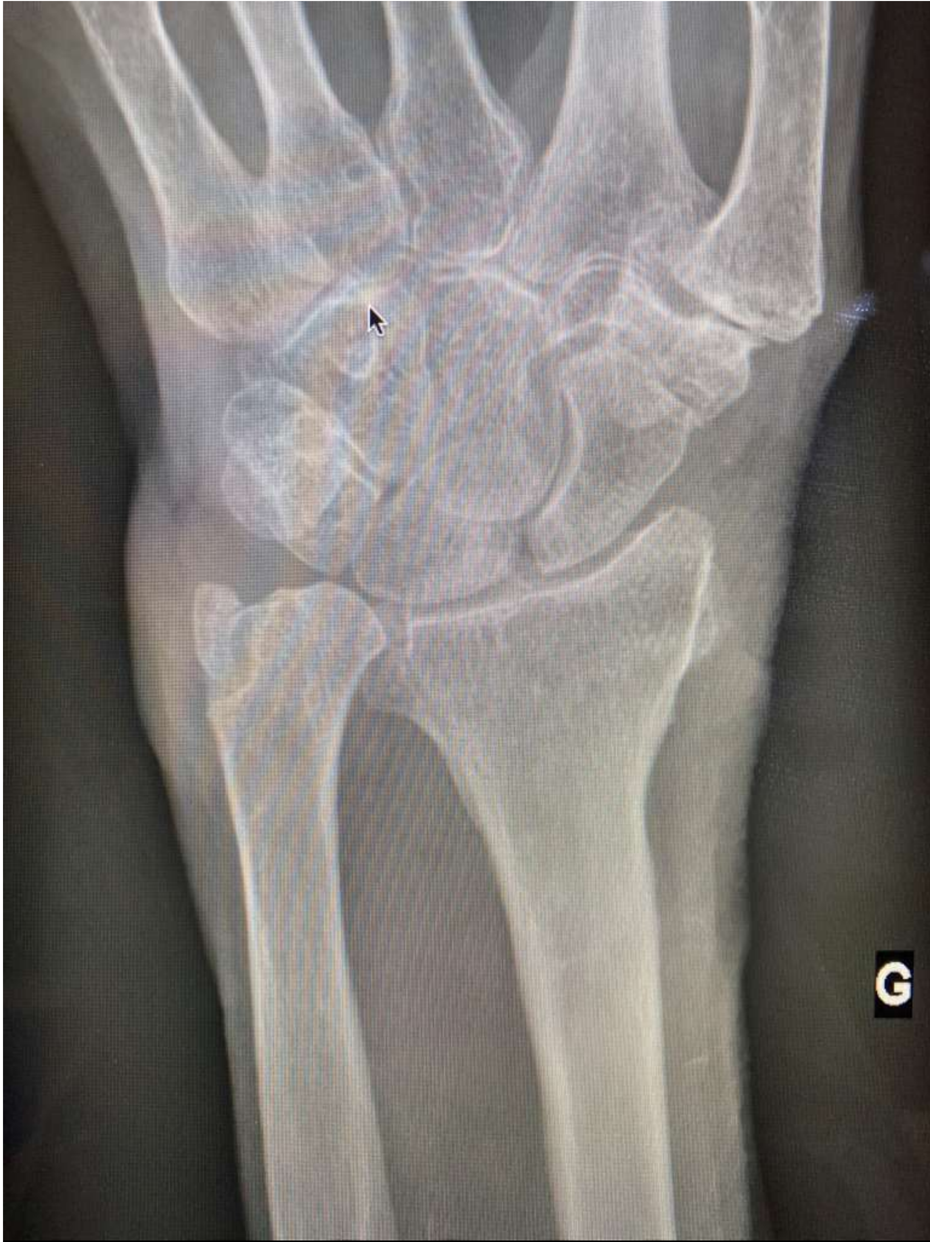
Interventions in-utiles pour les fractures du radius distal chez les personnes âgées

Tilleuls academy, Biel 2022

Georges Kohut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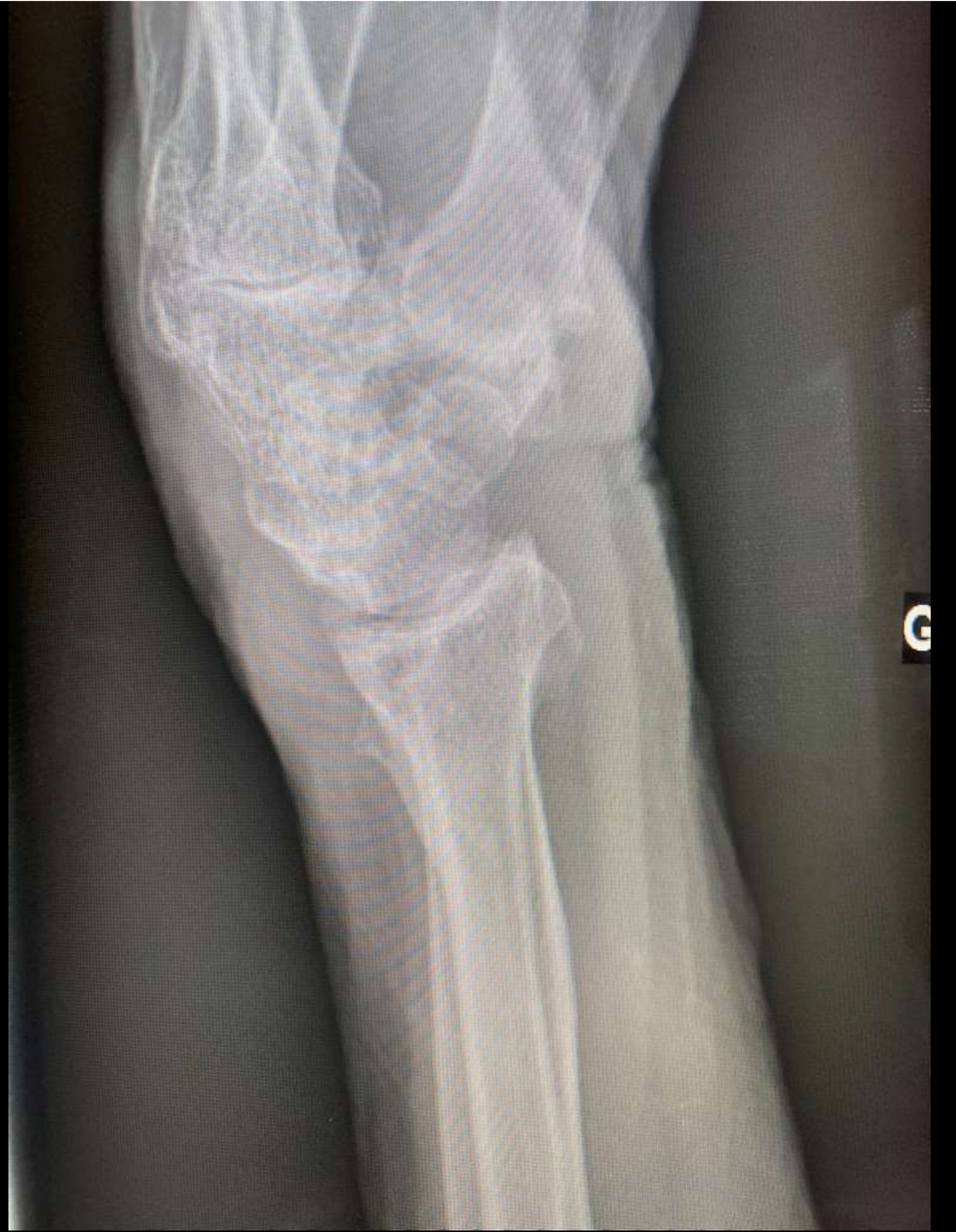
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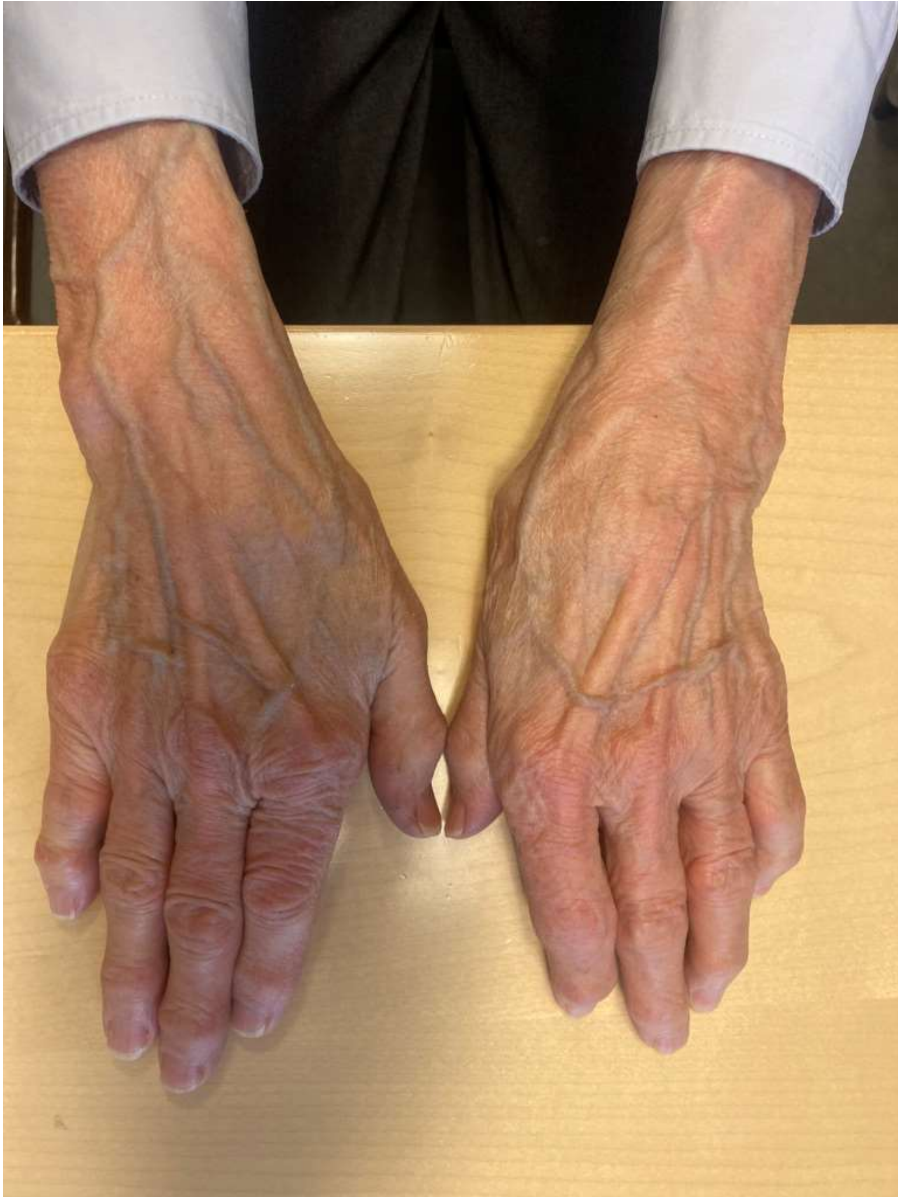
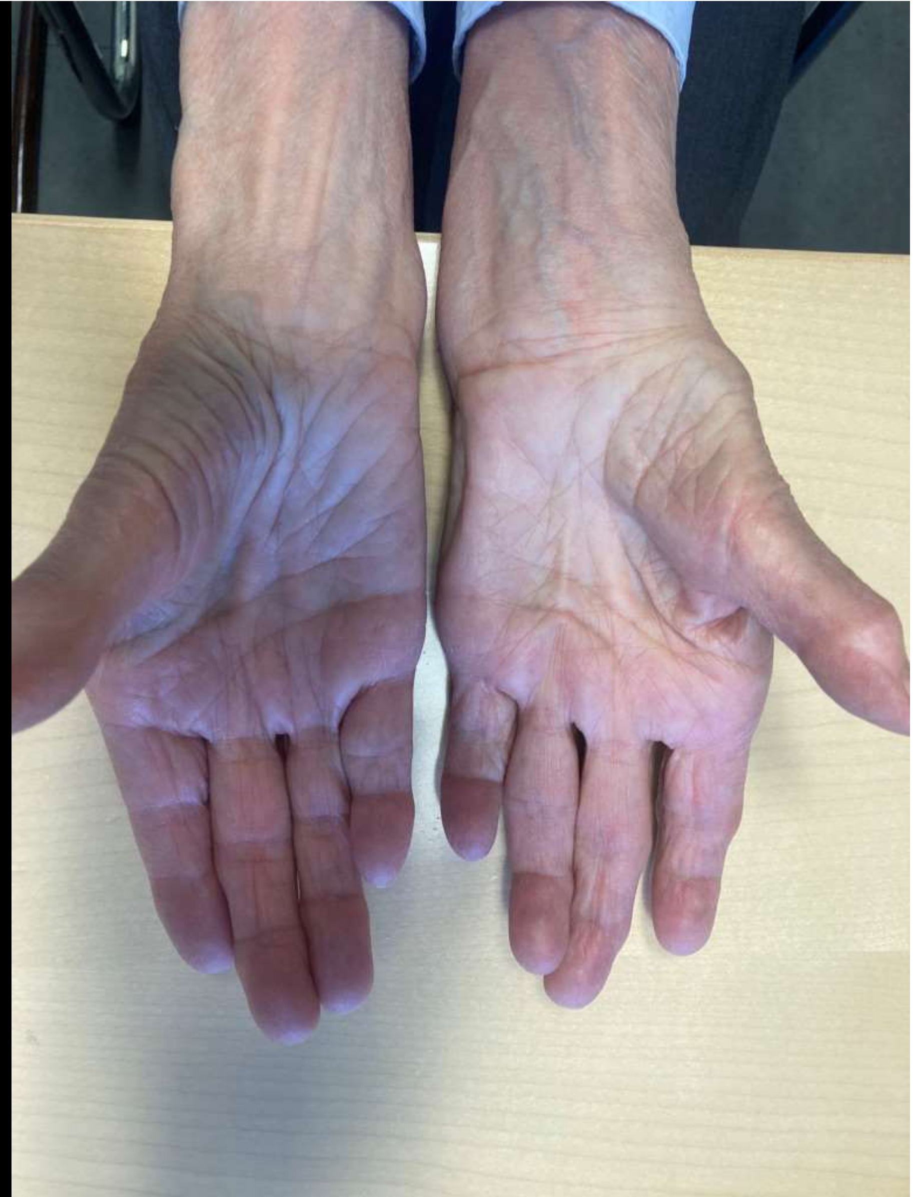
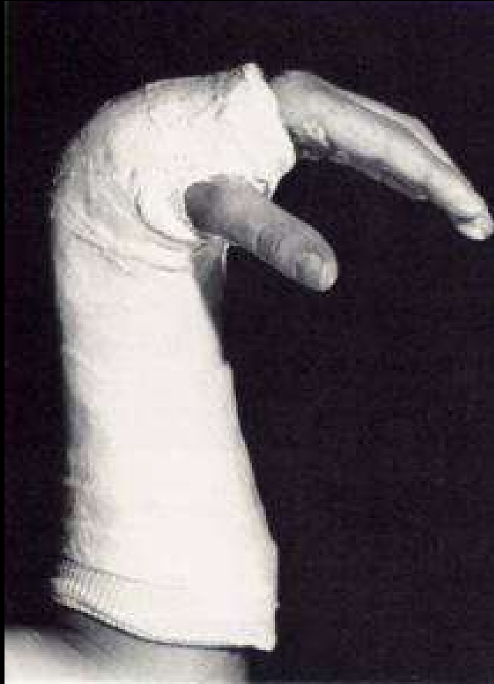
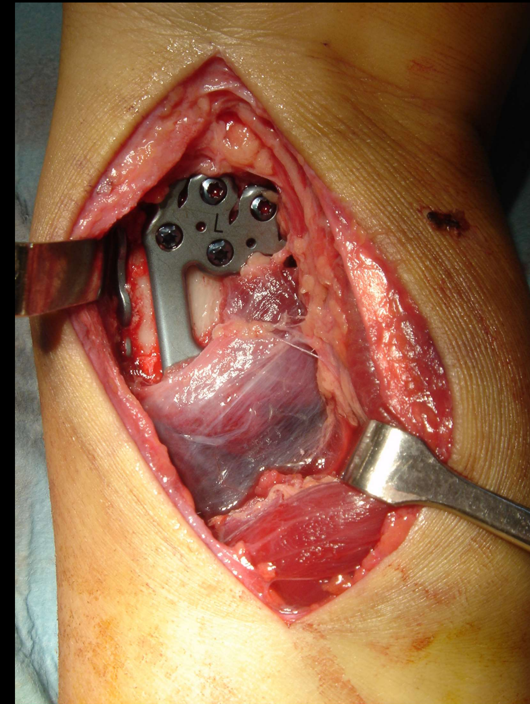



Why do we make a difference? Elderly people..

- Have *different* demands
- Need to maintain their autonomy
- Don't have much time

- Won't experience post-traumatic OA
- ~~Bone quality~~





conservative treatment may be more aggressive than surgery

incidence

- 10% of 65 years old women will experience a DRF during remaining lifetime
- 1000 DRF > 65y per day in US

Goals of the treatment

- 1. Maintain the function of the upper extremity
- 2. Reduce pain
- 3. Restore the function of the wrist

- ~~Anatomic reposition~~
- ~~Stable fixation~~
- ~~Immediate motion of the wrist~~

What says the literature?

Abraham Colles, 1814

"One consolation only remains,
that the limb will, at some remote
period, enjoy perfect freedom
in all its motion, and be completely
exempt from pain.

The deformity, however, will remain undiminished
through life."

- Closed reduction and cast immobilization leads to malunion in over 50% of cases

Tschung KC et al, JBJS 2009
Beharrie AW et al, JOT 2004

A systematic review of outcomes and complications of treating unstable distal radius fractures in the elderly

- 21 papers
- 981 patients over 60 years
- volar locking plate / ex fix / K-wire / cast

Rafael J. Diaz-Garcia et al, JHS 2011

A systematic review of outcomes and complications of treating unstable distal radius fractures in the elderly

- Major complications
  - 38 CRPS (11 in CI)
  - 25 nerve lesions (4 in CI)
  - 26 tendon rupture / adhesion req. surgery (3 in CI)
  - 8 hardware loosening / failure

Rafael J. Diaz-Garcia et al, JHS 2011

A systematic review of outcomes and complications of treating unstable distal radius fractures in the elderly

- *Wrist motion* is clinically comparable
- *DASH score* is clinically comparable
- *Volar tilt and ulnar variance* are better with VLPS and non-bridging ex fix.
- *Rate of recovery* of ADL's is different

Rafael J. Diaz-Garcia et al, JHS 2011

A systematic review of outcomes and complications of treating unstable distal radius fractures in the elderly

- *Conclusion:*
  - *Non consensus*
  - *Consider quality of life during recovery (pain, rate of recovery, limitation of ADL's)*

Rafael J. Diaz-Garcia et al, JHS 2011

Secondary displacement after closed reduction increases with patient age

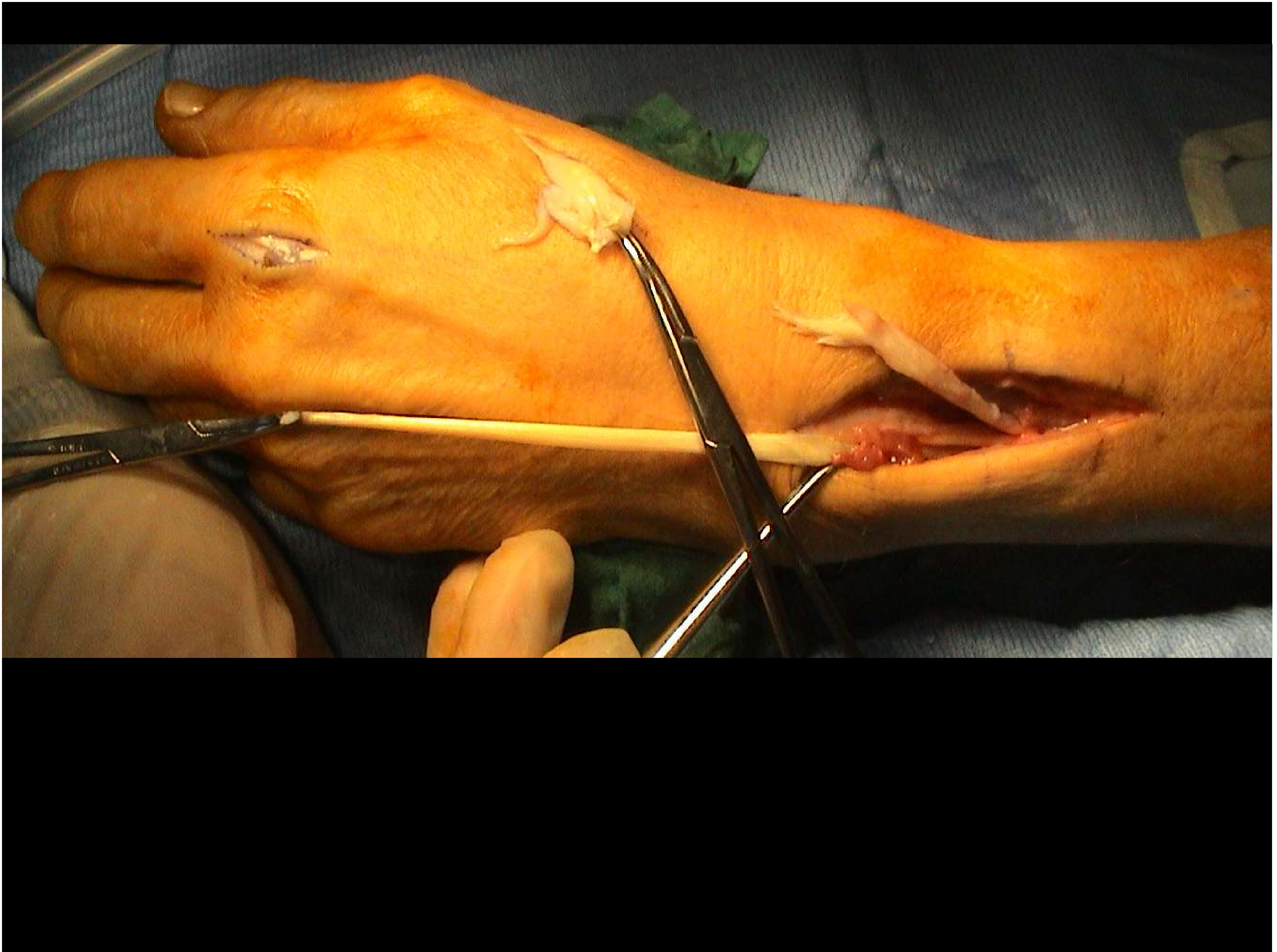
Makhni EC et al, JHS Am, 2008

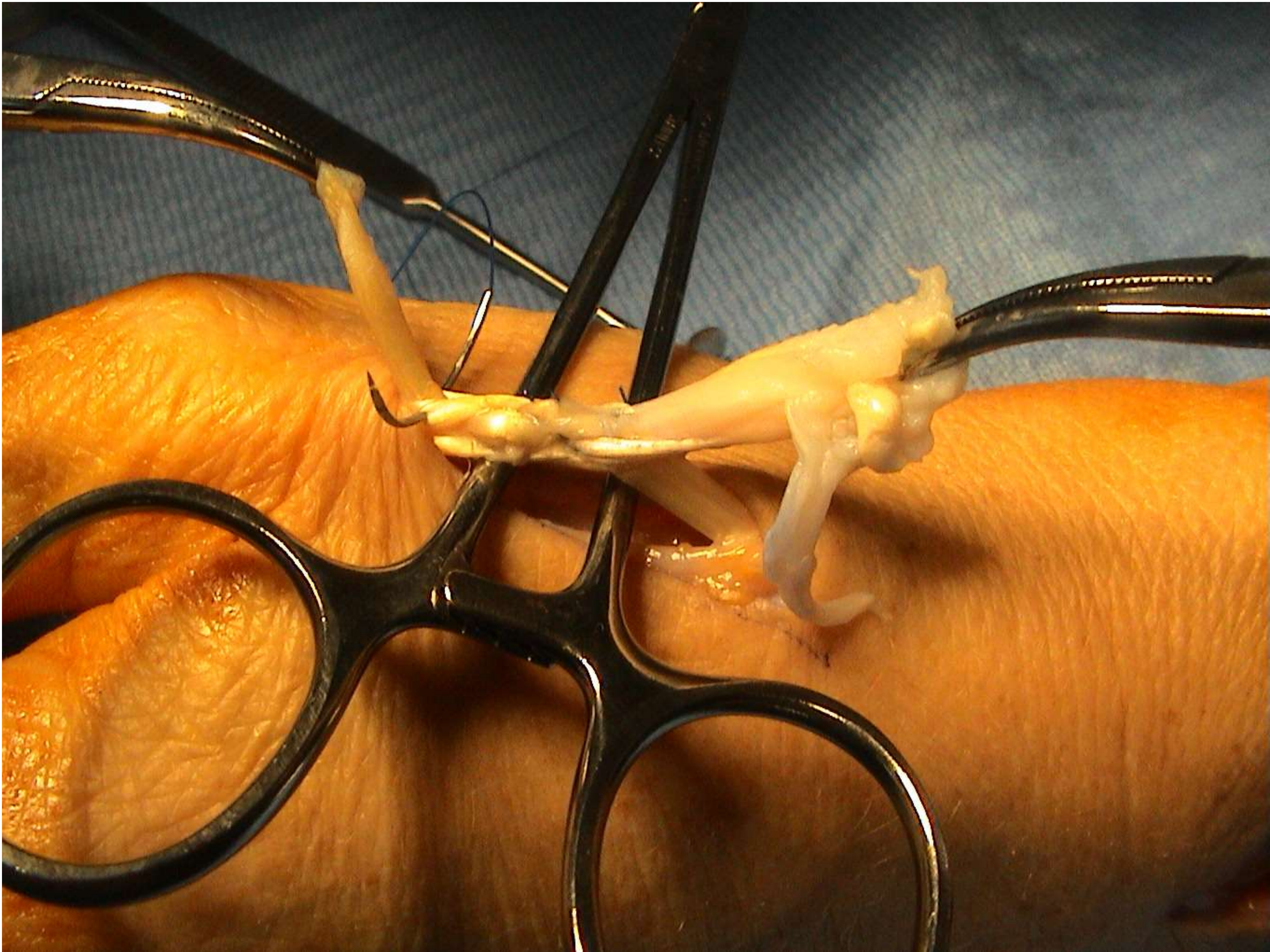
Complications associated with operative versus nonsurgical treatment of distal radius fractures in patients aged 65 and older

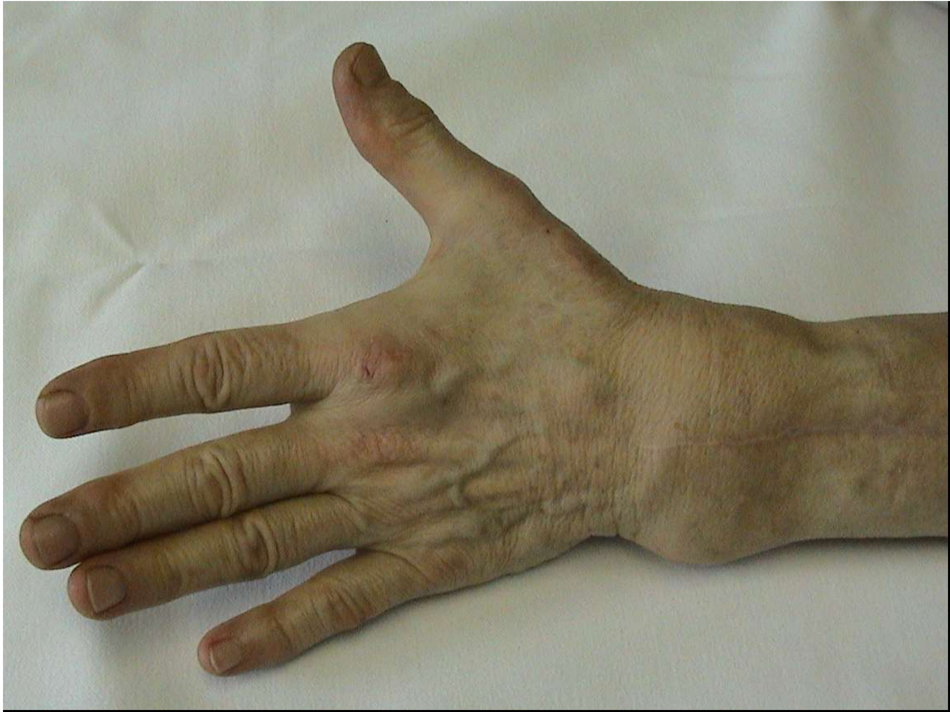
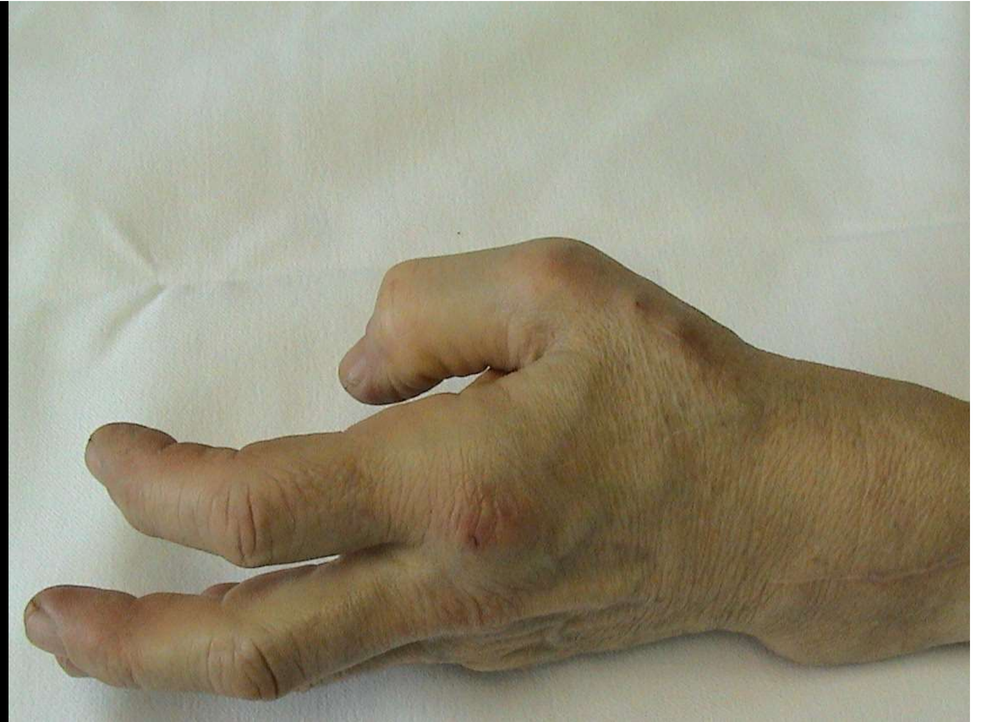
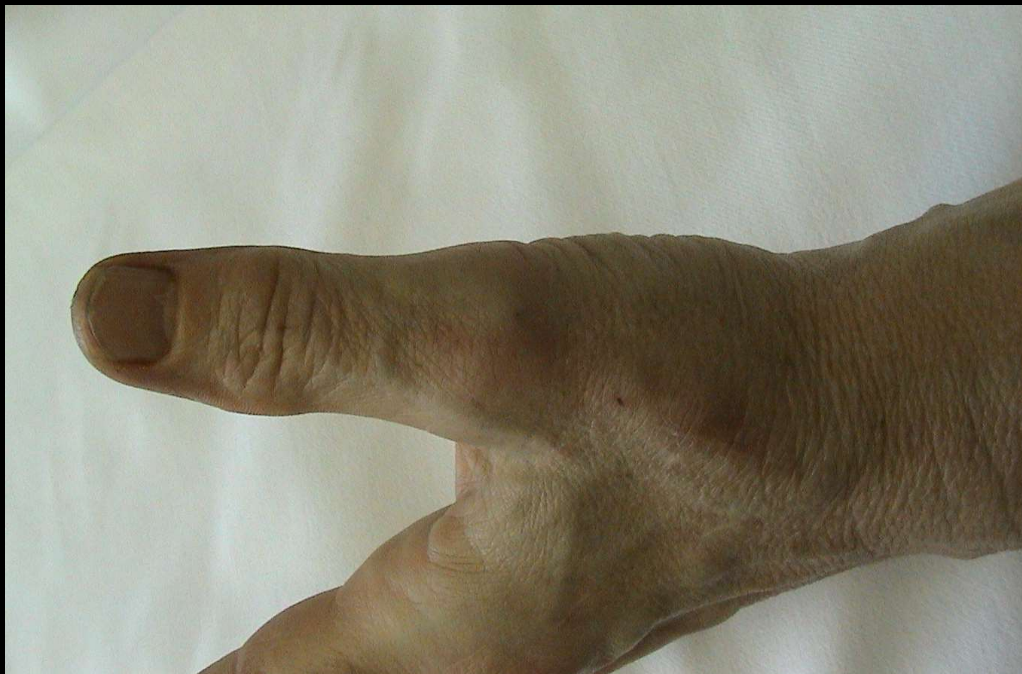
- case-controls (2 x 129 patients)
- No difference in function

Complication	Conservative	operative
Median neuropathy	14 (6 req. surgery)	8 (2 req. surgery)
CRPS	3	4
SSI	0	16 (12 pin sites)
Tendon rupture/adhesion	1	8

Kristina Lutz et al, JHS am 2014





A Prospective Randomized Trial Comparing Nonoperative Treatment with Volar Locking Plate Fixation for Displaced and Unstable Distal Radial Fractures in Patients Sixty-five Years of Age and Older

Rohit Arora, MD, Martin Lutz, MD, Christian Deml, MD, Dietmar Krappinger, MD, PhD, Luzian Haug, MD, and Markus Gabl, MD

Investigation performed at the Department of Trauma Surgery and Sports Medicine, Medical University Innsbruck, Innsbruck, Austria

Conclusions: At the twelve-month follow-up examination, the range of motion, the level of pain, and the PRWE and DASH scores were not different between the operative and nonoperative treatment groups. Patients in the operative treatment group had better grip strength through the entire time period. Achieving anatomical reconstruction did not convey any improvement in terms of the range of motion or the ability to perform daily living activities in our cohorts.

Level of Evidence: Therapeutic Level I. See Instructions for Authors for a complete description of levels of evidence.

N = 73

JBJS 2011

THE TREATMENT OF DISTAL RADIUS FRACTURES

GUIDELINE AND EVIDENCE REPORT

Adopted by the American Academy of Orthopaedic Surgeons
Board of Directors
December 5, 2009

- Operative fixation if — *moderate*
    - Shortening > 3mm
    - Dorsal tilt > 10 degrees
    - Intraarticular step-off > 2mm
- Surgery for patients > 55 y — *inconclusive*
- Vit C suppl. — *moderate*

Distal radius fractures in the superelderly: does malunion affect functional outcome?

- > 80 y
- ADL, pain, function, strength are comparable

Court-Brown et al, ISRN Orthop 2014

Personal views

- Strong indications for surgery
  - Open fractures
  - Acute CTS
  - Fracture of the ulnar neck
  - Displacement in flexion

Personal views

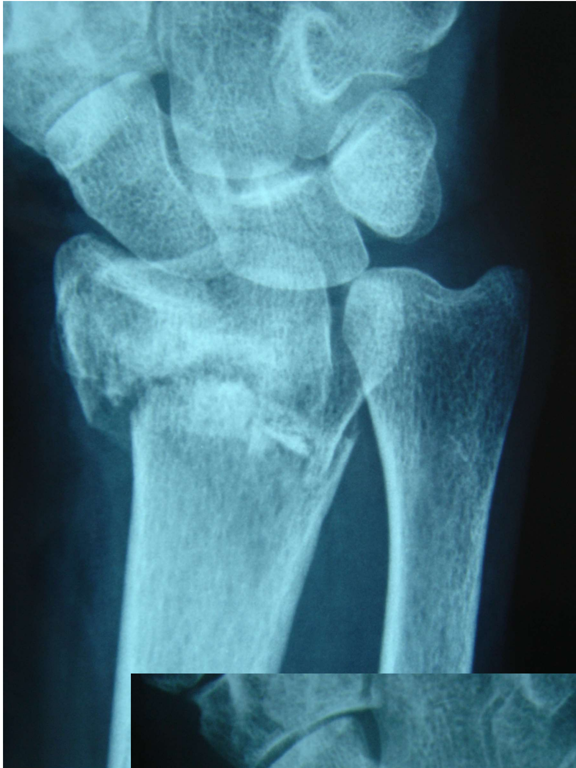
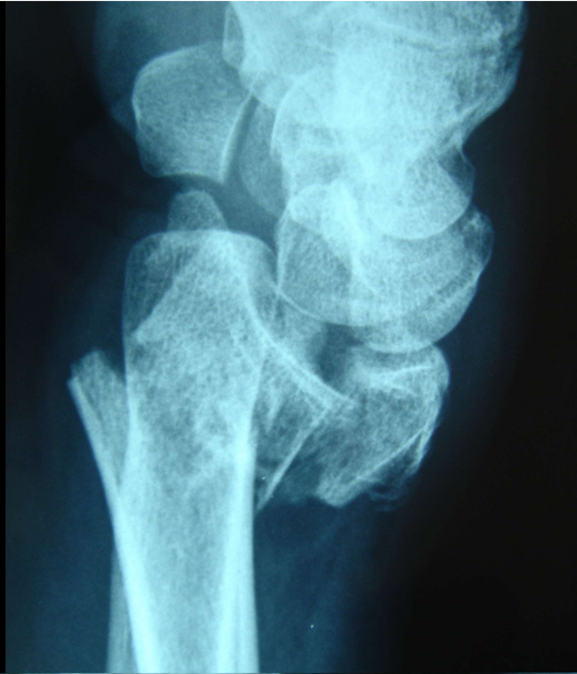
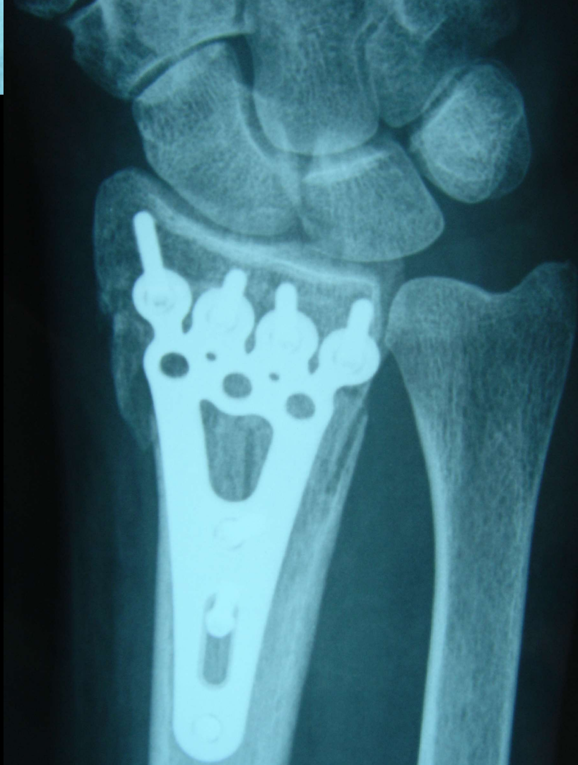
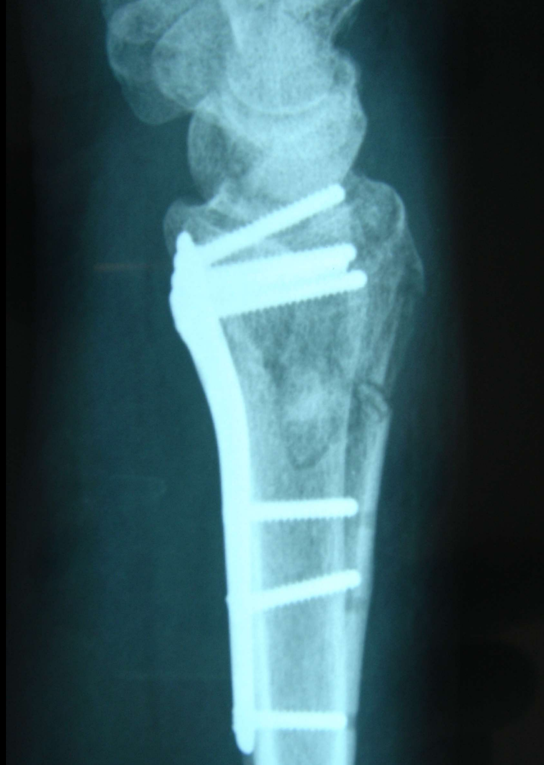
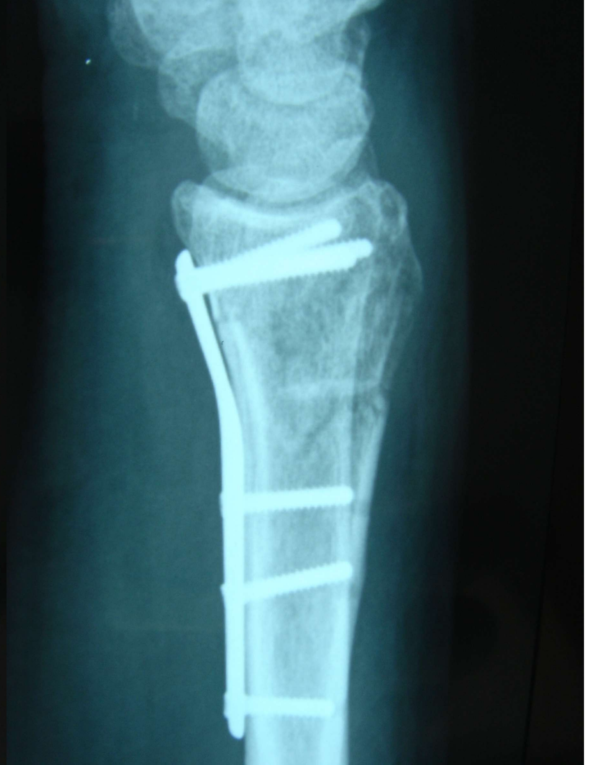
- Relative indications for surgery
  - Faster recovery
  - Need for grip strength

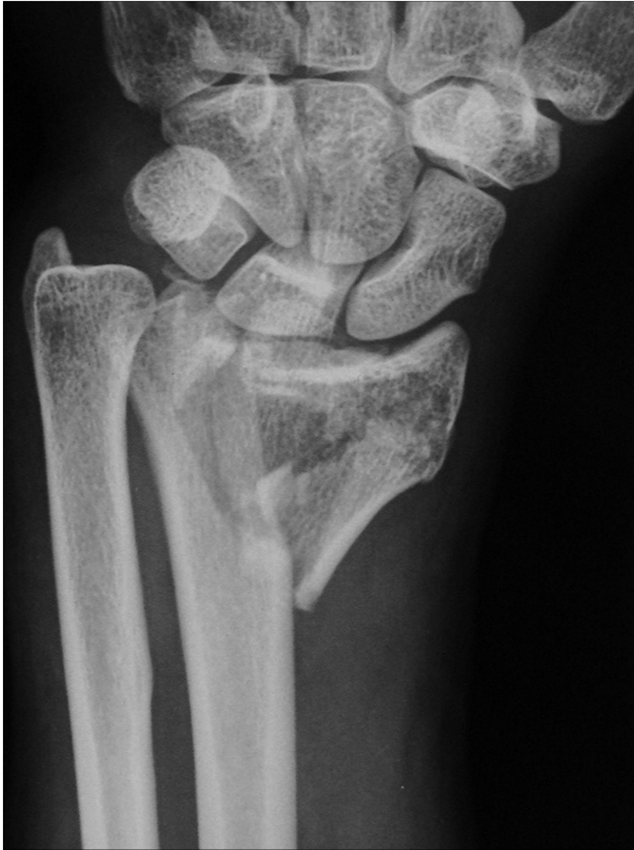
Personal views

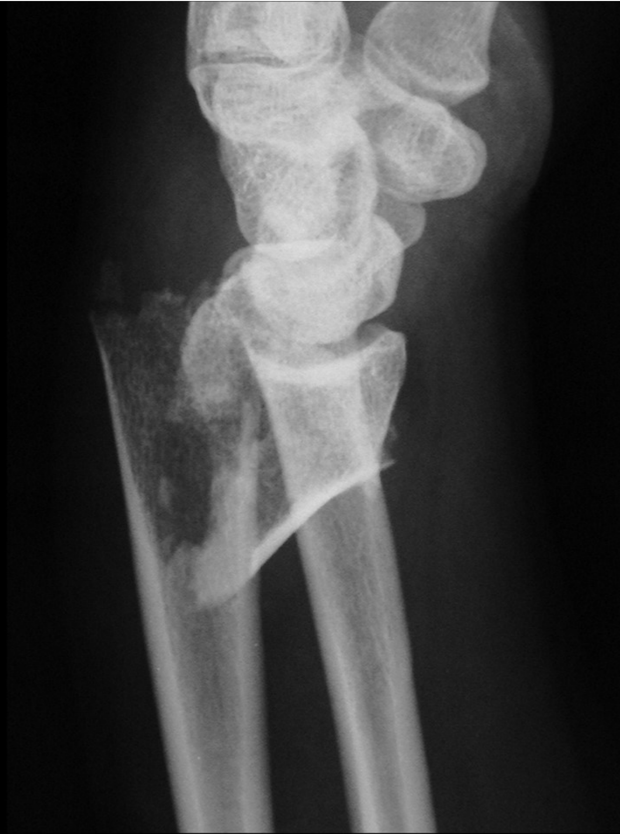
- Treat patients, not fractures
- If we operate, let's do it right
  - volar locking plate
  - Splint for max 10 days, fingers free
  - Immediate ROM shoulder, elbow and fingers
  - Use the hand
  - Vitamin C
  - SUPINATE

Five reasons for supination :

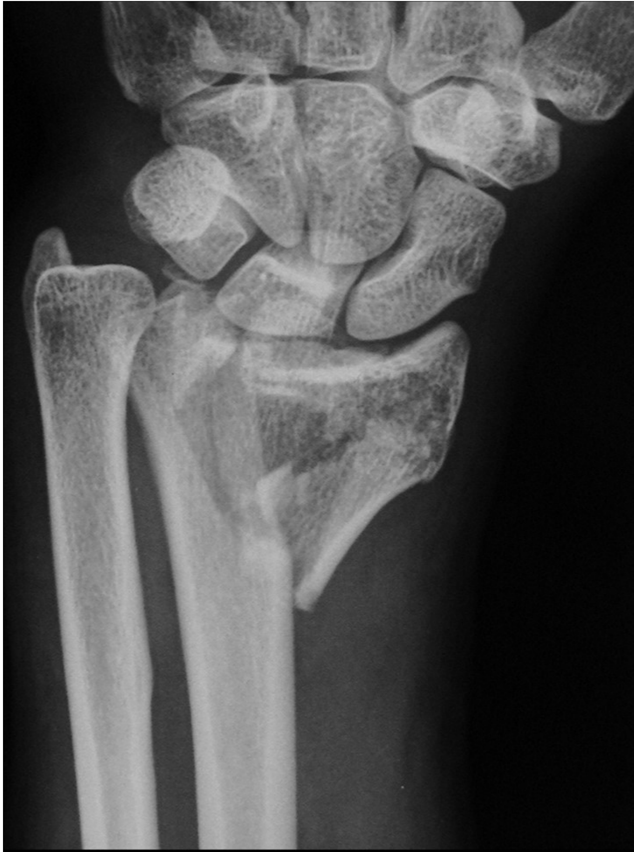
- Because
  - It stretches the pronator quadratus
  - It reduces the DRUJ and the ECU
  - It is not compensated by the shoulder
  - It helps use the hand and flex the fingers
  - Maybe it prevents CRPS

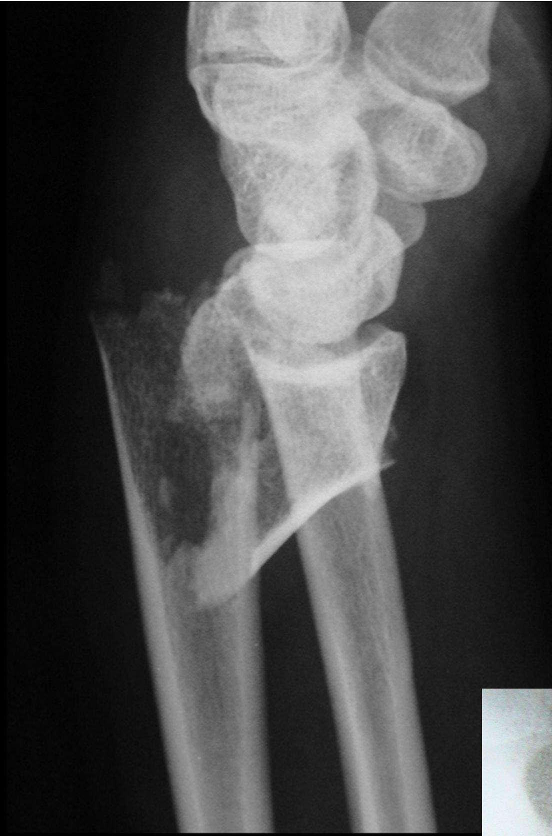






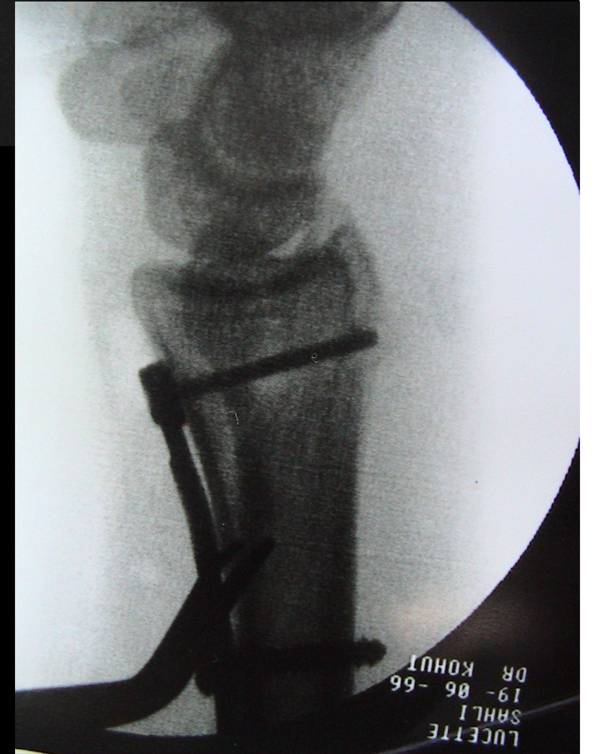


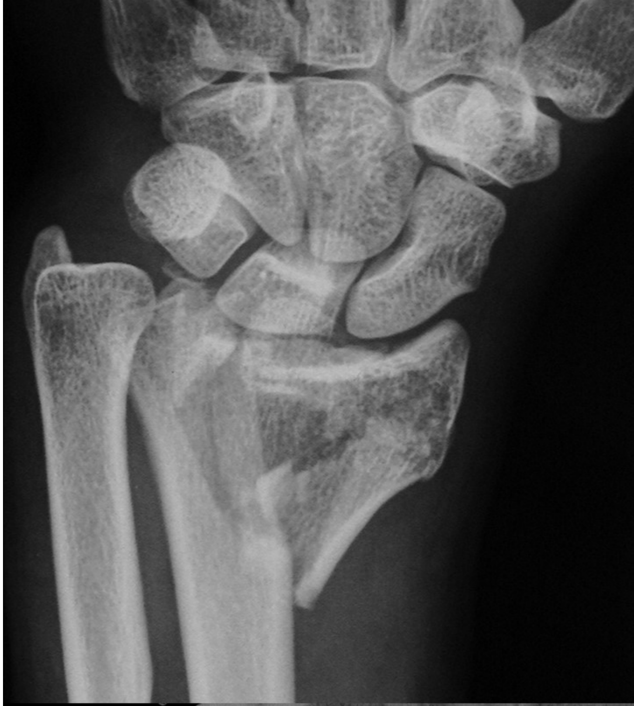
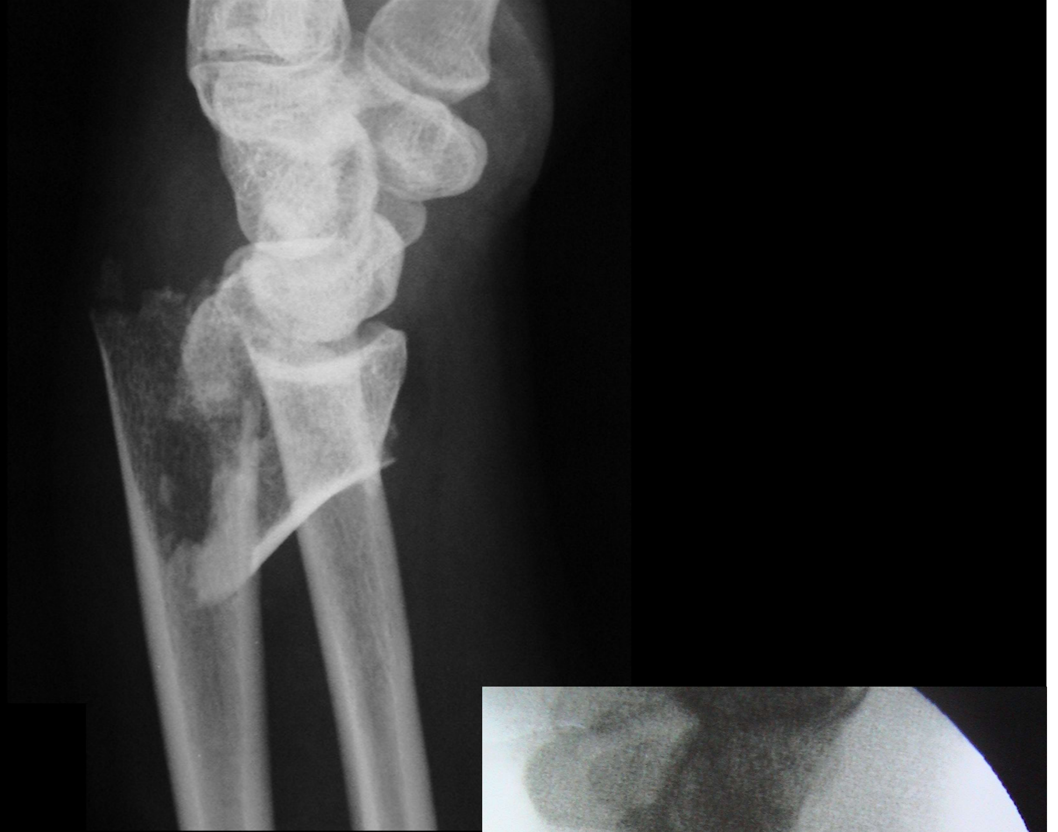
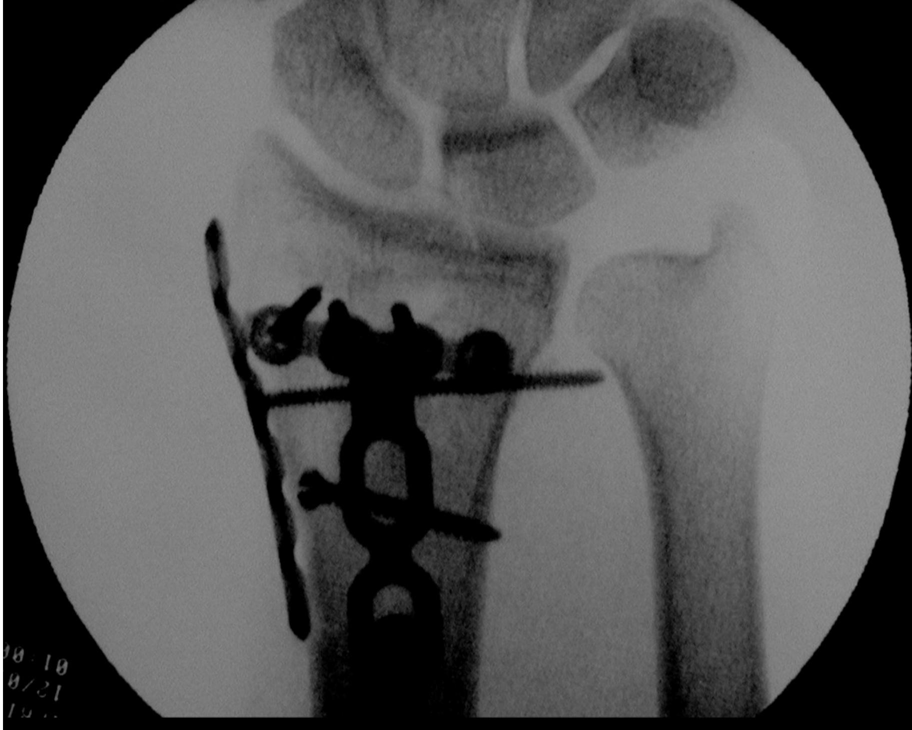
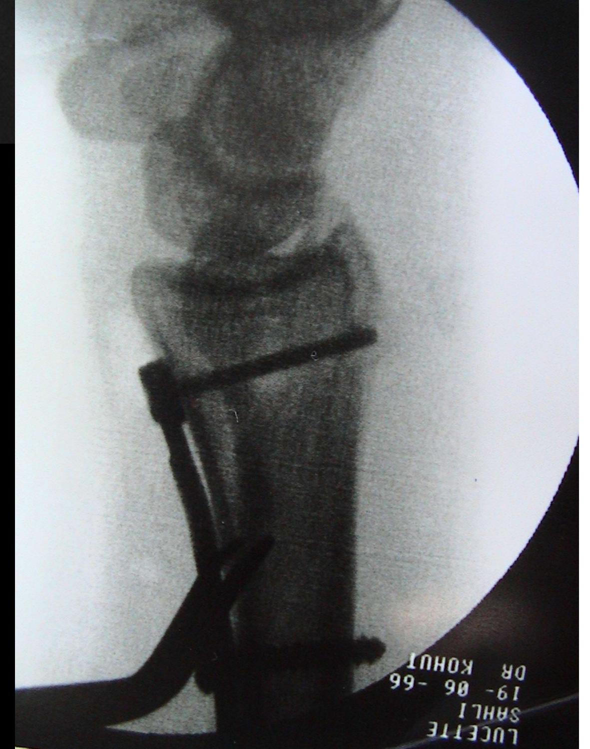


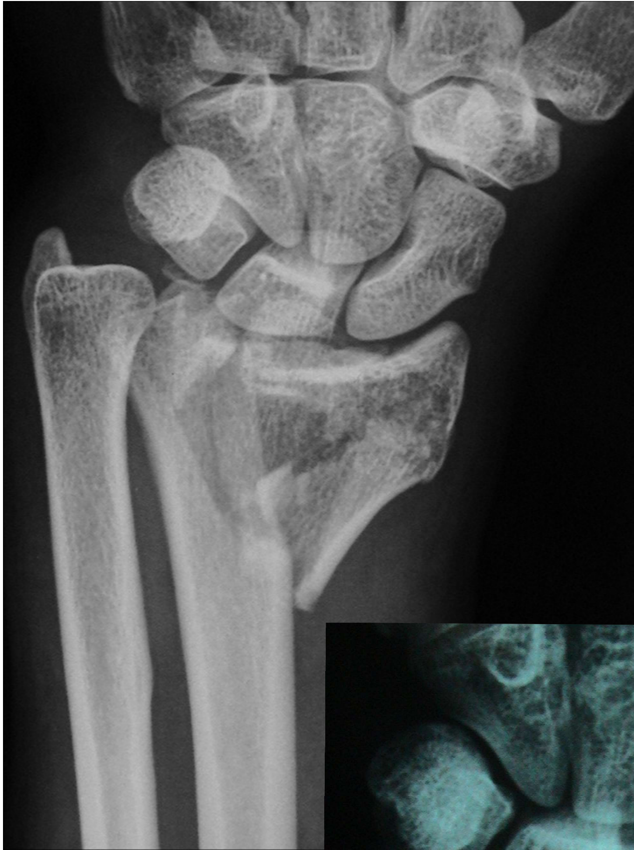
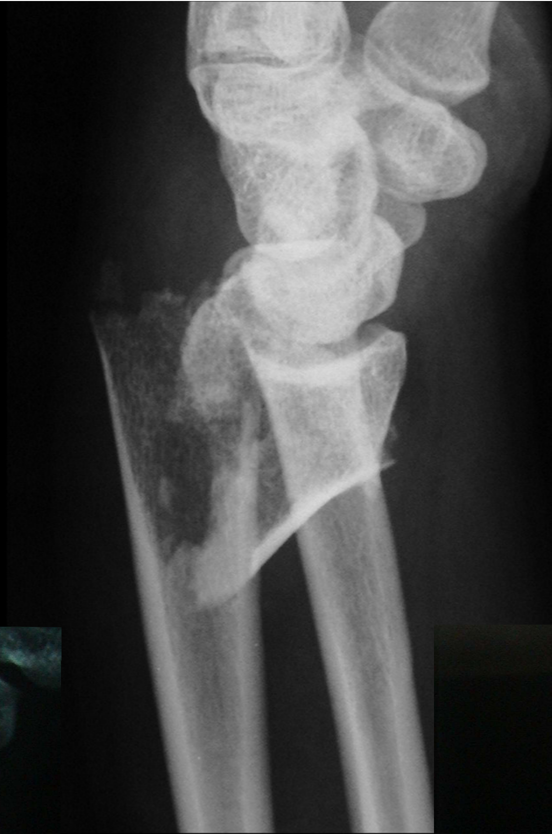
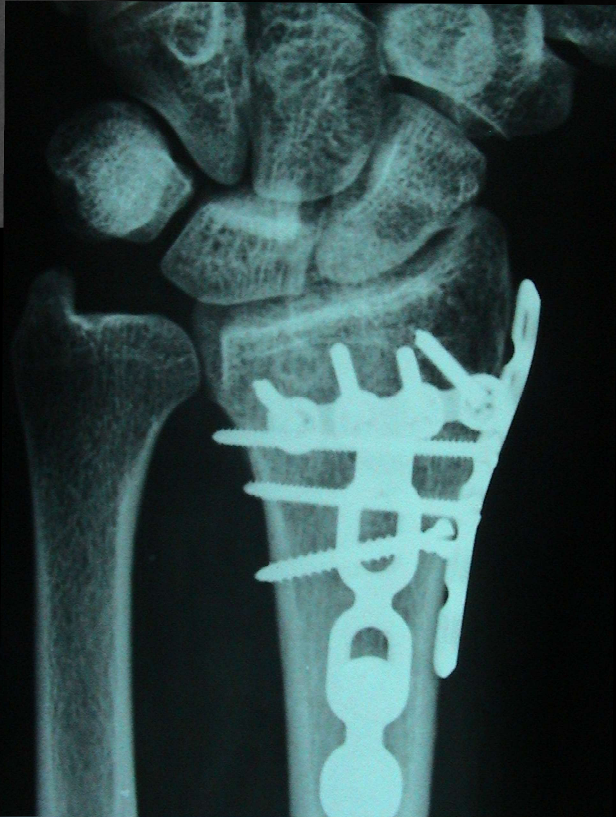
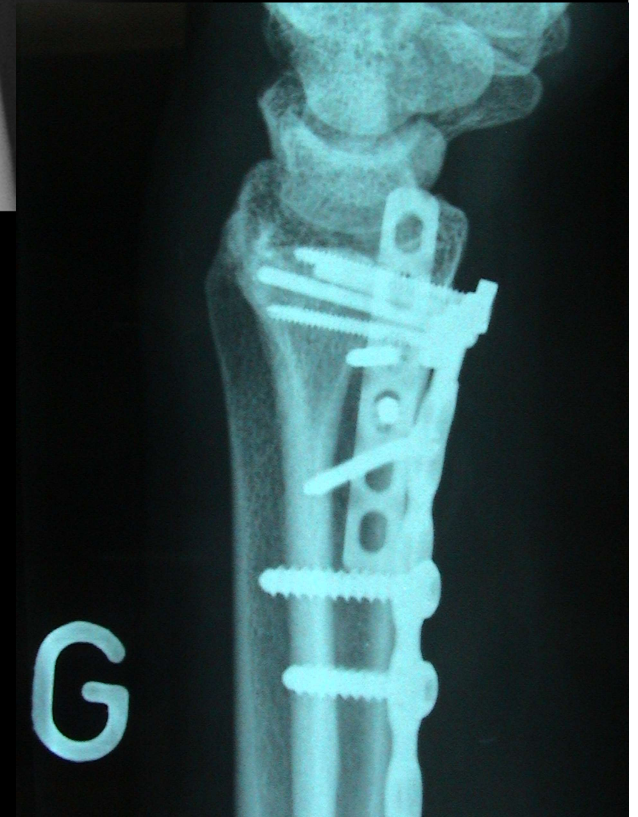
SL, 34y





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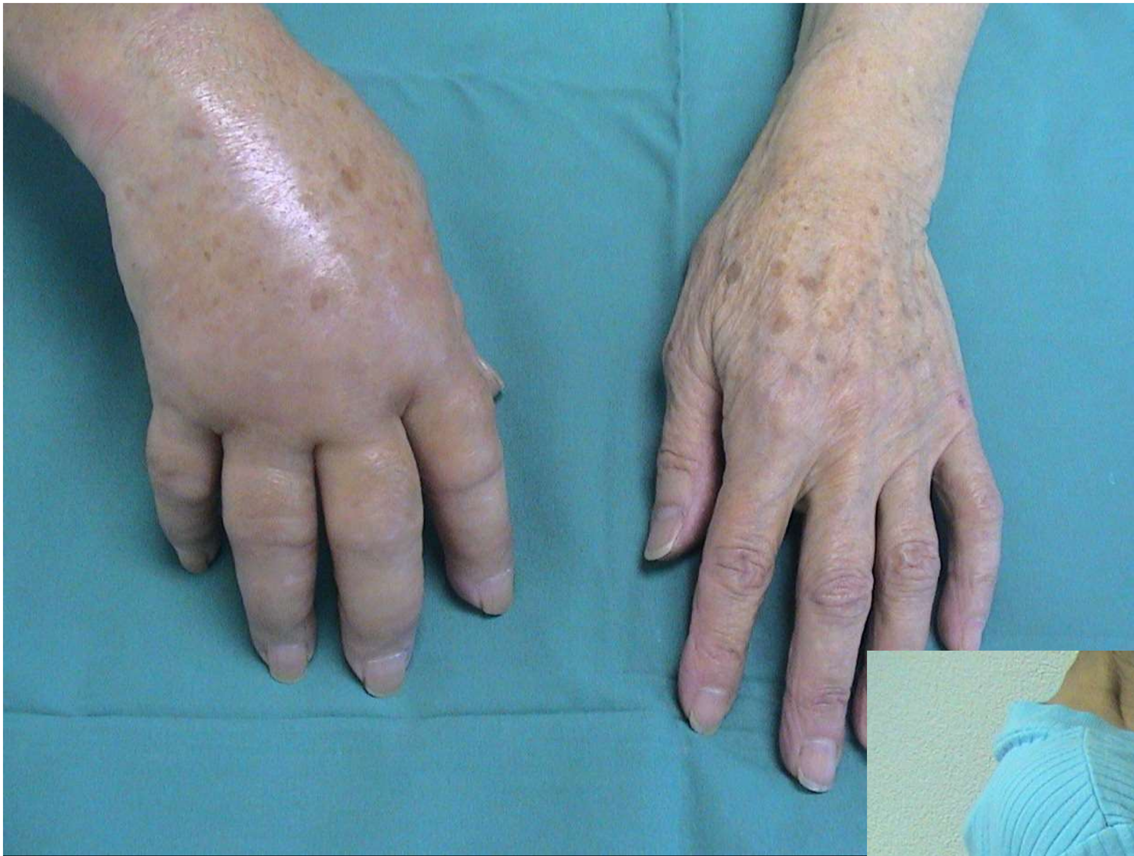
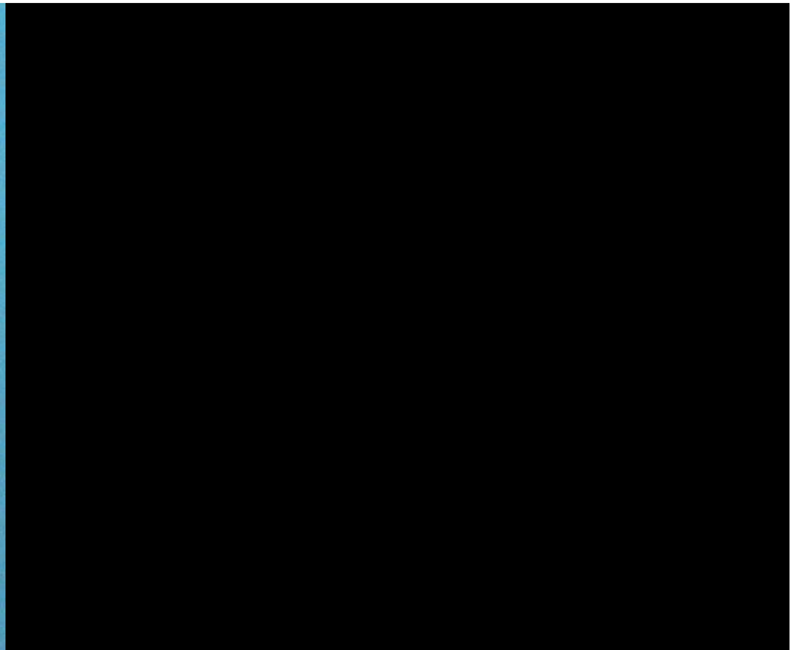
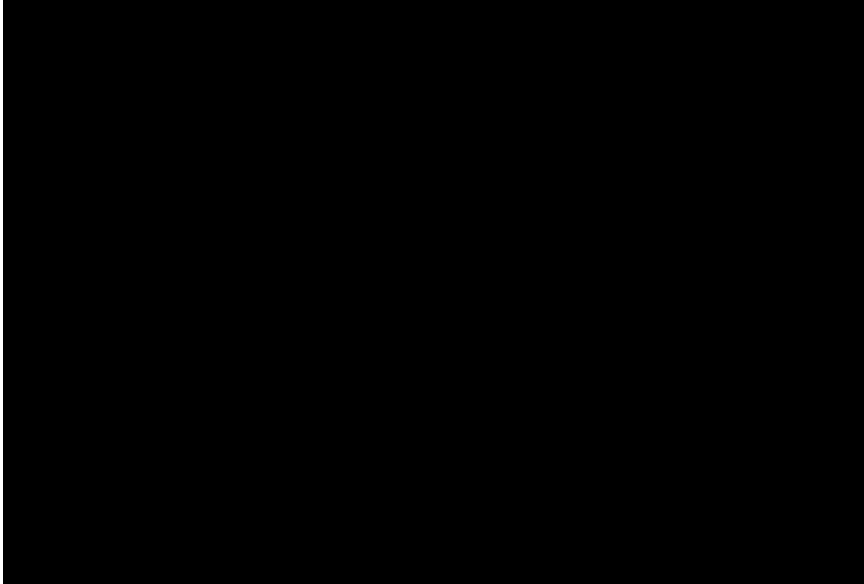
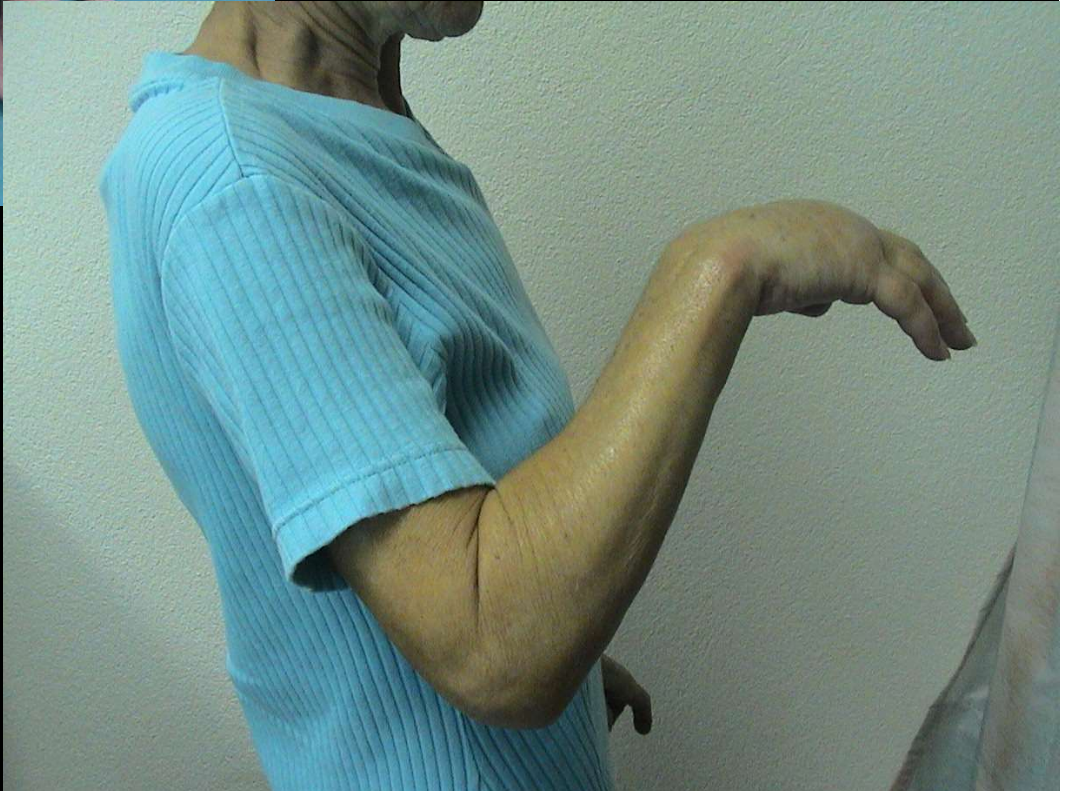
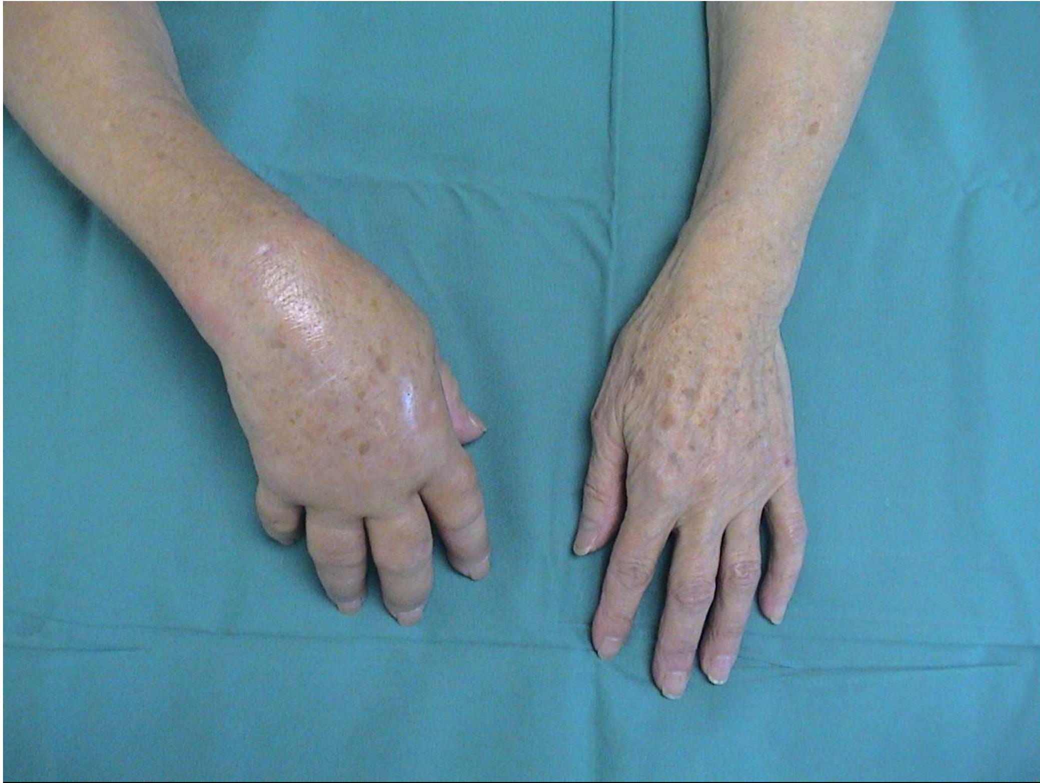
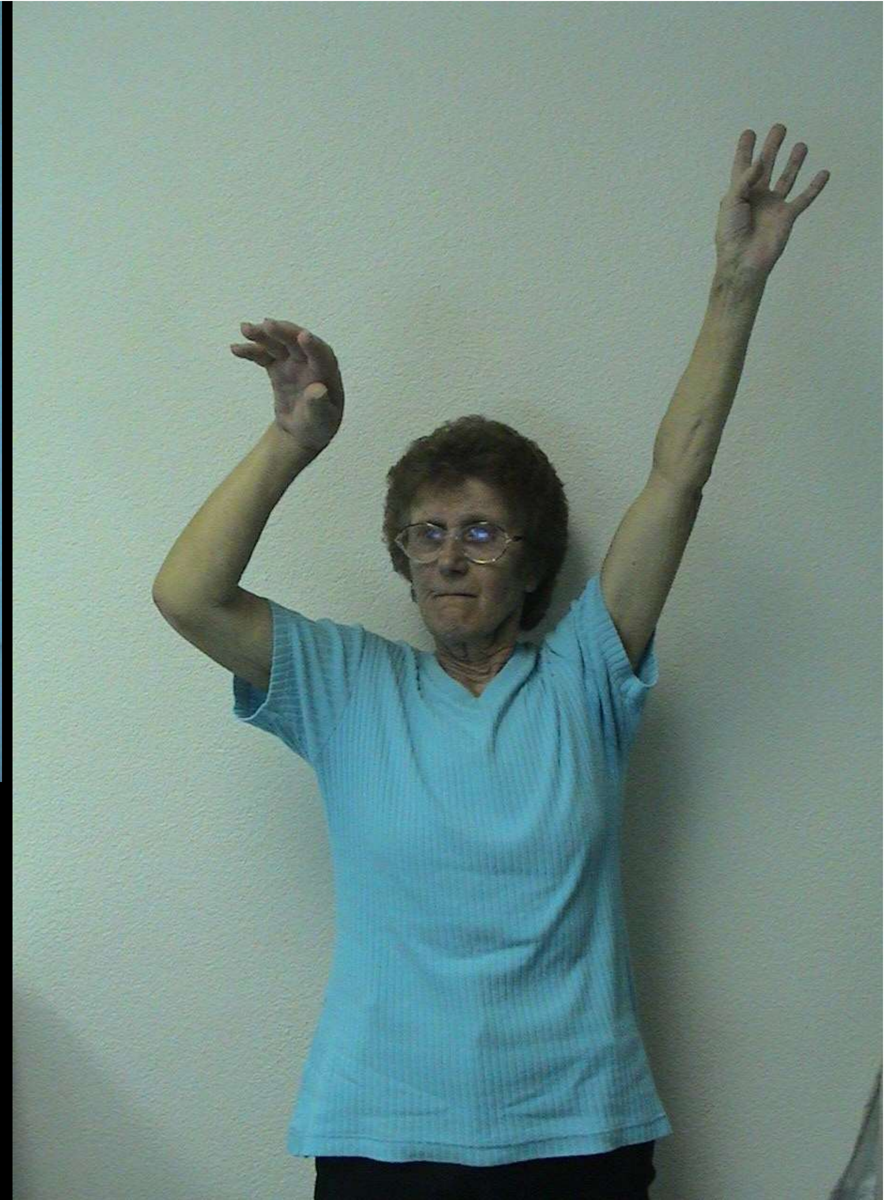







CRPS

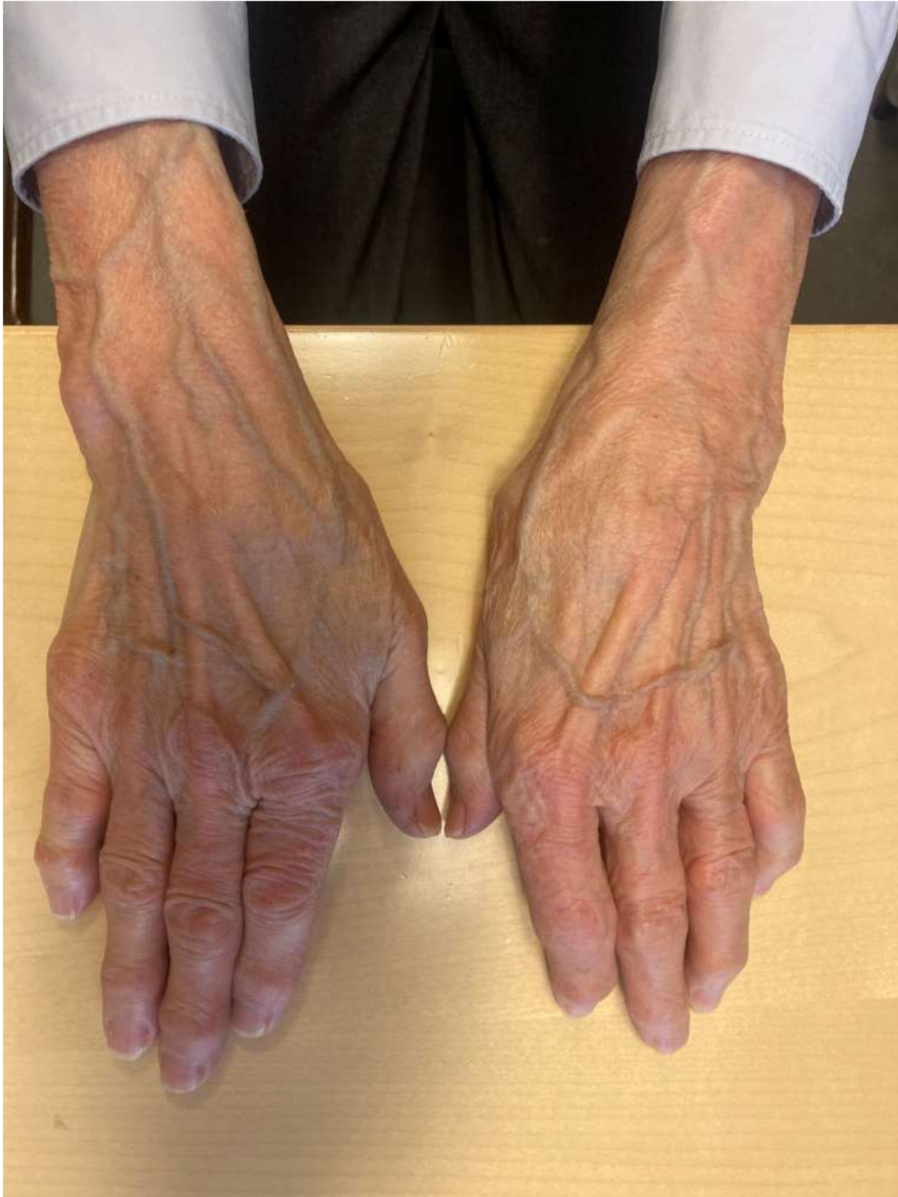


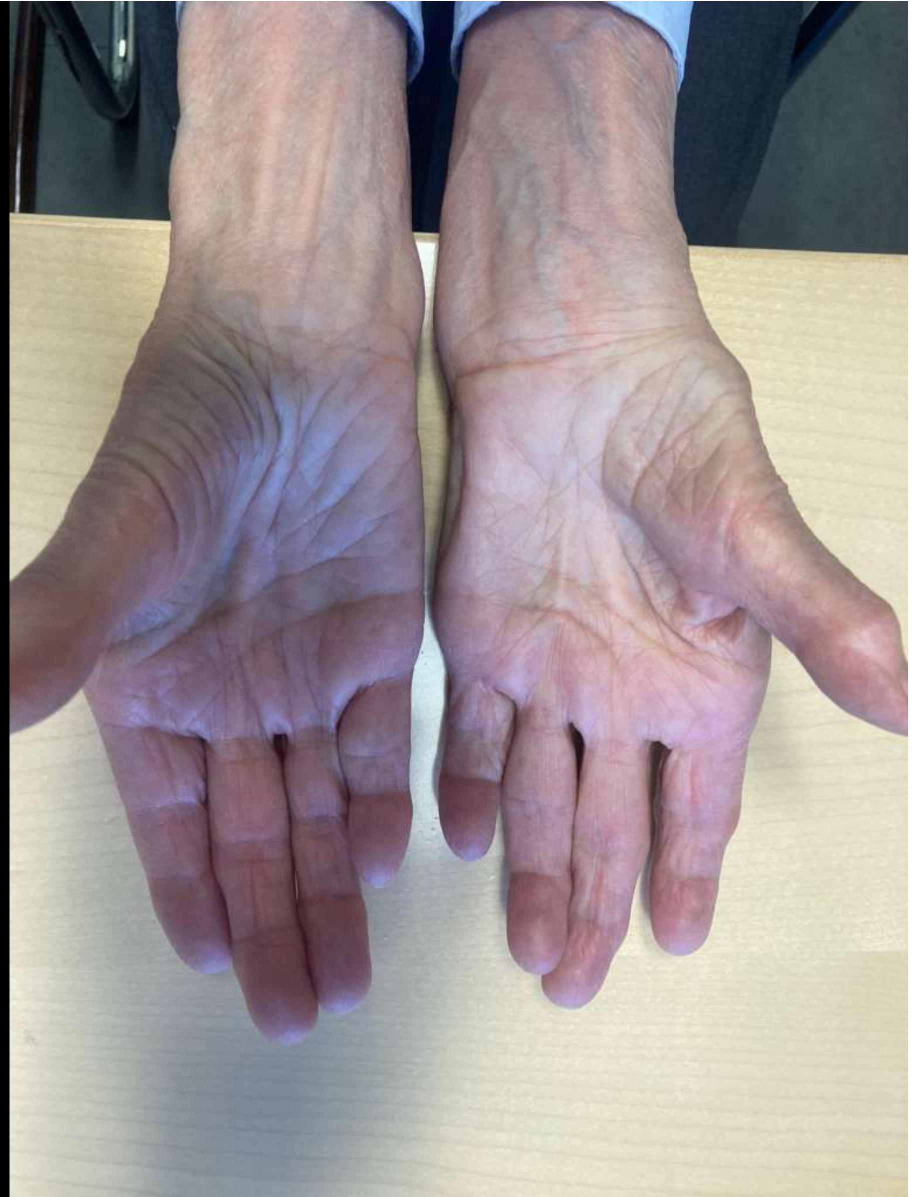
CRPS. Prevention

- Atraumatic reposition and surgery
- Respect the nerves: radial and PIN
- NO PAIN

CRPS. Treatment

- Pain treatment
- Motor imagery program
  - Limb laterality recognition
  - Mirror therapy





- Pas d'autre signe neurogène périphérique :
  - Pas de fasciculation,
  - Pallesthésie dans la norme,
  - Réflexes ostéo-tendineux perçus sans anomalie et sans asymétrie.

- Absence de signe neurologique central, en particulier pas de syndrome pyramidal.

Electromyogramme du 28.02.2022

Neurographies motrices :

- Nerf médian gauche : pas de potentiel évoqué malgré des stimulations maximales
- Nerf ulnaire gauche : neurographie dans la norme, en regard du poignet et du coude.

Neurographies sensitives :

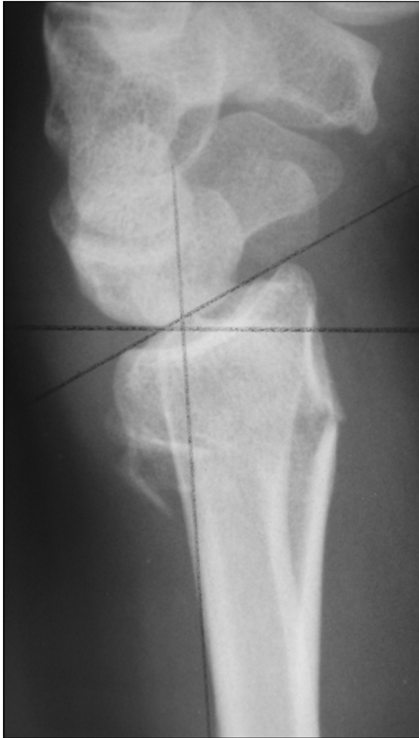
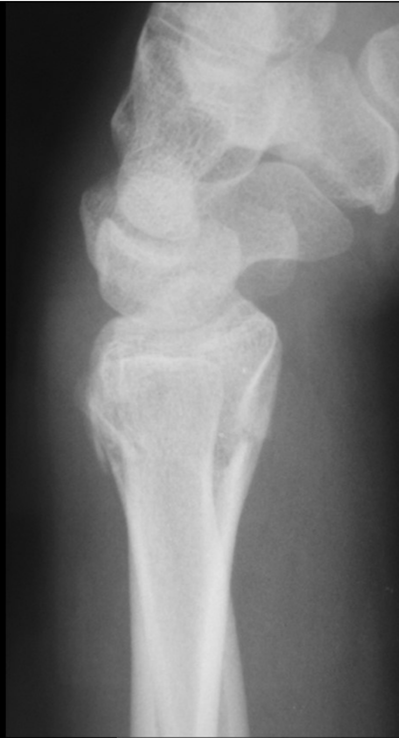
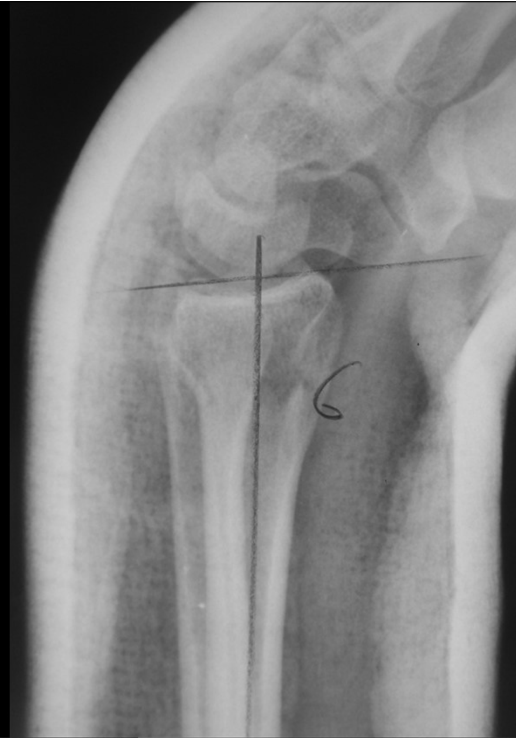
- Nerf médian gauche : pas de potentiel évoqué malgré des stimulations maximales
- Nerf ulnaire gauche : neurographie dans la norme.

CONCLUSION

Madame BOUQUET-PILOTTA évoque un déficit sensitivo-moteur systématisé au territoire tronc
laire du nerf médian gauche, apparu dans les suites d'une fracture radiale gauche.

L'anamnèse et l'examen clinique sont compatibles avec un tunnel carpien gauche sévère.

L'examen neurophysiologique ne permet pas d'obtenir des potentiels moteurs ou sensitifs con
nant le nerf médian gauche malgré des stimulations maximales.
Les neurographies ulnaires gauches sont par ailleurs dans la norme.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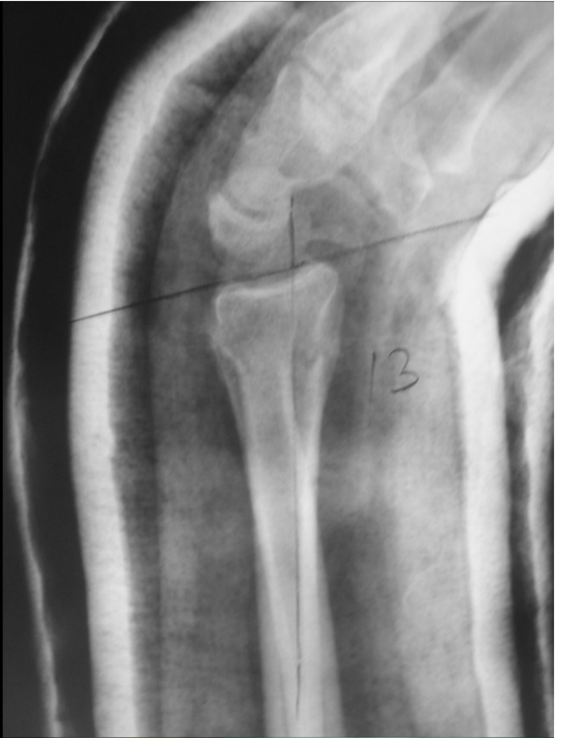
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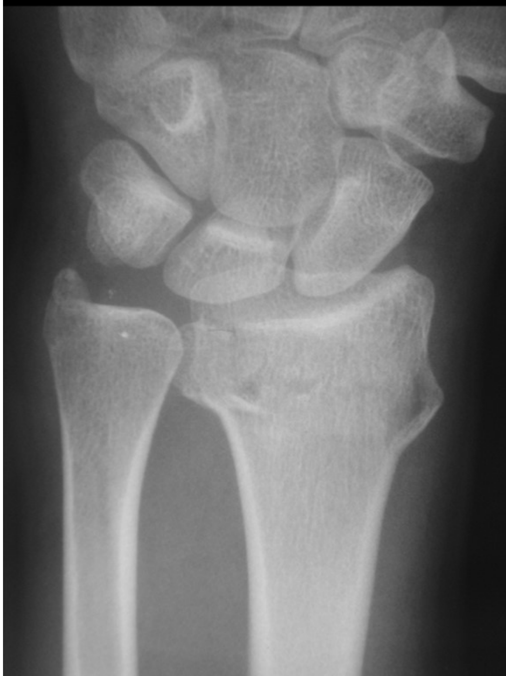
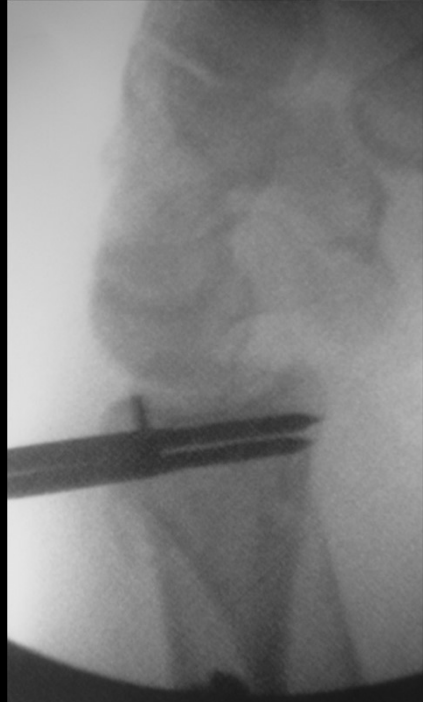
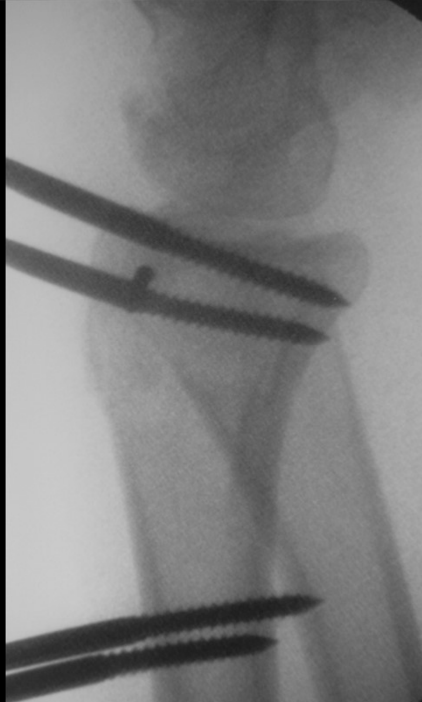
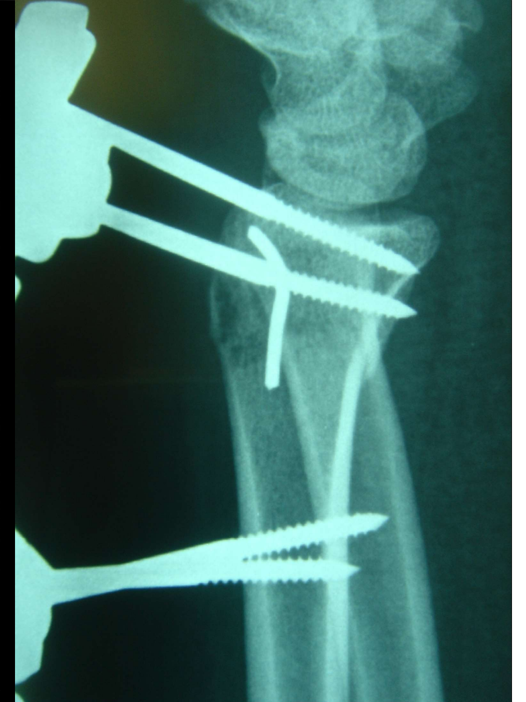
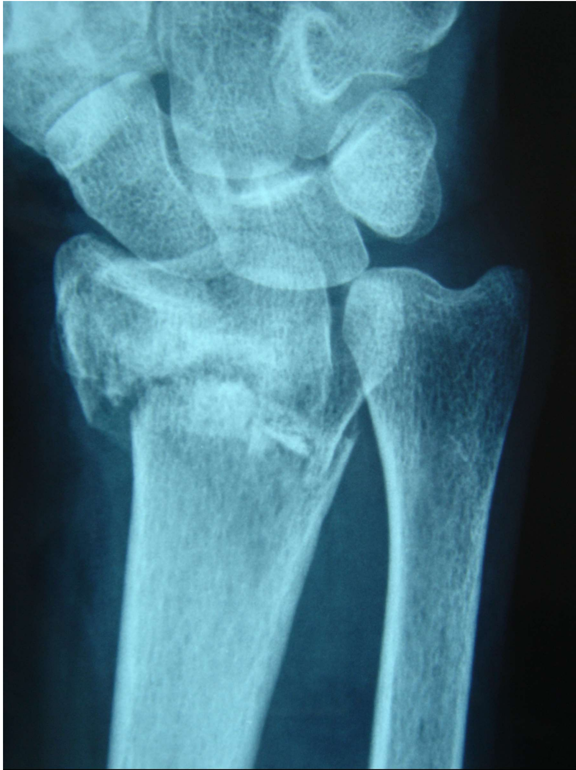





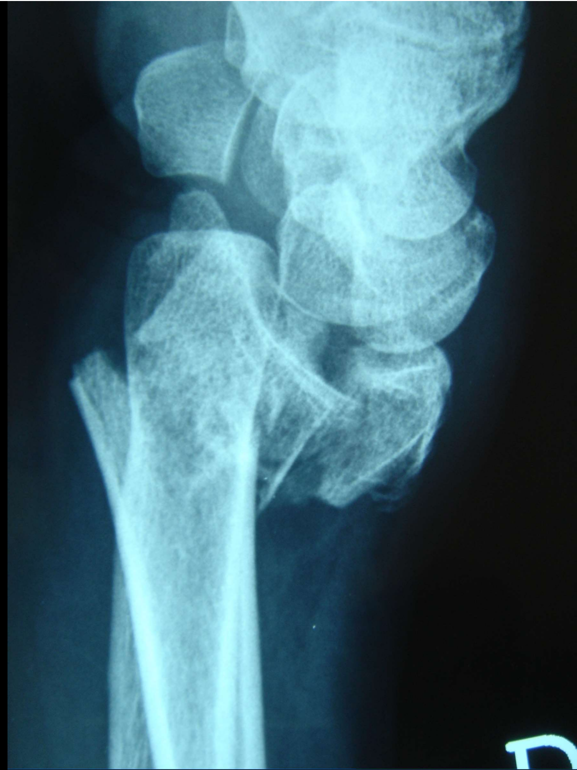
Distal radius fractures in elderly… are we too aggressive?

Yes, if we operate on most patients or if we perform forceful reposition and CI

Why?

- Young surgeons like and need to operate
- Staff meetings concentrate more on x-rays than clinical situations





DM, 68y