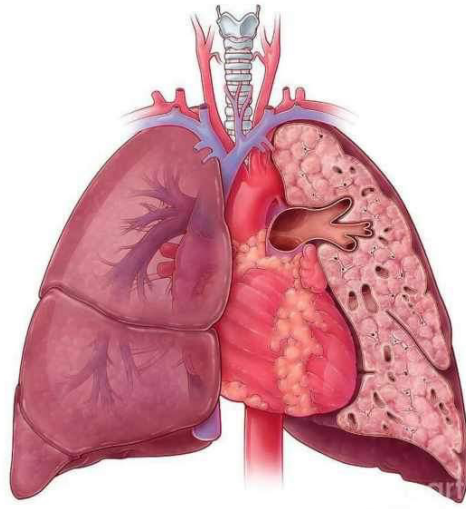


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لجان الدفعات



تفريغ أناتومي



موضوع المحاضرة: Skeletal System | part 3

11

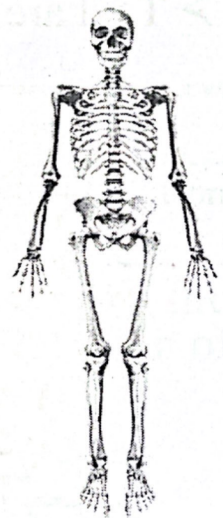
رقم المحاضرة :

Yara Hani

إعداد الصيدلانية :

■ The Appendicular Skeleton

Appendicular Skeleton



The Upper Limb

Each upper limb has 32 bones

Two separate regions ينقسم إلى منطقتين

1. The pectoral (shoulder) girdle which attaches upper limb to trunk → 2 bones in each: Clavicle and Scapula لوحة الكتف

2. The free part (30 bones):

- 1 Humerus (arm)
- 1 Ulna + 1 Radius (forearm)
- 8 Carpal bones (wrist) يكونوا على شكل صفين (٤٤)
- 5 Metacarpals and 14 Phalanges (hand)

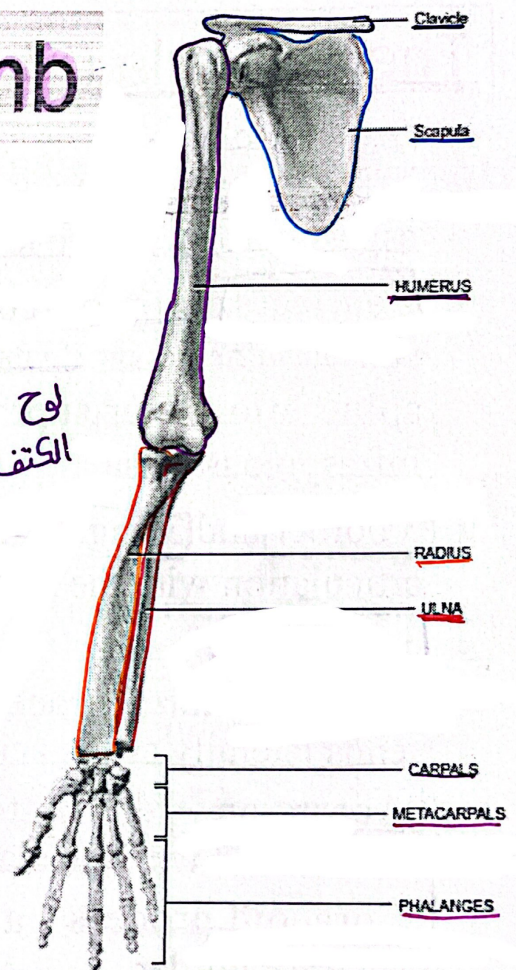


Fig.23: Anterior view of the upper limb bones.

The Pectoral (Shoulder) Girdle:

1 The Clavicle (Collarbone):

- The anteriorly located clavicle is "S" shaped → شكلها يشبه حرف S
- The medial end articulates with the sternum
- The lateral end articulates with the acromion of the scapula

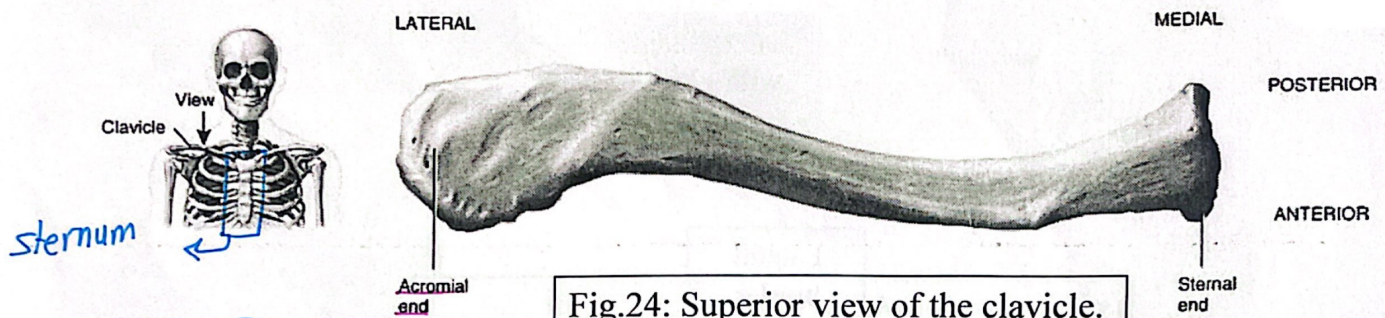


Fig.24: Superior view of the clavicle.

■ Functions of the clavicle:

1. Keeps the limb away from the trunk →
2. Transmits force from the upper limb to the trunk →
3. The only bony attachment of upper limb with the trunk. Therefore, if the clavicle is fractured, the limb will fall (Dropped limb). → 38

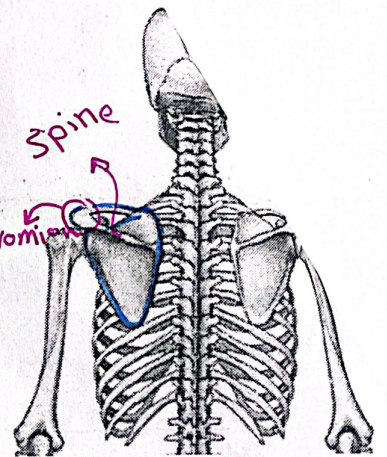
وإذا انكسرت يتوقع الايد وهو المثلث الوحيد الي يرفع الايد .

• نهايتها على (7th rib) وهو آخر (True Rib)

The Scapula (Shoulder blade):

مثلثة الشكل

- Triangular in shape and located on the posterior aspect of the rib cage level with the 2nd to 7th ribs.
- 2 surfaces: anterior (costal) surface featuring the subscapular fossa. Posterior surface divided by the spine into upper supraspinous fossa and lower infraspinous fossa.
- 3 border and 3 angles. The lateral angle presents the glenoid cavity for articulation with the head of the humerus. لأنها مثلث: لها 3 أضلاع + 3 زوايا
- 3 processes:
 1. Spine - a large process on the posterior surface of the scapula that ends laterally as the acromion. هو أكبر بروز من عظمة [Scapula]
 2. Acromion - the flattened lateral end of the spine of the scapula. هو امتداد ال [Spine] من الأمام، وتكون مقعرة مع [Clavicle]
Articulates with the clavicle.
 3. Coracoid process - a protruding projection on lateral end of the superior border. ← ماله 2 دقل بارتصال أي عظمة ركنه بتزبط فيه العضلات



شكله مثل المنقار ؛ بنهاية تطلع عظمة ال [Clavicle] ويعتمد إلى الامام حتى توصل ال [Sternum] وبالتحديد :

manubrial
↓
Clavicular notch

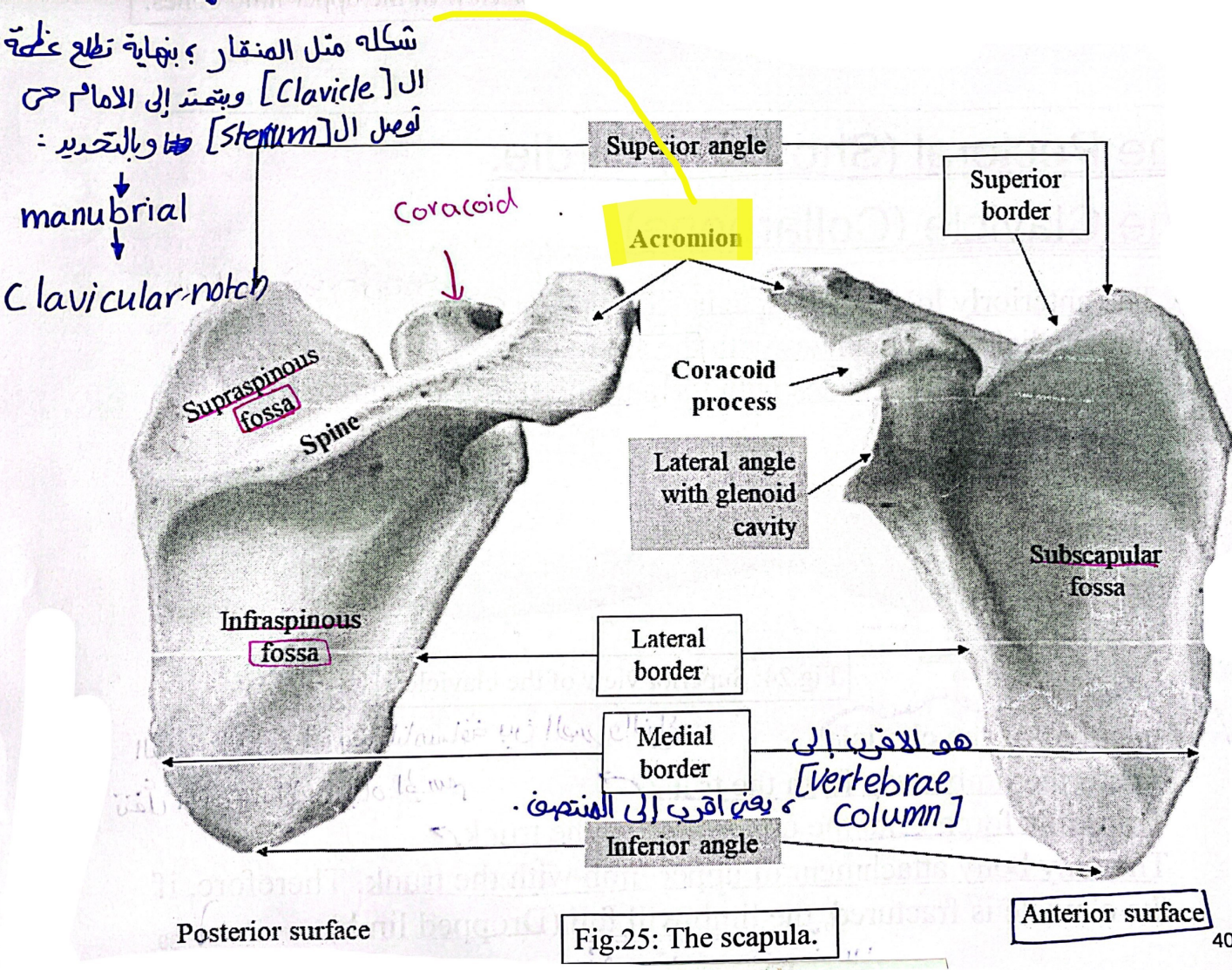


Fig.25: The scapula.

3. Coracoid process - a protruding process on the superior border.

دفل بارصل آيت
لكنه بترقبط فيه

كنا ال [Glenoid Cavity] الموجود
على ال [lateral angle of scapula]
التي راج يركب فيه [head humerus]
بـ [Joint] نوعه [Ball and socket]
راج دوفيه المفاضة القادمة.

شكله مثل المنقار ؛ بنهاية تطلع على
ال [Clavicle] ويعتمد إلى الامام
توصل ال [Sternum] وبالتحديد

manubrial
↓
clavicular notch

clavicular notch

Superior angle

Coracoid

Acromion

Clavicular notch

Supraspinous fossa

Spinous process

Infraspinous fossa

Subscapular fossa

عشان تتخيلوا الموقع
انتبهوا من جهة
♥ Interior

Interior

Posterior surface

Anterior surface

40

Anterior view

The Humerus:

- Longest and largest bone of the upper limb. Formed of an upper end, a shaft, and a lower end.

The proximal end features:

Rounded head that articulates with the glenoid cavity of the scapula to form the shoulder joint.

The anatomical neck.

- Distal to the neck, we have the greater and lesser tubercles.

Between these tubercles, we have the intertubercular (bicipital) groove for the tendon of the long head of the biceps muscle.

- The surgical neck (the most common site of humerus fracture) separates the upper part from the shaft.

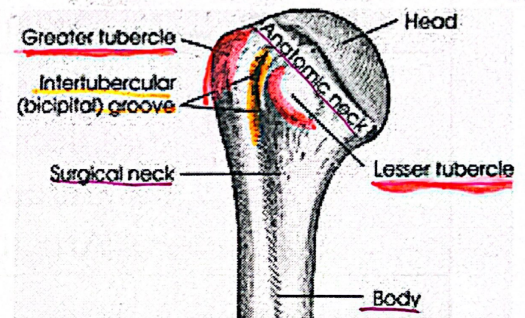
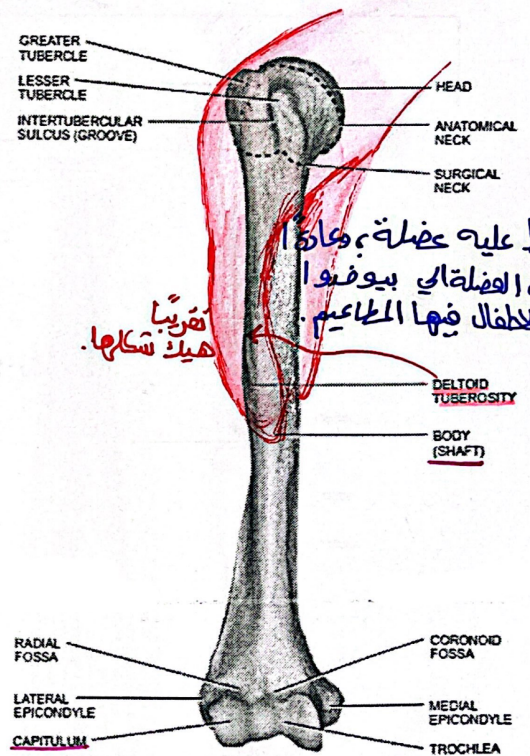
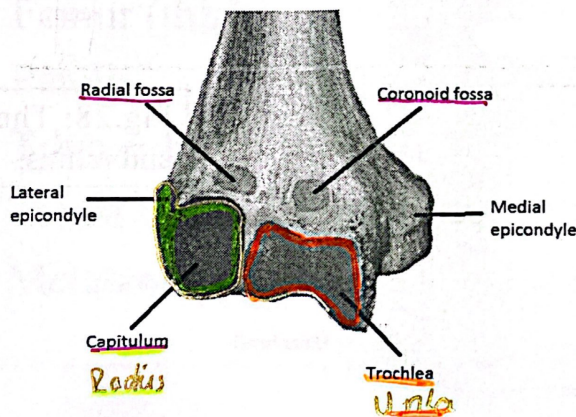


Fig.26: The proximal end of the humerus.

اماكن ارتصال العضلات

- **The shaft** to which muscles are attached and several nerves are related.
- **The distal end** features the round **capitulum** which articulates with the head of the radius and the spool-shaped **trochlea** which articulates with the **ulna**. Also we have two **epicondyles** for muscle attachment. The medial epicondyle is more prominent.

يكون شكلها مثل العلاقة بينه وبين عظمة [Ulna] إلى أن ترتبط فيه يكون شكلها.



يترتب عليه عضلة، وعادةً تكون العضلة التي بيوفوا الالتفال فيها المطاعيم. تقريباً هيئتها شكلها.

Fig.27: Above: anterior view of the humerus. To the left: the distal end of the humerus.

The Ulna and Radius:

Feature	Ulna	Radius
Position	• Medial	• Lateral
Proximal end اقربا للجسم	• Ulnar notch • Olecranon process • Coronoid process • Articulates with trochlea	• Disc-shaped head • Articulates with capitulum
Shaft	• Triangular	• Triangular • Radial tuberosity for tendon of biceps
Interosseous border	• Lateral	• Medial
Distal end	• Head of ulna • Posteriorly located <u>Styloid process</u>	• Laterally located <u>Styloid process</u>
Wrist joint	• Not involved	• Involved

يكون على مكان العظام

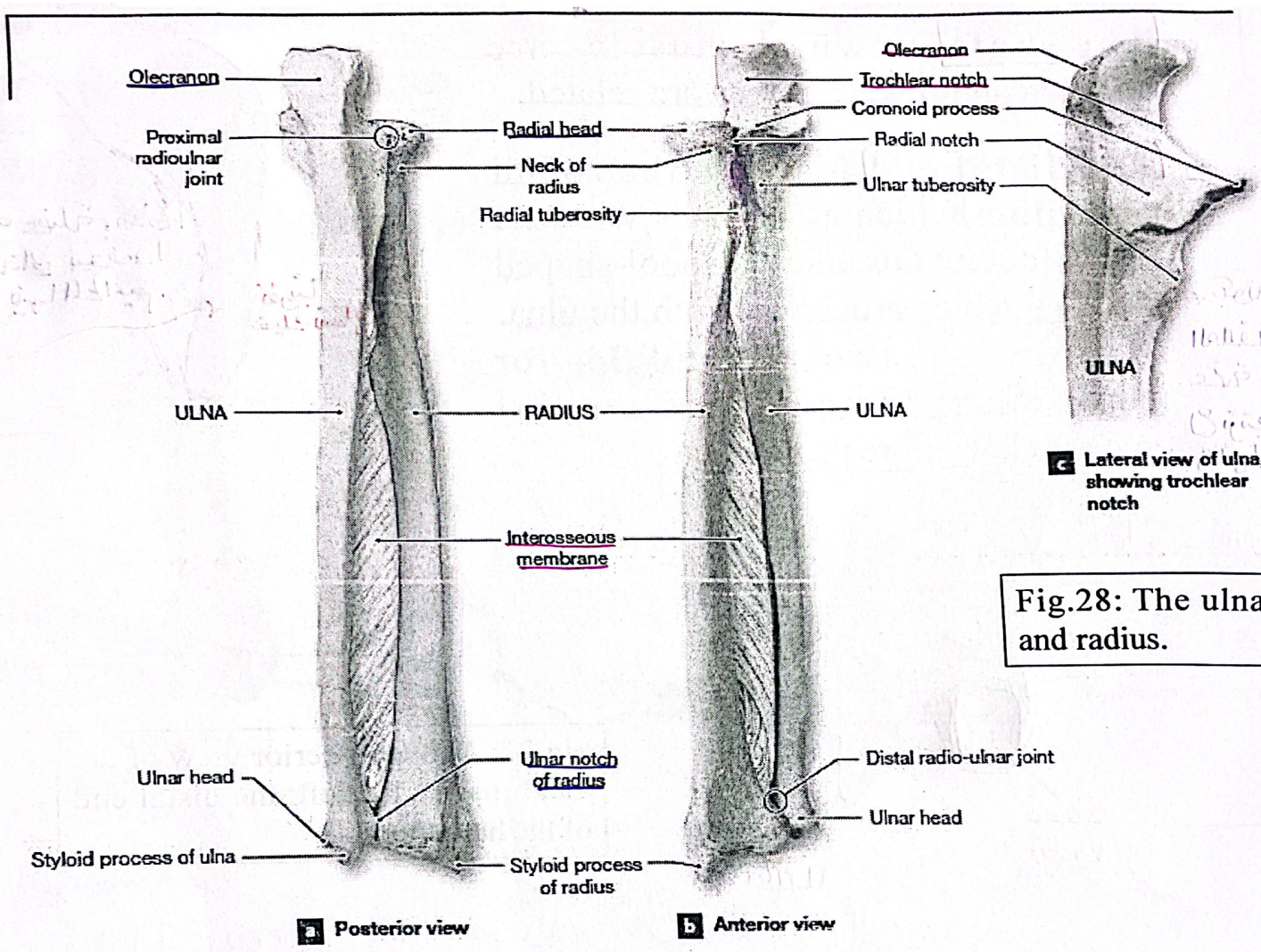
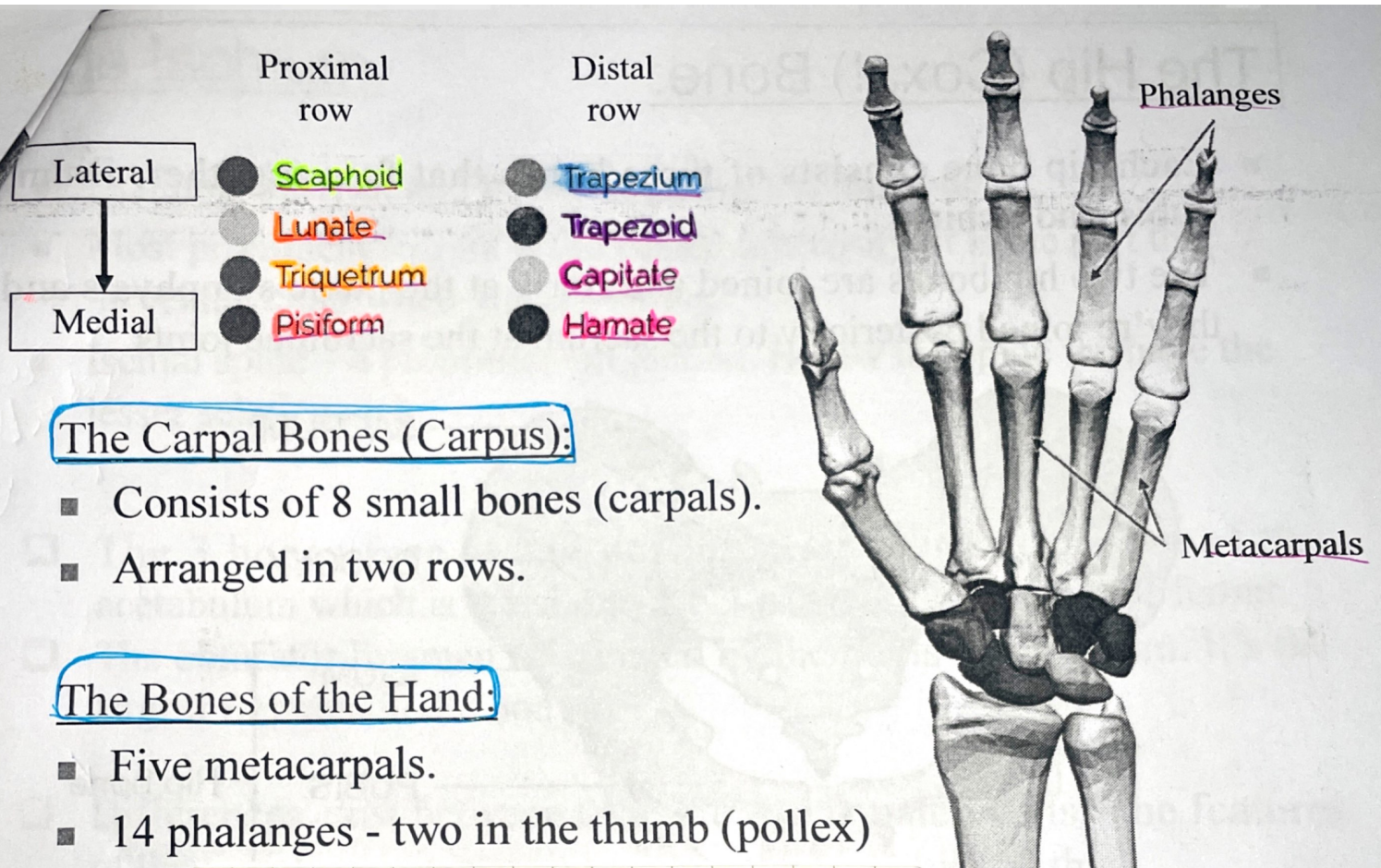


Fig.28: The ulna and radius.



The Carpal Bones (Carpus):

- Consists of 8 small bones (carpals).
- Arranged in two rows.

The Bones of the Hand:

- Five metacarpals.
- 14 phalanges - two in the thumb (pollex) and 1

Sally Left The Party To
Take Cathy Home.

Fig.29: The bones of the wrist and hand.