Elbow Anatomy and Physical Examination

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GROSS ANATOMY

- Osteology: The 3 bones that comprise the elbow joint (distal humerus, proximal ulna, and proximal radius) allow it to function as a trochoginglymus joint, providing both flexion/extension as well as pronation-supination.
  - Distal humerus: transitions from the shaft to the medial and lateral columns, which support the articular surface (Figure 1-1)
    - Lateral column
      - Lateral supracondylar ridge: attachment of brachioradialis (BR) and extensor carpi radialis longus anteriorly and triceps posteriorly (Figure 1-2)
      - Avascular zone between BR and triceps marks the lateral column for surgical exposure
    - Lateral epicondyle: attachment of common extensor-supinator tendon and lateral ulnar collateral ligament (LUCL) posteriorly
      - Tendinitis of extensor carpi brachialis brevis (deep in common extensor mass) is cause of lateral epicondyritis\(^1\) (Figure 1-3)
      - Lateral epicondyle debridement: must stay anterior to LUCL to avoid creating posterior rotatory instability
  - Medial column
    - The medial supracondylar ridge is more narrow than lateral, thus more prone to fracture
    - The medial epicondyle is more prominent than the lateral, serves as attachment of medial ulnar collateral ligament and flexor-pronator mass