



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)

A green arrow pointing downwards, containing white text. The arrow has a slight gradient and a shadow effect.

**Anterior
COMPARTMENTS
OF THE LEG**

- **Cutaneous Nerve Supply of the leg**

1- Medial side by saphenous nerve (from femoral nerve).

2- Front and lateral side of the leg:

b- Upper by lateral cutaneous nerve of the calf.

c- Lower by superficial peroneal nerve.

- ** Cutaneous Nerve Supply of the Foot**

A- Dorsum of the foot.

1- Medial by saphenous nerve.

2- Lateral by sural nerve.

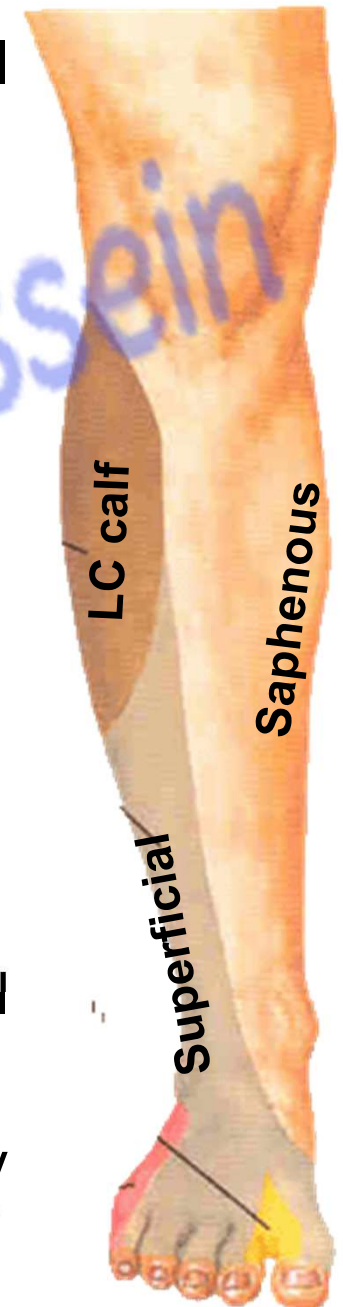
3- Intermediate part by superficial peroneal nerve.

B- Dorsum of the toes;

- All the dorsum of the toes supplied by superficial peroneal nerve **except 2 areas;**

1- The adjacent sides between big toe and 2nd toe by the **deep peroneal nerve**.

2- Lateral side of the little toe by the **sural nerve**.

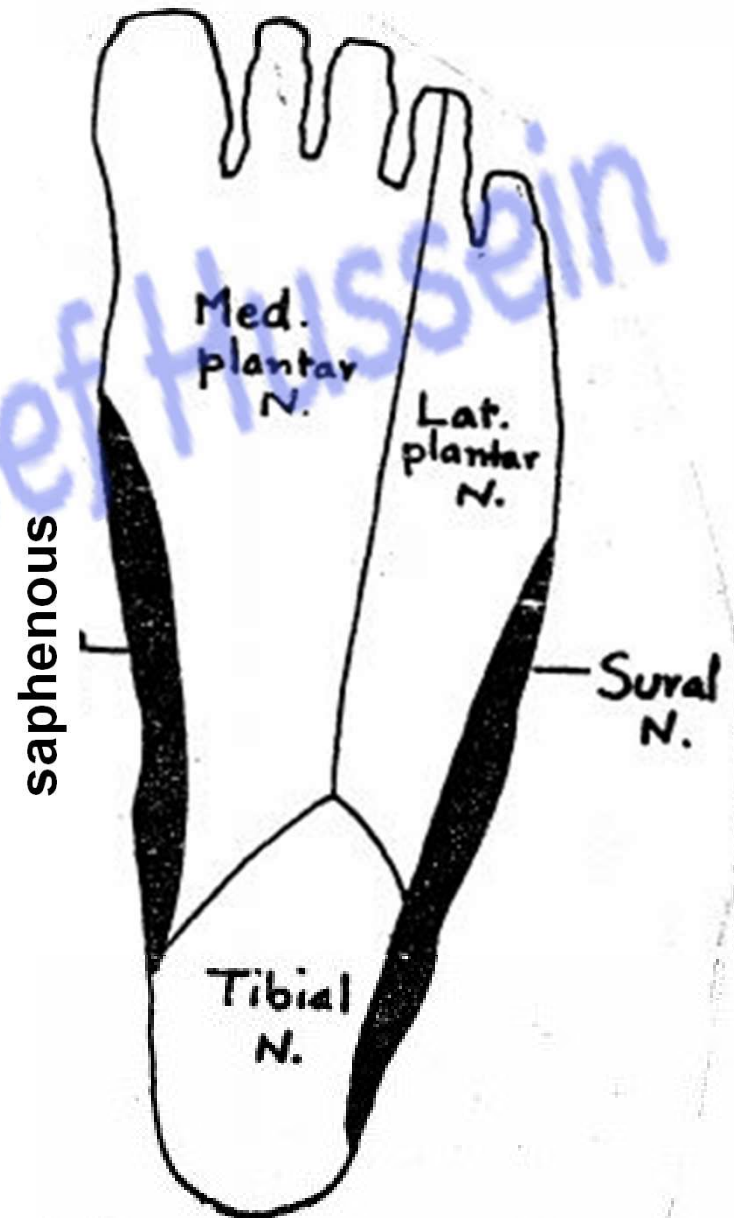


C- Sole of the foot

- 1- The **heel** by the posterior tibial nerve.
- 2- **Medial 2/3** by the medial plantar nerve.
- 3- **Lateral 1/3** by the lateral plantar nerve.

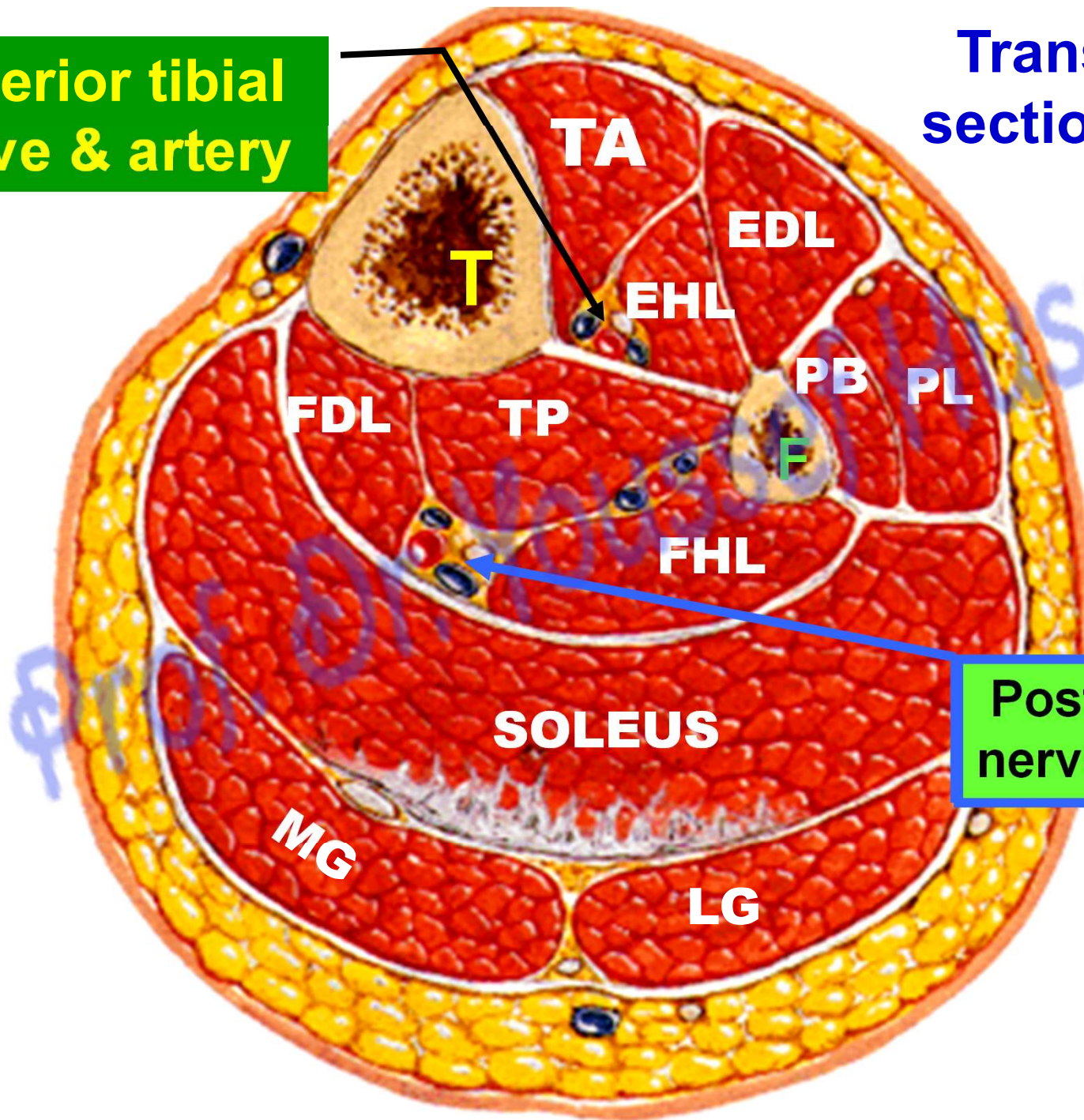
D- Plantar surfaces of the toes;

- 1- **Medial three and half** toes by medial plantar nerve.
- 2- **Lateral one and half** toes by lateral plantar nerve.



**Anterior tibial
nerve & artery**

**Transverse
section of leg**

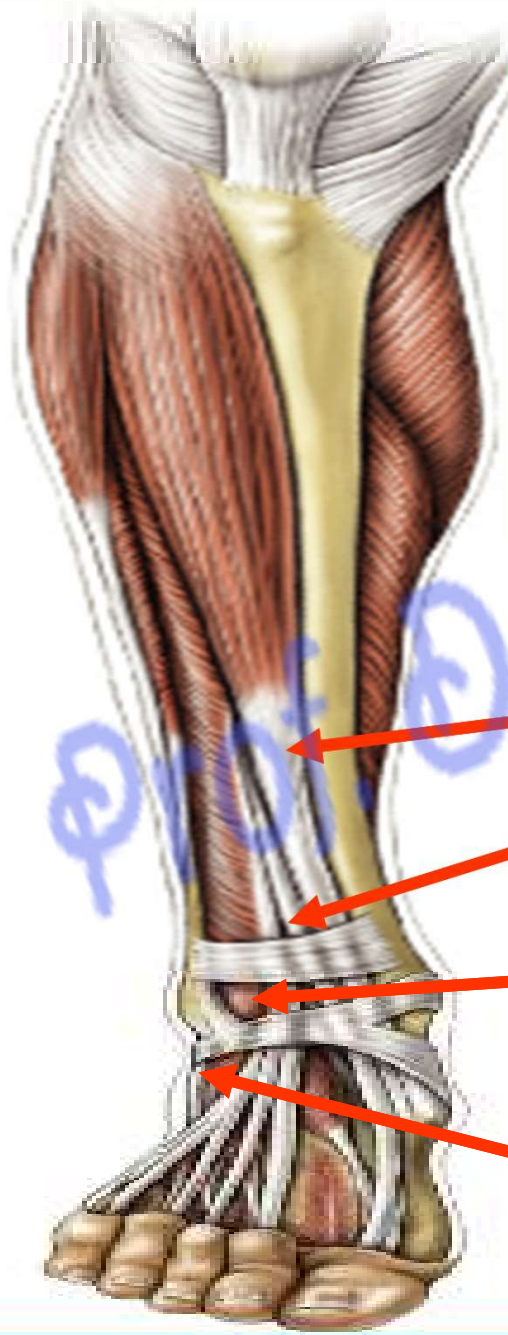


**Posterior tibial
nerve & vessels**

- **Anterior Compartment of the Leg**

Tom Has Very Nice Dark Pen

- 1- **Tibialis anterior** muscle.
- 2- **Extensor Hallucis longus** muscle.
- 3- **Anterior tibial Vessels**.
- 4- **Deep peroneal (anterior tibial) Nerve**.
- 5- **Extensor Digitorum longus** muscle.
- 6- **Peroneus tertius** muscle.



Tibialis anterior

Ext hallucis longus

Ext digitorum longus

Peroneus tertius

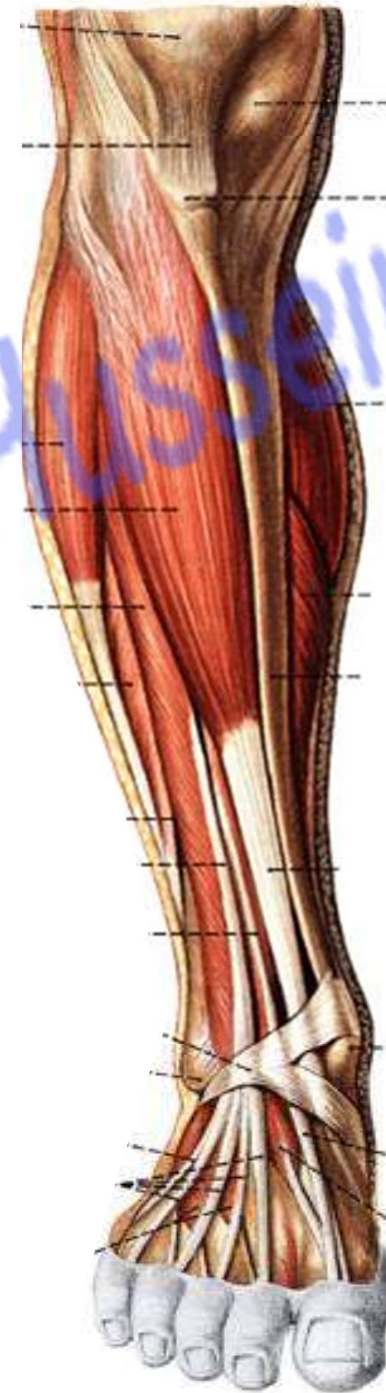
Anterior Compartment

All muscles of this group arise from the front of the fibula except tibialis anterior which arises from the tibia.

Nerve supply: deep peroneal Nerve (ant tibial N)

Actions: Dorsiflexion of the foot (ankle joint)

B.S: Anterior tibial vessels.



**** Origin of muscles of anterior compartment**

1- Tibialis Anterior

- From the upper 2/3 of the lateral surface of the **tibia**.

2- Extensor Digitorum Longus

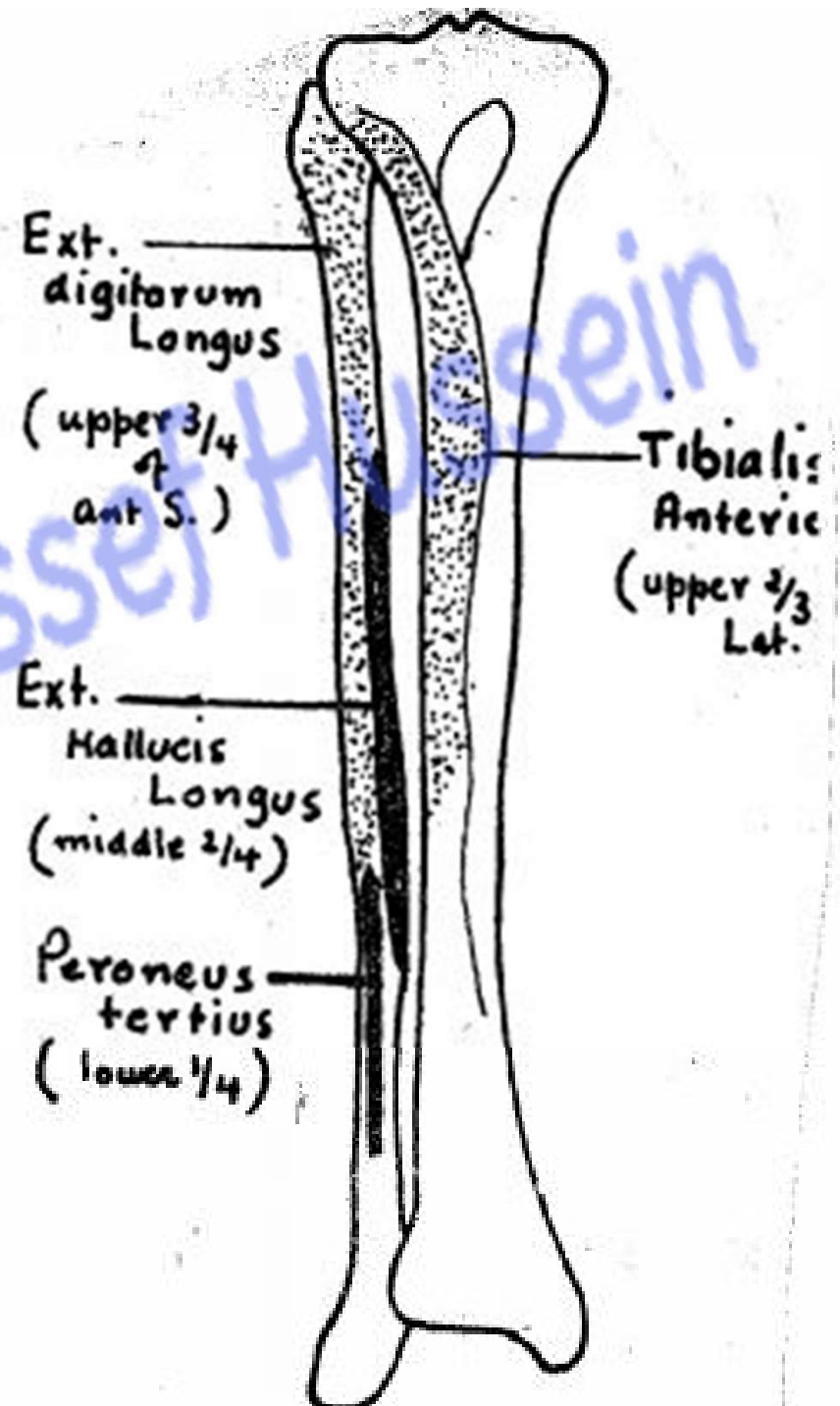
- from the upper 3/4 of the anterior surface of the **fibula**.

3- Extensor Hallucis Longus

- From the middle 2/4 of the anterior surface of the **fibula**.

4- Peroneus Tertius

- From the lower 1/4 of the anterior surface of the **fibula**.



Insertion of muscles of ant compartment

1- Tibialis Anterior

- Medial cuneiform bone and the first metatarsal bone.

2- Extensor Digitorum Longus

- **Extensor expansions** of lateral 4 toes that divided into

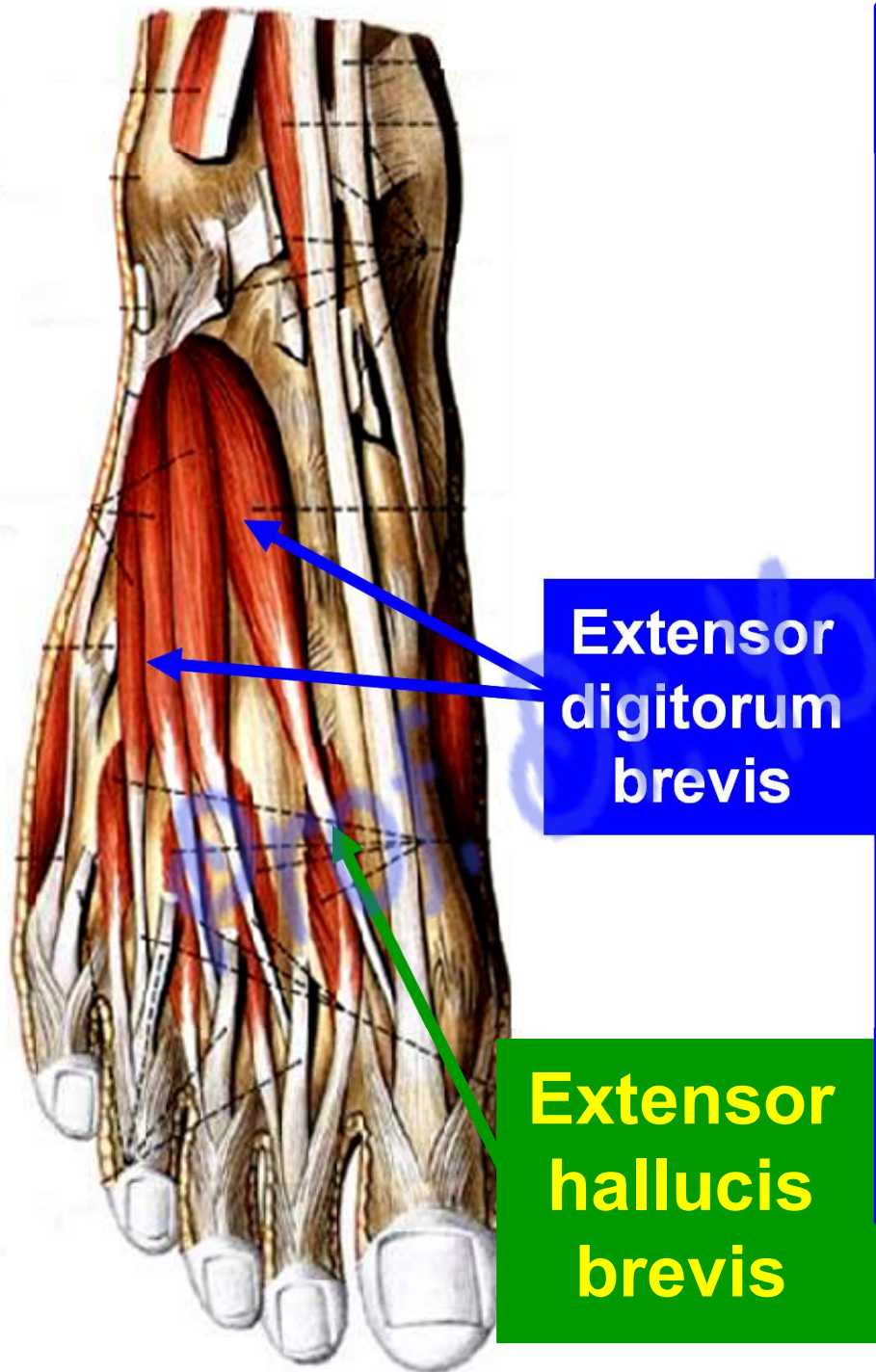
3- Extensor Hallucis Longus

- Terminal phalanx of the big toe.

4- Peroneus Tertius

- The 5th metatarsal bone.





- **Extensor Digitorum Brevis**

**** Origin;**

1. From the anterior surface of the calcaneus.
2. From inferior extensor retinaculum.

**** Insertion:** The muscle divides into **4 slips** for the medial 4 toes.

- 1- The **medial slip** inserted into **proximal** phalanx of the big toe (**extensor hallucis brevis**).

- 2- The **lateral 3 slips** are inserted into extensor expansion of the **2nd, 3rd and 4th toes**.

Middle slip to middle phalanx

Extensor expansions of 2nd, 3rd, 4th toes

Extensor expansion on proximal phalanx

Two collateral slips to terminal phalanges

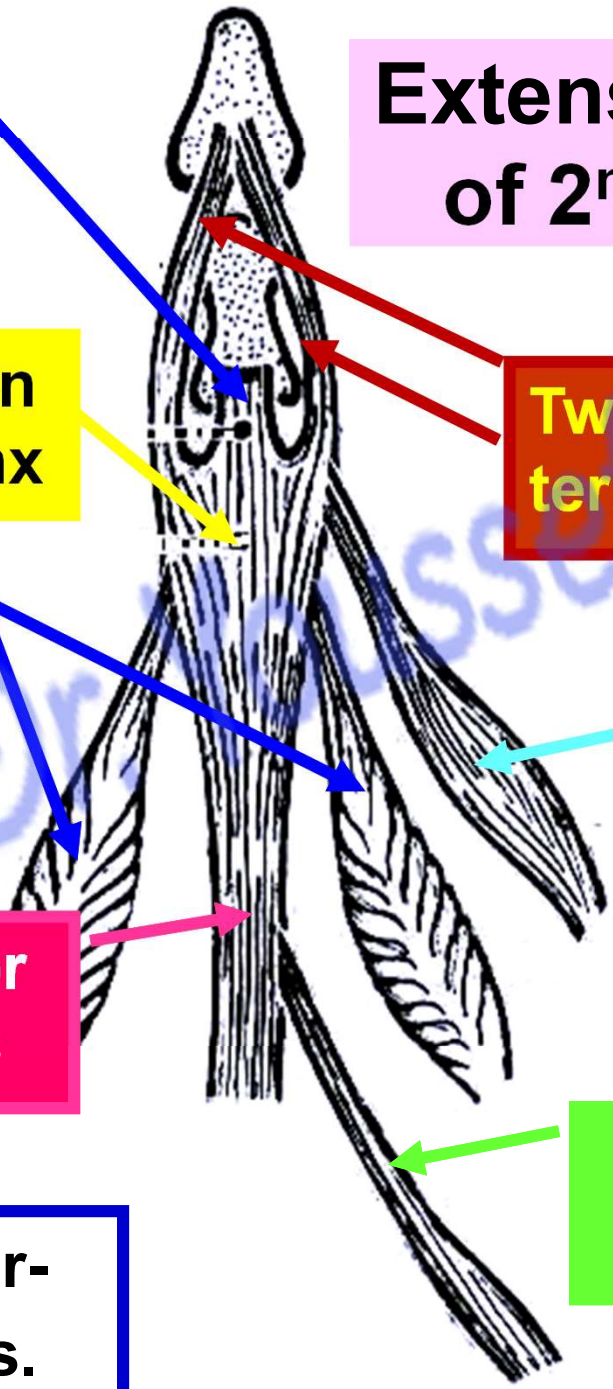
Tendons of 2 interossei

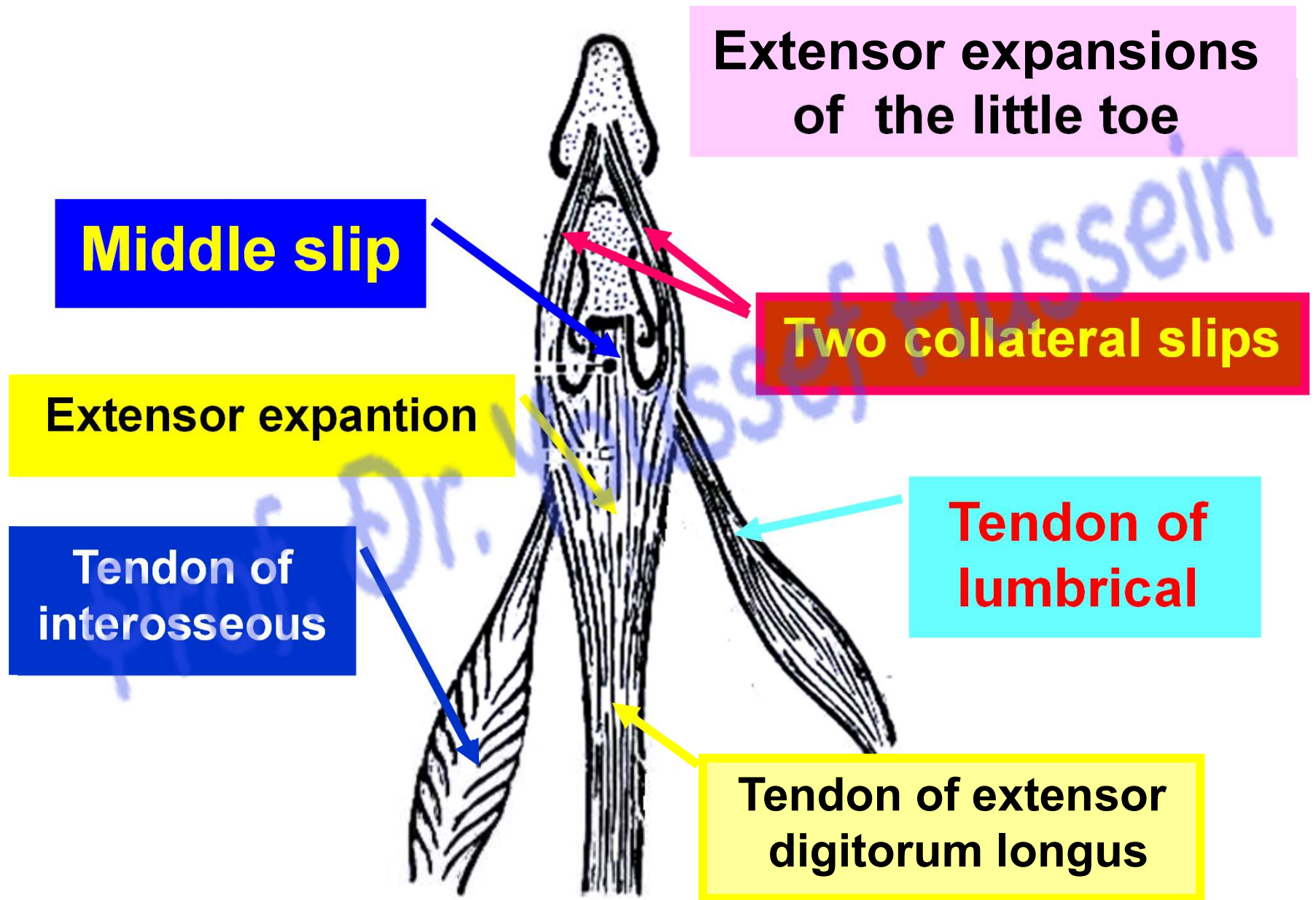
Tendon of lumbrical

Tendon of extensor digitorum longus

Tendon of extensor digitorum brevis

Extension of inter-phalangeal joints.





N.B; The big toe has no extensor expansion.

❖ Actions of the muscles

1- Tibialis Anterior

- 1- Dorsiflexion of the foot (ankle joint).
- 2- Inversion of the foot.
- 3- Support and maintain **medial longitudinal arch** of foot.

2- Extensor Digitorum Longus

- 1- Dorsiflexion of the foot.
- 2- Extension of the metatarsophalangeal joints and all joints of the **lateral 4 toes**.

3- Extensor Hallucis Longus

- 1- Dorsiflexion of the foot.
- 2- Extension of the metatarsophalangeal joints all joints of the **big toe**.

4- Peroneus Tertius

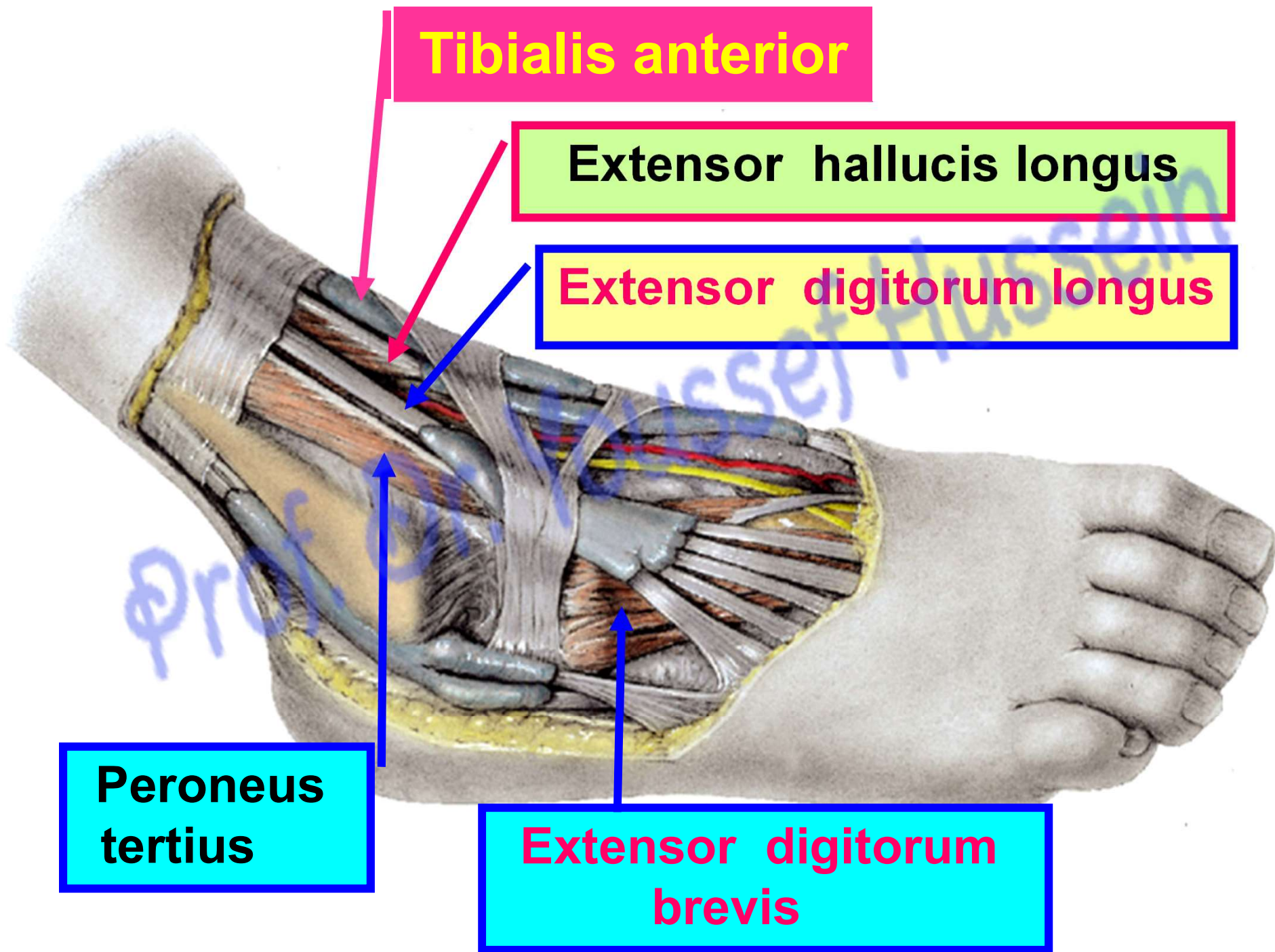
- 1- Dorsiflexion of the foot.
- 2- Eversion of the foot.

Tibialis anterior

**Tendon of
Extensor
hallucis longus**

**Tendons of
Extensor
digitorum longus**





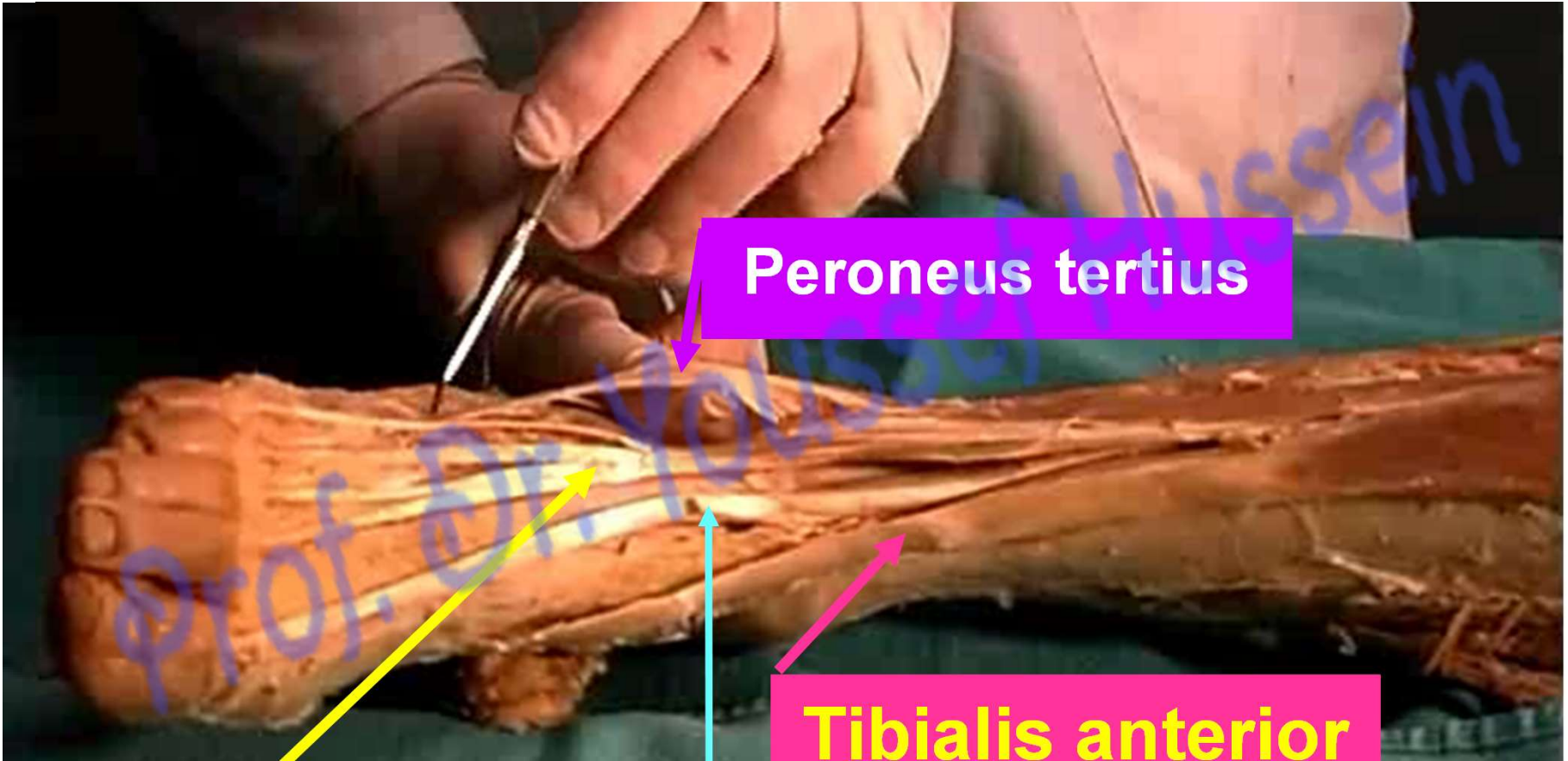
Tibialis anterior

Extensor hallucis longus

Extensor digitorum longus

Peroneus tertius

Extensor digitorum brevis



Peroneus tertius

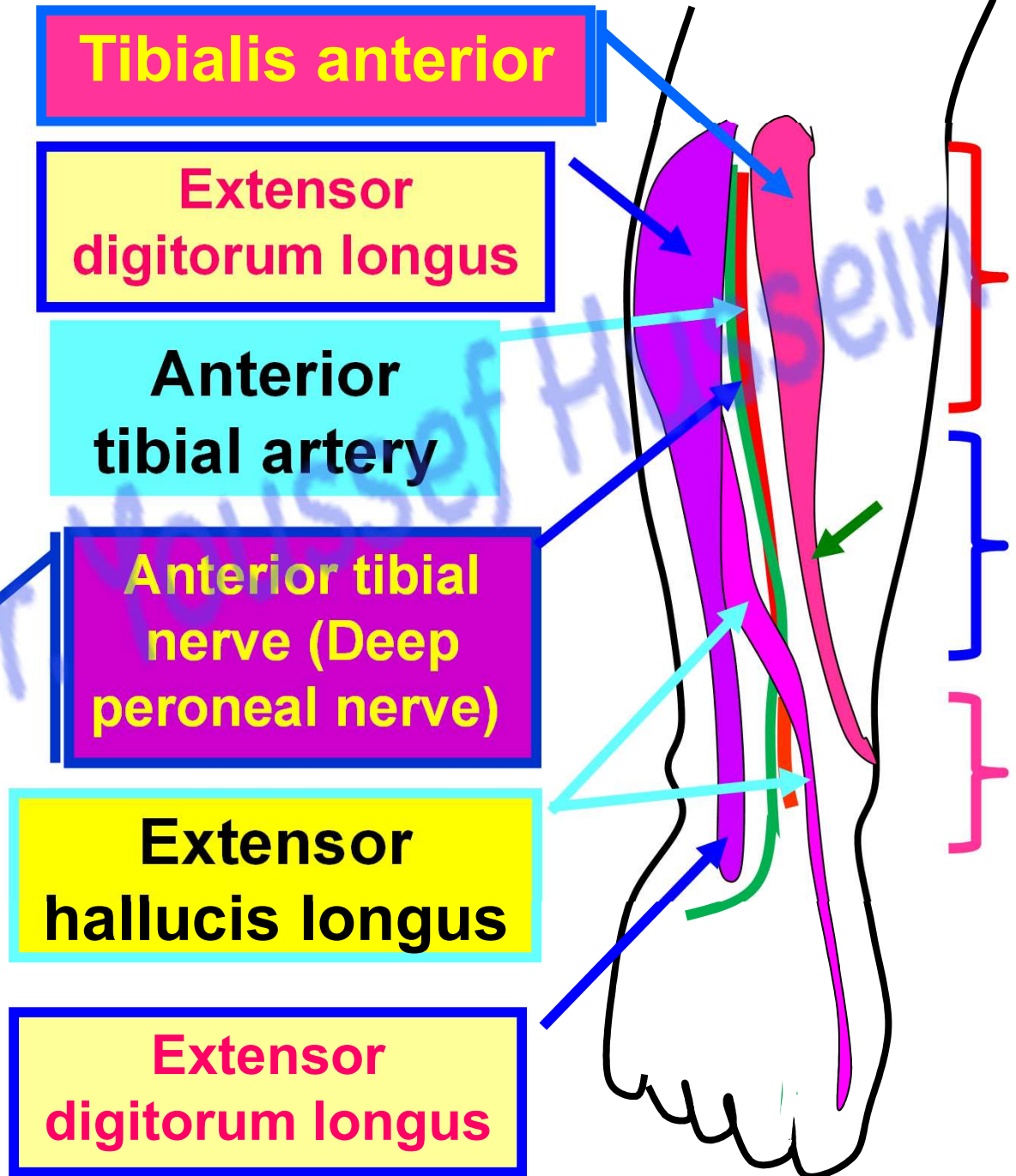
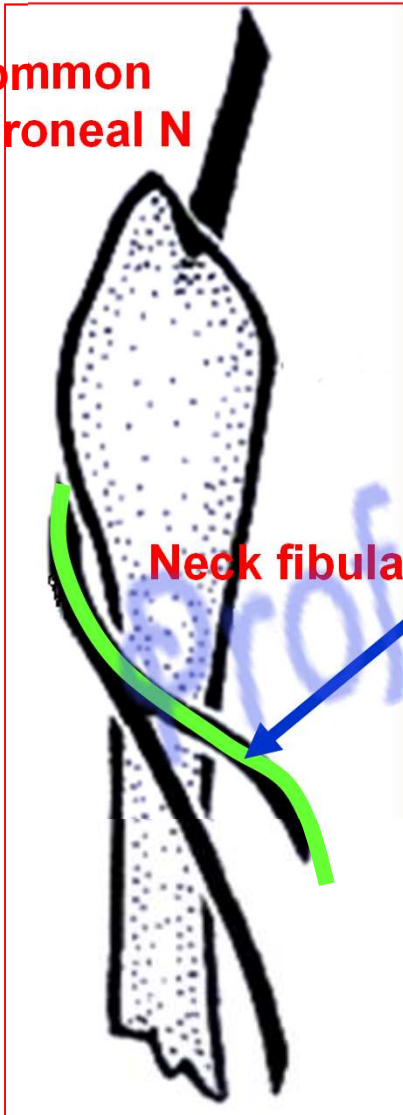
Tibialis anterior

**Extensor
hallucis longus**

**Extensor
digitorum longus**

Deep peroneal nerve

Common peroneal N



- **Anterior tibial (Deep Peroneal) Nerve**

**** Origin:** one of the two terminal branches of the common peroneal nerve, at the **lateral side of the neck of the fibula**.

**** Course and relations in the leg:**

1- It passes through the extensor digitorum longus.

2- Upper part, between Tibialis anterior and extensor digitorum longus.

3- Middle part, between Tibialis anterior and extensor hallucis longus.

4- lower part, between Extensor hallucis longus and extensor digitorum longus.

5- It is crossed by extensor hallucis longus from lateral to medial

**** Termination;** by dividing into medial and lateral terminal branches.

**** Branches of anterior tibial nerve**

1- Muscular branches to muscles of the anterior compartment

2- Articular branches: to the ankle joint.

3- Terminal branches in the foot

I- Medial terminal branch:

- **Cutaneous** to the adjacent sides of the big and 2nd toes.

- **Articular branches** to the joints of the foot.

II- Lateral terminal branch: ends by ganglia and gives

1- Muscular to the extensor digitorum brevis.

2- Articular to the joints of the foot.

- **Injury of the anterior tibial nerve**

- ** **Causes**, Fracture neck of the fibula. Stab wound.

- ** **Results of injury**

- 1. Motor affects**; paralysis of muscles of anterior compartment leading to



- Loss of dorsiflexion and extension of toes.

- Weakness of inversion of the foot.

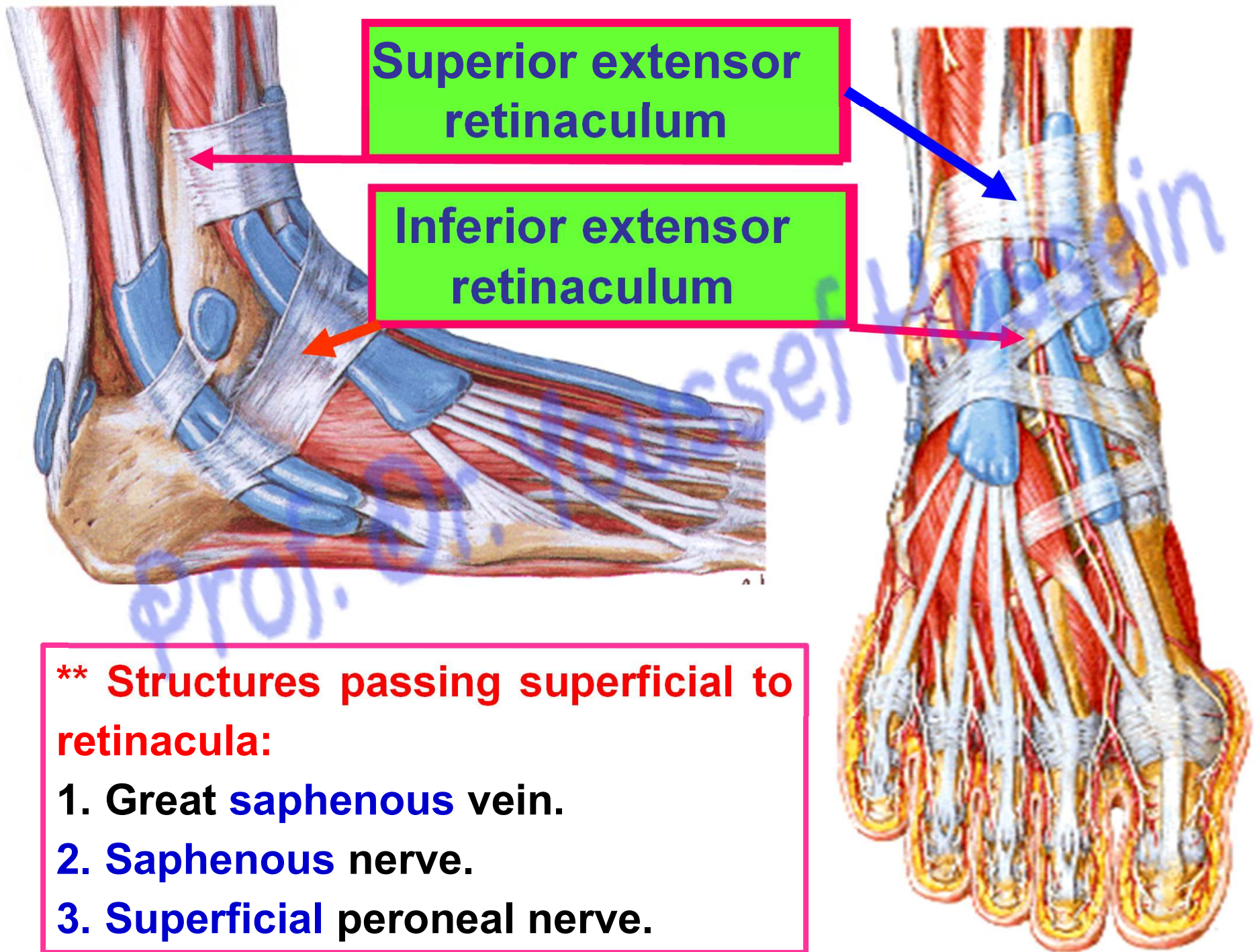
- ** **Deformity**, Foot drop

- **Gait**: high steppage gait.

- 2- Sensory affects**;

- loss of sensation of adjacent sides of the big and 2nd toe.





**** Structures passing superficial to retinacula:**

- 1. Great saphenous vein.**
- 2. Saphenous nerve.**
- 3. Superficial peroneal nerve.**

DEEP

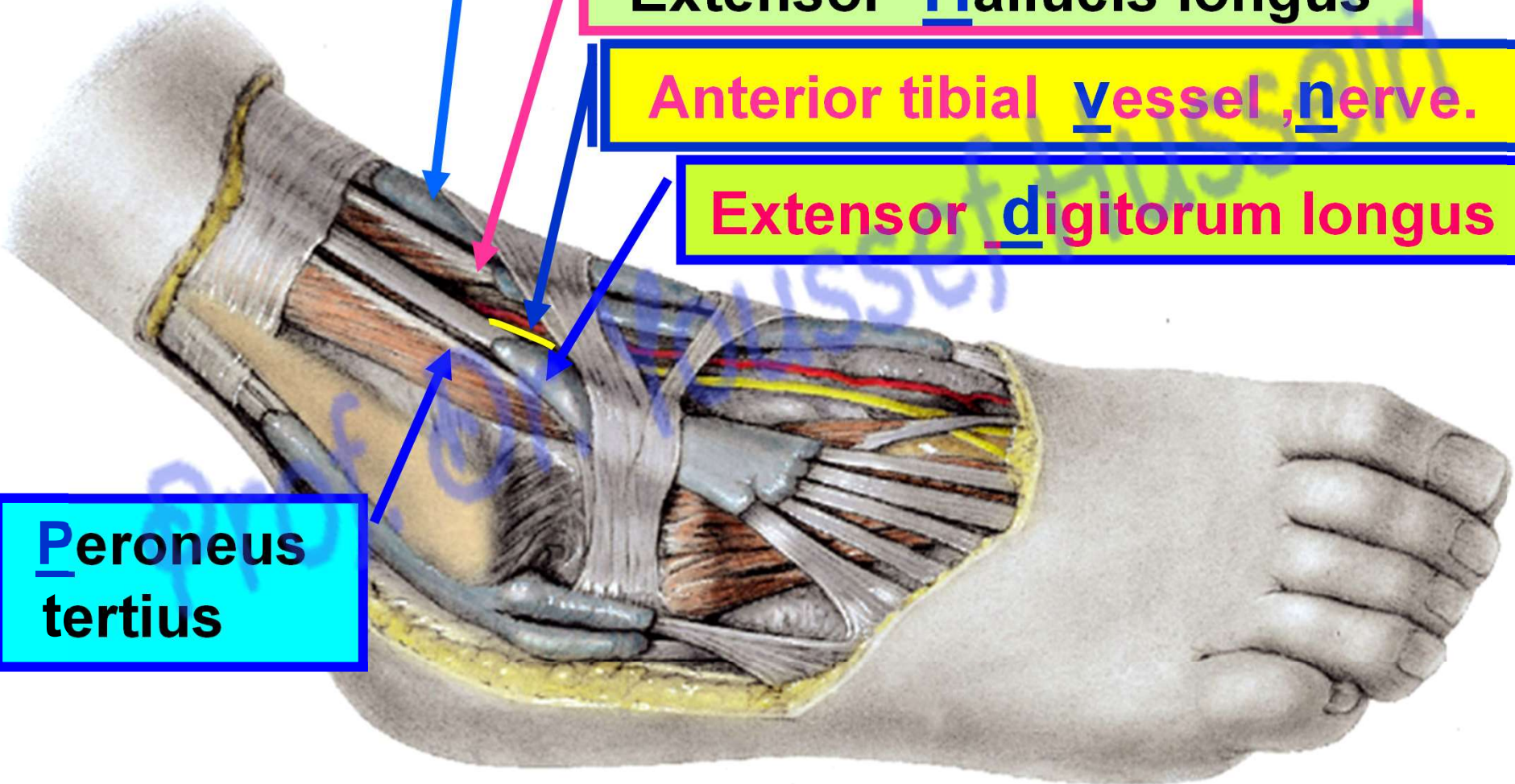
Tibialis anterior

Extensor Hallucis longus

Anterior tibial vessel, nerve.

Extensor digitorum longus

Peroneus tertius



Tom

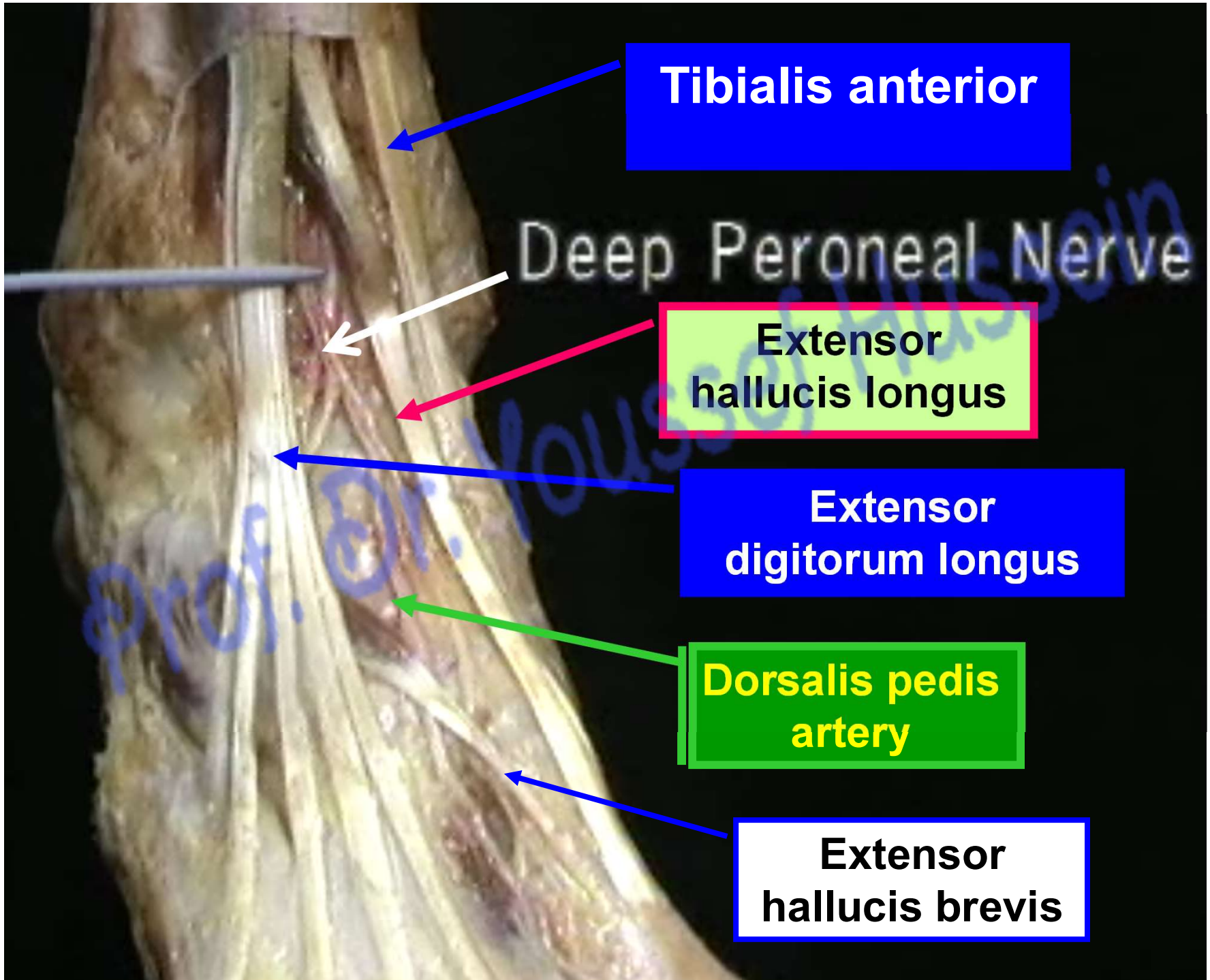
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Tibialis anterior

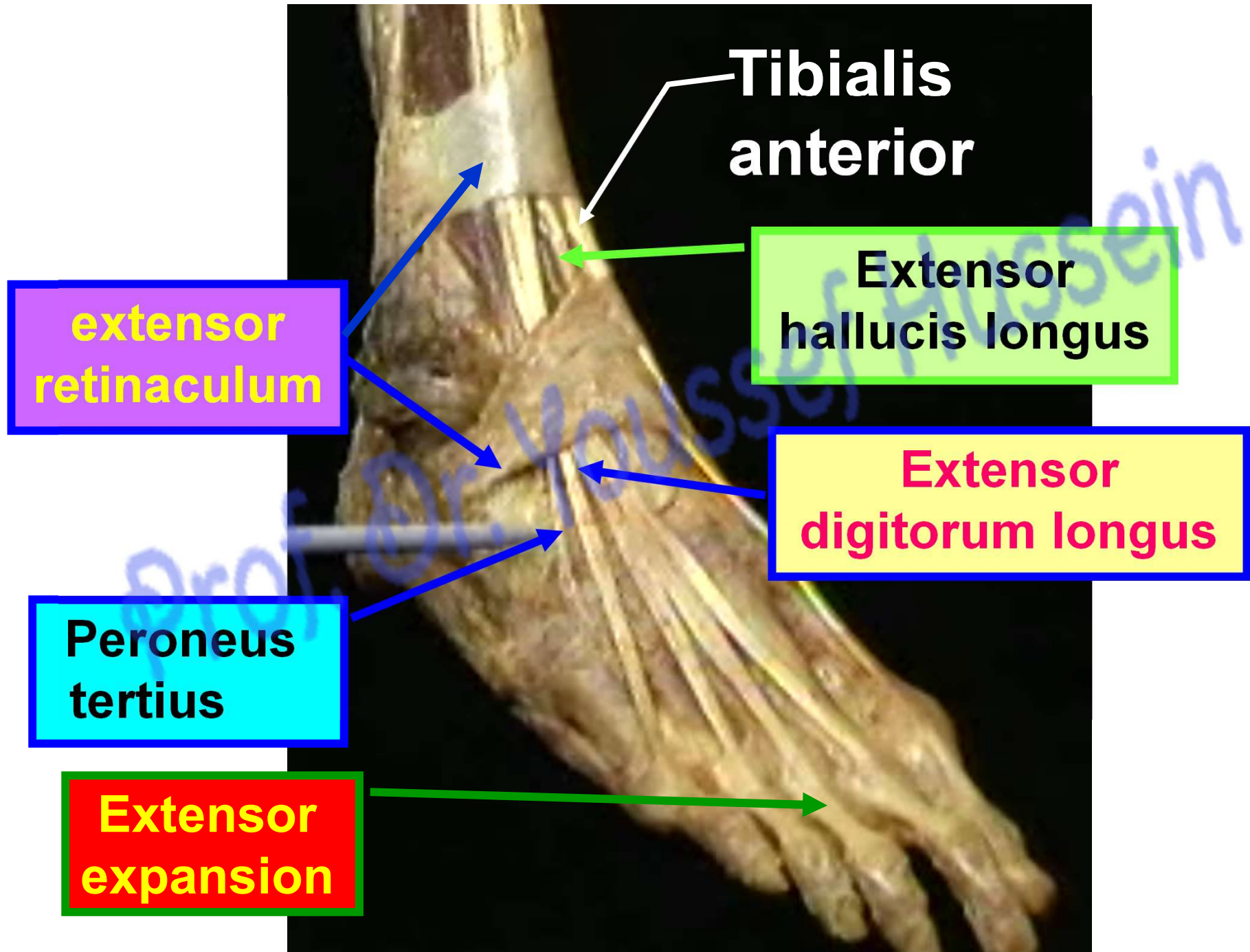
Deep Peroneal Nerve

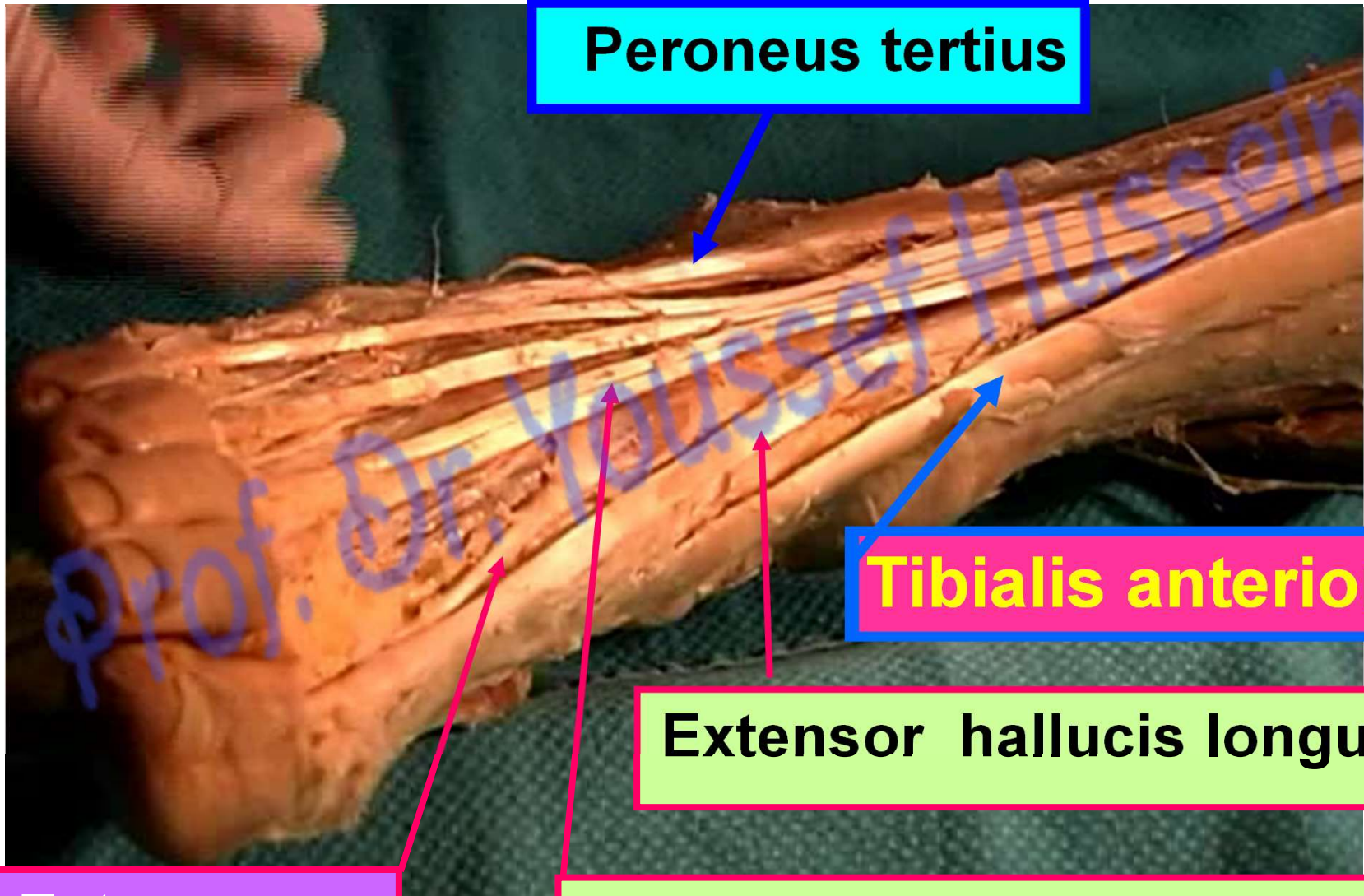
**Extensor
hallucis longus**

**Extensor
digitorum longus**

**Dorsalis pedis
artery**

**Extensor
hallucis brevis**





Peroneus tertius

Tibialis anterior

Extensor hallucis longus

**Extensor
hallucis brevis**

Extensor digitorum longus

