Vaisseaux sanguins étudiés aujourd'hui :

## Aorte

- aorte **thoracique**

  aorte ascendante

    a. coronaire droite

    a. coronaire gauche

  arc aortique

    t. brachiocéphalique

    a. carotide commune G.

    a. subclavière G.

  aorte descendante

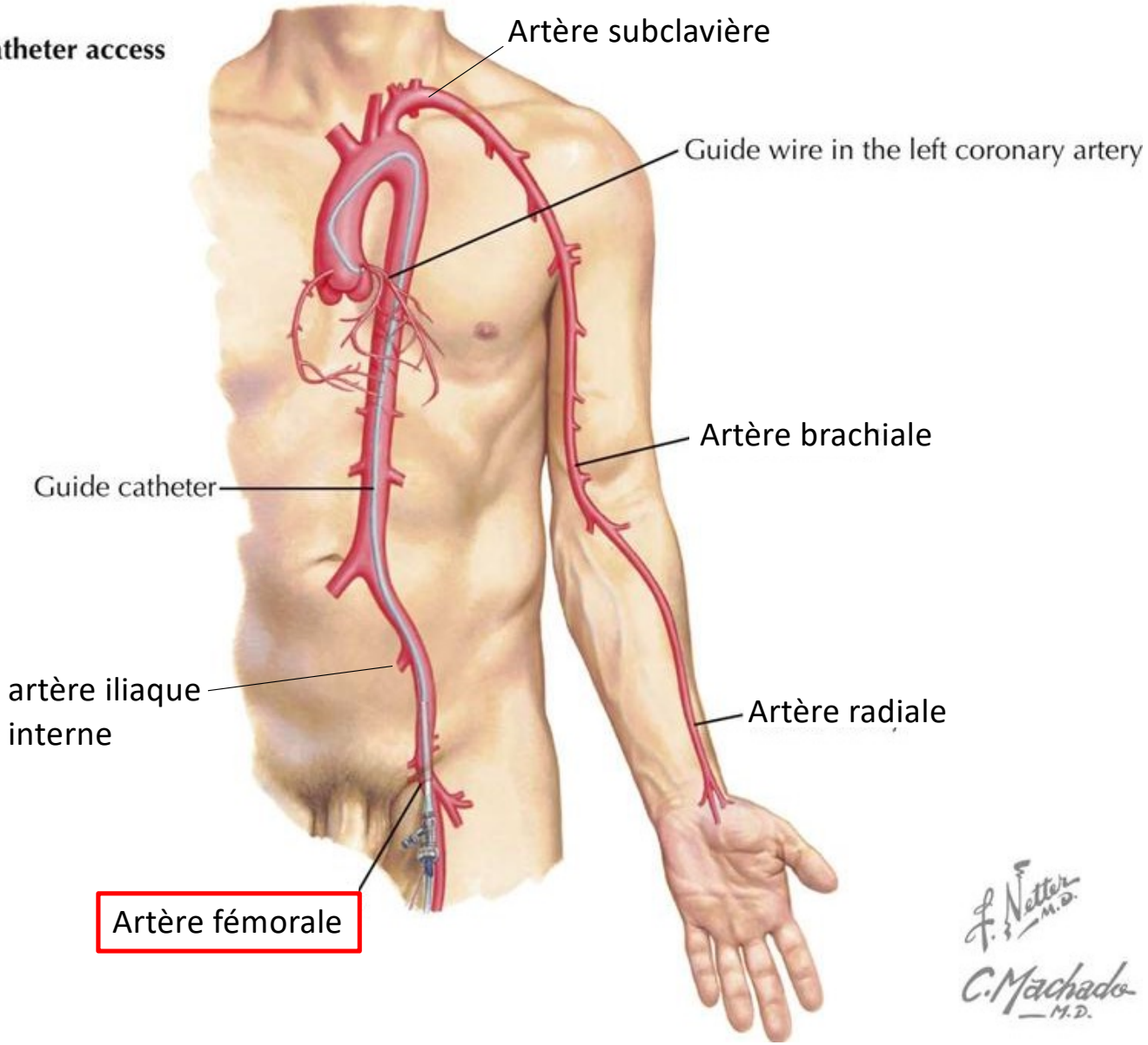
- aorte **abdominale**

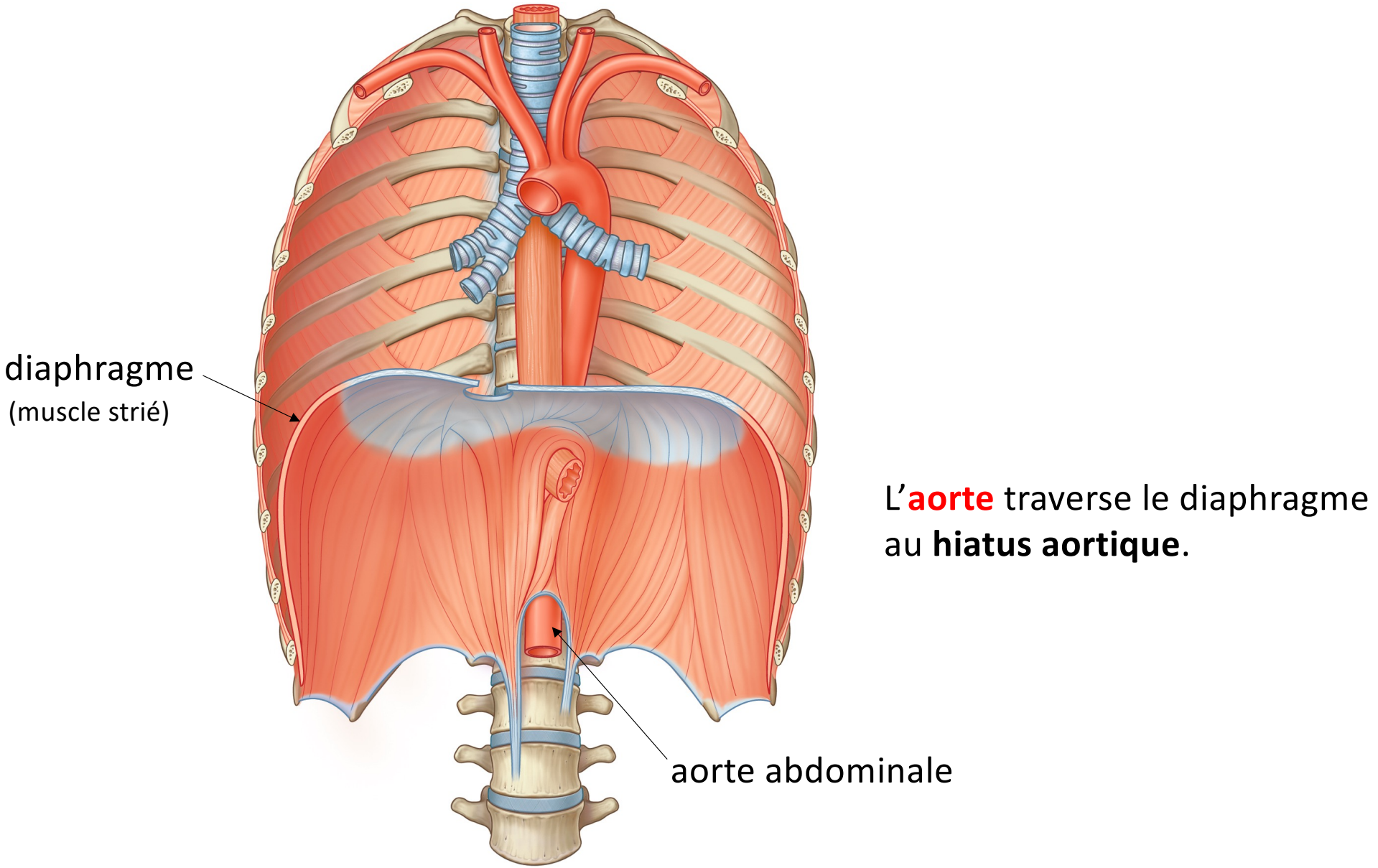
bifurcation de l'aorte :

**Artères iliaques** communes

  artère iliaque externe

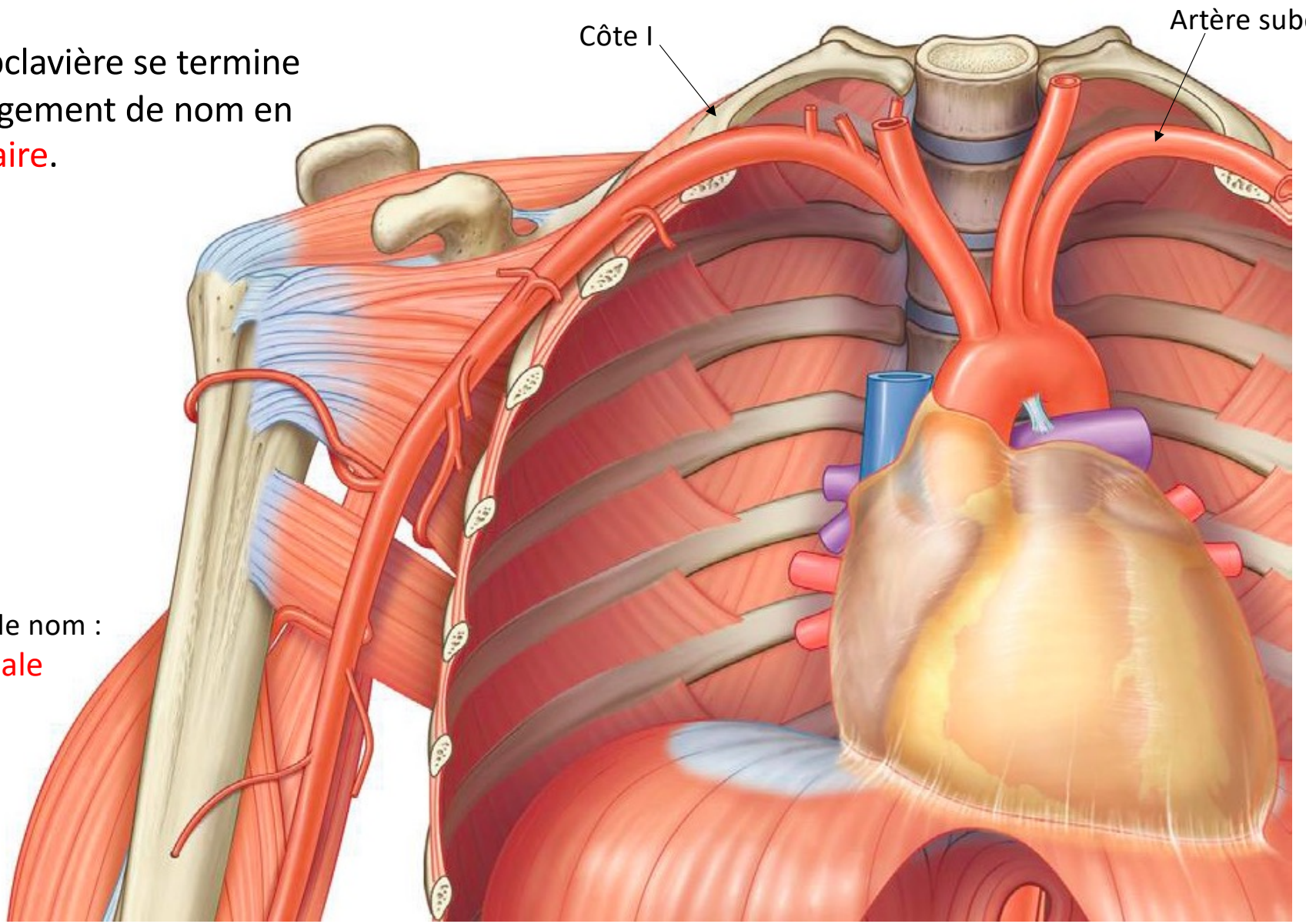
  artère iliaque interne





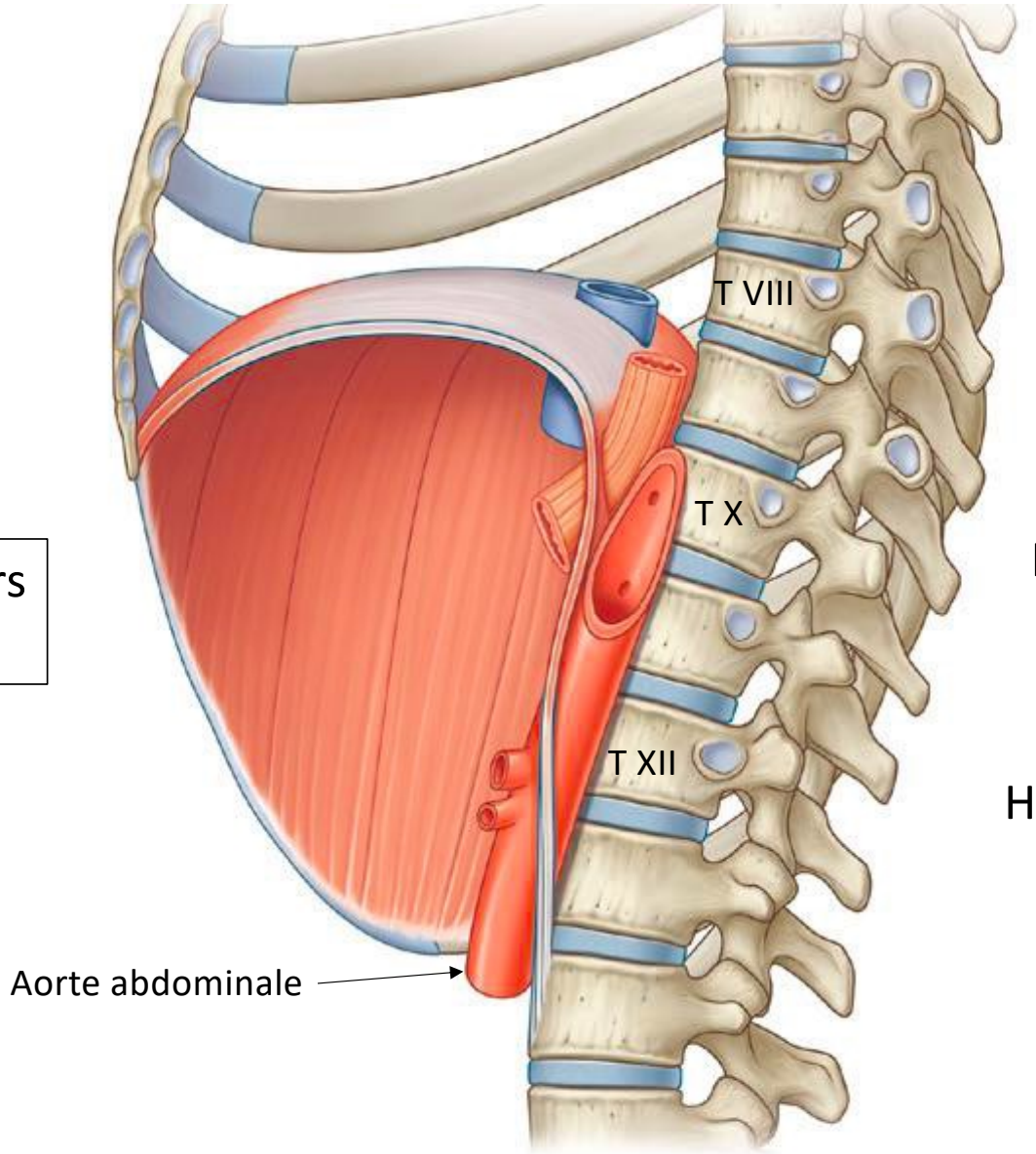

L'**aorte** traverse le diaphragme au **hiatus aortique**.

L’artère subclavière se termine par le changement de nom en artère axillaire.




Changement de nom :
artère brachiale

Passages au travers du diaphragme




Foramen de la veine cave inférieure: T VIII

Hiatus œsophagien : T X

Hiatus aortique : T XII

Classification des artères

## ARTERIES

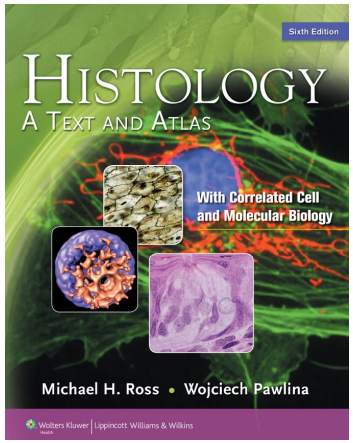
Traditionally, arteries are classified into three types on the basis of size and the characteristics of the tunica media.

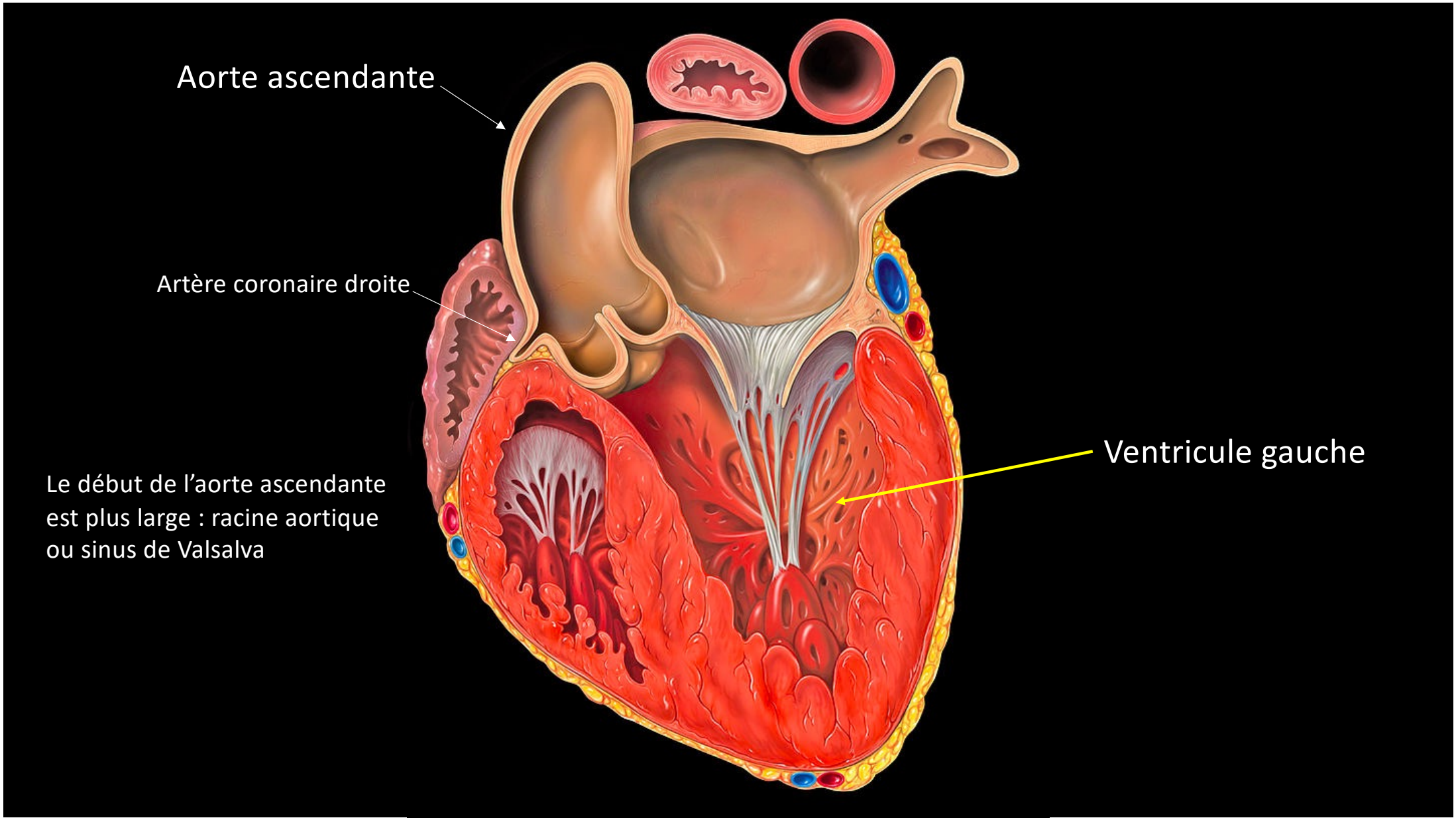
- **Large arteries** or **elastic arteries** such as the aorta and pulmonary arteries convey blood from the heart to the systemic and pulmonary circulations, respectively (see Fig. 13.2). Their main branches—the brachiocephalic trunk, common carotid, subclavian, and common iliac arteries—are also classified as elastic arteries.
- **Medium arteries** or **muscular arteries** (most of the "named" arteries of the body) cannot be sharply distinguished from elastic arteries. Some of these arteries are difficult to classify because they have features that are intermediate between the two types.
- **Small arteries** and **arterioles** are distinguished from one another by the number of smooth muscle layers in the tunica media. By definition, arterioles have only one or two layers, and small arteries may have as many as eight layers of smooth muscle in their tunica media.

Artères élastiques

Artères musculaires

Artères de petite taille






Le début de l'aorte ascendante est plus large : racine aortique ou sinus de Valsalva

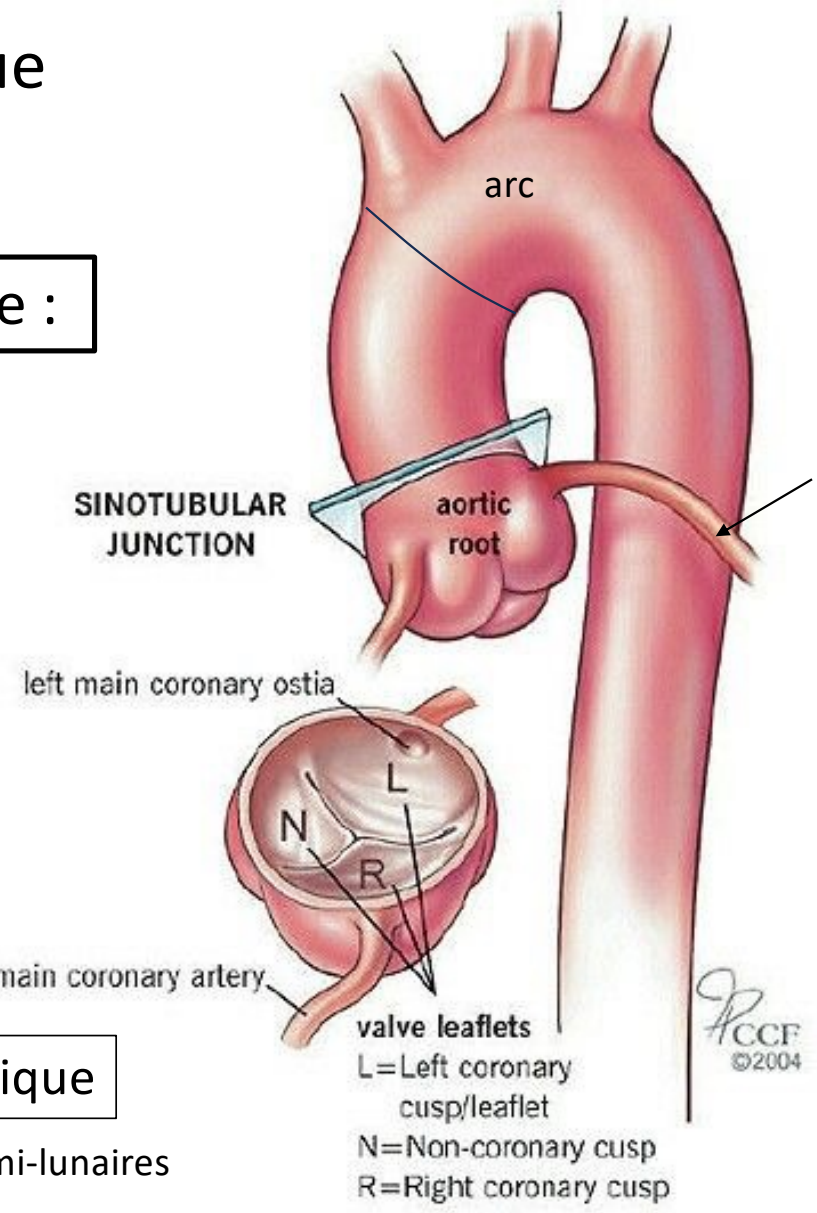
# Aorte thoracique

## L'aorte ascendante :

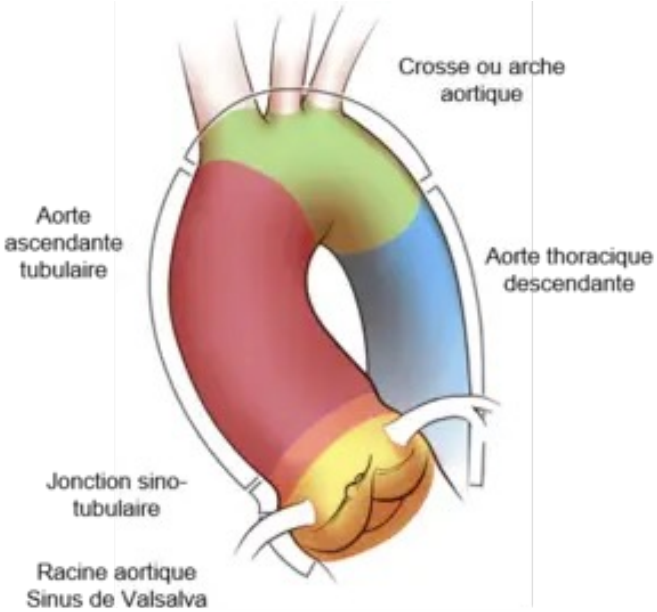
- portion tubulaire

jonction sino-tubulaire

- sinus de Valsalva




Artère coronaire gauche (pour le cœur)




## Valve aortique

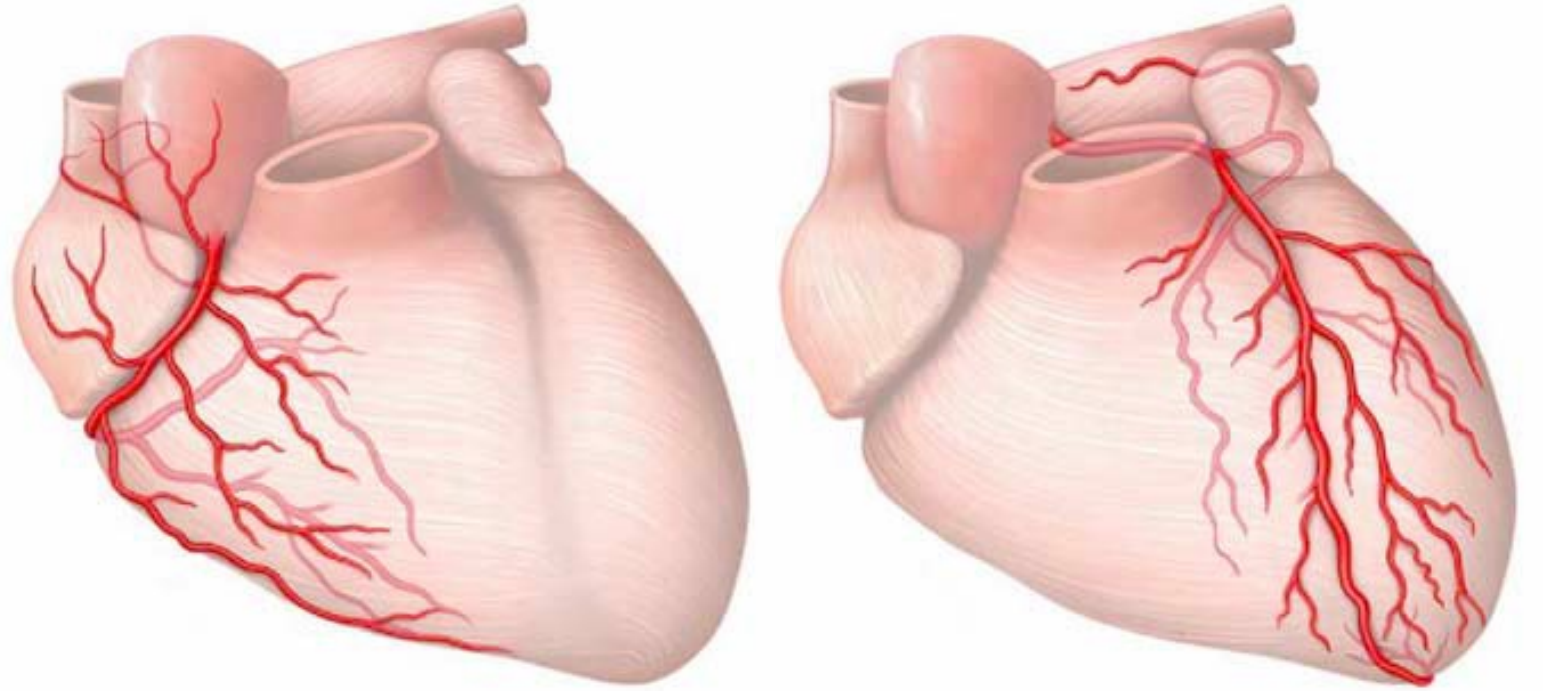
3 valvules semi-lunaires

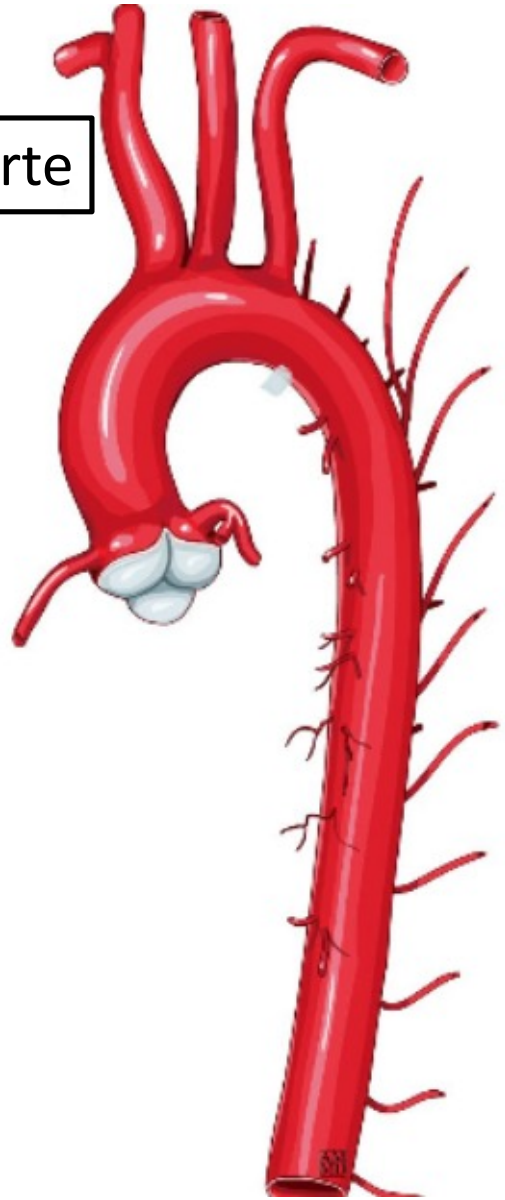
Branches collatérales de l’aorte ascendante :

Artère coronaire droite

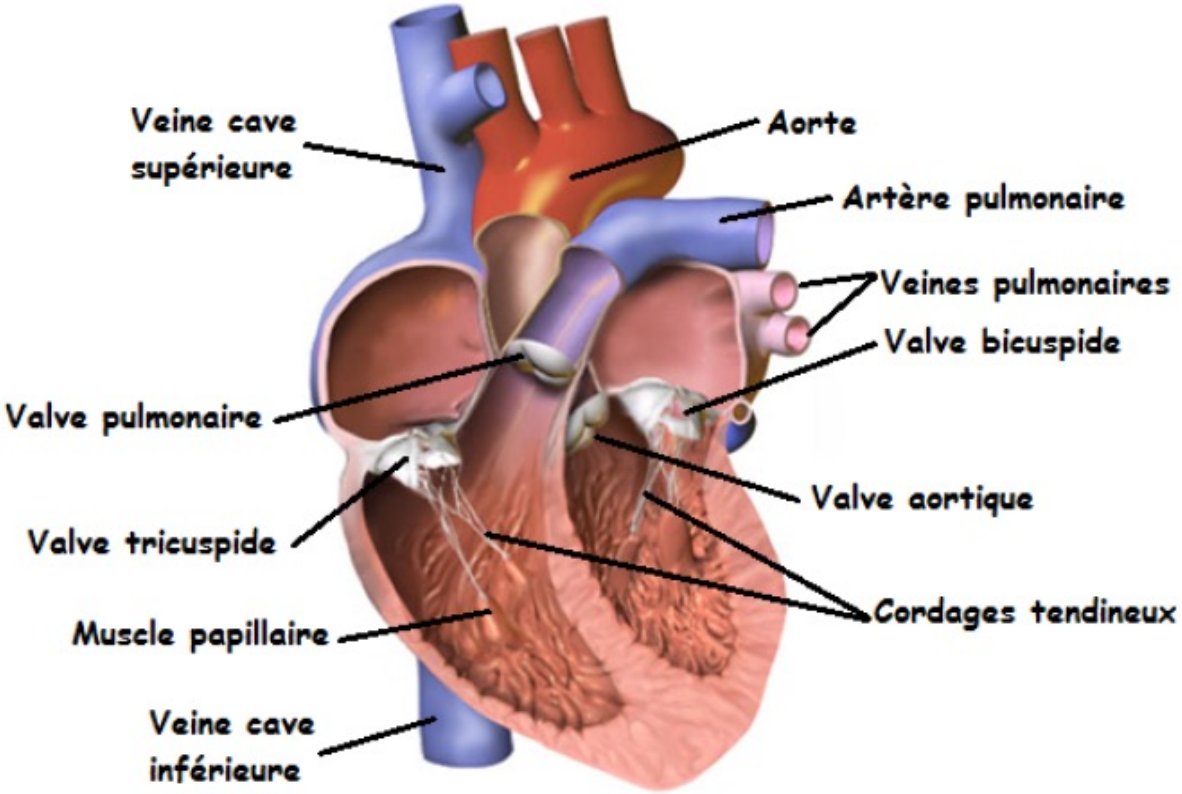
Artère coronaire gauche

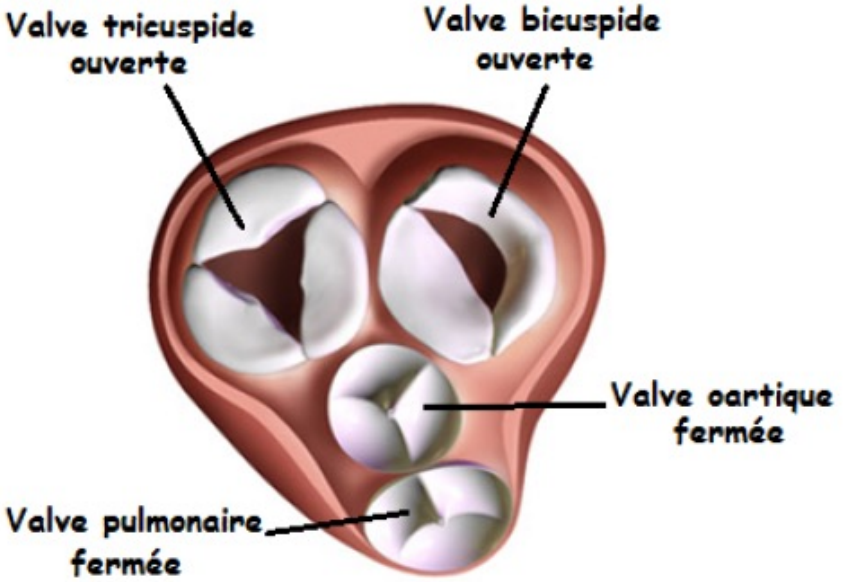
L’aorte





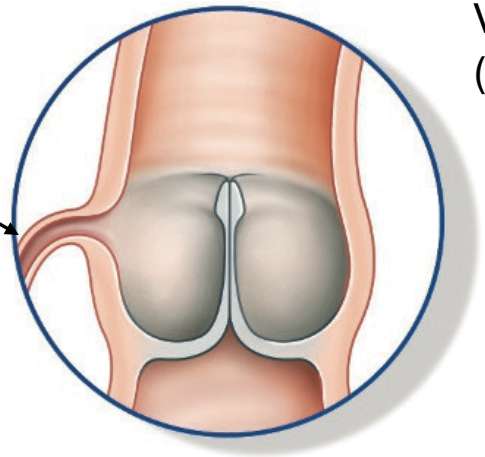
Les 2 artères coronaires sont des artères musculaires



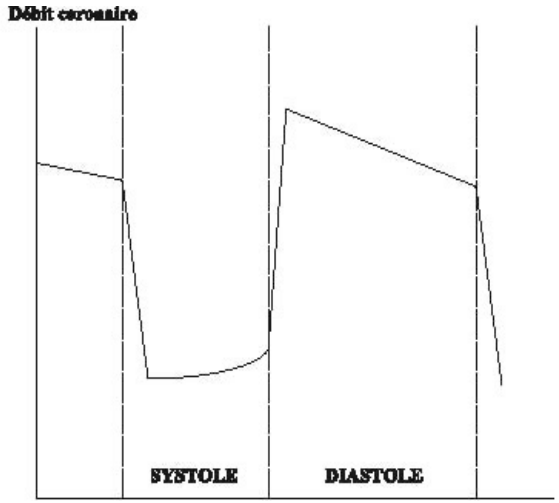




la **valve aortique** et la **valve pulmonaire** sont formées de 3 valvules semi-lunaires en forme de « nids d'hirondelles ».

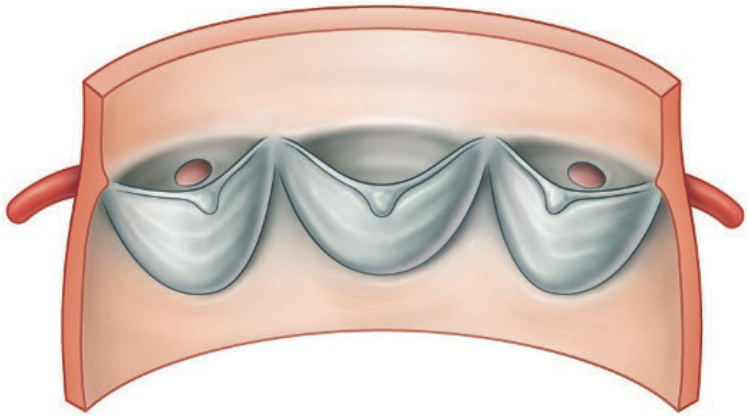
# La valve aortique




Valve fermée
(durant la diastole)




3 valvules semi-lunaires

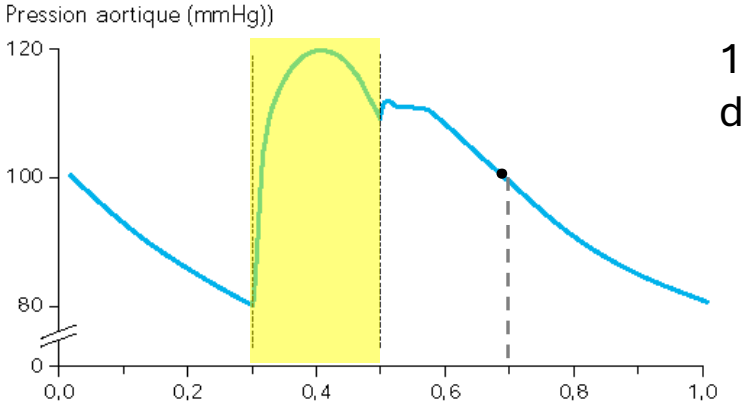


Noter la localisation
des orifices (**ostium**)
des artères coronaires.

Figure 3.68

Morphologie ⟷ Physiologie

Sur la figure :
cycle cardiaque de 700 ms
donc FC : 85 b/min

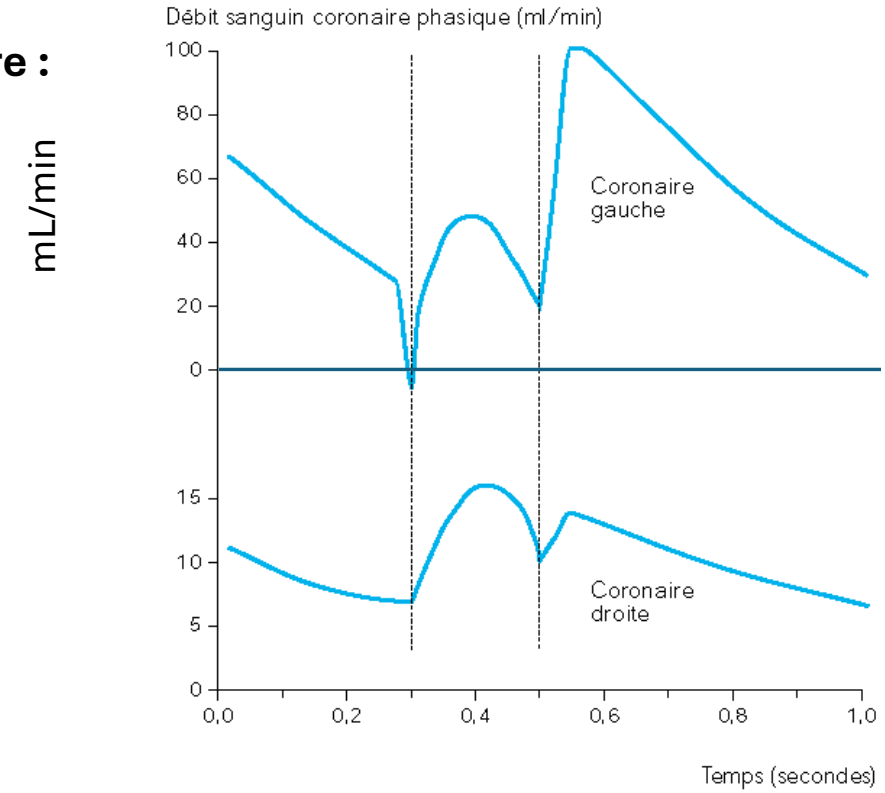


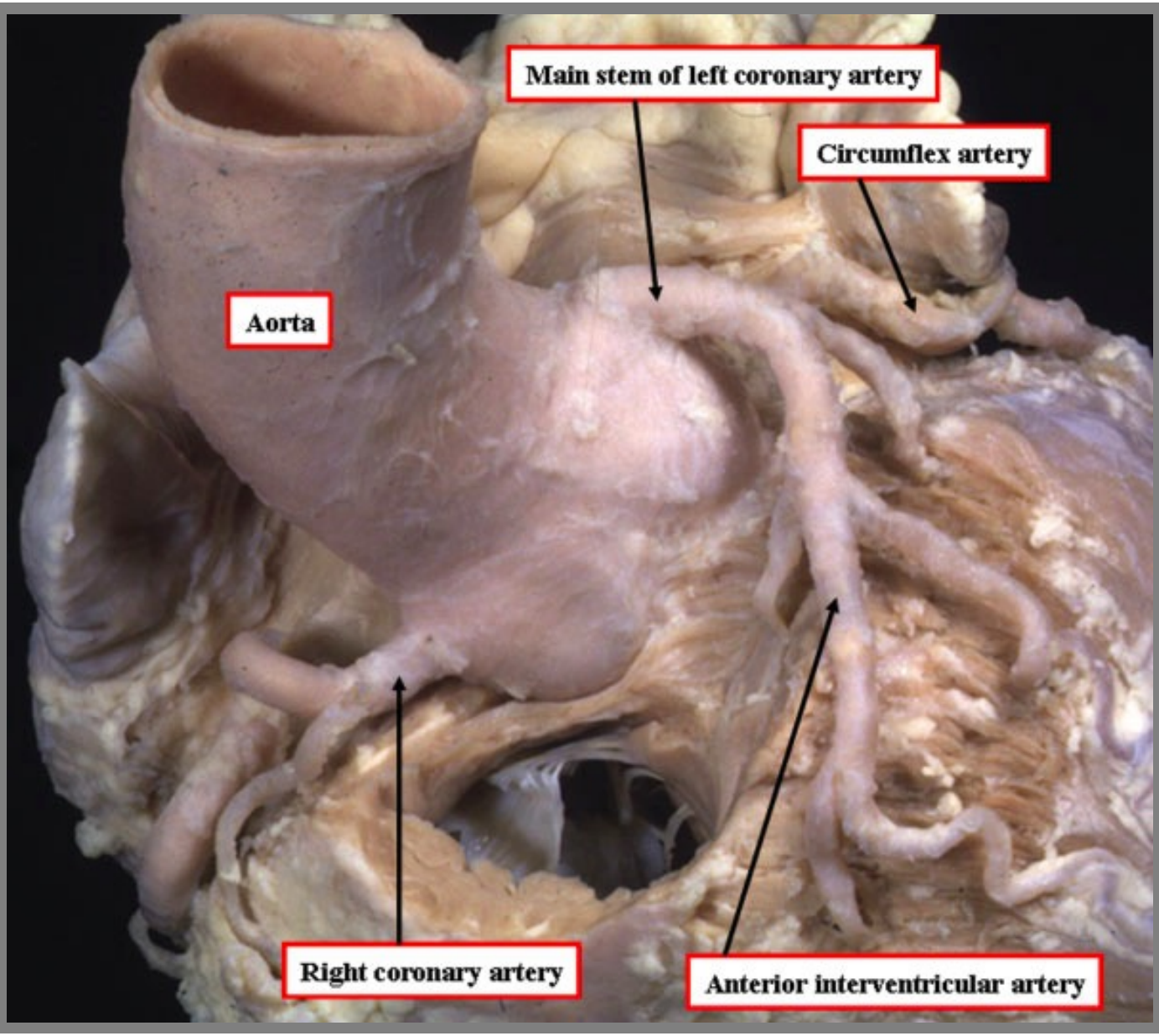

1 cycle cardiaque de 1 seconde:
donc la férquence cardiaque =
60 contractions / minute

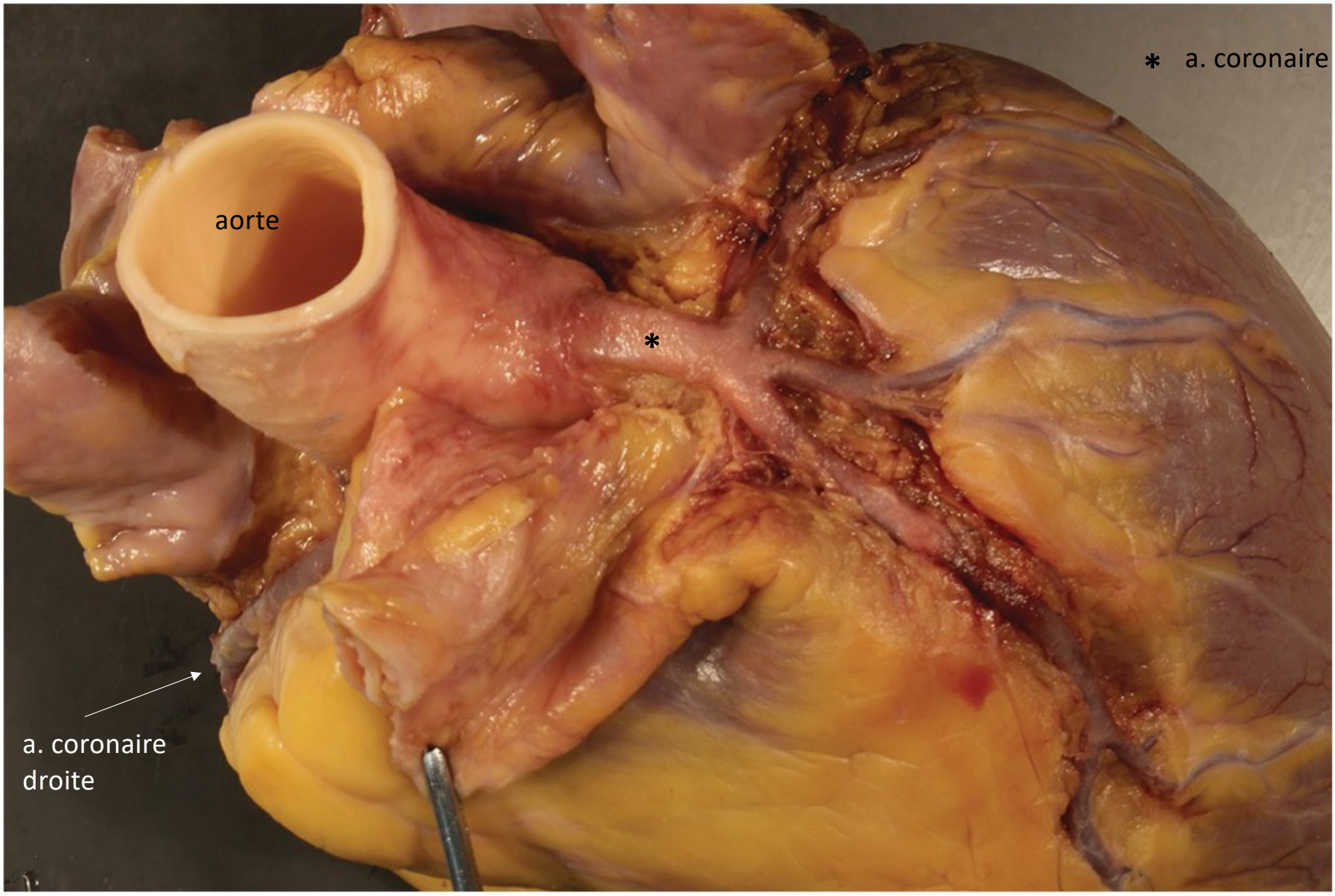
FC = 70 b/min → 857 ms

FC = 66 à 67 b/min → 900ms

**Débit sanguin coronaire :**

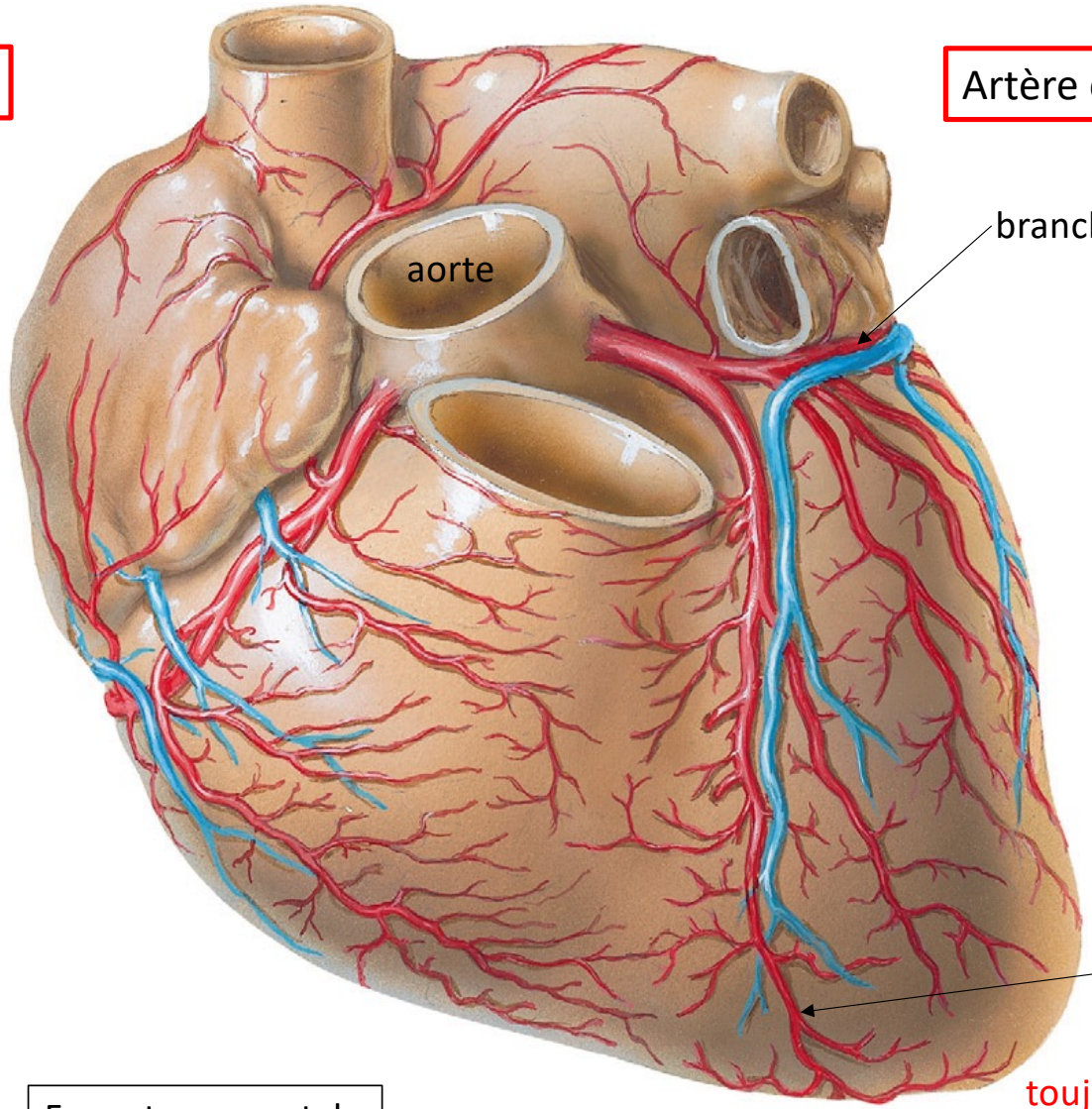



Main stem of left coronary artery
Circumflex artery
Aorta
Right coronary artery
Anterior interventricular artery


* a. coronaire gauche
aorte
*
a. coronaire droite

Artère coronaire droite

Artère coronaire gauche

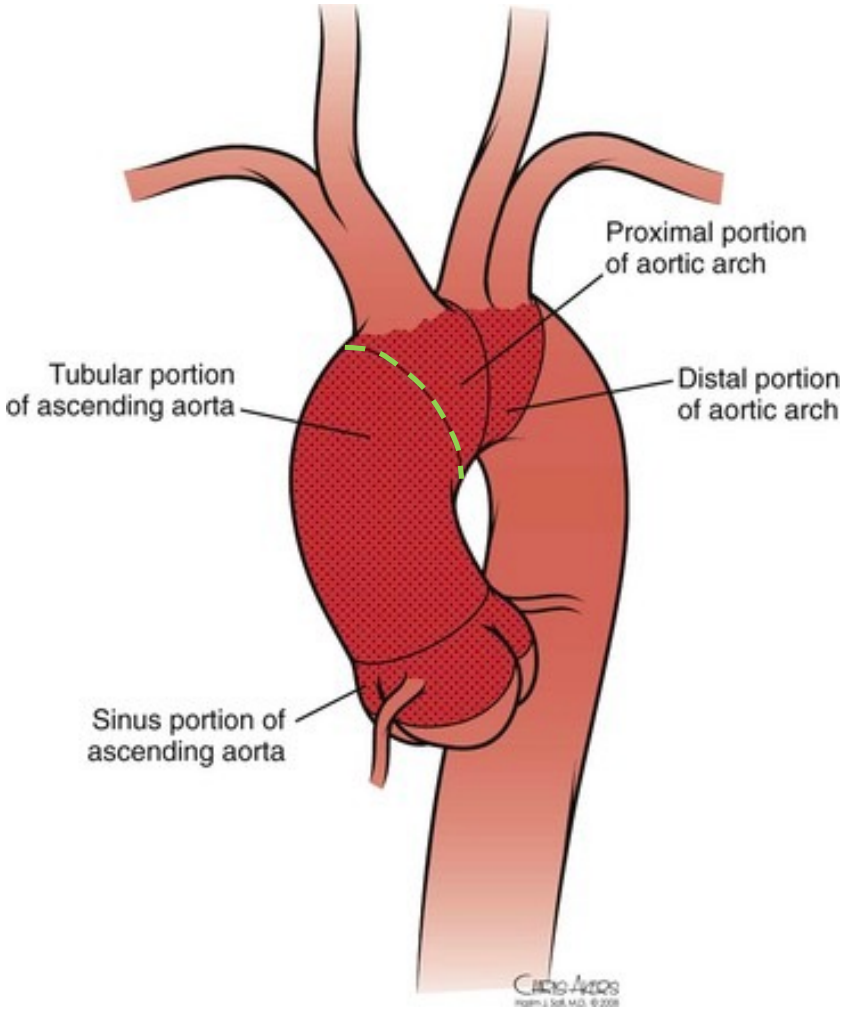



toujours de l'a. coronaire G

Face sterno-costale

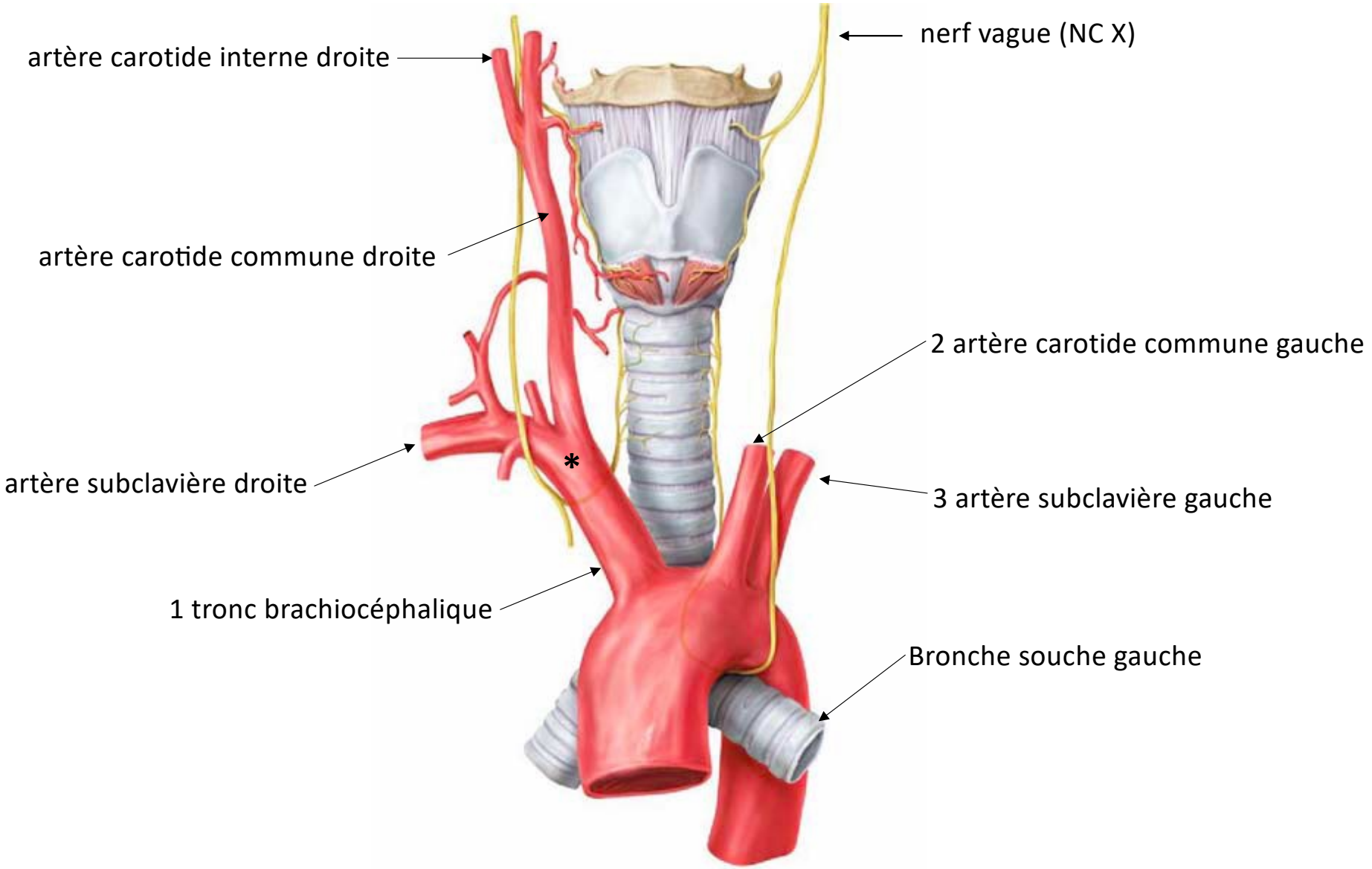
L'aorte ascendante

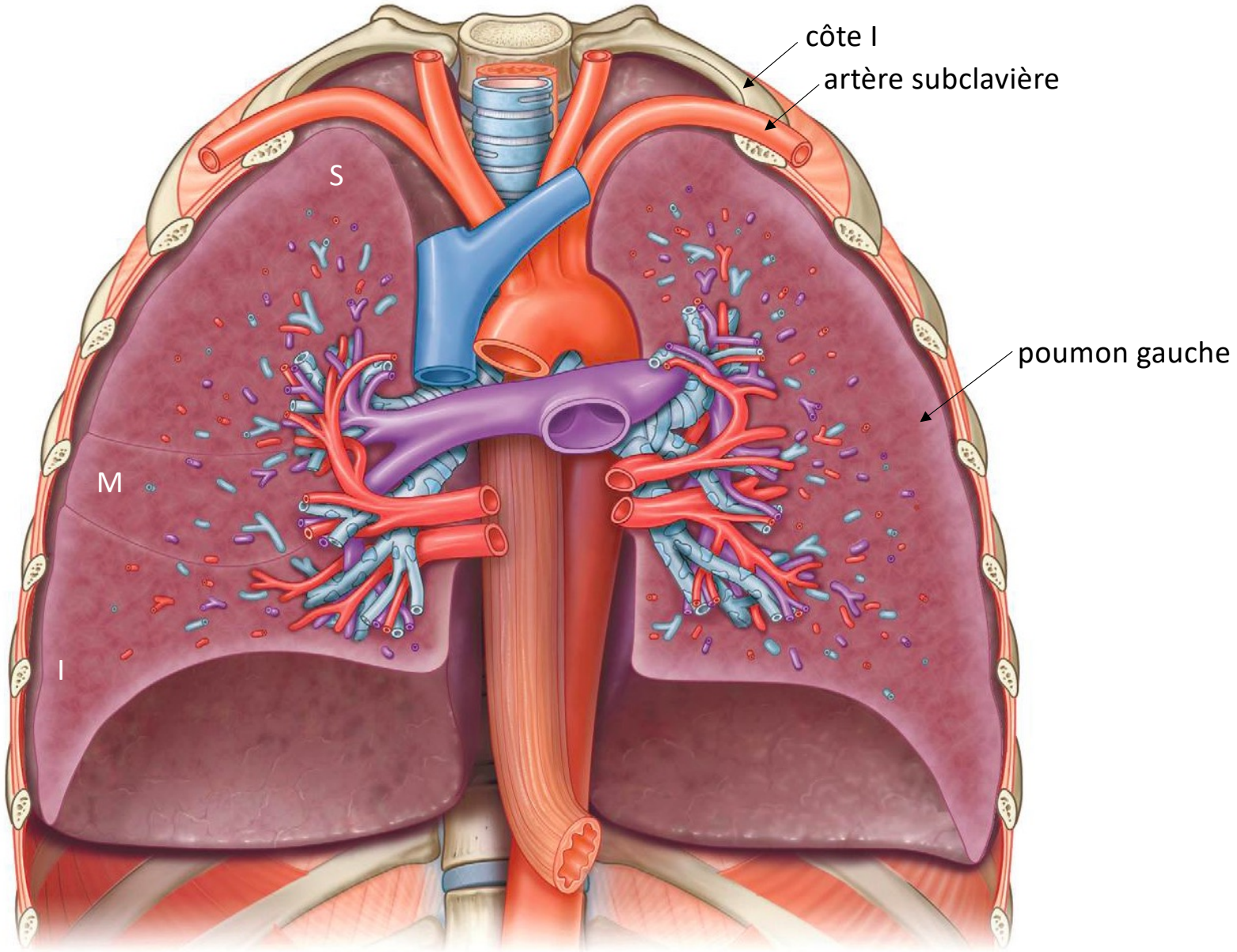
- sinus aortique
- portion tubulaire



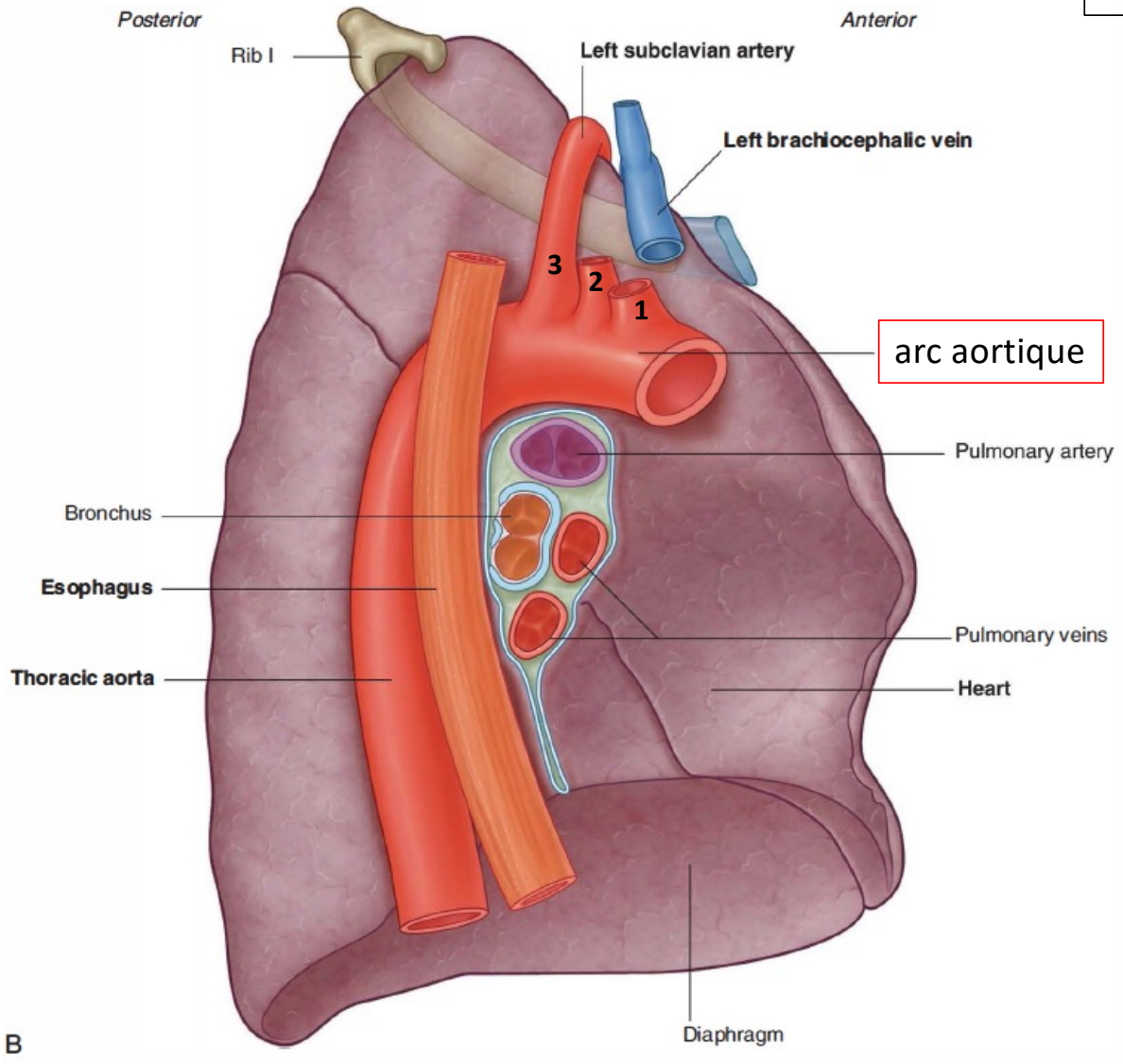

L'arc aortqiue

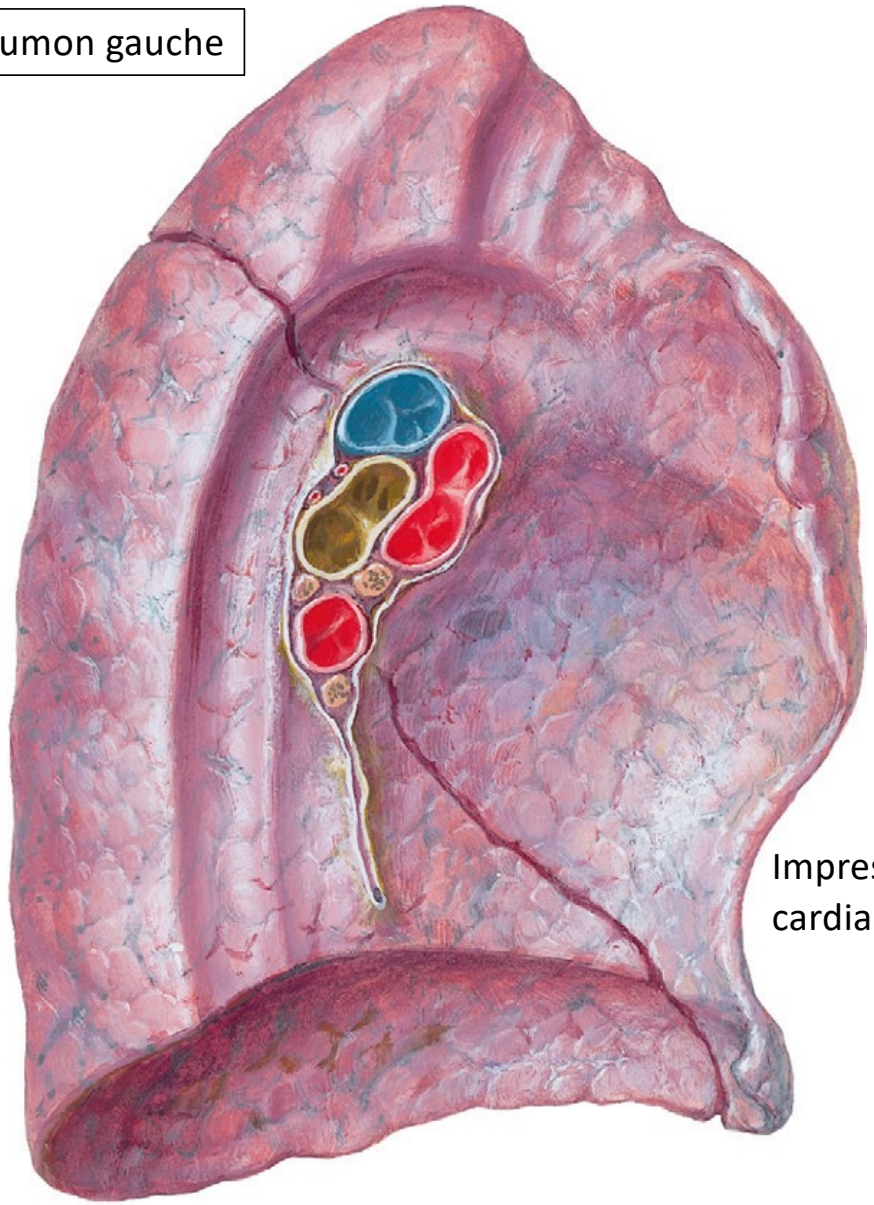
- portion proximale
  - → tronc brachiocéphalique
- portion distale
  - → a. carotide commune G
  - → a. subclavière G


artère carotide interne droite
nerf vague (NC X)
artère carotide commune droite
2 artère carotide commune gauche
artère subclavière droite
*
3 artère subclavière gauche
1 tronc brachiocéphalique
Bronche souche gauche


côte I
artère subclavière
S
poumon gauche
M
I

Poumon gauche

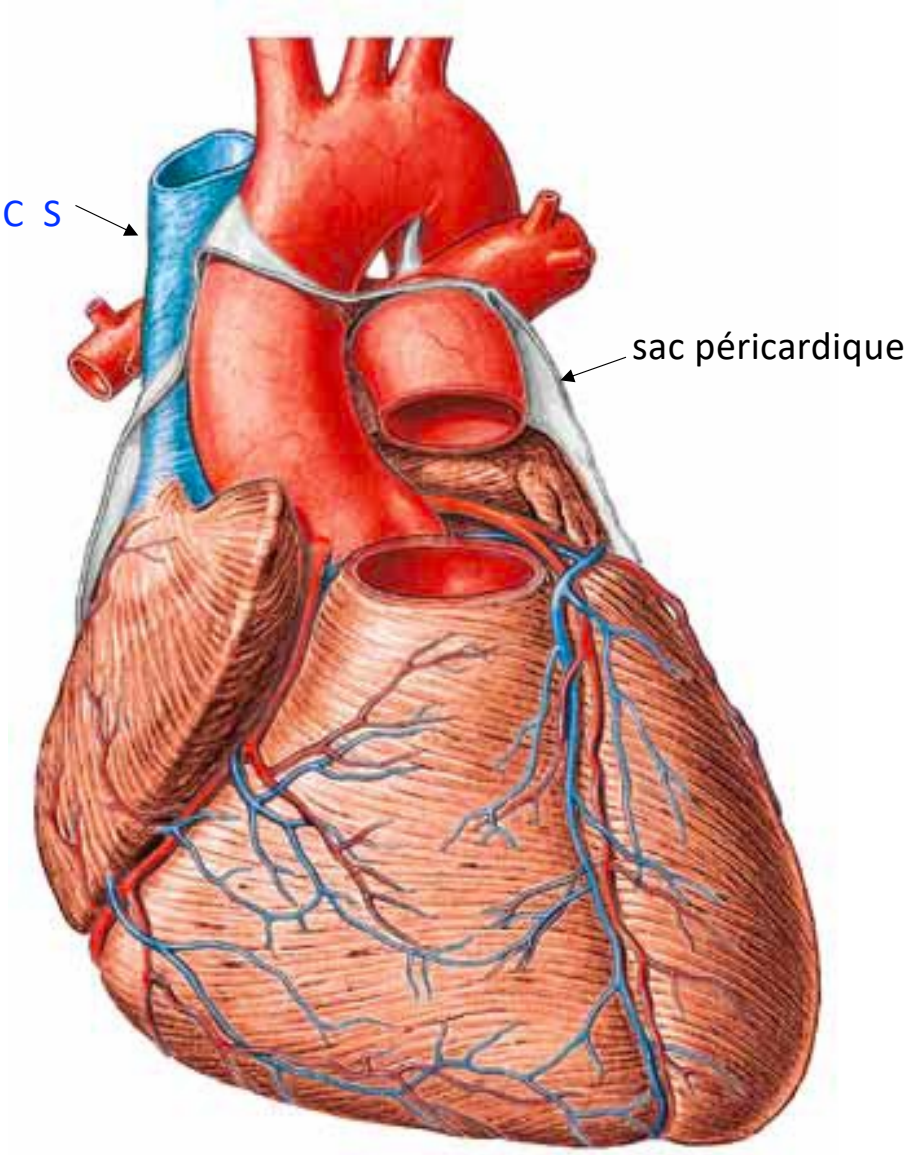


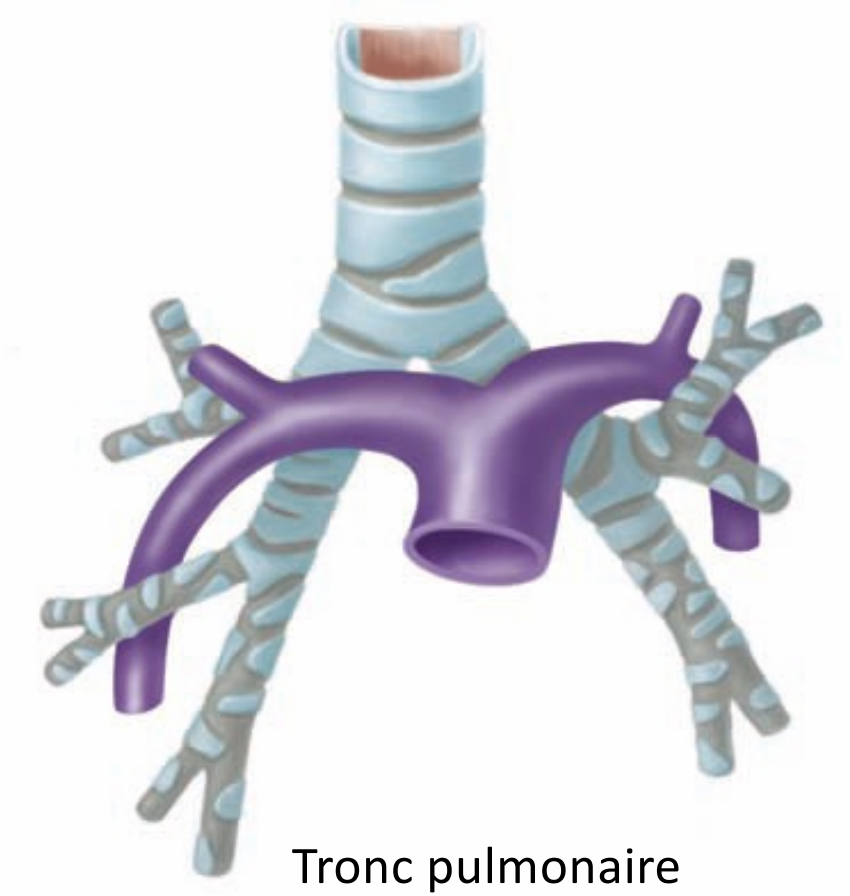



Impression cardiaque

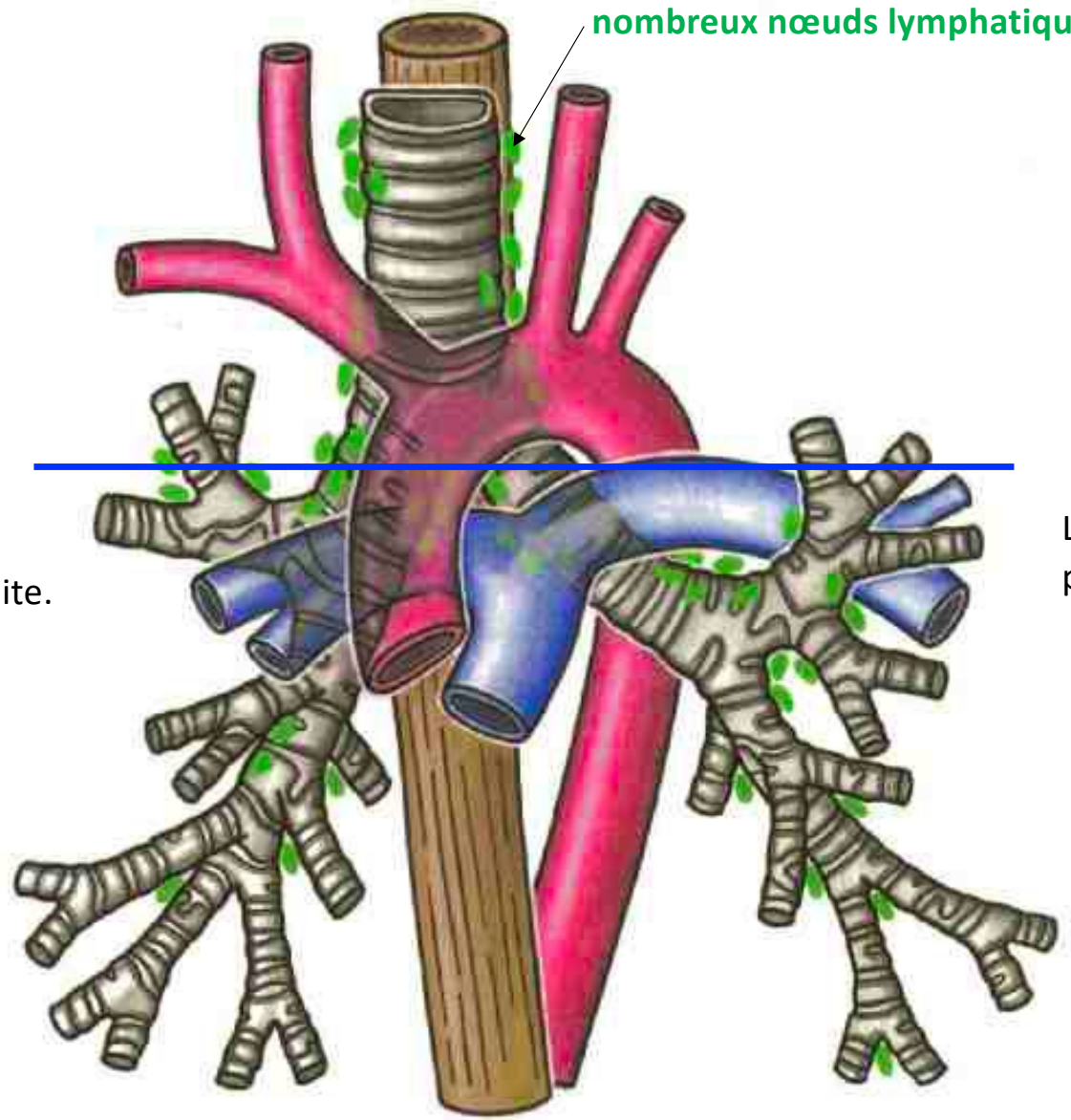
# Cœur

Toute la graisse
épicardique
a été enlevée.



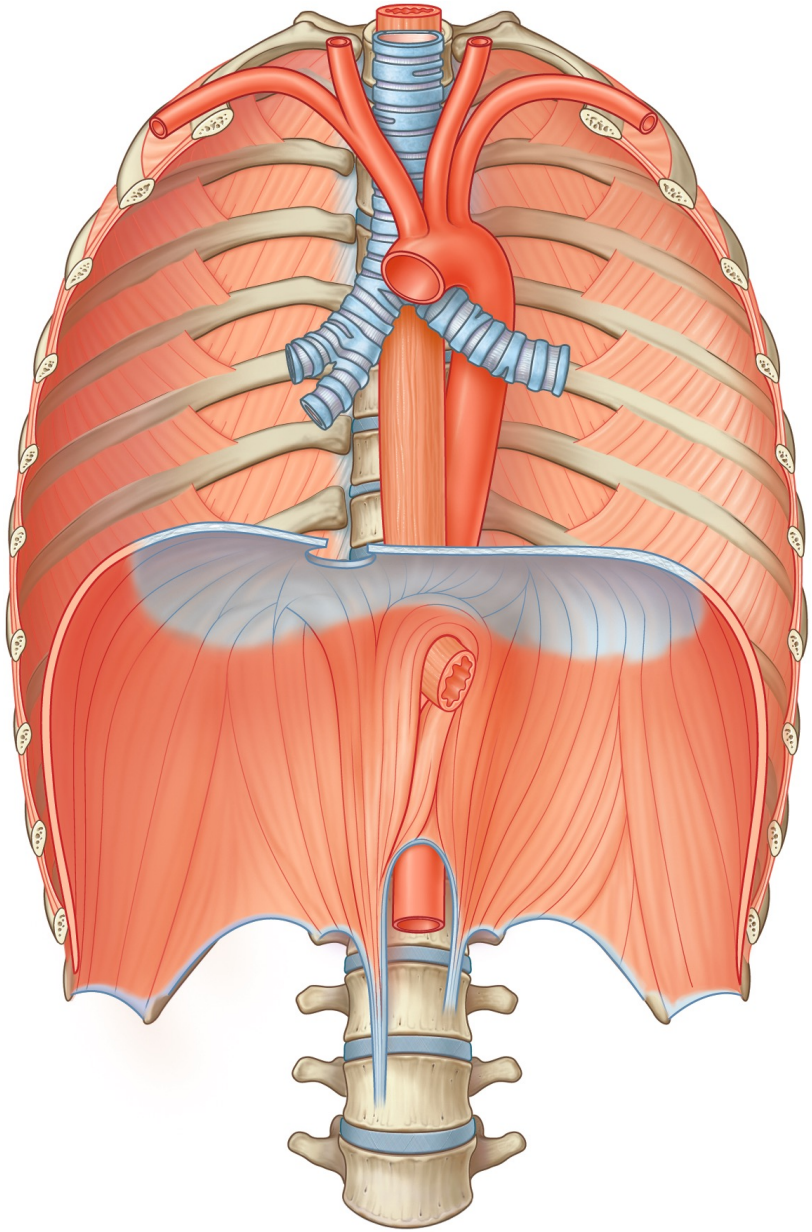
Tronc pulmonaire

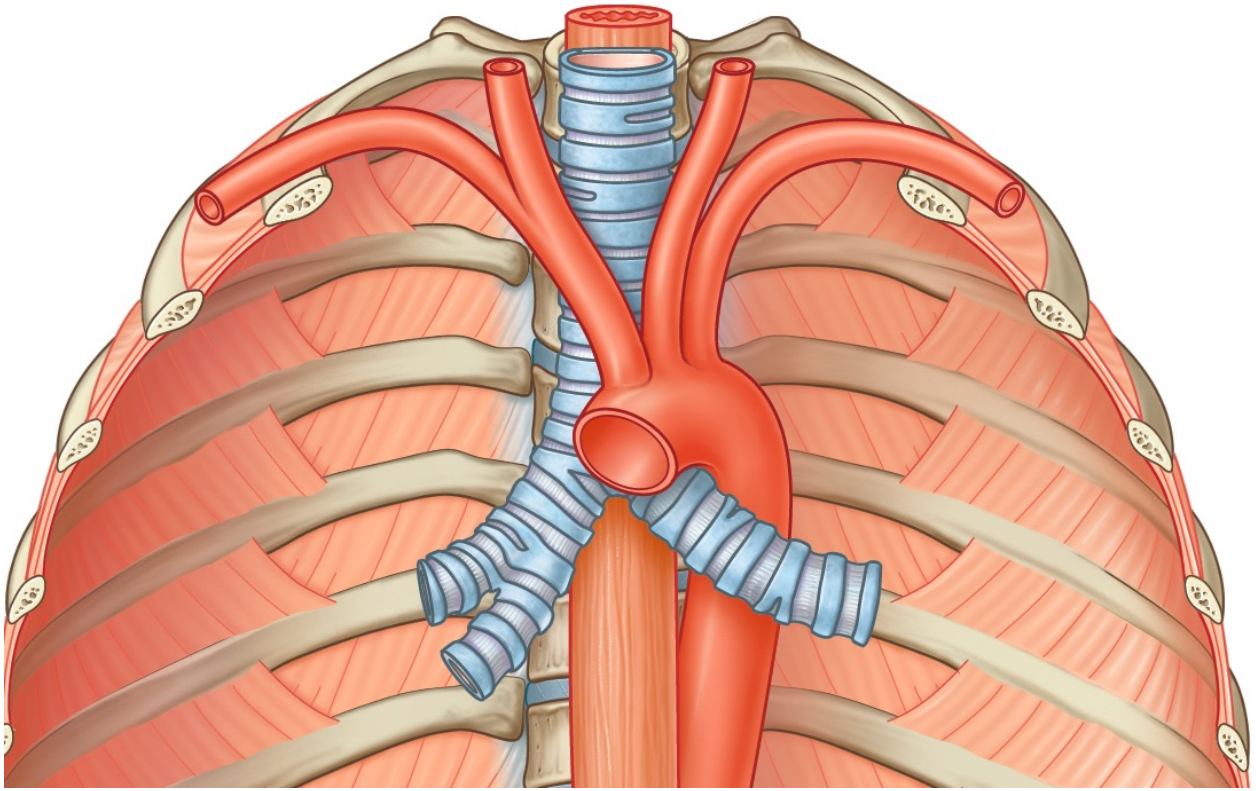



L'artère pulmonaire droite passe ***devant*** la bronche droite.

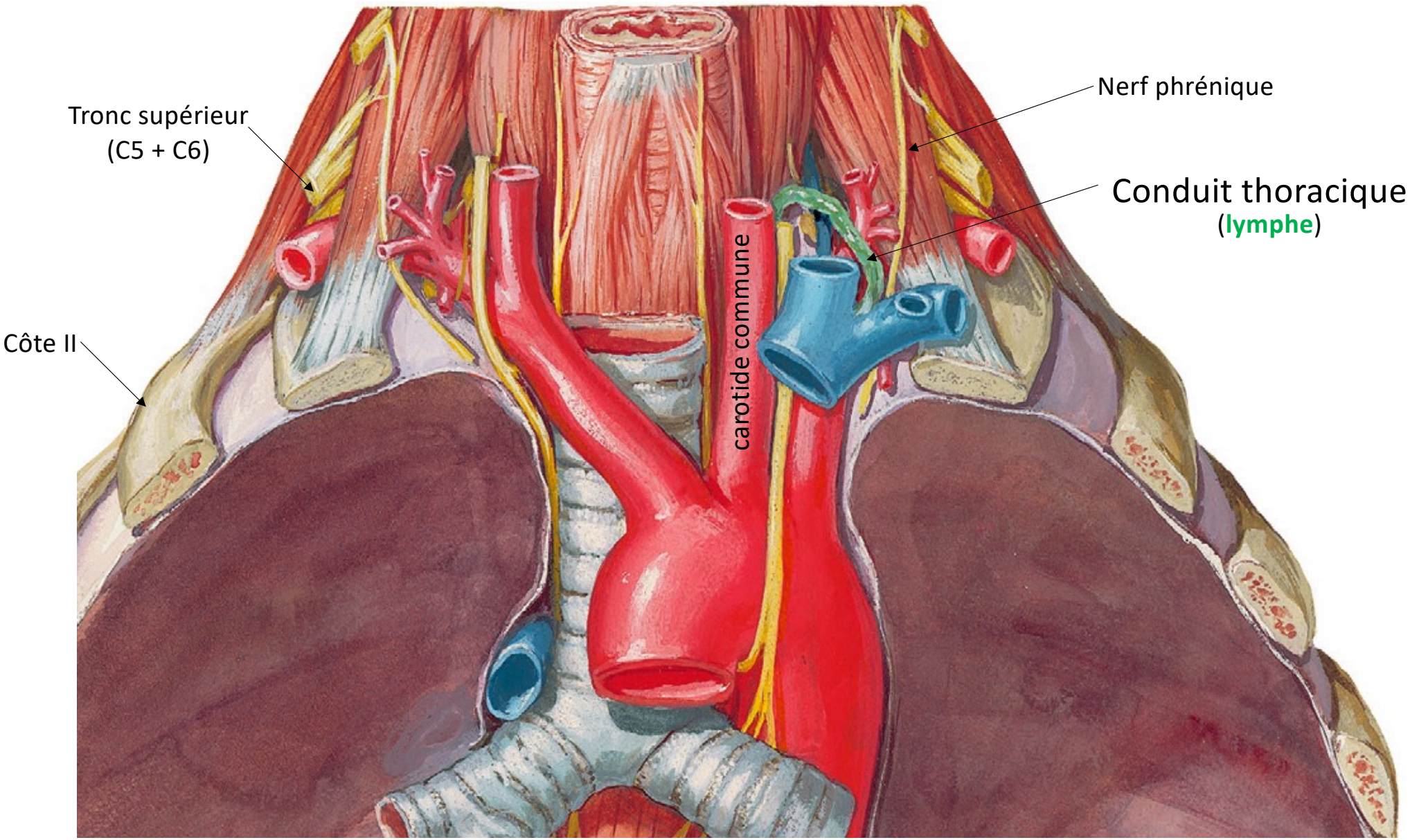
L'artère pulmonaire gauche passe ***sur*** la bronche gauche.

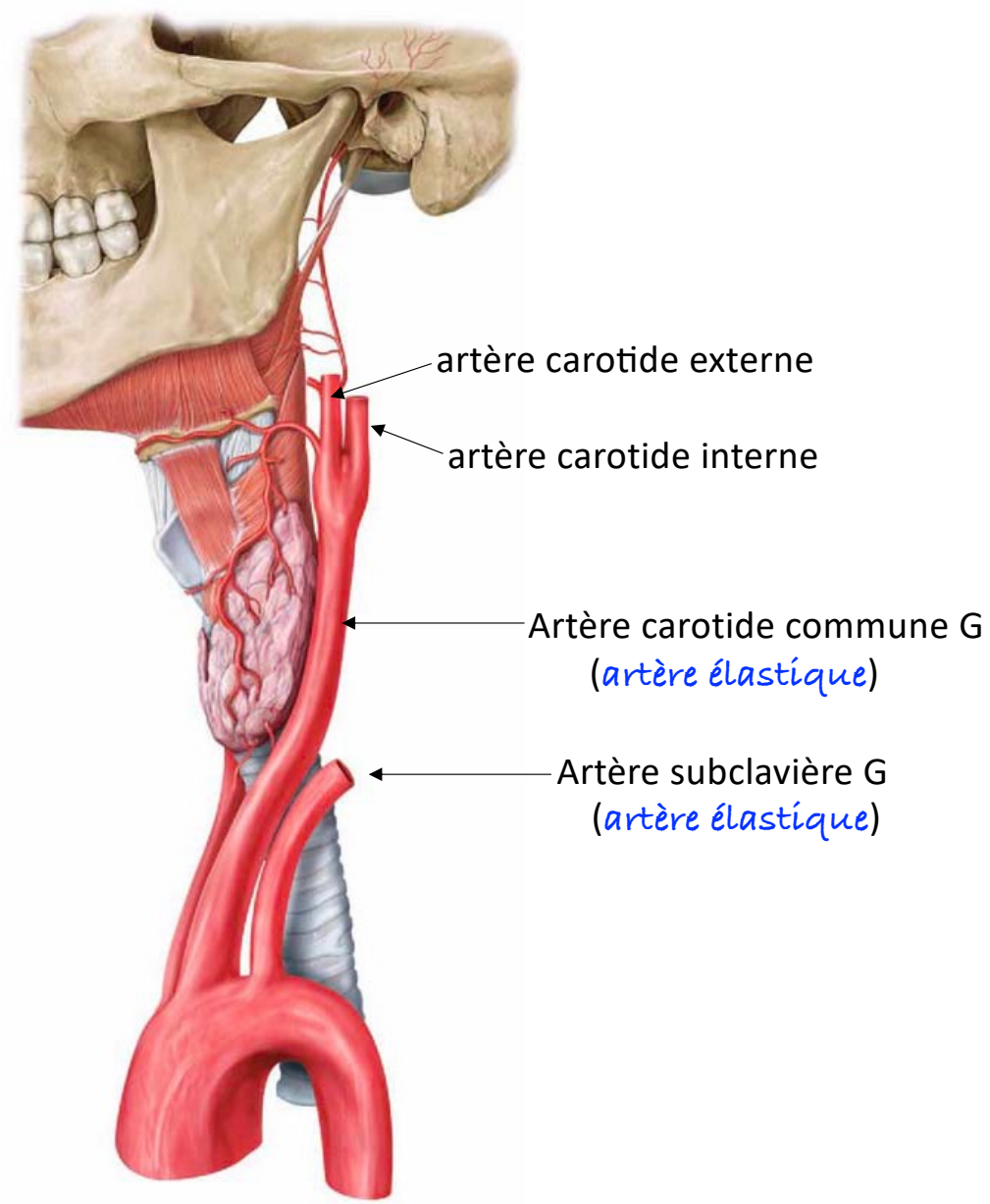
→ elle est plus haute que la droite

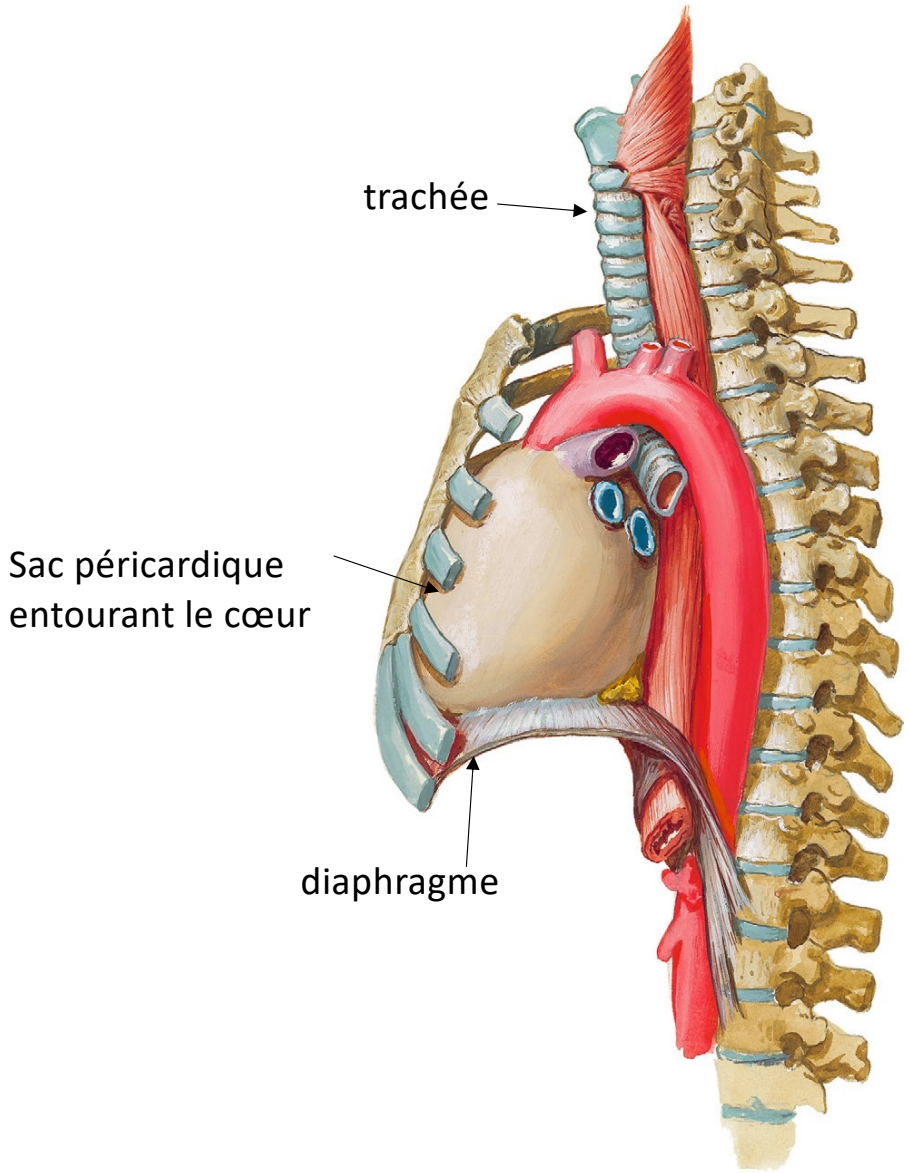




L’artère subclavière repose sur la côte I

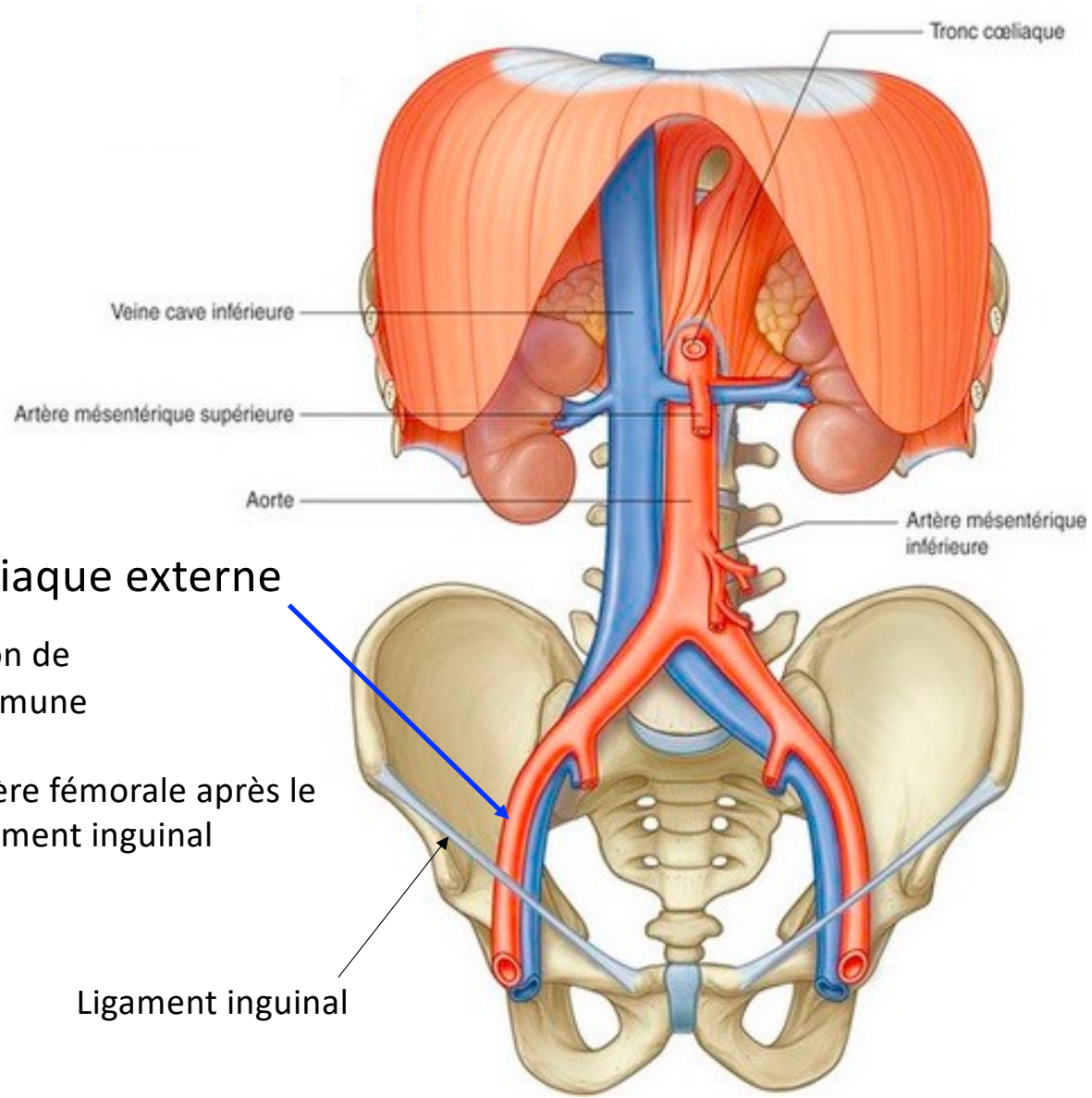

Tronc supérieur
(C5 + C6)
Nerf phrénique
Conduit thoracique
(lymphe)
Côte II
carotide commune


artère carotide externe
artère carotide interne
Artère carotide commune G
(artère élastique)
Artère subclavière G
(artère élastique)


trachée
Sac péricardique
entourant le cœur
diaphragme

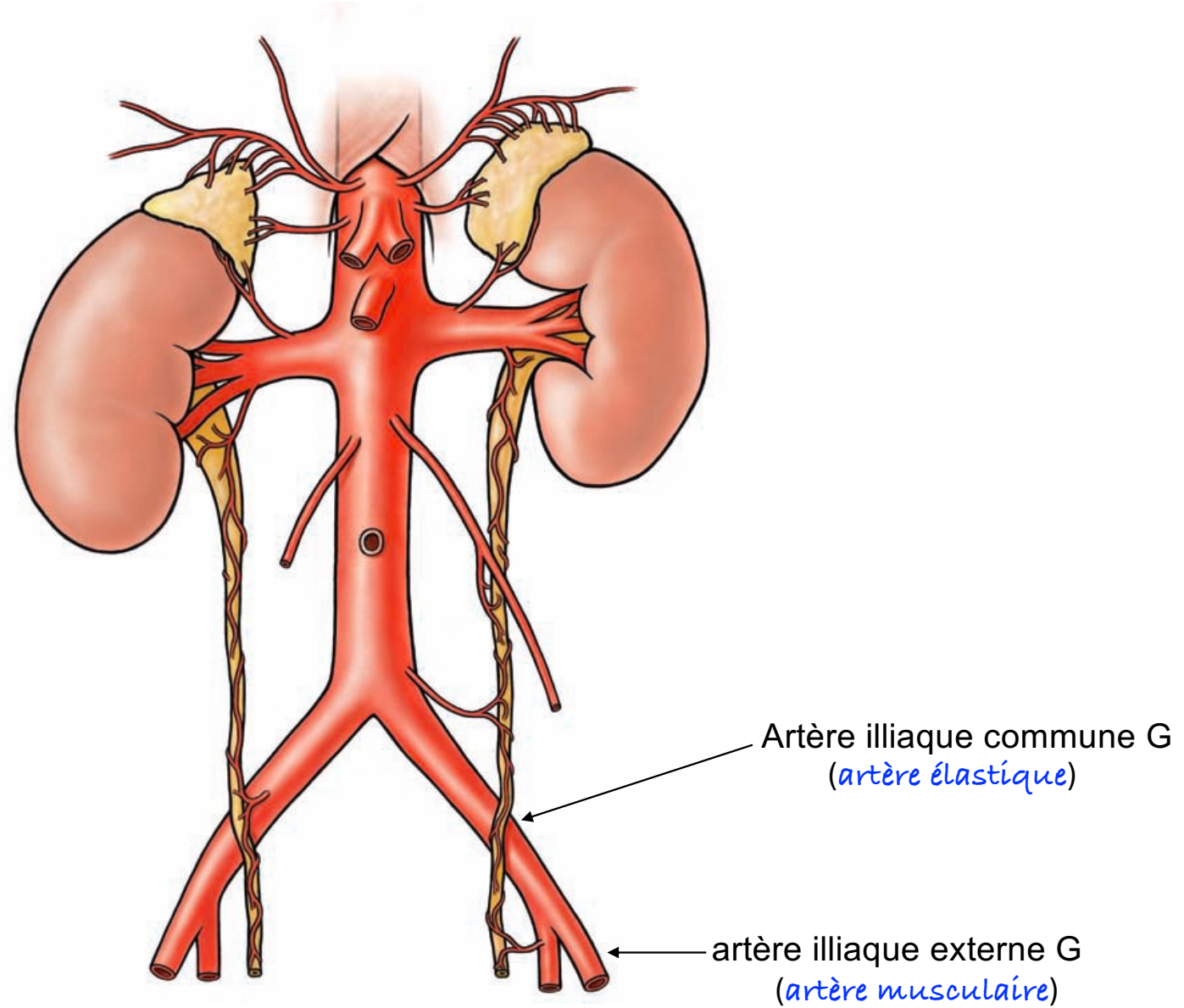
# Artère iliaque externe

- naît de la bifurcation de l'artère iliaque commune
- prend le nom d'artère fémorale après le passage sous le ligament inguinal



# L’aorte abdominale

Les artère rénales :
0.5 l/min chacune
(au repos)



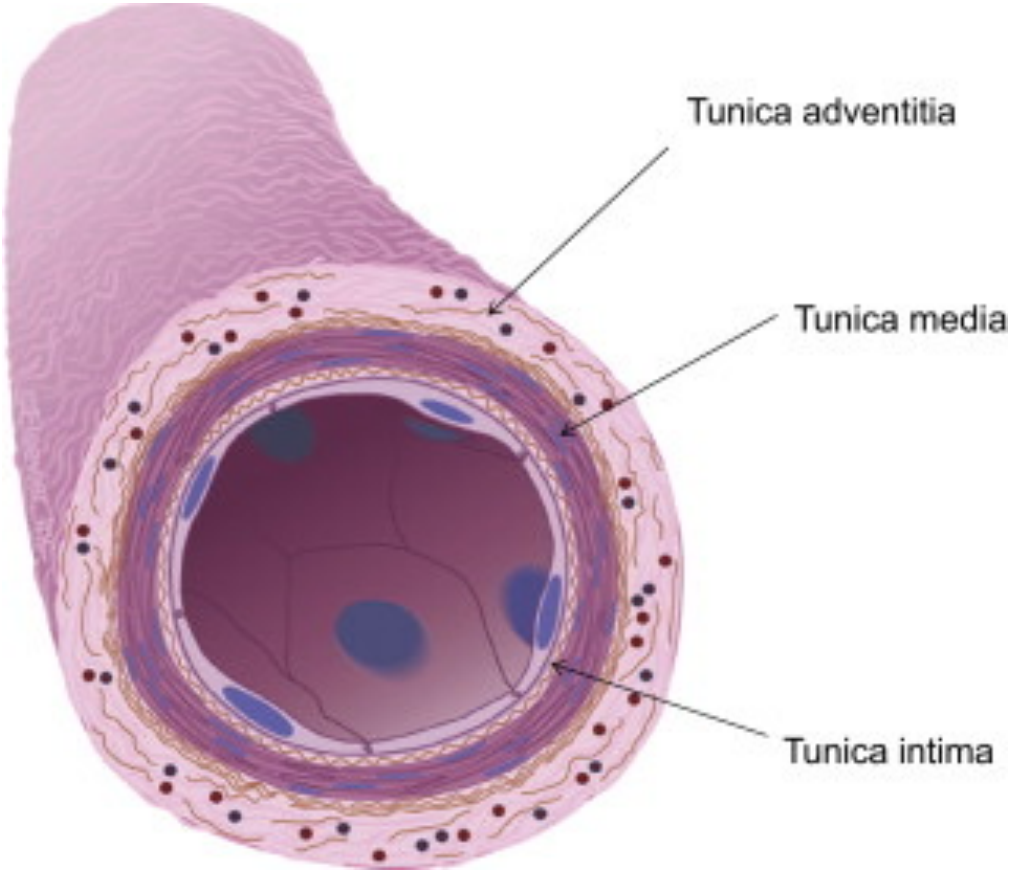



Figure 3. Cross-section of the artery.
Note the relatively thick tunica intima with smooth muscle fibers arranged in circular fashion.
Endothelium is one cell layer thick.

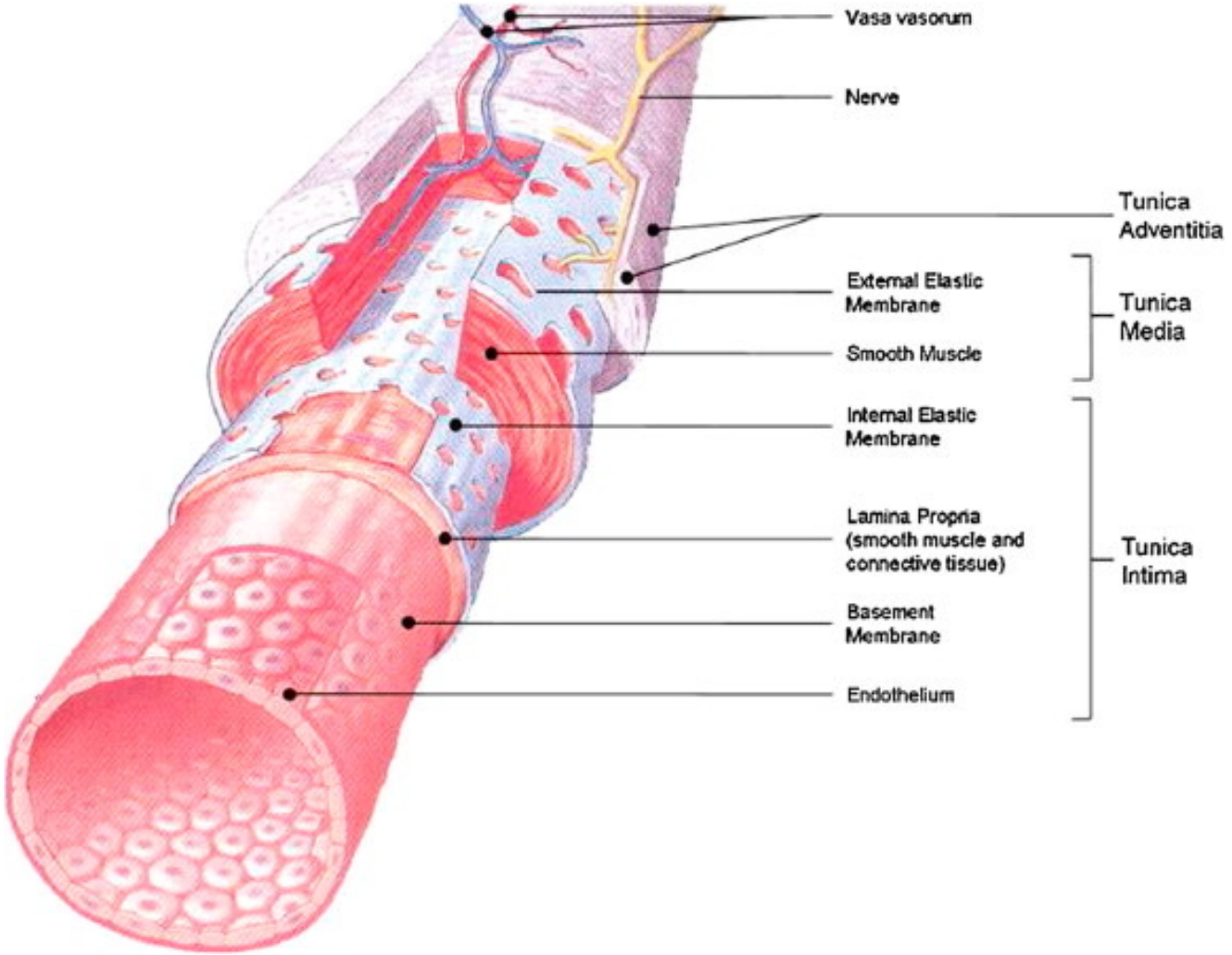
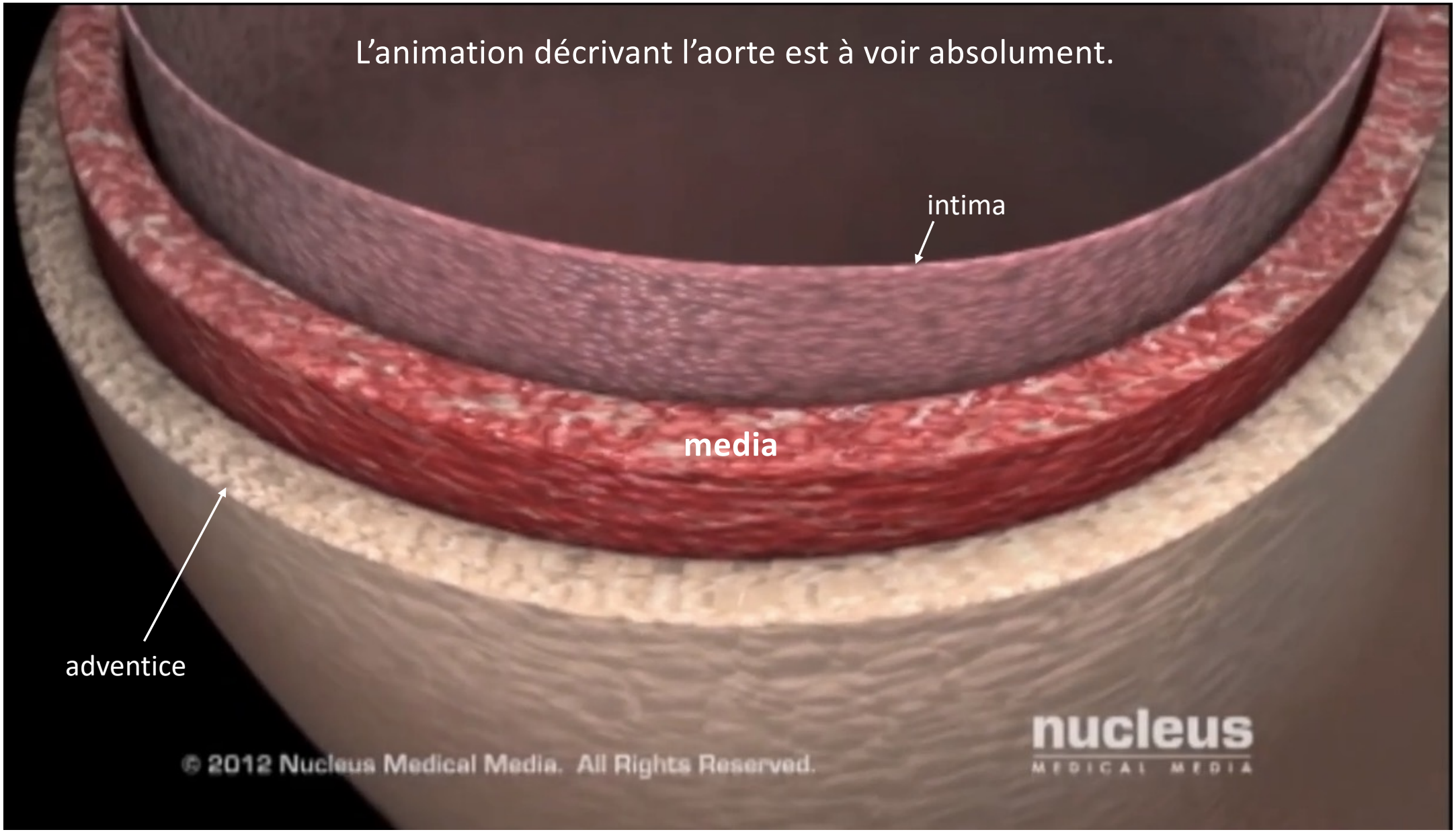
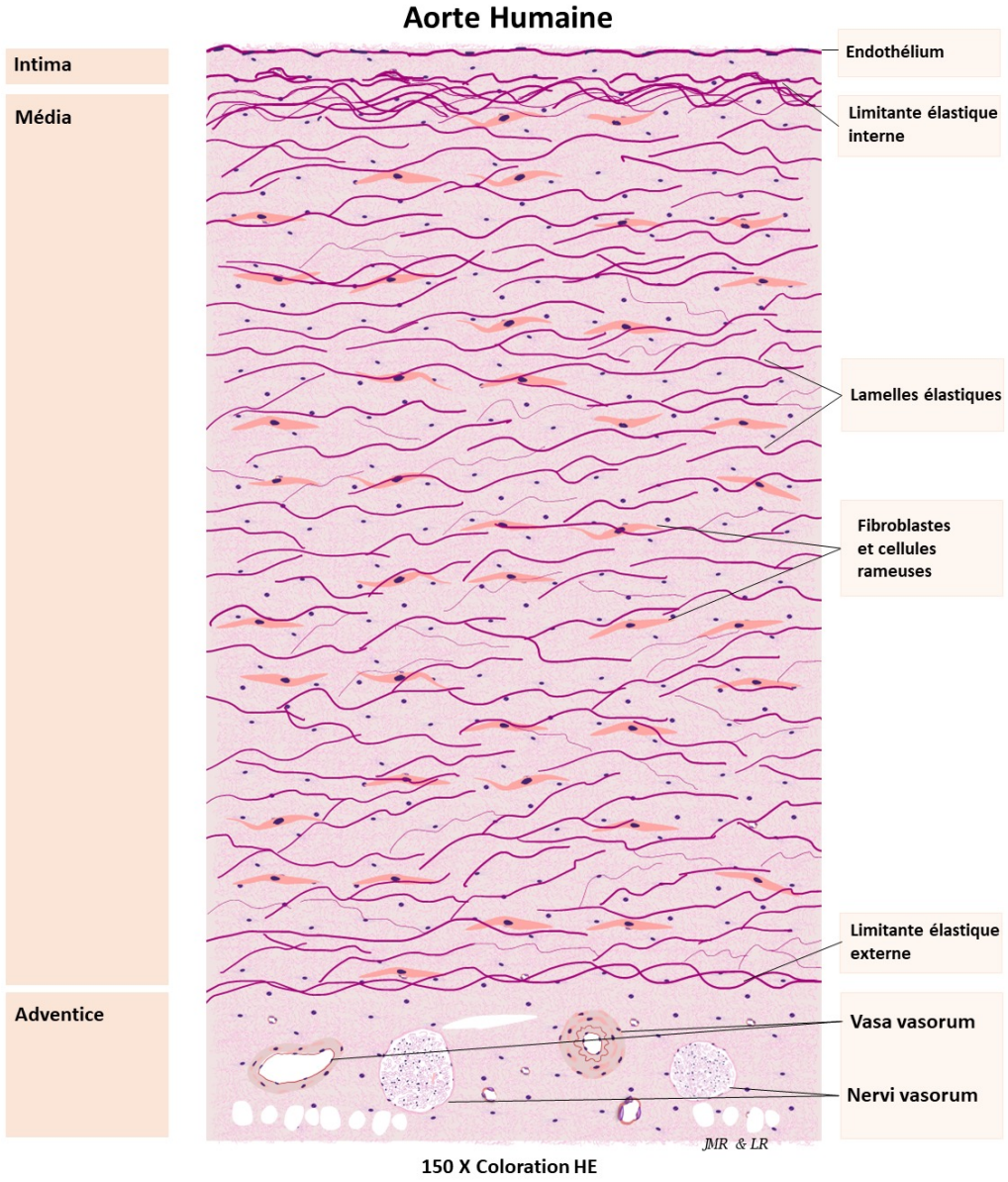



Figure 7.2.
The generalized structure of the layers of the blood vessel wall, observable in most vessels except for the capillaries and venules [31].

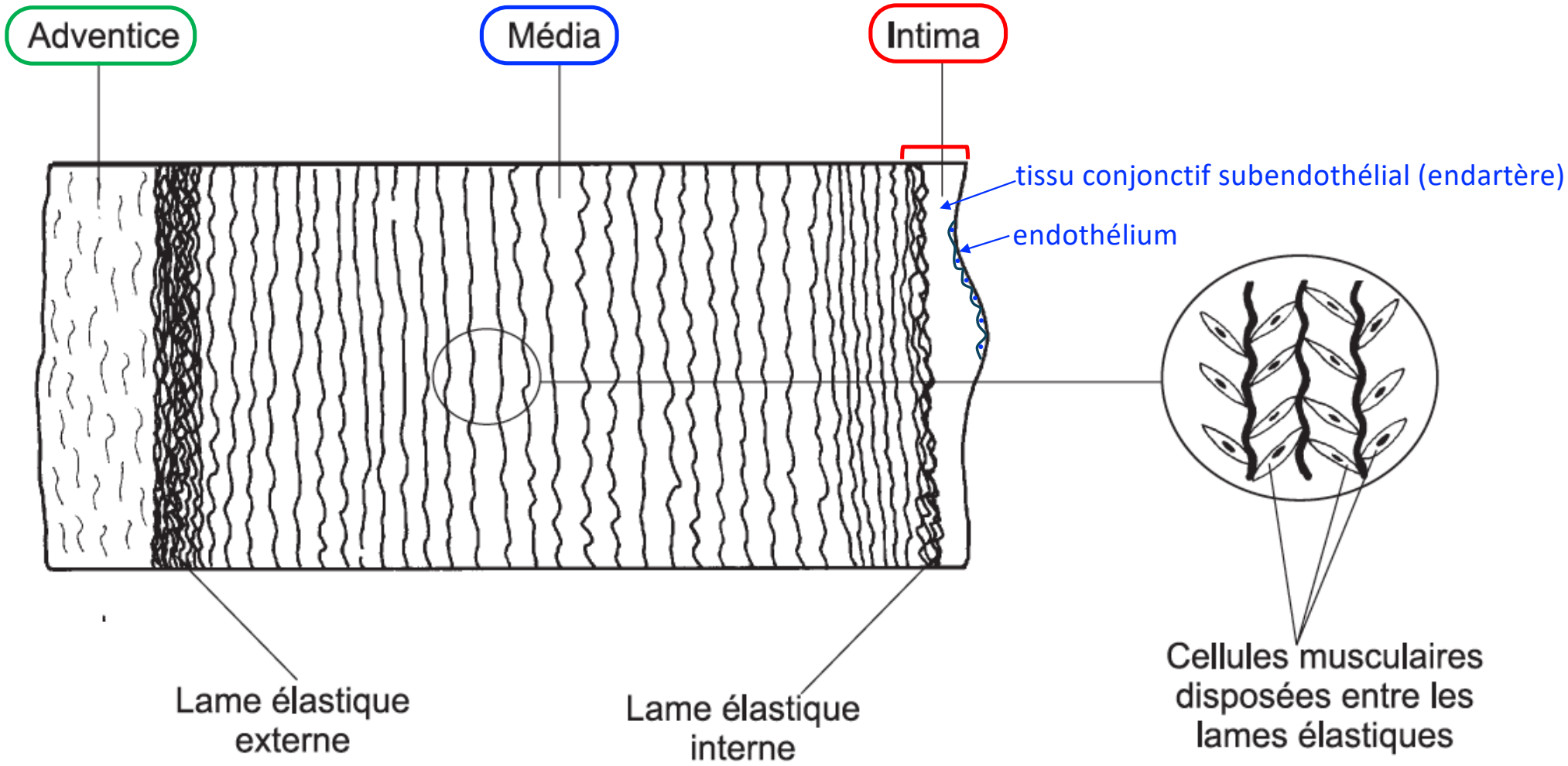

L’animation décrivant l’aorte est à voir absolument.
intima
media
adventice
© 2012 Nucleus Medical Media. All Rights Reserved.
nucleus
MEDICAL MEDIA

# Artère élastique

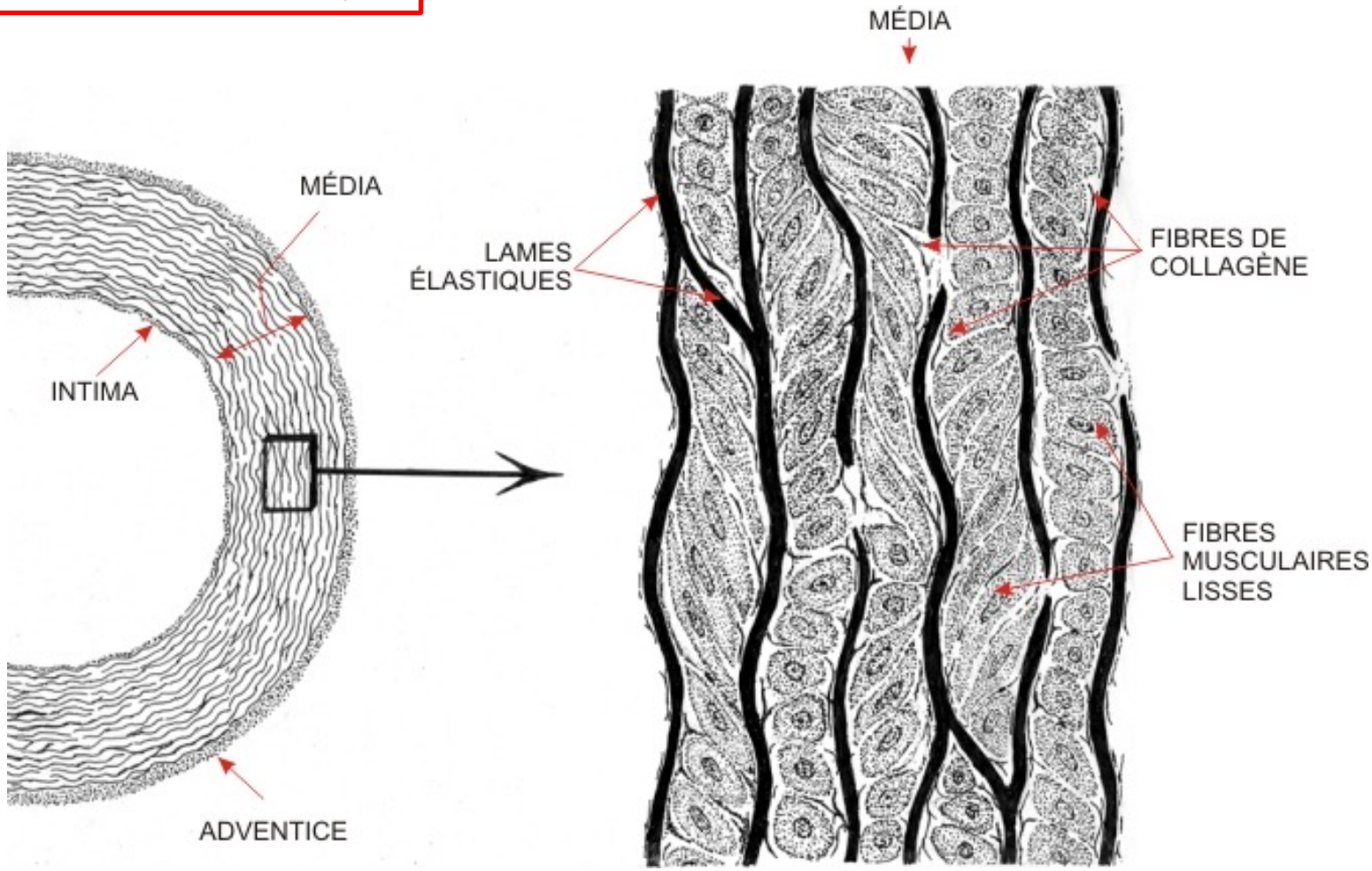



= vaisseaux pour les vaisseaux

**Figure 2: Représentation schématique d'une artère élastique (coupe longitudinale)**



# Aorte : artère élastique




Élastine → fibres élastiques → lames élastiques

**Figure 2: Représentation schématique d'une artère élastique (coupe longitudinale)**

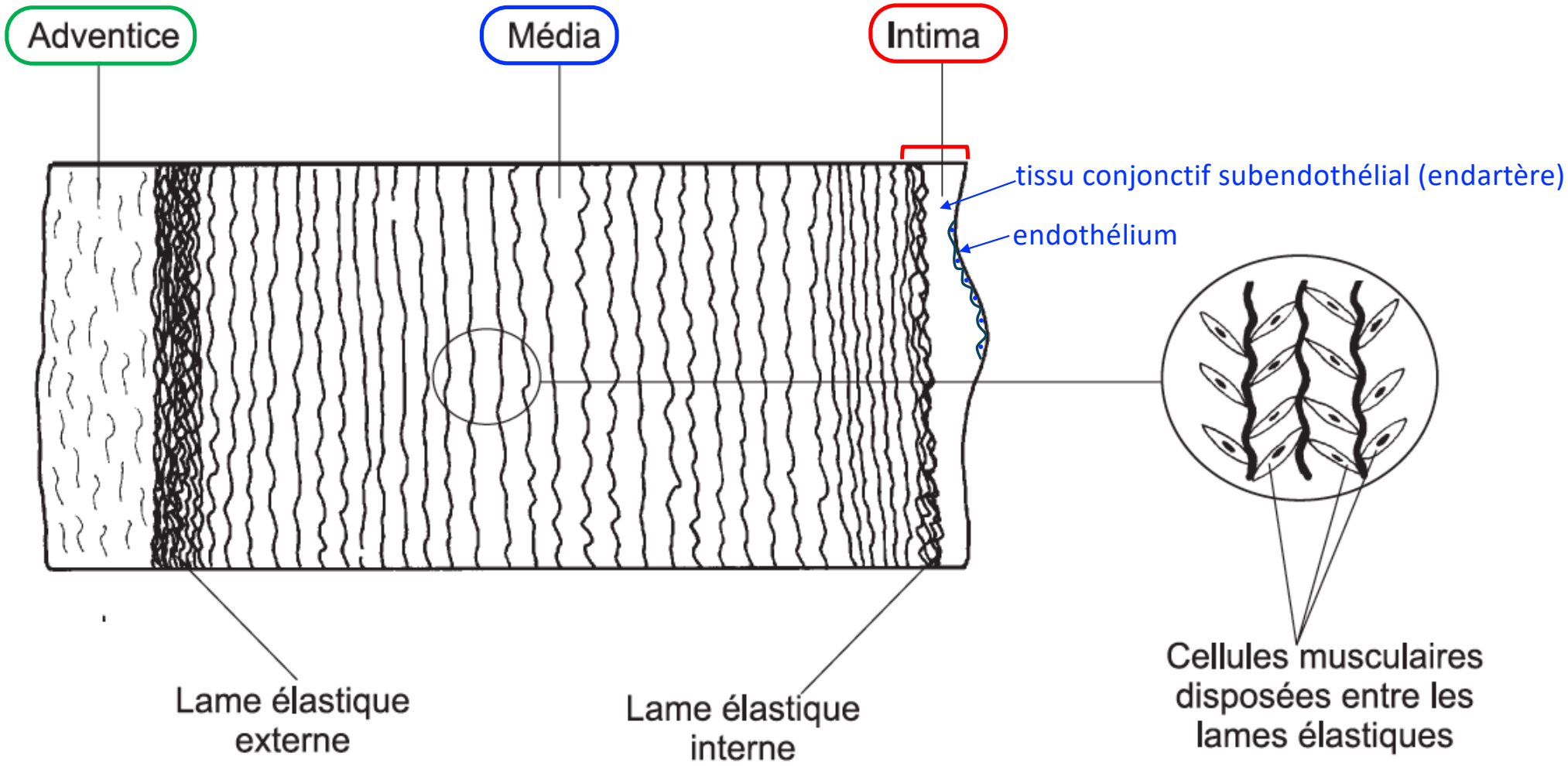


**Figure 2: Représentation schématique d'une artère musculaire (coupe longitudinale)**

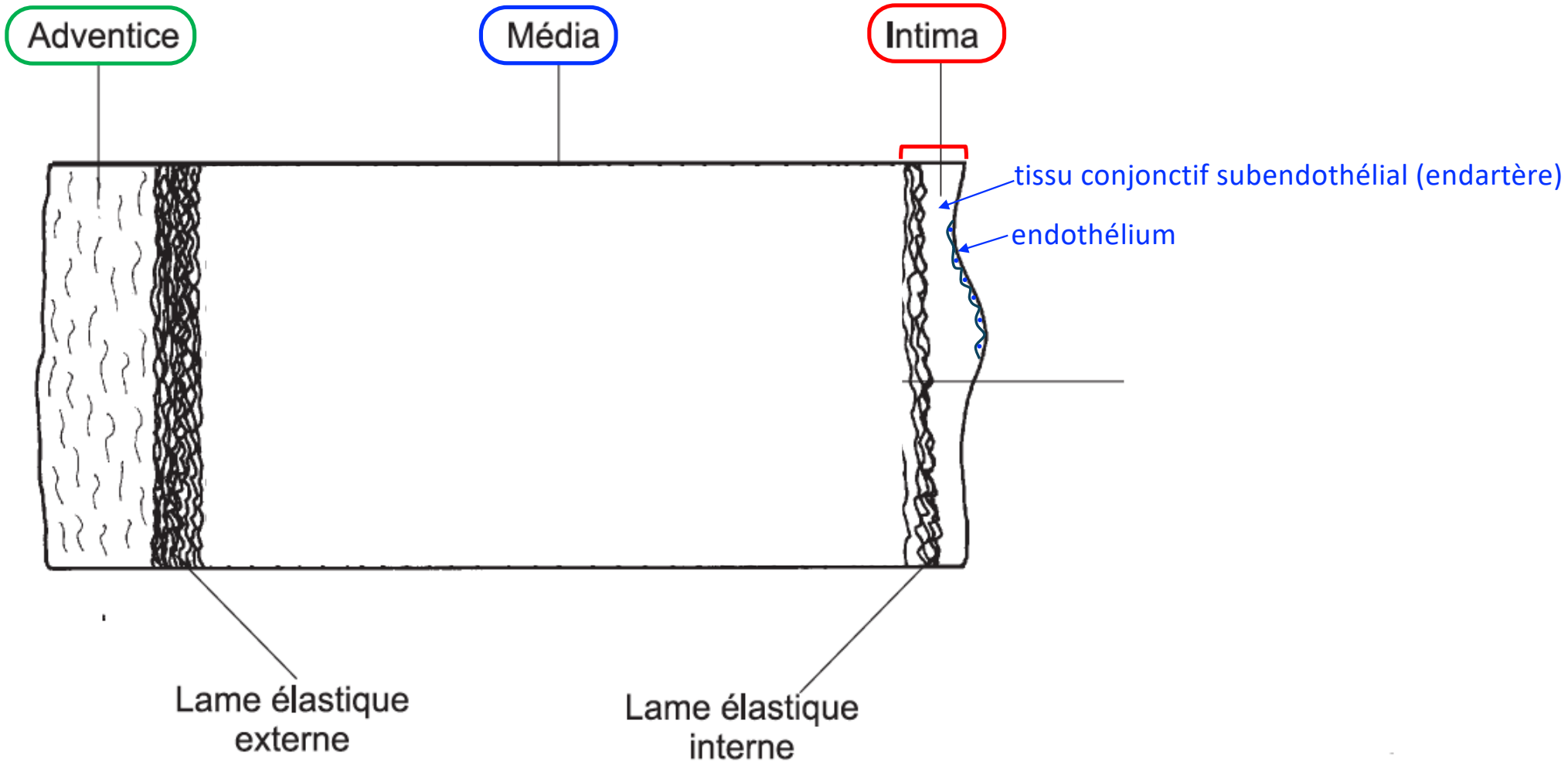
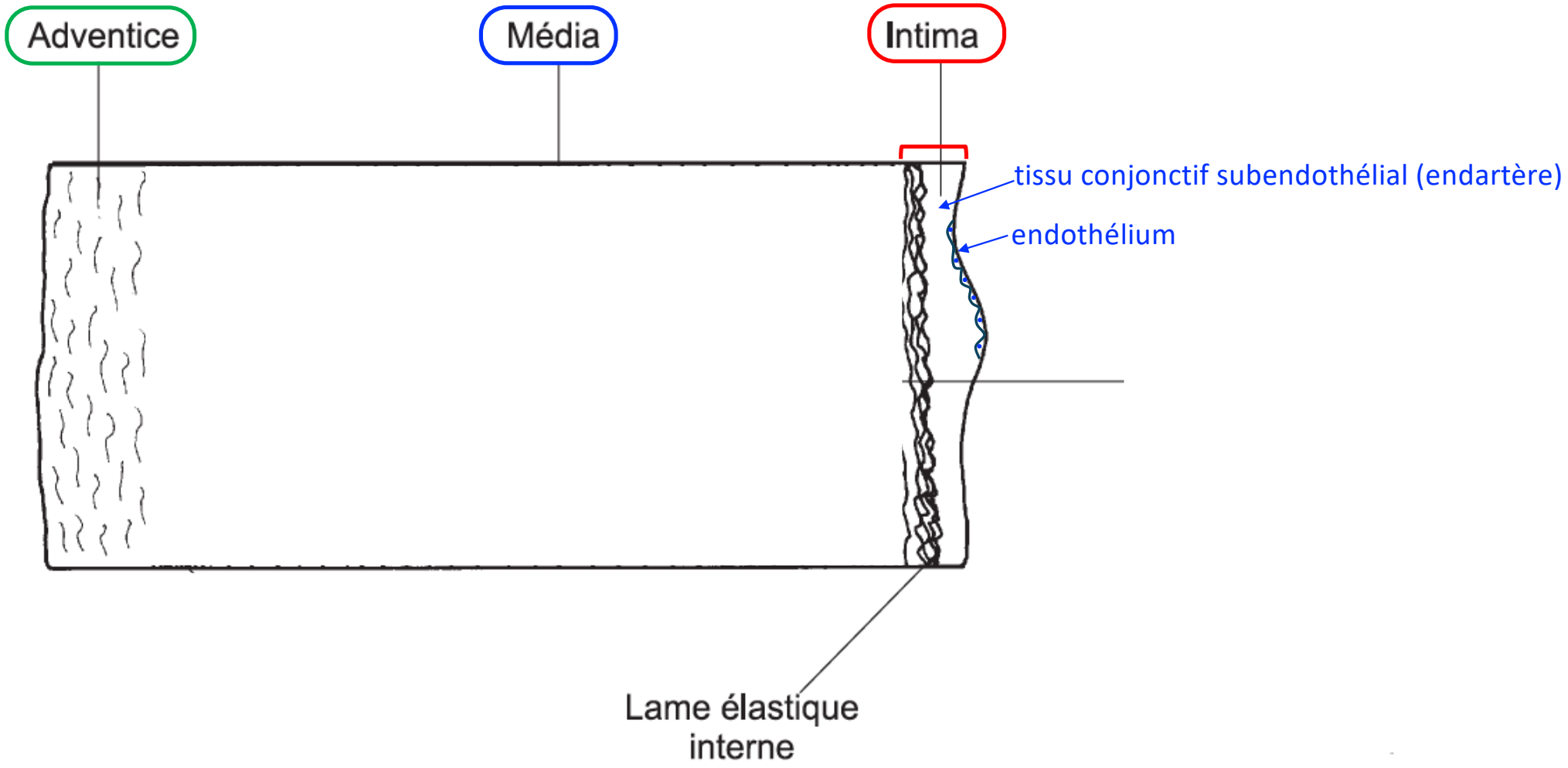
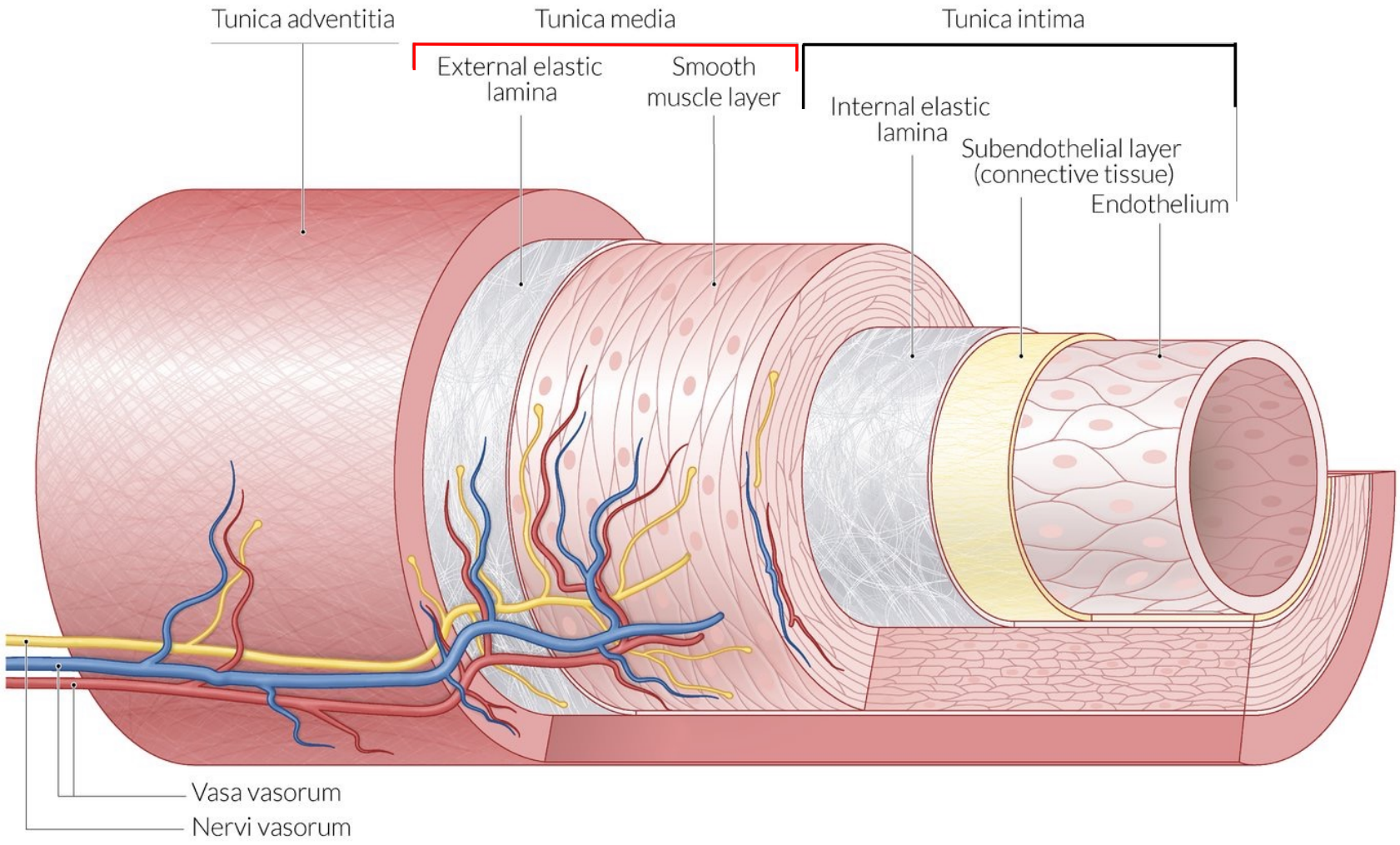


**Figure 2: Représentation schématique d'une artère de petite taille (coupe longitudinale)**

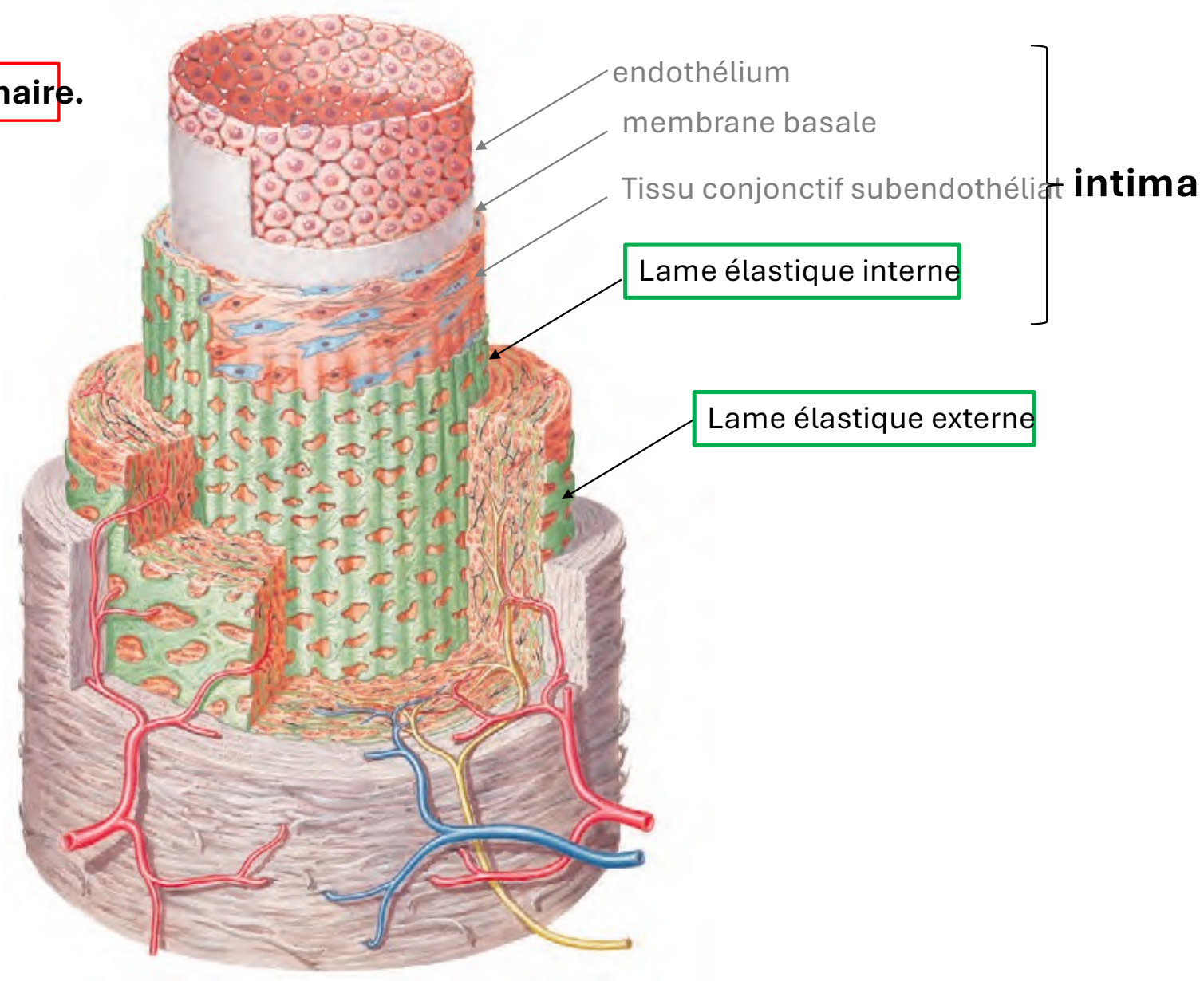


# Structure des artères : schéma général

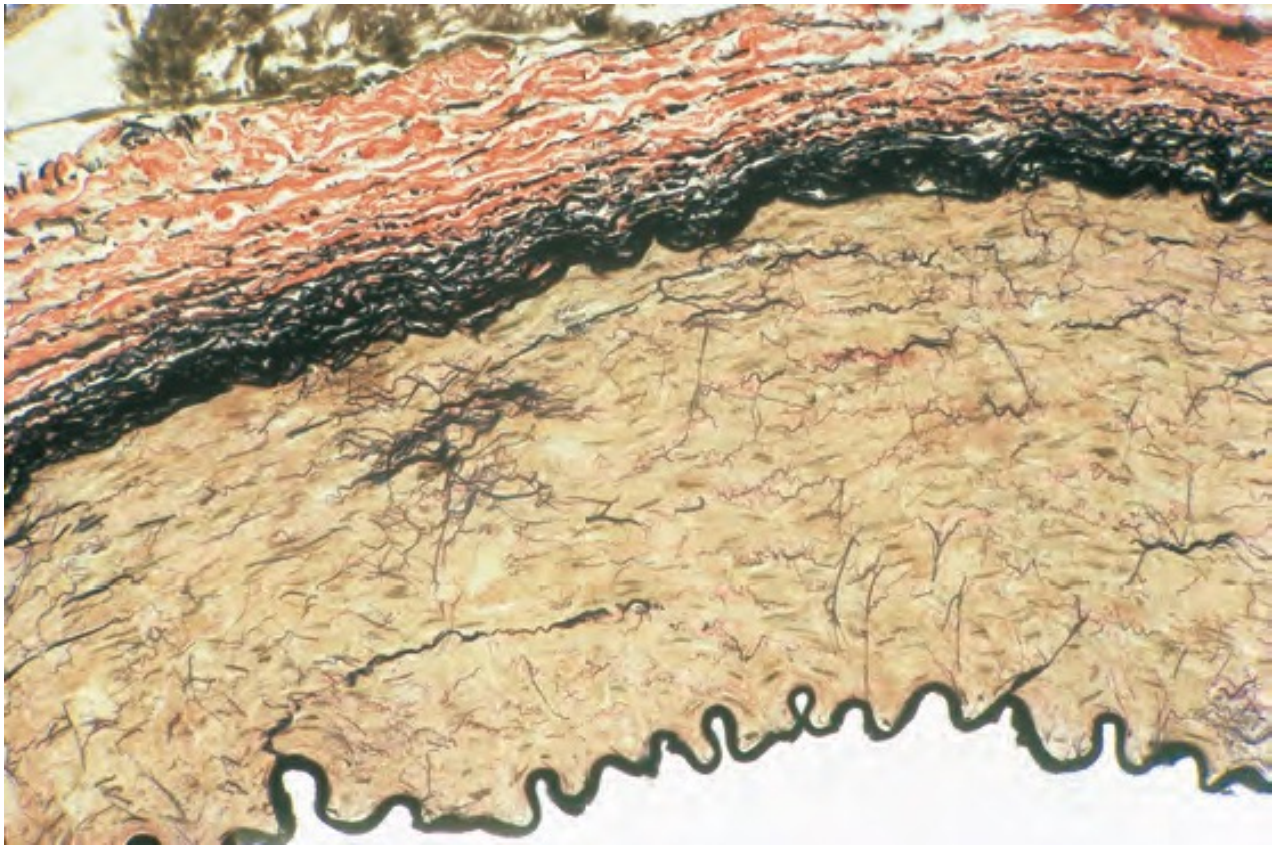


**Structure d’une artère coronaire.**

Artère musculaire



# Artère musculaire



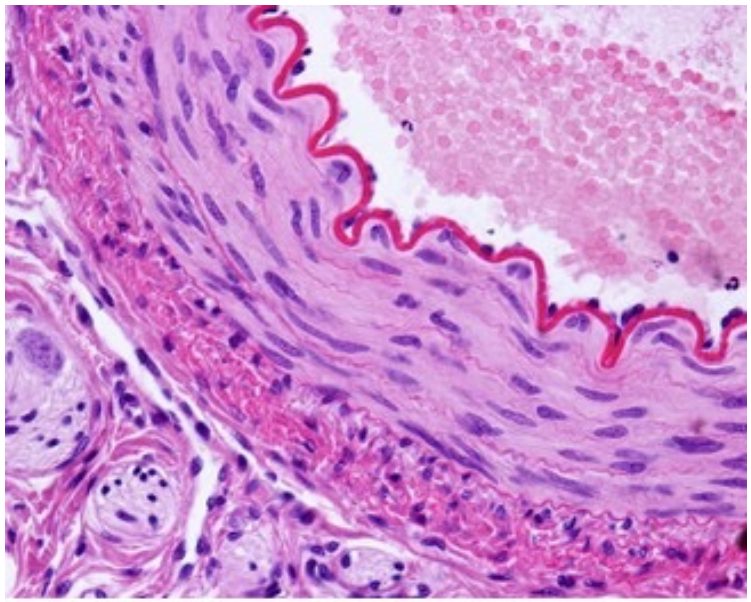
Élastine colorée
en noir.

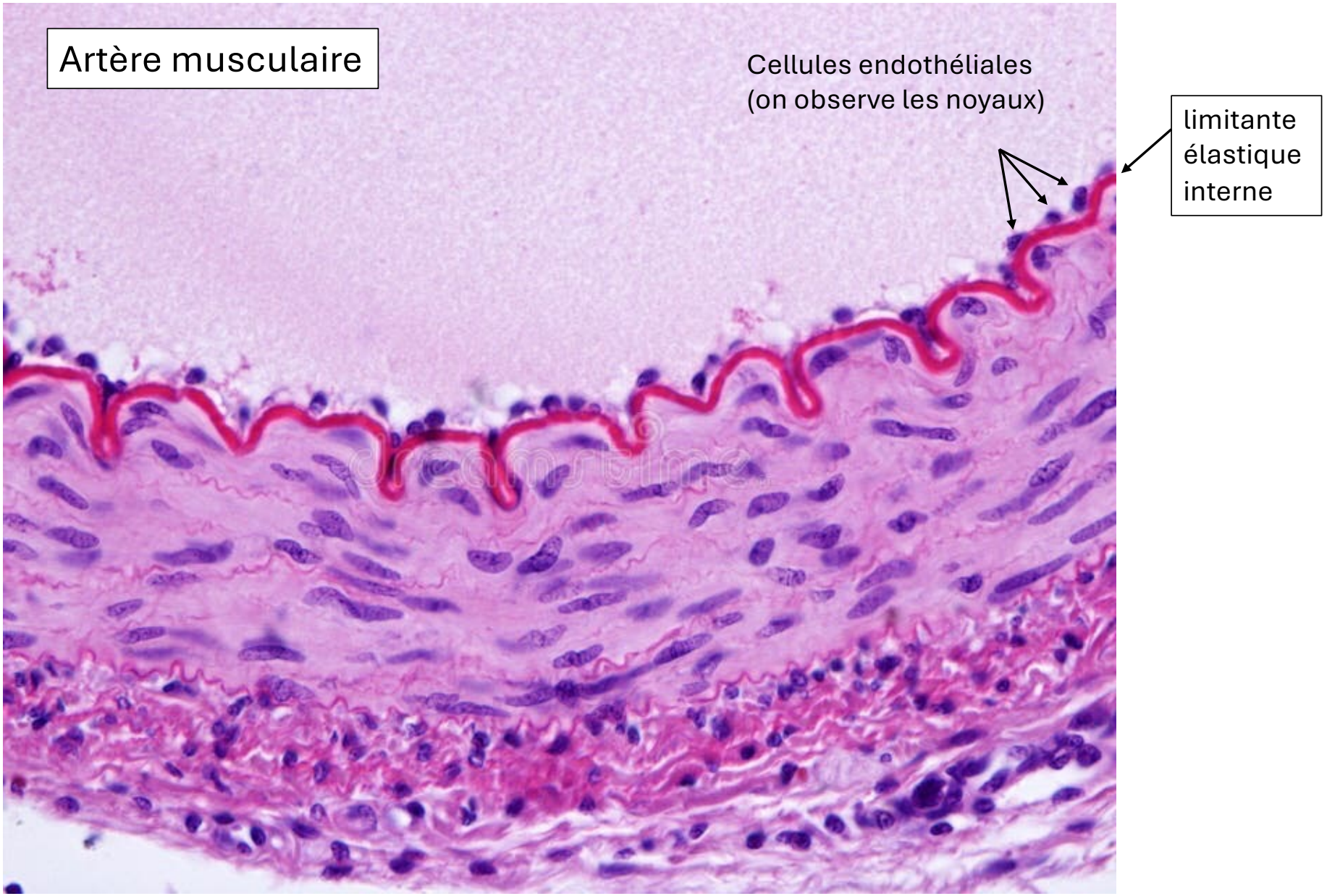
Lame élastique externe

Muscle lisse

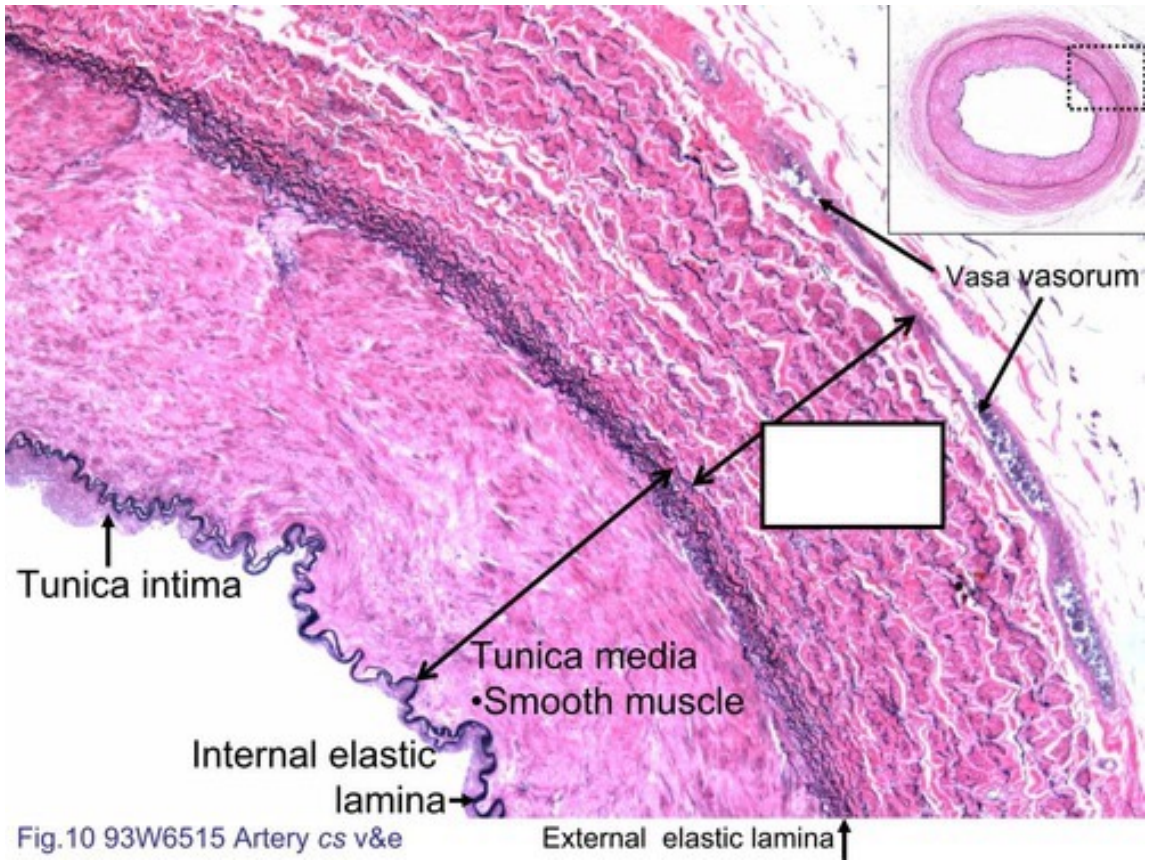
Lame élastique interne

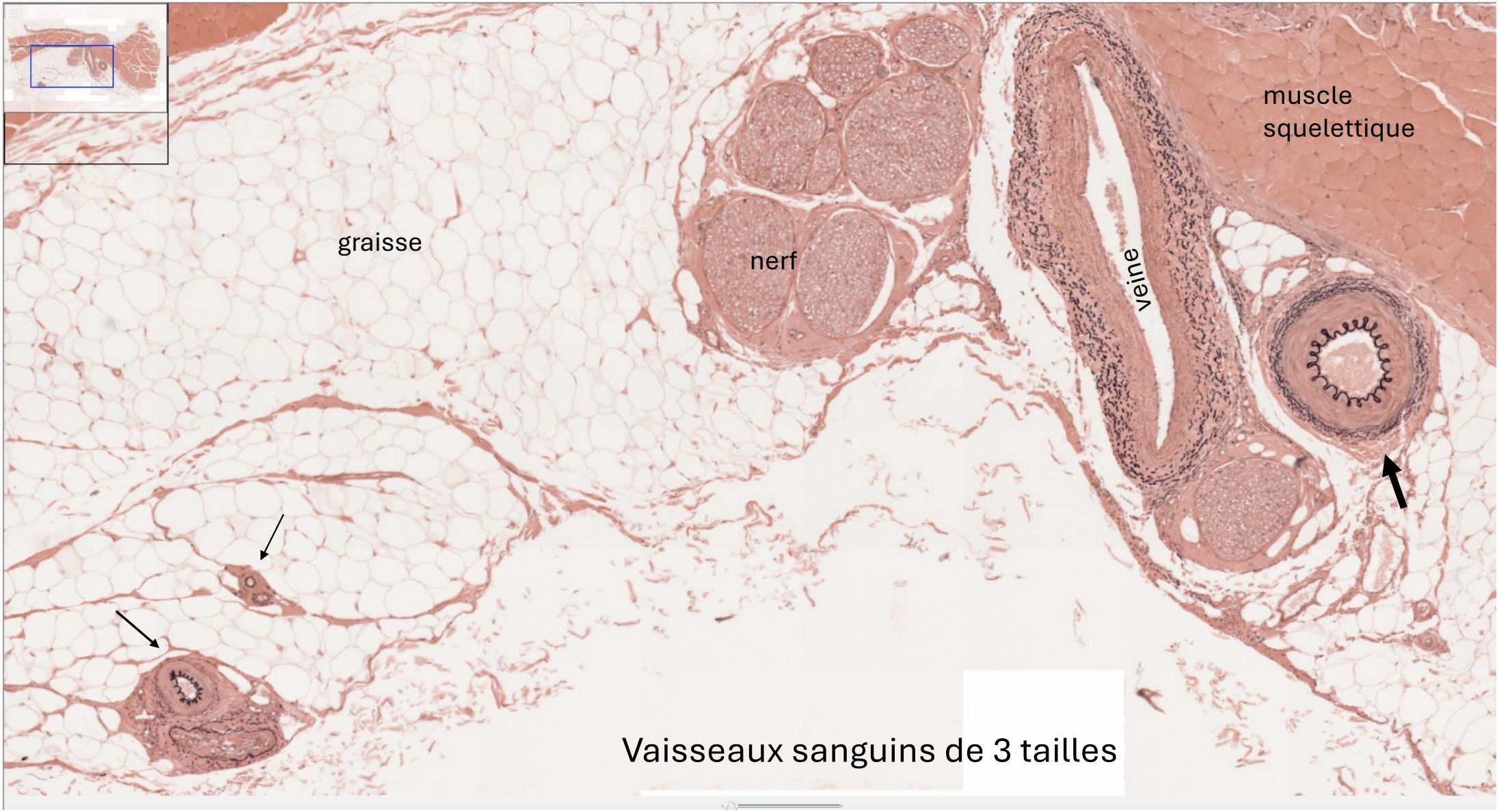
Part of a cross-section of a muscular artery stained with the Verhoeff-van Gieson stain.
Both the internal and external elastic laminae are very prominent, and very fine elastic fibers (black)
can be seen in the yellow muscular tunica media. The collagen fibers of the tunica adventitia are stained red.




Artère musculaire
Cellules endothéliales
(on observe les noyaux)
limitante
élastique
interne

Artère musculaire




graisse
nerf
veine
muscle
squelettique
Vaisseaux sanguins de 3 tailles