

وسهلا



أهلا

يُمنع أخذ السلايدات بدون  
إذن المحرر واي اجراء  
يخالف ذلك يقع تحت طائلة  
المسؤولية القانونية  
جميع المعلومات للاستخدام  
التعليمي فقط

# الأستاذ الدكتور يوسف حسين

أستاذ التشريح وعلم الأجنة - كلية الطب - جامعة الزقازيق - مصر

رئيس قسم التشريح والأنسجة والأجنة - كلية الطب - جامعة مؤتة - الأردن

مساعد العميد لشؤون الطلاب والامتحانات - كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا المانيا

جروب الفيس د. يوسف حسين (استاذ التشريح)

اليوتيوب د. يوسف حسين

Prof. Dr. Youssef Hussein Anatomy - YouTube

[https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd\\_cn0PQ](https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd_cn0PQ)

<https://www.youtube.com/@ProfDrYoussefHusseinAnatomy/playlists>

# Axillary Artery

Prof. Dr. Youssef Hussein Anatomy - YouTube

- Beginning
- End
- Parts

**AXILLARY ARTERY**

**Subclavian artery**

7st rib

1st

2nd

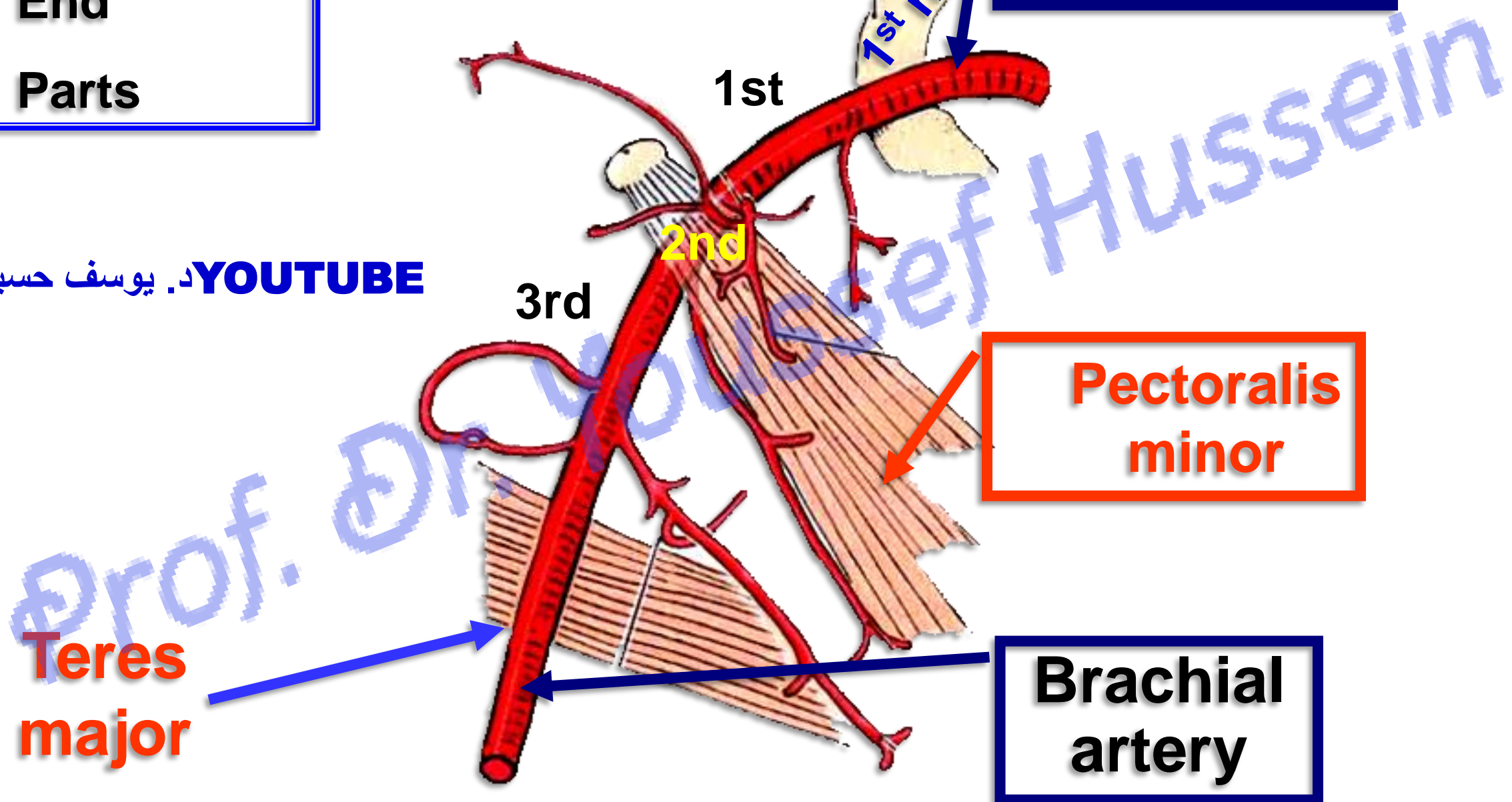
3rd

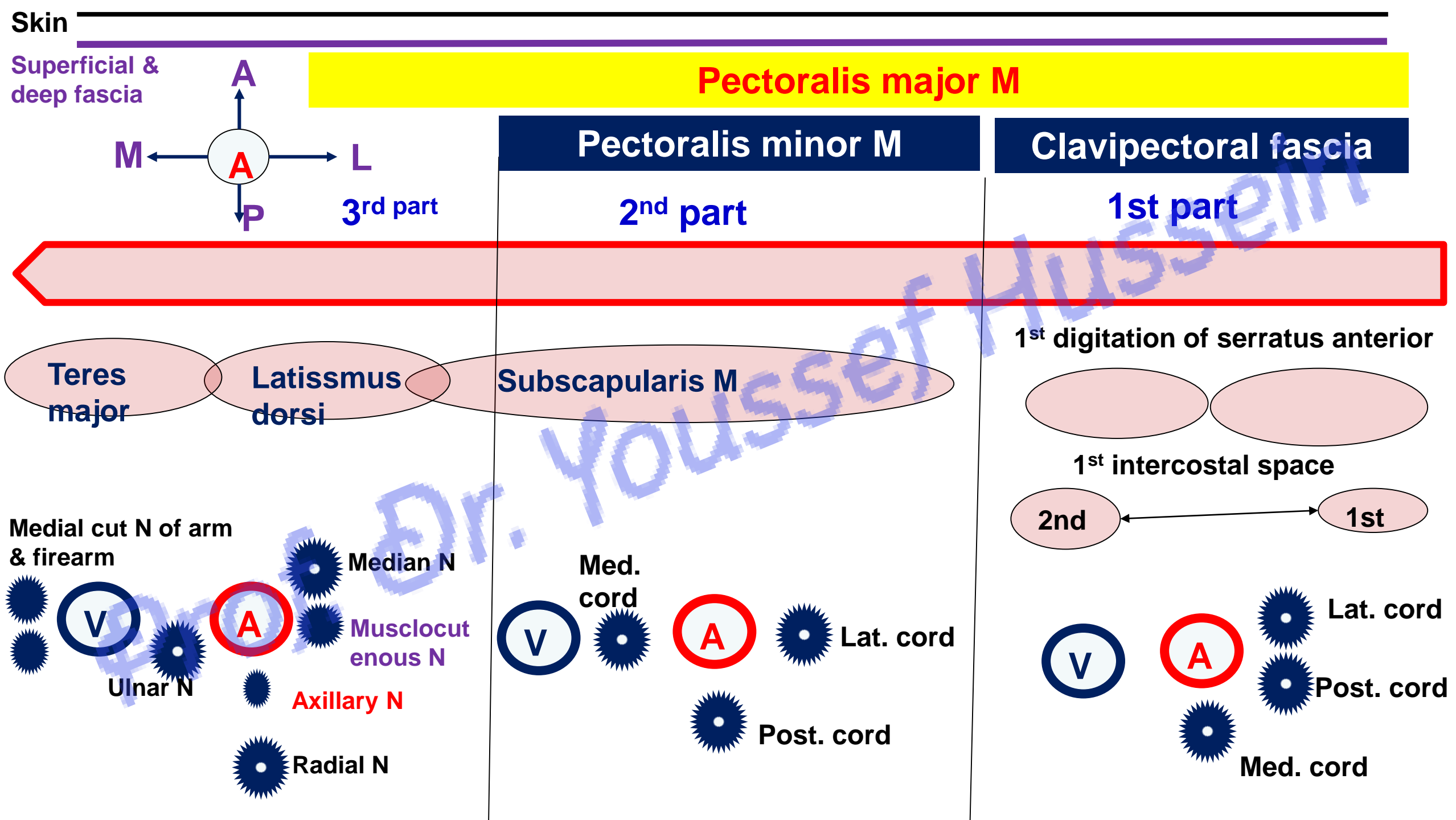
**Pectoralis minor**

**Brachial artery**

**Teres major**

YOUTUBE د. يوسف حسين





- **Relations of the first part of the axillary artery**

- **Anterior:**

- a- Skin, superficial fascia and deep fascia.
- b- Pectoralis major.
- c- Clavipectoral fascia.

- **Posterior;**

- a- Medial cord of brachial plexus.
- b- First and second ribs and First intercostal space.
- c- First digitation of serratus anterior and long thoracic nerve.

- **Lateral:**

- a- Lateral cord of brachial plexus.
- b- Posterior cord of brachial plexus.

- **Medially:** Axillary vein.

د. يوسف حسين YOUTUBE

- **Relations of the second part of the axillary artery**

- **Anterior:**

- a- Skin, superficial fascia and deep fascia.
- b- Pectoralis major.
- c- Pectoralis minor.

- **Posterior:**

- a- Posterior cord of brachial plexus.
- b- Subscapularis.

- **Lateral:** Lateral cord of brachial plexus.

- **Medial:**

- a- Medial cord of brachial plexus,
- b- Axillary vein.

د. يوسف حسين YOUTUBE



- **Relations of the third part of the axillary artery**

- **Anteriorly:**

- a- Skin, superficial fascia and deep fascia.
- b- Pectoralis major (only upper part).
- c- Medial root of the median nerve.

- **Posteriorly:**

- a- Radial and axillary nerves.
- b- Subscapularis, latissimus dorsi and teres major (SLT).

- **Laterally:**

- a- Median nerve.
  - a. Musculocutaneous nerve.

- **Medially:**

- a- Axillary vein. **YOUTUBE** د. يوسف حسين
- b- Ulnar nerve.
- c- Medial cutaneous nerve of the arm.
- d- Medial cutaneous nerve of the forearm.

- **Surgical anatomy**

- The skin of the axilla has abundant hair, so infection is common forming **axillary abscess**, Also **cancer breast** spreads to axillary lymph node.
- The axillary vessels and cords of the brachial plexus pass from the apex to the base **close to the lateral wall**.
- Accordingly, **incisions in the axilla** are done longitudinally through the base **nearer to the medial wall** to avoid injury of the vessels and big nerves.

# Branches of Axillary a.

**Thoracoacromial artery)**

**A** cromial,  
**P** ectoral,  
**C** lavicular  
**D** eltoid

**Superior thoracic artery (1<sup>st</sup>)**

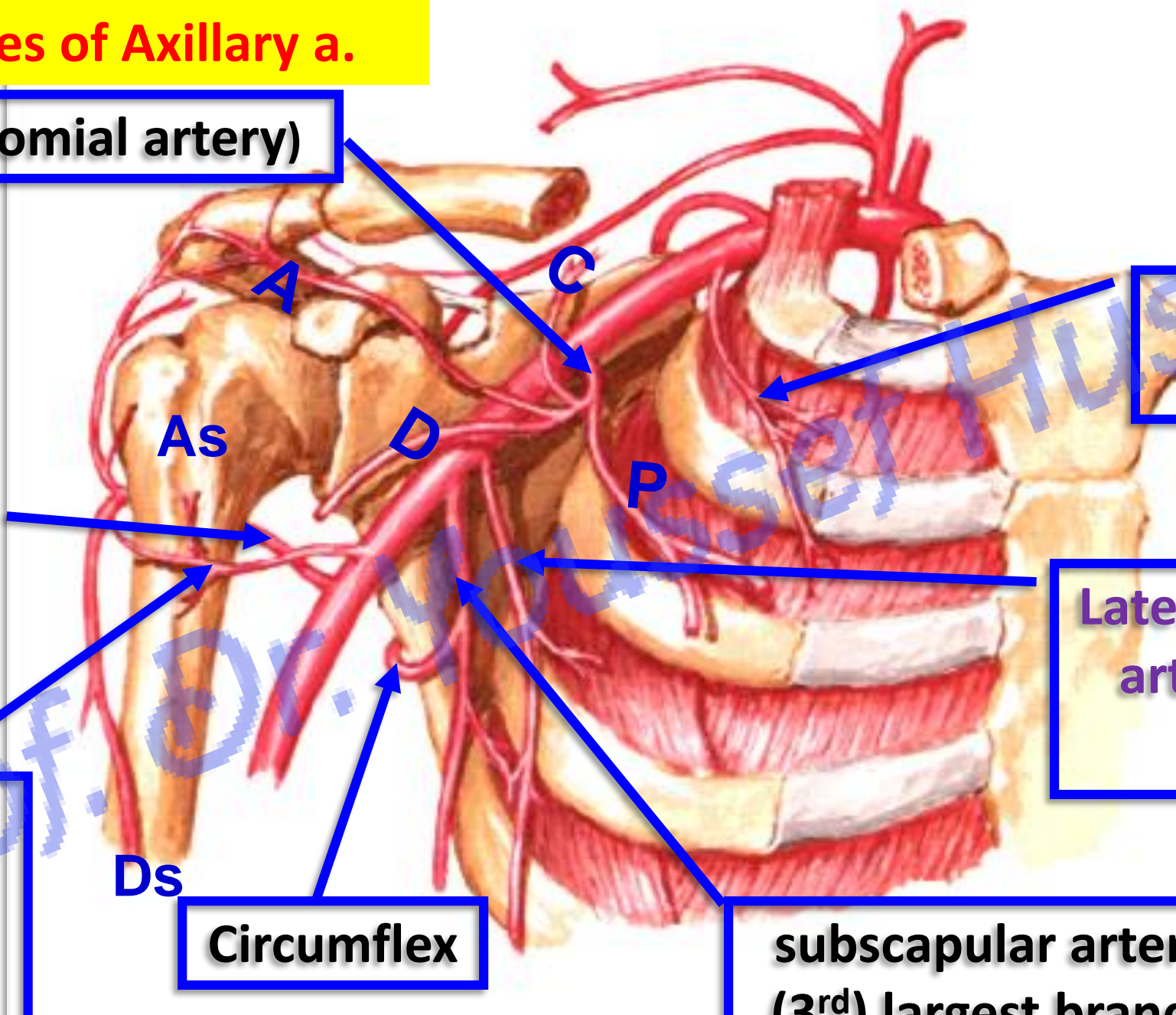
**Posterior circumflex artery (3<sup>rd</sup>)**

**Lateral thoracic artery (2<sup>nd</sup>)**

**Anterior circumflex artery (3<sup>rd</sup>)**

**Circumflex**

**subscapular artery (3<sup>rd</sup>) largest branch**





## **\*\* Branches of the axillary artery;**

**I- Branches of the first part** (only one branch) Superior thoracic artery to the upper part of the lateral thoracic wall.

**II- Branches of the second part** (gives two):

1- Lateral thoracic artery to the lateral thoracic wall and female breast.

2- Thoracoacromial artery gives 4 branches (**A**cmomial, **P**ectoral,

**C**lavicular, **D**eltoid):

**III- Branches of the third part** (3 branches);

1- Anterior circumflex humeral artery.

2- Posterior circumflex humeral artery.

3- Subscapular artery.

**YOUTUBE**. يوسف حسين

- **III- Branches of the third part (3 branches);**

**1- Anterior circumflex humeral artery:** It runs in front the surgical neck of the humerus to anastomosis with the posterior circumflex humeral artery.

- It gives an **ascending** branch to the shoulder joint through **bicipital groove**.

**2- Posterior circumflex humeral artery:** It passes posteriorly through the **quadrangular space** with the **axillary nerve** to anastomosis with the anterior circumflex humeral artery.

- It gives **descending** branch which anastomoses with the ascending branch of the profunda brachii artery.

**3- Subscapular artery:** is the largest branch.

- It descends along the lateral border of the scapula to the inferior angle.

- It gives **circumflex scapular artery** passes through the **upper triangular** intermuscular space. It shares in the anastomoses around the scapula

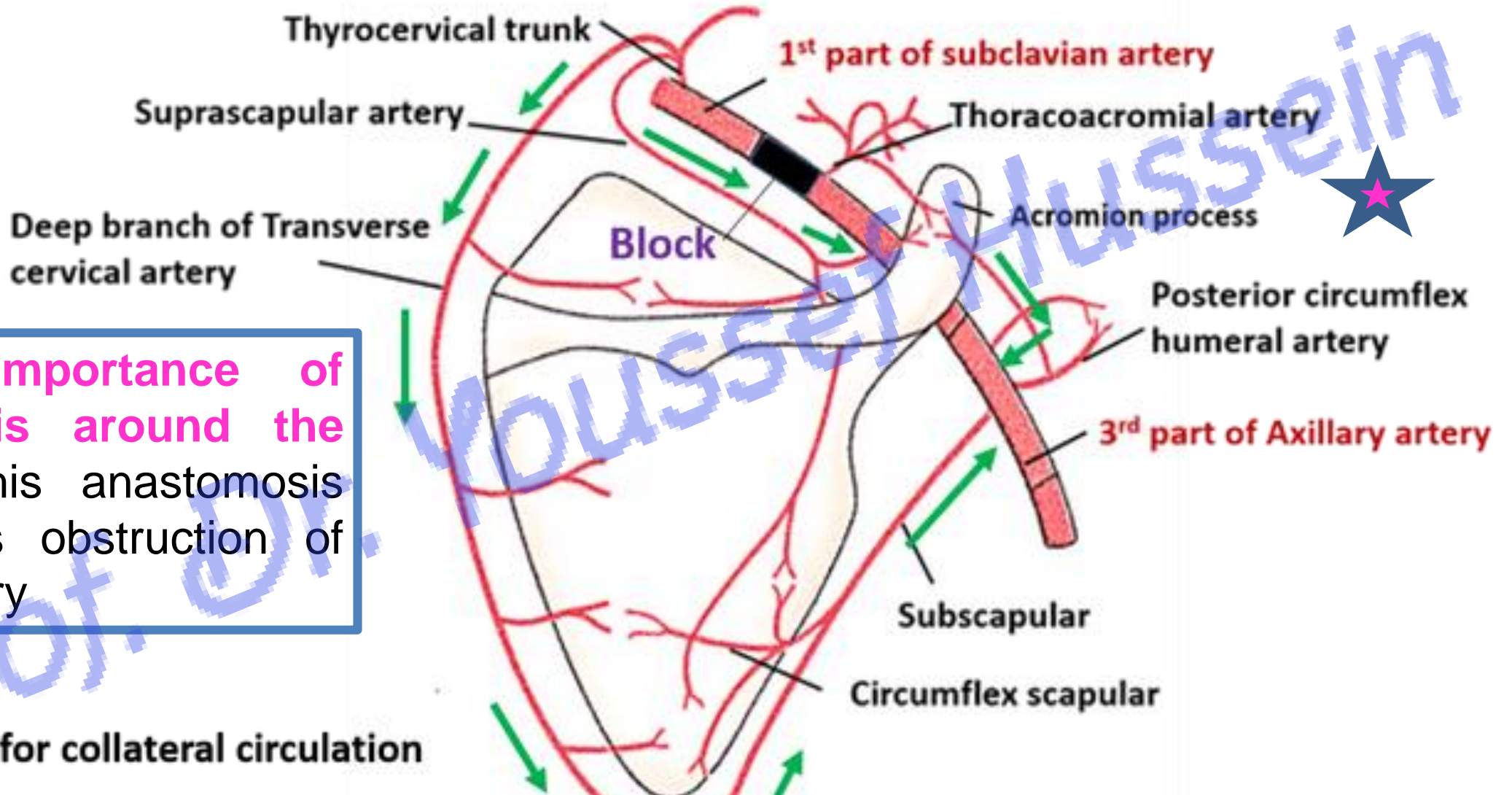
# Anastomosis around scapula

## Anastomosis Between

- **First part of Subclavian artery**
- **Third part of Axillary artery**
- **Posterior intercostal arteries**

**YOUTUBE**. يوسف حسين

## Anastomosis Around Scapula



**Surgical Importance of anastomosis around the scapula**, this anastomosis can bypass obstruction of Axillary artery

## Anastomosis around the scapula

Deep branch of transverse cervical artery



Supraspinous fossa

Suprascapular artery

Infraspinous fossa

Circumflex scapular artery

Subscapular fossa

Subscapular artery (3<sup>rd</sup> part of axillary artery)

Inferior angle

- The first part of subclavian artery gives thyrocervical trunk;

1- **Suprascapular artery** on the dorsal aspect of the scapula.

2- **Deep branch of transverse cervical artery** along medial border of scapula.



**Thoracoacromial artery)**

**A** cromial,

**Branch of  
Posterior  
circumflex**

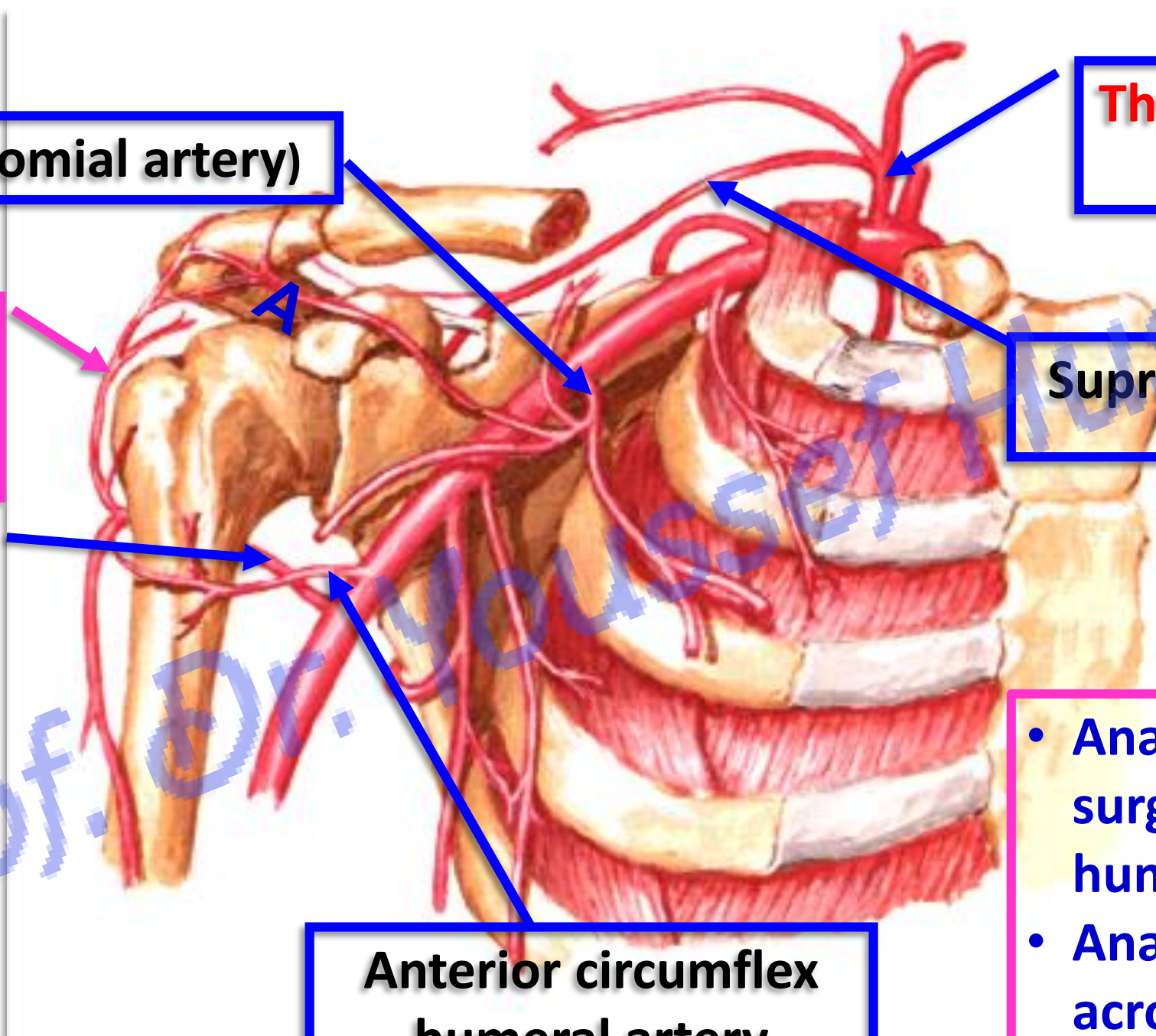
**Posterior  
circumflex  
artery (3<sup>rd</sup>)**

**Anterior circumflex  
humeral artery**

**Thyrocerical trunk**

**Suprascapular artery**

- **Anastomosis around surgical neck of humerus**
- **Anastomosis around acromion**



- **Anastomoses around the surgical neck of the humerus**

1- **Anterior** circumflex humeral artery (3<sup>rd</sup> part of axillary artery).

2- **Posterior** circumflex humeral artery (3<sup>rd</sup> part of axillary artery).

3- **Ascending** branch of profunda brachii artery (brachial artery).

**\*\* Surgical Importance**, this anastomosis can bypass obstruction of brachial artery above the origin of profunda brachii artery.

- **Anastomoses around the acromion process**

1. Acromial branch of thoracoacromial artery.

2. Branch of suprascapular artery. **YOUTUBE** د. يوسف حسين

3. Branch of posterior circumflex humeral artery.

<https://www.youtube.com/@ProfDrYoussefHusseinAnatomy/playlists>

# Brachial Artery

Prof. Dr. Youssef Hussein Anatomy - YouTube

**Begin – End**

**BRACHIAL ARTERY**

*Teres major m.*

**Begin at lower border of teres major Muscle**

*Venae comitantes*

*Neck of Radius*

**End opposite the neck of the radius**

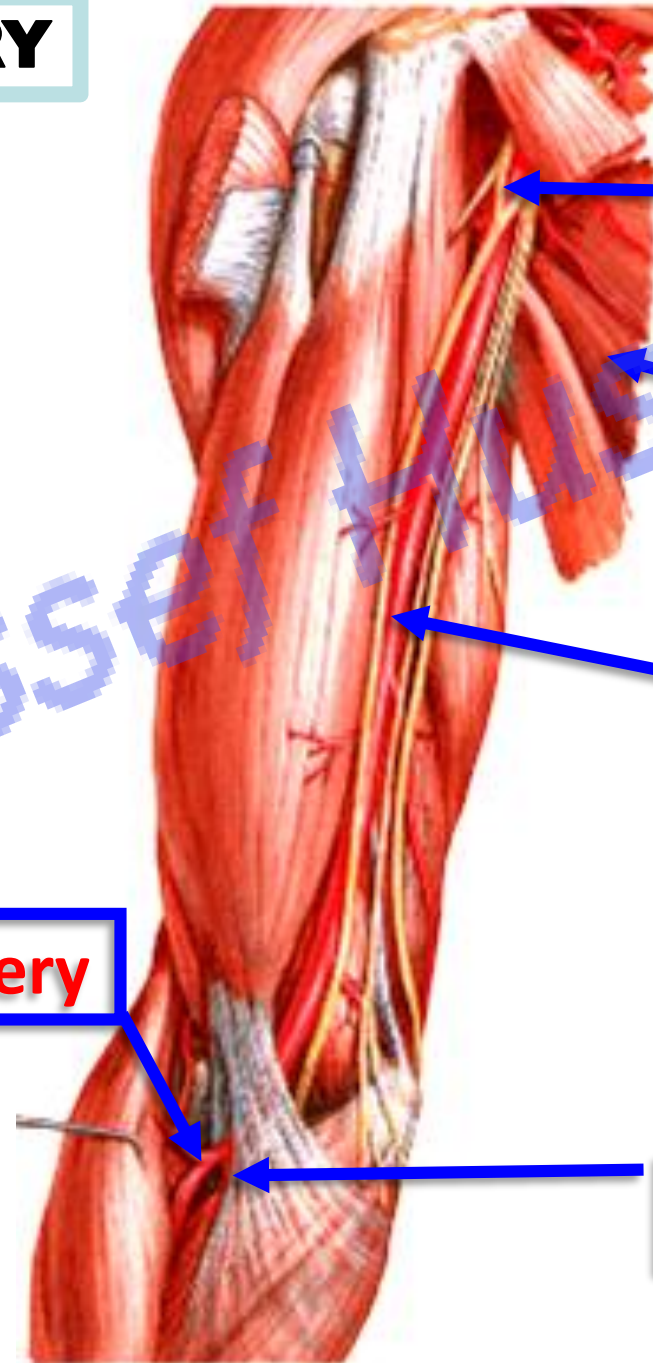
**Radial artery**

**Axillary artery**

**Teres major**

**Brachial artery**

**Ulnar artery**





**Lateral**

**Medial**

**Musculo-cutaneous**

**Coraco-brachialis**

**median nerve**

**biceps brachii**

**Bicipital aponeurosis**

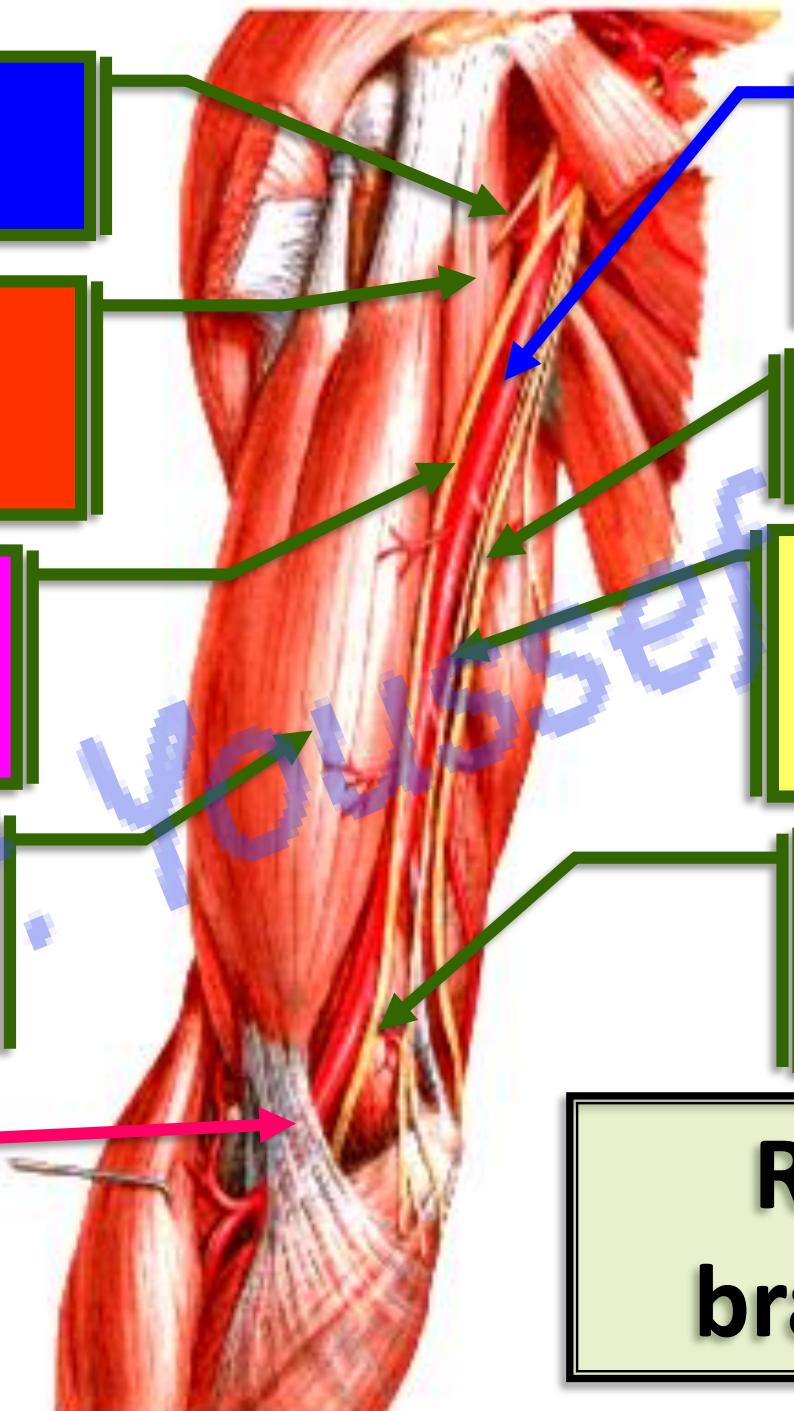
**brachial artery**

**Ulnar nerve**

**Medial cutaneous n. of forearm**

**median nerve**

**Relations of brachial artery**





## \*\* Relations of the brachial artery in the arm

- **Laterally;**

- 1- **Median nerve** and musculocutaneous nerve.

د. يوسف حسين YOUTUBE

- 2- Coracobrachialis and biceps brachii muscles.

- **Medially:**

- 1- **Ulnar nerve** and medial cutaneous nerves of the arm and forearm.

- 2- **Median nerve** and basilic vein.

- **Anteriorly:**

[Prof. Dr. Youssef Hussein Anatomy - YouTube](#)

- 1- **Median nerve** crosses in front of the artery from lateral to medial.

- 2- **Bicipital aponeurosis** which separates brachial artery from median cubital vein.

- **Posteriorly:** Long head of triceps and Brachialis muscle.

# Brachial artery is the site of auscultation of blood pressure



**brachial  
artery**

**Profunda  
brachii**

**Superior ulnar  
collateral  
artery**

**Inferior ulnar  
collateral  
artery**

**Radial  
artery**

**Ulnar  
artery**

**Branches  
of Brachial  
artery**





**In front lateral epicondyle**

**Ascending branch**

**Behind lateral epicondyle**

**Anterior descending branch (radial collateral artery)**

**Profunda brachii**

**Posterior descending branch (Middle collateral artery)**

**Radial recurrent artery**

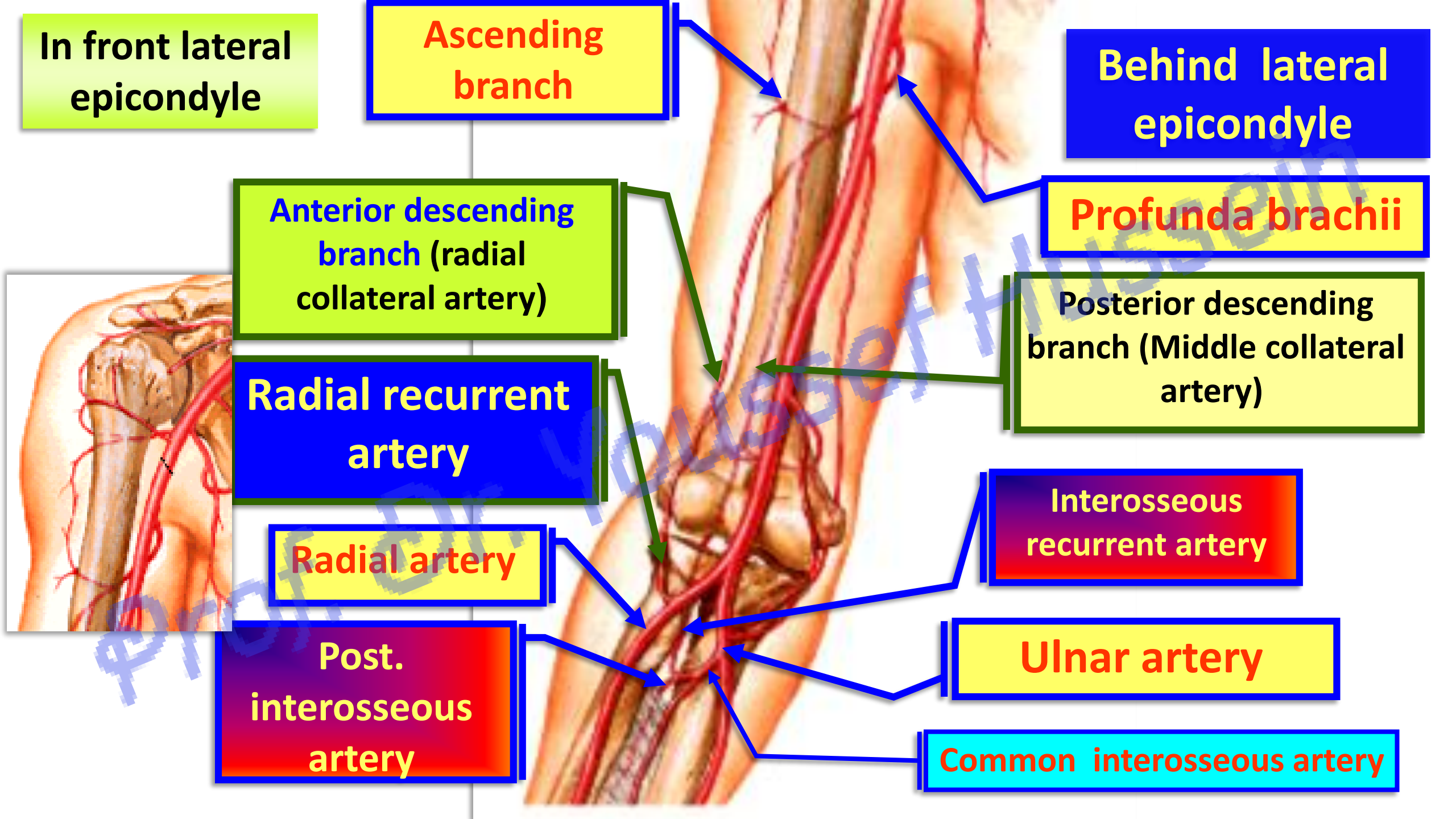
**Interosseous recurrent artery**

**Radial artery**

**Ulnar artery**

**Post. interosseous artery**

**Common interosseous artery**



- **Profunda brachii**

- It is the main arterial blood to the posterior compartment of the arm.

\* **Course:**

- It descends through the **lower (lateral) triangular space** with the radial nerve.

- Then descend in the **spiral groove** with the **radial nerve** behind the humerus between the lateral and medial head of the triceps.

- It terminates by dividing into anterior and posterior descending branches.

\* **Branches**

**a - Muscular branches.**

**b- Nutrient artery** of the humerus

**c- Ascending branch:** which anastomoses with the **descending** branch of the posterior circumflex humeral artery.

**d- Anterior descending branch** (*Radial collateral artery*):

- It anastomoses with the **radial recurrent artery** in front of the lateral epicondyle.

**e- Posterior descending branch** (*Middle collateral artery*):

- It anastomoses with **interosseous recurrent** artery in back of the lateral epicondyle.

د. يوسف حسين YOUTUBE



**(in front medial epicondyle)**

**behind medial epicondyle**

**anterior branch of inferior ulnar collateral artery**

**Superior ulnar collateral artery**

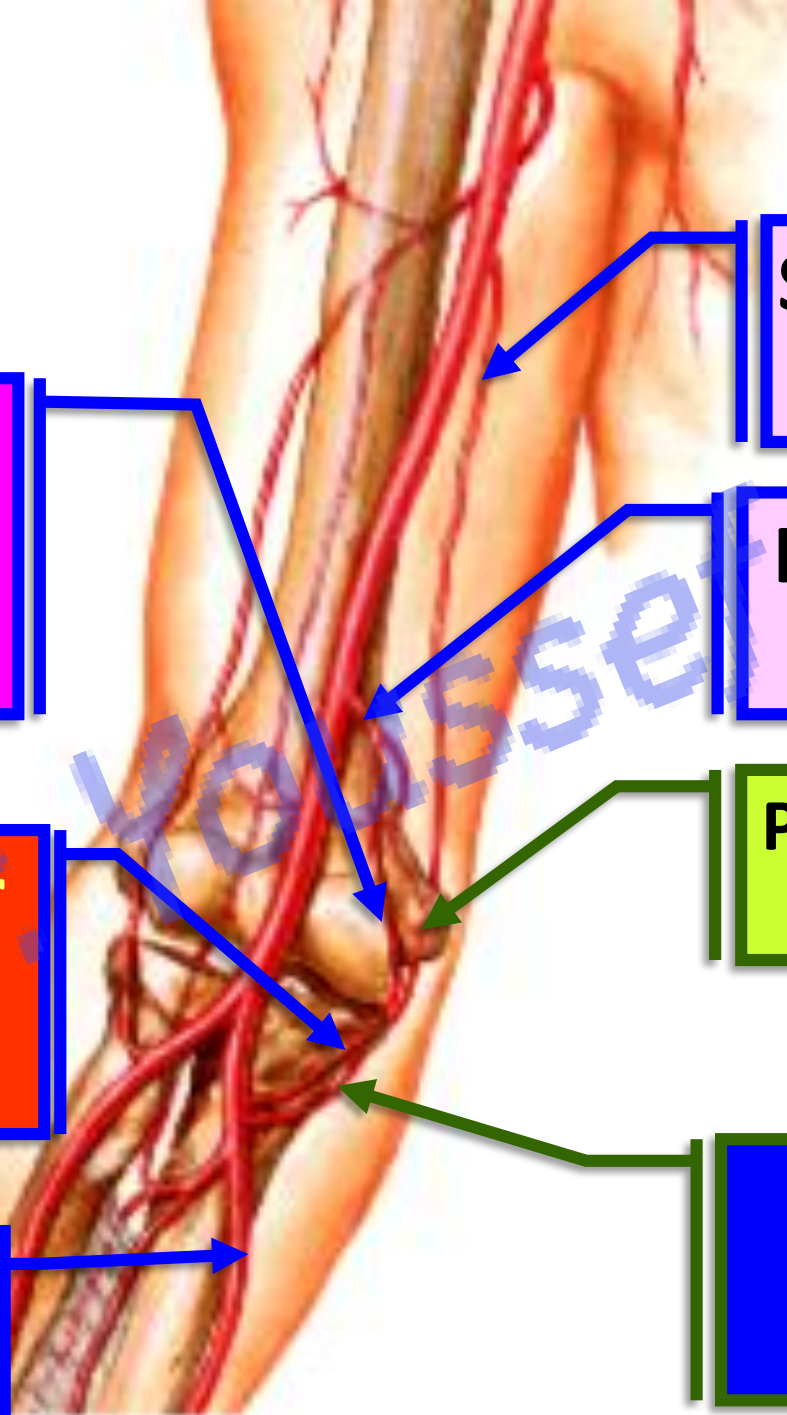
**Inferior ulnar collateral artery**

**Anterior ulnar recurrent artery**

**Posterior branch of inferior ulnar collateral artery**

**Ulnar artery**

**posterior ulnar recurrent artery**



## **\*\* Branches of the brachial artery**

**1- Profunda brachii artery**

**2- Superior ulnar collateral artery:**

- It continues with the ulnar nerve **to the back** of the medial epicondyle where it anastomoses with the **posterior ulnar recurrent artery**.

**3- Inferior ulnar collateral artery:** it divides into anterior and posterior branches.

**a) The anterior branch** descends to the front of the medial epicondyle and anastomoses with the **anterior ulnar recurrent artery**.

**b) The posterior branch** descends to the back of the medial epicondyle where it anastomoses with the **posterior ulnar recurrent artery**.

**4- Terminal branches** (radial and ulnar arteries).

- **Anastomoses around the elbow joint**

**\*\* Formation;** between the branches of brachial and radial and ulnar arteries.

**\*\* Sites of anastomosis**

**1- In front of the lateral epicondyle;** between

a- Anterior descending branch of the profunda brachii artery.

b- Radial recurrent artery (from the radial artery).

**2- Behind the lateral epicondyle;** between

a- Posterior descending branch of the profunda brachii artery.

b- Interosseous recurrent artery (from posterior interosseous artery).

**3- In front of the medial epicondyle;** between

a- Anterior branch of Inferior ulnar collateral artery (from brachial artery).

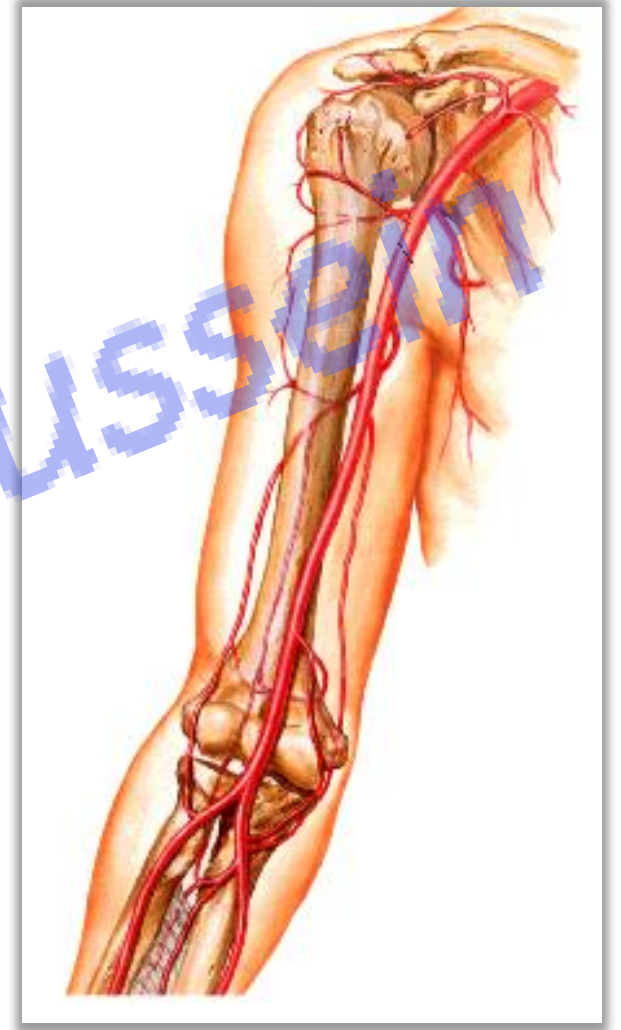
b- Anterior ulnar recurrent artery (from the ulnar artery).

**4- Behind the medial epicondyle;** between

a- Superior ulnar collateral artery and posterior branch of inferior ulnar collateral (from brachial artery).

b- Posterior ulnar recurrent artery (from the ulnar artery).

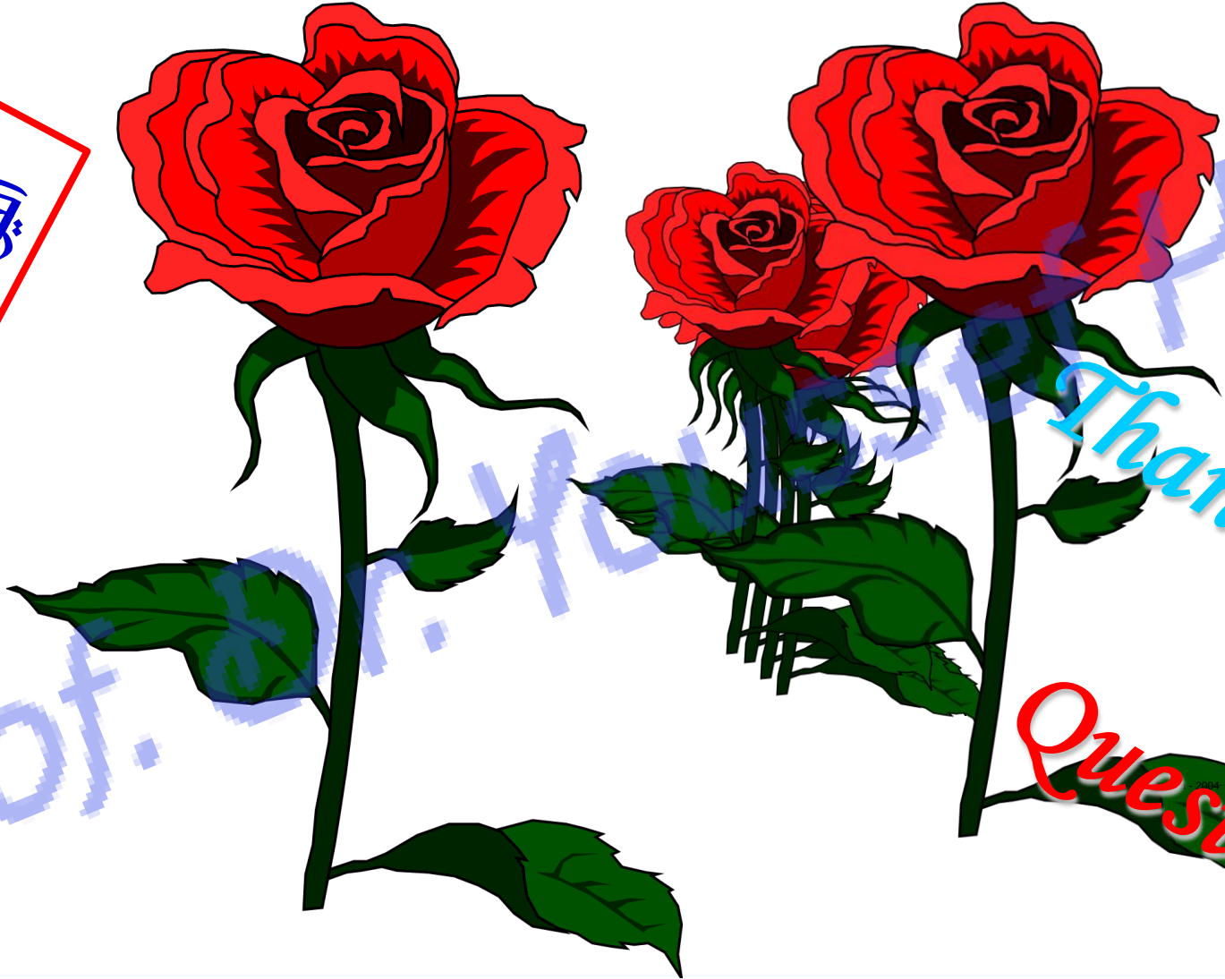
**\*\* Significance,** anastomosis can bypass obstruction of brachial artery above its terminal branches.



[https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd\\_cn0PQ](https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd_cn0PQ)

يُمنع أخذ السلايدات بدون  
إذن المحرر واي اجراء  
يخالف ذلك يقع تحت طائلة  
المسؤولية القانونية  
جميع المعلومات للاستخدام  
التعليمي فقط

اليوتيوب د. يوسف حسين



Thank You

Questions

<https://www.youtube.com/@ProfDrYoussefHusseinAnatomy/playlists>