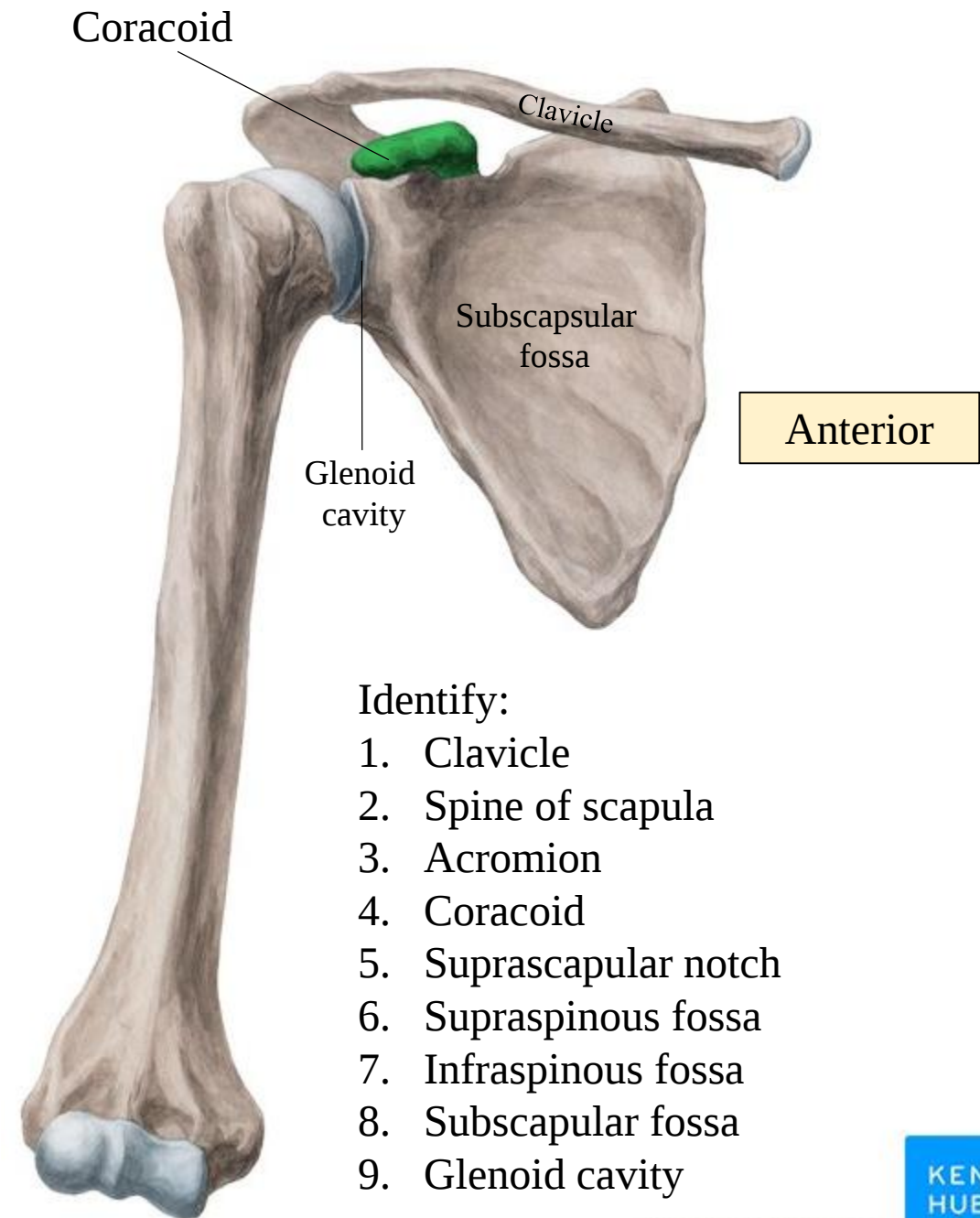
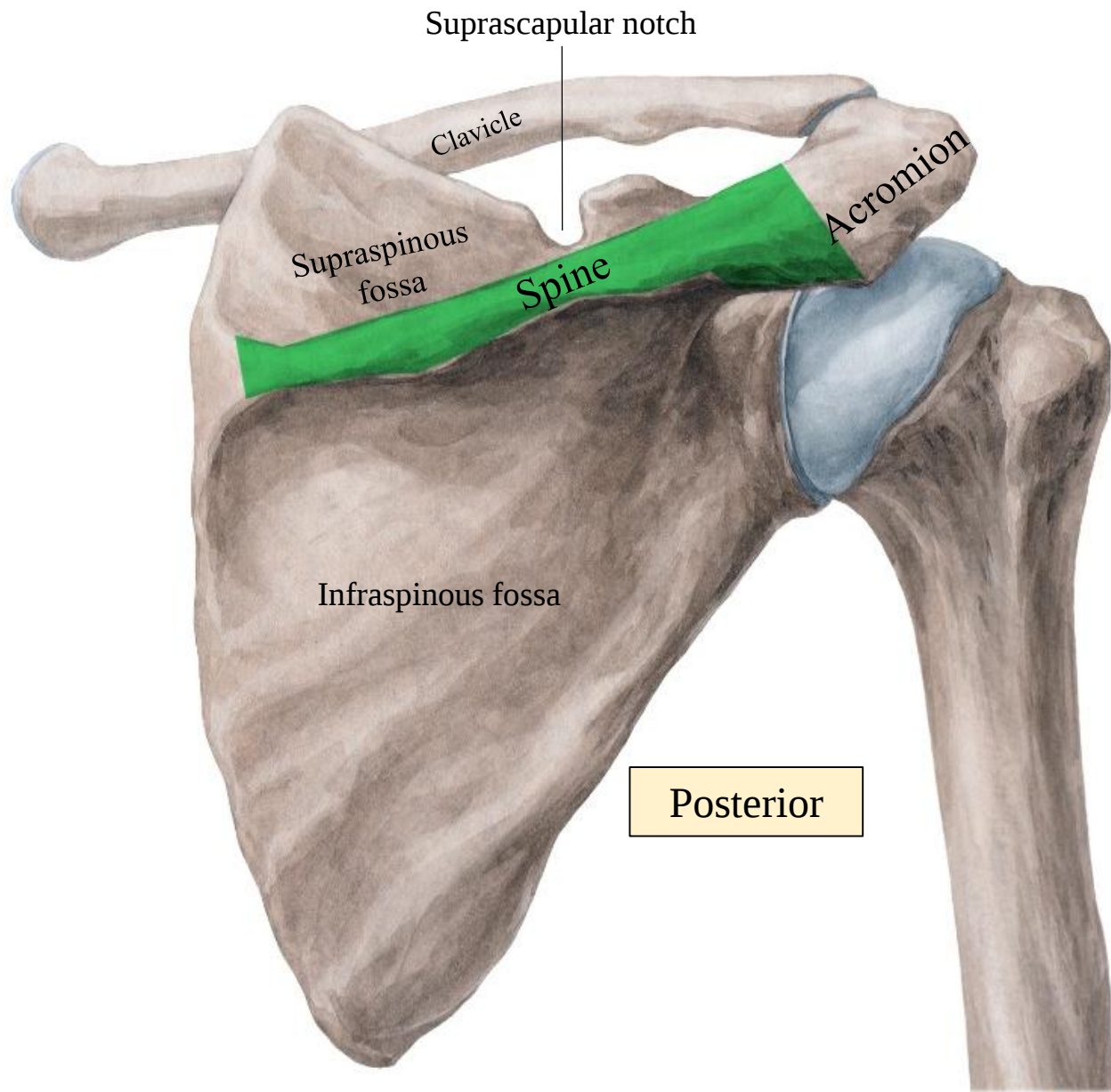




Images for Practical Exam 2025

Introduction to Anatomy and Embryology

Dr. Heba Kalbouneh
DDS, MSc, DMD/PhD
Professor of Anatomy, Histology and Embryology



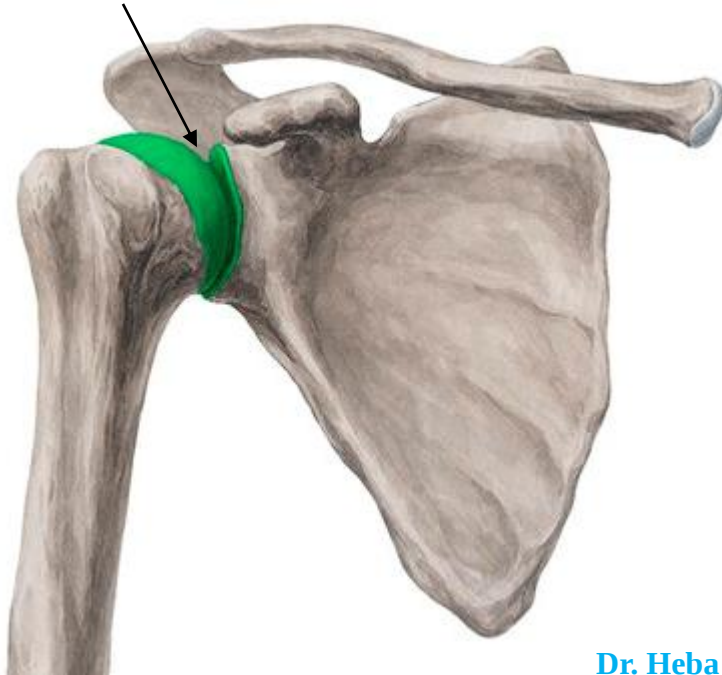
Identify the joints and their types:

1-Sternoclavicular joint (Synovial double plane joint).

2- Acromioclavicular joint (Synovial plane joint).

3- Shoulder Joint (glenohumeral joint) (Ball and socket synovial joint).

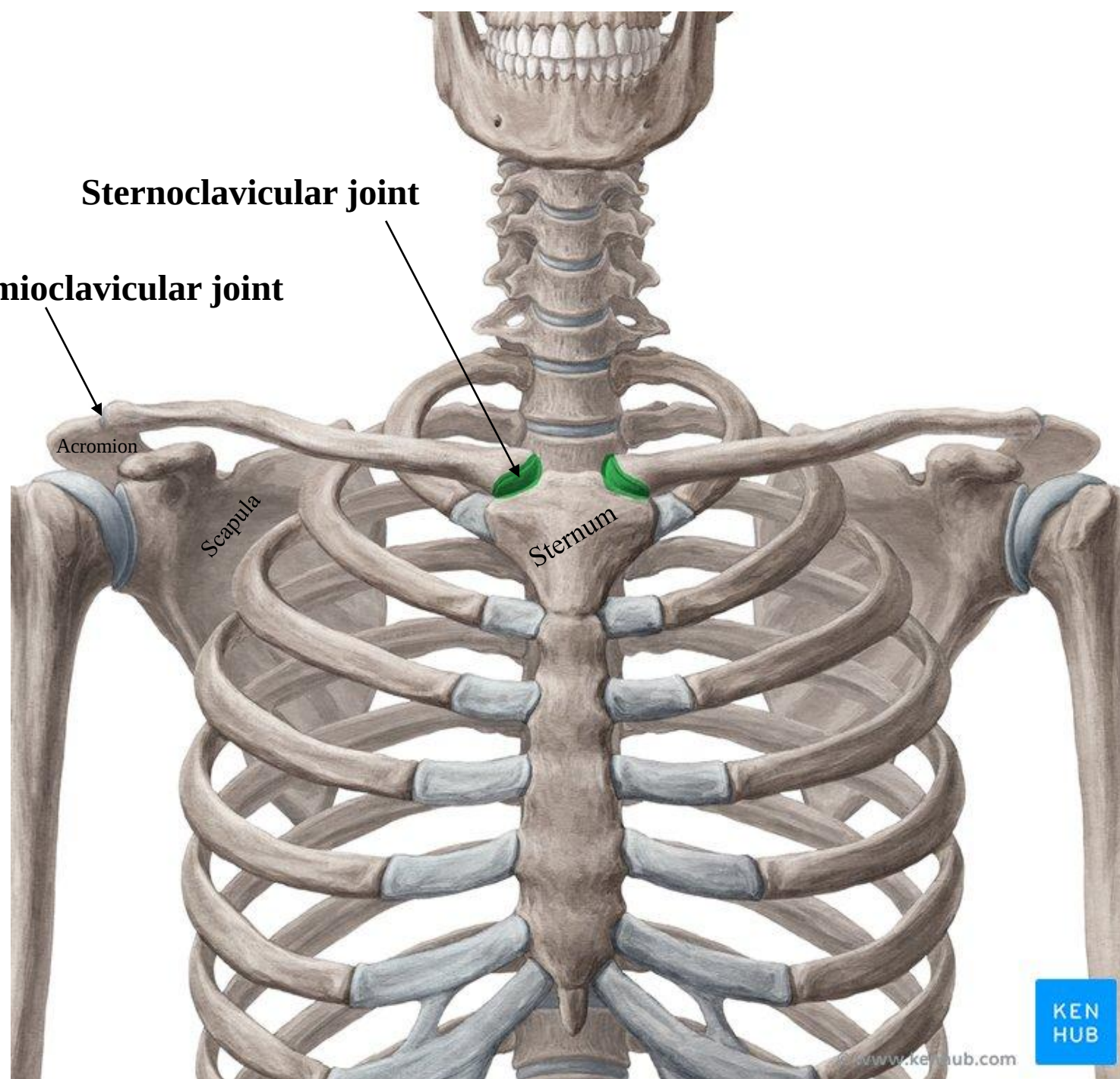
Shoulder Joint



Dr. Heba Kalbouneh

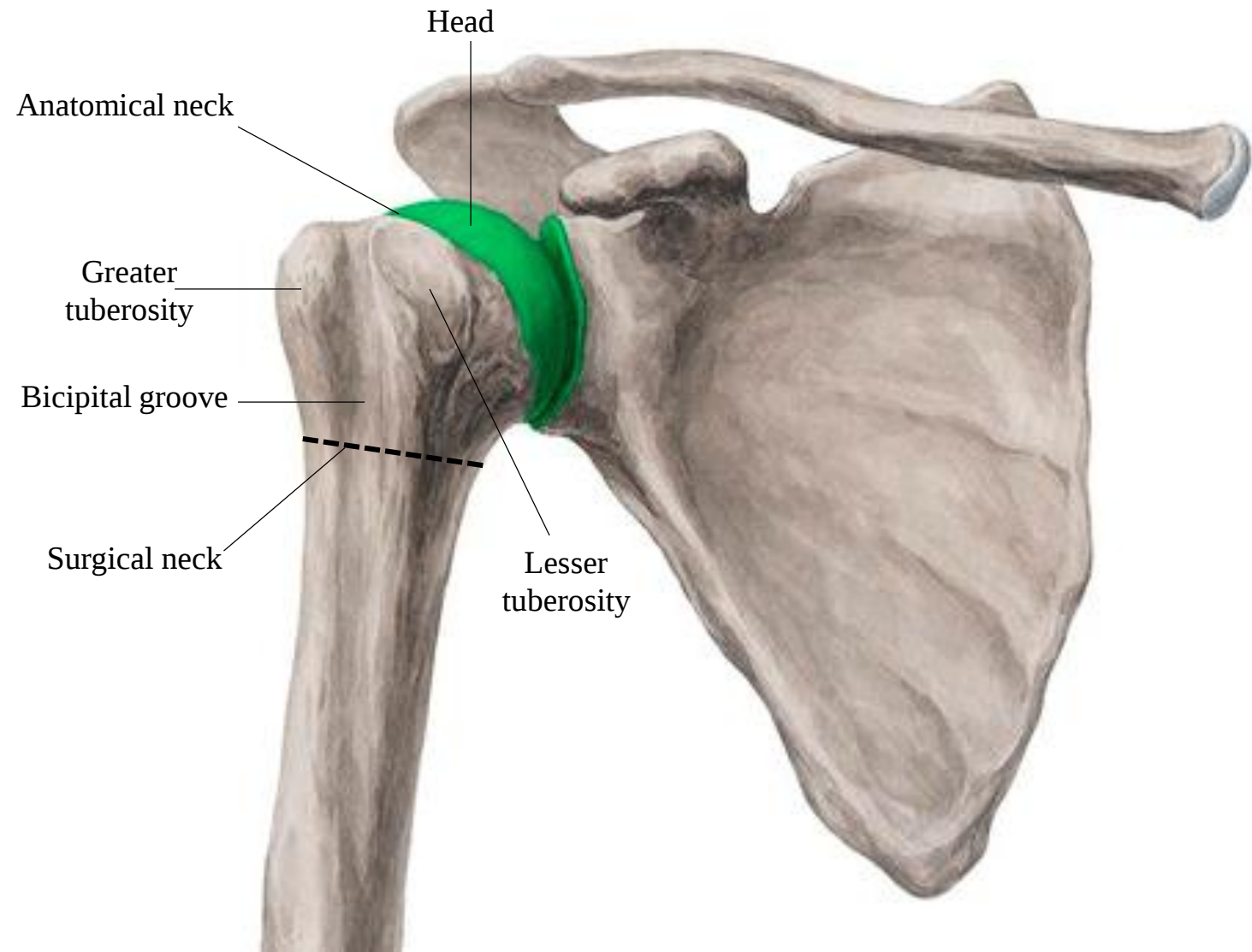
Sternoclavicular joint

Acromioclavicular joint



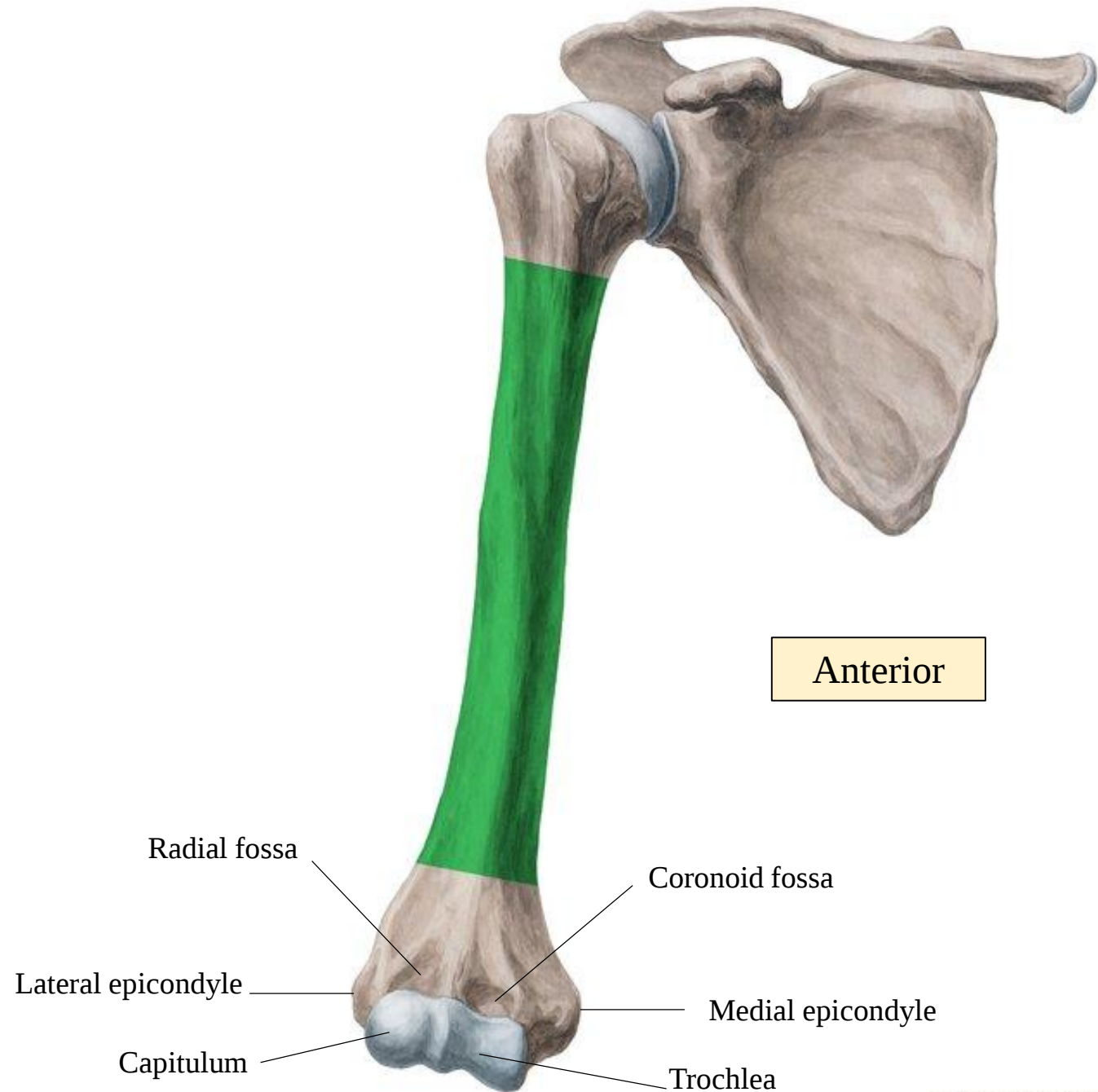
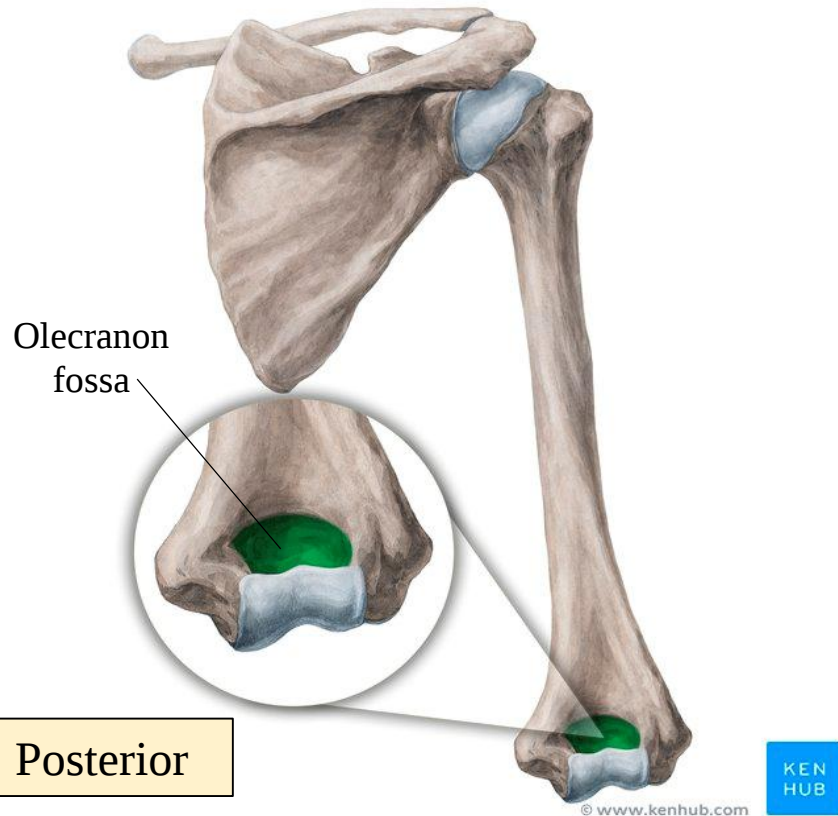
Identify:

- ✓ Head of humerus
- ✓ Anatomical neck
- ✓ Greater tuberosity (tubercle)
- ✓ Lesser tuberosity (tubercle)
- ✓ Inter-tubercular (bicipital) groove
- ✓ Surgical neck



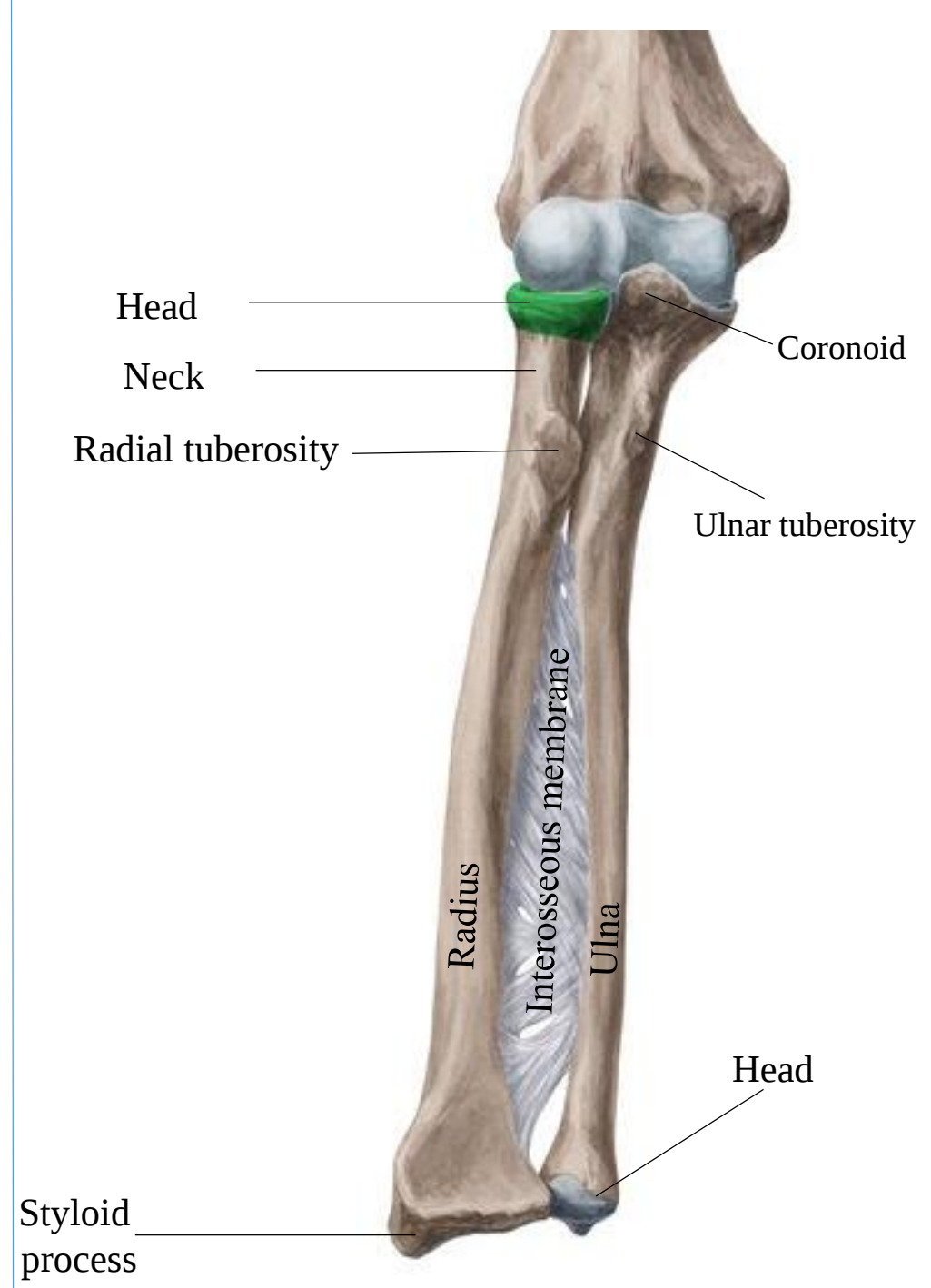
Identify:

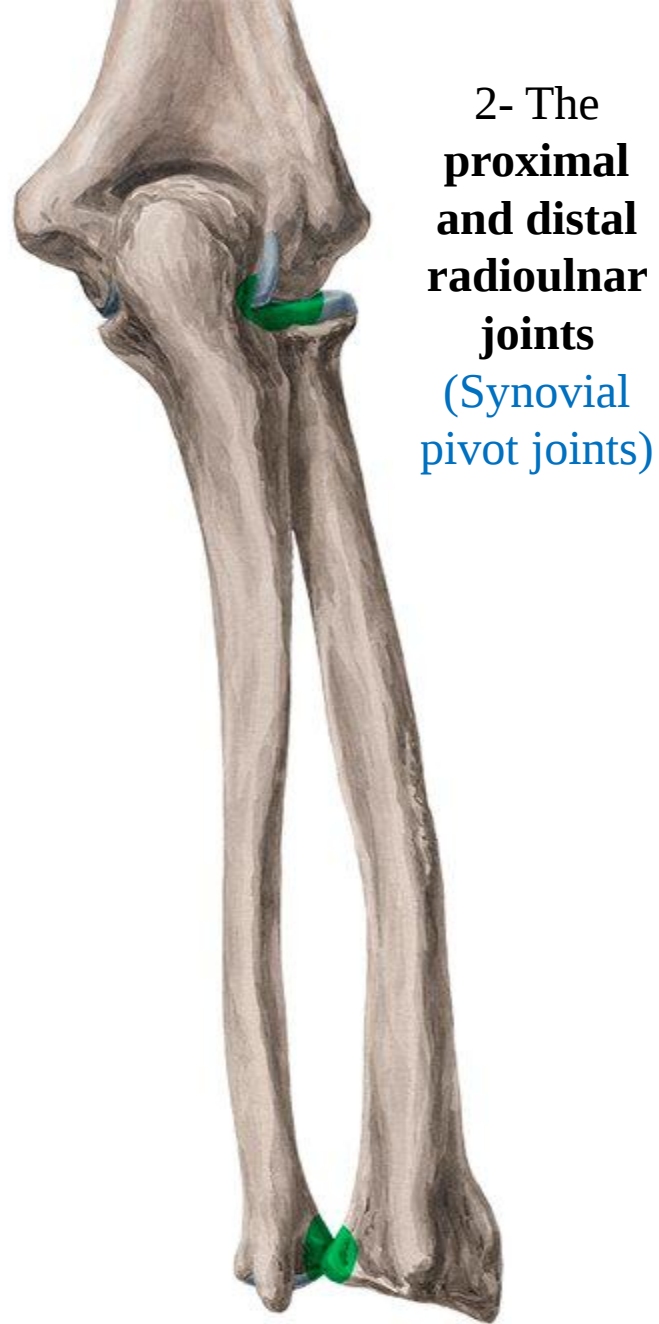
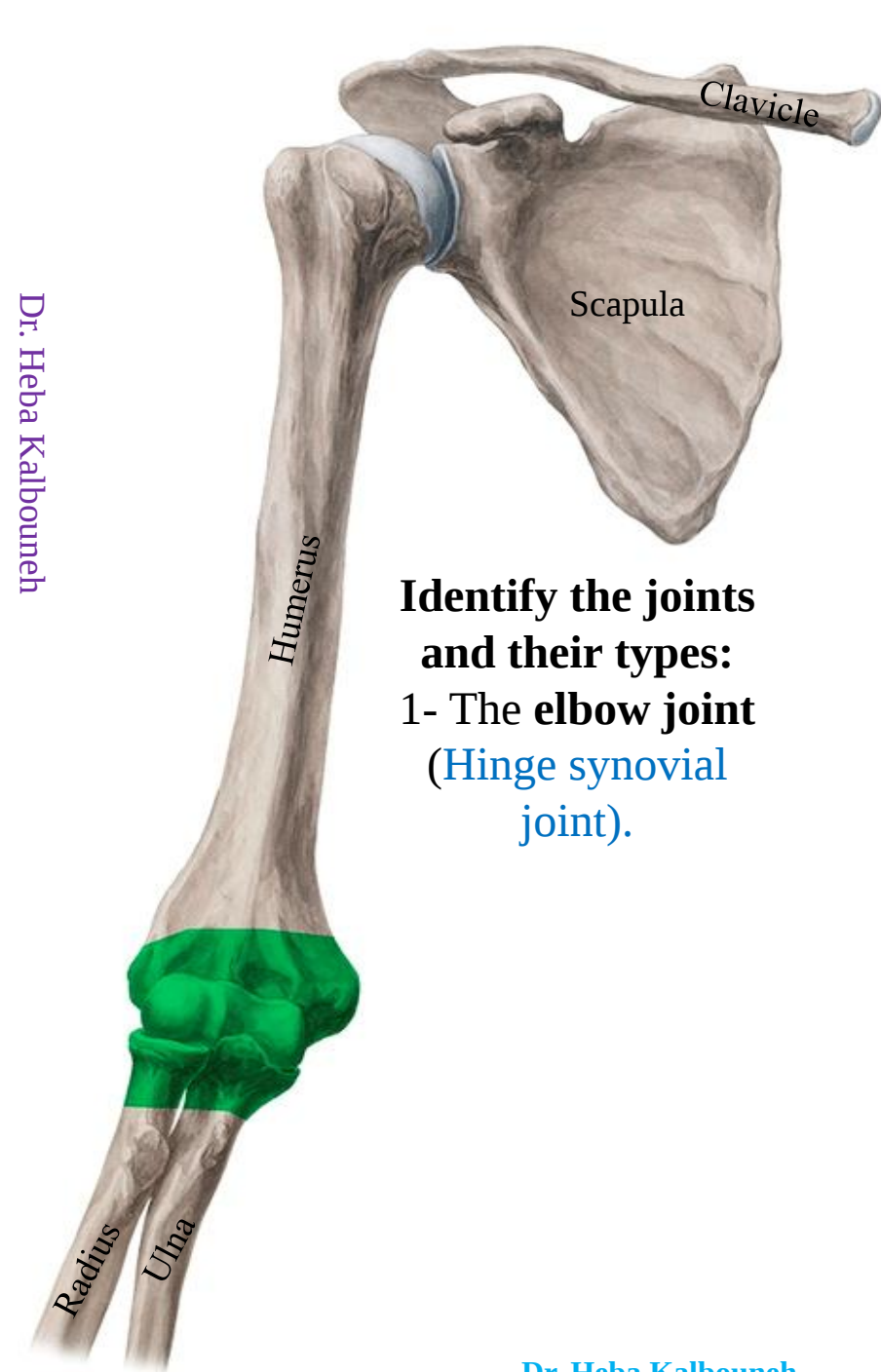
- ✓ Two epicondyles (medial & lateral)
- ✓ Trochlea
- ✓ Capitulum
- ✓ Radial fossa
- ✓ Coronoid fossa
- ✓ Olecranon fossa



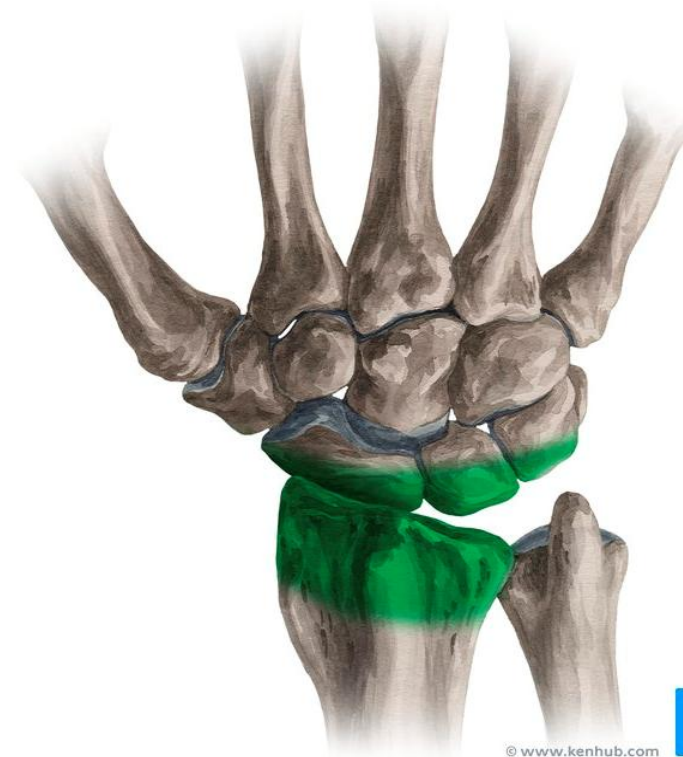
Identify:

- ✓ Head of radius
- ✓ Neck of radius
- ✓ Radial tuberosity
- ✓ Styloid process of radius
- ✓ Head of ulna
- ✓ Coronoid
- ✓ Olecranon
- ✓ Ulnar tuberosity
- ✓ Styloid process of ulna
- ✓ Interosseous membrane





3- The **wrist joint:** (Radiocarpal joint) (Synovial Condylod (ellipsoid)).



Identify the bones and their types:

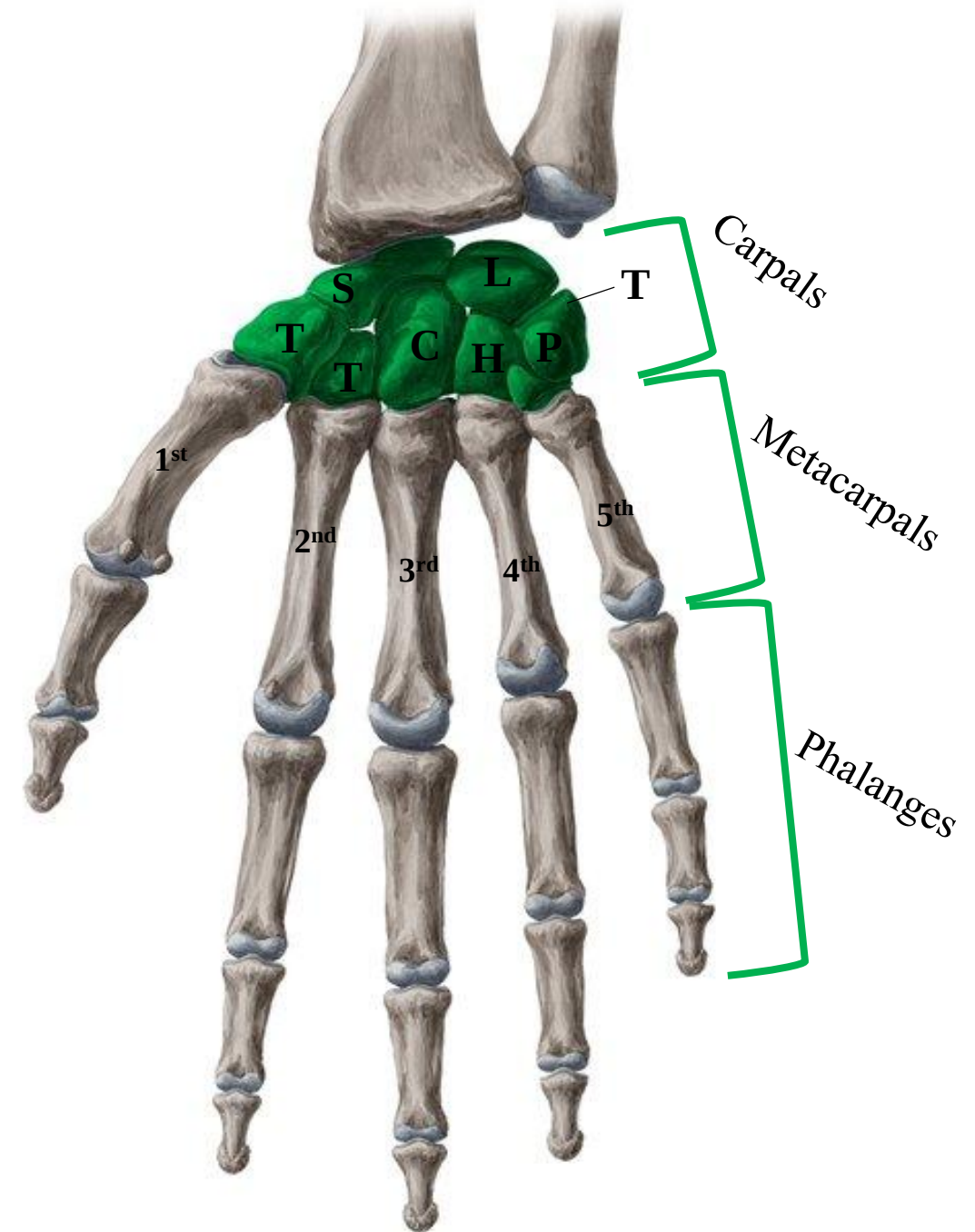
Scaphoid
Lunate
Triquetrum
Pisiform
Trapezium
Trapezoid
Capitate
Hamate

Short bones

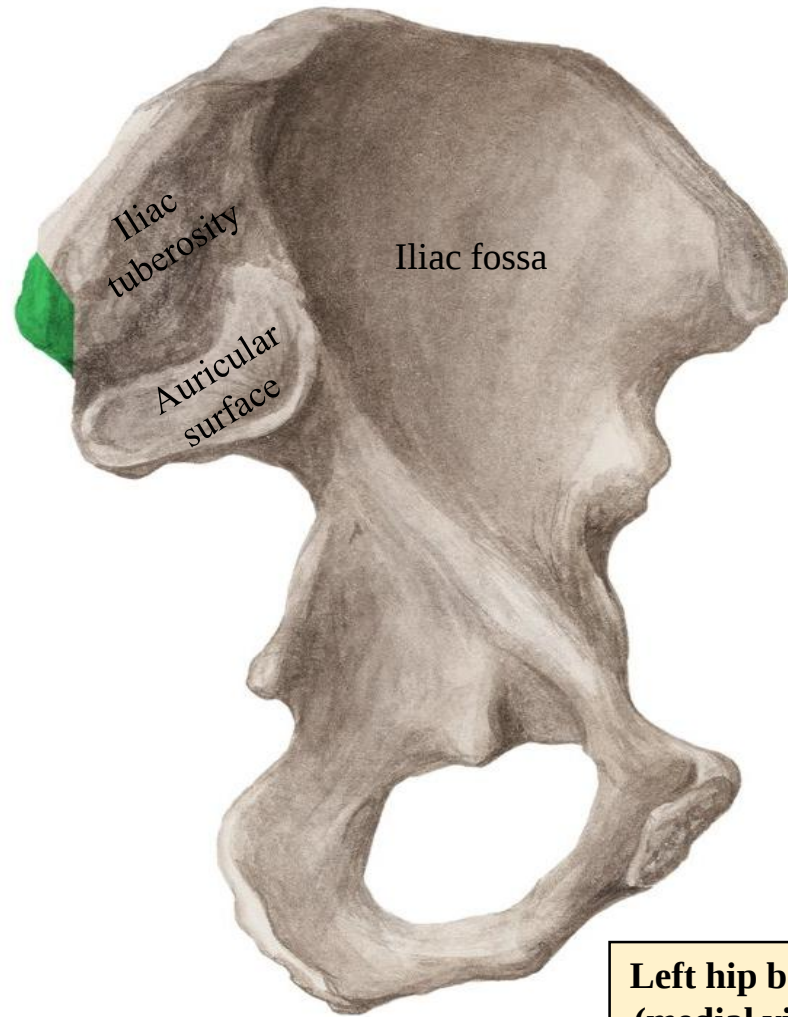
Metacarpals (1st-5th)

Phalanges (proximal, middle, distal)

Long bones



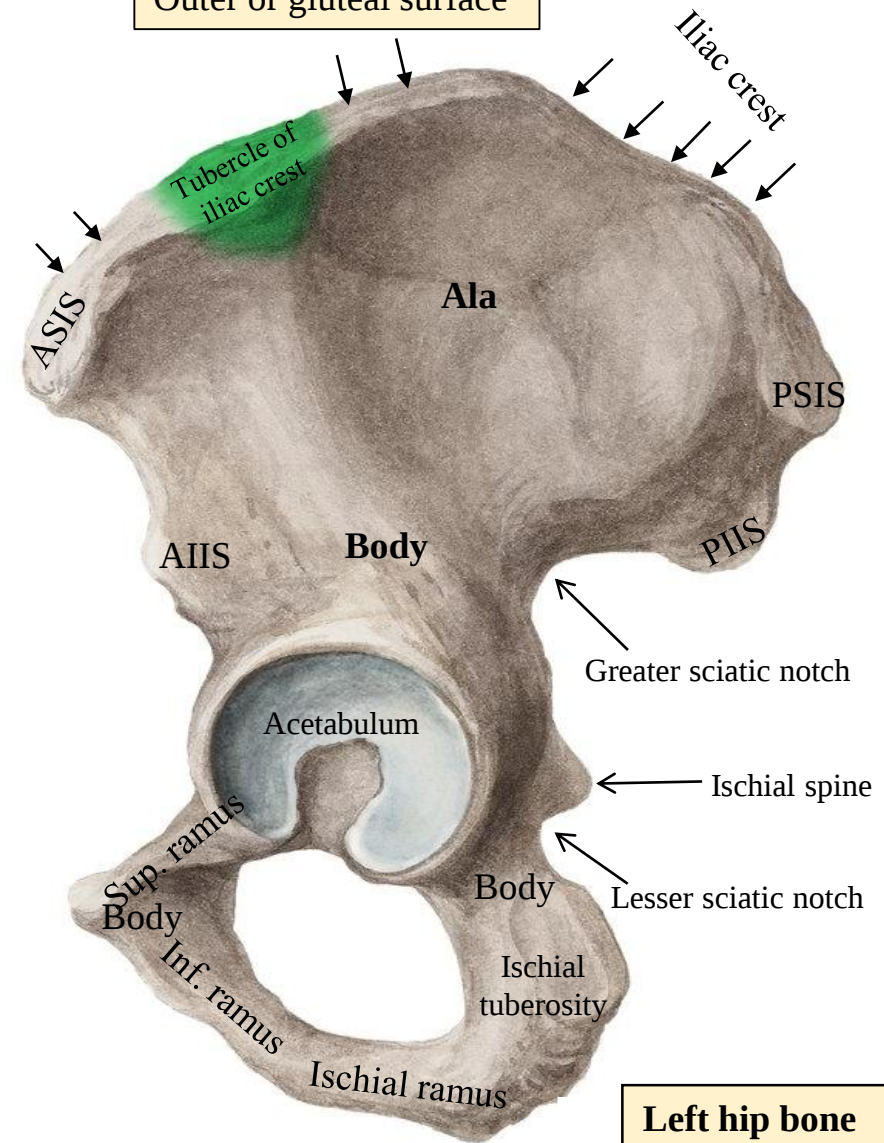
Inner or pelvic surface



Left hip bone
(medial view)

- Identify:
- ✓ Ilium:
 - Body and ala (wing)
 - Iliac crest
 - Iliac tubercle
 - Anterior superior iliac spine (ASIS)
 - Anterior inferior iliac spine (AIIS)
 - Posterior superior iliac spine (PSIS)
 - Posterior inferior iliac spine (PIIS)
 - Iliac fossa
 - Iliac tuberosity
 - Auricular surface
 - ✓ Pubis:
 - Body
 - Superior ramus
 - Inferior ramus
 - ✓ Ischium:
 - Body
 - Ischial tuberosity
 - Ischial spine
 - Ischial ramus
 - Greater sciatic notch
 - Lesser sciatic notch
 - ✓ Acetabulum

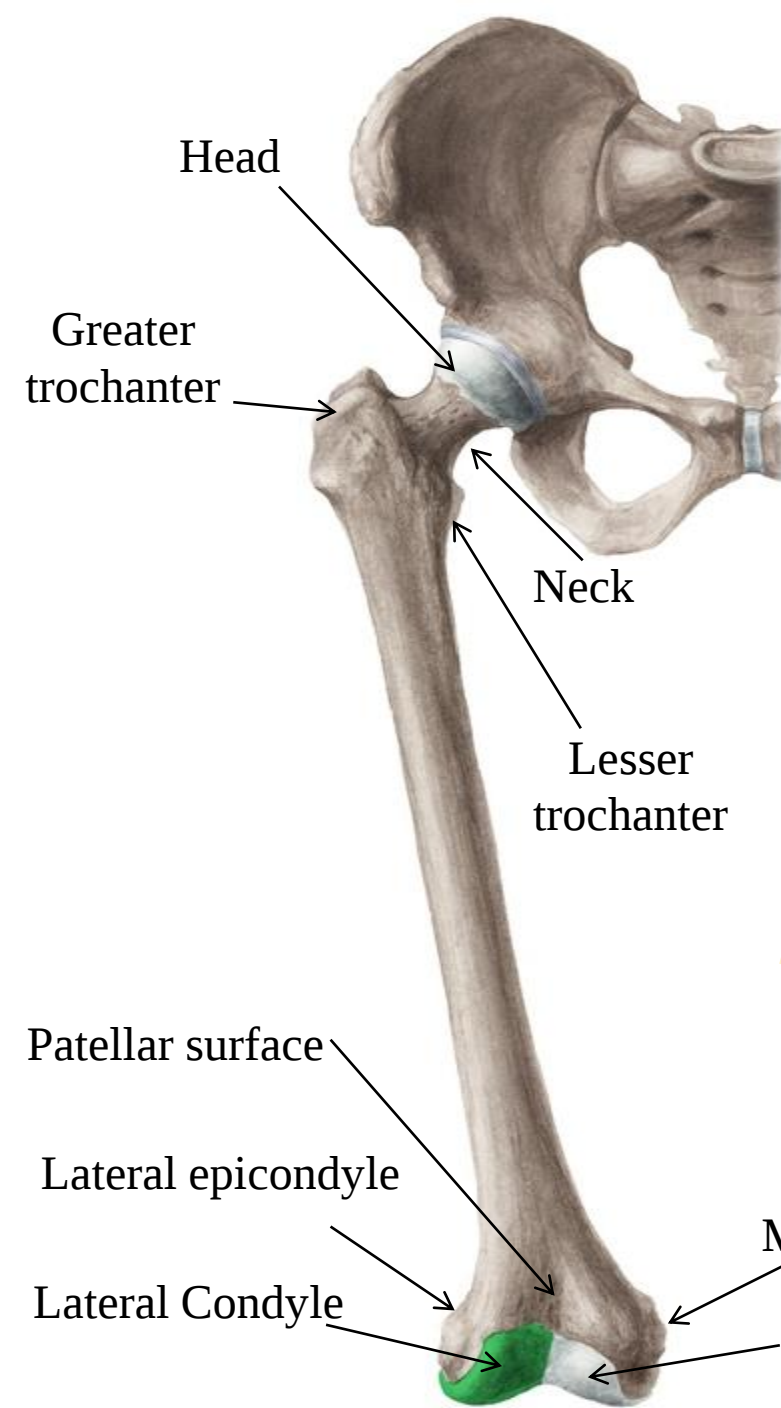
Outer or gluteal surface



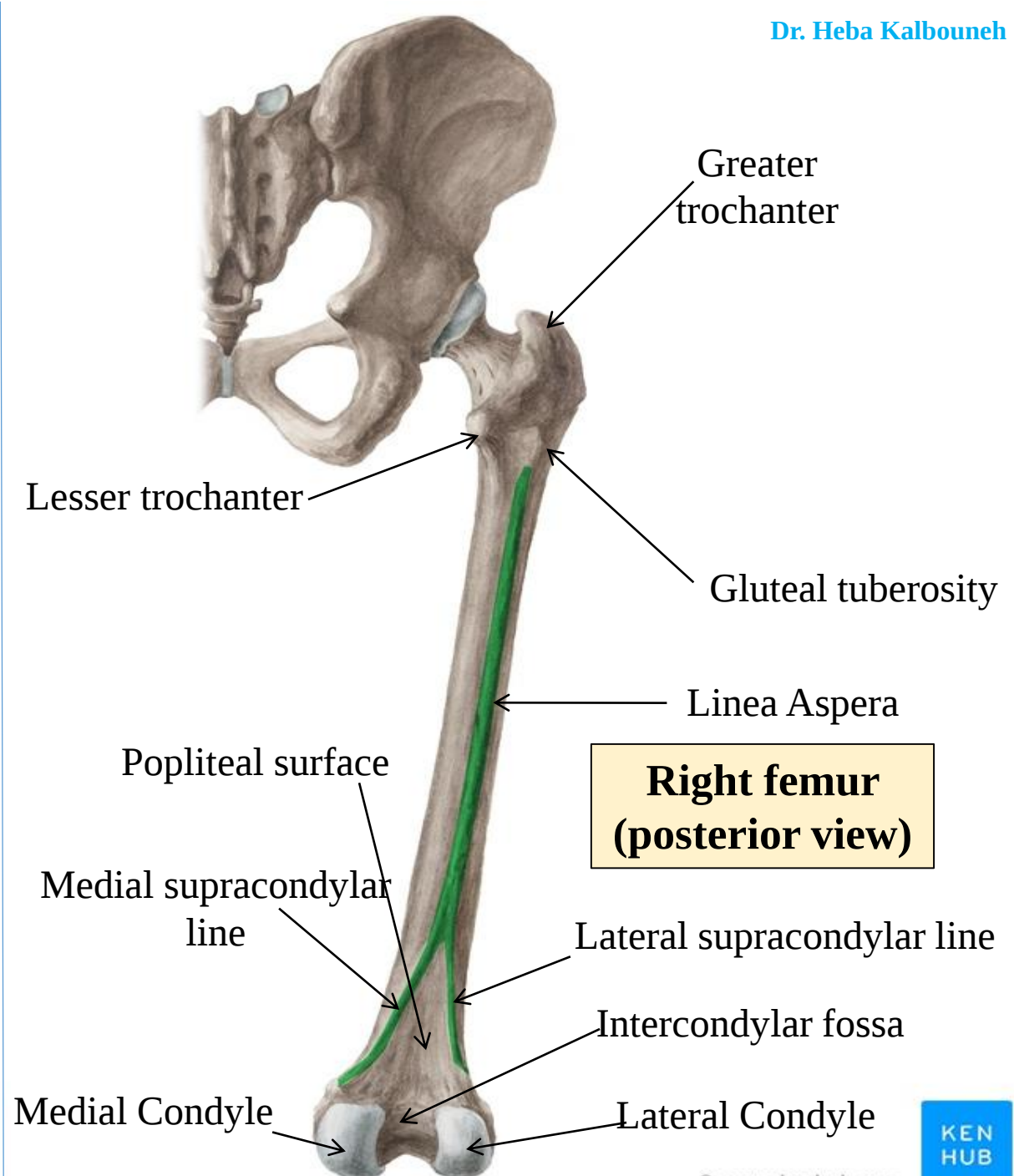
Left hip bone
(lateral view)

Identify:

Head and neck of femur
Greater trochanter
Lesser trochanter
Medial and lateral condyles
Patellar surface of femur
Intercondylar fossa
Medial and lateral epicondyles
Gluteal tuberosity
Linea aspera
Medial & lateral supracondylar lines
Popliteal surface of femur



**Right femur
(anterior view)**



**Right femur
(posterior view)**

Identify the joints and their types:

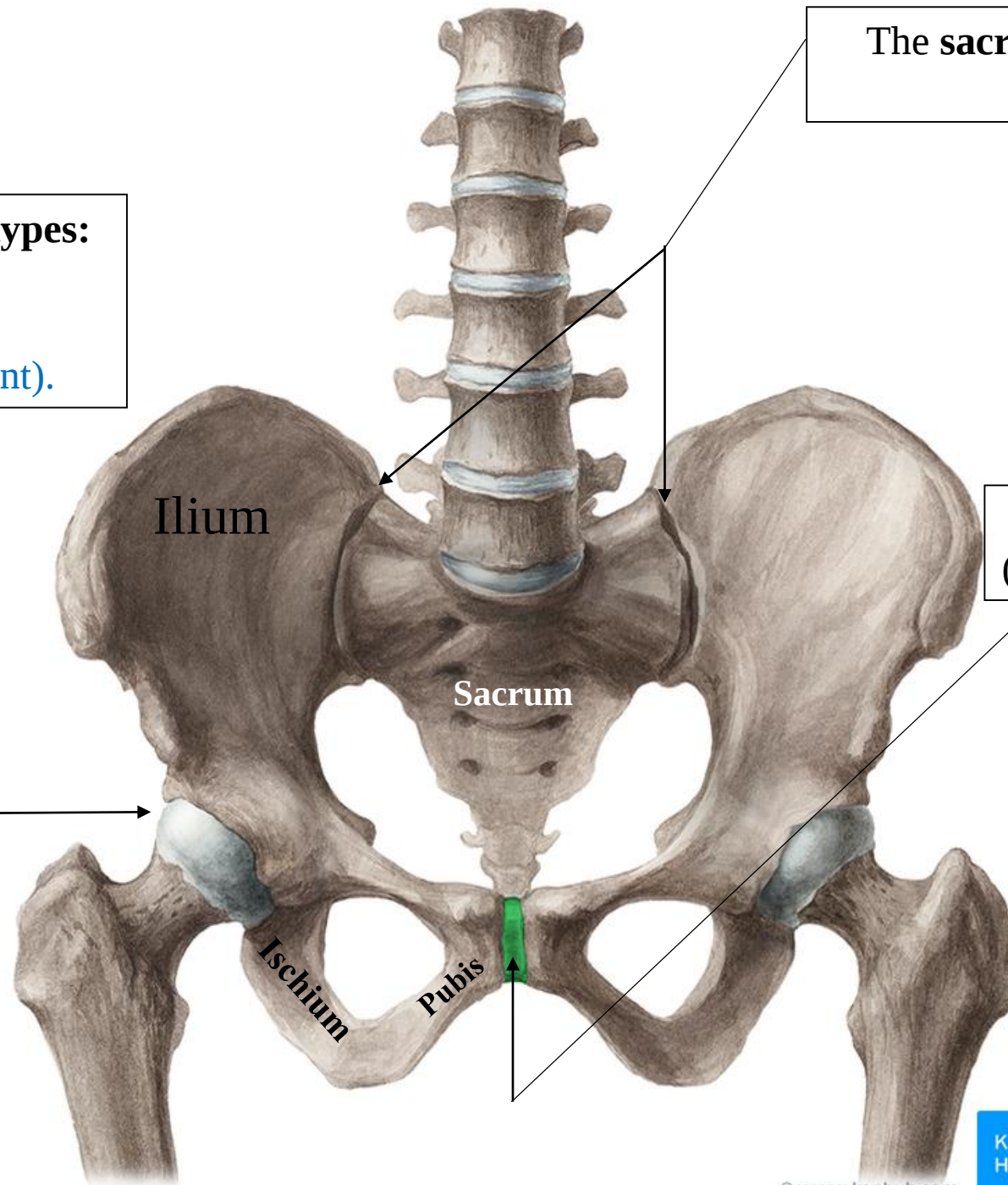
The hip joint

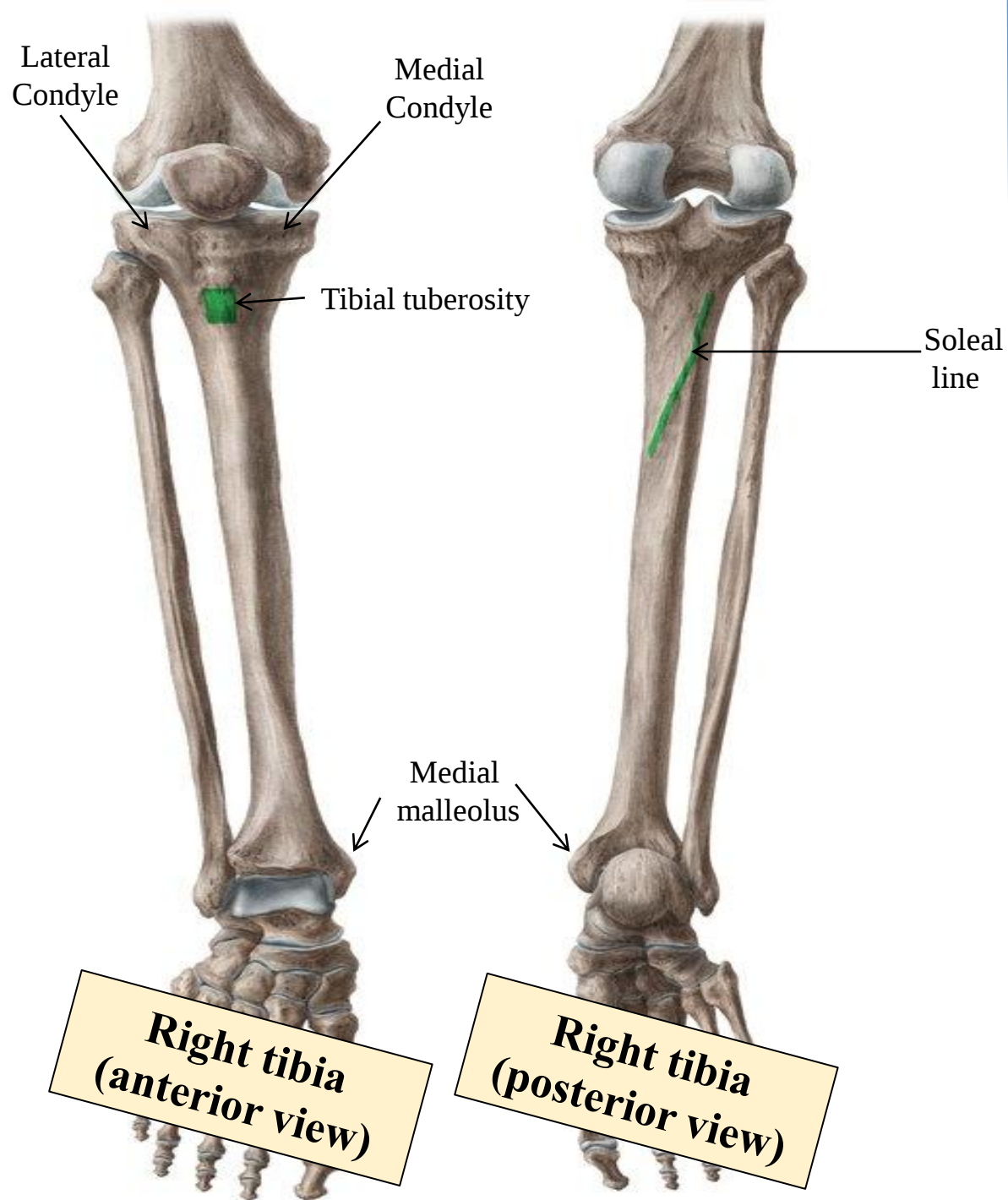
(Acetabulofemoral joint)

(Ball and socket synovial joint).

The **sacroiliac joint** (Plane synovial joint).

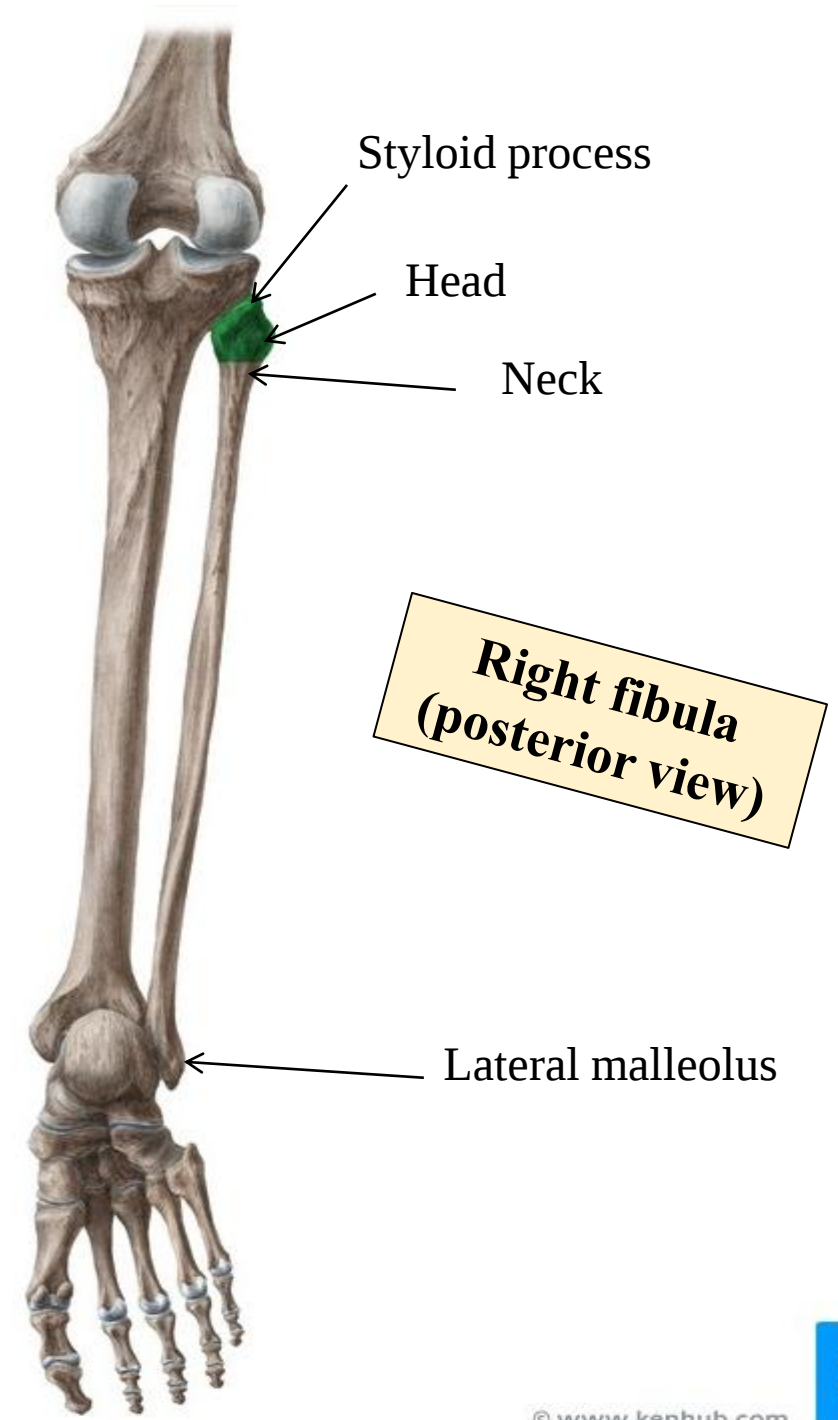
The **symphysis pubis**
(Secondary cartilaginous joint).





Identify:

- Lateral and medial condyles of tibia
- Tibial tuberosity
- Medial malleolus
- Soleal line
- Head of fibula
- Neck of fibula
- Styloid process of fibula
- Lateral malleolus



Identify the bones:

1- Talus

2- Calcaneus

3- Navicular

4- Medial Cuneiform

5- Intermediate Cuneiform

6- Lateral Cuneiform

7- Cuboid

Metatarsals (1st-5th)

Phalanges (proximal, middle, distal)

Tuberosity of 5th metatarsal

**Tuberosity of the
fifth metatarsal
bone**

Proximal phalanx

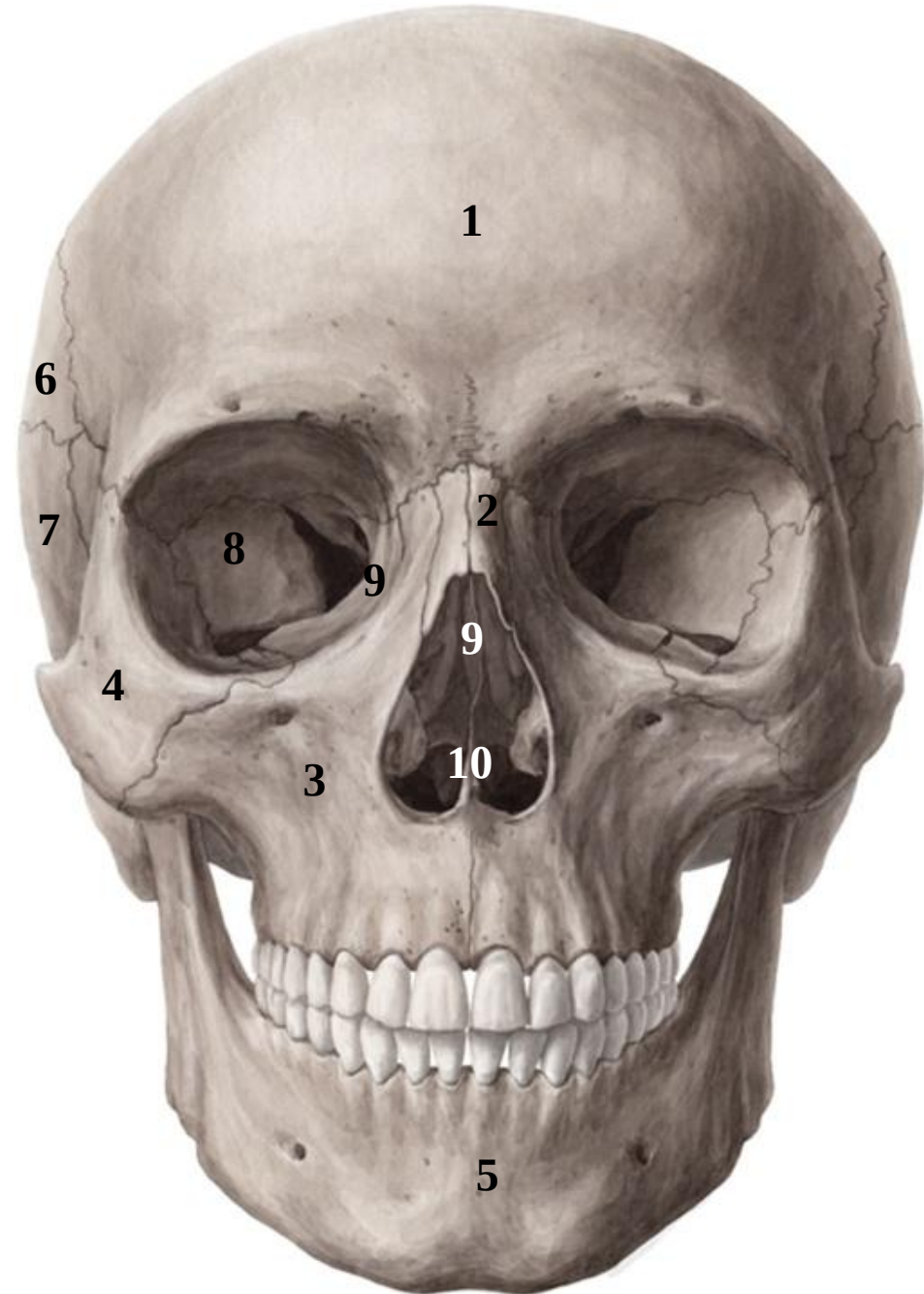
Middle phalanx

Distal phalanx

Skull (Norma Frontalis)

Identify the following bones:

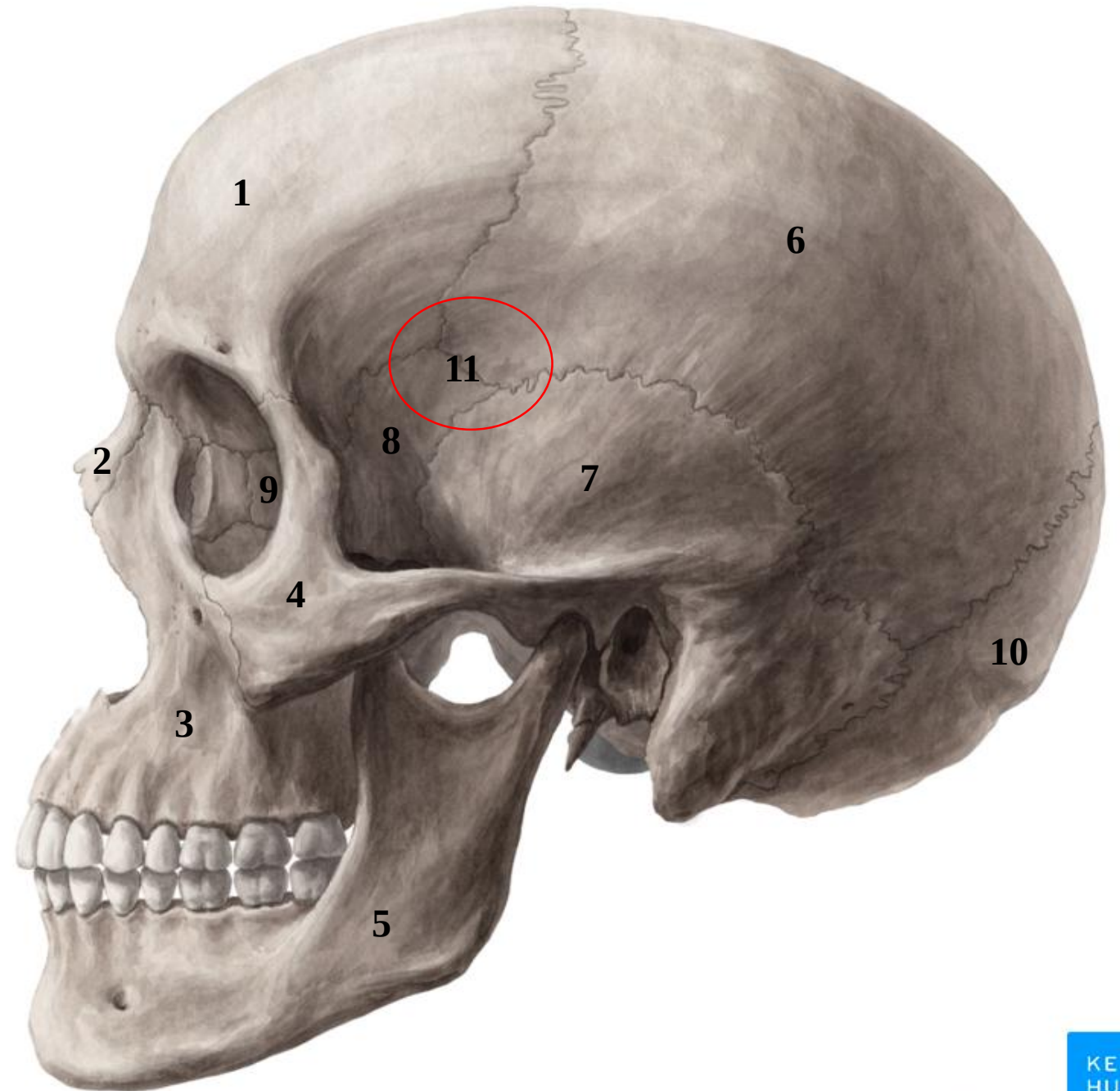
1. Frontal bone
2. Nasal bone
3. Maxilla
4. Zygomatic bone
5. Mandible
6. Parietal bone
7. Temporal bone
8. Sphenoid bone
9. Ethmoid bone
10. Vomer bone



Skull (Norma Lateralis)

Identify the following bones:

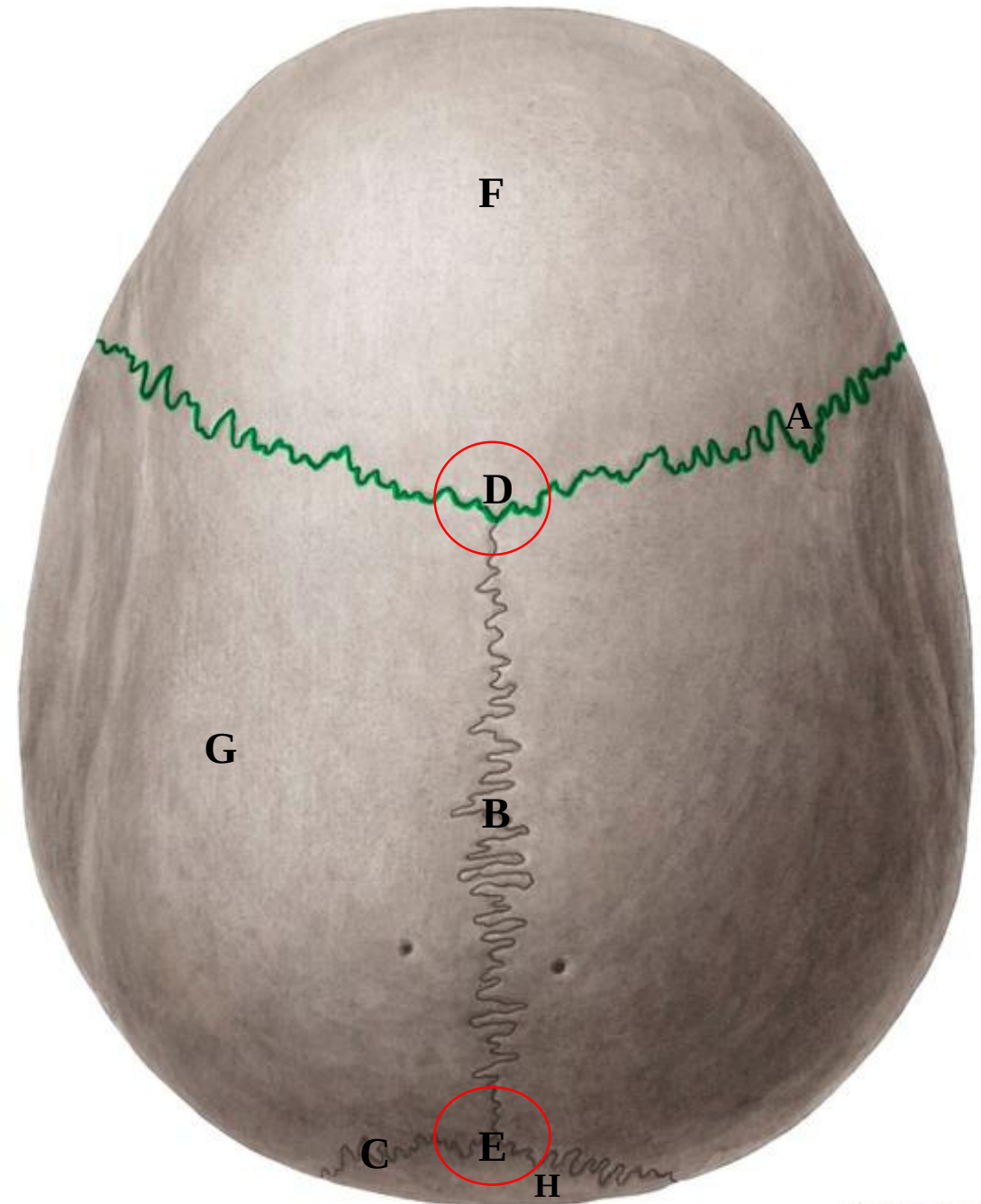
1. Frontal bone
2. Nasal bone
3. Maxilla
4. Zygomatic bone
5. Mandible
6. Parietal bone
7. Temporal bone
8. Sphenoid bone
9. Ethmoid bone
10. Occipital bone
11. Pterion



Skull (Norma Verticalis)

Identify the following bones, sutures and areas:

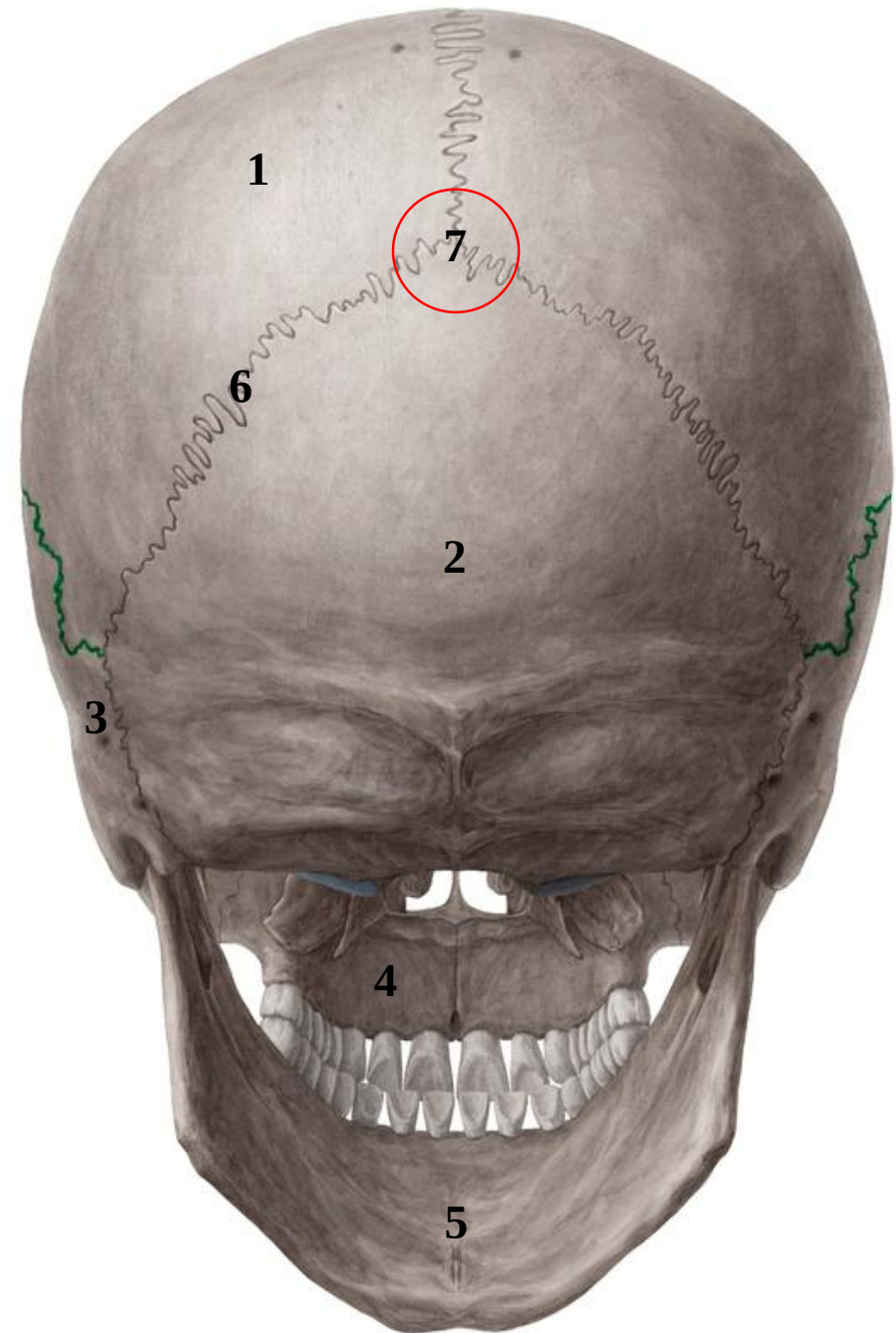
- A. Coronal suture
- B. Sagittal suture
- C. Lambdoid suture
- D. Bregma
- E. Lambda
- F. Frontal bone
- G. Parietal bone
- H. Occipital bone



Skull (Norma Occipitalis)

Identify the following bones:

1. Parietal bone
2. Occipital bone
3. Temporal bone
4. Maxilla
5. Mandible
6. Lambdoid suture
7. Lambda



Identify: body, pedicle, lamina, vertebral foramen, transverse process, spinous process, superior and inferior articular processes

Anterior

Body

Pedicle

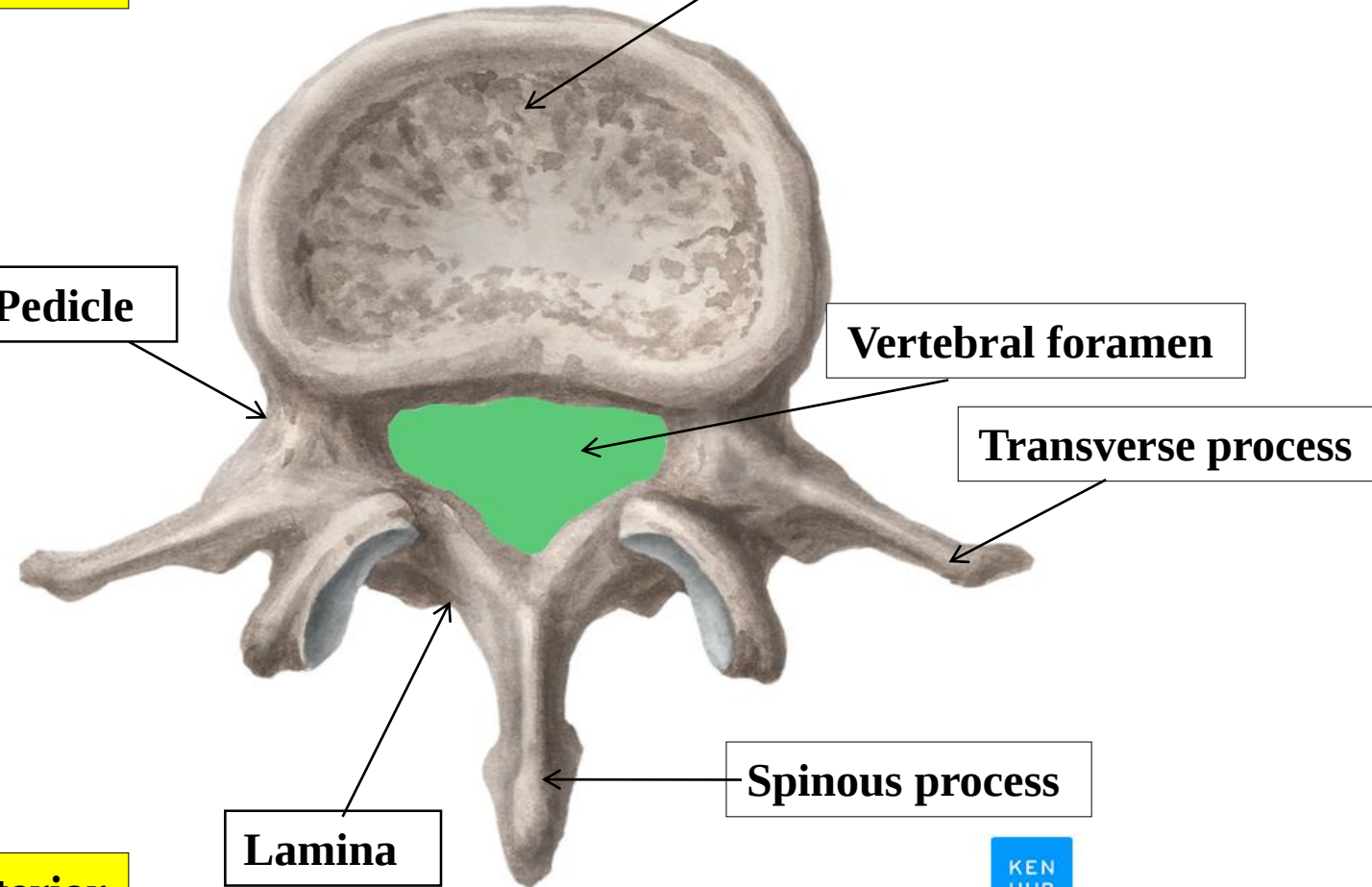
Vertebral foramen

Transverse process

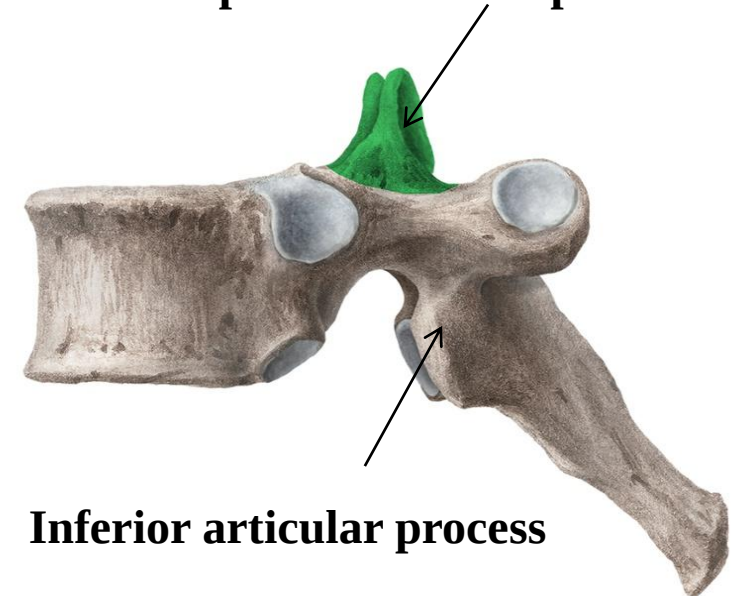
Spinous process

Lamina

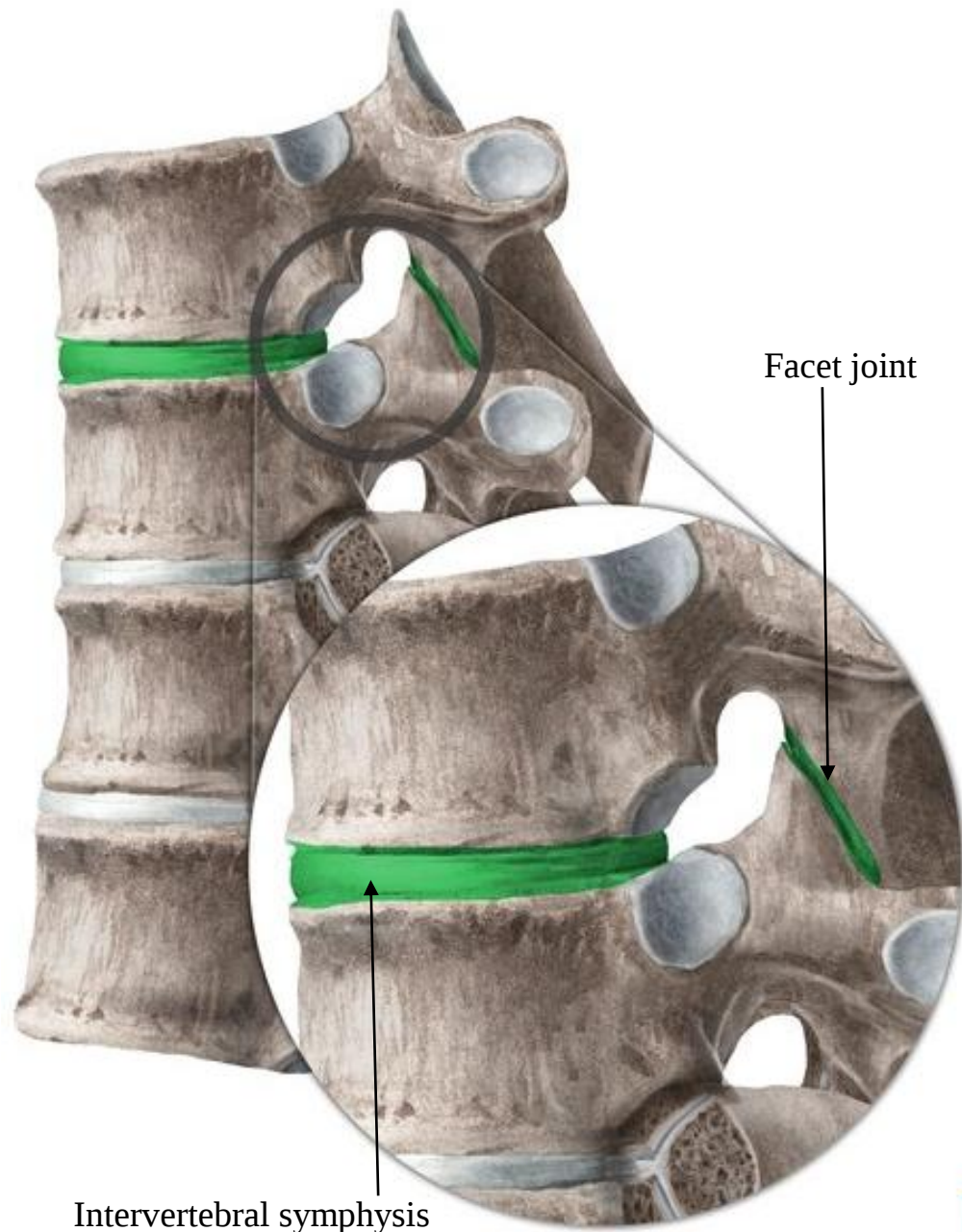
Posterior



Superior articular process



Inferior articular process

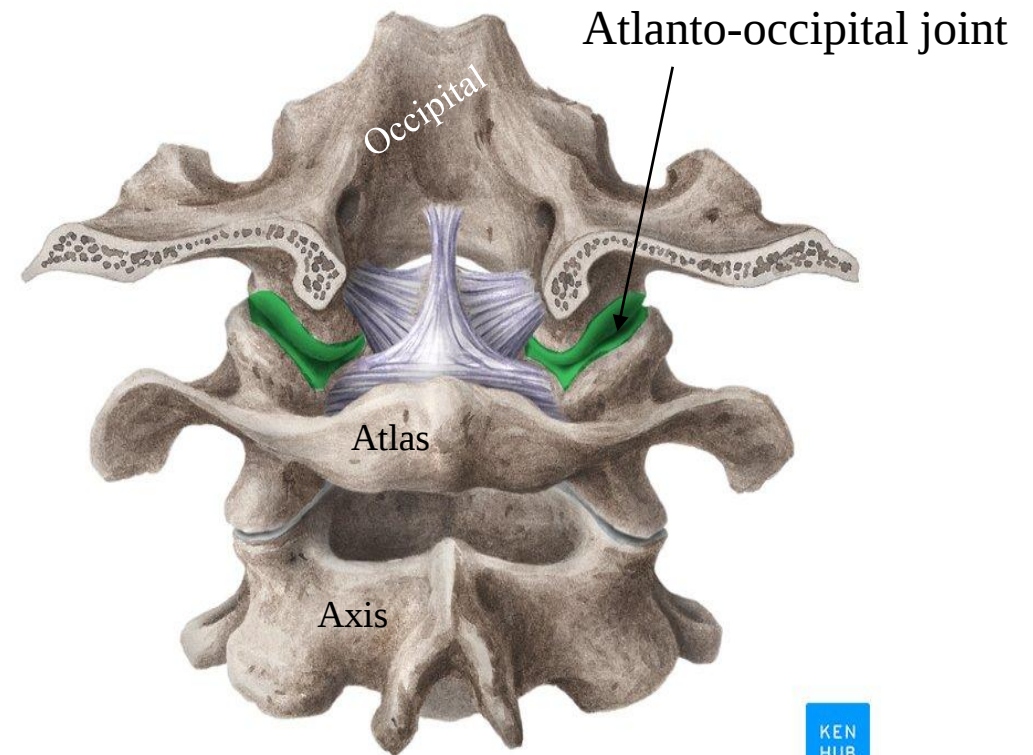


Intervertebral symphysis

Facet joint

Identify the joints and their types:

- 1- An intervertebral symphysis (**Secondary cartilaginous joint or symphysis**)
- 2- Facet joints (**Synovial plane joints**)
- 3- Atlanto-occipital joint (**Synovial condyloid (ellipsoid) joint**).



Atlanto-occipital joint

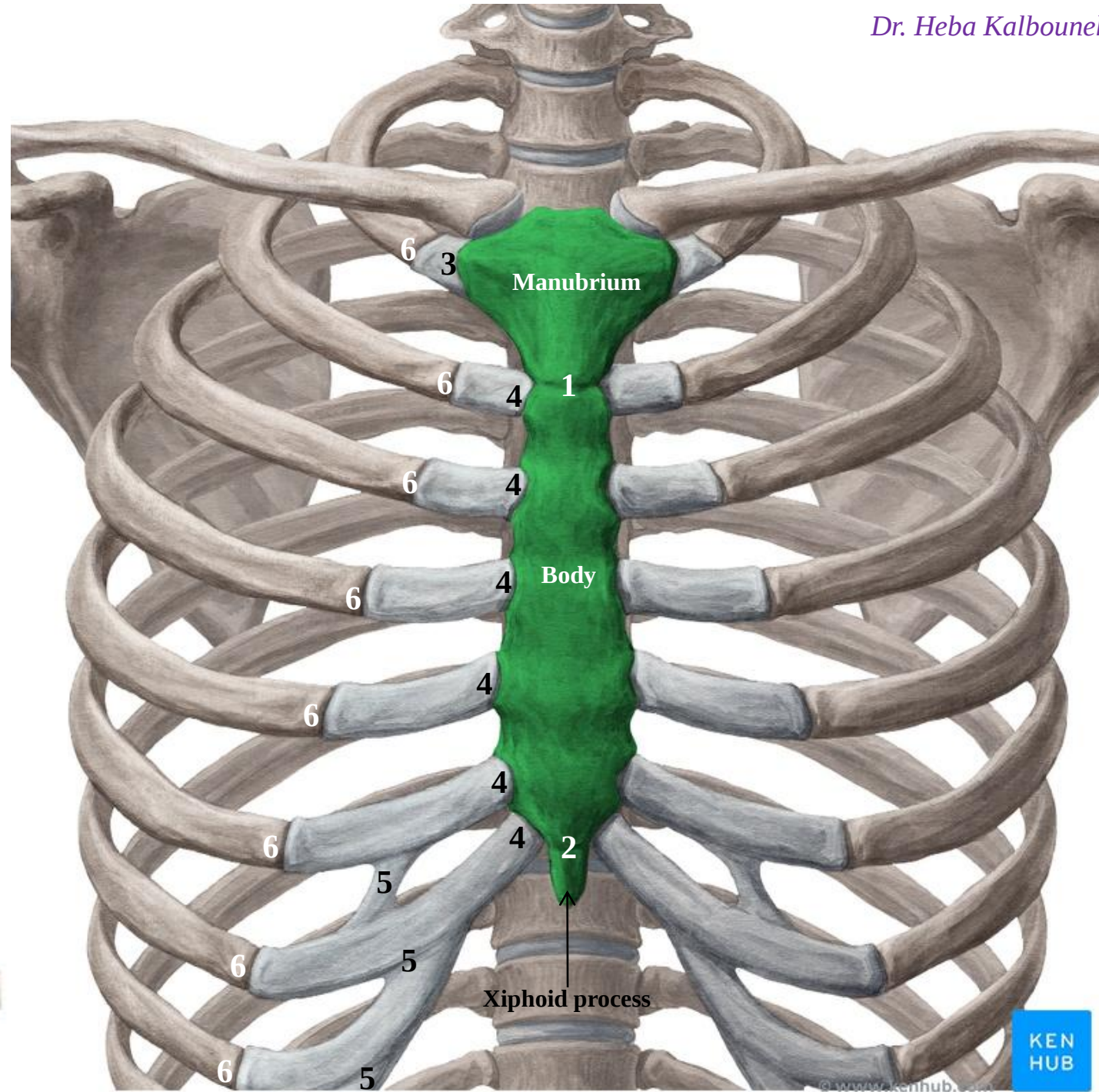
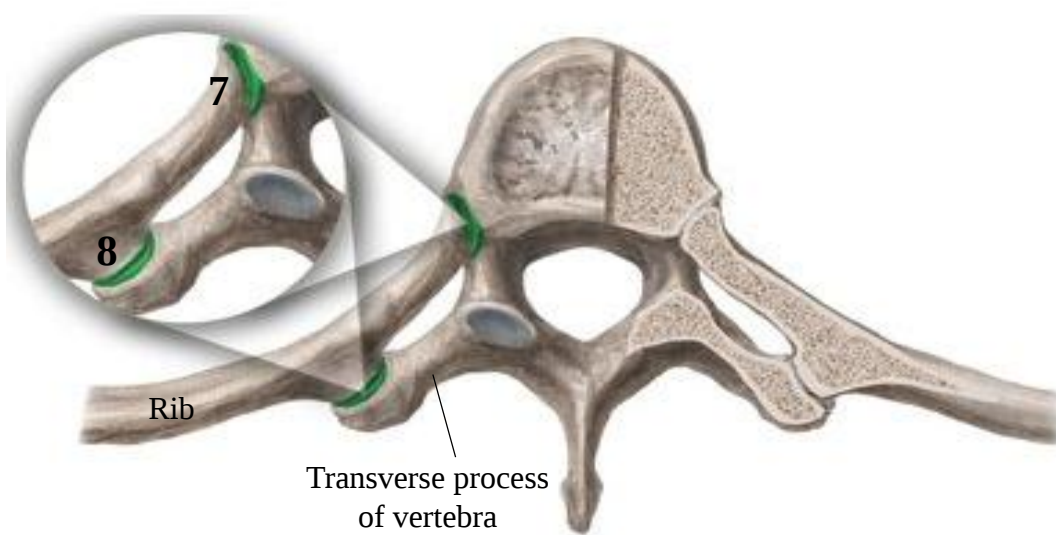
Atlas

Axis

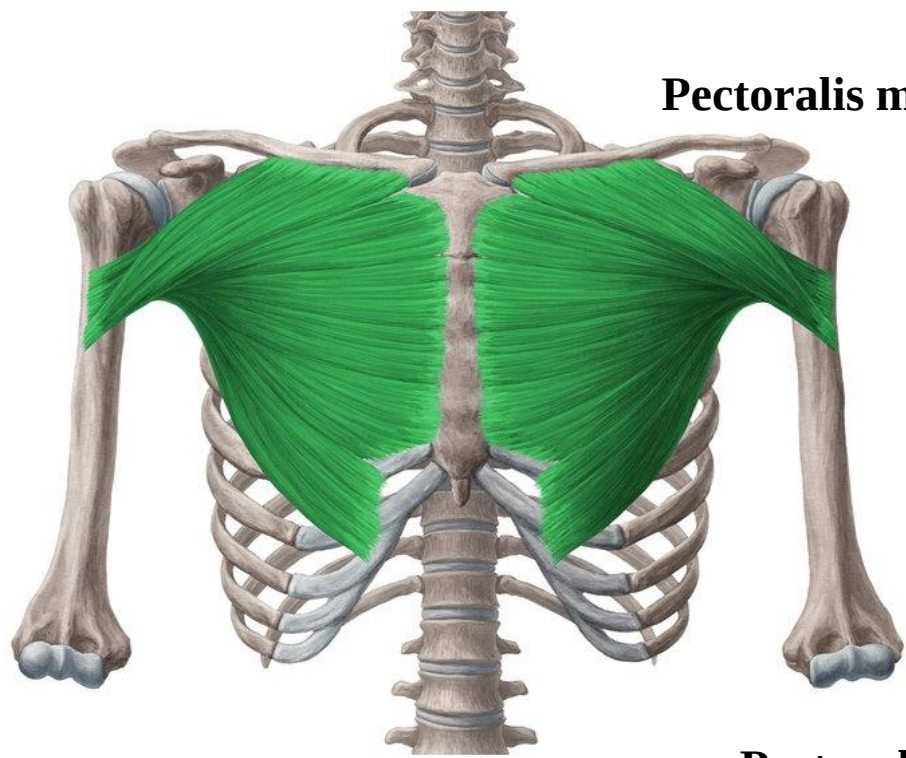
Identify the parts of sternum: Manubrium sterni, Body of the sternum, Xiphoid process.

Identify the joints of thoracic wall and their types:

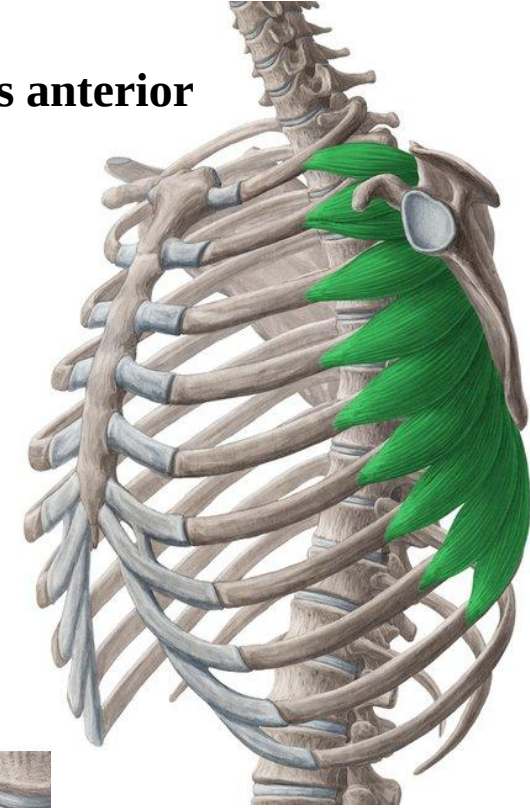
1. Manubriosternal joint (**cartilaginous joint**)
2. Xiphisternal joint (**cartilaginous joint**)
3. Sternochondral synchondrosis of 1st rib (**cartilaginous joint**)
4. Sternochondral joints (2nd-7th costal cartilages) (**synovial plane joints**)
5. Interchondral joints (6th-10th costal cartilages) (**synovial plane joints**)
6. Costochondral joints (**cartilaginous joints**)
7. Joints of the heads of the ribs (costocorporeal joints) (**synovial plane joints**)
8. Joints of the tubercles of the ribs (costotransverse joints) (**synovial plane joints**)



Pectoralis major

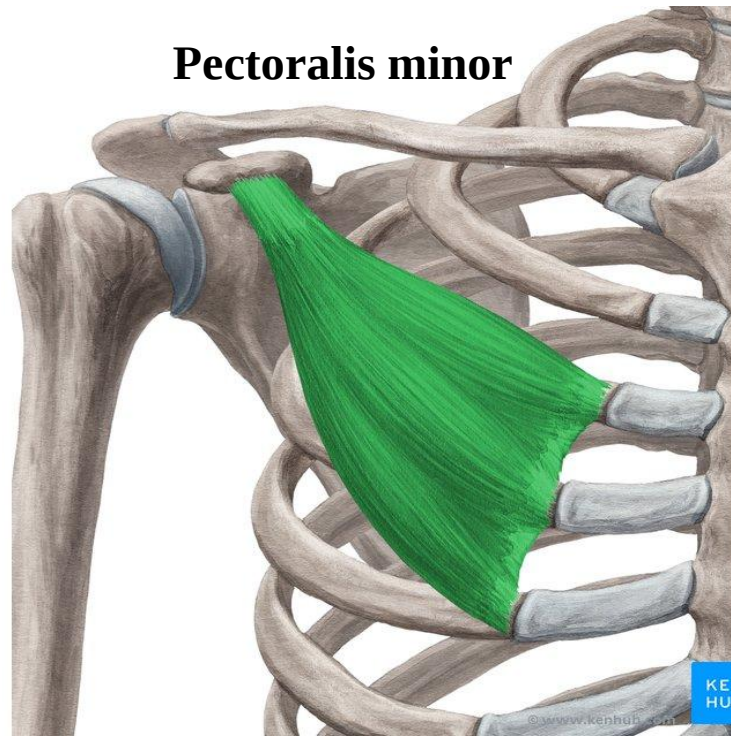


Serratus anterior

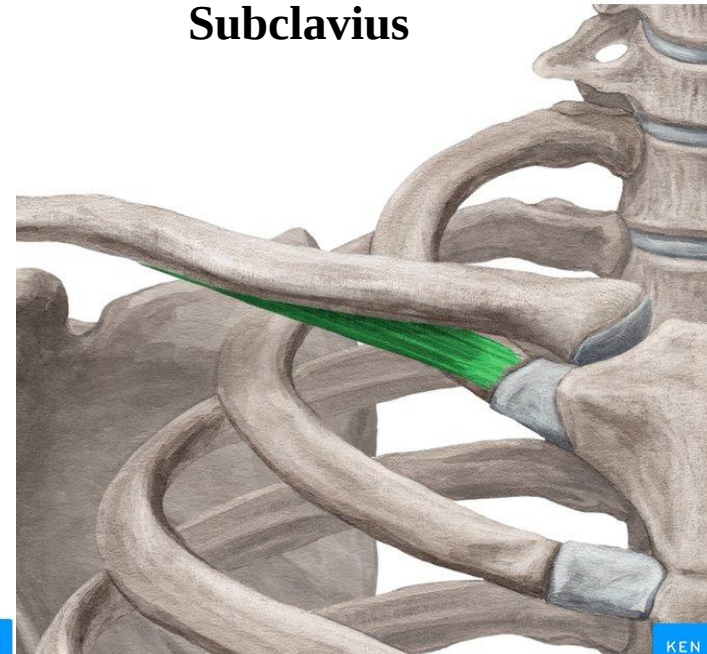


Identify the Muscles
Connecting the
Upper Limb to the
Thoracic Wall

Pectoralis minor



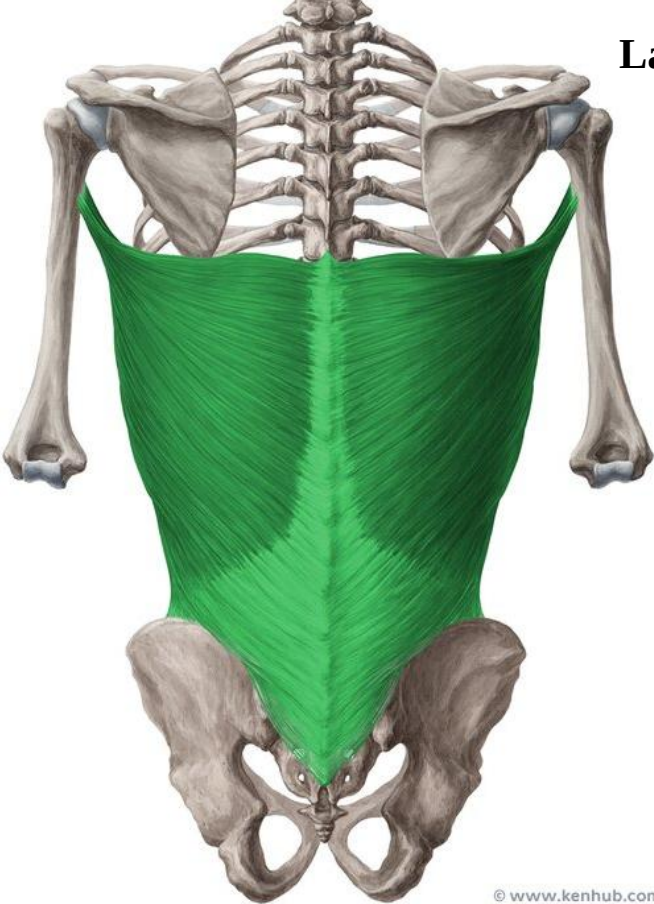
Subclavius



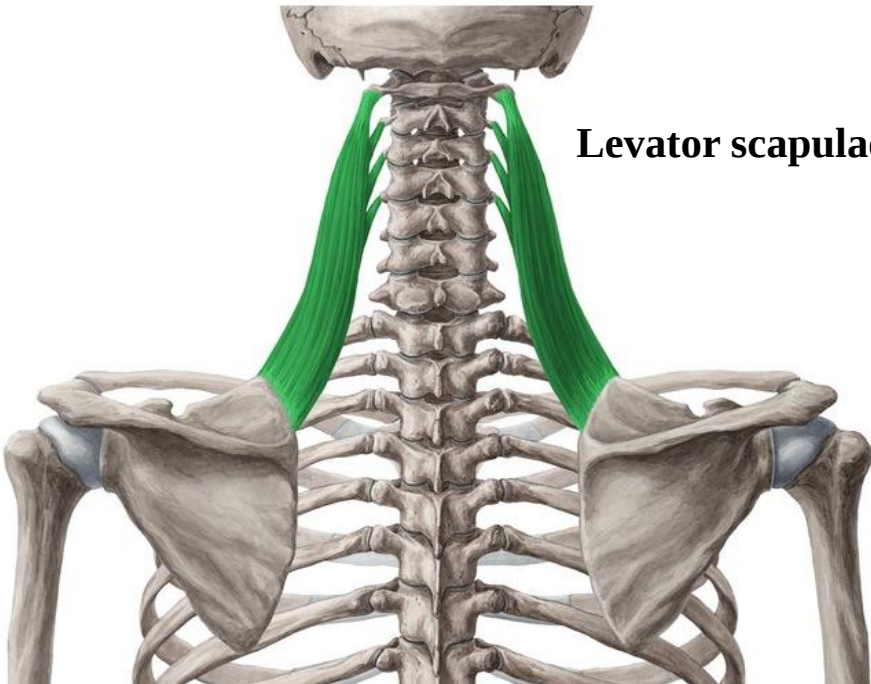
Trapezius



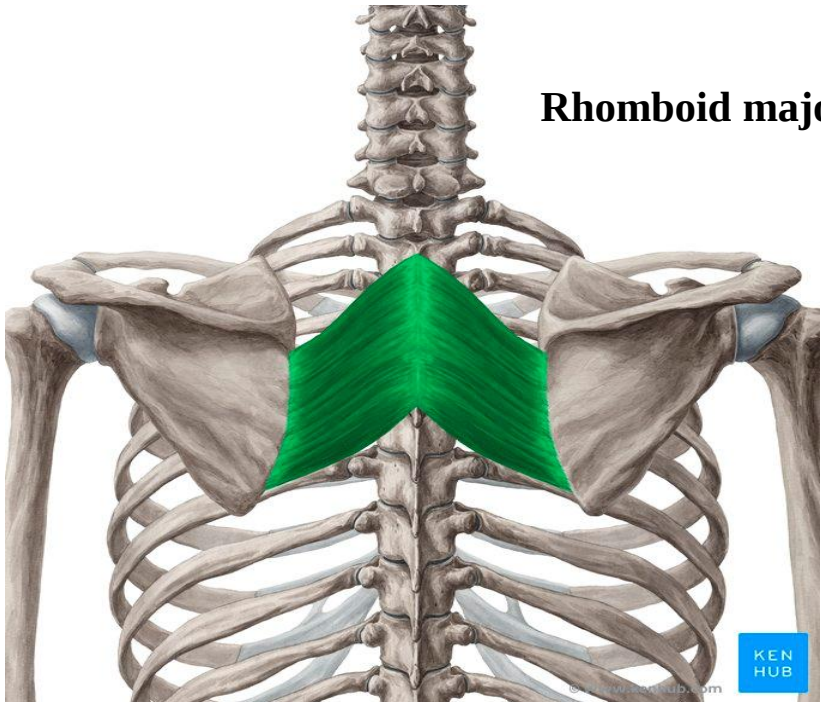
Latissimus dorsi



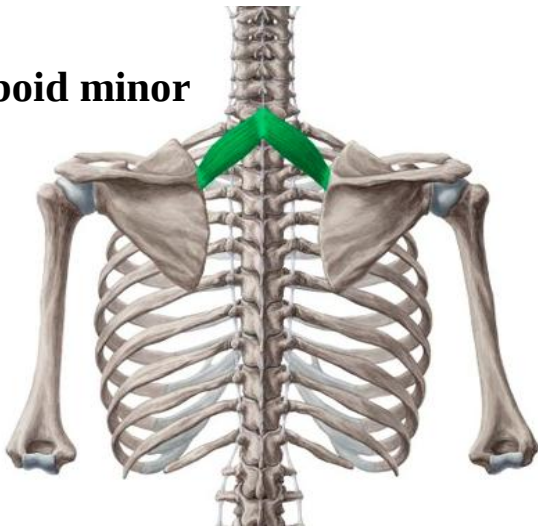
Levator scapulae



Rhomboid major



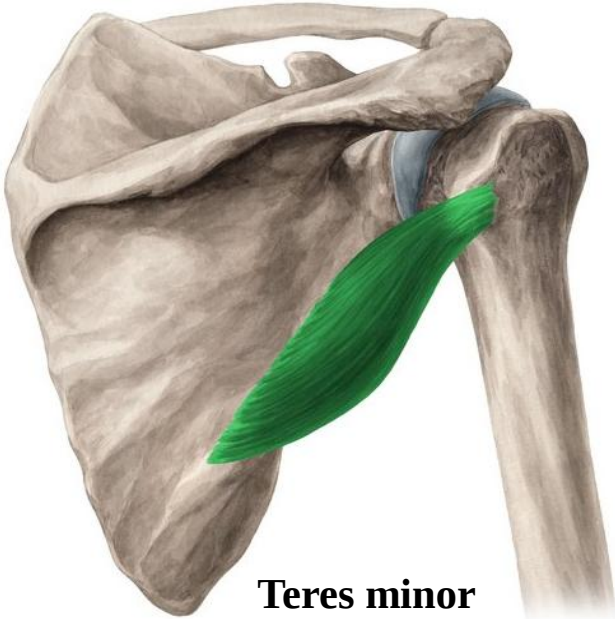
Rhomboid minor



Identify the Muscles
Connecting the
Upper Limb to the
Vertebral Column

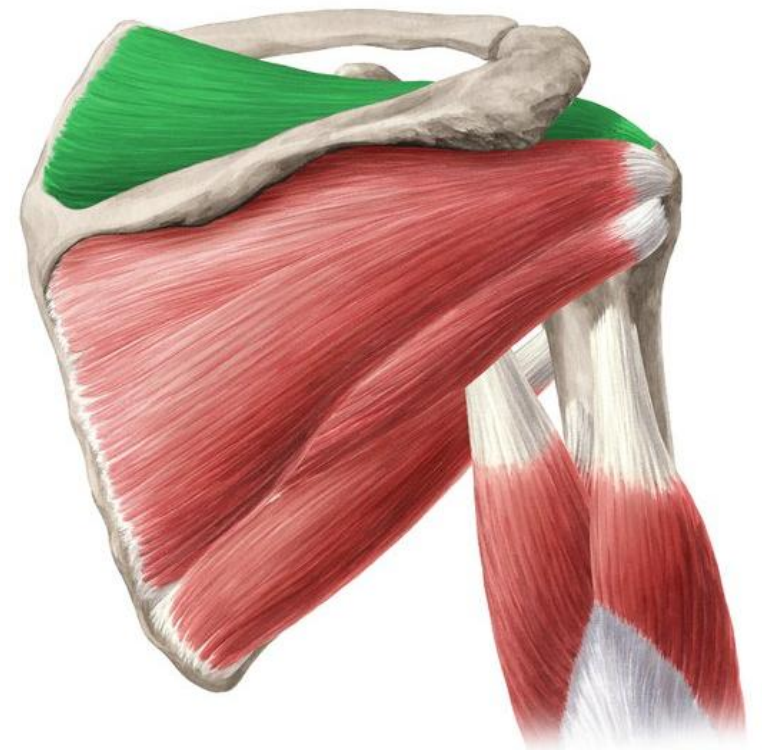


Teres major

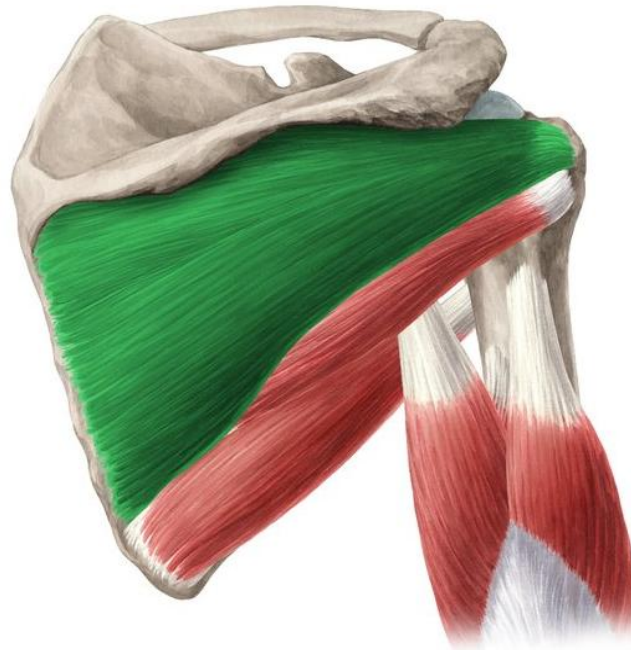


Teres minor

Identify the Muscles
Connecting the
Scapula to the
Humerus



Supraspinatus



Infraspinatus

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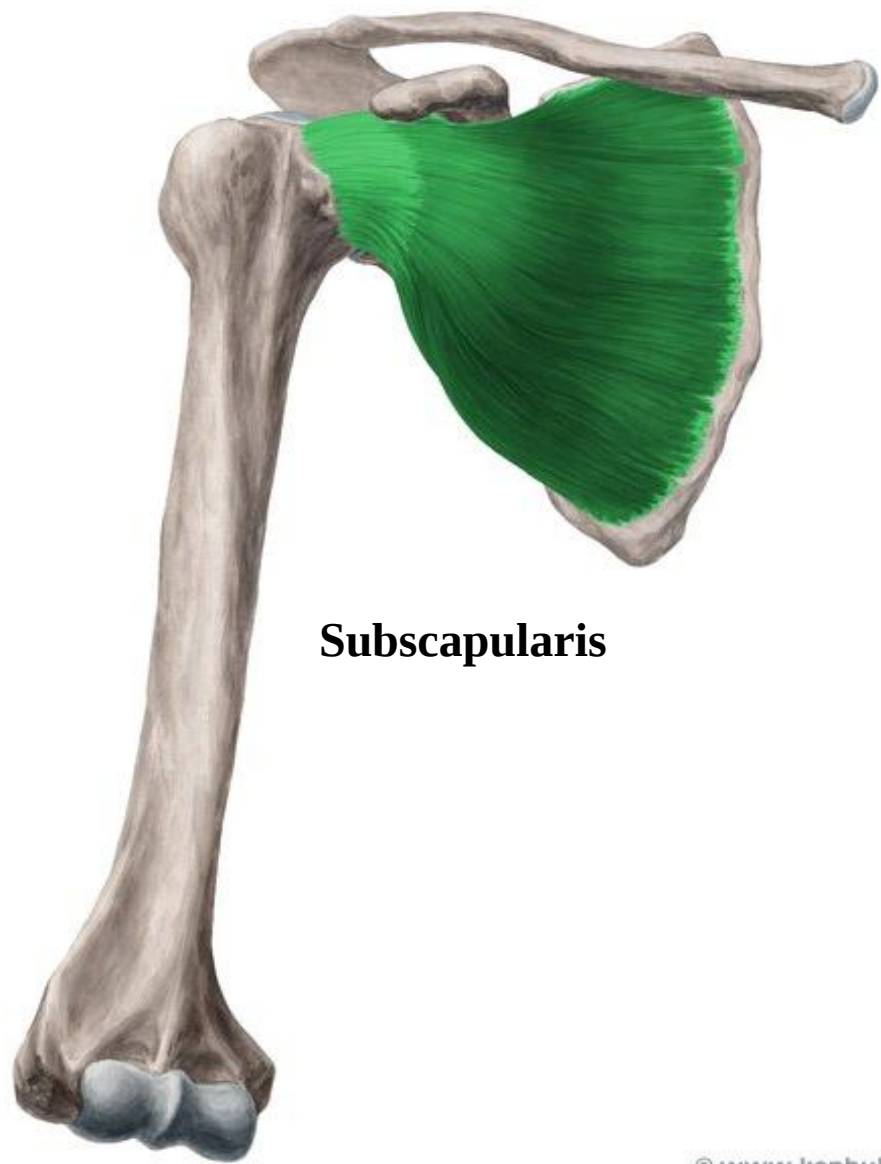
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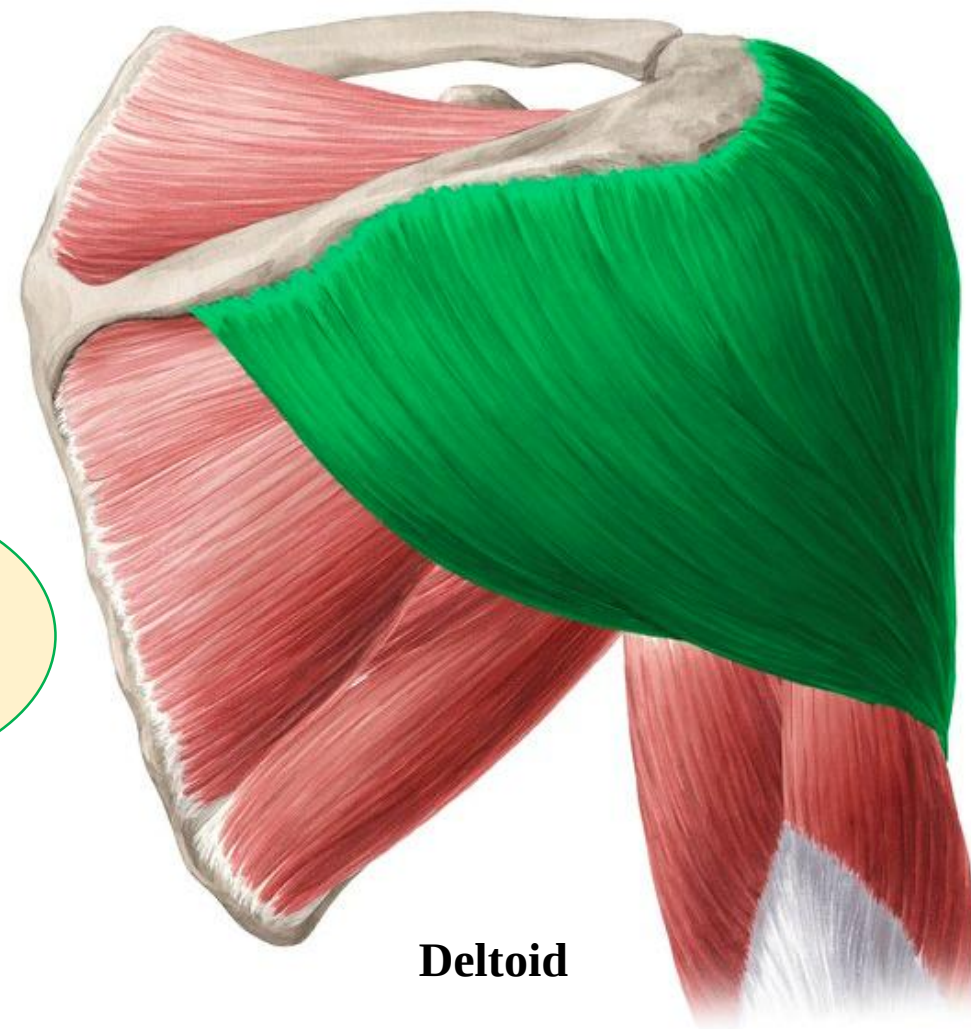
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Subscapularis

Identify the Muscles
Connecting the
Scapula to the
Humerus

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Deltoid

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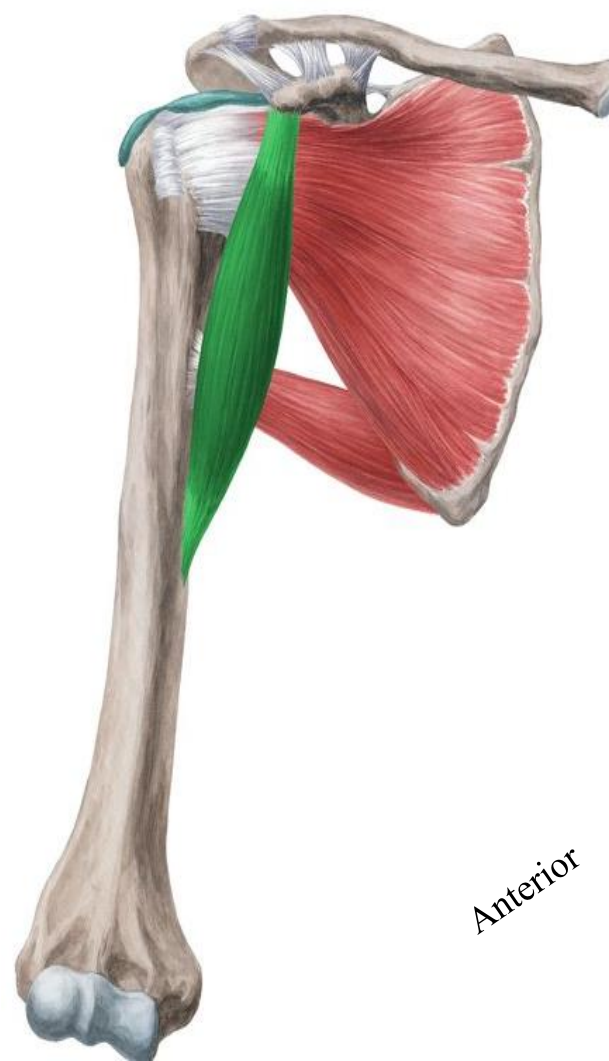




Biceps brachii



Brachialis



Coracobrachialis

Anterior



Triceps brachii

Posterior

Identify the Muscles
of the Arm

Identify the Muscles of
the Forearm (Anterior
compartment/
Superficial group)



Pronator teres



**Flexor carpi
radialis**



Palmaris longus



**Flexor carpi
ulnaris**



**Flexor digitorum
superficialis**



Flexor digitorum profundus

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Flexor pollicis longus

Identify the Muscles of the Forearm (Anterior compartment/ Deep group)



Pronator quadratus

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**Extensor carpi
ulnaris**



**Extensor
digiti minimi**



**Extensor
digitorum**



**Extensor carpi
radialis brevis**



**Extensor carpi
radialis longus**



Brachioradialis

Identify the Muscles of the Forearm (Posterior/ Lateral compartment/ Superficial group)

**Extensor
pollicis longus**



**Extensor
pollicis brevis**



**Abductor
pollicis longus**



**Extensor
indicis**

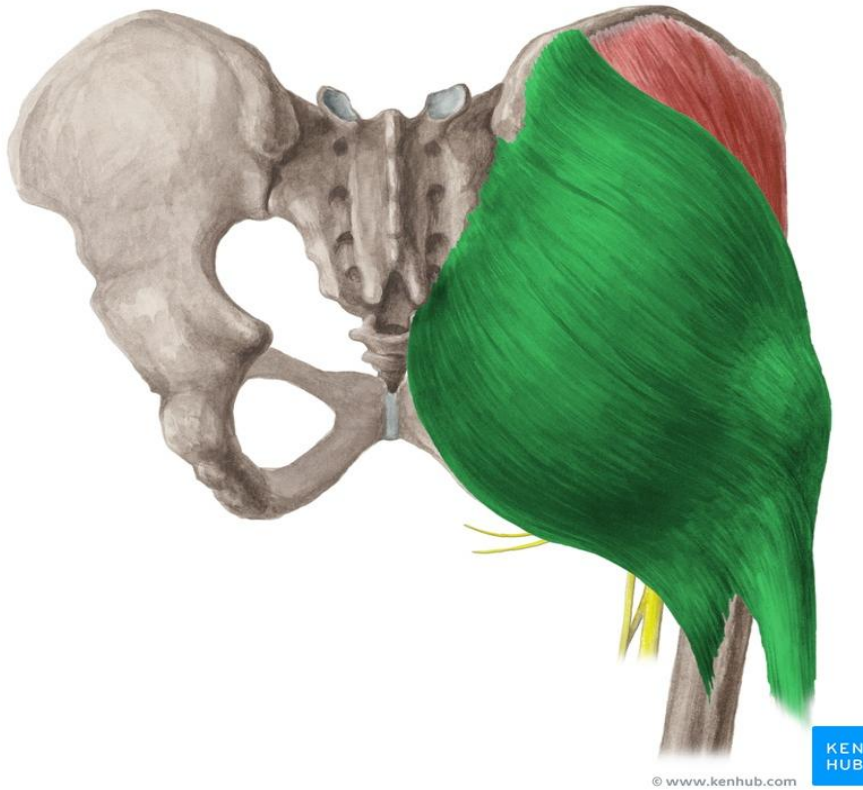


Supinator

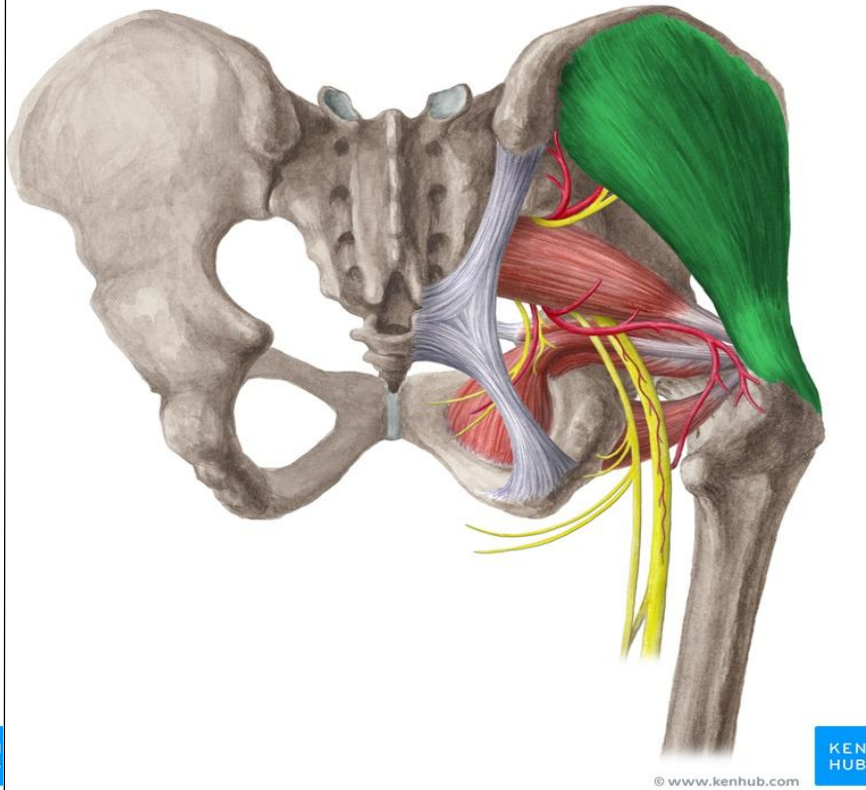


Identify the
Muscles of the
Forearm (Posterior
compartment/ Deep
group)

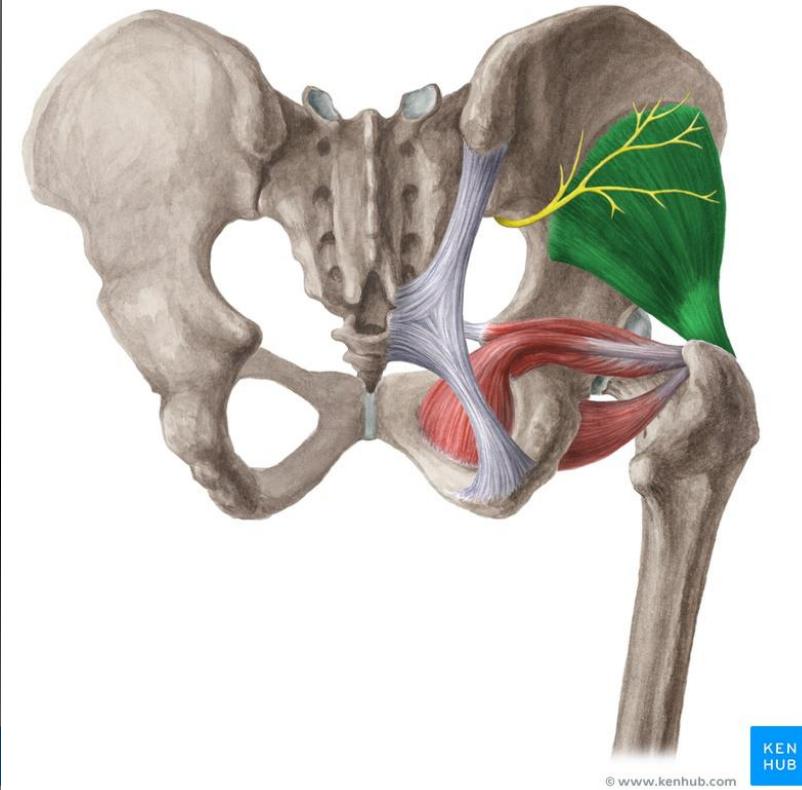
Gluteus maximus



Gluteus medius

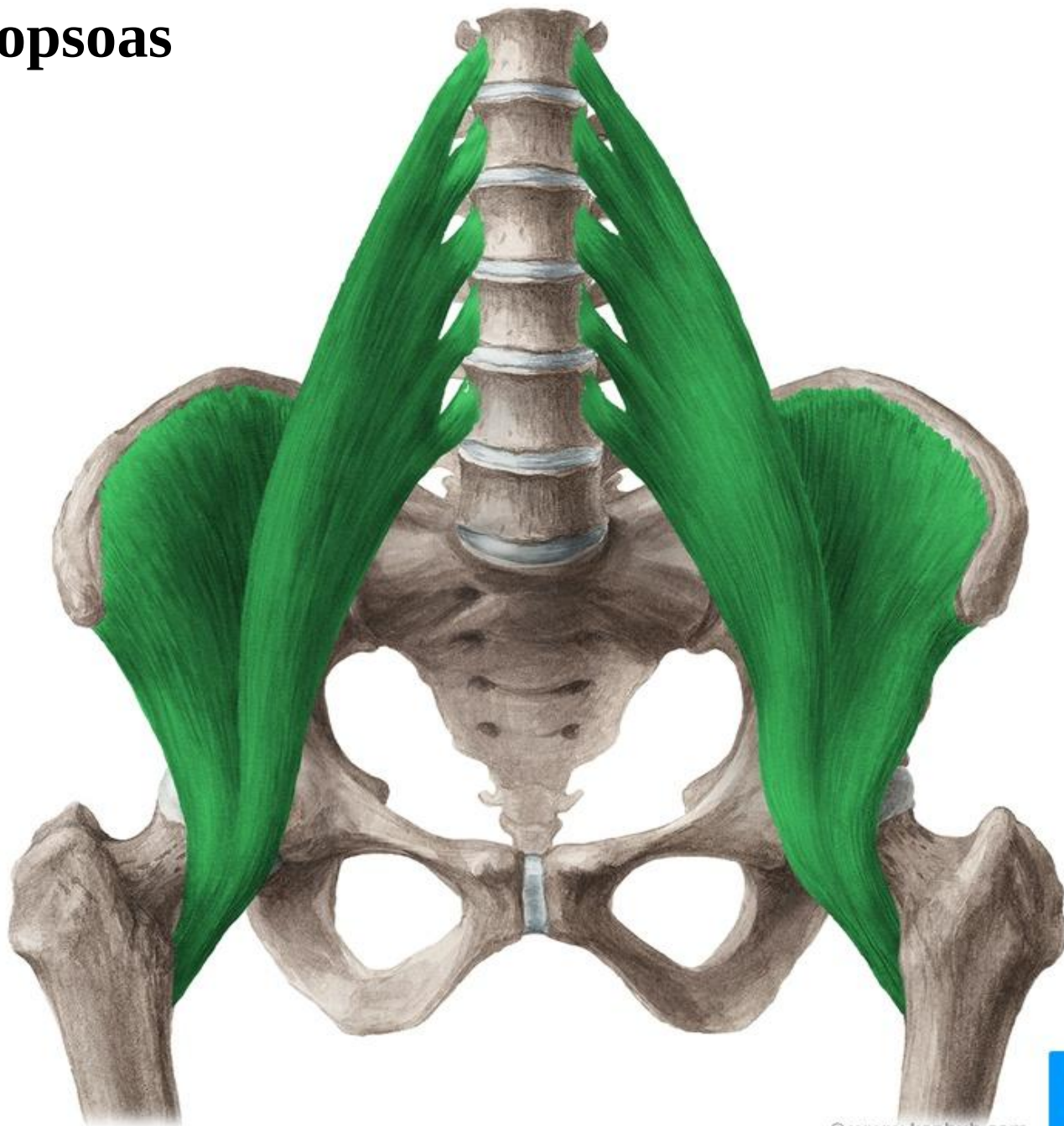


Gluteus minimus



Identify the Muscles
of Gluteal Area

Iliopsoas



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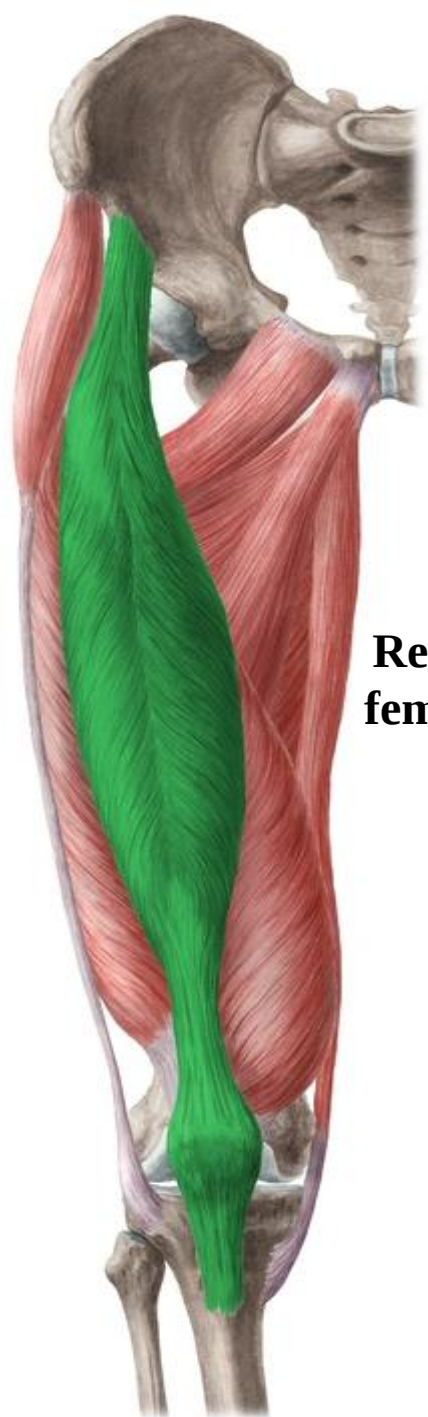
Sartorius



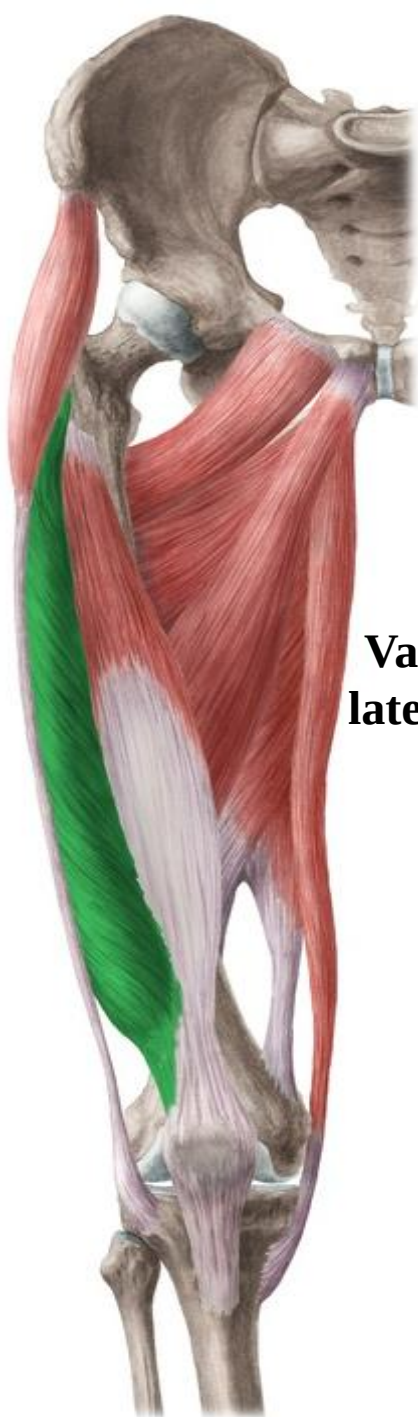
Identify the Muscles
of the Thigh
(Anterior
Compartment)

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**Rectus
femoris**



**Vastus
lateralis**



**Vastus
medialis**



**Vastus
intermedius**

Identify the Muscles
of the Thigh
(Anterior
Compartment)

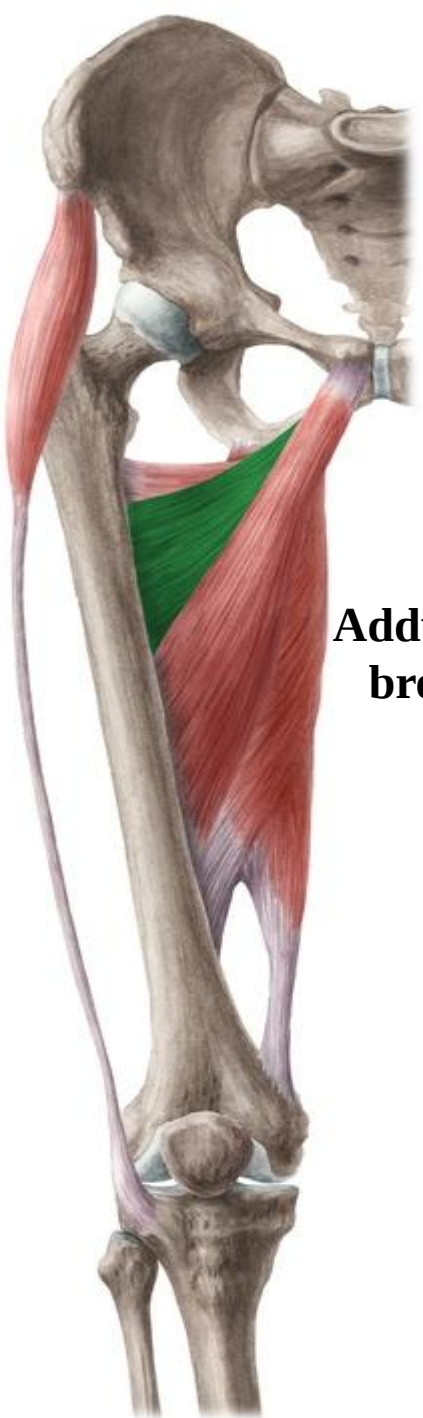
Quadriceps femoris



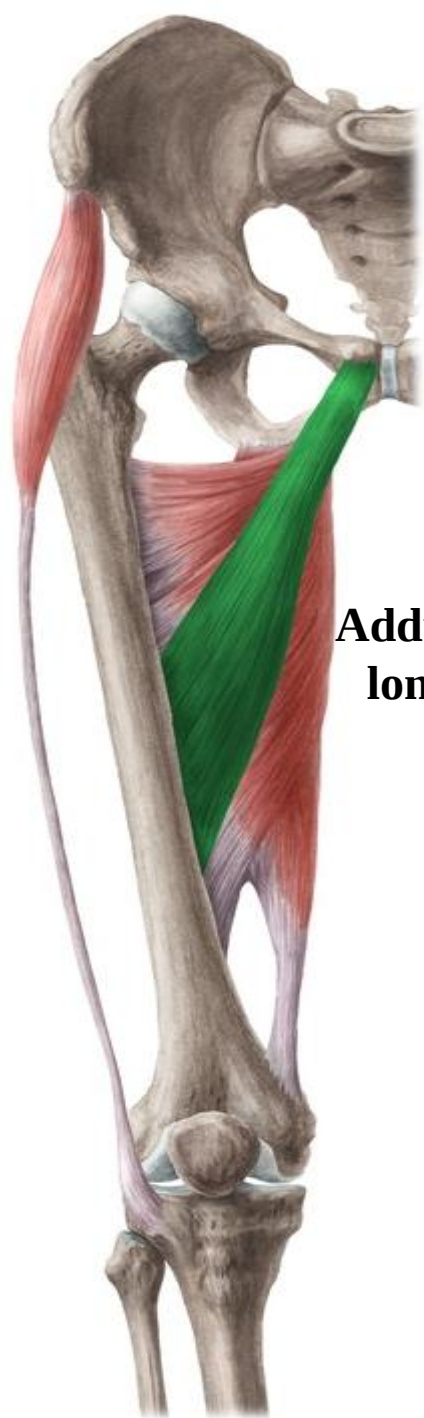
Identify the Muscles
of the Thigh
(Anterior
Compartment)

Pectineus

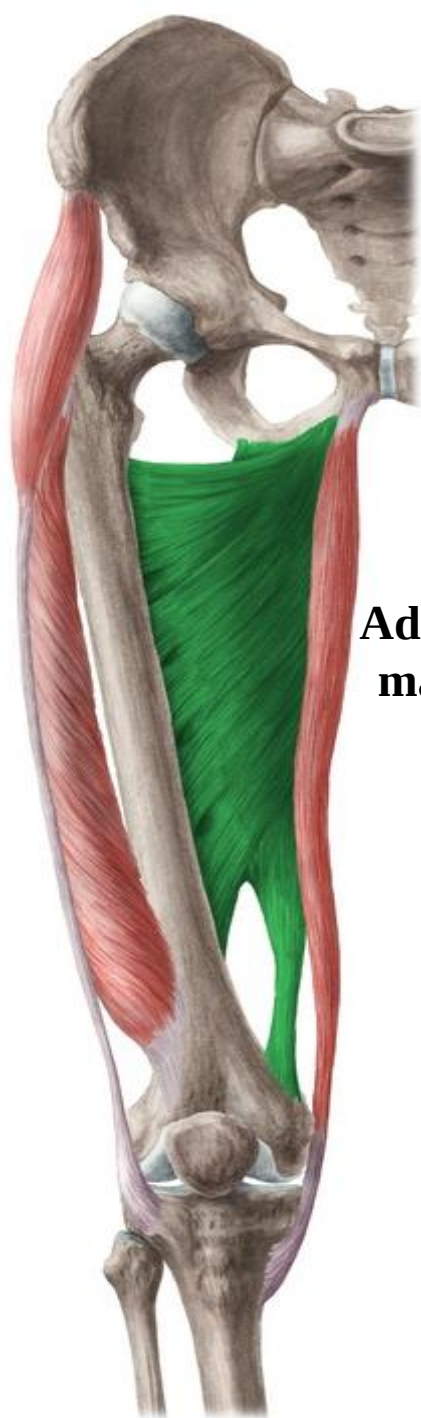




**Adductor
brevis**



**Adductor
longus**

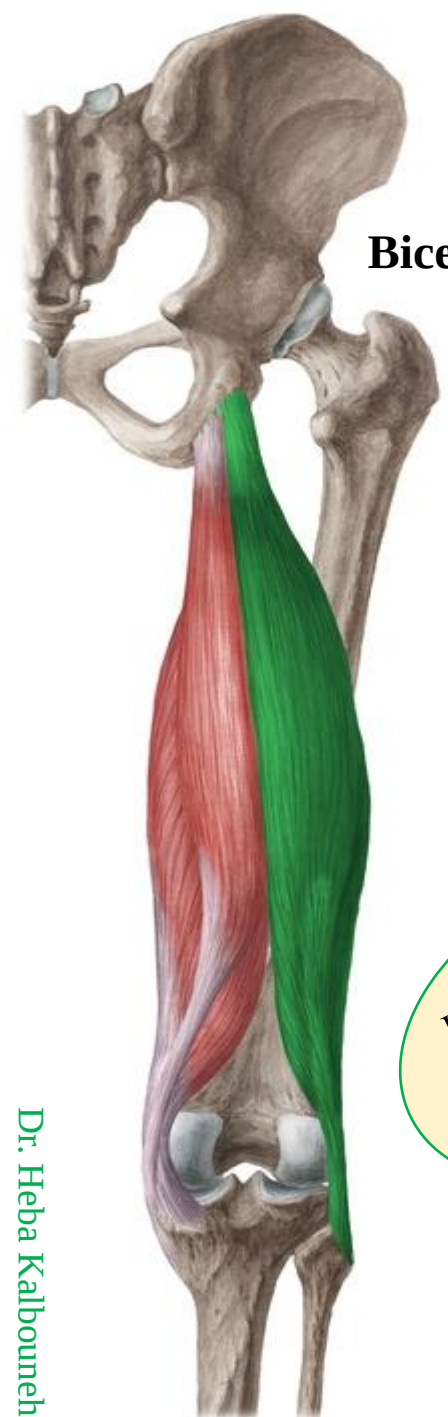


**Adductor
magnus**



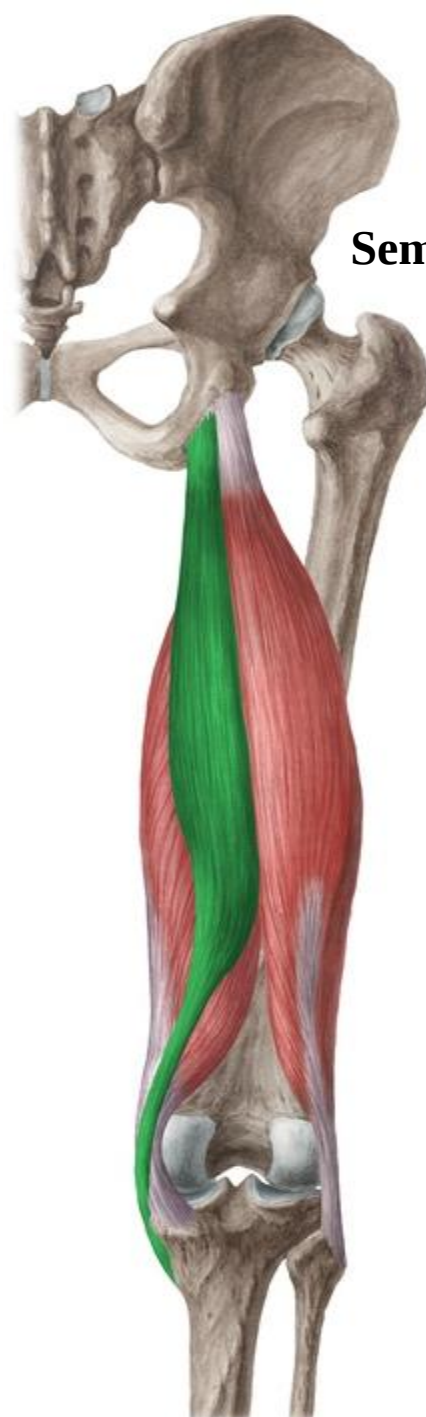
Gracilis

Identify the Muscles
of the Thigh (Medial
Compartment)

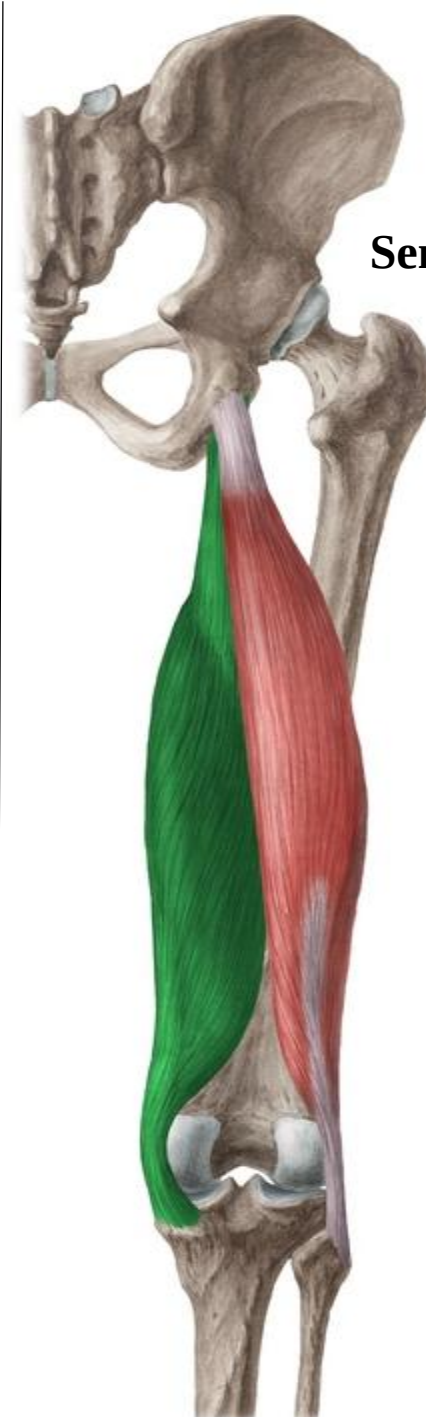


Biceps femoris

Identify the Muscles
of the Thigh
(Posterior
Compartment)



Semitendinosus



Semimembranosus



Tibialis anterior



Extensor hallucis longus



Extensor digitorum longus

Identify the Muscles
of the Leg (Anterior
Compartment)

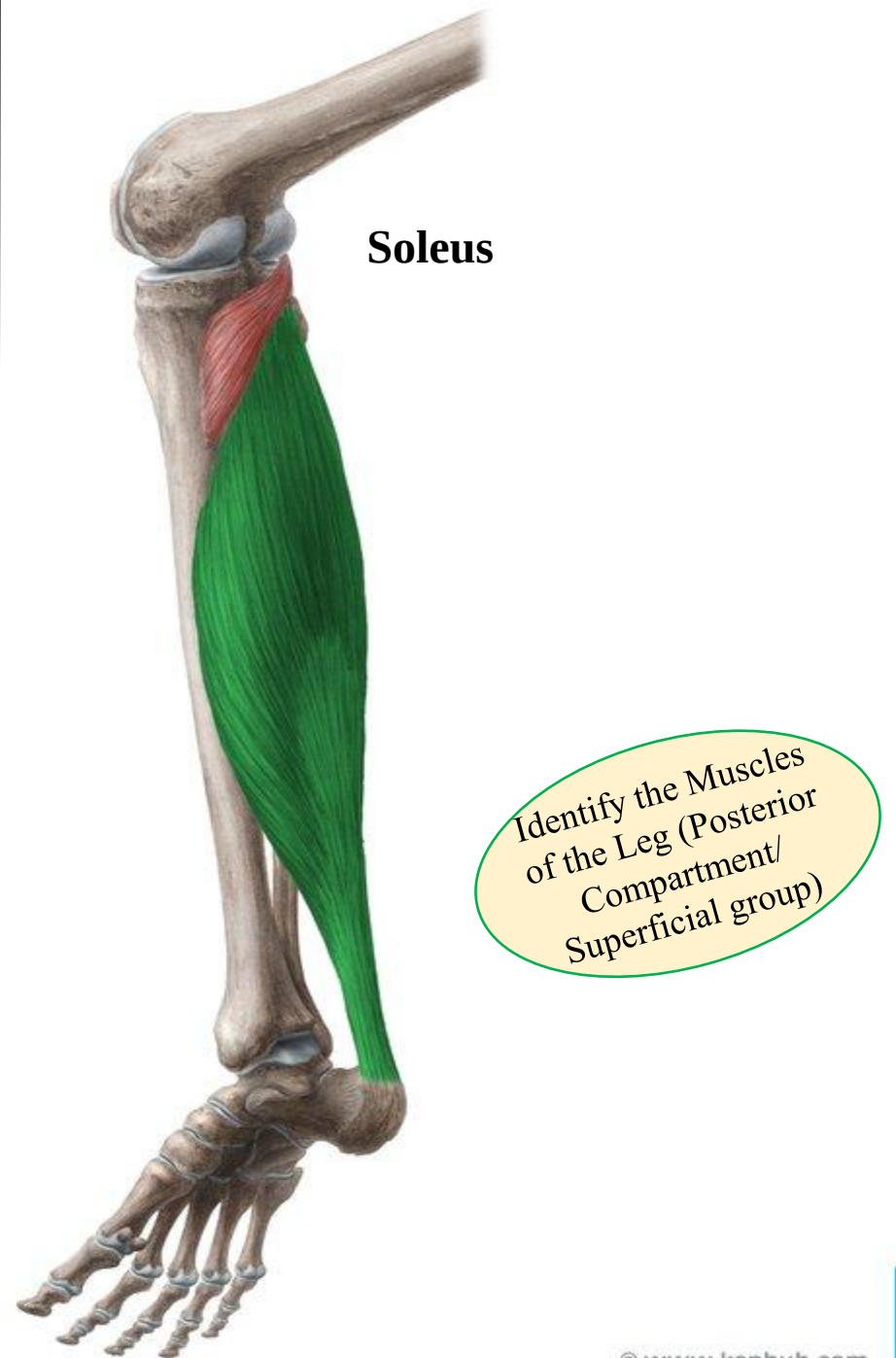


Fibularis longus

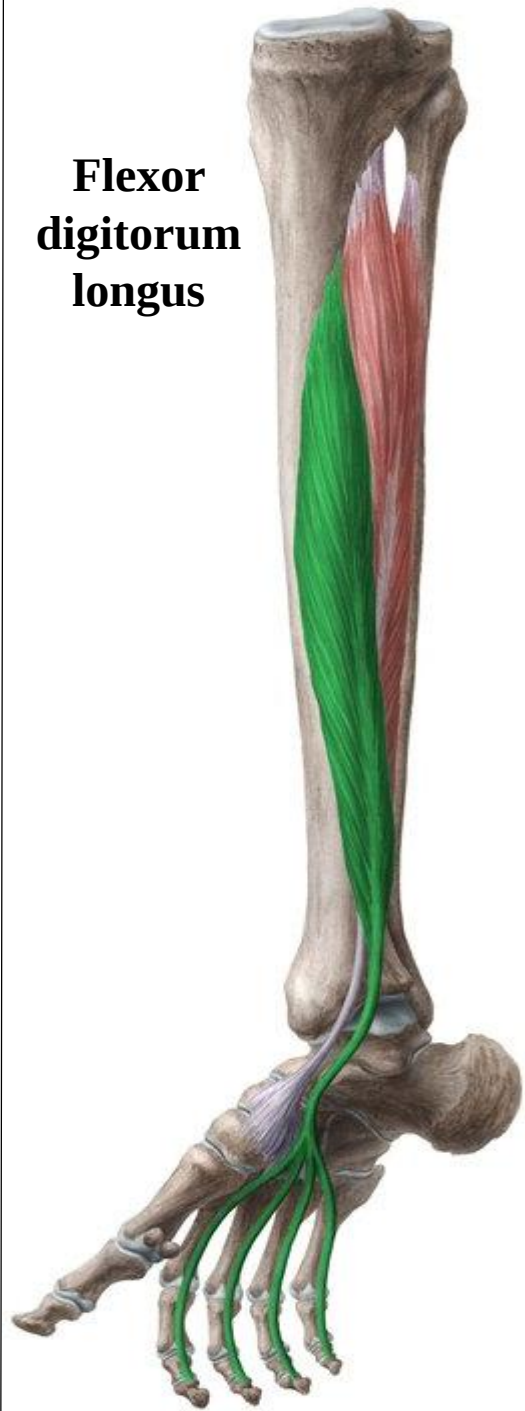


Fibularis brevis

Identify the Muscles
of the Leg (Lateral
Compartment)

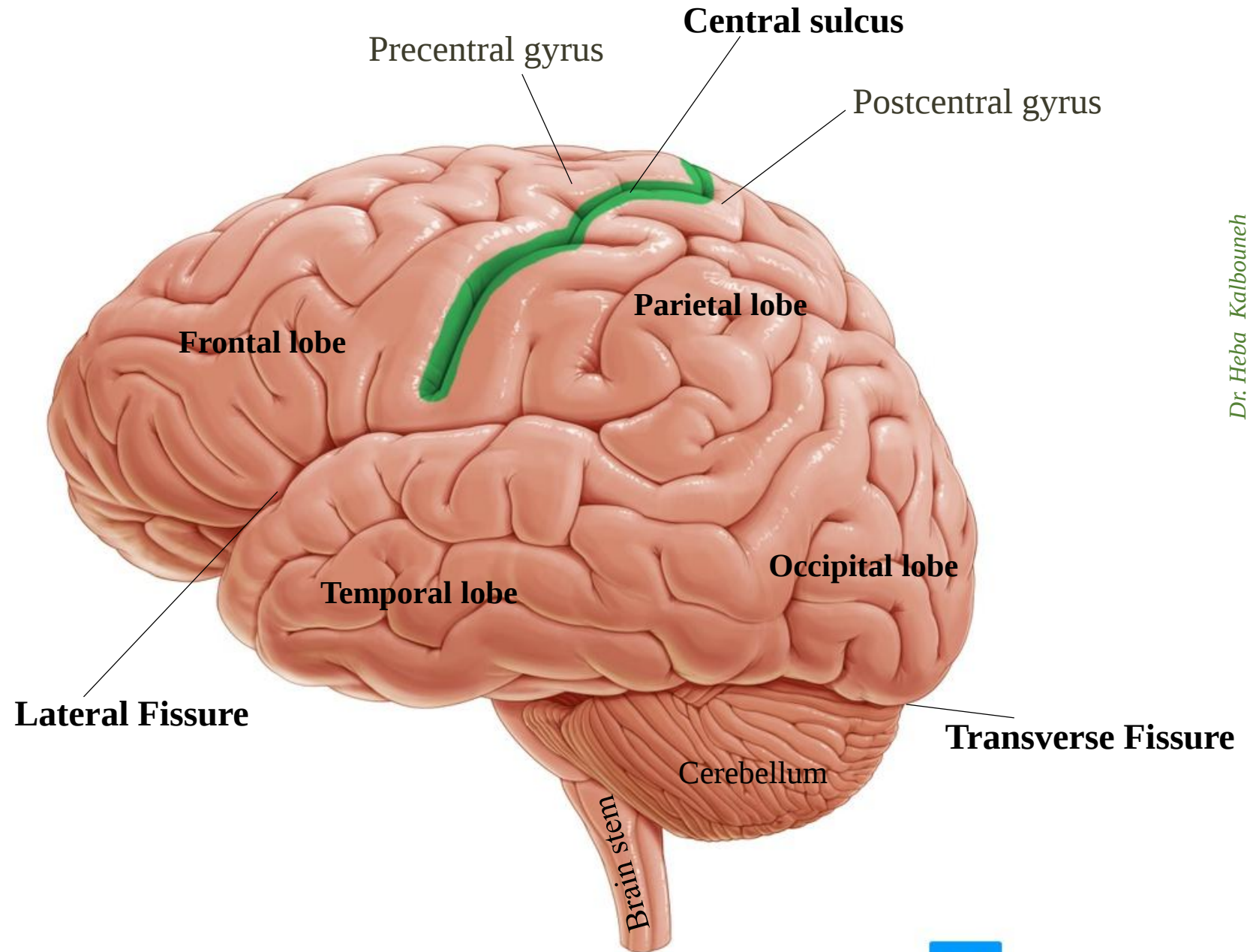


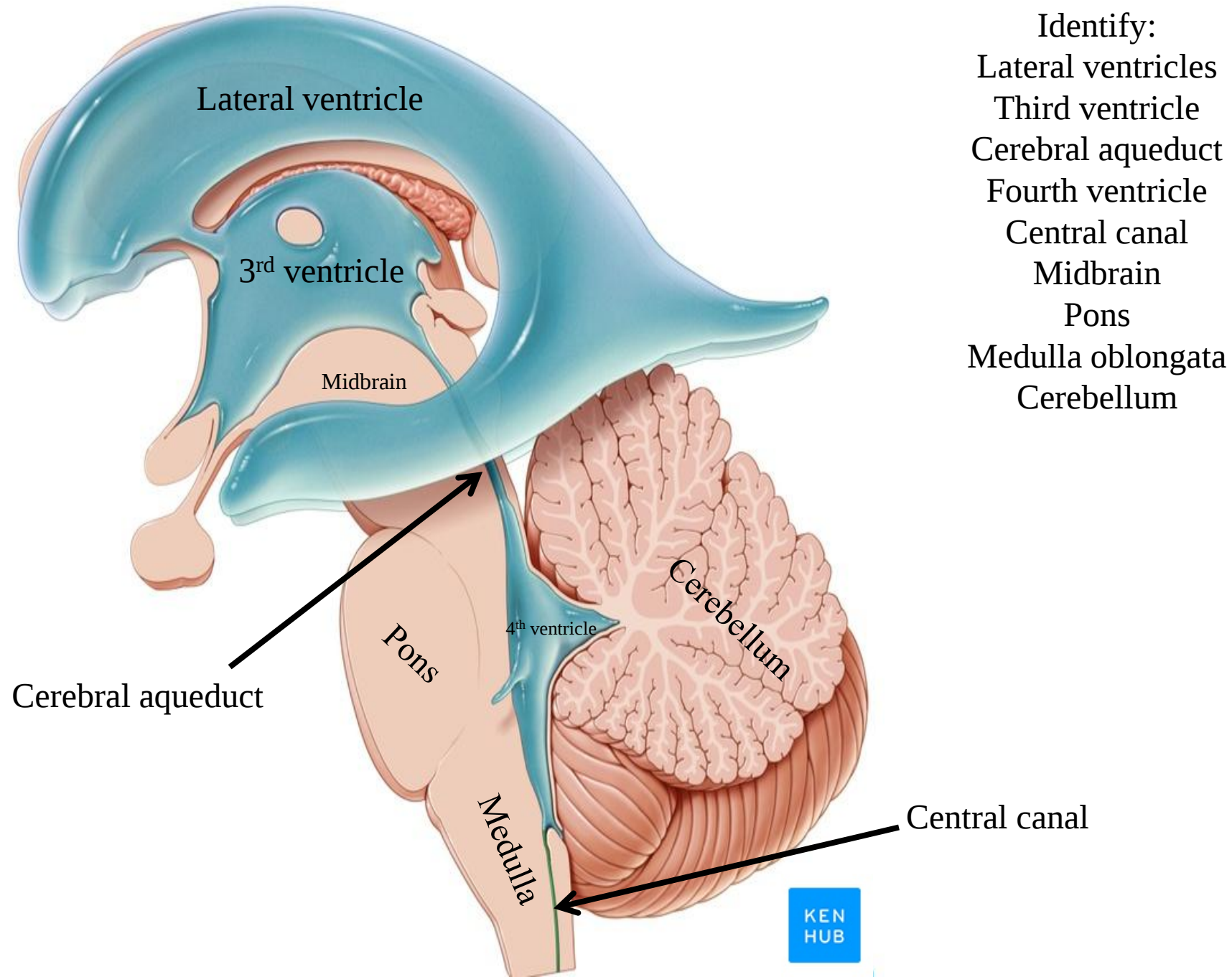
Identify the Muscles of the Leg (Posterior Compartment/ Deep group)



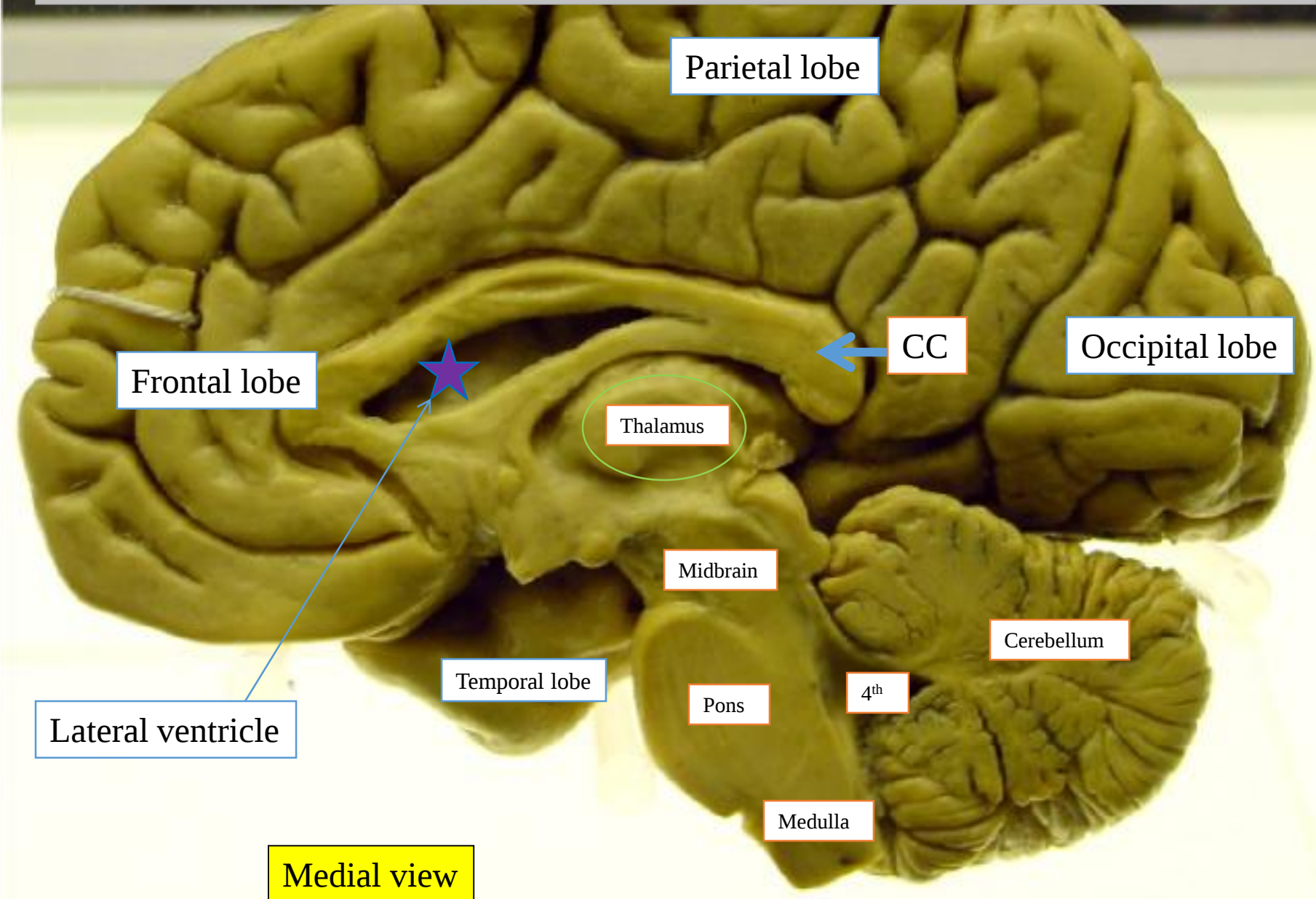
Identify:

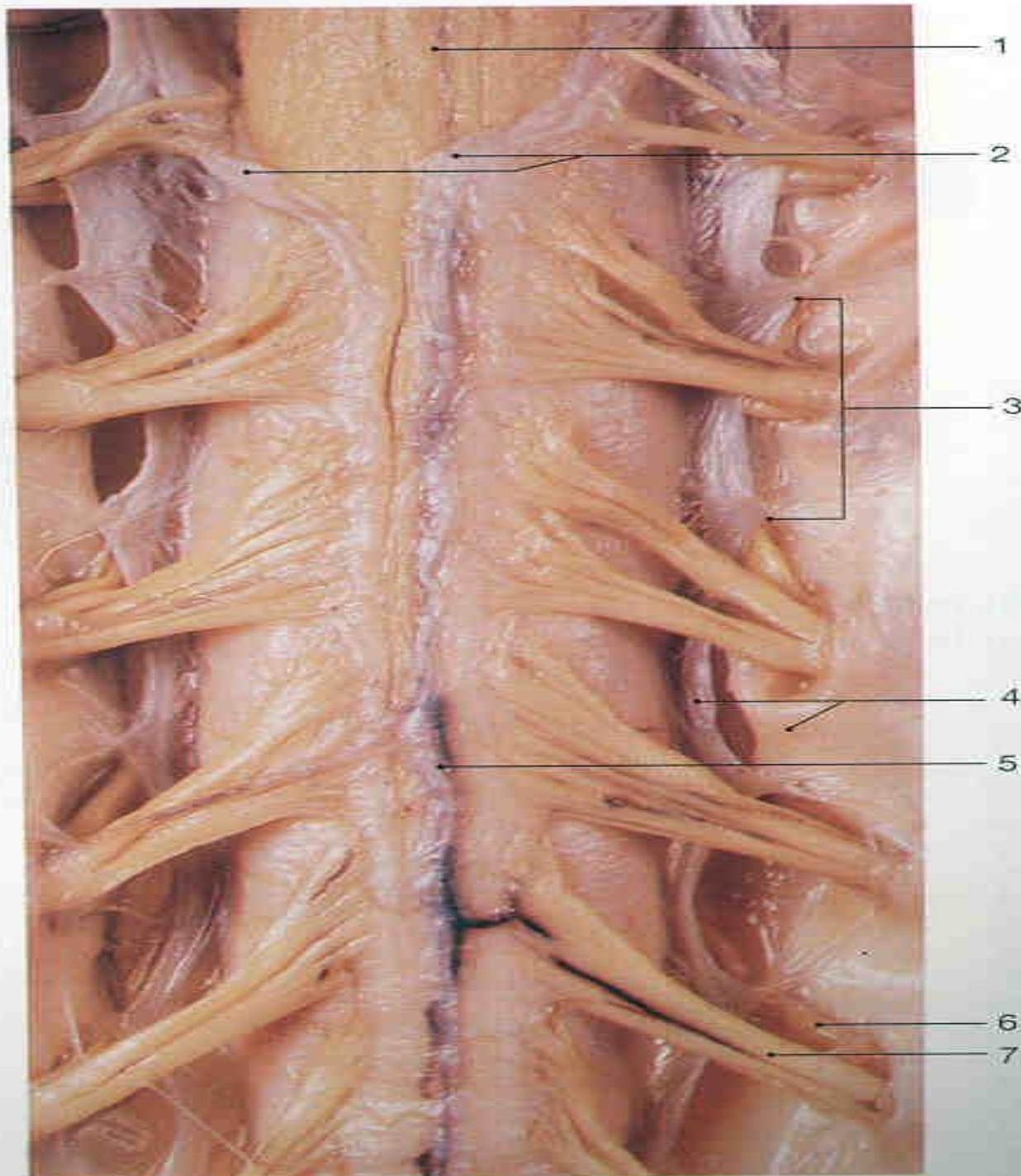
- Frontal lobe
- Parietal lobe
- Temporal lobe
- Occipital lobe
- Cerebellum
- Brainstem
- Central sulcus
- Precentral gyrus
- Postcentral gyrus
- Lateral fissure
- Transverse fissure





Identify the following regions of the normal brain in the image below: frontal, parietal, occipital and temporal lobes- Corpus callosum- Lateral ventricle- Fourth ventricle - Midbrain - Pons - Cerebellum – Thalamus- Hypothalamus





Identify

1:Anterior Median Fissure

2: Pia Mater

3: Denticulate Ligaments

4: Arachnoid and Dura
Mater (reflected)

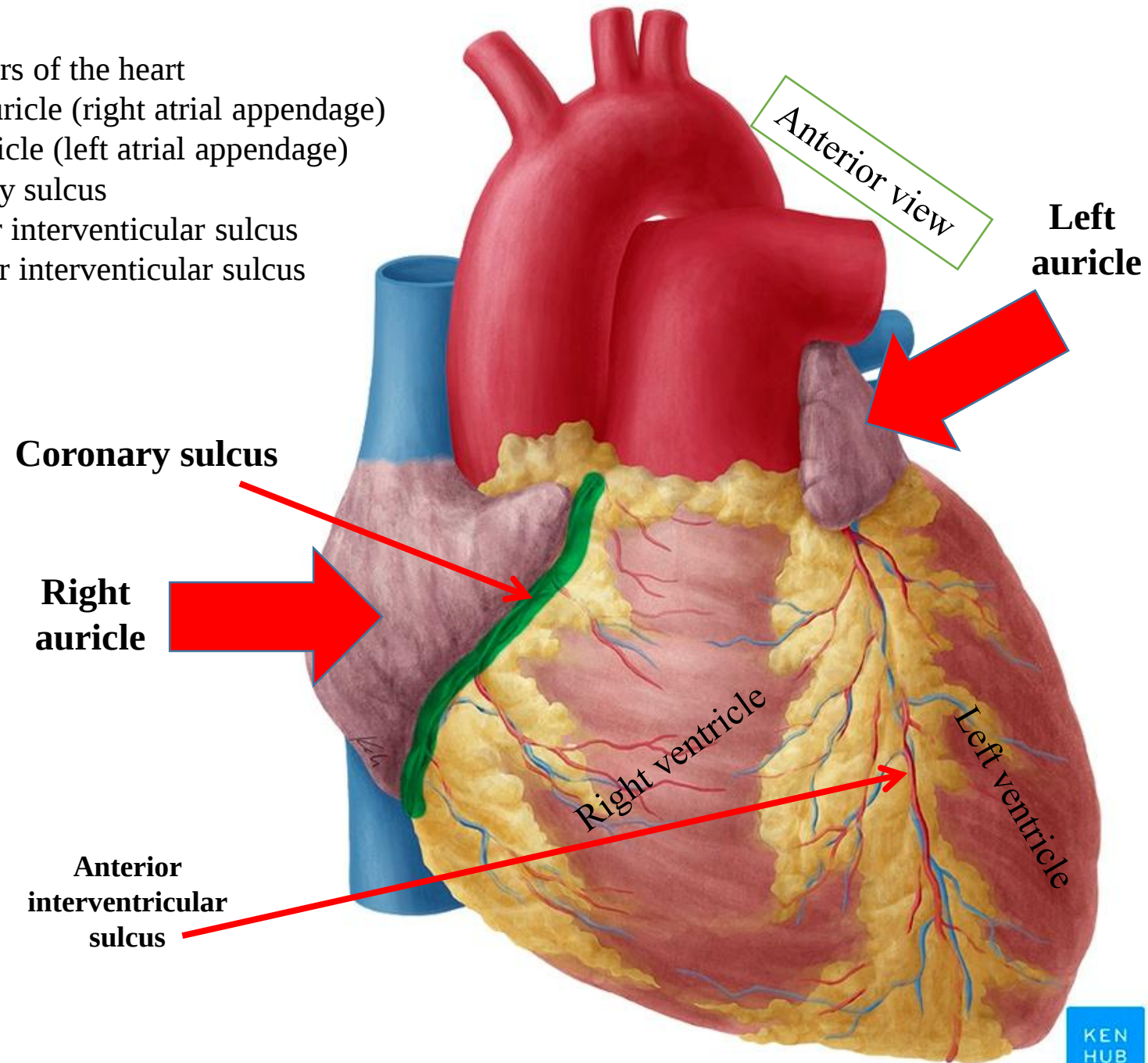
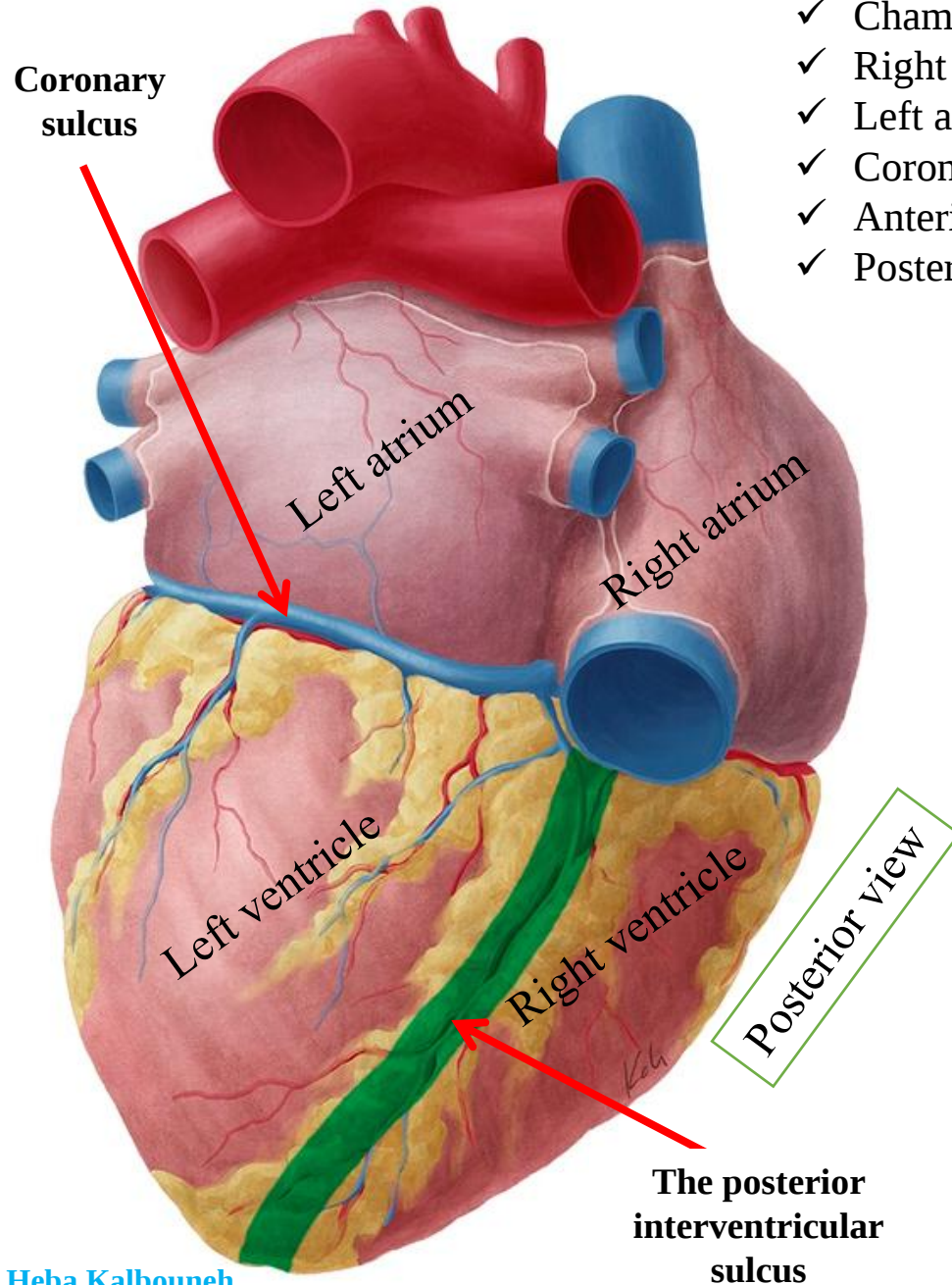
5:Anterior spinal artery

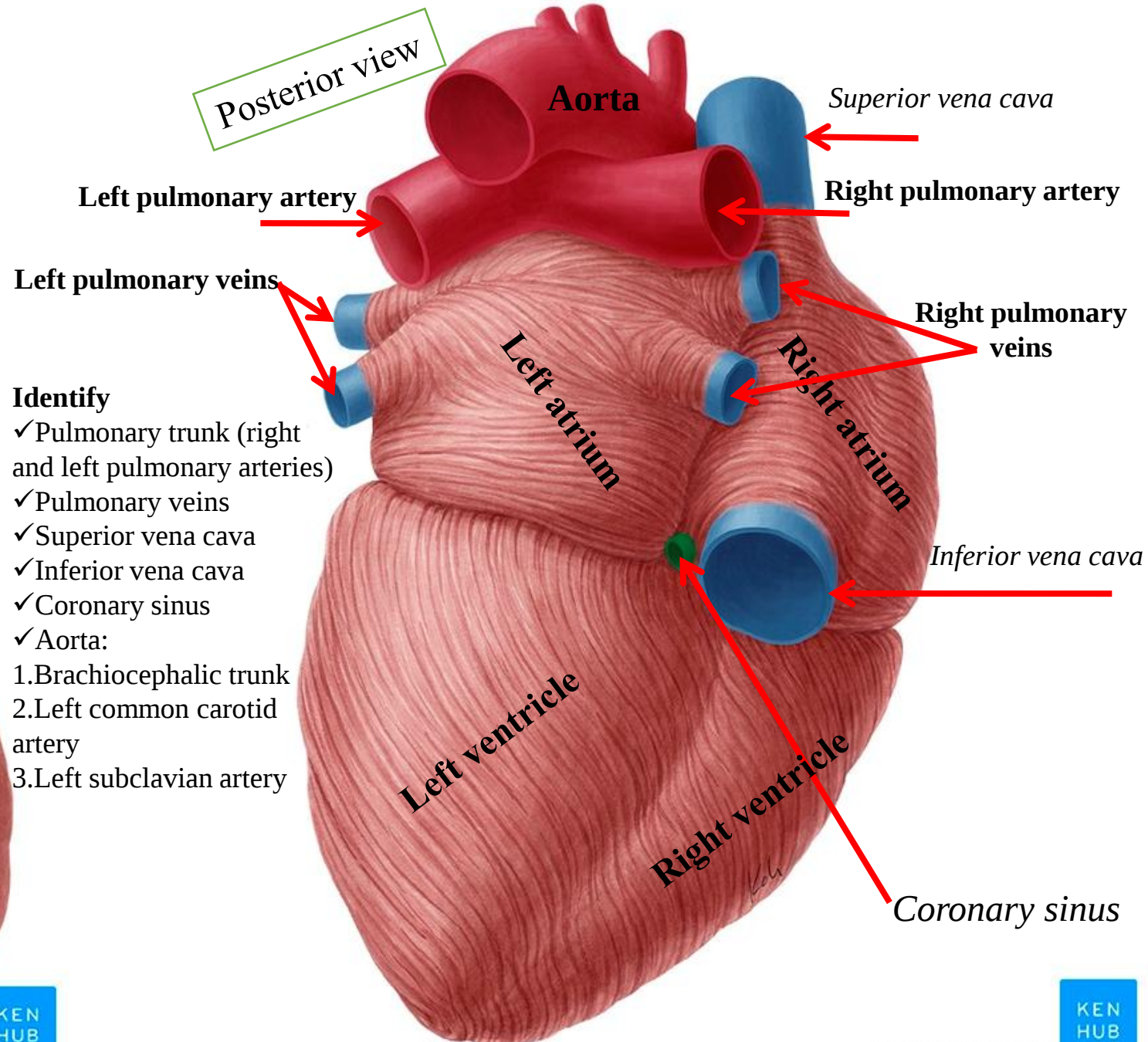
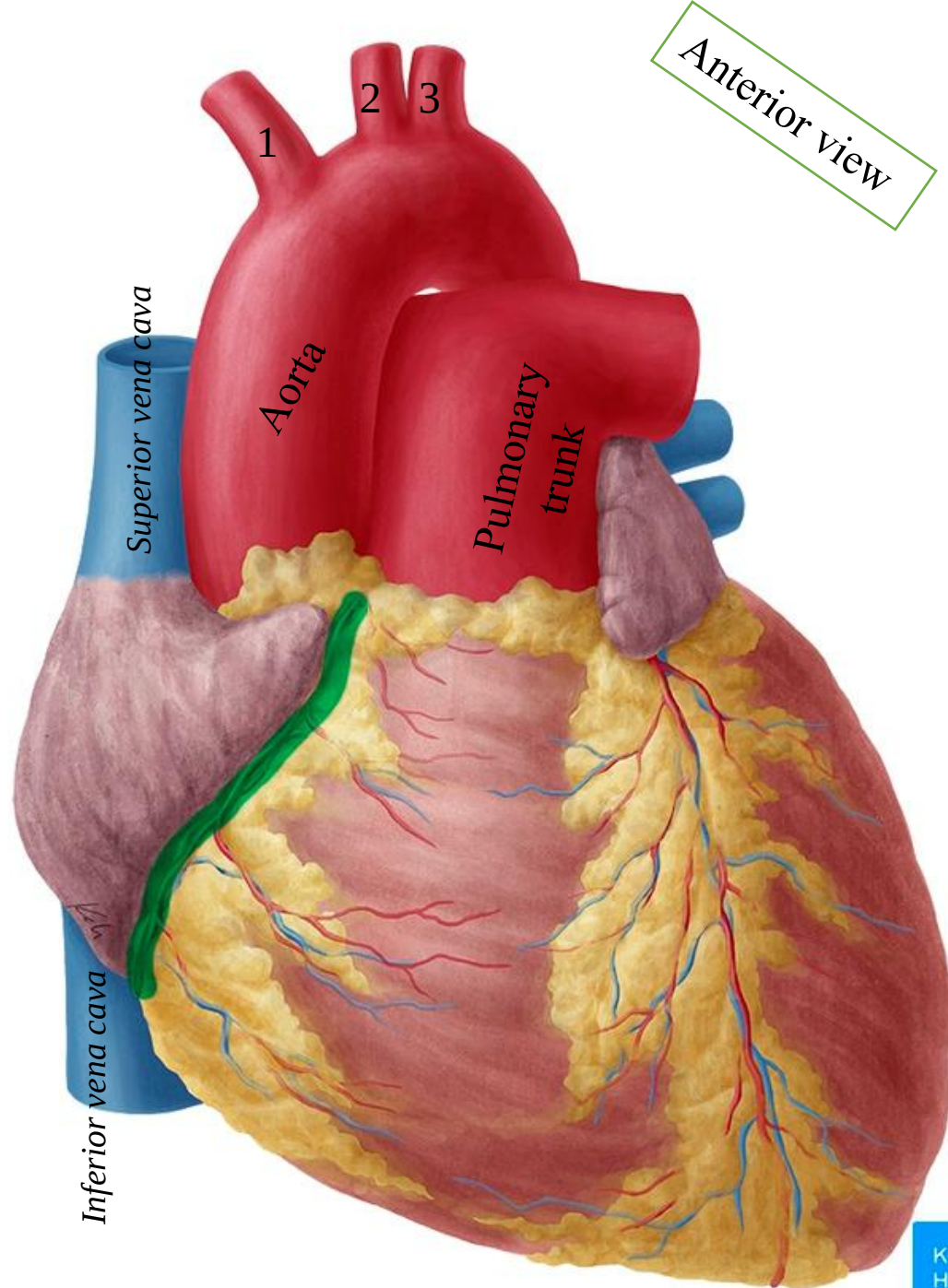
6: Dorsal Root

7:Ventral Root

Identify

- ✓ Chambers of the heart
- ✓ Right auricle (right atrial appendage)
- ✓ Left auricle (left atrial appendage)
- ✓ Coronary sulcus
- ✓ Anterior interventricular sulcus
- ✓ Posterior interventricular sulcus





Identify

Nasal cavity

Hard palate

Soft palate

Tongue

Mandible

Hyoid bone

Epiglottis

Larynx

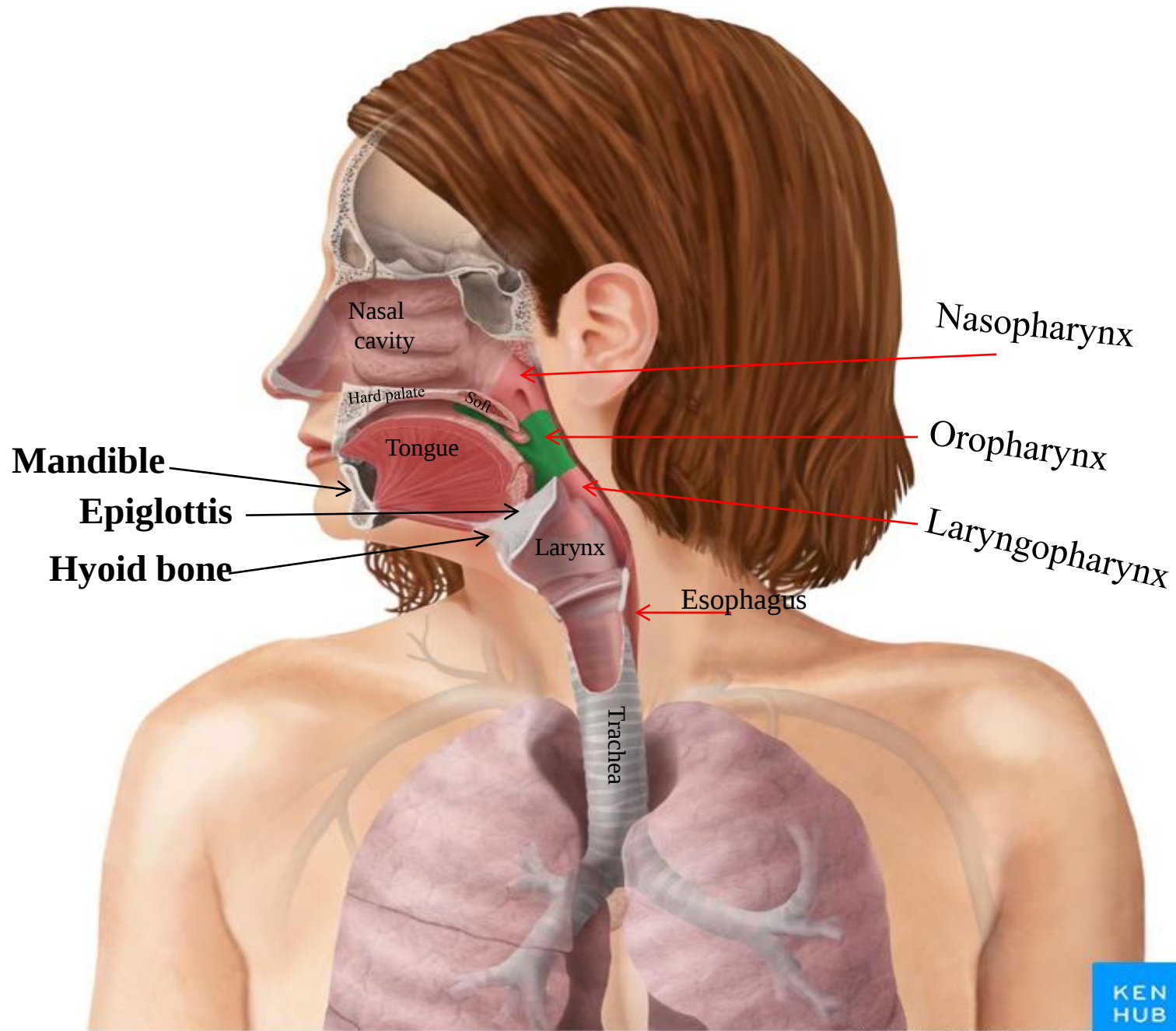
Trachea

Esophagus

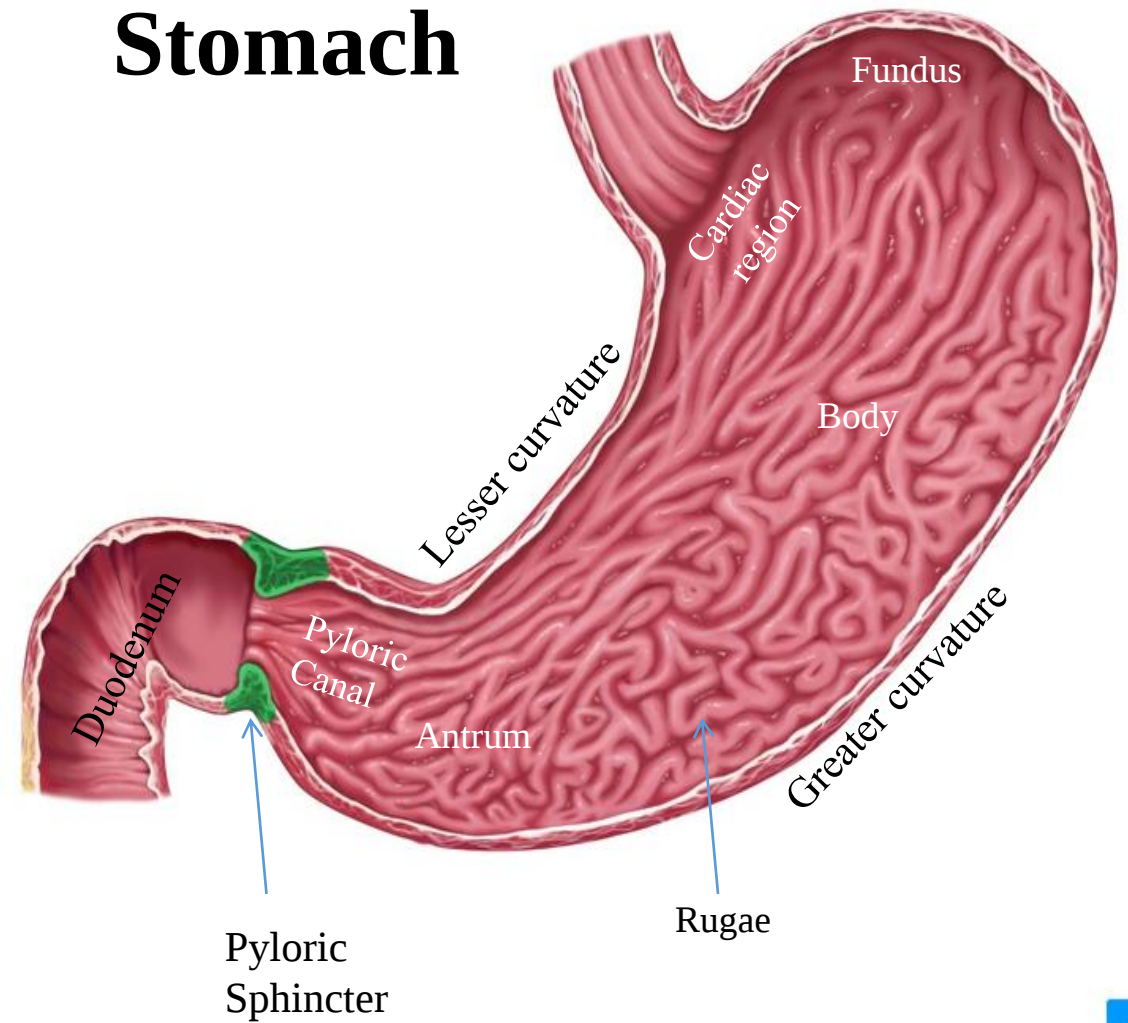
Nasopharynx

Oropharynx

Laryngopharynx



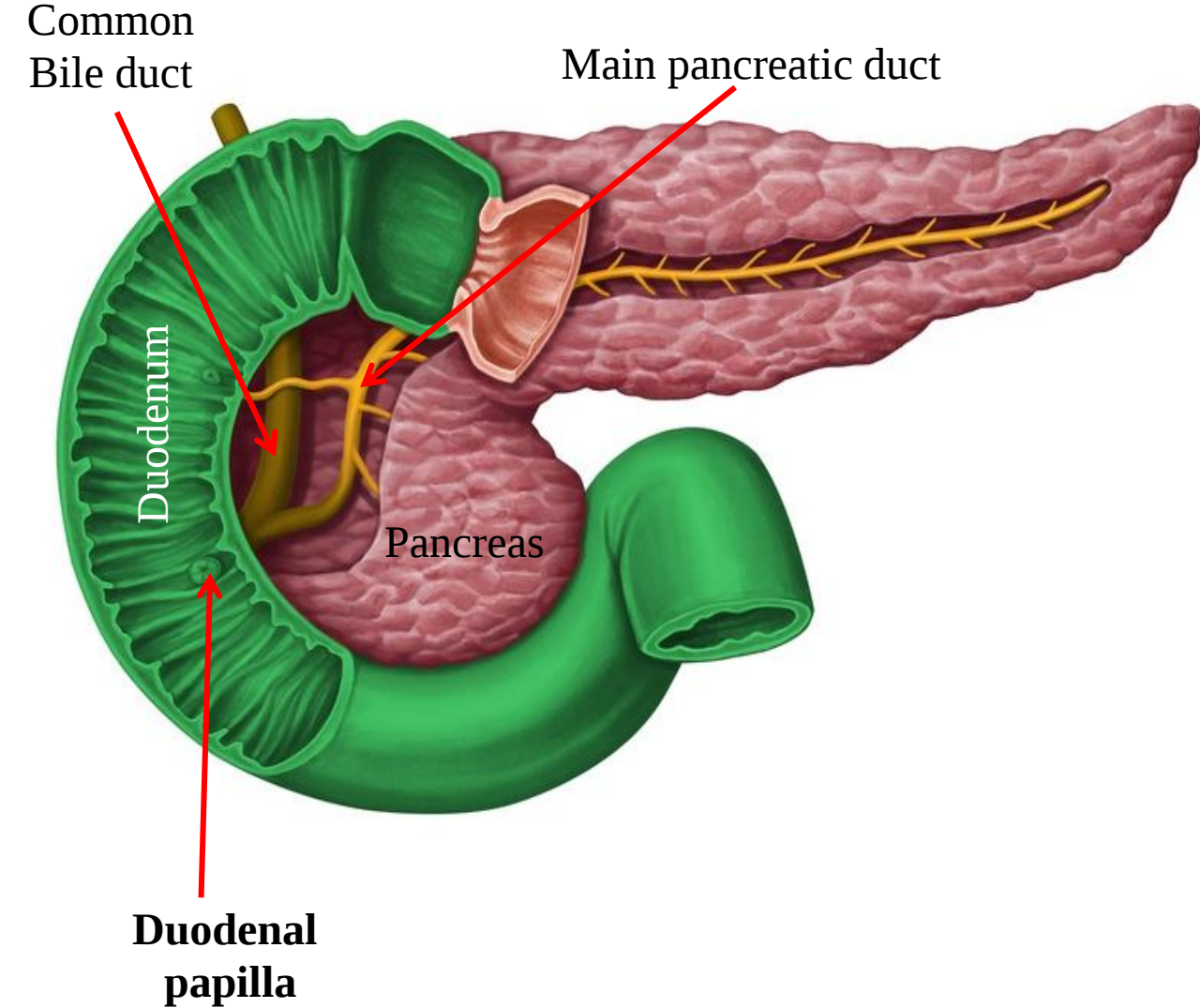
Stomach



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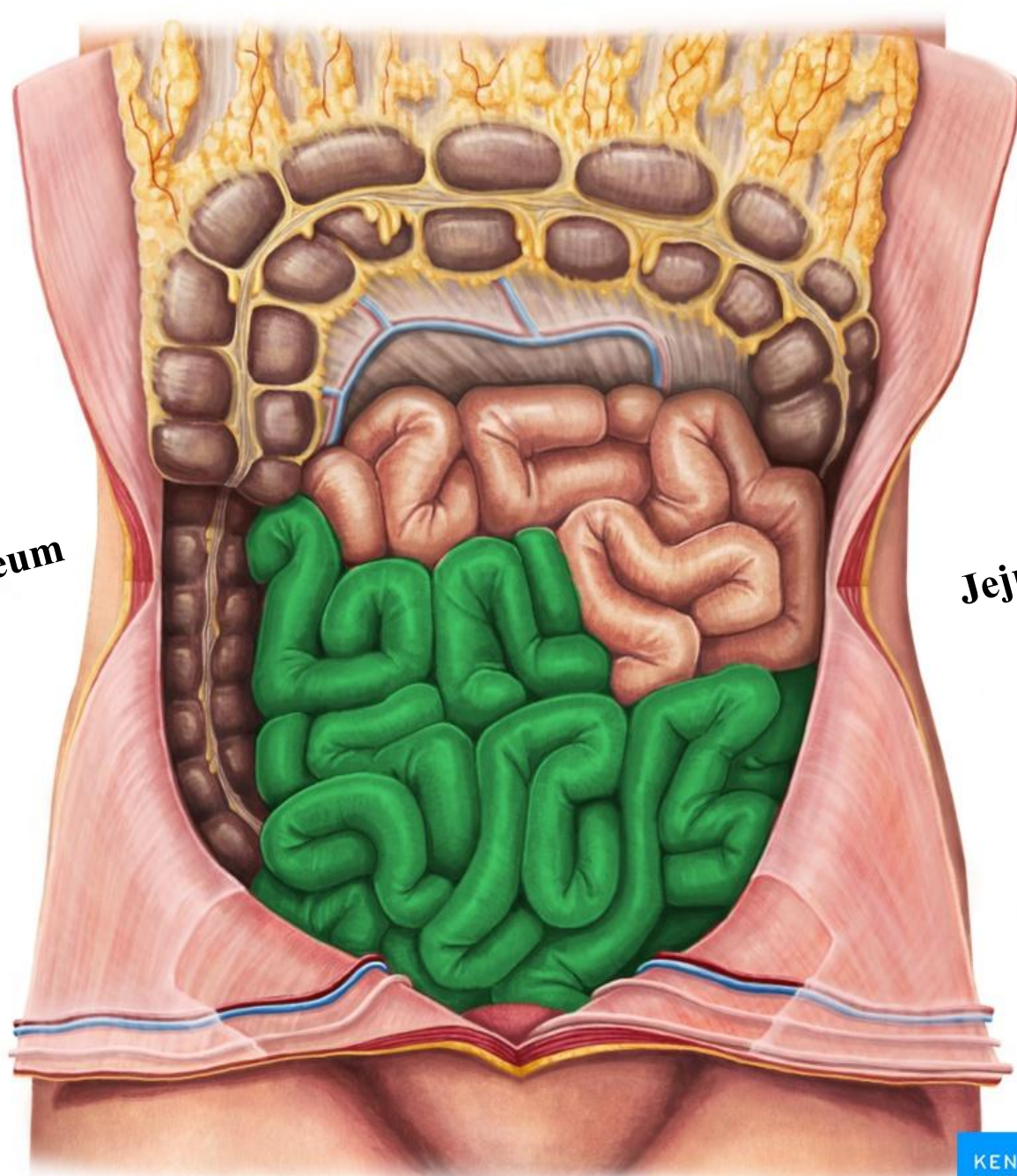
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Identify: cardia, fundus, body, pyloric antrum, pyloric canal, pyloric sphincter, lesser curvature, greater curvature, rugae, main pancreatic duct, common bile duct, pancreas, duodenum, duodenal papilla

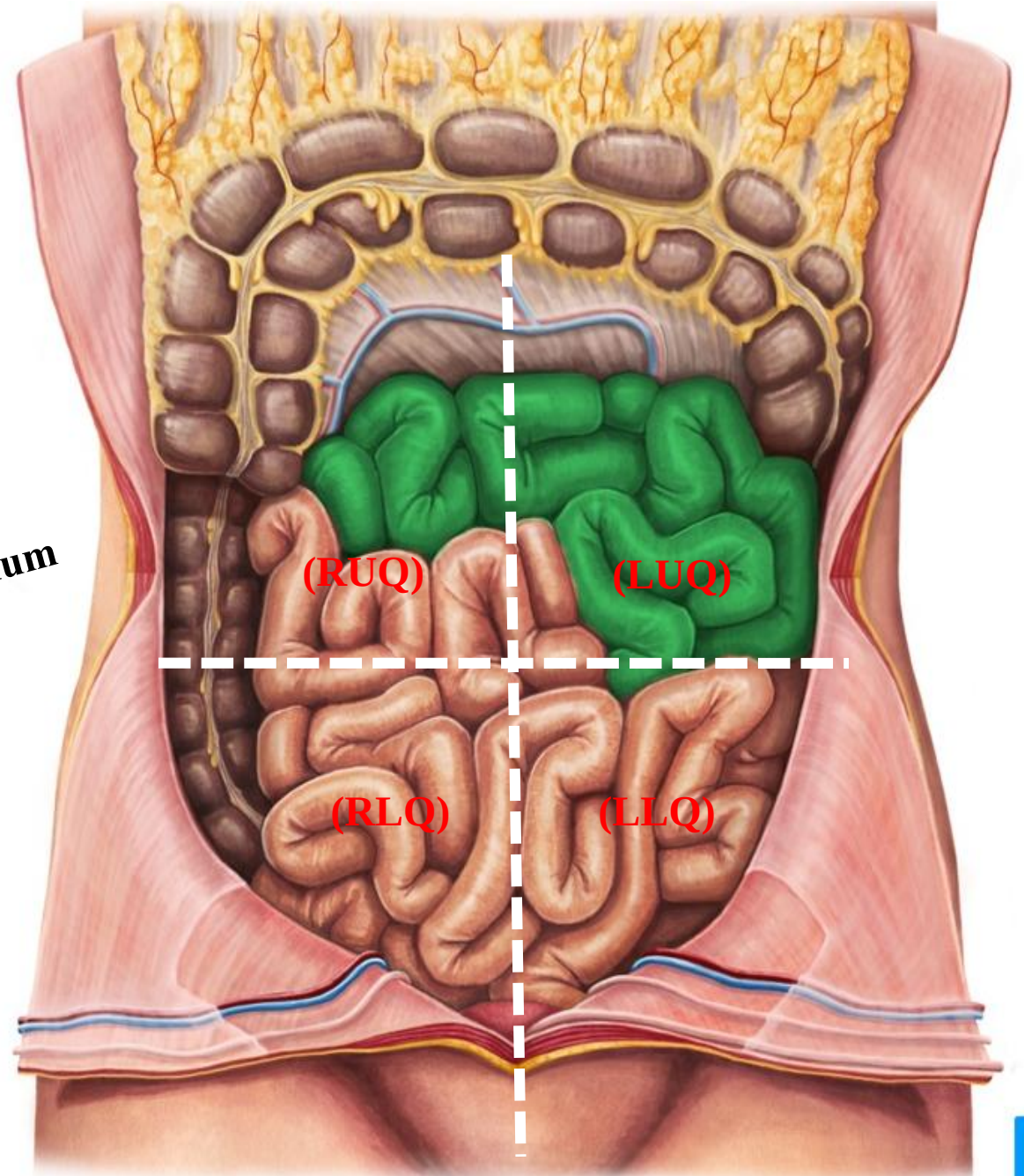


Dr. Heba Kalbouneh

Ileum



Jejunum

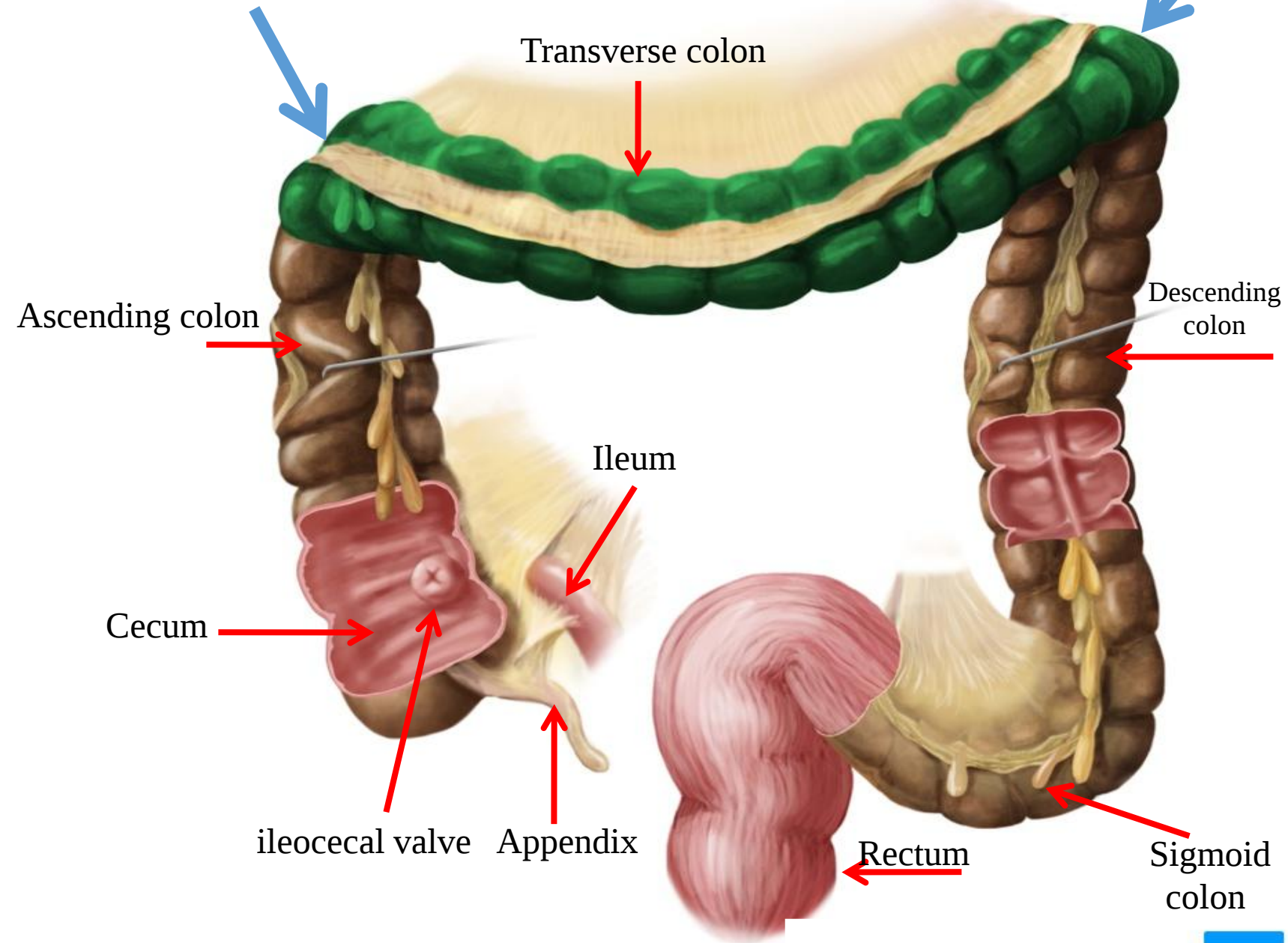


Identify

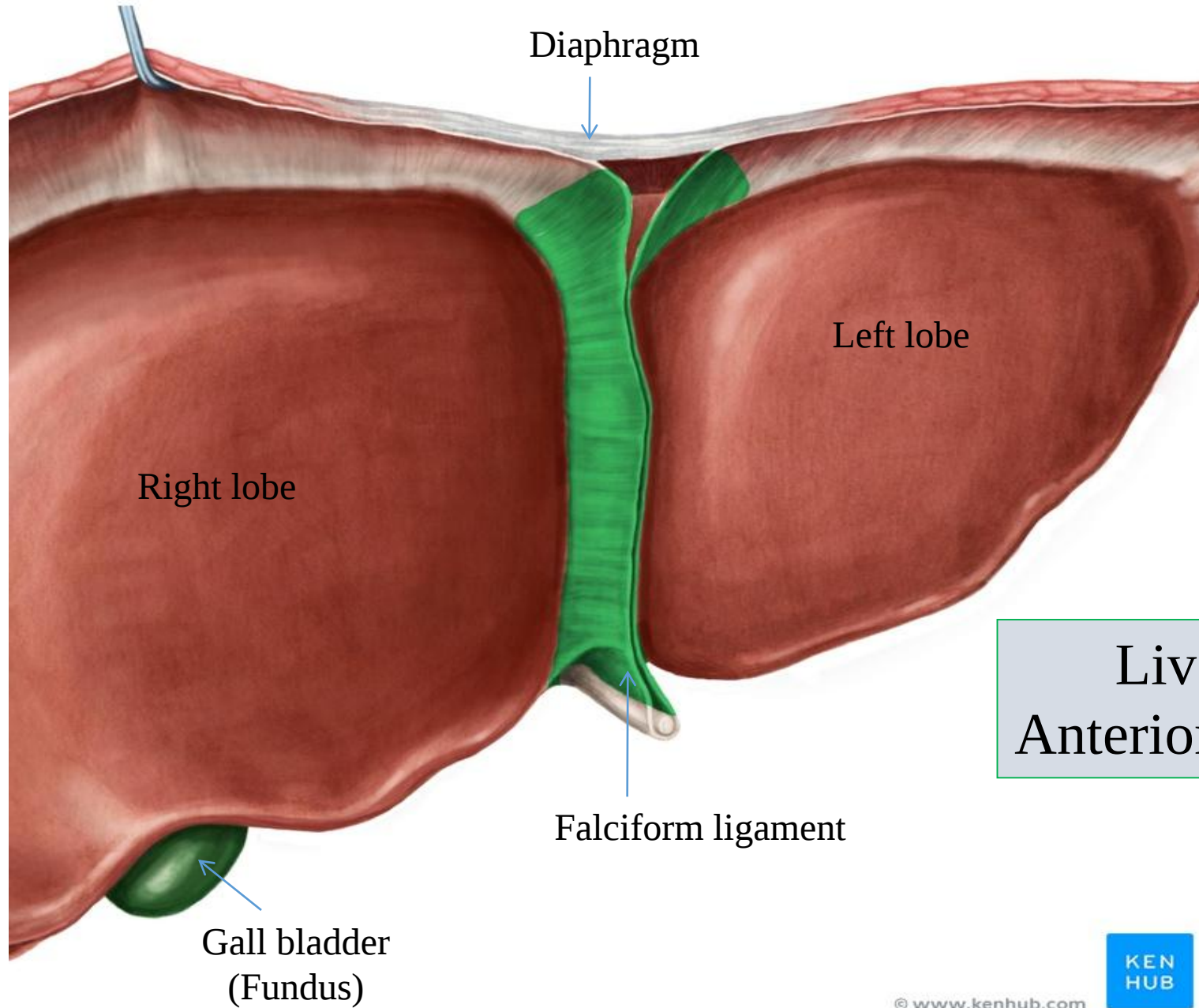
- ✓ Ileum
- ✓ Appendix
- ✓ Ileocecal valve
- ✓ Cecum
- ✓ Ascending colon
- ✓ Right colic flexure (hepatic)
- ✓ Transverse colon
- ✓ Left colic flexure (splenic)
- ✓ Descending colon
- ✓ Sigmoid colon
- ✓ Rectum

Right colic (or hepatic) flexure

Left colic (or splenic) flexure



Identify:
Right lobe
Left lobe
Falciform ligament
Diaphragm
Gall bladder



Liver
Anterior view

Identify:

- ✓ Right lobe
- ✓ Left lobe
- ✓ Caudate lobe
- ✓ Quadrate lobe
- ✓ Porta hepatis
- ✓ Portal vein
- ✓ Hepatic artery
- ✓ Hepatic duct
- ✓ Cystic duct
- ✓ Common bile duct
- ✓ Gall bladder
- ✓ IVC

