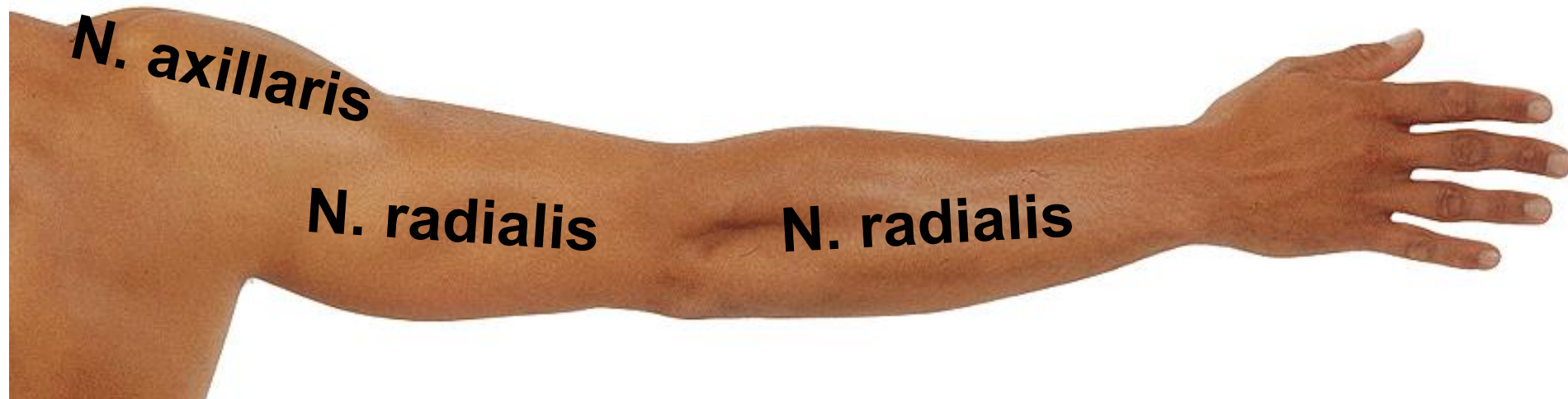
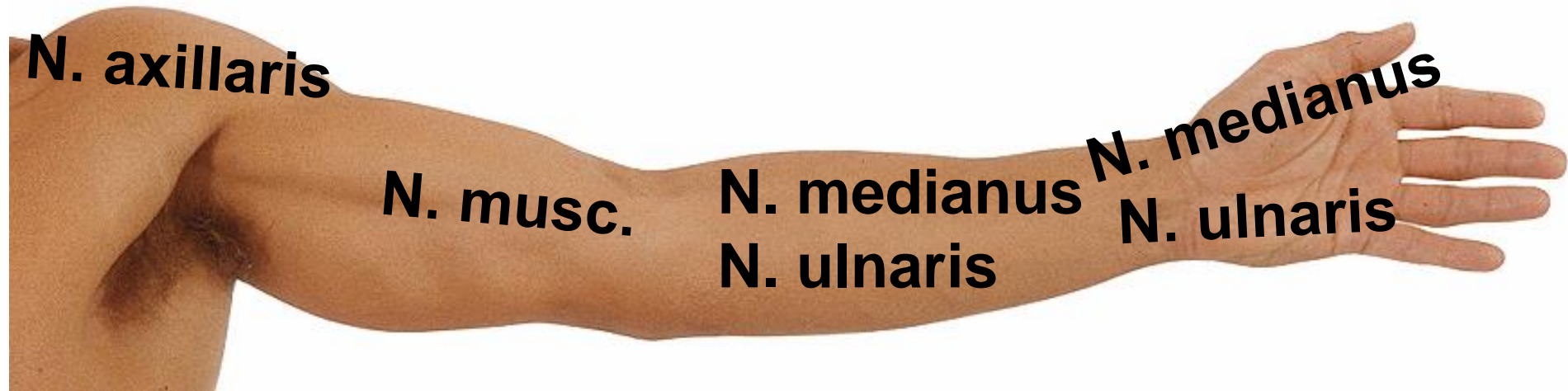
mm. lumbricales 1,2

Rr. cutanei:

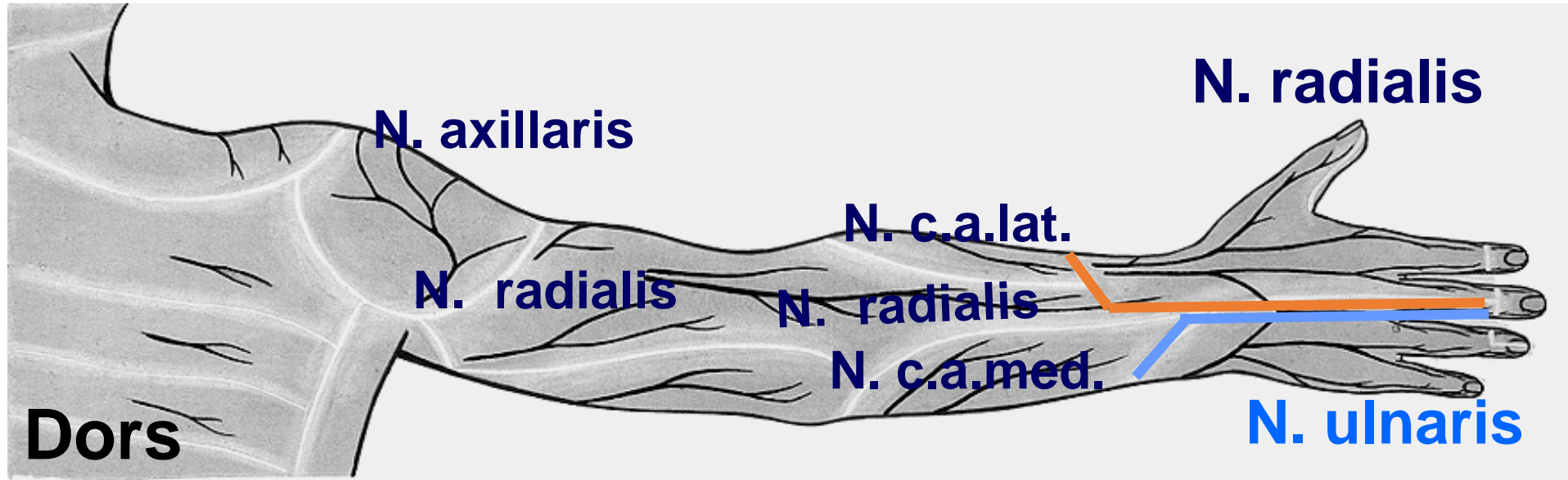
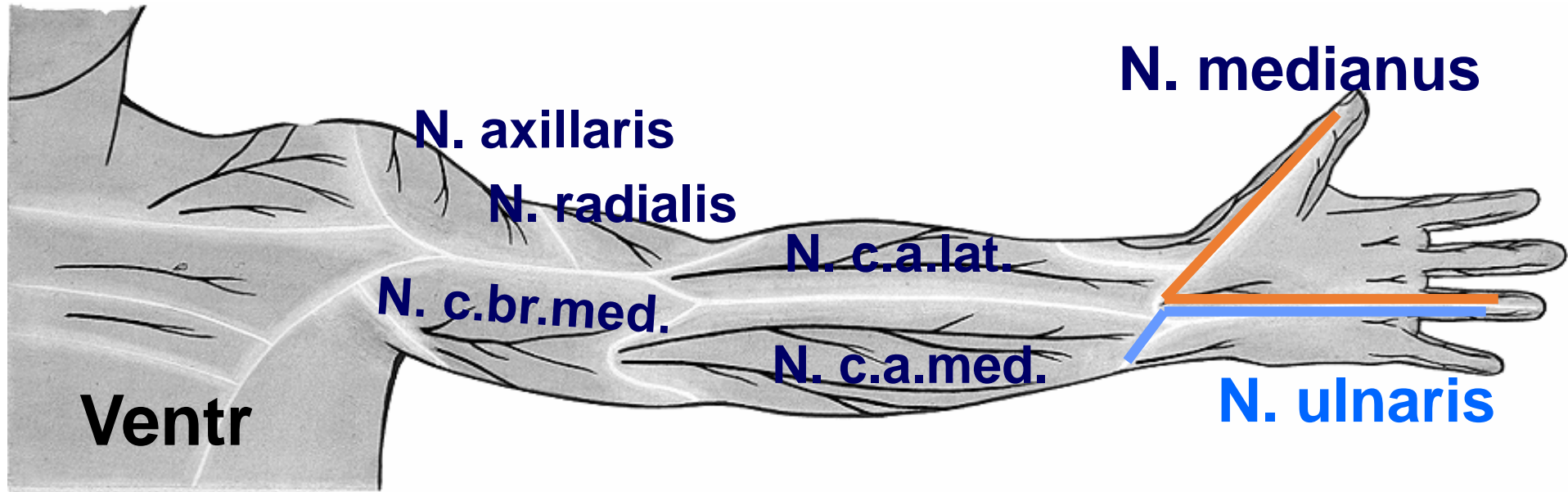
nn. digit. palmares
1. 2. 3. ½ 4. finger



Motor innervation



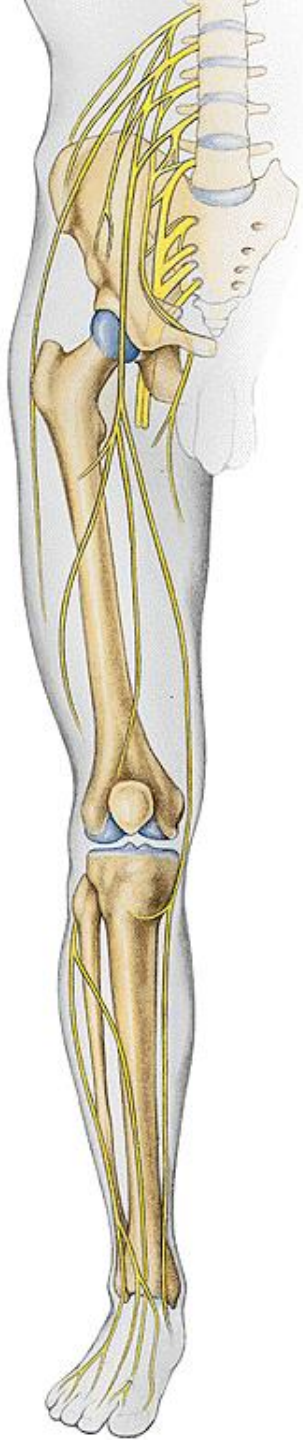
Sensory innervation



Innervation of lower limb

Plexus lumbalis

Plexus sacralis



Plexus lumbalis

Abdomen

Thigh ant., med., lat.

Lower leg: med.

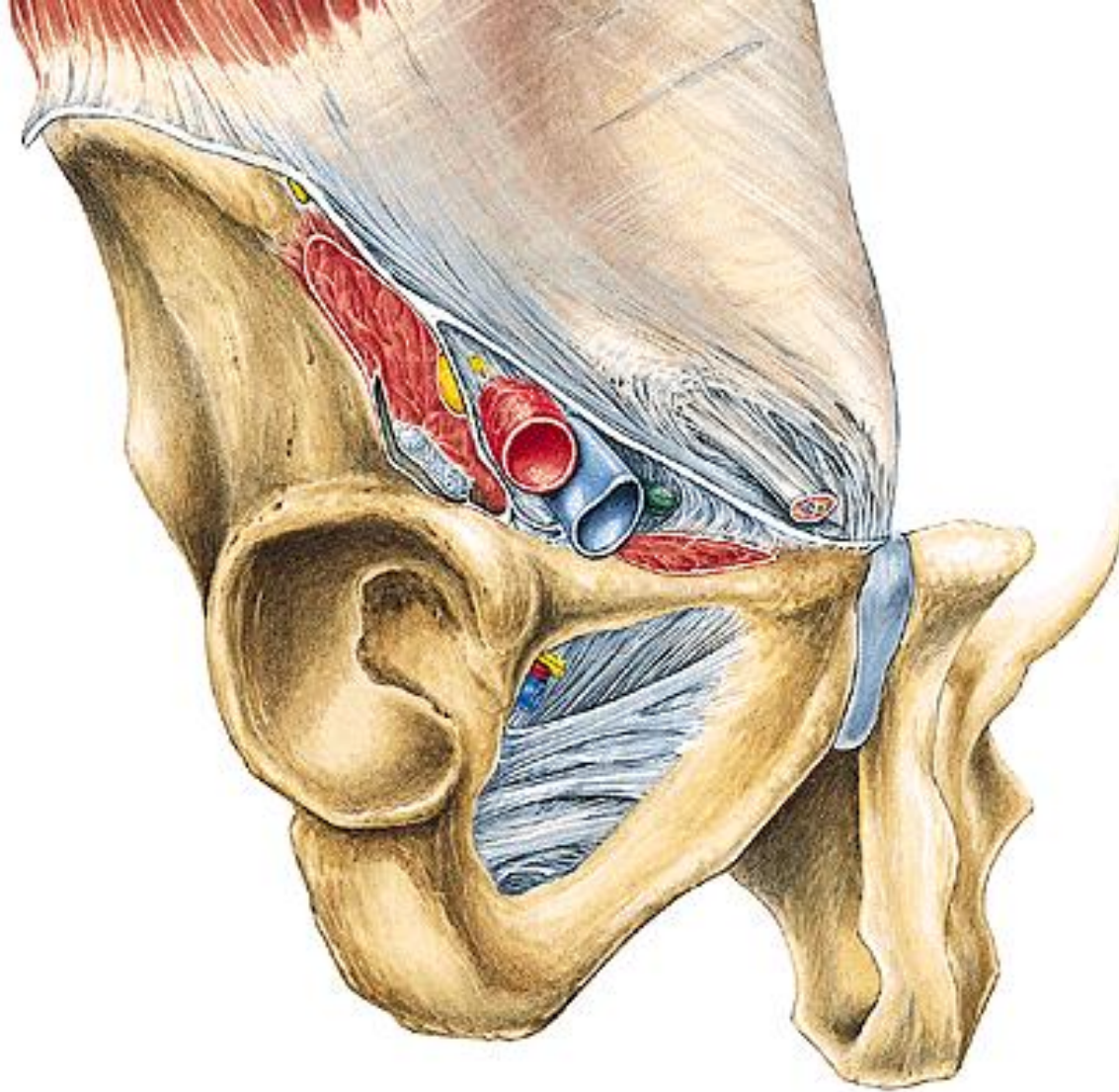
Plexus sacralis

Thigh: post.

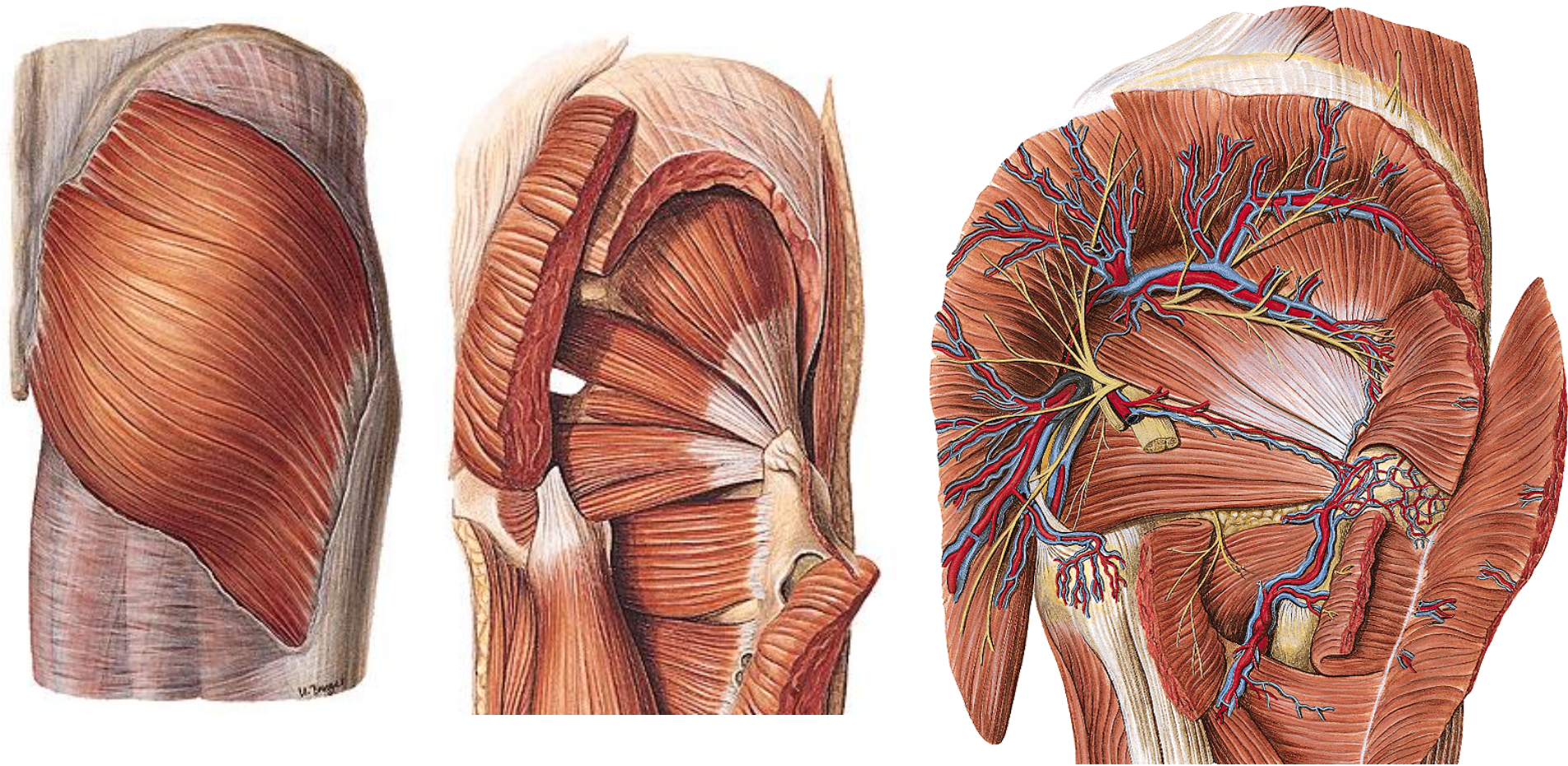
Lower leg: ant., lat., post.

Foot

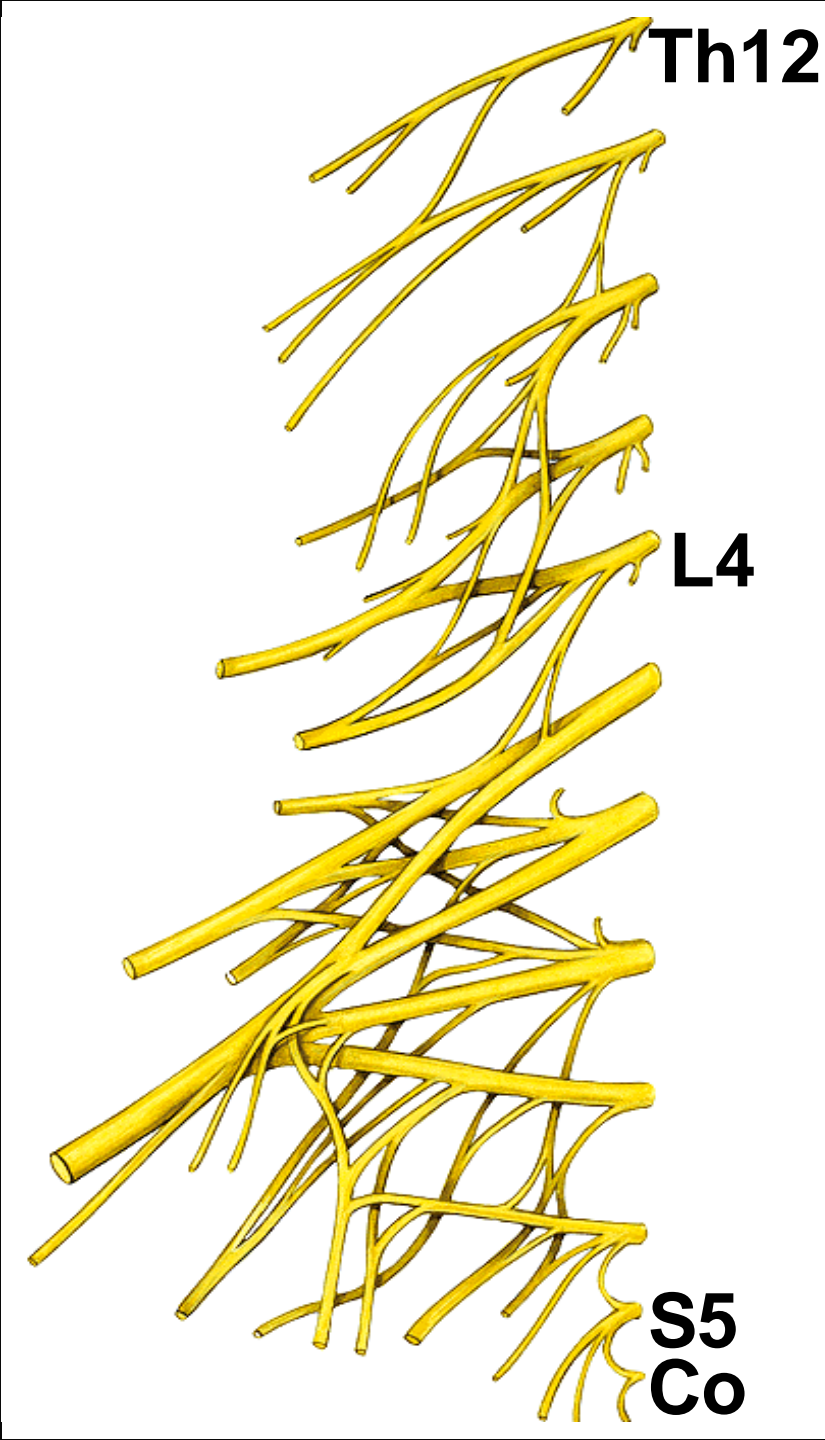




Ventrally:
lacuna musculorum et vasorum
canalis obturatorius



**Dorsaly:
foramen supra- et infrapiriforme**



Plexus lumbalis

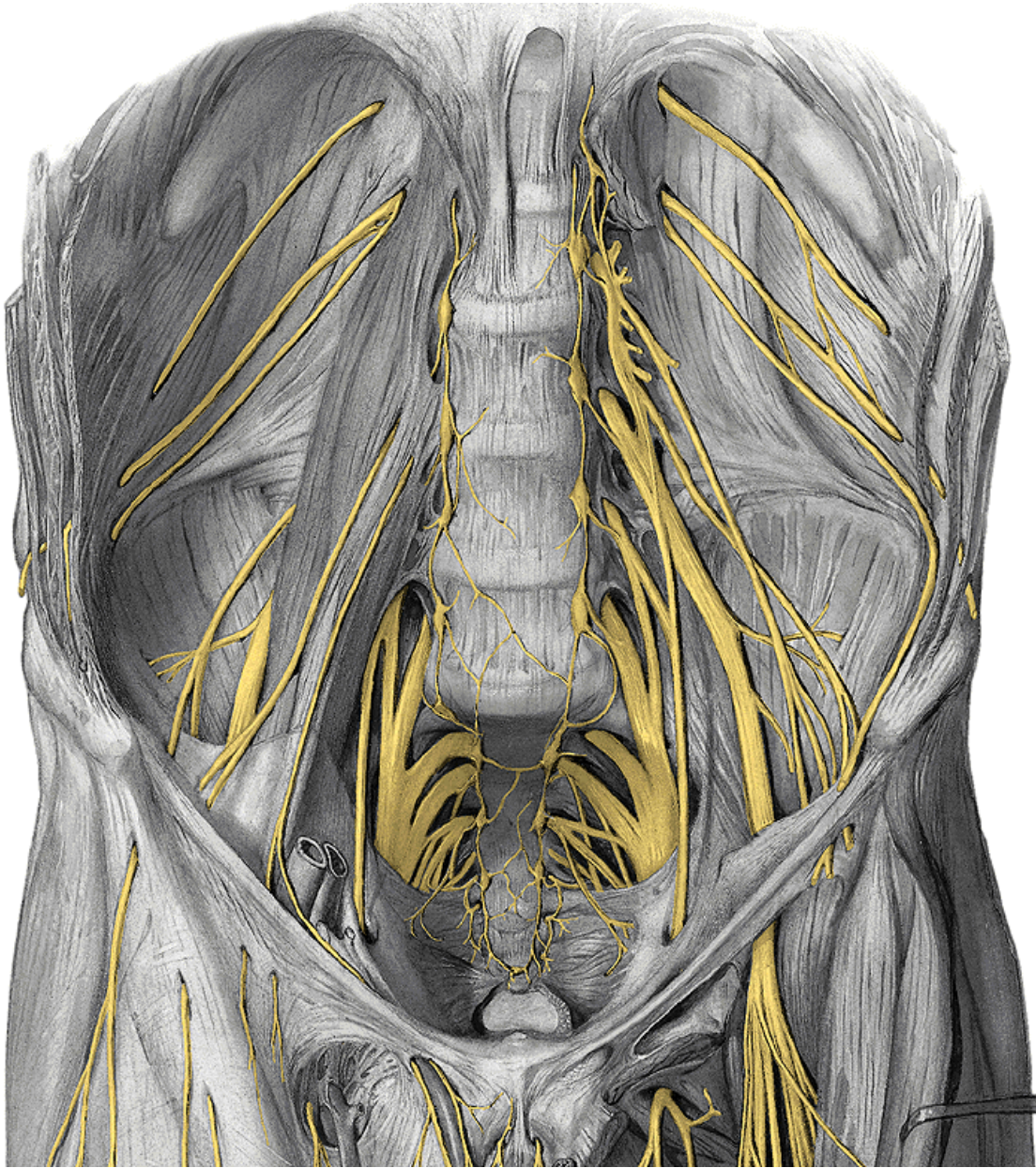
Anterior rami of spinal nerves

Th12 - L4

Plexus sacralis

Anterior rami of spinal nerves L4 -

Co



Plexus lumbalis

M. psoas major

Rr. musculares

N. iliohypogastricus

N. ilioinguinalis

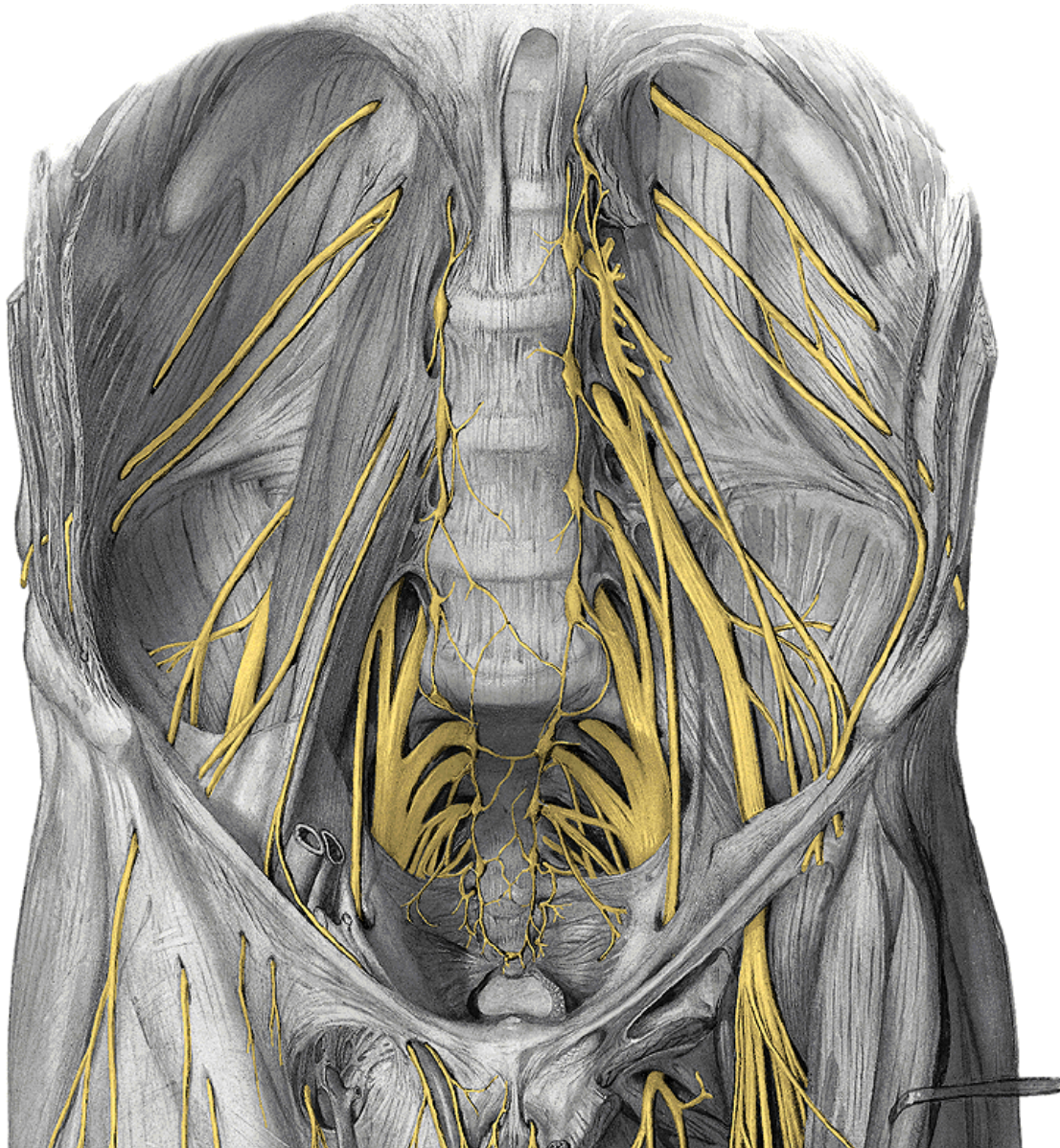
N. cut. femoris lat.

N. femoralis

N. genitofemoralis

N. obturatorius

N. iliohypogastricus

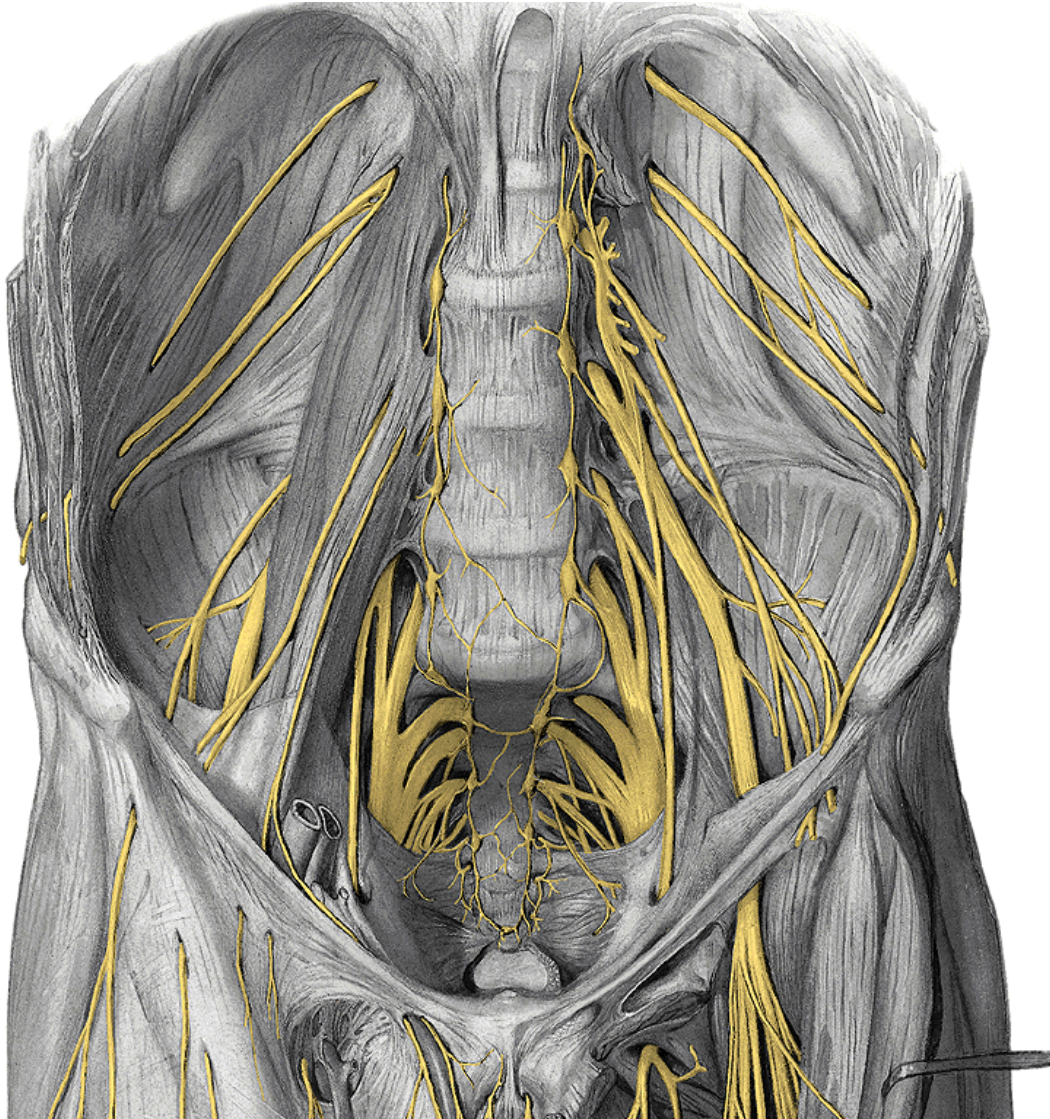


**between m. transversus
+ m. obliquus int.**

Rr. musculares

Rr. cutanei

N. ilioinguinalis



**between m. transversus
+ m. obliquus int.**

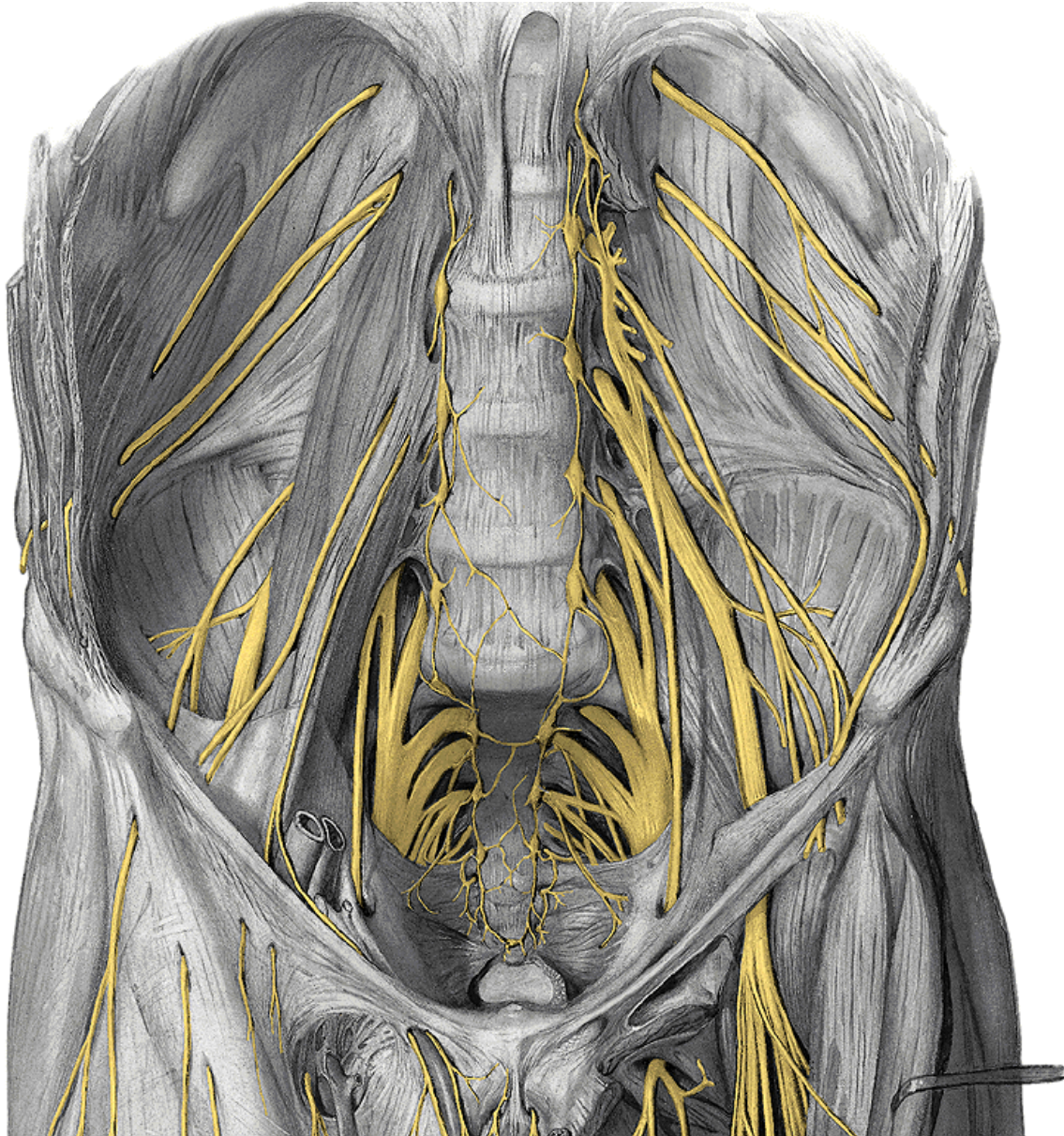
Rr. musculares

Rr. cutanei

Through inguinal canal

Rr. scrot. / lab. ant.

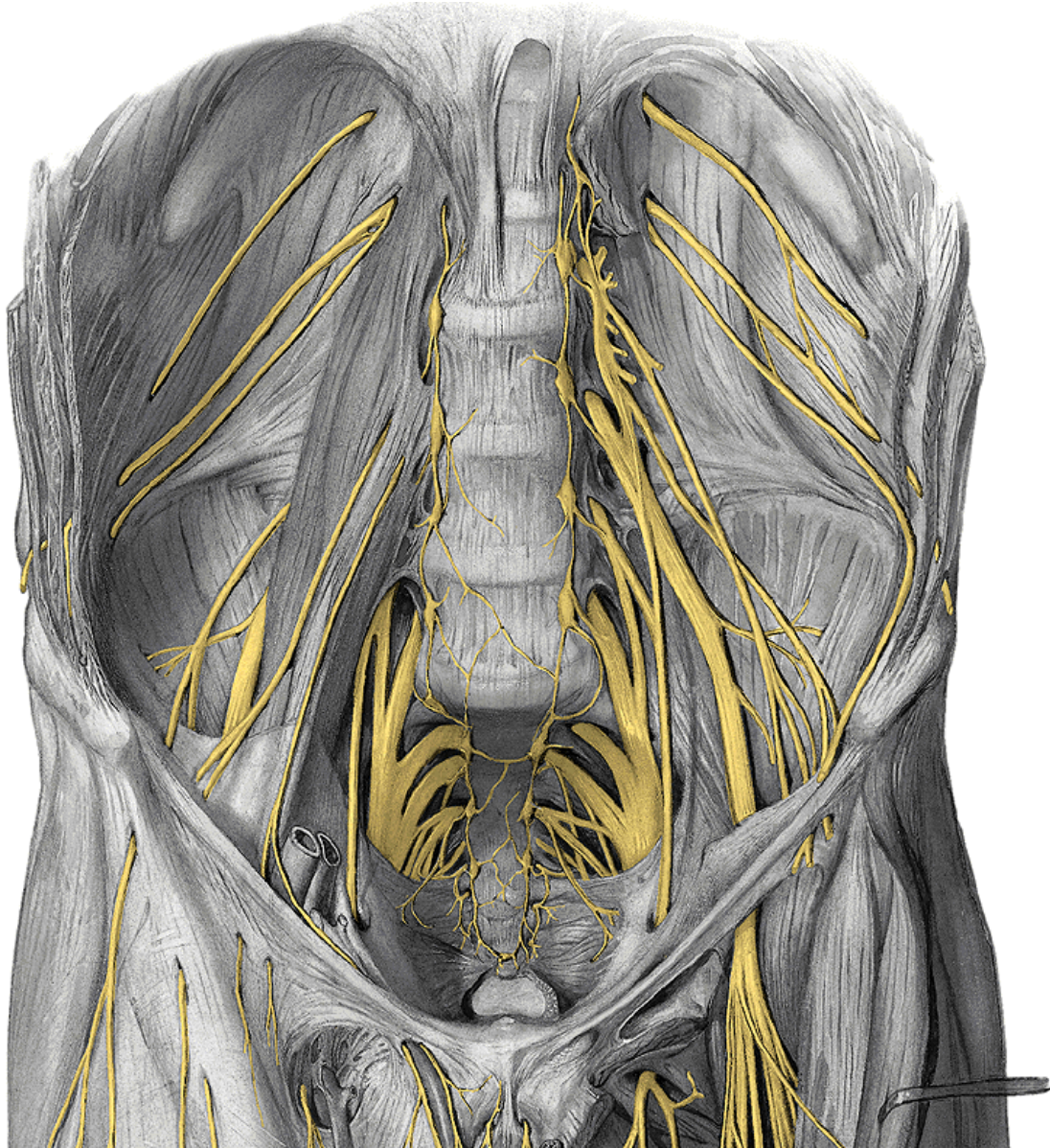
N. cut. femoris lat.



- **To SIAS**
- **below lig. inguinale**
- **thigh**

Rr. cutanei lat.

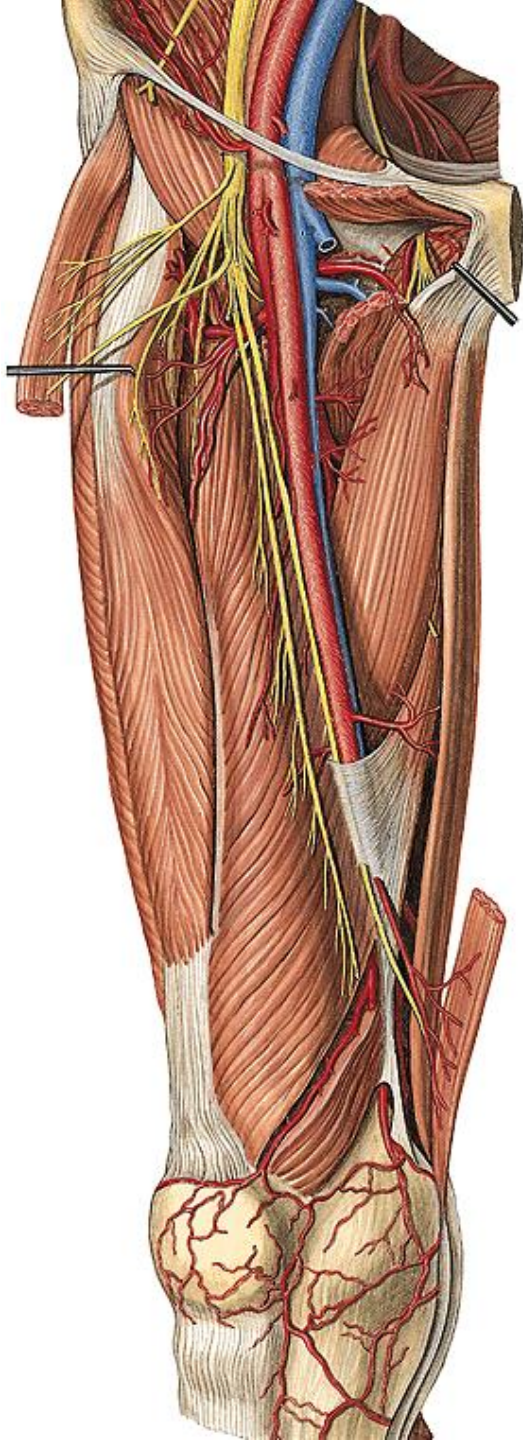
N. femoralis



- through lacuna musc.
- fossa iliopectinea thigh

Rr. musculares
Rr. cutanei ant.

N. saphenus



N. saphenus

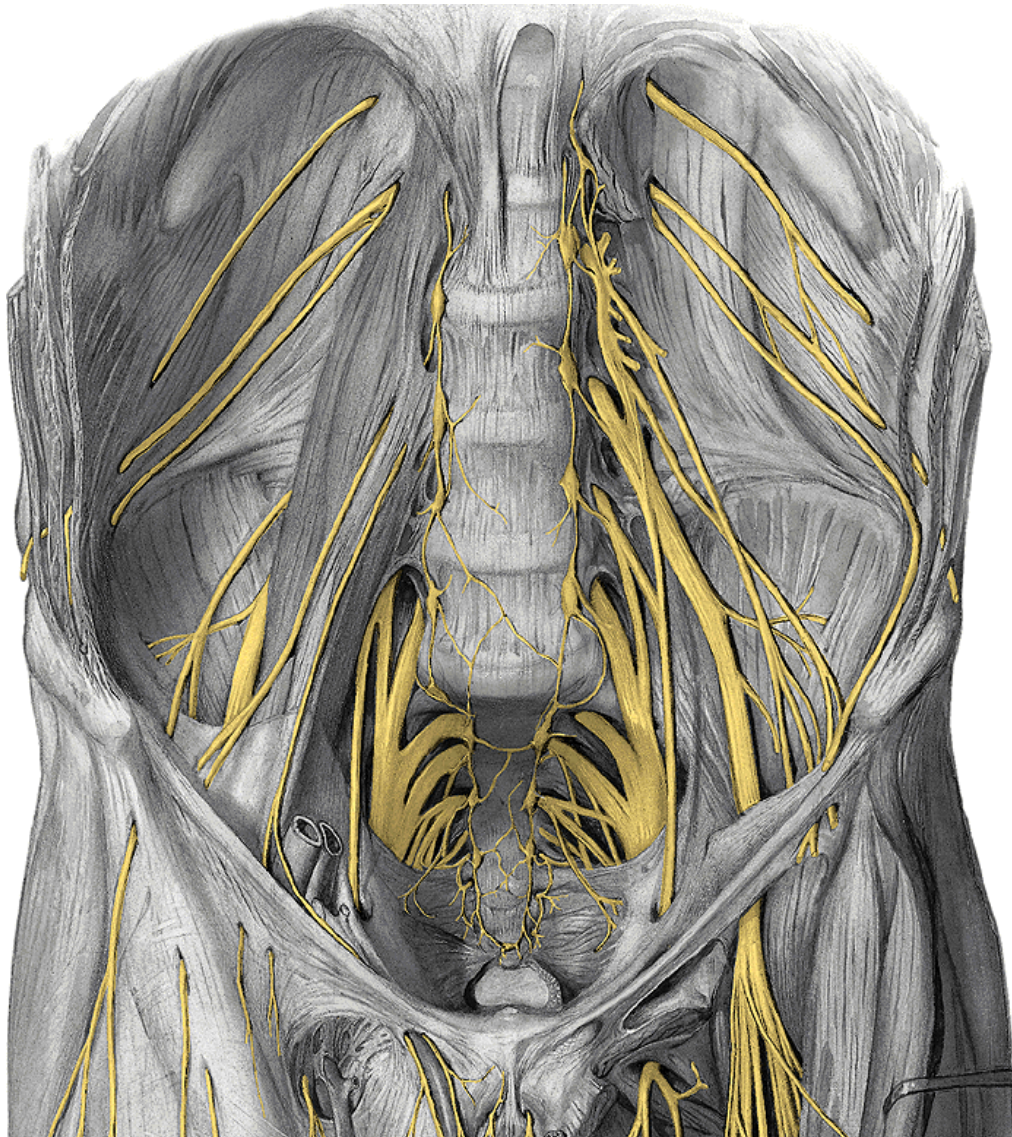
- in canalis adductorius
- along v. saphena magna

R. infrapatellaris

Rr. cut. cruris med.



N. genitofemoralis



through m. psoas major:

R. genitalis

through canalis inguin.

R. musculares:

m. cremaster

Rr. cutanei:

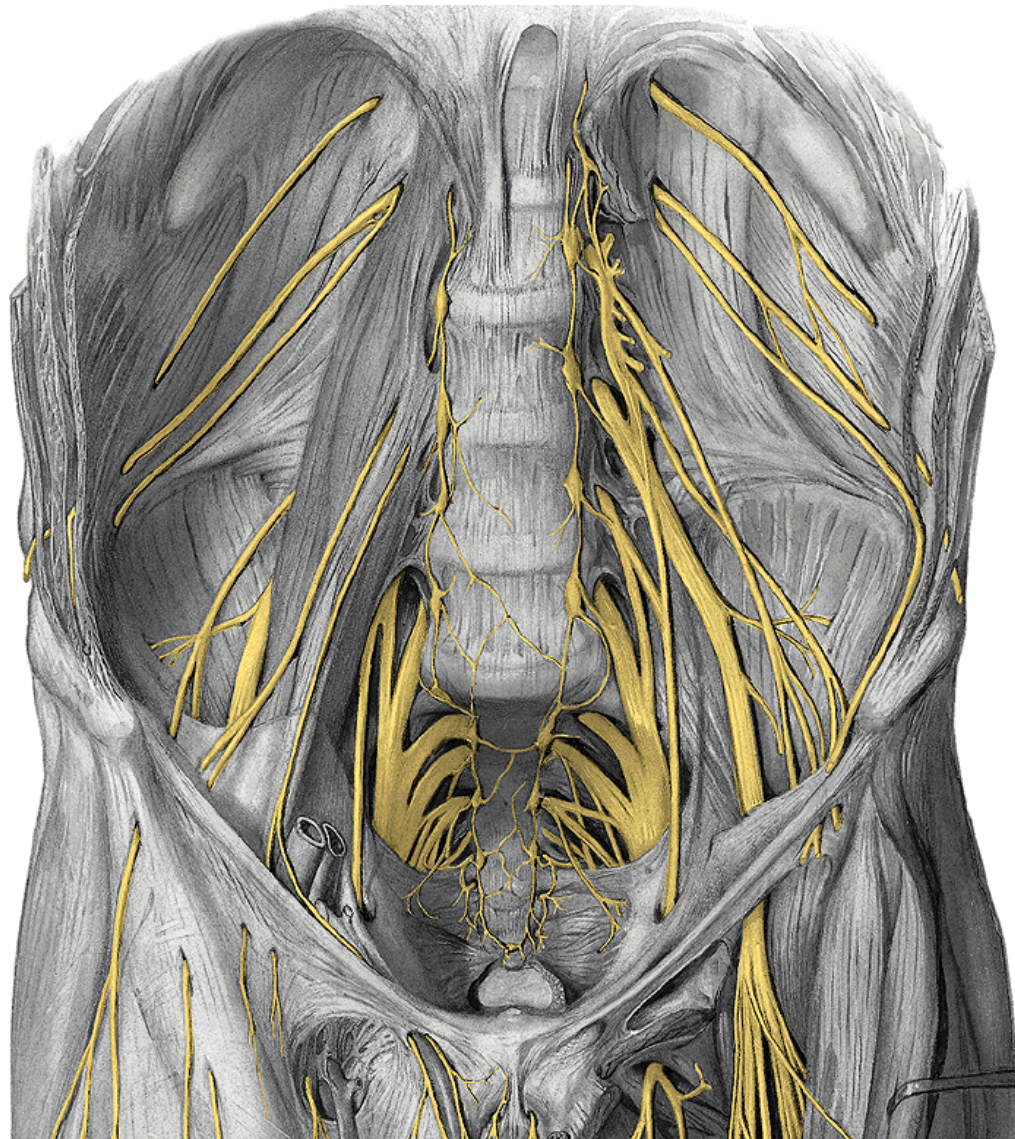
scrotum / labia majora + med.
thigh

R. femoralis

lacuna vasorum

Rr. cutanei (Δ femorale)

N. obturatorius



- through can. obturatorius
- med. side of thigh

R. anterior

Rr. musculares:
adductors

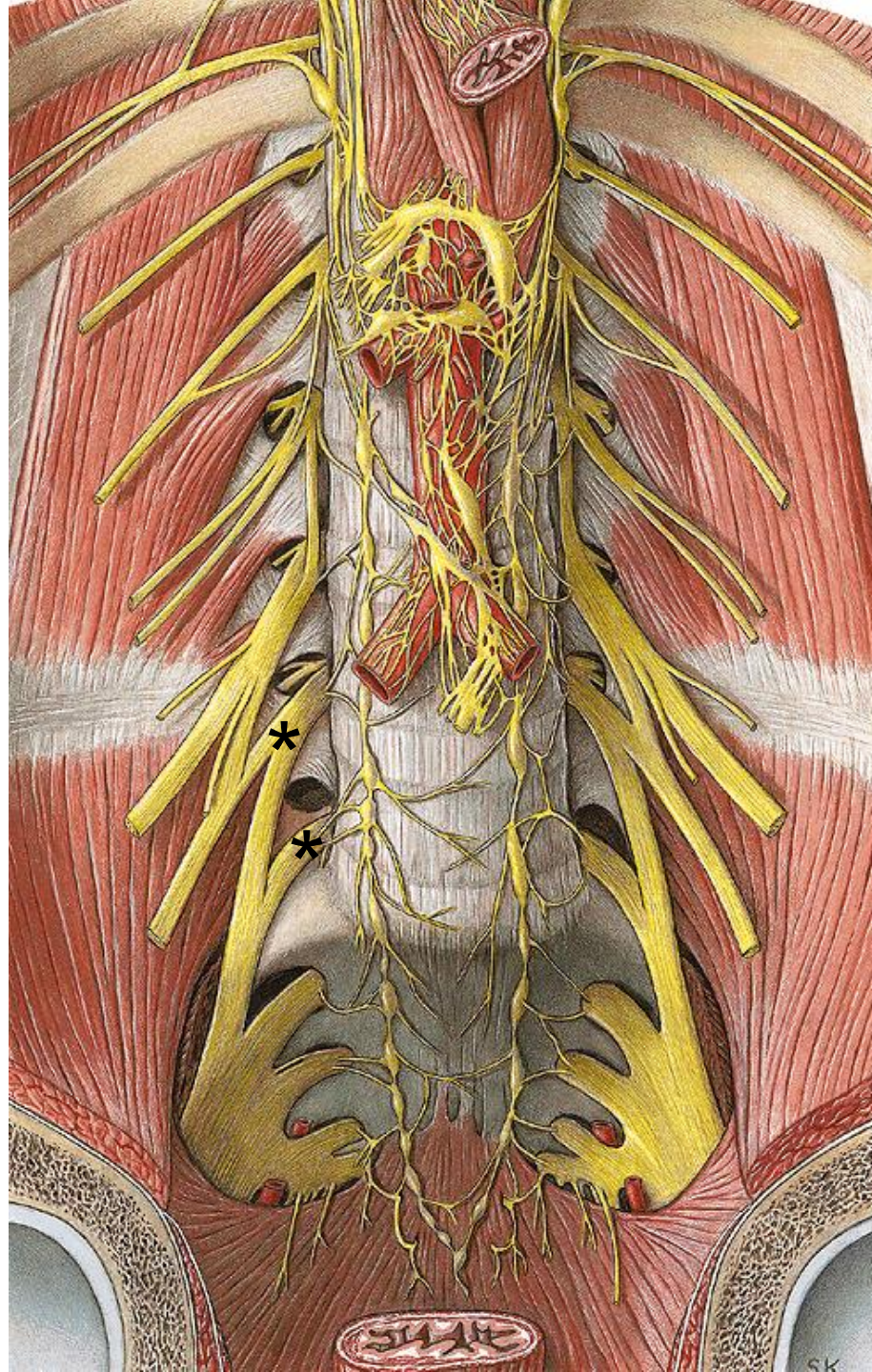
R. cutaneus

R. posterior

R. musculares:
m. add. magnus

Rr. articulares

Plexus sacralis



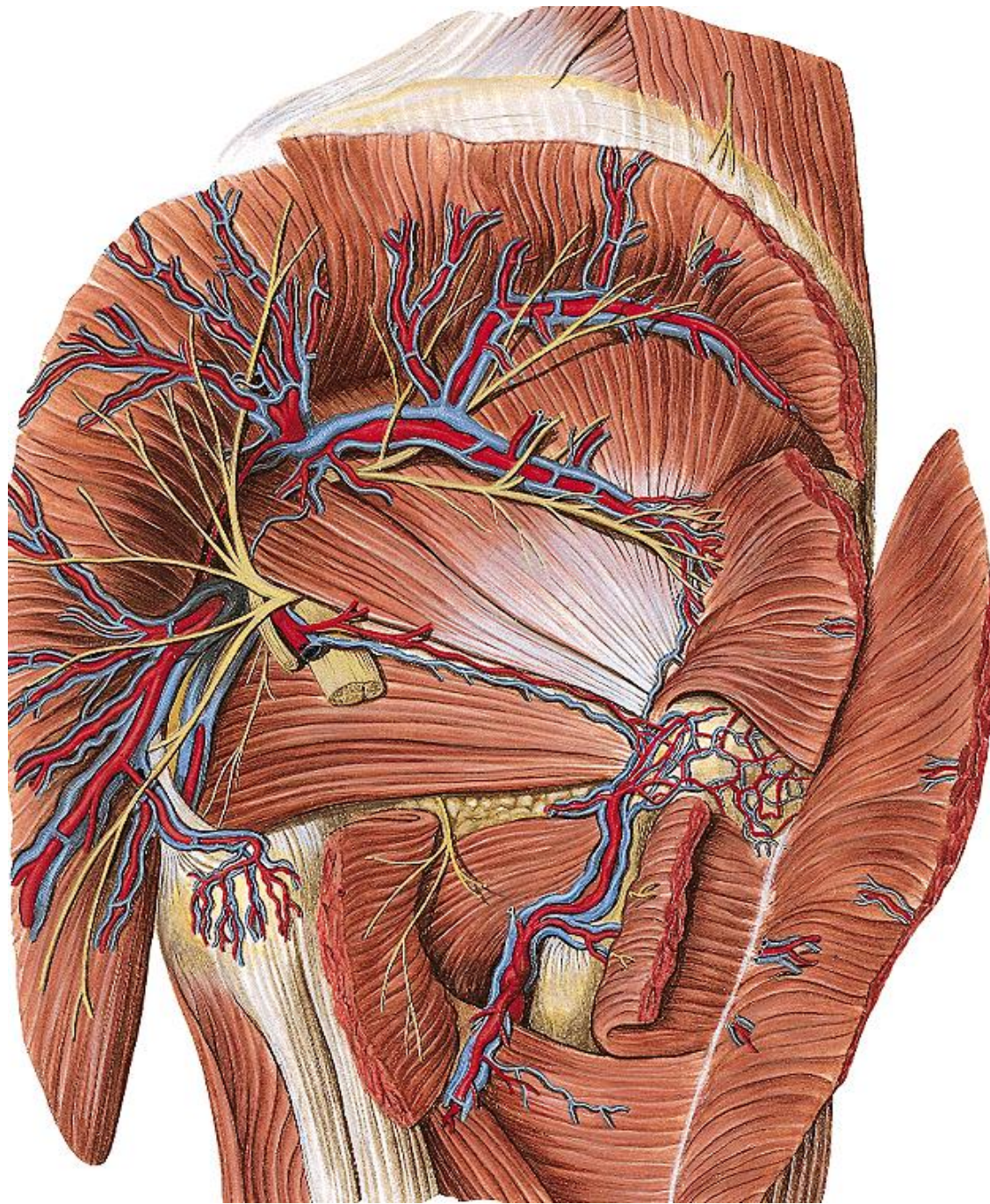
**Rami anteriores of spinal
nerves**

L4 - Co

Rami anteriores of spinal nerves

L4,5 =

***truncus lumbosacralis**

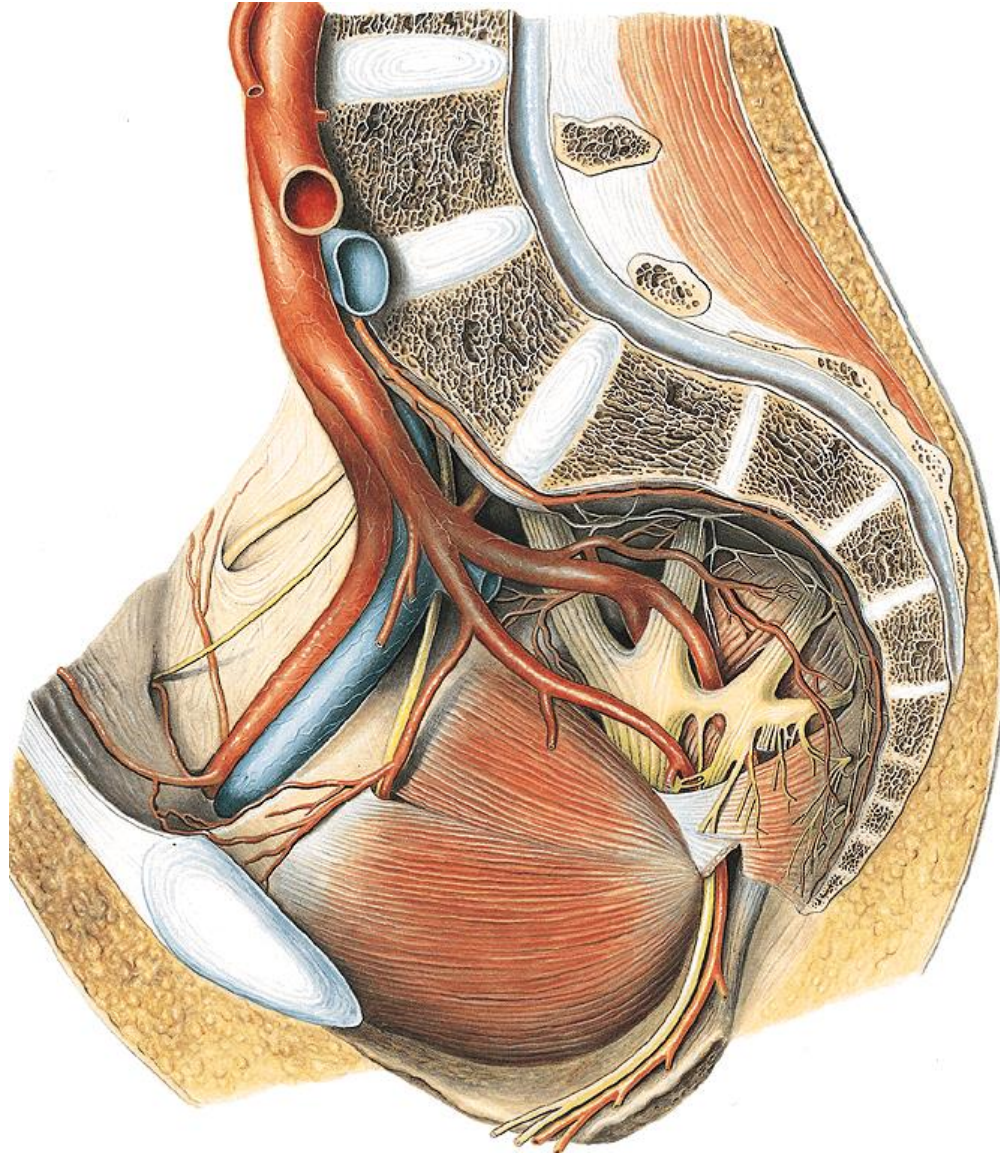


Rr. musculares
N. gluteus sup.

N. gluteus inf.
N. cut. femoris post.
N. ischiadicus

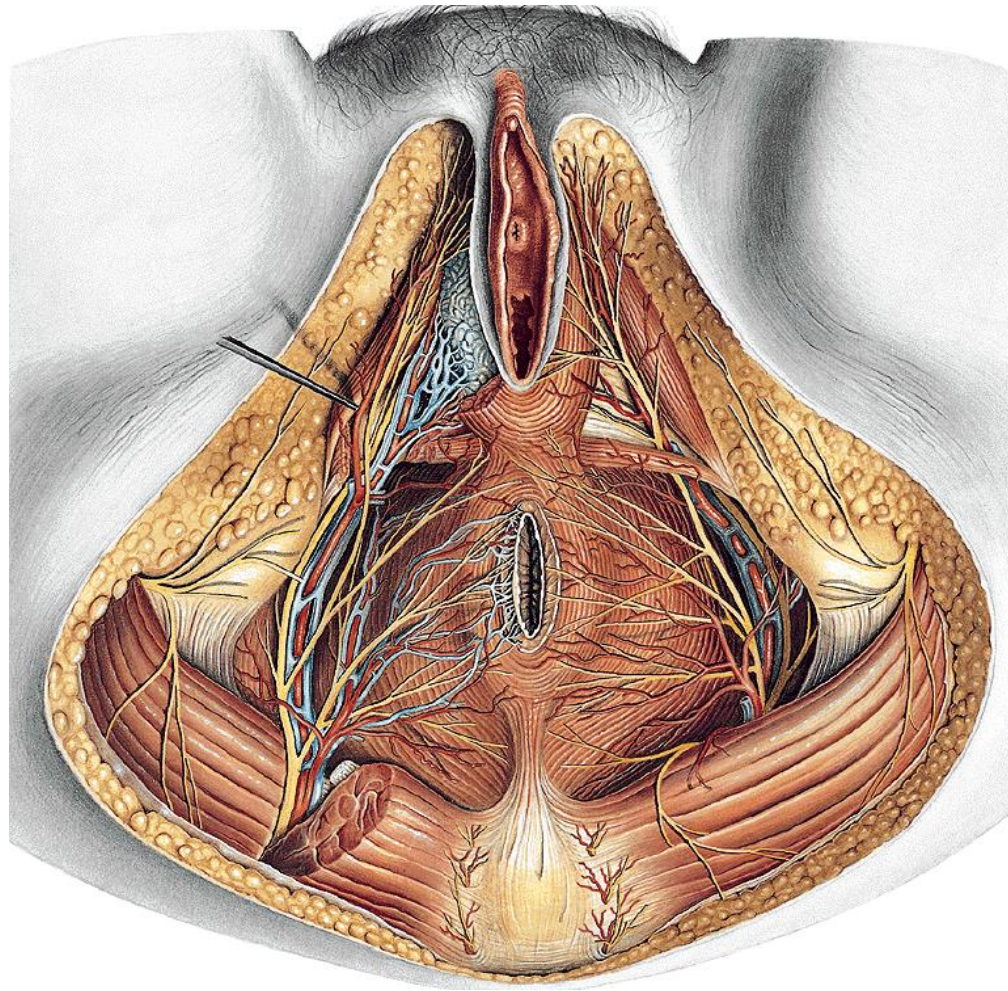
N. pudendus
N. coccygeus

N. pudendus



Through for. infrapiriforme:

- around spina ischiad. -**
- to for. ischiad. minus**
- to fossa ischiorectalis**
- To symphysis**



mixed:

Nn. rectales inf.

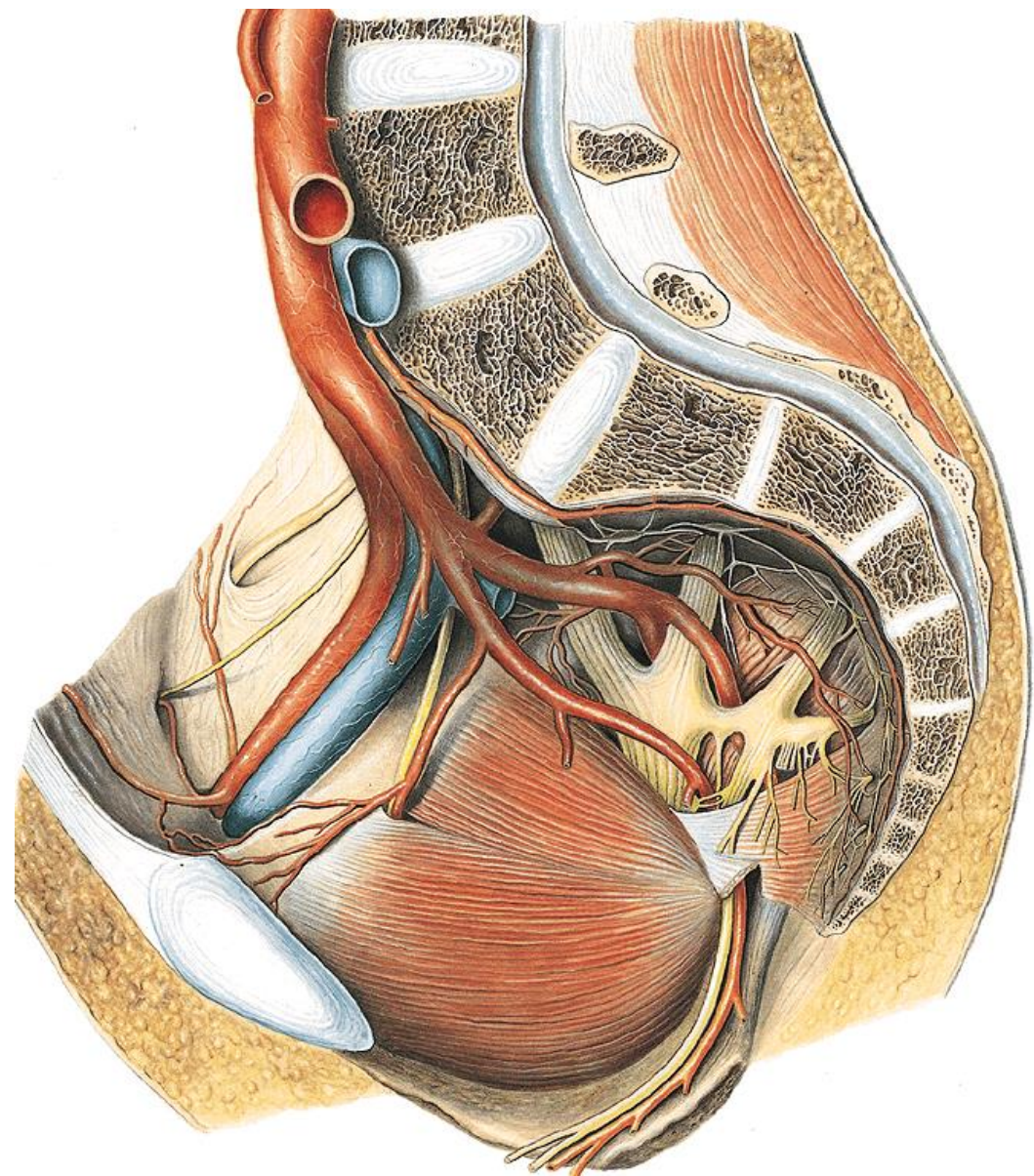
- m. sphinct. ani ext.
- m. levator ani
- skin

Nn. perineales

- perineal muscles and muscles of genitals
- rr. scrot./labiales post.

N. dors penis/clitoridis

N. coccygeus



on m. coccygeus

Rr. musculares:

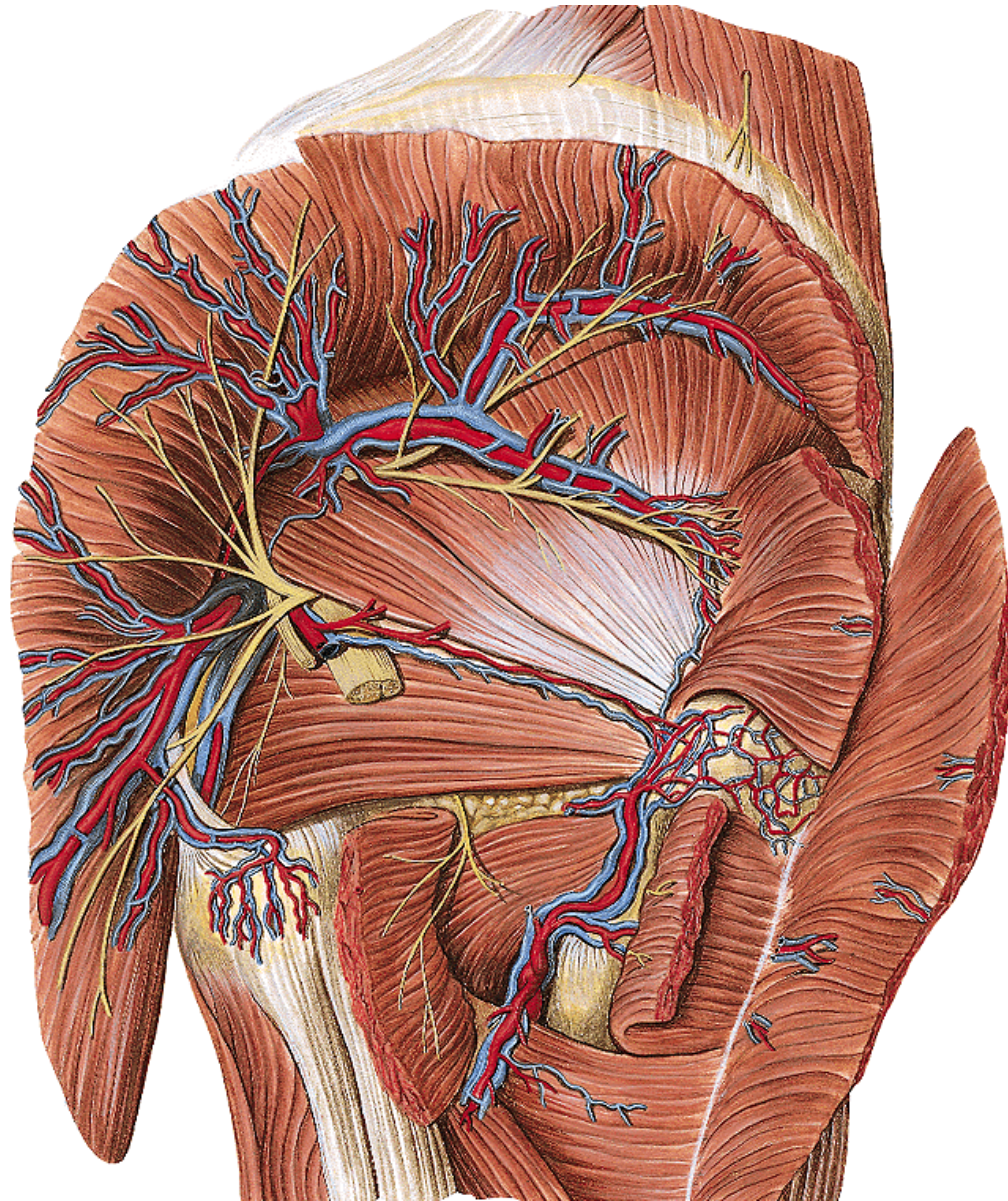
m. levator ani

m. coccygeus

Rr. cutanei:

**skin between anus and
top of the coccyx**

Nn. glutei



Superior

- through for. suprapirif. –
between mm. glutei

Rr. musculares:

m. gluteus med., min., m.
tensor fasc latae

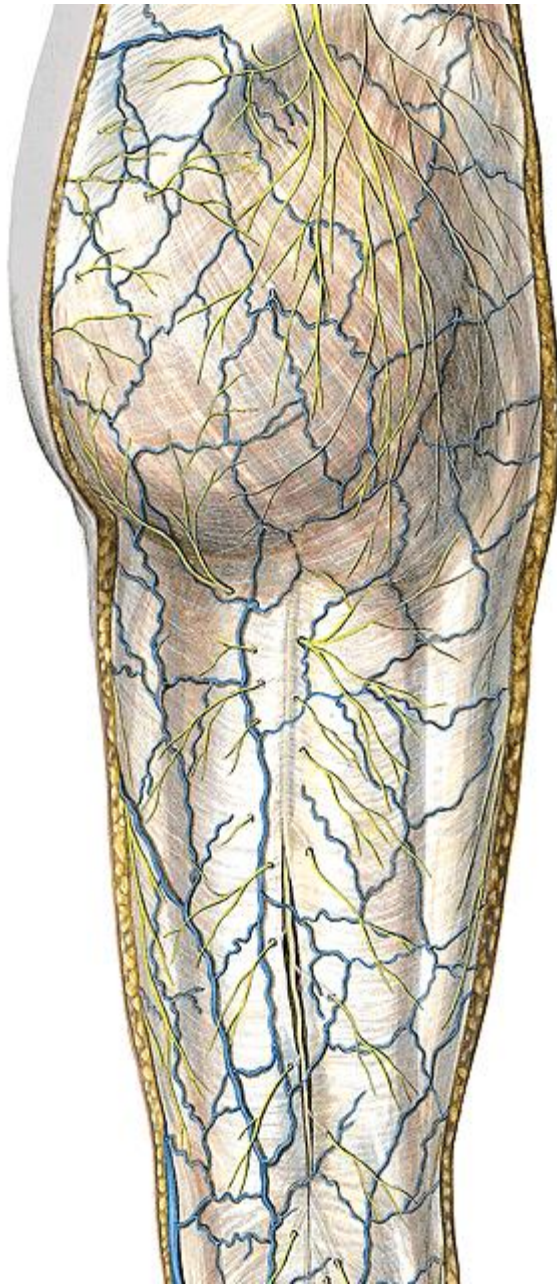
Inferior

přes for. infrapirif

Rr. musculares:

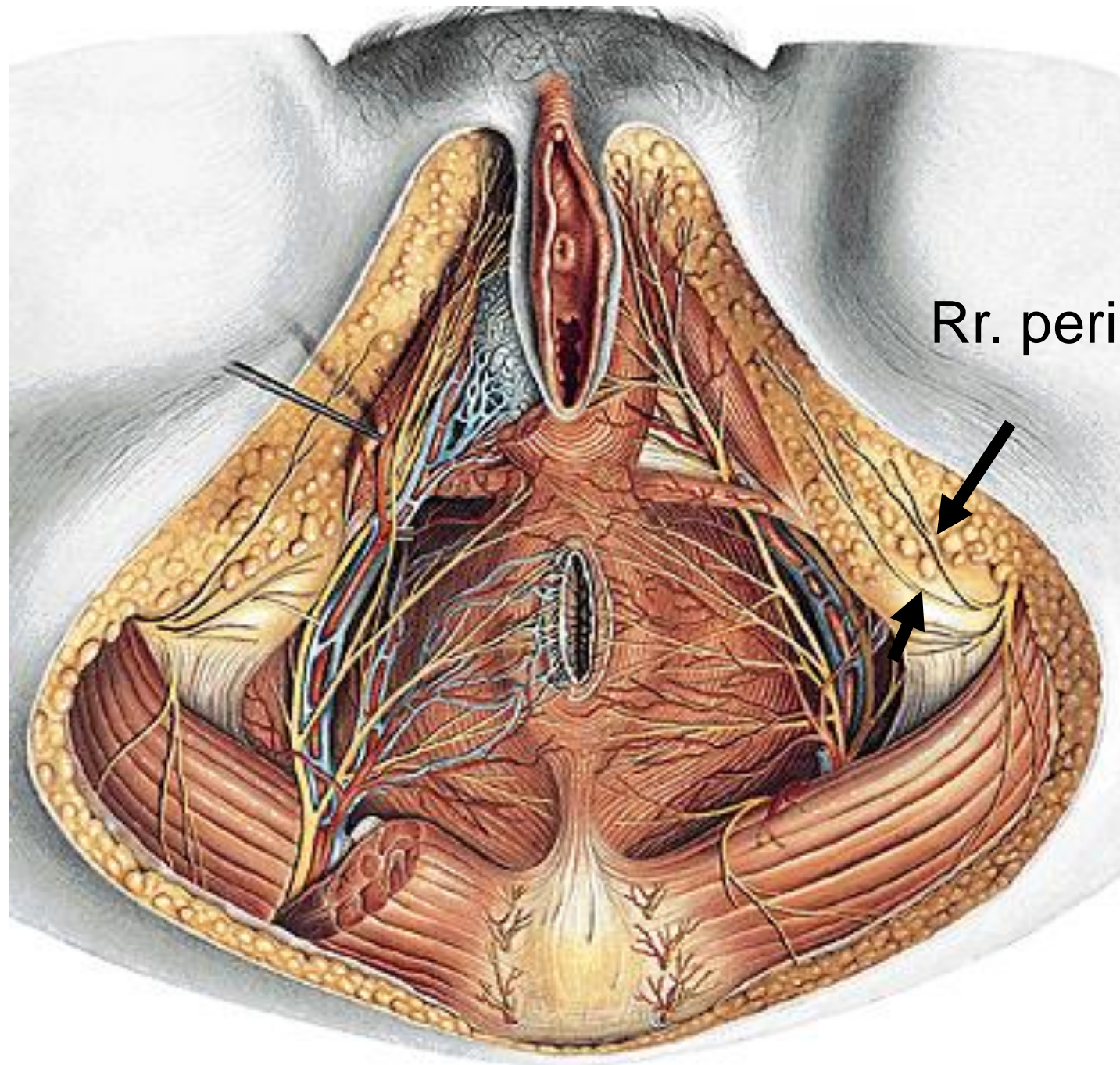
m. gluteus max.

N. cut. femoris post.



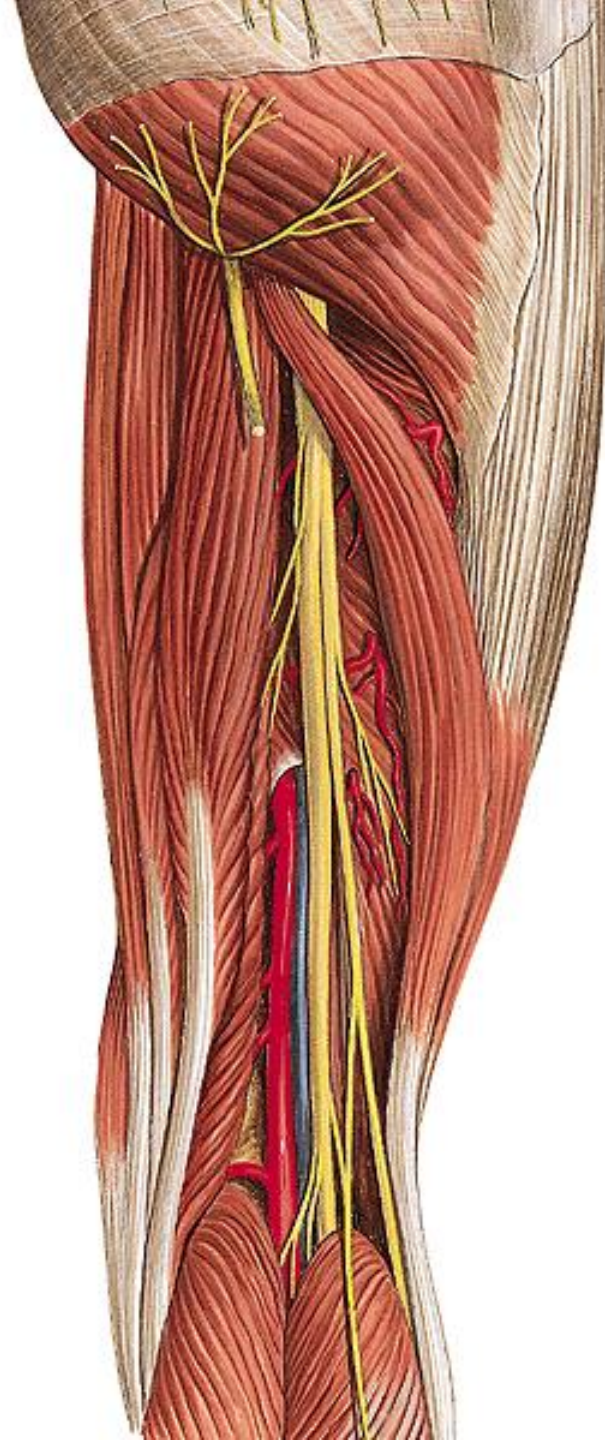
- for. infrapirif.
- subfascial

Nn. clunium inf.
Rr. perineales



Rr. perineales





N. ischiadicus

- Through for. infrapiriforme
- below m. gluteus max.
- below m. biceps fem.
- to fossa poplitea

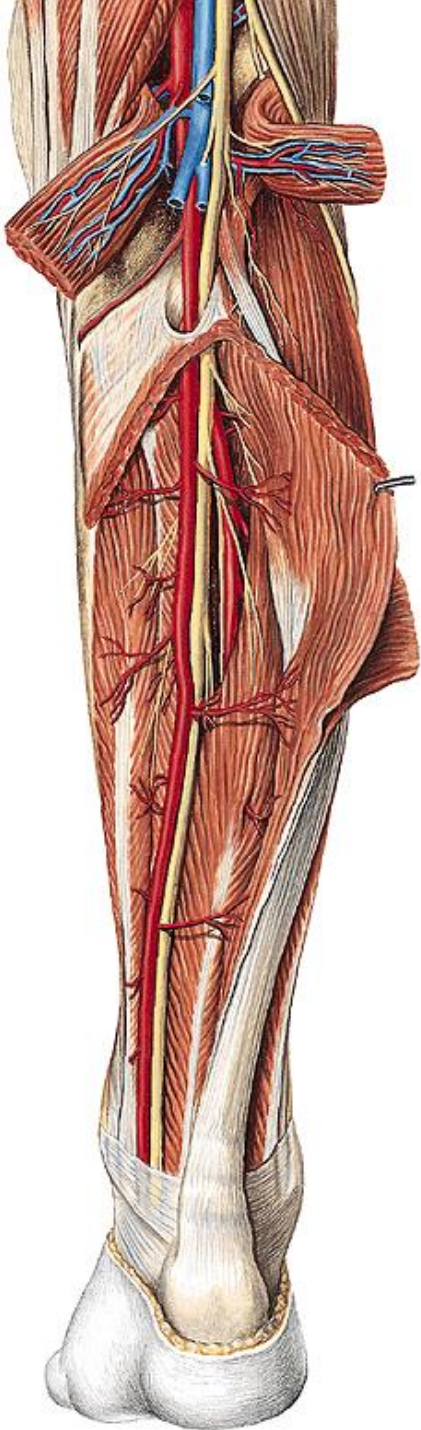
Rr. musculi:

- m. biceps fem.
- m. semitendin.
- m. semimembr.
- m. adductor magus

Rr. articulares: (art. coxae, genus)

N. tibialis

N. peroneus communis



N. tibialis

- **Between the heads of m. gastrocnemius**
- **below m. soleus**

Rr. musculi:

- m. triceps
- m. popliteus
- m. flx. digit. + hallucis longus
- m. tibialis post.

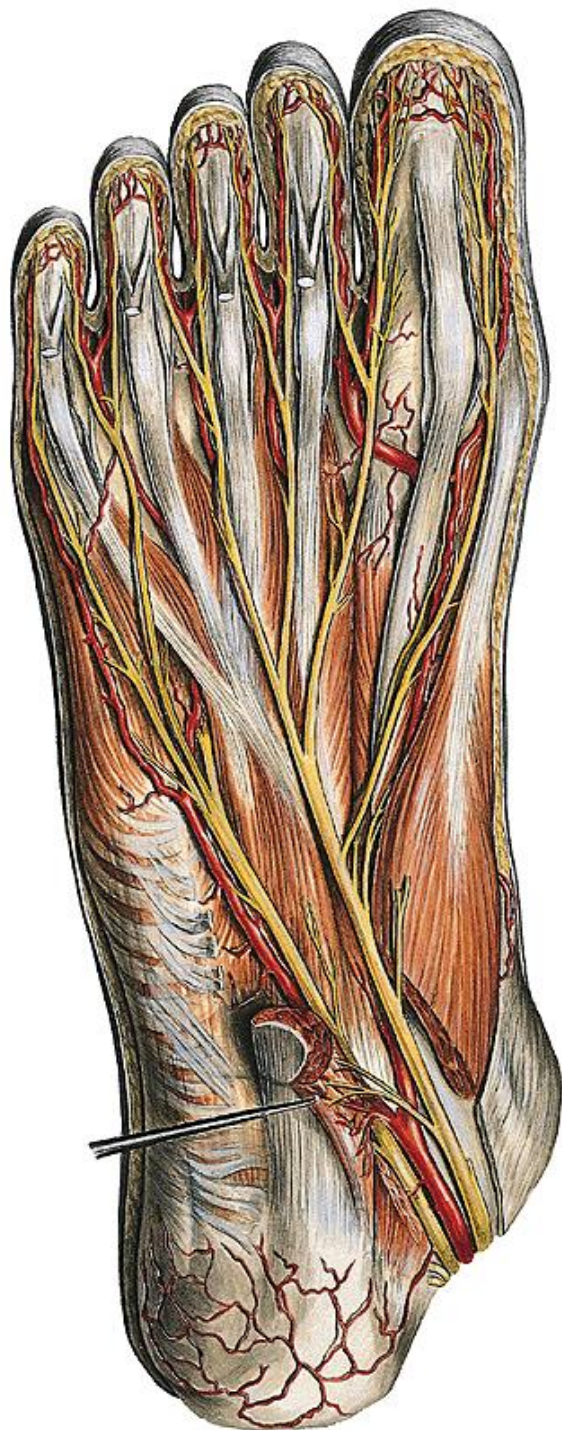
N. cut. surae med.

N. inteross. cruris

Rr. calcanei med.

- **Behind malleolus medialis to the planta pedis**

N. plantaris med. et lat.



N. plantaris med.

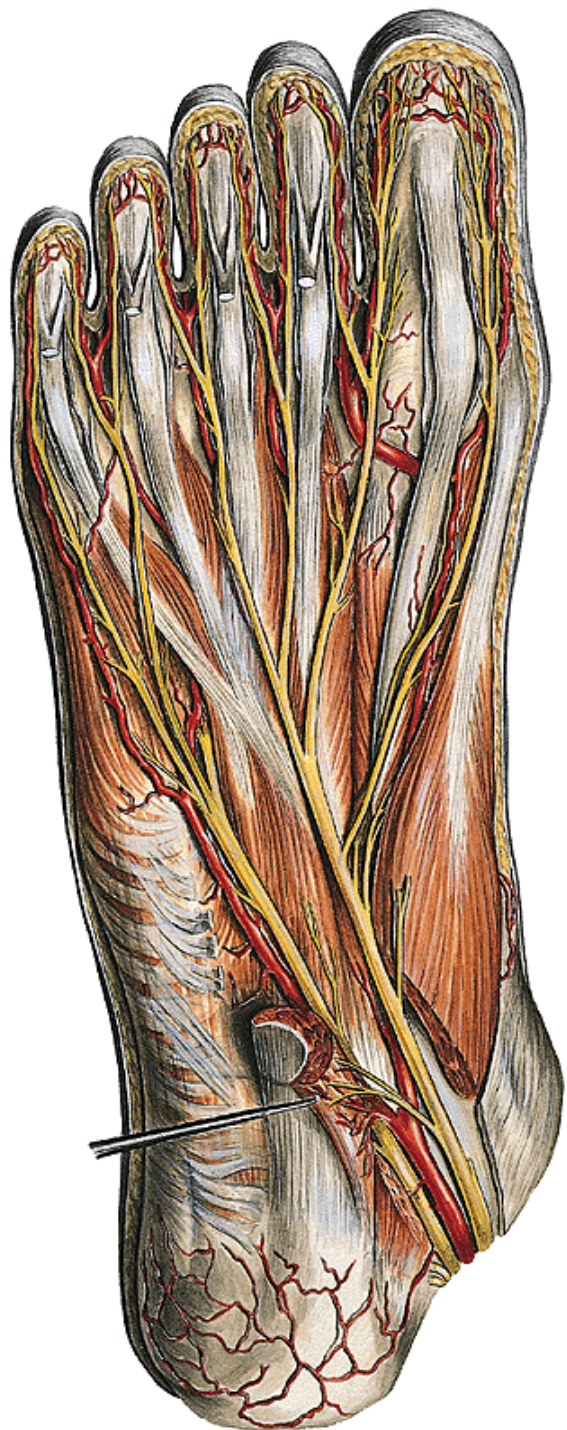
Rr. musc:

m. flexor digit. brevis
muscles of the big toe
mm. lumbricales 1,2

Rr. cutanei:

Nn. digit. plant.

1- ½ 4 toe



N. plantaris lat.

R. spf.:

R. musc:

m. quadratus plantae
superficial muscles of the
hypothenar

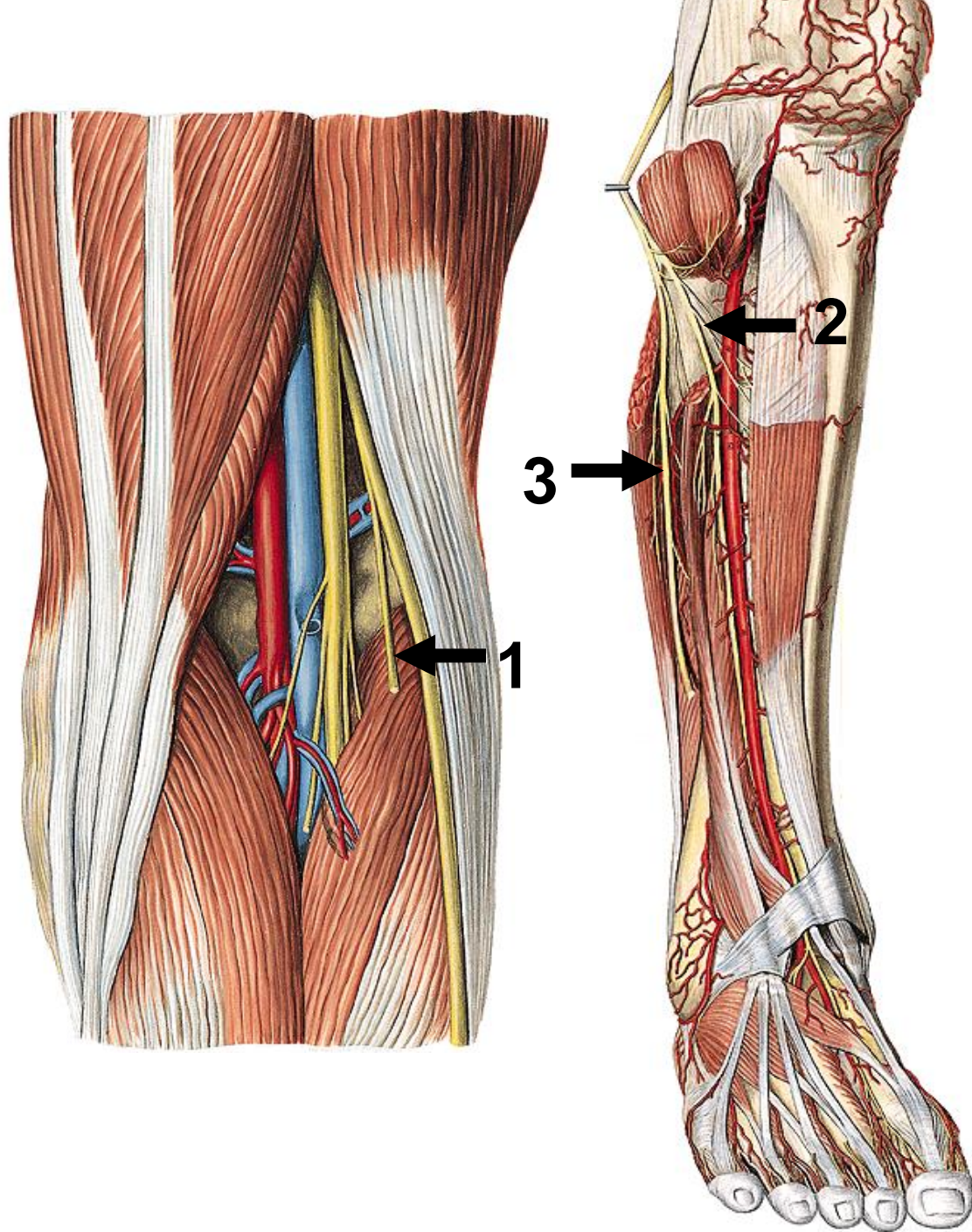
Nn. digit. plant.

fior $\frac{1}{2}$ 4 + 5. toe

R. prof.:

Rr. musc:

hypothenar muscles
mm. lumbricales 4,5
mm. interossei
m. adductor hallucis

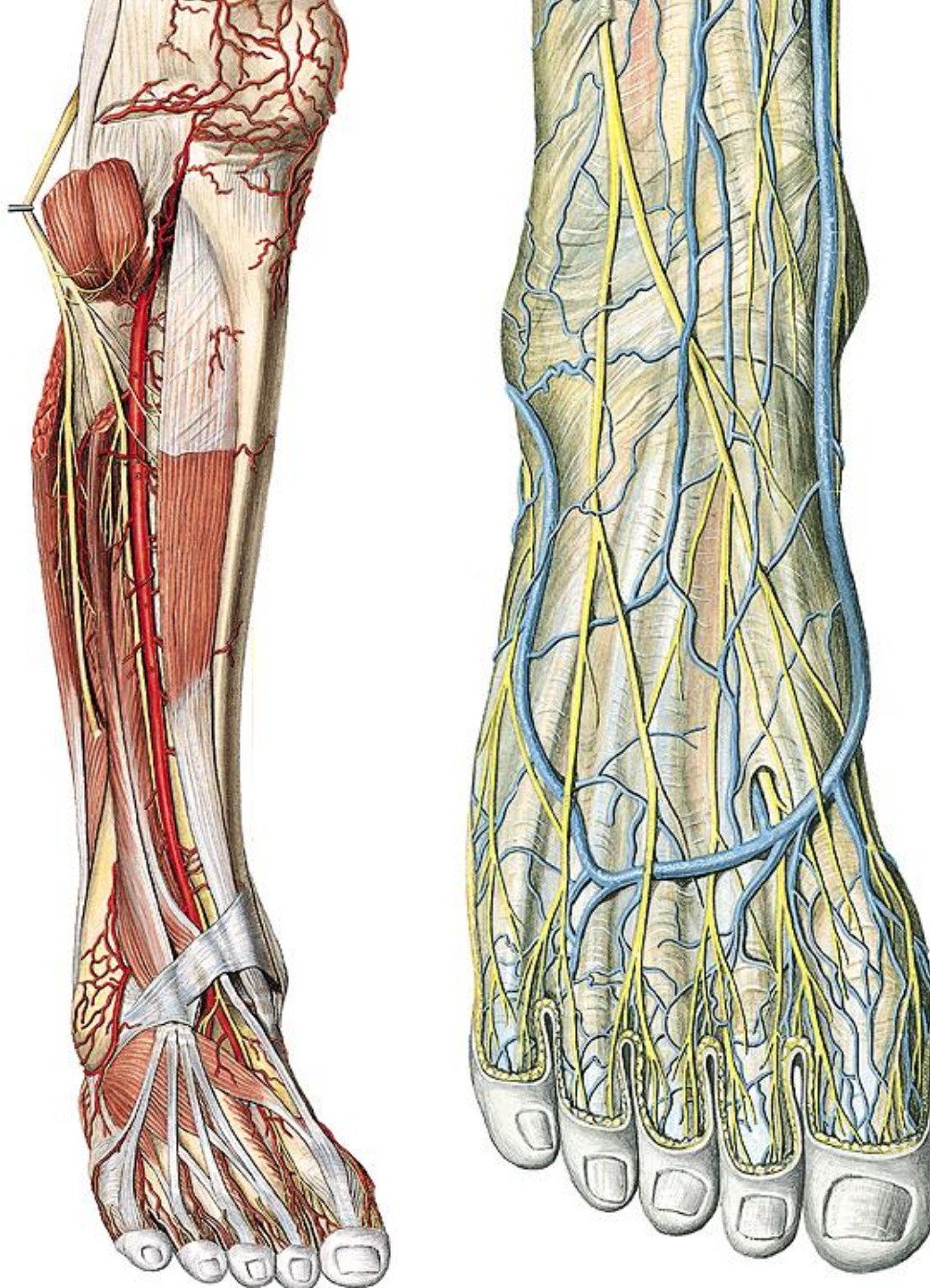


N. fibularis communis

1 N. cut. surae lat.

2 N. fibularis prof.

3 N. fibularis spf.

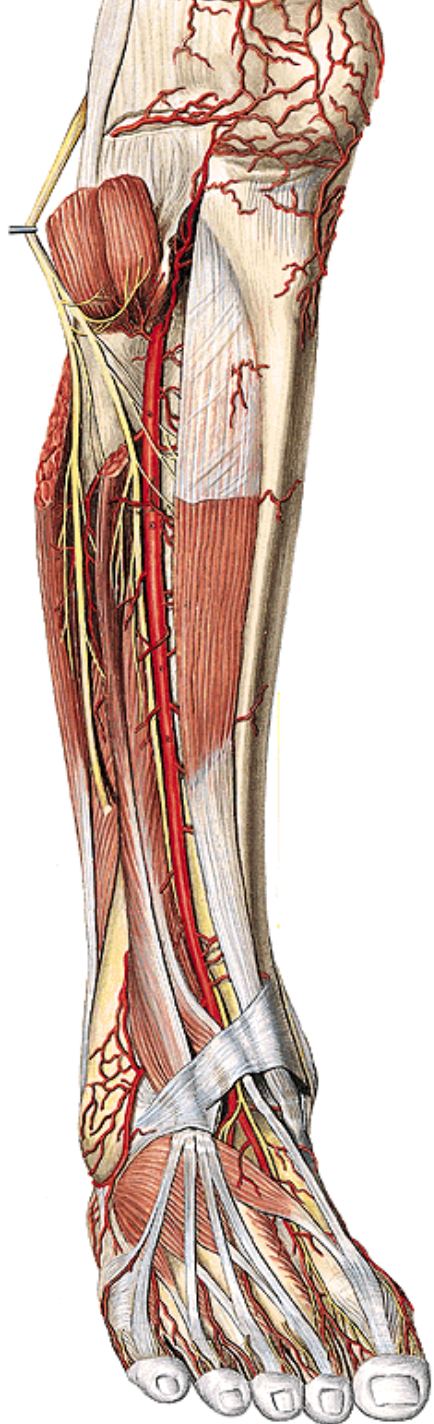


N. fibularis spf.

- between mm.
fibulares

Rr. musc :
mm. fibulares

Rr. cutanei:
dorsum of the foot
and toes



N. fibularis prof.

Between muscles of anterior group of lower leg

Rr. musc:

anterior group of muscles of lower leg and dorsum of the foot

Rr. cutanei:

skin between 1. + 2. toe



N. tibialis

1 n.c.surae med.

N. fib. comm.

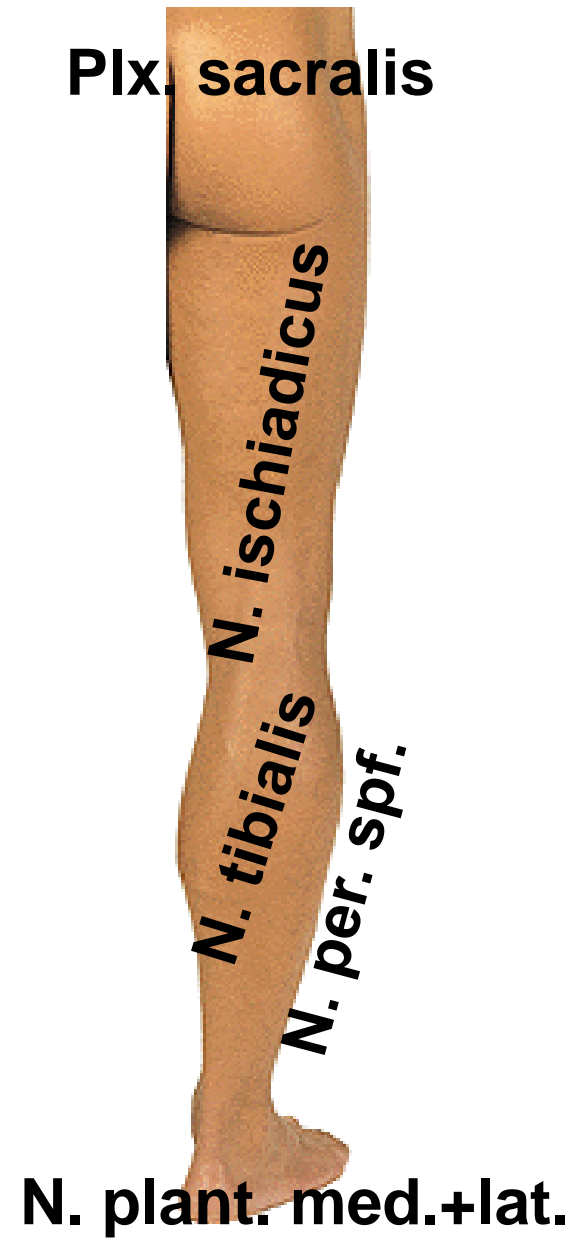
2 n. c. surae lat.

r. communicans

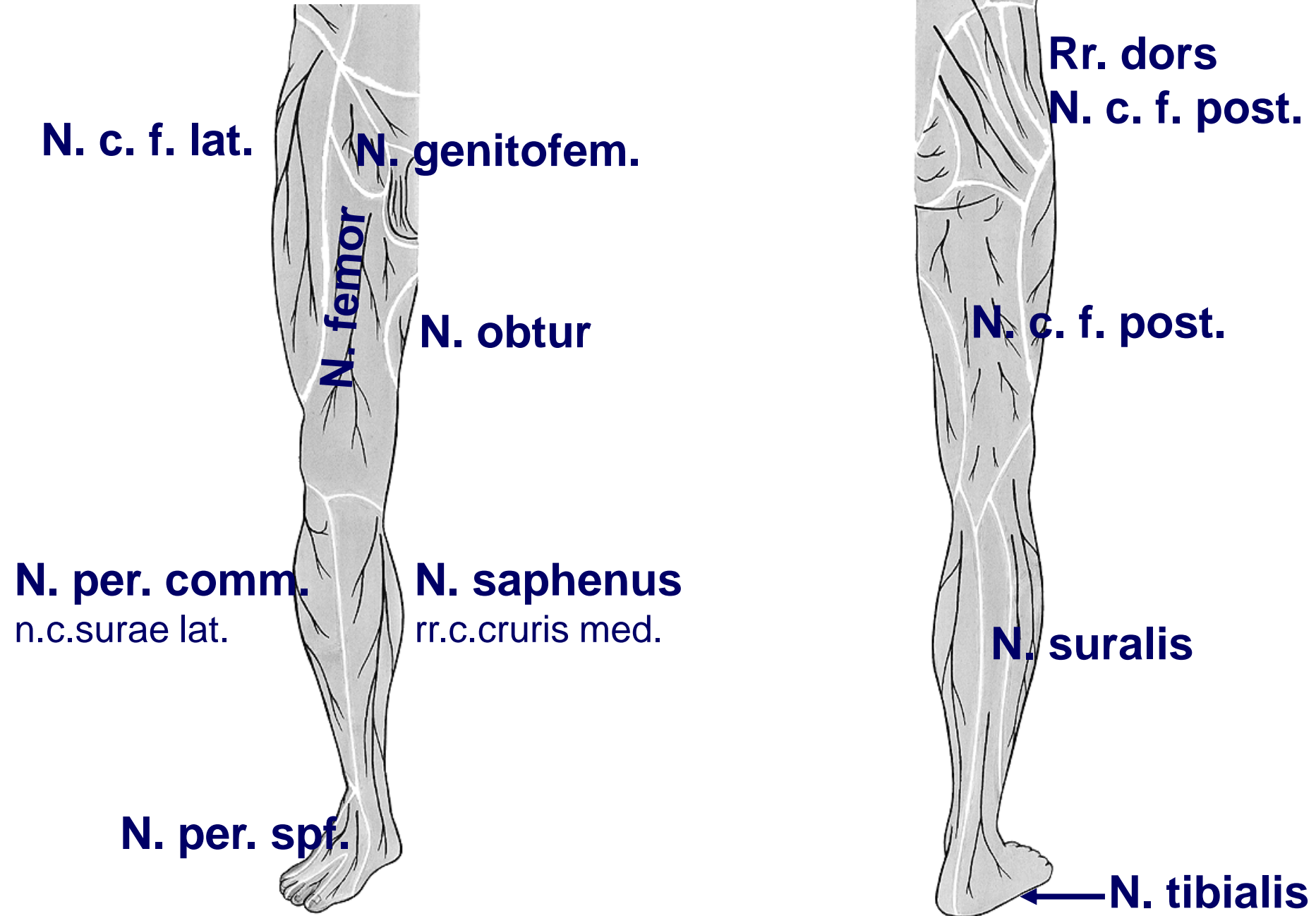
3 N. suralis

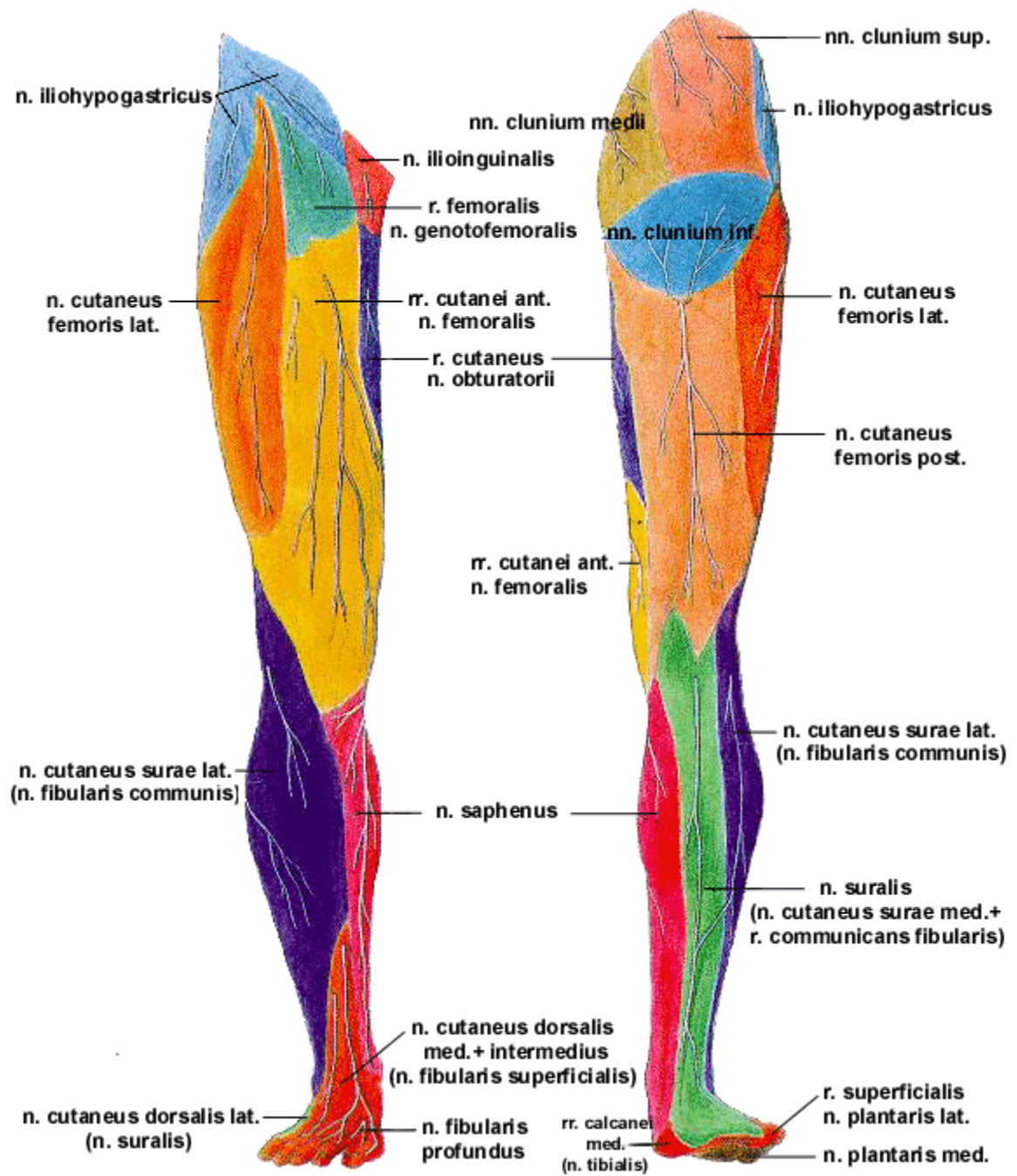
v. saphena parva

Motor innervation



Skin innervation





Illustrations and photographs were copied from:
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Putz,R., und Pabst,R. 20. Auflage. München:
Urban &Schwarzenberg, 1993
Netter: Interactive Atlas of Human Anatomy.
Windows Version 2.0