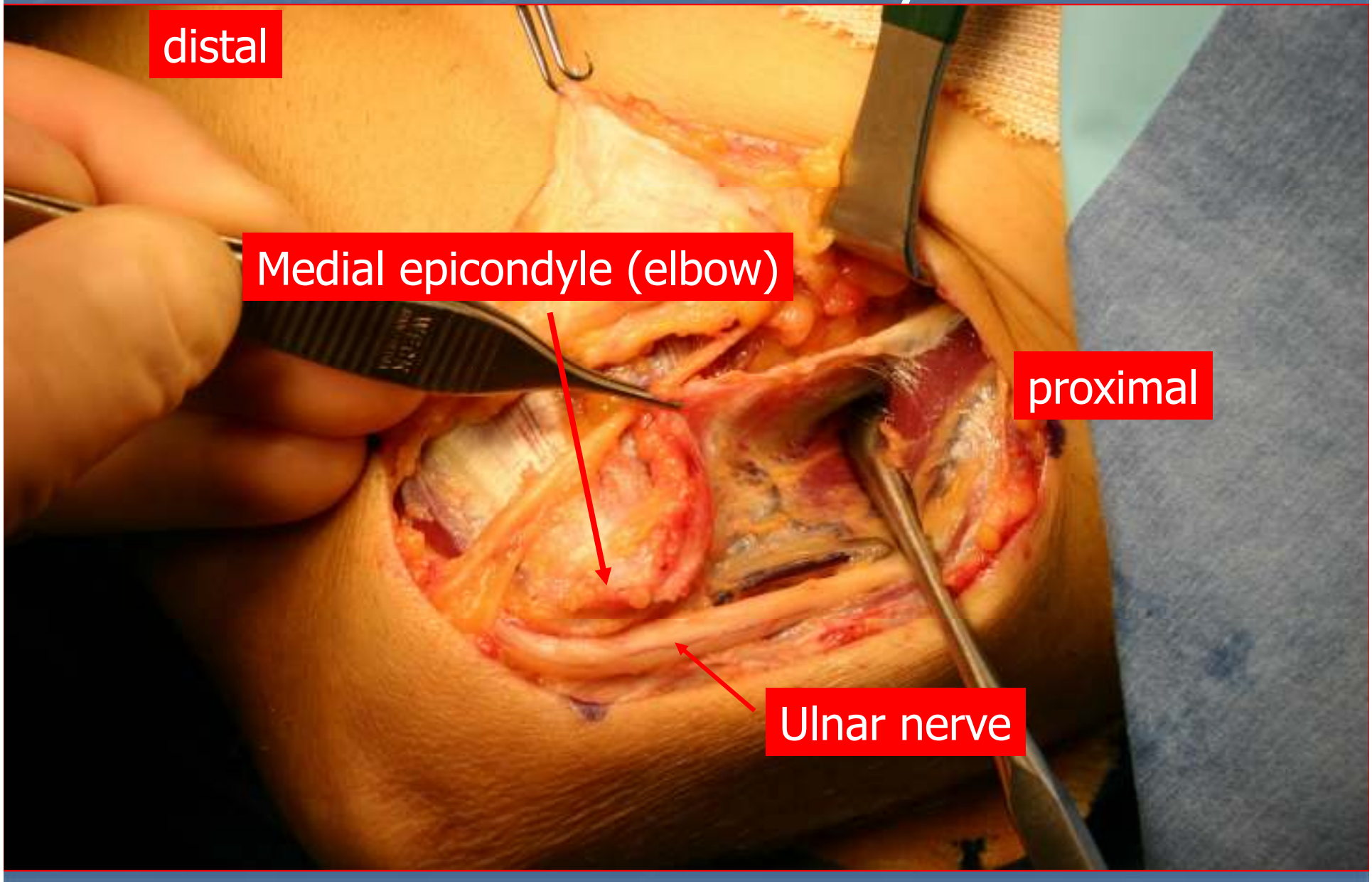
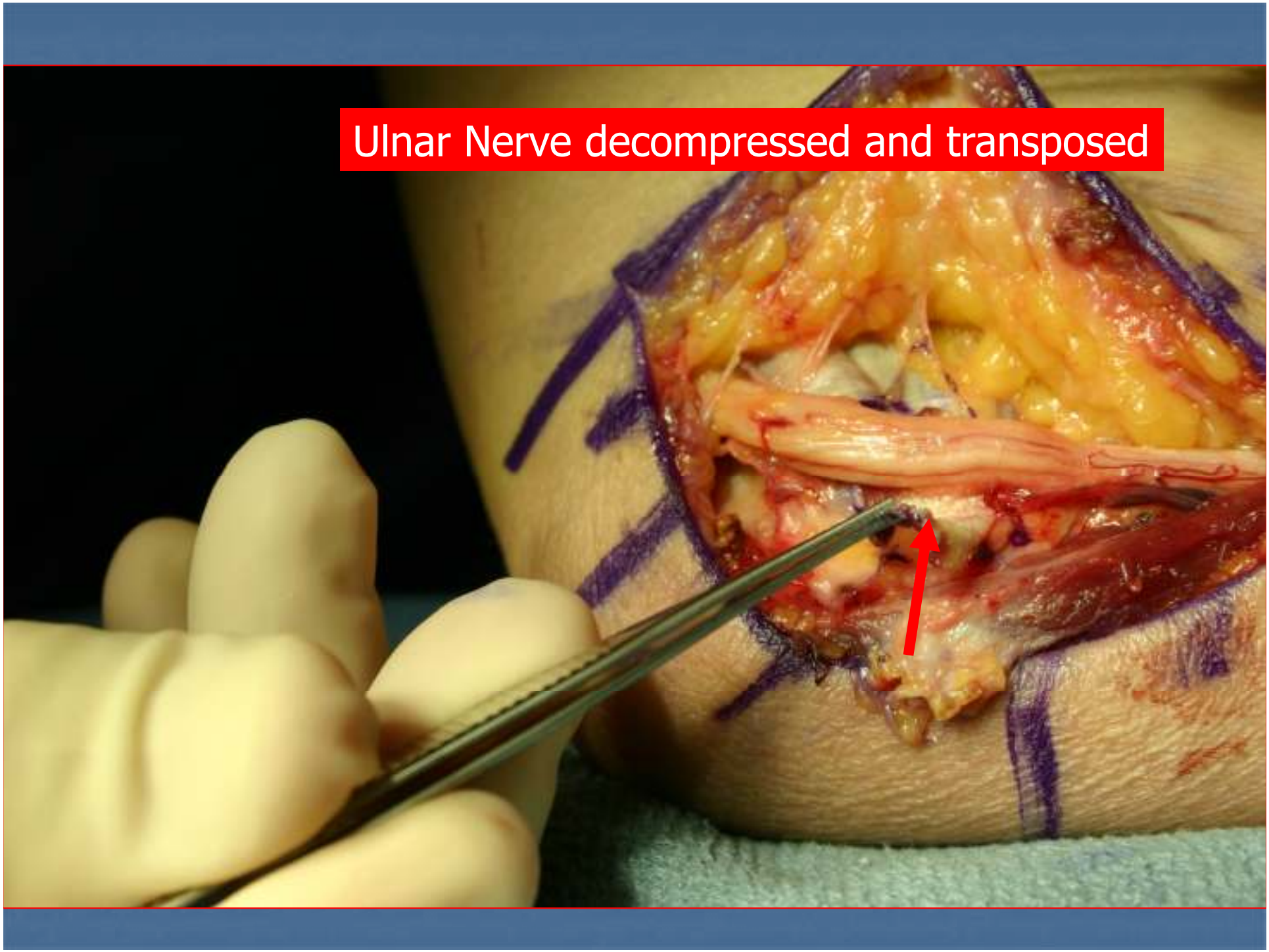
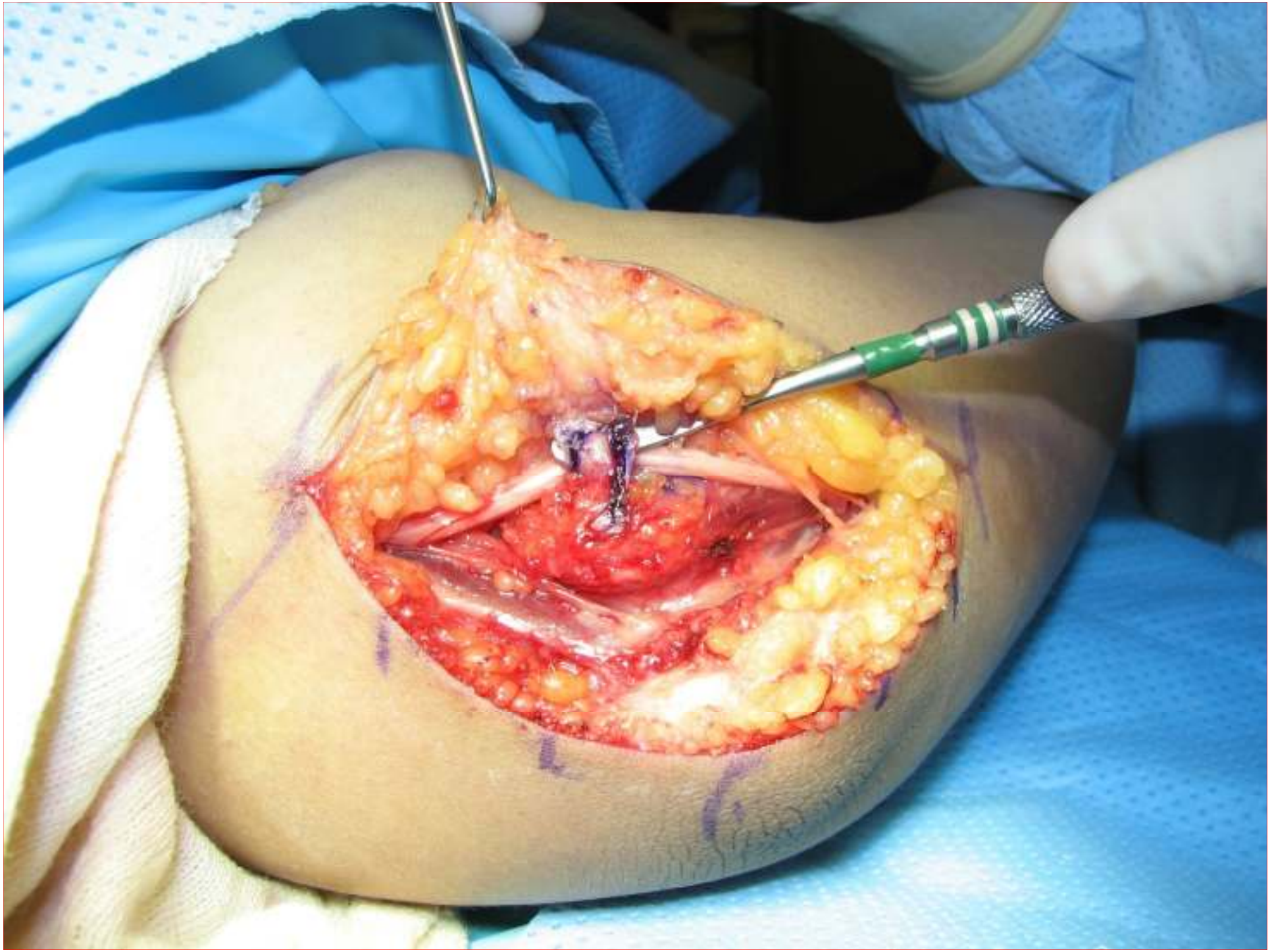
Operative Treatment

- In-situ decompression of the ulnar nerve
  - +/- anterior transposition

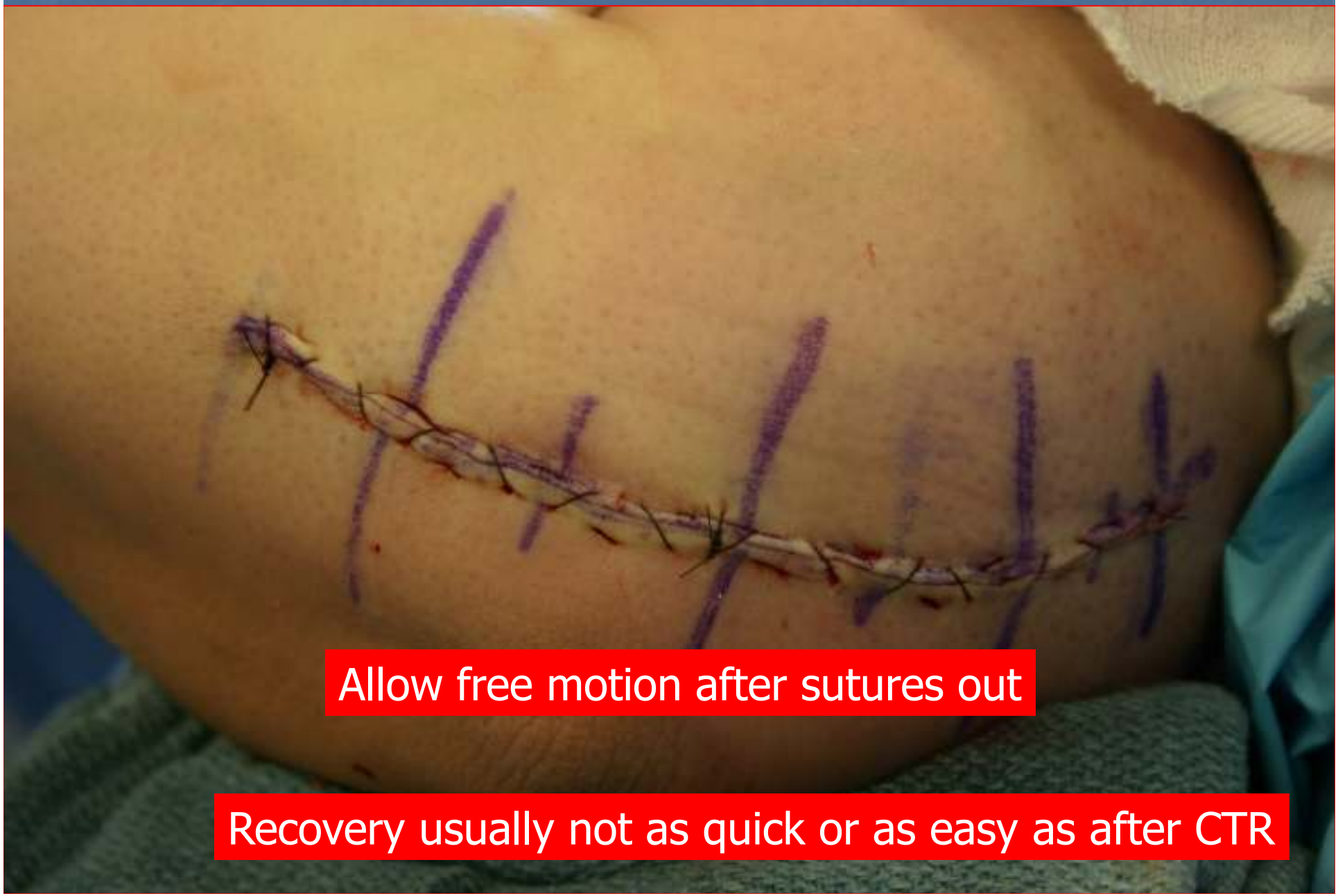
O.R. Anatomy



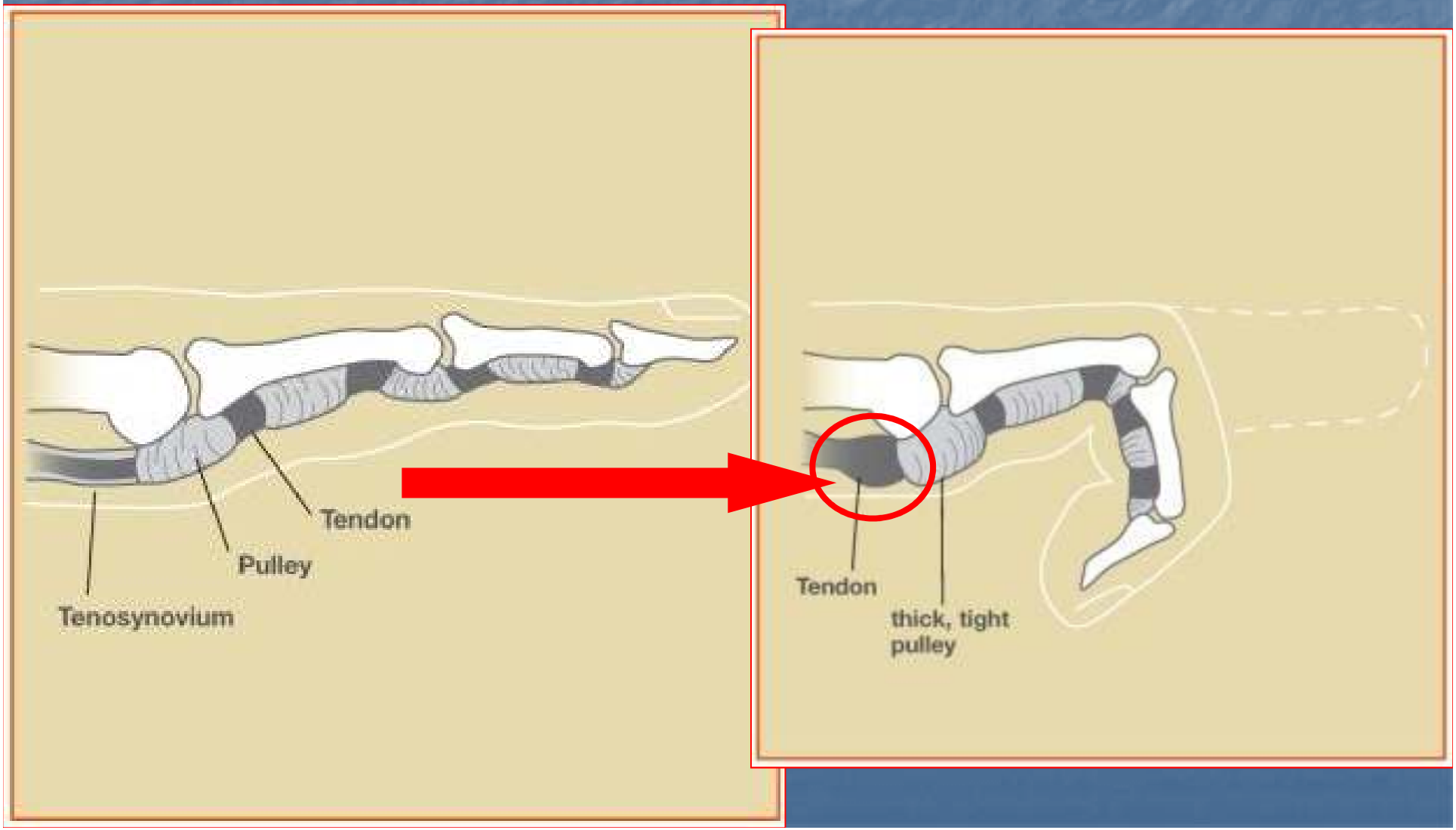

Ulnar Nerve decompressed and transposed

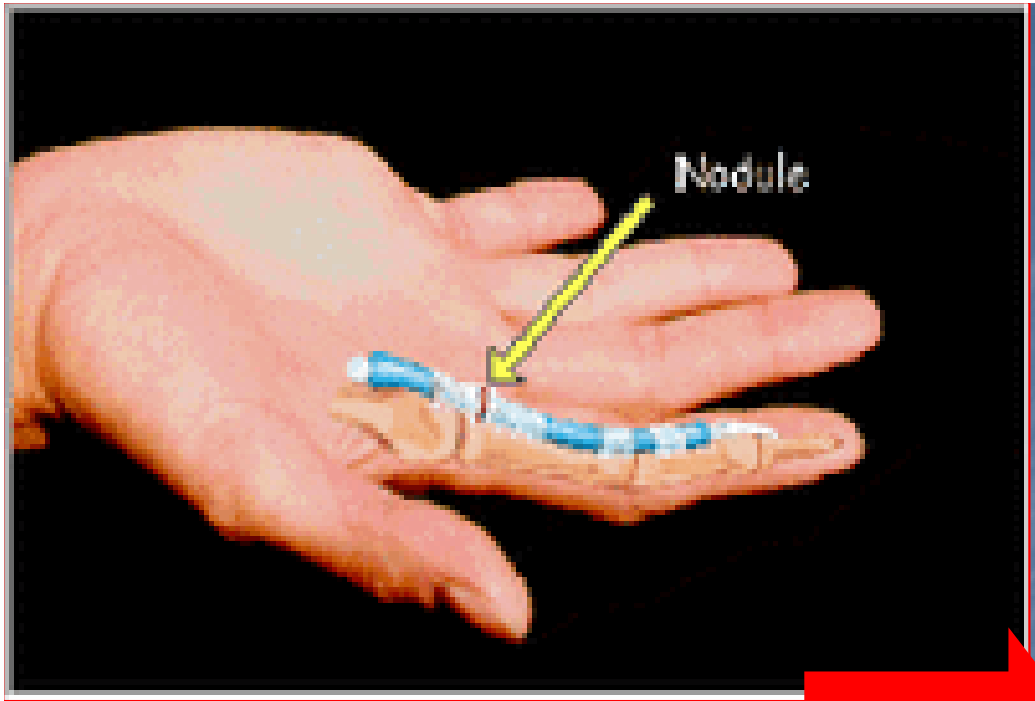


Post-op


Allow free motion after sutures out
Recovery usually not as quick or as easy as after CTR

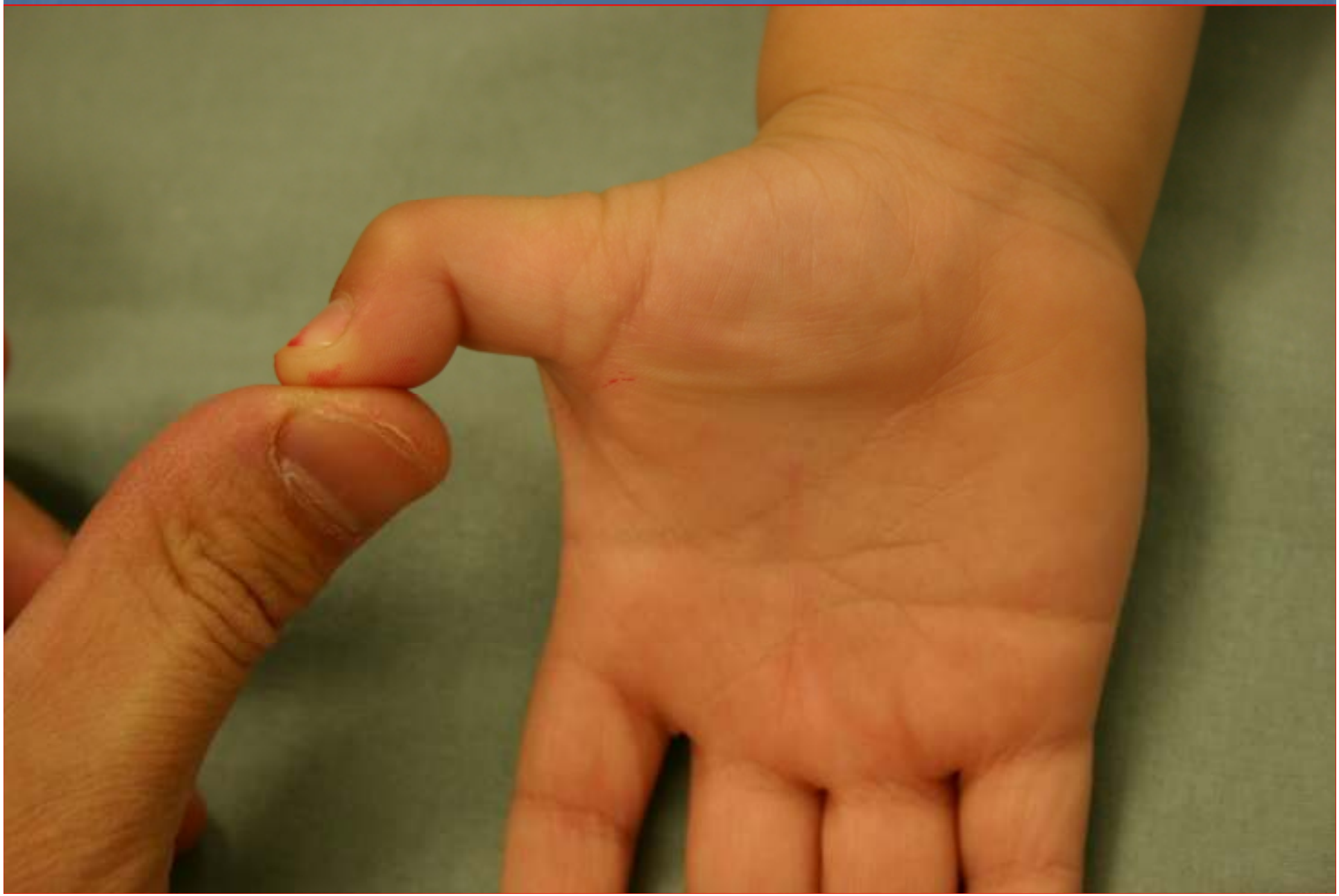
III. "Trigger" Fingers





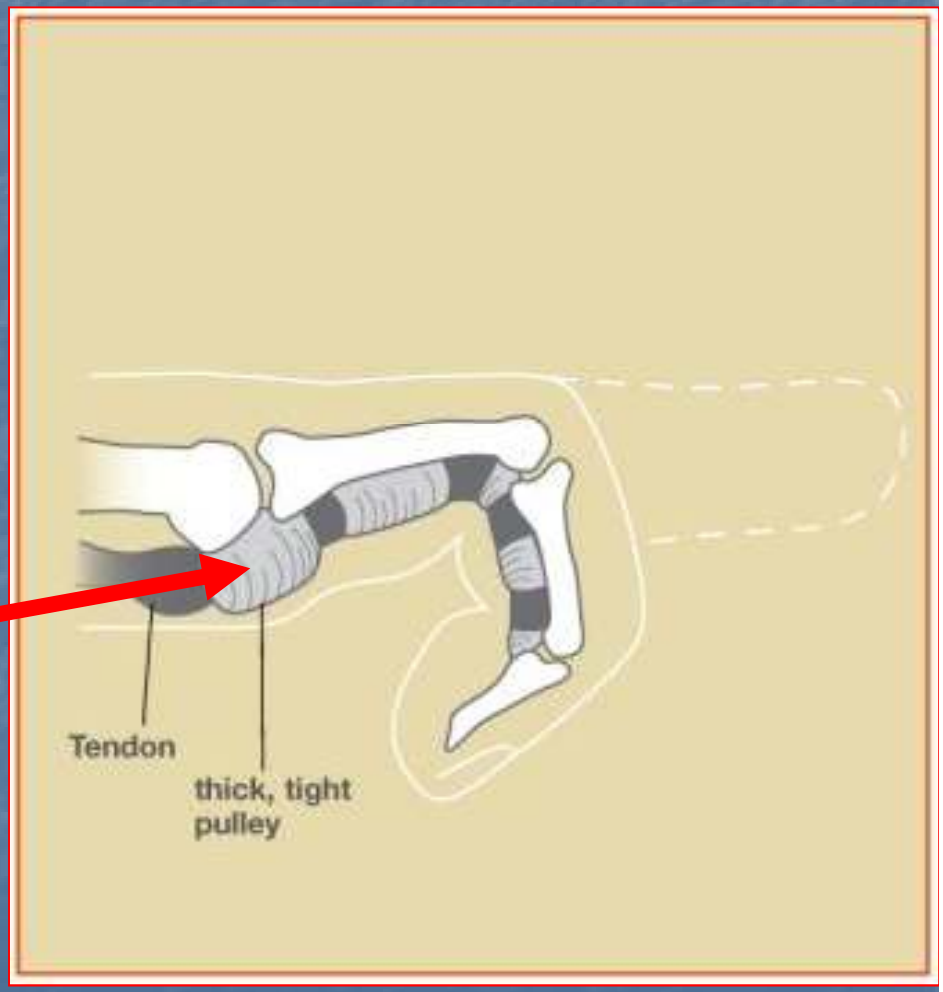
Clicking,
Locking,
Catching, . . .

Congenital Trigger Thumb

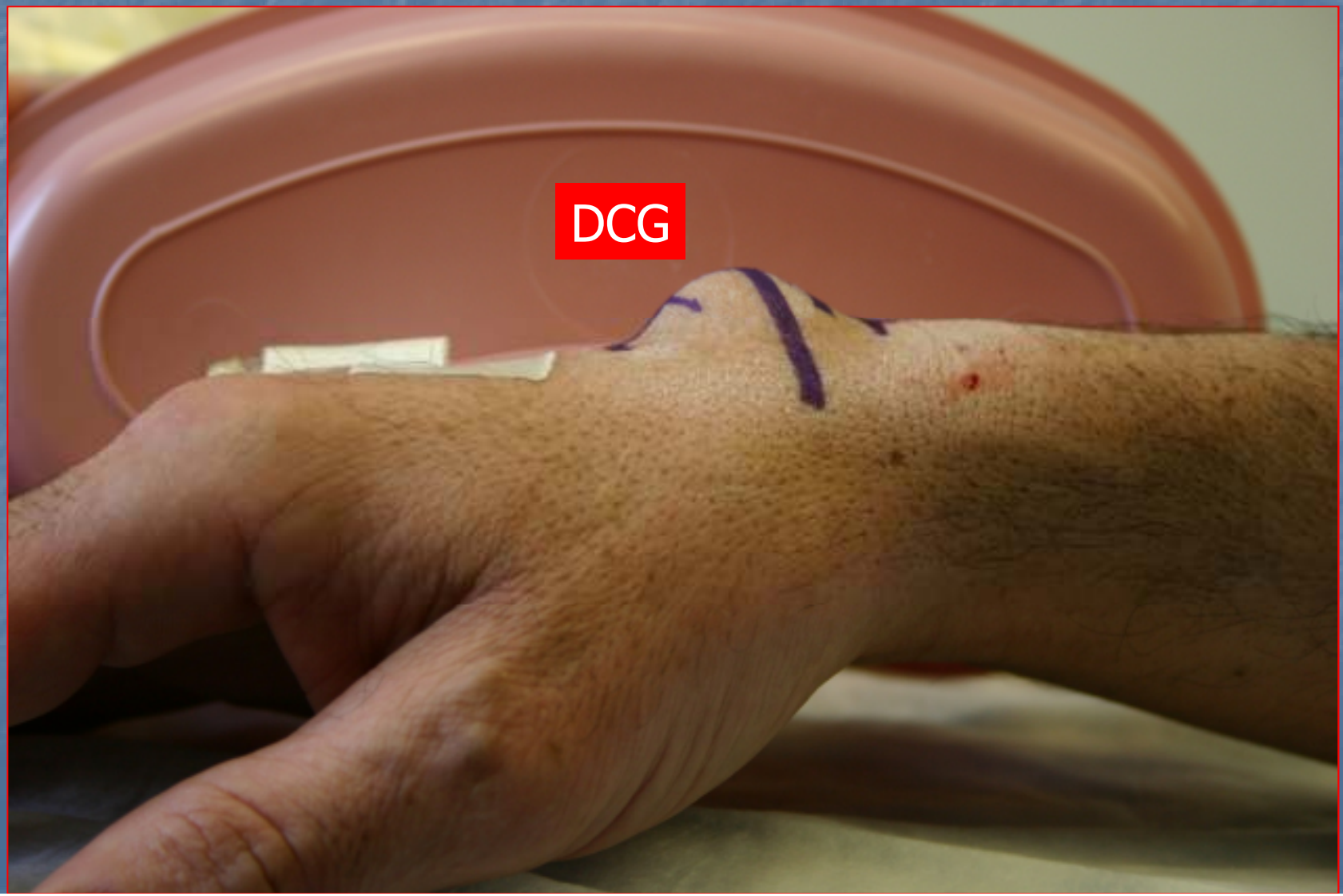


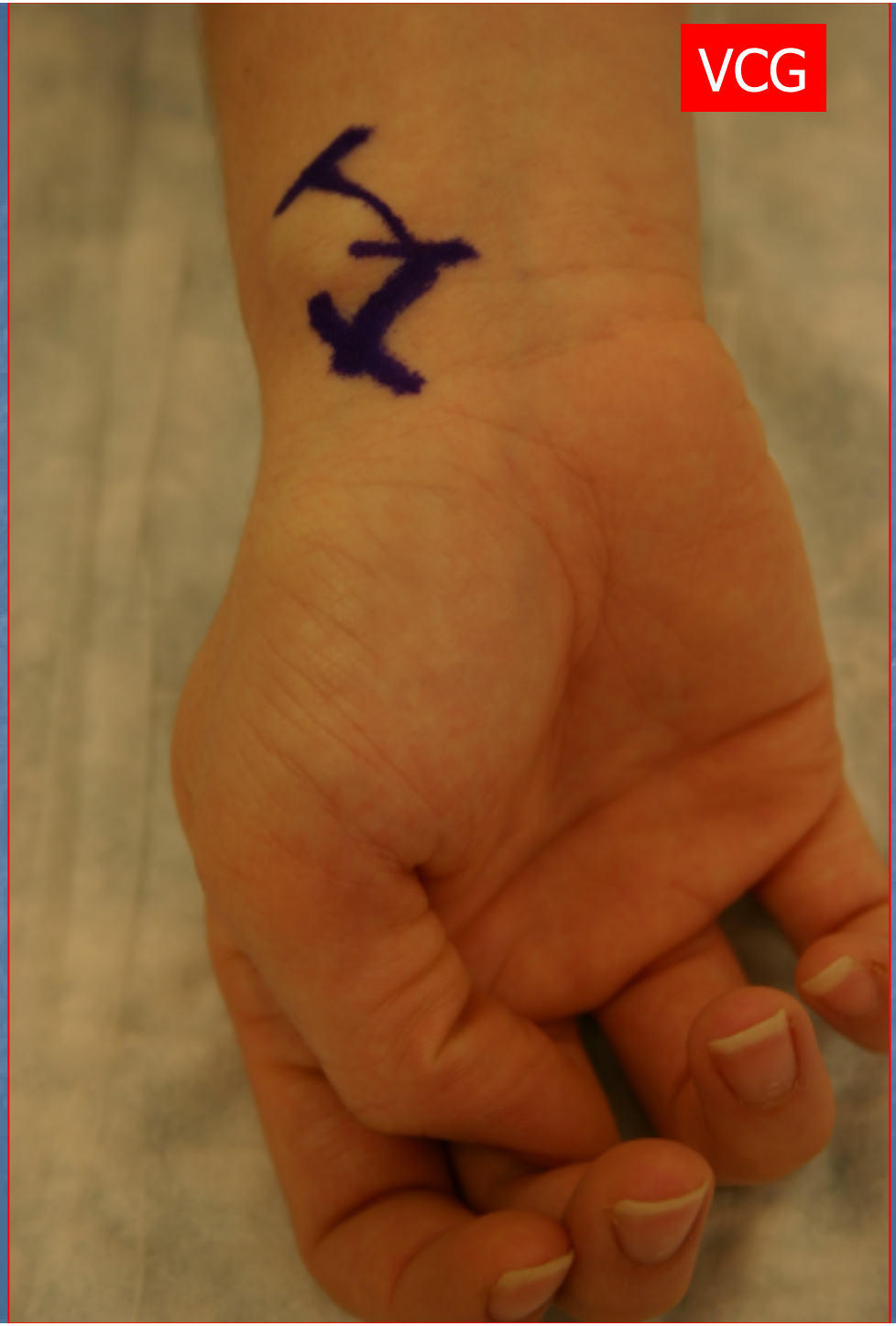
Trigger Finger Treatments

- Splints (nighttime)
- NSAIDs
- Cortisone Injections
  - Less effective in DM
- Surgery
  - release A-1 pulley

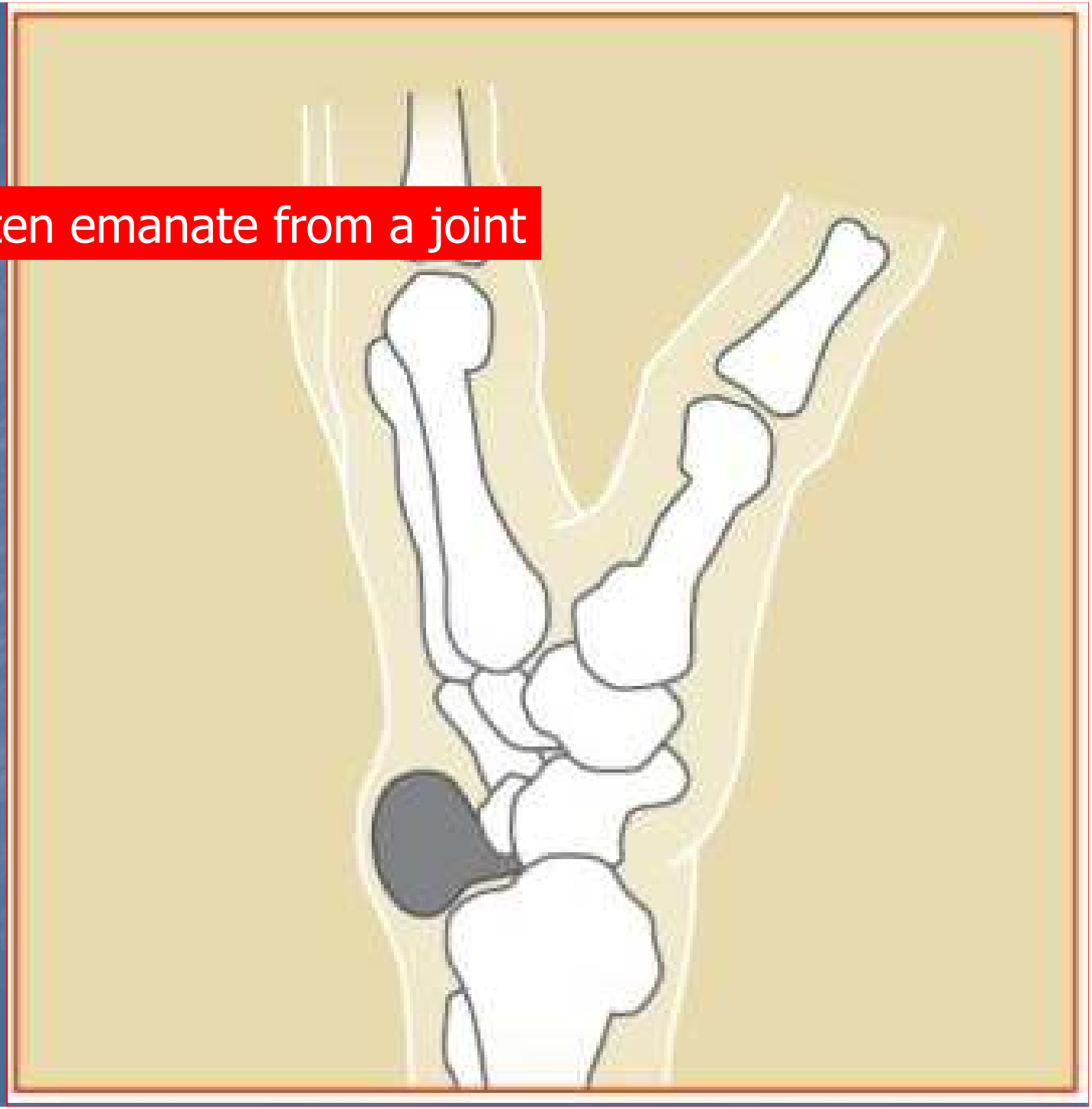


IV. Wrist Ganglia




VCG

Ganglia often emanate from a joint




"Mucous cyst"
(DIPJ)

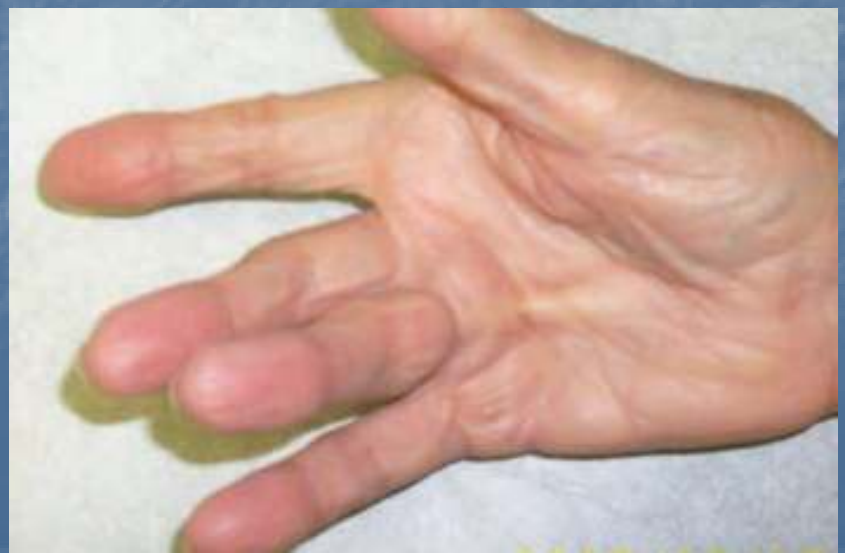
Wrist and Finger Ganglia Treatment

- **Observation**
- Splints
- Aspiration
- Surgery


Tend not to aspirate VCG

V. Dupuytren's Contracture:

- Progressive fibromatosis of the palmar and digital fascia
  - Transformation of fibroblasts to myofibroblasts → produce excessive collagen (immature type III collagen to mature type I ratio increases within palmar fascia)
  - Collagen forms pathologic "cords"
  - Cords thicken and shorten → flexion contractures of the digits result



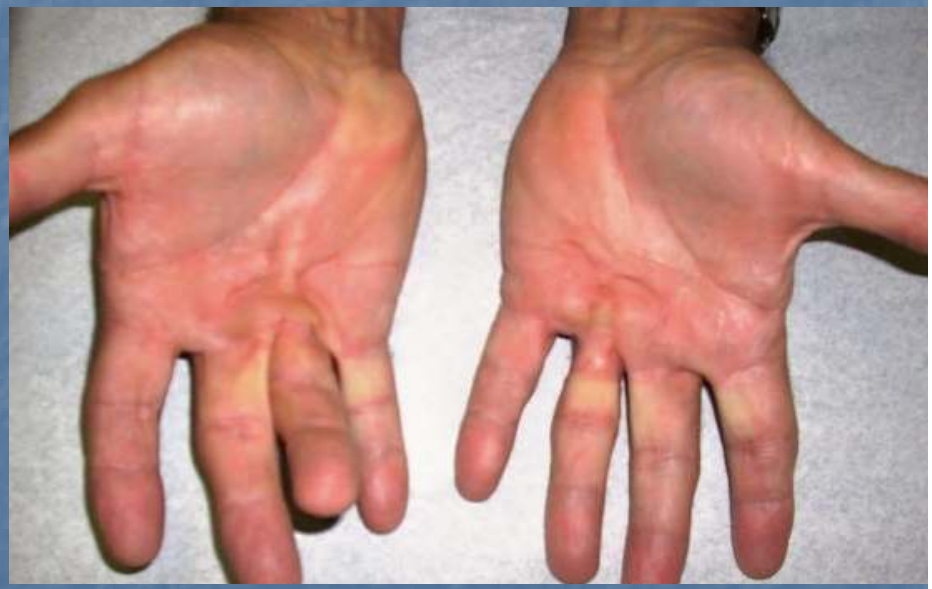
Dupuytren's Epidemiology

- Global Prevalence
  - Estimated at 3-6% among adult Caucasians
    - 13.5 to 27 million people in the United States and Europe
  - Present in all races
- Incidence
  - Presents usually between age 40-60 y.o.
- Gender
  - Much more common in men
- Hereditary Expression
  - One of the most common hereditary connective tissue diseases in Caucasians
    - Highest in people with Northern European ancestry
  - Other contributory factors are not clearly understood
    - Some case associated with DM, Epilepsy (medications), and Chronic Alcoholism

Luck JV. *J Bone Joint Surg [Am].* 1959;41:635-664.
Tubiana R et al. *Dupuytren's Disease*. London: Martin Dunitz Ltd.; 2000:53, 55.

Dupuytren's: Severity of Hand Involvement

- More aggressive/worse prognosis if:
  - Positive family history
  - Young Onset < 40 y.o.
  - Bilateral involvement
  - Involvement of more radial digits
  - Ectopic disease
    - Feet (Ledderhose 5% of pts.), Penis (Peyronie's 3%)



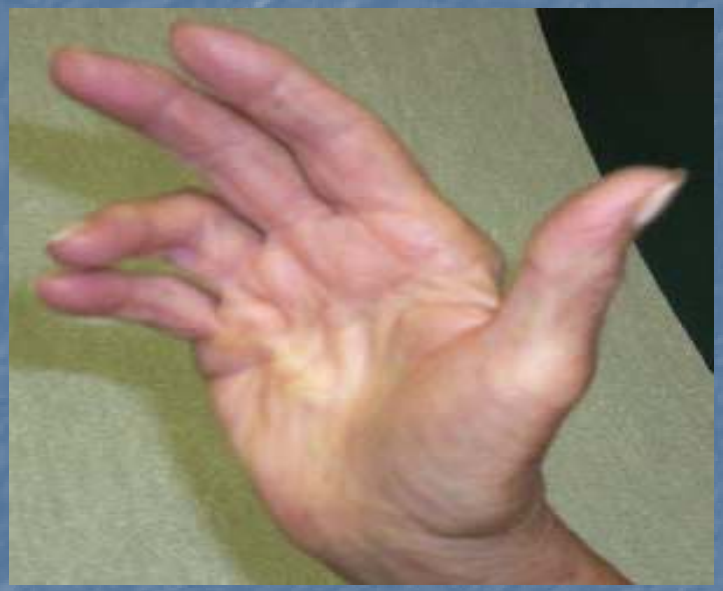
Townley WA et al. *BMJ*. 2006;332:397-400.
Tubiana R et al. *Dupuytren's Disease*. London: Martin Dunitz Ltd.; 2000:86, 90.

Dupuytren's: Clinical Findings

- Patients may present with a lump, a longitudinal cord, or a fixed contracture of the MC[Most commonly involves RF and SF]oints)
- Garrod's nodes (knuckle pads) can be on dorsal MCP/PIP joints

Dupuytren's: Finger Involvement

- Most commonly affects RF and SF
  - SF: 51%
  - RF: 60.7%
  - MF: 22.5%
  - IF: 5.8%
  - Thumb: 7%



Initially limited to a single finger . . . often progresses to other fingers (45% bilateral)

Tubiana R et al. *Dupuytren's Disease*. London: Martin Dunitz Ltd.; 2000:87-88.

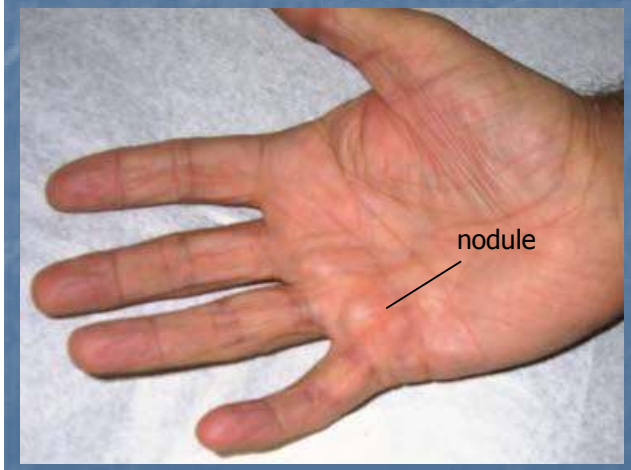
Dupuytren's Is Often Progressive (and has no cure)

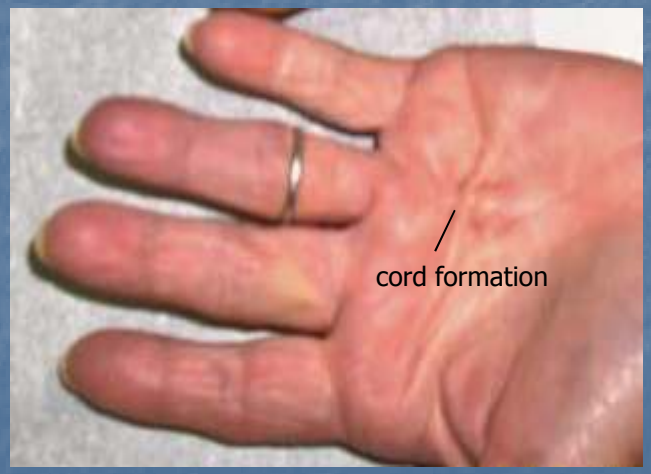
Progression of Dupuytren's

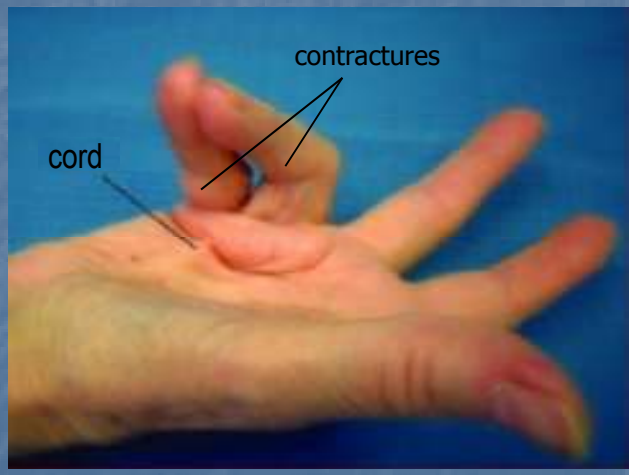
- Palmar lesions
- Nodule formation

- Cord formation
- Digital contracture begins

- Contracted cords
- Flexion deformities







Luck JV. *J Bone Joint Surg [Am].* 1959;41:635-664.

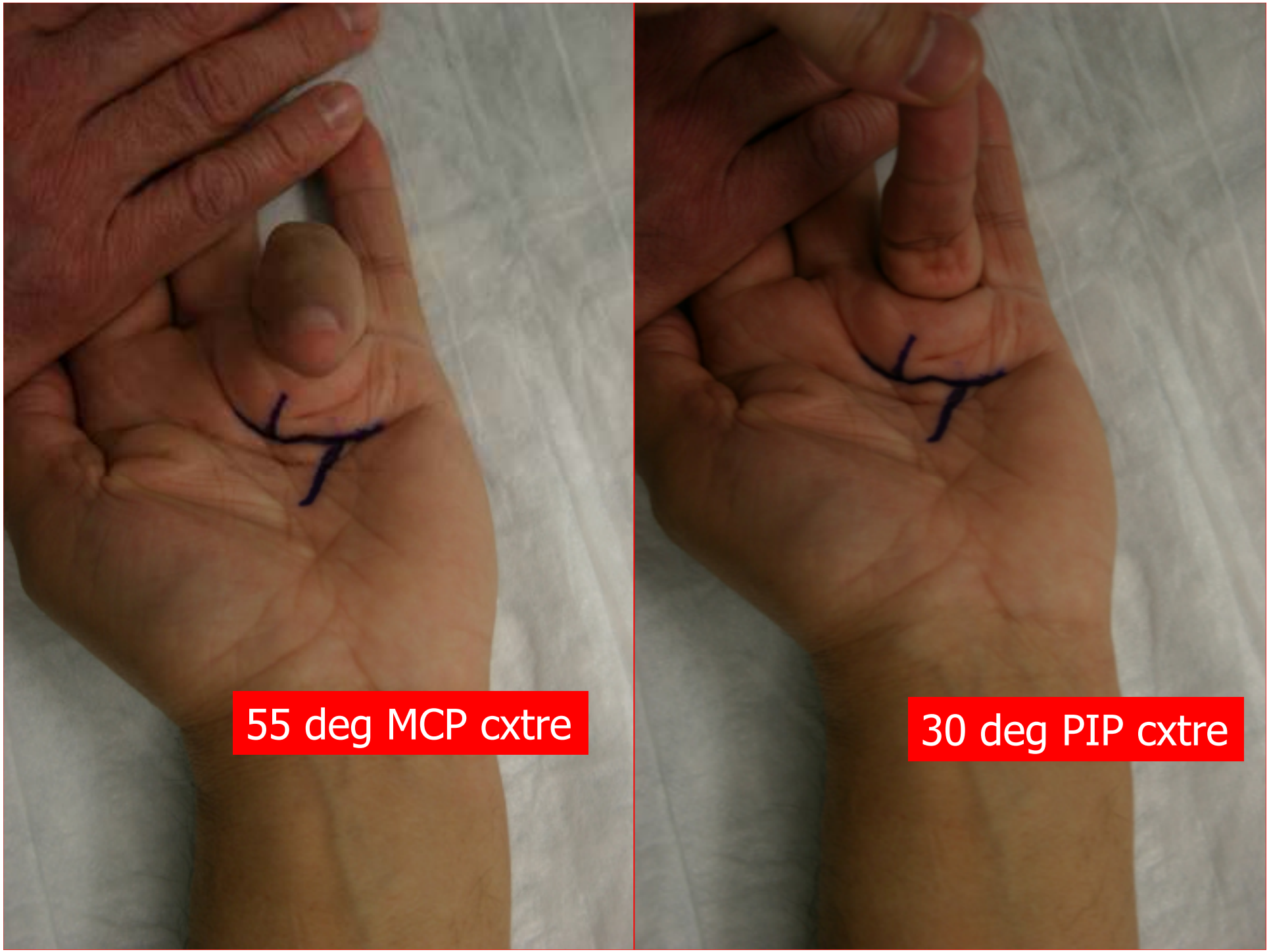
Treatment Options

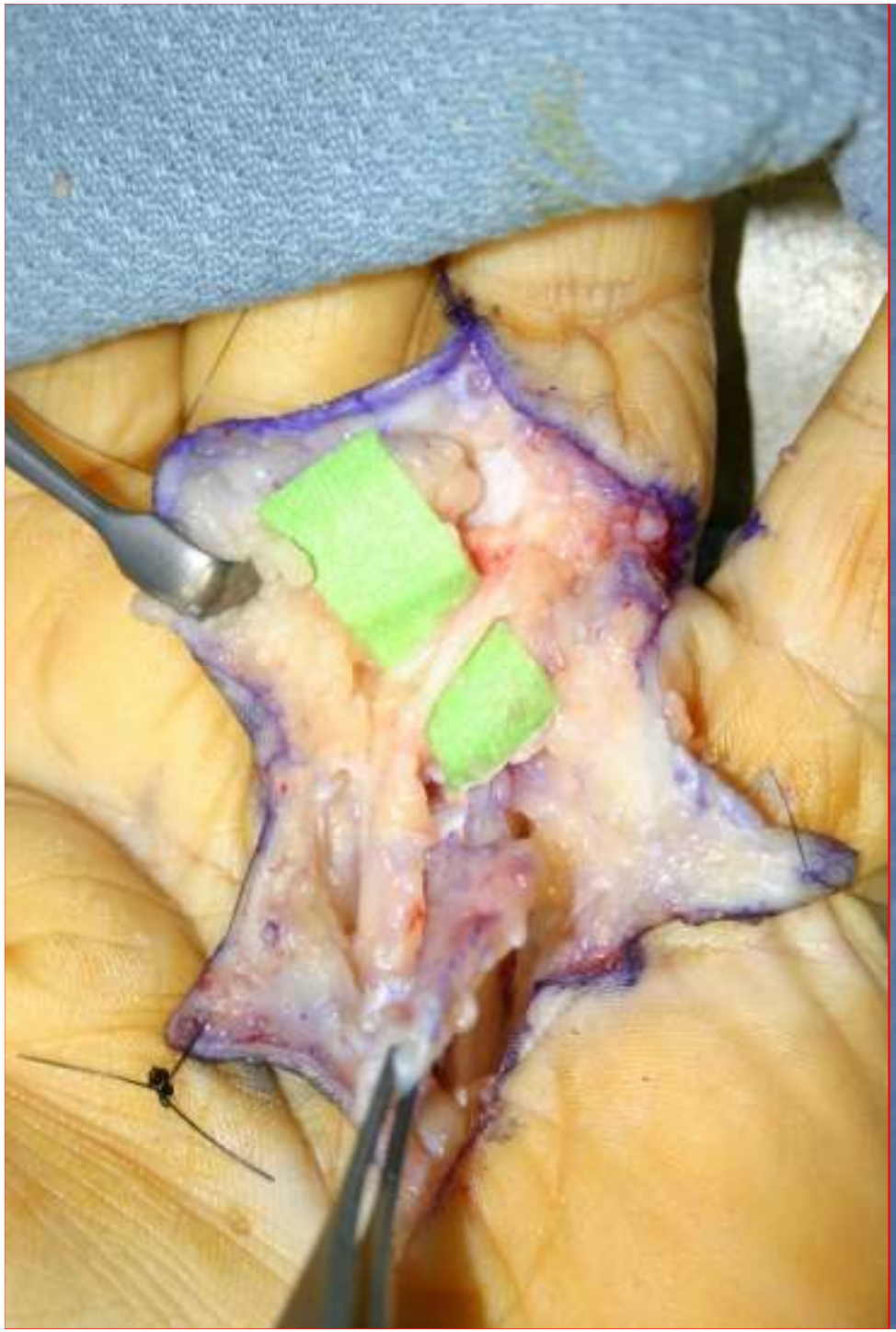
Traditionally for MCPJ cxtre > 30 deg and/or any PIPJ cxtre

- Surgical options
  - Open (fasciotomy, fasciectomy)
  - Closed (needle aponeurotomy)
- Non-surgical options . . .

Case Example (2006): Mr. L.A.

- 62 y.o. male of Irish descent with "years" of L RF getting "more and more in the way"
- Wants me to "fix it"
- Long d/w him regarding risks and benefits of an operation (subtotal fasciectomy) versus further watchful waiting

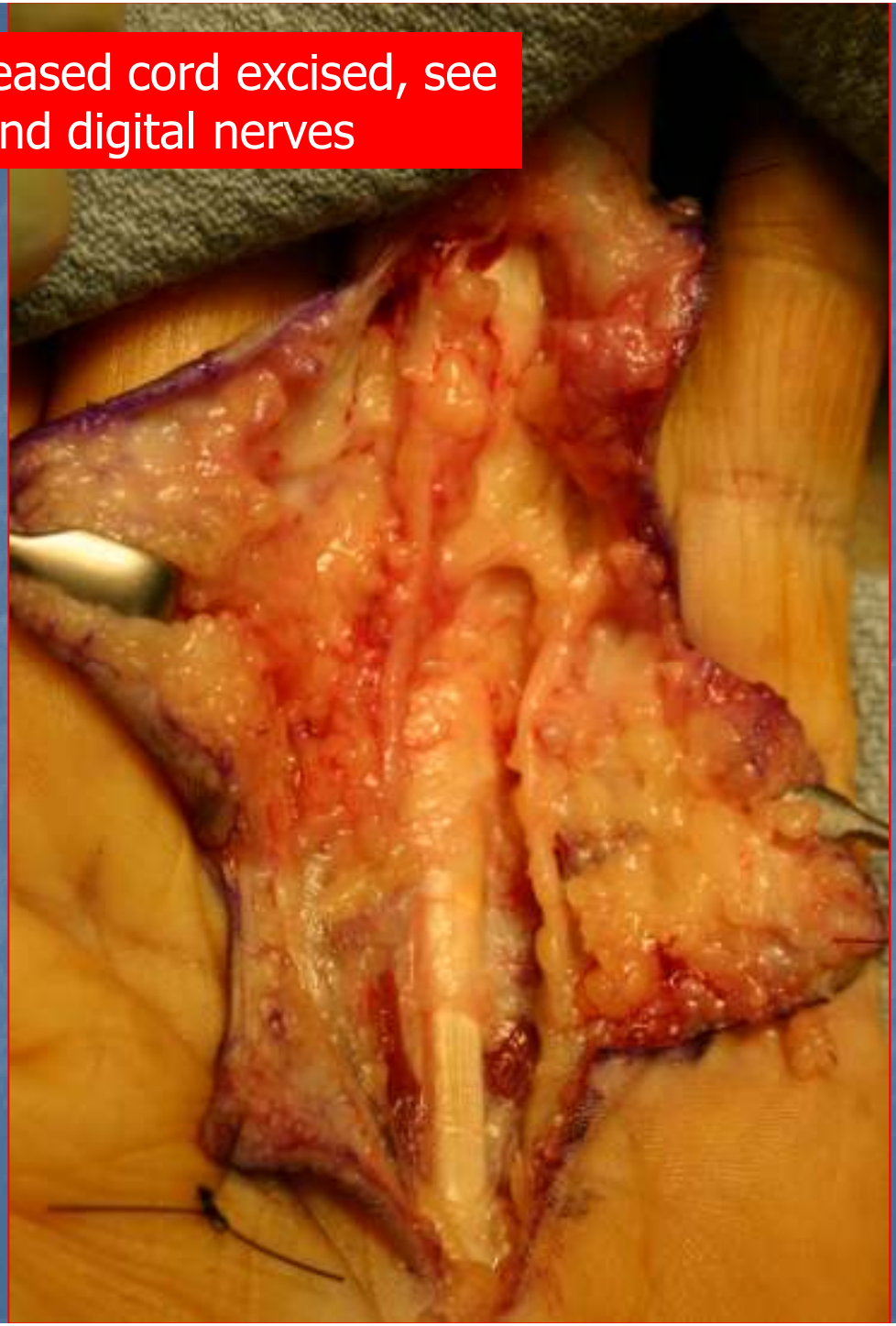

55 deg MCP cxtre
30 deg PIP cxtre



The "gold standard" operation:

Subtotal fasciectomy of the diseased tissue

After diseased cord excised, see tendon and digital nerves

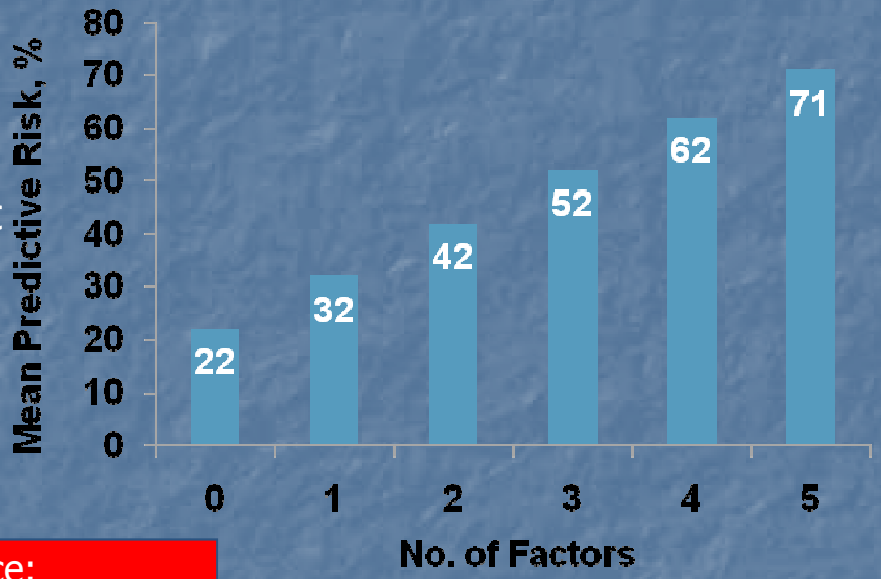


Large Brunner incision,
drains left to prevent hematoma

1 month post-op

Dupuytren's Recurrence After Surgery

- Surgical recurrence rates range widely in the literature from 2% to 60%, with an average of 33%
  - Heterogeneity of procedures, surgeons, inclusion criteria
- We do know that there is no definitive cure for Dupuytren's
- Recurrence after surgery highly dependent on previously mentioned factors . . .
  - Positive family history
  - Bilateral involvement
  - Male gender
  - Early age of onset
  - Garrod's pads



Mean predictive risk of recurrence:
- 22% when no factors are present
- 71% when all 5 factors are present

Hindocha S et al. *J Hand Surg.* 2006;31A:1626-1634.
Rayan GM. Dupuytren's disease: anatomy, pathology, presentation, and treatment. *J Bone Joint Surg Am.* 2007;89A(1):190-198.
Tubiana R et al. *Dupuytren's Disease*. London: Martin Dunitz Ltd.; 2000;243.

Needle Aponeurotomy

- Placing a needle percutaneously into the cord and trying to divide it
  - Less invasive than open fasciectomy
  - Relatively few practitioners feel comfortable doing this as it is a “blind” procedure
  - Recurrence rate highly variable and practitioner-dependent

Treatment Options (cont.)

- Surgical options
  - Open (subtotal fasciectomy)
  - Closed (needle aponeurotomy)
- Non-surgical options
  - In February 2010, the FDA approved XIAFLEX
    - An injectable collagenase said to be a "a non-surgical treatment option for adults with Dupuytren's contracture with a palpable cord"

Xiaflex

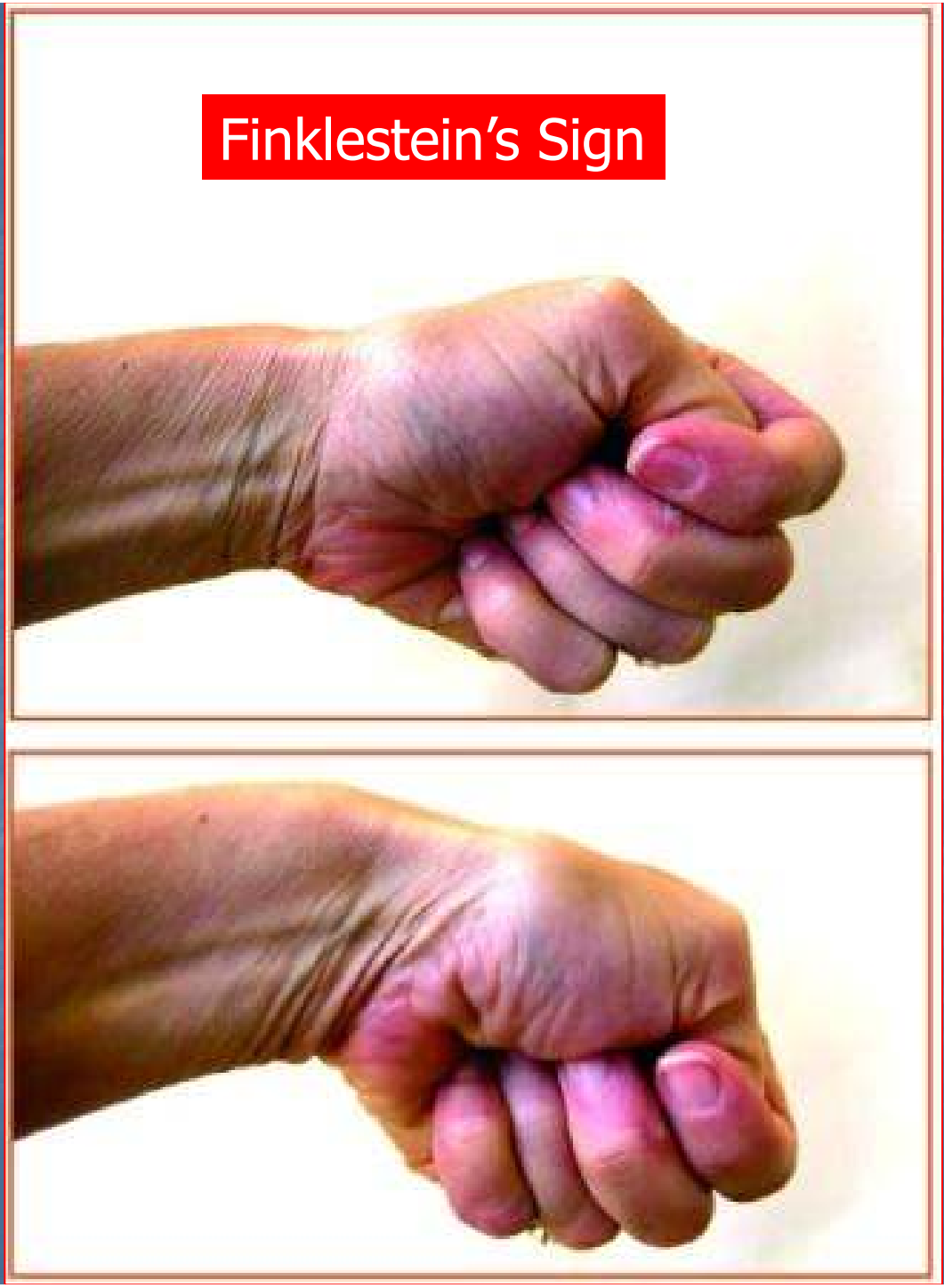
- Easy for the patient
  - In-office, no O.R., no incision
  - No therapy afterward
  - Resume normal lifestyle right away
  - Patients “love” it (n=25)
  - Recurrence Likely
    - 20% at 2 years

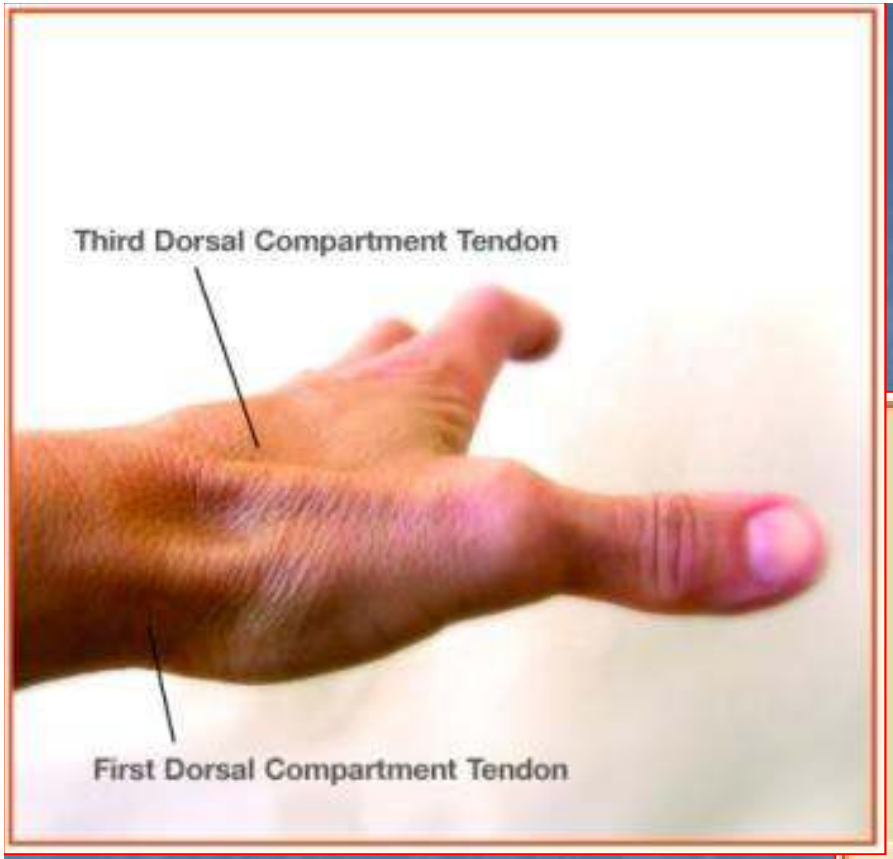
VI. Tendonitis

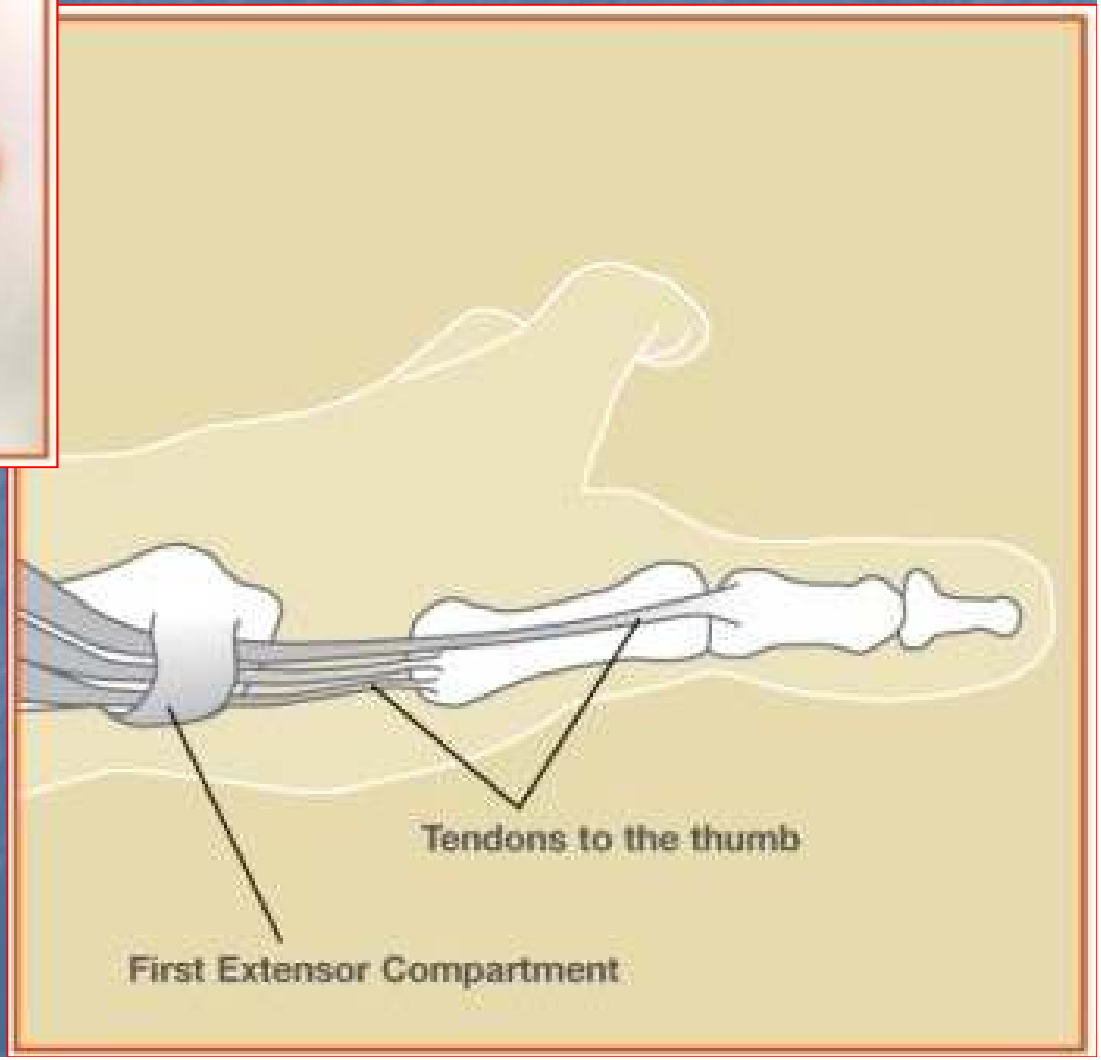
- Overuse/inflammation of the tendons of the wrist or fingers
  - 1st DC (DeQuervain's)
  - 2nd DC (Lateral epicondylitis proximally . . . Intersection syndrome distally)
  - FCR
  - FCU
  - ECU

"DeQuervain's" Tendonitis

Finklestein's Sign




Third Dorsal Compartment Tendon
First Dorsal Compartment Tendon


Tendons to the thumb
First Extensor Compartment

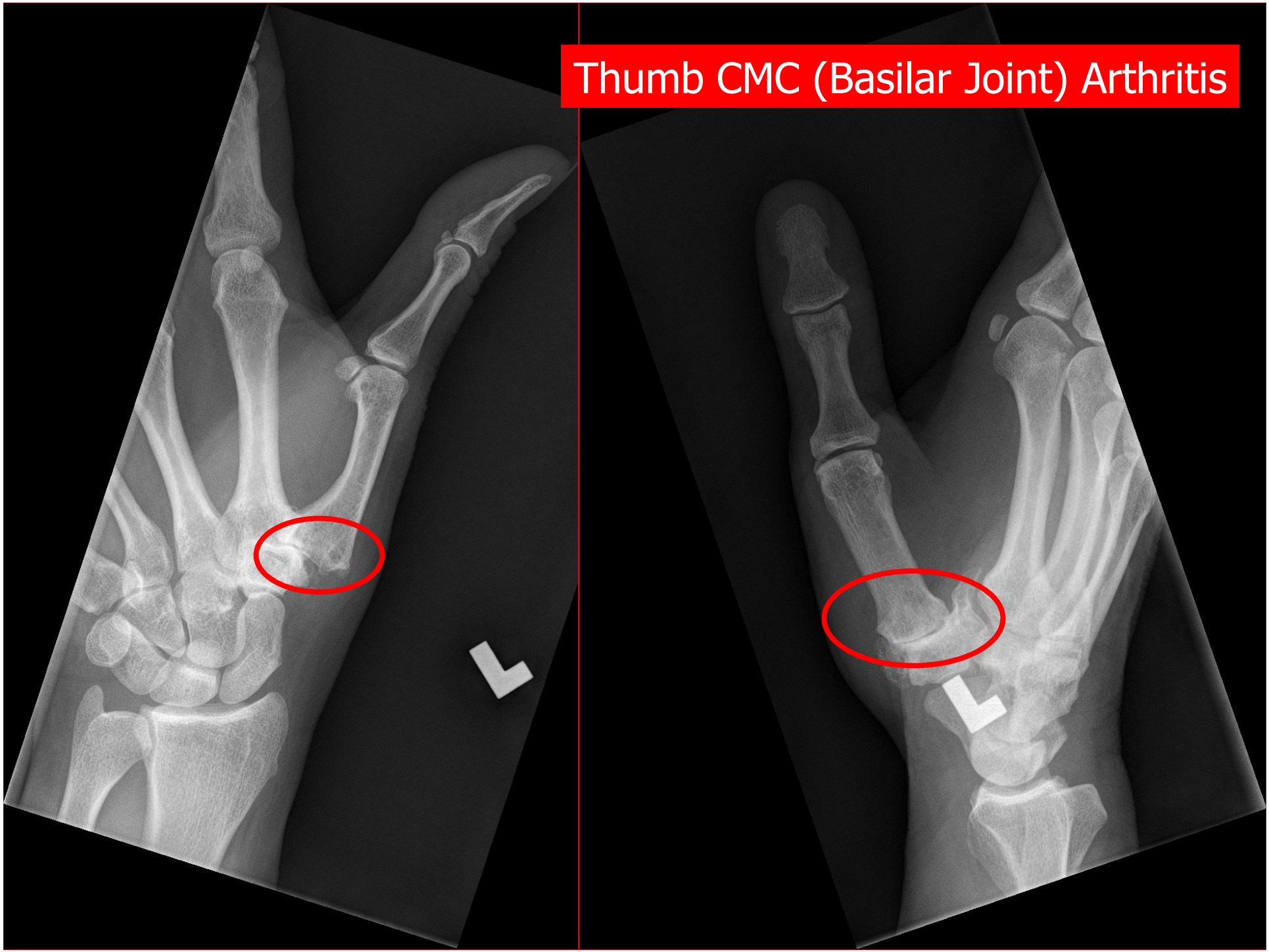
Tendonitis

- Usually nonoperative treatment effective
  - Splints
  - NSAIDs
  - Injections
- Occasionally surgery
  - Release “stenotic” tendon sheath

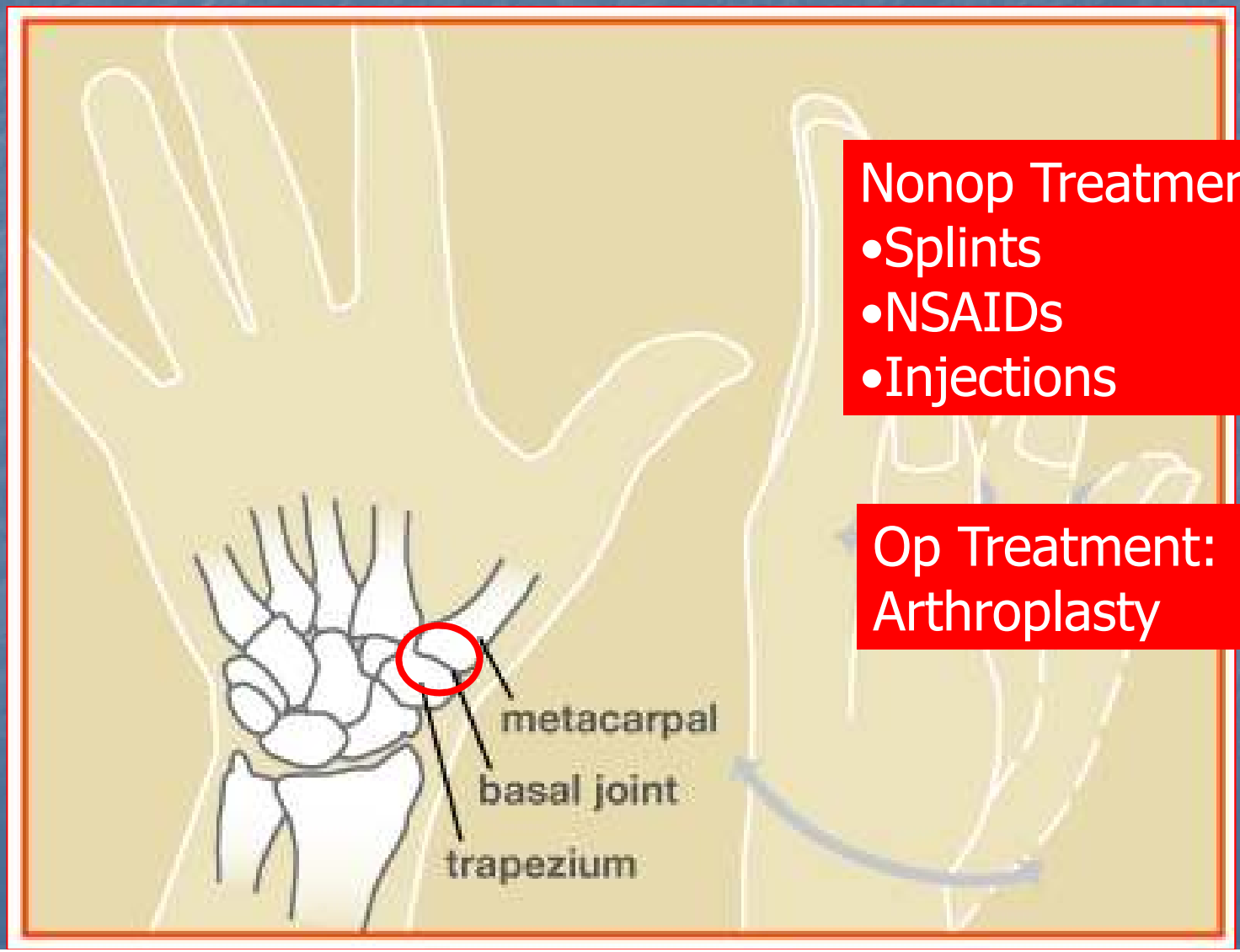
VII. Osteoarthritis

- Diffuse wrist and/or finger joint pain or ache
- Usually no numbness or tingling
- X-Rays critical

Loss of joint cartilage

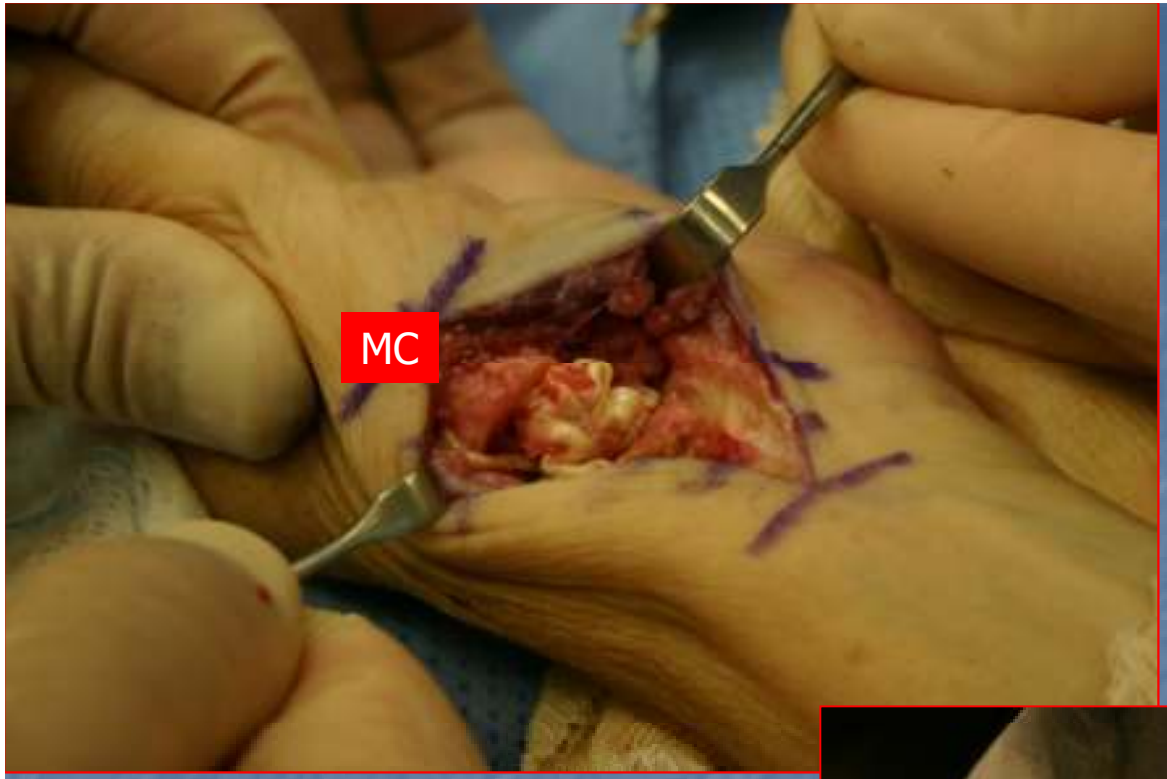

Thumb CMC (Basilar Joint) Arthritis

Thumb Basilar Joint Osteoarthritis

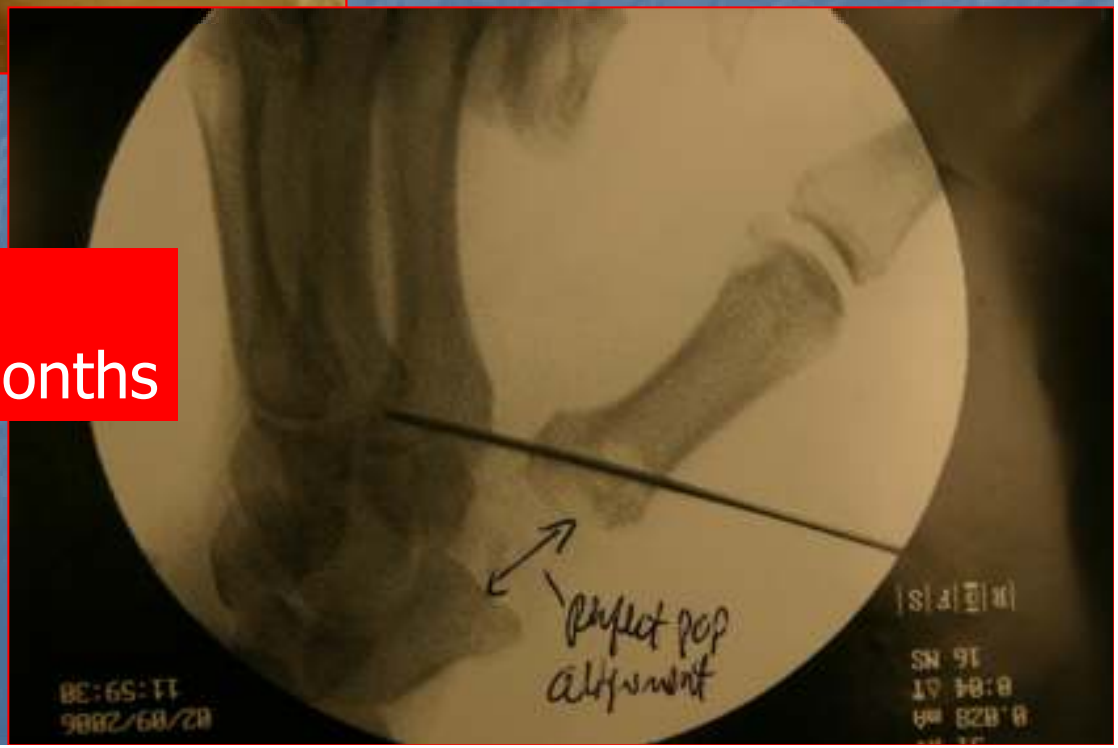


Nonop Treatments:
- Splints
- NSAIDs
- Injections

Op Treatment:
Arthroplasty

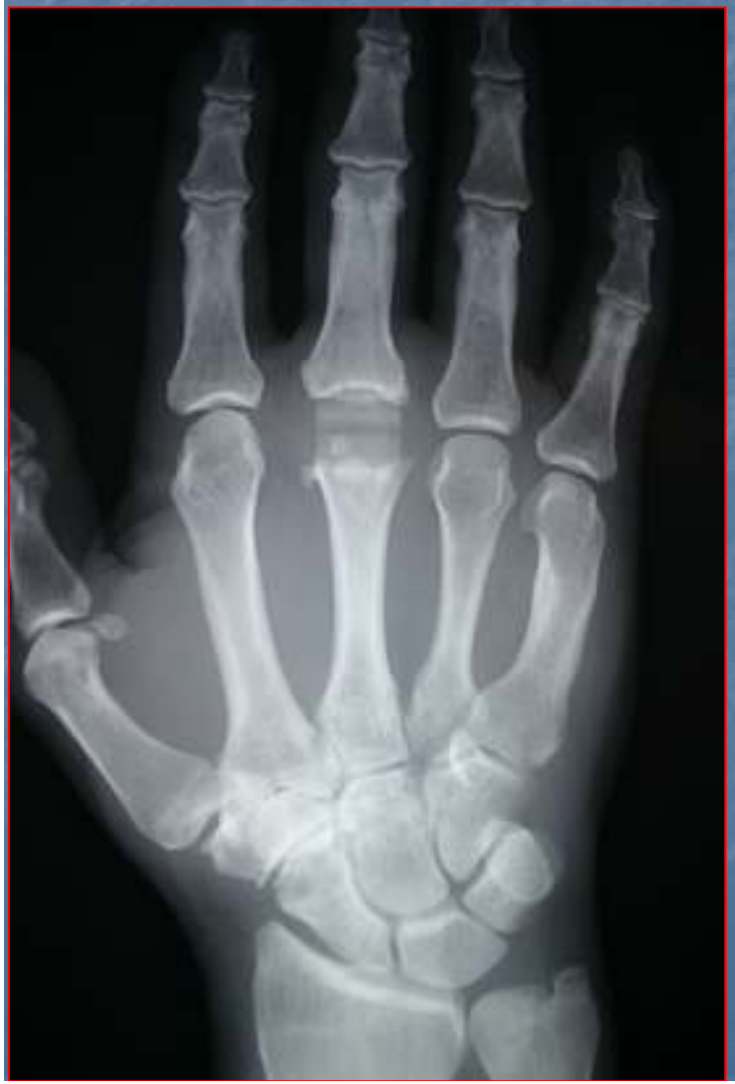


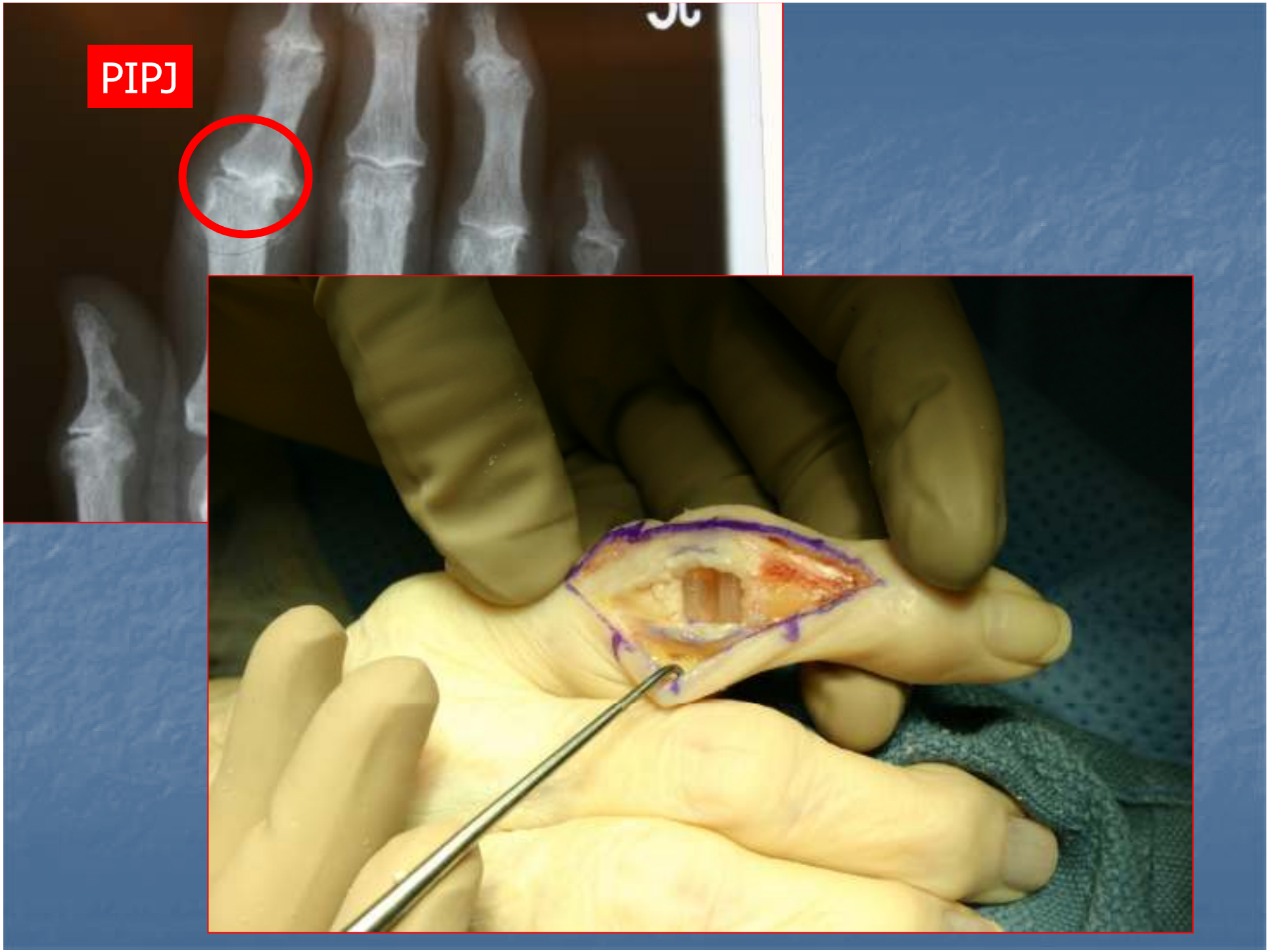
Trapezium-ectomy and LRTI



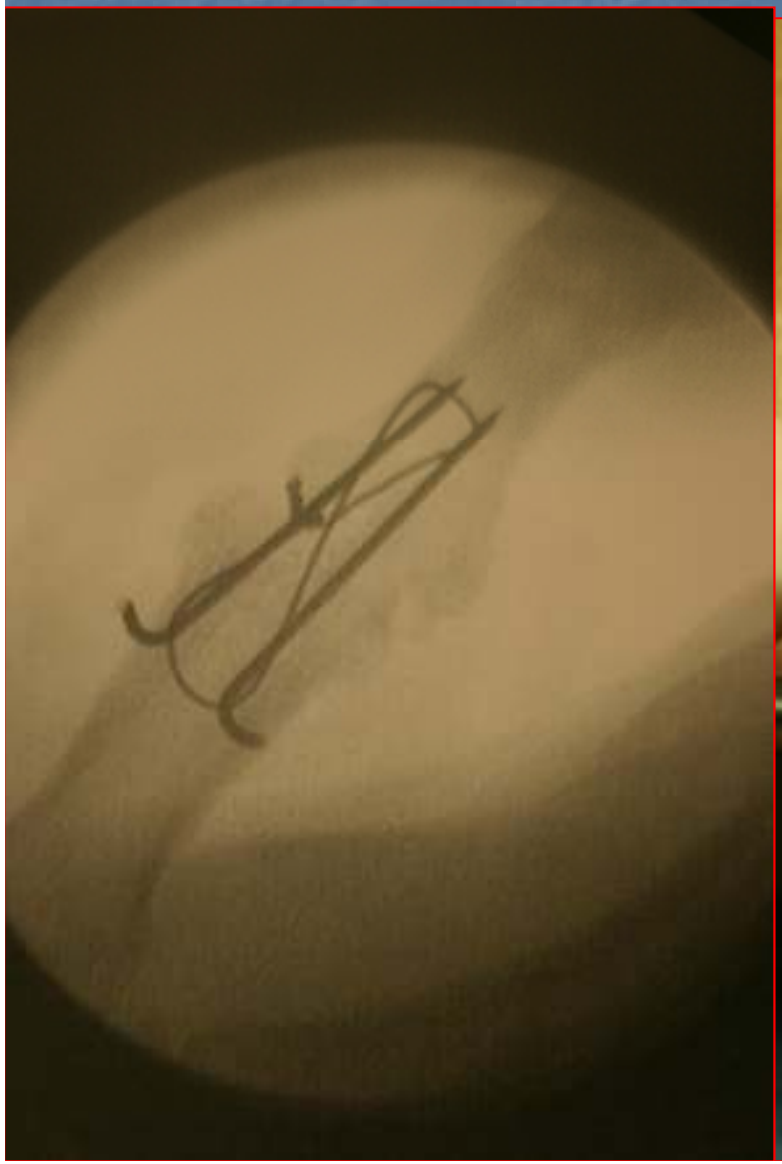
Postop:
1 month cast, HT x a few months

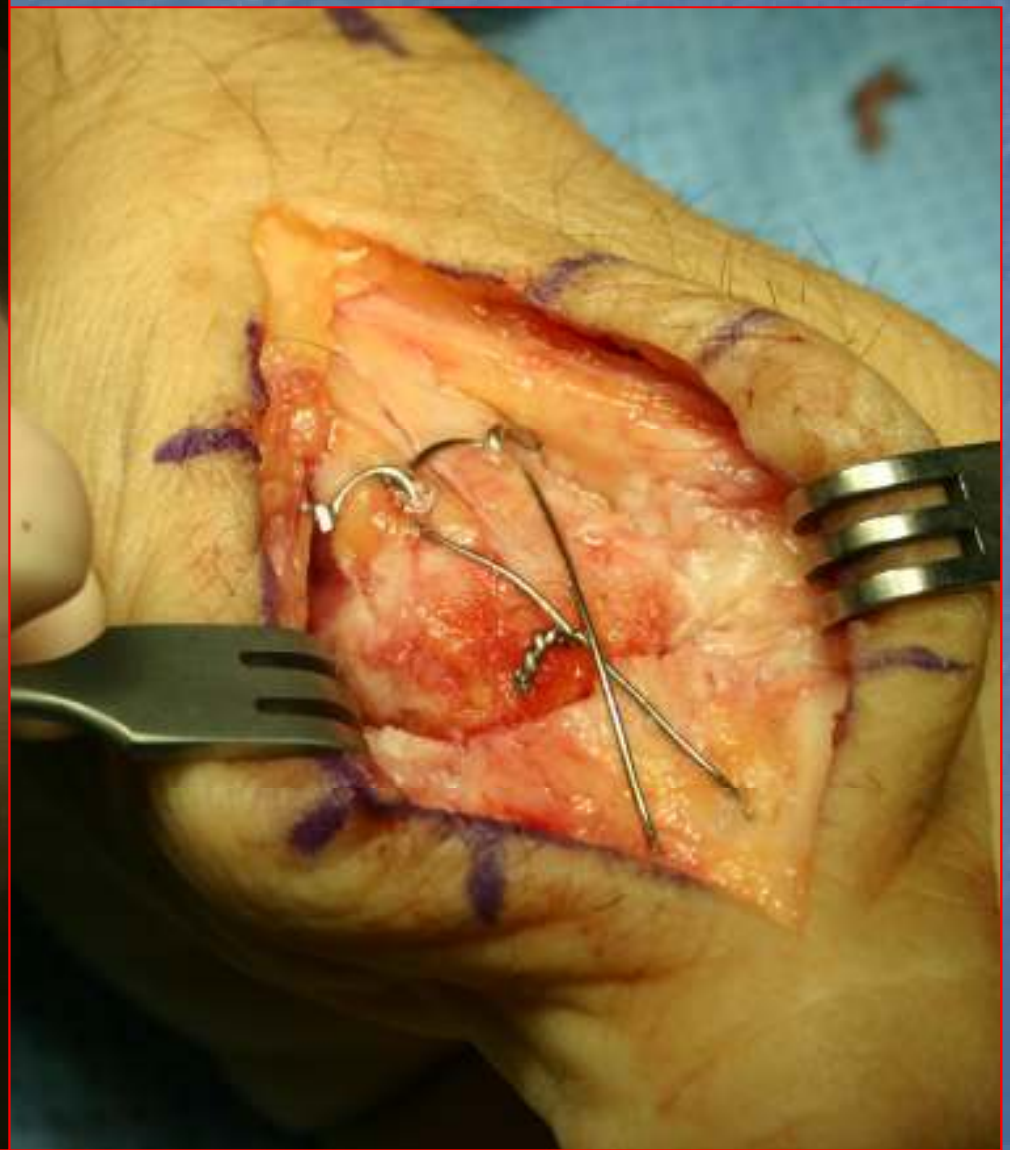
Finger joint replacement . . .



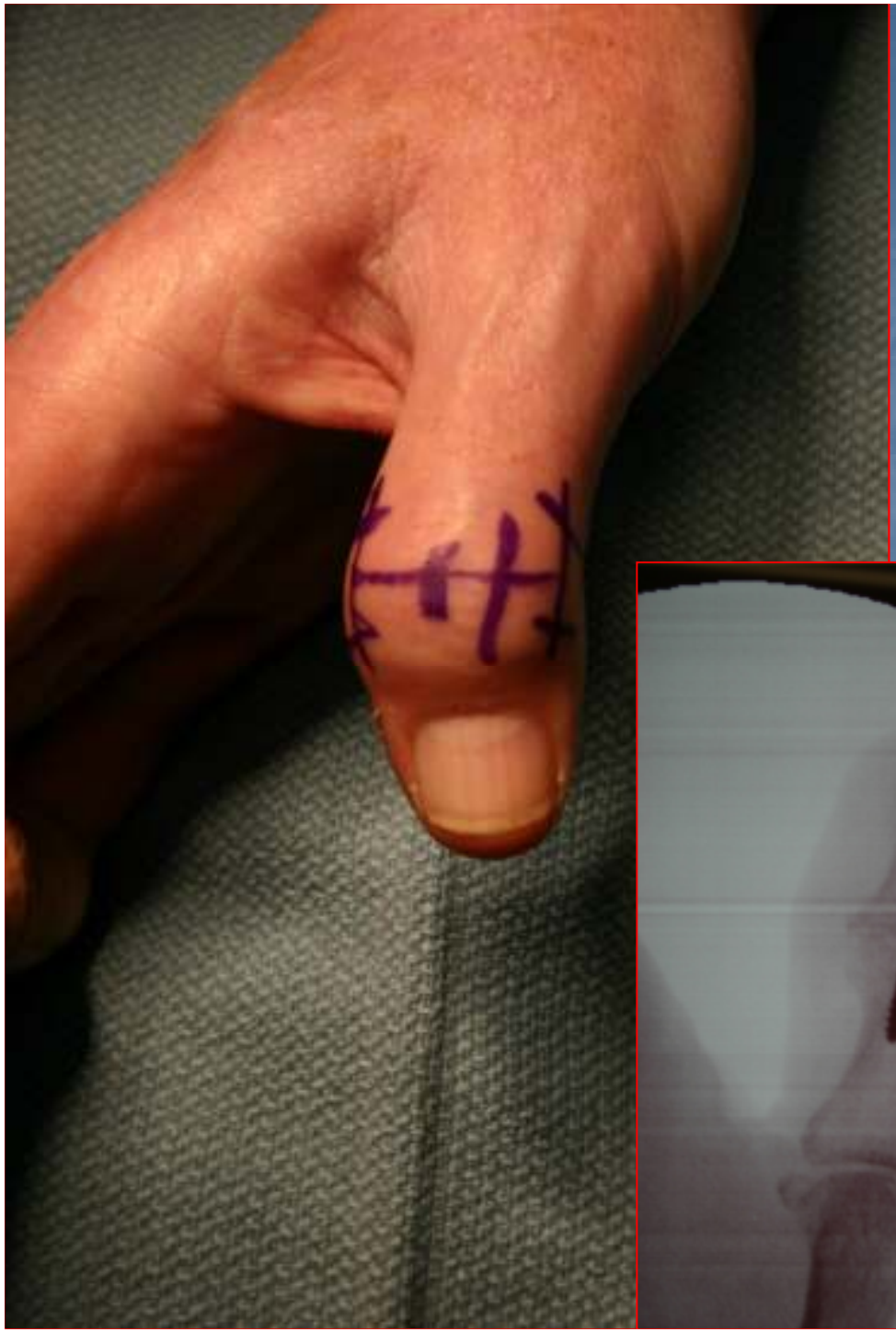

PIPJ

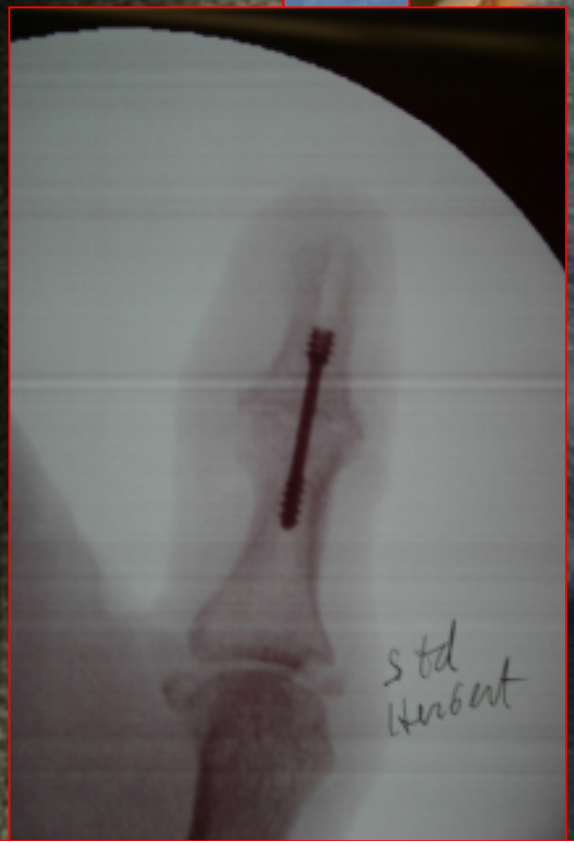
vs. Fusion (i.e., thumb MCPJ)

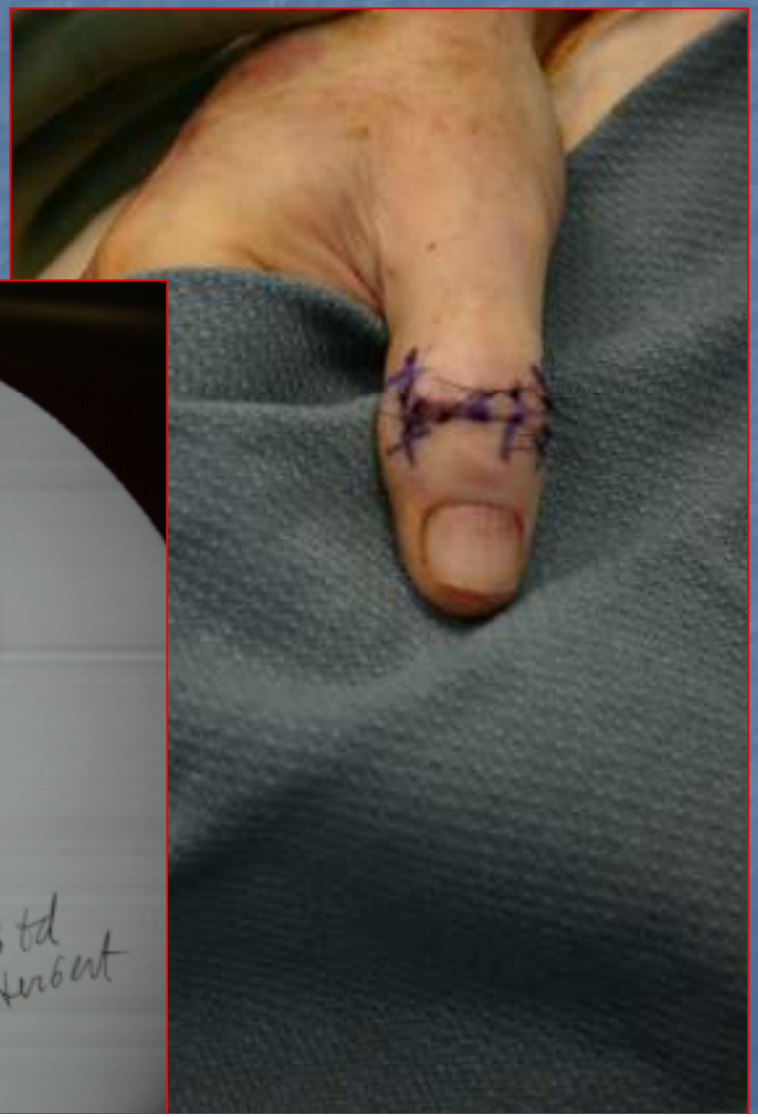




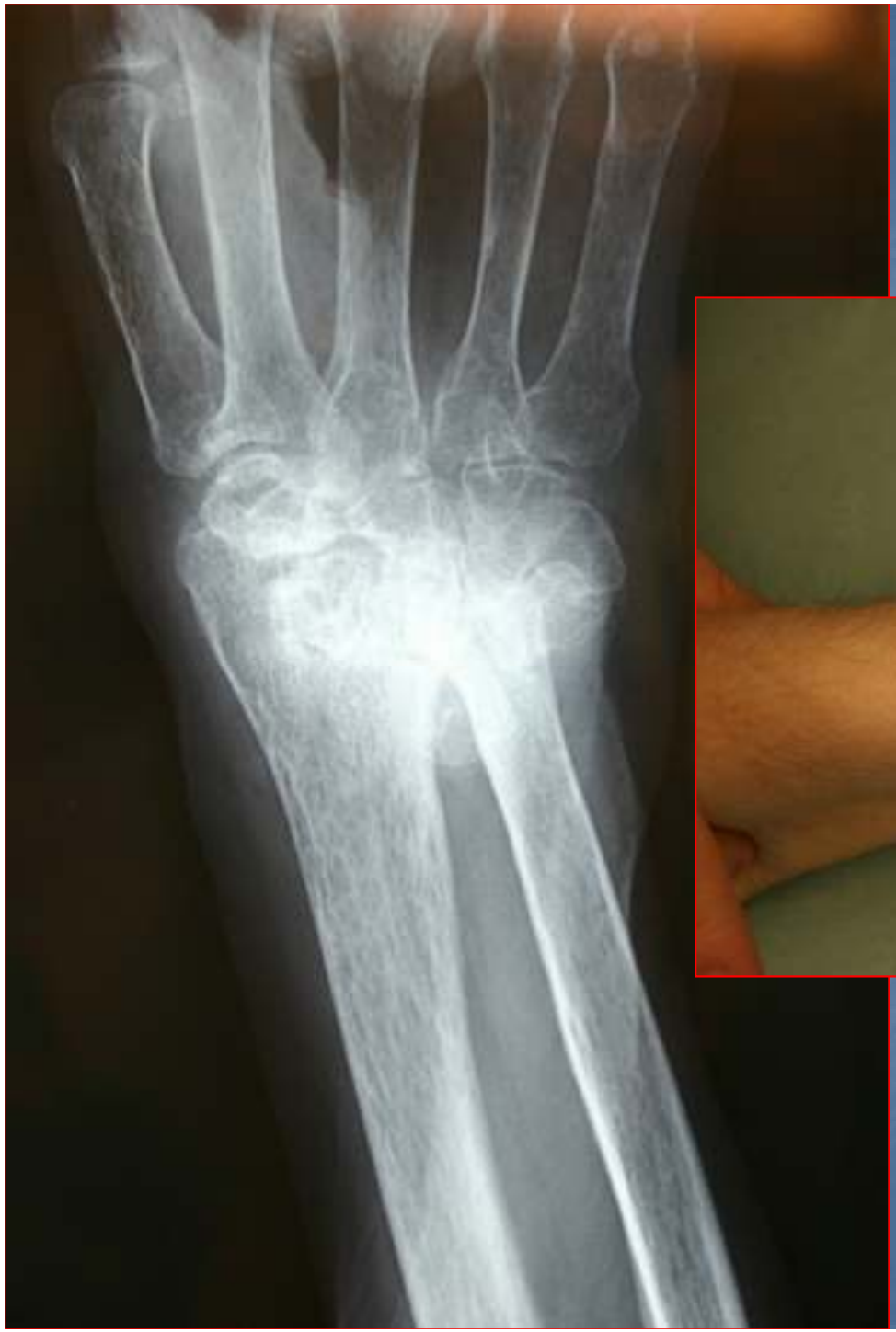
. . . or a painful DIPJ deformity

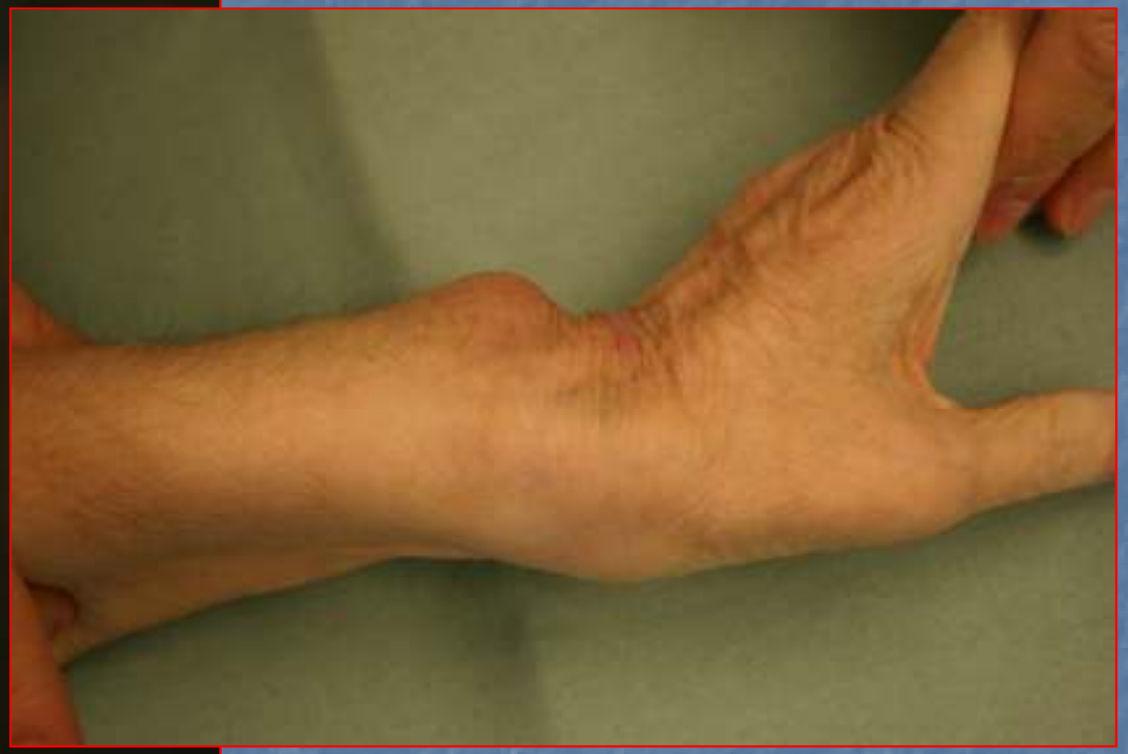


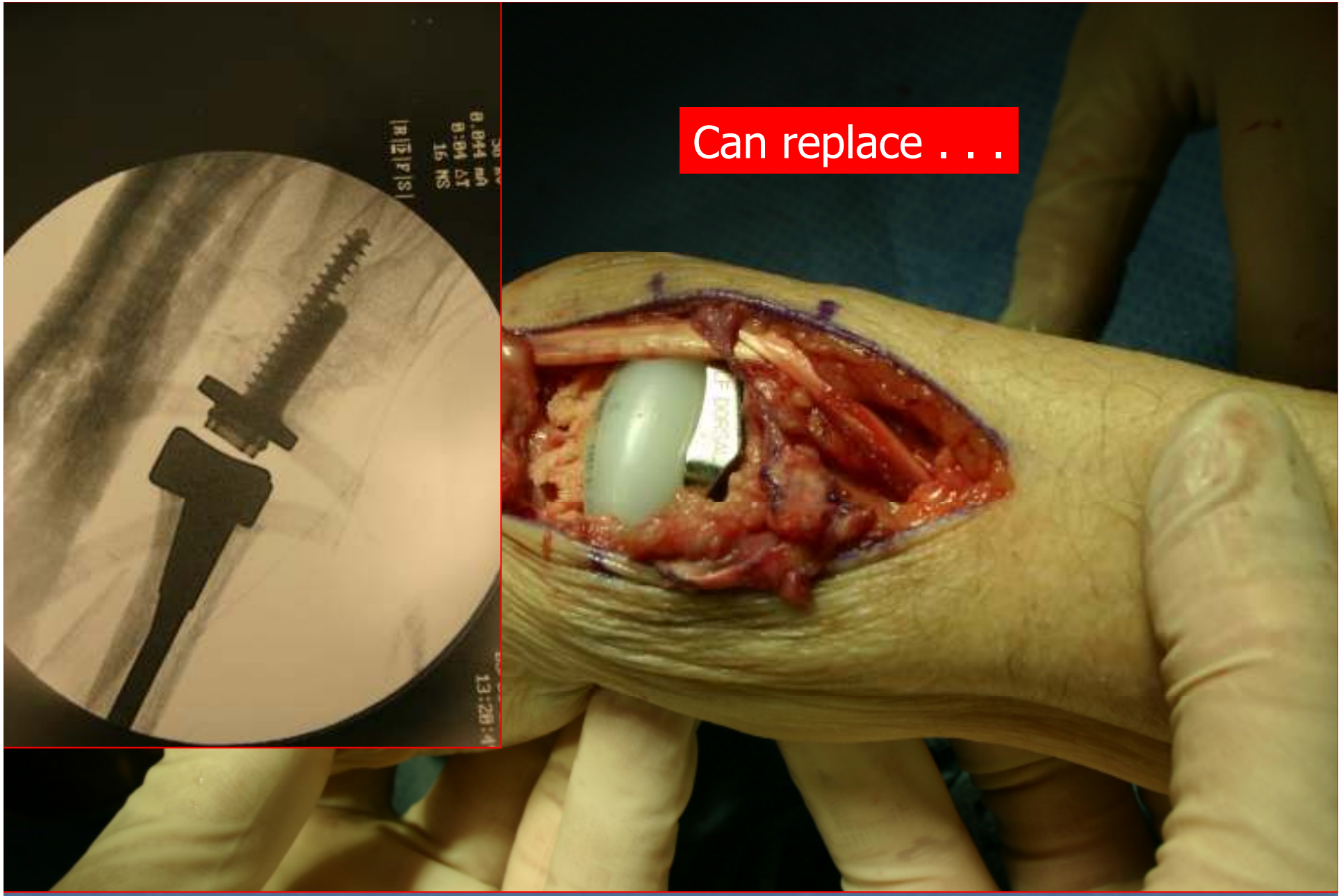


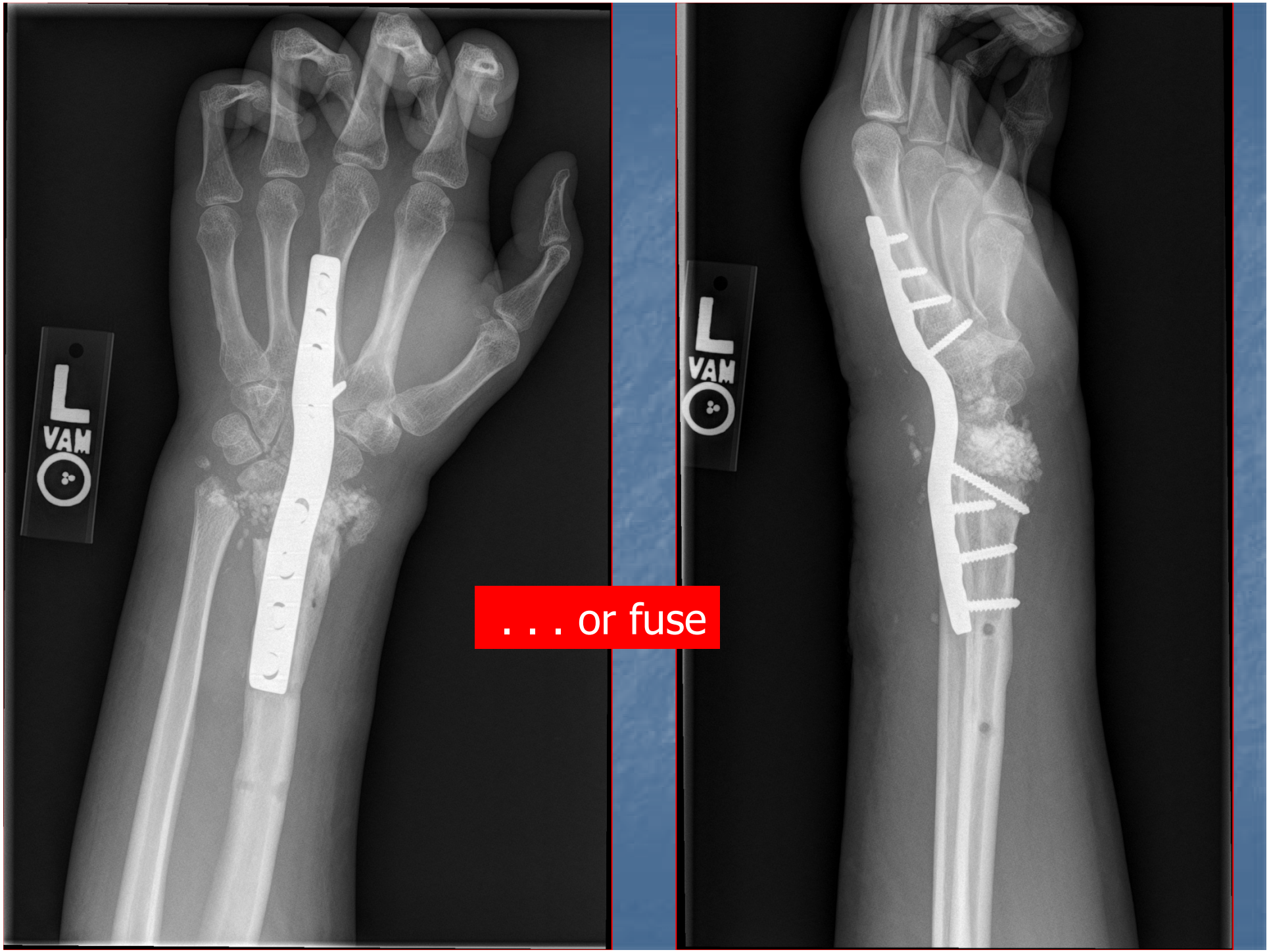


Wrist arthritis?

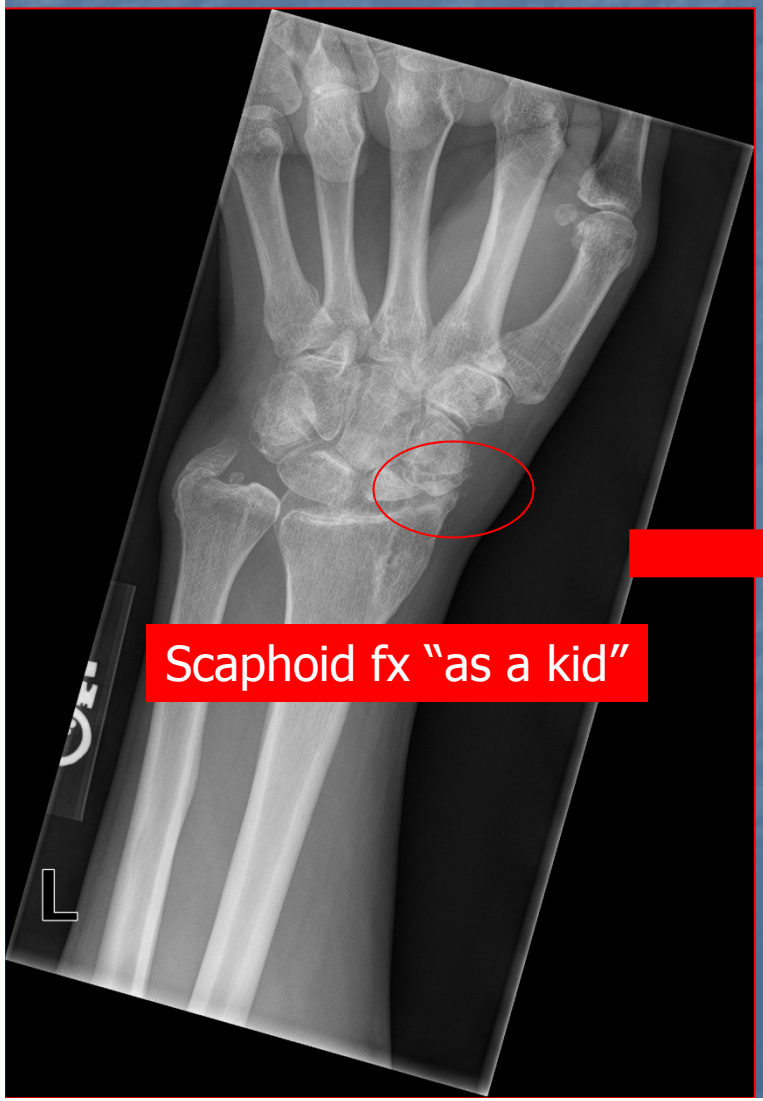


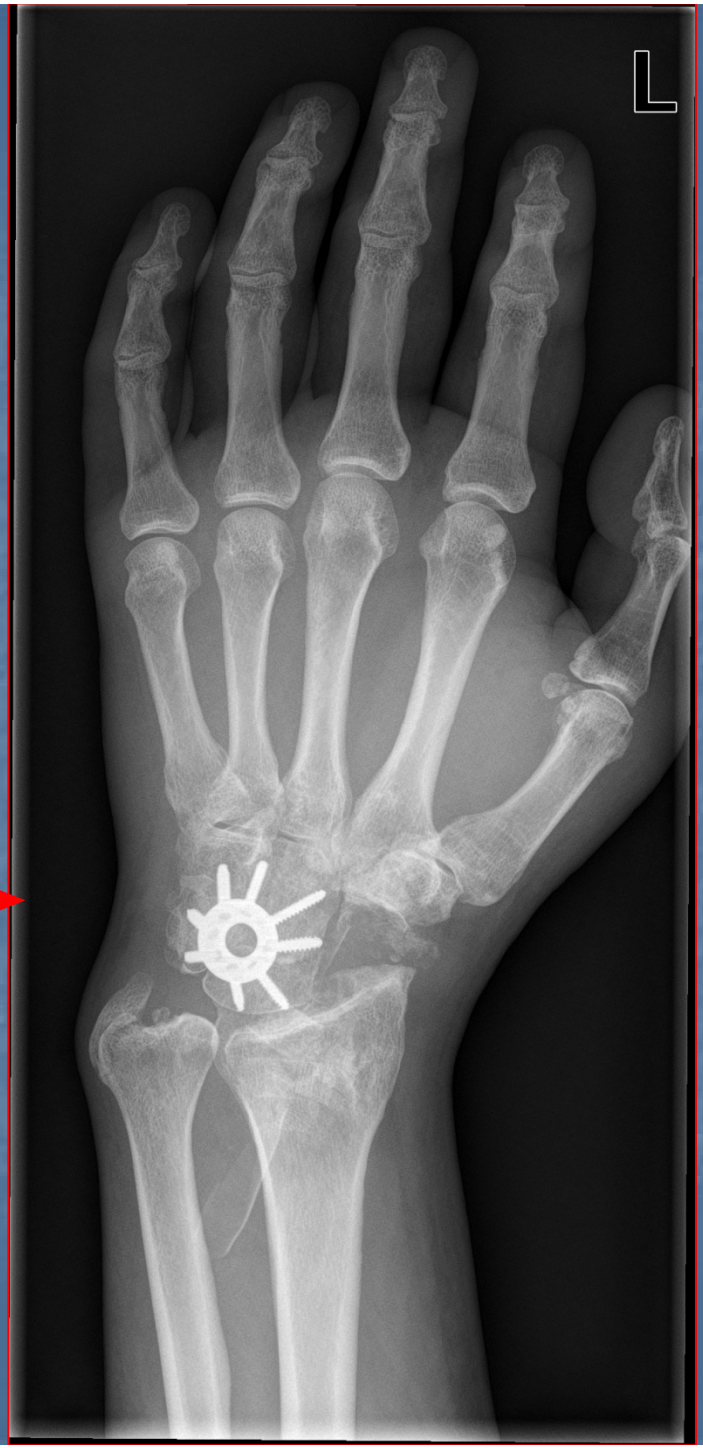



Can replace . . .


L
VAM
. . . or fuse
L
VAM

Examine the patient and X-Ray to identify arthritic pain generator



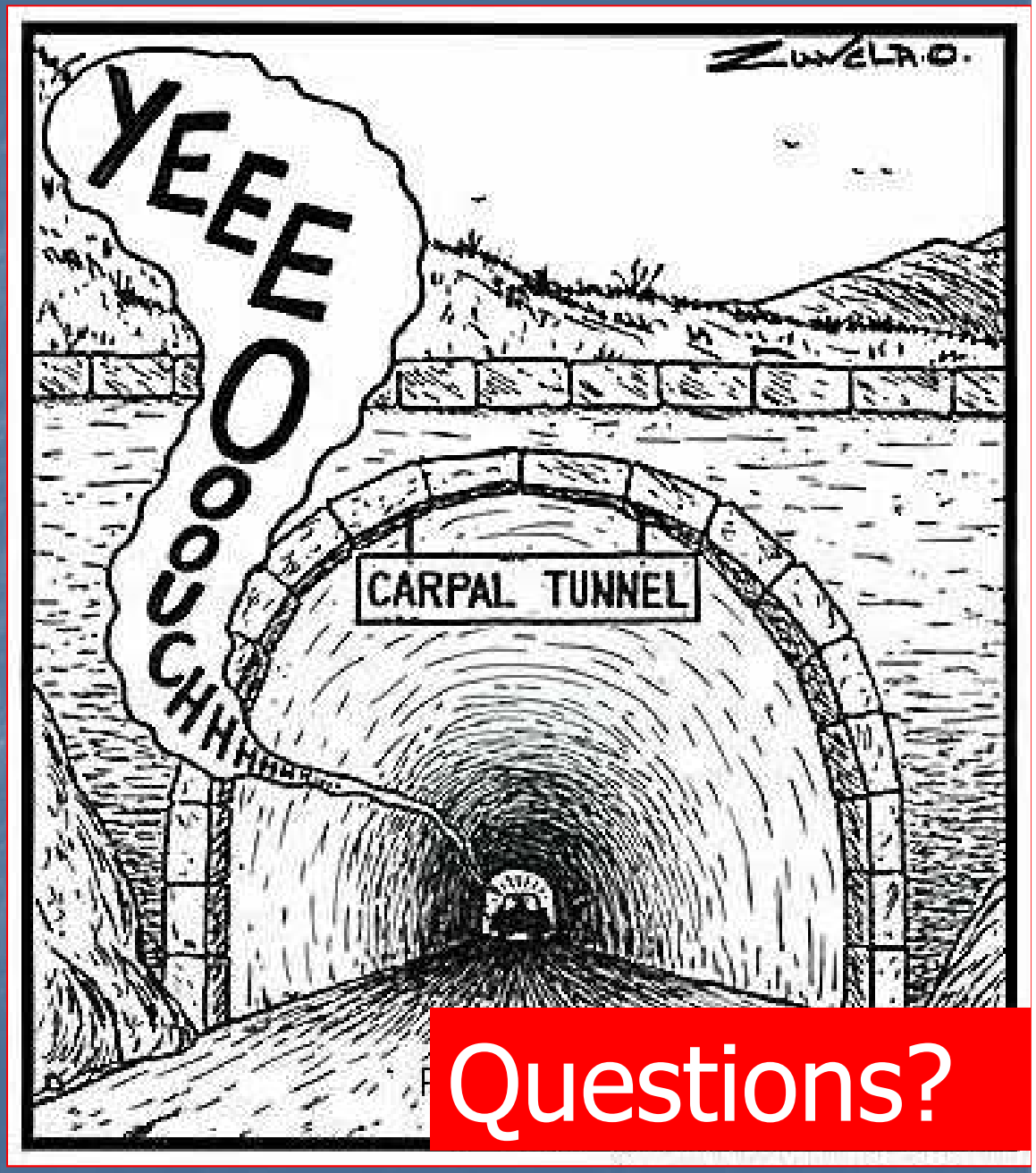


VIII.
Trauma (presenting to the office)

- Low threshold to X-Ray
- Beware snuffbox pain
- Free up fingers (proximal to MCPJs) if splinting/casting a wrist injury

Understand pt.’s goals and then educate re. risks and benefits

Thank-you!



Questions?