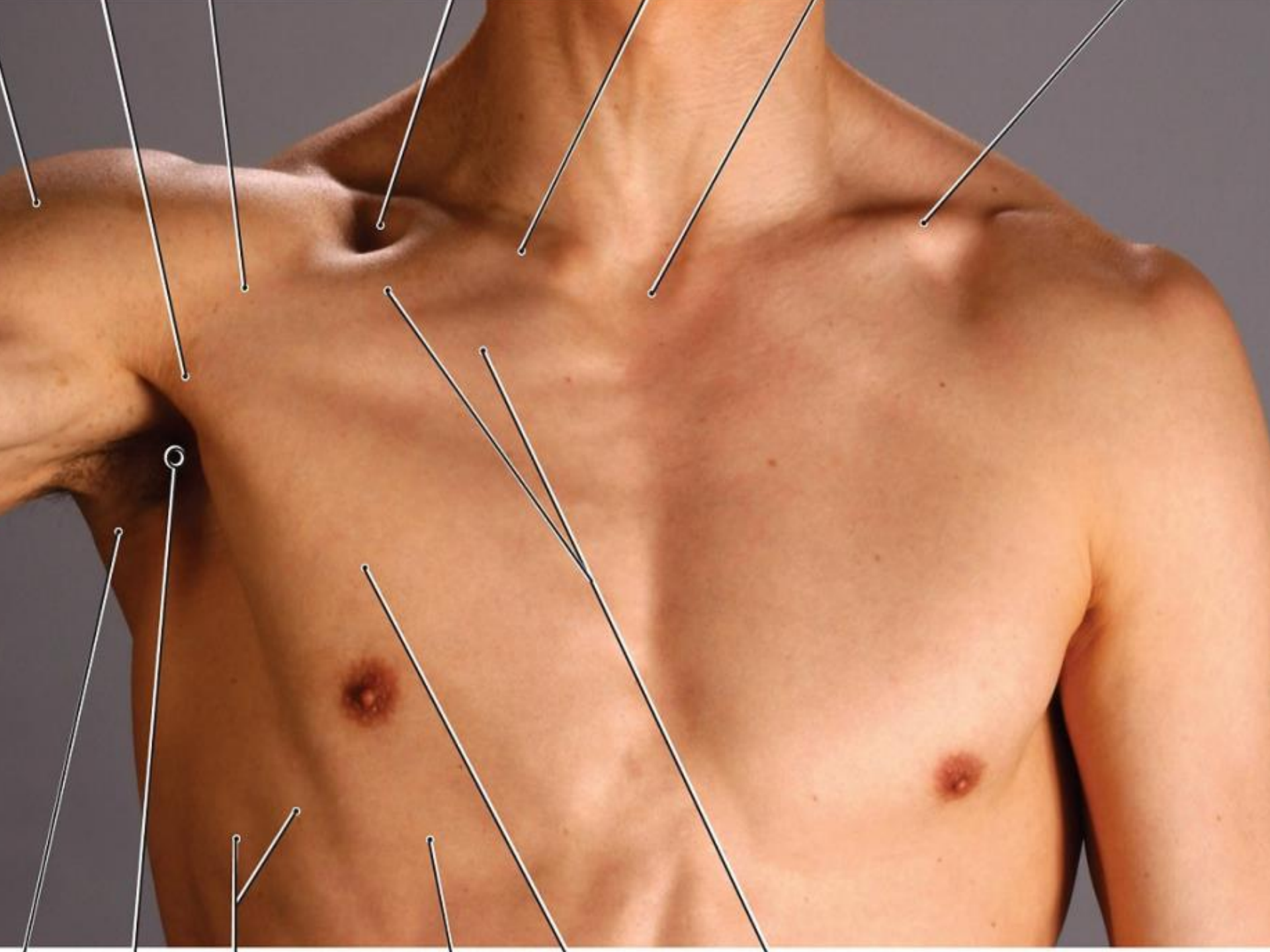


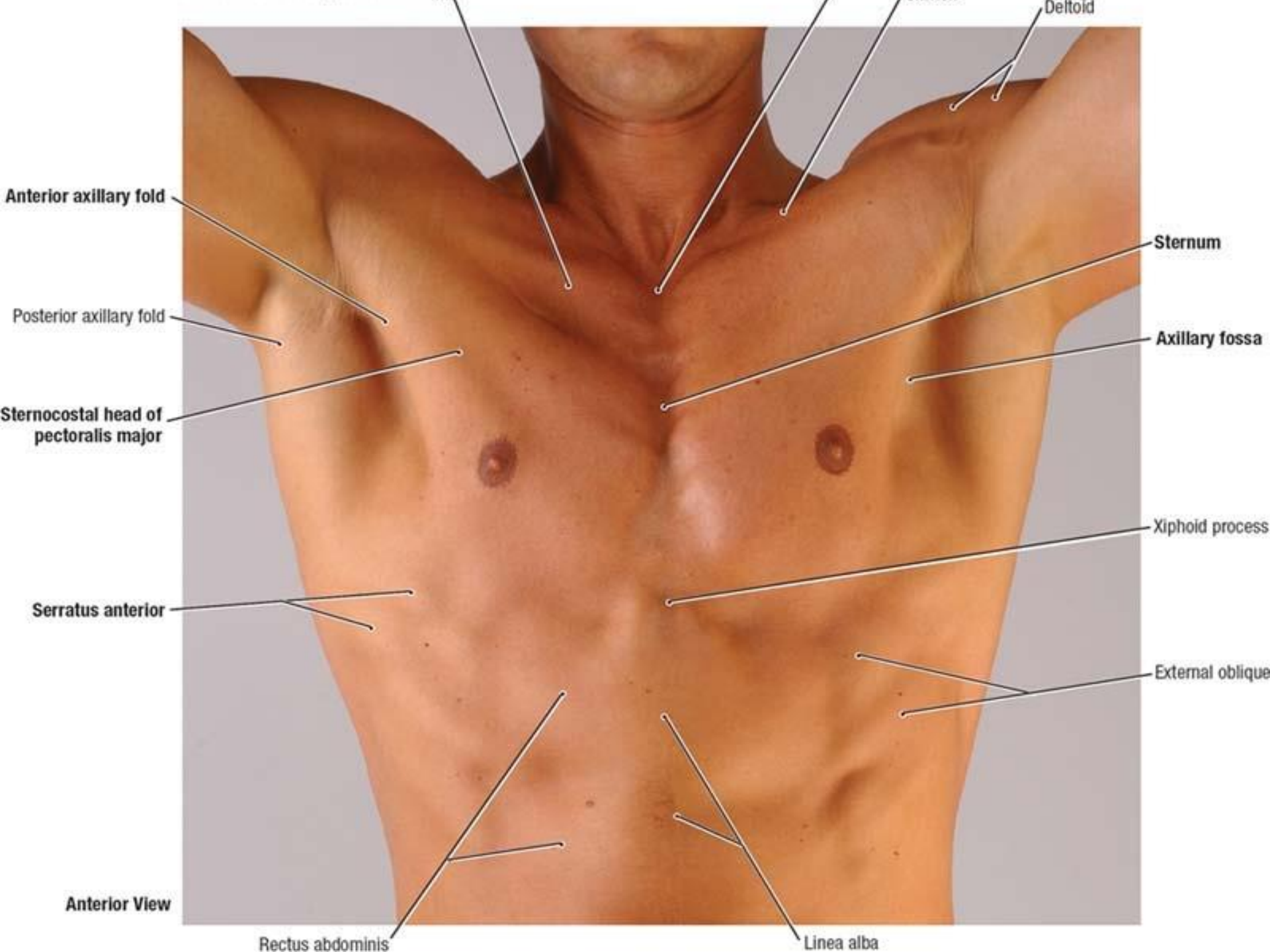
Shoulder Girdle

Pectoral Region

By

Dr Qaisar Zaman afridi





Anterior axillary fold

Posterior axillary fold

Sternocostal head of pectoralis major

Serratus anterior

Anterior View

Rectus abdominis

Deltoid

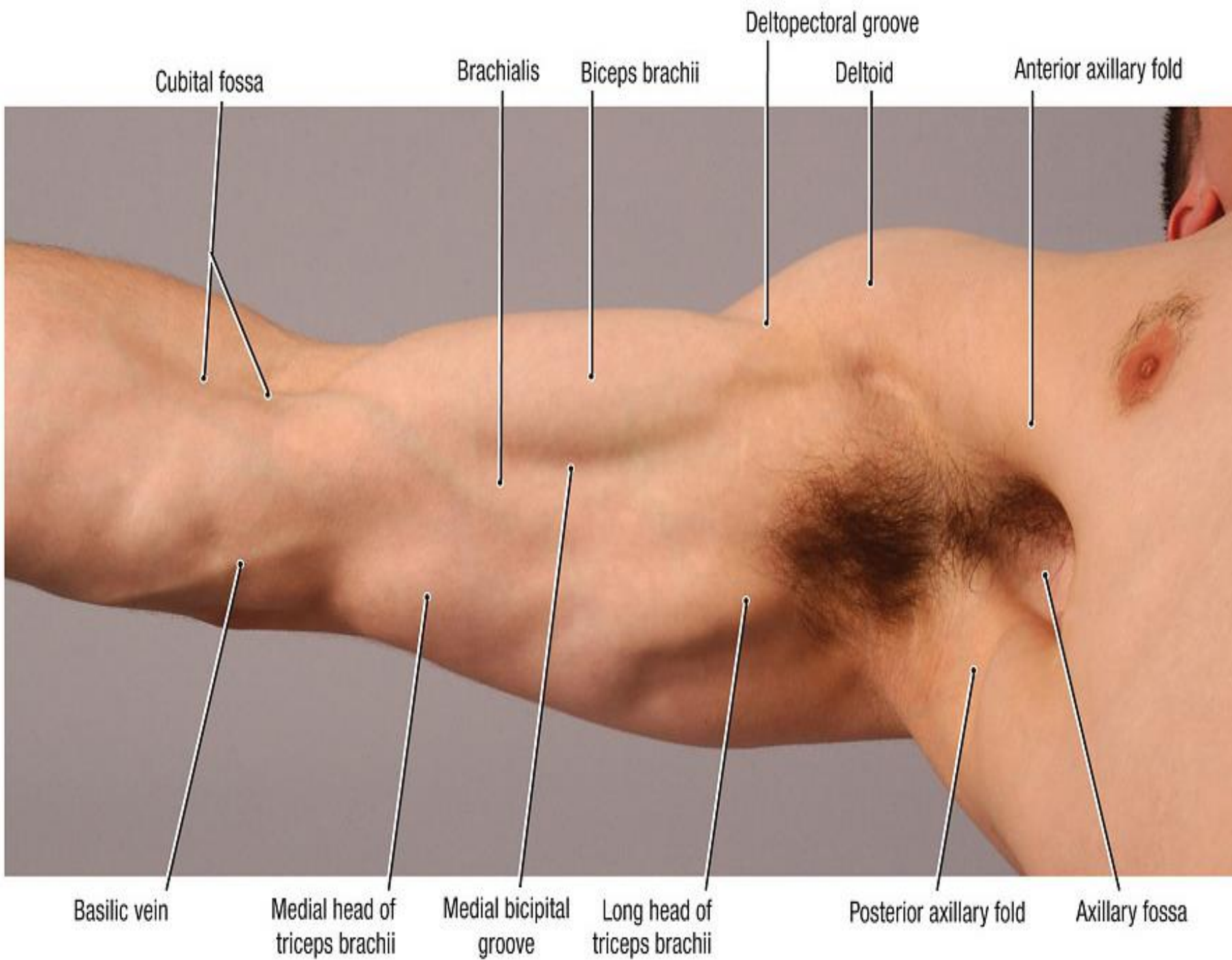
Sternum

Axillary fossa

Xiphoid process

External oblique

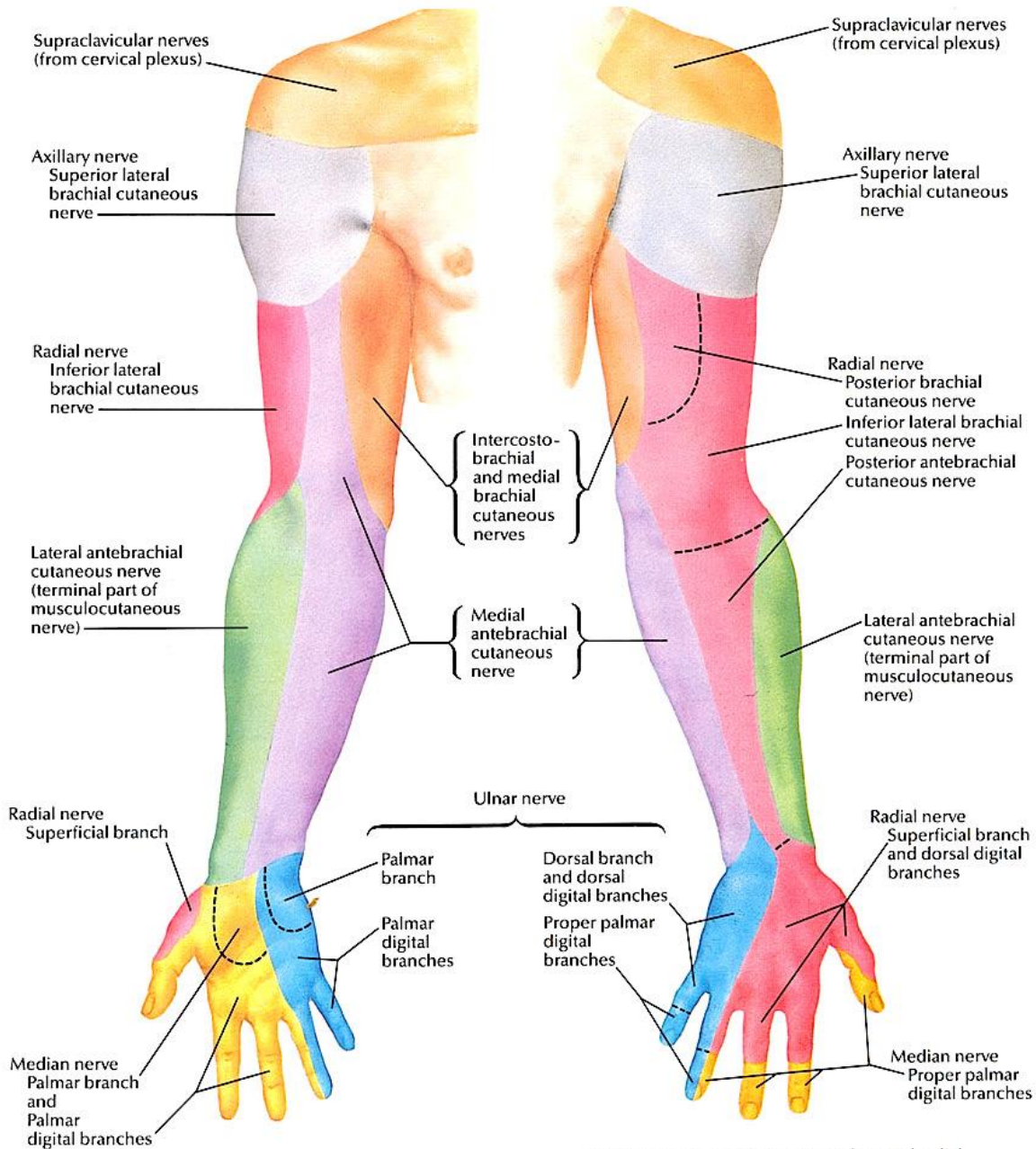
Linea alba



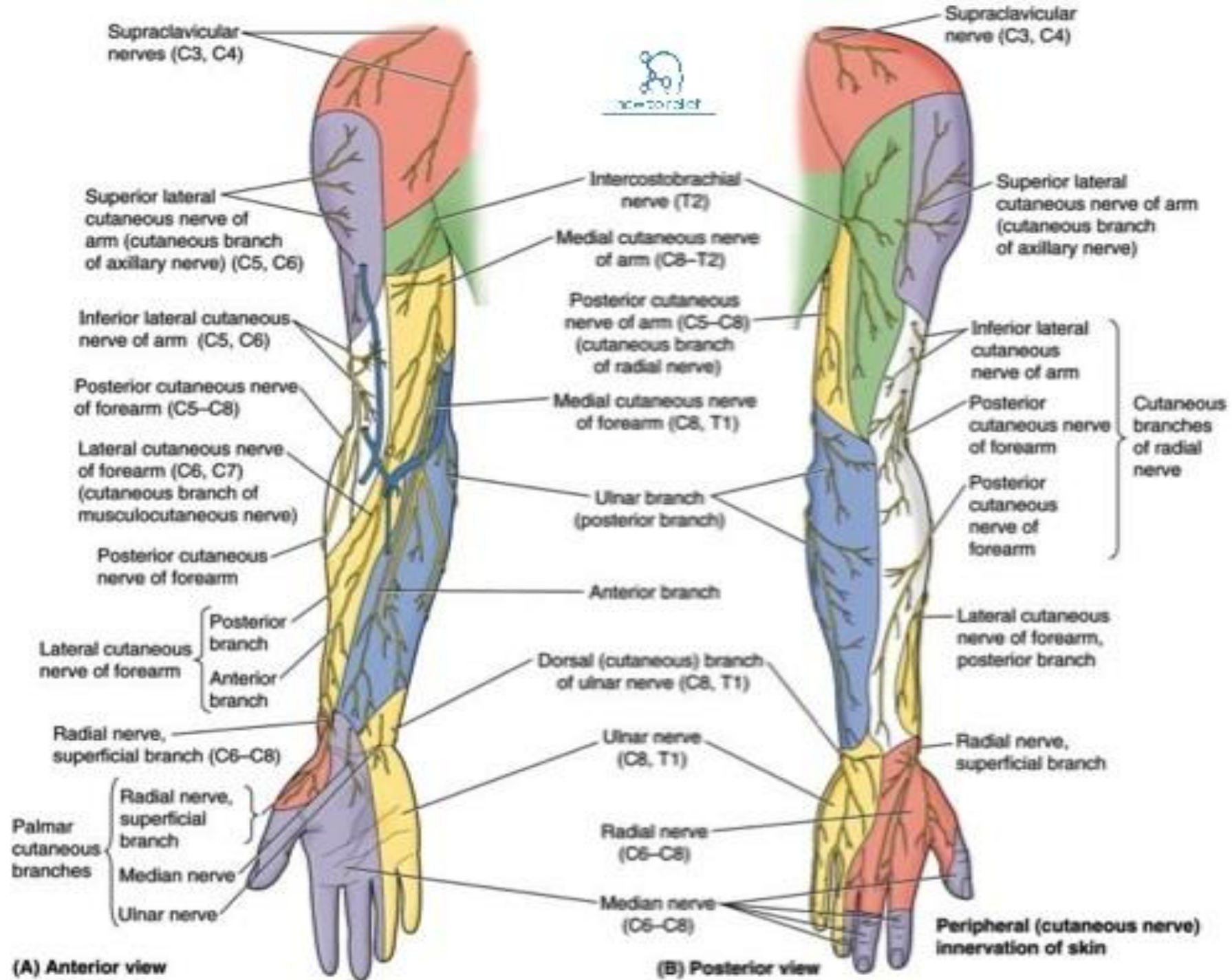
l View

Anterior (palmar) view

Posterior (dorsal) view



Note: division variable between ulnar and radial innervation on dorsum of hand and often aligns with middle of 3rd digit instead of 4th digit as shown



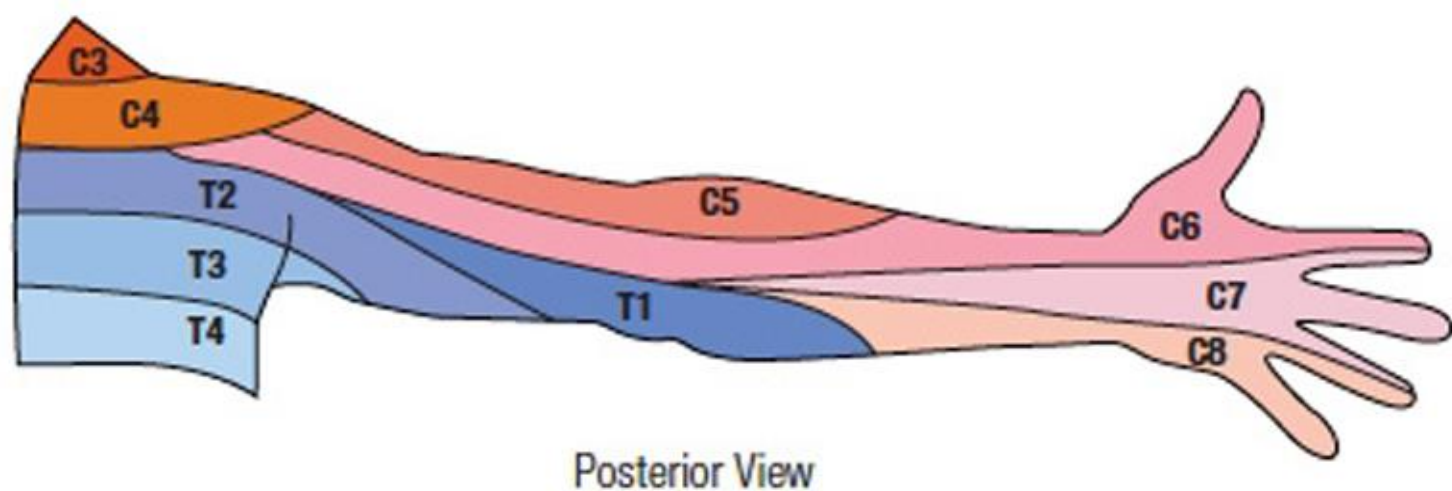
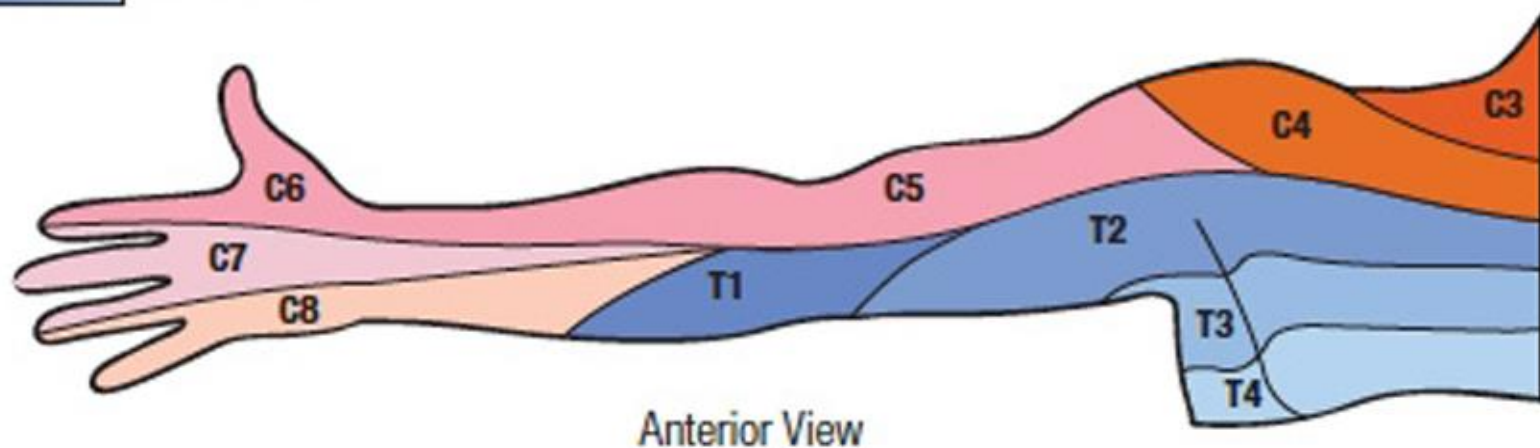
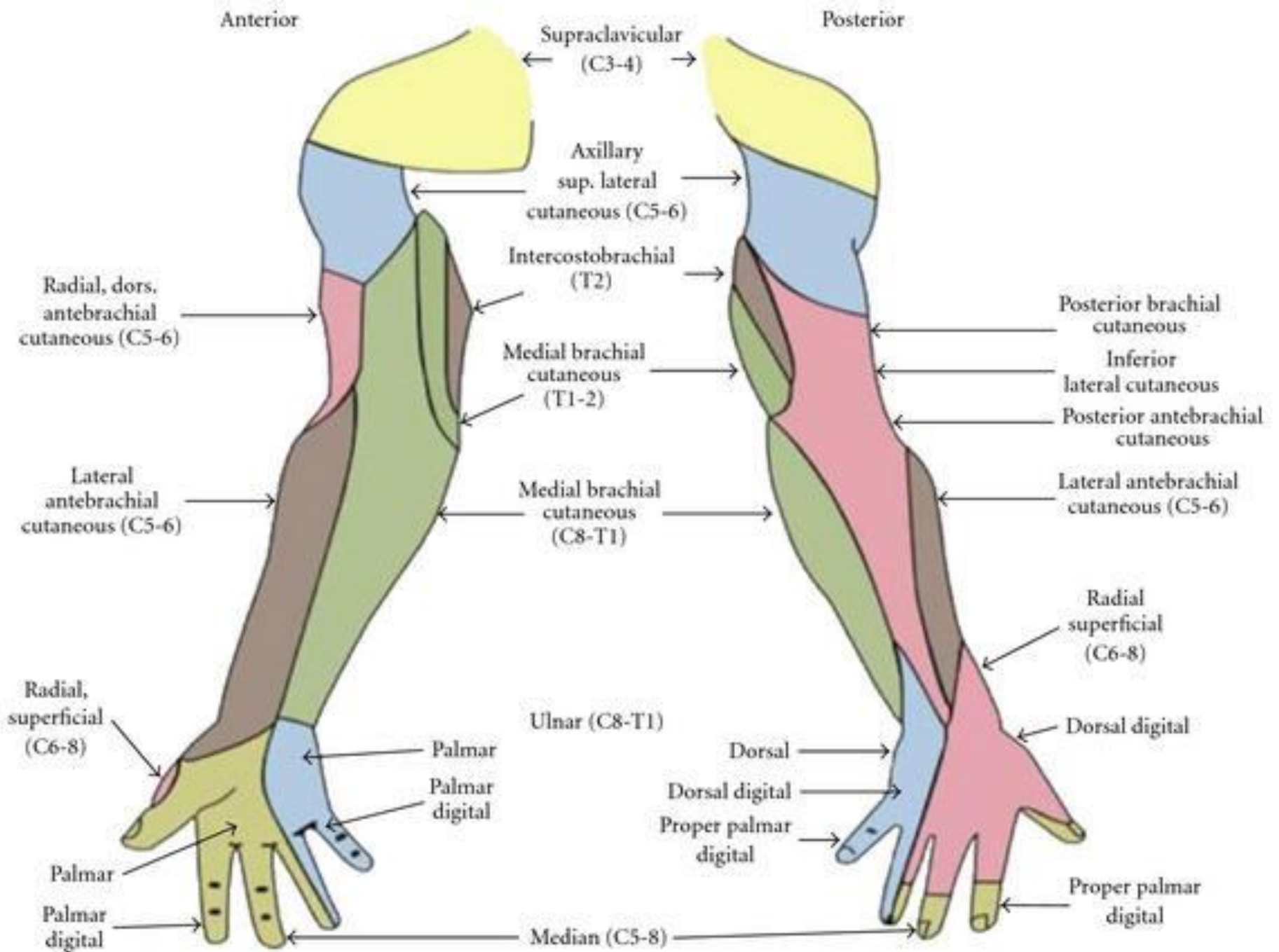
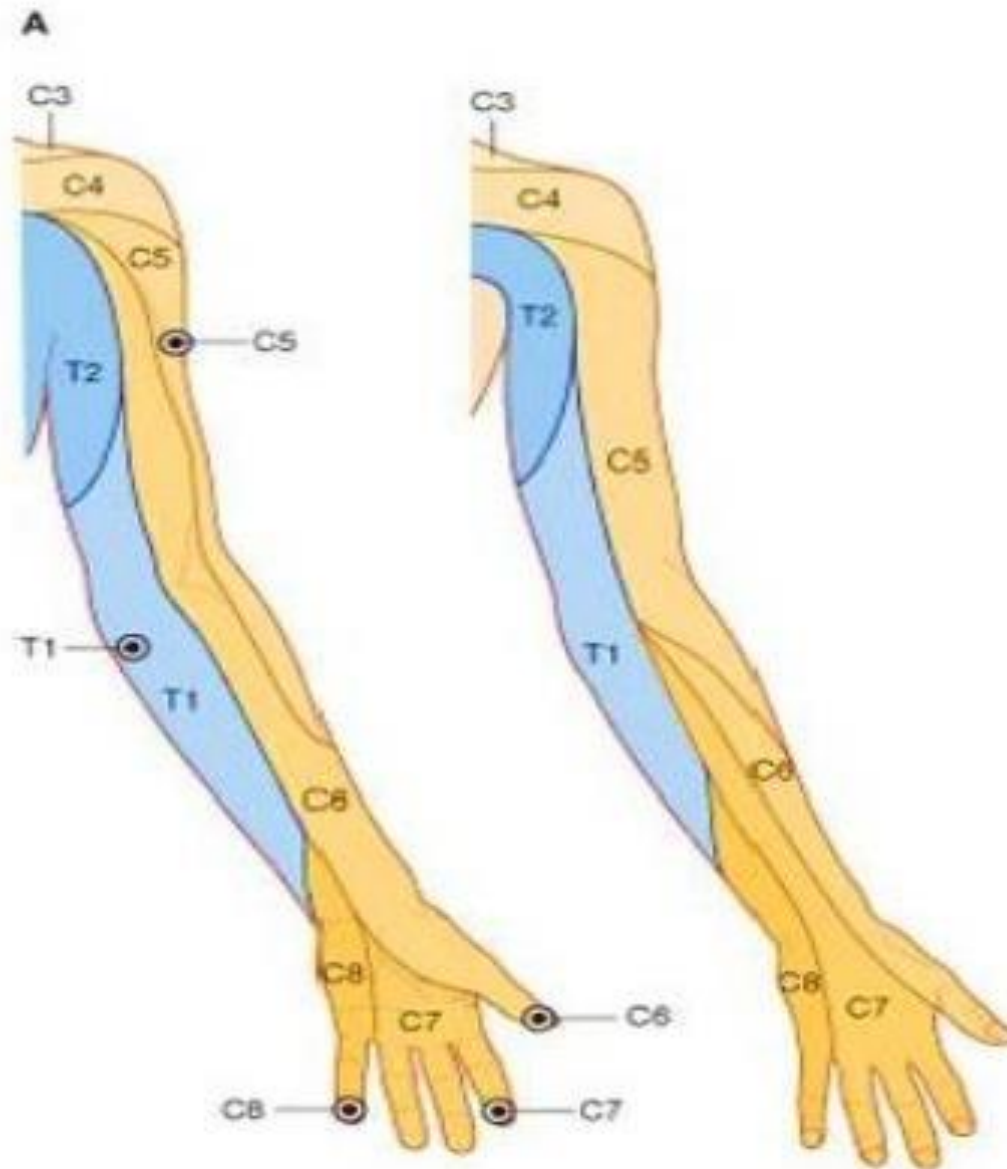
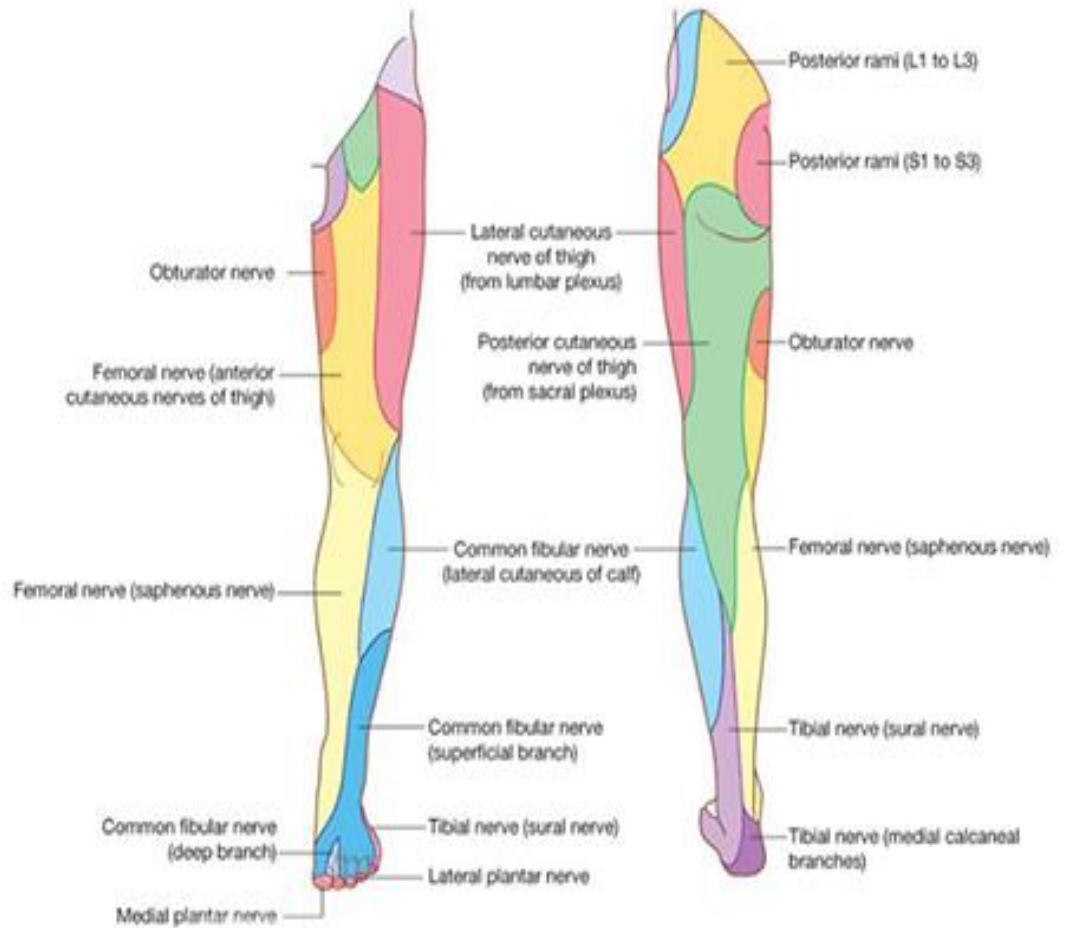
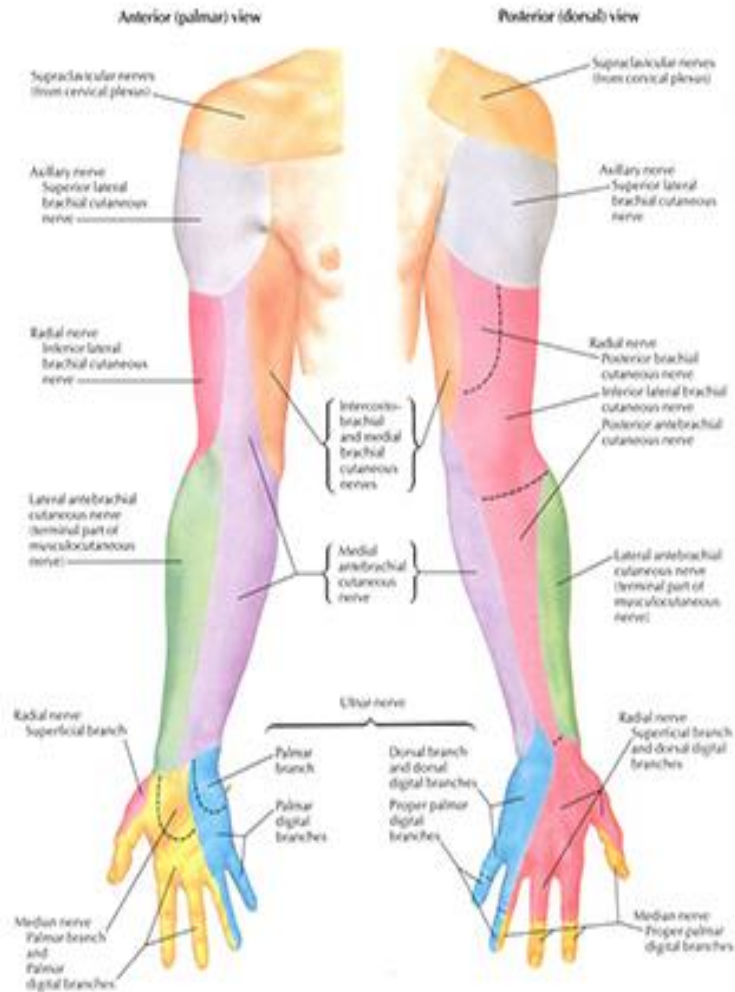


Figure 2. A map of dermatomal innervation of the shoulder and upper extremity.

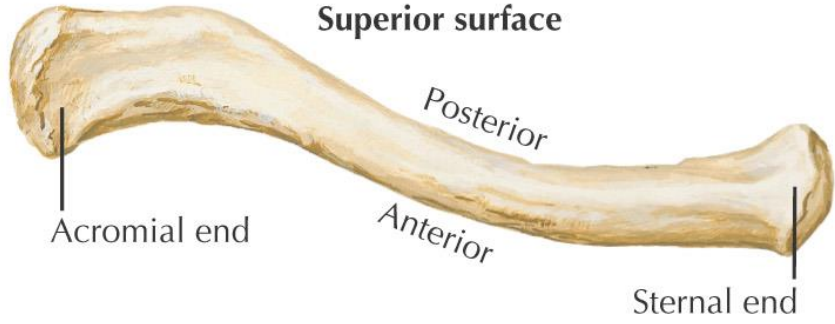


DERMATOMES AND MYOTOMES





Superior surface



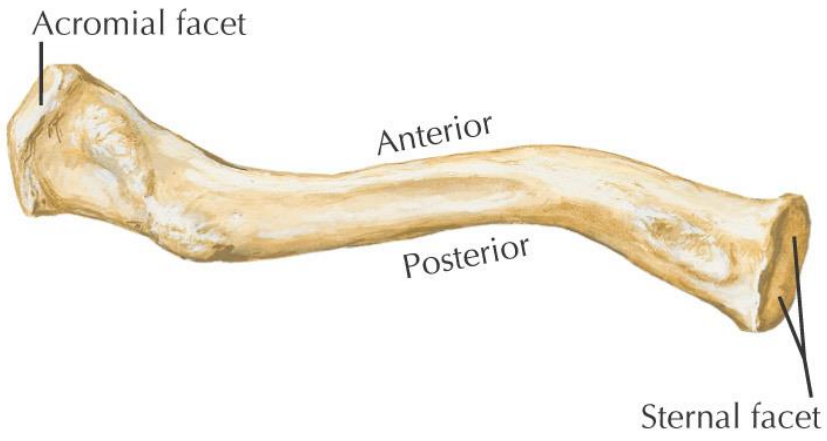
Acromial end

Posterior

Anterior

Sternal end

Inferior surface

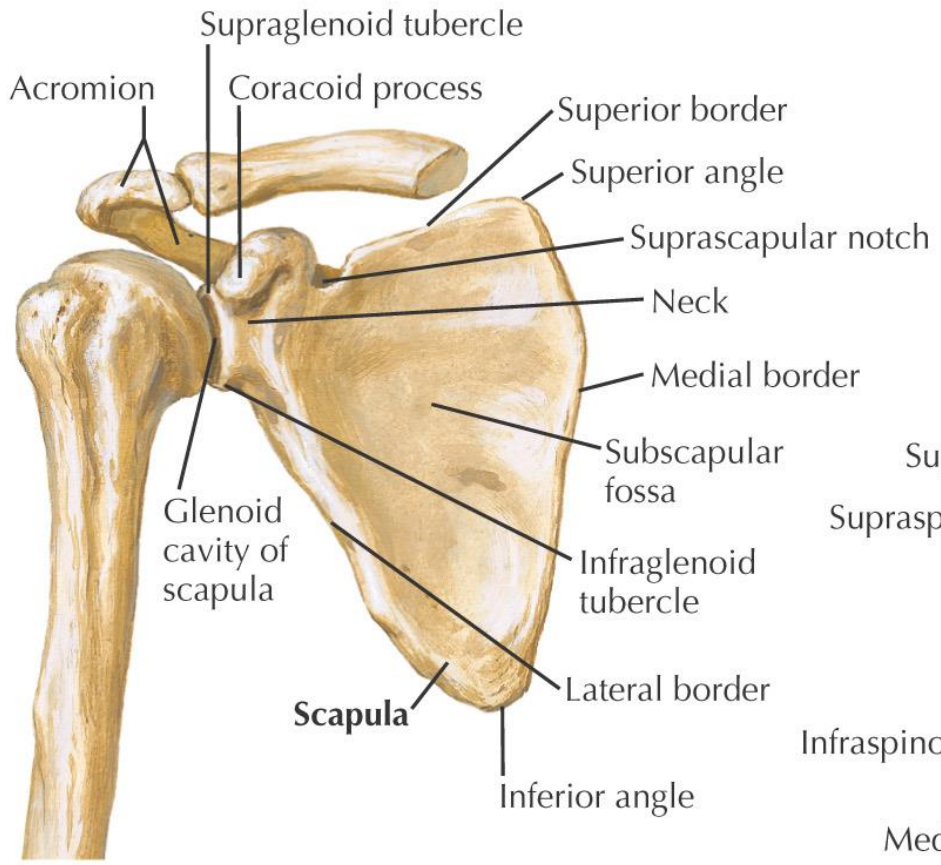


Acromial facet

Anterior

Posterior

Sternal facet



Acromion

Supraglenoid tubercle

Coracoid process

Superior border

Superior angle

Suprascapular notch

Neck

Medial border

Subscapular fossa

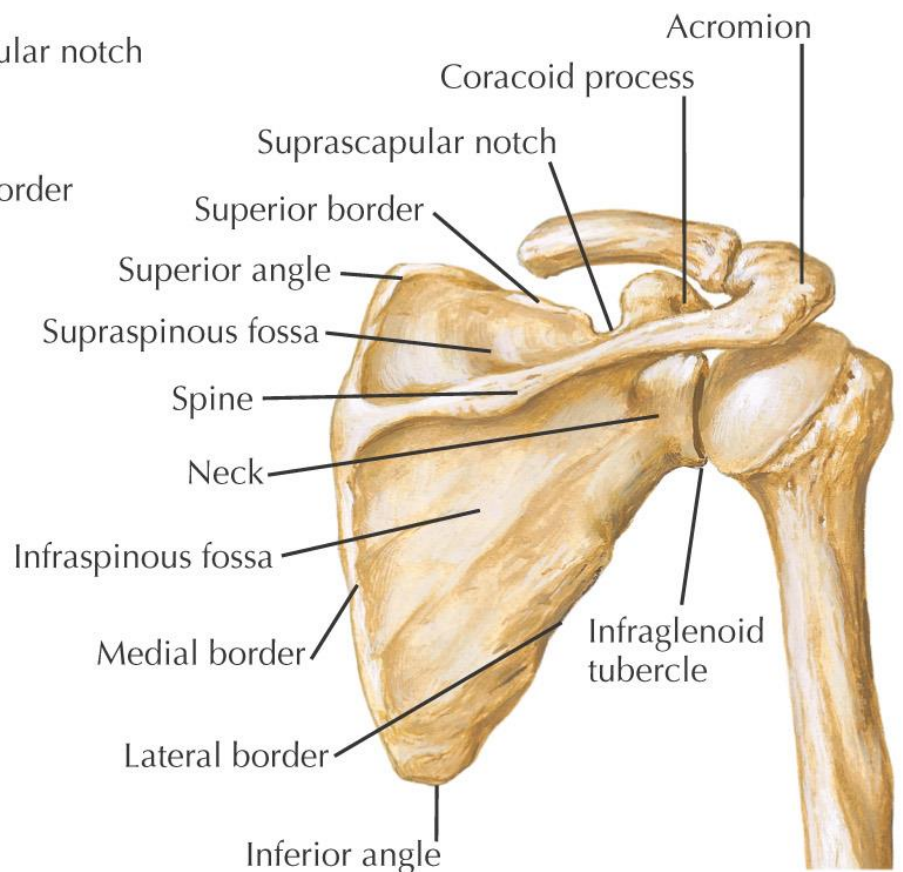
Glenoid cavity of scapula

Infraglenoid tubercle

Scapula

Lateral border

Inferior angle



Acromion

Coracoid process

Suprascapular notch

Superior border

Superior angle

Supraspinous fossa

Spine

Neck

Infraspinous fossa

Medial border

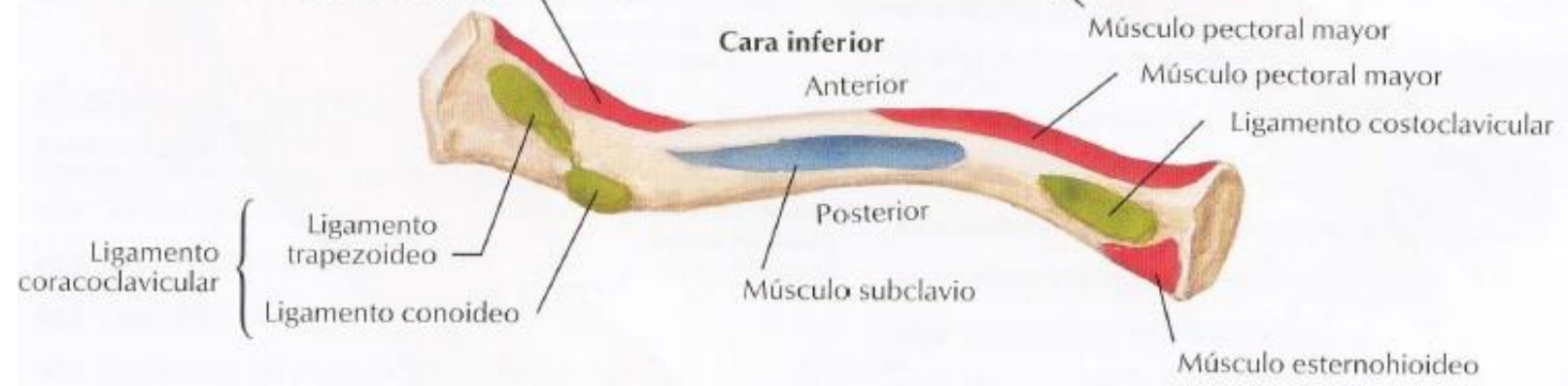
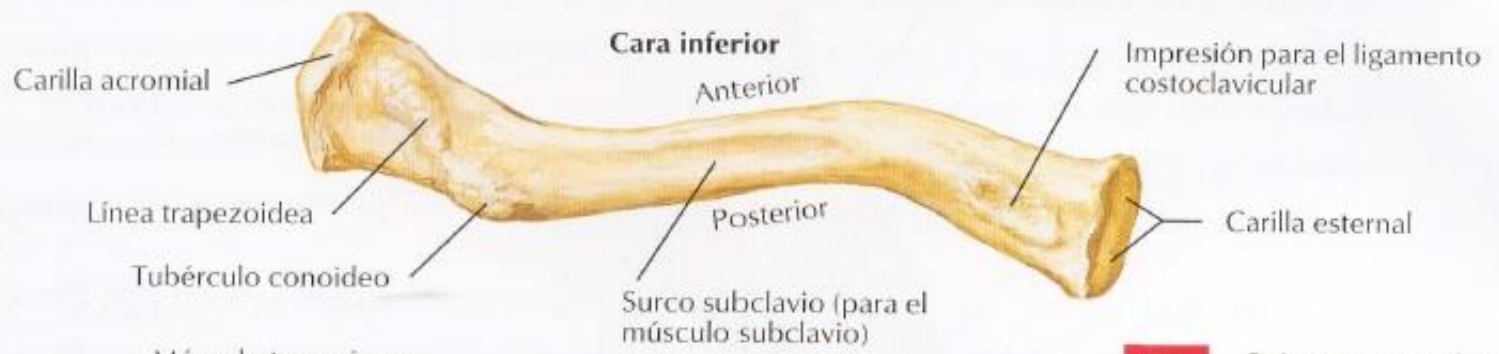
Infraglenoid tubercle

Lateral border

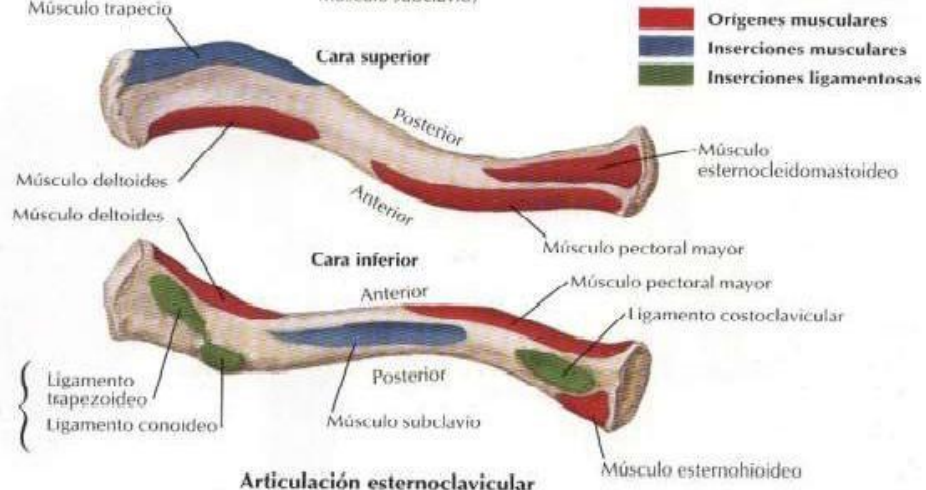
Inferior angle

F. Netter M.D.

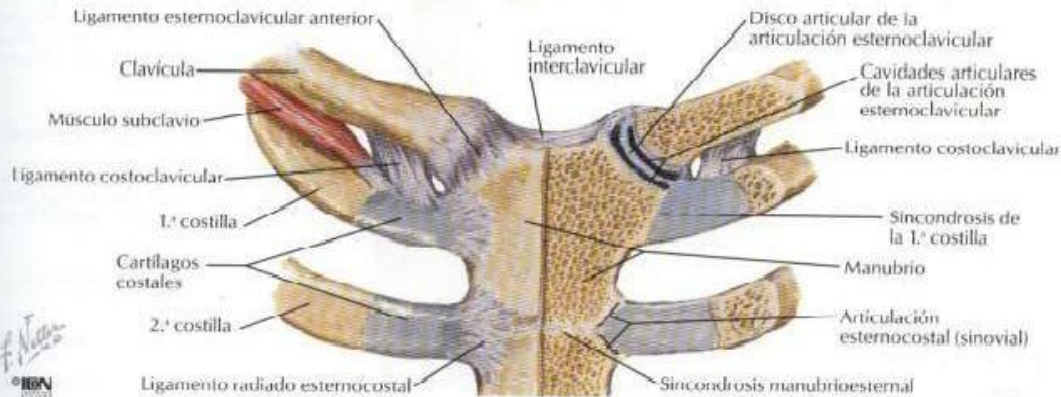
Clavícula derecha

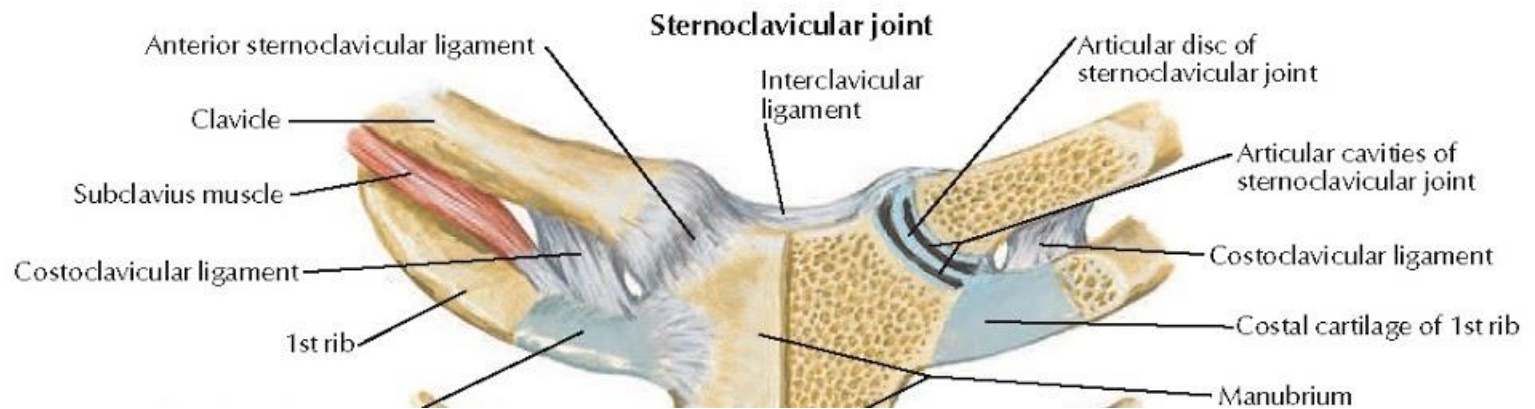
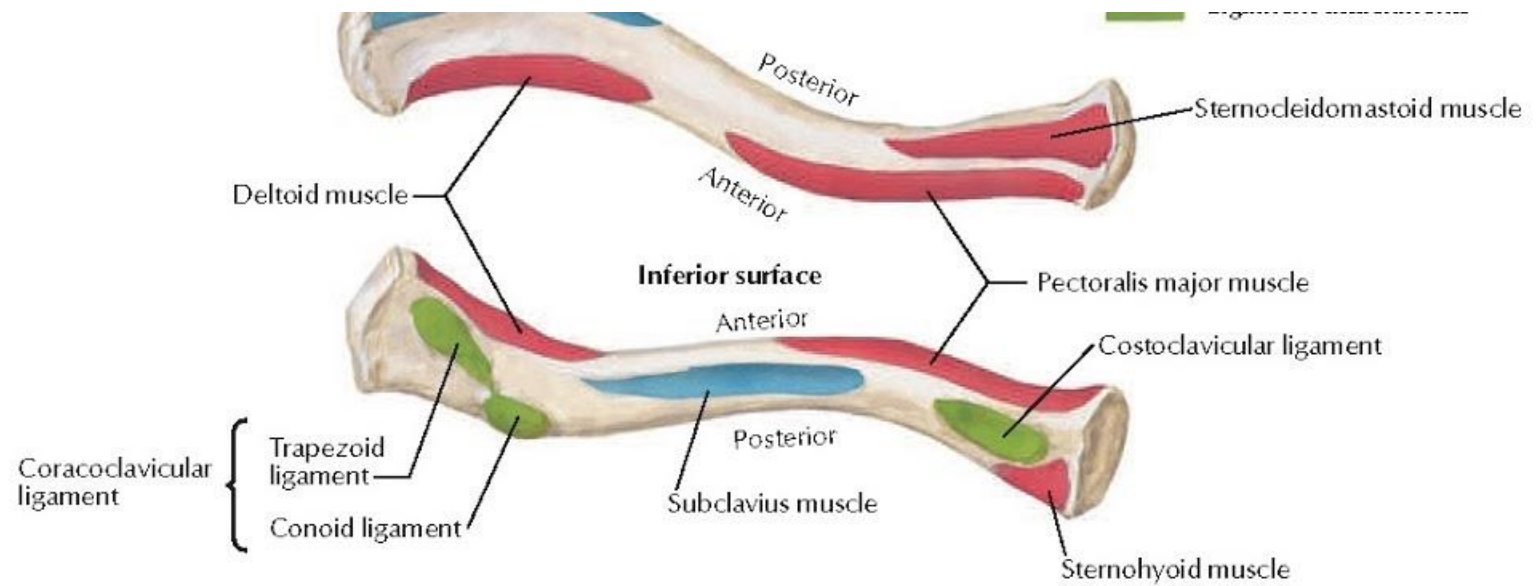


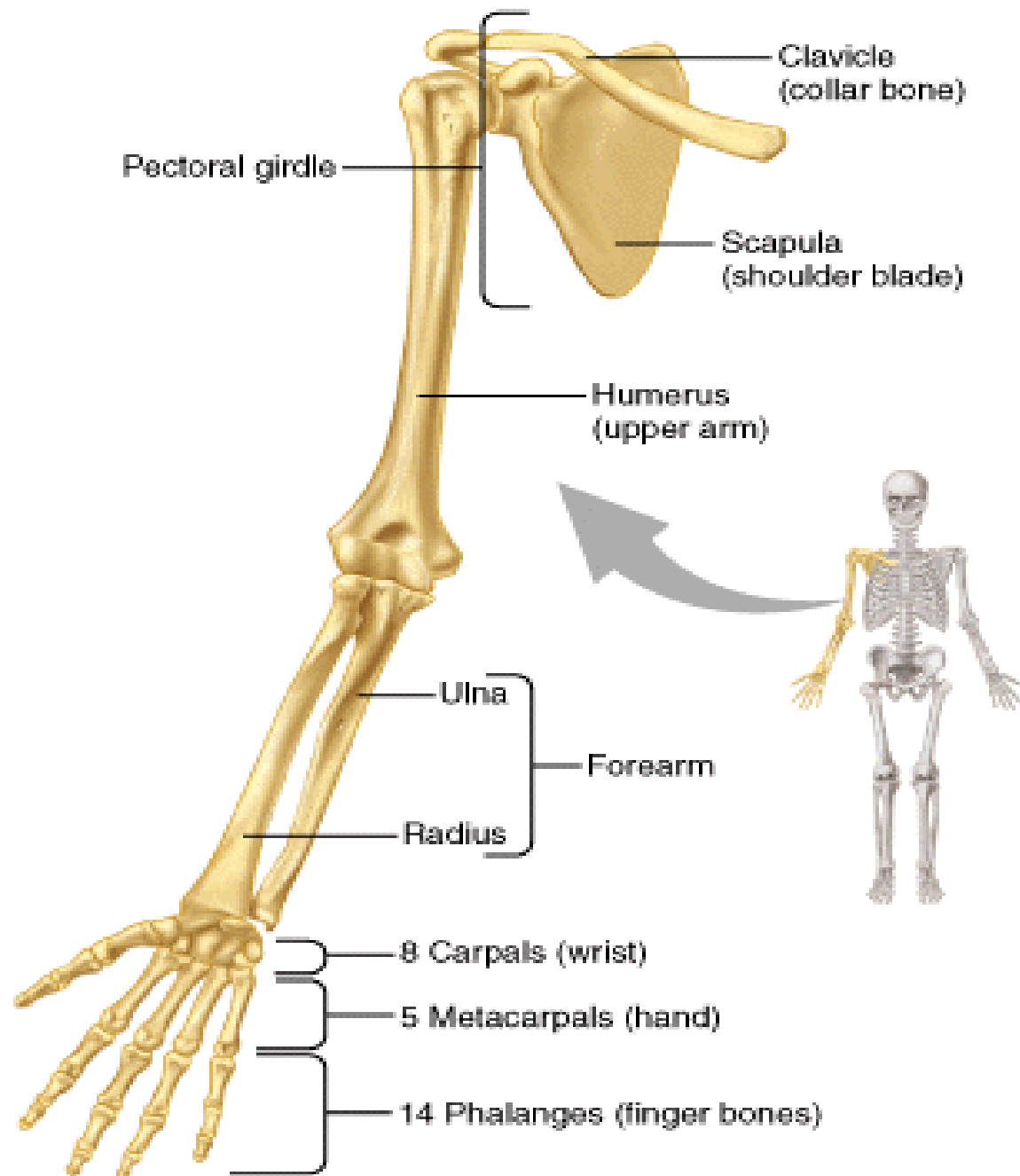
Clavícula derecha



Articulación esternoclavicular

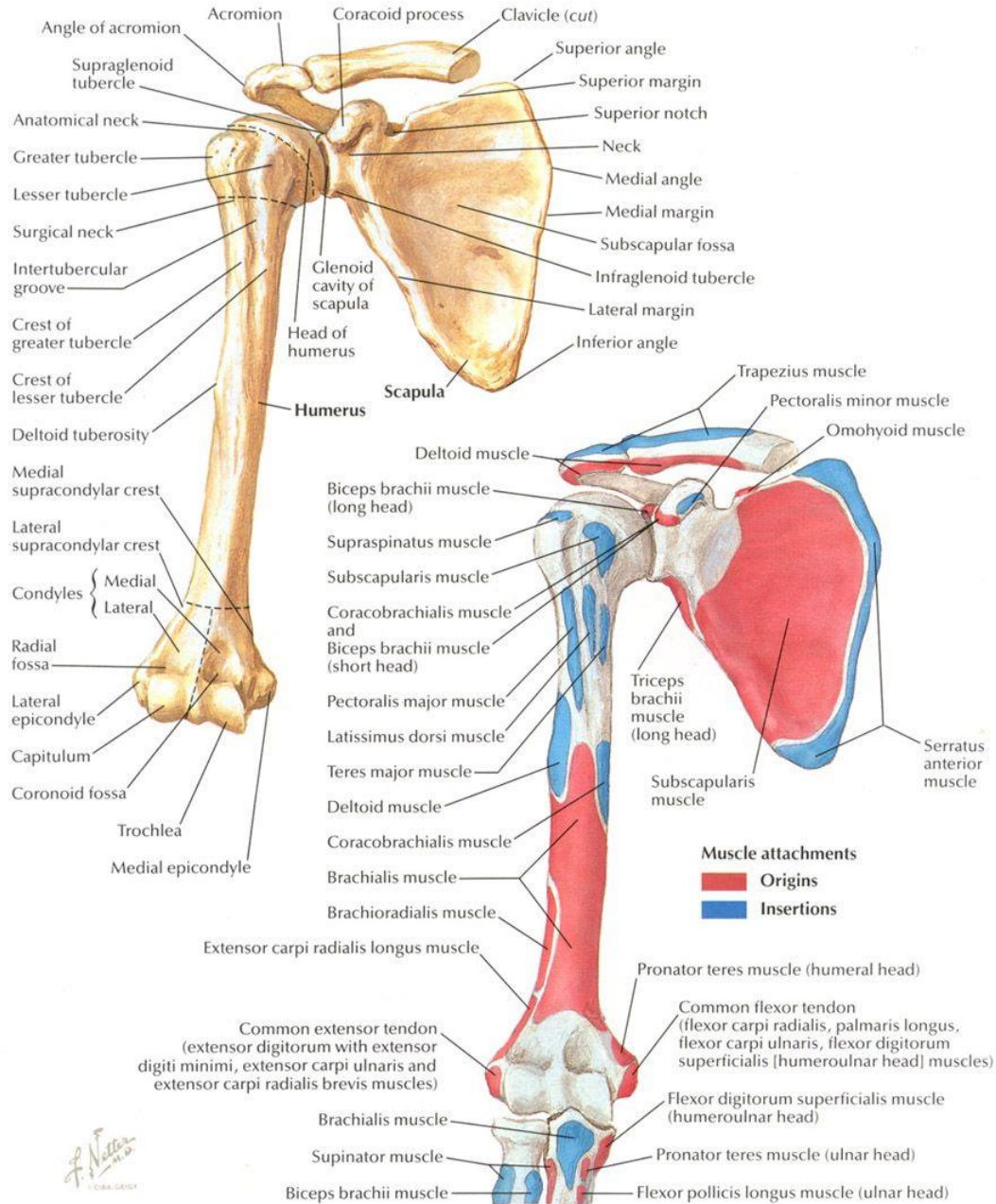


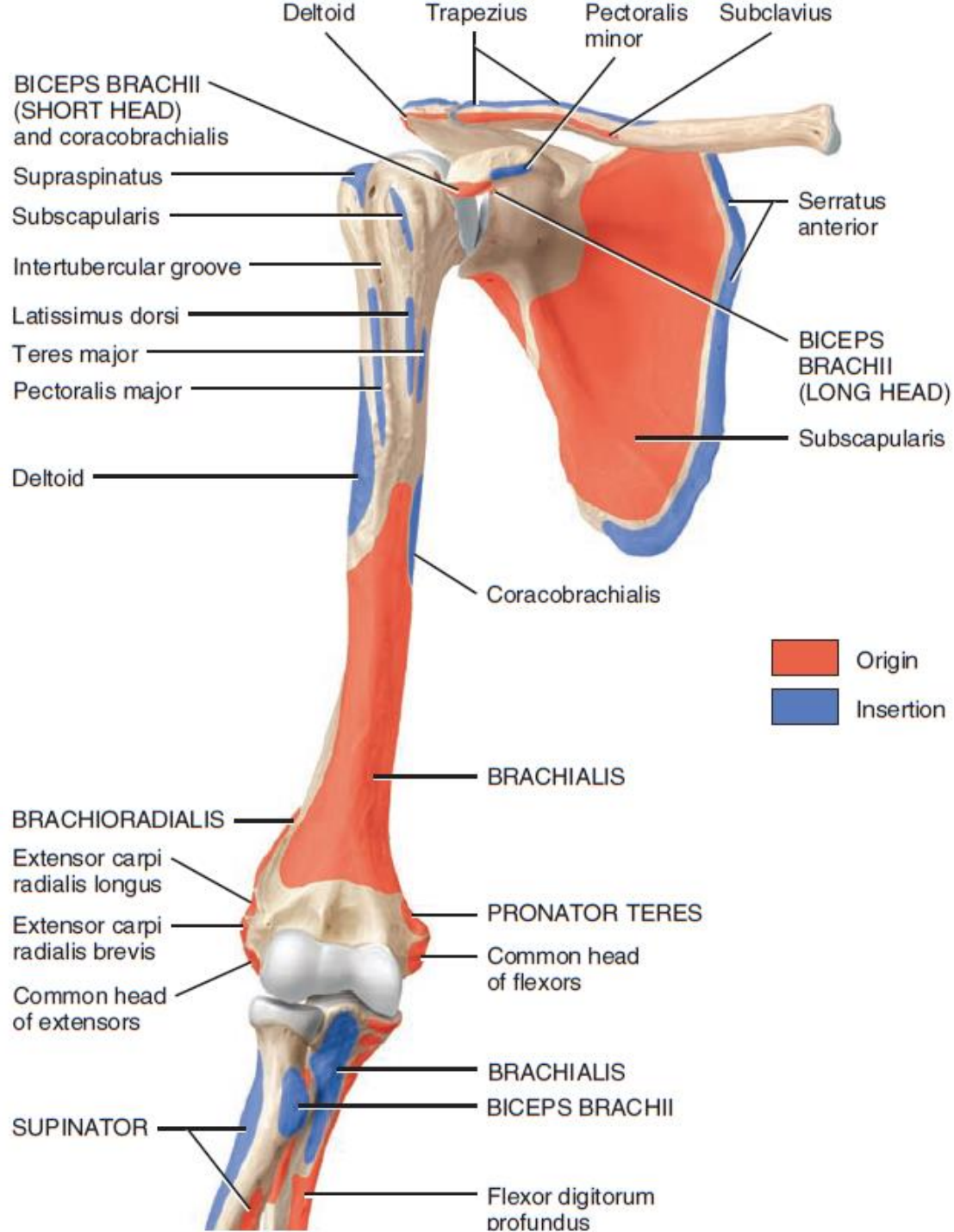


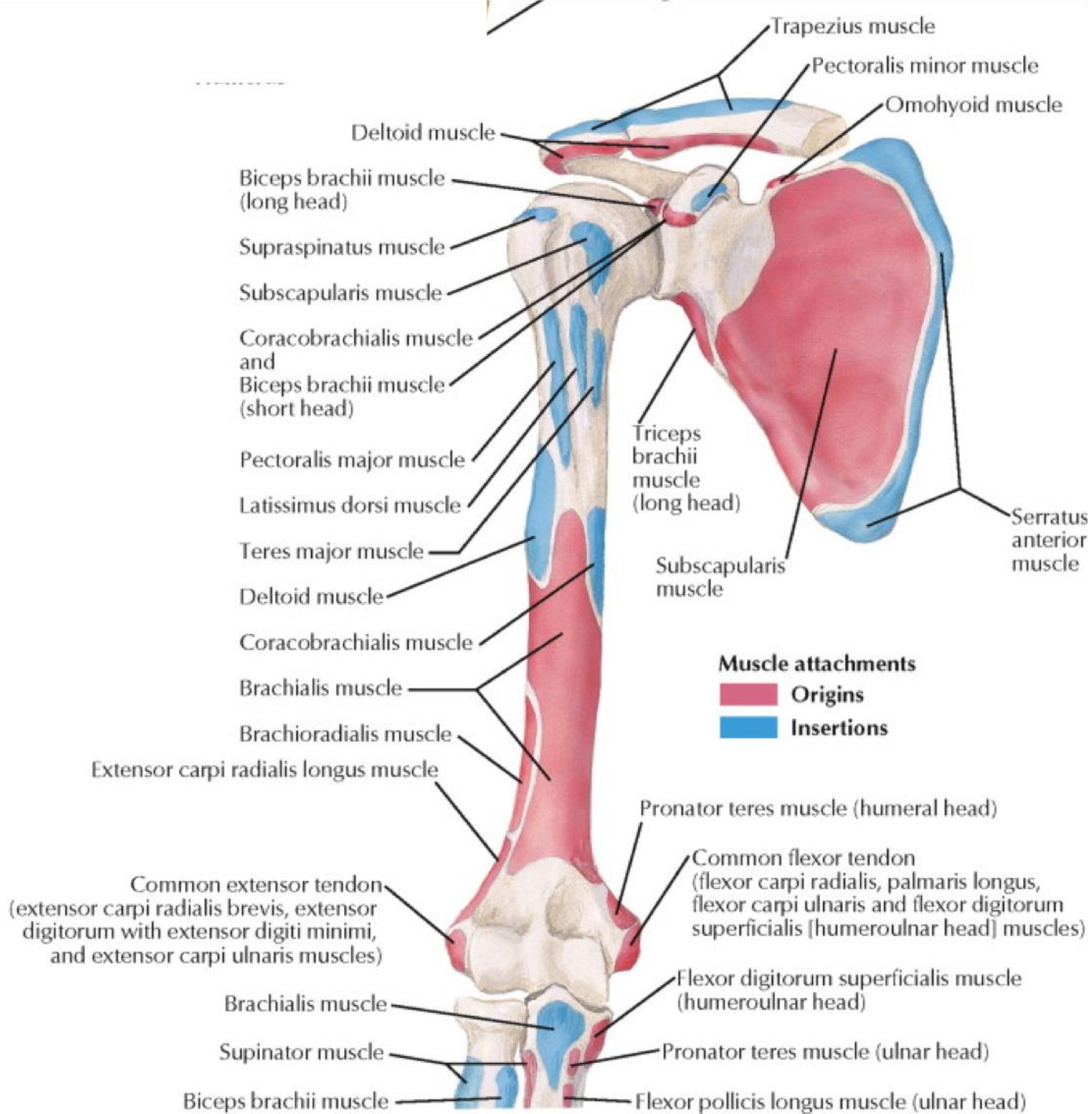


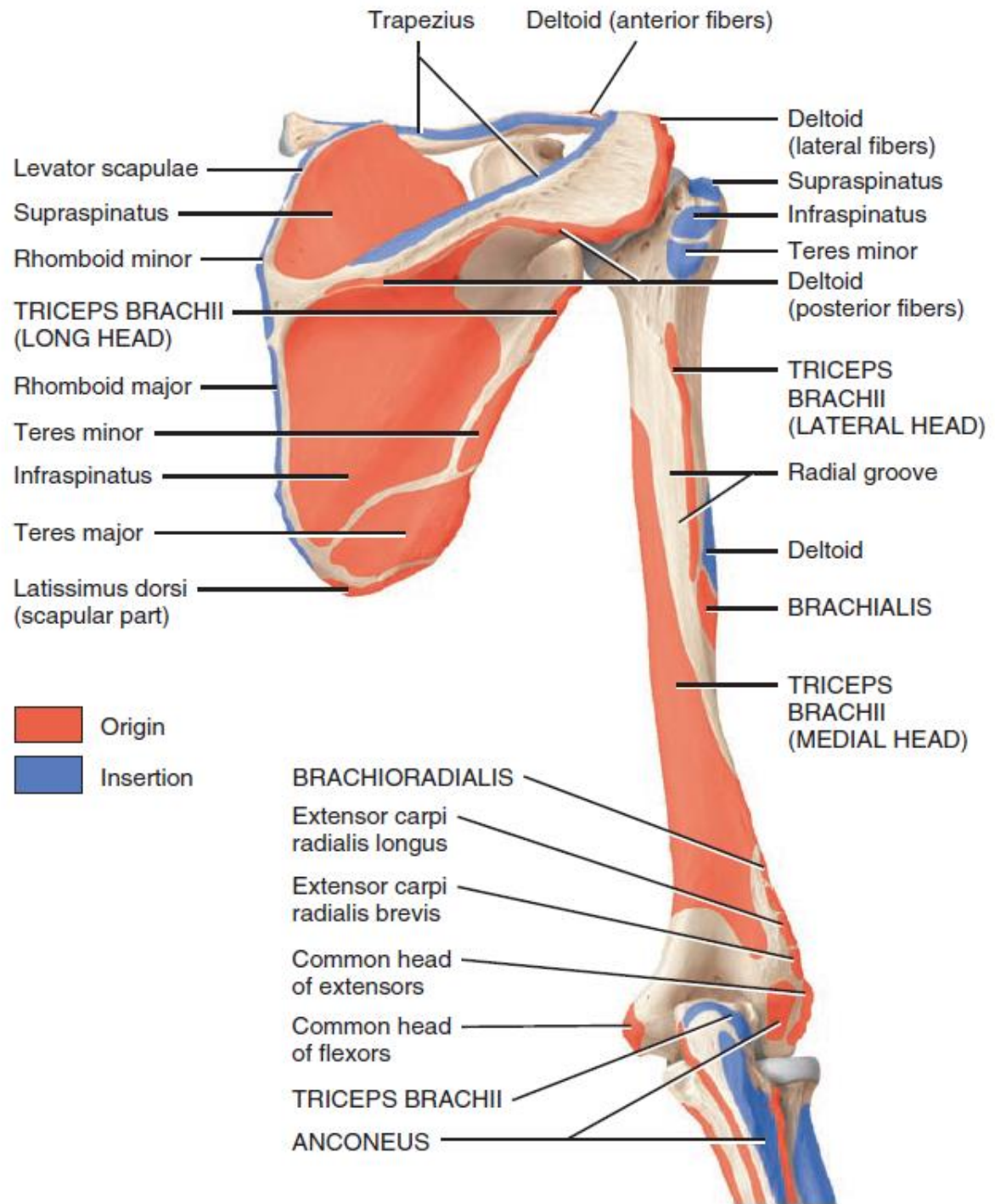
Humerus and Scapula: Anterior Views

SEE ALSO PLATE 170









Clavicle

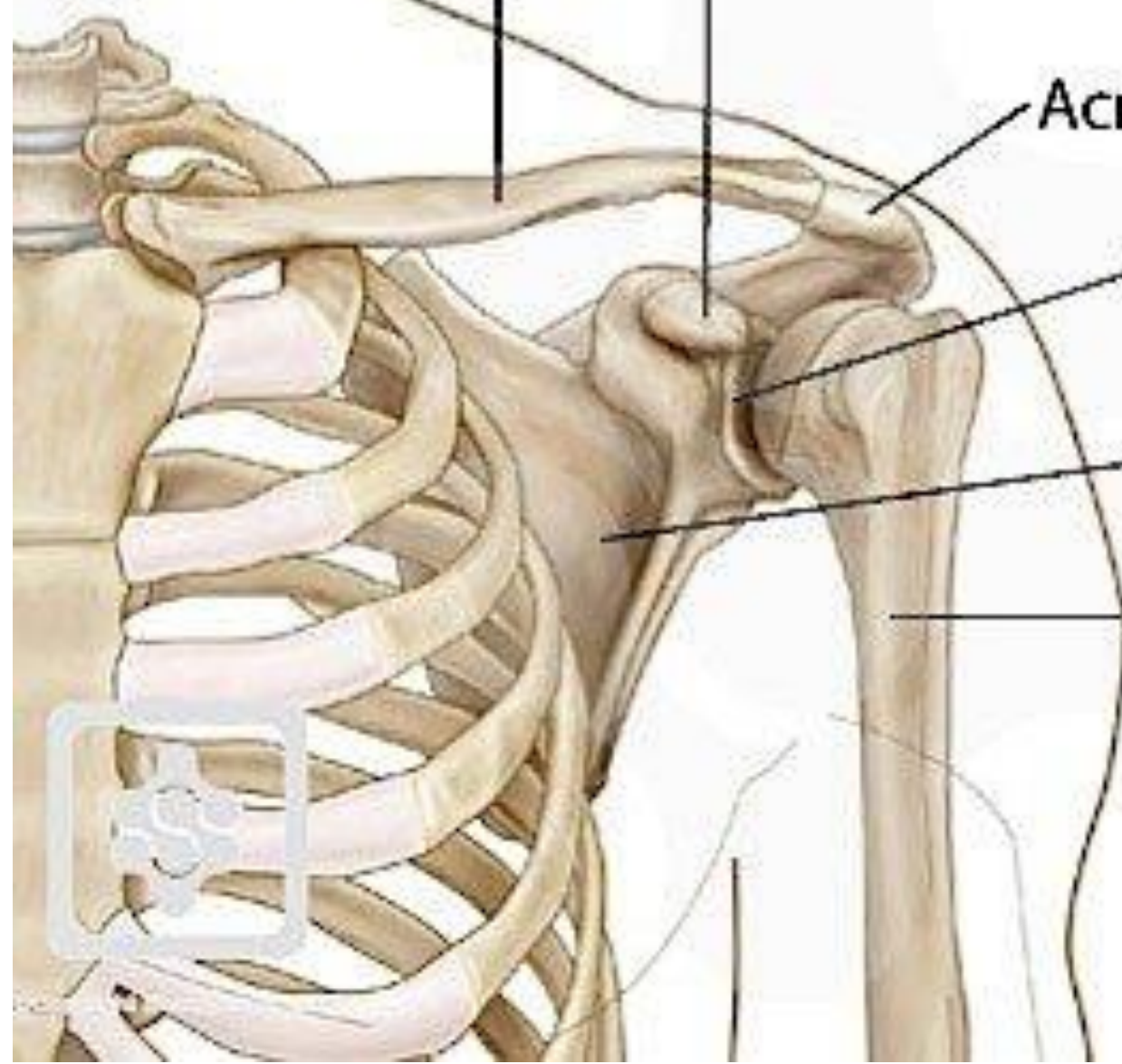
Coracoid process

Acromion

Glenoid cavity

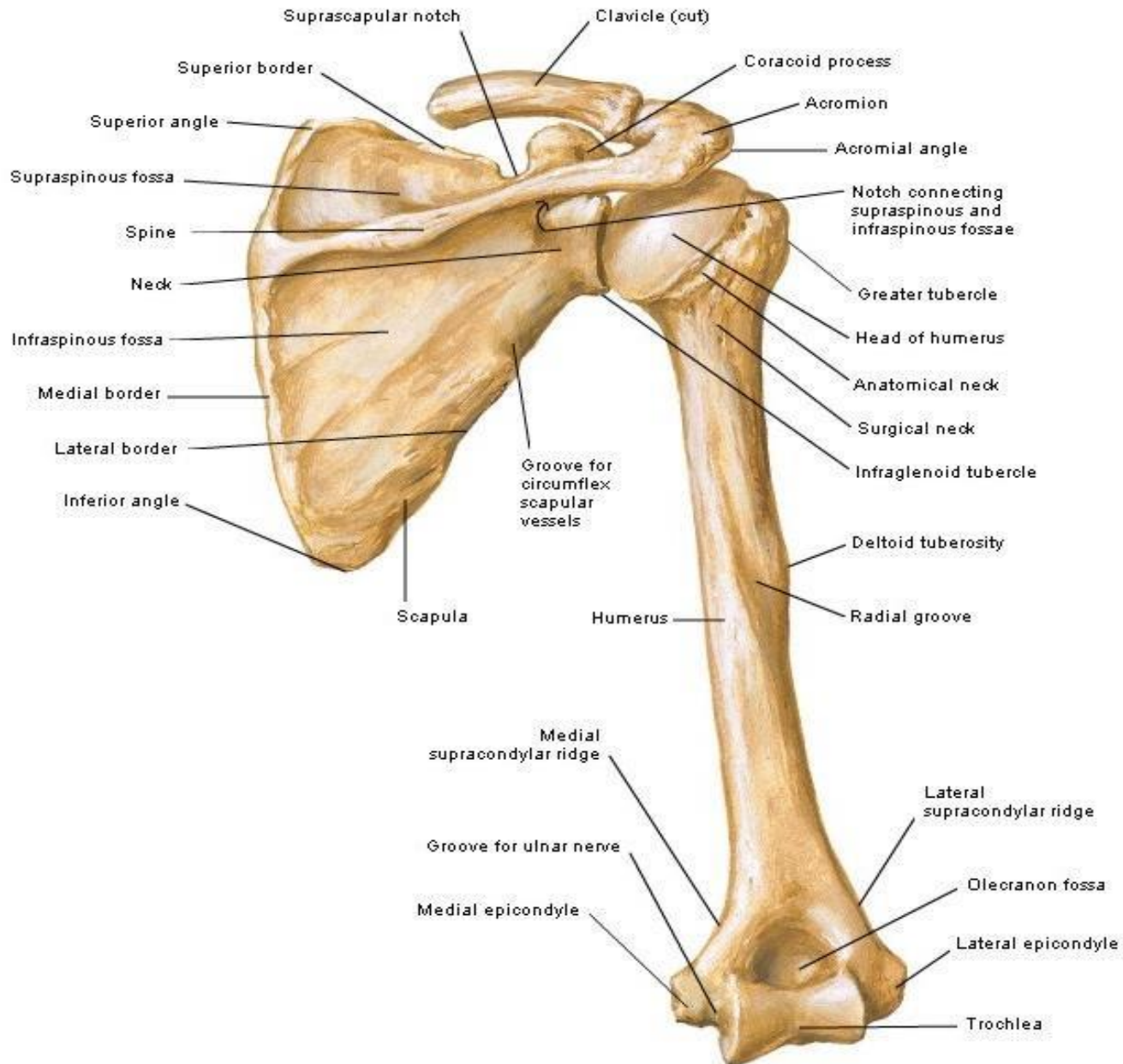
Scapula

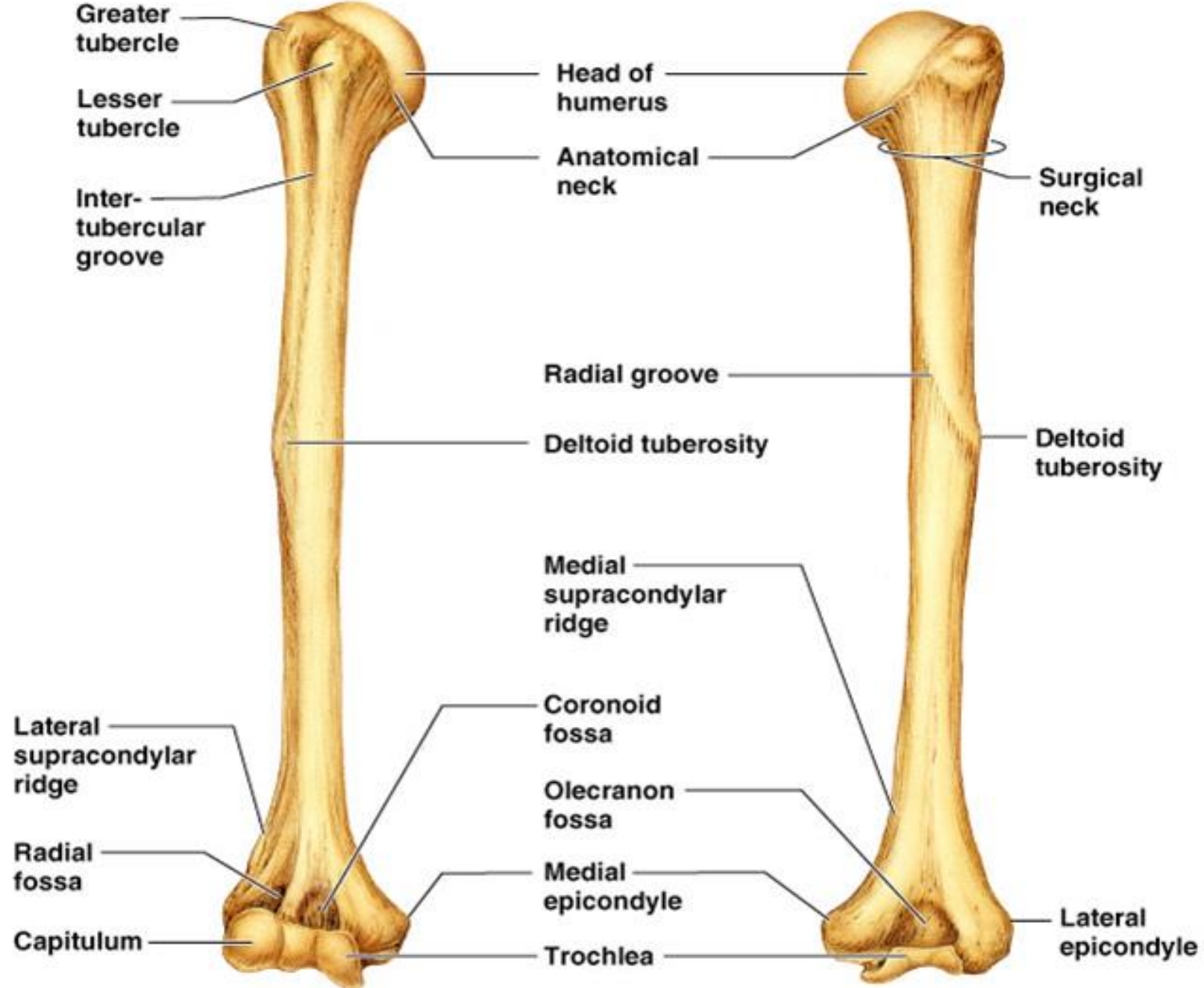
Humerus



Humerus and Scapula

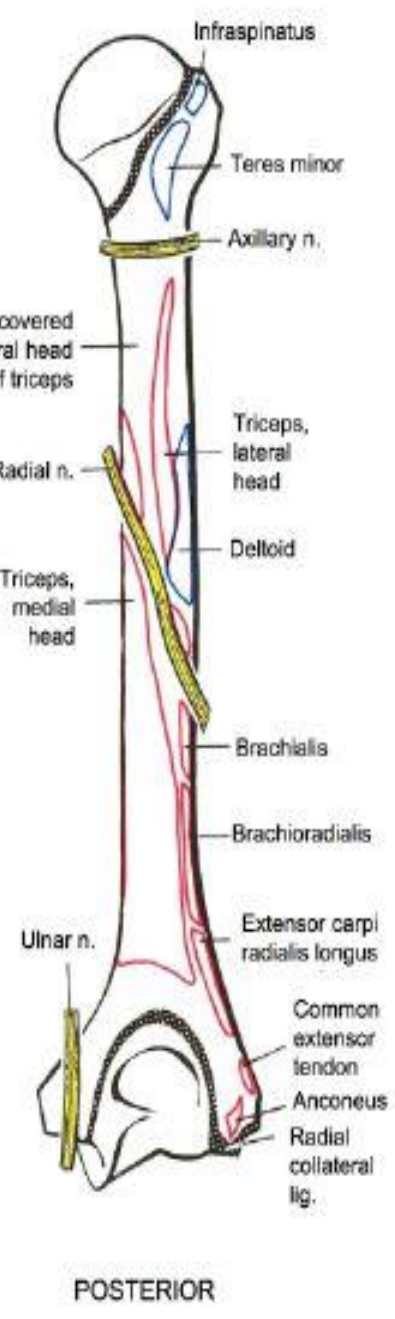
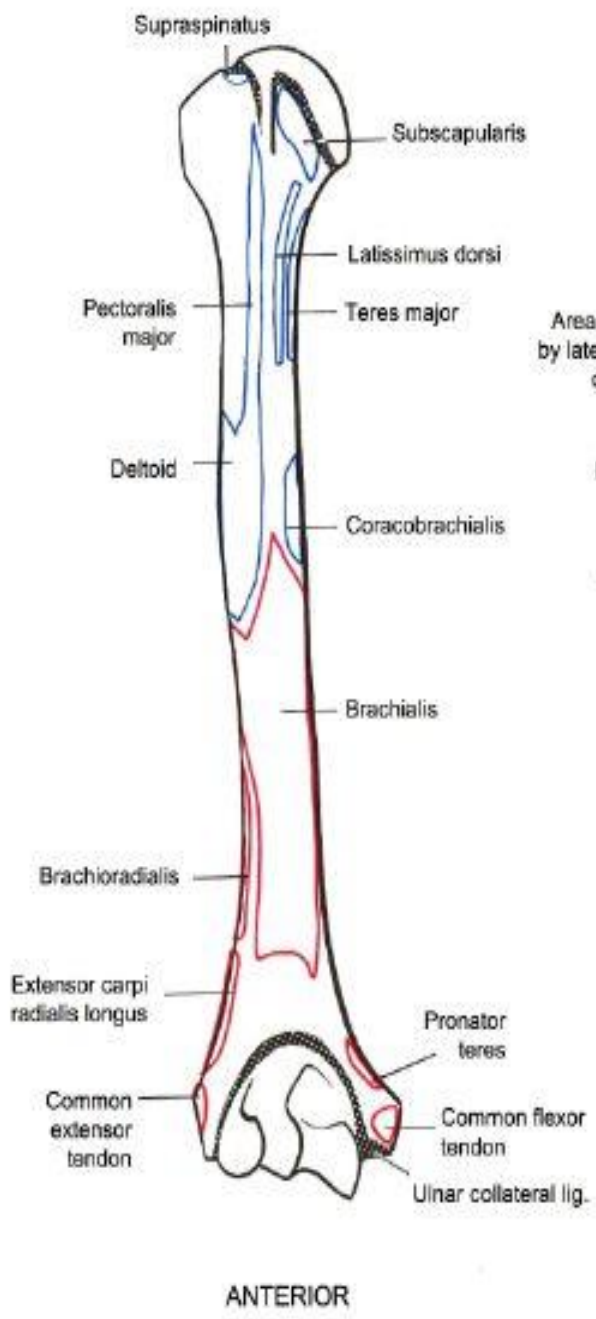
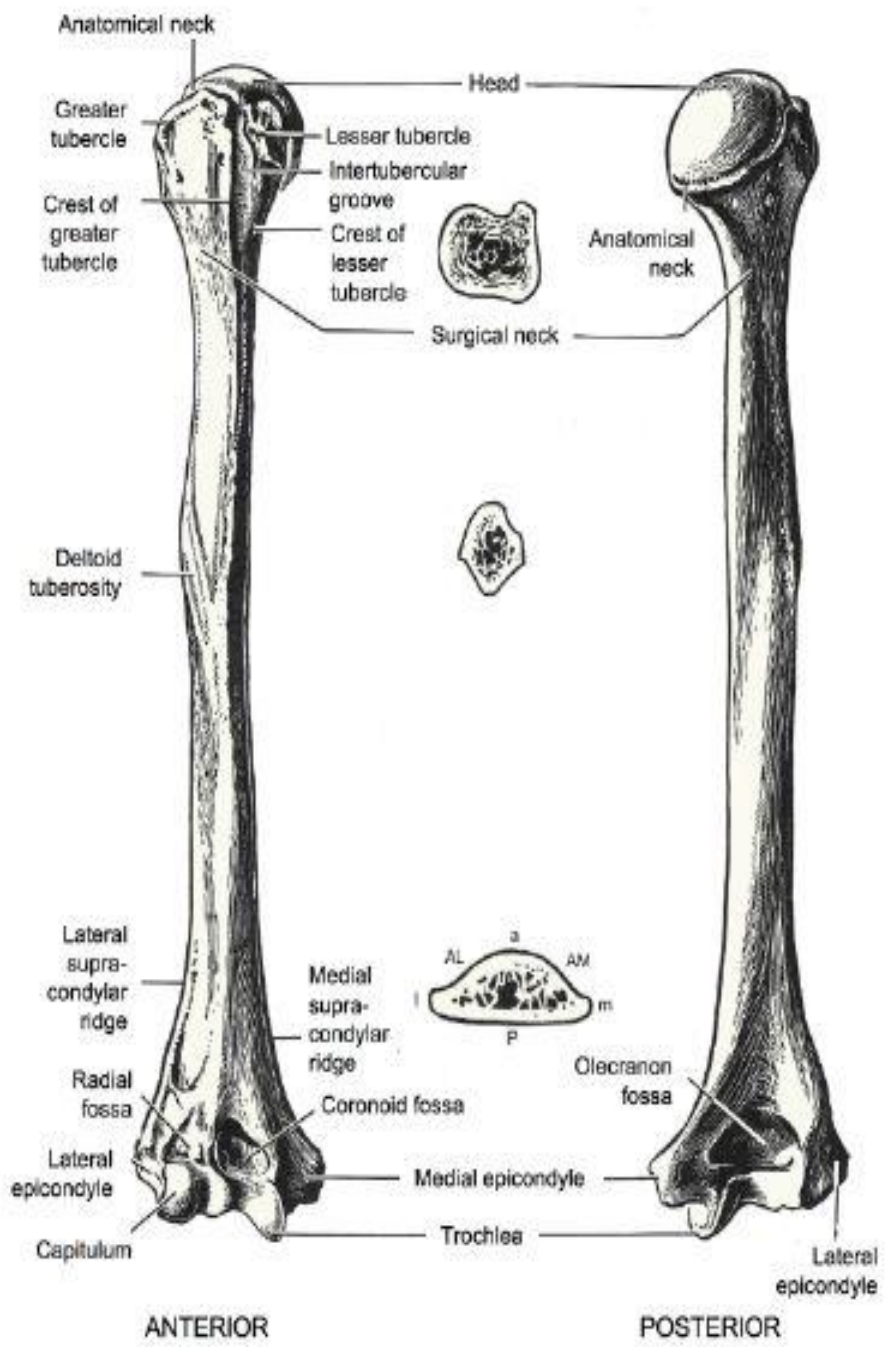
Posterior View: Features

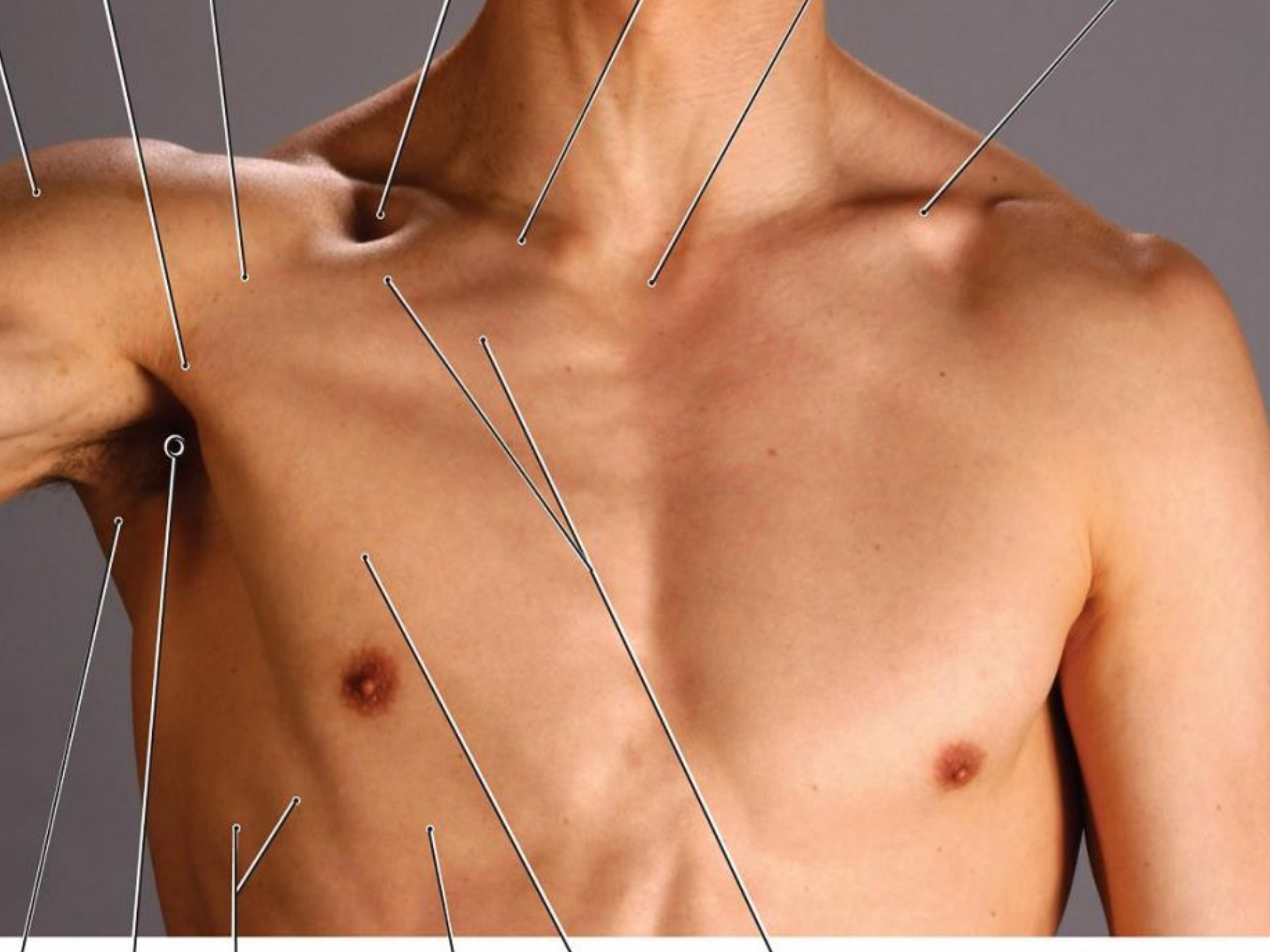




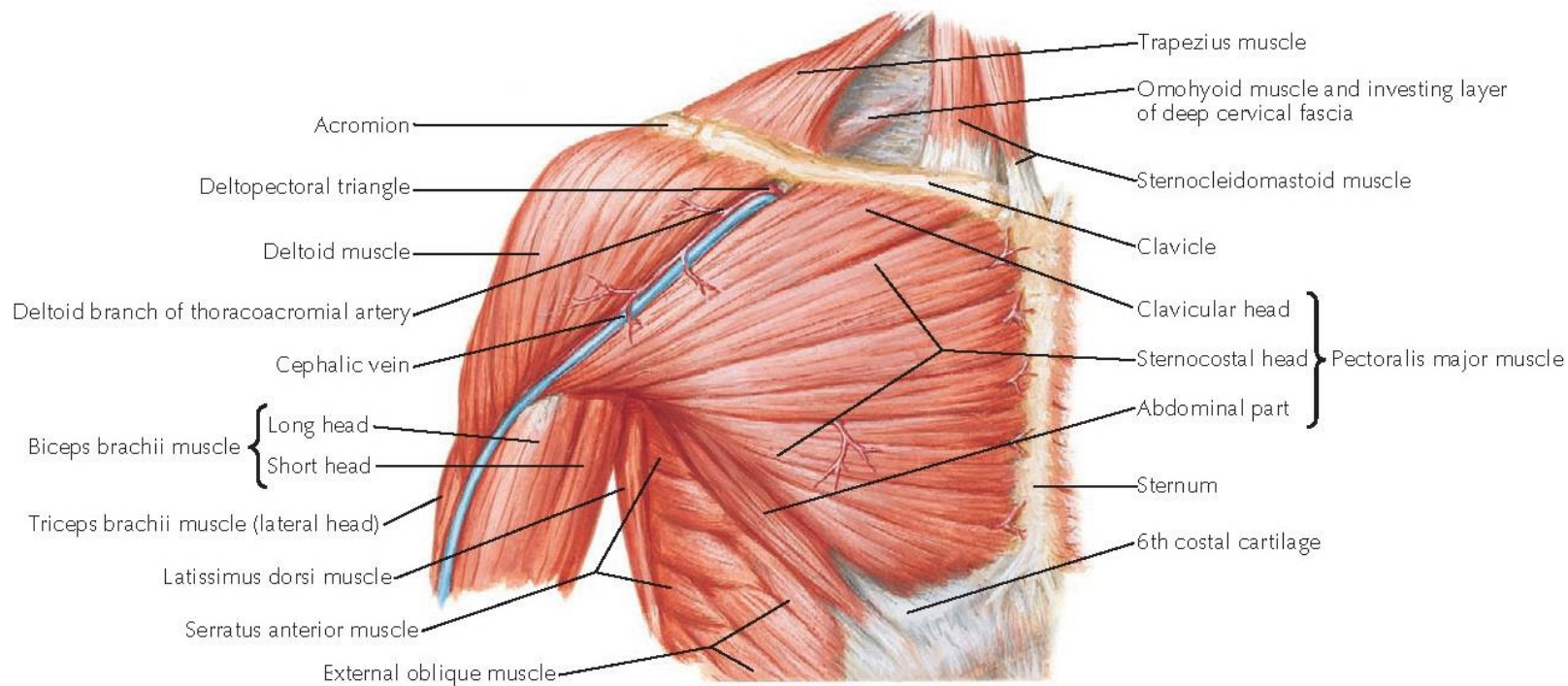
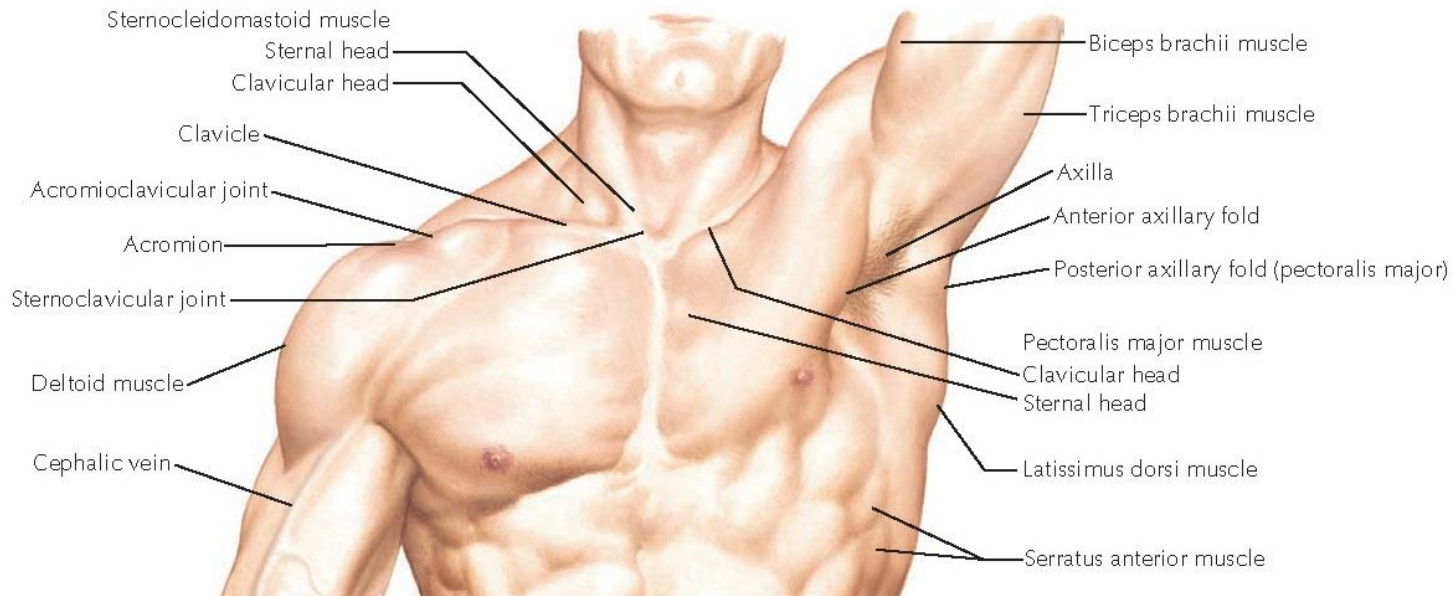
(a) Anterior view

(b) Posterior view

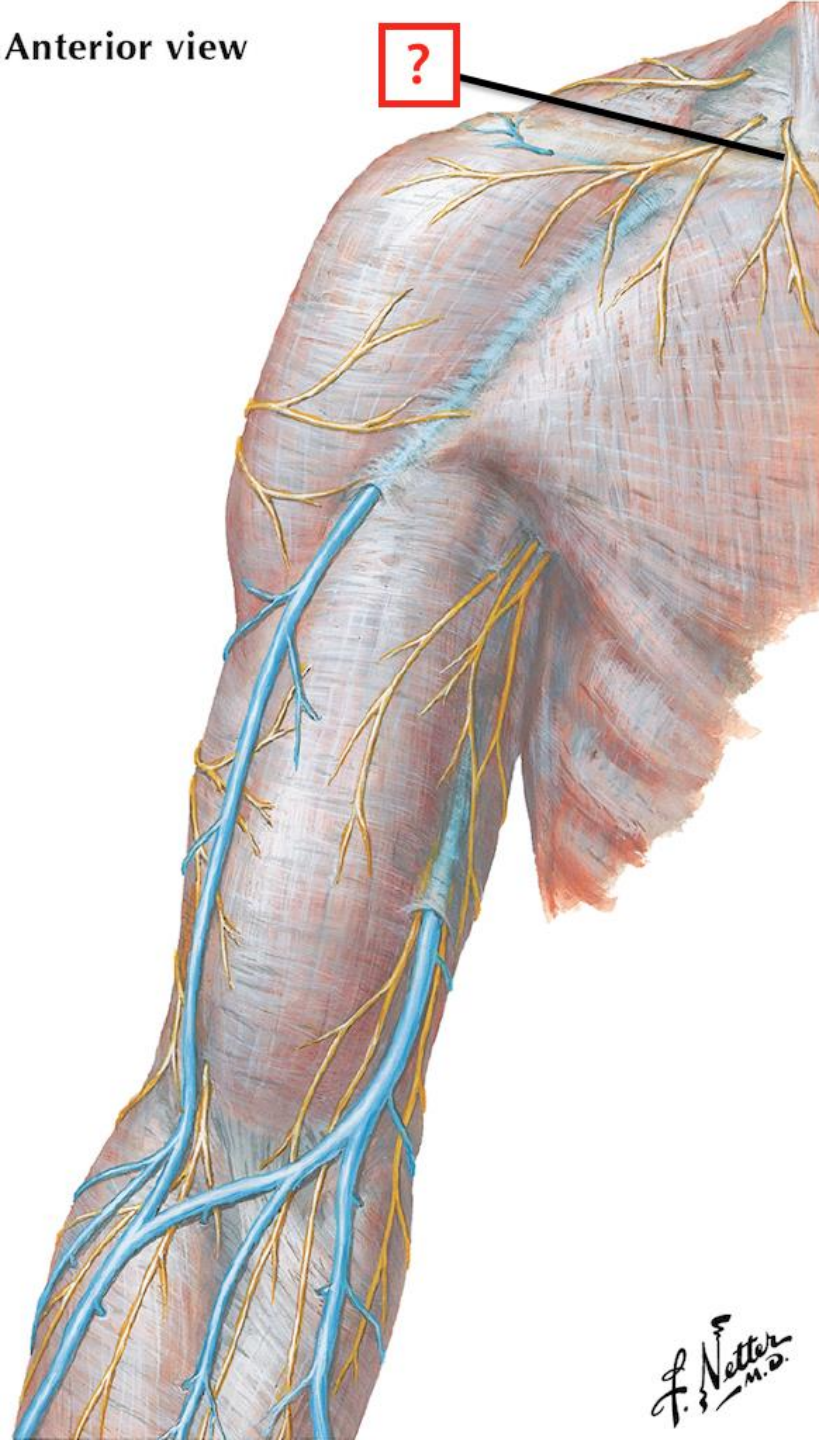




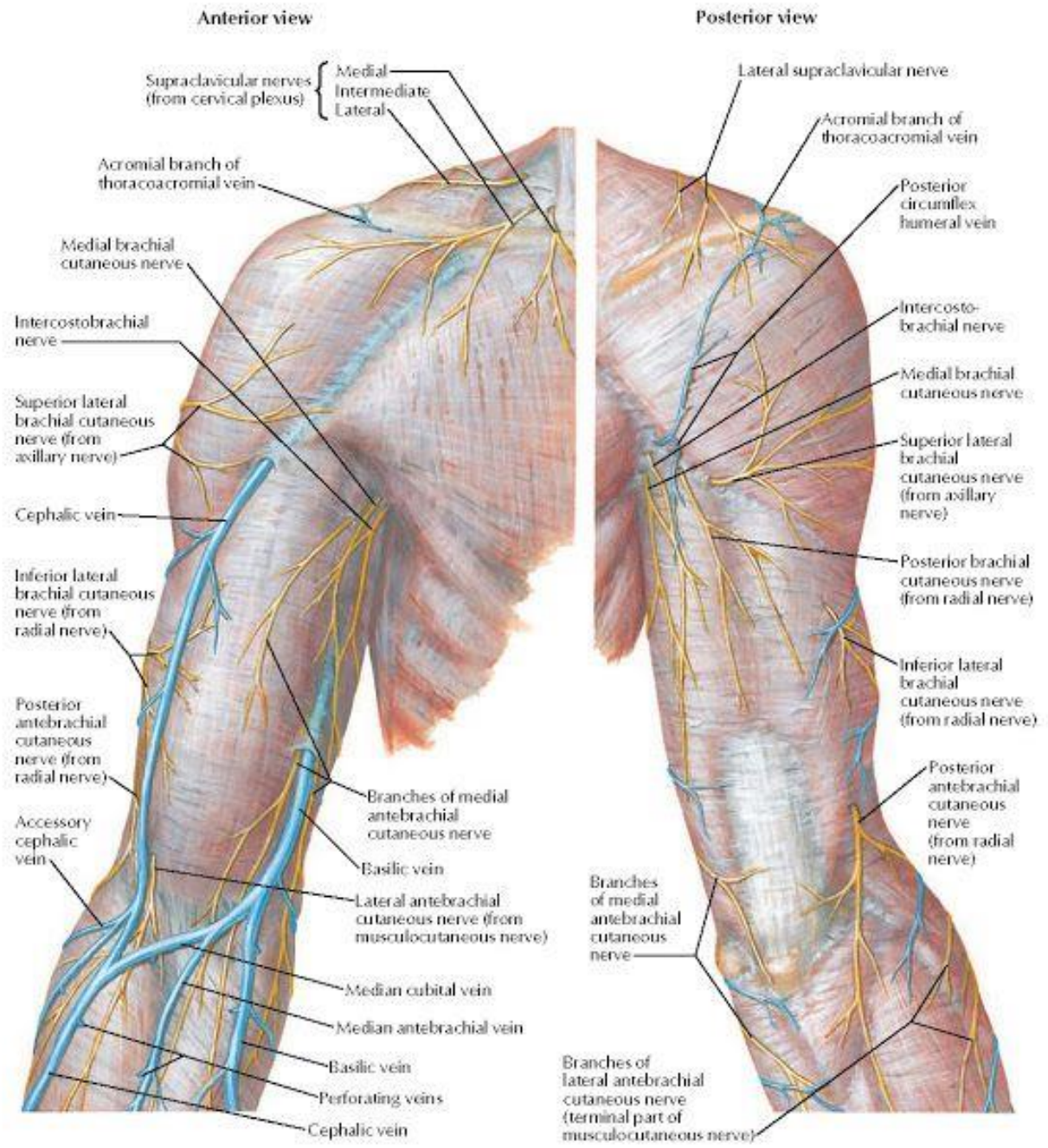
ANTERIOR MUSCLES OF SHOULDER

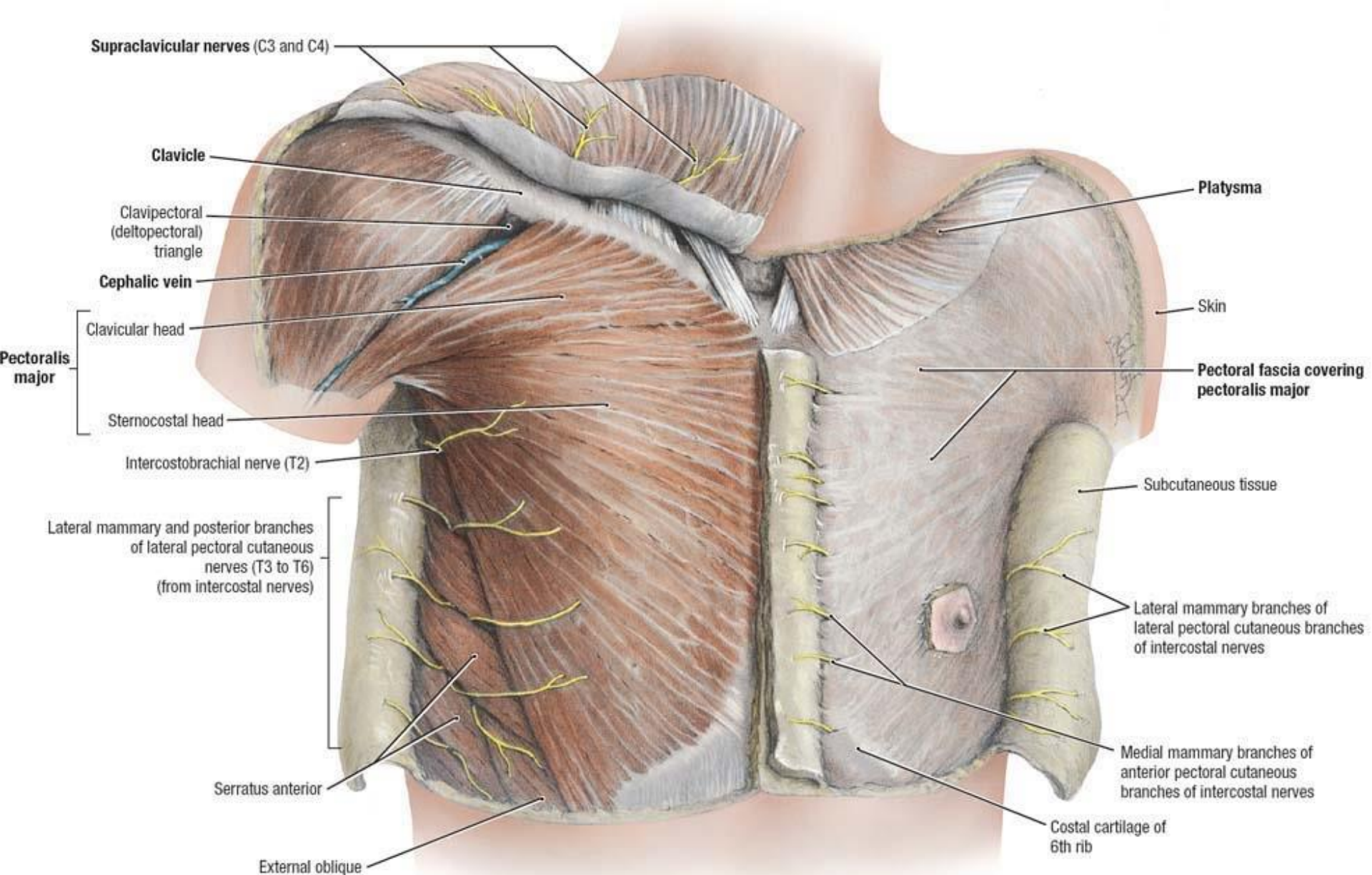


Anterior view



F. Netter
M.D.





Supraclavicular nerves (C3 and C4)

Clavicle

Clavipectoral
(deltopectoral)
triangle

Cephalic vein

Clavicular head

Pectoralis
major

Sternocostal head

Intercostobrachial nerve (T2)

Lateral mammary and posterior branches
of lateral pectoral cutaneous
nerves (T3 to T6)
(from intercostal nerves)

Serratus anterior

External oblique

Platysma

Skin

Pectoral fascia covering
pectoralis major

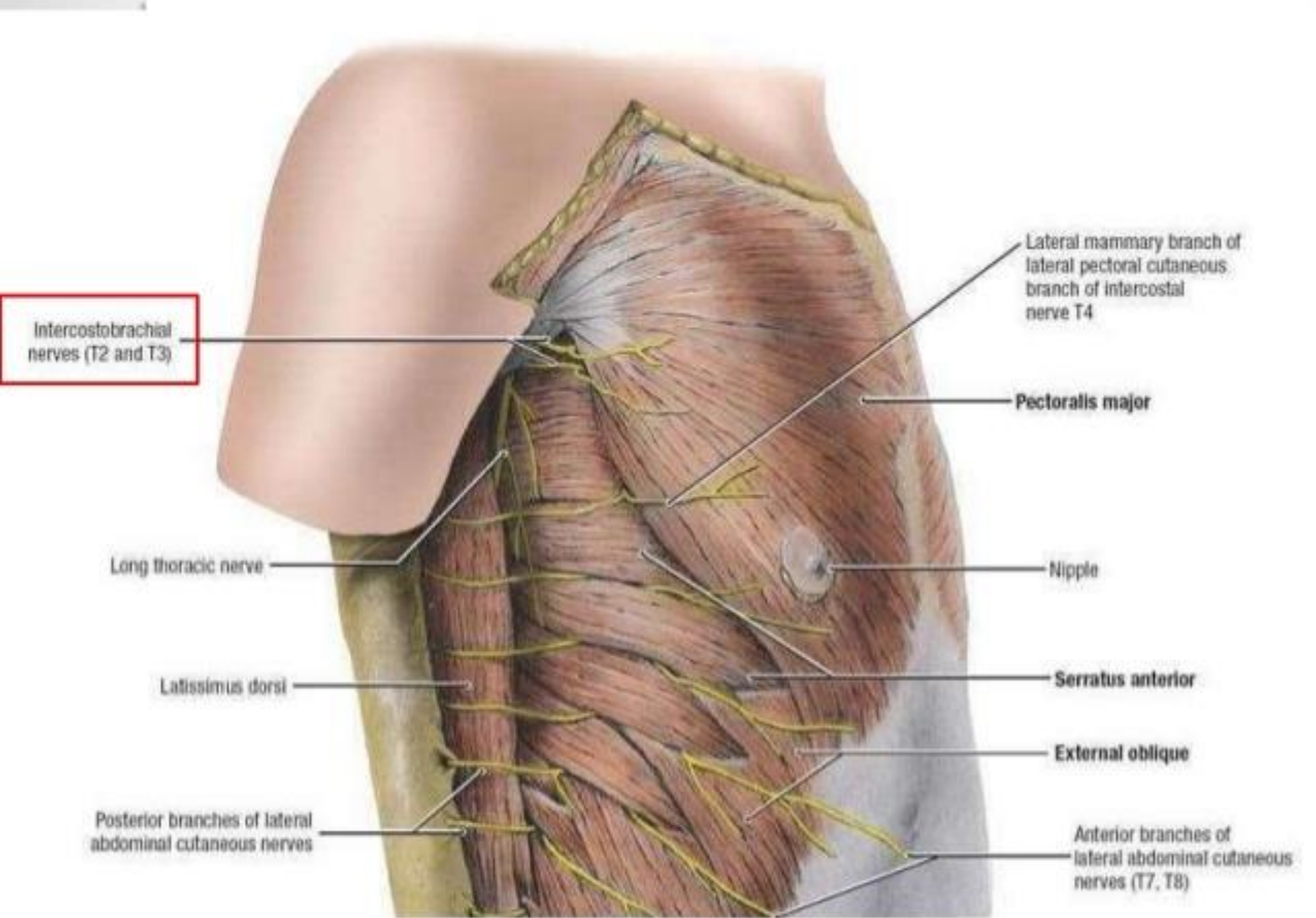
Subcutaneous tissue

Lateral mammary branches of
lateral pectoral cutaneous
branches of intercostal nerves

Medial mammary branches of
anterior pectoral cutaneous
branches of intercostal nerves

Costal cartilage of
6th rib

Anterior View



Intercostobrachial nerves (T2 and T3)

Lateral mammary branch of lateral pectoral cutaneous branch of intercostal nerve T4

Pectoralis major

Nipple

Serratus anterior

External oblique

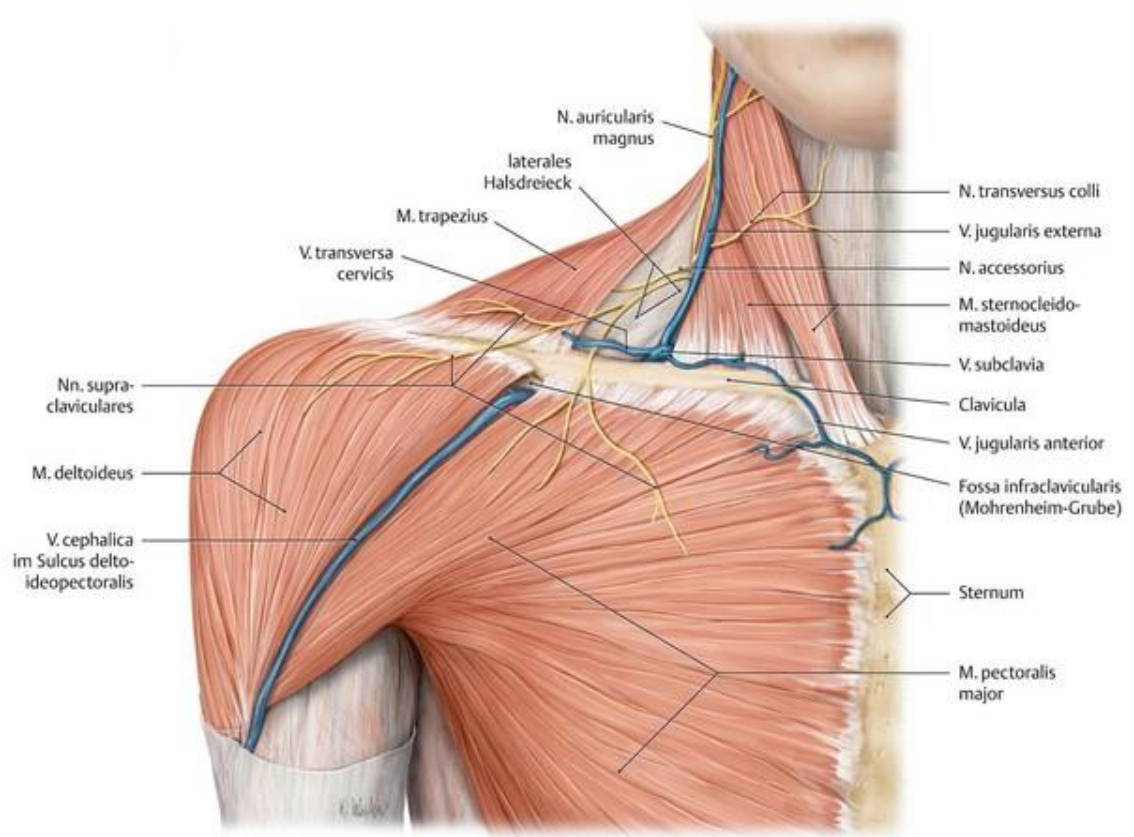
Anterior branches of lateral abdominal cutaneous nerves (T7, T8)

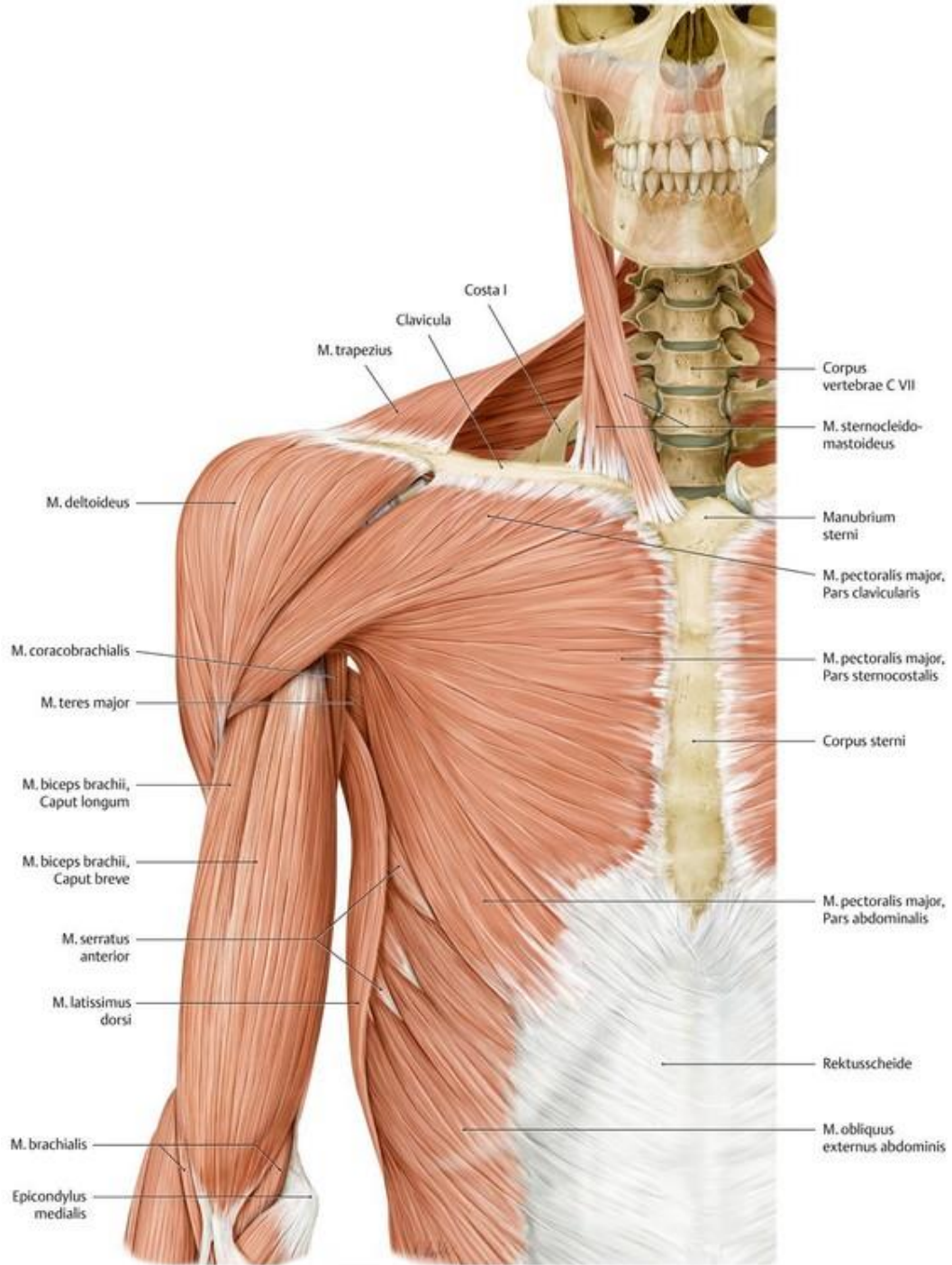
Long thoracic nerve

Latissimus dorsi

Posterior branches of lateral abdominal cutaneous nerves

A. Anterolateral View





Clavicula

Costa I

M. trapezius

Corpus vertebrae C VII

M. sternocleidomastoideus

M. deltoideus

Manubrium sterni

M. pectoralis major, Pars clavicularis

M. coracobrachialis

M. pectoralis major, Pars sternocostalis

M. teres major

Corpus sterni

M. biceps brachii, Caput longum

M. pectoralis major, Pars abdominalis

M. biceps brachii, Caput breve

M. serratus anterior

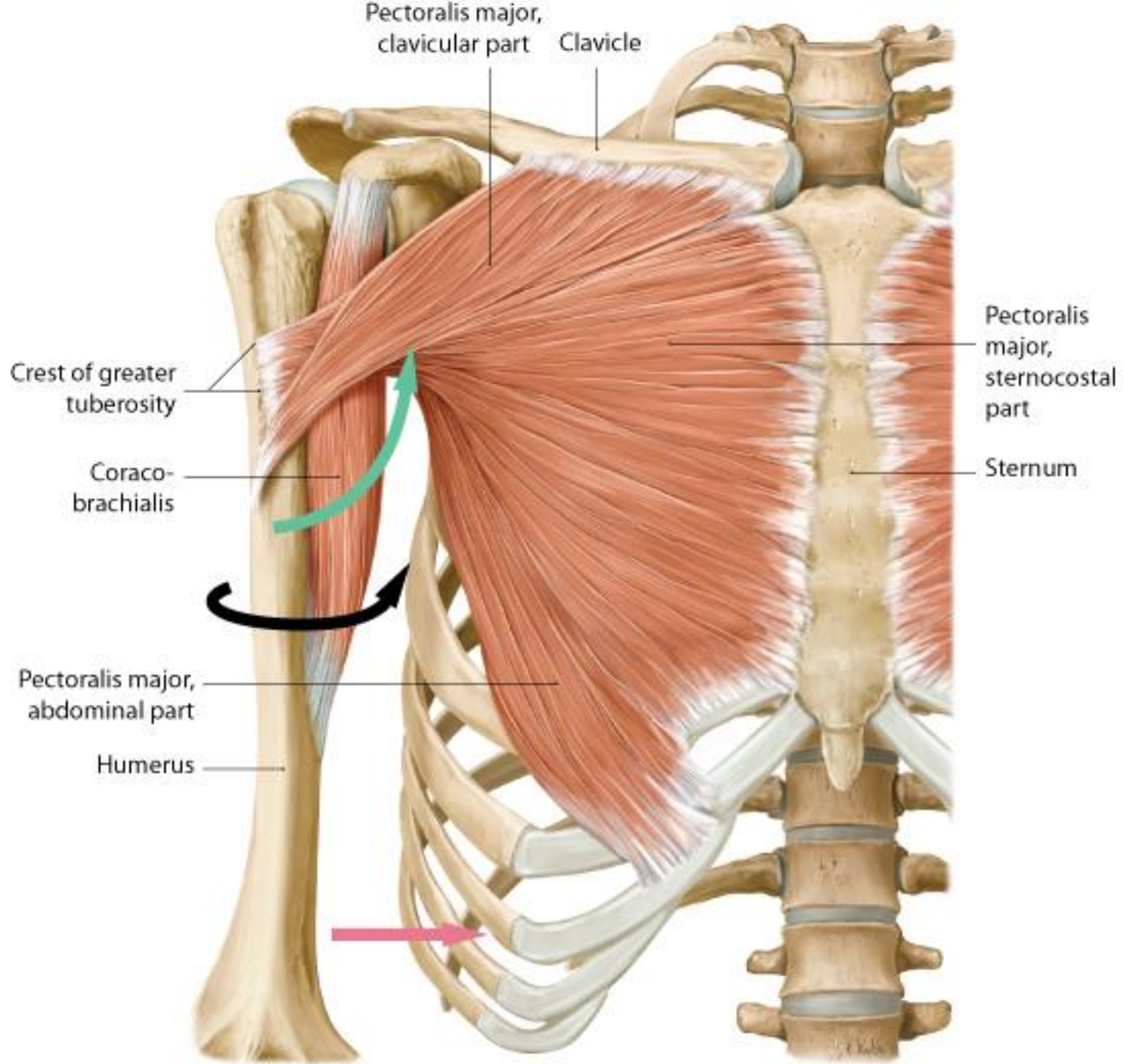
Rektusscheide

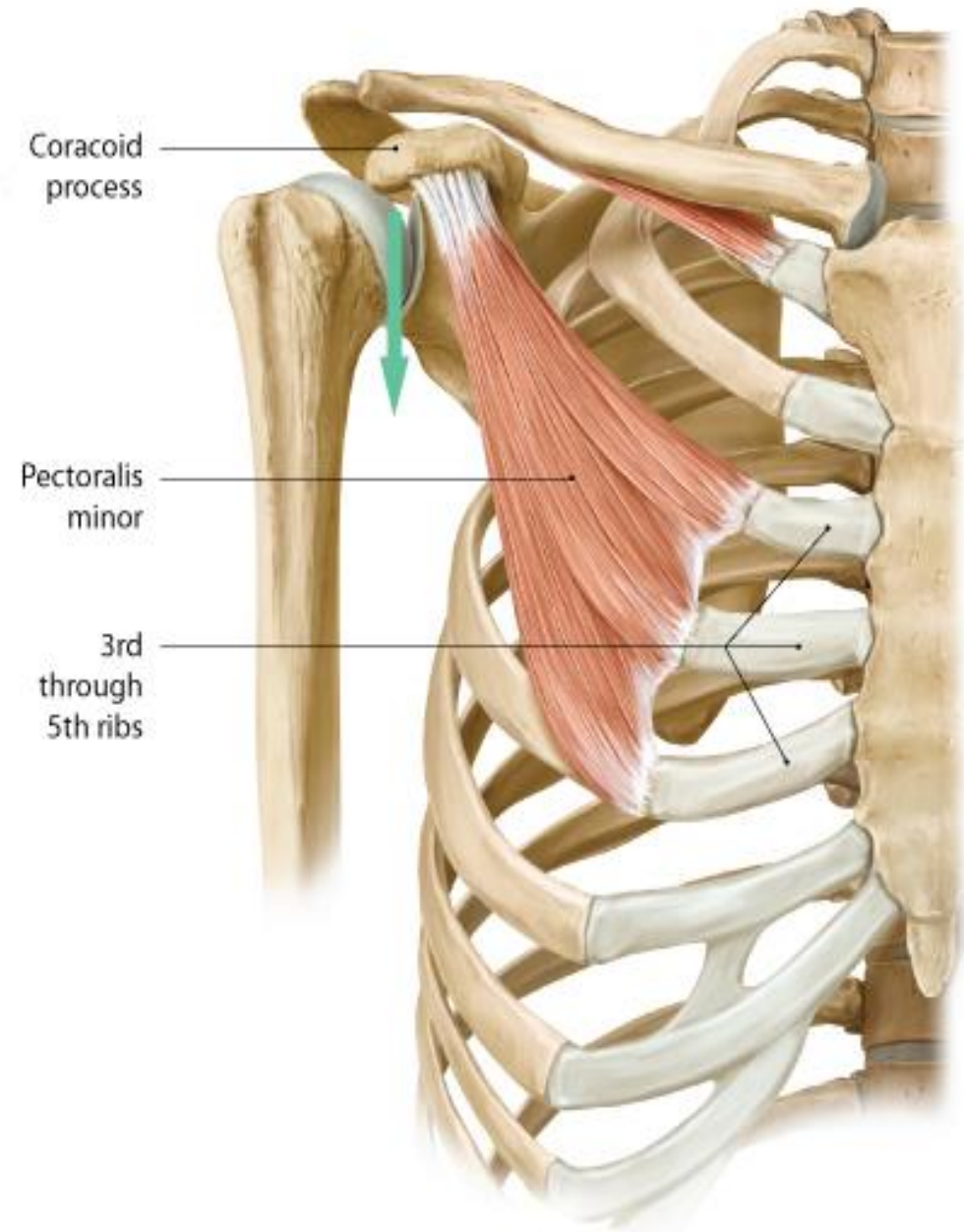
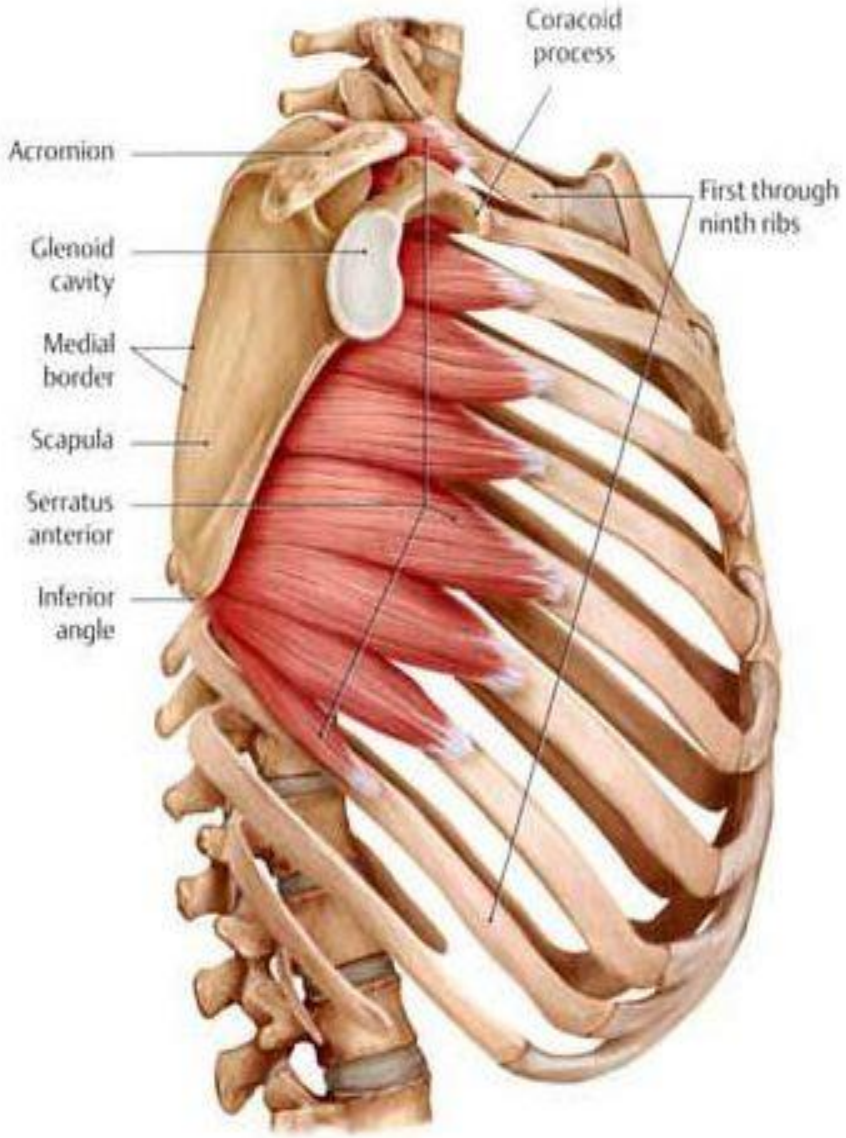
M. latissimus dorsi

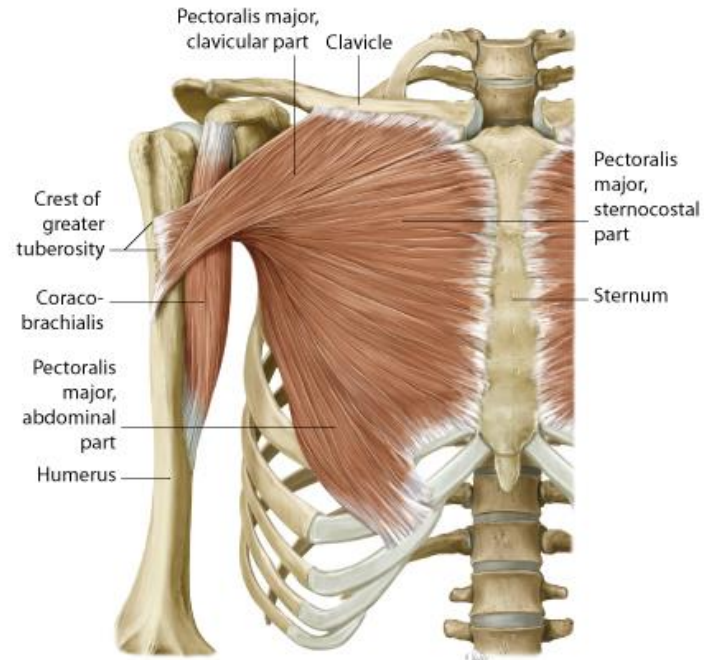
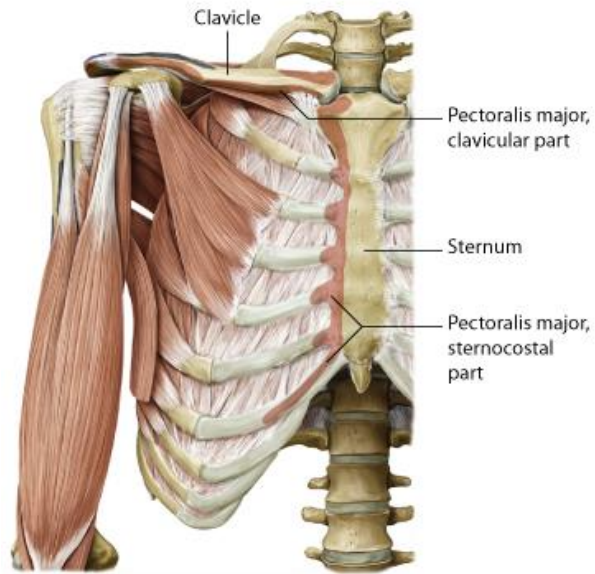
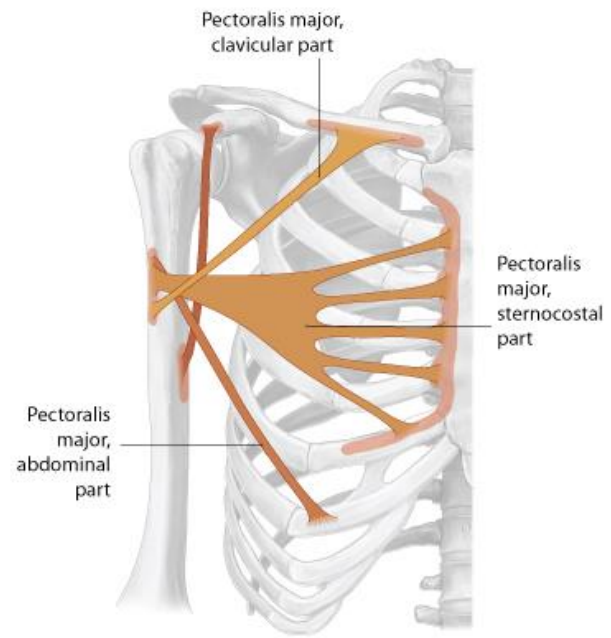
M. obliquus externus abdominis

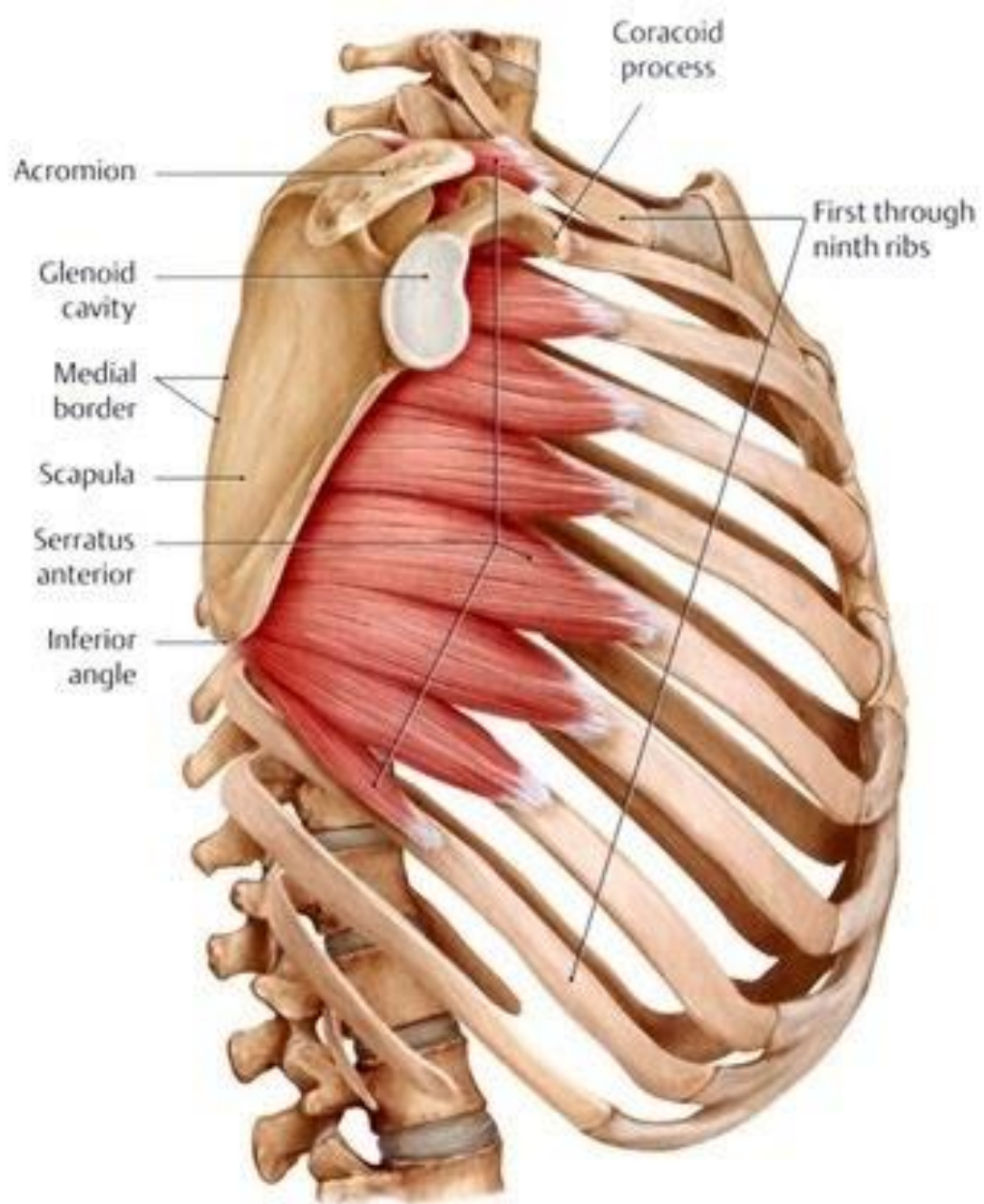
M. brachialis

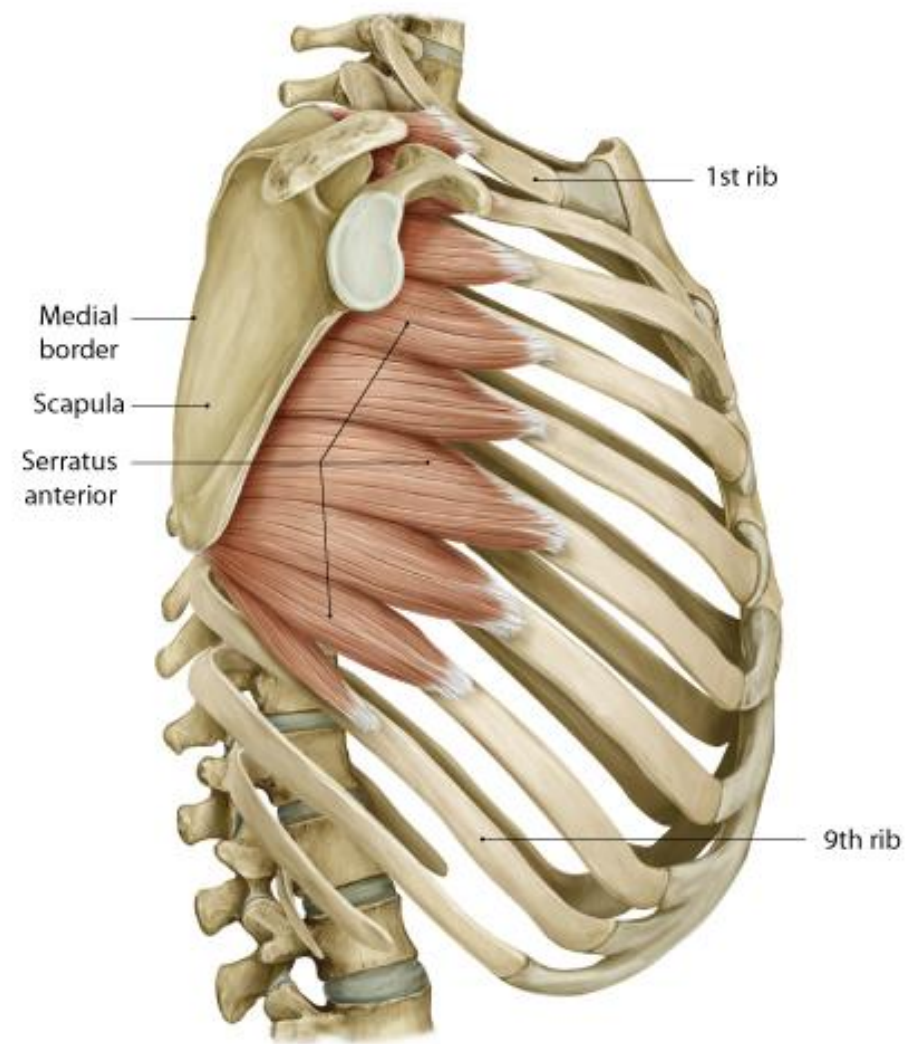
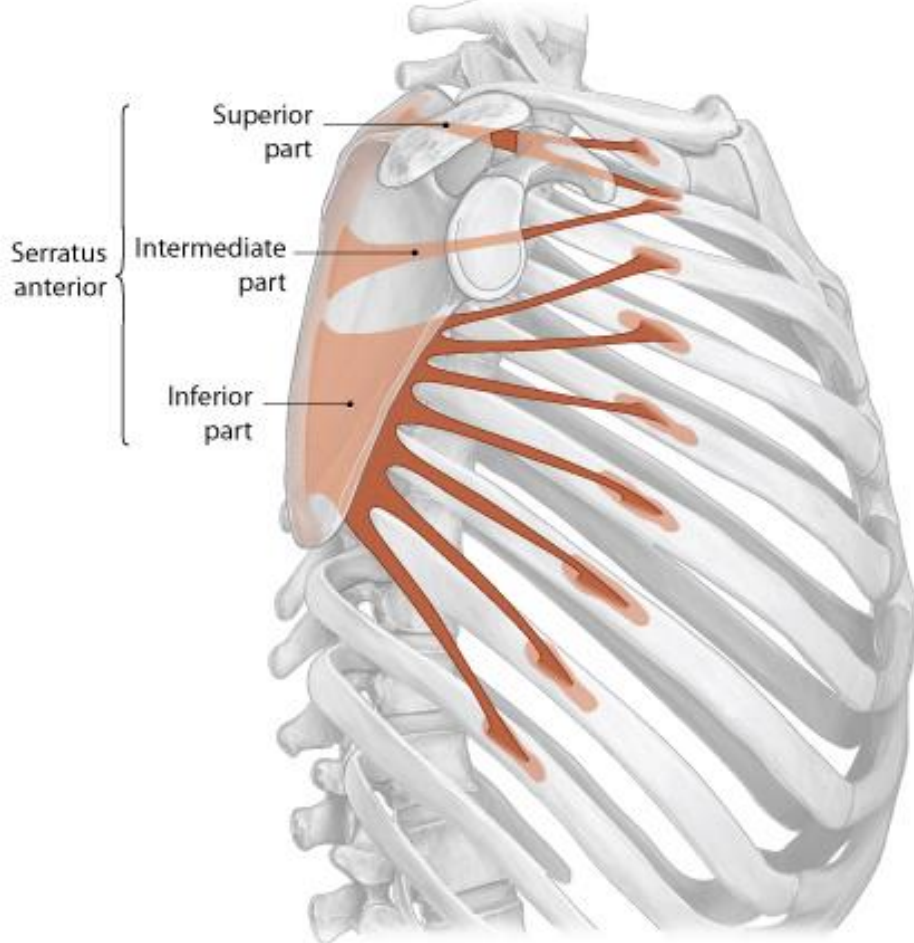
Epicondylus medialis

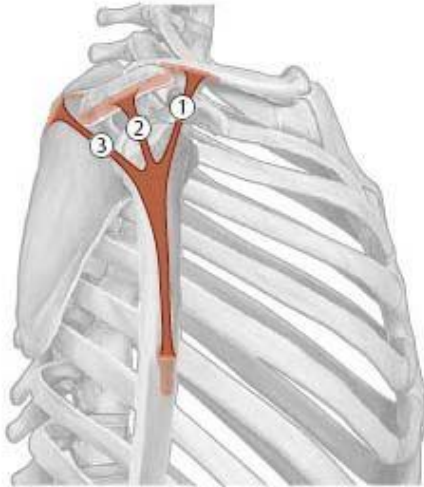




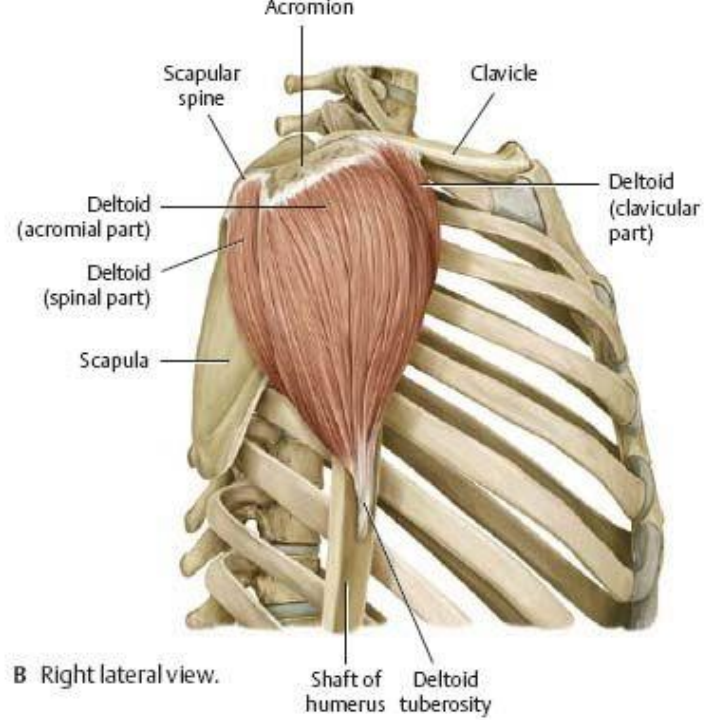




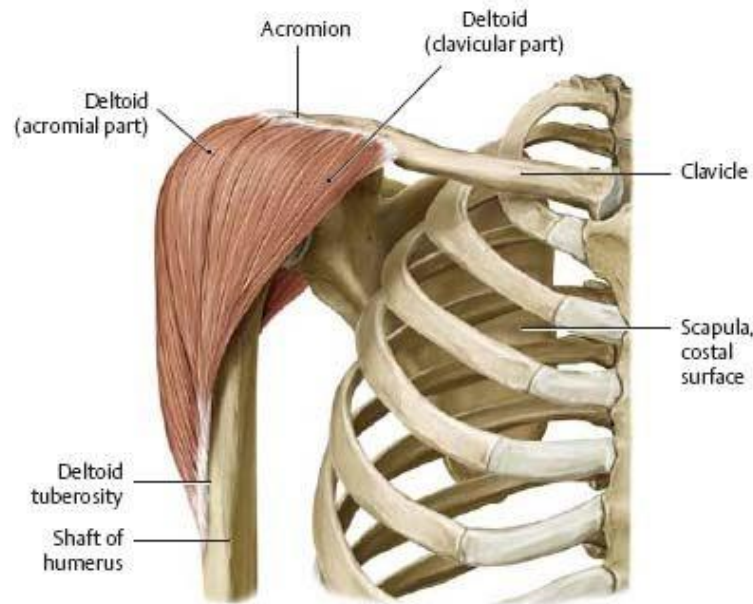




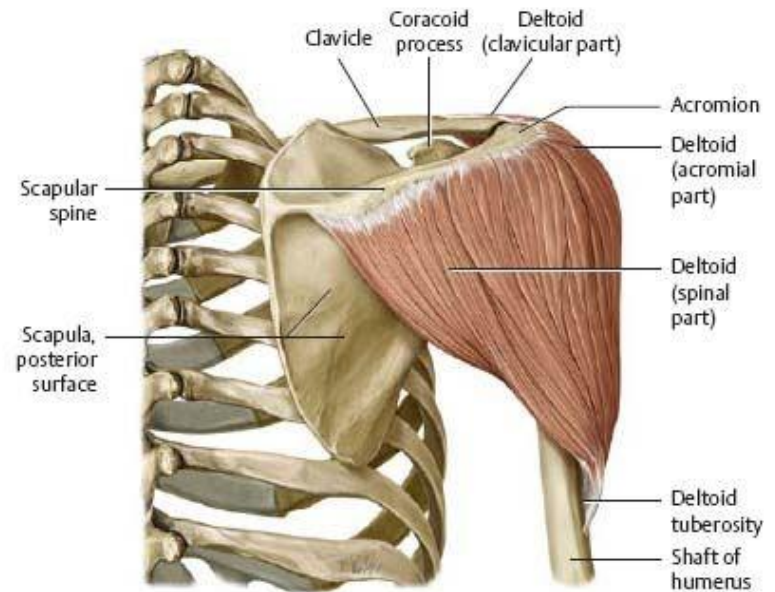
A Parts of the deltoid, right lateral view.



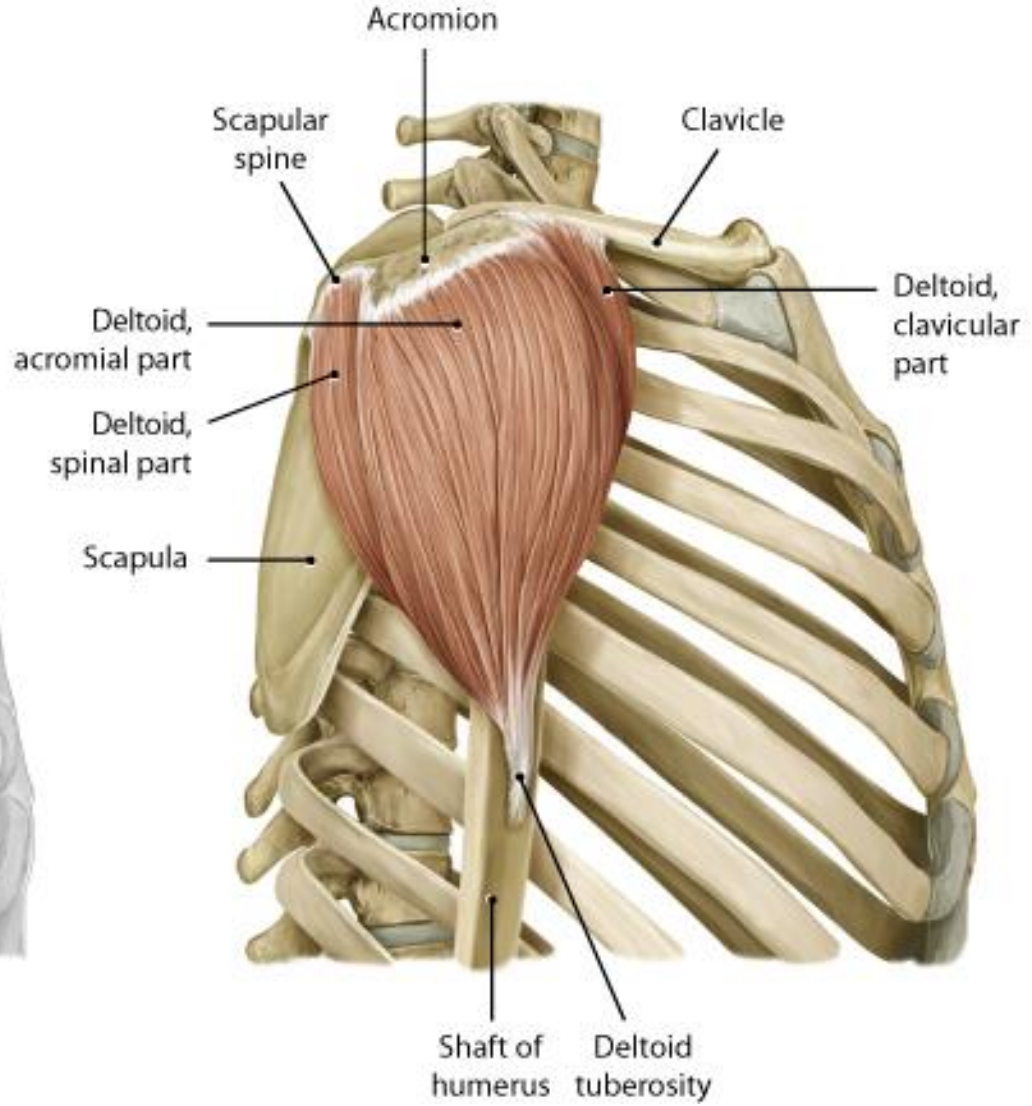
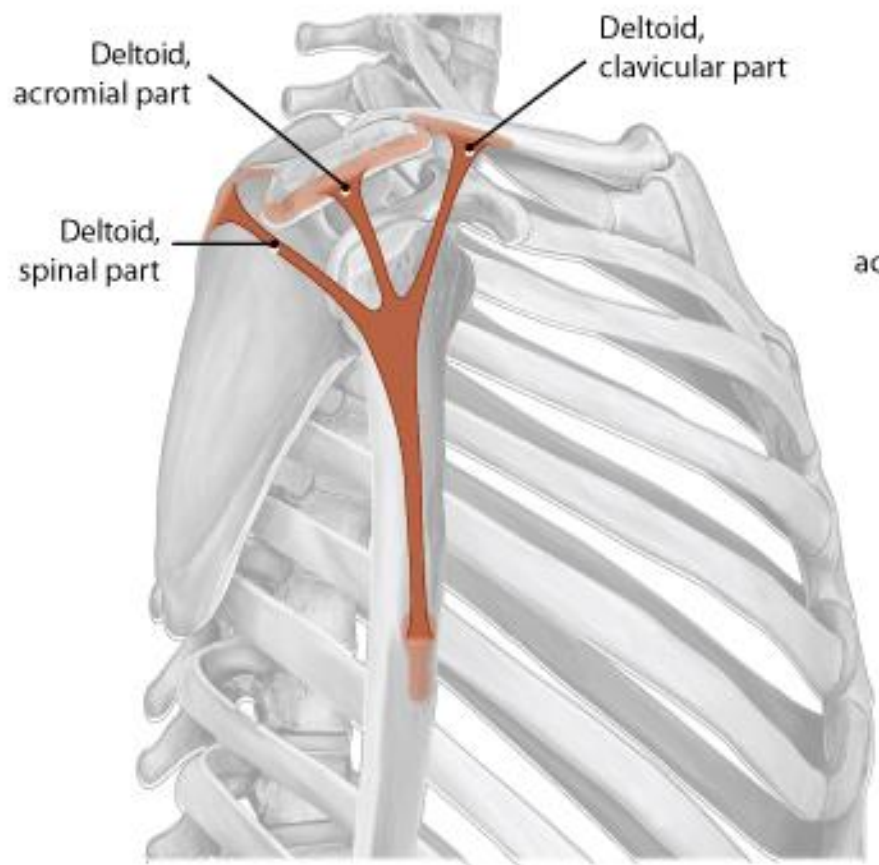
B Right lateral view.

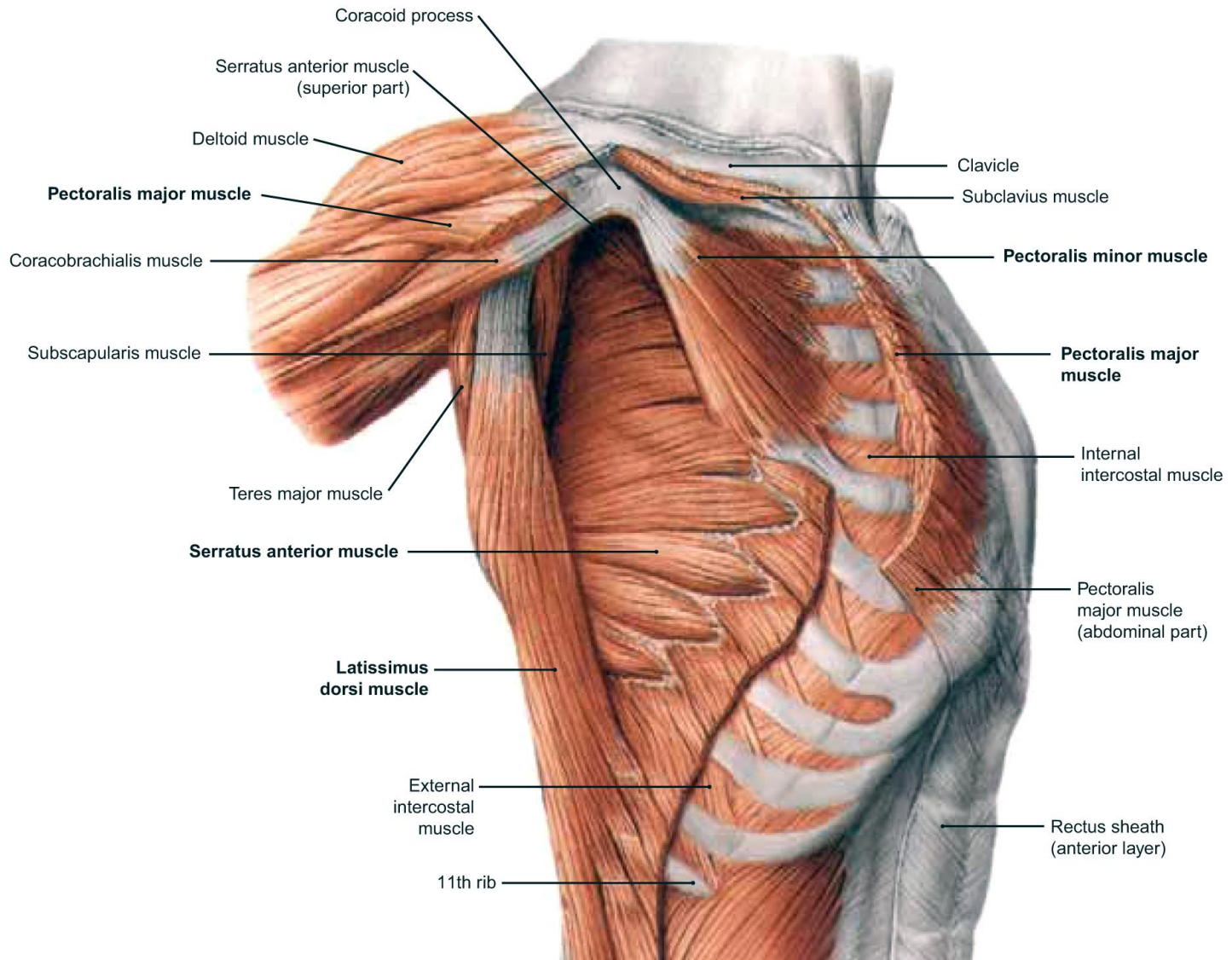


C Anterior view.

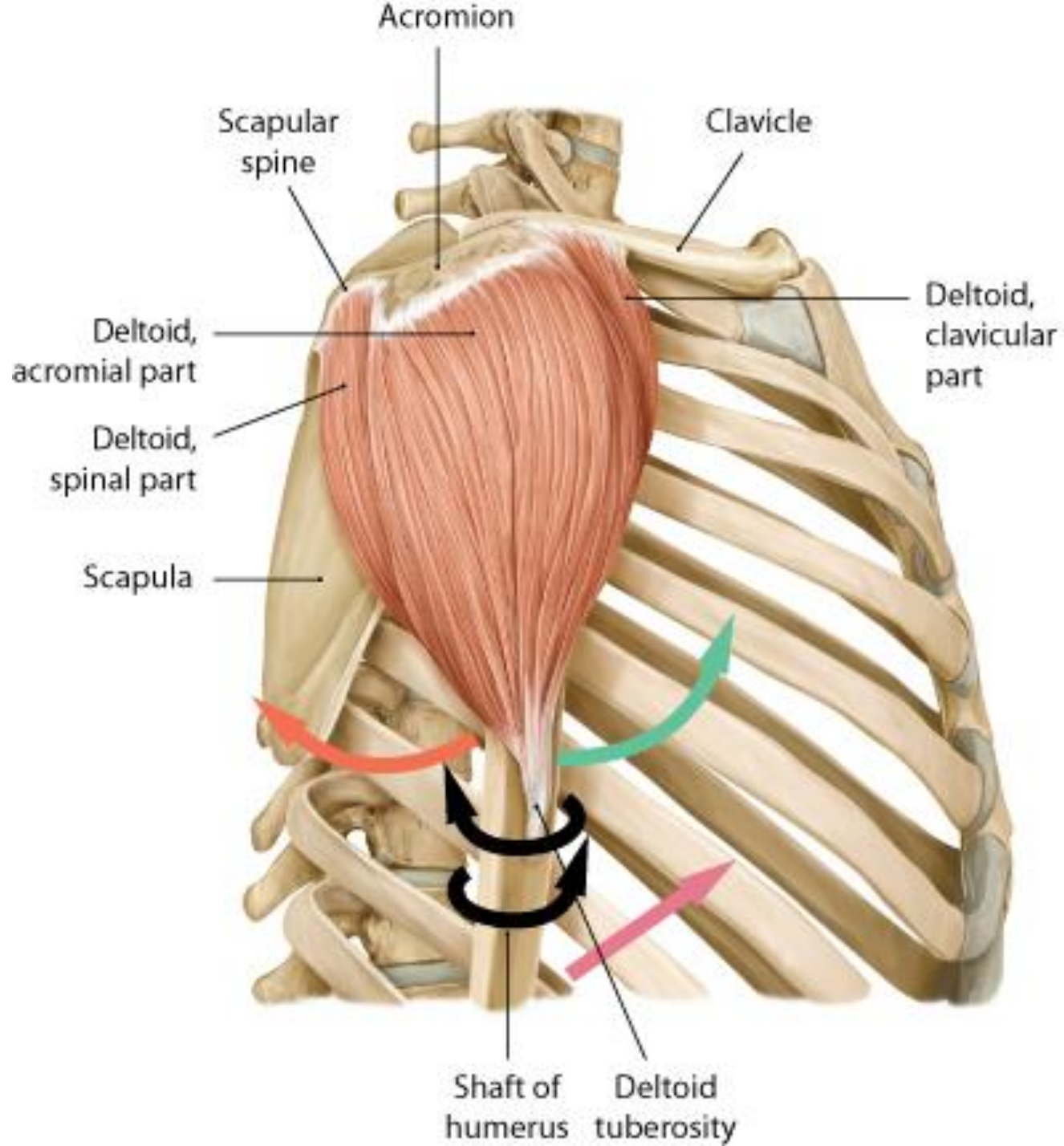


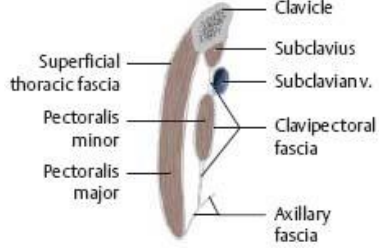
D Posterior view.



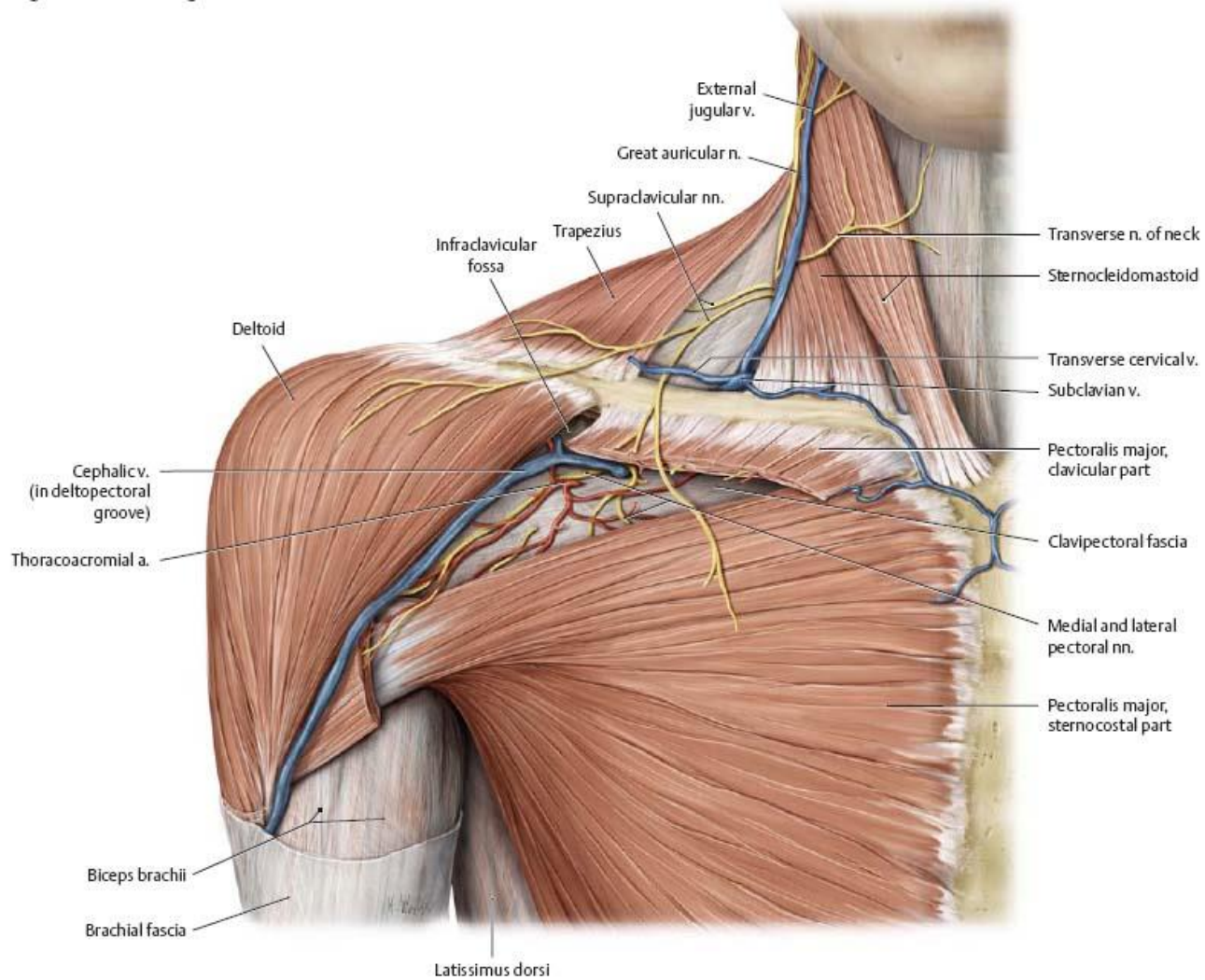


PECTORALIS MINOR, SERRATUS ANTERIOR, AND LATISSIMUS DORSI MUSCLES, LATERAL VIEW (RIGHT)

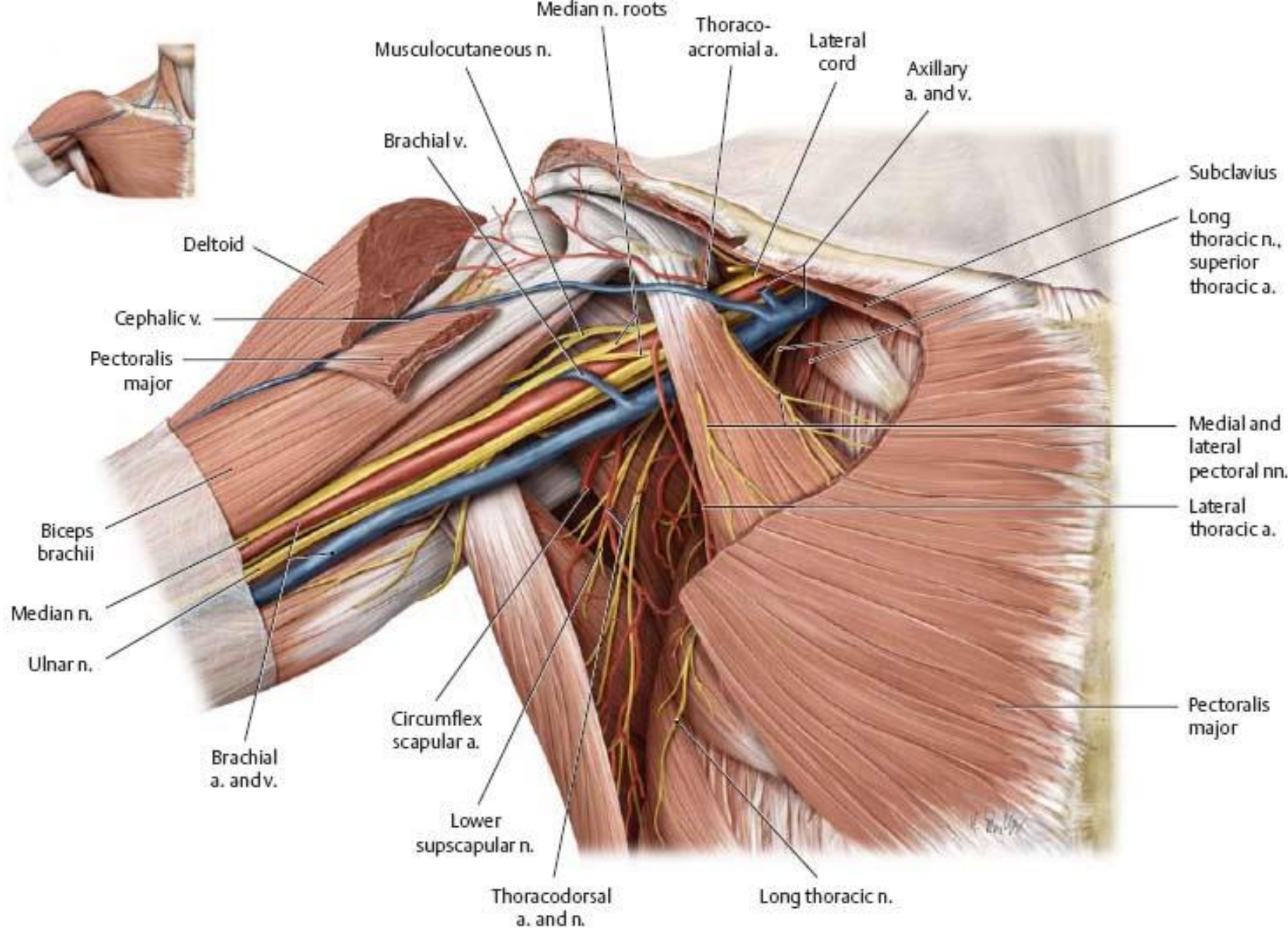




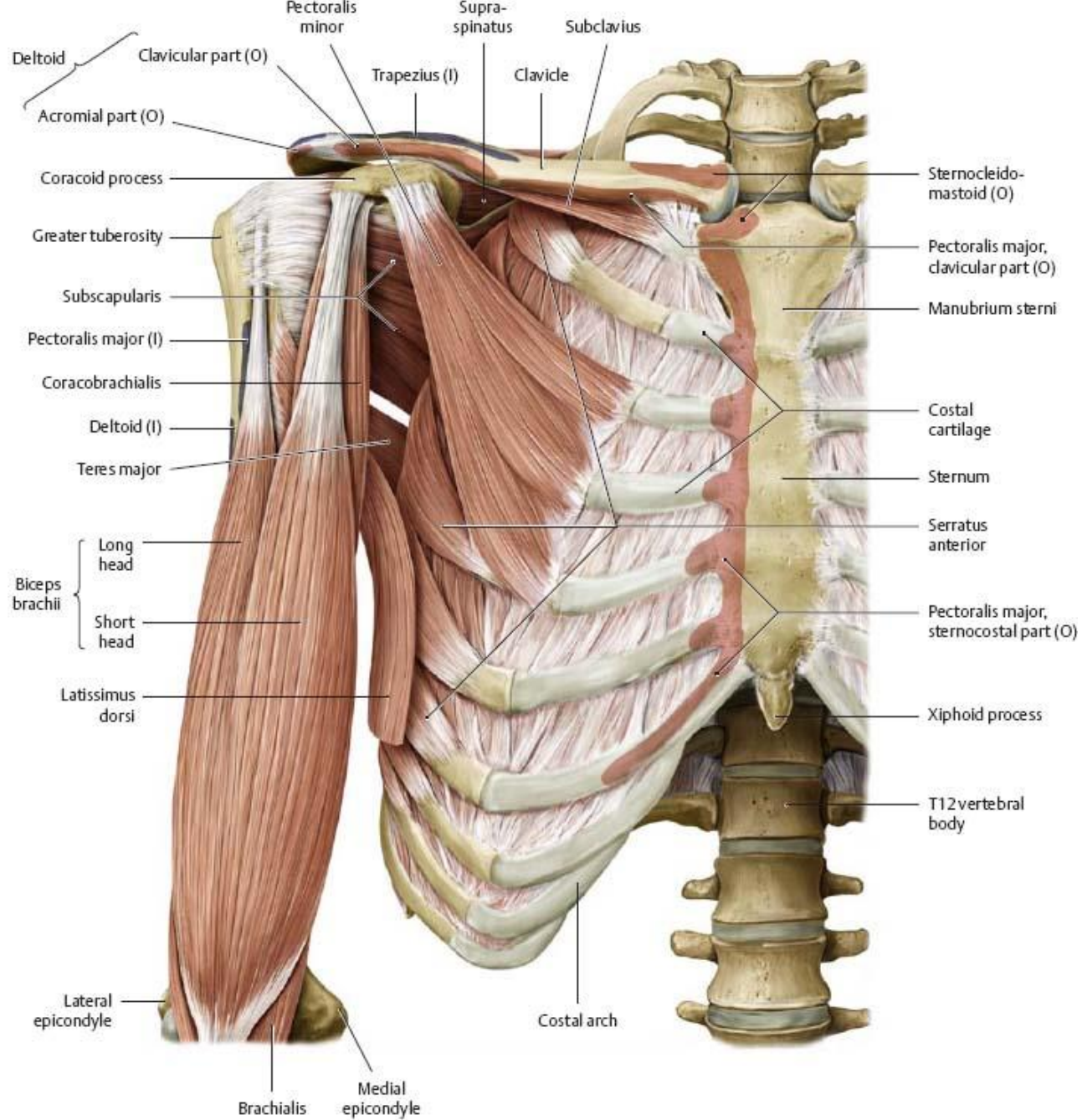
A Sagittal section through anterior wall.



B Anterior view. *Removed:* Platysma, muscle fasciae, superficial layer of cervical fascia, and pectoralis major (clavicular part).
Revealed: Clavipectoral triangle.



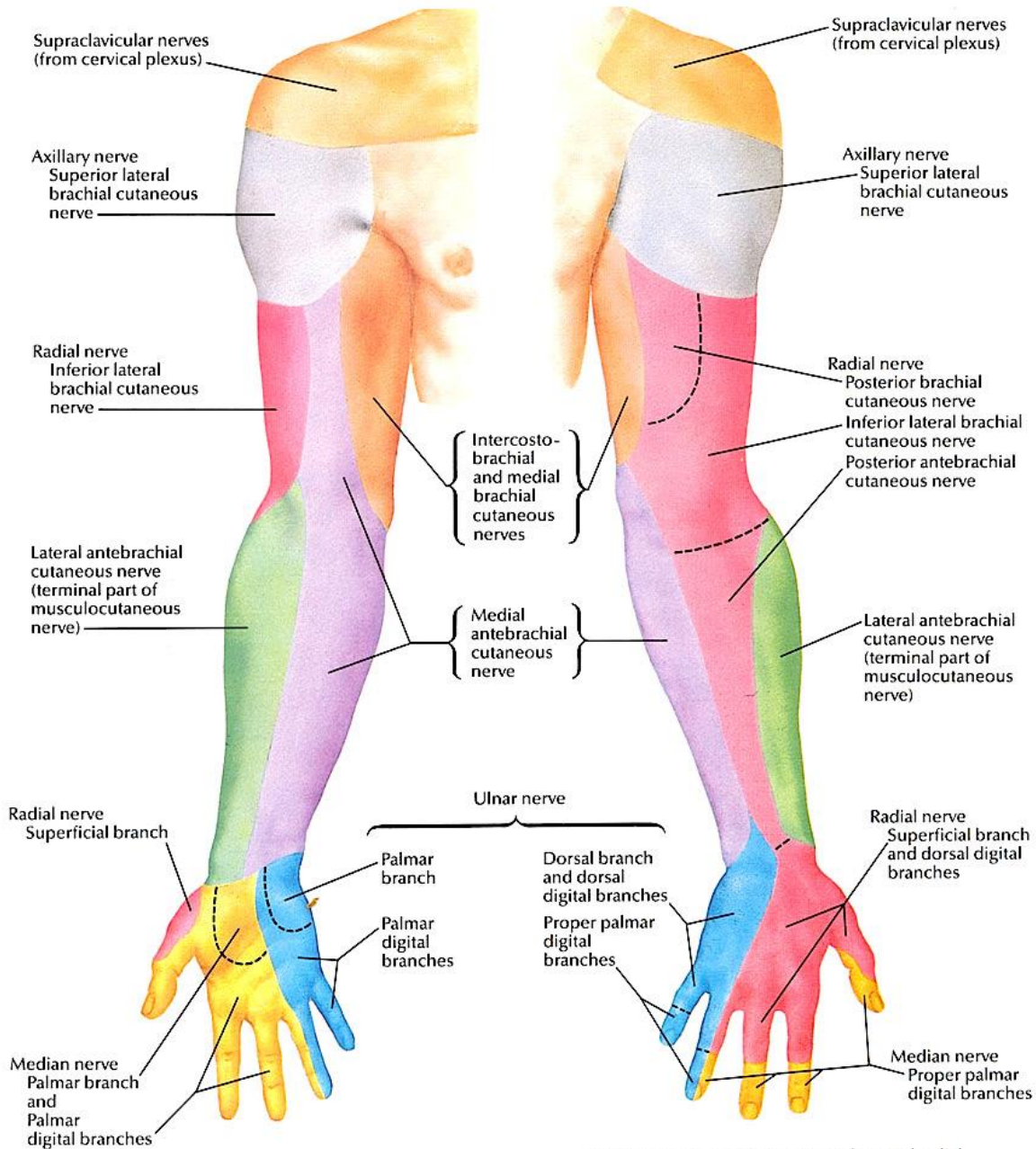
A Removed: Pectoralis major and clavipectoral fascia.



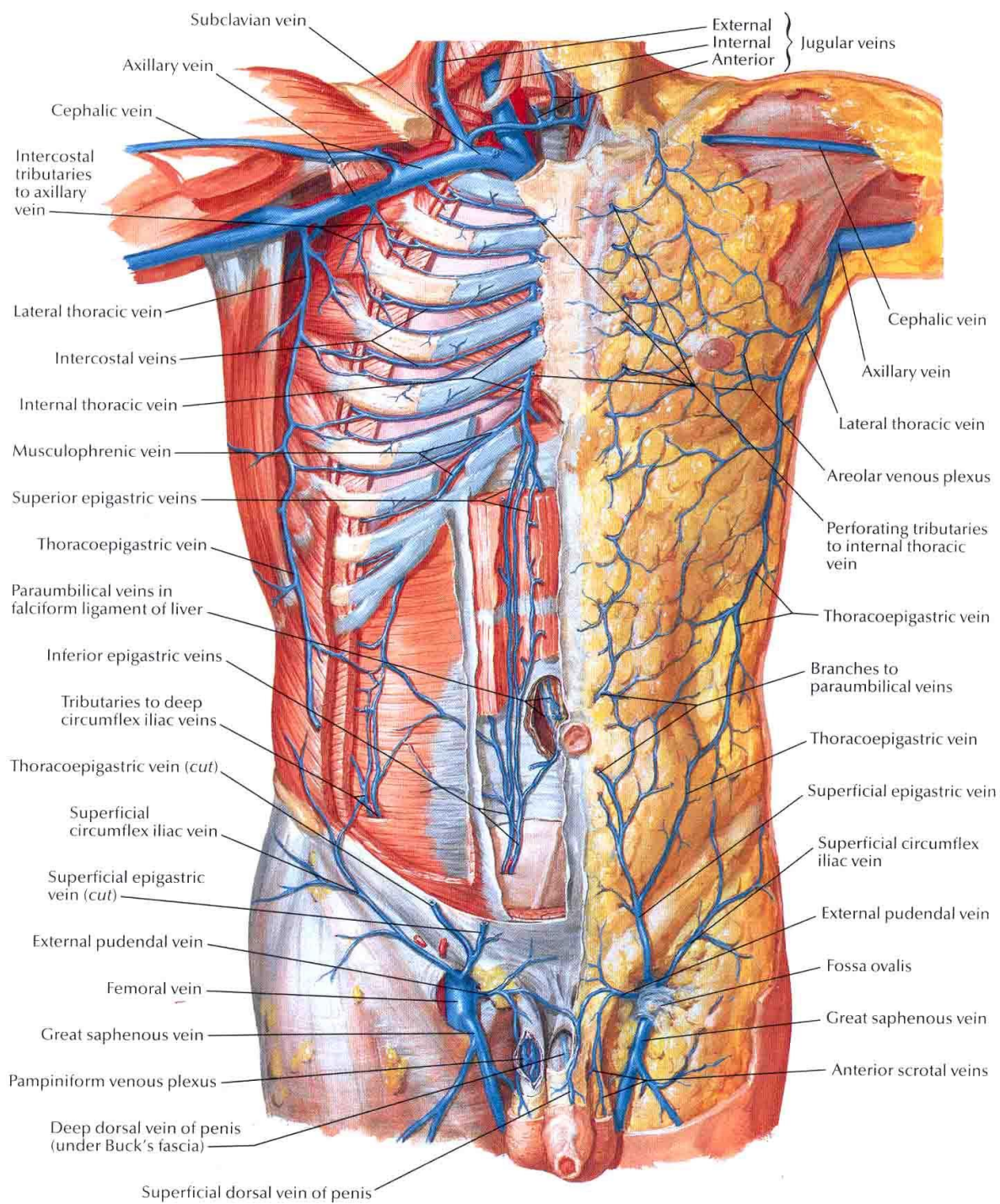
B Deep dissection. *Removed:* Sternocleidomastoid, trapezius, pectoralis major, deltoid, and external oblique muscles.

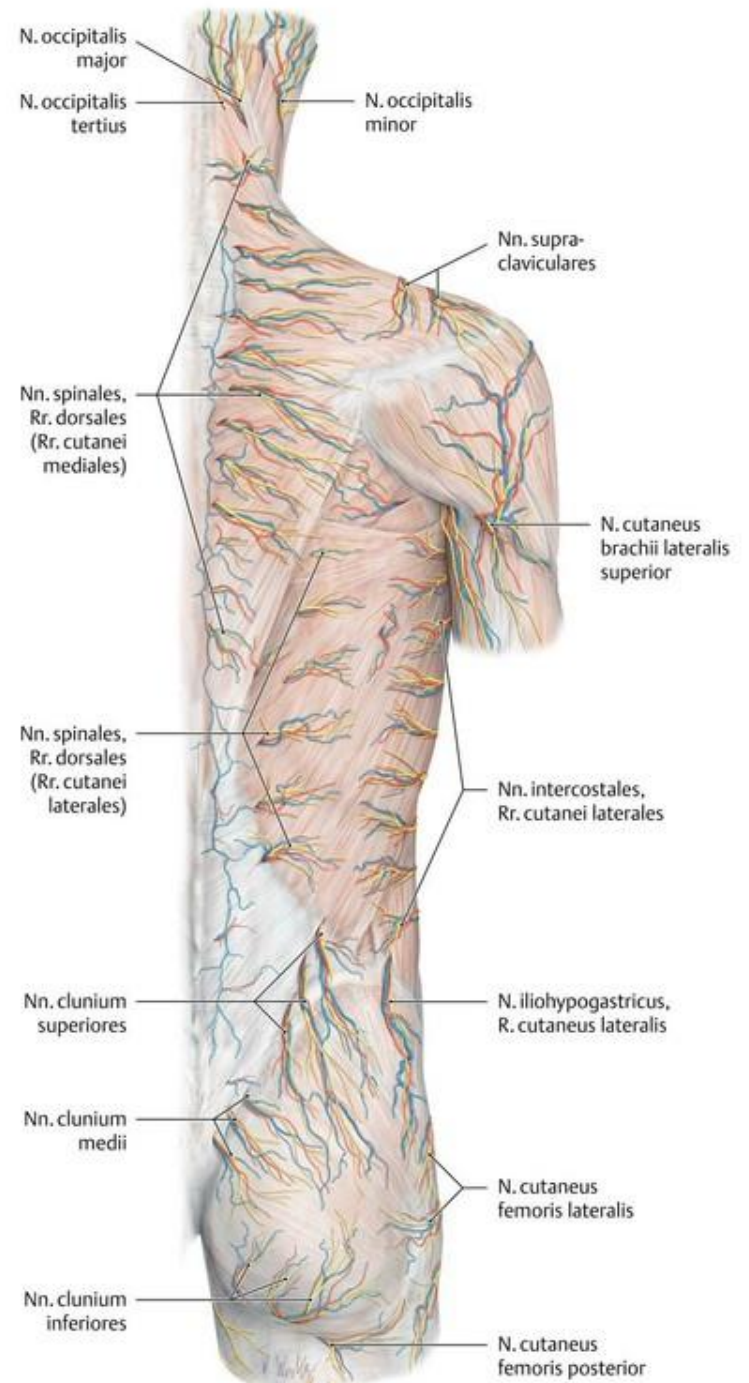
Anterior (palmar) view

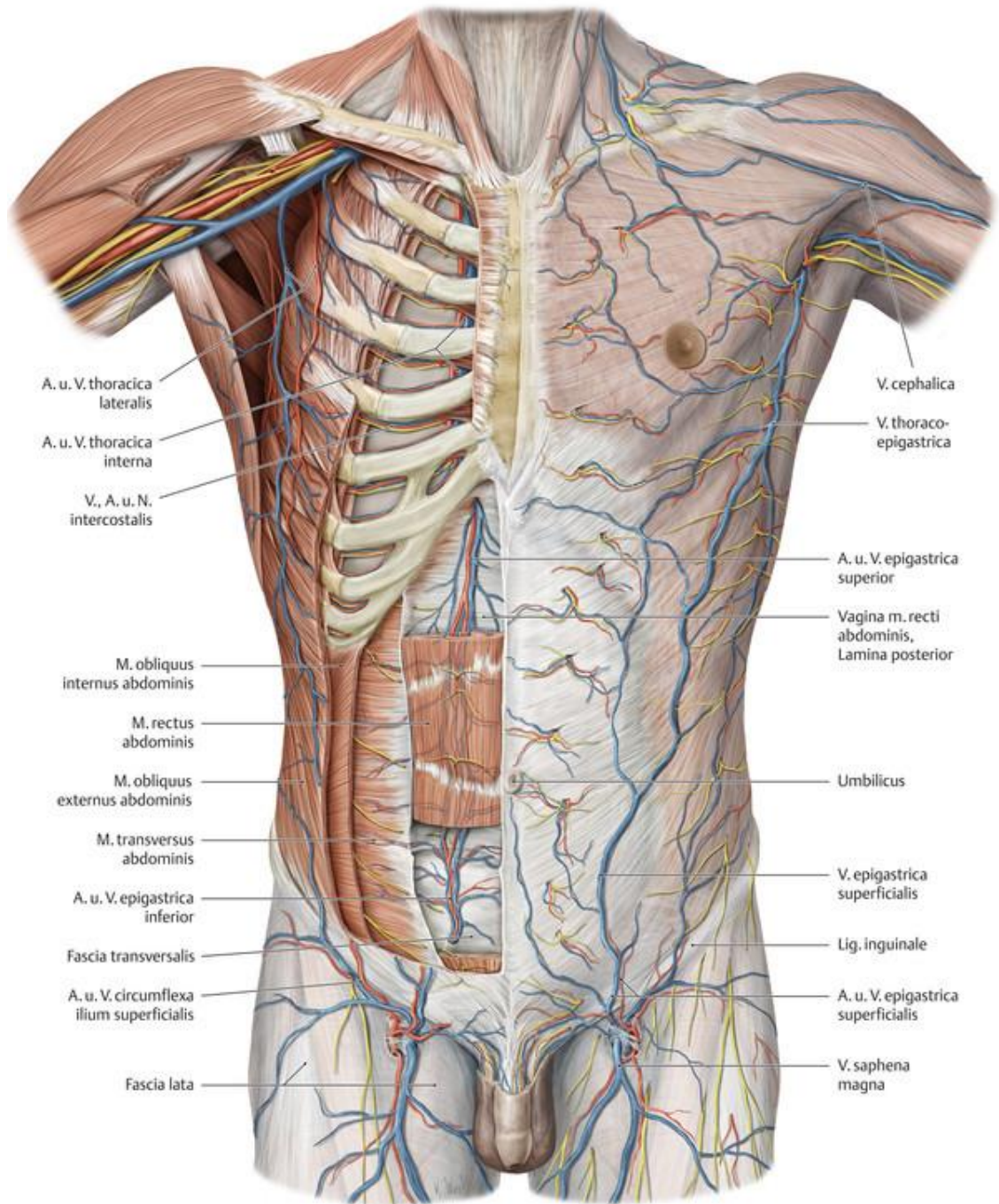
Posterior (dorsal) view



Note: division variable between ulnar and radial innervation on dorsum of hand and often aligns with middle of 3rd digit instead of 4th digit as shown







A. u. V. thoracica lateralis

A. u. V. thoracica interna

V., A. u. N. intercostalis

M. obliquus internus abdominis

M. rectus abdominis

M. obliquus externus abdominis

M. transversus abdominis

A. u. V. epigastrica inferior

Fascia transversalis

A. u. V. circumflexa ilium superficialis

Fascia lata

V. cephalica

V. thoraco-epigastrica

A. u. V. epigastrica superior

Vagina m. recti abdominis, Lamina posterior

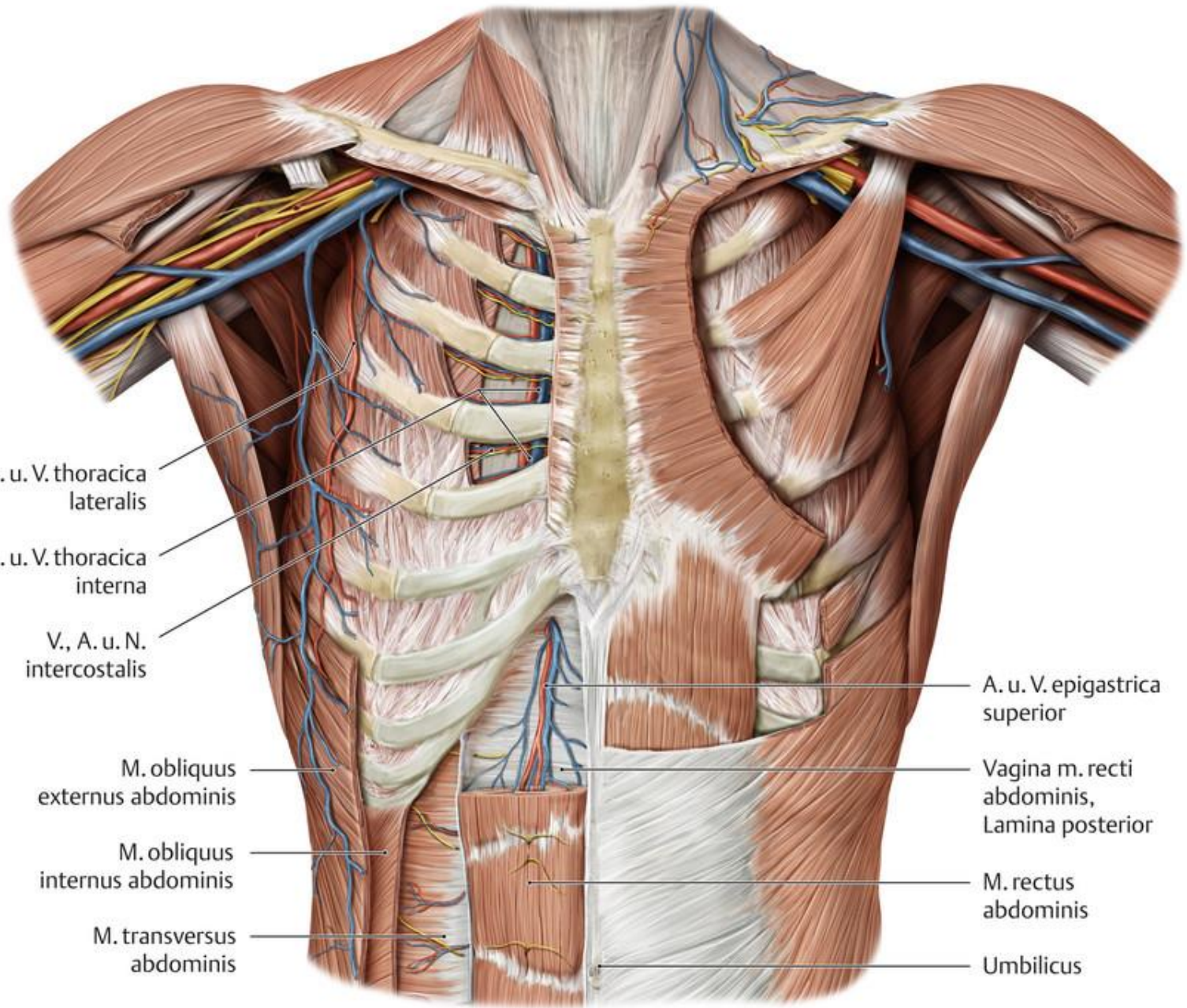
Umbilicus

V. epigastrica superficialis

Lig. inguinale

A. u. V. epigastrica superficialis

V. saphena magna



A. u. V. thoracica
lateralis

A. u. V. thoracica
interna

V., A. u. N.
intercostalis

M. obliquus
externus abdominis

M. obliquus
internus abdominis

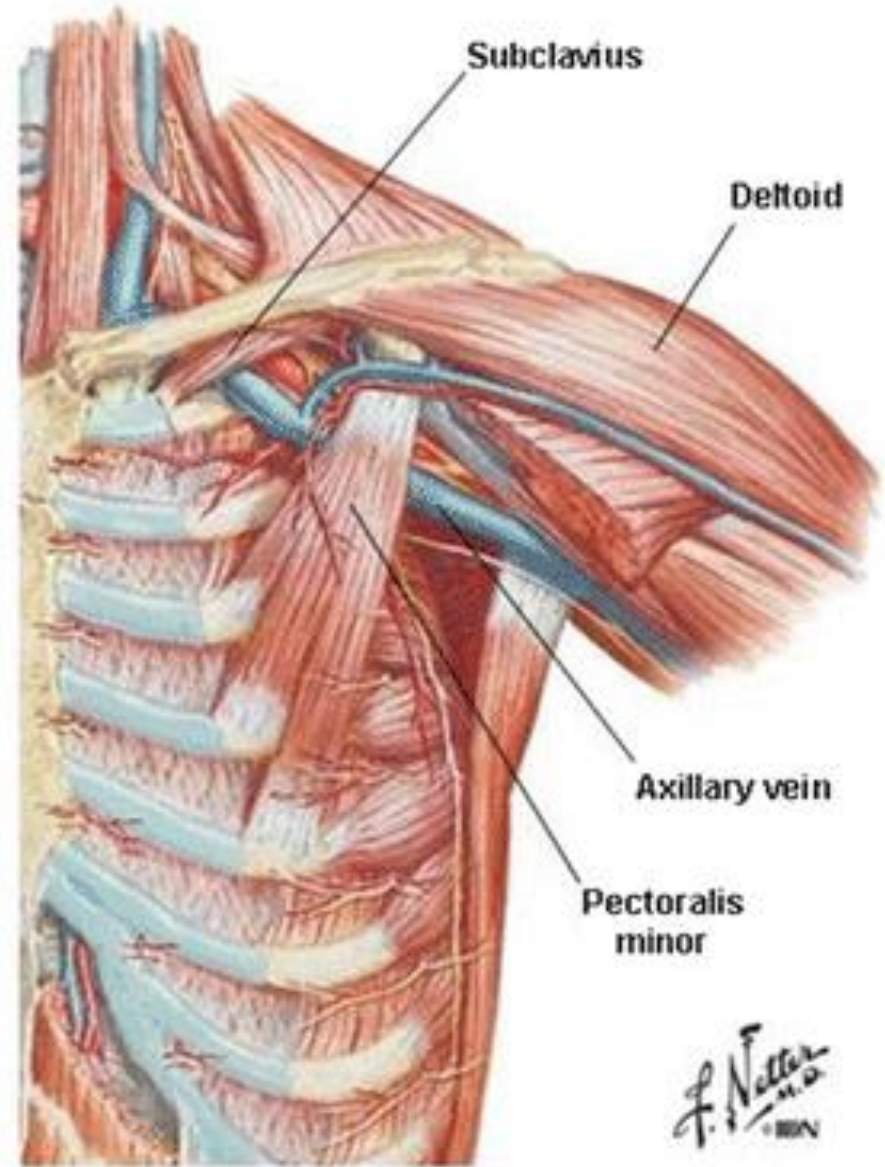
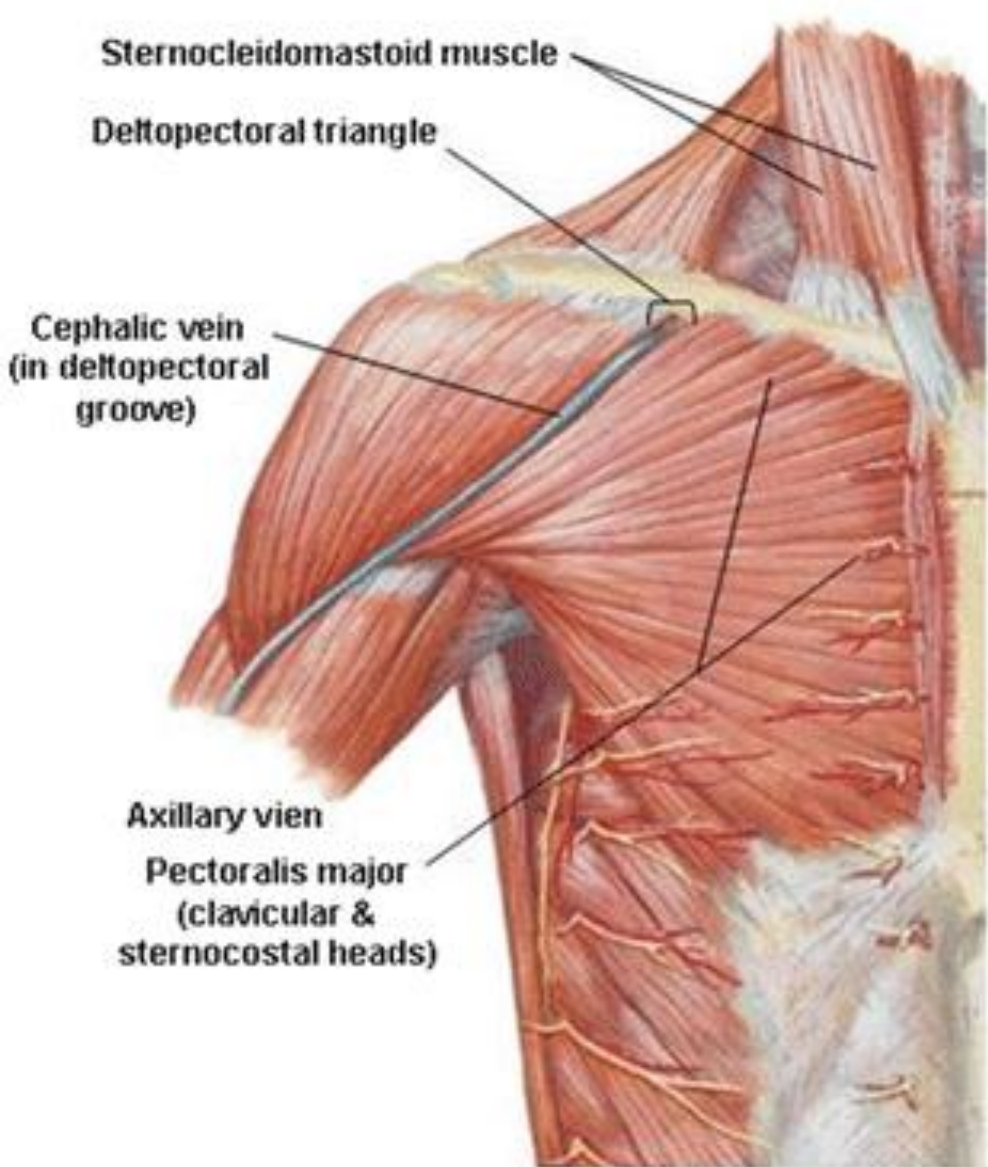
M. transversus
abdominis

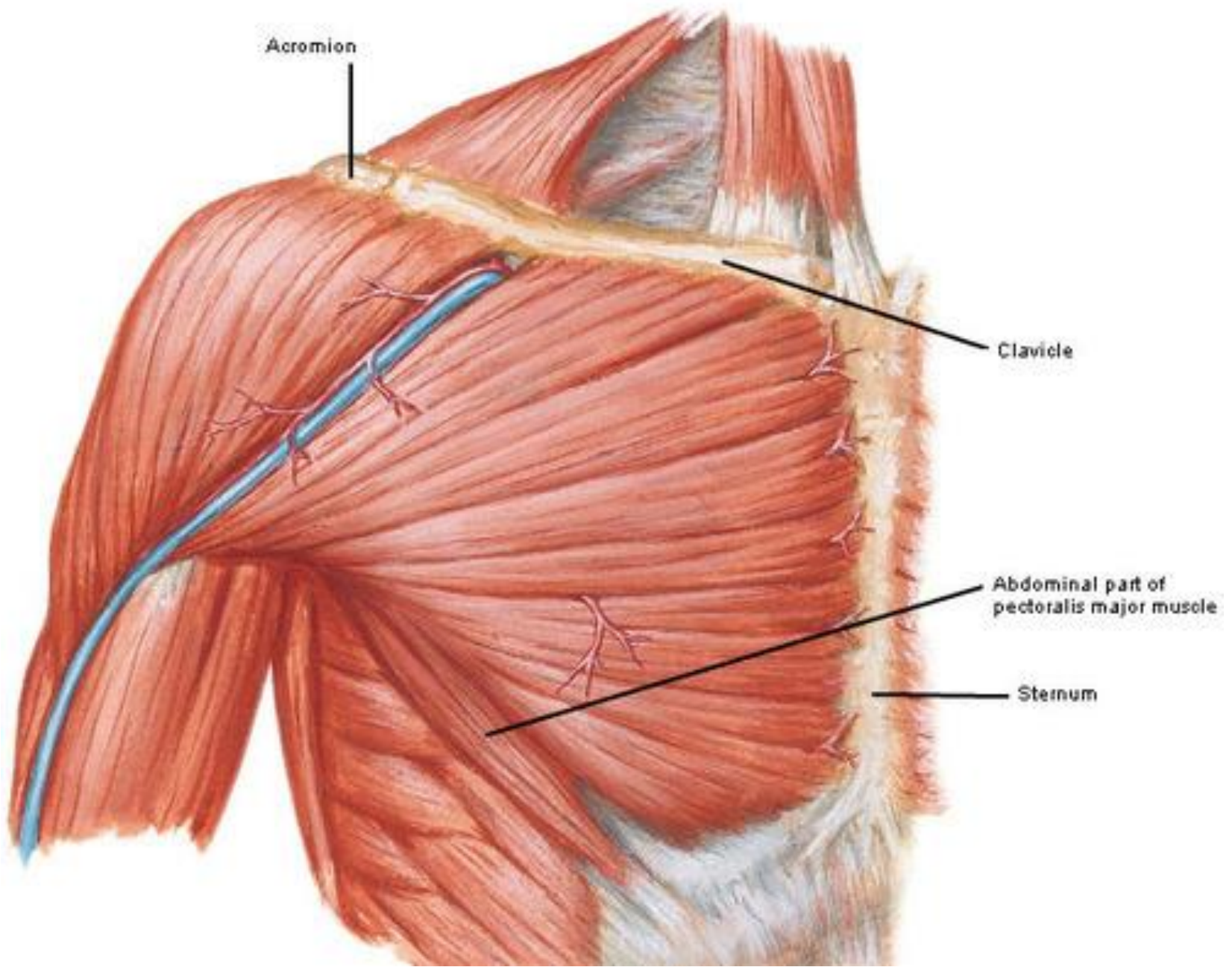
A. u. V. epigastrica
superior

Vagina m. recti
abdominis,
Lamina posterior

M. rectus
abdominis

Umbilicus



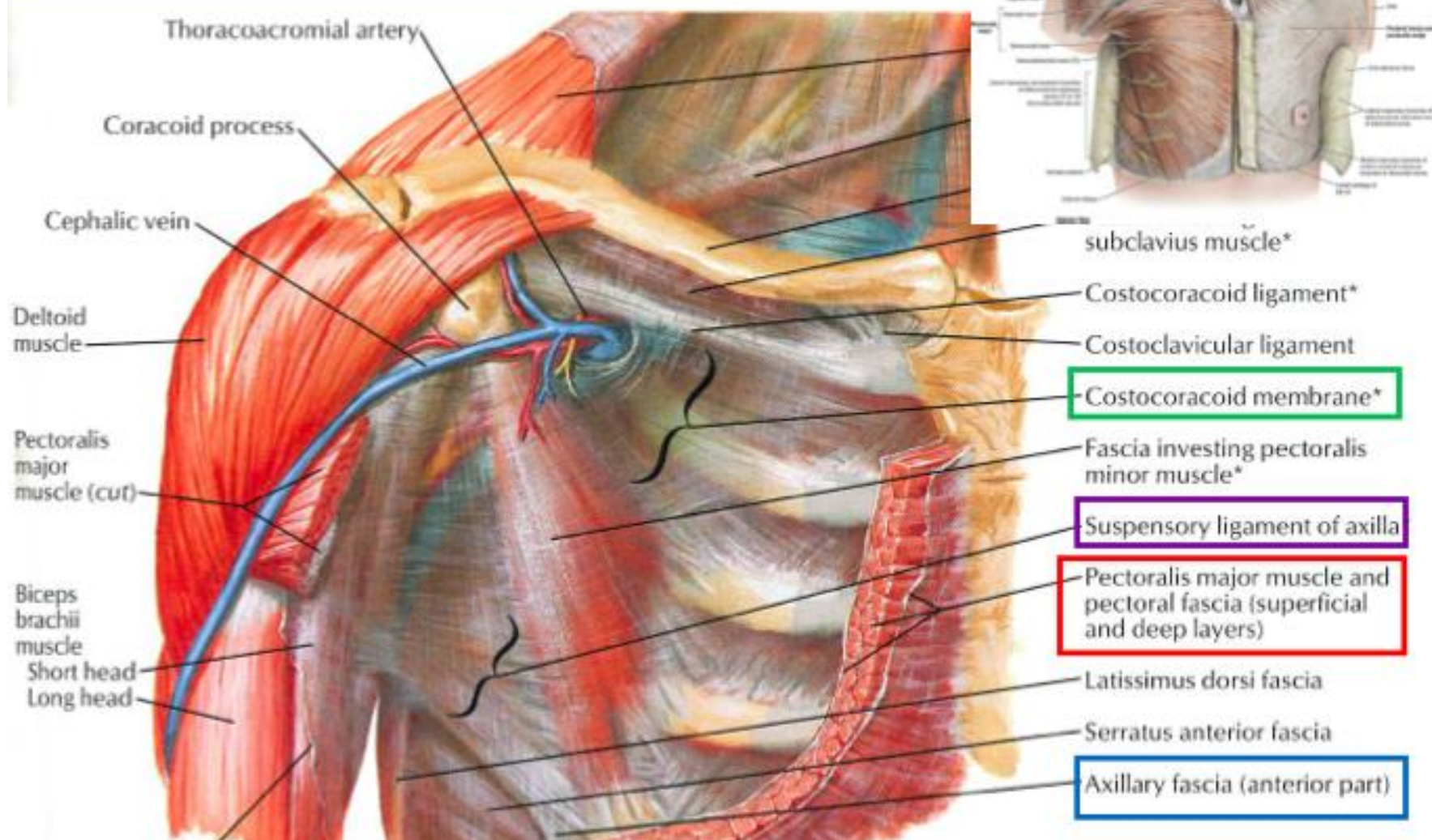


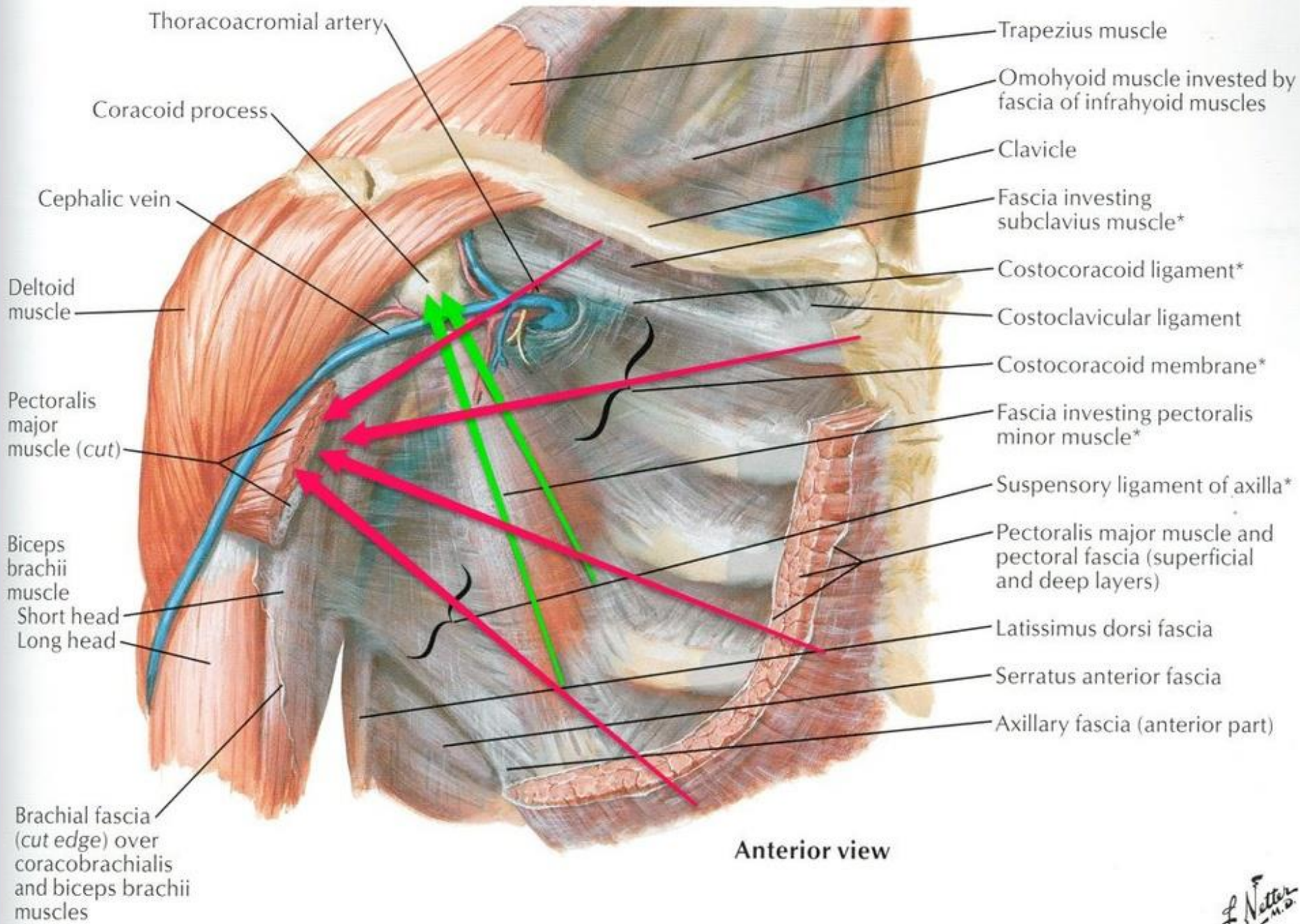
Acromion

Clavicle

Abdominal part of pectoralis major muscle

Sternum





Thoracoacromial artery

Trapezius muscle

Coracoid process

Omohyoid muscle invested by fascia of infrahyoid muscles

Cephalic vein

Clavicle

Deltoid muscle

Fascia investing subclavius muscle*

Pectoralis major muscle (cut)

Costocoracoid ligament*

Costoclavicular ligament

Costocoracoid membrane*

Biceps brachii muscle
Short head
Long head

Fascia investing pectoralis minor muscle*

Suspensory ligament of axilla*

Pectoralis major muscle and pectoral fascia (superficial and deep layers)

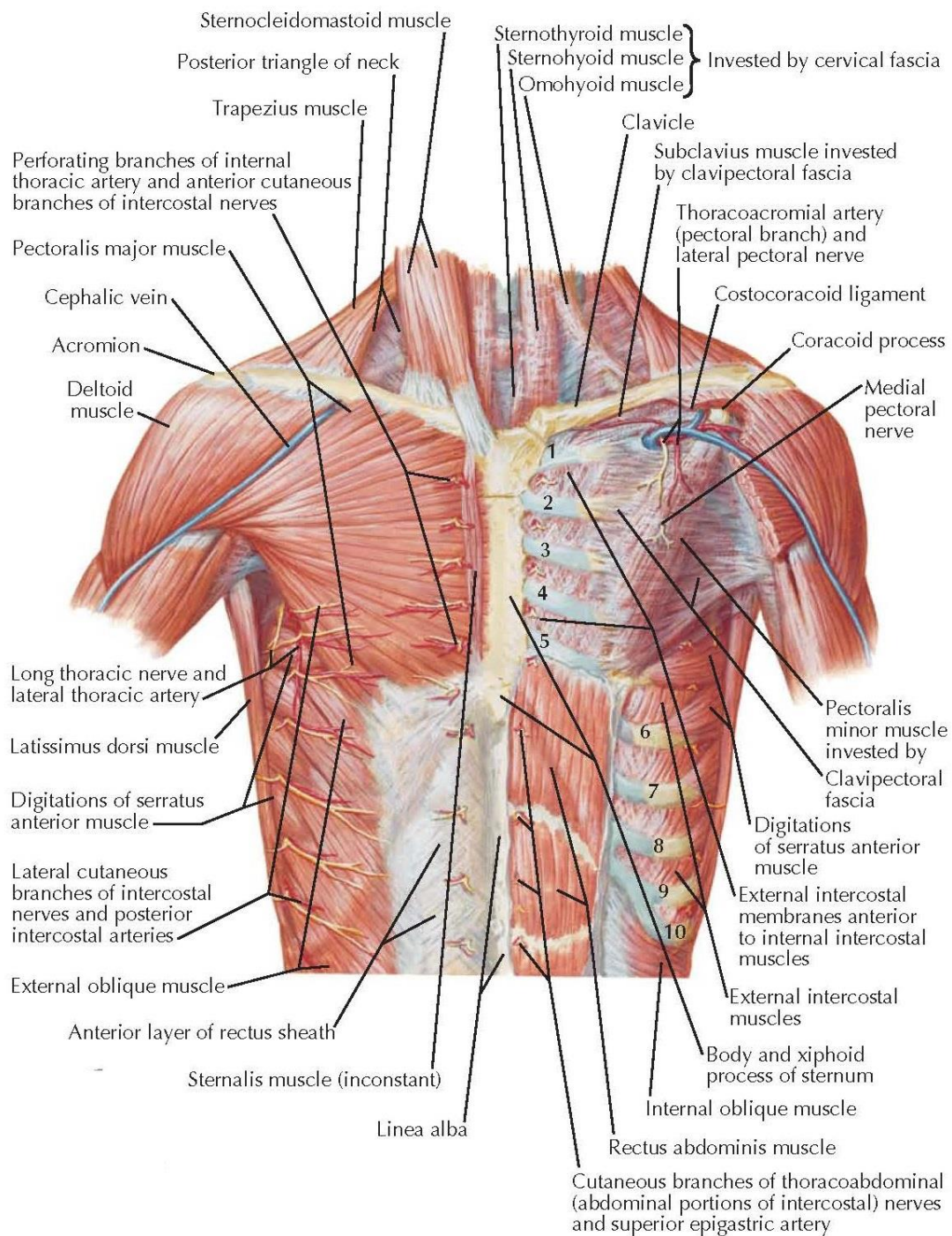
Latissimus dorsi fascia

Serratus anterior fascia

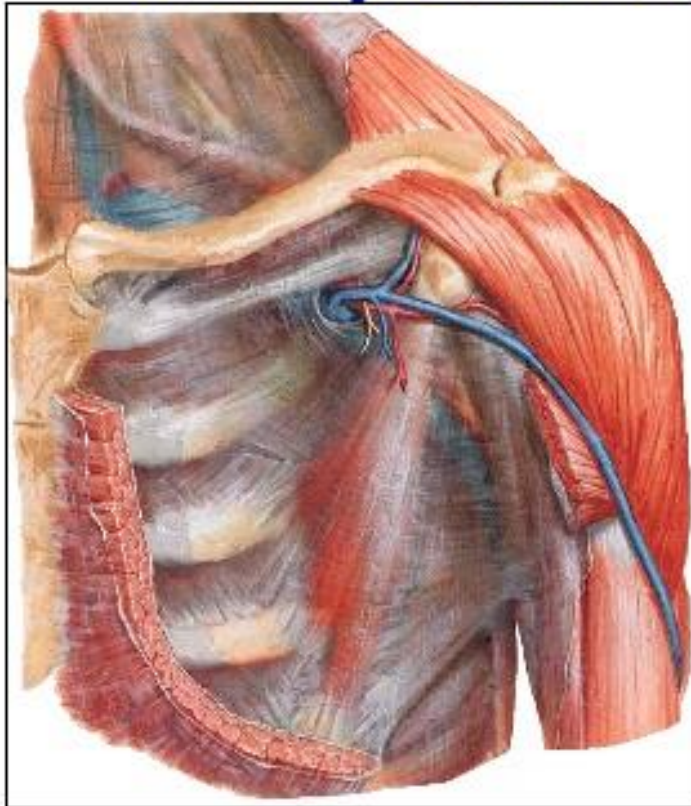
Axillary fascia (anterior part)

Brachial fascia (cut edge) over coracobrachialis and biceps brachii muscles

Anterior view



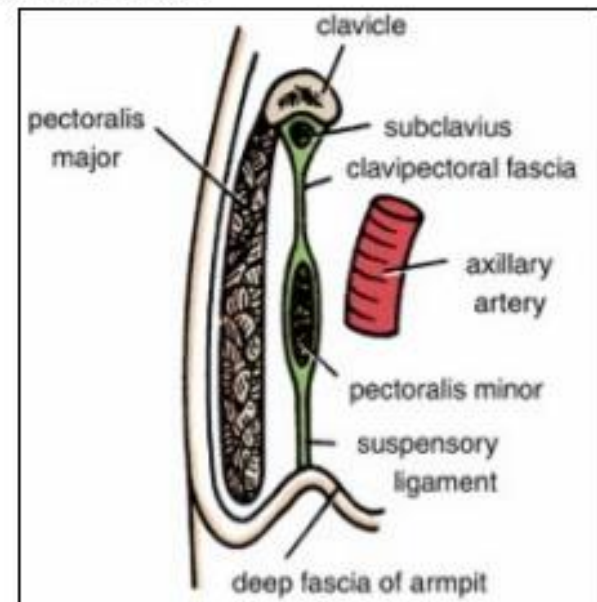
Clavipectoral fascia

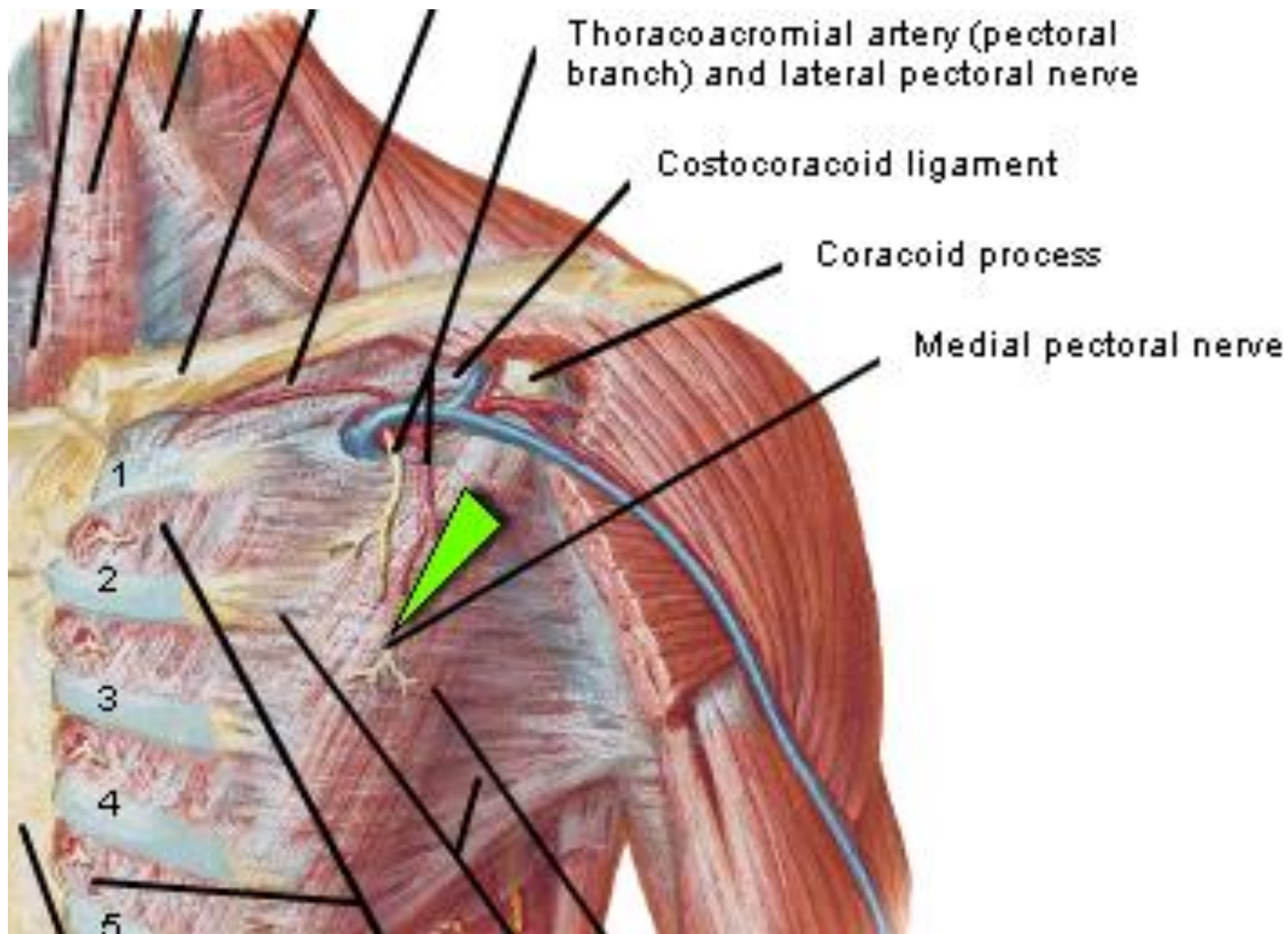


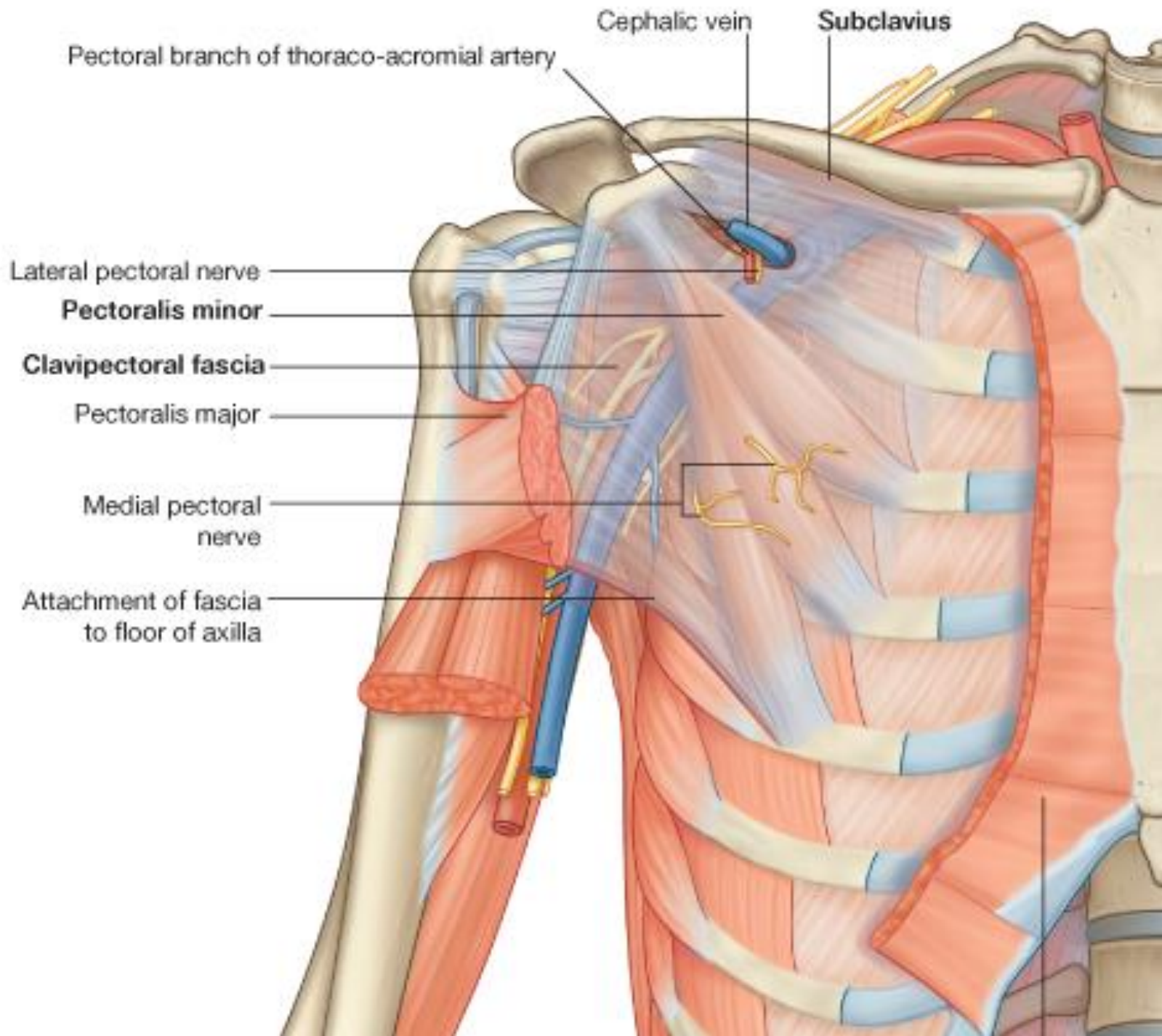
Encloses subclavius and Pectoralis Minor.

It is pierced by :

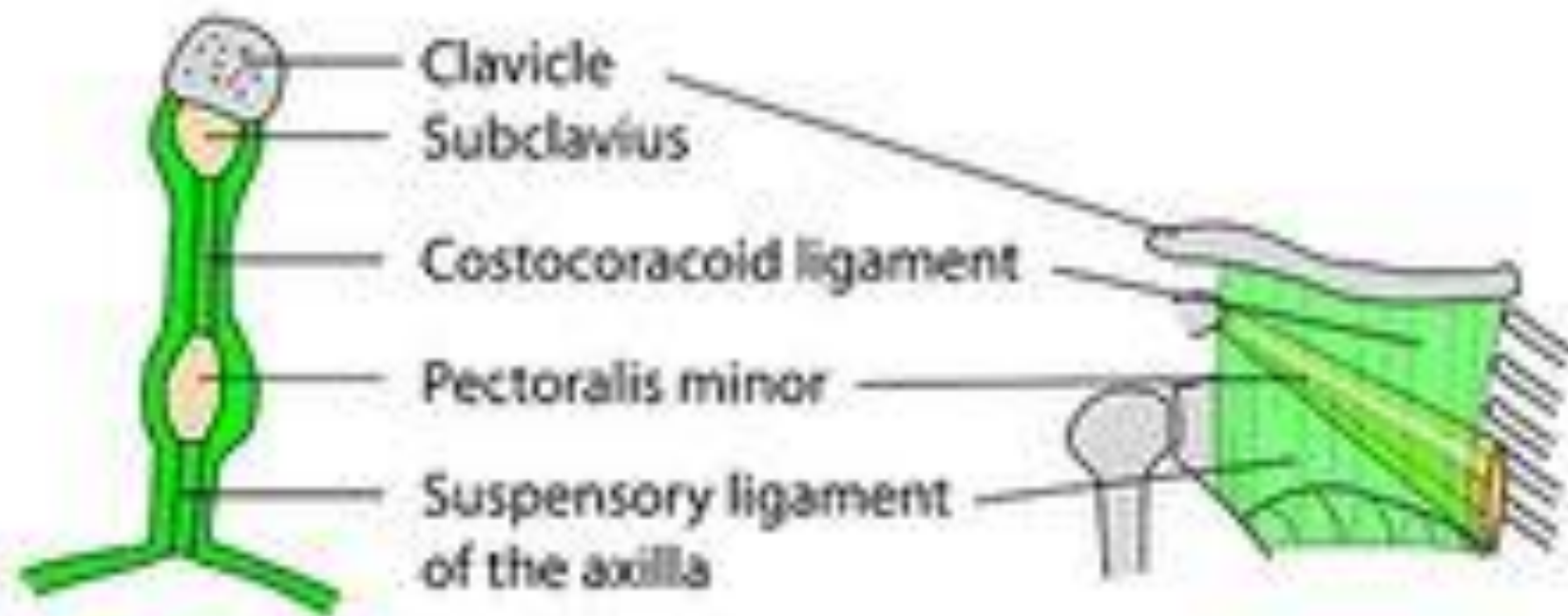
- **Lateral pectoral nerve.**
- **Thoraco- acromial artery**
- **Cephalic vein.**
- **Lymph nodes** from pectoral region to apical group of axillary lymph nodes





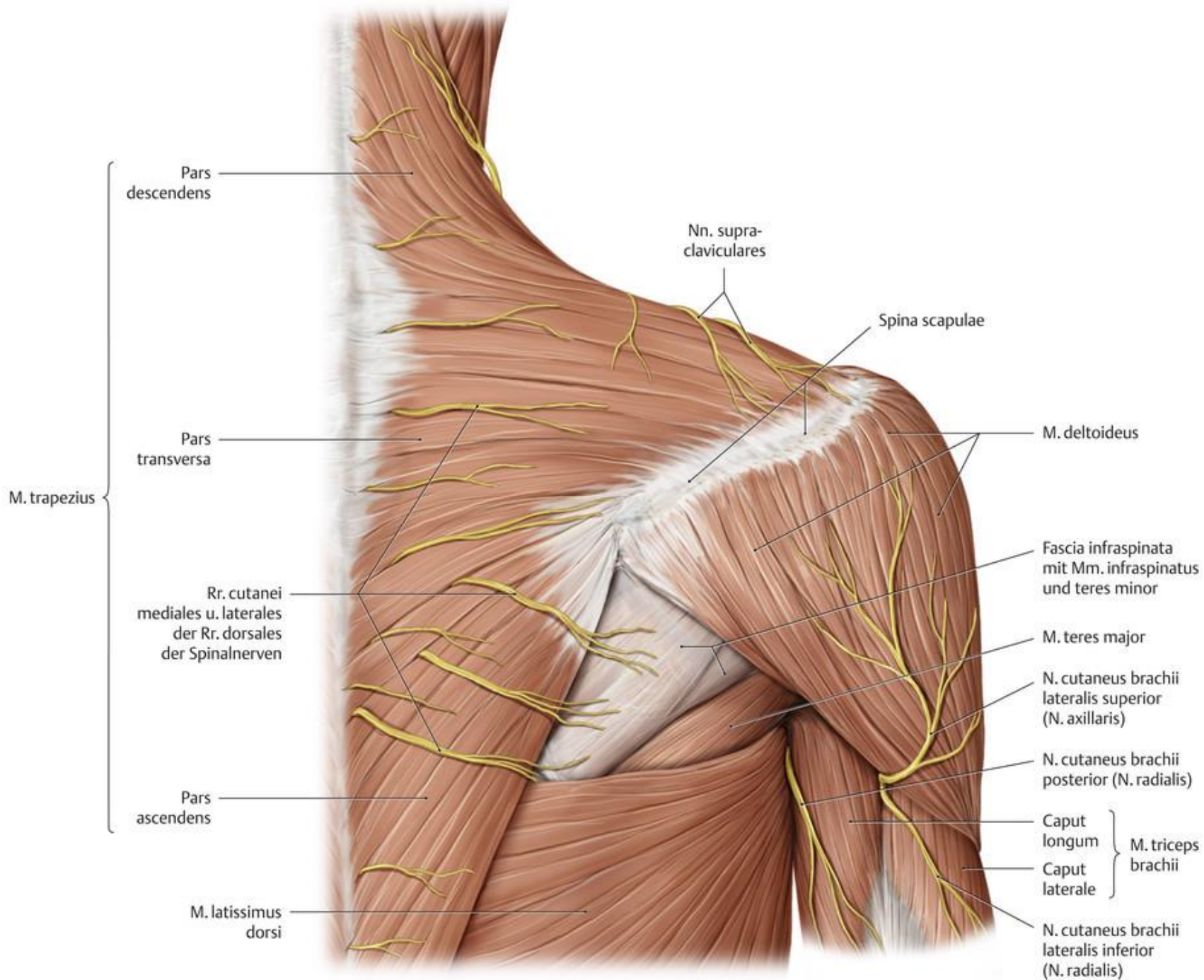


CLAVIPECTORAL FASCIA



Pierced by:

- Acromiothoracic trunk
- Cephalic vein
- Lateral pectoral nerve
- Lymphatics



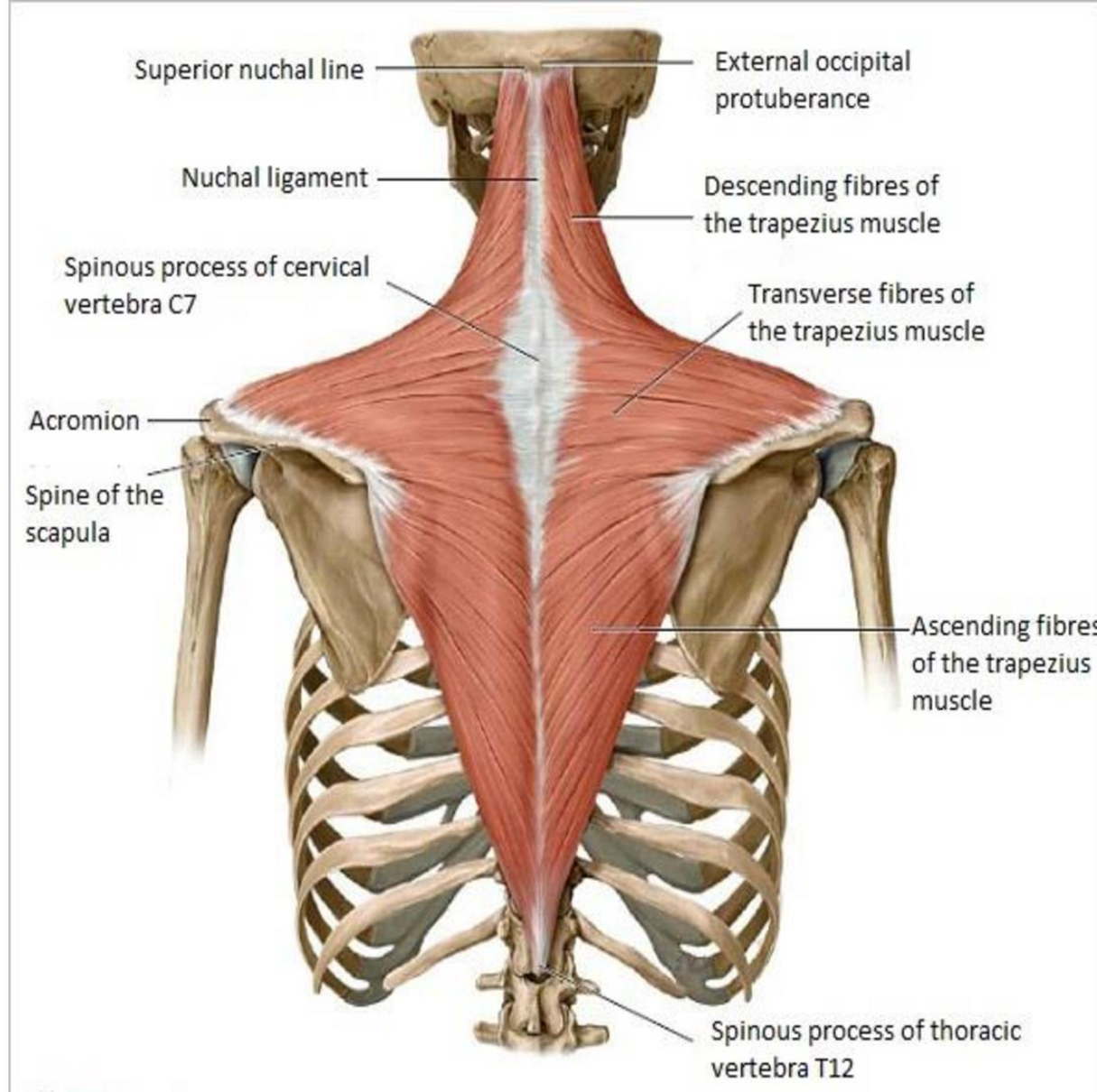
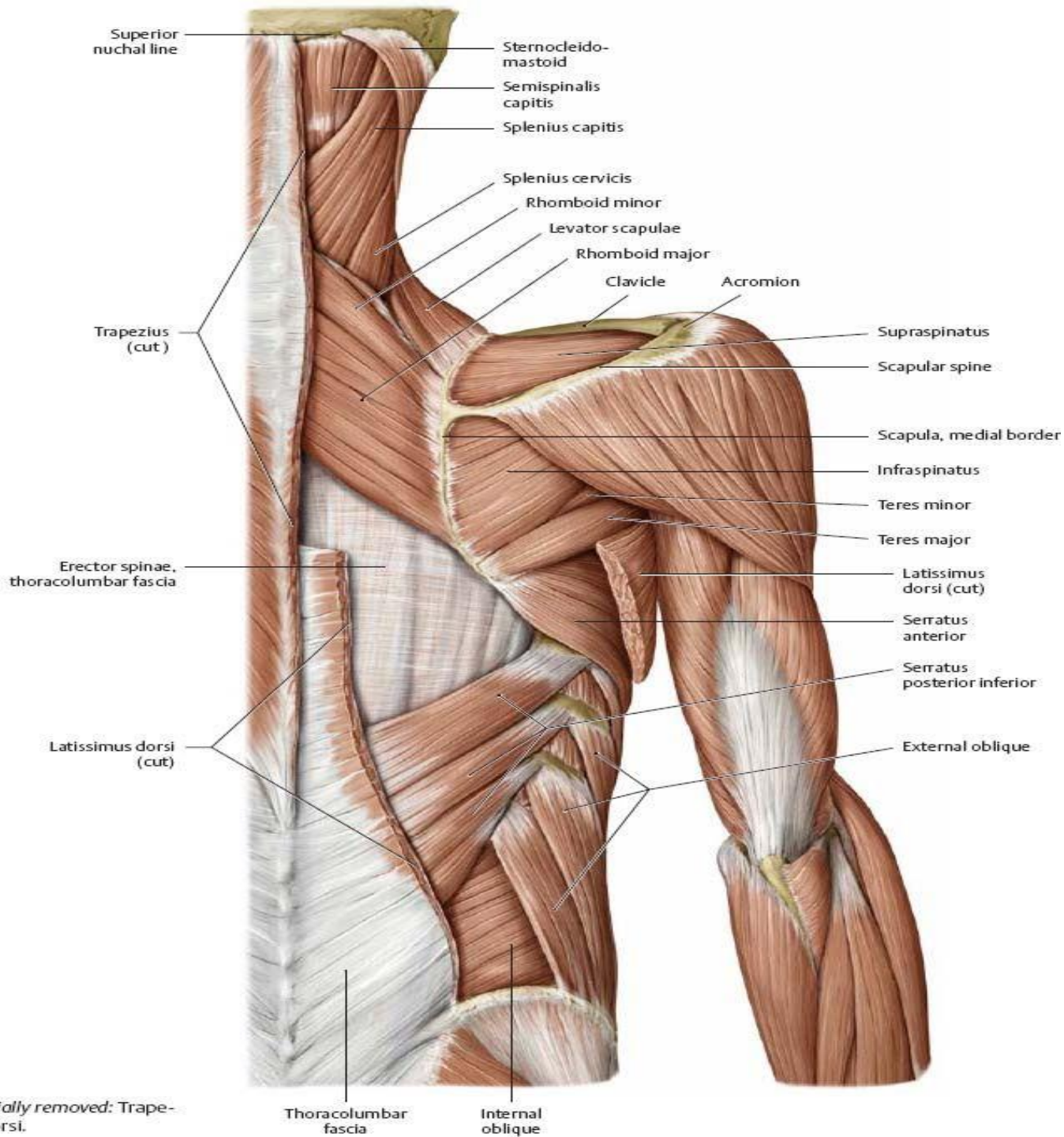
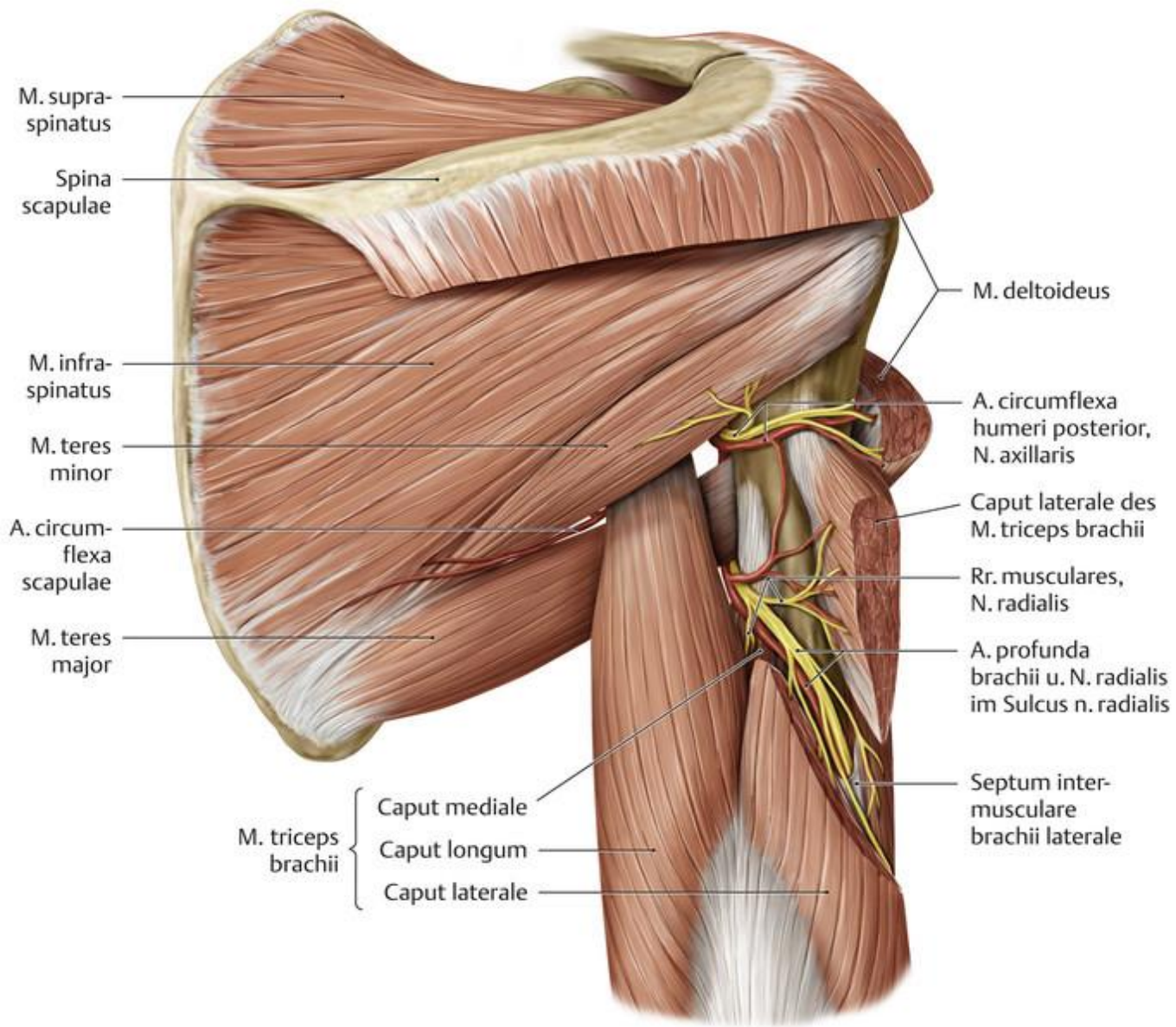
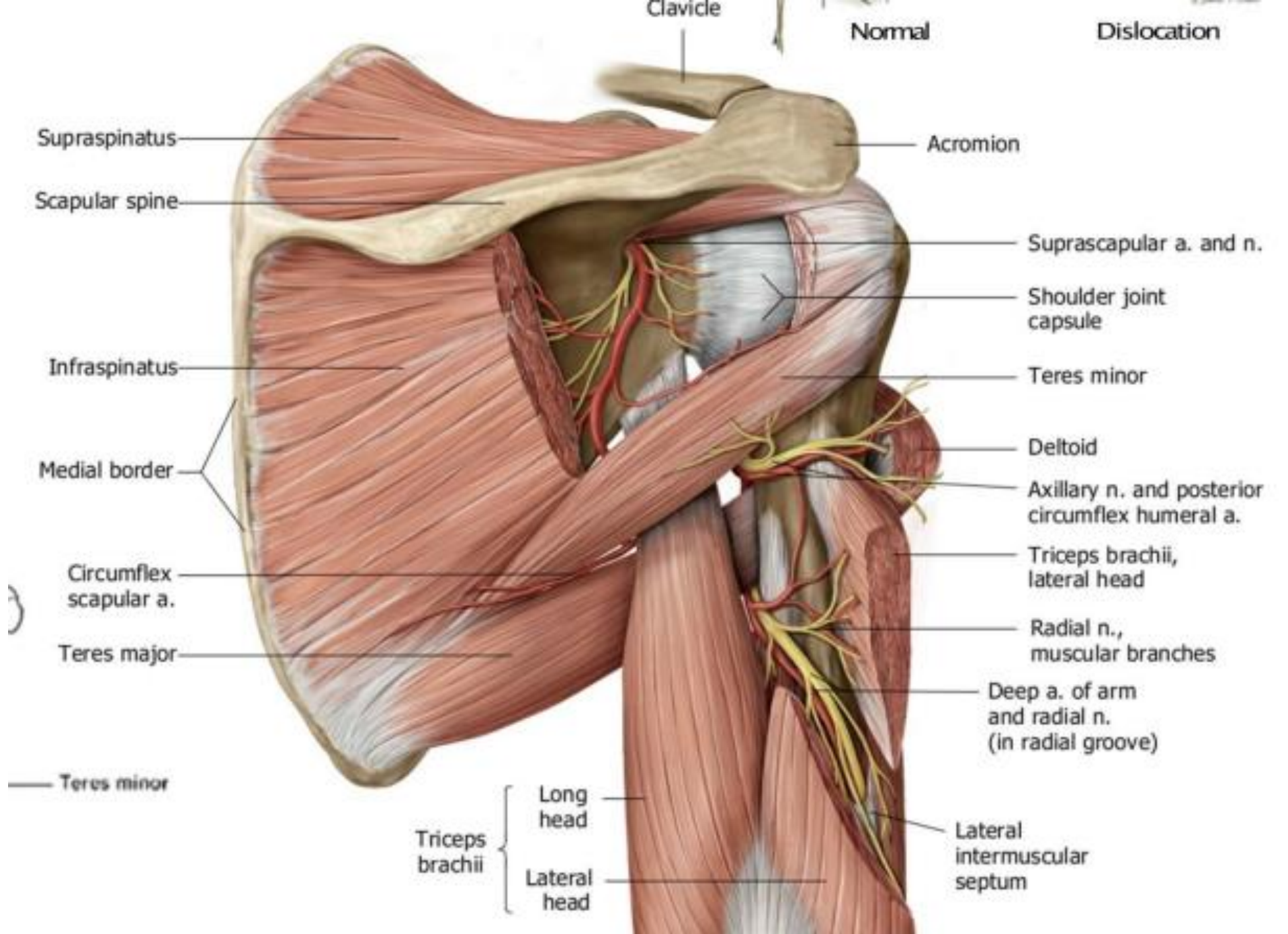


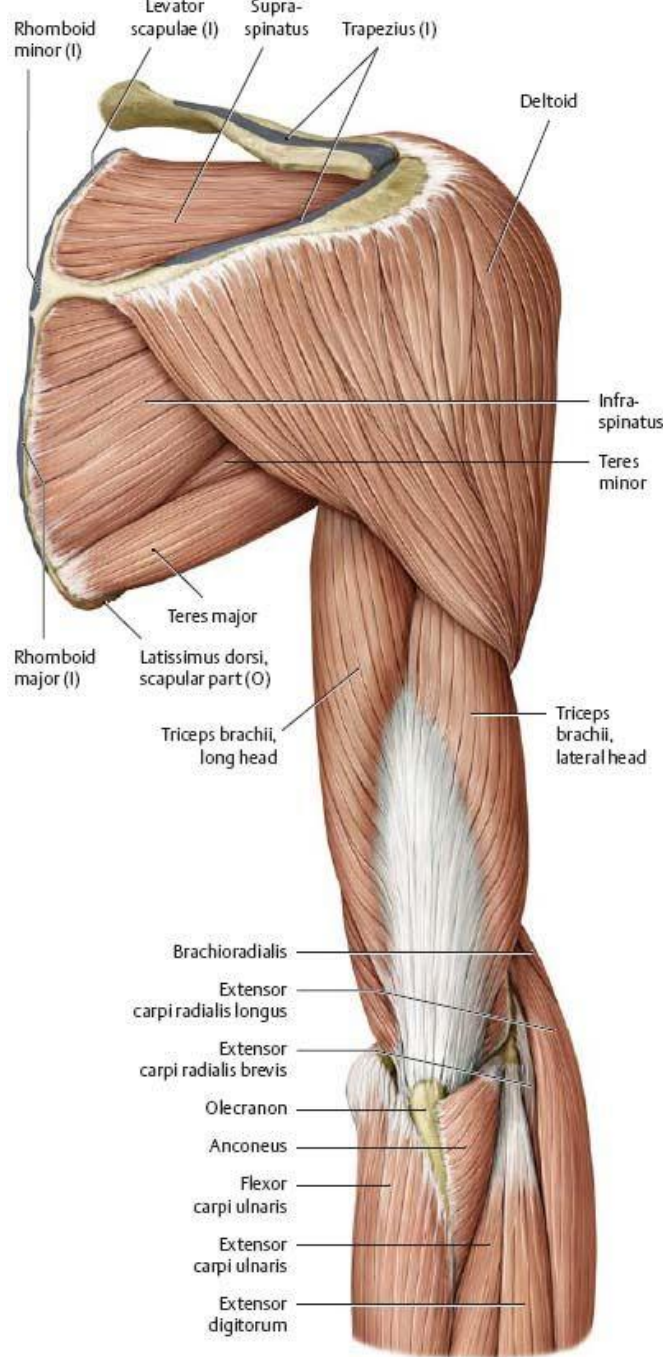
Figure 2.5: Diagram of the Trapezius Muscle (adapted from Rotator Cuff Rehab n. d.).



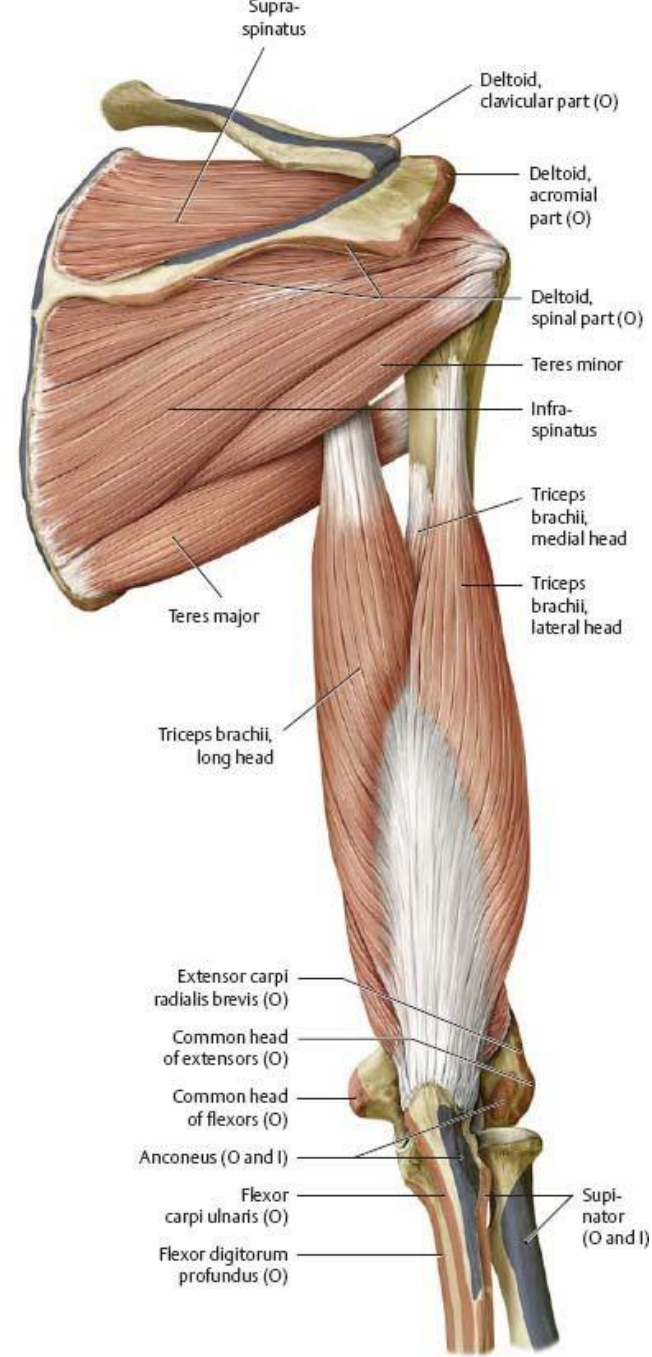
B Deep dissection. *Partially removed:* Trapezius and latissimus dorsi.



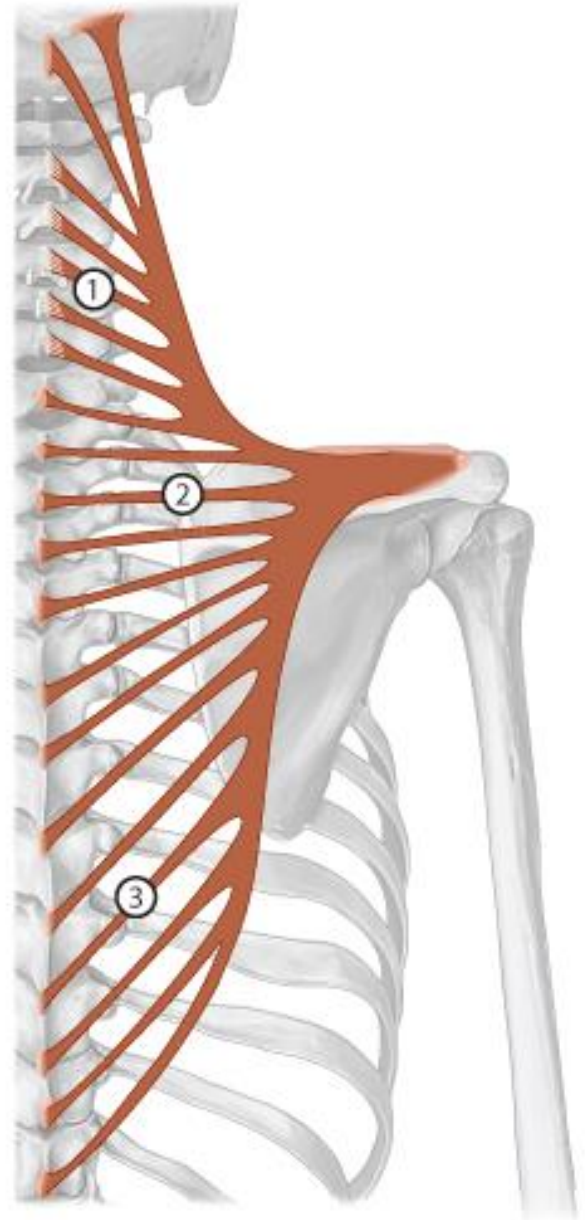
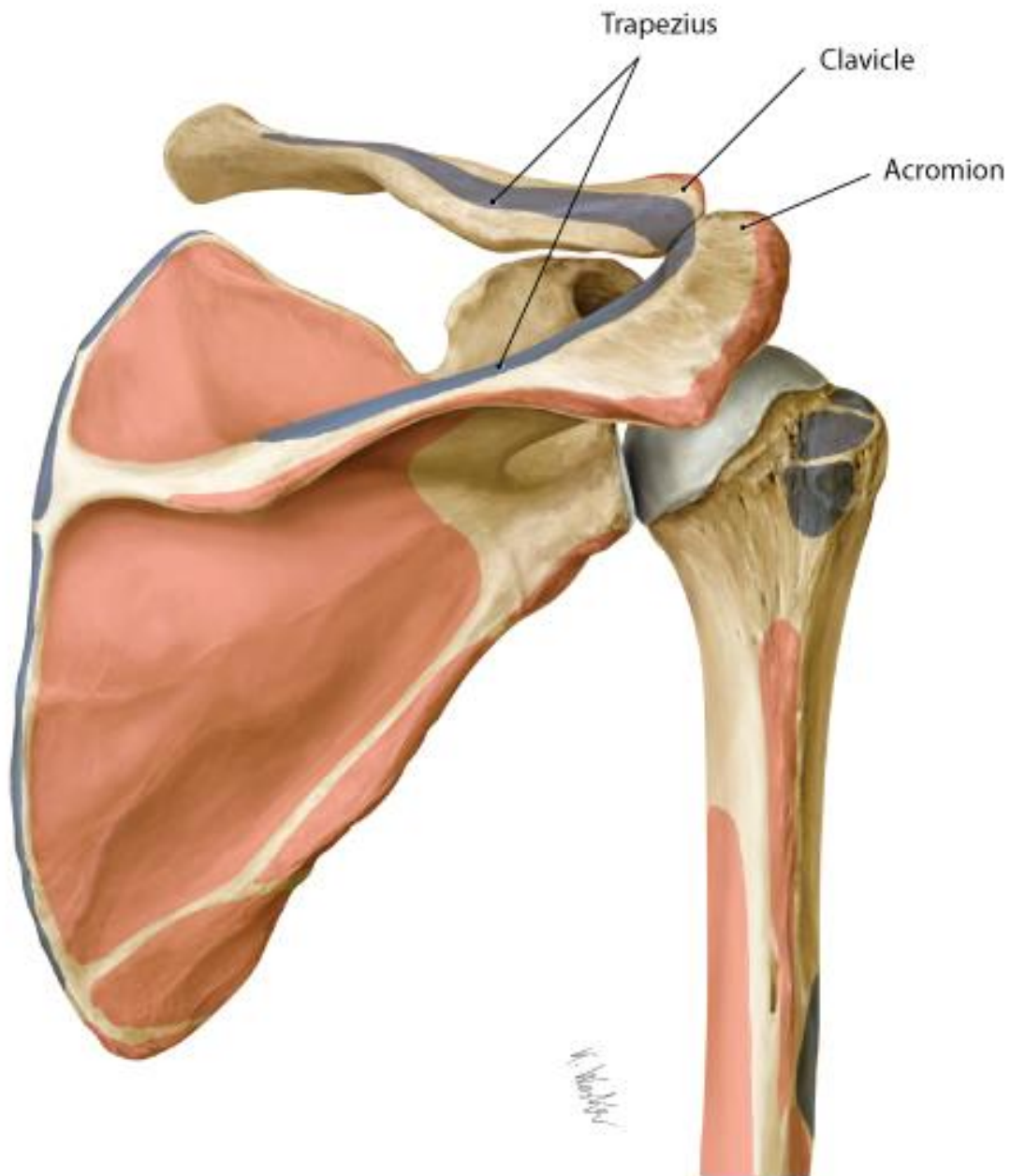


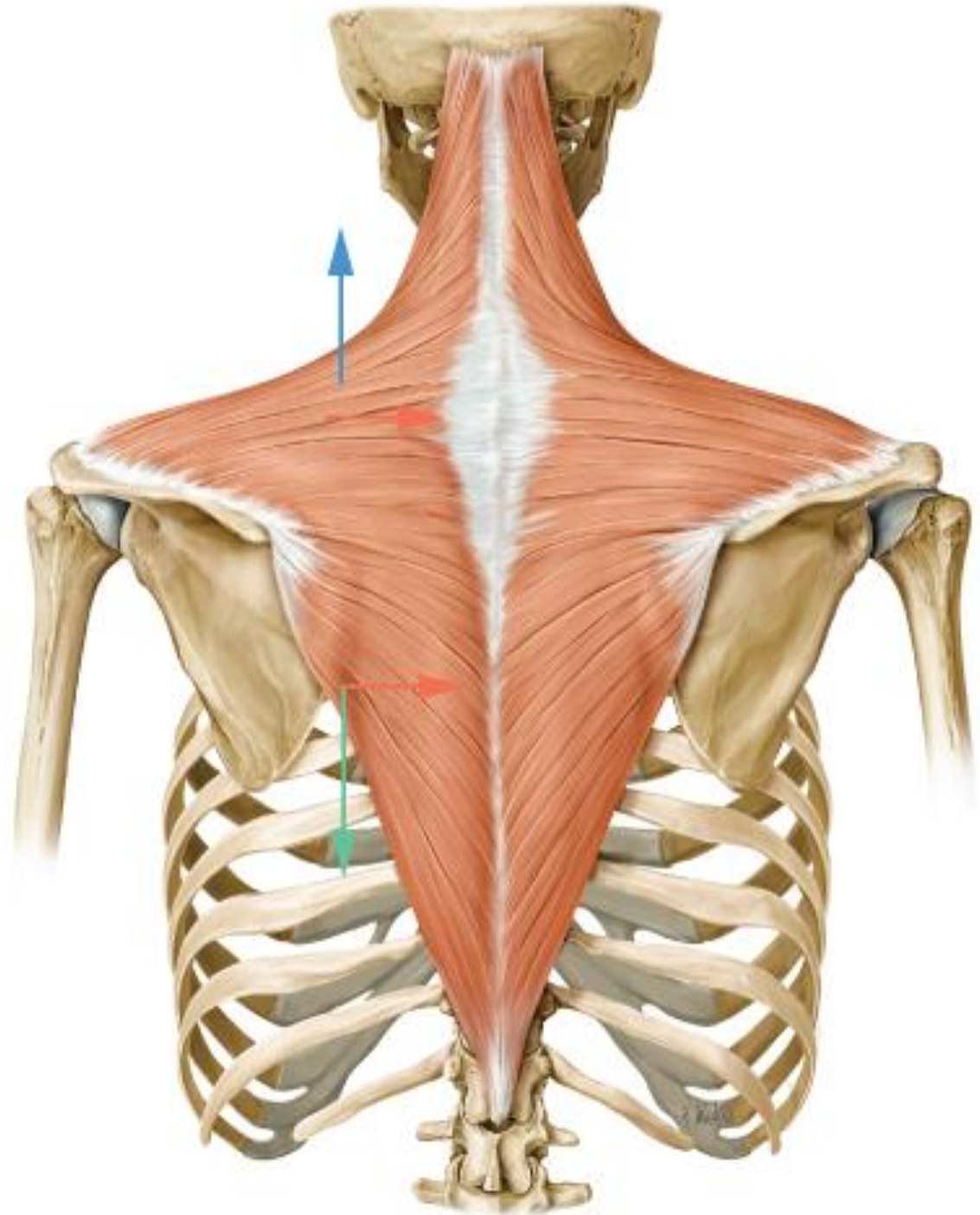


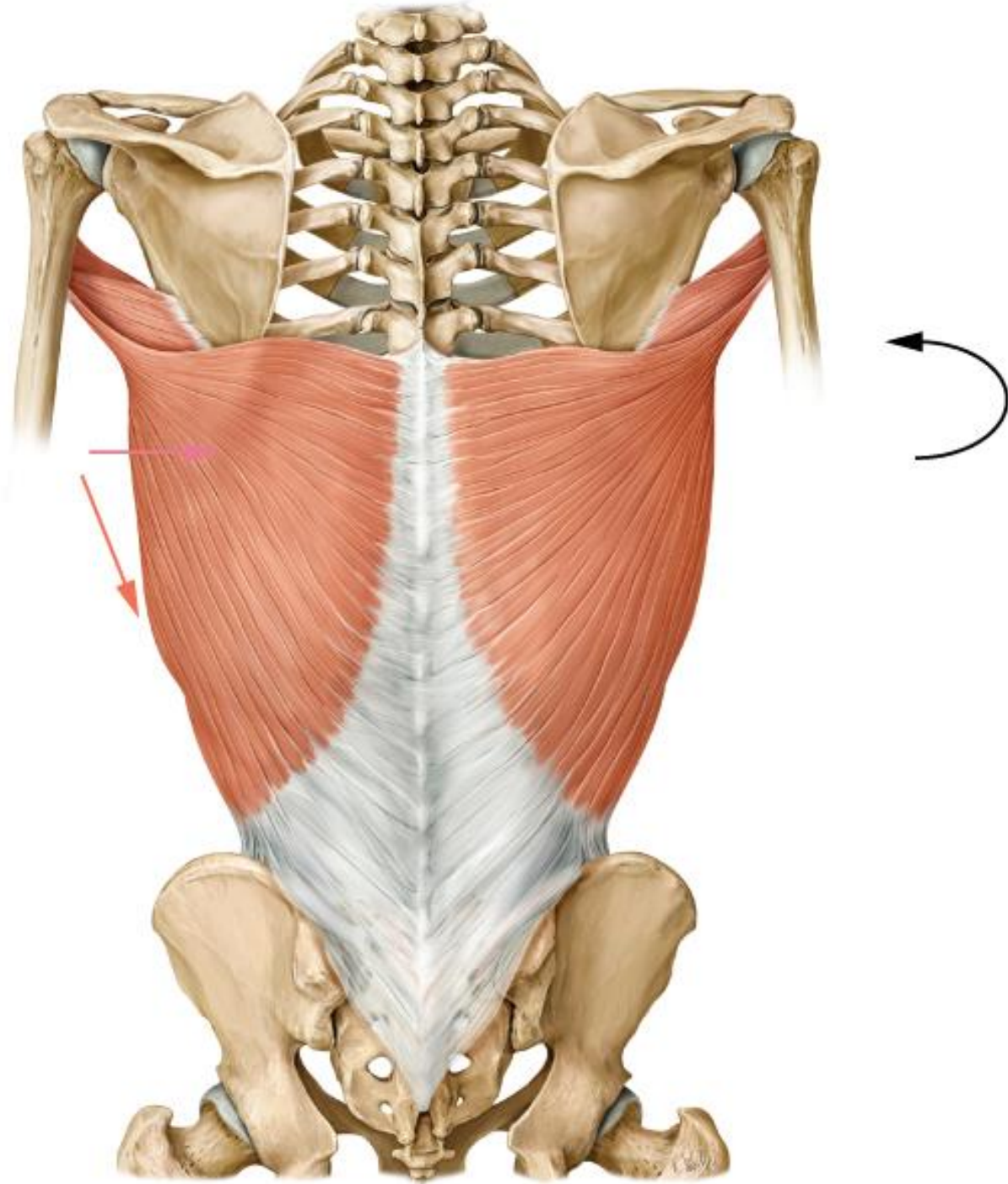
A Removed: Rhomboids major and minor, serratus anterior, and levator scapulae.

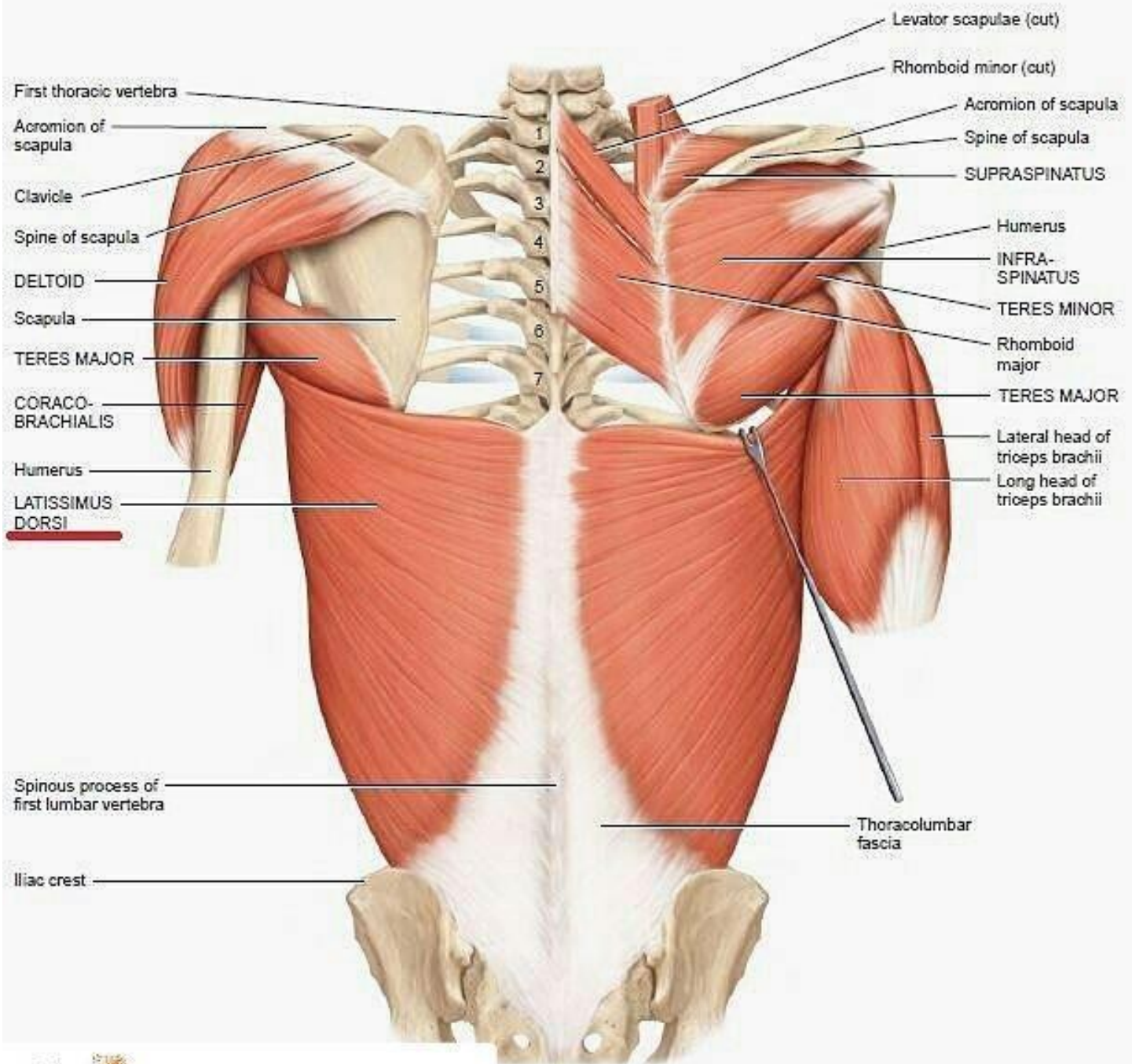


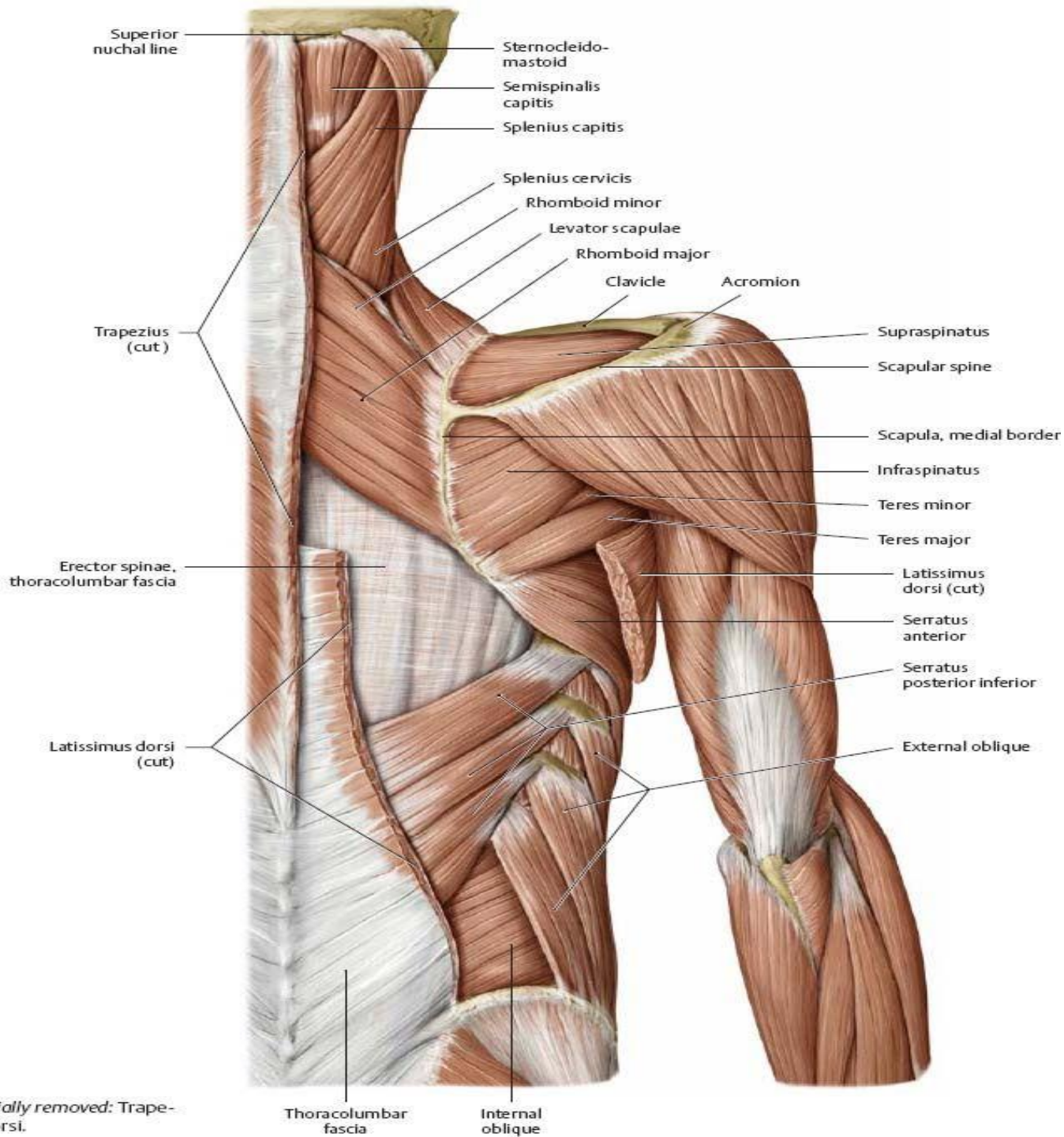
B Removed: Deltoid and forearm muscles.



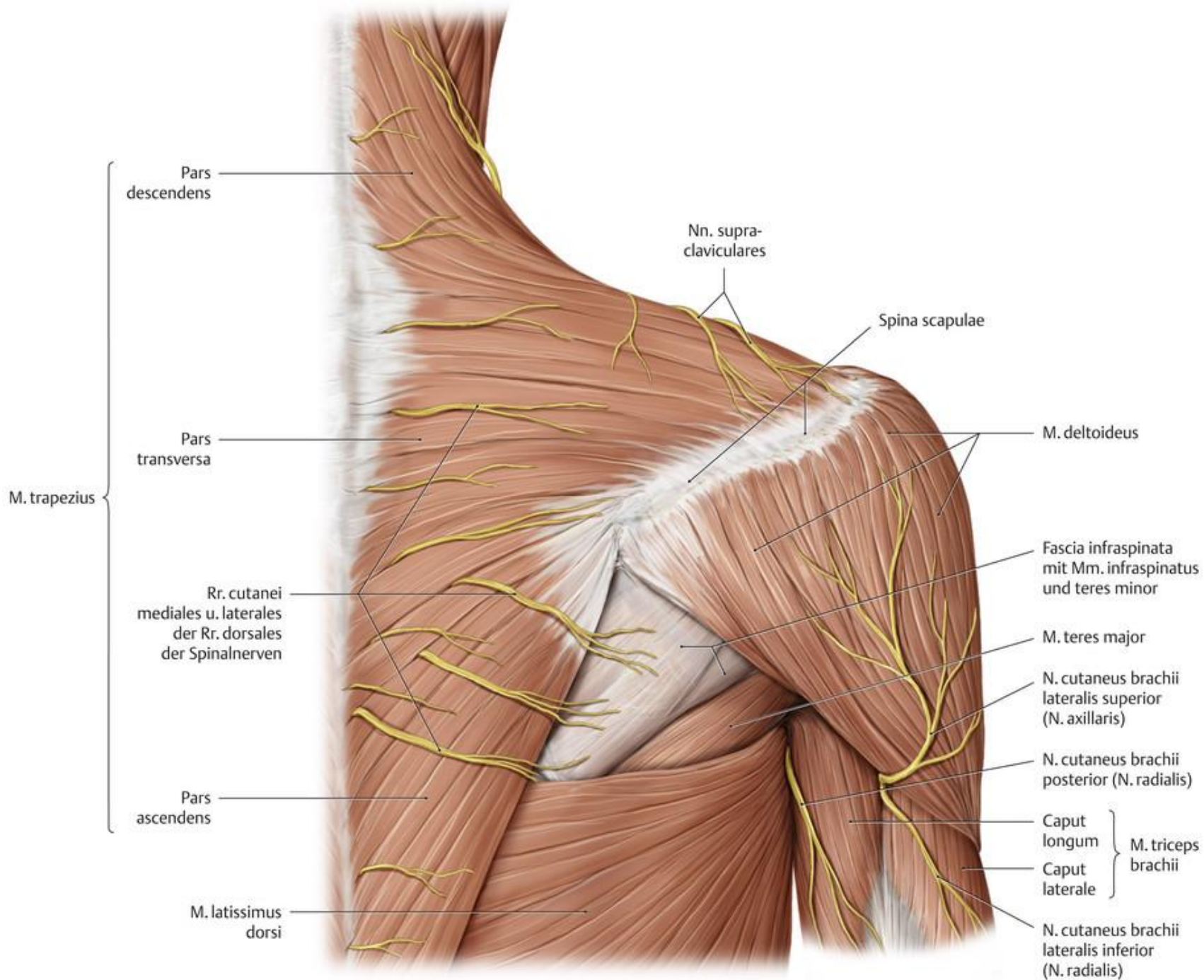




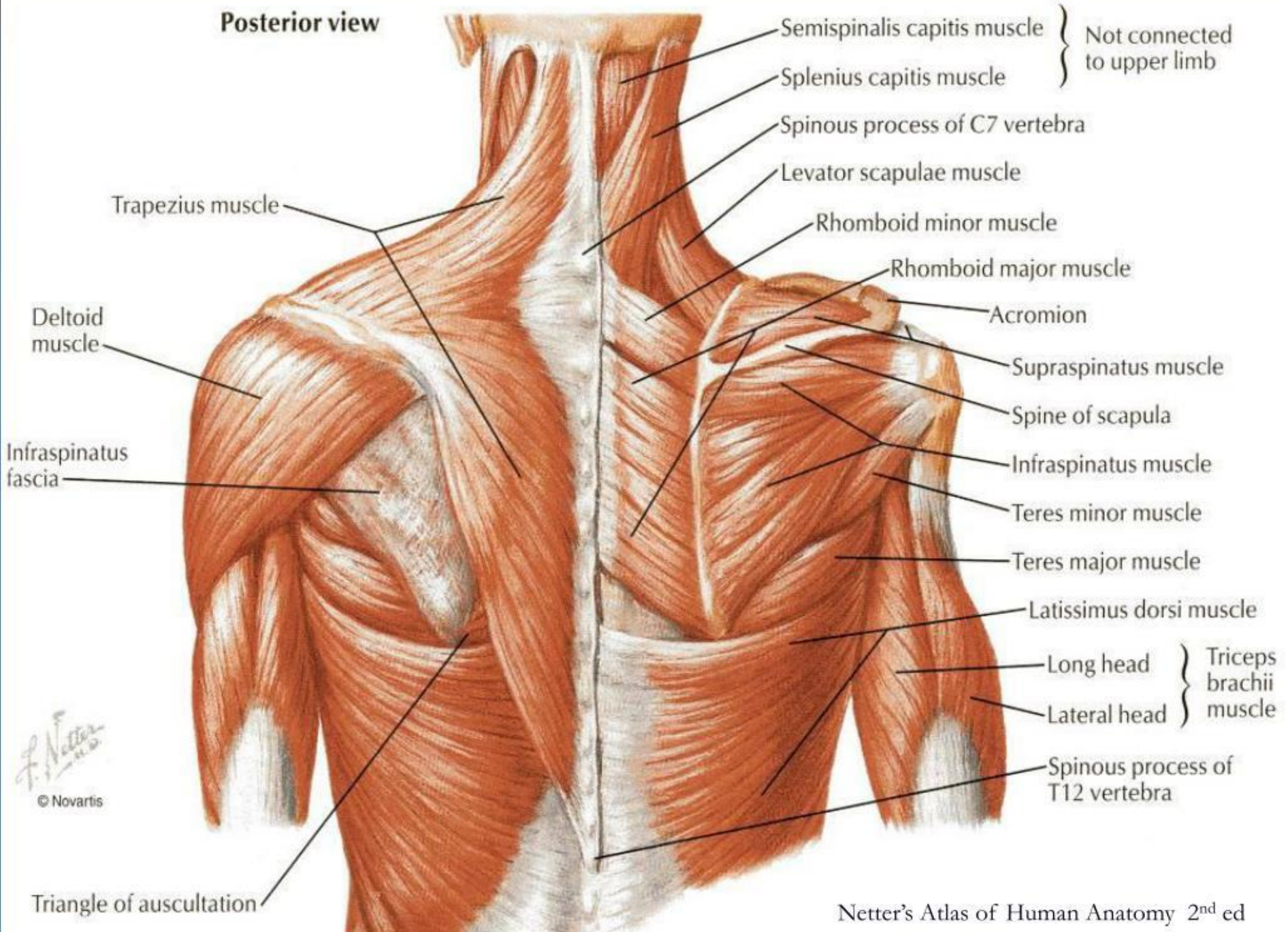




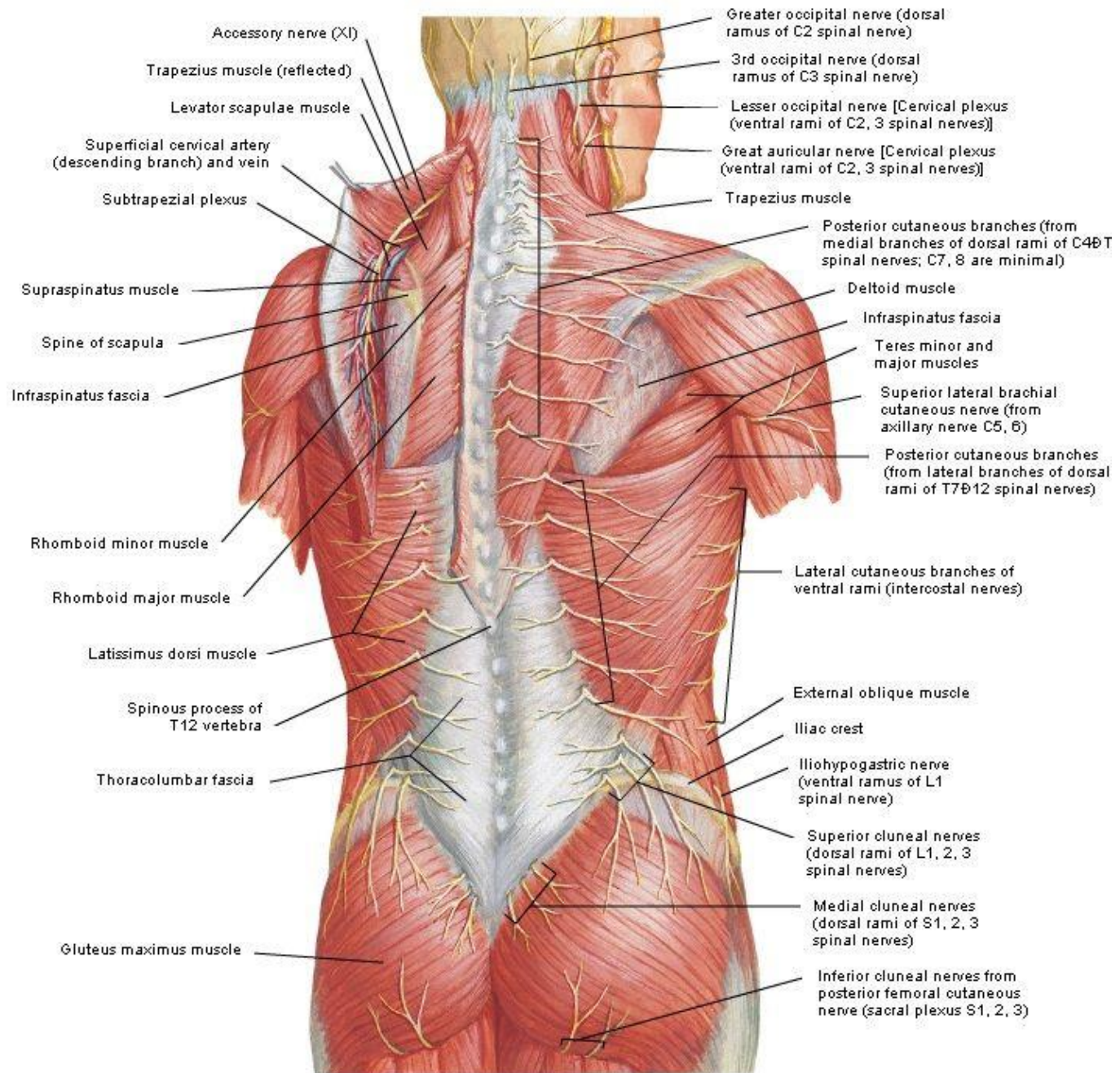
B Deep dissection. *Partially removed:* Trapezius and latissimus dorsi.

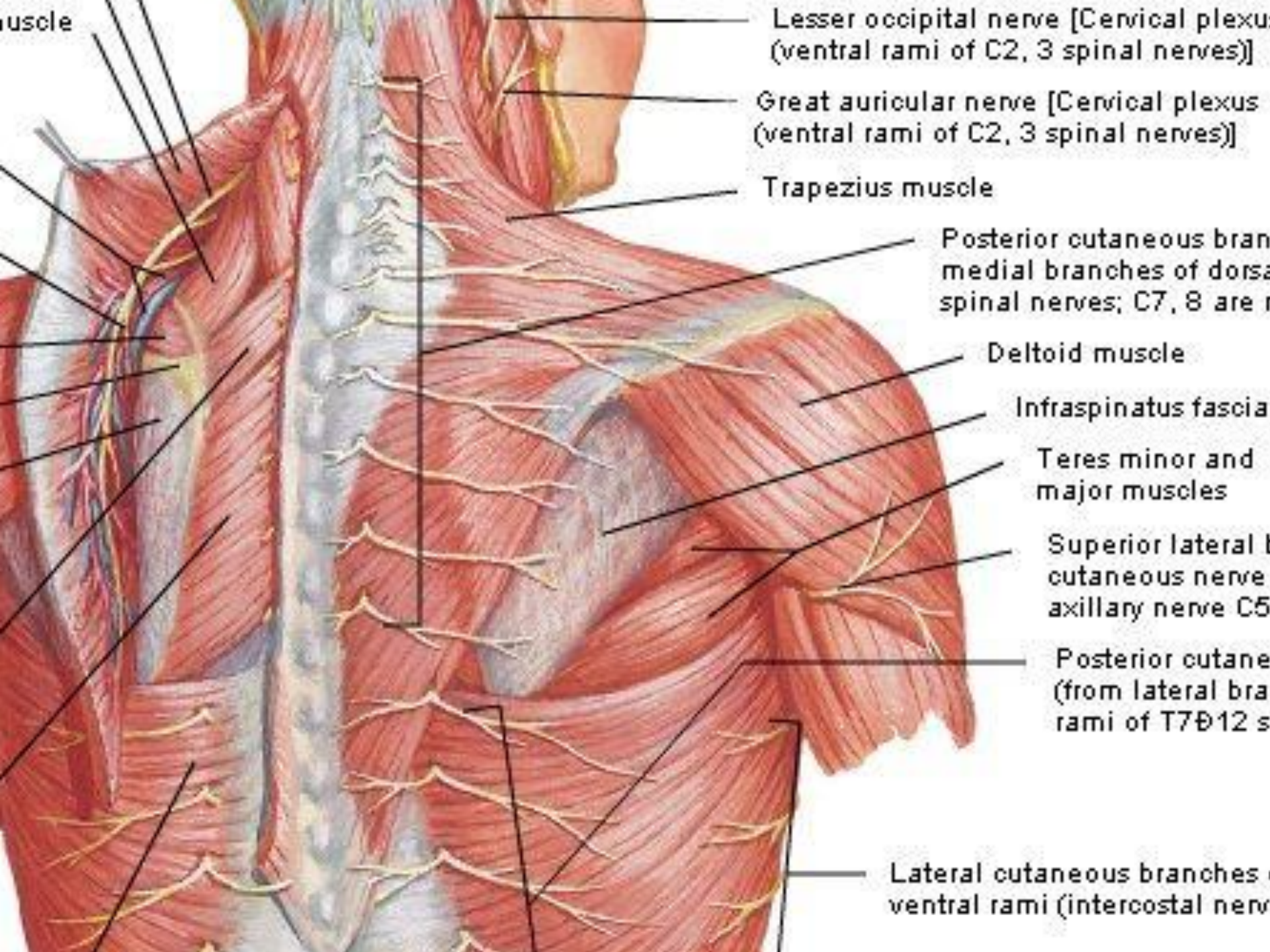


Posterior view



F. Netter M.D.
© Novartis





muscle

Lesser occipital nerve [Cervical plexus (ventral rami of C2, 3 spinal nerves)]

Great auricular nerve [Cervical plexus (ventral rami of C2, 3 spinal nerves)]

Trapezius muscle

Posterior cutaneous branches medial branches of dorsal spinal nerves; C7, 8 are

Deltoid muscle

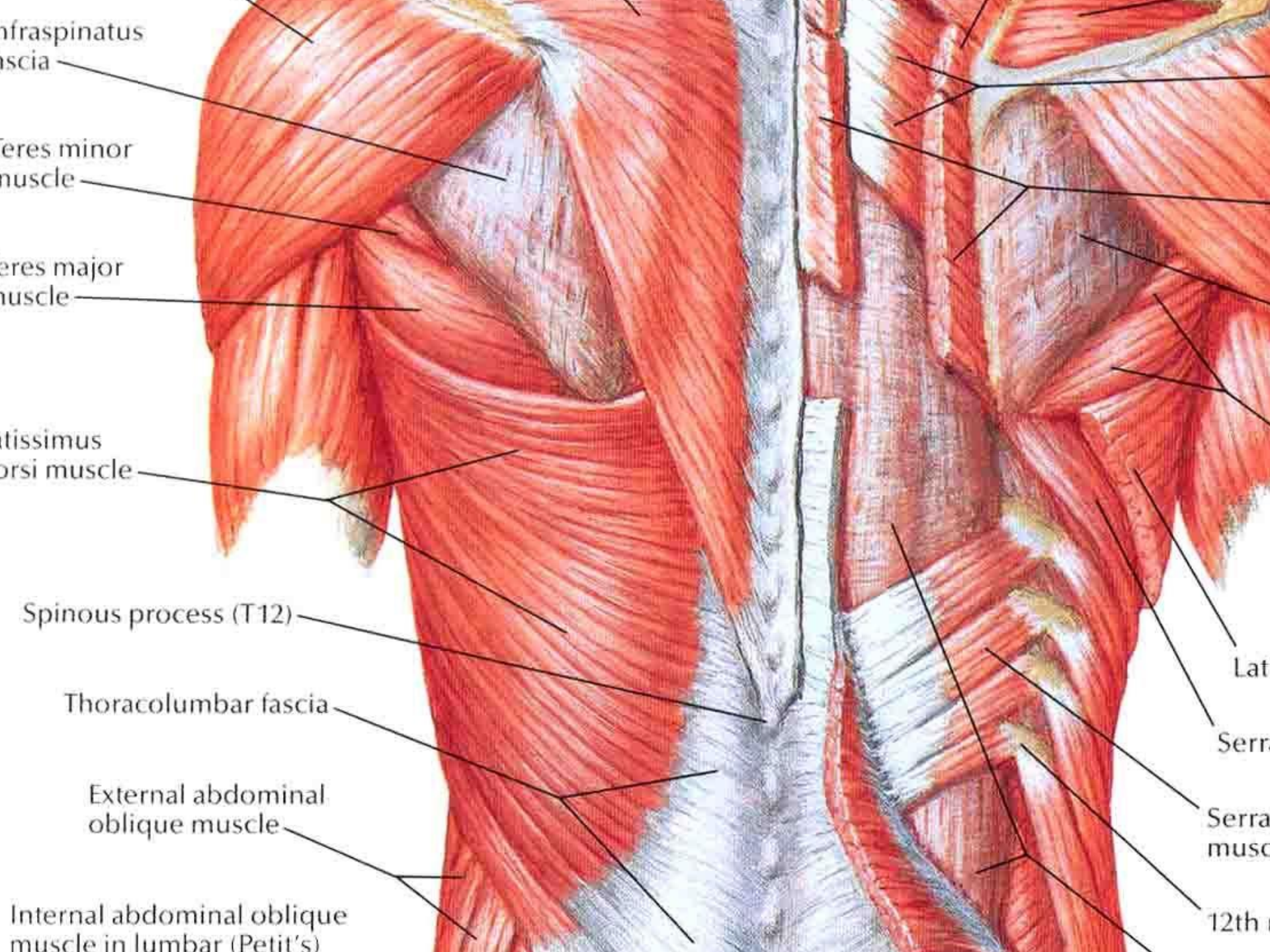
Infraspinatus fascia

Teres minor and major muscles

Superior lateral cutaneous nerve axillary nerve C5

Posterior cutaneous (from lateral branches of rami of T7-12 s)

Lateral cutaneous branches of ventral rami (intercostal nerves)



Infraspinatus
Fascia

Teres minor
muscle

Teres major
muscle

Latissimus
dorsi muscle

Spinous process (T12)

Thoracolumbar fascia

External abdominal
oblique muscle

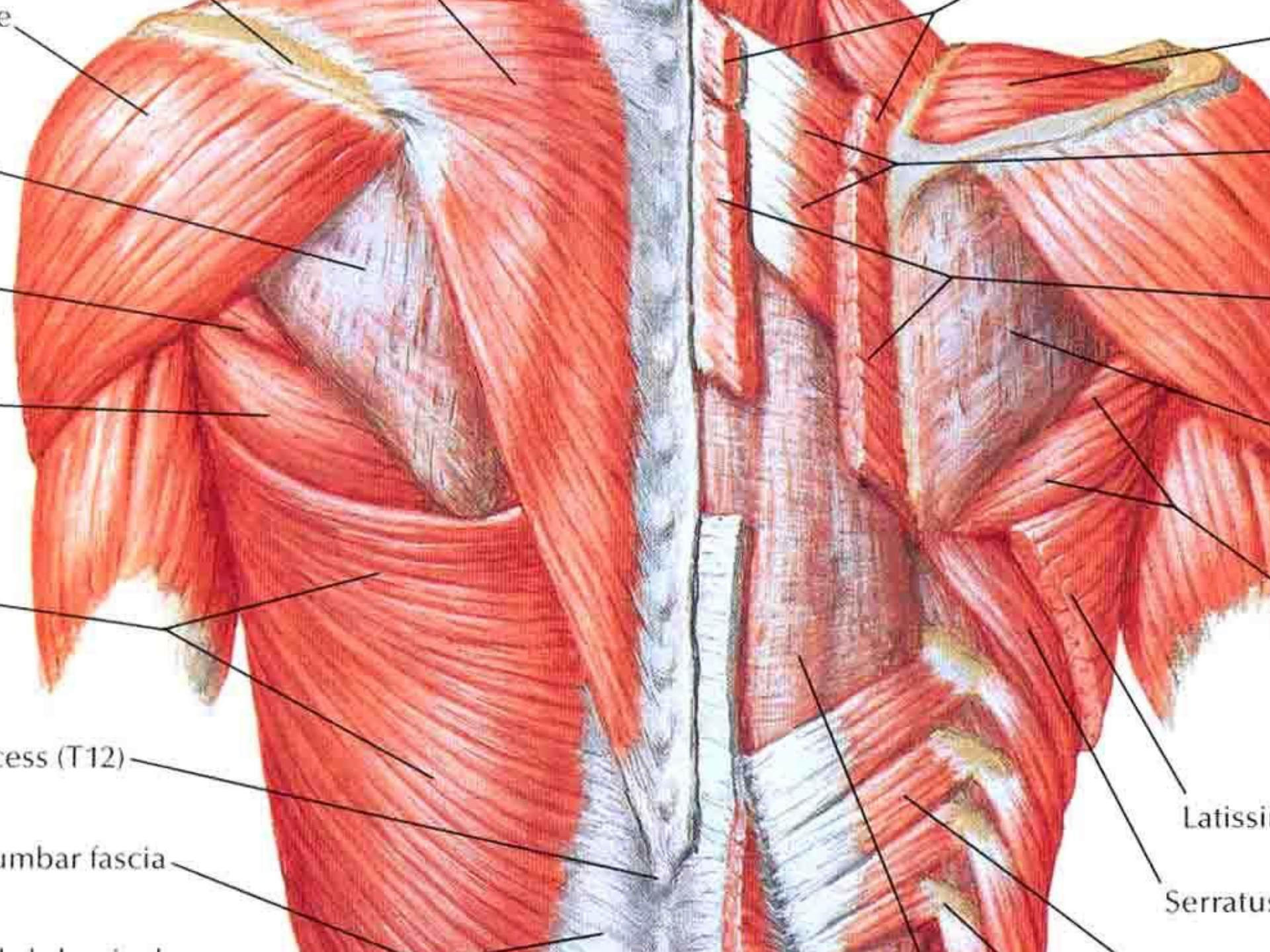
Internal abdominal oblique
muscle in lumbar (Petit's)

Lat

Serr

Serra
muscle

12th r

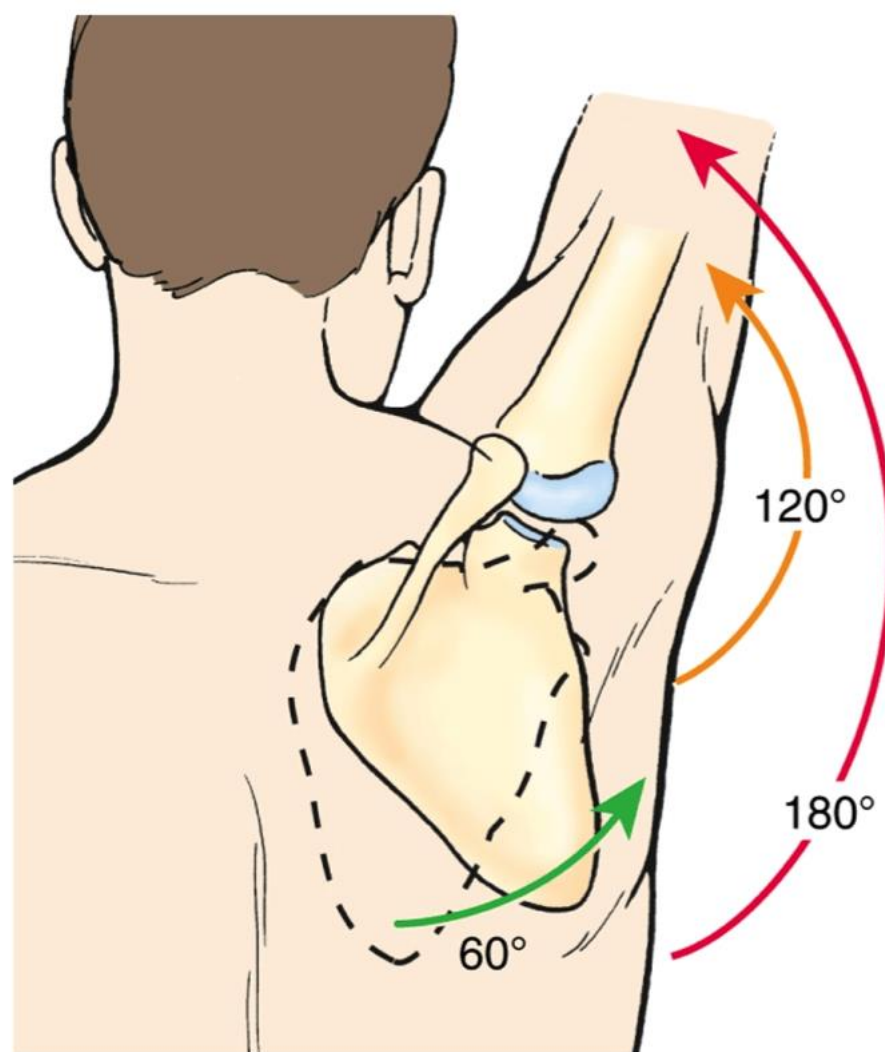


Process (T12)

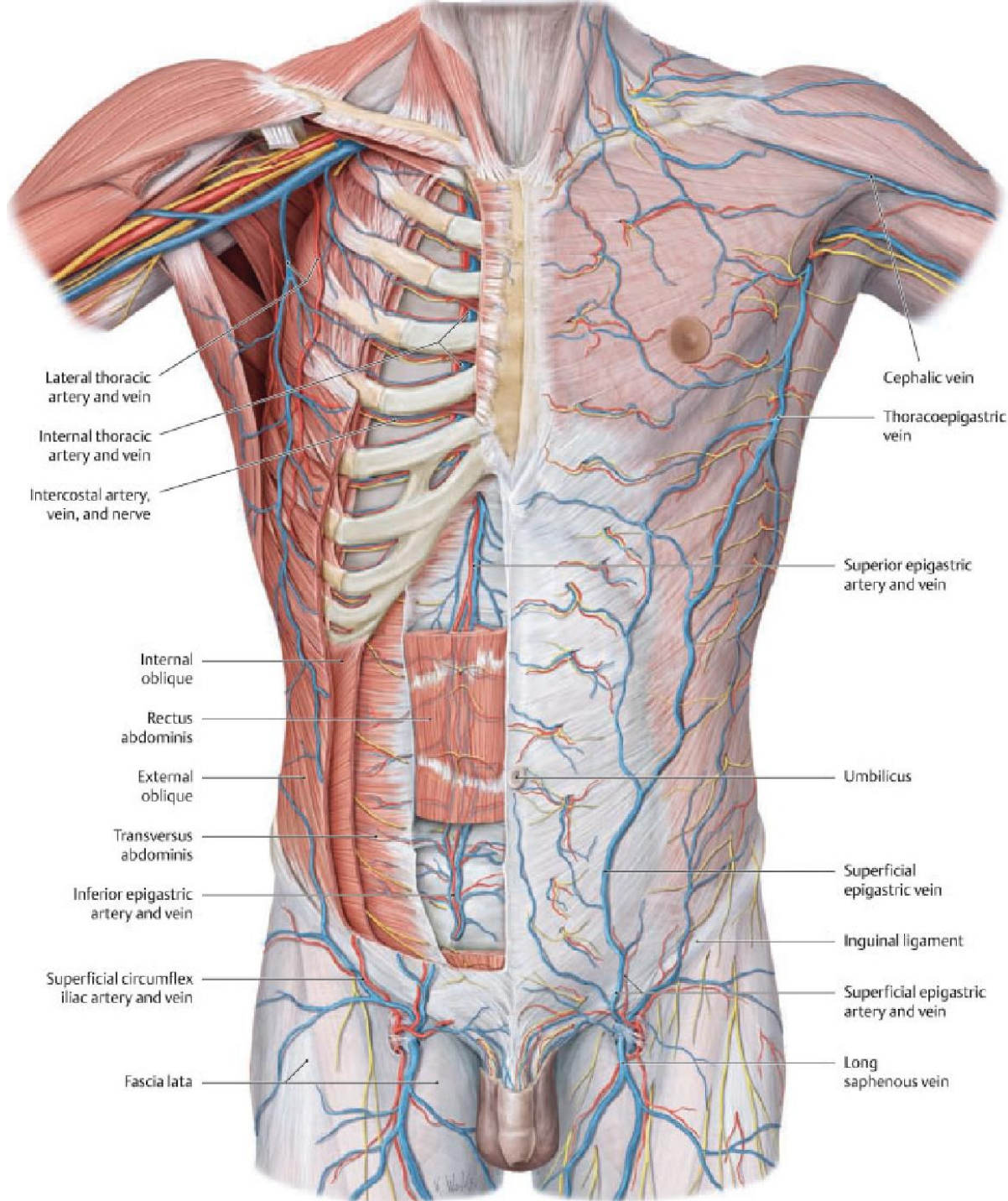
Lumbar fascia

Latissimus

Serratus



(C) Scapulo-humeral rhythm. The scapula and humerus move in 1:2 ratio. When the arm is abducted 180 degrees, 60 degrees occurs by rotation of the scapula, and 120 degrees by rotation of the humerus at the shoulder joint.

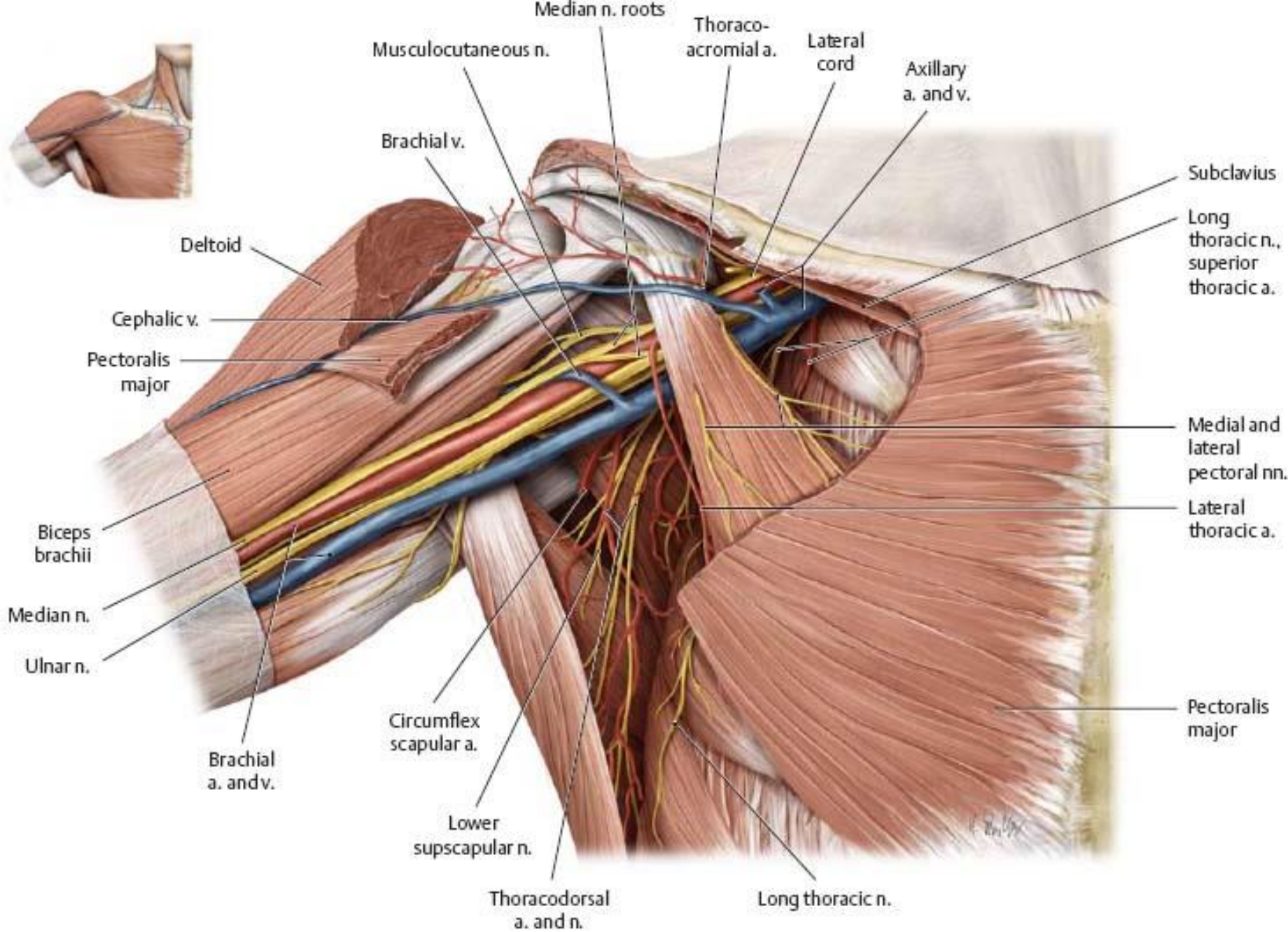


Lateral thoracic artery and vein
Internal thoracic artery and vein
Intercostal artery, vein, and nerve

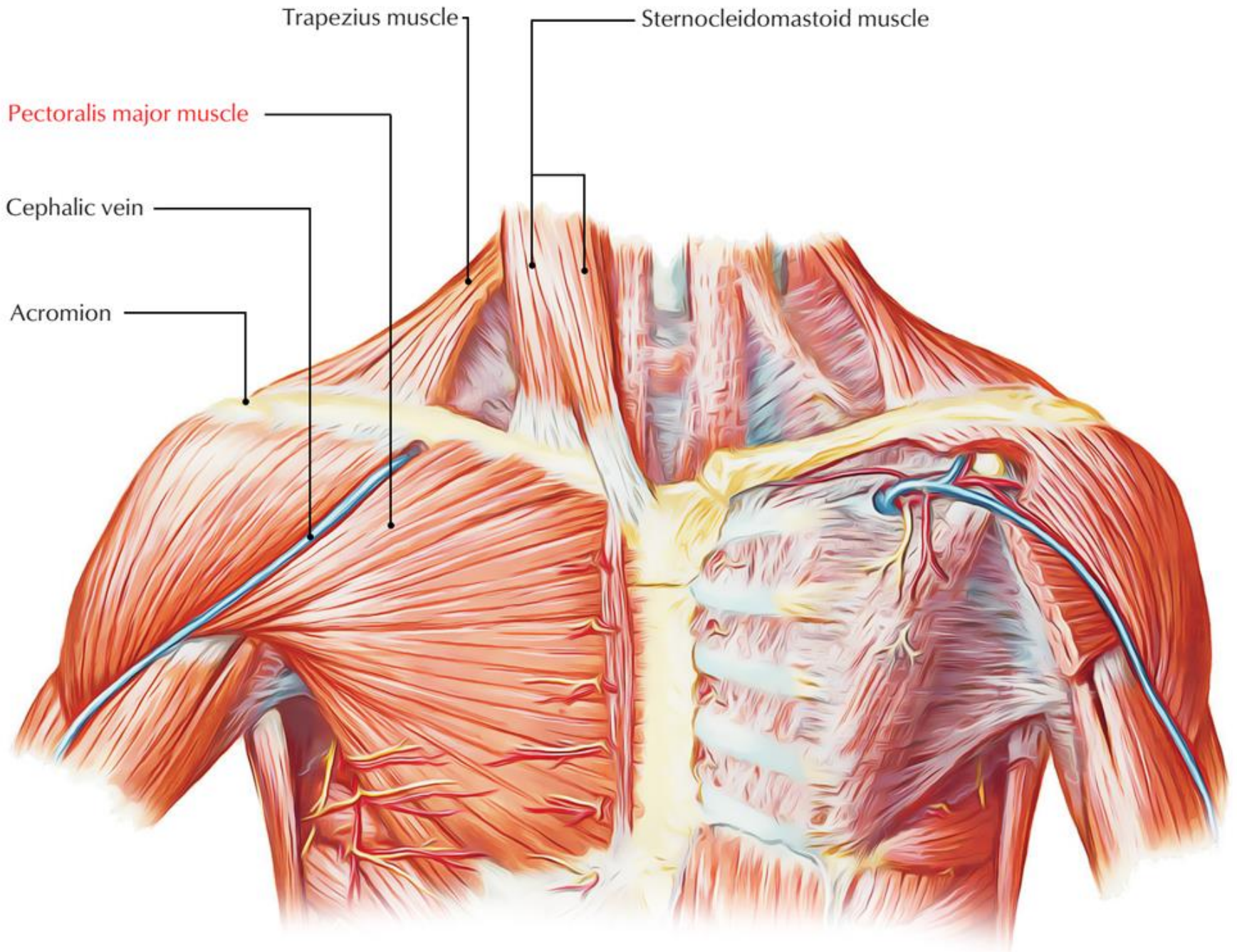
Cephalic vein
Thoracoepigastric vein

Internal oblique
Rectus abdominis
External oblique
Transversus abdominis
Inferior epigastric artery and vein
Superficial circumflex iliac artery and vein
Fascia lata

Superior epigastric artery and vein
Umbilicus
Superficial epigastric vein
Inguinal ligament
Superficial epigastric artery and vein
Long saphenous vein



A Removed: Pectoralis major and claviopectoral fascia.



pectoralis m.

angle of scapula

Pectoralis major m.

Clavicular head

Sternocostal head

Abdominal head

Subclavius m.

Clavicle

Coracoid process

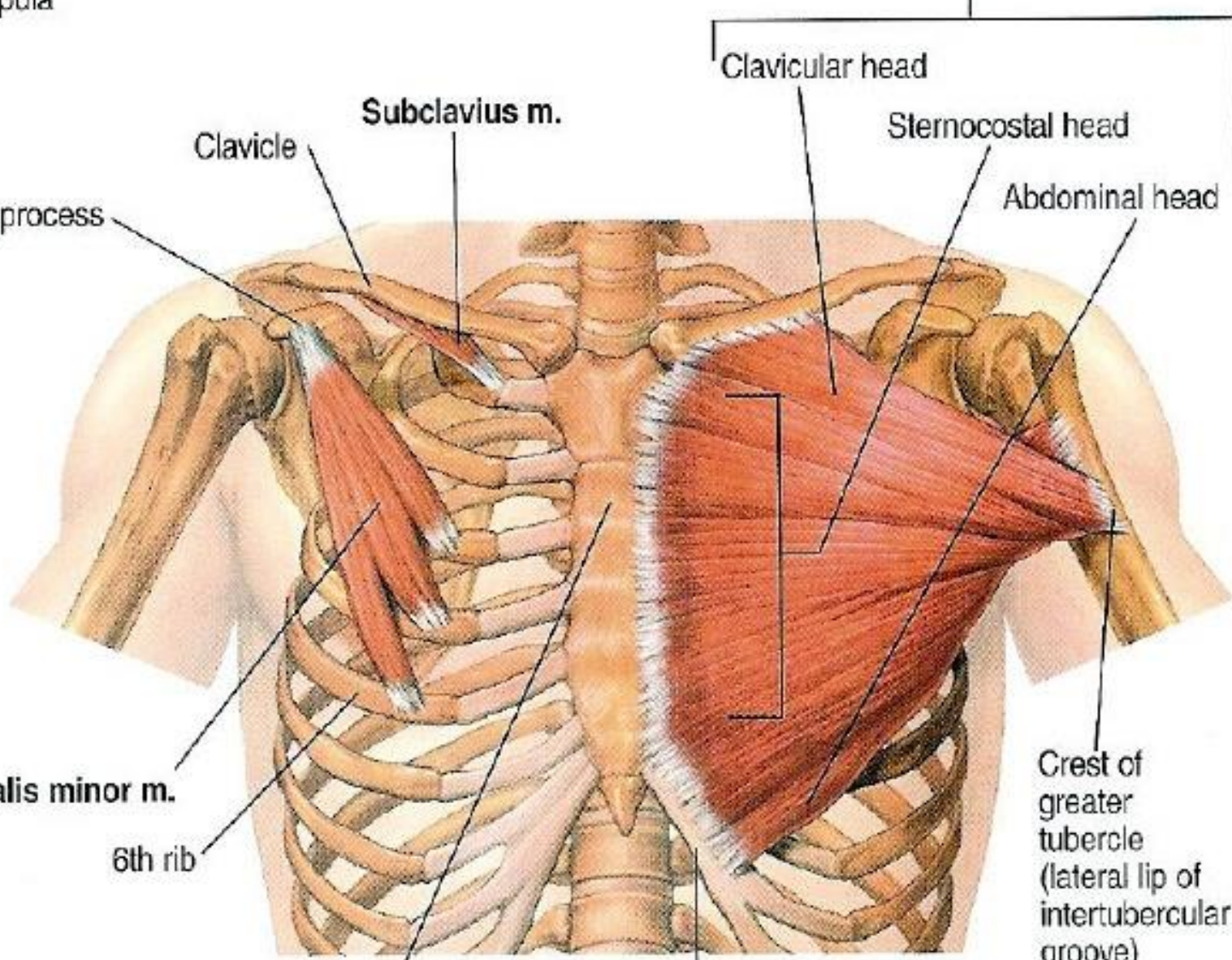
Pectoralis minor m.

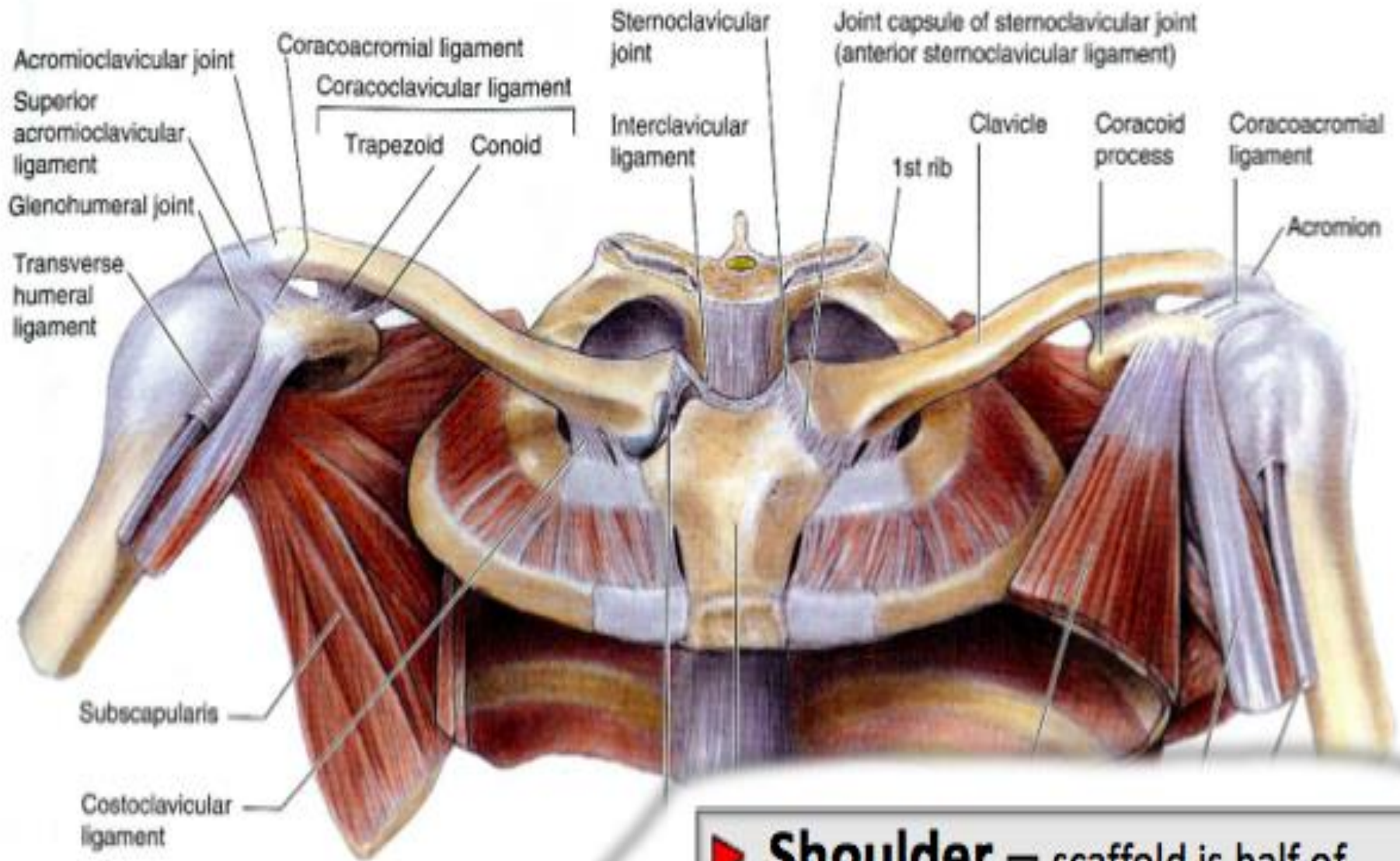
6th rib

Crest of greater tubercle (lateral lip of intertubercular groove)

Sternum

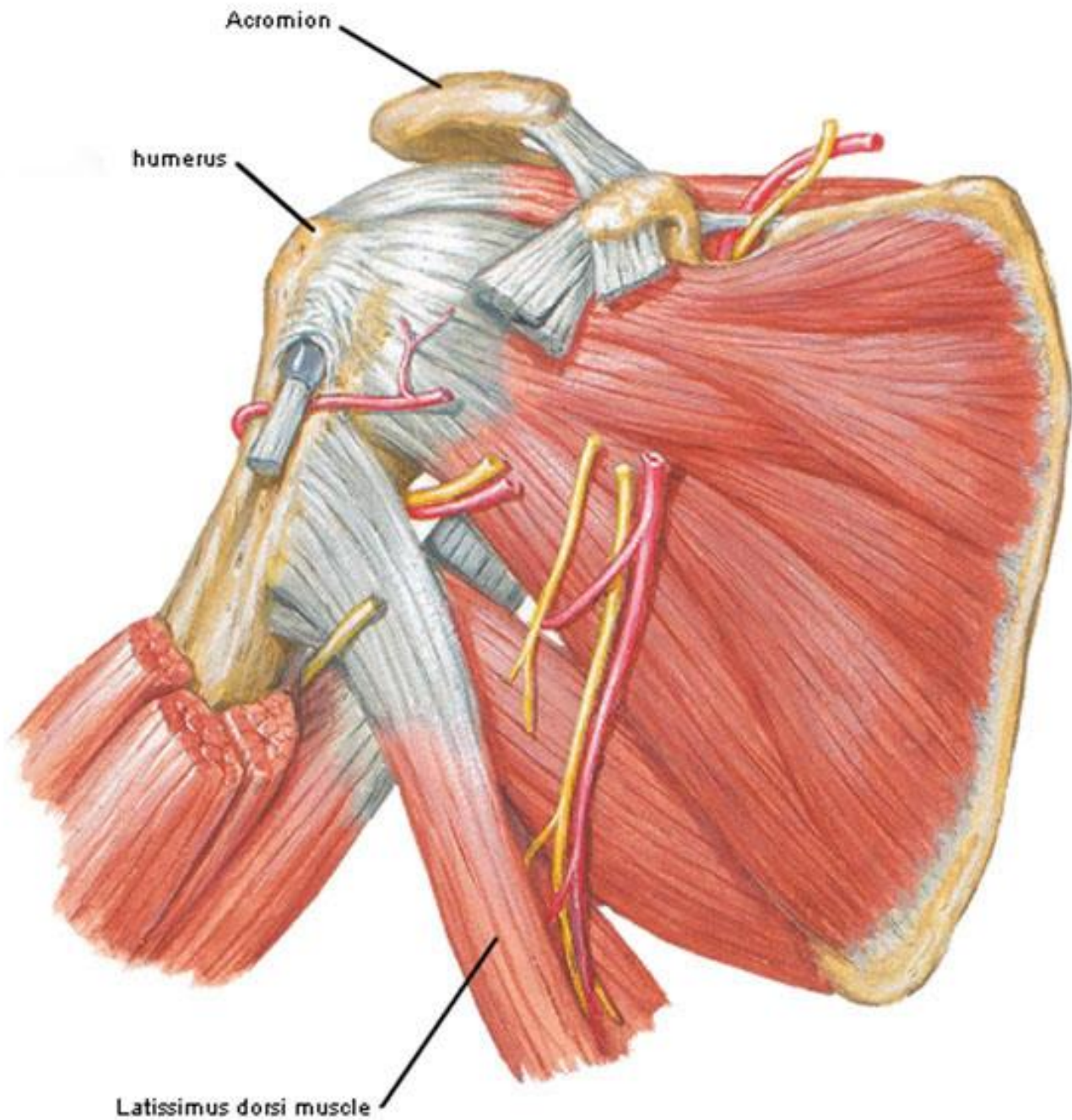
Costal arch





Anterior view

► **Shoulder** – scaffold is half of pectoral girdle (scapula, clavicle, manubrium of sternum)



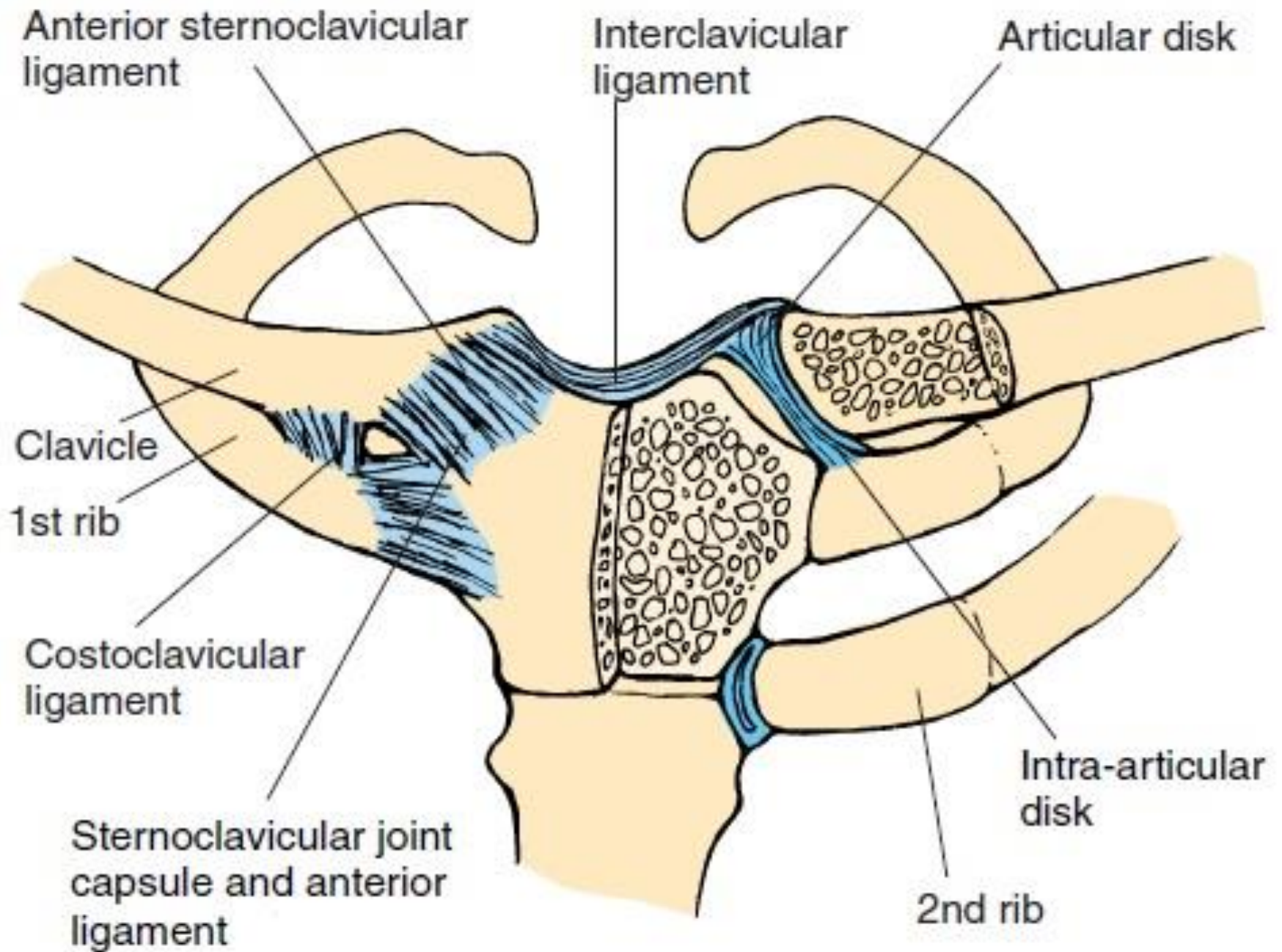
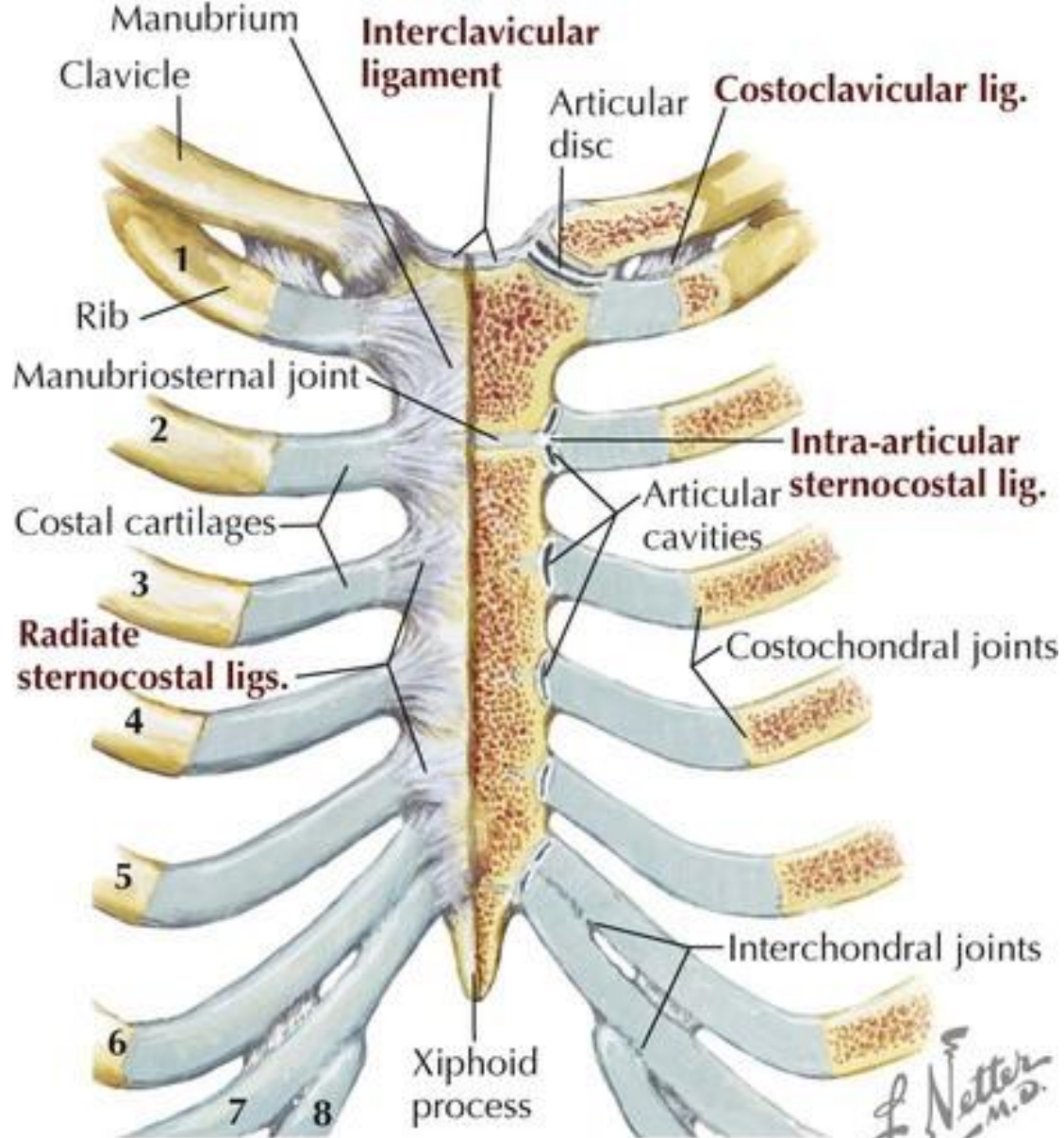
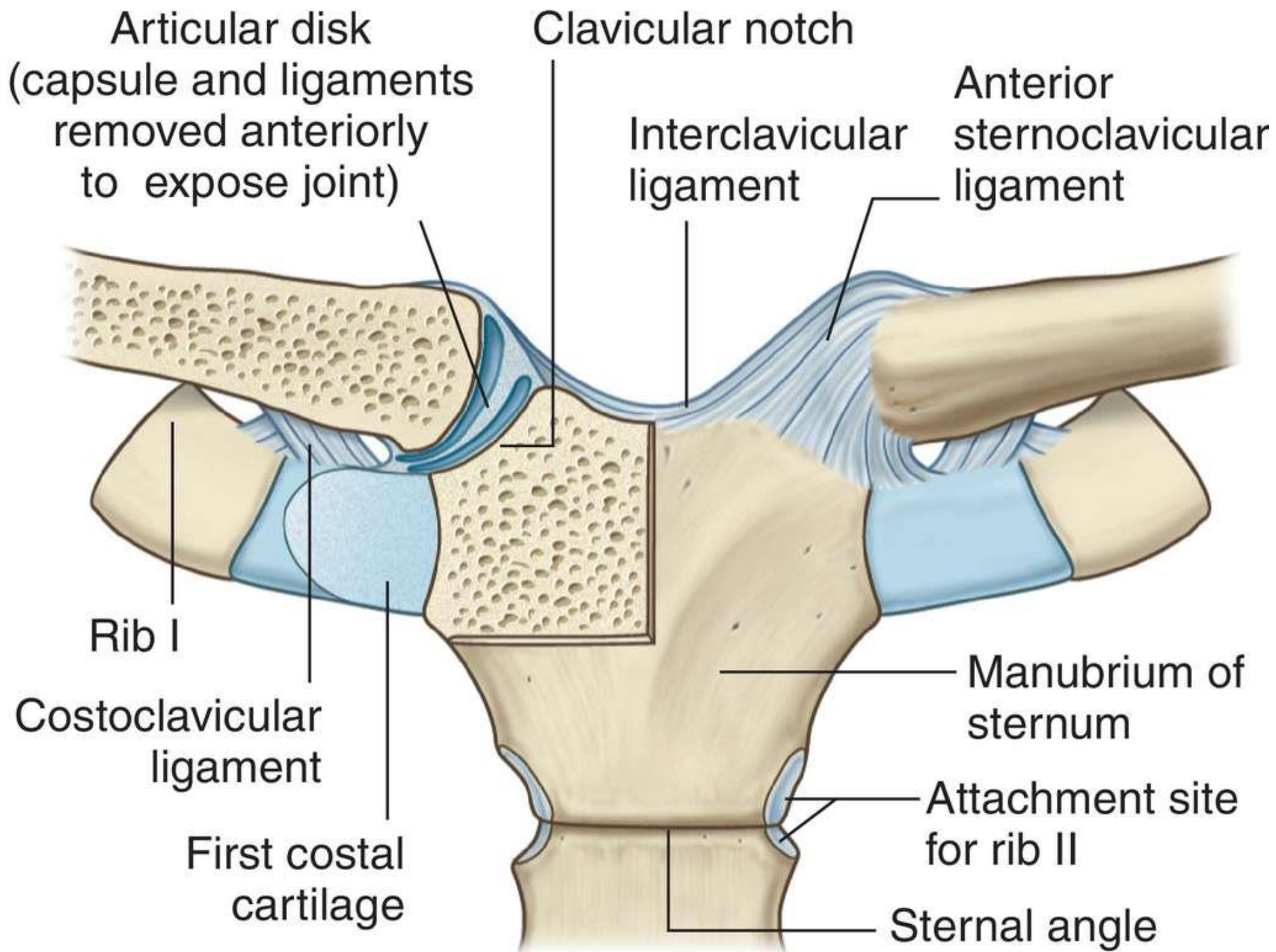


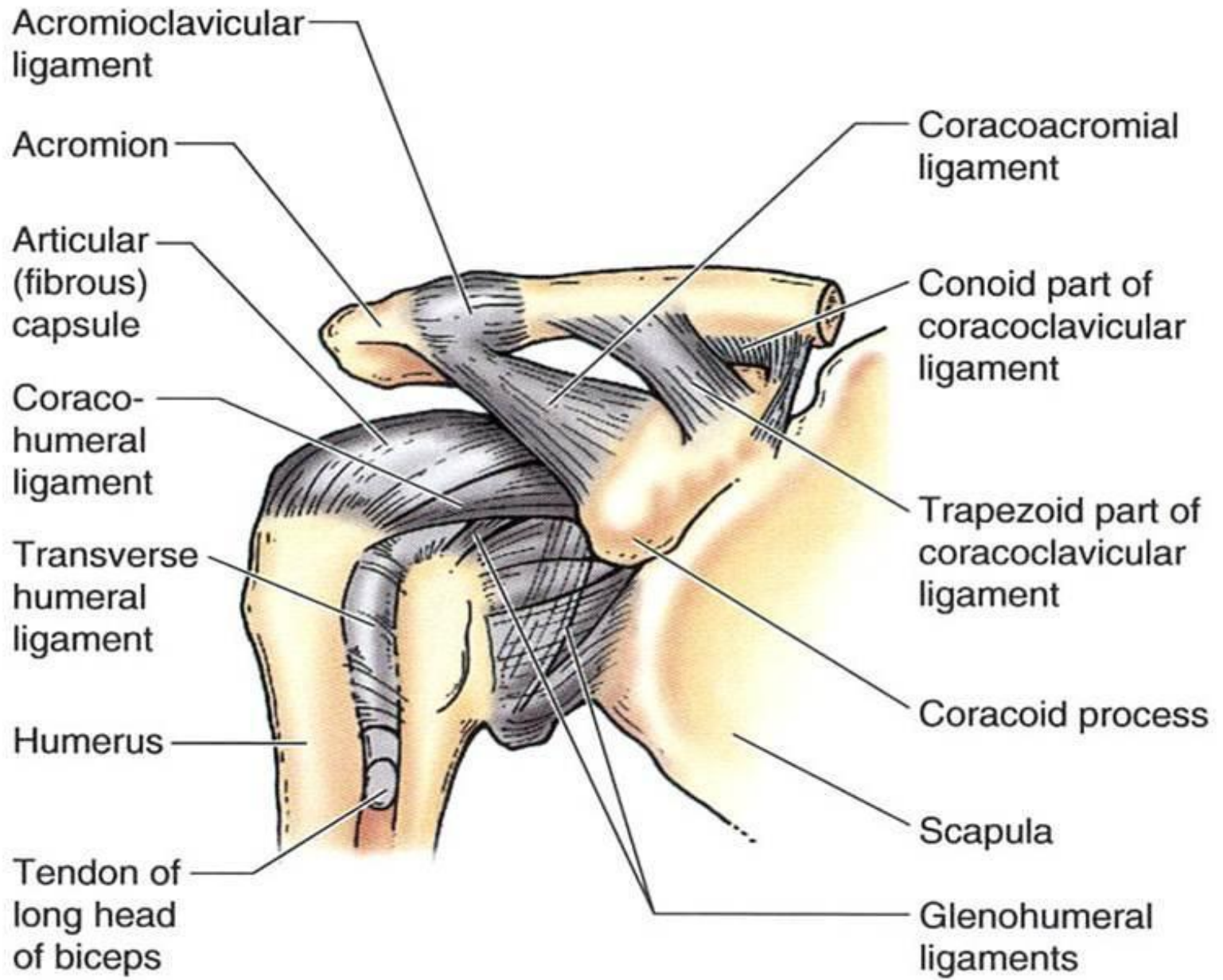
FIGURE 3.39. Sternoclavicular Joint



Sternocostal articulations: anterior view

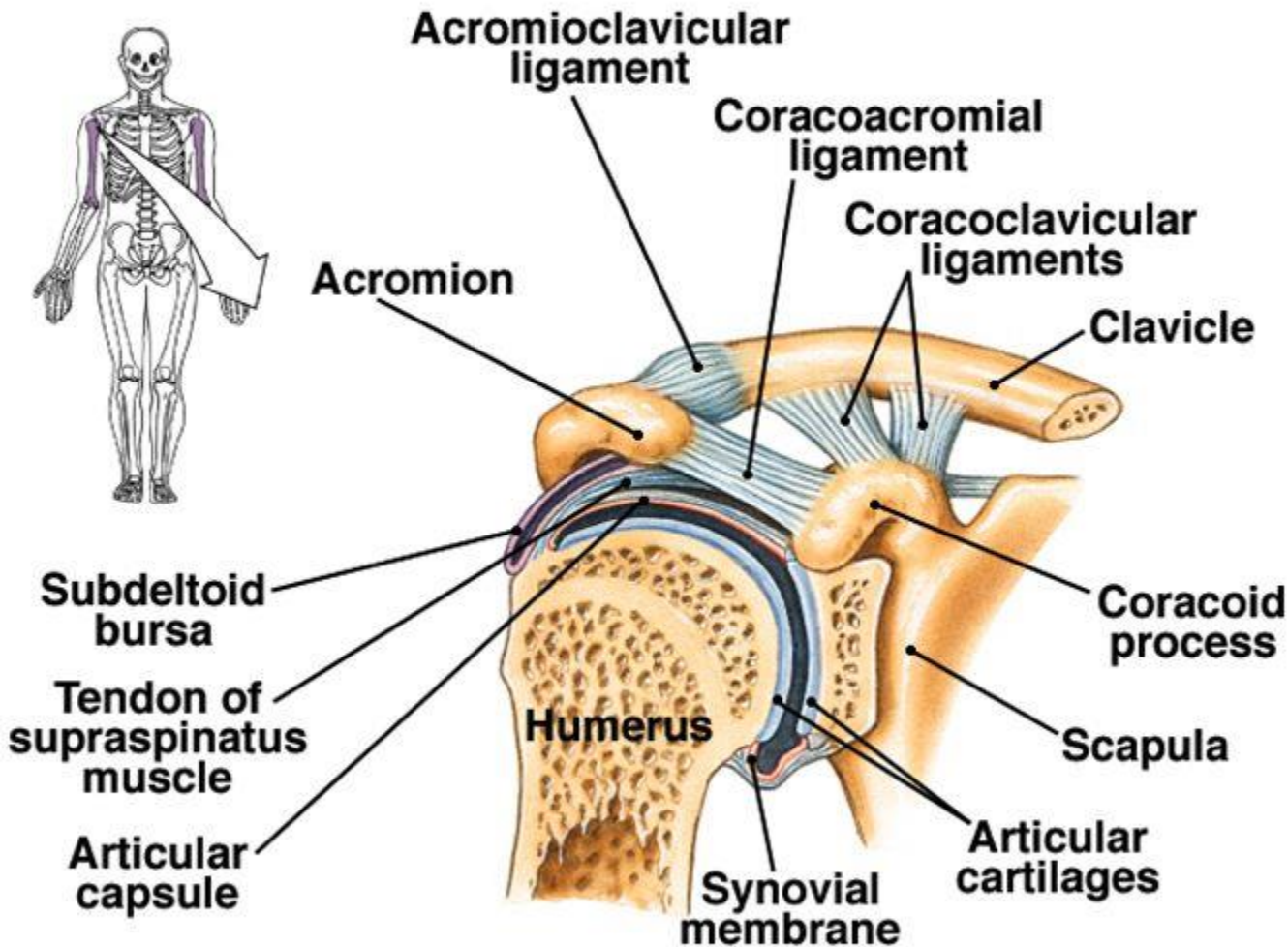
Note: On left side of the rib cage, the sternum and proximal ribs have been shaved down and the ligaments removed to show the bone marrow and articular cavities.





(B) Anterior view

Joints of the Pectoral Girdle

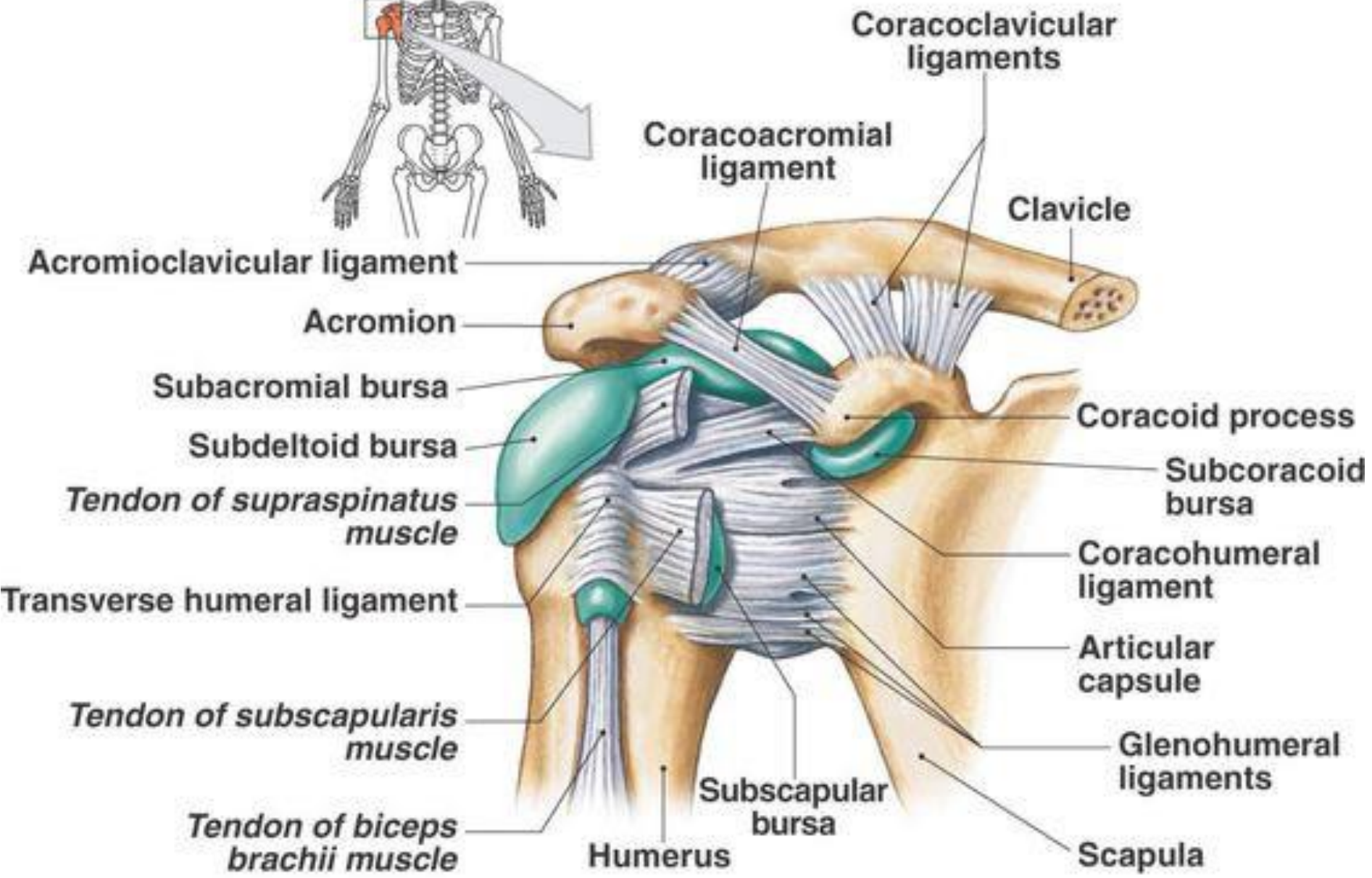
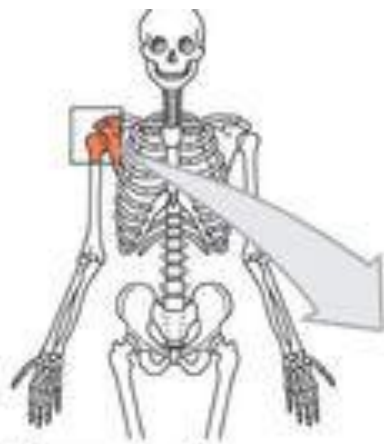


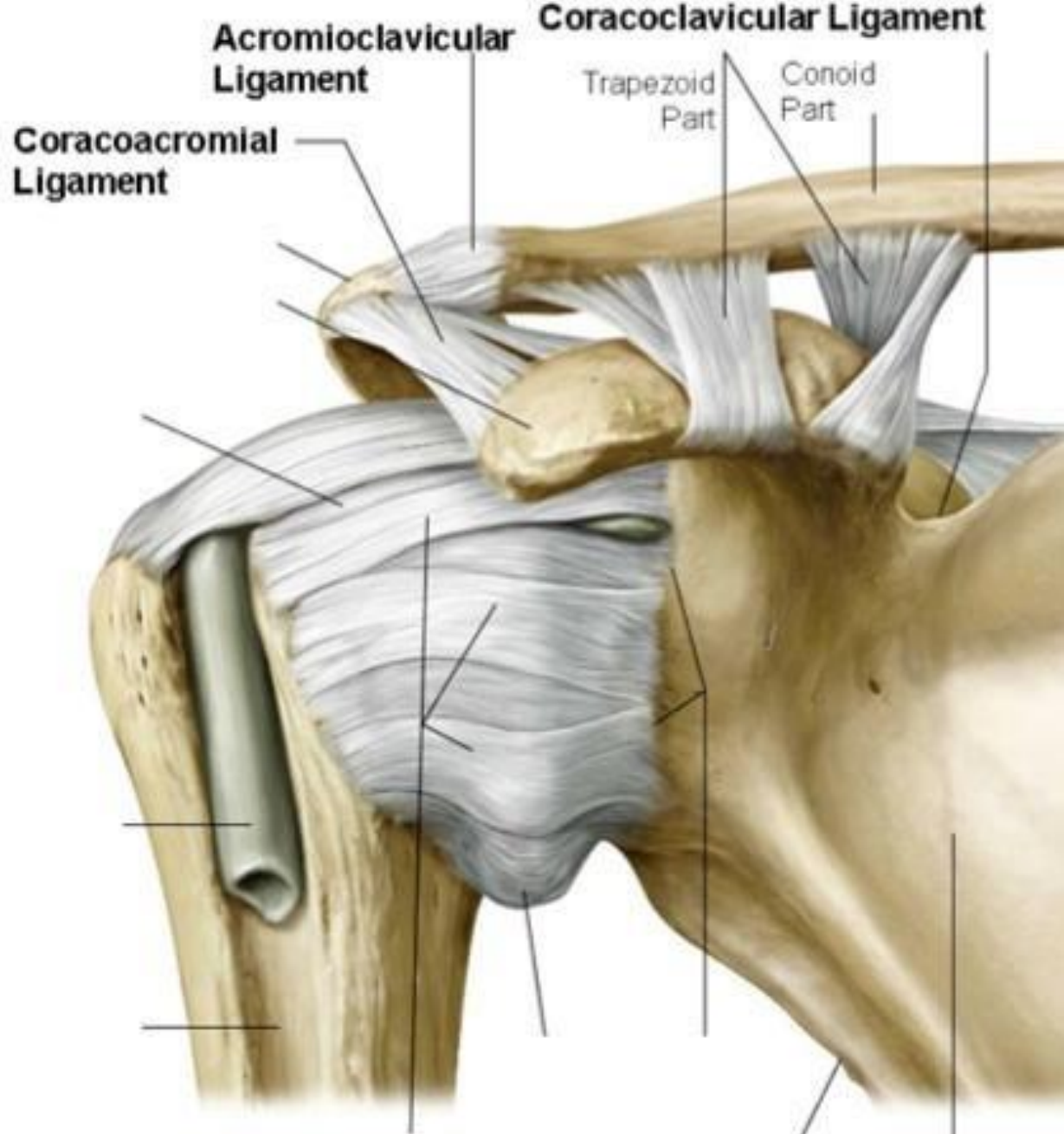
Clavicle is one of the most frequently fractured bones in the body.

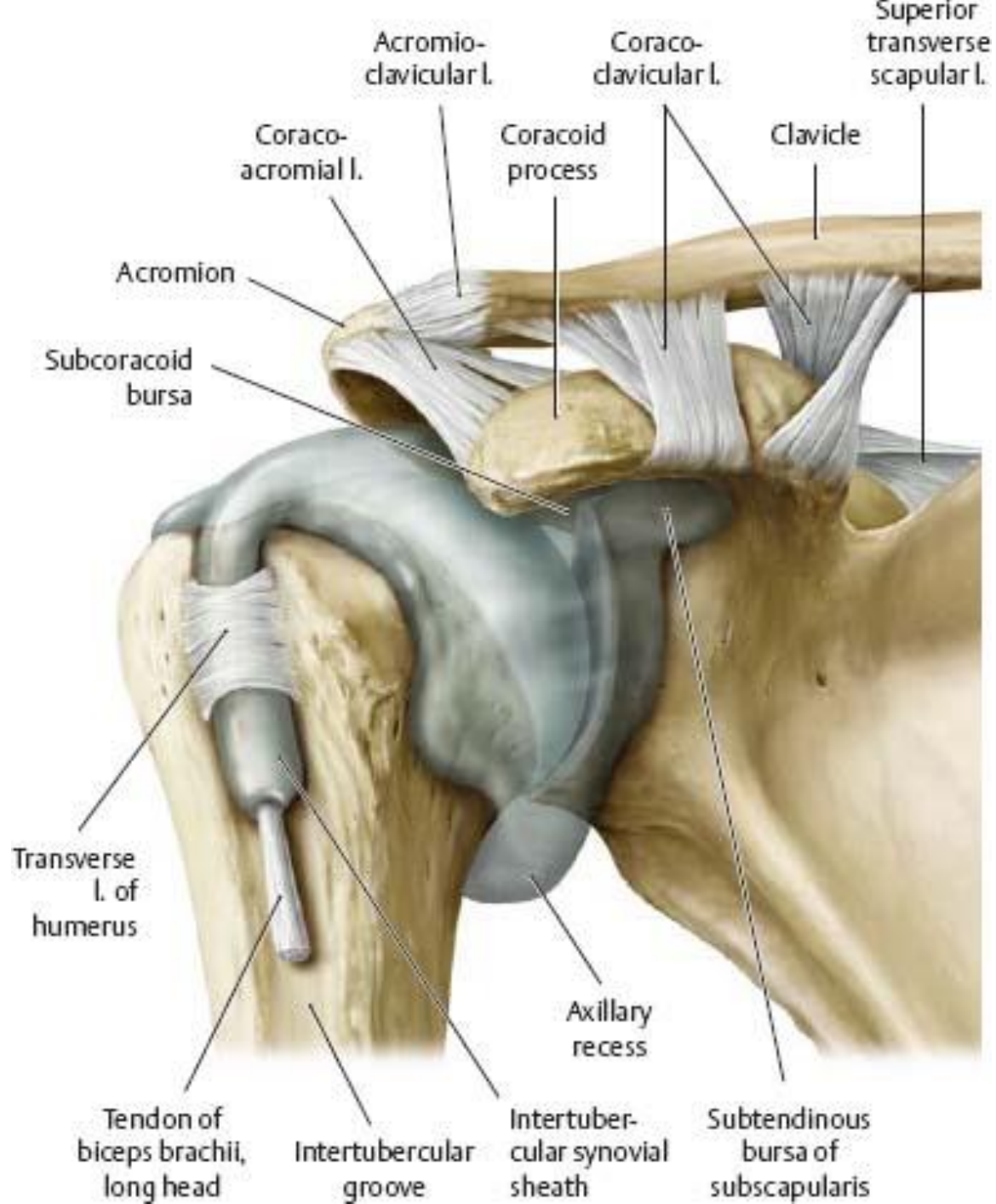
Clavicular midregion is the weakest point of clavicle and most frequent fracture site.

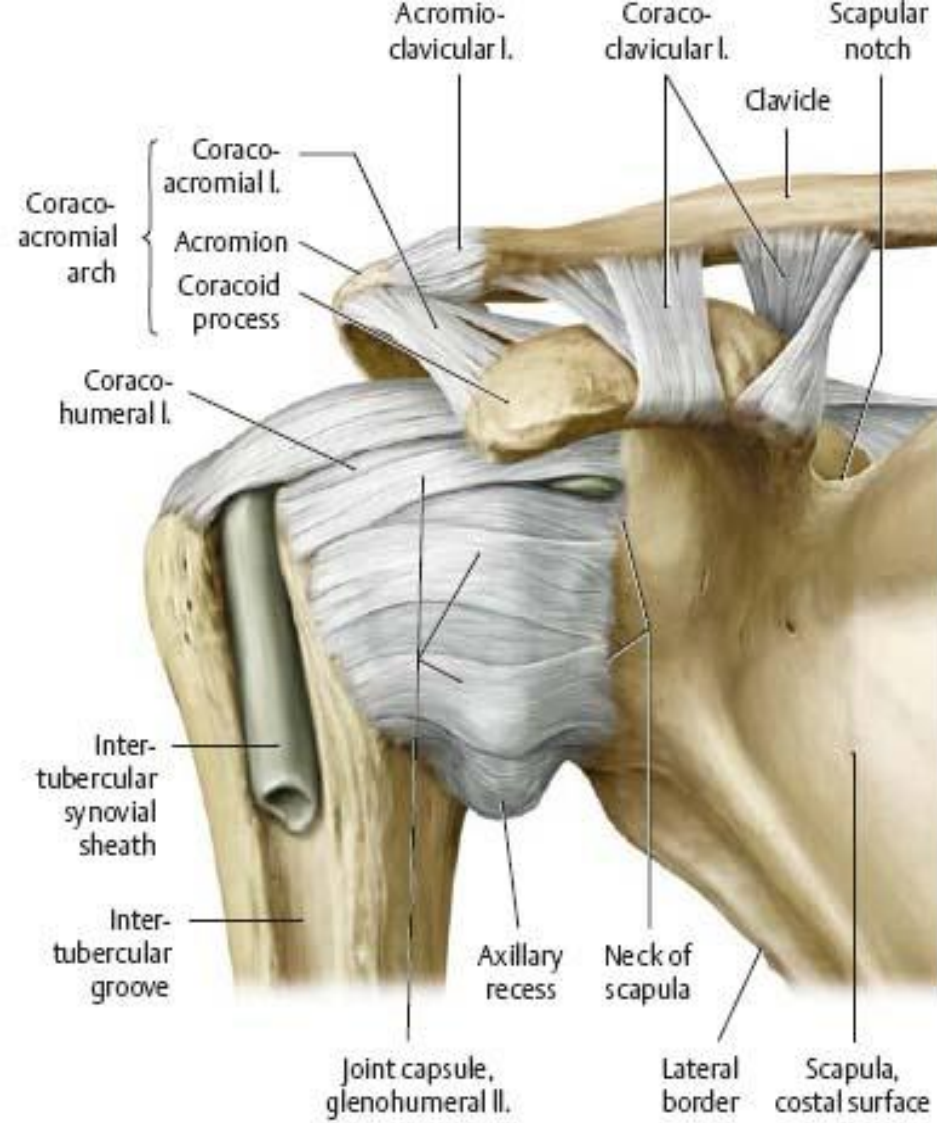
Figure: Martini, *Fundamentals of Anatomy & Physiology*, Prentice Hall, 2004

Anterior view, frontal section; right shoulder

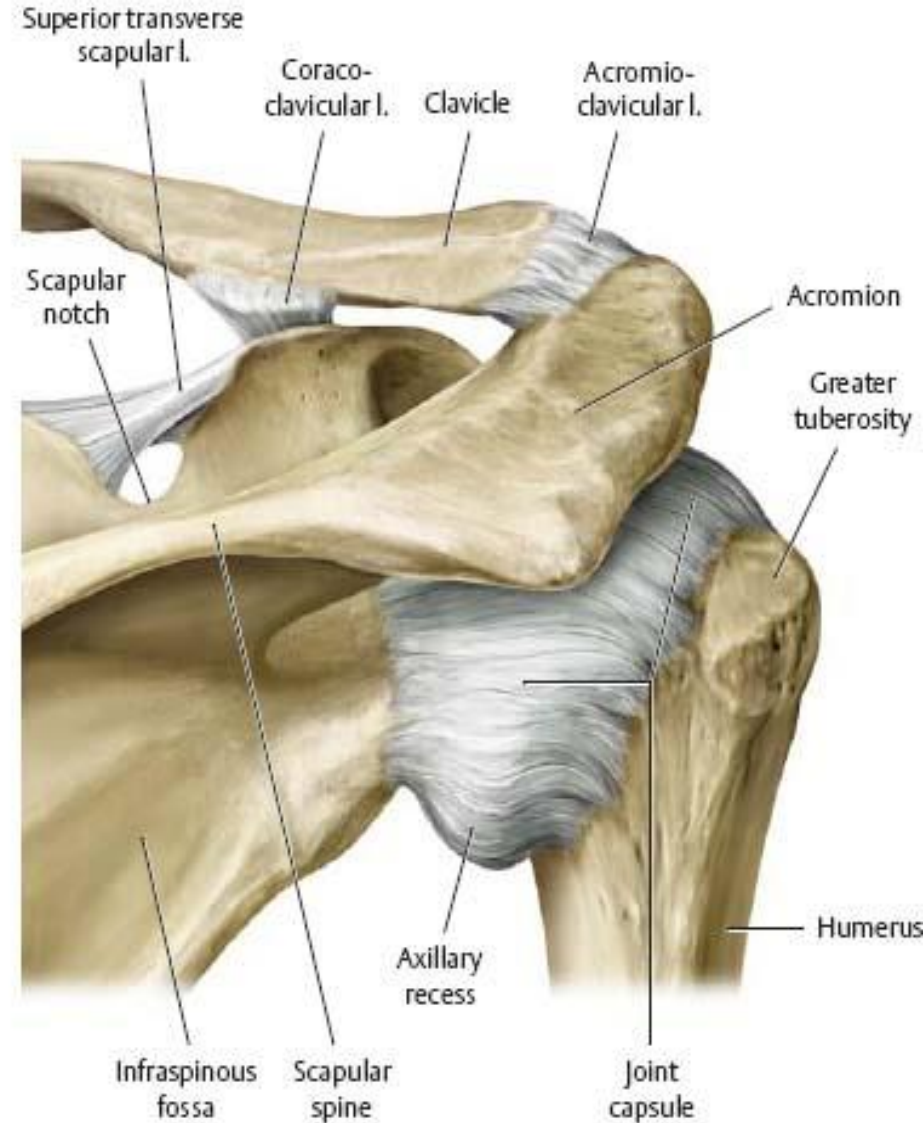




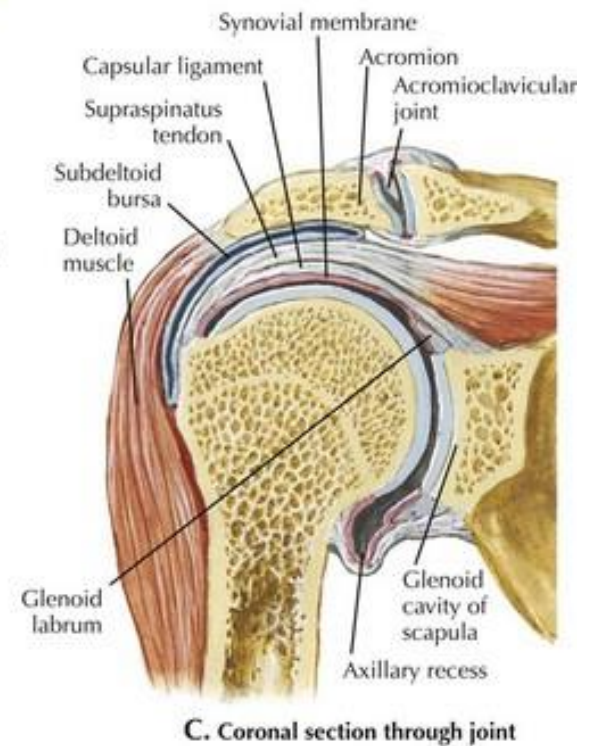
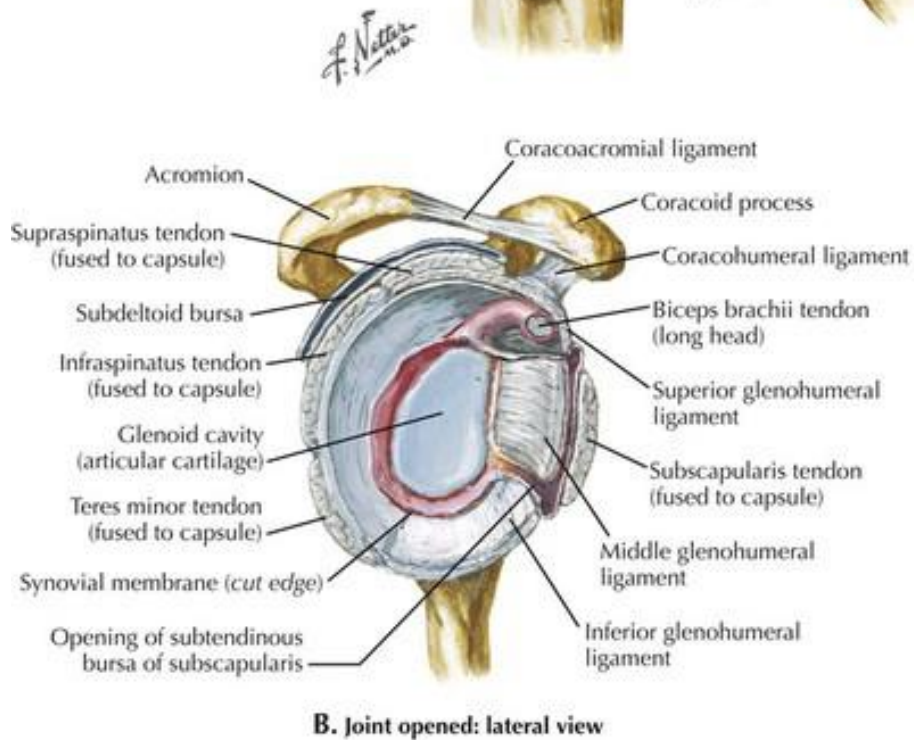
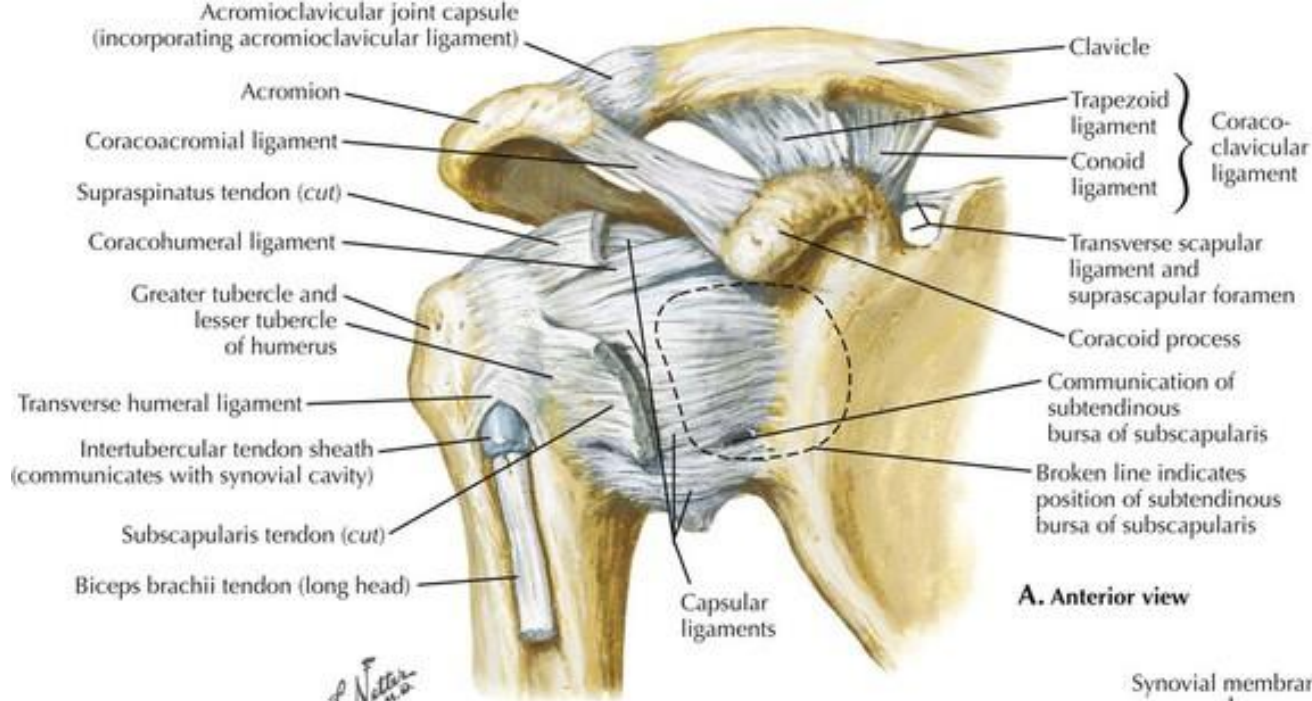


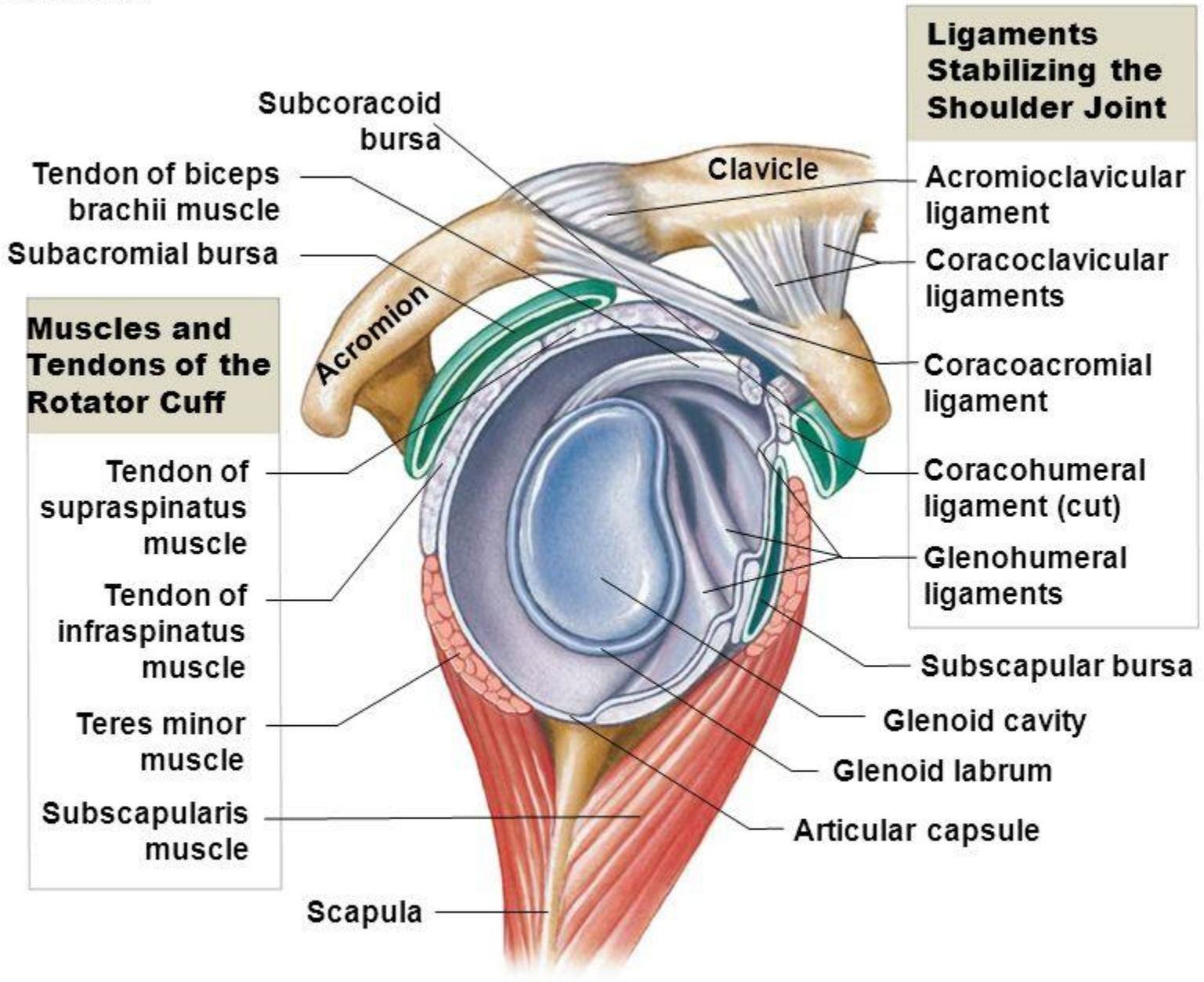


A Anterior view.

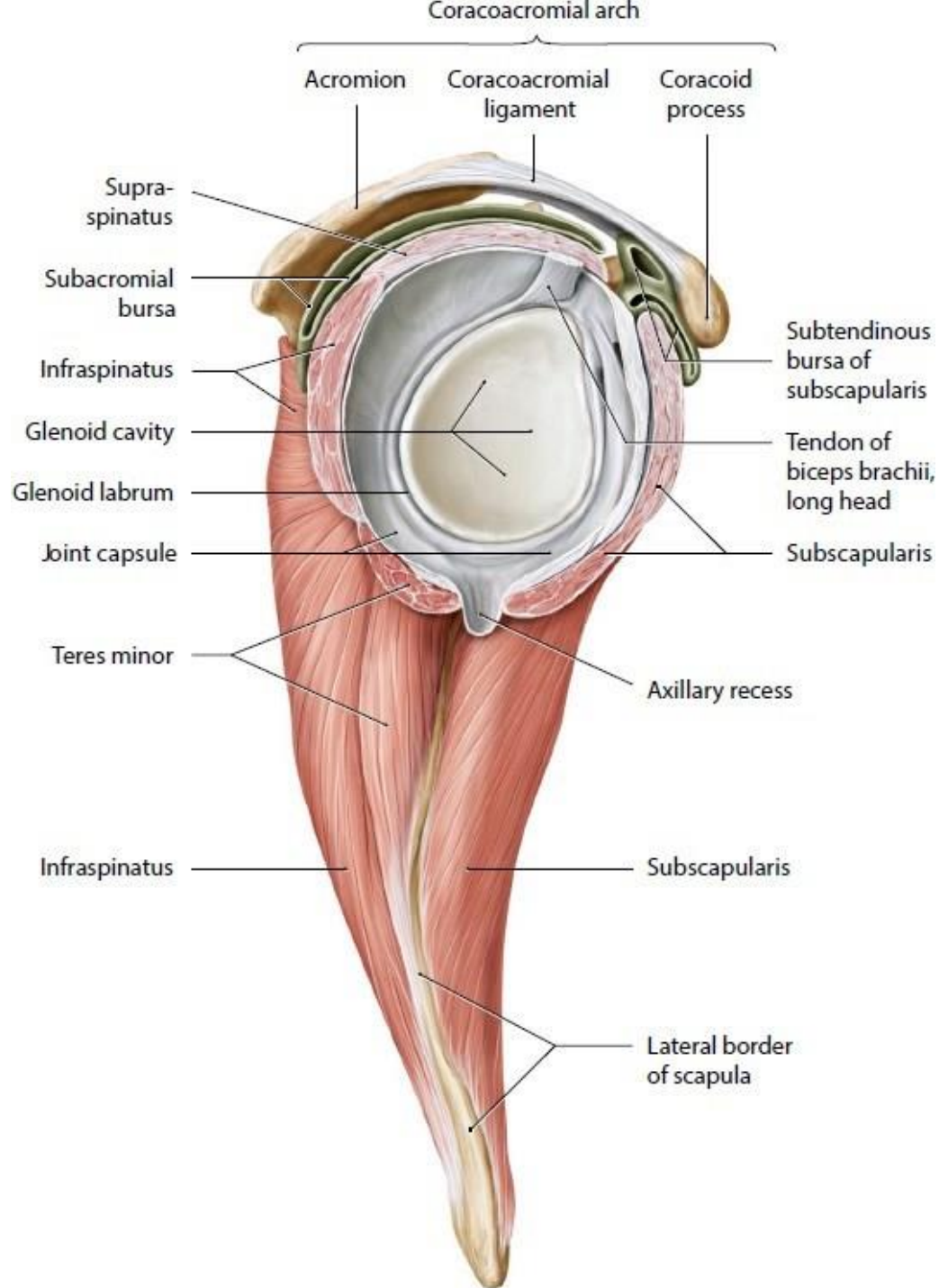


B Posterior view.

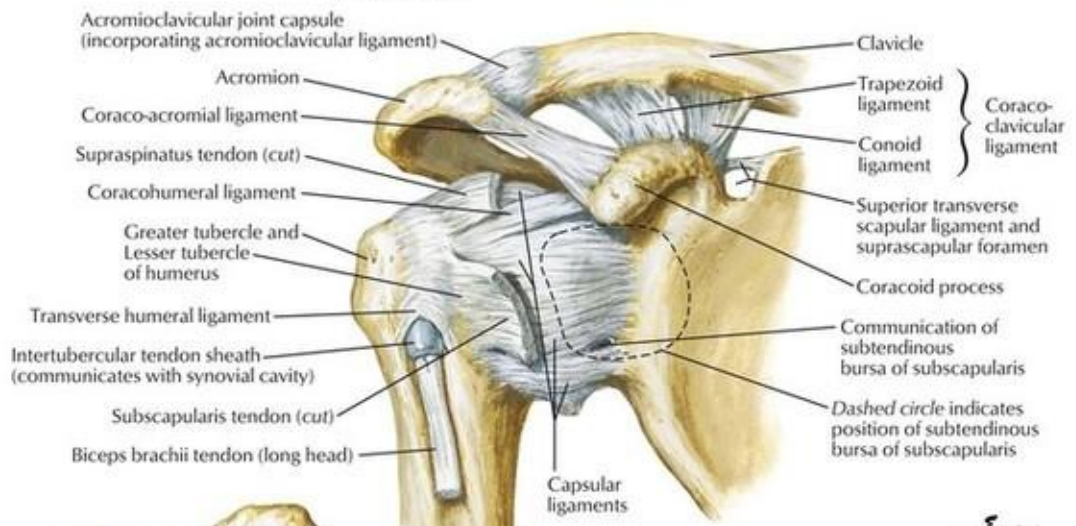




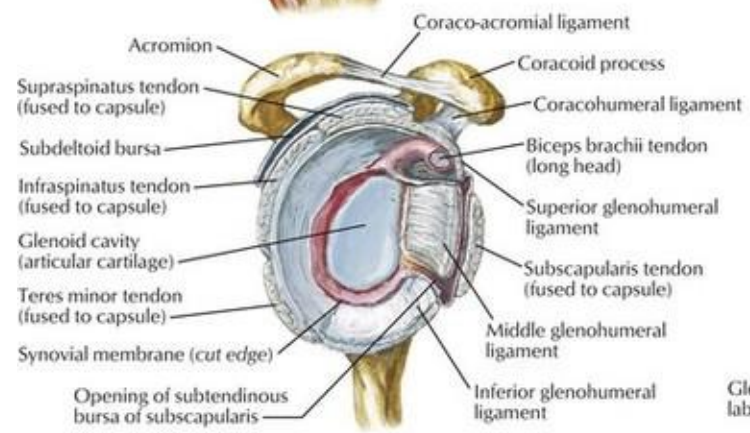
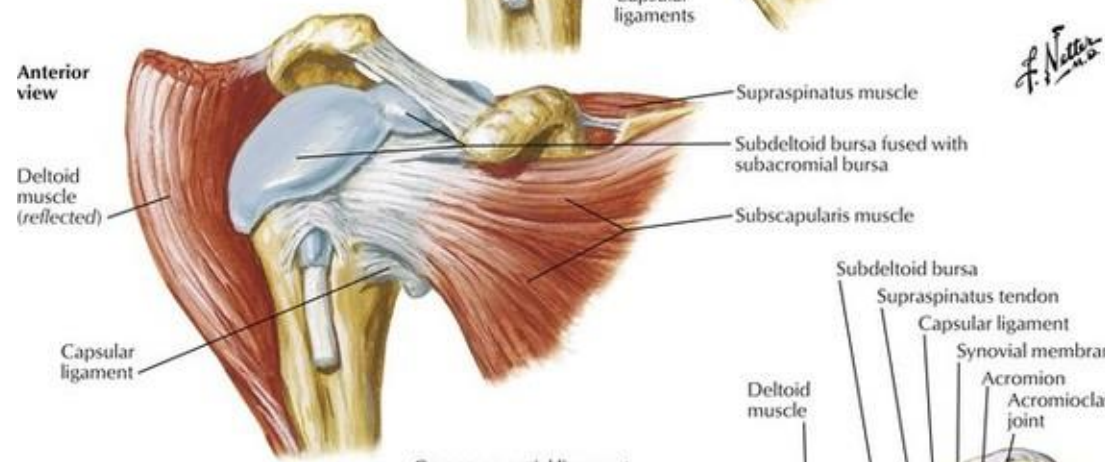
b Lateral view of pectoral girdle



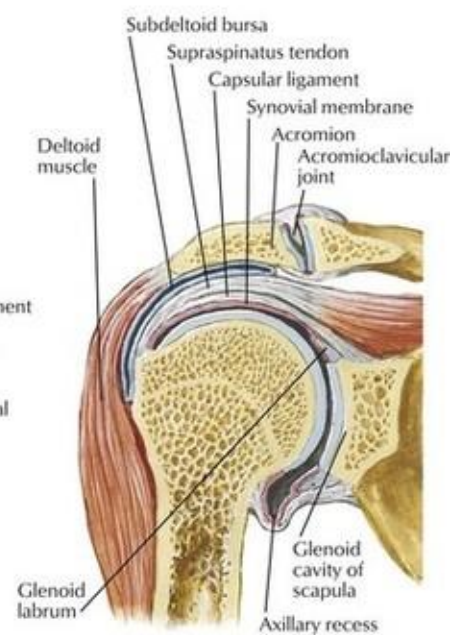
Anterior view



Anterior view

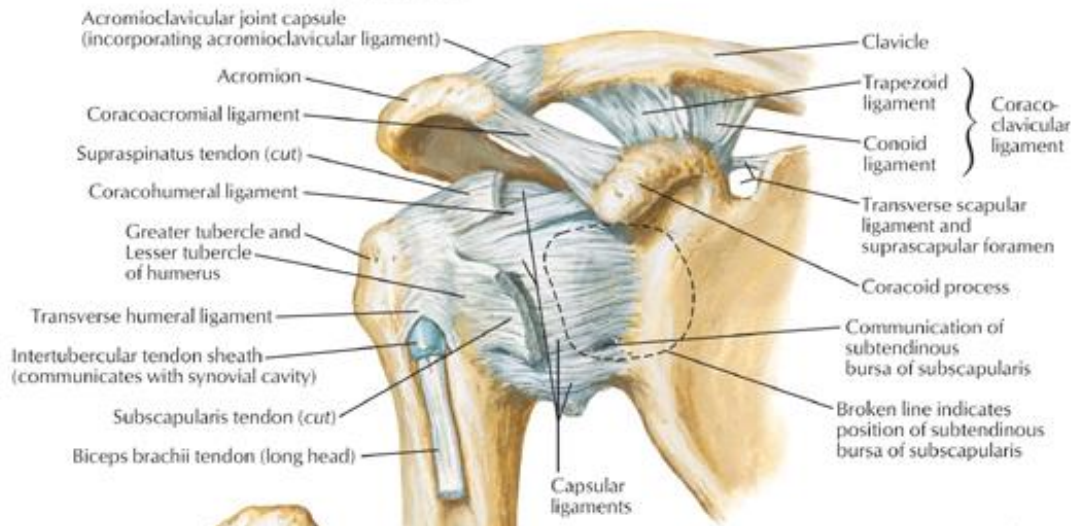


Joint opened: lateral view

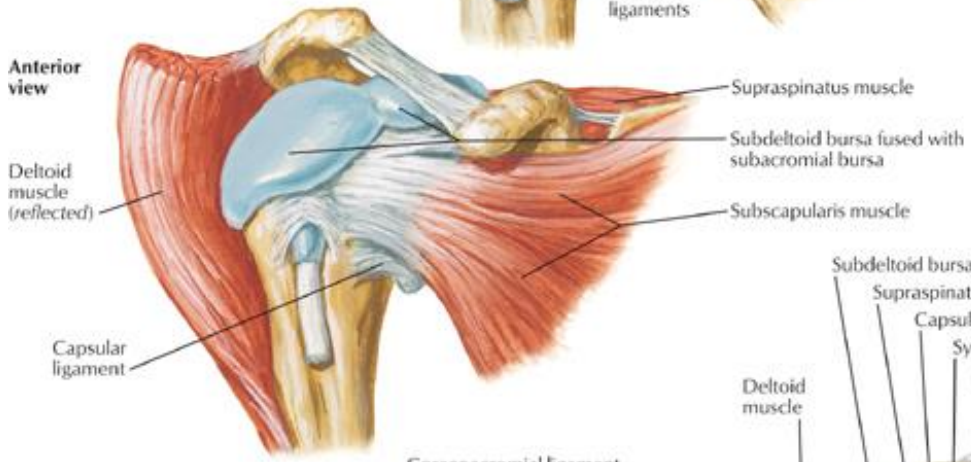


Coronal section through joint

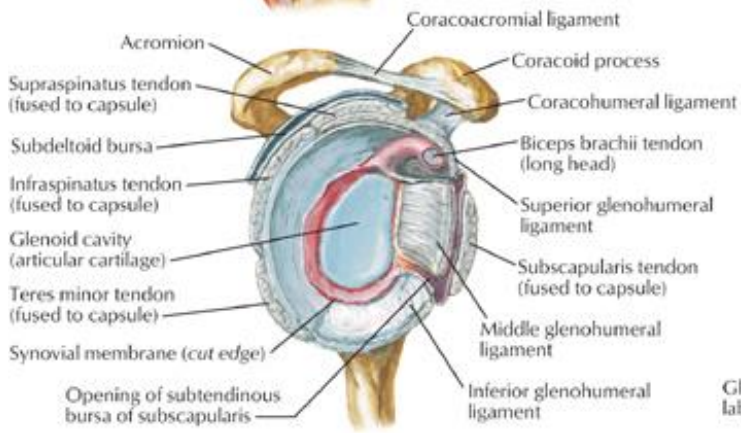
Anterior view



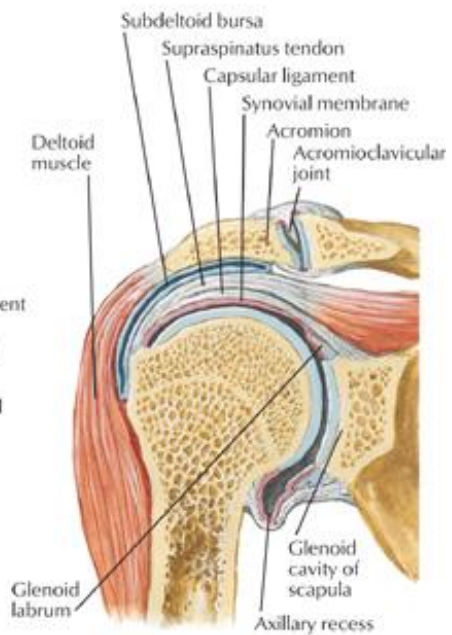
Anterior view



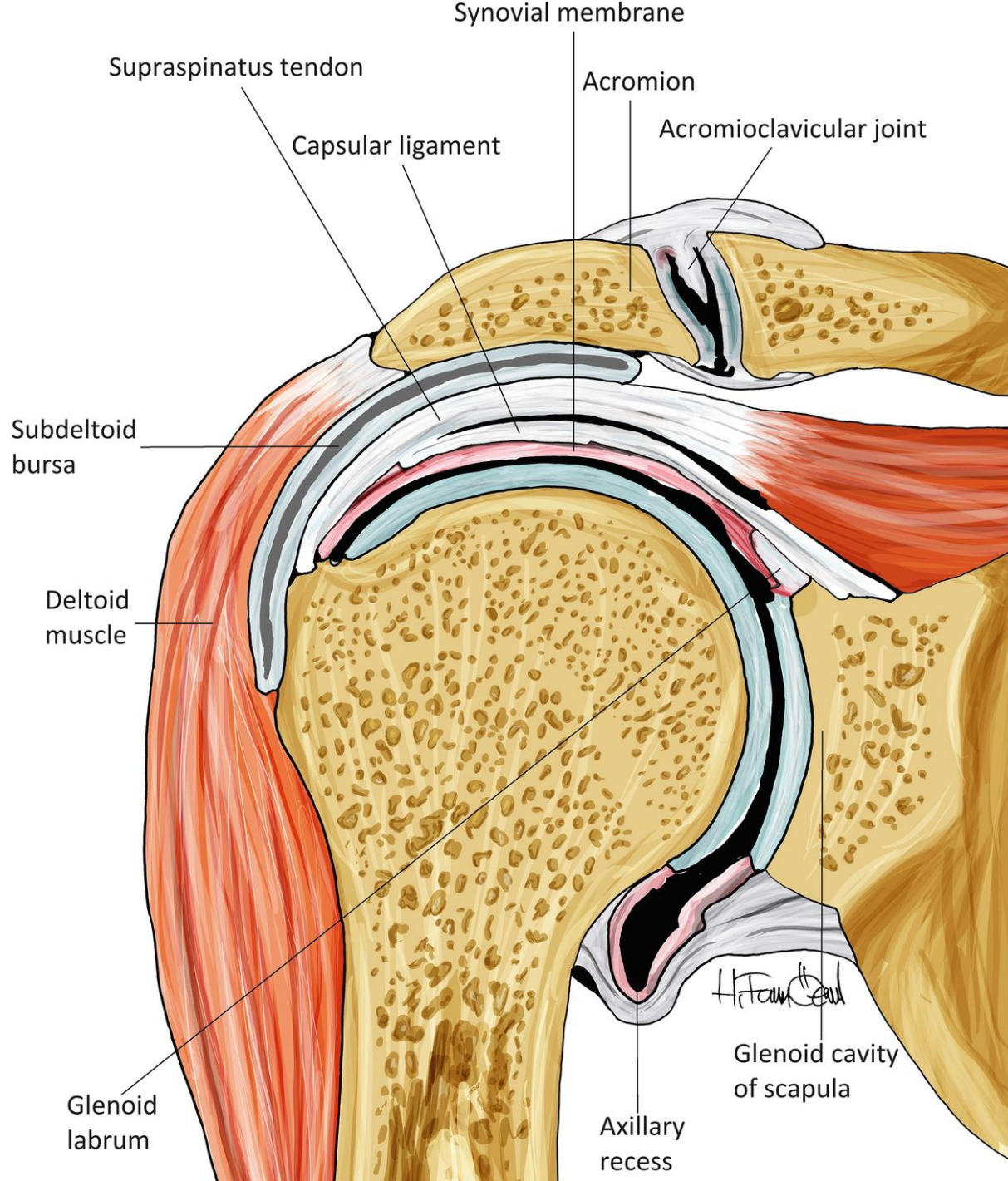
f. Netter



Joint opened: lateral view

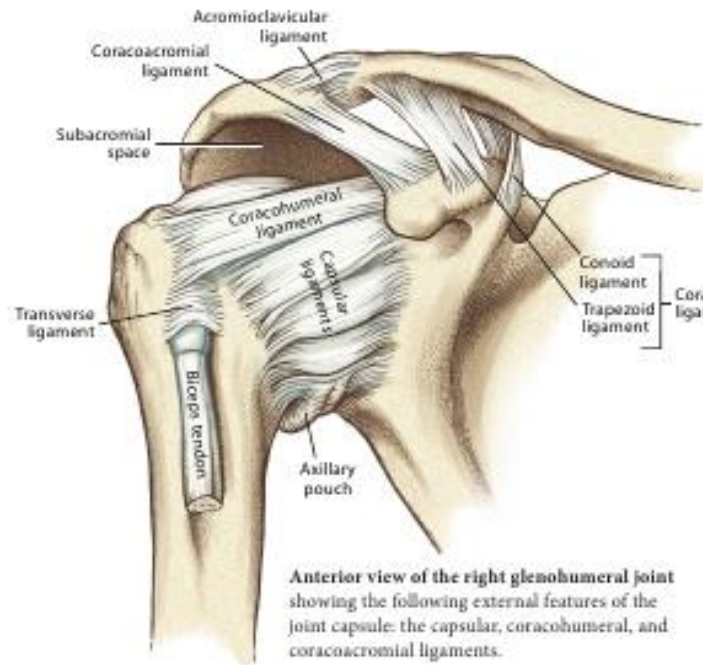


Coronal section through joint

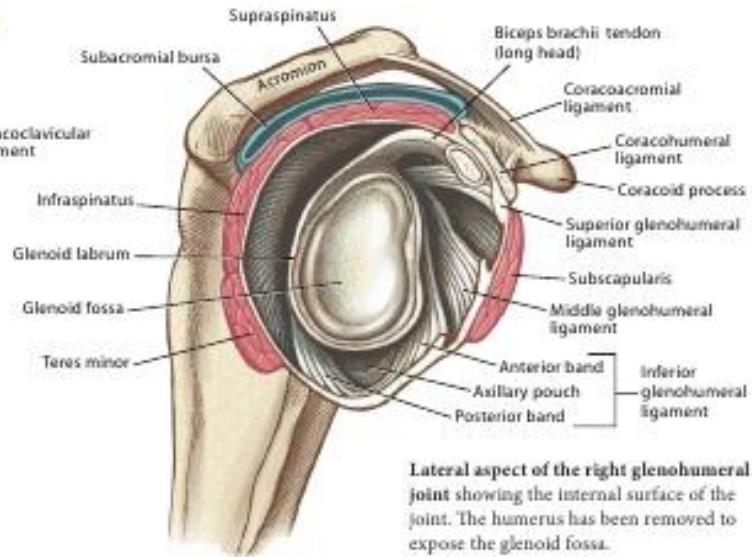


The Glenohumeral Joint

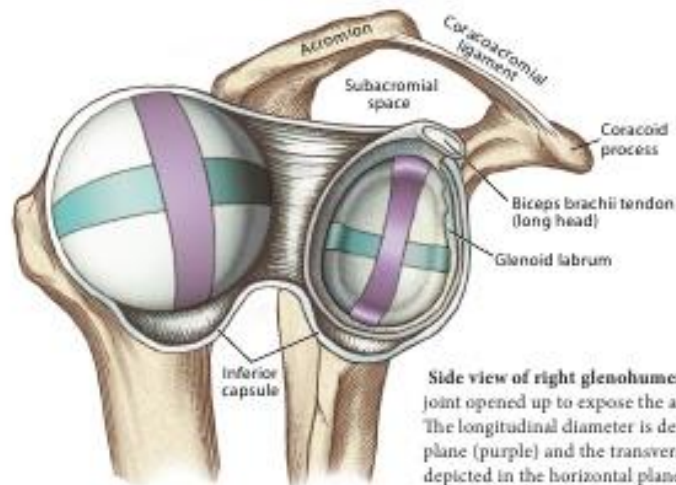
from *Kinesiology of the Musculoskeletal System, 2nd Edition*
by Donald A. Neumann, © Elsevier Sciences



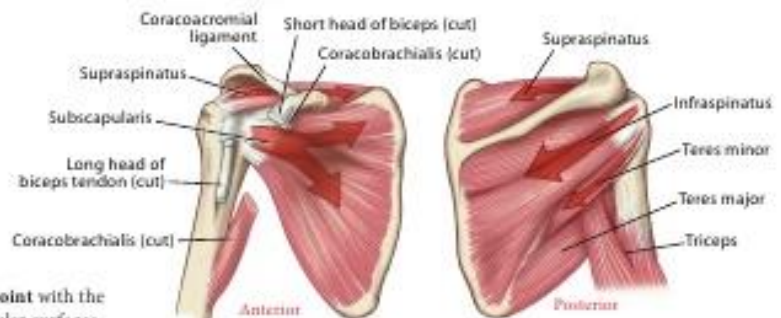
Anterior view of the right glenohumeral joint showing the following external features of the joint capsule: the capsular, coracohumeral, and coracoacromial ligaments.



Lateral aspect of the right glenohumeral joint showing the internal surface of the joint. The humerus has been removed to expose the glenoid fossa.



Side view of right glenohumeral joint with the joint opened up to expose the articular surfaces. The longitudinal diameter is depicted in the frontal plane (purple) and the transverse diameter is depicted in the horizontal plane (blue-green).

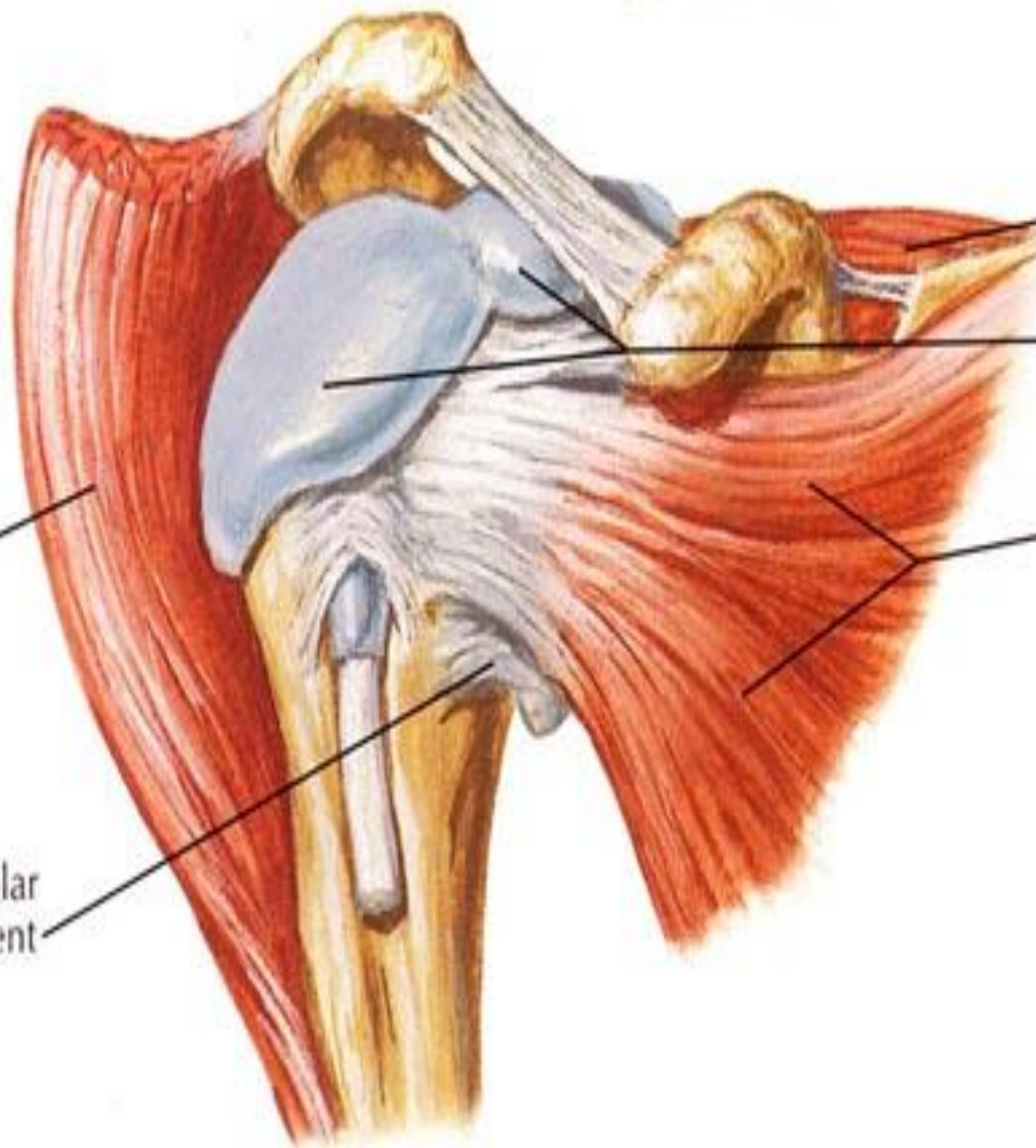


Anterior and posterior views of the right shoulder showing the rotator cuff muscles blending into and reinforcing the glenohumeral joint capsule.

Anterior view

Deltoid muscle
(reflected)

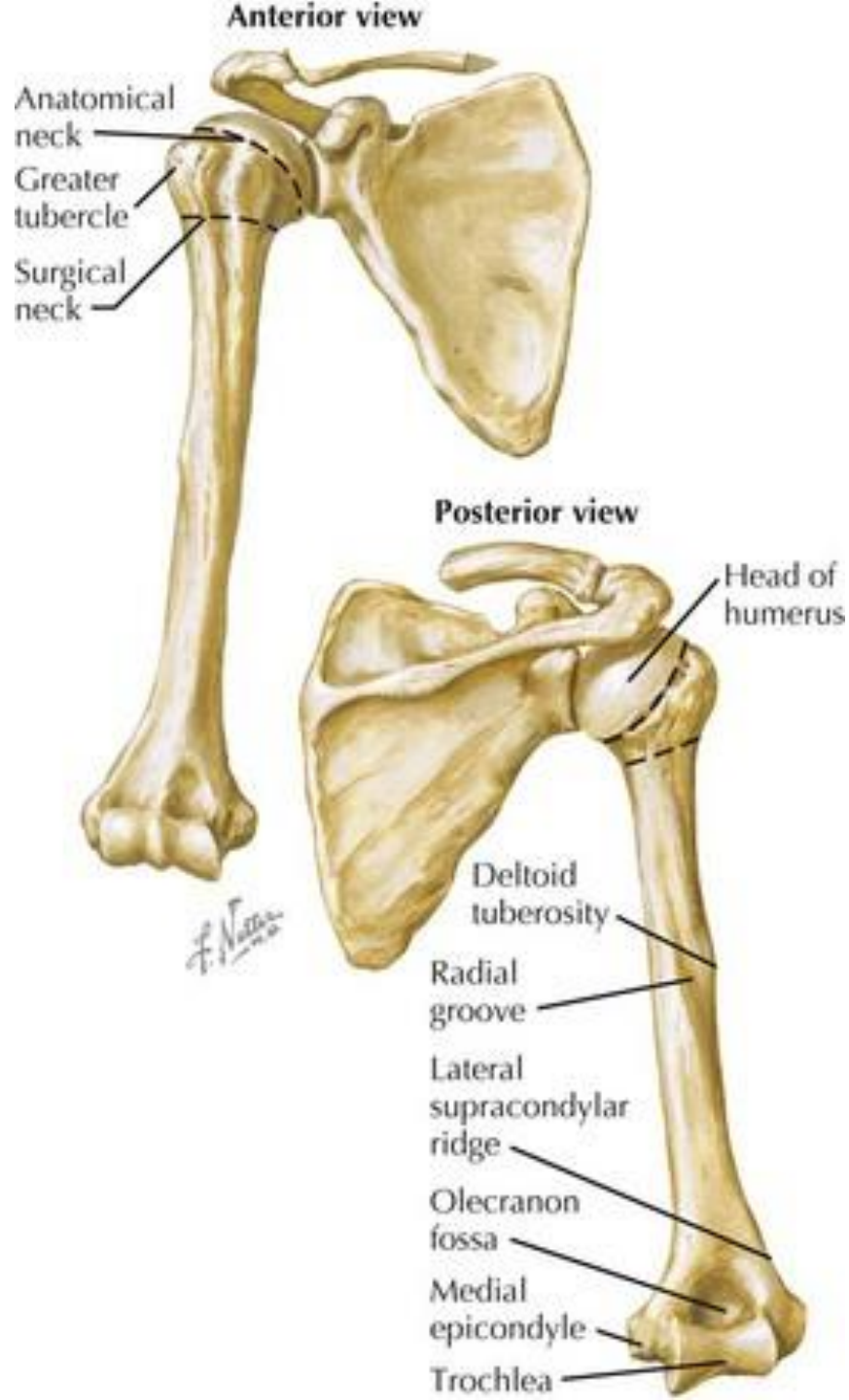
Capsular ligament

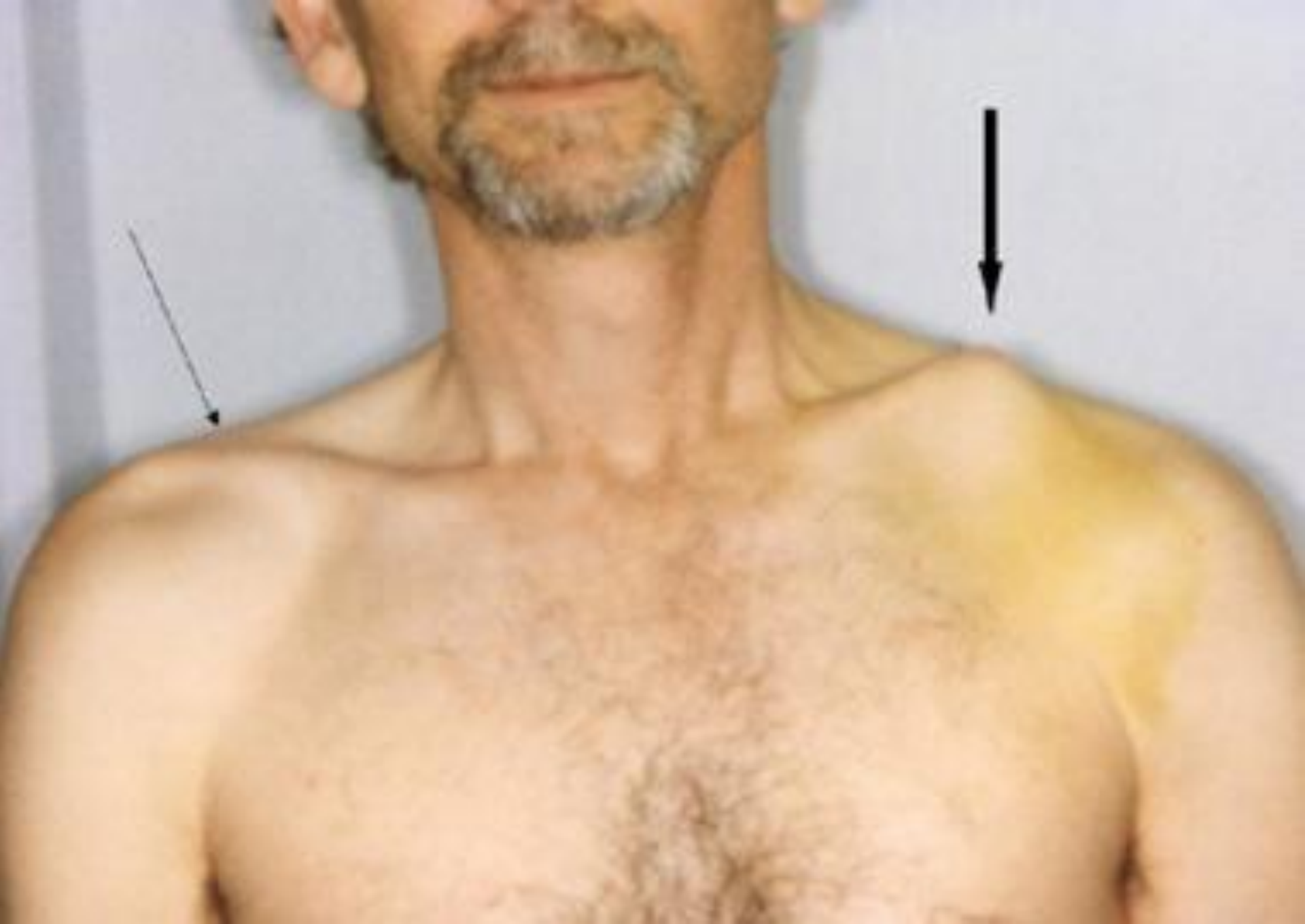


Supraspinatus muscle

Subdeltoid bursa fused with
subacromial bursa

Subscapularis muscle















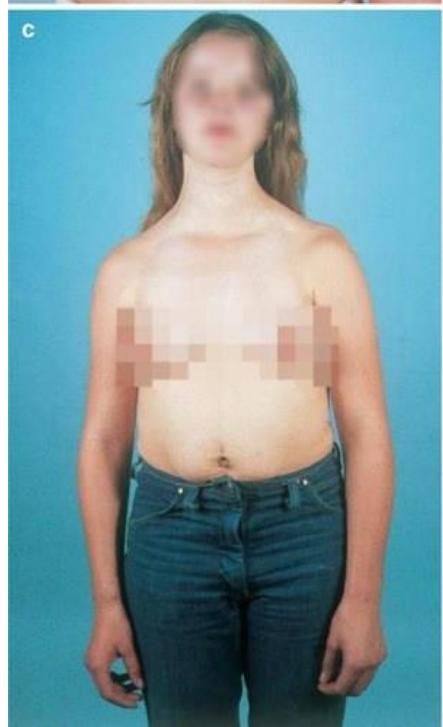
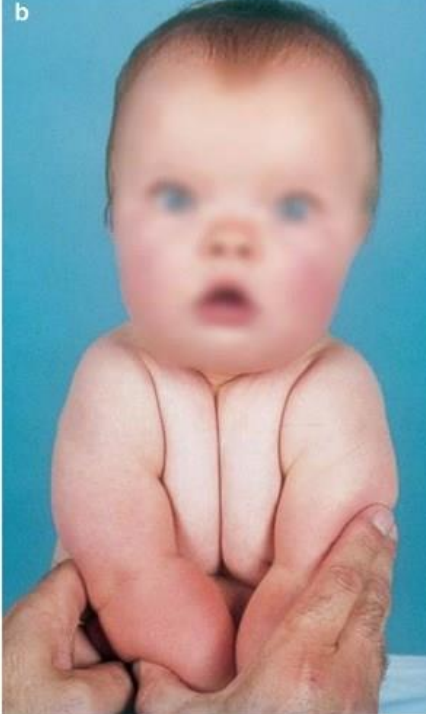


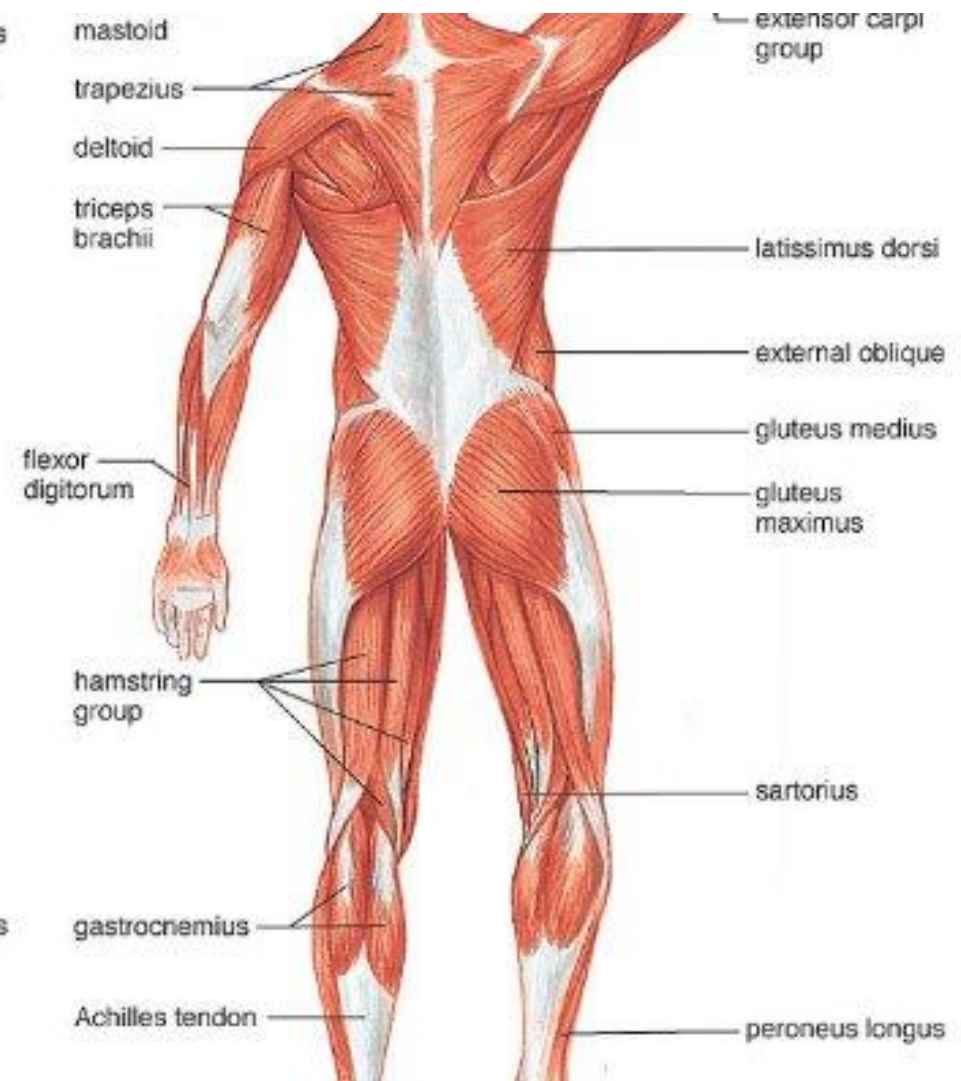
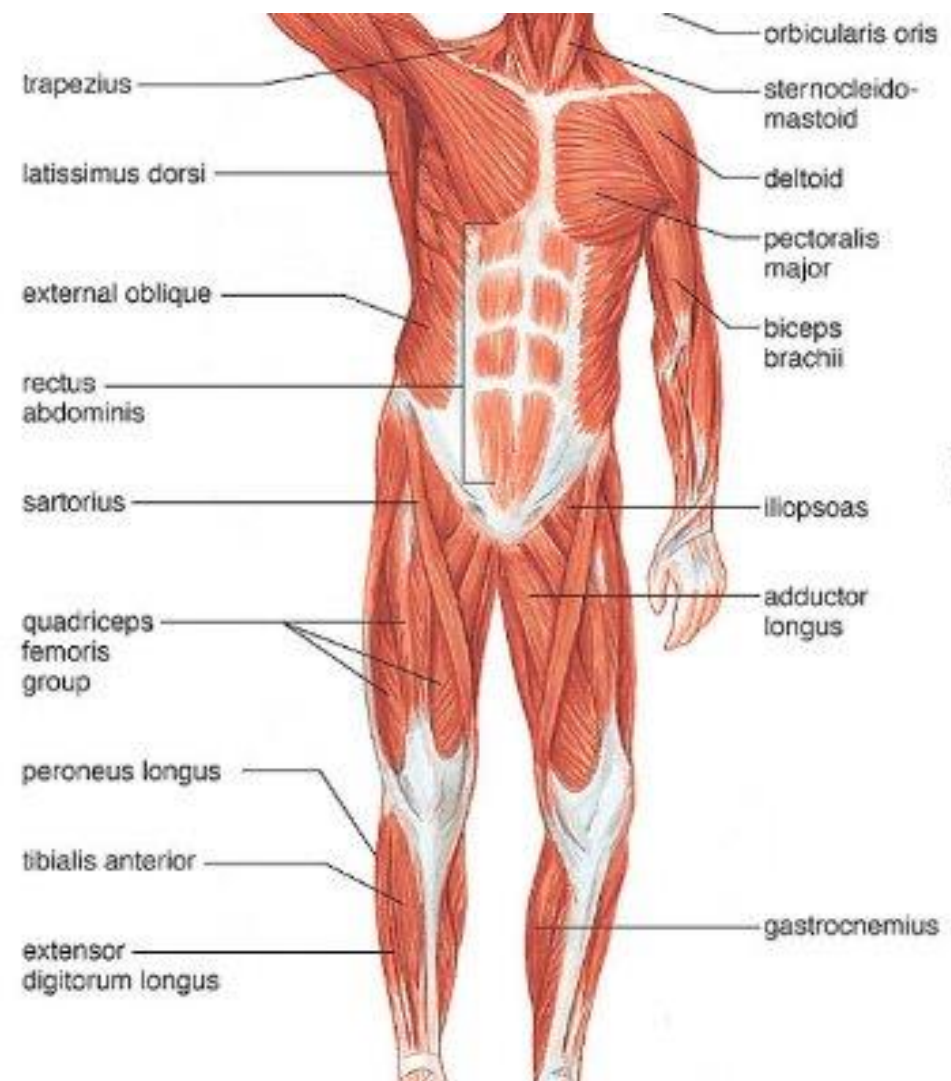
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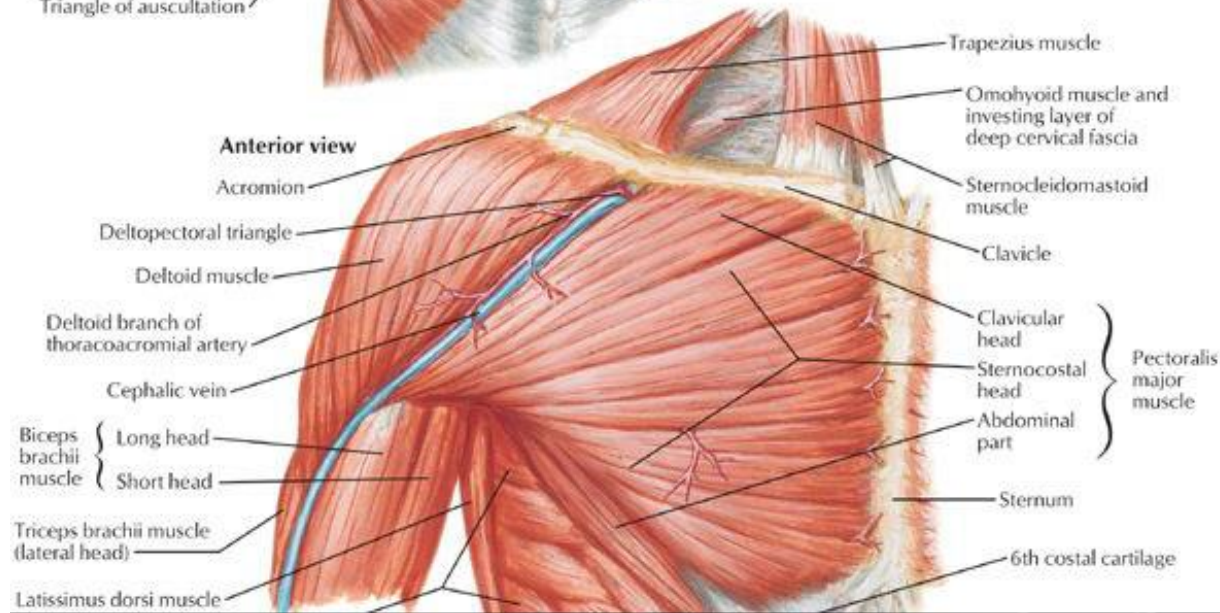
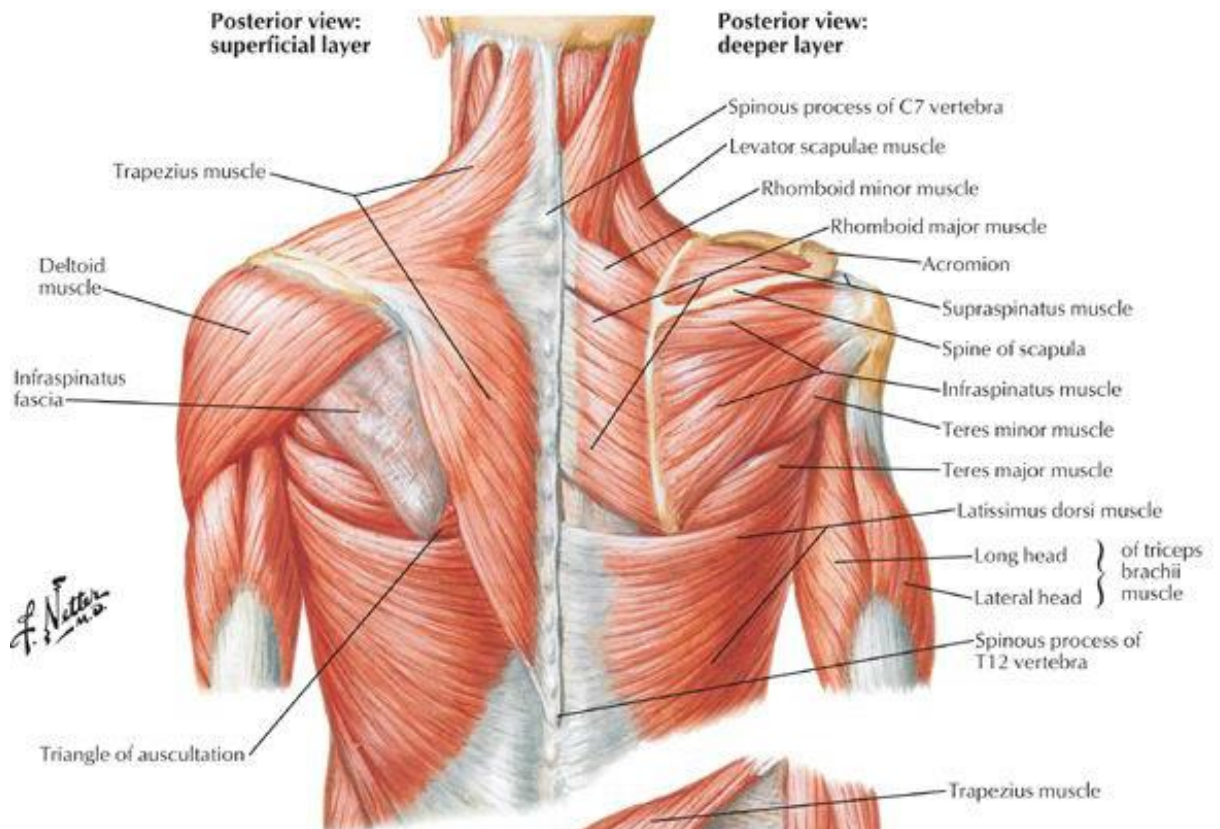


b

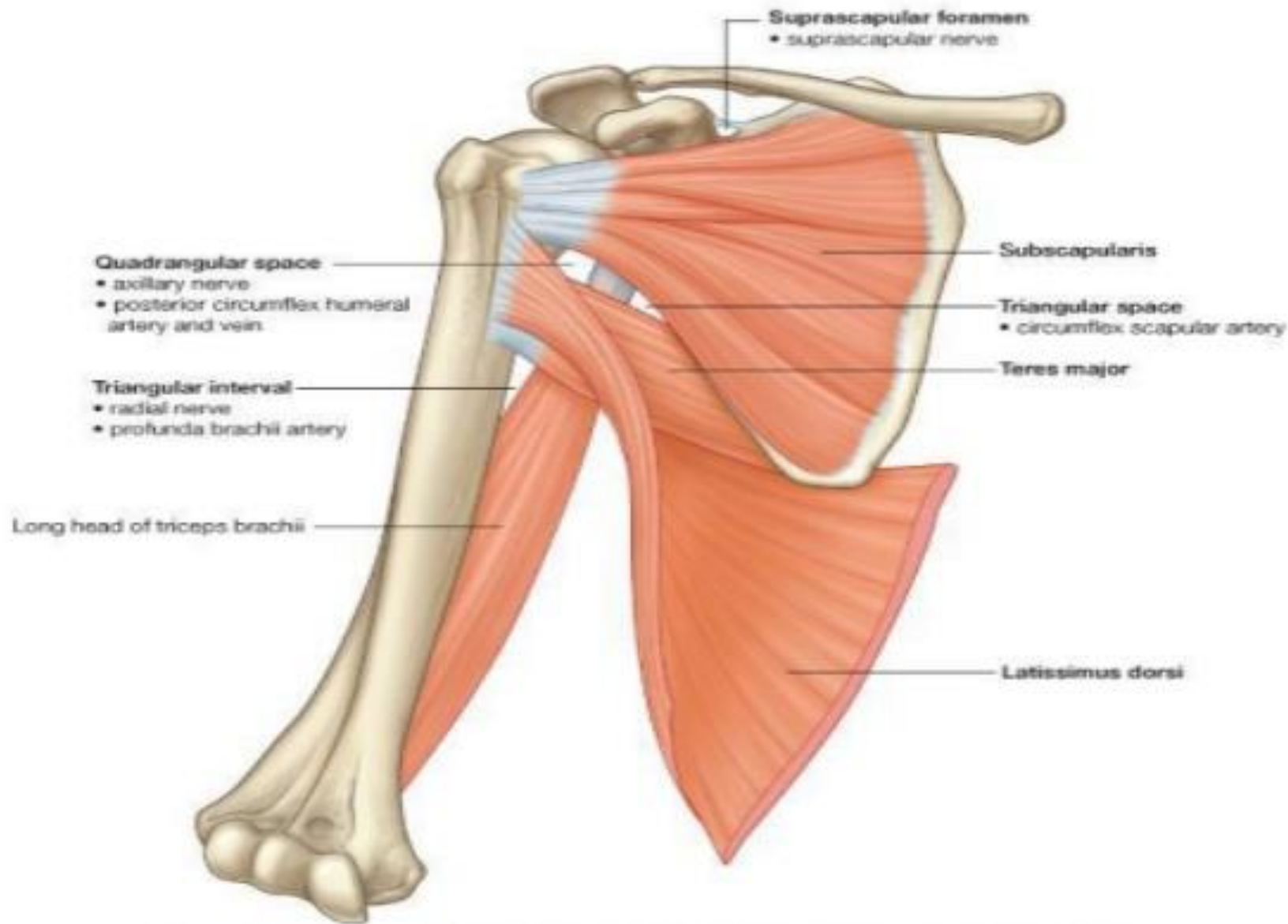


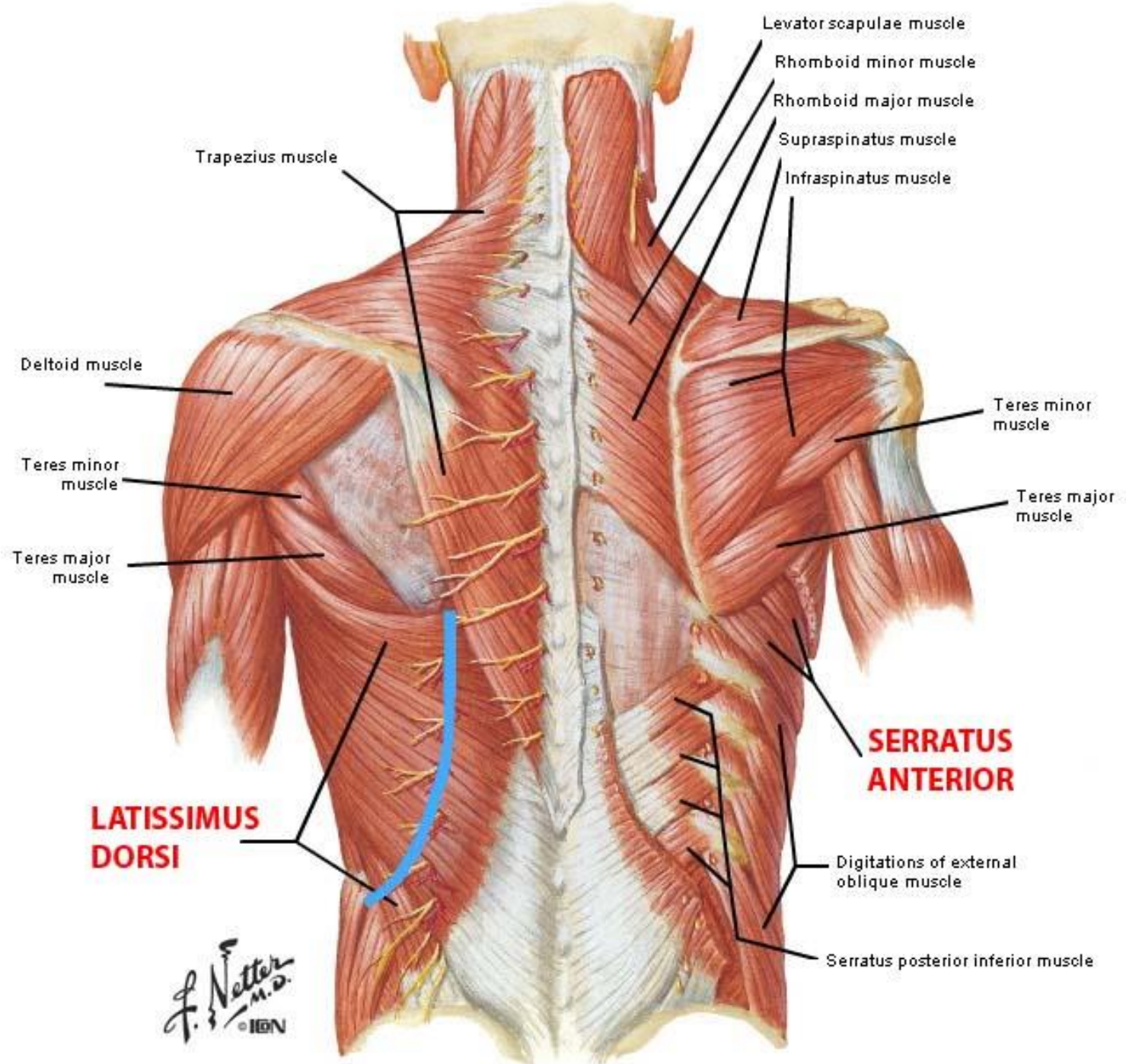






POSTERIOR WALL OF THE AXILLA





Levator scapulae muscle

Rhomboid minor muscle

Rhomboid major muscle

Supraspinatus muscle

Infraspinatus muscle

Trapezius muscle

Deltoid muscle

Teres minor muscle

Teres major muscle

Teres minor muscle

Teres major muscle

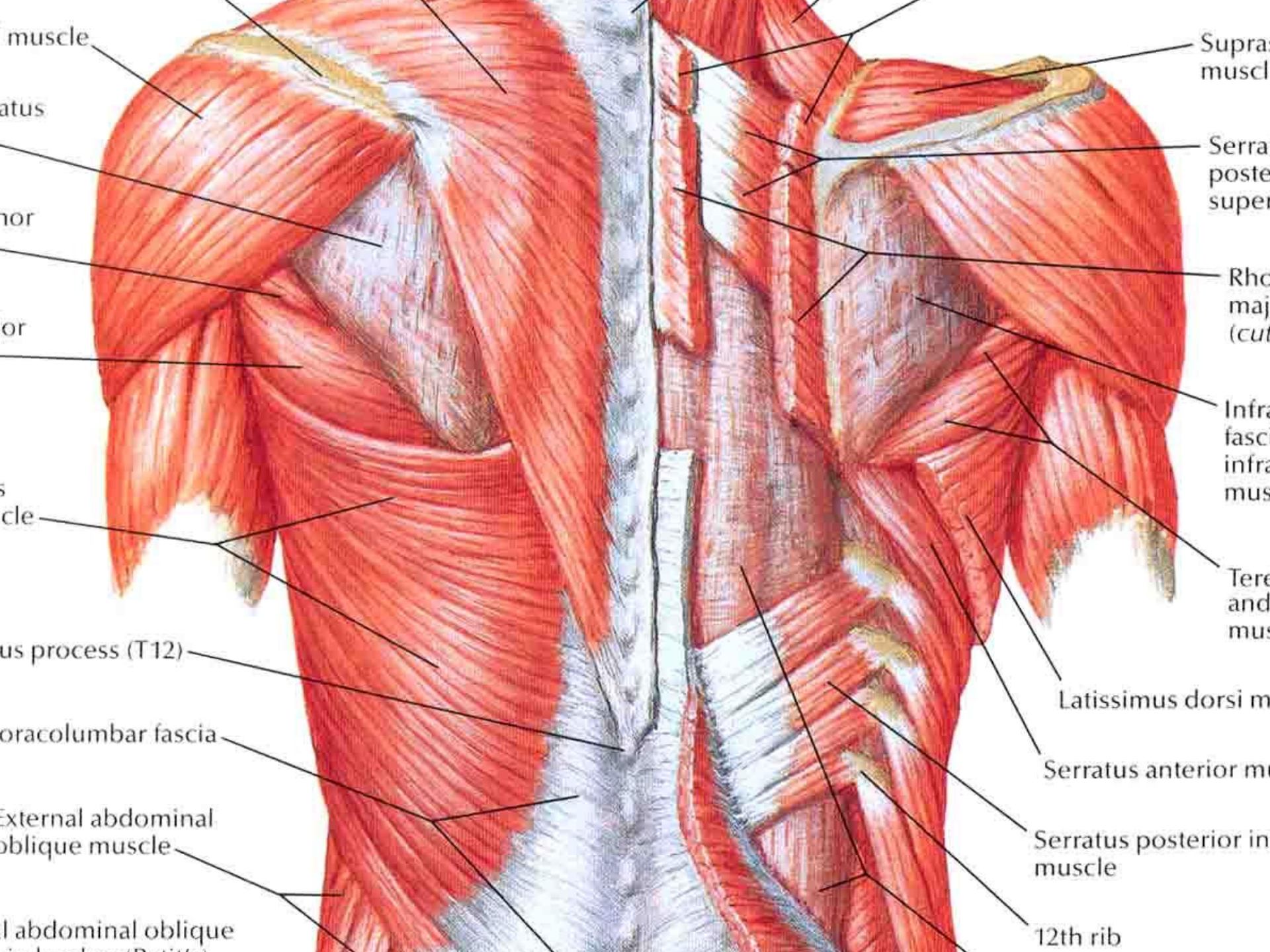
LATISSIMUS DORSI

SERRATUS ANTERIOR

Digitations of external oblique muscle

Serratus posterior inferior muscle

F. Netter
M.D.
© IEN



muscle

atus

nor

or

s cle

us process (T12)

oracolumbar fascia

External abdominal oblique muscle

l abdominal oblique

Supra muscul

Serra poste super

Rho maj (cut

Infrac fasci infra mus

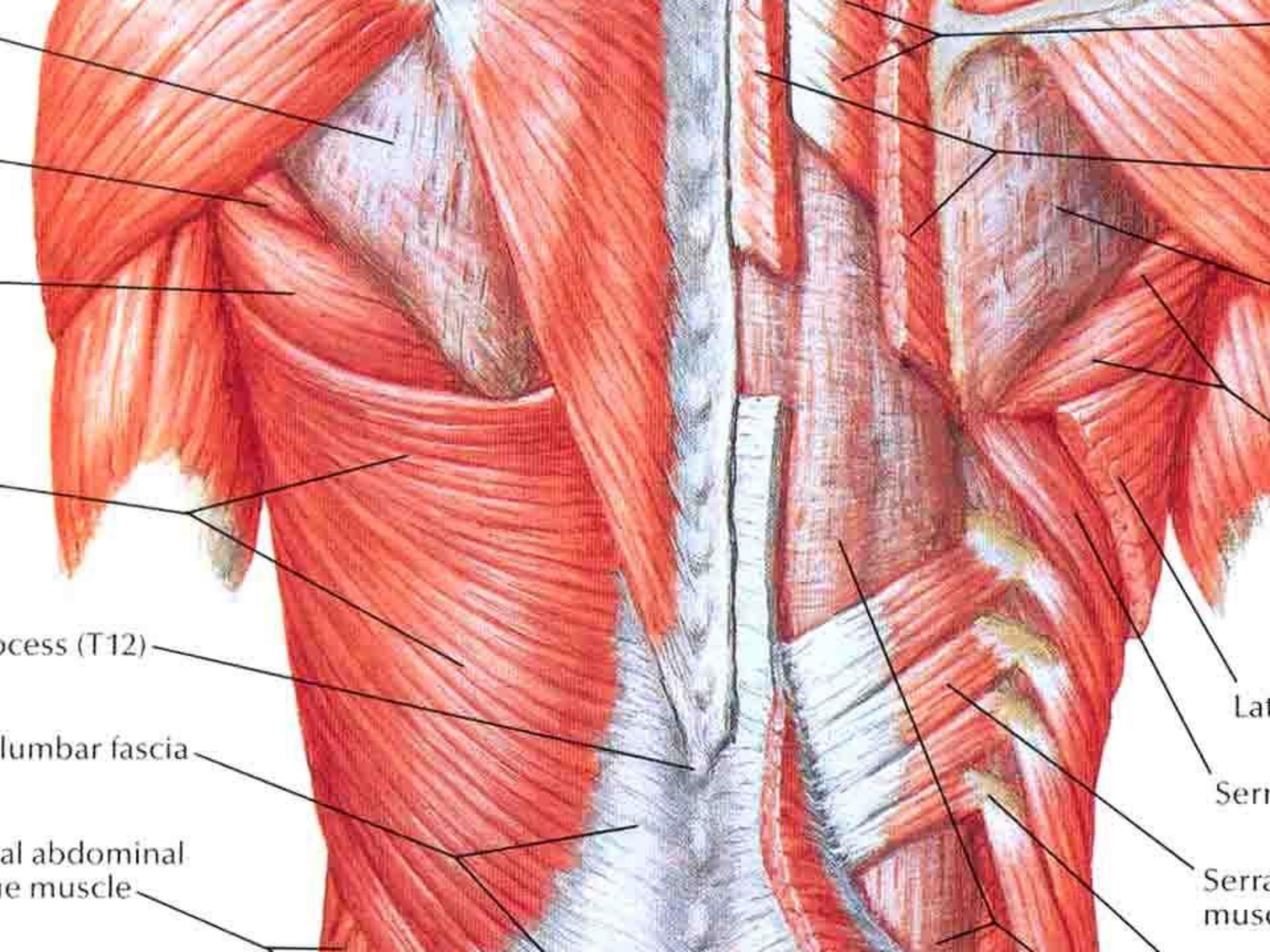
Tere and mus

Latissimus dorsi m

Serratus anterior m

Serratus posterior in muscle

12th rib



Process (T12)

lumbar fascia

al abdominal
e muscle

Lat

Serr

Serra
mus

Sternocleidomastoid

TRAPEZIUS (superior fibers)

TRAPEZIUS (middle fibers)

Acromion of scapula

Deltoid

Infraspinatus

Teres minor

Teres major

TRAPEZIUS (inferior fibers)

SERRATUS ANTERIOR

Triceps brachii

Twelfth thoracic vertebra

Occipital bone

Ligamentum nuchae

Cervical vertebrae

LEVATOR SCAPULAE

Clavicle

SUBCLAVIUS

RHOMBOID MINOR

Scapula

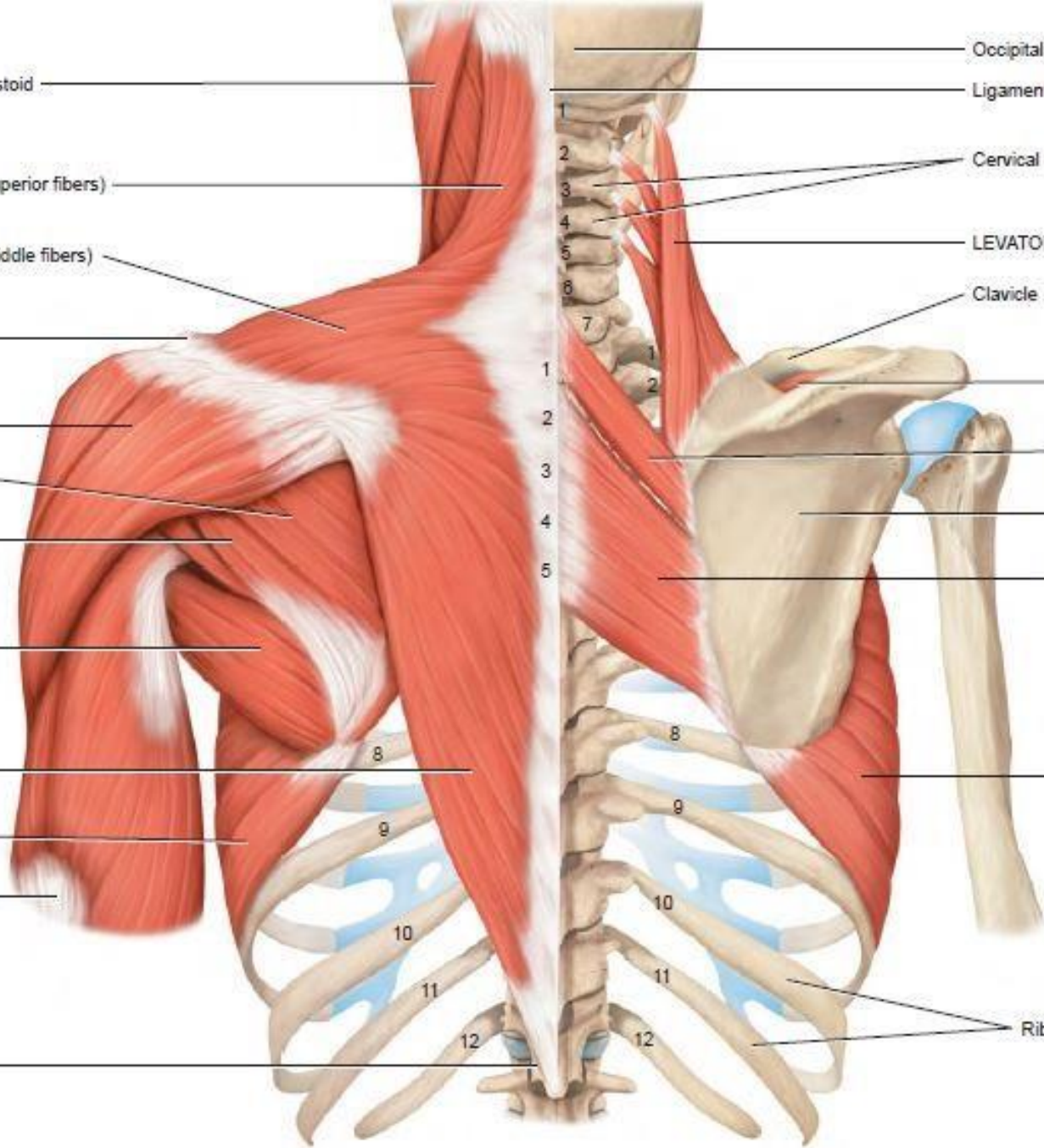
RHOMBOID MAJOR

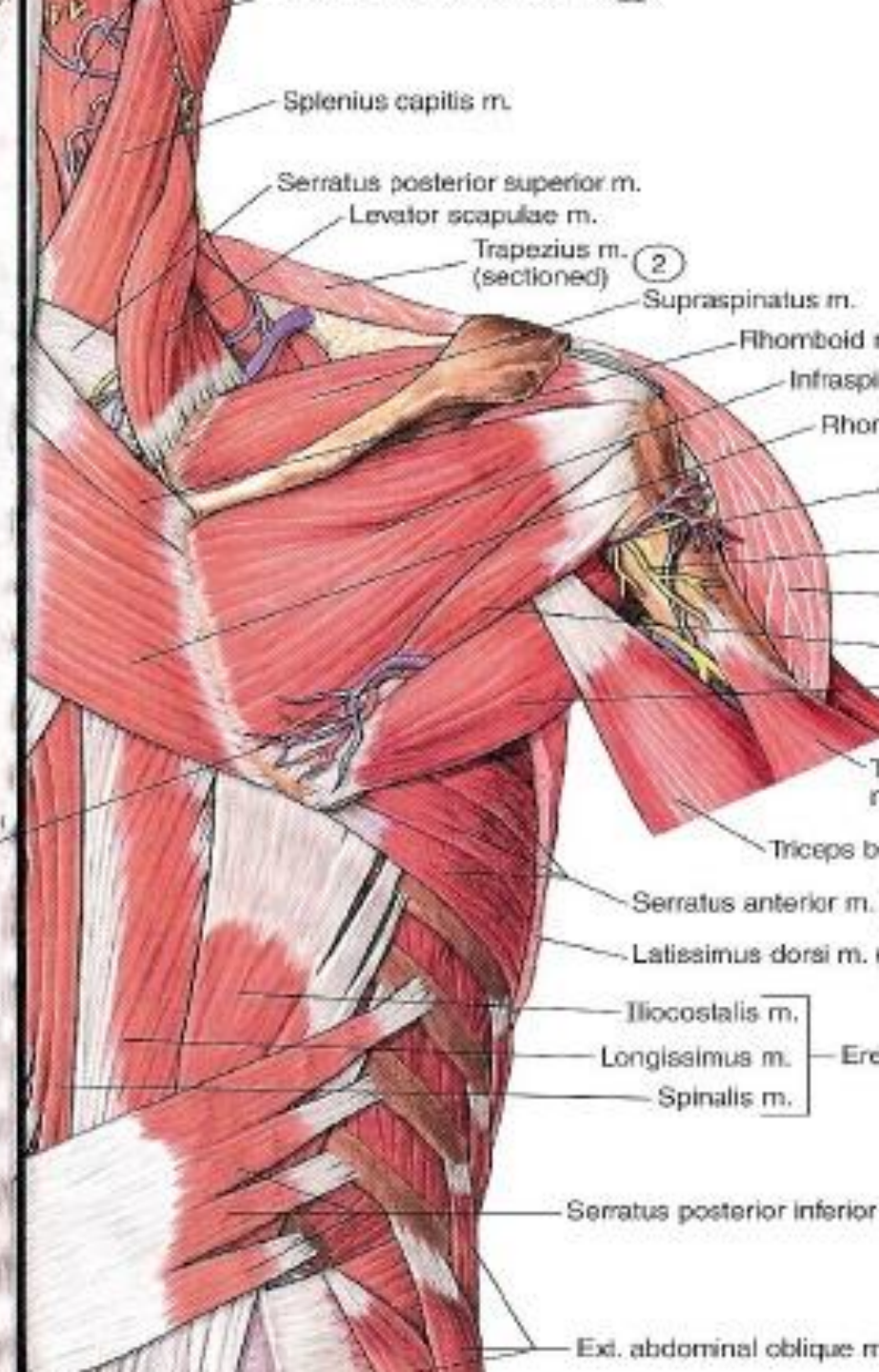
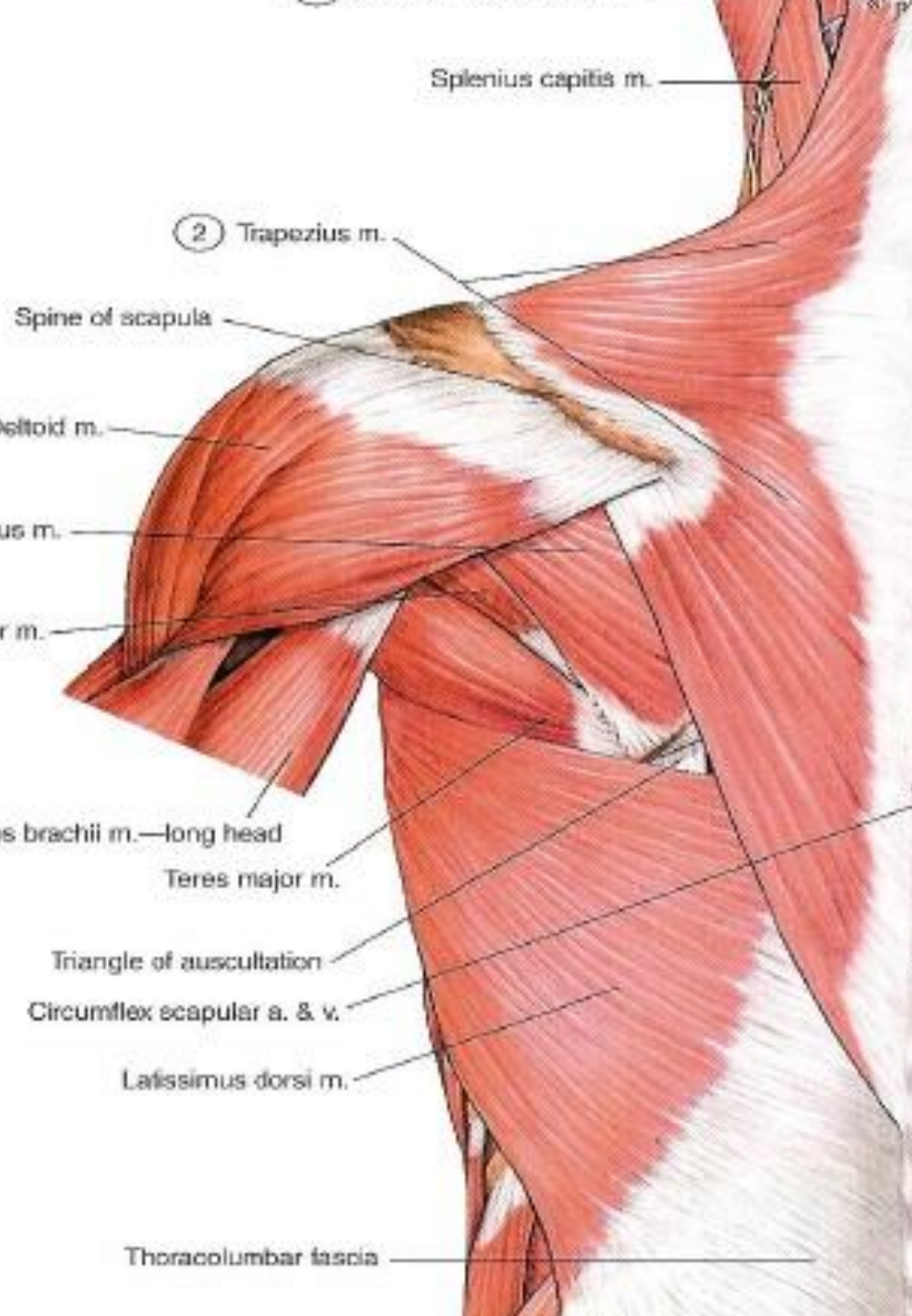
SERRATUS ANTERIOR

Ribs

(d) Posterior superficial view

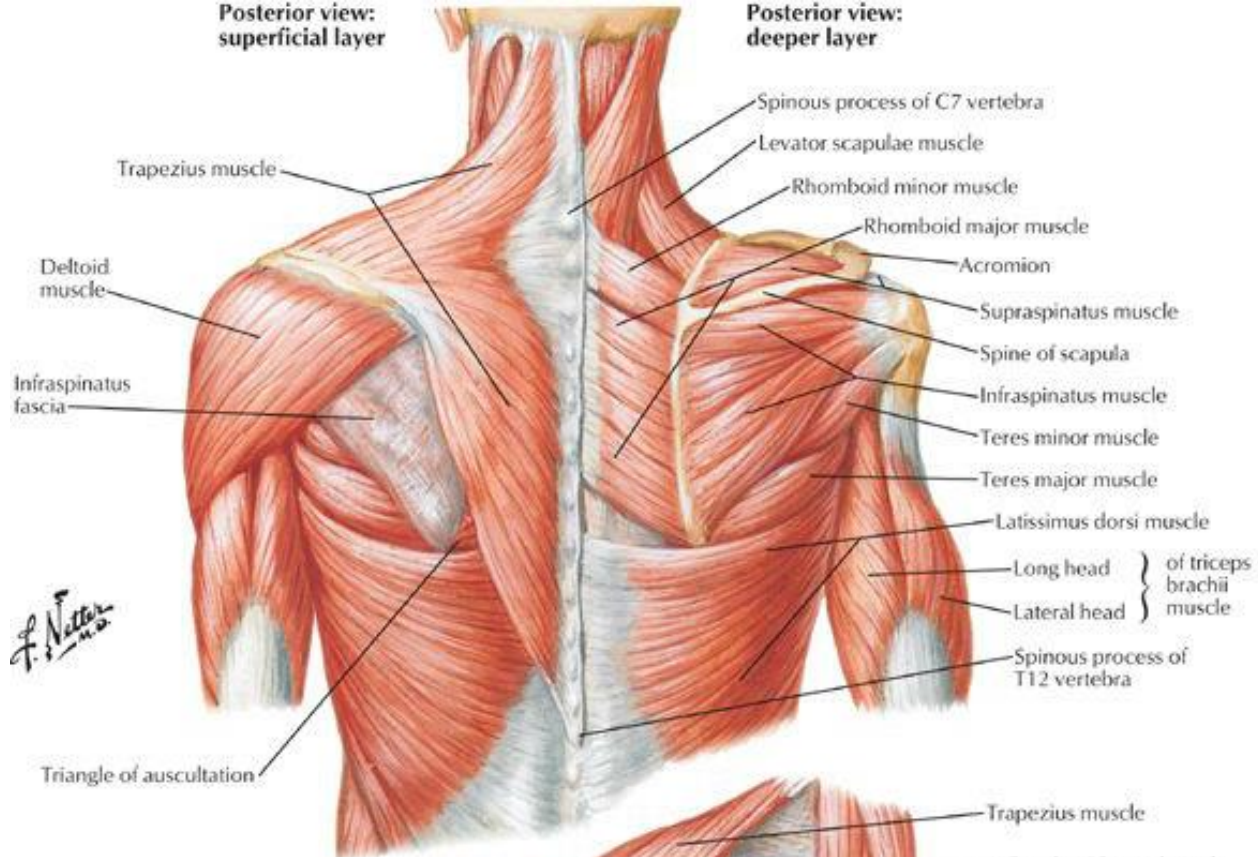
(e) Posterior deep view



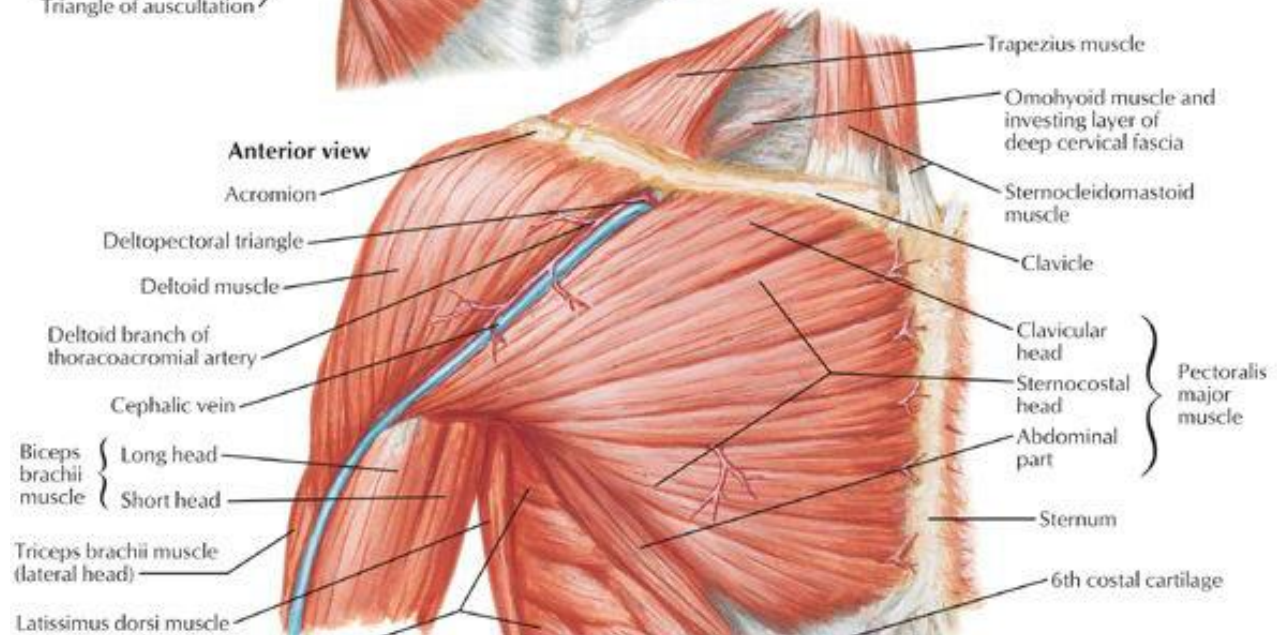


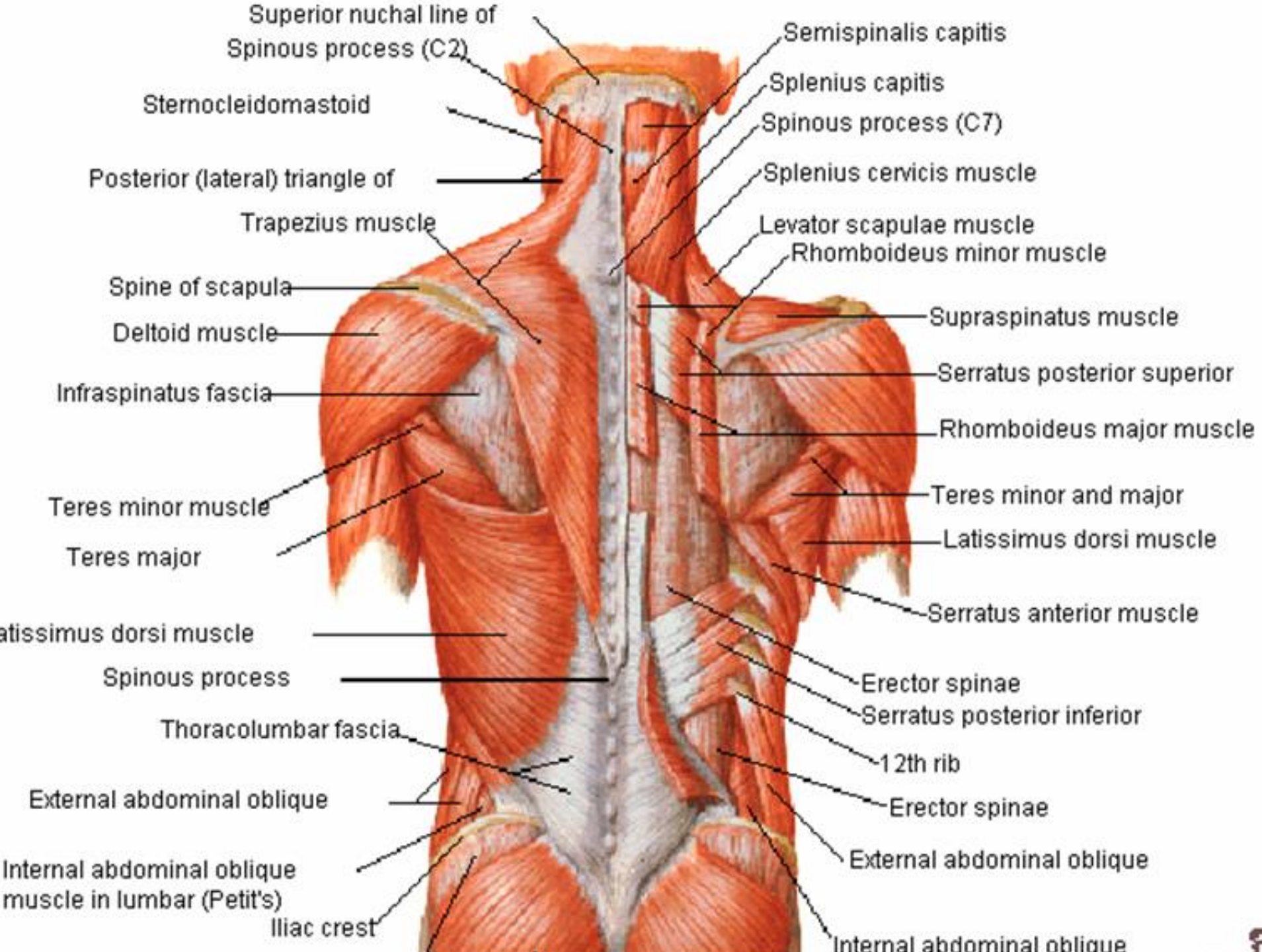
**Posterior view:
superficial layer**

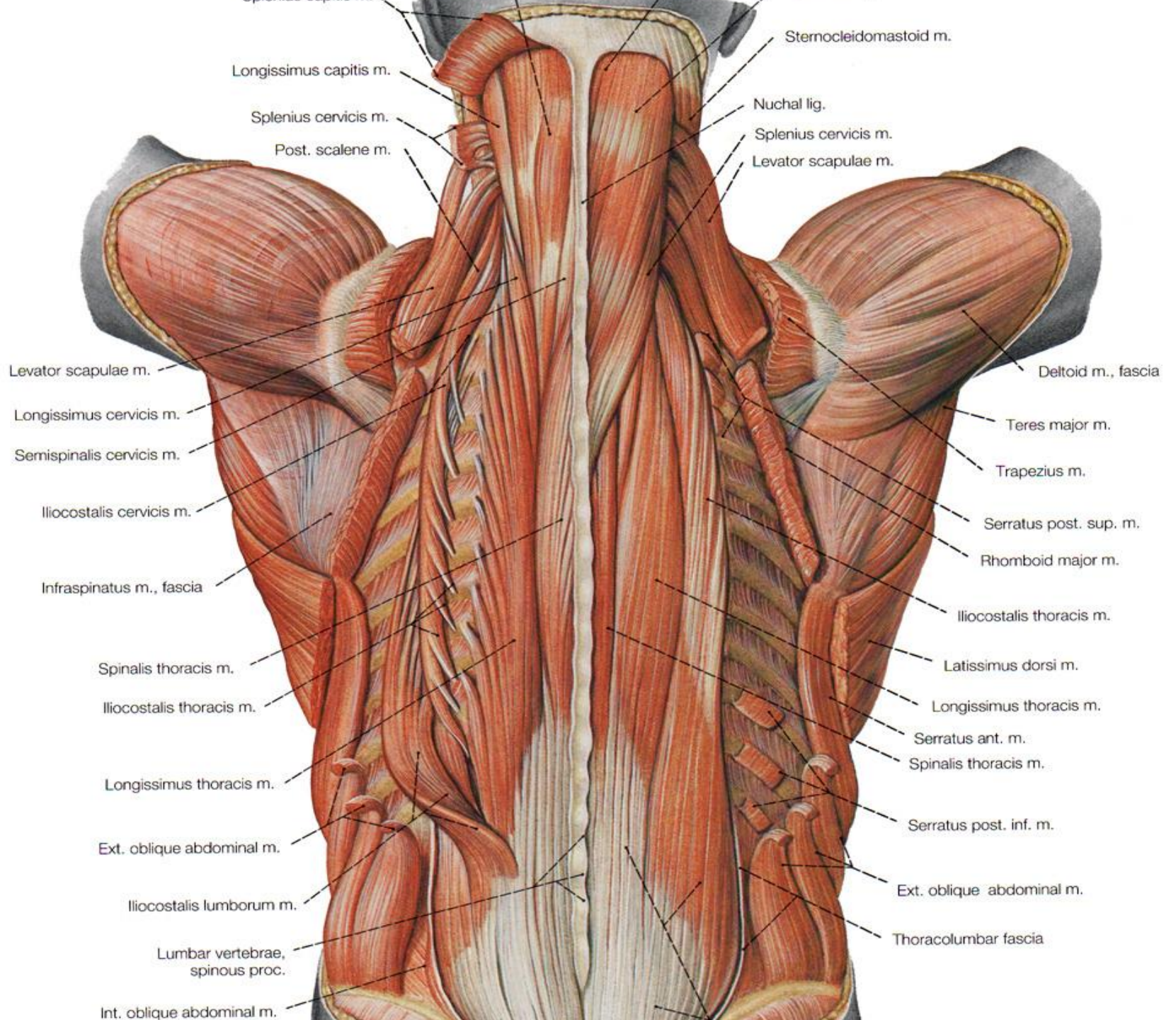
**Posterior view:
deeper layer**

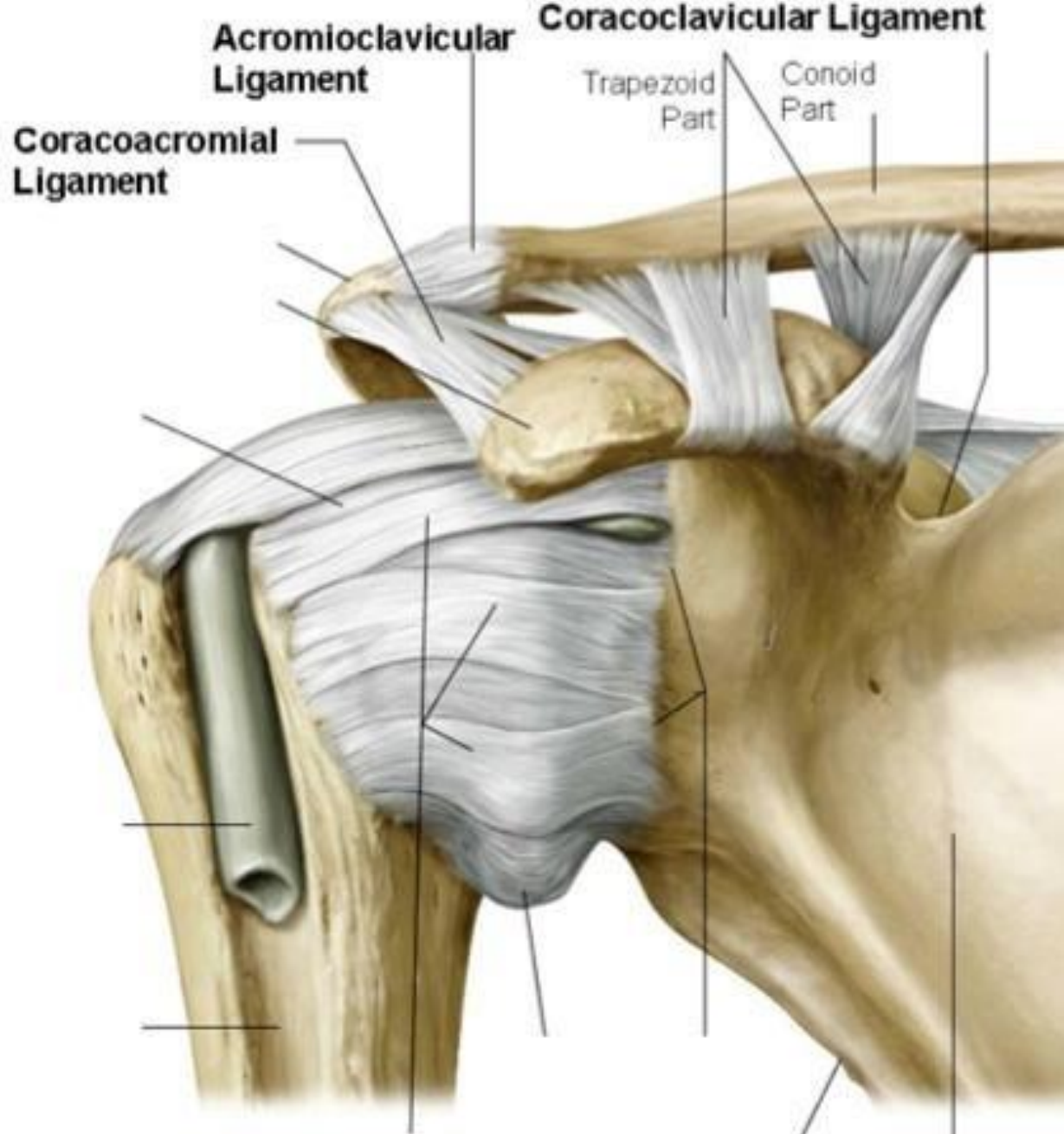


Anterior view









Clavicle

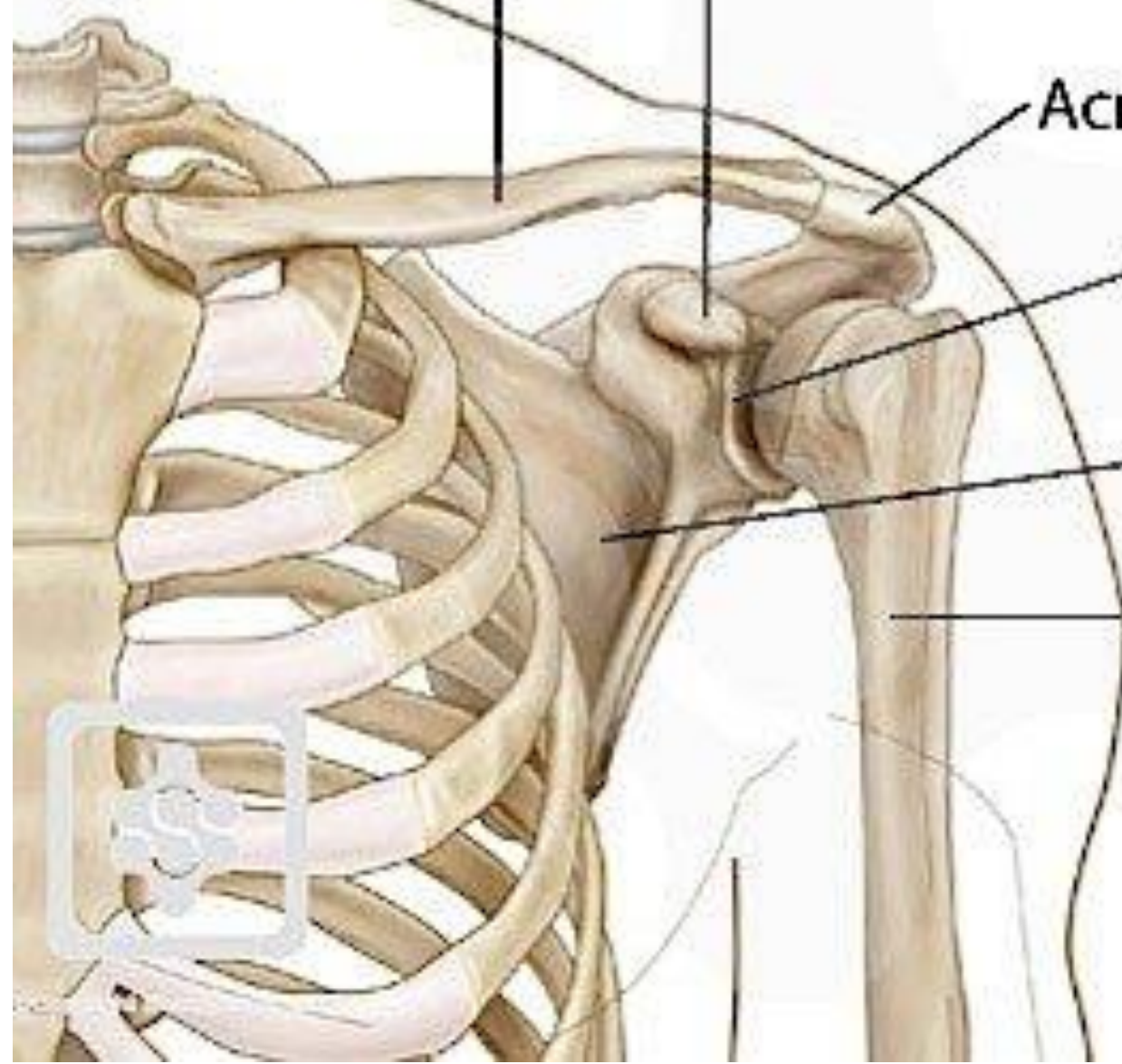
Coracoid process

Acromion

Glenoid cavity

Scapula

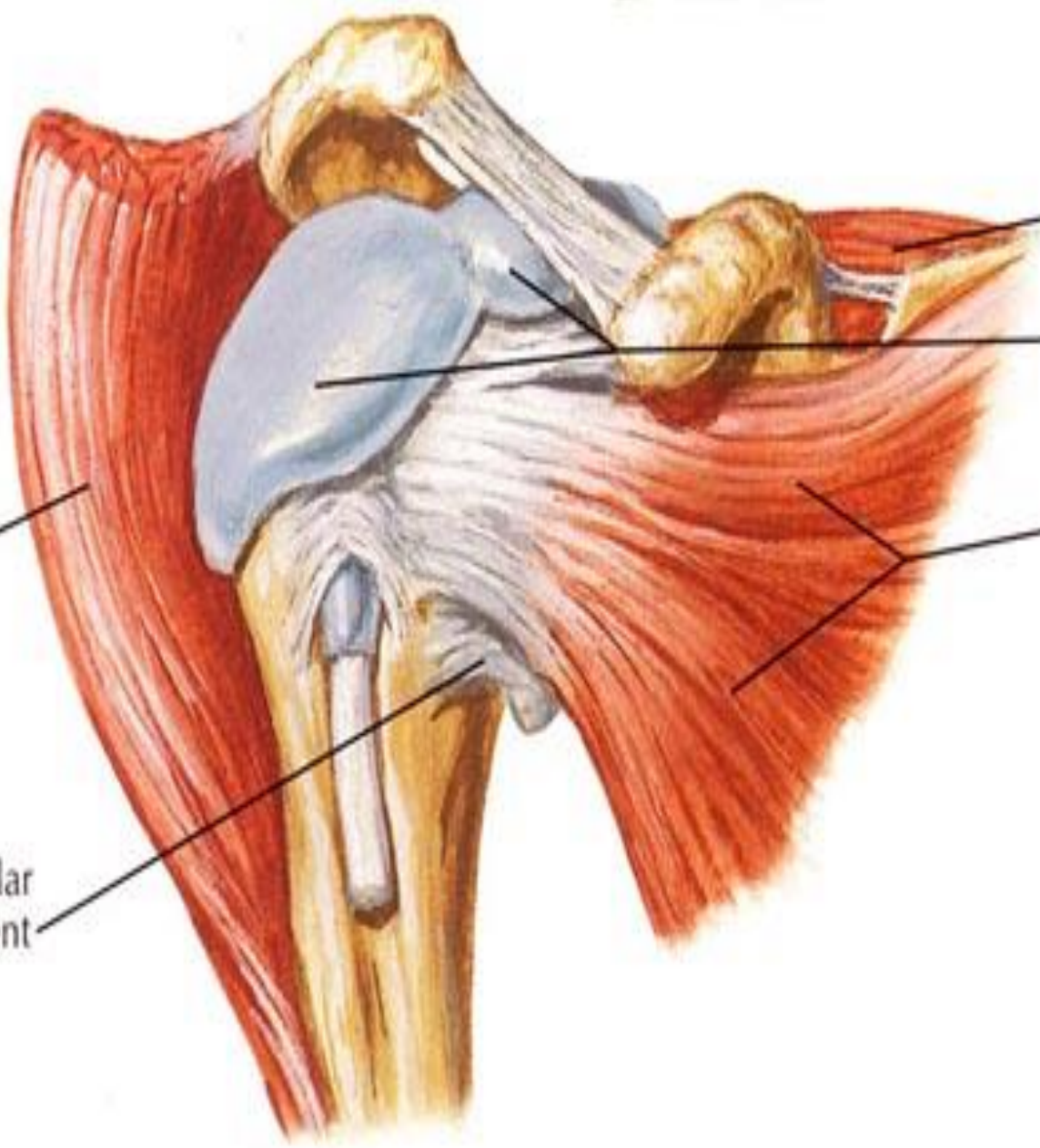
Humerus



Anterior view

Deltoid muscle
(reflected)

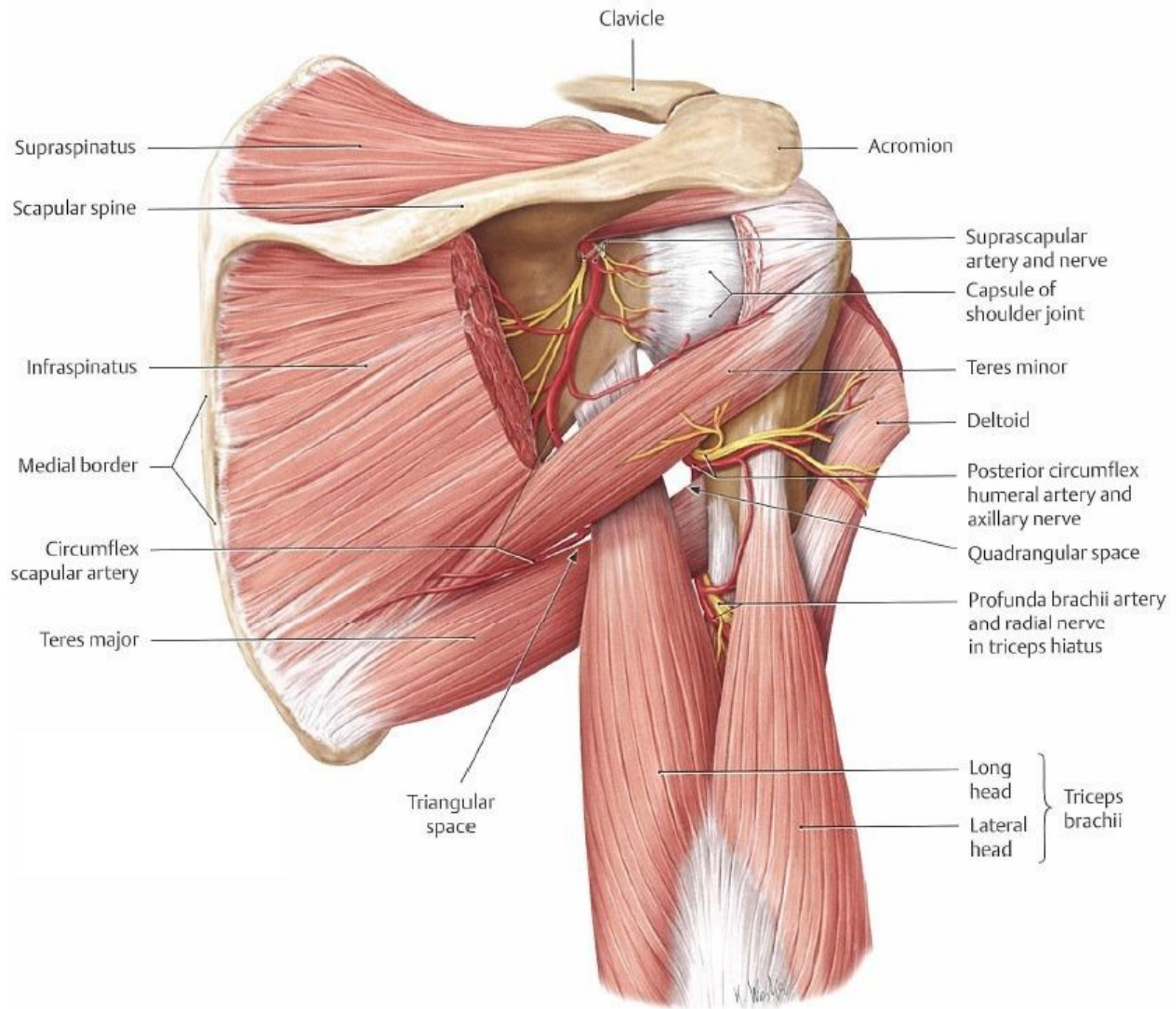
Capsular ligament



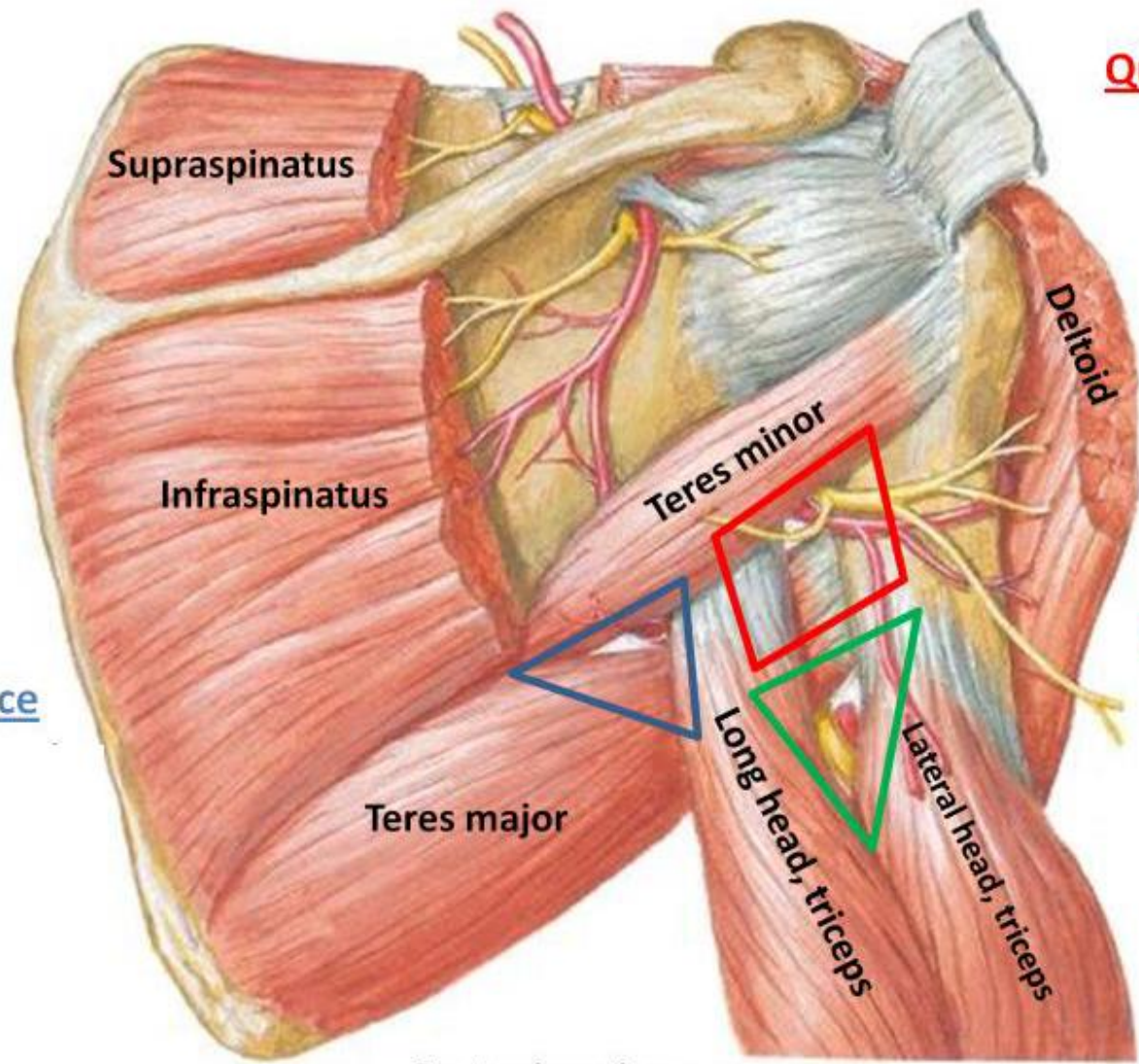
Supraspinatus muscle

Subdeltoid bursa fused with
subacromial bursa

Subscapularis muscle



A The triangular and quadrangular spaces of the axilla



Quadrangular Space

Supraspinatus

Infraspinatus

Teres minor

Deltoid

Triangular Interval

Triangular Space

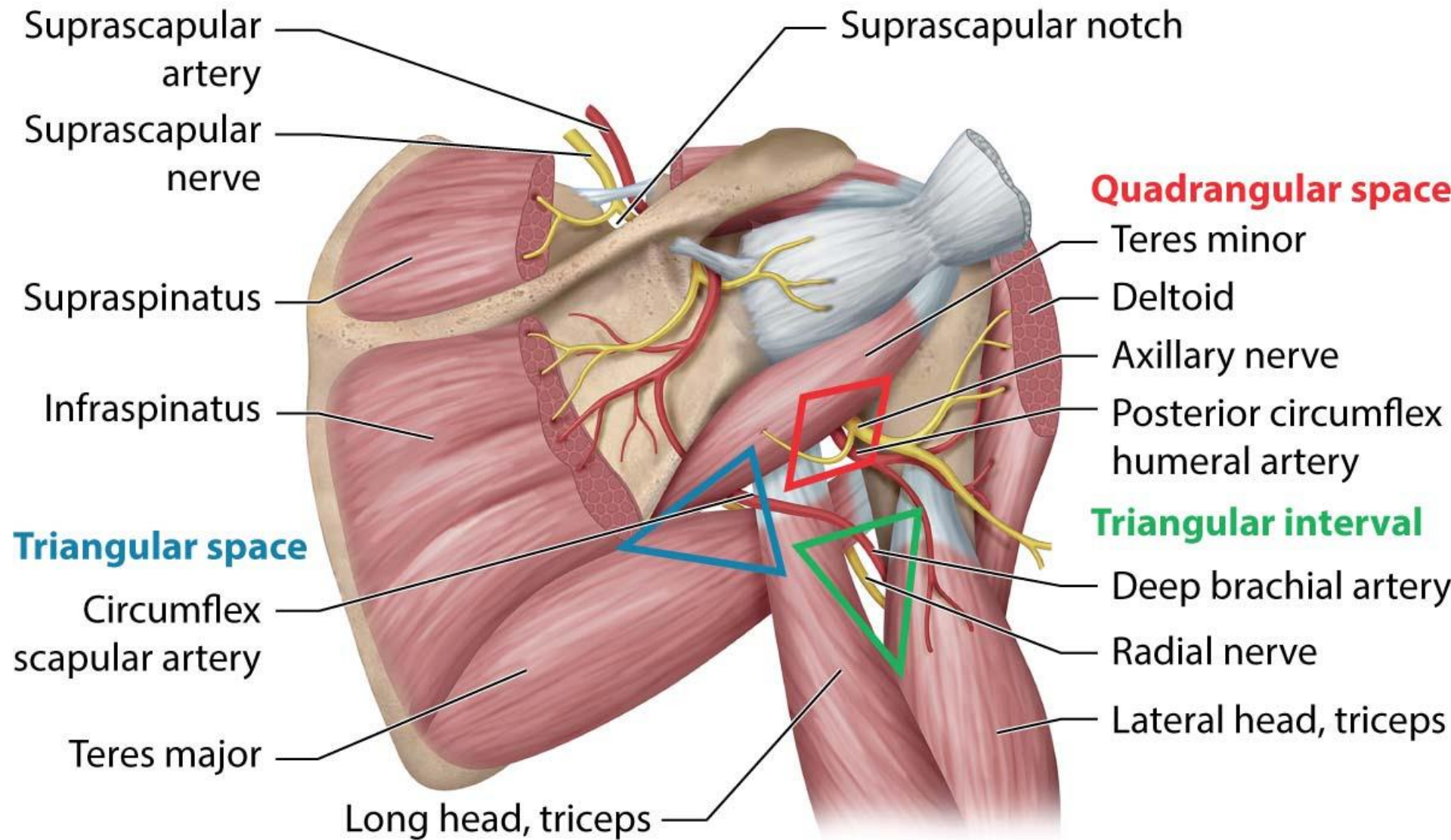
Teres major

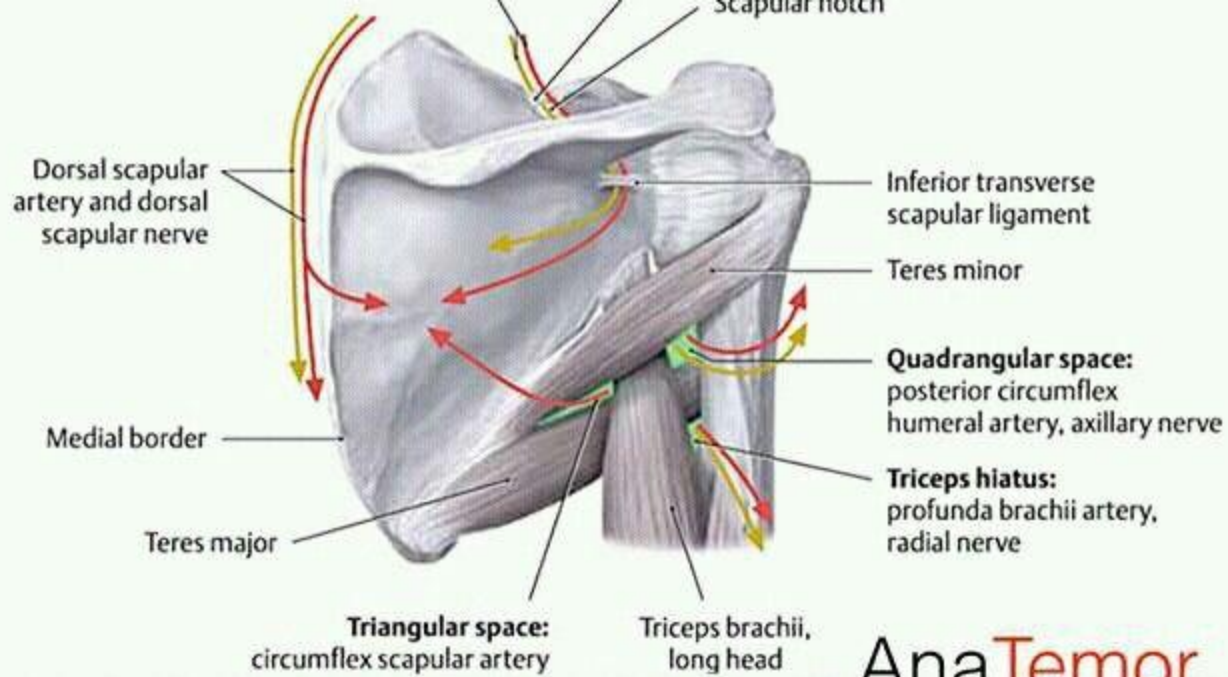
Long head, triceps

Lateral head, triceps

Posterior view

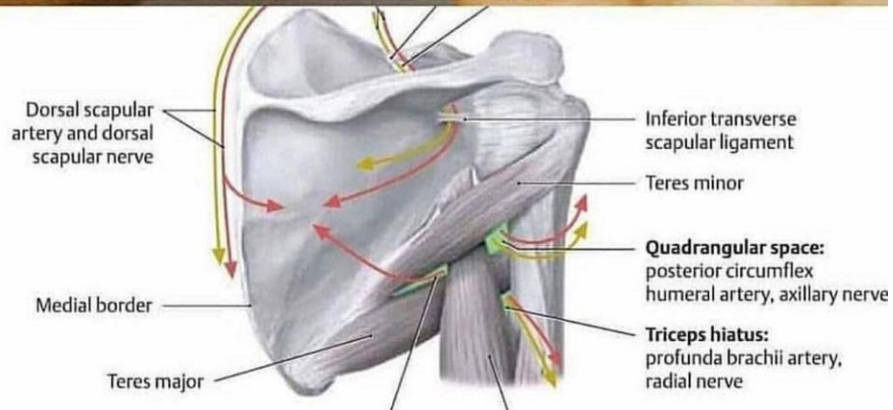
Posterior View



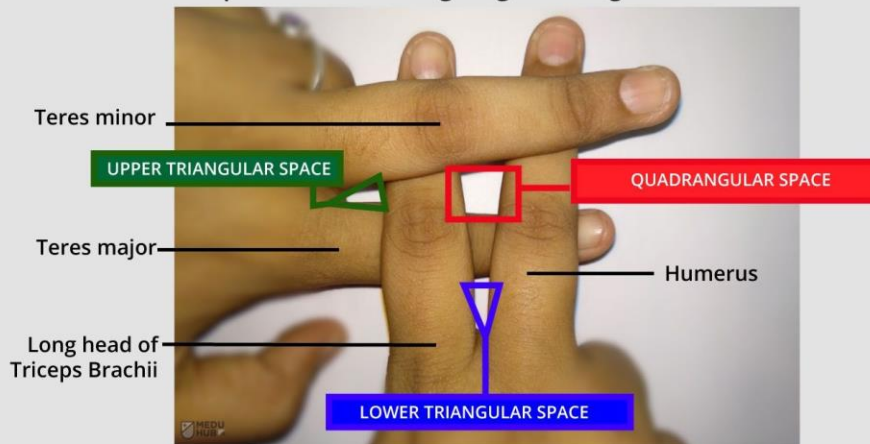


AnaTemor

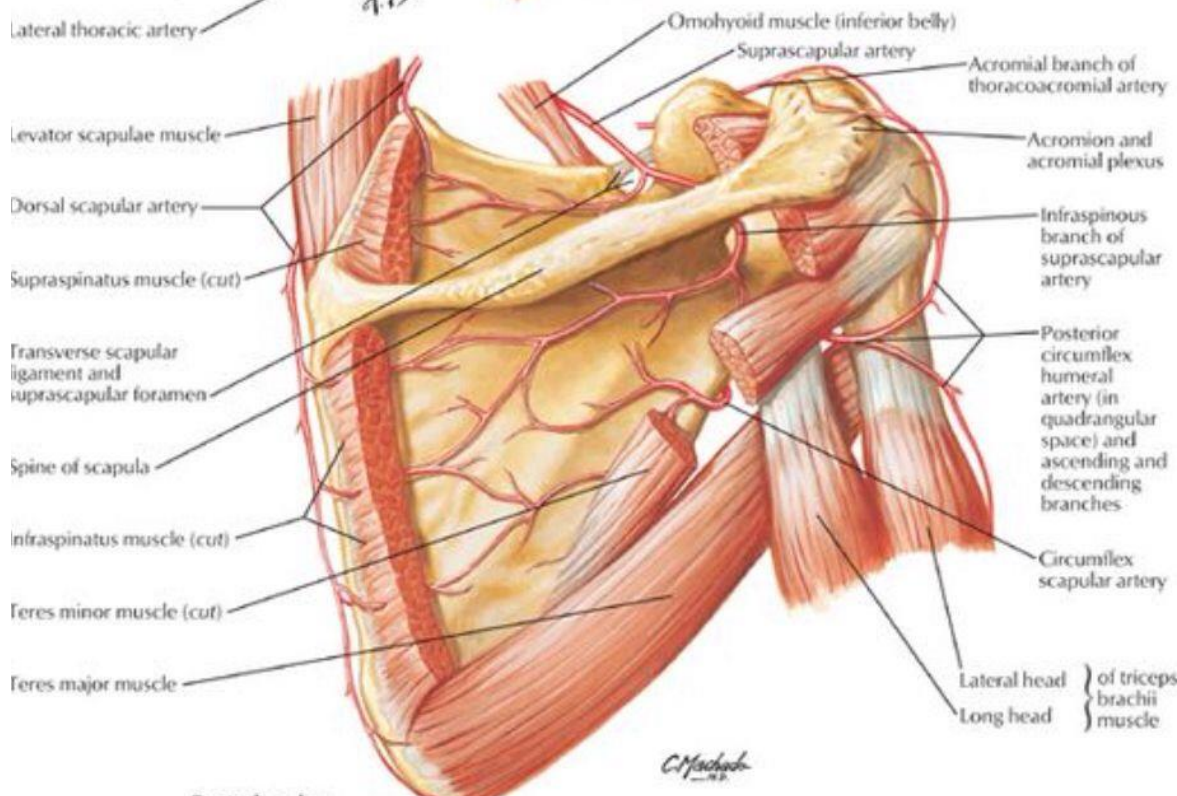
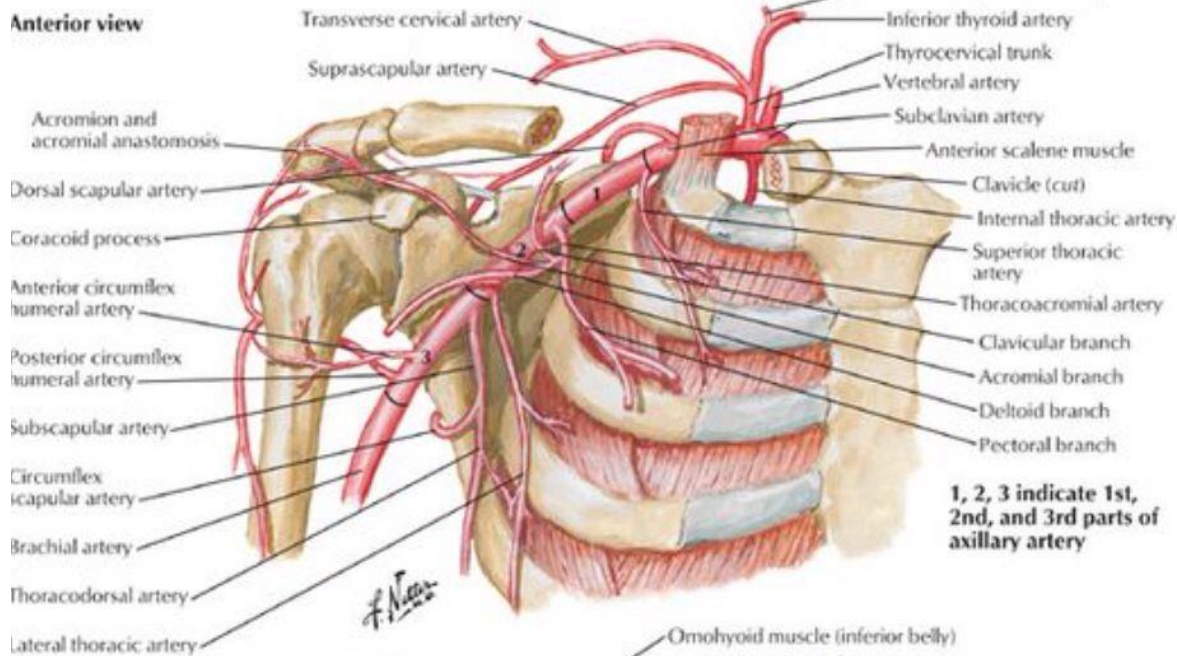




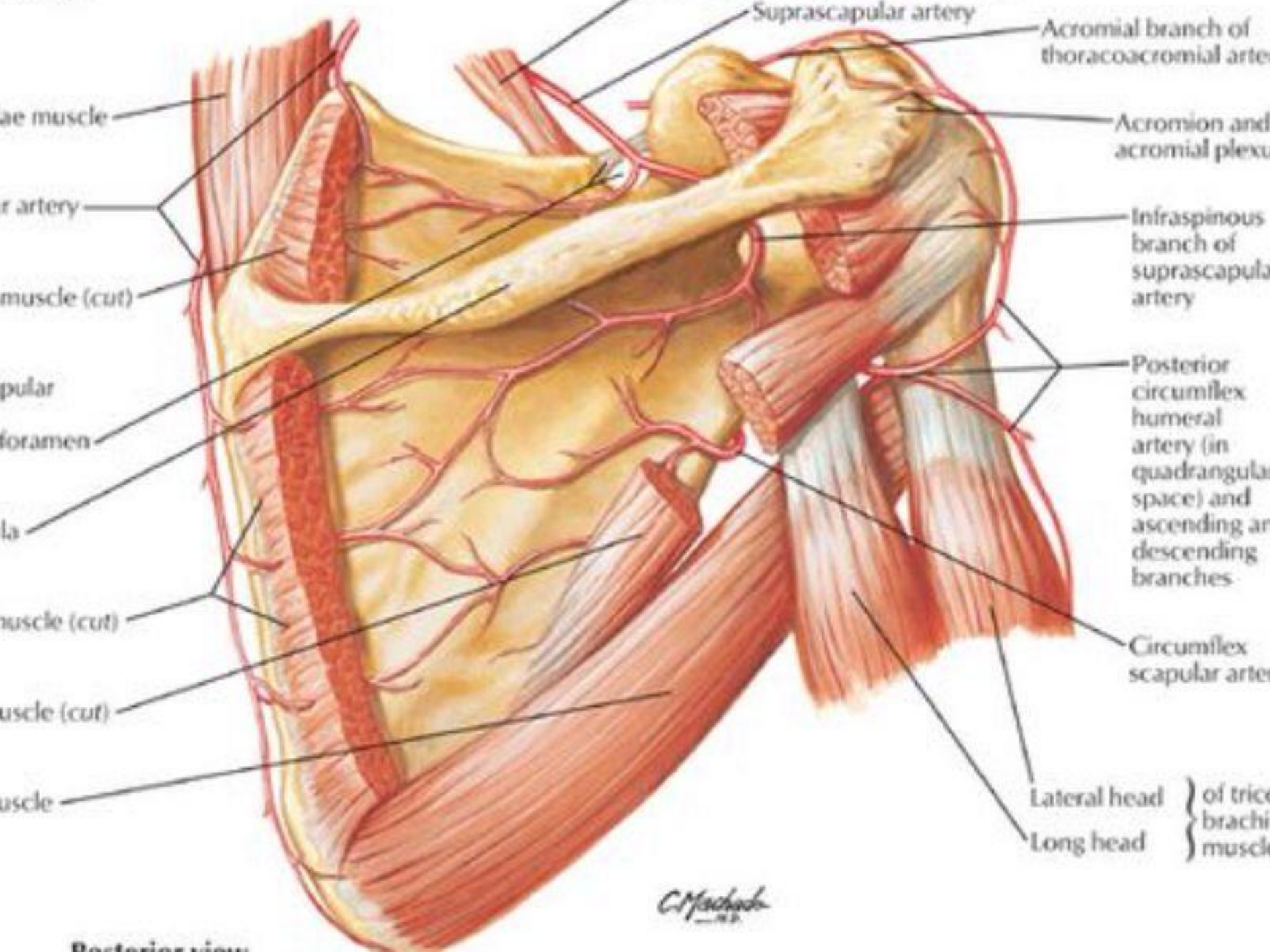
Spaces of Arm using Finger arrangement



Anterior view

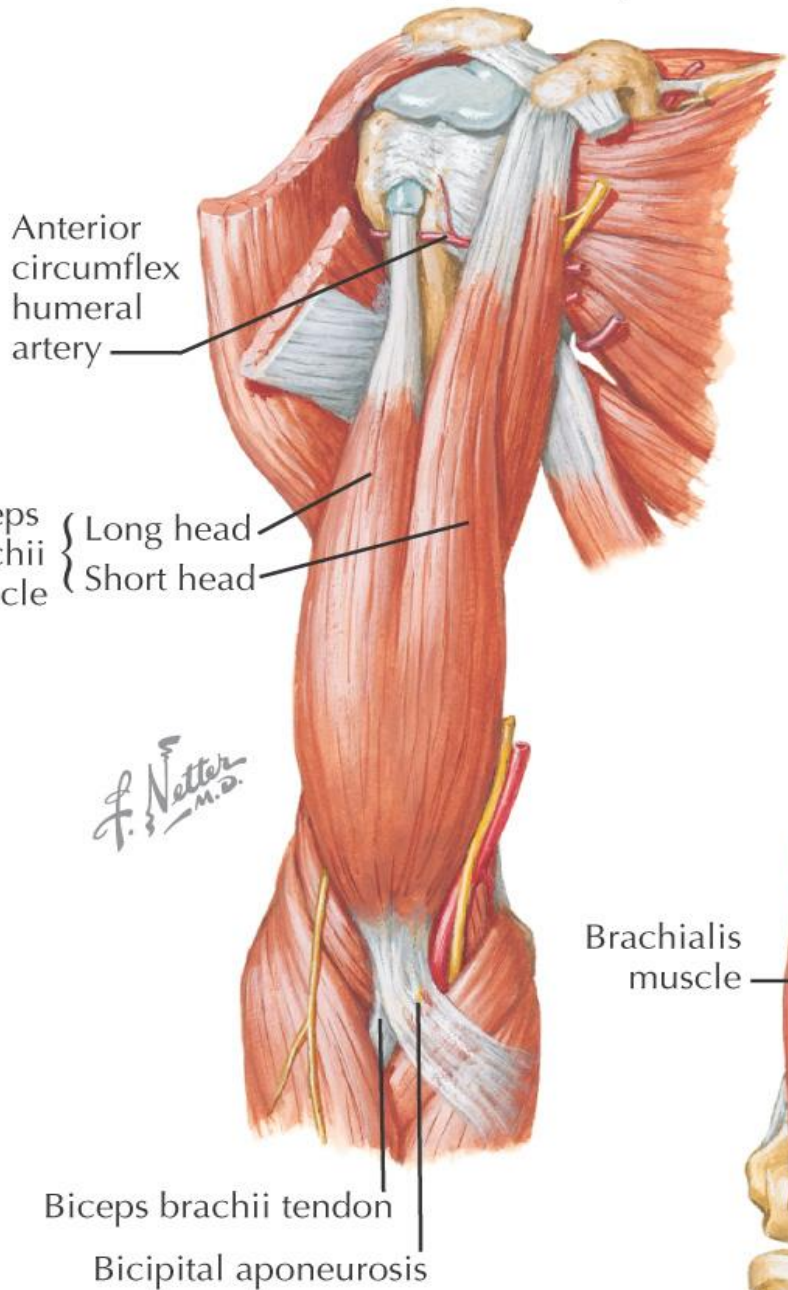


Posterior view

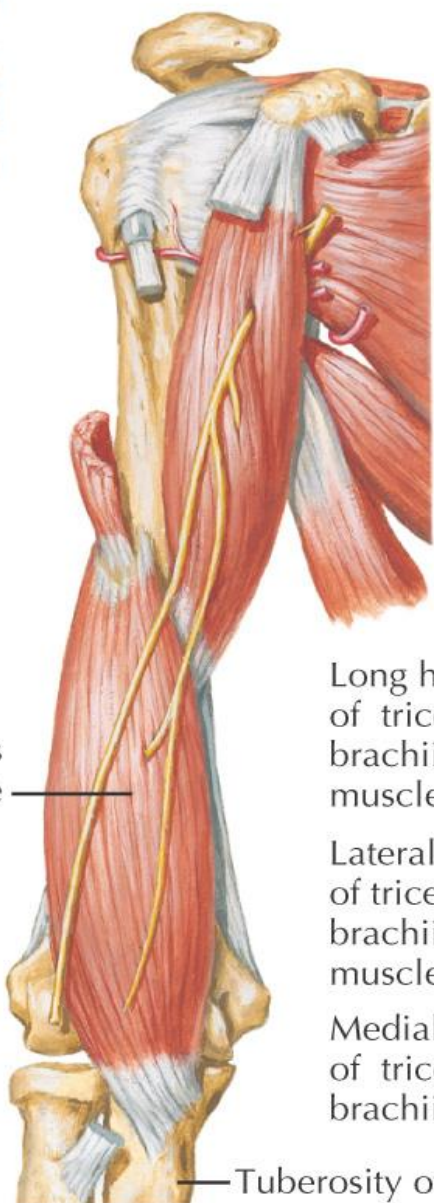


Posterior view

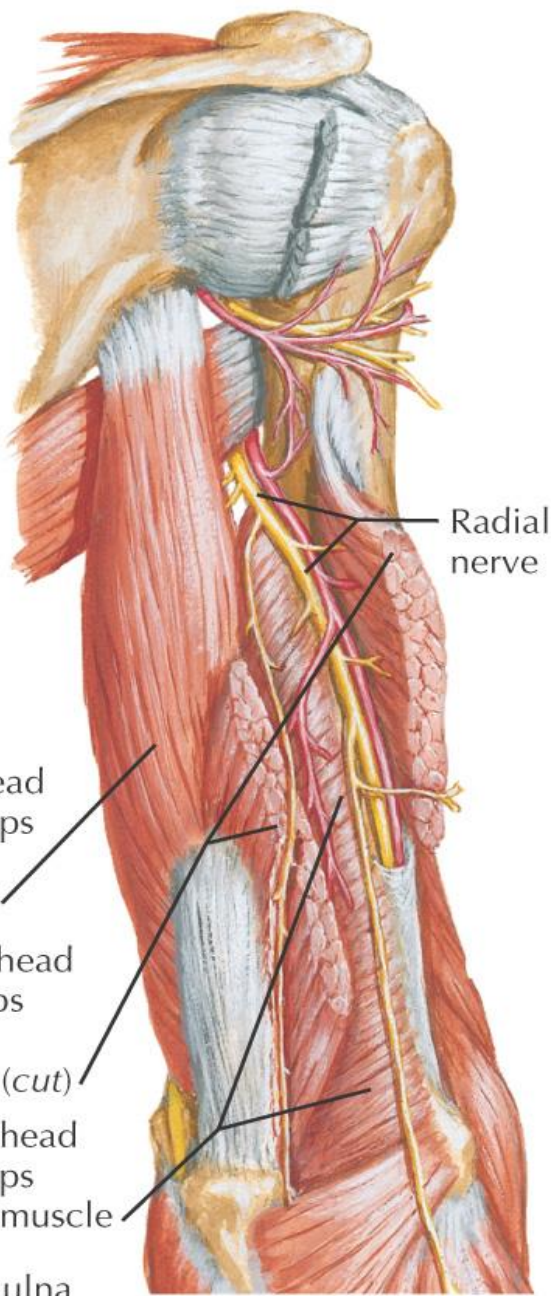
Superficial layer



Deep layer



Deep layer



Anterior view

Transverse cervical artery

Suprascapular artery

Acromion and acromial anastomosis

Dorsal scapular artery

Coracoid process

Anterior circumflex humeral artery

Posterior circumflex humeral artery

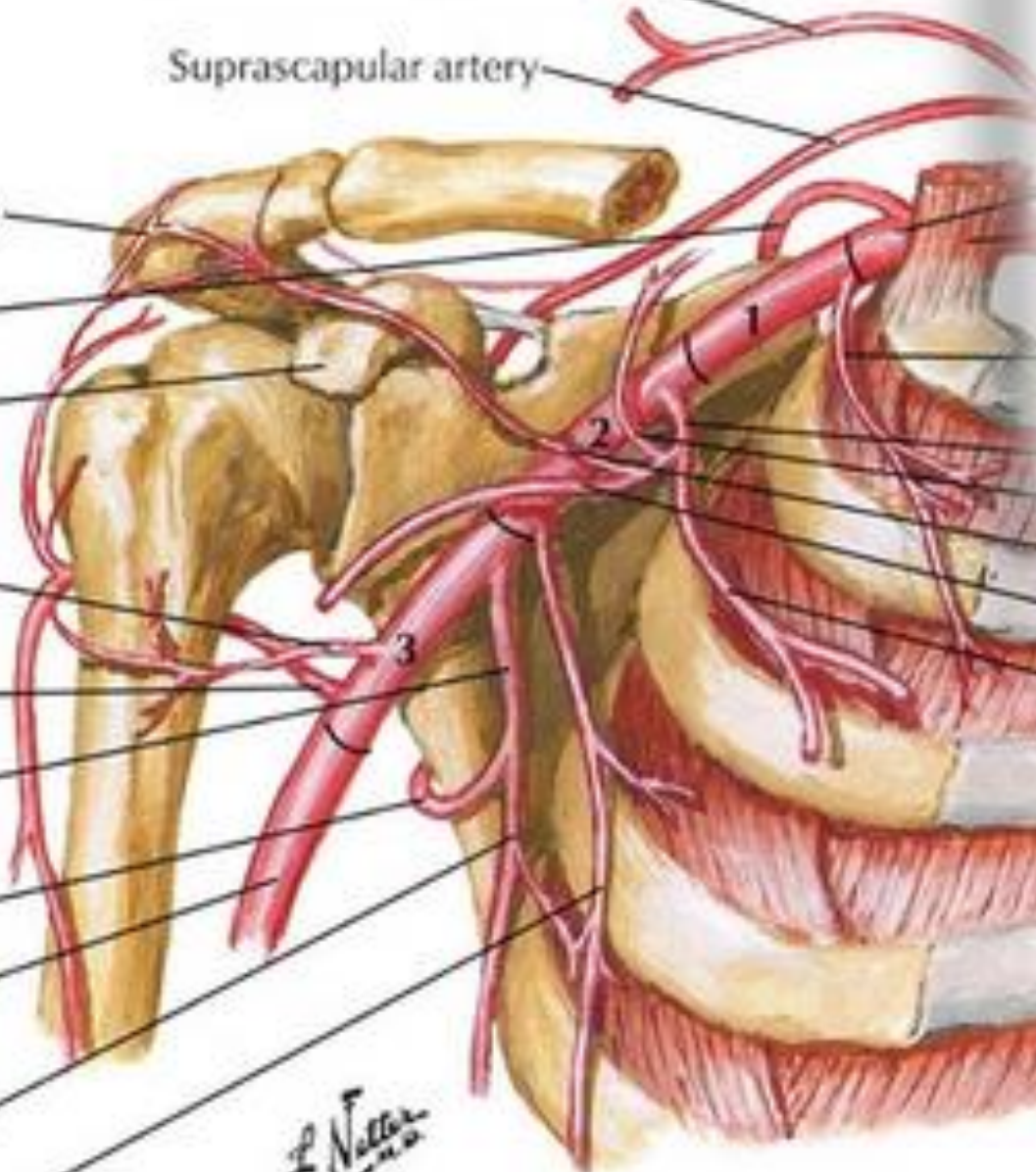
Subscapular artery

Circumflex scapular artery

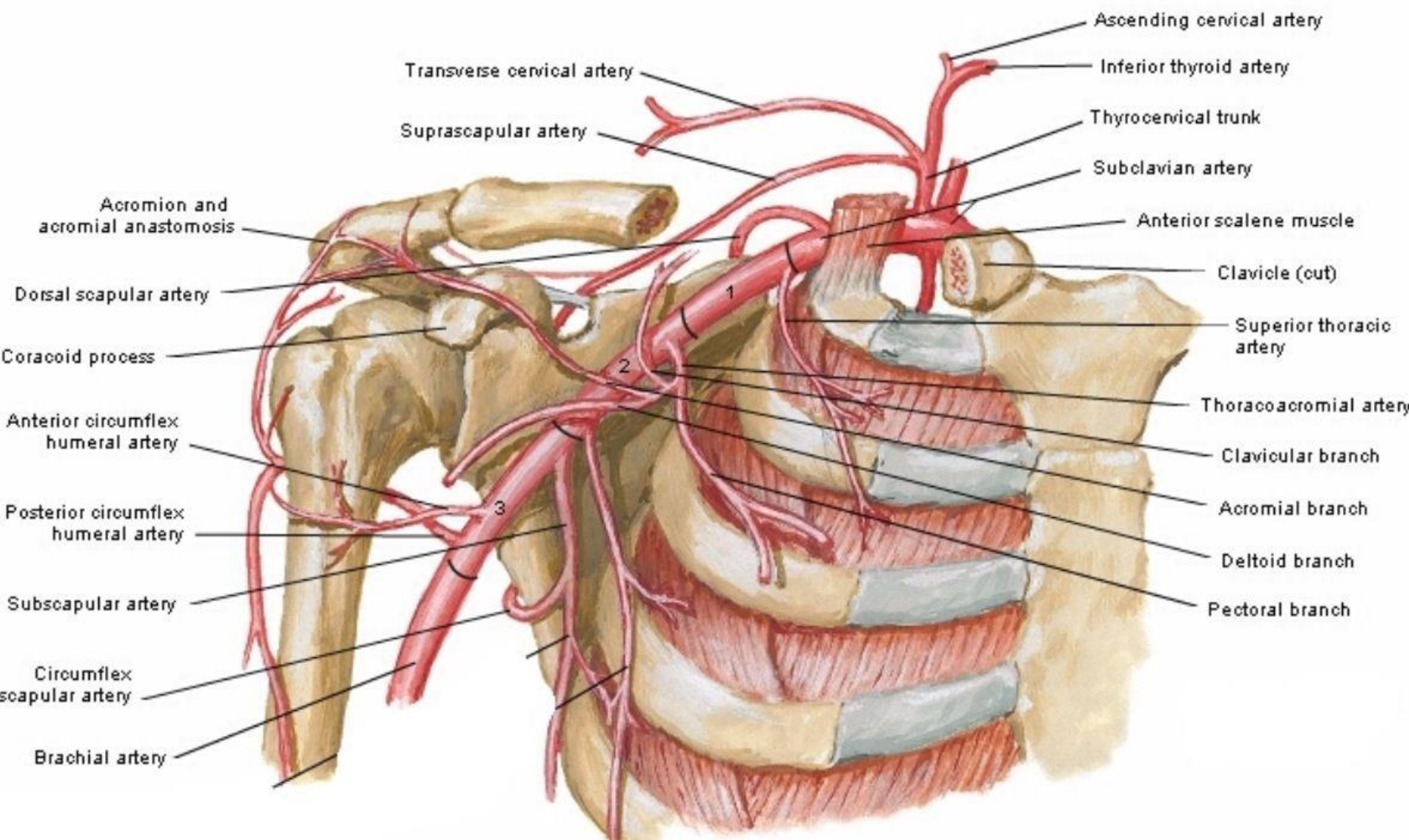
Brachial artery

Thoracodorsal artery

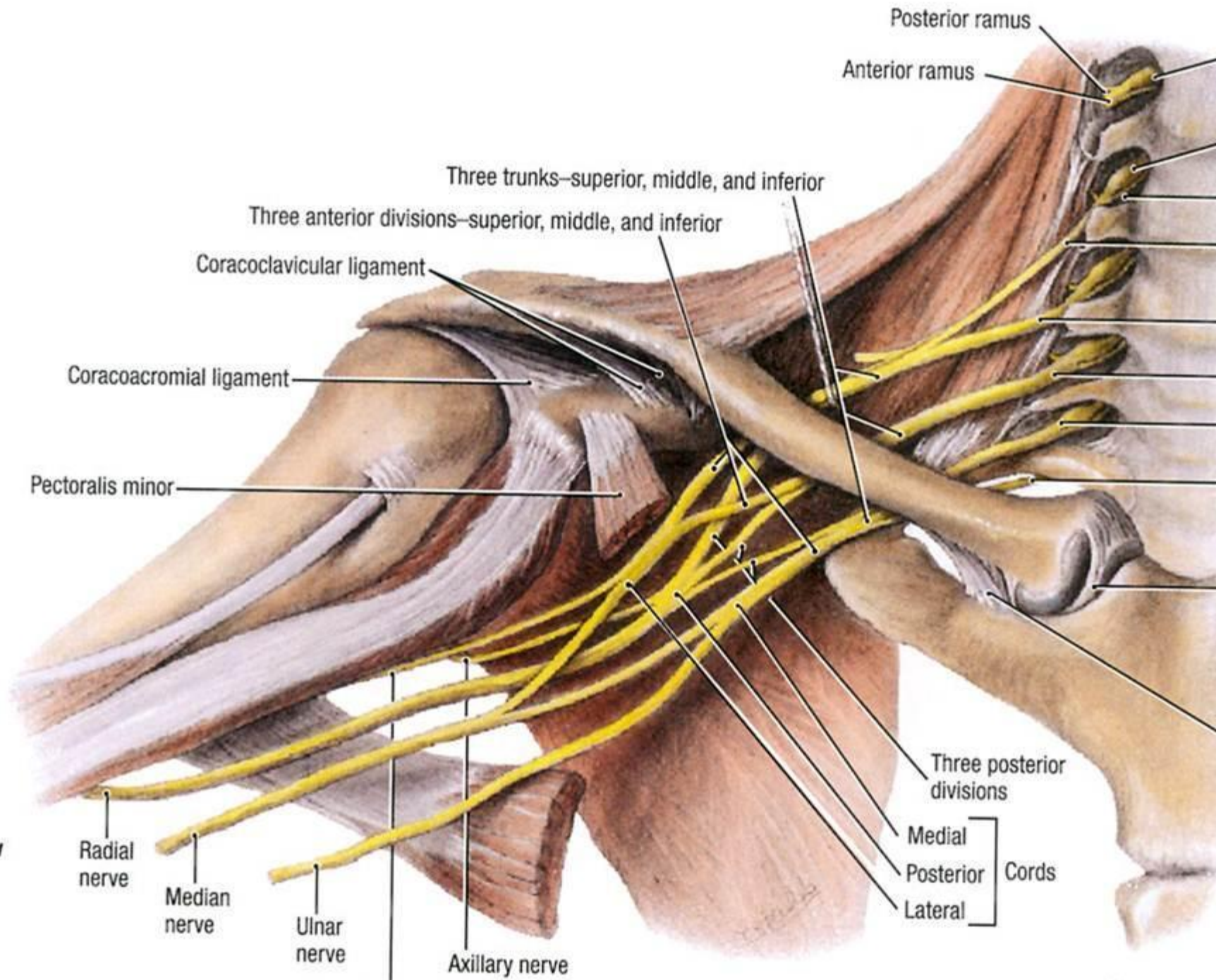
Lateral thoracic artery

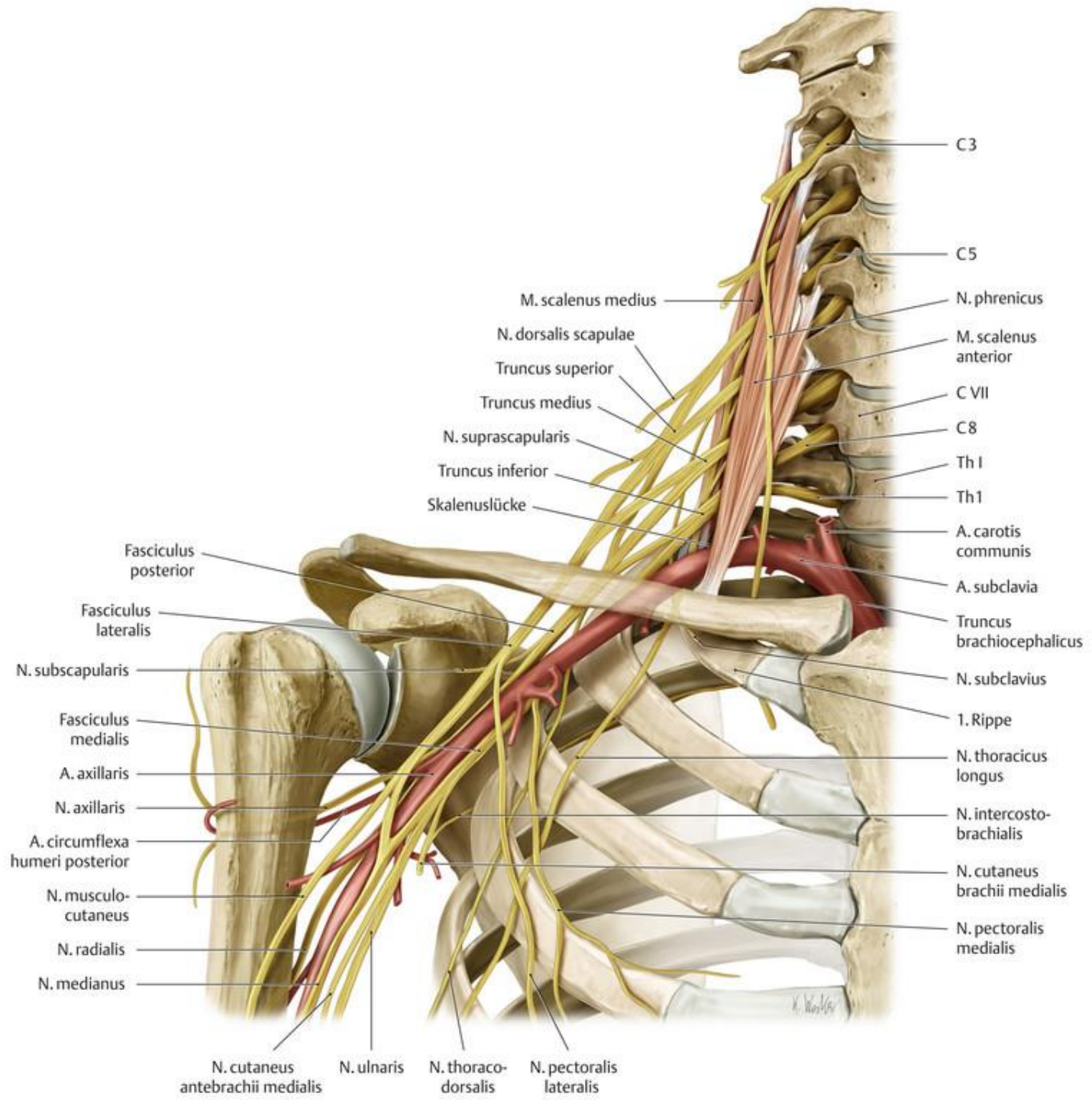


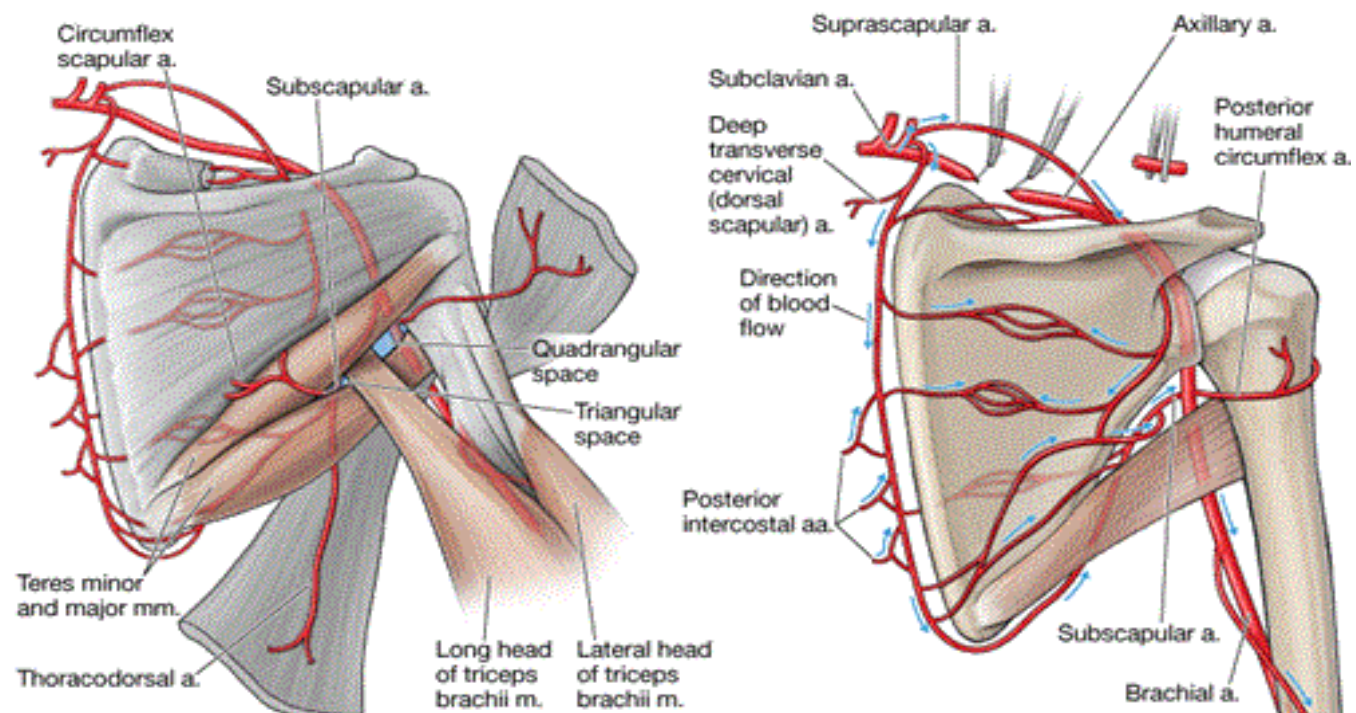
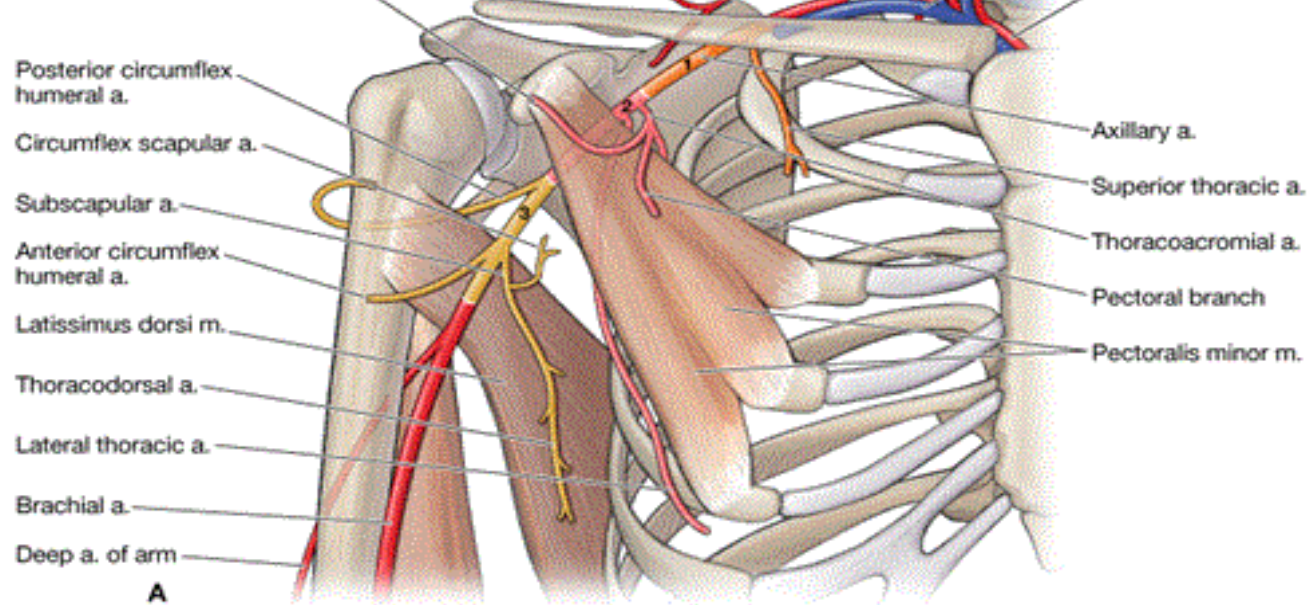
F. Netter M.D.
© IGM

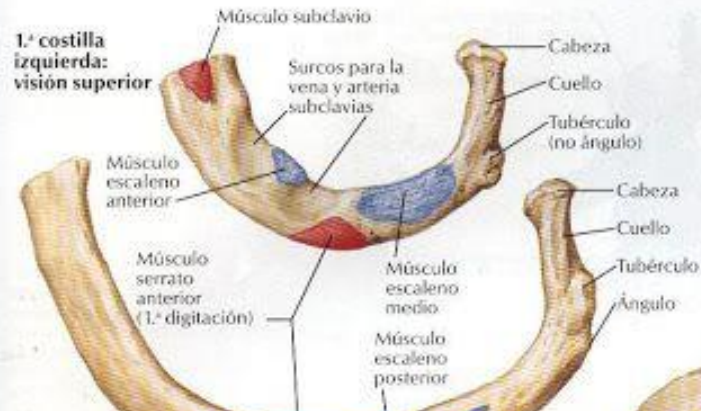


Anterior View





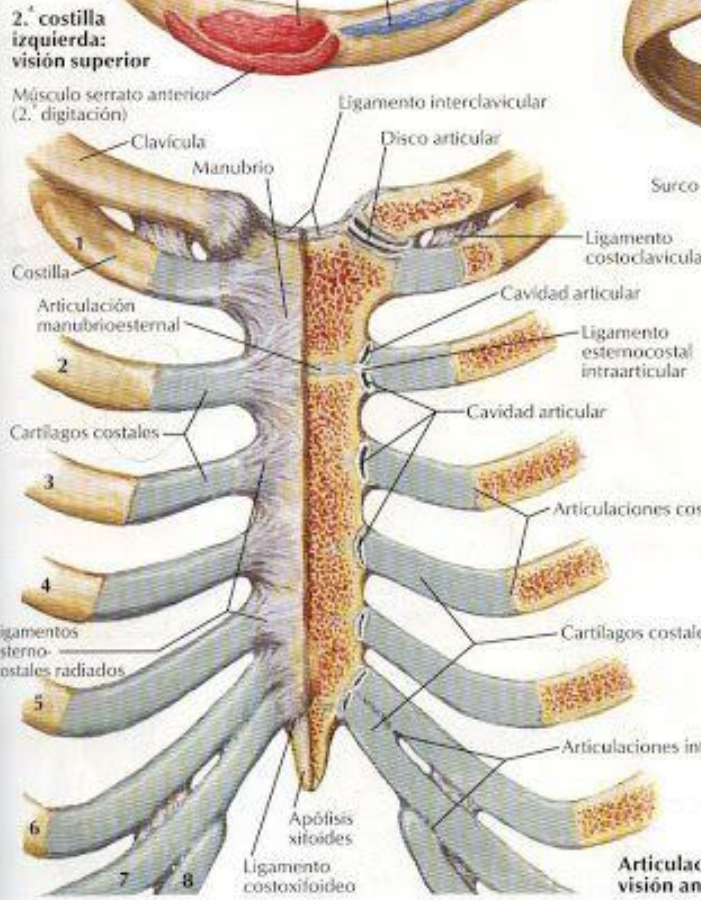




Uniones musculares

■ Orígenes

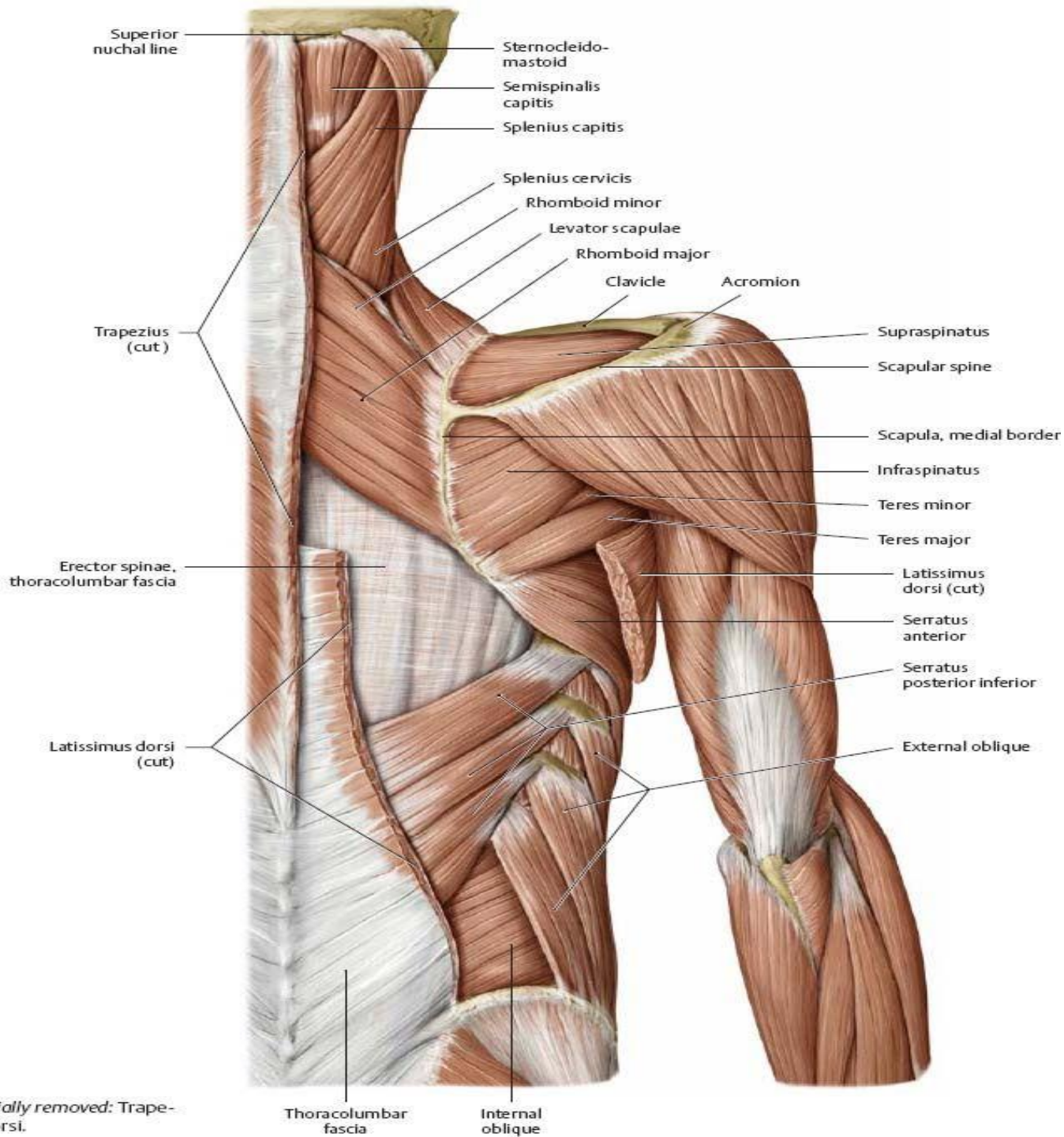
■ Inserciones



Nota: la cabeza de una costilla típica se articula con la carilla costal superior de la vértebra torácica de su mismo número (por medio de su carilla articular inferior), la carilla costal inferior de la vértebra inferior (mediante su carilla superior) y el disco intervertebral entre las dos vértebras. El tubérculo costal se articula con la apófisis transversa de la vértebra del mismo número

Articulaciones esternocostales: visión anterior

F. Naranjo
© IEM



B Deep dissection. *Partially removed:* Trapezius and latissimus dorsi.