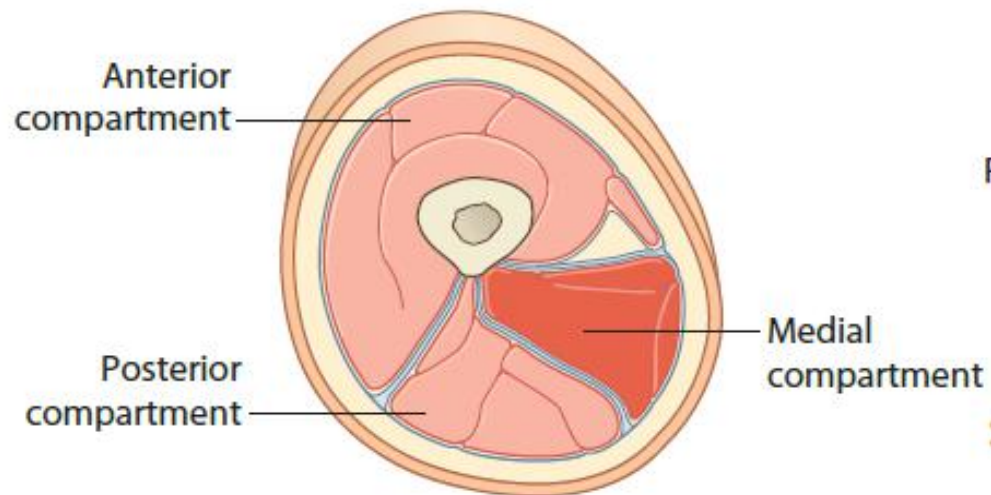
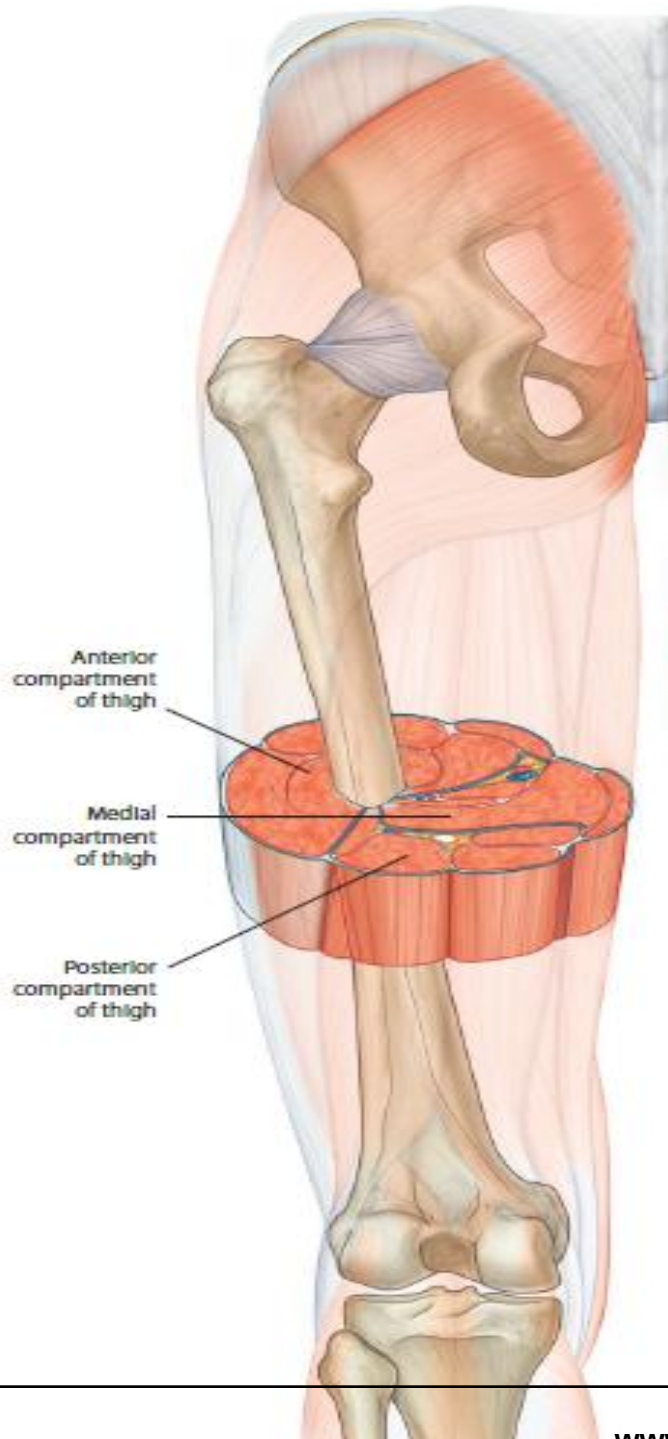


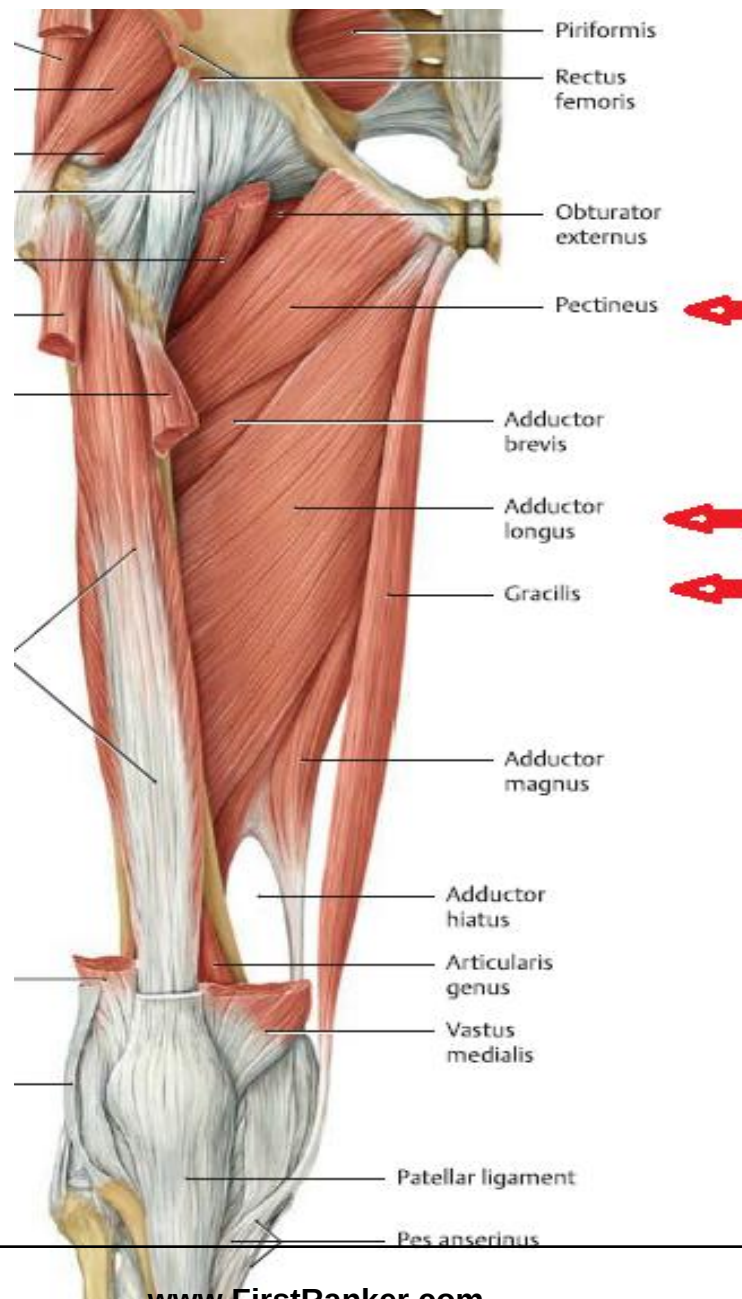
BOUNDARIES

- **Anteriorly** → *by anterior intermuscular septum* which separates it from the anterior (extensor) compartment of the thigh.
- **Posteriorly** → *by posterior intermuscular septum* (ill-defined) which separates it from posterior (flexor) compartment of the thigh.

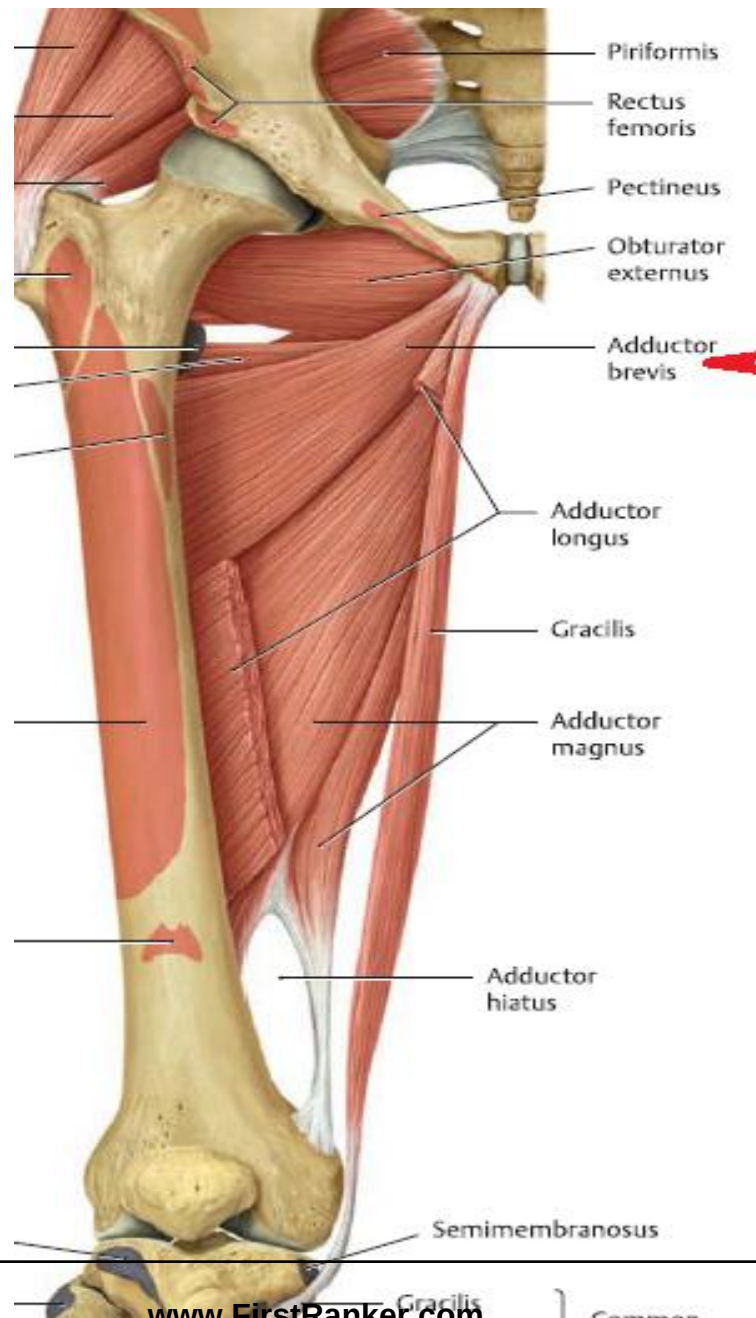


- **Muscles of the medial compartment of the thigh→**
- Pectineus
- Adductor longus
- Gracilis
- Adductor brevis
- Adductor magnus

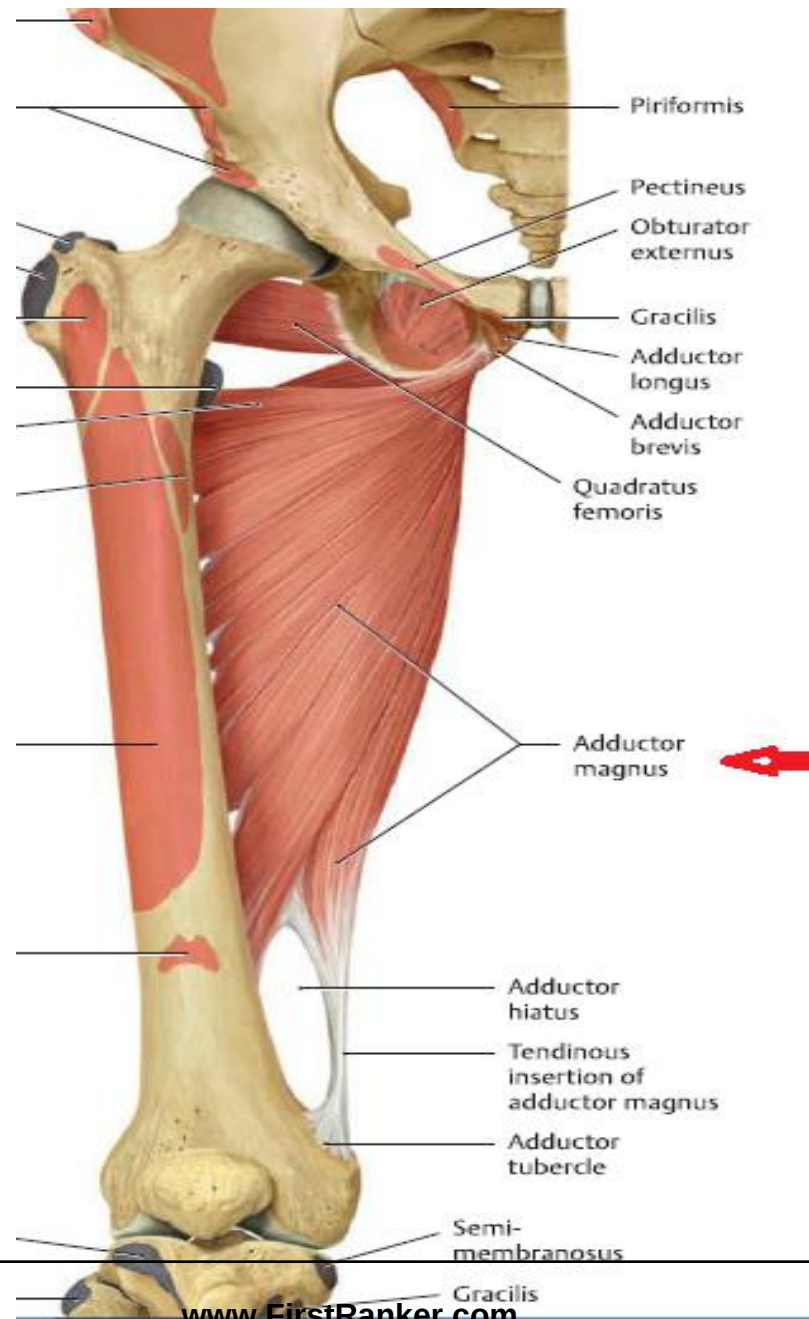
Anterior (first) layer pectineus, adductor longus, and gracilis



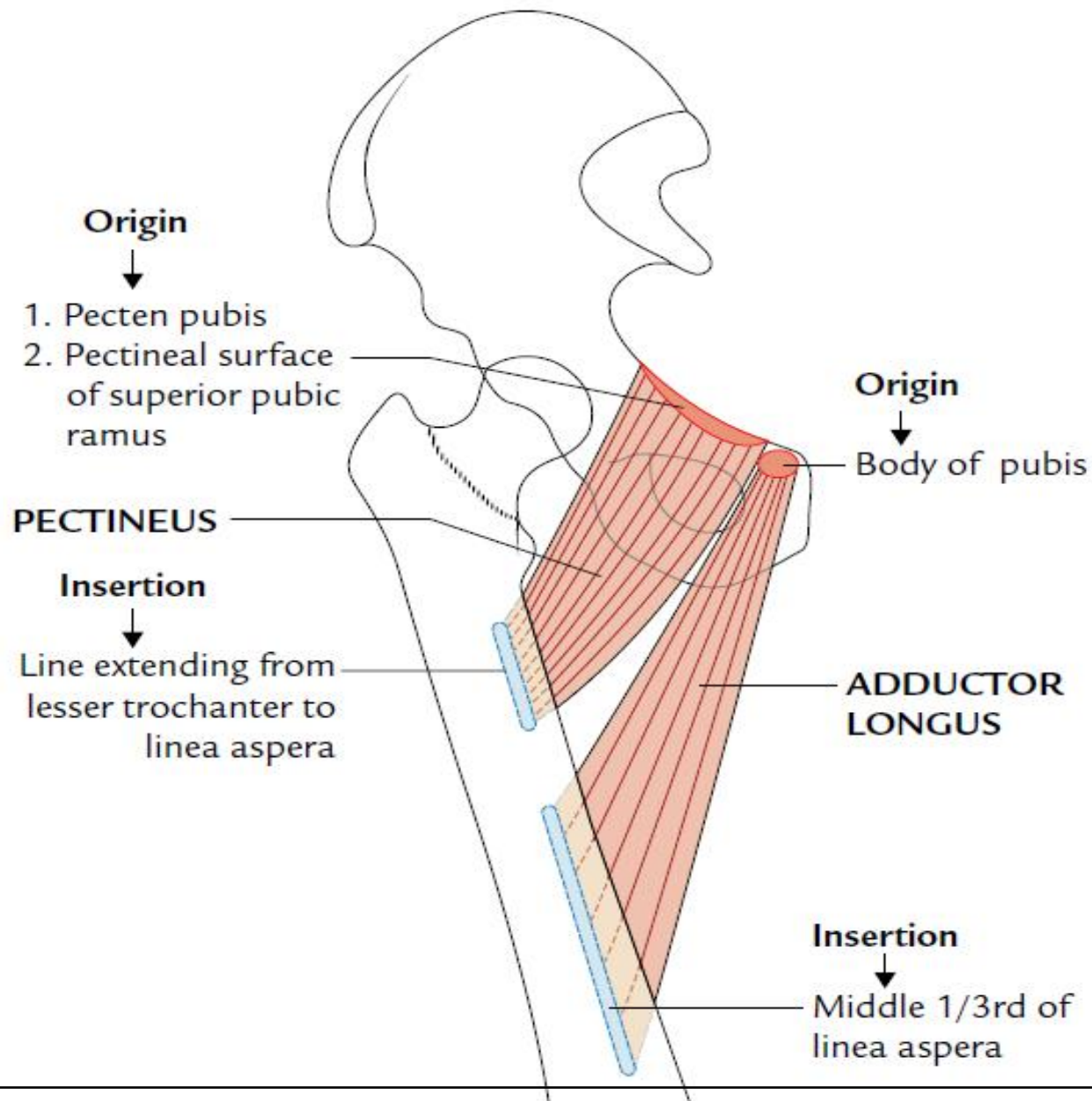
Middle (second) layer adductor brevis



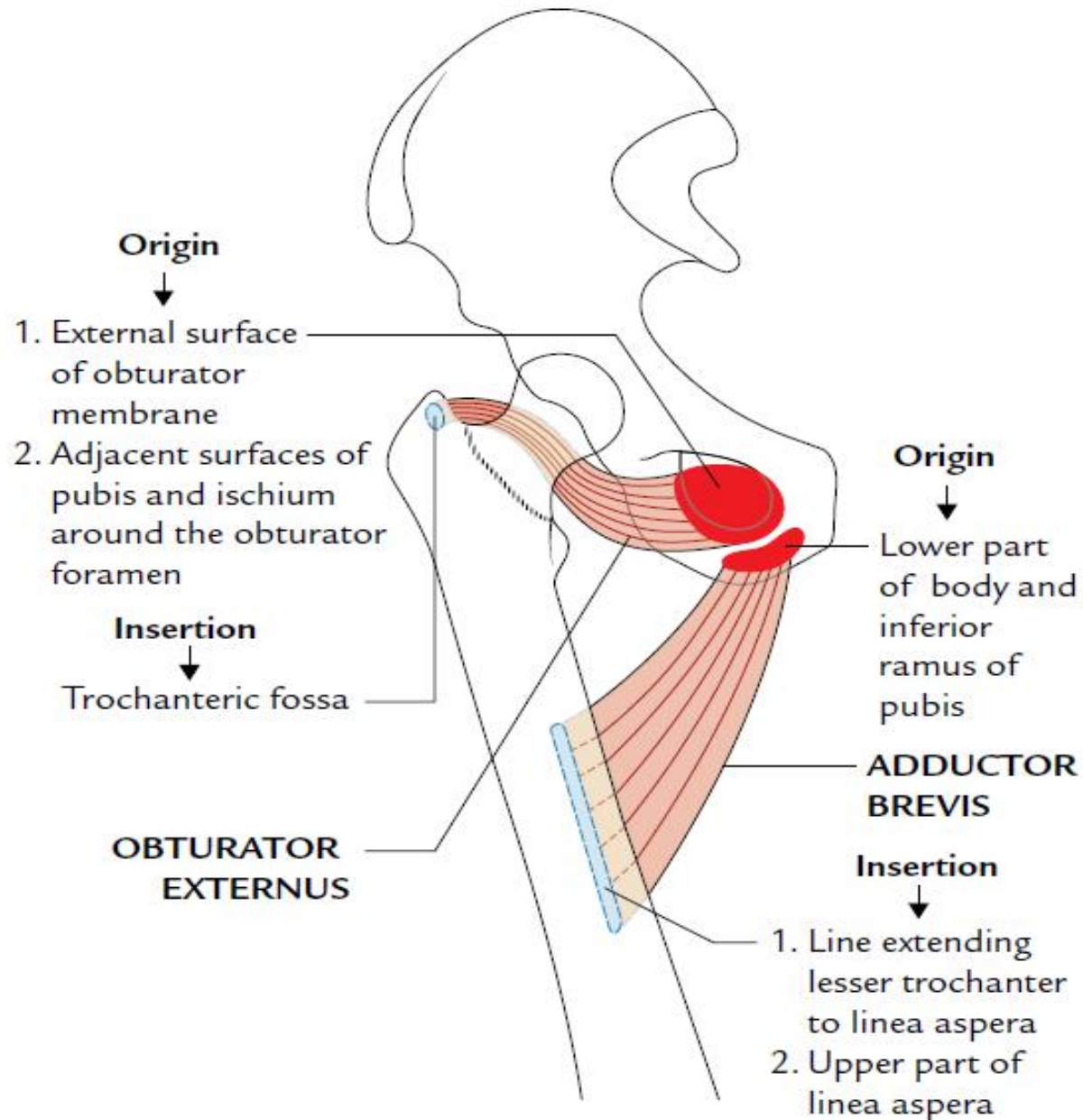
Posterior (third) layer adductor magnus



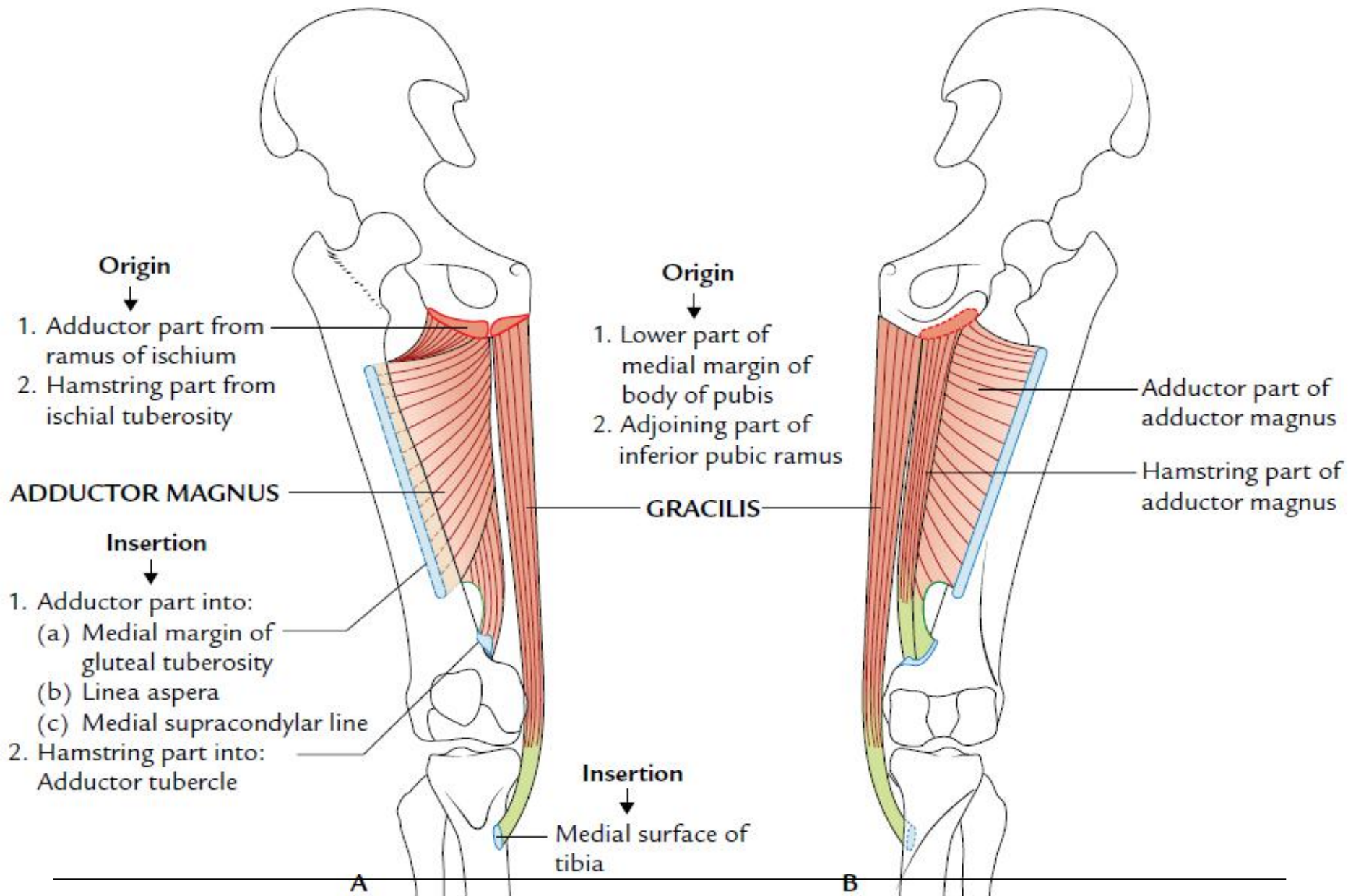
Origin and insertion of the pectineus and adductor longus



Origin and insertion of the adductor brevis



Origin and insertion of the adductor magnus and gracilis



Muscle	Nerve supply	Actions
Pectineus	Femoral nerve and obturator nerve (anterior division)	Adduction of the thigh
Adductor longus	Obturator nerve (anterior division)	Adduction & medial rotation of thigh
Adductor brevis	Obturator nerve (anterior and posterior divisions)	Adduction of thigh
Adductor magnus	Adductor part → obturator nerve (posterior division) Hamstring part → tibial part of sciatic nerve	Adduction and medial rotation of thigh Weak extension of hip joint
Gracilis	Obturator nerve (anterior division)	Adduction of thigh Flexion and medial rotation of leg

OBTURATOR NERVE

- Chief nerve → adductor compartment of the thigh.
- Arises from → lumbar plexus in the abdomen
- Formed by → the ventral division of the anterior primary rami of L2, L3, L4 spinal nerves.
- Enters the thigh by passing through the obturator canal.

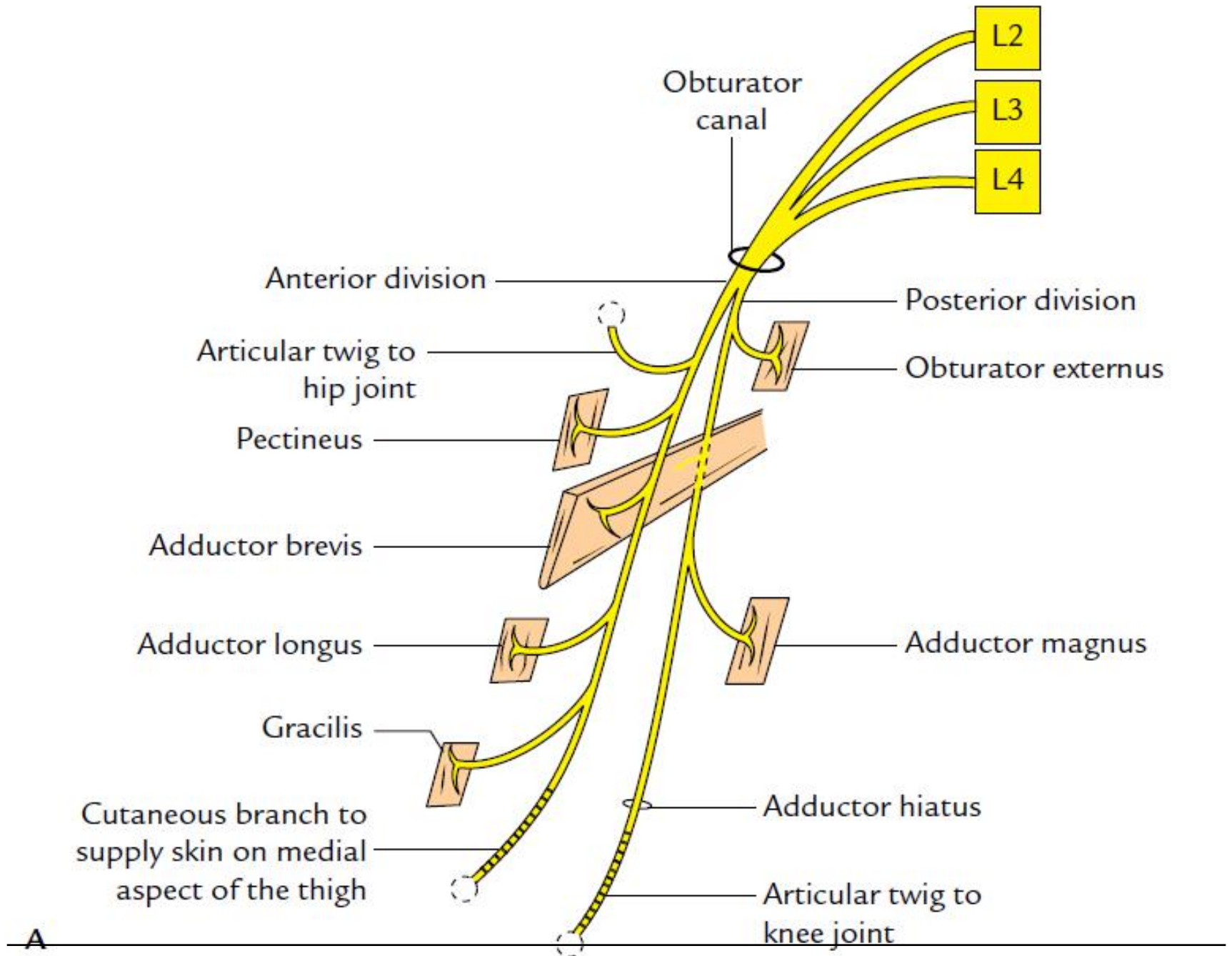
Course

- In the obturator canal the obturator nerve divides into ***anterior*** and ***posterior*** divisions.
- ***Anterior division*** passes downwards into the thigh in front of the obturator externus.
- Then it descends behind the pectineus and the adductor longus, and in front of the adductor brevis.
- ***Posterior division*** enters the thigh by piercing the anterior part of the obturator externus muscle
- Then it descends behind the adductor brevis and in front of the adductor magnus.



Distribution

- **Anterior division**
- Pectineus
- Adductor longus
- Adductor brevis
- Gracilis
- Articular twig to the hip joint
- In adductor canal:→
 - a twig to the subsartorial plexus of nerves.
 - terminates by supplying the femoral artery.

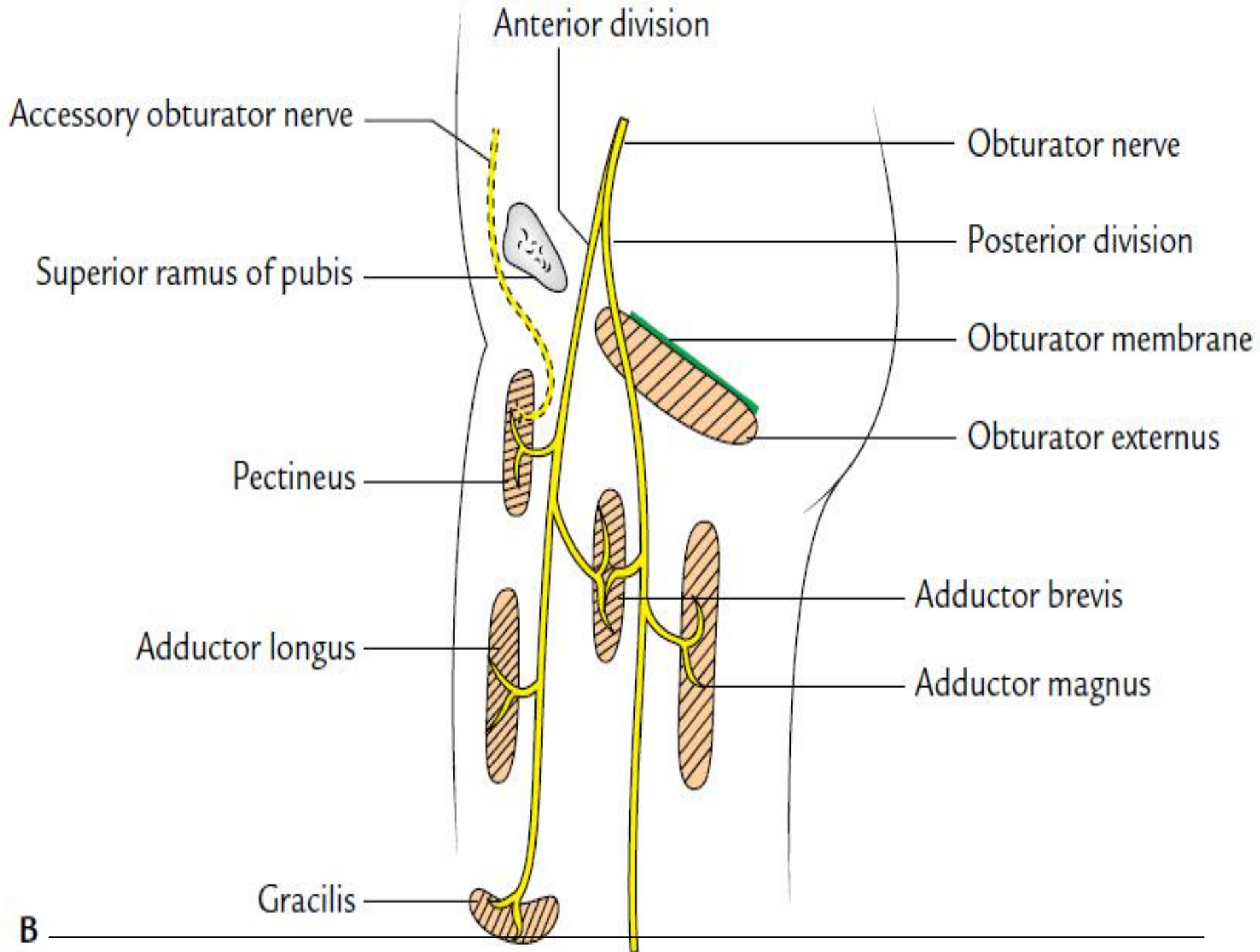


Distribution cont...

- **Posterior division**
- Obturator externus
- Adductor magnus
- Adductor brevis
- Its terminal part forms an articular branch called **genicular branch**, to supply the knee joint.

ACCESSORY OBTURATOR NERVE

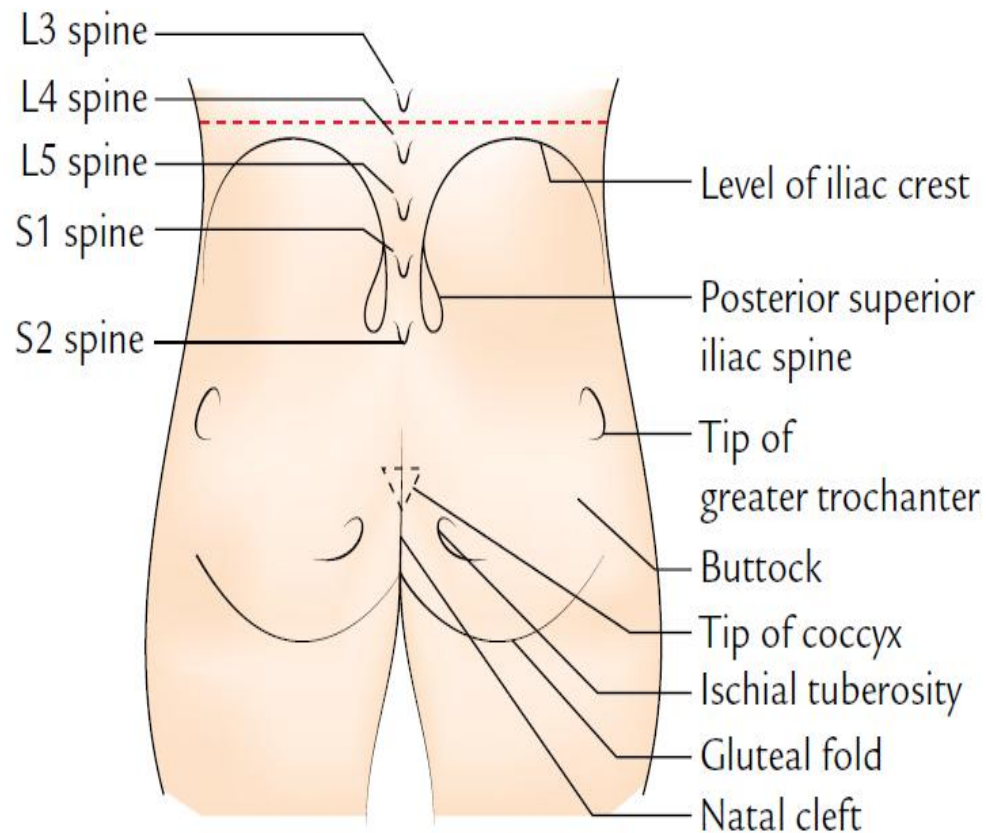
- Arises from the lumbar plexus.
- Formed by the ventral divisions of the anterior primary rami of L3, L4 spinal nerves
- It crosses the superior ramus of pubis deep to pectineus, which it supplies.
- An articular twig to the hip joint
- Terminates by communicating with the anterior division of the obturator nerve



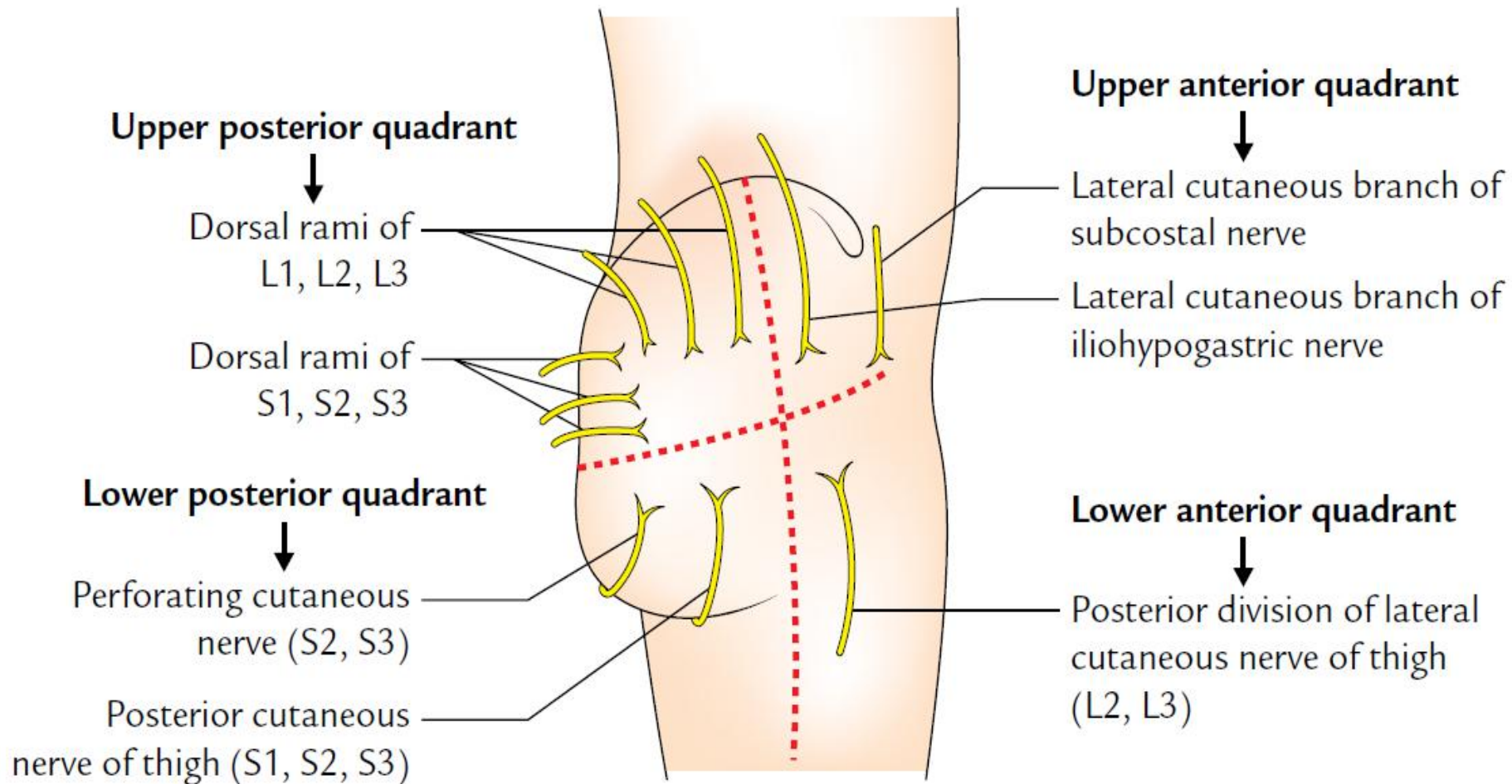
B

GLUTEAL REGION

- The gluteal region overlies the back and side, of the lateral half of the pelvis.
- Extent →
- Superiorly--iliac crest
- Inferiorly--gluteal fold
- Medially--mid-dorsal line and natal cleft
- Laterally--anterior superior iliac spine to the anterior edge of the greater trochanter

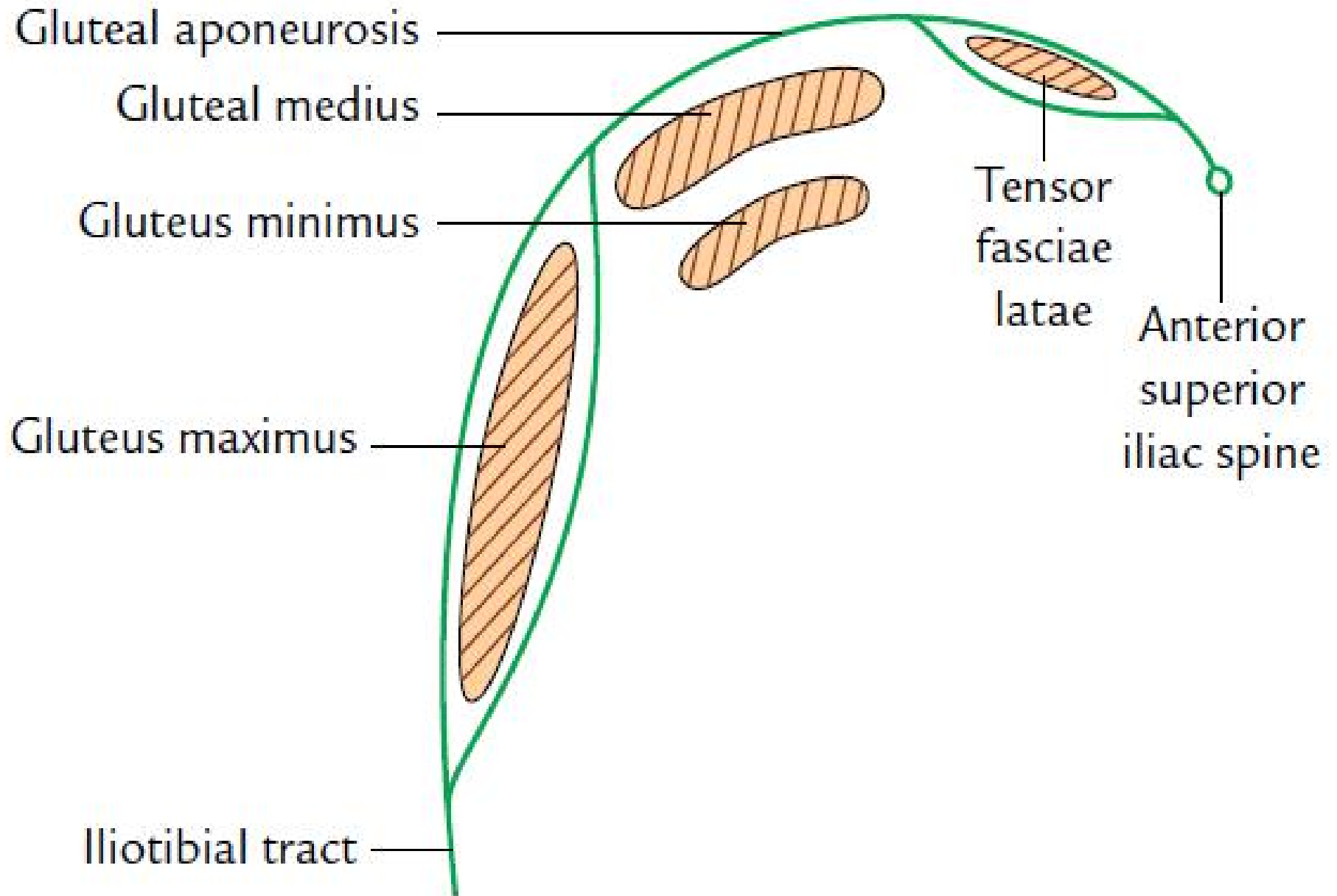


Cutaneous nerves of the gluteal region

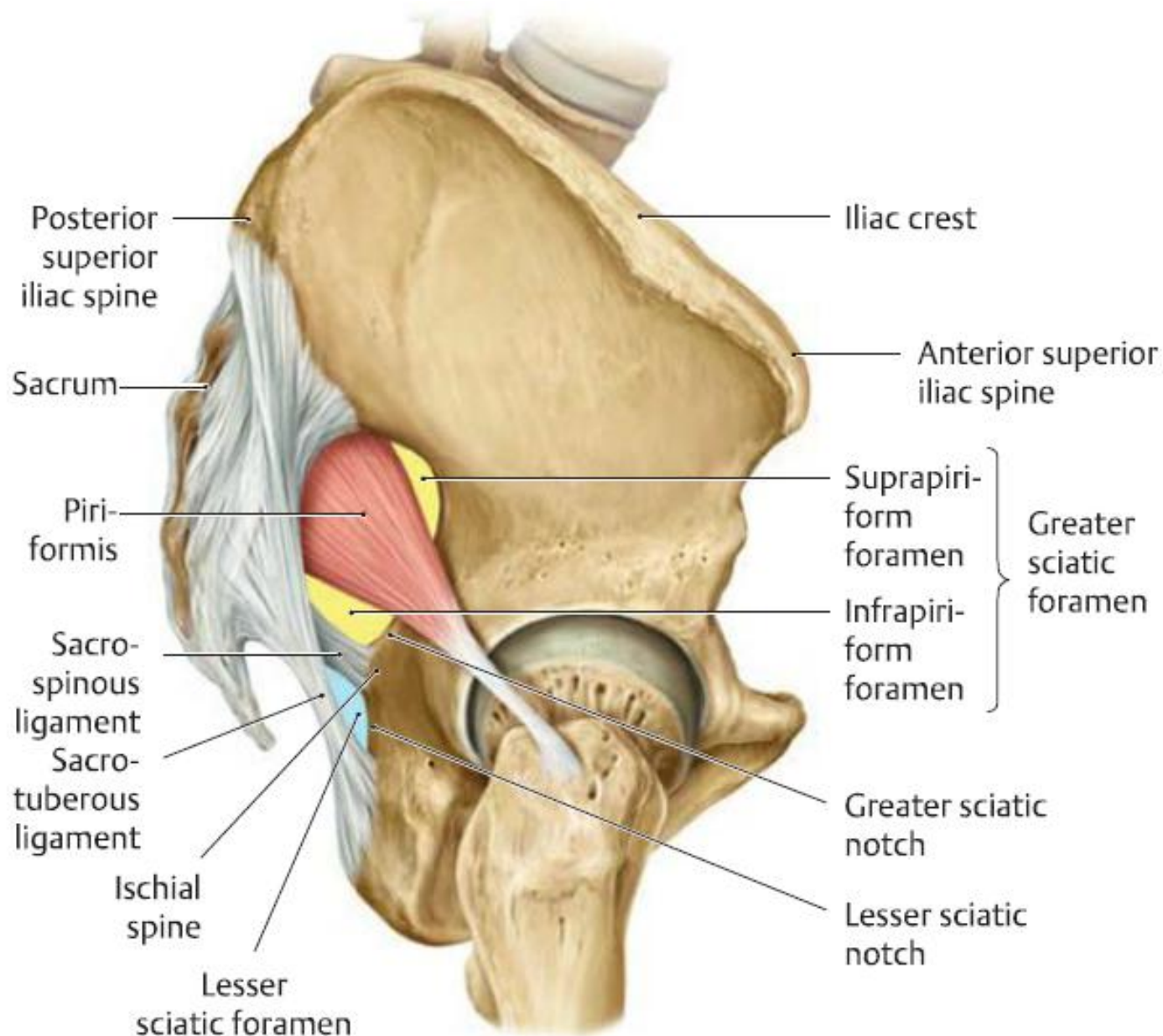


Deep fascia of the gluteal region

- Attached above to the iliac crest and behind to the sacrum
- It splits to enclose the tensor fasciae latae and gluteus maximus.
- Between tensor fasciae latae and gluteus maximus is a thick fascial sheet called **gluteal aponeurosis which covers** the gluteus medius
- Laterally, the deep fascia is continuous with the *iliotibial tract*.



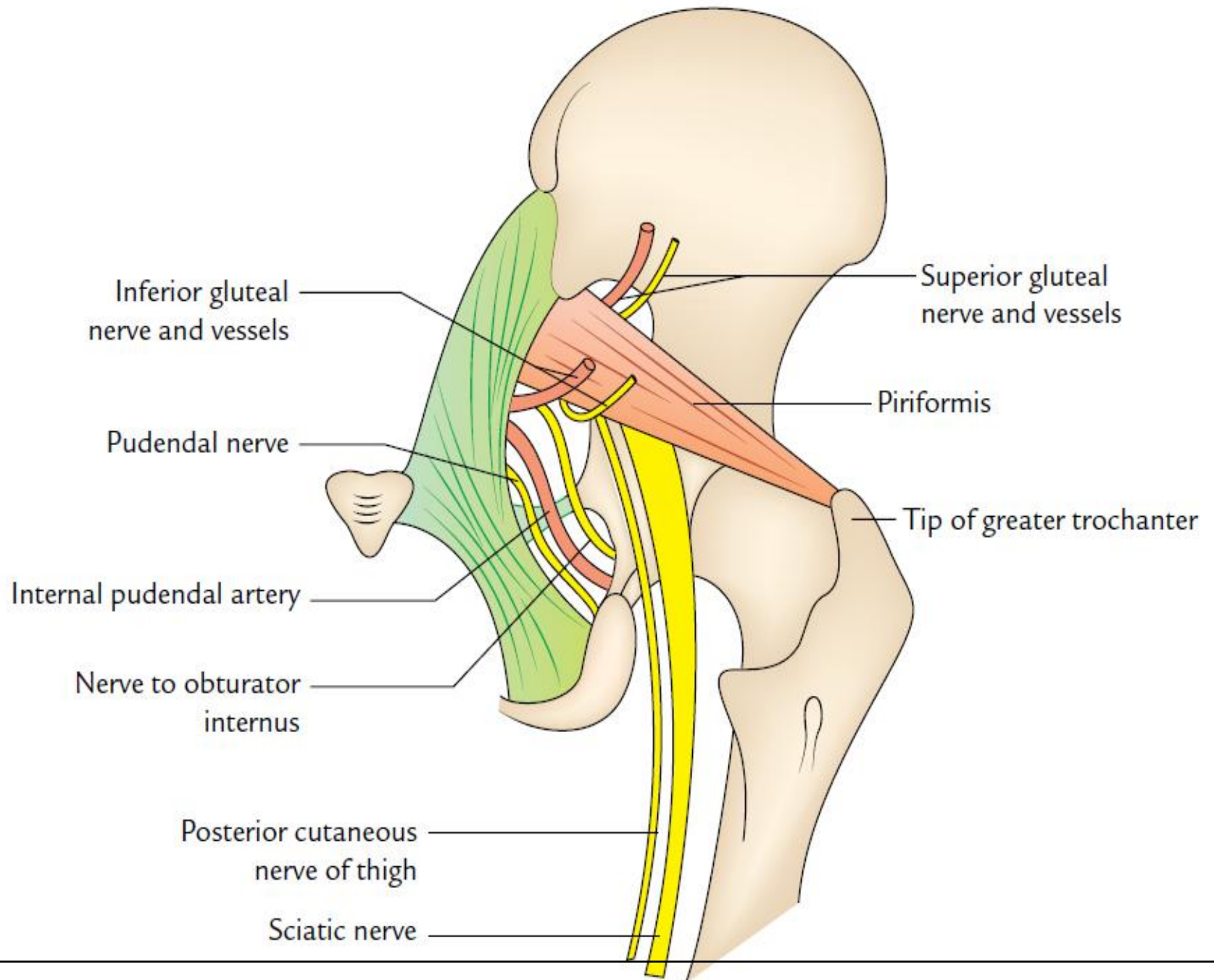
Gluteal ligaments (sacrospinous and sacrotuberous ligaments)



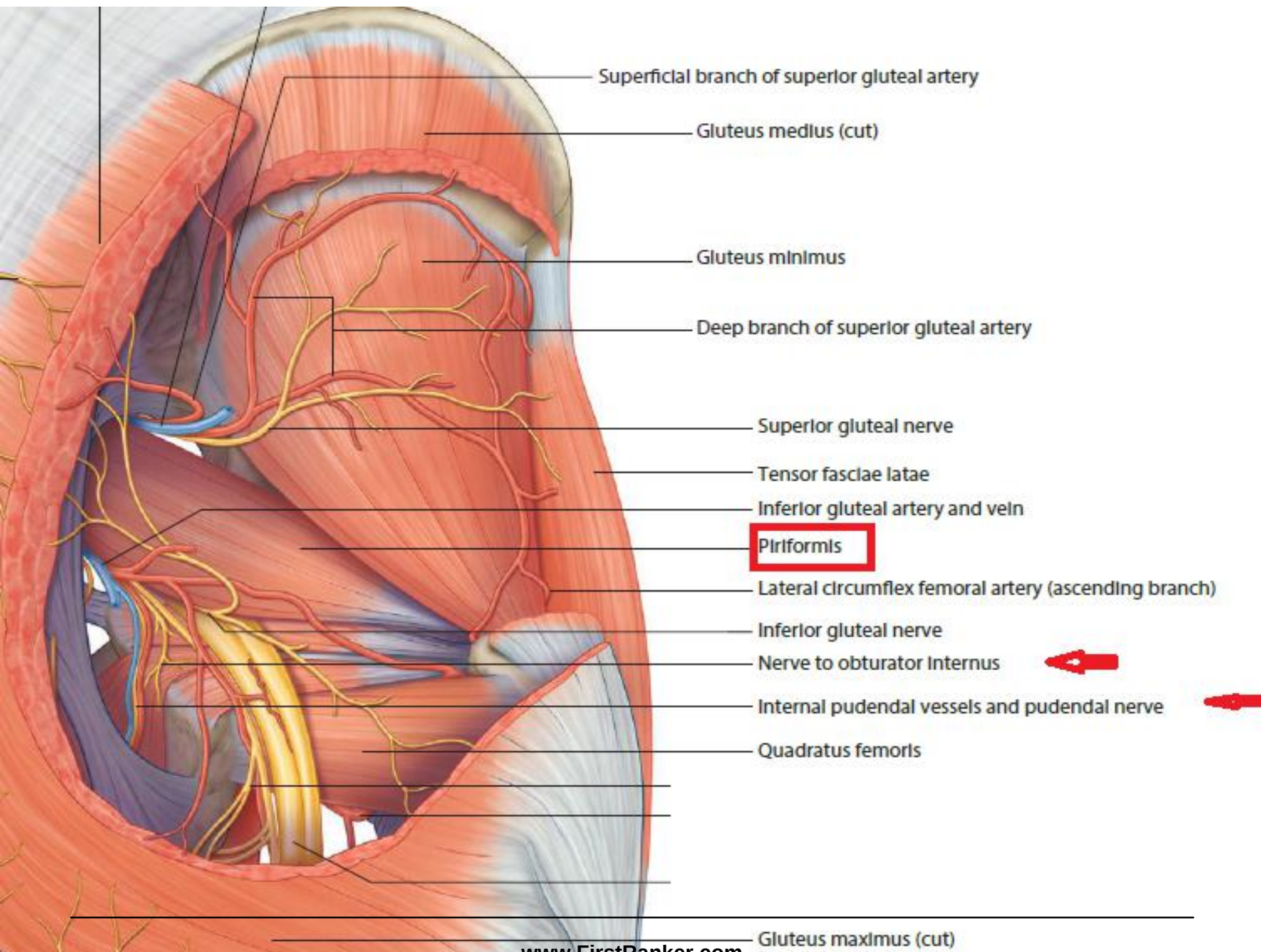
Structures passing through the greater sciatic foramen

- **1.Above the piriformis:**
 - a) Superior gluteal nerve and vessels

- **2.Below the piriformis:**
 - a) Inferior gluteal nerve and vessels.
 - b) Sciatic nerve (most lateral structure).
 - c) Posterior cutaneous nerve of the thigh.
 - d) Nerve to quadratus femoris.
 - e) Pudendal nerve.
 - f) Internal pudendal vessels.
 - g) Nerve to obturator internus



- **Structures passing through the lesser sciatic foramen →**
 - a) Tendon of obturator internus.
 - b) Nerve to obturator internus.
 - c) Internal pudendal vessels.
 - d) Pudendal nerve



MUSCLES OF THE GLUTEAL REGION

- **Major muscles**
 - (a) Gluteus maximus.
 - (b) Gluteus medius.
 - (c) Gluteus minimus.
 - (d) Tensor fasciae latae.

L5 spinous
process

Iliac crest

Anterior
superior
iliac spine

Gluteus
medius

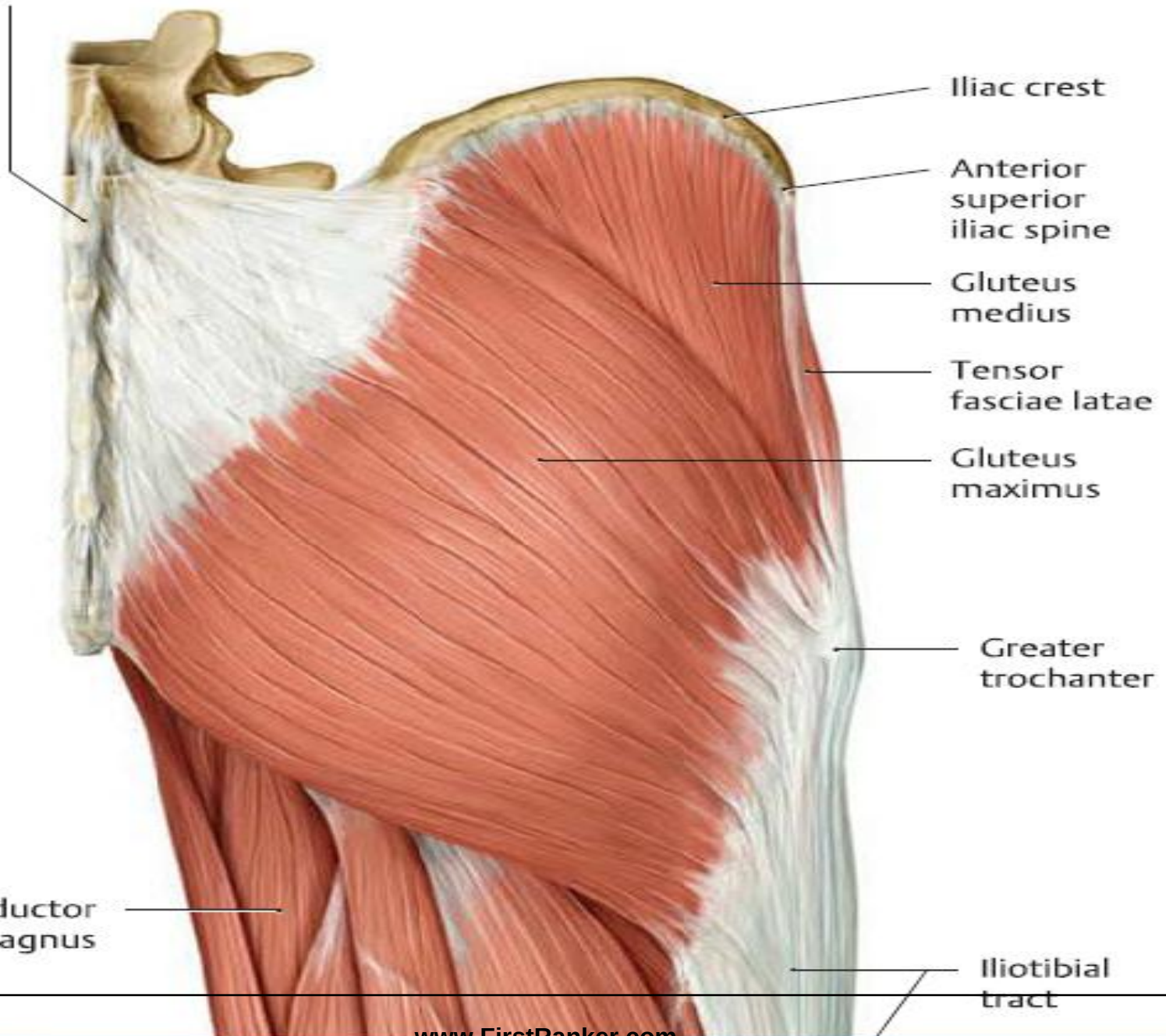
Tensor
fasciae latae

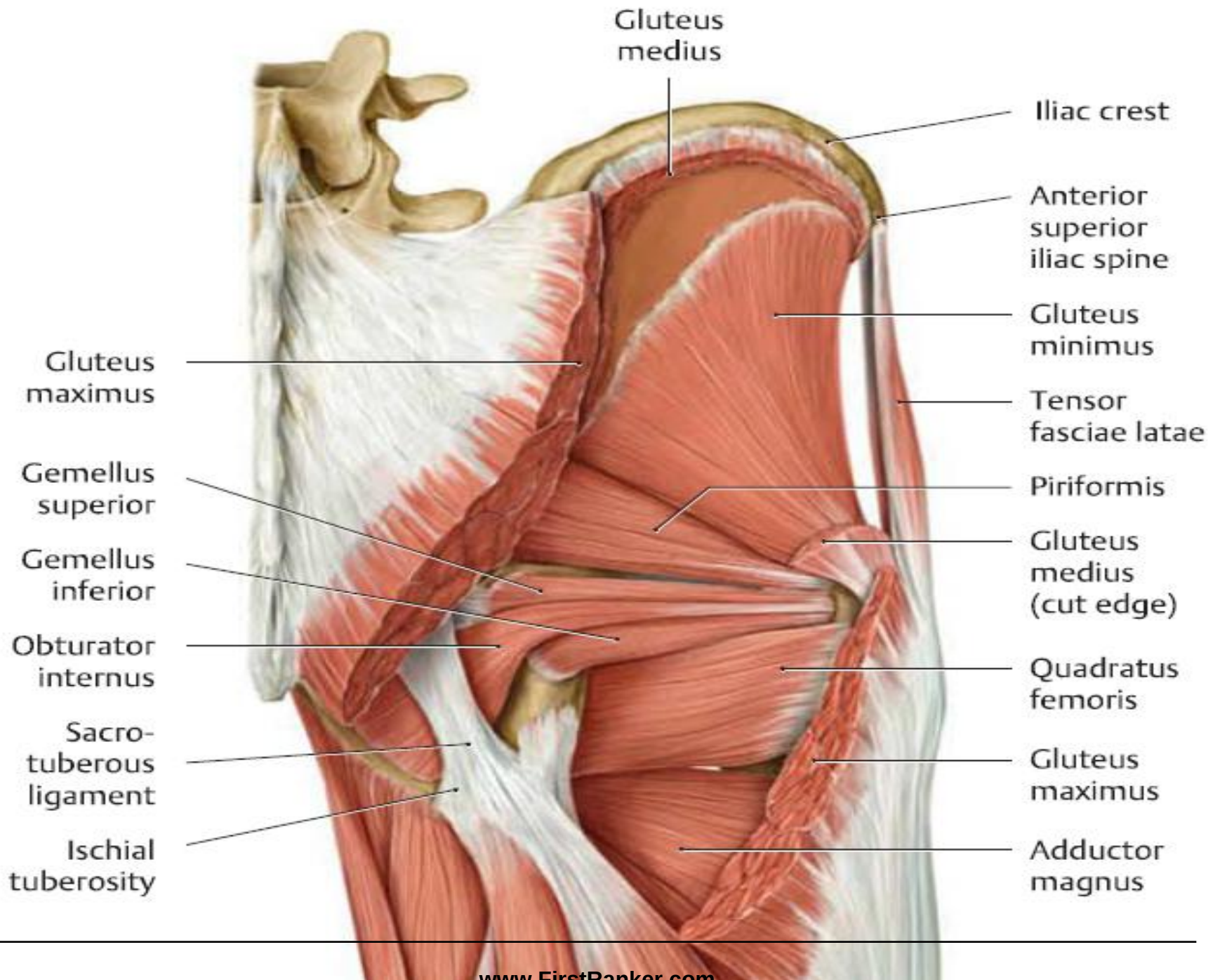
Gluteus
maximus

Greater
trochanter

Adductor
magnus

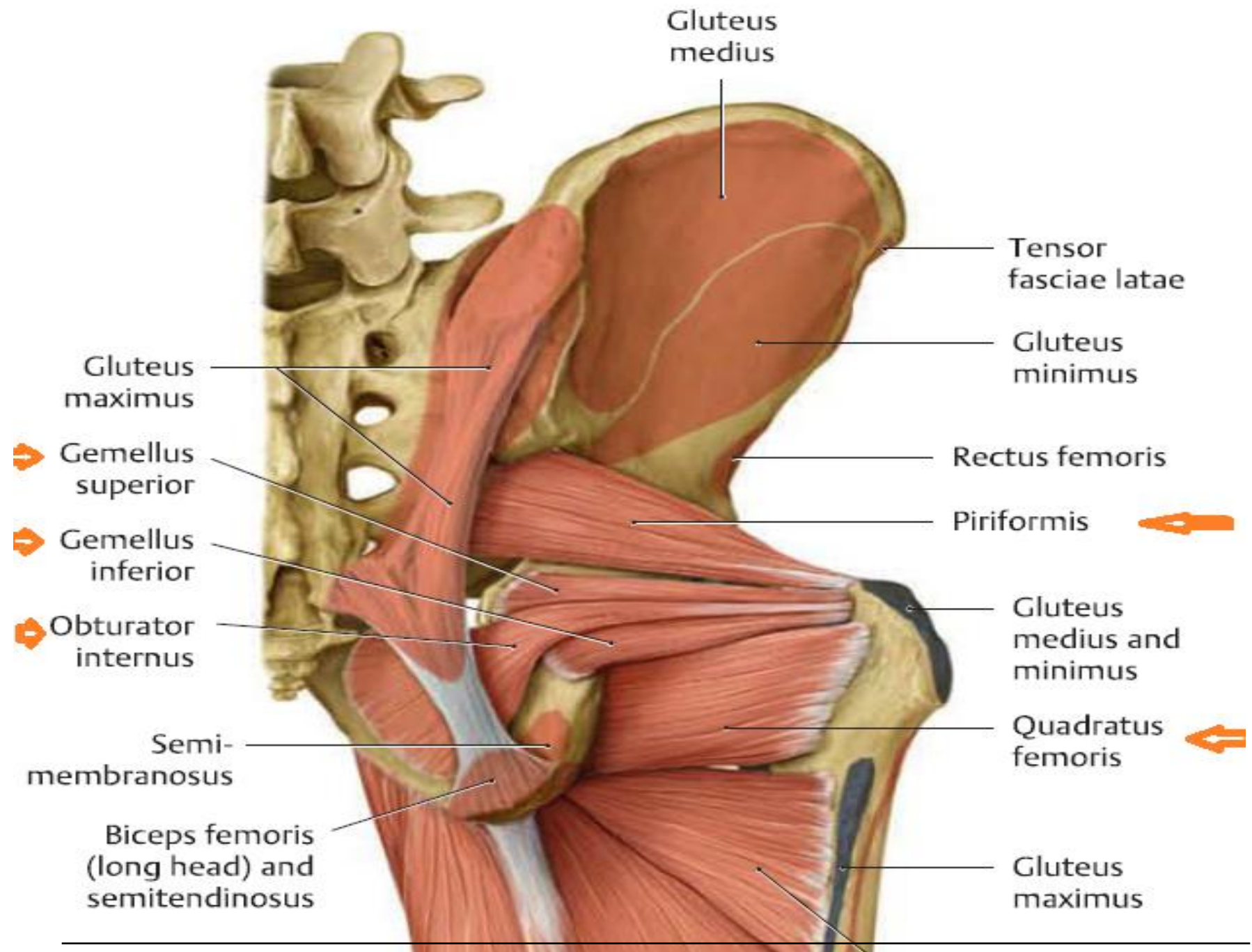
Iliotibial
tract



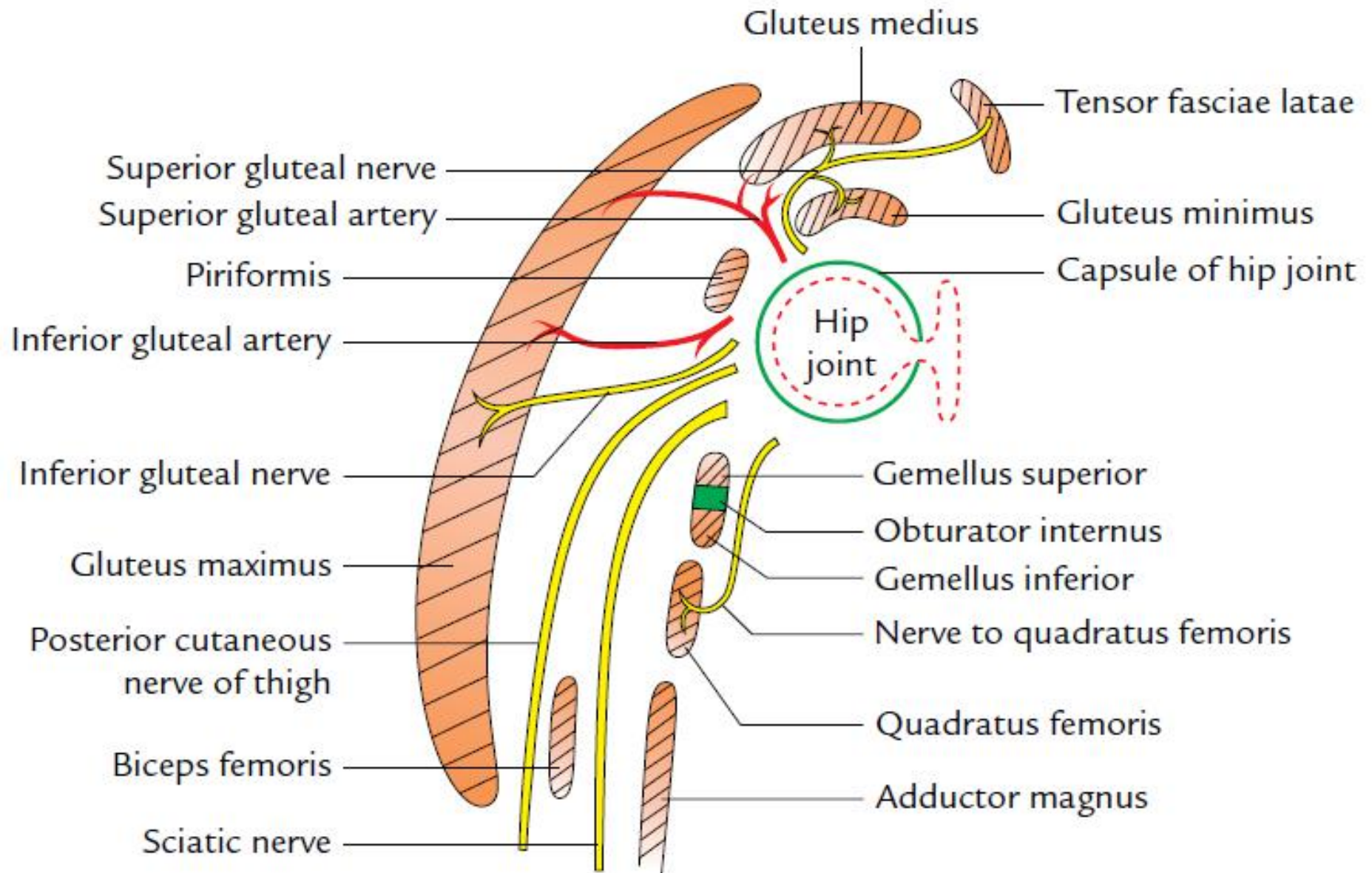


- **Minor muscles**

- (a) Piriformis
- (b) Superior and inferior gemelli.
- (c) Obturator internus.
- (d) Quadratus femoris.
- (e) Obturator externus



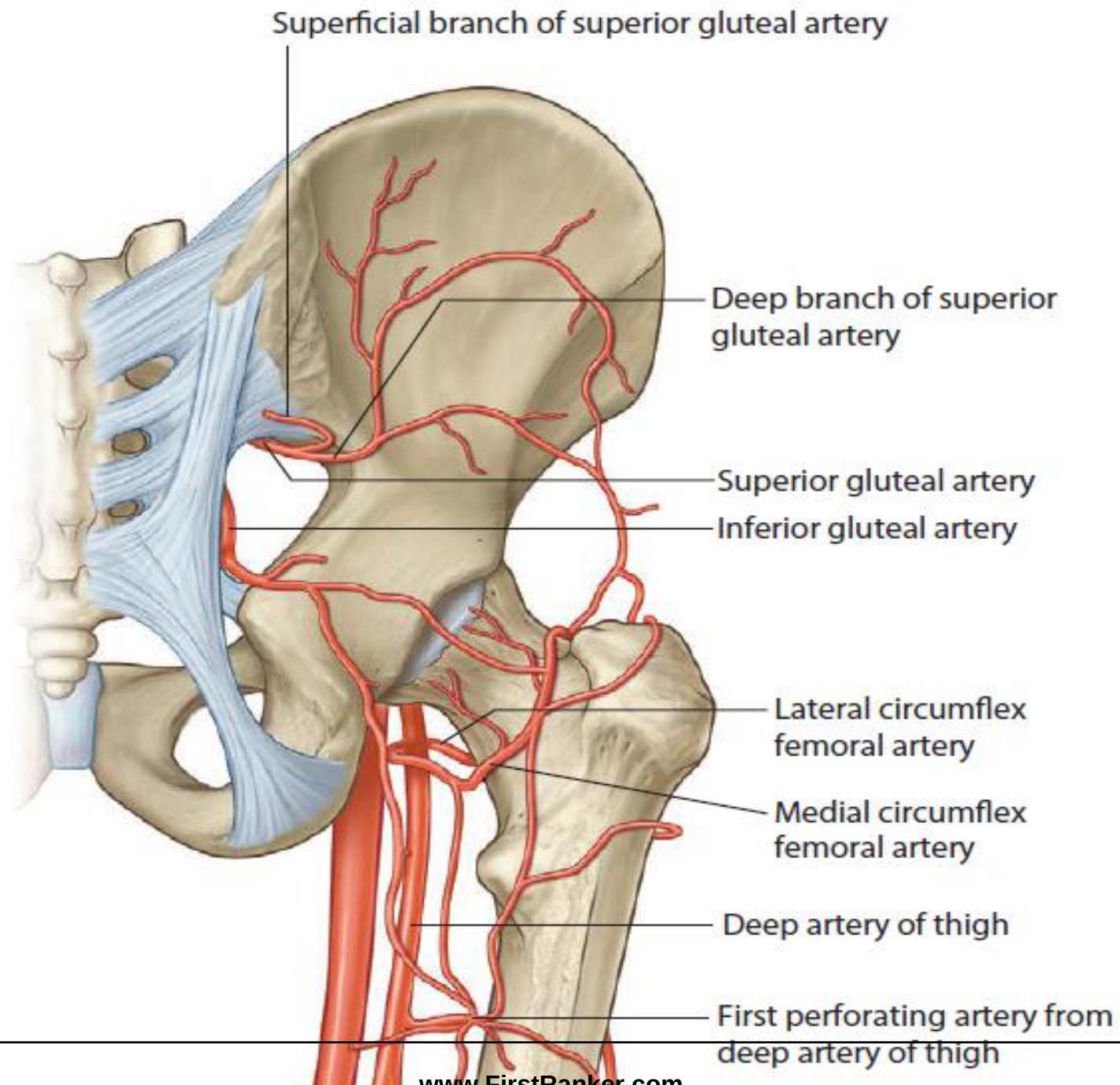
Structures under cover of the gluteus maximus



Muscle	Nerve supply	Actions
Gluteus maximus	Inferior gluteal nerve (L5; S1, S2)	Chief extensor of the hip joint Assists in getting up from sitting position
Gluteus medius	Superior gluteal nerve (L5; S1)	Abductor of the hip joint Prevents the sagging of pelvis on the unsupported side
Gluteus minimus	Superior gluteal nerve	Abductor of the hip joint
Tensor fasciae latae	Superior gluteal nerve	Supports the femur on tibia during standing position
Piriformis	Ventral rami of S1, S2	Lateral rotator of the thigh at hip joint*
Gemellus superior	Nerve to obturator internus (L5; S1, S2)	*
Gemellus inferior	Nerve to quadratus femoris (L4; L5, S1)	*
Obturator internus	Nerve to obturator internus	*
Quadratus femoris	Nerve to quadratus femoris (L4; L5, S1)	*

SUPERIOR GLUTEAL ARTERY

- Branch of the posterior division of internal iliac artery.
- Divides → Superficial and Deep branches
- **Superficial branch** → between gluteus medius and maximus, and supplies both of them.
- **Deep branch** → between gluteus medius and minimus
- subdivides into upper and lower branches
- **Upper branch**-- spinous anastomosis (ASIS)
- **Lower branch**-- trochanteric anastomosis

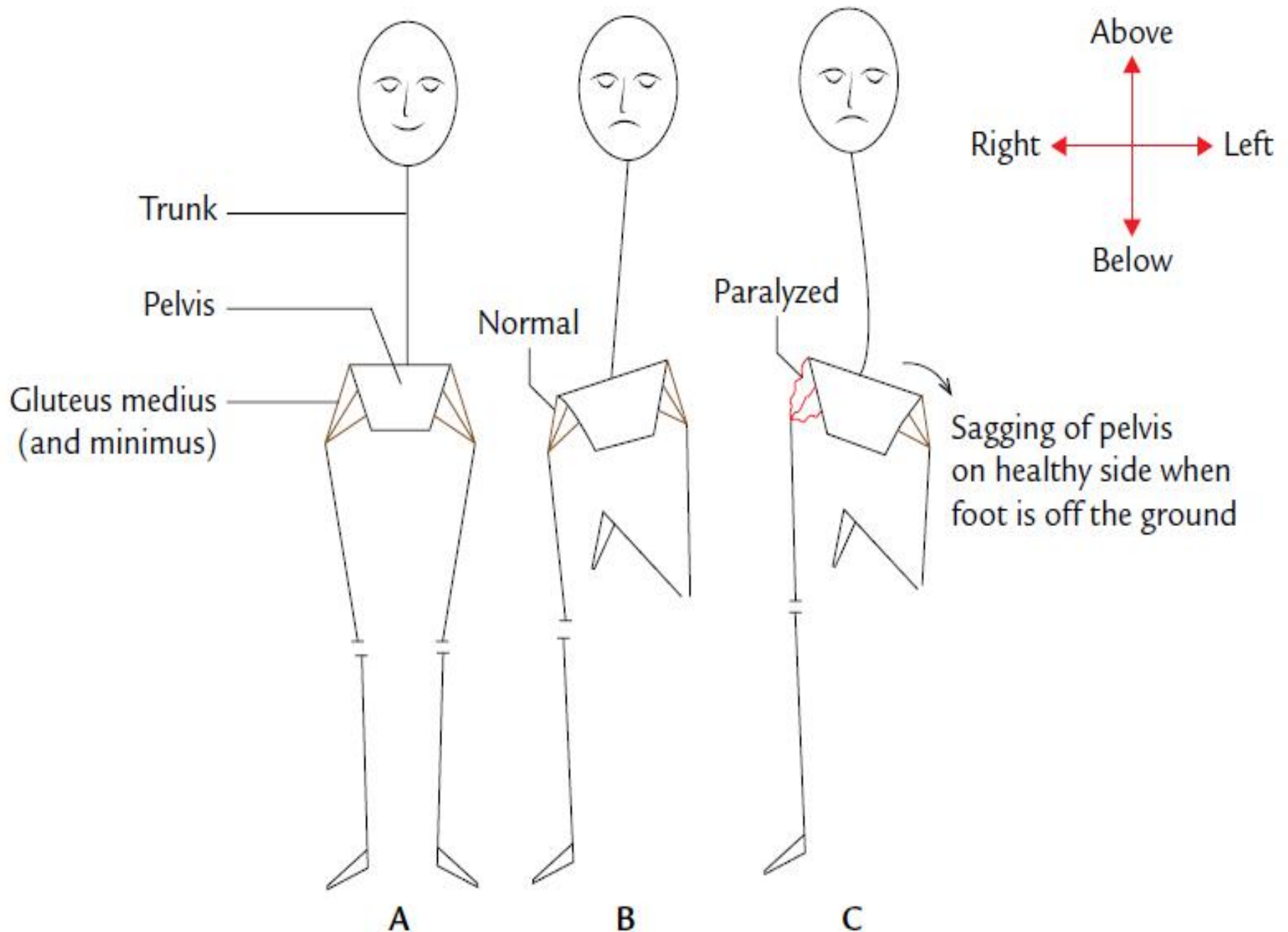


INFERIOR GLUTEAL ARTERY

- Branch of anterior division of the internal iliac artery.
- Branches:→
 - i) Muscular branches to the adjacent muscles.
 - ii) Anastomotic branches to cruciate and trochanteric anastomoses.
 - iii) Artery to sciatic nerve

TRENDELENBURG'S SIGN

- The gluteus medius and minimus prevent the unsupported side of the pelvis from sagging during walking
- When the gluteus medius and minimus of one side are paralyzed due to injury of the superior gluteal nerve.
- The pelvis sags on the healthy side if that foot is off the ground.
- As a result, the person walks with a **lurching gait**



Intramuscular injection in gluteal region

