The University Of Jordan
Faculty Of Medicine
Anatomy Department

Hip Bone and Femur

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Bones of the lower limb

The bones of lower limb consists of

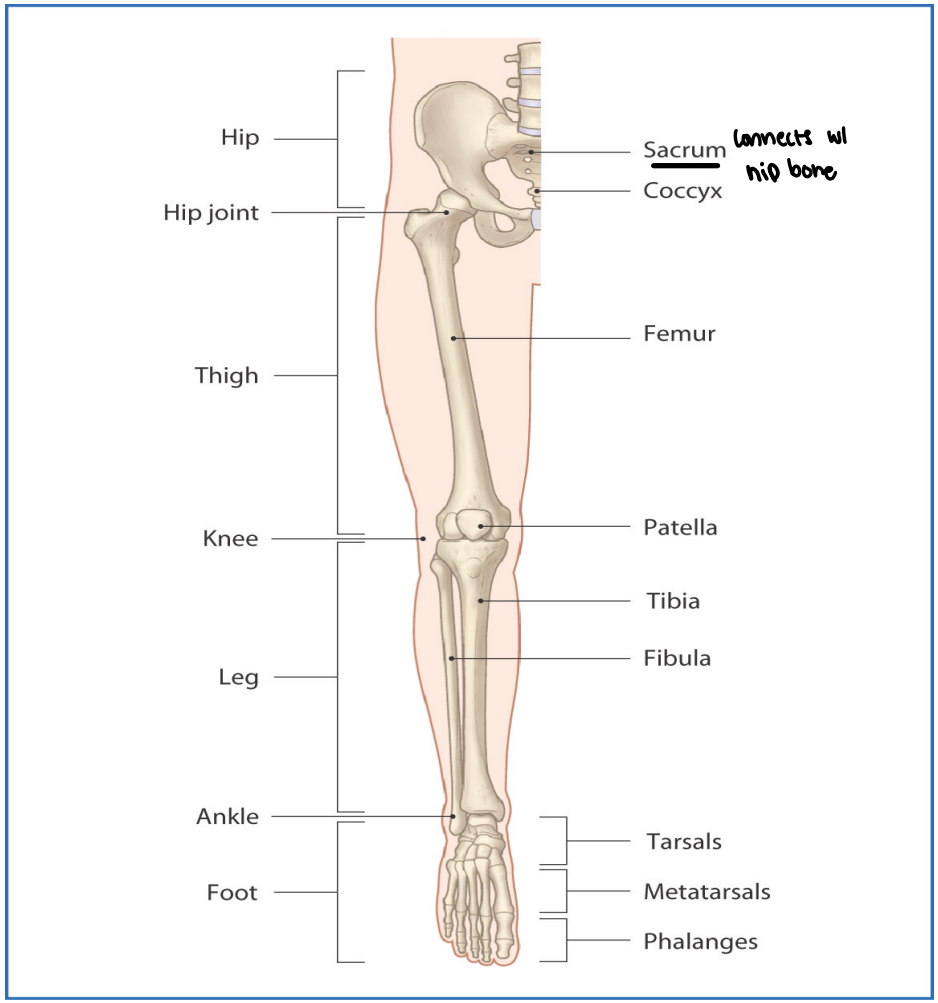
The pelvic girdle:

- Connects the lower limb to the trunk.
- It is formed of 2 hip bones & sacrum .

Bone of the thigh: The femur .

Bones of the leg: The tibia and the fibula .

Bones of the foot: The tarsal bones, the metatarsals and the phalanges .



Hip bone

Hip bone is formed of 3 bones:

1. Iliac bone : It is the upper part of hip bone .

- It has ***3 borders*** :

  a. Upper border called iliac crest.

  The outer border of iliac crest is called tubercle of iliac crest

  b. Anterior border which presents the anterior superior iliac spine (A.S.I.S) & anterior inferior iliac spine .

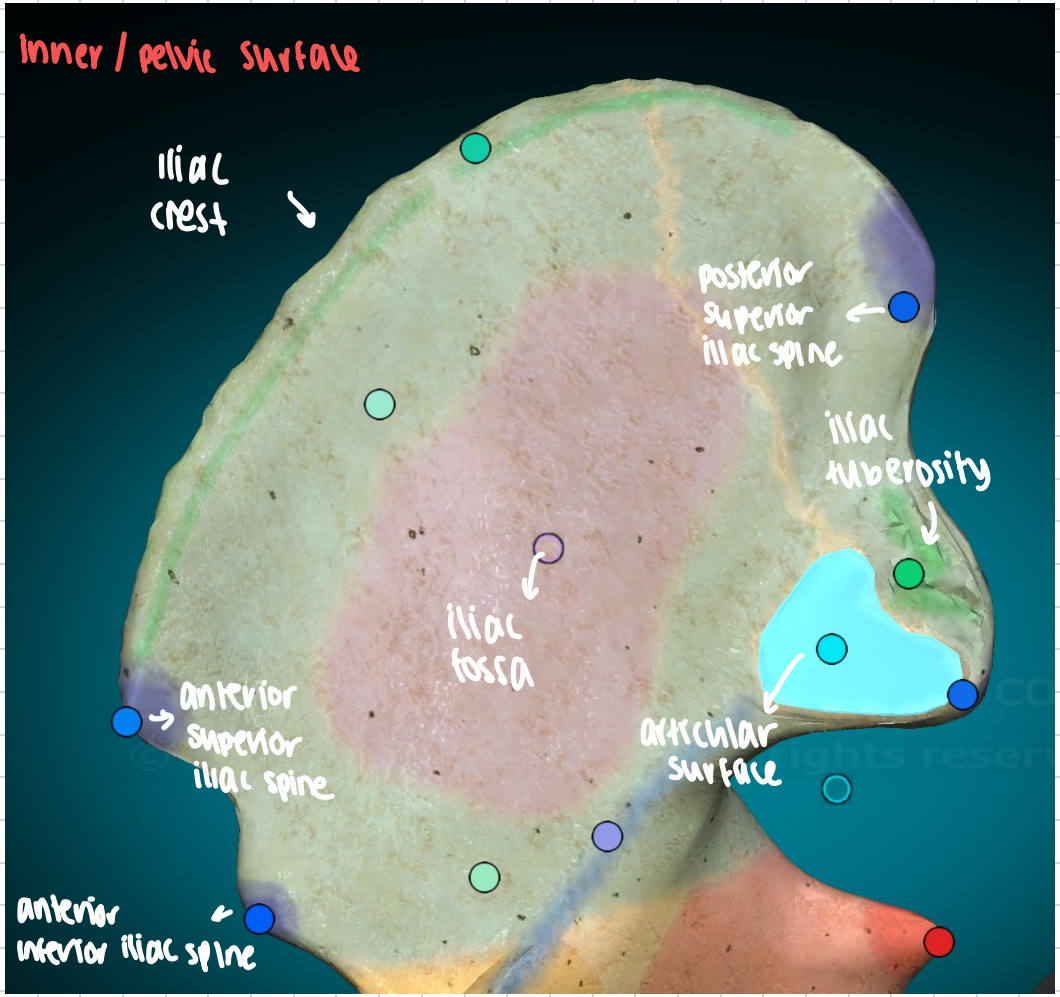
  c. Posterior border which presents the posterior superior iliac spine & posterior inferior iliac spine .

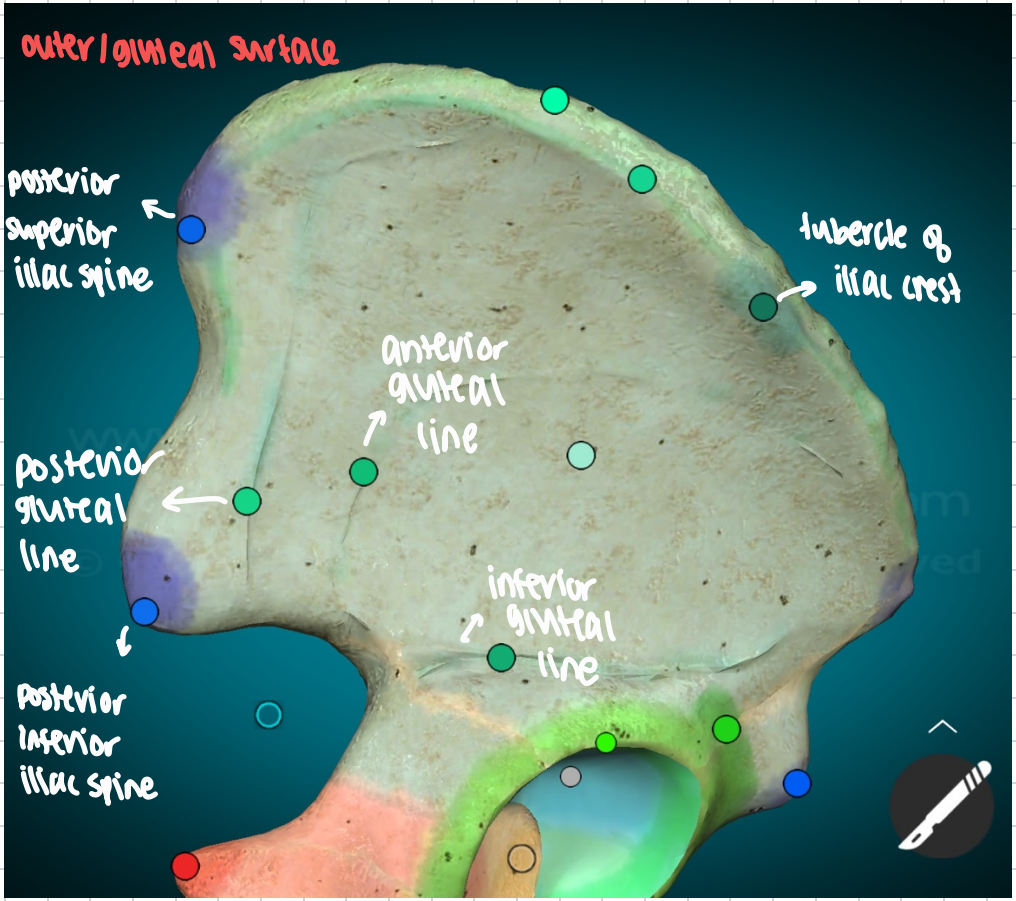
- It has ***2 surfaces*** :

  a. Outer or gluteal surface which has 3 gluteal lines (Posterior , middle & inferior) .

  b. Inner or pelvic surface which show iliac fossa , iliac tuberosity and auricular surface (which articulates with sacrum) .

iliac bone


inner / pelvic surface
iliac crest
posterior superior iliac spine
iliac tuberosity
iliac fossa
anterior superior iliac spine
auricular surface
anterior inferior iliac spine


outer / gluteal surface
posterior superior iliac spine
tubercle of iliac crest
anterior gluteal line
posterior gluteal line
inferior gluteal line
posterior inferior iliac spine

2. Ischial bone:

The lower posterior part of hip bone & consists of :

a. Body

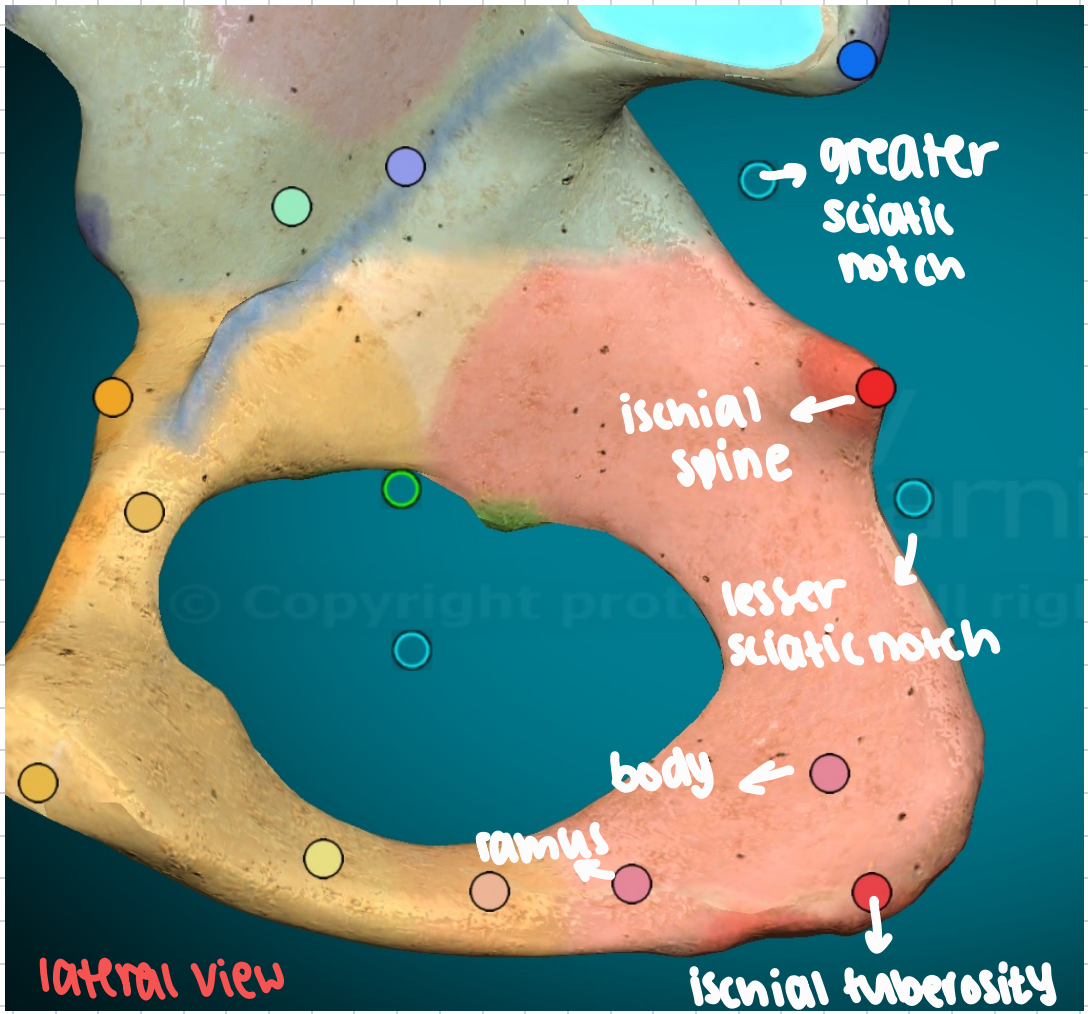
b. Ischial tuberosity: for muscle attachment and it is related to bursa to reduce friction during sitting

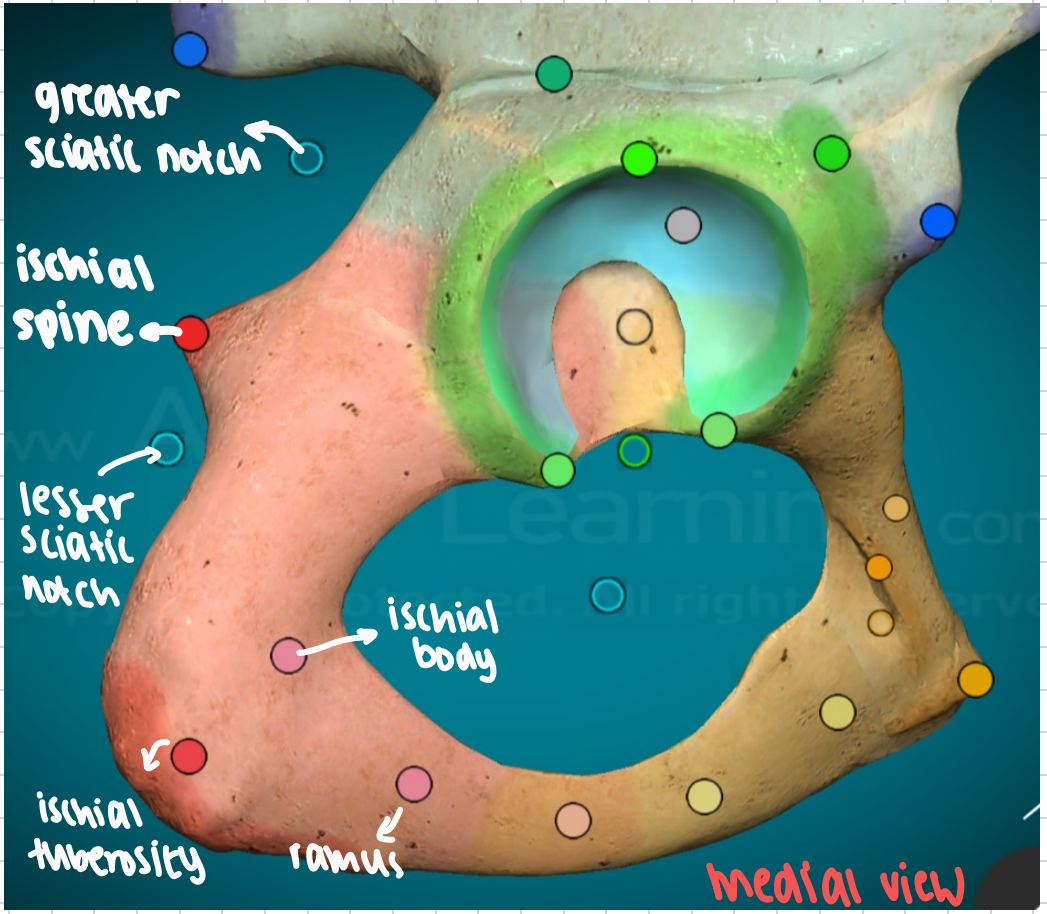
c. Ischial spine : which separates the greater sciatic notch from the lesser sciatic notches .

d. Ischial ramus which joins the inferior pubic ramus to form ischiopubic (conjoint) ramus .

Ischiopubic rami of both sides form the pubic arch

ischial bone





3. Pubic bone: The lower anterior part of hip bone & consists of :

a . Body :

- It articulates with the medial surface of the opposite bone to form the symphysis pubis.
- Its upper border is called ***pubic crest*** which ends laterally in a projection called ***pubic tubercle***.

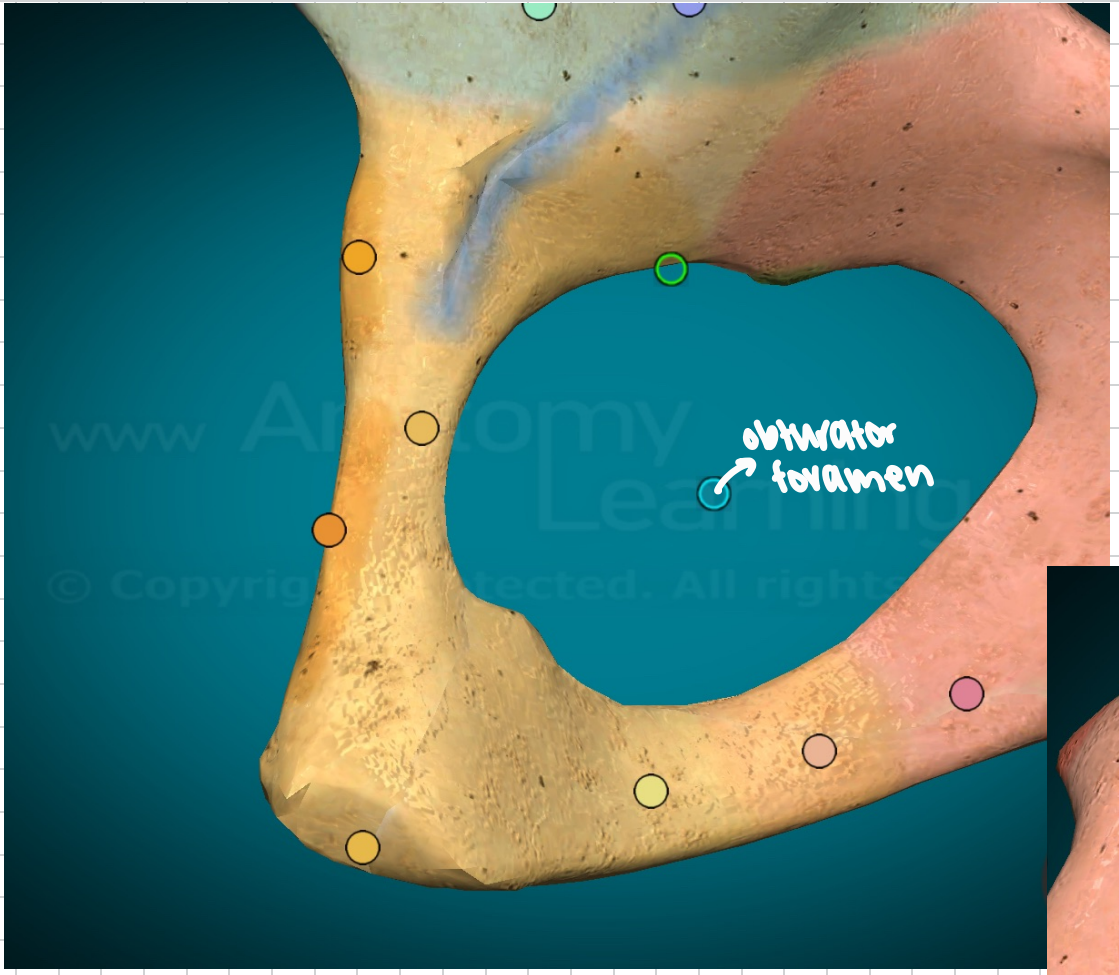
b. superior pubic ramus which has 3 surfaces :

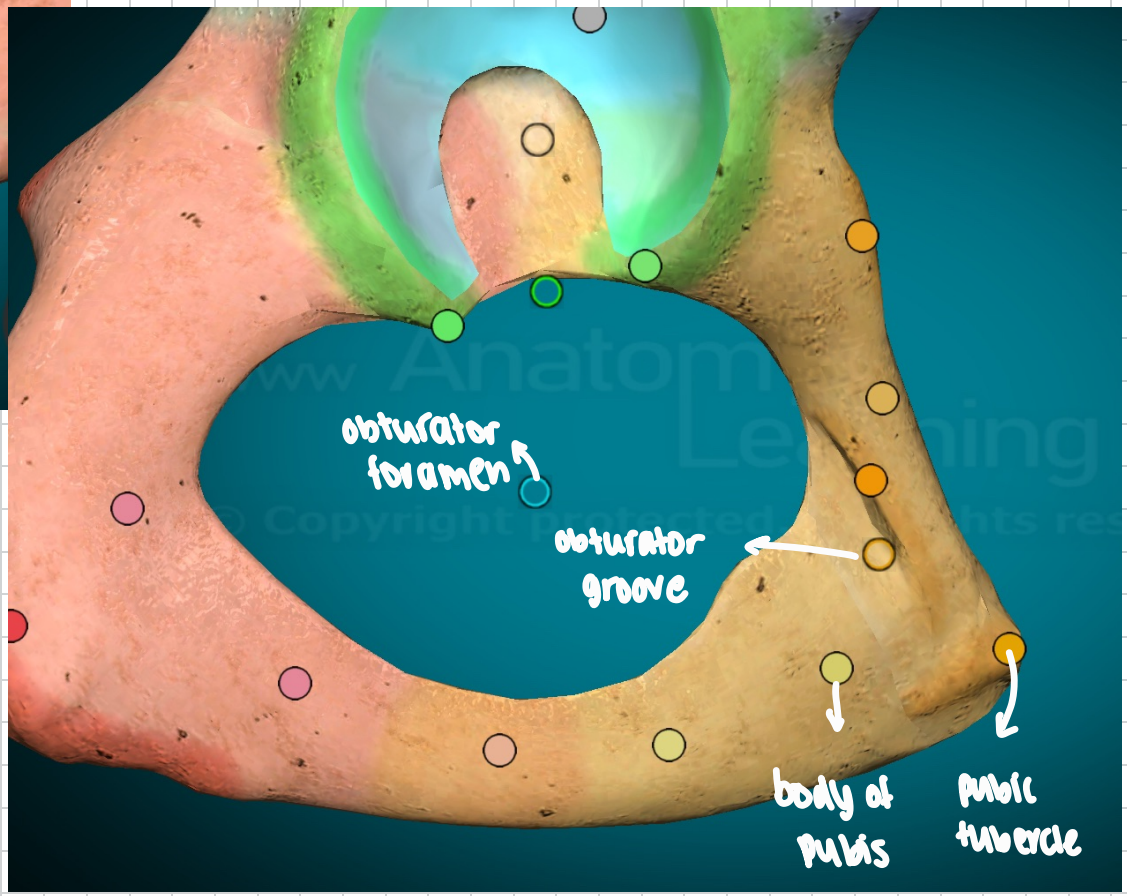
- Pectineal surface & pectineal line .
- A smooth posterior pelvic surface.
- An inferior obturator surface which shows a groove for the passage of the obturator nerve and vessels.

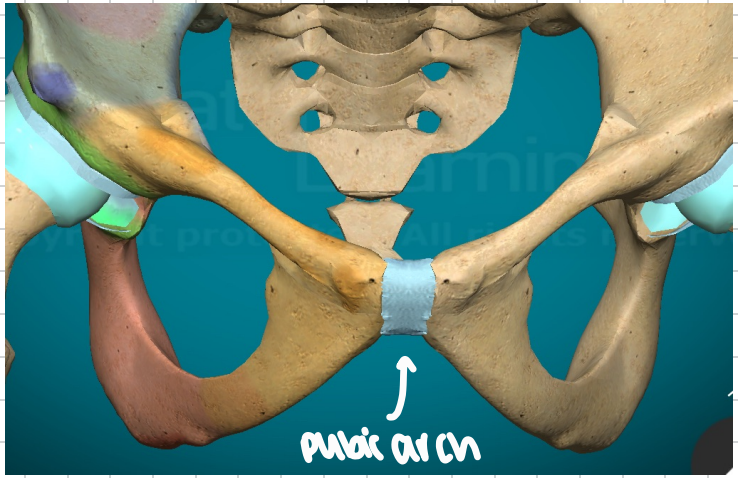
c. Inferior pubic ramus :

- Joins the ischial ramus .
- It has 2 surfaces : (outer and inner pelvic surface)
- It has 2 borders : Upper border forms part of obturator foramen and lower border forms the pubic arch .

pubic bone


obturator foramen


obturator foramen
obturator groove
body of pubis
pubic tubercle


pubic arch

The acetabulum

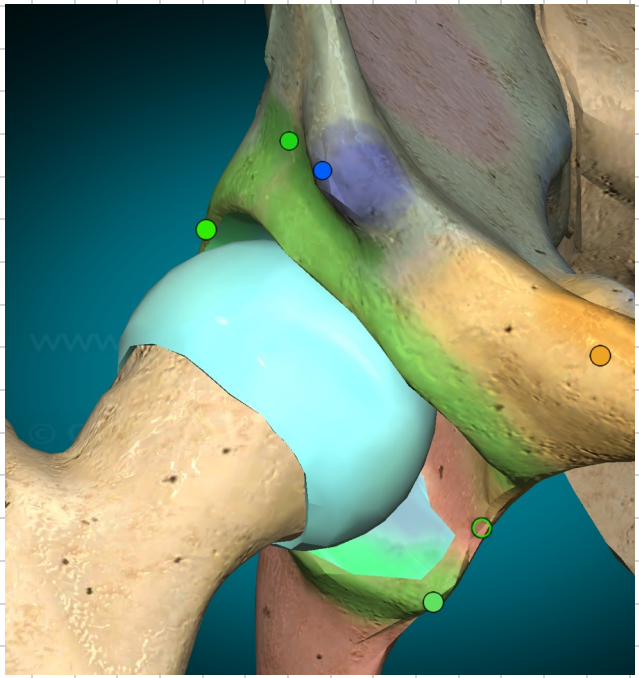
- ✓ It is a hollow depression on the lateral surface of the hip bone .
- ✓ A fibrocartilaginous lip called labrum acetabulare ,which is attached to the margin of the acetabulum to increase its depth.
- ✓ The acetabulum articulates with head of femur to form hip joint

The obturator foramen

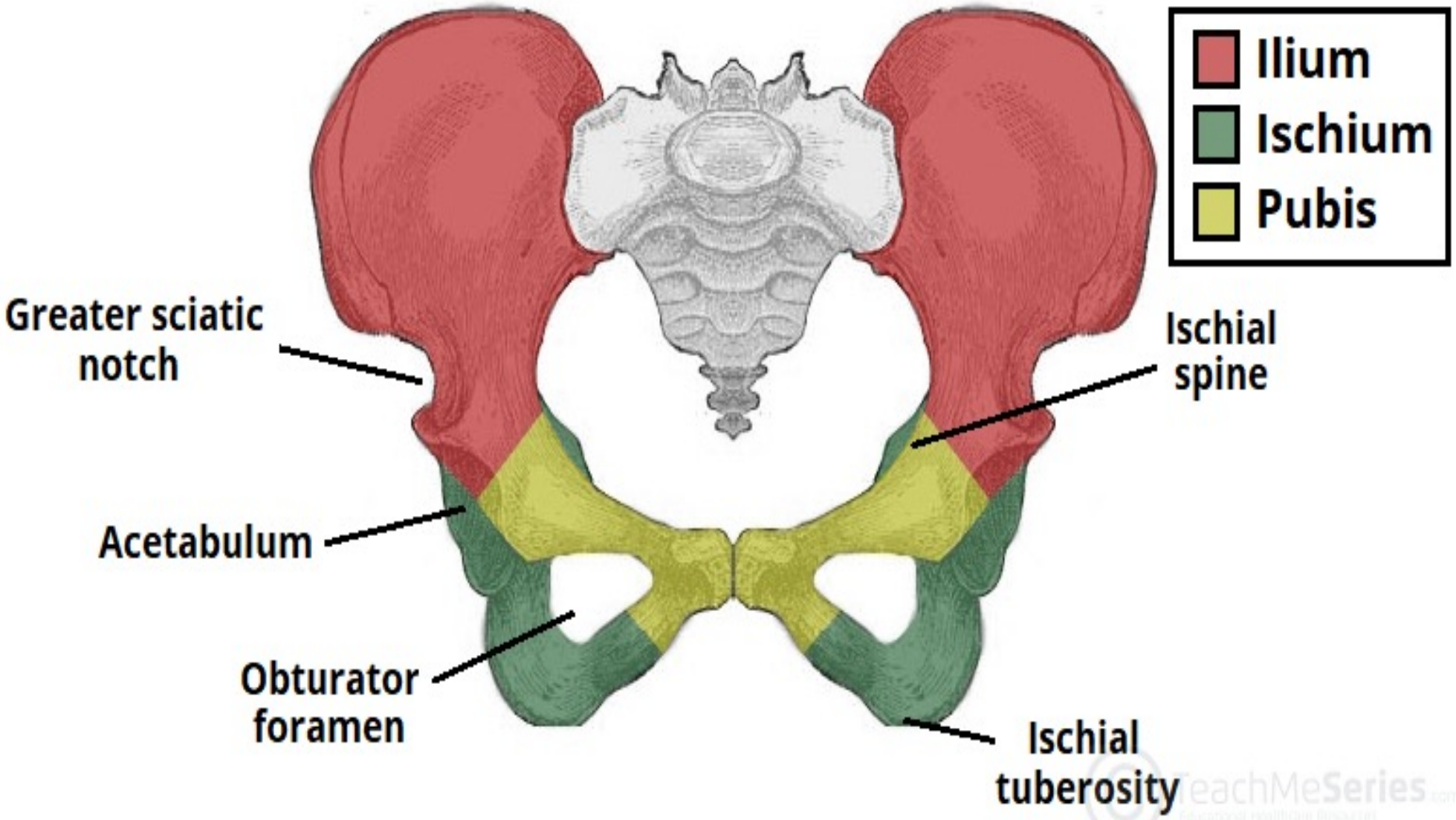
- ❖ A large opening below and in front of the acetabulum.
- ❖ It is filled with obturator membrane except superiorly .
- ❖ An obturator groove forms an obturator canal for the passage of obturator vessels and nerve.

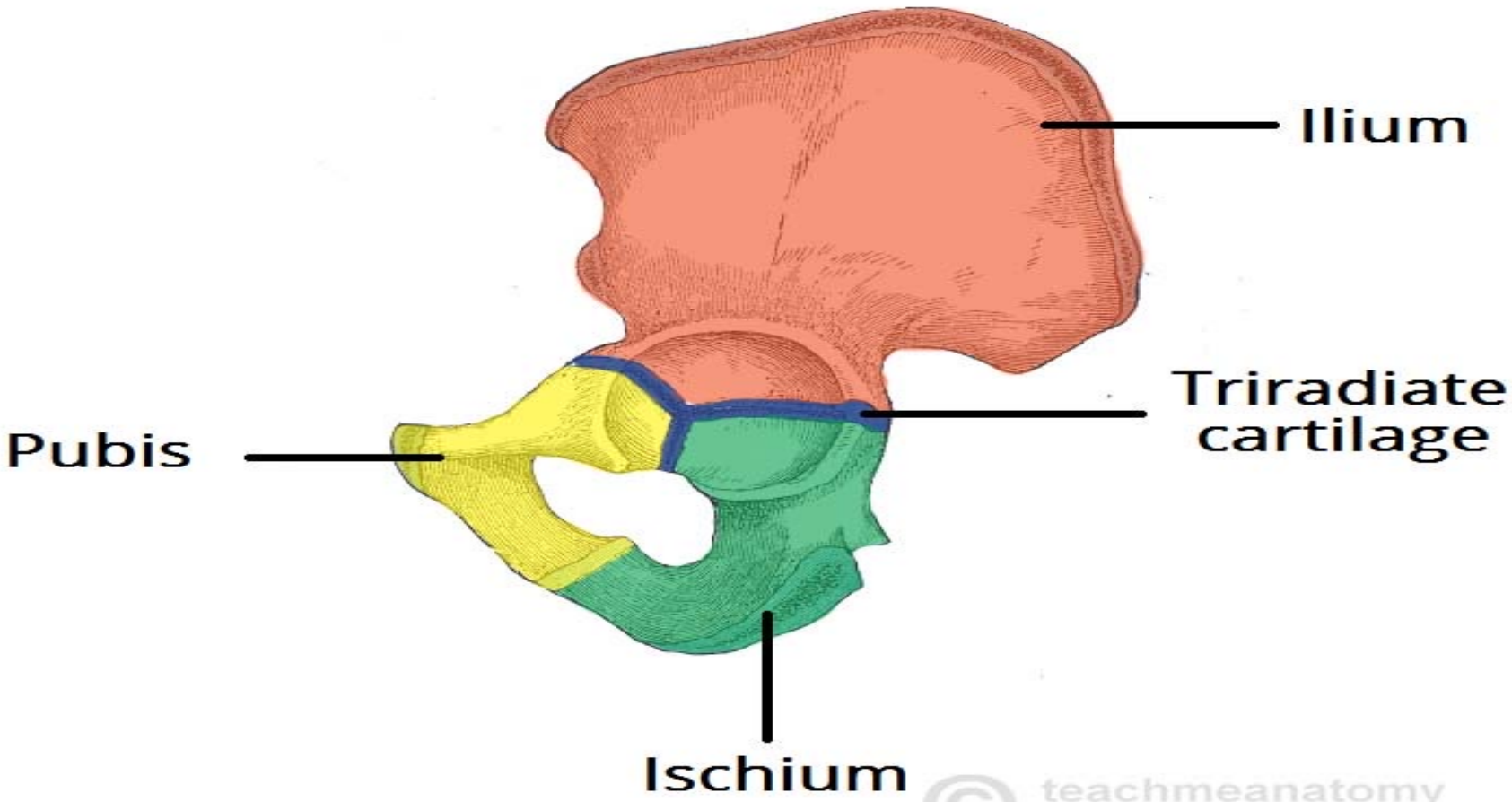
acetabulum

articulates w/ the femur head



obturator foramen


Ilium
Ischium
Pubis
Greater sciatic notch
Ischial spine
Acetabulum
Obturator foramen
Ischial tuberosity


Ilium
Triradiate cartilage
Pubis
Ischium
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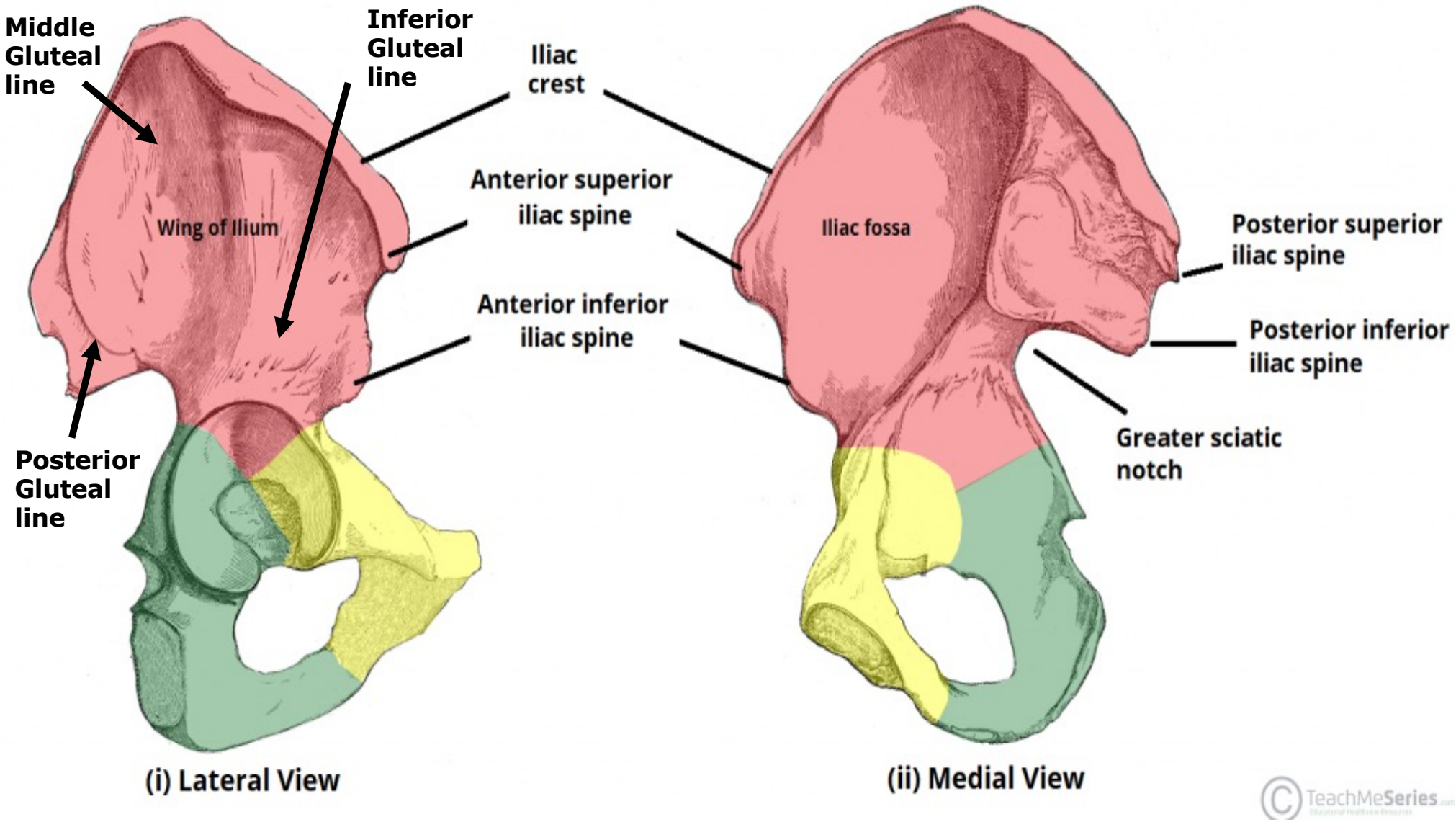
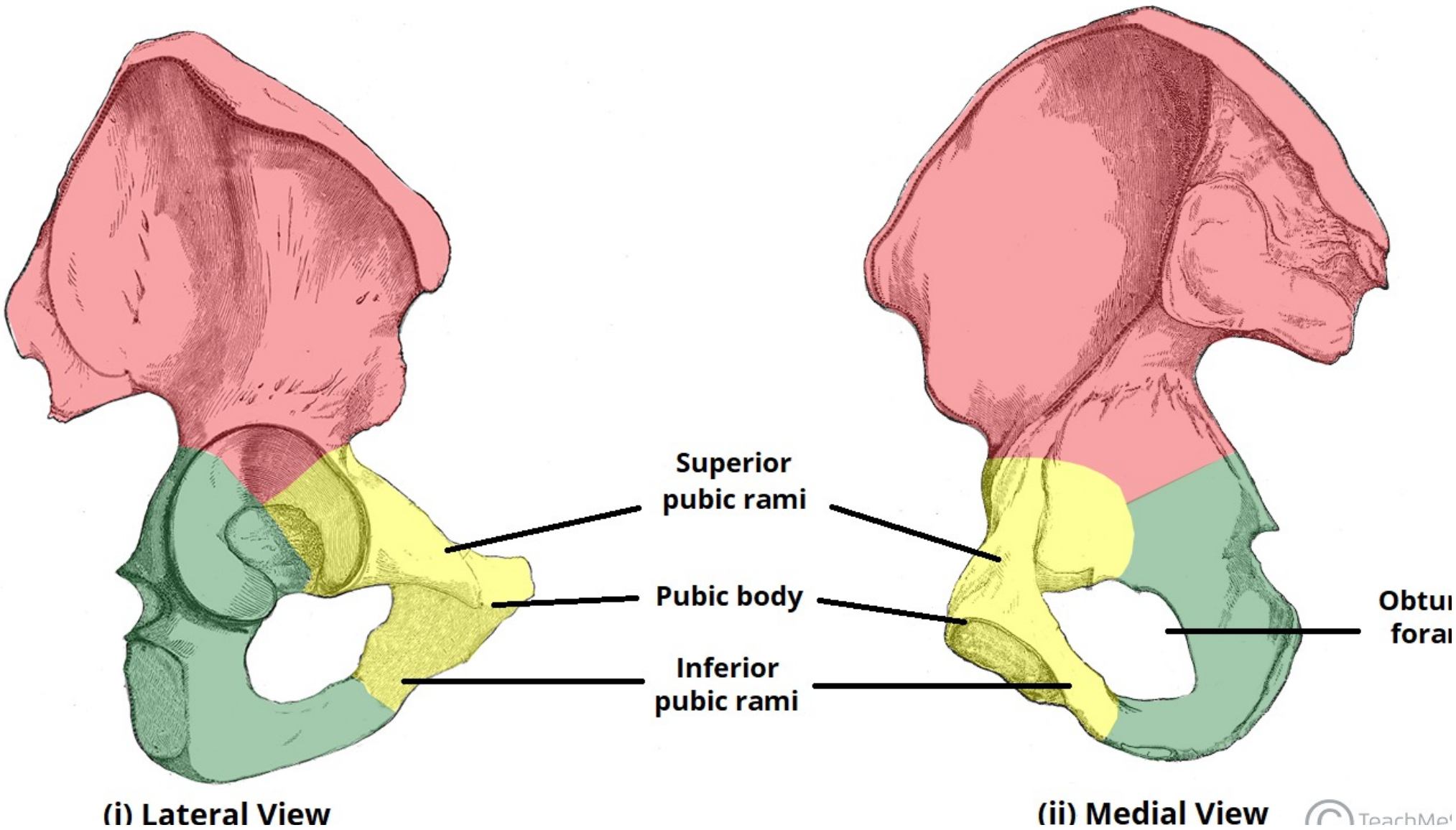
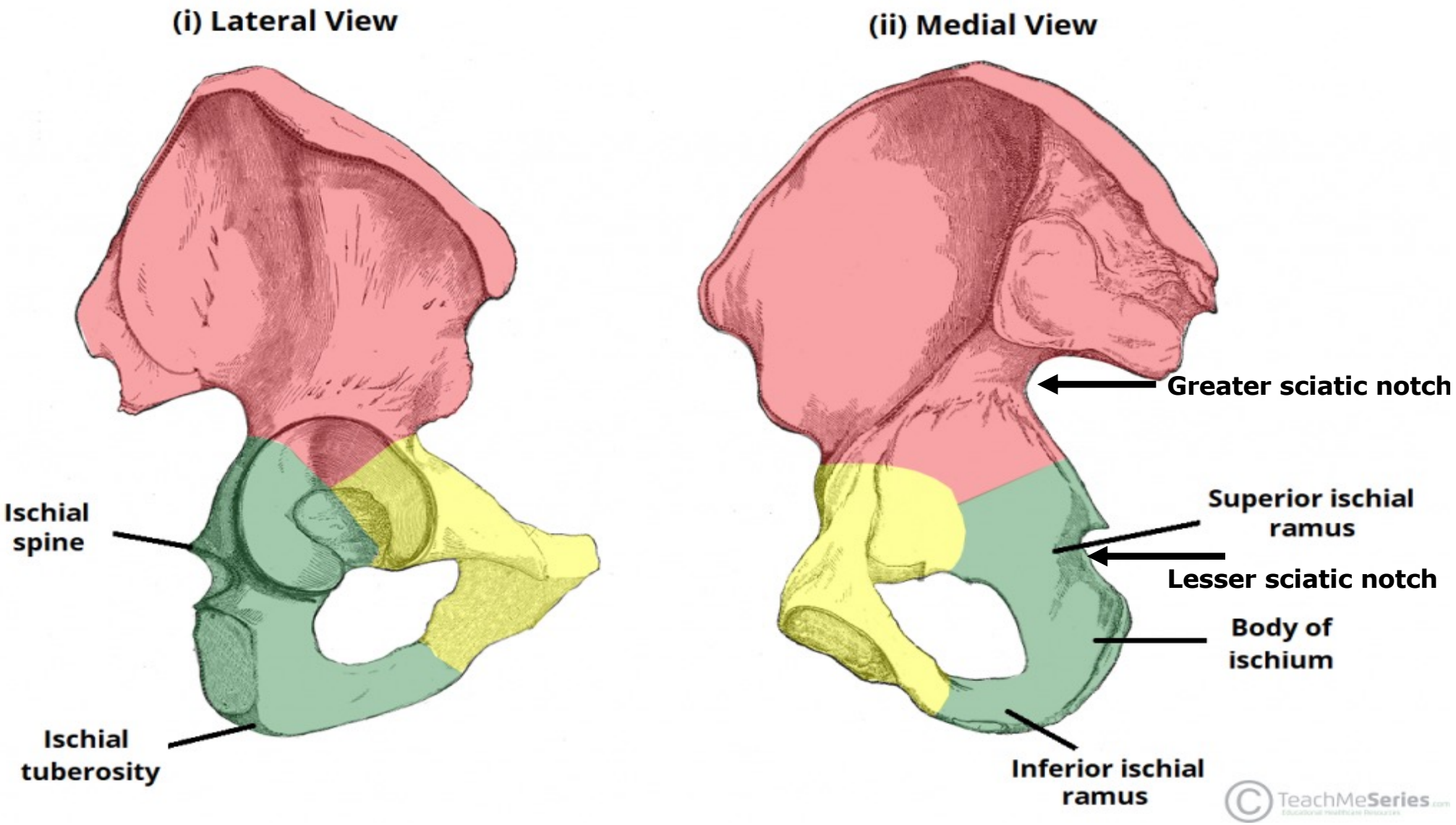
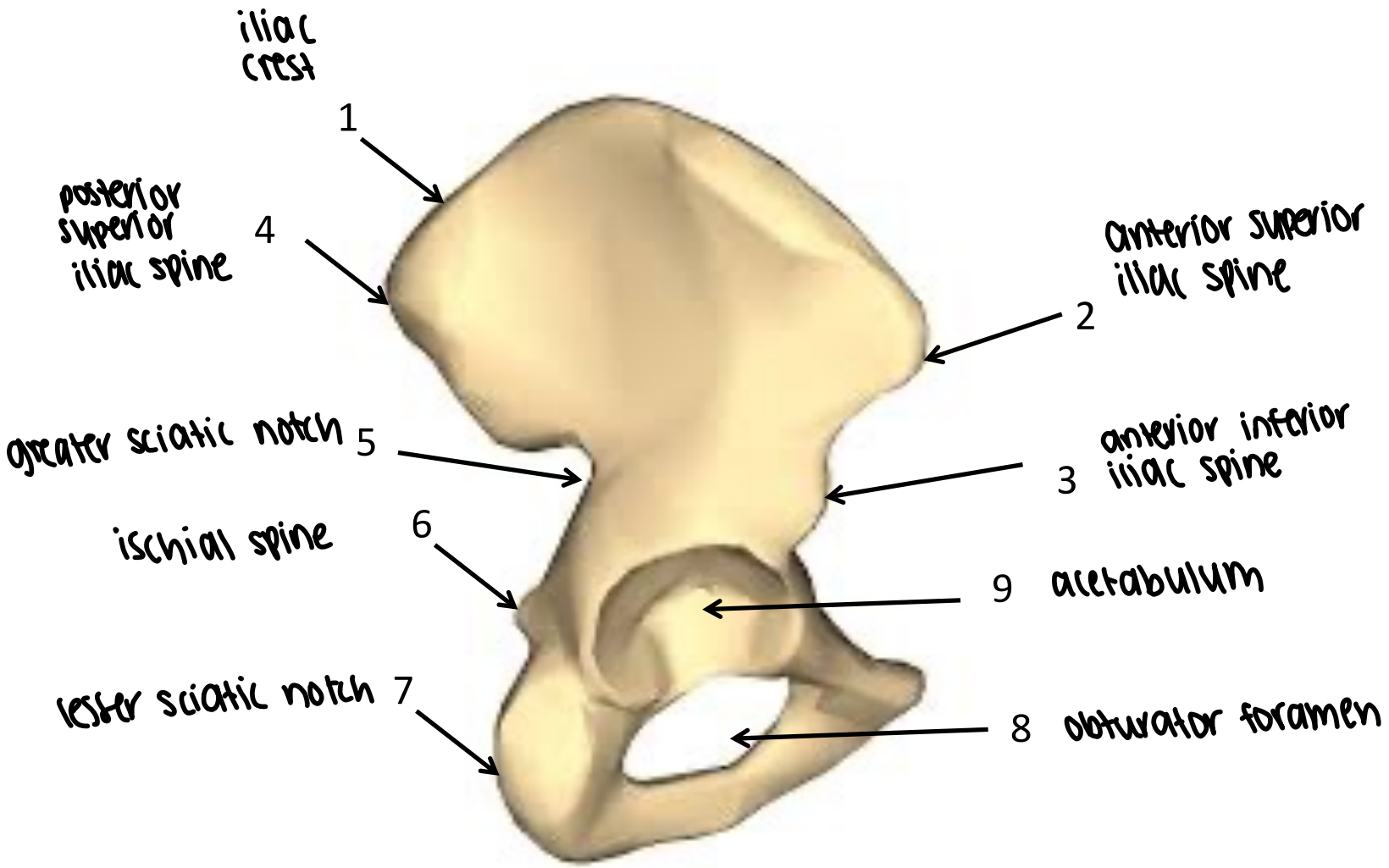

Middle Gluteal line
Inferior Gluteal line
Iliac crest
Anterior superior iliac spine
Anterior inferior iliac spine
Posterior Gluteal line
Wing of Ilium
Iliac fossa
Posterior superior iliac spine
Posterior inferior iliac spine
Greater sciatic notch
(i) Lateral View
(ii) Medial View
TeachMeSeries


Superior pubic rami
Pubic body
Inferior pubic rami
Obtu
fora
(i) Lateral View
(ii) Medial View


(i) Lateral View
(ii) Medial View
Ischial spine
Ischial tuberosity
Greater sciatic notch
Superior ischial ramus
Lesser sciatic notch
Body of ischium
Inferior ischial ramus
TeachMeSeries


iliac crest
1
posterior superior iliac spine
4
anterior superior iliac spine
2
greater sciatic notch
5
anterior inferior iliac spine
3
ischial spine
6
9
acetabulum
lesser sciatic notch
7
8
obturator foramen

Articulation of hip bone :

1. Anterior with other hip bone forming ***symphysis pubis*** .
2. Posterior with sacrum forming ***sacroiliac joint*** .
3. Lateral with femur forming ***hip joints*** .

1-Symphysis pubis

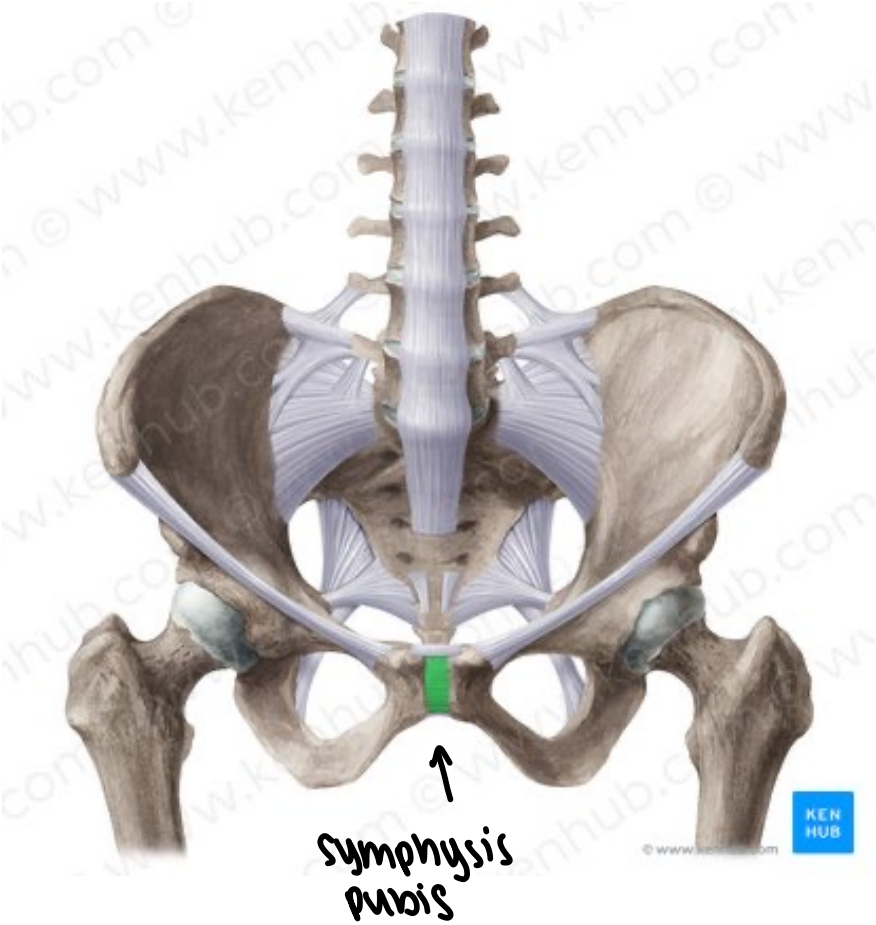
Articulating bones

Right and left superior pubic rami

Type :

Secondary cartilaginous joint

midline

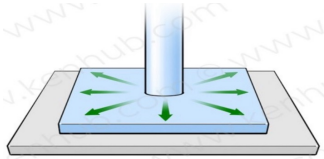


2-Sacroiliac joint

Articulating bones

Auricular surface of the ilium and the sacrum

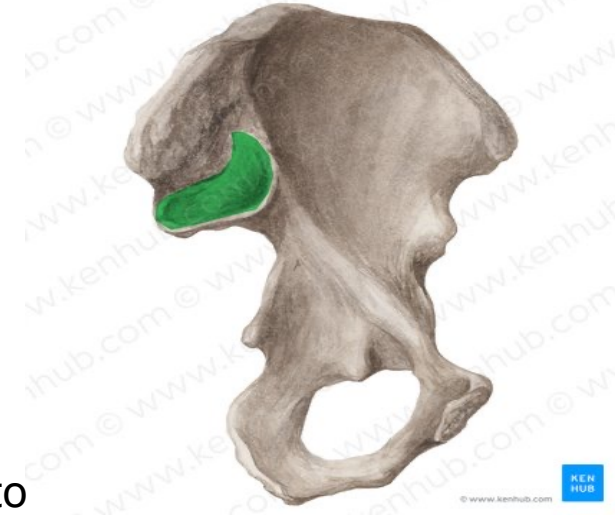
Type :



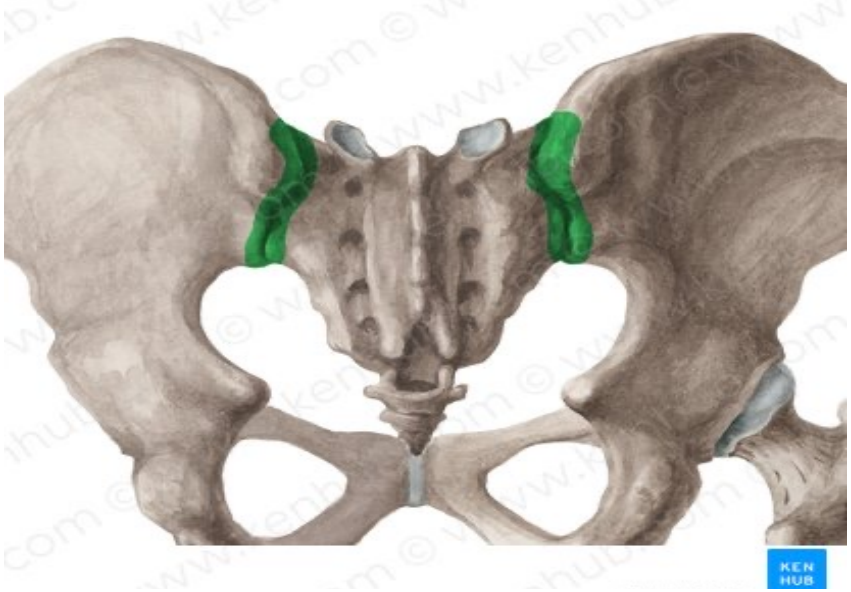
Plane synovial joint

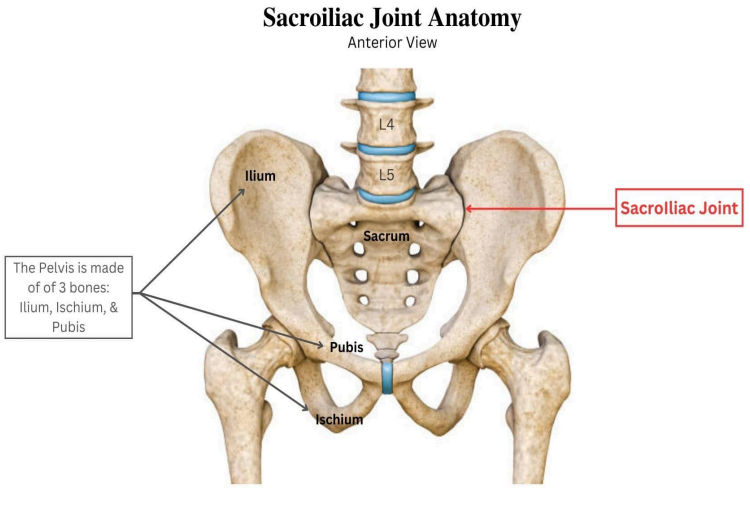
Movement :

Gliding movement and weight transmission from axial skeleton to

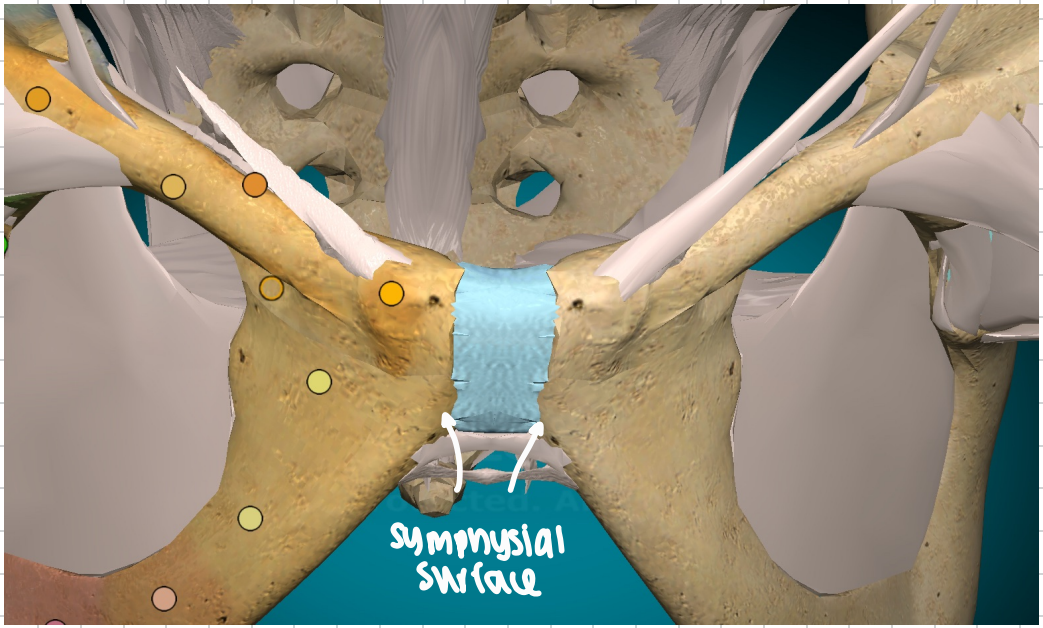


Auricular surface of the ilium

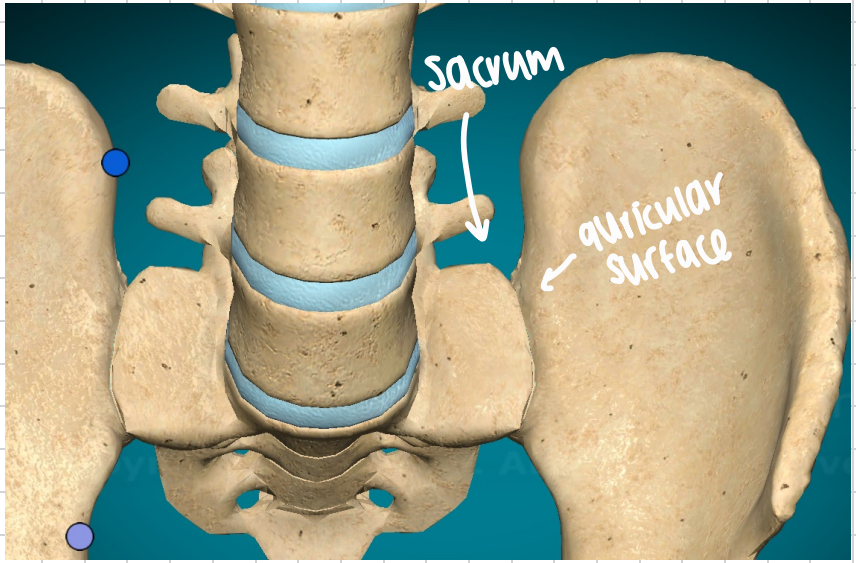


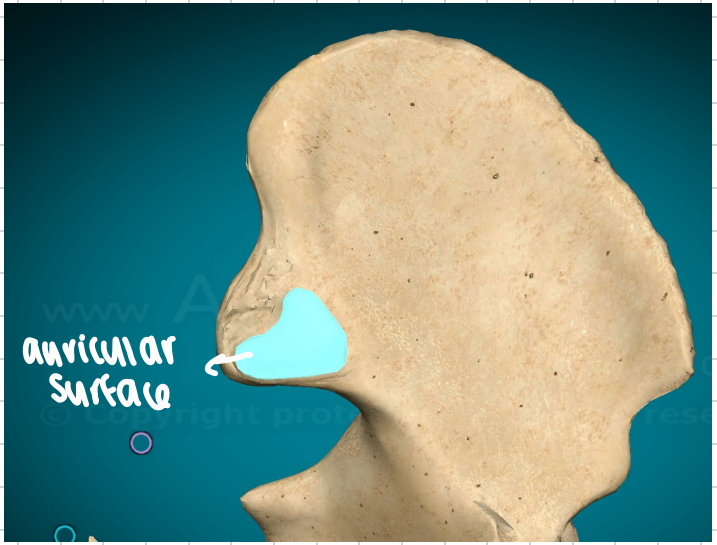


1. Symphysis pubis



2. sacroiliac joint





vertebral column + pubic bone

Vertebropelvic ligaments:

1) Iliolumbar ligament : extends from the tip of the L5 transverse process to iliac crest.

2) Lumbosacral ligament : extends from the inferior aspect of L5 transverse process to the lateral part of the ala of sacrum.

3) Sacrotuberous ligament ;

It extends between posterior iliac spines, lower part of the sacrum and coccyx and ischial tuberosity.

4) Sacrospinous ligament: Extends from ischial spine to the lateral margins of sacrum and coccyx.

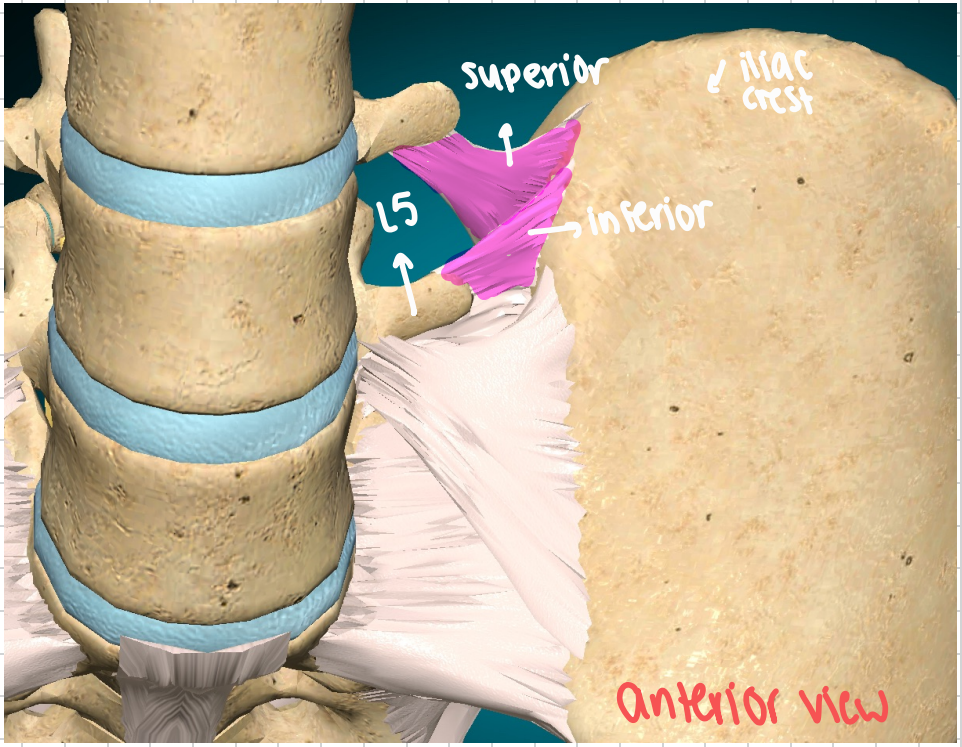
Functions of the Vertebropelvic Ligaments:

- The **iliolumbar and lumbosacral ligaments** prevent the anteroinferior displacement of L5 vertebra under effect of body weight.

iliolumbar anteroinferior displacement

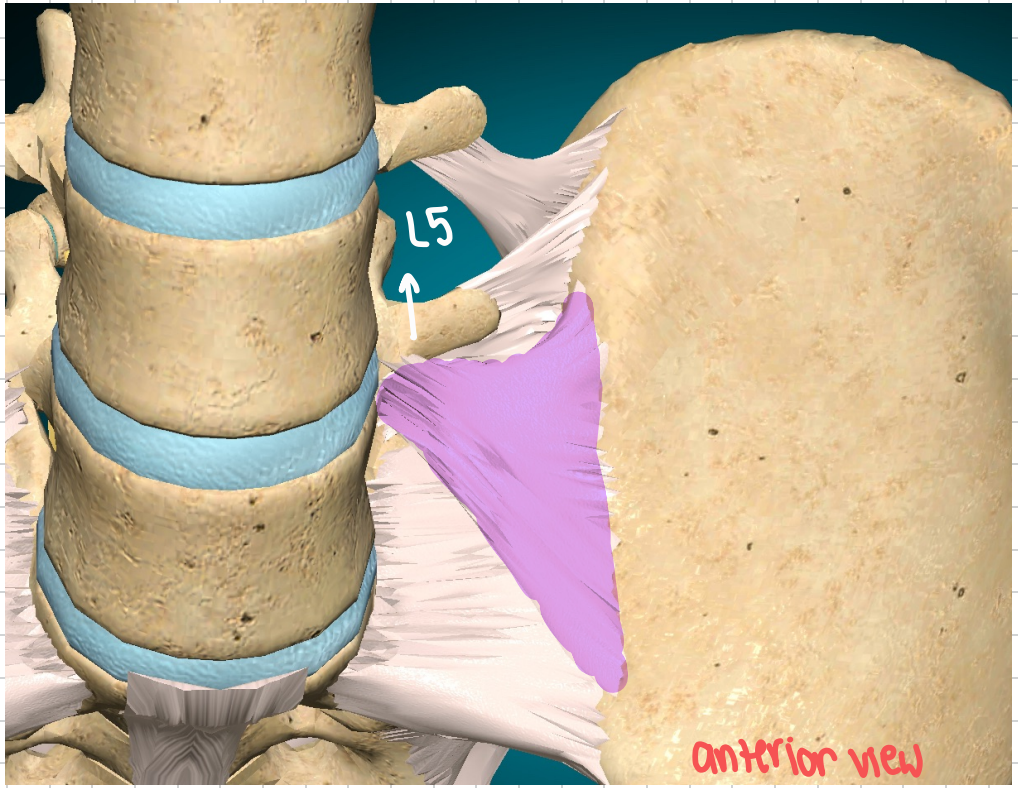
- The **sacrotuberous and sacrospinous ligaments** convert the greater and lesser sciatic notches into foramina.

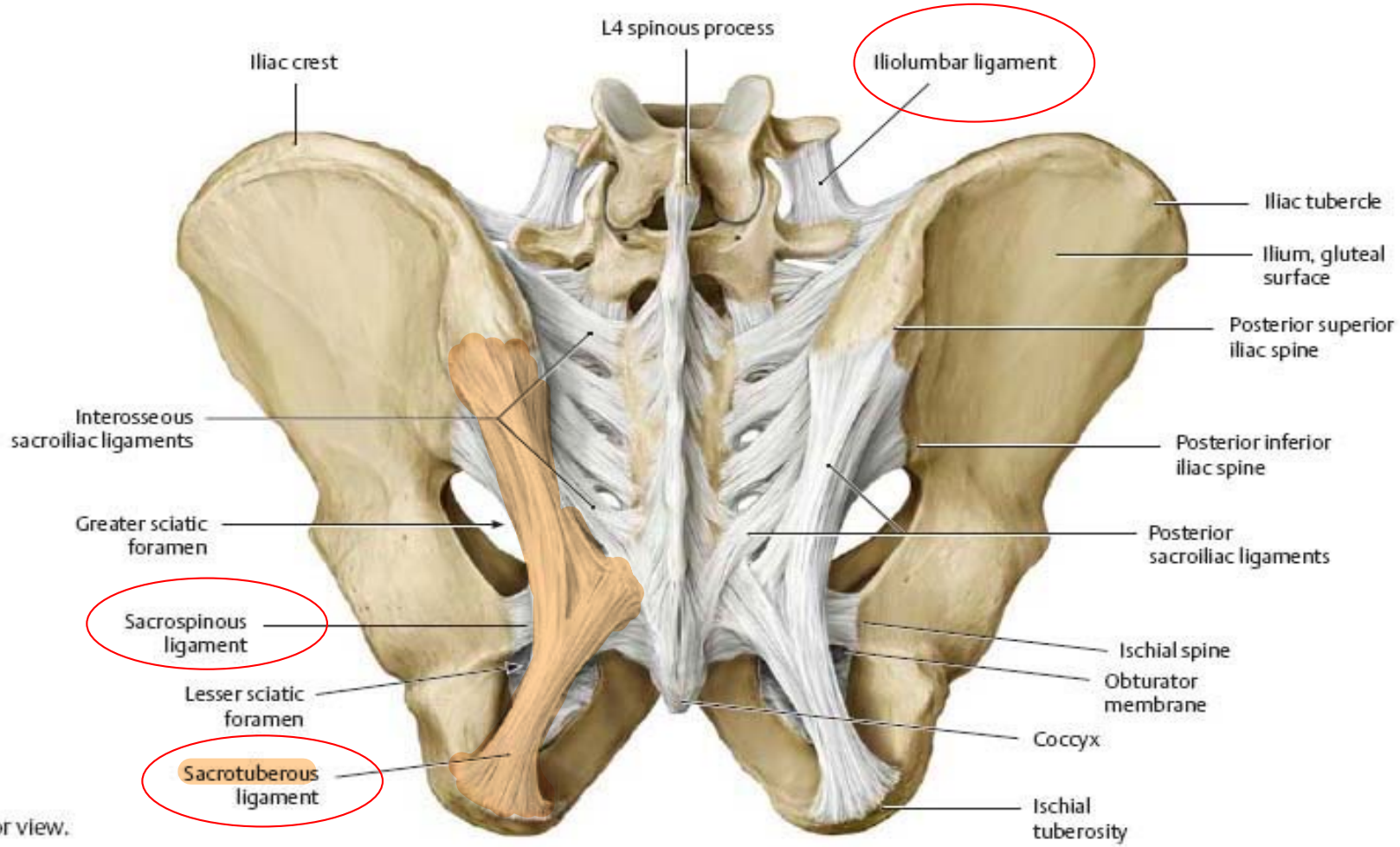
They also prevent the upward tilting of the lower part of sacrum under effect of body weight



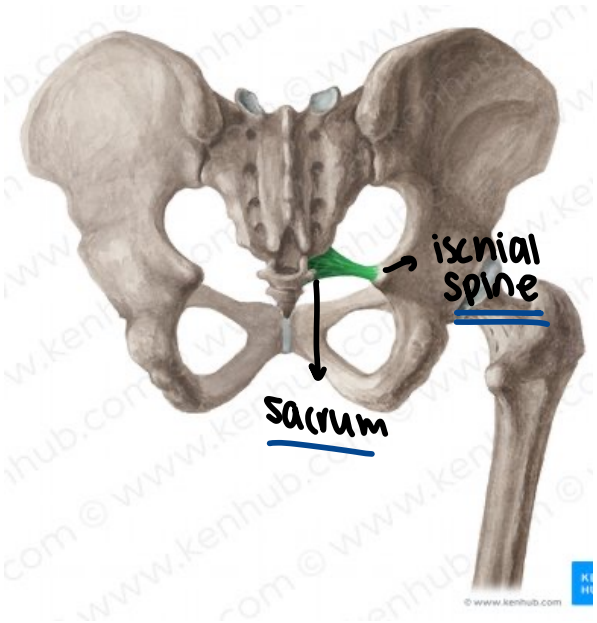
iliolumbar ligament

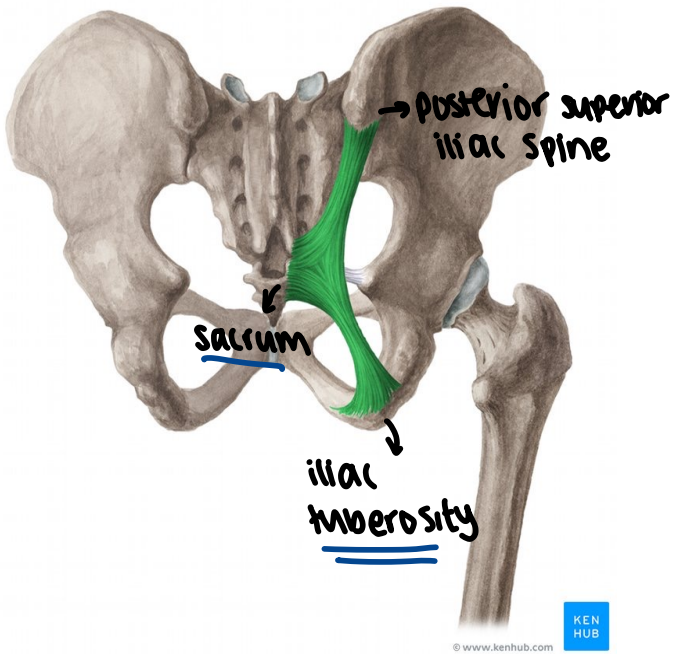
lumbosacral ligament

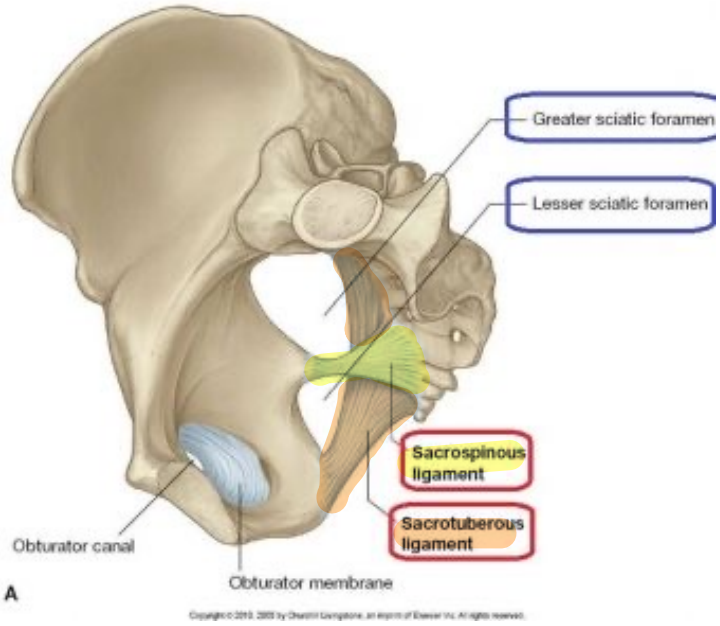




B Posterior view.







Sacrospinous ligament

Sacrotuberous ligament

3-Hip joint

Articulating bones

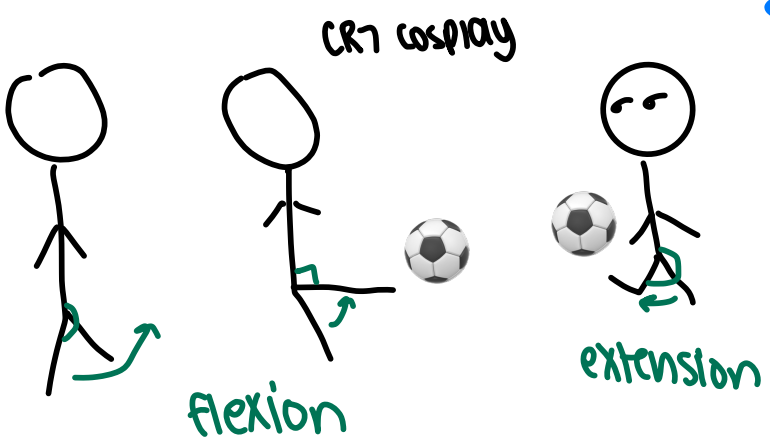
Acetabulum articulates with head of femur

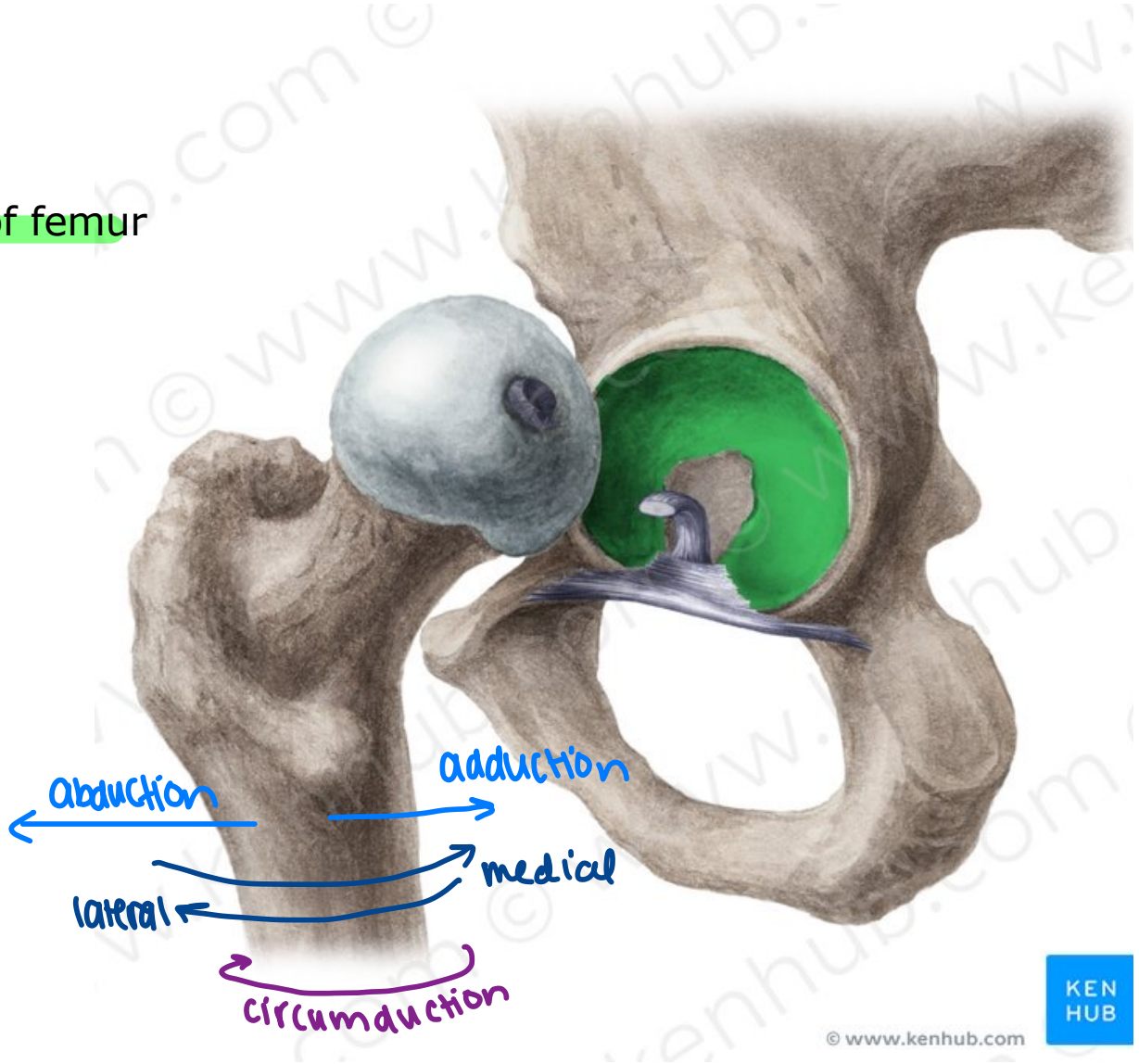
Type :

Ball and socket synovial joint

Movement :

1. Flexion and extension
2. Abduction and adduction
3. Medial and lateral rotation
4. Circumduction

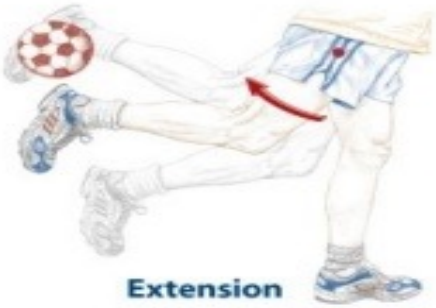




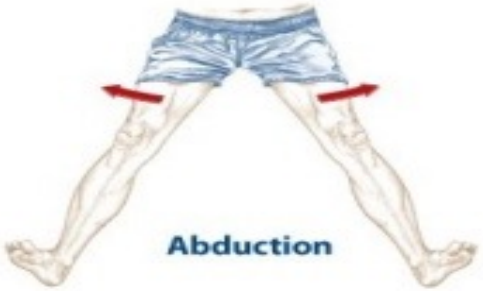
Hip

(coxal joint)

Flexion



Extension



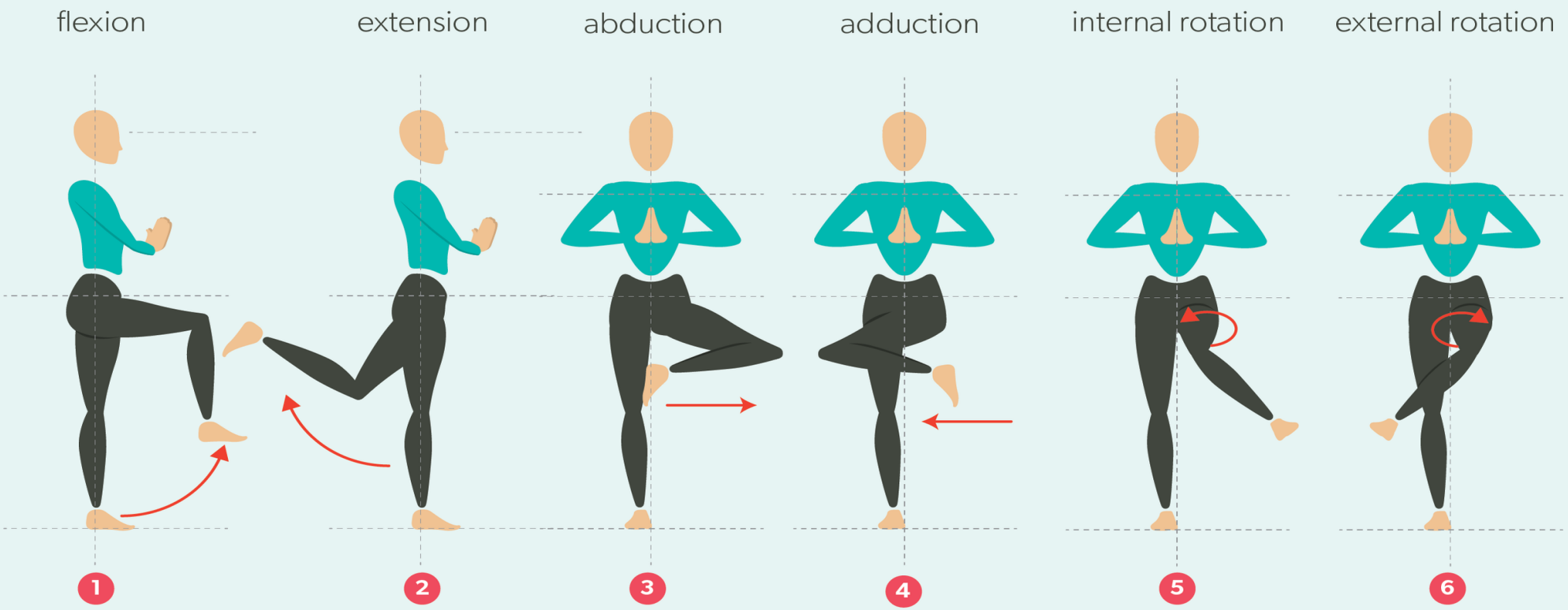
Abduction

Adduction

Medial rotation
(internal rotation)

Lateral rotation
(external rotation)

ANATOMY 101 | HIP MOVEMENTS



Ligaments:

1- Iliofemoral Ligament :

ilia + femur

It prevent overextension of the hip during standing

2-Pubofemoral Ligament :

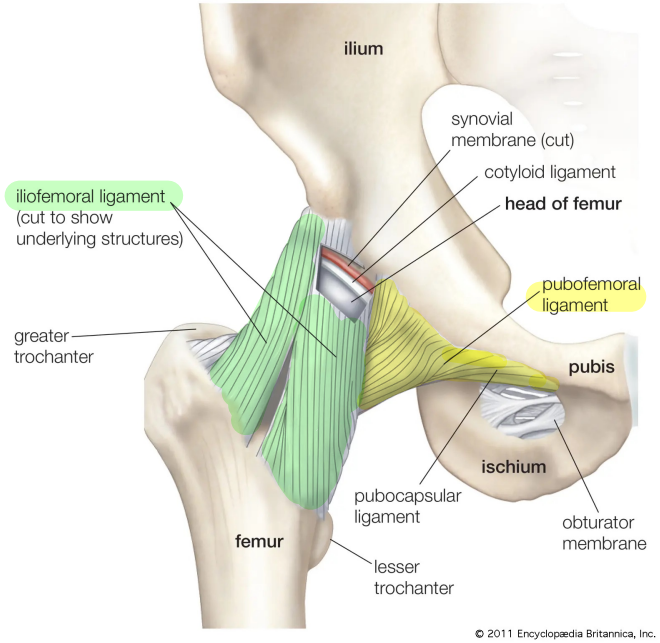
pubis + femur

It limits extension and abduction

3-Ischiofemoral Ligament:

ischial + femur

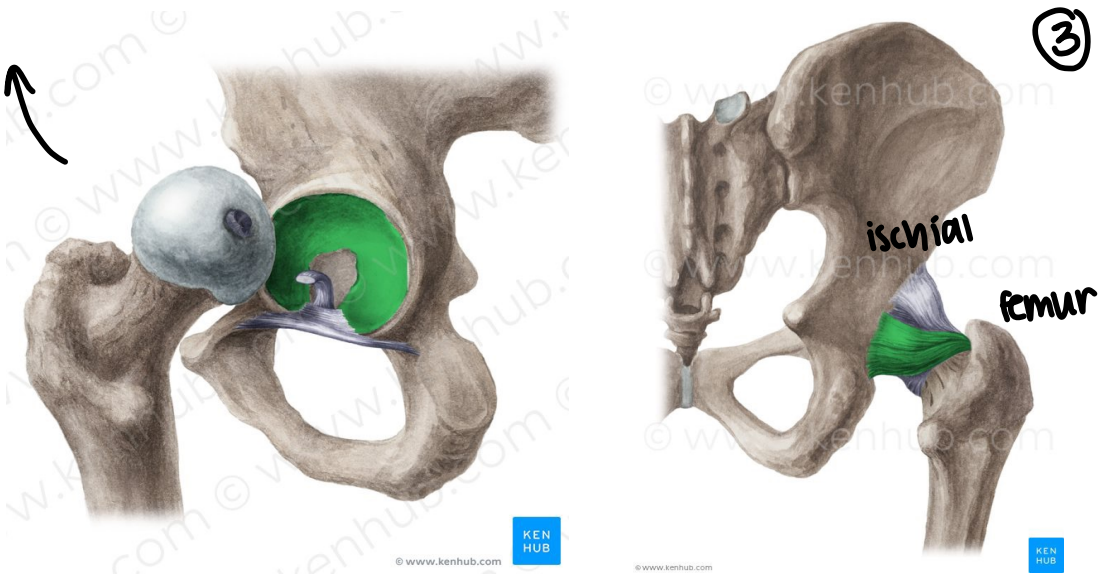
It limits extension

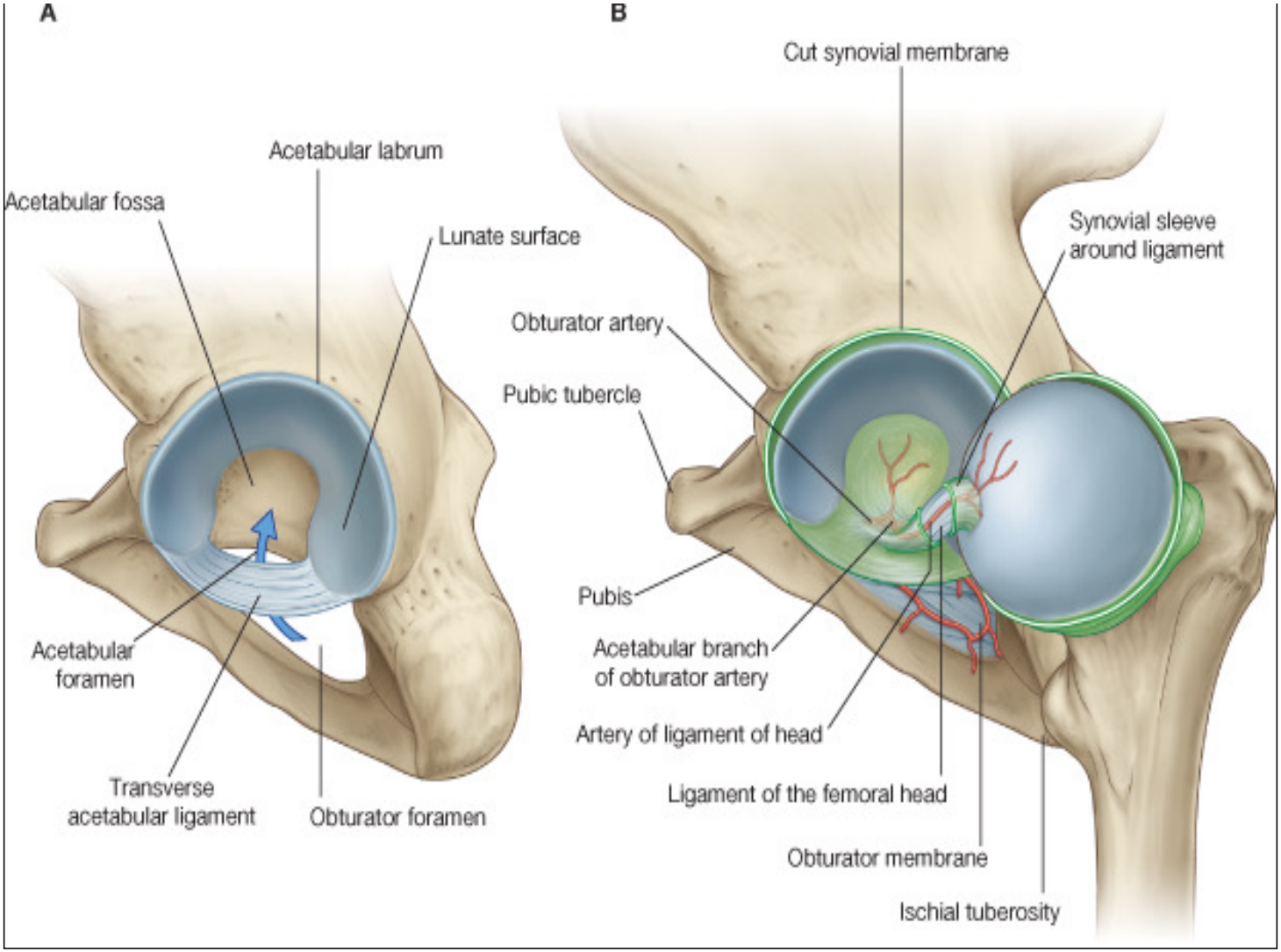


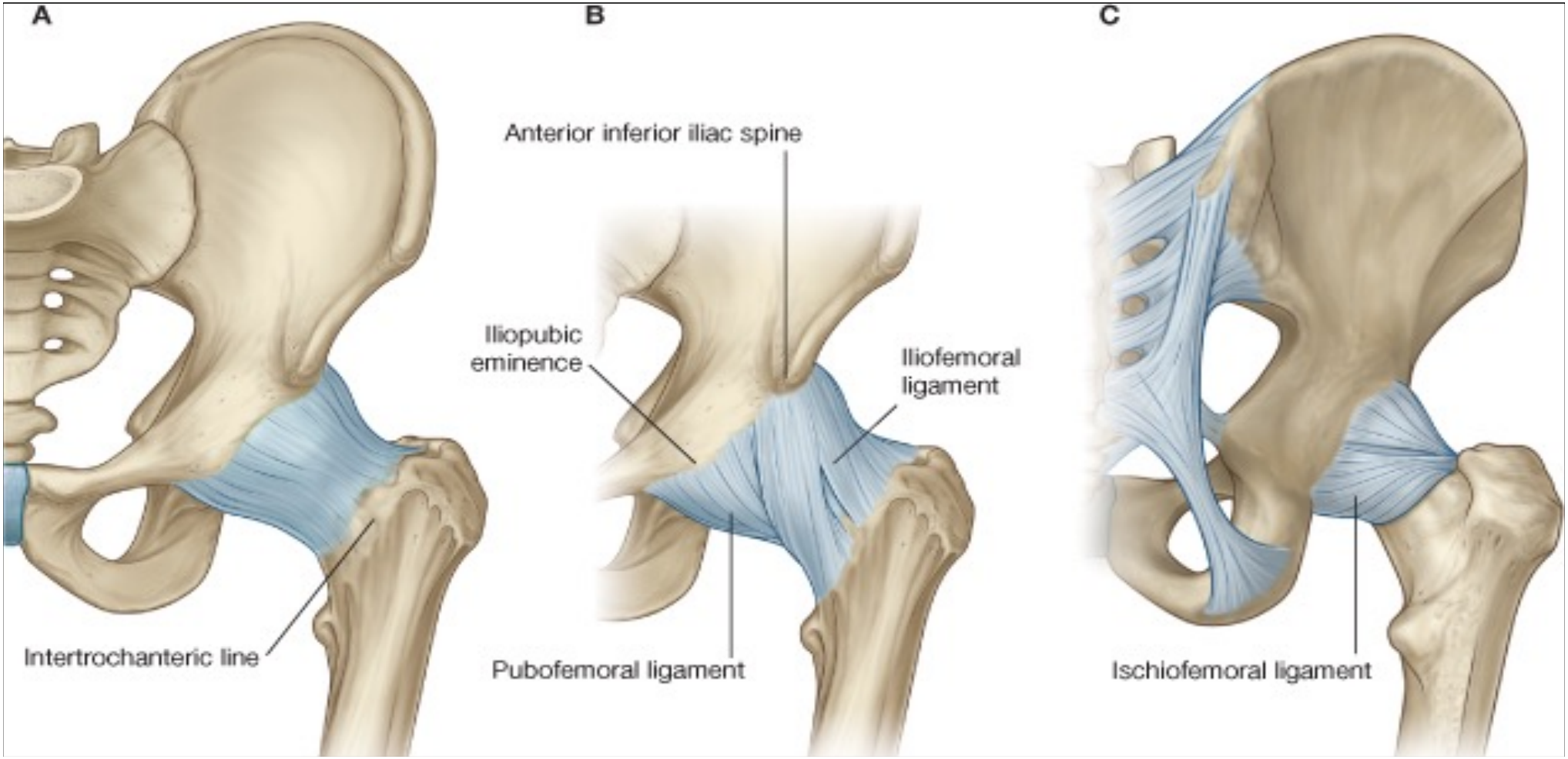
4-Ligament of the head of the femur :

is attached to a fovea on the head of the femur and sides of the acetabular notch.

It transmits blood supply for the head

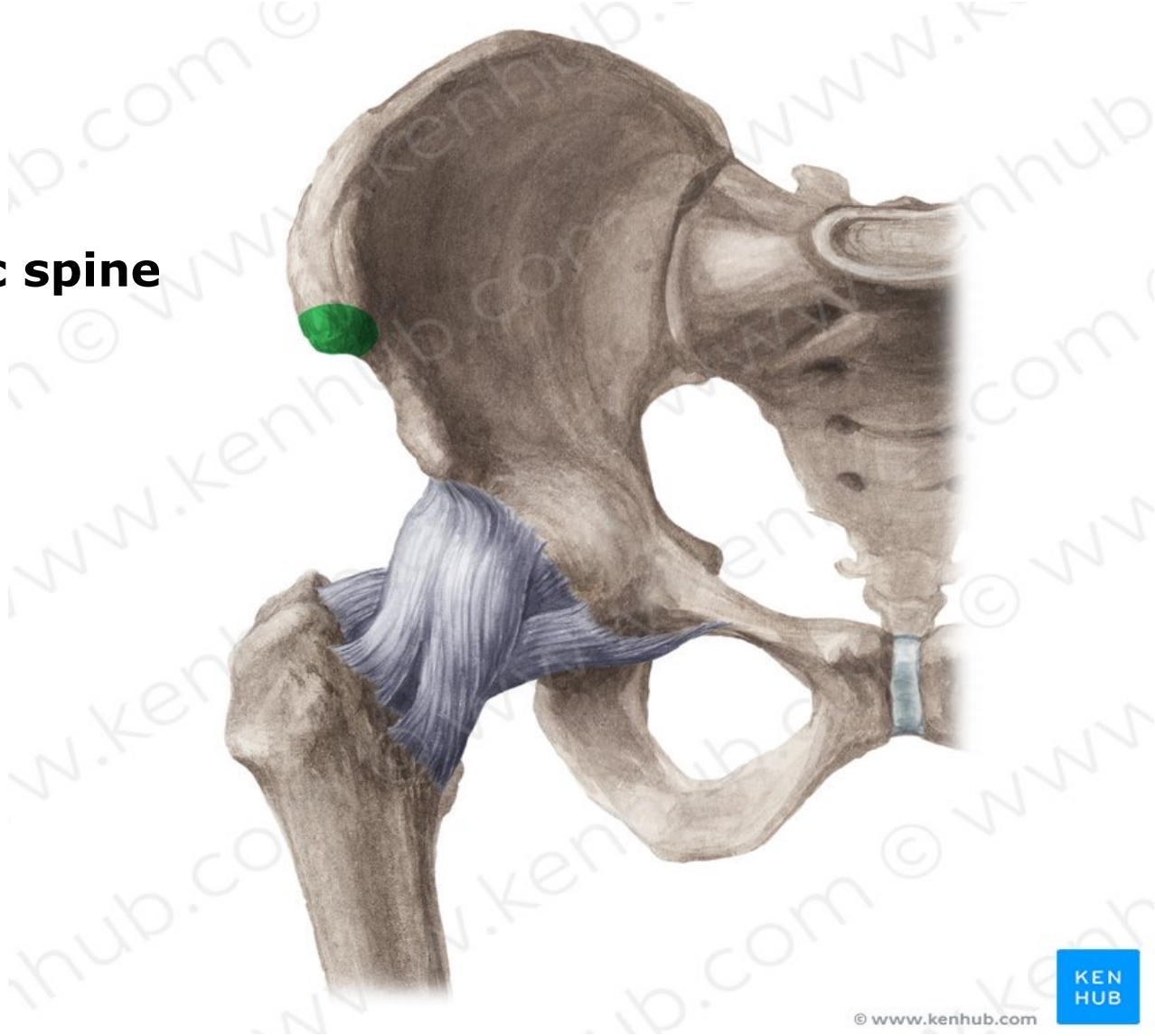



A
Acetabular labrum
Acetabular fossa
Lunate surface
Acetabular foramen
Transverse acetabular ligament
Obturator foramen
B
Cut synovial membrane
Synovial sleeve around ligament
Obturator artery
Pubic tubercle
Pubis
Acetabular branch of obturator artery
Artery of ligament of head
Ligament of the femoral head
Obturator membrane
Ischial tuberosity

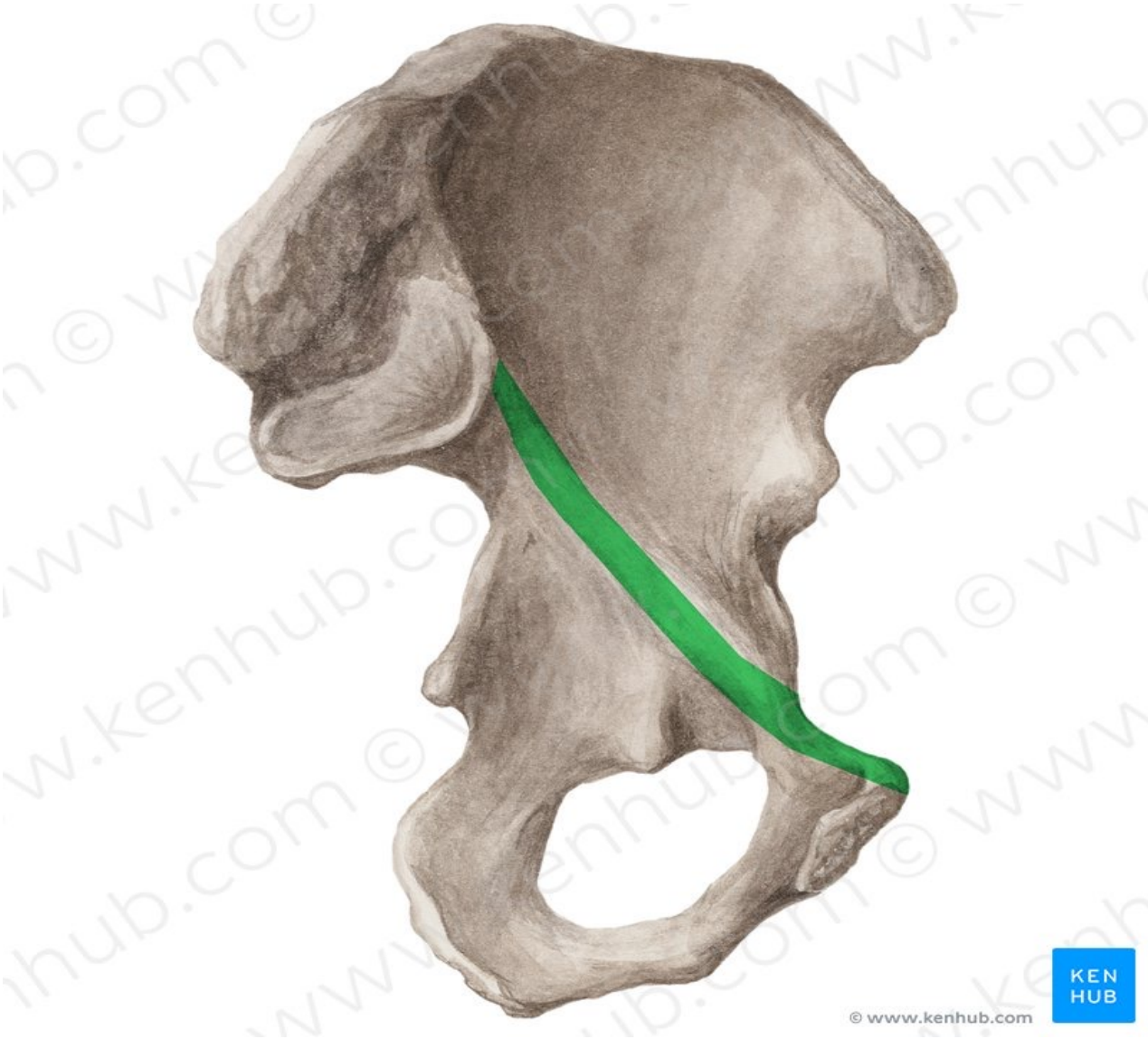

A
B
C
Anterior inferior iliac spine
Iliopubic eminence
Iliofemoral ligament
Intertrochanteric line
Pubofemoral ligament
Ischiofemoral ligament

TEST YOUR KNOELDGE

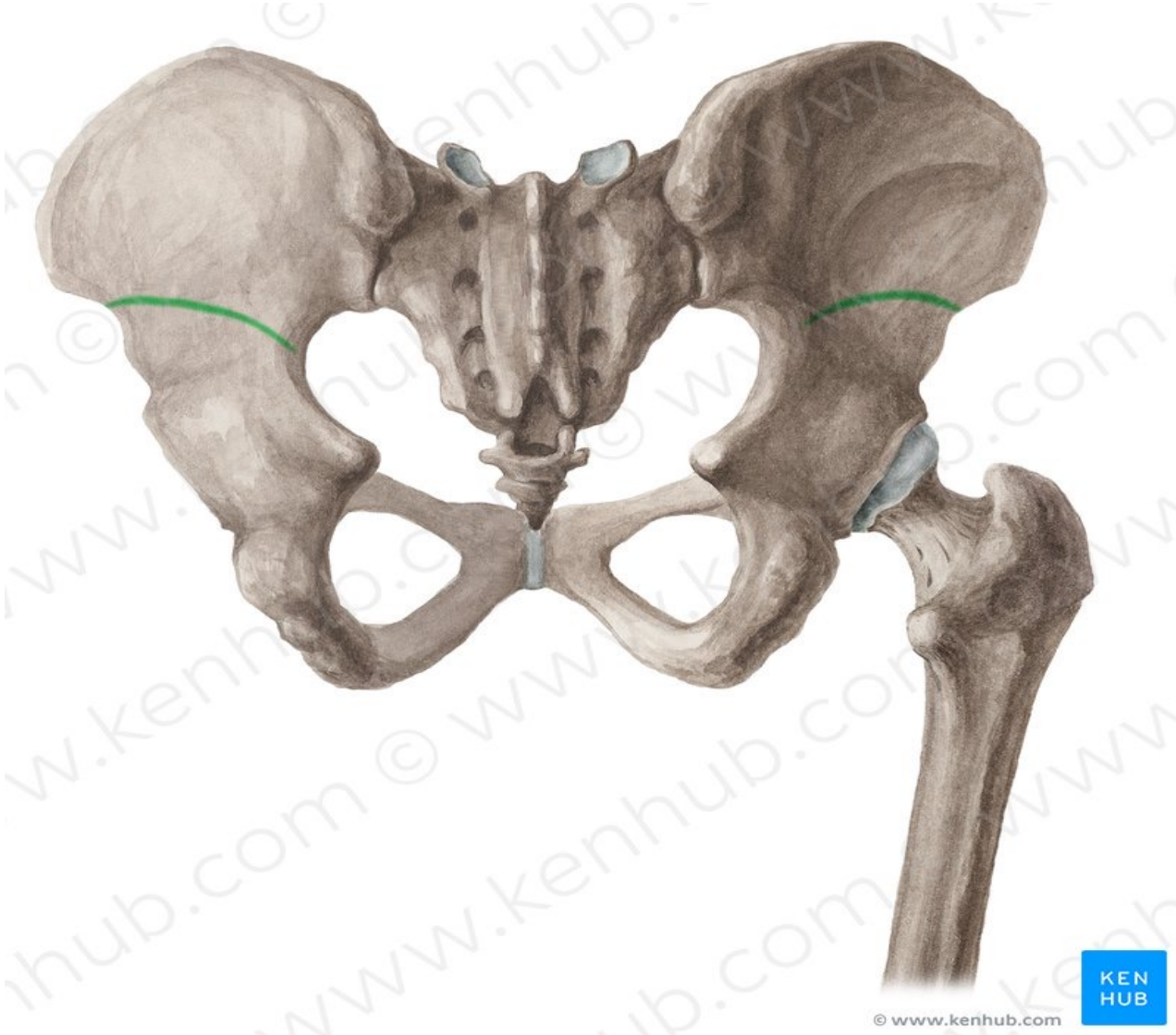
Anterior superior iliac spine



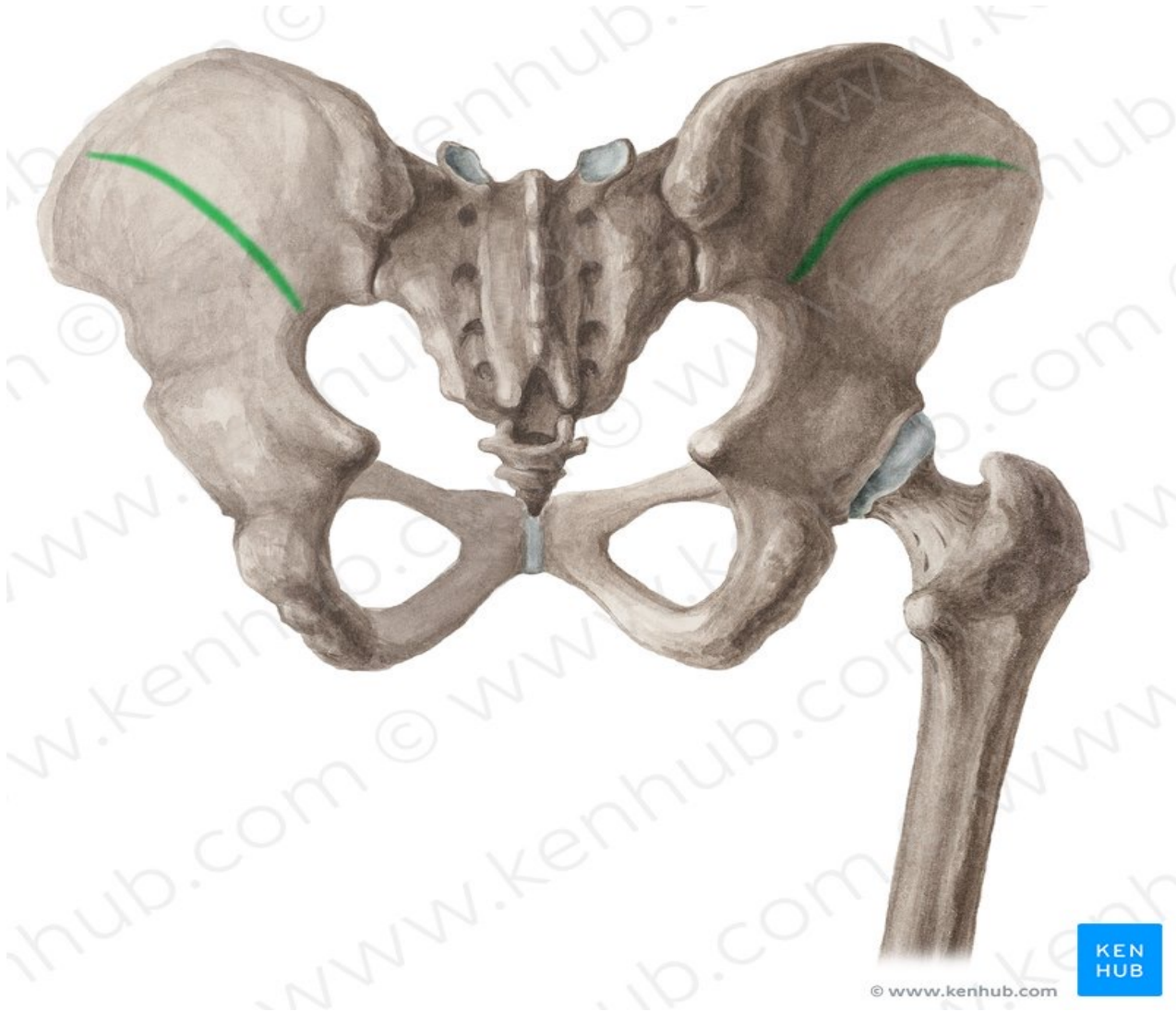
Arcuate line



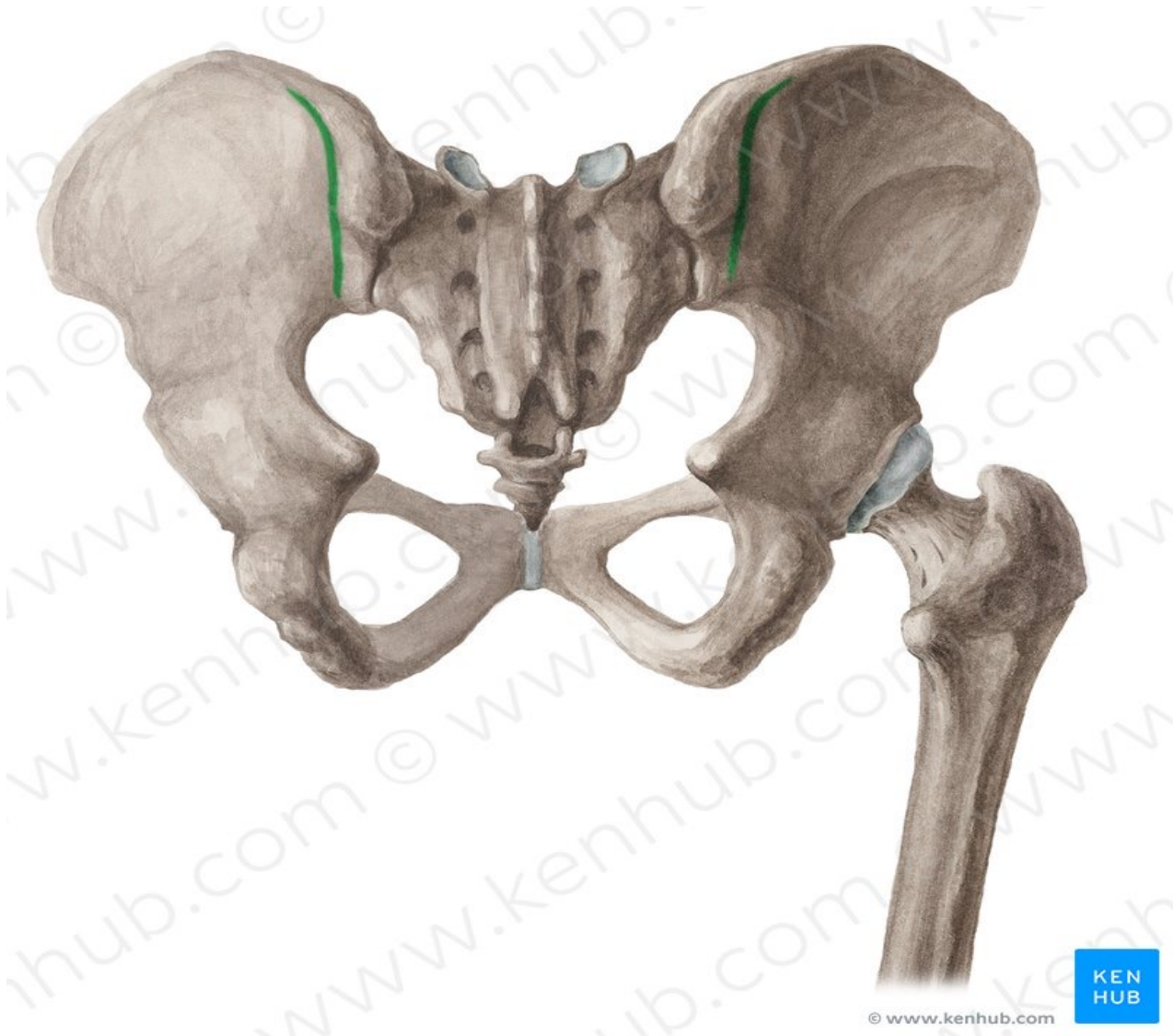
Inferior Gluteal line



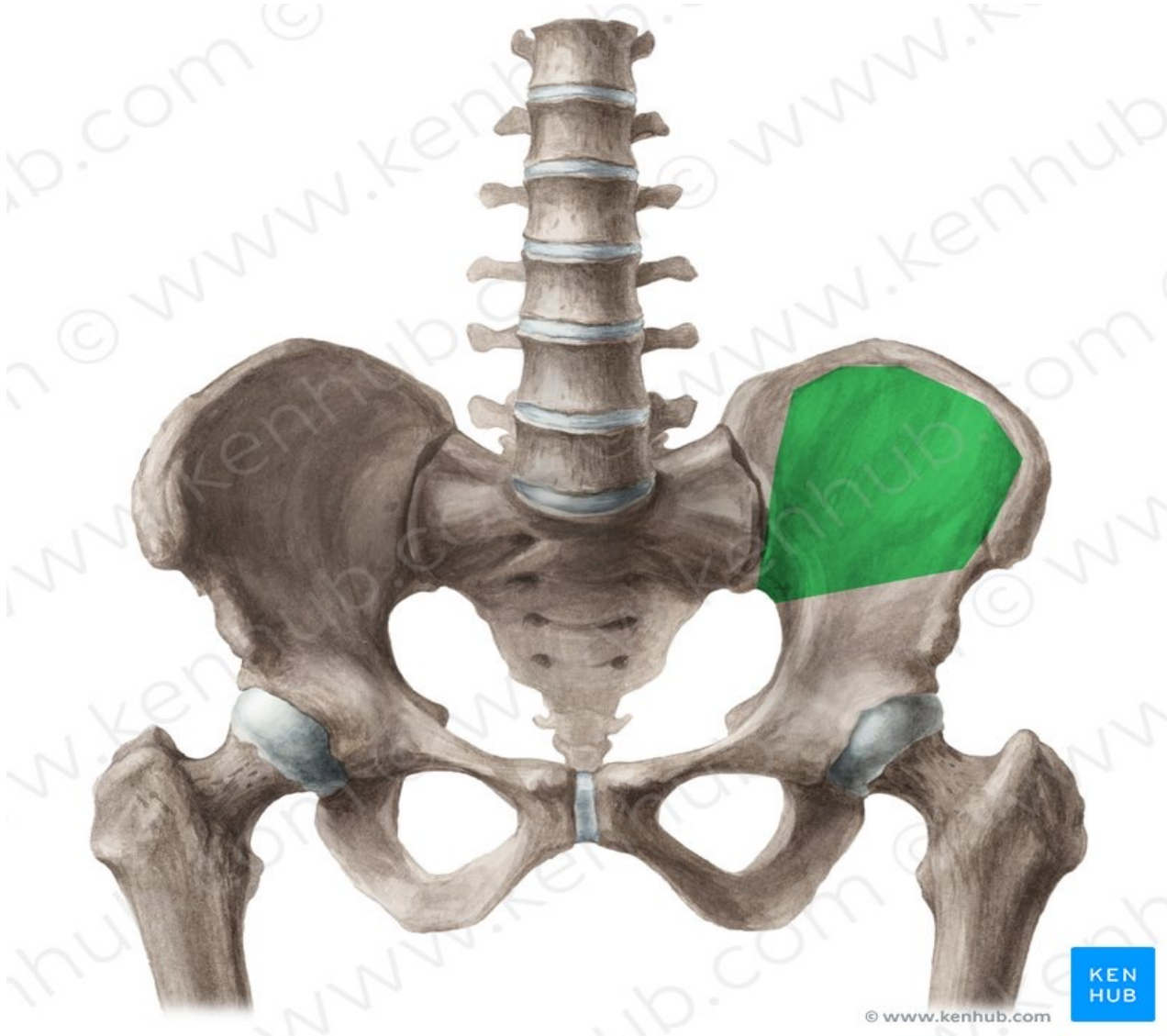
Middle Gluteal line



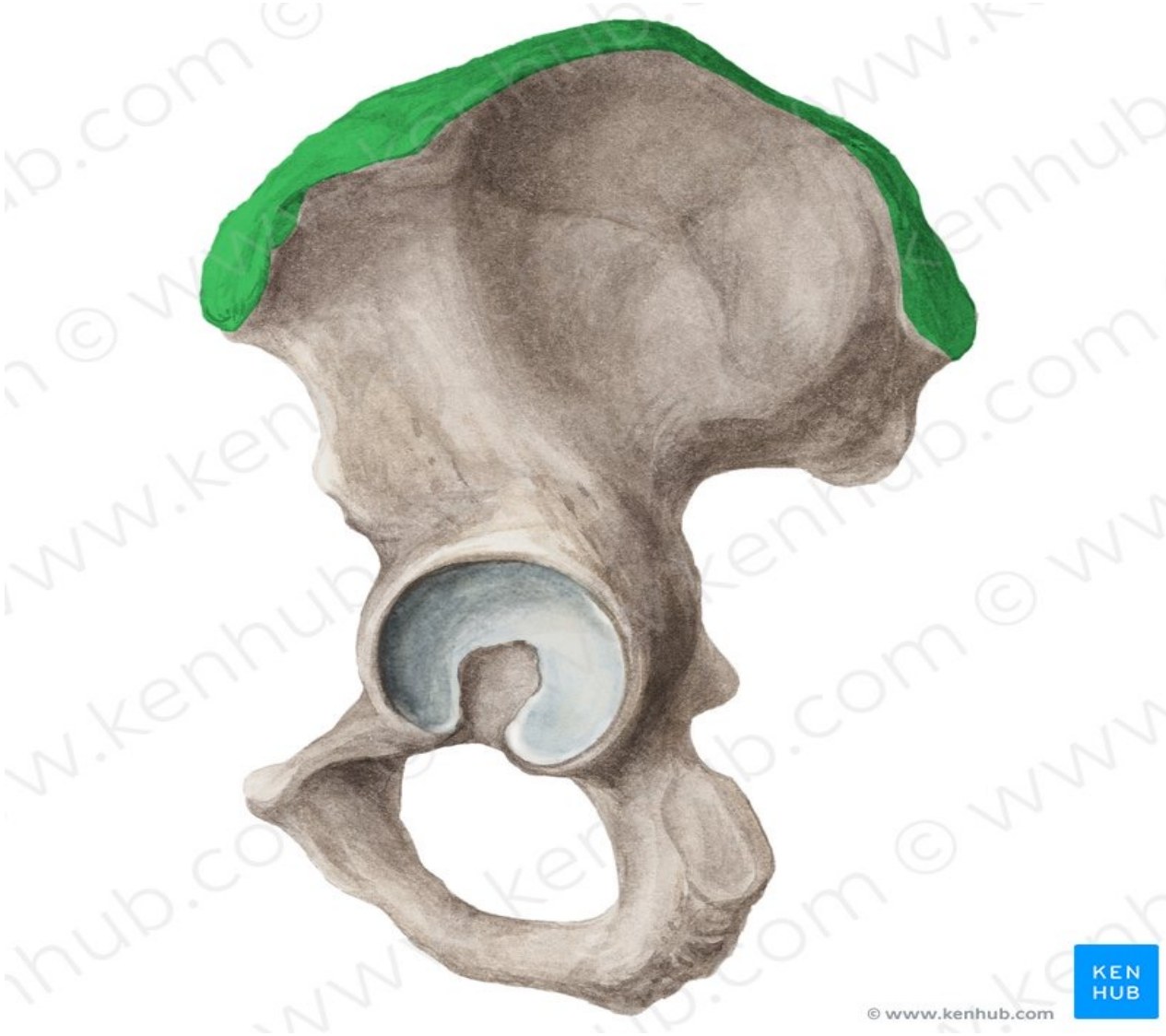
Posterior Gluteal line



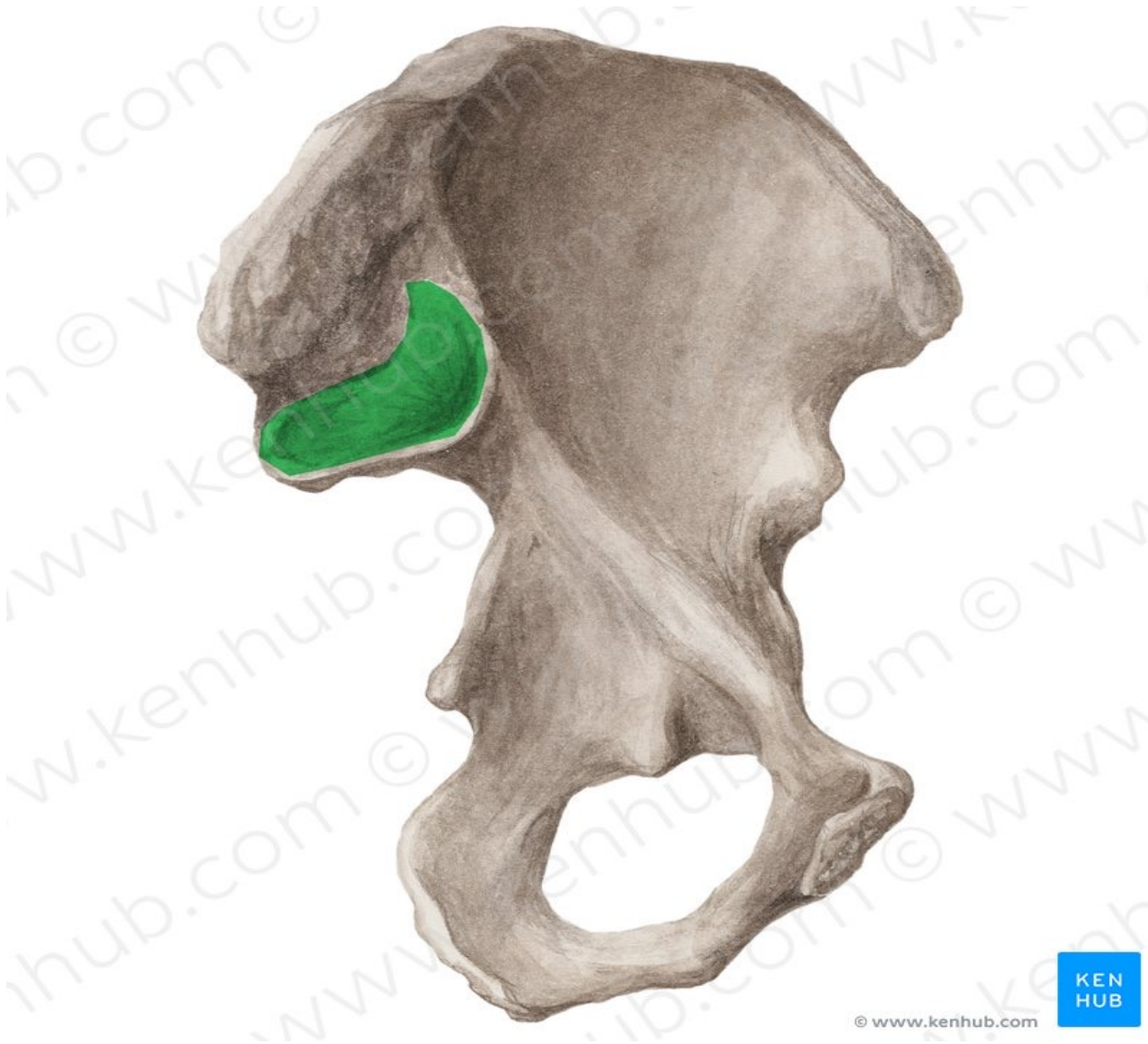
Iliac Fossa



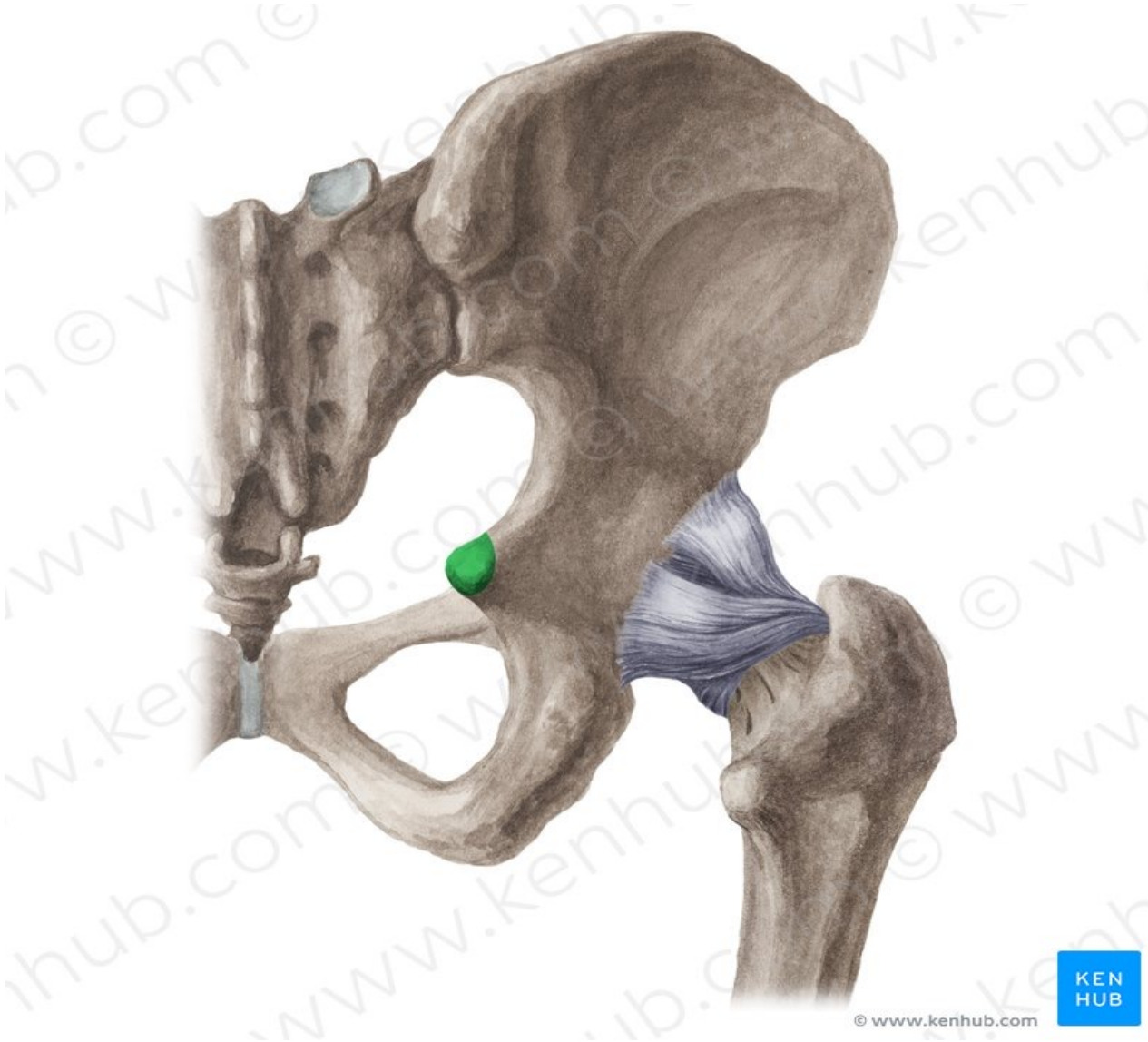
Iliac crest



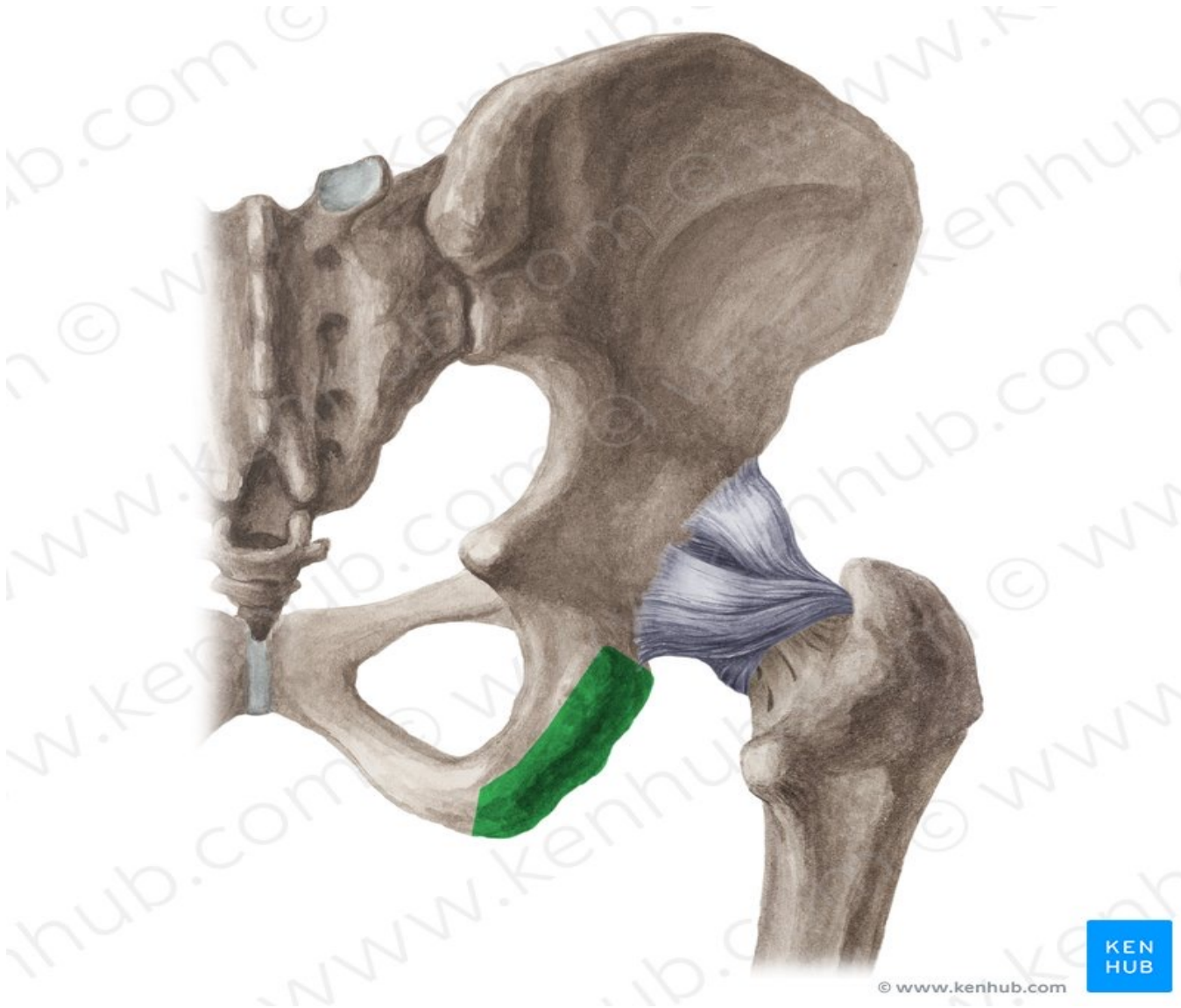
Auricular surface



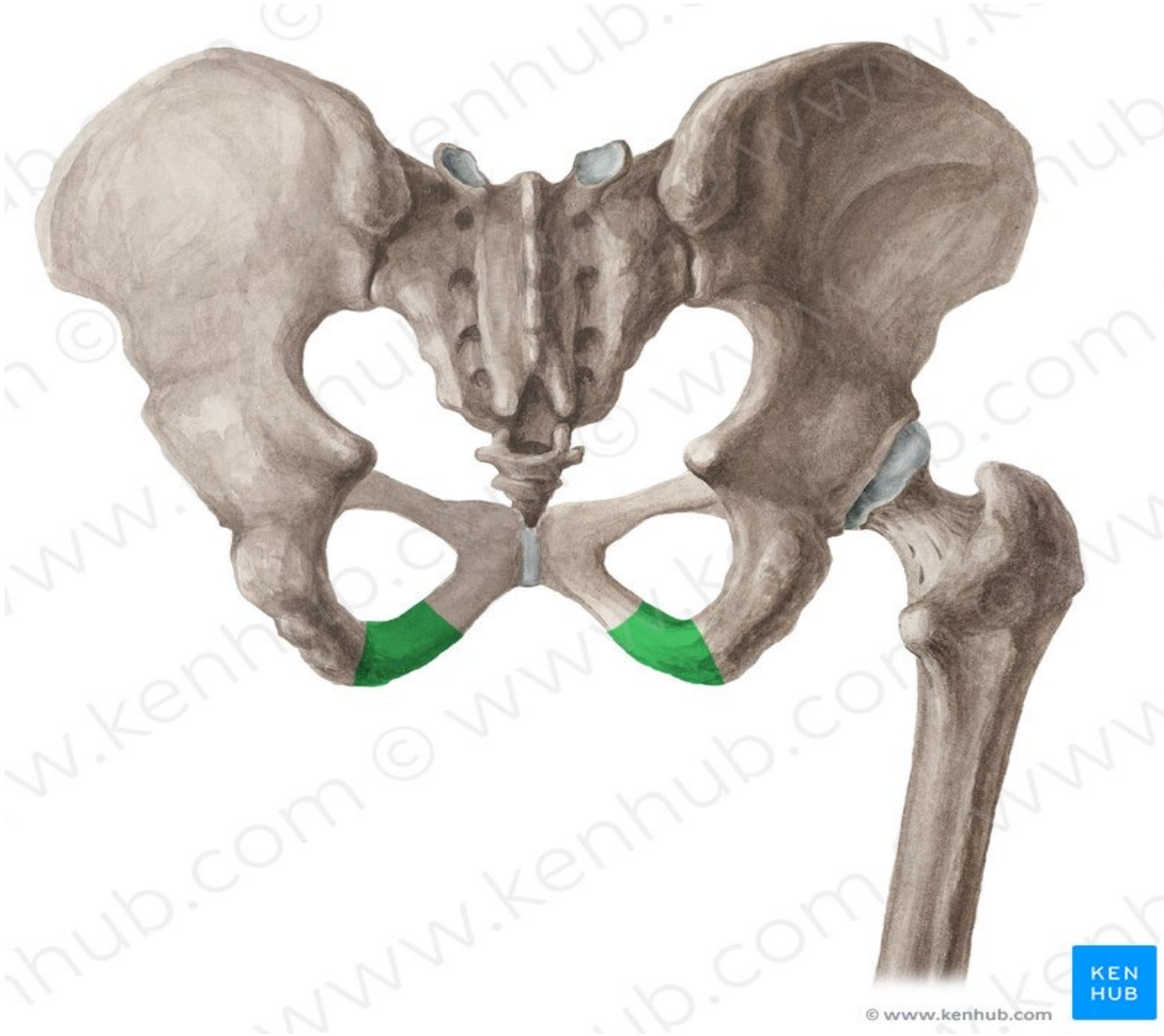
Ischial spine



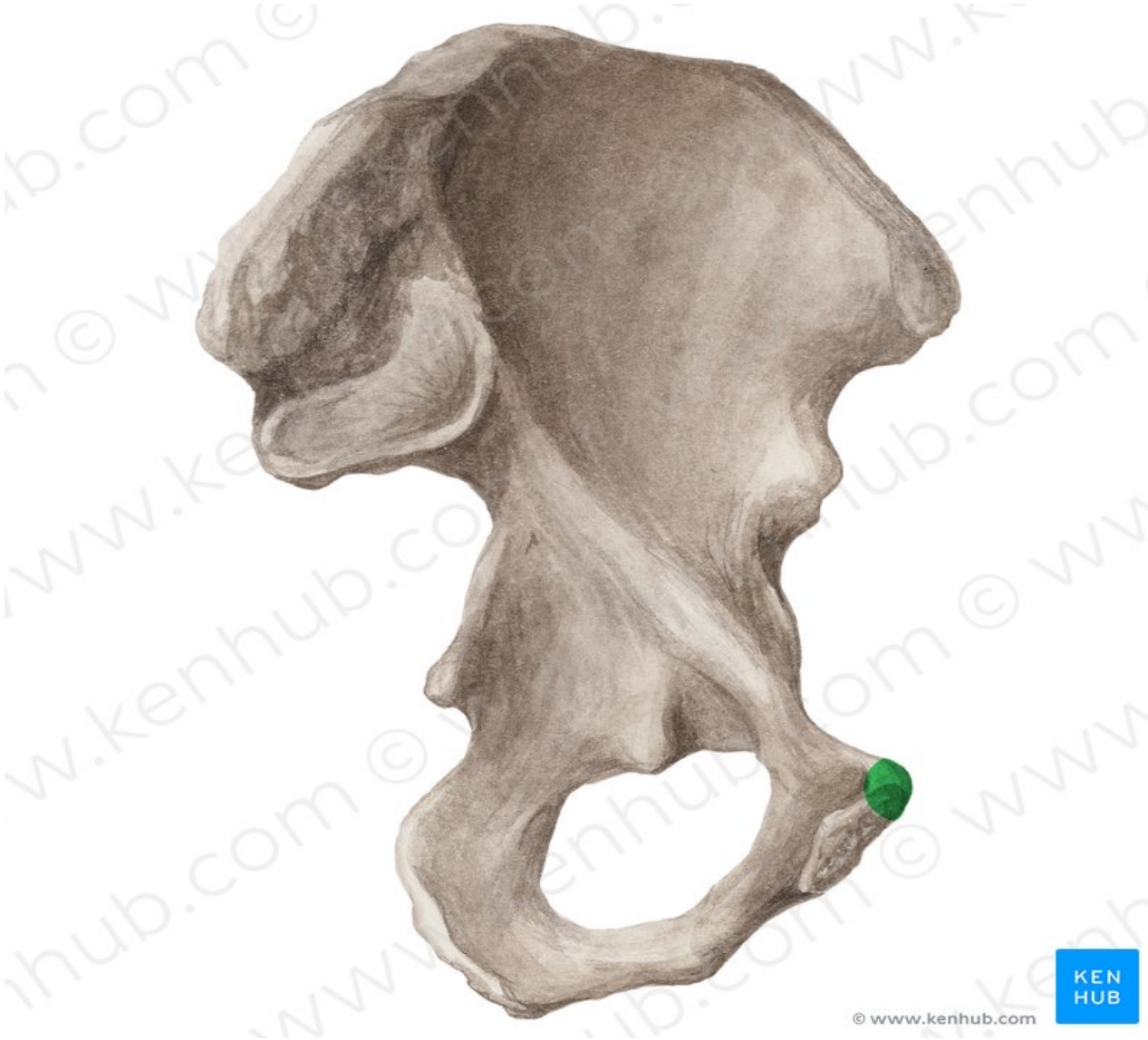
Ischial Tuberosity



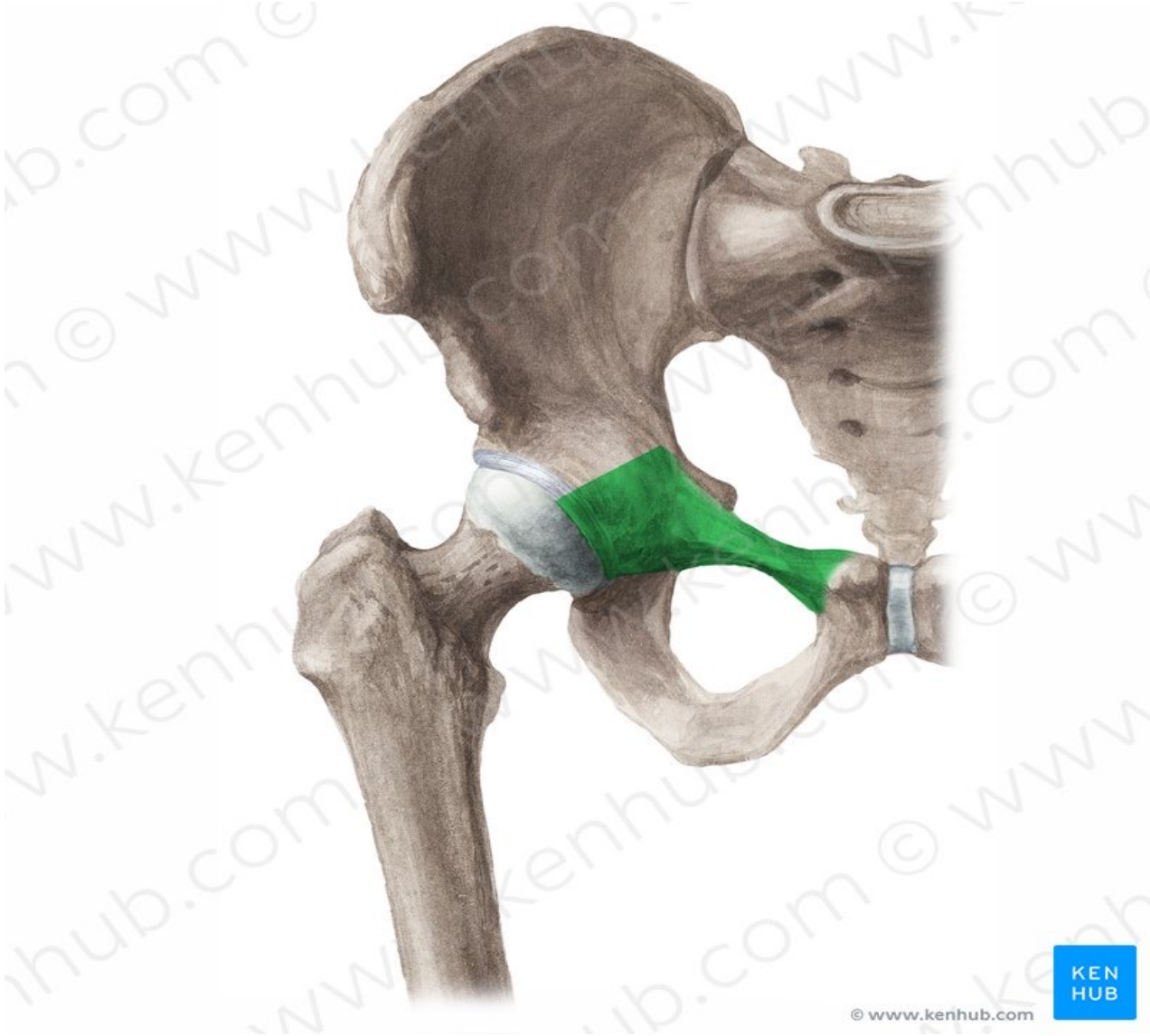
Ischial ramus



Pubic tubercle



Superior pubic ramus



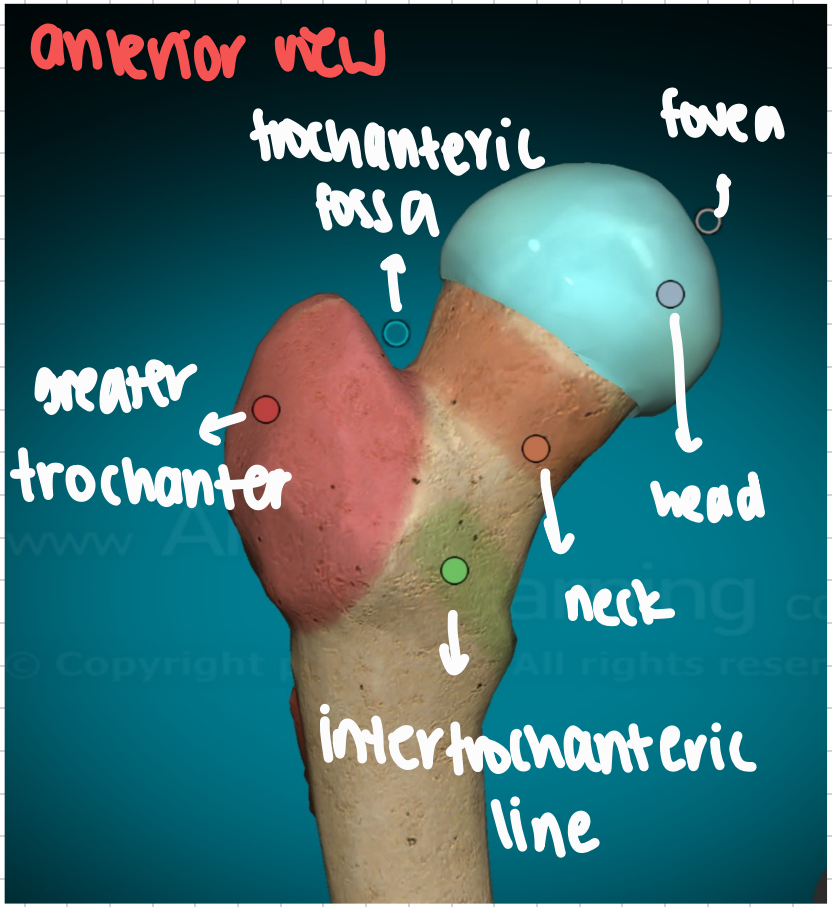
FEMUR

It is the longest & strongest bone in the body. It has :

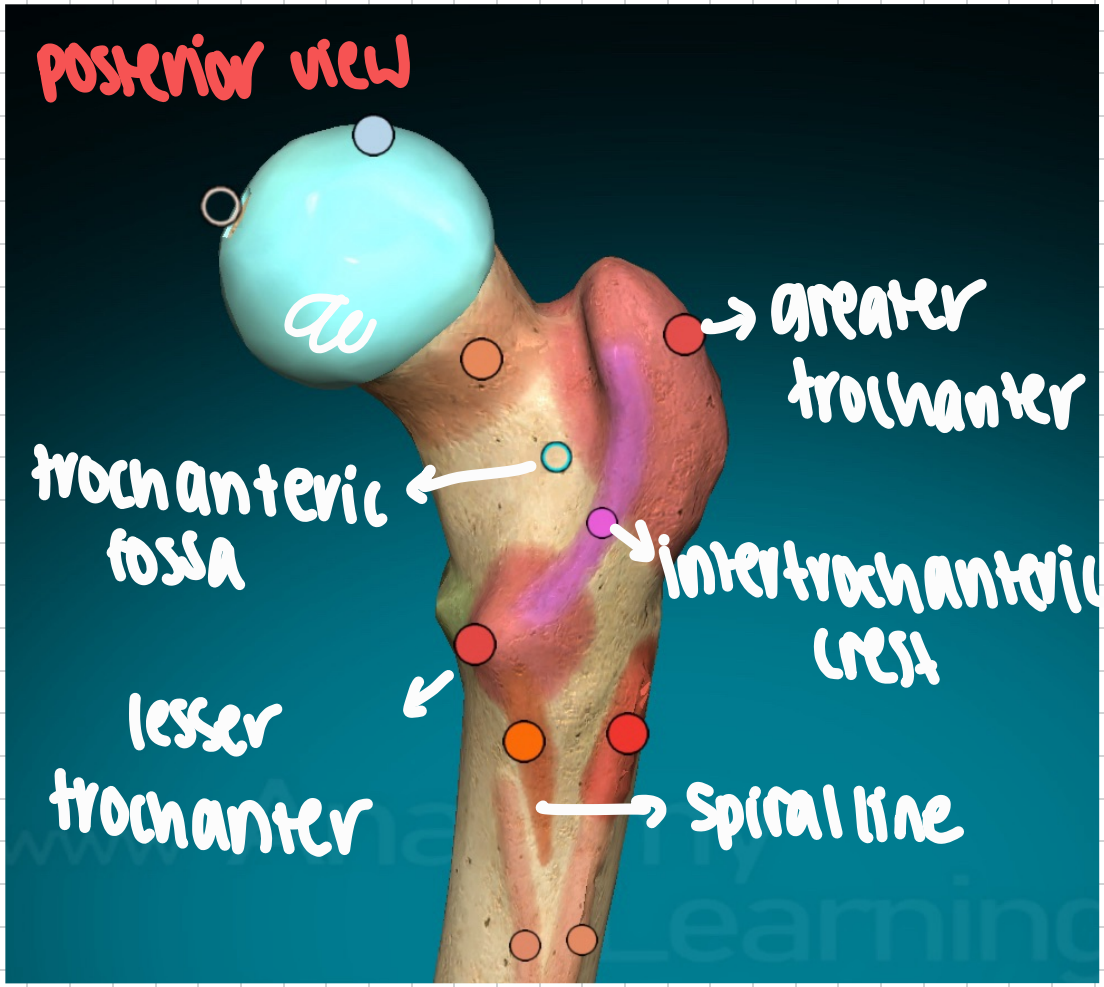
1. Upper end: consists of

- ***Head*** (show fovea) and ***neck*** .
- ***Greater trochanter*** (Its medial surface shows ***trochanteric fossa*** *)*
- ***Lesser trochanter***
- ***Intertrochanteric line*** (anterior) & ***intertrochanteric crest*** (posterior) between greater and lesser trochanter.
- ***Itertrochanteric line*** makes a spiral turn medially, to form the *spiral line*
- The angle between neck and shaft is 125 degree .

upper end


anterior view
trochanteric fossa
fovea
greater trochanter
head
neck
intertrochanteric line


fovea


posterior view
greater trochanter
trochanteric fossa
intertrochanteric crest
lesser trochanter
spiral line

2. Shaft: It presents

* **Anterior surface** convex smooth anteriorly .
* **Posterior surface** show

A. Gluteal tuberosity (lateral)

B. Pectineal line (medial)

C. Spiral line (medial)

} treat them as the same (for now 😔)

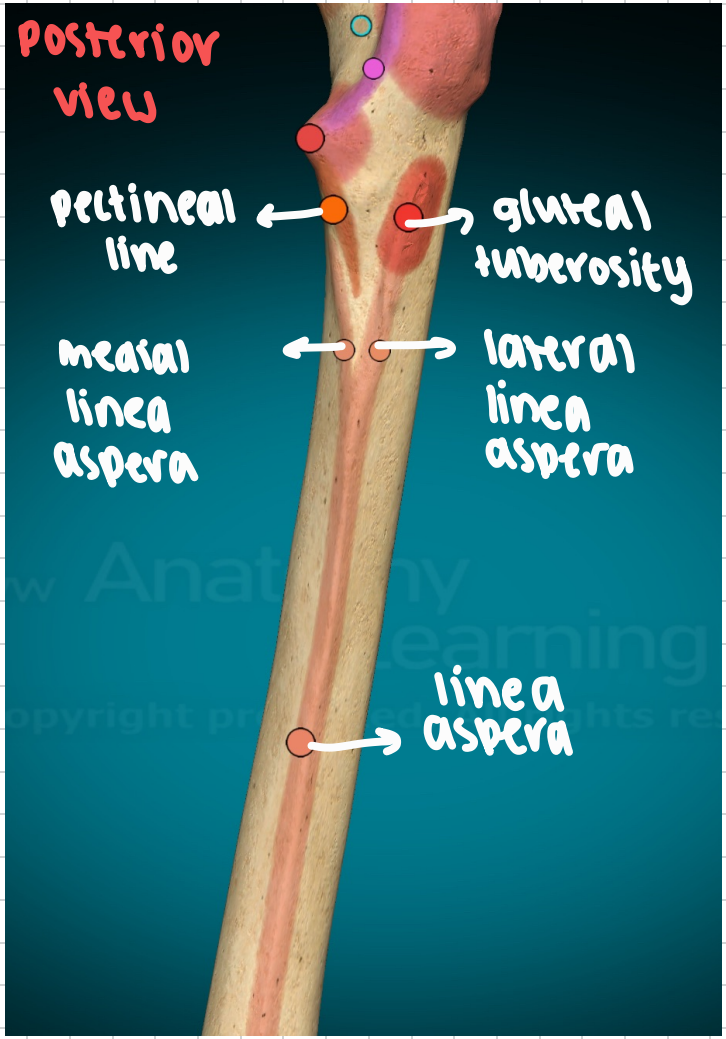
D. Linea aspera (has a medial & lateral lips)

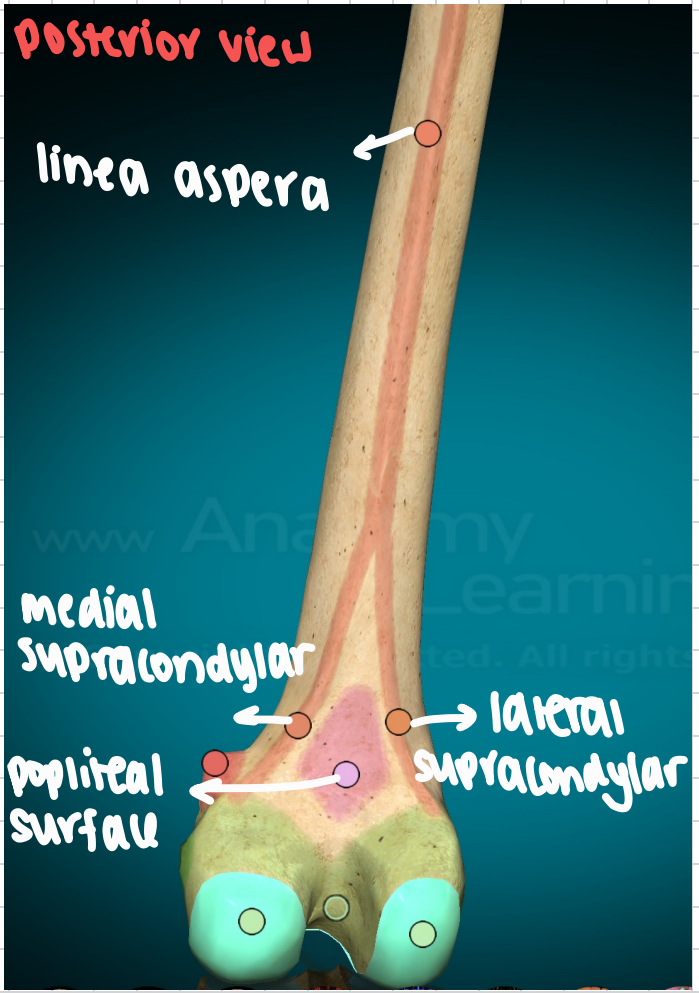
E. Medial & lateral supracondylar ridges

F. Popliteal surface of femur.

SHAFT


shaft
anterior view


posterior view
pectineal line
gluteal tuberosity
medial linea aspera
lateral linea aspera
linea aspera


posterior view
linea aspera
medial supracondylar
lateral supracondylar
popliteal surface

3. Lower end: It has

* **Medial and lateral condyles :**

The Lateral condyle more prominent , and show popliteal groove

The two condyles are fused anteriorly to form a ***patellar surface*** and separated posteriorly to form an ***intercondylar fossa.***

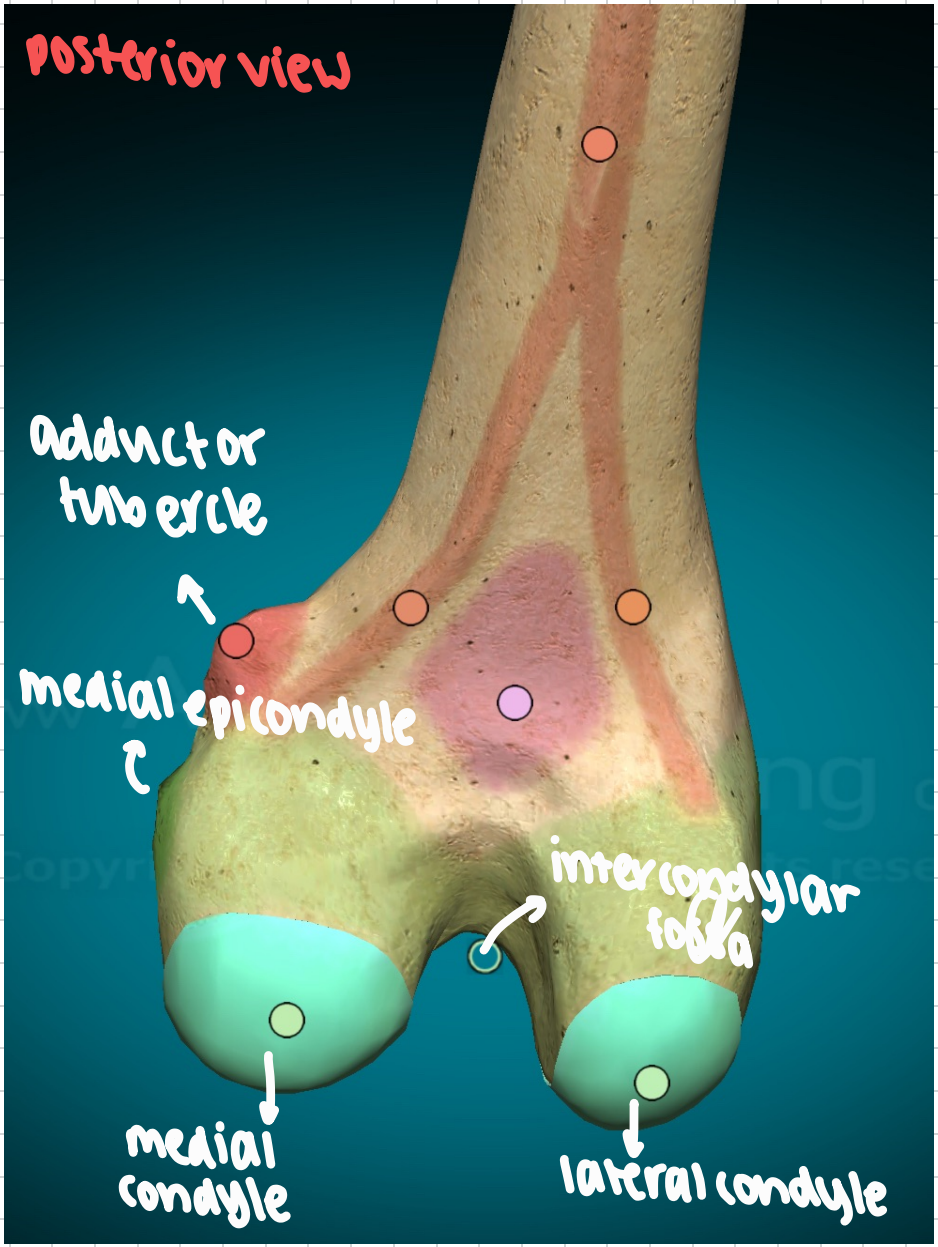
* ***Medial and lateral epicondyles***
* ***Adductor tubercle*** is prominence present at the lower end of the medial supracondylar line.

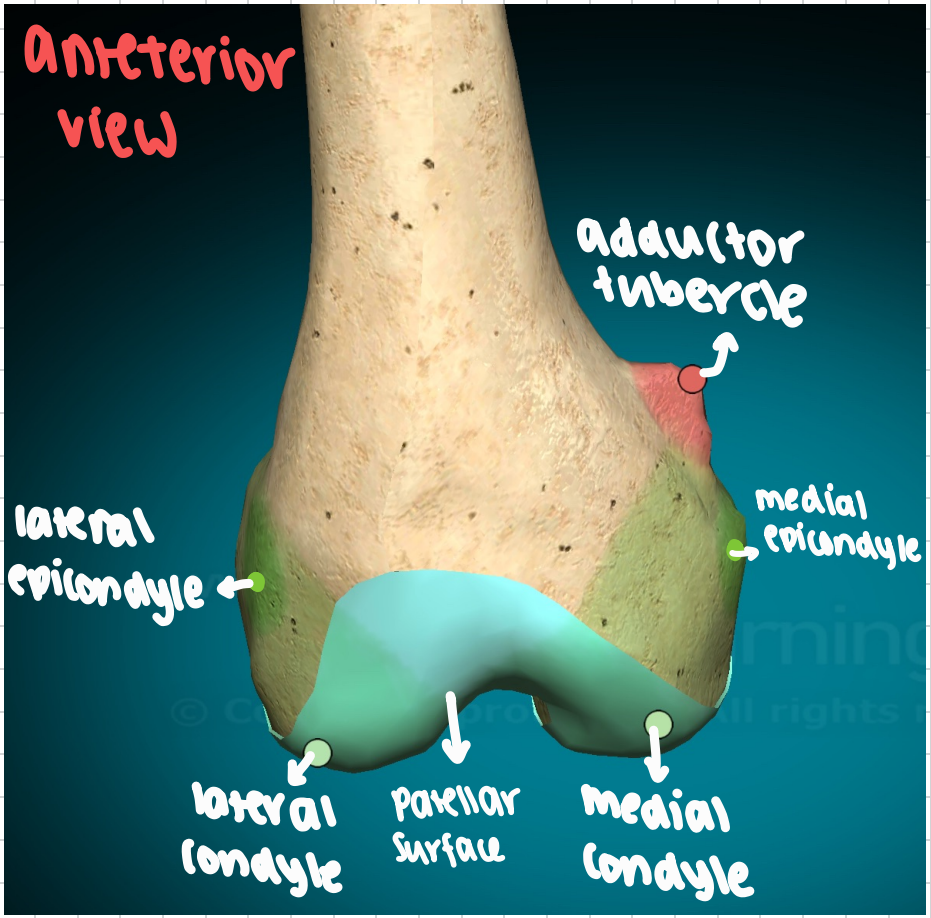
↓

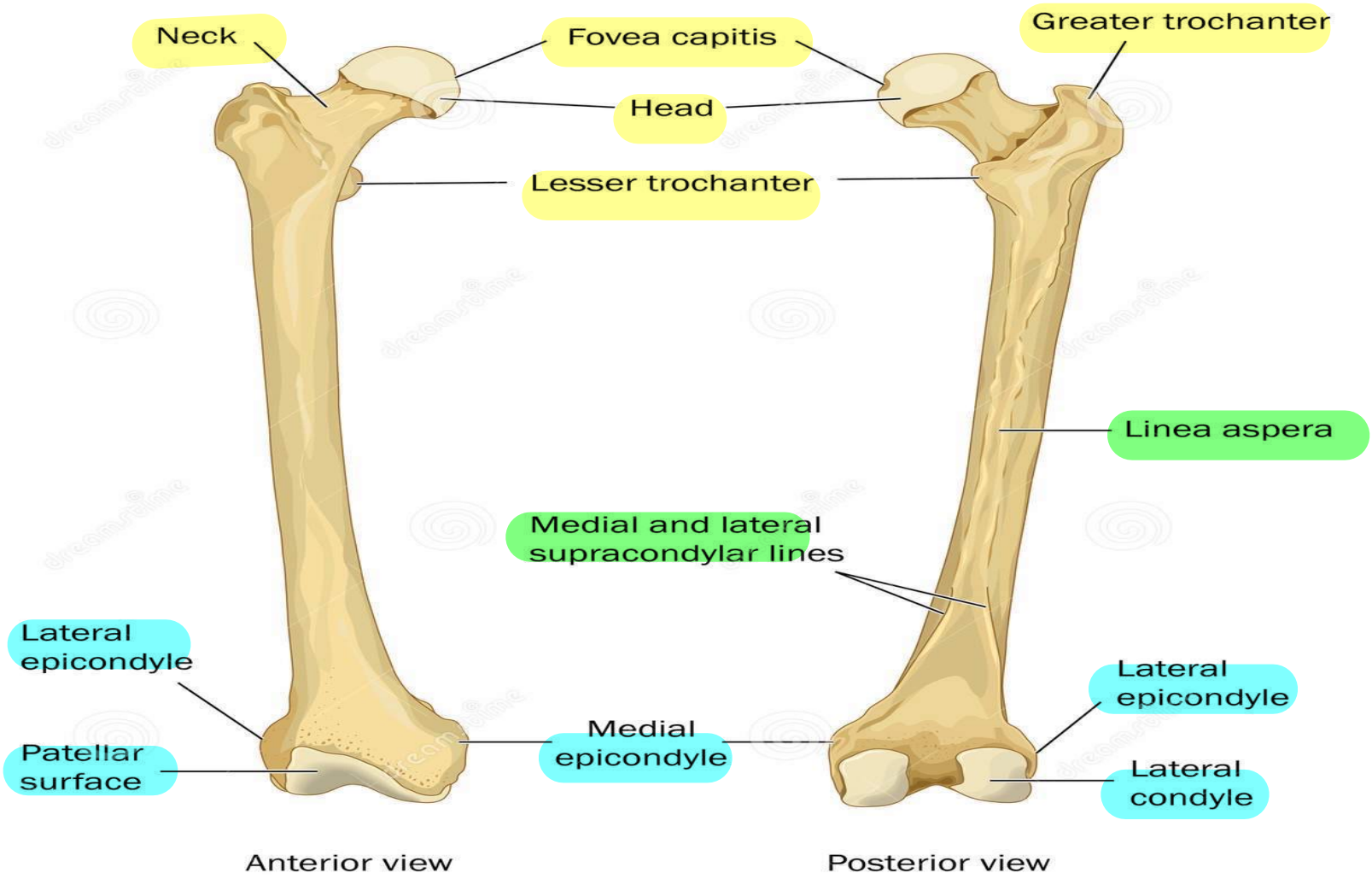
adduction: movement towards the body → medial

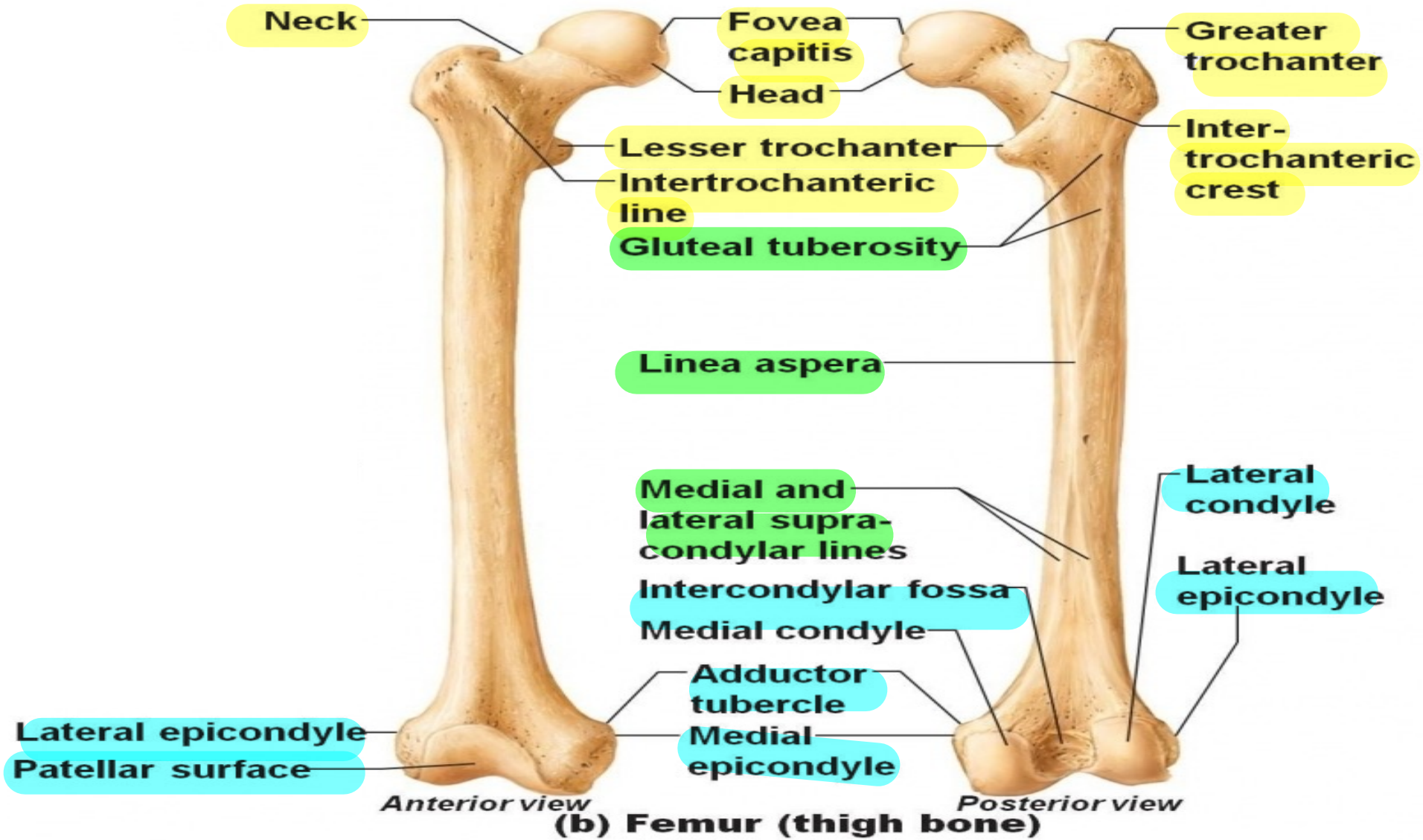
adductor tubercle is on the medial side

lower end

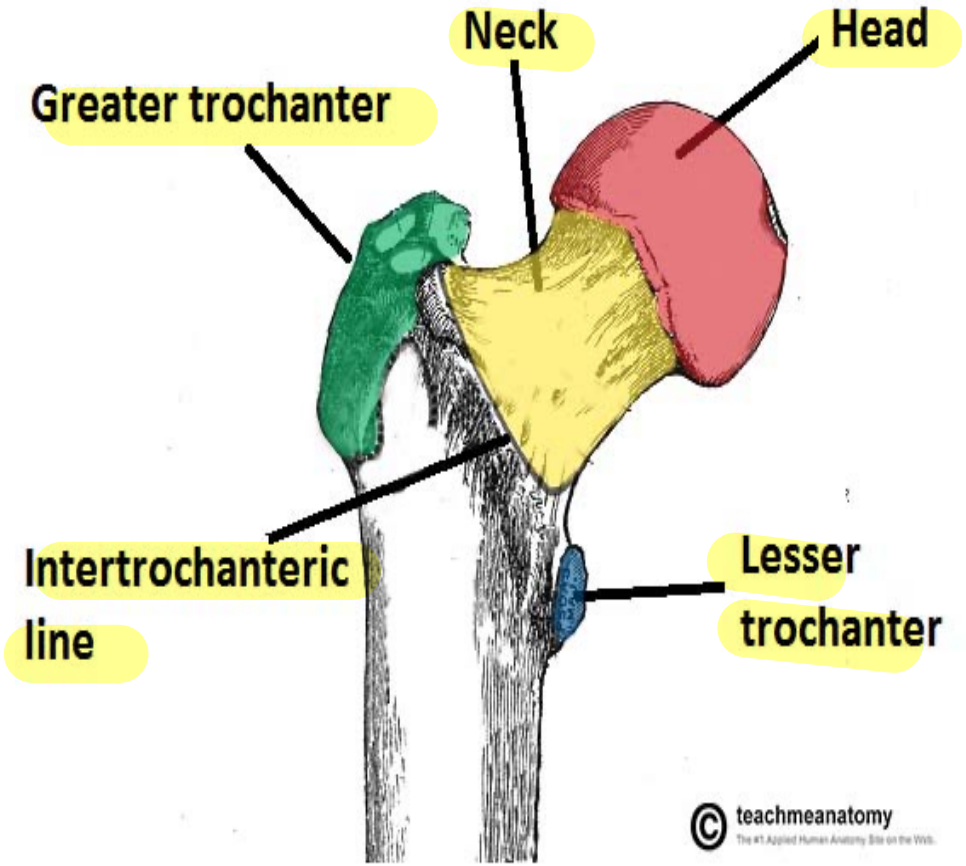

posterior view
adductor tubercle
medial epicondyle
intercondylar fossa
medial condyle
lateral condyle


anterior view
adductor tubercle
lateral epicondyle
medial epicondyle
lateral condyle
patellar surface
medial condyle

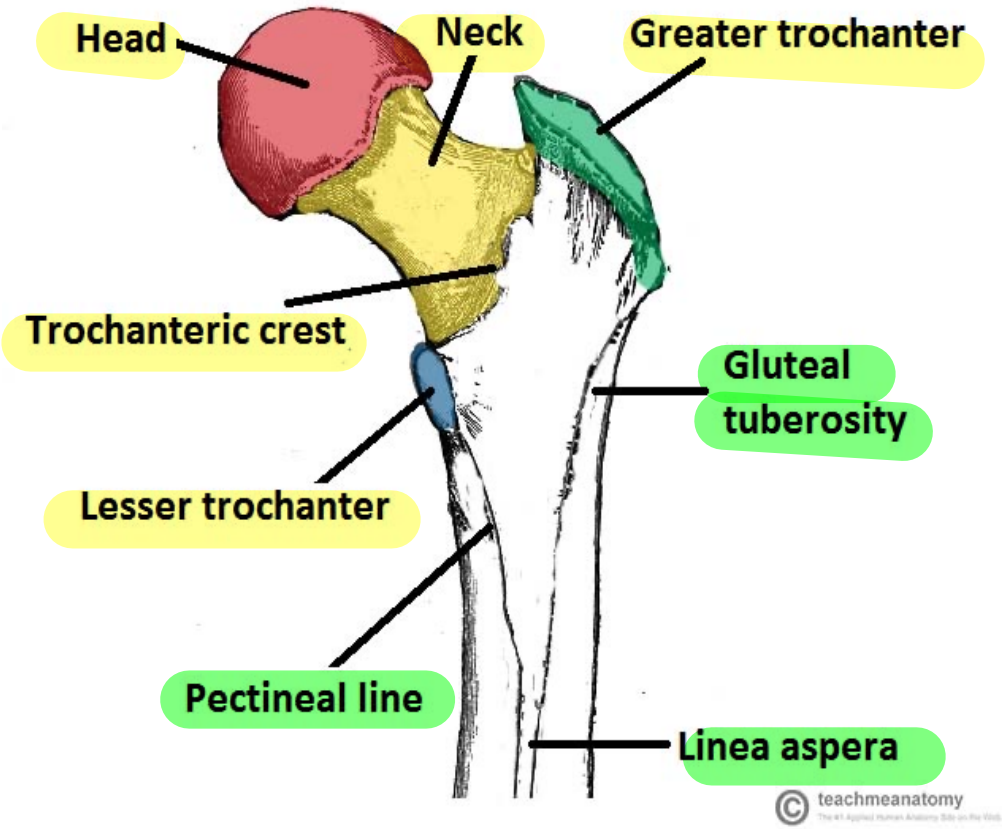




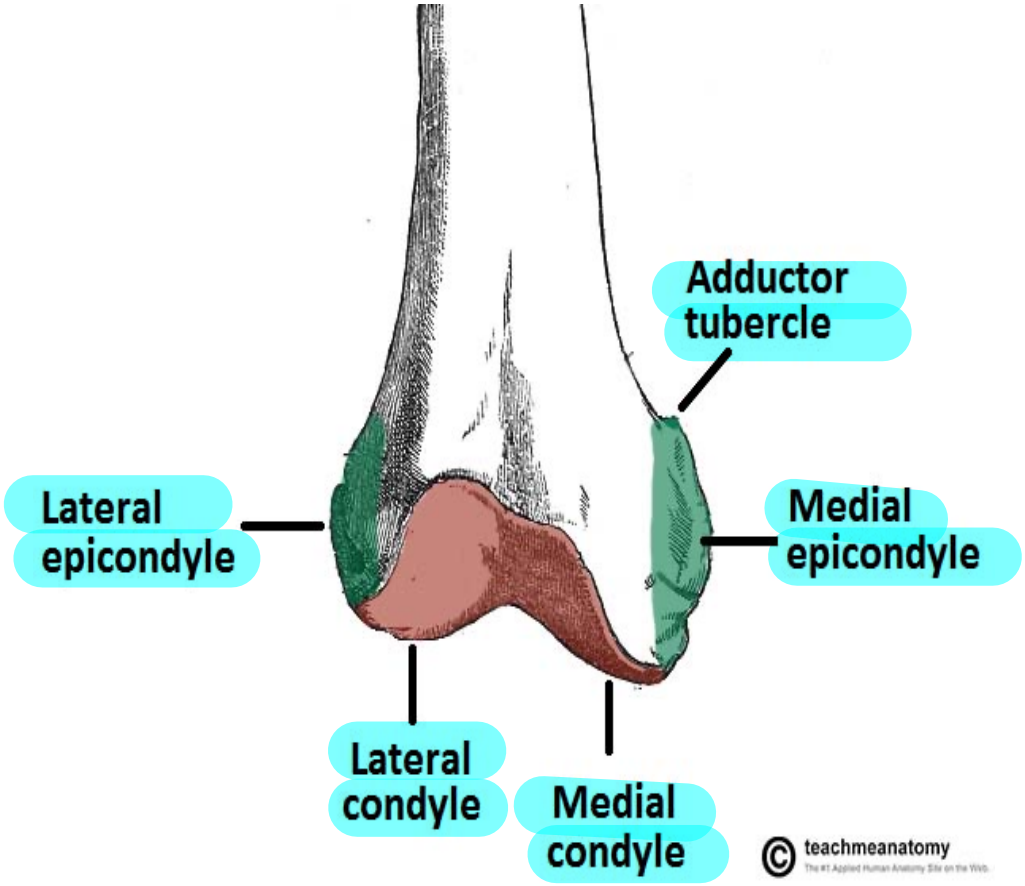
(b) Femur (thigh bone)



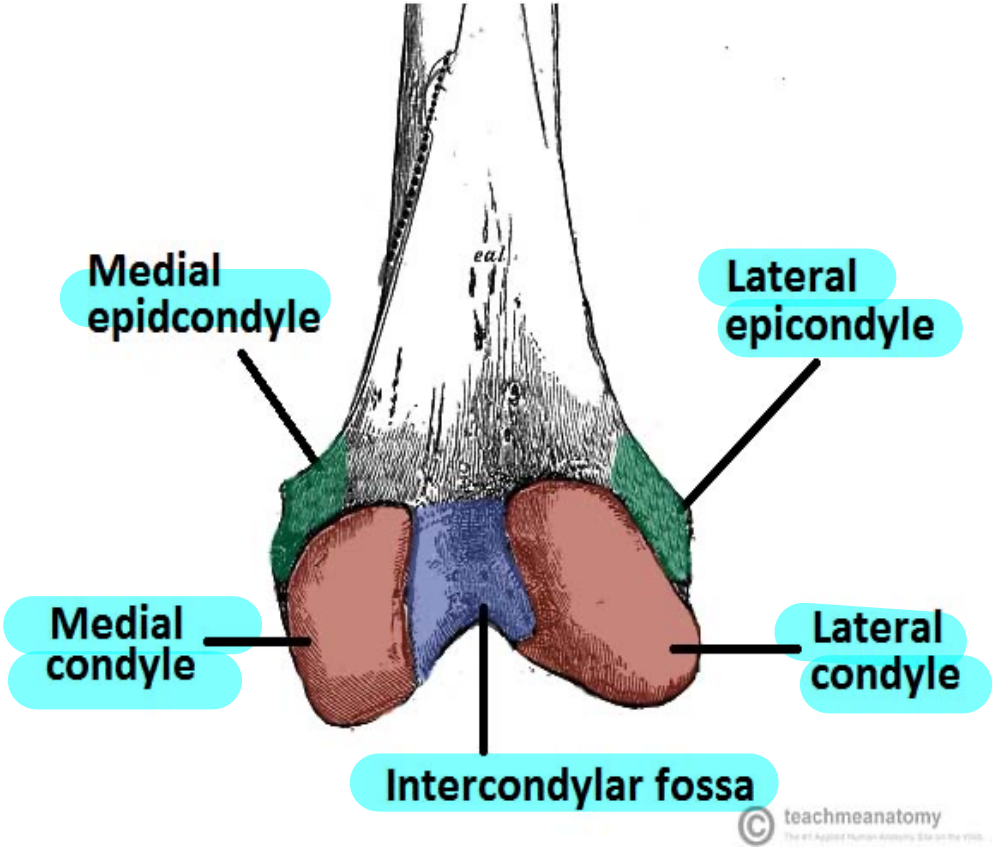
Anterior View



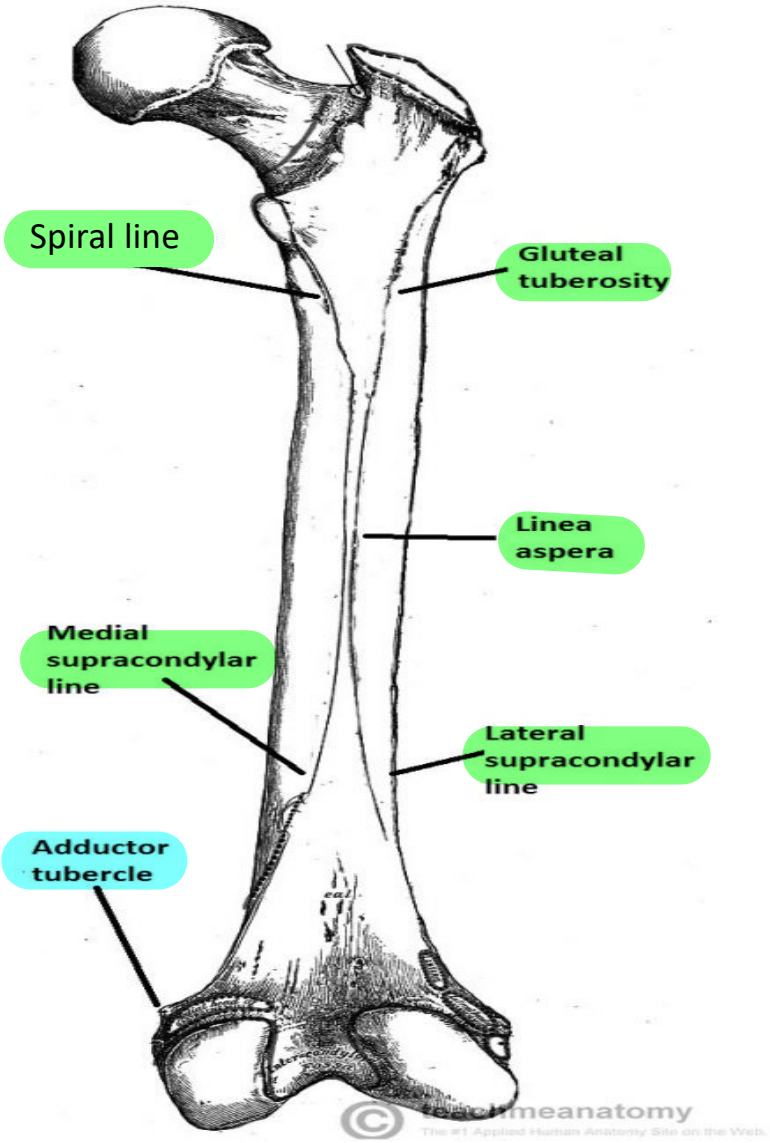
Posterior View

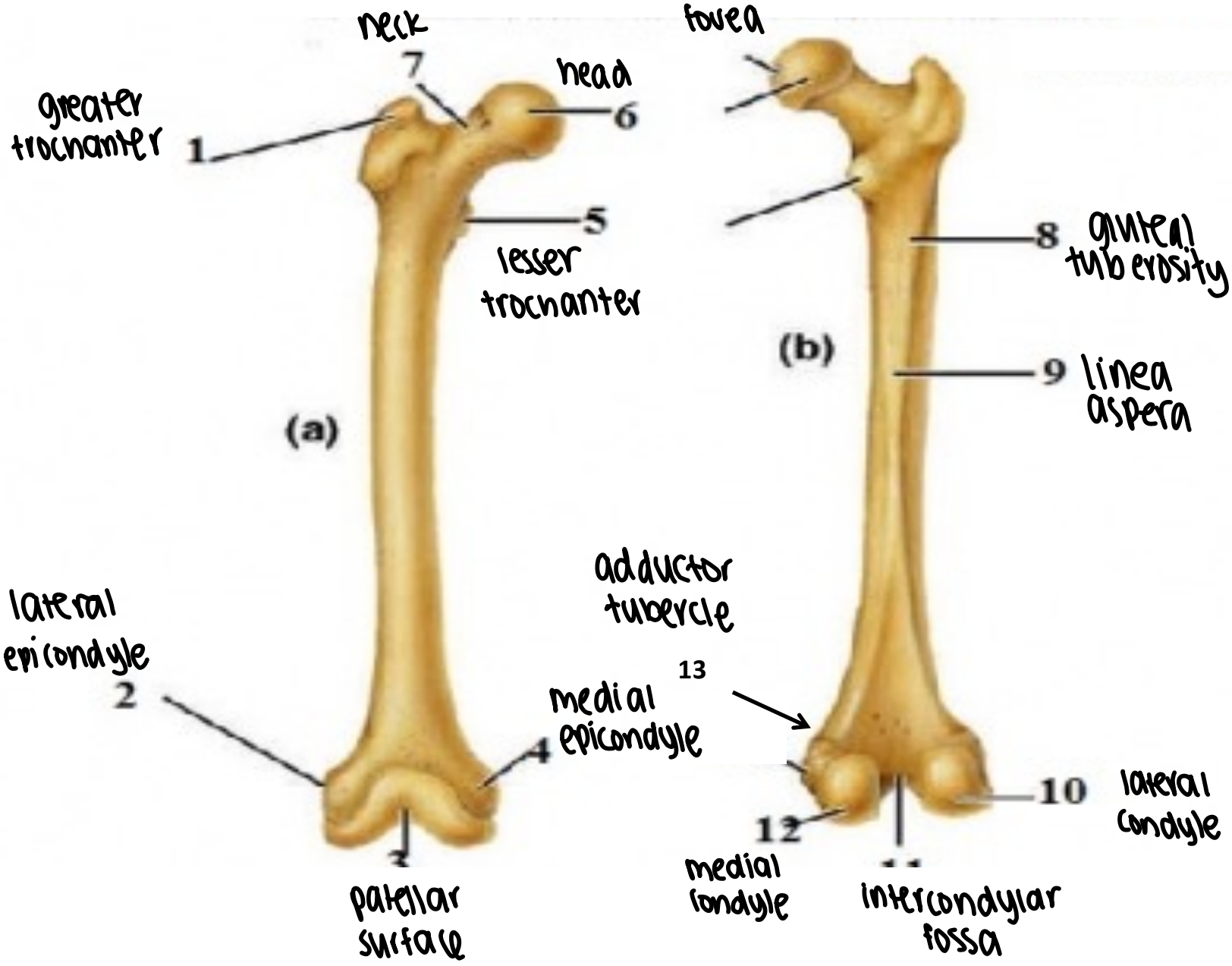


Anterior View



Posterior View


Spiral line
Gluteal tuberosity
Linea aspera
Medial supracondylar line
Lateral supracondylar line
Adductor tubercle

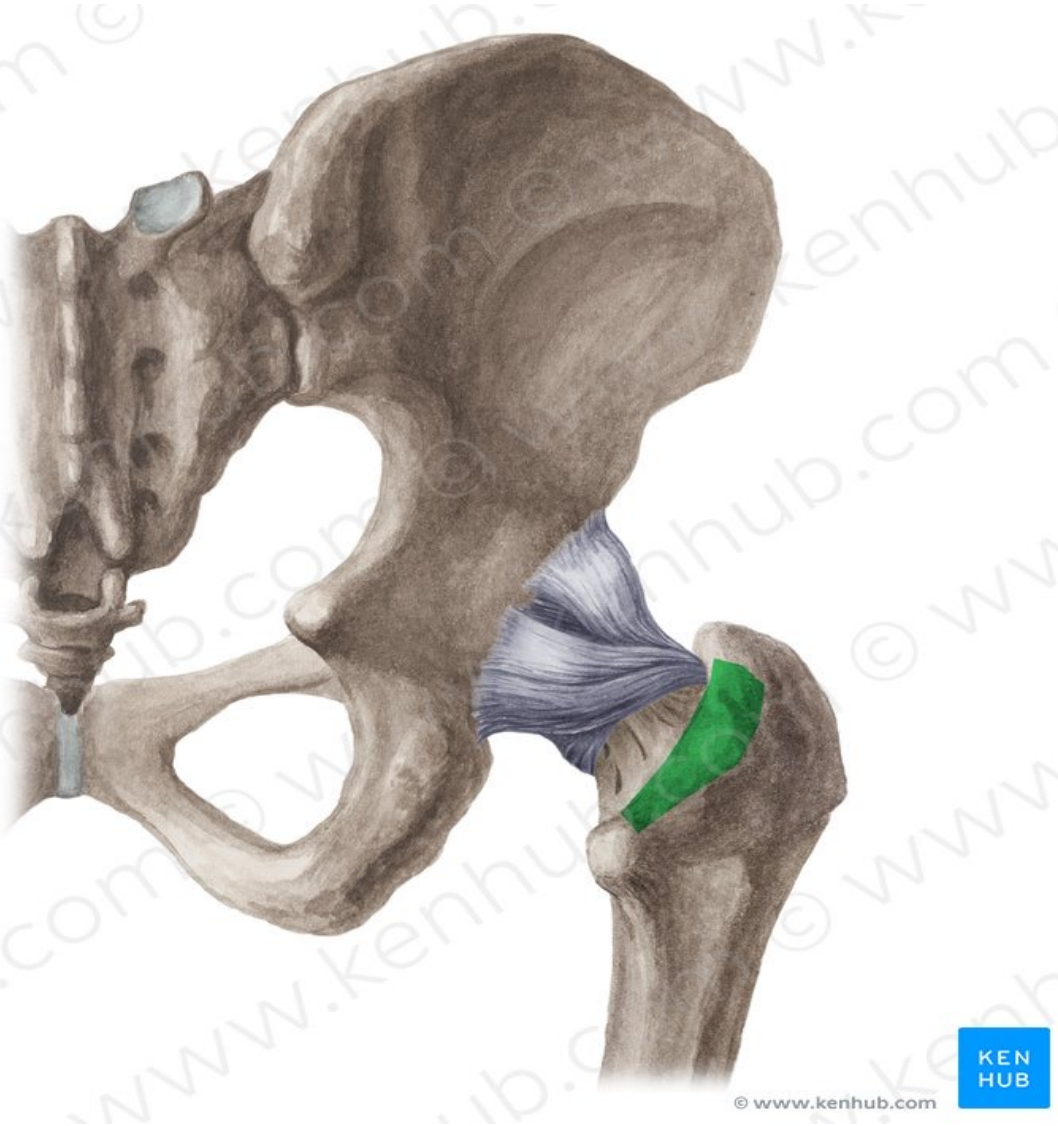

neck
7
head
6
greater trochanter
1
5
lesser trochanter
(a)
(b)
fovea
8
gluteal tuberosity
9
linea aspera
adductor tubercle
13
lateral epicondyle
2
medial epicondyle
4
10
lateral condyle
12
medial condyle
intercondylar fossa
patellar surface

TEST YOUR KNOELDGE

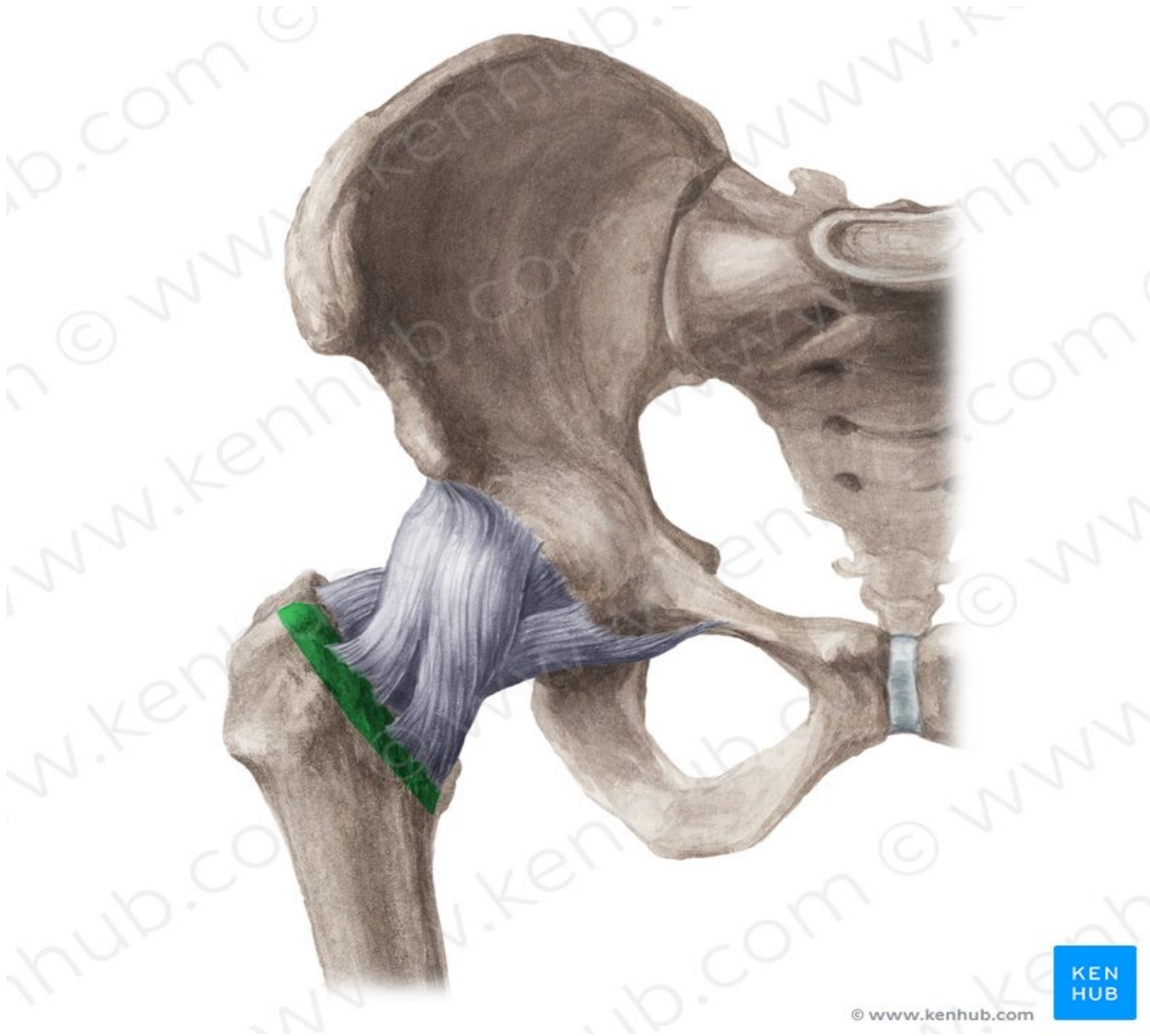
Intercondylar fossa

1-Linea Aspera
2-Medial supracondylar line
3-Lateral supracondylar line

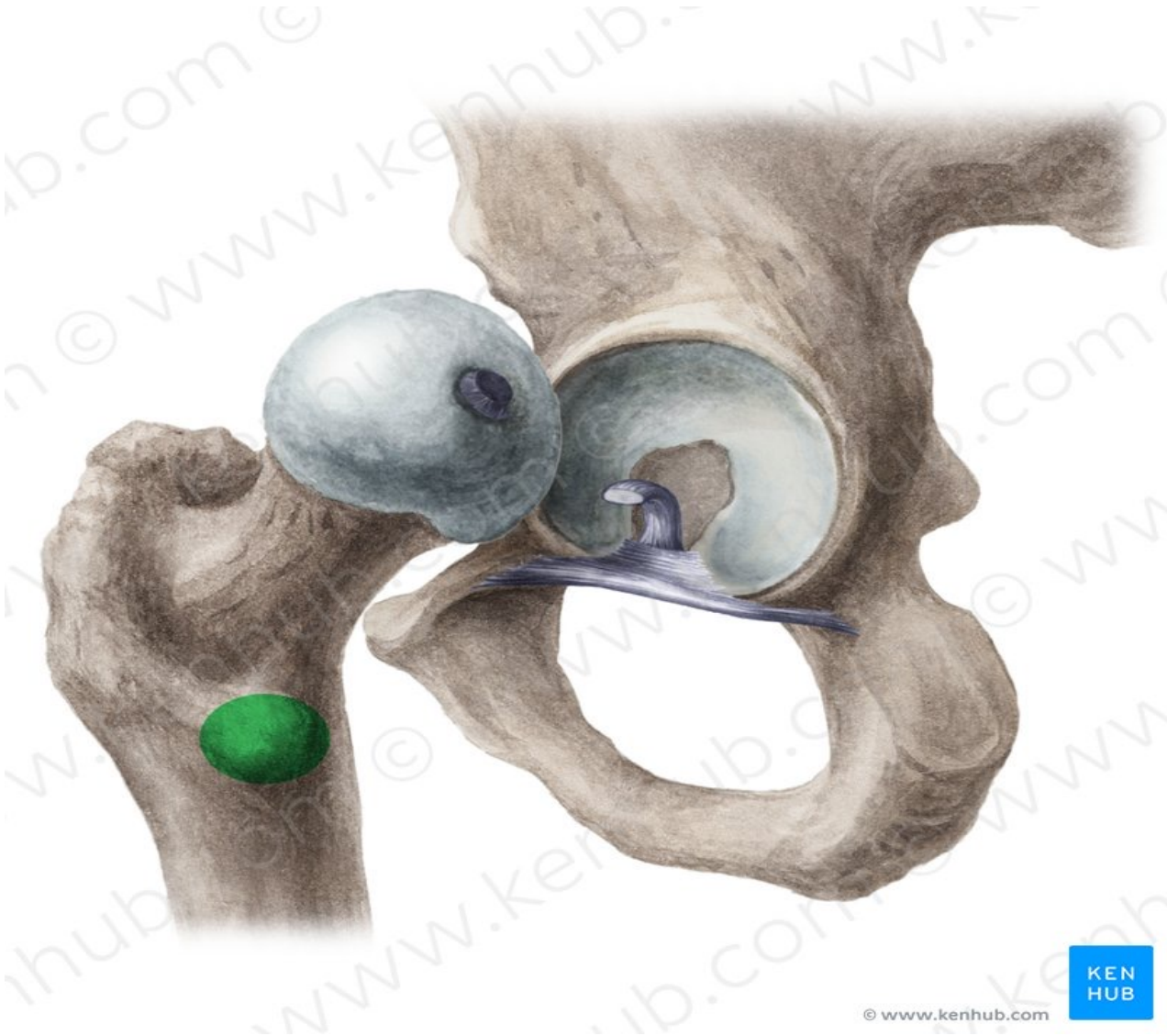
Intertrochanteric crest



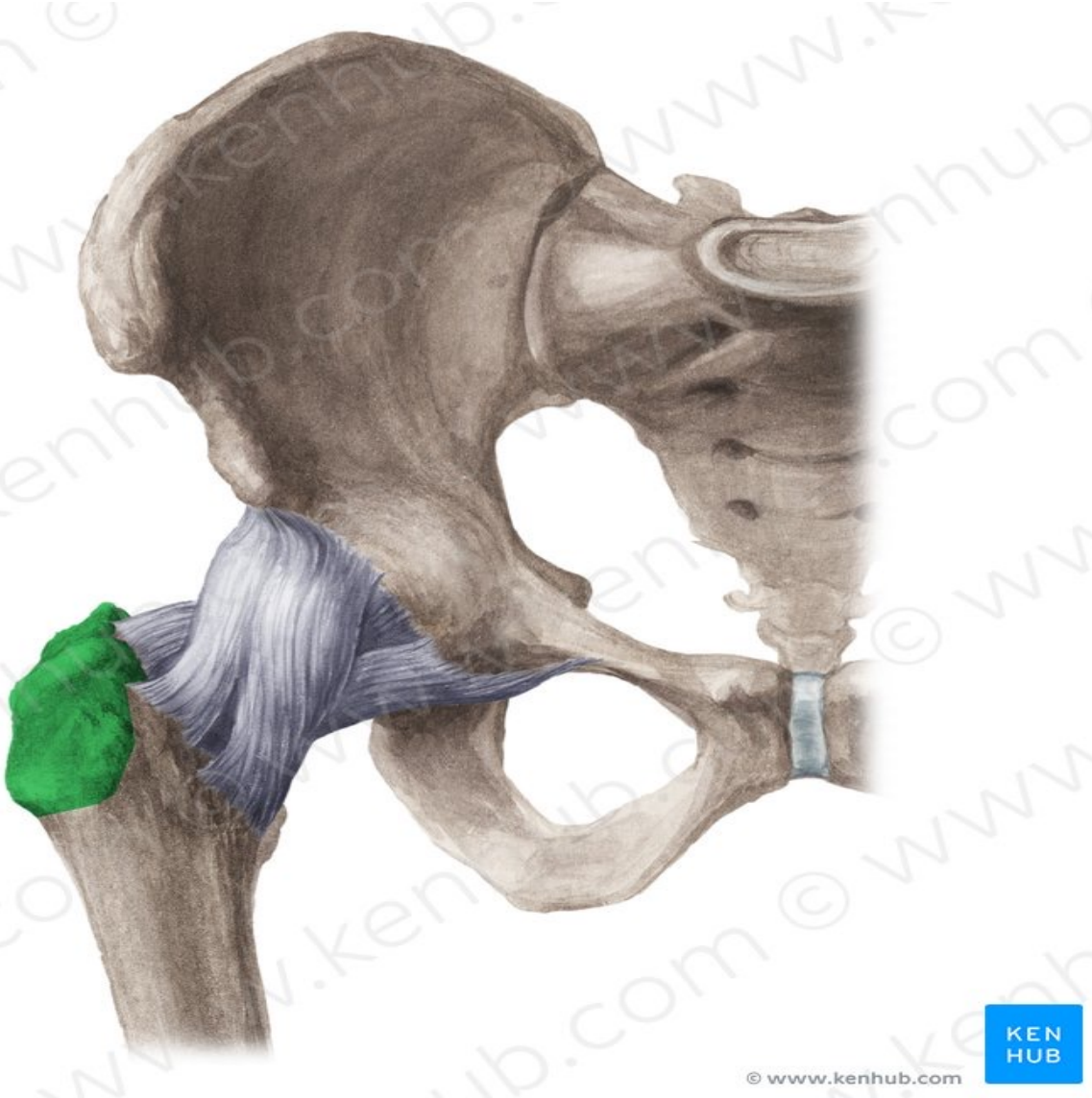
Intertrochanteric line



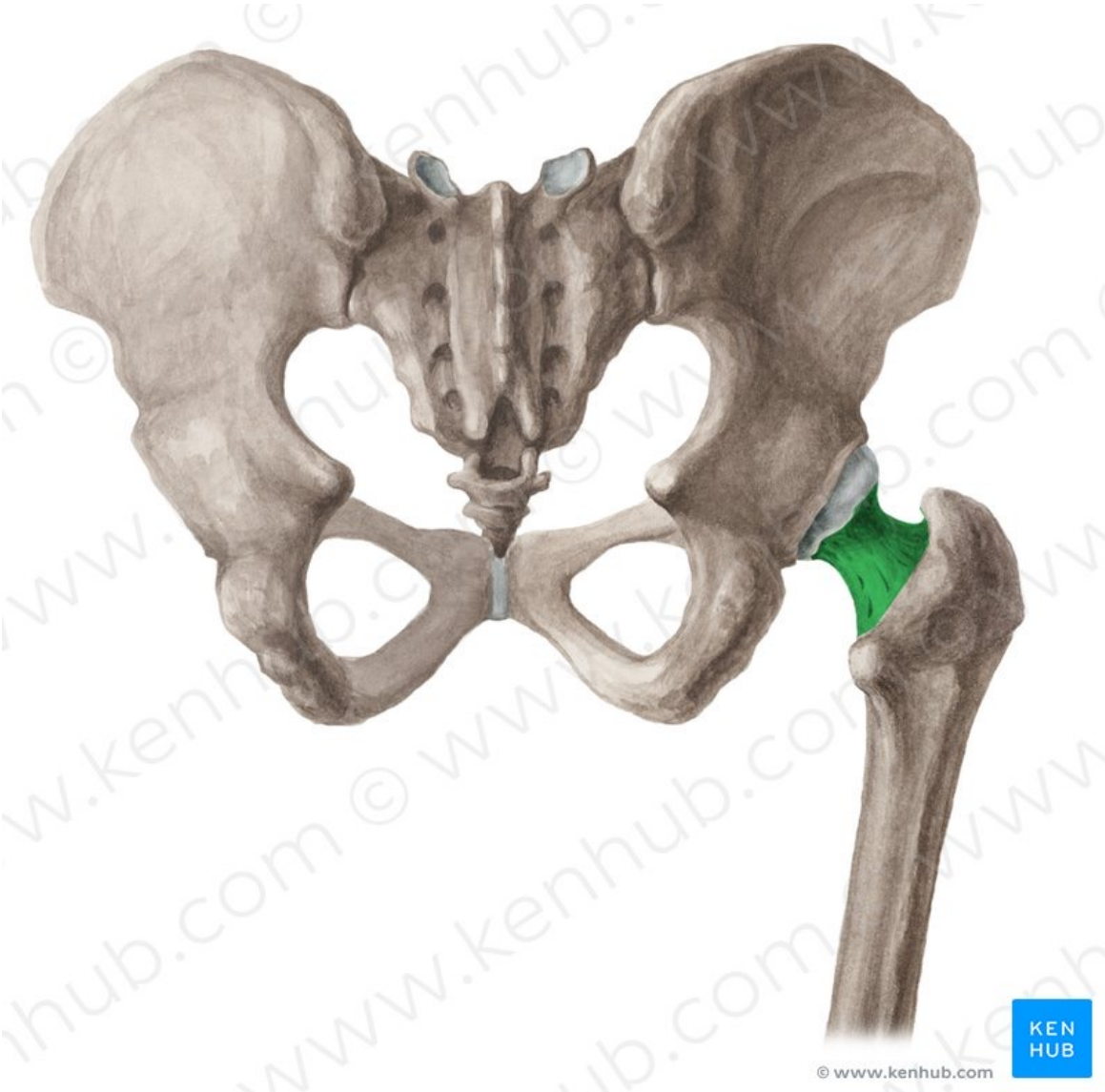
Lesser Trochanter



Greater Trochanter

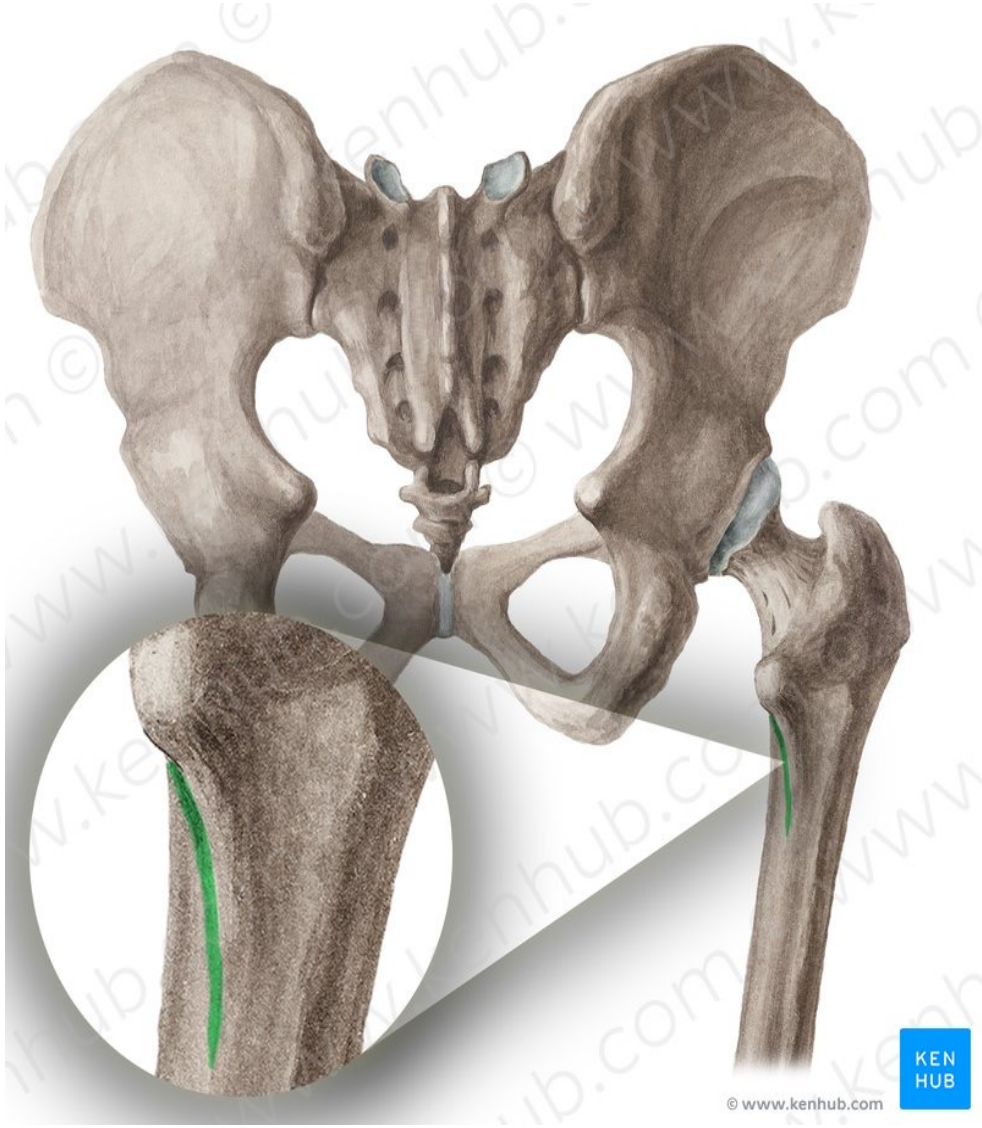


Neck



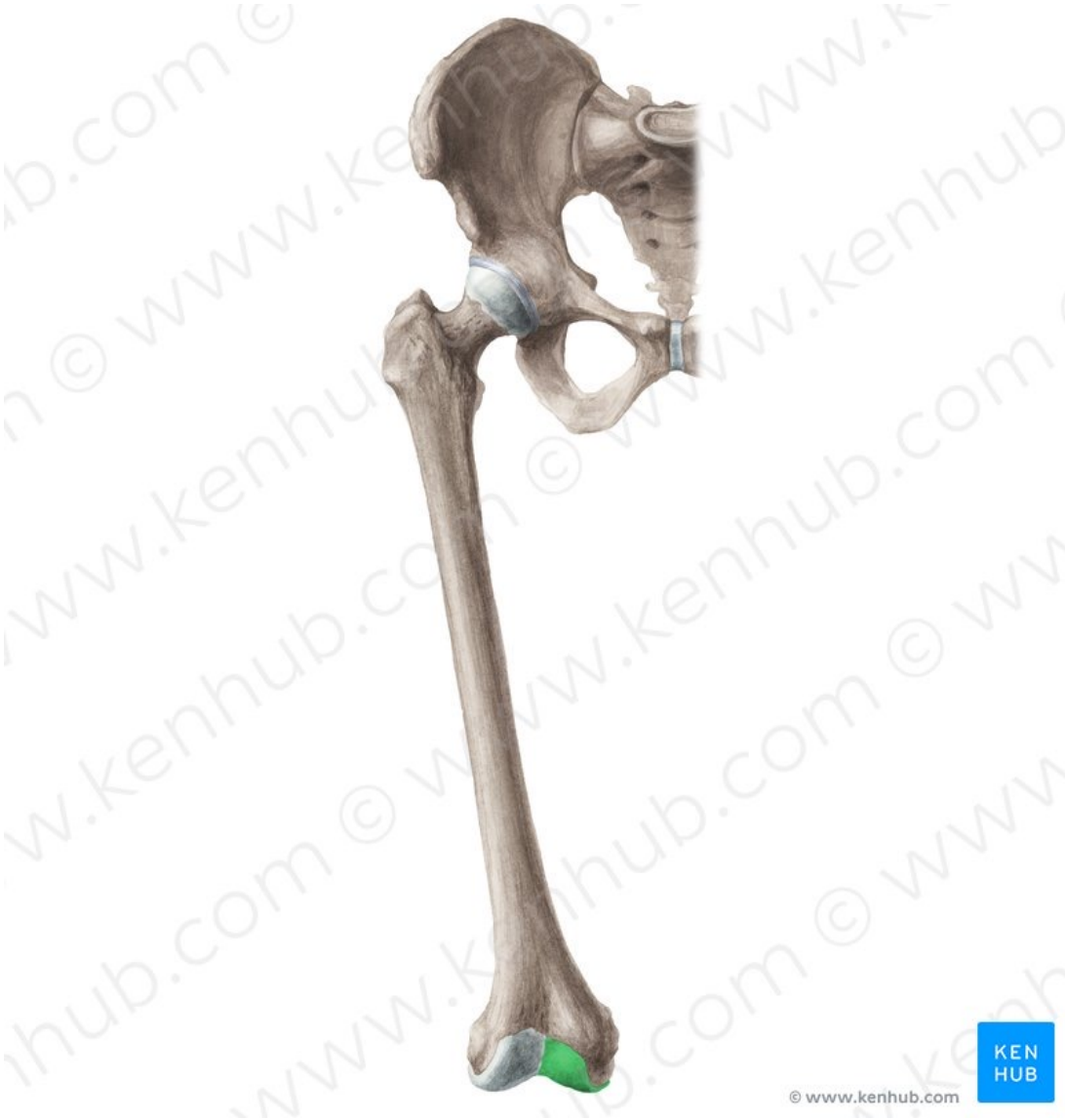
Head

Spiral line

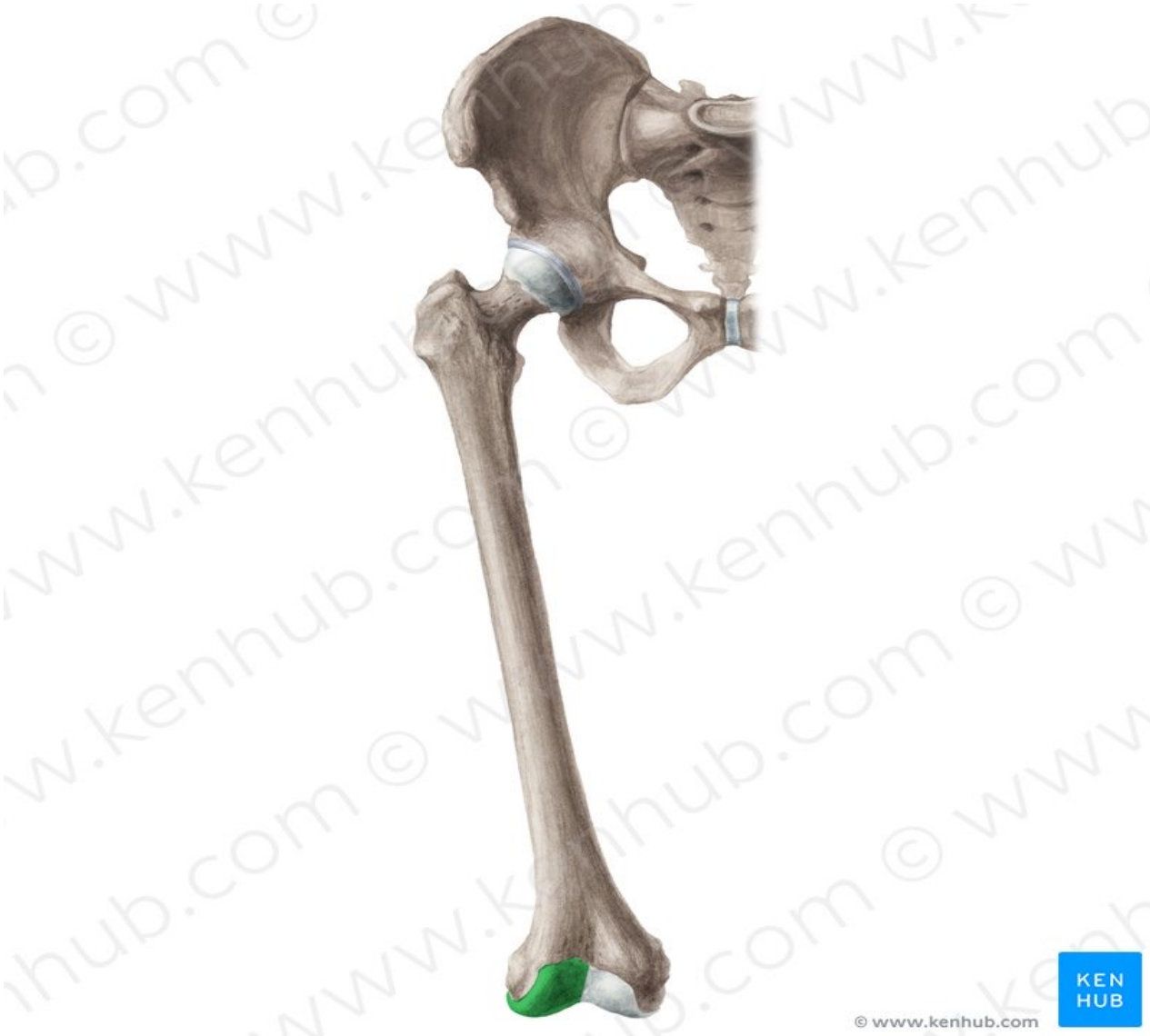


Adductor tubercle

Medial condyle



Lateral condyle



THANK YOU

The University Of Jordan
Faculty Of Medicine
Anatomy Department

Tibia ,Fibula and Foot

Dr.Ahmed Salman
Associate Prof. of Anatomy. The University Of Jordan

Tibia

It is the ***medial*** bone of the leg and the only one concerned with ***body weight transmission*** (from femur to foot). It has:

1. **Upper end:** consists of 2 condyles & tuberosity .

➢ ***2 condyles :***

- ***Medial*** : **larger** than the lateral one and its upper articular surface is **oval** .
- ***Lateral*** : has upper articular surface is **circular**.
- Its **postero-lateral** aspect has an articular facet to articulate with the **head of the fibula** forming the **superior tibiofibular** joint.

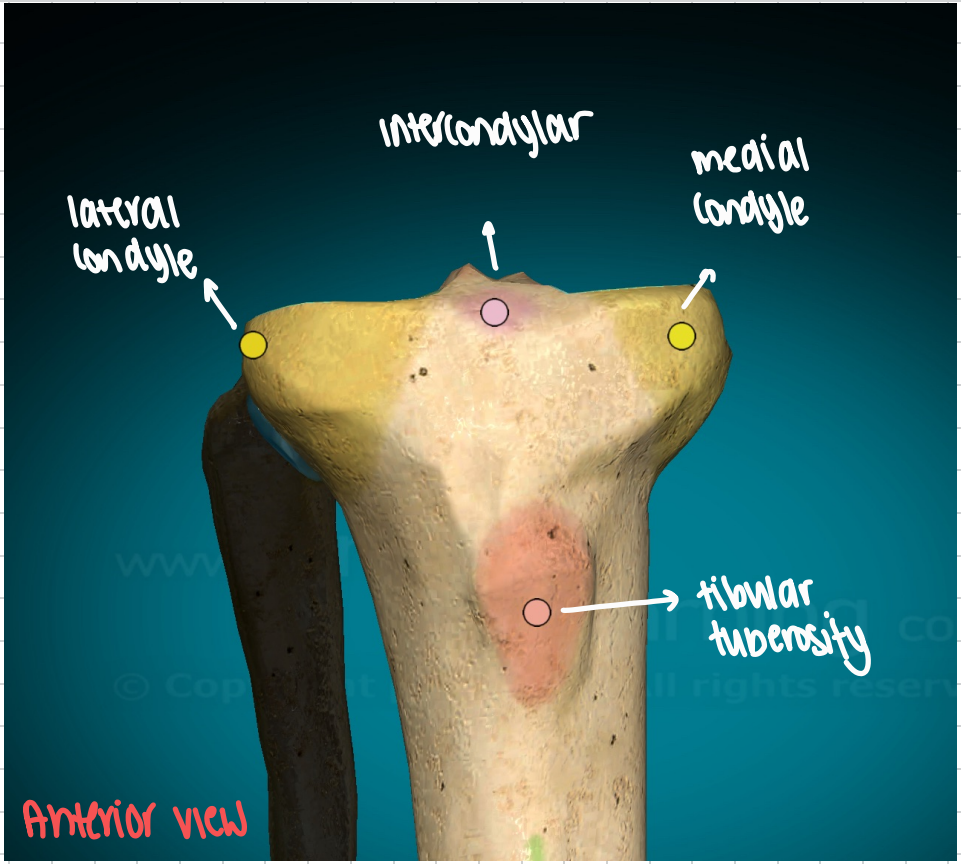
➢ ***The intercondylar area:***

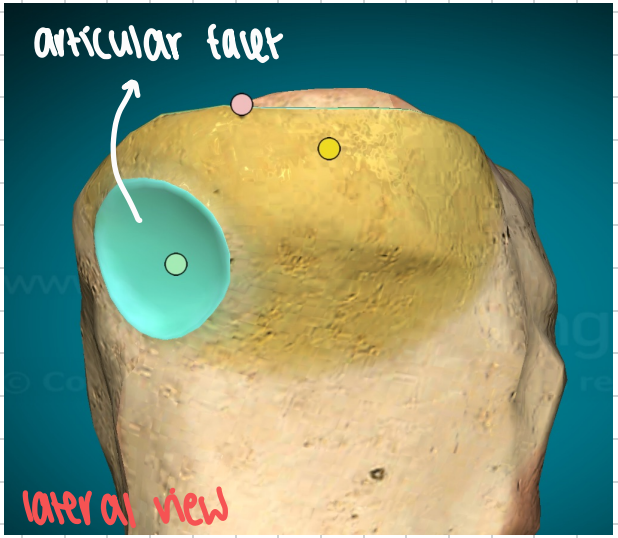
- A **rough non-articular** area **between** the **2** articular surfaces of the **2** condyles.

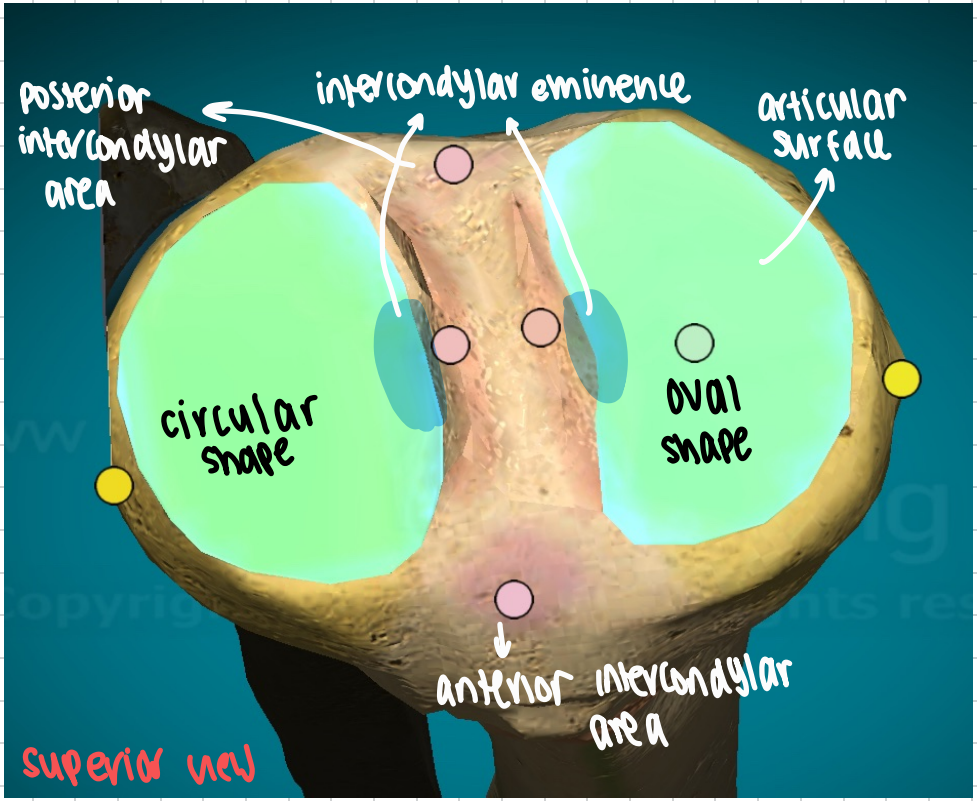
-It is **divided** into anterior and posterior areas by the **intercondylar eminence.**

➢***Tibial tuberosity :*** lies anteriorly.

UPPER END


intercondylar
lateral condyle
medial condyle
tibular tuberosity
Anterior view


articular facet
lateral view


posterior intercondylar area
intercondylar eminence
articular surface
circular shape
oval shape
anterior intercondylar area
superior view

2. Shaft : It Presents

* ***3 surfaces :*** medial , lateral & posterior (which has a soleal line)
* ***3 borders :*** anterior (shin of tibia) lateral (interosseous border) and medial .
* The anterior border & medial surface are subcutaneous so it more liable to compound fracture is common.

3. Lower end: It has

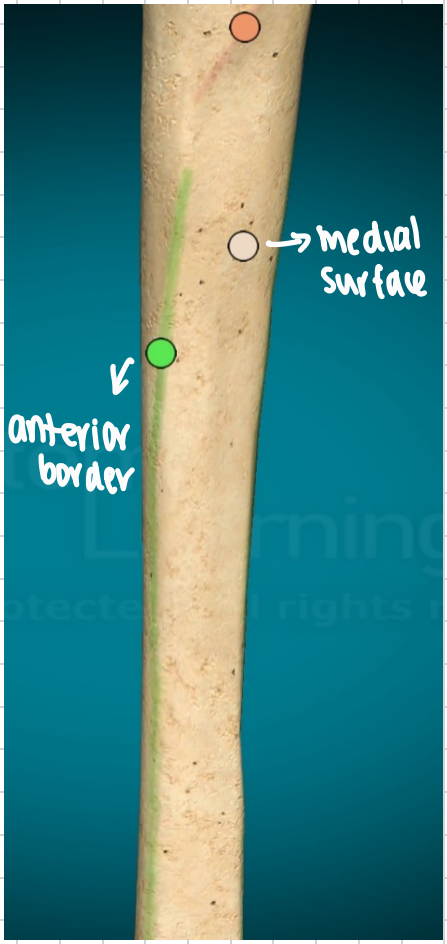
5 surfaces : **anterior , posterior**

- **lateral** (has a *fibular notch* to articulate with the lower end of fibula to form the inferior tibiofibular joint)
- **medial** (which projects downwards as the medial malleolus)
- **inferior** articular surface

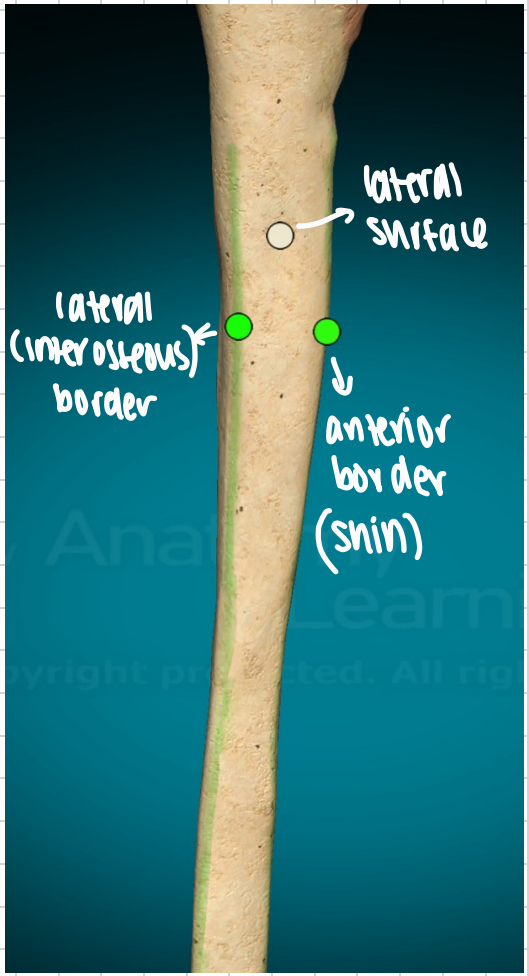
SHAFT

anterior views:

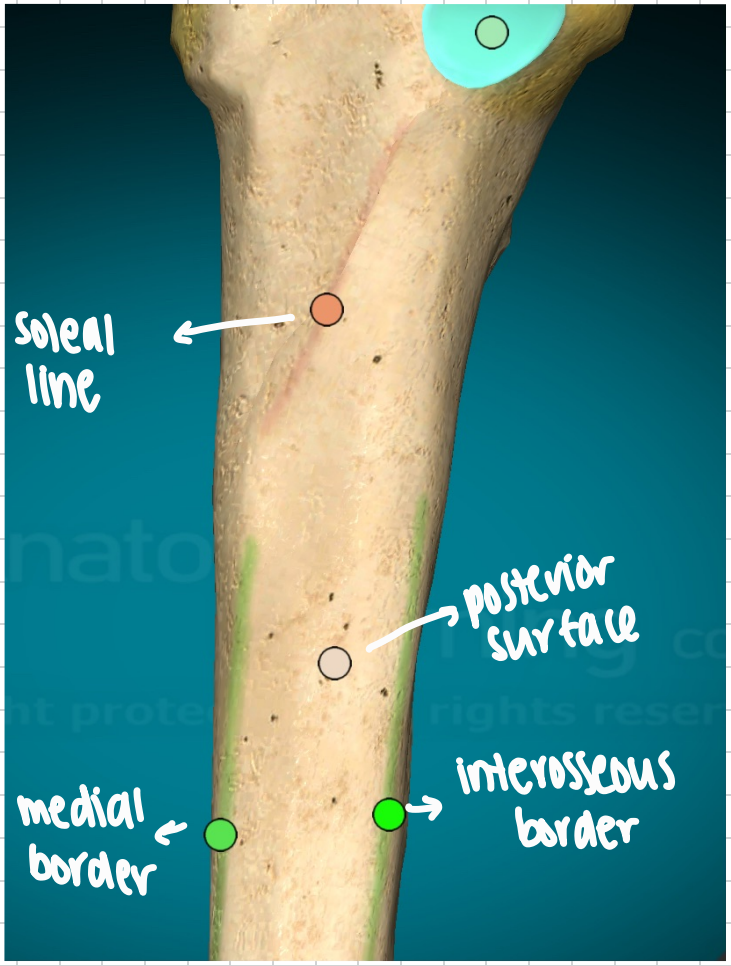
a) medial



b) lateral



posterior view:

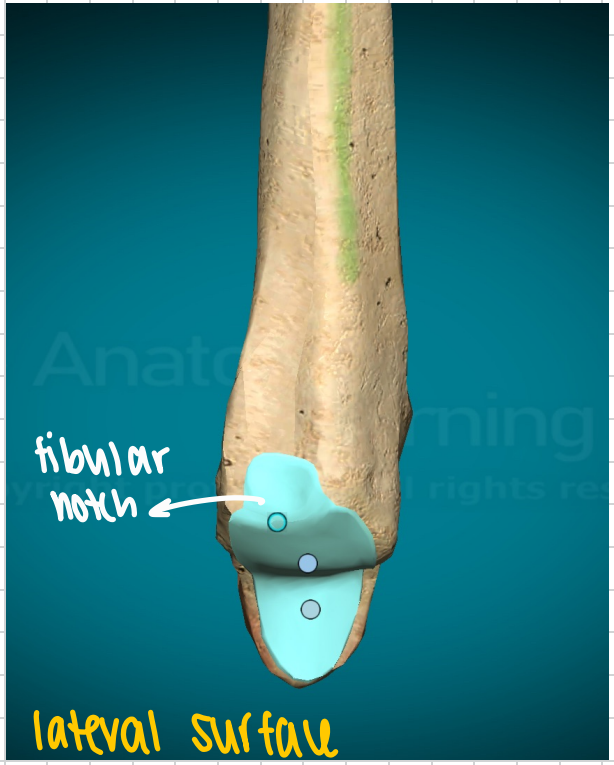


LOWER END

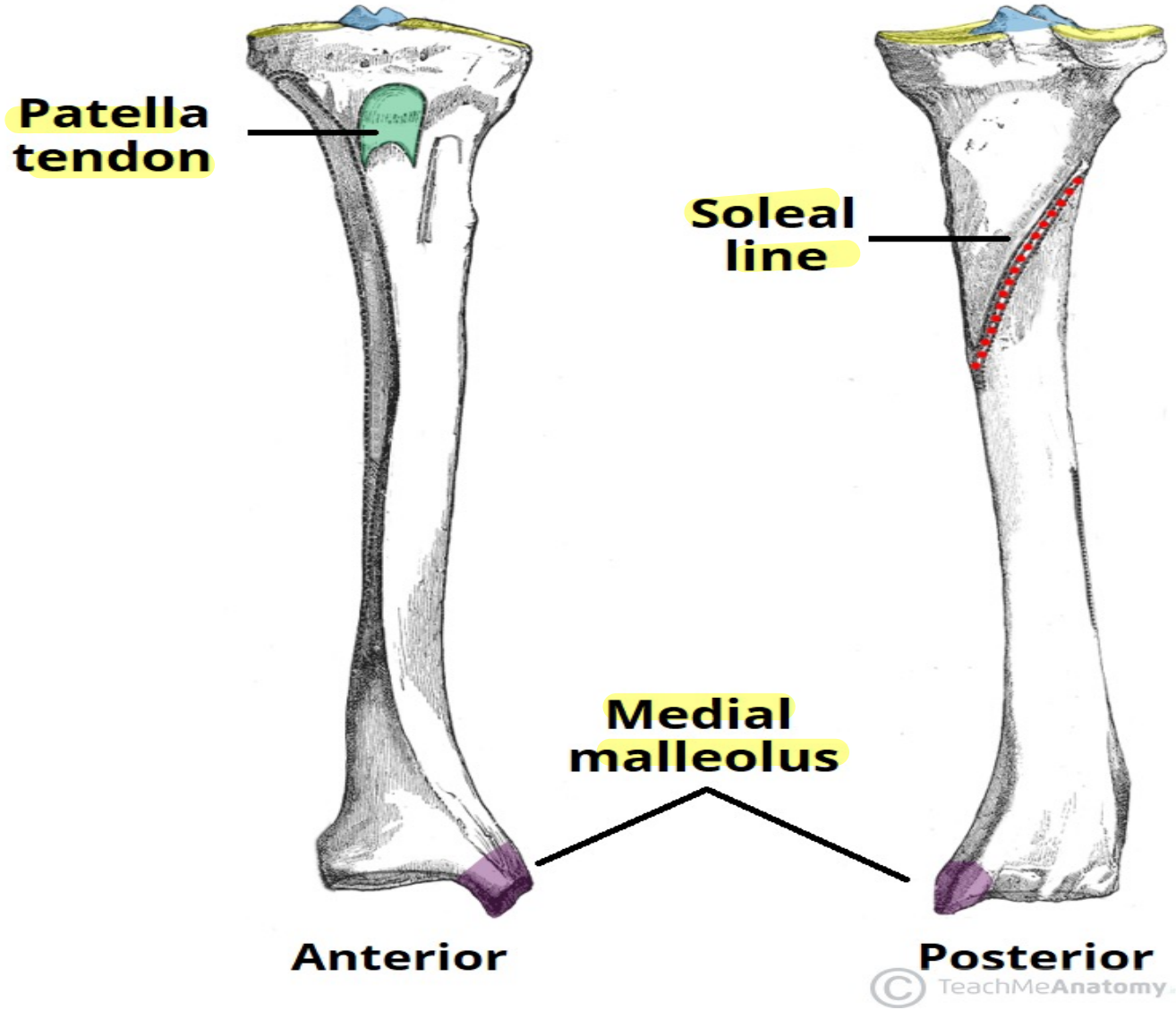

medulla
malleolus
medial surface

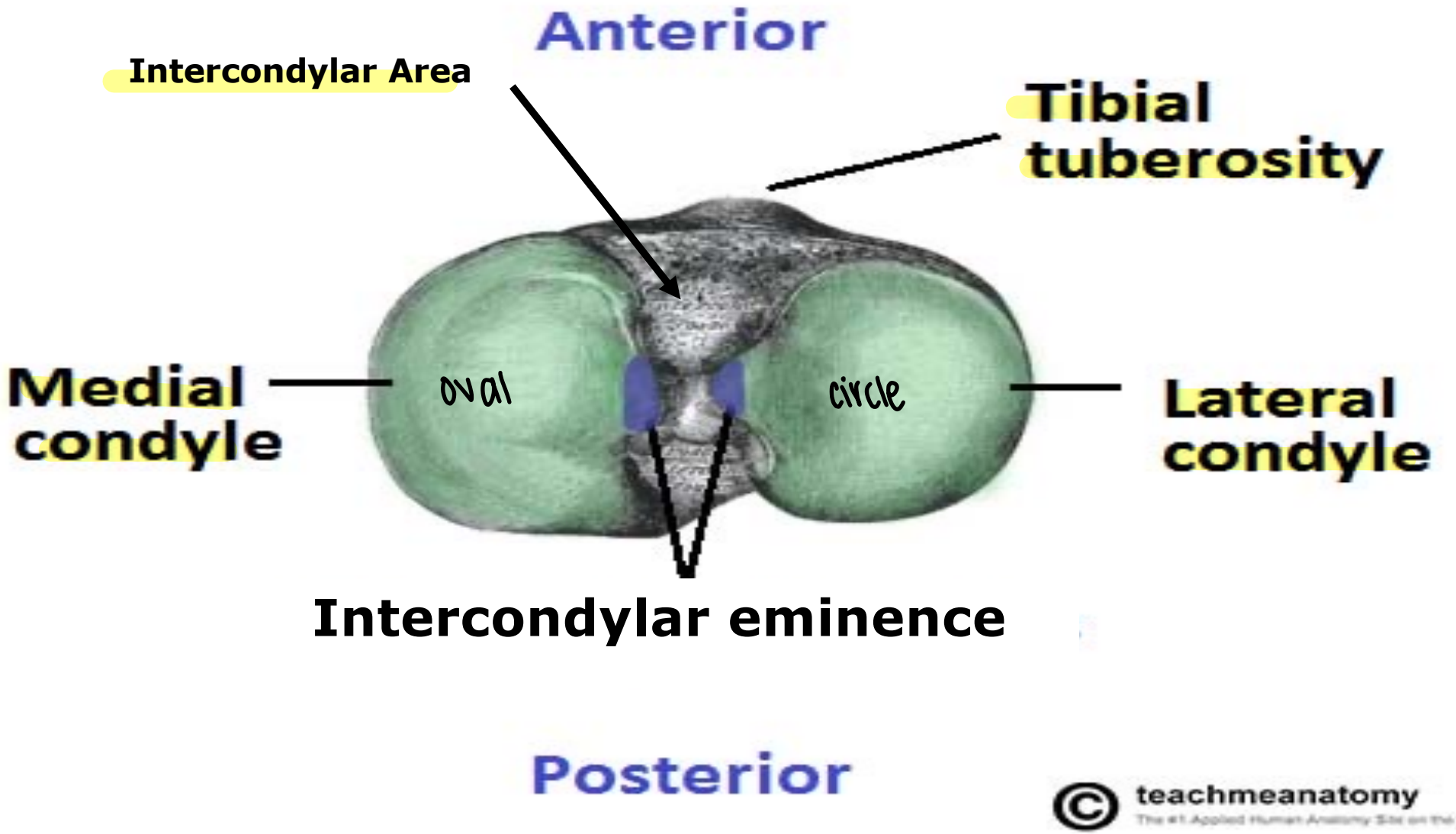

posterior
surface


medulla
malleolus
anterior surface

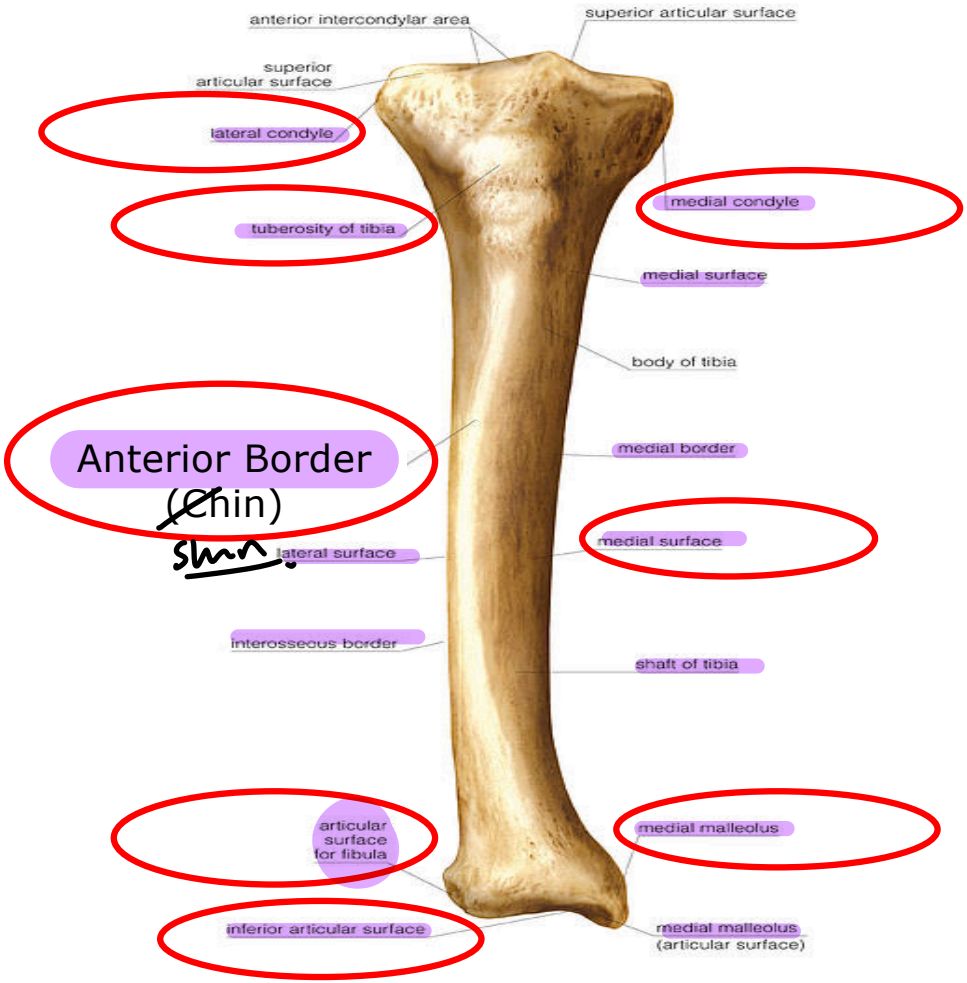

fibular
notch
lateral surface


articular
surface
interior surface

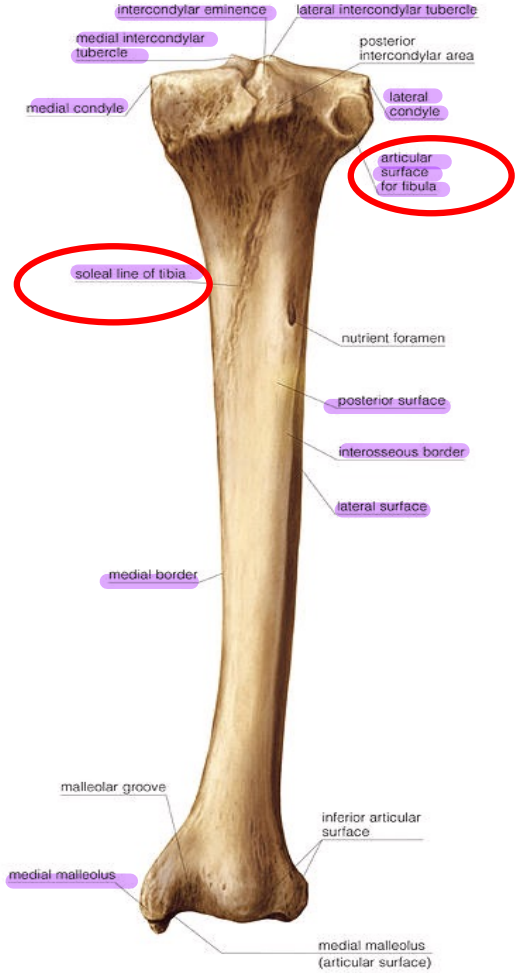

Patella tendon
Soleal line
Medial malleolus
Anterior
Posterior
© TeachMeAnatomy


Anterior
Intercondylar Area
Tibial tuberosity
Medial condyle
oval
circle
Lateral condyle
Intercondylar eminence
Posterior
teachmeanatomy

Anterior



Posterior



Articulation of the tibia

modified: slight rotational movement

1- Knee

Type : Modified hinge synovial joint.

extension/flexion, small range of rotation

Articular Surfaces : Condyles of the femur , condyles of tibia and the Patella.

Ligaments of the knee

outside of knee

Extracapsular

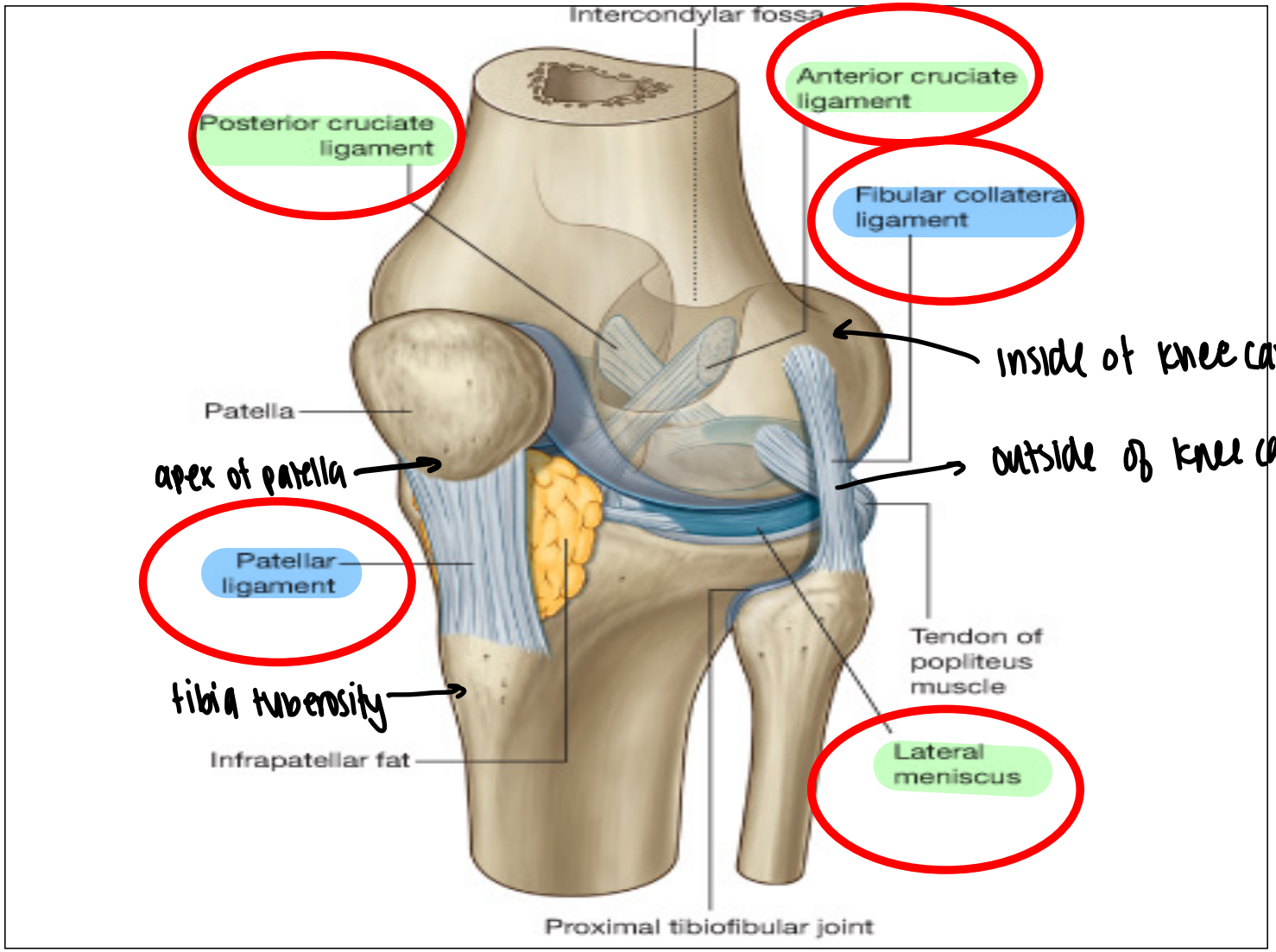
1. Tibial collateral ligament
2. Fibular collateral ligament
3. Ligamentum patellae

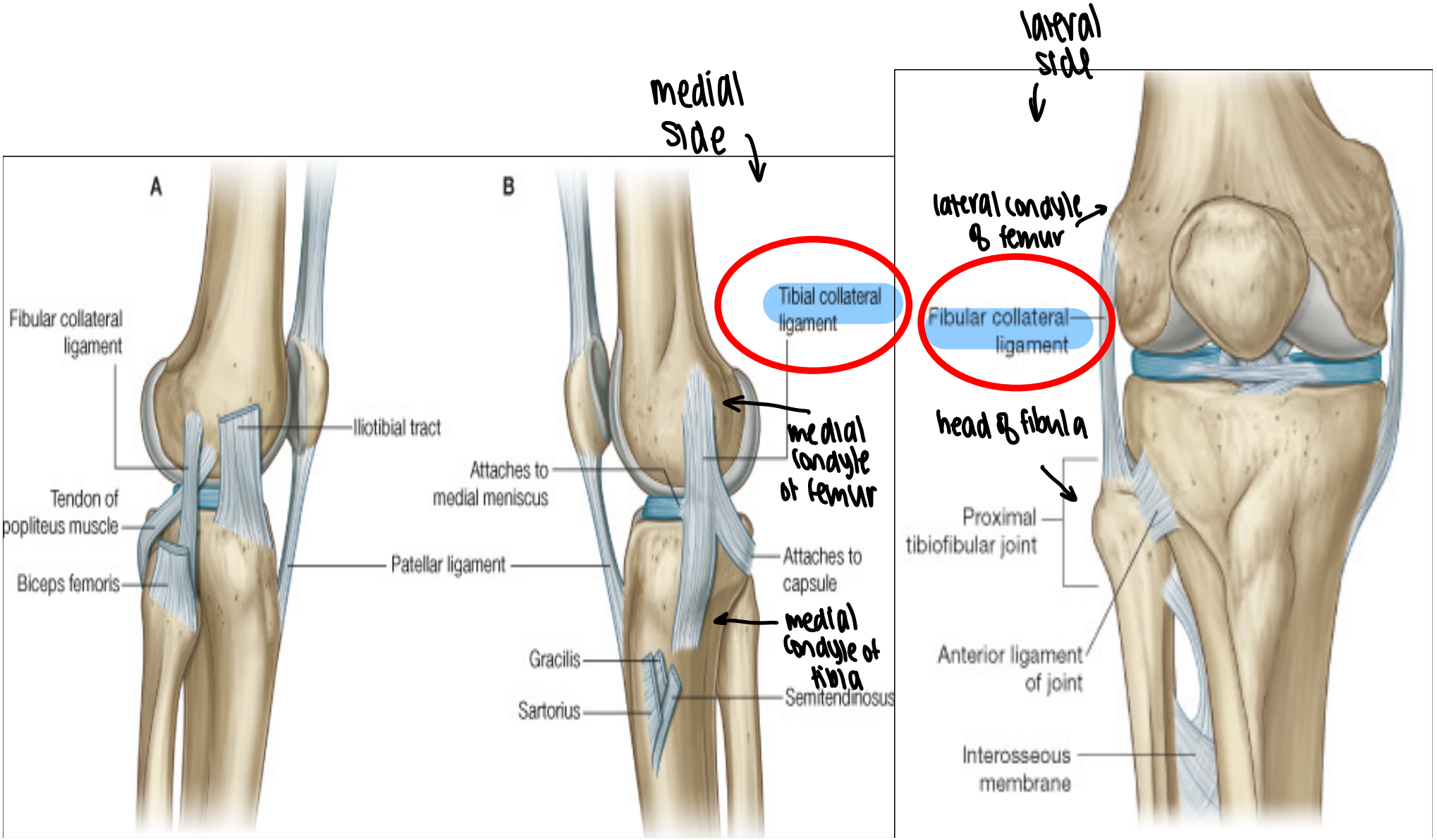
inside of knee

Intracapsular

Medial and lateral menisci
Anterior and posterior cruciate ligaments

examples will be shown in next slides


Intercondylar fossa
Posterior cruciate ligament
Anterior cruciate ligament
Fibular collateral ligament
Patella
apex of patella
Patellar ligament
tibia tuberosity
Infrapatellar fat
Tendon of popliteus muscle
Lateral meniscus
Proximal tibiofibular joint
inside of knee capsule
outside of knee capsule


A
B
Fibular collateral ligament
Iliotibial tract
Tendon of popliteus muscle
Biceps femoris
Patellar ligament
Attaches to medial meniscus
Gracilis
Sartorius
Tibial collateral ligament
Attaches to capsule
Semitendinosus
medial side
medial condyle of femur
medial condyle of tibia
lateral side
lateral condyle of femur
Fibular collateral ligament
head of fibula
Proximal tibiofibular joint
Anterior ligament of joint
Interosseous membrane

marked on the slides

Extracapsular

1. Ligamentum patellae :

- It extends from the apex of the patella to tibial tuberosity.

2. Tibial collateral ligament:

- **Attachments:**

Above to the medial femoral epicondyle

Below to medial condyle of the tibia.

3. Fibular collateral ligament:

- **Attachments**:

Above to the lateral femoral epicondyle

Below to the head of fibula

intrascapular

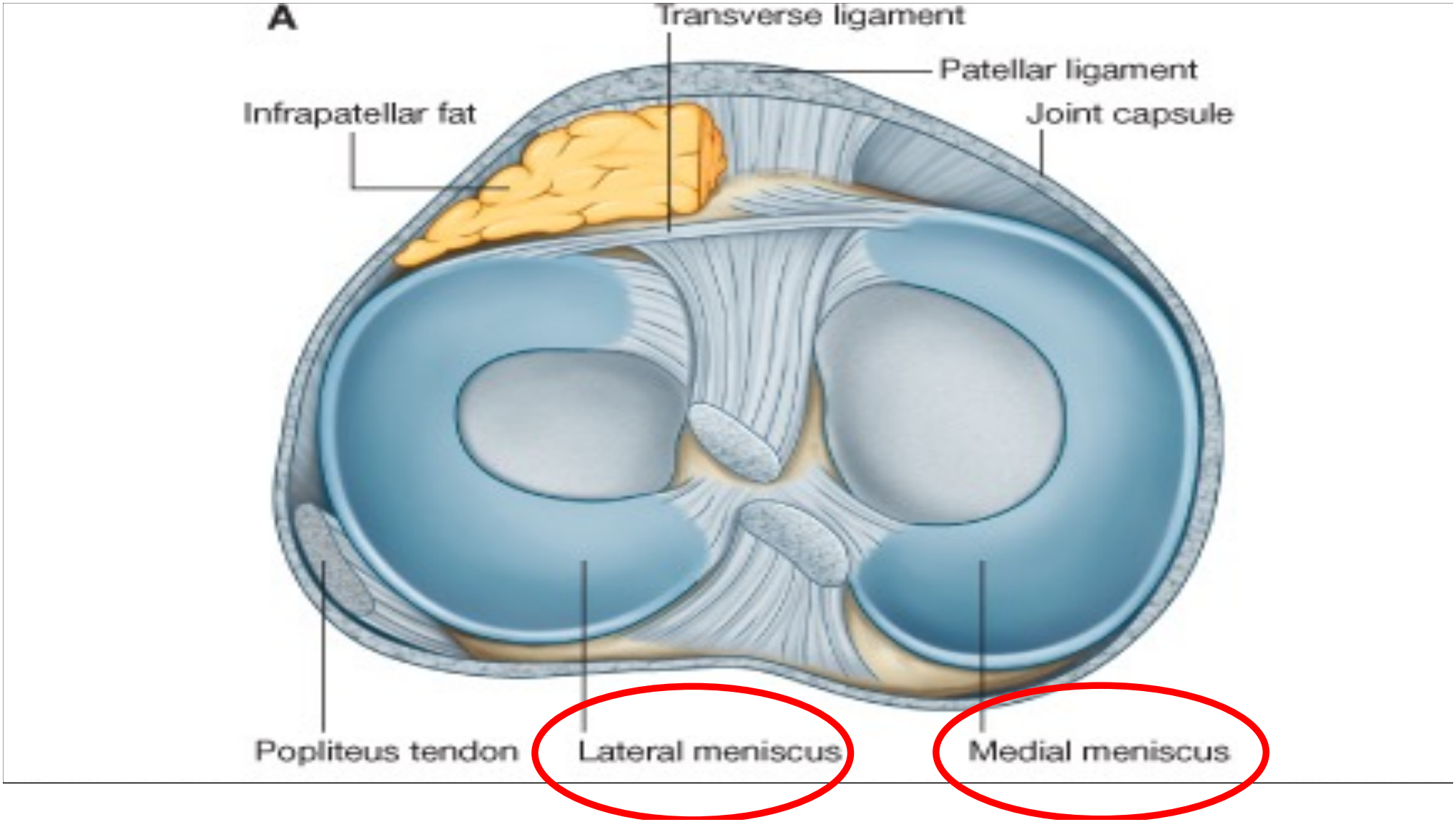
The two menisci (medial and lateral)

Function :

- They facilitate rotation of the femur on the tibia
- They are shock absorption.

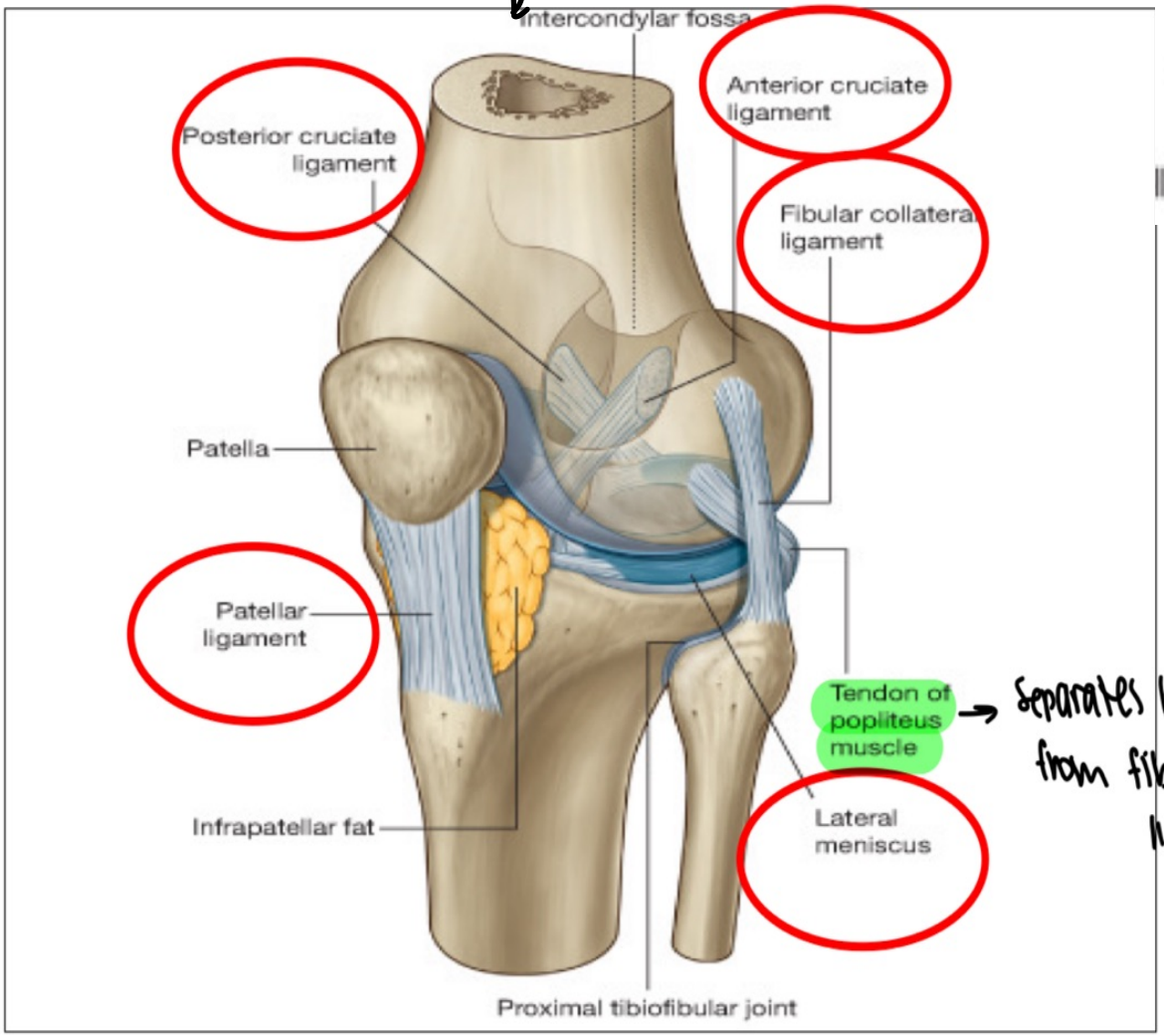
Difference between the two meniscus

Lateral meniscus	Medial menisus
O shaped	C shaped
It is separated from the fibular collateral ligament by the tendon of popliteus.	It is attached to tibial collateral ligament.
It is free to move on the tibia, so that it is less susceptible to injury.	It is relatively fixed, so that is more susceptible to injury.

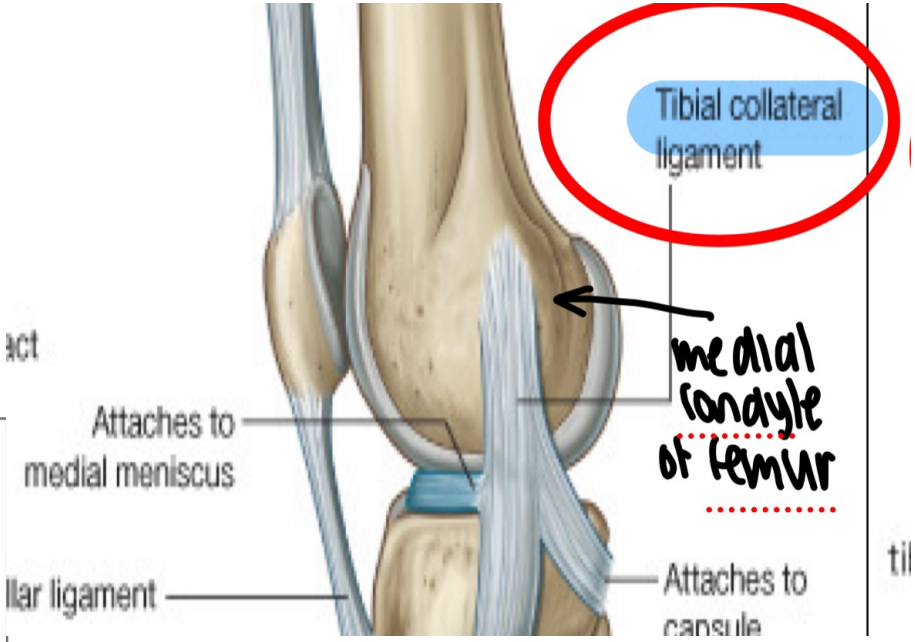

A
Transverse ligament
Patellar ligament
Infrapatellar fat
Joint capsule
Popliteus tendon
Lateral meniscus
Medial meniscus

- lateral meniscus is less prone to injury
- it is also moveable unlike medial meniscus

lateral ↓



→ separates lateral meniscus from fibular collateral ligament



medial condyle of femur

medial ↗

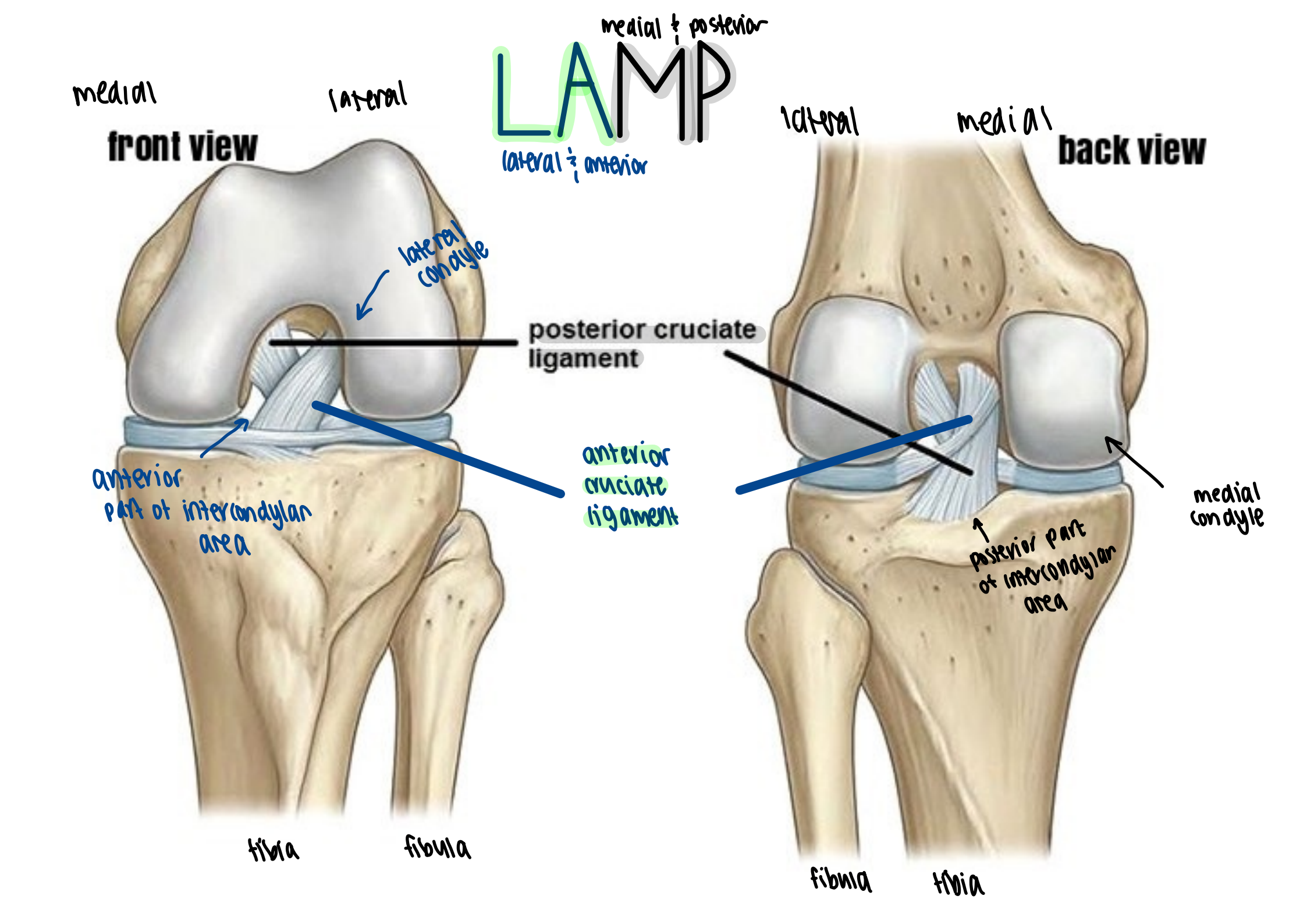
- medial meniscus is more prone to injury
- cannot move - fixed attachment

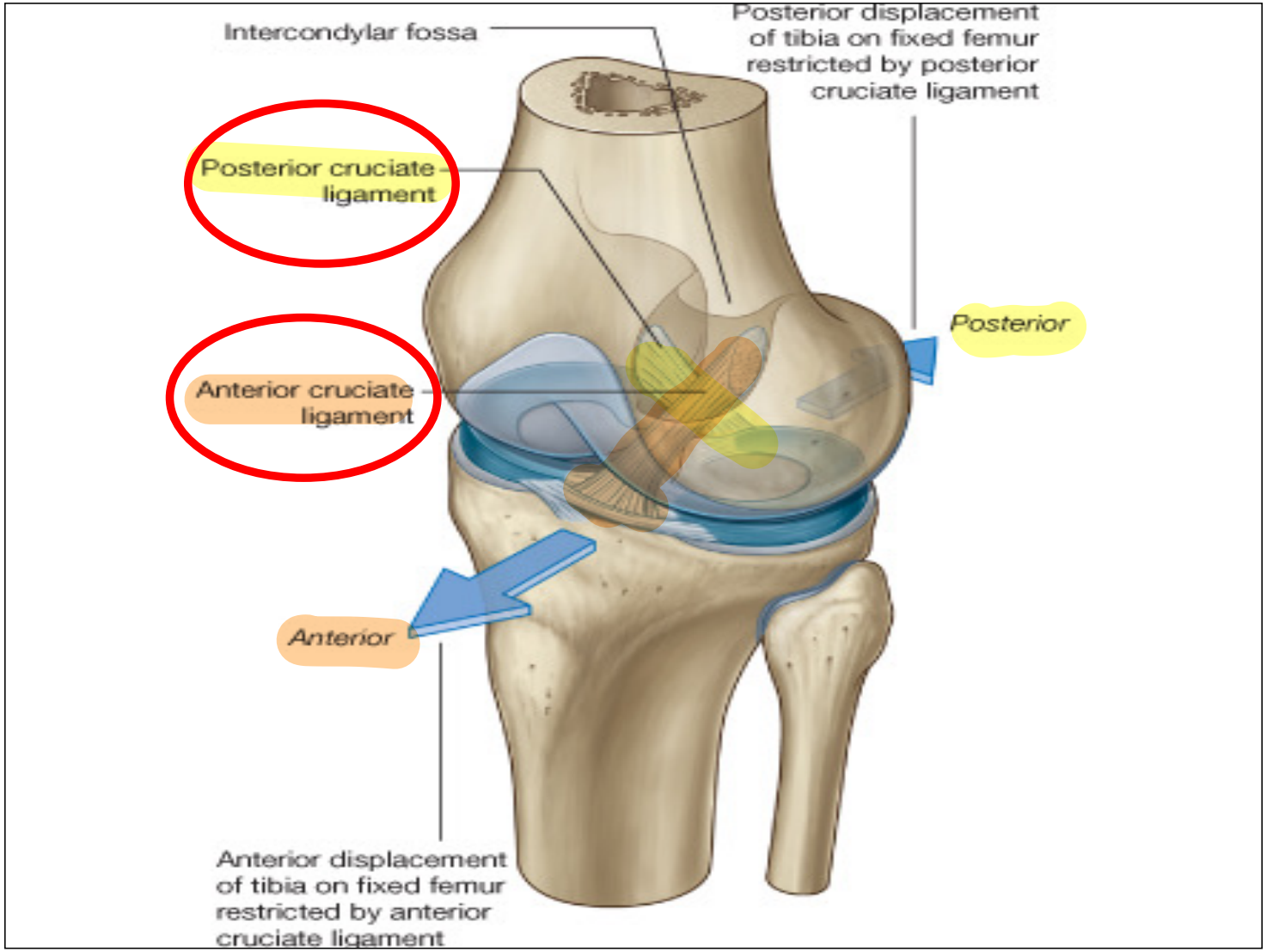
The two cruciate ligaments (anterior and posterior)

Function : provide antero-posterior stability of the knee joint.

Difference between anterior and posterior cruciate ligaments

	Anterior cruciate ligament	Posterior cruciate ligament
Attachments	**Anterior** part of intercondylar area to the **lateral** femoral condyle.	**Posterior** part of intercondylar area to the **medial** femoral condyle.
Functions	• Prevents ***anterior*** displacement of the tibia. • It becomes tense near full ***extension***.	•Prevents ***posterior*** displacement of the tibia. • It becomes tense ***in full flexion***

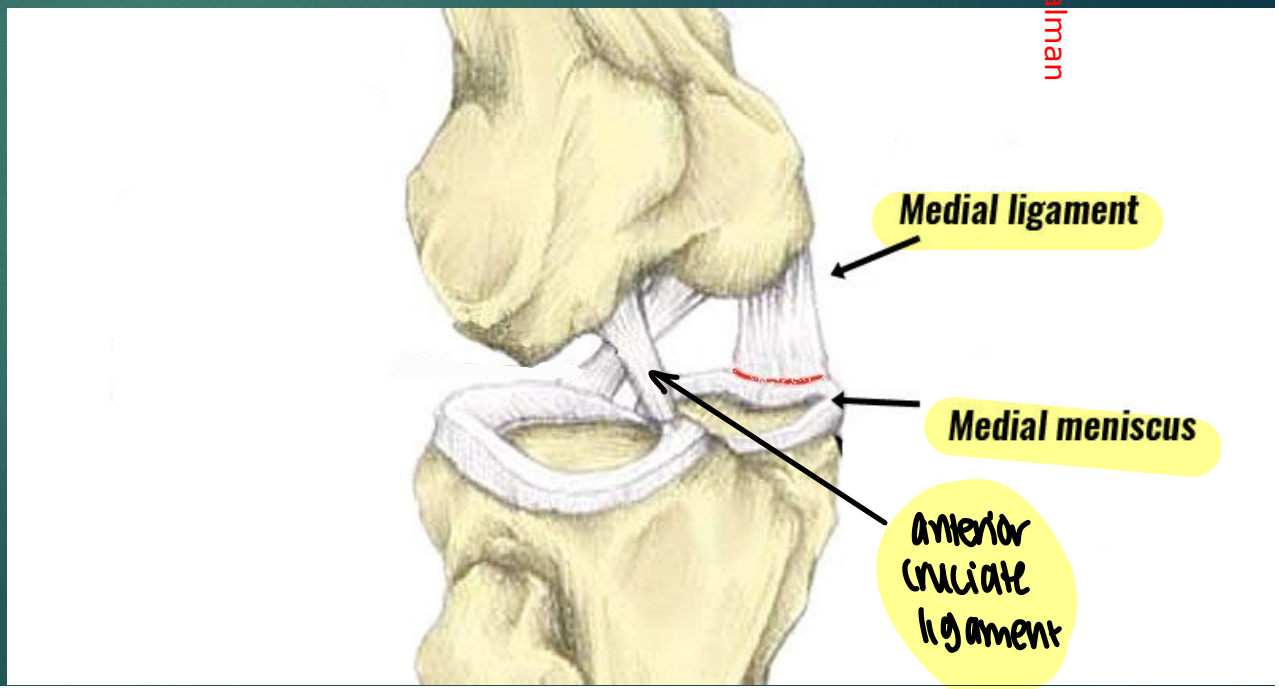

medial & posterior
LAMP
lateral & anterior
medial
lateral
front view
lateral condyle
posterior cruciate ligament
anterior part of intercondylar area
anterior cruciate ligament
tibia
fibula
lateral
medial
back view
medial condyle
posterior part of intercondylar area
fibula
tibia


Intercondylar fossa
Posterior displacement of tibia on fixed femur restricted by posterior cruciate ligament
Posterior cruciate ligament
Anterior cruciate ligament
Posterior
Anterior
Anterior displacement of tibia on fixed femur restricted by anterior cruciate ligament

Unhappy Triad

Injury of :

1. Medial menisus
2. Tibial (medial) collateral ligament
3. Anterior cruciate ligament



You need a

1. Medial Meniscus
2. Anterior cruciate ligament
3. Tibial collateral ligament

to lay on if you have an unhappy triad injury

TEST YOUR KNOWLEDGE

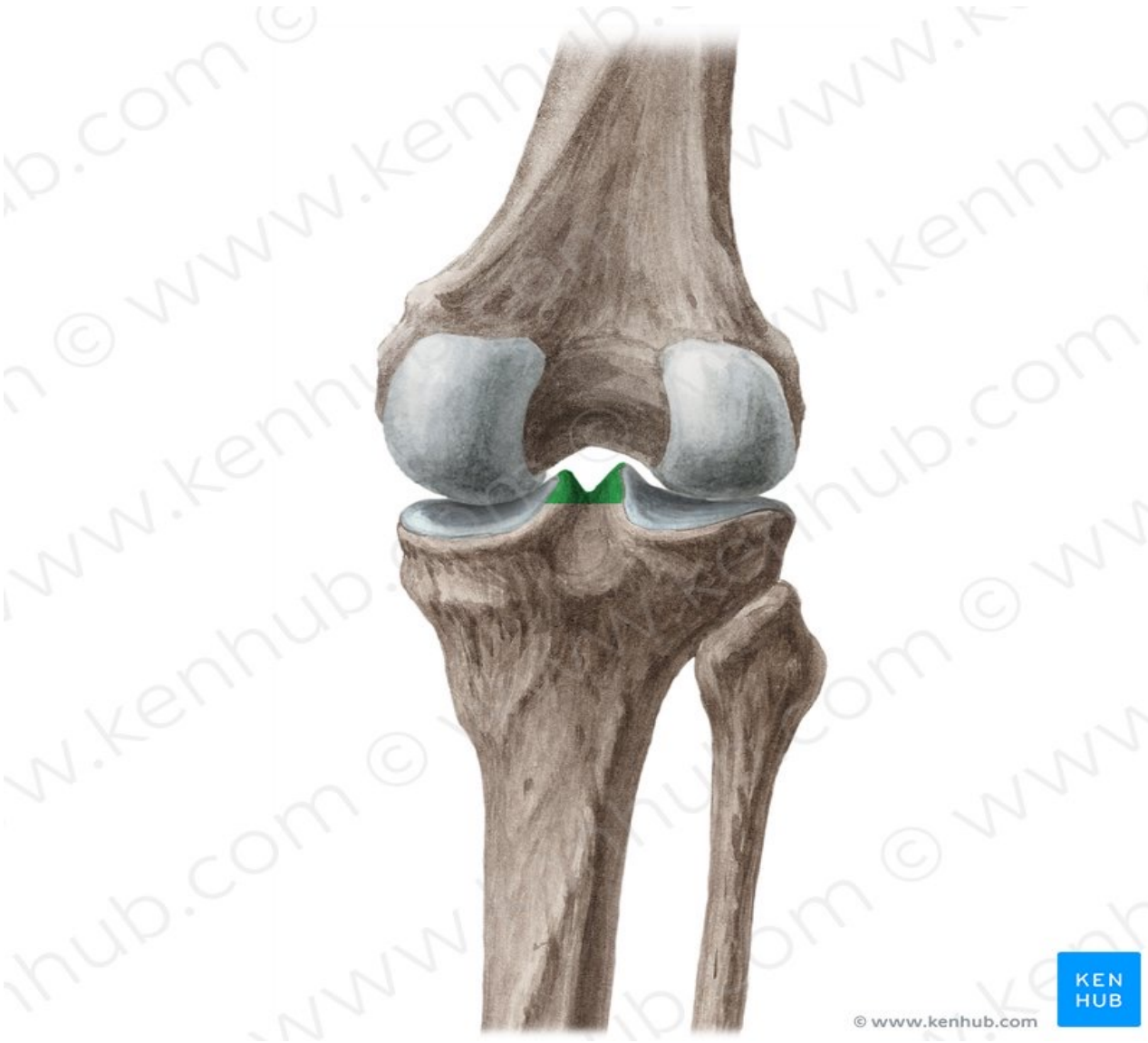
Tibial tuberosity

Soleal line

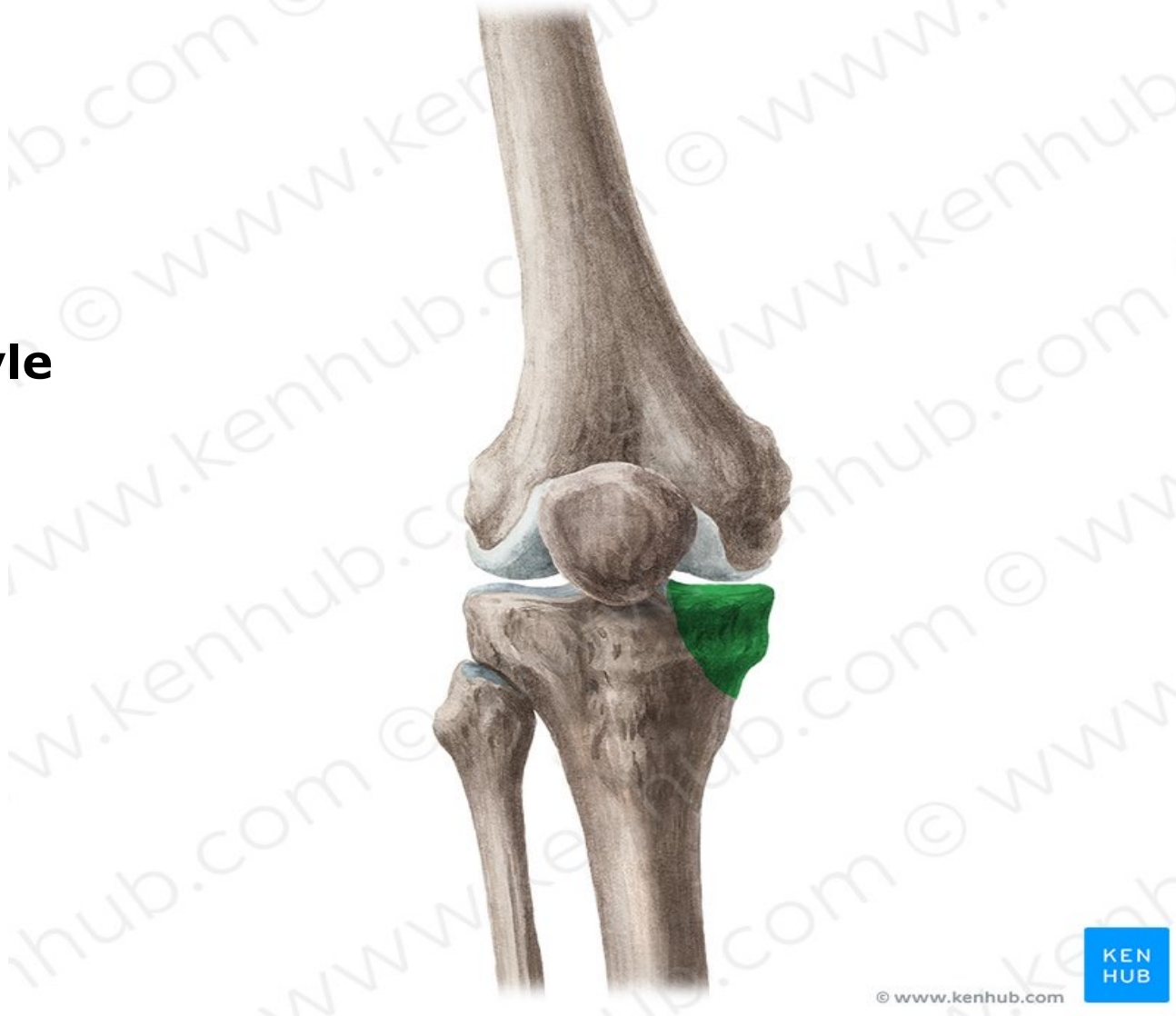
Anterior border (Chin of the tibia)

Medial (subcutaneous surface)

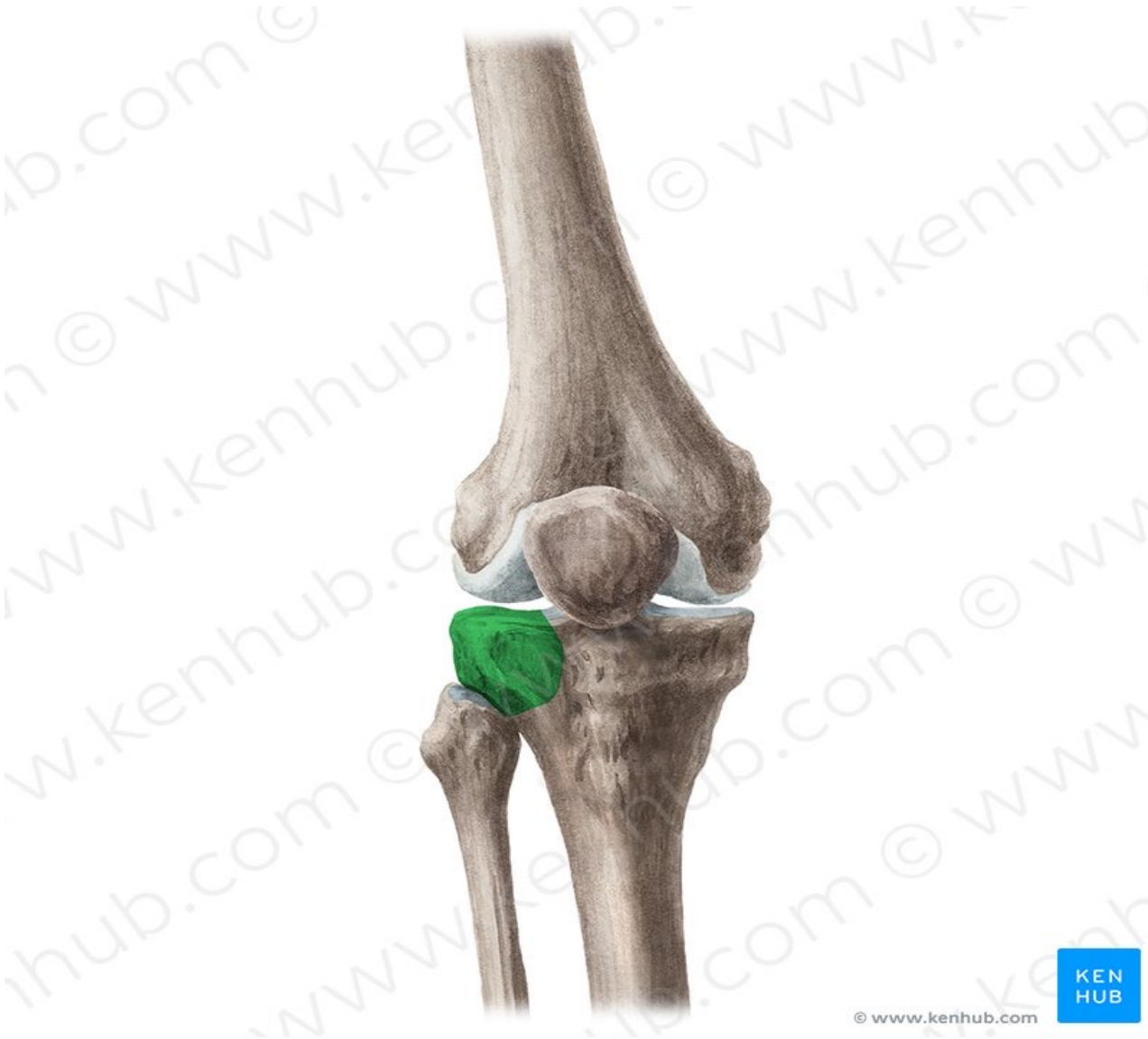
Intercondylar eminence



Medial condyle



Lateral condyle



Fibula

* It is ***lateral*** bone of the leg which does ***not share*** in body weight transmission . It has :

* **Upper end :**

1-Head : It has

-A ***circular facet*** on its medial surface (articulate with the lateral condyle of tibia to form the ***superior tibiofibular*** joint.

- A ***styloid process*** projecting upwards .

2- Neck : it is the ***commonest*** site of ***fracture*** fibula .

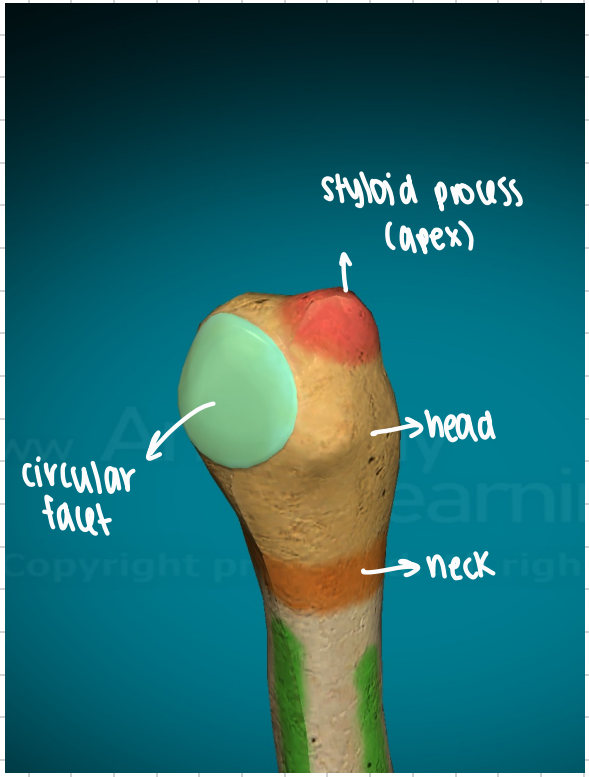
* **Shaft:** It has 3 borders (anterior , posterior, medial orinterosseous border) & 3 surfaces (anterior , posterior & lateral)

* **Lower end (*lateral malleolus*):**

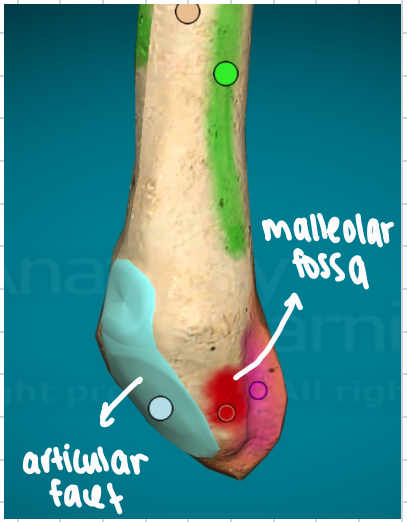
- It has ***2 surfaces*** , a ***lateral*** subcutaneous surface
- a ***medial*** surface showing smooth area for articulation with talus and ***malleolar fossa*** .

fibula

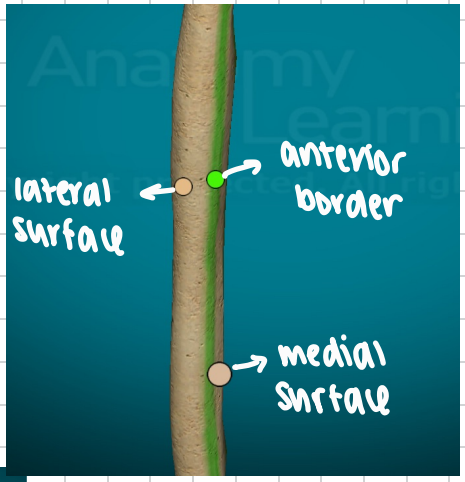
upper end



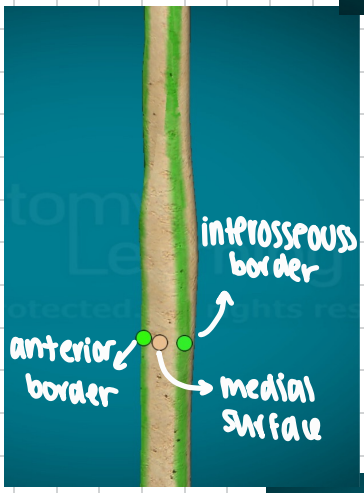
lower end



shaft

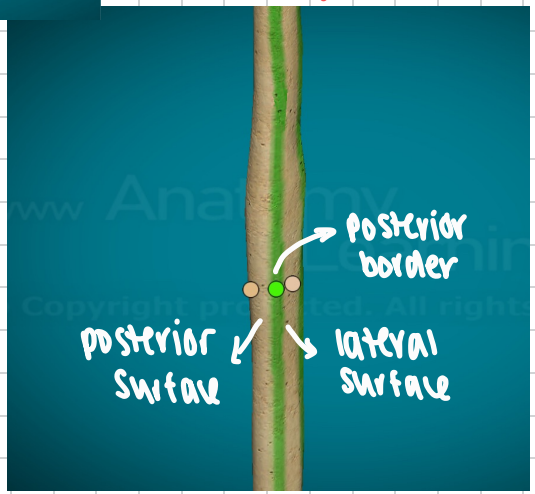


anterior
lateral



anterior
medial

posterior



Functions of Fibula:

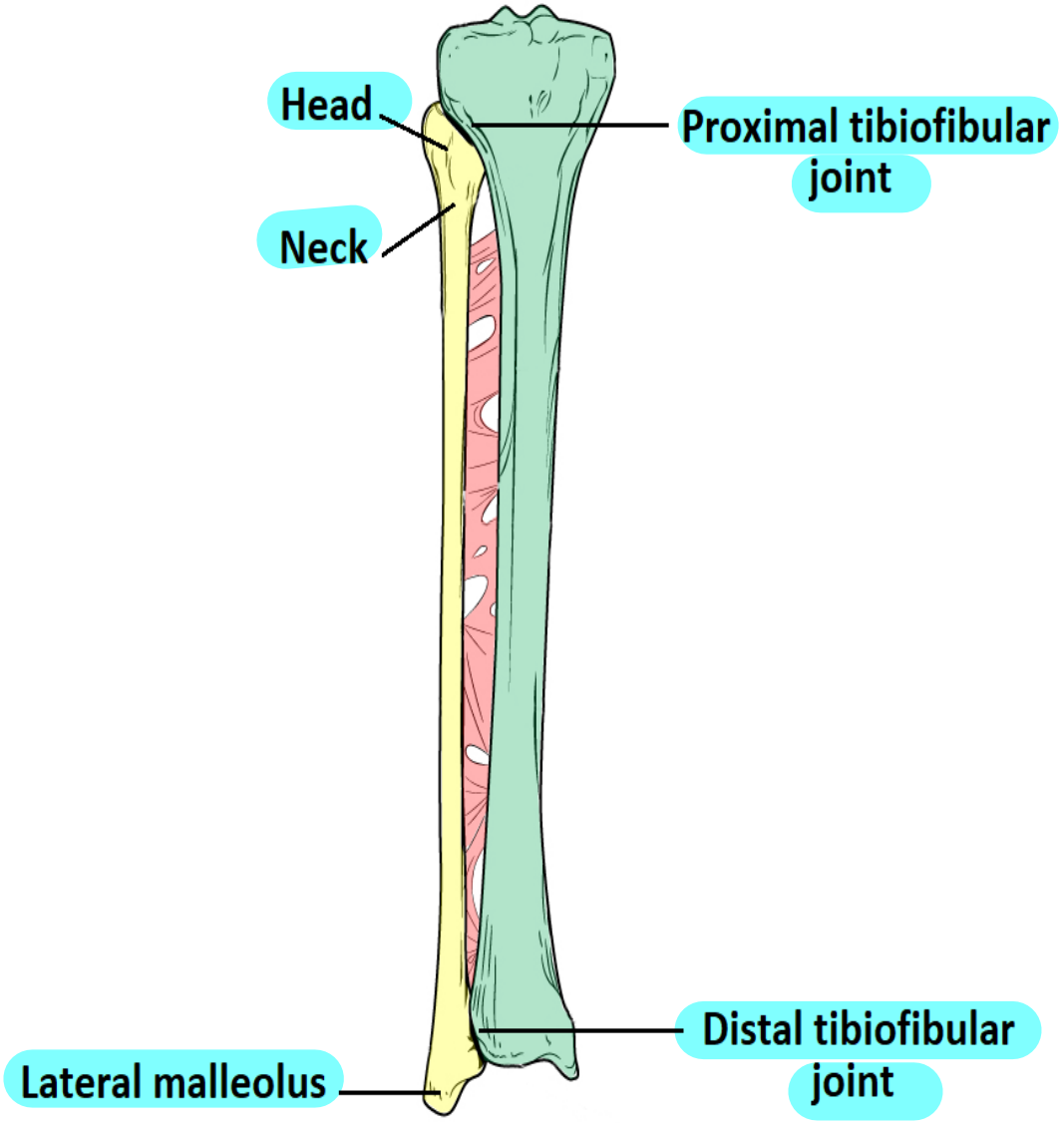
1-Gives ***muscular attachments***.

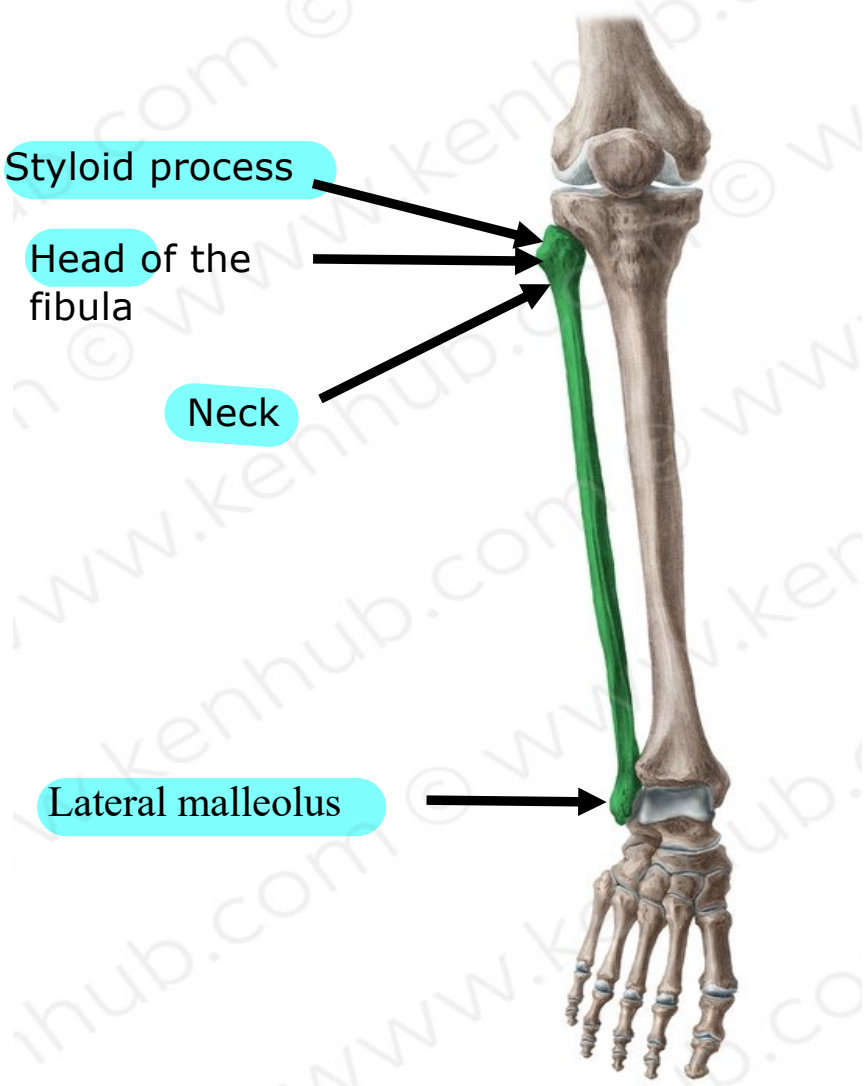
2-Enters in the ***formation of 3 joints***: ankle, *superior tibiofibular* joint and *inferior tibiofibular* joint.

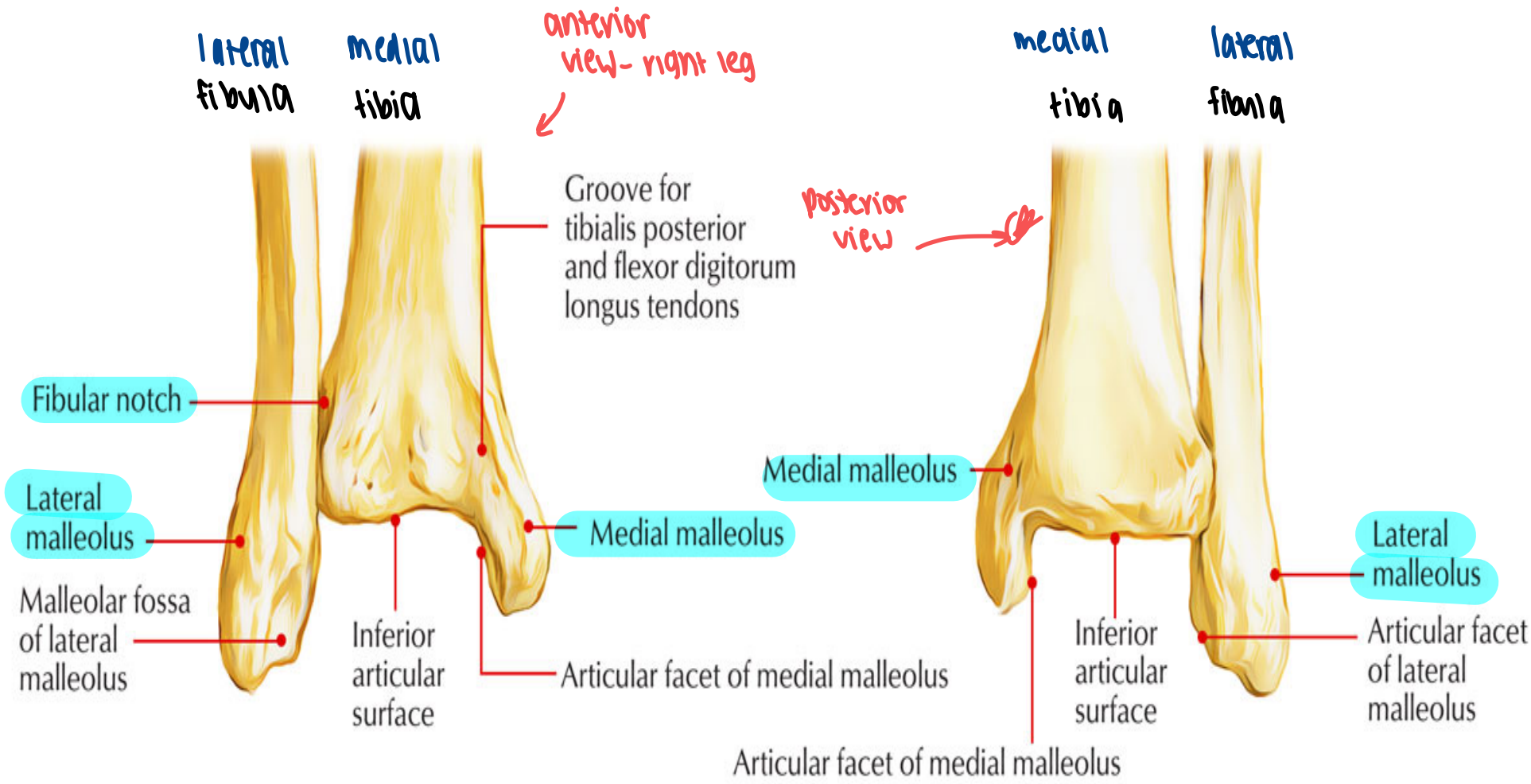
IT DOES NOT SHARE IN THE FORMATION OF THE KNEE JOINT.

3-Used commonly as a ***bone graft*** in plastic bone surgery.

4-It ***does not transmit body weight*** because it does not articulate with the femur in the knee joint.


Head
Proximal tibiofibular joint
Neck
Lateral malleolus
Distal tibiofibular joint


Styloid process
Head of the fibula
Neck
Lateral malleolus


lateral
fibula
medial
tibia
anterior
view- right leg
Groove for
tibialis posterior
and flexor digitorum
longus tendons
Fibular notch
Lateral
malleolus
Malleolar fossa
of lateral
malleolus
Inferior
articular
surface
Medial malleolus
Articular facet of medial malleolus
medial
tibia
lateral
fibula
posterior
view
Medial malleolus
Lateral
malleolus
Inferior
articular
surface
Articular facet
of lateral
malleolus
Articular facet of medial malleolus

Articulation of the fibula

1) Superior tibiofibular joint :

Type: Plane synovial joint uniaxial

Articular surfaces : Head of fibula

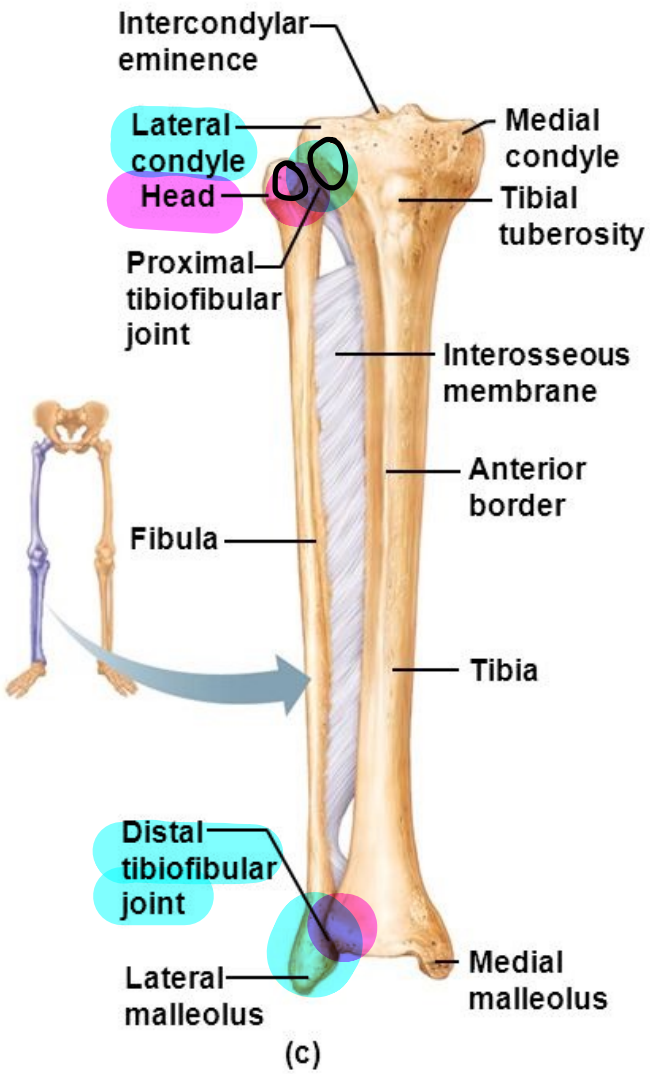
and the fibular facet of the lateral tibial condyle.

2) Inferior tibiofibular joint:

Type: Fibrous (syndesmoses)

Articular surfaces : Fibular notch of the tibia

and the lower end of the fibular shaft.



TEST YOUR KNOWLEDGE

Head of the fibula

Neck of the fibula

Lateral malleolus

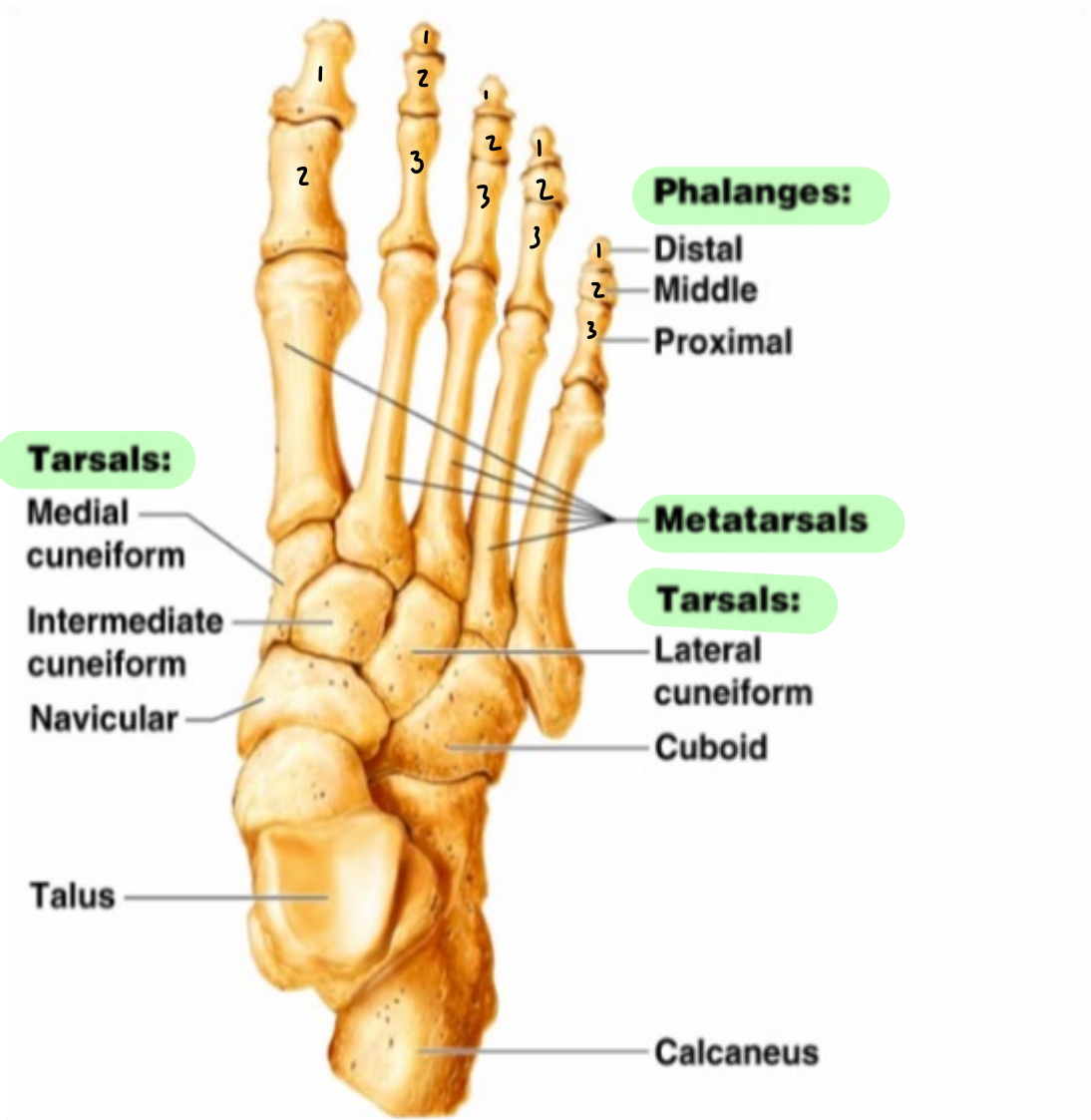
Bones of the FOOT

Bones of foot: Include:

Tarsal bones : Calcaneous, talus , navicular, cuboid & 3 cuneiform bones.

5 Metatarsal bones: The 5th metatarsal bone has a tuberosity

Phalanges: Each toe has 3 phalanges except big one (has 2 phalanges).



intermediate cuneiform

lateral cuneiform

medial cuneiform

TIGER CUBS NEED MILC

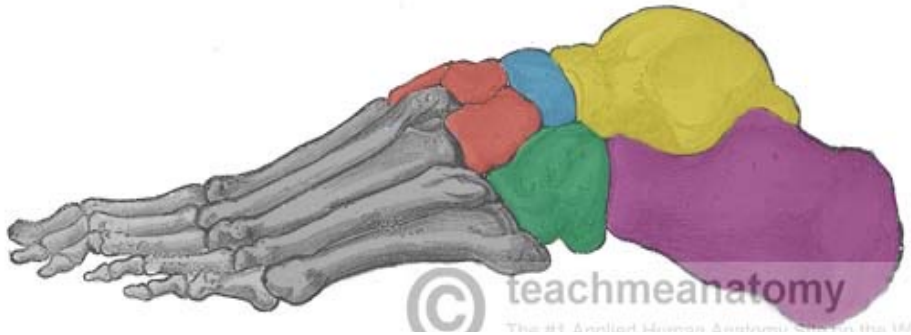
Talus

navicular

calcaneus

cuboid

Calcaneus
Talus
Navicular
Cuboid
Cuneiforms



Ankle Joint

Type: Hinge synovial joint.

Articular surfaces :

- Above: lower end of tibia and the medial malleolus, lateral malleolus of fibula .
- Below: the trochlear surface of the body of the talus.

Supporting ligaments:

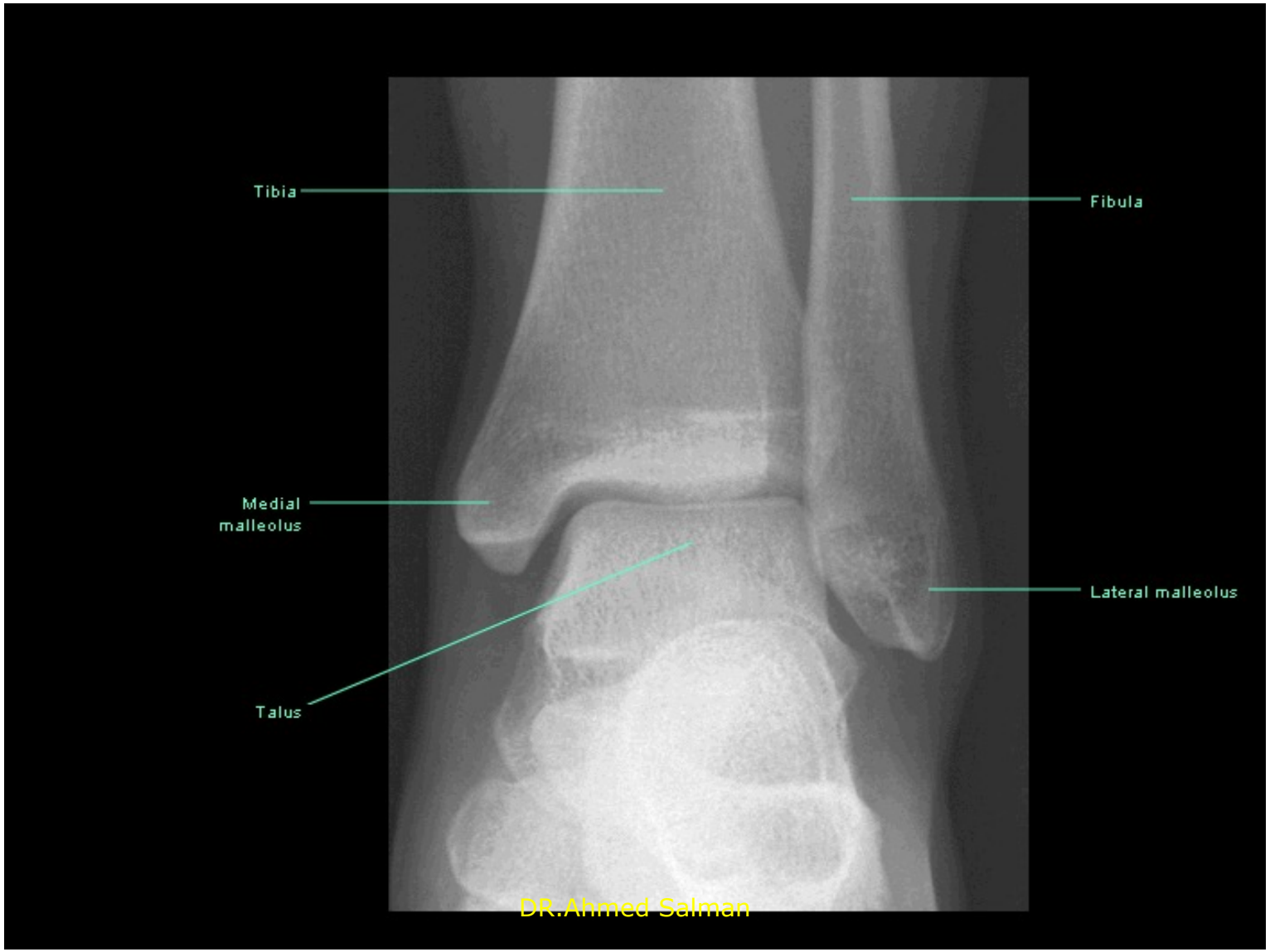
(1) Medial (deltoid) ligament

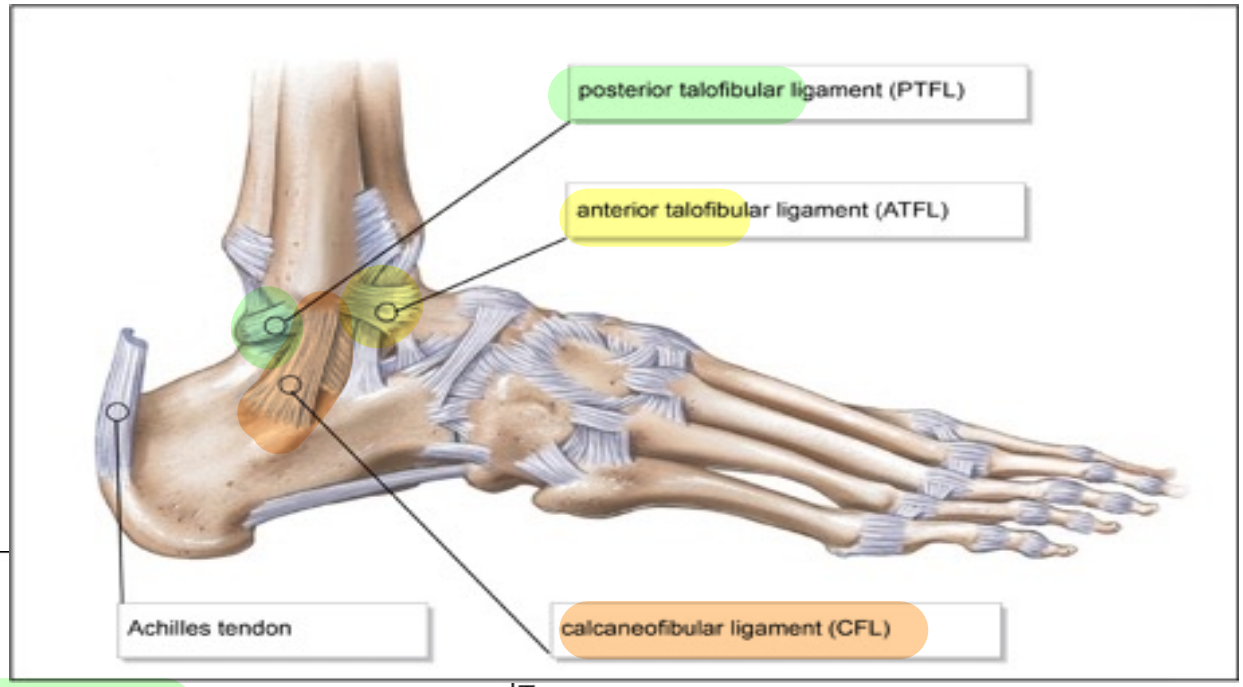
(2) Lateral ligament: has 3 bands :

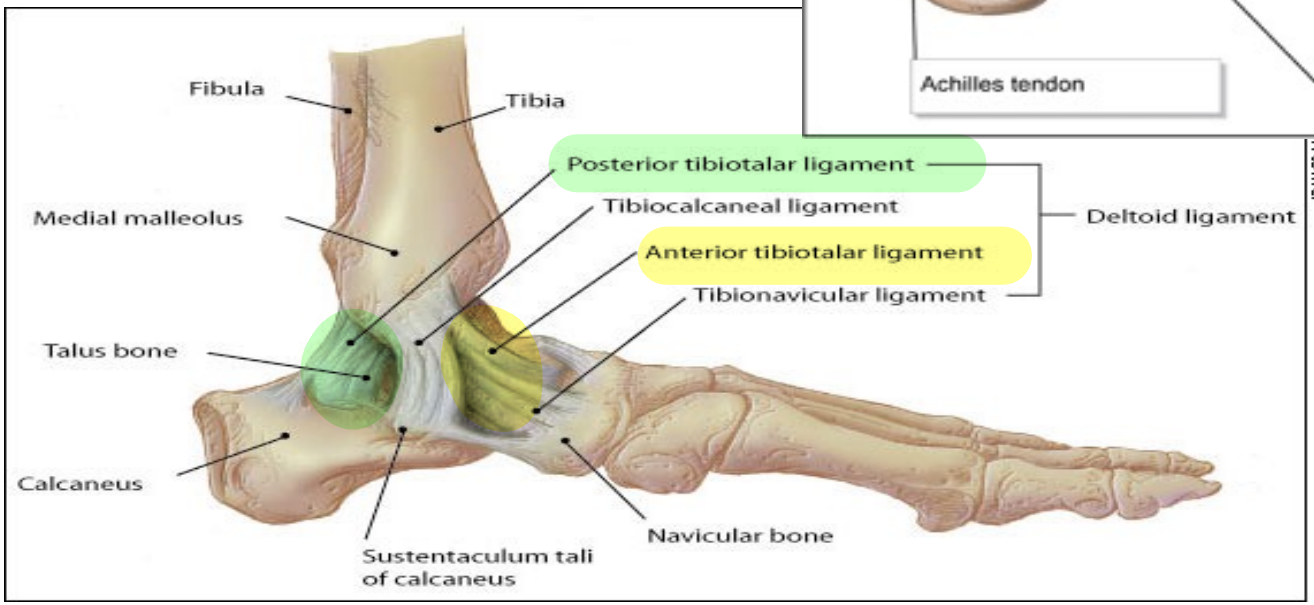
- Anterior talofibular ligament
- Posterior talofibular ligament
- Calcaneofibular ligament:

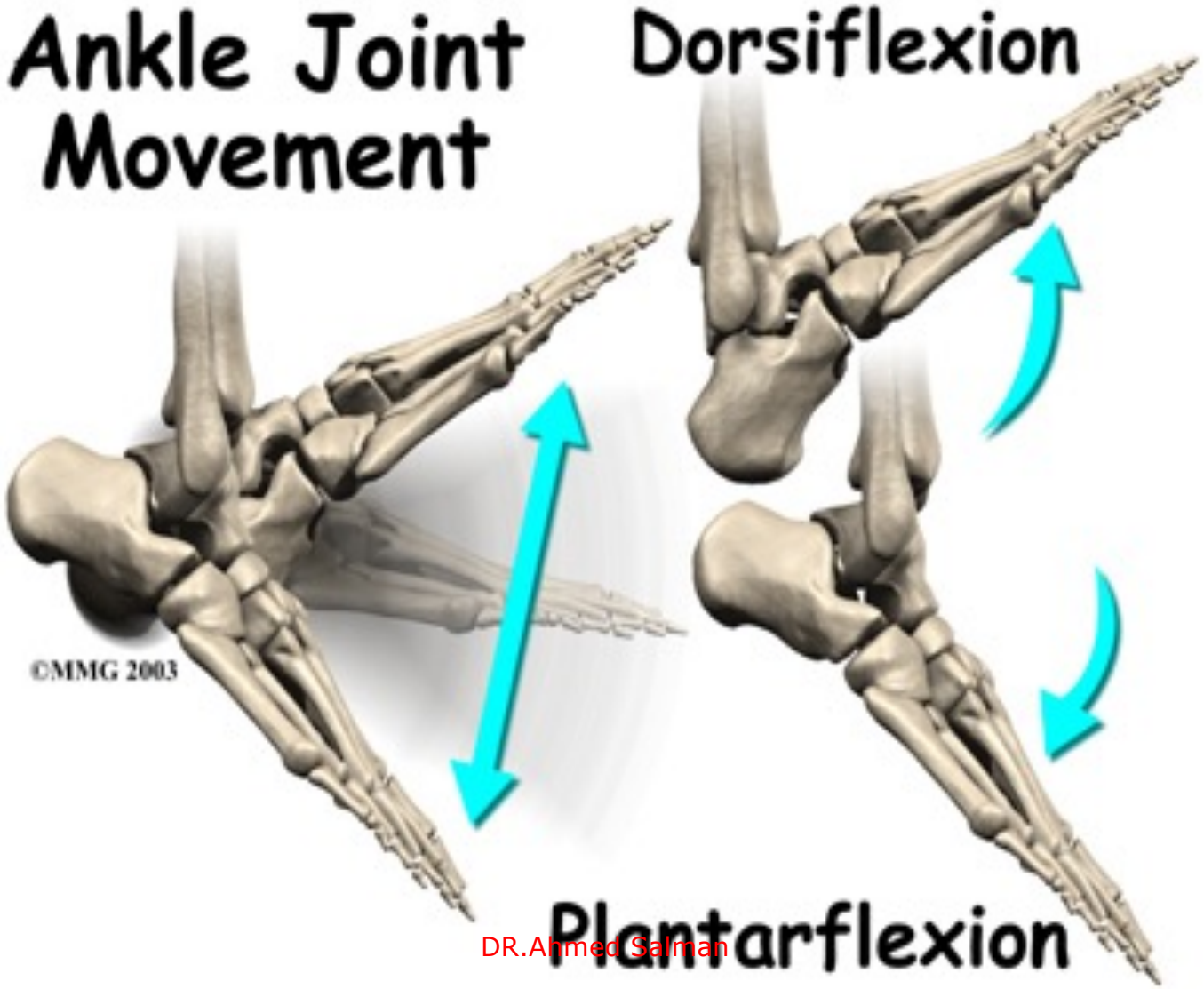
Movement :

1. Dorsiflexion
2. Plantar flexion


Tibia
Fibula
Medial malleolus
Lateral malleolus
Talus
DR.Ahmed Salman


posterior talofibular ligament (PTFL)
anterior talofibular ligament (ATFL)
Achilles tendon
calcaneofibular ligament (CFL)


Fibula
Tibia
Posterior tibiotalar ligament
Tibiocalcaneal ligament
Anterior tibiotalar ligament
Tibionavicular ligament
Deltoid ligament
Medial malleolus
Talus bone
Calcaneus
Navicular bone
Sustentaculum tali
of calcaneus
Hosmer


Ankle Joint Movement
Dorsiflexion
©MMG 2003
Plantarflexion
DR.Ahmed Salman

Joints of the Foot

Subtalar (between the talus and the calcaneum) **and Mid tarsal joints** (talocalcaneonavicular and the calcaneocuboid)

Type : Plane Synovial

Movements :

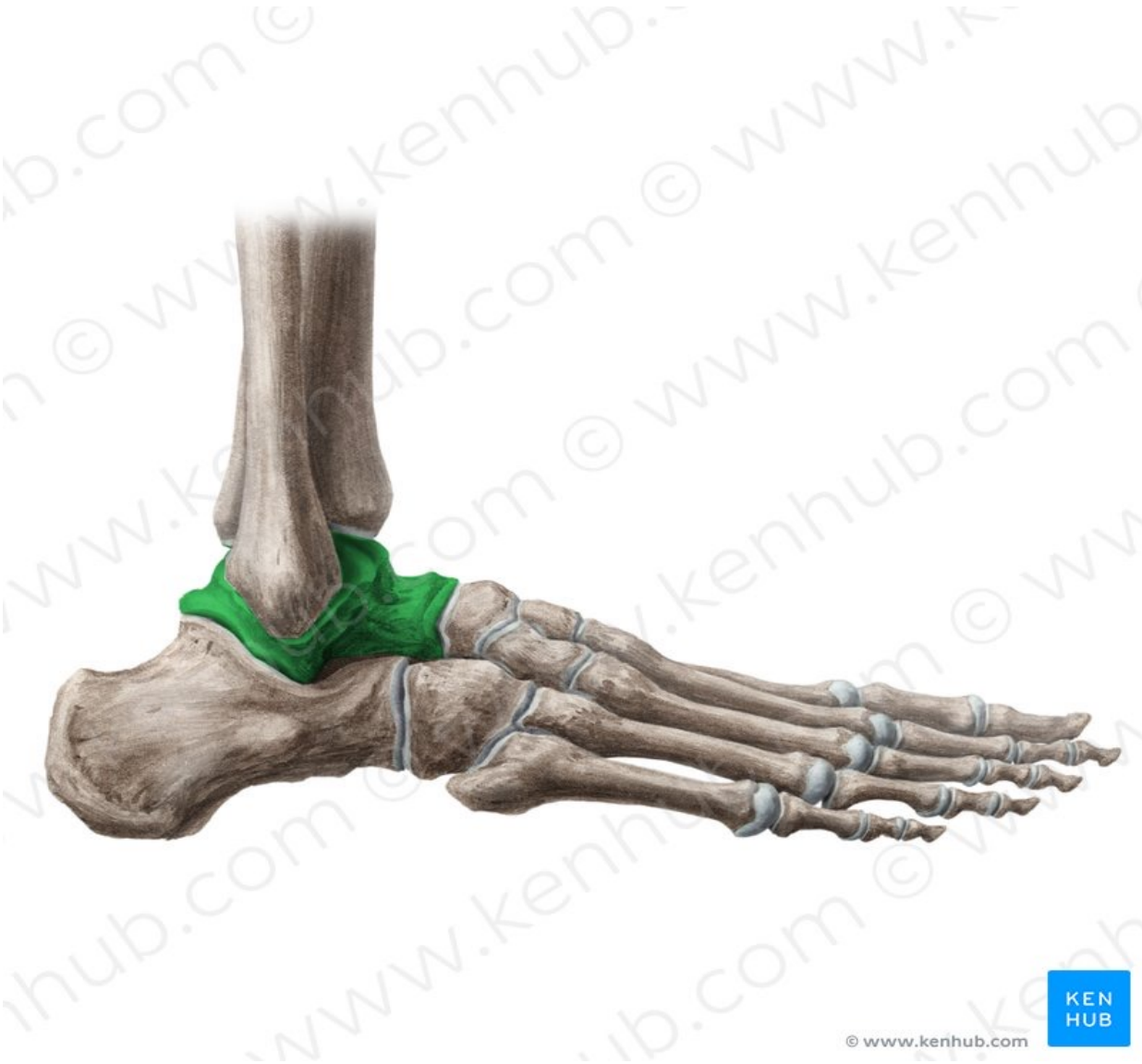
Inversion and eversion

Inversion is much more free than eversion why ?

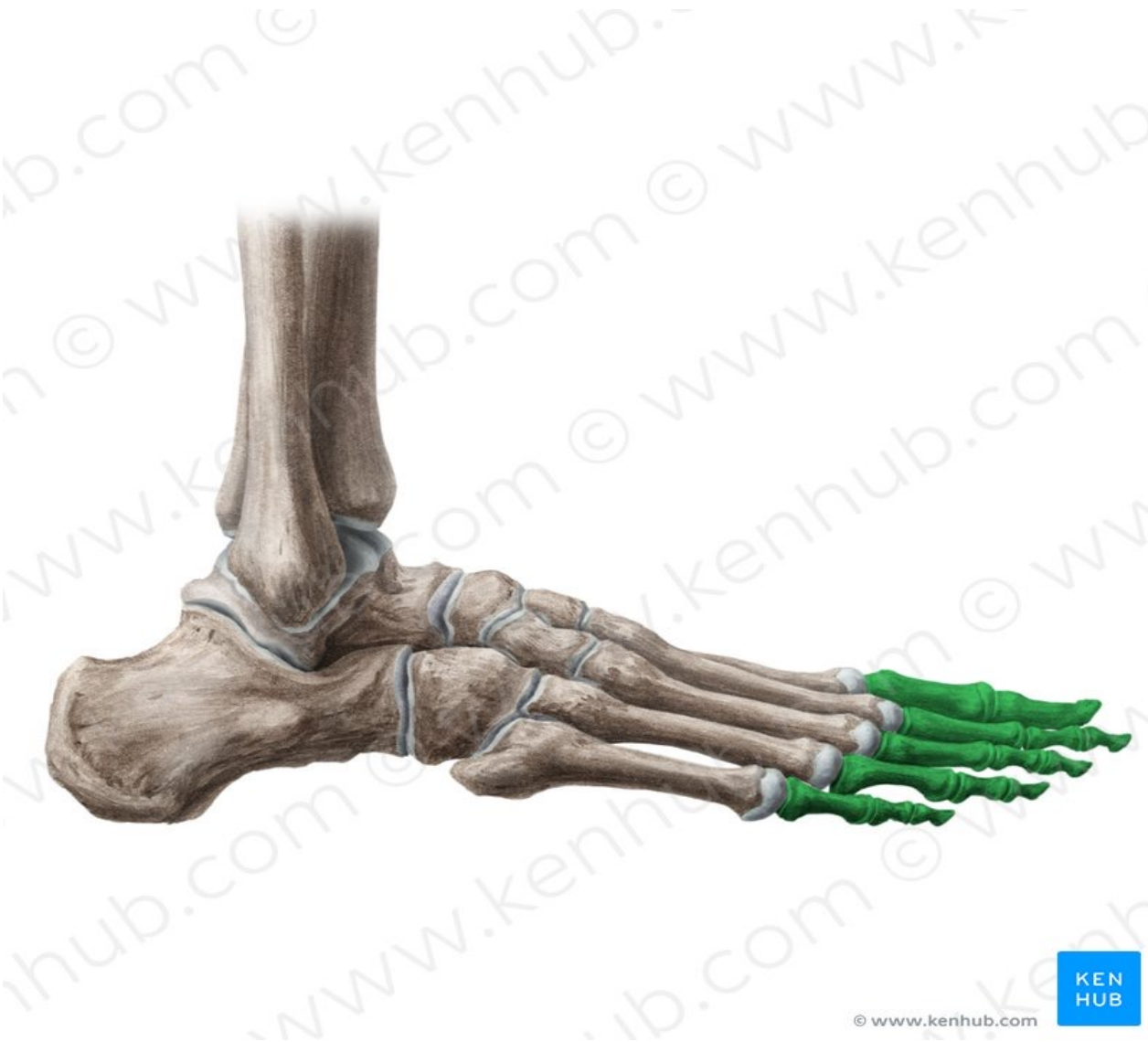
(L. malleolus is lower than the M. malleolus).

TEST YOUR KNOWLEDGE

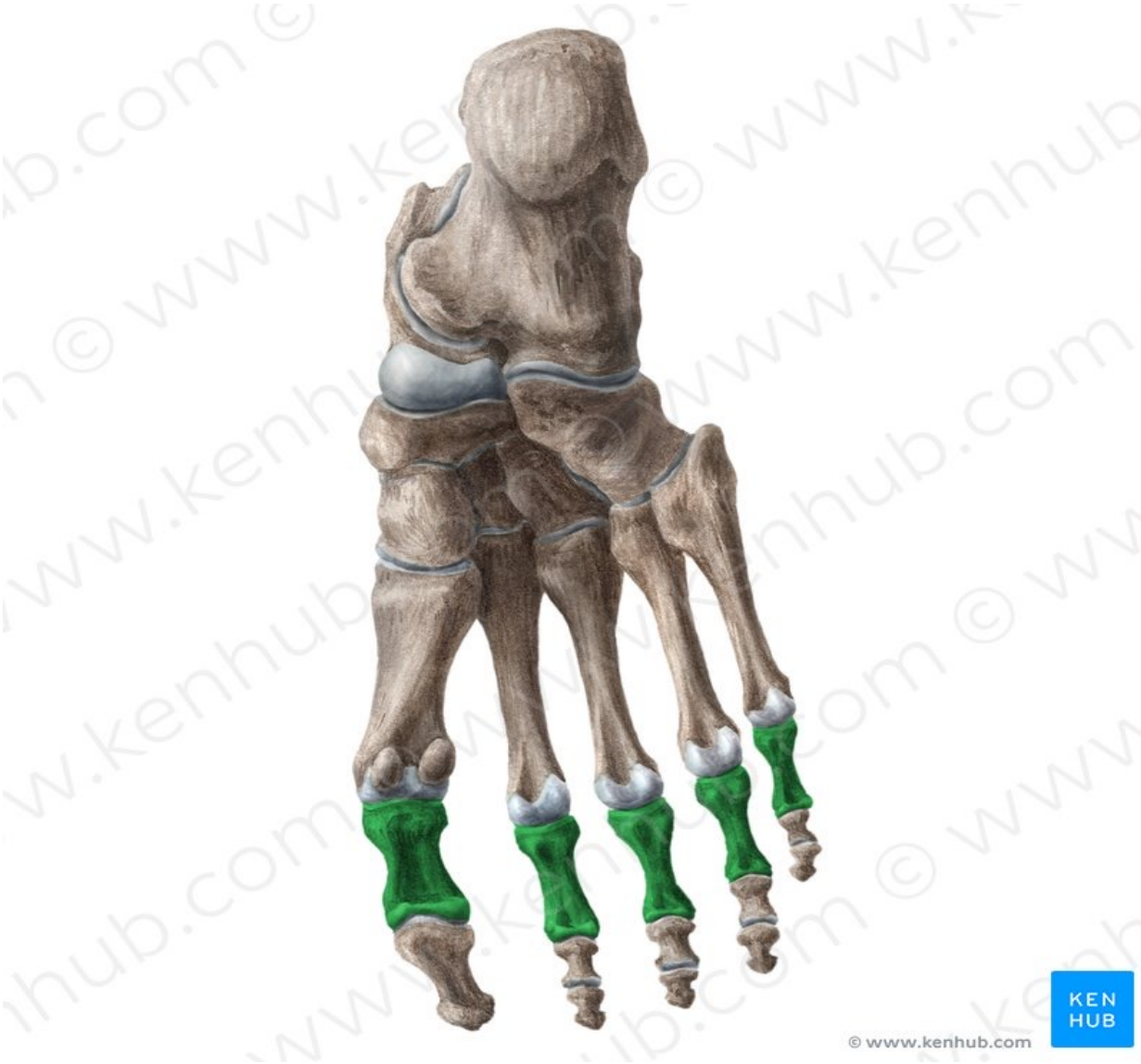
Talus



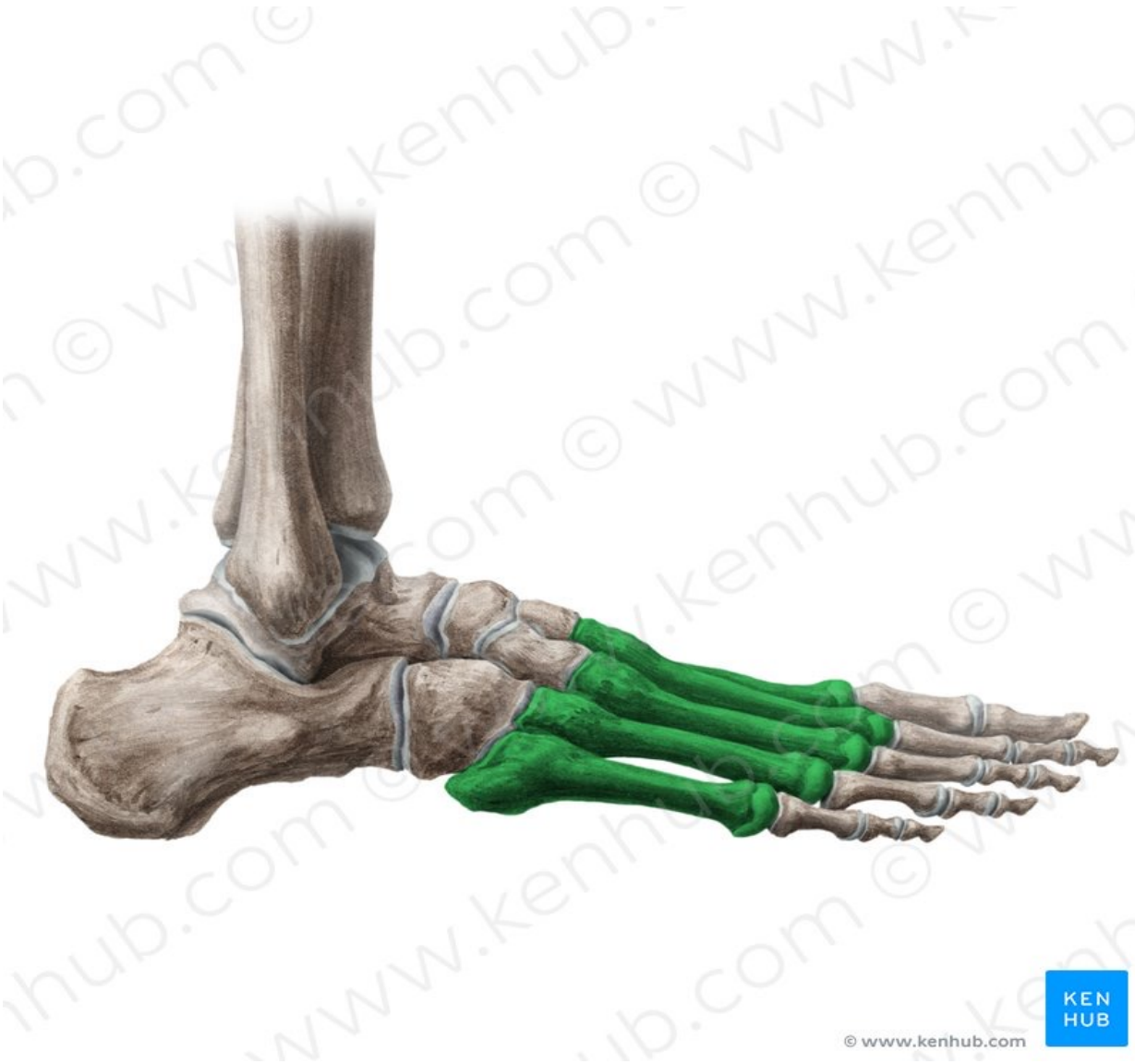
Phalanges



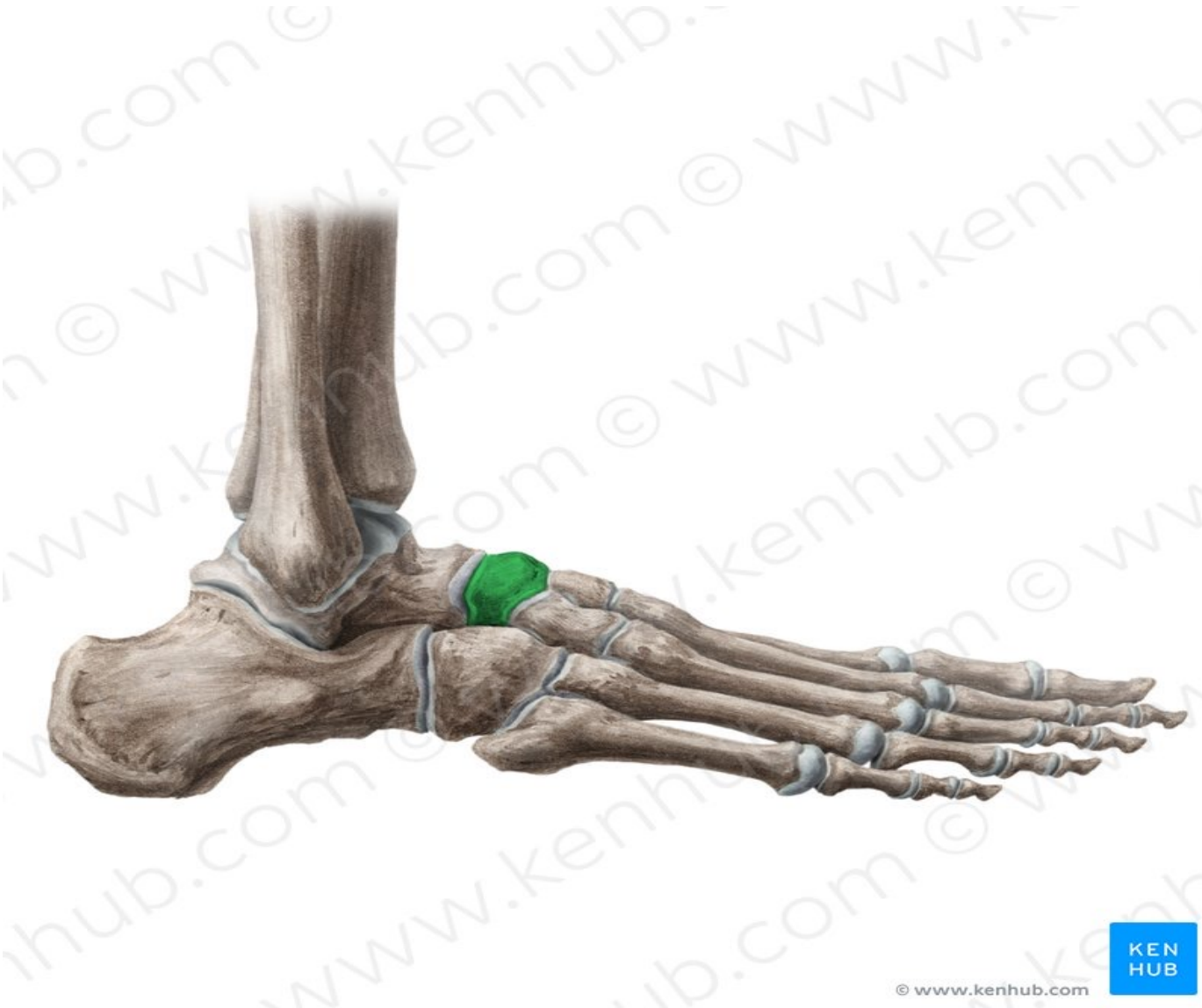
Proximal Phalanges



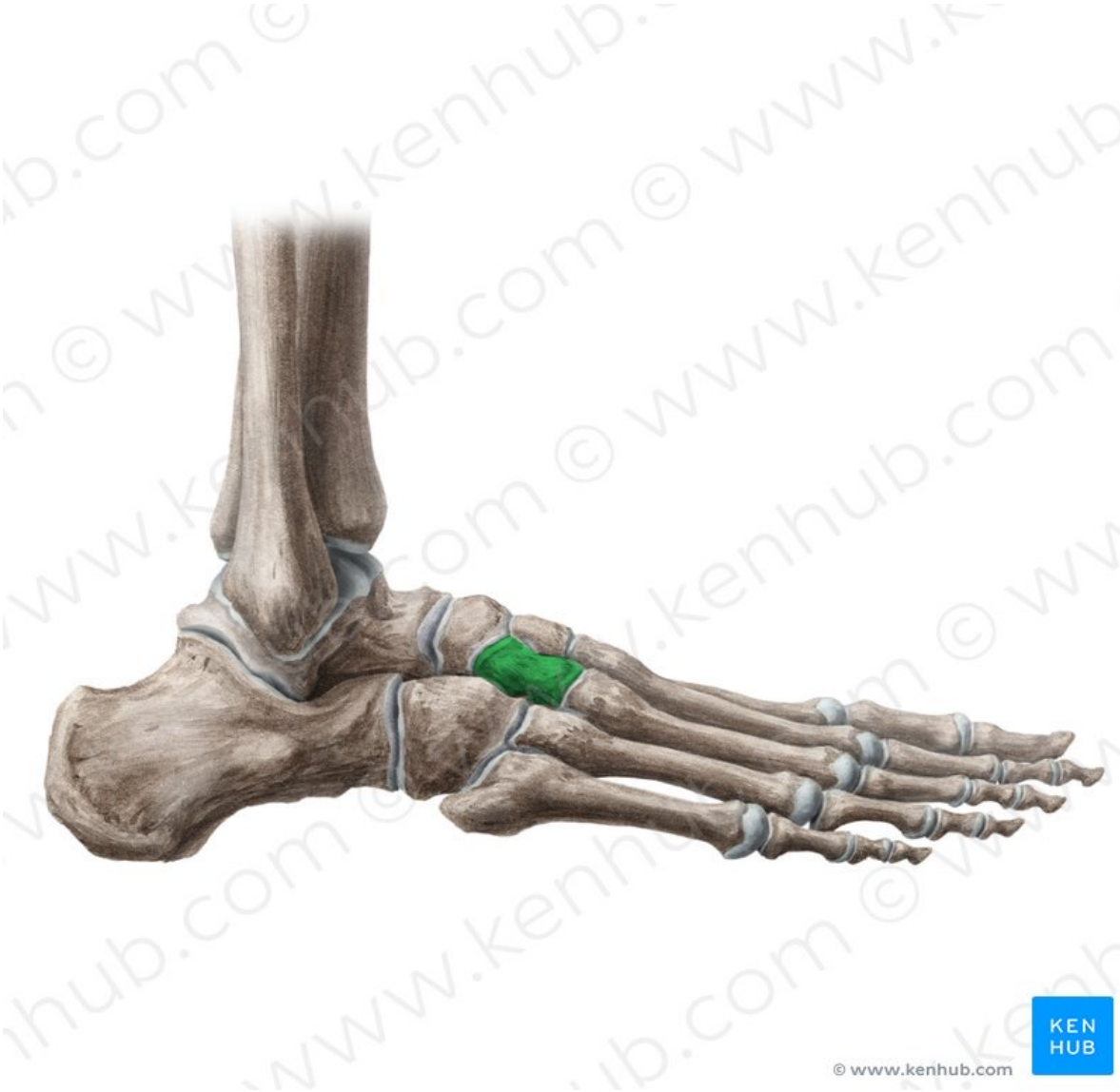
Metatarsal bone



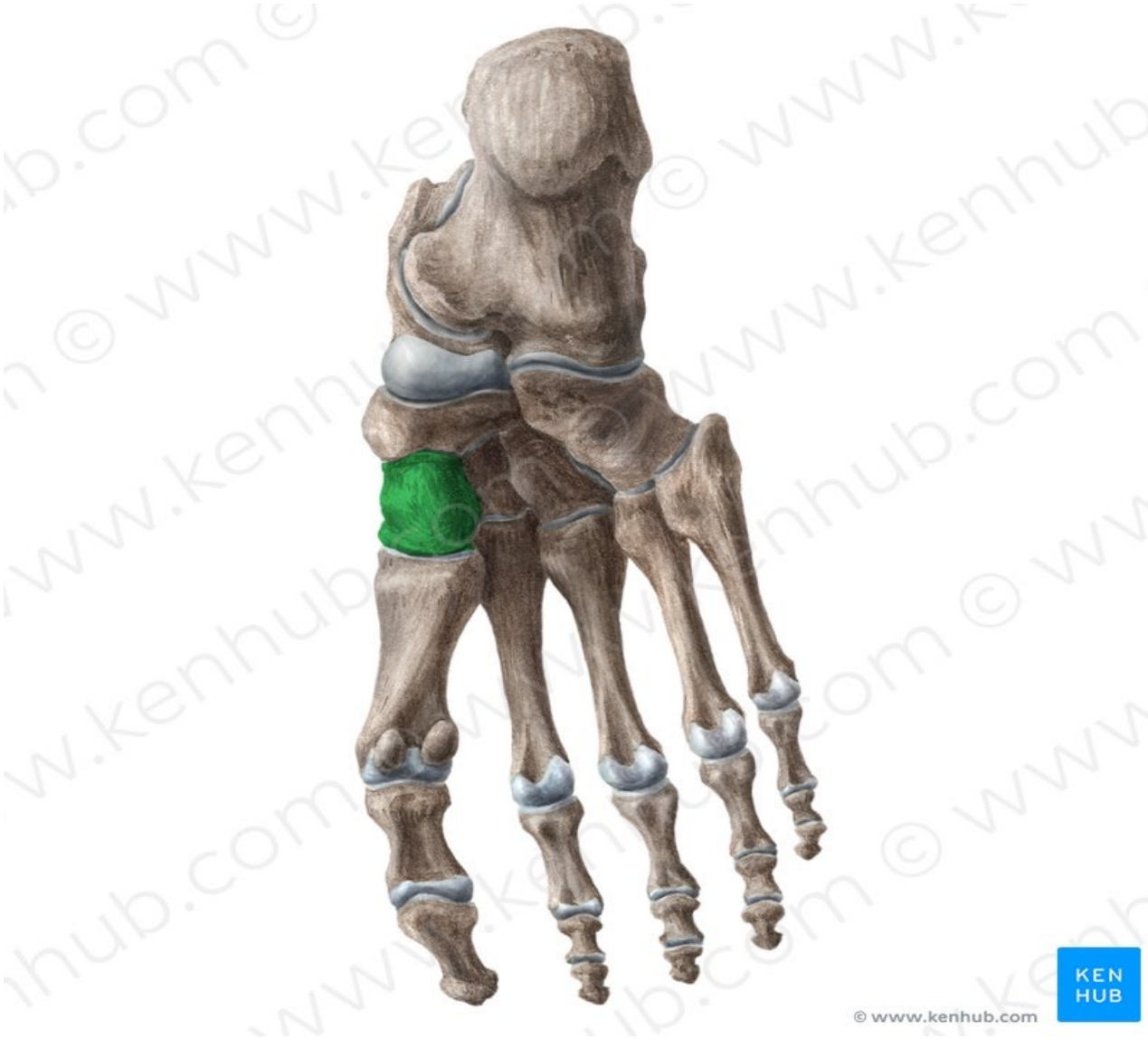
Navicular



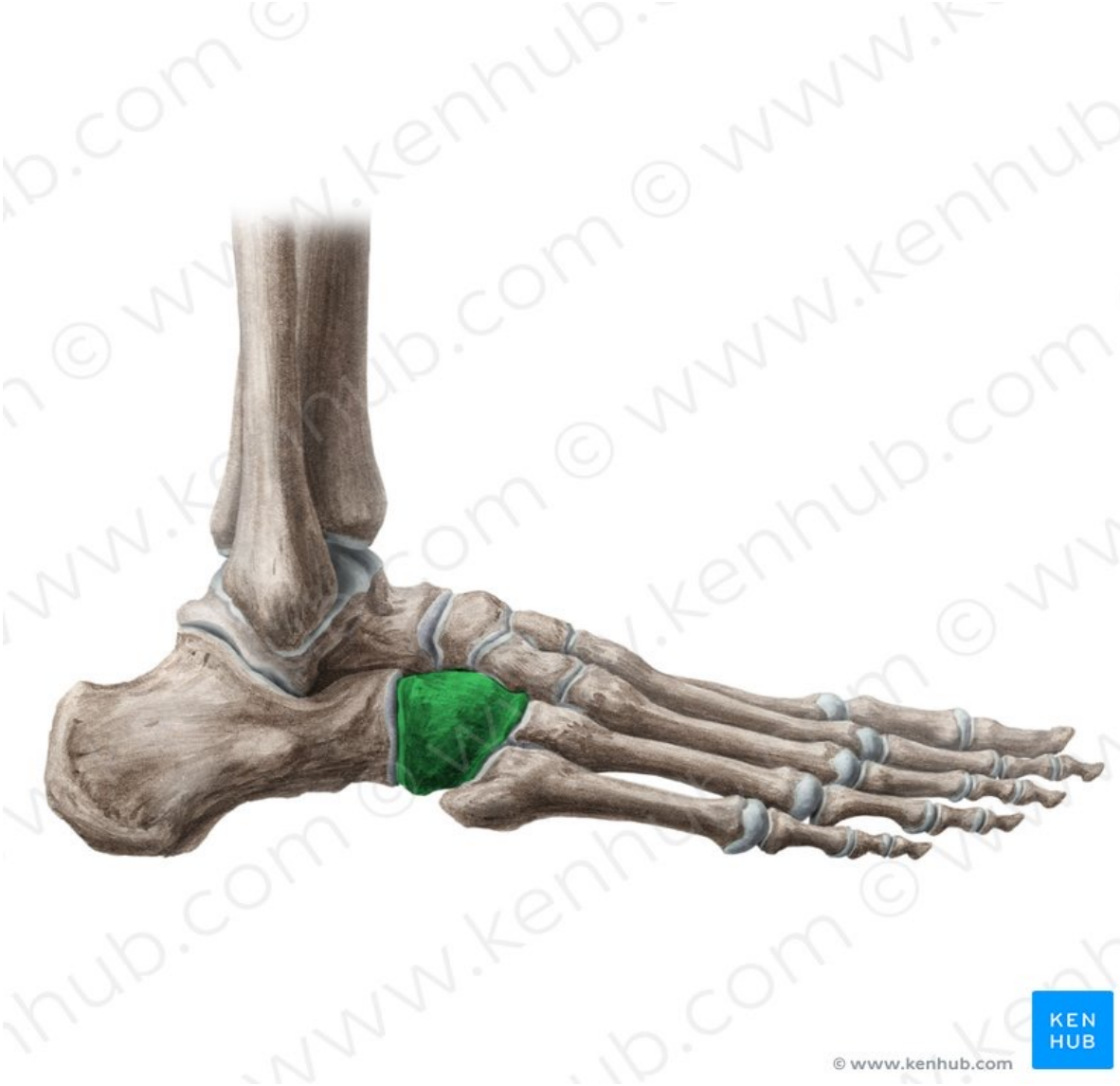
Lateral Cuneiform



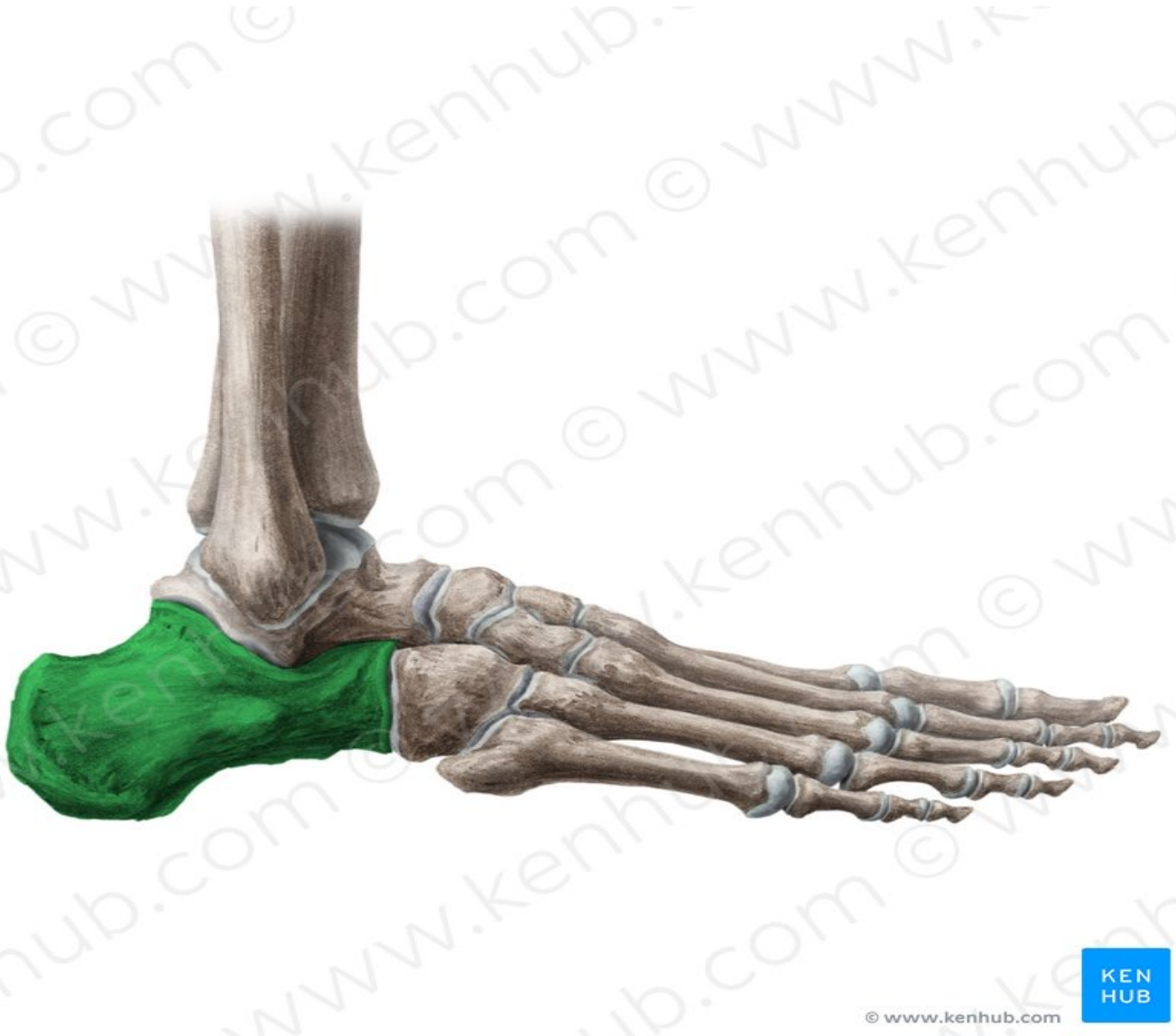
Medial Cuneiform



Cuboid



Calcaneus



THANK YOU