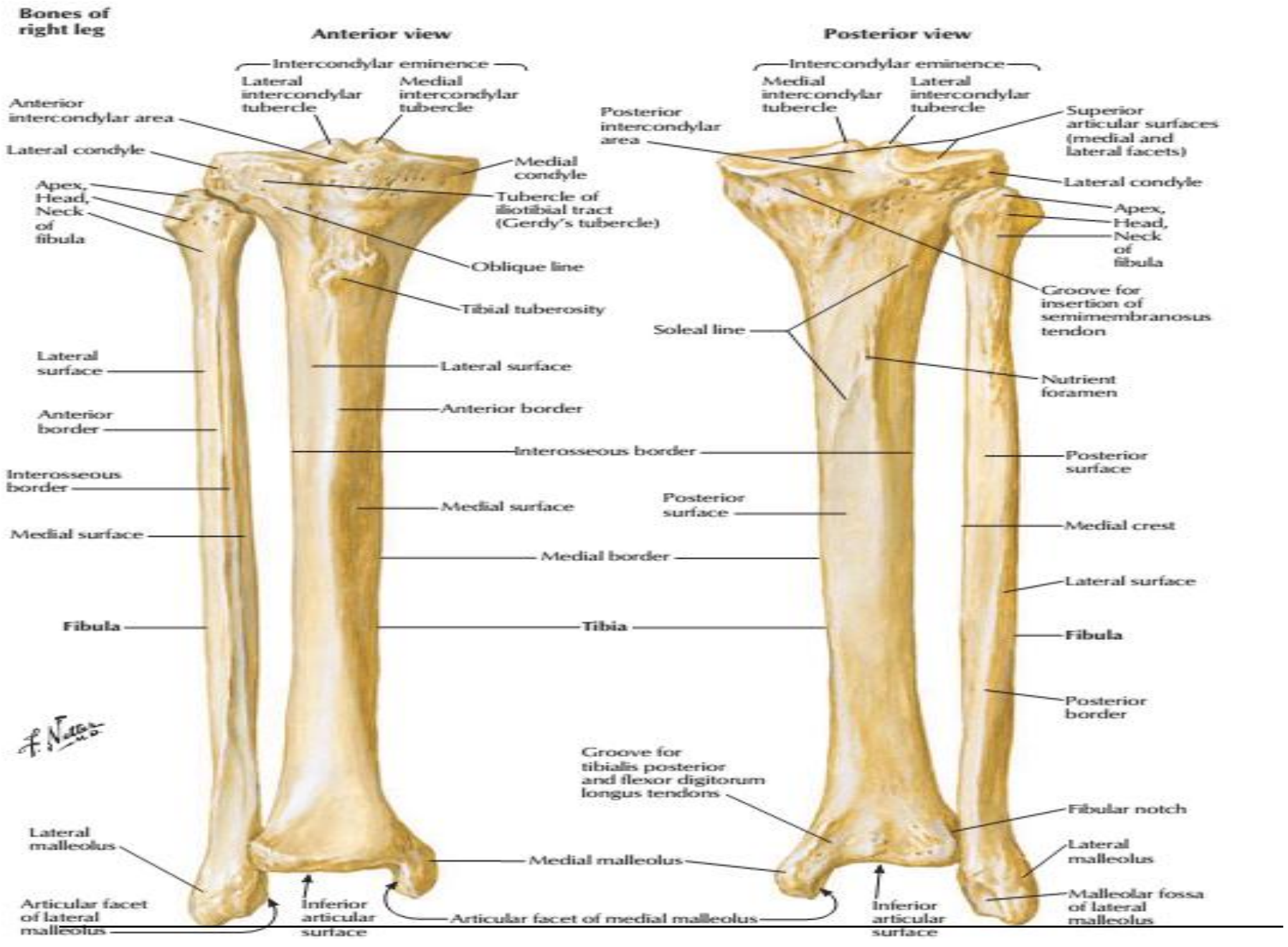
- Strong bong on the medial side of the leg.
- Helps in the formation of knee joint above and ankle joint below.
- Parts: 1. upper end
  2. shaft
  3. lower end

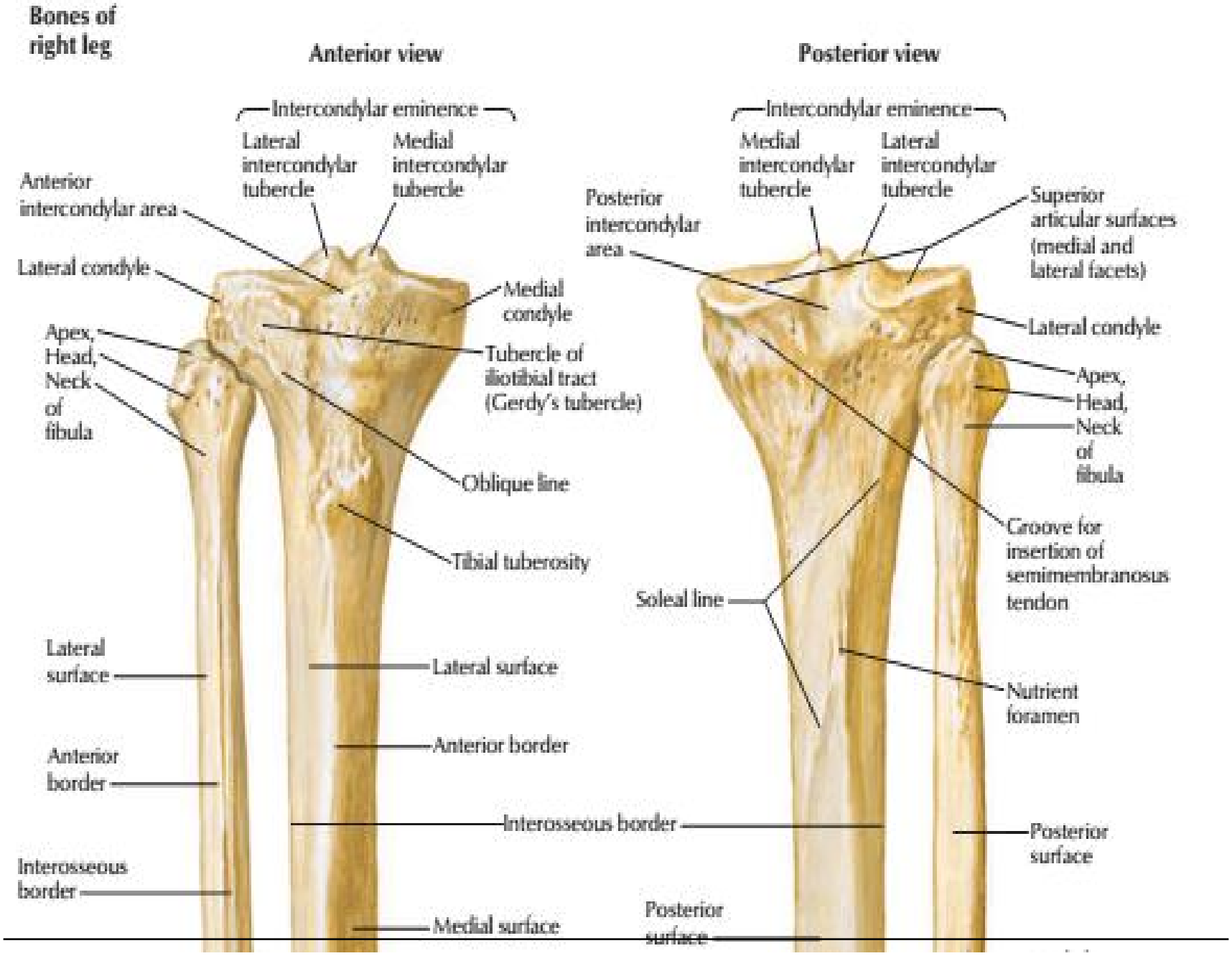


SIDE DETERMINATION

1. Upper end is broader.
2. Anterior border of the shaft is sharp and prominent.
3. Medial malleolus projects from the, medial side of the lower end.

THE UPPER END

- Expanded transversely.
- Consists of: i) medial condyle
  ii) lateral condyle
  iii) tuberosity



A) MEDIAL CONDYLE:

- Larger of the two condyles.
- Possesses 4 surfaces:

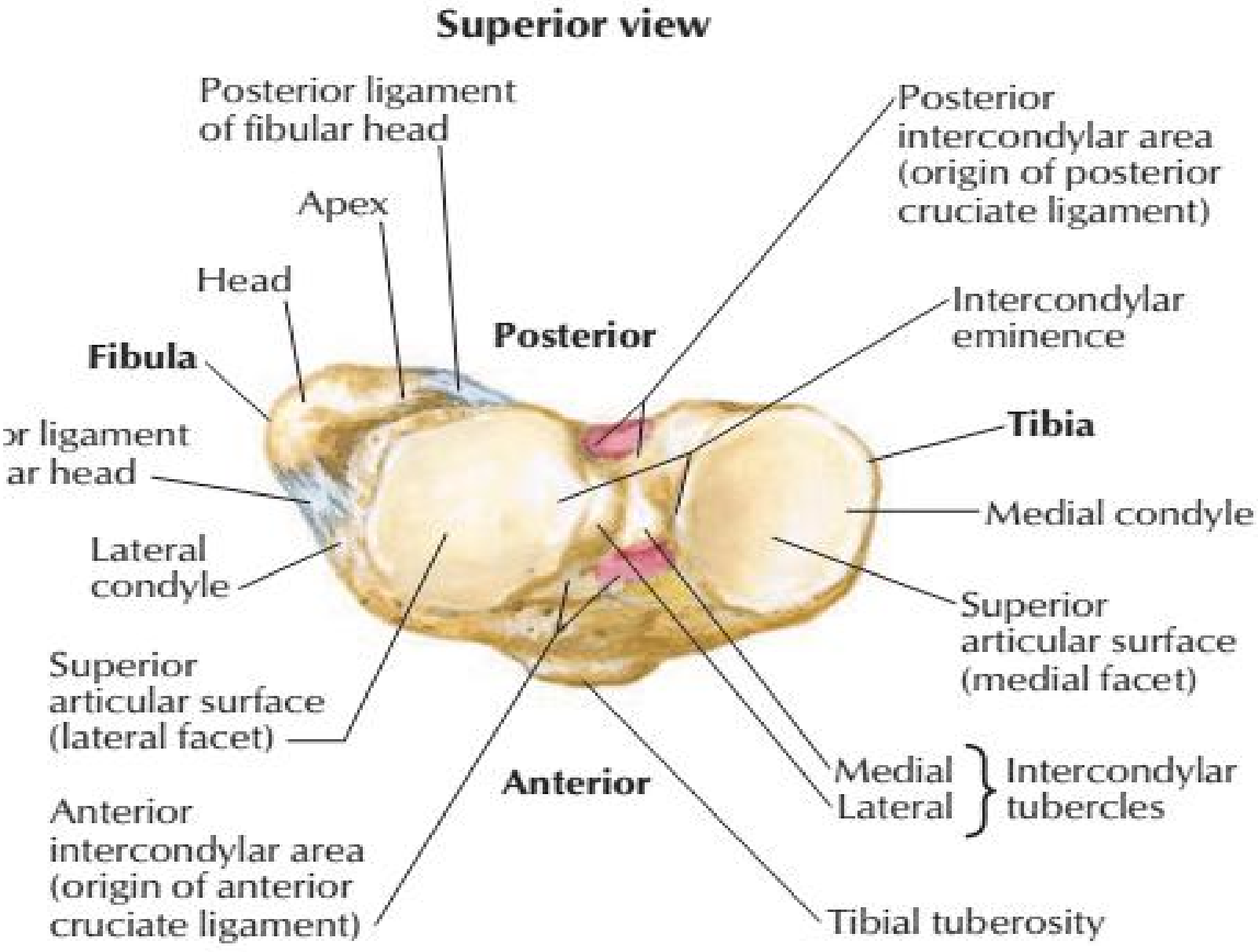
a) Upper articular surface:

✓ concave, smooth and oval in shape.

✓ Articulates with medial condyle of femur.

✓ Anterior, medial and posterior margins of the articular surfaces are flattened and related to medial meniscus(medial semilunar cartilage).

✓ Lateral margin projects upwards to form medial intercondylar tubercle.



b) Posterior surface:

- ✓ **Presents a groove.**
- ✓ **Upper lip of the groove gives attachment to:**

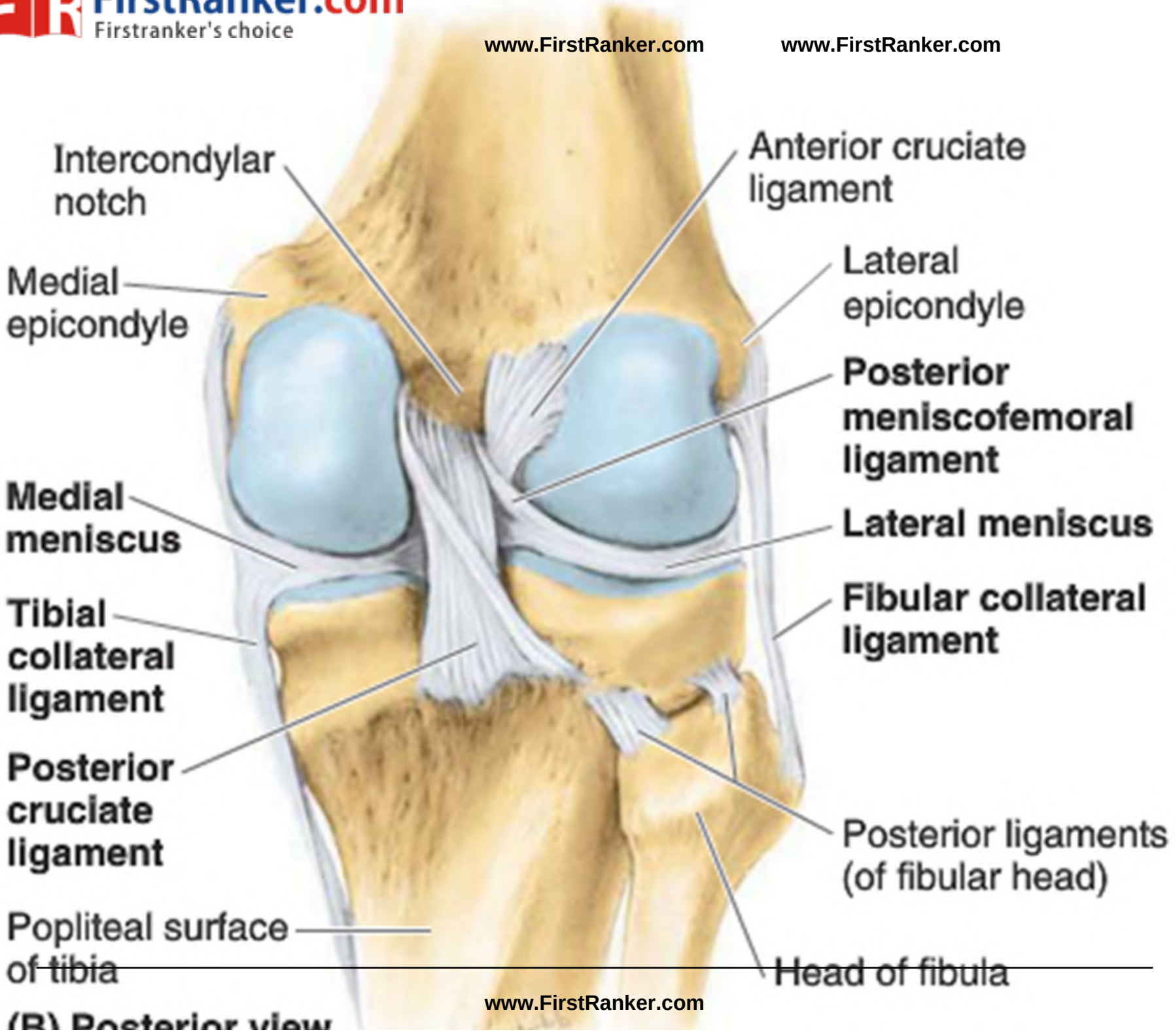
i. **Capsular ligament of knee**

ii. **Tibial collateral ligament of knee.**

- ✓ **Semimembranosus is inserted into the groove and its lower lip.**

c) Medial and anterior surfaces:

- ✓ **Rough**
- ✓ **Pierced by numerous vascular foramina.**
- ✓ **Gives attachment to: medial patellar retinaculum.**



(B) Posterior view

B) LATERAL CONDYLE:

- Overhangs upper part of posterior surface of shaft.
- It has a small round facet in its posterolateral aspect called the fibular facet, which articulates with the head of fibula. Its margins gives attachment to capsular ligament of superior tibio-fibular joint.
- Posterior surface is presents a groove which is related to popliteus tendon.
- Upper articular surface is concave and circular and its flattened margins are related to lateral meniscus. It articulates with the lateral condyle of femur.
- Medial margin is raised to form lateral intercondylar tubercle.

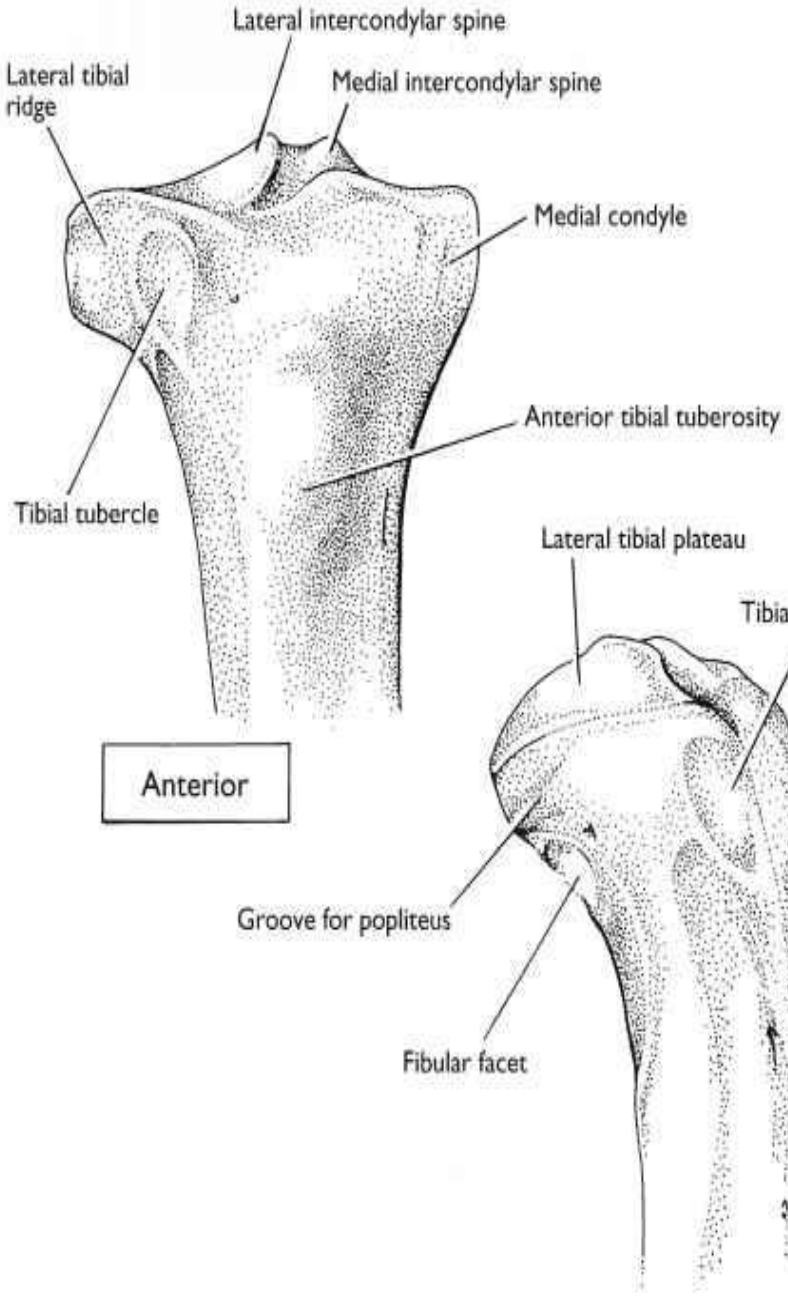


Diagram A

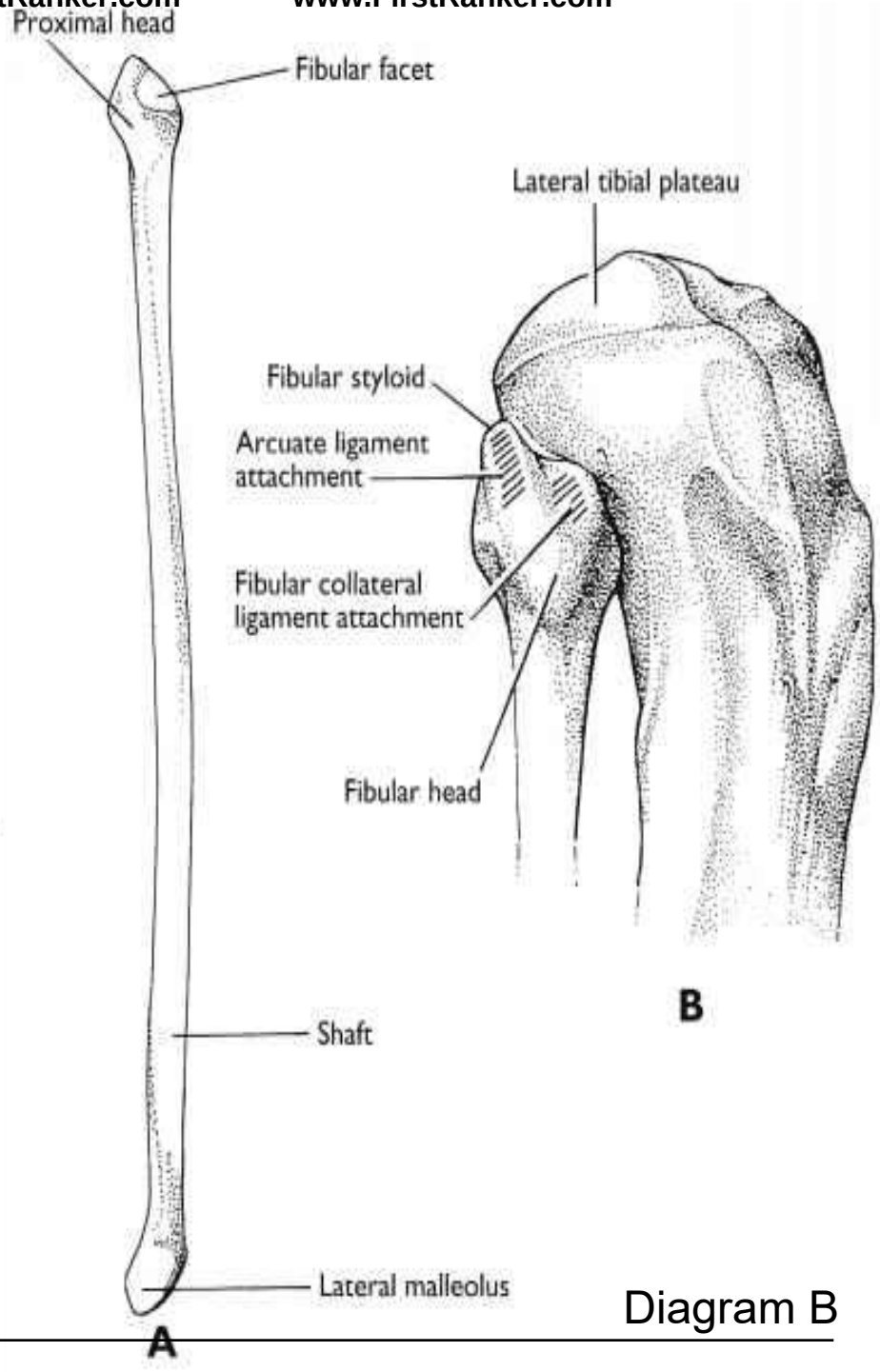
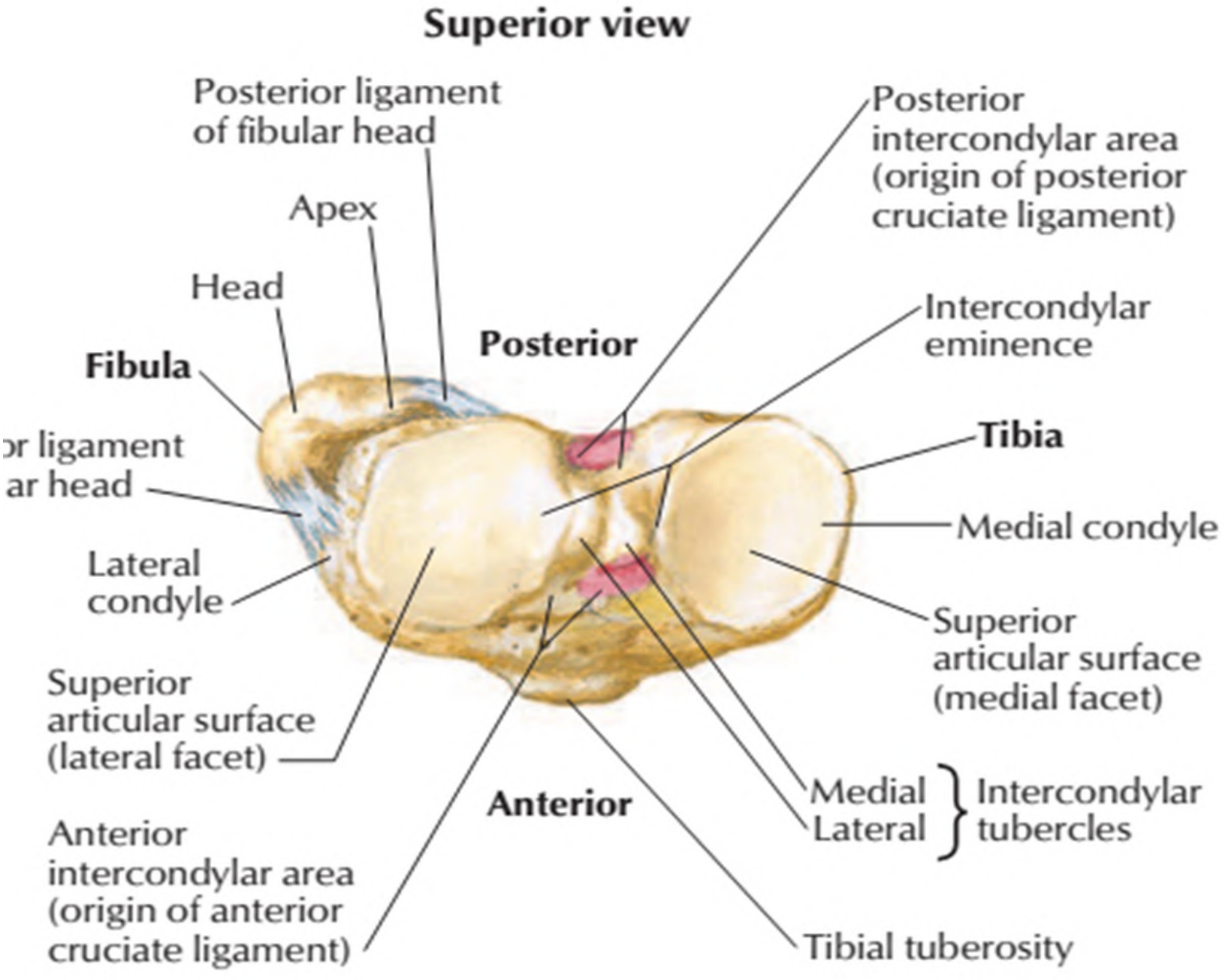


Diagram B

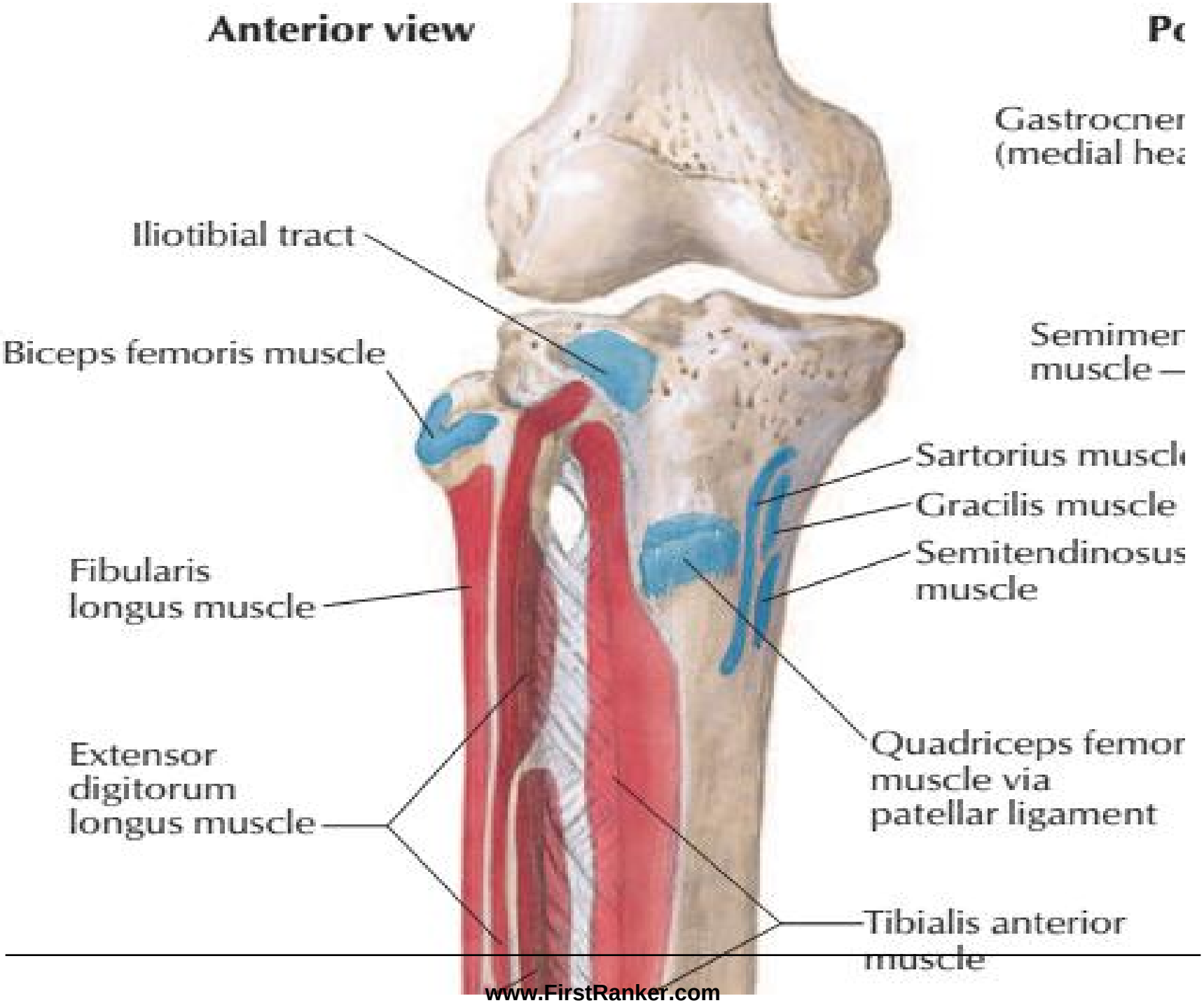


ATTACHMENTS ON THE LATERAL CONDYLE:

1. A sharp margin separating the anterior and lateral surfaces of condyle from the lateral surface of the shaft; gives attachment to deep fascia of leg.
2. An oval impression on the anterior surface gives attachment to ilio tibial tract.
3. Few fibres of biceps femoris are inserted above and in front of fibular facet.
4. Extensor digitorum longus.
5. Peroneus longus.

Arise from lateral surface below the fibular facet.

6. Lateral patellar retinaculum- above iliotibial tract.

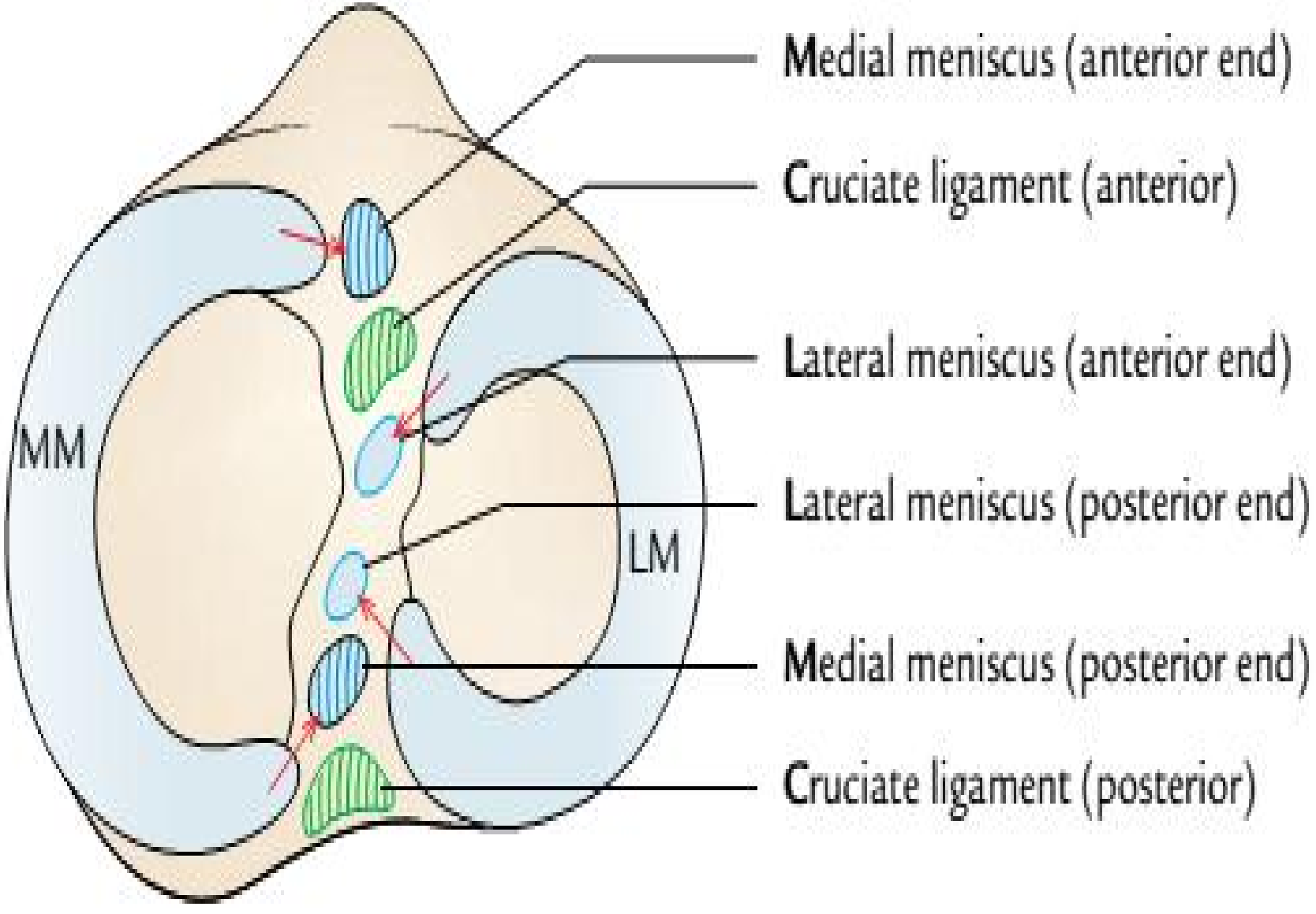


INTERCONDYLAR AREA

- Rough, non articular area between the superior articular surfaces of the condyles.
- An elevated area in the middle art is called the intercondylar eminence. The lateral and medial part of this prominence projects upwards and constitutes lateral and medial intercondylar tubercles, separated by a groove.
- Intercondylar area gives attachments from before backwards to:

1. Anterior horn of medial meniscus.
2. Anterior cruciate ligament.
3. Anterior horn of lateral meniscus.
4. Posterior horn of lateral meniscus.
5. Posterior horn of medial meniscus.
6. Posterior cruciate ligament.

- The ridge on the posterior aspect of intercondylar area gives attachment to capsular ligament of knee joint.

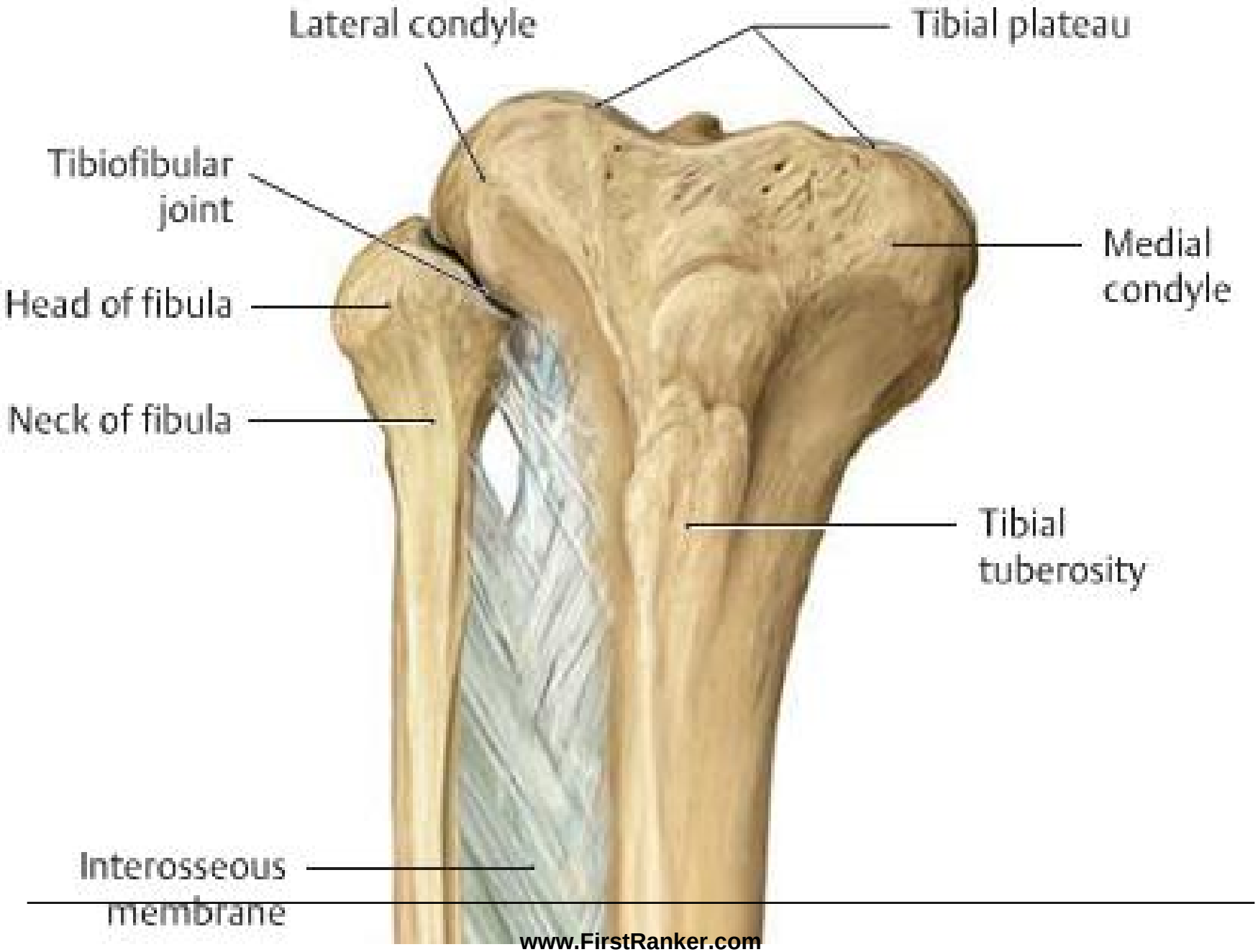


C) TUBEROSITY OF TIBIA:

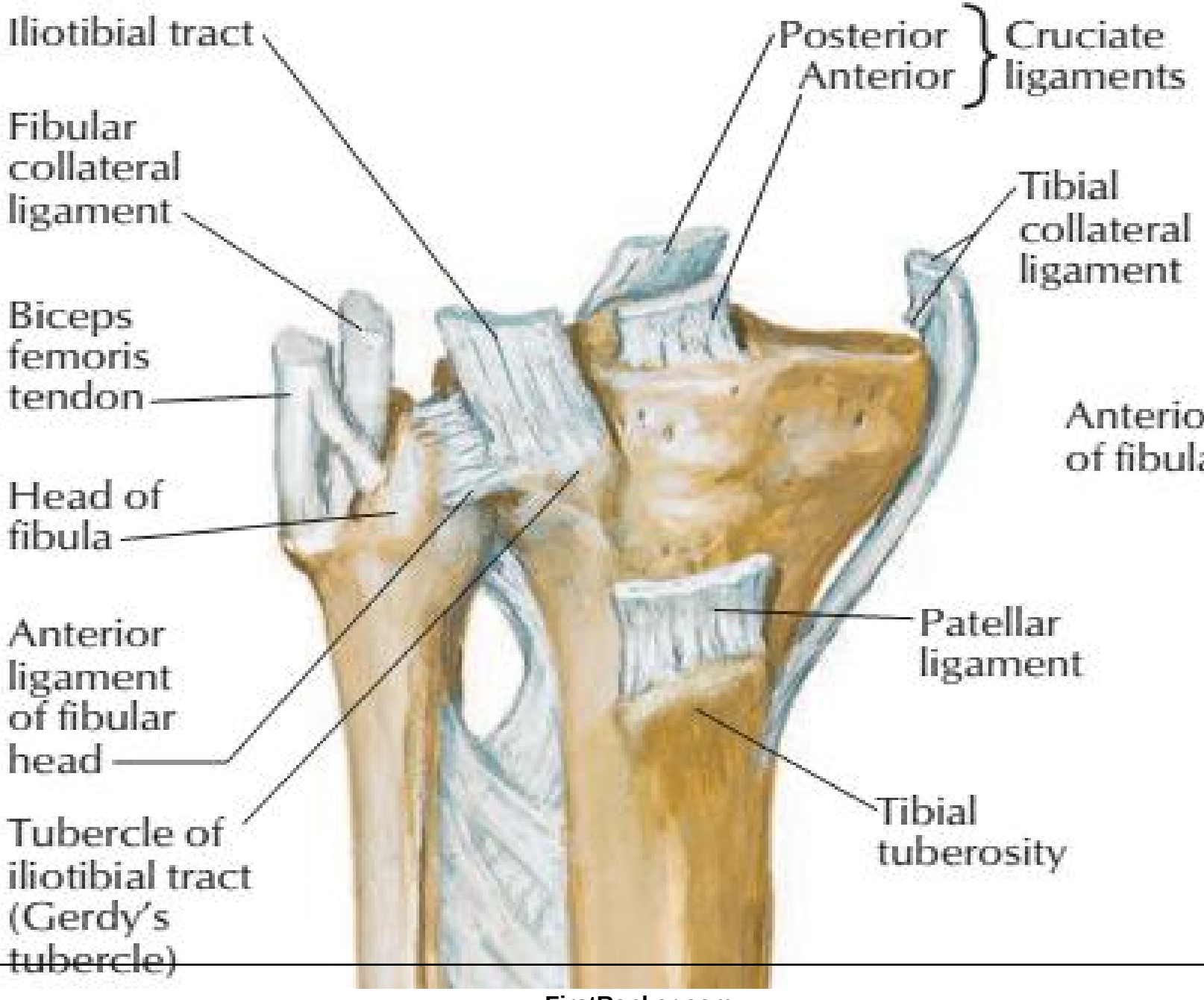
- Lies at the upper border of anterior border of the shaft and at a place where anterior surfaces of the condyles becomes continuous.
- It is triangular in shape.
- Has two parts:

i. Upper smooth part: gives attachment to ligamentum patellae.

ii. Lower rough part: subcutaneous and separated from he skin by subcutaneous infrapatellar bursa.



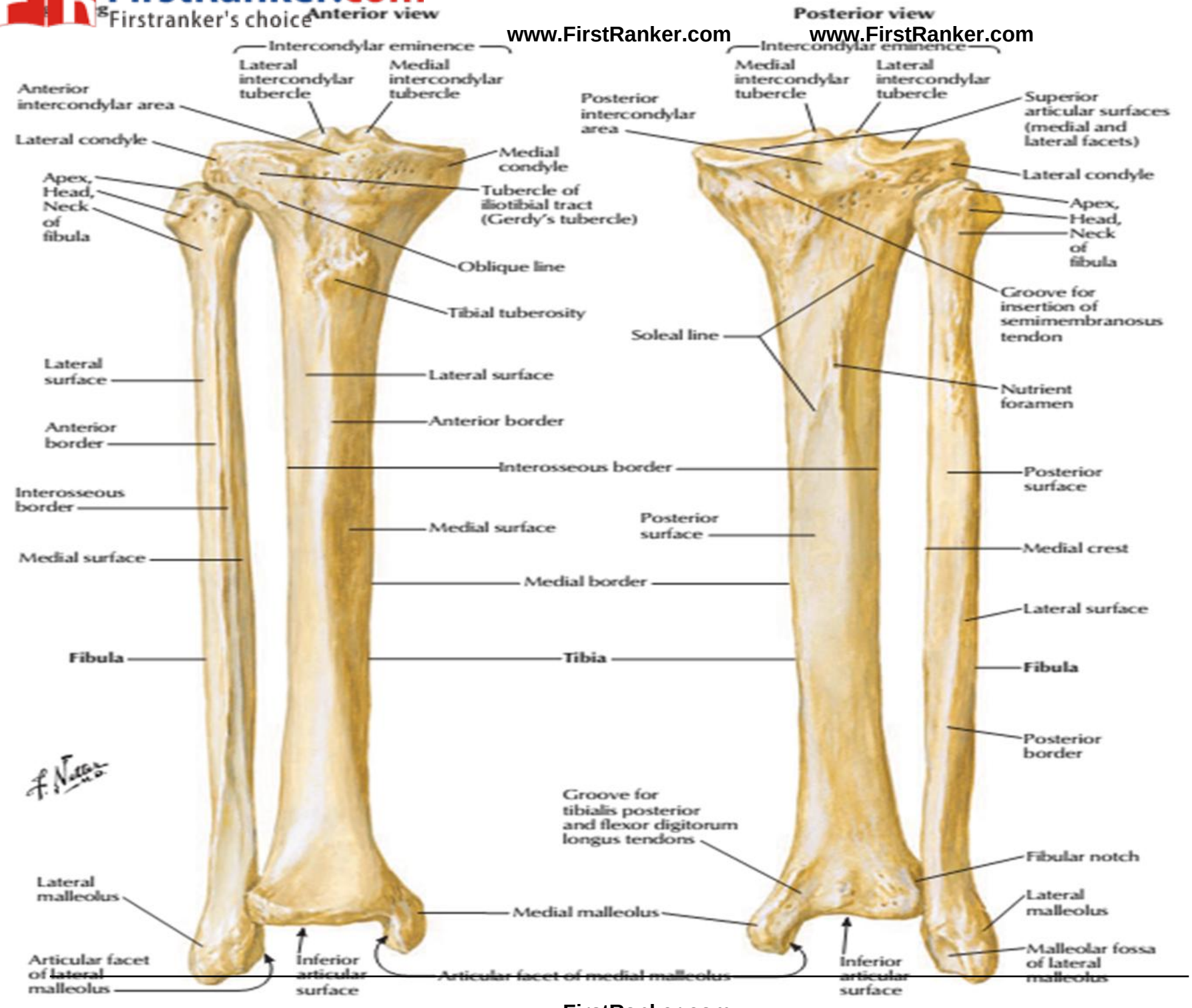
Anterior view with ligament attachments

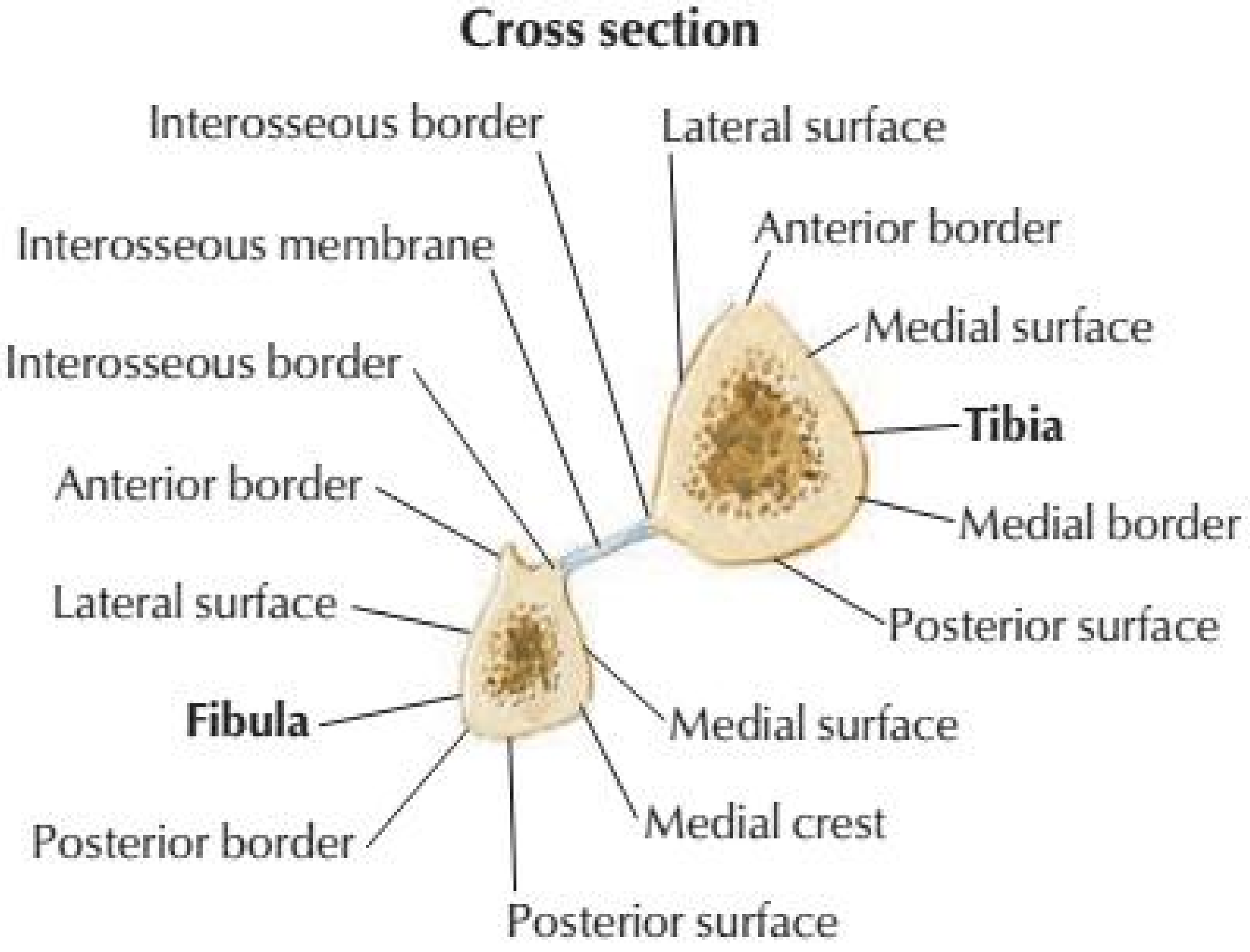


THE SHAFT

- Prismoid in shape. Triangular in cross section.
- Gradually tapers from above downwards.
- Possesses:

1. 3 borders: anterior, interosseous and medial.
2. 3 surfaces: medial, lateral and posterior.





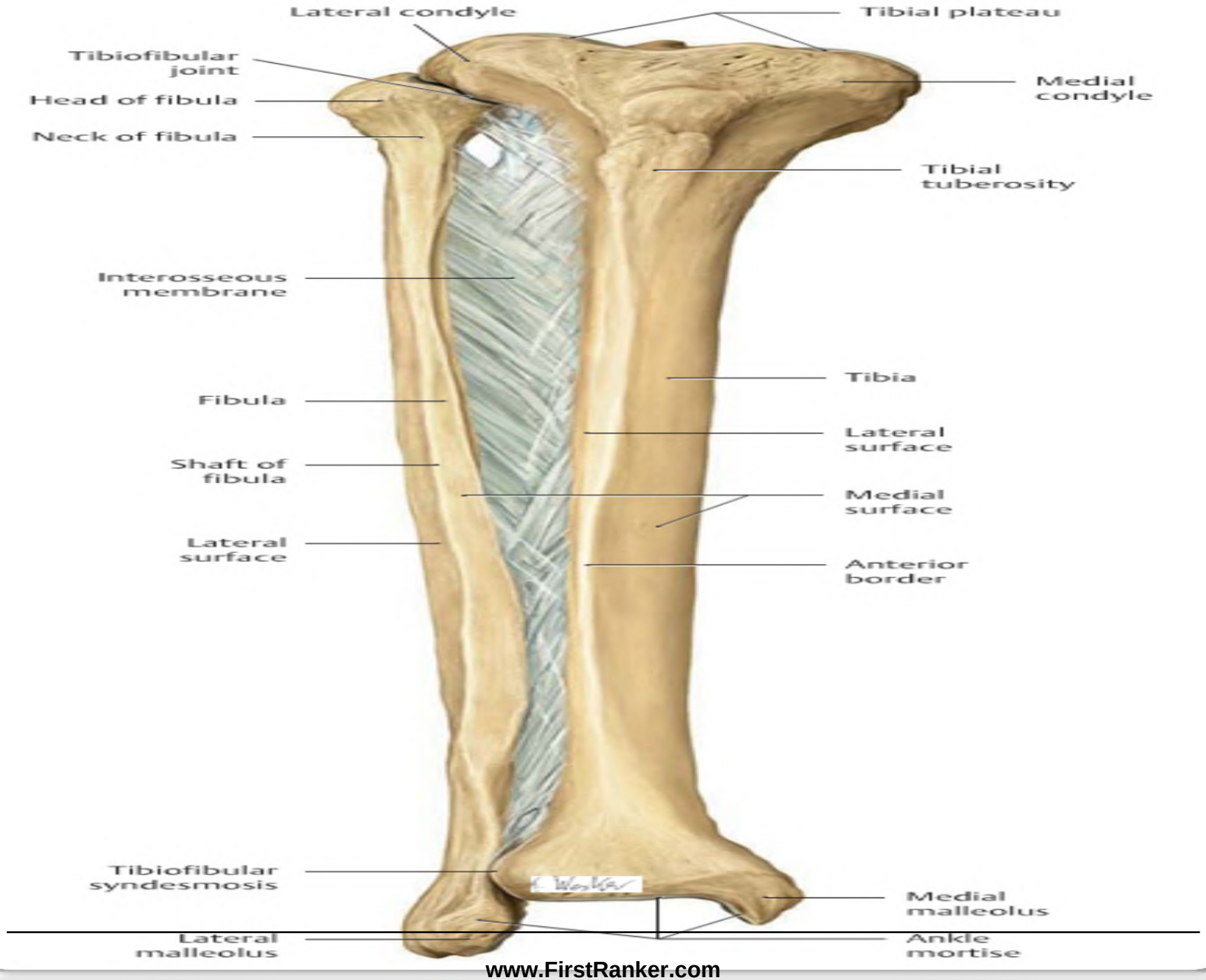
BORDERS

A) Anterior border

- Begins below the tuberosity of tibia and ends below the anterior margin of medial malleolus.
- Subcutaneous, sharp and prominent in upper 2/3 and is called the ‘shin’.

B) Interosseous (lateral) border

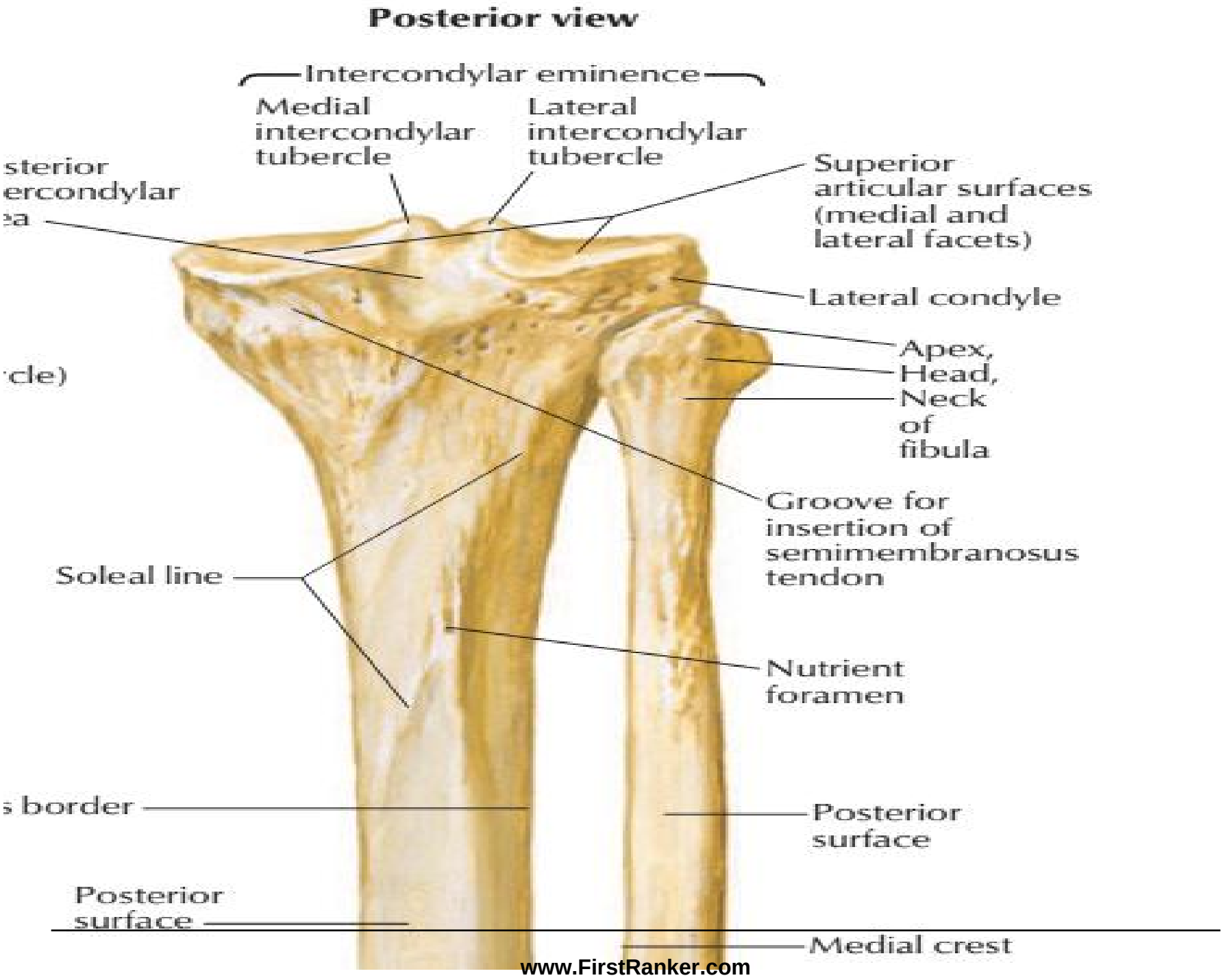
- Begins from antero-inferior part of fibular facet on the lateral condyle and extends below to reach the anterior border of fibular notch at the lateral aspect of lower end.
- Gives attachment to interosseous membrane except at its upper and lower ends.
- Its lower end which forms the anterior boundary of fibular notch gives attachment to anterior tibio-fibular ligament.

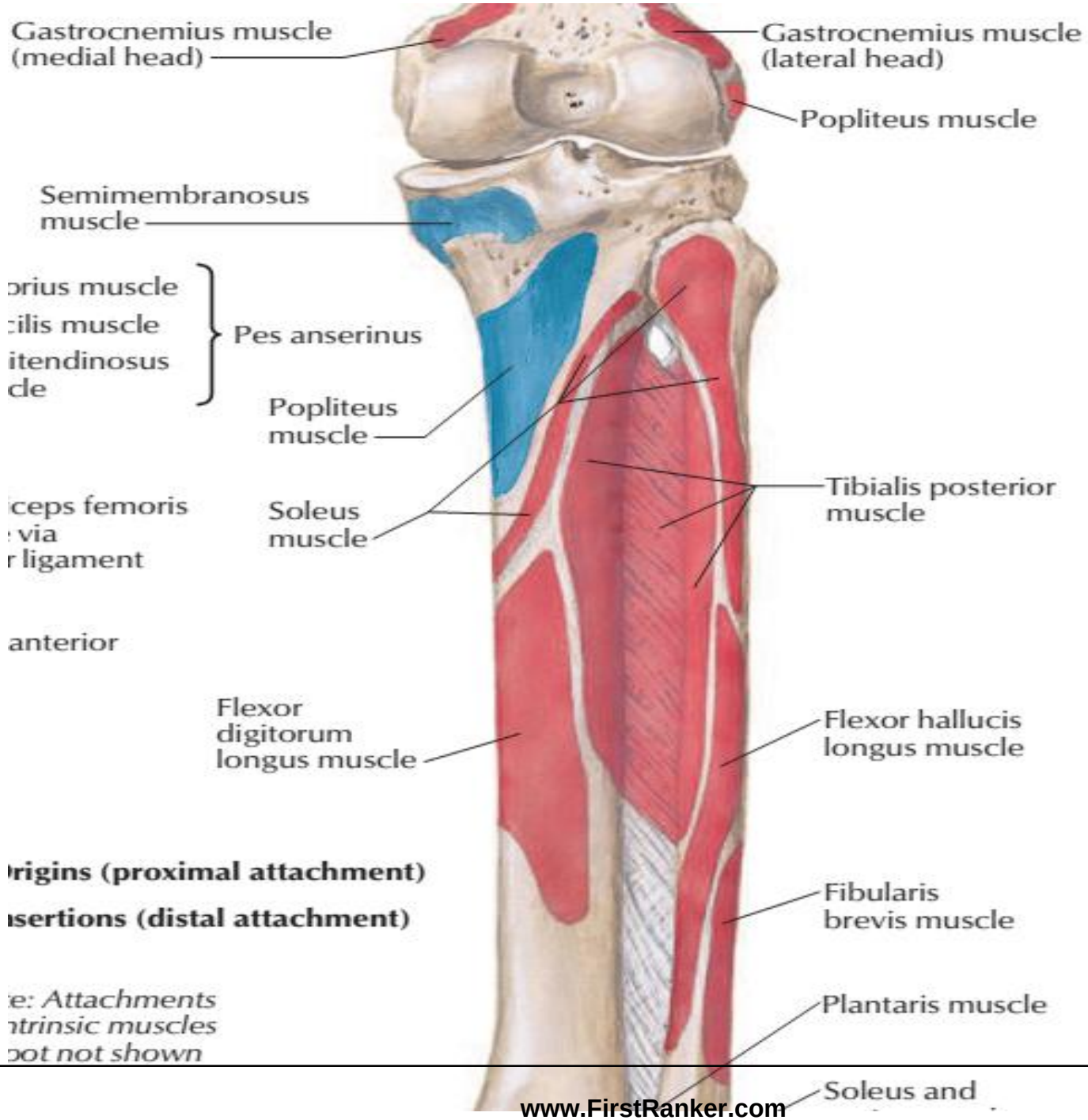


C) Medial border

- It begins below the anterior end of the groove on the medial condyle and runs down to the posterior margin of medial malleolus.
- It is sharp and prominent only in its middle part.
- It is divided into 2 parts by the soleal line joining it.
- Attachments:

1. Above the soleal line:
   a) fascia covering popliteus.
   b) tibial collateral ligament of knee joint.
   c) semimembraneous.
2. Below soleal line:
   a) soleus.
   b) fascia covering deep muscles of back of leg.





SURFACES

A) Medial surface

- Lies between anterior and medial borders.
- It is subcutaneous in nearly the whole of its extent.
- Rough area near its upper end gives attachment to:

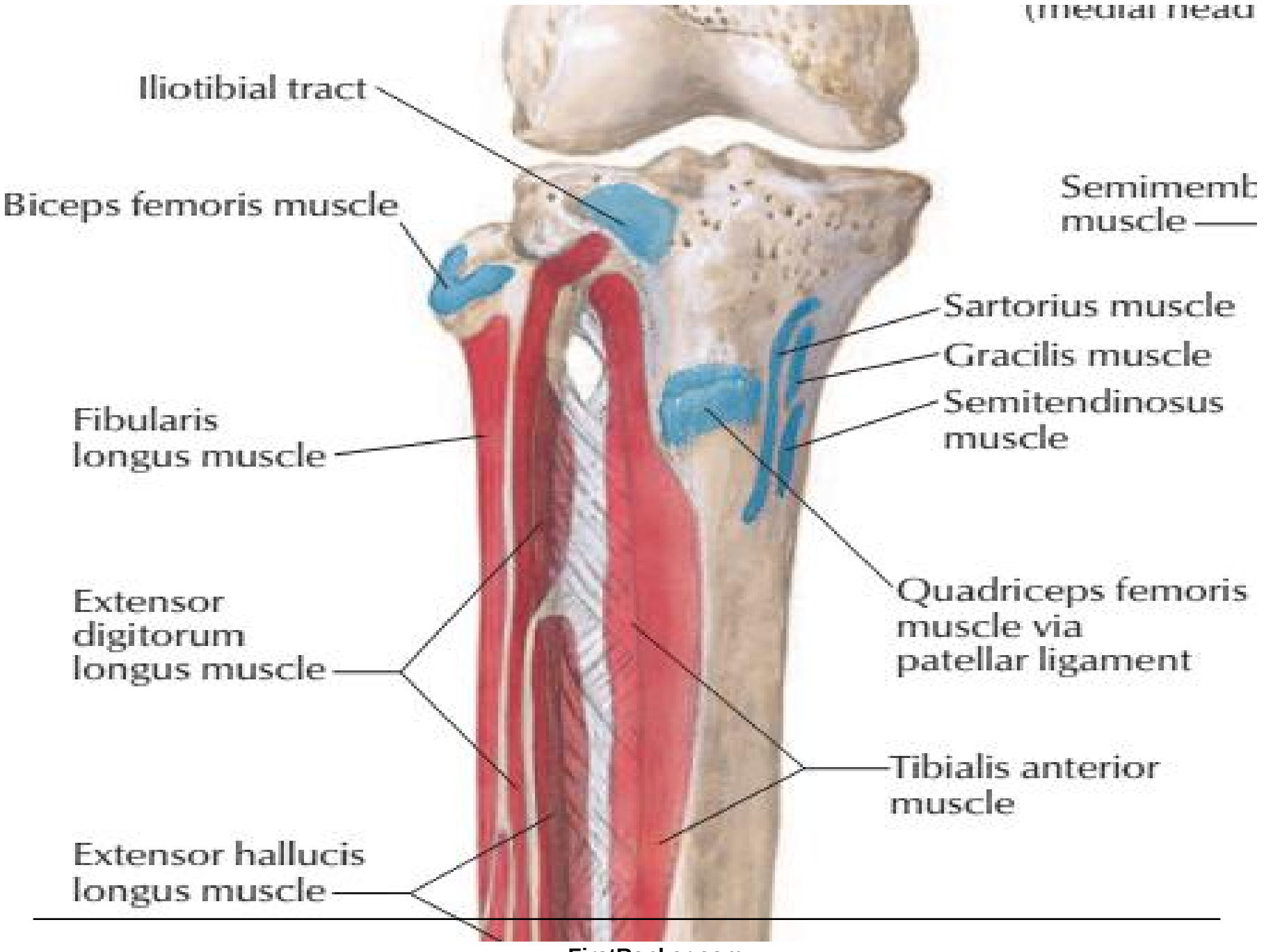
1. Tibial collateral ligament of knee joint.
2. Semimembranosus- inserted behind the ligament

- In front of the rough area following muscles are attached from before backwards:

1. Sartorius
2. Gracillis
3. Semitendinosus

- The rest of the medial surface is covered only by superficial fascia.

- (mnemonic: Girl between two Surgeons)

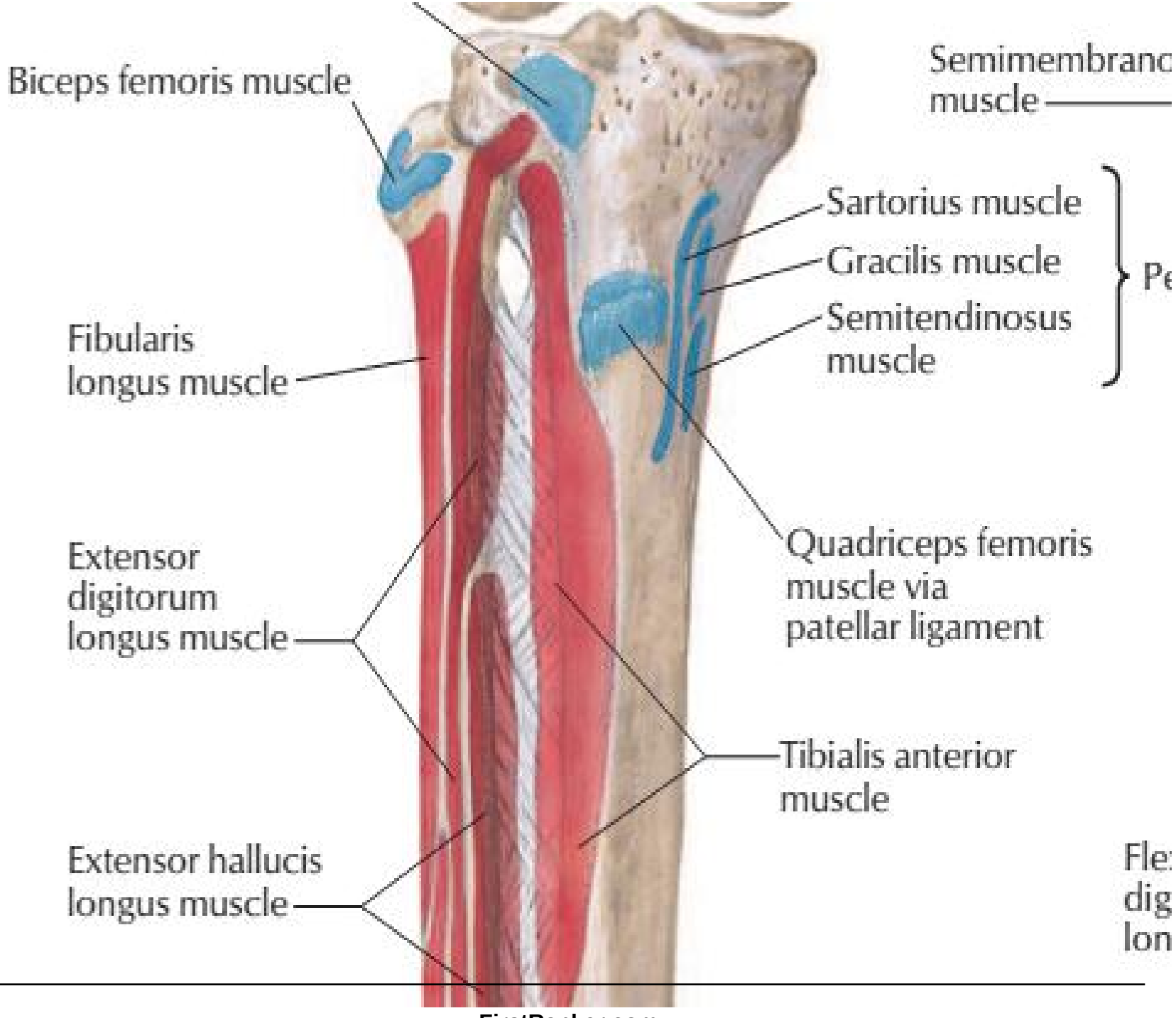


B) Lateral surface

- Lies between anterior and interosseous borders.
- Tibialis anterior – arises from its upper 2/3 part.
- Lower third of the surface is related fro medial to lateral side to:

1. Tibialis anterior
2. Extensor hallusis longus
3. Anterior tibial artery
4. Deep peroneal nerve
5. Extensor digitorum longus
6. Peroneal tertius

(mnemonic: The Himalayas Are Not Dry Plateaus.)



C) Posterior surface

- Lies between the interosseous and medial borders.
- Soleal line- it is an oblique line running from above (in front of fibular facet) downwards and medially to the medial border. It is divides the surface into the upper triangular area and a lower area.
- Attachments:

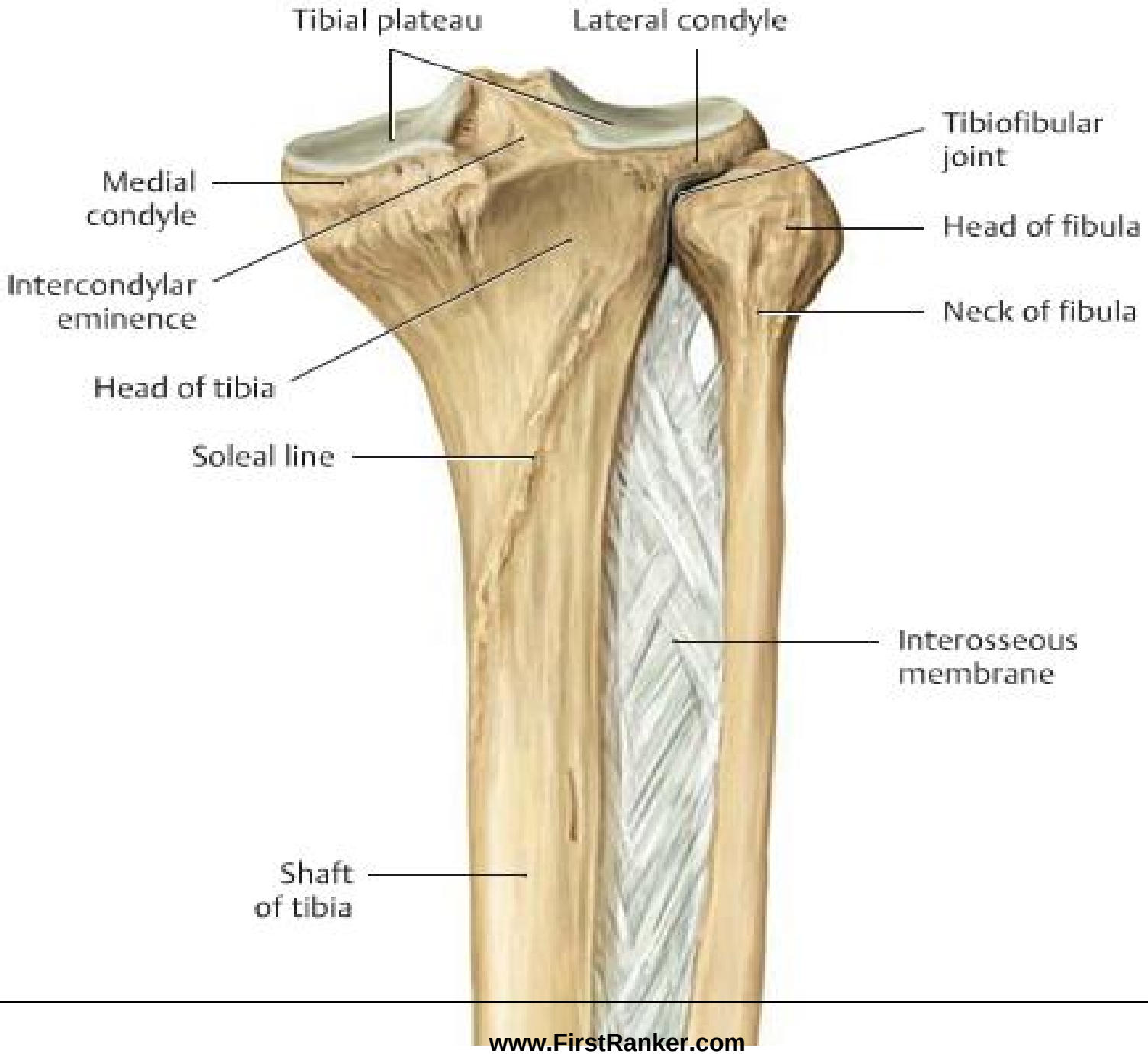
1. Fascia covering popliteus
2. soleus.

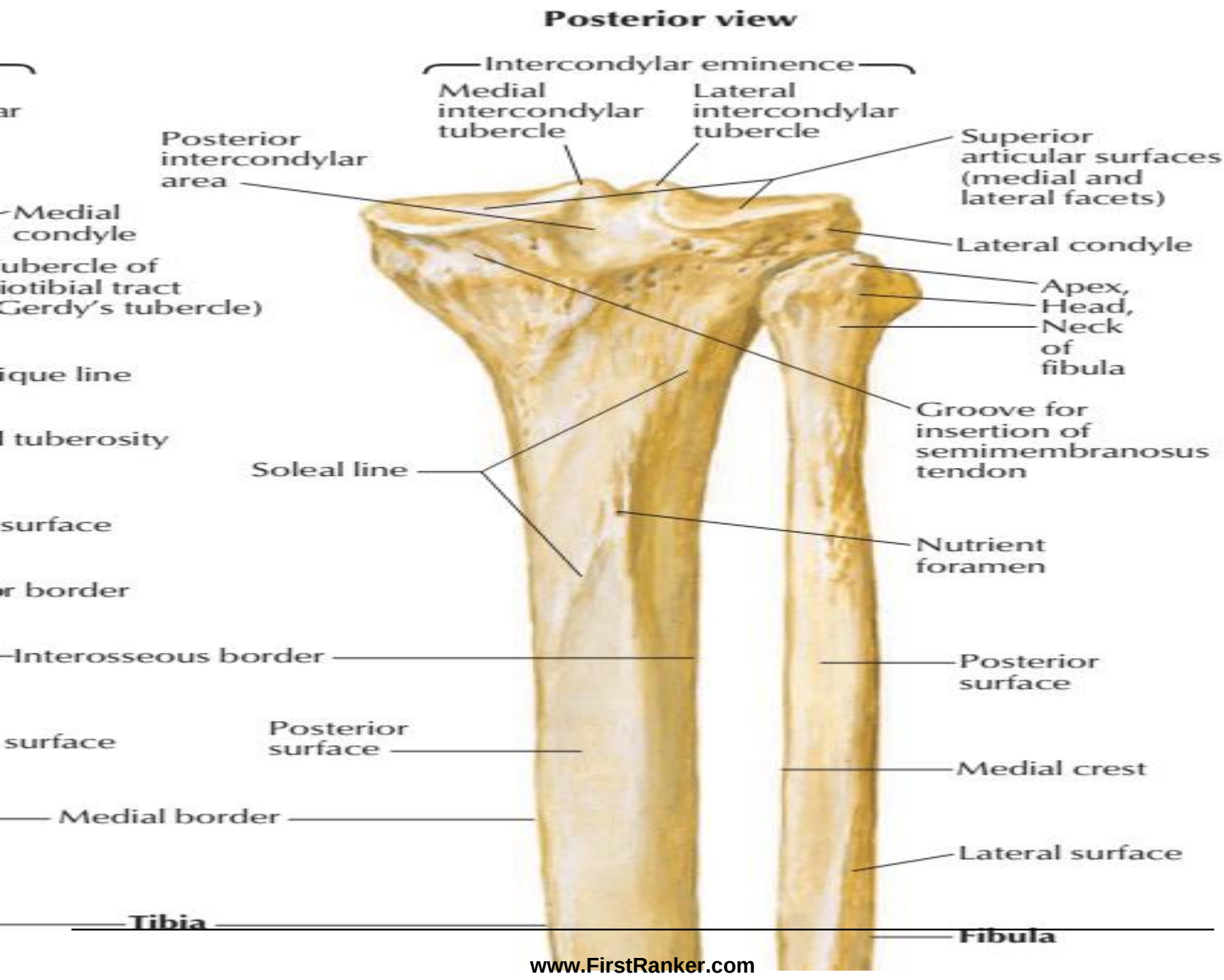
- A faint vertical line below soleal line divides the surface into medial and lateral parts.

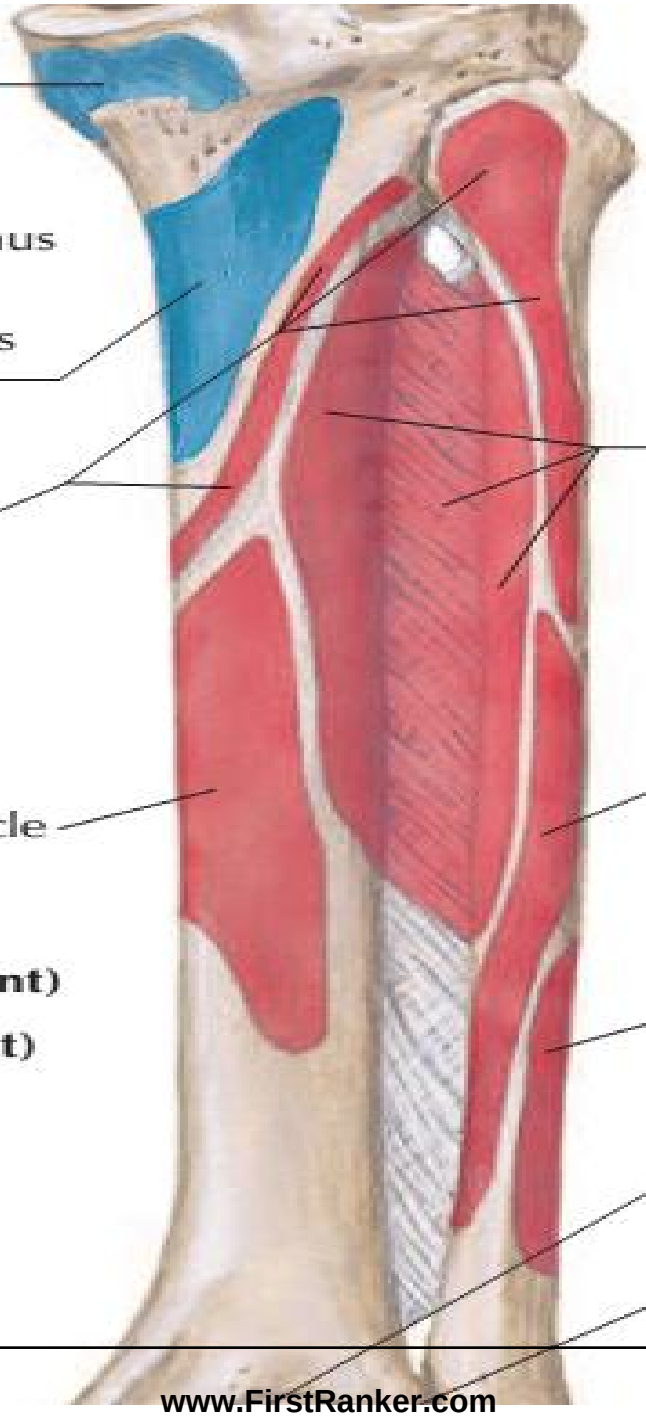
1. Flexor digitorum longus arises from the medial part.
2. Tibialis posterior arises from the lateral part.

- Lower ¼ of this surface has no muscular attachments but is related (medial to lateral) to: Tibialis posterior tendon, flexor digitorum longus, posterior tibial artery, tibial nerve and flexor halluces longus.

❖ Mnemonic: The Doctors Are Not Hunters.







Semimembranosus muscle

rius muscle
lis muscle
endinosus
le

Pes anserinus

Popliteus muscle

eps femoris
via
ligament

Soleus muscle

Tibialis posterior muscle

nterior

Flexor digitorum longus muscle

Flexor hallucis longus muscle

igins (proximal attachment)

ertions (distal attachment)

Fibularis brevis muscle

: Attachments
trinsic muscles
ot not shown

Plantaris muscle

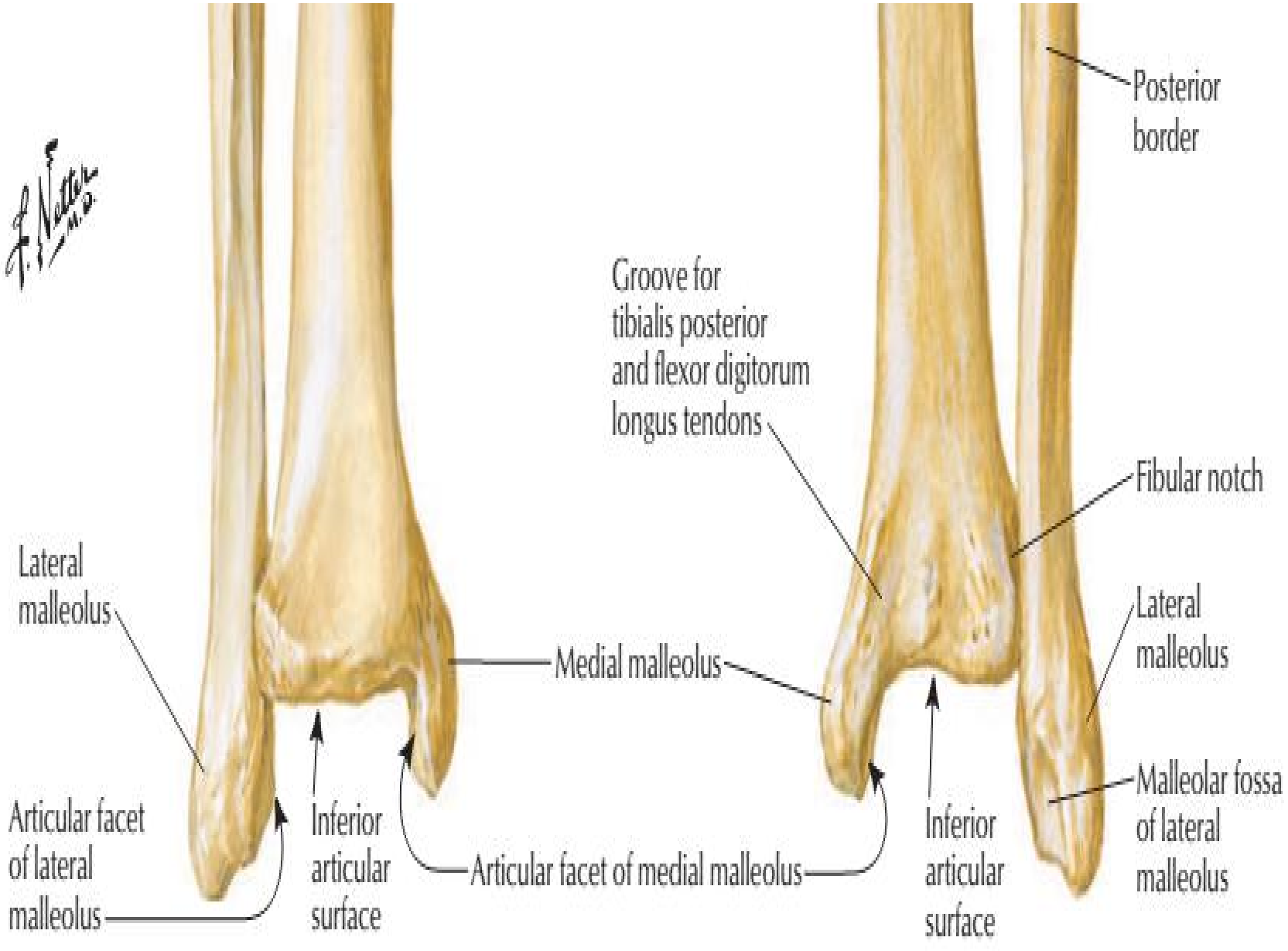
Soleus and gastrocnemius muscles via calcaneal (Achilles)

THE LOWER END

- Five surfaces:

1. Anterior
2. Posterior
3. Medial
4. Lateral
5. Inferior

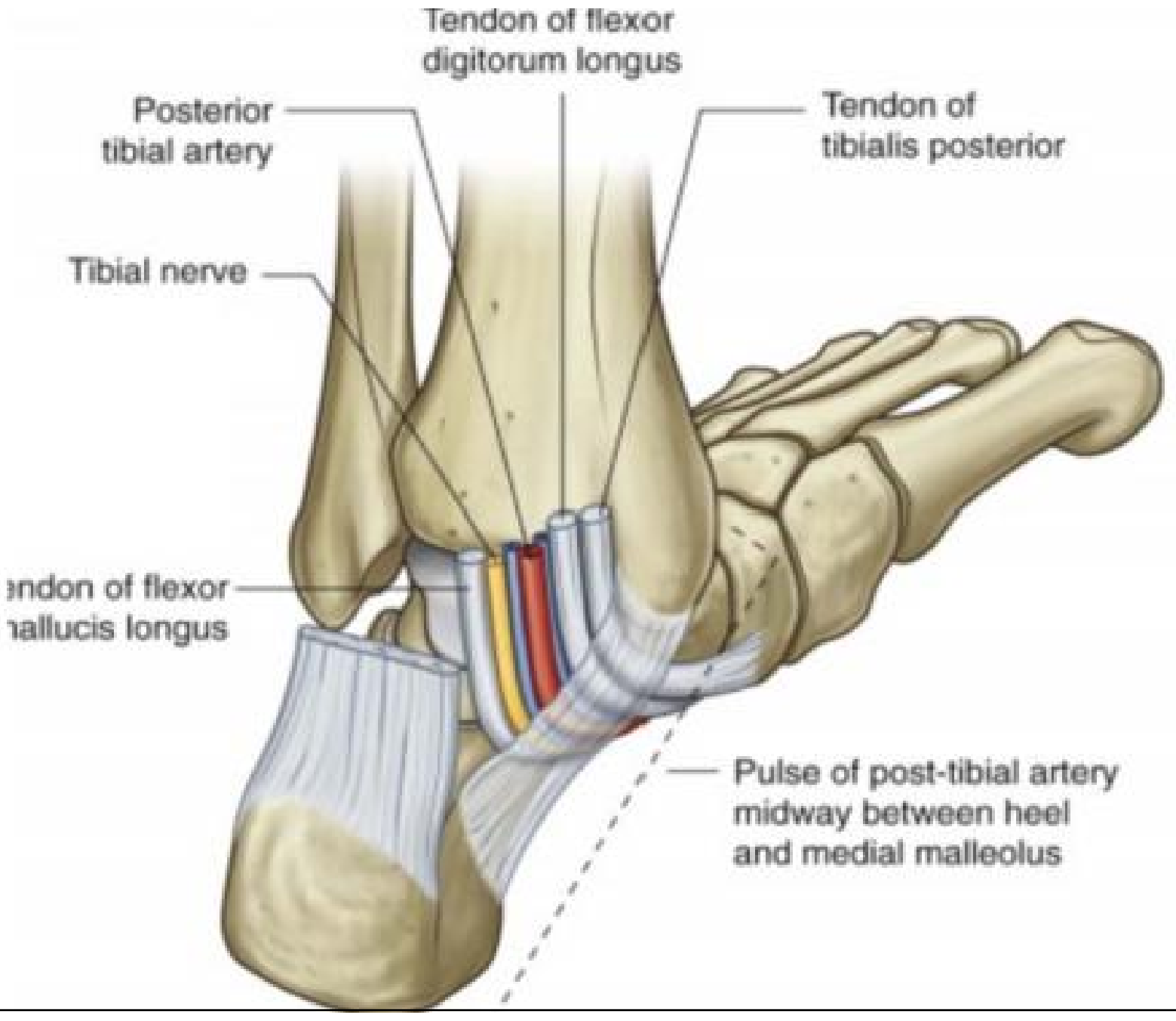
- Has one process k/a **medial malleolus.**



MEDIAL MALLEOLUS

- Short and stout process which projects down from medial part of the lower end.
- It possesses 4 surfaces and one border.

1. Medial surface: convex and subcutaneous.
2. Lateral surface: has a comma shaped facet for articulation with the medial side of the body of talus.
3. Anterior surface: gives attachment to anterior part of articular capsule of ankle joint.
4. Posterior surface: has a groove which lodges the tendon of tibialis posterior.
5. Lower border: has a depression in the middle to which is attached deltoid ligament of ankle joint.



SURFACES

1. Anterior surface:

- Gently convex and is continuous above with lateral surface of the shaft. It is separated from its inferior surface by an arrow transverse groove which gives attachment to capsular ligament of knee joint.
- Relations (medial to lateral):

a) Tibialis anterior

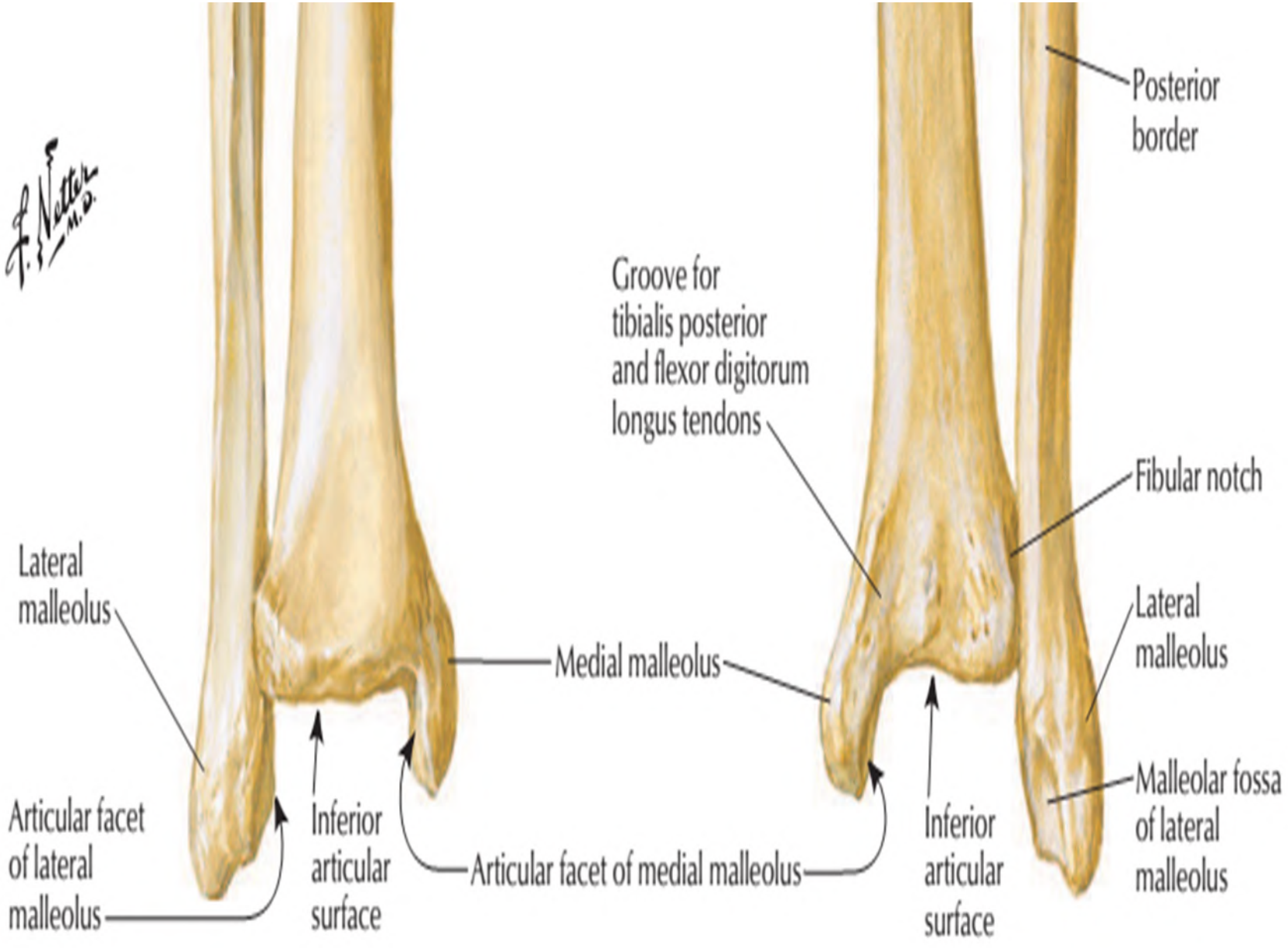
b) Extensor hallucis longus

c) Anterior tibial vessels

d) Deep peroneal nerve

e) Extensor digitorum longus

f) Peroneal tertius



2. Medial surface

- Convex and subcutaneous.
- Continuous above with medial surface of the shaft and below with medial surface of medial malleolus.

3. Posterior surface

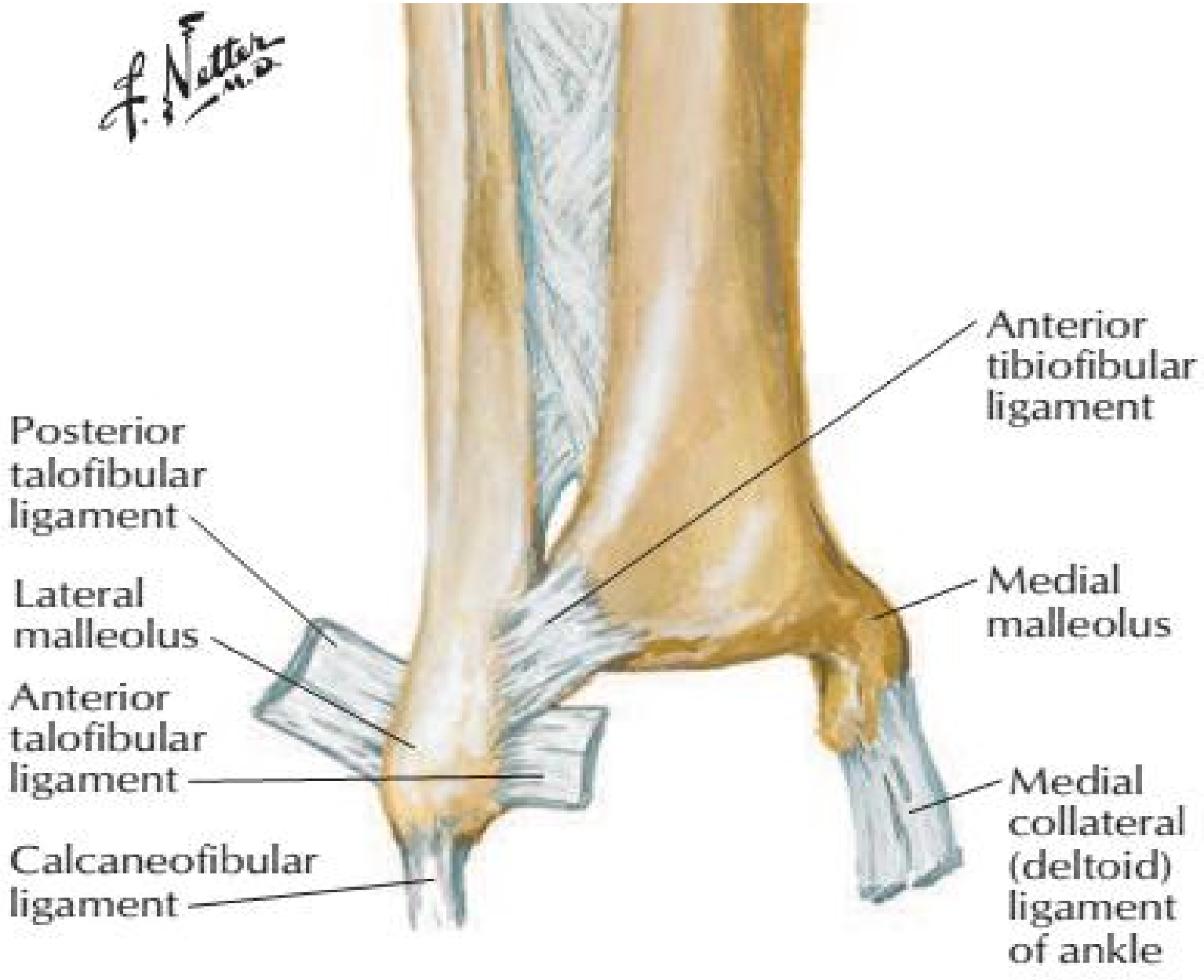
- Faces backwards and is continuous with posterior surface of the shaft. Separated from the inferior surface by a sharp margin which gives attachment to capsular ligament of ankle joint.
- It has a groove at its medial end which lodges the tendon of tibialis posterior. Lateral to this groove lies the posterior tibial vessels and tibial nerves and the tendon of flexor hallucis longus.
- Presents nutrient foramen which is directed downwards, so upper end of the growing end of the bone. Nutrient artery is derived from posterior tibial artery.

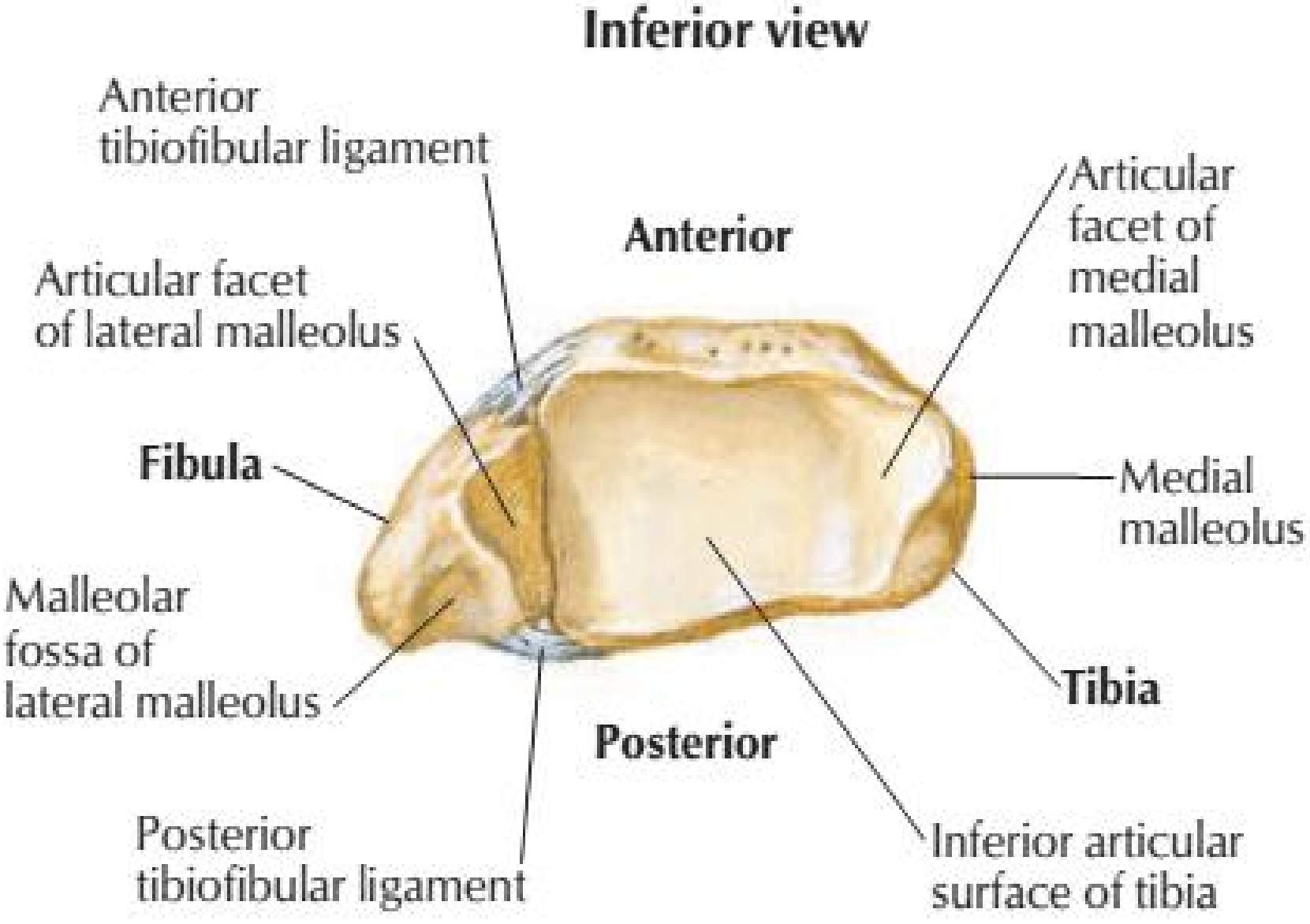
4. Lateral surface

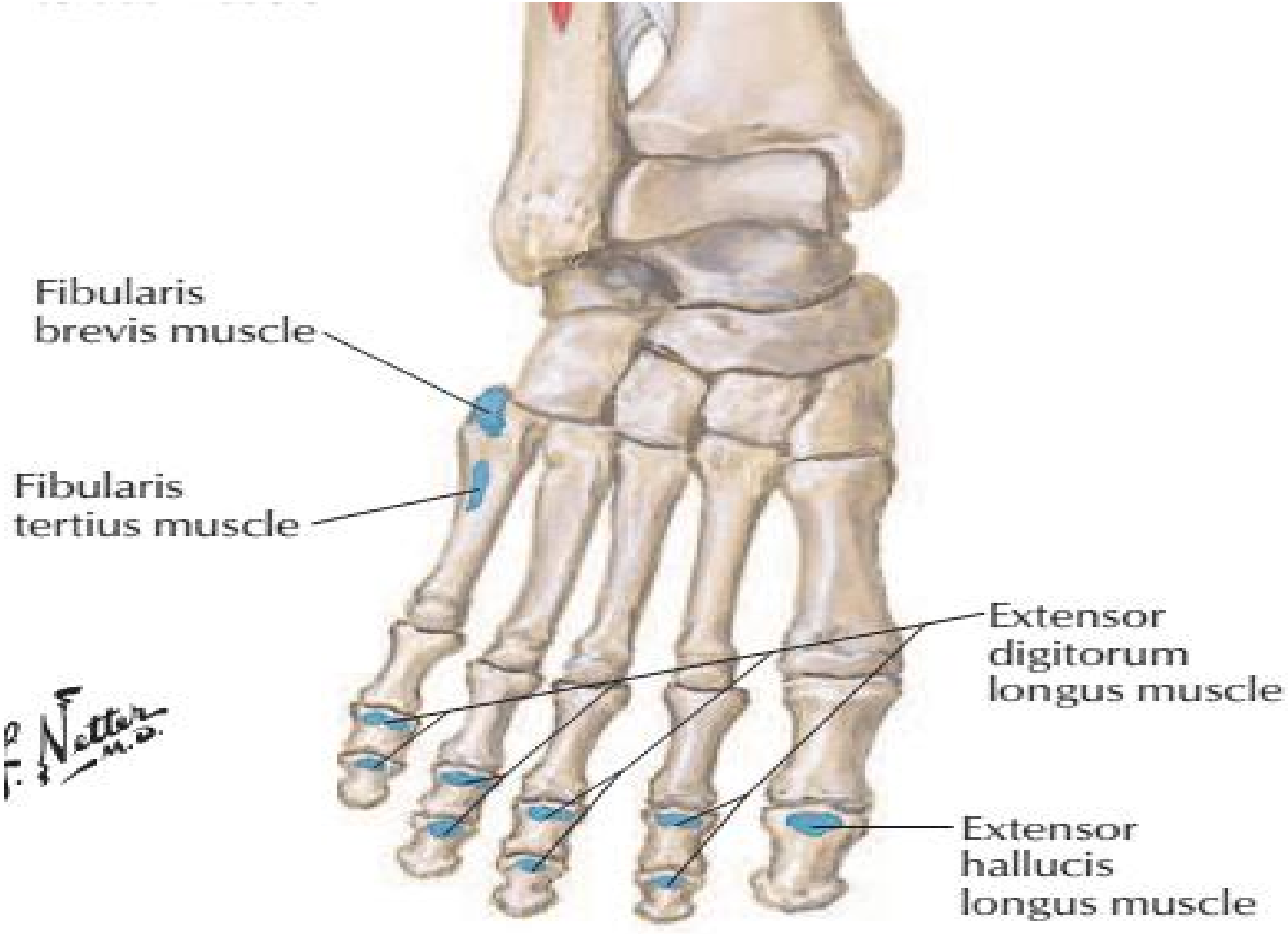
- Formed by fibular notch which articulates with the lower end of fibula.
- Floor of the notch gives attachment to interosseous tibio -fibular ligament which keeps lower ends of two bones in strong apposition.
- Anterior and posterior borders of the notch give attachment to anterior and posterior tibio-fibular ligaments.

5. Inferior border

- Covered by hyaline cartilage and articulates with superior surface of the body of talus.
- Medially it is continuous with articular surface of medial malleolus.







Thank you.