



Lecture title: Bones of fore limbs

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Summary: Metacarpal bones

In horse

There are (3) metacarpal bones (second ,third& fourth)Metacarpal bones .position between the carpal bones & proximal phalanx.

Land marks third or large metacarpal bones is fully development long bone It has body & two extremity.The body has two surfaces (dorsal & palmar) :

a-dorsal surface has metacarpal tuberosity ,

b-palmer surface has area attached with suspensory ligament .

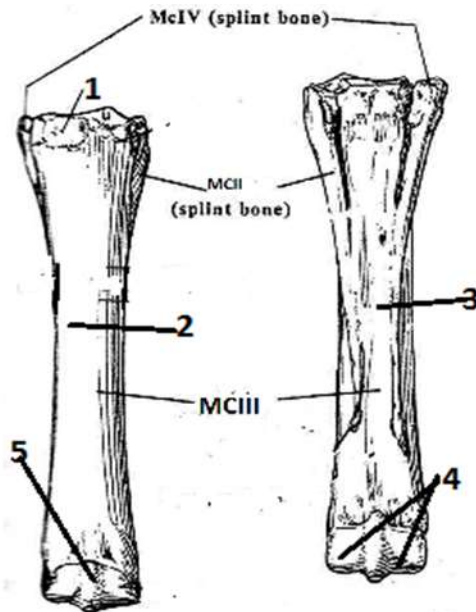
It has two extremities:

a- proximal extremity (head) articulate with distal rows of carpal bones

Distal extremity it has one trochlear articulation with proximal phalanx & two



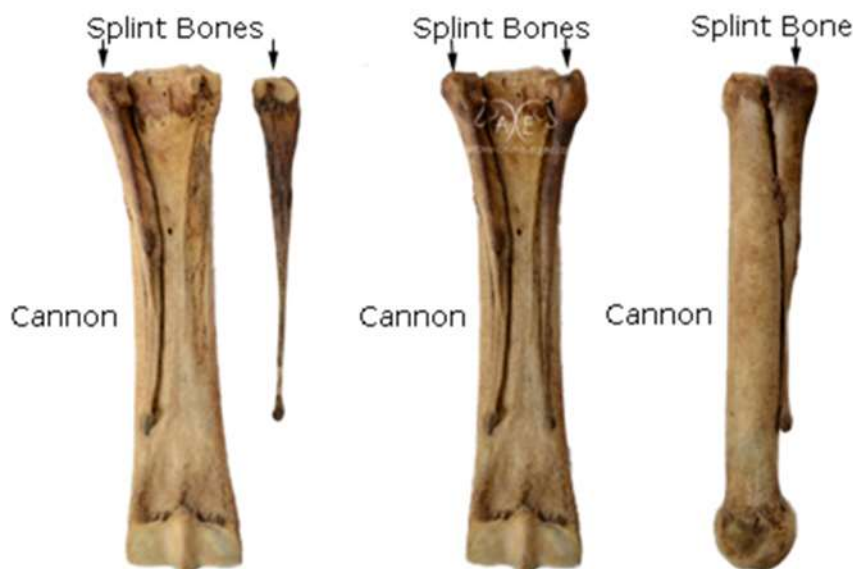
proximal sessamoid bone.



Metacarpal bones of horse

- 1-Metacarpal tuberosity.
- 2- Dorsal surface.
- 3- palmar surface.
- 4-medial & lateral condyles.
- 5- Sagittal ridge.
- MCIV-fourth metacarpal bone.
- MCII-second metacarpal bone.
- MCIII-third metacarpal bone

Second (medial) & fourth (lateral) small metacarpal bones (reduce long bone)



Metacarpal bones in horse

Cannon=large metacarpal bone
splint=small II&IV metacarpal bone

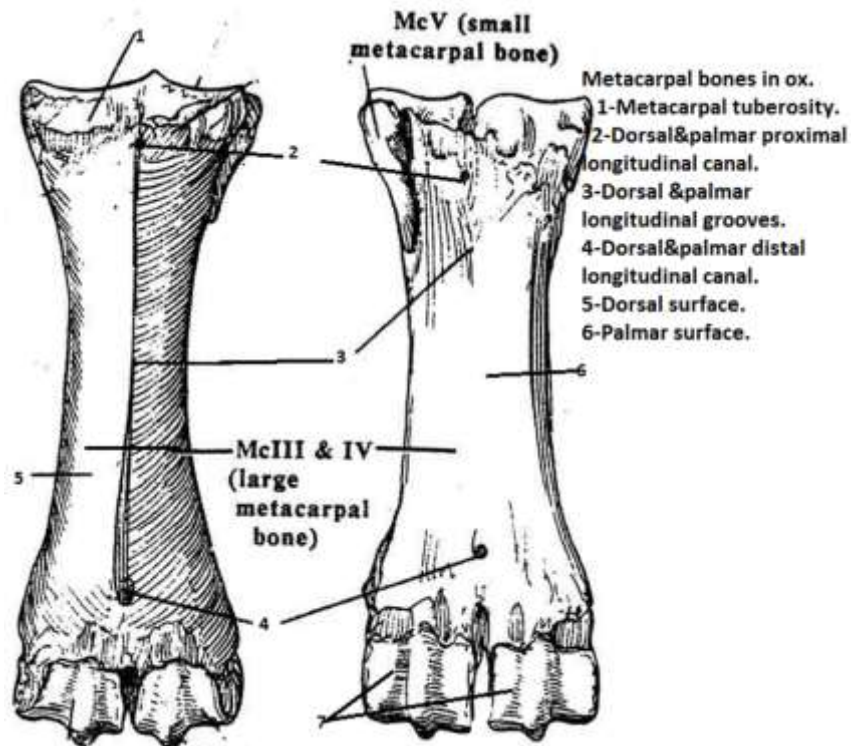


In ruminants :

The metacarpus consists of large metacarpal and a lateral small metacarpal bone.

1-Large metacarpal bone(McIII+McIV)is bone results from fusion of the third and fourth bones .The dorsal surface marked by the dorsal longitudinal sulcus or groove and proximally there is the lateral metacarpal tuberosity .The palmar surface has palmar longitudinal sulcus ,in the dorsal and palmar surface there are the proximal and distal metacarpal canal. The proximal end or base articulate with distal row of the carpus .The distal end or the head is divided by intertrochlear incisor the head articulate with first phalanx.

The small metacarpal boneIs a rounded rod about 3-4 cm in length ,it attached to proximal part of the lateral border of the large metacarpal bone

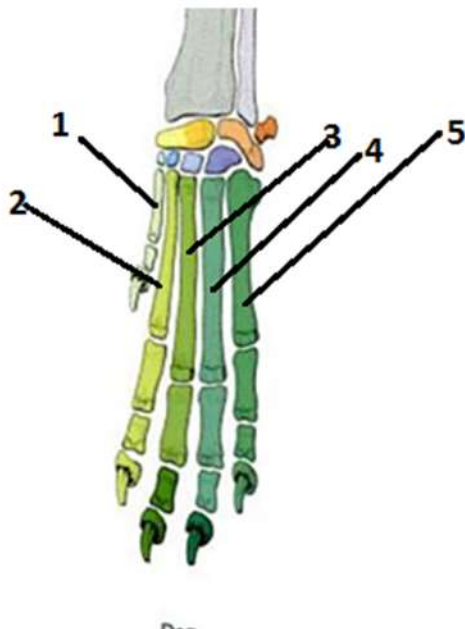


distal end is pointed .



Metacarpal bones In dog

Five metacarpal bones are present .The first is much the shortest . Third and fourth are the longest ,each consists of body and two extremities.They articulate proximally with distal row of carpal bones and distally with first phalanges .



- 1-First metacarpal bone.
- 2-Second metacarpal bone.
- 3-Third metacarpal bone.
- 4-Fourth metacarpal bone .
- 5-Fifth metacarpal bone



The digits in ox:

Four digits are present in the ox ,two are fully developed (third &fourth) they have three phalanges and three sesamoids each .

The second and fifth are vestige and are placed palmar to the fetlock as (dew claws) each contains one or two small bone which do not articulate with skeleton.

The digit in ruminant

The digits in dog:

The digits have three phalanges except the first digit consists of two phalanges and very short .Third and fourth digits are the