

# ARTERIES

**blood from the heart gets around  
the body through blood vessels**

There are 3 types of blood vessels

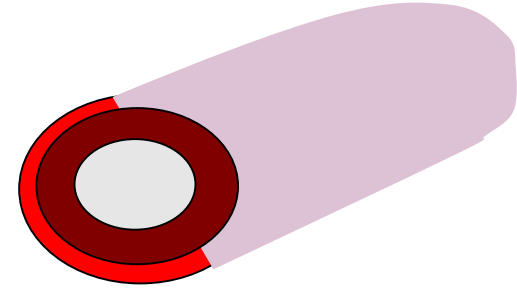
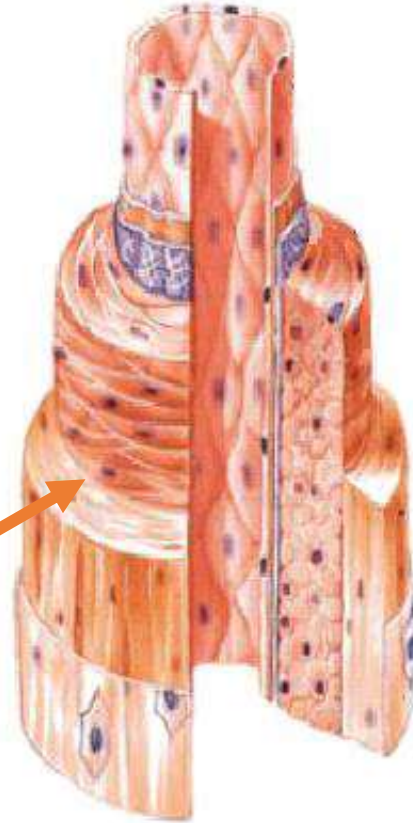
- a. ARTERY**
- b. VEIN**
- c. CAPILLARY**

# The ARTERY

Arteries carry blood **away** from the heart.

the elastic fibres allow the artery  
to **stretch** under pressure

**thick muscle and elastic  
fibres**



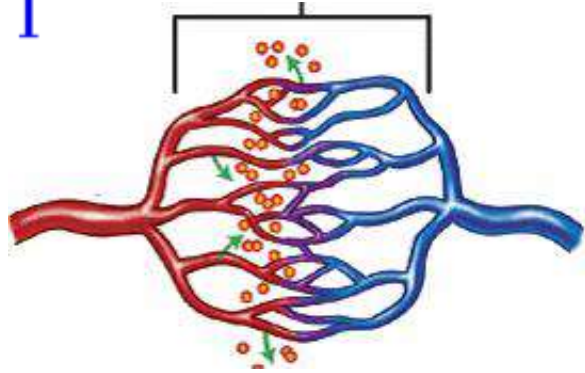
the thick muscle can contract  
to **push** the blood along.

- Tunica intima - endothel cells
- Tunica media – smooth muscle, elastic and collagen fibres
- Tunica externa - adventitia

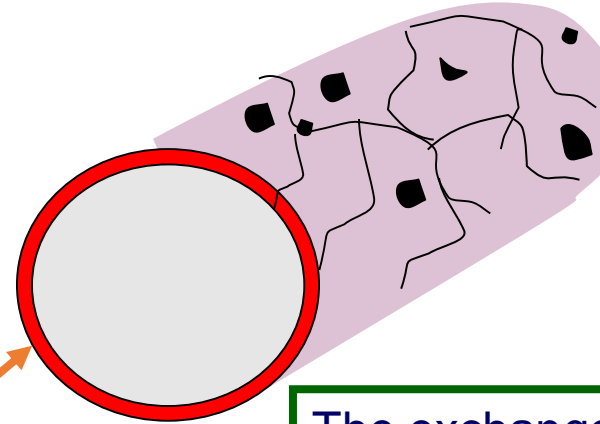
Collateral branches  
Terminal branches

# The CAPILLARY

Capillaries link Arteries with Veins



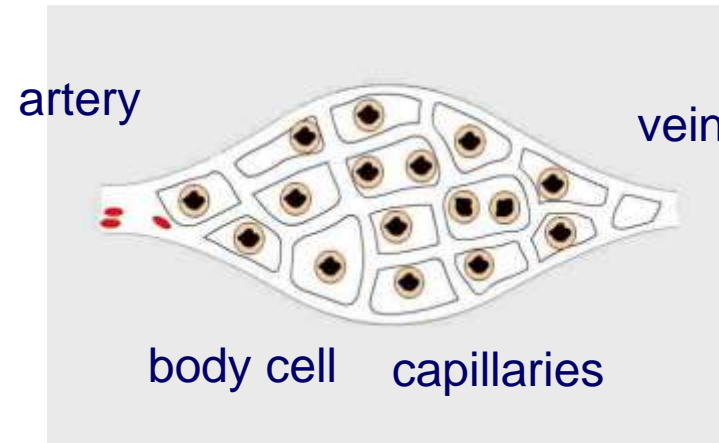
they exchange materials between the blood and other body cells.



The exchange of materials between the blood and the body can only occur through capillaries.

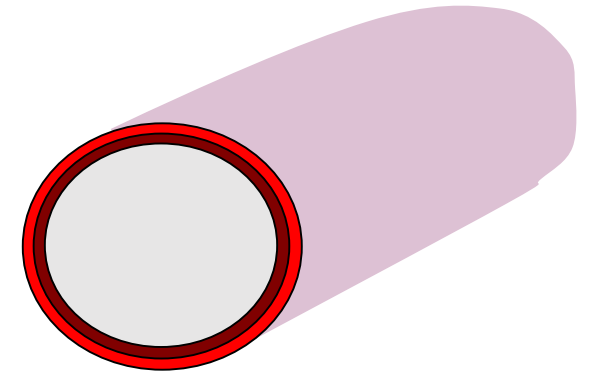
the wall of a capillary is only one cell thick

A collection of capillaries is known as a **capillary bed**.



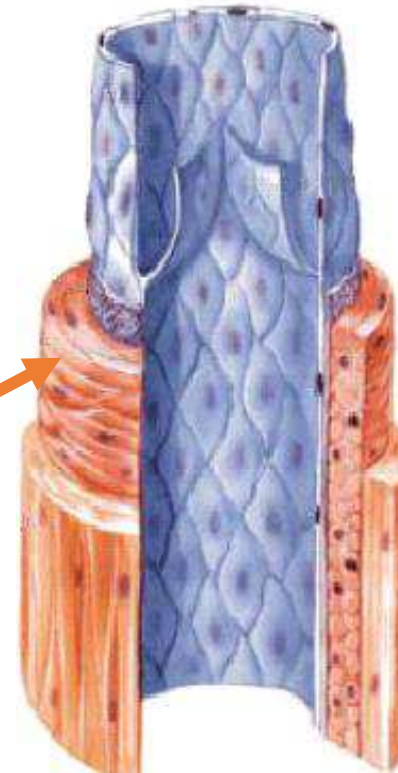
# The VEIN

Veins carry blood **towards** the heart.



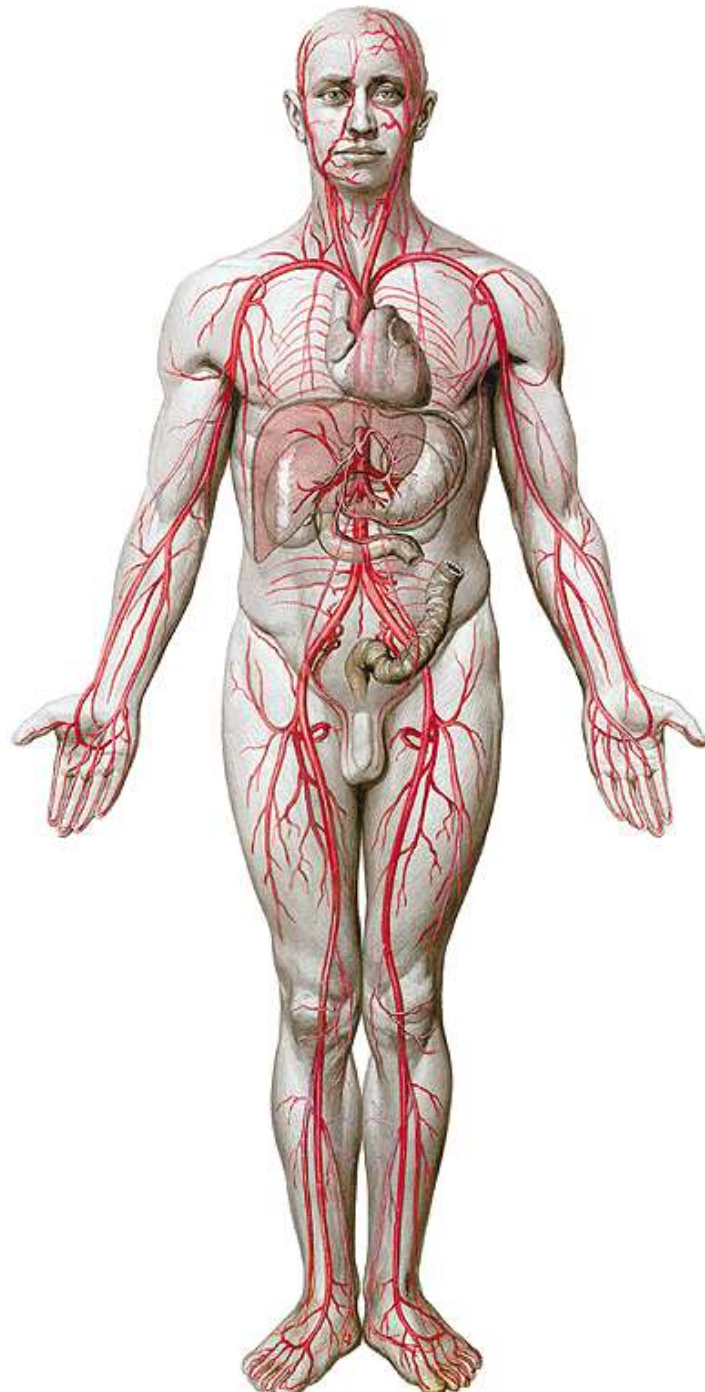
veins have **valves** which act to stop the blood from going in the wrong direction.

**thin muscle and elastic fibres**



Tunica intima - endothel  
Tunica media – smooth muscle  
(not in cranial sinuses)  
Tunica externa - adventitia

body muscles surround the veins so that when they contract to move the body, they also squeeze the veins and push the blood along the vessel.



# Aorta

**Aorta ascendens:** heart

**Arcus aortae:** head, neck, UL

**Aorta descendens:**

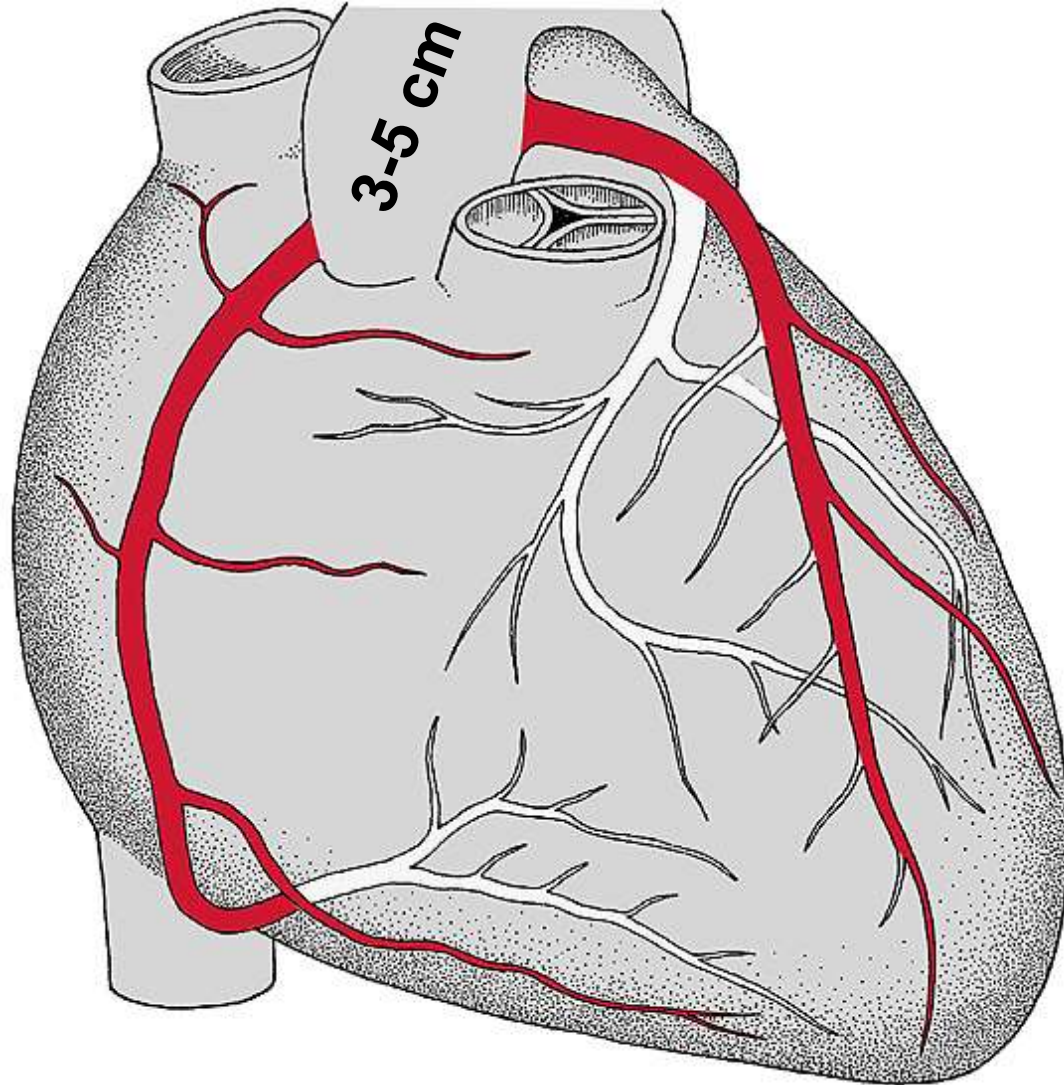
**A. thoracica** - thorax

**A. abdominalis** - abdomen

**Aa. iliacae communes:**

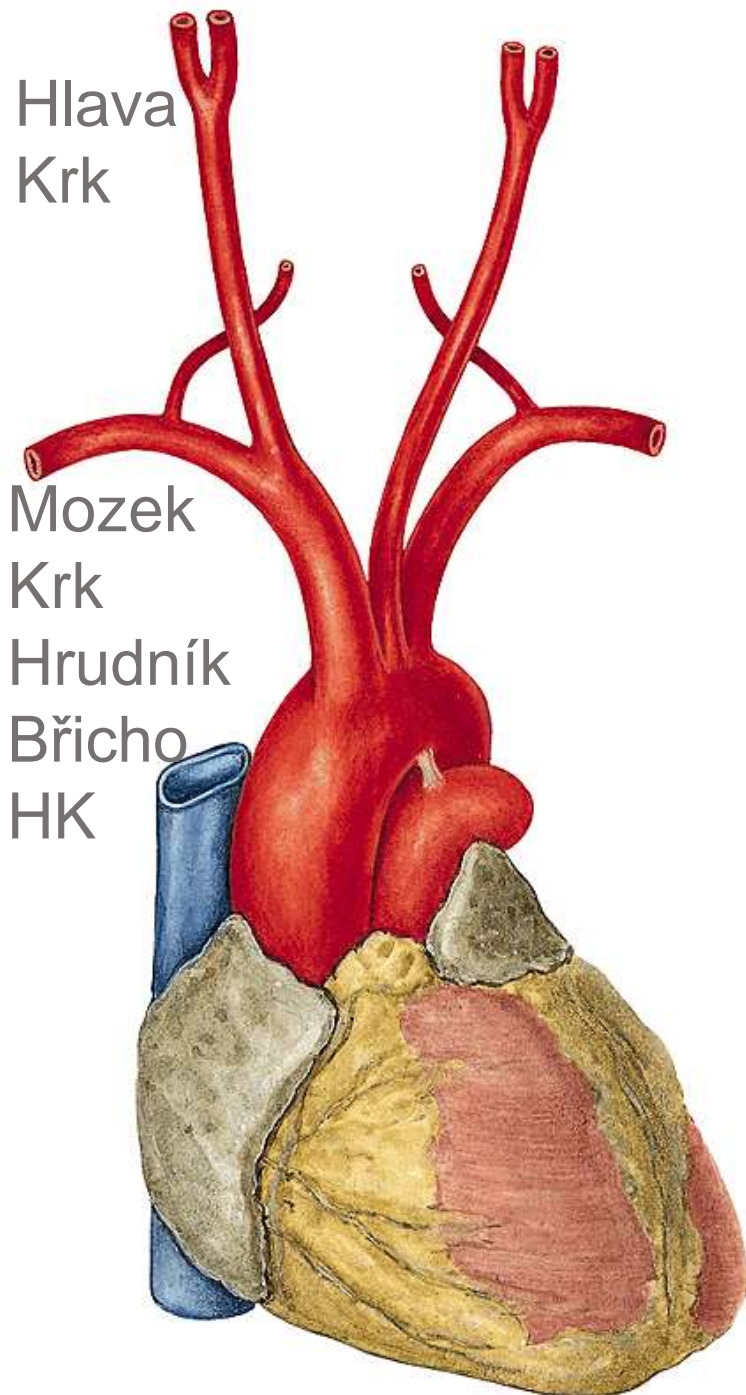
interna - pelvis

externa - LL



Bulbus aortae  
Aa. coronariae





## Arcus aortae

### Ligamentum arteriosum

#### Dx

#### Tr. brachiocephalicus

a. carotis comm. dx

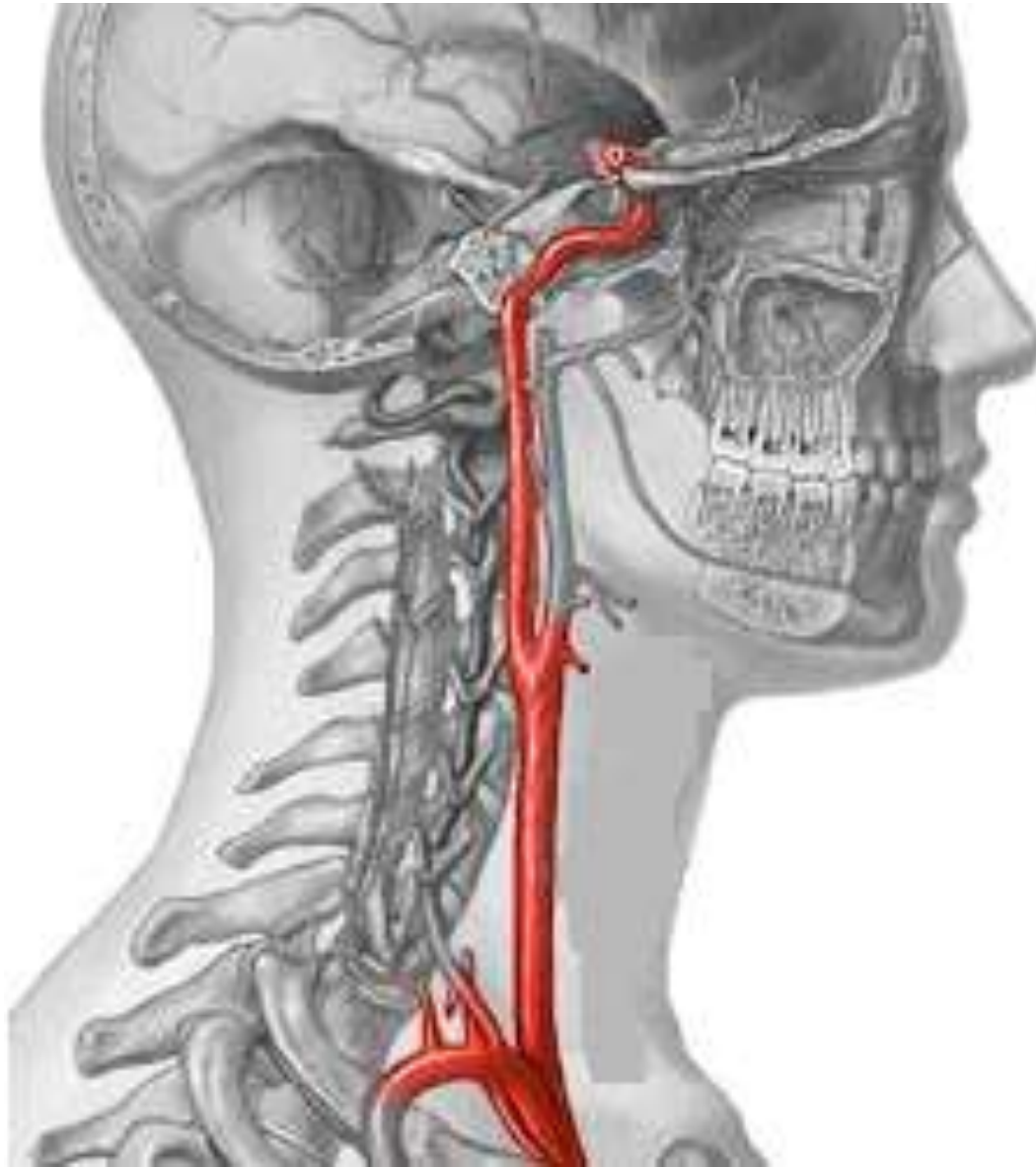
a. subclavia dx

#### Sin

A. carotis comm. sin

A. subclavia sin





**A. carotis comm.**

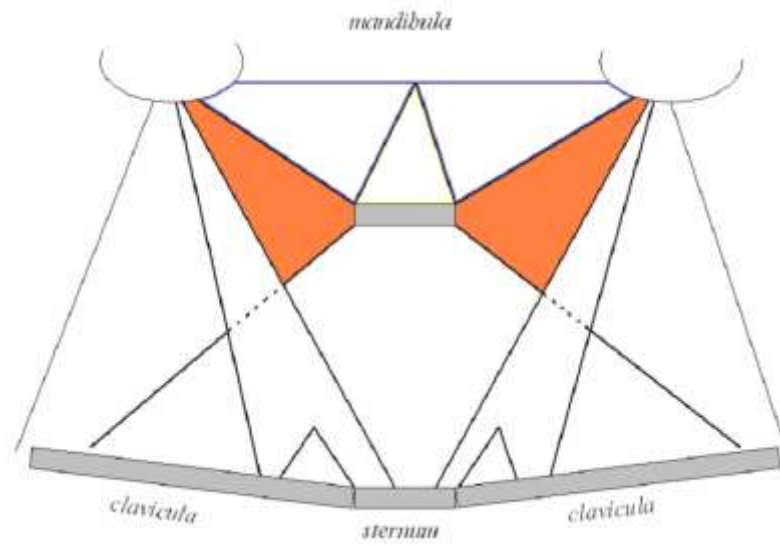
**A. carotis int.**

orbit, inner ear,  
part of the brain

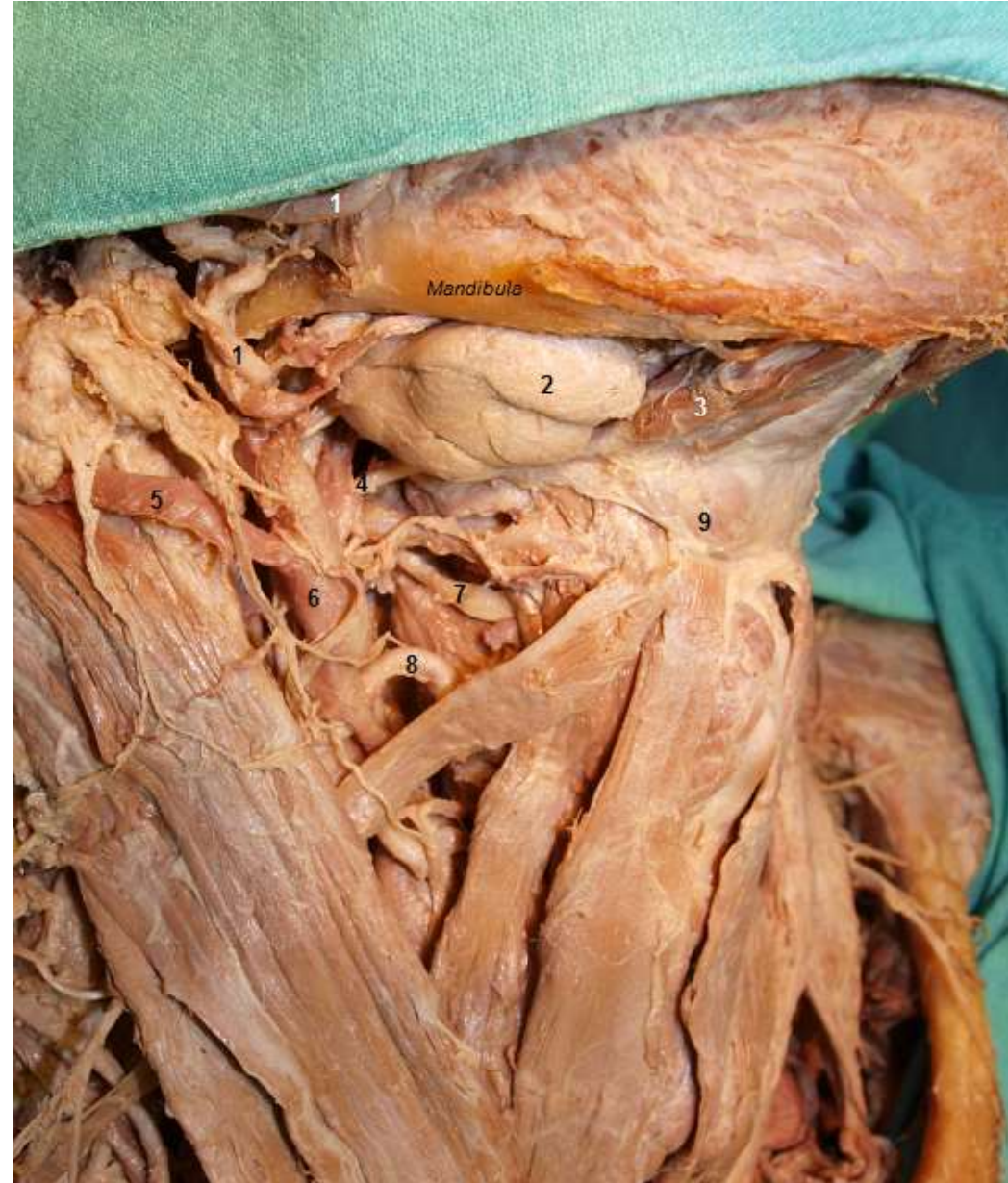
**A. carotis ext.**

Surface of the head,  
nasal cavity, paranasal  
sinuses, oral cavity,  
cranial part of the neck

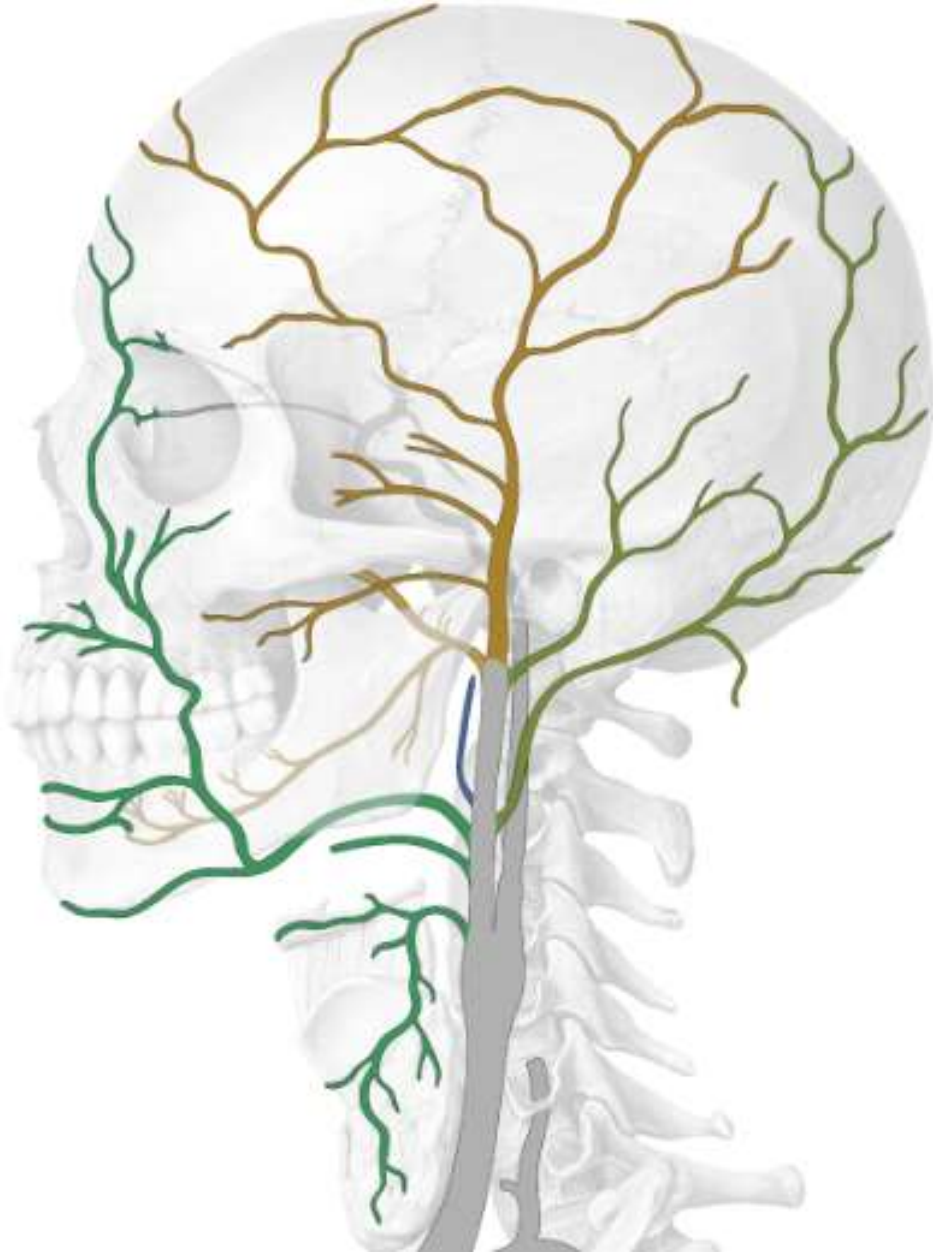
# Trigonum caroticum



Tuberculum caroticum  
C6



## A. carotis ext.



ventral

- a. thyroidea sup.
- a. lingualis
- a. facialis

dorsal

- a. occipitalis
- a. auricularis post.

Med.

- a. pharyngea asc.

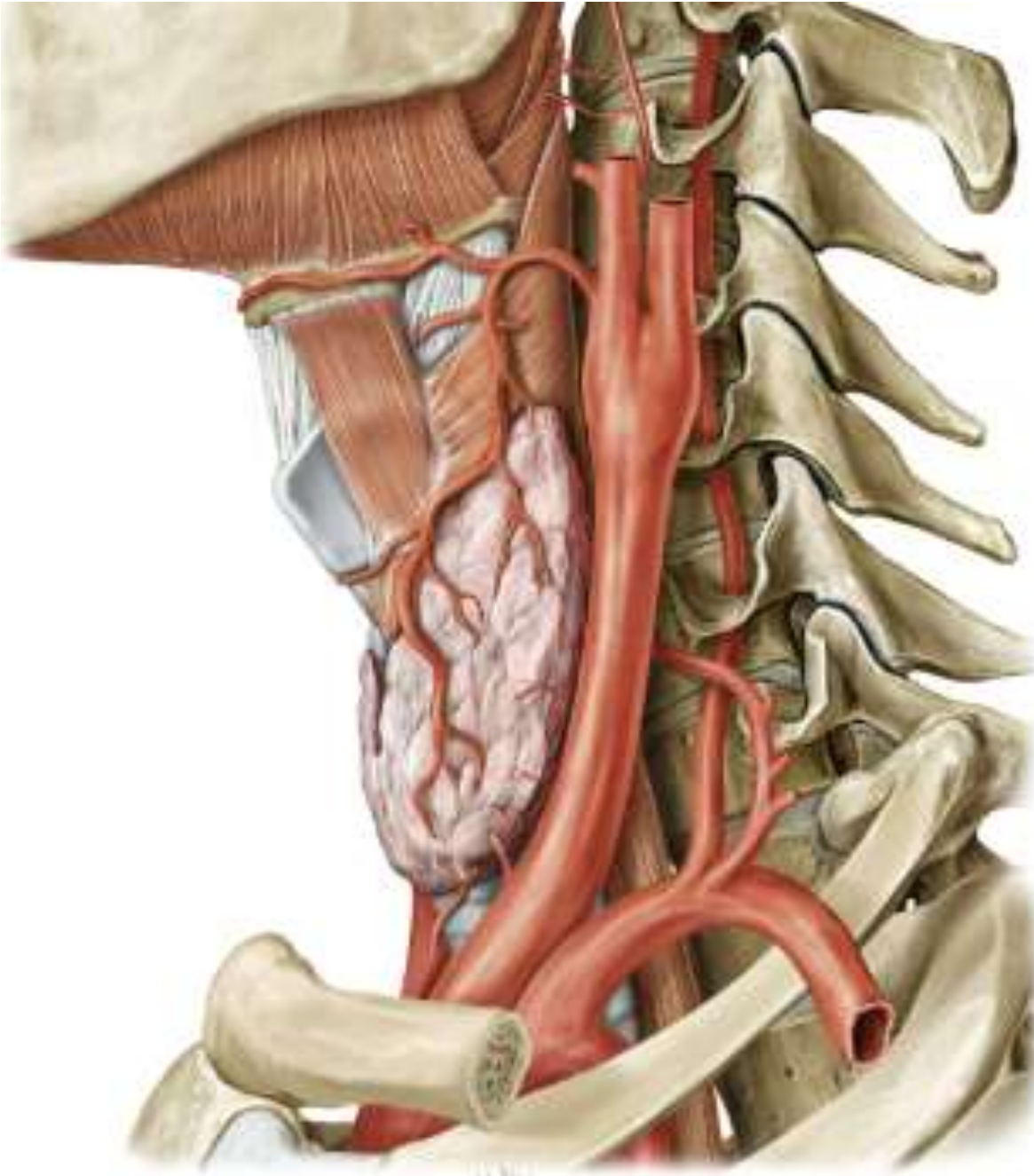
Lat.

- a. sternocleidomastoidea

terminal

- a. maxillaris
- a. temporalis spf.





**A. thyroidea sup.**

R. infrahyoideus

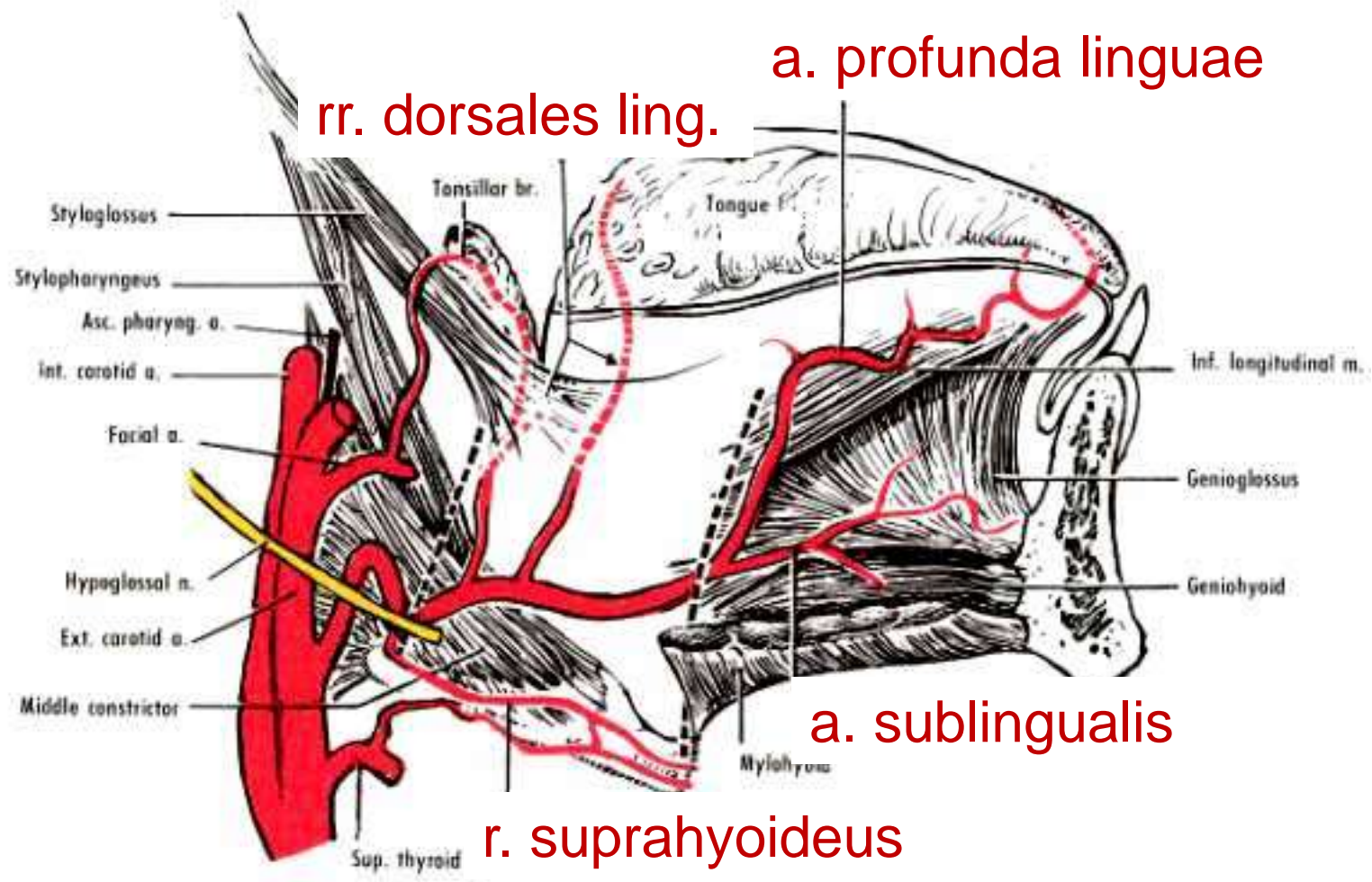
A. laryngea sup.

R. cricothyroideus

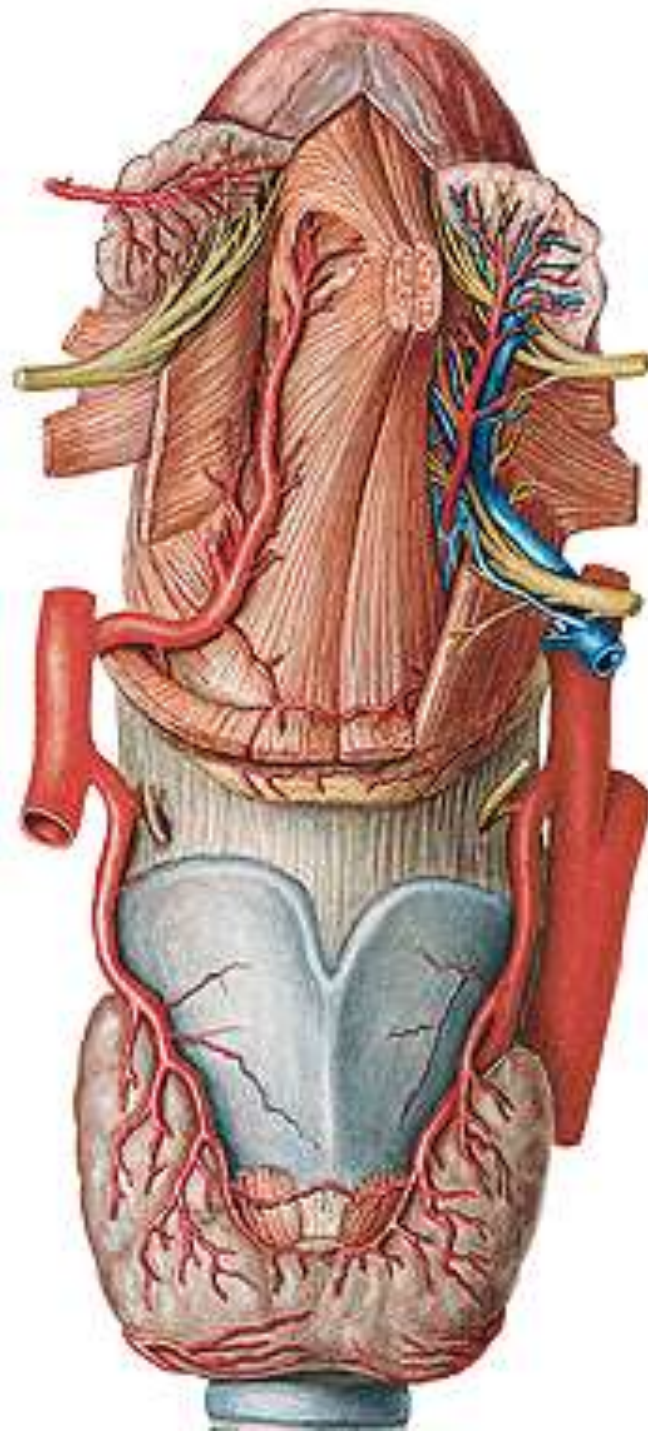
Rr. glandulares

# A. lingualis

between m. genioglossus a hyoglossus → oral cavity

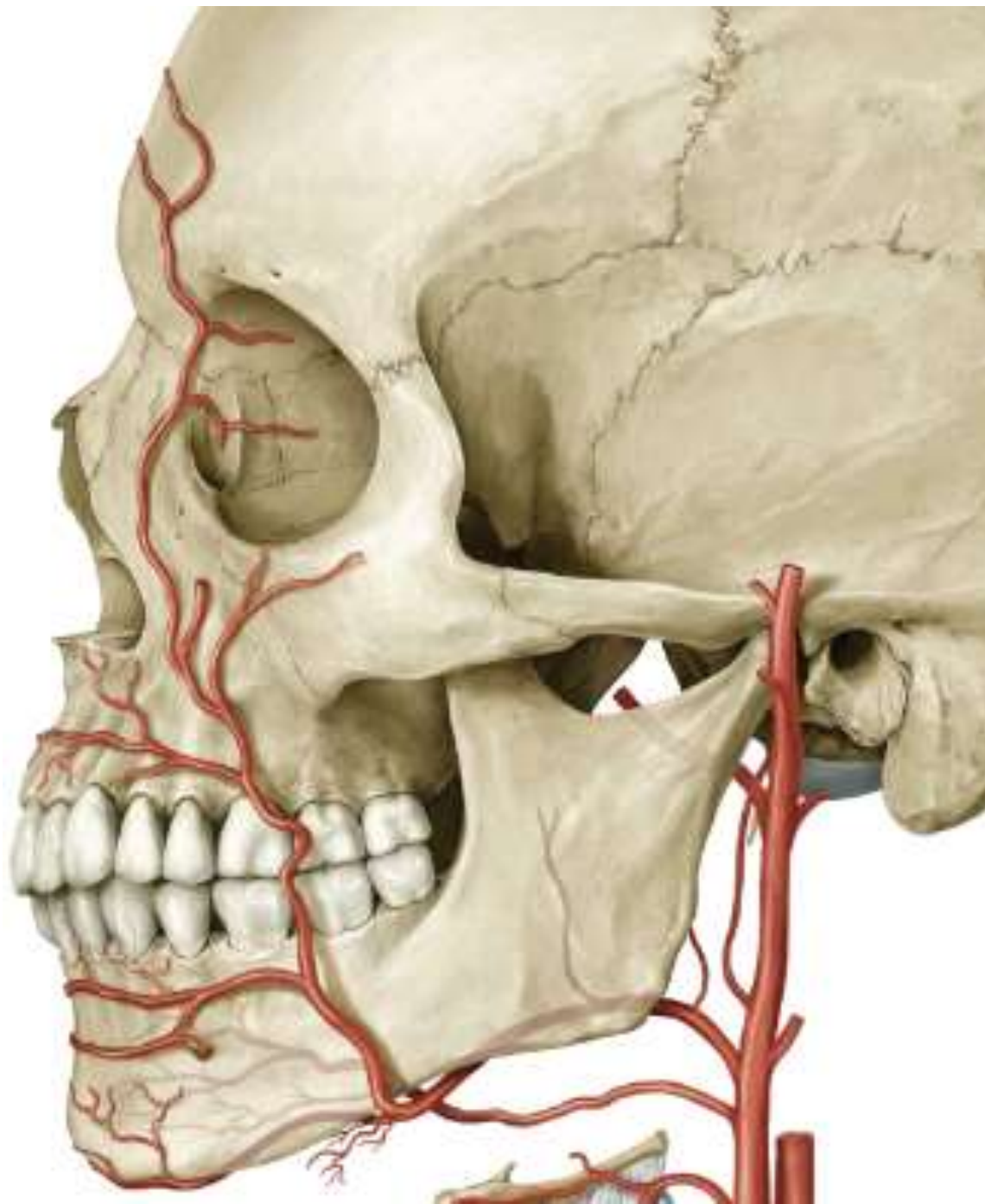


a. profunda ling.



a. sublingualis





## **A. facialis**

R. tonsillaris

A. palatina asc.

Rr. glandulares

A. submentalis

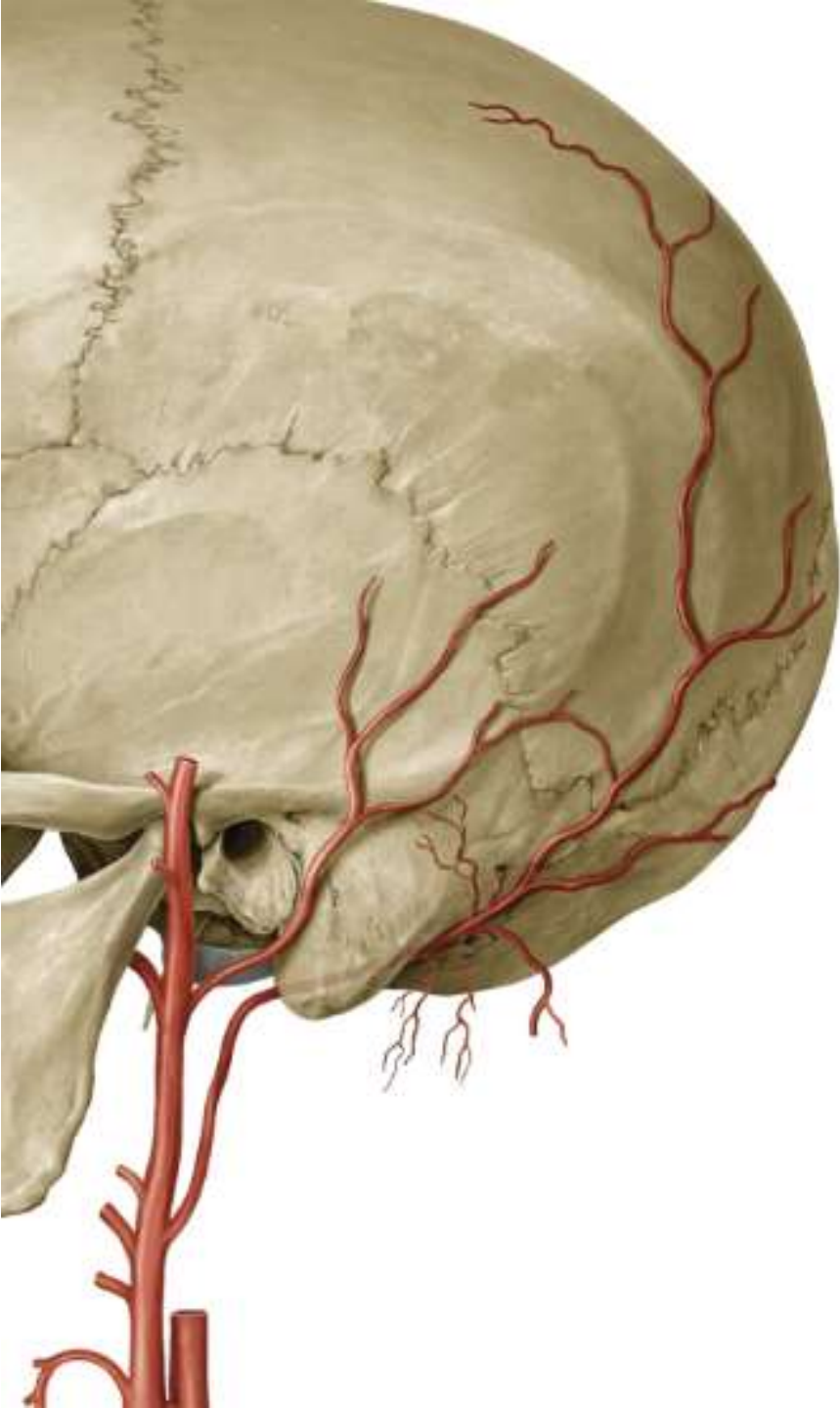
A. labialis inf.

(circulus arteriosus oris)

A. labialis sup.

A. alaris nasi

A. angularis

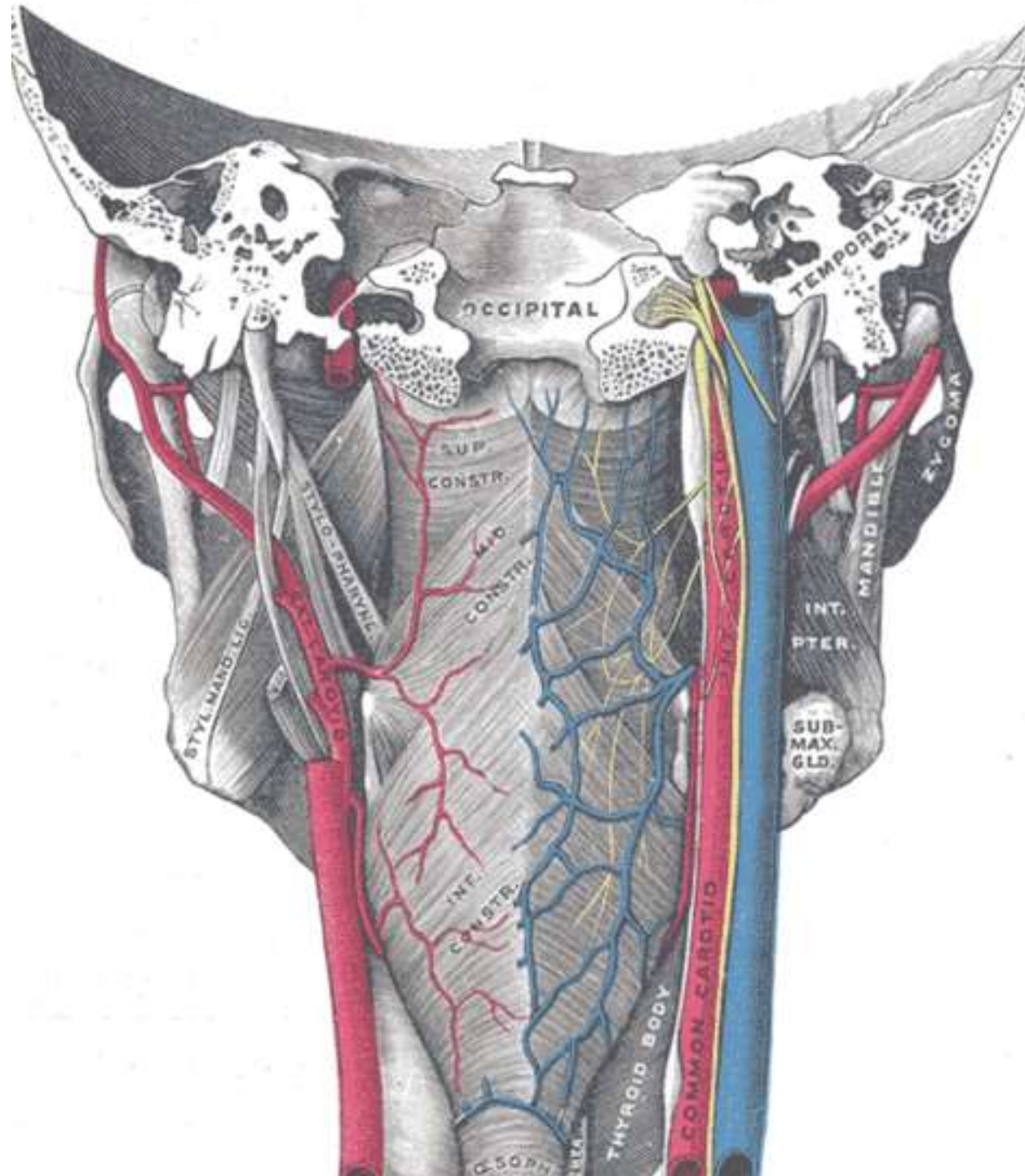


## **A. occipitalis**

Rr. musculares  
R. mastoideus  
R. auricularis  
Rr. occipitales

## **A. auricularis post.**

Rr. musculares  
Rr. glandulares  
R. auricularis  
A. stylomastoidea



## A. pharyngea ascendens

rr. pharyngeales

a. tympanica inf.

a. meningea post.





## **A. temporalis spf.**

Rr. auriculares ant.

Rr. parotidei

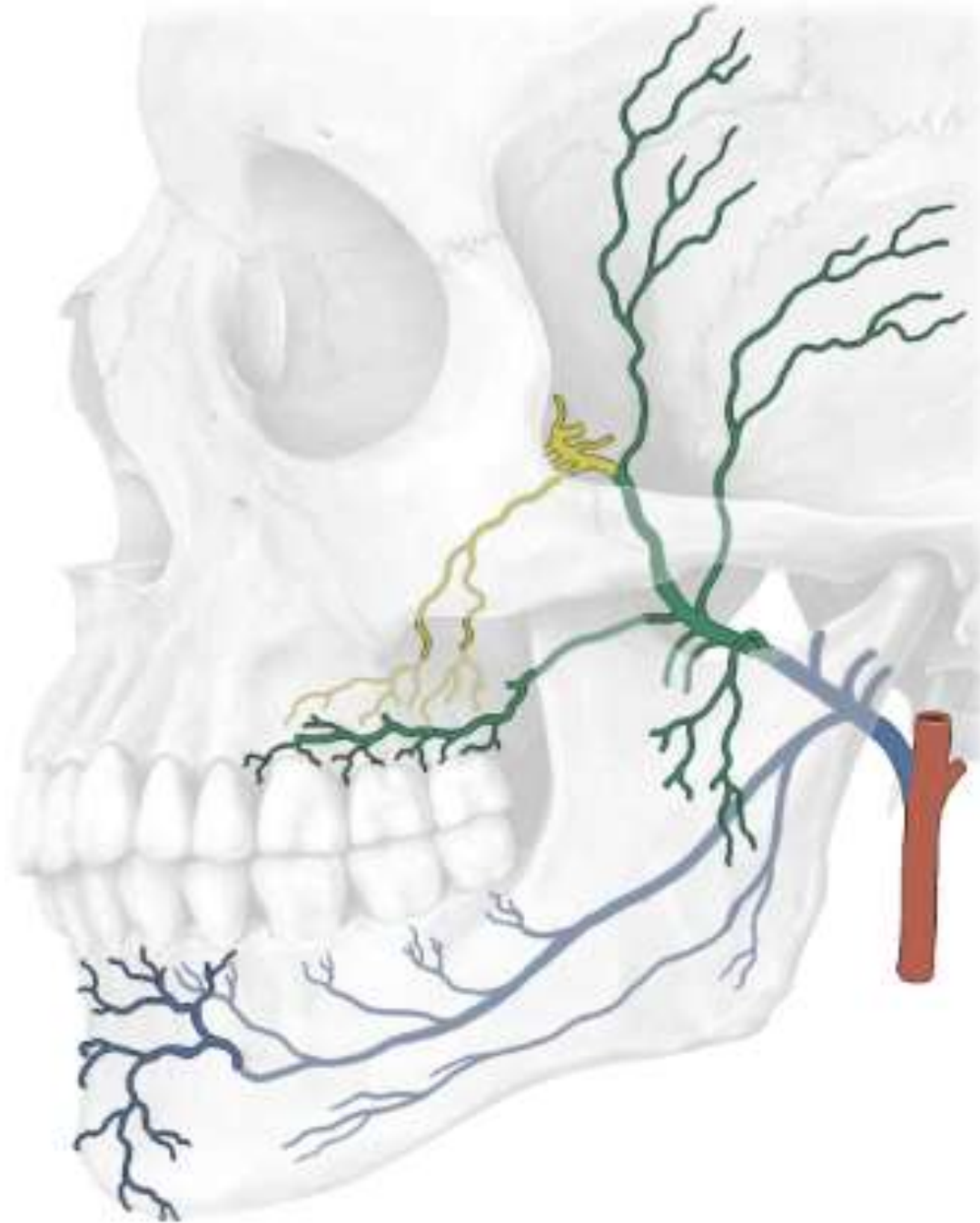
A. transversa faciei

A. zygomaticoorbitalis

A. temporalis media

R. frontalis

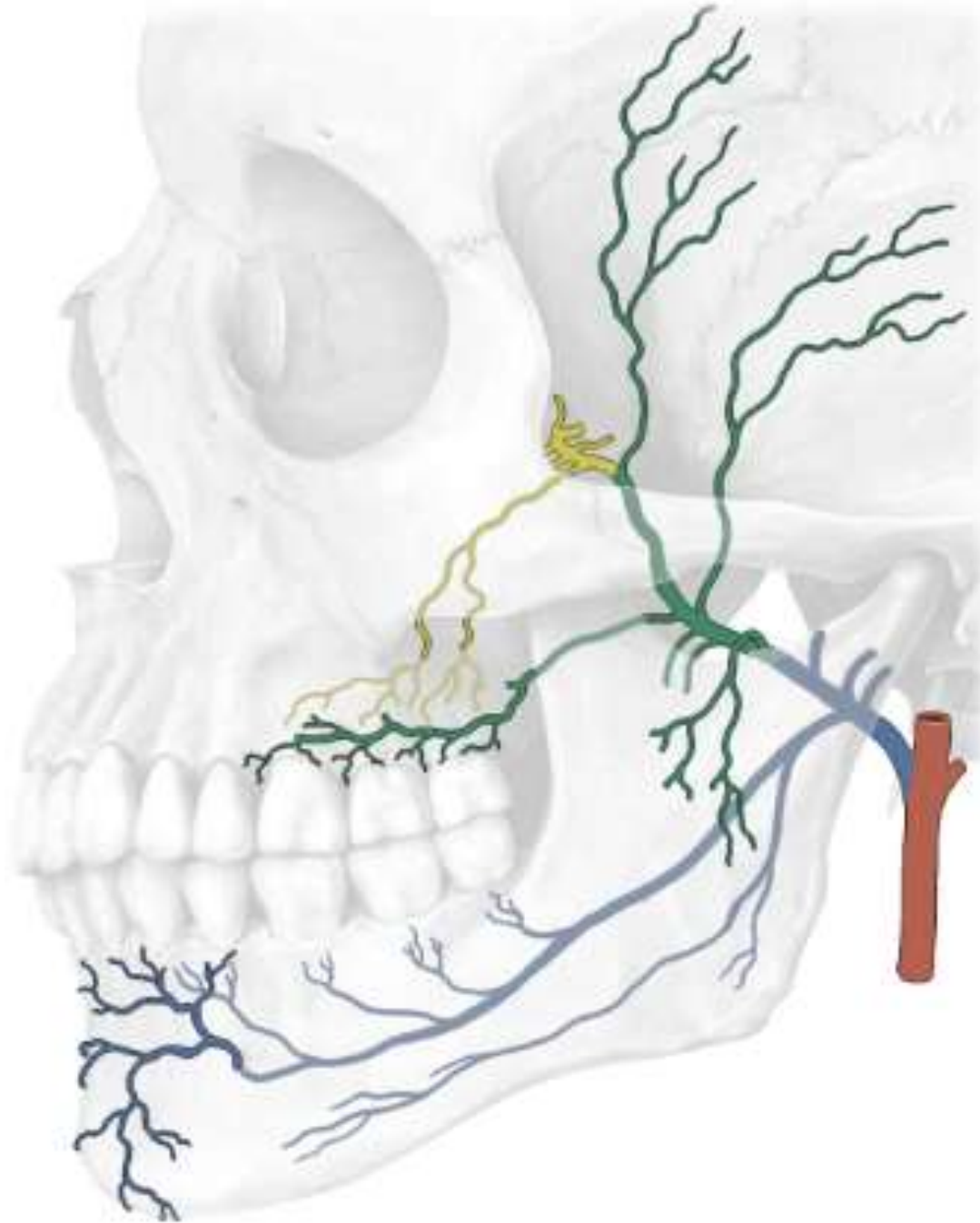
R. parietalis



## A. maxillaris

### Pars

- mandibularis
- pterygoidea
- pterygopalatina



## Pars mandibularis

A. meningea media

A. tympanica ant.

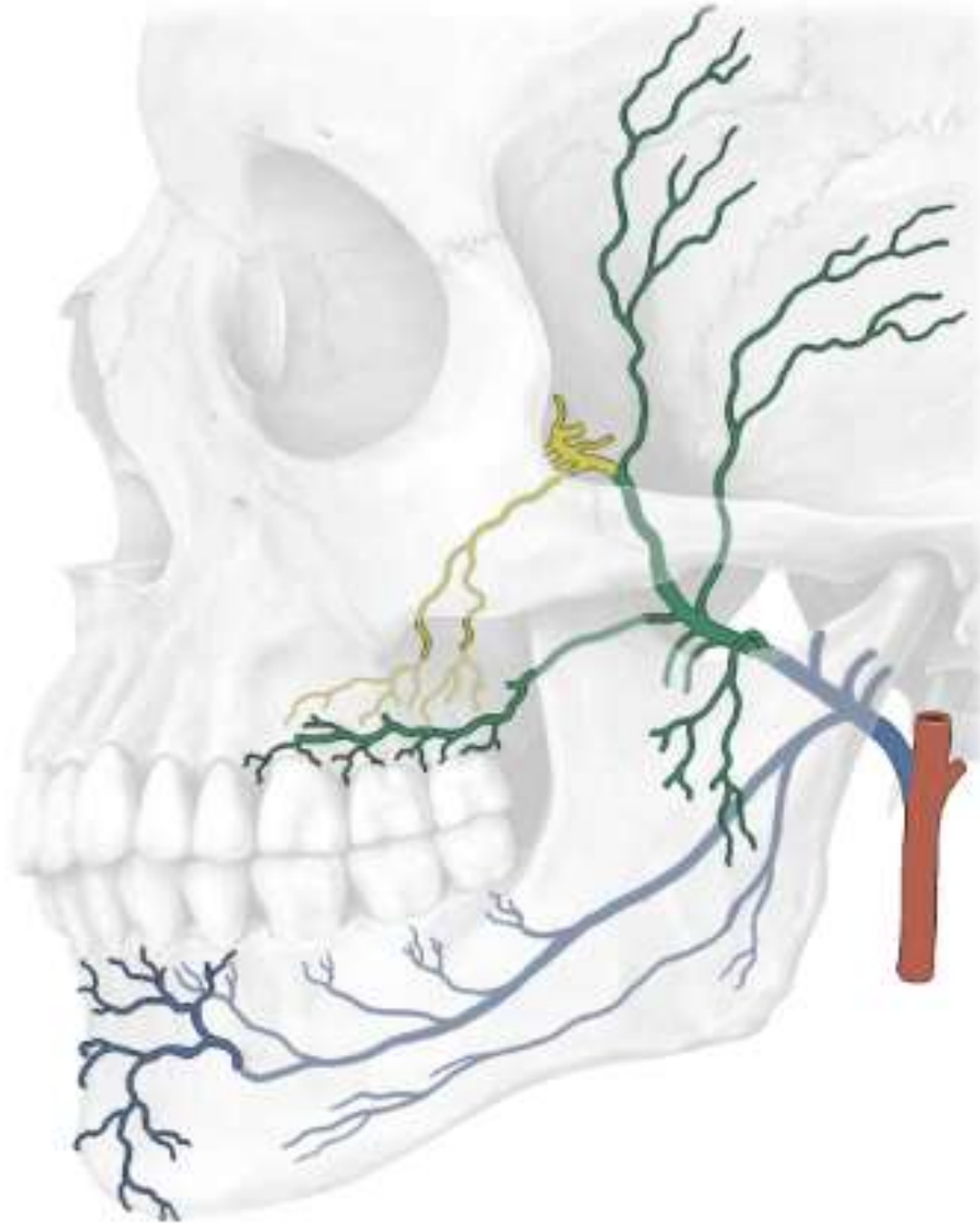
A. alveolaris inf.

rr. dentales

r. mylohyoideus

a. mentalis





## Pars pterygoidea

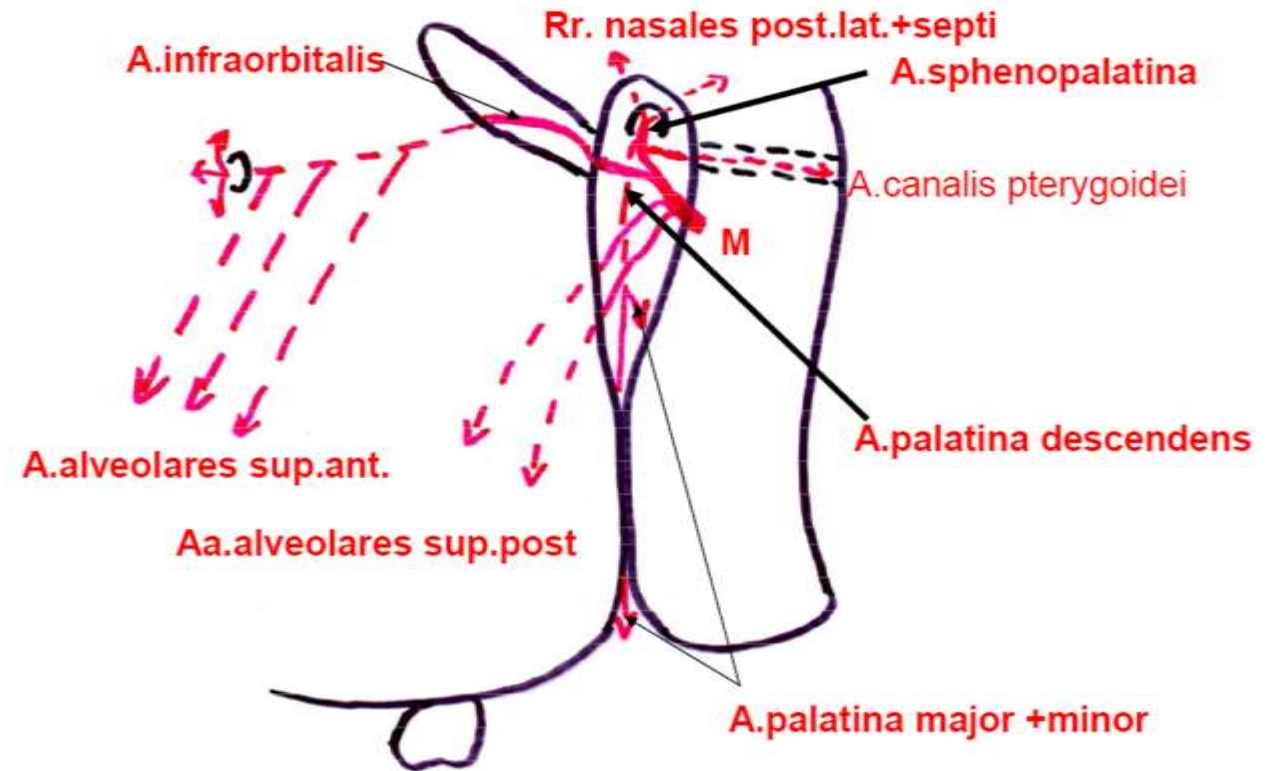
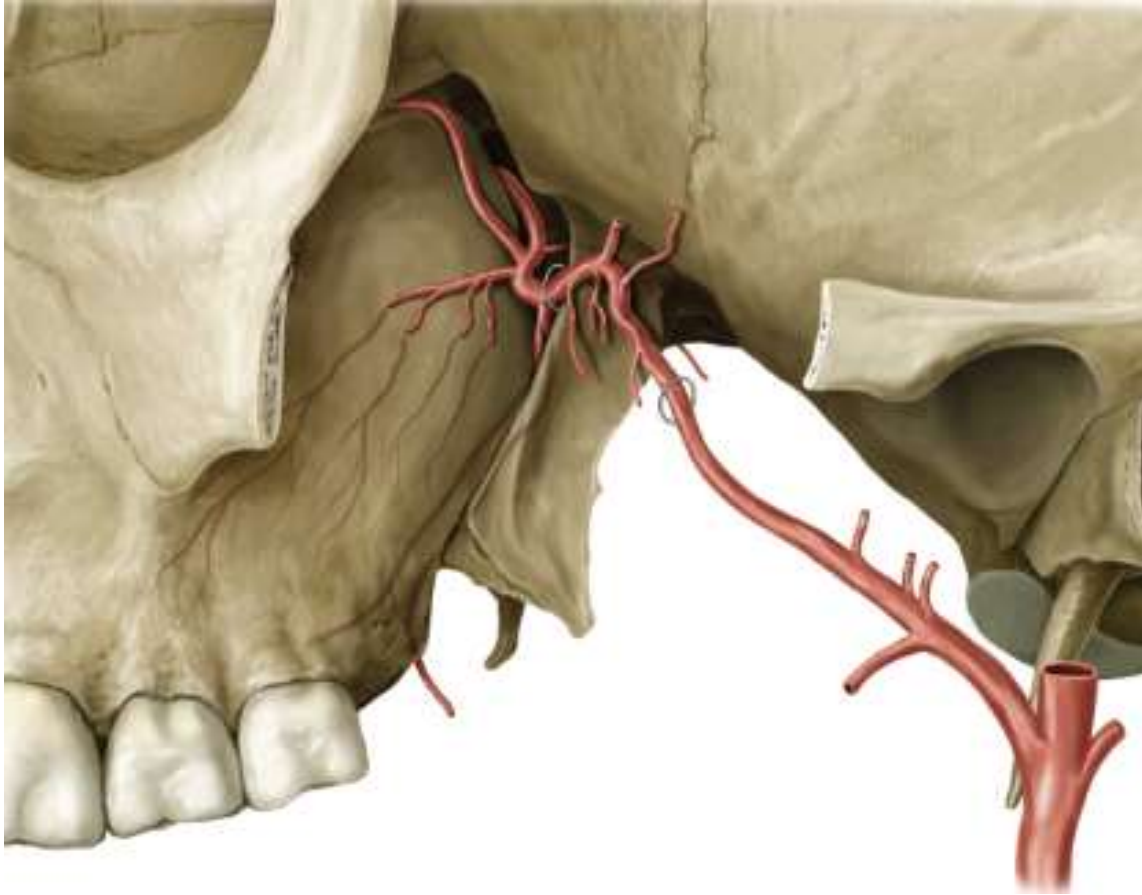
A. masseterica

Aa. temporales prof.

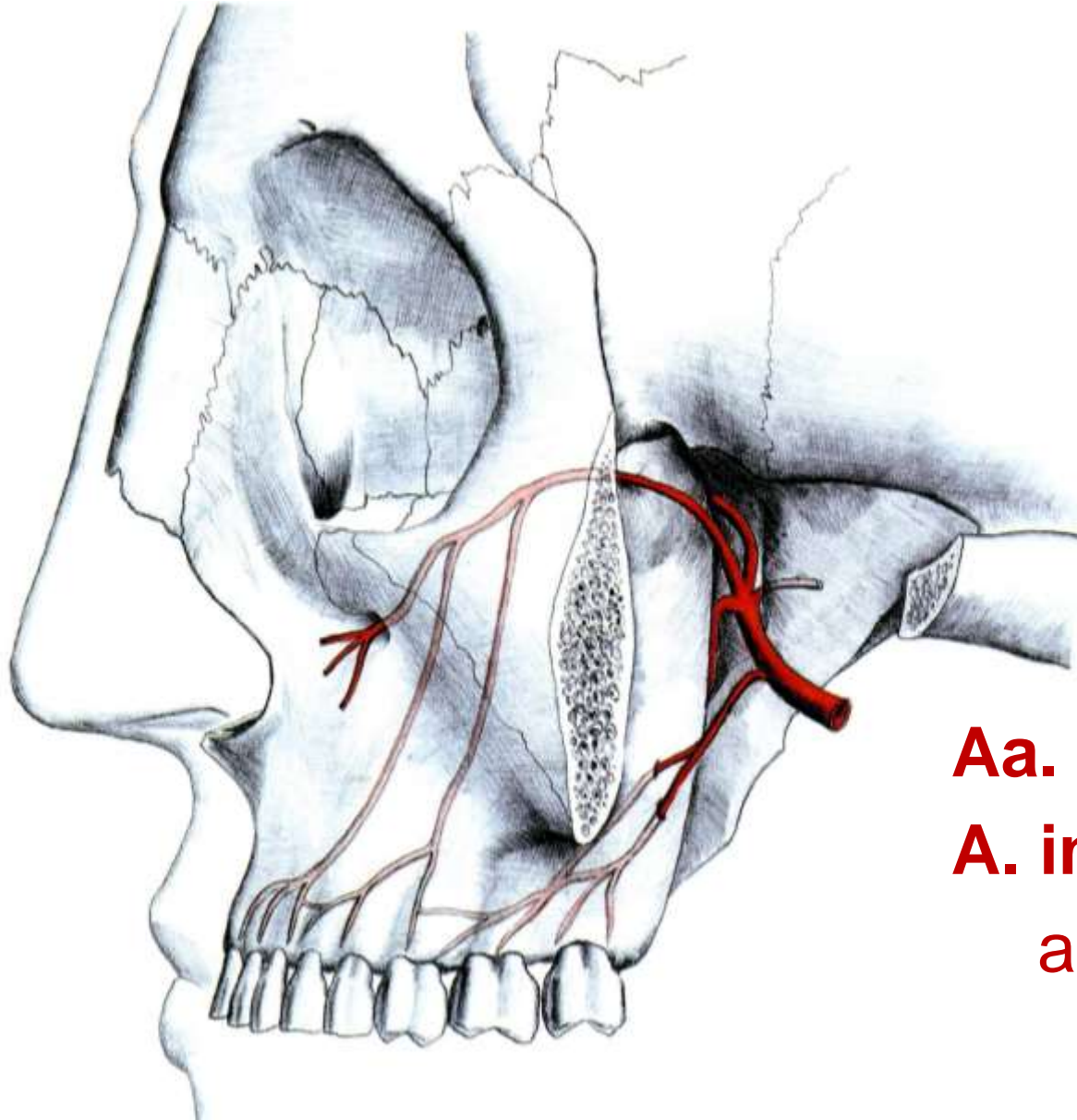
Rr. pterygoidei

A. buccalis

## Pars pterygopalatina



# Artery supply of the upper jaw

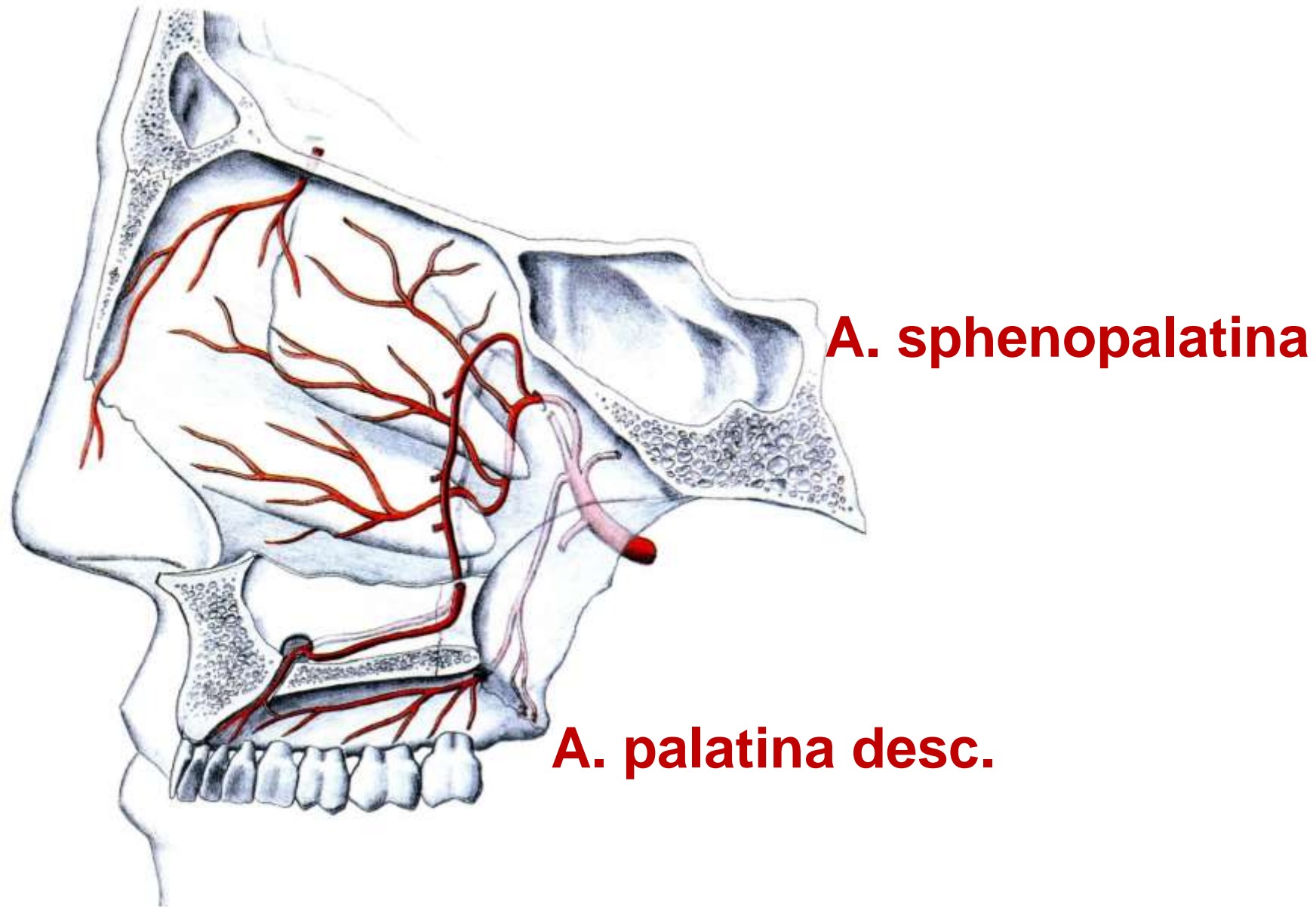


**Aa. alv. sup. post.**

**A. infraorbitalis**

**aa. alv. sup. ant.**

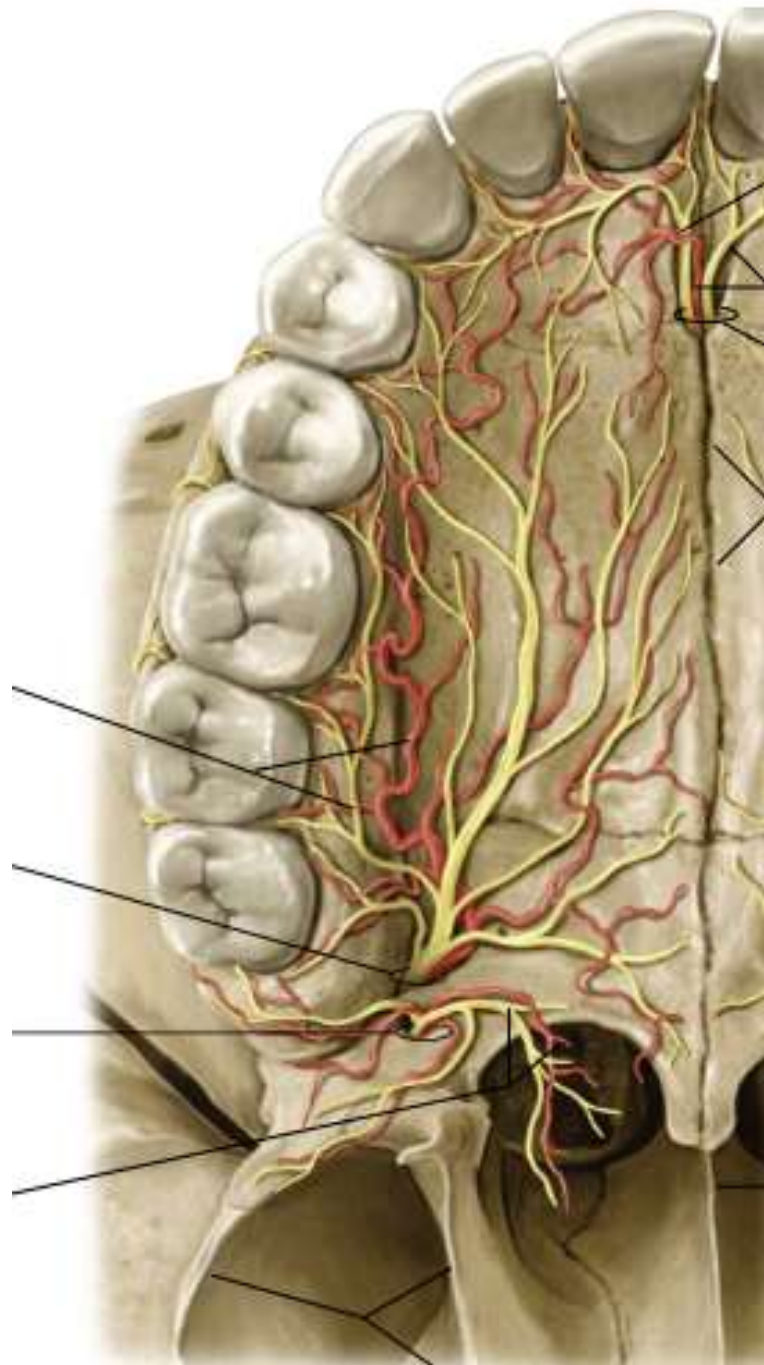
# Artery supply of the palate and nasal cavity





**A. palat. major**

**Aa. palat. minores**

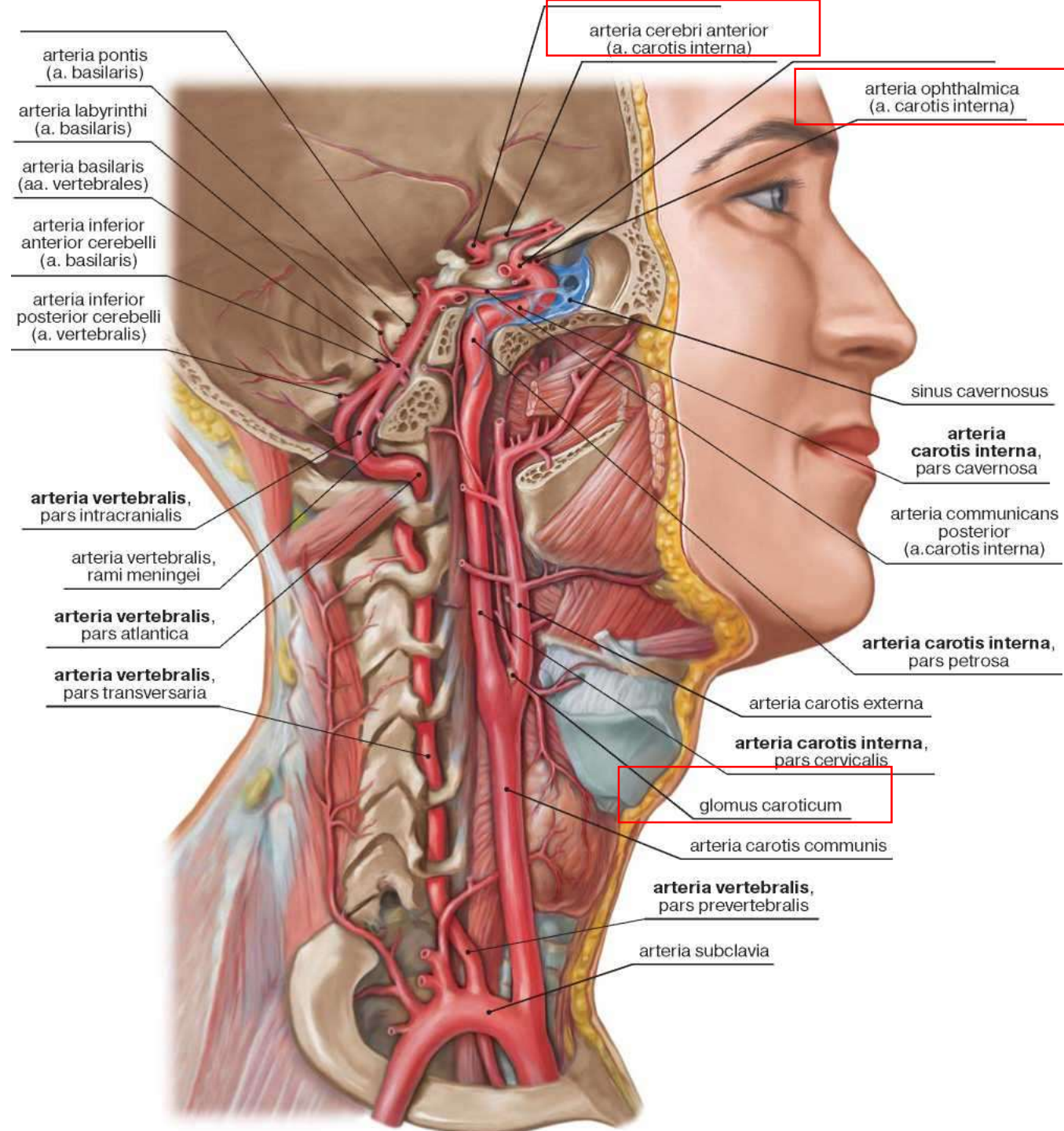


## A. CAROTIS INTERNA:

- aa. hypophysiales
- a. ophthalmica
- a. cerebri ant.
- a. cerebri media

Carotid syphon

Sinus caroticus  
Glomus caroticum

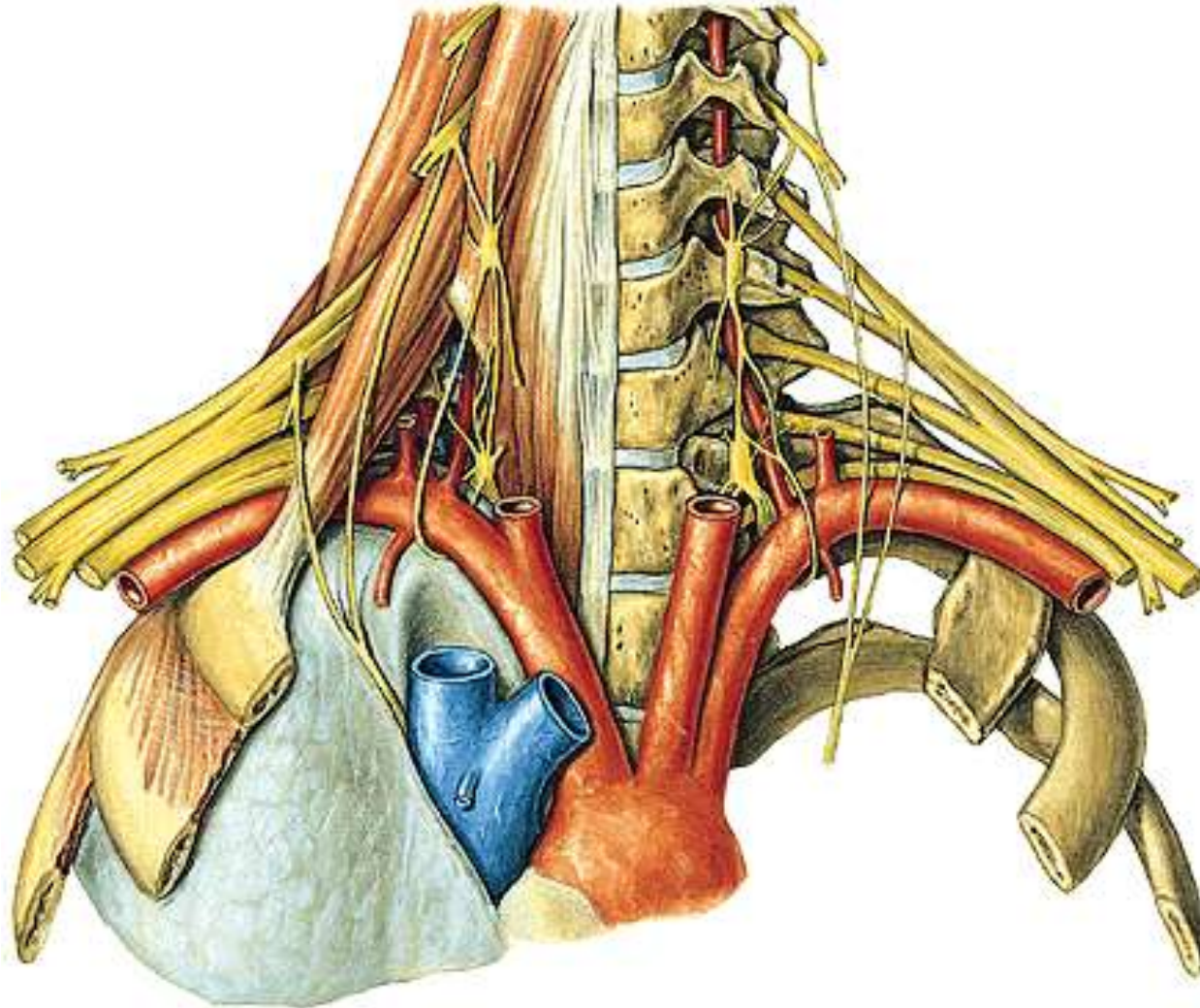




## A. subclavia

Cupula pleurae

Fissura scalenorum



Pars intrascalenica  
(medial)

Pars interscalenica  
(posterior)

Pars extrascalenica  
(lateral)

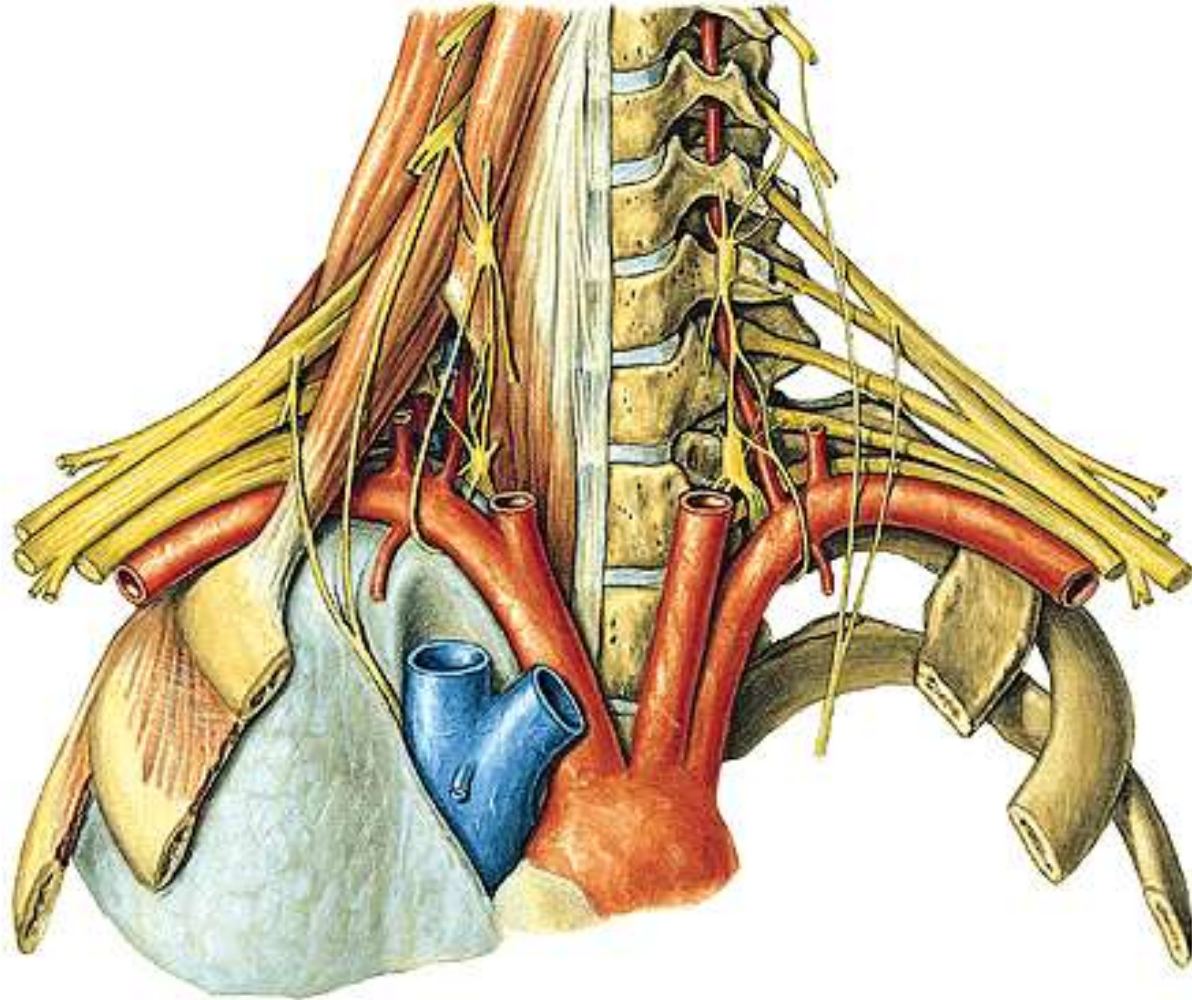
Part of the brain

Neck (lower portion)

Thoracic wall (A,L)

Abdominal wall (A)

→ UL



A. vertebralis

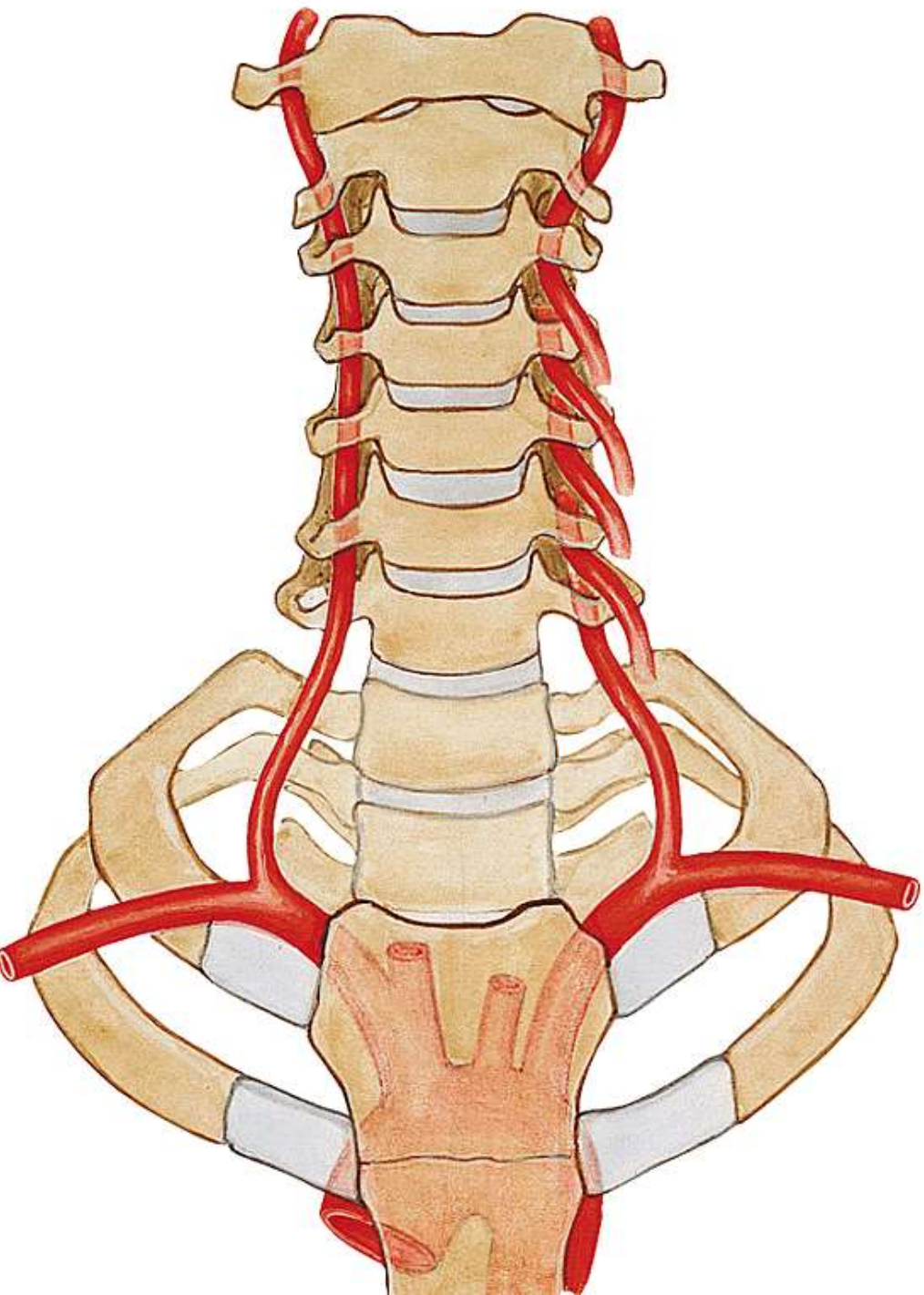
A. thoracica int.

Tr. thyrocervicalis

Tr. costocervicalis

(A. transversa colli)





## A. vertebralis

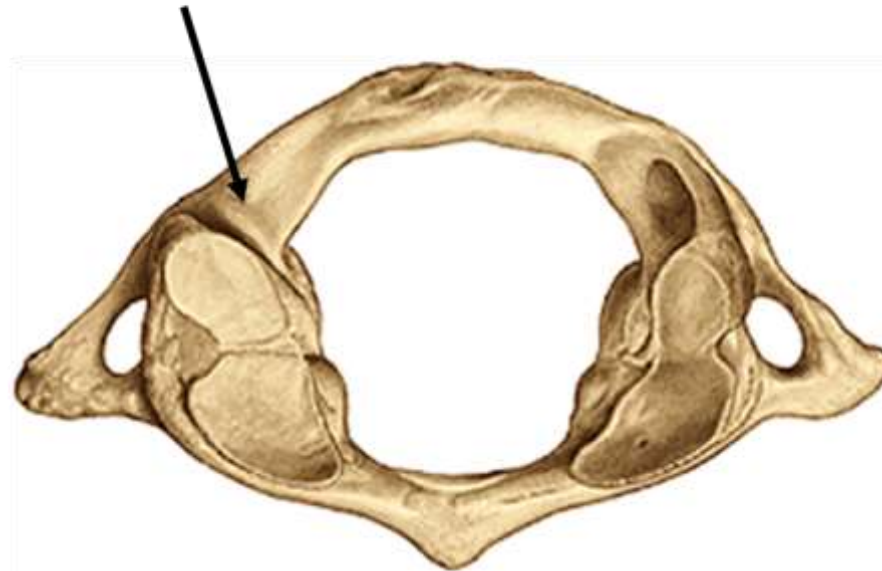


Foramen magnum  
Membr. atl-occip. post.  
Sulcus a. vertebralis  
For. transvers. C6-1

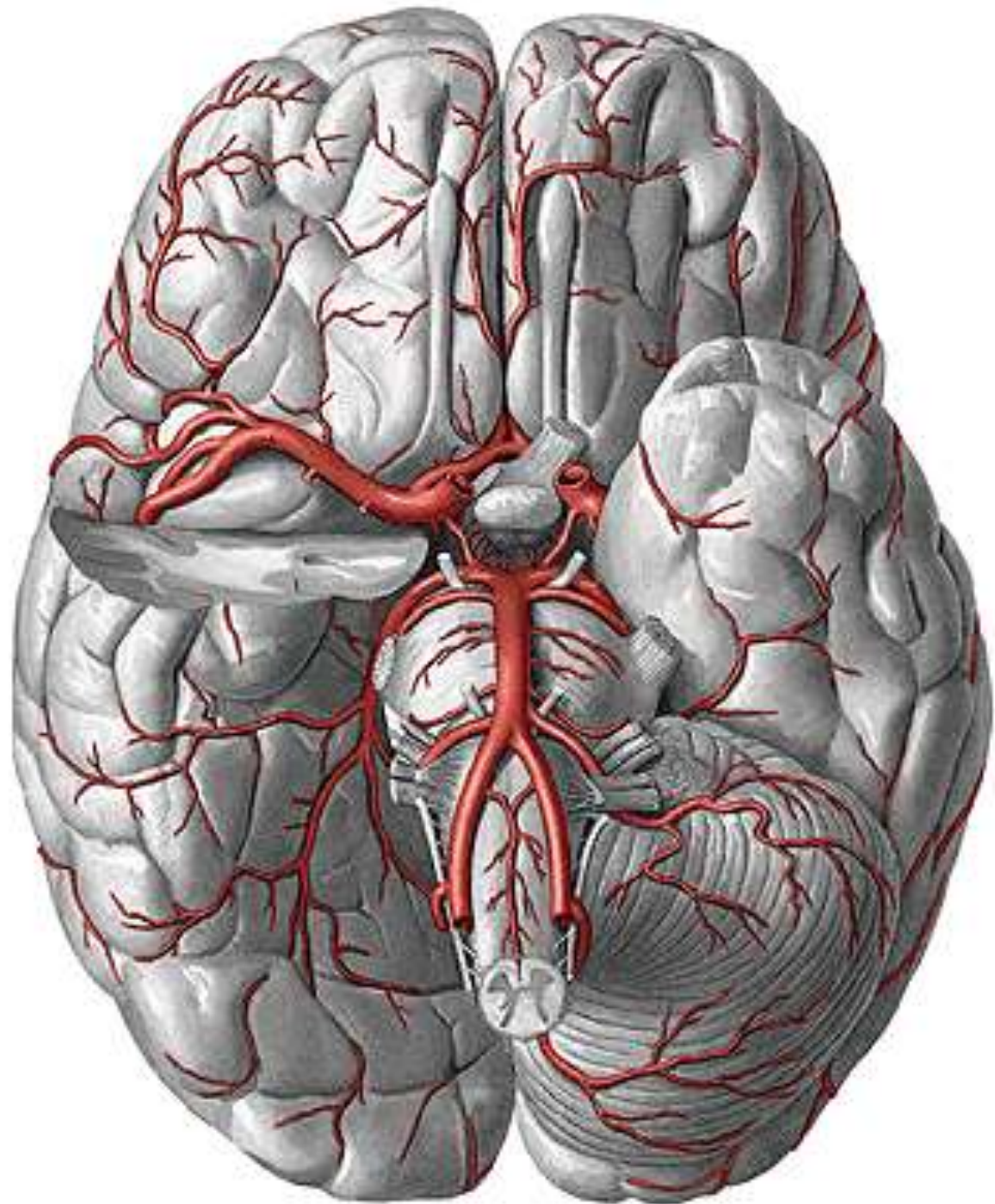
rr. spinales

**Sulcus a. vertebralis**

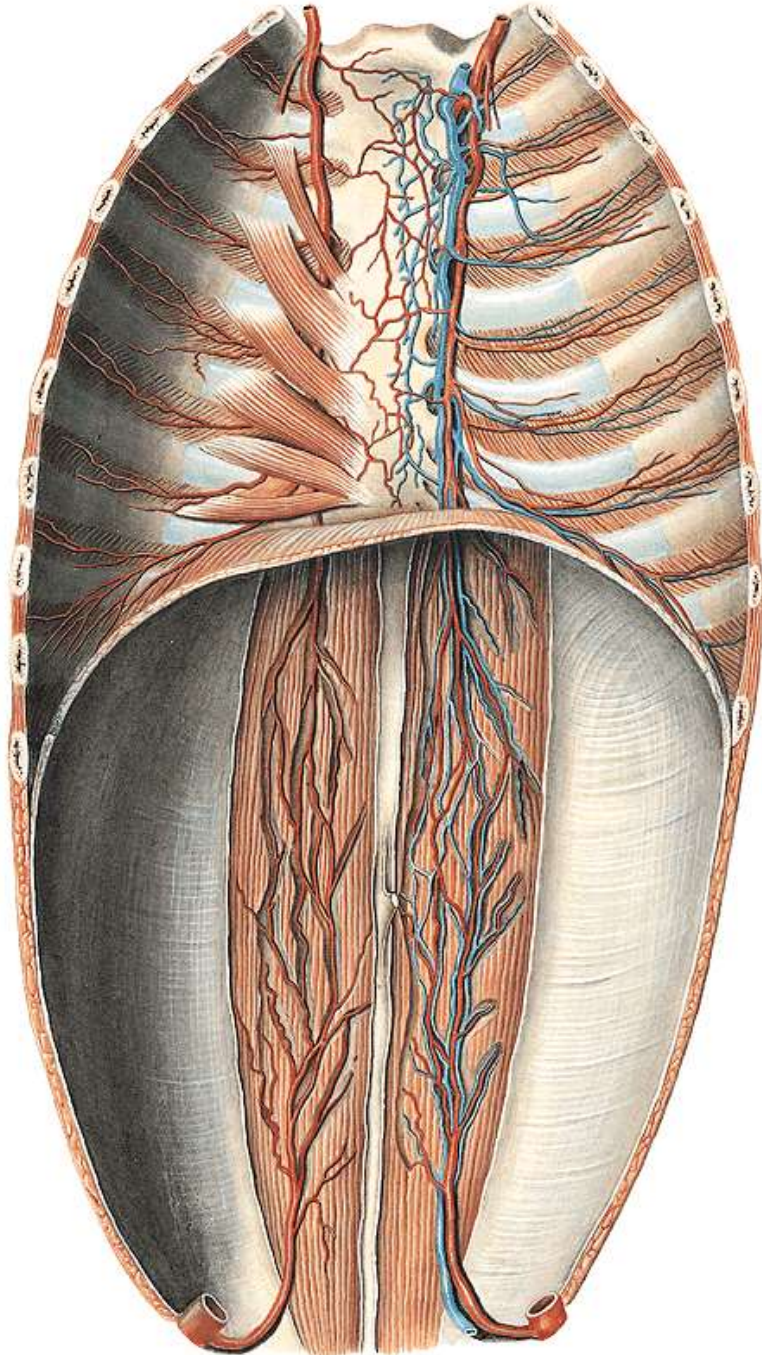
rr. musculares



- a. cerebelli inf. post.
- a. basilaris







## **A. thoracica int.**

Apertura thoracis sup.

Fissura sternocostalis

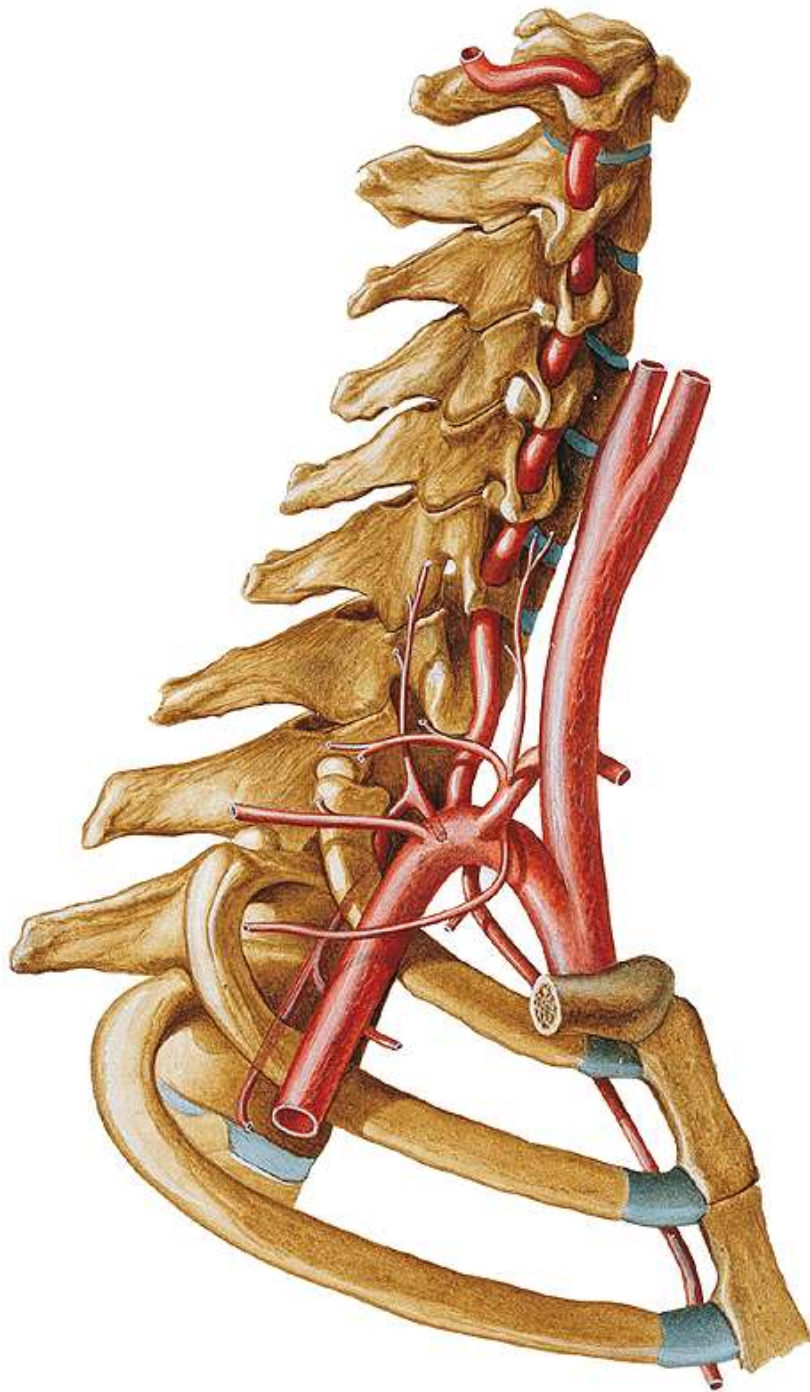
Rr. mediastinales

A. pericardiophrenica

Rr. intercost. ant. (6 IntCS)

A. musculophrenica (7-11 IntCS)

A. epigastrica sup.



## Tr. thyrocervicalis

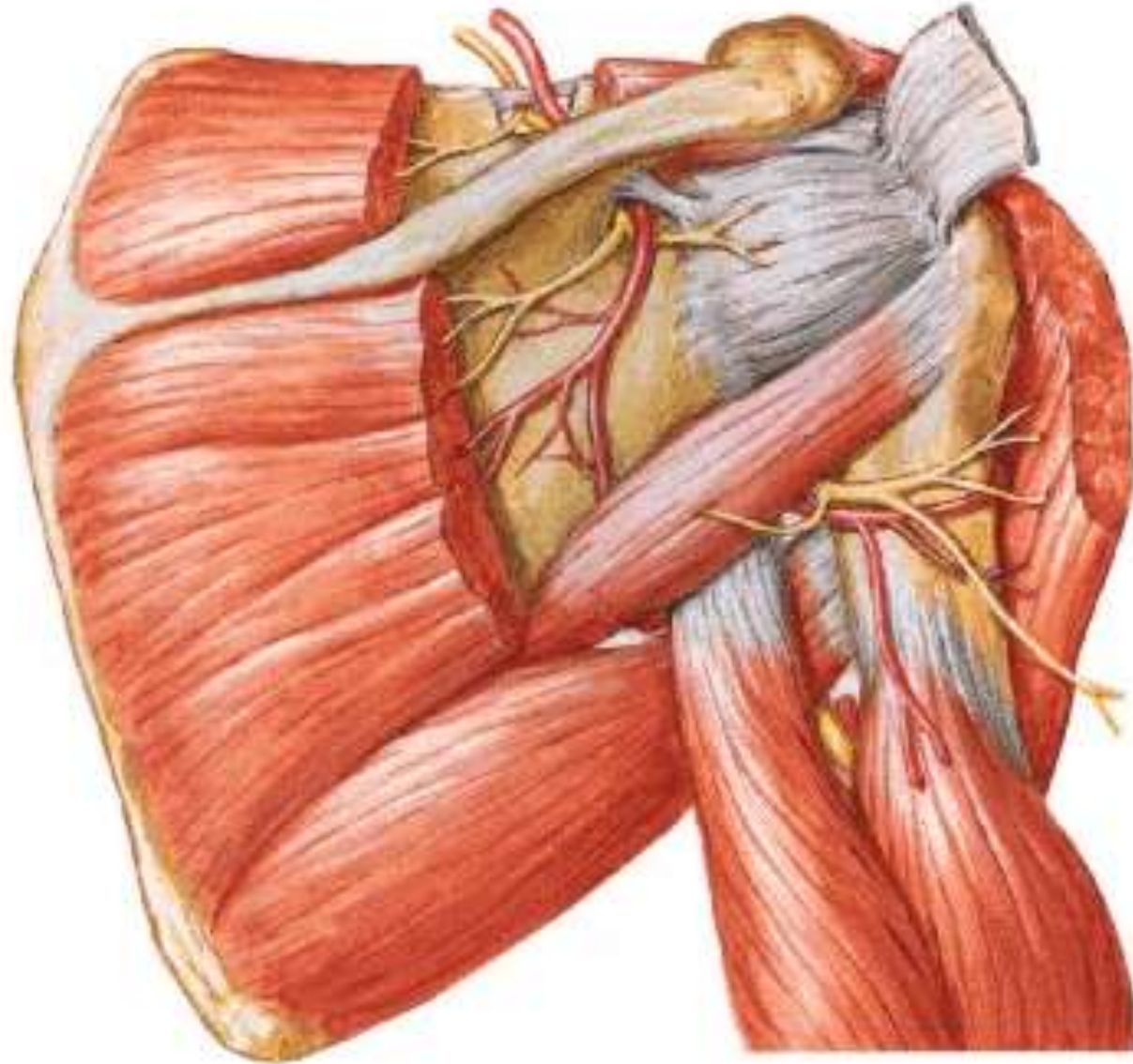
- A. thyroidea inf.
- A. cervicalis asc.
- A. cervicalis spf.
- A. suprascapularis  
(a. transversa coli –  
or separate branch)

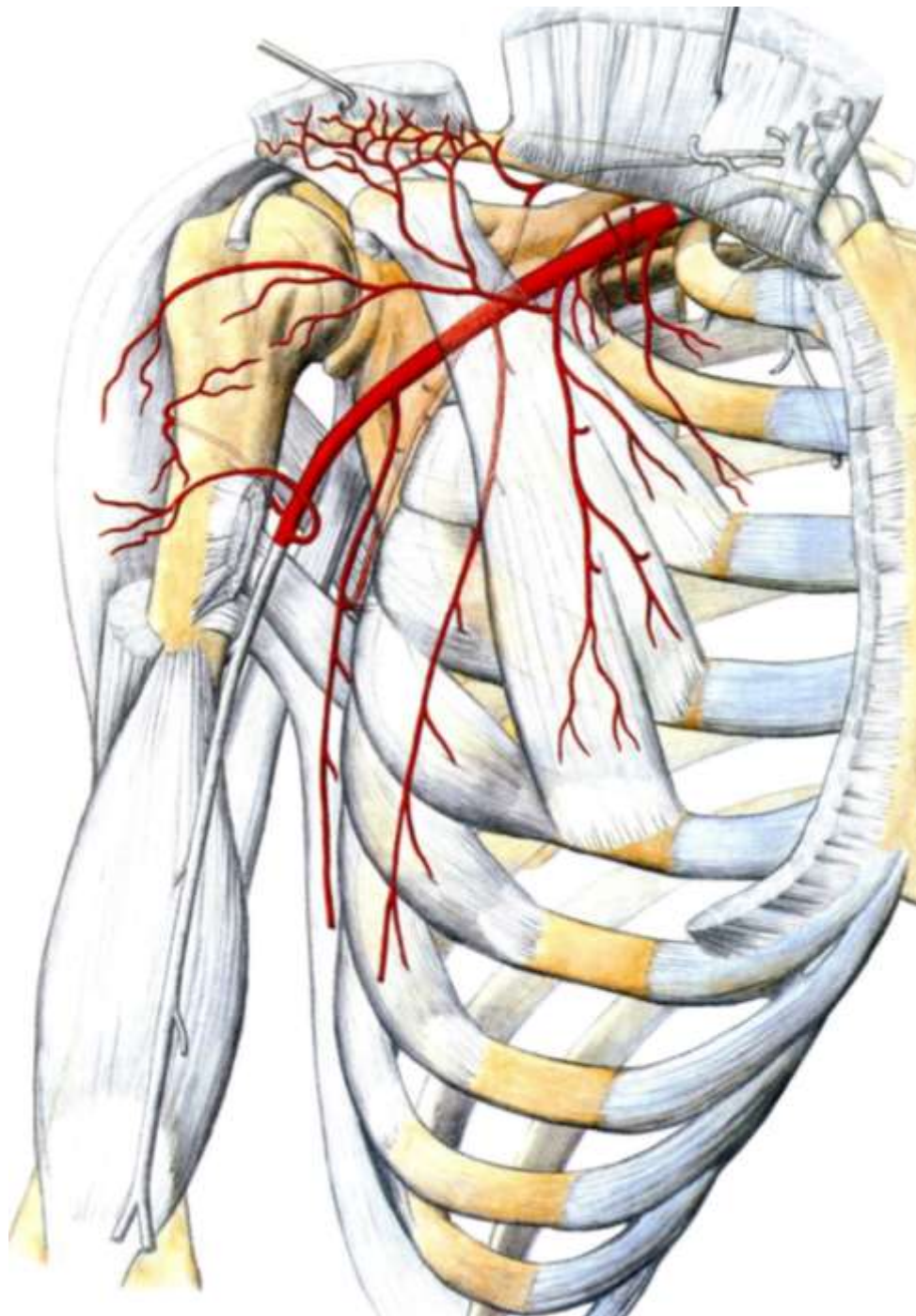
## Tr. costocervicalis

- A. cervicalis prof.
- A. intercost. suprema  
(1,2 intcs dorsaly)



## A. suprascapularis





## **A. axillaris**

shoulder

wall of the thorax

A. thoracica suprema

Rr. subscapulares

A. thoracoacromialis

A. thoracica lat.

A. subscapularis

a. circumfl. scap.

a. thoracodorsalis

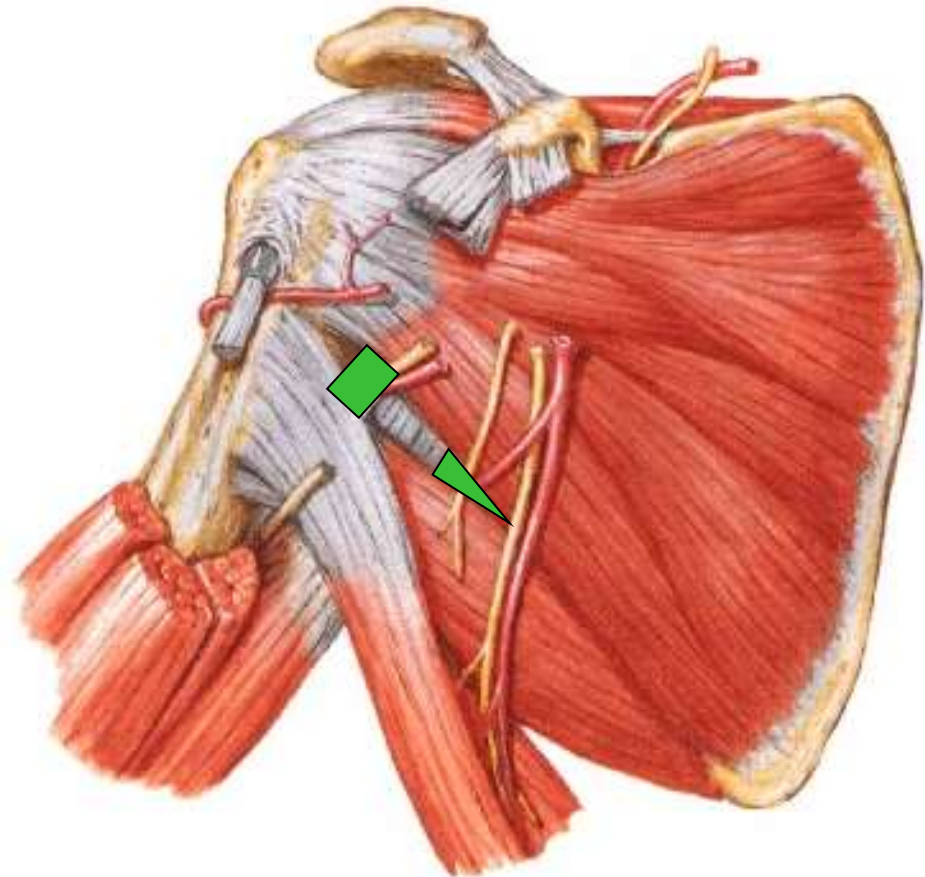
Aa. circuflexae humeri

## A. CIRCUMFLEXA SCAPULAE

– foramen omotricipitale (trilaterum): m. teres minor  
m. teres major  
caput longum m. tricipitis

## A. CIRCUMFLEXA HUMERI POST.

- for. humerotricipitale  
(quadrilaterum):  
m. teres minor  
m. teres major  
caput longum m. tricipitis  
humerus



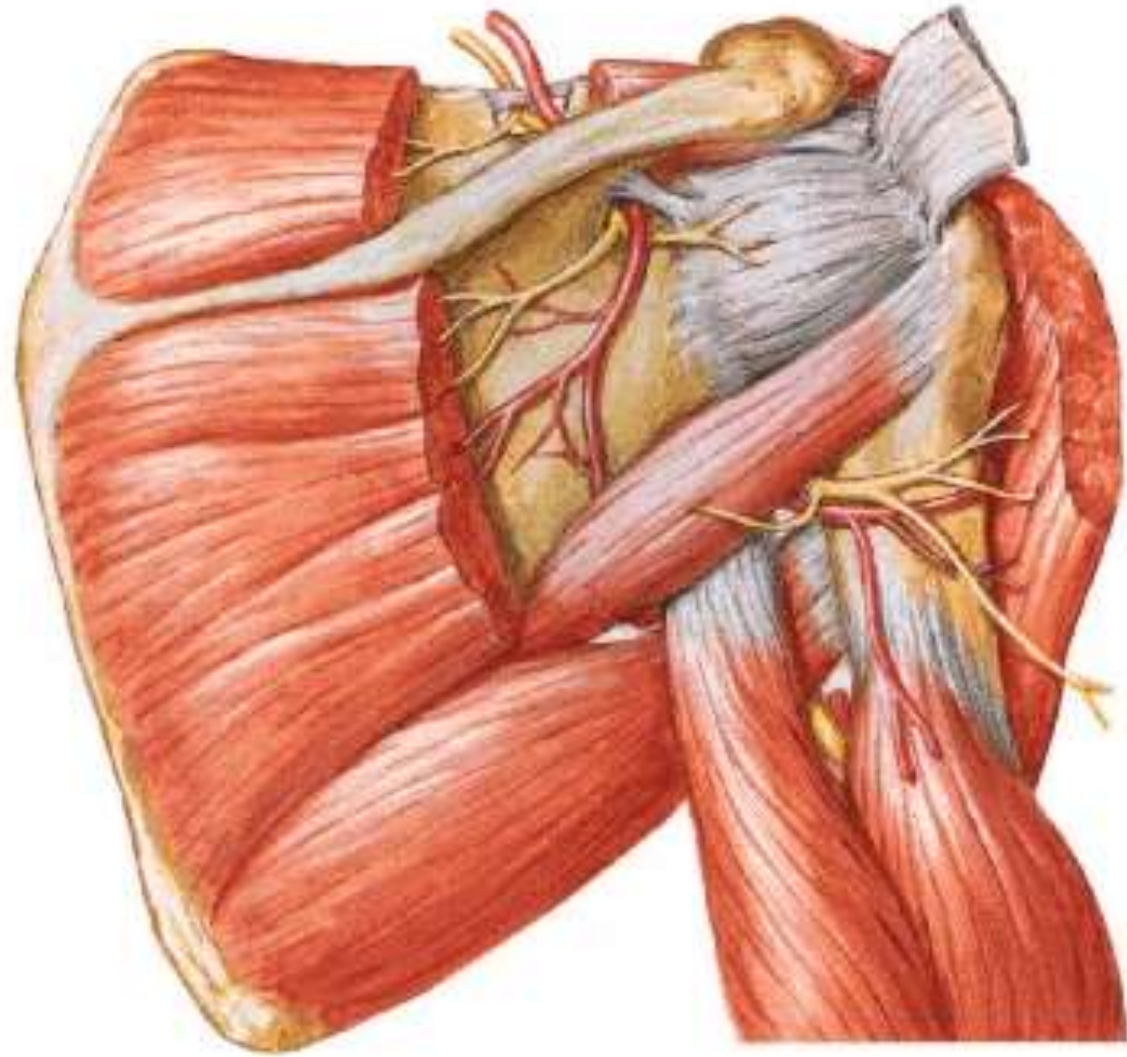


**Fossa infraspinata:**

**anastomosis**

**a. suprascapularis**

**+ a. circumflexa scapulae**







## UPPER LIMB

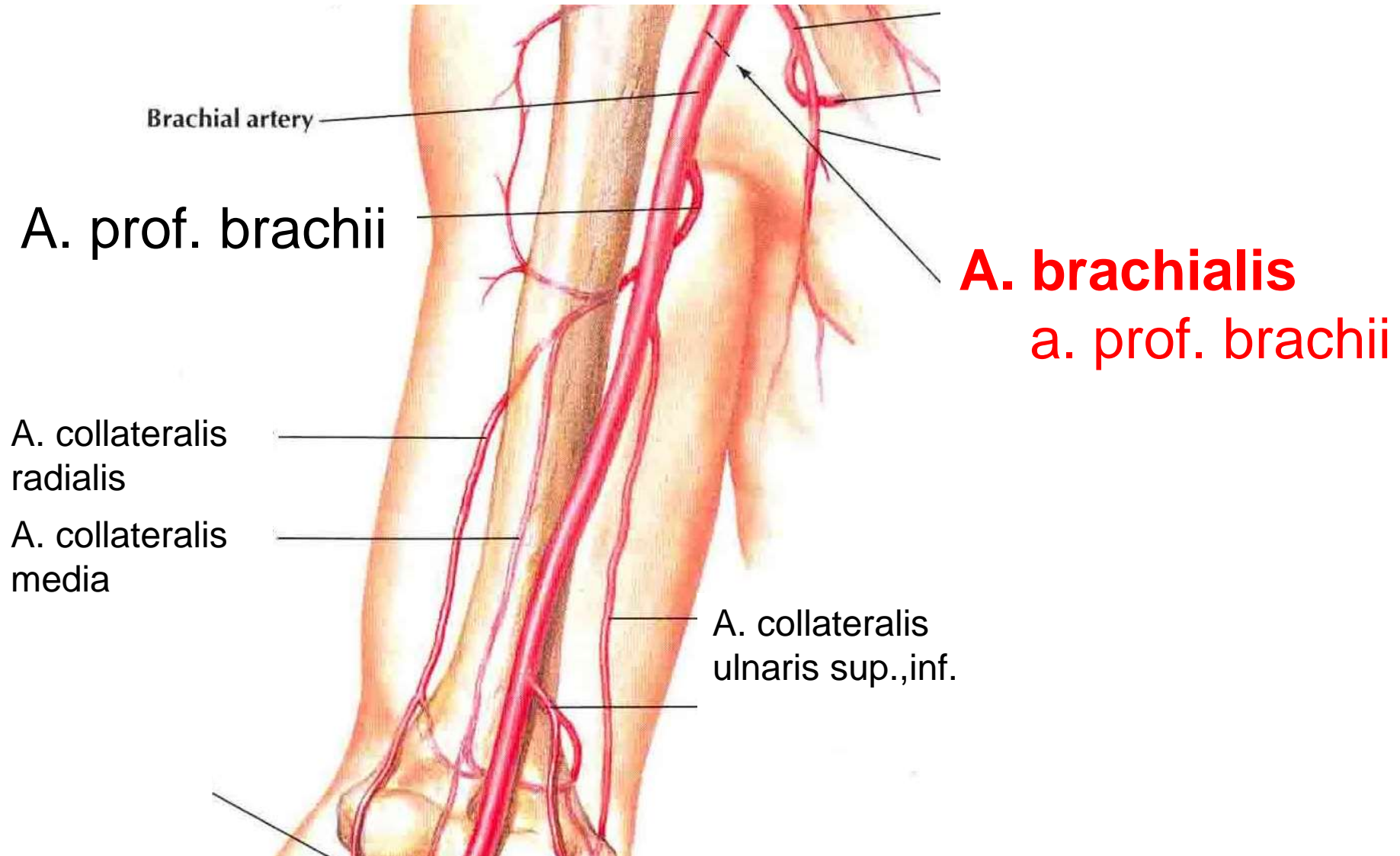
**A. brachialis**

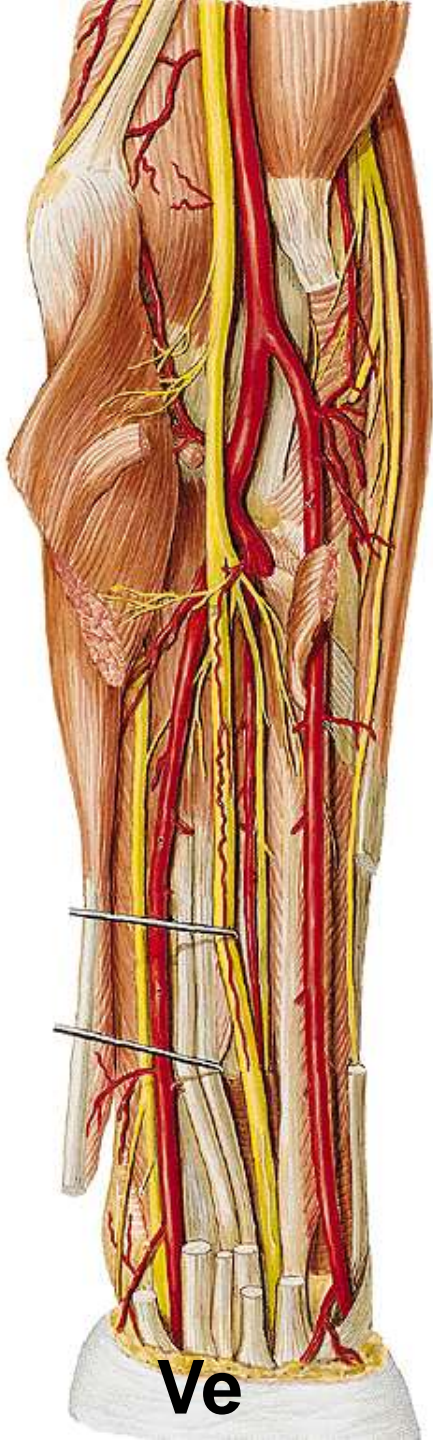
**A. radialis**

**A. ulnaris**

**Arcus palmaris spf. et prof.**

**Rete carpi dorsale**



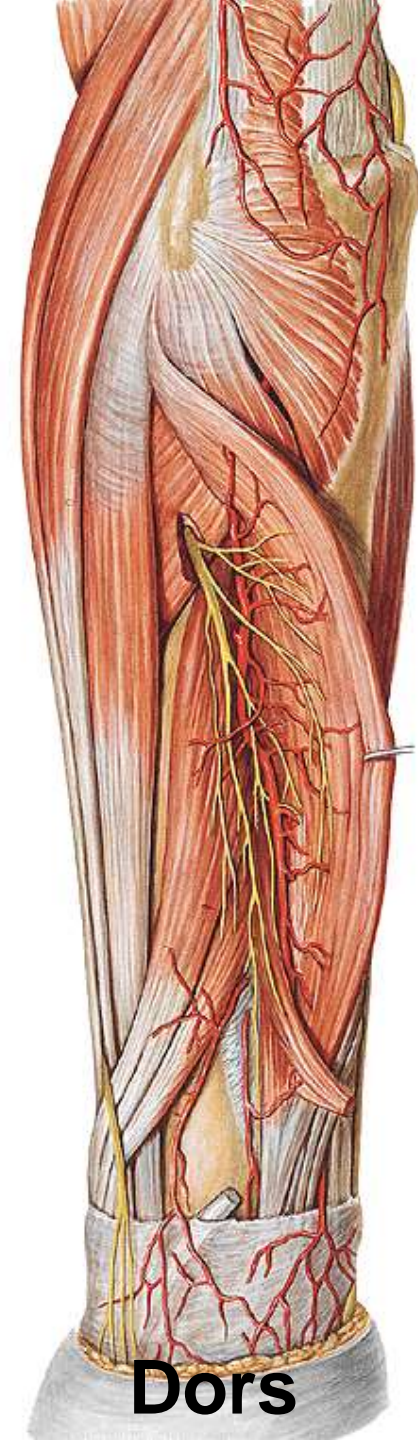


**A. radialis**

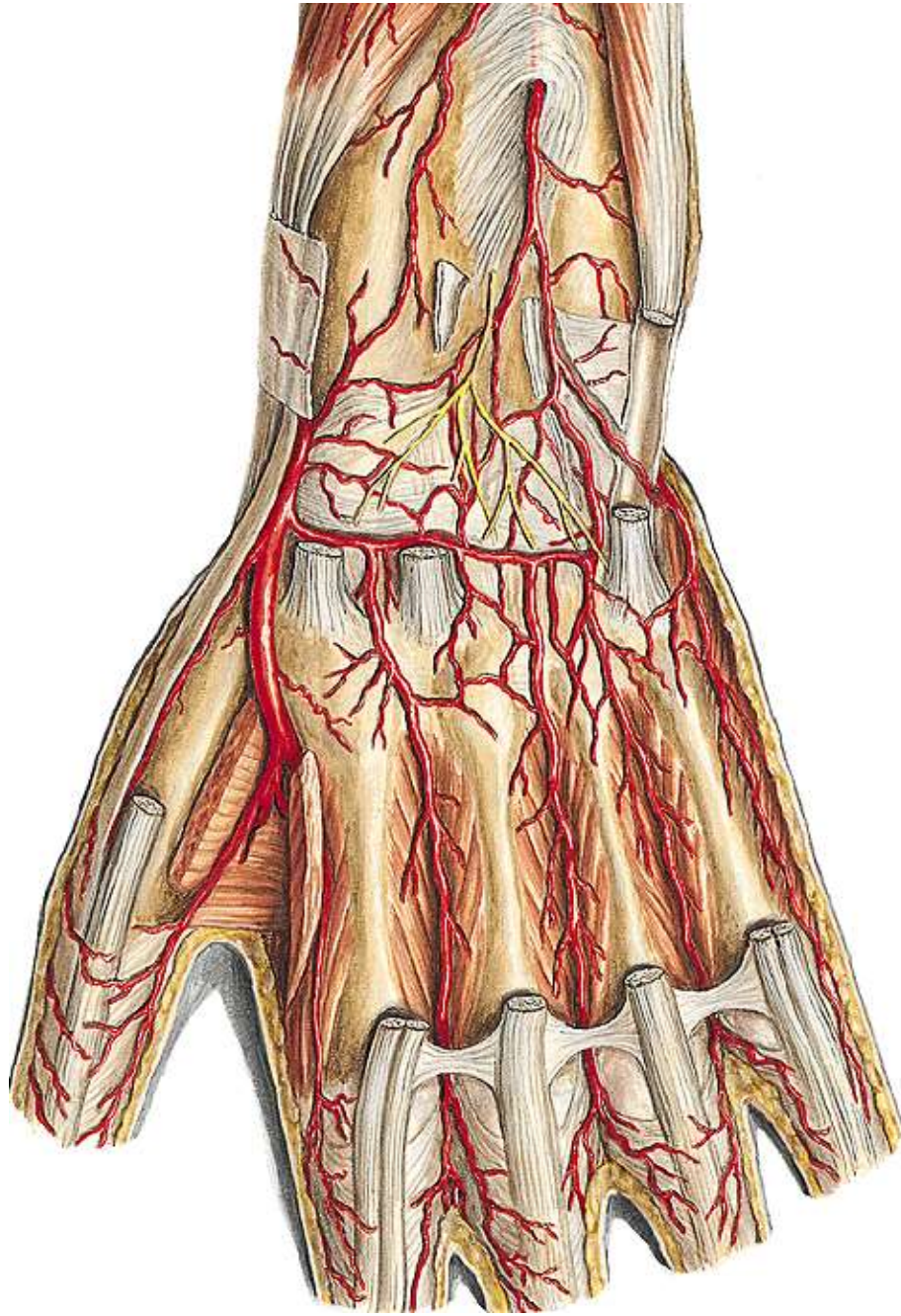
**A. ulnaris**

**a. interossea comm.**

**a. inteross. ant., post**



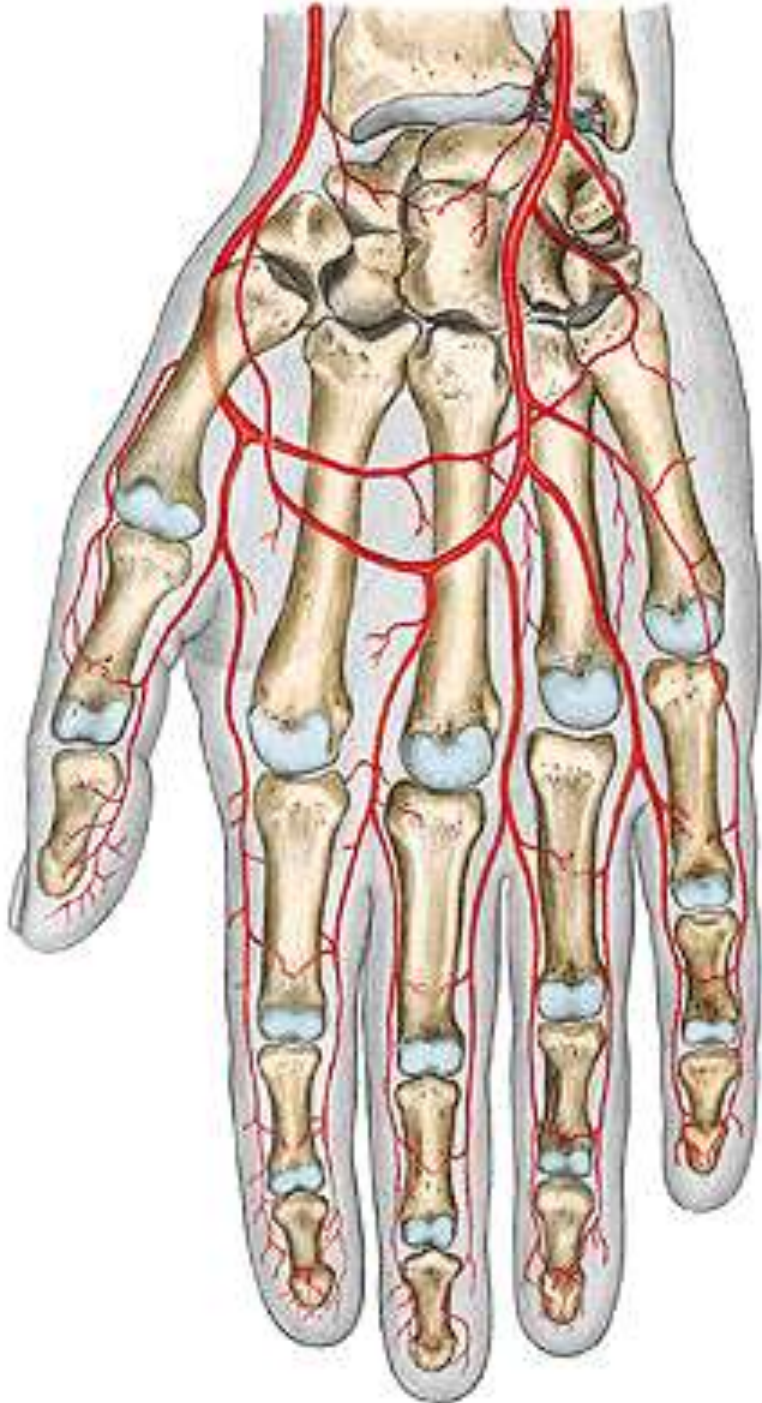




**A. radialis et ulnaris**  
rete carpi dorsale



Aa. metacarpeae dorsales  
> aa. digitales dorsales



**A. radialis**      **A. ulnaris**  
r. palmaris spf. et prof.

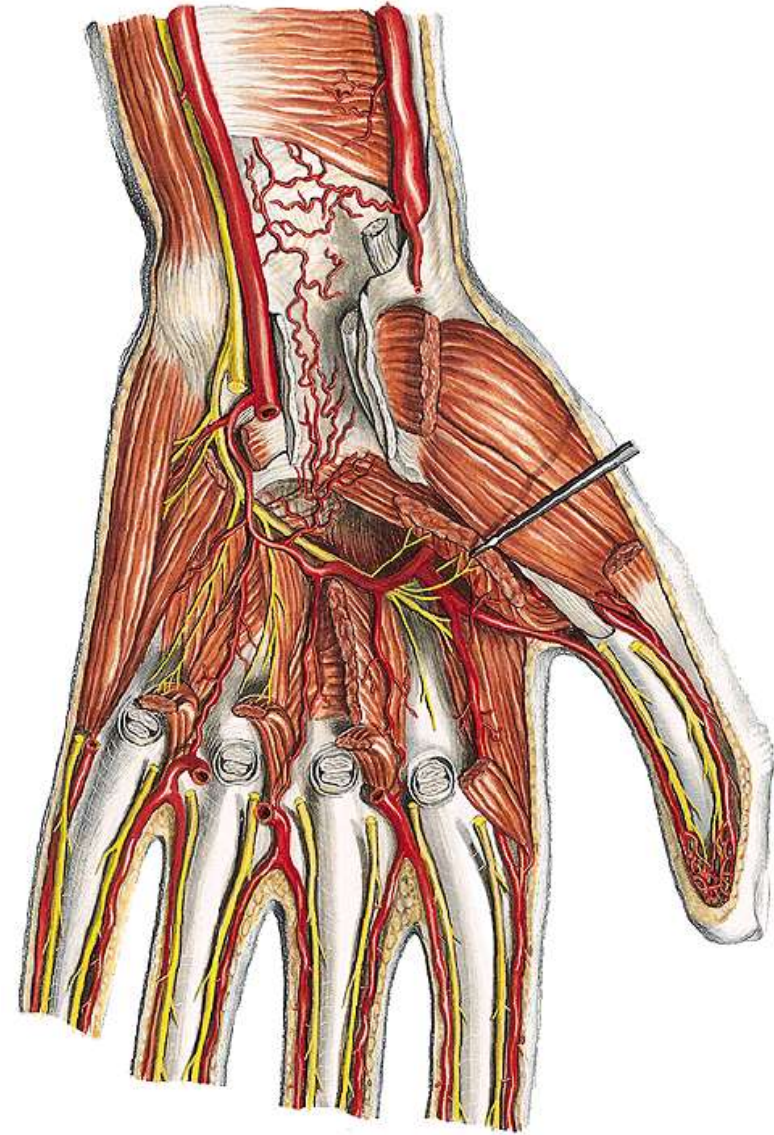
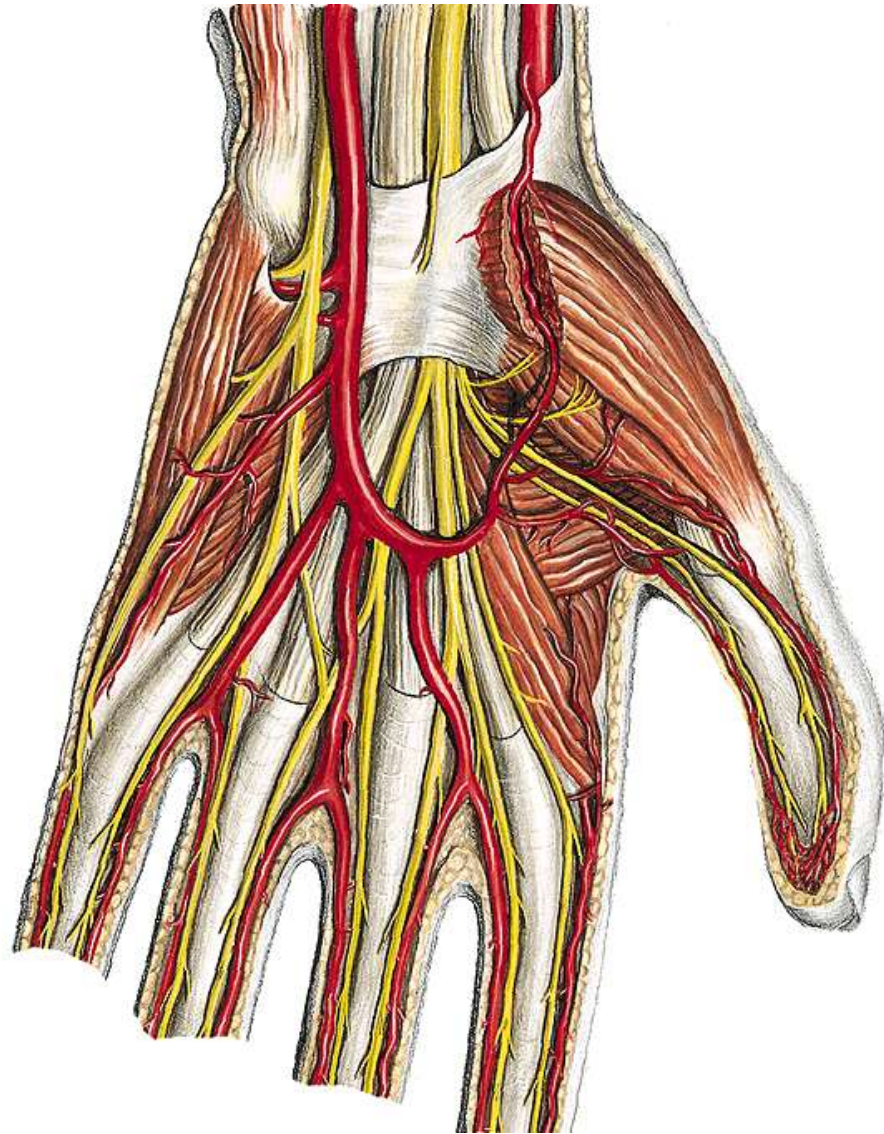


**Arcus palm. spf.**  
**Arcus palm. prof.**

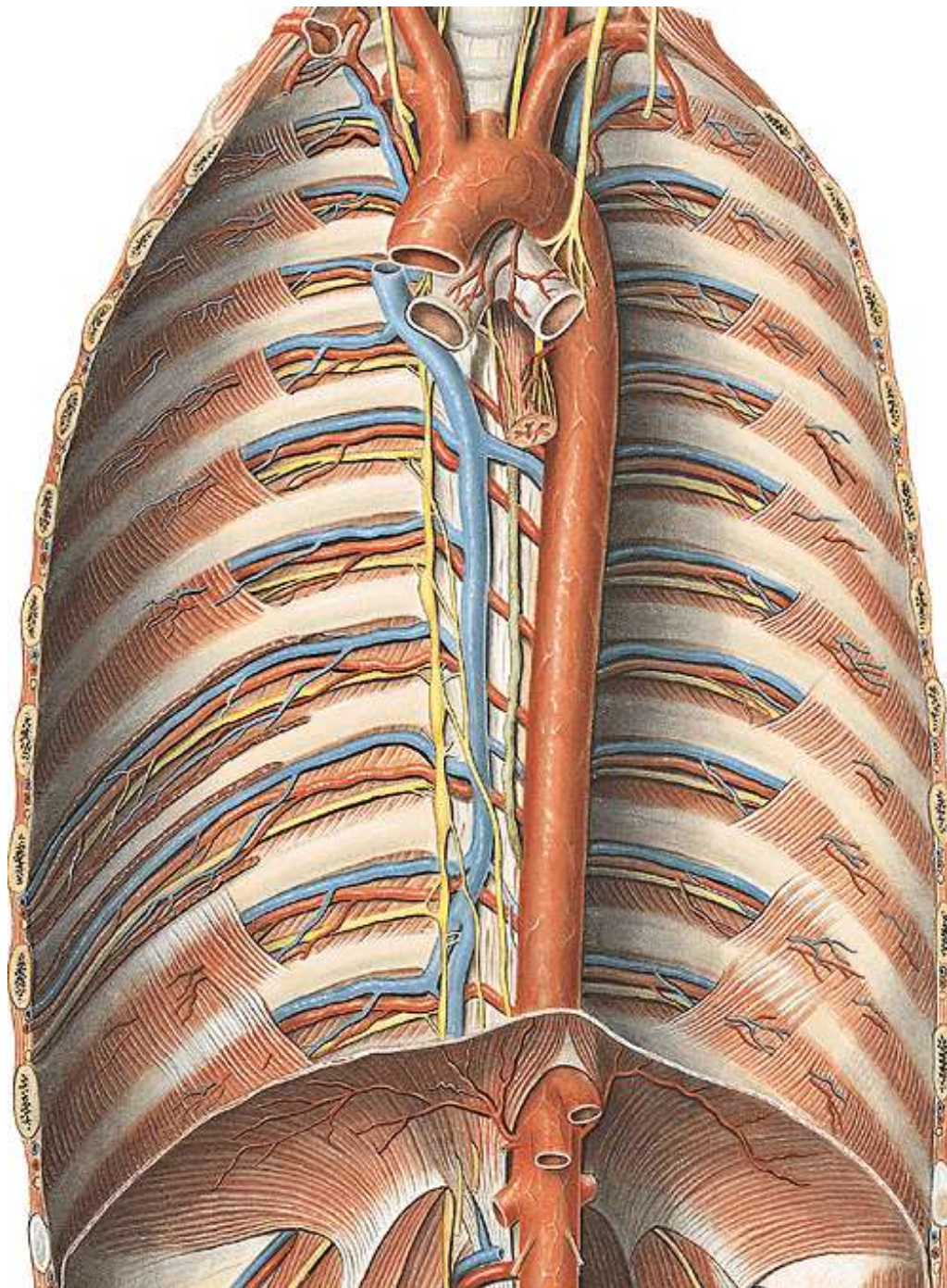


Aa. digit. palm. comm. et  
propriae









## Aorta thoracica

Th3 - Th11

Hiatus aorticus

Wall

aa. intercost. post.

aa. phrenicae sup.

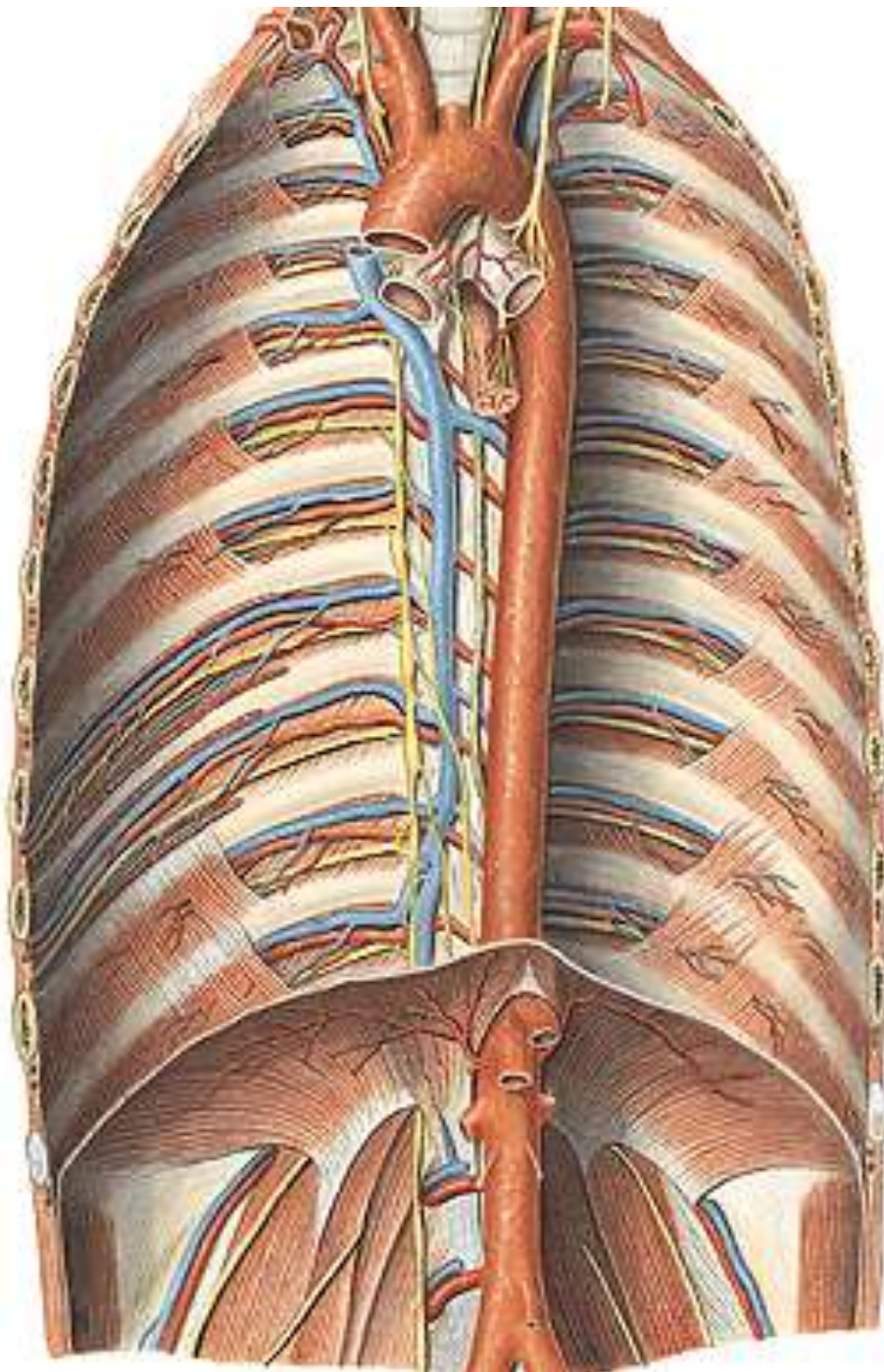
Organs

bronchi

esophagus

pericard





# Aorta abdominalis

wall

aa. phrenicae inf.

aa. lumbales

Paired organs

Noradrenal glands

kidneys, ureters

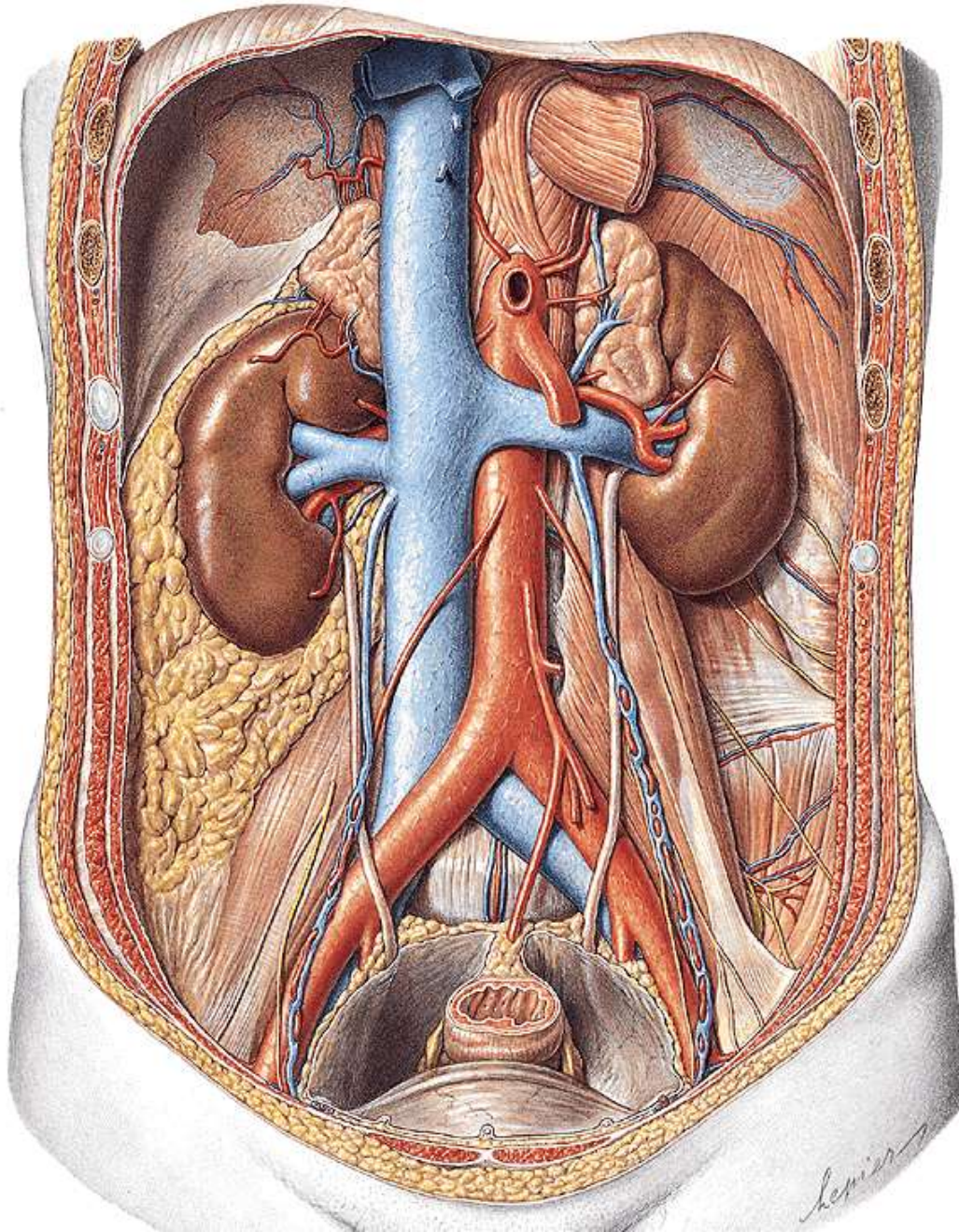
testicles / ovaries

unpaired

liver, gallbladder, stomach,

pancreas, spleen, intestine





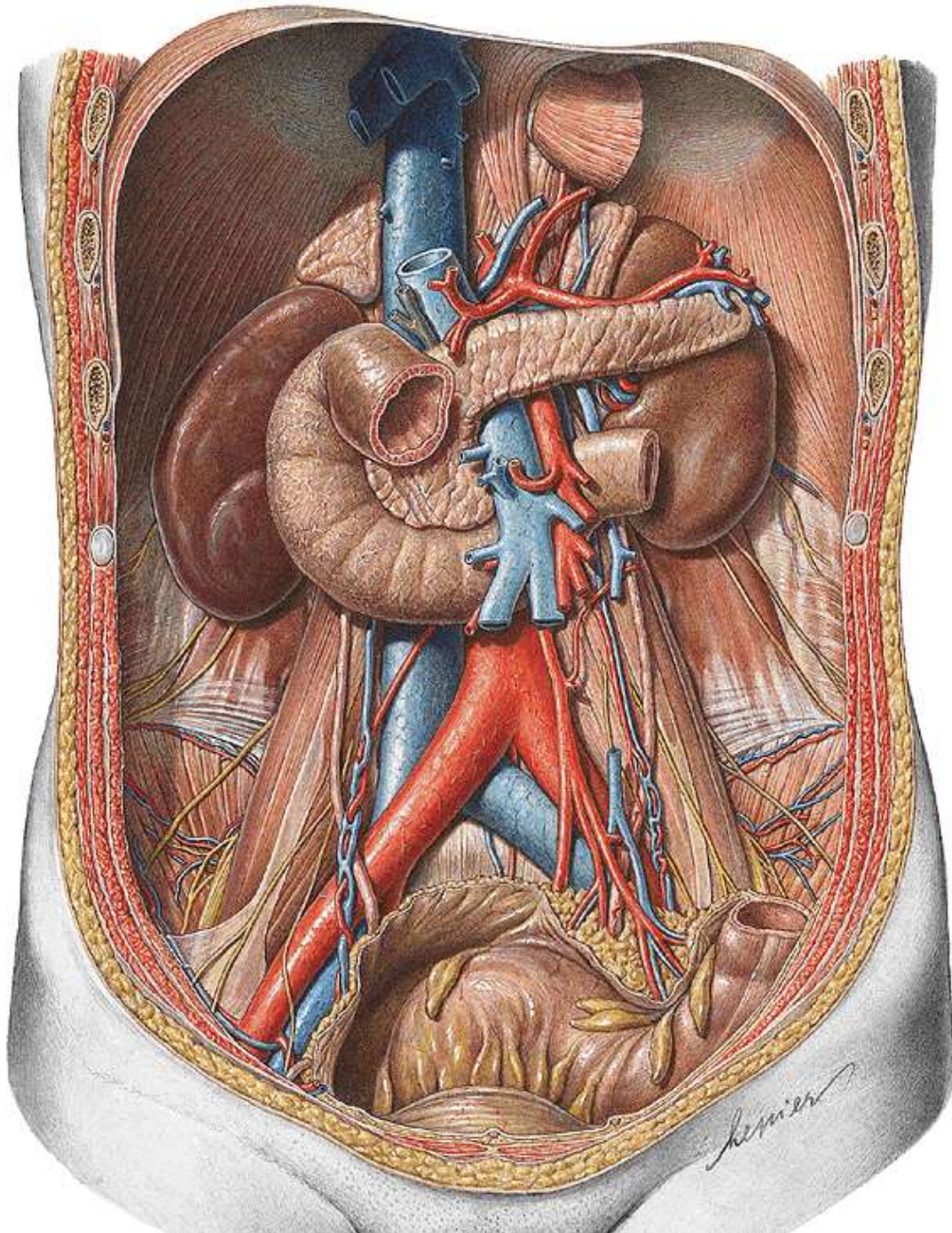
paired organ branches

Aa. suprarenales

Aa. renales

Aa. testicul. / ovaricae





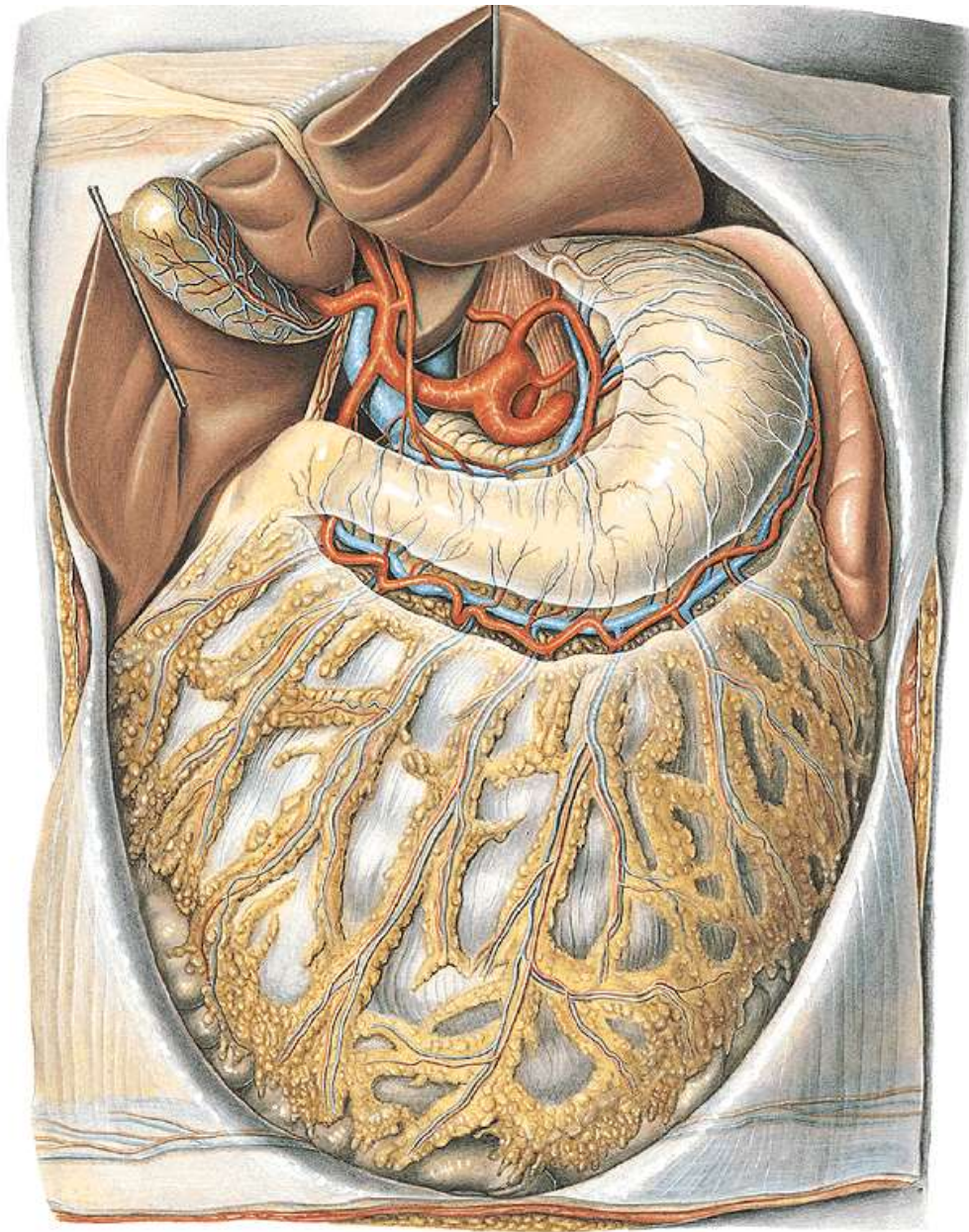
Unpaired organ branches

Truncus coeliacus

A. mesenterica sup.

A. mesenterica inf.





# Truncus coeliacus

A. gastrica sin. - rr. oesophageales

A. lienalis

- rr. pancreatici

- a. gastromentalis sin.

- aa. gastricae breves

- rr. splenici

A. hepatica comm.

- a. hepatica propria

- a. gastrica dx.

- r. dexter

- a. cystica

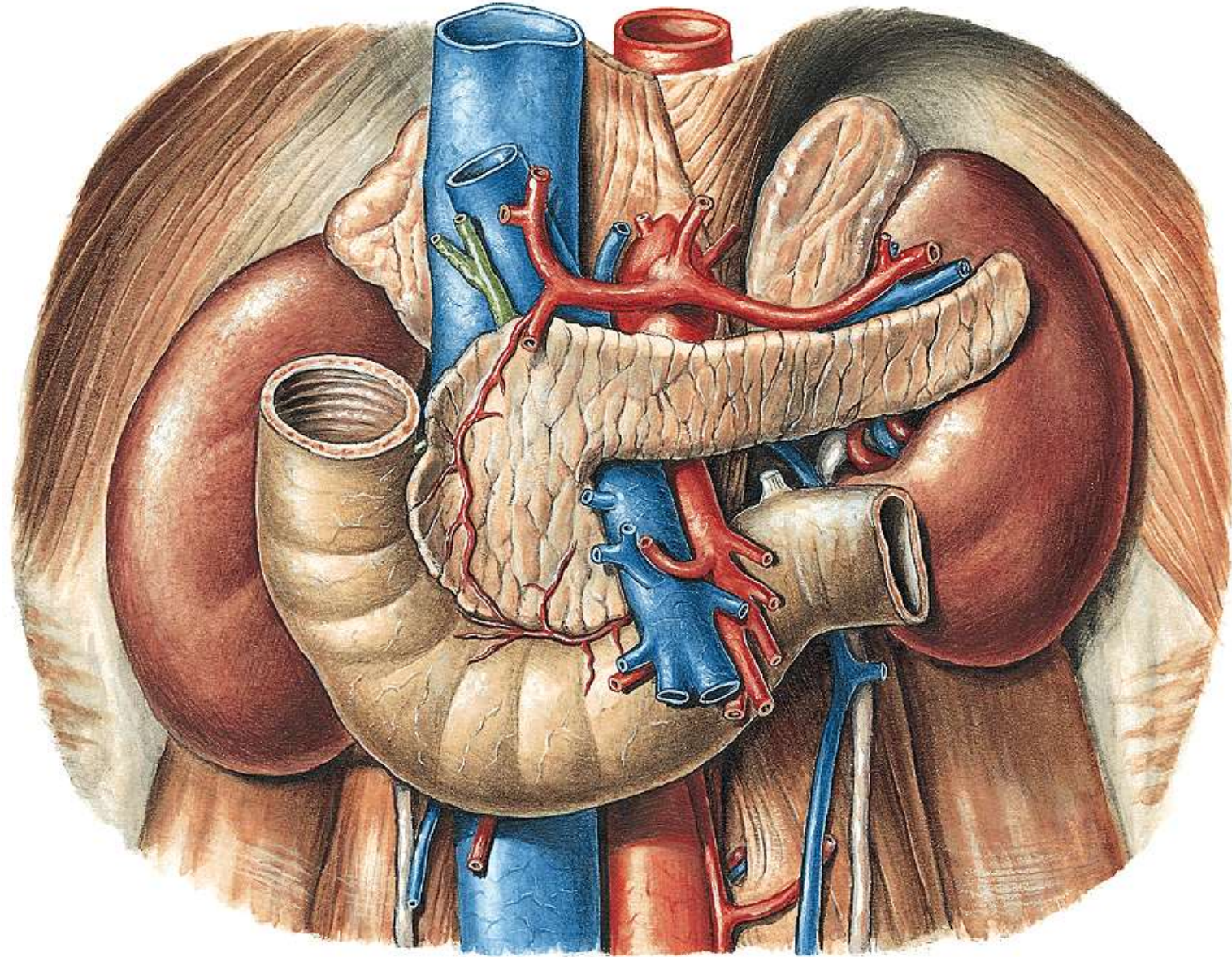
- r. sinister

- a. gastroduodenalis

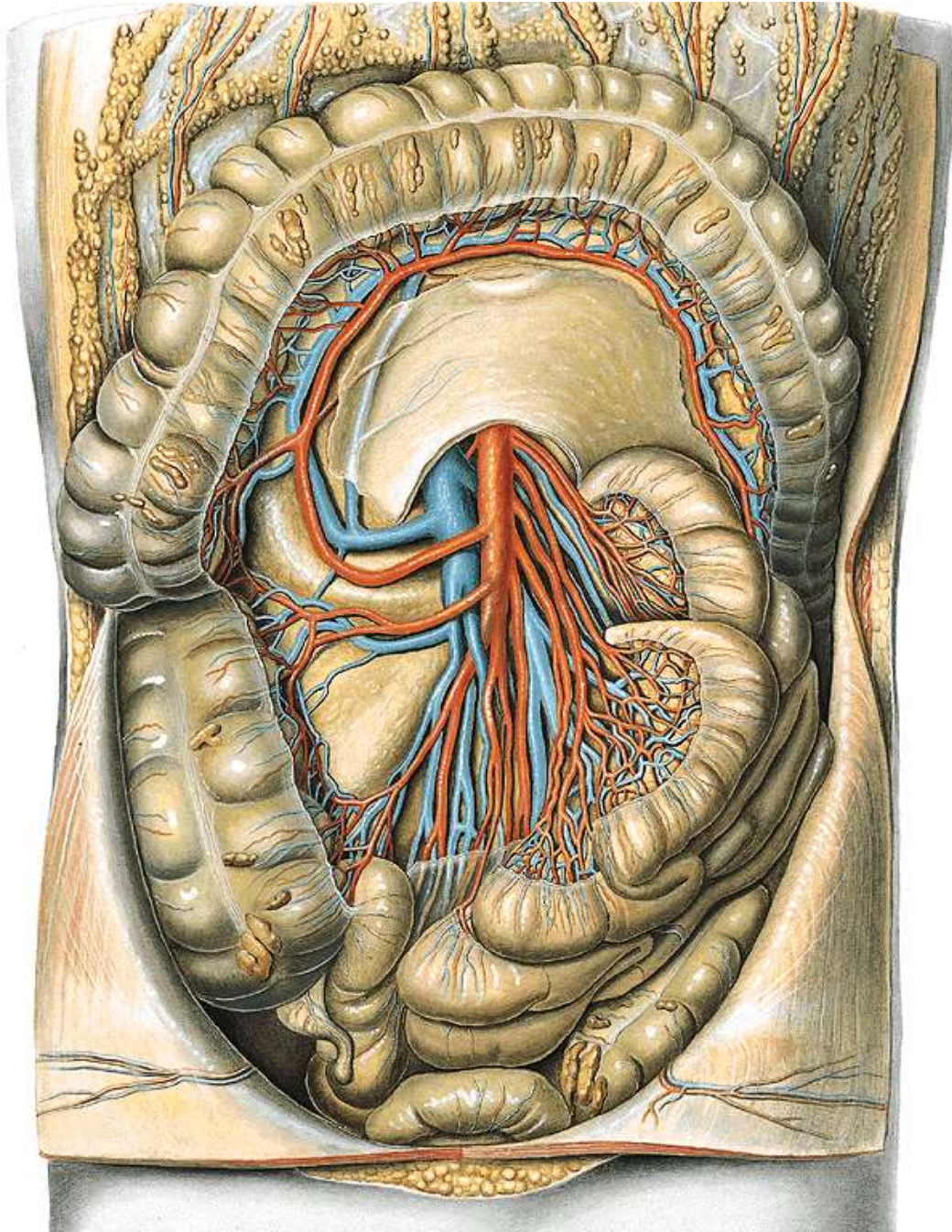
- a. gastromentalis dx.

- aa. pancreatico-  
duodenales sup.





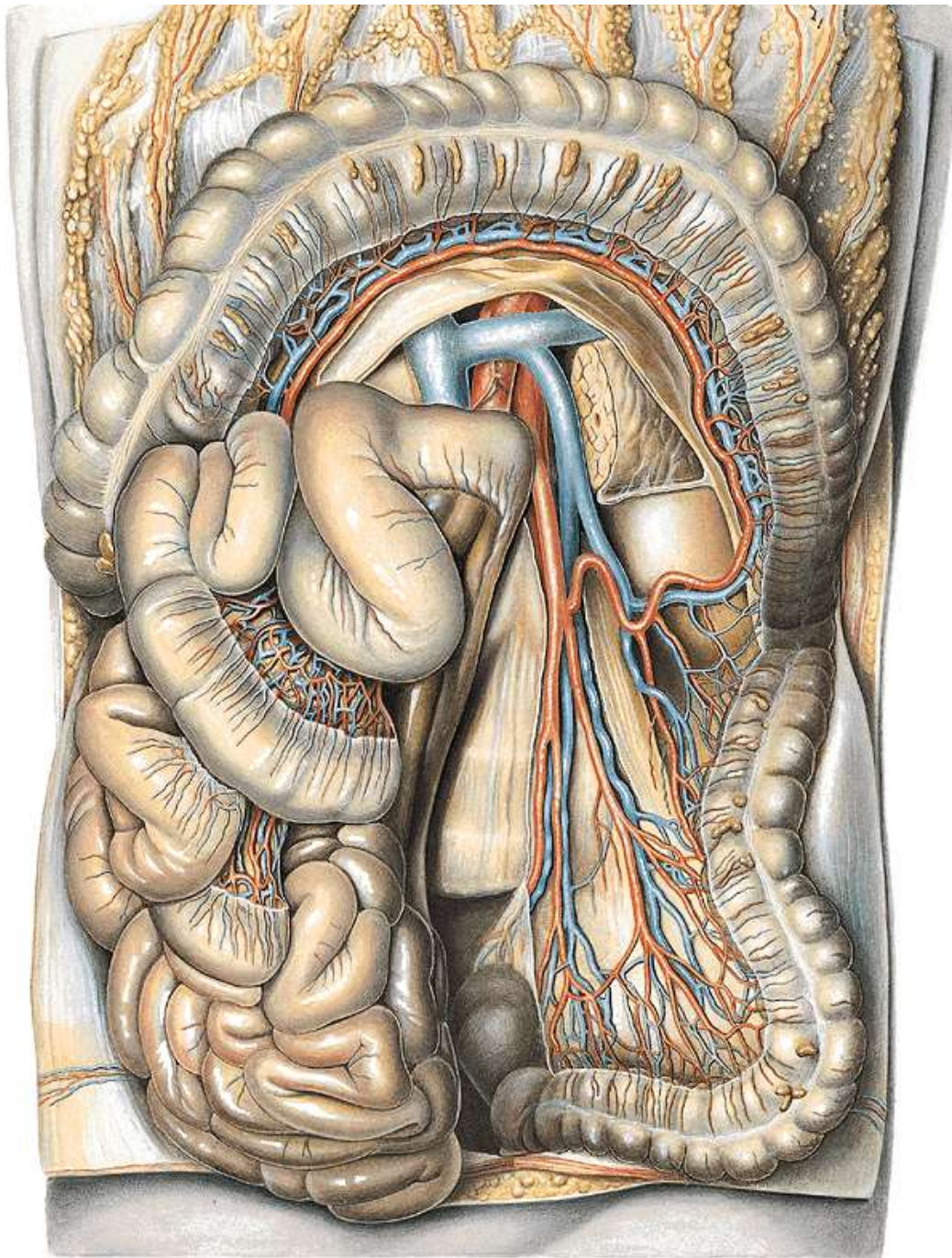




## A. mesenterica sup.

- a. pancreaticoduodenalis inf.
- aa. jejunaes et ileales (10-18)
- a. ileocolica
  - r. ilealis
  - r. colicus
  - r. appendicularis
- a. colica dx.
- a. colica media

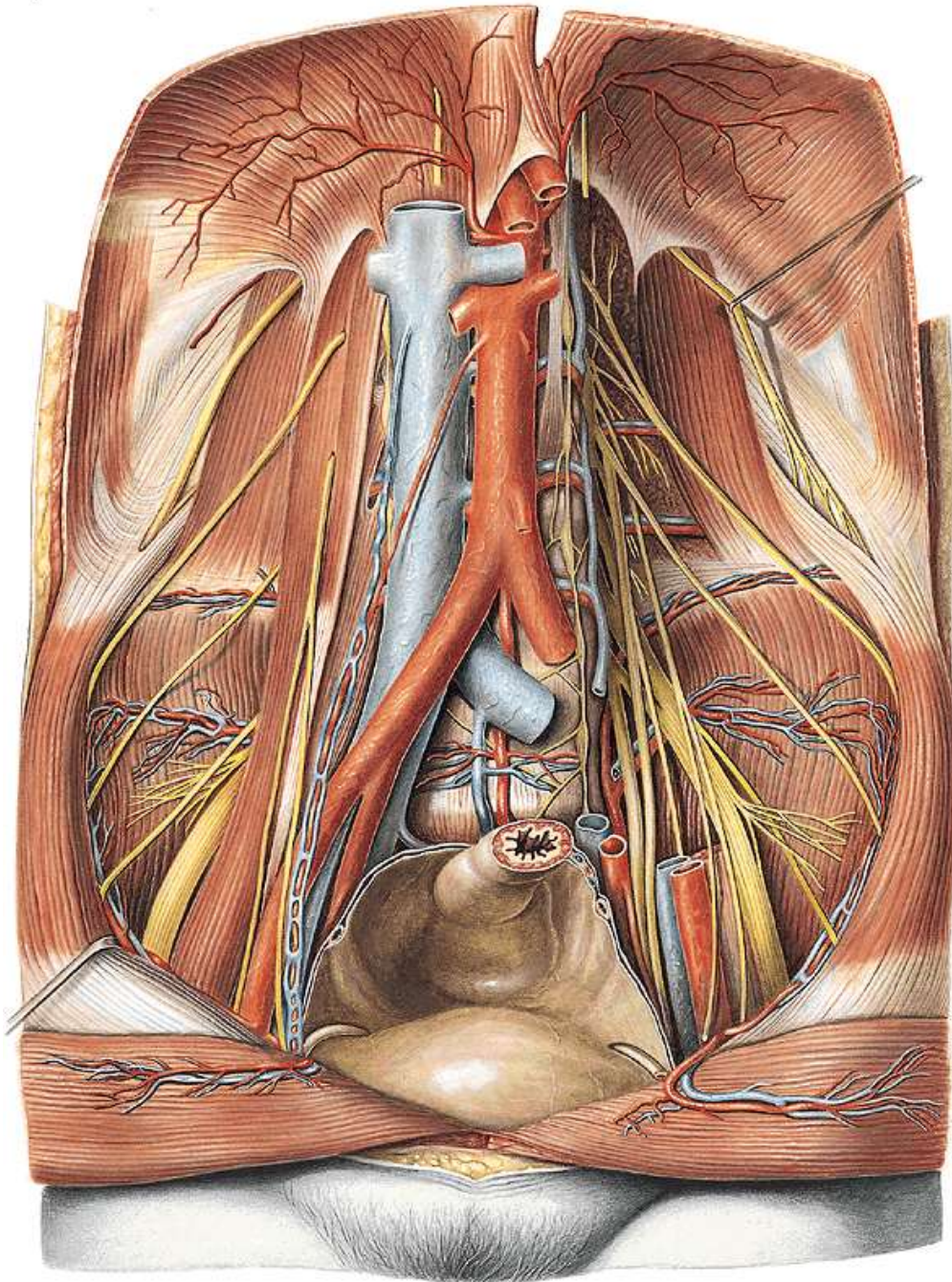




## A. mesenterica inf.

- a. colica sinistra
- aa. sigmoideae
- a. rectalis sup.





**A. sacralis mediana**

**Aa. iliaca communes**

**A. iliaca ext.**

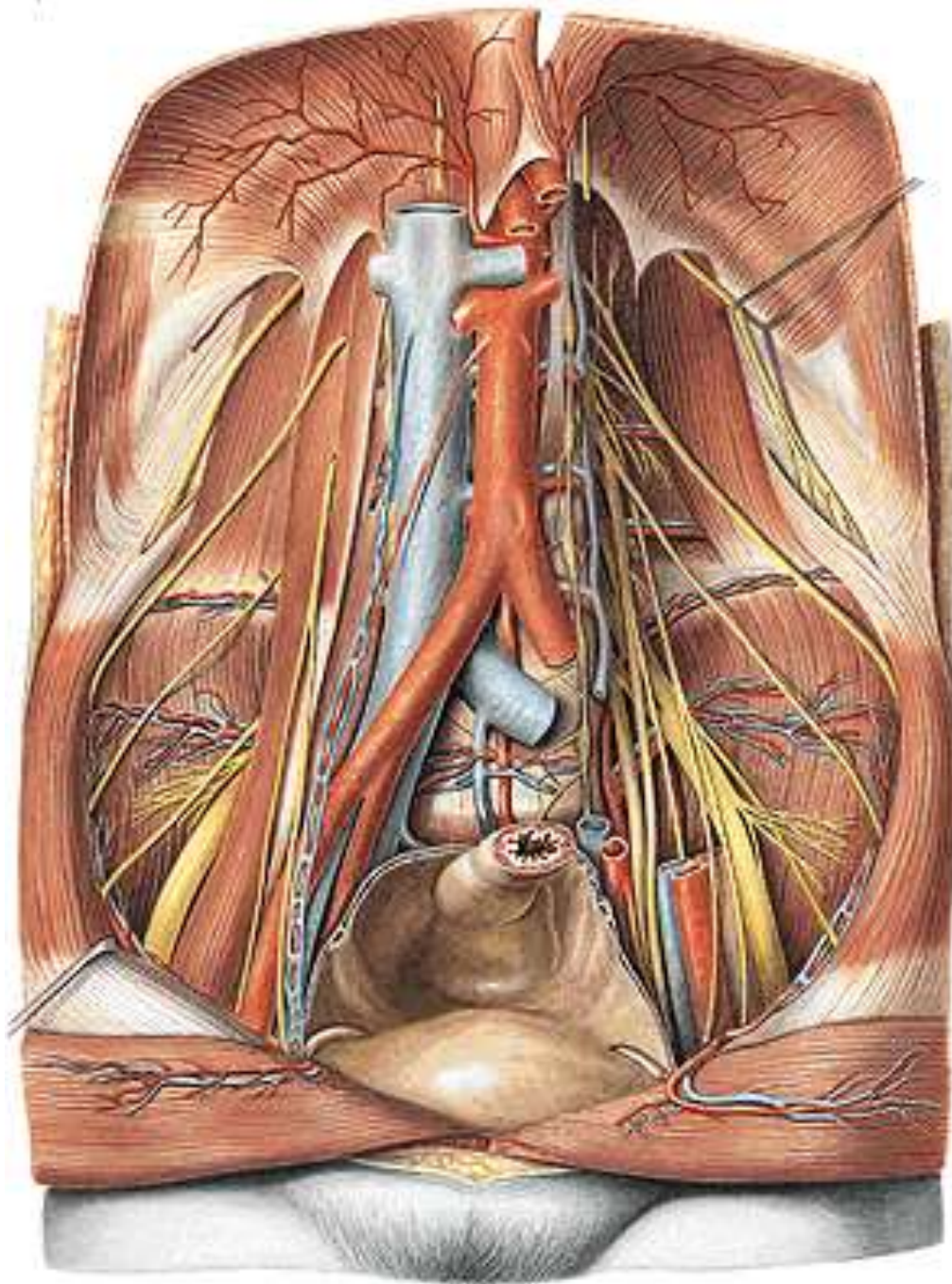
Lower part of anterior  
abdominal wall

→ LL

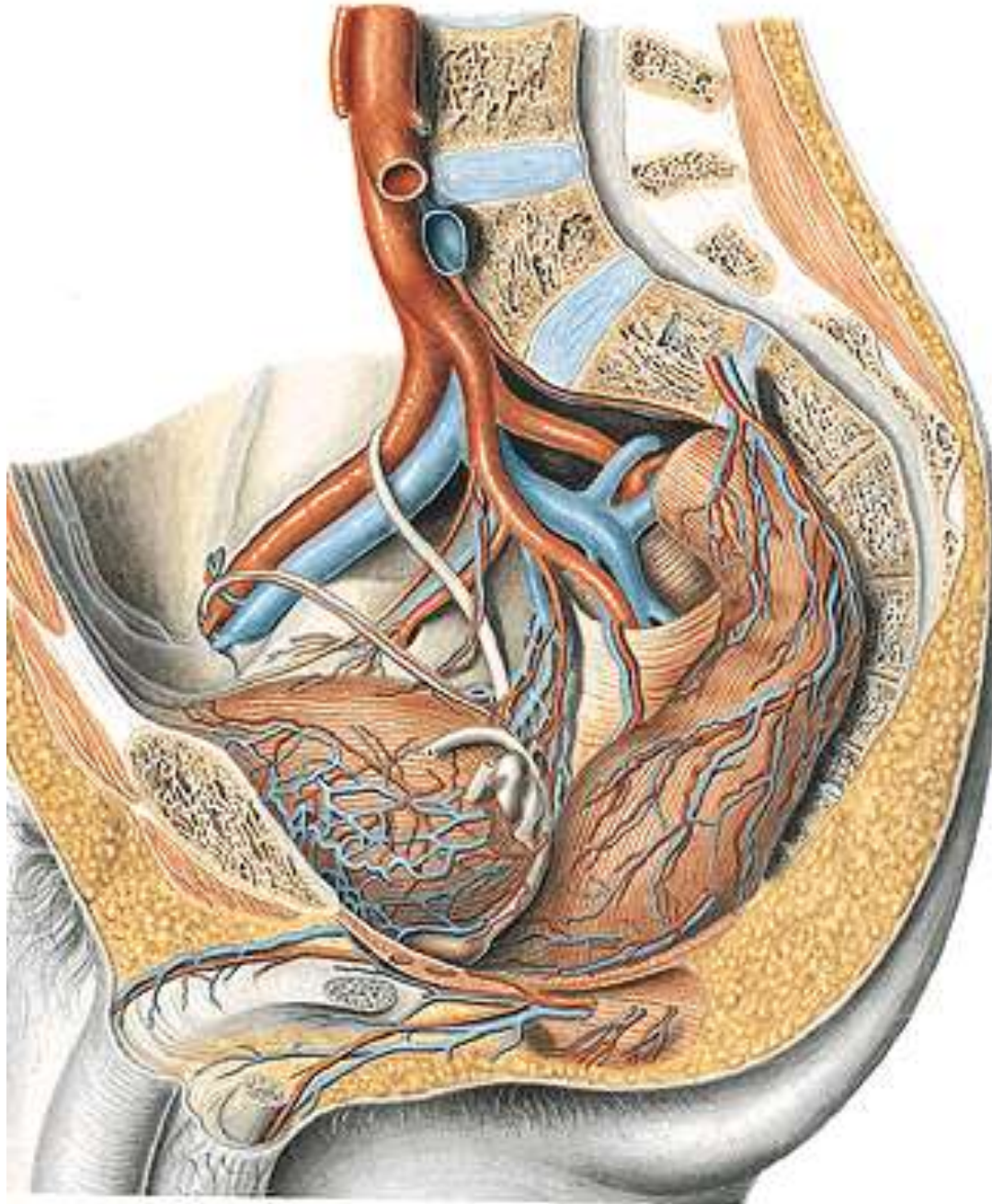
**A. iliaca int.**

pelvis





**A. iliaca ext.**  
Lacuna vasorum



## A. iliaca int.

Visceral branches

Urinary bladder

rectum

genitals

♂ prostate, dct. def.

♀ uterus, ovarian tube, vagina

a. umbilicalis

to the placenta





## Parietal branches

A. iliolumbalis

A. sacralis lat.

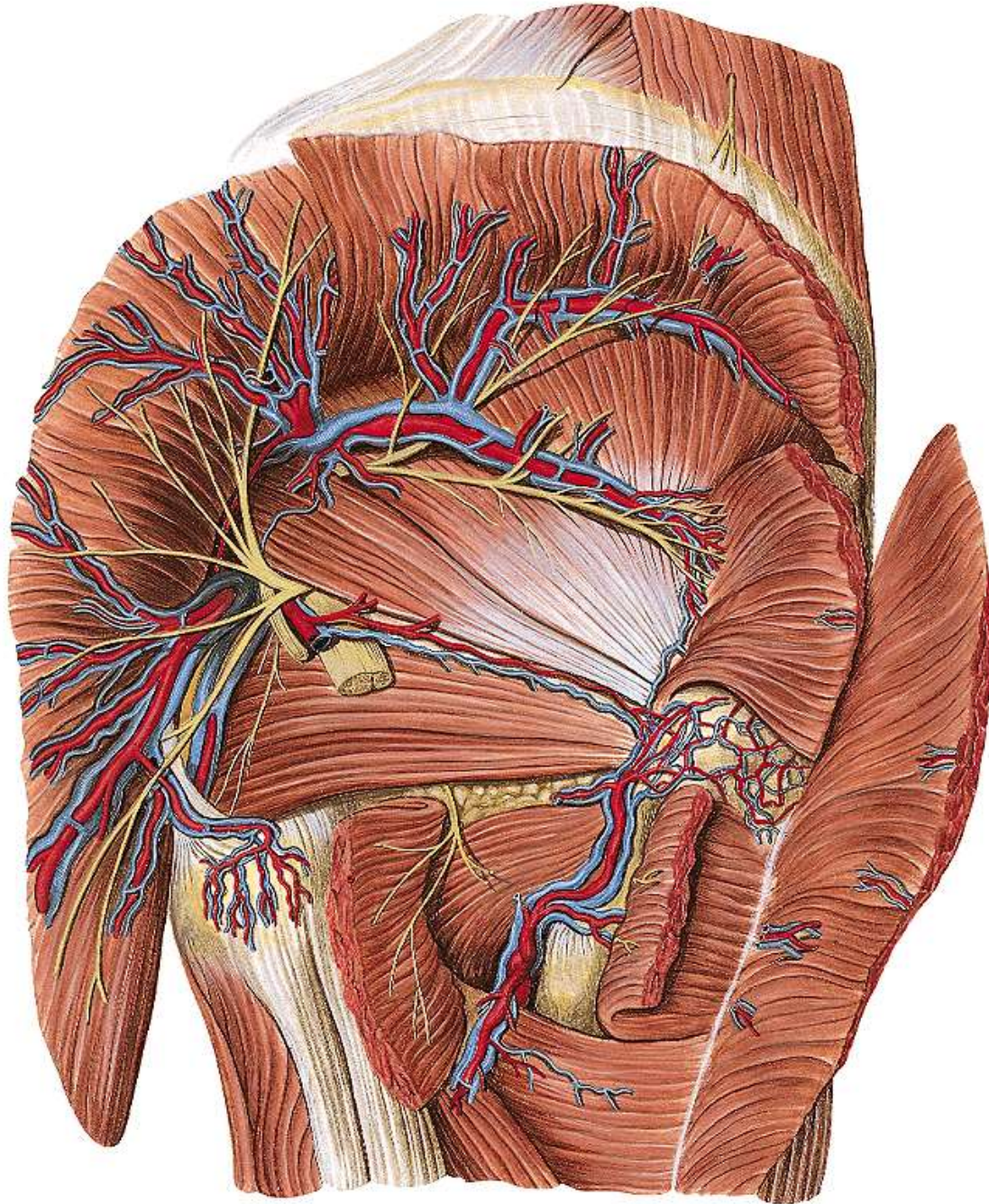
A. obturatoria →

A. glutea sup. →

A. glutea inf. →

A. pudenda int.

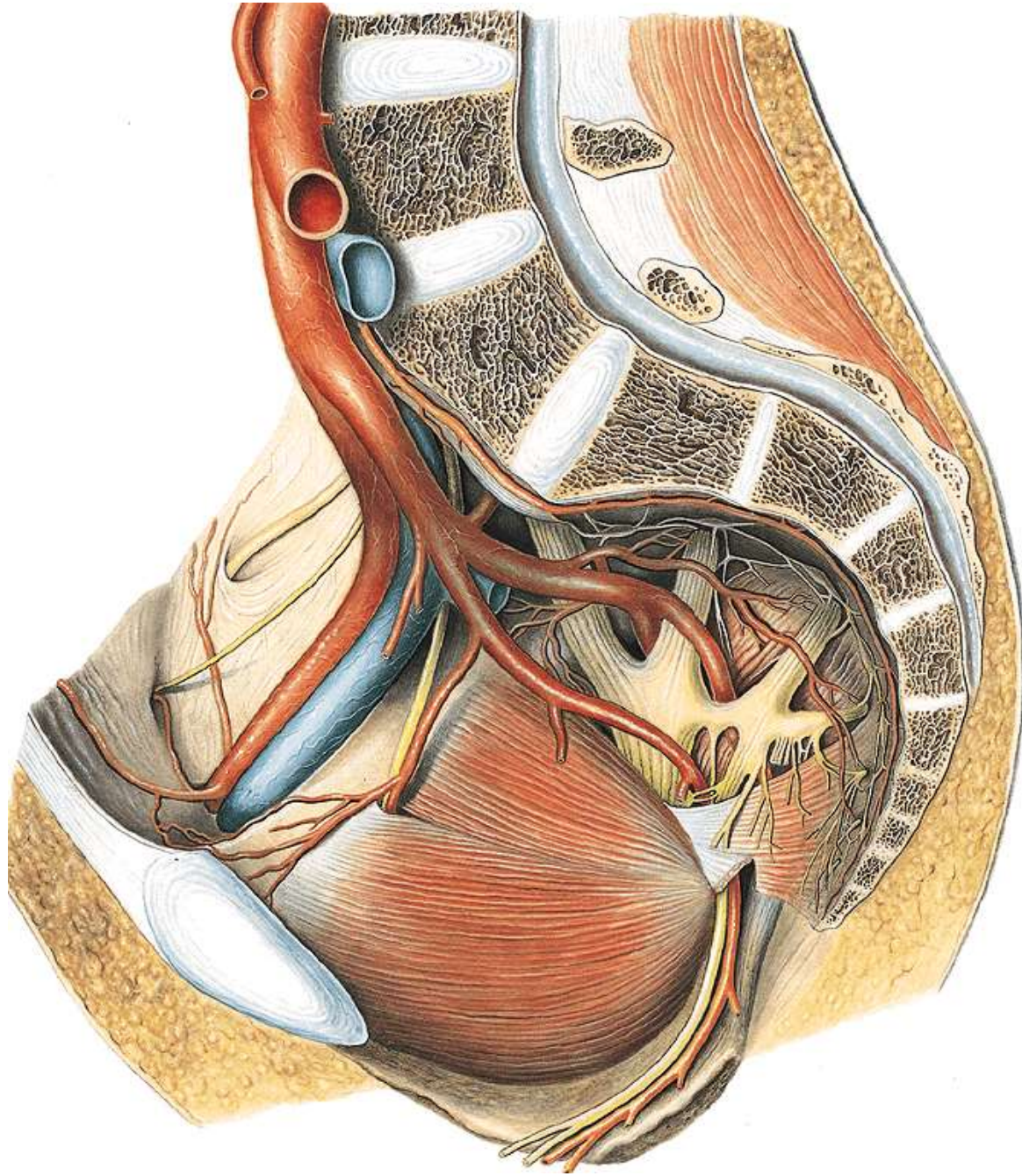




A. glutea sup.

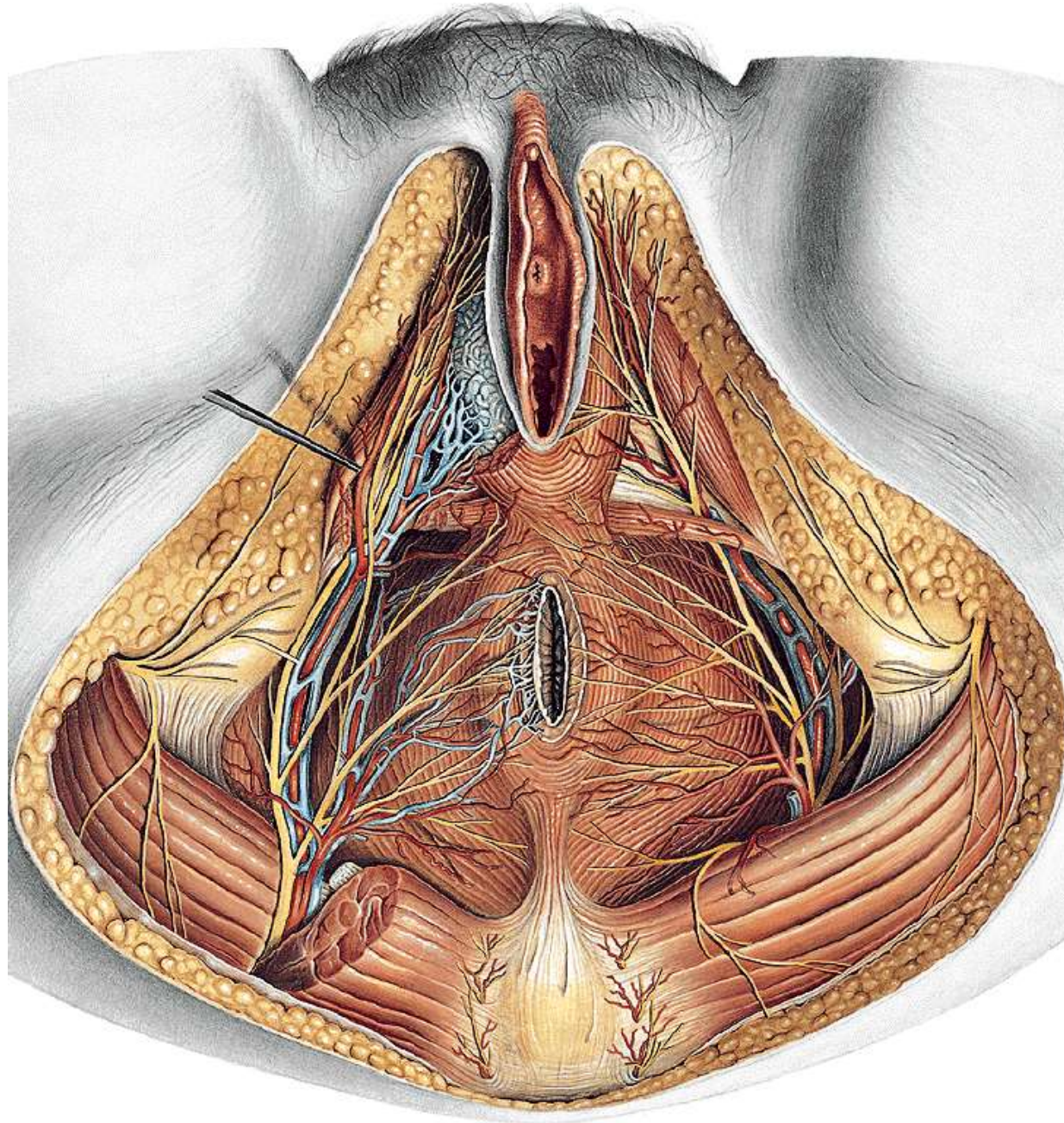
A. glutea inf.





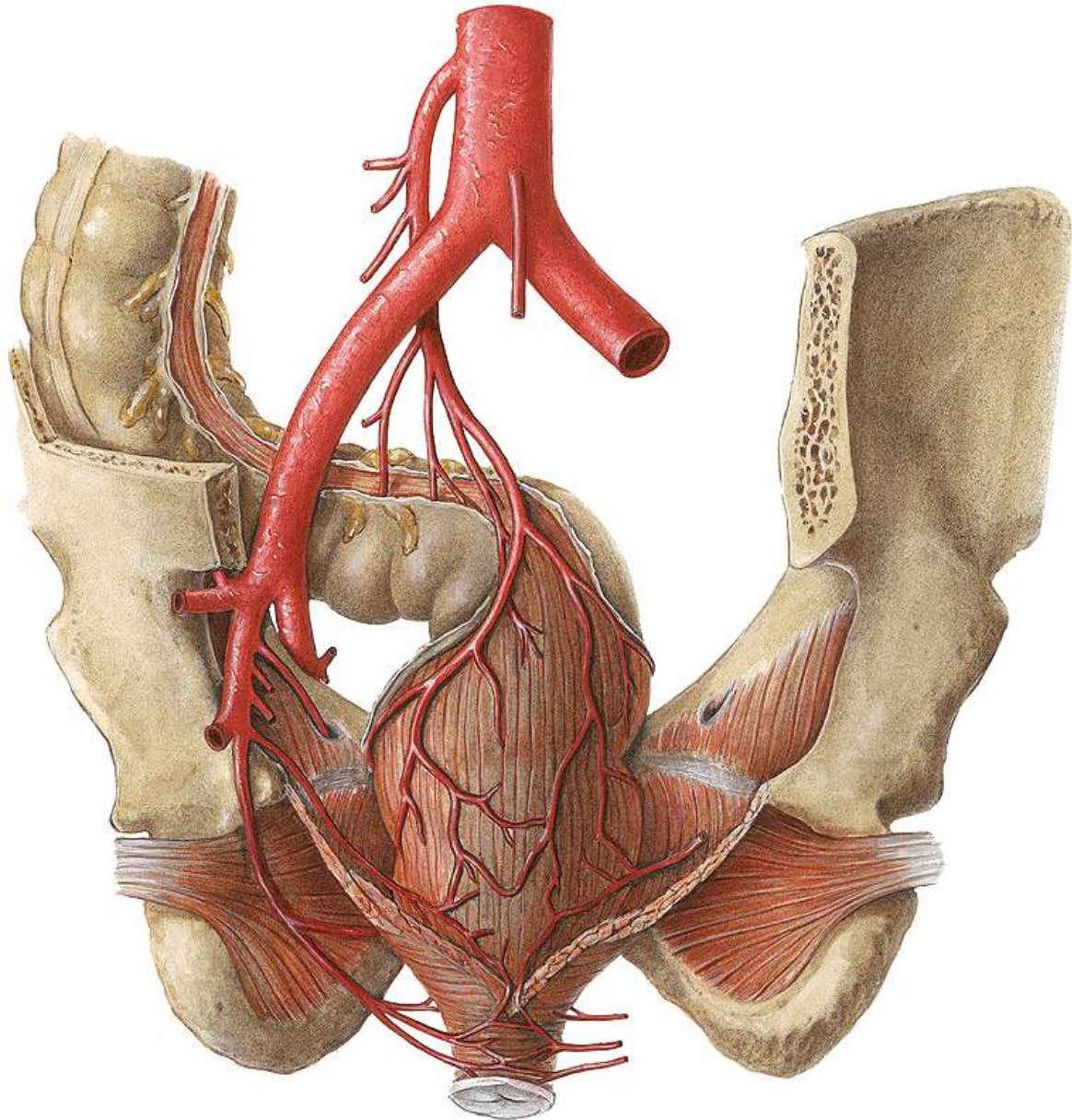
a. pudenda int.





**A. pudenda int.**  
Rectum  
External genitals





**A. rectalis**  
superior  
a. mesent. inf.

**media**  
a. iliaca int

**inferior**  
a. pudenda int.





Ve

## Lower limb

**A. femoralis**

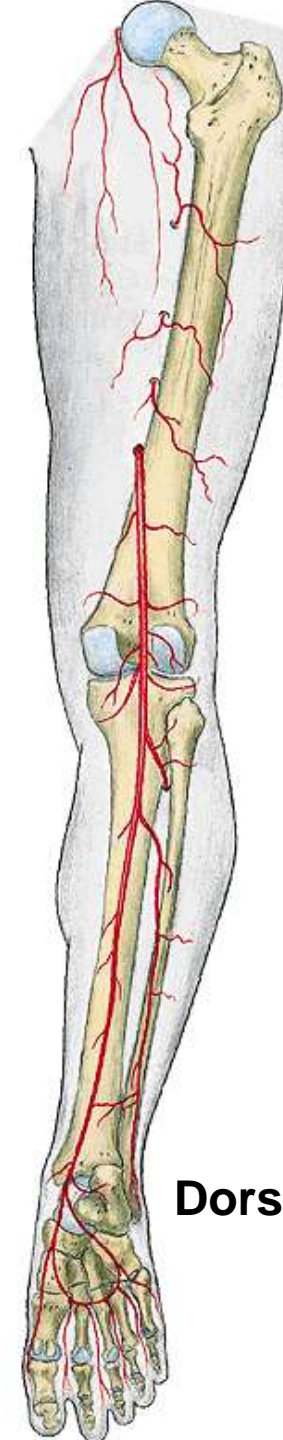
**A. poplitea**

**A. tibialis ant.**

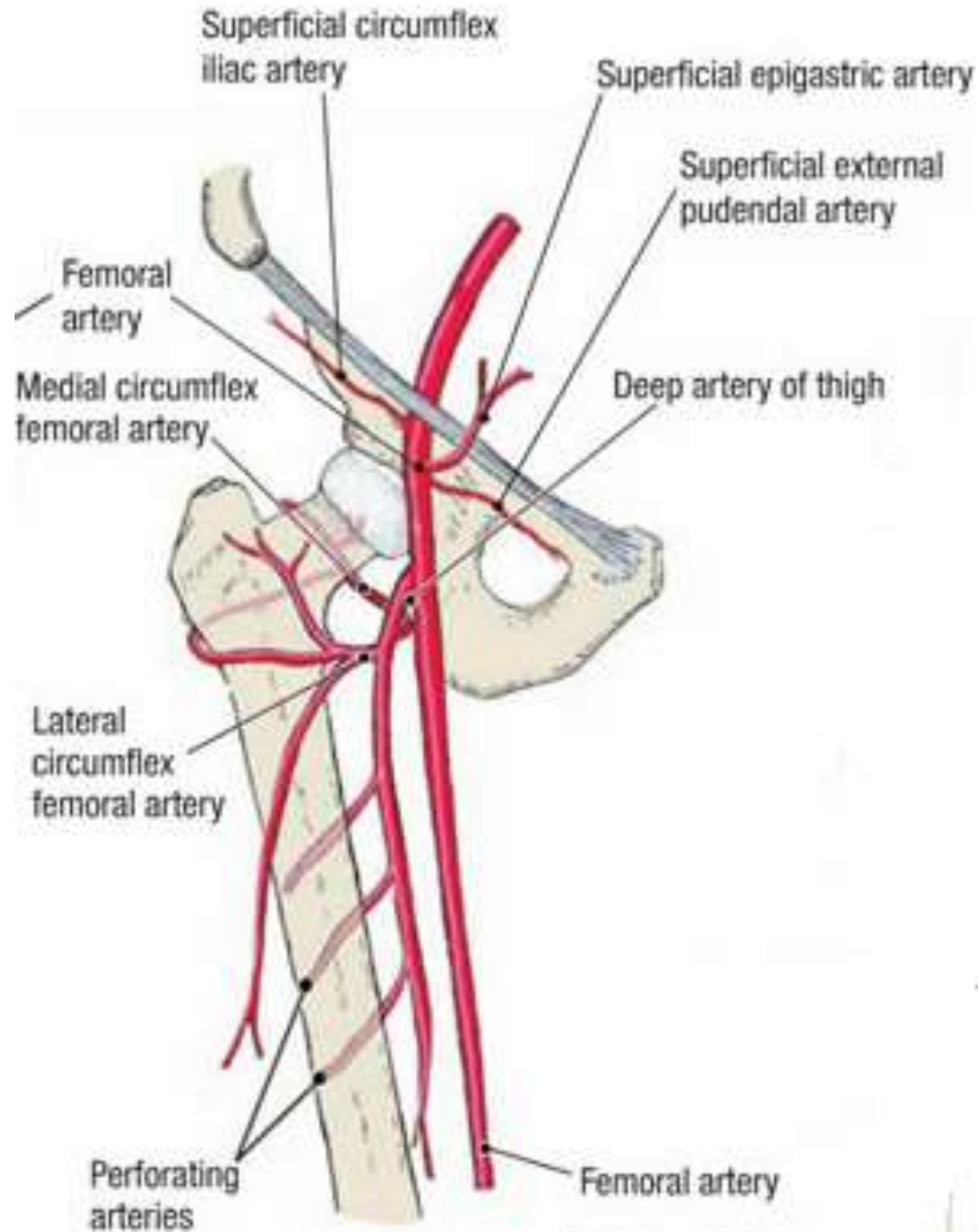
**A. tibialis post.**

**Aa. metatarsae dorsales**

**Arcus plantaris**



Dors



## A. femoralis

A. epigastr. spf.

A. circ. ilium spf.

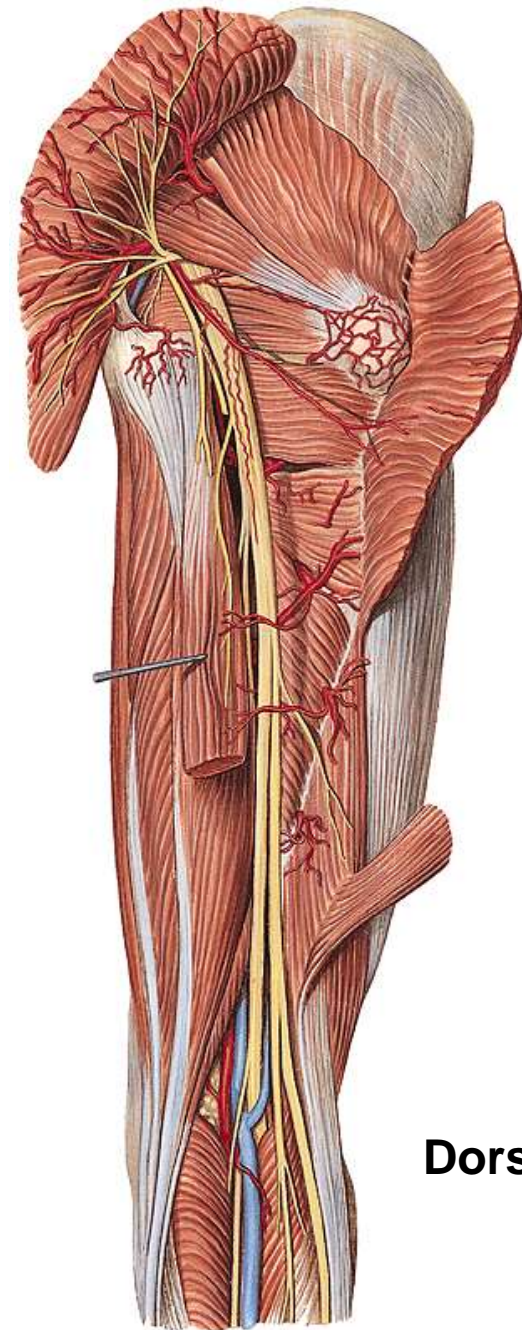
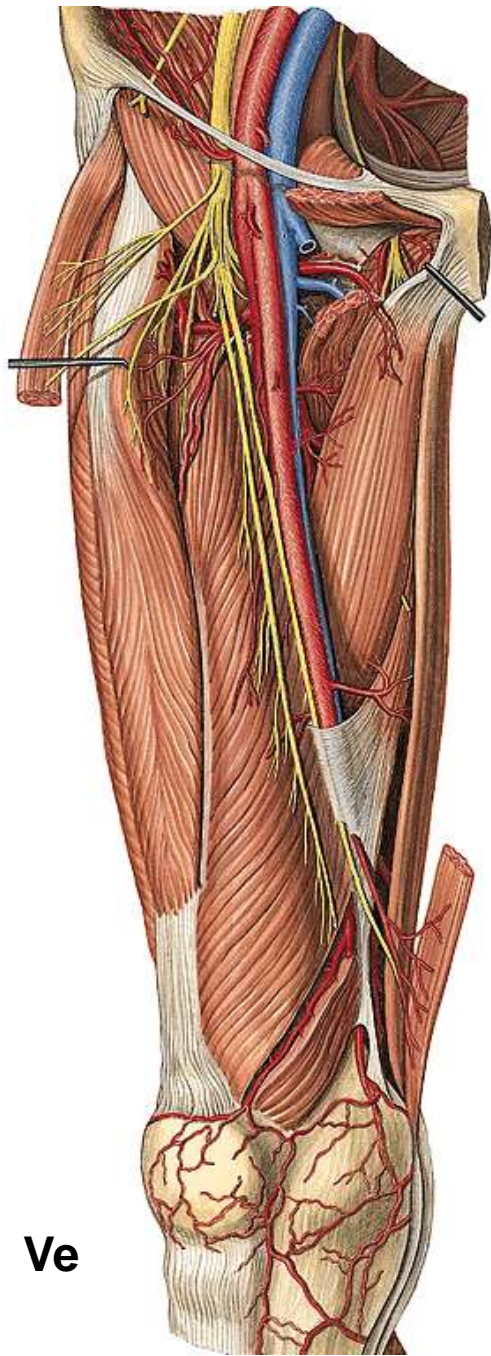
Aa. pudendae ext.

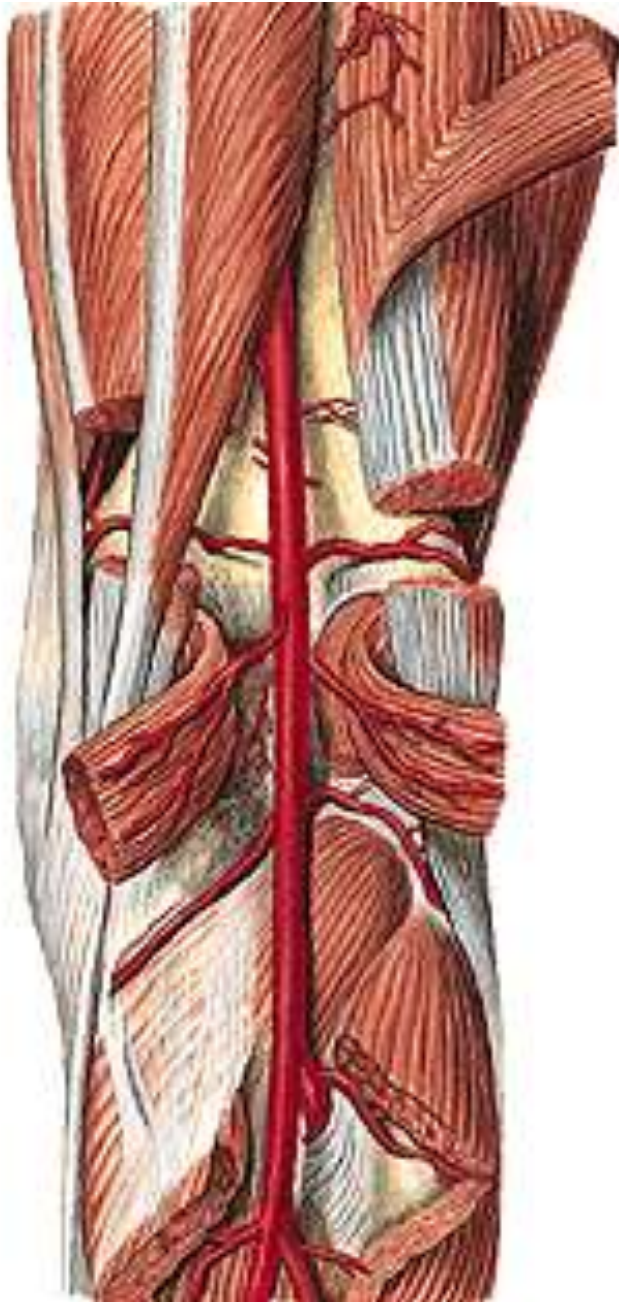
A. prof. femoris

aa. circumfl.

aa. perforantes





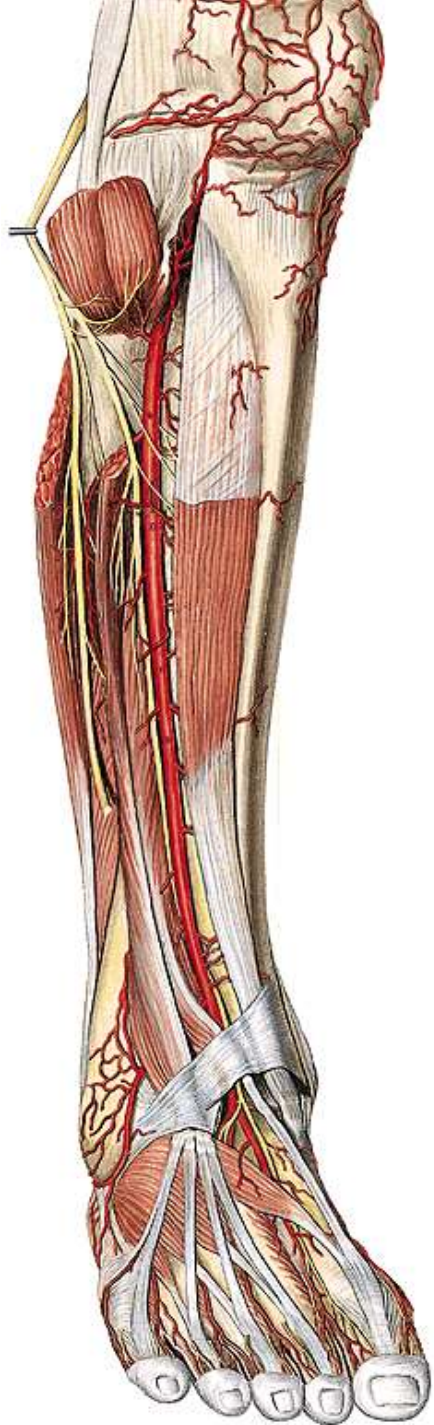


## A. poplitea

Aa. genus

Aa. surales





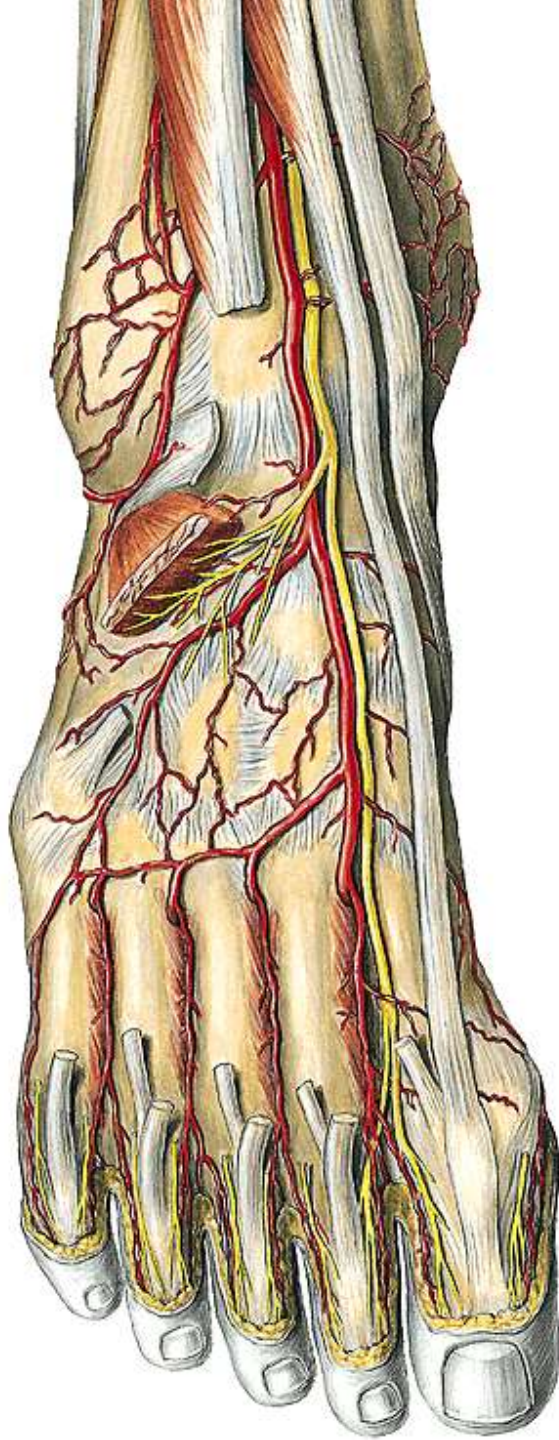
**A. tibialis**

anterior

posterior

a. fibularis





**A. tibialis ant.**

→ **a. dorsalis pedis**

a. tarseae med.

a. tarsea lat.

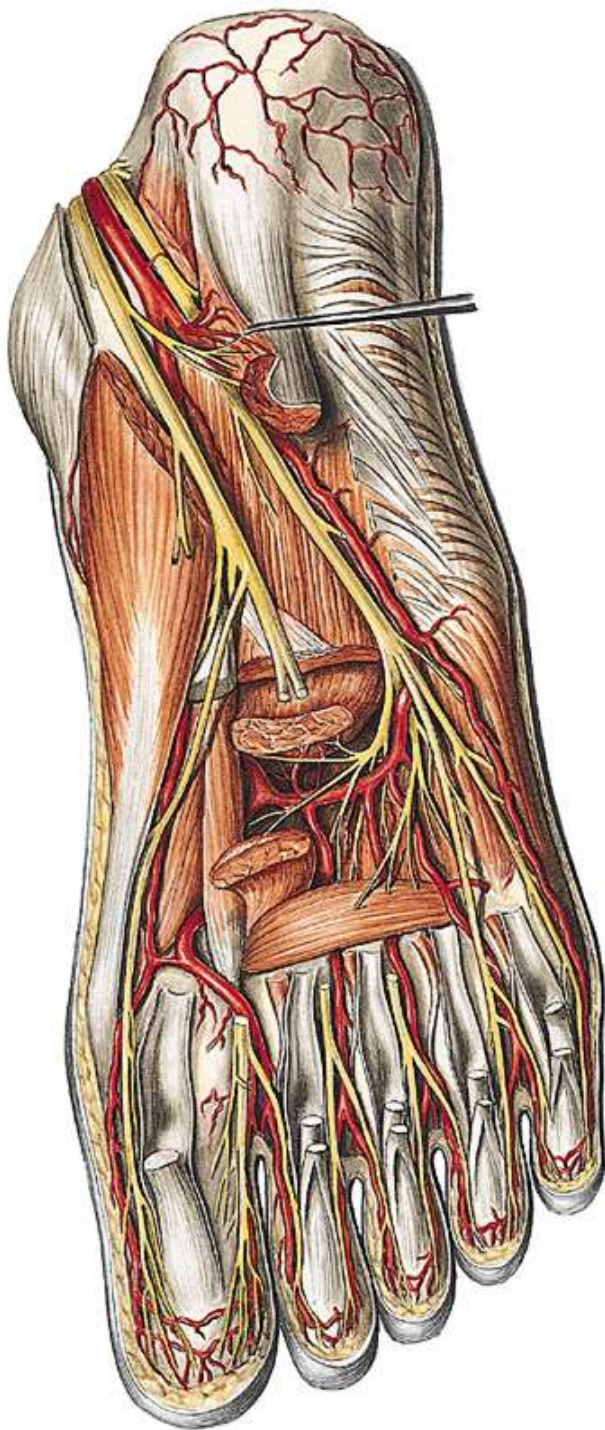
**a. arcuata**



aa. metatarsae dors.

aa. digitales dors.





**A. plantaris med.**  
**A. plantaris lat.**

**> arcus plantaris**



aa. metatarsae plant.  
aa. digitales plant.





Illustrations were copied from:

**Atlas der Anatomie des Menschen/Sobotta.**

**Putz,R., und Pabst,R. 20. Auflage. München:**

**Urban & Schwarzenberg, 1993)**

**Netter: Interactive Atlas of Human Anatomy.**

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