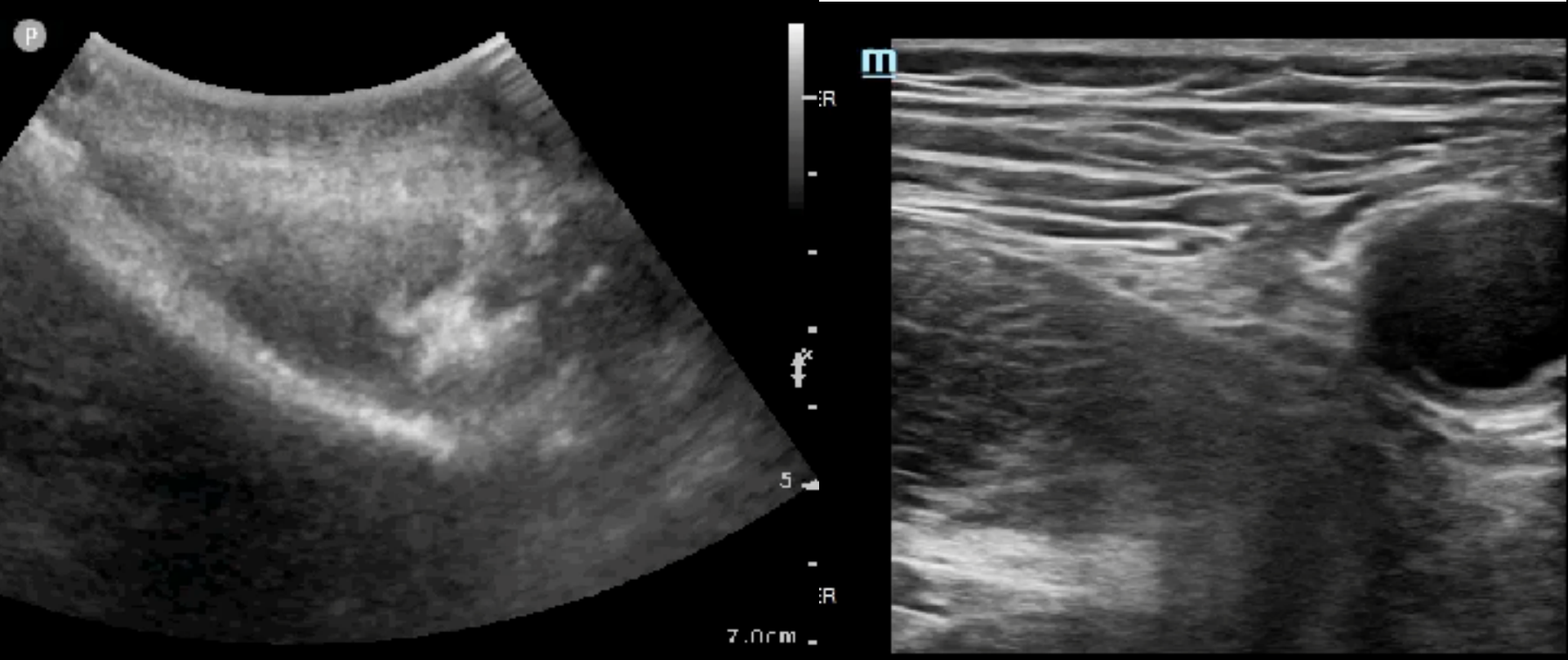




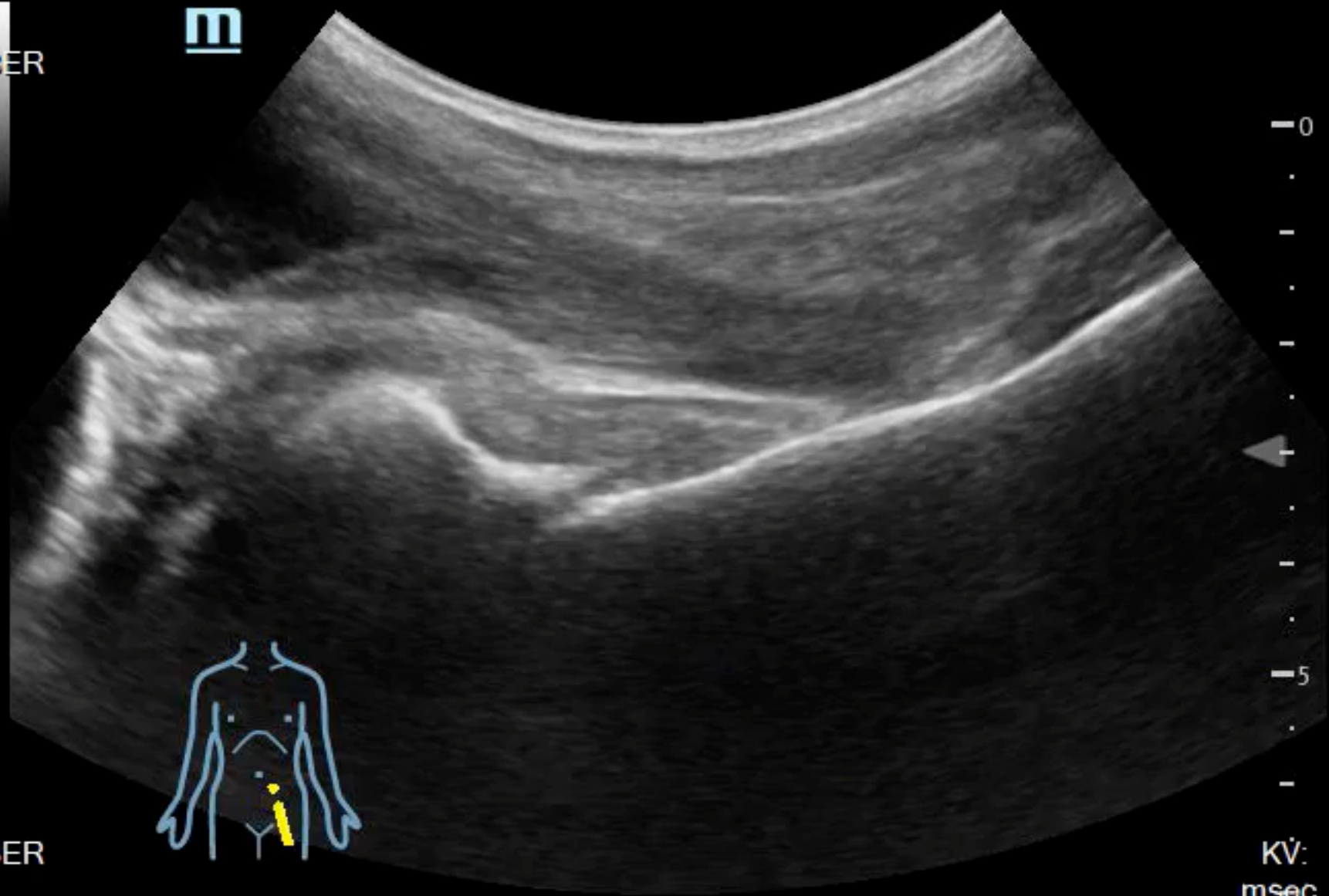
LE NERVE BLOCKS IN ED

陳國智醫師 雙和醫院急診醫學科

juice119@gmail.com

POCUSAcademy.com

FH5.0
DB 115
PF19007BER
PR 28
D7.0
G 60



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iNeedle

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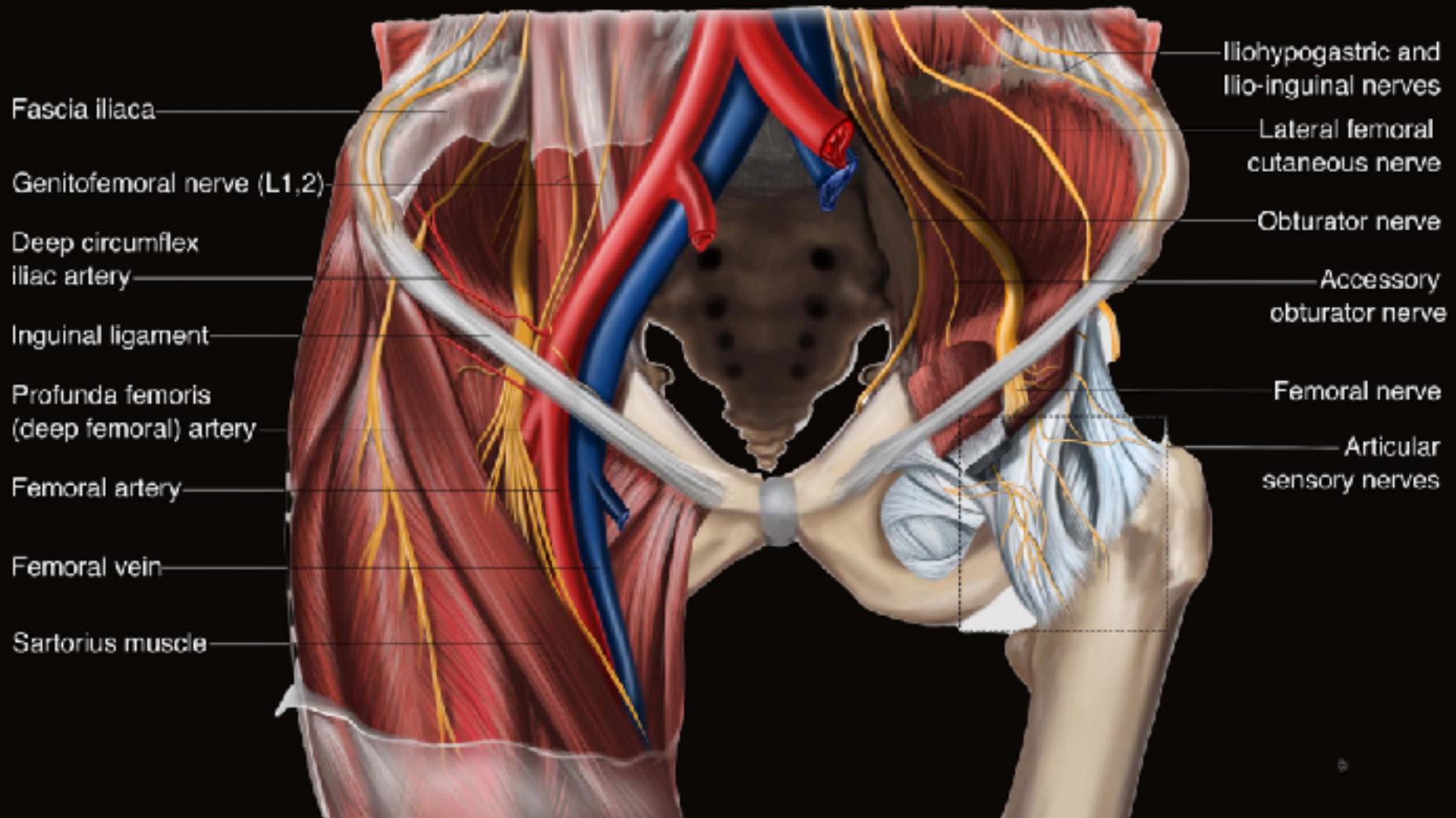
KV:
msec
ALG:

NYSORA NERVE BLOCK MANUAL



Prof. Dr. Admir Hadzic

Fascia Iliaca Block



Fascia Iliaca Block

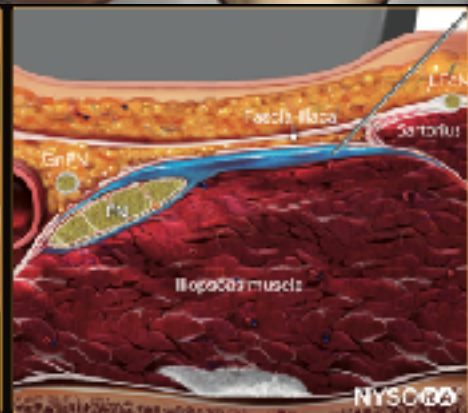
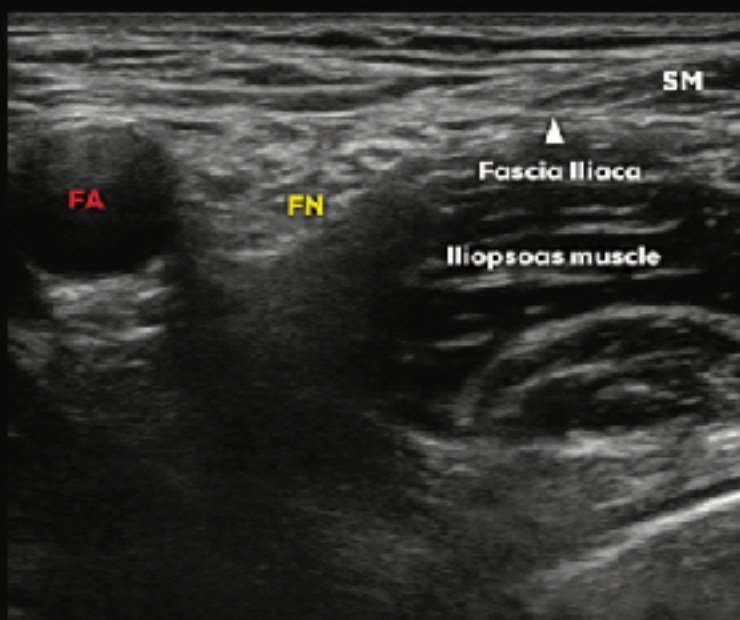
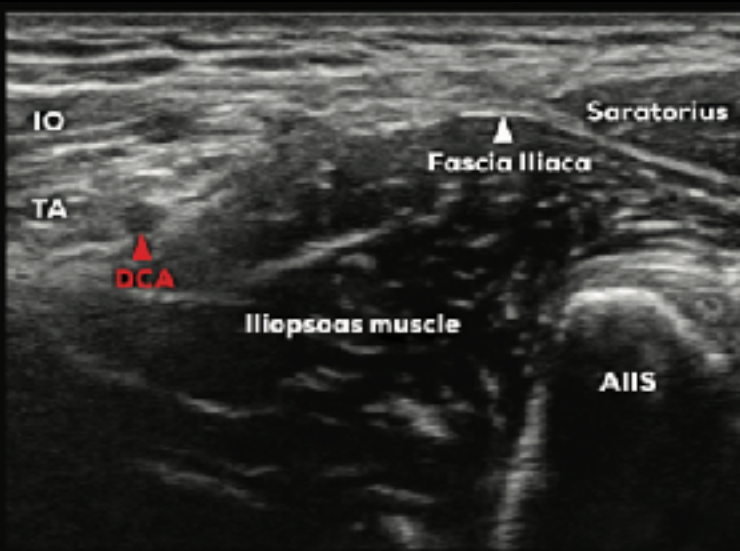
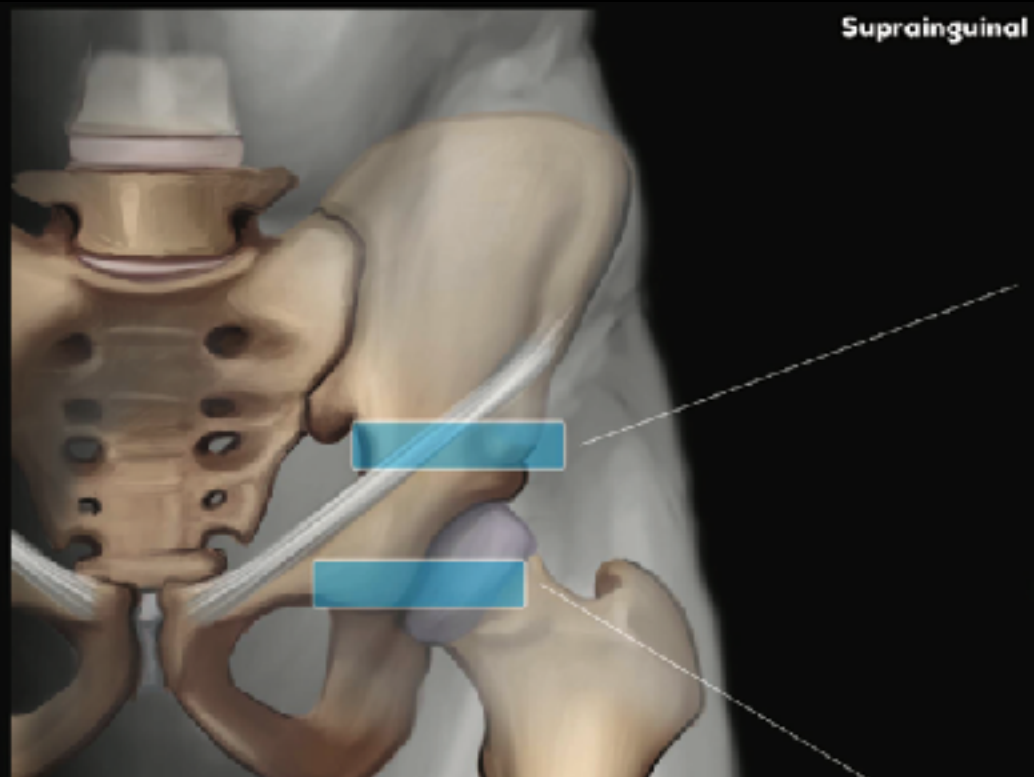


Hip fracture

20-30 ml

**Femoral N.
LFCN**

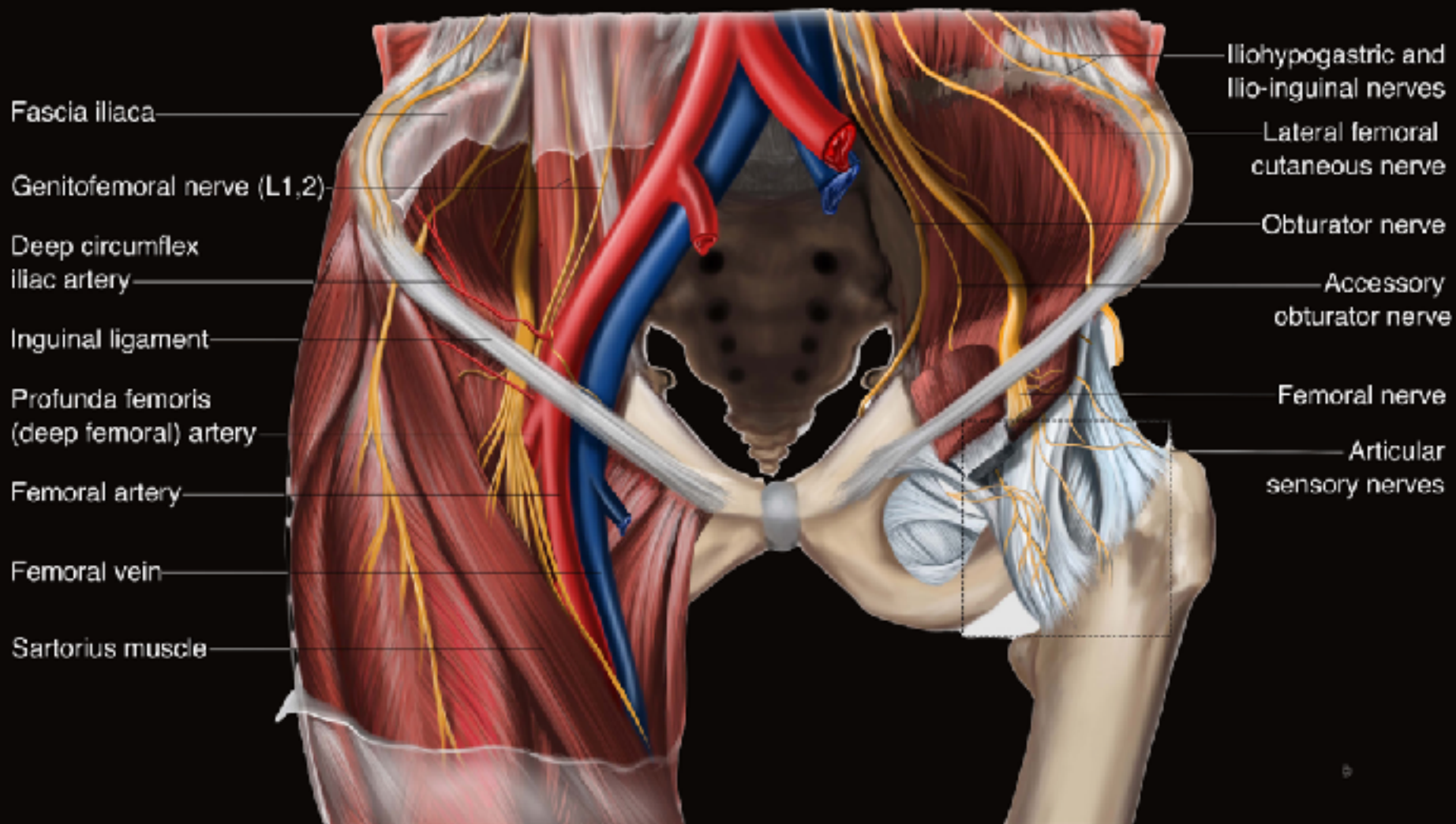
Fascia Iliaca Block



Infrainguinal

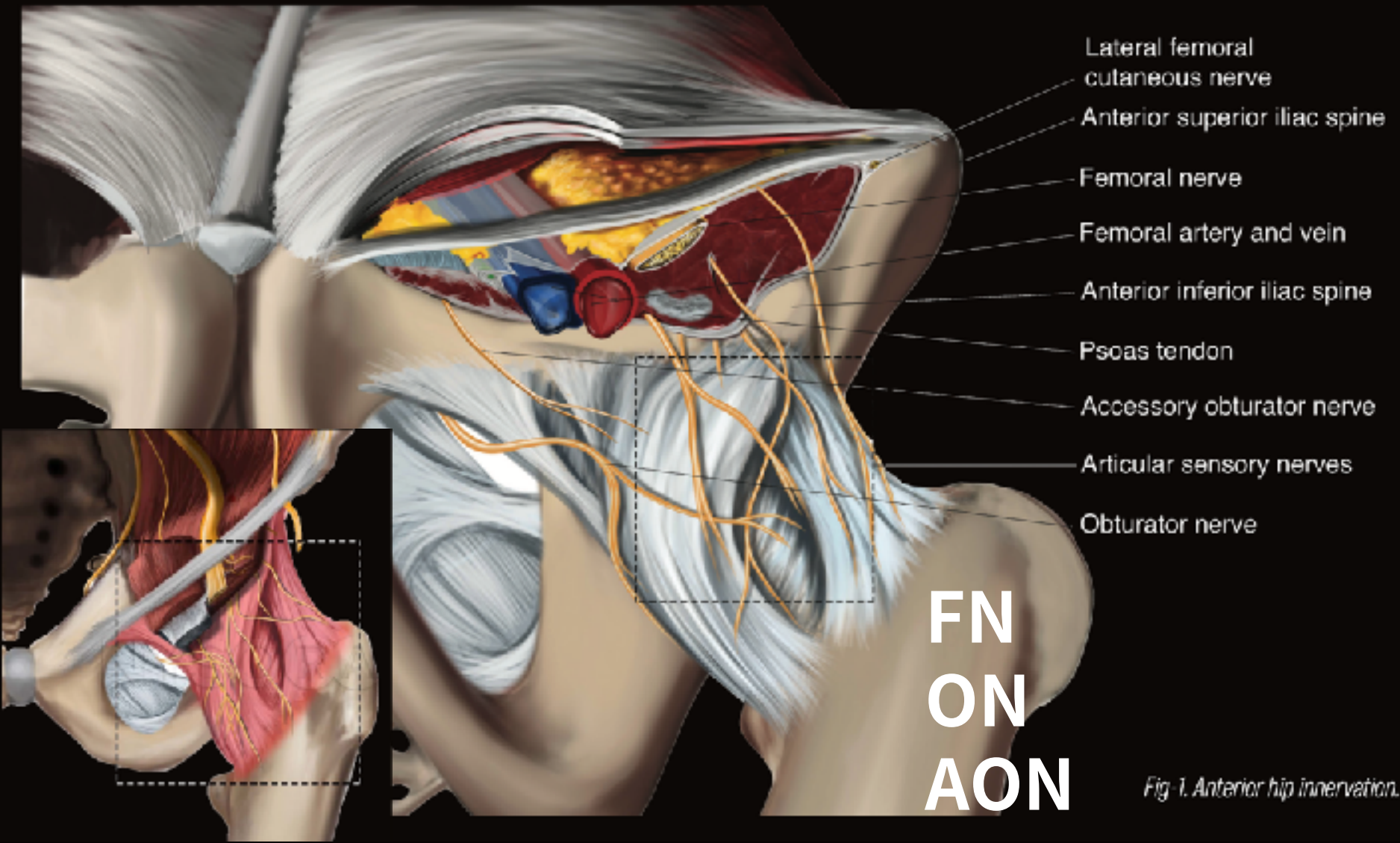
PENG block

Pericaspular Nerve Group block



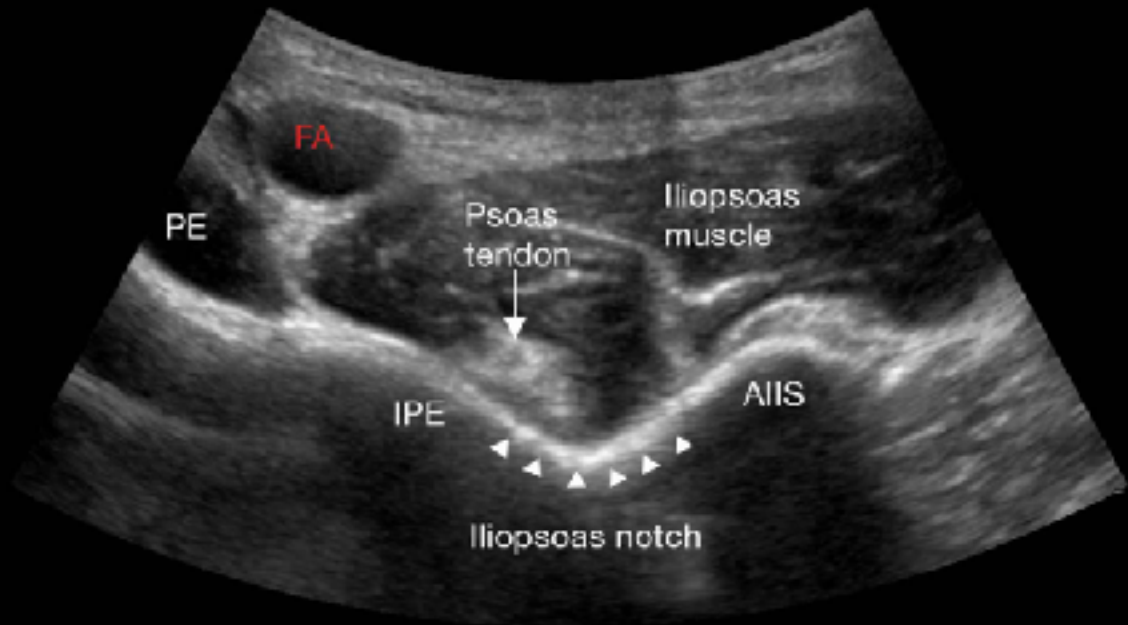
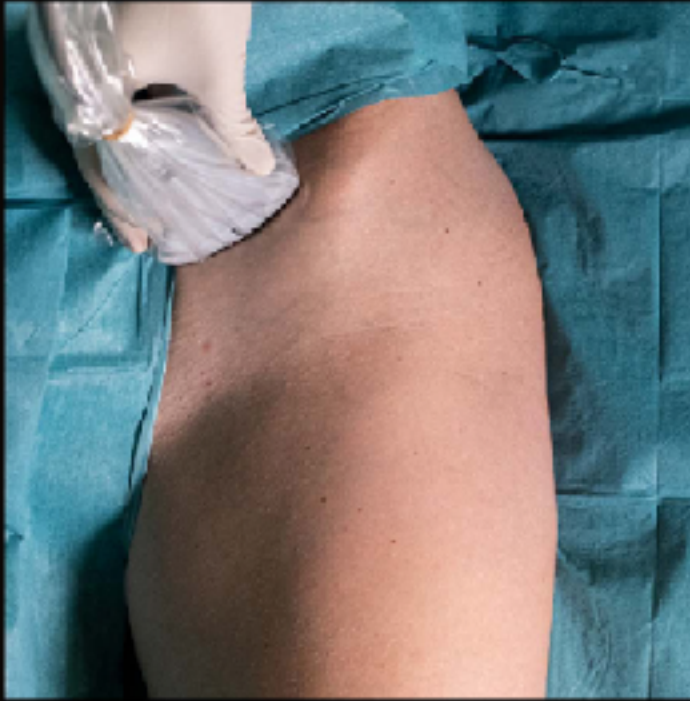
PENG block

Pericaspular Nerve Group block



PENG block

Pericapsular Nerve Group block



Hip fracture - 20 ml - motor sparing block

ASIS - AIIS - IPE - Psoas tendon

PENG block

Pericapsular Nerve Group block

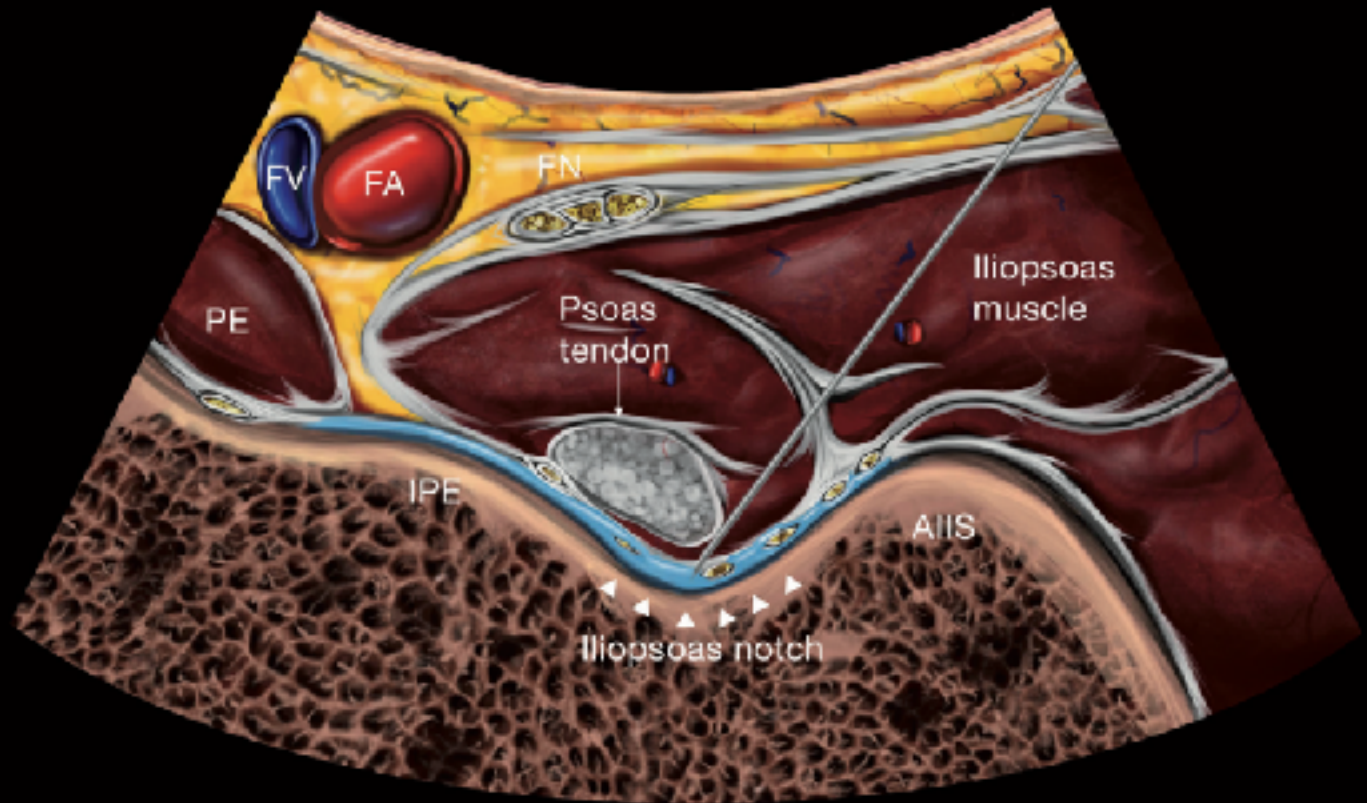
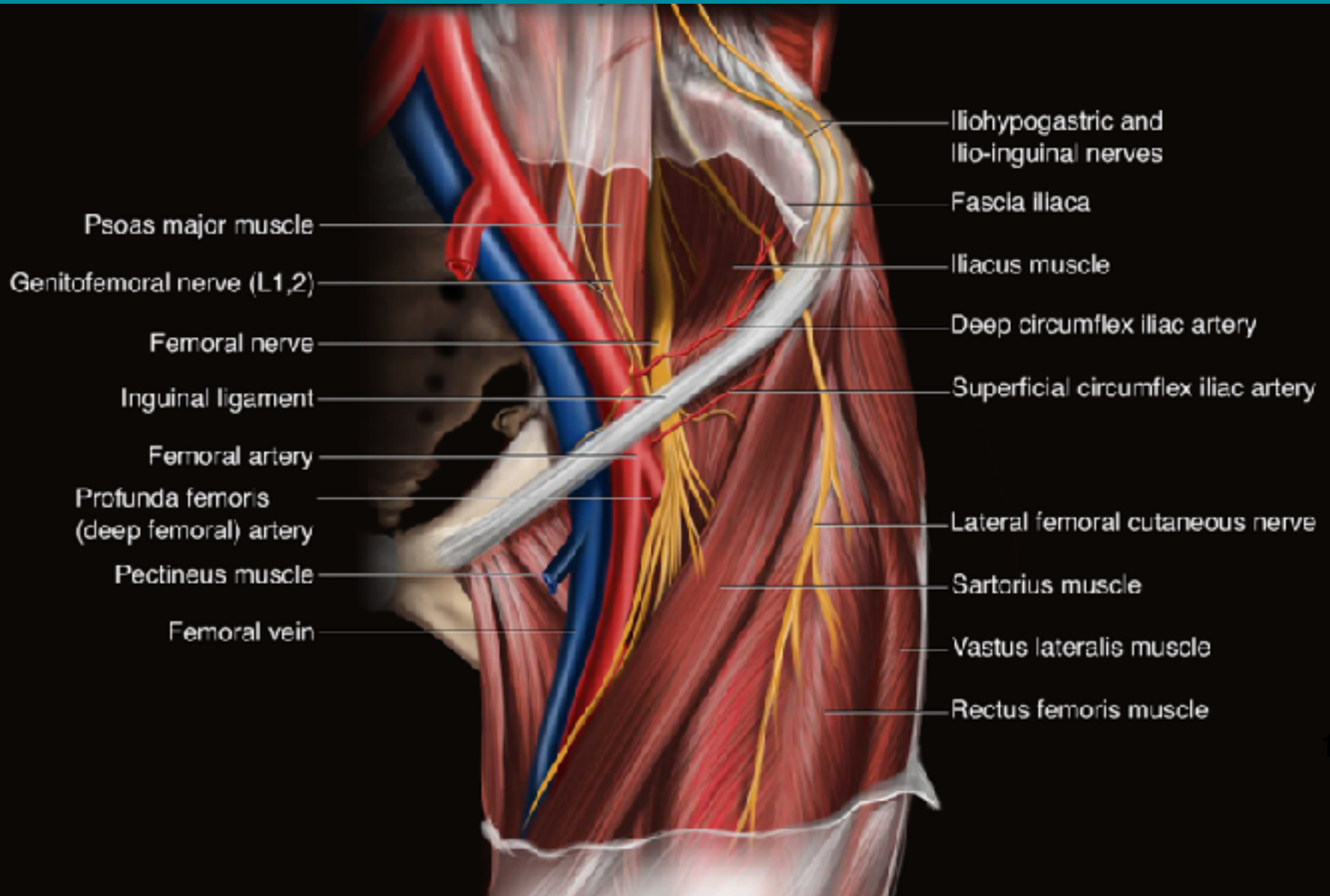


Fig-5. Hip Block; Reverse Ultrasound Anatomy. FA, femoral artery; FV, femoral vein; FN, femoral nerve; PE, pectineus muscle; IPE, iliopubic eminence; AIIS, anterior inferior iliac spine.

Femoral nerve block



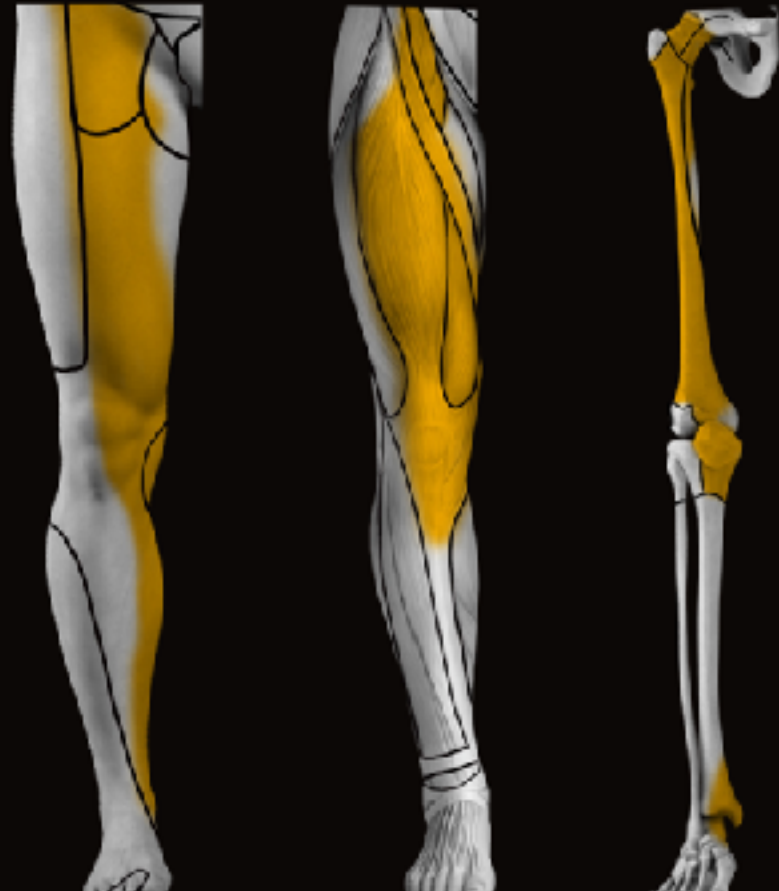
Femoral nerve block

THE FEMORAL NERVE INNERVATES:

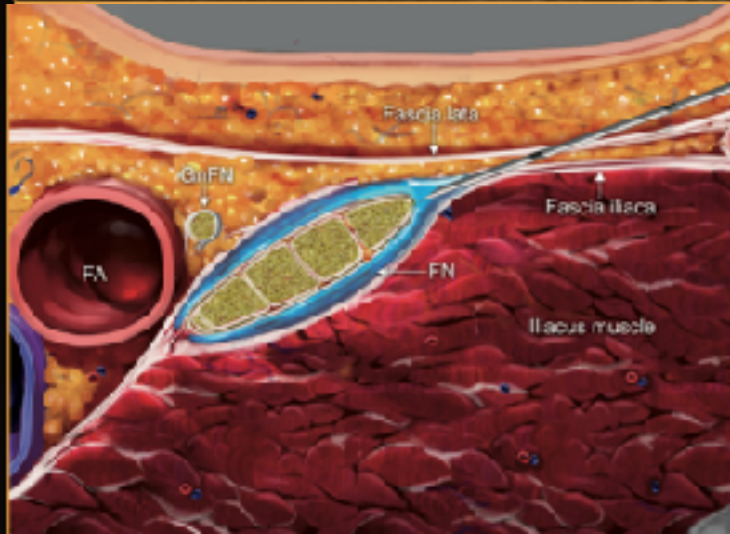
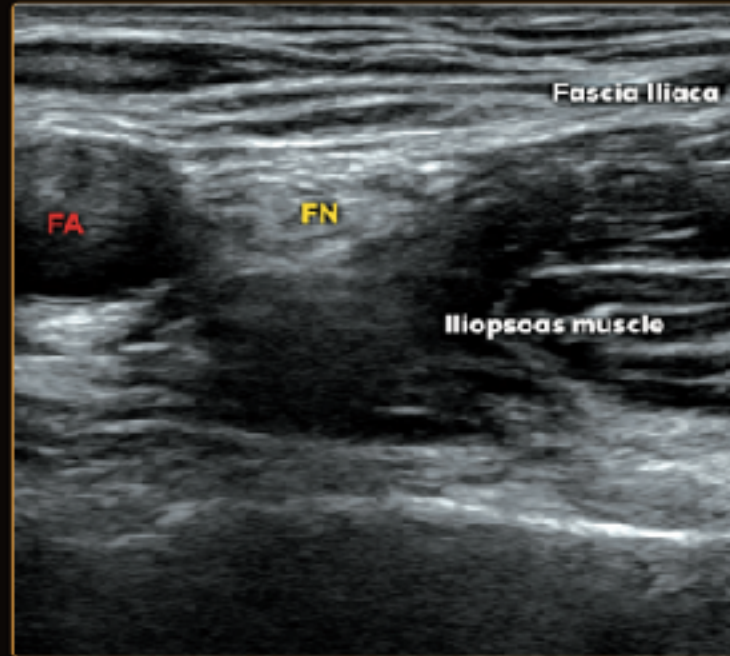
- **Joints:** Part of the hip, anterior aspect of the knee and the medial aspect of the ankle.
- **Bones:** Anterior aspect of the femur.
- **Muscles:** The extensors of the knee (quadriceps, sartorius, and pectineus).
- **Skin:** Anterior and medial thigh and knee, and medial leg down to the midfoot.

10-15 ml

Femoral artery

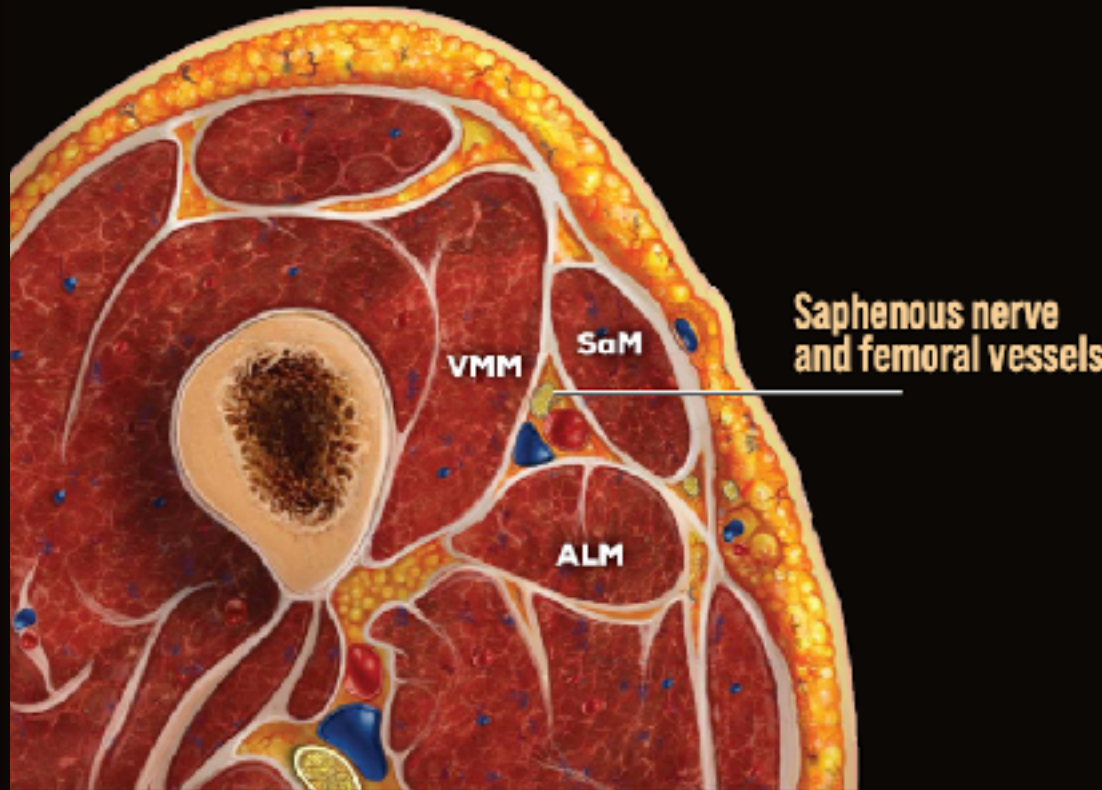
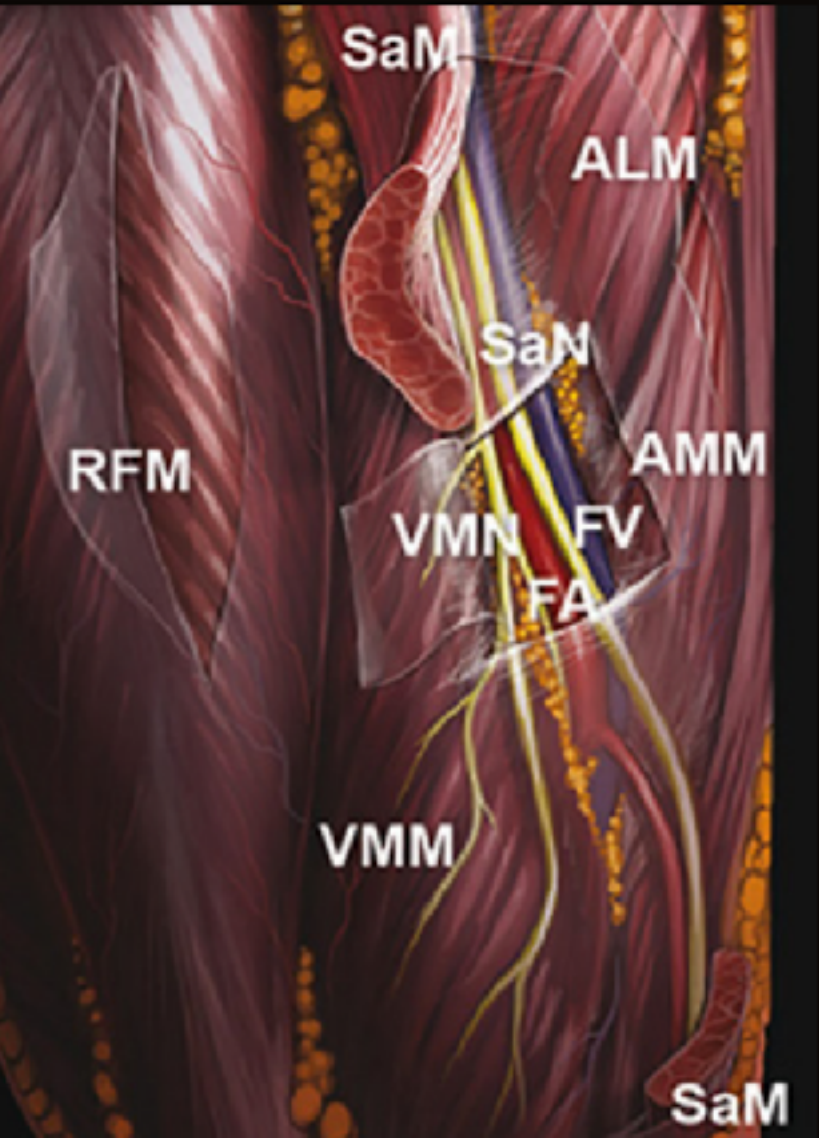


Femoral nerve block

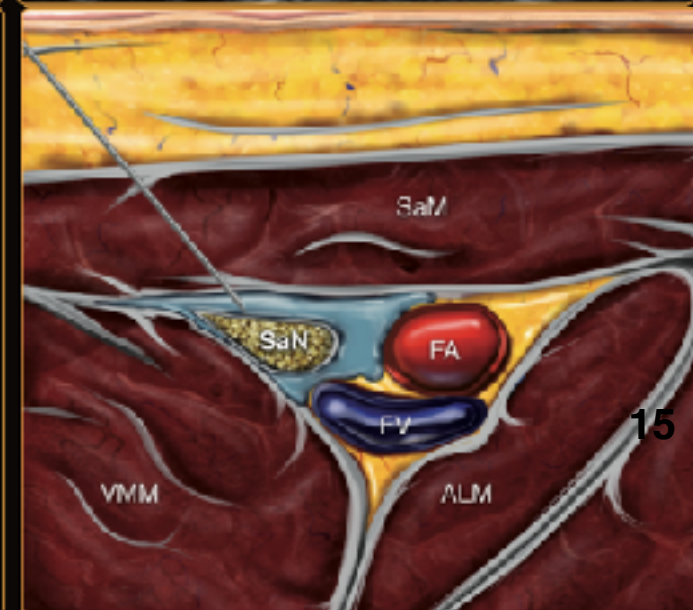
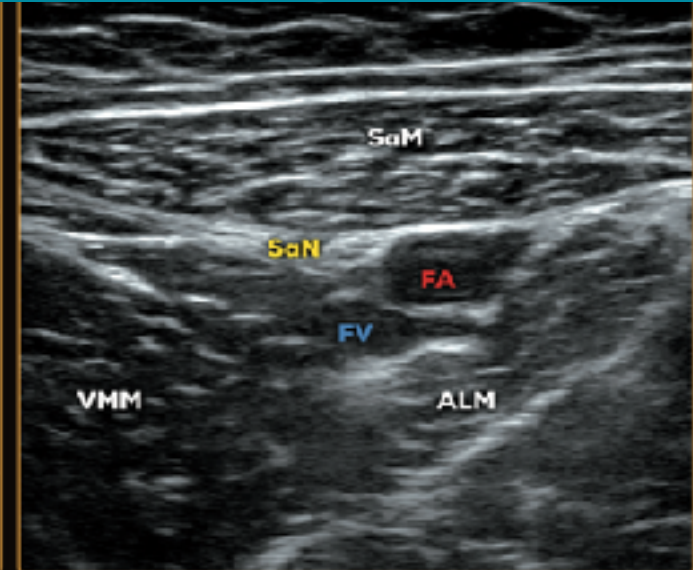
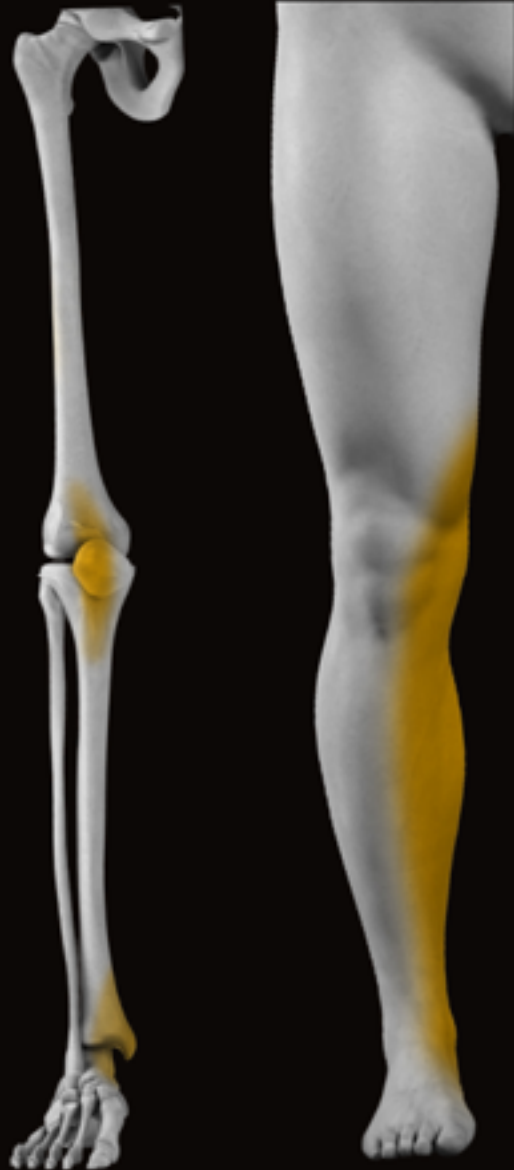


Saphenous nerve block

10-15 ml
SFA
Satorius muscle



Saphenous nerve block



LFCN block

Lateral femoral cutaneous nerve block

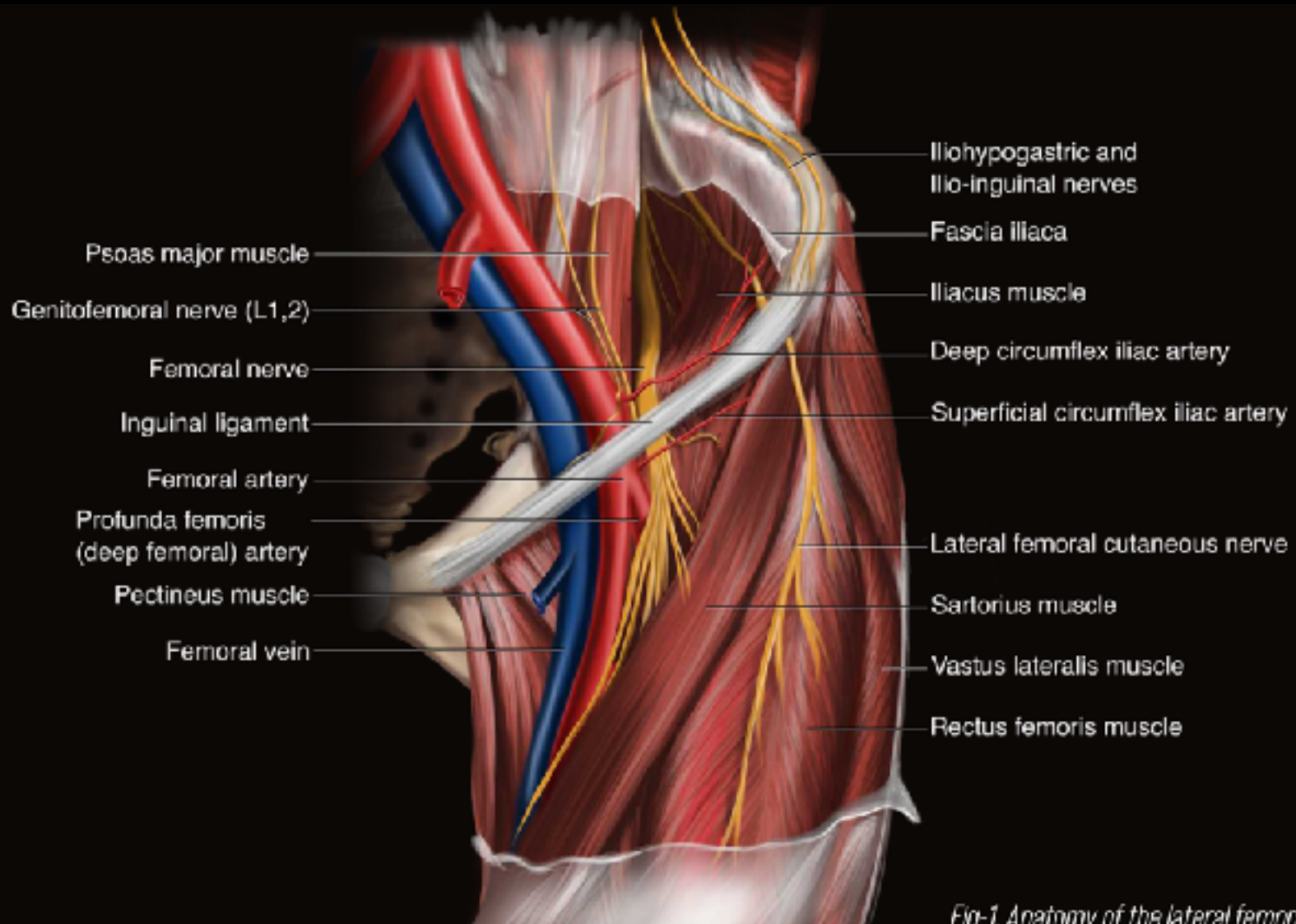
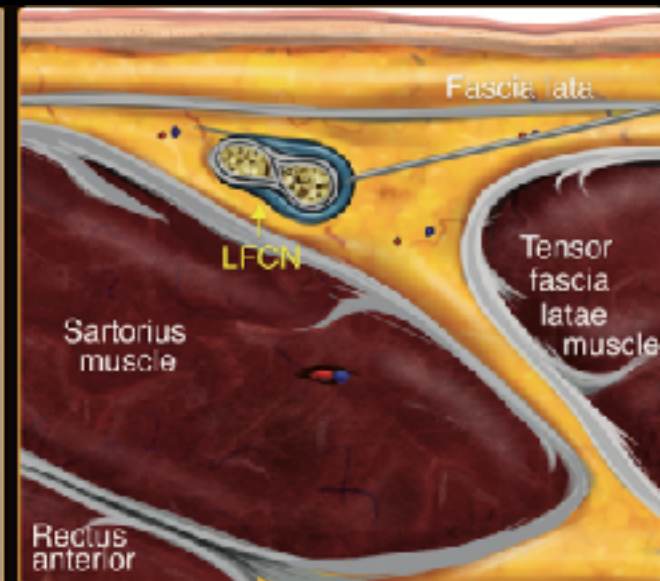
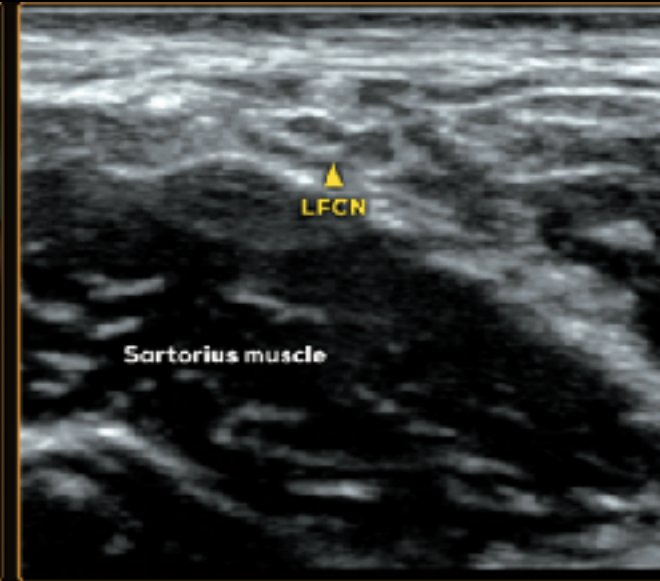
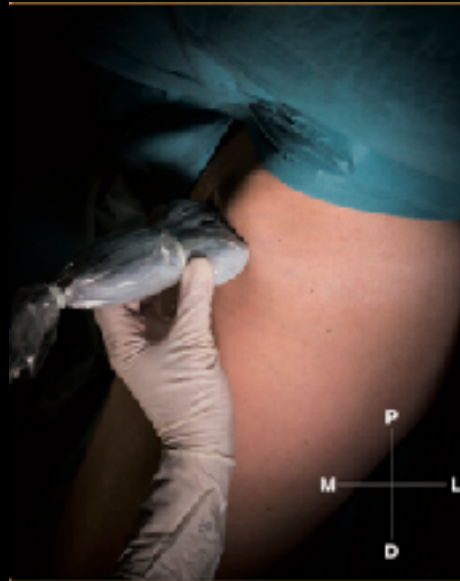


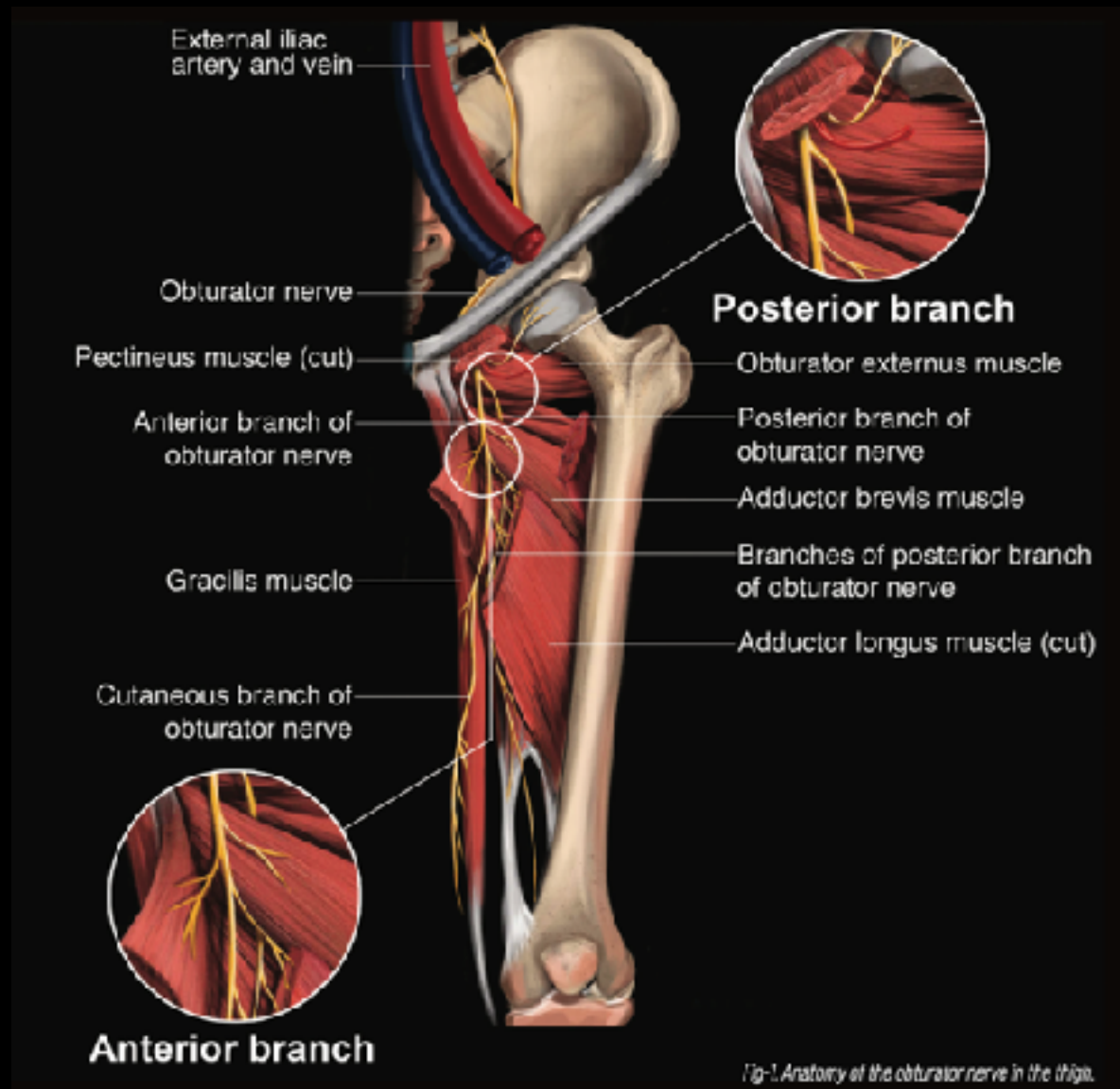
Fig-1. Anatomy of the lateral femoral cutaneous nerve.

LFCN block

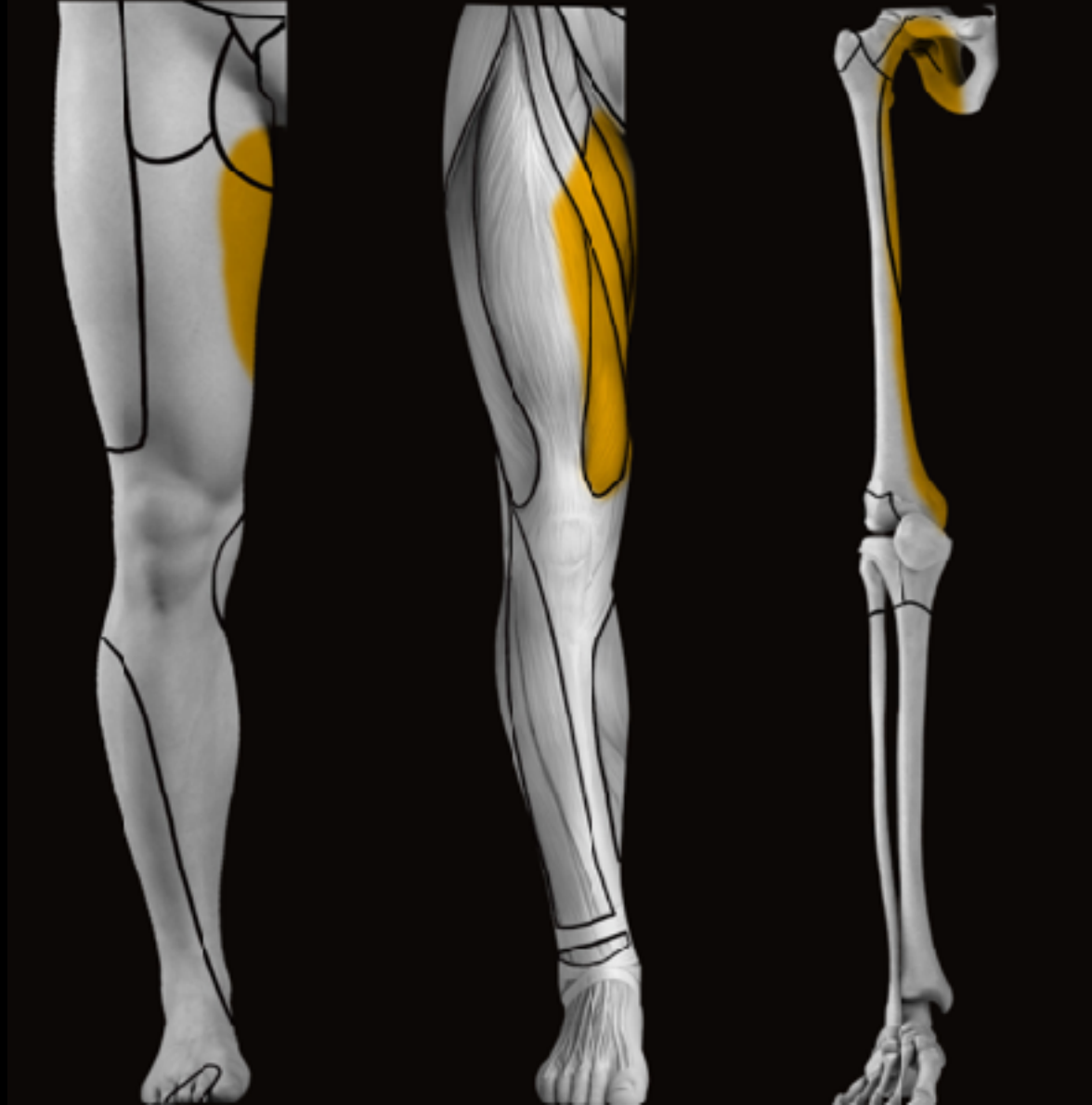
Lateral femoral cutaneous nerve block



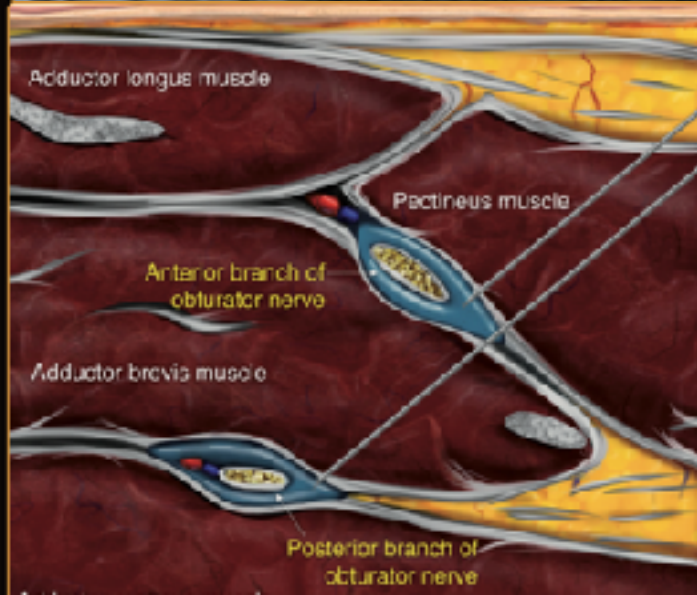
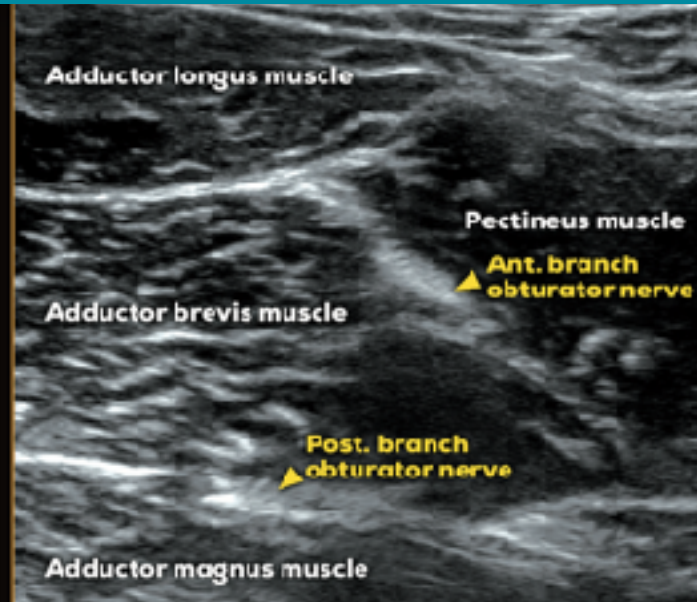
Obturator nerve block



Obturator nerve block

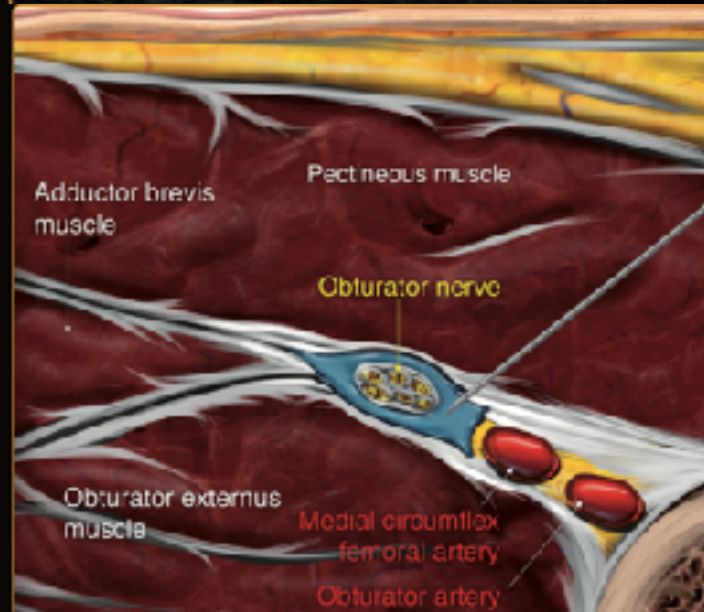


Obturator nerve block



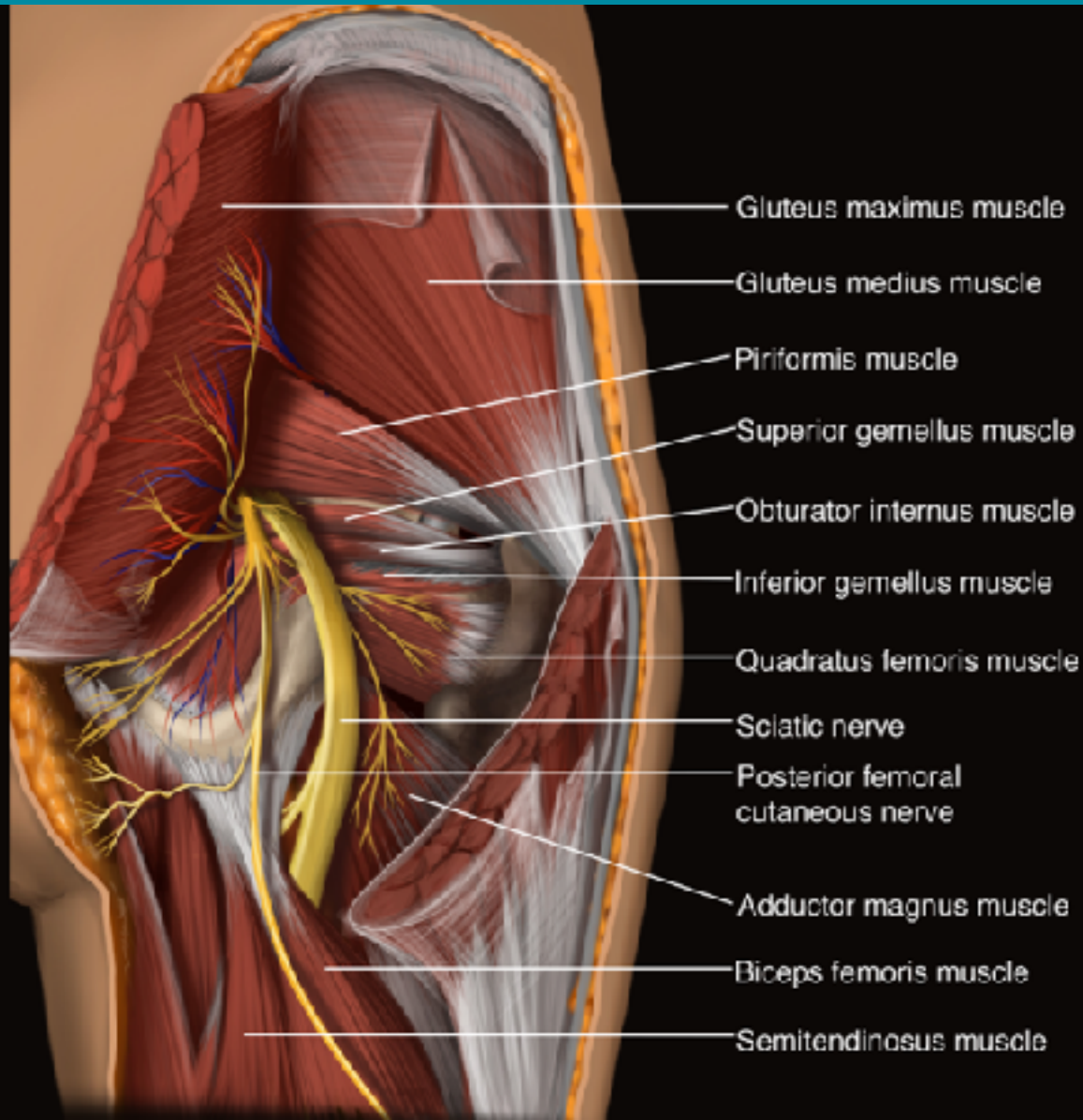
**10 ml
in each plane**

Obturator nerve block

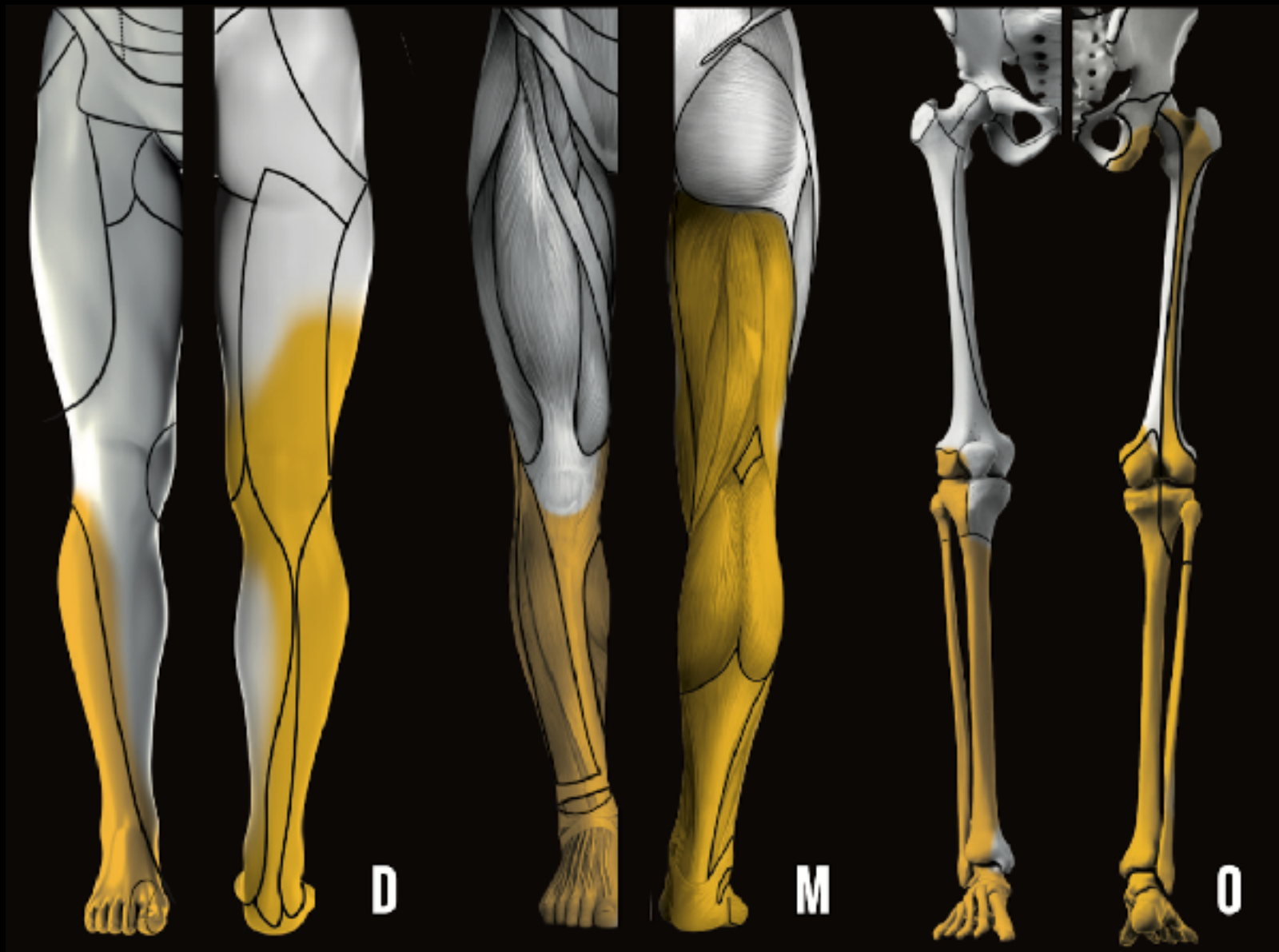


15 ml

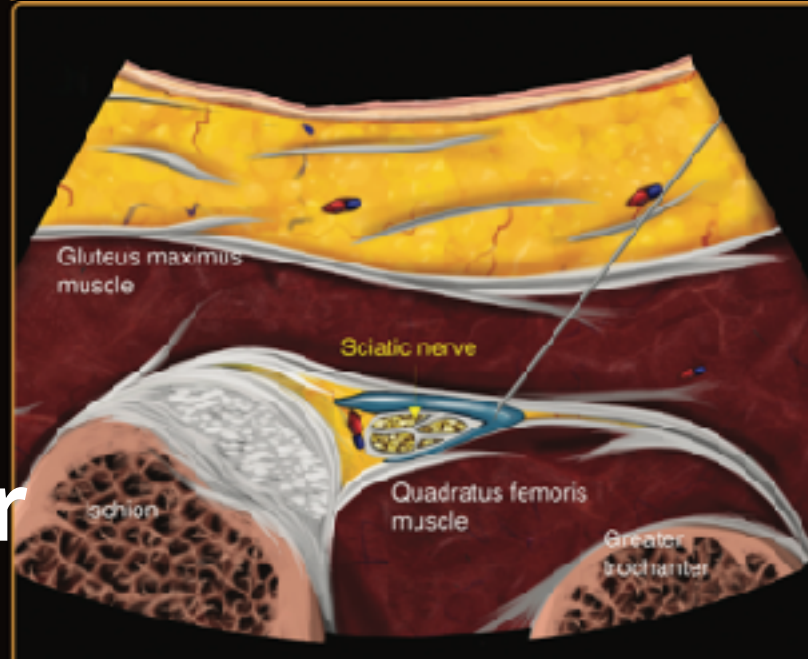
Sciatic nerve block



Sciatic nerve block

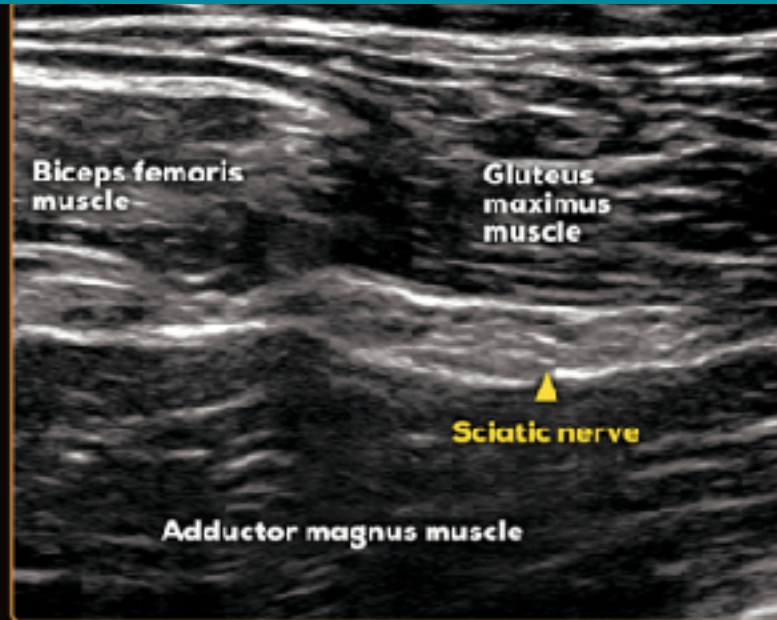


Sciatic nerve block

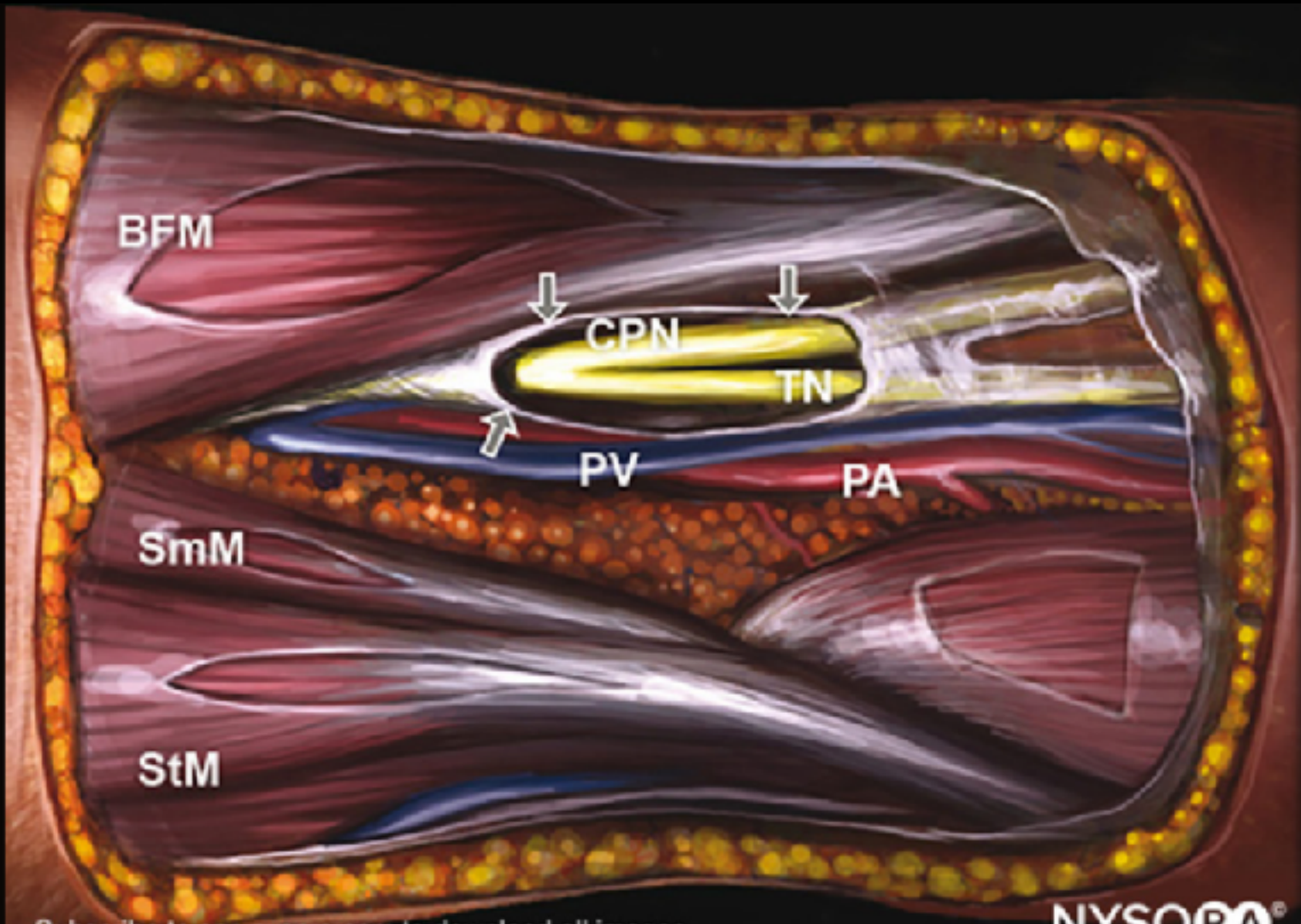


20 ml
Greater trochanter
Ischial tuberosity

Sciatic nerve block



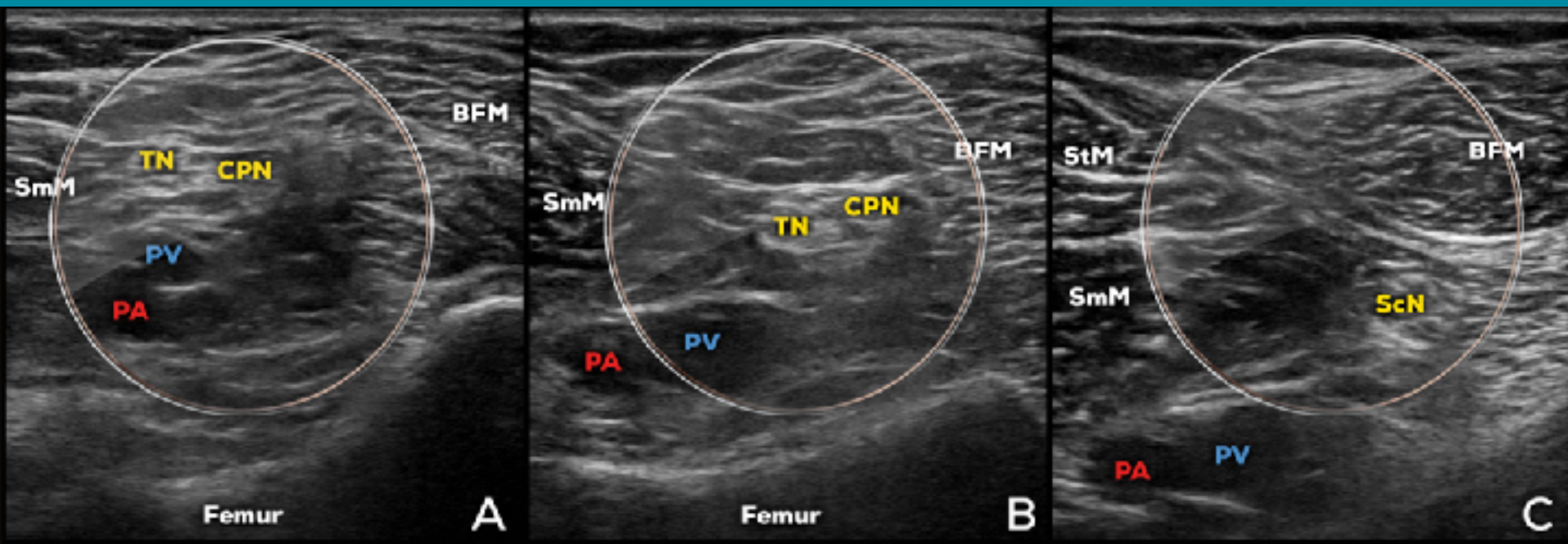
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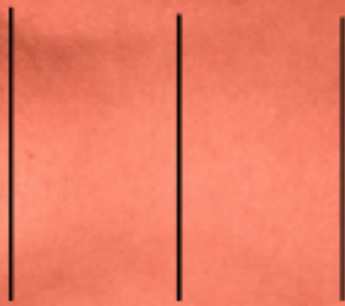
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Sciatic nerve block



A B C



Sciatic nerve block

ANTERIOR



D



M



O

POSTERIOR



D

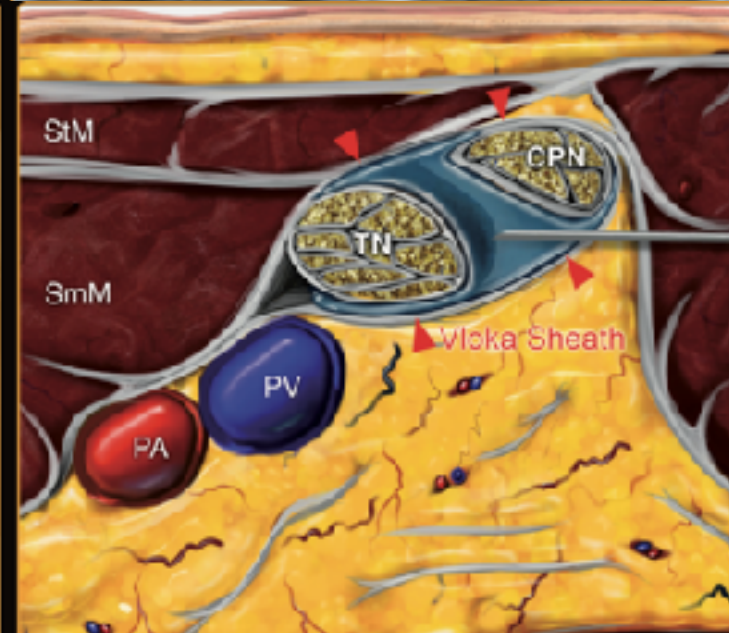
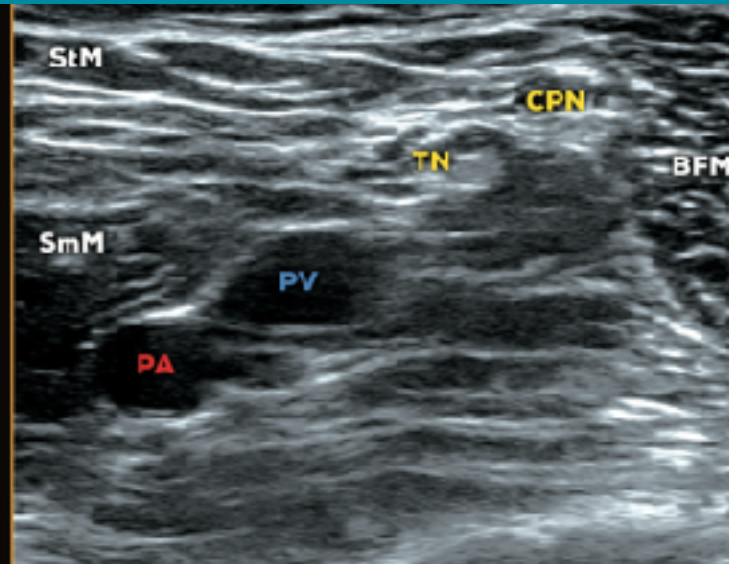


M



O

Sciatic nerve block



Ankle block

SENSORY - SKIN COVERAGE

PLANTAR VIEW



DORSAL VIEW



■ Tibial nerve

■ Sural nerve

■ Deep peroneal nerve

■ Superficial peroneal nerve

■ Saphenous nerve

Fig-6. Sensory distribution of an ankle block.

Tibial nerve block

TIBIAL NERVE

- The largest nerve at the ankle.
- **Anatomy:** Travels posterior to the medial malleolus with the posterior tibial artery and veins, deep to the flexor retinaculum, where it divides into calcaneal, medial and lateral plantar nerves.
- **Innervates:** The intrinsic muscles, bones, joints and the skin of the heel and sole of the foot.

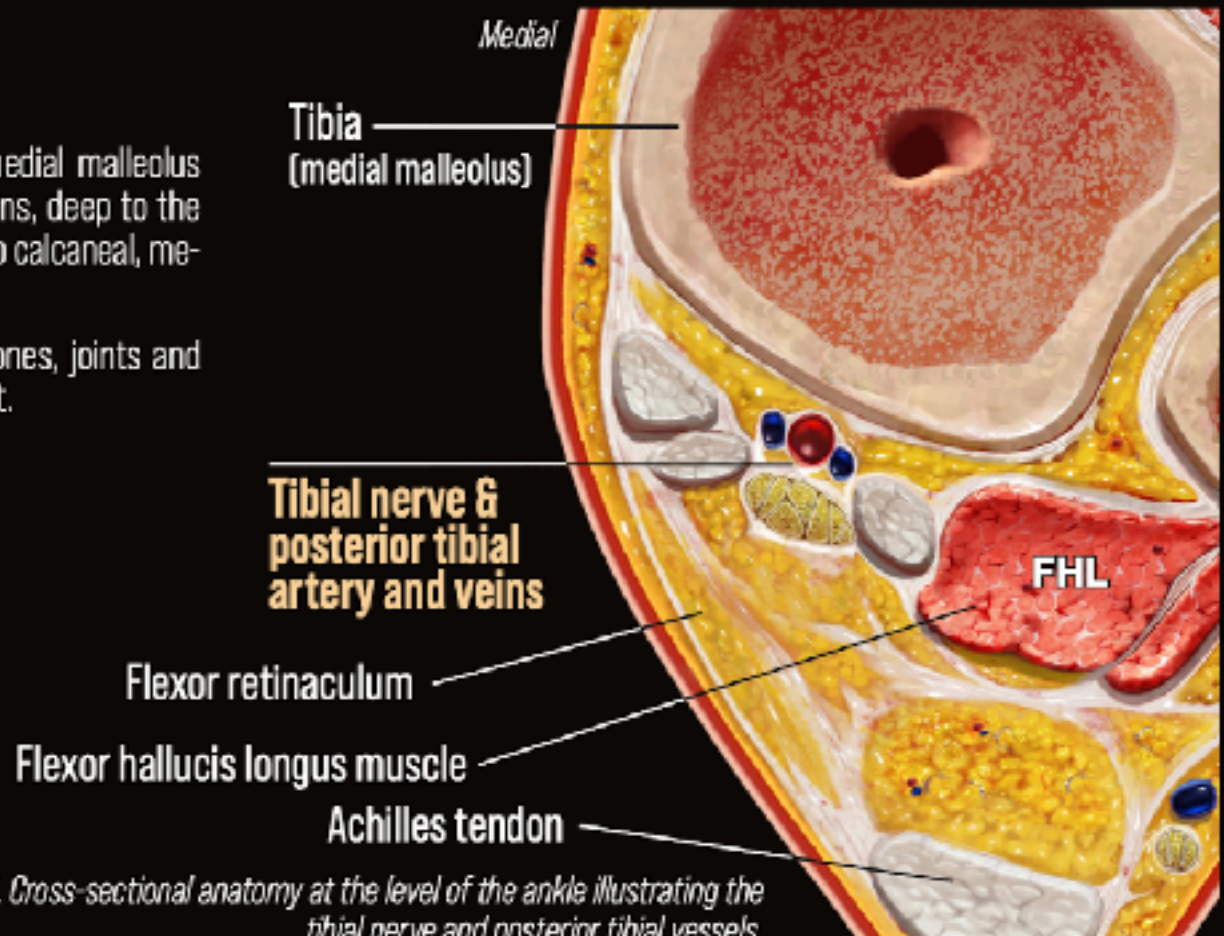
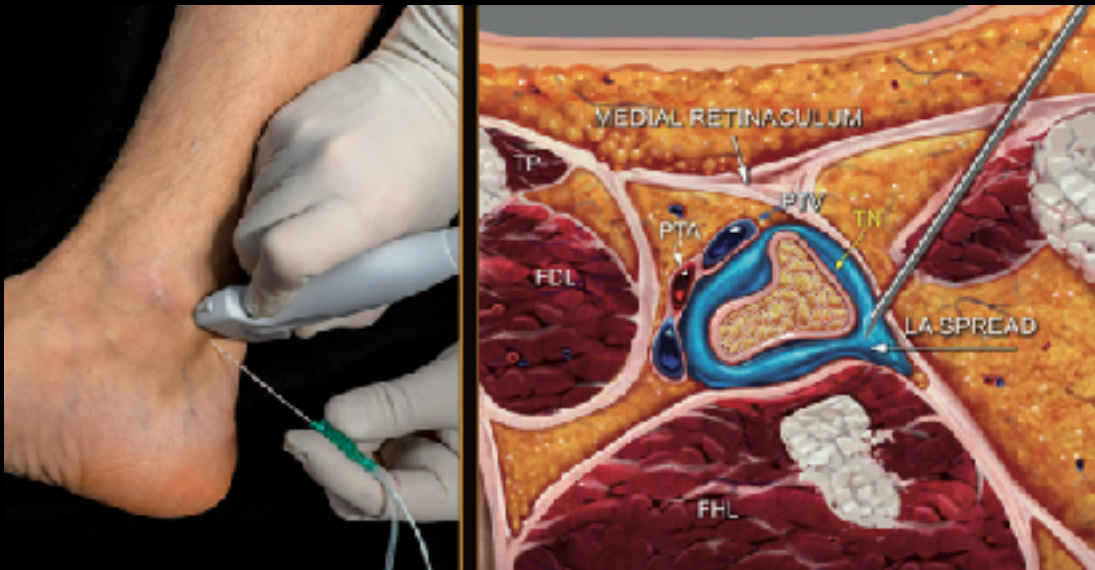
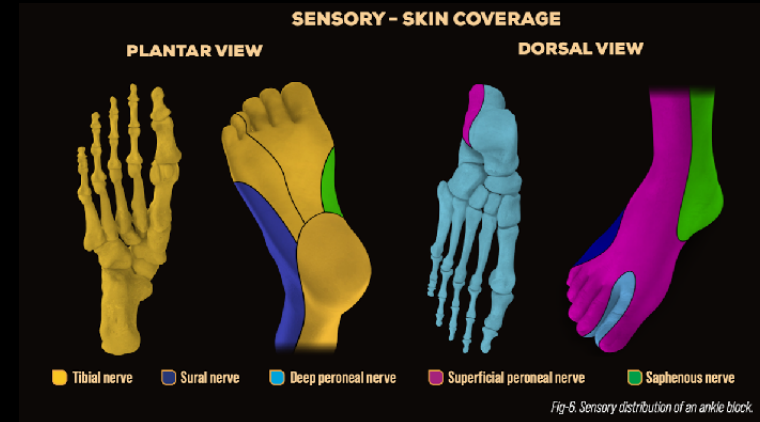
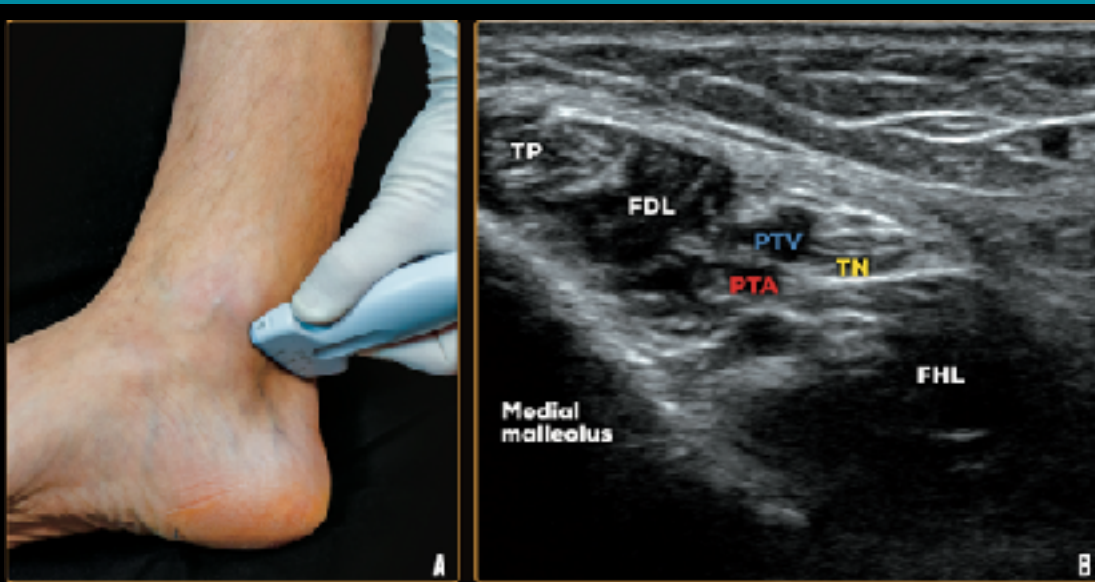


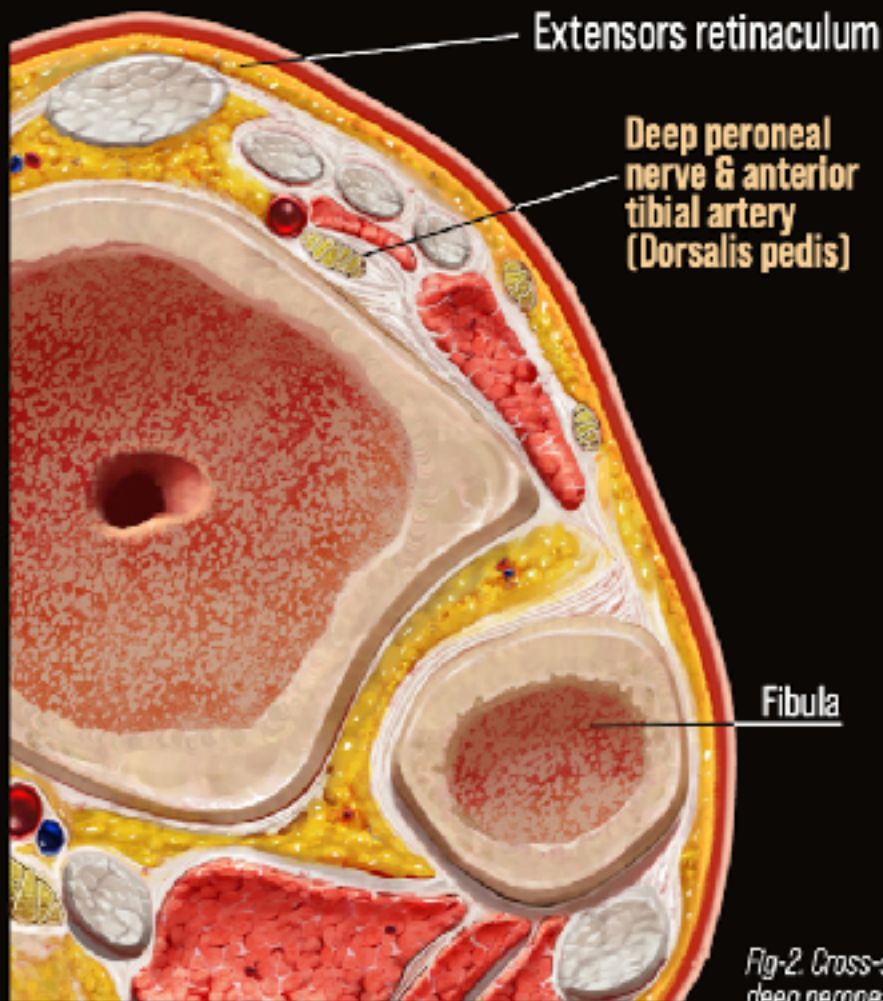
Fig-1. Cross-sectional anatomy at the level of the ankle illustrating the tibial nerve and posterior tibial vessels.

Tibial nerve block



5-8 ml
PTA
Medial malleolus

Deep peroneal nerve block

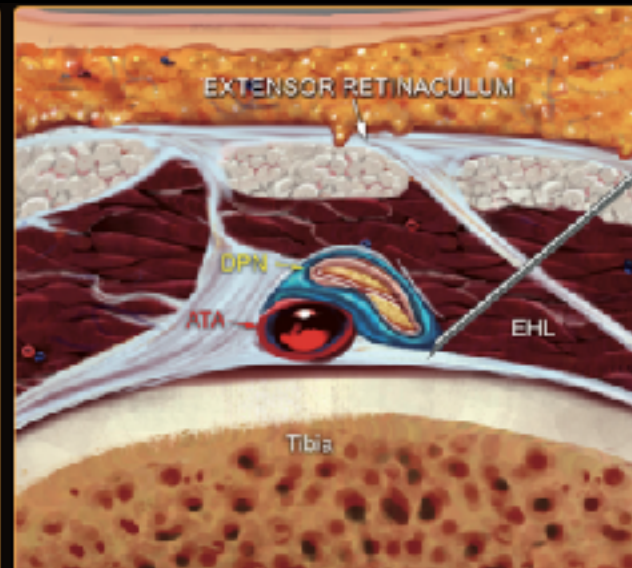
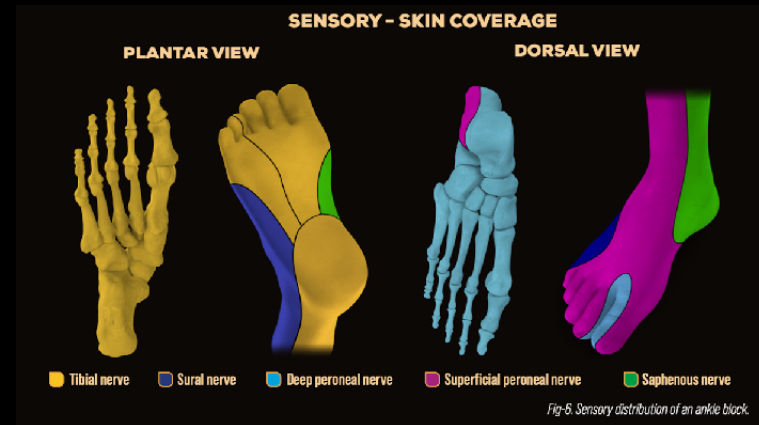
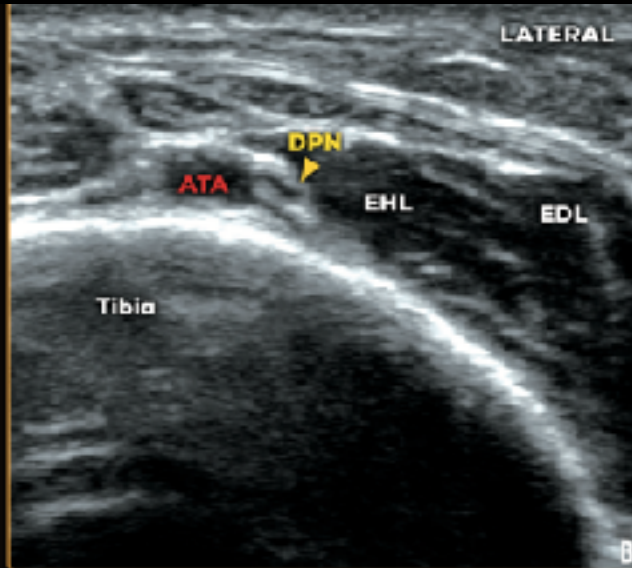


DEEP PERONEAL NERVE

- One of the terminal branches of the common peroneal nerve.
- **Anatomy:** Crosses the anterior tibial artery from a medial to a lateral position, passes under the extensors retinaculum.
- **Innervation:** Nerve divides into lateral and medial branches to innervate all the deep structures on the dorsum of the foot and the skin between the first and second toe.

Fig-2. Cross-sectional anatomy at the level of the ankle illustrating the deep peroneal nerve.

Deep peroneal nerve block



**5 ml
ATA
Distal tibia**

Superficial peroneal nerve block

SUPERFICIAL PERONEAL NERVE

- Terminal branch of the common peroneal nerve.
- **Anatomy:** Midway between the knee and ankle joints, the nerve is just below the crural fascia in the fascial plane between anterior (peroneal) and lateral (extensor digitorum longus) muscle compartments. The superficial peroneal nerve is located just deep to the crural fascia between the peroneal muscles and the extensor digitorum longus.
- **Innervates:** Skin of the dorsal and lateral surface of the foot.

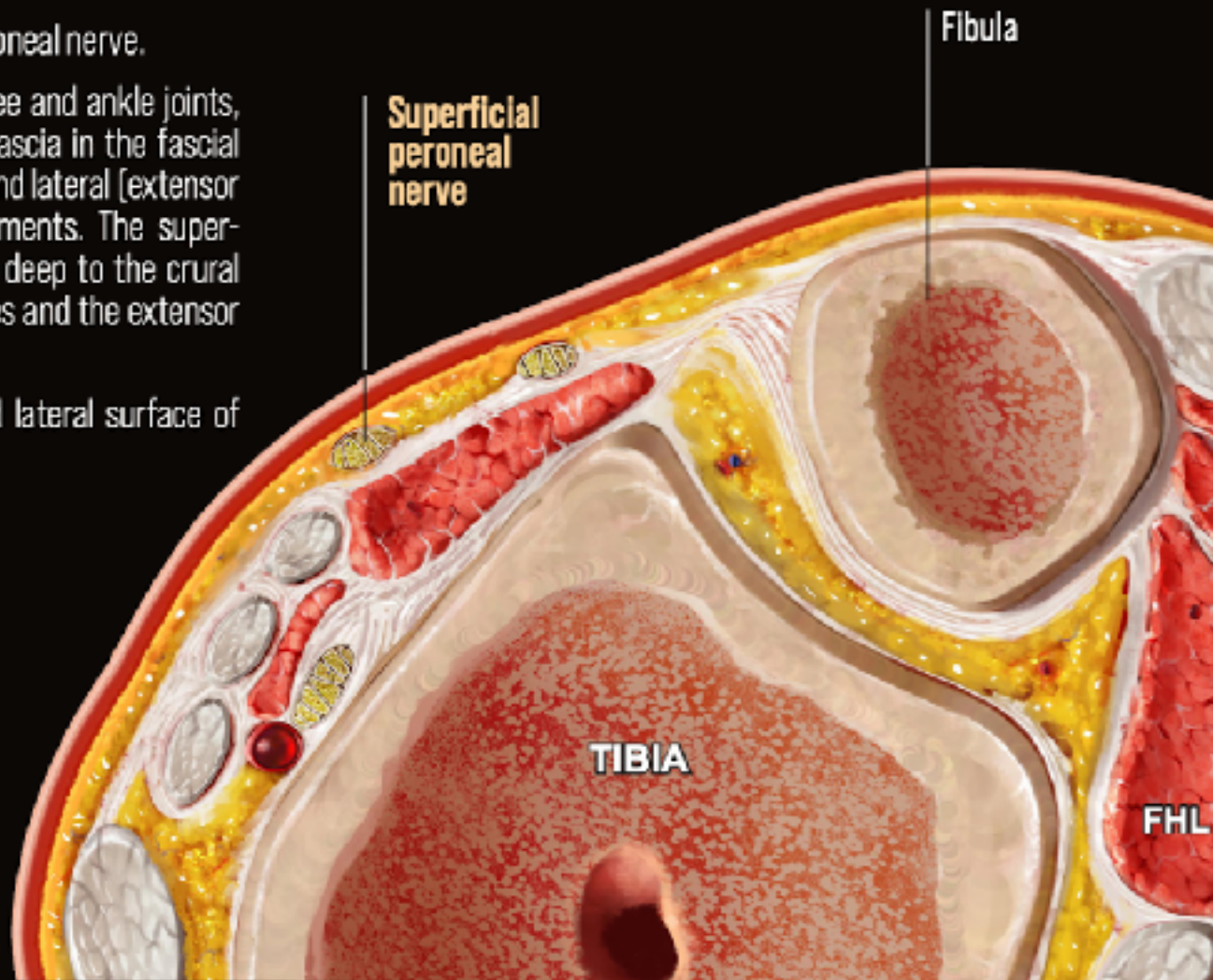
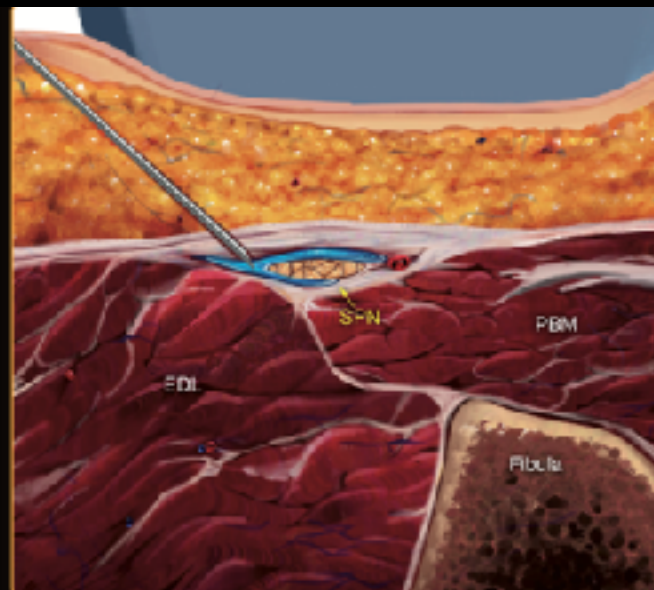
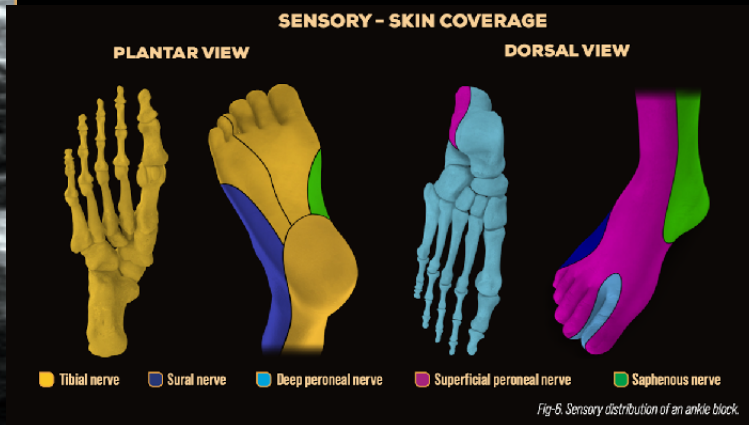
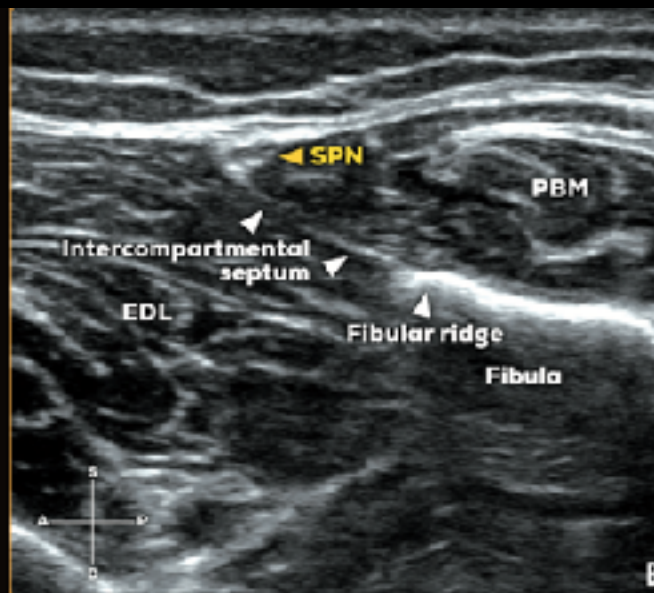


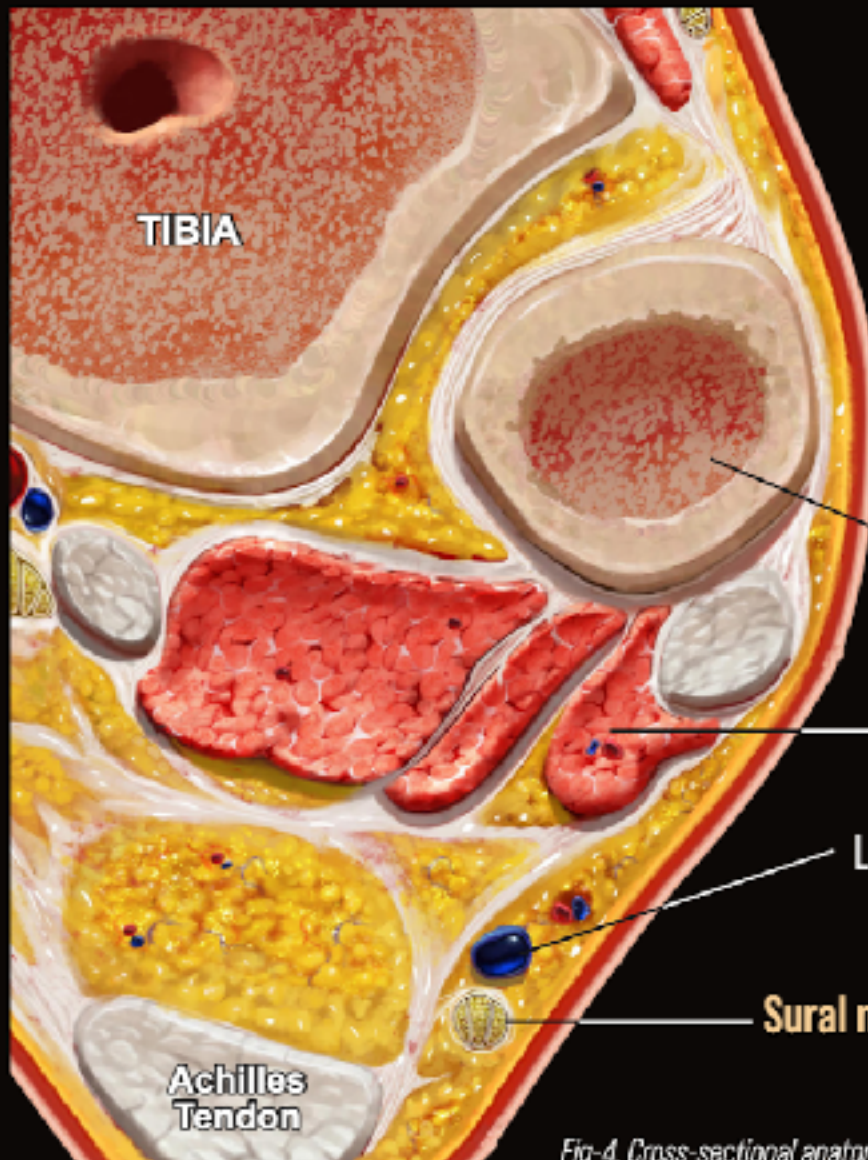
Fig-3. Cross-sectional anatomy at the level of the ankle illustrating the superficial peroneal nerve. FHL, flexor hallucis longus muscle.

Superficial peroneal nerve block



5 ml
Fibula
EDL
PBM

Sural nerve block



SURAL NERVE

- Originates from cutaneous branches of the tibial and common peroneal nerves.
- **Anatomy:** At the ankle, it courses laterally to the Achilles tendon, next to the lesser saphenous vein.
- **Innervates:** Lateral aspect of the foot and ankle.

Fibula

Peroneus longus
and brevis muscles

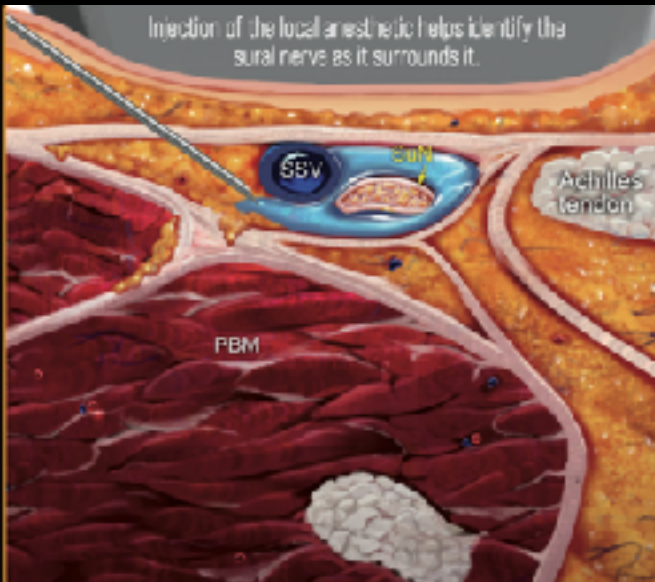
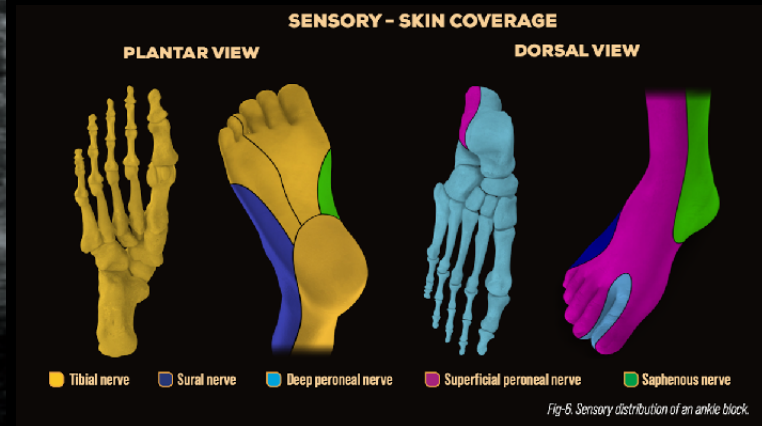
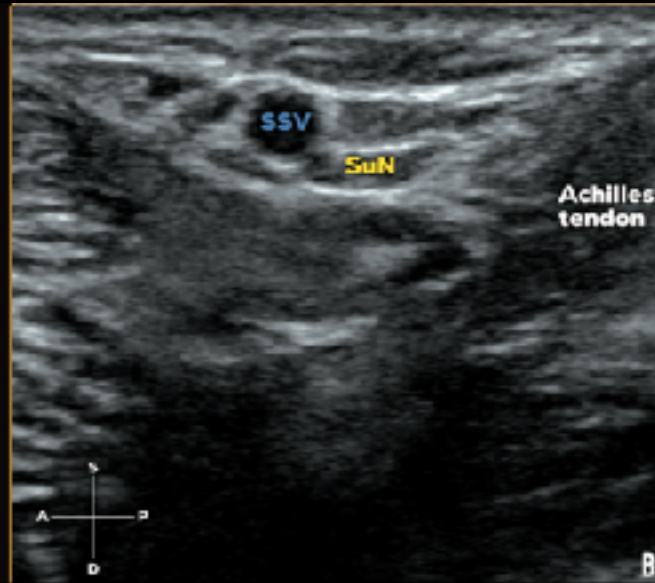
Lesser saphenous vein

Sural nerve

Achilles
Tendon

Fig-4. Cross-sectional anatomy at the level of the ankle illustrating the sural nerve.

Sural nerve block



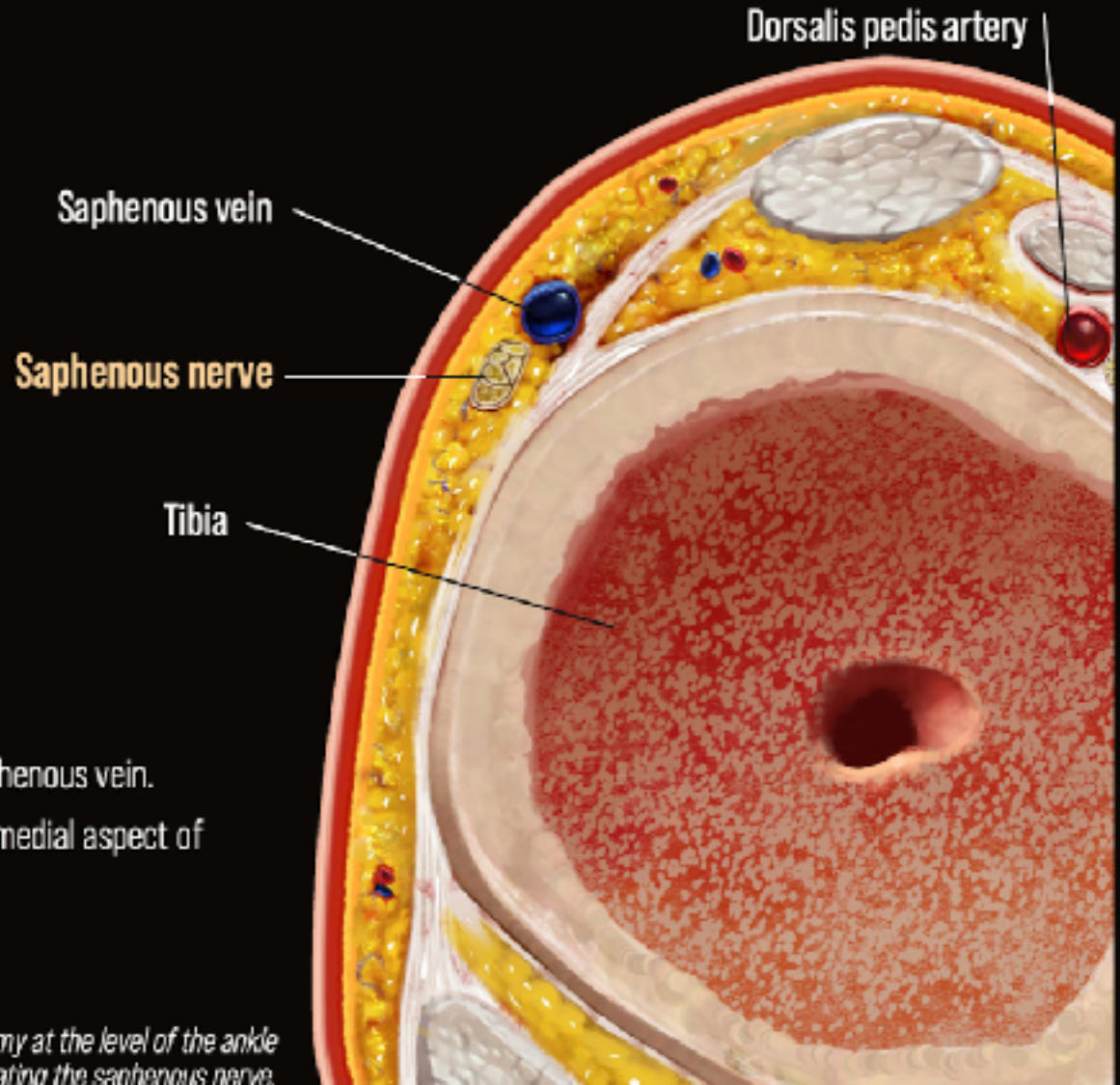
5 ml
SSv
Achilles tendon

Saphenous nerve block

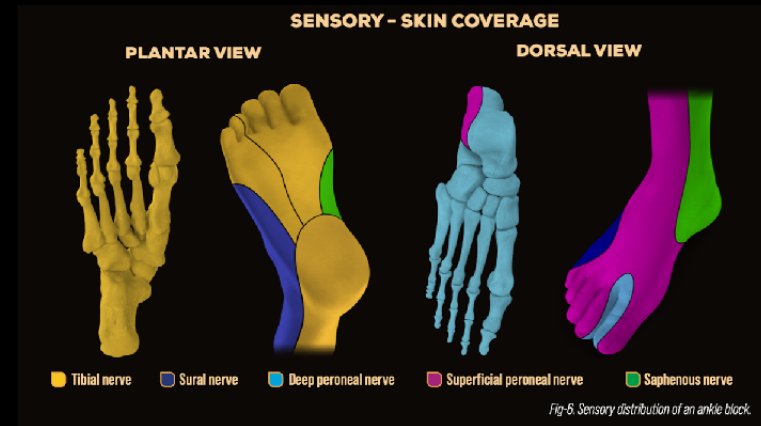
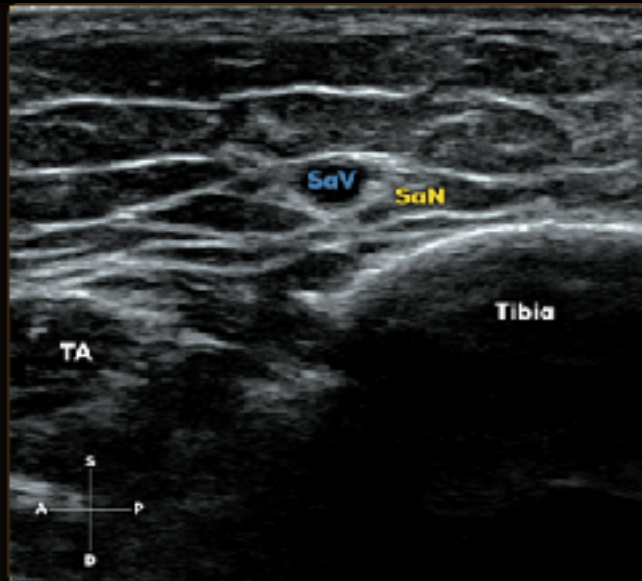
SAPHENOUS NERVE

- Terminal branch of the femoral nerve.
- **Anatomy:** It travels alongside the great saphenous vein.
- **Innervates:** The medial malleolus and the medial aspect of about the ankle.

Fig-5. Cross-sectional anatomy at the level of the ankle illustrating the saphenous nerve.



Saphenous nerve block



**5 ml
SaV
Medial malleolus**