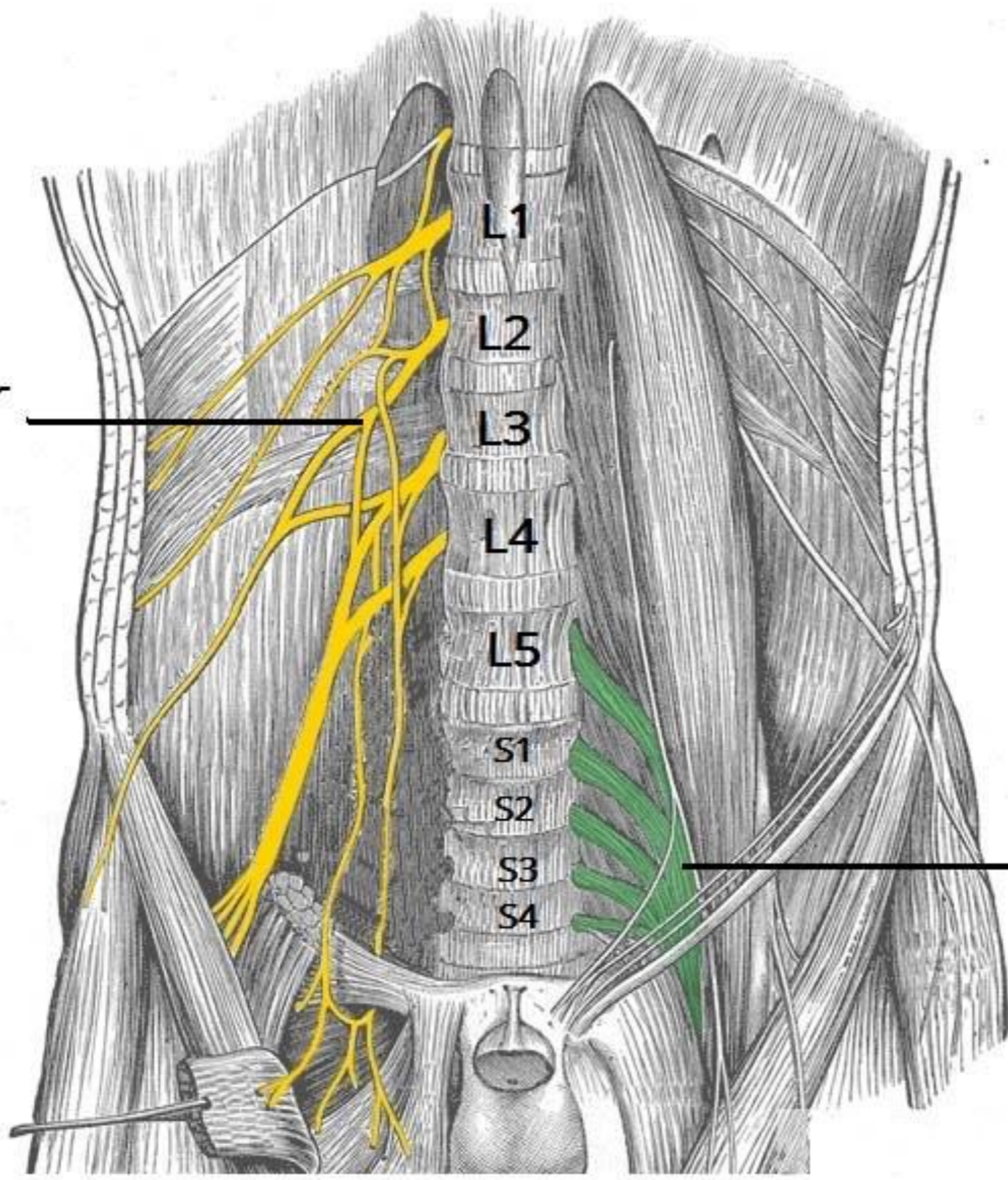


# BLOCCHI NERVOSI DELL'ARTO INFERIORE

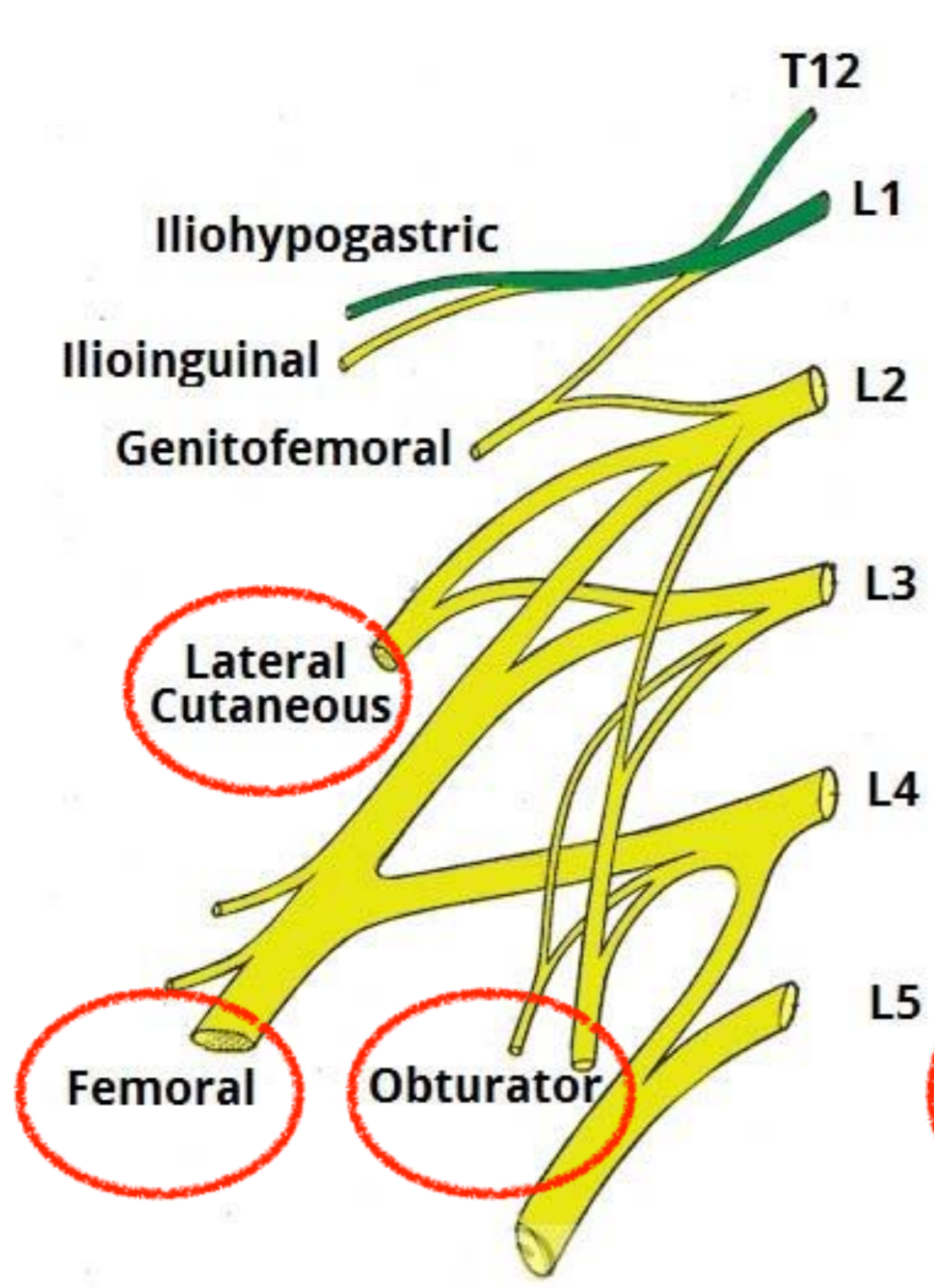
Lumbar Plexus



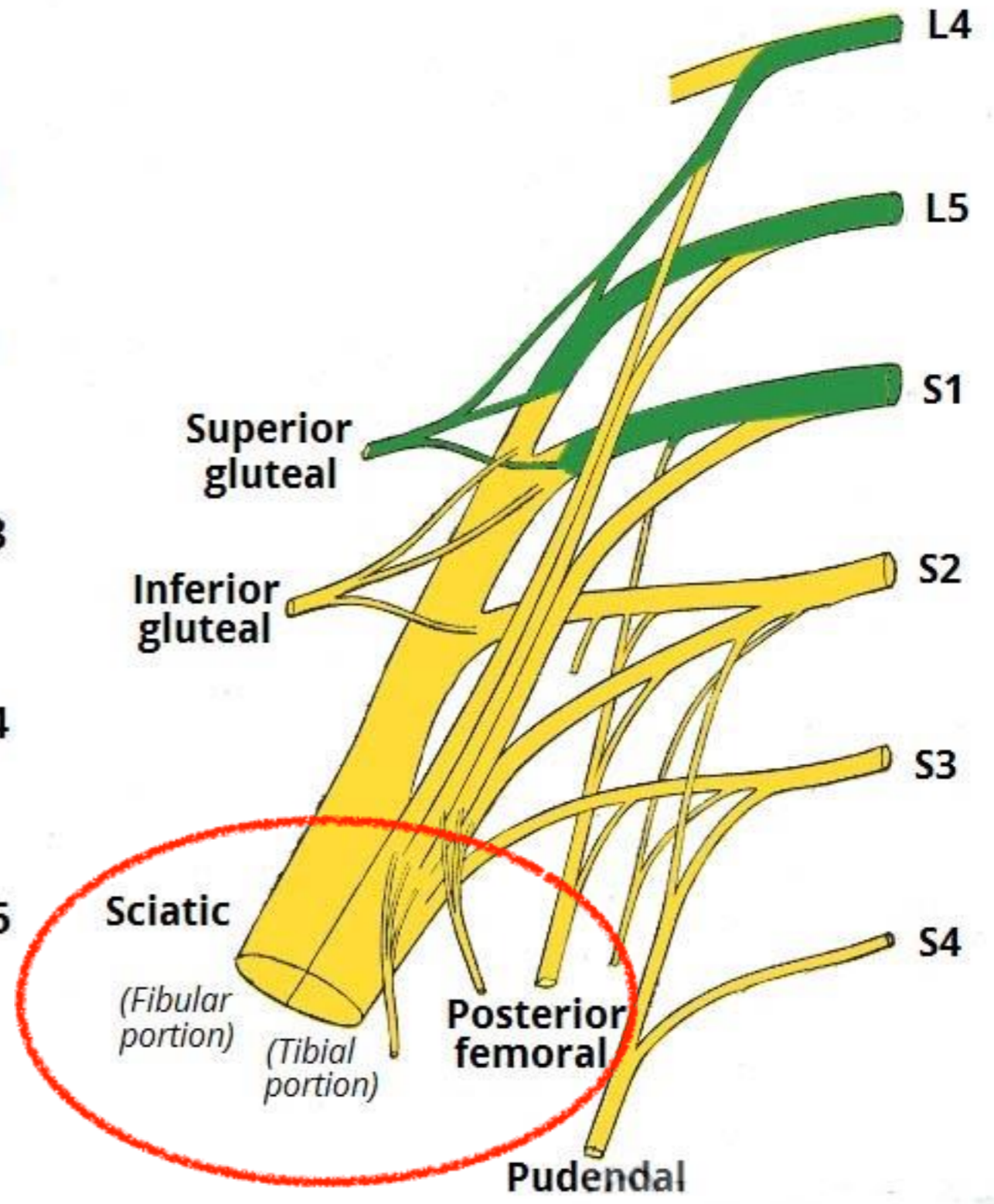
Sacral Plexus



# PLESSO LOMBARE



# PLESSO SACRALE



# Dermatomes

**Anterior**



**Posterior**



- Subcostal T12
- Ilioinguinal L1
- Iliohypogastric T12-L1
- Lateral cutaneous nerve of the thigh L2-L3
- Genitofemoral L1-L2
- Obturator div post L2-L4
- Femoral div ant de L2-L4
- Saphenous L2-L4
- Posterior cutaneous nerve of the thigh S1-S3
- Sciatic L4-S3
- Tibial L4-S3
- Common peroneal L4-S3
- Superficial peroneal L4-S2
- Deep peroneal L4-S2
- Sural S1

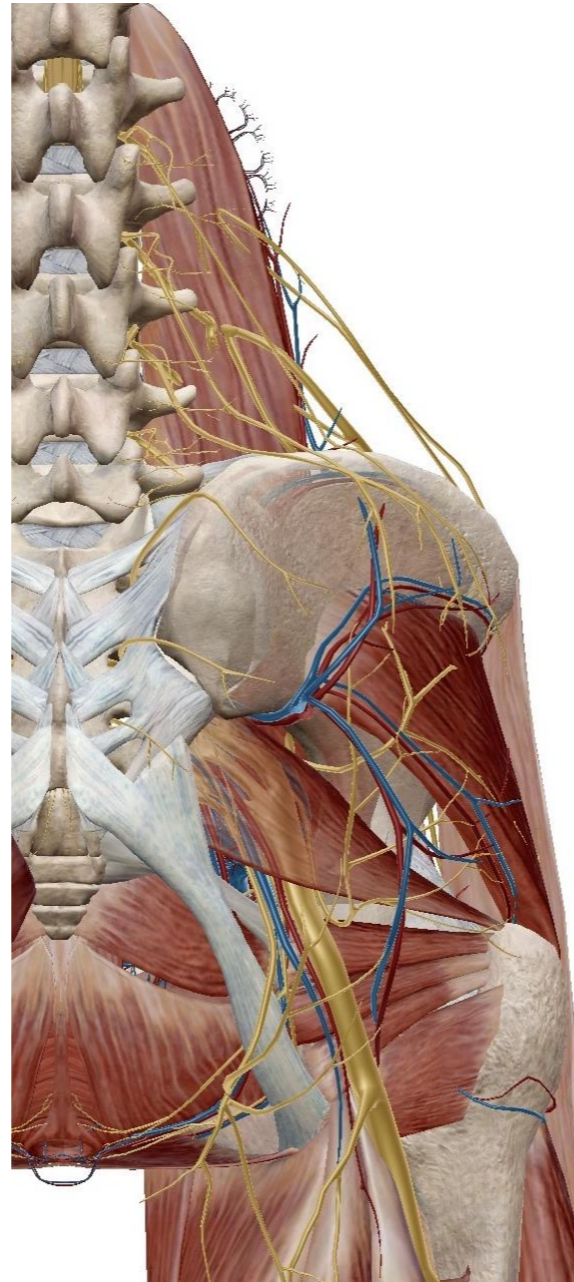


# PLESSO LOMBARE

## APPROCCIO POSTERIORE

LUMBAR PLEXUS BLOCK

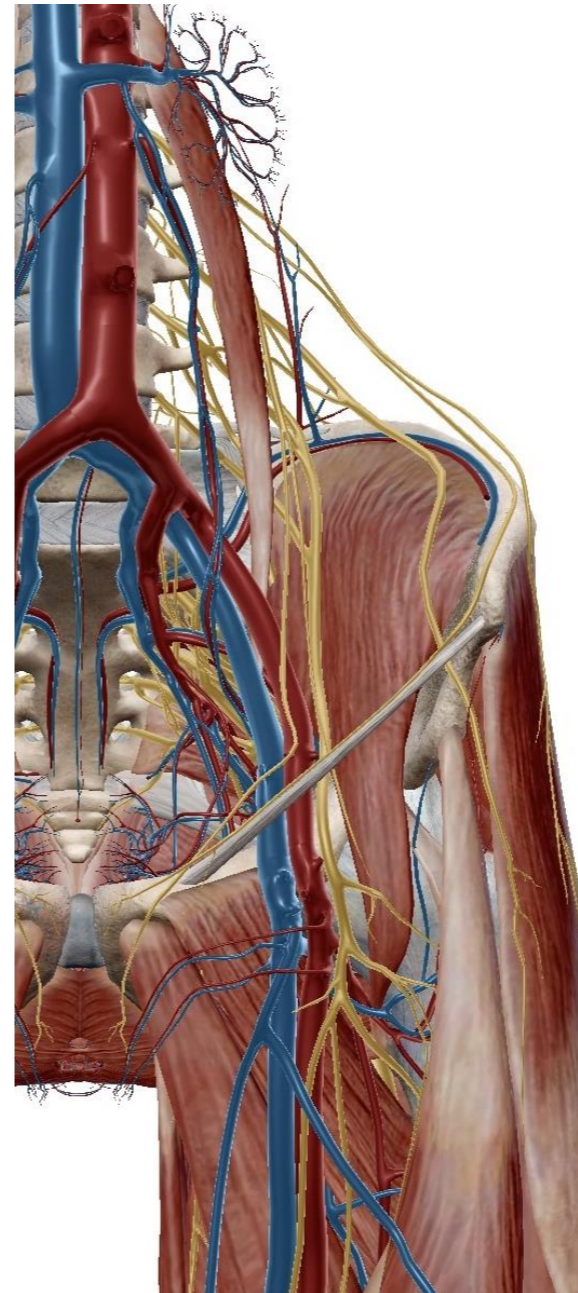
ANTERIOR QLB



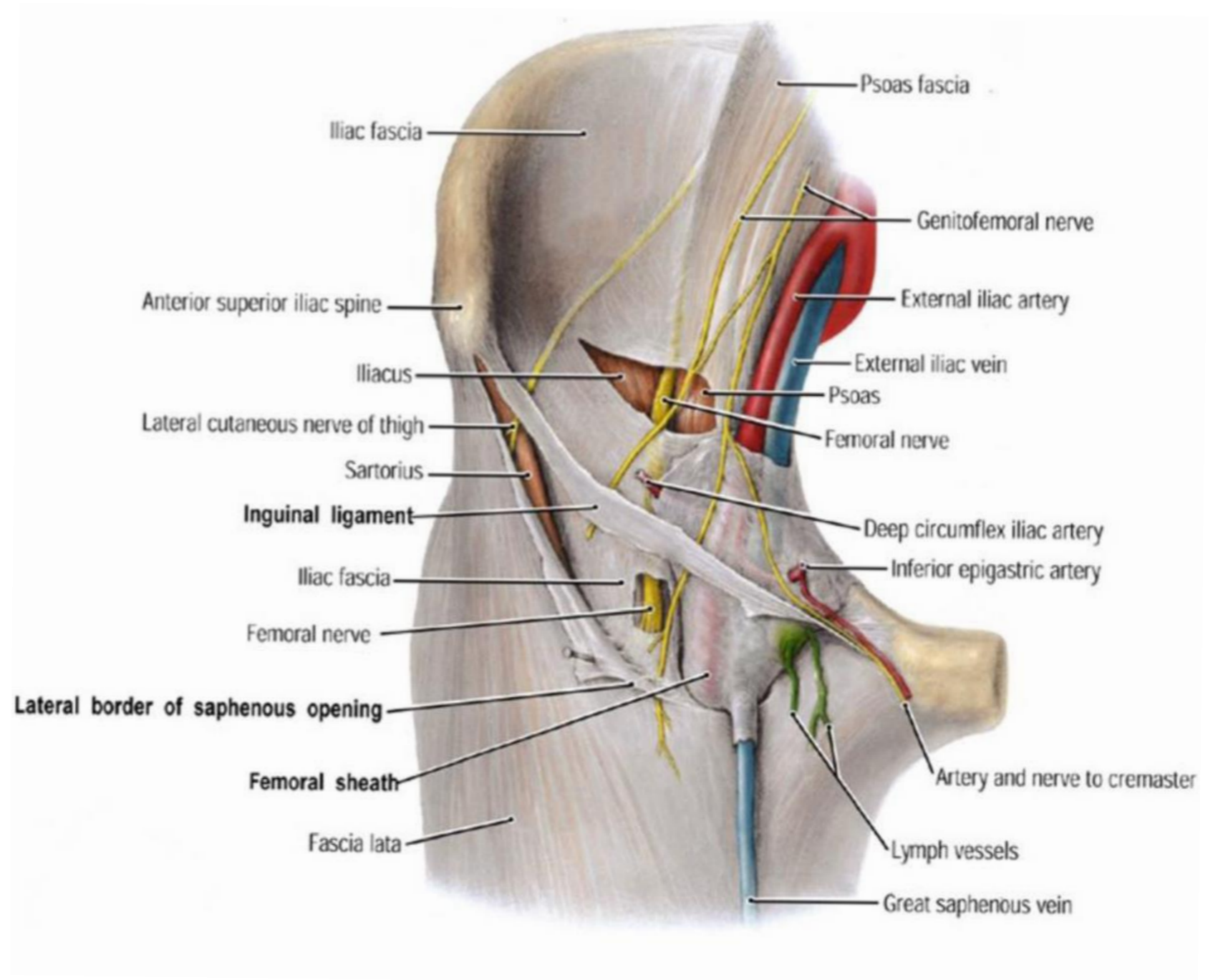
## APPROCCIO ANTERIORE

SUPRAINGUINAL  
FASCIA ILIACA BLOCK

INFRAINGUINAL  
FASCIA ILIACA BLOCK

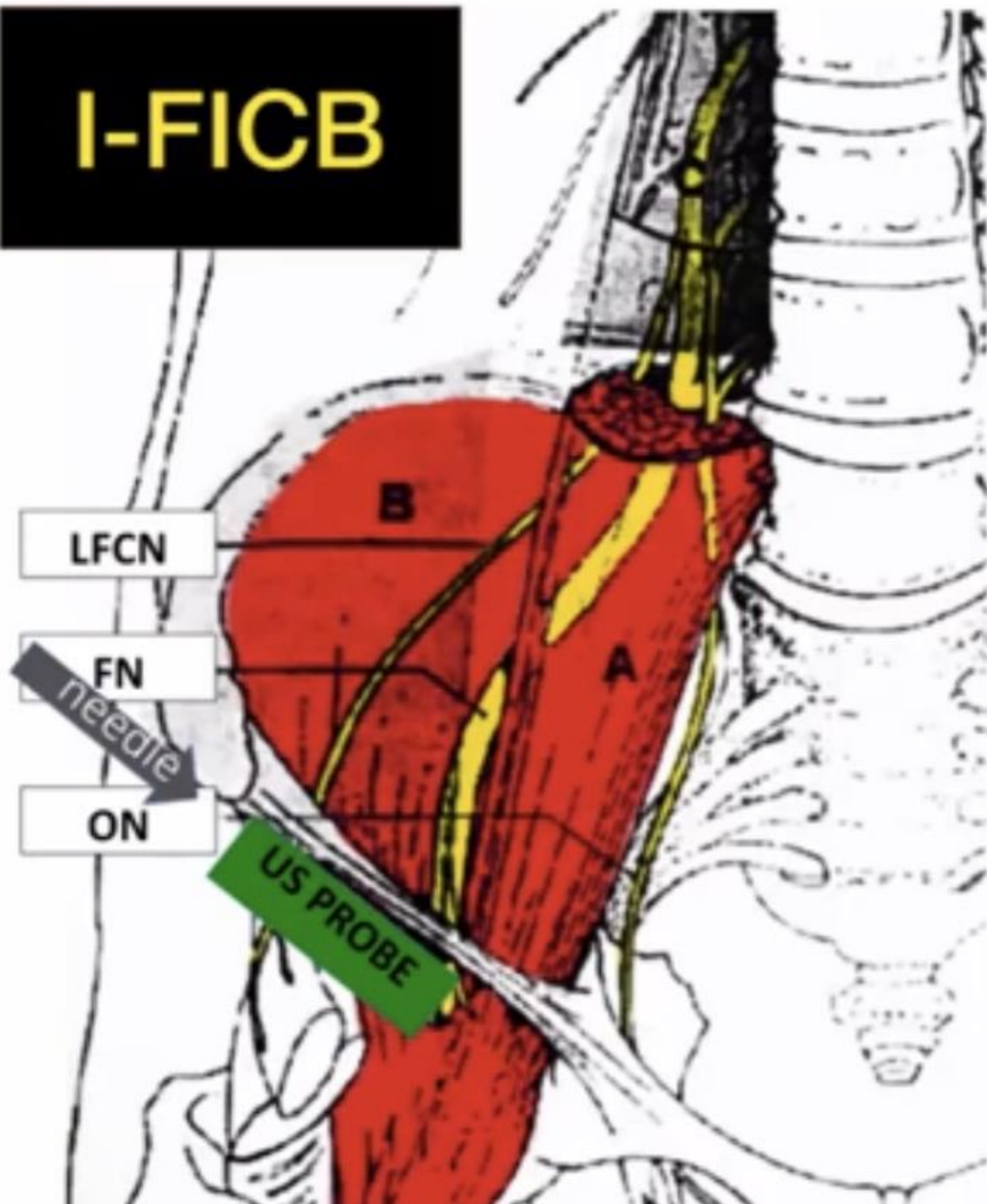


# FASCIA ILIACA

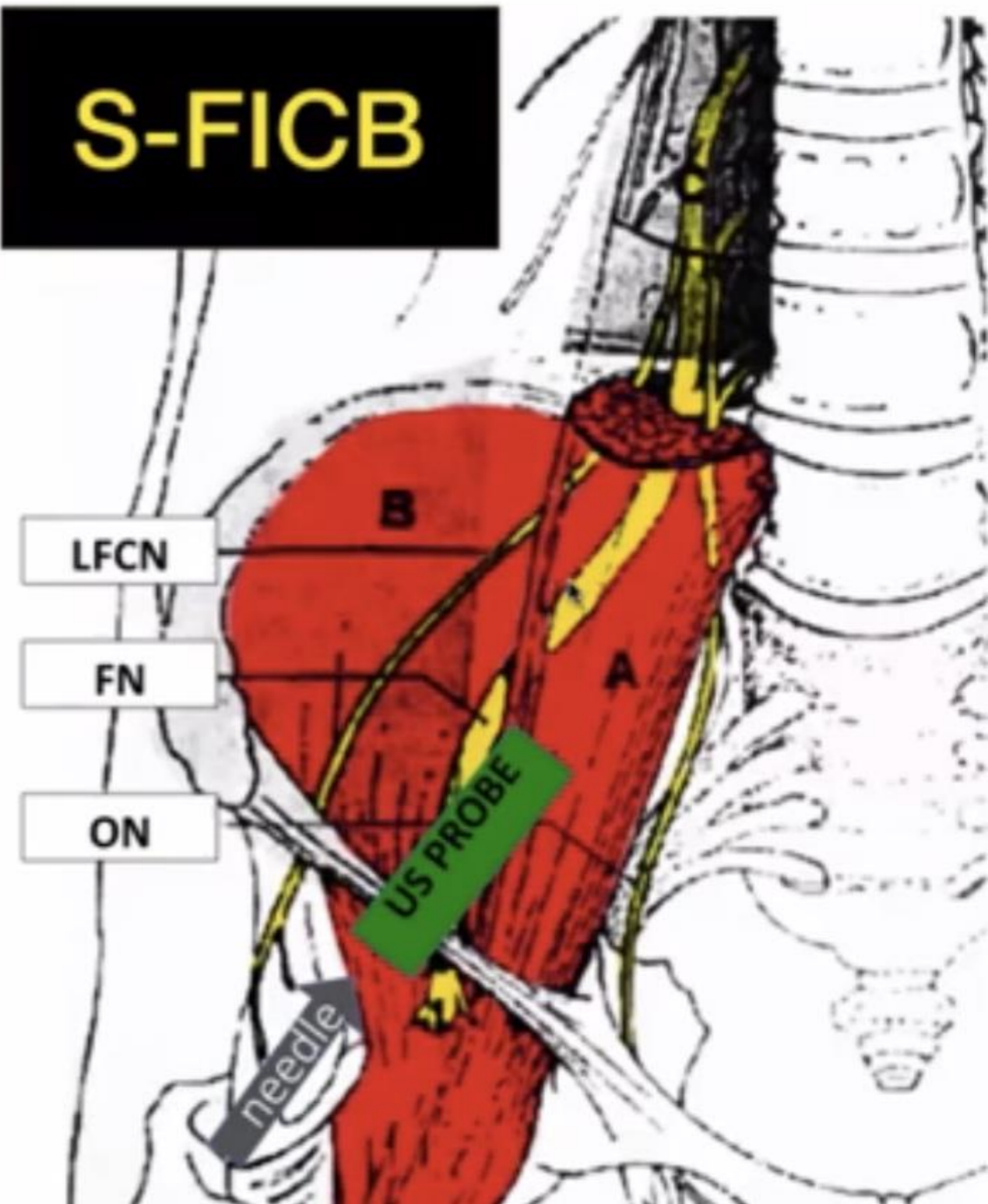




# I-FICB

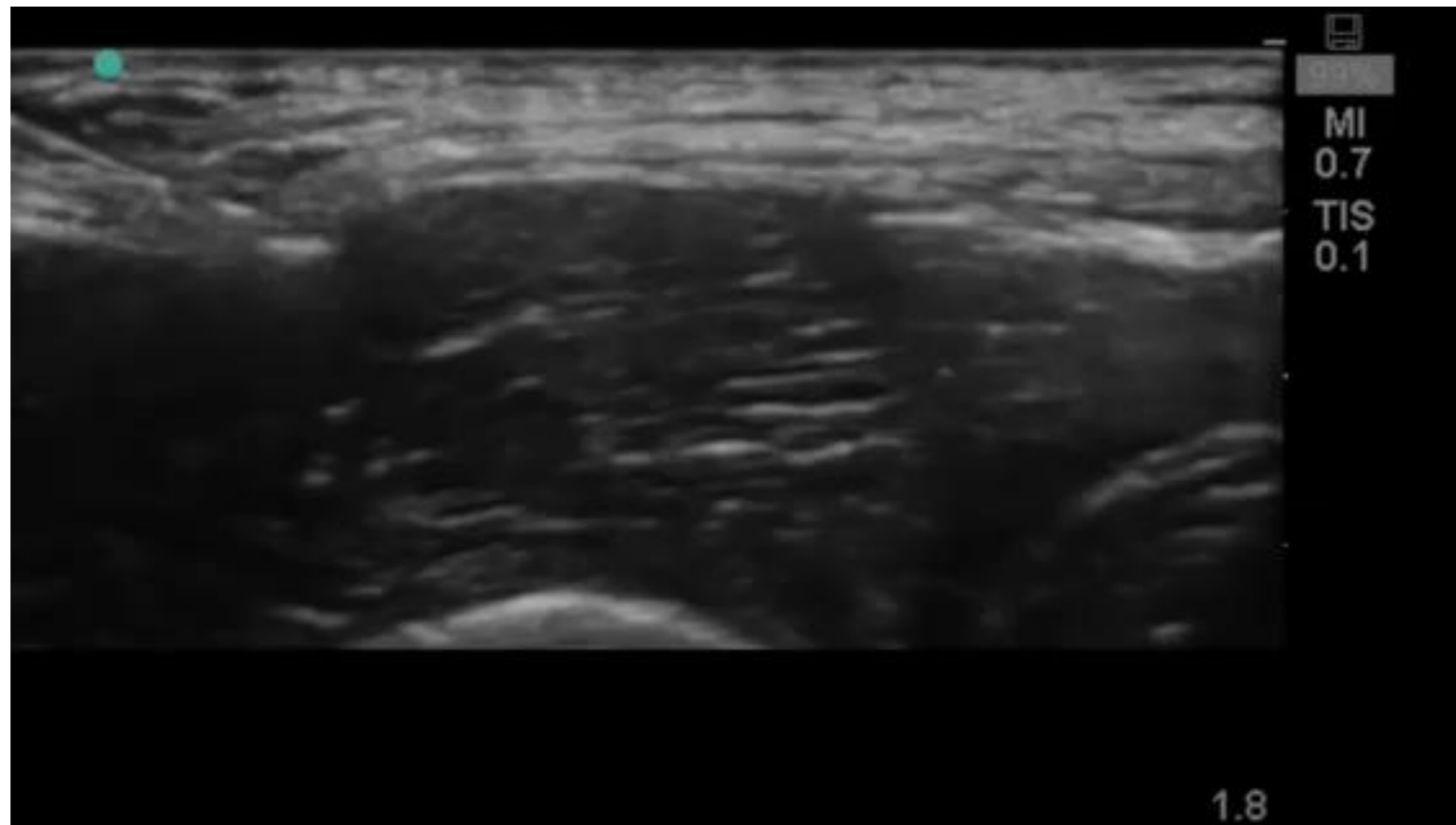
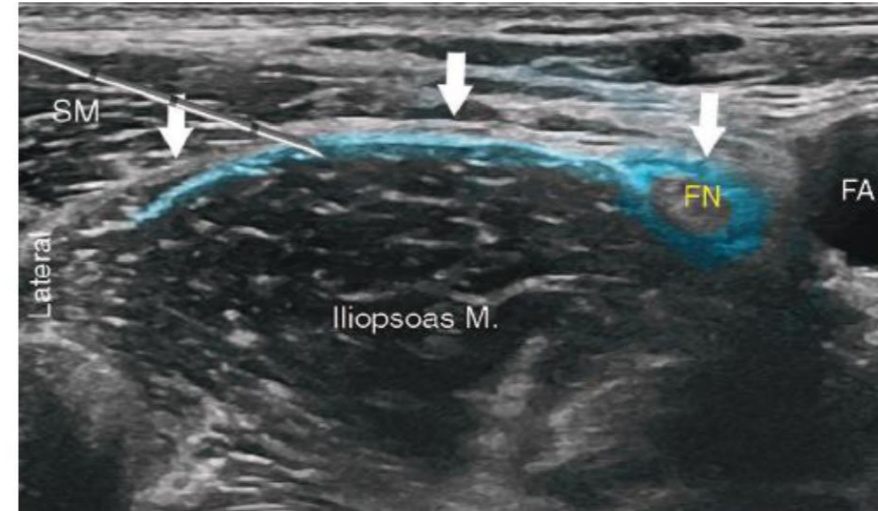
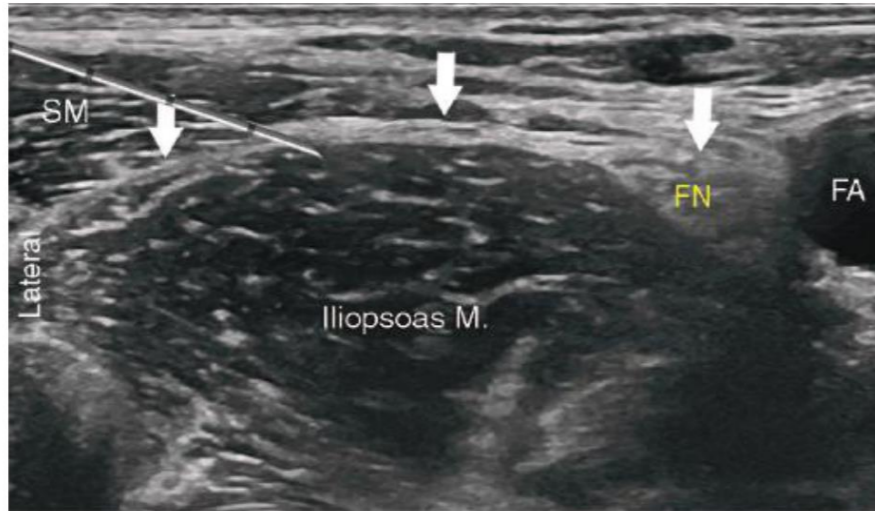


# S-FICB

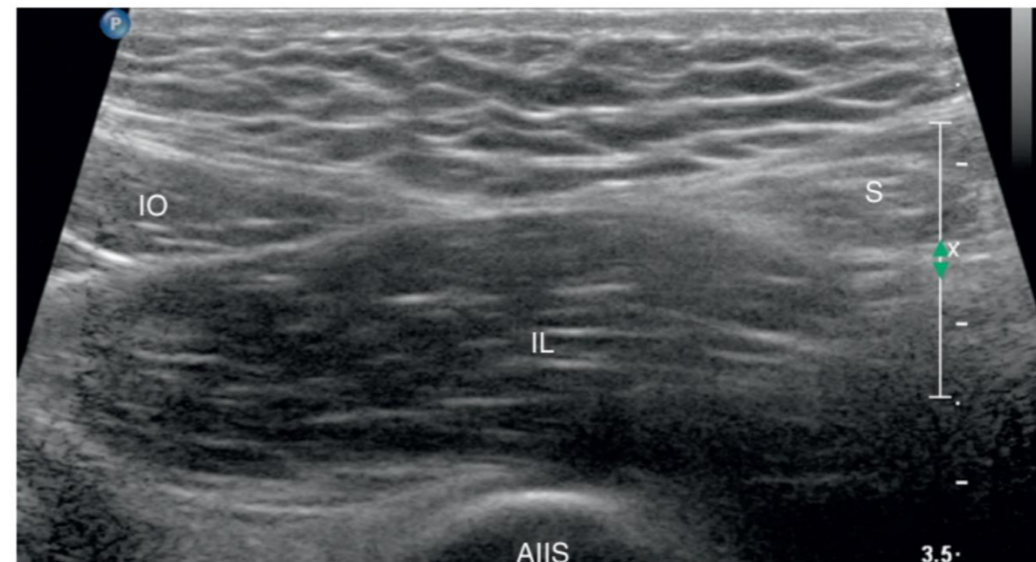




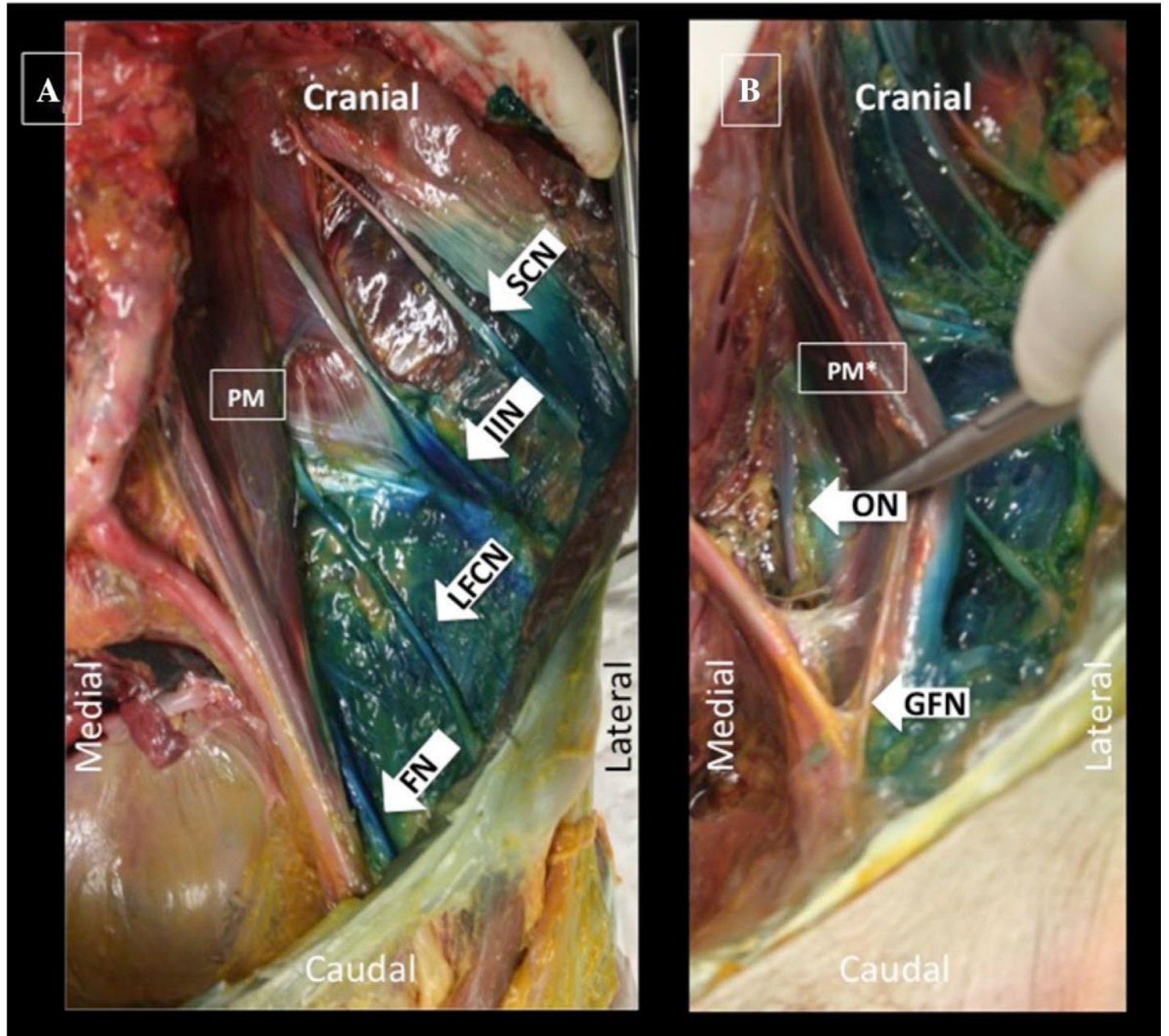
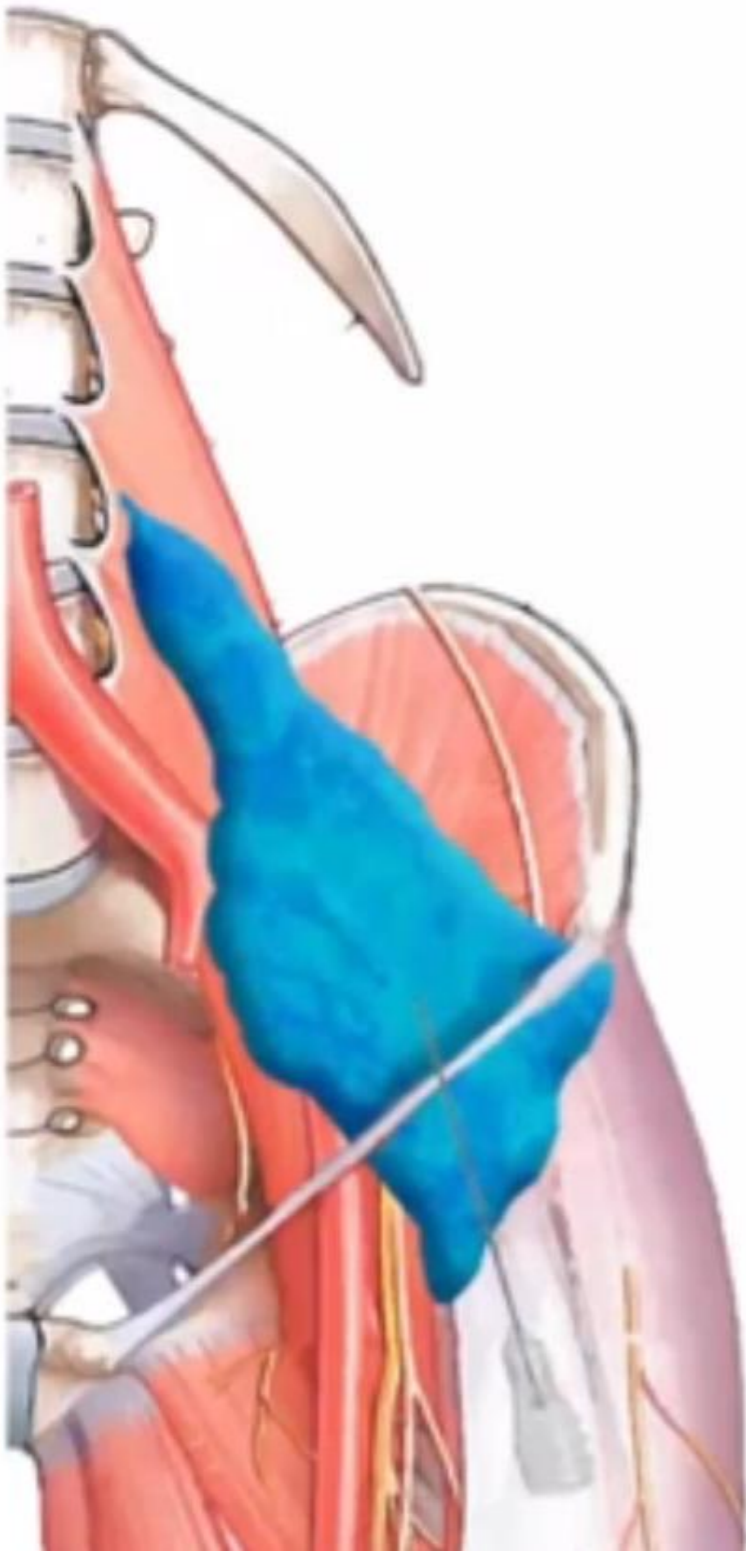
# INFRA INGUINAL FASCIA ILIACA BLOCK

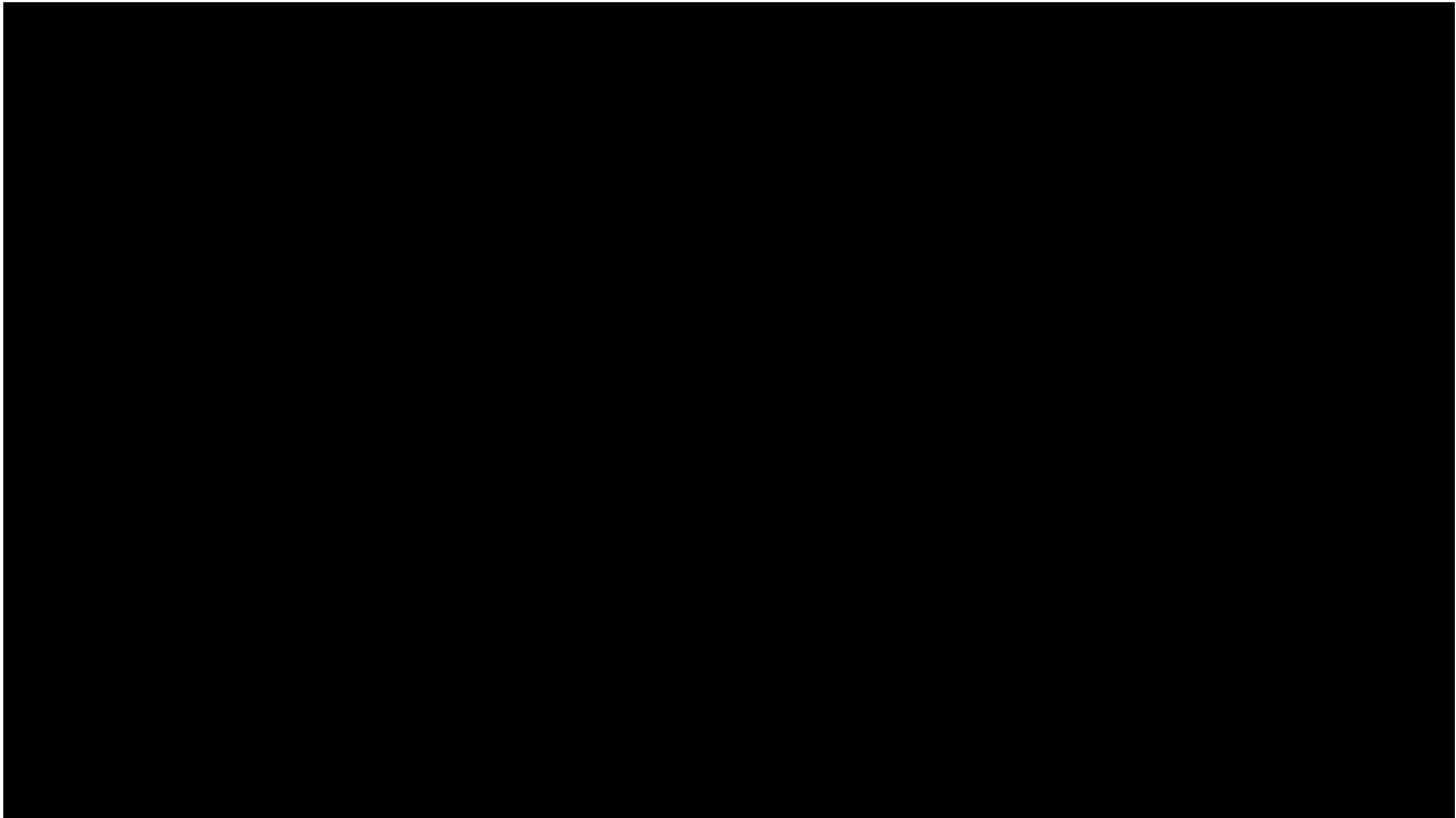


# SUPRA INGUINAL FASCIA ILIACA BLOCK













**PENG BLOCK**

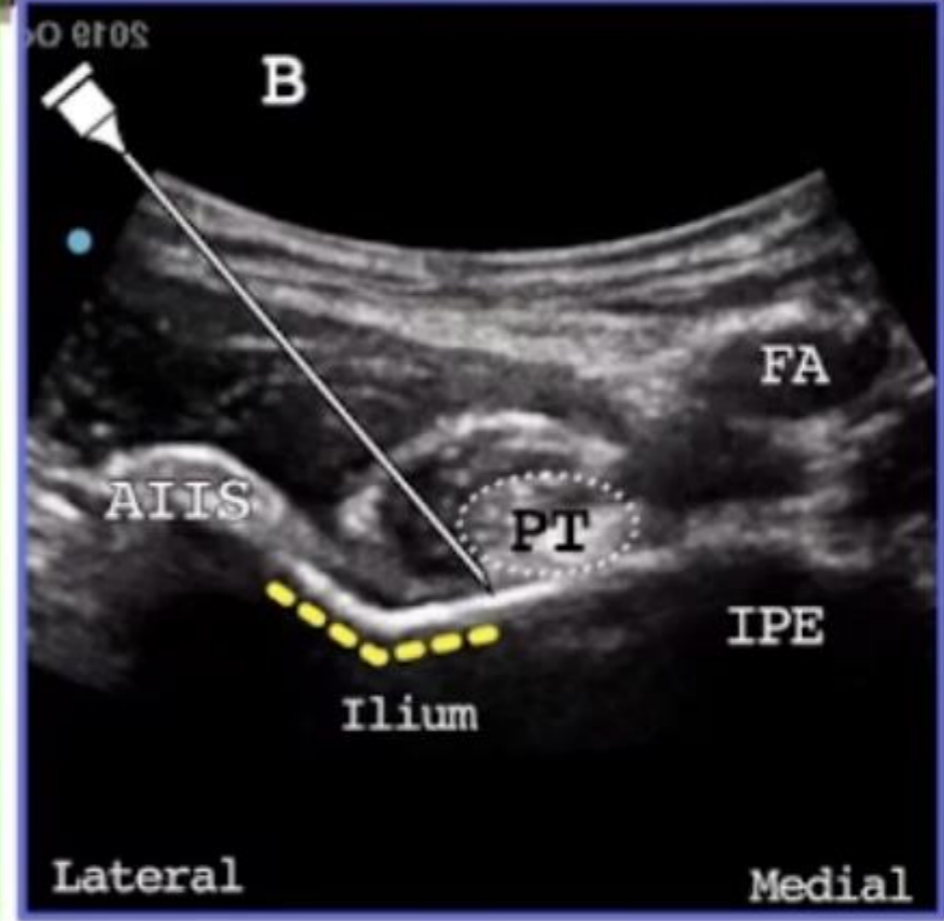
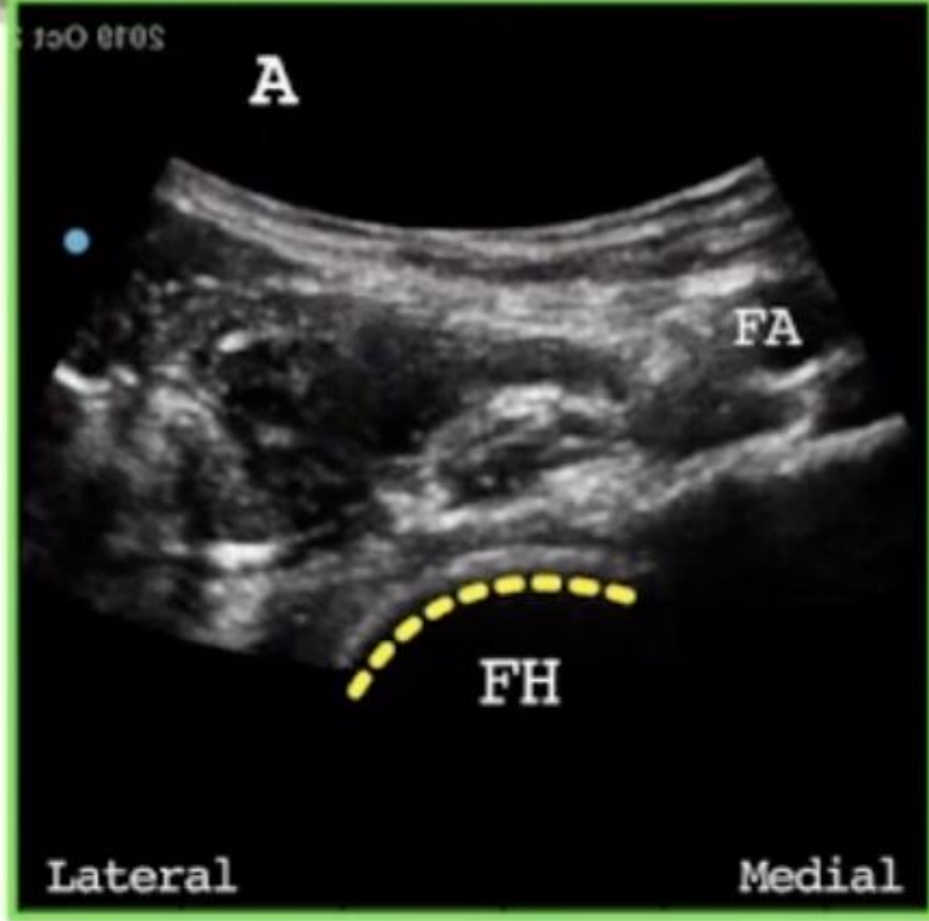
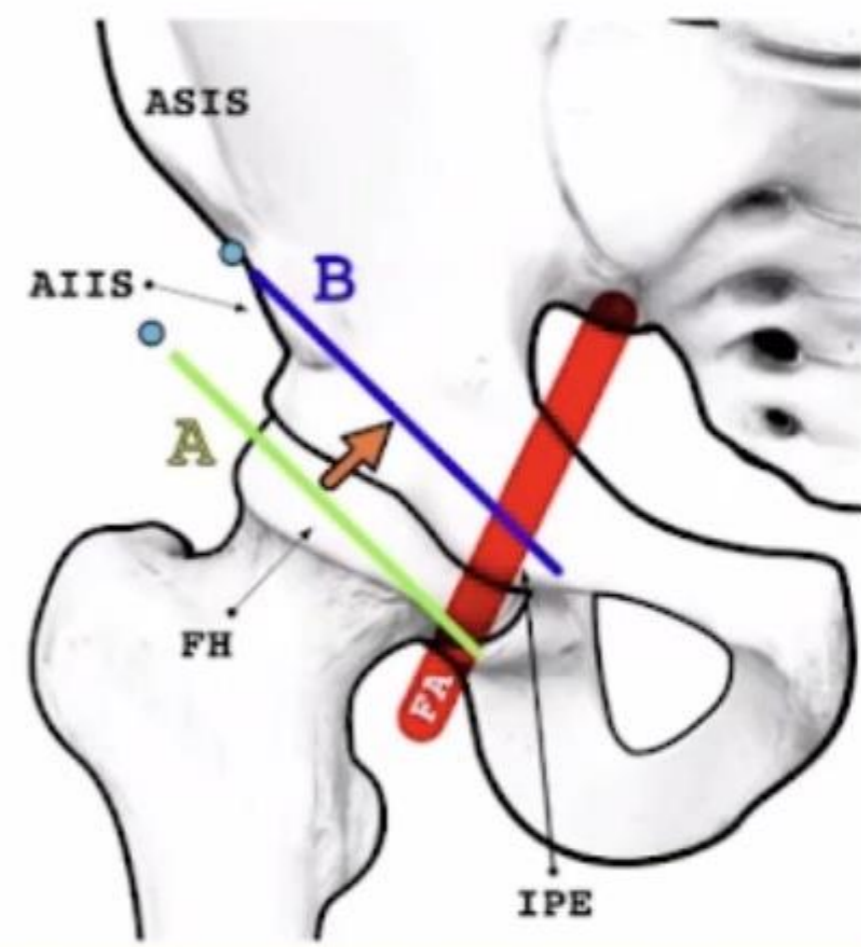
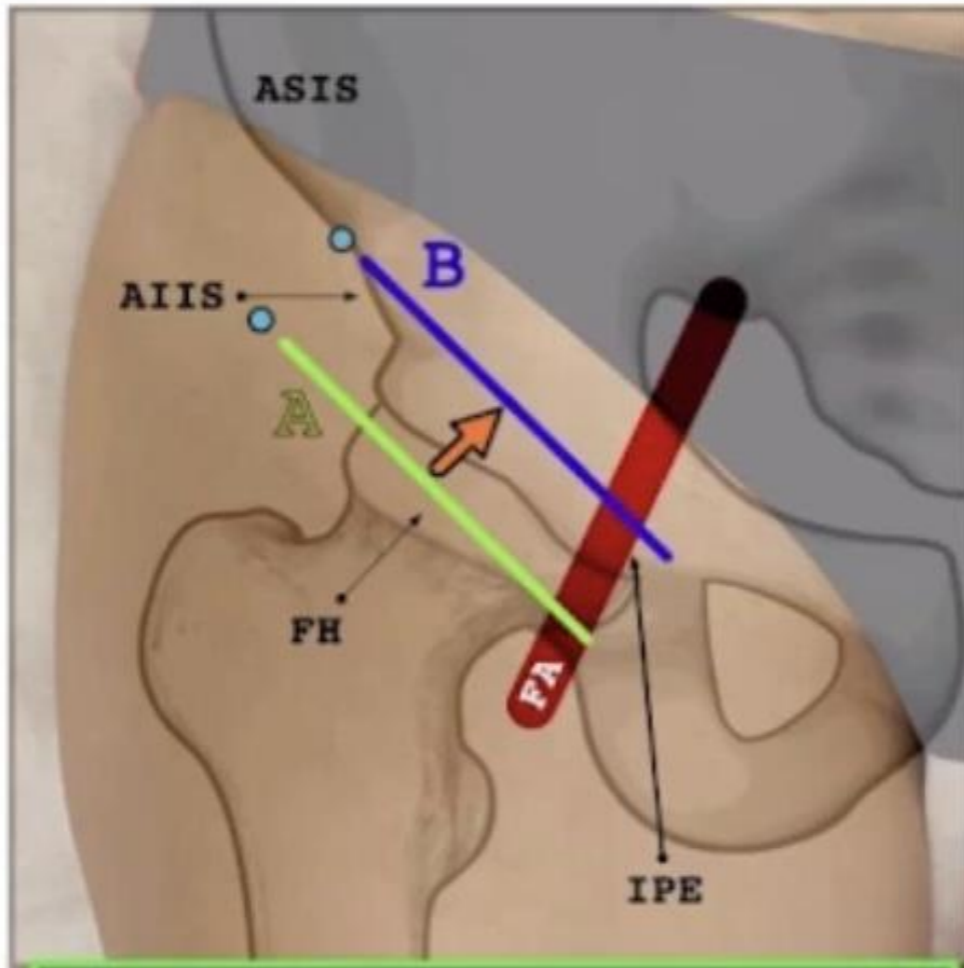
Lateral femoral cutaneous nerve  
Anterior superior iliac spine  
Femoral nerve  
Femoral artery and vein  
Anterior inferior iliac spine  
Psoas tendon  
Accessory obturator nerve  
Articular sensory nerves  
Obturator nerve

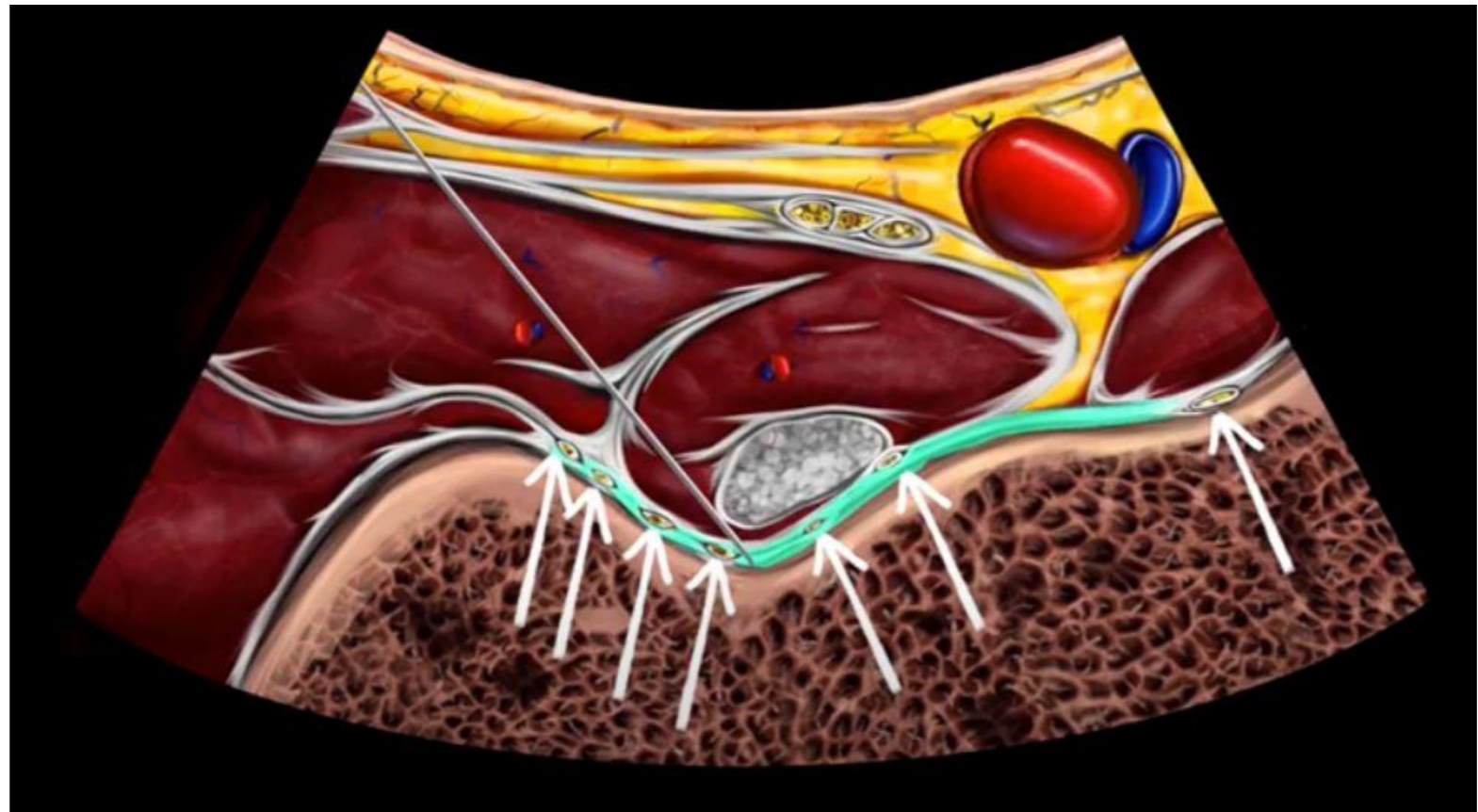
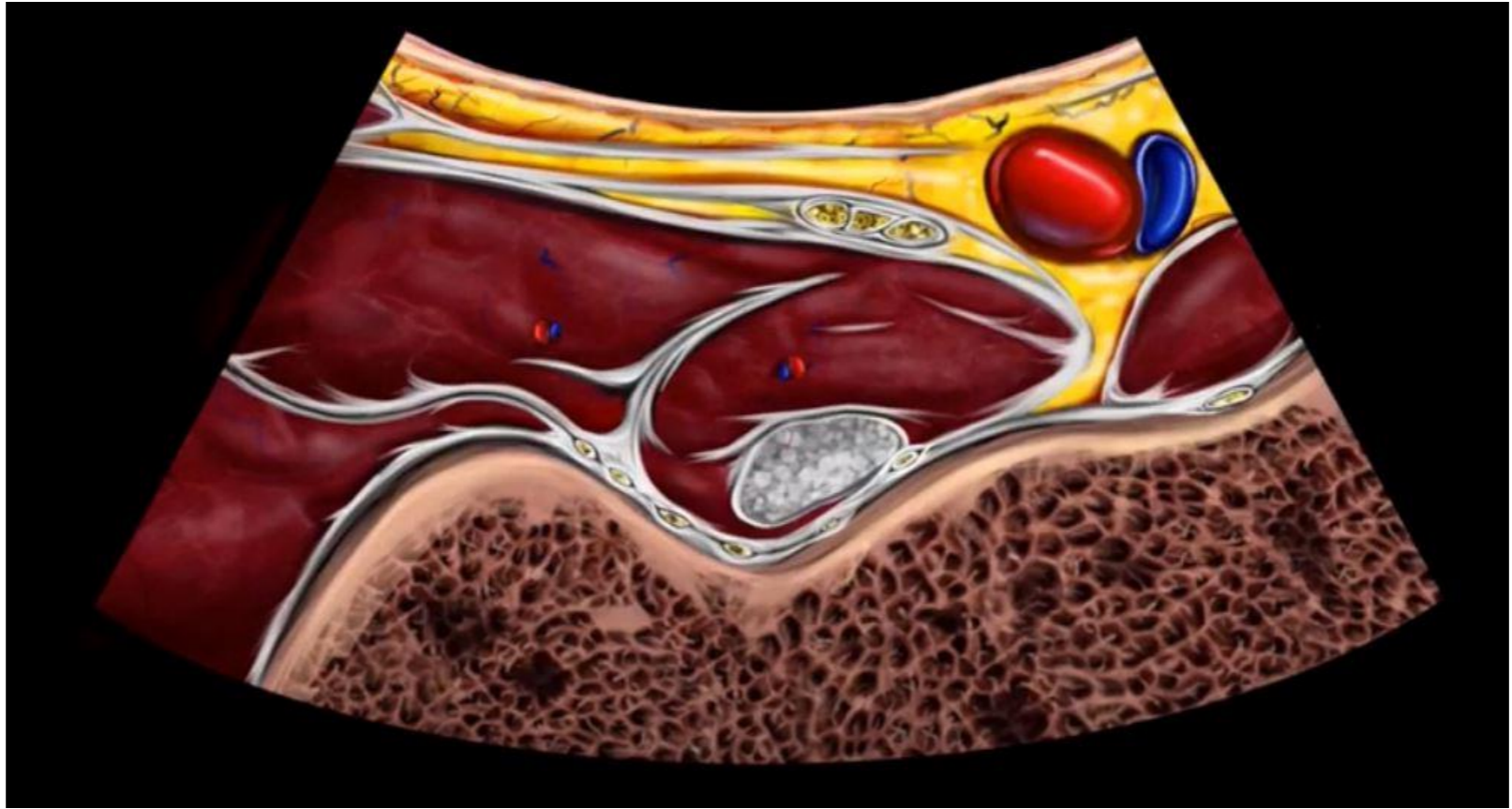


## HIP BLOCK

- Injection under the Iliacus muscle
- Spread over the pubic ramus
- Analgesia without motor block
- Ambulation  analgesia Fascia Iliaca 
- SAME-DAY HIP SURGERY

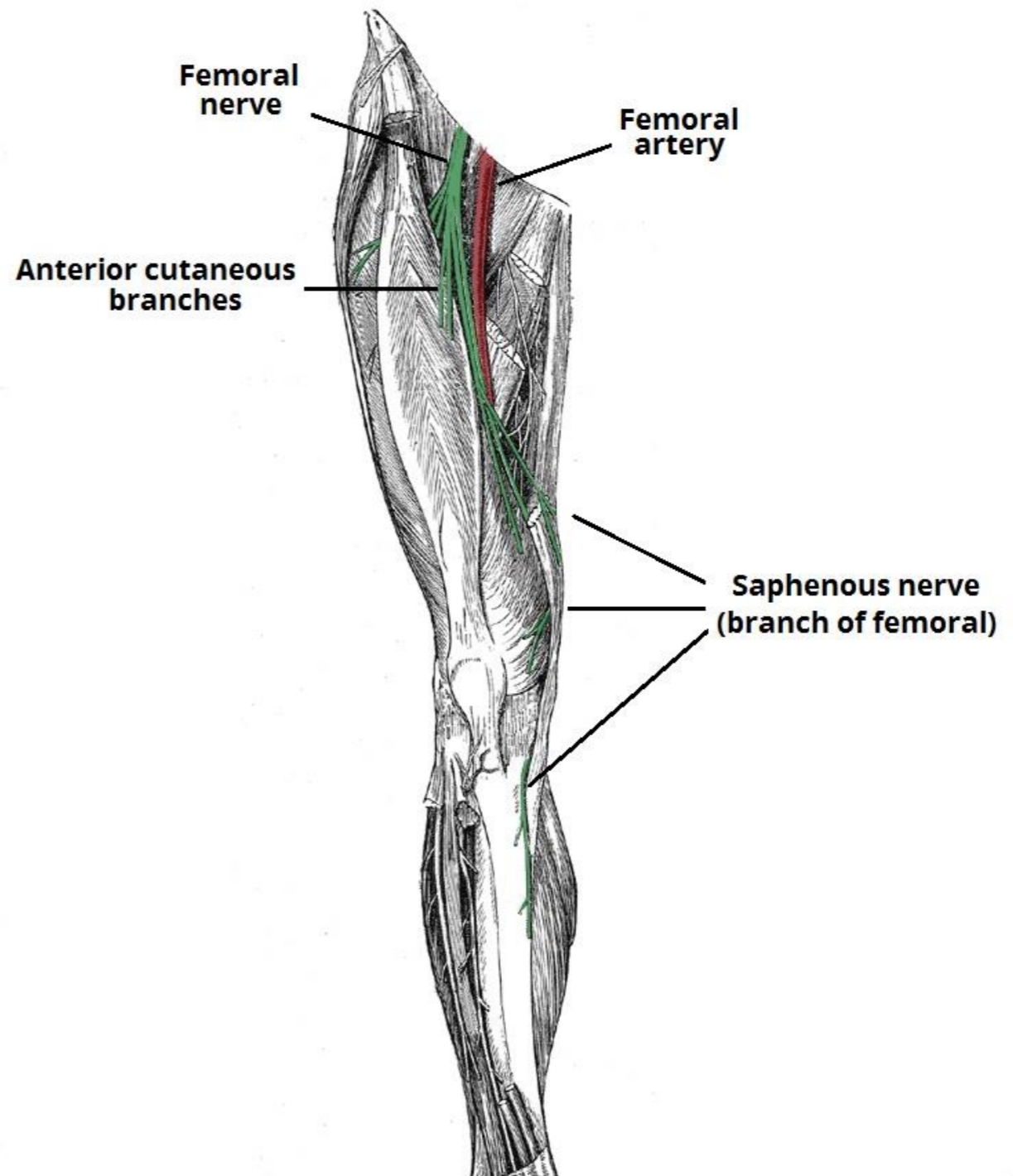






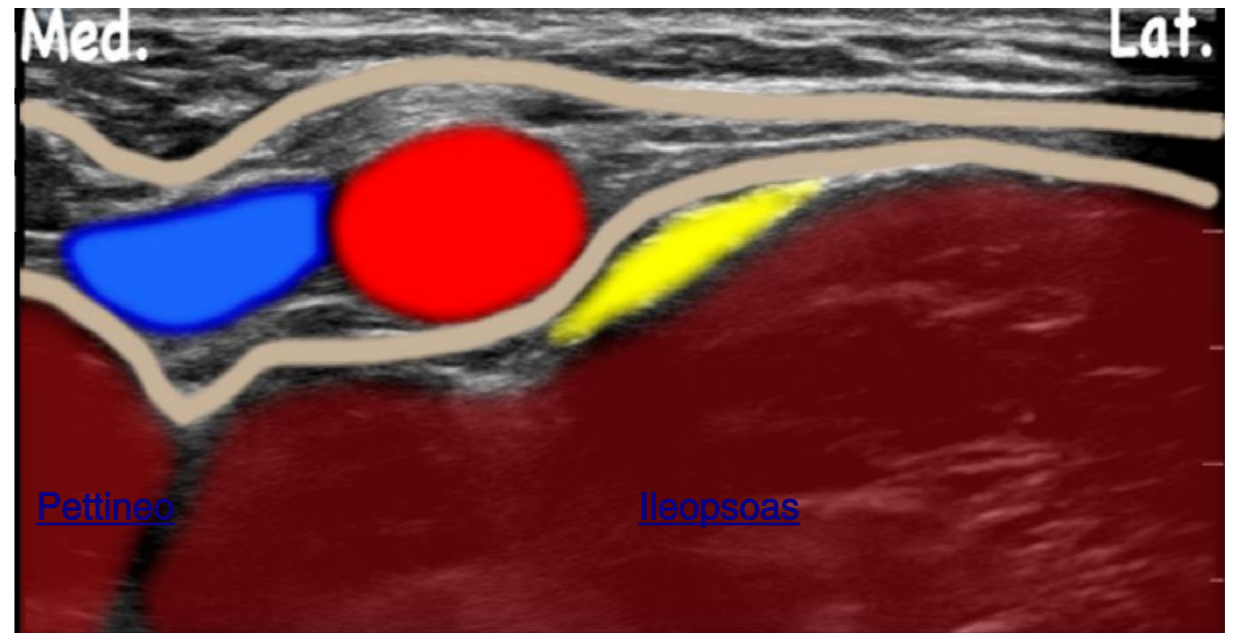
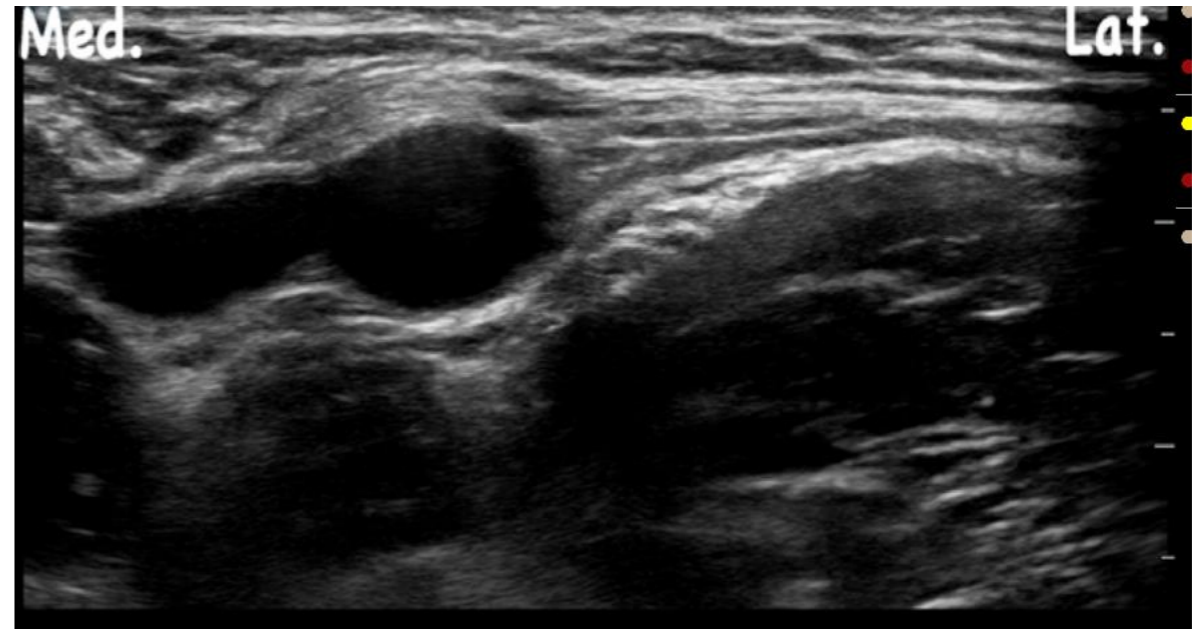
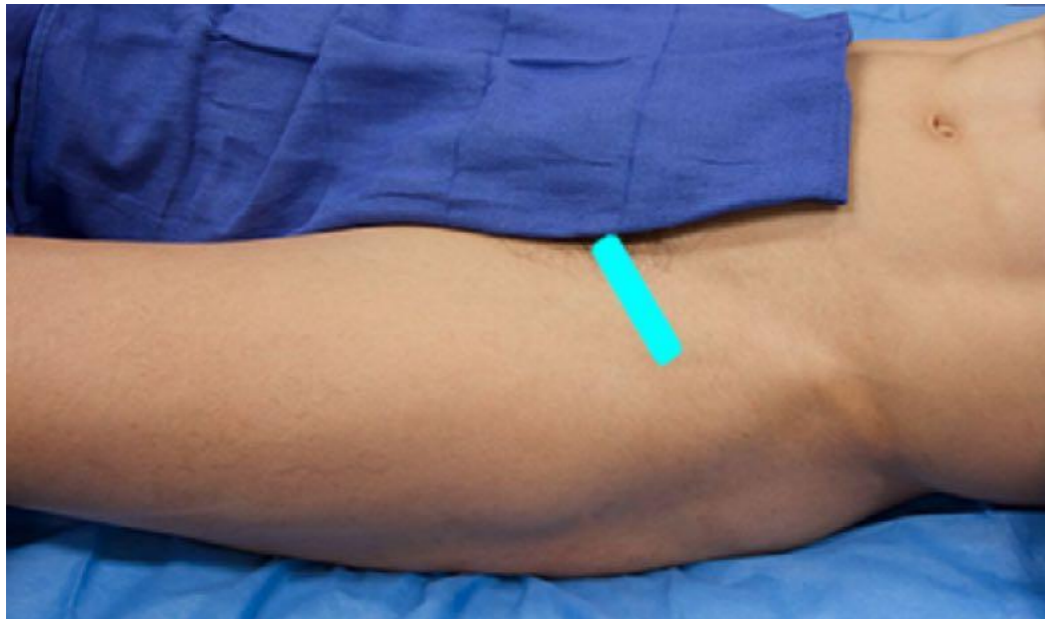


# NERVO FEMORALE



The femoral nerve is the largest branch of the lumbar plexus, arising from the **second, third, and fourth** lumbar nerves. The femoral nerve passes underneath the inguinal ligament into the thigh. Femoral nerve close to femoral artery and vein inguinal ligament, the nerve is positioned lateral and slightly deeper than the femoral artery between the psoas and iliac muscles.

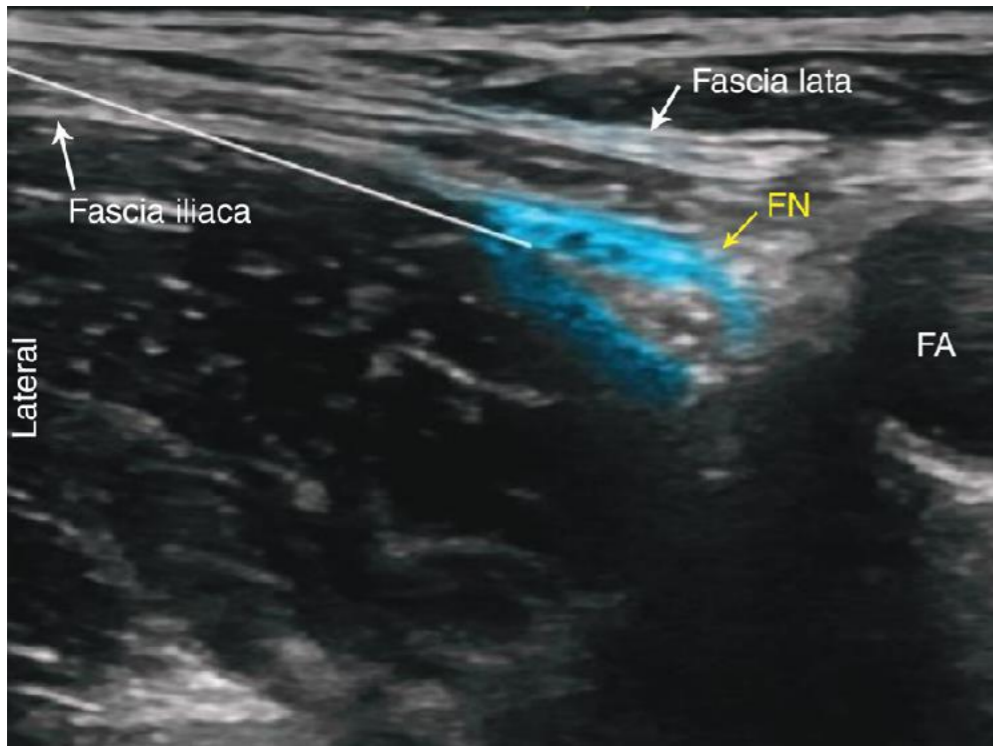
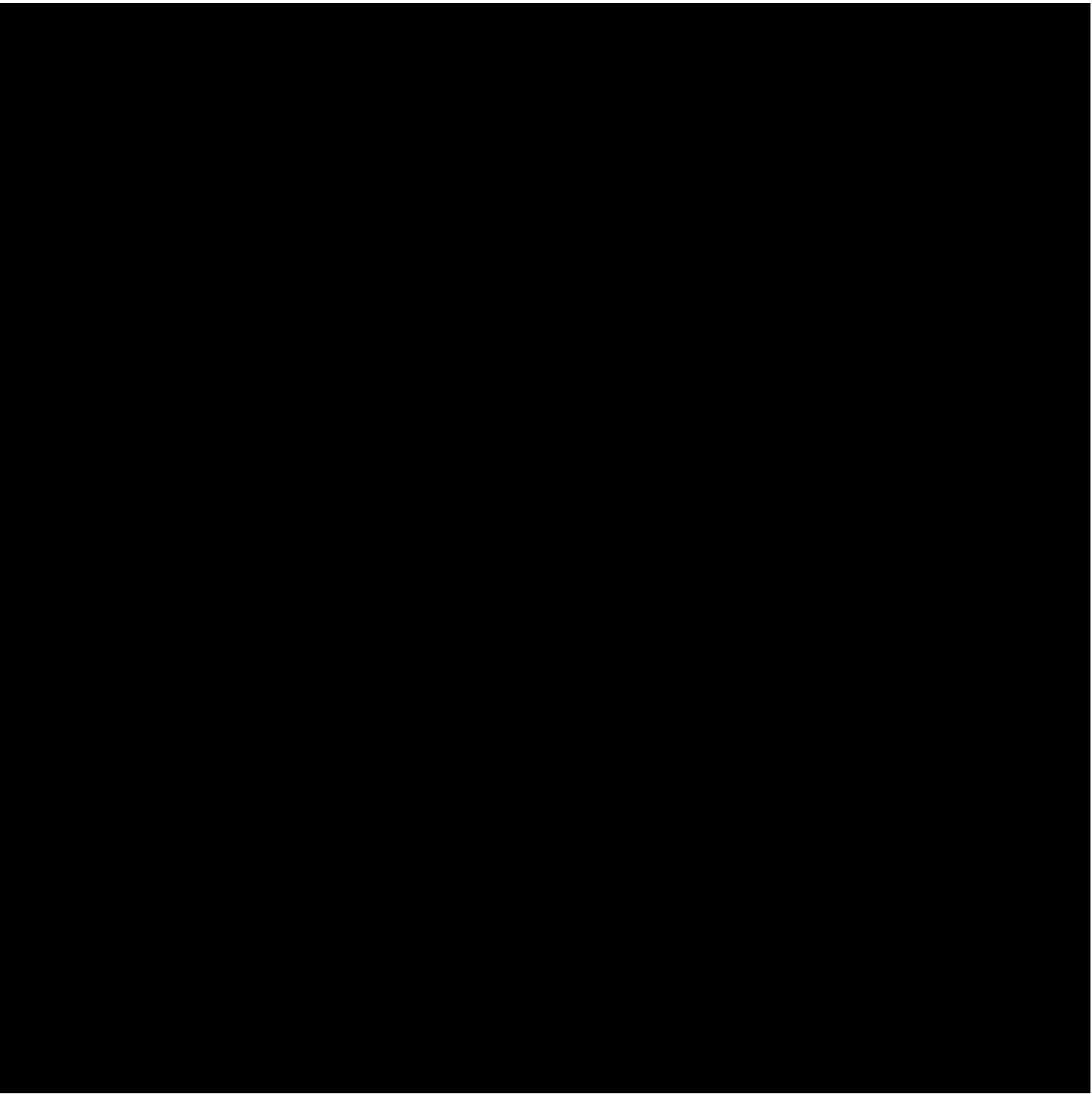
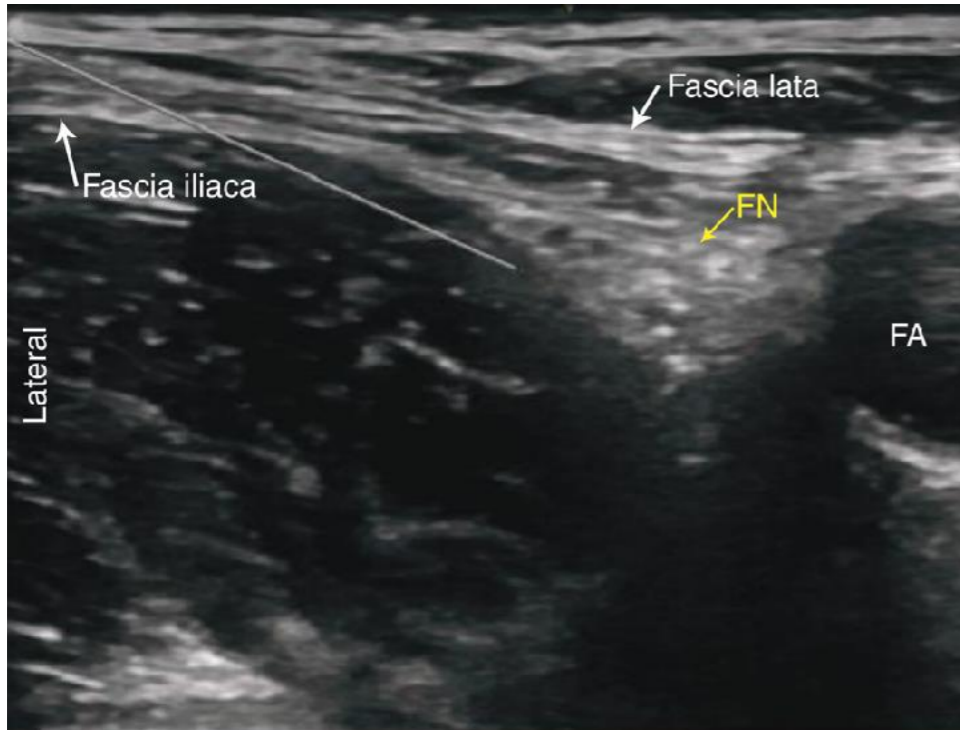


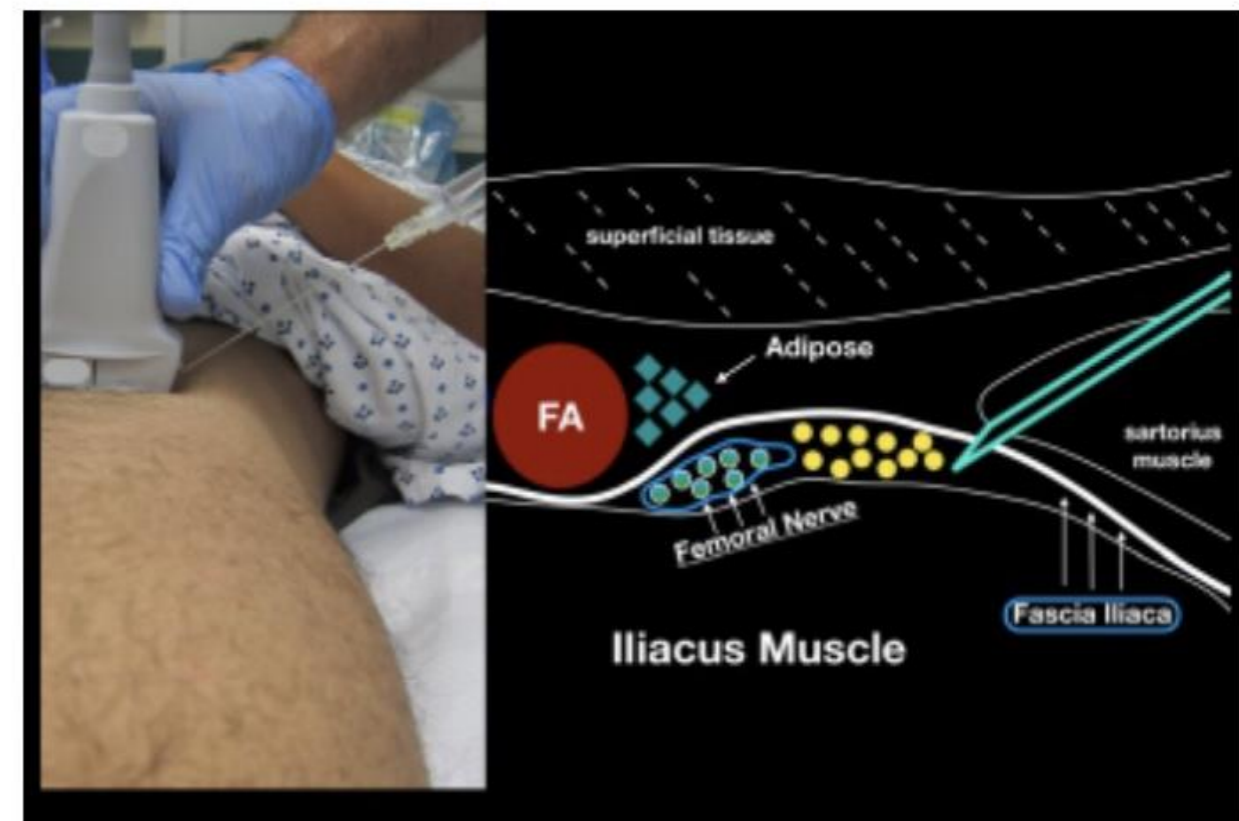
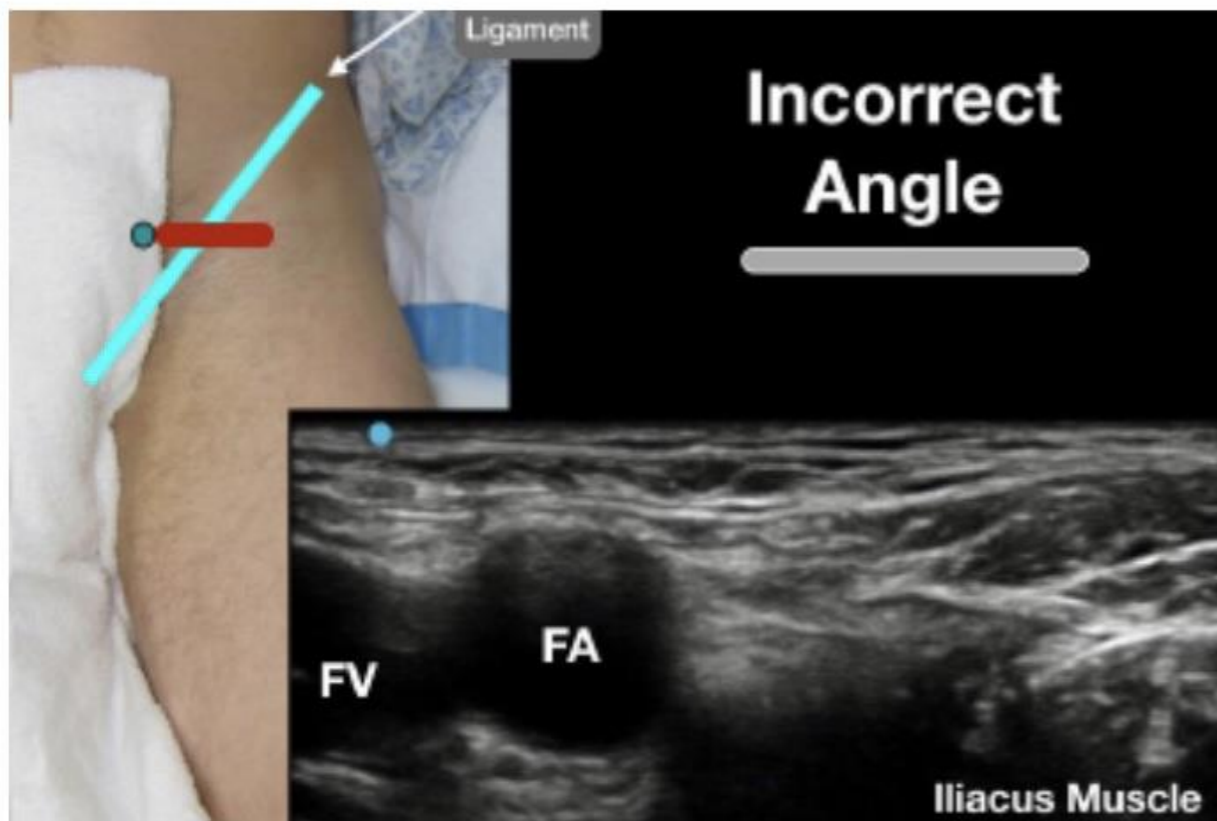
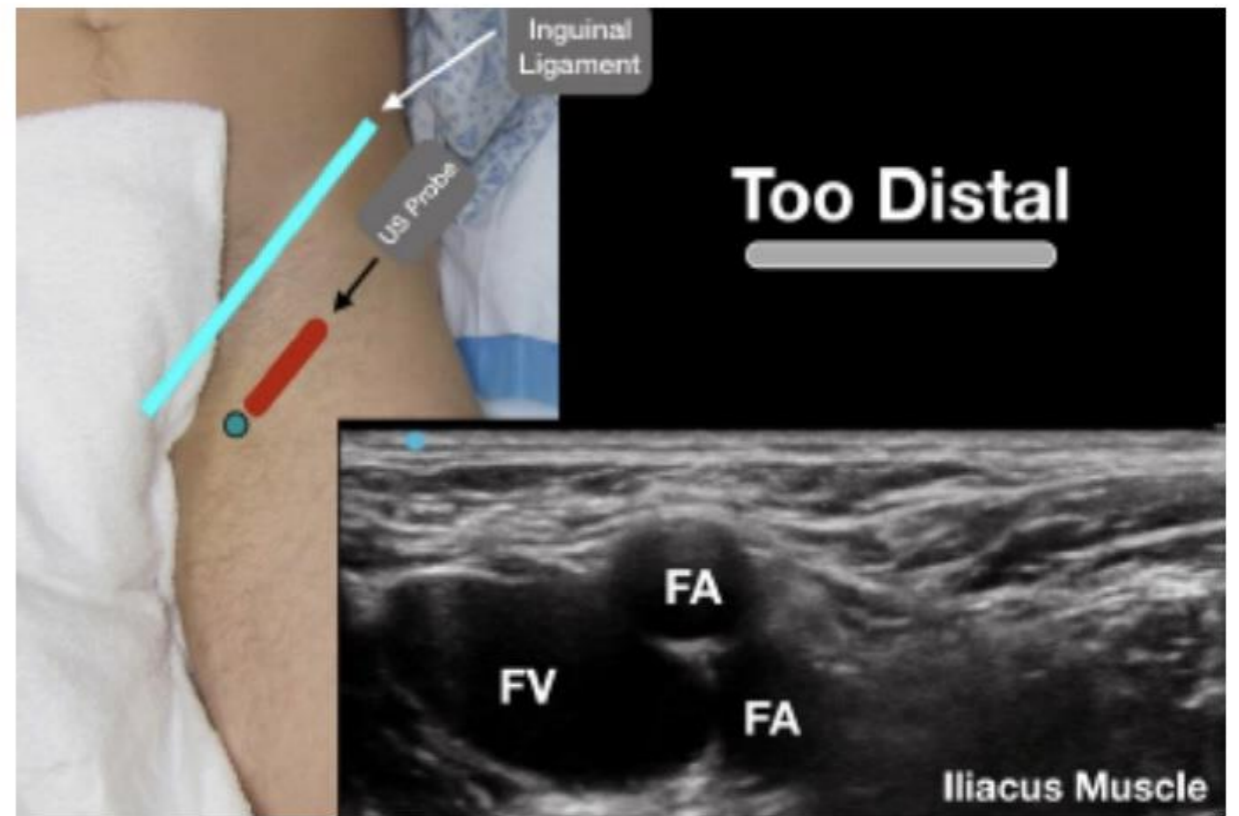
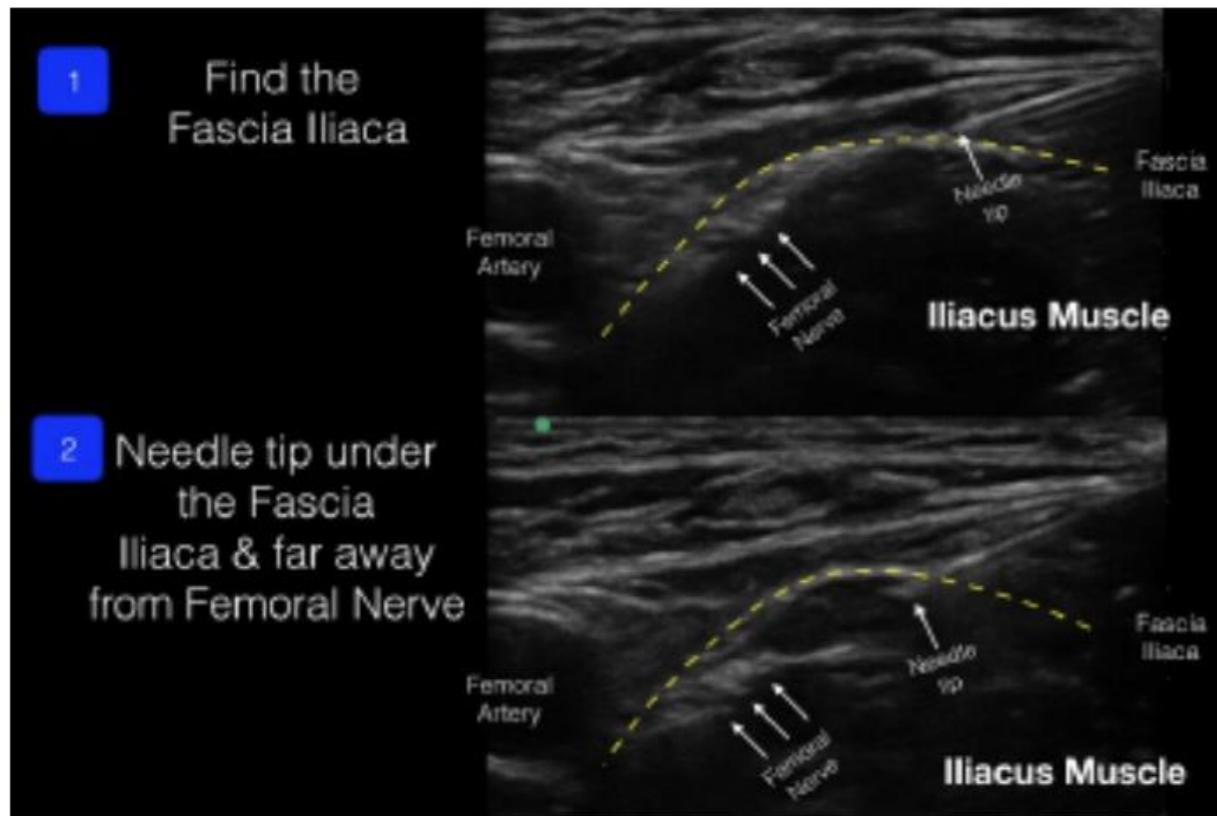














## **FEMORAL NERVE**

**Indications:** Surgery on femur, anterior thigh and knee, patella fracture, quadriceps tendon repair. Analgesia for hip and femur fractures.

**Patient position:** Supine.

**Transducer:** Linear.

**Needle:** 22G, 5-10 cm short bevel.

**Common EMR obtained:** Quadriceps muscle contraction.

**LA:** 10-20 ml.

**Initial transducer placement:** Femoral crease, parallel and inferior to inguinal ligament, must find the common FA.

**Initial depth setting:** 4 cm.

**Landmarks:** Common femoral artery and fascia iliaca.

**Ideal view:** Femoral nerve lateral to femoral artery, below fascia iliaca, above departure of profunda femoris artery.

**Technique:** Needle Insertion in plane, lateral to medial, alternatively out of plane.

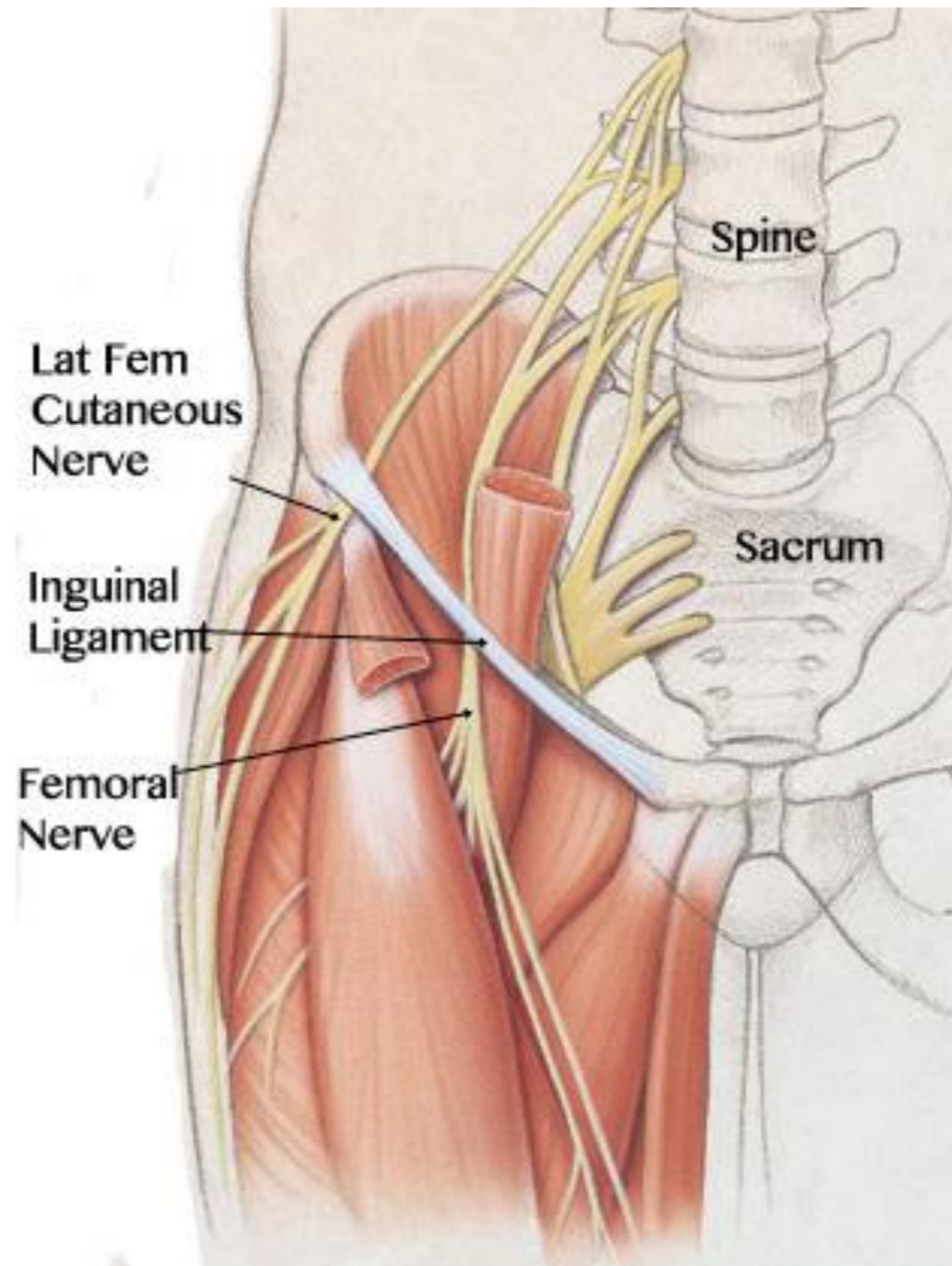
**Ideal spread of LA:** Under the fascia iliaca around the femoral nerve.

**Tips:** Obtain view proximal to bifurcation of the FA. Tilt the probe cranially/caudally to optimize the image of the nerve. Puncture the FI lateral to the edge of the FN.

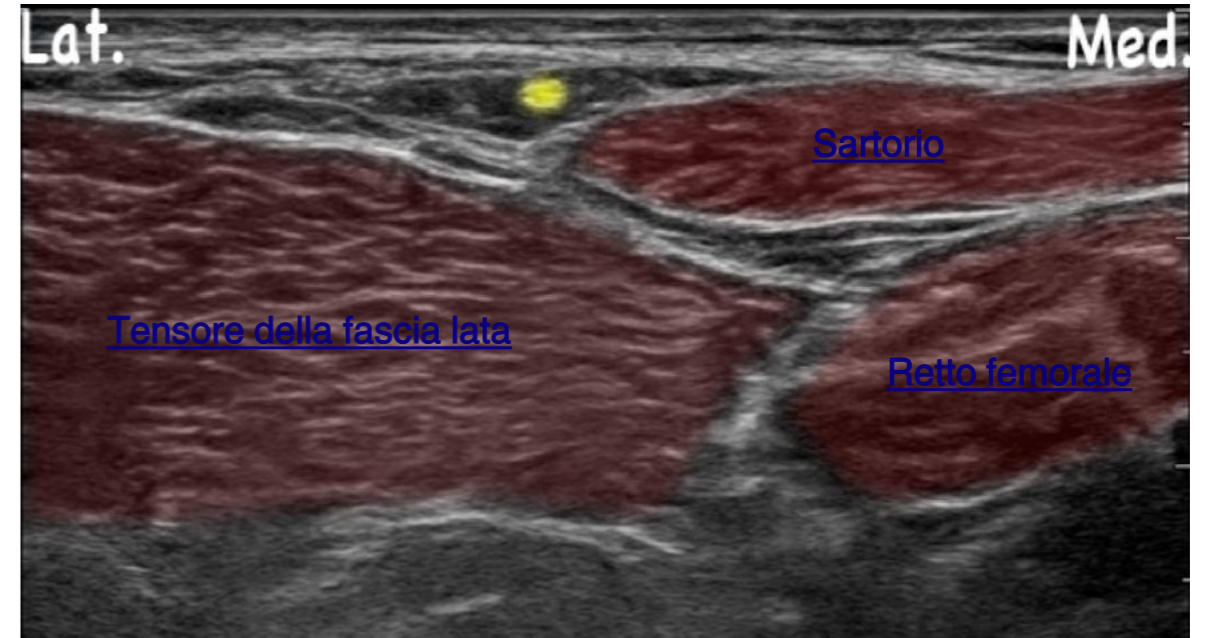
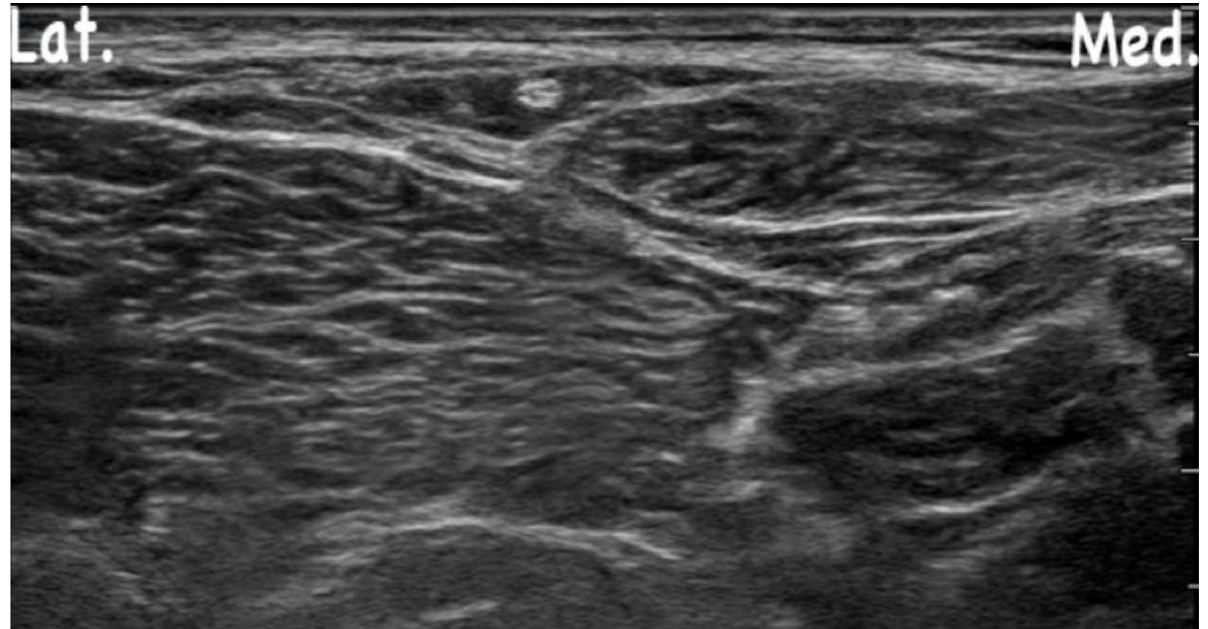
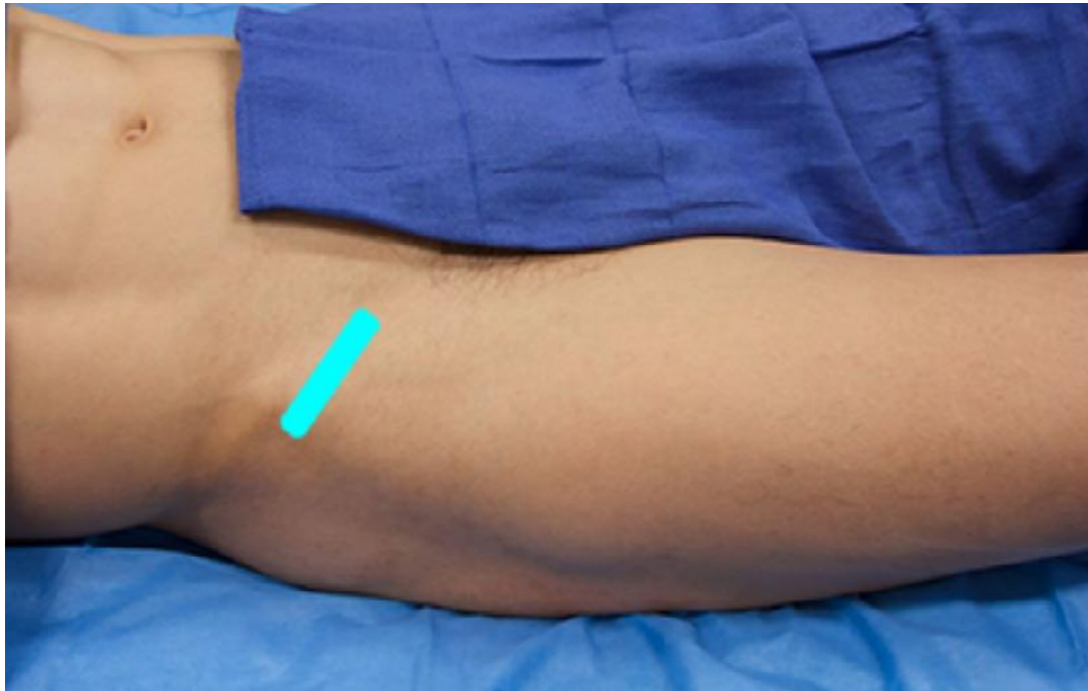
**Beware:** motor weakness of quadriceps muscles can occur; risk of falls.

# CUTANEO LATERALE DEL FEMORE

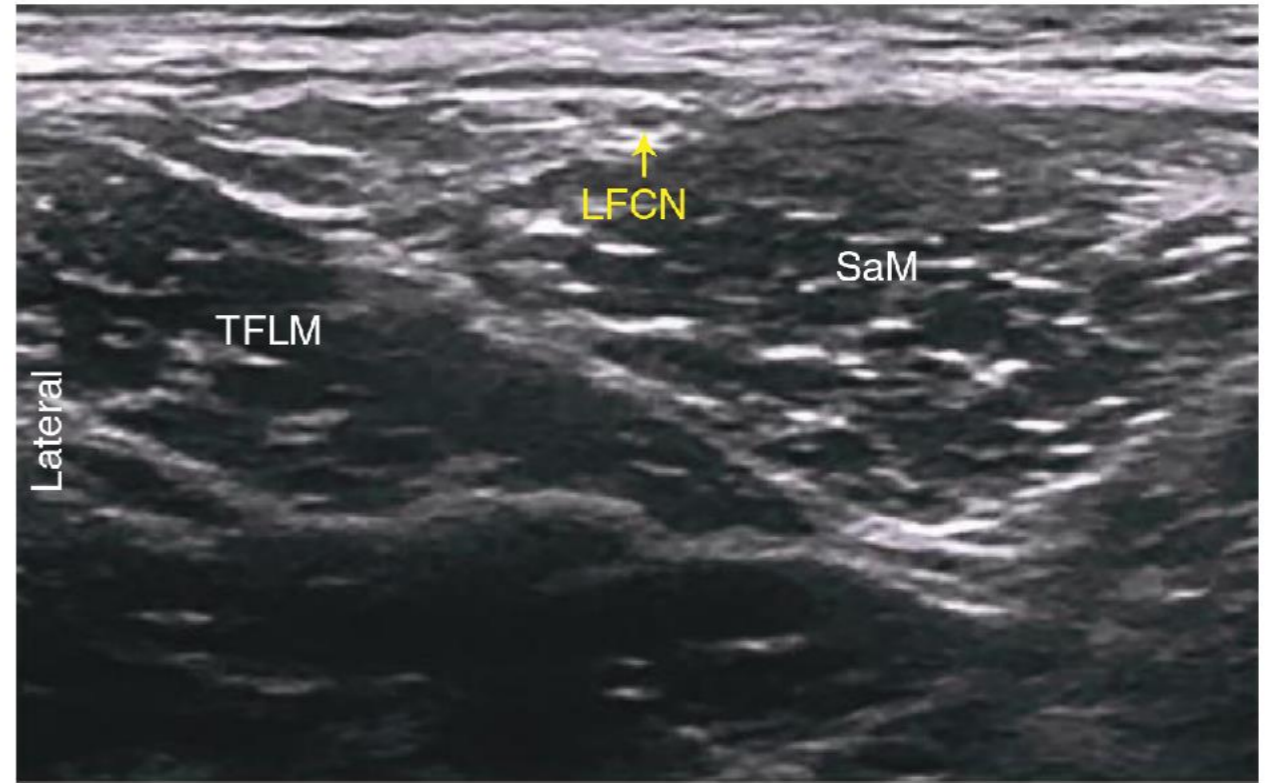




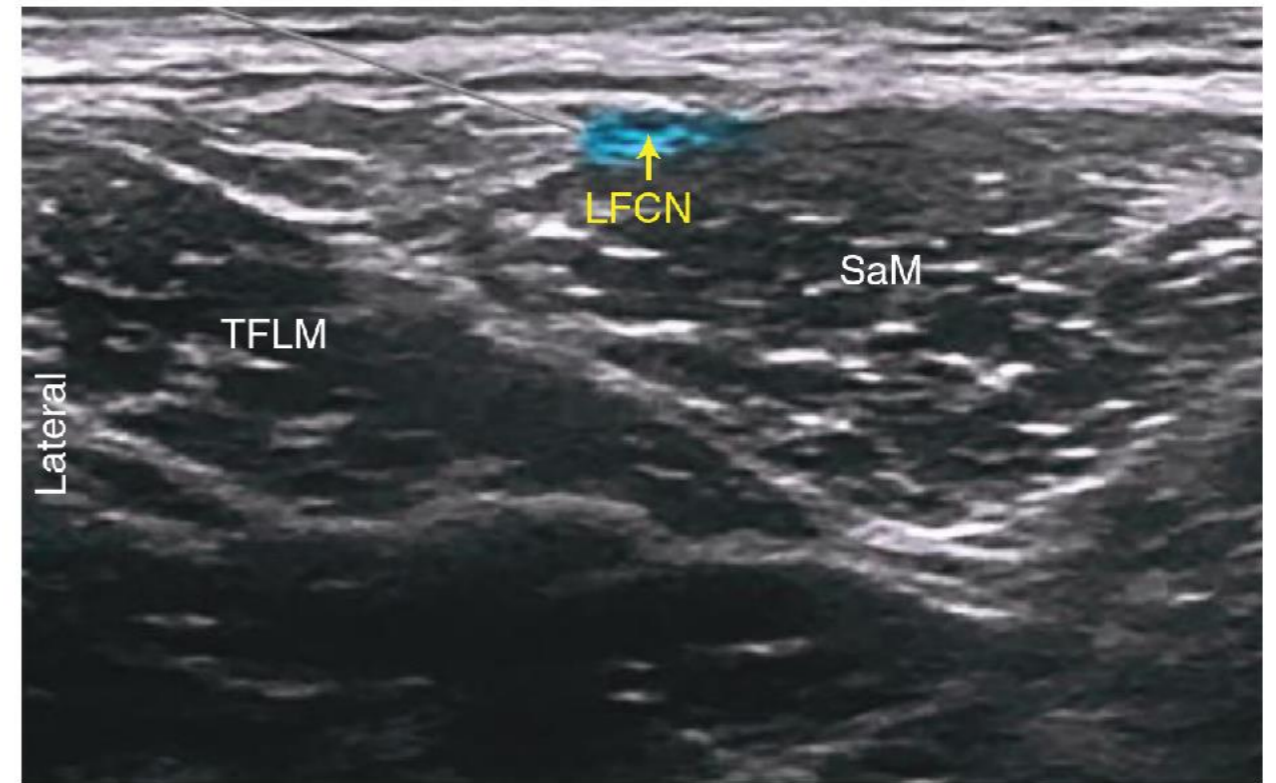
The lateral femoral cutaneous nerve (LFCN), arises from the dorsal divisions of L2–L3. After emerging from the lateral border of the psoas major muscle, it courses inferiorly and laterally toward the anterior superior iliac spine (ASIS). The nerve passes under the inguinal ligament and over the sartorius muscle into the thigh, where it divides into two branches (anterior and posterior).





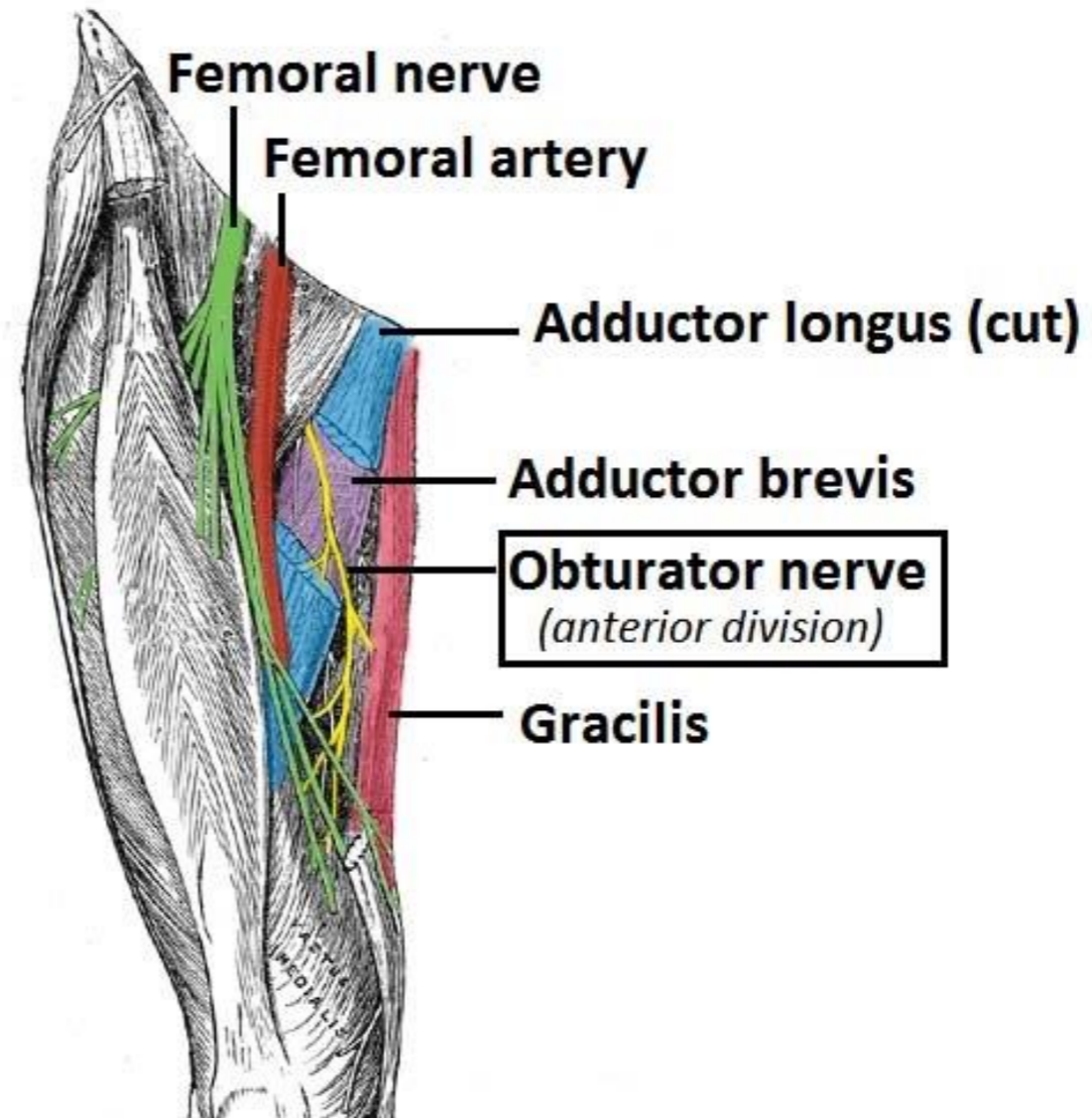


A



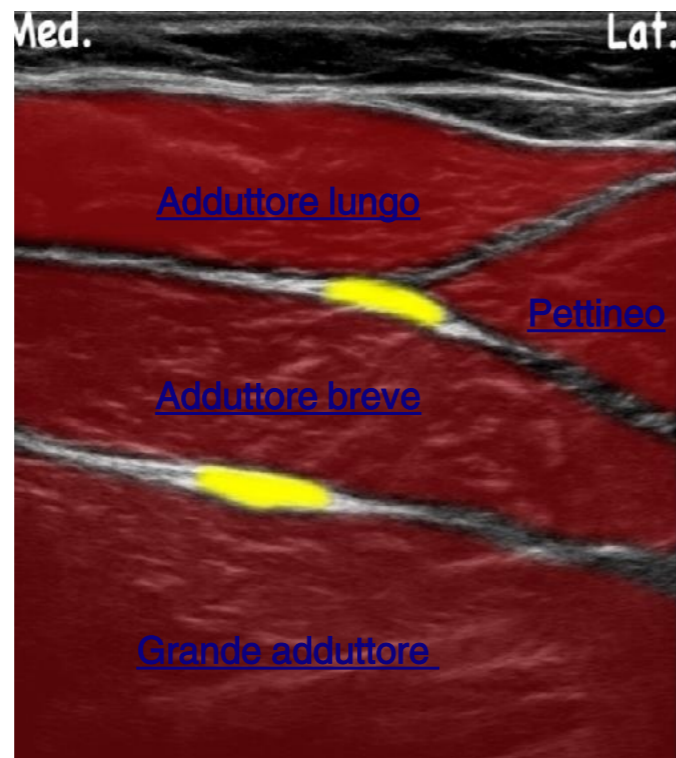
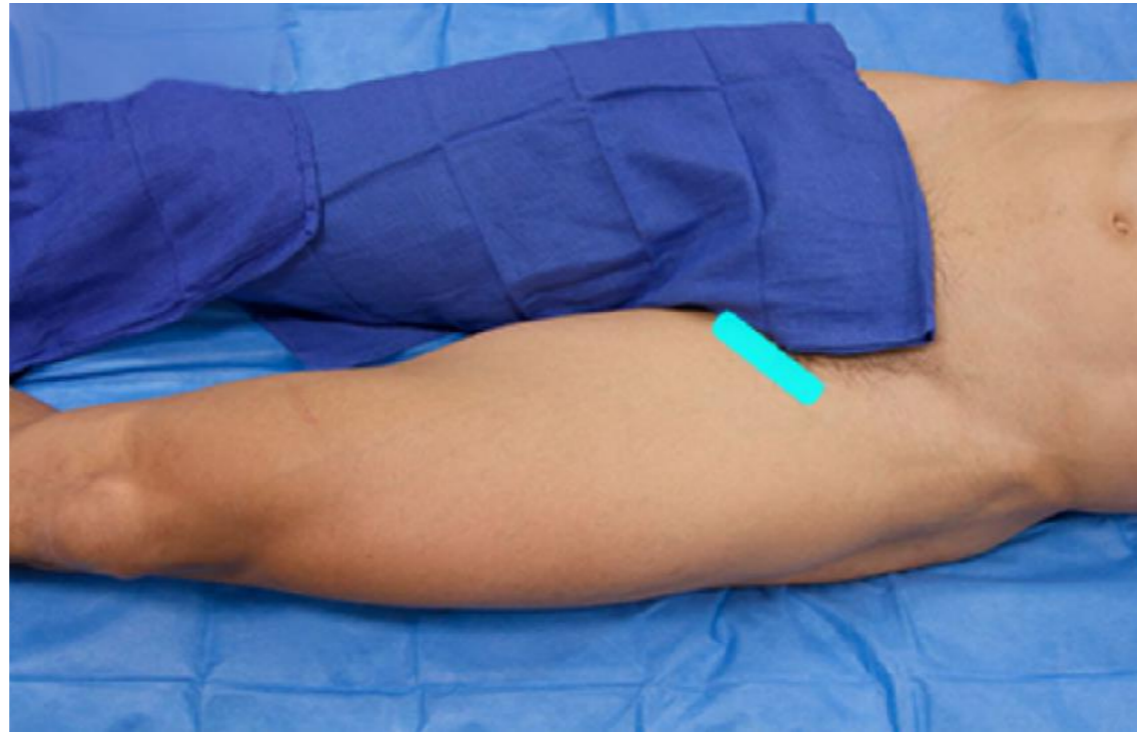
B

# OTTURATORIO



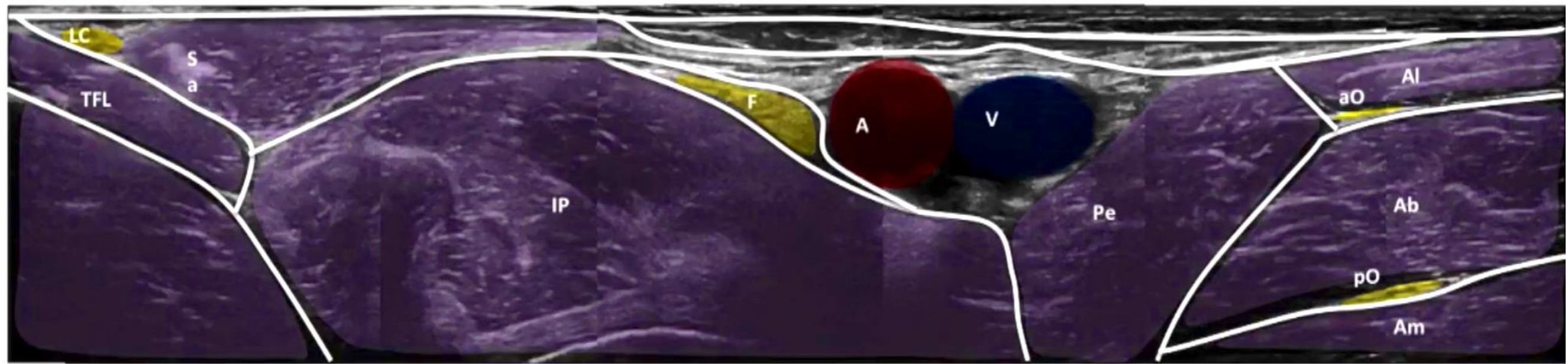
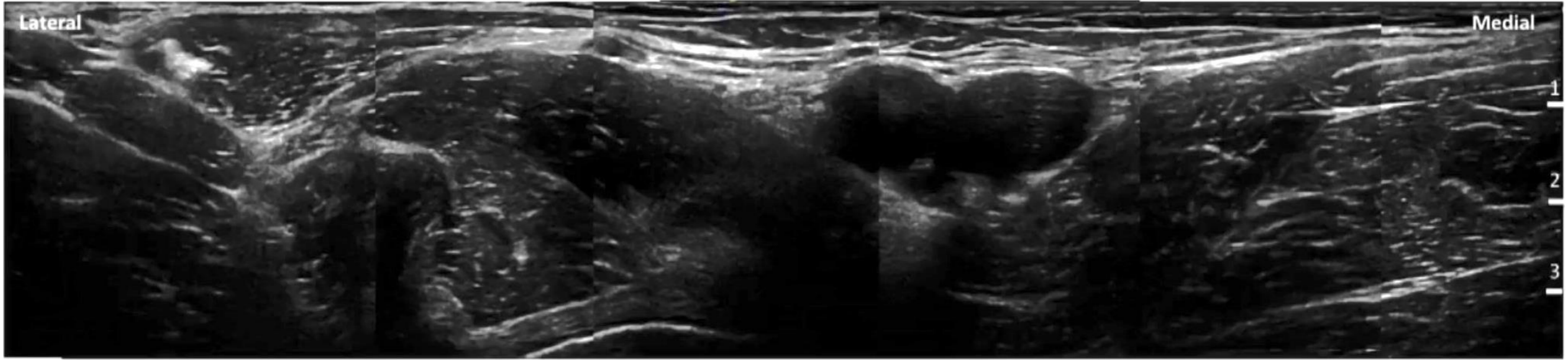
The obturator nerve arises from the anterior rami of the **second, third, and fourth** lumbar nerves. The obturator nerve then runs along the lateral wall of the lesser pelvis and extends to the anterior thigh after passing through the obturator canal. During its course, the obturator nerve divides into anterior and posterior branches that run between the pectineus and obturator externus muscles.



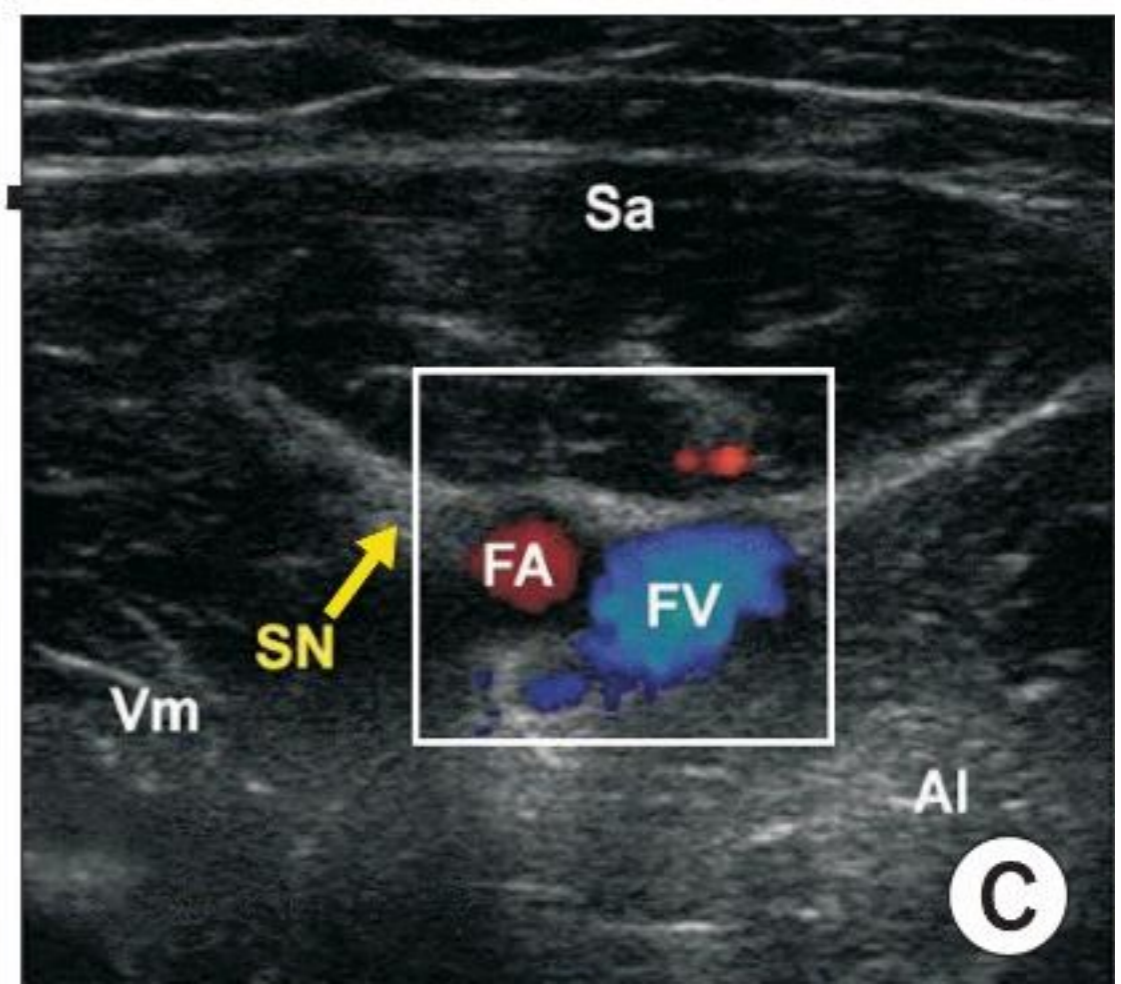
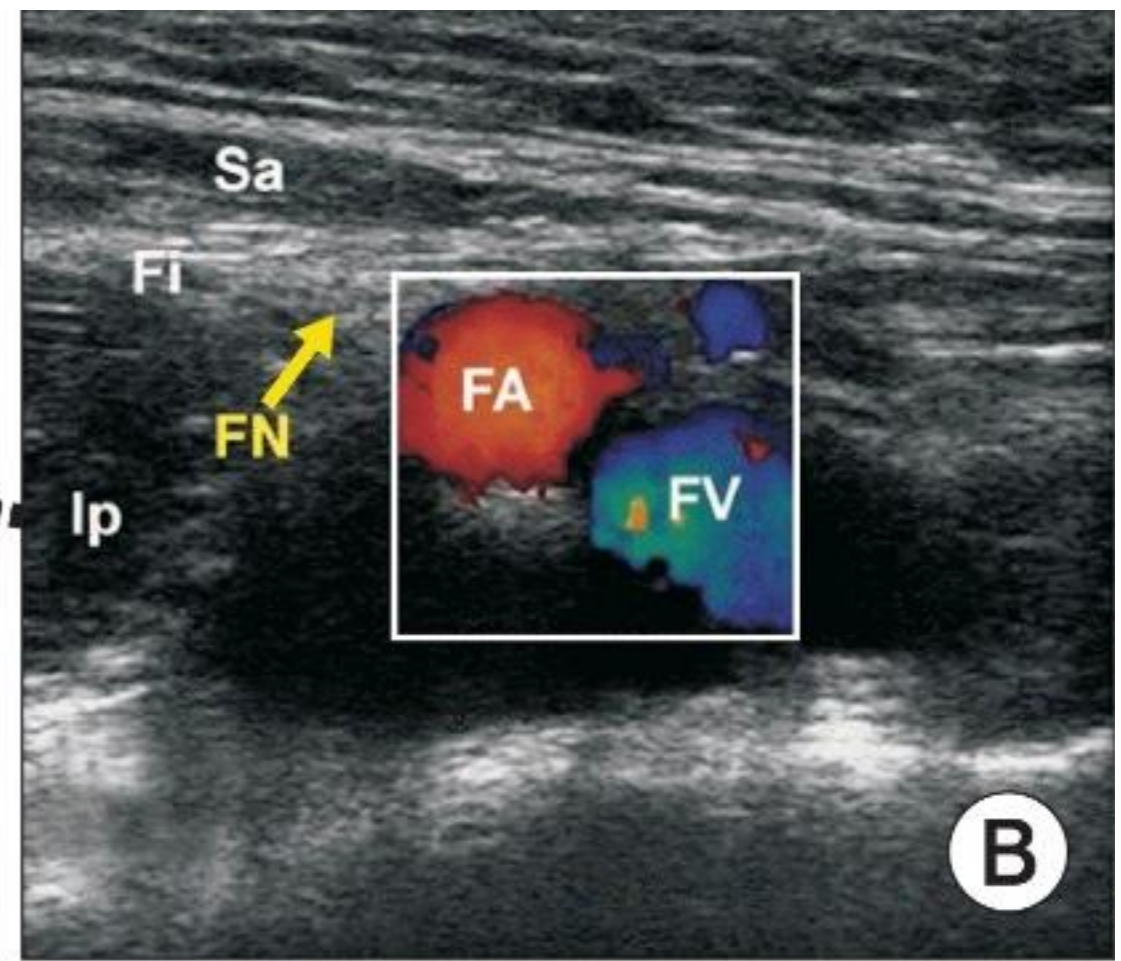
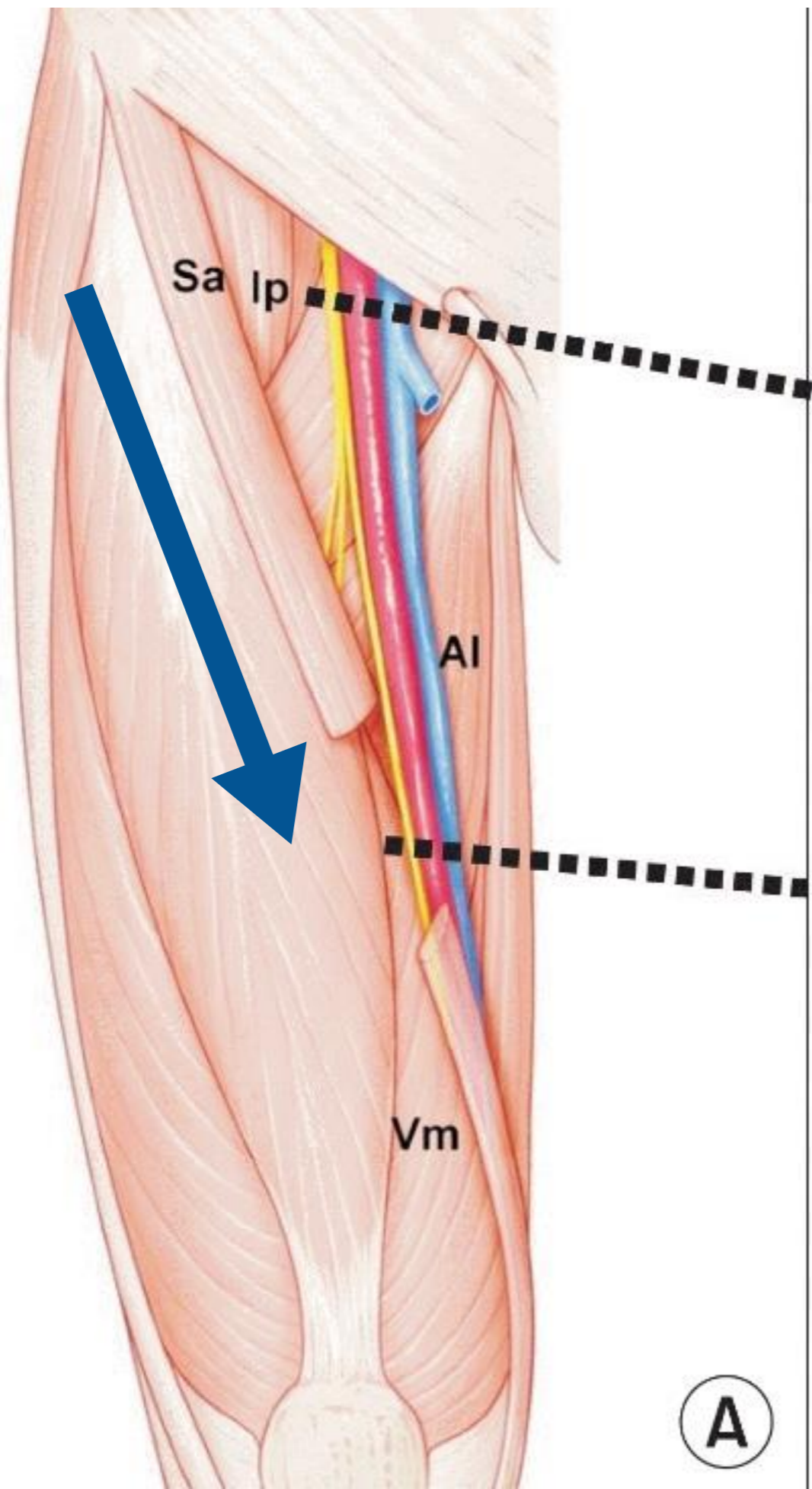








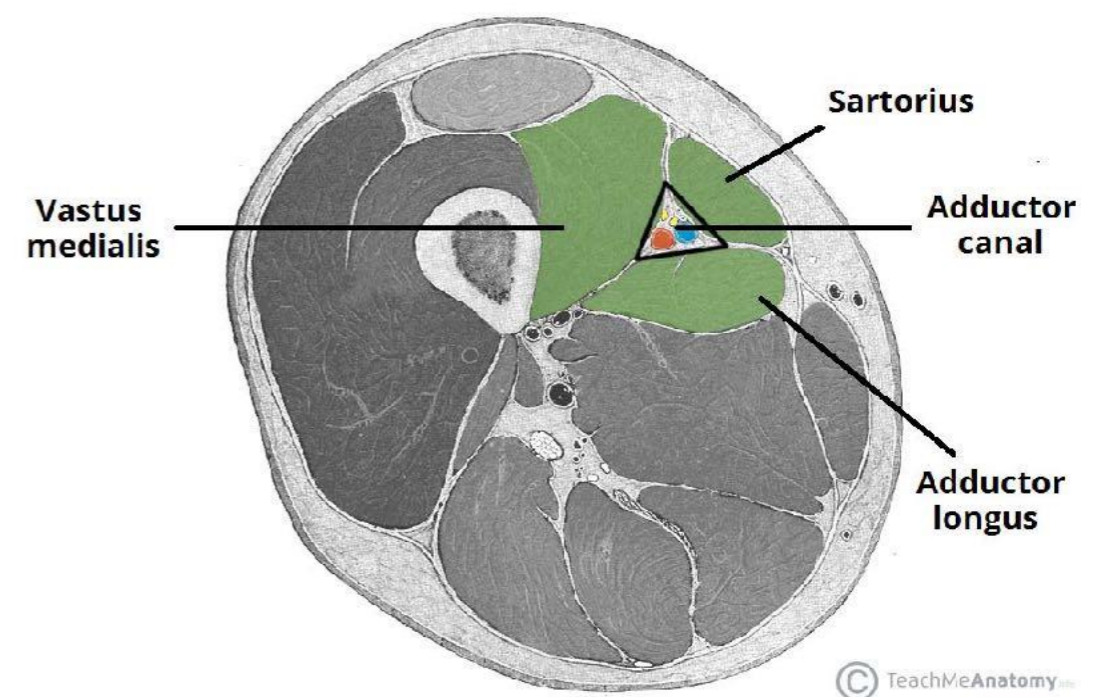
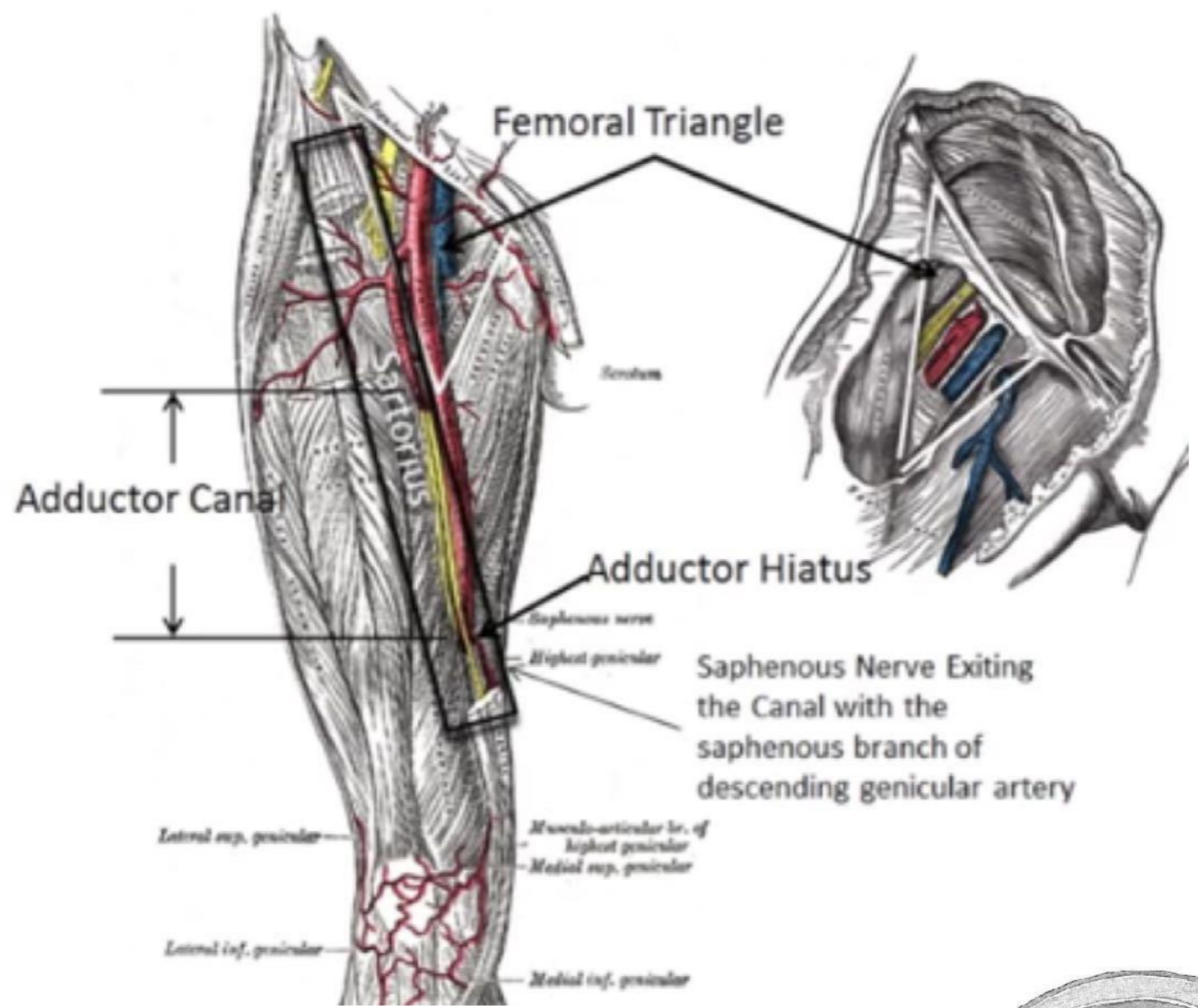




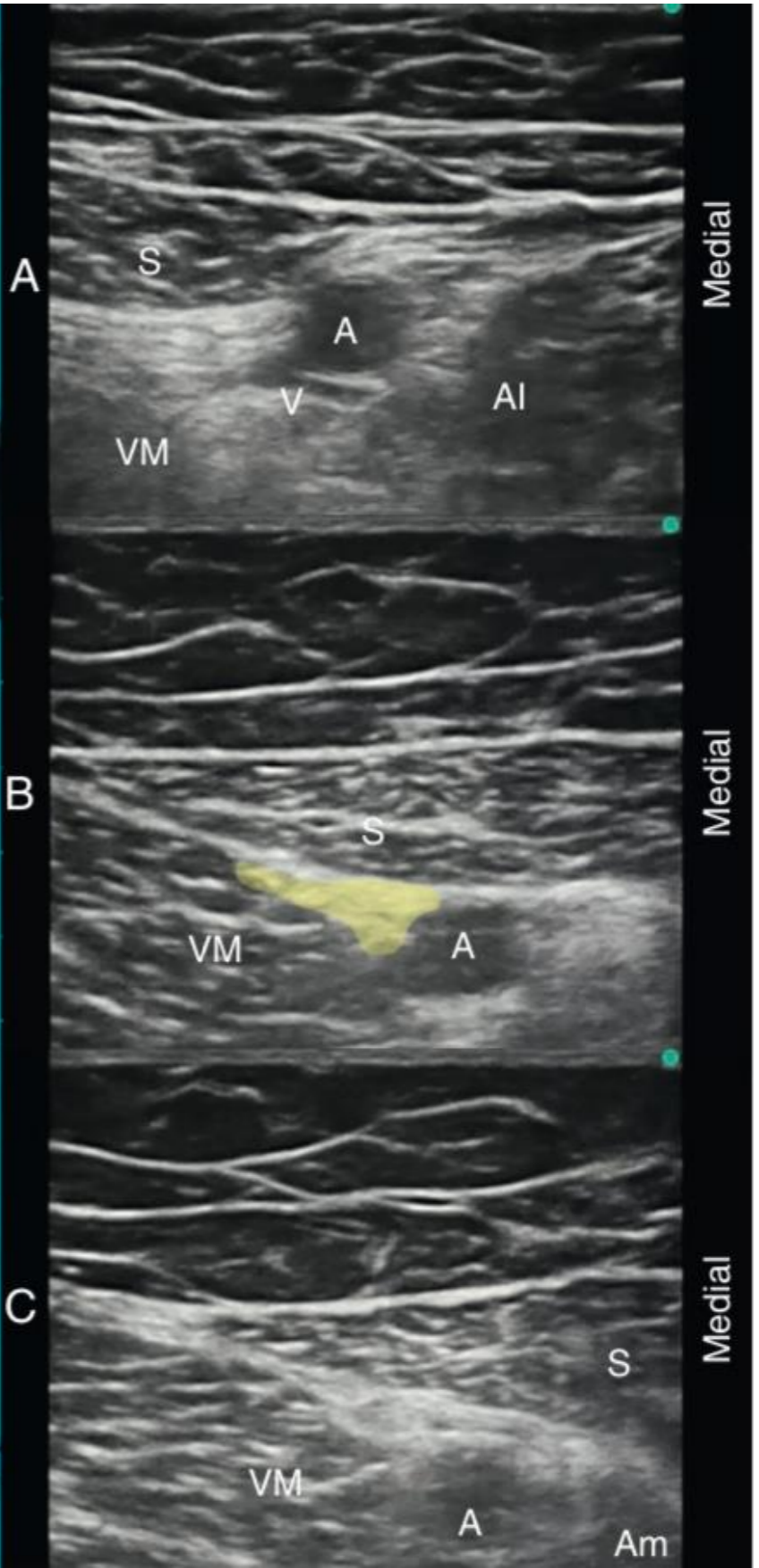
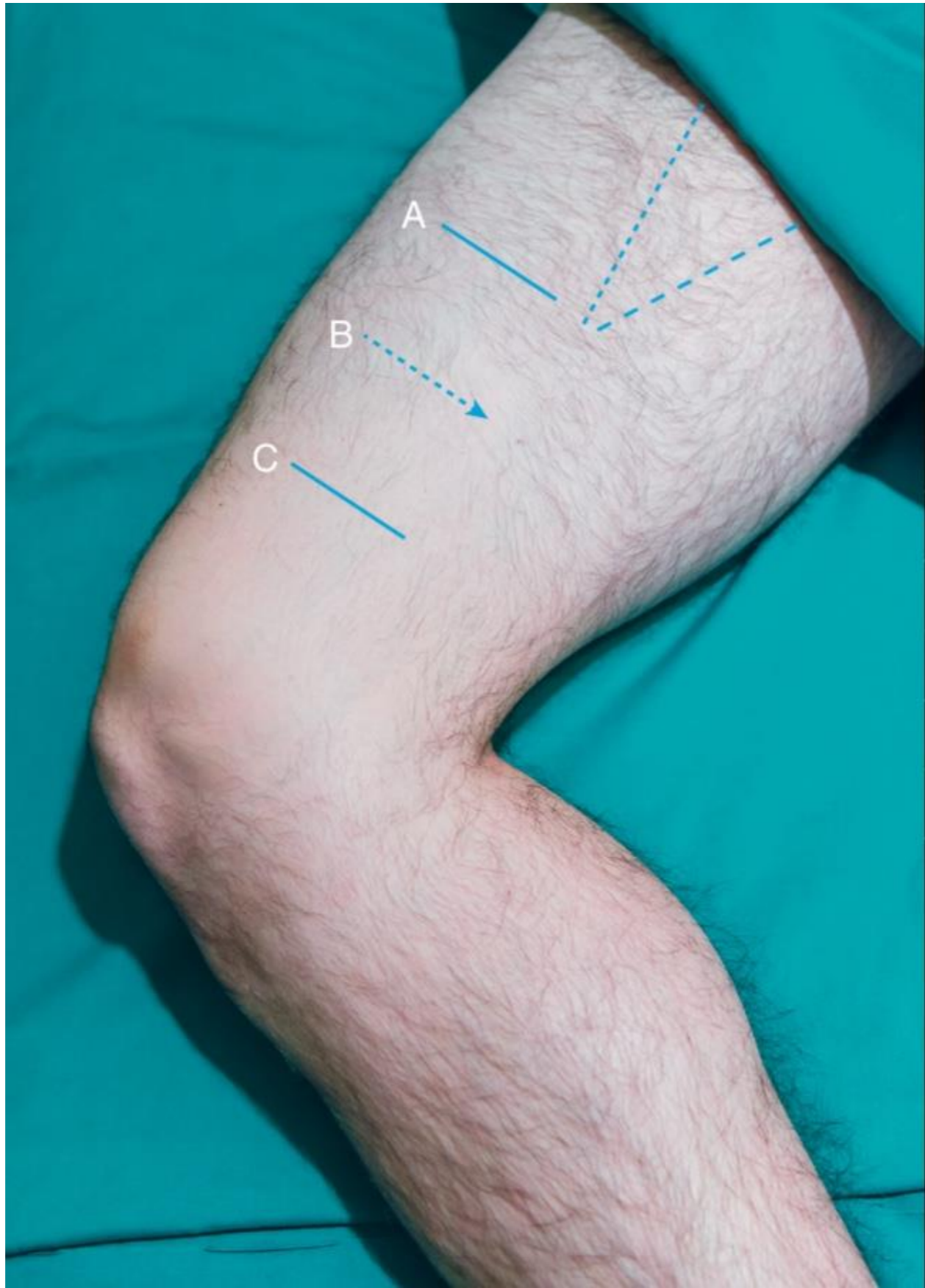


# SAFENO

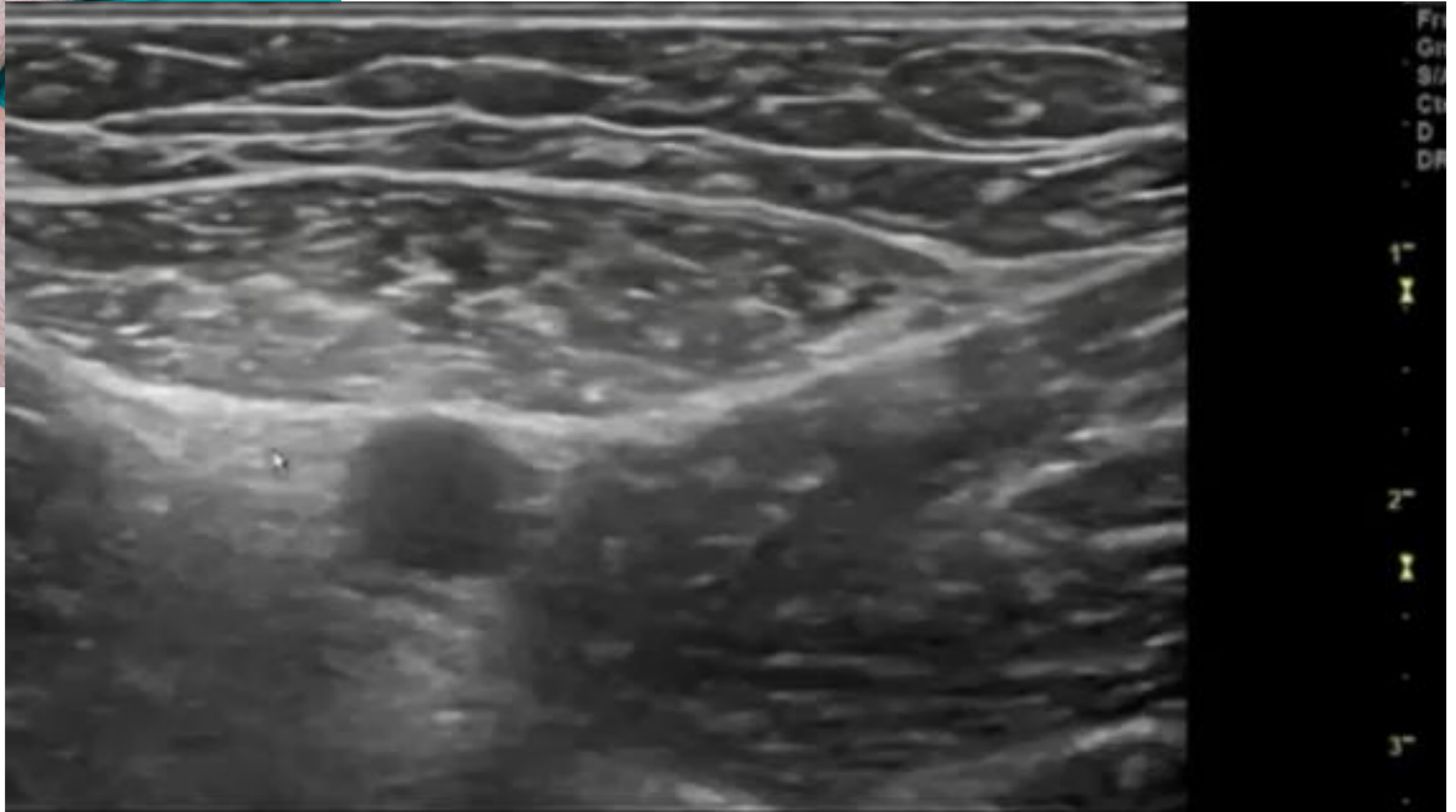
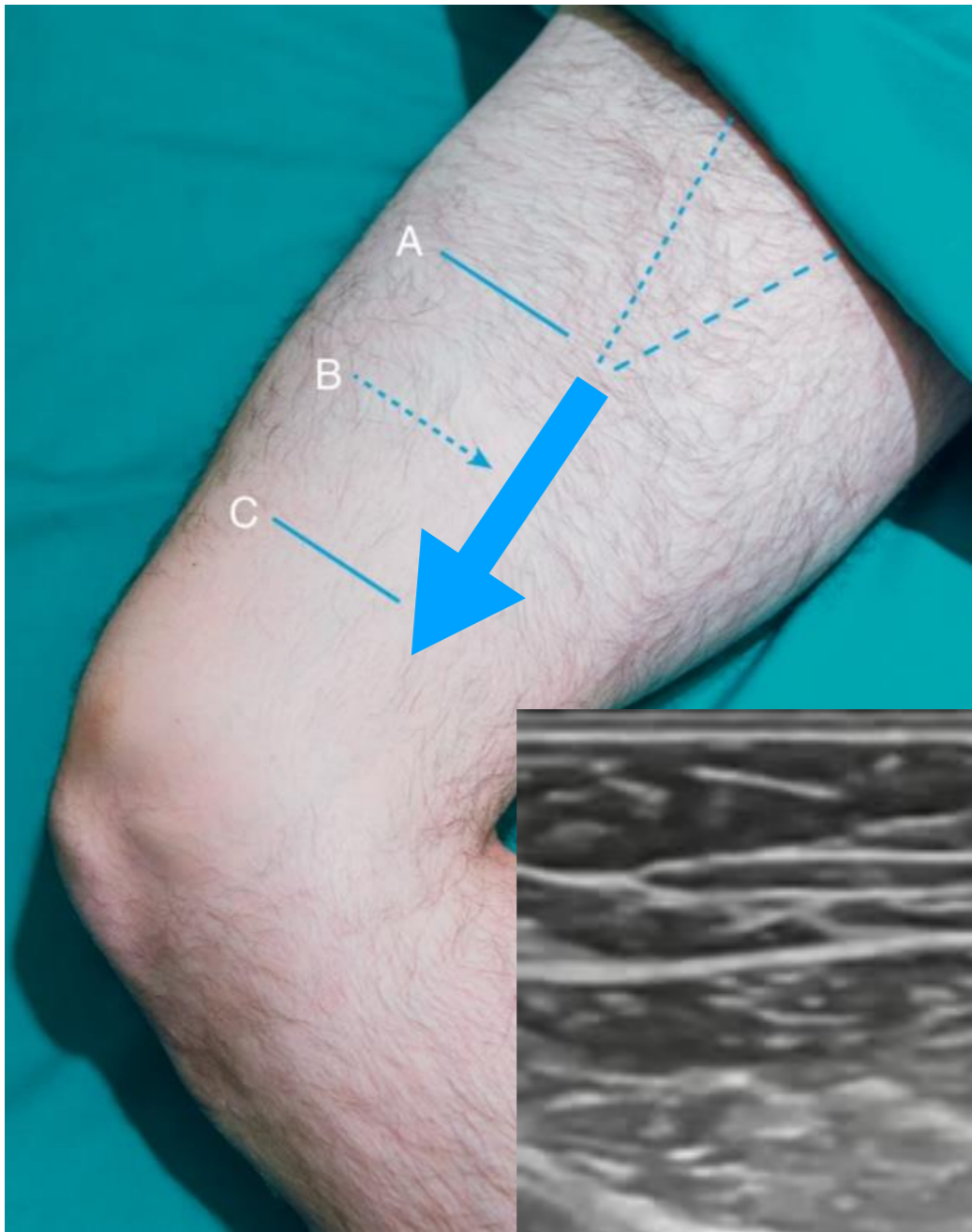
Triangolo femorale  
Canale degli adduttori  
Hiatus popliteo

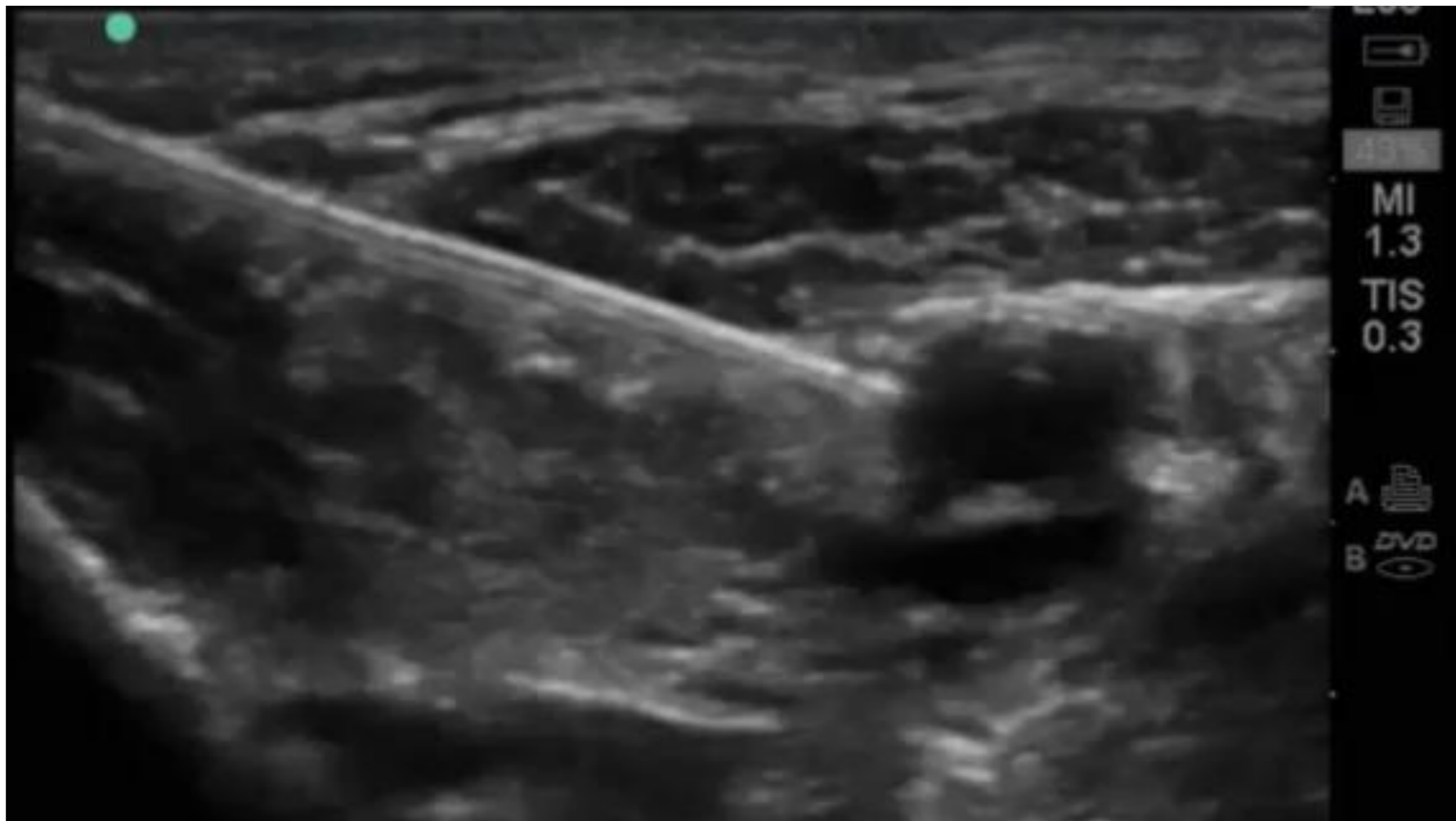
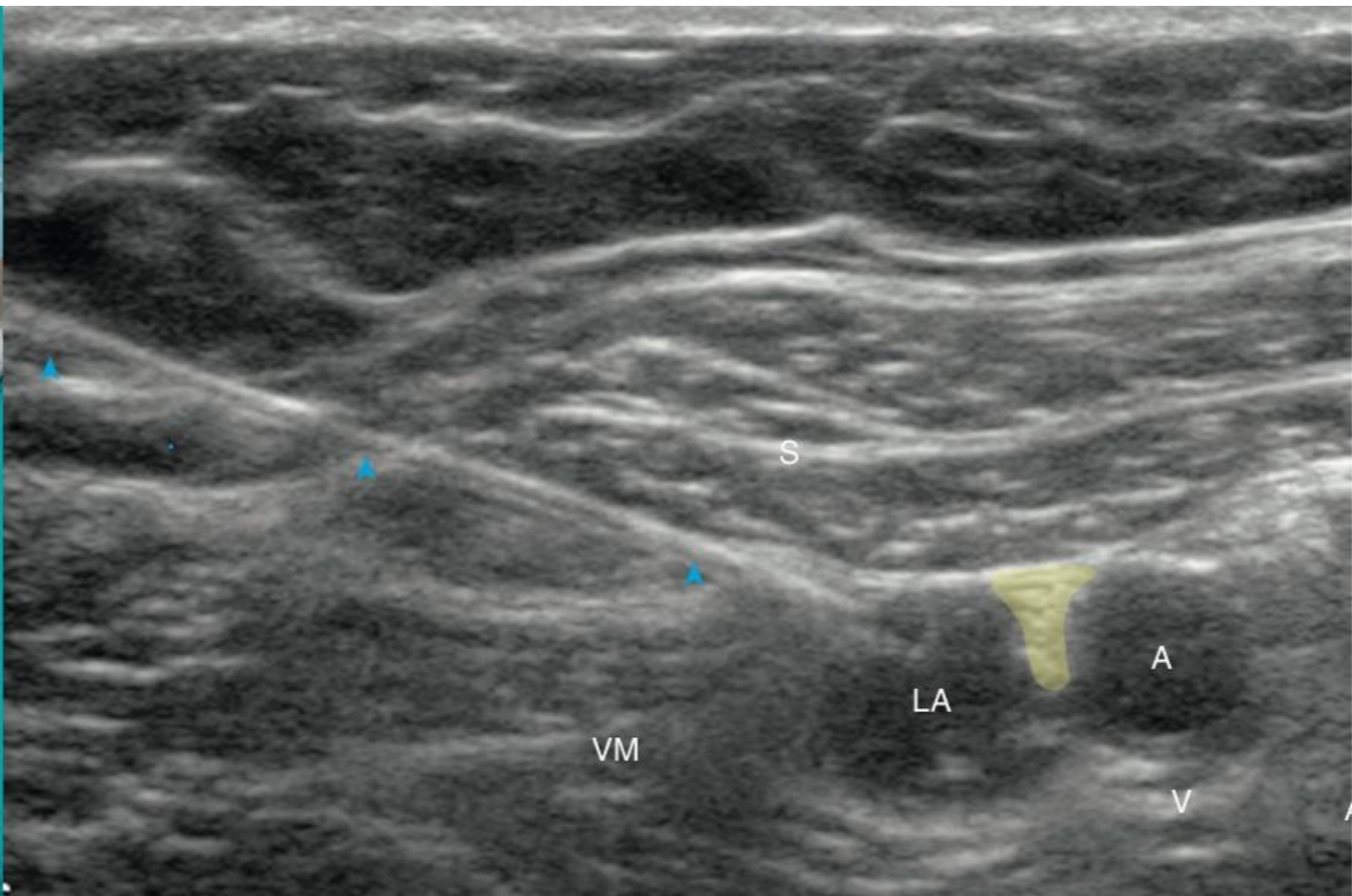












## **SAPHENOUS NERVE**

**Indications:** Analgesia for knee surgery as a component of multimodal analgesia. In combination with sciatic nerve block for surgery below the knee.

**Patient position:** supine with leg abducted and externally rotated.

**Transducer:** Linear.

**Needle:** 22G, 5-10 cm short bevel.

**Common EMR obtained:** If used, paresthesia of medial aspect of lower leg or vastus medialis twitch can be elicited.

**LA:** 10-15 ml

**Initial transducer placement:**

Transverse view at medial aspect of lower thigh to mid-thigh level.

**Initial depth setting:** 4 cm.

**Landmarks:** Sartorius muscle and femoral artery

**Ideal view:** Femoral artery in the subsartorius plane at the medial edge of the vastus medialis.

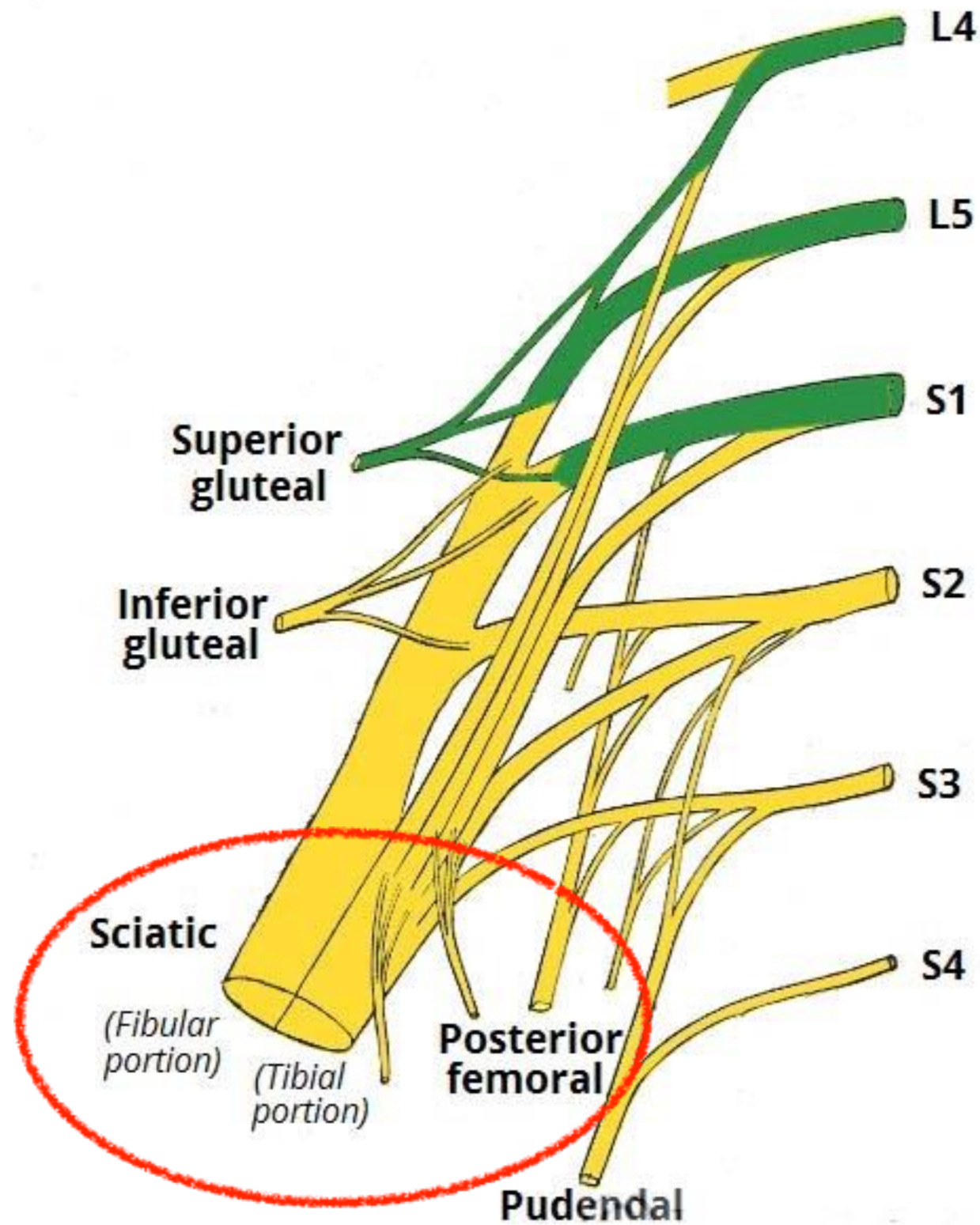
**Technique:** Needle insertion in plane, lateral to medial, alternatively out of plane.

**Ideal spread of LA:** In the fascial plane (arrows) underneath sartorius muscle on both sides of the artery

**Tips:** When localization of femoral artery proves difficult, use PD and/or start scanning at the level of the femoral crease and follow the course of the femoral artery distally into the canal



# PLESSO SACRALE



# SCIATICO

Parasacrale

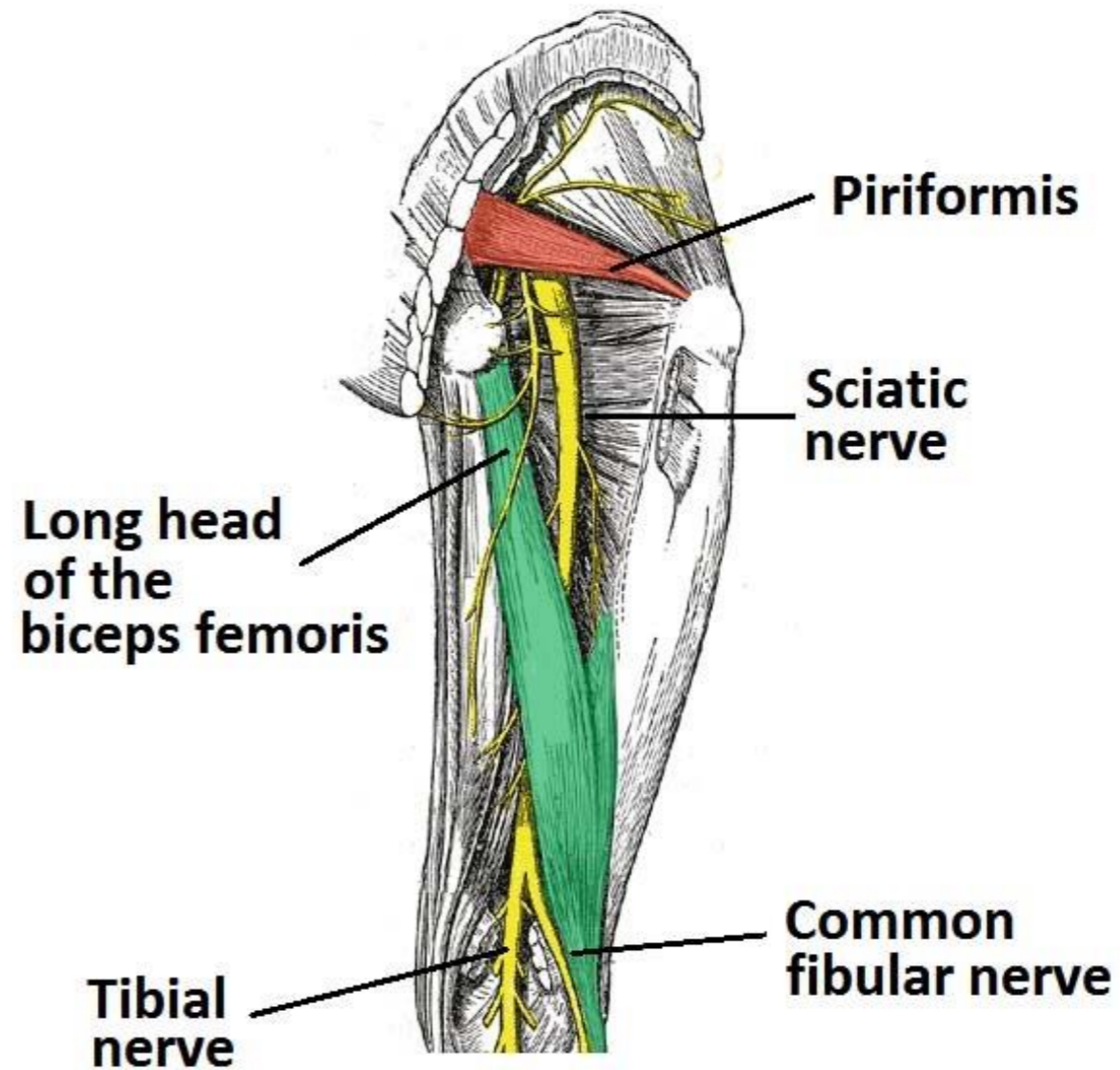
Transgluteo

Sottogluteo

Cavo popliteo

Approccio anteriore

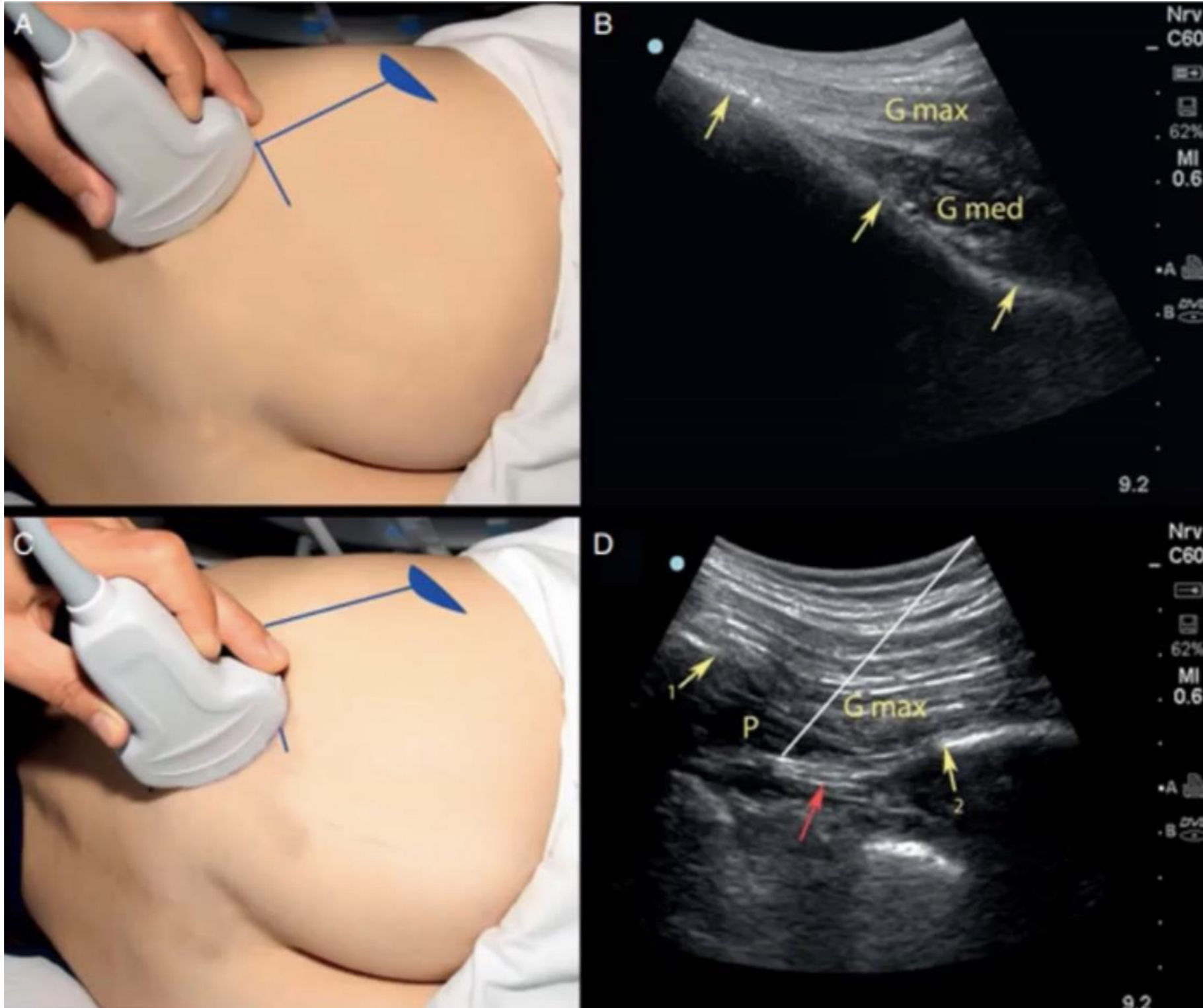
Approccio laterale

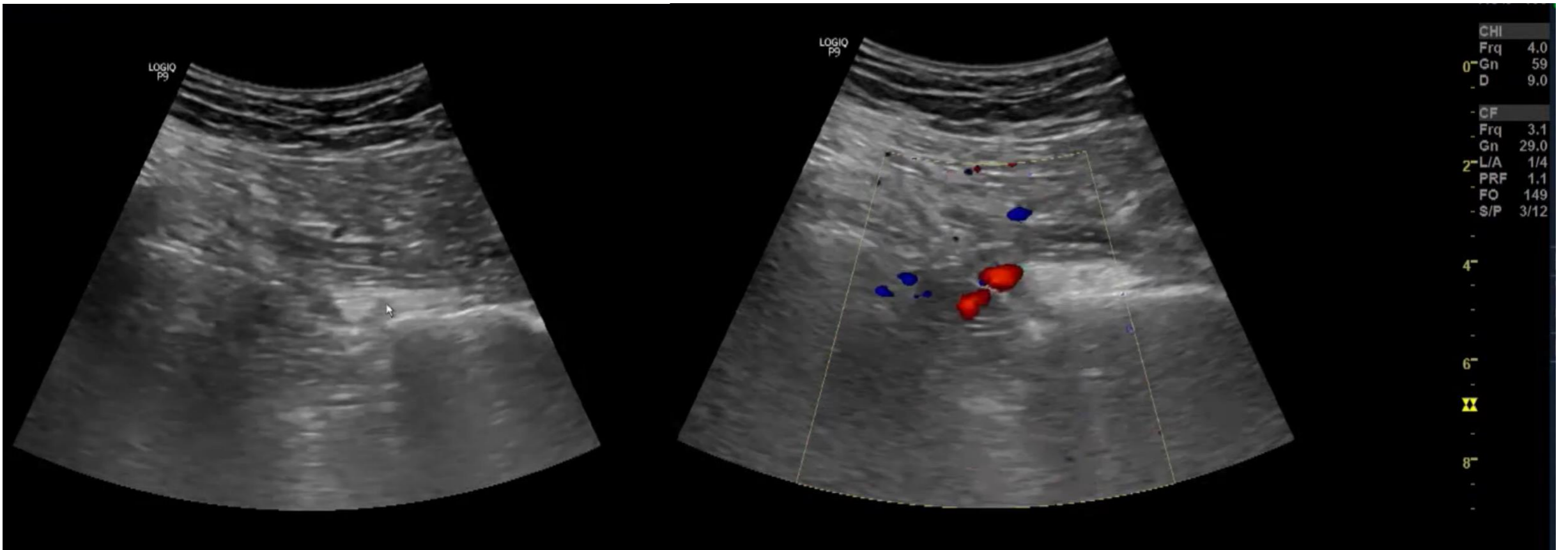
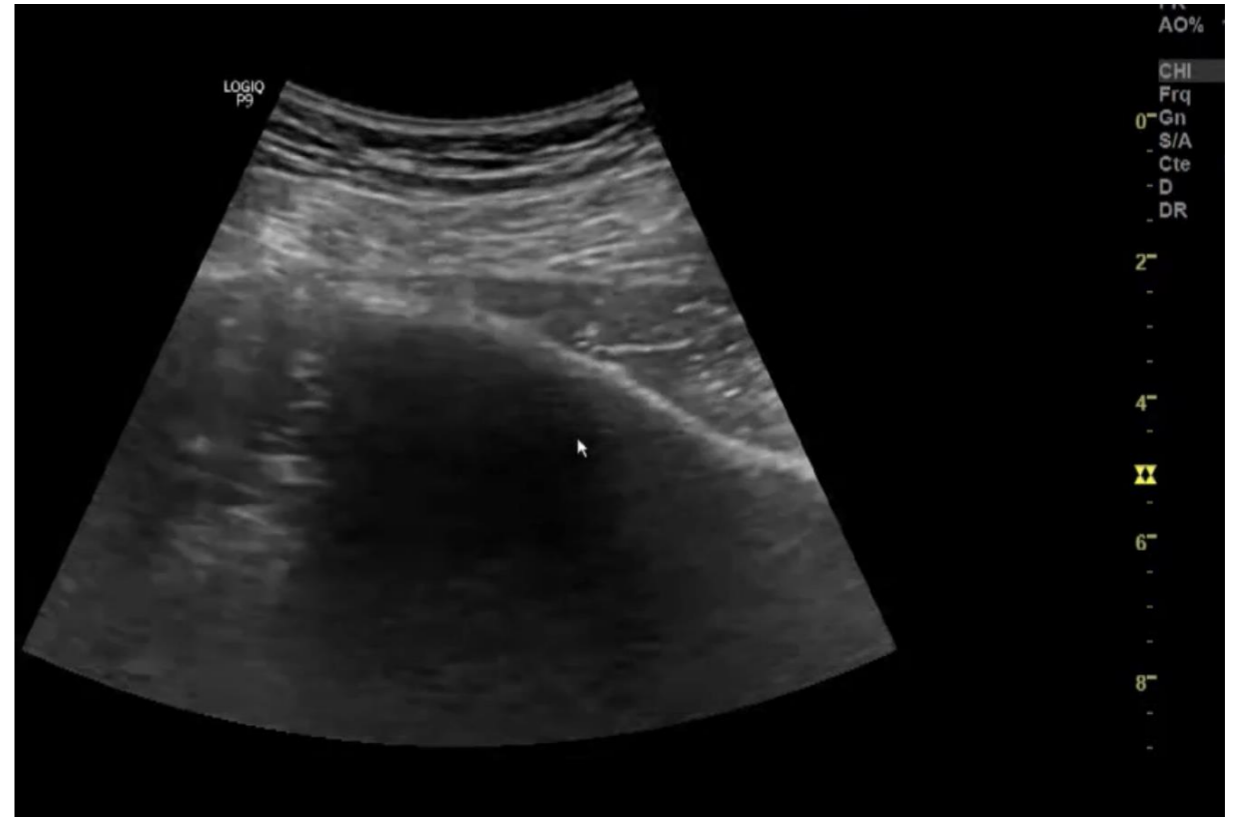


The sciatic nerve is the largest nerve in the human body, originating from the lumbosacral plexus (L4–5 and S1–3) and providing sensory and motor innervation to the lower extremity. The sciatic nerve exits the pelvis via the greater sciatic foramen below the piriformis muscle. In the gluteal region, the sciatic nerve courses between muscle layers. The sciatic nerve anterior (deep) to the gluteus maximus muscle is found just lateral to the origin of the biceps femoris muscle at the ischial tuberosity. The sciatic nerve lies medial to the greater trochanter.



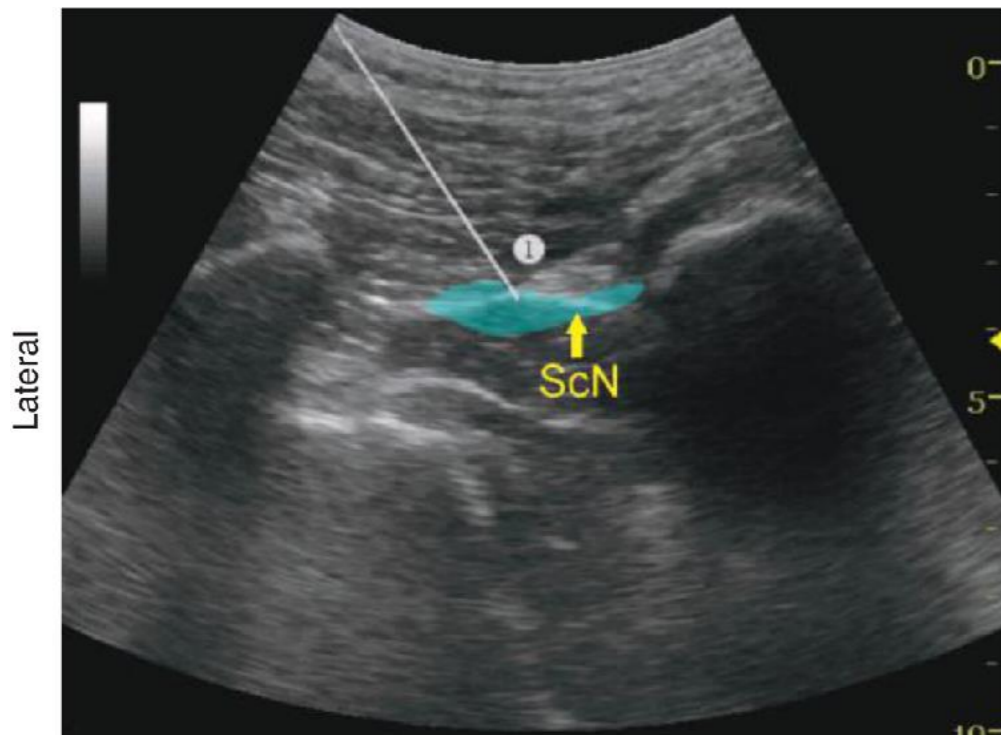
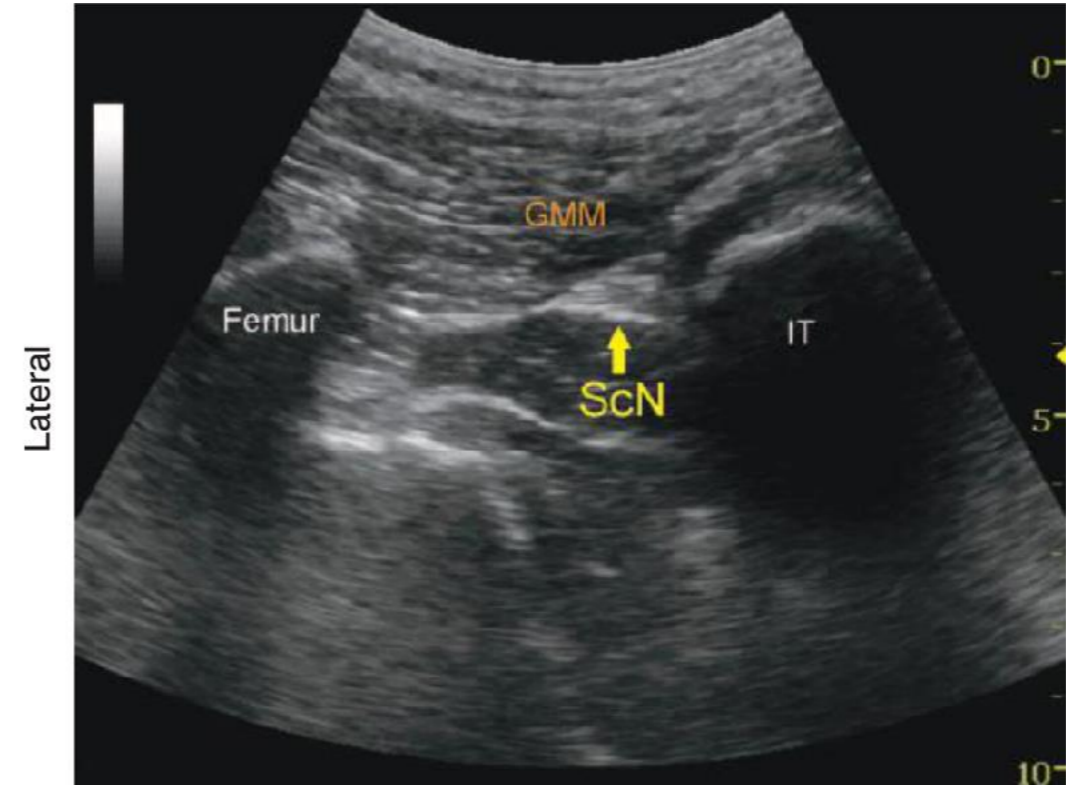
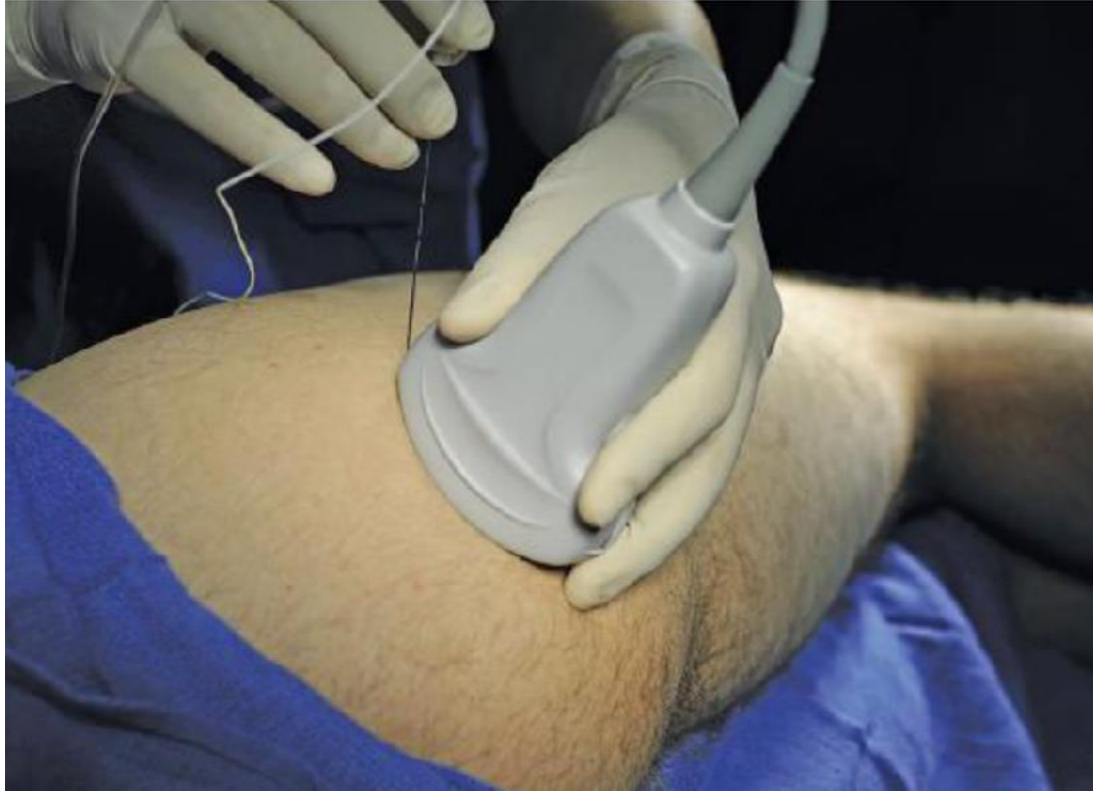
# Parasacrals





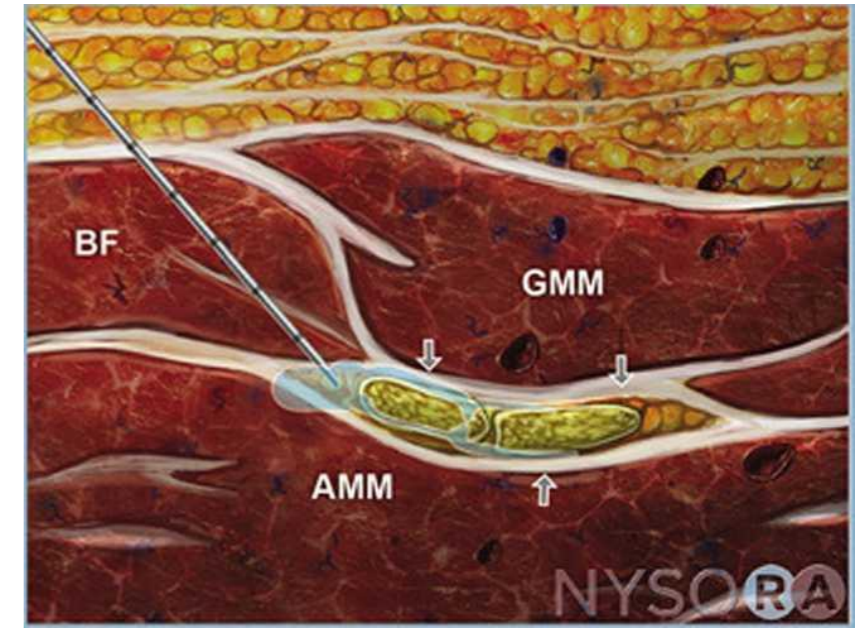
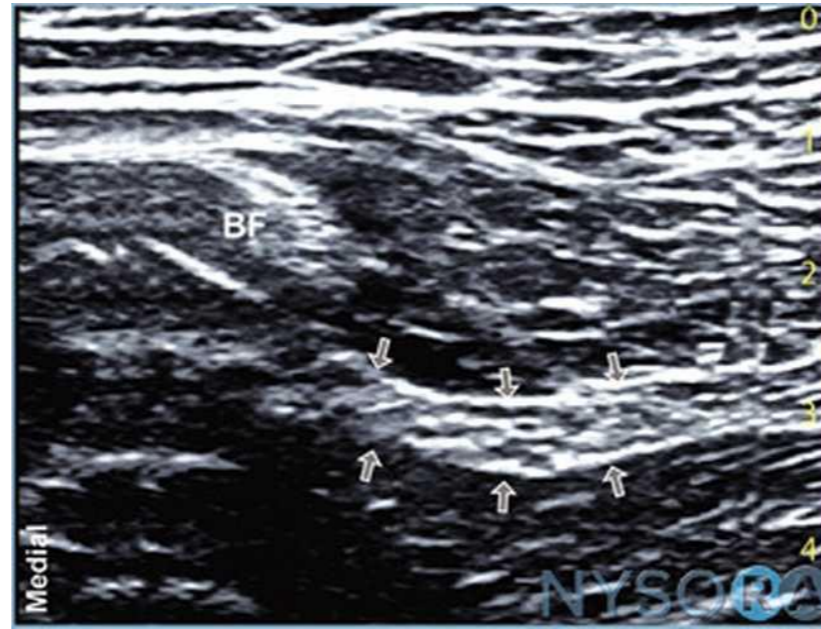
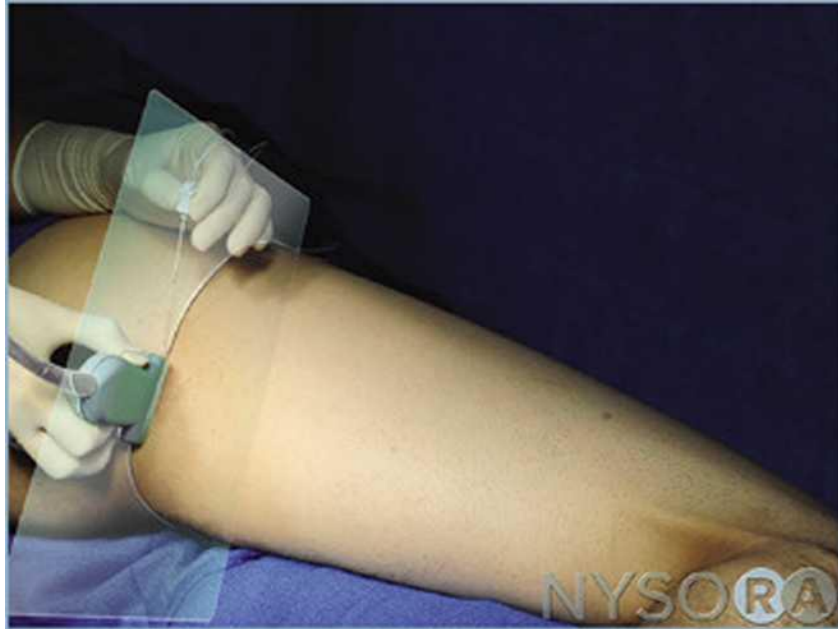


# Transgluteo





# SOTTOGLUTEO



## **Subgluteal Sciatic Nerve**

**Indications:** Anesthesia and analgesia for surgery on femur, at and below the knee.

**Patient position:** Prone, lateral or oblique.

**Transducer:** Linear or curved in larger patients

**Needle:** 22G, 8-10cm short bevel. Common EMR obtained: Twitch of calf or foot

**LA:** 15-20 ml

**Initial transducer placement:** Gluteal crease, scan cephalad-caudad until the best view of the oval-shaped sciatic nerve and the muscular tunnel in which it travels are visualized regardless of the level.

**Initial depth setting:** 4-5 cm.

**Landmarks:** Sciatic nerve, gluteus maximus, fascia underneath gluteus maximus.

**Ideal view:** Sciatic nerve in common connective tissue sheath (intermuscular tunnel).

**Technique:** Needle insertion in plane, lateral to medial, alternatively out of plane.

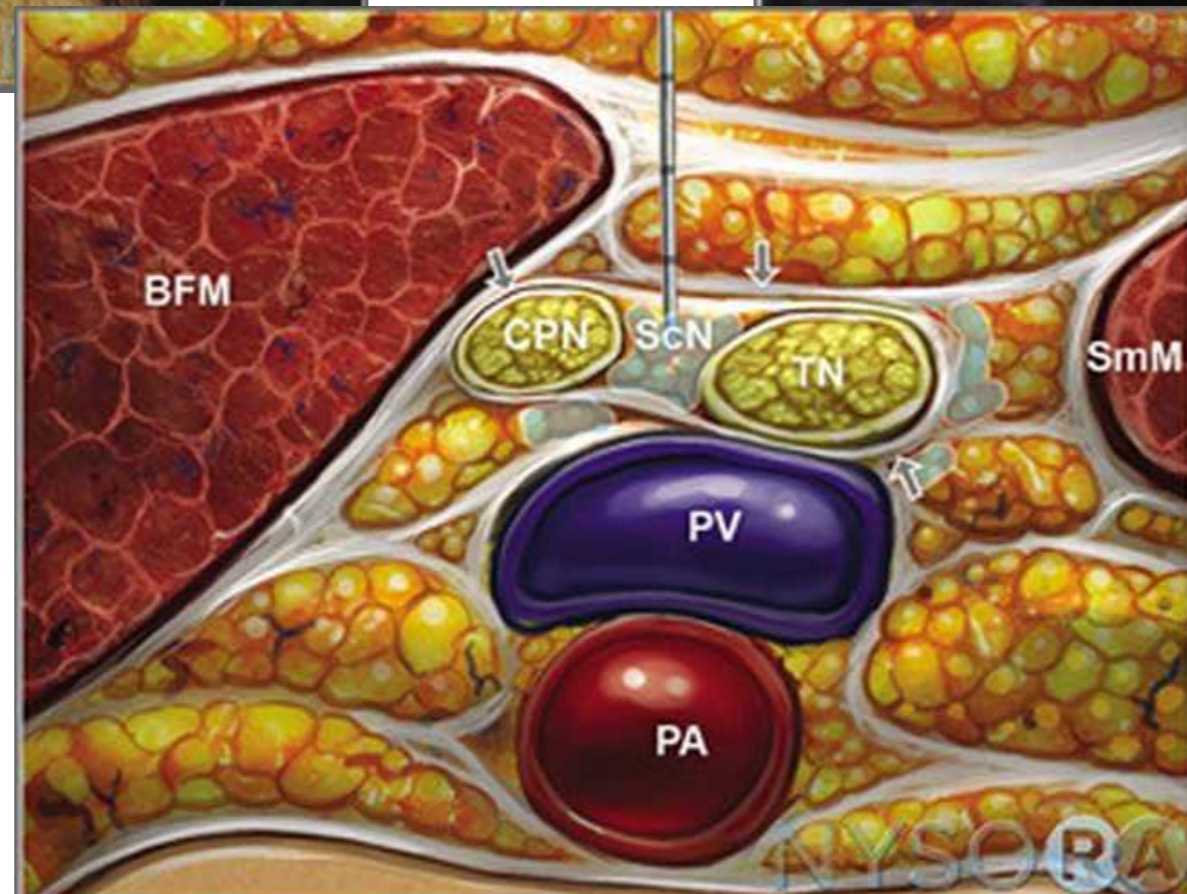
**Ideal spread of LA:** Around the nerve, within the common connective tissue sheath.

**Tips:** Avoid inferior gluteal artery. Needle should enter the sheath of the ScN either at the lateral or medial aspect of the nerve. Transducer pressure and tilt often required to obtain the adequate view.



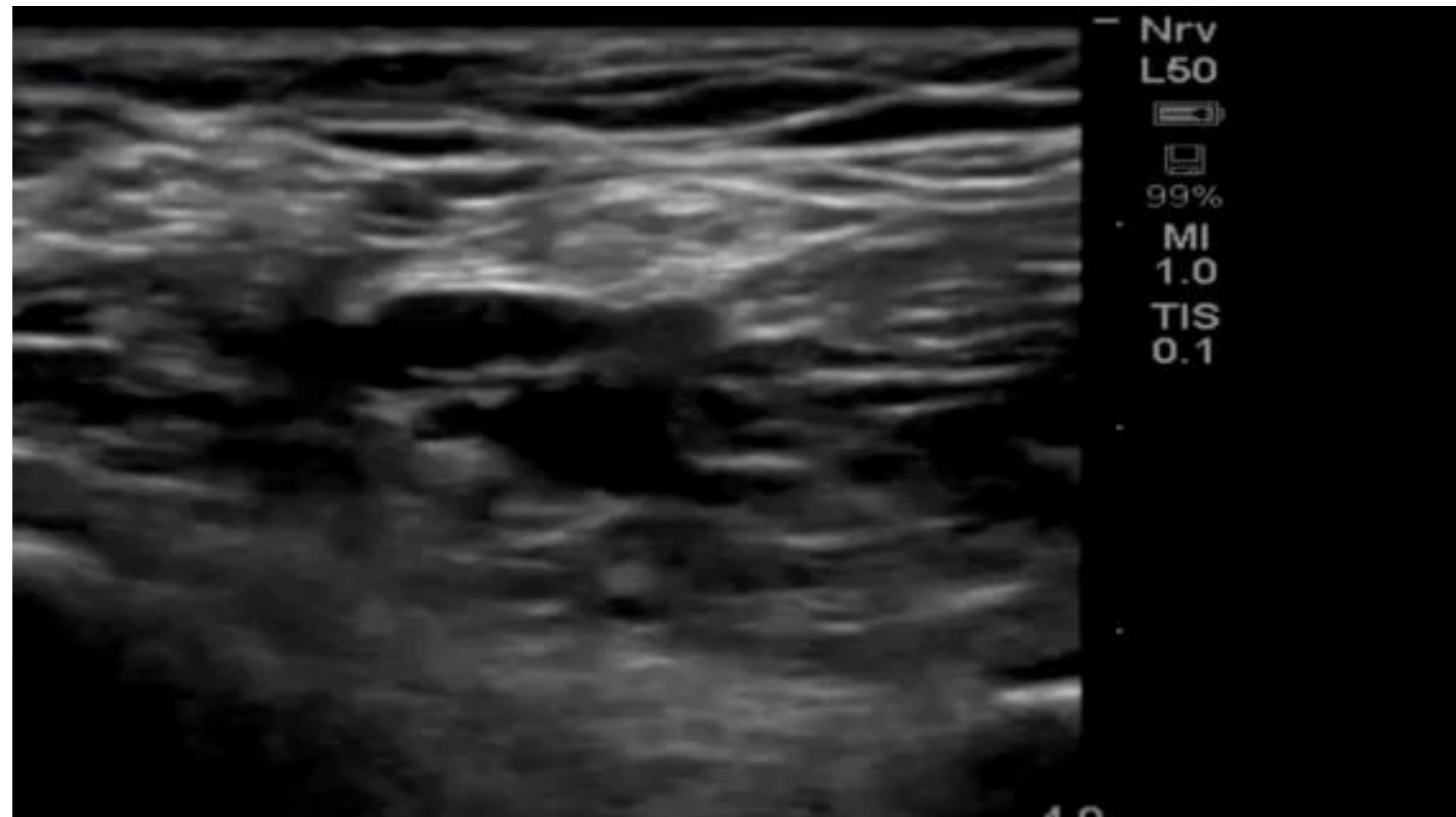
# POPLITE

## DECUBITO LATERALE



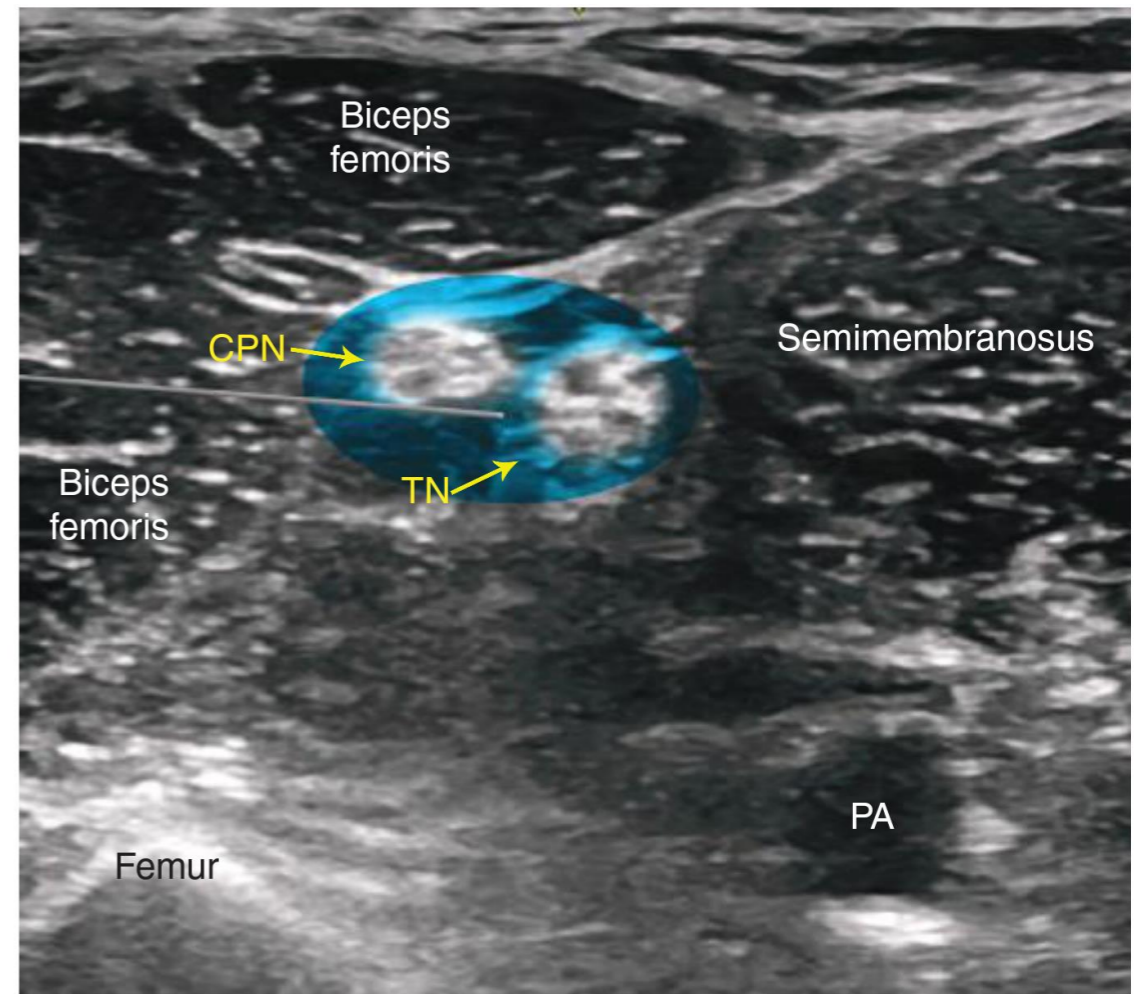
# POPLITE

## DECUBITO PRONO





# APPROCCIO LATERALE DECUBITO SUPINO

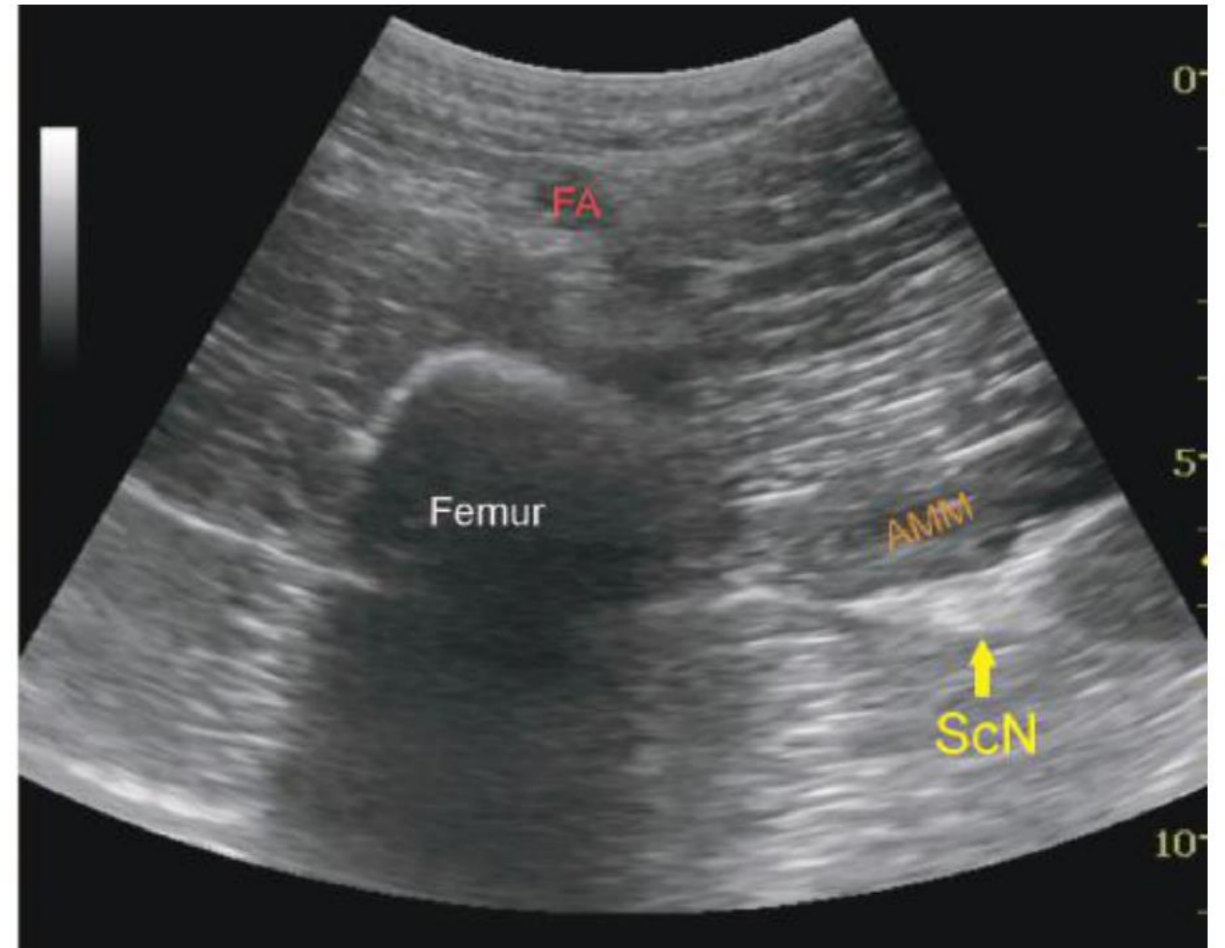




# APPROCCIO ANTERIORE DECUBITO SUPINO

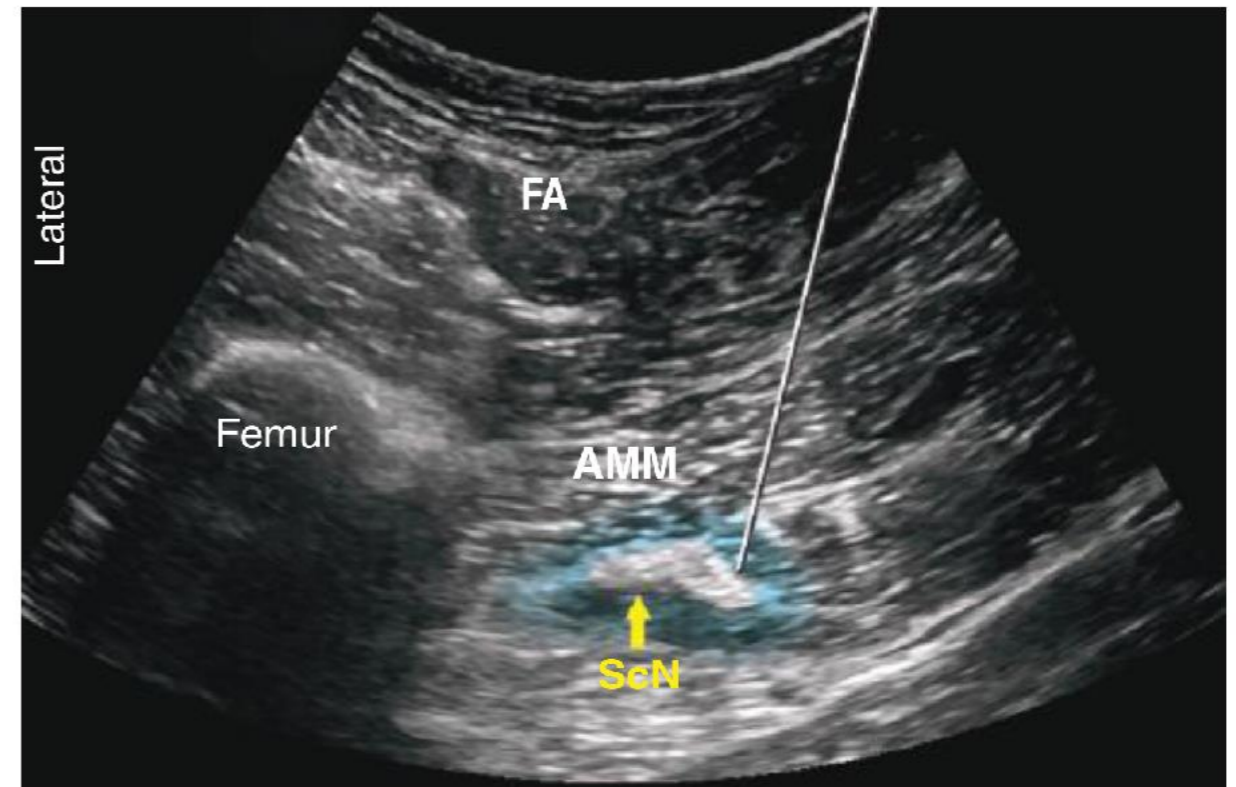


Lateral



Sciatic nerve block-anterior approach

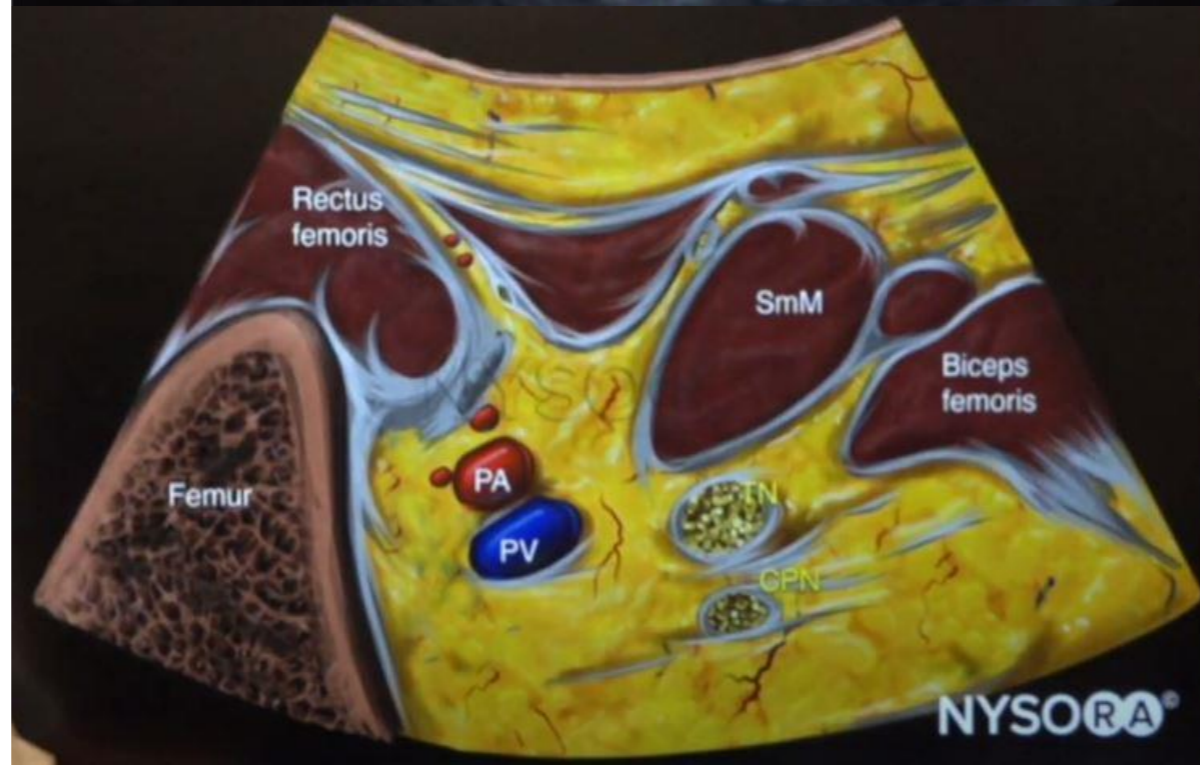
Lateral



**IPACK BLOCK**





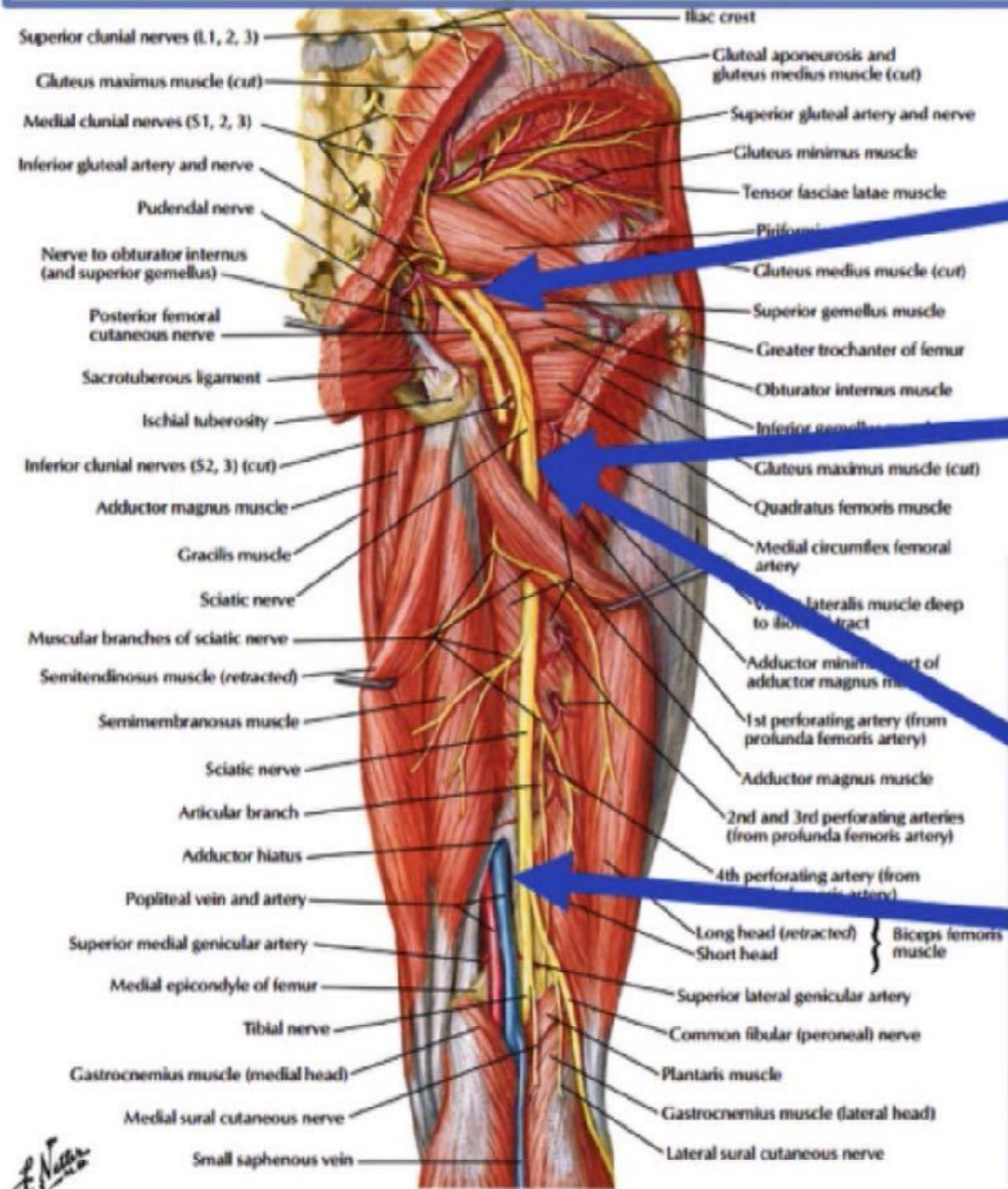








# Sciatic nerve block for knee surgery



## Anesthesia

Proximal procedures

Parasacral: hip relaxation

Major surgery

Anterior Sub-Gluteal Deeper blocks

Infra-gluteal : safe and easier

Minor surgery

## Analgesia

Infra-gluteal: Gold standard but cause foot drop and mask surgically induced peroneal nerve injury  
Genu flectum (loss of amplitude in knee extension)

## Motor sparing PNB

### iPACK

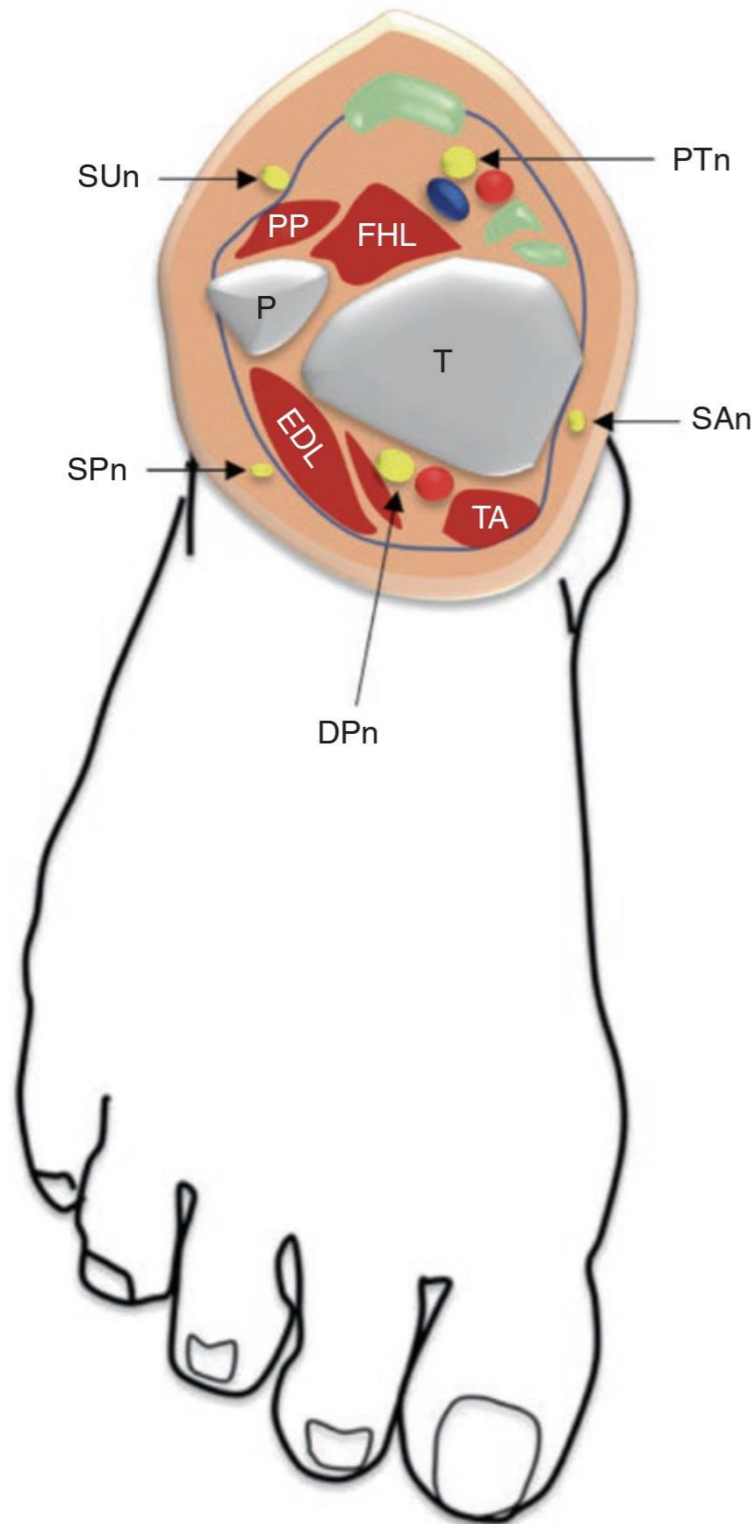
(infiltration between the popliteal artery and capsule of the knee)

Popliteal Selective Tibial n.

Motor weakness



# ANKLE BLOCK



Five nerves provide sensory innervation to the foot at or below the level of the ankle. These are posterior tibial, sural, deep, and superficial peroneal nerves (terminal branches of sciatic nerve) and saphenous nerve (branch from the femoral nerve).

### TIBIAL NERVE

- MEDIAL PLANTAR N.
- LATERAL PLANTAR N.
- CALCANEAL N.

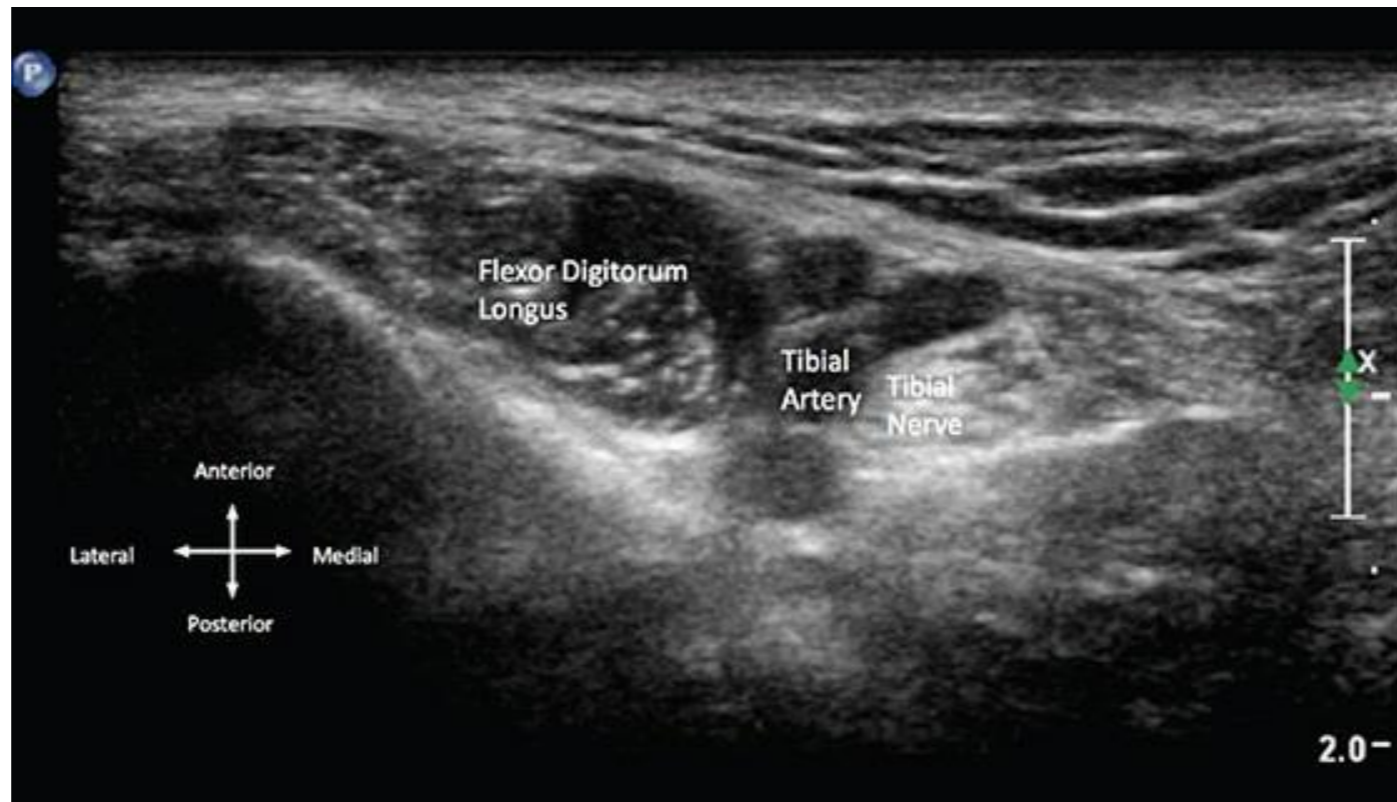
### COMON PERONEAL NERVE

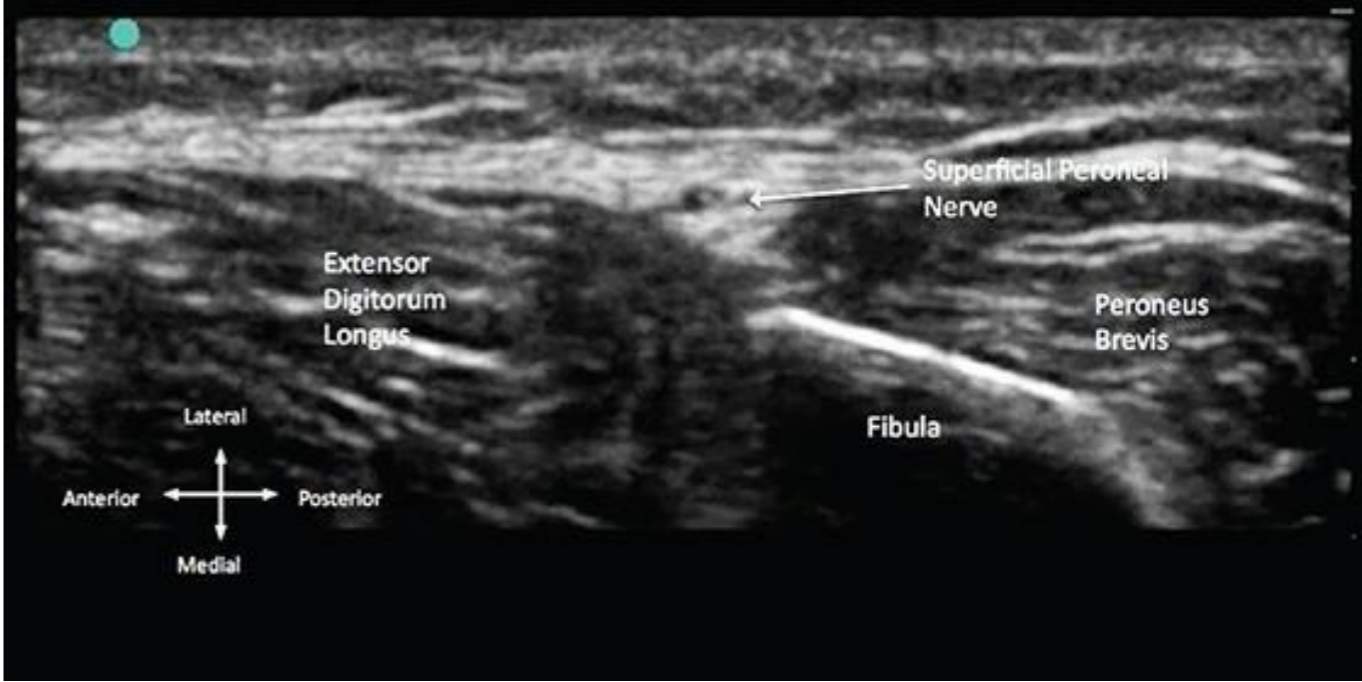
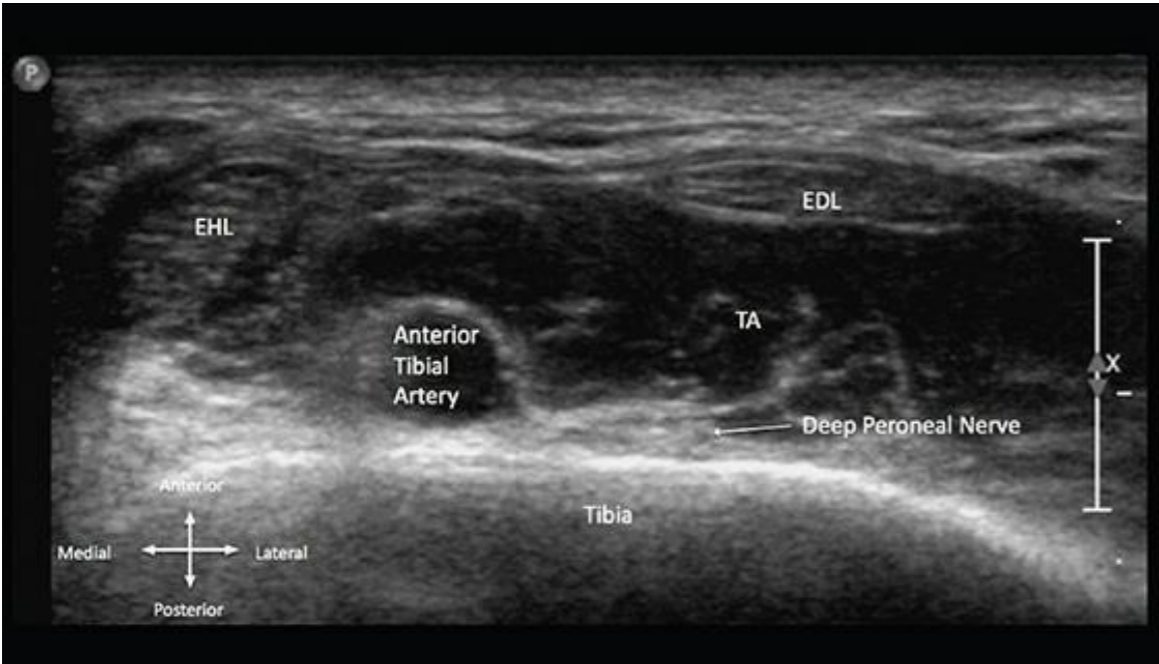
- SUPERFICIAL PERONEAL N.
- DEEP PERONEAL N.

- SURAL N.
- SAPHENOUS N.

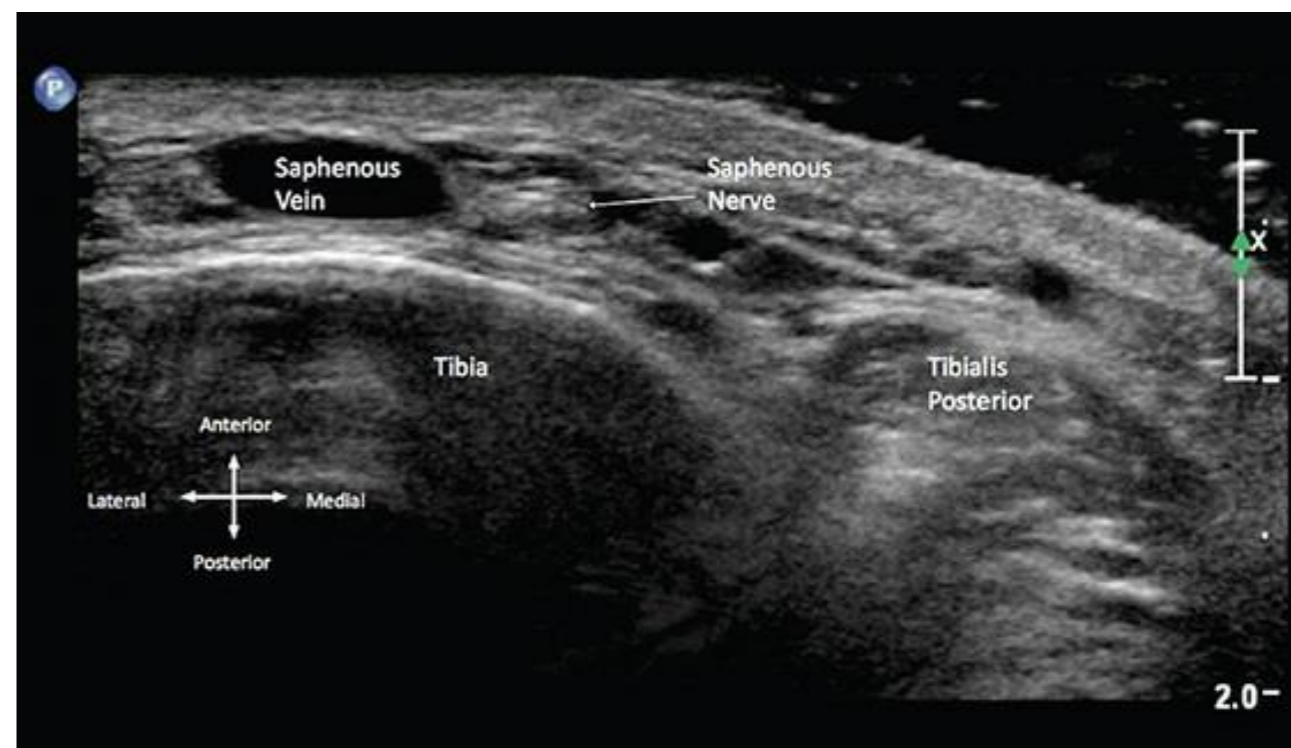
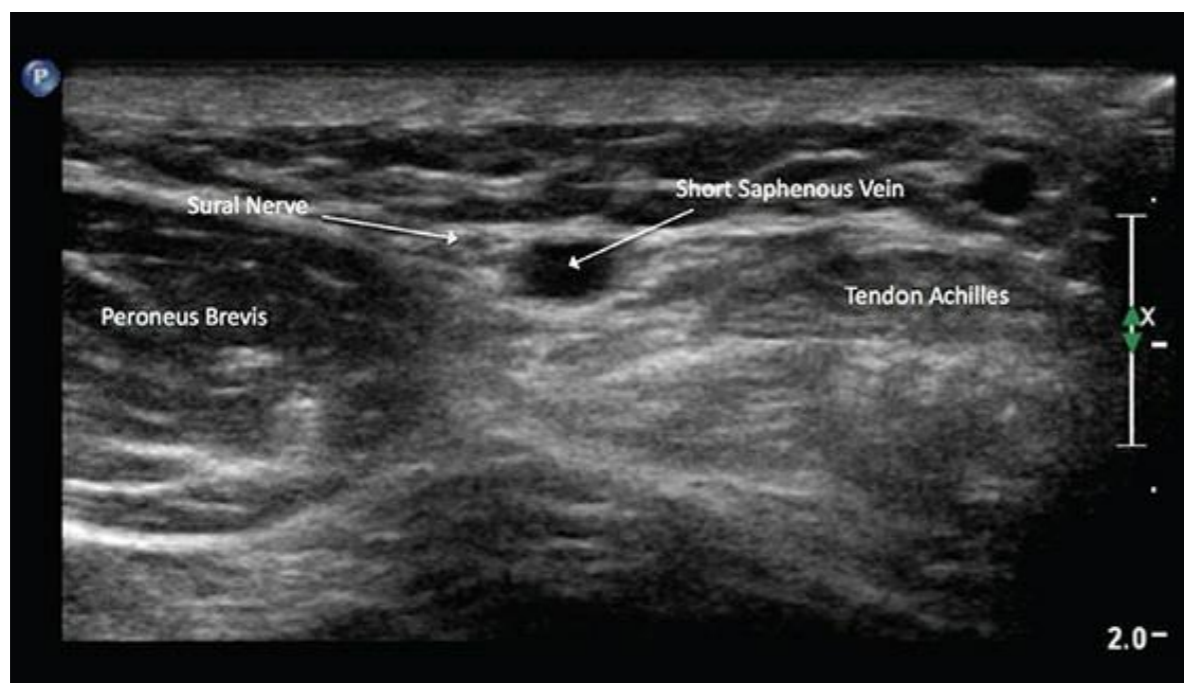


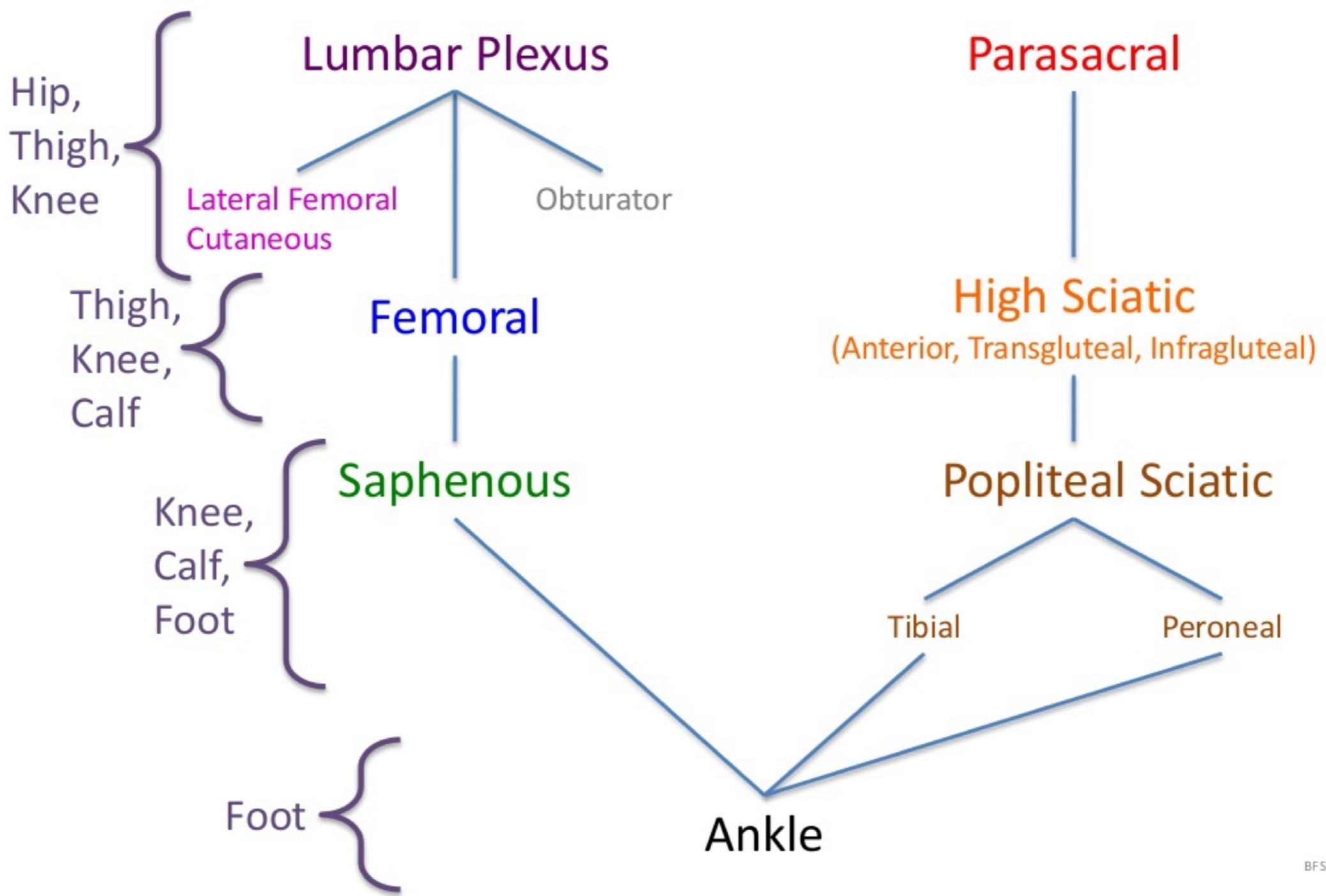














**GRAZIE**