

Finger Dislocations

CCSU Sports Medicine

Symposium
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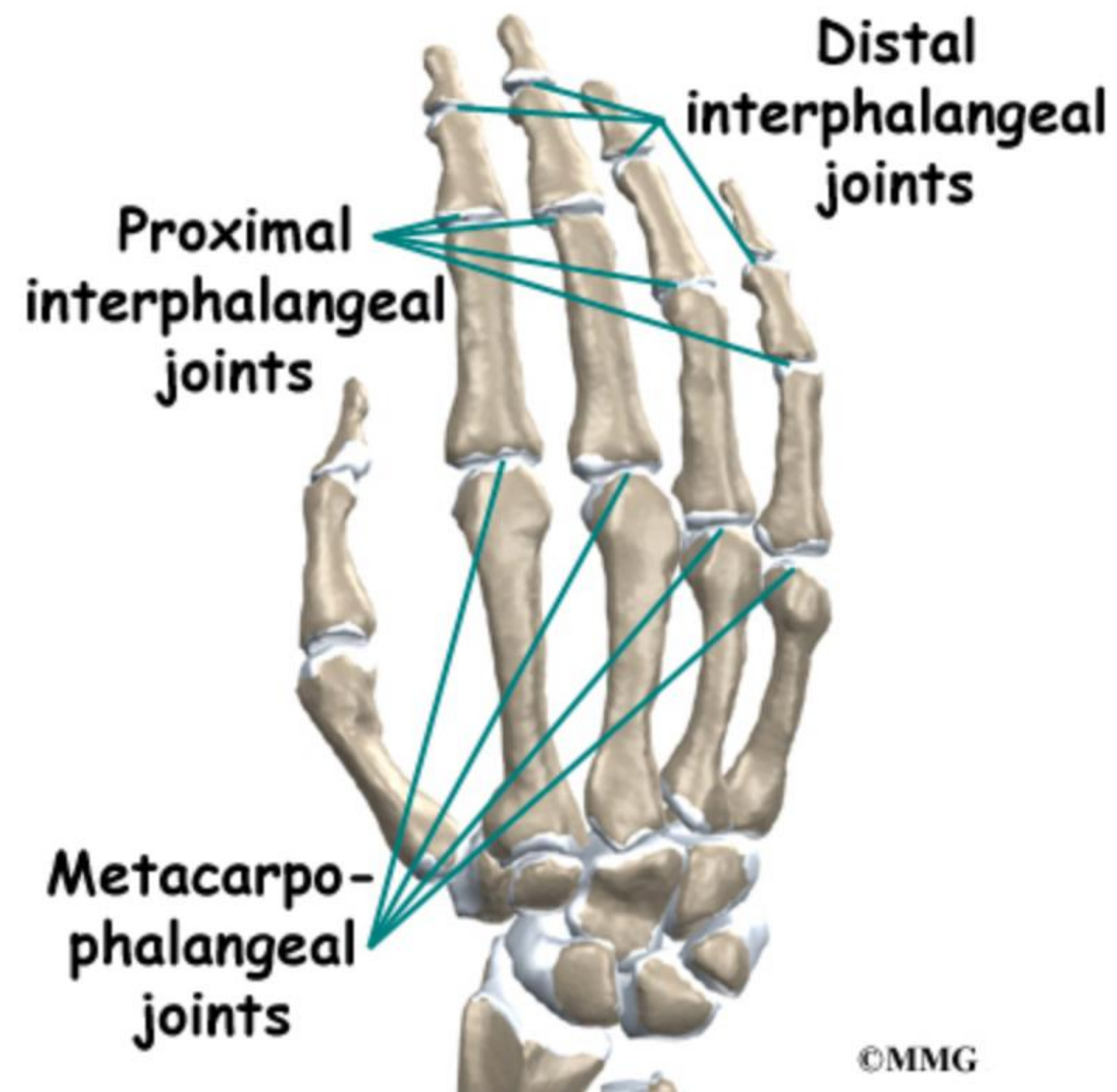
Conflicts of Interest

None

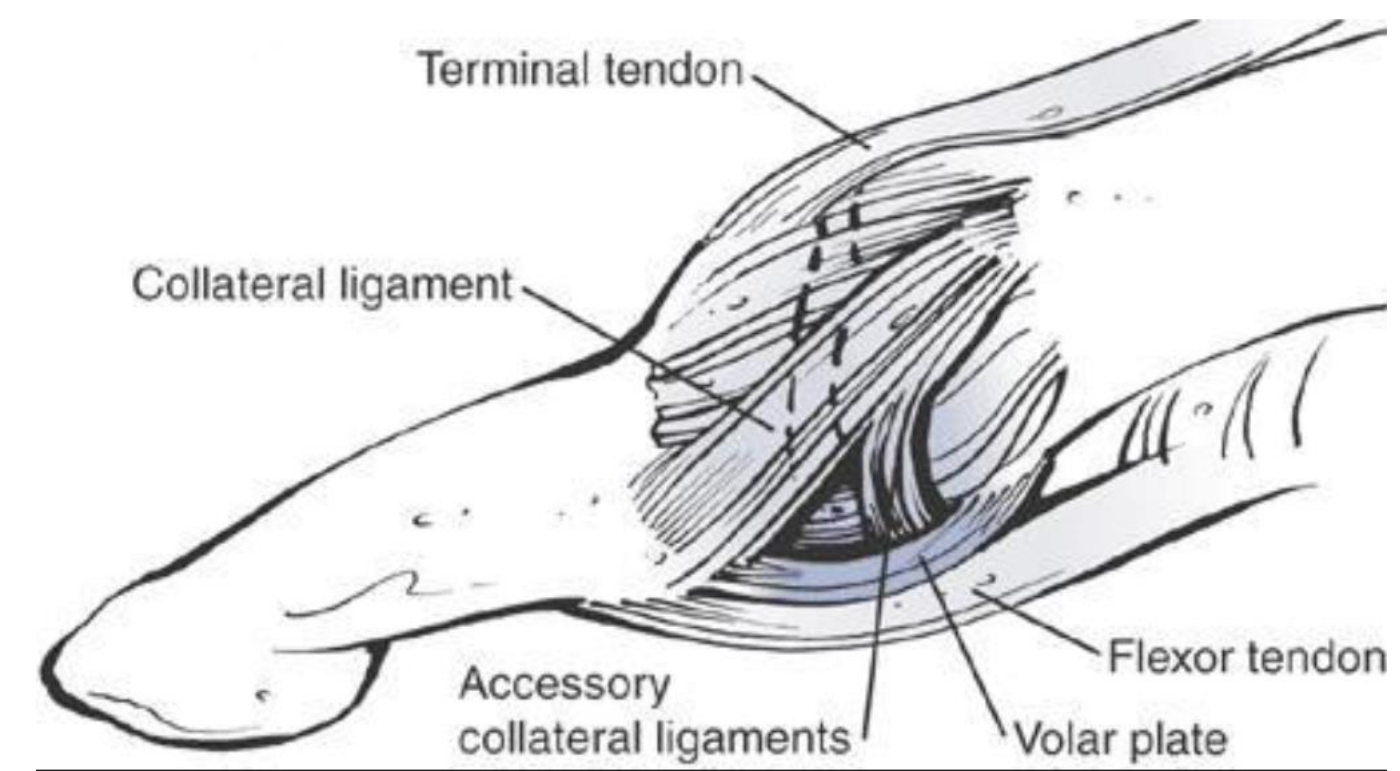
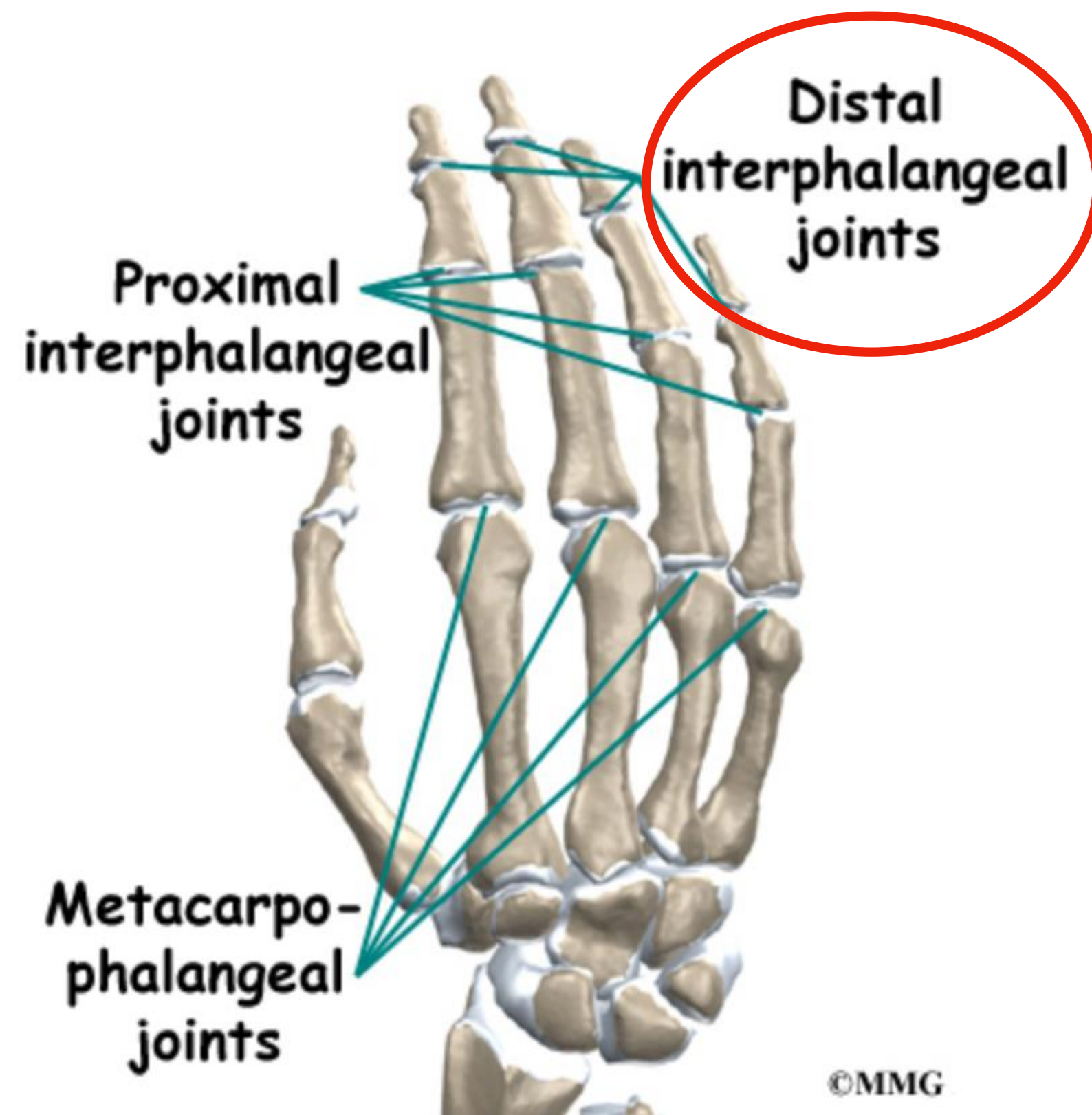
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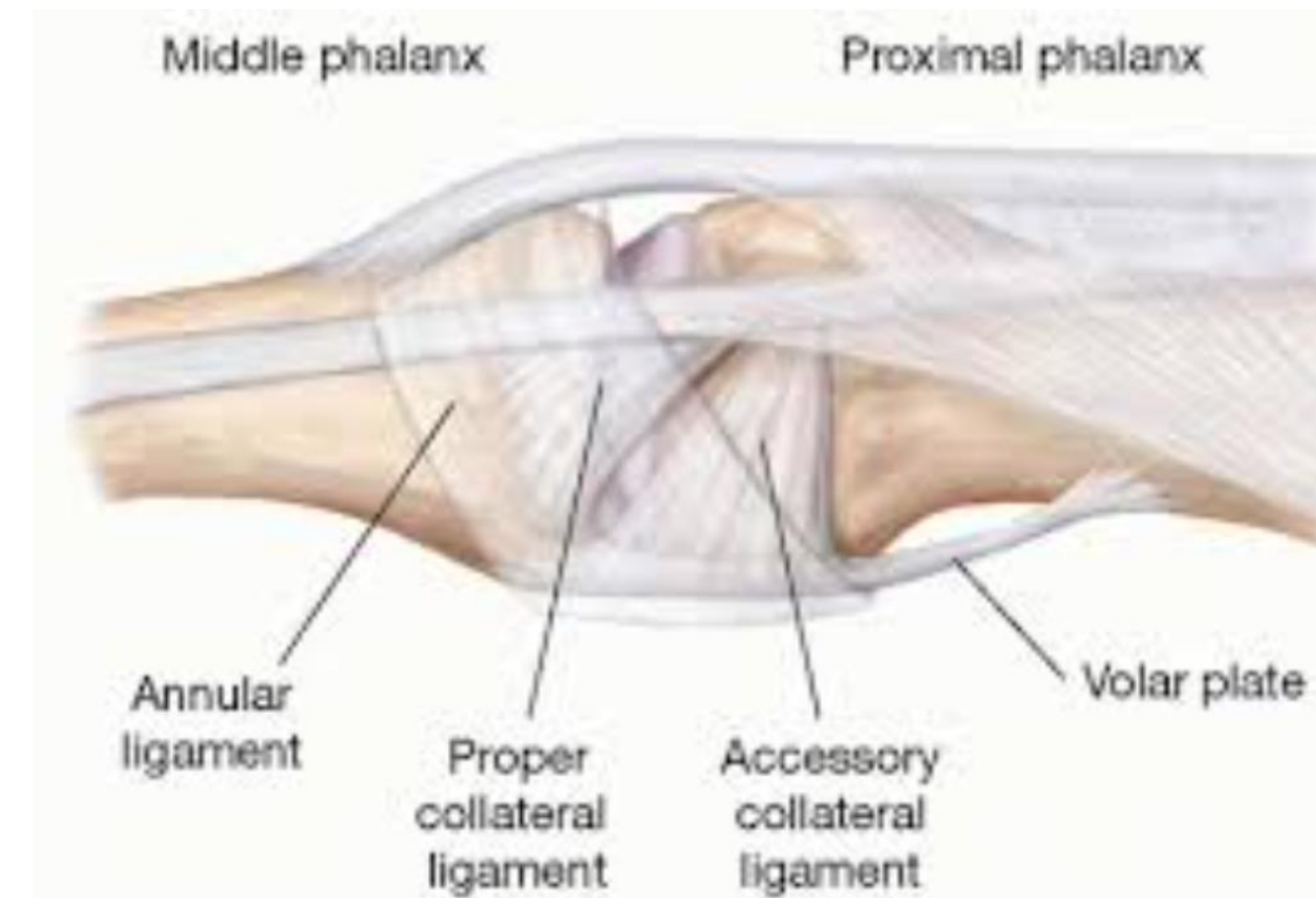
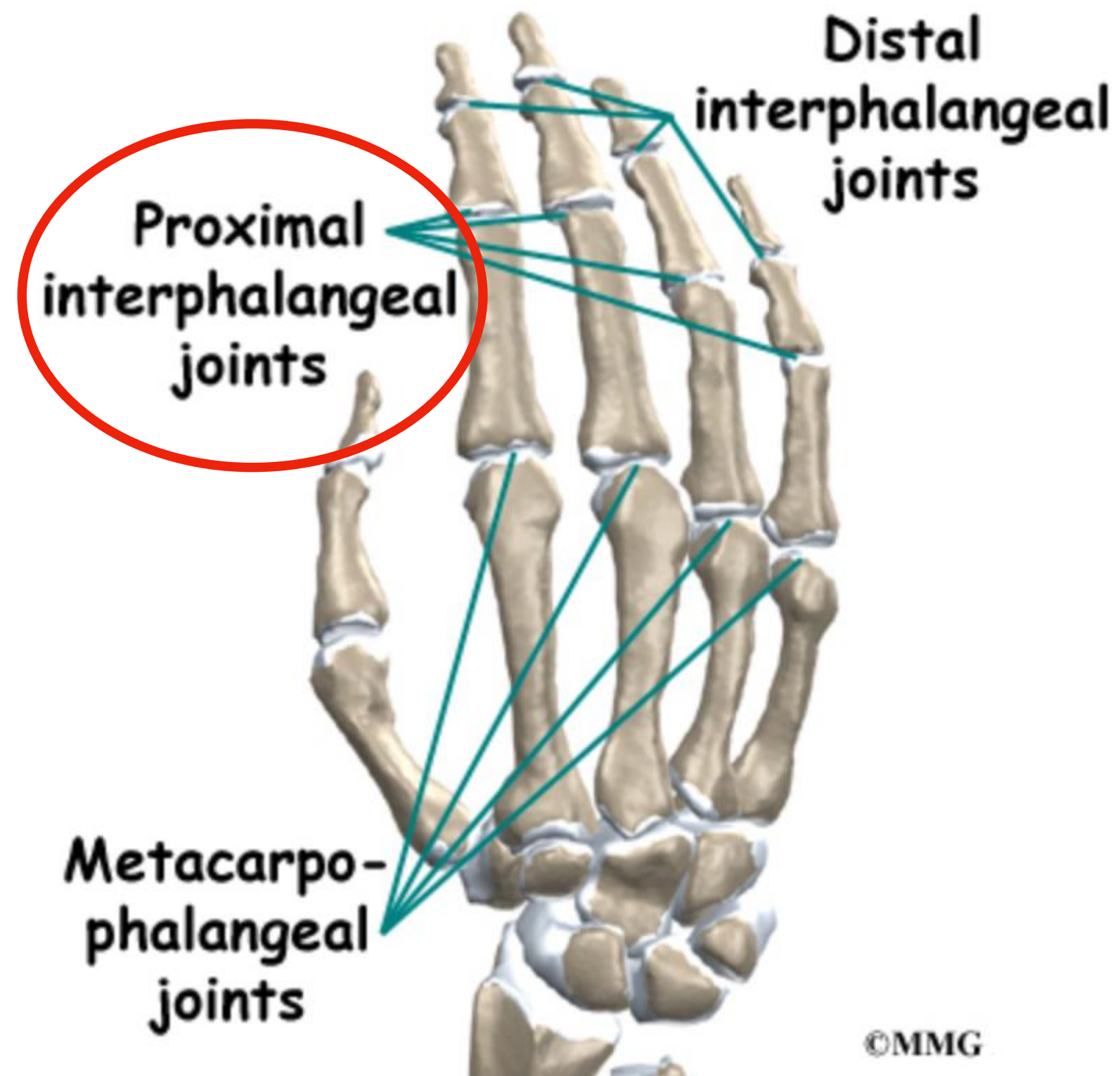
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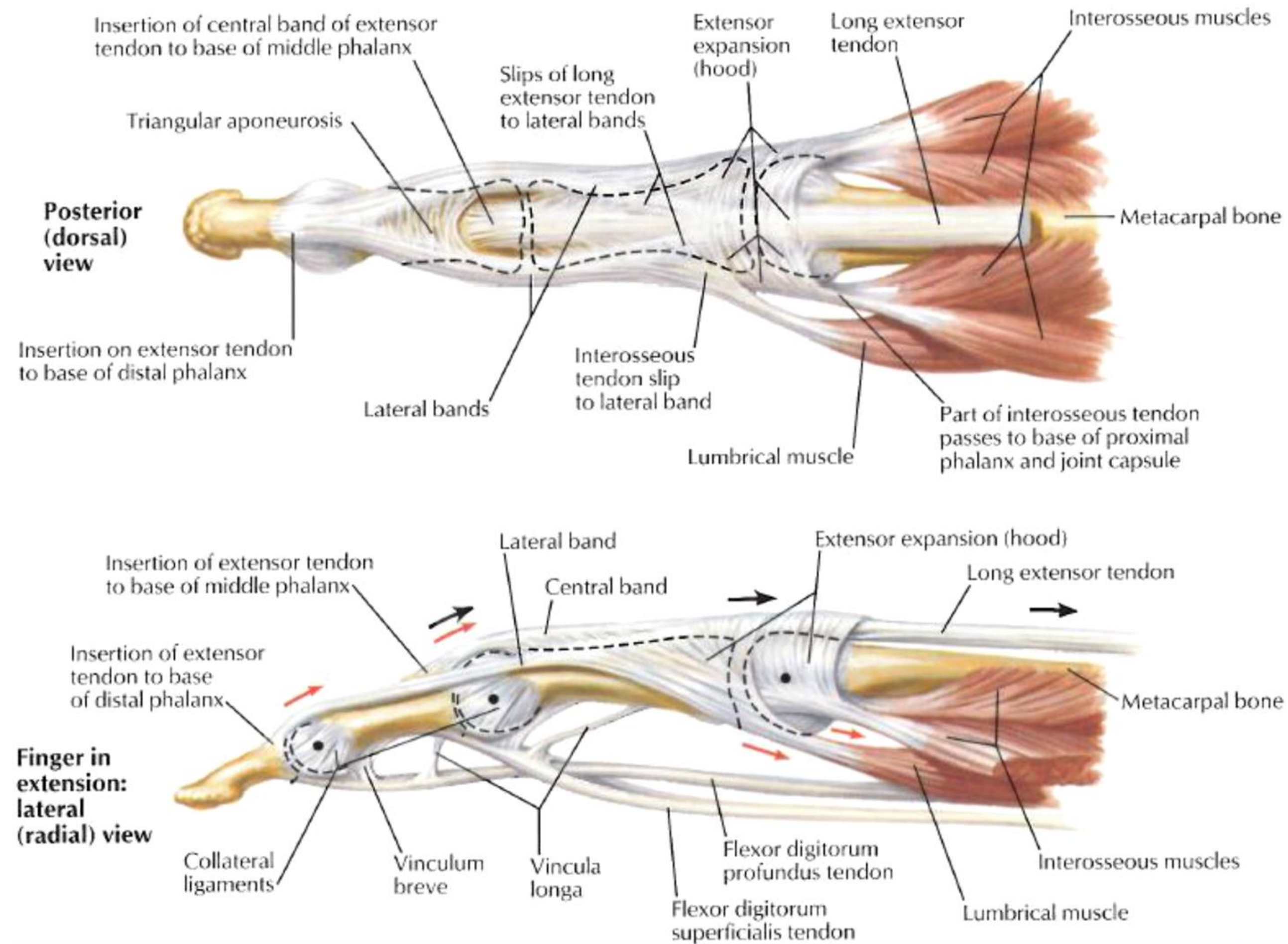
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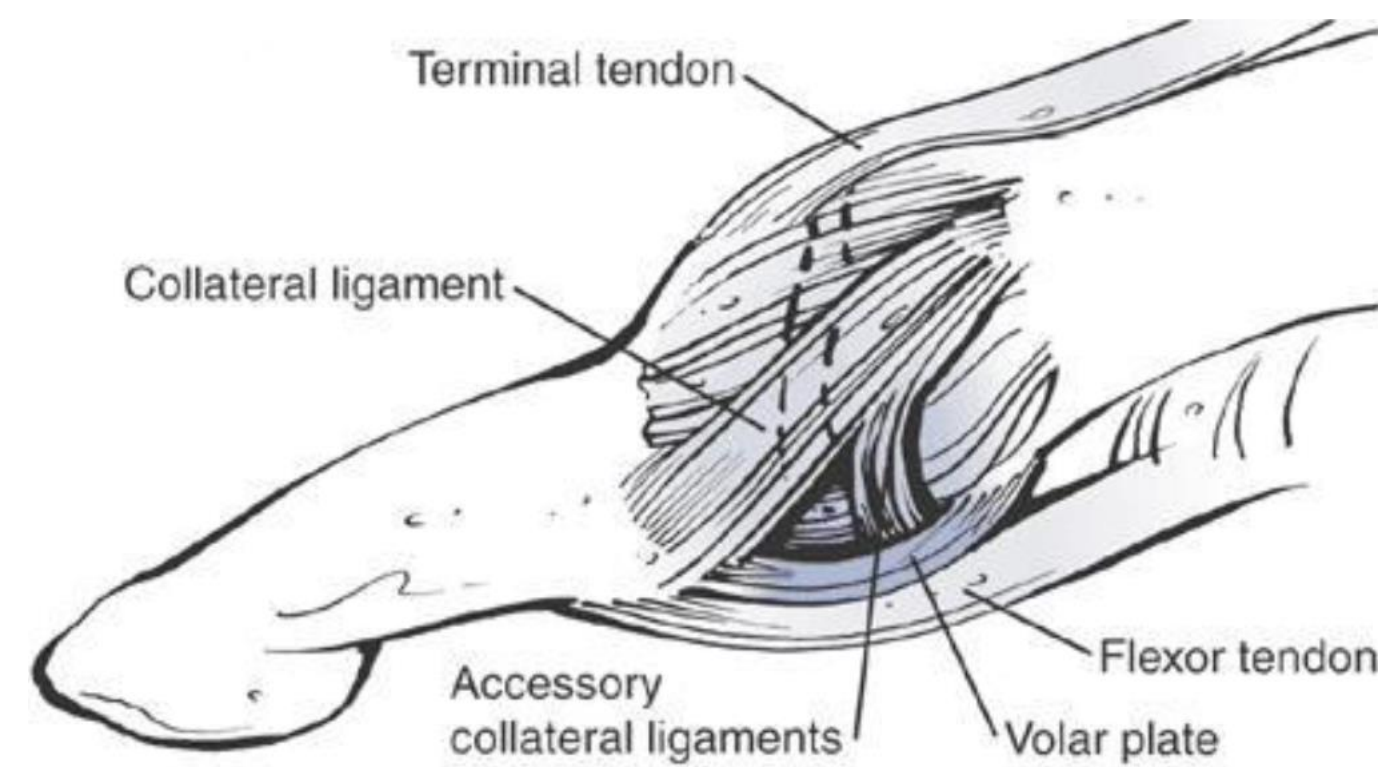
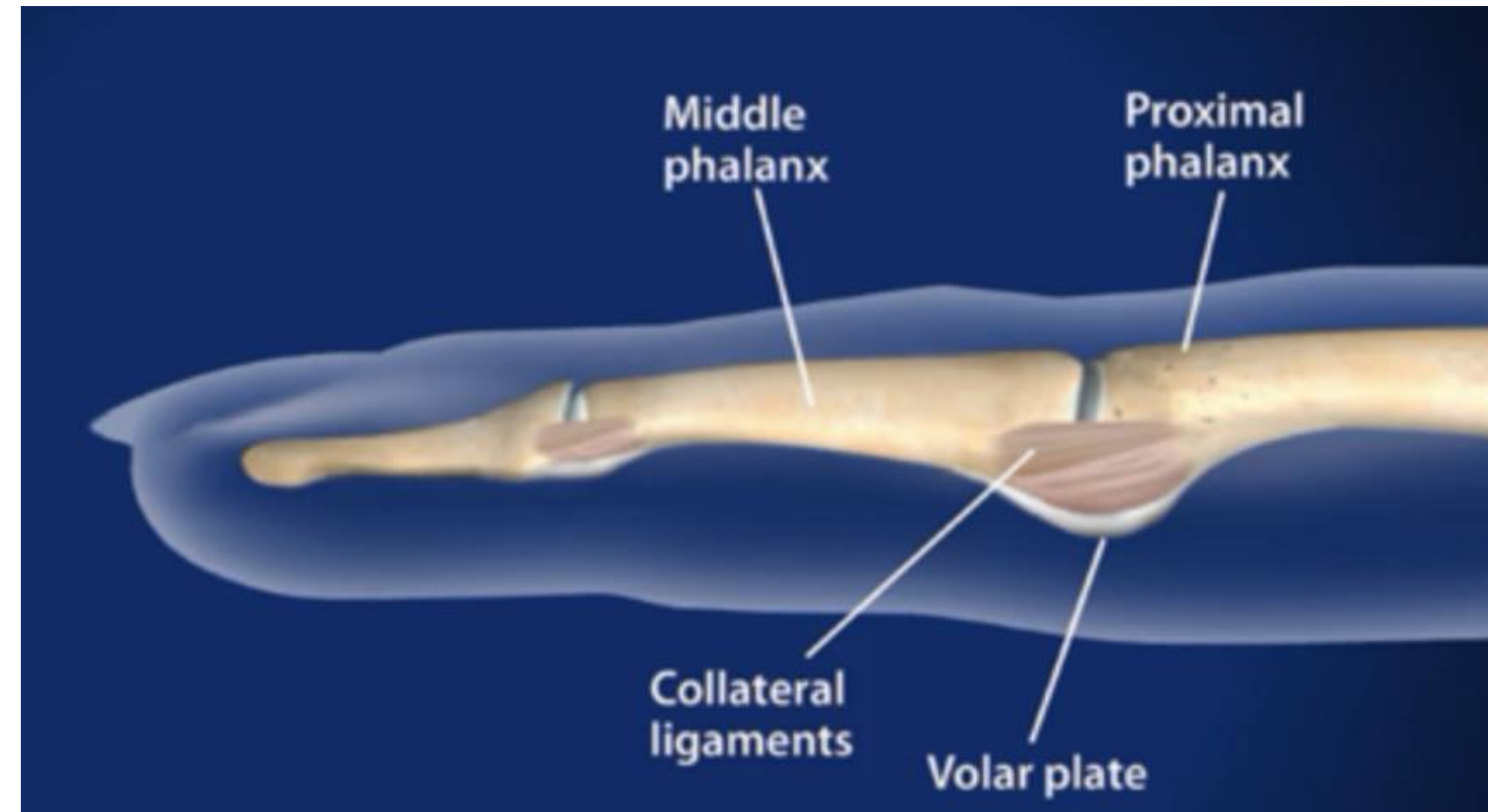
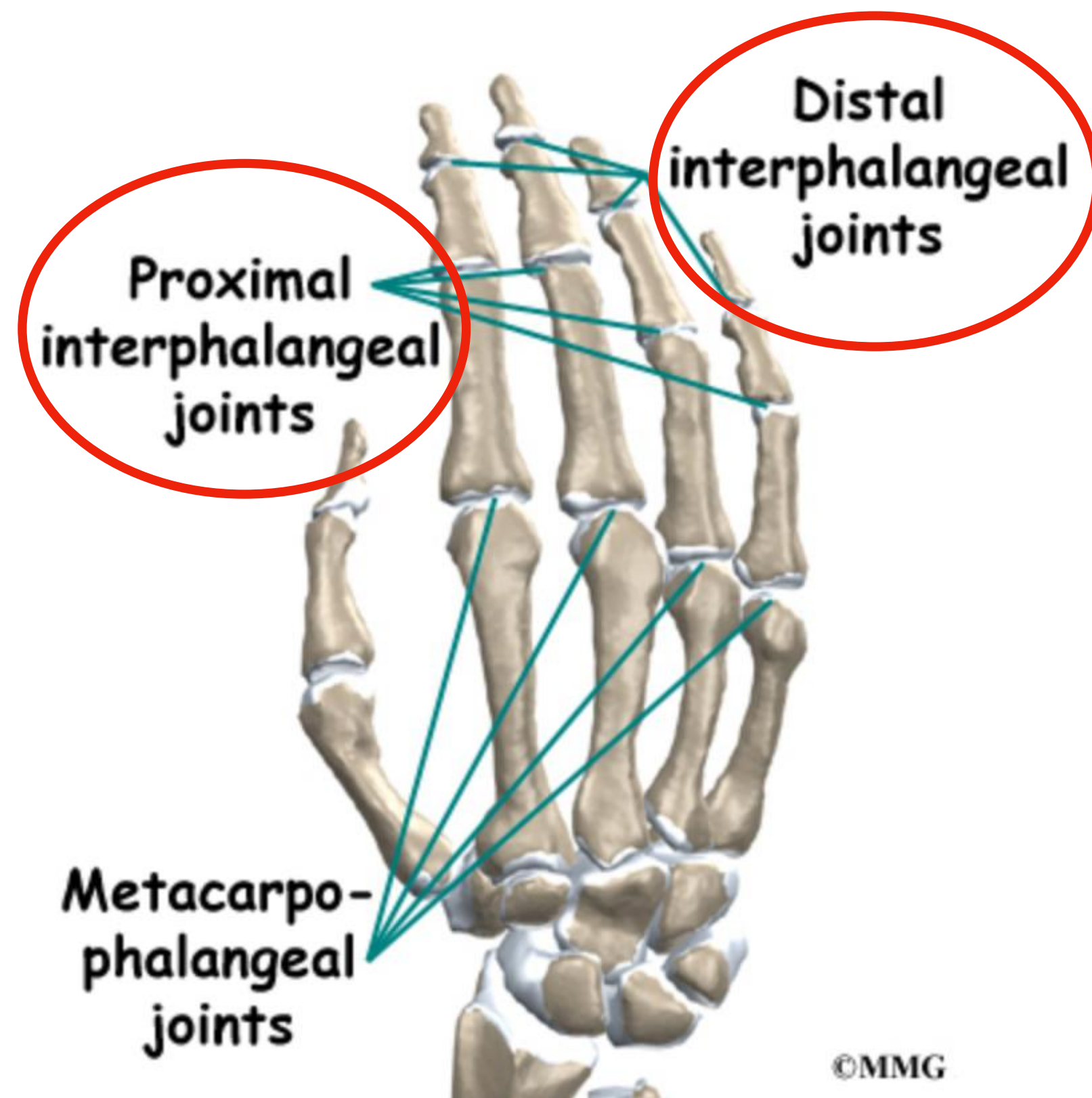
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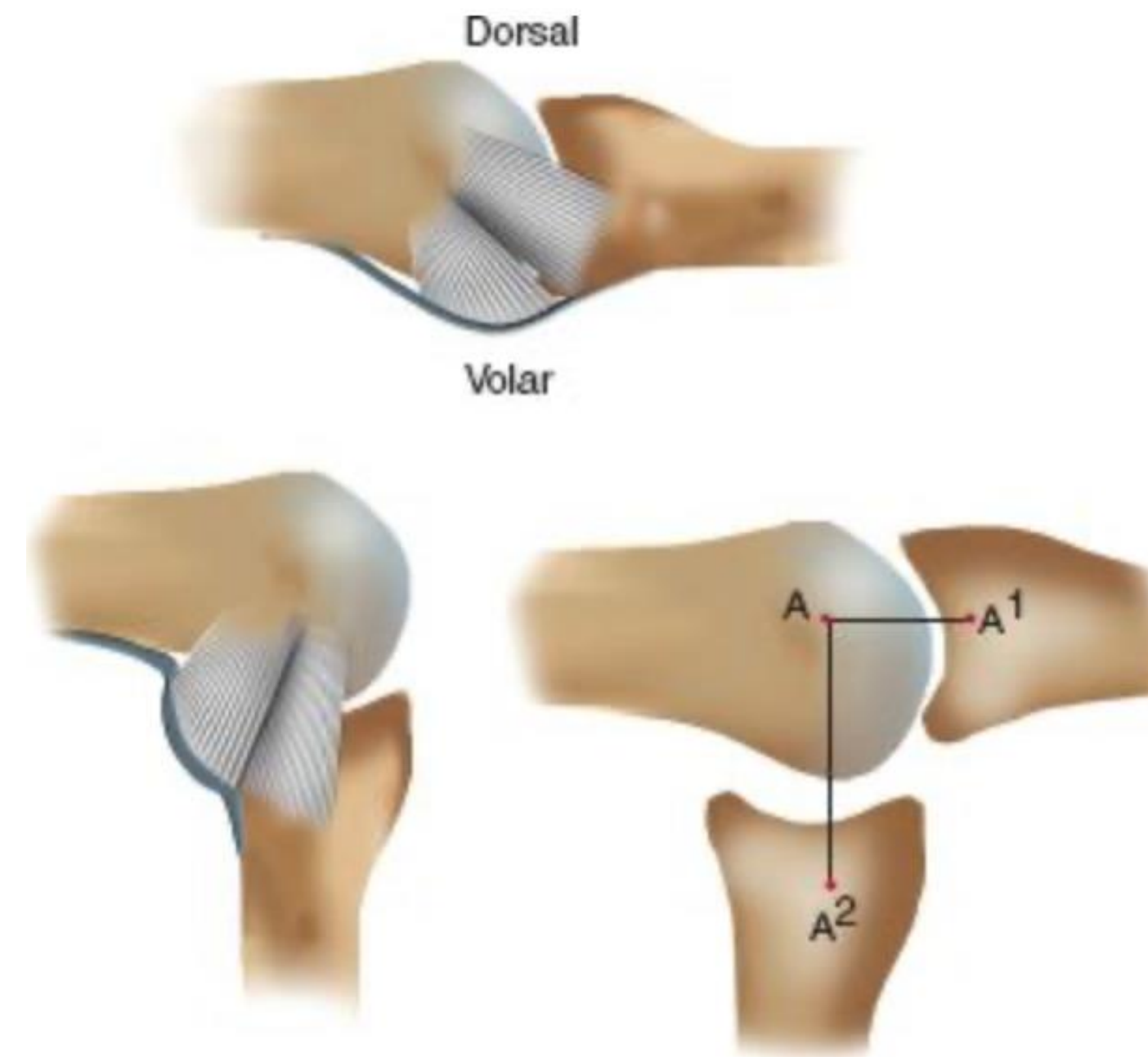
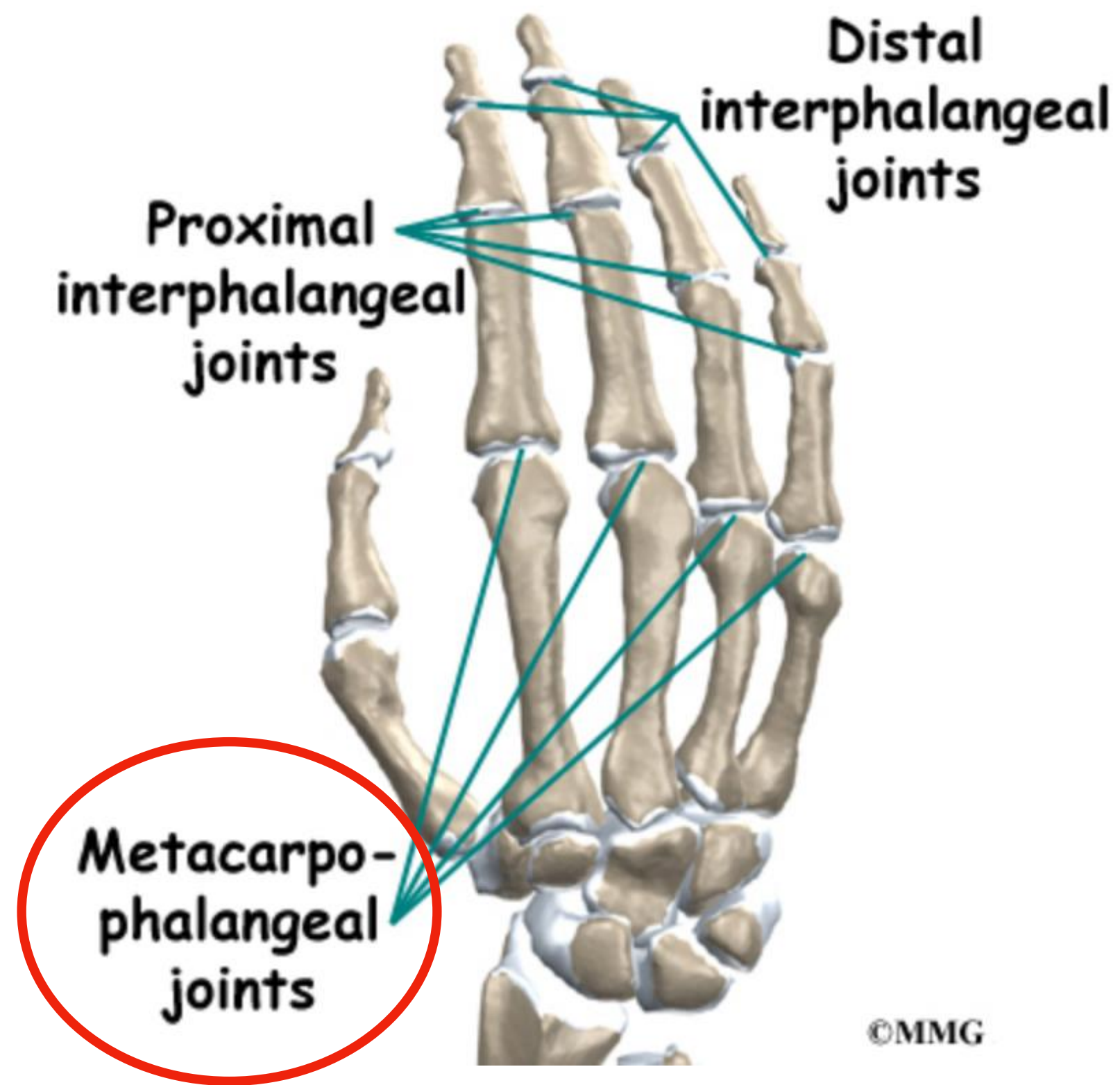
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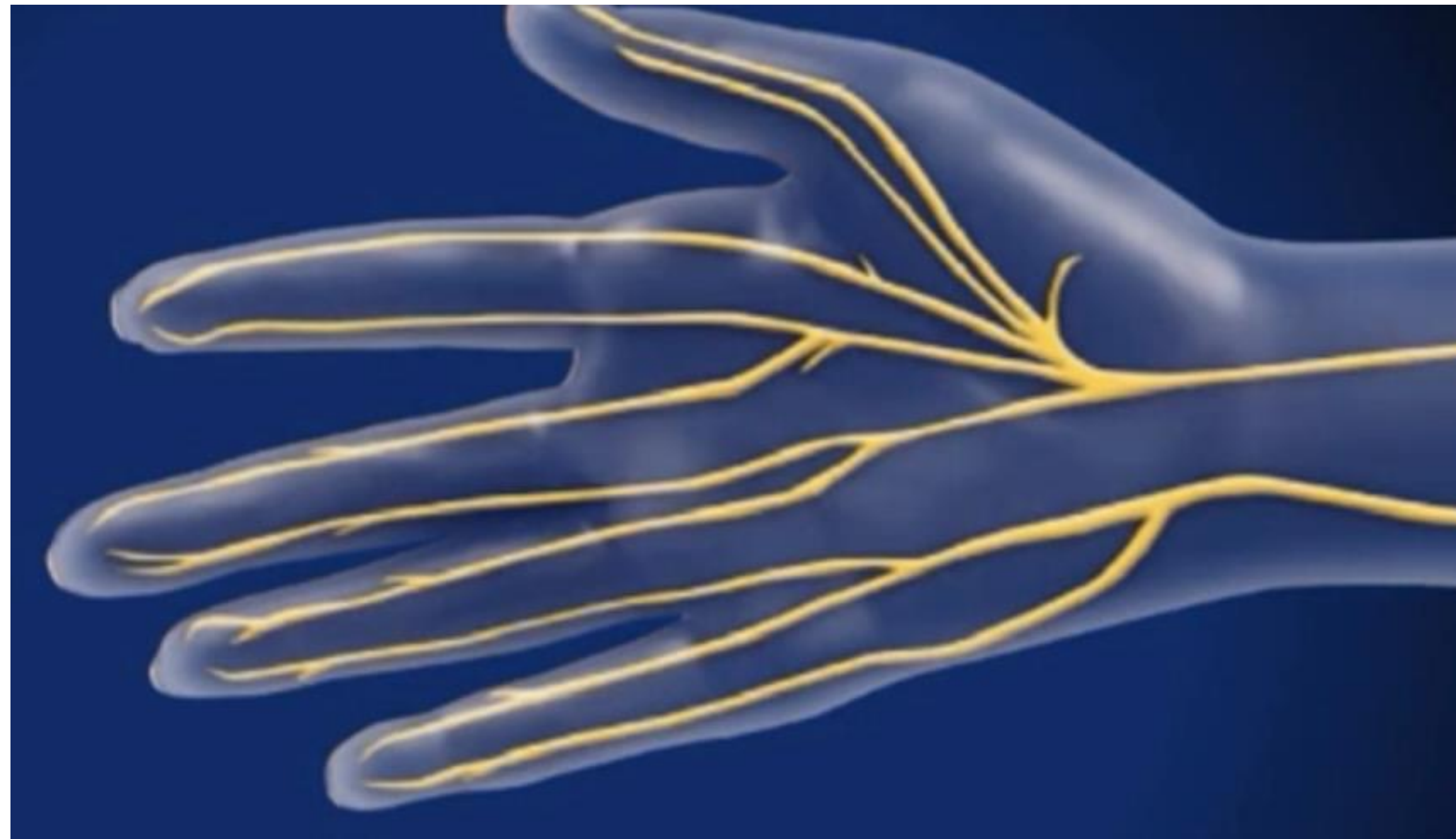
Anatomy



Anatomy



Anatomy- Digital Nerves



Classification

Dorsal



Volar



Lateral



History

- **Mechanism**
 - **PIP**
 - **Axial load and hyperextension**
 - **MCP**
 - **Hyperextension**
- **Prior finger injuries or dislocations?**

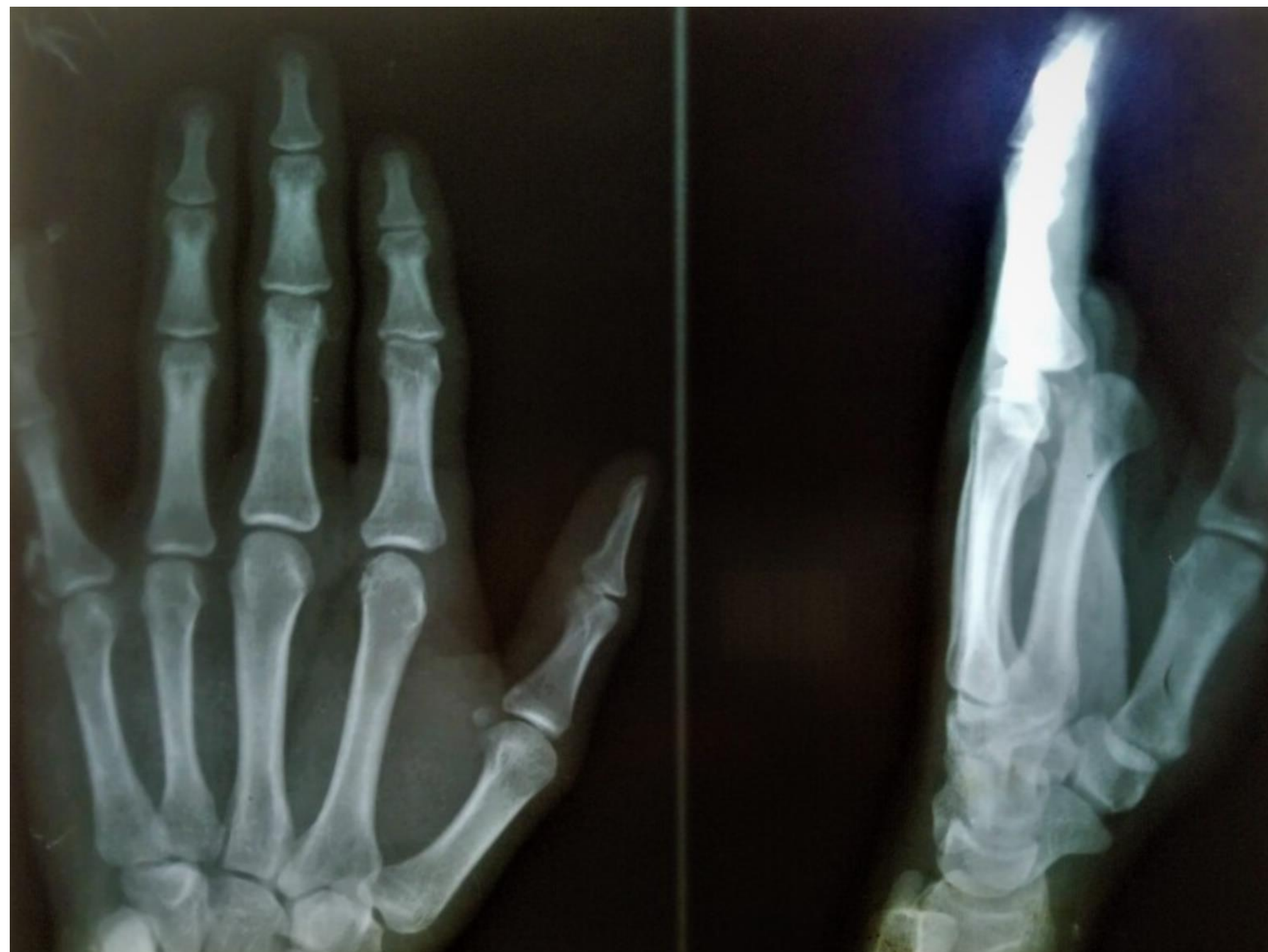


Examination

- Skin
 - Lacerations, tenting, puckering, swelling
- Deformity
 - Malrotation, scissoring
- Range of Motion
- Sensory and vascular exam
 - Light touch, cap refill
- Stability



Imaging

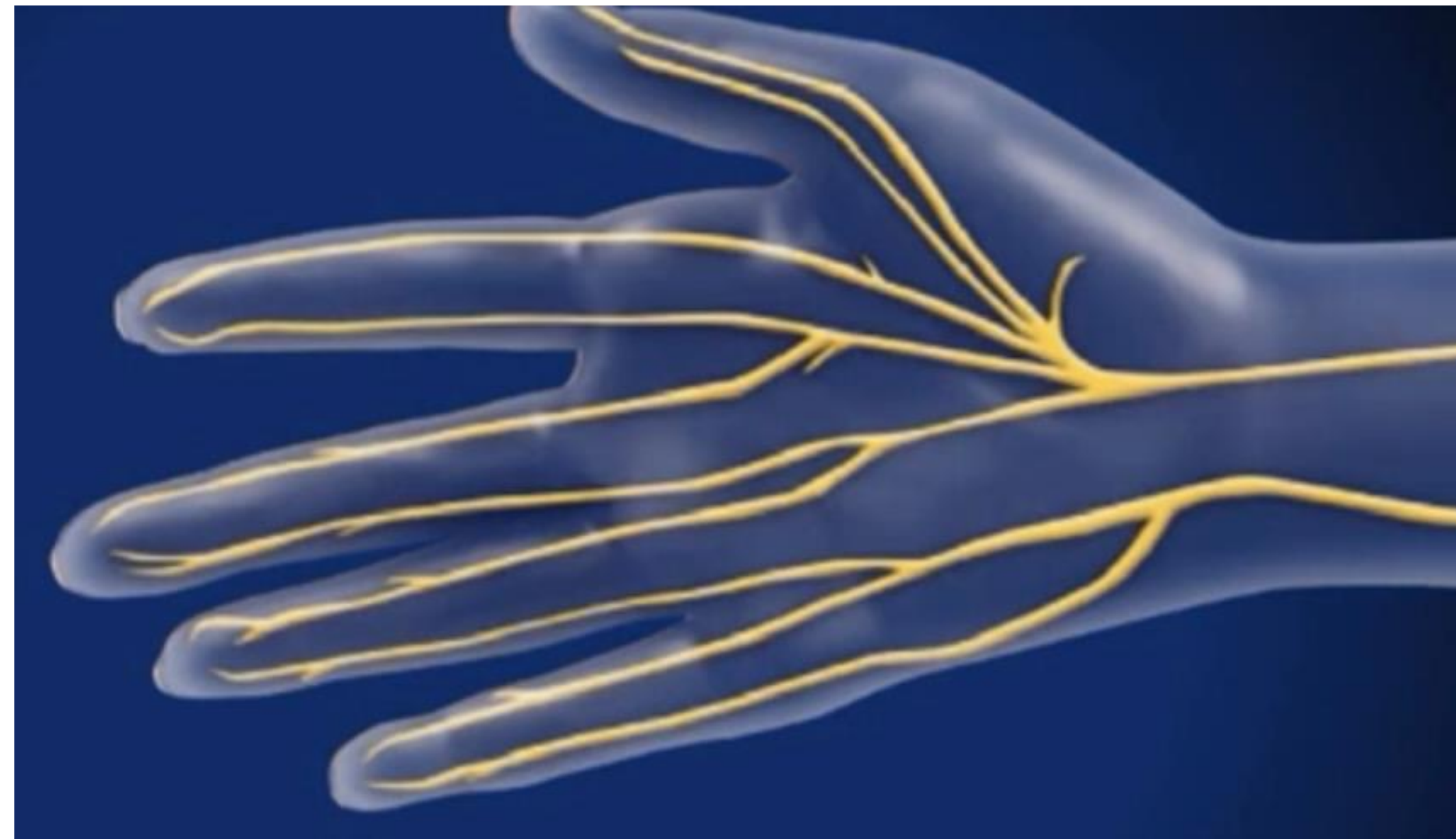


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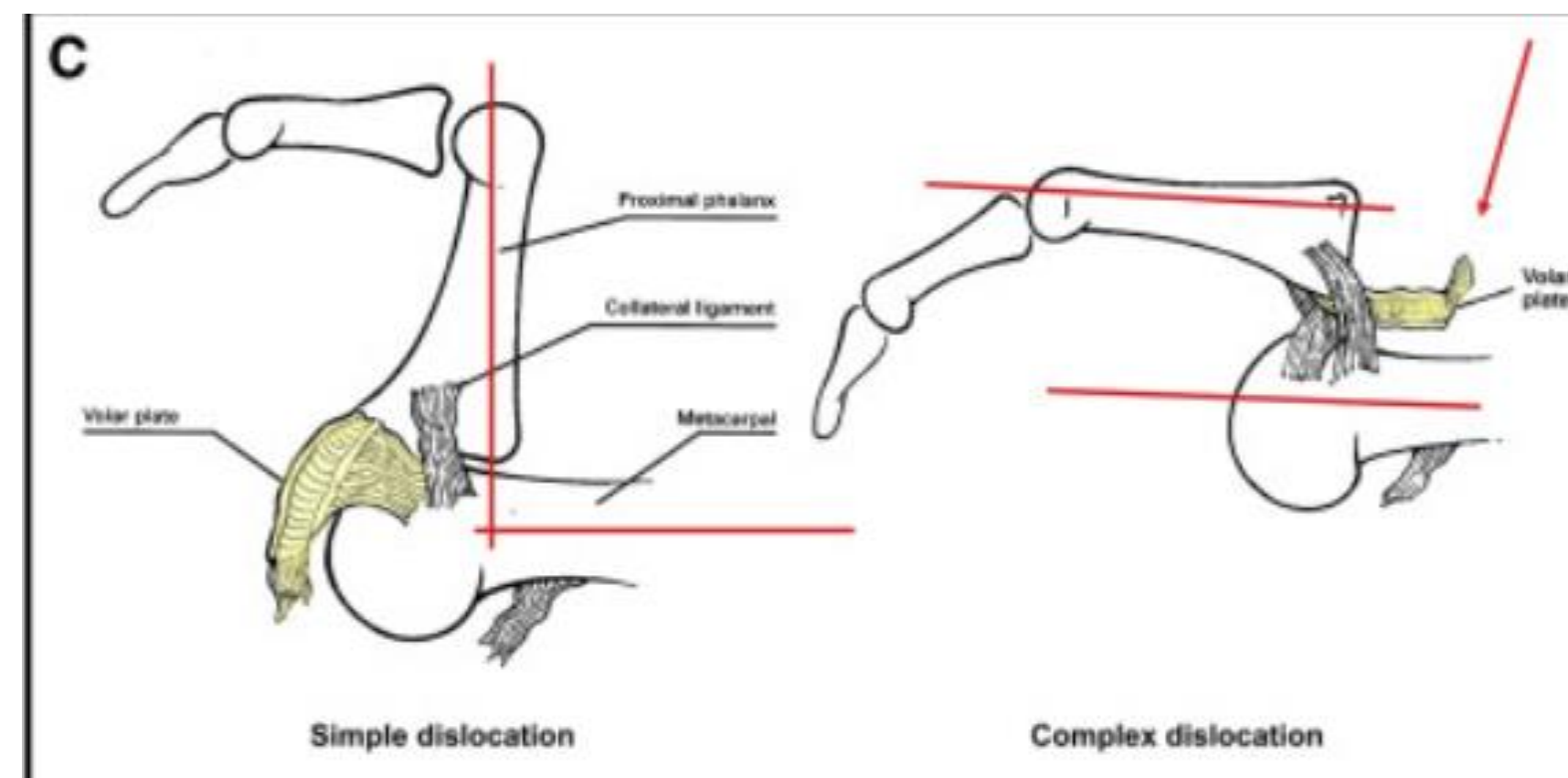
Treatment- Digital Block

- 6-8 cc of lidocaine without epinephrine
 - Volar and Dorsal



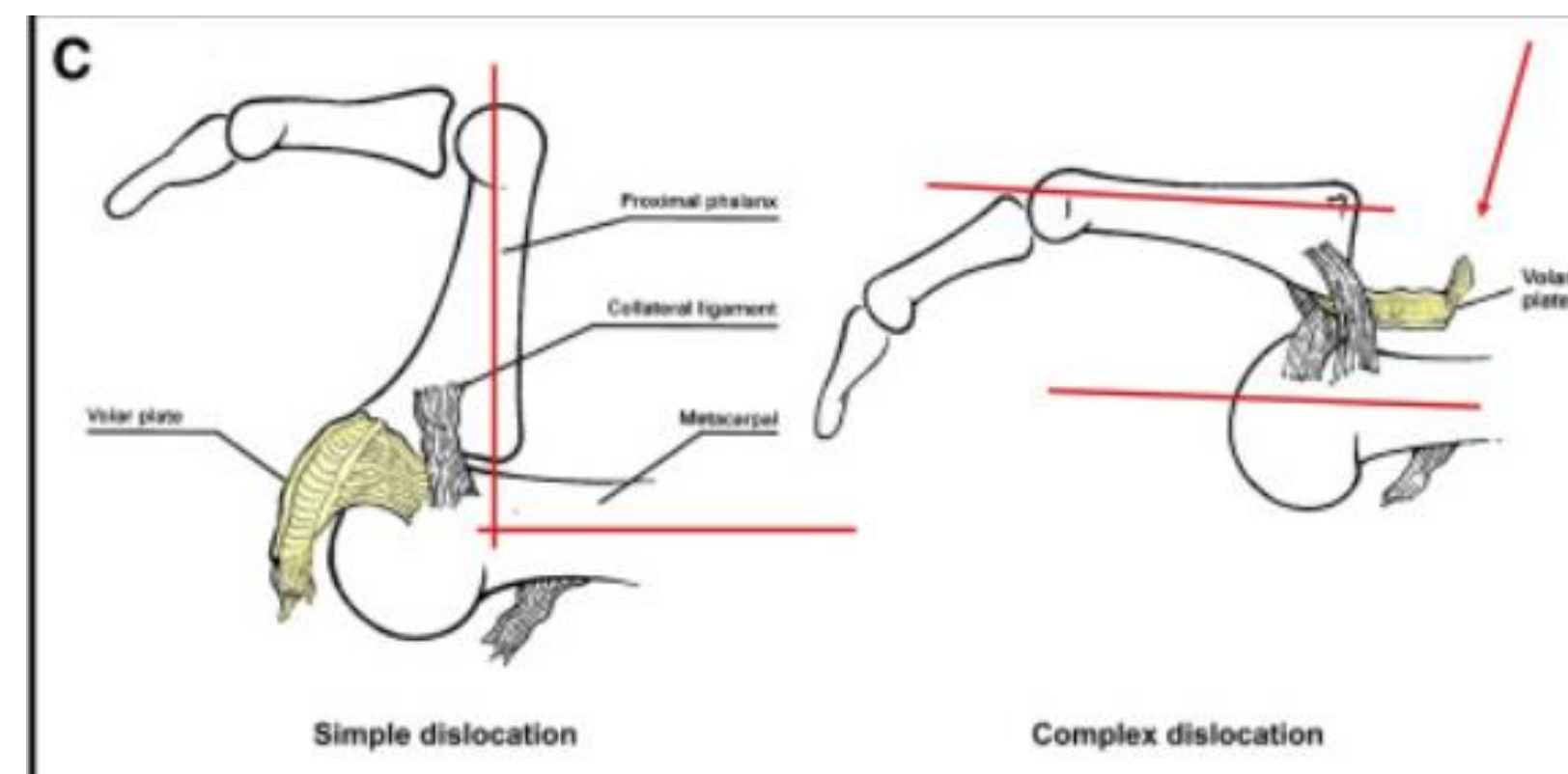
MCP Dislocations

- Most Frequently
 - Dorsal
 - Index finger
- **Simple**
 - MCP hyperextended, PIP flexed
- **Complex**
 - Volar plate interposed
 - Bayonet apposition



MCP Dislocations

- Most Frequently:
 - Dorsal
 - Index finger
- Complex
- **Beware**
 - Bayonet apposition
 - volar skin puckering/dimpling
 - Joint space widening on X-ray



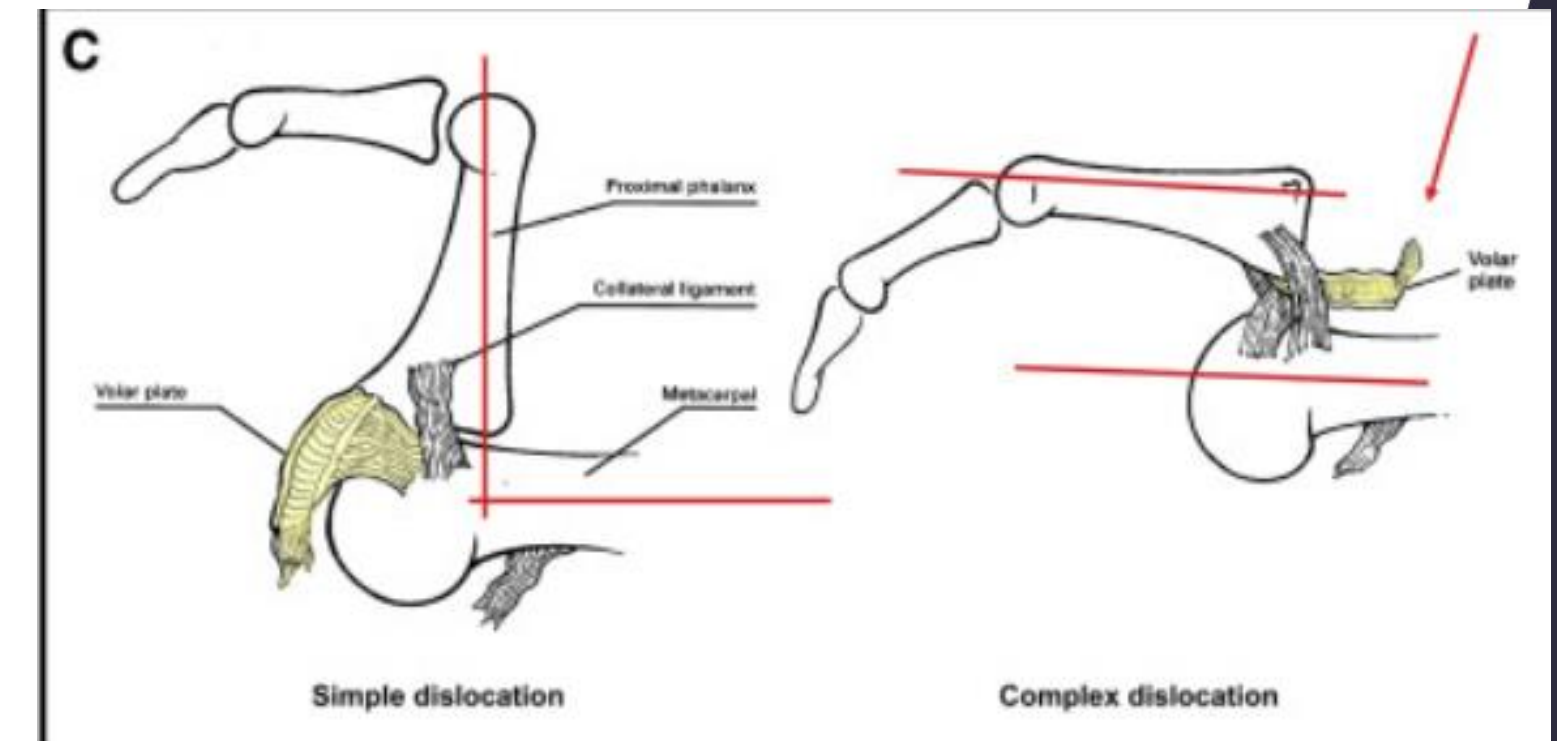
MCP Dislocations

- Volar
 - Very Rare
 - Dorsal skin depression at base of proximal phalanx



Treatment- MCP Dislocations

- *Avoid Traction!*
 - *May turn a simple dislocation into a complex dislocation*
1. Dorsal to volar pressure over proximal phalanx
 2. Wrist flexion
- Avoid multiple attempts
 - Complex dislocation

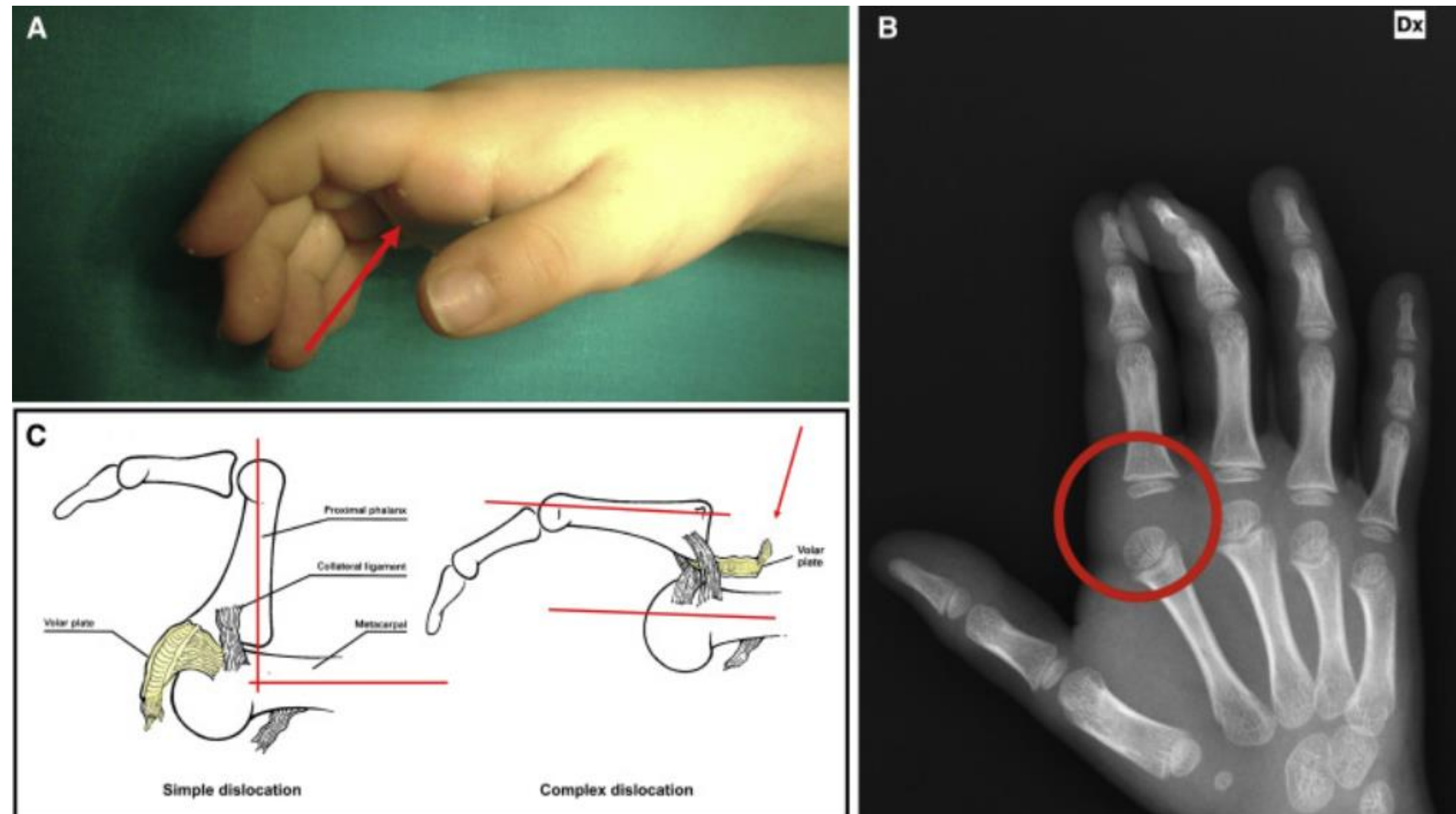


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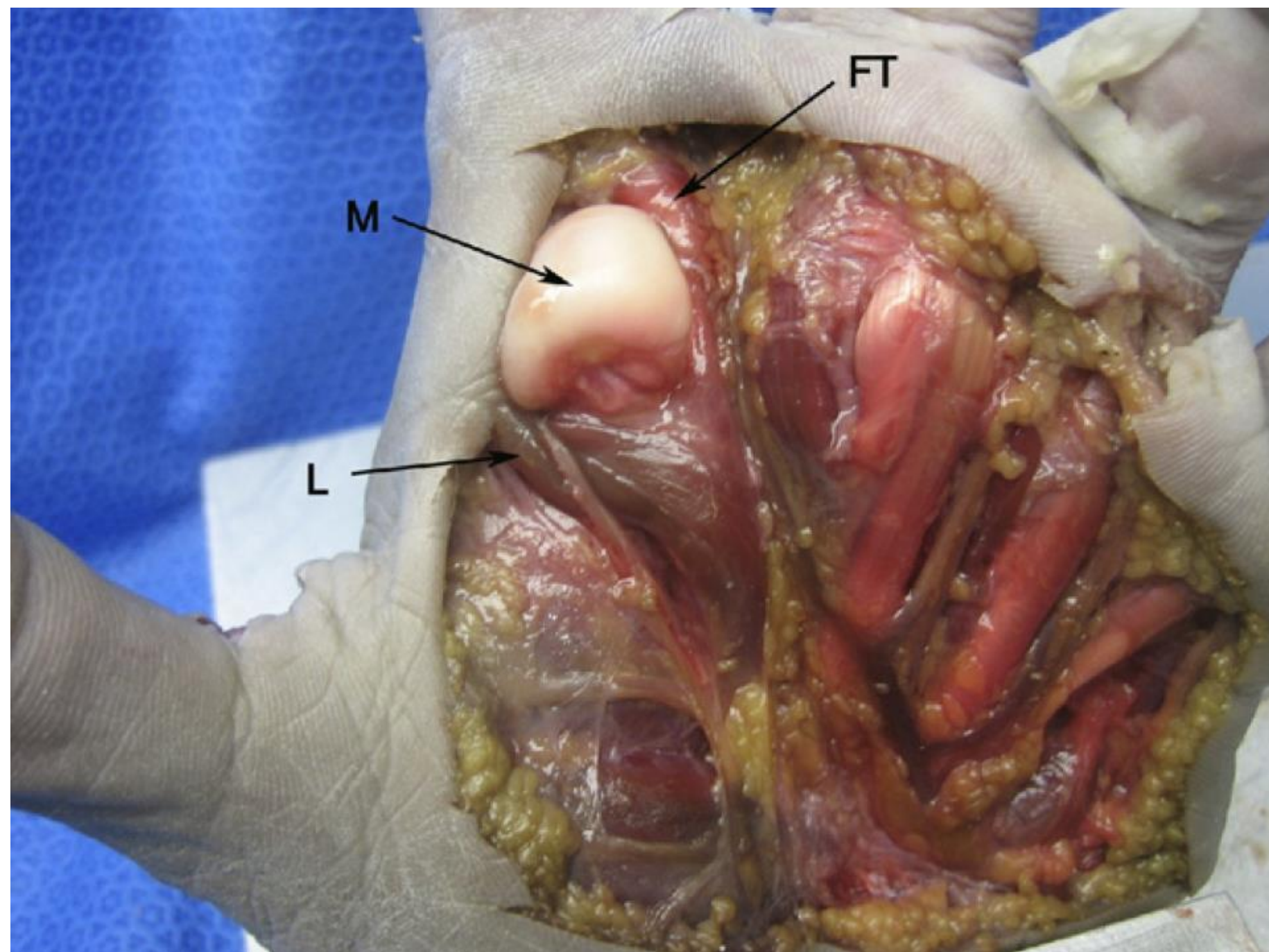
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Treatment- MCP Dislocations

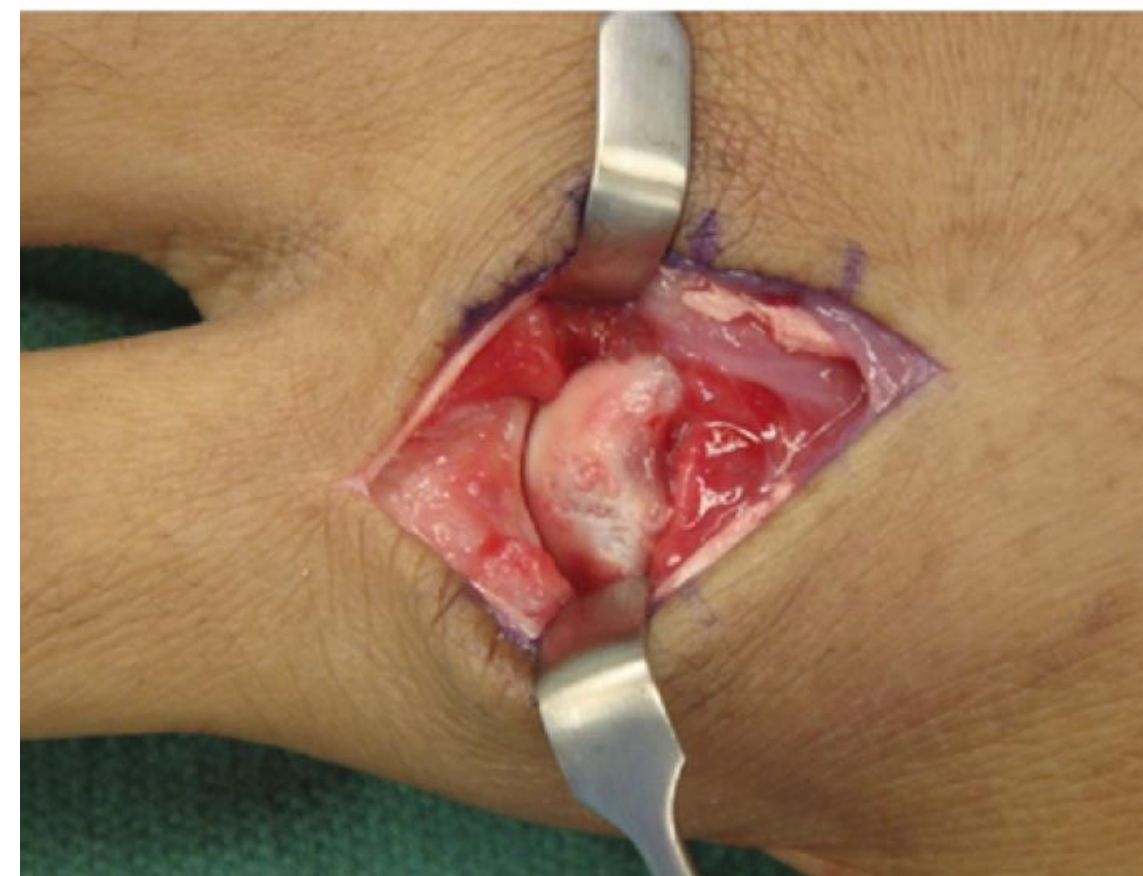
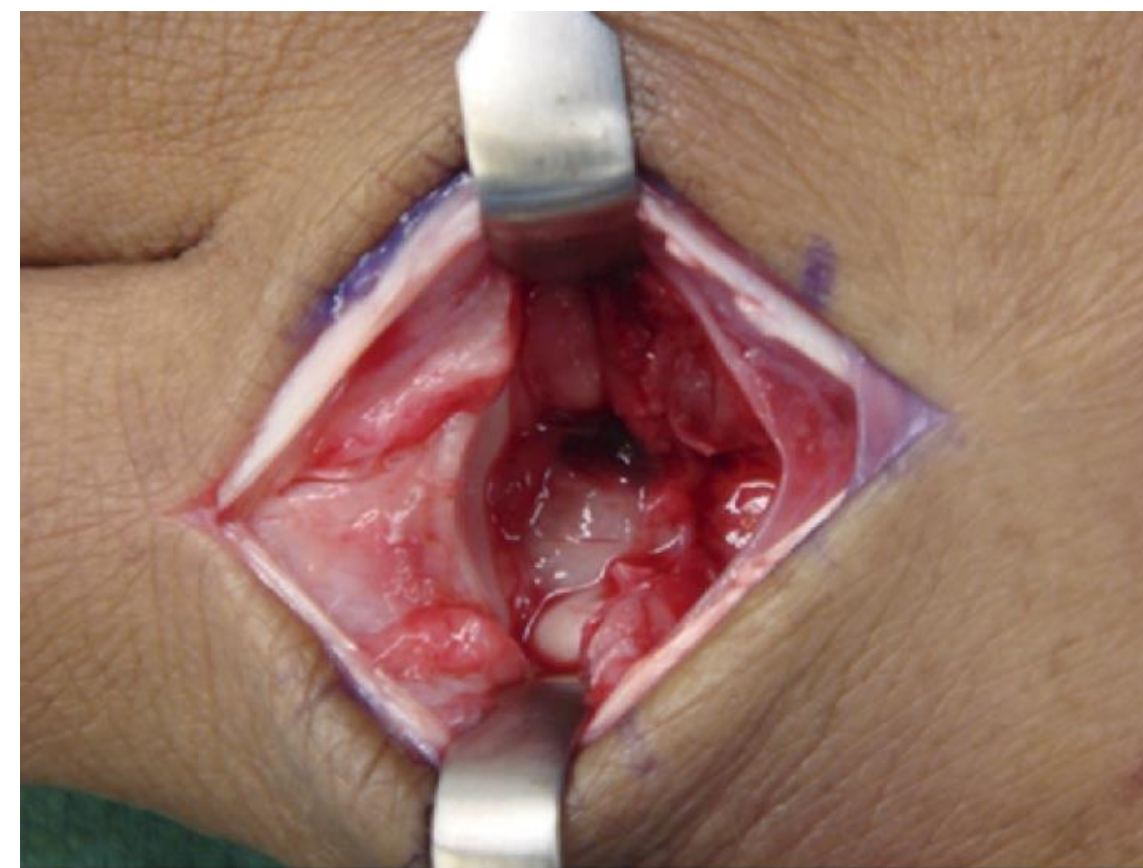
- Complex



Treatment- Complex MCP Dislocations

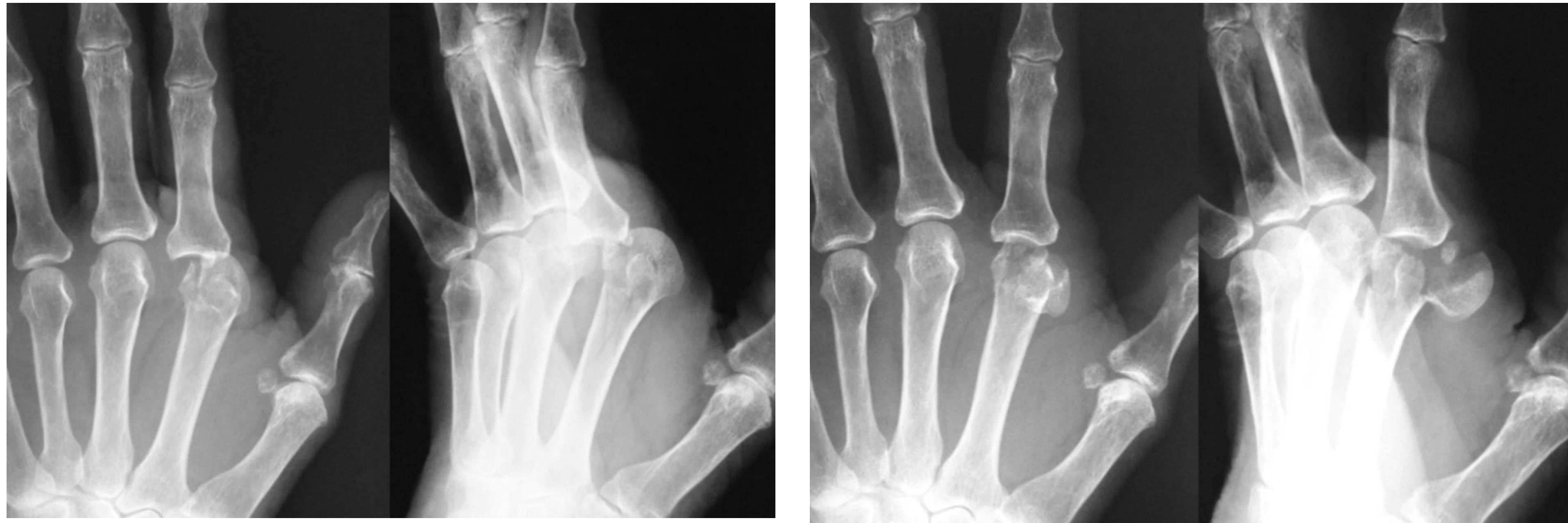


Volar



Dorsal

Treatment- Complex MCP Dislocations



Iatrogenic displacement of the metacarpal head of the index finger while attempting closed reduction of a complex dorsal metacarpophalangeal joint dislocation

Masahiko Tohyama ^{1 2}, Ken Iida ², Sadahiko Konishi ²

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Treatment- MCP Dislocations

- Dorsal Blocking Orthosis (DBO) at 45 degrees
- PIP and DIP free for ROM, active MCP flexion
- 4 weeks DBO
- Return to sport 6-8 weeks with buddy straps



PIP Dislocations

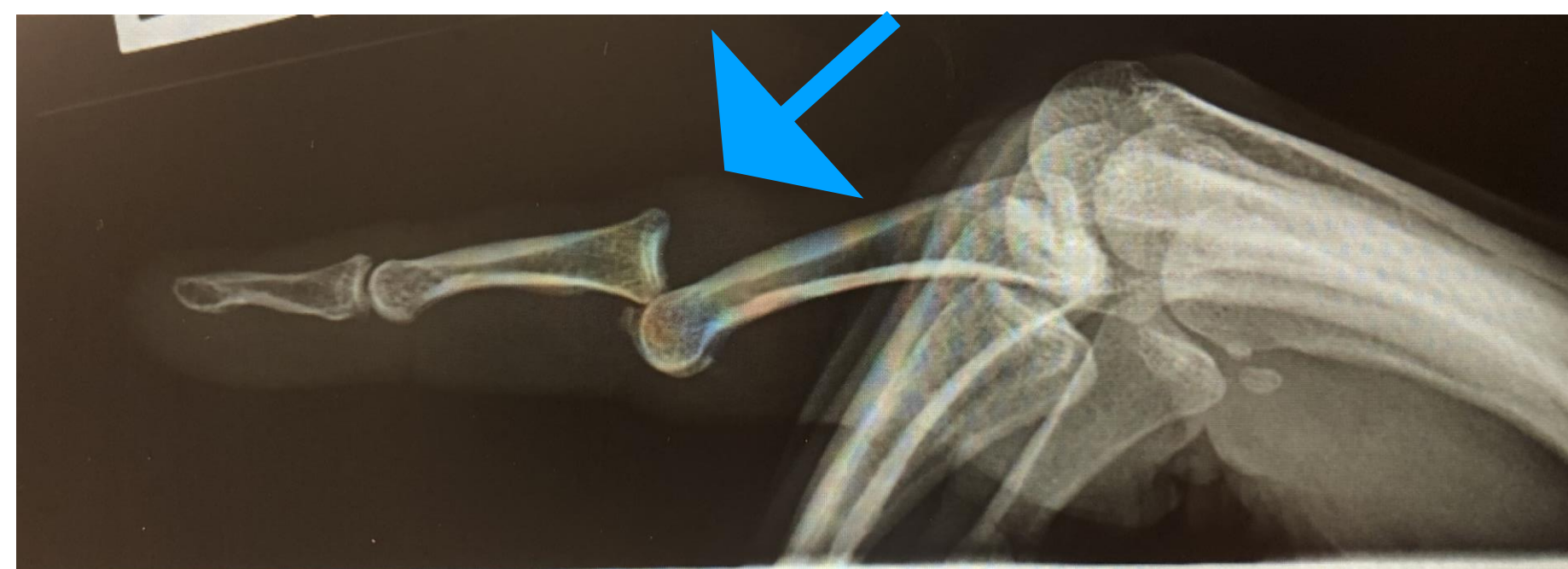
- More Common than MCP
 - Dorsal
 - Middle Finger
- Dorsal: PIP extended, DIP flexed
- Volar (rare)
 - Rotatory
- Lateral



Treatment- Dorsal PIP Dislocations

1. Slight extension
2. Longitudinal traction
3. Dorsal to volar pressure over the base of middle phalanx

- Typically a palpable reduction

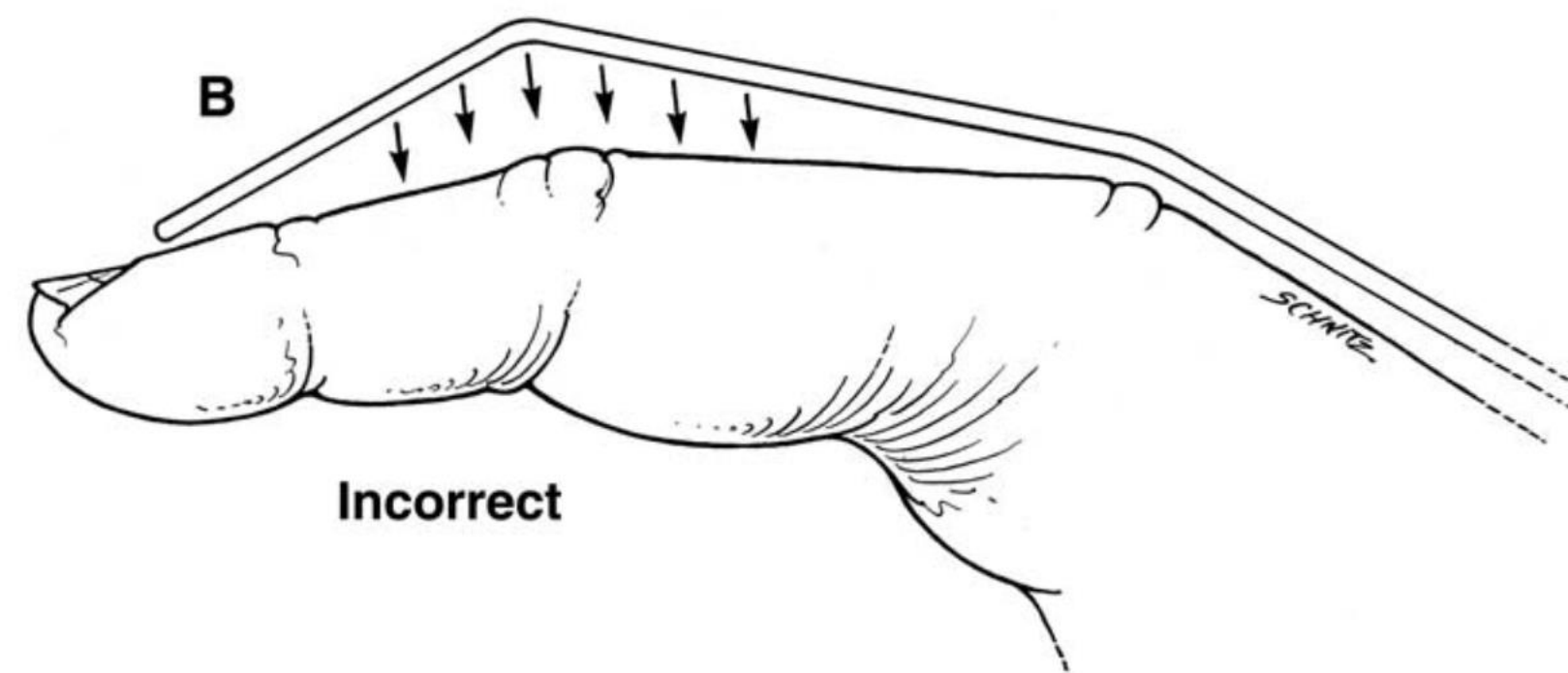
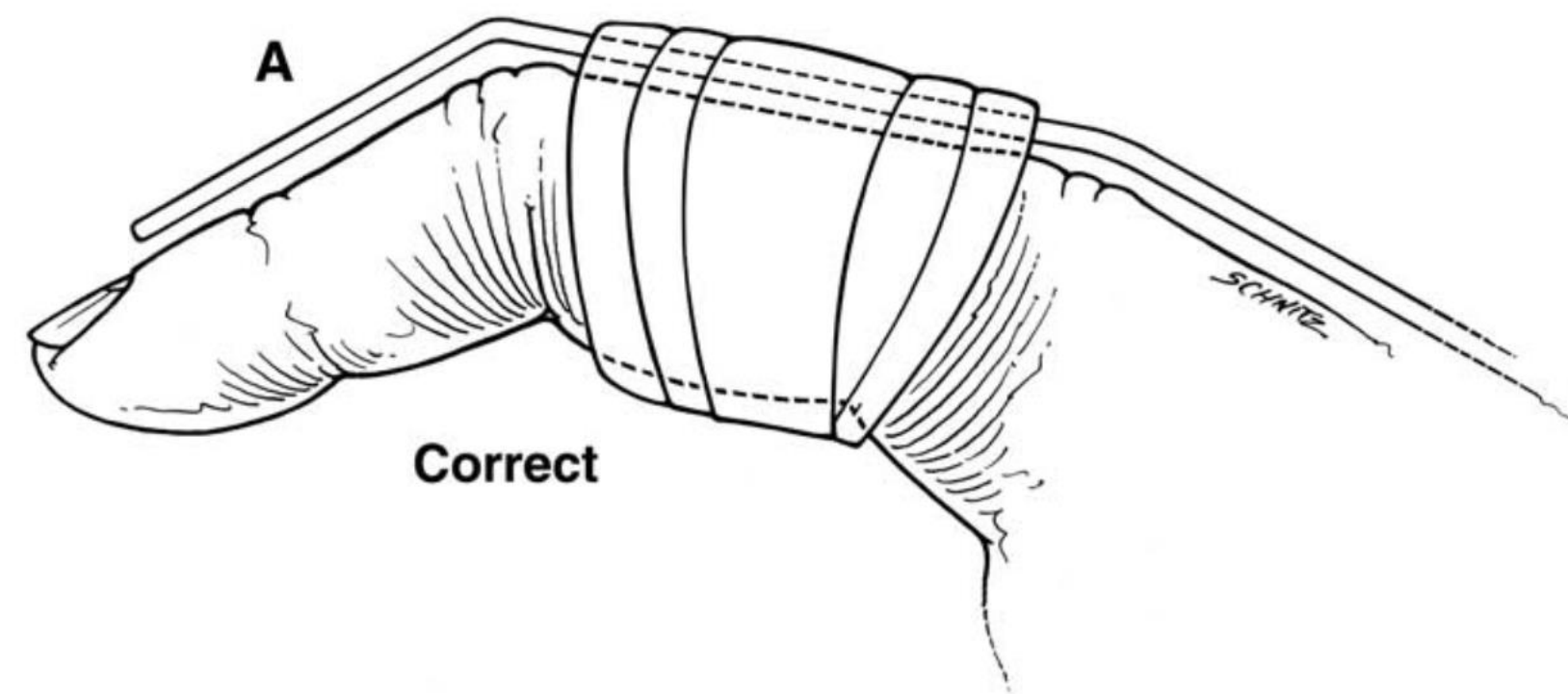


Treatment- Dorsal PIP Dislocations

- *Test stability post-reduction*
- Dorsal blocking splint
 - Volar plate usually injured, occasionally volar lip fracture
- X-rays
- Treatment depends on stability



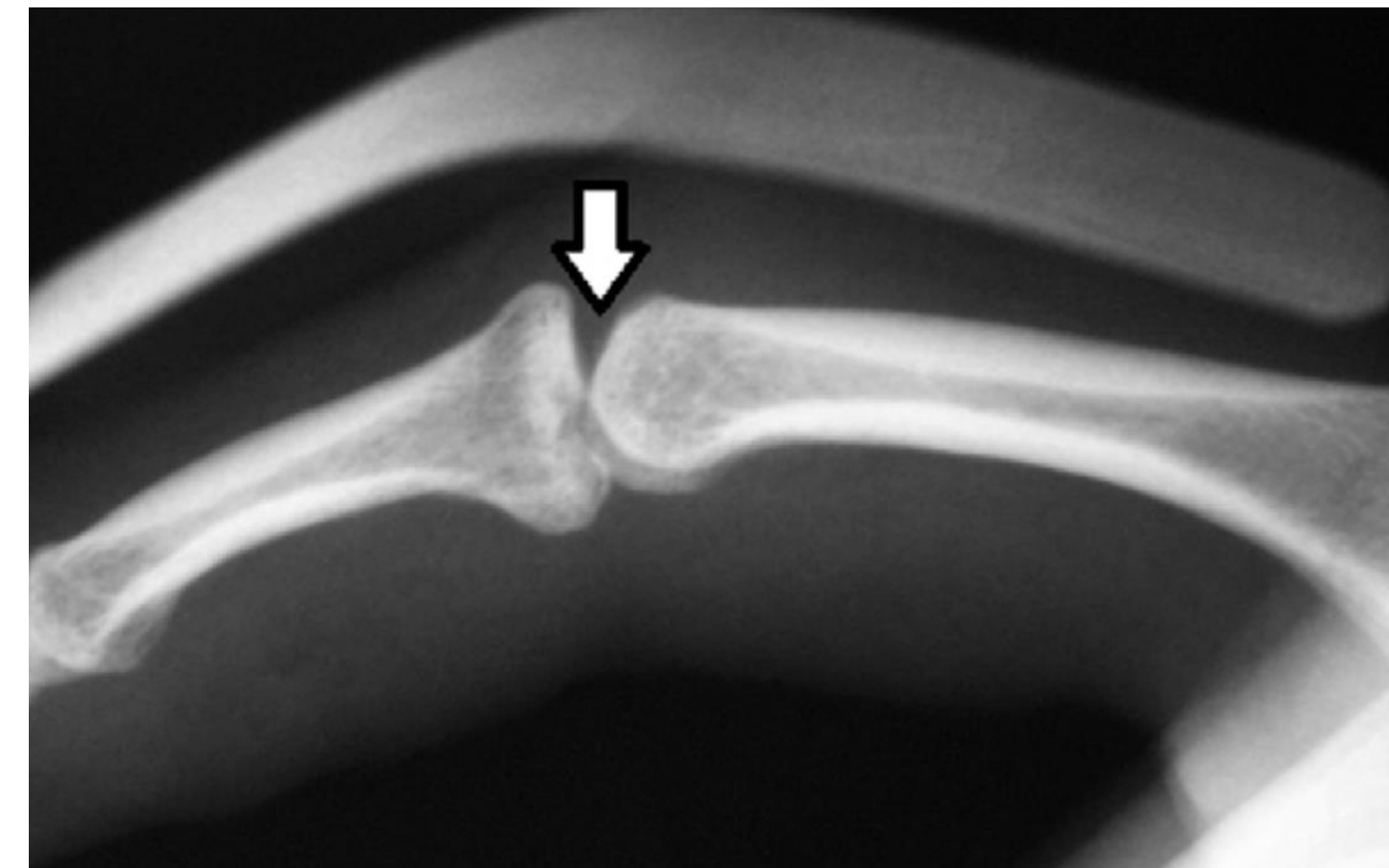
Treatment- Dorsal PIP Dislocations



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Treatment- Dorsal PIP Dislocations



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Treatment- Dorsal PIP Dislocations

- Stable?
 - Buddy strap x 4-6 weeks
- Mild instability?
 - Dorsal Blocking splint X 3 weeks, then buddy straps
 - Return to play 3-8 weeks depending on sport



Treatment- Dorsal PIP Dislocations

Operative treatment

- Irreducible dislocations
- Severely unstable injuries
- Unstable fracture-dislocations



Treatment- Volar PIP Dislocations

1. Flexion of PIP
2. Flexion MCP and wrist to relax extrinsic flexor tendons
3. Longitudinal traction
4. Volar to dorsal pressure over the base of middle phalanx

- Typically a palpable reduction



Treatment- Volar PIP Dislocations

- Splint in full extension at PIP x 6 weeks
- Active DIP flexion
- Return to sport 8-10 weeks



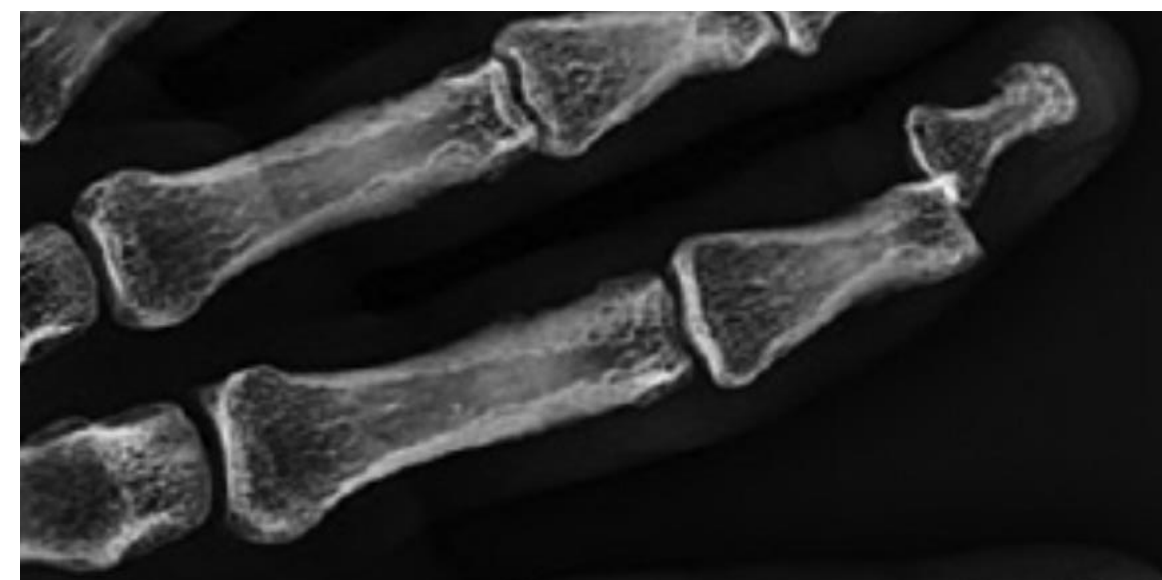
Treatment- DIP Dislocations

- Similar to PIP joint
 - Dorsal more common
 - Open wounds
- Reduction:
 1. Extension
 2. Traction
 3. Dorsal to volar pressure over distal phalanx base



Treatment- DIP Dislocations

- Check stability and function of FDP, terminal extensor
- Stable?
 - Buddy straps
- Unstable?
 - Dorsal blocking splint 3-4 weeks
- Volar? (Mallet)
 - Extension splint x 6 weeks
- Irreducible or FDP avulsion?
 - Operative



Takeaway Points

1. Initial examination and imaging when possible are key to guiding your reduction
2. MCP Dislocations: be able to identify simple vs complex patterns
3. Avoid traction for MCP dislocations
4. PIP dislocations: traction and unhinge the phalangeal base
5. Check stability and document after reduction
6. Post-reduction radiographs are important



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