



Embalming Injection Points

MORT 1010 Embalming Incisions

Embalming Injection Points

- **Linear Guide**
- **Anatomical Guide**
- **Anatomical Limits**

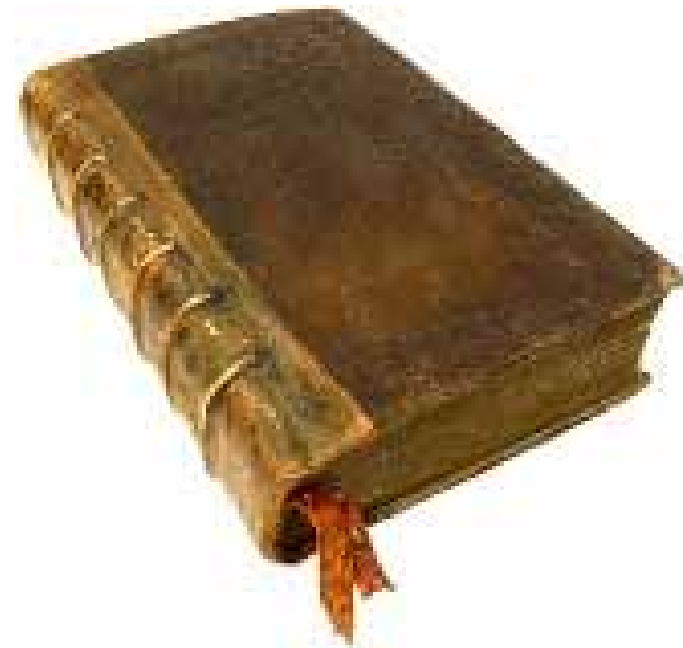


Note:

*All descriptions used throughout this unit assume that the body is in
Anatomical Position.*



Definitions





Linear Guide



- Imaginary
- Line *visualized* or *drawn* on the surface of the skin to represent the approximate location of some more deeply lying structure



Materials Used for Demonstration



Anatomical Guide

- Known → Unknown
- Method of locating structure by reference to an adjacent *known* prominent structure.



"Do you think they mean us?"



Anatomical Limit

- Real
- Point of **ORIGIN**
- Point of **TERMINATION**
- In relation to an adjacent structure

BEGIN



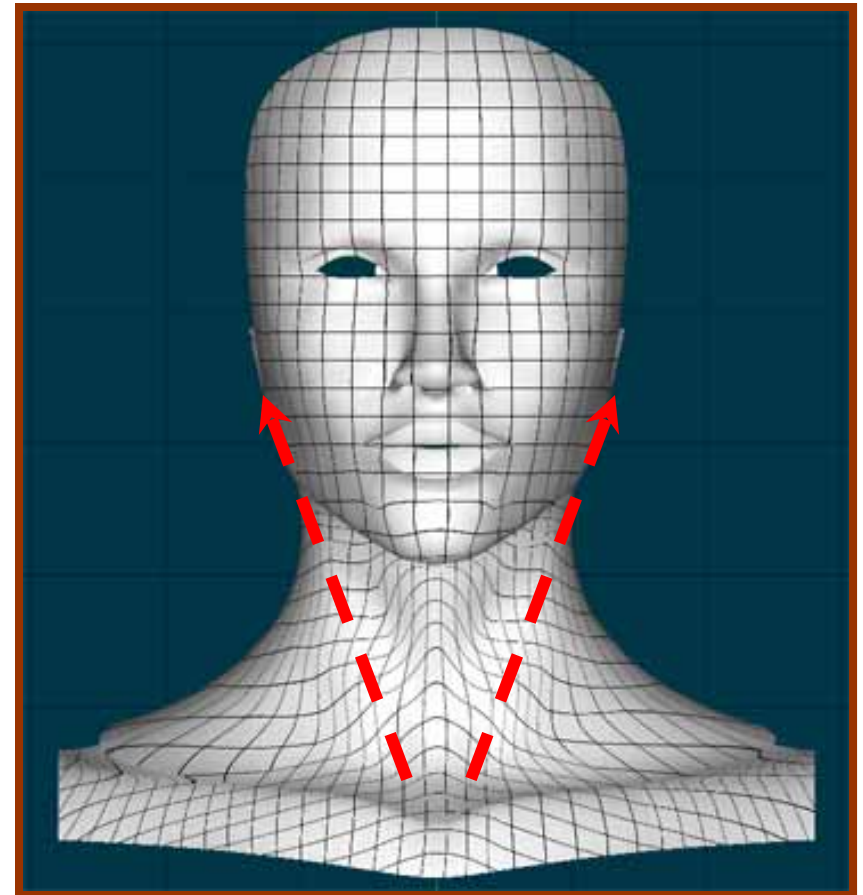
END



Common Carotid Artery

Common Carotid Artery

- **Linear Guide**
 - Point from sternoclavicular articulation
 - To anterior surface of lobe of ear.



Common Carotid Artery



- **Anatomical Guide**
 - Along medial border of sternocleidomastoid muscle

Common Carotid Artery

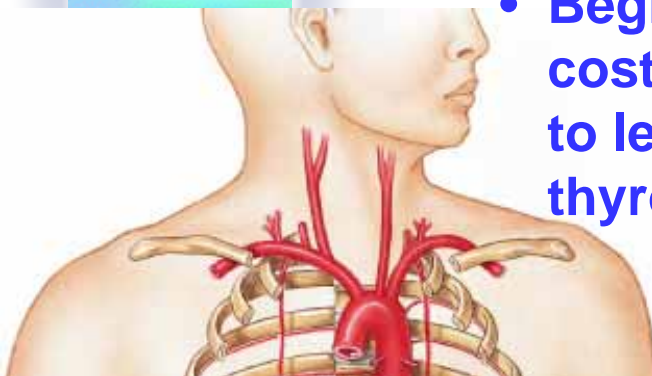
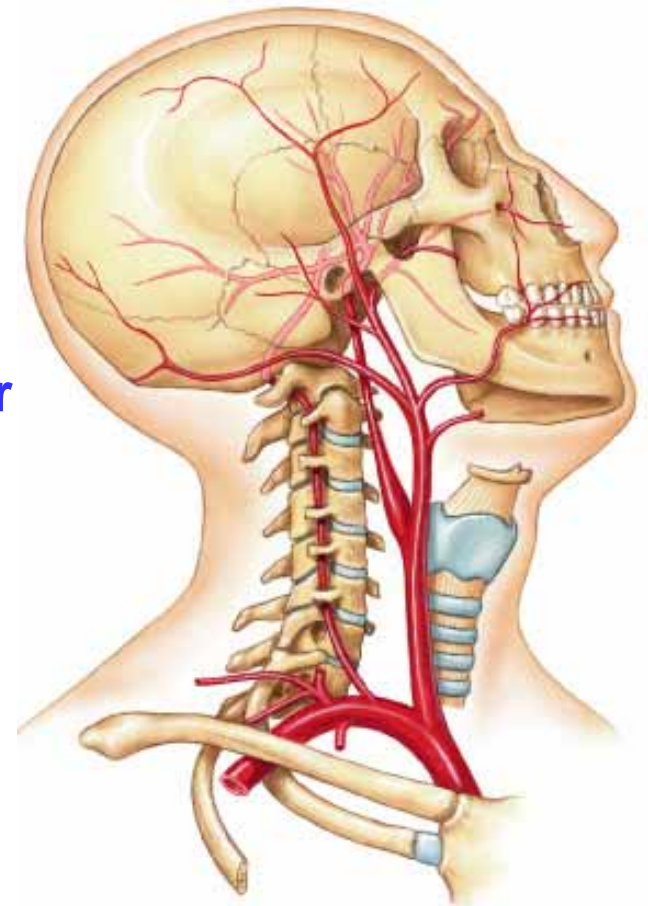
- **Anatomical Limits**

- **Right common carotid artery**

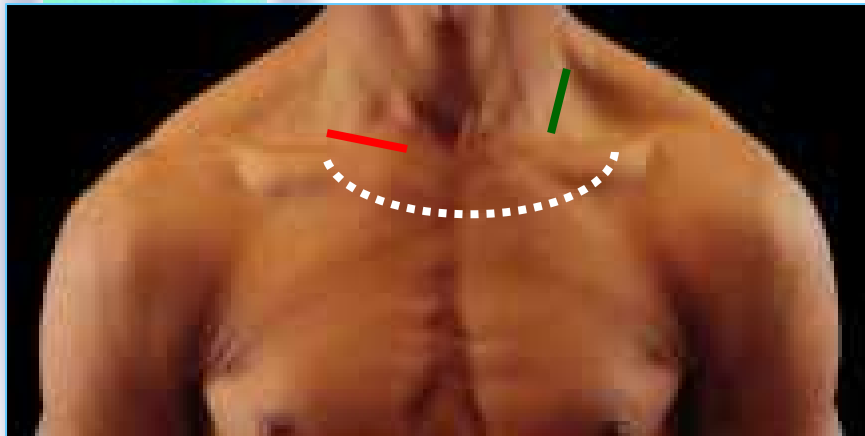
- **Begins at the level of sternoclavicular articulation and extends to level of upper border of thyroid cartilage.**

- **Left common carotid artery**

- **Begins at the level of 2nd costal cartilage and extends to level of upper border of thyroid cartilage.**



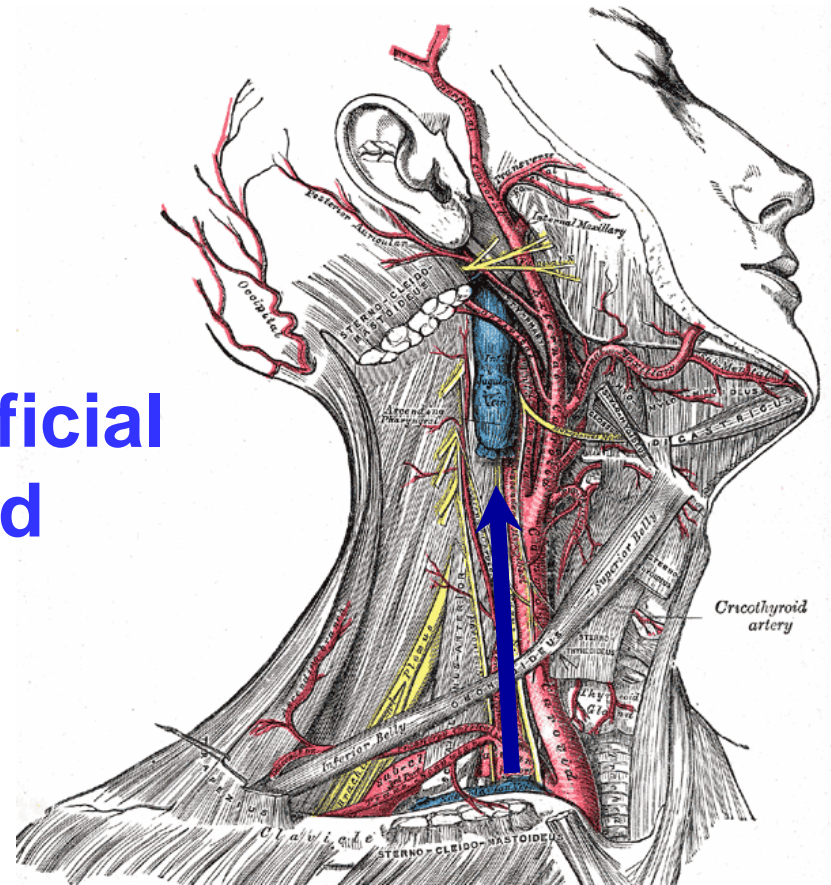
Embalming Incision



- **Supraclavicular (Anterior Lateral)**
 - Along superior border of medial or middle one third of clavicle
- **Parallel (Anterior Vertical)**
 - Along posterior border of inferior one third of sternocleidomastoid muscle
- **Semi lunar (Apron incision or bib)**
 - From center of one clavicle by dipping curve
 - To center of other clavicle

Accompanying Vein

- Internal jugular
- Lateral and superficial to common carotid artery





Considerations – Common Carotid Artery

- Very large in diameter
- Very elastic
- Close to center of circulation
- Close to center of venous drainage
- Has no branches except its terminal branches
- Supplies fluid directly to the head
- Accompanied by a very large vein that can be used for drainage.
- Arterial coagula are pushed away from the head.

Precautions – Common Carotid Artery



- The head may be over-injected
- If leakage occurs, it may be seen
- Some types of instruments, if improperly used, may mark the side of the face or jaw line.
- The incision may be visible with some types of clothing



Subclavian Artery

Subclavian Artery

(Autopsy Cases Only)

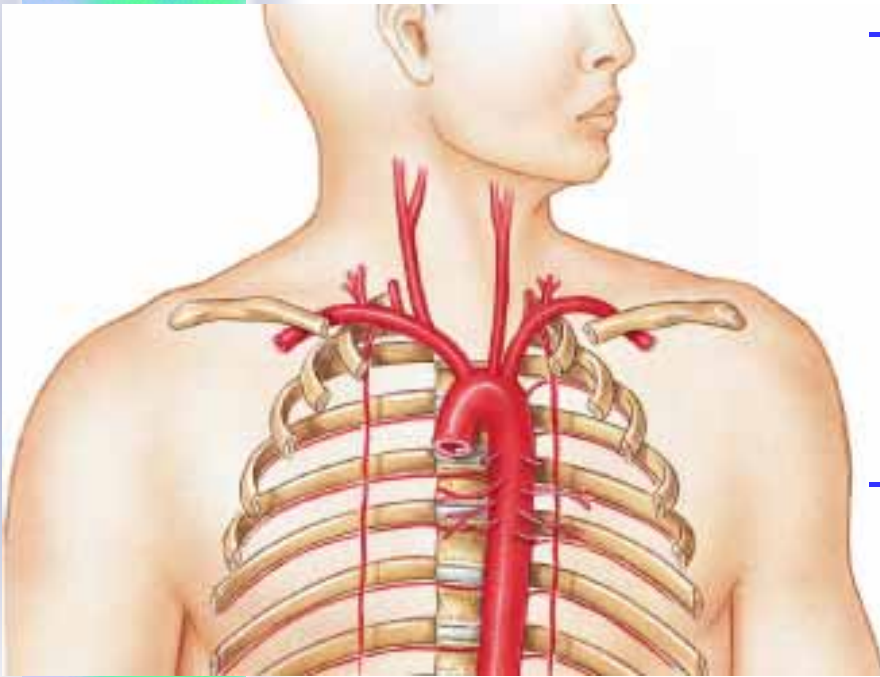
- **Anatomical limits**

- **Right Subclavian**

- Begins at the sternoclavicular articulation.
 - Extends to the outer border of first rib (right).

- **Left Subclavian**

- Begins at level of 2nd. Costal cartilage.
 - Extends to outer border of first rib (left).

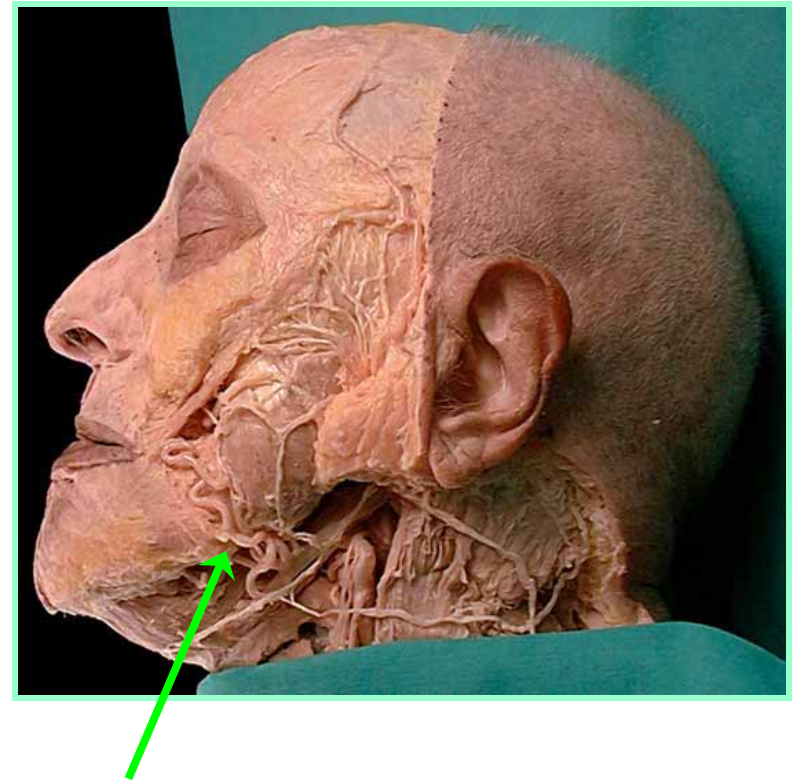




Facial Artery

Facial Artery

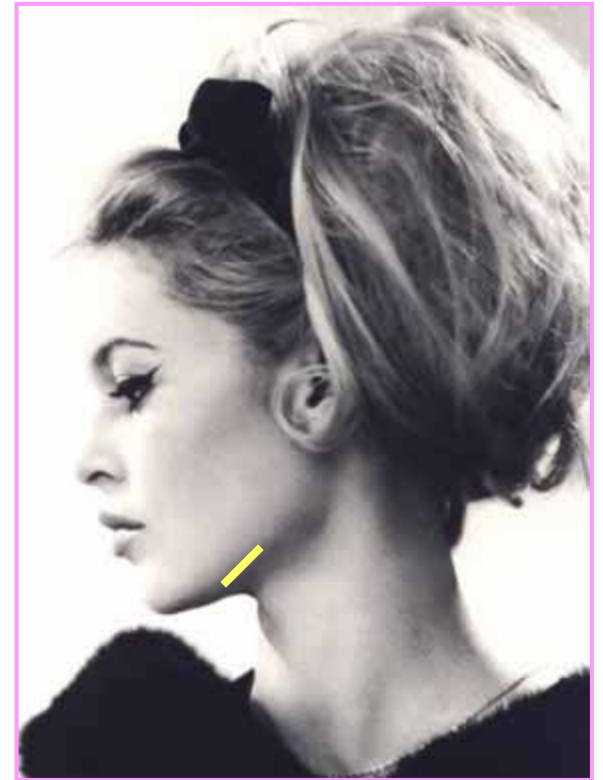
- **Anatomical Guide**
 - Along inferior border of mandible.
 - Anterior to the angle of the mandible





Facial Artery

- **Place of incision**
 - Along anatomical guide





Axillary Artery

Axillary Artery

- **Linear Guide**

- Through the center of the base of the axillary space.
- Parallel to long axis of upper extremity when abducted.



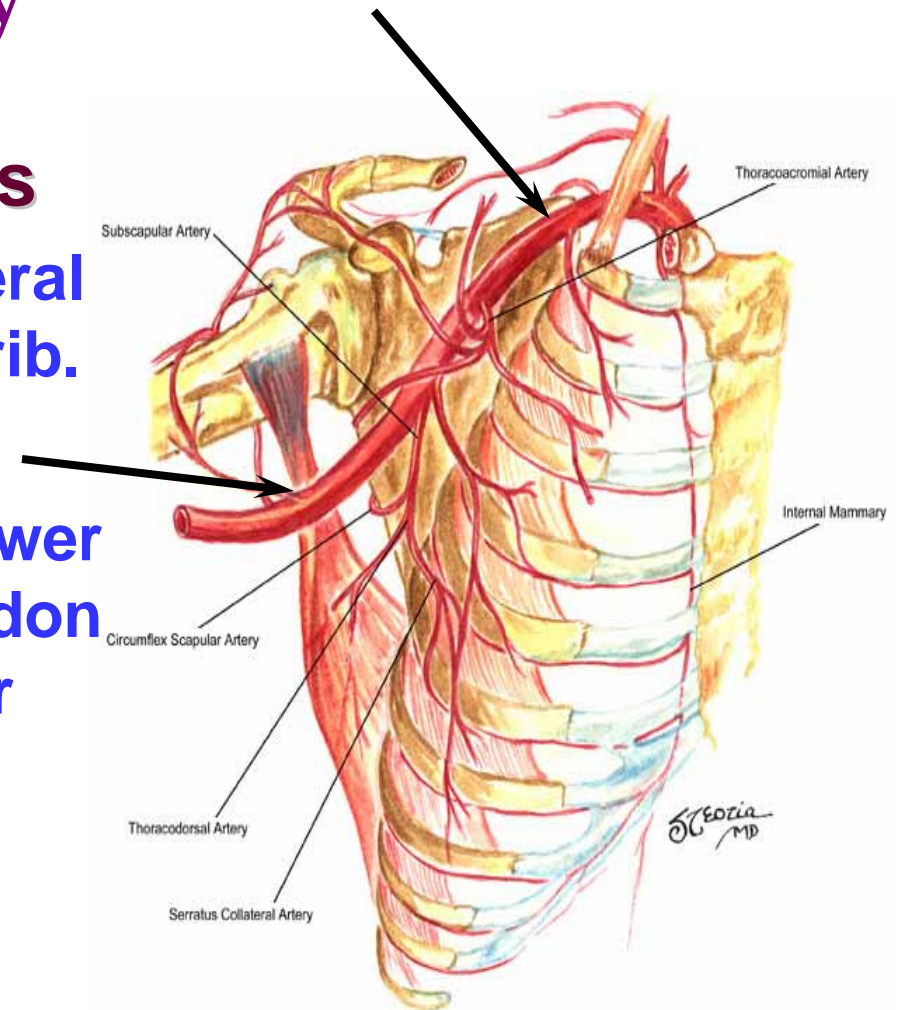


• Anatomical Guide

- **Posterior to the medial border to the coracobrachialis muscle**

Axillary Artery

- **Anatomical Limits**
 - Begins at the lateral border of the 1st rib.
 - Extends to the lower border of the tendon of the teres major muscle.



Embaling Incision

- **Along the anterior margin of the hairline of the axilla.**





Considerations – Axillary Artery

- **Arterial fluid flows directly into the arm and hand.**
- **Close to the face**
- **Vessels are superficial**
- **Close to the center of arterial fluid distribution.**
- **Close to center of venous drainage**
 - **Right atrium of heart**



Precautions – Axillary Artery

- **Arm must be extended**
- **Numerous branches**
- **Artery is small for injection of the whole body.**
- **Accompanying vein is small for drainage**
- **Danger of over-injecting facial tissues**





Brachial Artery

Brachial Artery

- **Linear Guide**

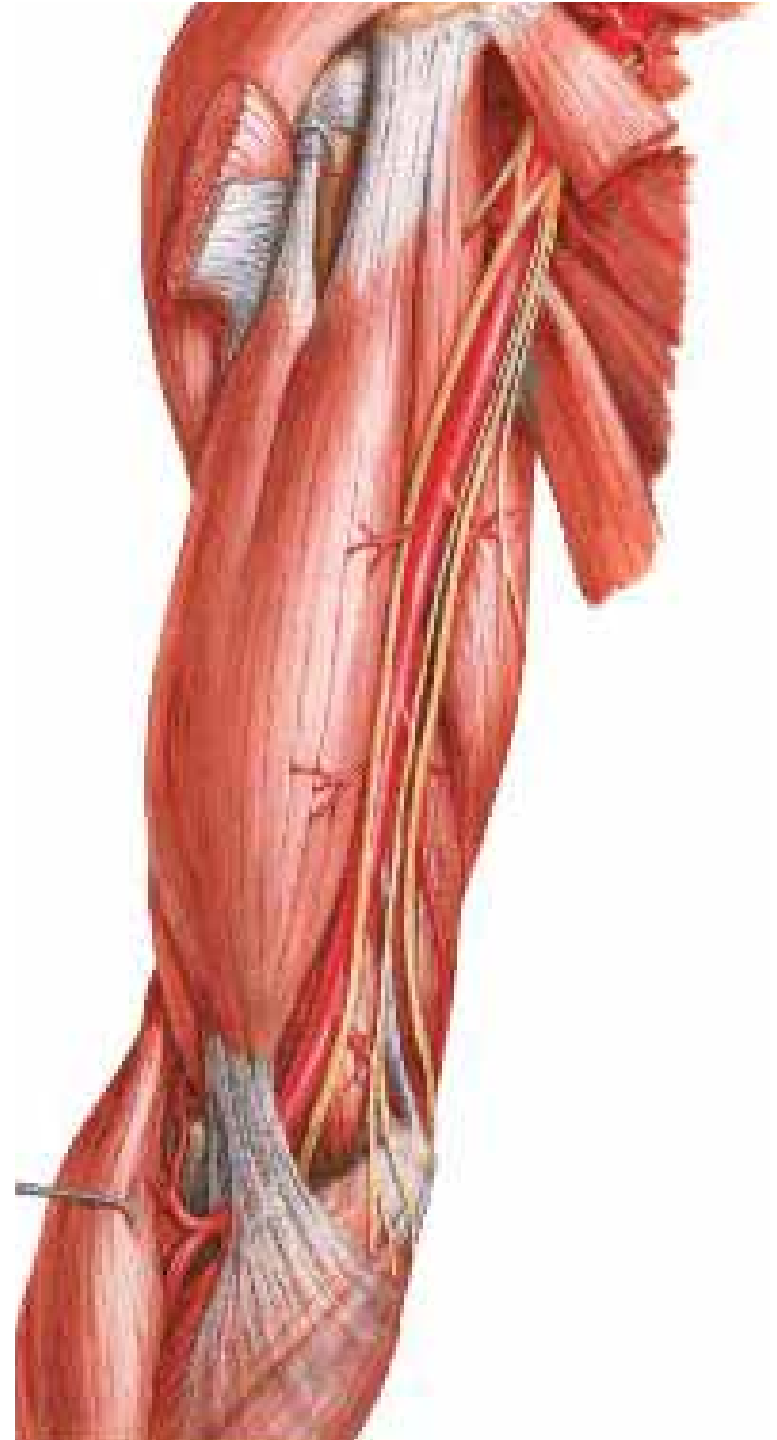
- From center of the base of axillary space.
- To center of forearm just below bend of elbow.



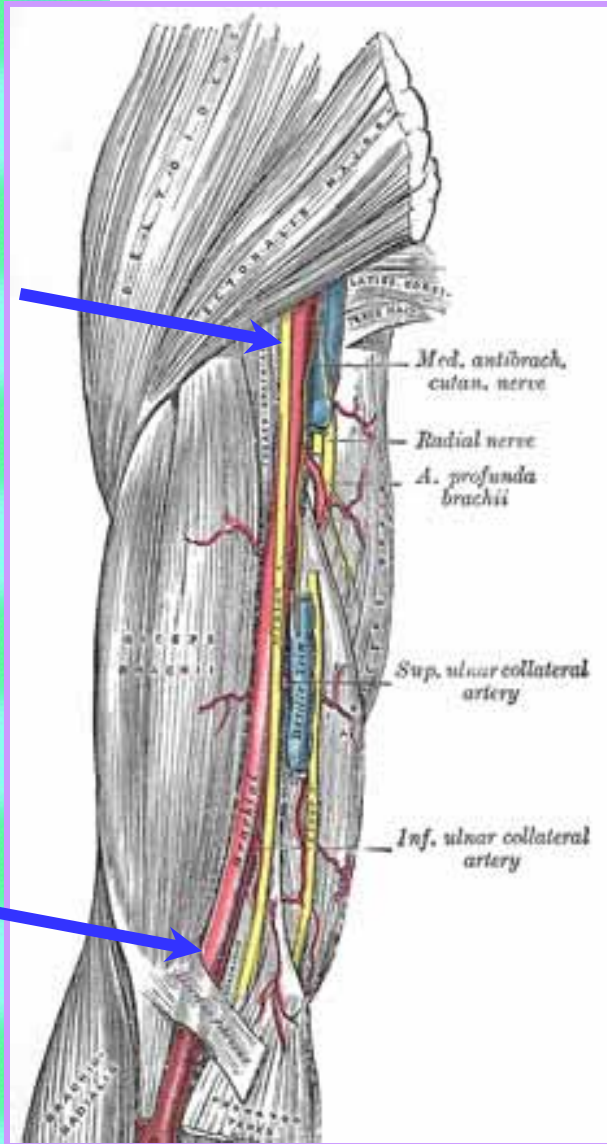


Brachial Artery

- **Anatomical Guide**
 - Lies in the medial bicipital groove.
 - Posterior to the medial border of the belly of the biceps brachii muscle.



Brachial Artery



- **Anatomical Limits**

- Begins at inferior border of tendon of teres major muscle.
- Extends at a point just inferior to the antecubital fossa.

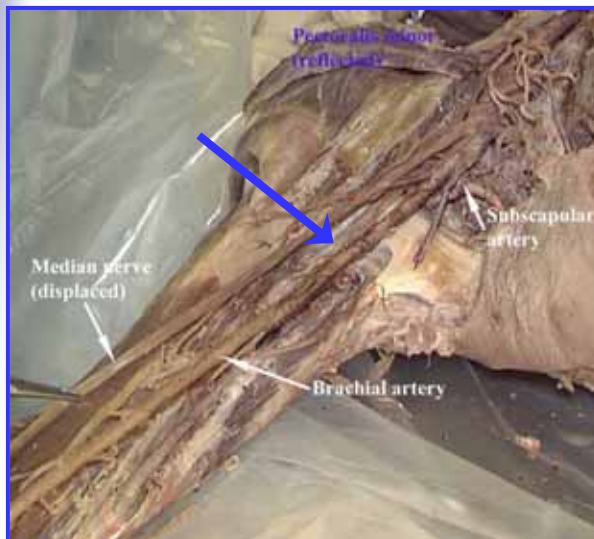
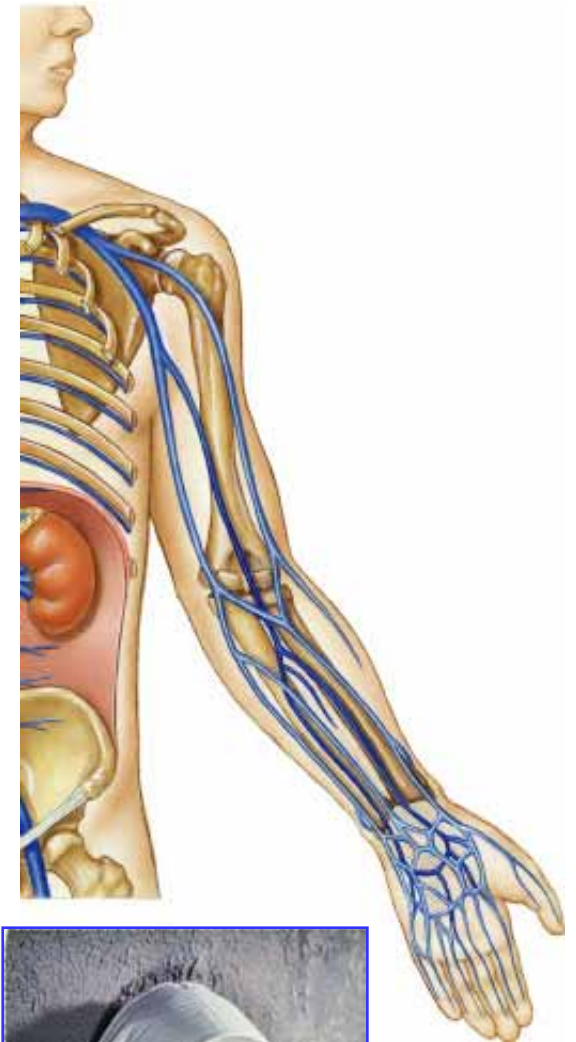
Embaling Incision

- Along the groove between biceps and triceps muscle.



Brachial Artery

- **Accompanying vein**
 - **Brachial vein**
 - Medial and superficial to brachial artery
 - **Cephalic**
 - Ascends along the radial side of the forearm.





Considerations and Precautions – Brachial Artery

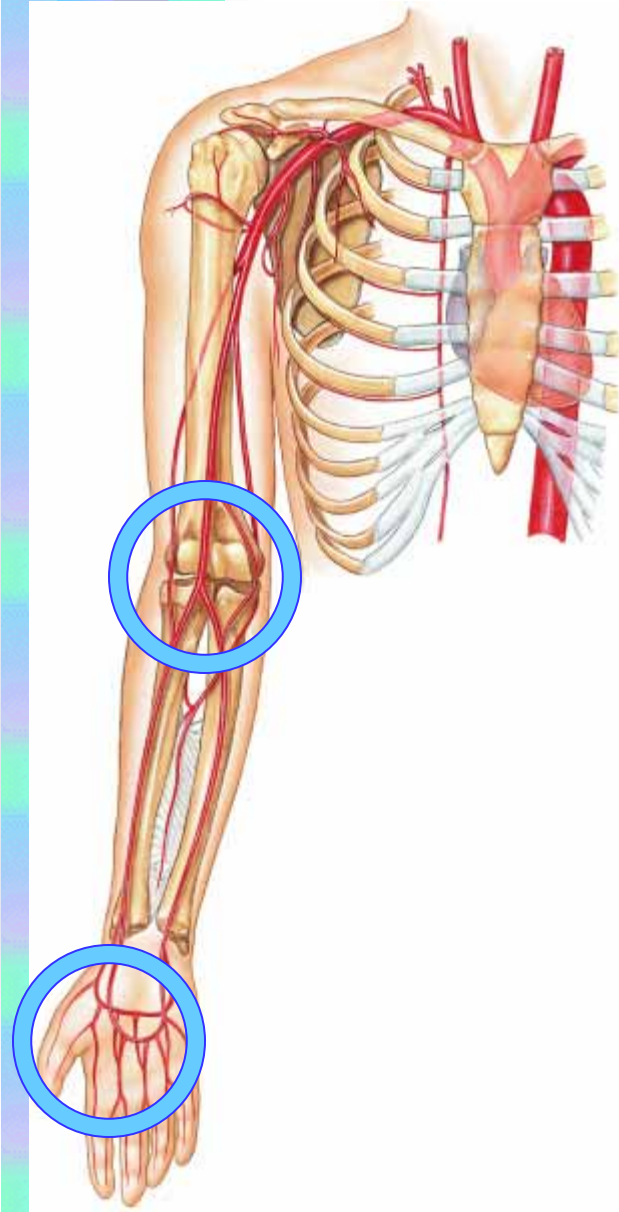
- **Considerations**
 - Same as those of the axillary artery.
- **Precautions**
 - Same as those of the axillary artery.





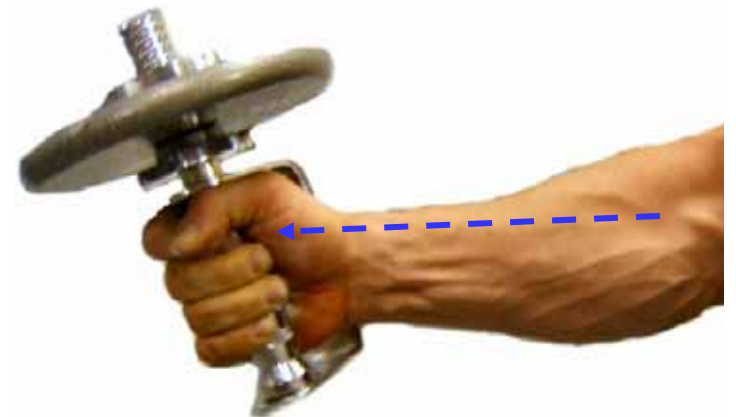
Radial Artery

Radial Artery



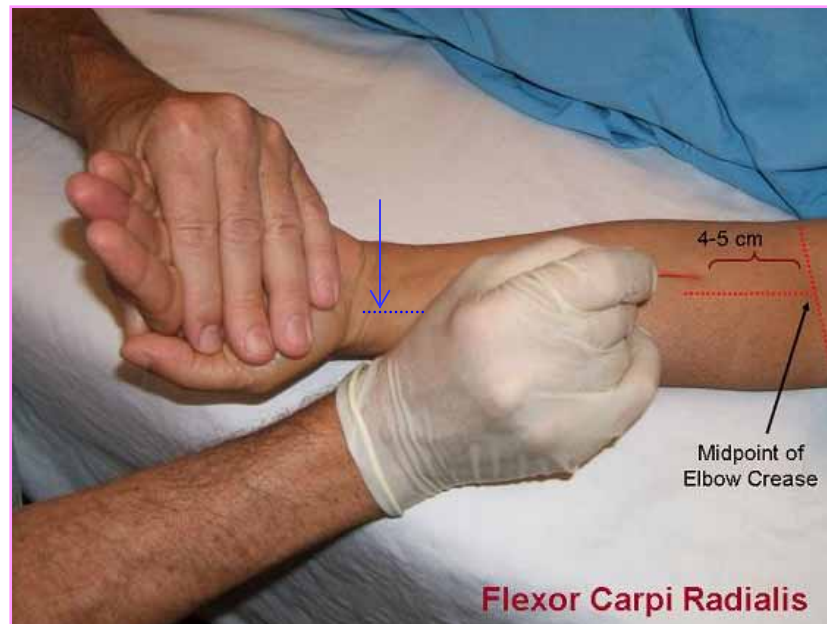
- **Linear Guide**

- On surface of forearm
 - From center of bend of elbow.
 - To the center of base of the index finger.



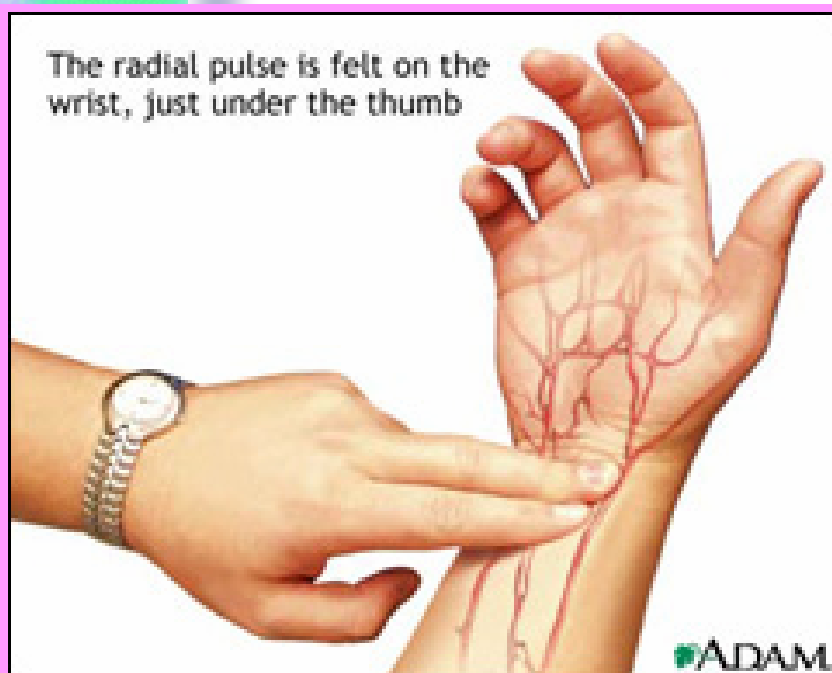
Radial Artery

- **Anatomical Guide**
 - **Lateral**
 - Tendon of the flexor carpi radialis muscle.



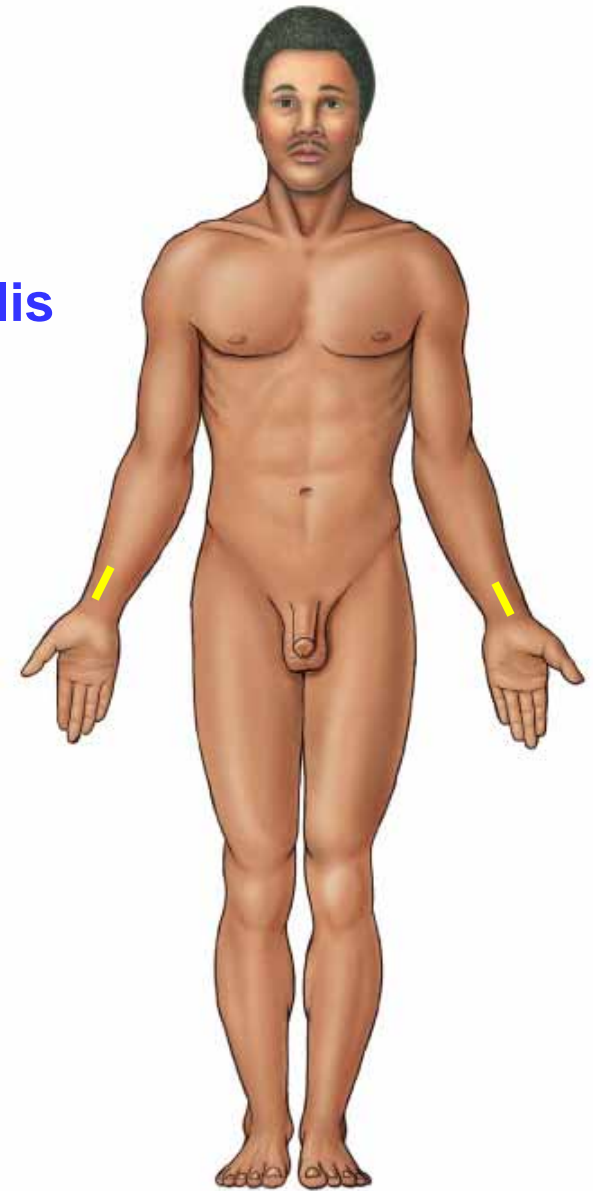
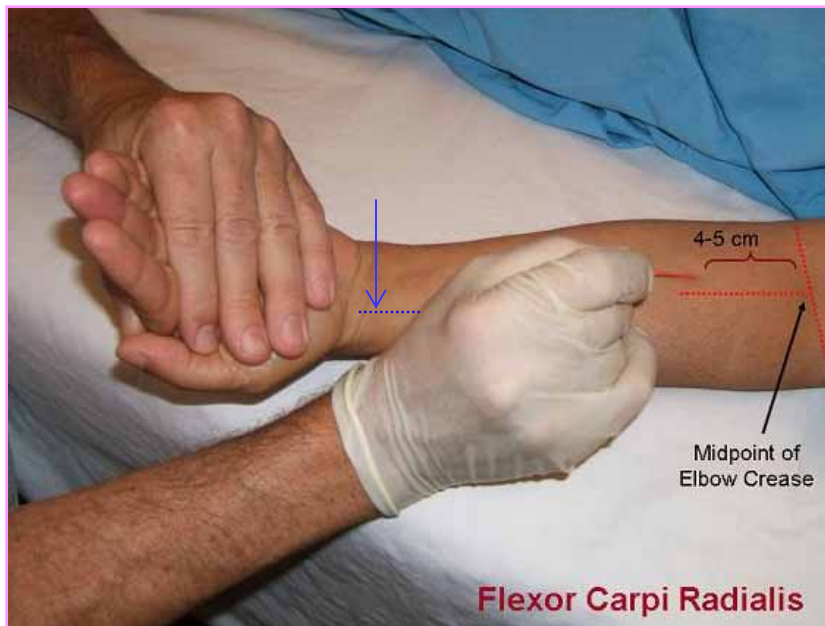
Radial Artery

- **Anatomical Limits**
 - From antecubital fossa
 - To the palm of the hand.



Embalming Incision

- **Lateral**
 - Tendon of the flexor carpi radialis muscle.
 - About one inch above base of thumb.





Precautions – Radial Artery

- **Size of vessel**
- **Fluid may not get to all areas**
- **Difficult area to tightly suture**



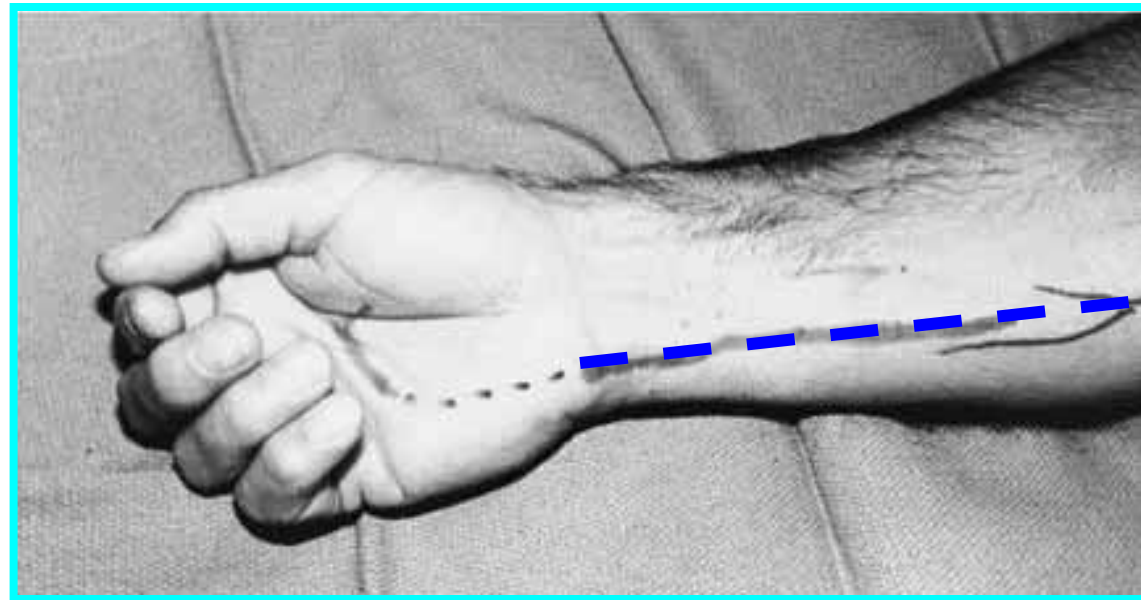


Ulnar Artery

Ulnar Artery

- **Linear Guide**

- On surface of forearm from center of bend of elbow (antecubital fossa).
- To a point between 4th and 5th finger.

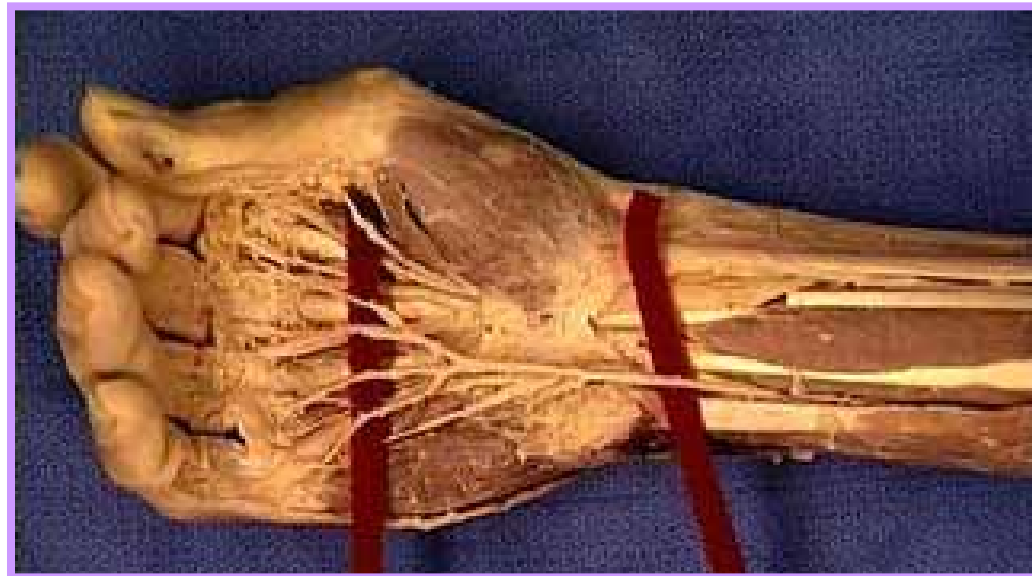


Ulnar Artery

- **Anatomical Guide**

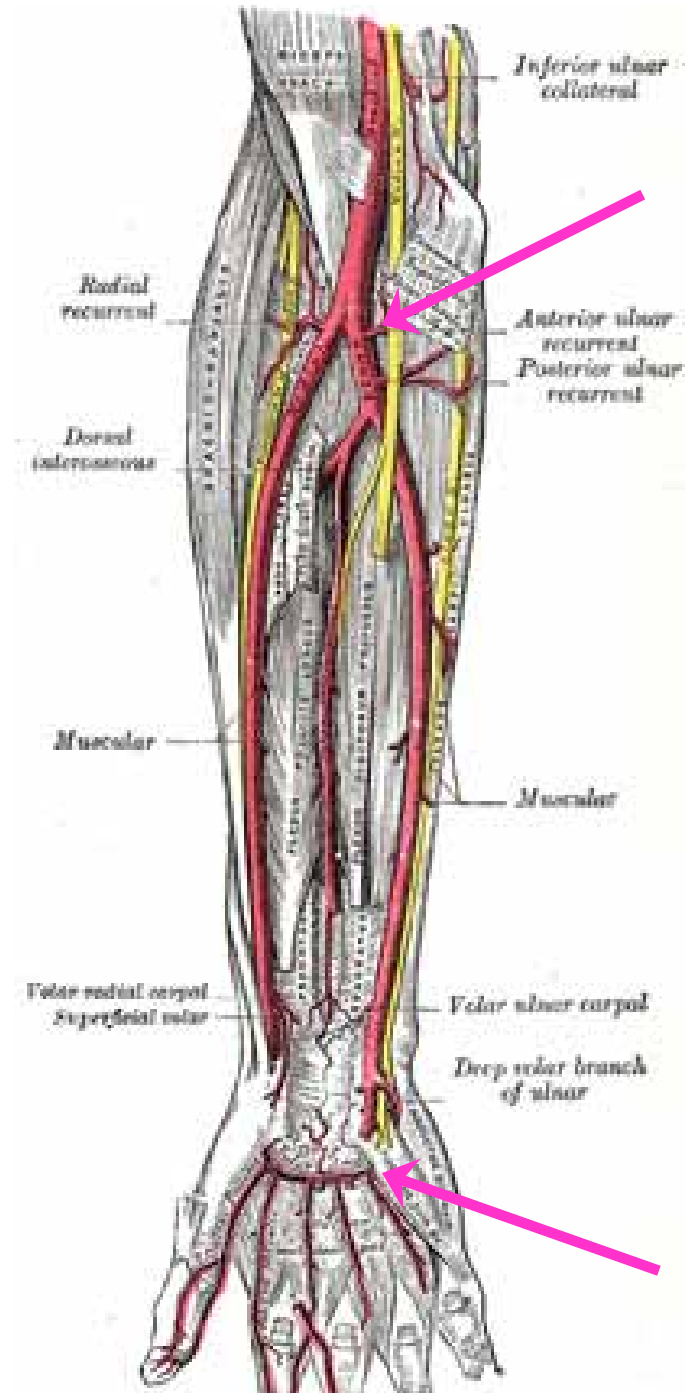
- Lateral to

- The tendon of the flexor carpi ulnaris muscle
 - Lies between tendons of flexor carpi ulnaris and flexor digitorum superficialis.



Ulnar Artery

- **Anatomical Limits**
 - Extends from the antecubital fossa.
 - To the palm of the hand.



Embalming Incision

- **Between the tendons of:**
 - Flexor carpi ulnaris
 - Flexor digitorum superficialis

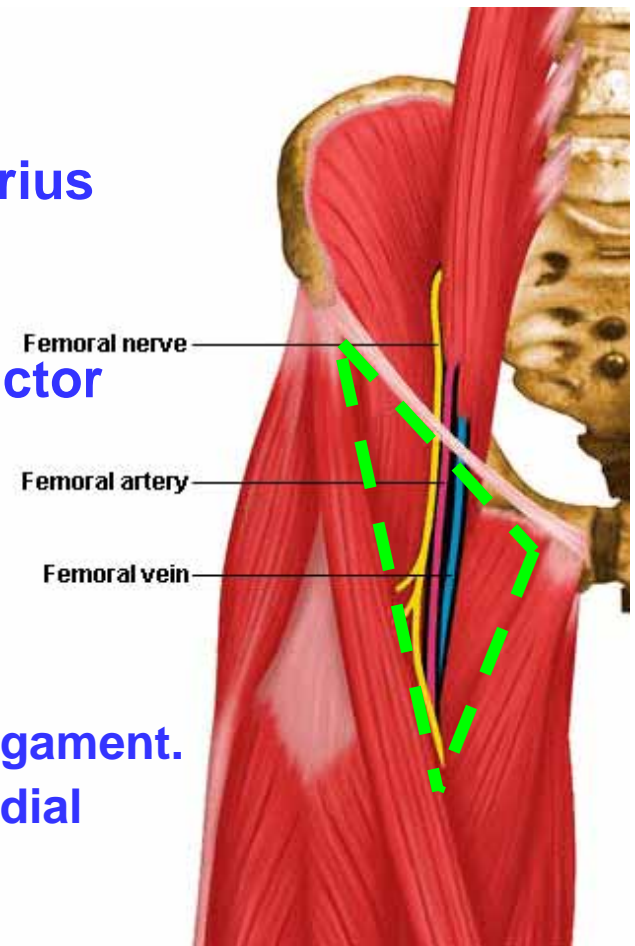
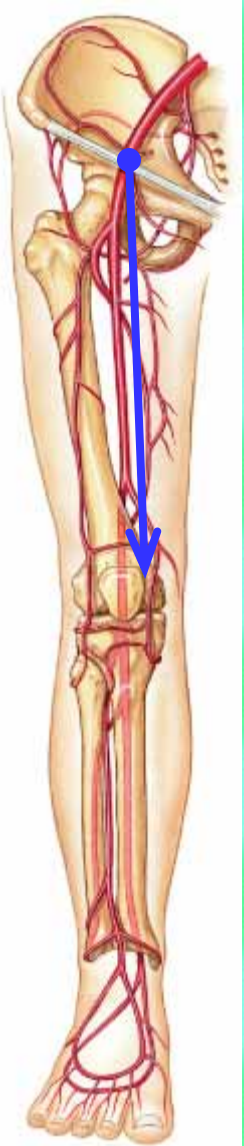




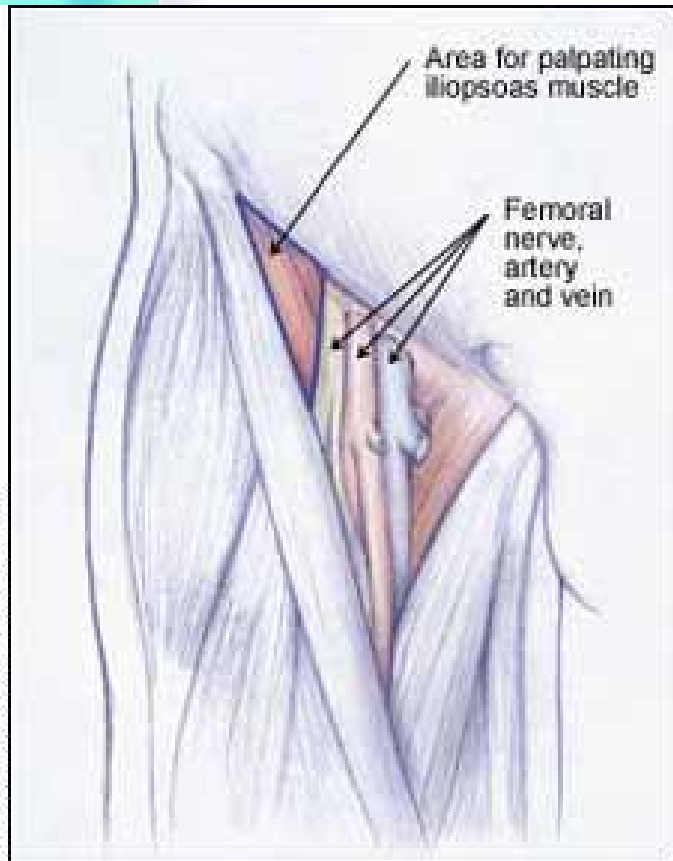
Femoral Artery

Femoral Artery

- **Femoral triangle**
 - Inguinal ligament
 - Medial border of the sartorius muscle.
 - Lateral border of the adductor longus muscle.
- **Linear Guide**
 - On surface of thigh
 - From center of inguinal ligament.
 - To the center point of medial condyle of femur.



Femoral Artery



- **Anatomical Guide**

- Through the center of femoral **triangle** bounded by:

- **Base**

- Inguinal ligament

- **Laterally**

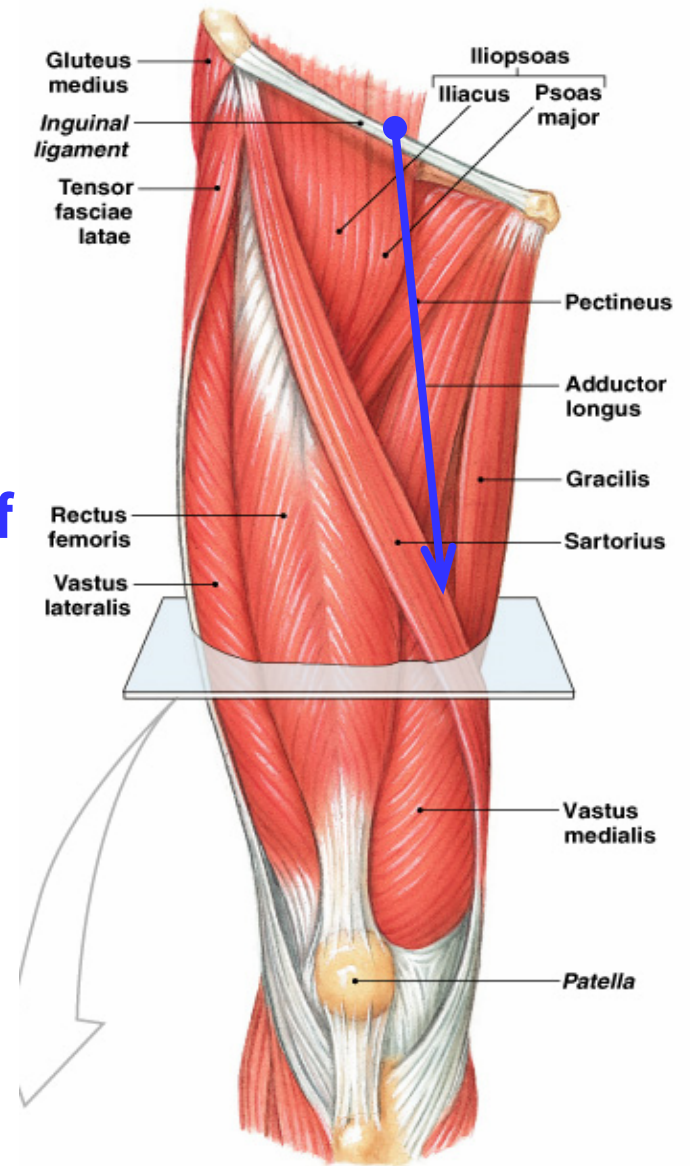
- Sartorius muscle

- **Medially**

- Adductor longus muscle

Femoral Artery

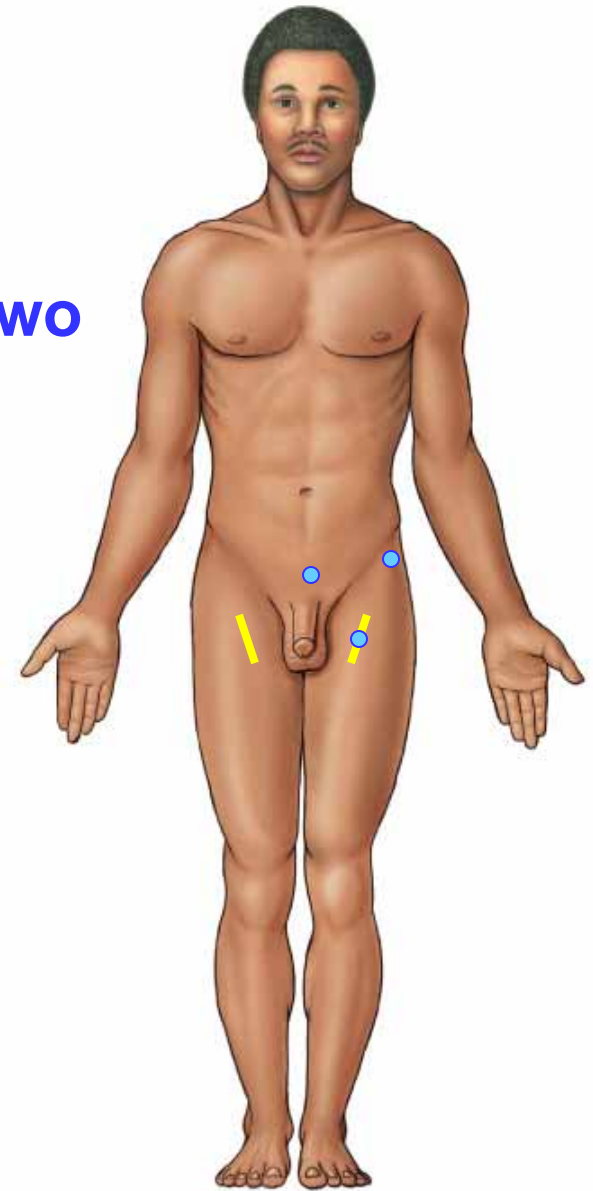
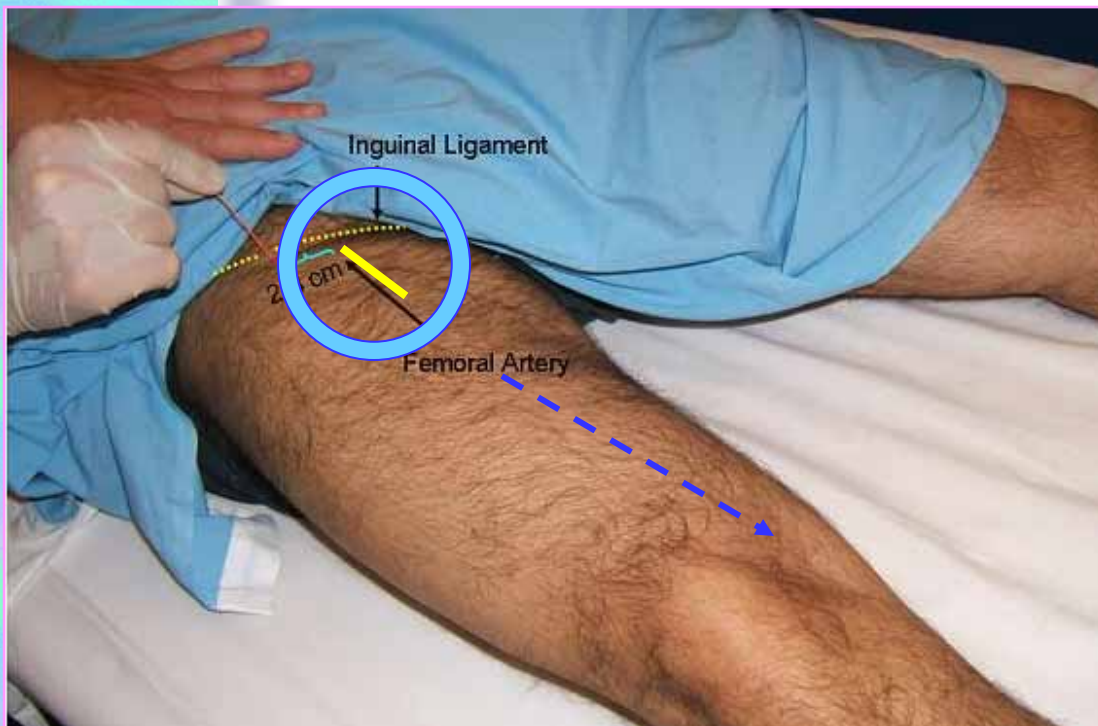
- **Anatomical Limits**
 - Begins at a point posterior to the center of the inguinal ligament.
 - Terminates at the opening in the adductor magnus muscle.



(b) Anterior view of right thigh

Embalming Incision

- Along linear guide
- Any portion of the superior two thirds.





Considerations – Femoral Artery

- Artery is large
- Incision is not visible
- Both sides of head may receive an even distribution of fluid.
- Accompanying vein is large
 - May be used for drainage
- It can be a clean method of embalming
 - No fluid or blood will pass under the body
- Head and arms can be posed without having to be further manipulated after embalming.



Precautions – Femoral Artery

- Arteriosclerosis
- In obese bodies, the vessels may be very deep
- No control over fluid entering the head
- Coagula may be pushed to viewing areas
- Large branches may be mistaken for femoral artery





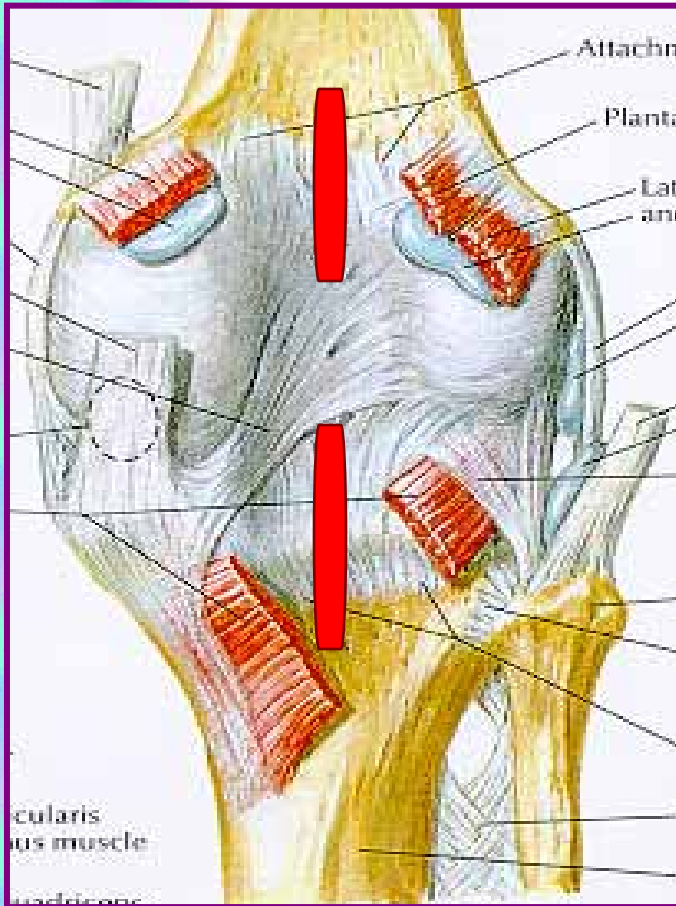
Popliteal Artery

Popliteal Artery



- **Linear Guide**
 - Through the center of popliteal space
 - Parallel to the long axis of lower extremity.

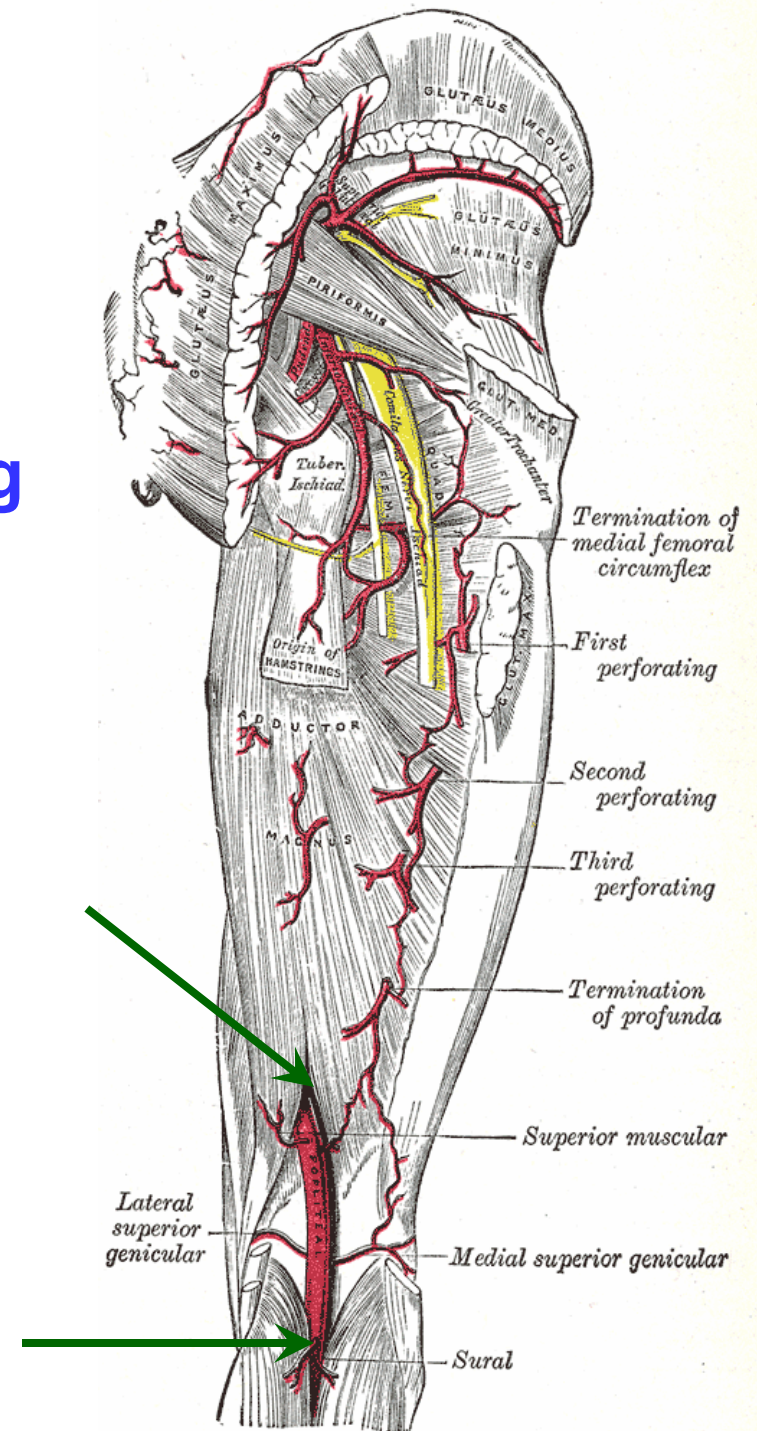
Popliteal Artery



- **Anatomical Guide**
 - Located between
 - Popliteal surface of the femur
 - Oblique popliteal ligament

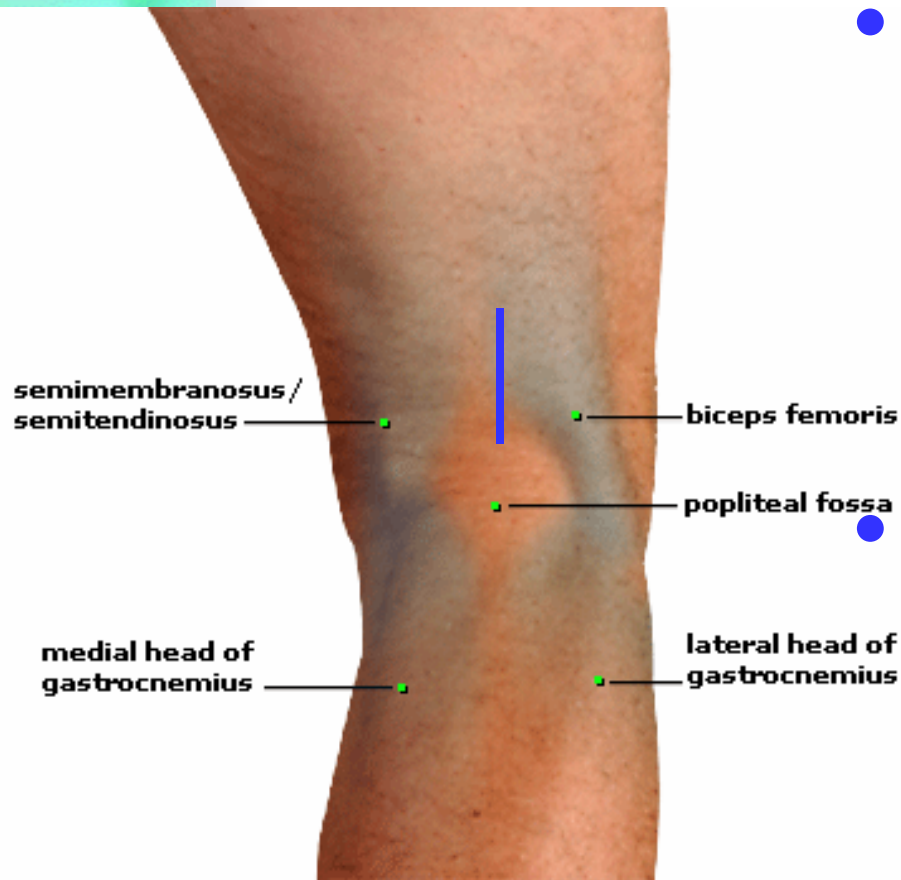
Popliteal Artery

- **Anatomical Limits**
 - Begins at an opening formed by the adductor magnus muscle.
 - Terminates at the inferior border of popliteal muscle.



Embalming Incision

- Longitudinal incision of posterior medial aspect of thigh.
- Superior to the popliteal space.





Anterior Tibial Artery

Anterior Tibial Artery



- **Linear Guide**

- From lateral border of patella.
- To a point between the medial and lateral malleoli.

Embaling Incision



- Along lateral margin of inferior one-third of crest of tibia.





Posterior Tibial Artery

Posterior Tibial Artery

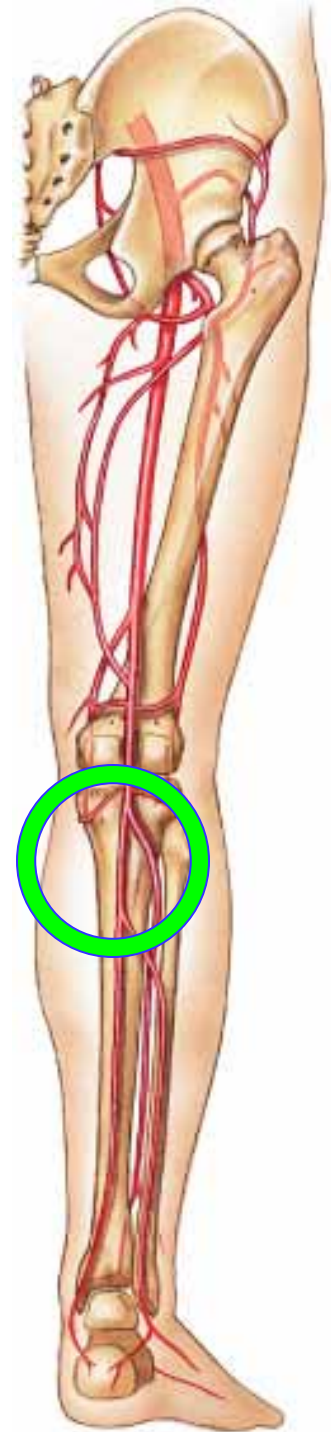
- **Linear Guide**
 - From center of popliteal space.
 - To point midway between medial malleolus and the calcaneus.





Embalming Incision

- **Along the superior one-third of the linear guide.**





Dorsalis Pedis Artery

Dorsalis Pedis Artery



- **Linear Guide**

- From the center of the anterior surface of the ankle joint.
- To a point between the big toe and adjacent toe.



Embalming Incision

- **Along the superior one-third of the linear guide.**

