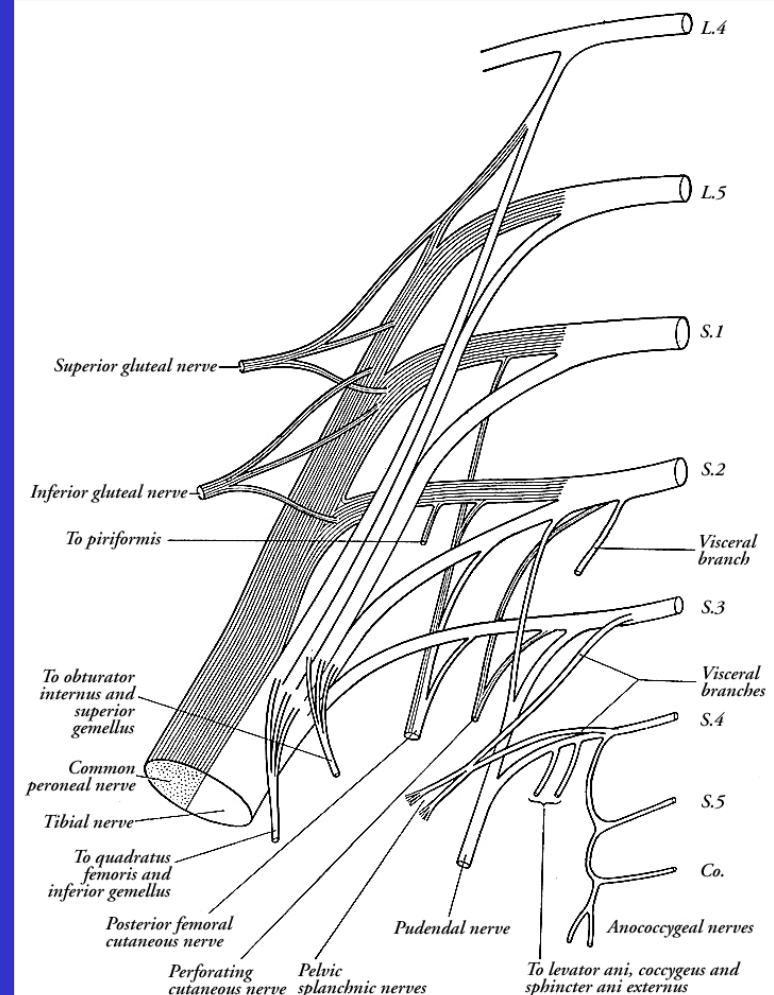
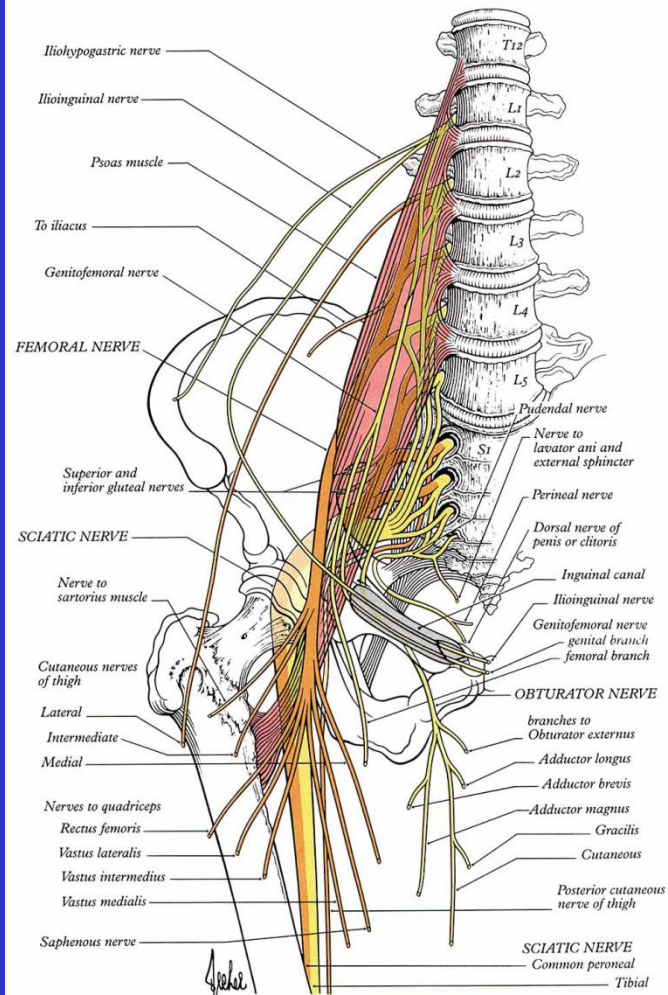


UNIVERSITAS CAROLINA PRAGENSIS

Svaly a hlavní kmeny cév a  
nervů dolní končetiny a hlavní  
topografické útvary

Ondřej Naňka



Na DK jsou **extensory** pocházející z **dorsálního svalového blastému** inervovány z **n. femoralis** a z **n. peroneus communis**, které vznikly z dorsálního větvení ramí anteriora lumbálních a sakrálních nervů. Naproti tomu **adduktory a flexory** pocházející z **ventrálního svalového blastému** jsou inervovány z **n. obturatorius** a **n. tibialis**, které pocházejí z ventrálního větvení příslušných rr. anteriora. Nervy před vstupem do základu končetiny vytvářejí pleteně a pak teprve vrůstají do ventrálního a dorsálního svalového blastému.

***Pl. lumbalis***  
***Th12-L4***

**N. subcostalis**

**N. iliohypogastricus**

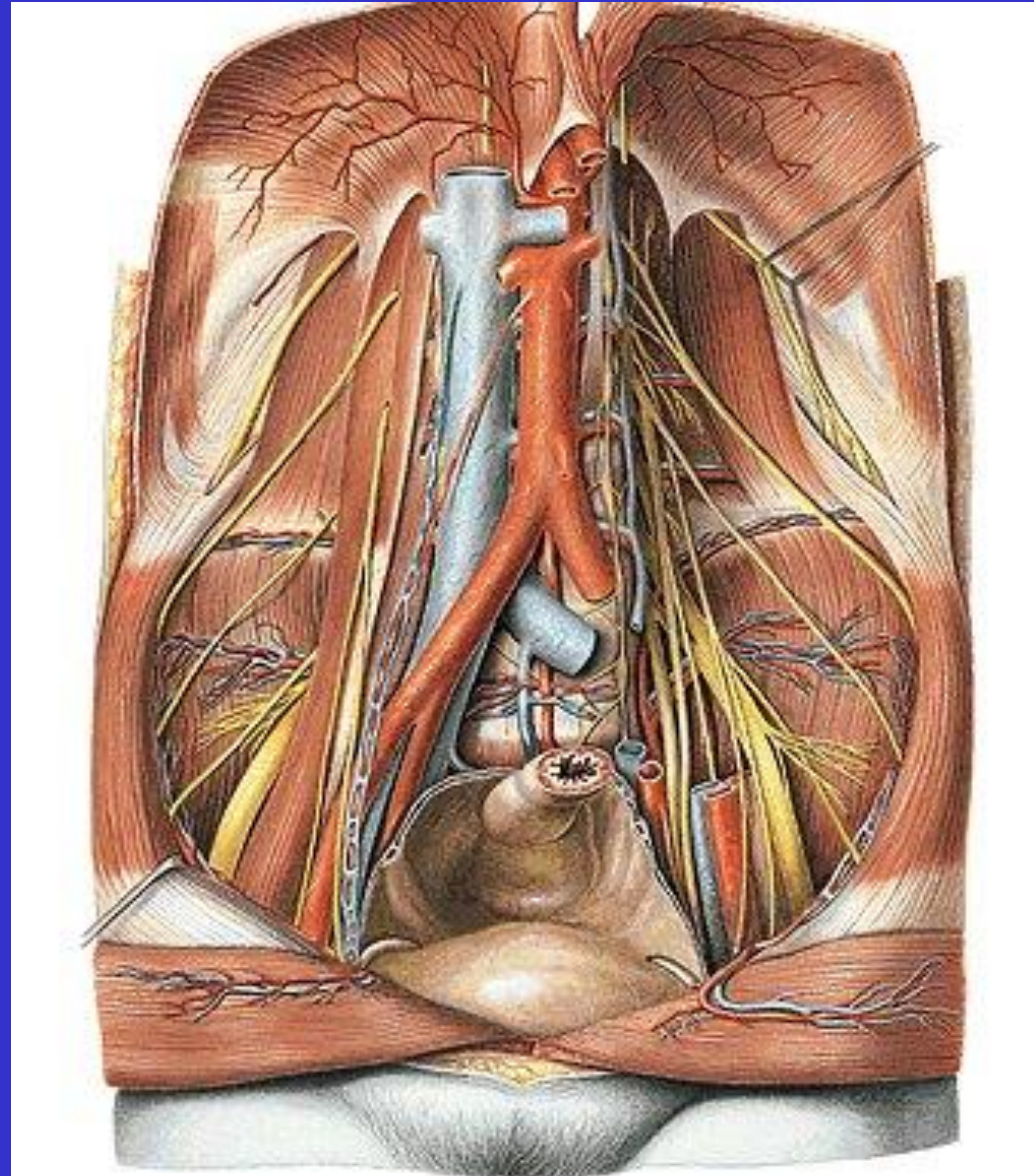
**N. ilioinguinalis**

**N. cutaneus femoris  
lateralis**

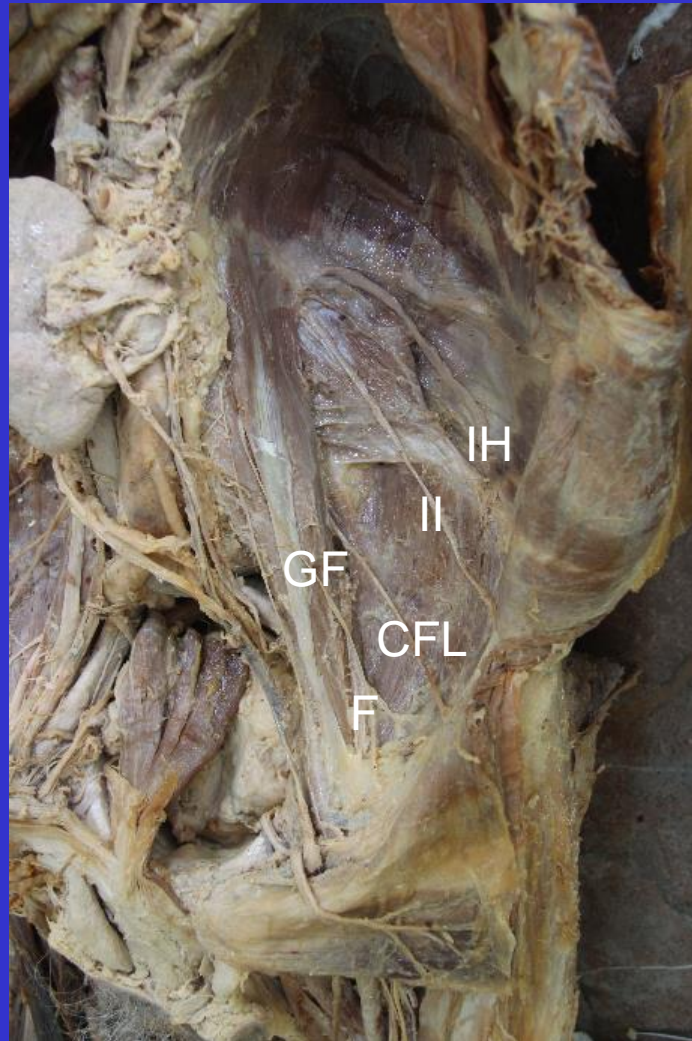
**N. femoralis**

**N. genitofemoralis**

**N. obturatorius**



# Plexus lumbalis



# *Plexus sacralis* *L4-S4*

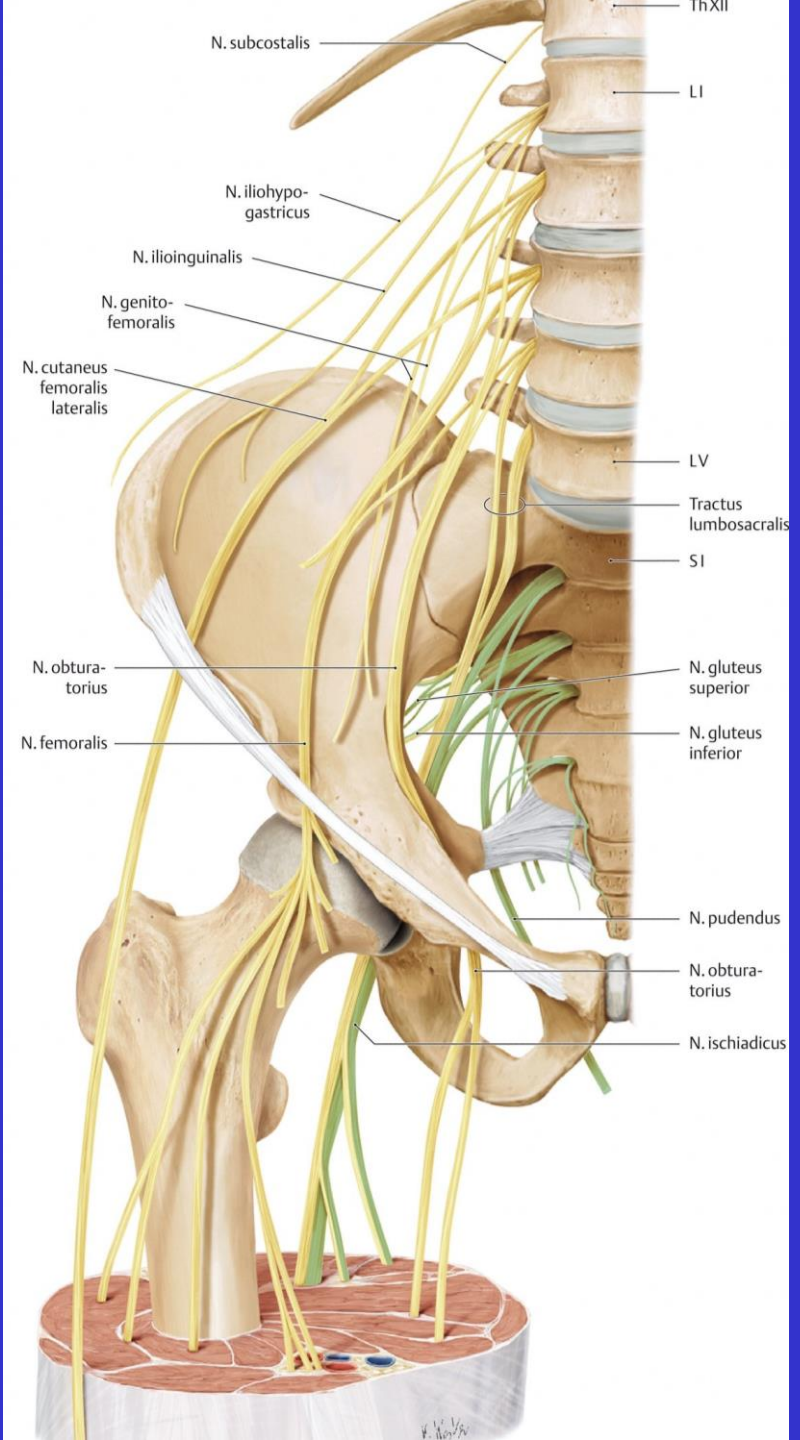
**N. gluteus superior**

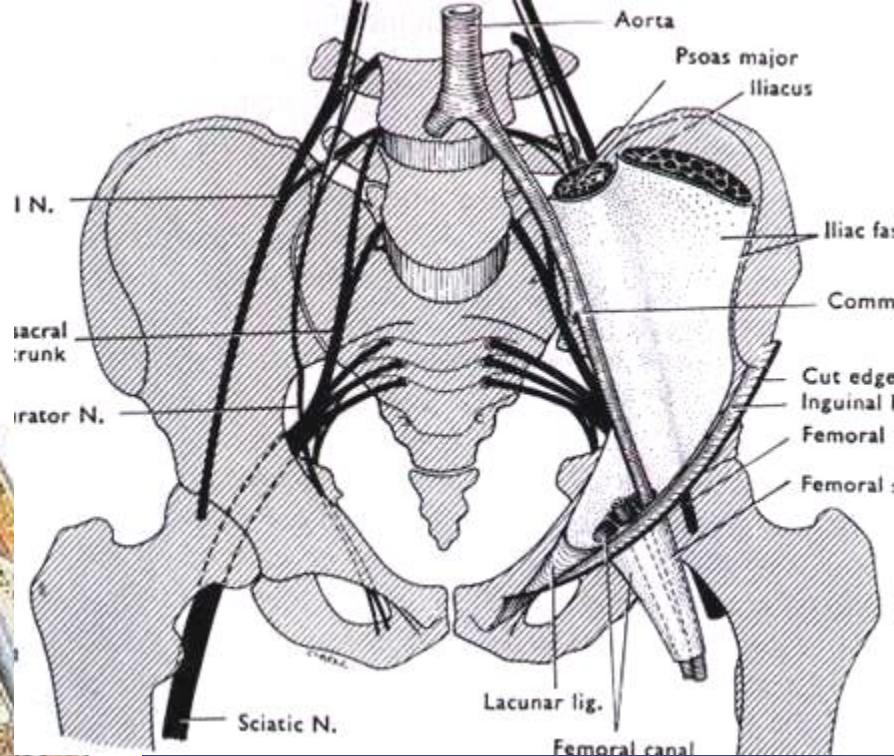
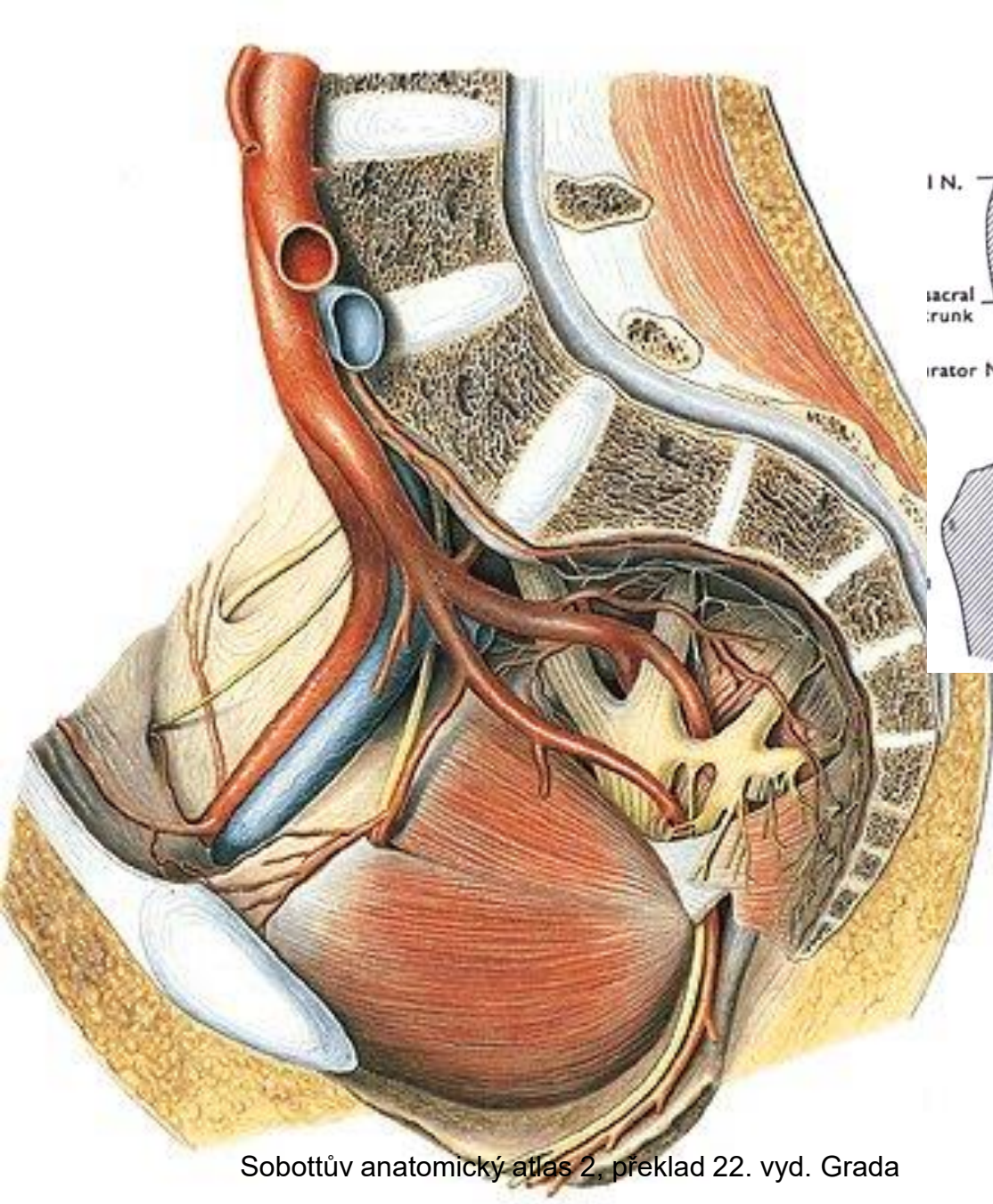
**N. gluteus inferior**

**N. cutaneus femoris posterior**

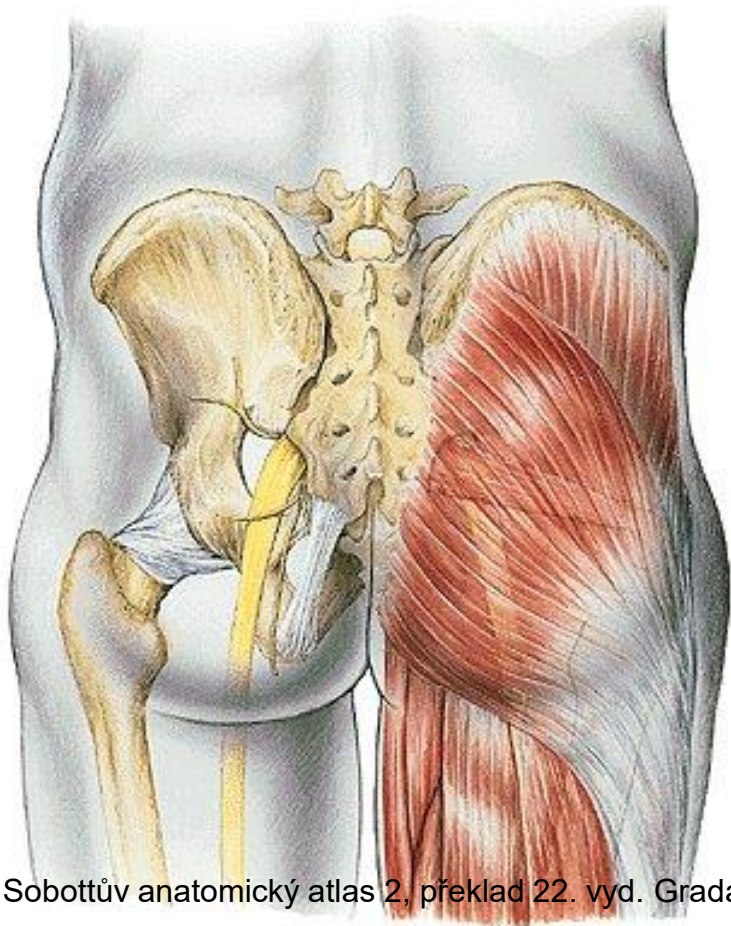
**N. ischiadicus**

**N. pudendus**

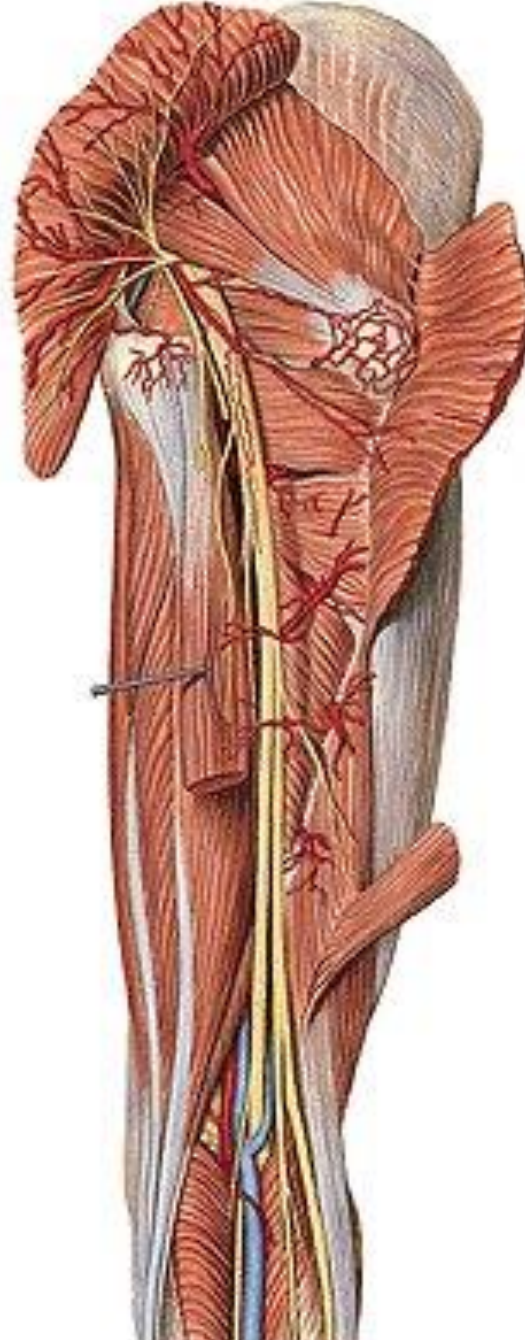




Sobottův anatomický atlas 2, překlad 22. vyd. Grada

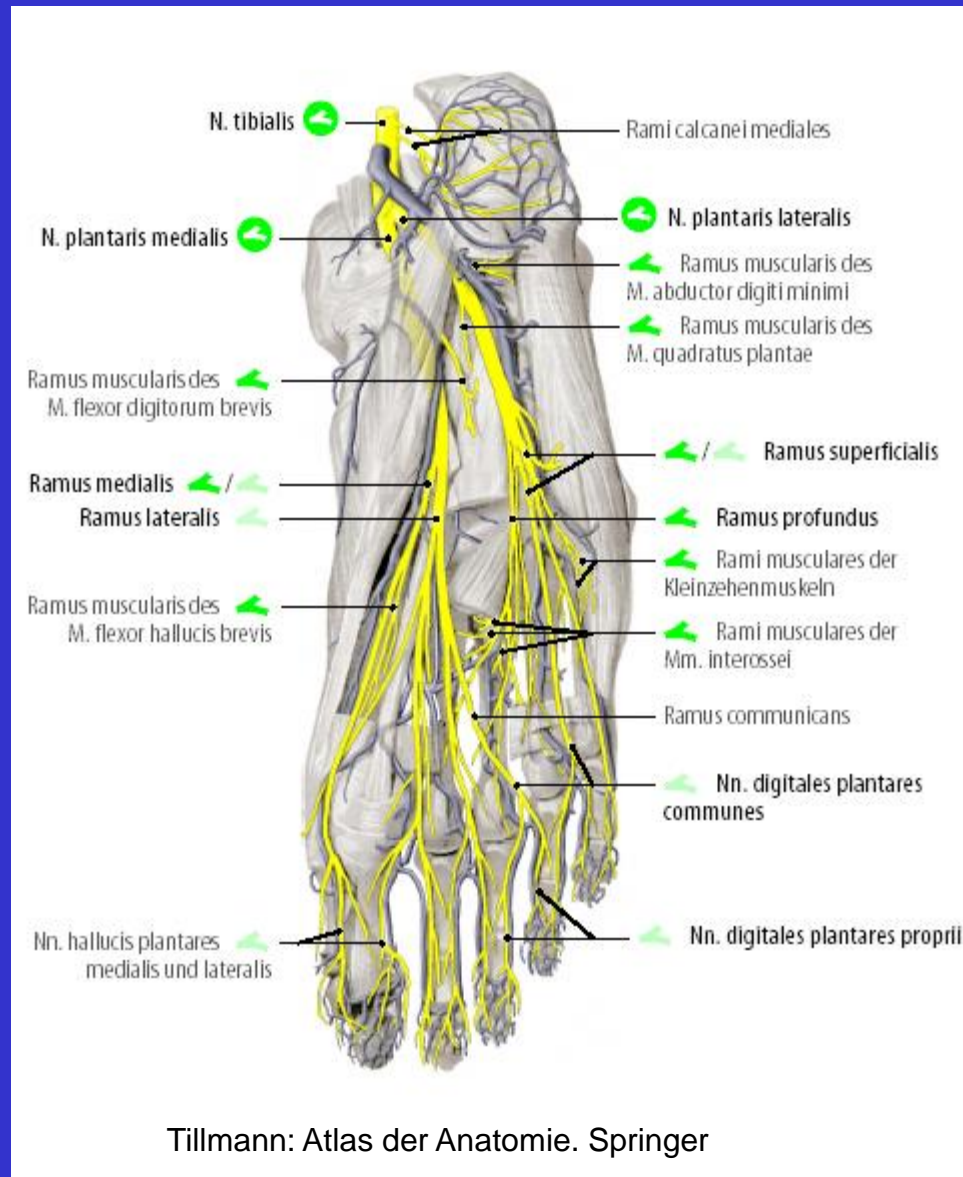


Sobottův anatomický atlas 2, překlad 22. vyd. Grada



Sobottův anatomický atlas 2, překlad 22. vyd. Grada

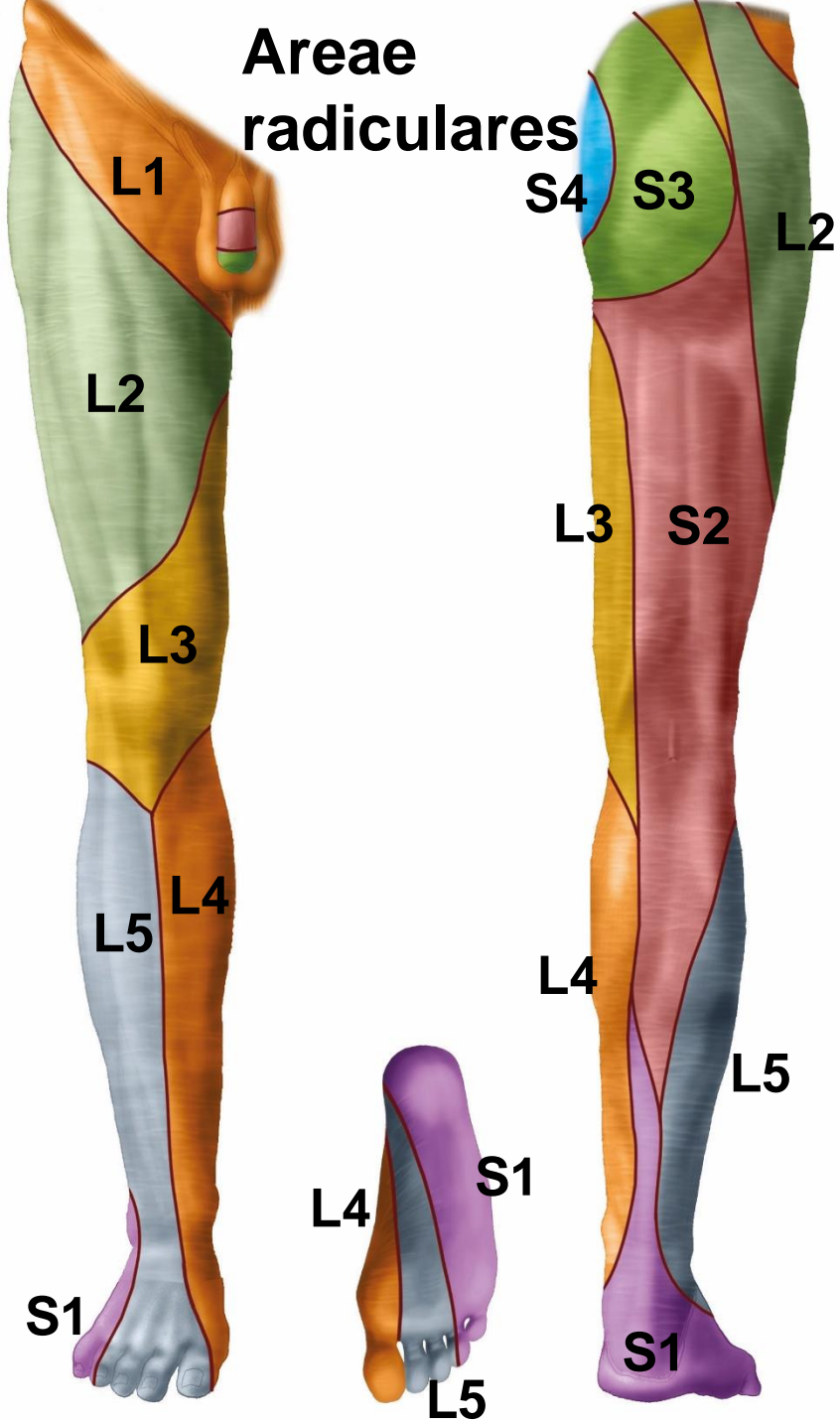




Tillmann: Atlas der Anatomie. Springer



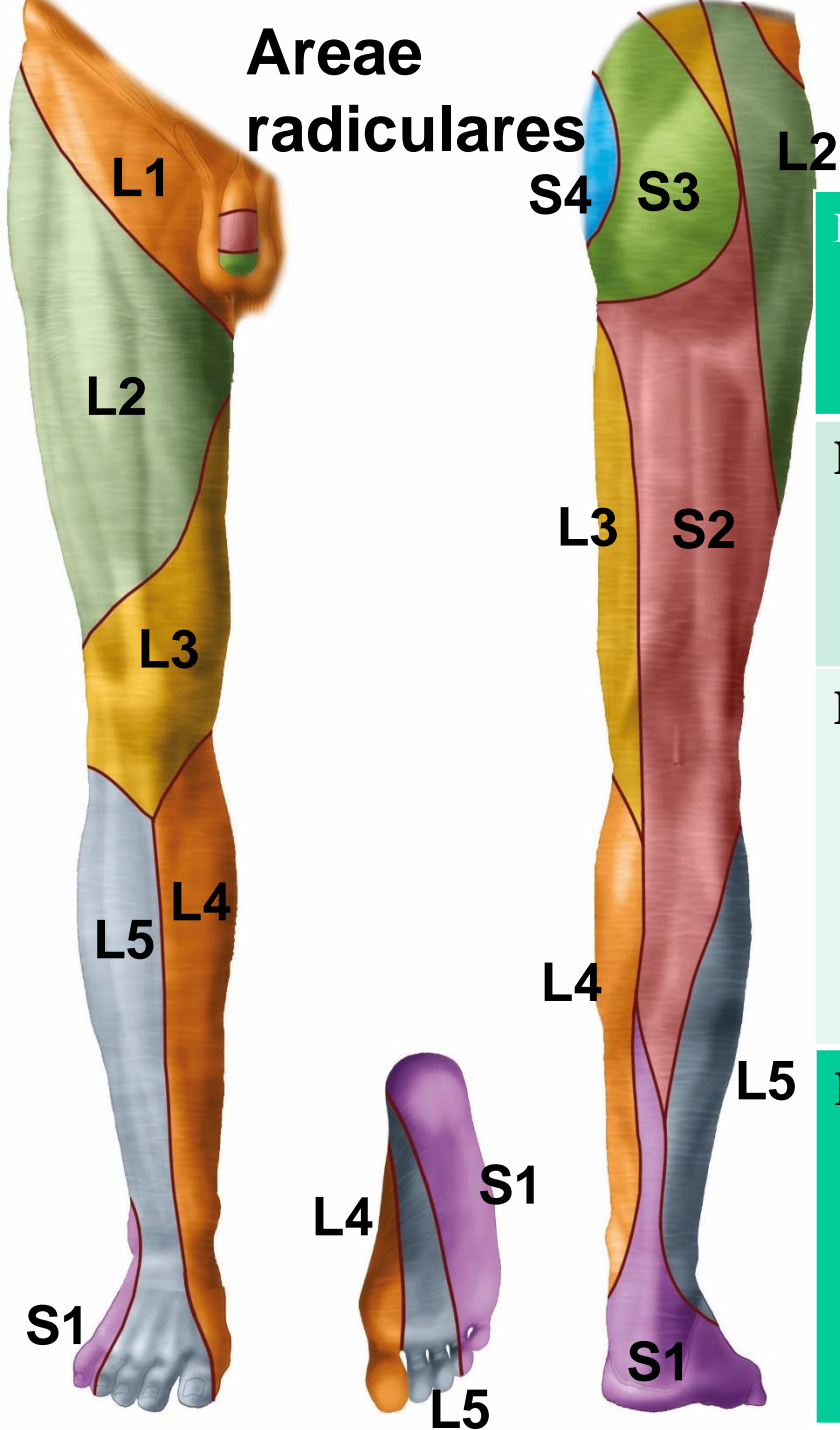
# Areae radicales



# Areae nervinae



# Areae radicales



Hernie	Kořen	Dermatom	Pareza svalu	Výpad reflexu	Výpad funkce
L3, 4	L4	Koleno, bércec, kotník	Quadri-ceps femoris, Tibialis anterior	<b>pate-lární</b>	inverze
L4, 5	L5	bércec laterálně, hřbet a ploska nohy, med. hrana nohy	EHL, EDBr		oslabená chůze po patě, dorzální flexe nohy a prstů
L5, S1	S1	bércec dorsálně, laterální kotník, lat. hrana nohy	mm. peronei	<b>trici-pitový</b>	chůze po prstech, plantární flexe a everze

## A. iliaca externa

a. epigastrica inf.

a. circumflexa ilium prof.

## A. iliaca interna

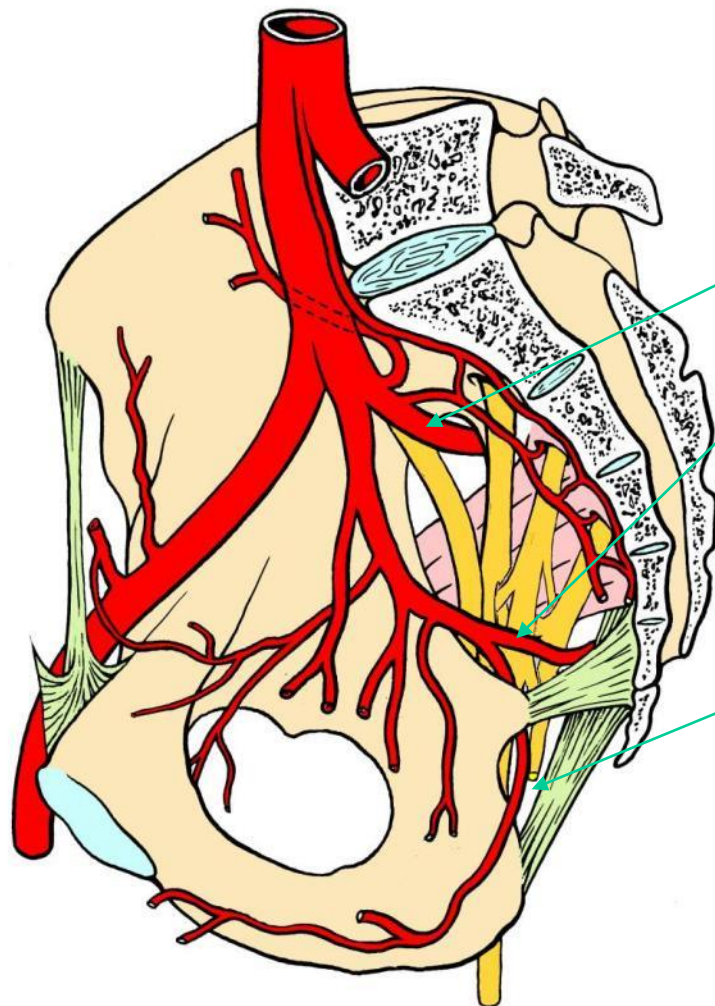
Dorsální kmen

a. glutea sup. et inf.

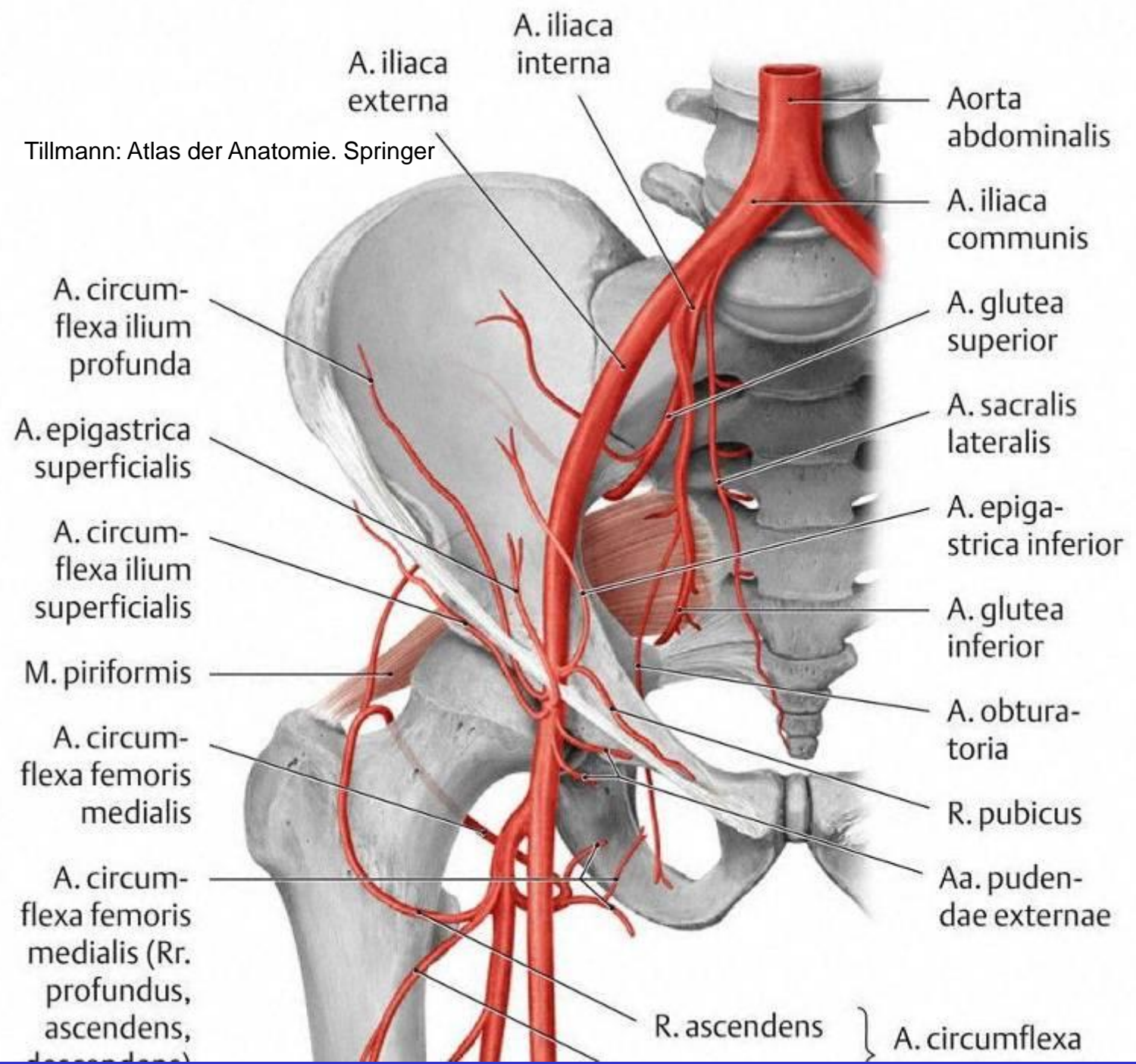
a. ischiadica

Ventrální kmen

a. pudenda interna



Tillmann: Atlas der Anatomie. Springer



A. iliaca externa

A. iliaca interna

Aorta abdominalis

A. iliaca communis

A. glutea superior

A. sacralis lateralis

A. epigastrica inferior

A. glutea inferior

A. obturatoria

R. pubicus

Aa. pudendae externae

A. circumflexa ilium profunda

A. epigastrica superficialis

A. circumflexa ilium superficialis

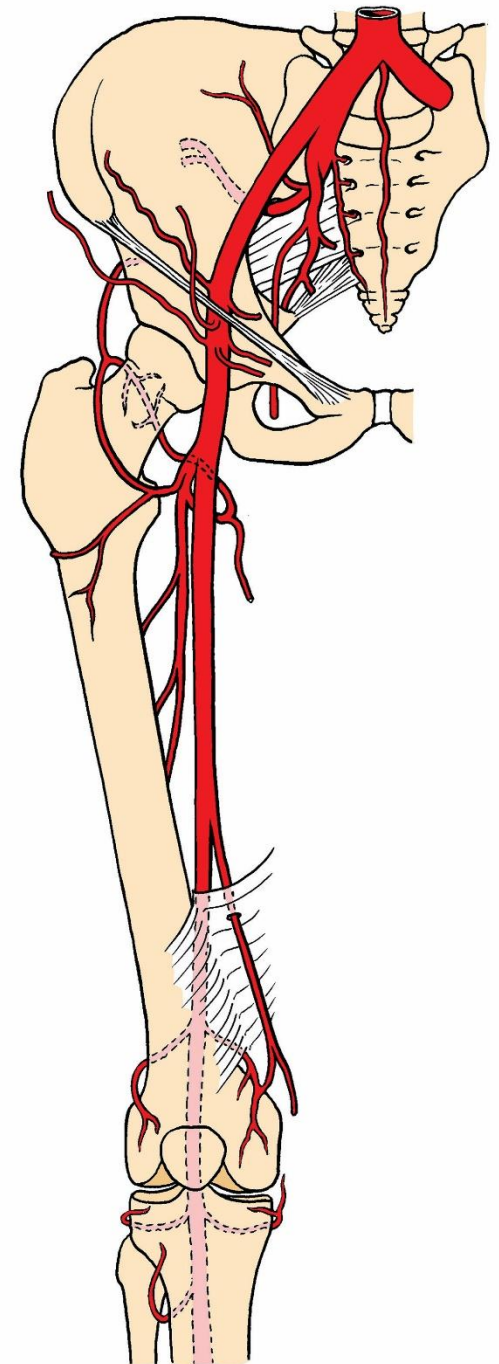
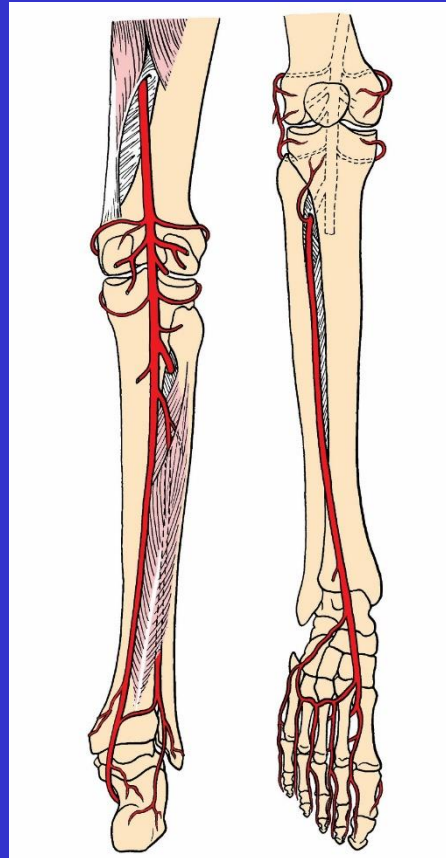
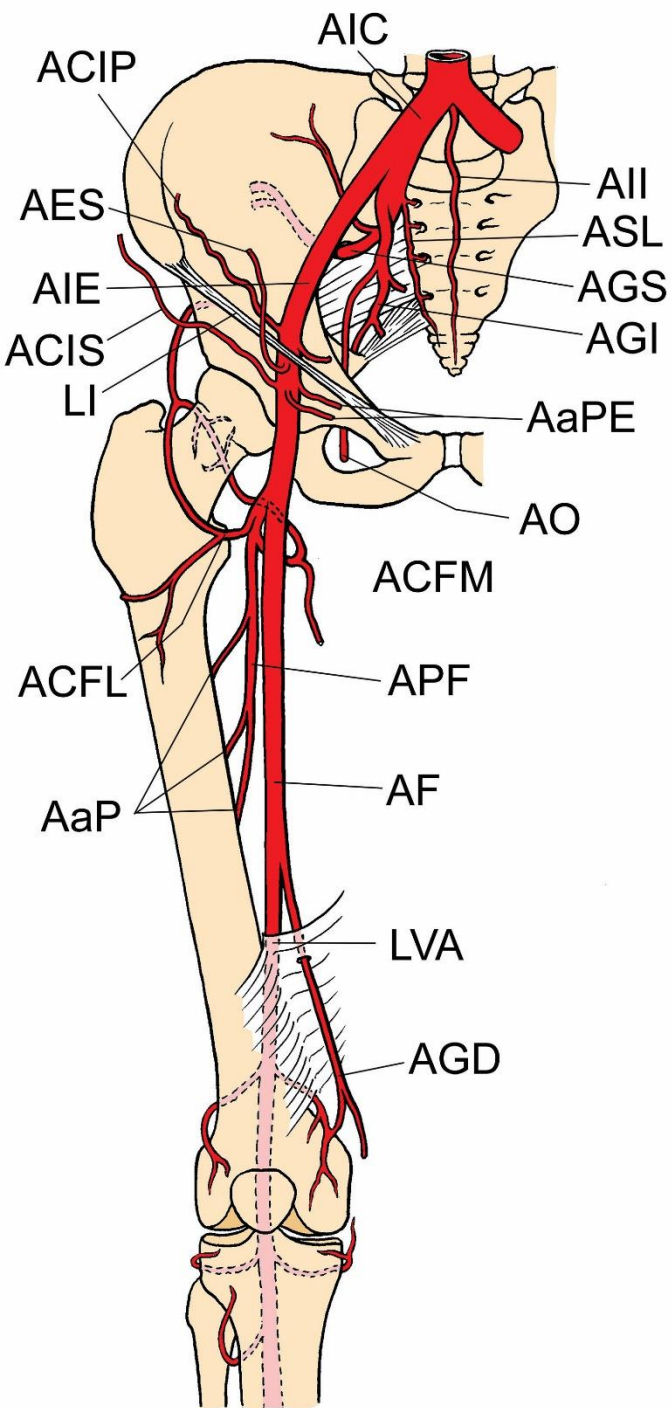
M. piriformis

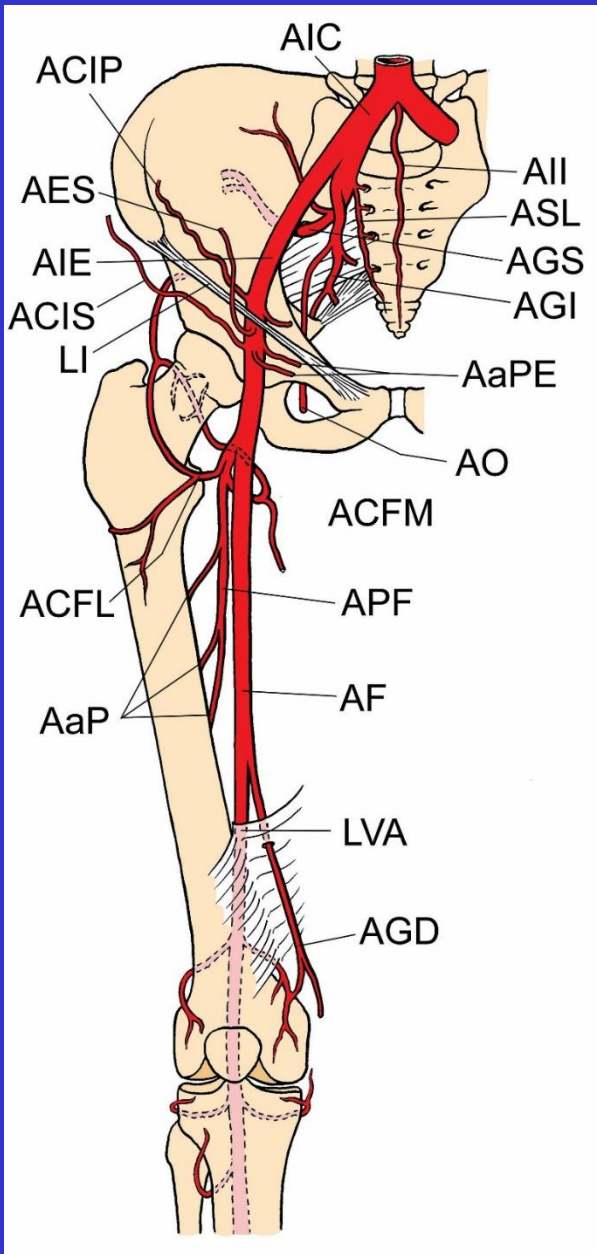
A. circumflexa femoris medialis

A. circumflexa femoris medialis (Rr. profundus, ascendens, descendens)

R. ascendens

A. circumflexa



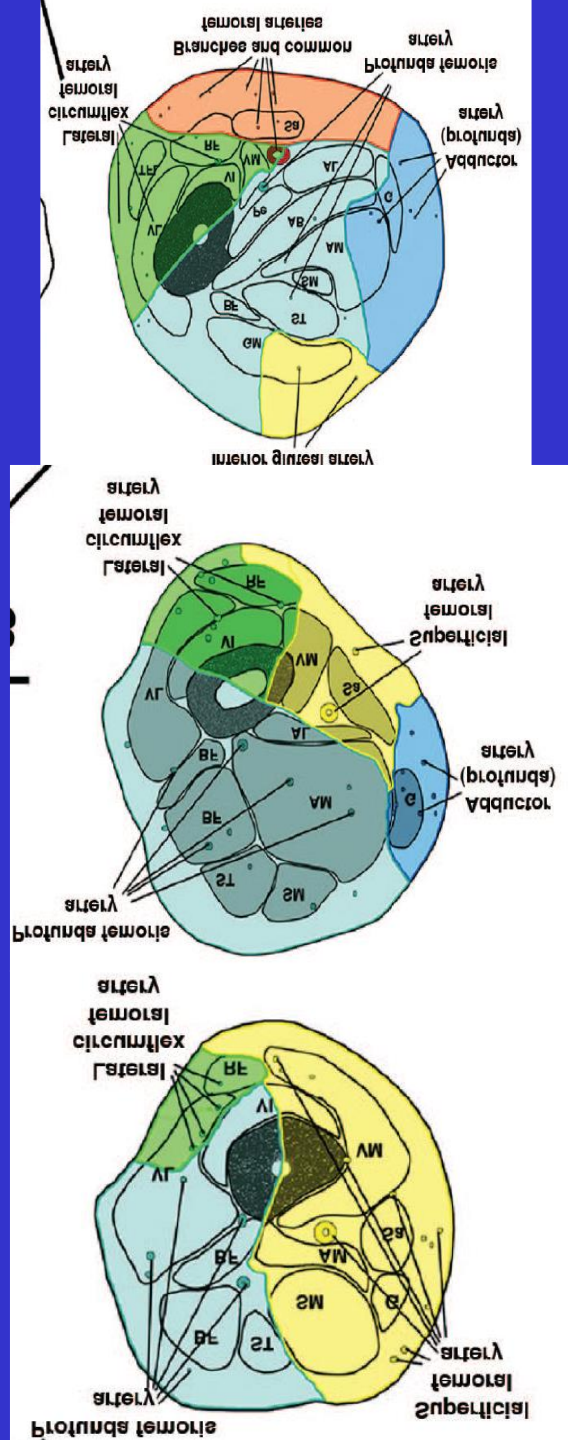


# A. femoralis

a. circumflexa fem. med.  
 a. circumflexa fem. lat.

a. profunda femoris  
 aa. perforantes I-III  
 a. genus descendens

Angiosomy



# A. poplitea

a. genus sup. m. + l.

a. genus media

a. genus inf. m. + l.

aa. surales

a. tibialis posterior

a. peronea (canalis musculoperoneus)

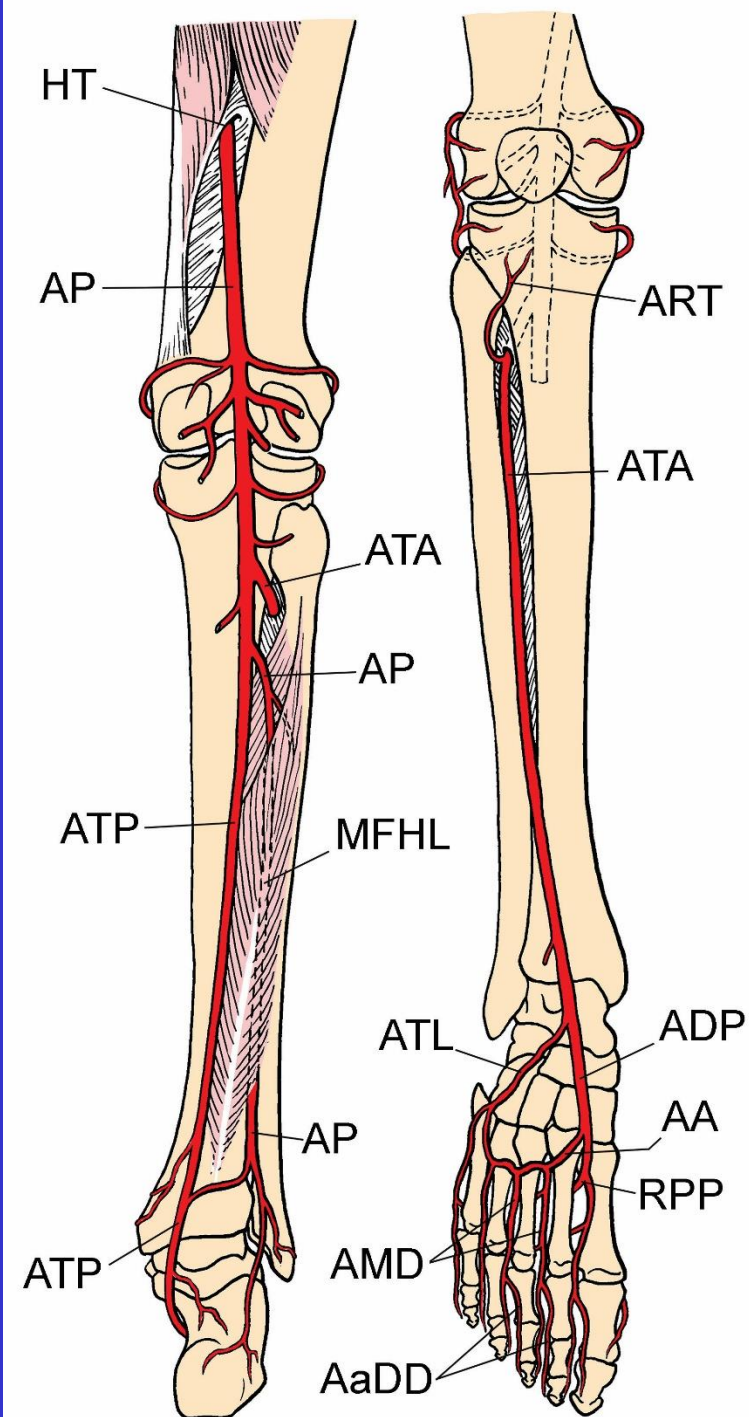
a. plantaris med.

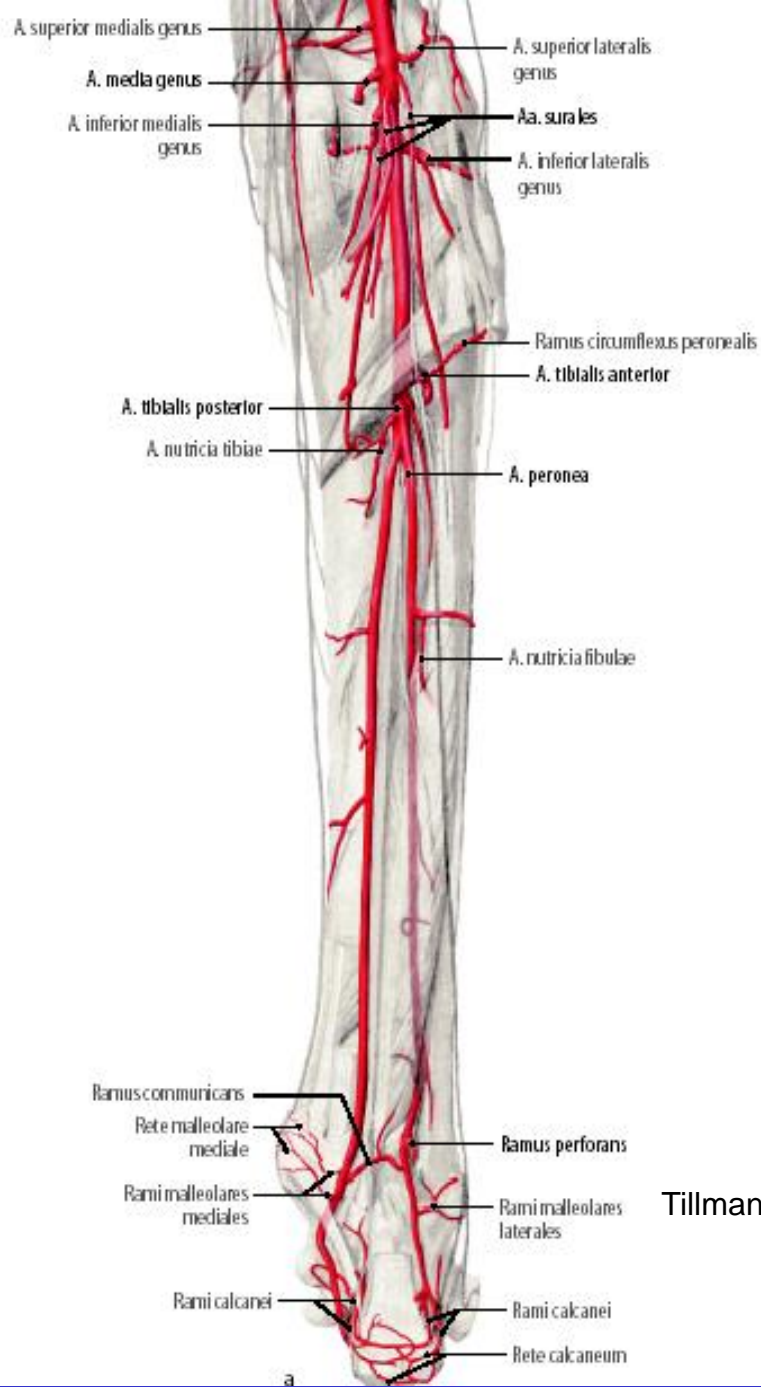
a. plantaris lat.

a. tibialis anterior

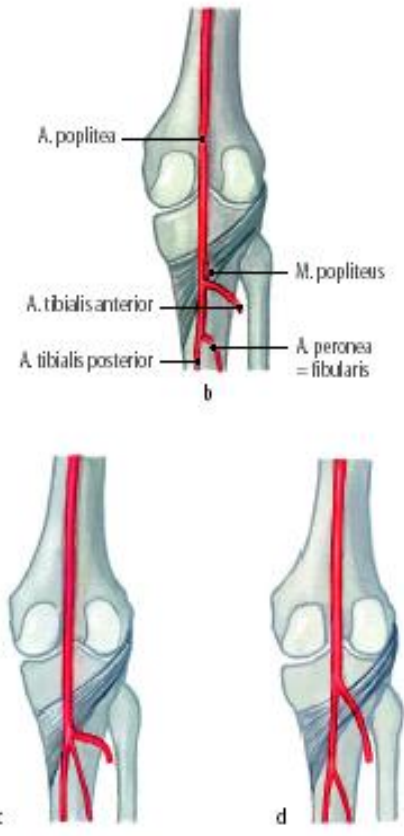
a. dorsalis pedis

a. arcuata





- └ Rami calcanei
- └ Rete calcaneum
- A. peronea (fibularis)
- └ A. nutritia fibulae
- └ Ramus perforans
- └ Ramus communicans
- └ Rami malleolares laterales
- └ Rami calcanei
- └ Rete calcaneum



Tillmann: Atlas der Anatomie. Springer



**TEPNY  
BÉRCE**



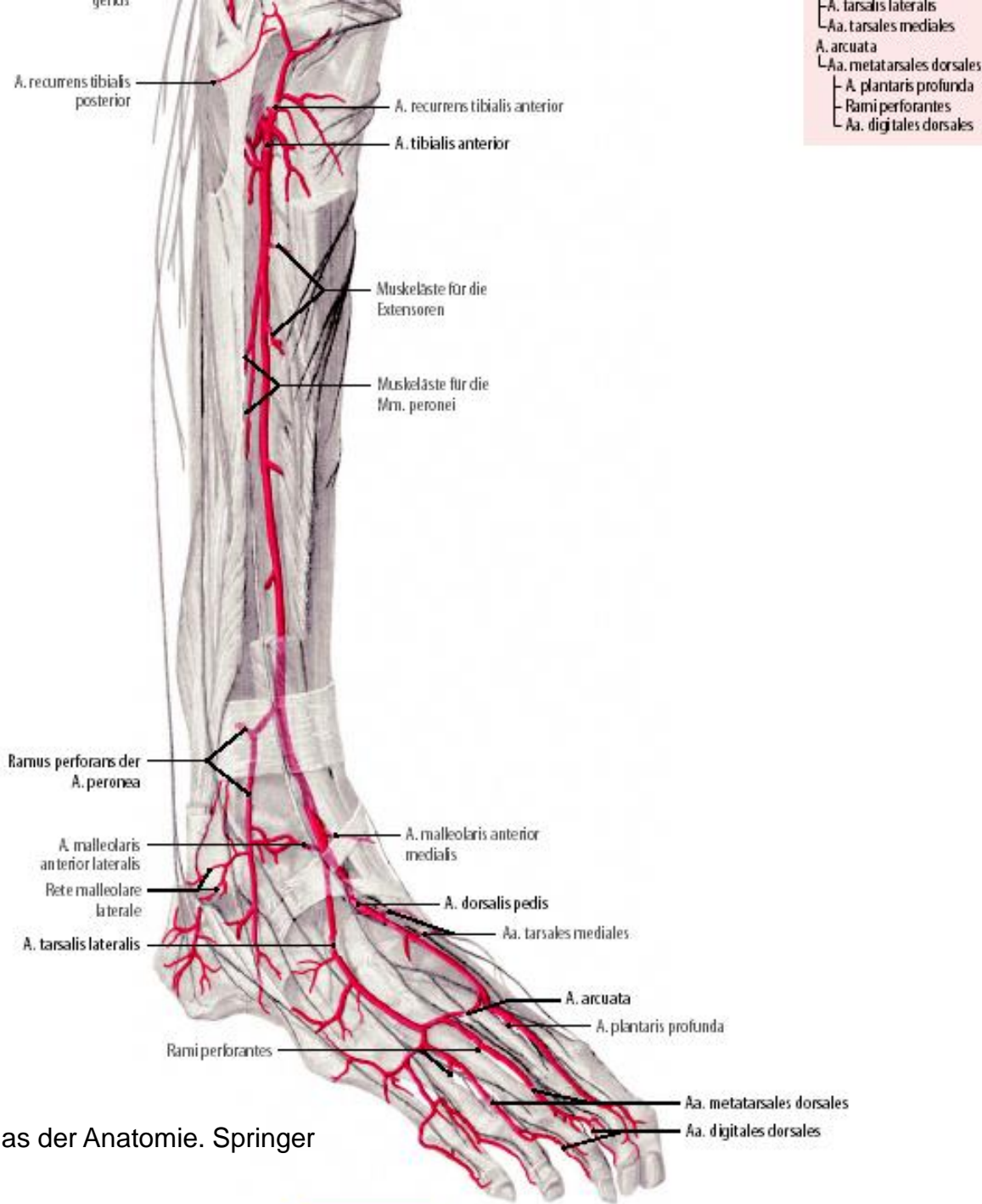


Fig. 9

**Angiosomes of the Leg: Anatomic Study and Clinical Implications.**

Taylor, G; Pan, Wei  
Plastic & Reconstructive Surgery. 102(3):599-616,  
September 1998.

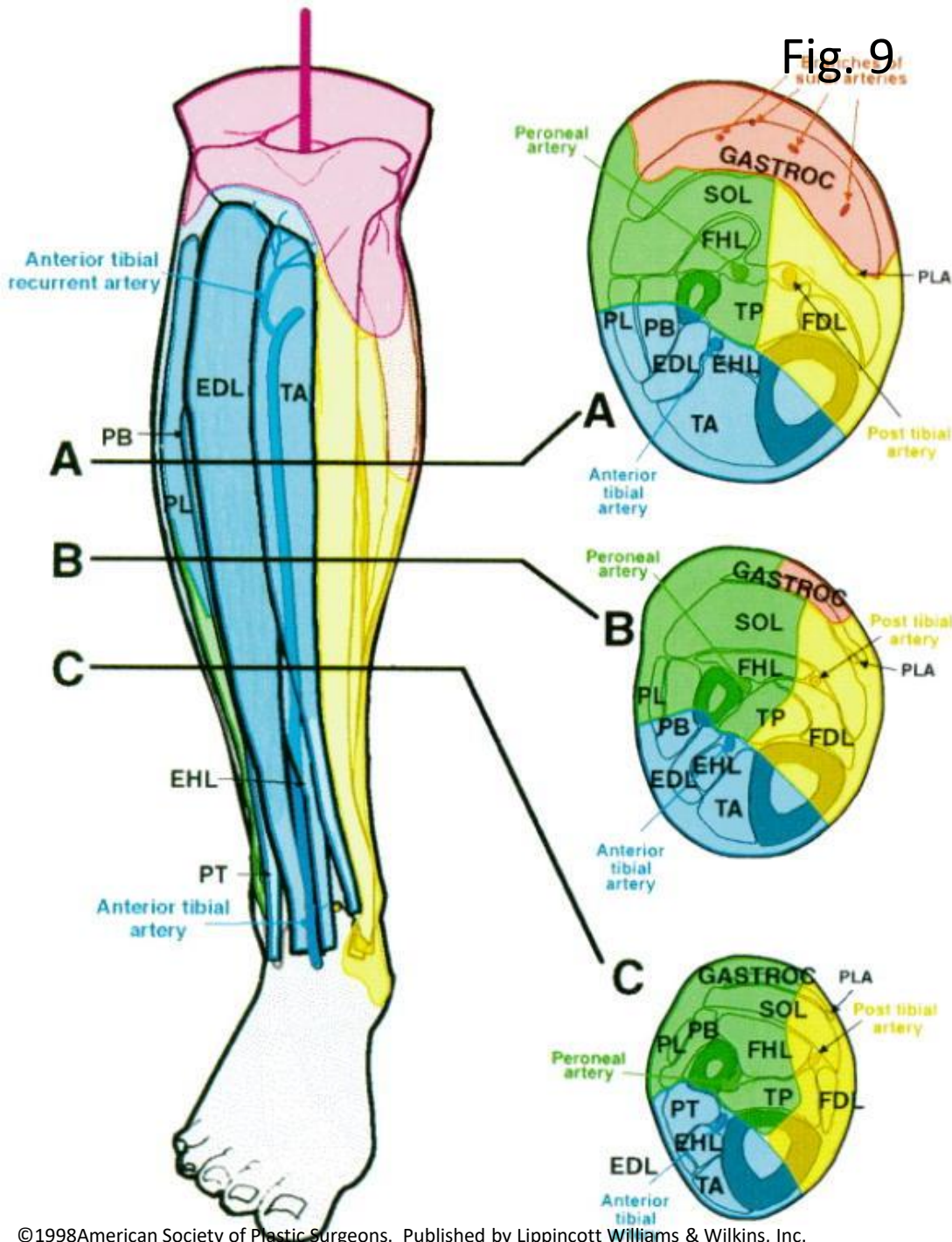


Fig. 9 . Anterior view of the leg with cross-sections at three levels, viewed distally. They show the angiosomes of the anterior tibial (blue), posterior tibial (yellow), peroneal (green), and sural (orange) angiosomes. Note that, in each case, the angiosome territories extend from the skin to the bone and their borders, defined by anastomotic vessels, and meet usually within tissues, especially the muscles, rather than between them. EDL, extensor digitorum longus; EHL, extensor hallucis longus; FDL, flexor digitorum longus; FHL, flexor hallucis longus; GASTROC, gastrocnemius; PB, peroneus brevis; PL, peroneus longus; PLA, plantaris; PT, peroneus tertius; SOL, soleus; TA, tibialis anterior; TP, tibialis posterior.

- A. tibialis anterior**
  - a. malleolaris ant. med.**
  - a. malleolaris ant. lat.**
  
- a. dorsalis pedis**
  - a. tarsalis lat.**
  - a. tarsales med.**
  
- a. arcuata**
  - aa. metatarsales dorsales**
  - aa. digitales dorsales**
  
- a. plantaris profunda**

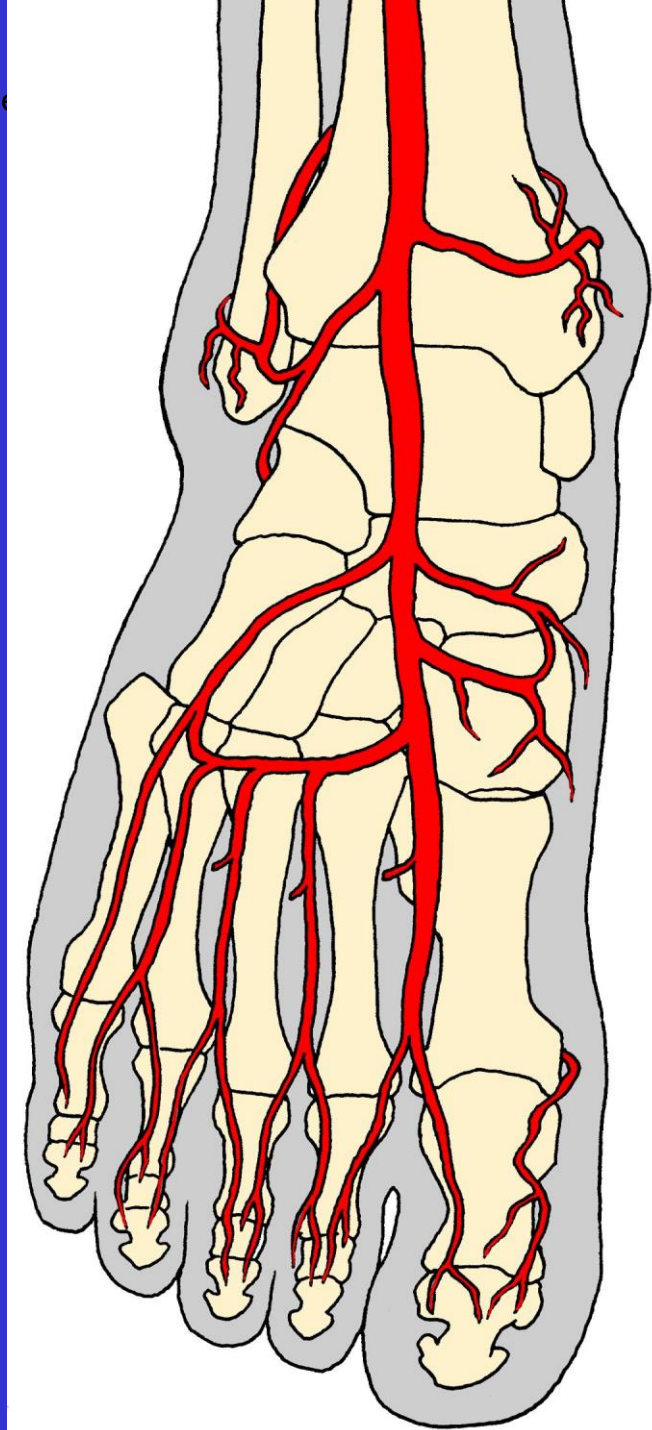
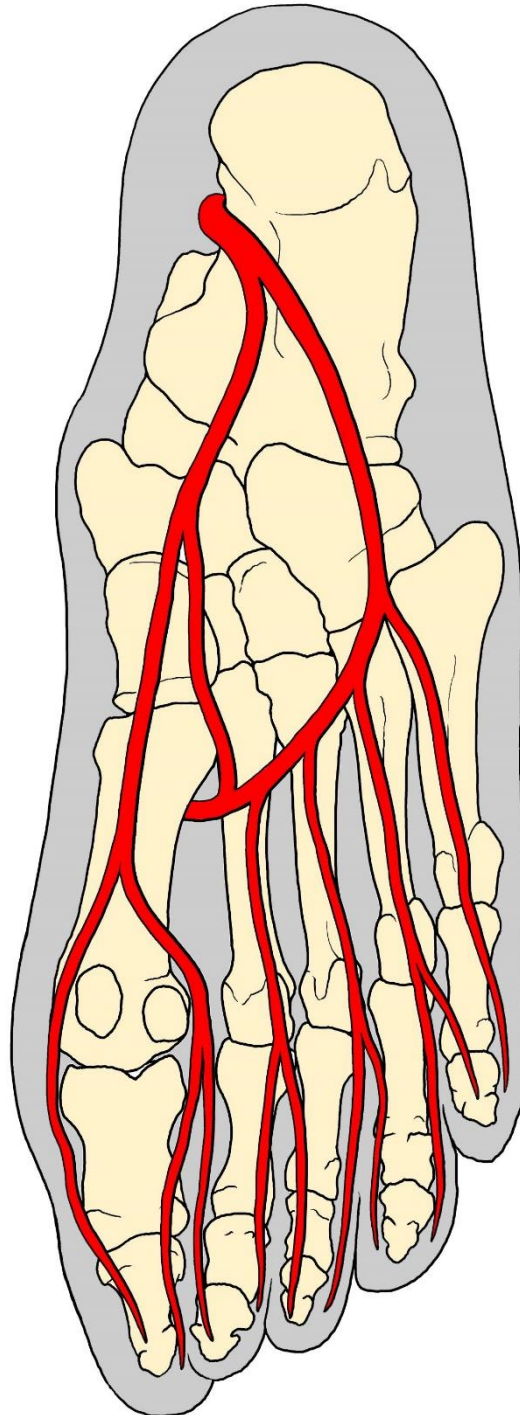
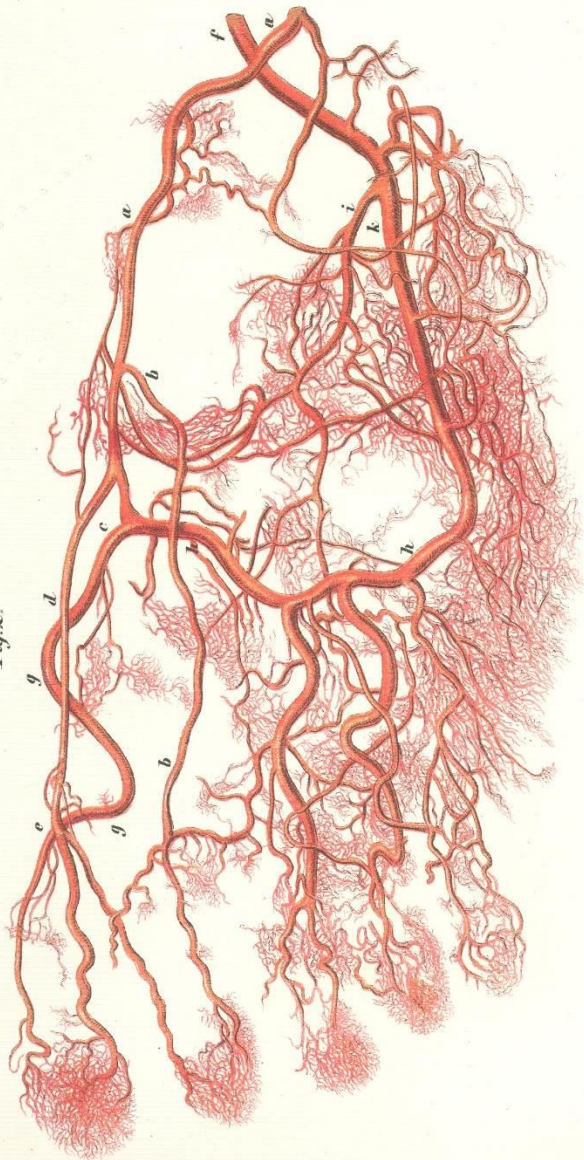


Fig. 2.



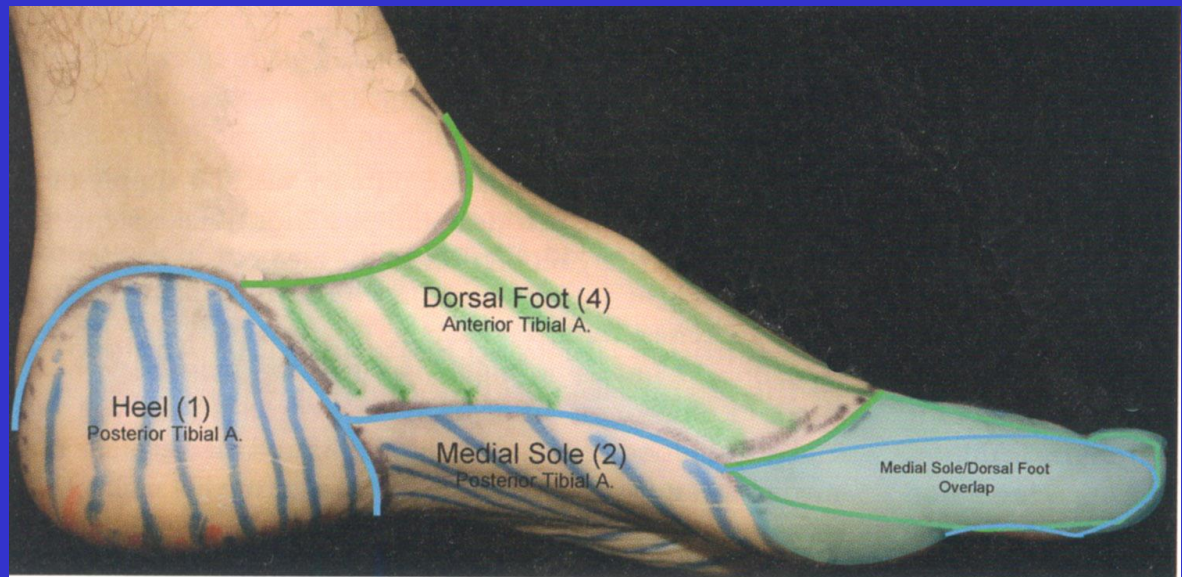
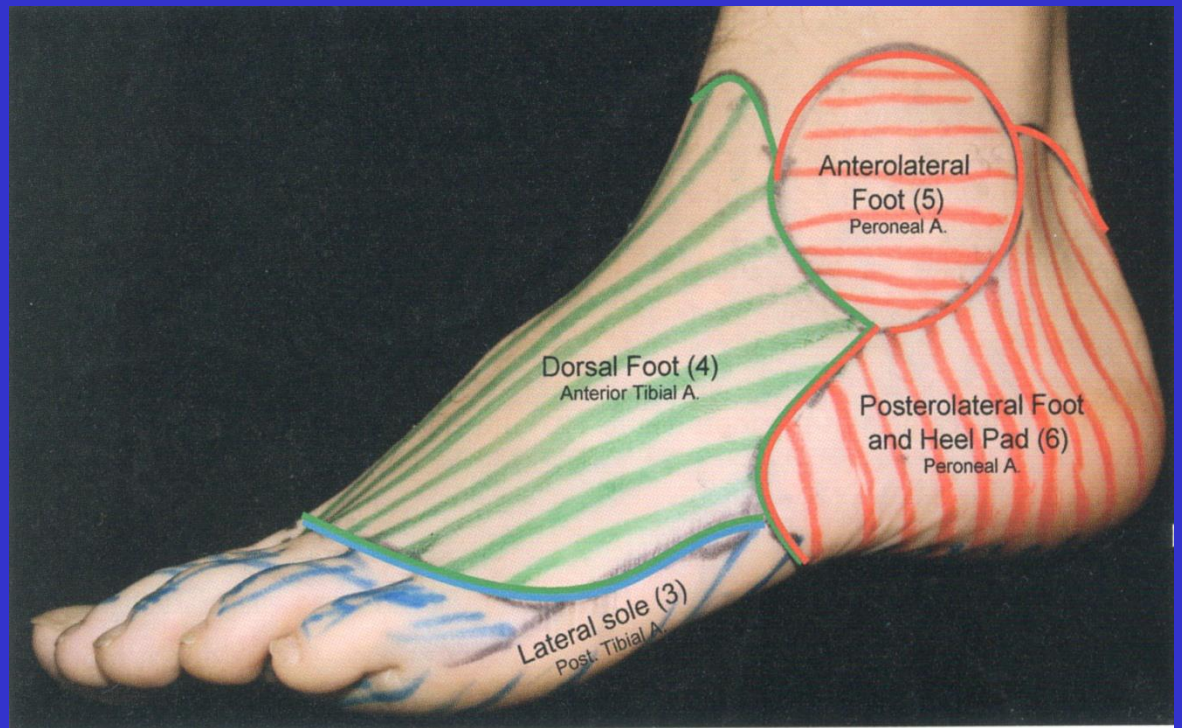
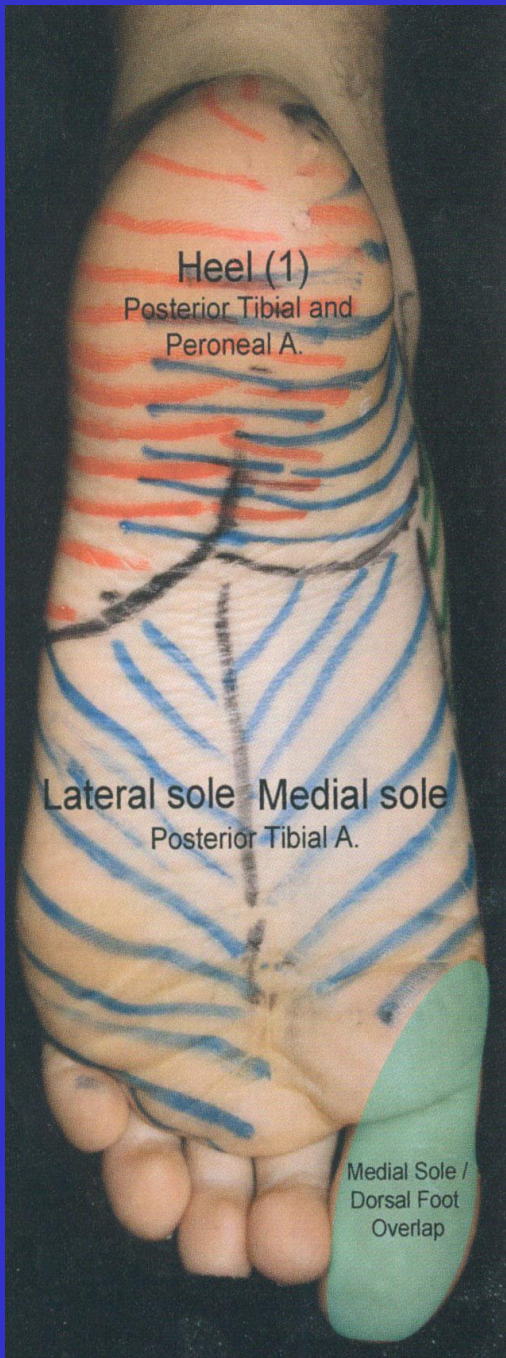
a. tibialis posterior

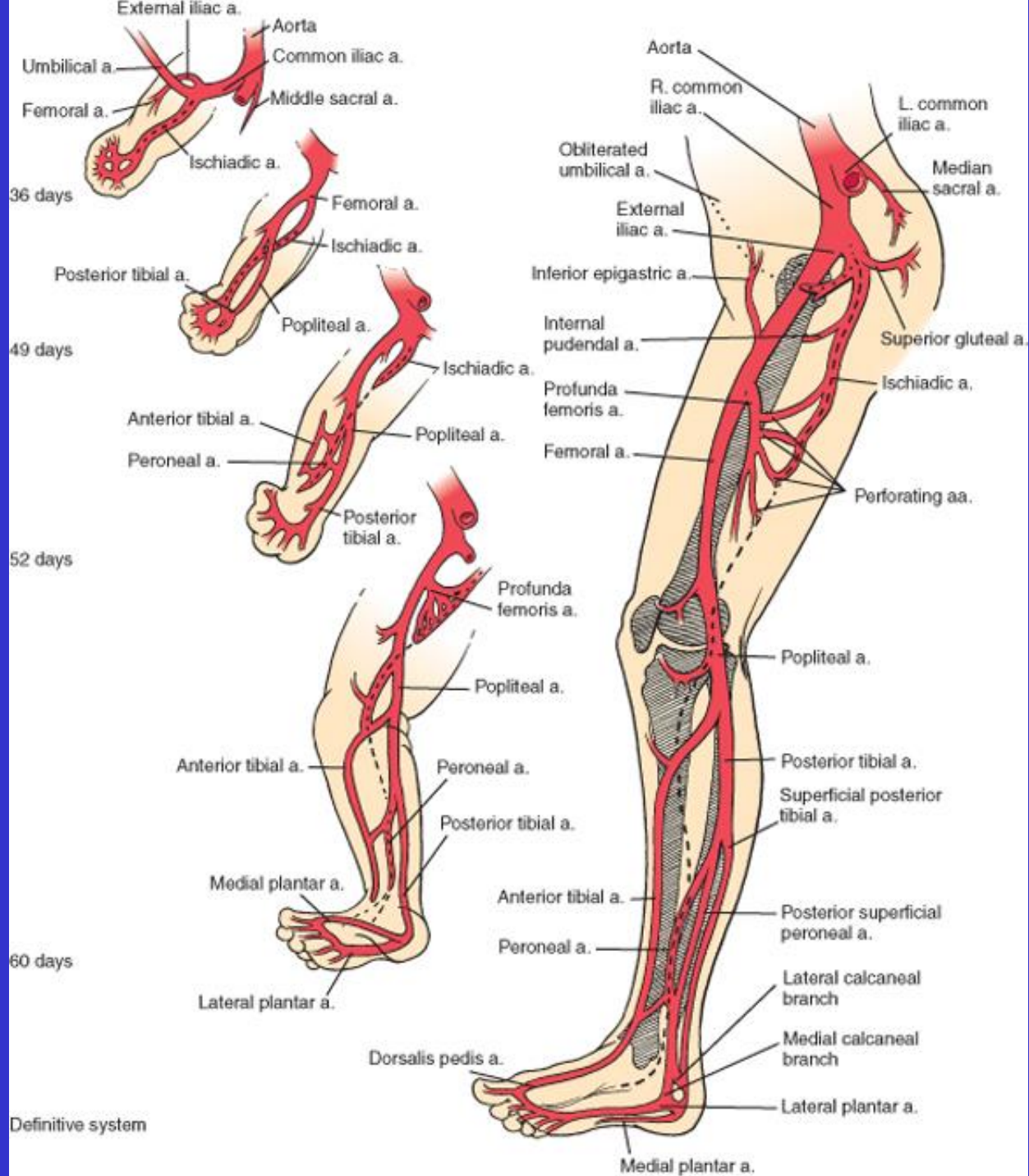
a. plantaris med.  
r. spfc. et prof.

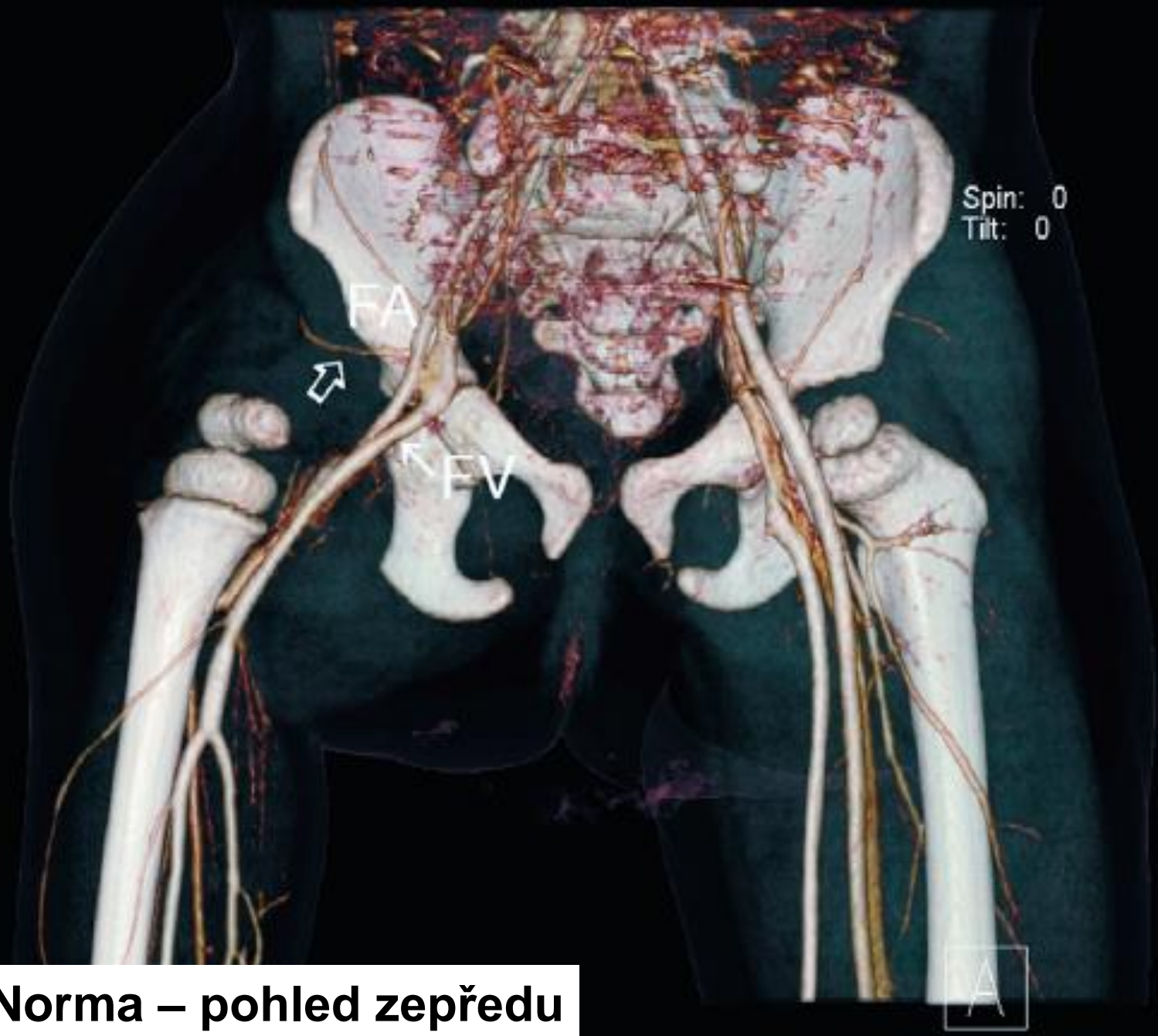
a. plantaris lat.  
z ní vzniká

Arcus plantaris  
aa. metatarsales  
plantares

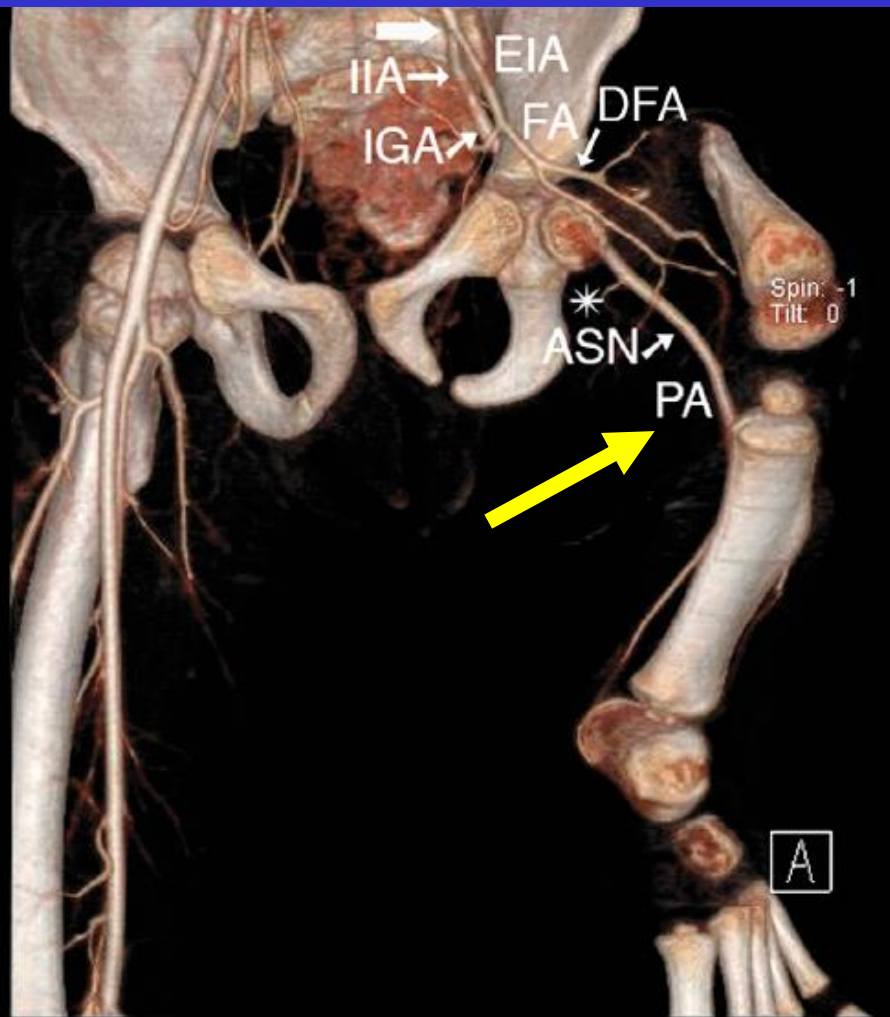
aa. digitales  
plantares  
communes et  
propriae



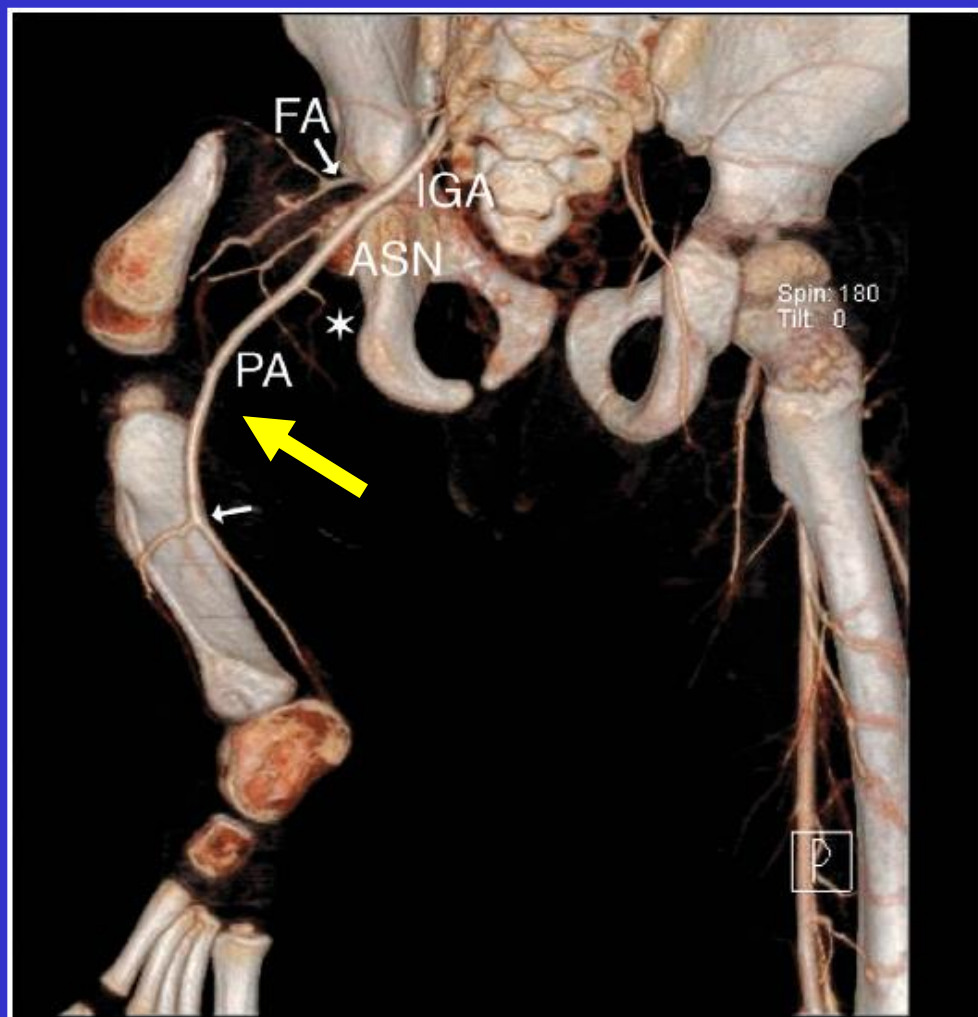




**Norma – pohled zepředu**



**Pohled zepředu**



**Pohled zezadu**



# anastomosa, arteriogenese shear stress

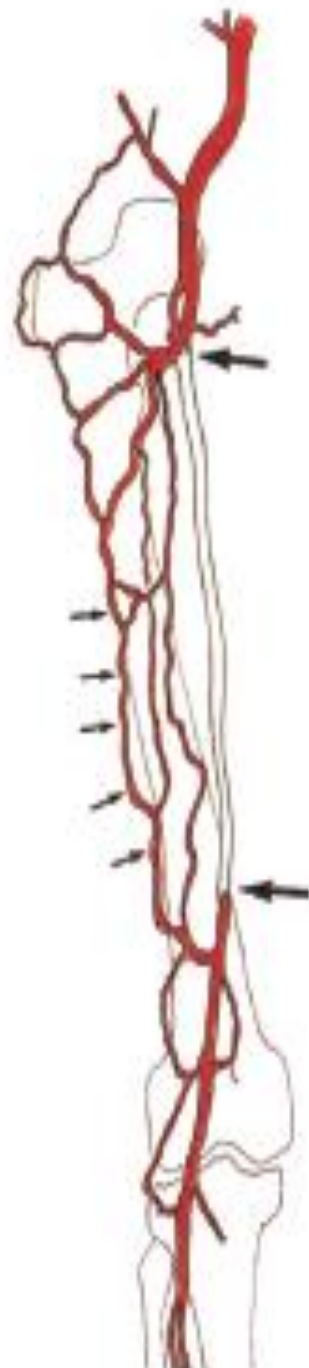
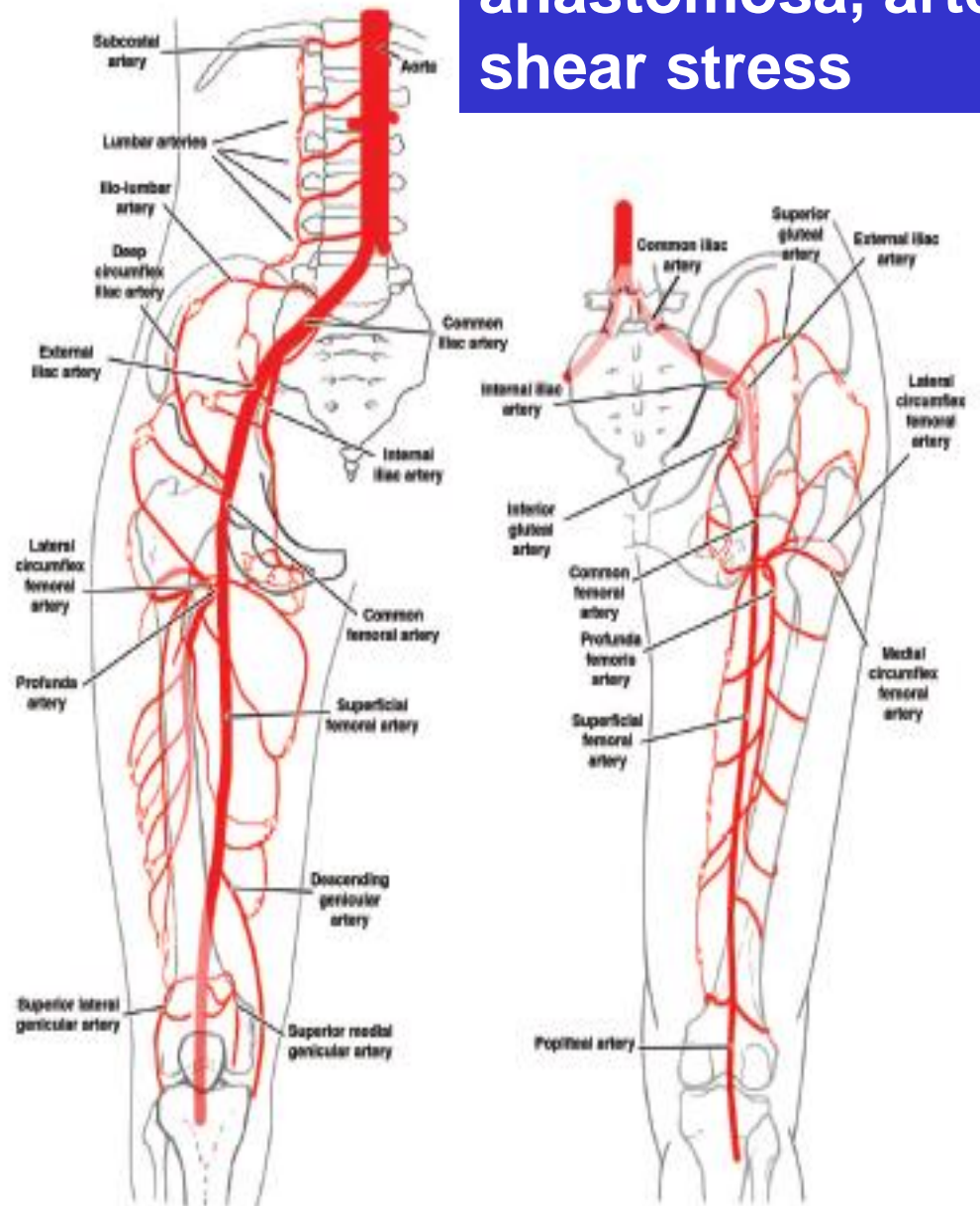


Fig. 10. Illustration of the anastomosis around the hip joint and thigh forming a bypass shunt between the aorta and the popliteal artery.

Hiatus saphenus

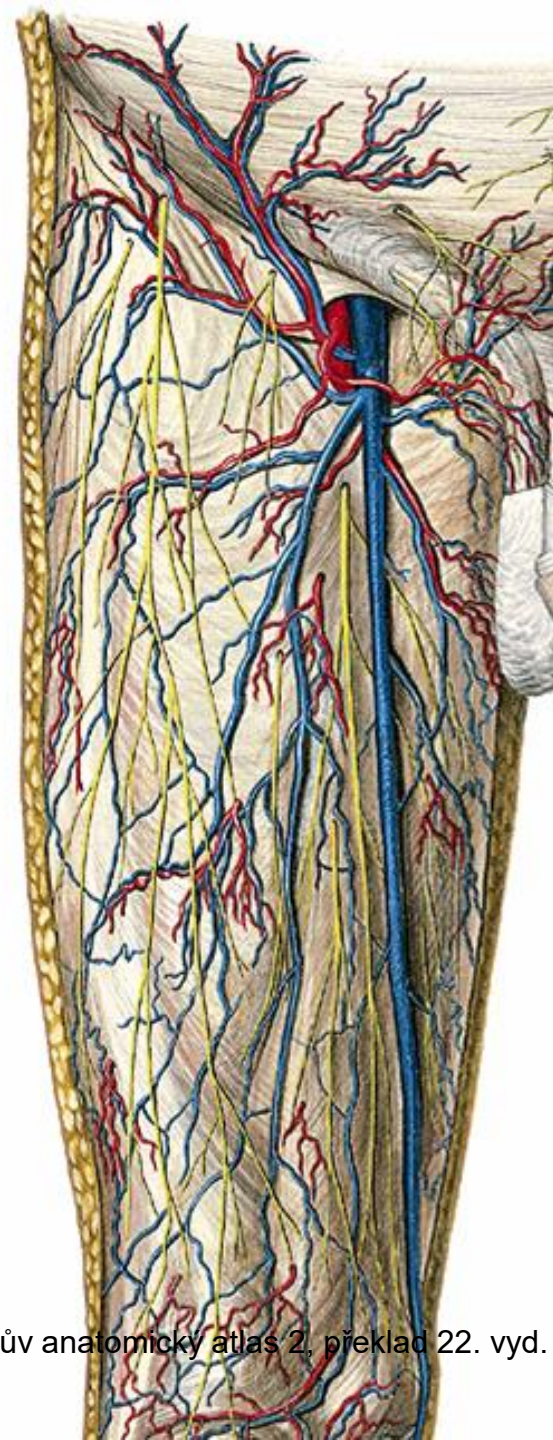
Lamina cribrosa fasciae  
latae femoris

v. saphena magna

v. circumflexa ilium spfc.

v. epigastrica spfc.

vv. pudendae ext.



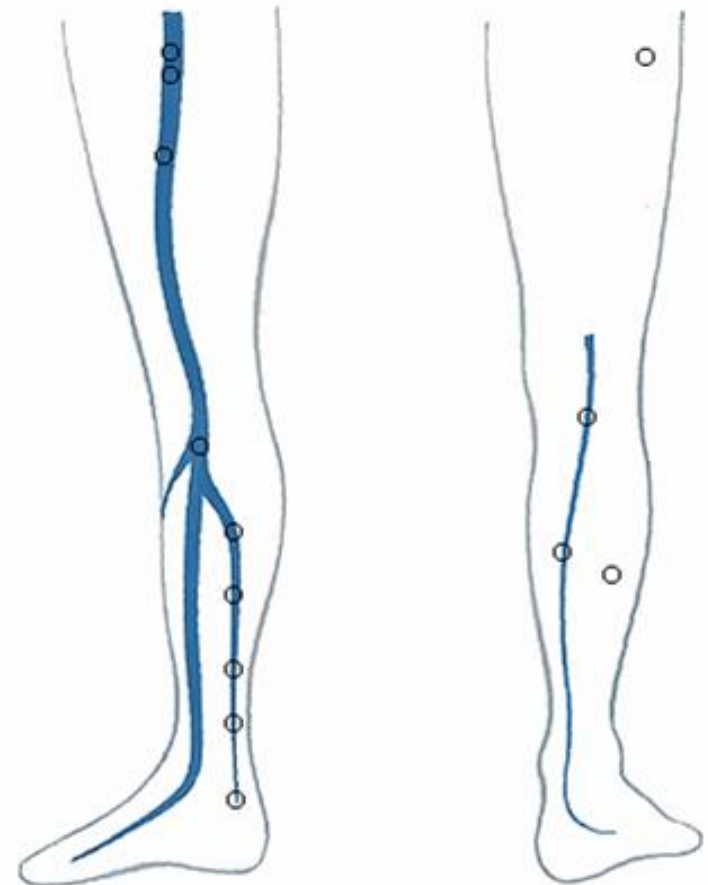
v. saphena parva

v. femoropoplitea

perforátory



Sobottův anatomický atlas 2, překlad 22. vyd. Grada



- **Svaly kyčelního kloubu**

- **Přední skupina**

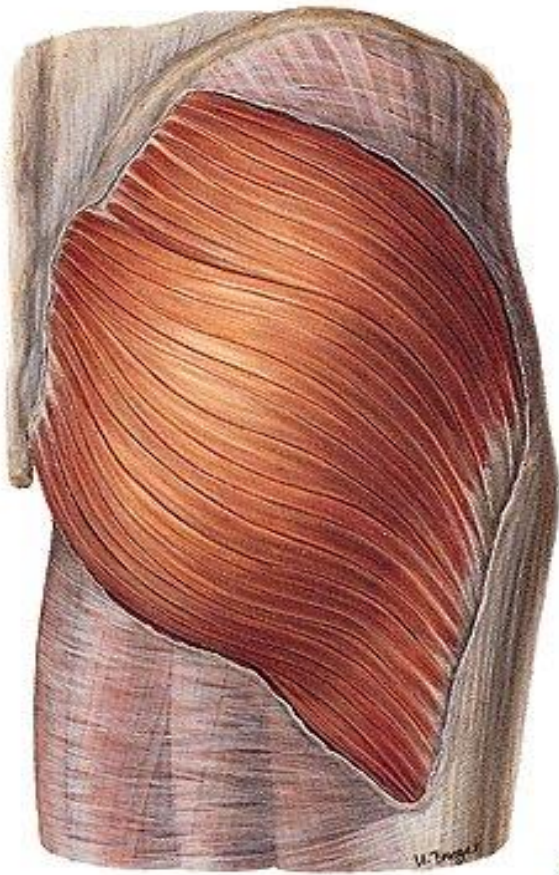
m. iliopsoas, m. obturatorius ext.

n. femoralis + n. obturatorius

- **Zadní skupina**

mm. glutei – nn. glutei

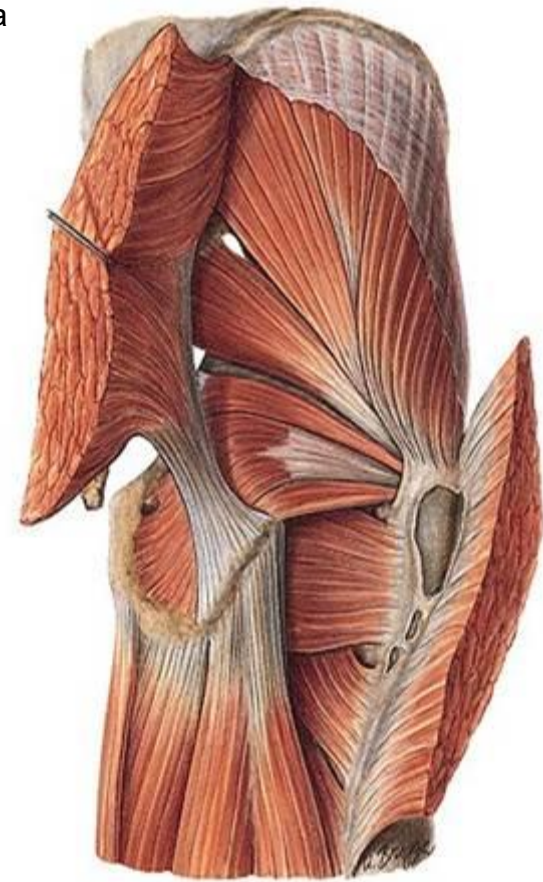
pelvitrochanterické svaly – pl. sacralis

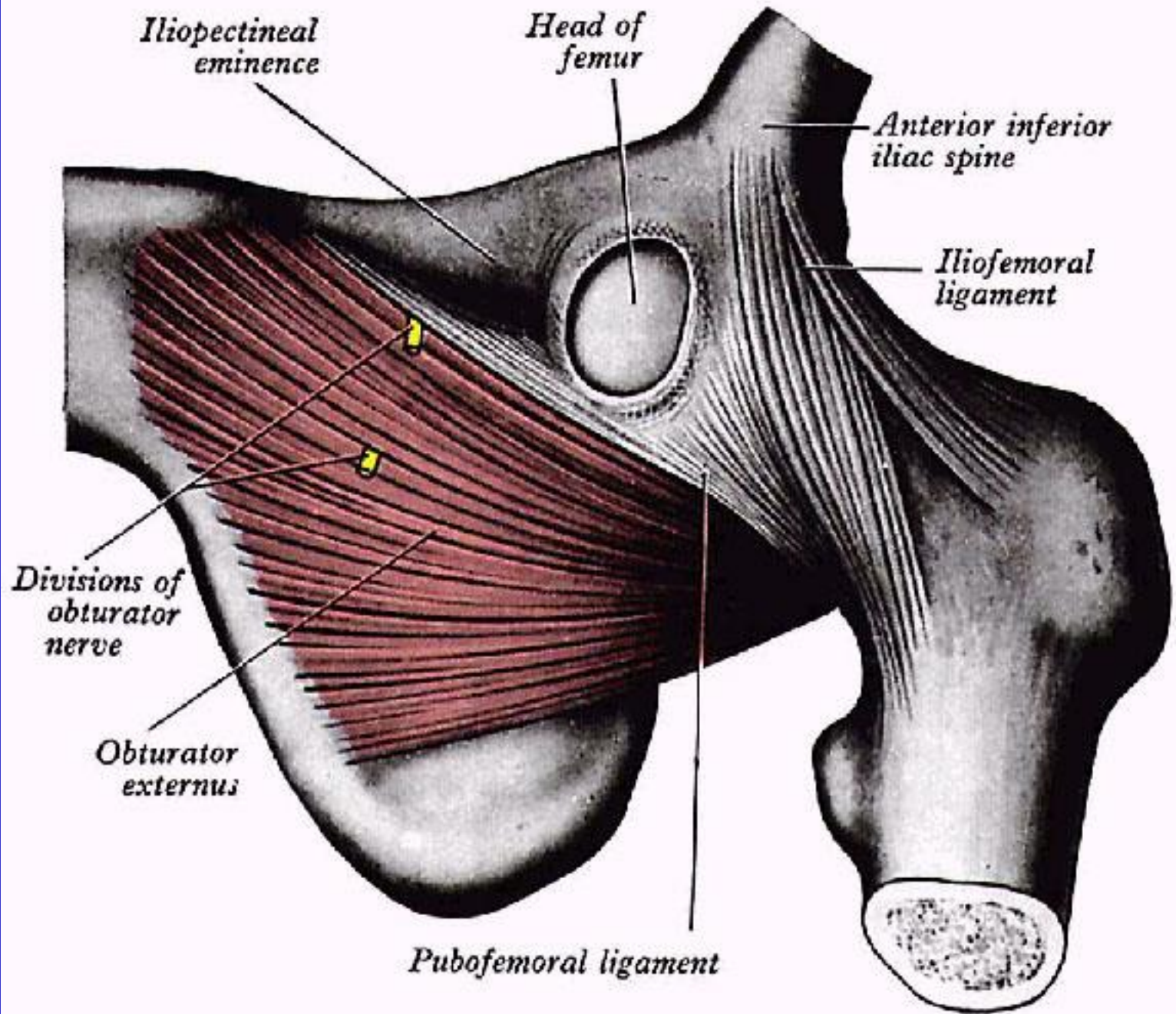


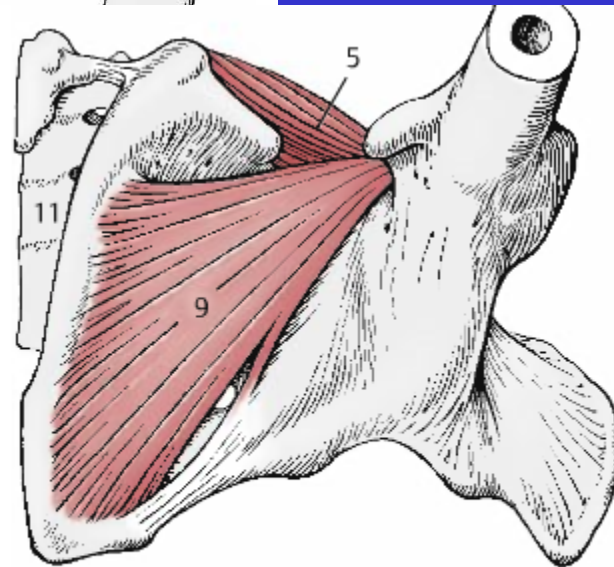
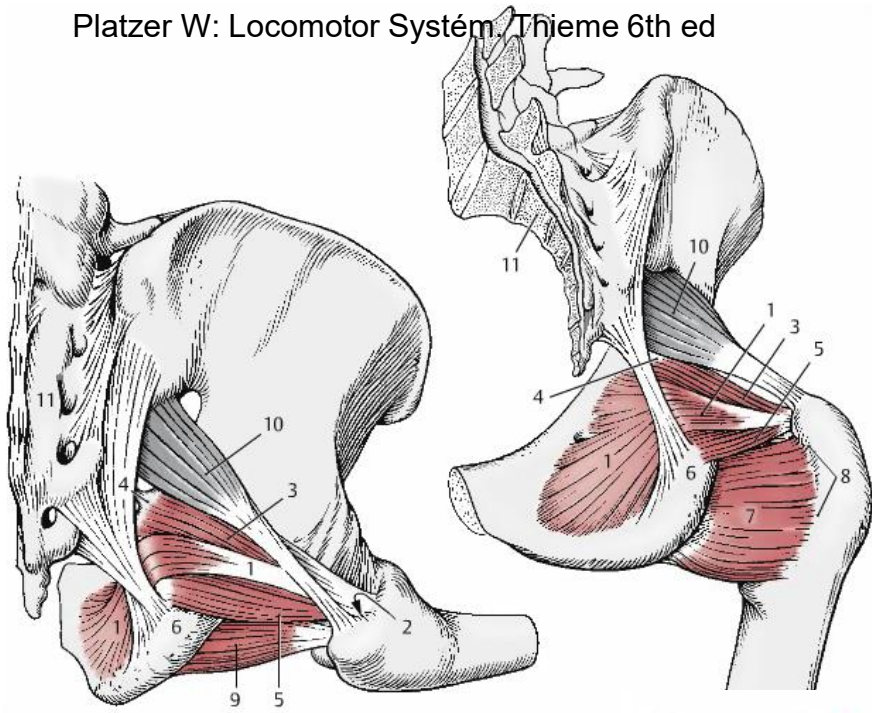
Gluteální svaly  
m. gluteus maximus,  
medius et minimus  
m. tensor fasciae latae  
+ tractus iliotibialis



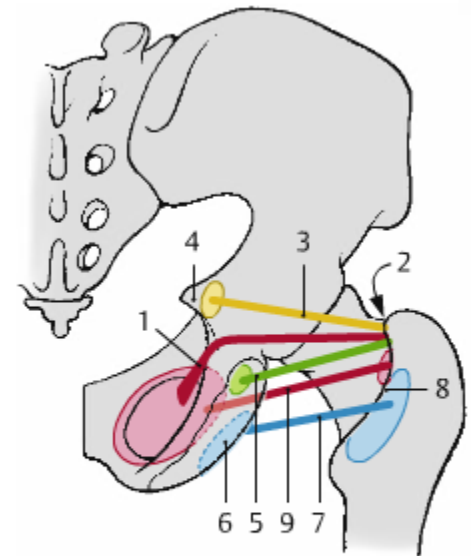
Pelvitrochanterické svaly  
m. piriformis  
m. gemmelus sup. et inf.  
m. quadratus femoris



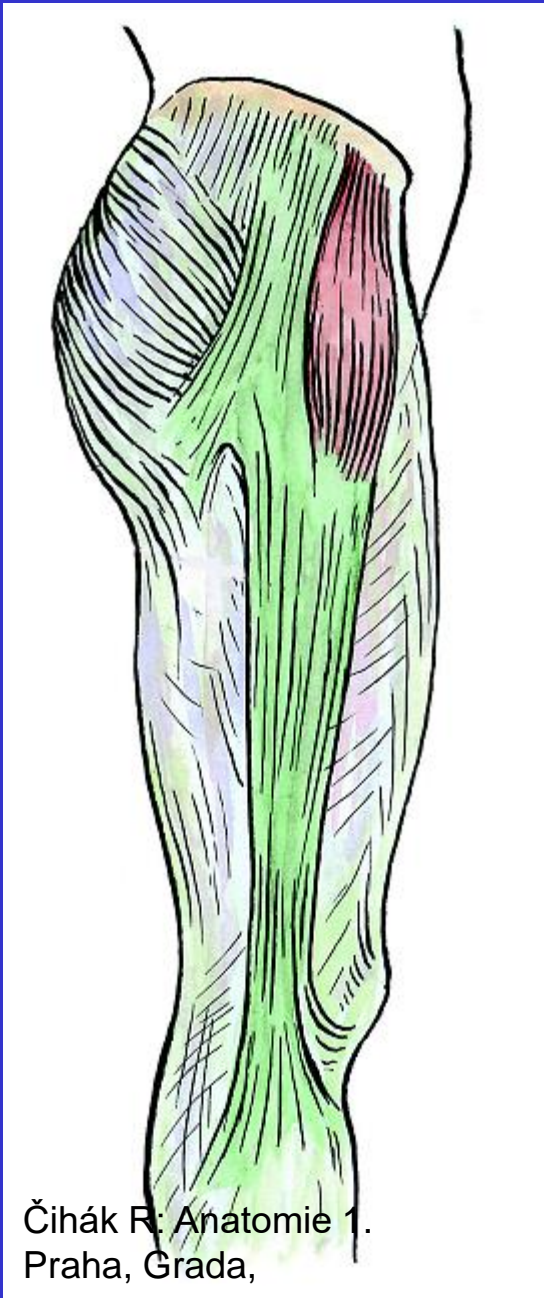




C Distal view of obturator externus muscle

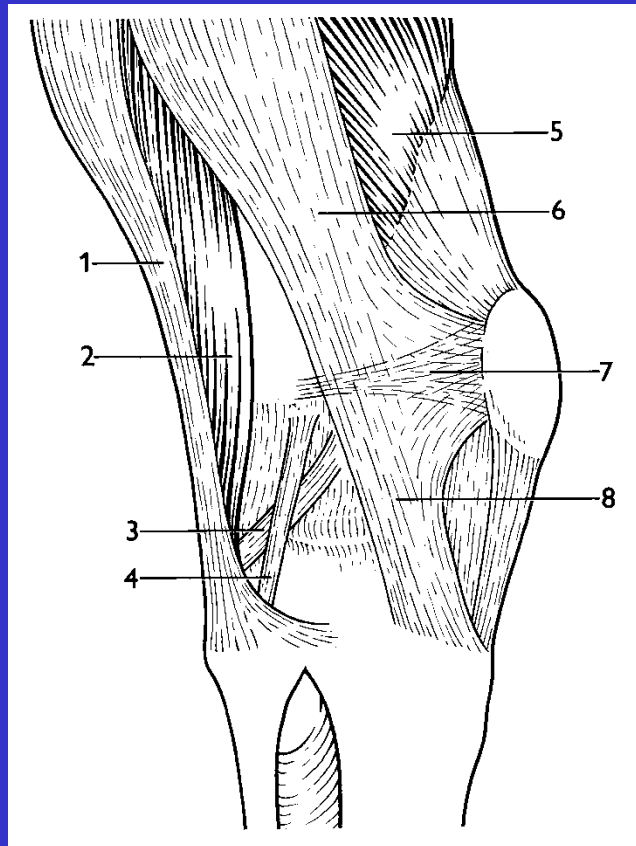


D Diagram of origin, course, and insertion of muscles

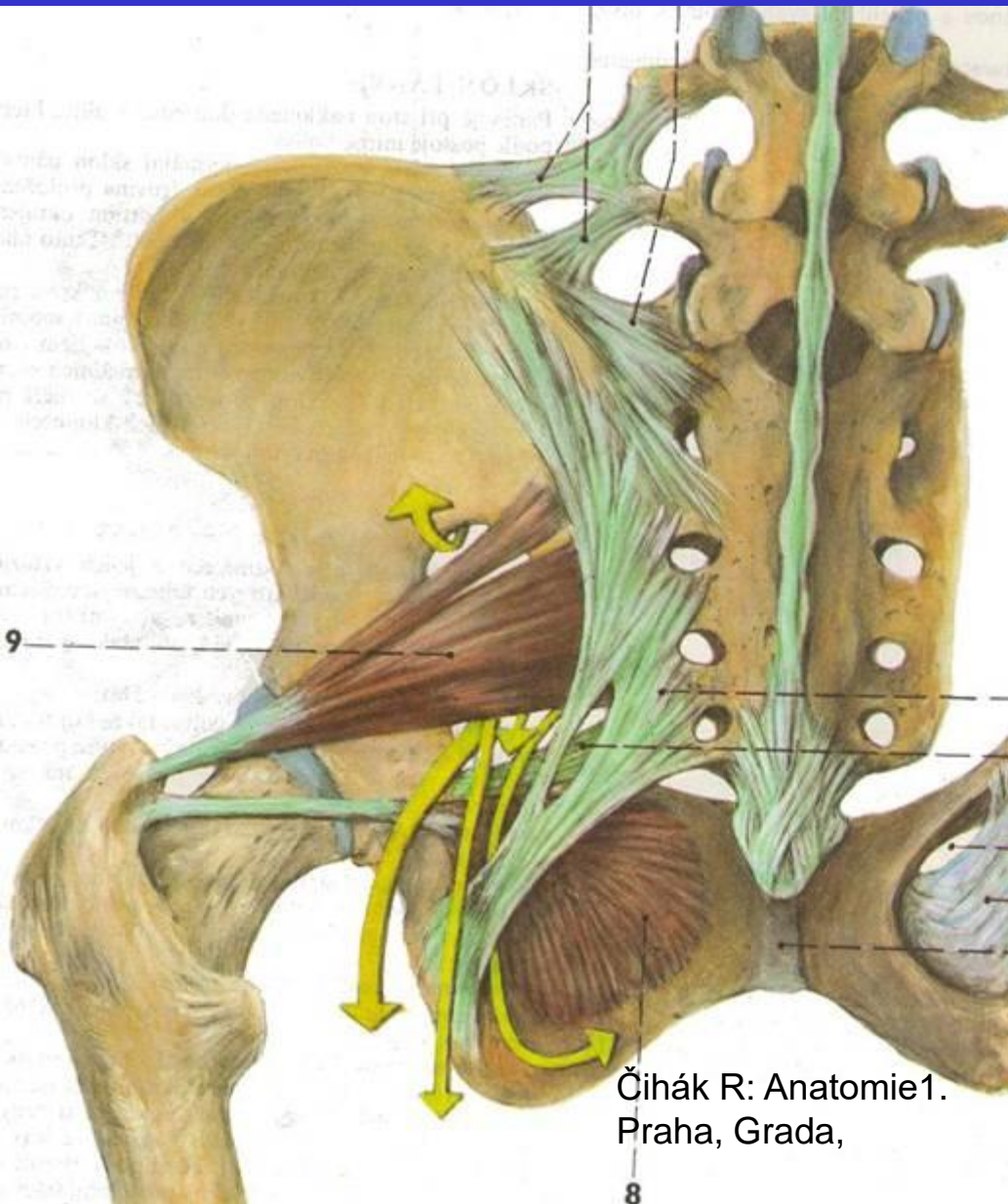


Čihák R: Anatomie 1.  
Praha, Grada,

## M. tensor fasciae latae Tractus iliotibialis





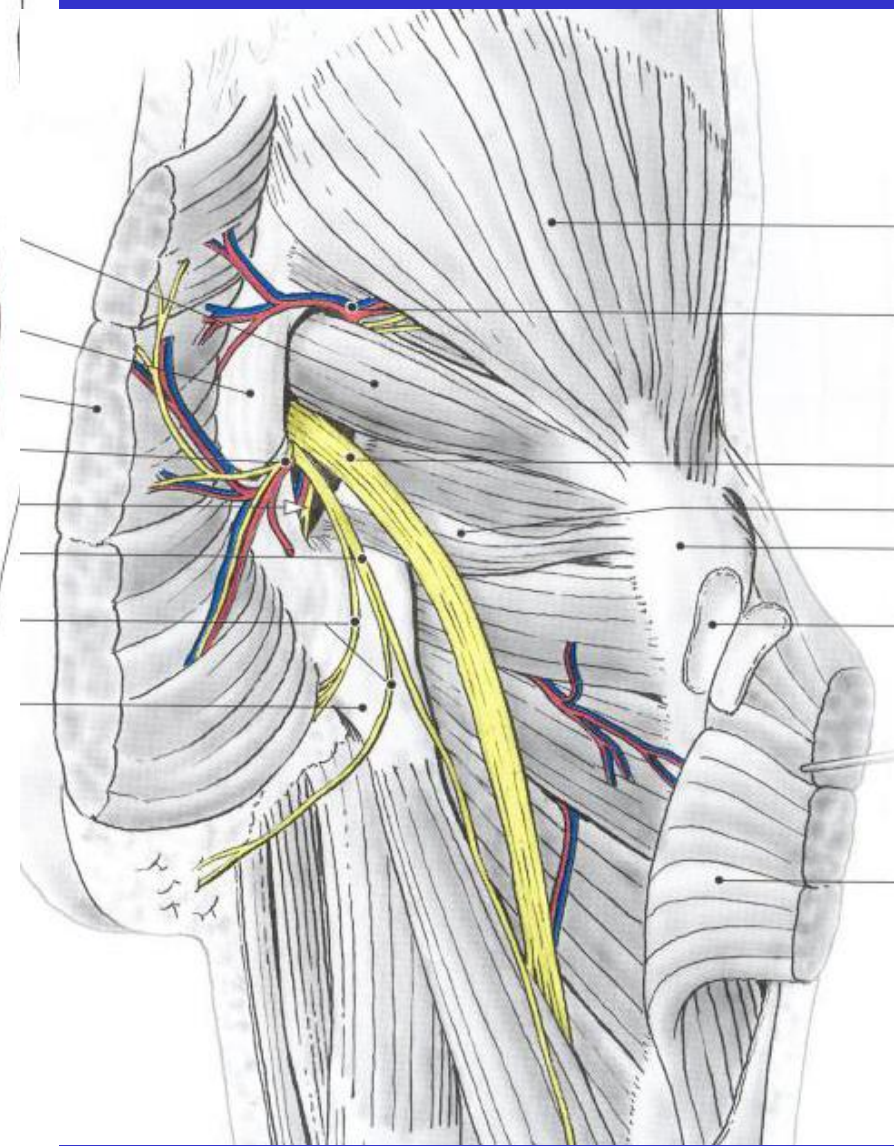
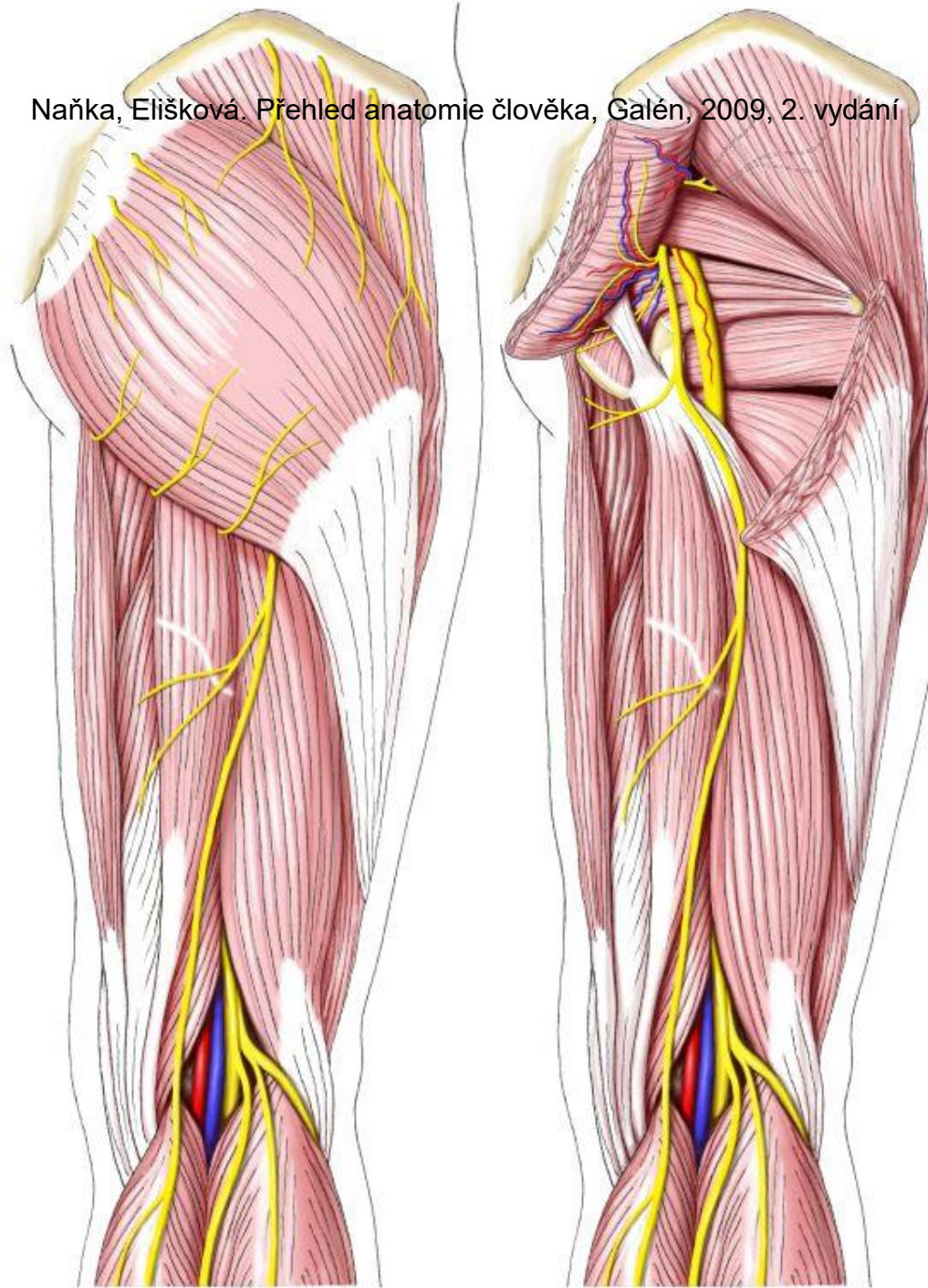


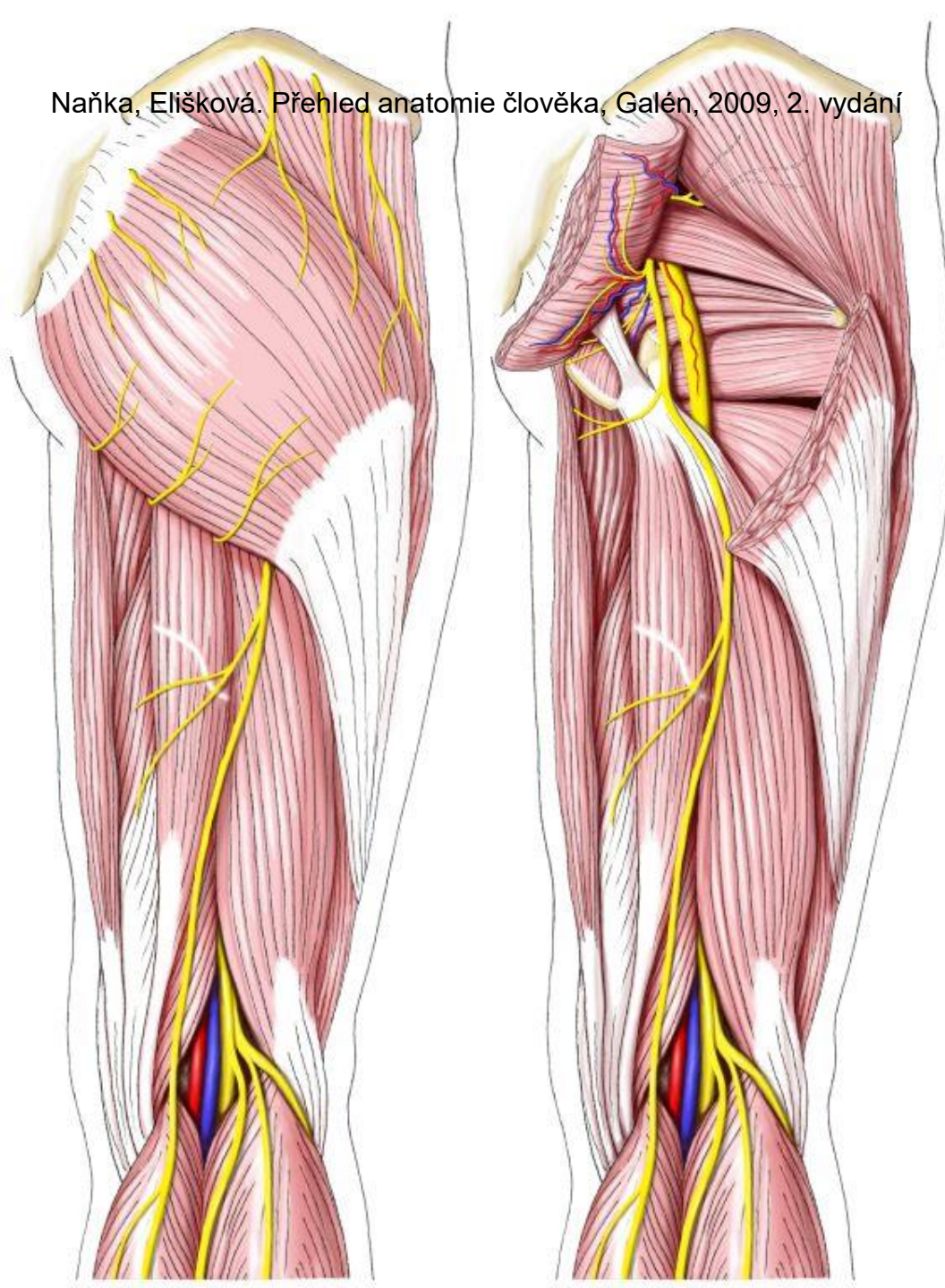
**For. suprapiriforme**  
**a.+v. + n. gluteus sup.**

**For. infrapiriforme**  
**a.+v. + n. gluteus inf.**  
**n. Ischiadicus**  
**n. cut. femoris post.**  
**a.+ v. pudenda int.**  
**n. pudendus**

**For. ischiadicum min.**  
**a.+ v. pudenda int.**  
**n. pudendus**

Naňka, Elišková. Přehled anatomie člověka, Galén, 2009, 2. vydání





## Foramen ischiadicum majus

**For. suprapiriforme**  
vasa glutea sup.

**For. infrapiriforme**  
vasa glutea inf.  
n. cut. femoris post.  
n. ischiadicus  
n. pudendus  
vasa pudenda int.

**For. ischiadicum minus**  
m. obturatorius int.  
n. pudendus  
vasa pudenda int.

## Přední skupina svalů kyčle

m. Iliopsoas

## Přední sk. stehna

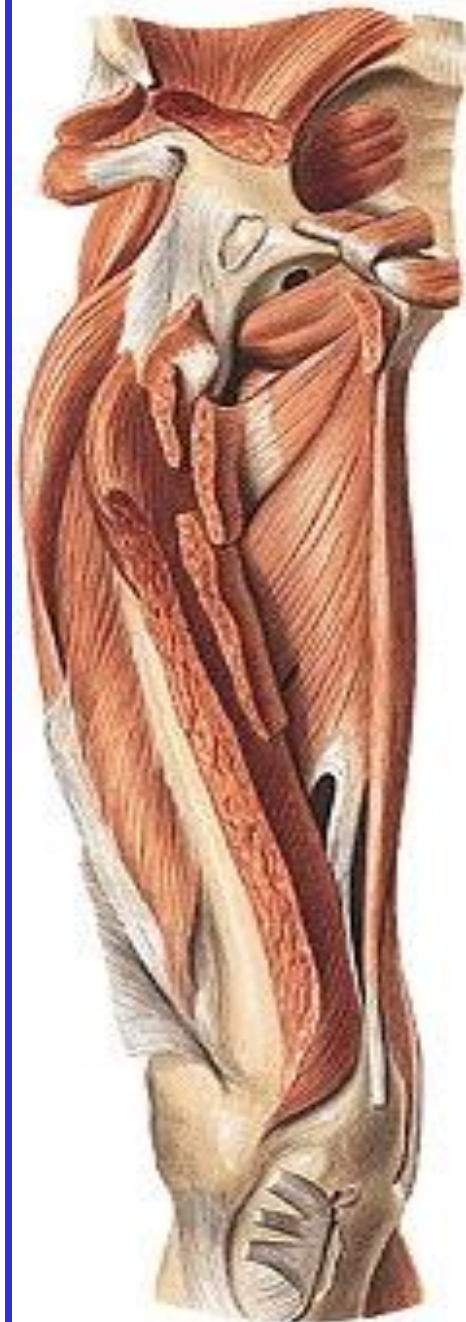
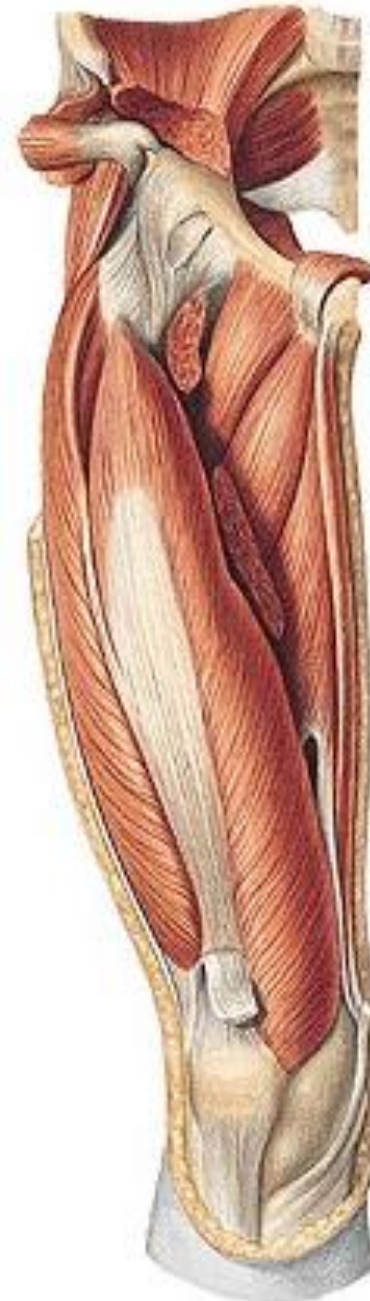
m. sartorius

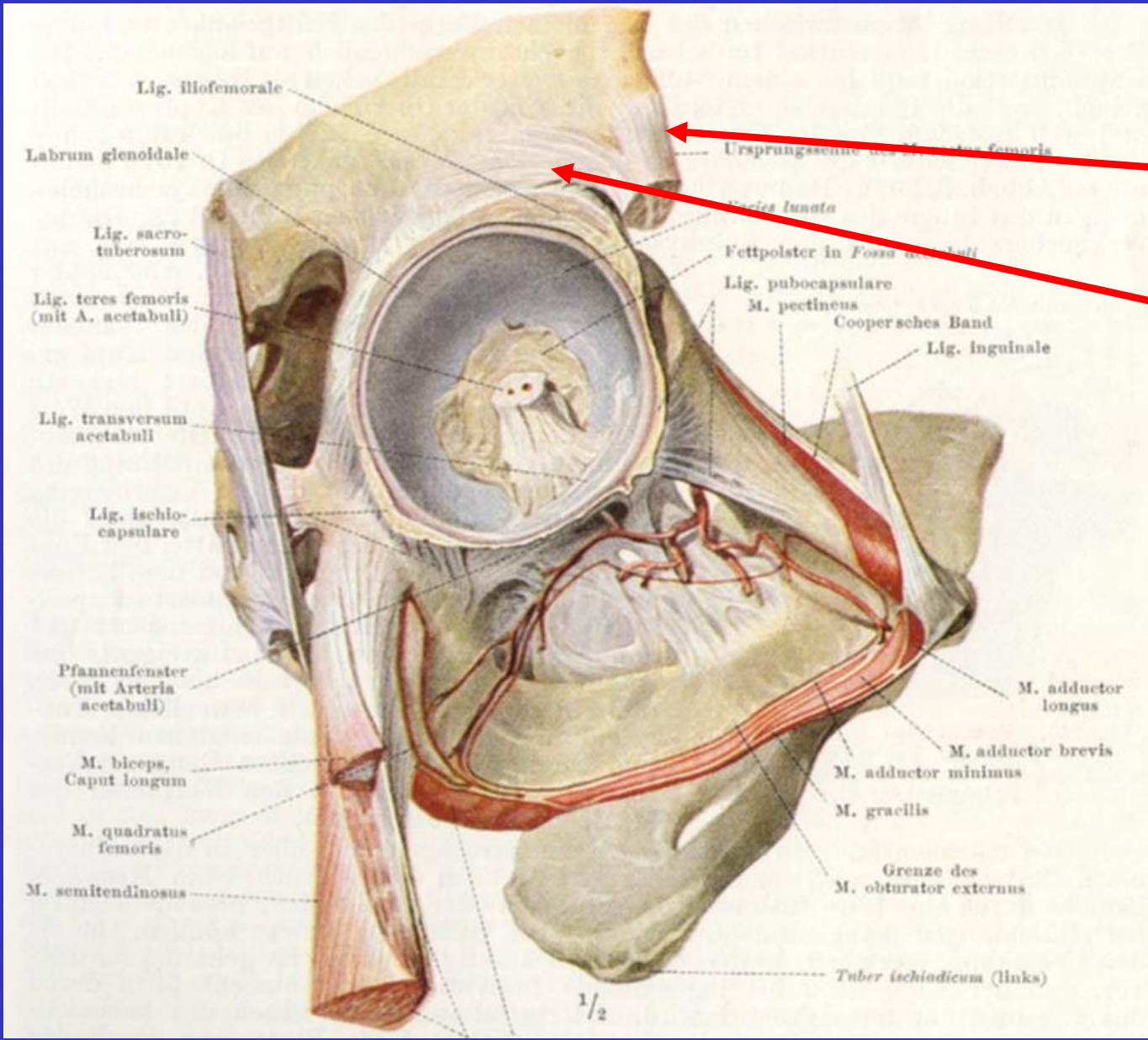
m. quadriceps  
femoris

m. rectus femoris

m. vastus  
medialis  
lateralis  
intermedius

n. femoralis





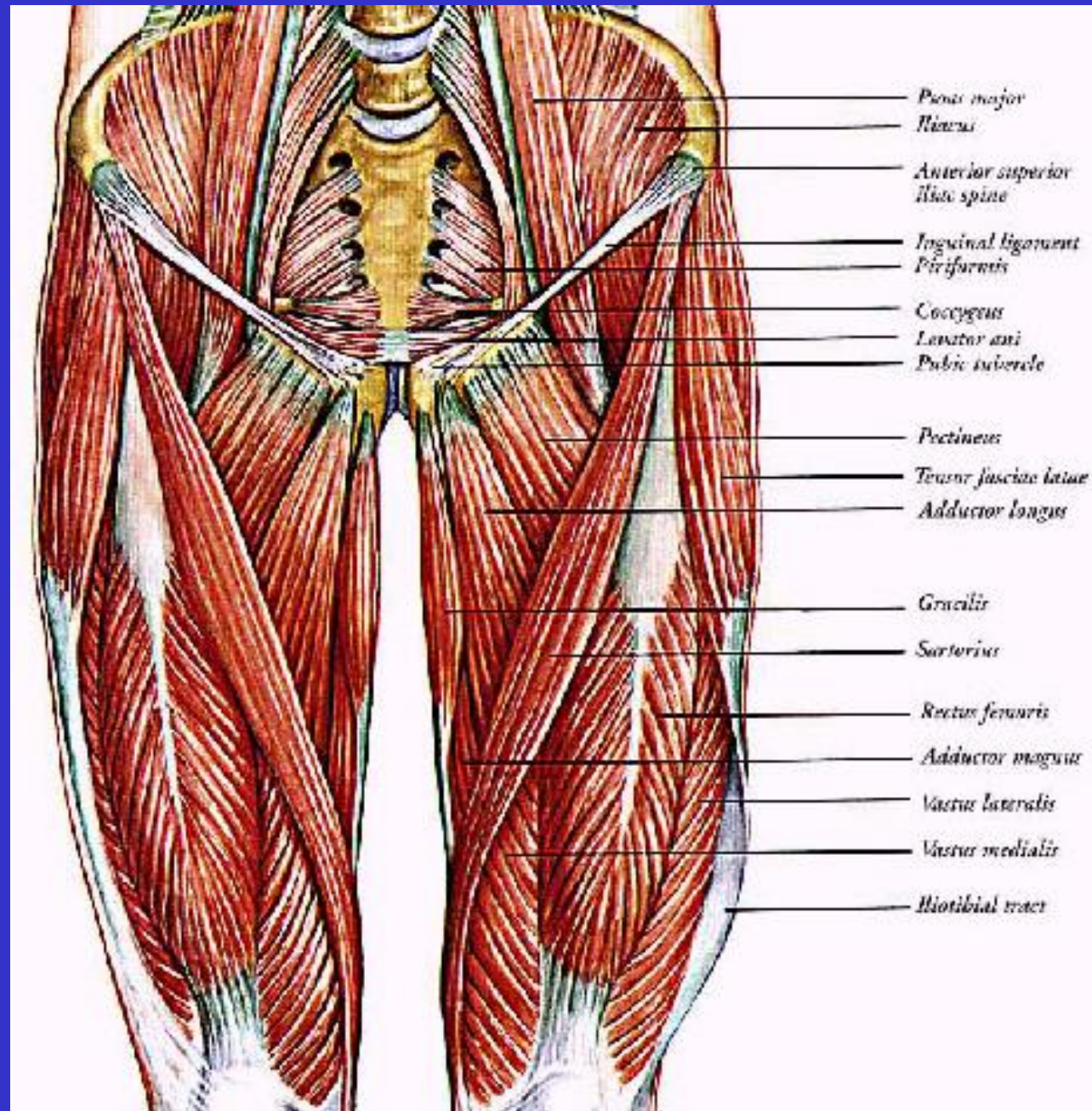
Caput rectum

Caput reflexum

## Mediální skupina Adduktory

m. gracilis,  
m. pectineus,  
m. adductor longus,  
m. adductor brevis,  
m. adductor magnus

n. obturatorius  
(+n. femoralis  
+ n. ischiadicus)



## Mediální skupina Adduktory

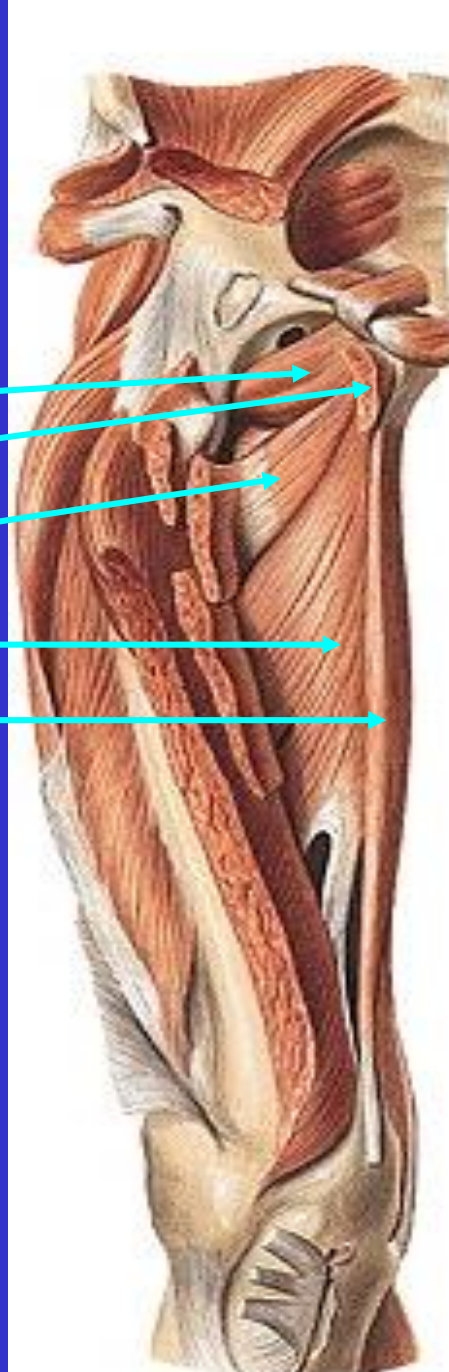
m. pectineus,

m. adductor longus

m. adductor brevis

m. adductor magnus

m. gracilis



inervace

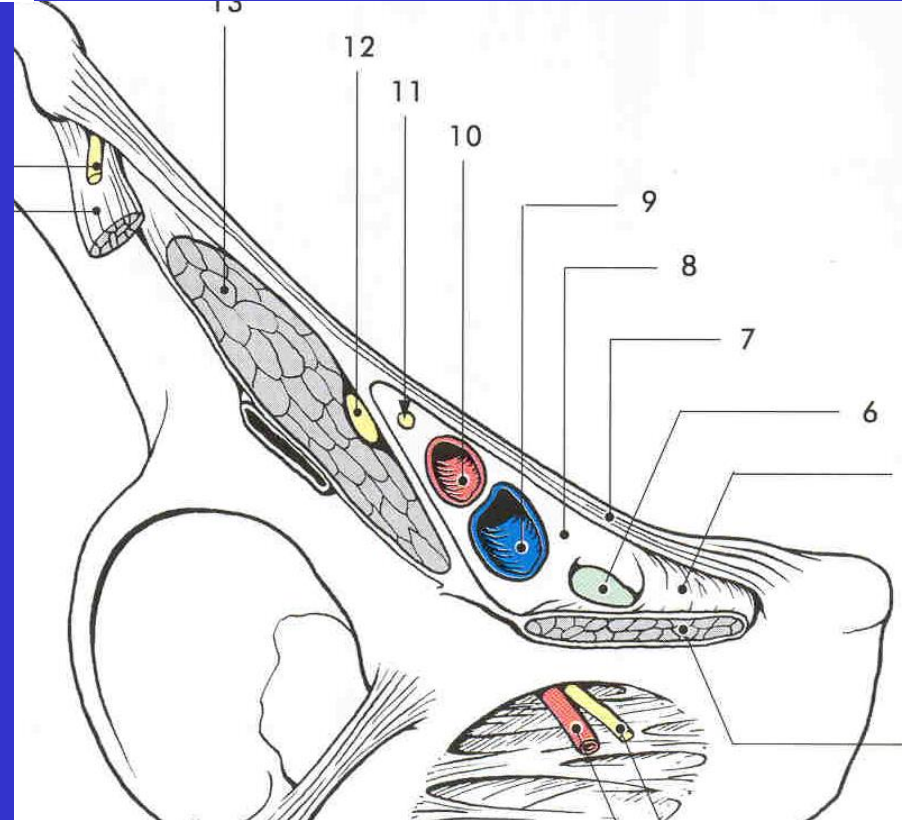
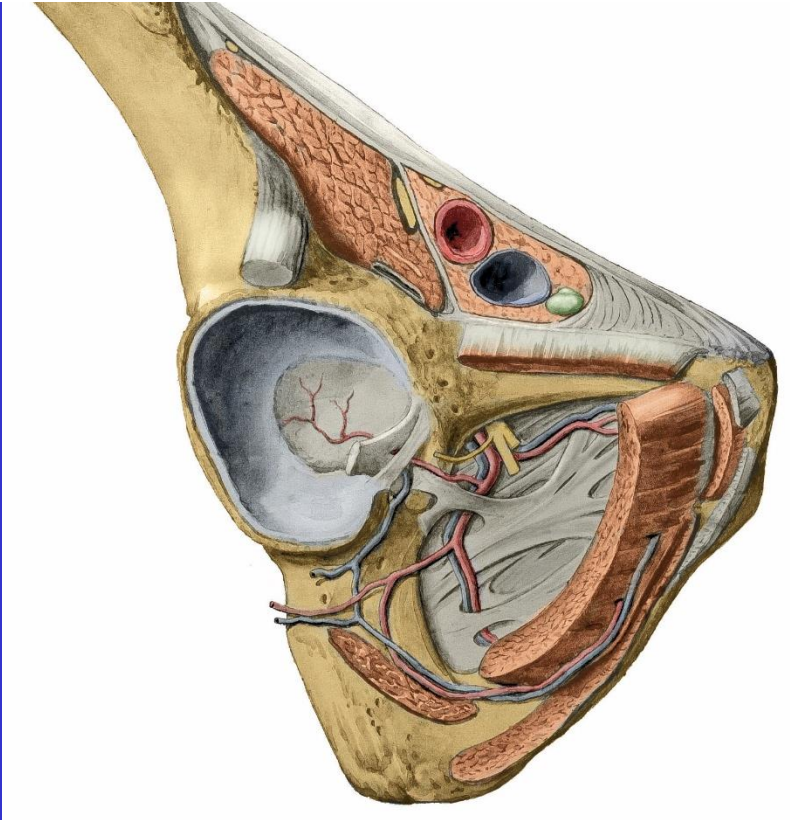
n. obturatorius

(+n. femoralis

+ n. ischiadicus)

# Lacuna vasorum et lacuna musculorum

Grim, Naňka, Helekal: Atlas Anatomie člověka I, Grada 2014



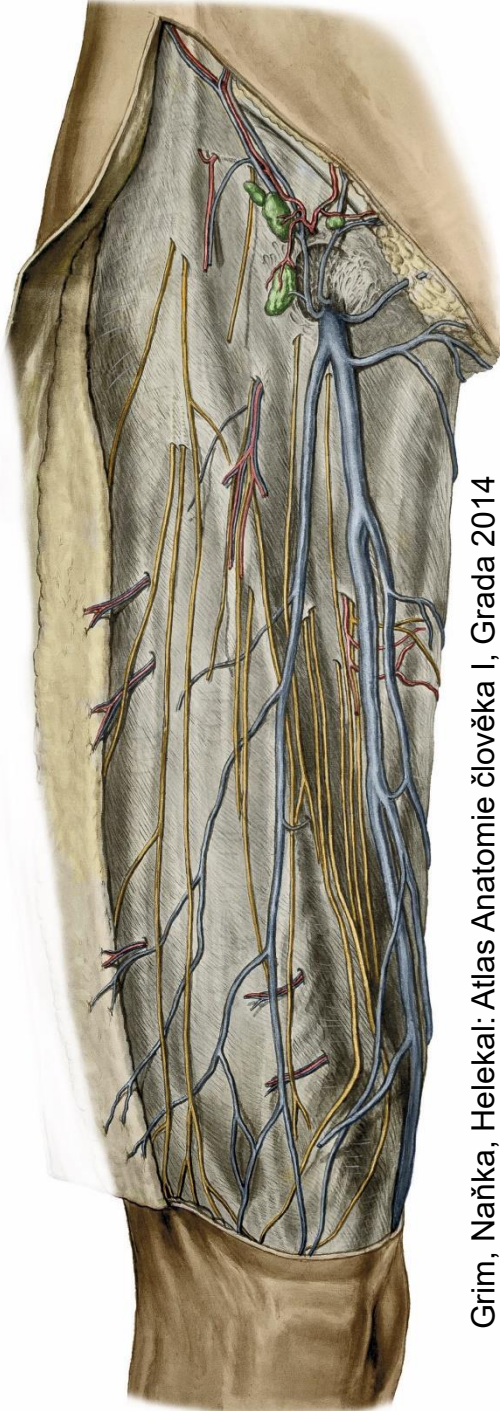
**Arcus iliopectineus, lig. inguinale**

**lacuna musculorum** – m. psoas major, m. iliacus a n. femoralis,

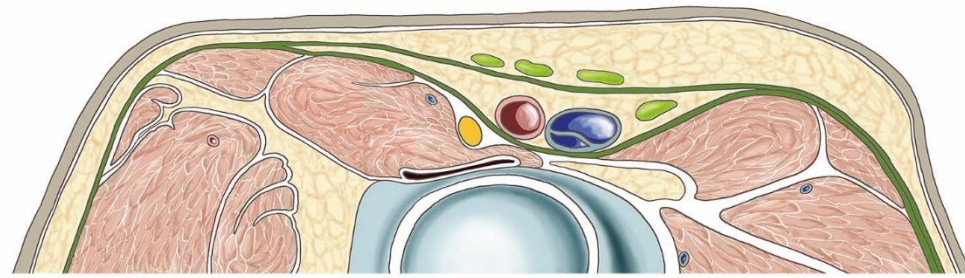
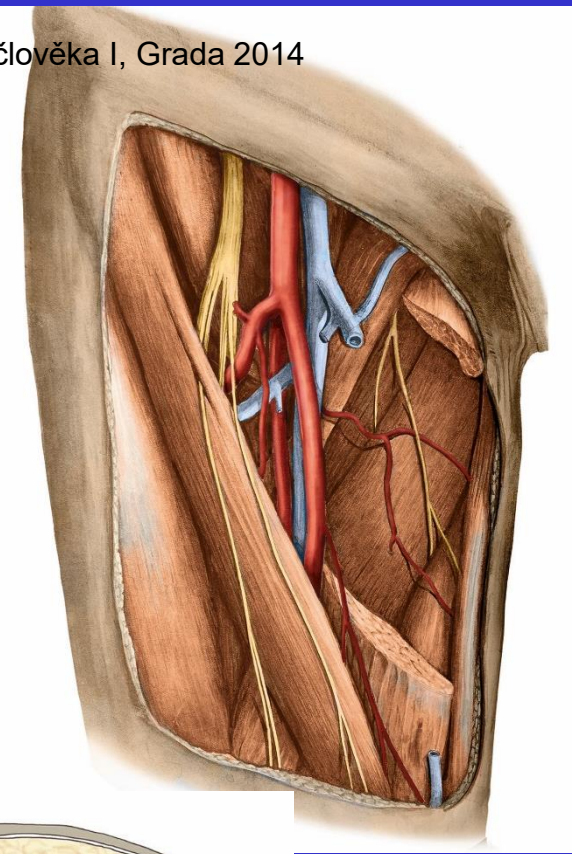
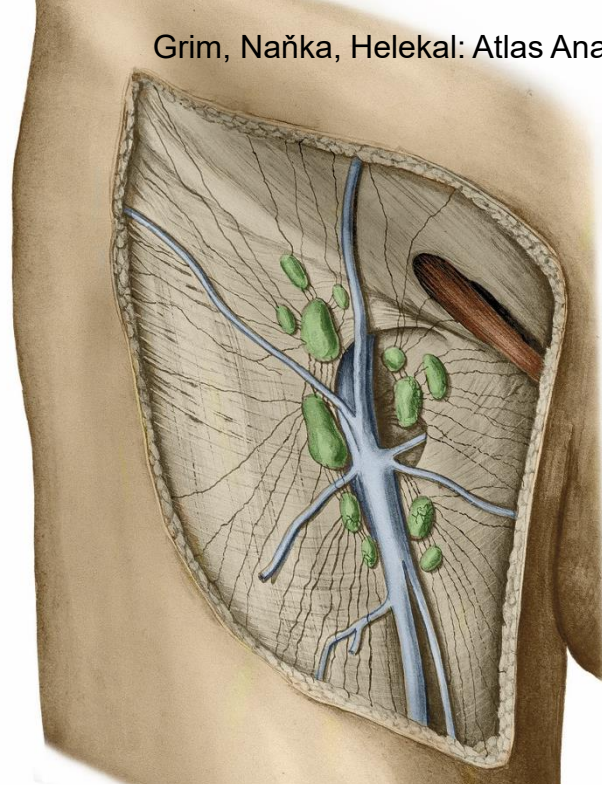
**lacuna vasorum** – vasa femoralis

Septum femorale, lig. lacunare

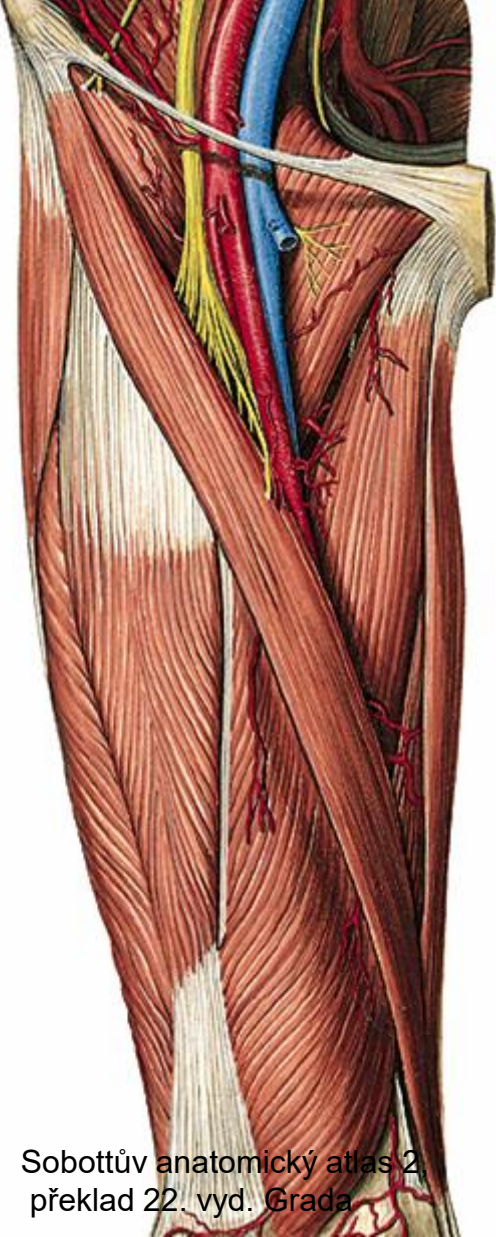




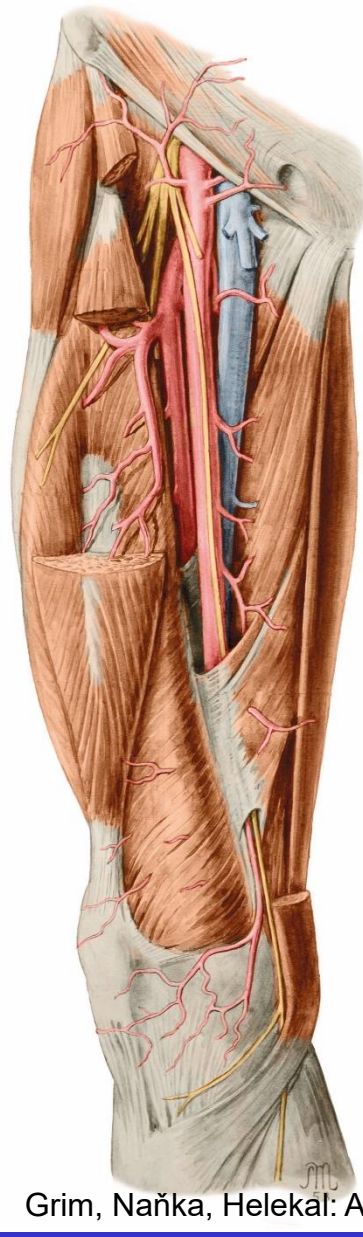
Grim, Naňka, Helekal: Atlas Anatomie člověka I, Grada 2014



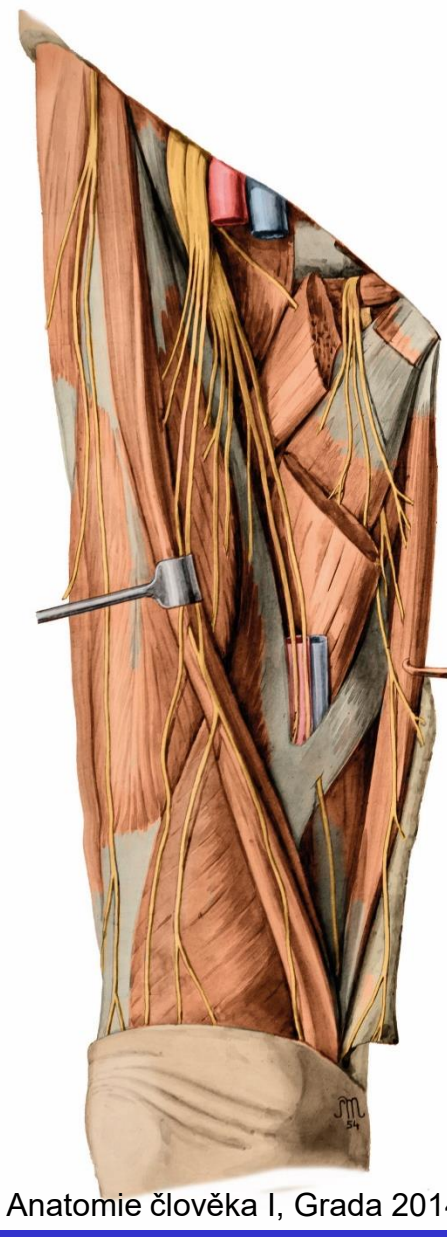
**Hiatus saphenus**  
**Lamina cribrosa fasciae latae**  
**Trigonum femorale**  
**Fossa iliopectinea**



Sobottův anatomický atlas 2.  
překlad 22. vyd. Grada



Grim, Naňka, Helekál: Atlas Anatomie člověka I, Grada 2014



n. saphenus  
a. descendens  
genus

**Trigonum femorale et fossa iliopectinea**  
**Canalis vastoadductorius**  
**Lamina vastoadductoria**

## Zadní skupina („hamstringy“)

m. biceps femoris,  
m. semitendinosus,  
m. semimembranosus,

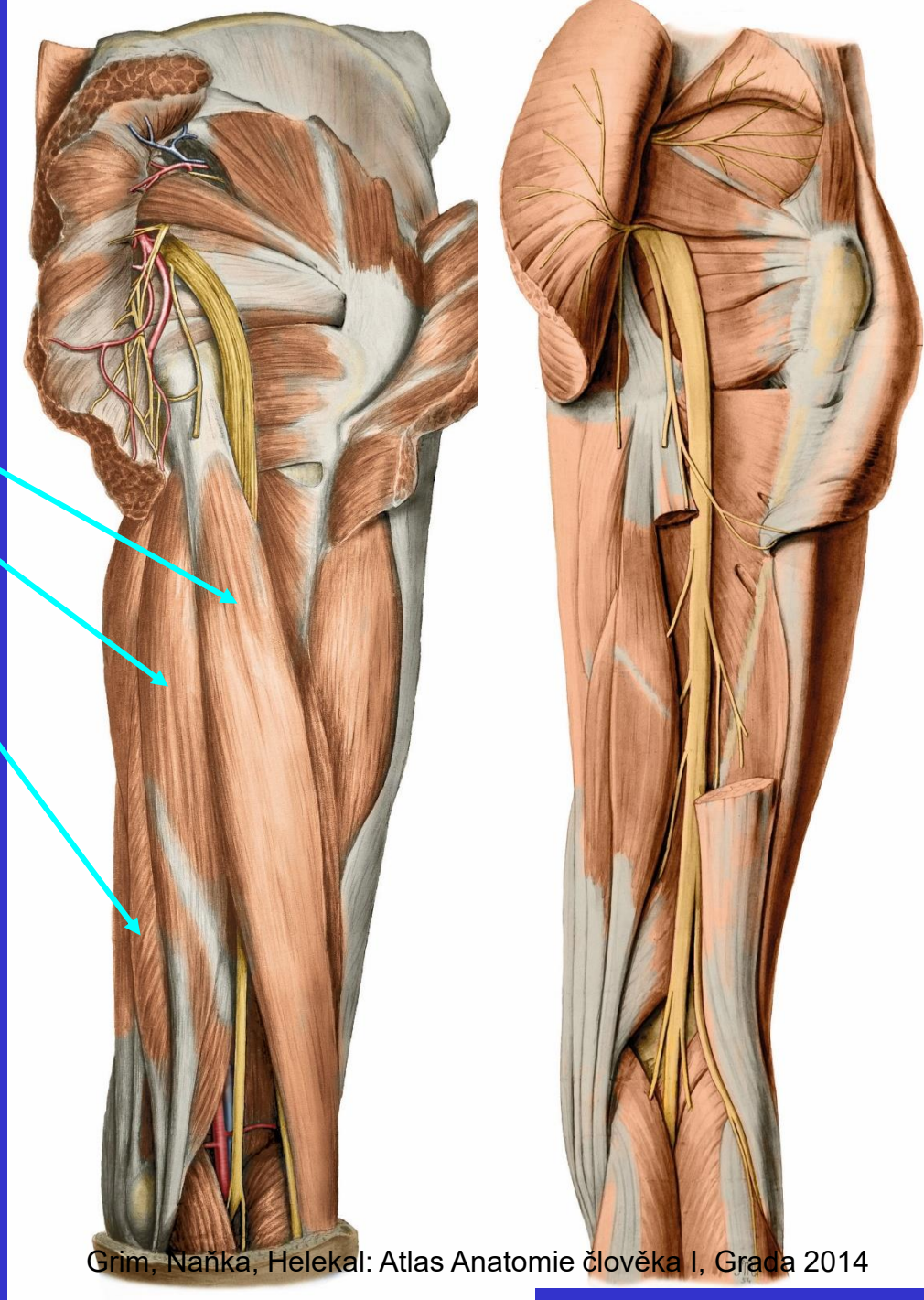
## n. ischiadicus

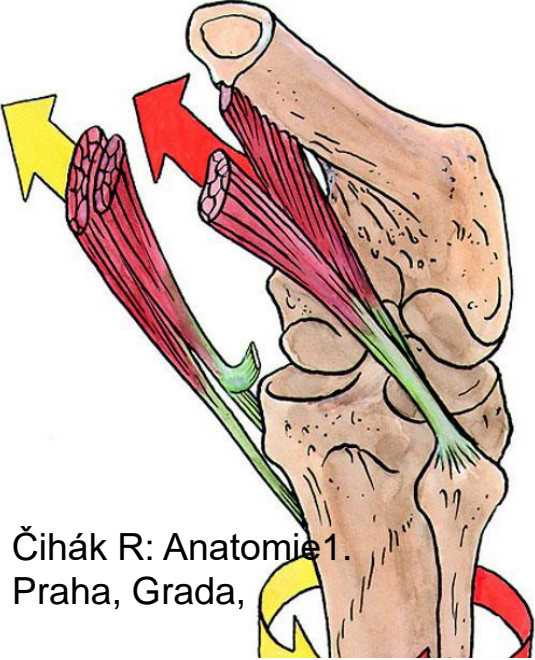
## Pes anserinus superficialis

m. sartorius  
m. gracilis  
m. semitendinosus

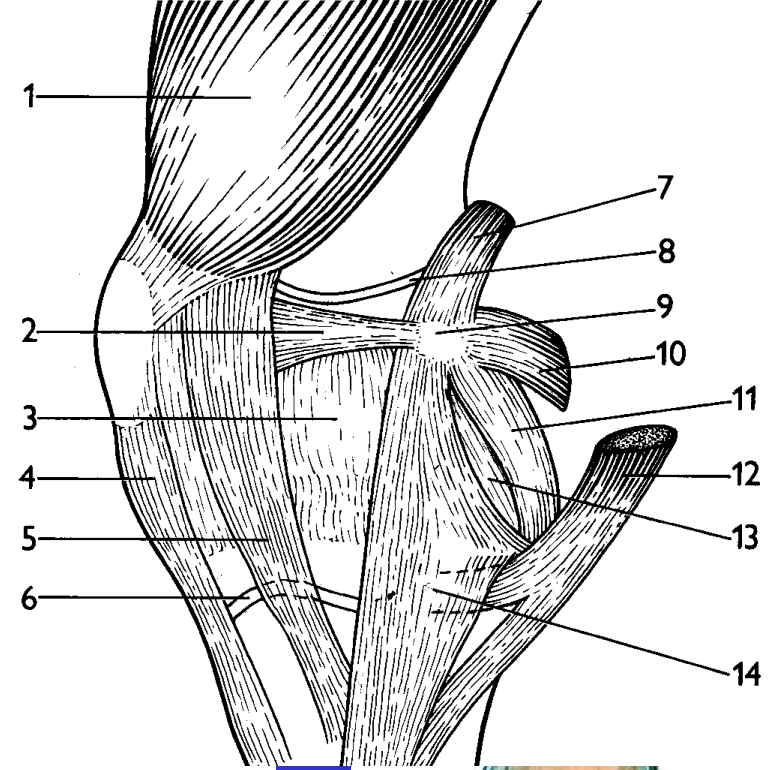
## Pes anserinus profundus

úpon. m. semimembranosus  
Lig. popliteum obliquum



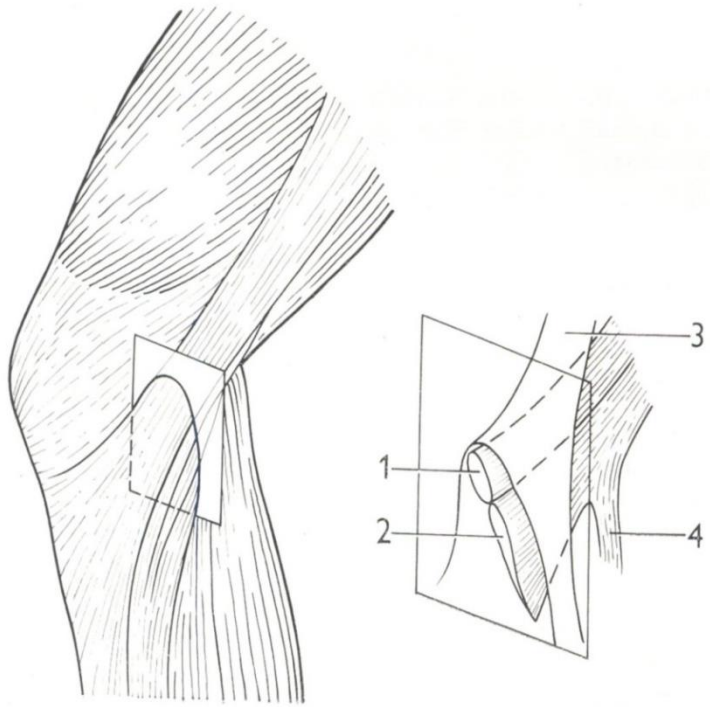


Čihák R: Anatomie 1.  
Praha, Grada,



**Pes anserinus superficialis**  
 m. sartorius  
 m. gracilis  
 m. semitendinosus

Čihák R: Anatomie 1.  
Praha, Grada,



**Pes anserinus profundus**  
 úpon. m. semimembranosus  
 Lig. popliteum obliquum

**Obr. 9.** Uspořádání pes anserinus:  
 1 — šlacha m. gracilis, 2 — šlacha m. semitendinosus, 3 — šlacha m. sartorius, 4 — část šlachy m. semitendinosus vyzařující do bércevé fascie.

# Svaly kyčle a jejich funkční rozdělení

## Flexory Fem

IP, Sar, RF, TFL

Vnitřní rotace  
GMi, Me, TFL, **GS+I**  
Gr, AdM, Pect **F,O,I**

## Adduktory Ob+Is

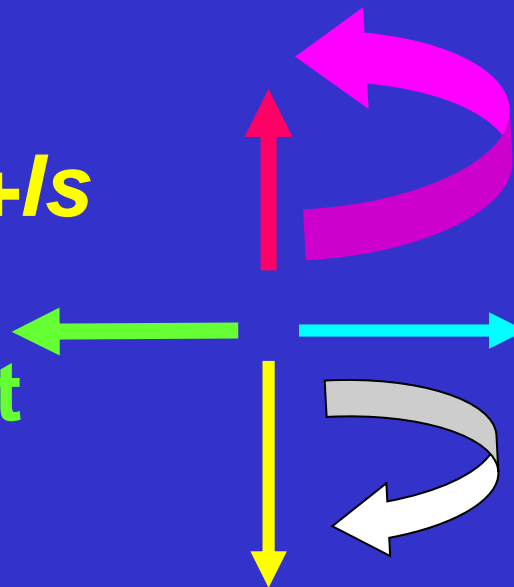
AdL, AdBr,  
AdM, Gr, Pect

Abduktory GS+I  
TFL, Glutei

Extensory  
Glu Max  
Hamstringy  
**GI+I**

## Zevní rotace

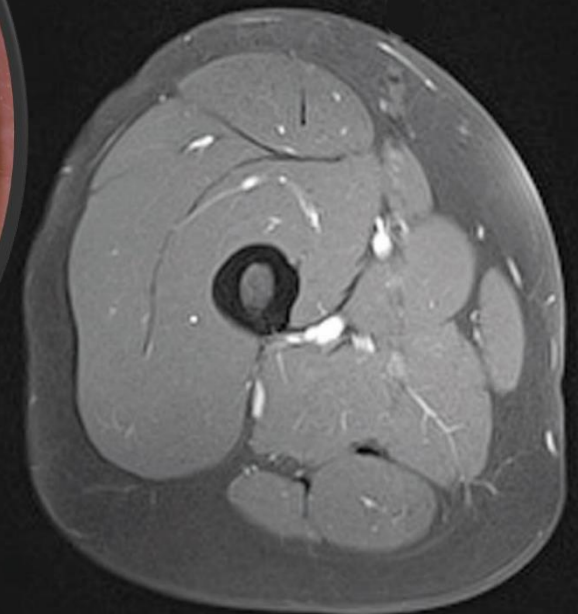
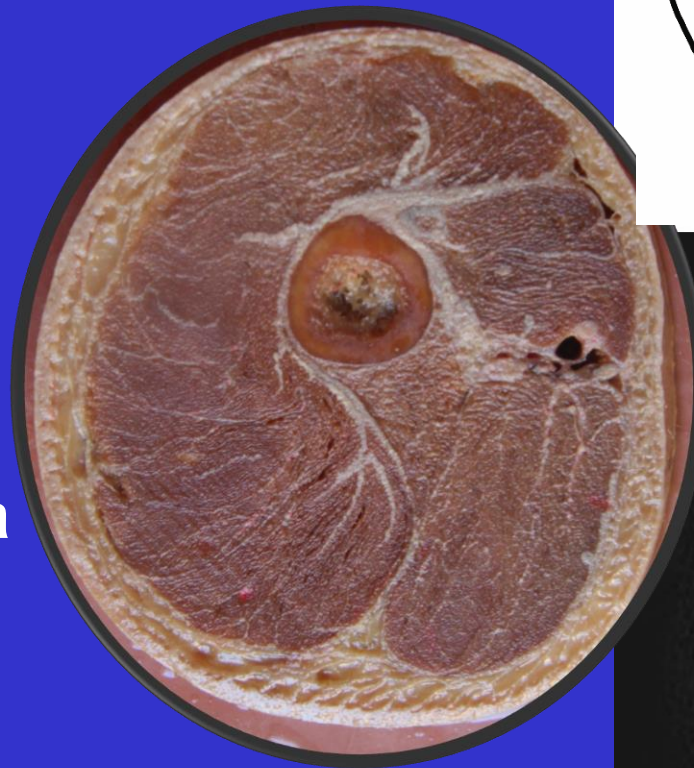
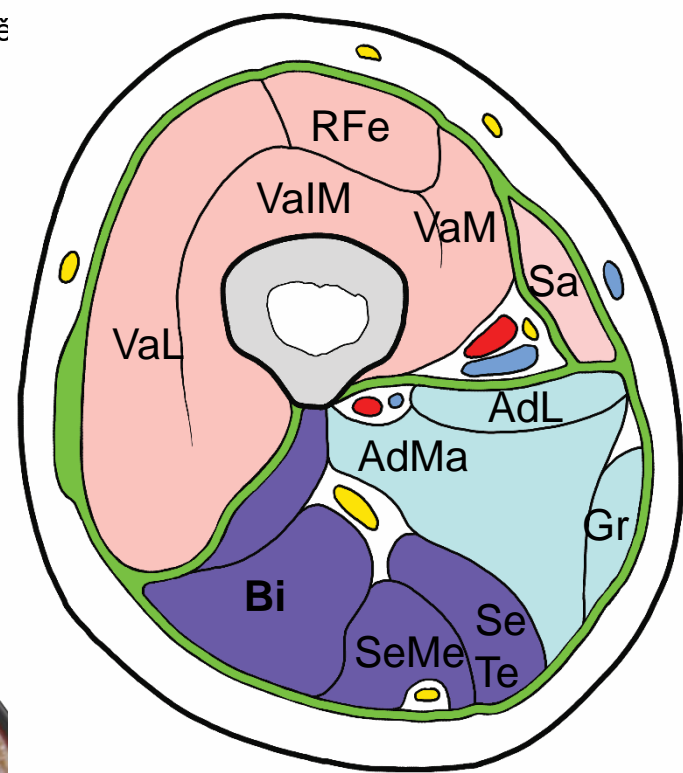
Pir, ObIn, ObEx,  
GeSup, GeIn, Qt Fe  
+Glu **PISac, GS**

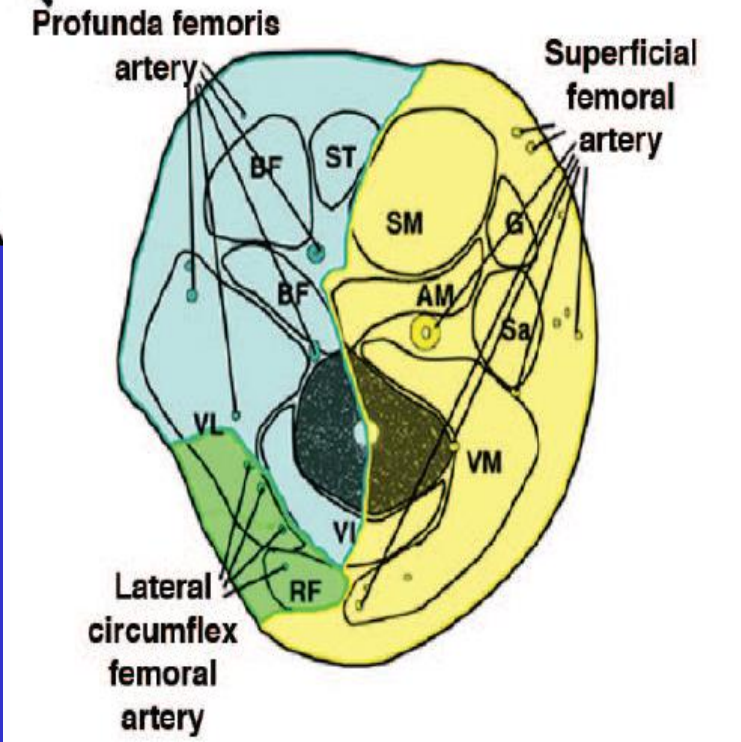
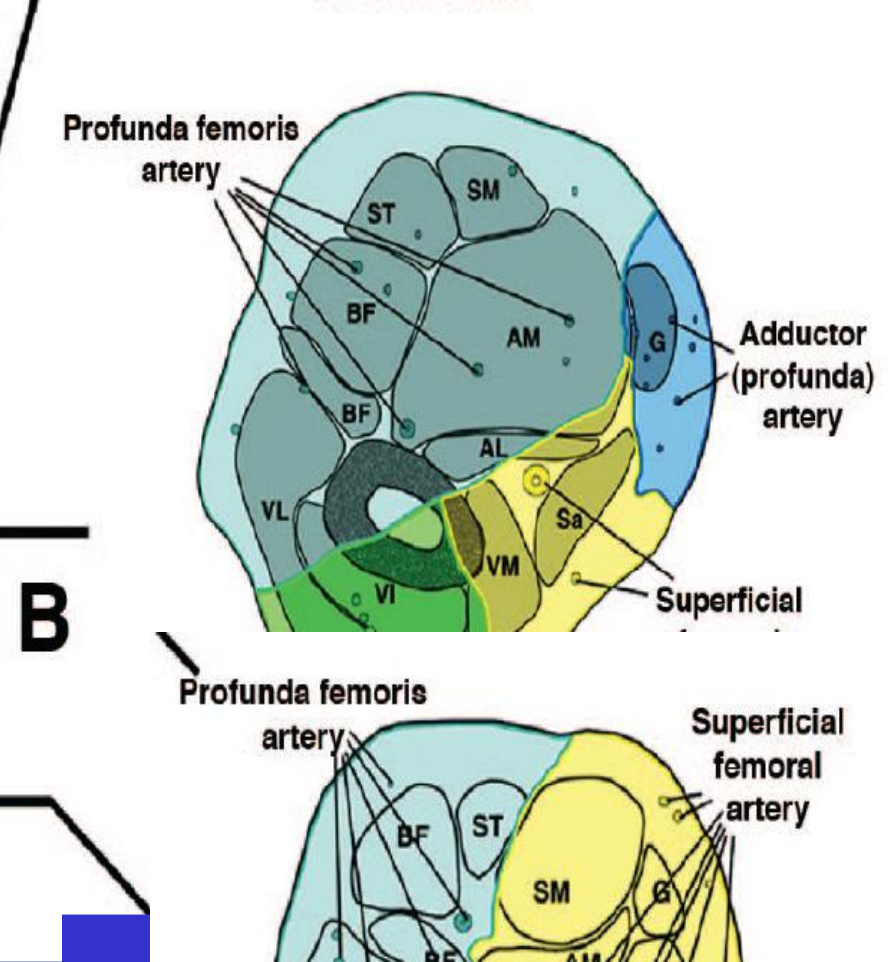
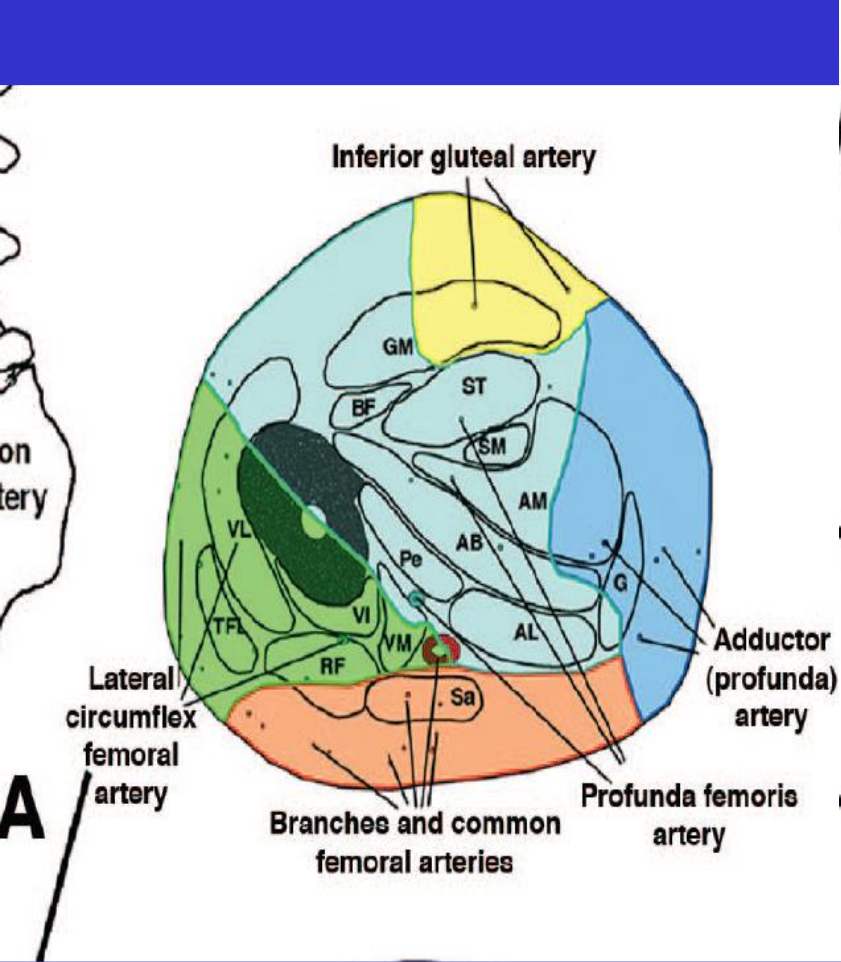


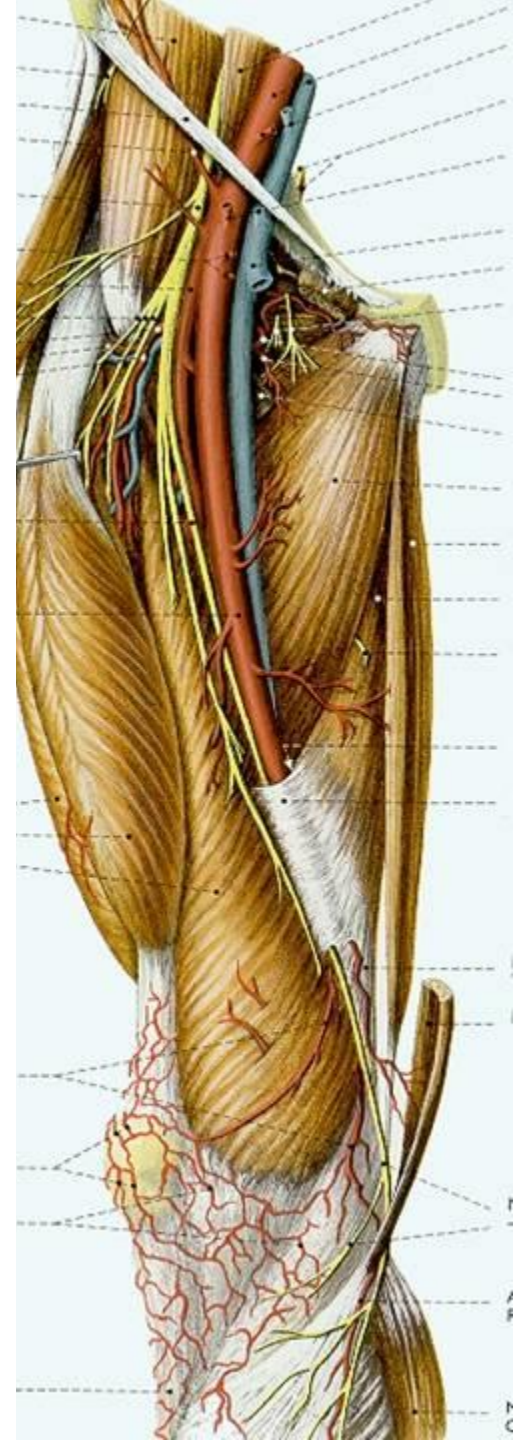
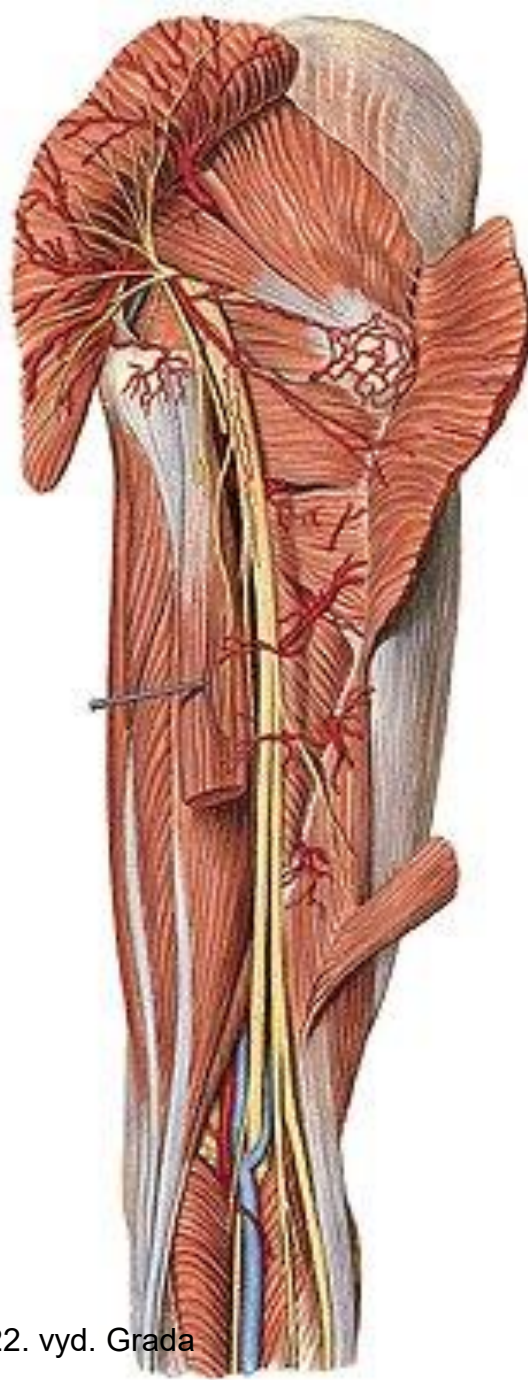
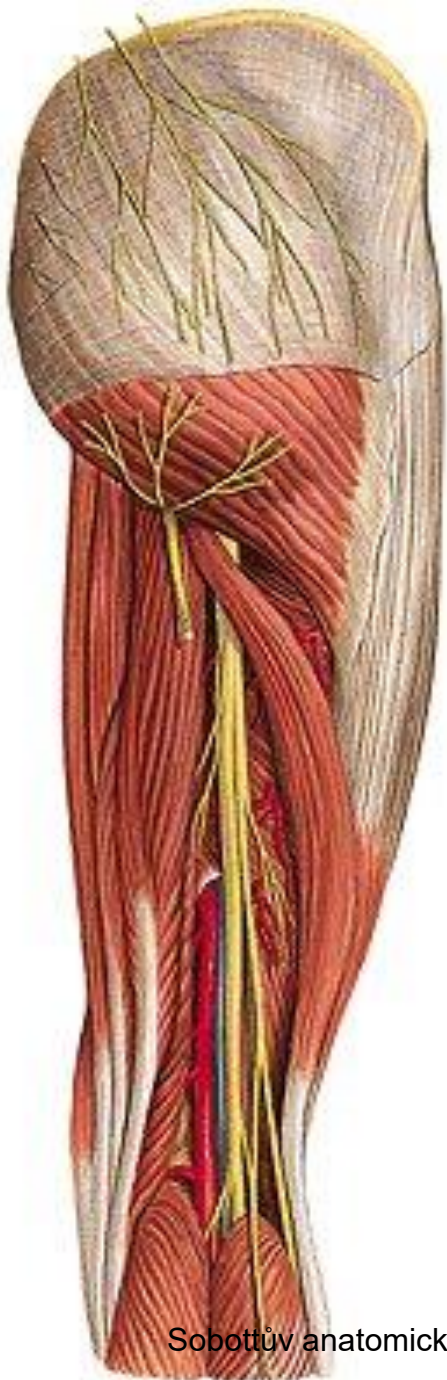
Fascia lata,  
tractus iliotibialis,  
septum femorale  
intermusculare  
laterale;  
septum mediale—  
jen splývající  
fascie

Hiatus saphenus  
*Trigonum  
femorale*  
Fossa iliopectinea  
*Canalis  
adductorius*

vasa femoralia  
n. saphenus  
n. obturatorius  
n. ischiadicus

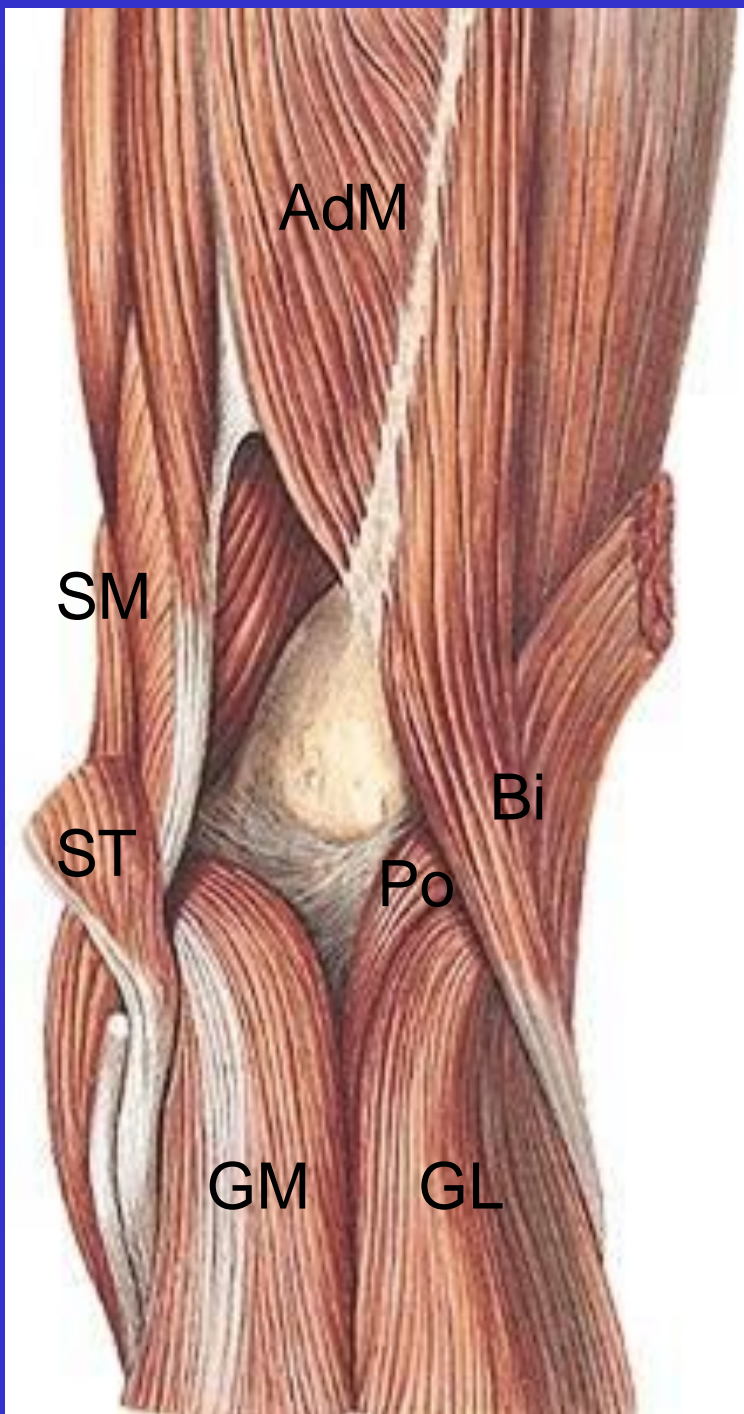






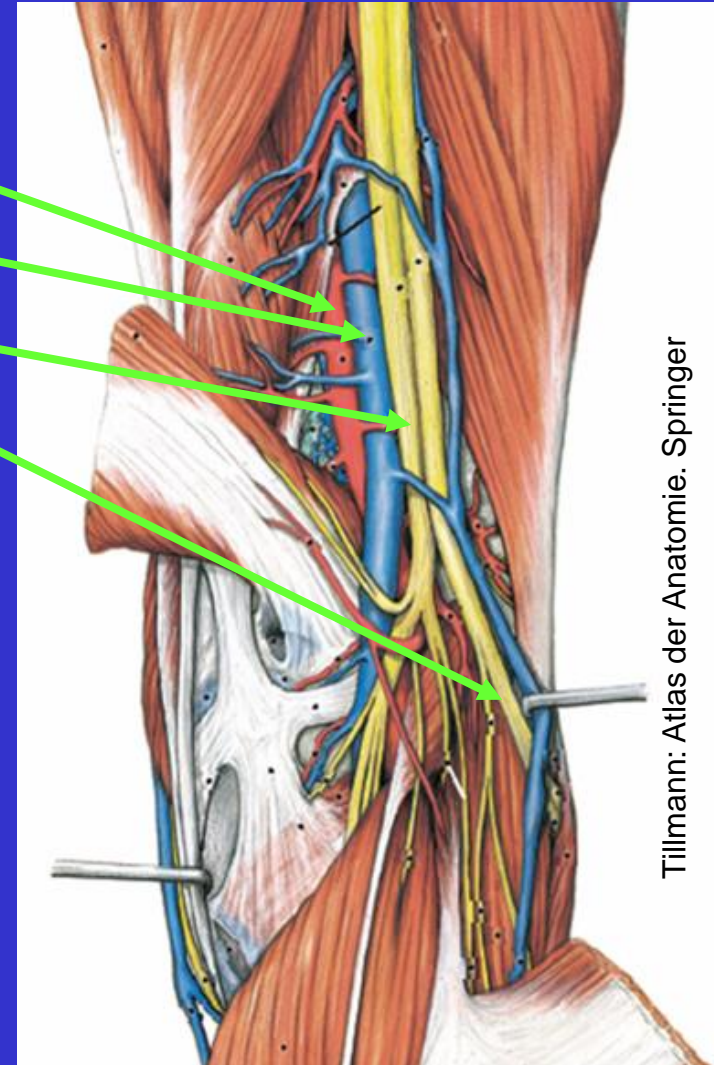
Sobottův anatomický atlas 2, překlad 22. vyd. Grada





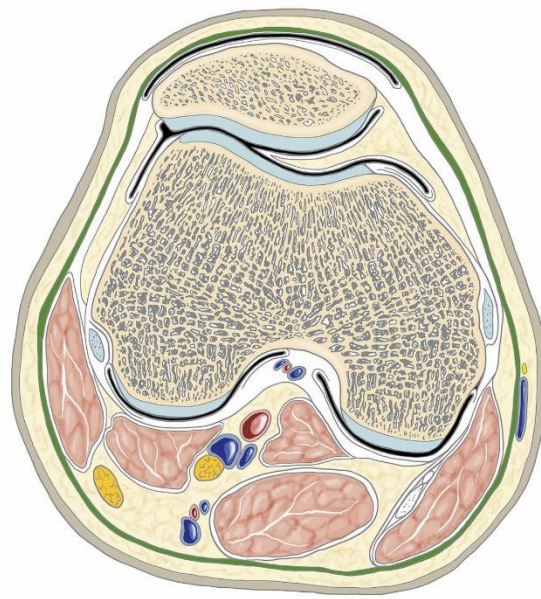
**Fossa poplitea, hiatus adductorius  
a. + v. poplitea, n. tibialis,  
n. peroneus communis,  
m. popliteus**

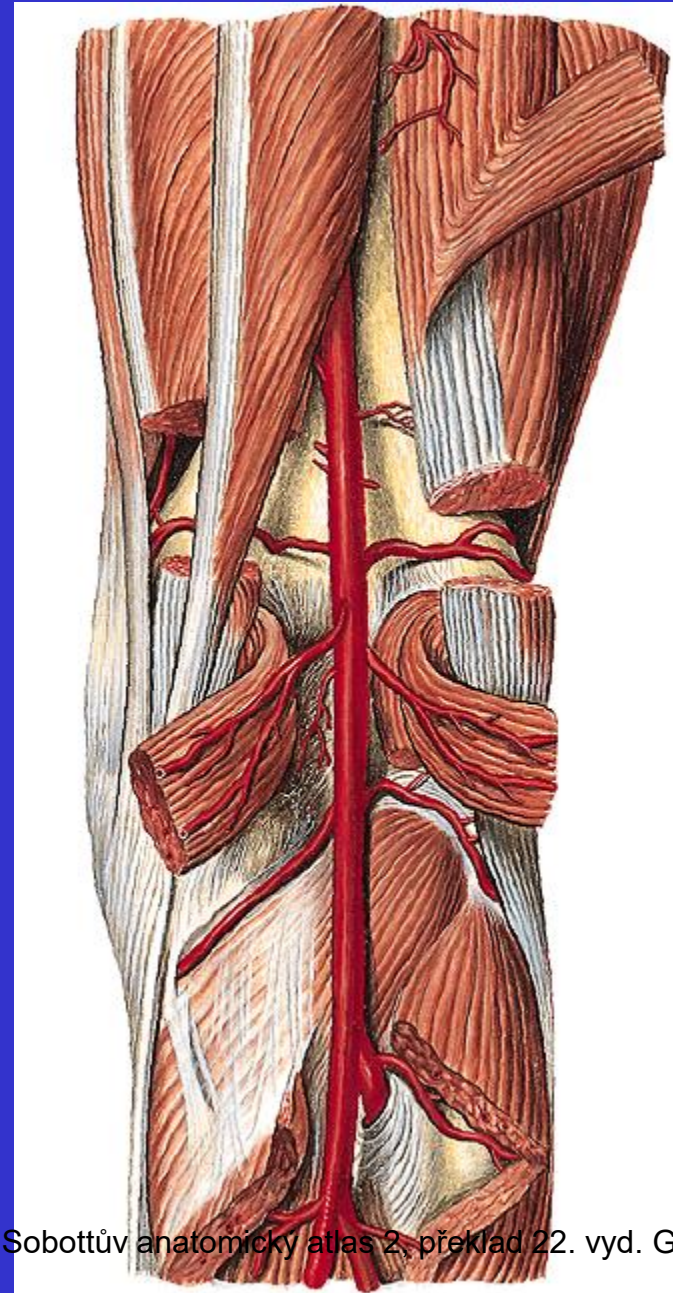
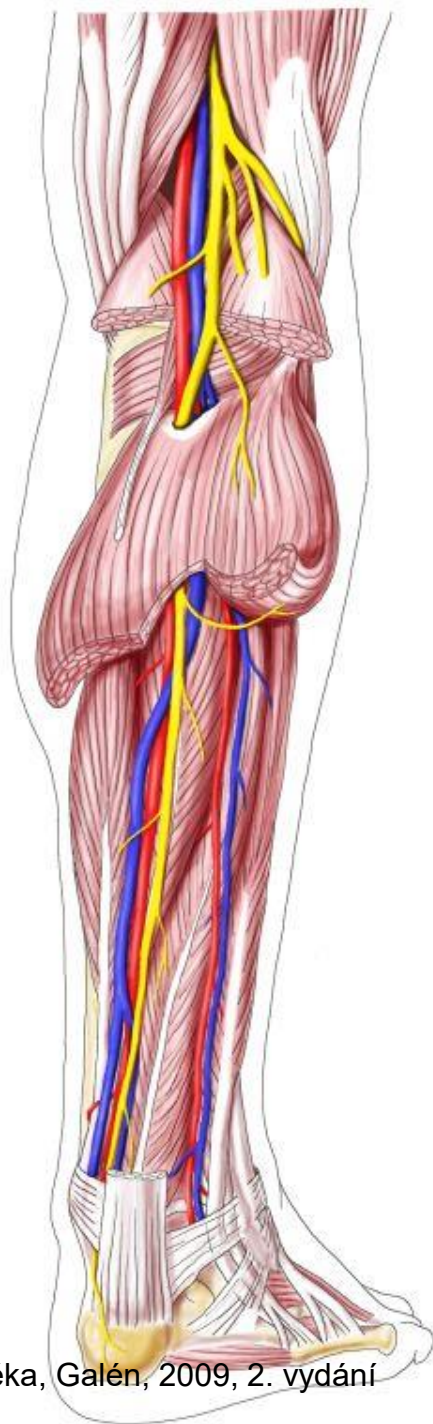
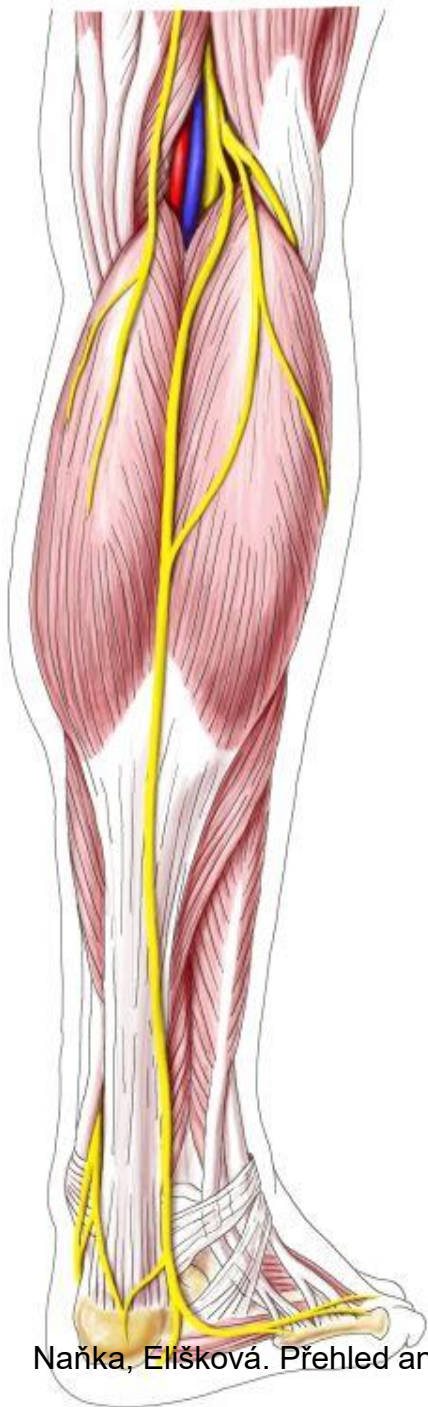
**A. poplitea  
V. poplitea  
N. tibialis  
N. peroneus  
communis**



A. poplitea  
V. poplitea  
N. tibialis

N. peroneus  
communis





Sobottův anatomický atlas 2, překlad 22. vyd. Grada

Naňka, Elišková. Přehled anatomie člověka, Galén, 2009, 2. vydání

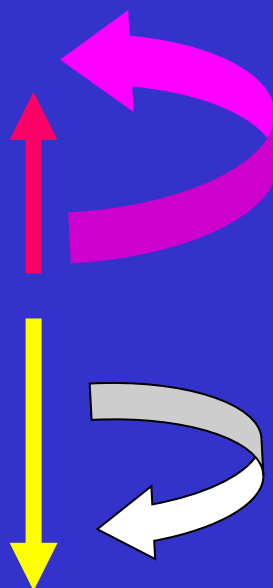
# Svaly kolene a jejich funkční rozdělení

## Flexory *Is*

Bic, SemiTe, SemiMe, GM+L

## Vnitřní rotace *Is*

SemiTe, SemiMe, Popliteus



## Zevní rotace *Is + Gl*

Bic, TFL

## Extensory

Quadriceps *Fe*

# Svaly bérce

Dorsální skupina  
povrchová vrstva

m. triceps surae

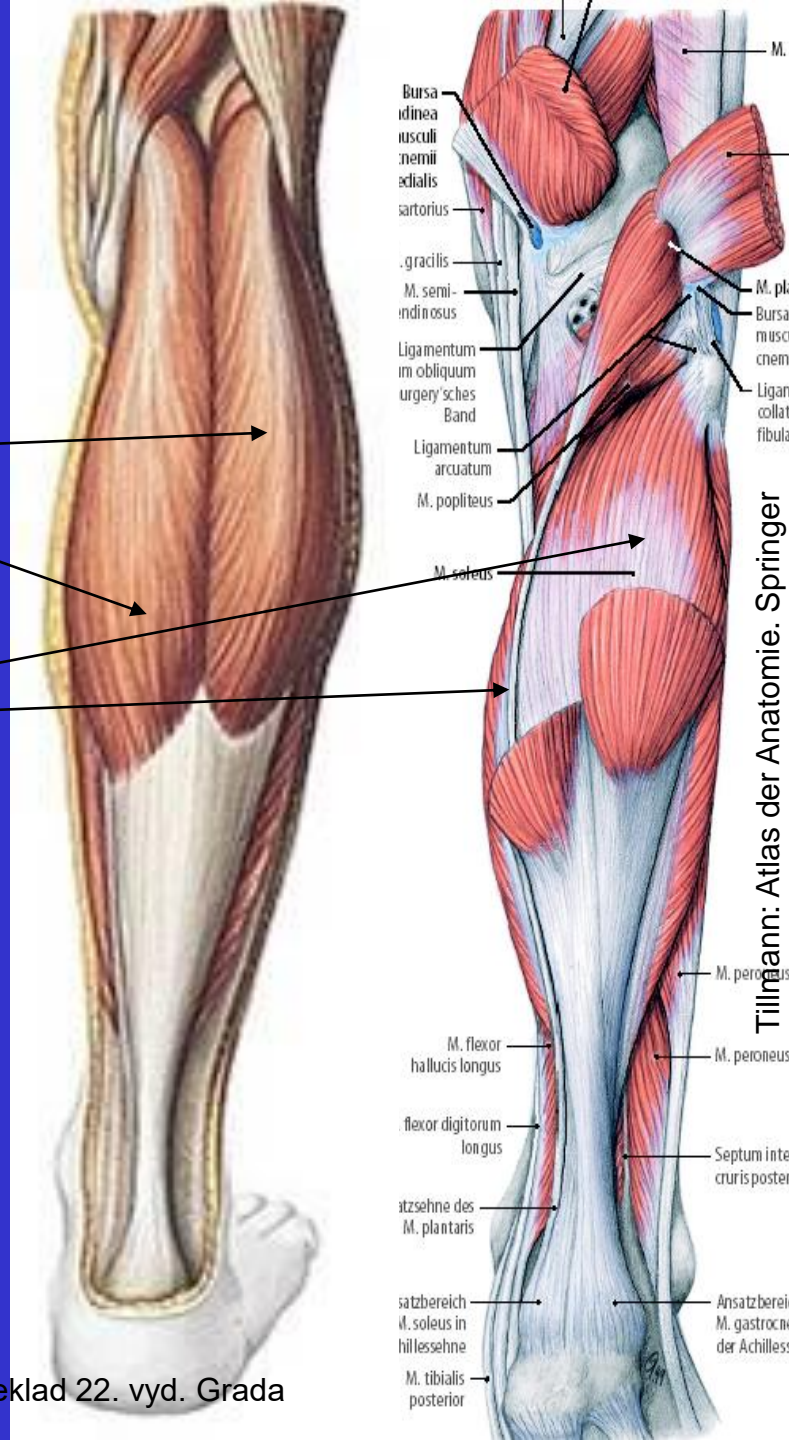
- m. gastrocnemius lat.
- m. gastrocnemius med.
- m. soleus

m. plantaris

hluboká vrstva

- m. tibialis posterior
- m. flexor digitorum longus
- m. flexor hallucis longus

inervace n. tibialis



Tillmann: Atlas der Anatomie. Springer

# Dorsální skupina

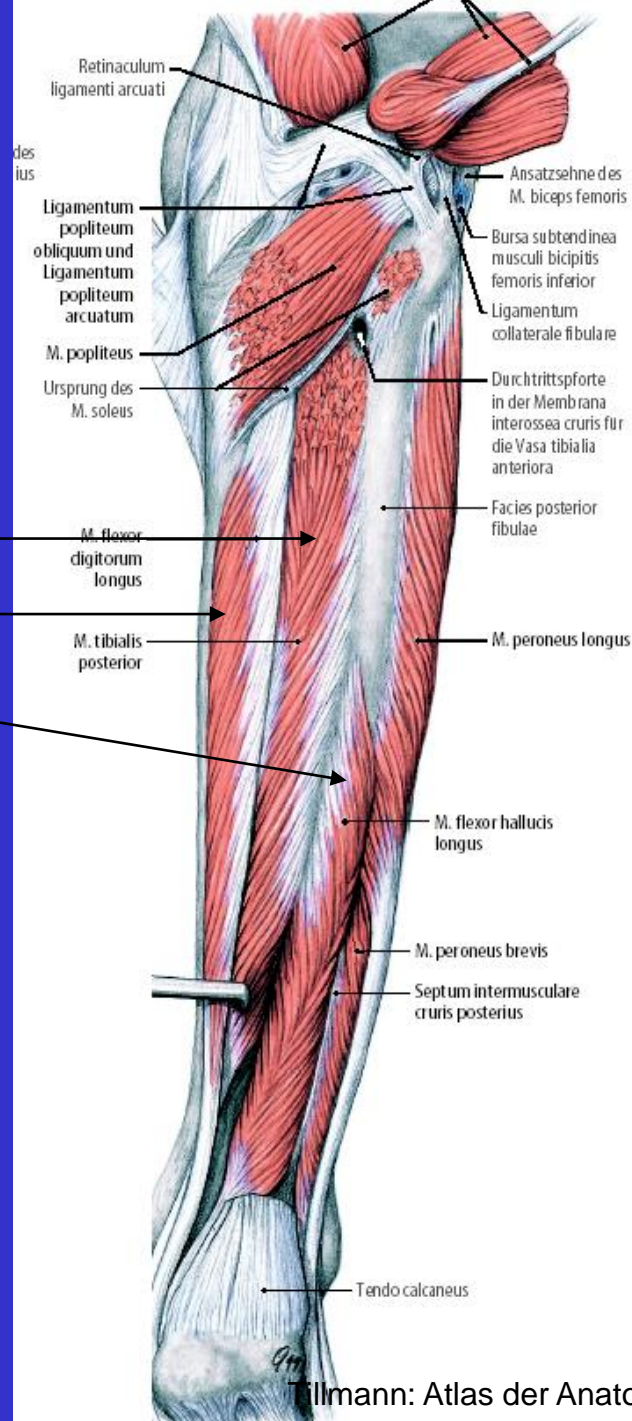
## hluboká vrstva

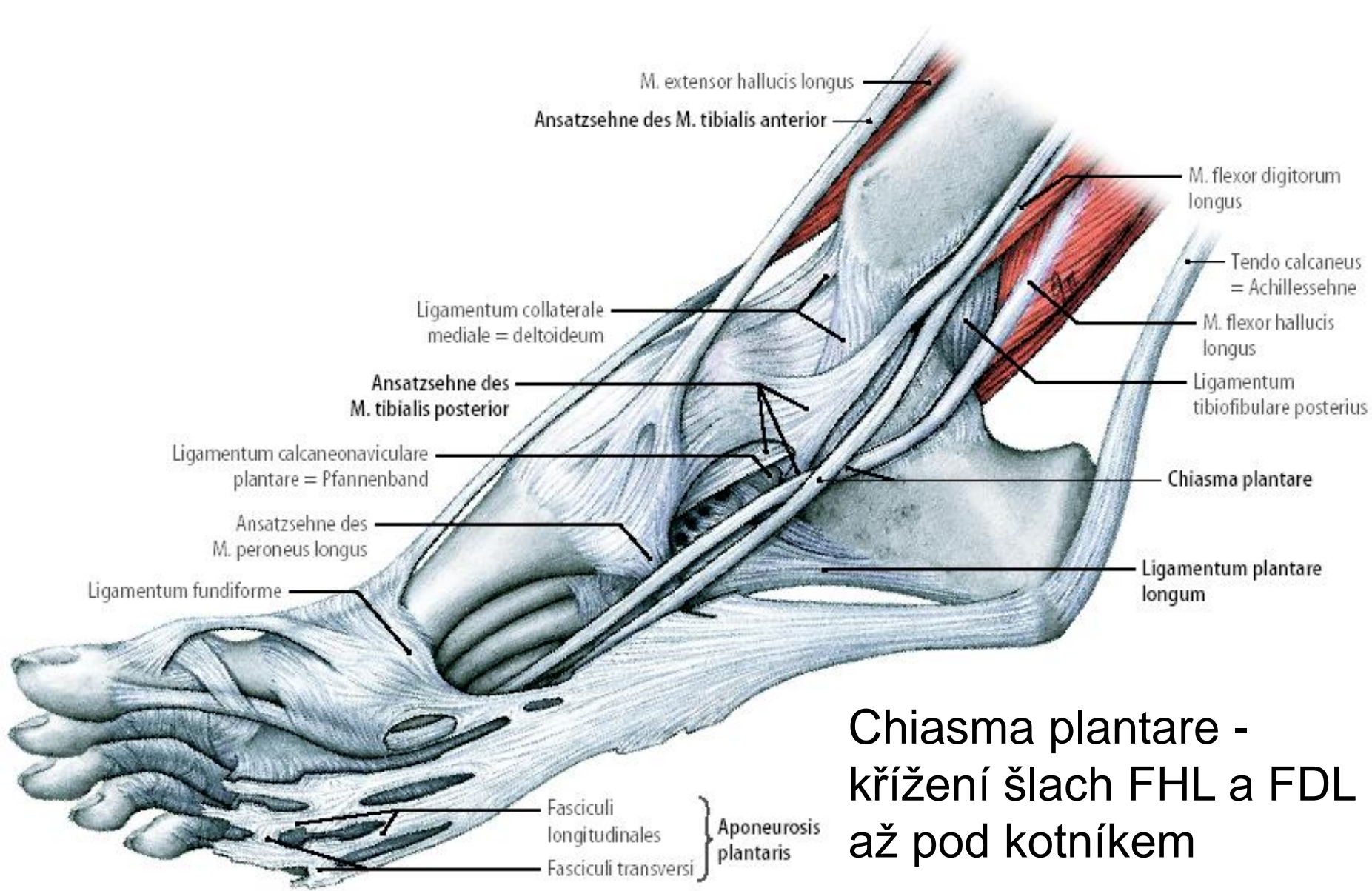
m. tibialis posterior

m. flexor digitorum longus

m. flexor hallucis longus

inervace n. tibialis





Chiasma plantare -  
 křížení šlach FHL a FDL  
 až pod kotníkem

## Svaly bérce

laterální skupina

(n. peroneus superficialis)

m. peroneus longus  
et brevis

CAVE - m. peroneus tertius -  
přidatná šlacha z m. EDL k  
tuberositas MTT. V.







## Ventrální skupina n. peroneus profundus

m. tibialis anterior

m. extensor hallucis longus

m. extensor digitorum longus

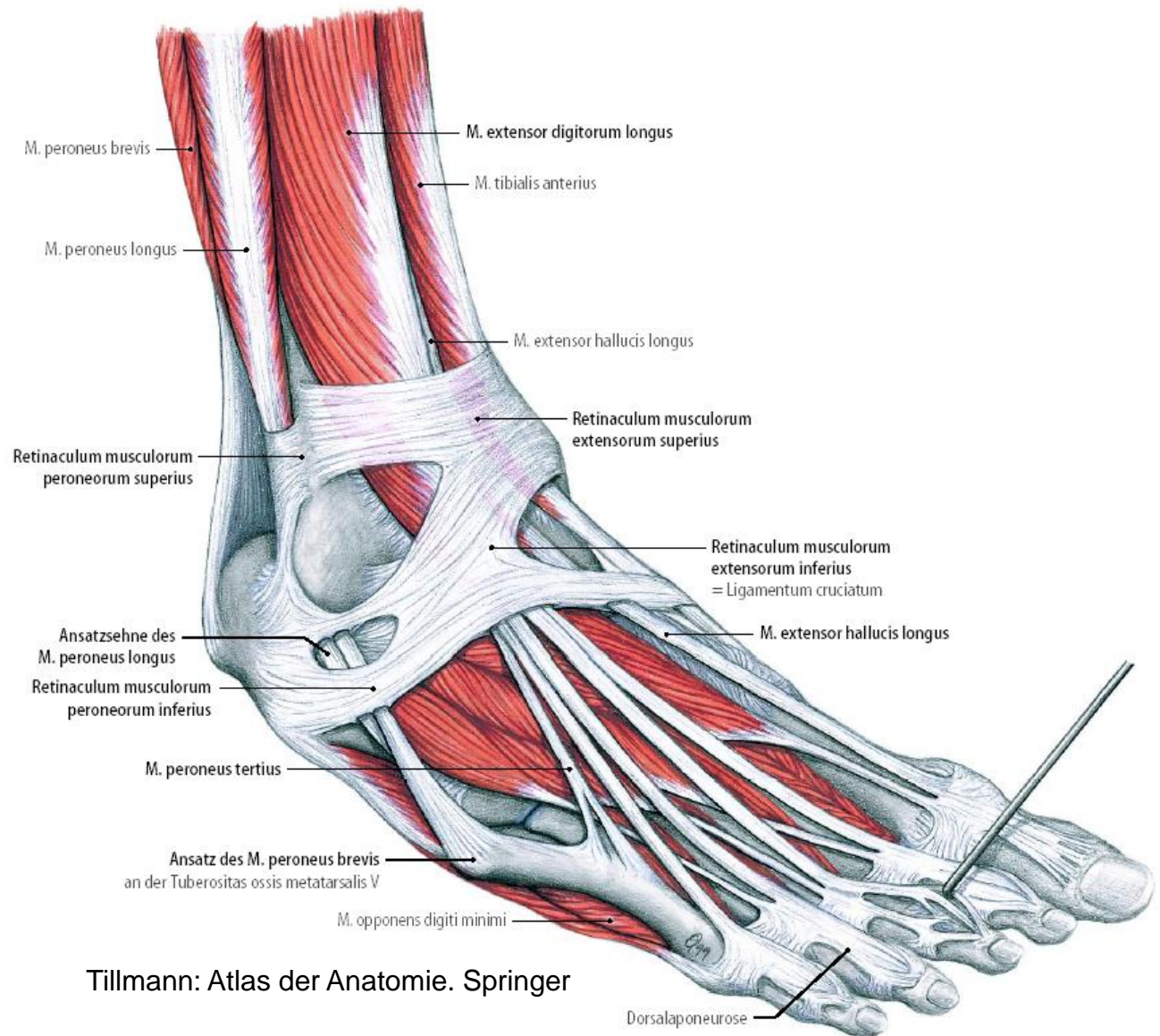
Sobottův anatomický atlas 2, překlad 22. vyd. Grada



**retinaculum  
mm.  
extensorum  
sup. et inf.**

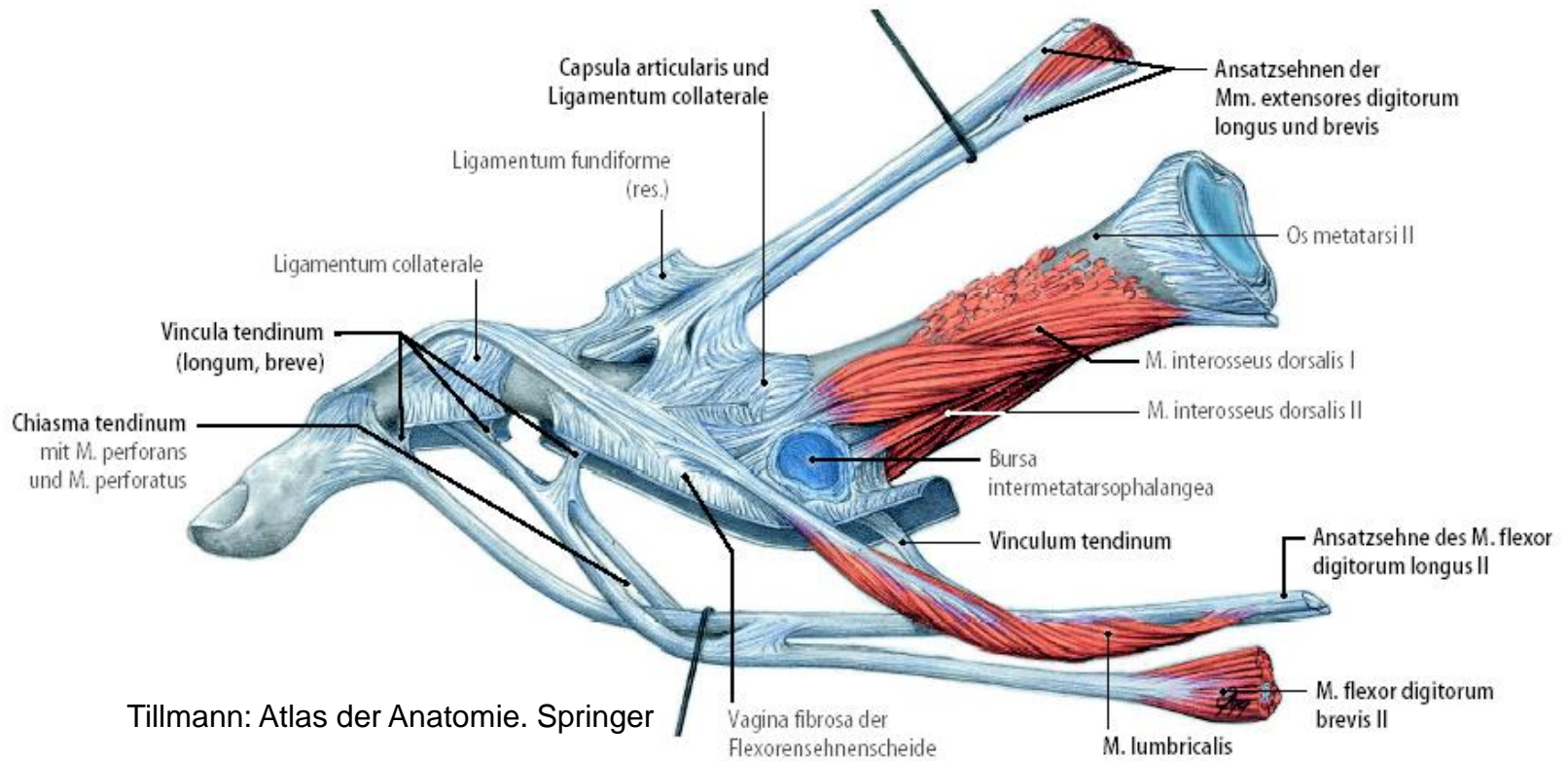
vaginae  
tendinum  
tarsales ant.

a. tibialis ant.  
n. tibialis  
n. peroneus  
prof.



Tillmann: Atlas der Anatomie. Springer

# retinaculum mm. peroneorum superius et inferius



Tillmann: Atlas der Anatomie. Springer

# A. poplitea

a. genus sup. m. + l.

a. genus media

a. genus inf. m. + l.

a. tibialis posterior

a. peronea

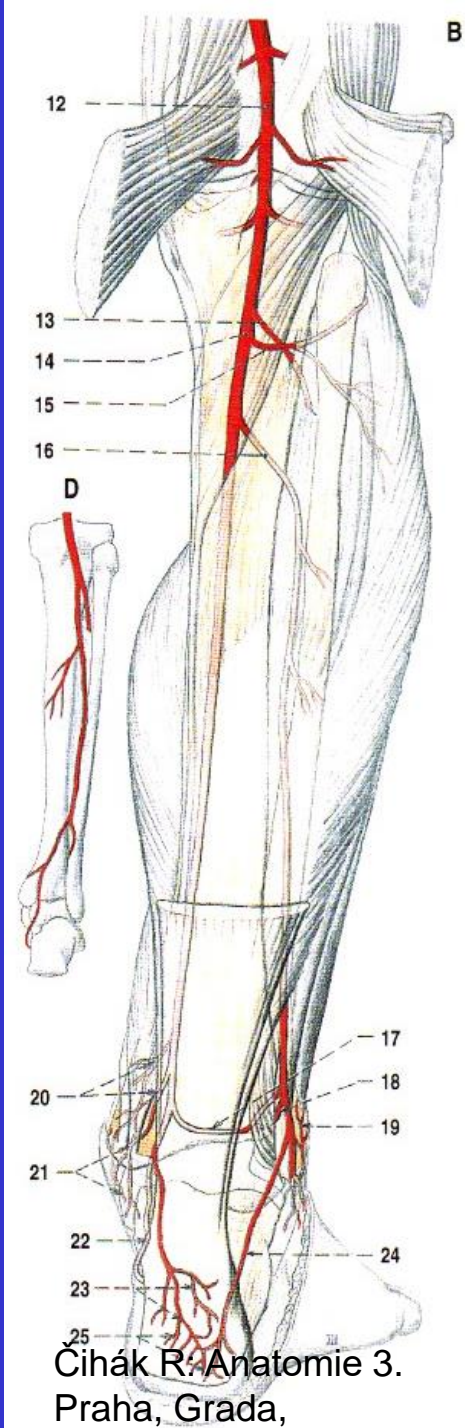
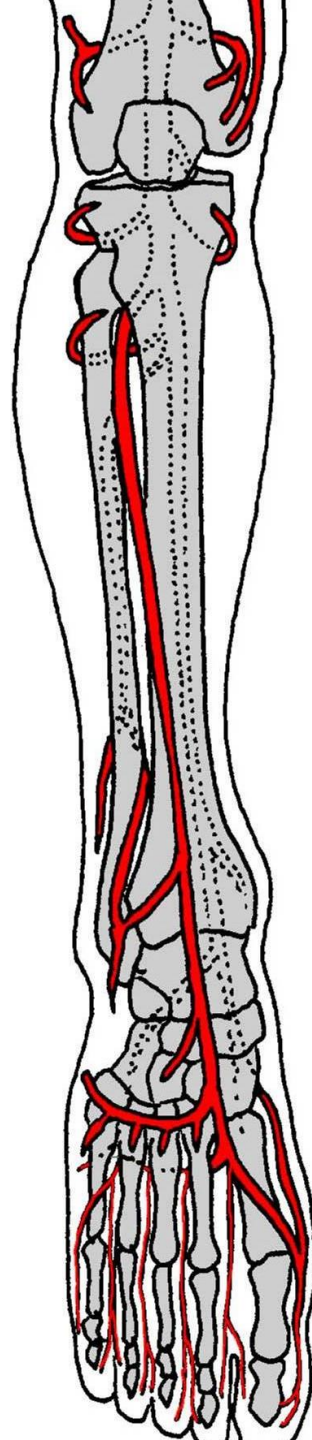
a. plantaris med.

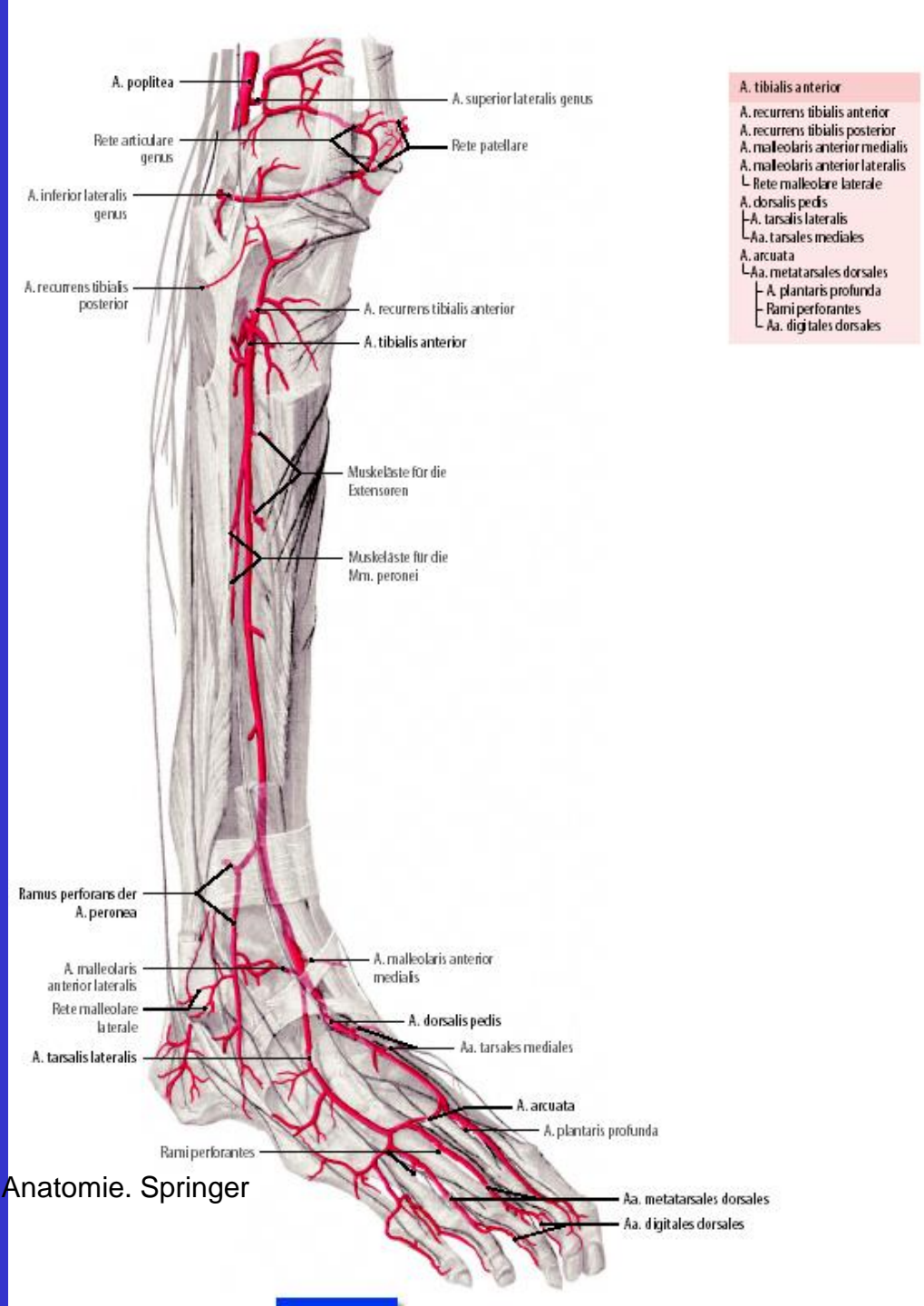
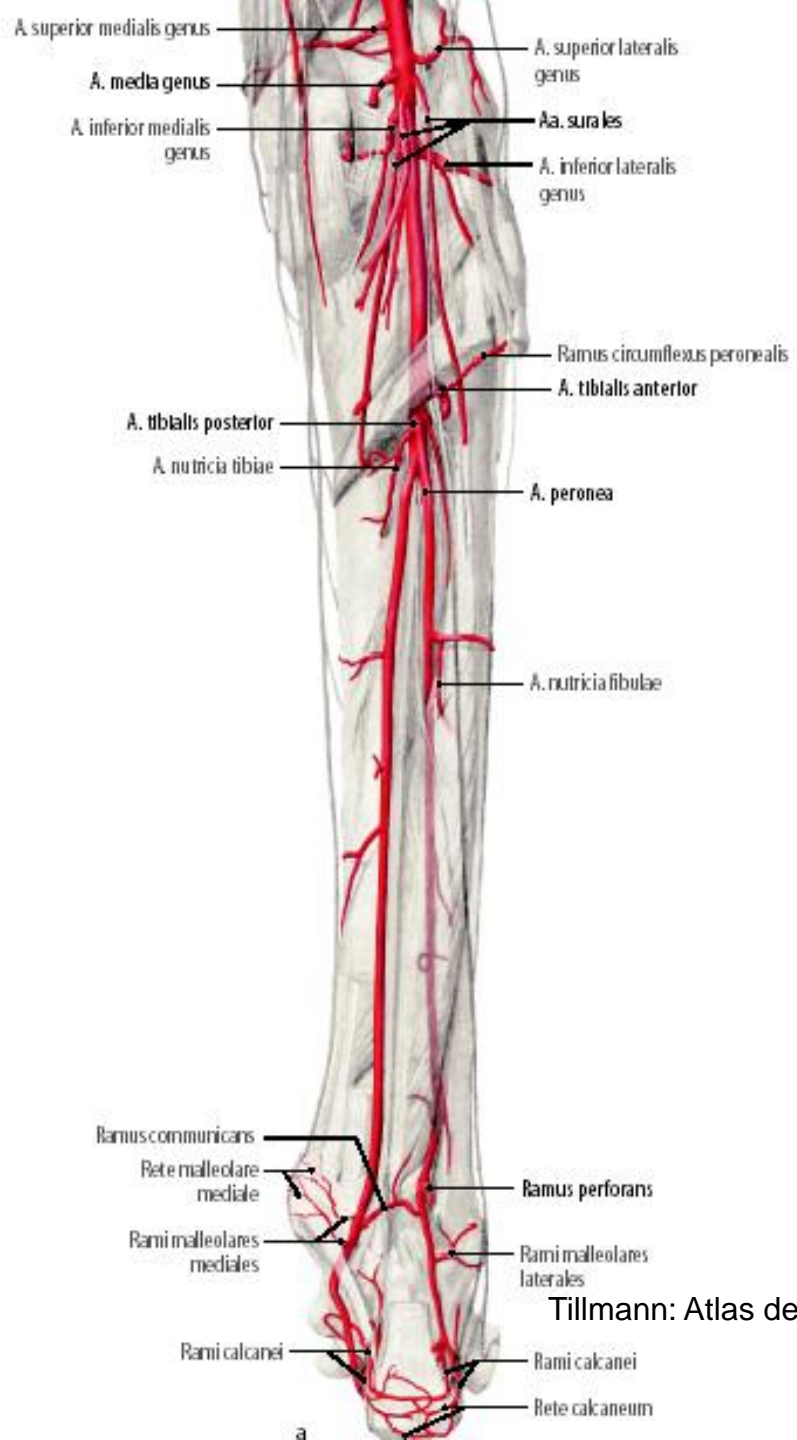
a. plantaris lat.

a. tibialis anterior

a. malleolaris ant. med.

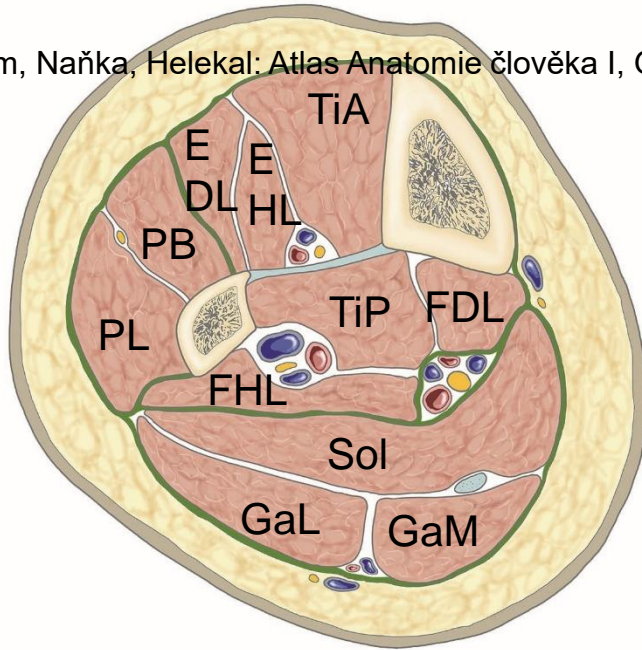
a. malleolaris ant. lat.





- A. tibialis anterior
- A. recurrens tibialis anterior
- A. recurrens tibialis posterior
- A. malleolaris anterior medialis
- A. malleolaris anterior lateralis
- └ Rete malleolare laterale
- A. dorsalis pedis
- └ A. tarsalis lateralis
- └ Aa. tarsales mediales
- A. arcuata
- └ Aa. metatarsales dorsales
- └ A. plantaris profunda
- └ Rami perforantes
- └ Aa. digitales dorsales

Tillmann: Atlas der Anatomie. Springer



vasa tibialia ant.  
n. peroneus profundus

vasa tibialia post.  
n. tibialis vasa peronea

n. peroneus superf.

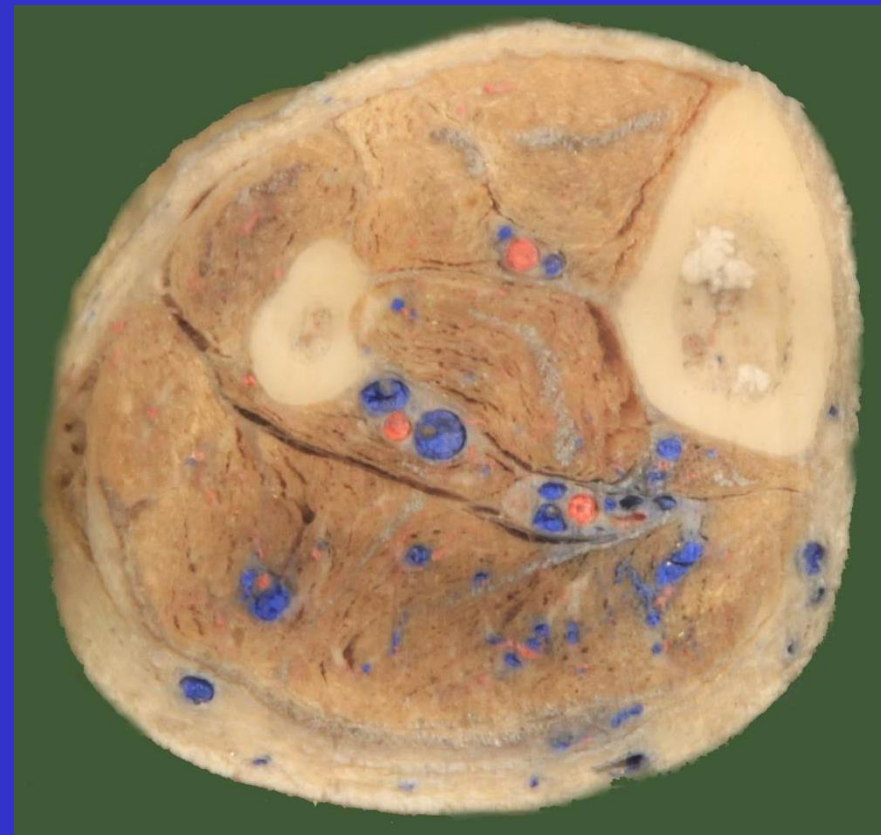
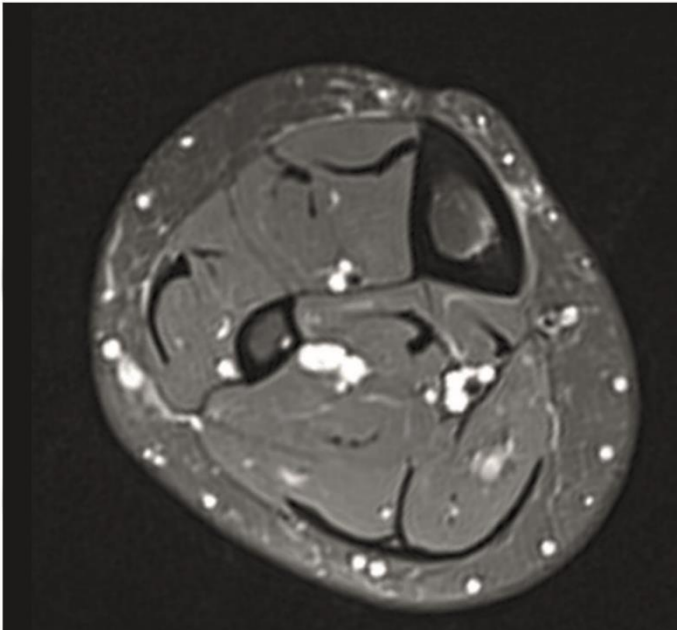
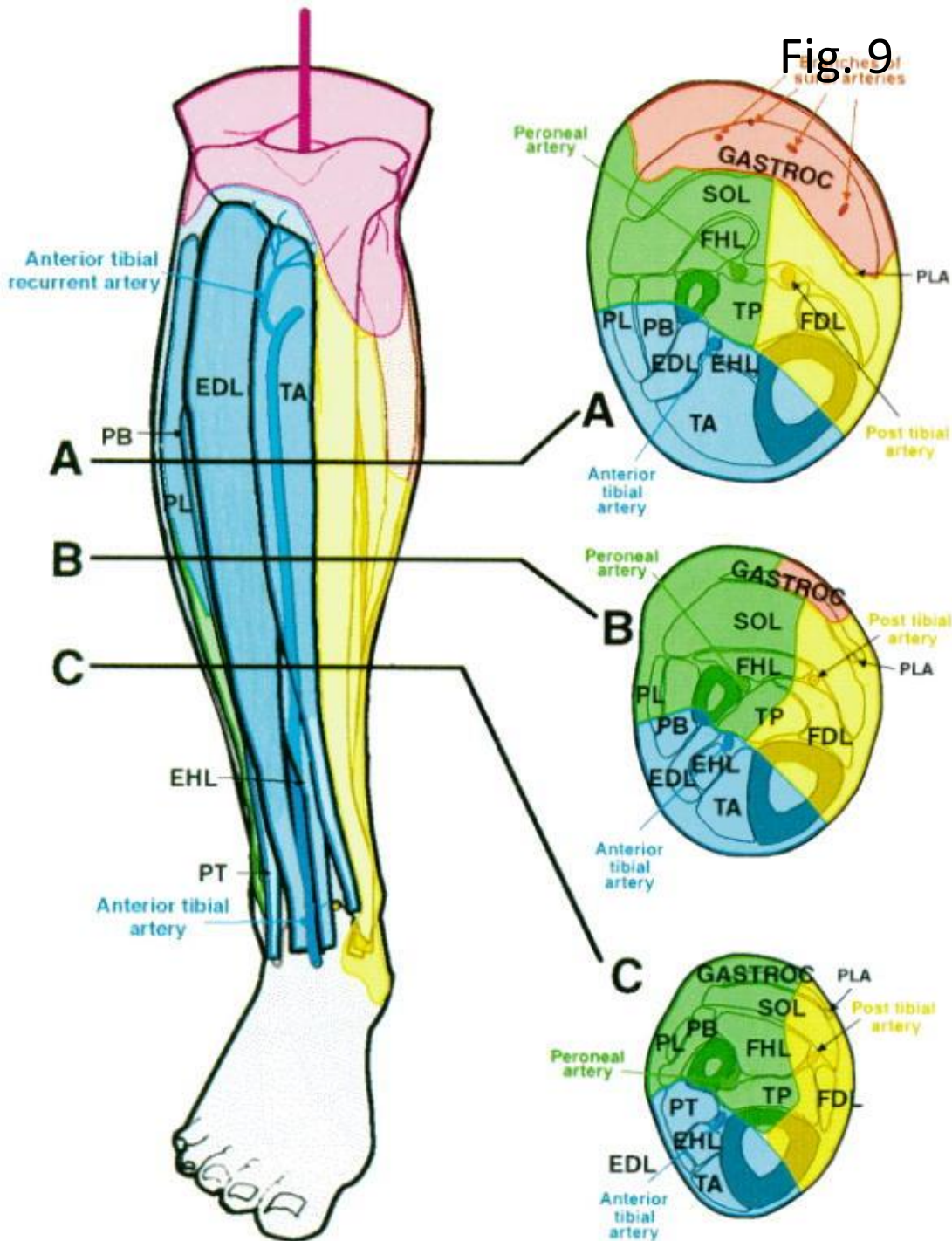


Fig. 9



**Angiosomes of the Leg: Anatomic Study and Clinical Implications.**

Taylor, G; Pan, Wei

Plastic & Reconstructive Surgery. 102(3):599-616, September 1998.

Fig. 9 . Anterior view of the leg with cross-sections at three levels, viewed distally. They show the angiosomes of the anterior tibial (blue), posterior tibial (yellow), peroneal (green), and sural (orange) angiosomes. Note that, in each case, the angiosome territories extend from the skin to the bone and their borders, defined by anastomotic vessels, and meet usually within tissues, especially the muscles, rather than between them. EDL, extensor digitorum longus; EHL, extensor hallucis longus; FDL, flexor digitorum longus; FHL, flexor hallucis longus; GASTROC, gastrocnemius; PB, peroneus brevis; PL, peroneus longus; PLA, plantaris; PT, peroneus tertius; SOL, soleus; TA, tibialis anterior; TP, tibialis posterior.



# Pohyby hlezna

Plantární Flexe *Ti, PeProf*

*Tri, FHL, PLo, TP, FDL, PBr*



Dorsální flexe *PeSup,*  
*TA, EDL, EHL, PTe*

# Pohyby v dolním kloubu zánártním

## Plantární Flexe *Ti, PeSup*

Tri, FHL, PLo, TP, FDL, FiBre

Inverse – PFle+Add+Su

Addukce *Ti*  
TP, FHL,

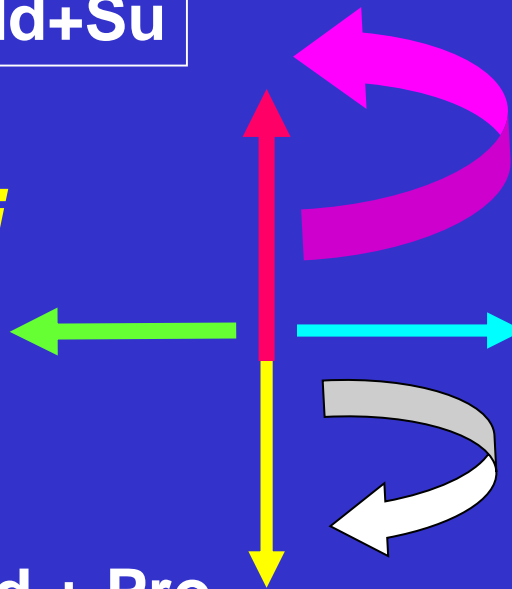
Everse – DoFle + Abd + Pro

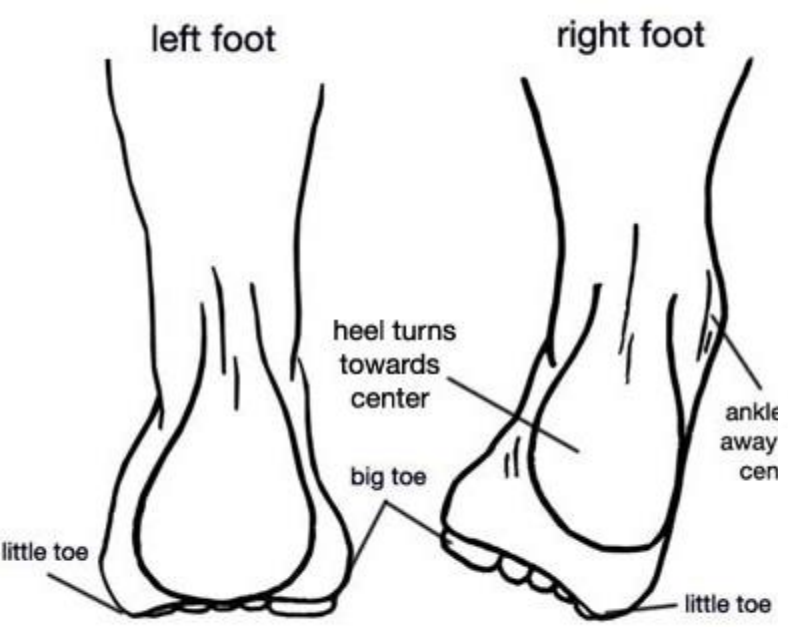
Dorsální flexe *PePro,*  
TA, EDL, EHL

Supinace  
TP, FDL, FHL *Ti*

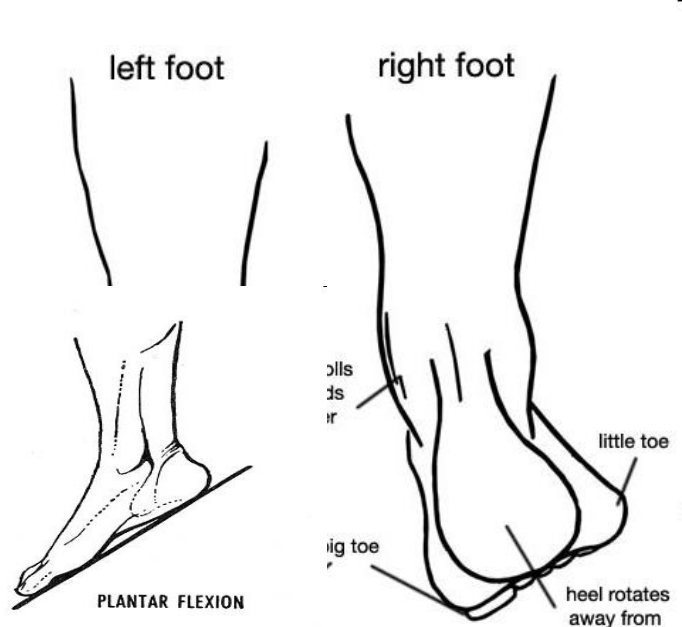
Abdukce *PeSup*  
FiBre, FiLo

Pronace  
FiLo, FiBre  
+EDL, EHL  
*PePro+Sup*





supination



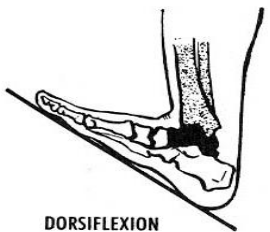
pronation



DORSIFLEXION



PLANTAR FLEXION



DORSIFLEXION



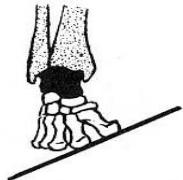
PLANTAR FLEXION



EVERSION



INVERSION



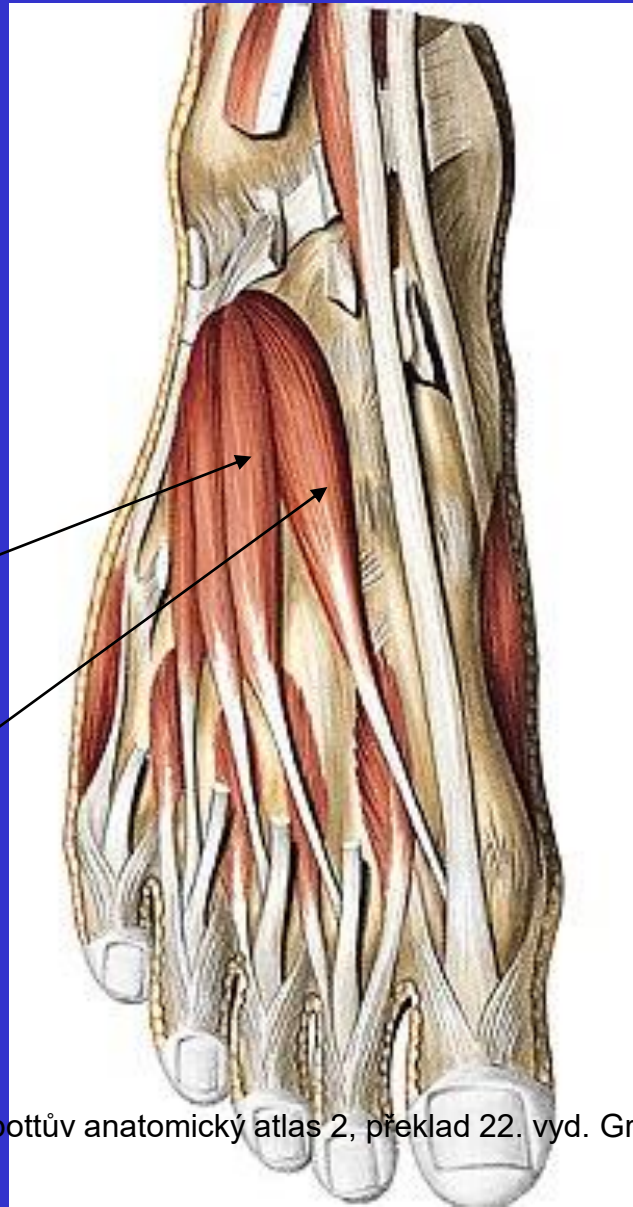
# Svaly nohy

Dorsální skupina  
inervace

n. peroneus prof.

m. extensor digitorum  
brevis (II-IV)

m. extensor hallucis  
brevis



# Svaly nohy

## Planta

### Svaly palce

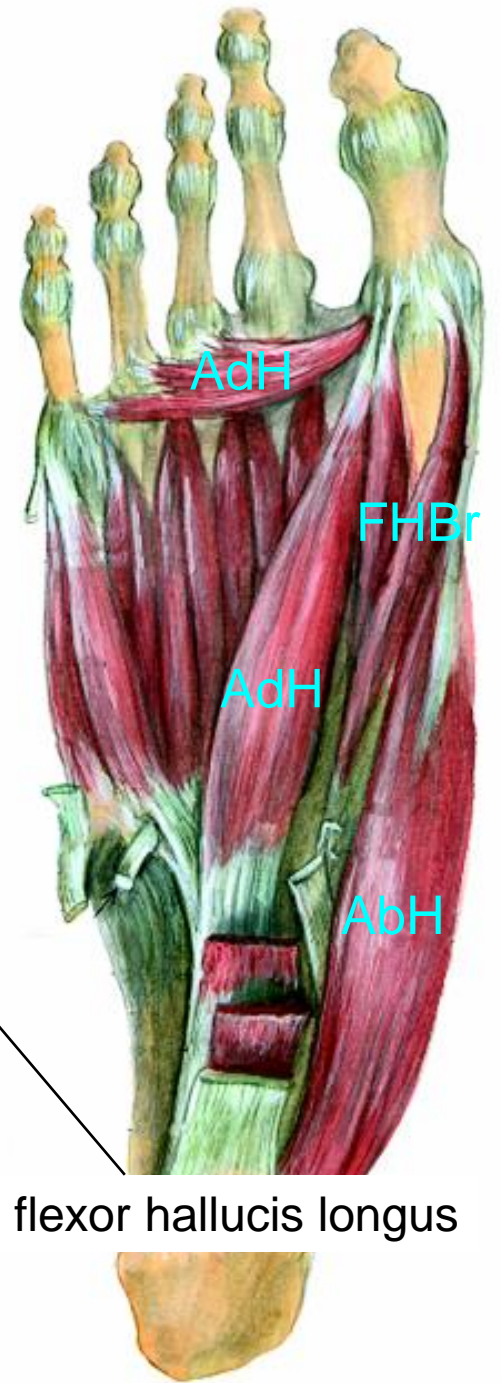
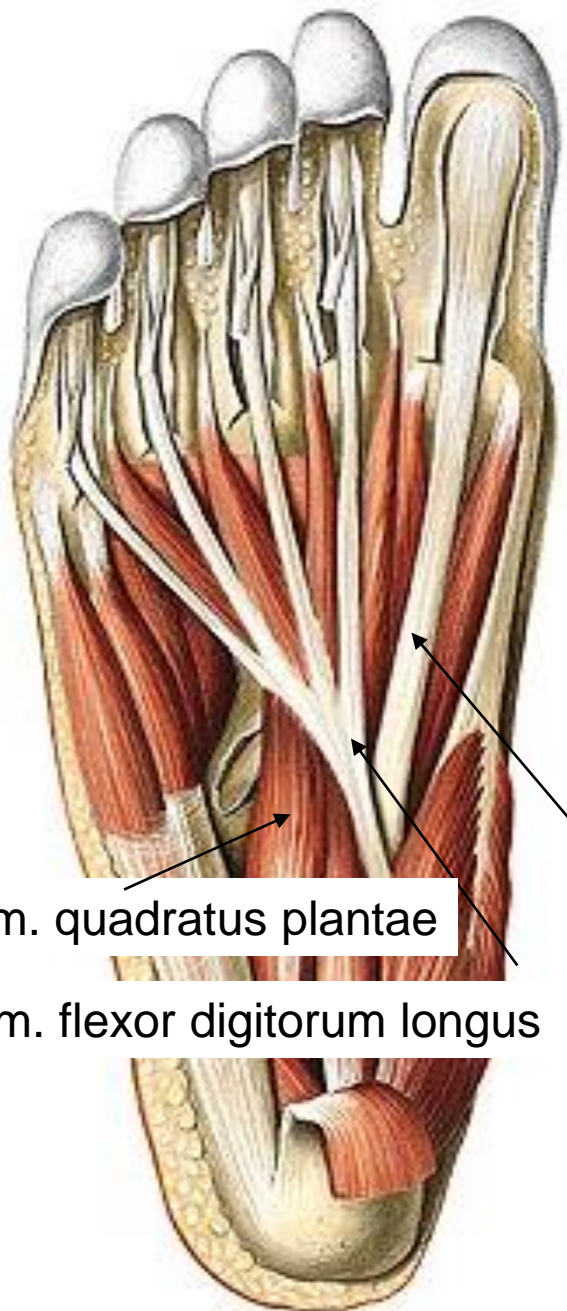
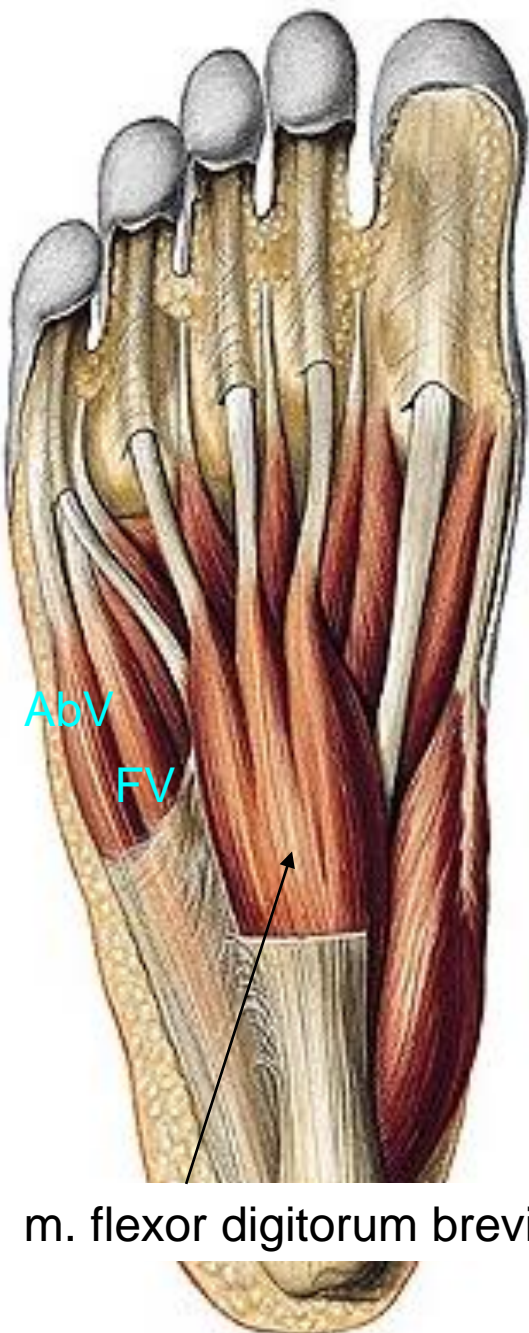
m. abductor hallucis, m. flexor hallucis brevis,  
m. adductor hallucis

### Střední prostor

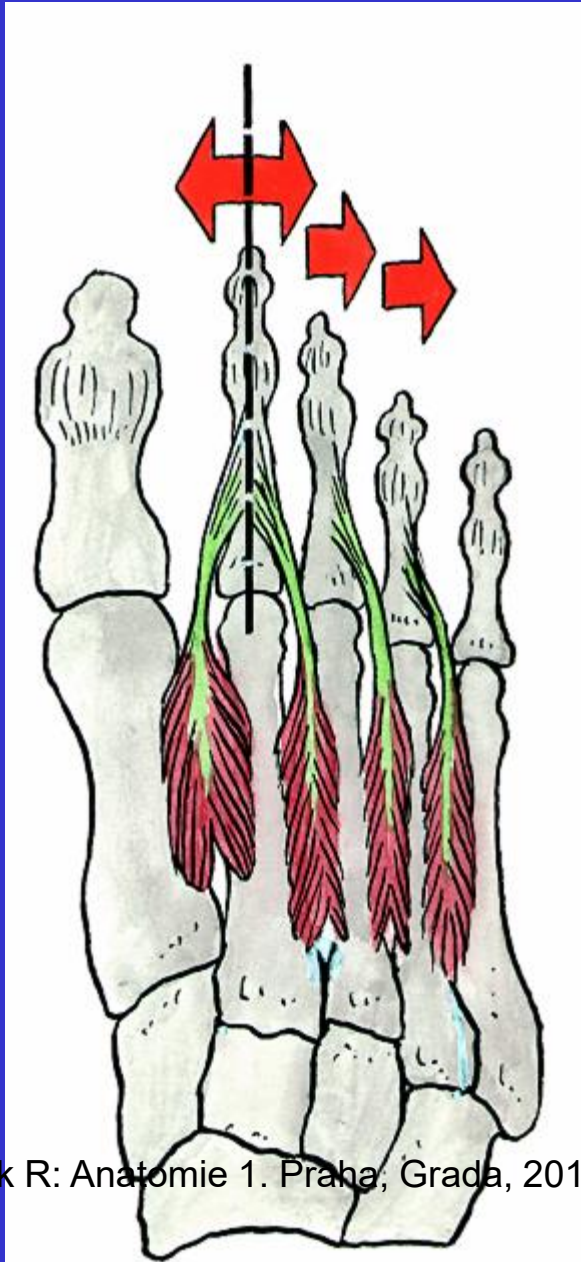
m. flexor digitorum brevis, m. quadratus  
plantae, mm. lumbricales  
m. interossei plantares et dorsales

### Svaly malíku

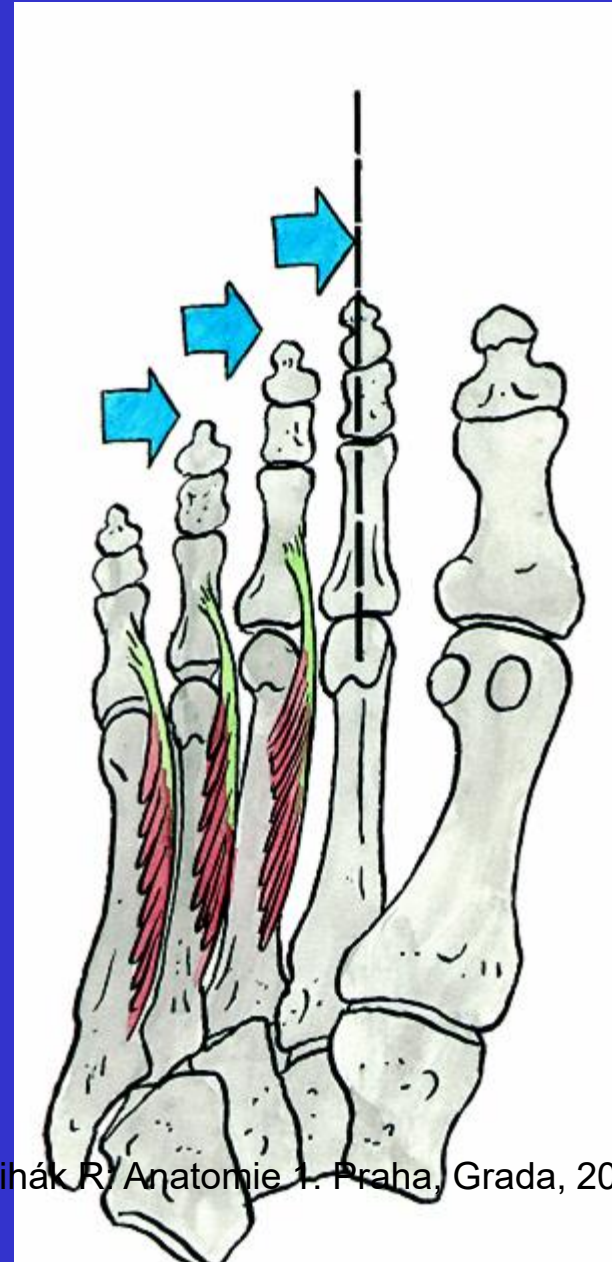
m. flexor digiti minimi brevis,  
m. abductor digiti minimi , (m. opponens d. V.)



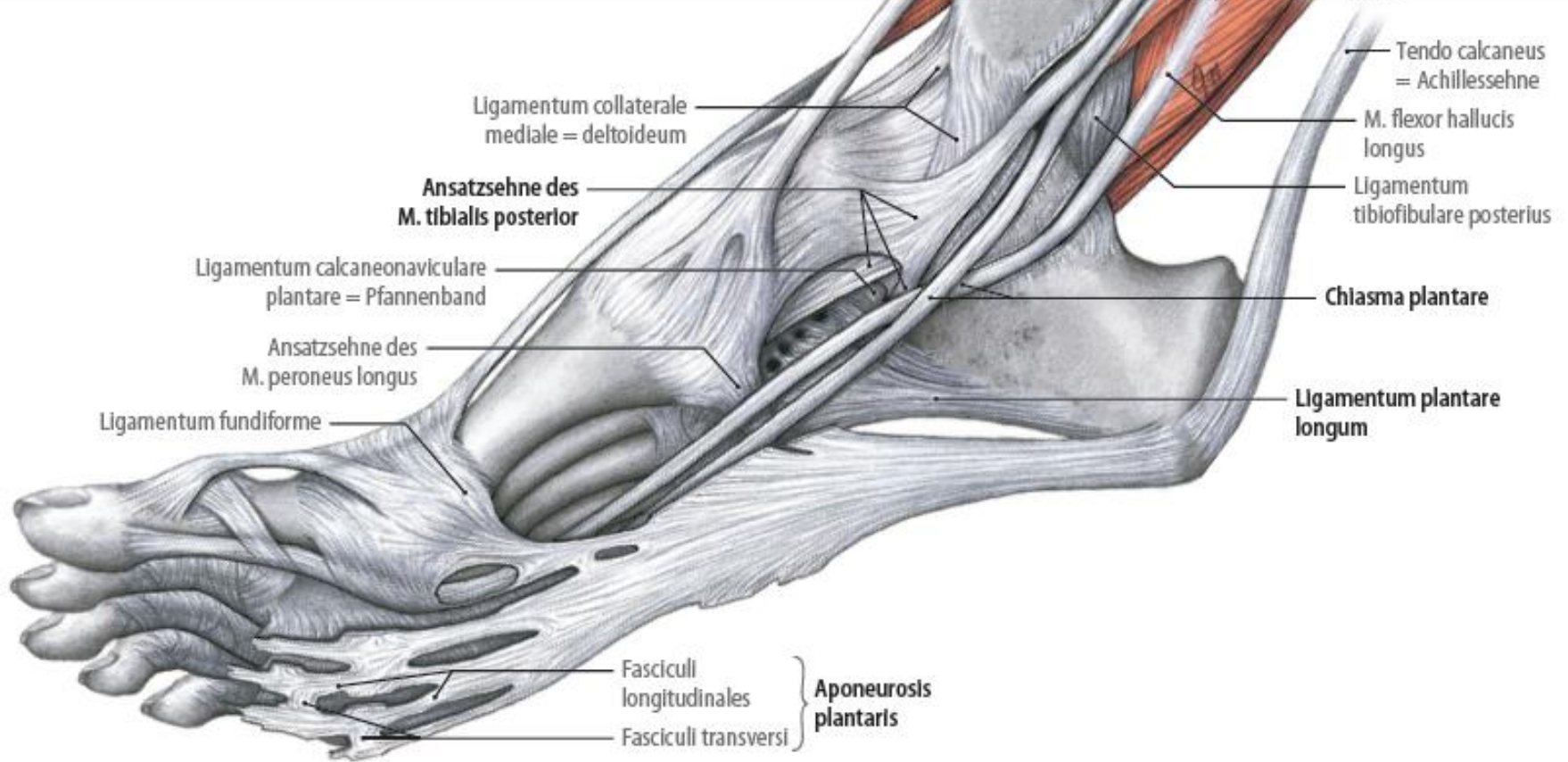
# Mm. interossei dorsales et plantares (n. plantaris lat)



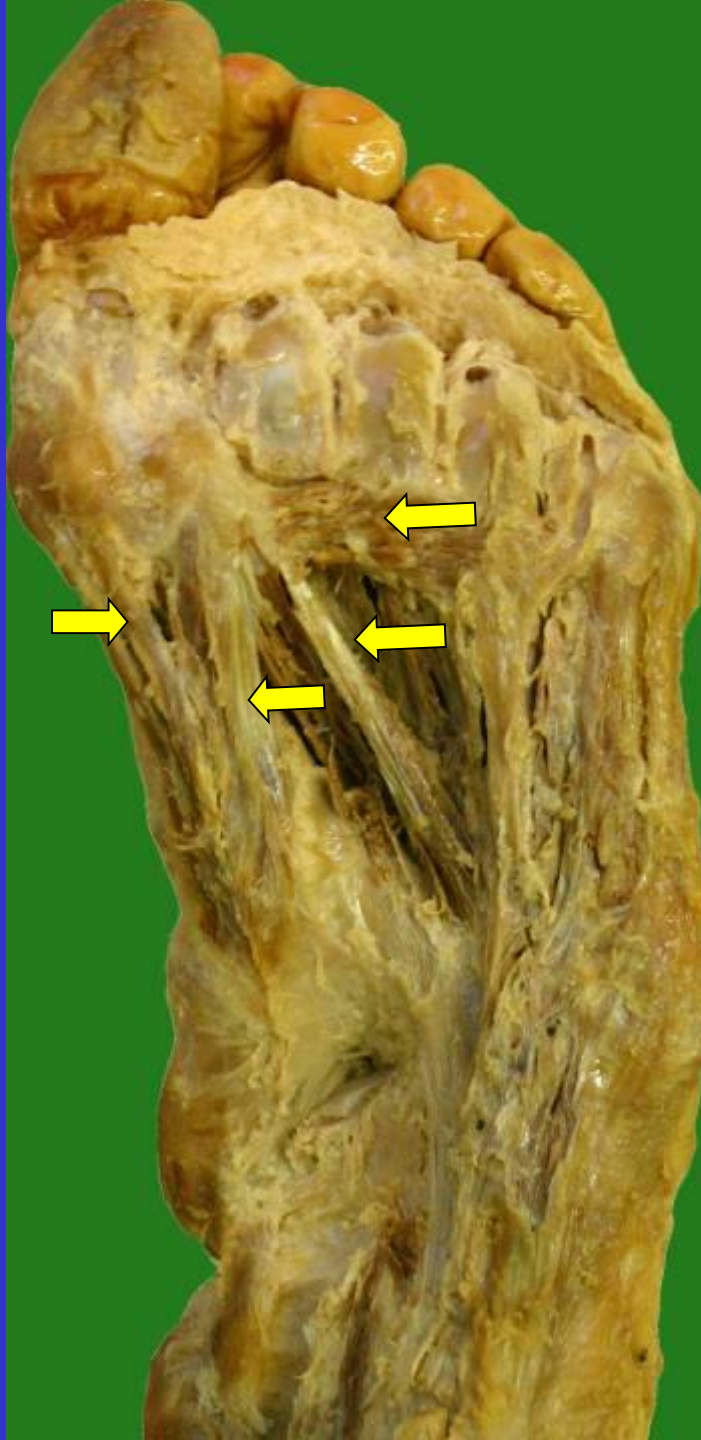
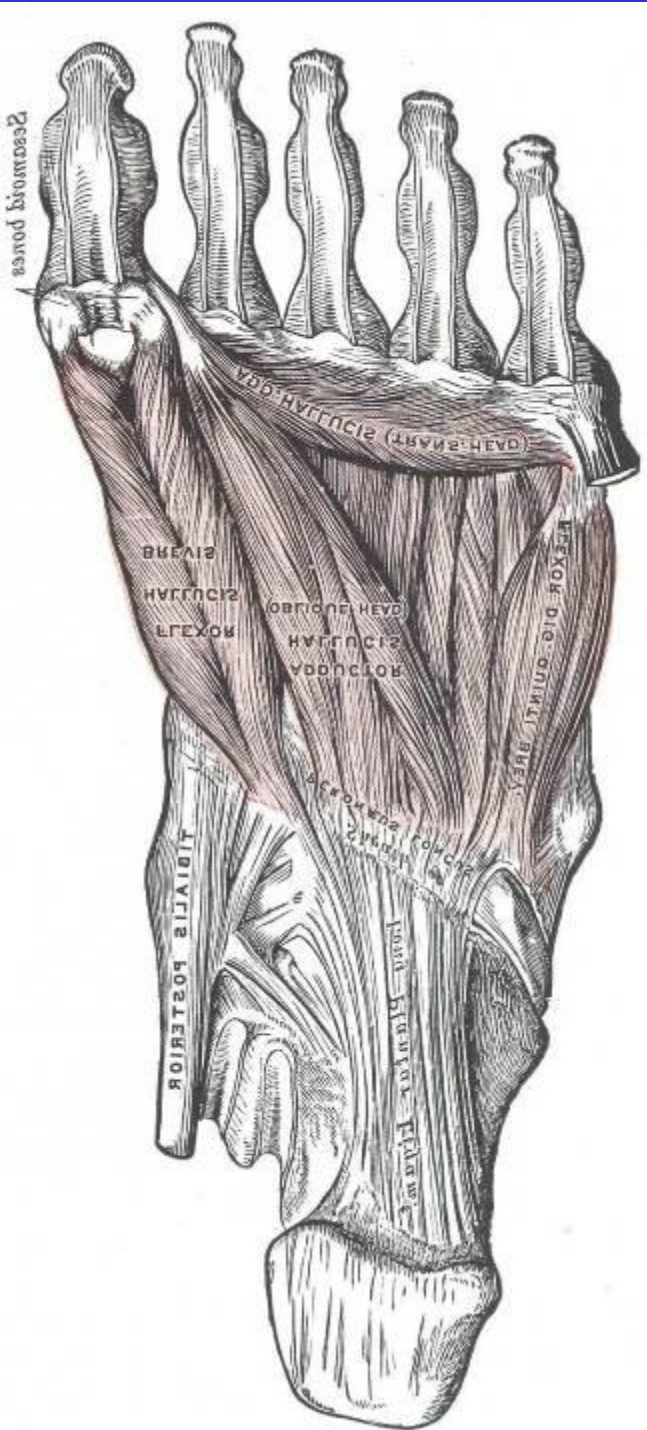
Čihák R: Anatomie 1. Praha, Grada, 2011

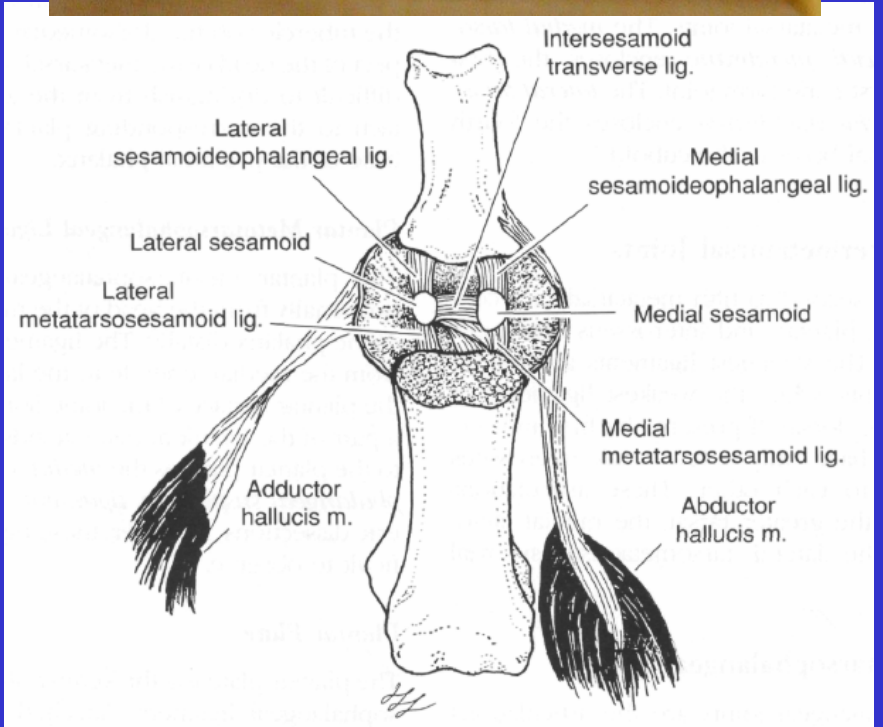
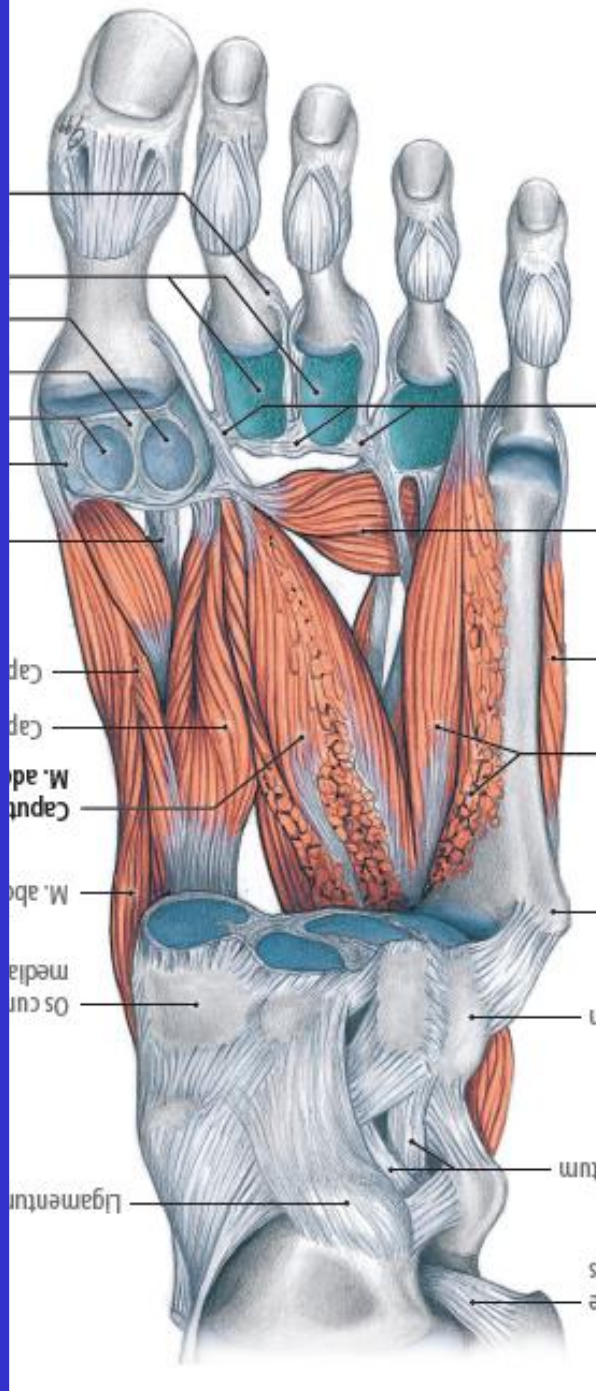


Čihák R: Anatomie 1. Praha, Grada, 2011





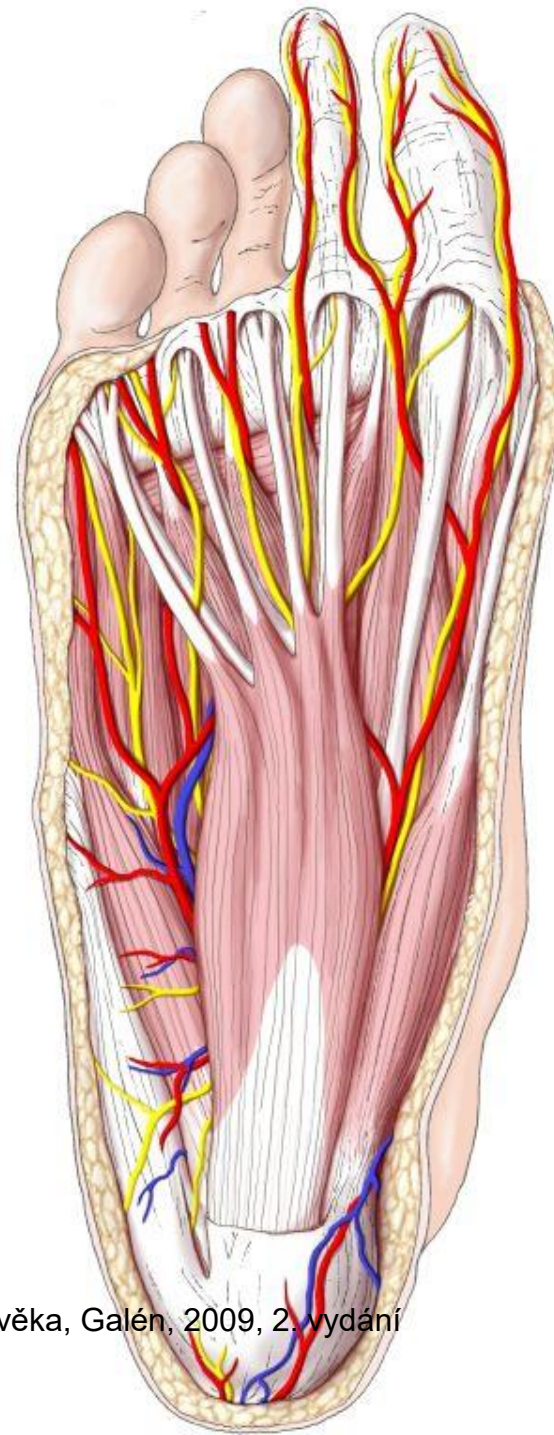
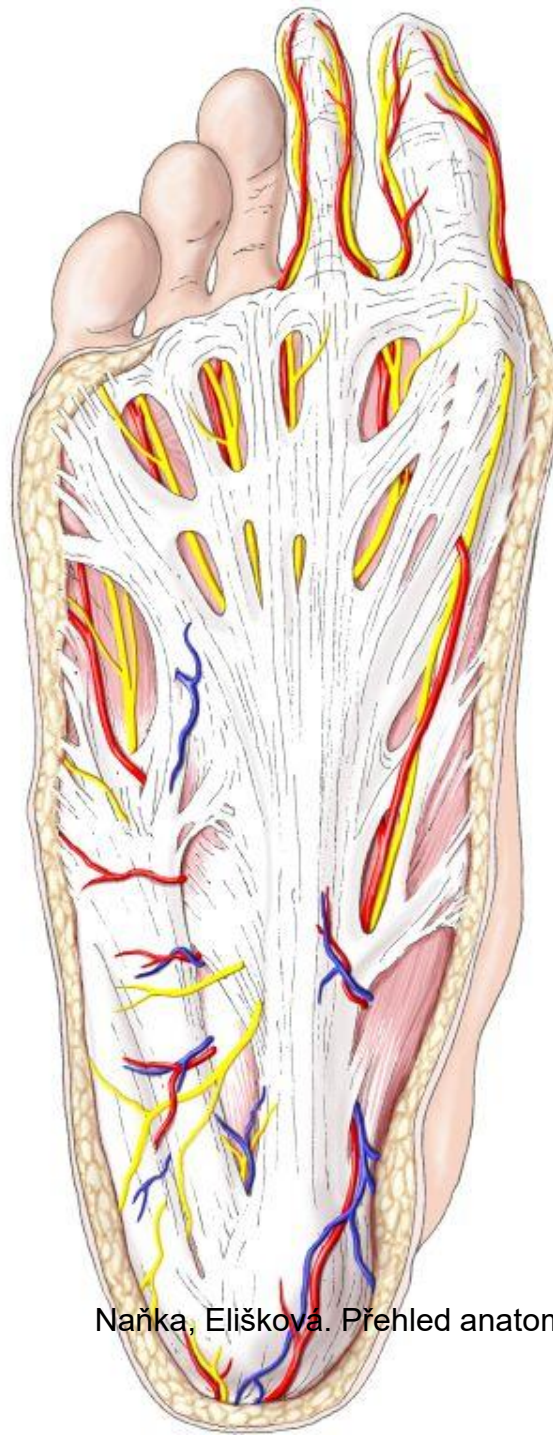


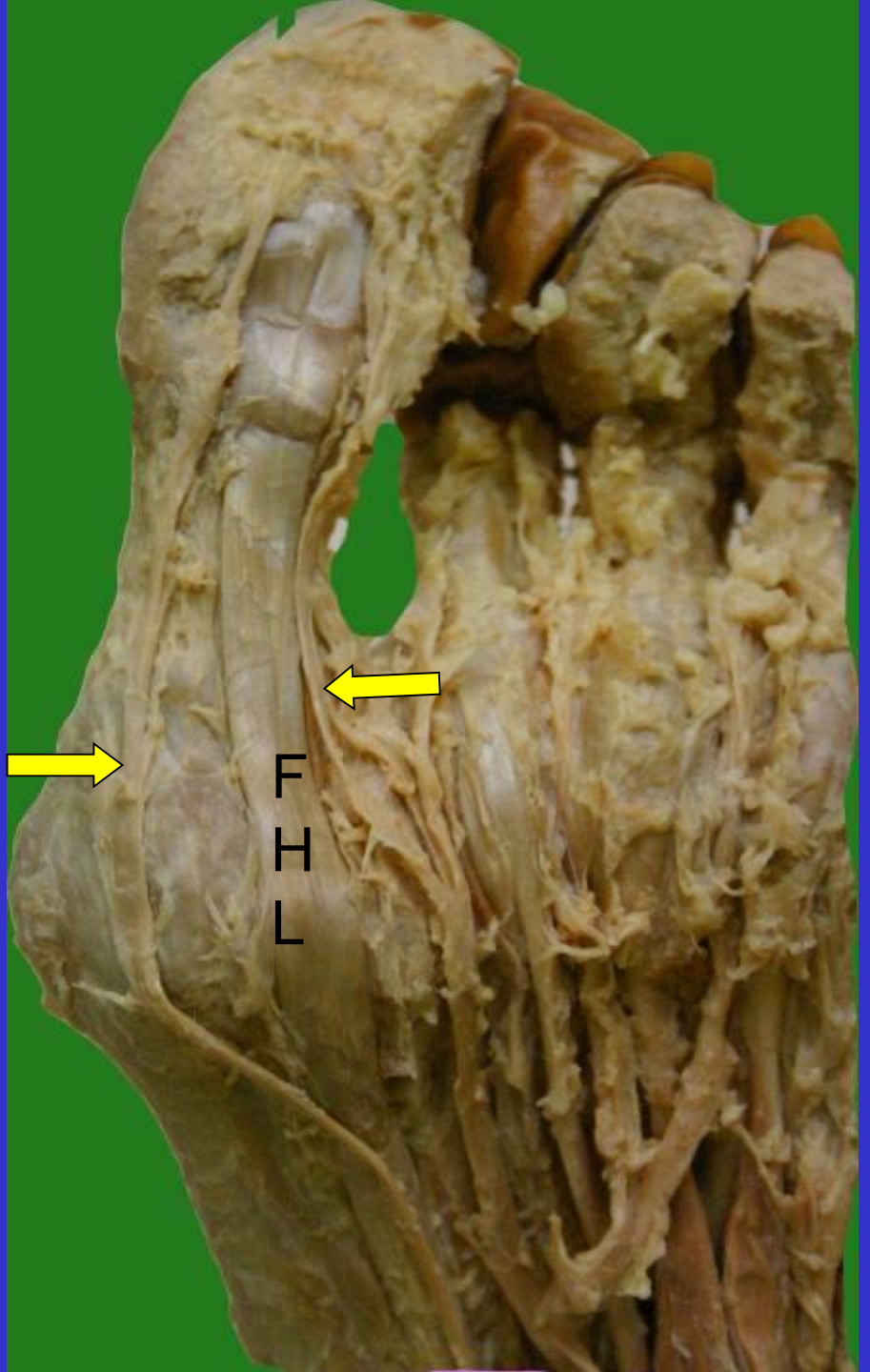
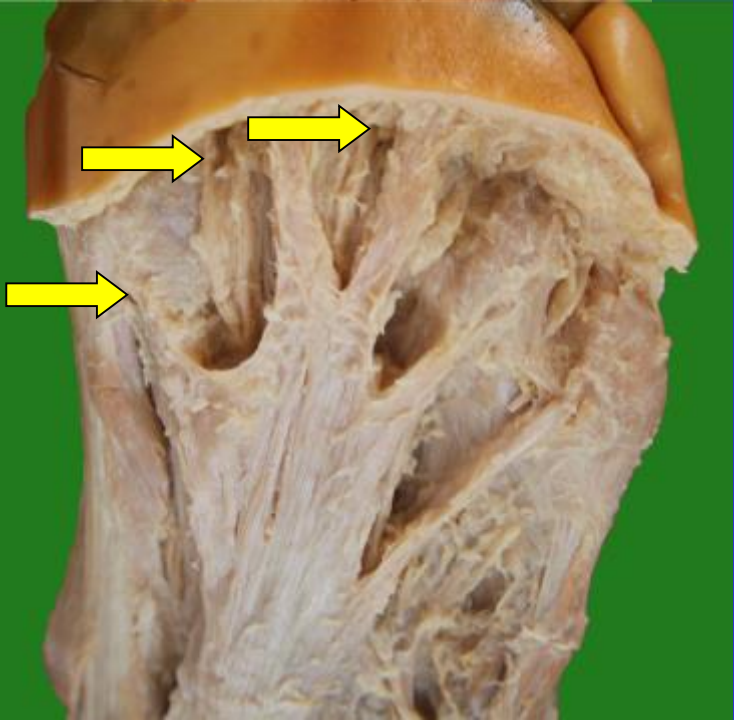


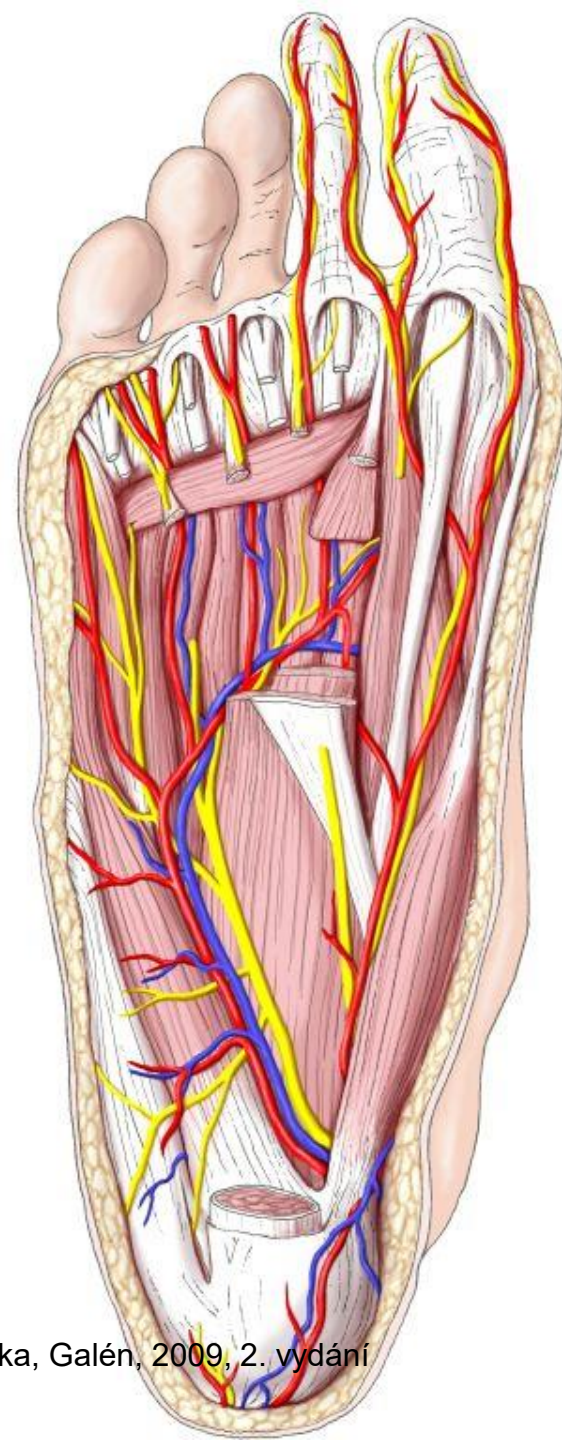
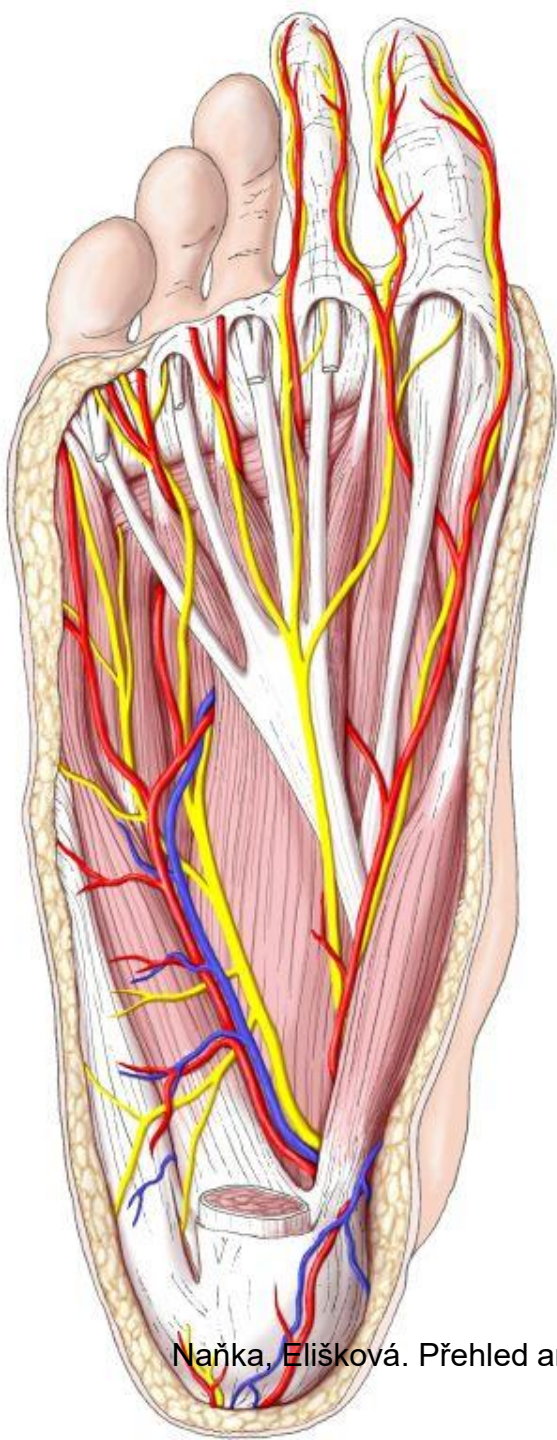
# Topografie planta pedis

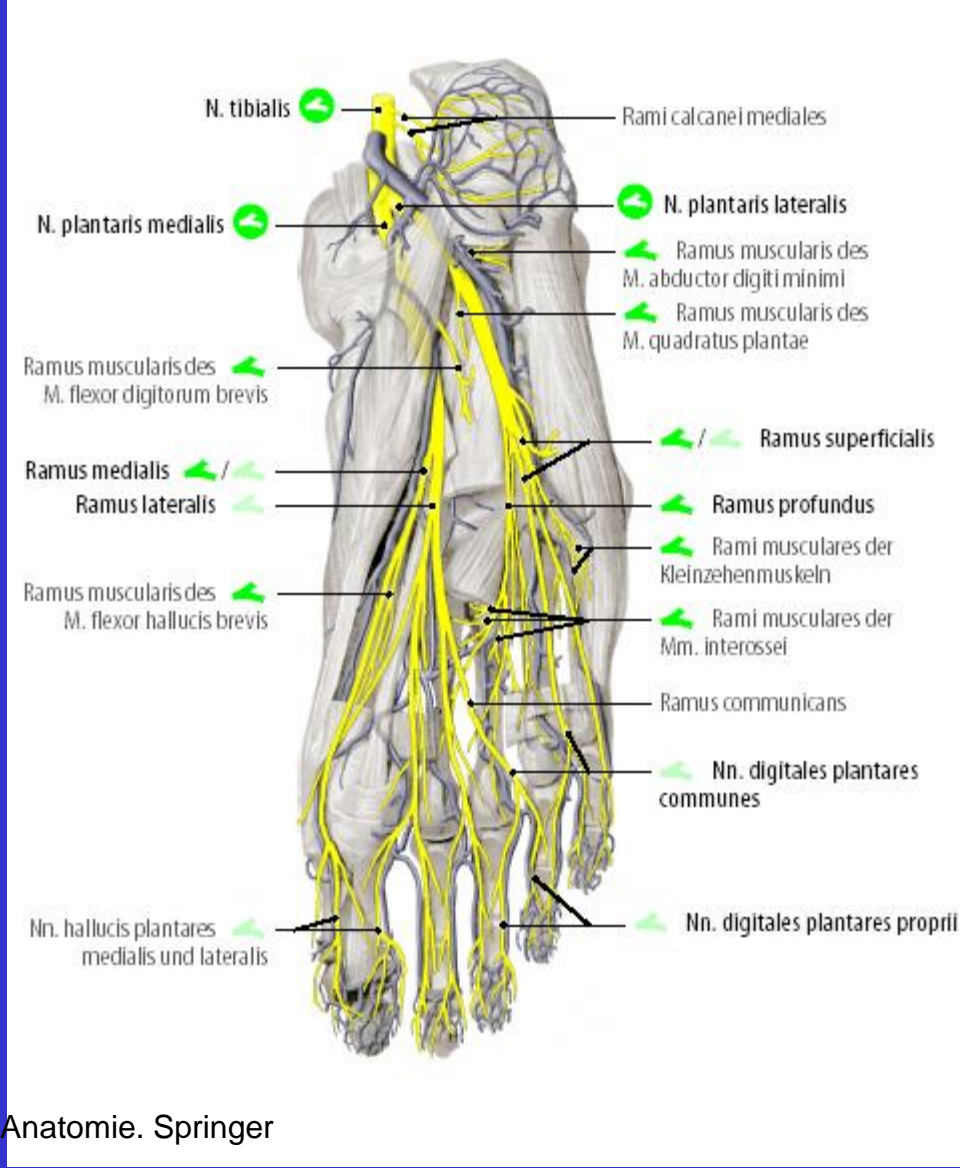
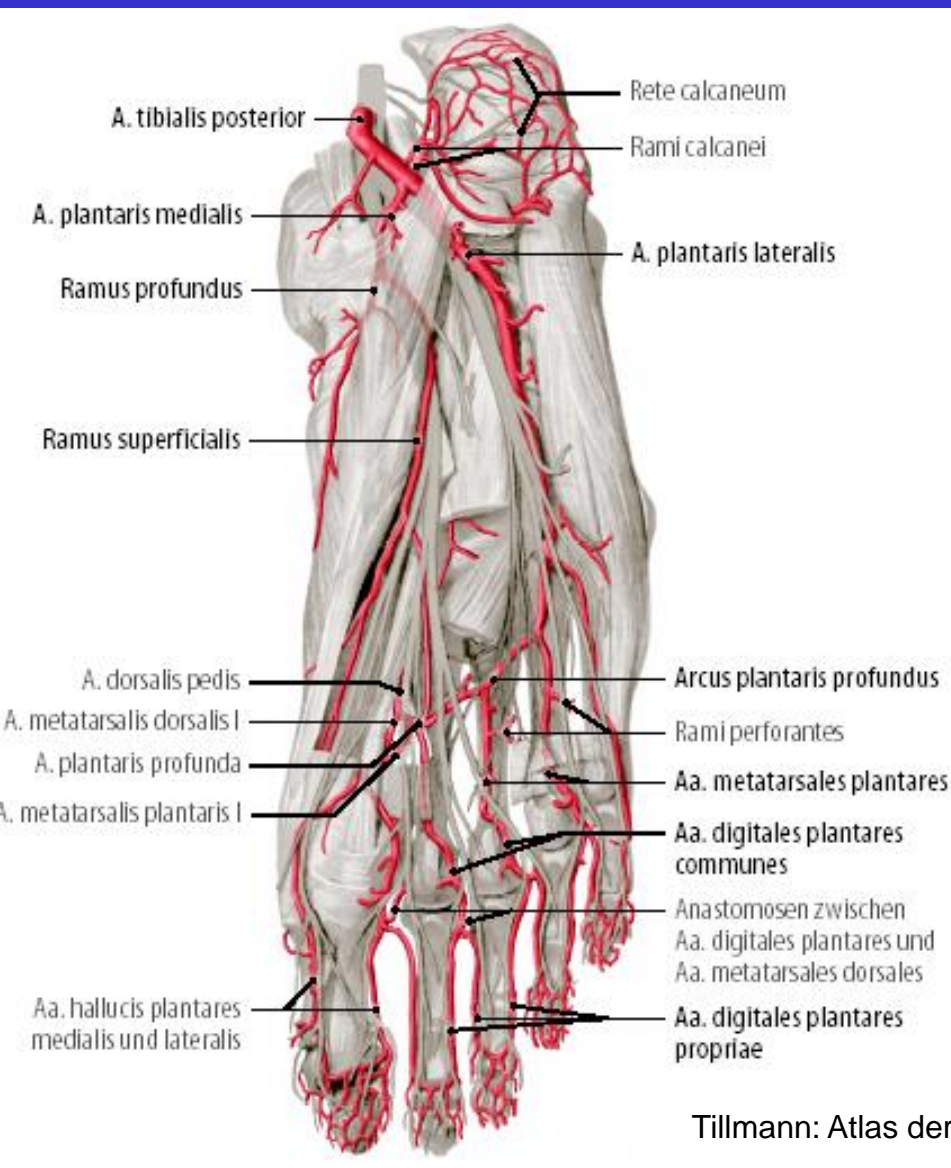
4 osteofasciální  
prostory

palcový,  
střední,  
malíkový,  
Interosseální



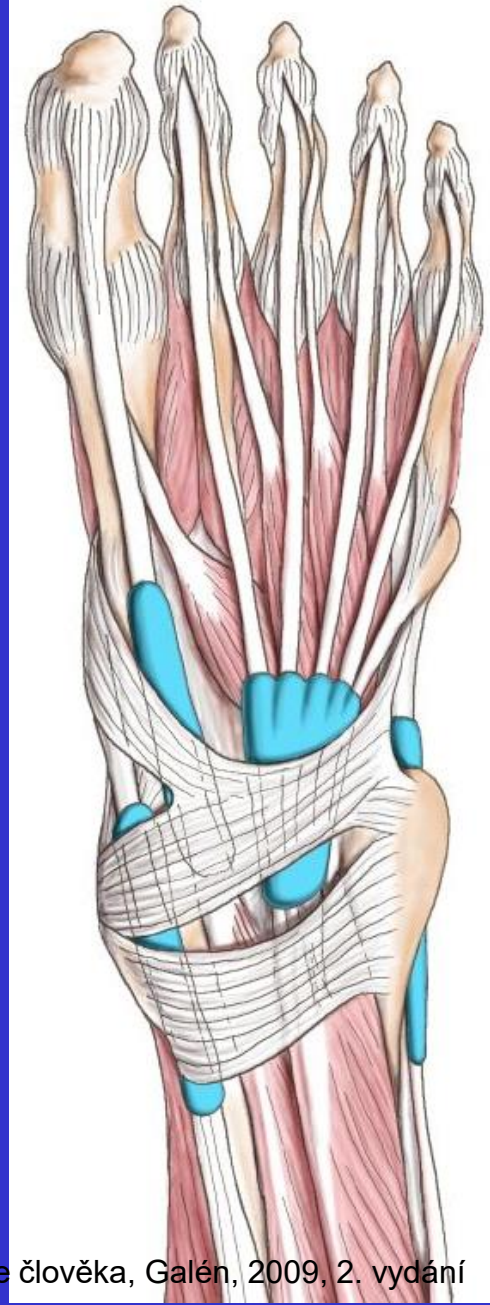
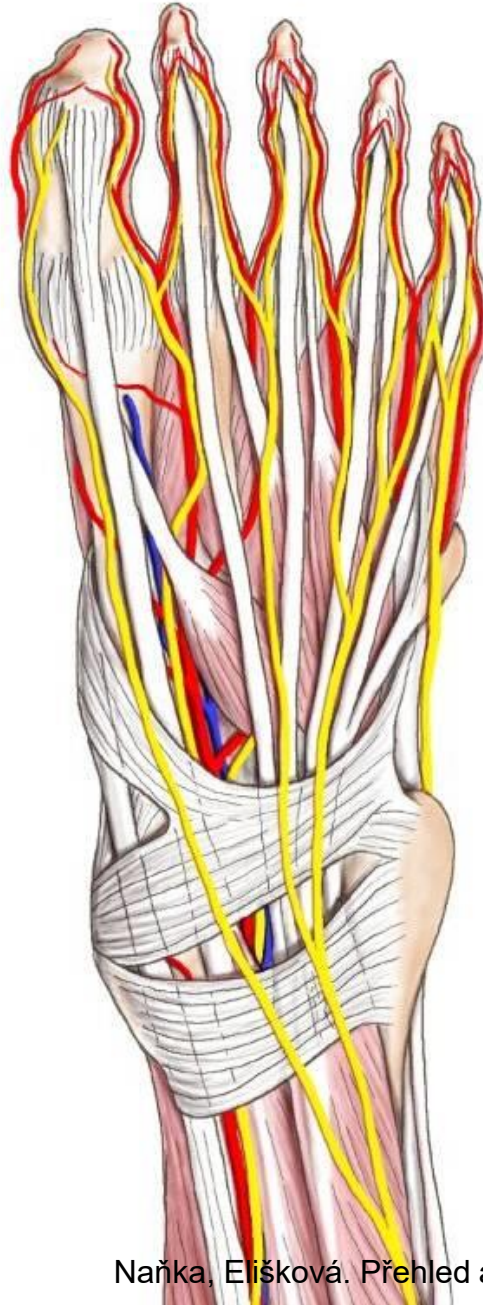
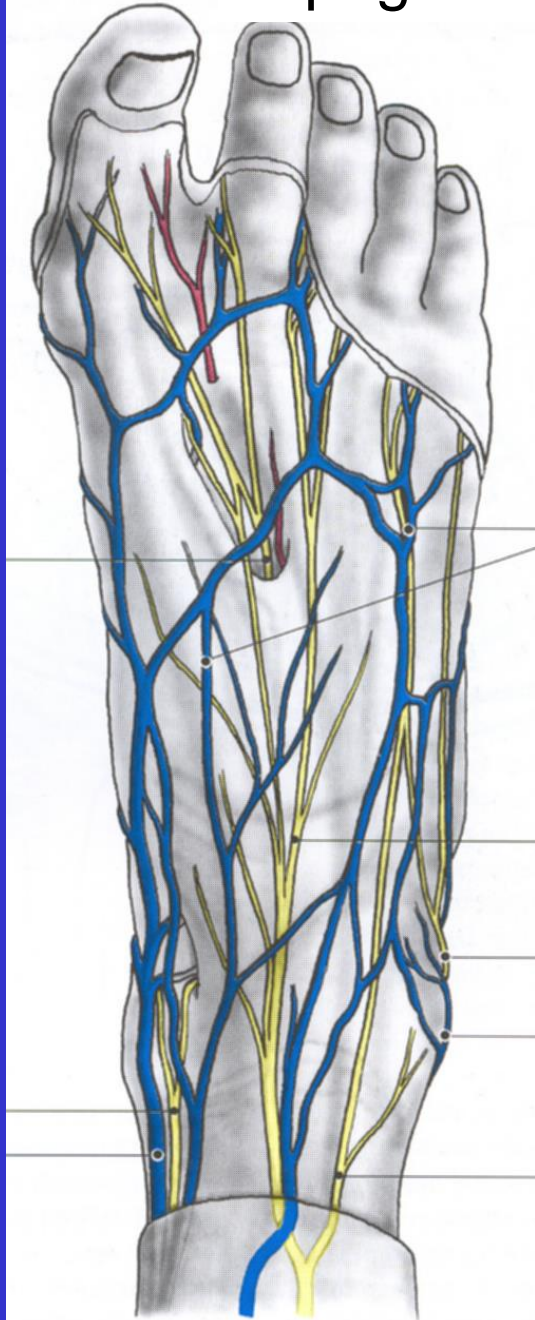






Tillmann: Atlas der Anatomie. Springer

# Topografie dorsum pedis – 1 osteofasciální prostor

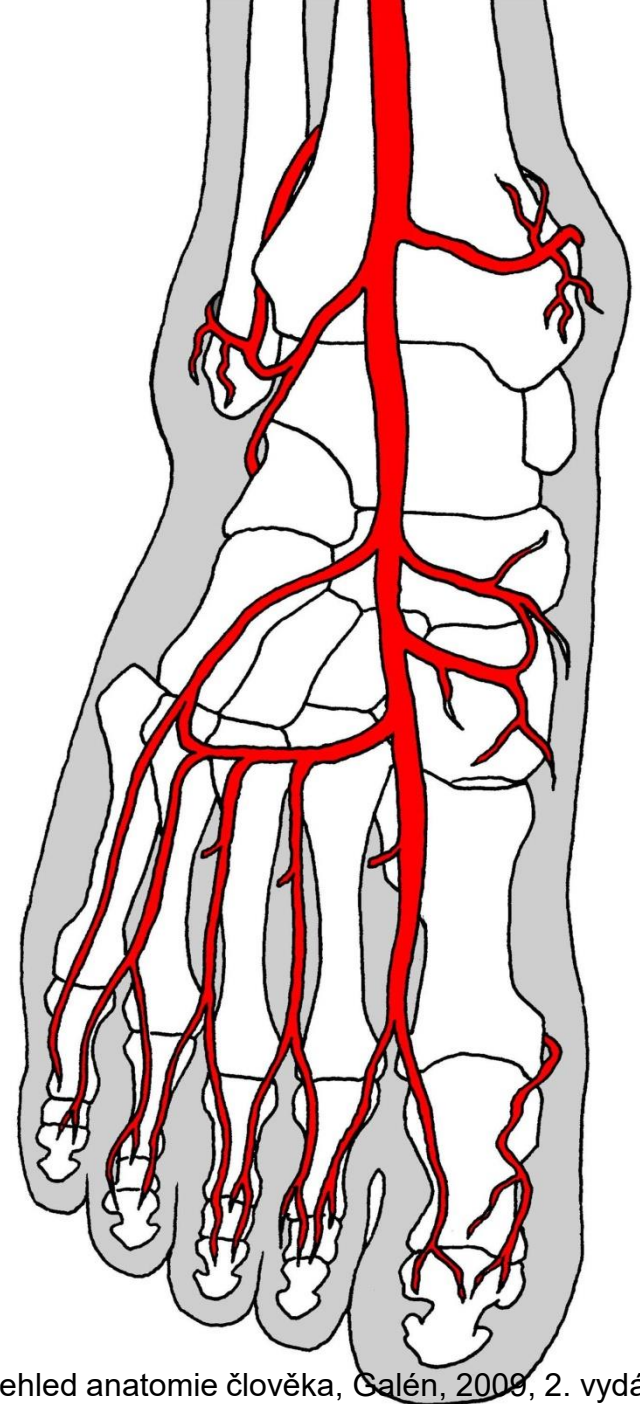


**a. tibialis anterior**  
a. malleolaris ant. med.  
a. malleolaris ant. lat.

**a. dorsalis pedis**  
a. tarsalis lat.  
a. tarsales med.

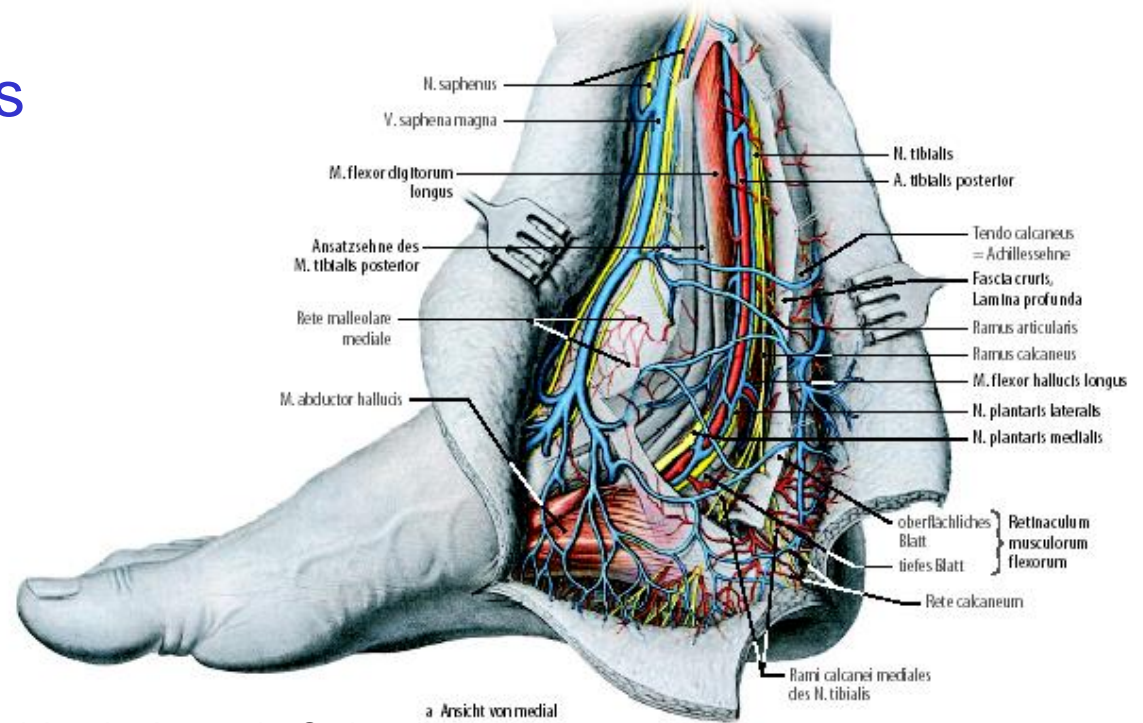
**a. arcuata**  
aa. tarsales dorsales  
aa. digitales dorsales

**a. plantaris profunda**

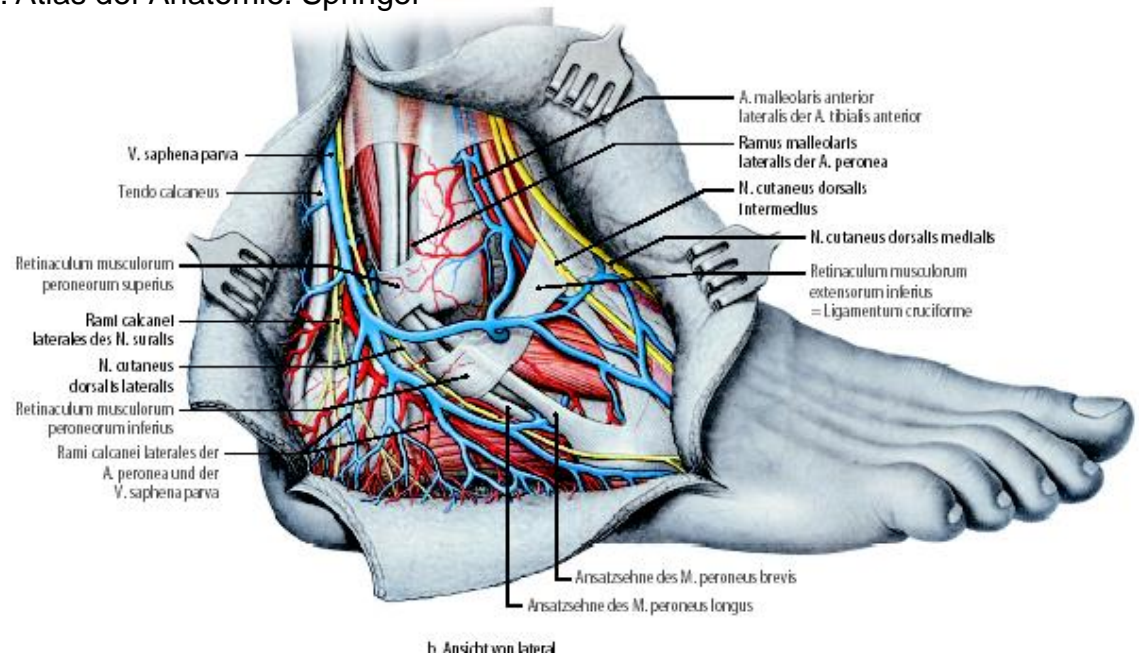


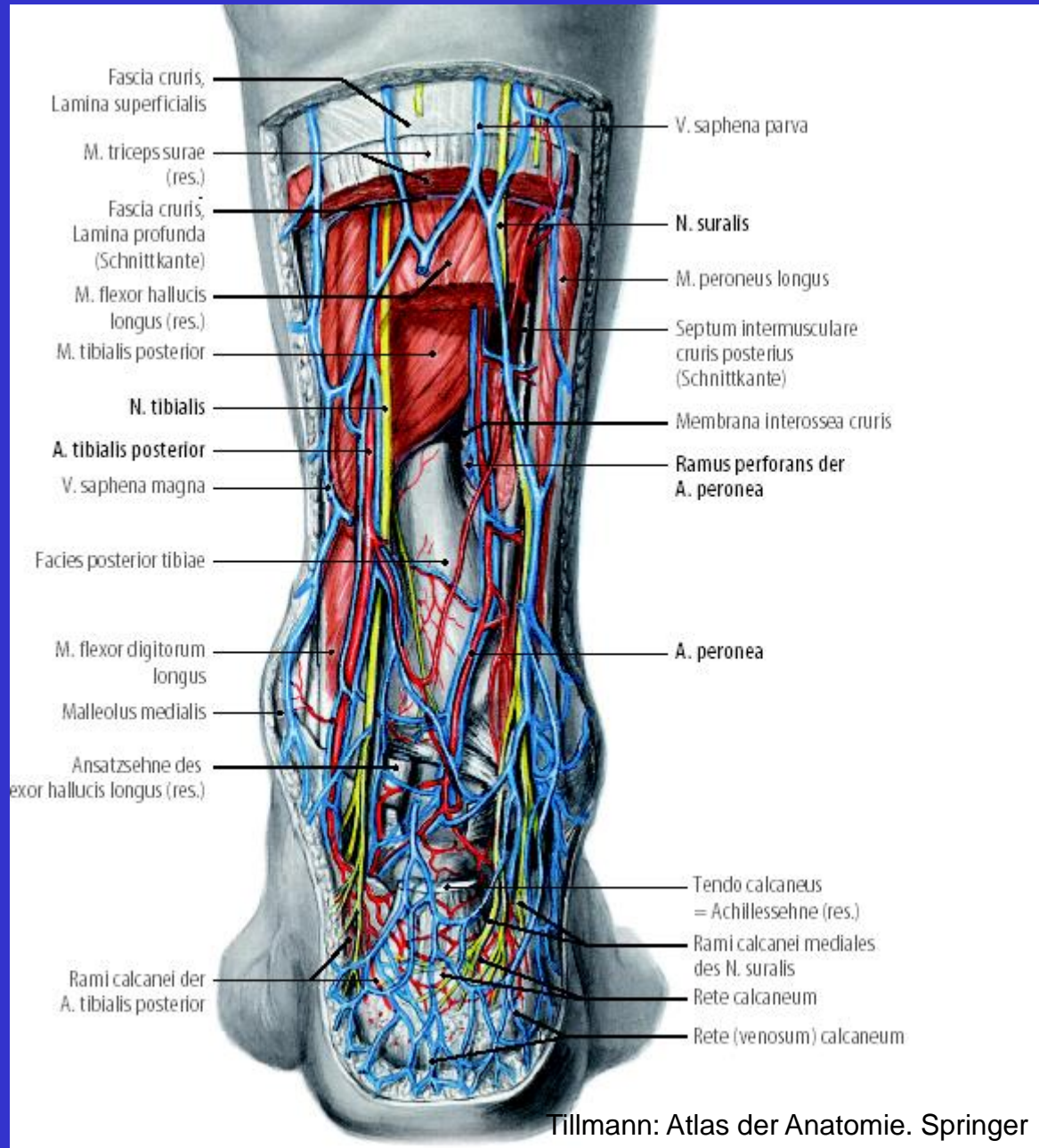


# Reg. retromalleolaris medialis et lateralis



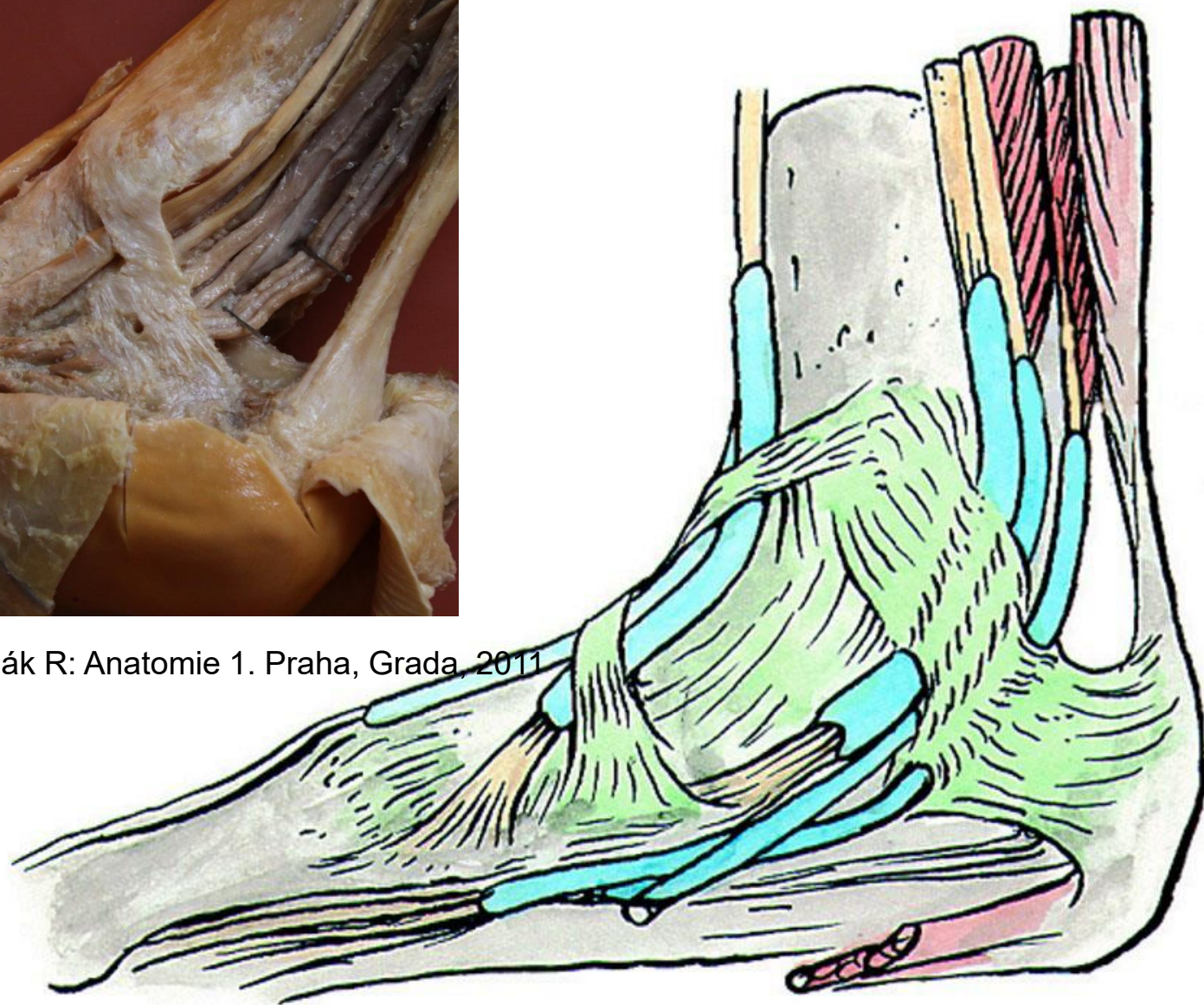
Tillmann: Atlas der Anatomie. Springer



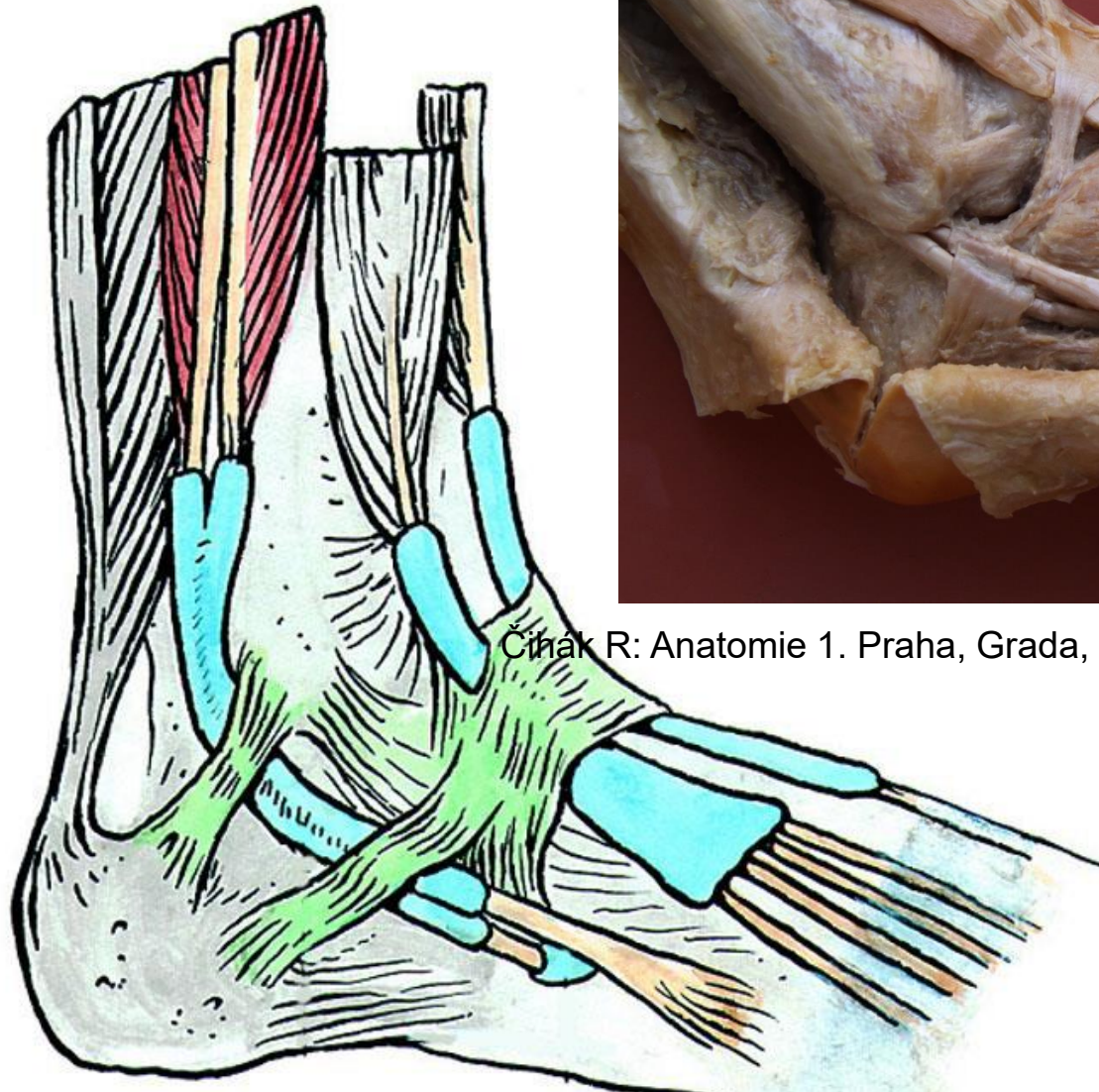




Čihák R: Anatomie 1. Praha, Grada, 2011

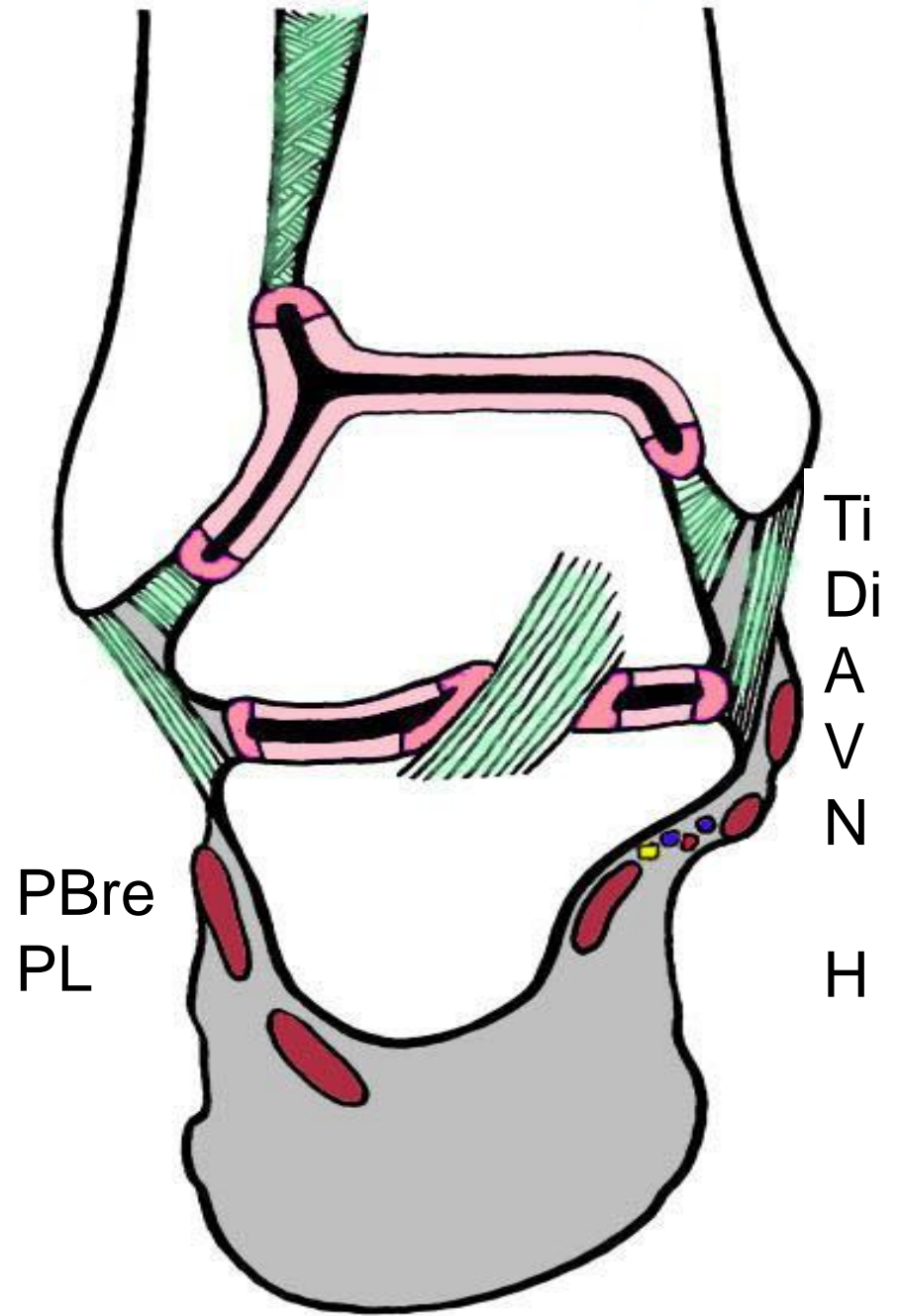
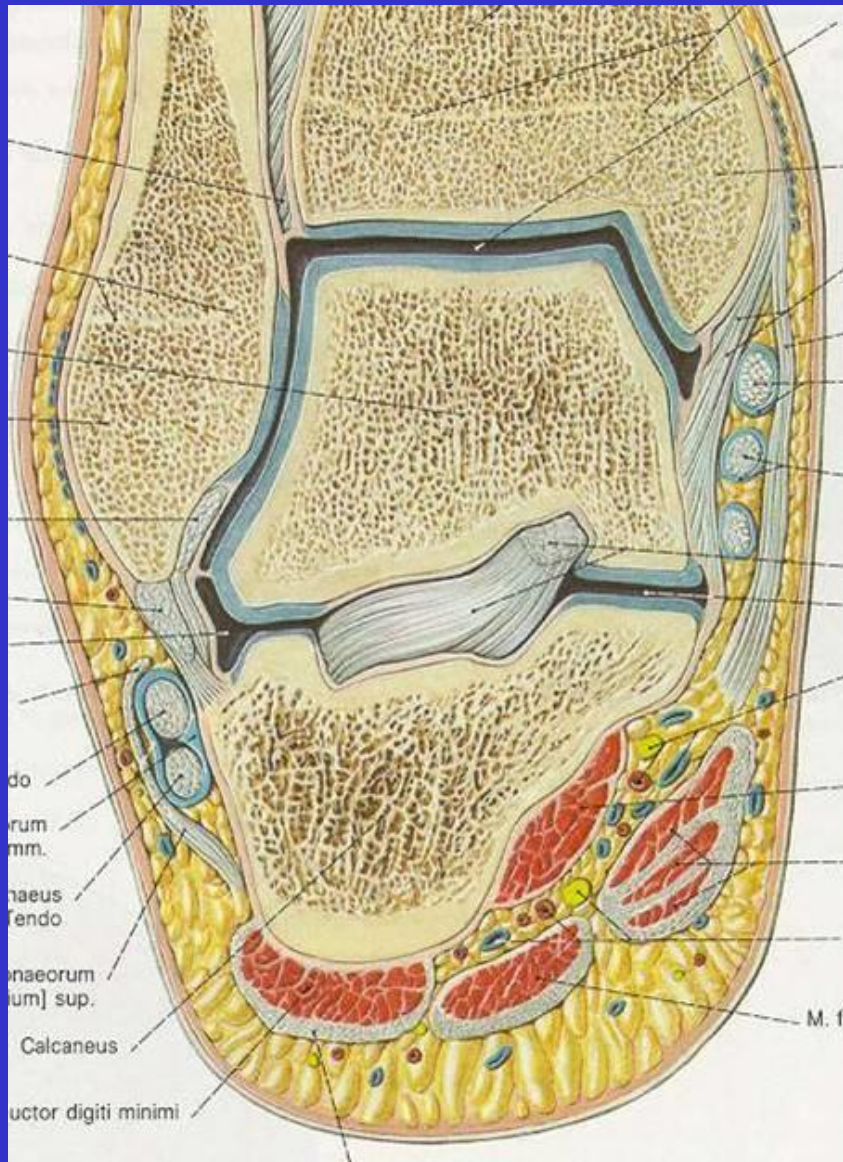


**retinaculum mm. flexorum (lig. laciniatum)**



Čihák R: Anatomie 1. Praha, Grada, 2011

Retinaculum mm. extensorum sup. et inf  
Retinaculum mm. peronaerorum sup. et inf.



## Faszienlogen (Fuß)

**1** Oberflächliche Faszie des Fußes

**Faszienloge der Extensoren (1)**  
zwischen

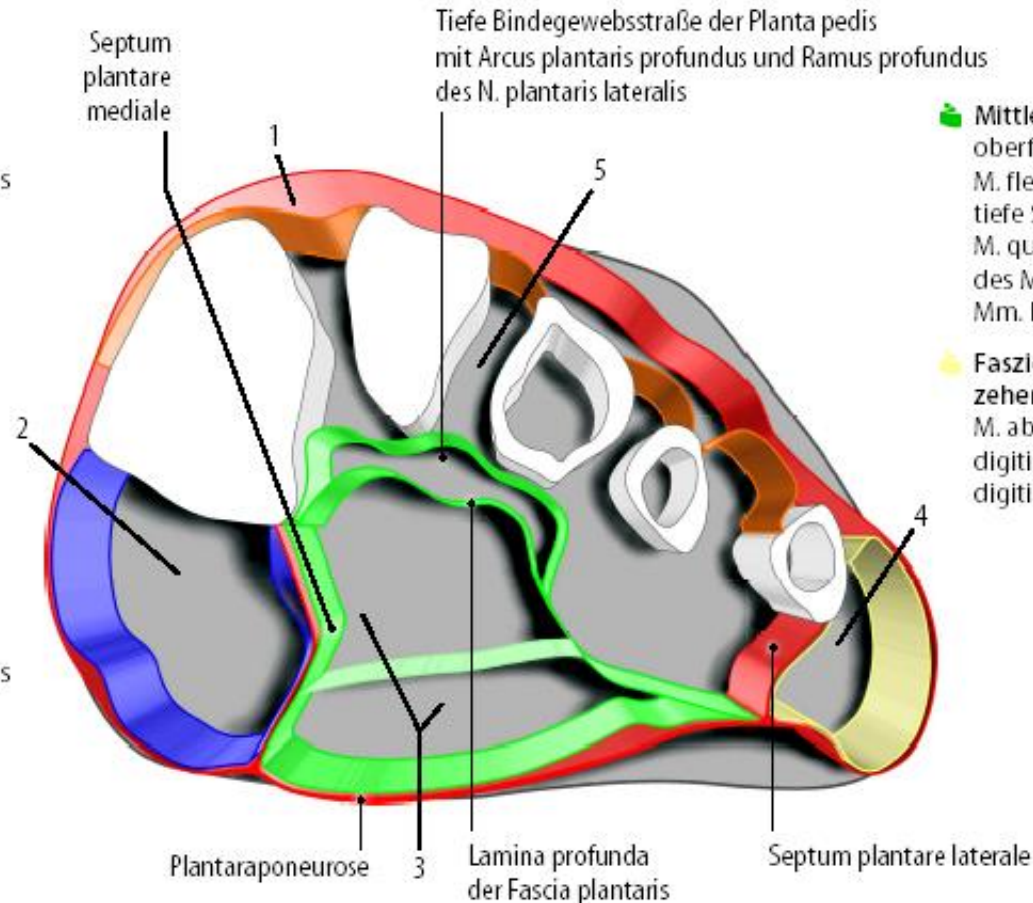
**1** oberflächlichem und  
**2** tiefem Blatt der Fascia dorsalis pedis  
M. extensor hallucis longus,  
M. extensor hallucis brevis,  
M. extensor digitorum longus,  
M. extensor digitorum brevis,  
M. tibialis anterior

**Faszienloge der Groß-**  
**zehenmuskeln (2)**

M. abductor hallucis,  
M. flexor hallucis brevis  
Ansatzsehne des M. flexor  
hallucis longus

**Tiefe Faszienloge (5)**  
zwischen

**2** tiefem Blatt der Fascia dorsalis pedis  
und der Fascia plantaris  
Mm. interossei, Ansatzsehnen der  
Mm. peroneus longus und  
tibialis posterior

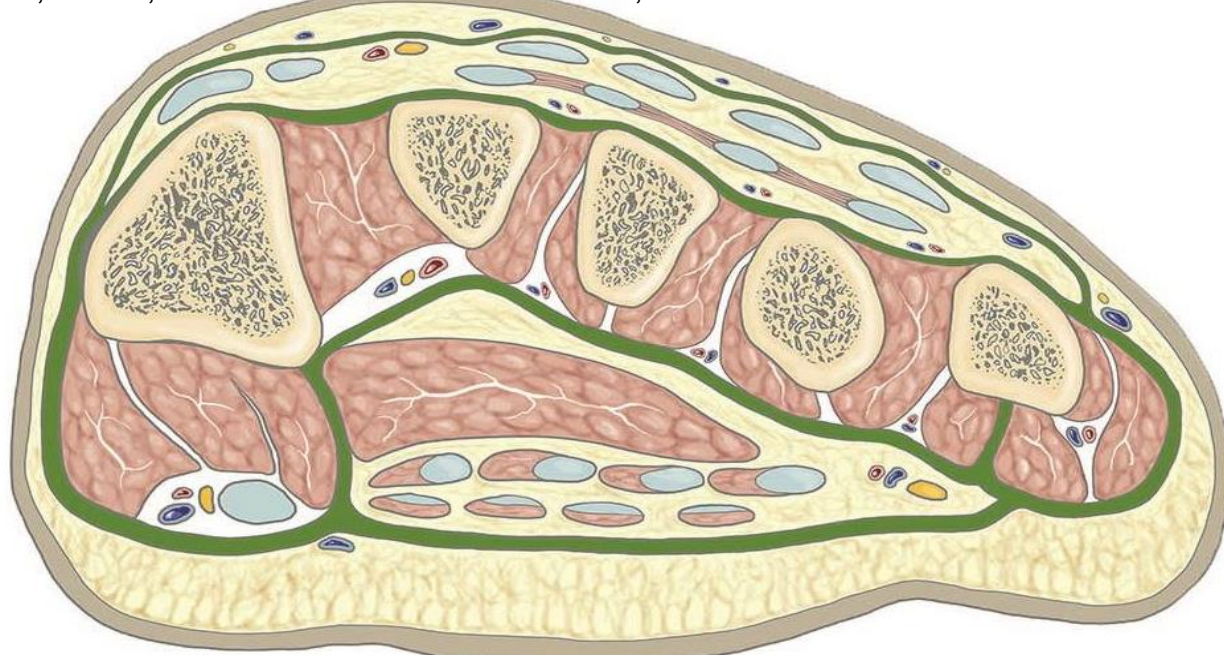


**Mittlere Faszienloge (3)**

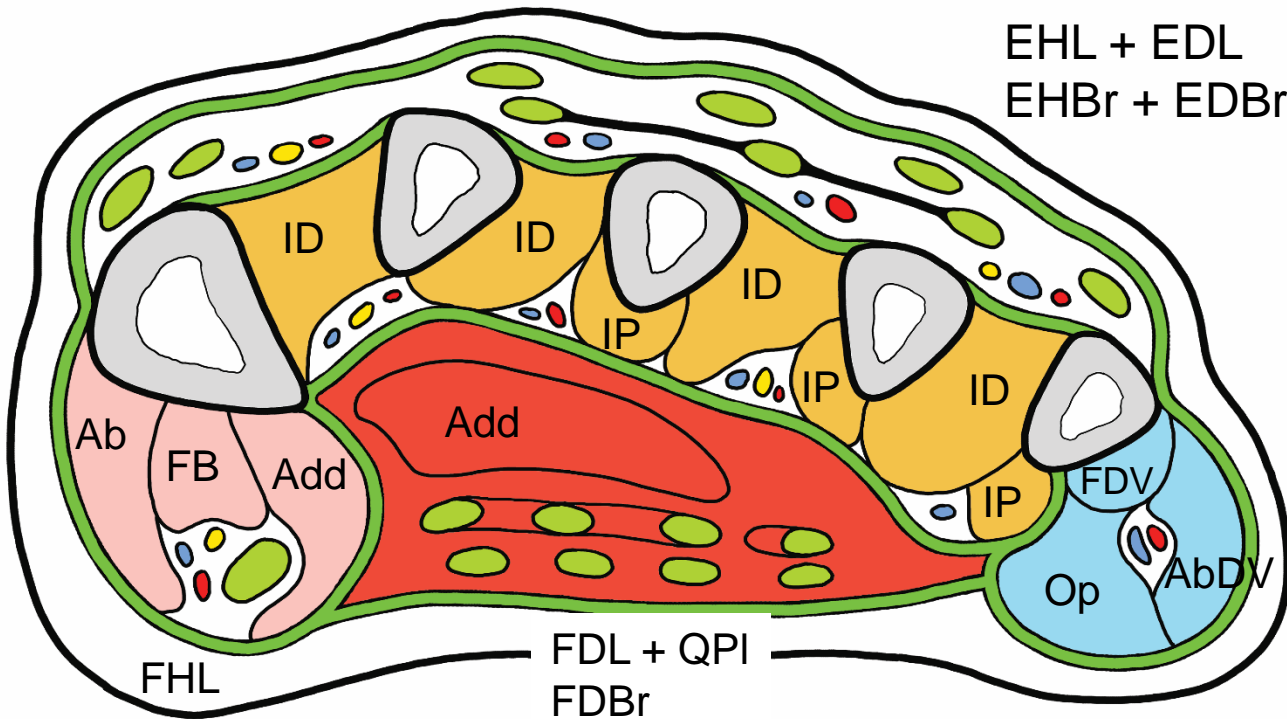
oberflächliche Schicht:  
M. flexor digitorum brevis  
tiefe Schicht:  
M. quadratus plantae, Ansatzsehnen  
des M. flexor digitorum longus und  
Mm. lumbricales, M. adductor hallucis

**Faszienloge der Klein-**  
**zehenmuskeln (4)**

M. abductor digiti minimi, M. flexor  
digiti minimi brevis, M. opponens  
digiti minimi



EHL + EDL  
EHLBr + EDBr



FHL  
FDL + QPI  
FDBr

FDV  
Op  
AbDW

Ab  
FB  
Add

Add

ID  
IP  
ID  
IP  
ID  
IP  
ID  
IP

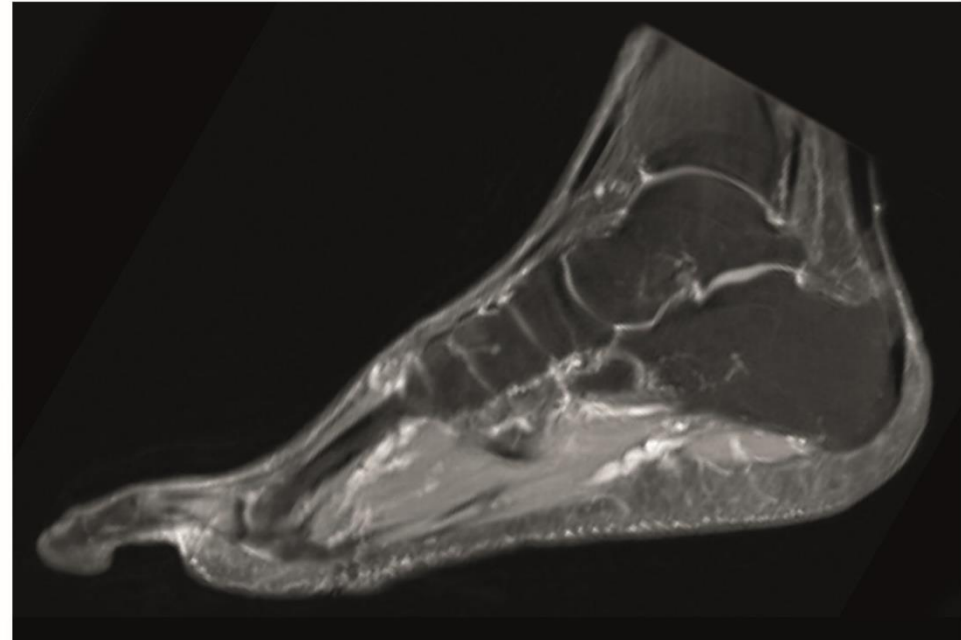
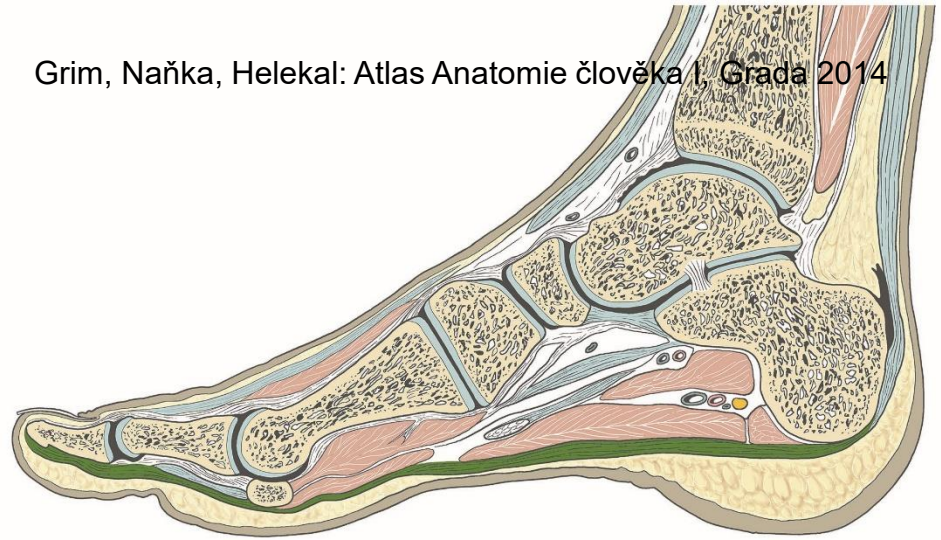
## ***Klenba nožní***

- brání utlačování  
měkkých tkání v plantě,  
umožňuje pružnost při  
došlapování

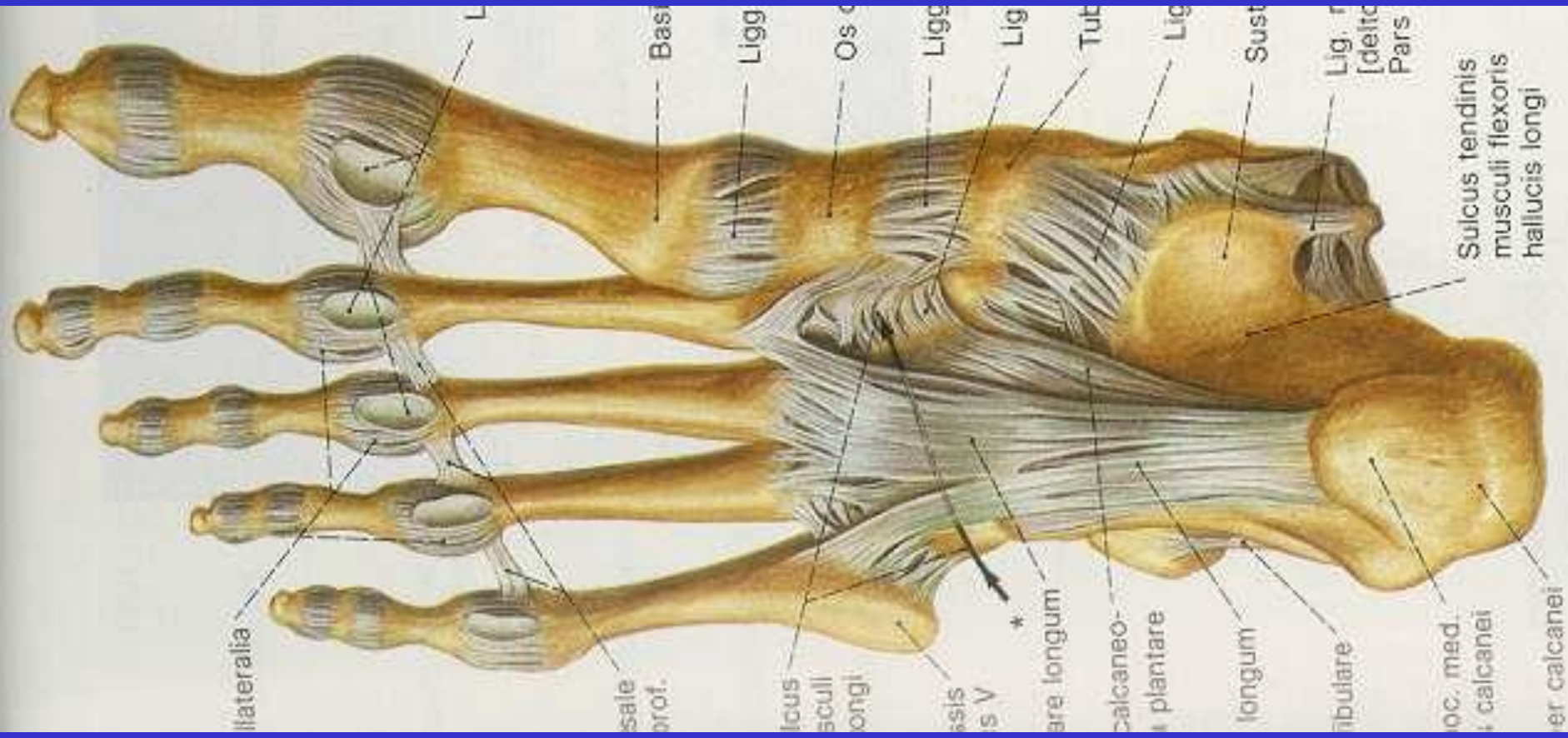
**příčná** – dána sklenutím  
ossa cuneiformia, drží ji  
mezikostní vazy, m.  
peroneus longus,  
m. adductor hallucis

**podélná** – vrcholem talus,  
aponeurosa, lig. plantare  
longum,  
m. tibialis ant. et post., m.  
flexor hall. longus

Grim, Naňka, Helekal: Atlas Anatomie člověka I, Grada 2014







Lateralia

Basale prof.

Lig. scull longi

Tarsus V

Calcaneus longum

Calcaneo-plantare

longum

Tibulare

Proc. med. calcanei

Tuber calcanei

Sulcus tendinis musculi flexoris hallucis longi

L

Bas

Ligg

Os c

Ligg

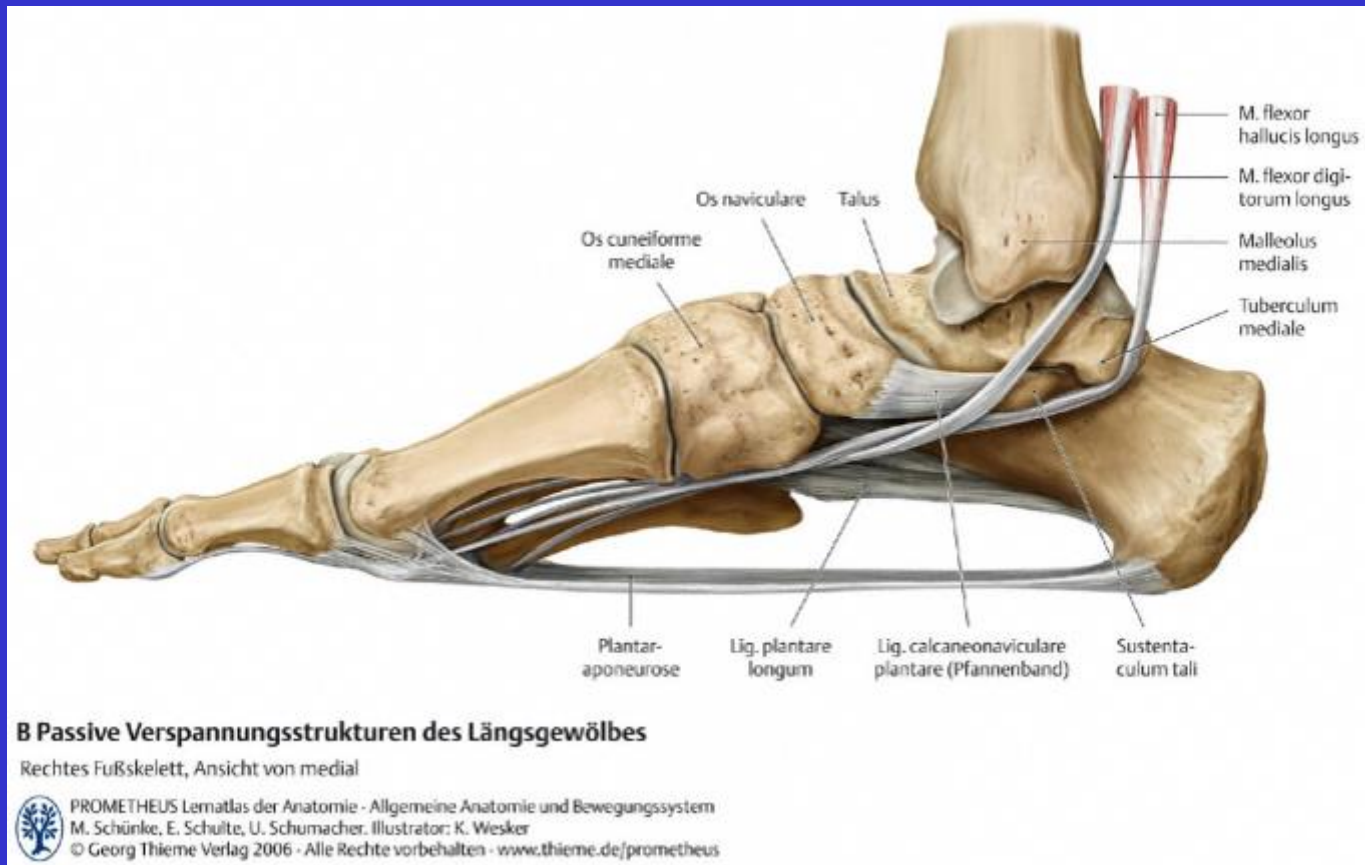
Lig

Tub

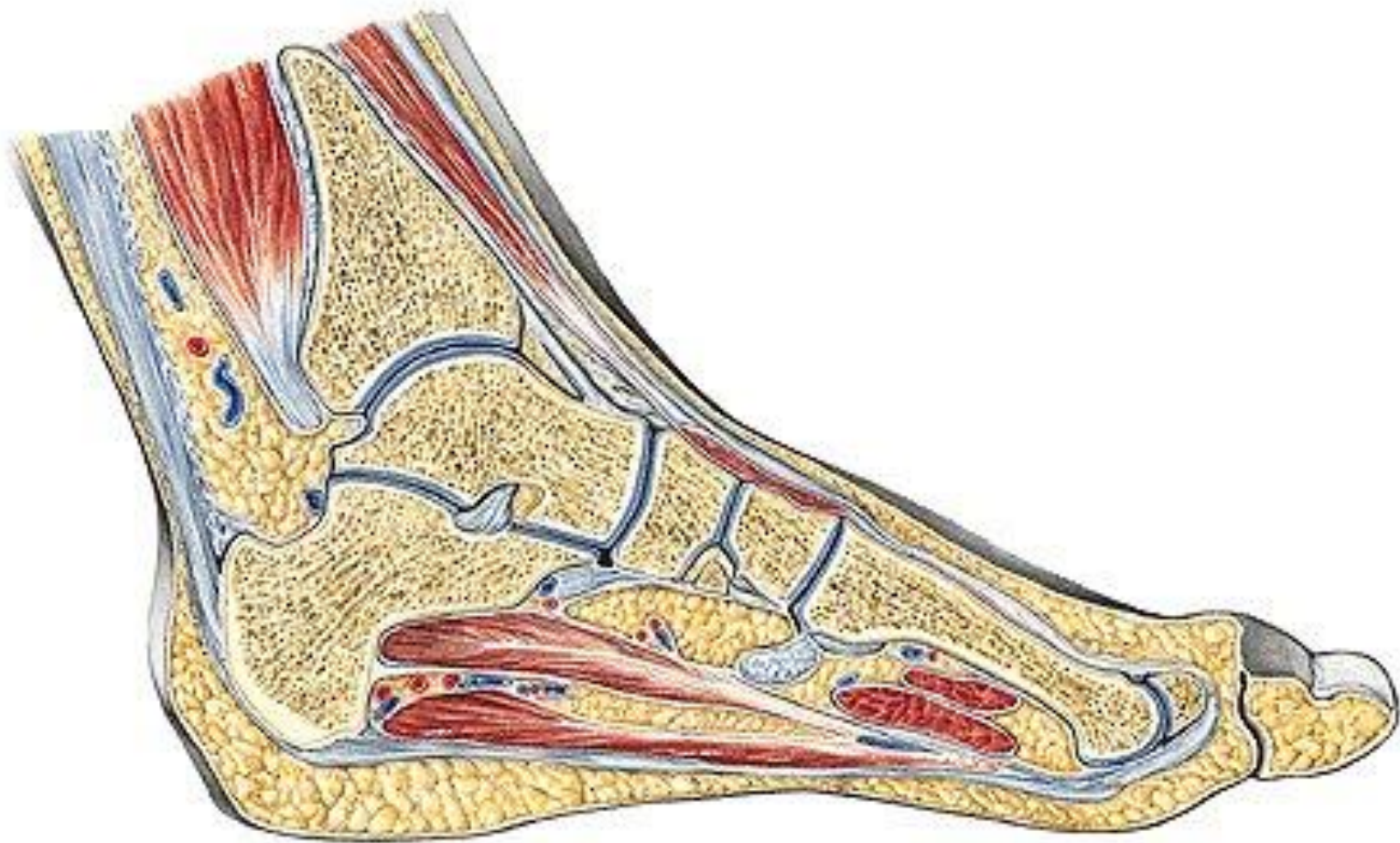
Lig

Sust

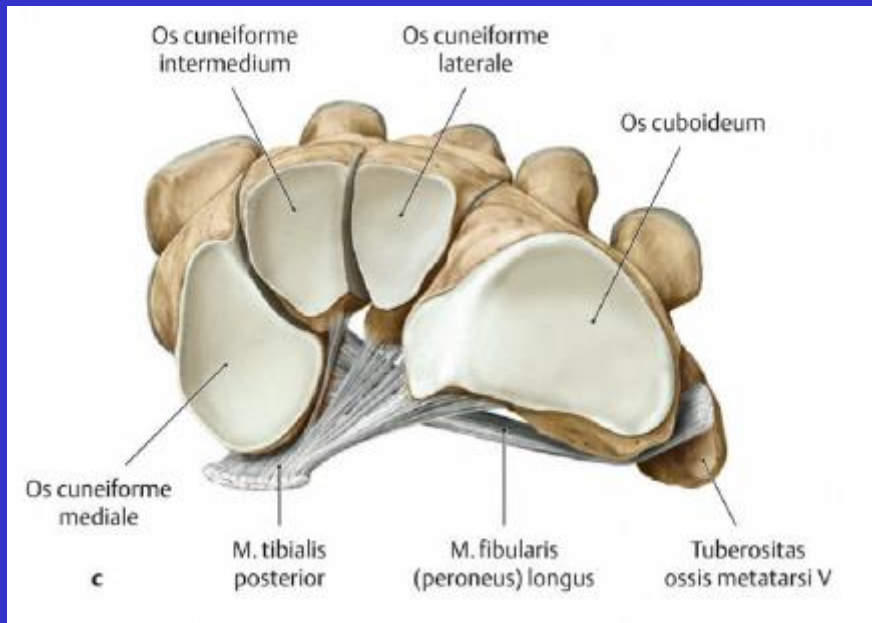
Lig. r [delto] Pars



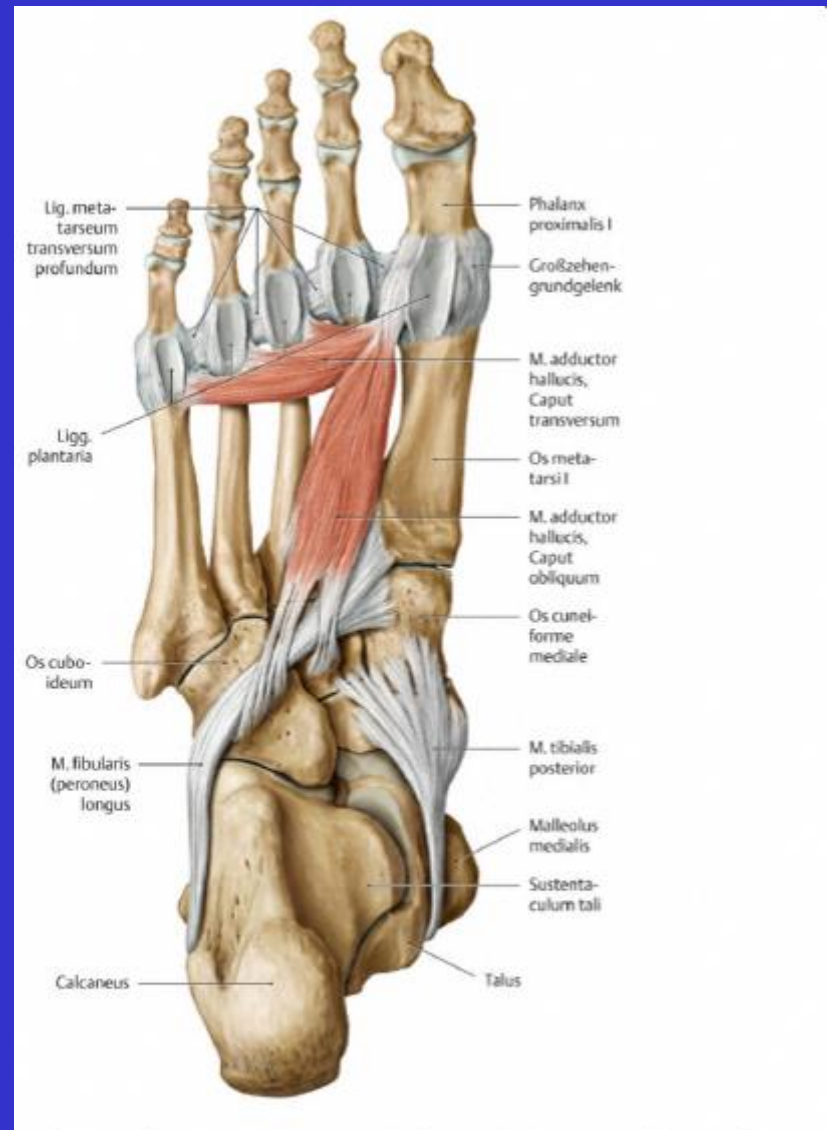
# Podélná klenba



Podélná klenba



# Príčná klenba

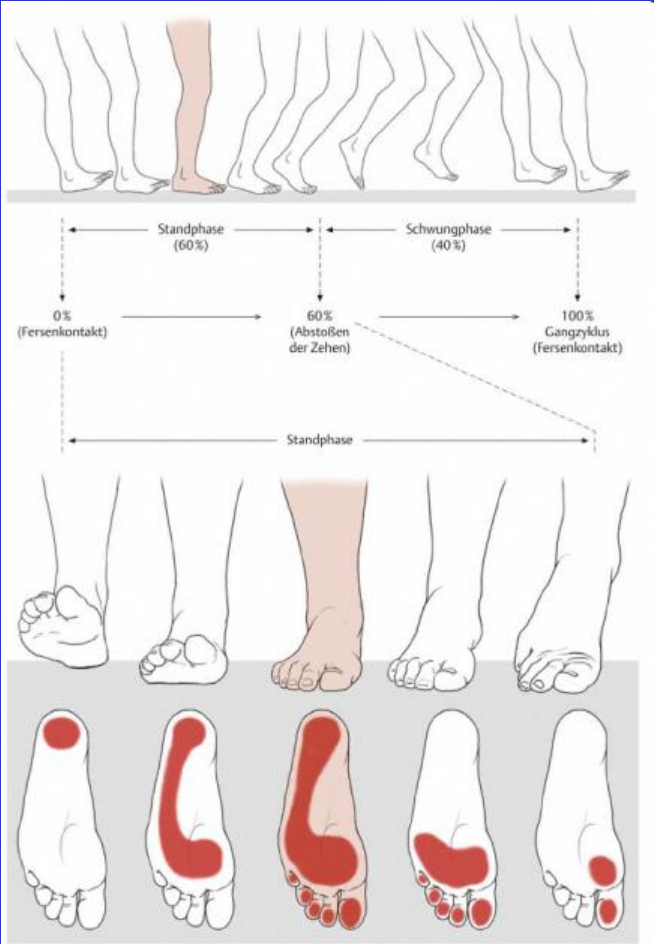


## D Aktive und passive Verspannungsstrukturen des Quergewölbes von plantar

Rechter Fuß.



PROMETHEUS Lernatlas der Anatomie - Allgemeine Anatomie und Bewegungssystem  
 M. Schünke, E. Schulte, U. Schumacher. Illustrator: K. Wesker  
 © Georg Thieme Verlag 2006 - Alle Rechte vorbehalten - www.thieme.de/prometheus



**D Bewegungen der freien unteren Extremität während eines Gangzyklus**



**D Fußabdrücke (Podogramme) rechter Füße**

a Normale Fußwölbung (Pes rectus) | b verstärkte Fußwölbung (Hohlfuß = Pes cavus) | c Verlust des Quergewölbes (Spreizfuß = Pes transversoplanus) | d Verlust des Längsgewölbes (Platt- bzw. Senkfuß = Pes planus)

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