WRIST

Vanessa JS Smith, PA-C

FOOSH HAPPENS: MAKING SENSE OF WRIST PAIN

WRIST

Vanessa JS Smith, PA-C

DISCLOSURE

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I have no relevant relationships
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within the past 24 months regarding
healthcare products used by or on patients.

AI was used to generate some images and graphics in this presentation.

AI DISCLOSURE

OBJECTIVES

At the conclusion of this session, participants will be able to:

Identify common mechanisms of wrist injury and correlate them with likely anatomic pathology.

Perform targeted wrist examination maneuvers to evaluate for fractures, ligamentous injury, and tendinopathy.

Apply clinical decision rules to guide imaging, immobilization, and follow-up.

Determine when wrist injuries should be managed conservatively versus referred for specialty evaluation.





ICMT!

Video available on YouTube @OrthoRefresh

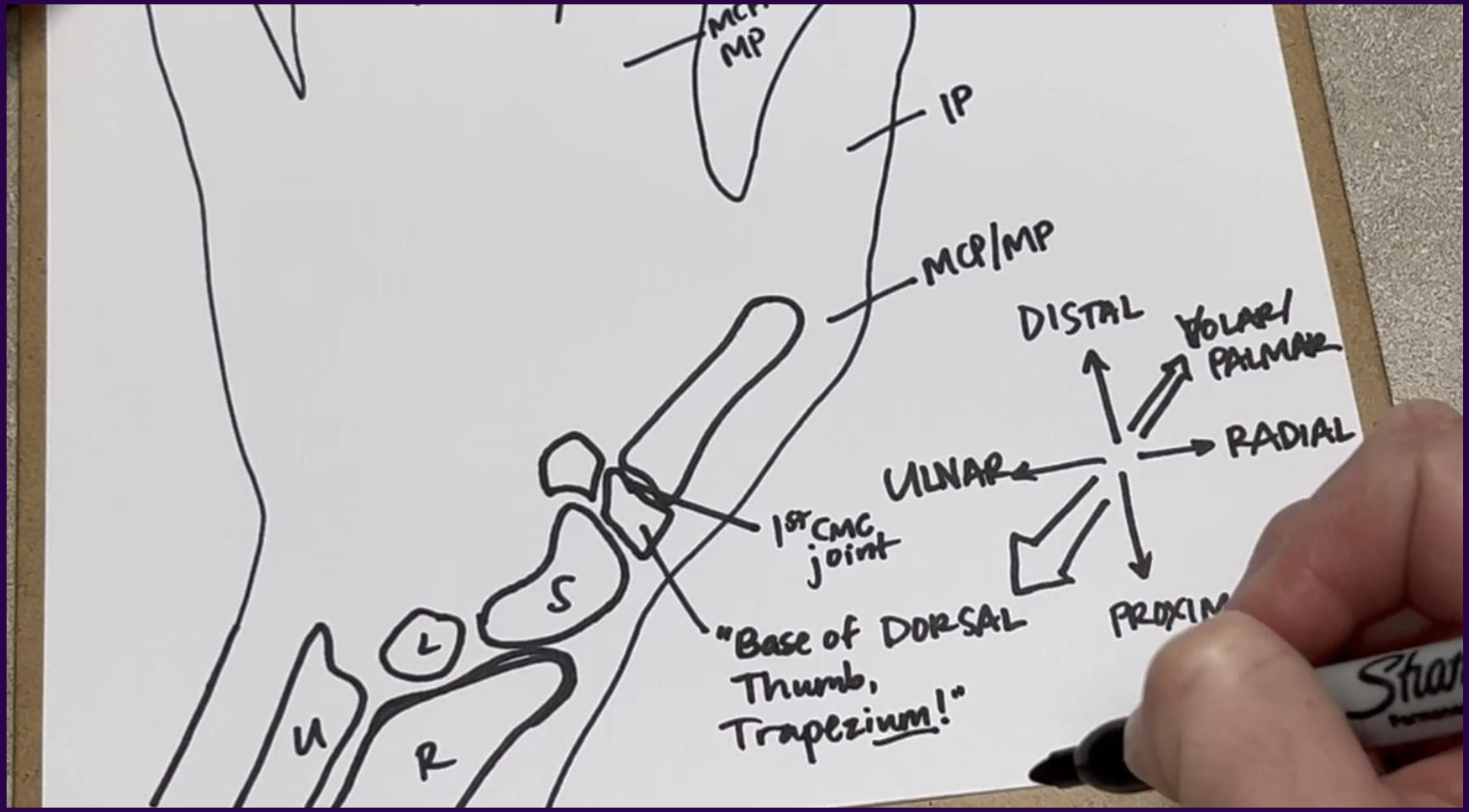
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This is something to remember!

LET'S REFRESH!

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DIRECTIONAL TERMINOLOGY



* If patient unable to take NSAID consistently, consider topical diclofenac (Voltaren gel) applied 3 times a day and/or oral acetaminophen (Tylenol Arthritis 650 mg) every 8 hours as needed for pain.

Wrist Injury/Pain

X-rays

No Fracture or Dislocation

Arthritis

Document
EXAM
Where's the pain?
Radial? Volar?
Dorsal? Ulnar?

NO

YES

1 – Splint!
Option for Velcro brace (HME) vs. Non-removable short arm splint (volar slab vs. thumb spica vs. gutter)
2 – NSAID consistently for short period of time*
3 – Work/sports note w/temporary restrictions (optional).
4 – Activity: pain will be the guide.
5 – Follow up 2-3 weeks for repeat exam. Still having a lot of pain or snuffbox tenderness, then repeat x-rays.
But if getting better, no new x-rays.
6 – Anticipate full recovery by 5-6 weeks from injury.

ARTHRITIS TOOLBOX – wrist splint, NSAID consistently*, etc.
Temporary work/sports restrictions.
May need f/u with Hand Surgery if symptoms worsen or fail to improve after 6+ weeks of conservative treatment.

Fracture or Dislocation

Dislocation

1 – Splint!
2 – URGENT Referral to Hand Surgery!

Fracture

Triquetral Fracture

1 – Splint!
Velcro wrist cock-up brace.
2 - Work/sports note w/temporary restrictions.
3 – Activity: pain will be the guide.
4 – Follow up 3-4 weeks for recheck, no x-rays needed. Update work note. Start wrist ROM.
5 – Anticipate full recovery by 5-6 weeks from injury.

Scaphoid Fracture

1 – Splint!
Non-removable Thumb spica vs. Short Arm Splint.
2 - Work/sports note w/ restrictions.
3 – Refer to Hand Surgery.

Distal Radius Fracture

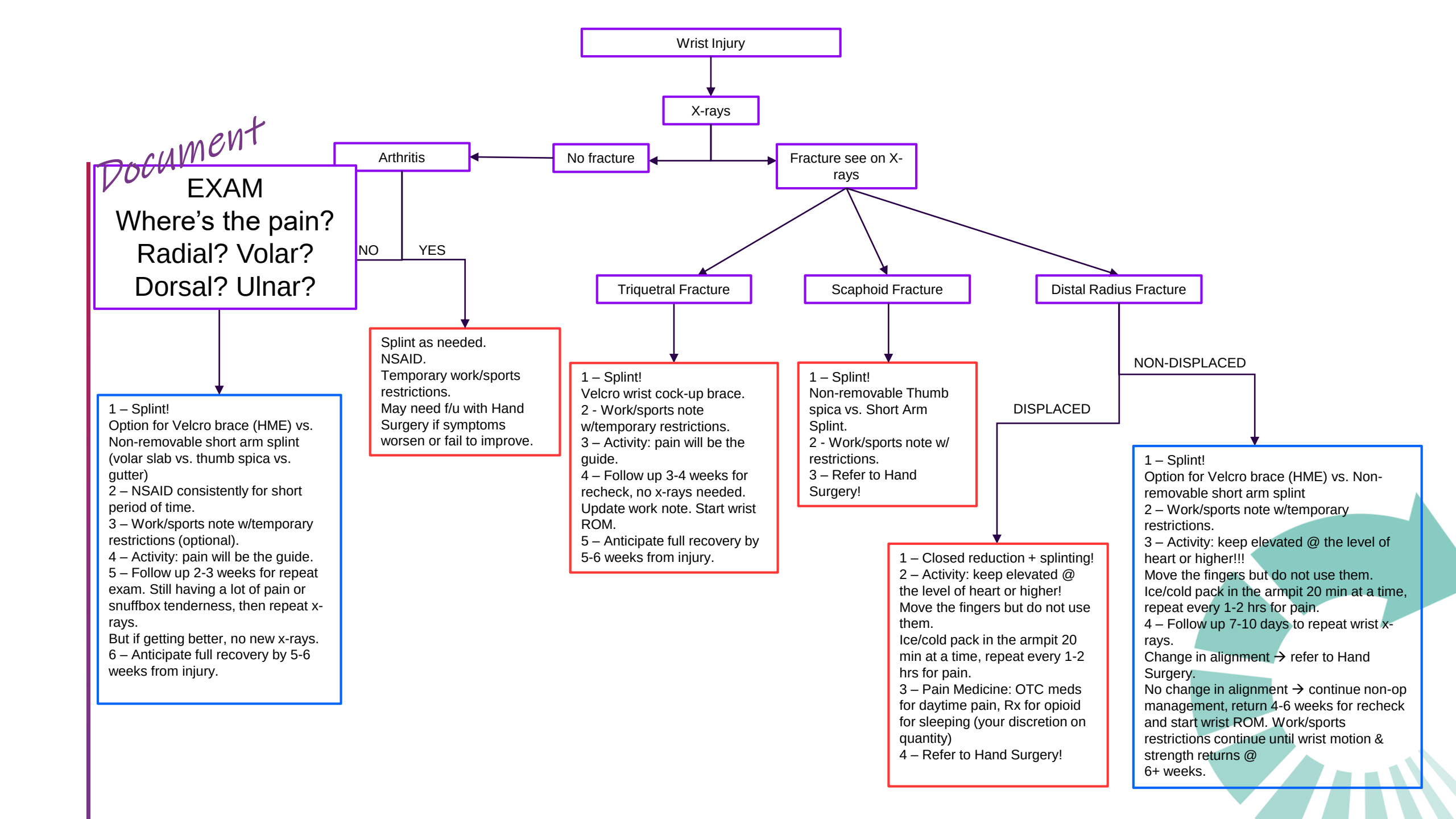
DISPLACED

1 – Closed reduction + splinting!
2 – Activity: keep elevated @ the level of heart or higher!
Move the fingers but do not use them.
Ice/cold pack in the armpit 20 min at a time, repeat every 1-2 hrs for pain.
3 – Work/sports note w/ restrictions.
4 – Pain Medicine: OTC meds for daytime pain, Rx for opioid for sleeping (your discretion on quantity)
5 – Refer to Hand Surgery!

NON-DISPLACED

1 – Splint!
Option for Velcro brace (HME) vs. Non-removable short arm splint
2 – Activity: keep elevated @ the level of heart or higher!!!
Move the fingers but do not use them.
Ice/cold pack in the armpit 20 min at a time, repeat every 1-2 hrs for pain.
3 – Work/sports note w/temporary restrictions.
4 – Pain Medicine: OTC meds for daytime pain, Rx for opioid for sleeping (your discretion on quantity)
5 – Follow up 7-10 days to repeat wrist x-rays.
Change in alignment → refer to Hand Surgery.
No change in alignment → continue non-op management, return 4-6 weeks for recheck and start wrist ROM. Work/sports restrictions continue until wrist motion & strength returns @ 8+ weeks.

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Wrist Injury
X-rays
No fracture
Arthritis
Fracture see on X-rays
Document
EXAM
Where's the pain?
Radial? Volar?
Dorsal? Ulnar?
NO
YES
Triquetral Fracture
Scaphoid Fracture
Distal Radius Fracture
NON-DISPLACED
DISPLACED
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3 – Work/sports note w/temporary restrictions (optional).
4 – Activity: pain will be the guide.
5 – Follow up 2-3 weeks for repeat exam. Still having a lot of pain or snuffbox tenderness, then repeat x-rays.
But if getting better, no new x-rays.
6 – Anticipate full recovery by 5-6 weeks from injury.
Splint as needed.
NSAID.
Temporary work/sports restrictions.
May need f/u with Hand Surgery if symptoms worsen or fail to improve.
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Velcro wrist cock-up brace.
2 - Work/sports note w/temporary restrictions.
3 – Activity: pain will be the guide.
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6+ weeks.

CHIEF COMPLAINT

RADIAL-SIDED WRIST PAIN

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CC: RADIAL-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Scaphoid fracture
- Thumb CMC arthritis
- deQuervain's tendinitis
- Intersection Syndrome
- Scapholunate (SL) ligament injury
- Wartenberg Syndrome (rare)



CC: RADIAL-SIDED WRIST PAIN

Exam

Point tender?
Edema location?
Grind test?
Finkelstein's test?
WHAT sign?
Snuffbox tenderness?
Crepitus?
Limited wrist AROM?
N/T?

"Point with one finger where you're having the most pain?"



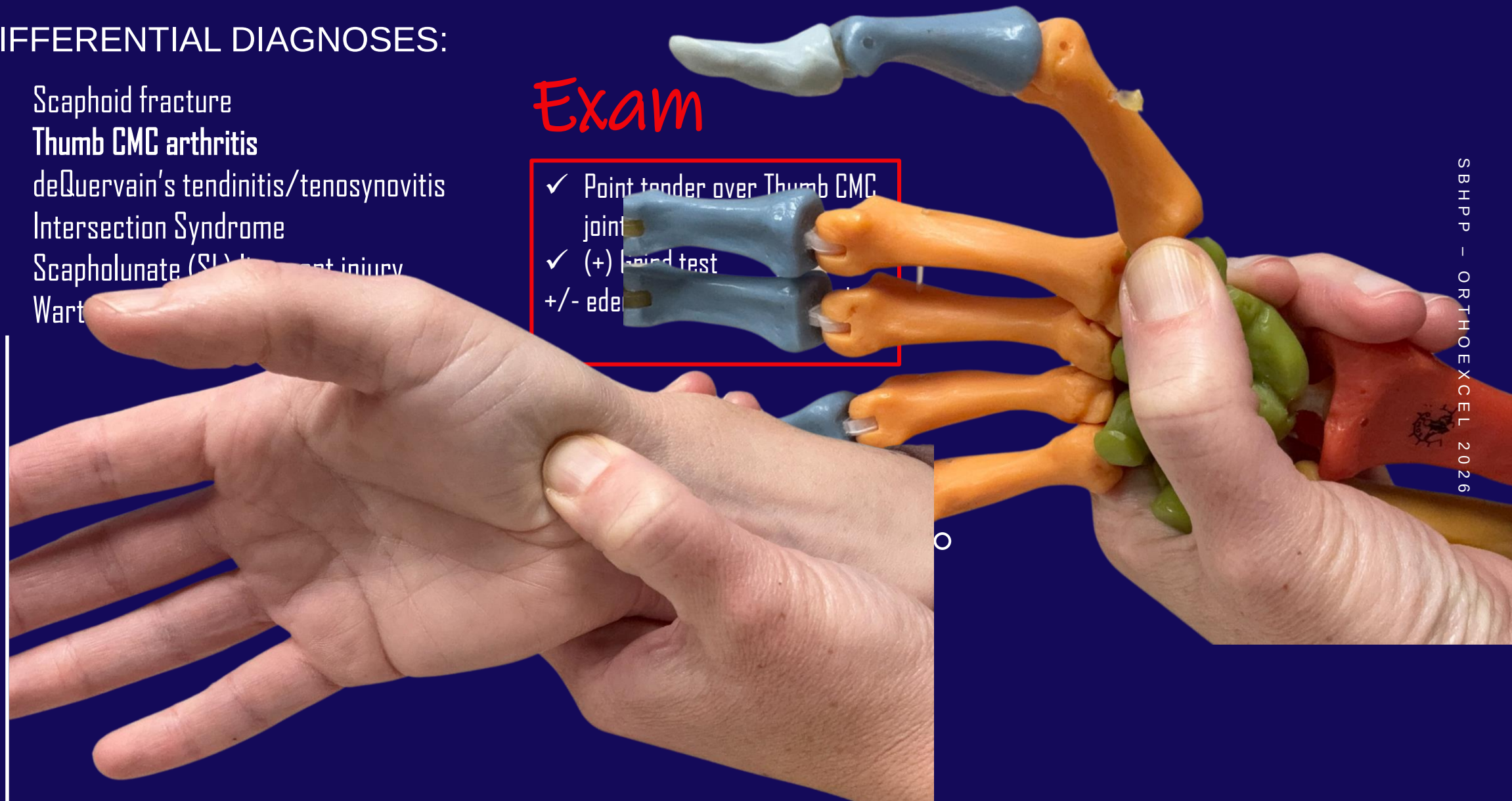
CC: RADIAL-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Scaphoid fracture
- **Thumb CMC arthritis**
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
- Scapholunate (SL) [illegible] injury
- Wart[illegible]

Exam

- ✓ Point tender over Thumb CMC joint
- ✓ (+) [illegible] test
- +/- ede[illegible]



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CC: RADIAL-SIDED WRIST PAIN

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Exam

- ✓ Point tender over Thumb CMC joint
- ✓ (+) Grind test

+/- edema about basilar thumb



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- Scapholunate (SL) ligament injury
- Wartenberg Syndrome



Exam

- ✓ Point tender over Thumb CMC joint
- ✓ (+) Grind test

+/- edema about basilar thumb

Plan

Splint for activities: Thumb CMC Controller, Comfort Cool splint (DME)
NSAID
Heat
Activity modification
Refer to Hand Surgery for cortisone injection

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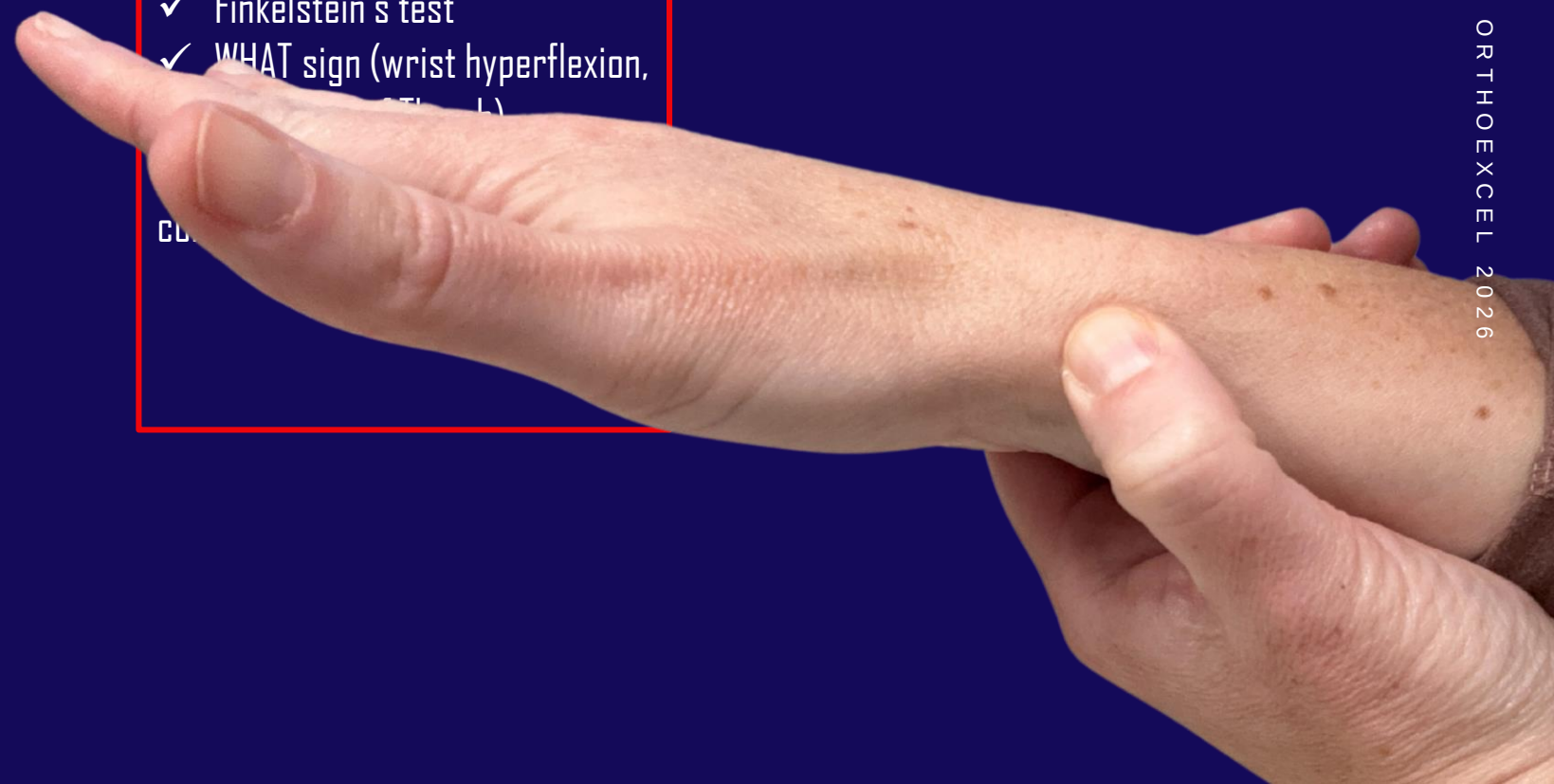
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- Wartenberg Syndrome

Exam

- ✓ Point tender over 1st dorsal compartment
- ✓ Finkelstein's test
- ✓ WHAT sign (wrist hyperflexion,



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- Wartenberg Syndrome

Exam

- ✓ Point tender over 1st dorsal compartment
- ✓ Finkelstein's test
- ✓ WHAT sign (wrist hyperflexion, abductio
- +/- ed

Eichhoff test



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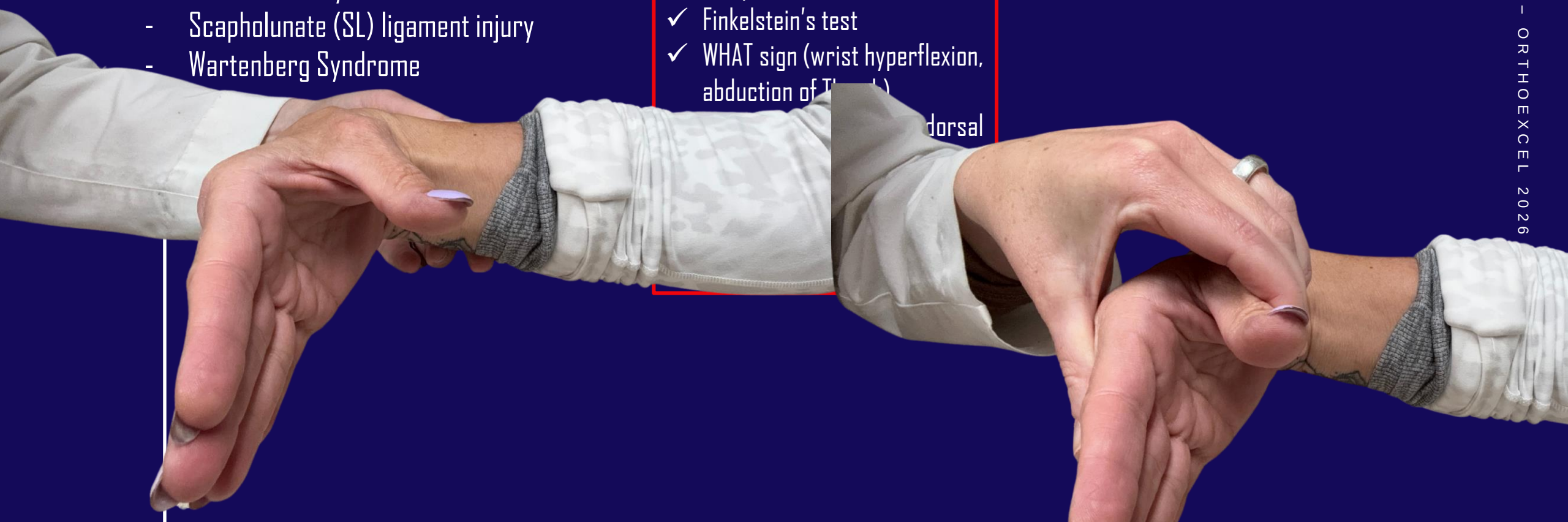
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Exam

- ✓ Point tender over 1st dorsal compartment
- ✓ Finkelstein's test
- ✓ WHAT sign (wrist hyperflexion, abduction of T
- dorsal



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- Scapholunate (SL) ligament
- Wartenberg Syndrom



Exam

- ✓ Point tender over 1st dorsal compartment
- ✓ Finkelstein's test
- ✓ WHAT sign (wrist hyperflexion, abduction of Thumb)

+/- edema or cyst about 1st dorsal compartment

Plan

Thumb spica Velcro wrist splint
NSAID
Ice: use a half-filled Styrofoam cup in the freezer!
Refer to Hand Surgery for cortisone injection vs. surgery.

CC: RADIAL-SIDED WRIST PAIN

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- Thumb CMC arthritis
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- Scapholunate (SL) ligament injury
- Wartenberg Syndrome

Exam

- ✓ NOT point tender over 1st dorsal compartment
- ✓ Point tender over area of intersection
- ✓ CREPITUS!



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CC: RADIAL-SIDED WRIST PAIN

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- deQuervain's tendinitis/tenosynovitis
- **Intersection Syndrome**
- Scapholunate (SL) ligament injury
- Wartenberg Syndrome

Exam

- ✓ NOT point tender over 1st dorsal compartment
- ✓ [illegible]nder over area of [illegible]n



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- **Intersection Syndrome**
- Scapholunate (SL) ligament injury
- Wartenberg Syndrome

Exam

- ✓ NOT point tender over 1st dorsal compartment
- ✓ Point tender over area of intersection
- ✓ CREPITUS!

+/- Finkelstein's test

+/- WHAT sign (wrist hyperflexion, abduction of Thumb)

Plan

Thumb spica Velcro wrist splint

NSAID

Ice: use a half-filled Styrofoam cup in the freezer!

Refer to Hand Surgery for cortisone injection vs. surgery.

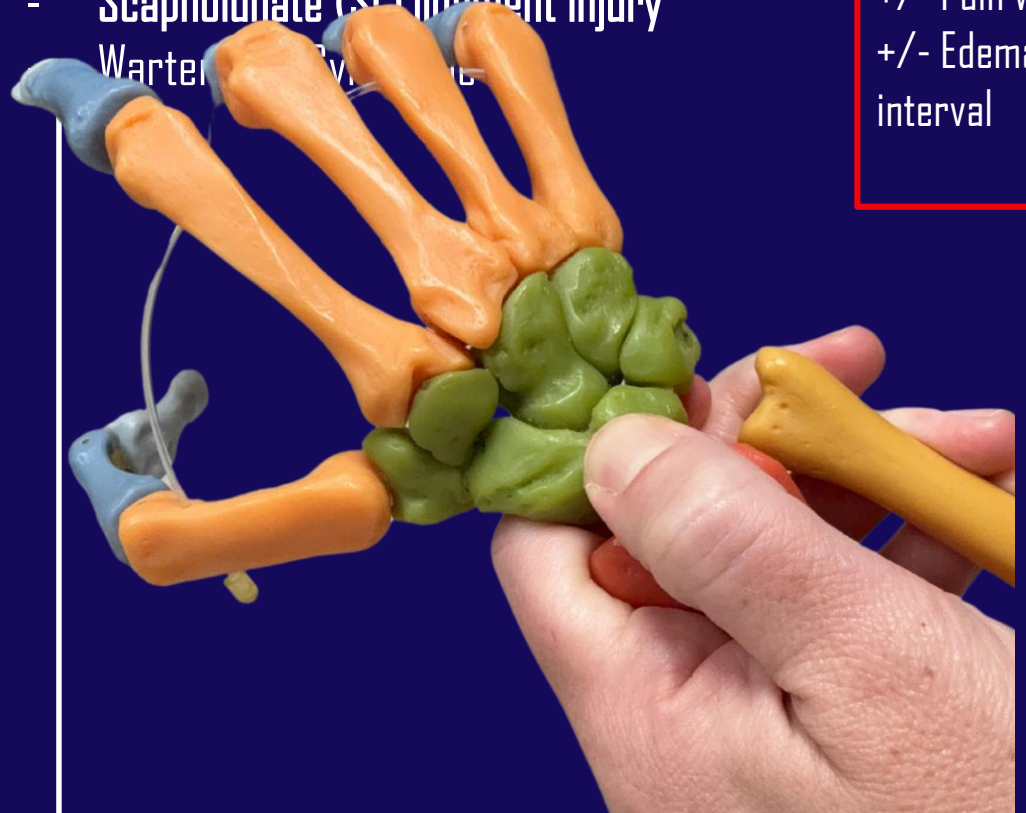
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- deQuervain's tendinitis/tenosynovitis
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- **Scapholunate (SL) ligament injury**
- Warter[illegible]

Exam

✓ Point tender over dorsal SL interval
+/- Pain with wrist AROM
+/- Edema dorsally over SL interval





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CC: RADIAL-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Scaphoid fracture
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- Intersection Syndrome
- **Scapholunate (SL) ligament injury**
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Exam

✓ Point tender over dorsal SL interval
+/- Pain with wrist AROM
+/- Edema dorsally over SL interval

Plan

Thumb spica Velcro wrist splint
NSAID
Ice
Refer to Hand Surgery if no better with conservative treatment

SBHPP – ORTHOEXCEL 2026

CC: RADIAL-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Scaphoid fracture
- Thumb CMC arthritis
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
-
-

Exam

- ✓ (+) Tinel's over SRN
- ✓ Decreased sensation over the dorsoradial aspect of hand, dorsal thumb and index finger
- Wrist AROM is full, n[illegible]





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CC: RADIAL-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Scaphoid fracture
- Thumb CMC arthritis
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
- Scapholunate (SL) ligament injury
- **Wartenberg Syndrome**

Exam

- ✓ (+) Tinel's over SRN
- ✓ Decreased sensation over the dorsoradial aspect of hand, dorsal thumb and index finger
- ✓ Wrist AROM is full, nonpainful

Plan

Avoid wearing watch or bracelet on that wrist.
NSAID.
Hand Therapy for desensitization exercises.
Refer to Hand Surgery if no better with conservative treatment

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CHIEF COMPLAINT

DORSAL WRIST PAIN

SBHPP – ORTHOEXCEL 2026

CC: DORSAL WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Occult Ganglion Cyst
- Scapholunate ligament injury
- Wrist arthritis
- Tendinitis
- Perilunate dislocation

"Point with one finger where you're having the most pain?"

"what DIRECTION is the pain?"

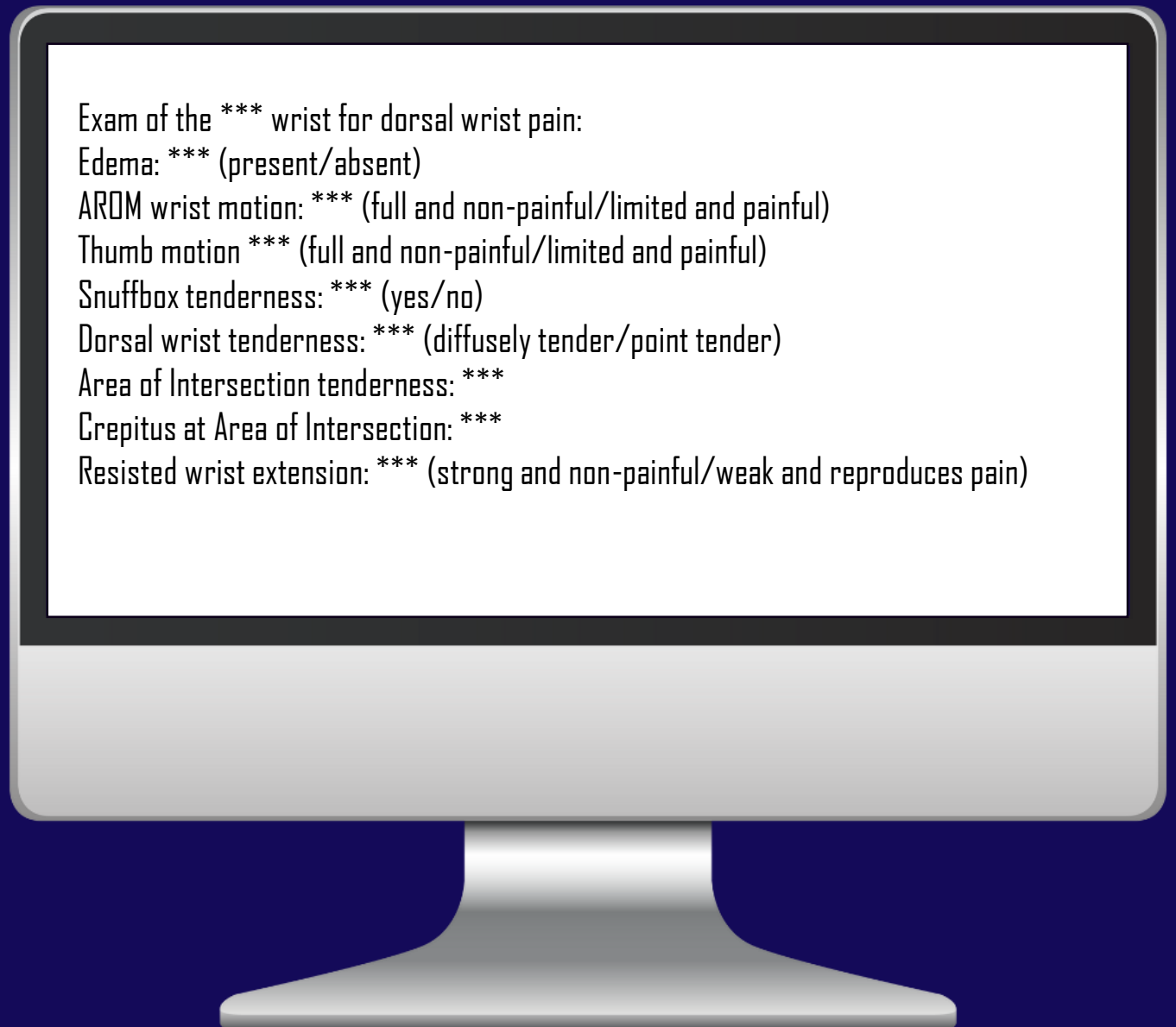


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CC: DORSAL WRIST PAIN

Exam

Point tender?
Edema?
Pain with wrist AROM?
Limited wrist AROM?
RROM wrist extension weak and painful?



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CC: DORSAL WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- **Occult Ganglion Cyst**
- Scapholunate ligament injury
- Wrist arthritis
- Tendinitis
- Perilunate dislocation

Exam

✓ Point tender over dorsal SL interval

+/- Pain with wrist AROM, especially terminal wrist extension

+/- Edema dorsally over SL int



SBHPP – ORTHOEXCEL 2026

CC: DORSAL WRIST PAIN

DIFFERENTIAL DIAGNOSES:

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- Wrist arthritis
- Tendinitis
- Perilunate disloc



Exam

✓ Point tender over dorsal SL interval
+/- Pain with wrist AROM, especially terminal wrist extension
+/- Edema dorsally over SL interval

Plan

Velcro wrist splint
NSAID
Ice
Refer to Hand Surgery if no better with conservative treatment

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SBHPP – ORTHOEXCEL 2026

CC: DORSAL WRIST PAIN

DIFFERENTIAL DIAGNOSES:

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- **Scapholunate ligament injury**
- Wrist arthritis
- Tendinitis
- Perilunate dislocation

What's the story? How did this start?



Exam

- ✓ Point tender over dorsal SL interval
- +/- Pain with wrist AROM
- +/- Edema dorsally over SL interval

Plan

Velcro wrist splint
NSAID
Ice
Refer to Hand Surgery if no better with conservative treatment

SBHPP – ORTHOEXCEL 2026

CC: DORSAL WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Occult Ganglion Cyst
- Scapholunate ligament injury
- **Wrist arthritis**
- Tendinitis
- Perilunate dislocation



Exam

- ✓ Diffusely tender or Point tender over dorsal wrist (radiocarpal joint, midcarpal joint, DRUJ)
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM
- +/- Edema DORSAL WRIST

Plan

Velcro wrist cock-up brace/splint
NSAID
Heat vs. Ice
Topical arthritis creams
Refer to Hand Surgery if no better with conservative treatment

SBHPP – ORTHOEXCEL 2026

CC: DORSAL WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Occult Ganglion Cyst
- Scapholunate ligament injury
- Wrist arthritis
- **Tendinitis**
- Perilunate dislocation

Exam

- ✓ No specific injury. Typically gradual onset or repetitive stress.
- ✓ Wrist AROM may be limited 2° to pain
- ✓ Tender over Area of Intersection, ECRB/ECRL, ECU
- ✓ RROM wrist extension INCREASES PAIN

+/- Edema



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CC: DORSAL WRIST PAIN

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Plan

Velcro wrist cock-up brace/splint
NSAID
Heat vs. Ice
Temporary work/sports restrictions
Refer to Hand Surgery if no better with conservative treatment

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CHIEF COMPLAINT

ULNAR-SIDED WRIST PAIN

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CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- Triquetral fracture
- Pisotriquetral arthritis
- (rare) septic joint, calcific tendinitis

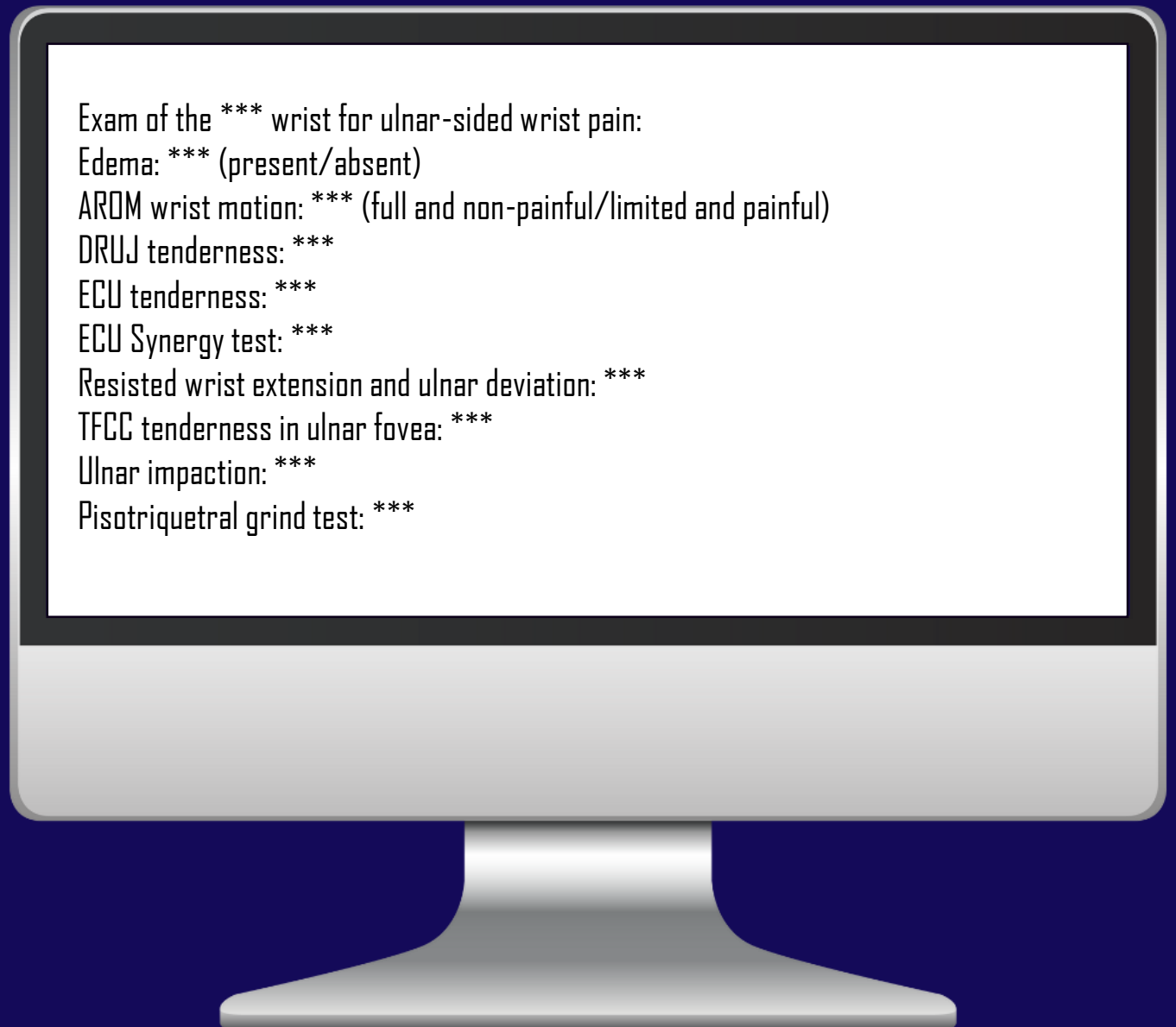


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CC: ULNAR-SIDED WRIST PAIN

Exam

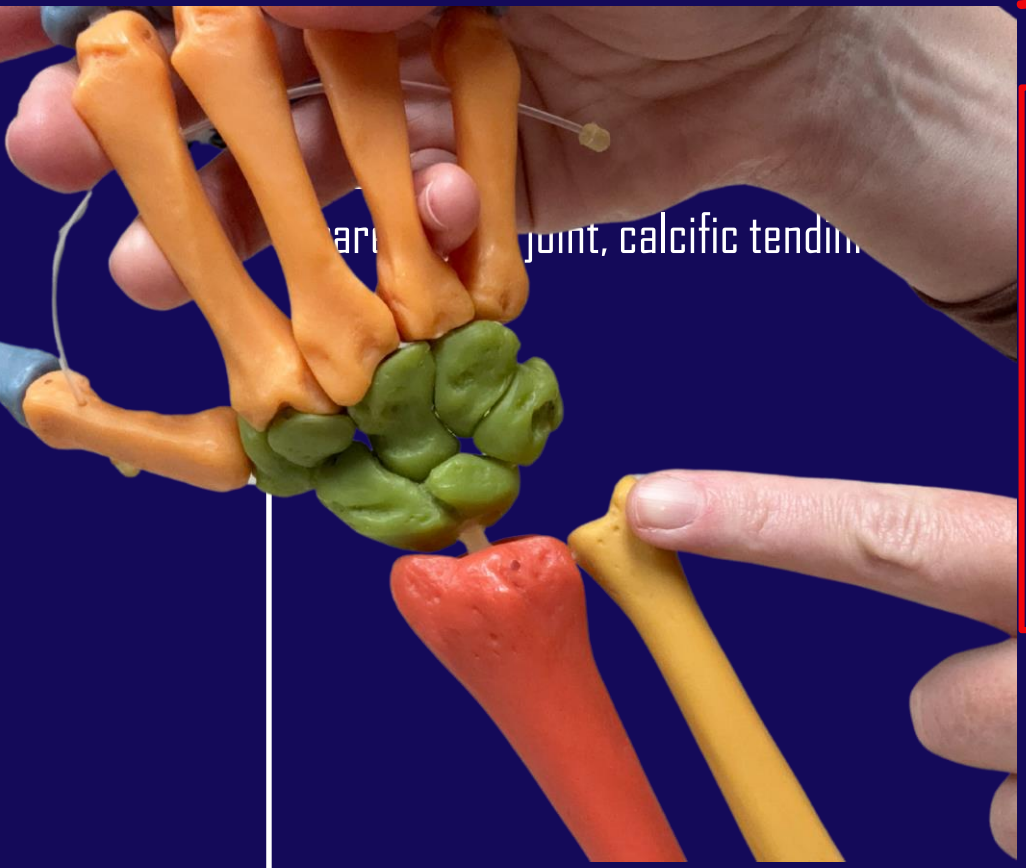
Diffusely tender or Point tender?
Pain with RROM wrist extension + ulnar deviation?
Edema?
Ulnar impaction test?
Pisotriquetral grind test?



CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis



- ...ar... ...joint, calcific tendin...

Exam

- ✓ Diffusely tender or Point tender over ECU Tendon
- ✓ ECU synergy test
- ✓ Pain with RROM wrist extension + ulnar deviation
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM

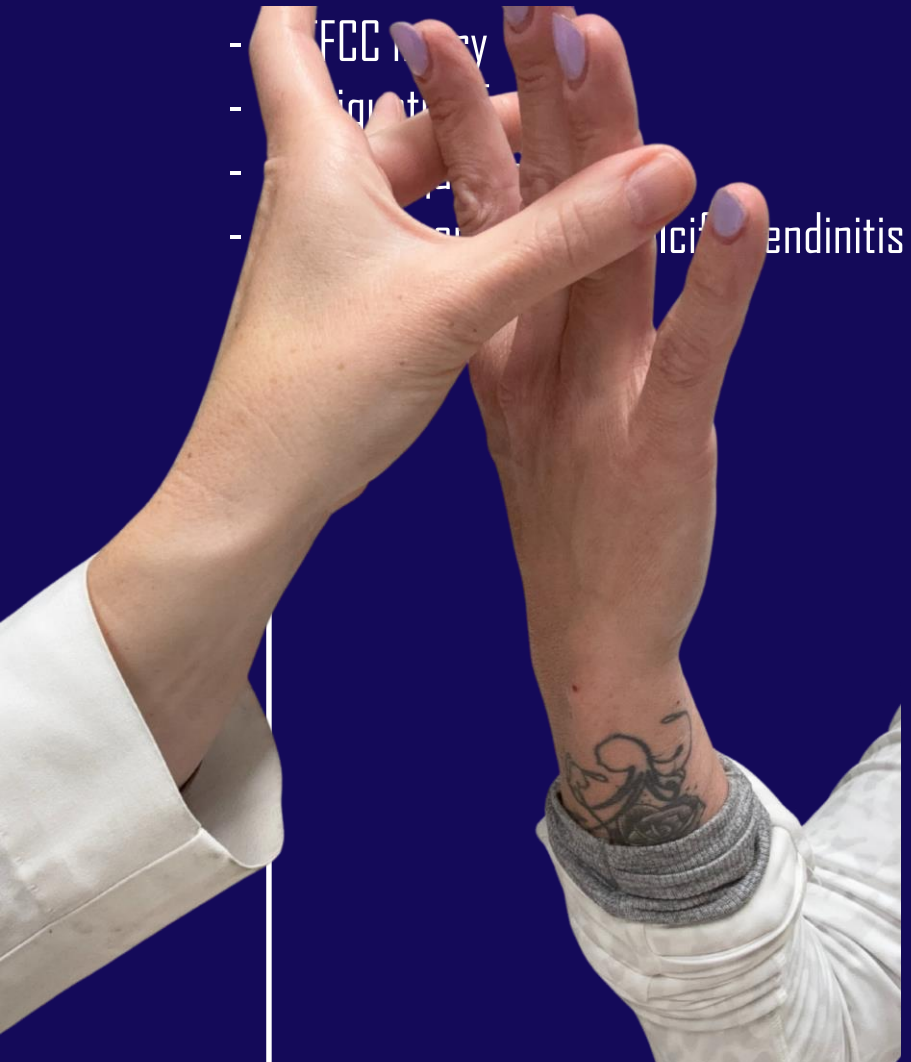


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CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- FCC
- [illegible]
- [illegible]
- [illegible] endinitis



Exam

- ✓ Diffusely tender or Point tender over ECU Tendon
- ✓ ECU synergy test
- ✓ Pain with RROM wrist extension + ulnar deviation

+/- Decreased wrist AROM

+/- Pain with wrist AROM



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- Triquetral fracture
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- (rare) septic joint, calcific tendinitis

Exam

- ✓ Diffusely tender or Point tender over ECU Tendon
- ✓ ECU synergy test
- ✓ Pain with RROM wrist extension + ulnar deviation

+/- Decreased wrist AROM

+/- Pain with wrist AROM

Plan

Velcro wrist cock-up brace/splint

OT

NSAID

Heat vs. Ice

Refer to Hand Surgery if no better with conservative treatment

CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- **TFCC injury**
- Triquetral fracture
- [illegible]ritis
- [illegible]calcific tendinitis



Exam

- ✓ Point tender over dorsal TFCC or Ulnar Fovea
- ✓ (+) Ulnar Impaction test
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM



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CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- **TFCC injury**
- Triquetral fracture
- Pisotriquetral arthritis
- (rare) septic joint, calcific tendinitis

Exam

- ✓ Point tender over dorsal TFCC or Ulnar Fovea
- ✓ (+) Ulnar Impaction test
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM



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DIFFERENTIAL DIAGNOSES:

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- **TFCC injury**
- Triquetral fracture
- Pisotriquetral arthritis
- (rare) septic joint, calcific tendinitis

Exam

- ✓ Point tender over dorsal TFCC or Ulnar Fovea
- ✓ (+) Ulnar Impaction test
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM

Plan

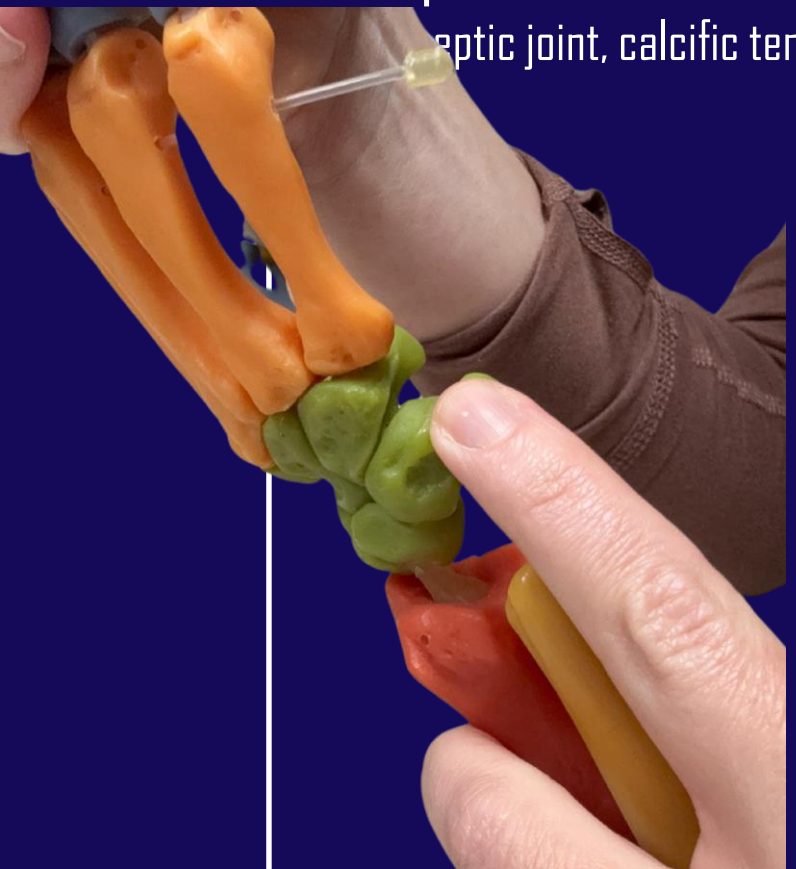
Ulnar Wrist Strap (Wrist Widget)
OT
NSAID
Heat vs. Ice
Refer to Hand Surgery if no better with conservative treatment

SBHPP – ORTHOEXCEL 2026

CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- Triquetral fracture
- **Pisotriquetral arthritis**
- eptic joint, calcific tendinitis



Exam

- ✓ Point tender VOLARLY over Pisotriquetral joint
- ✓ (+) Pisotriquetral grind test

Normal wrist AROM

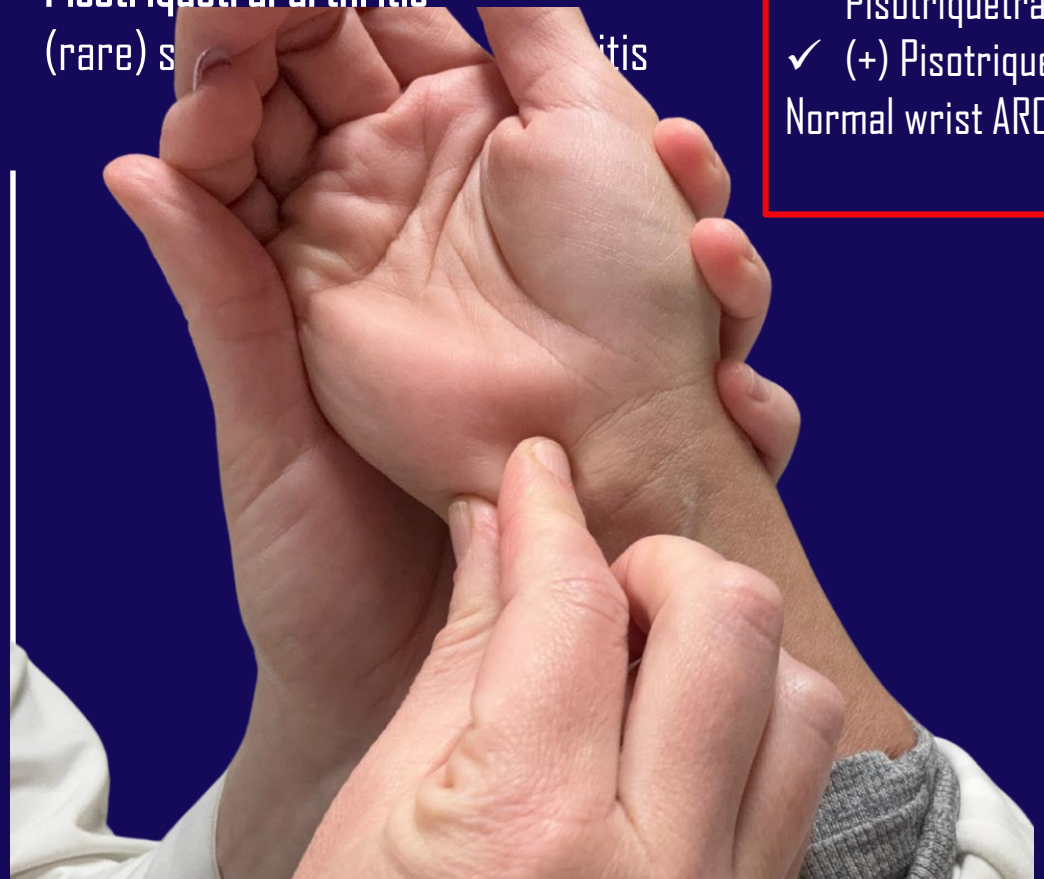


SBHPP – ORTHOEXCEL 2026

CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- Triquetral fracture
- **Pisotriquetral arthritis**
- (rare) s itis



Exam

- ✓ Point tender VOLARLY over Pisotriquetral joint
- ✓ (+) Pisotriquetral grind test

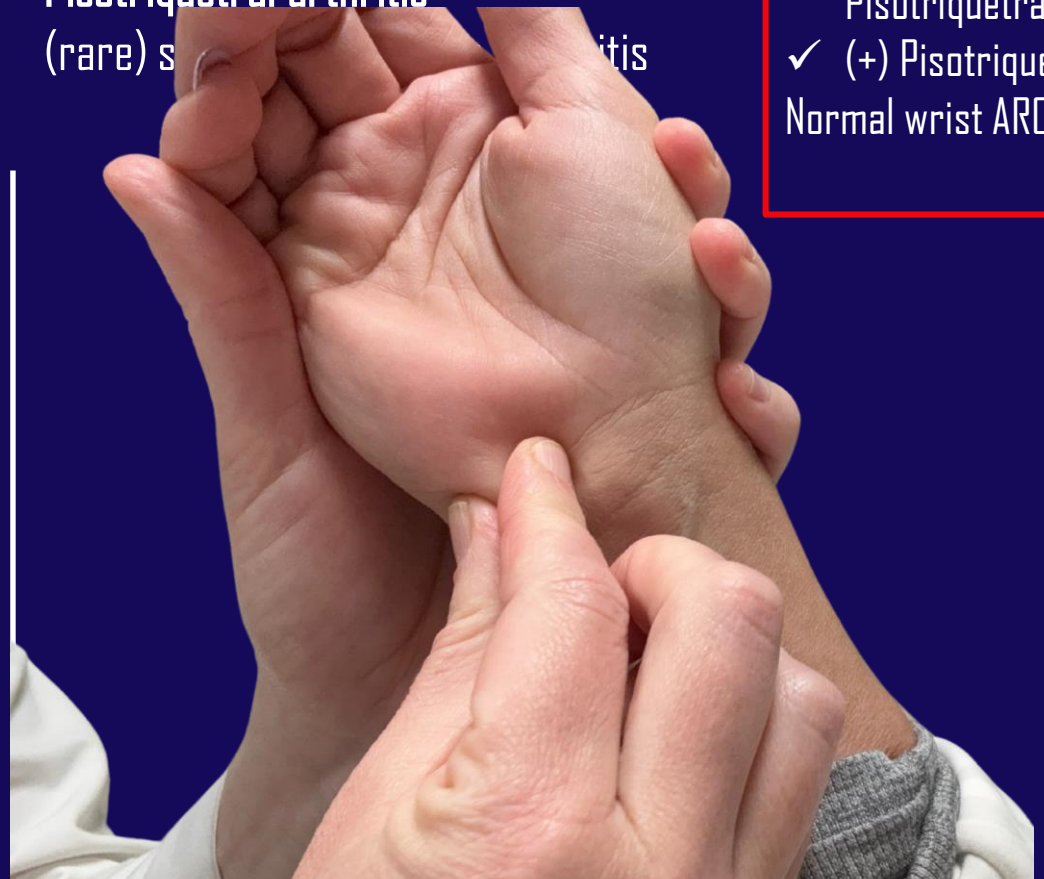
Normal wrist AROM

SBHPP – ORTHOEXCEL 2026

CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- Triquetral fracture
- **Pisotriquetral arthritis**
- (rare) s itis



Exam

- ✓ Point tender VOLARLY over Pisotriquetral joint
- ✓ (+) Pisotriquetral grind test

Normal wrist AROM

Plan

Velcro wrist cock-up brace/splint
NSAID
Heat vs. Ice
Topical arthritis creams
Refer to Hand Surgery if no better with conservative treatment.

CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- Triquetral fracture
- Pisotriquetral arthritis
- **(rare) septic joint, calcific tendinitis**

Exam

- ✓ Erythema
- ✓ Edema
- ✓ Pain with wrist AROM

+/- Fever/chills

Plan

Labwork: CRP, ESR, CBC w/diff
X-rays
Wrist splint: fiberglass volar short arm splint vs. wrist cock-up brace

Calcific Tendinitis:
NSAID!
Refer to Hand Surgery if unsure of diagnosis

Septic Wrist:
Diagnosis made with aspiration + labs
→ Refer to Hand Surgery!

CHIEF COMPLAINT

VOLAR WRIST PAIN

SBHPP – ORTHOEXCEL 2026

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

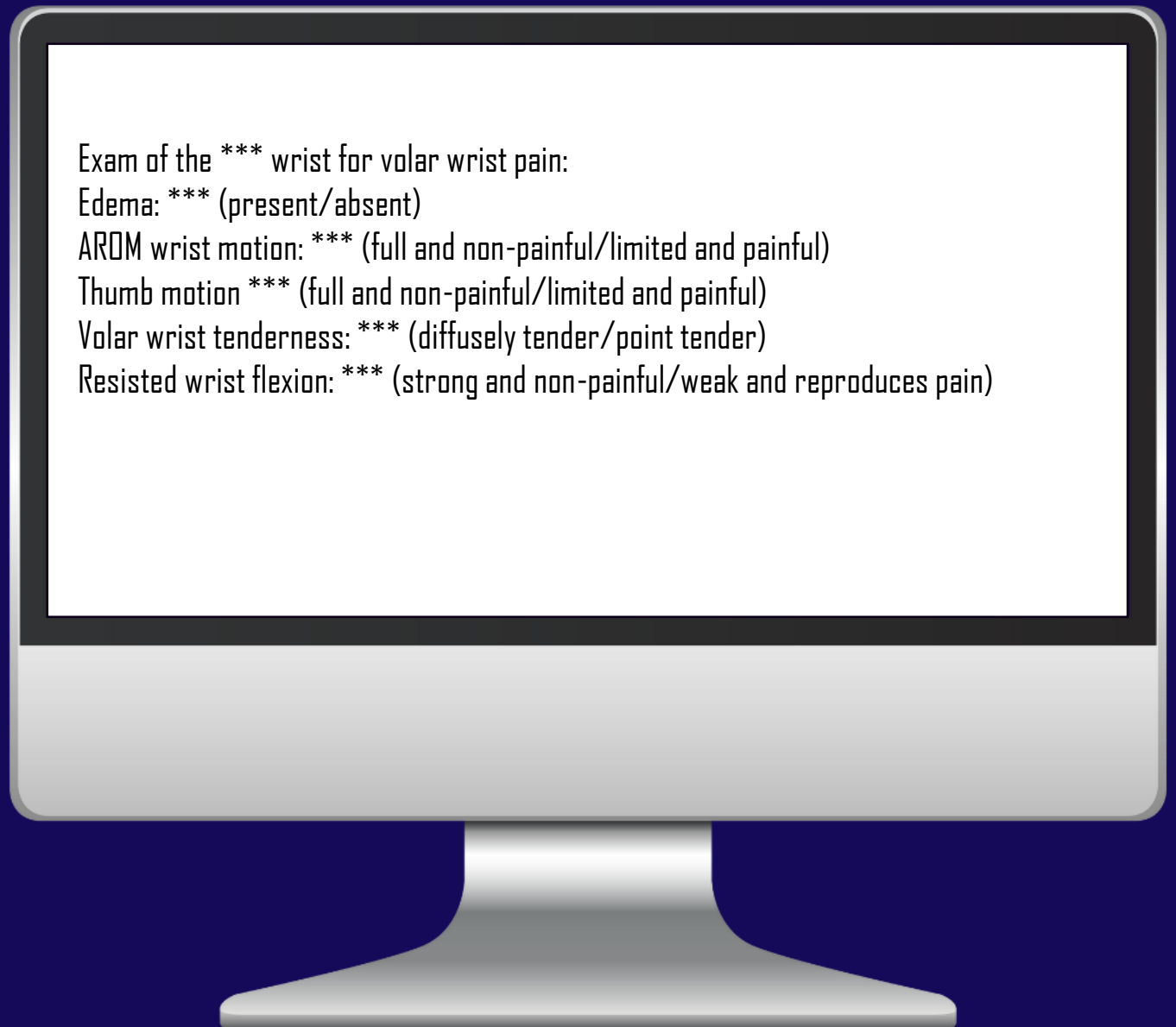
- Ganglion cyst
- Tendinitis
- (rare) Hook of Hamate fracture



CC: VOLAR WRIST/PALMAR HAND PAIN

Exam

Point tender or diffusely tendern?
Mass?
Pain with wrist AROM?
Weakness with RROM wrist flexion?



SBHPP – ORTHOEXCEL 2026

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- **Ganglion cyst**
- Tendinitis
-) Hook of Hamate fracture



Exam

- ✓ Point tender over volar radial wrist +/- mass
- ✓ Mass is non-pulsatile
- ✓ Transilluminates!

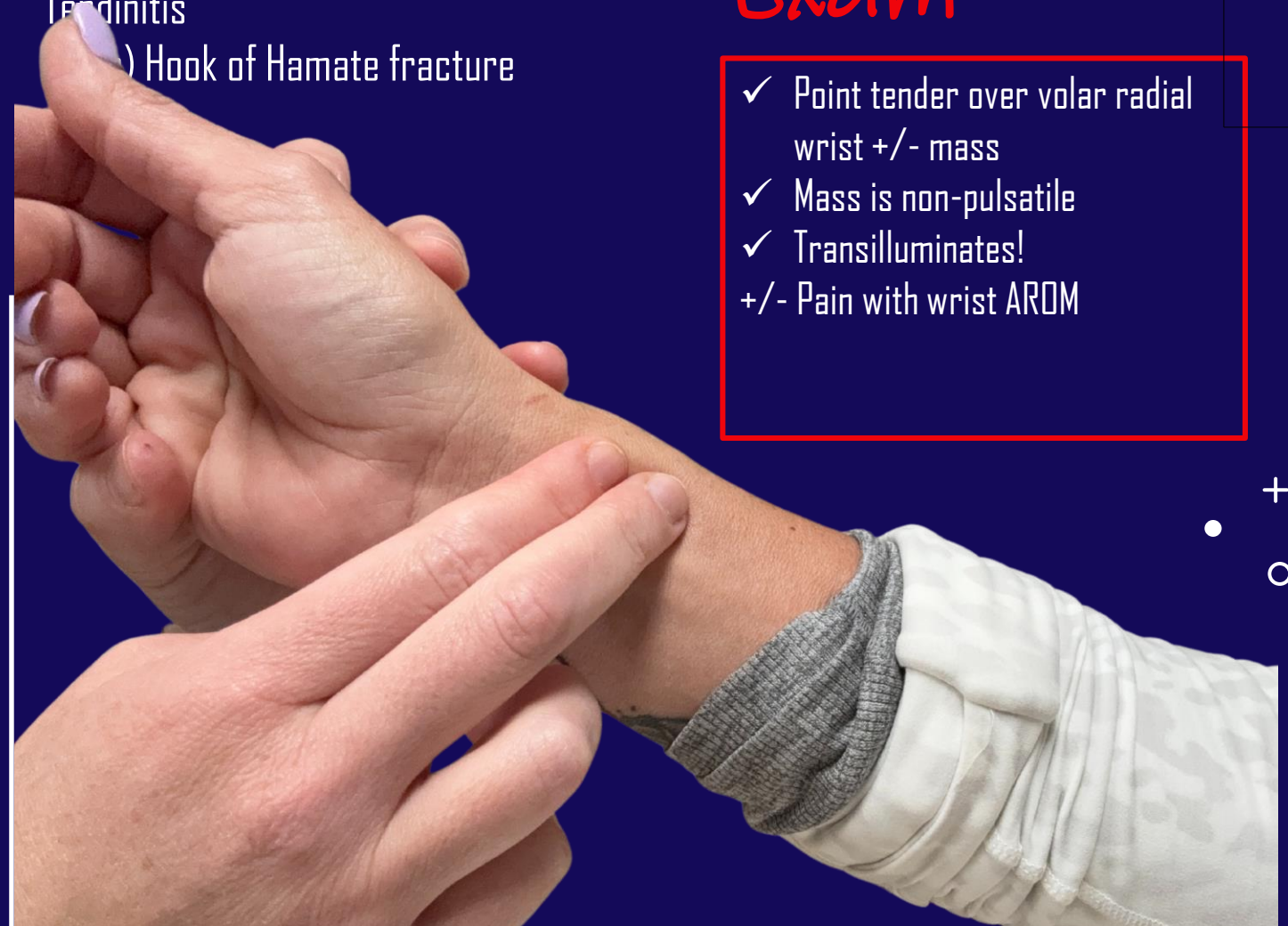
+/- Pain with wrist AROM

SBHPP – ORTHOEXCEL 2026

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- **Ganglion cyst**
- Tendinitis
-) Hook of Hamate fracture



Exam

- ✓ Point tender over volar radial wrist +/- mass
- ✓ Mass is non-pulsatile
- ✓ Transilluminates!

+/- Pain with wrist AROM

Plan

Velcro wrist cock-up brace/splint
NSAID
Ice
Refer to Hand Surgery if no better with conservative treatment

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- **Ganglion cyst / STT arthritis**
- Tendinitis
- (rare) Hook of Hamate fracture

Exam

- ✓ Point tender over volar radial wrist +/- mass
- ✓ Mass is non-pulsatile
- ✓ Transilluminates!
- ✓ Pain with palpation over distal pole of Scaphoid

+/- Pain with THUMB or wrist AROM

Plan

Velcro wrist cock-up brace/splint
NSAID
Ice
Refer to Hand Surgery if no better with conservative treatment



SBHPP – ORTHOEXCEL 2026

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- Ganglion cyst / STT arthritis
- **Tendinitis**
- (rare) Hook of Hamate fracture

Exam

- ✓ Diffusely tender or Point tender over FCU or FCR Tendon (most common)
- ✓ Pain with RROM wrist flexion

+/- Edema
+/- Decreased wrist AROM
+/- Pain with wrist AROM



SBHPP – ORTHOEXCEL 2026

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- Ganglion cyst / STT arthritis
- **Tendinitis**
- (rare) Hook of Hamate fracture

Exam

- ✓ Diffusely tender or Point tender over FCU or FCR Tendon (most common)
- ✓ Pain with RROM wrist flexion
- +/- Edema
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM

Plan

Velcro wrist cock-up brace/splint
OT
NSAID
Heat vs. Ice
Refer to Hand Surgery if no better with conservative treatment



SBHPP – ORTHOEXCEL 2026

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- Ganglion cyst / STT arthritis
- Tendinitis
- **(rare) Hook of Hamate fracture**

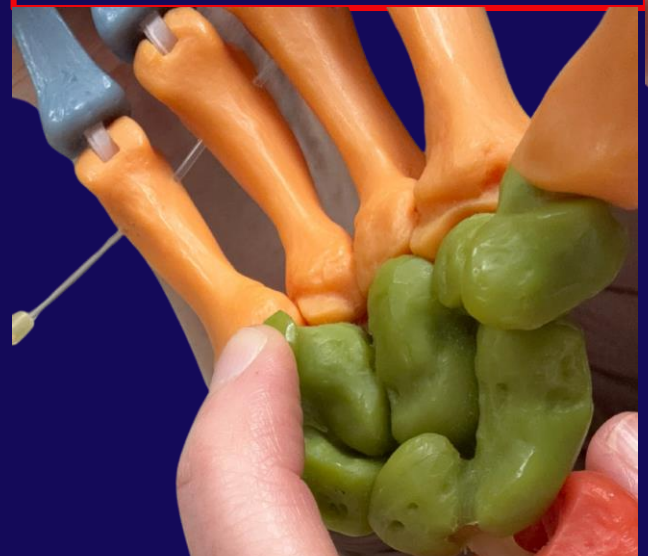
"I used my hand as a hammer to pound." Baseball player, golfer, etc. with repetitive pounding in the palm

Exam

- ✓ Point tender in the palm over Hook of Hamate
- ✓ Pain with RROM ring + small finger flexion with wrist in Ulnar Deviation

+/- Edema

Normal wrist AROM





CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- Ganglion cyst / STT arthritis
- Tendinitis
- **(rare) Hook of Hamate fracture**

"I used my hand as a hammer to pound." Baseball player, golfer, etc. with repetitive pounding in the palm

Exam

- ✓ Point tender in the palm over Hook of Hamate
- ✓ Pain with RROM ring + small finger flexion with wrist in Ulnar Deviation

+/- Edema

Normal wrist AROM

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- Ganglion cyst / STT arthritis
- Tendinitis
- **(rare) Hook of Hamate fracture**

Exam

- ✓ Point tender in the palm over Hook of Hamate
- ✓ Pa
  fle
  De

+/- Ec

Norma

"I used my hand as a hammer to pound." Baseball player, golfer, etc. with repetitive pounding in the palm

Radiographs: Carpal Tunnel View



Case courtesy of Maulik S Patel, Radiopaedia.org, rID: 72958

SBHPP – ORTHOEXCEL 2026

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

- Ganglion cyst / STT arthritis
- Tendinitis
- **(rare) Hook of Hamate fracture**

Exam

- ✓ Point tender in the palm over Hook of Hamate
- ✓ Pain with RROM ring + small finger flexion with wrist in Ulnar Deviation

+/- Edema

Normal wrist AROM

Plan

Velcro wrist cock-up brace/splint
OTC pain meds
Refer to Hand Surgery for discussion of options!

CC: VOLAR WRIST/PALMAR HAND PAIN

DIFFERENTIAL DIAGNOSES:

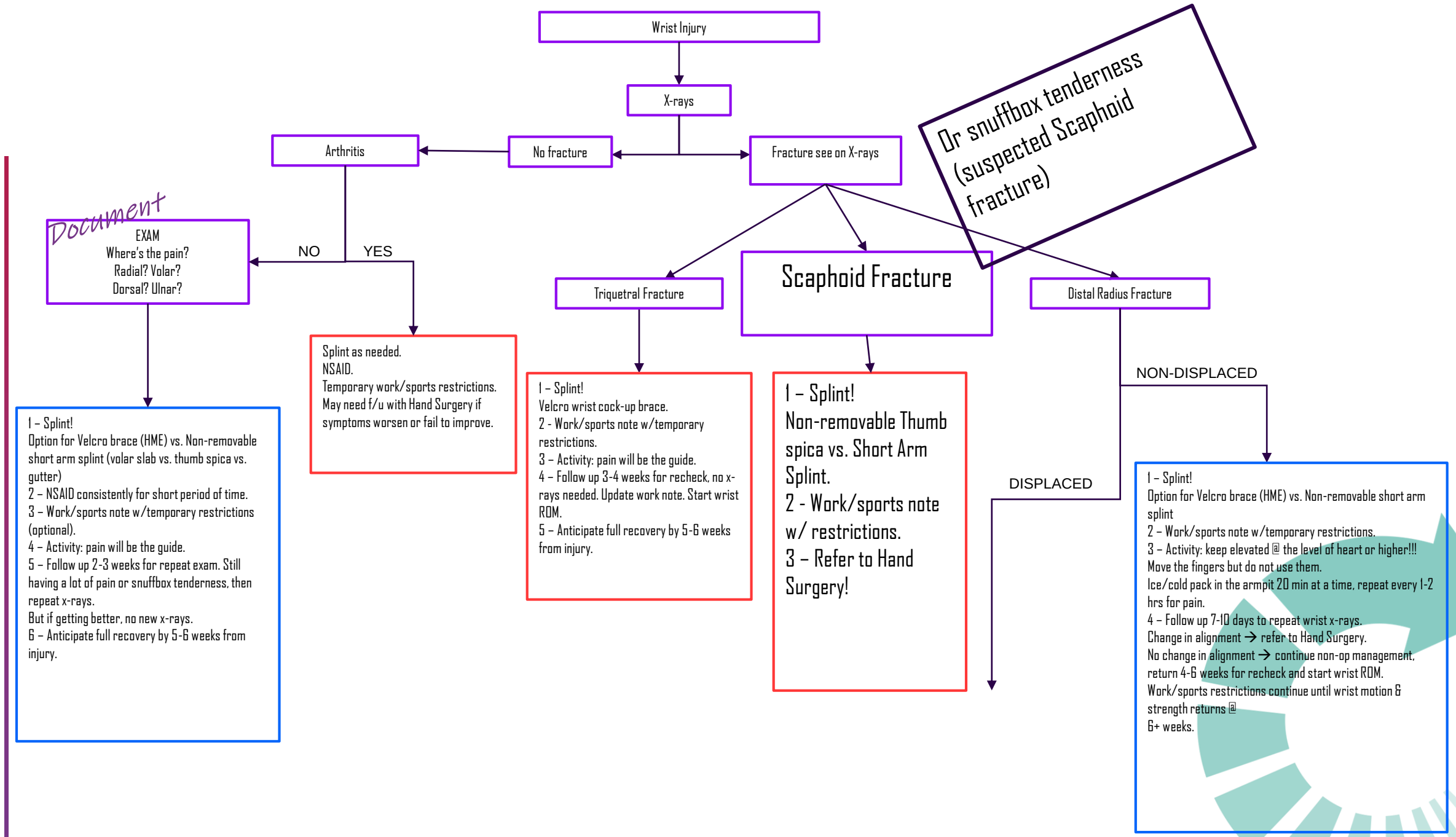
- Ganglion cyst / STT arthritis
- Tendinitis
- (rare) Hook of Hamate fracture



But also Carpal Tunnel Syndrome...

Remember what we talked about before lunch? ;-)

SBHPP – ORTHOEXCEL 2026


Wrist Injury
X-rays
No fracture
Arthritis
Fracture see on X-rays
Or snuffbox tenderness (suspected Scaphoid fracture)
Document
EXAM
Where's the pain?
Radial? Volar?
Dorsal? Ulnar?
NO
YES
Splint as needed.
NSAID.
Temporary work/sports restrictions.
May need f/u with Hand Surgery if symptoms worsen or fail to improve.
1 – Splint!
Option for Velcro brace (HME) vs. Non-removable short arm splint (volar slab vs. thumb spica vs. gutter)
2 – NSAID consistently for short period of time.
3 – Work/sports note w/temporary restrictions (optional).
4 – Activity: pain will be the guide.
5 – Follow up 2-3 weeks for repeat exam. Still having a lot of pain or snuffbox tenderness, then repeat x-rays.
But if getting better, no new x-rays.
6 – Anticipate full recovery by 5-6 weeks from injury.
Triquetral Fracture
1 – Splint!
Velcro wrist cock-up brace.
2 - Work/sports note w/temporary restrictions.
3 – Activity: pain will be the guide.
4 – Follow up 3-4 weeks for recheck, no x-rays needed. Update work note. Start wrist ROM.
5 – Anticipate full recovery by 5-6 weeks from injury.
Scaphoid Fracture
1 – Splint!
Non-removable Thumb spica vs. Short Arm Splint.
2 - Work/sports note w/ restrictions.
3 – Refer to Hand Surgery!
Distal Radius Fracture
NON-DISPLACED
DISPLACED
1 – Splint!
Option for Velcro brace (HME) vs. Non-removable short arm splint
2 – Work/sports note w/temporary restrictions.
3 – Activity: keep elevated @ the level of heart or higher!!!
Move the fingers but do not use them.
Ice/cold pack in the armpit 20 min at a time, repeat every 1-2 hrs for pain.
4 – Follow up 7-10 days to repeat wrist x-rays.
Change in alignment → refer to Hand Surgery.
No change in alignment → continue non-op management, return 4-6 weeks for recheck and start wrist ROM.
Work/sports restrictions continue until wrist motion & strength returns @
6+ weeks.

CC: RADIAL-SIDED WRIST PAIN

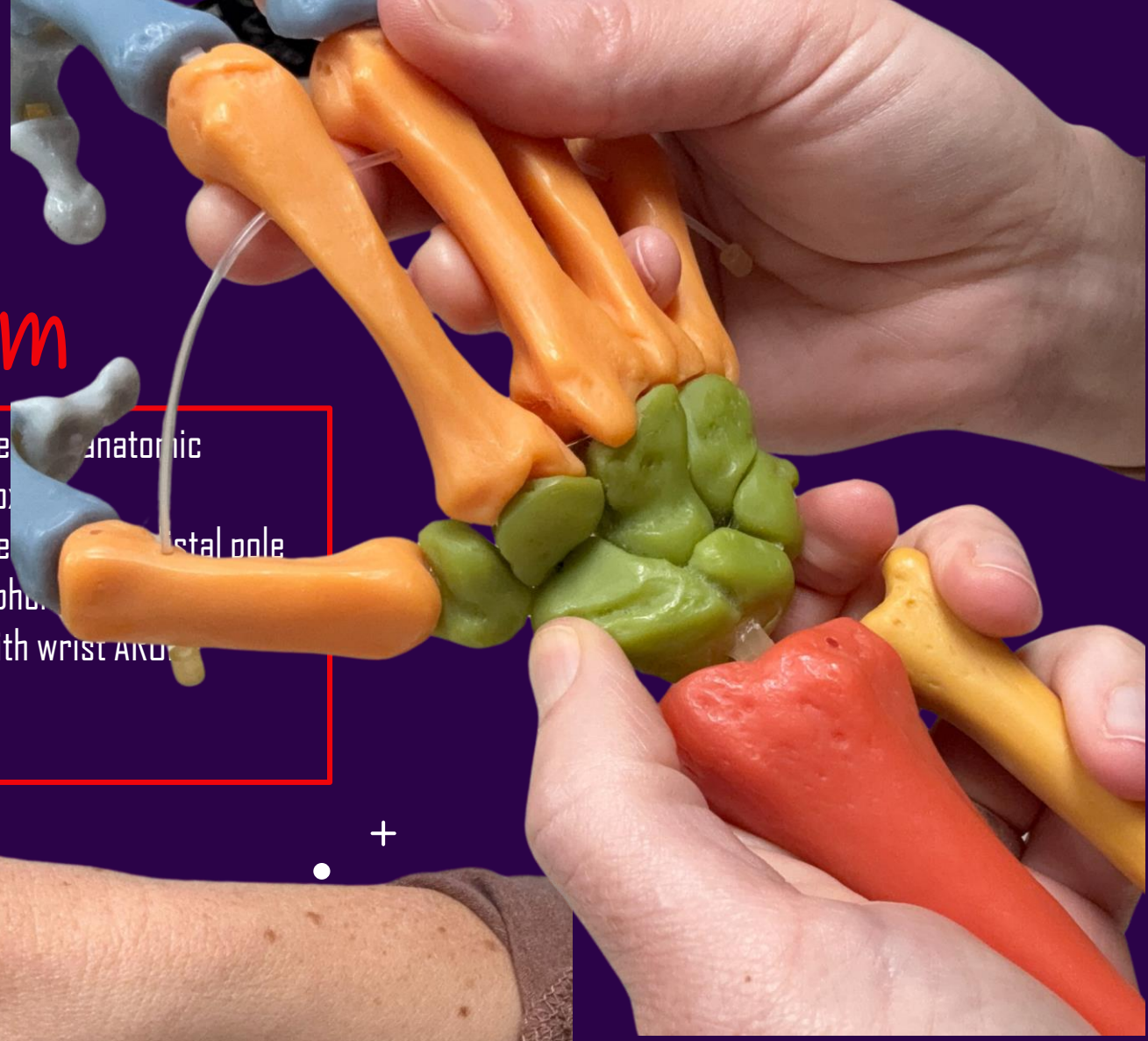
DIFFERENTIAL DIAGNOSES:

- **Scaphoid fracture**
- Thumb CMC arthritis
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
- Scapholunate (SL) ligament injury
- Wartenb[illegible] Syndrome

Exam

- ✓ Point te[illegible]natomic snuffbo[illegible]
- ✓ Point te[illegible]stal pole of Scapho[illegible]
- ✓ Pain with wrist AR[illegible]





CC: RADIAL-SIDED WRIST PAIN

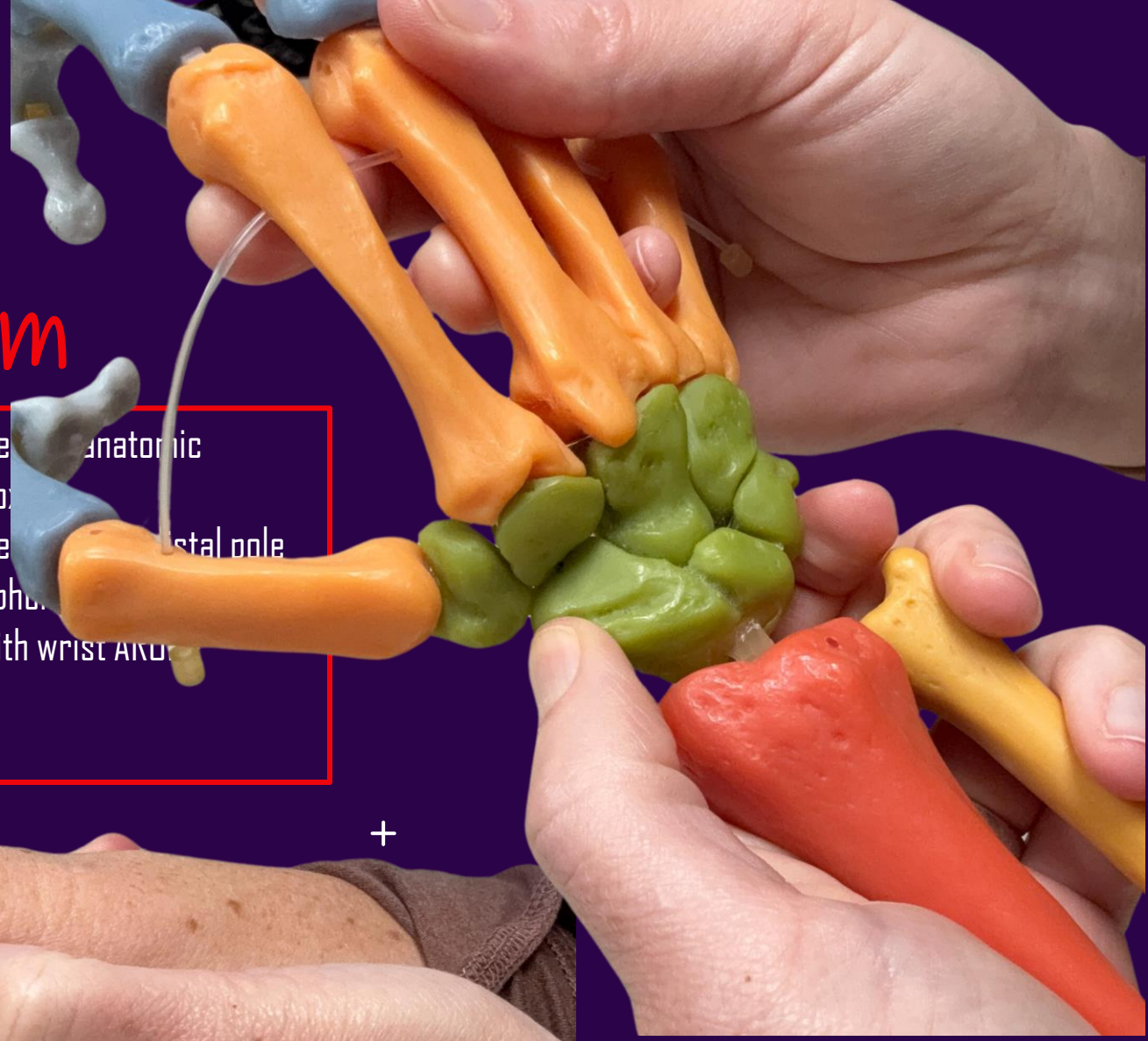
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- **Scaphoid fracture**
- Thumb CMC arthritis
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
- Scapholunate (SL) ligament injury
- Warte[illegible]rg Syndrome

Exam

- ✓ Point te[illegible]natomic snuffbo[illegible]
- ✓ Point te[illegible]stal pole of Scapho[illegible]
- ✓ Pain with wrist AR[illegible]



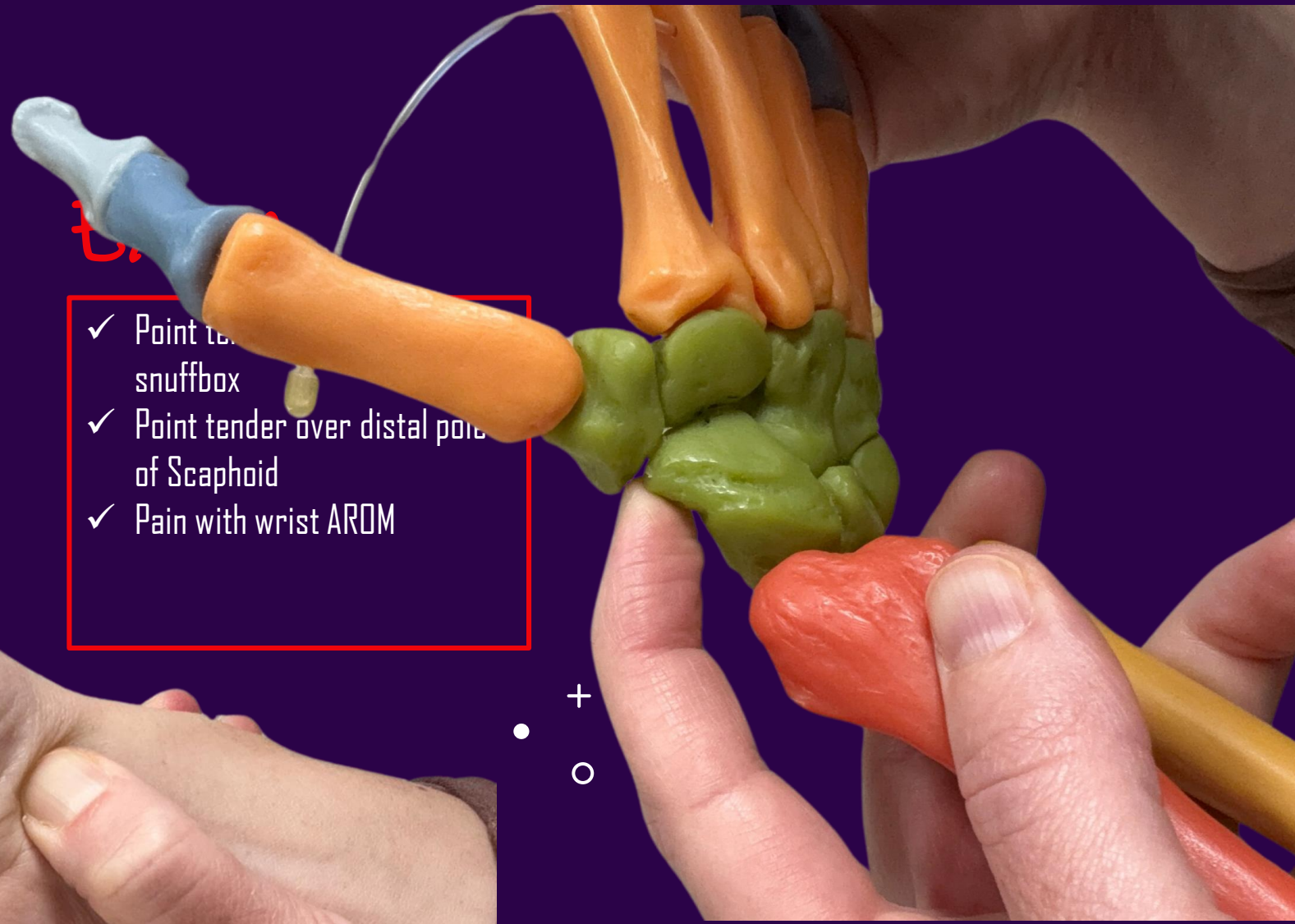


CC: RADIAL-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- **Scaphoid fracture**
- Thumb CMC arthritis
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
- Scapholunate (SL) ligament injury
- Wartenberg Syndrome





- ✓ Point te… snuffbox
- ✓ Point tender over distal pole of Scaphoid
- ✓ Pain with wrist AROM

CC: RADIAL-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- **Scaphoid fracture**
- Thumb CMC arthritis
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
- Scapholunate (SL) ligament injury
- Wartenberg Syndrome

Exam

- ✓ Point tender anatomic snuffbox
- ✓ Point tender over distal pole of Scaphoid
- ✓ Pain with wrist AROM

Plan

Splint: non-removable thumb spica fiberglass splint vs. volar short arm fiberglass splint.
Follow up in 2 weeks for recheck + repeat X-rays.
Persistent snuffbox tenderness with (-) X-rays → MRI without contrast.

CC: RADIAL-SIDED WRIST PAIN

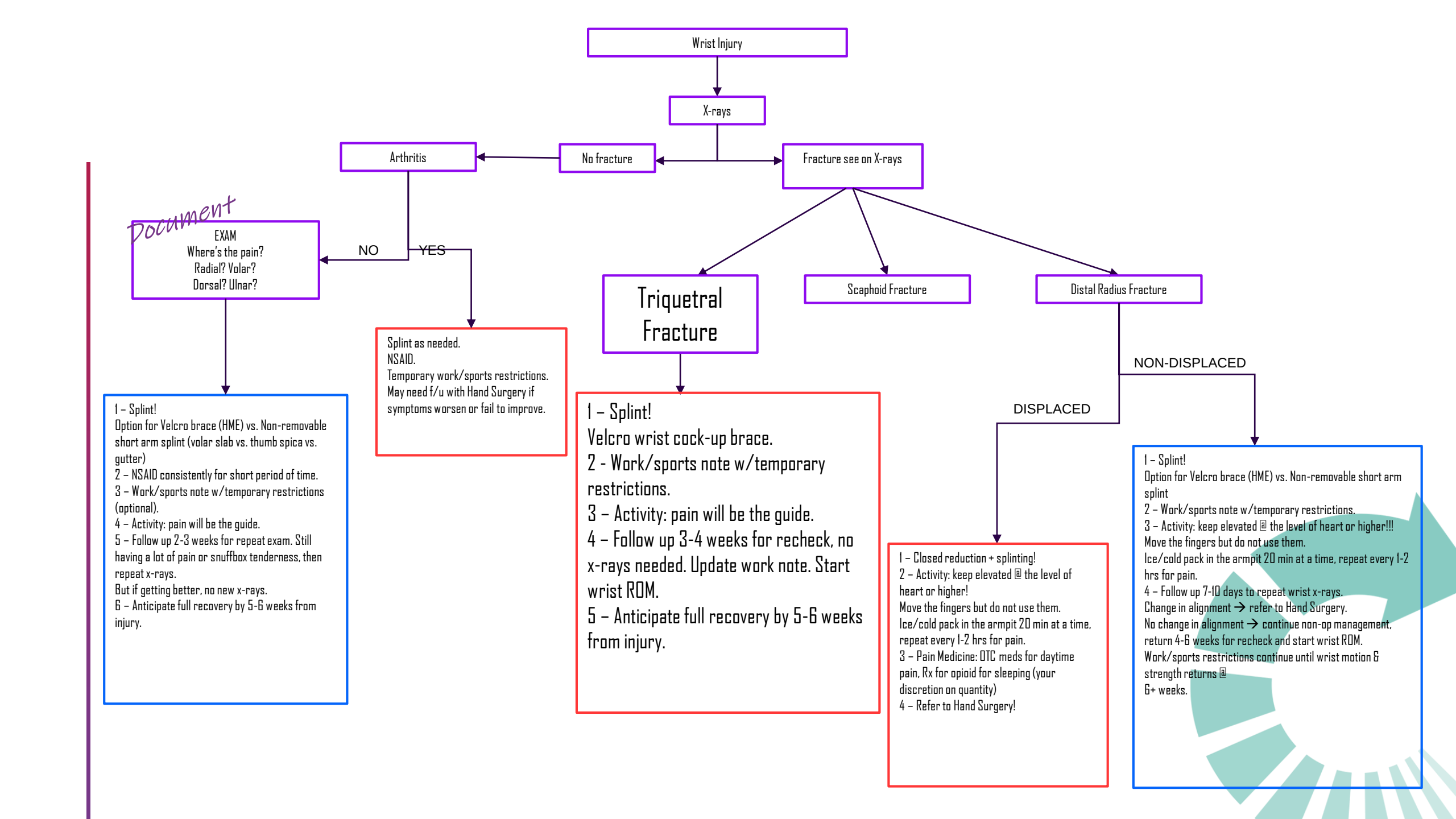
DIFFERENTIAL DIAGNOSES:

- **Scaphoid fracture**
- Thumb CMC arthritis
- deQuervain's tendinitis/tenosynovitis
- Intersection Syndrome
- Scapholunate (SL) ligament injury
- Wartenberg Syndrome



Plan

Splint: non-removable thumb spica fiberglass splint vs. volar short arm fiberglass splint.
Follow up in 2 weeks for recheck + repeat X-rays.
Persistent snuffbox tenderness with (-) X-rays → MRI without contrast.


Wrist Injury
X-rays
No fracture
Arthritis
Fracture see on X-rays
Document
EXAM
Where's the pain?
Radial? Volar?
Dorsal? Ulnar?
NO
YES
1 – Splint!
Option for Velcro brace (HME) vs. Non-removable short arm splint (volar slab vs. thumb spica vs. gutter)
2 – NSAID consistently for short period of time.
3 – Work/sports note w/temporary restrictions (optional).
4 – Activity: pain will be the guide.
5 – Follow up 2-3 weeks for repeat exam. Still having a lot of pain or snuffbox tenderness, then repeat x-rays.
But if getting better, no new x-rays.
6 – Anticipate full recovery by 5-6 weeks from injury.
Splint as needed.
NSAID.
Temporary work/sports restrictions.
May need f/u with Hand Surgery if symptoms worsen or fail to improve.
Triquetral Fracture
1 – Splint!
Velcro wrist cock-up brace.
2 - Work/sports note w/temporary restrictions.
3 – Activity: pain will be the guide.
4 – Follow up 3-4 weeks for recheck, no x-rays needed. Update work note. Start wrist ROM.
5 – Anticipate full recovery by 5-6 weeks from injury.
Scaphoid Fracture
Distal Radius Fracture
DISPLACED
NON-DISPLACED
1 – Closed reduction + splinting!
2 – Activity: keep elevated @ the level of heart or higher!
Move the fingers but do not use them.
Ice/cold pack in the armpit 20 min at a time, repeat every 1-2 hrs for pain.
3 – Pain Medicine: OTC meds for daytime pain, Rx for opioid for sleeping (your discretion on quantity)
4 – Refer to Hand Surgery!
1 – Splint!
Option for Velcro brace (HME) vs. Non-removable short arm splint
2 – Work/sports note w/temporary restrictions.
3 – Activity: keep elevated @ the level of heart or higher!!!
Move the fingers but do not use them.
Ice/cold pack in the armpit 20 min at a time, repeat every 1-2 hrs for pain.
4 – Follow up 7-10 days to repeat wrist x-rays.
Change in alignment → refer to Hand Surgery.
No change in alignment → continue non-op management, return 4-6 weeks for recheck and start wrist ROM.
Work/sports restrictions continue until wrist motion & strength returns @
6+ weeks.

CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- **Triquetral fracture**



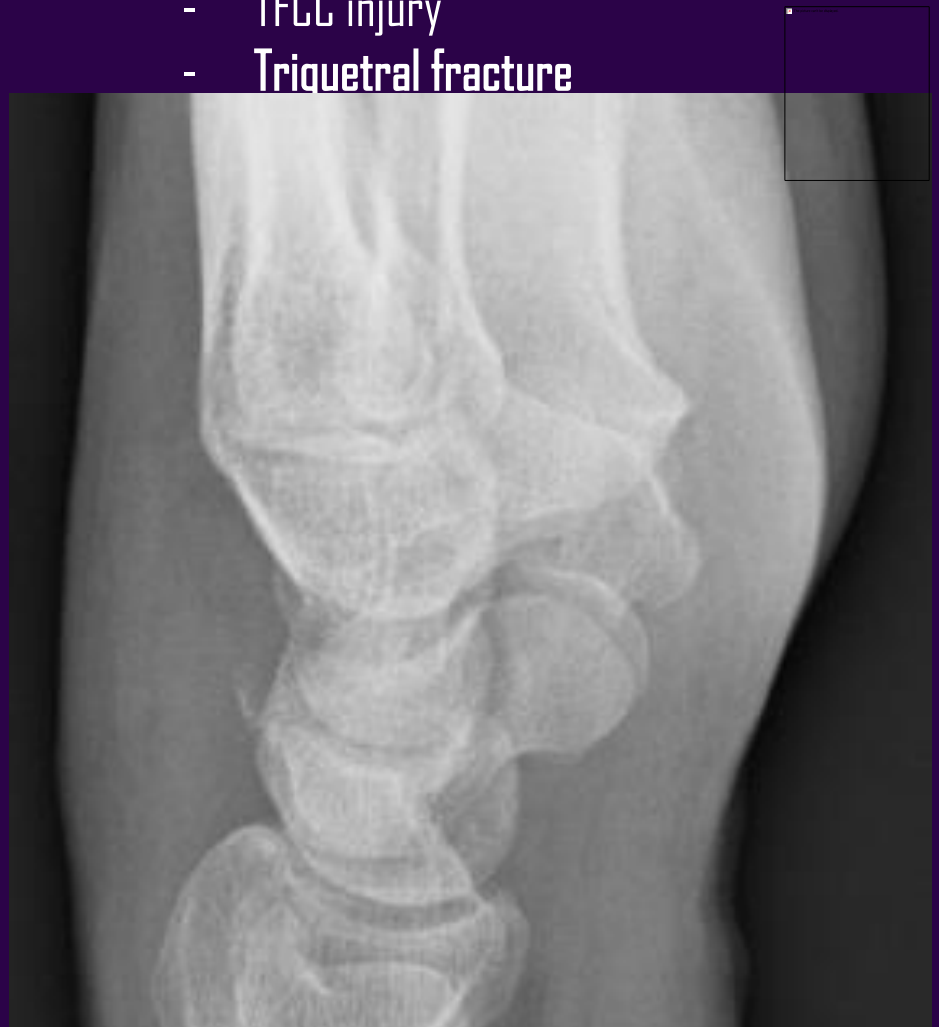




CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- **Triquetral fracture**



Exam

- ✓ Point tender over dorsal Triquetrum
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM
- +/- Edema dorsal ulnar wrist



CC: ULNAR-SIDED WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- ECU tendinitis
- TFCC injury
- **Triquetral fracture**



Exam

- ✓ Point tender over dorsal Triquetrum
- +/- Decreased wrist AROM
- +/- Pain with wrist AROM
- +/- Edema dorsal ulnar wrist



Plan

Velcro wrist cock-up brace/splint
NSAID
Ice
Temporary work/sports restrictions as the fracture takes about 6 weeks to heal.
Do not need repeat X-rays.
Around 4 weeks from injury, start wrist ROM.
Can have achy pain up to 8-10 weeks even after fracture is healed.


GILULA LINES
RADIOCARPAL JT
TFCC
DRUJ


GILULA LINES
RADIOCARPAL JT
TFCC
DRUJ

CC: DORSAL WRIST PAIN

DIFFERENTIAL DIAGNOSES:

- Occult Ganglion Cyst
- Scapholunate ligament injury
- Wrist arthritis
- Tendinitis
- **Perilunate dislocation**

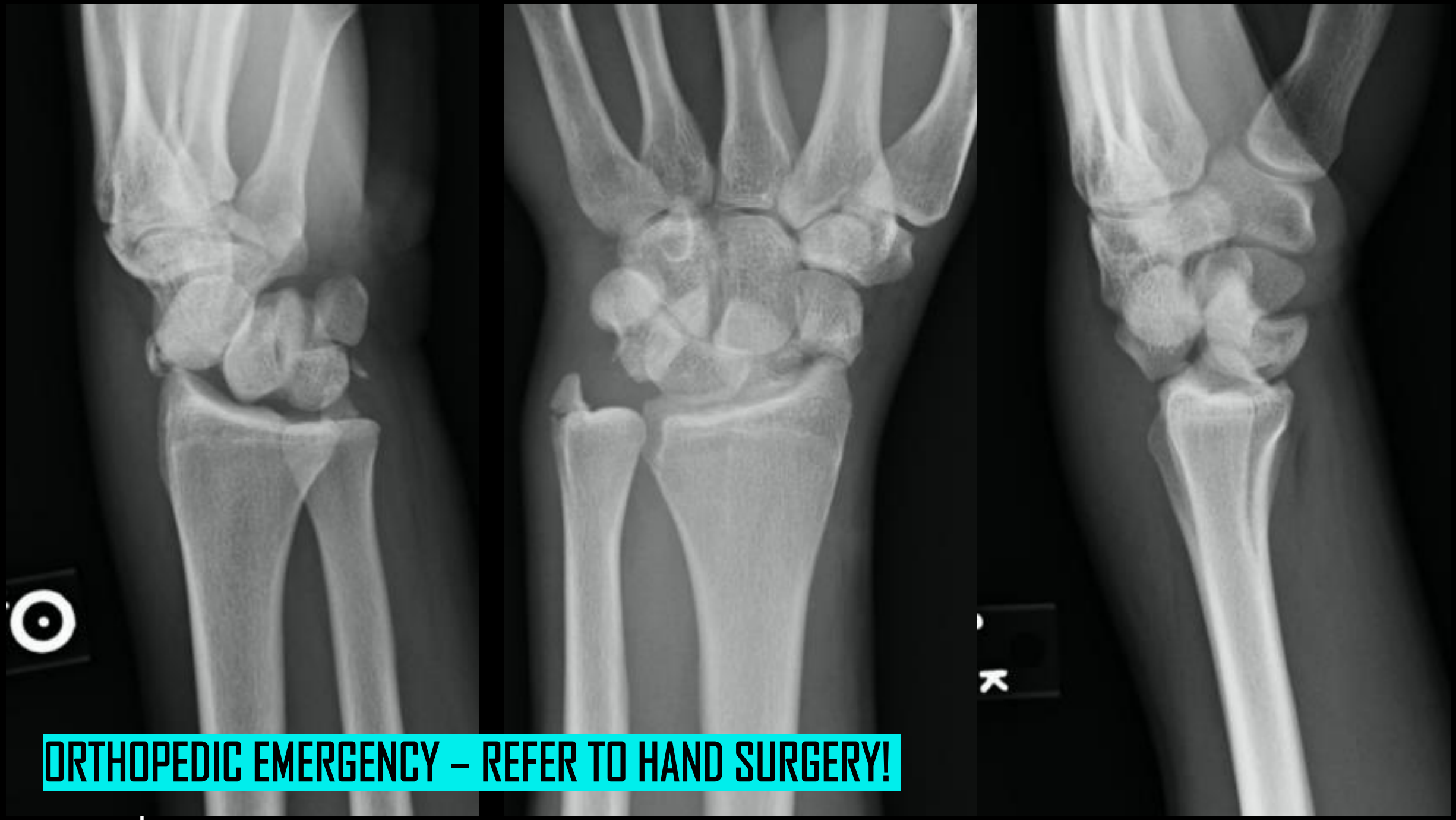
MOI

- ✓ High energy TRAUMA

Exam

- ✓ Will not move wrist at all
- ✓ Edema
- ✓ Cap refill
- ✓ Sensation

X-rays

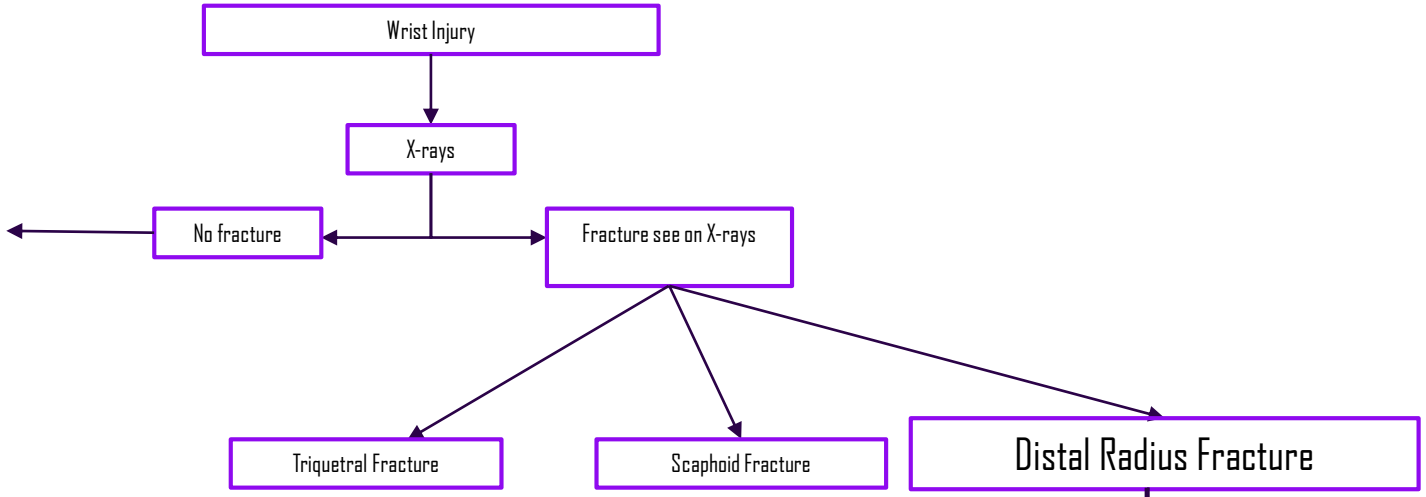

ORTHOPEDIC EMERGENCY – REFER TO HAND SURGERY!







ORTHOPEDIC EMERGENCY – REFER TO HAND SURGERY!



DISPLACED

1 – Closed reduction + splinting!
2 – Activity: keep elevated @ the level of heart or higher!
Move the fingers but do not use them.
Ice/cold pack in the armpit 20 min at a time, repeat every 1-2 hrs for pain.
3 – Pain Medicine: OTC meds for daytime pain, Rx for opioid for sleeping (your discretion on quantity)
4 – Refer to Hand Surgery!

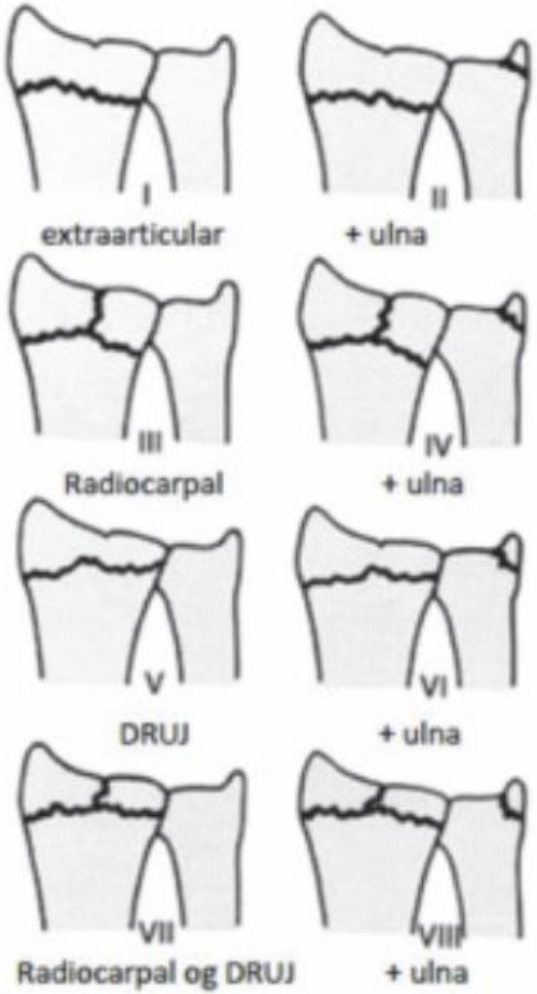
NON-DISPLACED

1 – Splint!
Option for Velcro brace (HME) vs. Non-removable short arm splint
2 – Work/sports note w/temporary restrictions.
3 – Activity: keep elevated @ the level of heart or higher!!!
Move the fingers but do not use them.
Ice/cold pack in the armpit 20 min at a time, repeat every 1-2 hrs for pain.
4 – Follow up 7-10 days to repeat wrist x-rays.
Change in alignment → refer to Hand Surgery.
No change in alignment → continue non-op management, return 4-6 weeks for recheck and start wrist ROM.
Work/sports restrictions continue until wrist motion & strength returns @
6+ weeks.

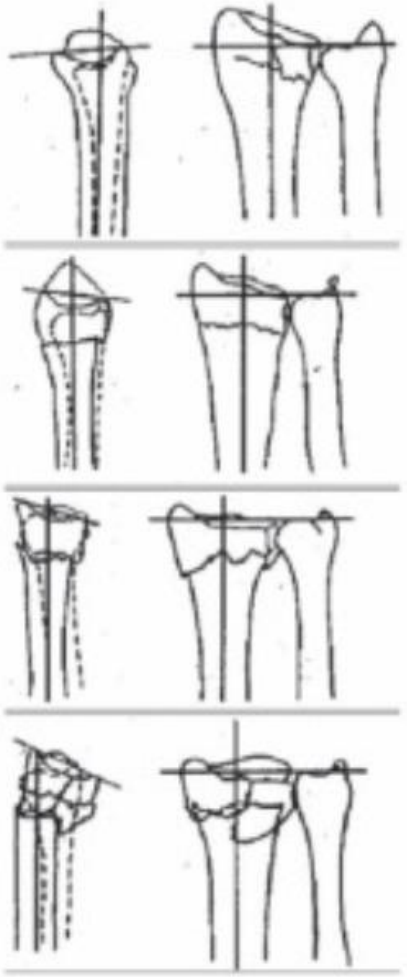
AO/OTA



Frykman



Older



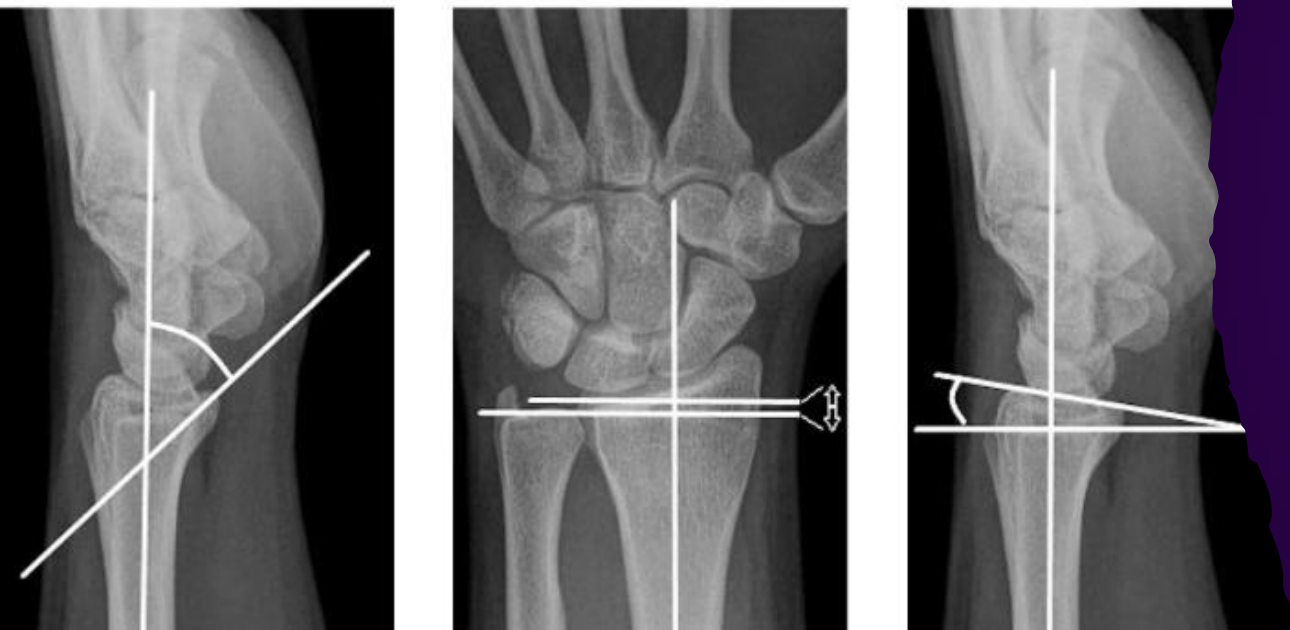
Type I: Dorsal angulation up to 5°, radial length to ulna at least 7 mm

Type II: Dorsal angulation, radial length 1-7 mm, no comminution

Type III: Dorsal radius comminute, radial length less than 4 mm, distal fragment slightly comminuted

Type IV: Marked comminution, radial length usually negative





RADIOGRAPHIC MEASUREMENTS

APD – anteroposterior distance

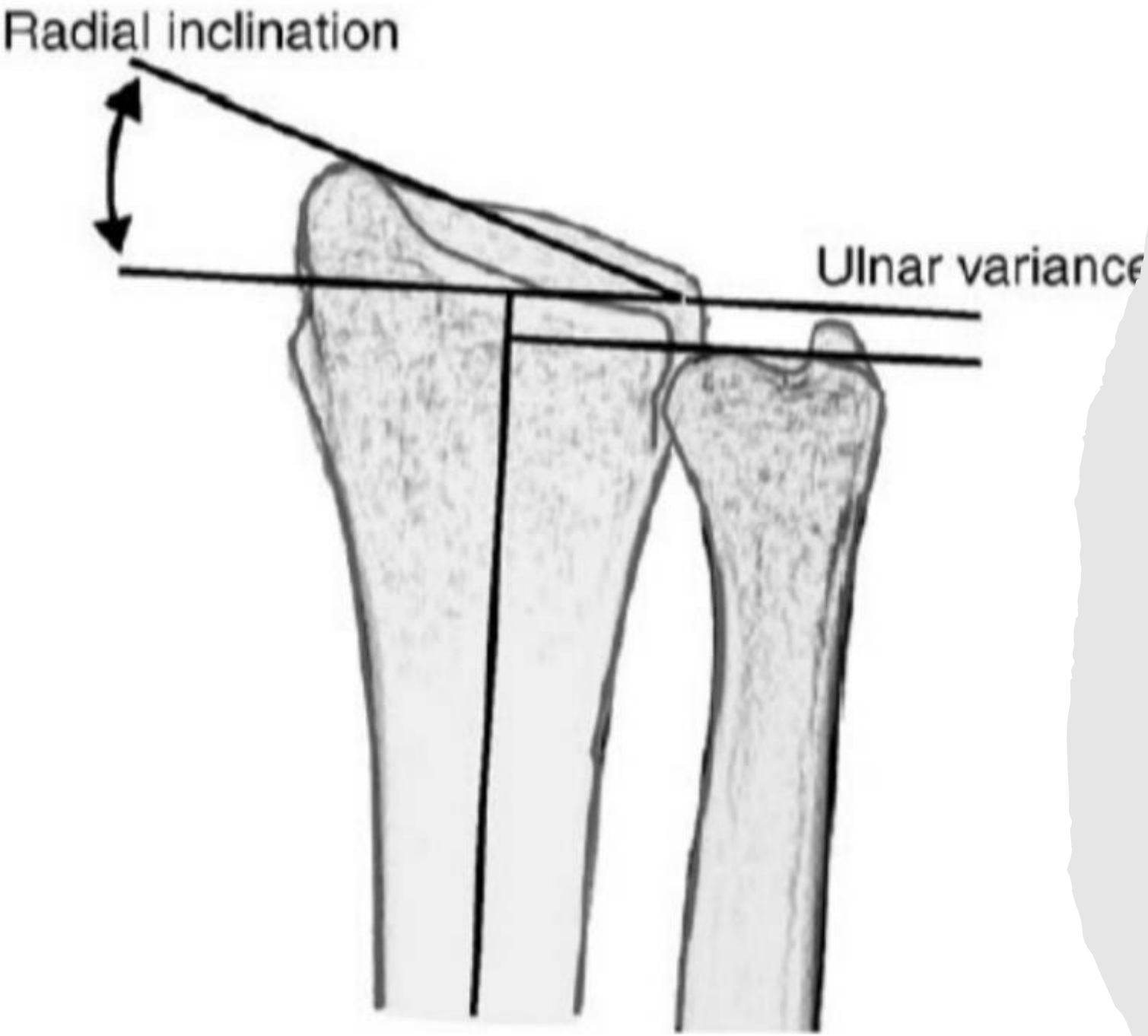
RH – radial height

RI – radial inclination

TDA – teardrop angle

UV – ulnar variance

VT – volar tilt



DISTAL RADIUS MEASUREMENTS

PA view

Radial Inclination:

- 19-22 degrees

Ulnar Variance:

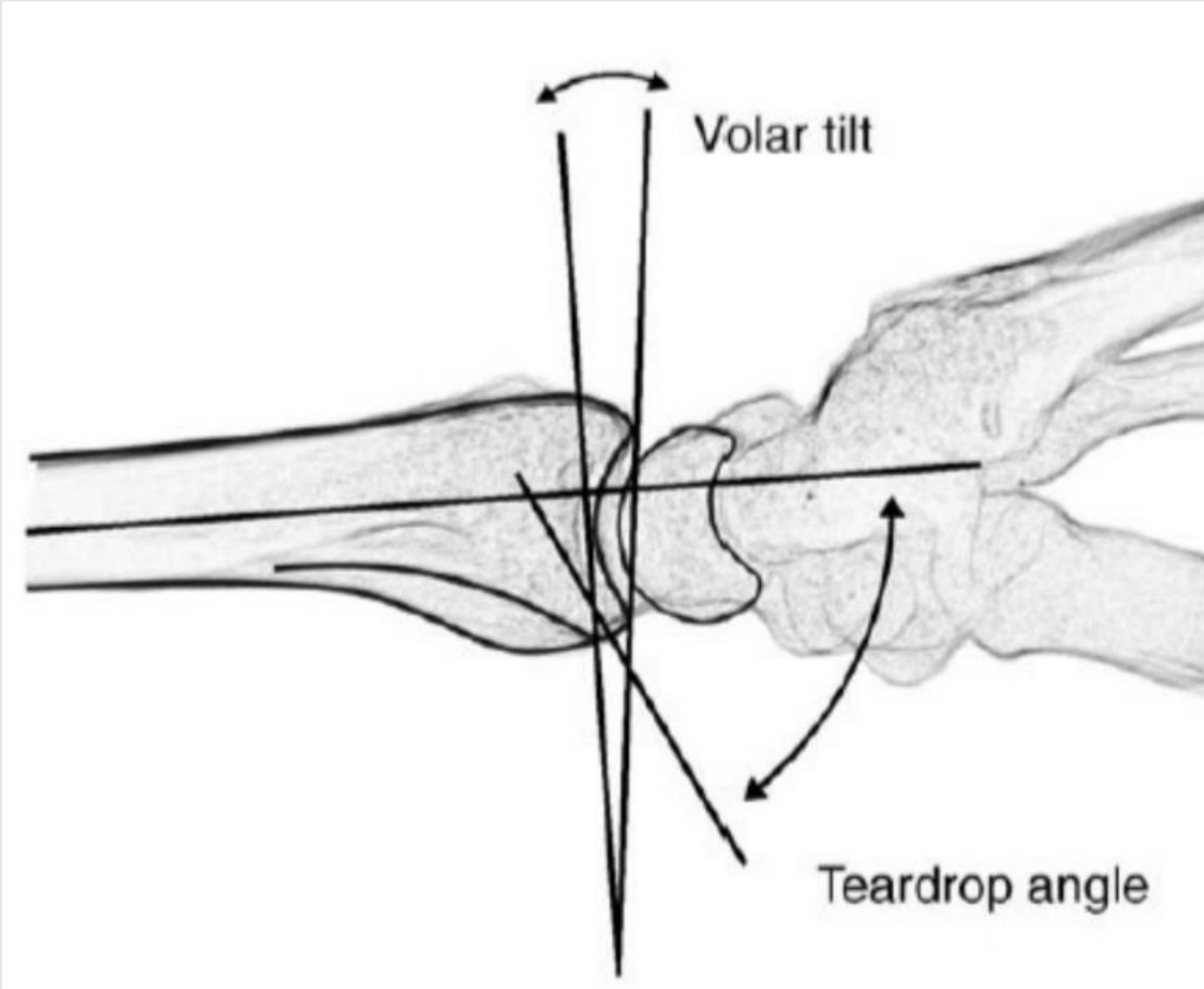
- Ulnar neutral to ulnar negative
- Within 2-3 mm of contralateral wrist

DISTAL RADIUS MEASUREMENTS

Lateral view

Tilt/Angulation:

- Described as dorsal or volar
- 11-12 degrees is average, though 0-20 degrees is acceptable.



DISTAL RADIUS MEASUREMENTS

PA view

Radial Inclination:

- **19-22 degrees**

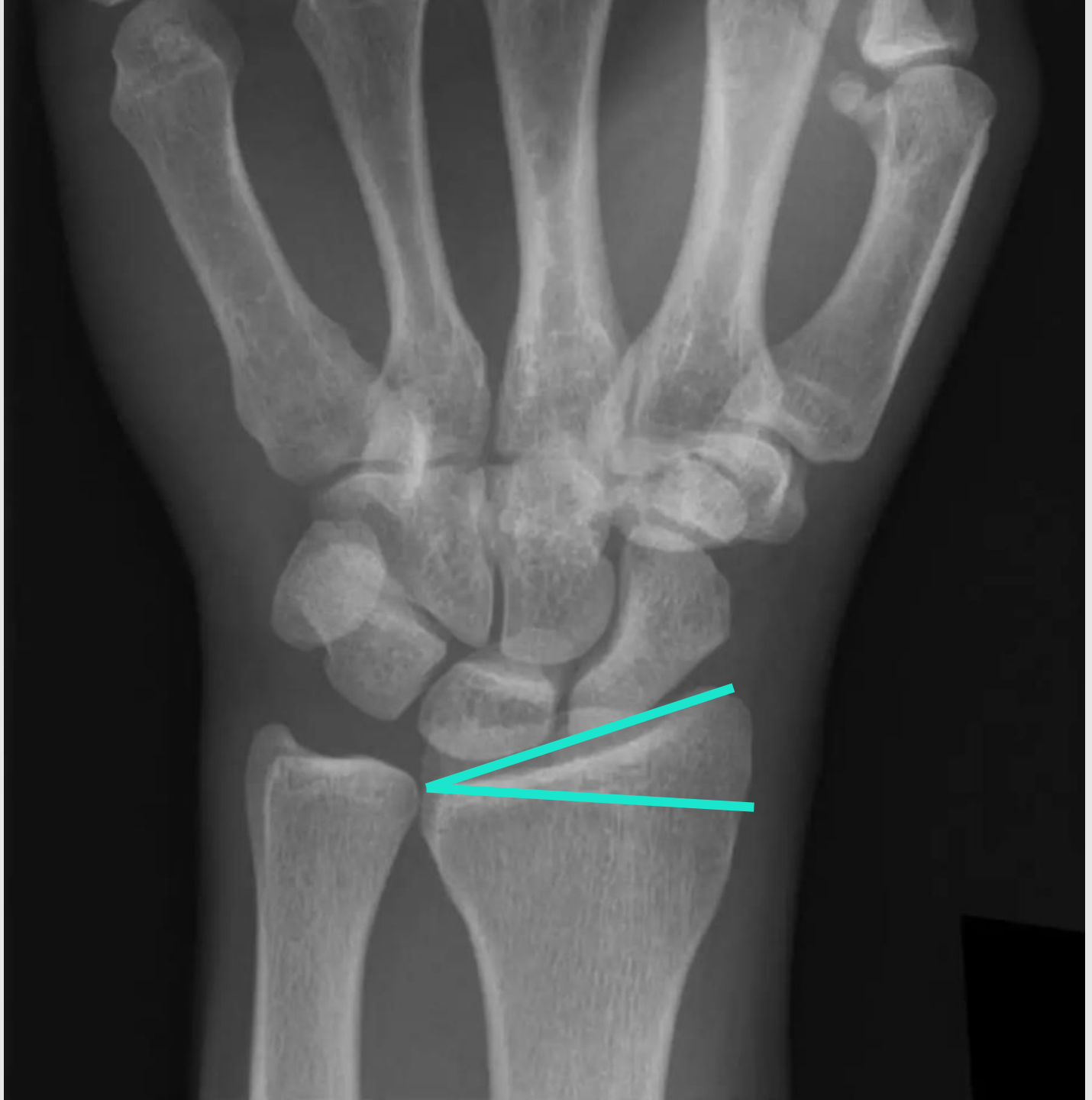
Ulnar Variance:

- Ulnar neutral to ulnar negative
- Within 2-3 mm of contralateral wrist

Lateral view

Tilt/Angulation:

- Described as dorsal or volar
- 11-12 degrees is average, though 0-20 degrees is acceptable.



DISTAL RADIUS MEASUREMENTS

PA view

Radial Inclination:

- 19-22 degrees

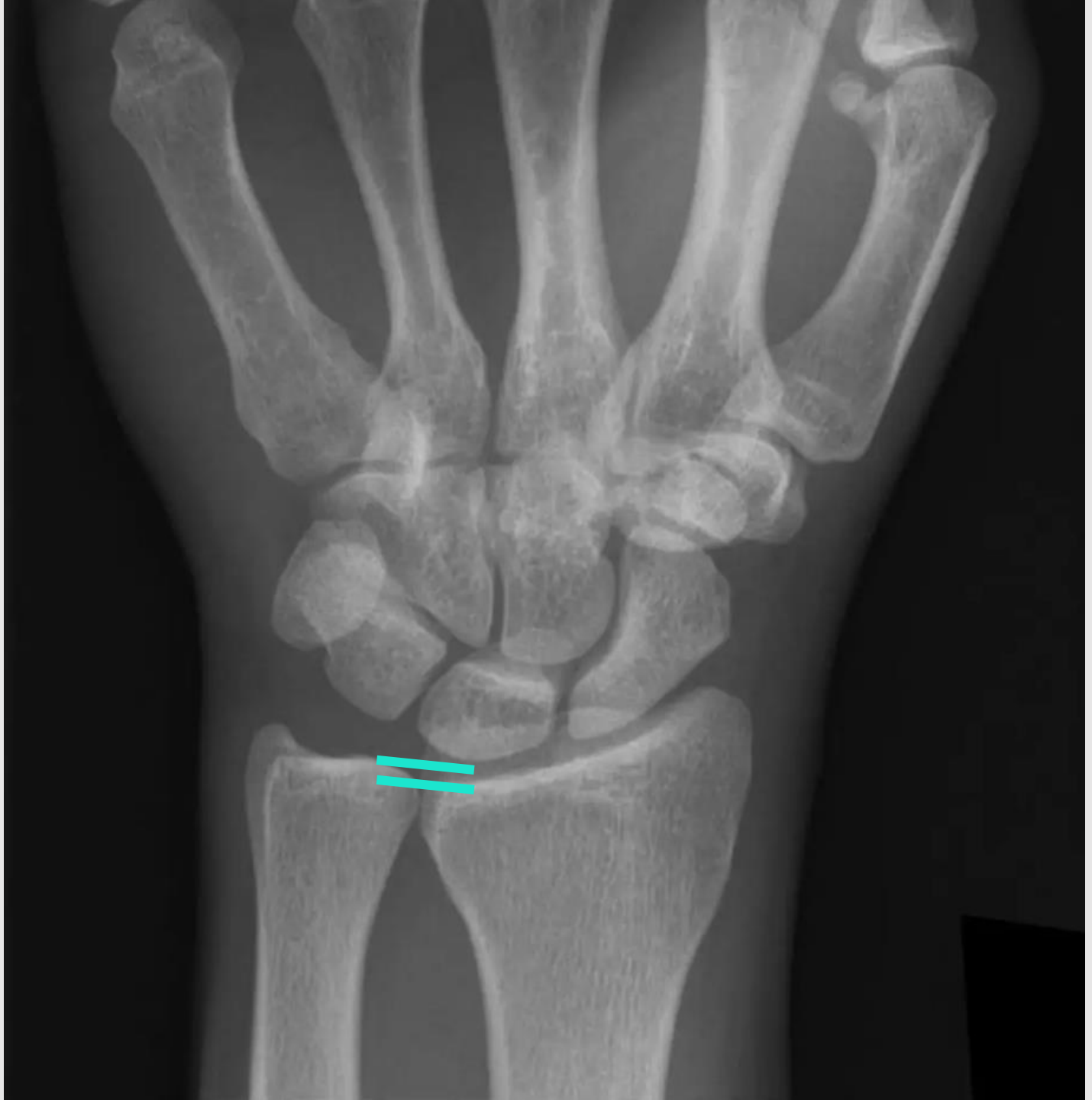
Ulnar Variance:

- **Ulnar neutral to ulnar negative**
- **Within 2-3 mm of contralateral wrist**

Lateral view

Tilt/Angulation:

- Described as dorsal or volar
- 11-12 degrees is average, though 0-20 degrees is acceptable.



DISTAL RADIUS MEASUREMENTS

PA view

Radial Inclination:

- 19-22 degrees

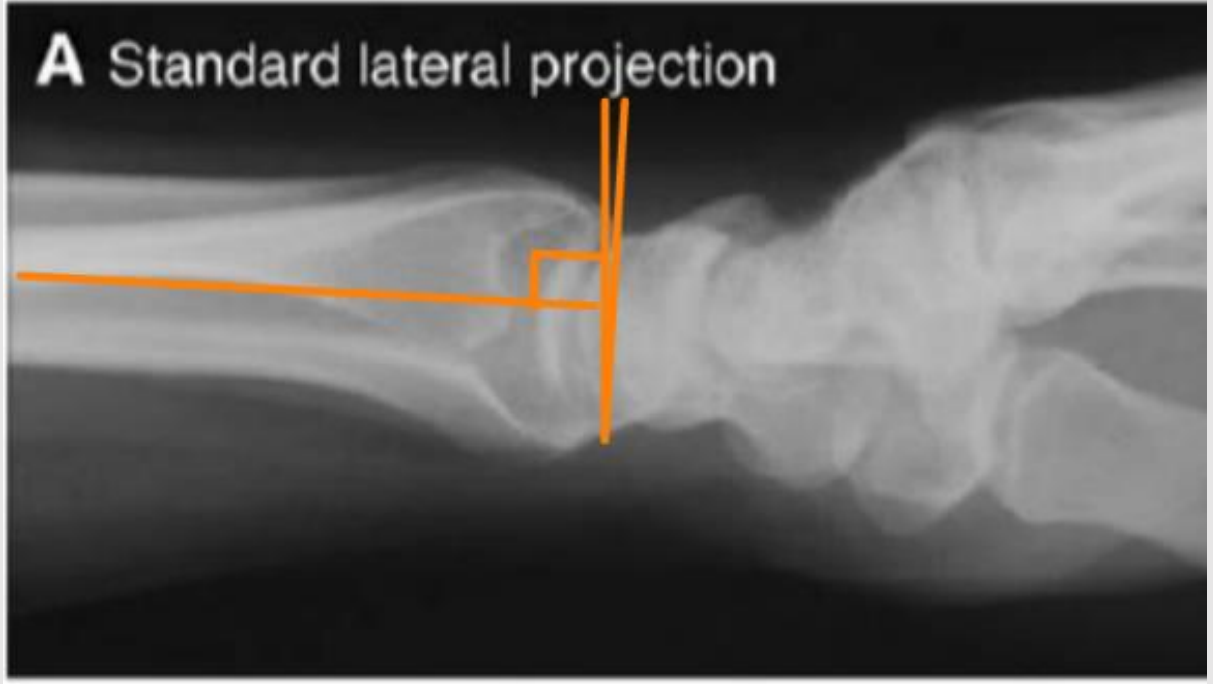
Ulnar Variance:

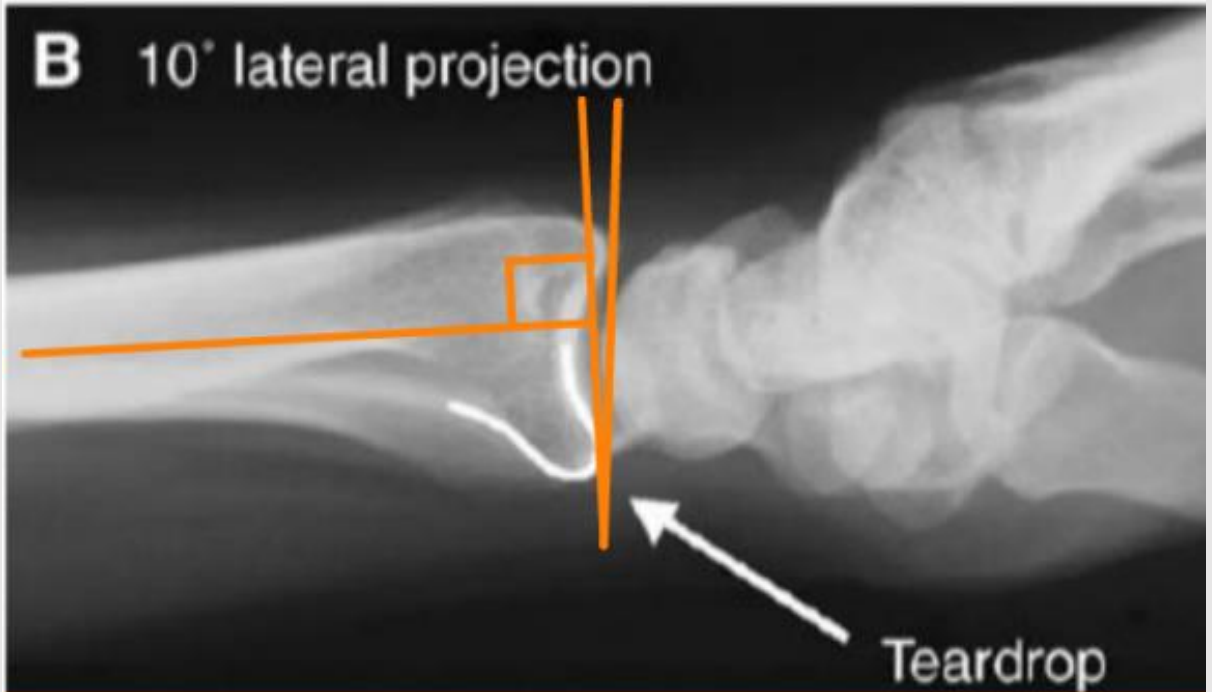
- Ulnar neutral to ulnar negative
- Within 2-3 mm of contralateral wrist

Lateral view

Tilt/Angulation:

- **Described as dorsal or volar**
- **11-12 degrees is average, though 0-20 degrees is acceptable.**





DISTAL RADIUS MEASUREMENTS

PA view

Radial Inclination:

- 19-22 degrees

Ulnar Variance:

- Ulnar neutral to ulnar negative
- Within 2-3 mm of contralateral wrist

Lateral view

Tilt/Angulation:

- **Described as dorsal or volar**
- **11-12 degrees is average, though 0-20 degrees is acceptable.**



Normal lateral wrist xray with the wrist in extension

CASE STUDIES



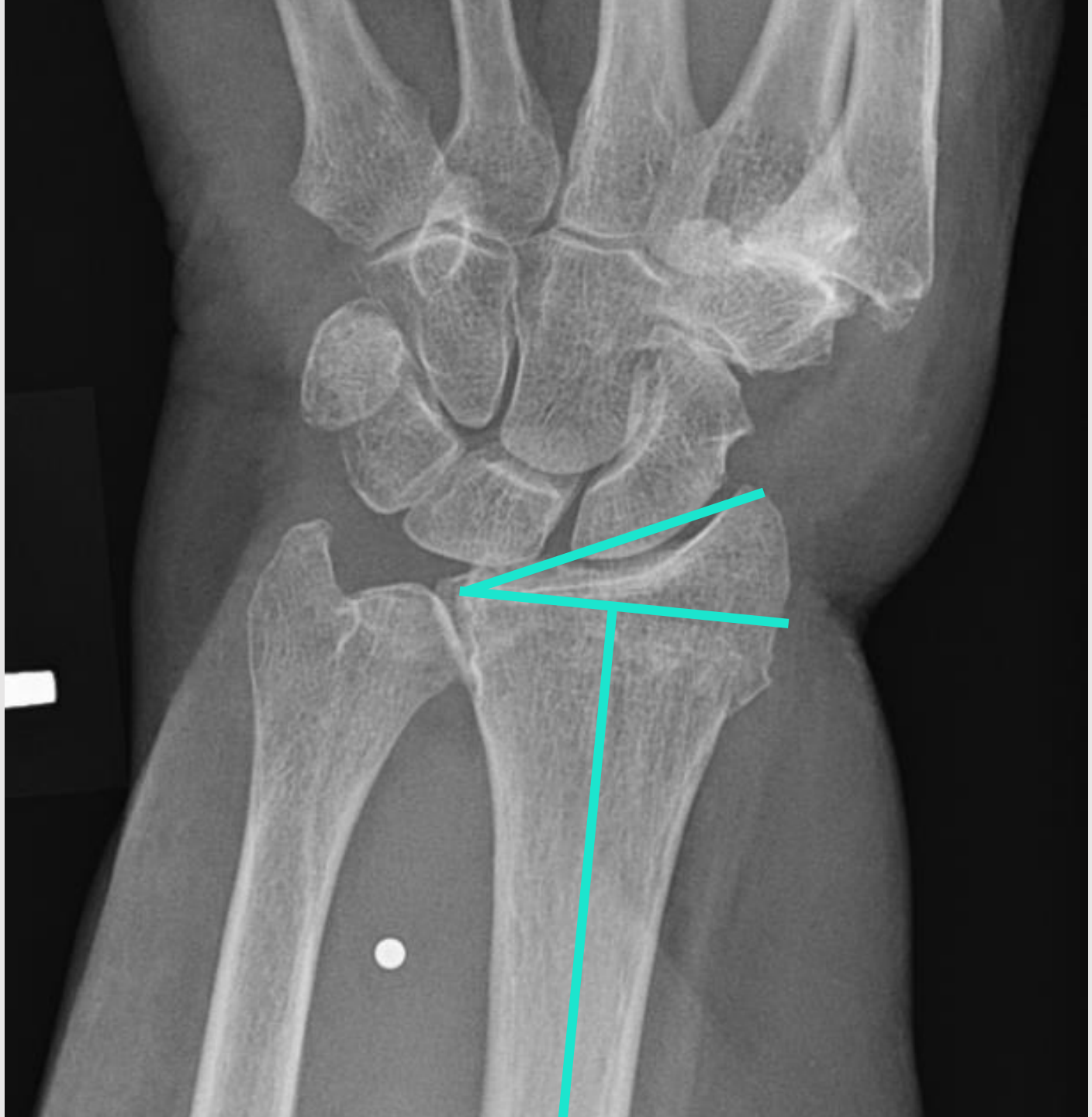
66 Y/O FEMALE, MOI: FOOSH LEFT HAND



66 Y/O FEMALE WHO FOOSH LEFT HAND

PA View

- [ ] Radial Inclination: _____
- [ ] Ulnar variance: _____

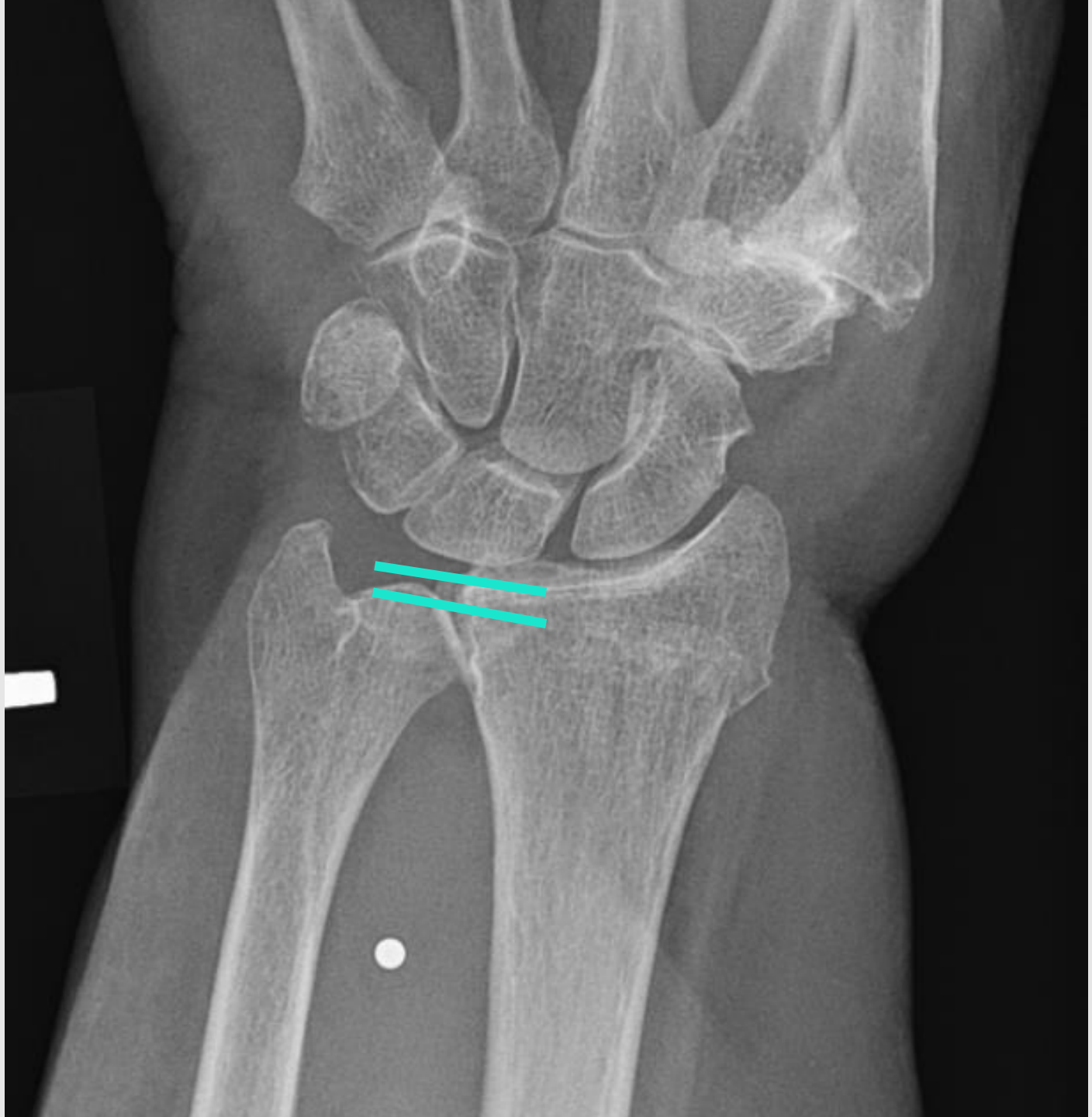


66 Y/O FEMALE

PA View

Radial Inclination: _____

Ulnar variance: _____



66 Y/O FEMALE

Lateral View

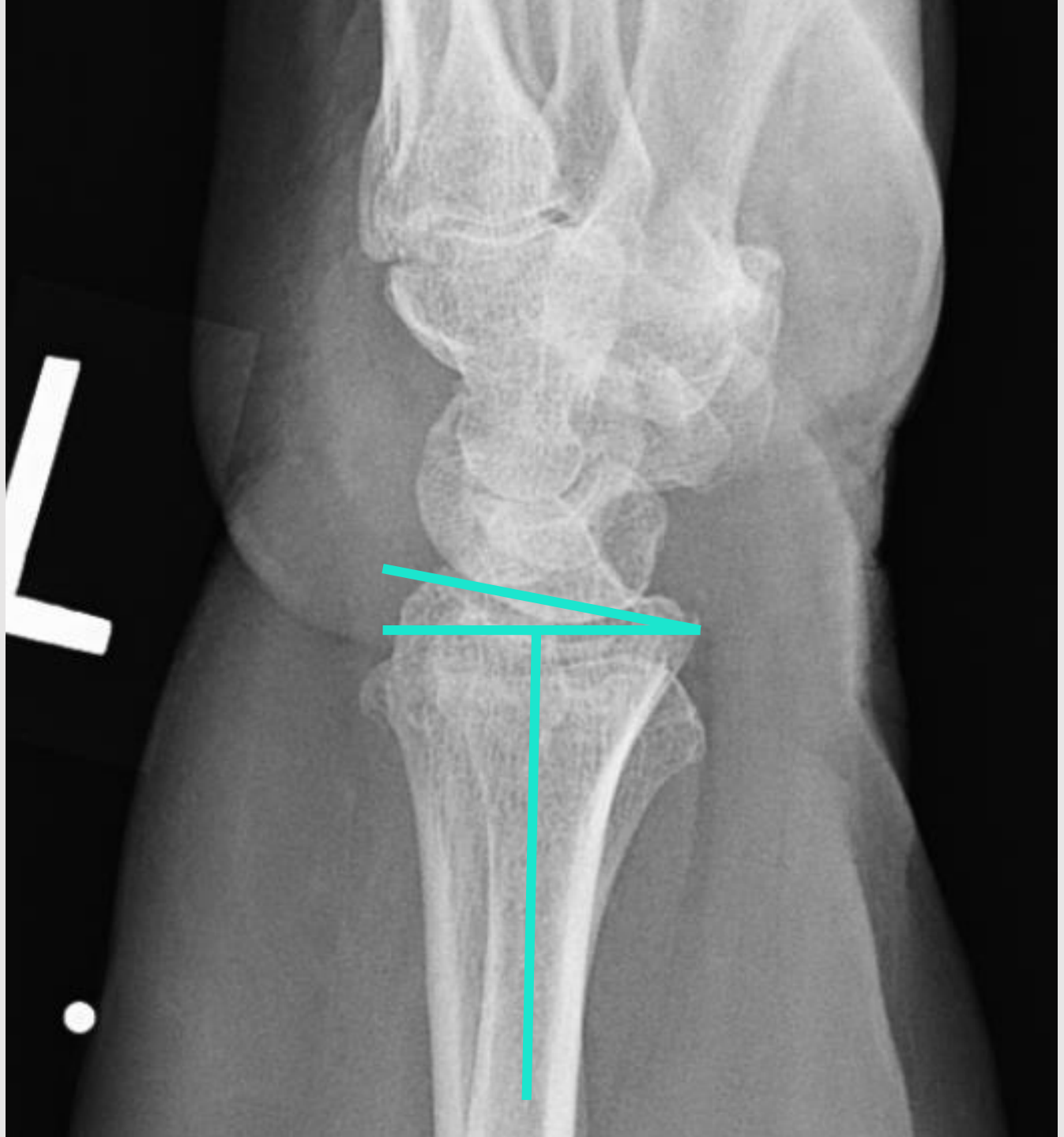
Tilt/Angulation: _____



66 Y/O FEMALE WHO

Lateral View

Tilt/Angulation: _____



66 Y/O FEMALE

"5 views of the left wrist show an **extra-articular distal radius fracture** with maintenance of radial inclination, ulnar negative variance, and volar tilt."

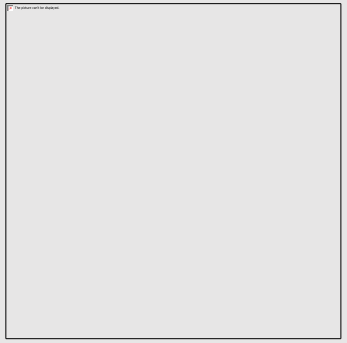




88 Y/O FEMALE, MOI: FELL OFF STEP LADDER WHILE PUTTING AWAY CHRISTMAS DECORATIONS



“4 views of the left wrist show a **left distal radius fracture with ~ 35 dorsal angulation**, loss of radial inclination, and ulnar positive variance.”







CLOSED REDUCTION AND SPLINTING



SUGARTONG SPLINT







SUGARTONG SPLINT









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Always keep reviewing the anatomy. What's under the skin?

Get X-rays of the area of pain.

"Point with one finger where you're having the most pain."

"What direction does the pain radiate?"

See a fracture on x-rays → splint!

Many subacute and chronic wrist conditions improve with non-op treatment!

Use the Ortho MDM Accelerator™ to determine initial treatment!

FINAL TIPS & TAKEAWAYS

THANK YOU

Vanessa JS Smith, PA-C

info@OrthoRefresh.com

I want to hear from you!

