



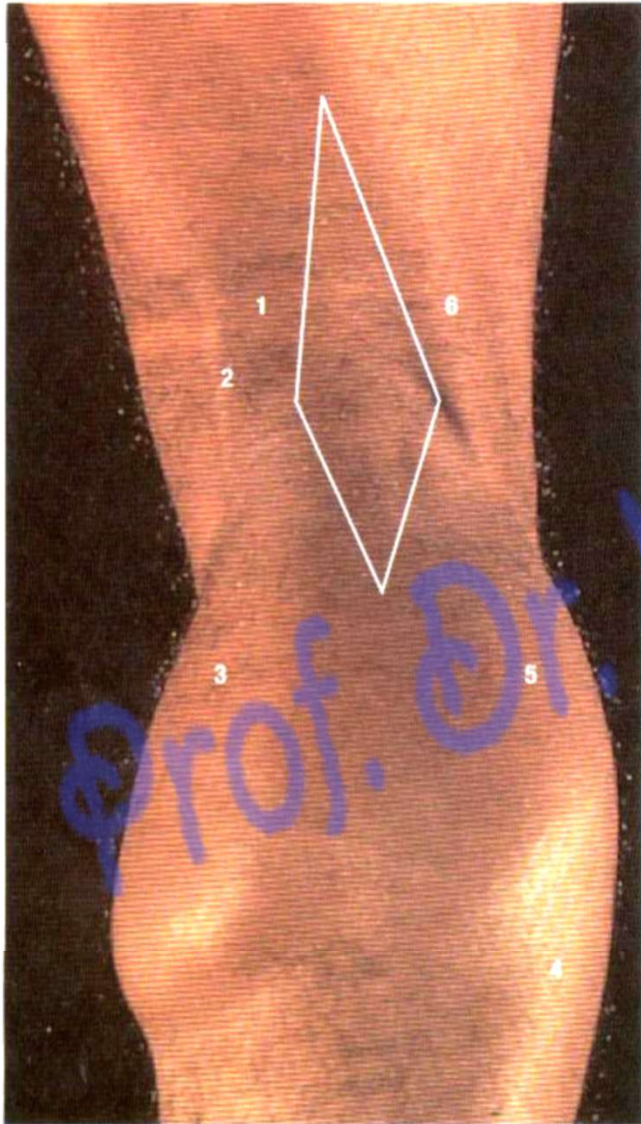
الأستاذ الدكتور / يوسف حسين

أستاذ التشريح وعلم الأجنة
كلية الطب - جامعة الزقازيق - مصر

رئيس قسم التشريح والأنسجة وعلم الأجنة - كلية الطب - جامعة مؤتة
دكتورة من جامعة كولونيا المانيا
جروب الفيس
د. يوسف حسين (استاذ التشريح)

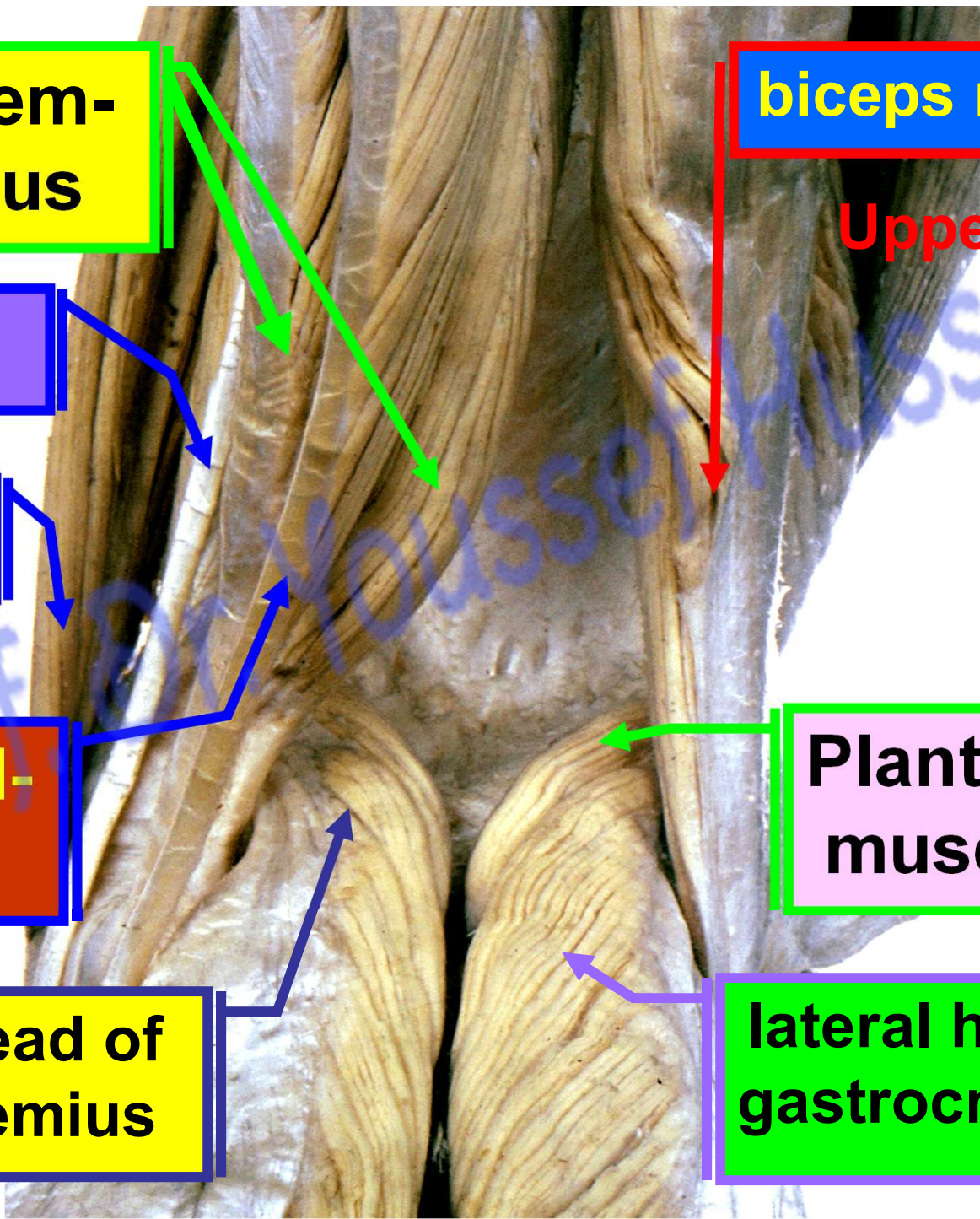


Popliteal fossa



- **Definition**
- **Position.**
- **Shape.**
- **Boundaries**





**Semimem-
branosus**

Gracilis

Sartorius

**Semitend-
inosus**

**medial head of
gastrocnemius**

biceps muscle

Upper lateral

**Plantaris
muscle**

**lateral head of
gastrocnemius**



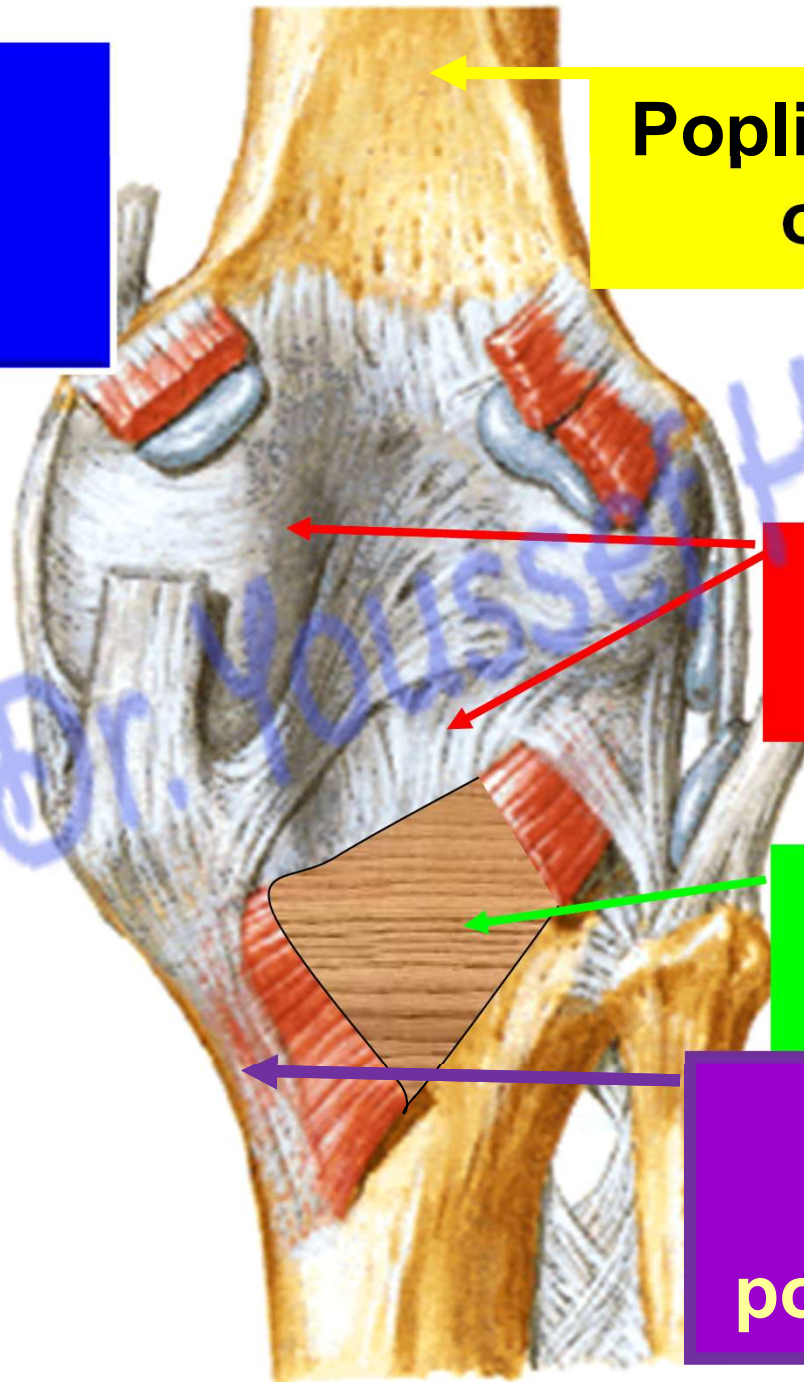
**Floor of
popliteal
fossa**

**Popliteal surface
of femur**

**Capsule of
knee joint**

**Popliteus
muscle**

**Fascia
covering
popliteus ms**



Contents of fossa

Popliteal vein

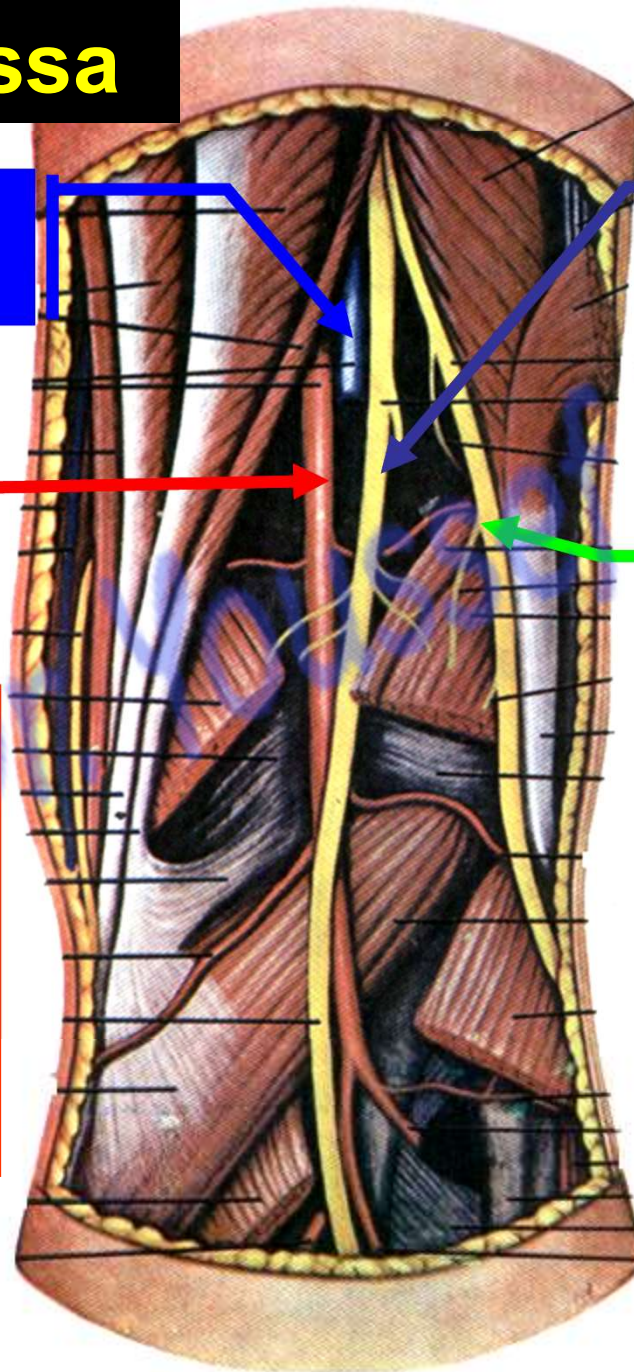
**Tibial
nerve**

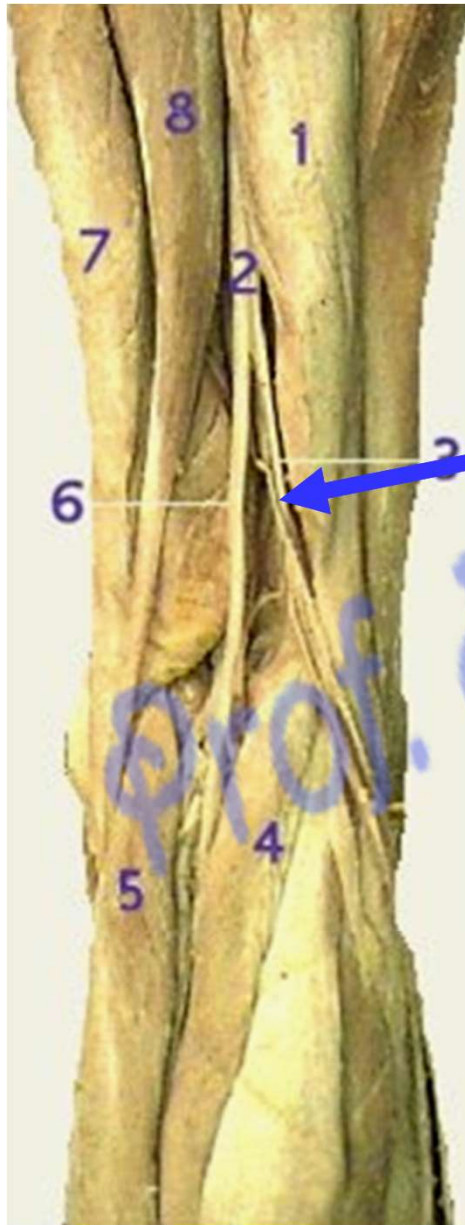
H1

**Popliteal
artery**

**Common
peroneal
nerve**

- Popliteal Lymph nodes
- Popliteal fat
- Posterior cutaneous nerve of the thigh (roof)

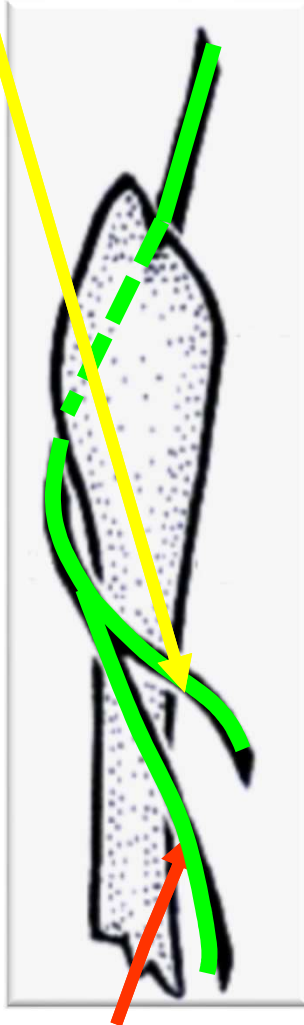




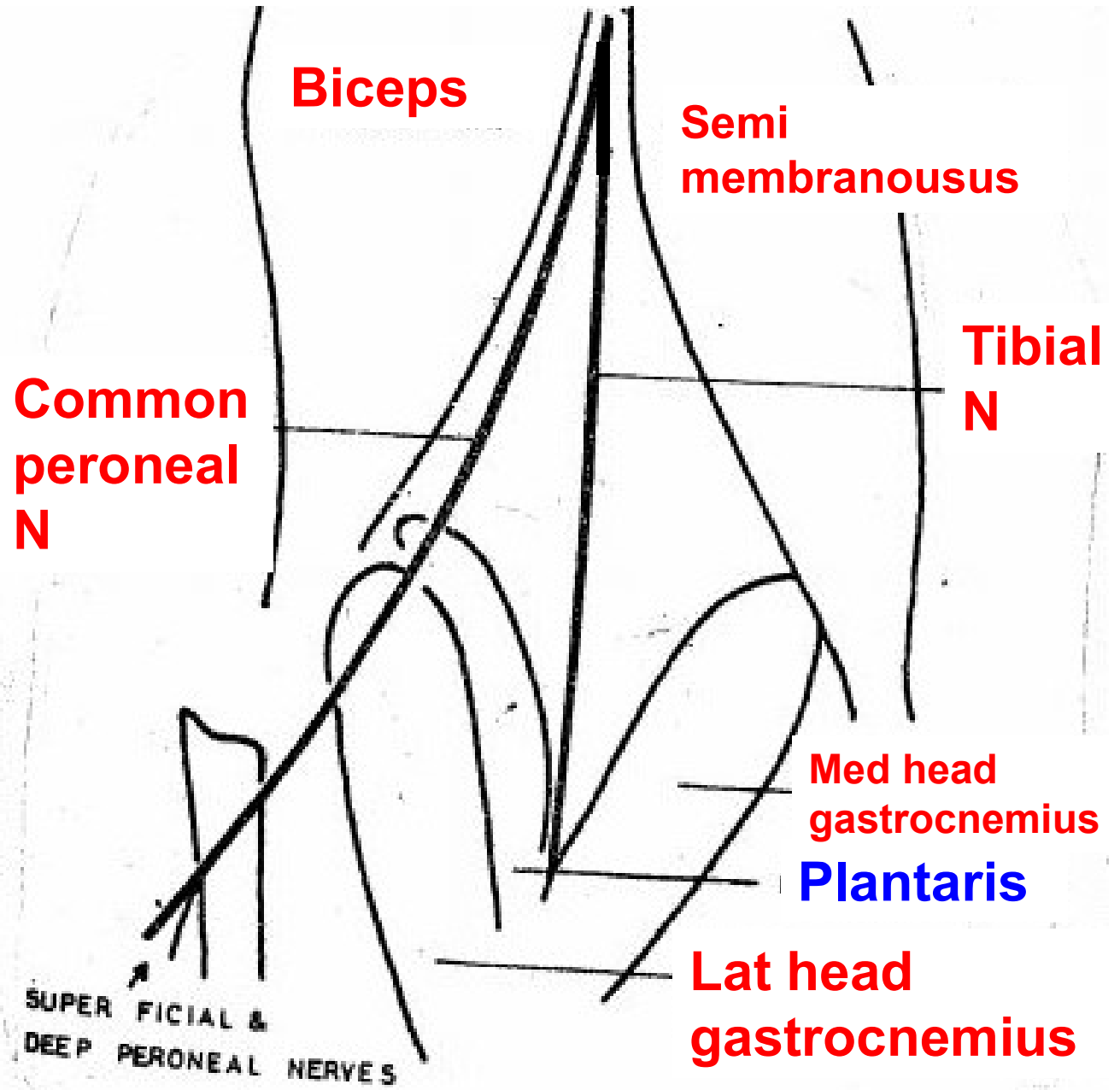
**Common
peroneal
nerve
(L. 4,5 S. 1,2)**

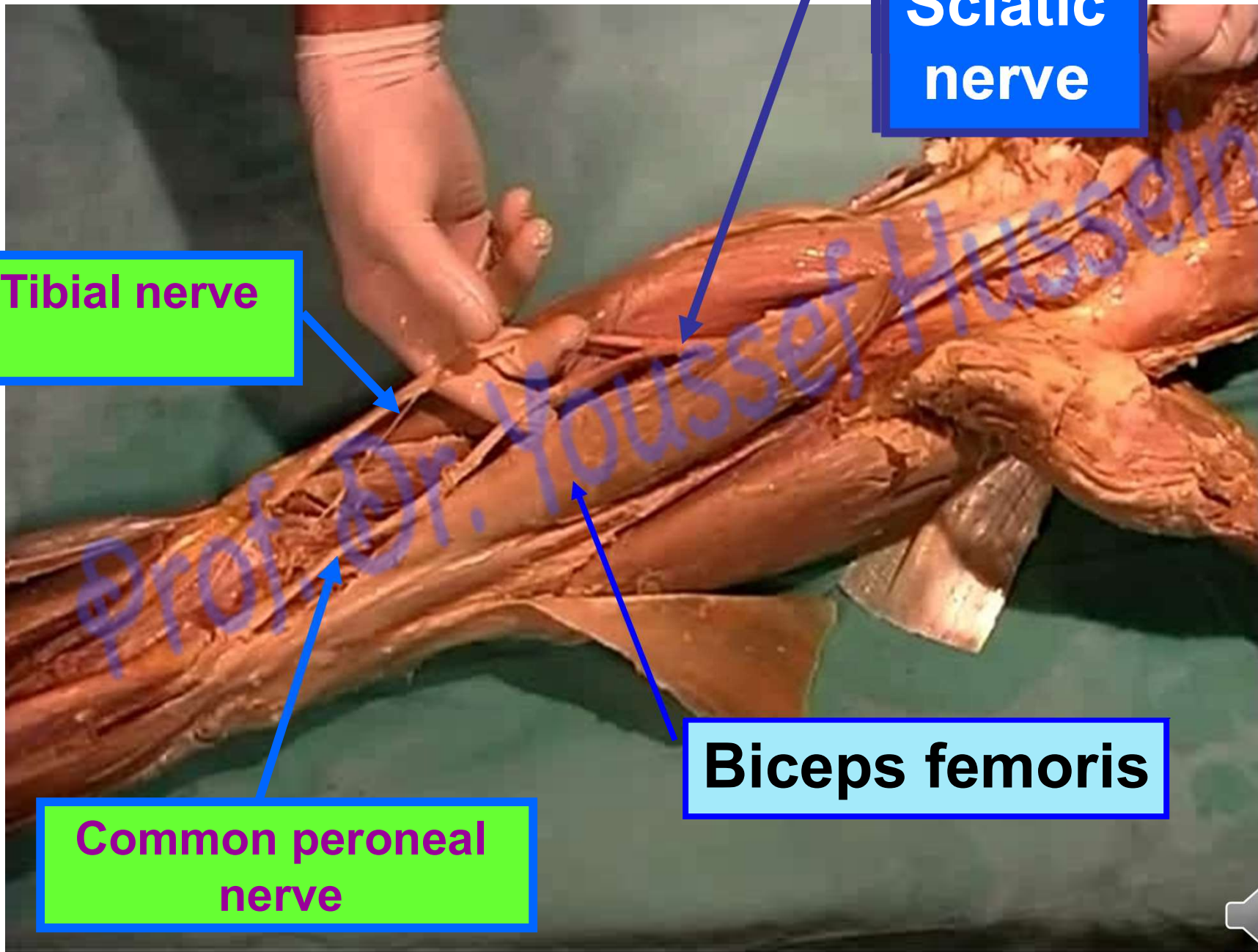


**Deep peroneal
n.**



Superficial peroneal n.





**Sciatic
nerve**

Tibial nerve

**Common peroneal
nerve**

Biceps femoris



• Common Peroneal Nerve

**** Origin:** one of the two terminal branches of the sciatic nerve in the middle of the back of the thigh.

**** Roots:** It arises from L 4, 5, S 1, 2.

**** Course;**

- It enters the popliteal fossa at its upper angle and descends downwards and laterally close to the medial side of the biceps femoris.

- It leaves the fossa through its lateral angle where it crosses the plantaris and lateral head of gastrocnemius.

- **Ends:** it curves on the lateral side of the neck of the fibula deep to the peroneus longus, then, divides into deep and superficial peroneal nerves. **It is the commonest site of injury**



**** Branches of Common Peroneal Nerve**

I- No muscular branches in the fossa.

II- Articular branches to the knee joint.

1- Superior lateral genicular nerve.

2- Inferior lateral genicular nerve.

3- Recurrent genicular nerve.

III- Cutaneous branches (LS):

a. Lateral cutaneous nerve of the calf; it supplies the skin of the lateral, and anterior surfaces of the upper part of the leg.

b- Sural communicating nerve.

IV- Terminal branches:

1- Deep peroneal (anterior tibial) nerve to the anterior compartment of the leg.

2- Superficial peroneal (musculocutaneous) nerve to the lateral compartment of the leg.



- **Tibial Nerve**

**** Origin:** one (larger) of the two terminal branches of the sciatic nerve.

**** Course:**

- It **enters** the fossa at its upper angle and **leaves** the fossa at its lower angle.

**** Ends:** At the distal border of popliteus, it continues as **posterior tibial nerve**.



Tibial nerve

The diagram illustrates the posterior view of the knee joint. The popliteal fossa is shown, with the tibial nerve entering from the upper angle and exiting from the lower angle. The posterior tibial nerve is shown continuing from the tibial nerve. A blue arrow points from the 'Tibial nerve' label to the nerve in the popliteal fossa, and another blue arrow points from the 'Posterior Tibial nerve' label to the nerve below the fossa.

Posterior Tibial nerve

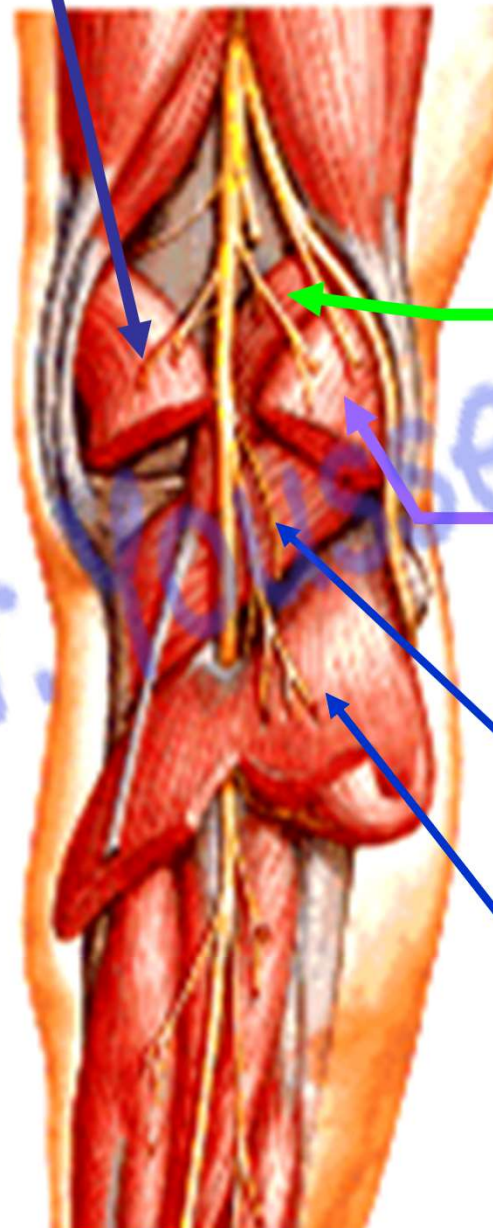


A small speaker icon is located at the bottom right of the 'Posterior Tibial nerve' label box.

medial head of gastrocnemius

- **Popliteus** (The nerve descends **superficial** to the muscle and then hooks on its **lower** border to supply the muscle through its **deep** surface).

- **Soleus**. It supplies the muscle through its **posterior** surface.



Muscular branches of Tibial nerve

Plantaris

lateral head of gastrocnemius

Popliteus muscle

Soleus muscle



**** Branches of the tibial Nerve in the popliteal fossa**

B- Articular branches: to the knee joint.

1- Superior medial genicular nerve.

2- Middle genicular nerve (supply the cruciate ligaments).

3- Inferior medial genicular nerve.

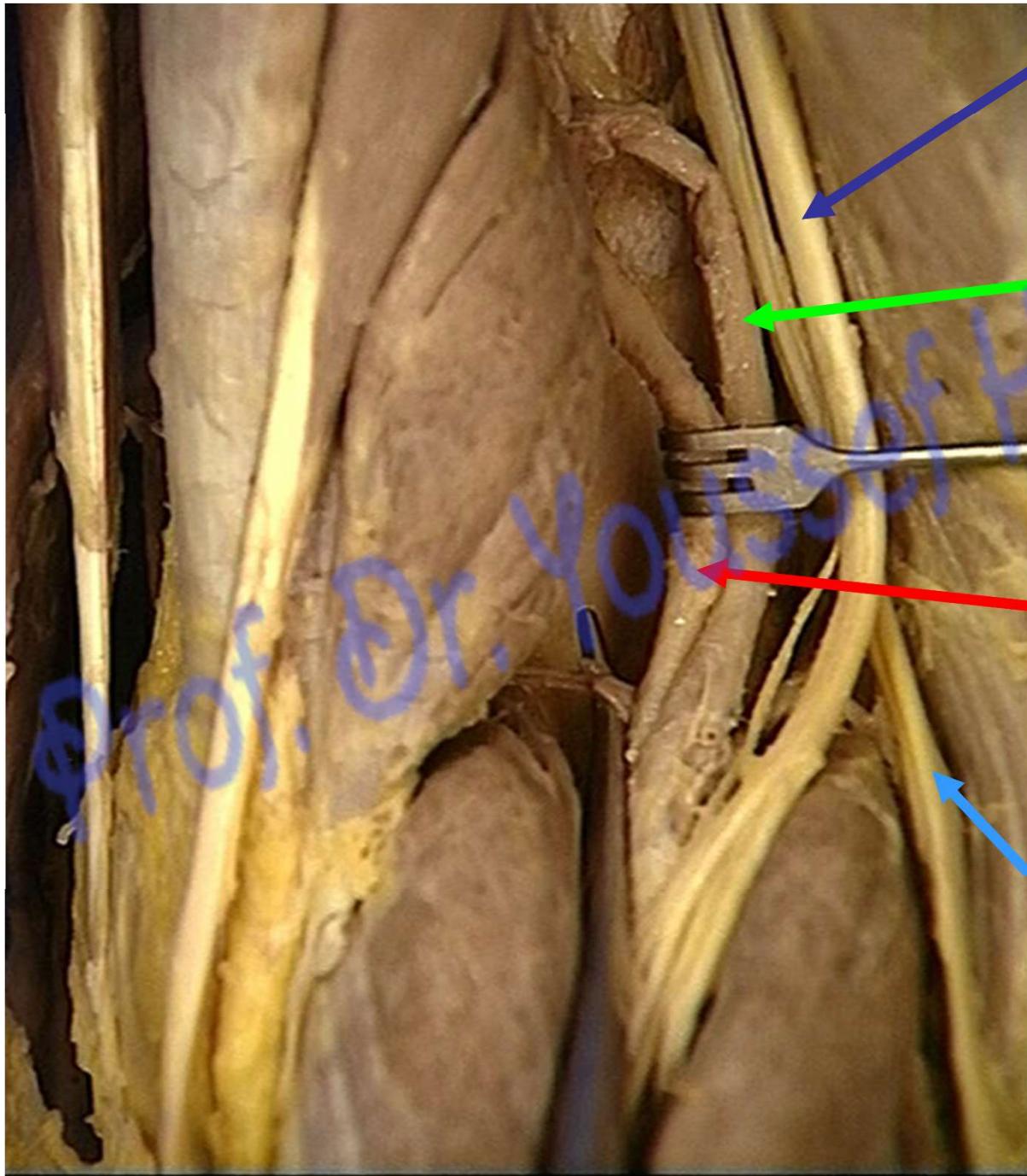
C- Cutaneous branch: Sural nerve:

- It descends in the back of the leg.

- It curves **behind and below the lateral malleolus** to continue forwards along the lateral border of the dorsum of the foot to **end in the lateral side of the little toe.**

- It **supplies** the back of the leg, lateral border of the foot and lateral side of the little toe.





**Tibial
nerve**

**Popliteal
vein**

**Popliteal
artery**

**Common
peroneal
nerve**





Lateral compartment of leg



Bones of foot

Calcaneus

Talus

Navicular

Cuboid

Lateral cuneiform

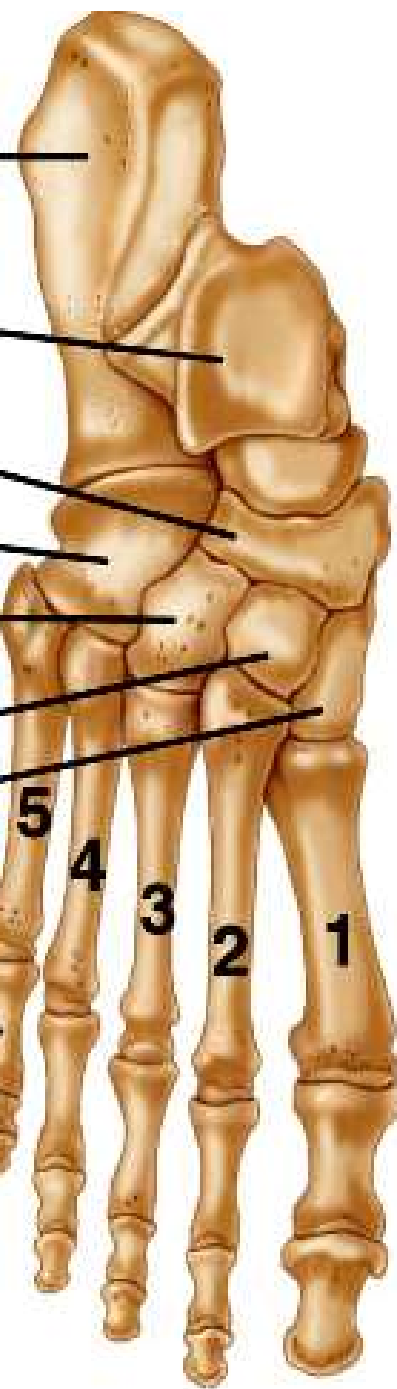
Intermediate cuneiform

Medial cuneiform

Proximal phalanx

Middle phalanx

Distal phalanx



Tarsals

Metatarsals

Phalanges



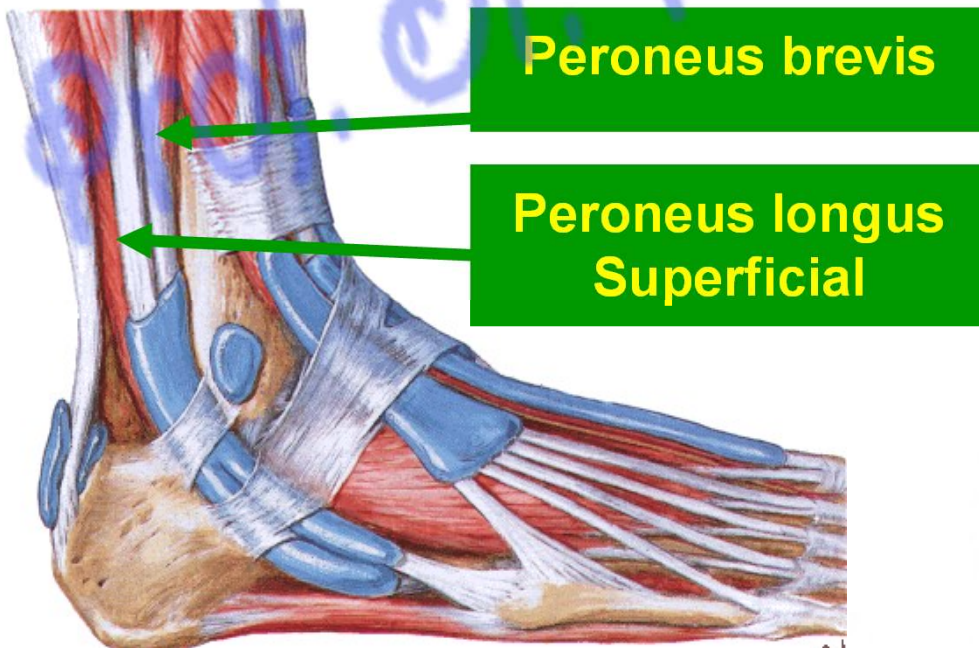
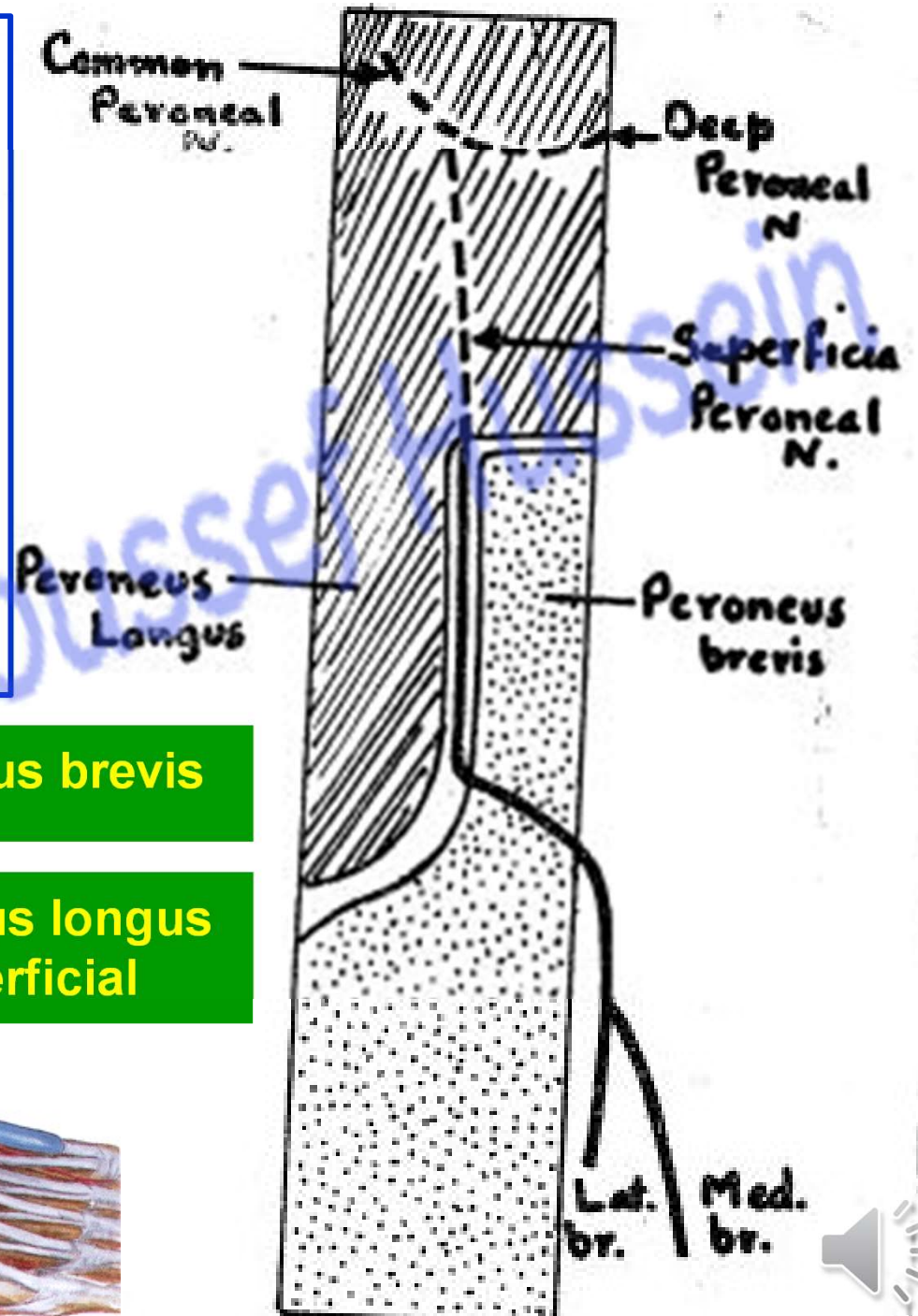
- **Peroneus Longus**

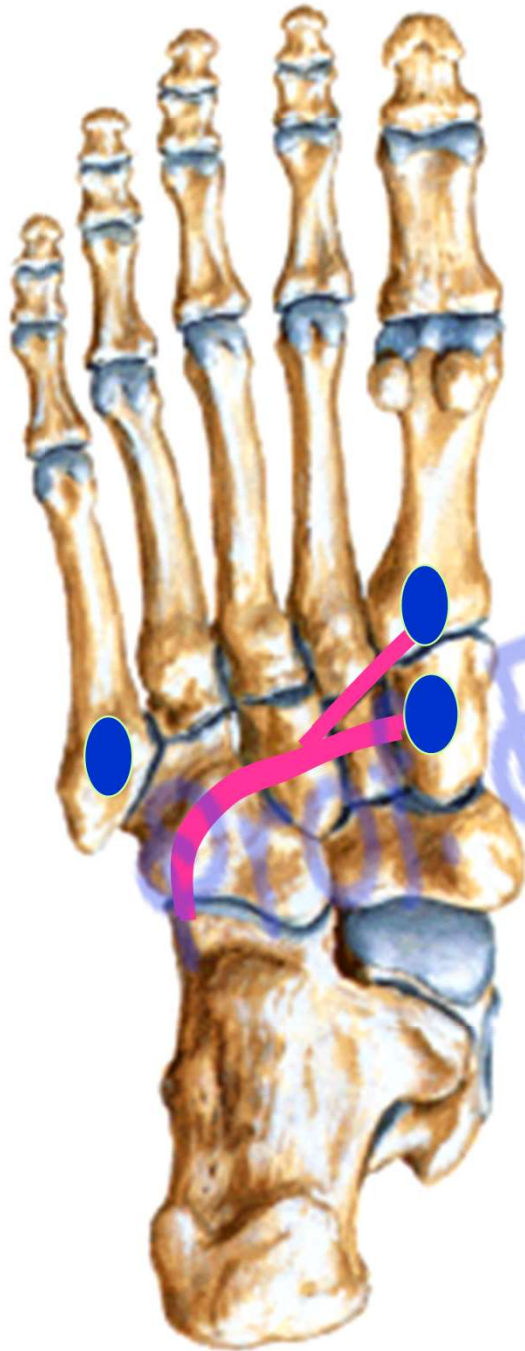
** **Origin:** From upper 2/3 of lateral surface of fibula.

- **Peroneus Brevis**

** **Origin:** From lower 2/3 of lateral surface of fibula.

** **Nerve supply:** Superficial peroneal nerve.





- **Peroneus Longus**

** It **cross sole** of foot from lateral to medial.

** **Insertion:** base of the first metatarsal bone and medial cuneiform bone.

- **Peroneus Brevis**

** It is **closely behind** lateral malleolus.

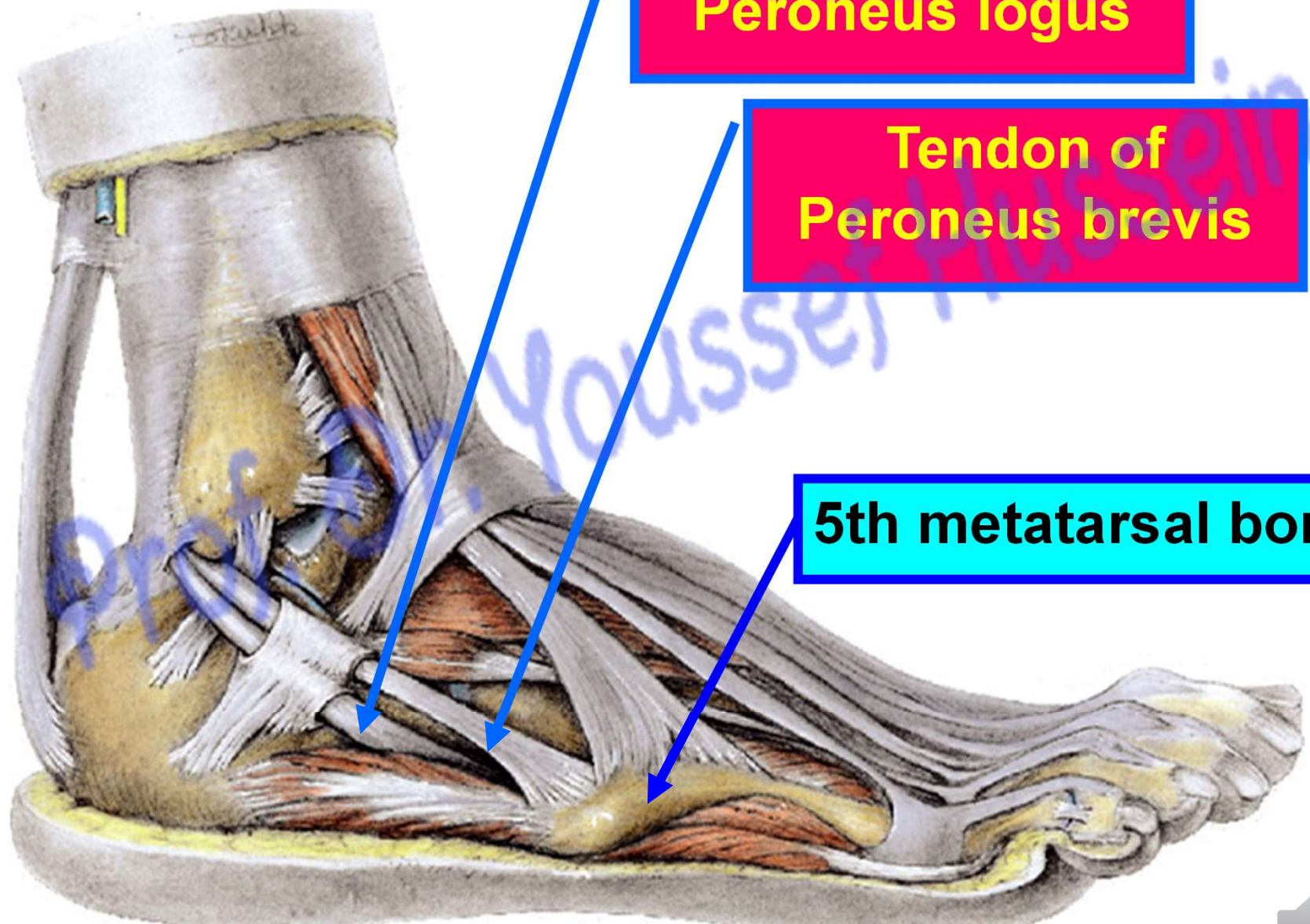
** **Insertion:** base of 5th metatarsal bone.

** **Actions:**

- 1- Plantar flexion of the foot.
- 2- Eversion of the foot.

3- Peroneus longus Plays an important role in supporting **transverse** arch of foot.





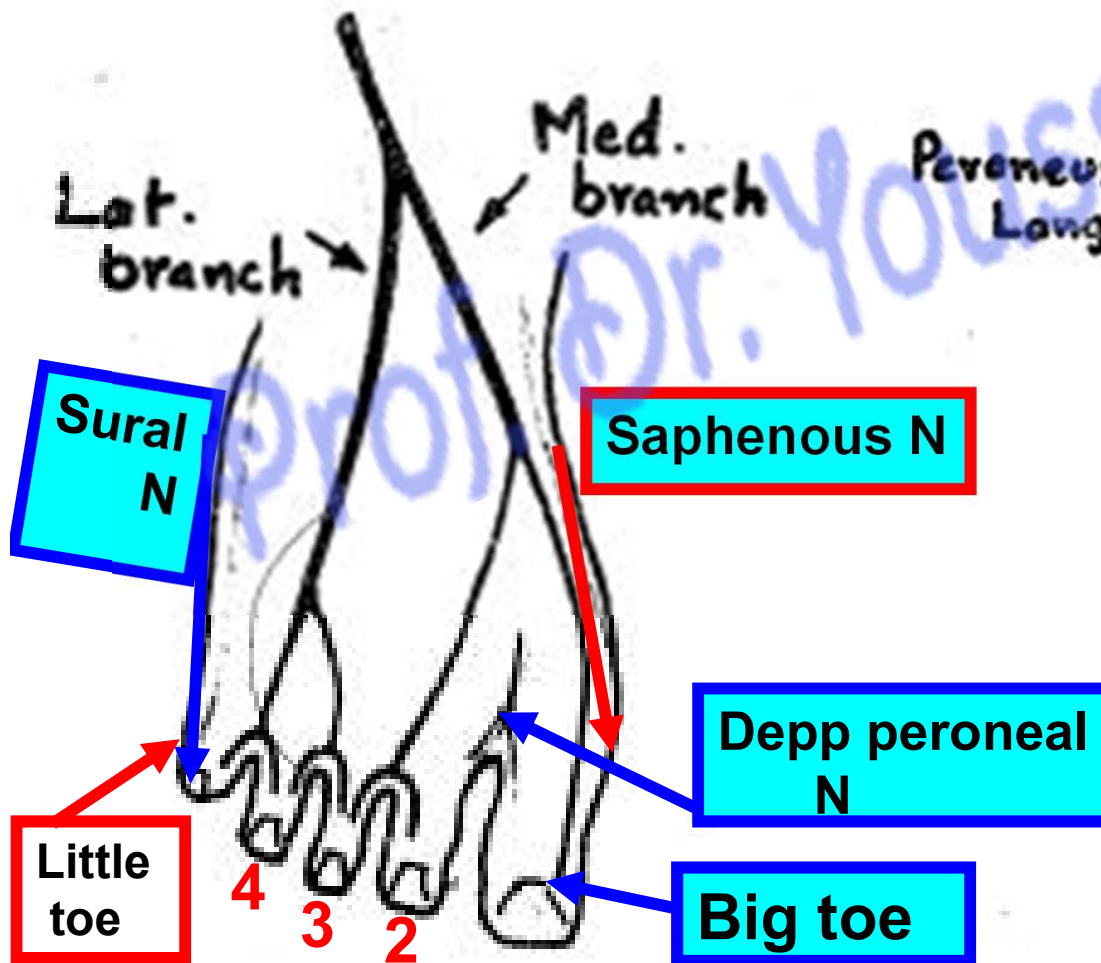
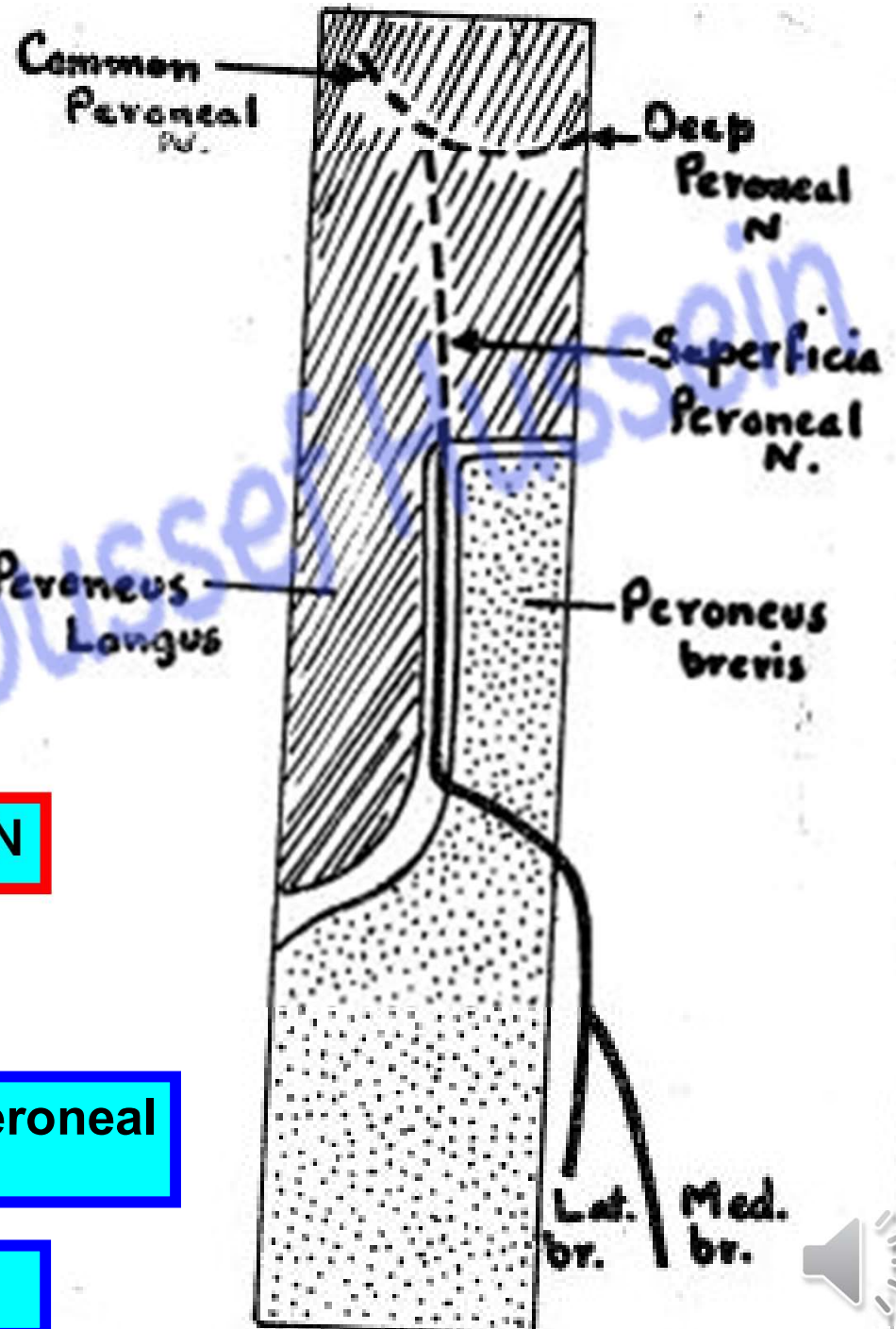
Tendon of Peroneus longus

Tendon of Peroneus brevis

5th metatarsal bone



Superficial peroneal nerve



- **Superficial Peroneal Nerve (musculocutaneous)**

**** Origin:** It is the smaller of the two terminal branches of the common peroneal nerve within the substance of the peroneus longus.

**** Course and relations:**

- It descends through the peroneus longus.
- Then between the peroneus longus and brevis.
- In the lower part of the leg; it pierces the deep fascia where it becomes subcutaneous.
- It enters foot superficial to extensor retinacula

**** Termination;** It divides into medial and lateral terminal branches.



- **Superficial Peroneal Nerve (musculocutaneous)**

**** Branches**

A- Muscular branches: two 2 peronei longus and brevis.

B- Cutaneous branches

- 1) The lower part of the lateral side and front of the leg.
- 2) Intermediate part of the dorsum of the foot.

C- Medial terminal division (Cutaneous): divides into 2 dorsal digital branches

1- Medial branch to the medial side of the big toe.

2- Lateral branch for adjacent sides of the 2nd and 3rd toes.

D- Lateral terminal division (Cutaneous) divides into 2 dorsal digital branches:

1- Medial branch for adjacent sides of the 3rd and 4th toes.

2- Lateral branch for adjacent sides of the 4th and little toes.



**** Injury of the common peroneal nerve**

**** Causes:** Fracture of the neck of the fibula (The **commonest site & dangerous position**).

**** Effect of injury:**

1- Motor; Paralysis of muscles of the leg

- Anterior compartment (deep peroneal N)

- Lateral compartment (superficial peroneal)

-Deformity: Foot drops

(manifested by plantar flexion and Inversion).

2- Sensory;

1) Loss of sensations on lower part of the front of the leg.

2) Loss of sensation of the dorsum of the foot **except** medial side (saphenous nerve)

3) Loss of sensation dorsum of all toes **except** lateral side of little toe (sural nerve)



