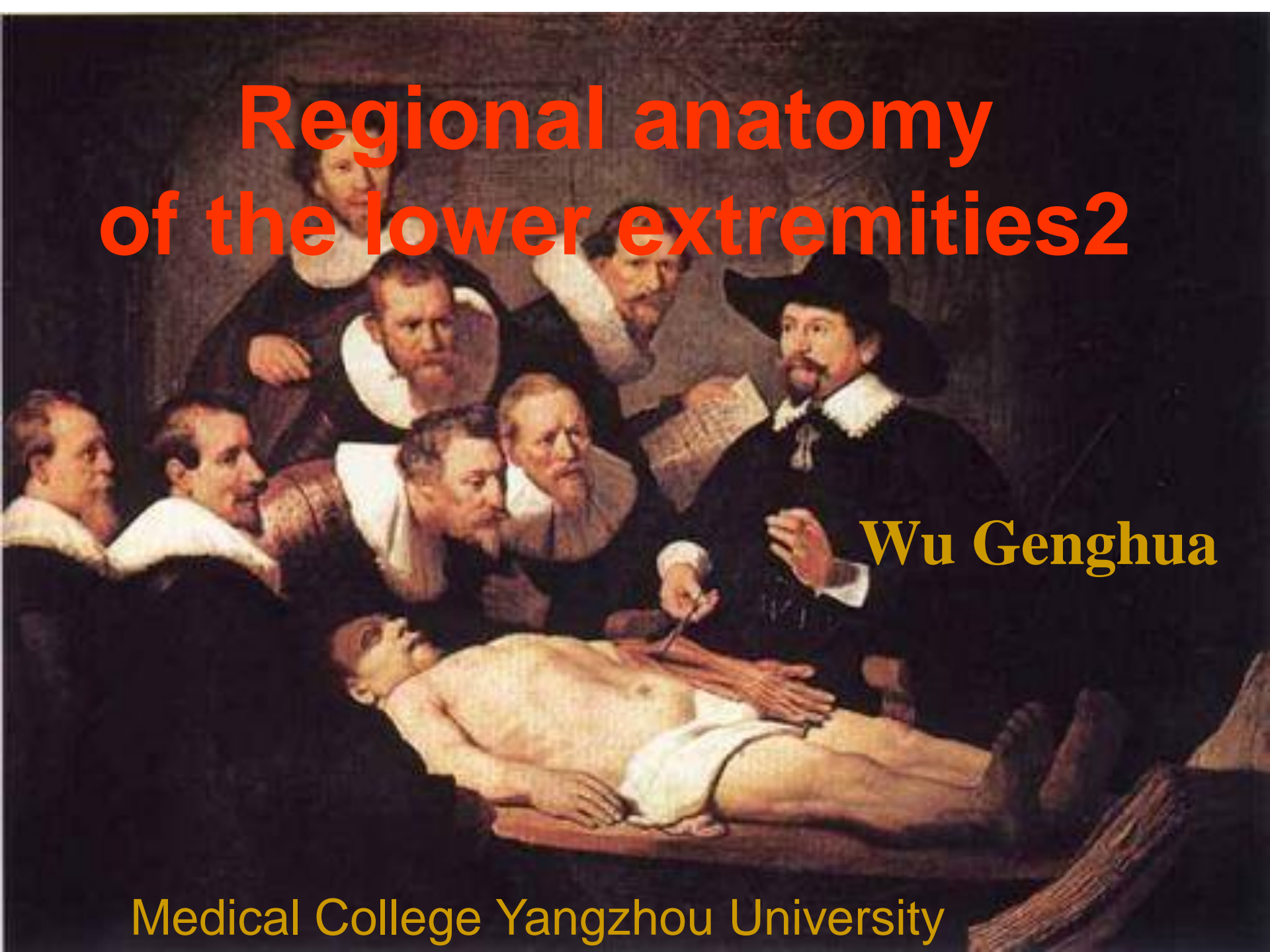


Regional anatomy of the lower extremities2



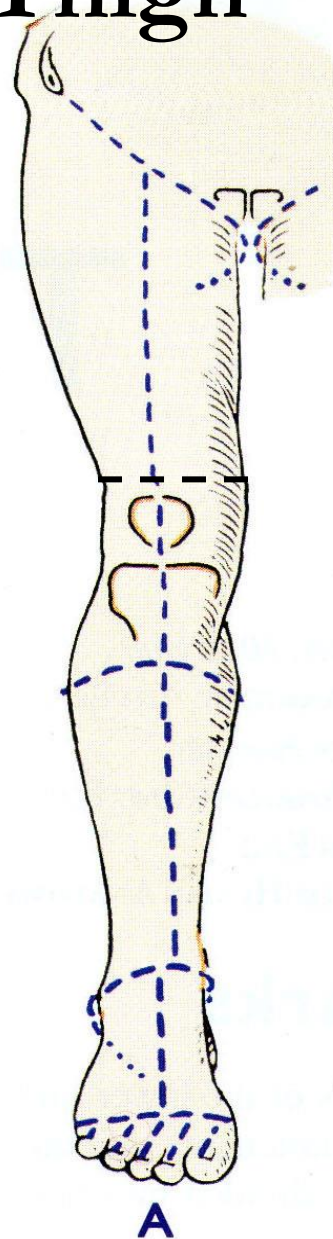
Wu Genghua

Medical College Yangzhou University

Anterior and Medial Region of the Thigh

■ Incisions:

- * ***an oblique incision*** : goes from the anterior and superior iliac spine to the pubis tubercle.
- * **two transverse incisions** :
 - (1) 2cm above of the base of the patella
 - (2) goes through the tibial tuberosity
- * **a vertical incision** : join the midpoint of the three previous incisions.



Great Saphenous V

superficial epigastric v.
superficial iliac circumflex v.
external pudendal v.
superficial medial femoral v.
superficial lateral femoral v.

• Cutaneous nerves:

- anterior and medial cutaneous branches of femoral n.
- lateral femoral cutaneous n.

saphenous N.



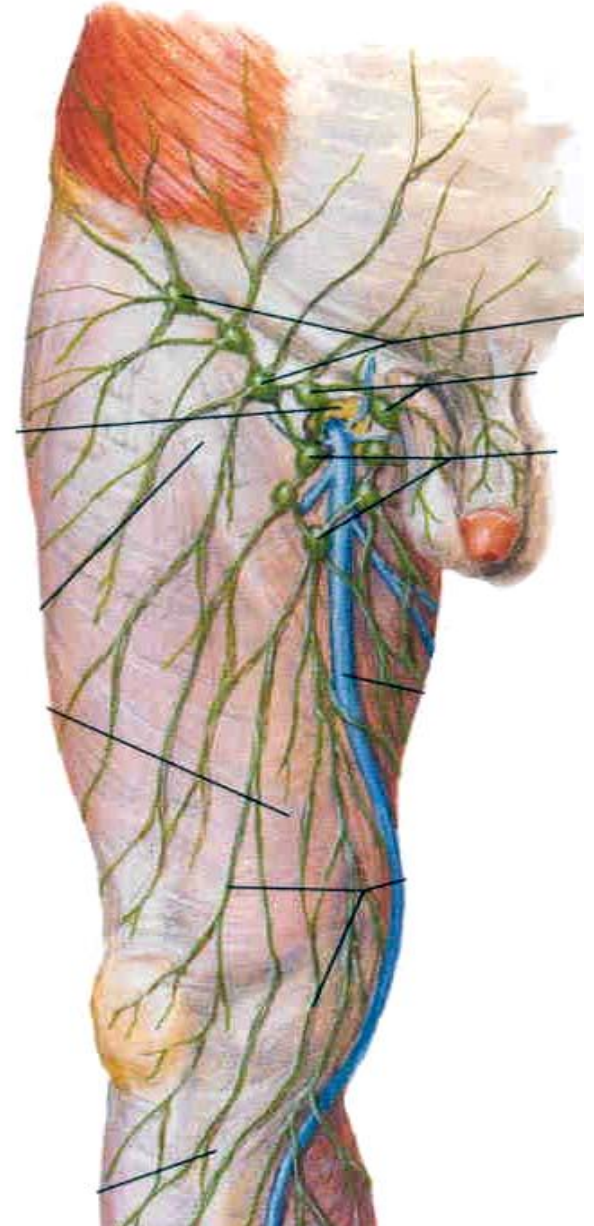
Superficial Structures

★ Superficial fascia

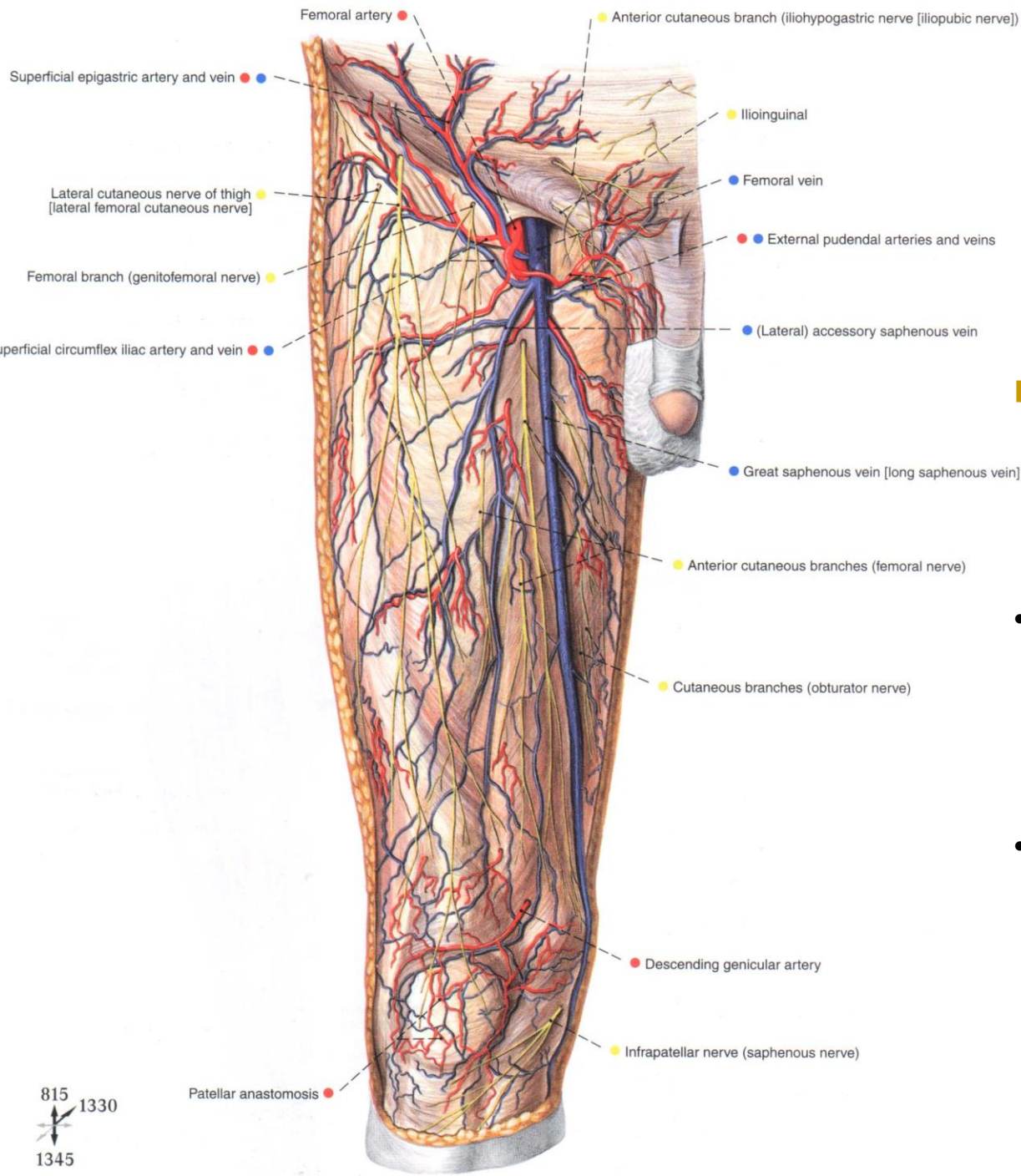
• Superficial inguinal lymph nodes:

– superior group

– inferior group



Superficial Arteries

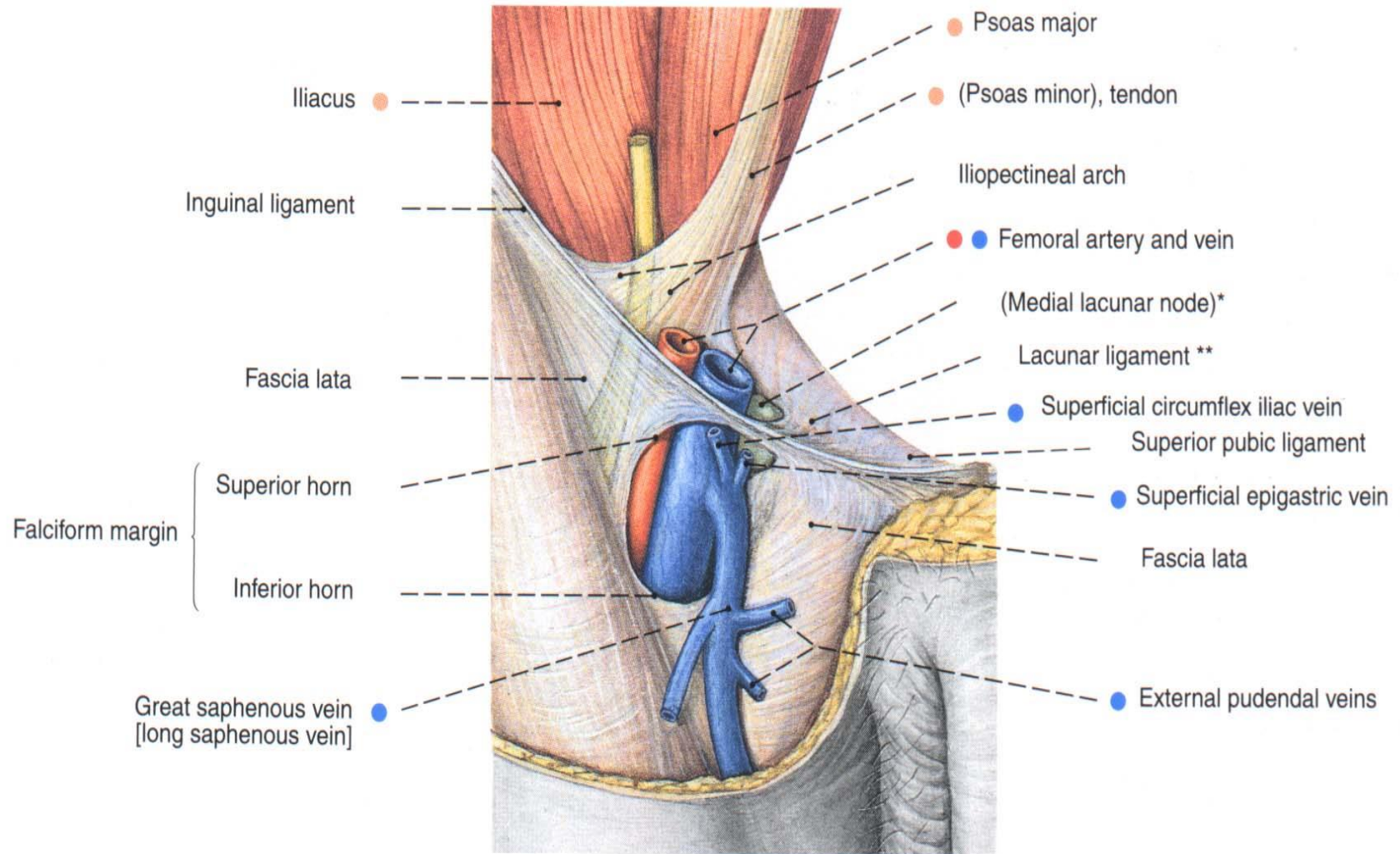


■ **superficial iliac circumflex artery**

• **superficial epigastric artery**

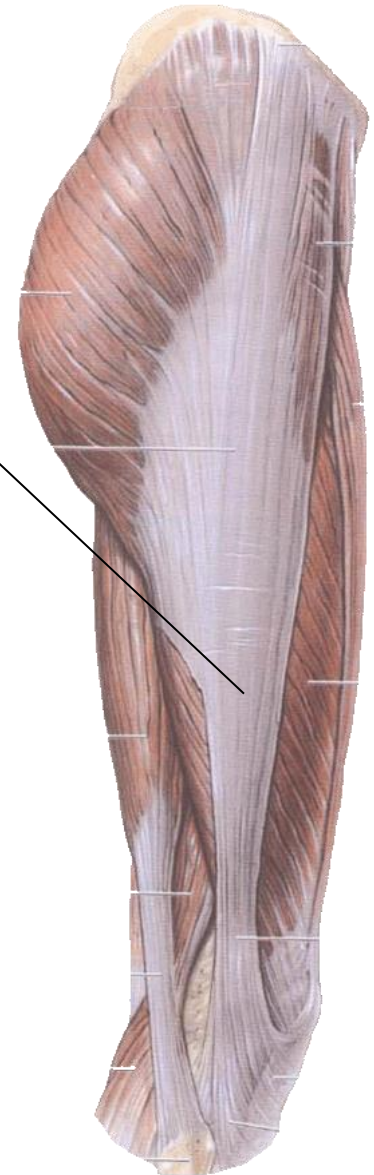
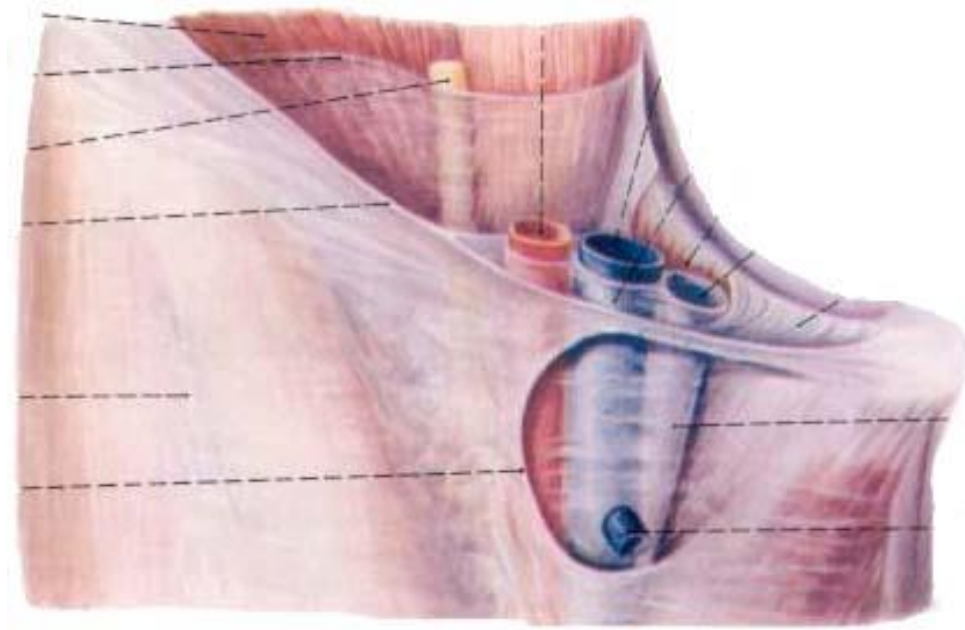
• **external pudendal artery**

Saphenous Opening



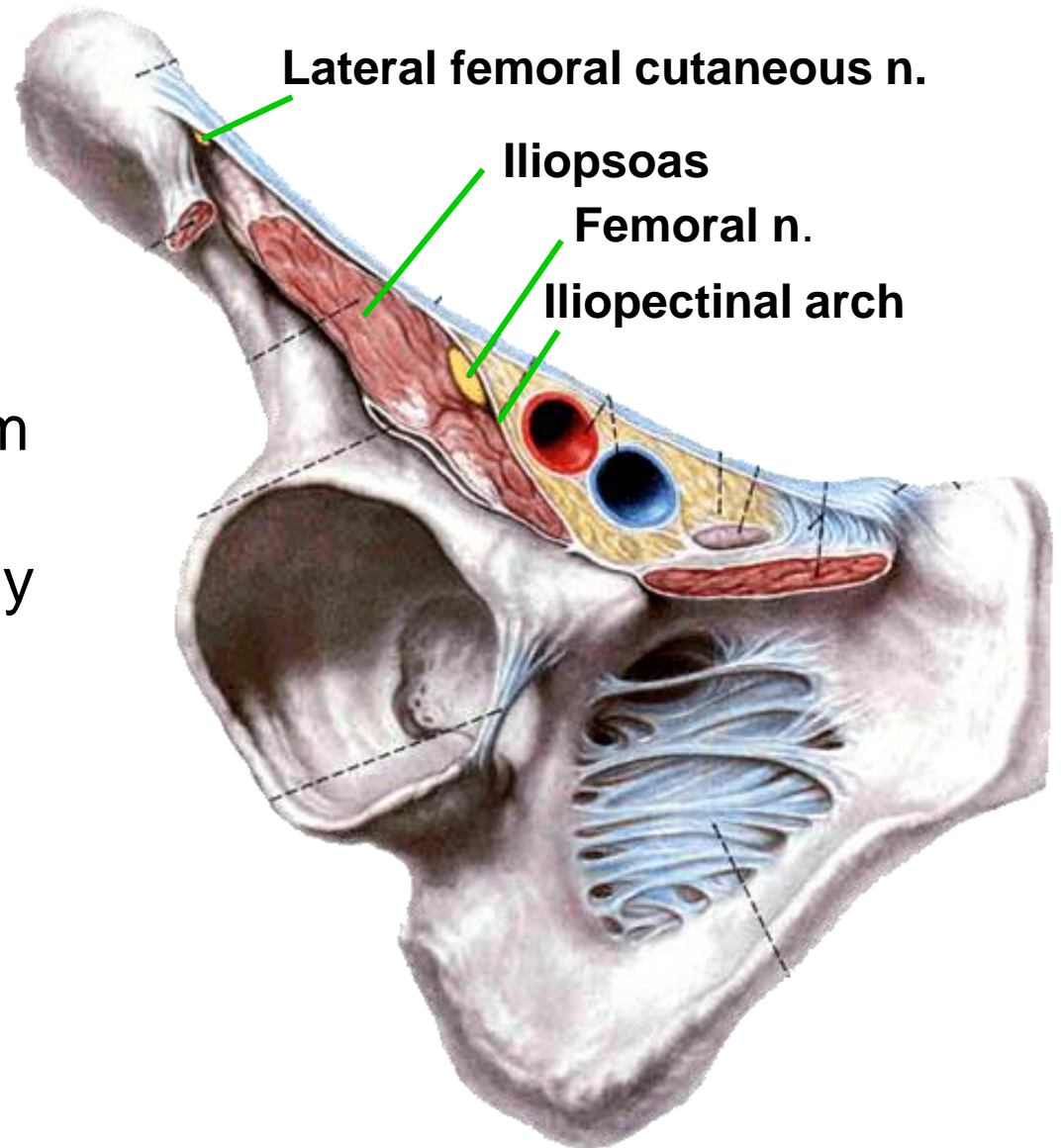
Deep Structures

- Deep fascia – fascia lata
 - Iliotibial tract
 - Saphenous hiatus
 - falciform margin
 - cribriform fascia

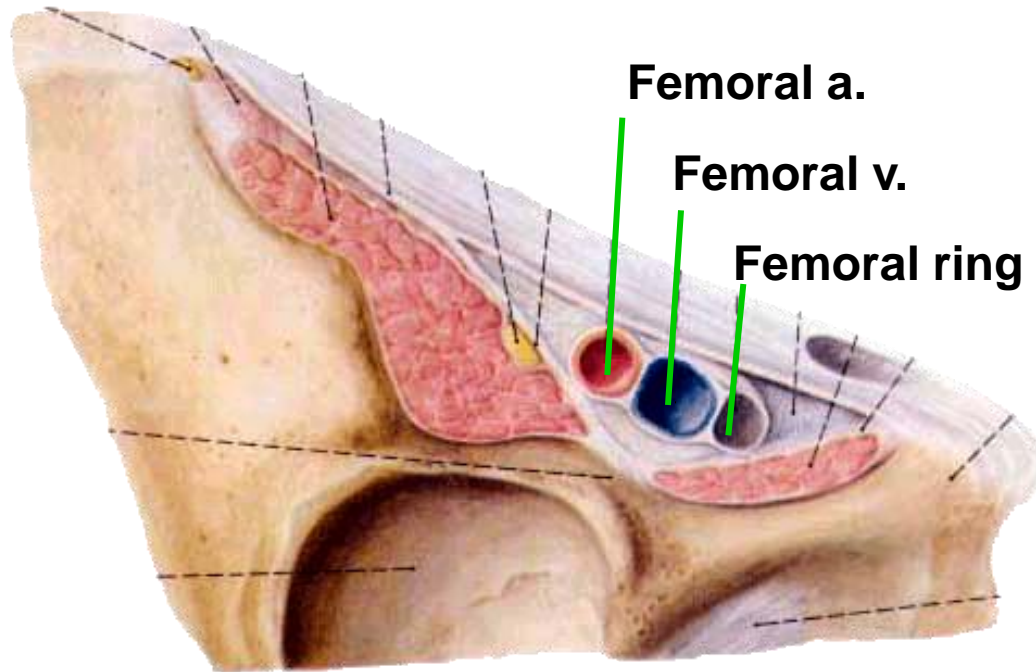


Lacuna musculorum

- Bounded by lateral portion of inguinal ligament anteriorly, ilium posterolaterally, iliopectinal arch medially
- Contents: iliopsoas, femoral n. and lateral femoral cutaneous n.



Lacuna vasorum



- Bounded by medial portion of inguinal ligament anteriorly, pectineal ligament posteromedially, lacunar ligament medially, and iliopectineal arch posterolaterally
- Contents:
 - femoral sheath, femoral a. and v., genital branch of genitofemoral n. and lymphatic vessels, femoral ring

The femoral canal

- It is about 1.3cm long , and its upper opening is called the **femoral ring** .
- The **boundaries of the femoral ring**

Anteriorly: the inguinal ligament

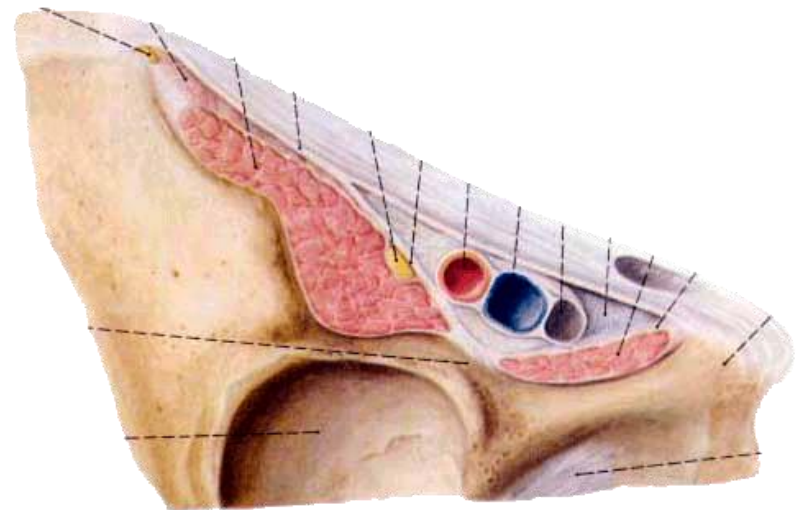
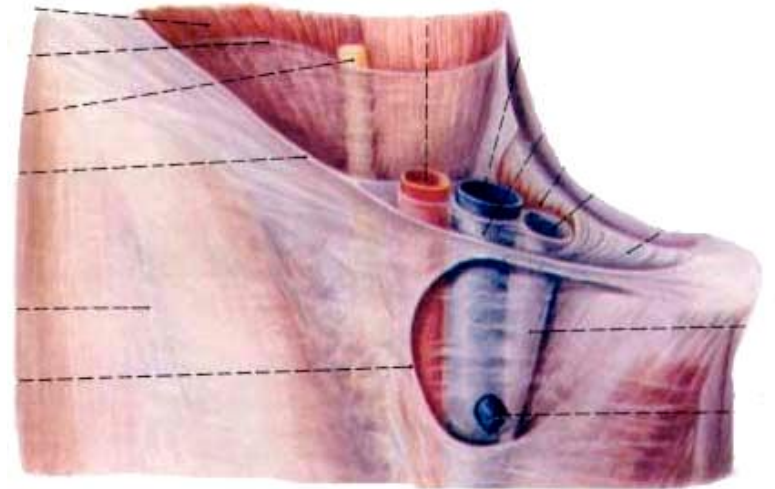
Posteriorly: the pecten of pubis

Medially: the lacunar ligament

Laterally: the femoral vein

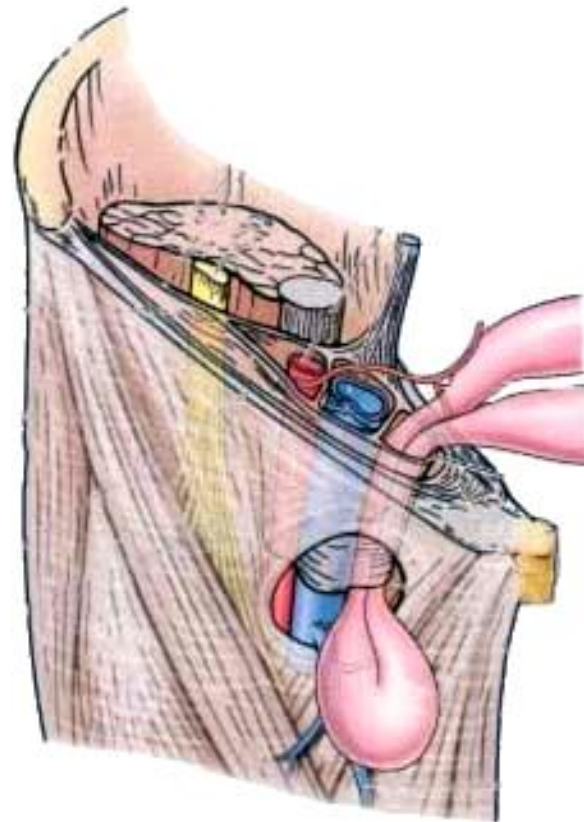
Superiorly: covered by femoral septum

- The canal contains a little loose fatty tissue, a small lymph node, and some lymph vessels.



Femoral hernia

A femoral hernia is common in women than in men (possibly due to a wider pelvis and femoral canal). If a loop of intestine is forced into the femoral ring, it expands to form a swelling in the upper part of the thigh.

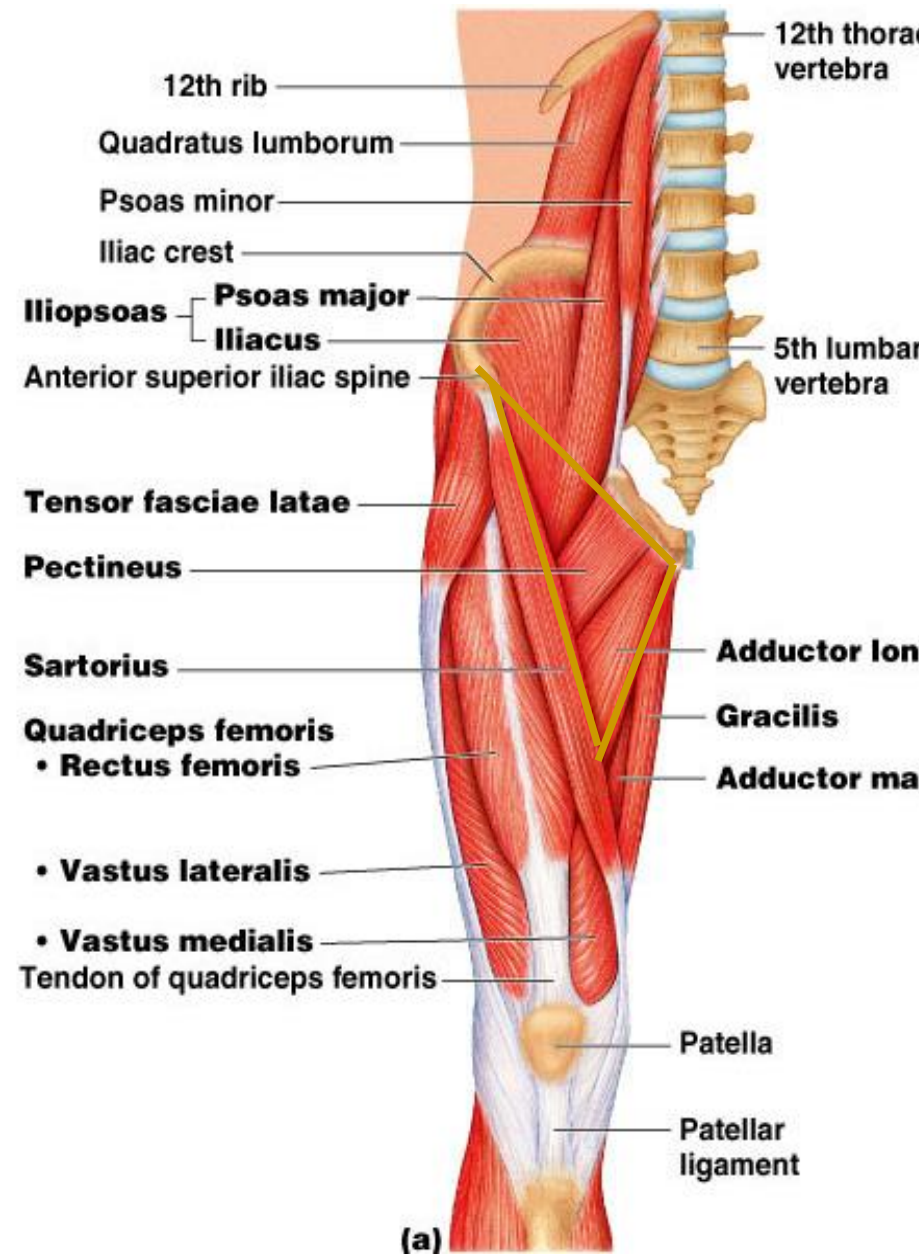


Femoral Triangle

★The boundaries

- Superiorly---the inguinal ligament
- Medially--- medial border of adductor longus
- Laterally--- medial border of sartorius
- Base---iliopsoas & pectineus muscle
- Inferiorly--- the apex of the triangle is continuous with adductor canal.

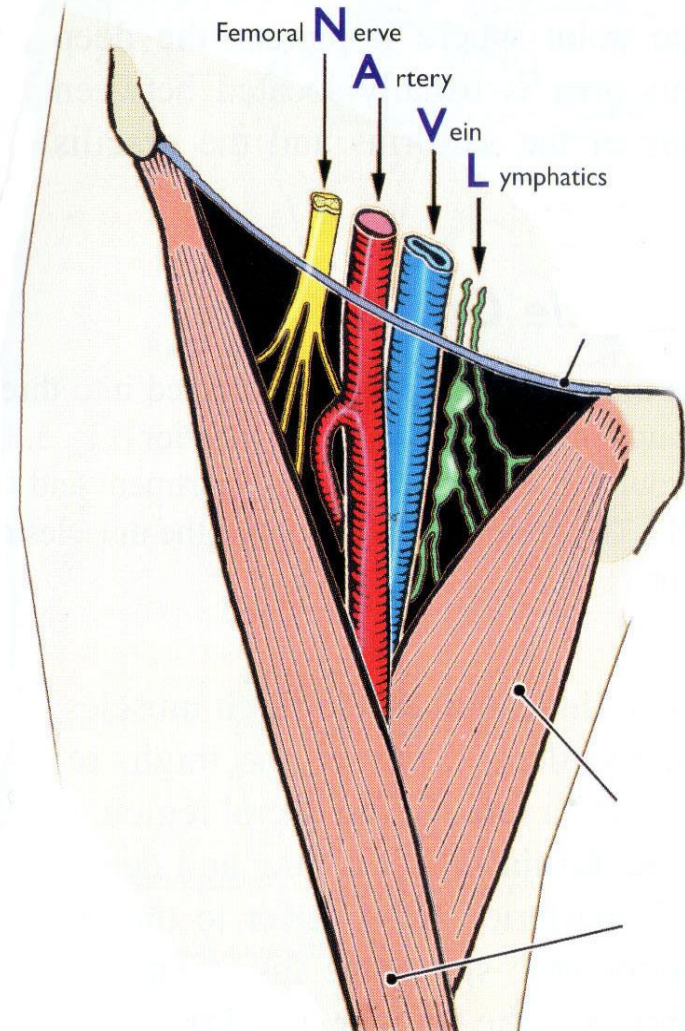
The *anterior wall* is fascia lata



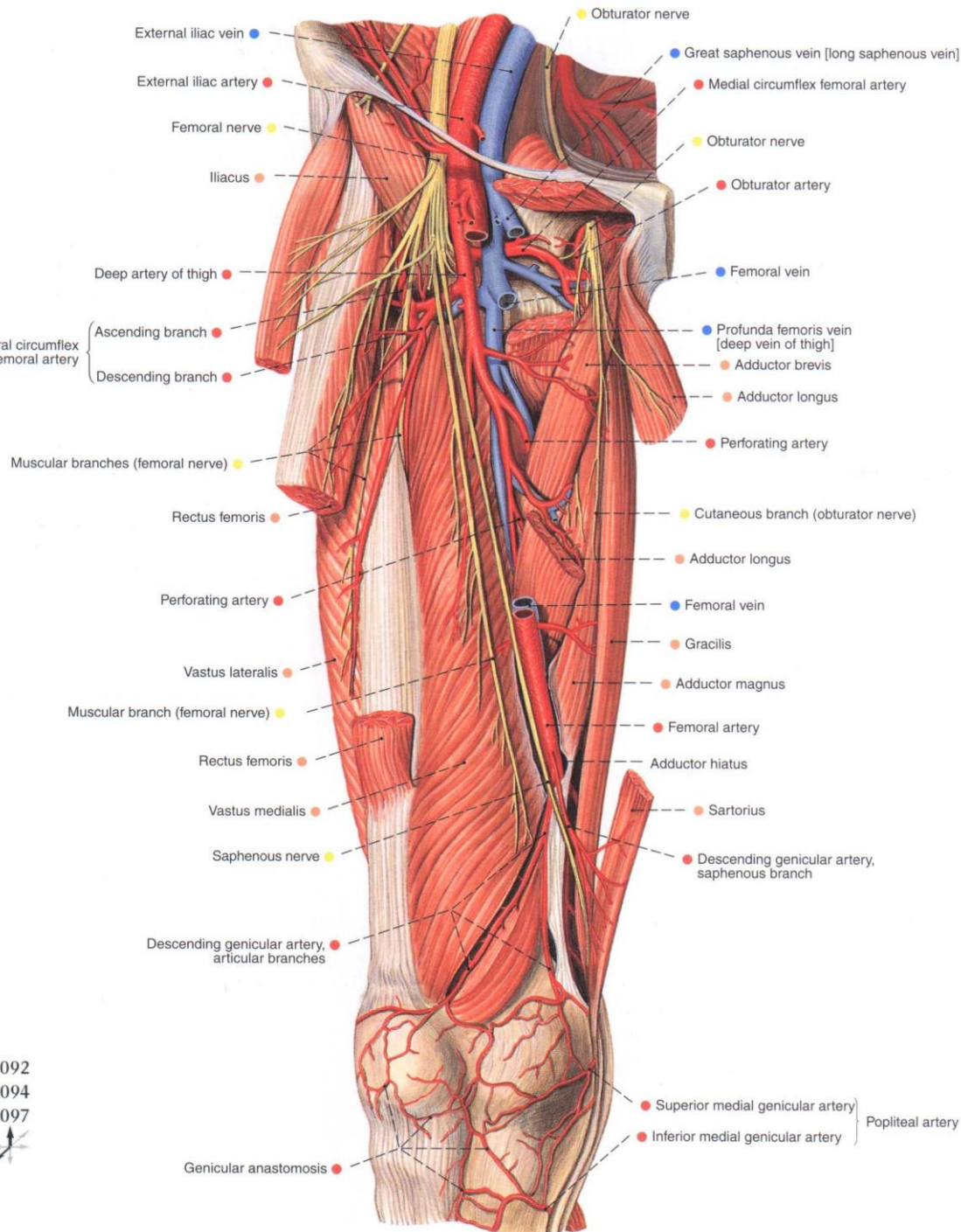
Femoral Triangle

★The contents:

- Femoral artery and its branches---- the profunda femoris artery
- Femoral vein
- Femoral canal
- Femoral nerve



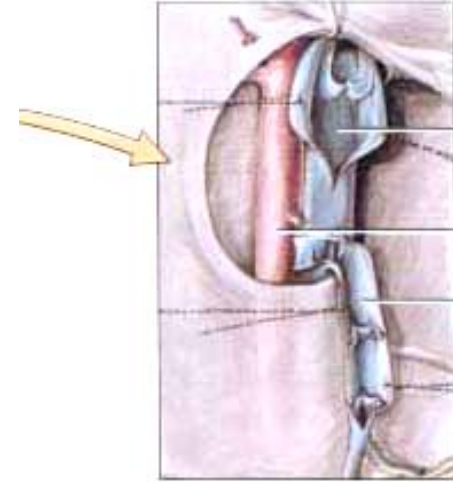
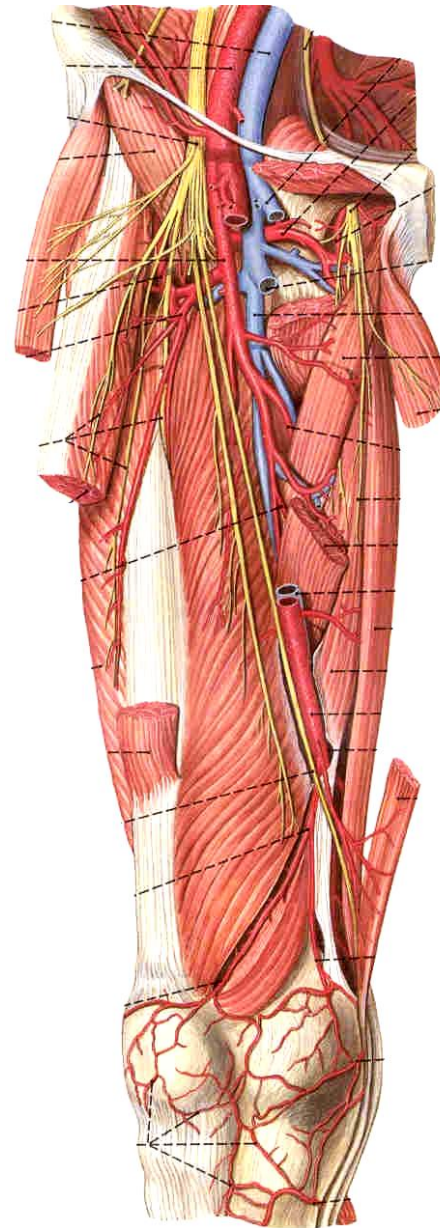
Femoral Artery



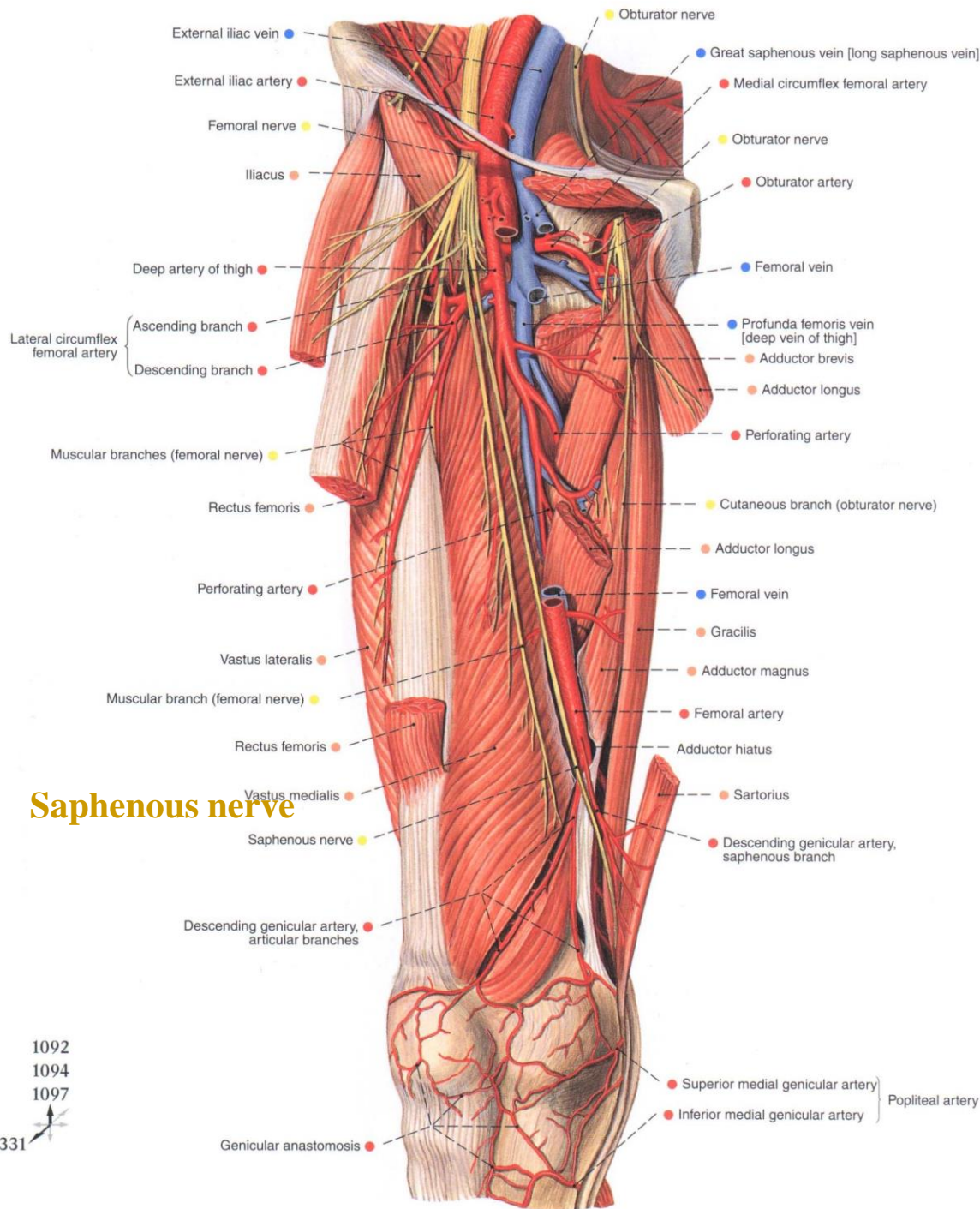
-
- **Profunda femoris artery**
- **medial circumflex femoral artery**
- **lateral circumflex femoral artery**
- **Perforating arteries**

Femoral Vein

- This is the direct continuation of the popliteal vein. It begins at the adductor tendinous opening and accompanies the femoral artery to the inguinal ligament behind which it becomes the external iliac vein.
- The femoral vein contains several valves.



Femoral Nerve



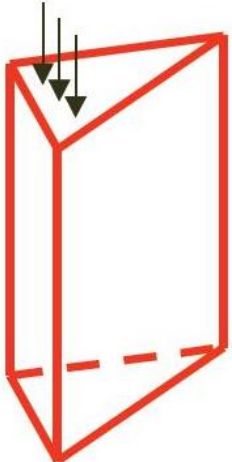
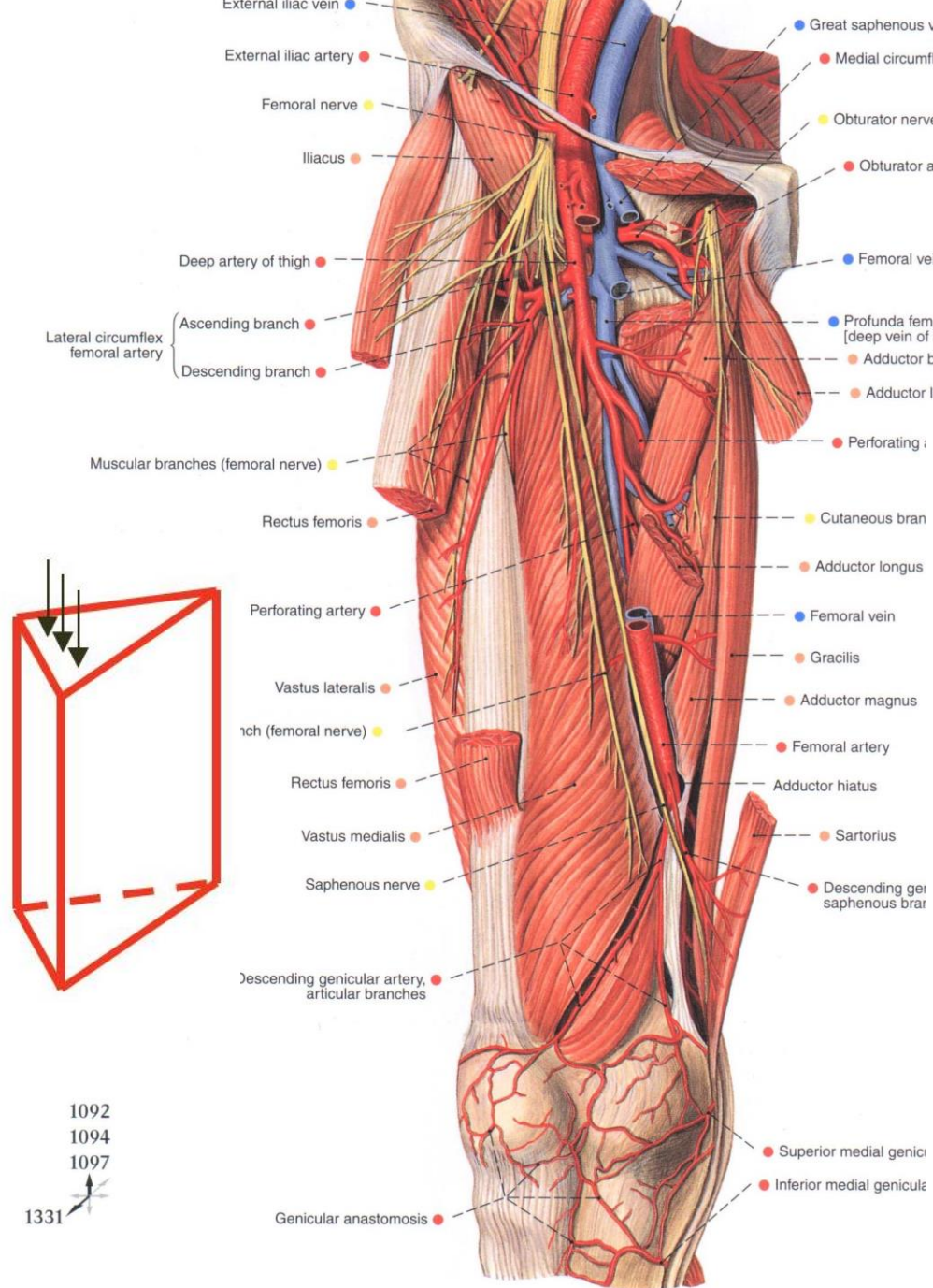
Saphenous nerve

- It arises from the lumbar plexus in the abdomen
- enters the thigh posterior to the inguinal ligament and lateral to the femoral artery.
- It ends by dividing into a number of branches 2 cm below the inguinal ligament.
- The longest cutaneous branch---saphenous nerve.

1092
1094
1097

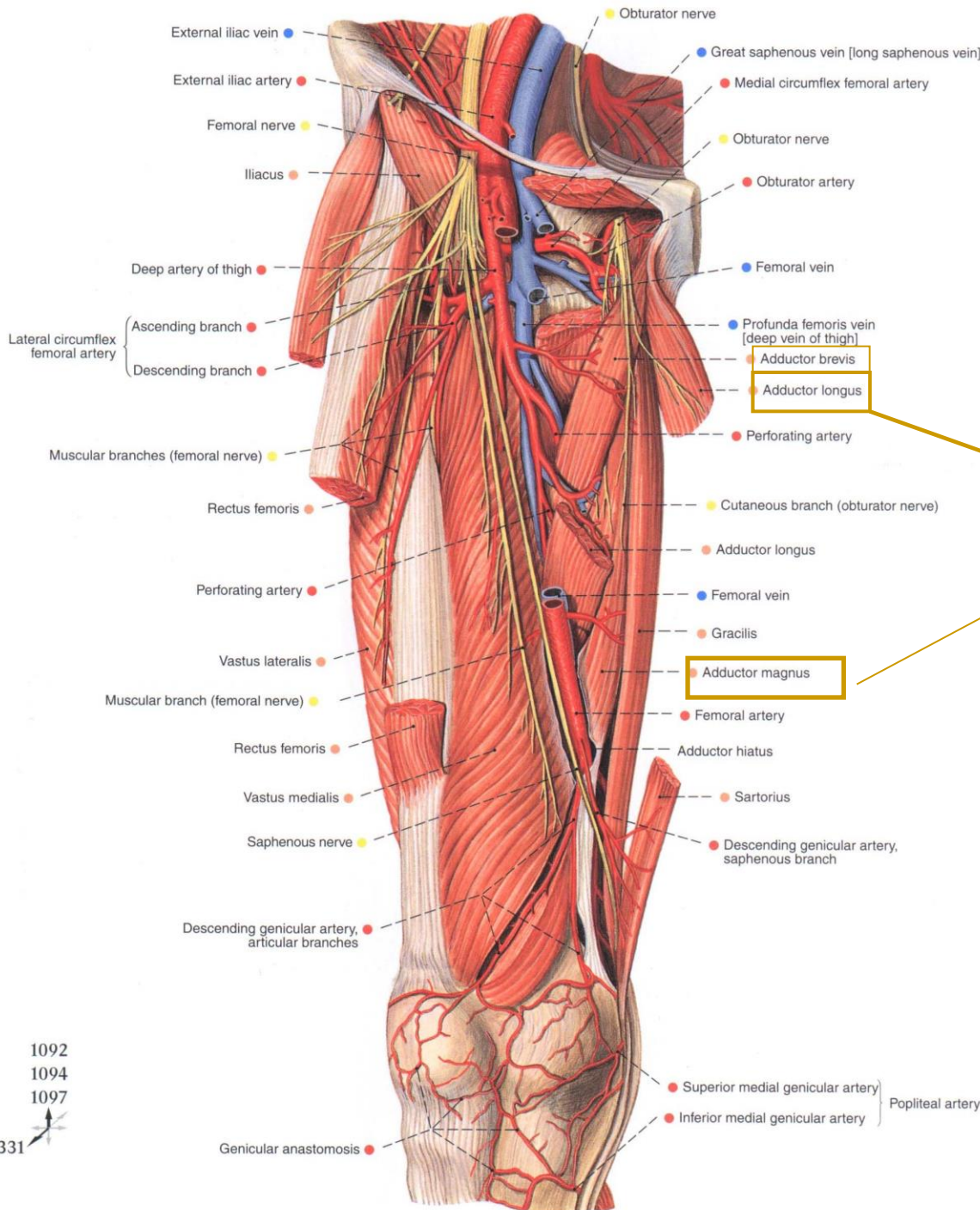
Adductor Canal

- Extends from apex of femoral triangle to adductor hiatus
- Boundaries:
 - Laterally--- vastus medialis muscle
 - Medially--- adductors longus and magnus muscle
 - Anteriorly--- adductor lamina and sartorius muscle
- Contents – saphenous nerve, femoral a., descending genicular a., femoral v., lymphatic vessels, and loose connective tissue

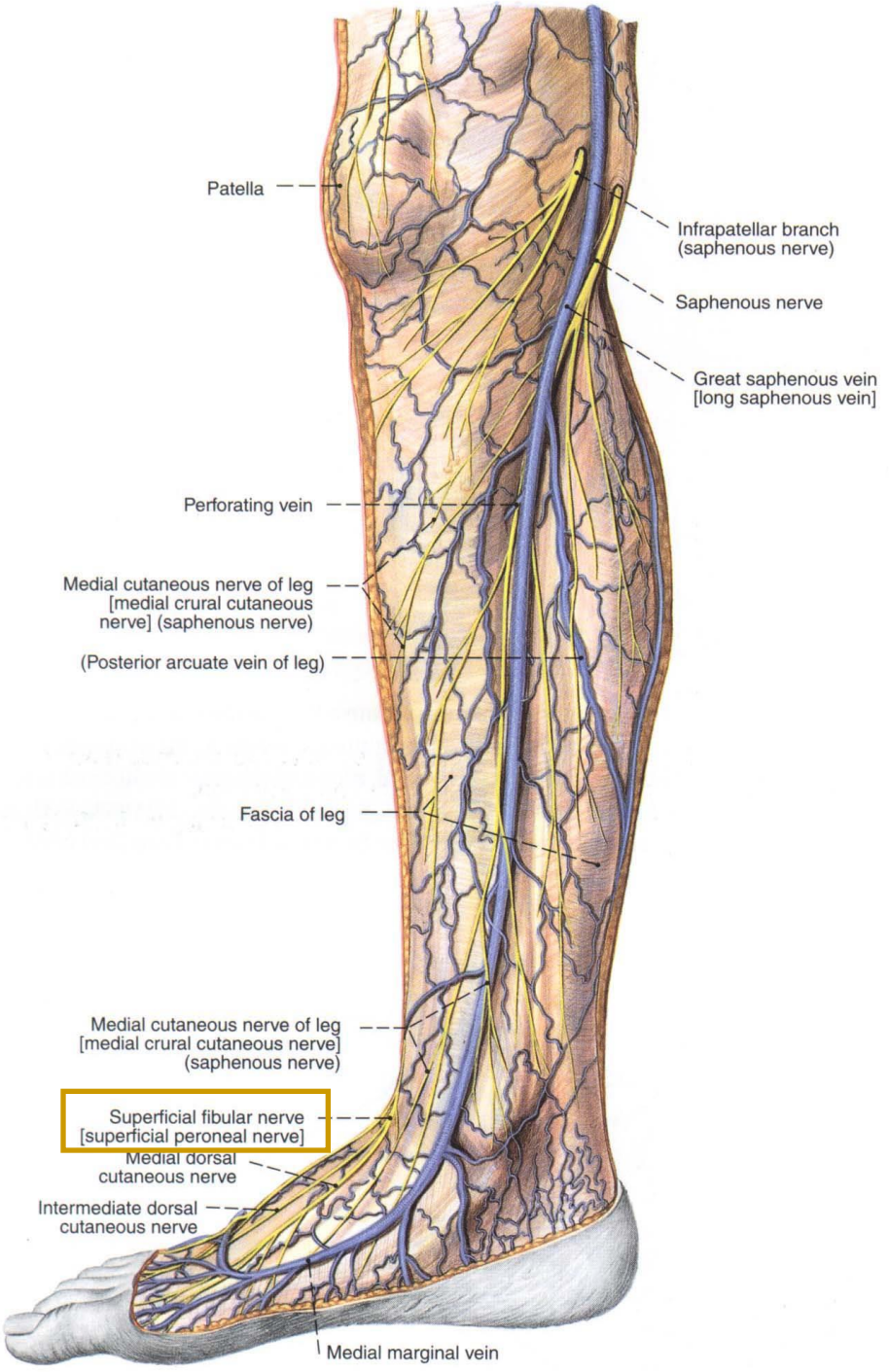


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1094
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1331

Medial Side of the Thigh



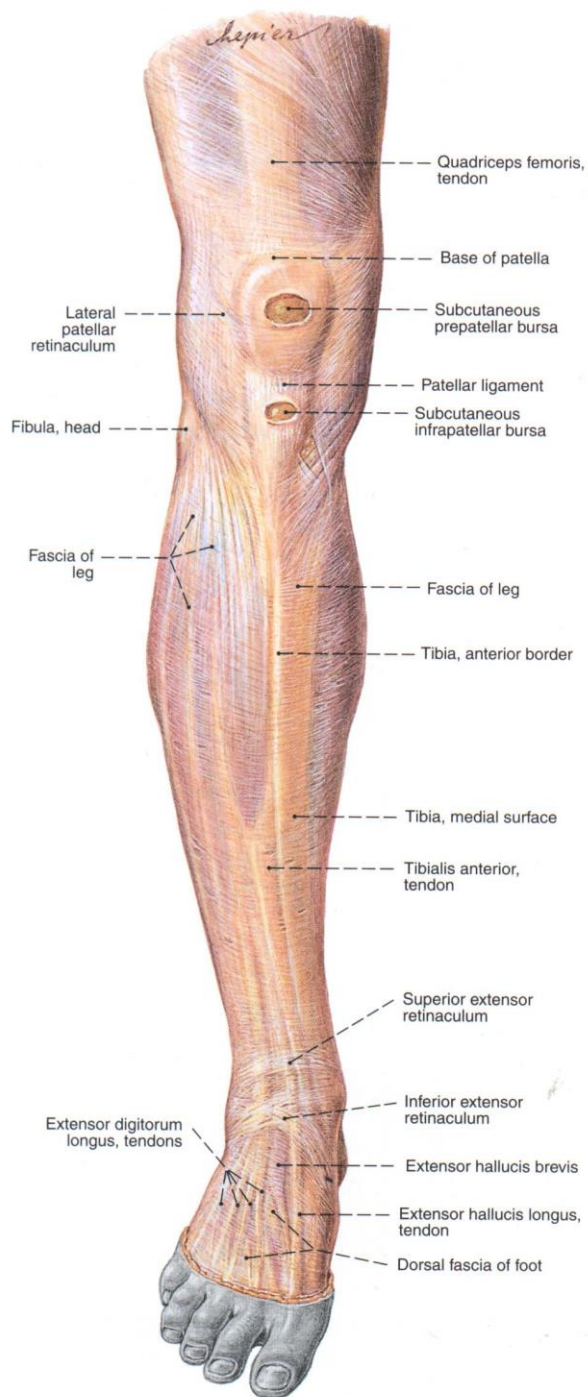
- Adduct muscle of the thigh
- pectineal m.
- adductor longus m.
- adductor magnus m.
- adductor brevis m.
- gracilis m.
- Obturator vessels and nerves
- obturator a.
- obturator v.
- obturator n.



Structures in the superficial fascia

- **Great saphenous vein:**
- **Saphenous nerve**
- **Small saphenous vein**
- **Superficial peroneal n. on the lower third.**

Deep structures



★ Deep fascia

- continuous with the fascia lata
- This fascia segregates the leg into three compartments: anterior, lateral, and posterior
- Superiorly it is thick intermedially is thin distally, the fascia thickens and forms the superior and inferior extensor retinaculum.

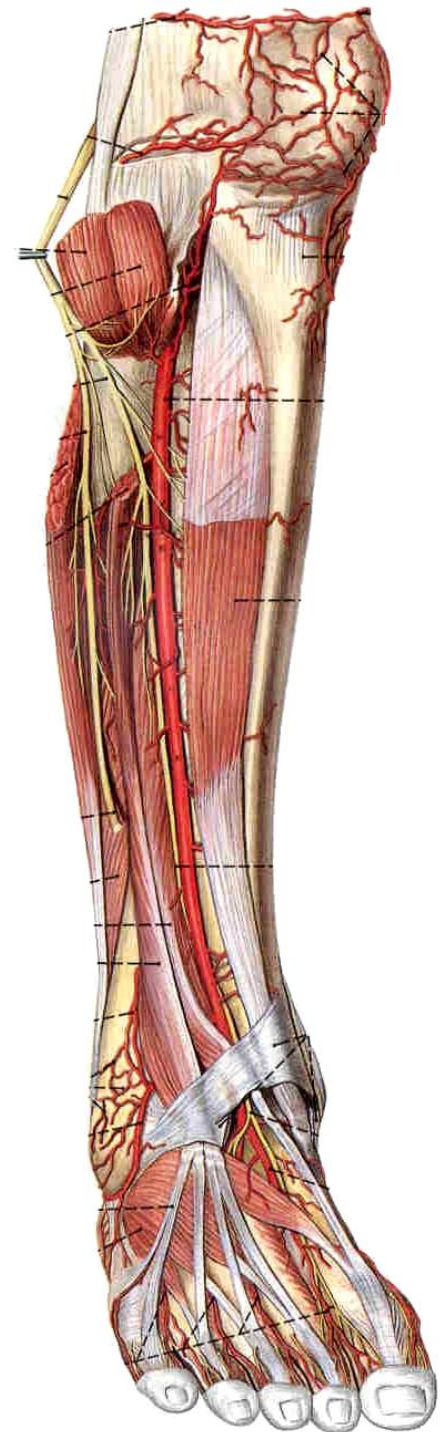
•

Anterior tibial artery

- It comes from the popliteal artery .
- It passes forwards above the interosseous membrane
- Just below the knee company with the deep peroneal nerve.
- It becomes the dorsalis pedis artery, midway between the malleoli.

The anterior tibial veins are closely applied to the artery.

Cut the tibialis anterior muscle at the level of the tibial tuberosity

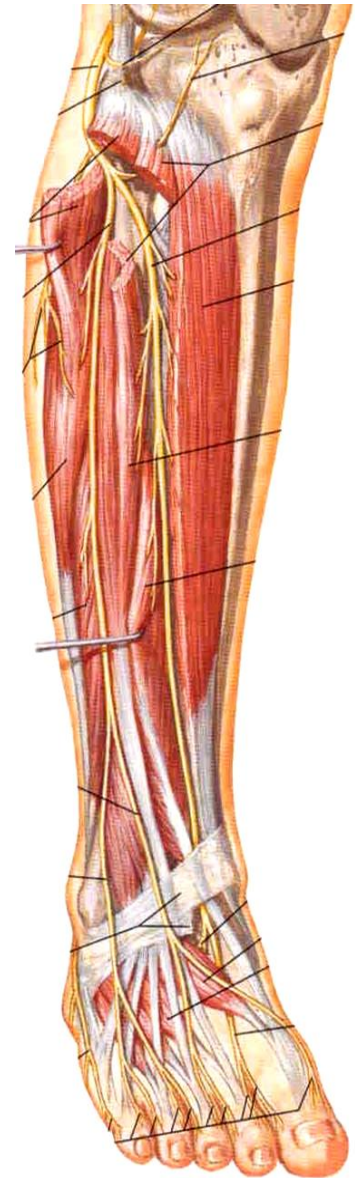


Superficial peroneal nerve

Deep peroneal nerve:

- It arises from the common peroneal nerve between the neck of the fibula and the peroneus longus muscle
- It descends in the anterior compartment of the leg with the anterior tibial vessels.

Along the trip of the common peroneus nerve cut the peroneus longus muscle

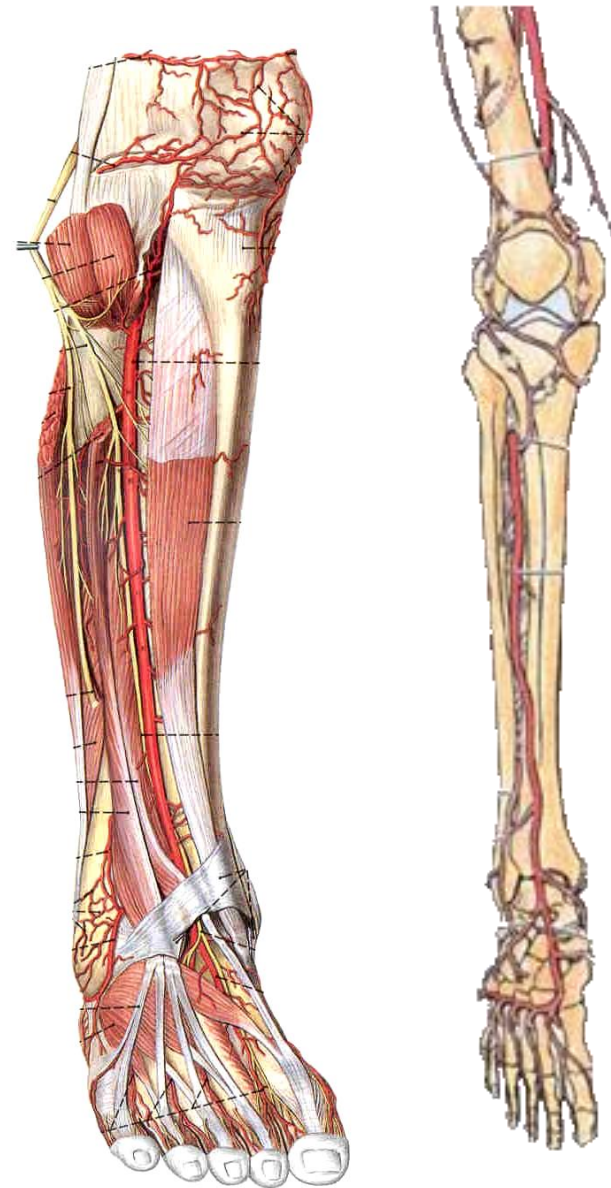


Anterior tibial a.

- Descends on anterior surface of interosseous membrane
- In front of ankle joint becomes dorsal a. of foot

Dorsal a. of foot

- Passes forward between tendons of extensor longus and extensor digitorum longus to the proximal
- End of first intermetatarsal space



Deep structures

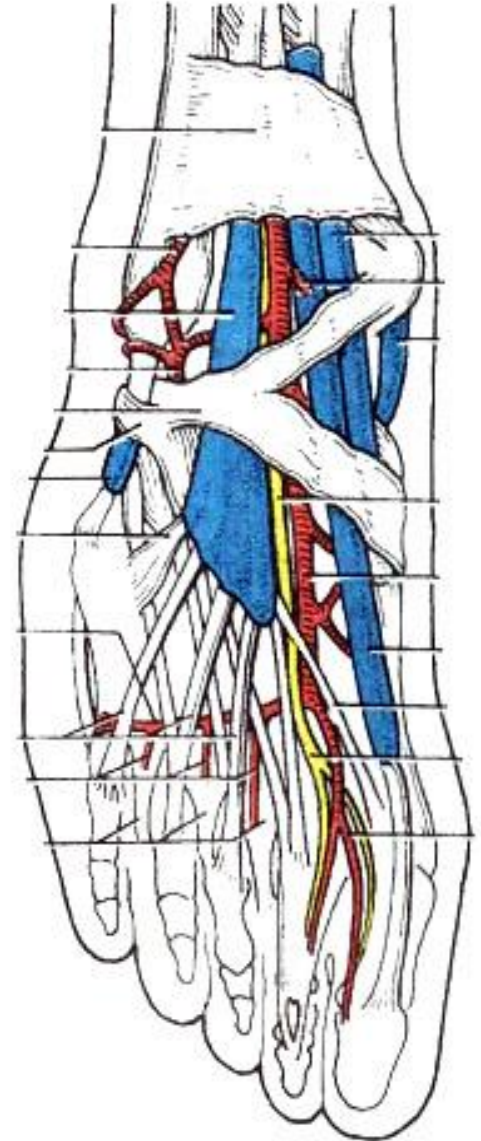
1. Deep fascia

superior extensor retinaculum

inferior extensor retinaculum

2. muscles:

3. Vessels and nerves:



- Thank you