

وسهلا



أهلا

يُمنع أخذ السلايدات بدون
إذن المحرر واي اجراء
يخالف ذلك يقع تحت طائلة
المسؤولية القانونية
جميع المعلومات للاستخدام
التعليمي فقط

الأستاذ الدكتور يوسف حسين

كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا المانيا

الواتس (أي استفسار)
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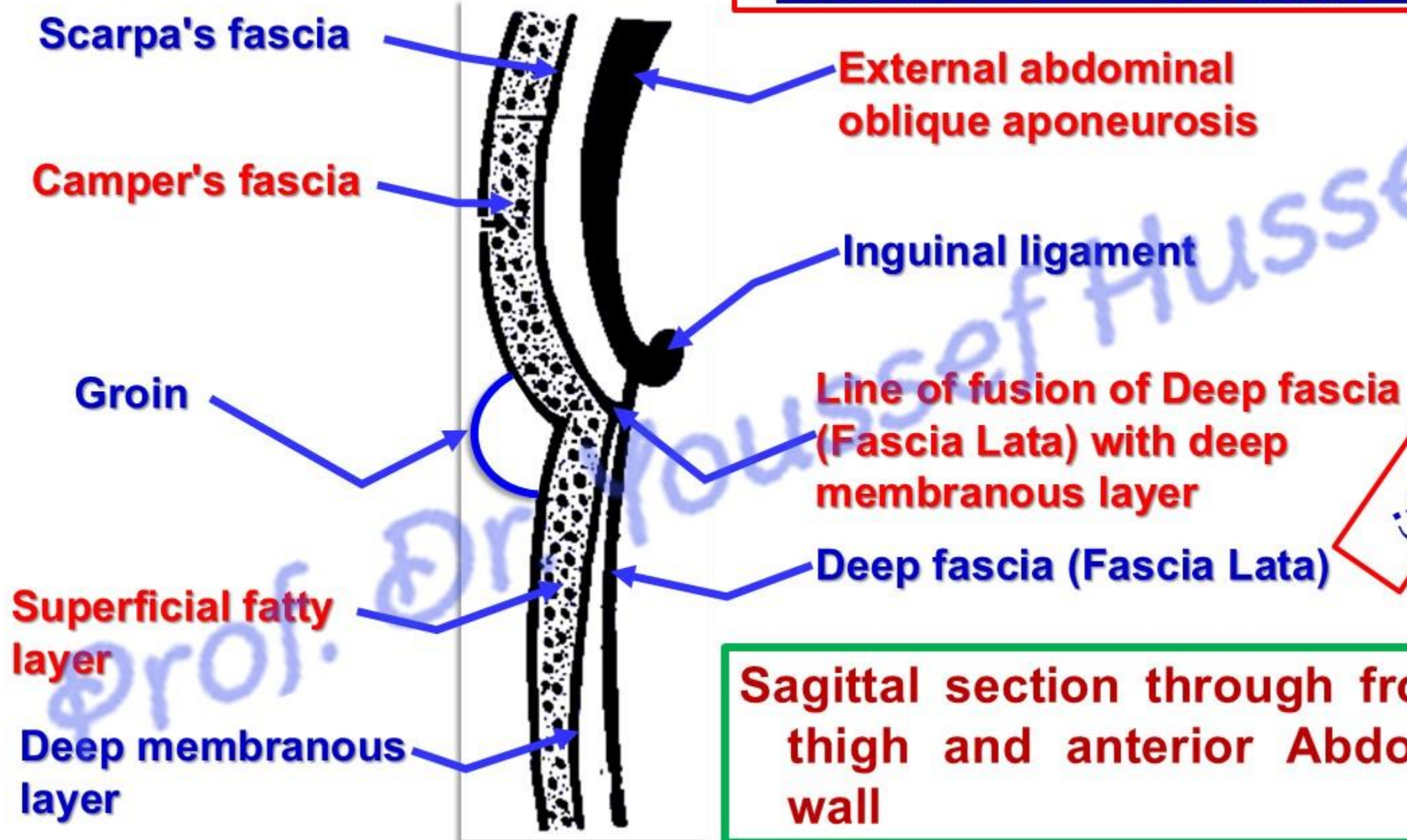
Front of the thigh

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Superficial and Deep Fascia

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Sagittal section through front of thigh and anterior Abdominal wall

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• Superficial Fascia of front of Thigh

- It is differentiated into:
 - a. **Superficial fatty layer:** thick especially in the medial side of the thigh.
- It continuous with Superficial fatty layer of anterior abdominal wall (**Camper's fascia**)
 - a. **Deep membranous layer:** continuous with Deep membranous layer of anterior abdominal wall (**Scarpa's fascia**)
- **** Groin** (Inguinal groove); junction of the anterior abdominal wall with front of thigh.

❖ Superficial cutaneous nerves

Femoral branch of genitofemoral nerve
(lumbar plexus L1, 2)

skin overlying the femoral triangle

Lateral cutaneous nerve of thigh
(lumbar plexus L 2, 3): Lateral part of the front of the thigh

Infrapatellar branch of saphenous nerve from femoral nerve L3&4

Ilioinguinal nerve (lumbar plexus L1,
upper part of the medial side of the thigh)

Obturator nerve (lumbar plexus L2, 3, 4,
middle 1/3 of the medial side of thigh)

Medial cutaneous nerve of thigh
(femoral nerve L 2, 3), Front and lower 1/3 of the medial side of the thigh

Intermediate cutaneous nerve of thigh
(femoral nerve L 2, 3), Front of the thigh

- **Patellar plexus**

- **Site:** on patella, ligamentum patella and proximal part of the tibia.

- **It is formed by;**

- 1- Anterior branch of the **lateral** cutaneous nerve of the thigh.
- 2- Anterior branch of the **medial** cutaneous nerve of the thigh.
- 3- **Intermediate** cutaneous nerve of the thigh.
- 4- **Infrapatellar** branch of the saphenous nerve.

- **Iliotibial Tract**

- It is the thickened lateral part of the **deep fascia of the thigh.**

- **Attachment**

a. **Superiorly:** outer lip of iliac crest

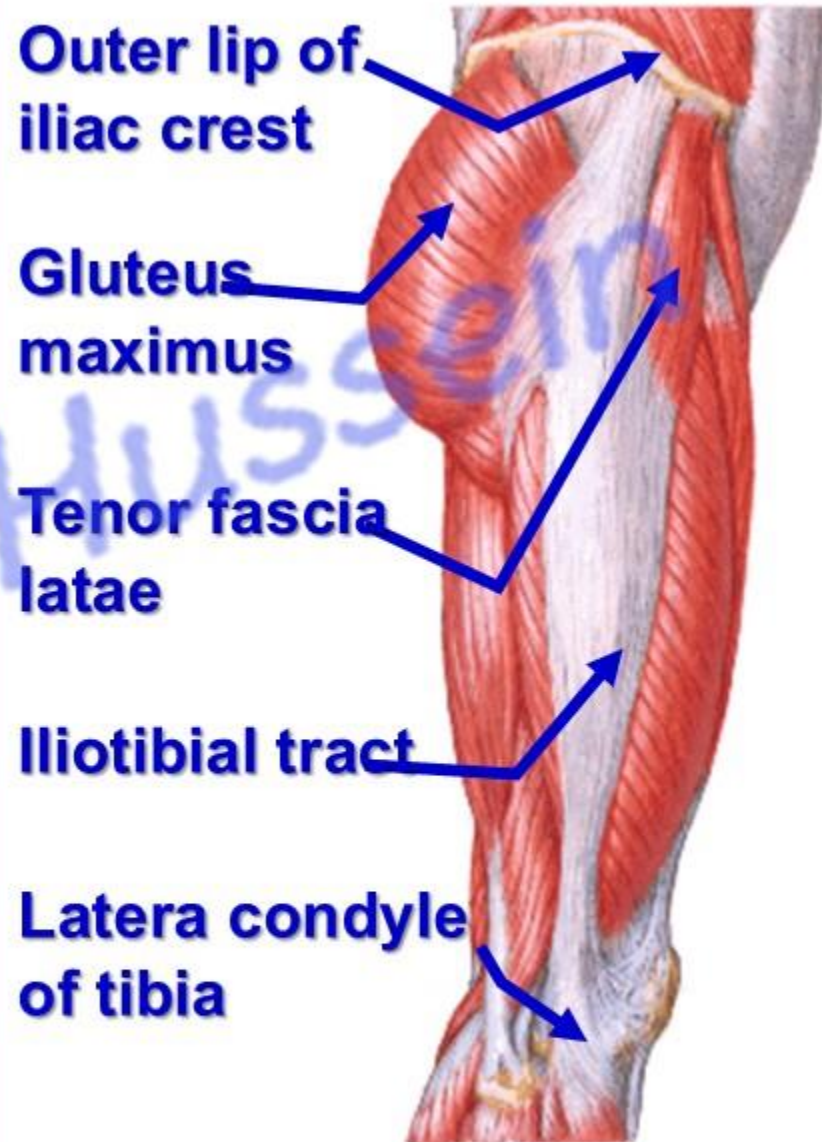
b. **Inferiorly,** lateral condyle of Tibia.

- **Nerve supply,** lateral cutaneous nerve of the thigh.

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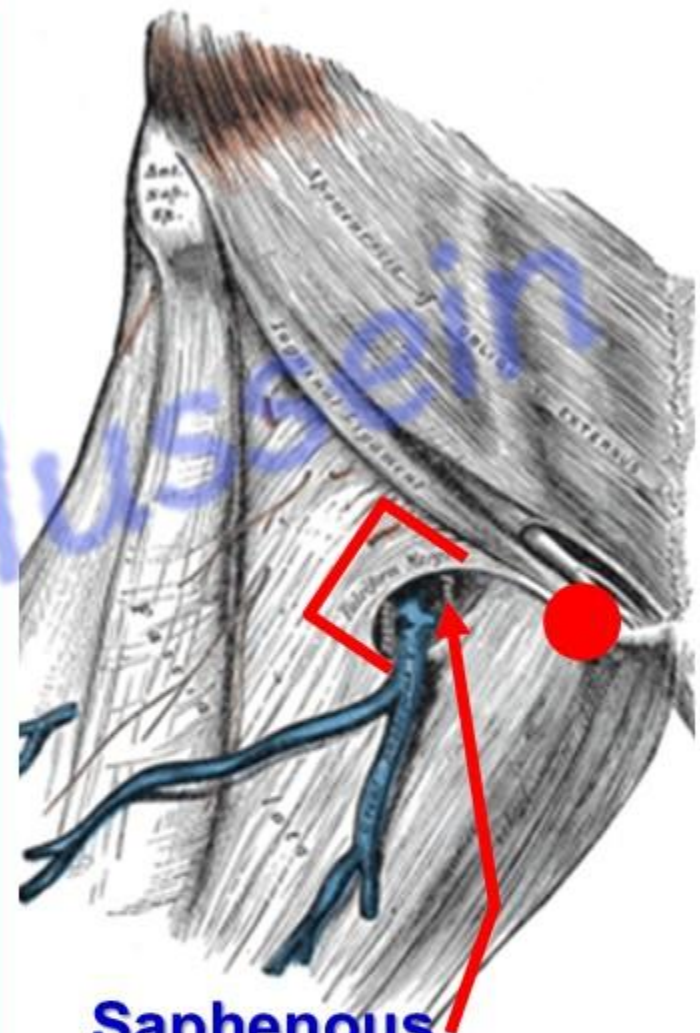
- **Functions,**

- 1- Receives **insertion** of superficial 3/4 of gluteus maximus and tensor fasciae latae.
- 2- Maintains extension of the knee joint.
- 3- Steady pelvis on the femur during standing.



• Saphenous Opening

- ** **Shape**, an oval opening in deep fascia of thigh.
- ** **Site**, 1.5 inches below and lateral to the pubic tubercle.
- ** **Margins**, superiorly, laterally and inferiorly are sharp and called **falciform margin**. medially, the margin is smooth.
- ** it is closed by a **cribriform fascia**.
- ** **Structures passing through the opening**
 - a- Great saphenous vein.
 - b- Lymph vessels from superficial to deep lymph nodes.
 - c- Superficial inguinal arteries from femoral artery**
 - 1- Superficial epigastric.
 - 2- Superficial external pudendal.
 - 3- Superficial circumflex iliac.
- ** **Deep relations**, femoral canal.
- ** **Surgical importance**, gives passage for femoral hernia.



**Saphenous
opening**

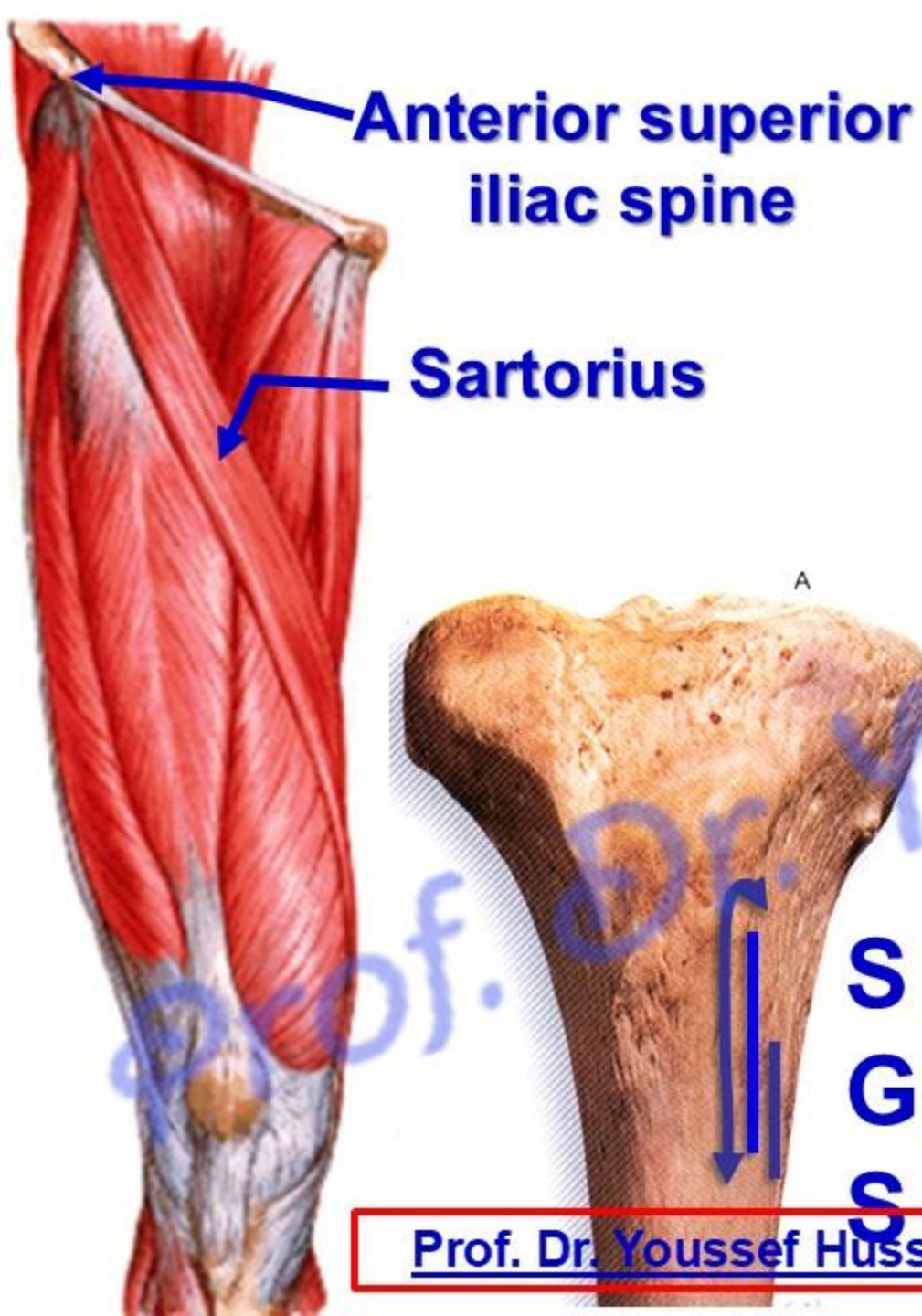
Muscles of Front of the thigh

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- Nerve supply: **All muscles of the front of thigh is supplied by femoral nerve except psoas major from lumbar plexus**

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❖ Sartorius

- It is the longest muscle of the body and it may be **absent**.

**** Origin:** from anterior superior iliac spine below attachment of inguinal ligament.

**** Insertion:** into the upper part of the medial surface of the tibia (SGS) sartorius, gracilis, semitendinosus from anterior to posterior.

**** Relations:**

- It forms the lateral border of **femoral triangle**
- It forms the roof of **adductor canal**

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Sartor = tailor

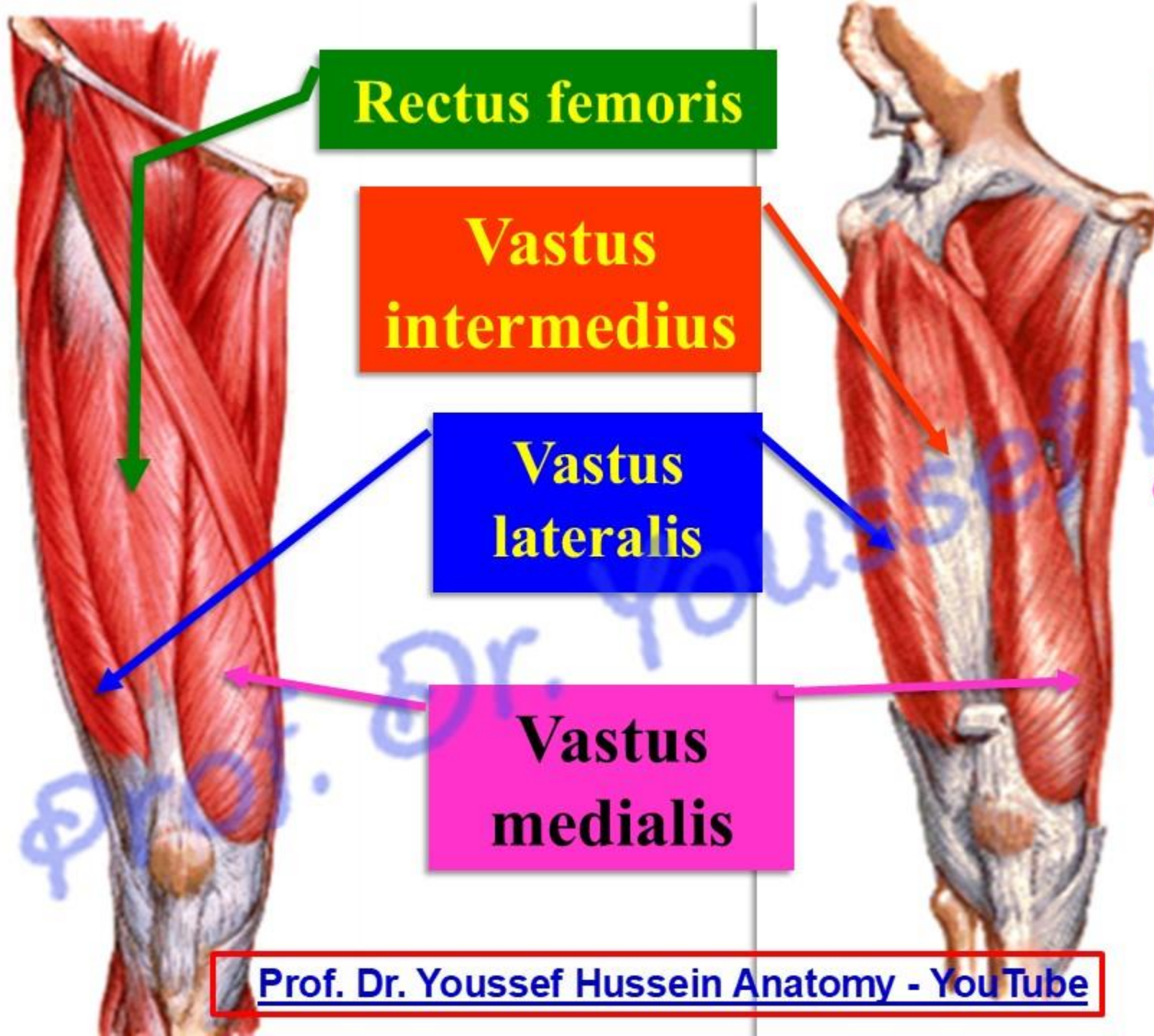
**** Actions:**

a- Flexion, abduction and lateral rotation of the thigh (**Hip joint**).

b- Medial rotation of the flexed leg (**Knee joint**).

N.B; Putting the lower limb in the classical cross leg position (tailor position)





Rectus femoris

**Vastus
intermedius**

**Vastus
lateralis**

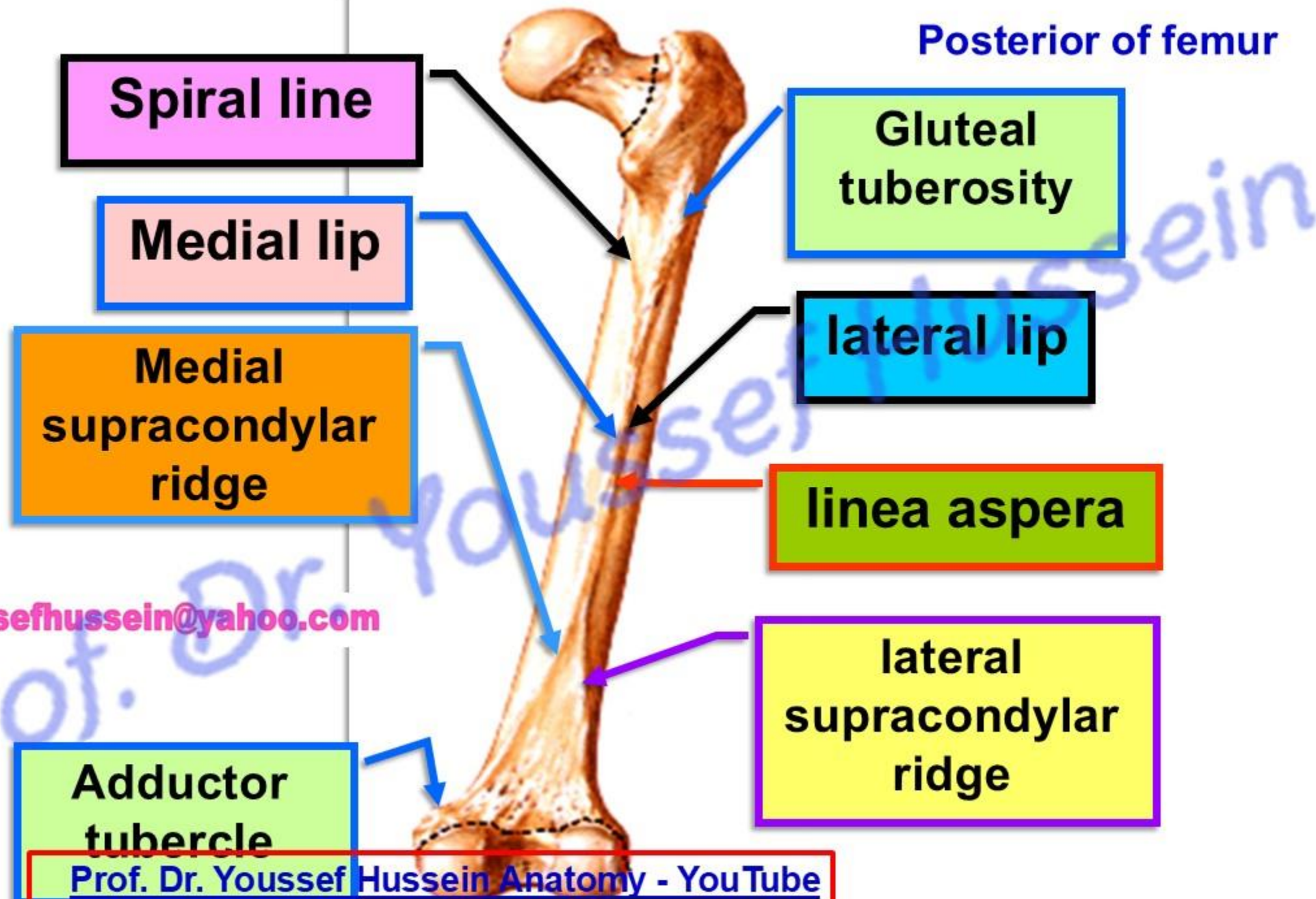
**Vastus
medialis**

**Quadriceps
muscle**

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Greater trochanter

Lesser trochanter

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Vastus Lat. (O.)

Vastus Med. (O.)

Vastus intermedius (O.)

Vastus Lateralis (O.)

Posterior of femur

Vastus Medialis (O.)

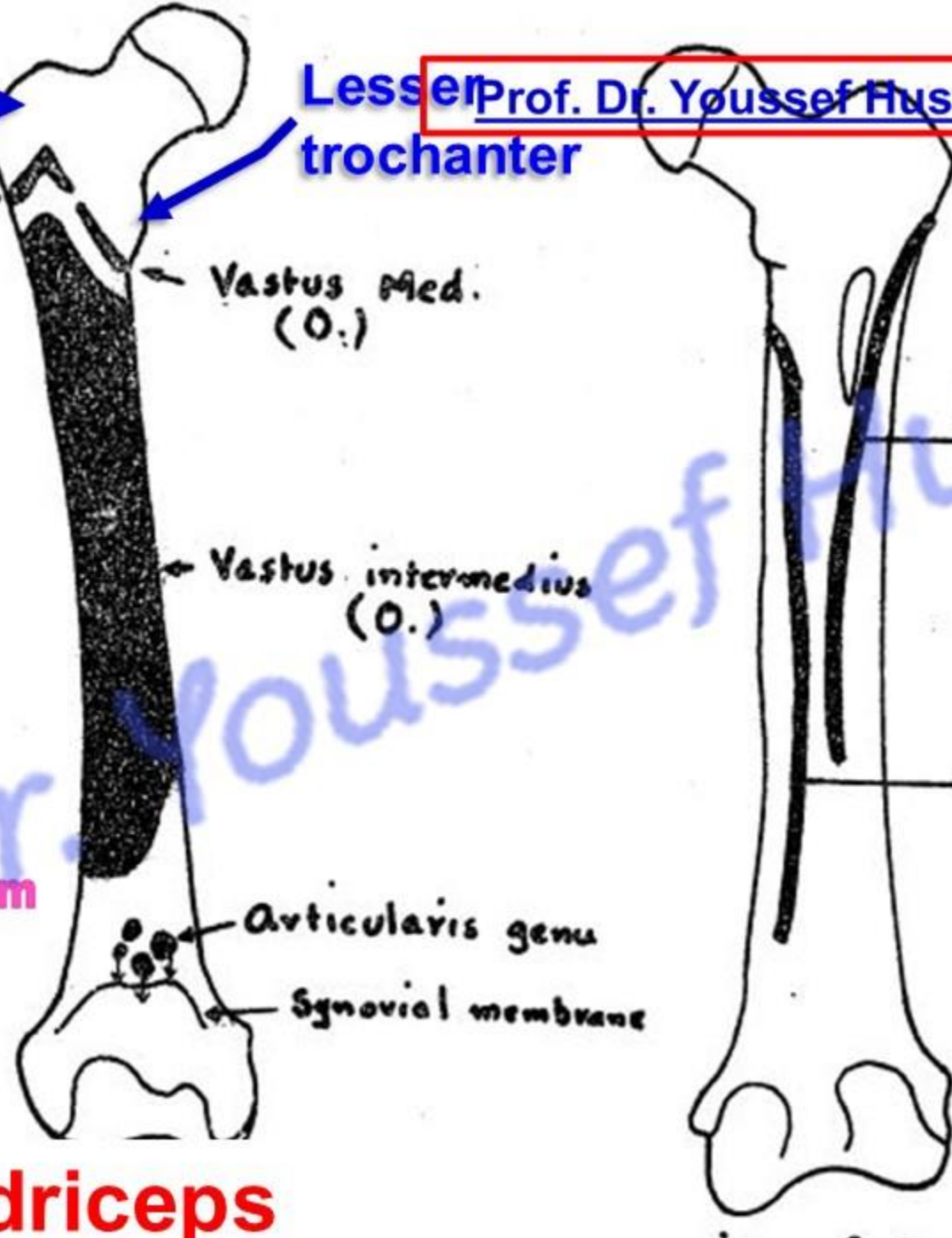
Anterior of femur

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Articularis genu

Synovial membrane

Origin of quadriceps



❖ Origin of Quadriceps Femoris

1- Vastus lateralis: arises by a linear origin from

- 1- Upper part of the intertrochanteric line.
- 2- Root of the greater trochanter.
- 3- Lateral margin of the gluteal tuberosity.
- 4- Lateral lip of the linea aspera.
- 5- Lateral supracondylar line.

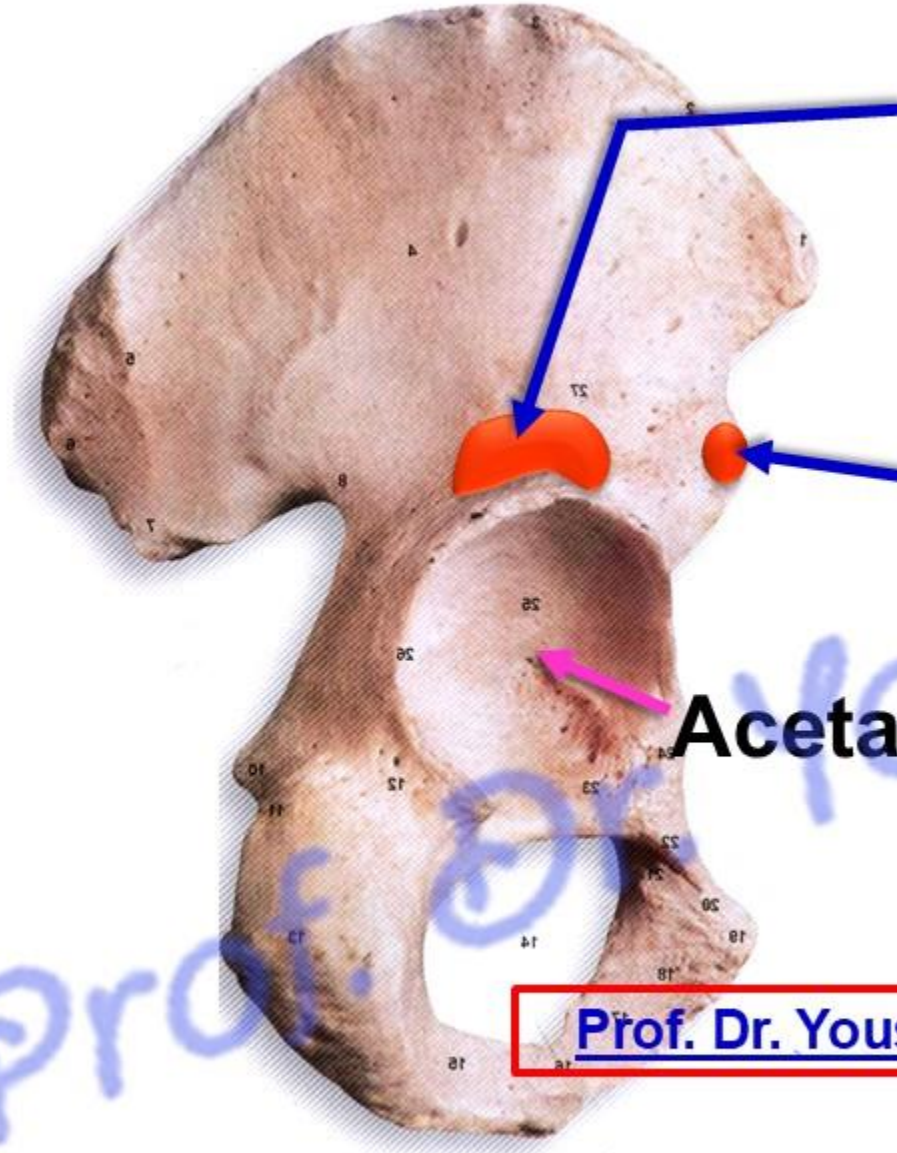
2- Vastus medialis: also arises by a linear origin from

- 1- Lower part of the Intertrochanteric line.
- 2- Spiral line.
- 3- Medial lip of the linea aspera.
- 4- Medial supracondylar line.

3- Vastus intermedius, from the upper 3/4 of the anterior and lateral surfaces of the shaft of the femur.

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Reflected head from an impression just above the acetabulum.

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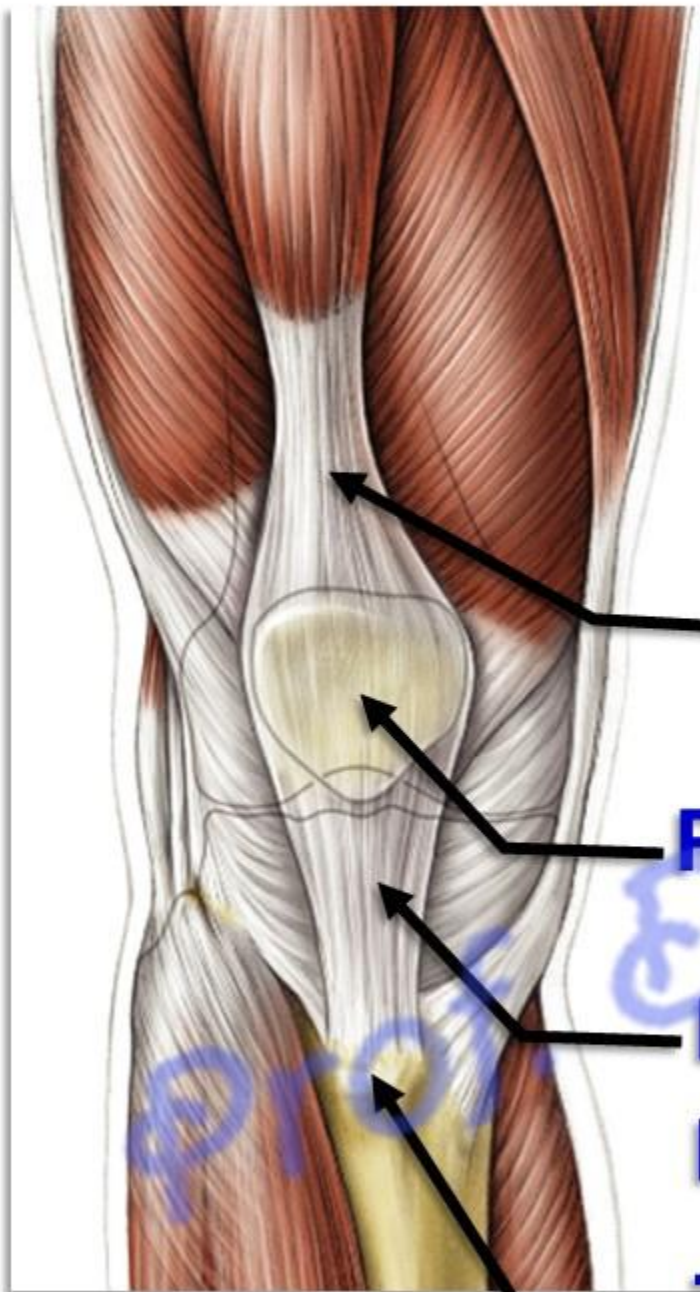
Straight head of Rectus femoris from the upper part of anterior inferior iliac spine

Acetabulum

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Origin of rectus femoris

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Quadriceps tendon

Patella

Ligamentum patellae

Tibial tuberosity

❖ ** Insertion of quadriceps muscles:

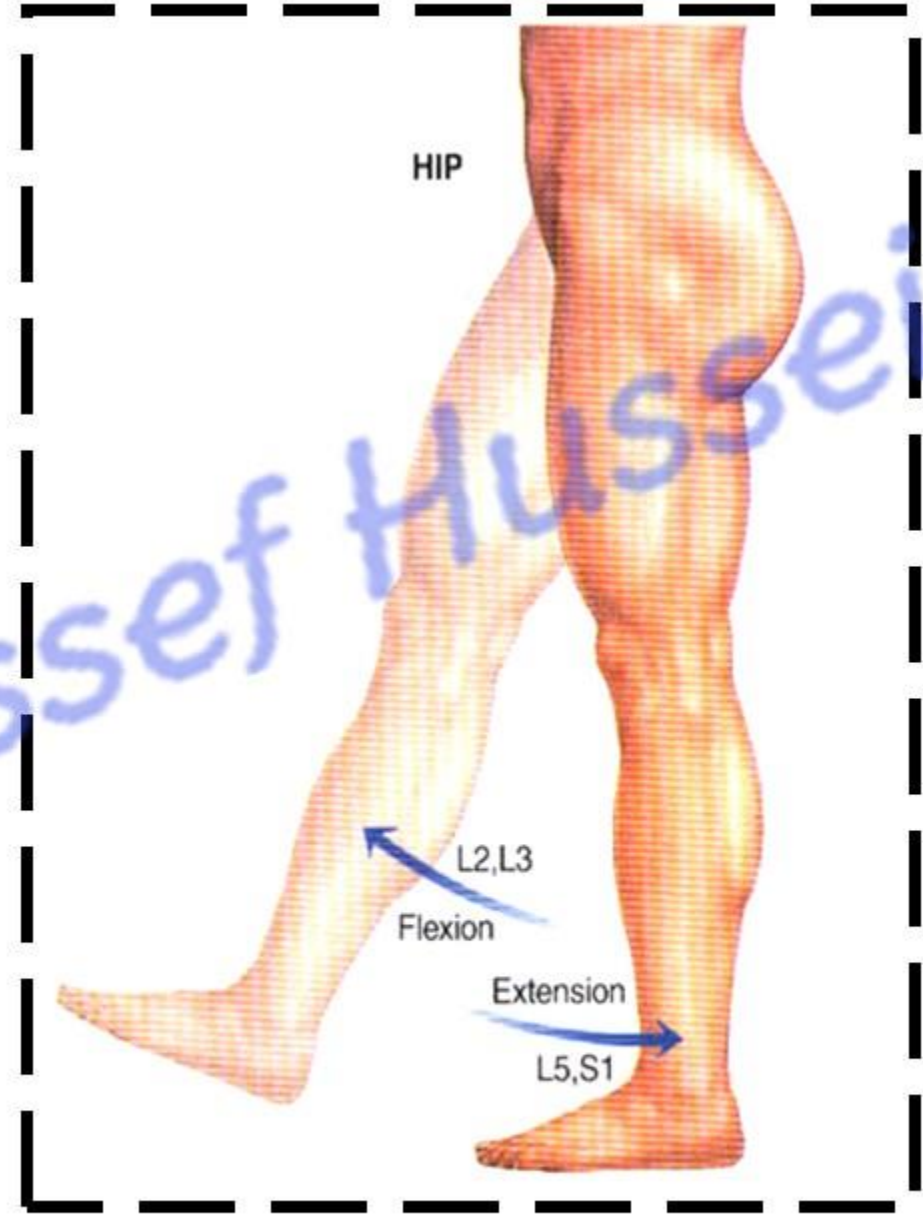
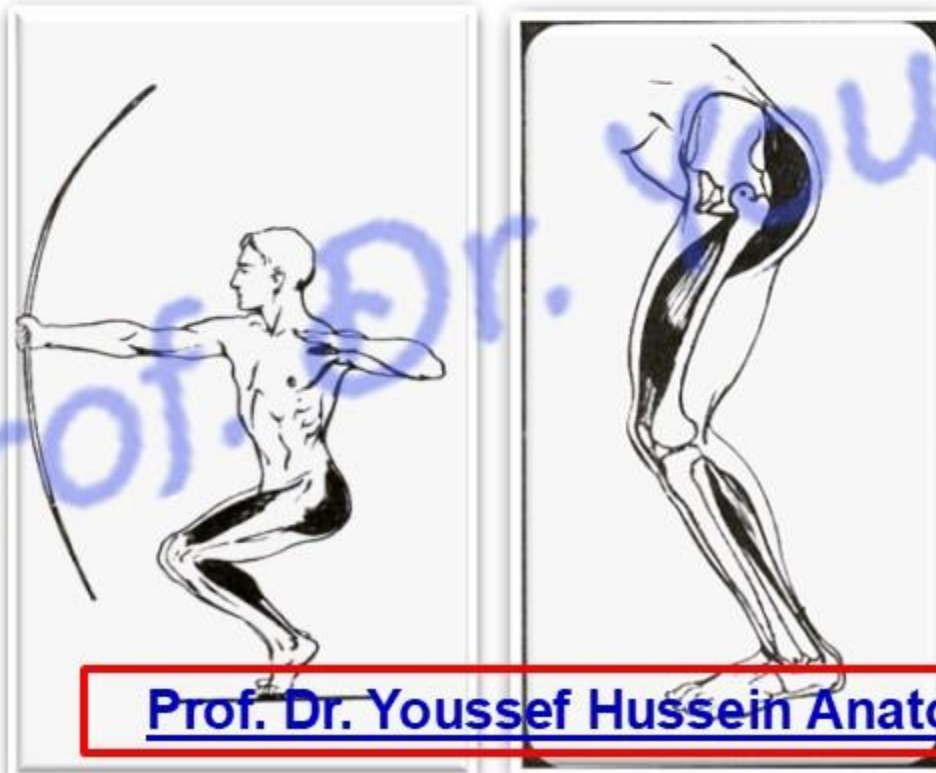
- The four muscles fuse into a common tendon called **quadriceps tendon** which is inserted into the base, borders of the **patella**.
- The **Ligamentum patellae**; carries the insertion to the upper part of tibial tuberosity.

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**** Actions of quadriceps:**

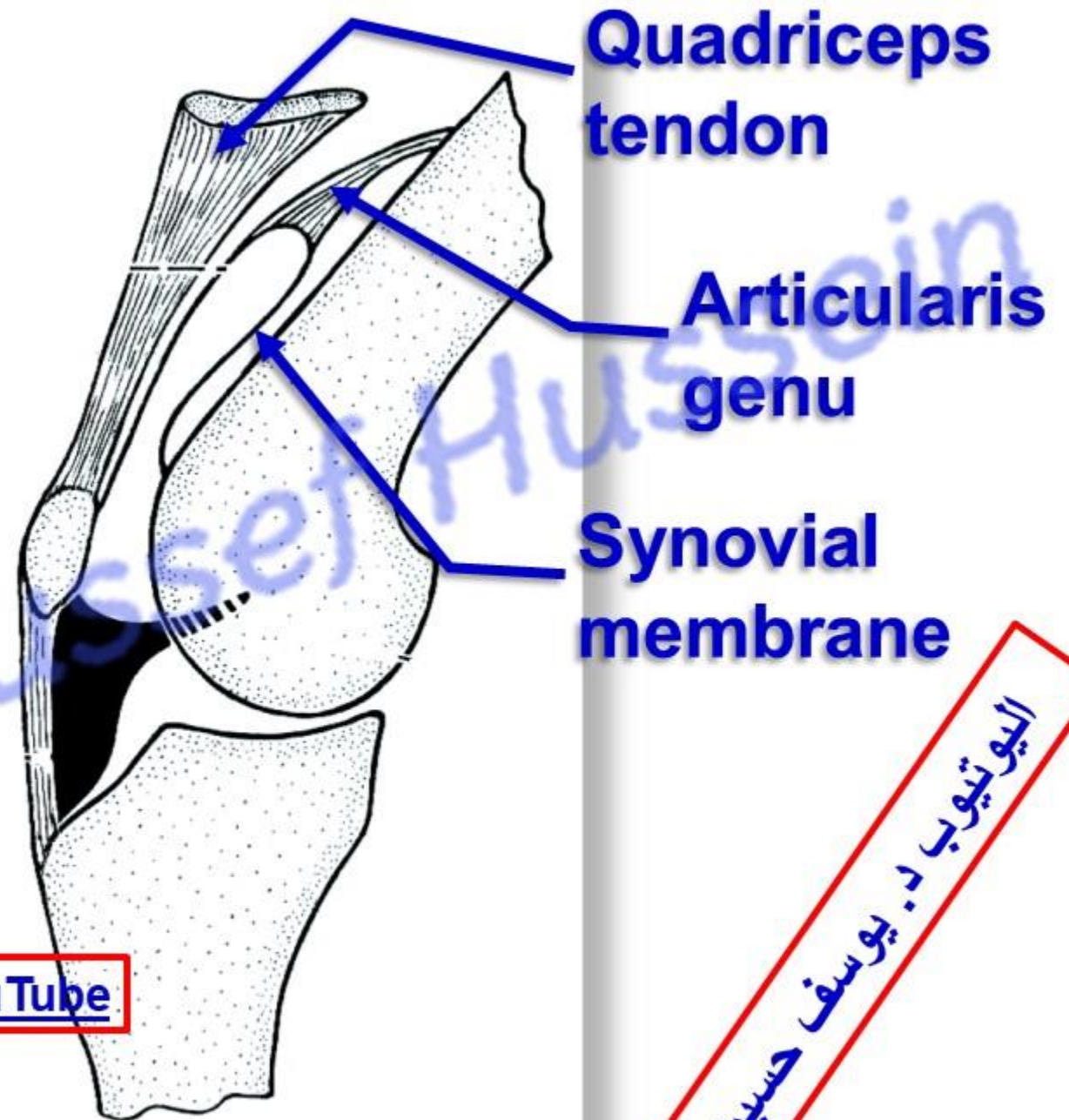
- 1- Main extensor of knee joint.
- 2- Raising from the sitting position
- 3- Rectus femoris helps in flexion of the hip joint.

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❖ **Articularis genu muscle**

- ** Origin**, from the lower part of the anterior surface of the femur.
- ** Insertion**, into the synovial membrane of the knee joint.
- ** Action**, It pulls the synovial membrane up during extension of the knee joint to prevent its damage between the bones.



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Femoral Triangle

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Iliacus

Psoas major

Femoral nerve

Femoral Triangle

**** an inverted triangular space on the front of the upper third of the thigh.**

Sartoris

Inguinal ligament

Femoral artery

Femoral vein

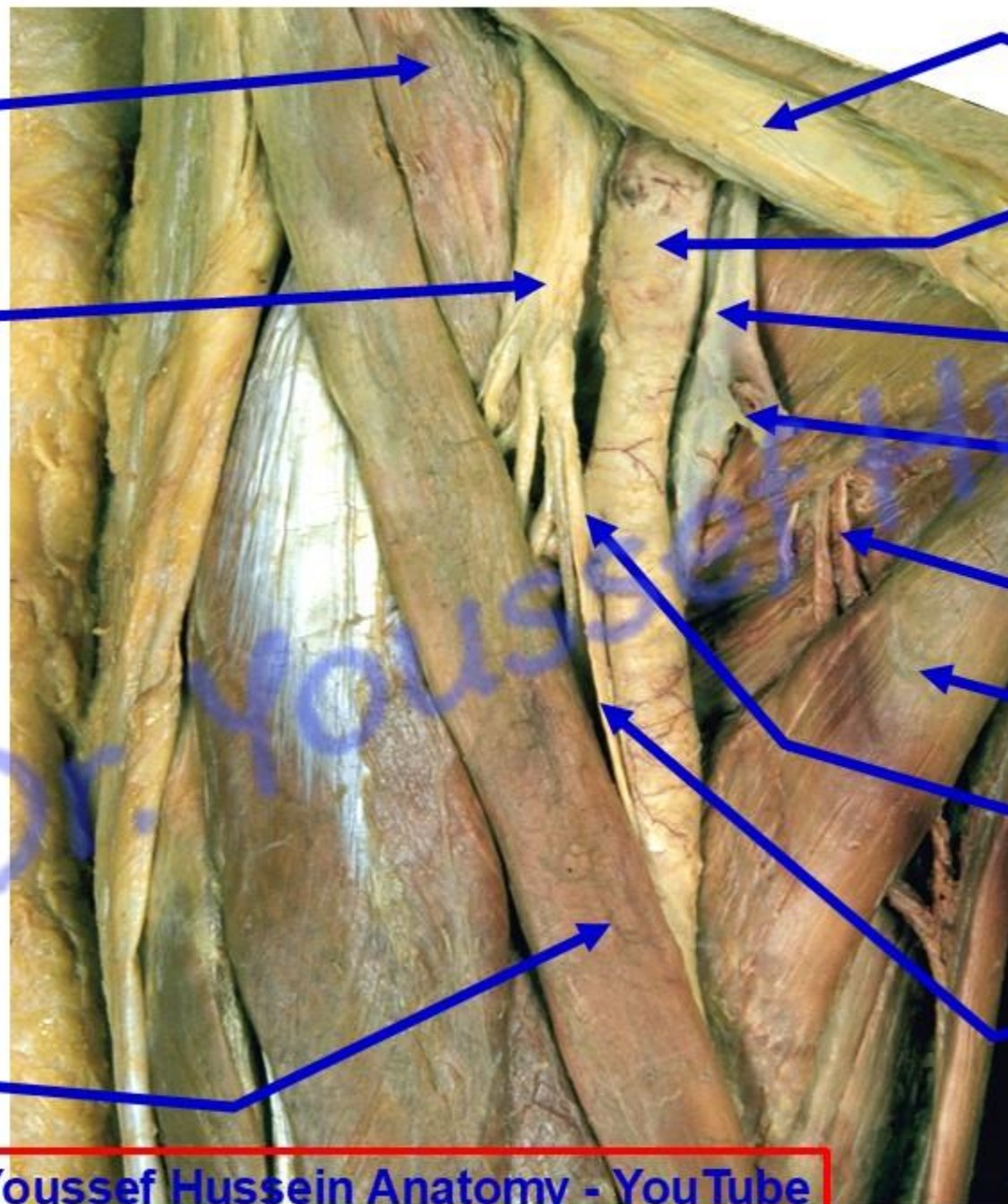
Great saphenous vein

Pectineus

Adductor longus

Profunda femoris artery

Saphenous nerve



**** Boundaries of the femoral triangle**

1- Base; inguinal ligament.

2- Medially, medial border of adductor longus.

3- Laterally, medial border of sartorius.

4- Apex, the meeting of the medial and lateral borders (continuous below with the adductor canal).

5- Floor: formed by 4 muscles; arranged from medial to lateral,

1) Adductor longus.

2) Pectineus.

3) Psoas major.

4) iliacus.

6- Roof: Skin, superficial fascia and deep fascia.

**** Contents of the femoral triangle :**

- 1- Femoral vein** and its tributaries.
- 2- Femoral artery** and its branches.
- 3- Femoral nerve** and its branches.
- 4- Femoral sheath** (fascia transversalis and fascia iliaca).
- 5- Great saphenous **vein**.
- 6- Profunda femoris **artery**.
- 7- Saphenous **nerve**
- 8- Lymph nodes:** superficial and deep inguinal lymph nodes.
- 9- Collection of fat.**

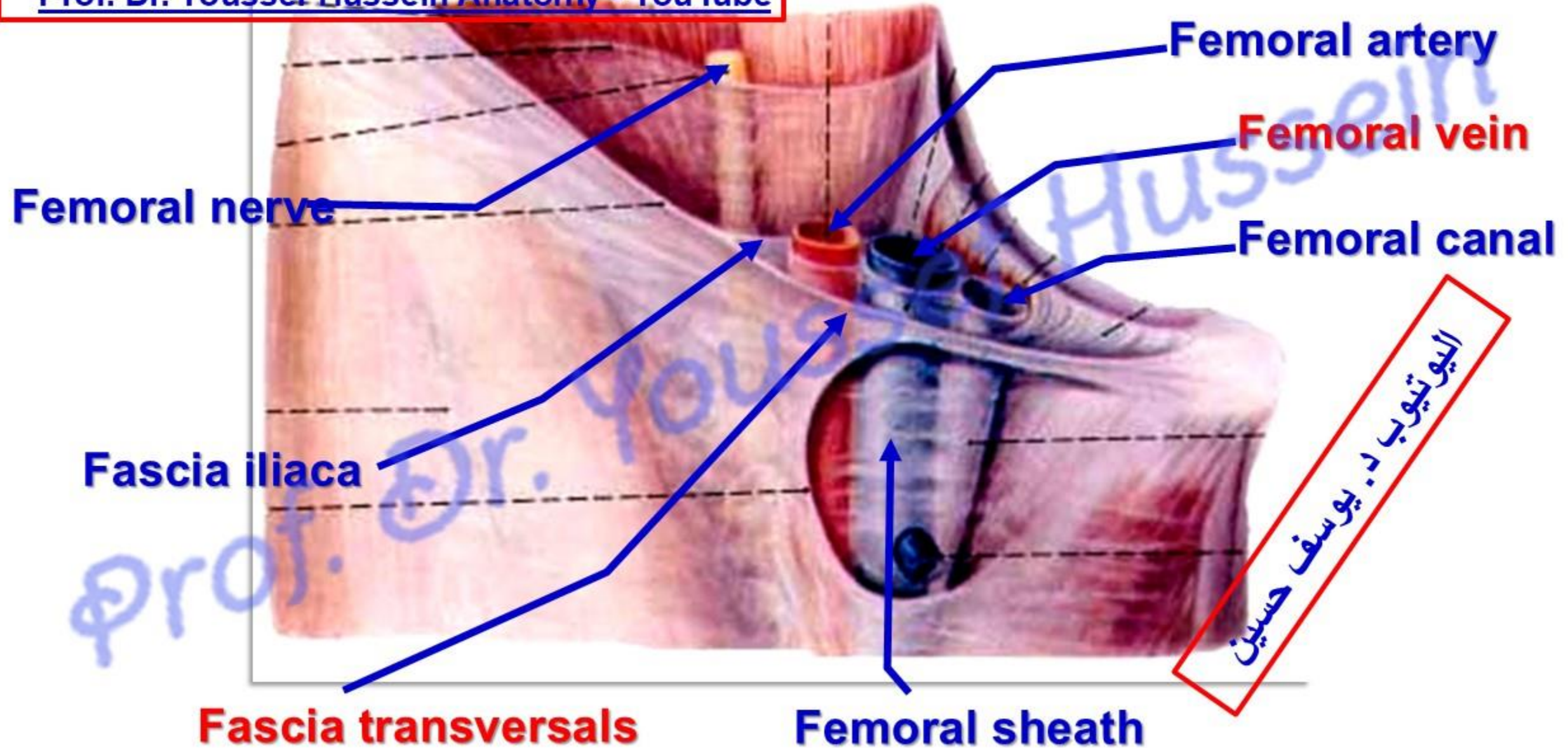
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Femoral Sheath and Canal

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Femoral sheath

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• Femoral Sheath

**** Shape;** funnel-shaped. Its medial part is much shorter.

**** Formation;** - **Anterior wall** is a fascia transversalis.

- **Posterior wall** is a fascia iliaca.

**** Compartments:**

- It is divided by 2 septa into 3 compartments.

A- Medial compartment: called femoral canal.

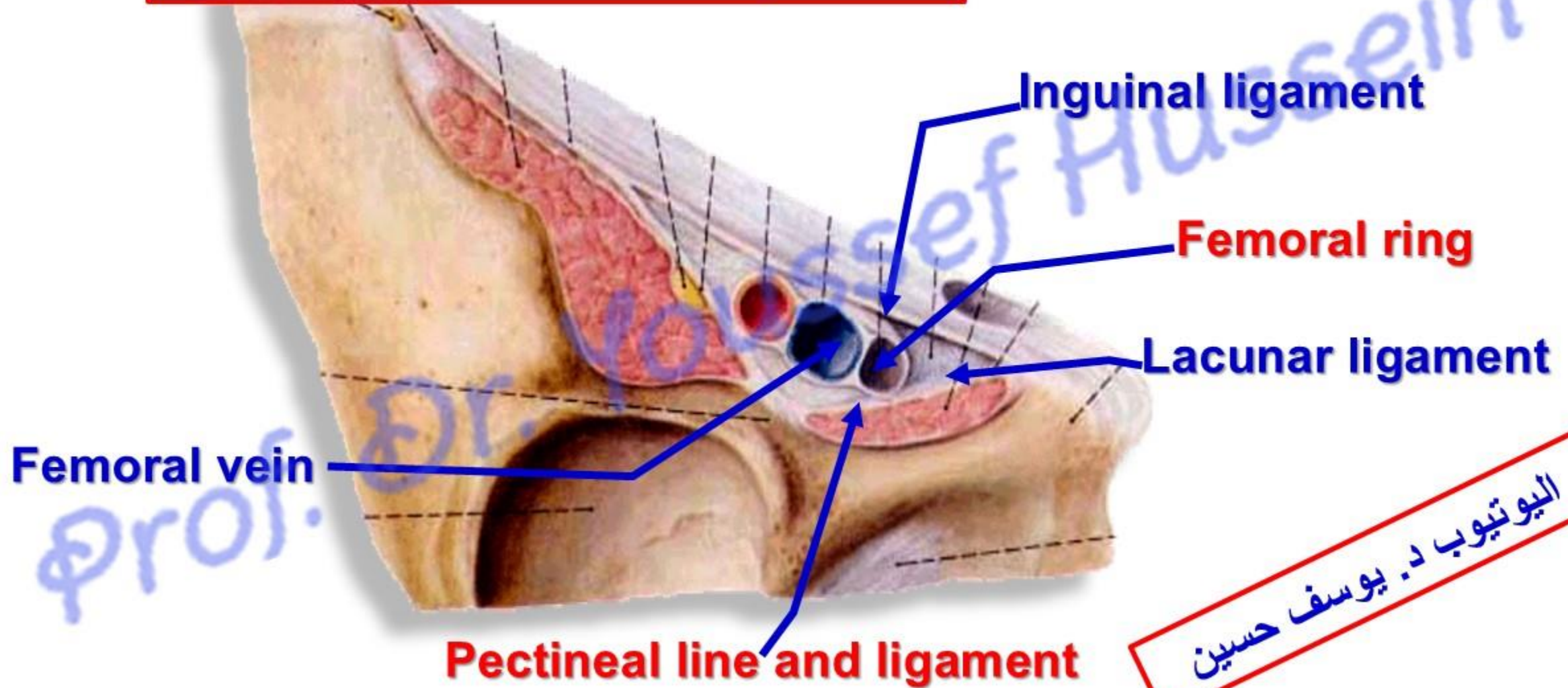
B- Intermediate compartment: transmits the femoral vein.

C- Lateral compartment: transmits femoral artery and femoral branch of the genitofemoral nerve.

N.B: femoral nerve passes outside the femoral sheath

Boundaries of the femoral ring

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- **Femoral canal**

**** Definition;** medial compartment of the femoral sheath.

**** Long,** half an inch.

**** Superiorly (base),** abdominal opening called **femoral ring**.

**** Boundaries of the femoral ring:**

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1- **Anteriorly:** Inguinal ligament

2- **Posteriorly:** pectineal line and pectineal ligament.

3- **Laterally:** femoral vein.

4- **Medially:** sharp base of the lacunar Ligament.

**** Contents of femoral canal;** Loose areolar **fatty** tissue and Lymph node of **Cloquet**.

**** Sex Differences of the ring:** It is **wider in female** than male and so **femoral hernia** is more common in female than male.

**** Functions (clinical importance) of femoral canal;**

1. It accommodates the distension of the femoral vein during increase venous return from the lower limb as during running.

2. It transmits the lymphatic to the external iliac lymph nodes.

Femoral Hernia

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**** Definition of femoral hernia;**

- Abnormal protrusion of any abdominal contents through the femoral ring and femoral canal to the front of the thigh just below the inguinal ligament.

**** Causes,** increased intraabdominal pressure as in chronic cough, constipation and during labor.

**** Sex Differences, more common in females** because

- 1) The femoral ring is wider in females.
- 2) Narrow blood vessels in females.
- 3) Weak muscle of anterior abdominal wall.
- 4) Repeated exposure to strains in childbearing.

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Questions

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