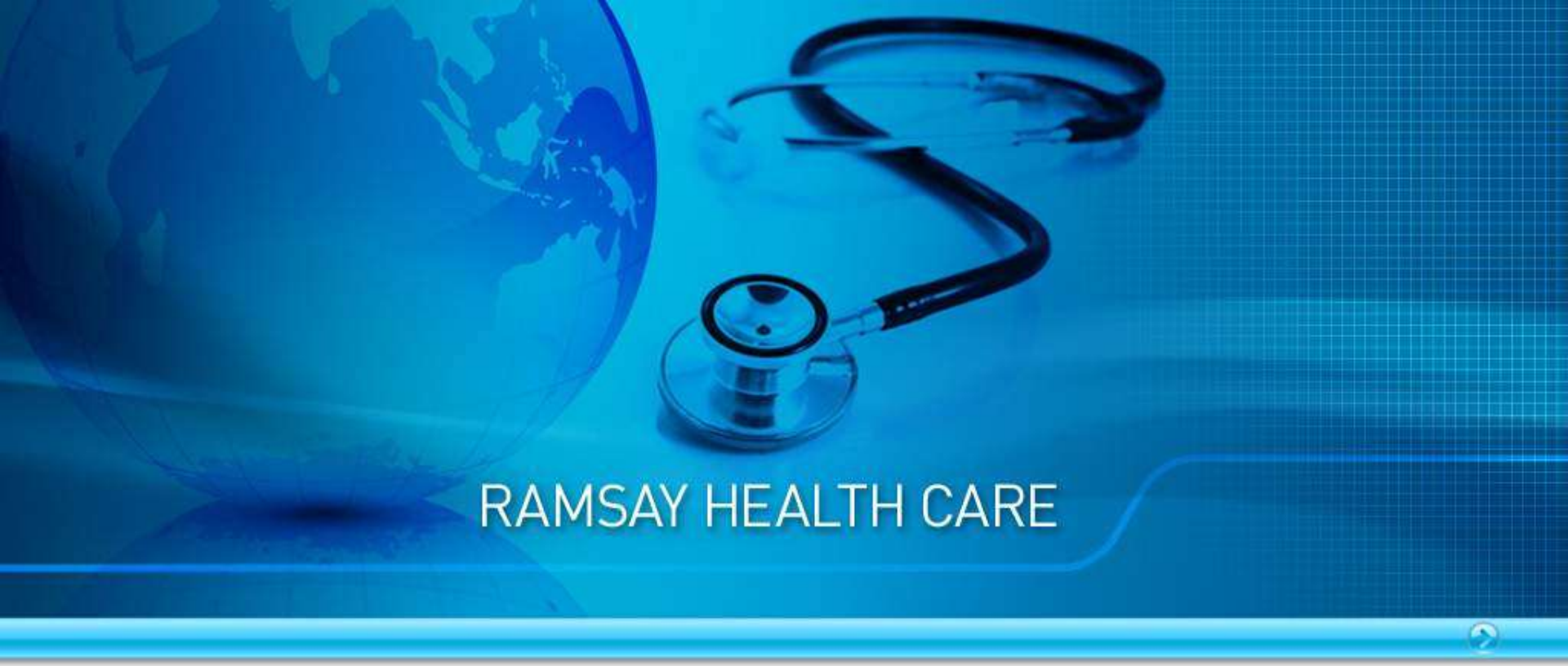

Advances in Hand and Upper Limb Surgery

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North Downs Hospital

People caring for people

RAMSAY HEALTH CARE

Objectives

Simple concepts:

Common presentations of hand/wrist/shoulder problems in primary care

Simple and quick Hand and Shoulder examination

Investigation and injections: Who should give them? When to refer?

Complex concepts:

Latest management for shoulder, hand and wrist trauma

Latest treatments for arthritis of the hand and wrist

Injection therapy for Dupuytrens: indications, risks and benefits.

My Background

Qualified 1997: Charing Cross/Westminster Medical School

BST 1998 to 2002: UCH/Stanmore/Kings (Neuro/Vascular + 1yr Plastics)

Trauma Fellow 2002 to 2003: Norfolk and Norwich

HST 2003 to 2009: NW Thames, London Deanery

Fellowship 2008 to 2009: Hand/microvascular and Upper Limb Surgery, Princess Alexandra Hospital, Brisbane, Australia

Locum Consultant 10/09 to 04/10: Royal Surrey County Hospital, Guildford

Locum Consultant 04/10 to 10/10: Norfolk and Norwich University Hospital

Princess Alexandra Hospital, Brisbane

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Patterns of injury in Queensland:

Very reminiscent of 1980s UK before increased stringency of health and safety laws, especially regarding the workplace.

High prevalence: Industrial injuries

agricultural injuries

sports/rural activity-related

All hand surgery in Queensland historically performed by Orthopaedic and not Plastic surgeons.

On call 1:4 for complex upper limb trauma and replantation injuries.

532 cases in 1 year, 8 digital replantations

Shoulder

Common Pathologies

>50yrs: Impingement, ACJ, cuff tear, frozen shoulder, calcific tendonitis, arthritis

<50yrs: Instability, ACJ, cuff tear (traumatic), congenital or post trauma problems

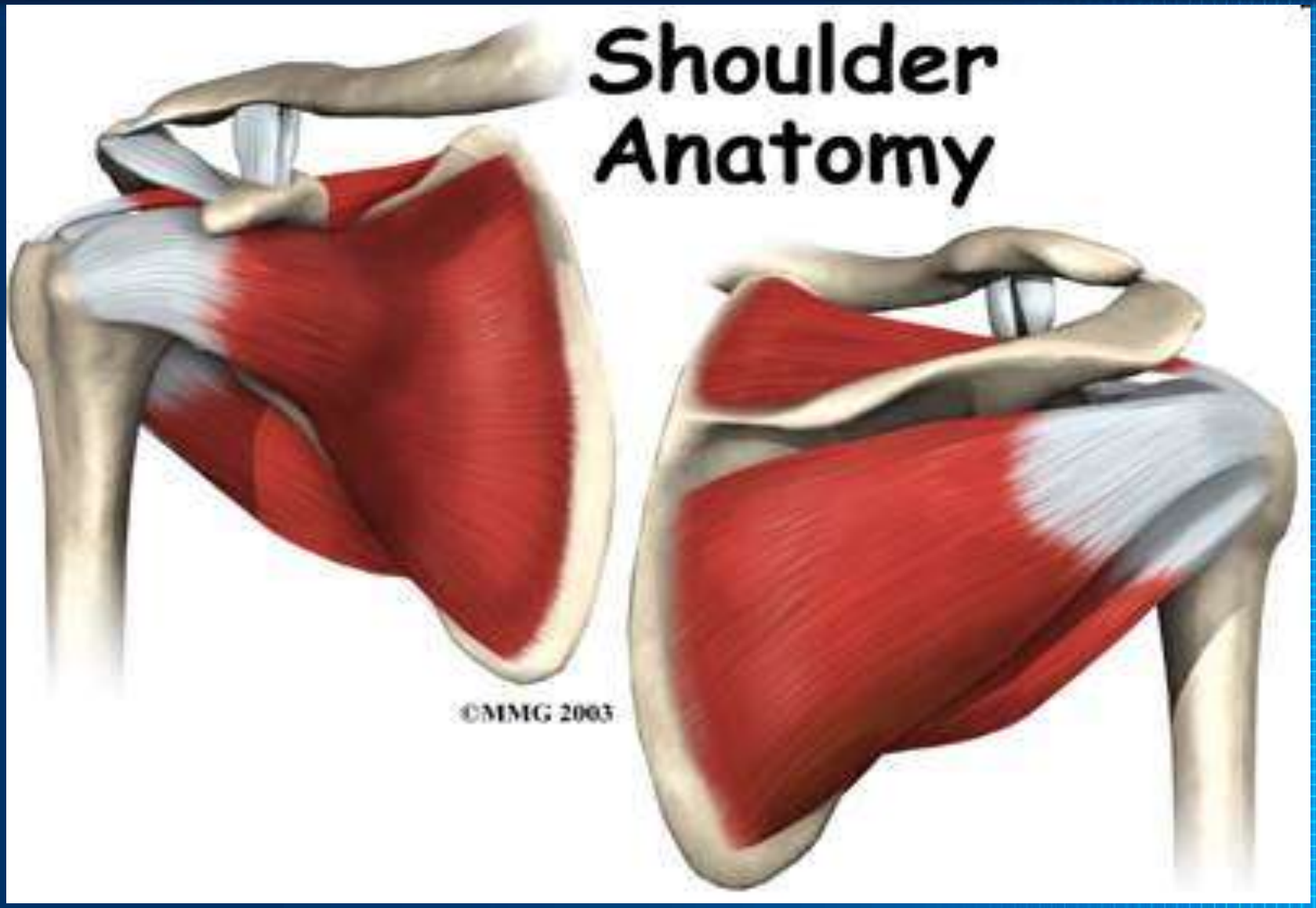
"Impingement in the young patient = instability until proven otherwise"

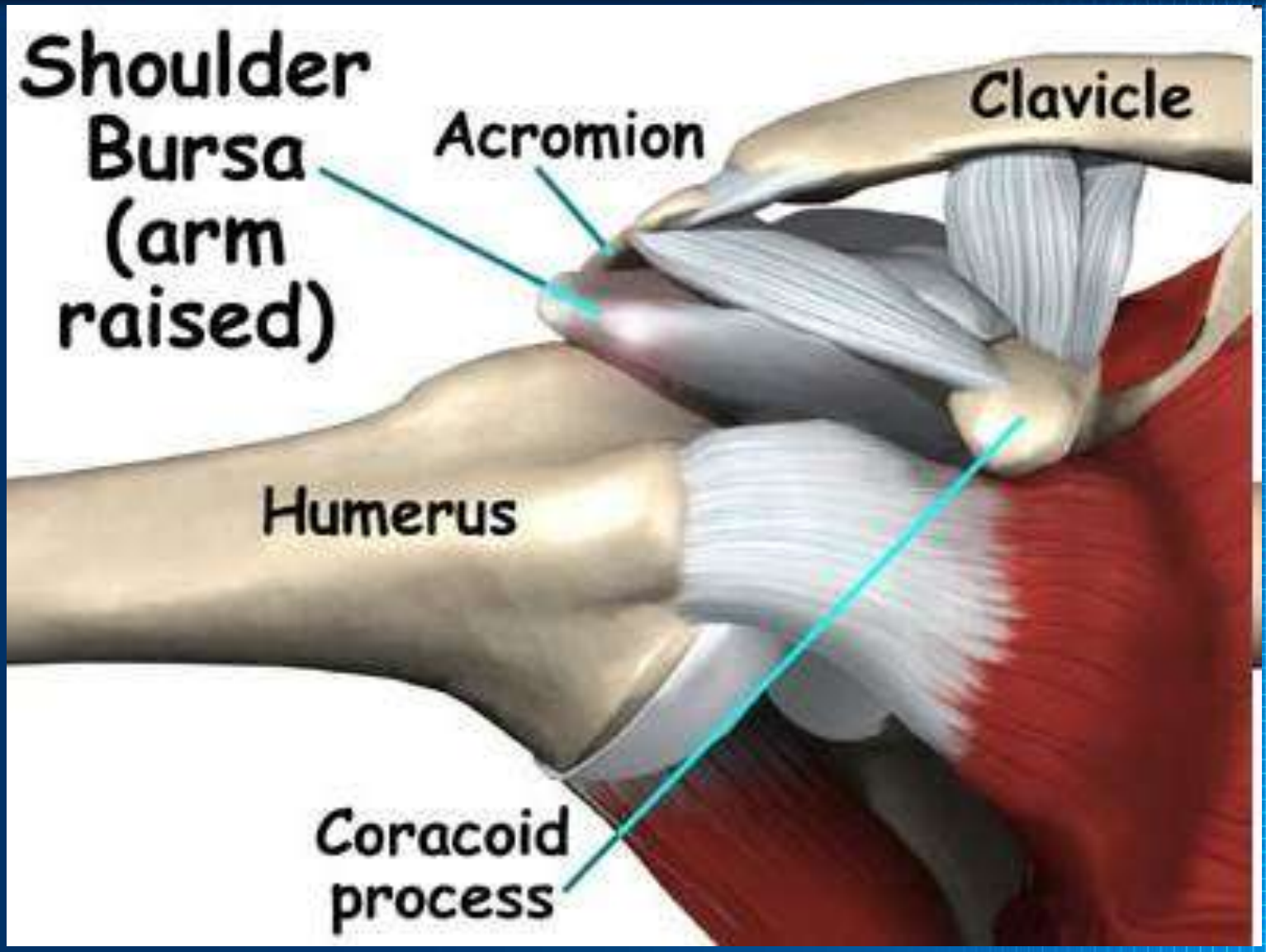
History: Acute or chronic? If acute, was there an injury and what was the mechanism?

Pain: Type and location. Loss of function:

"Can't lift my arm", "Can't sleep on it", "Can't do my bra at the back"

"Can't change gears", "Can't do my seatbelt"


Shoulder
Anatomy
©MMG 2003


Shoulder Bursa (arm raised)
Acromion
Clavicle
Humerus
Coracoid process

Examination

Based around Orthopaedic principles of look, feel and move

Buy this book! “Advanced Examination Techniques in Orthopaedics” by Nick Harris

Investigation

Plain film followed by ultrasound for the majority.

MRI and CT less commonly needed: mainly for instability and arthritis.

Treatment

Physio +/- guided injections ?Shockwave

Hydrodilatation for capsulitis very effective, but needs physio within 48hrs

Surgery: arthroscopic vs. open cuff repair. CSAW Study: controversial!

Who should be injecting?

Summary

Early diagnosis is important e.g. partial cuff tear, capsulitis/tendonitis

Ultrasound is a very important diagnostic and therapeutic tool

Limitations: intra-articular pathology, very stiff shoulders

Injections given under ultrasound guidance are superior e.g SA vs. ACJ

Hand and Wrist

Common Pathologies

Carpal Tunnel Syndrome

Tingling thumb, index, middle fingers?

Night time symptoms?

Diabetic?

Examination: Wasting, sensory change, compression testing

Investigations: Ultrasound and nerve conduction studies (NCS)

Ultrasound able to spot the “hourglass” lesion in those likely to need surgery

NCS better for chronic symptoms or clinically obvious cases e.g. thenar wasting

Treatment: “Weight loss or a bigger pair of trousers”

Cubital Tunnel:

Similar algorithm to carpal tunnel treatment.

Exclude obvious elbow structural problems first, then:

Basic advice + physio while obtaining NCS

ASSOCIATION WITH GOLFER'S ELBOW! Conservative treatment works for the majority of younger patients and mild cases.

US + injection if neuritis observed.

Surgery for obvious wasting clinically or severe NCS finding.

Transposition?

Tennis Elbow

"It begins and ends with the muscle" (ECRB Tightness)

Epicondyle pain follows after.

No evidence for Cortisone injections (CCGs), PRP is expensive
Headley Court Prospective RCT data awaited.

DRY NEEDLING is useful (mini operation) + Shockwave.

Main Treatment: Massage, Stretches, Splints and Eccentric Exercises

Surgery is awful, a last resort and really has variable results.

TYLER TWIST

REPEAT 10-15 TIMES A DAY

This simple exercise is research-proven-effective in treating tennis elbow pain

Begin with the yellow and progress to the next color when you can easily perform three sets of 15

STEP1

Hold the Flexbar® vertically in front of you, with your injured hand on the bottom end, and extend your wrist.

STEP2

Grasp the upper end of the bar with your other hand, facing your palm away from you

And the rest…

Trigger finger

Thumb base arthritis

Gamekeeper's/Skier's thumb

Dequervain's tenosynovitis

Dupuytrens

Lumps and bumps: Ganglia, benign tumours, arthritis of fingers

"My finger gets stuck and won't straighten"

"It hurts to turn a key or open jars"

"I poke myself in the eye when washing my face"

"The back of my knuckle and/or my palm hurts"

Not a painful condition

Finkelstein's test

Hand/wrist examination

Look: (expose both sides from elbows distally) Swelling, scars and cords, wasting, colour changes

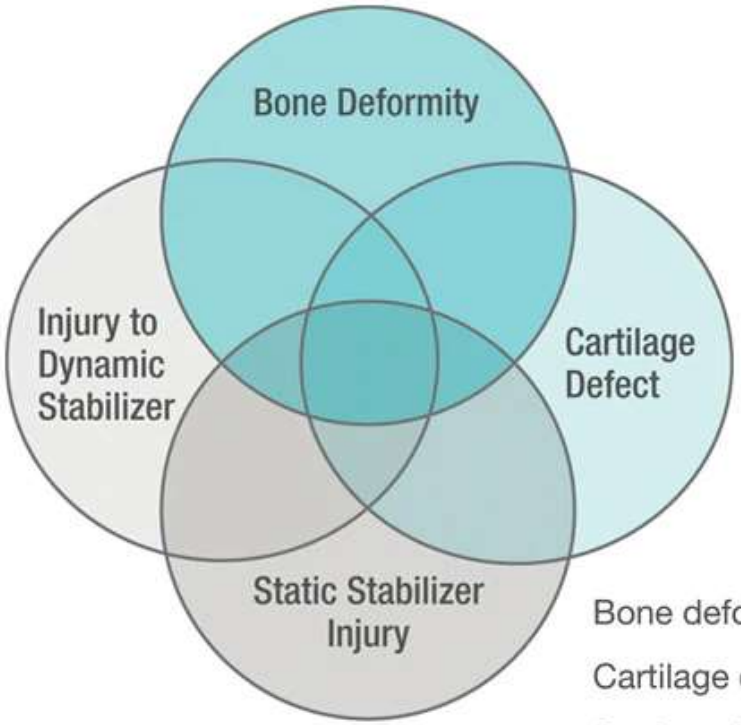
Feel: Set places to feel as well as any pointed out by the patient

Specific provocation tests: compression test, grind test, Finkelstein's test

Move: Compare all wrist and hand movements with other side

Specific tests: Kirk-Watson Test, Push-off test for TFCC, Synergy test for ECU, Grind test for CMCJ DRUJ Provocation tests

Ulnar-sided wrist pain "4 Leaf Clover Algorithm"



Journal of Hand Surgery 2016: Kakar, Garcia-Elias

Bone deformity?	YES/NO
Cartilage damage?	YES/NO
Static stabilizers, such as TFCC?	YES/NO
Dynamic problem, such as ECU?	YES/NO

Investigation

Plain films first.

Some specific views more helpful e.g. pinch views for thumb base

If the patient can put a finger on the pain, then get an ultrasound. If they can only put a hand over the area, then get an MRI.

Treatment

Initial *guided* injections are the mainstay for many common conditions:

Trigger finger, carpal tunnel, Dequervain's, thumb arthritis, finger arthritis, ganglia

Tender points following trauma. However, soft tissue injuries in hands may take up to *18 months* to settle down

Ulnar-sided Pain Treatment

TFCC: Wrist Widget 2-3 months

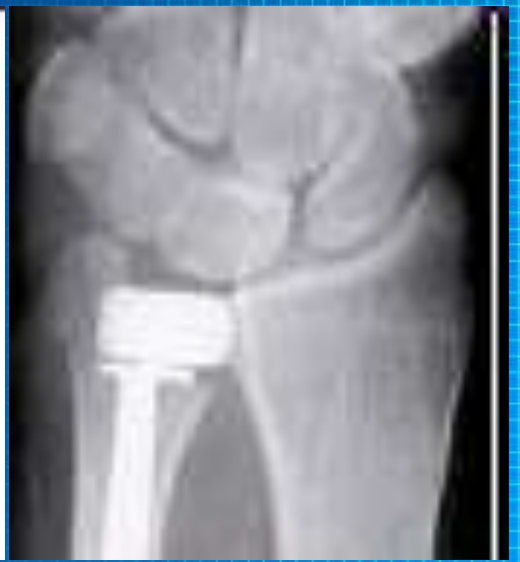
Consider surgery if not responding: open vs. arthroscopic

ECU: Wrist Widget 2-3 months

**US +/- injection if not responding and tendon inflamed.
Surgery (rarely) if tendon subluxed.**

DRUJ: Wrist Widget 2-3 months

Inject a lot, then Eclypse implant



Dupuytren's

Surgery *not* curative

Minimum criteria for surgery : 40deg FFD MCPJ and/or 30deg FFD PIPJs

Not a painful condition. Look for something else e.g. OA PIPJ, trigger finger, neuroma

Injection therapy:

Not curative

Serial splinting required

Risk of tendon rupture whereas none with surgery

Awaiting UK prospective trial data

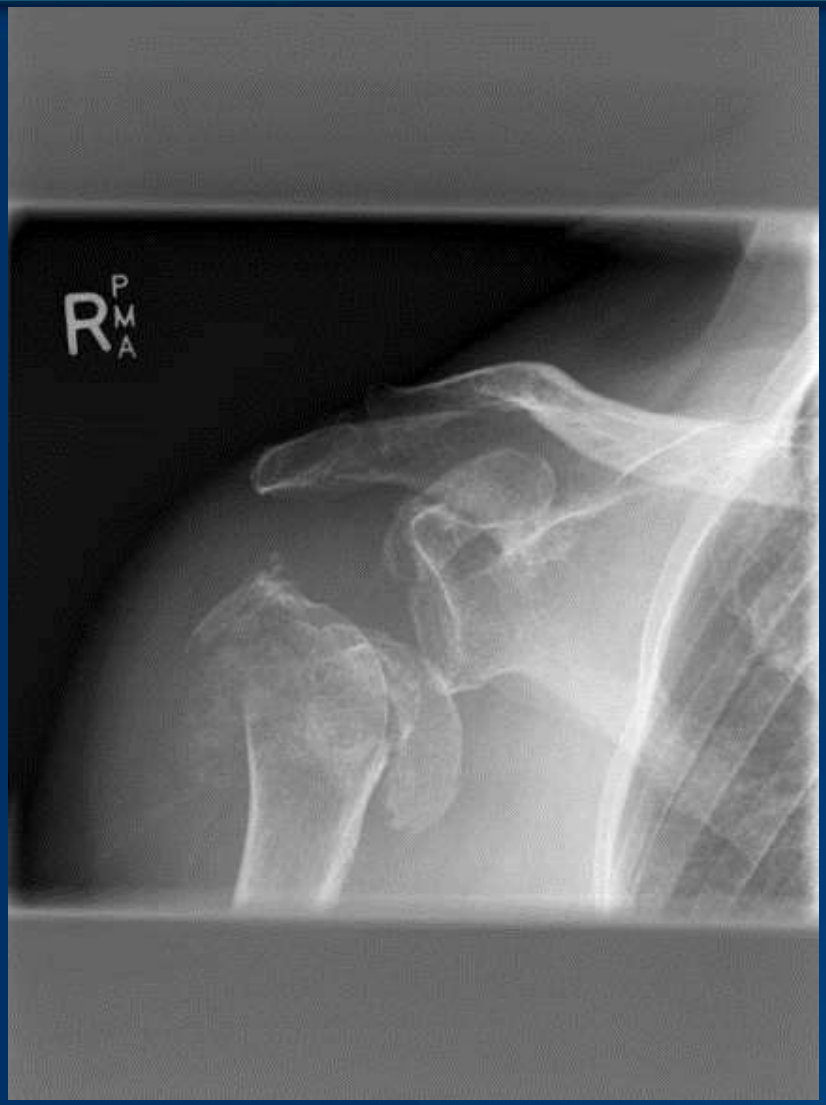
Summary

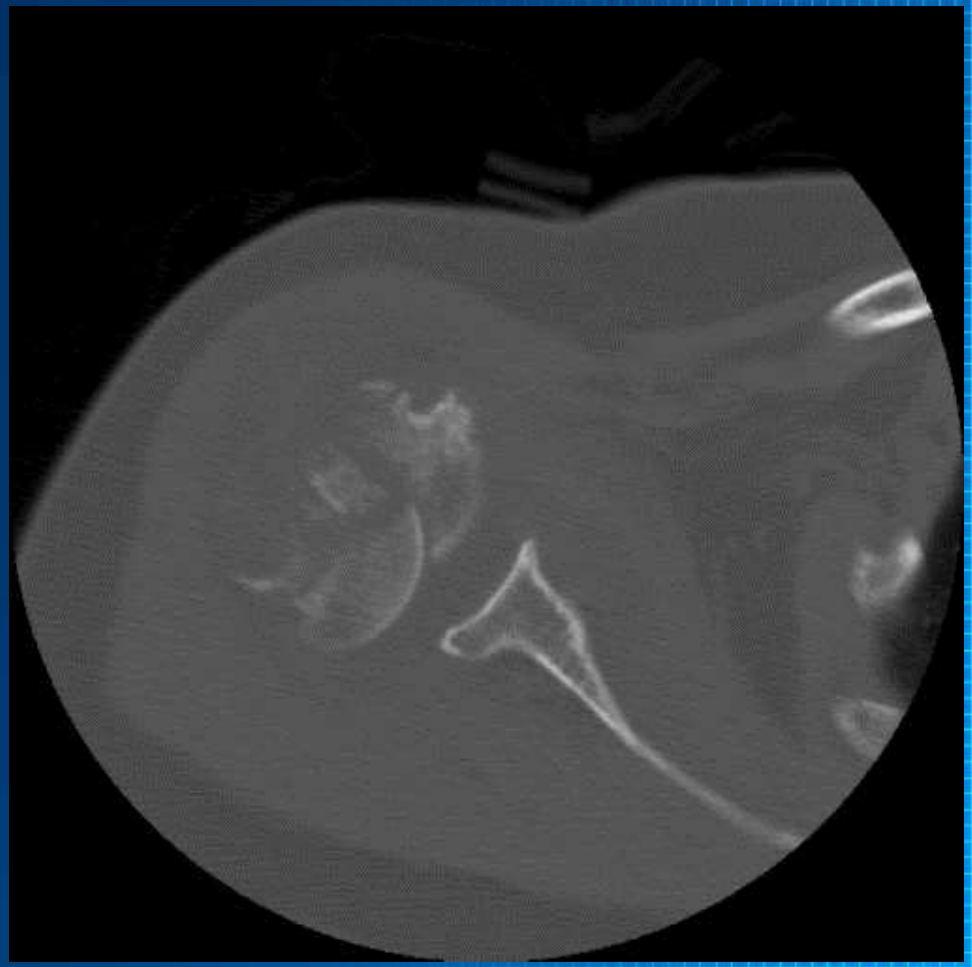
Early referral for many conditions, but particularly soft tissue injuries of hands is important. Timely hand therapy can mitigate many problems later.

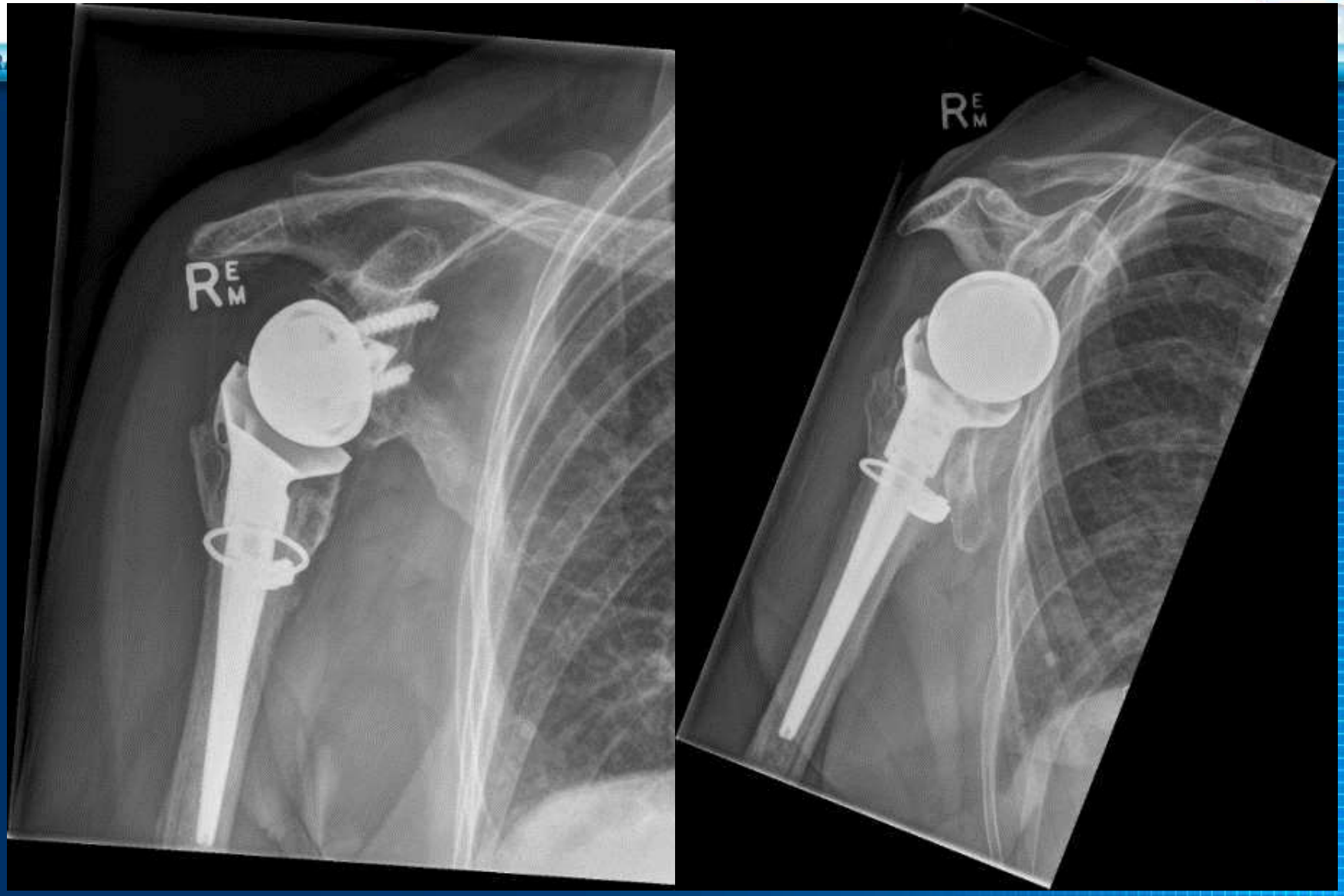
Best outcomes in hand surgery are achieved when therapists and surgeons work closely together under one roof.

Guided injections under ultrasound are best for giving therapeutic relief as well as valuable diagnostic information for eventual surgery.

Reverse TSR for 4-part fractures in the elderly (>75yrs)



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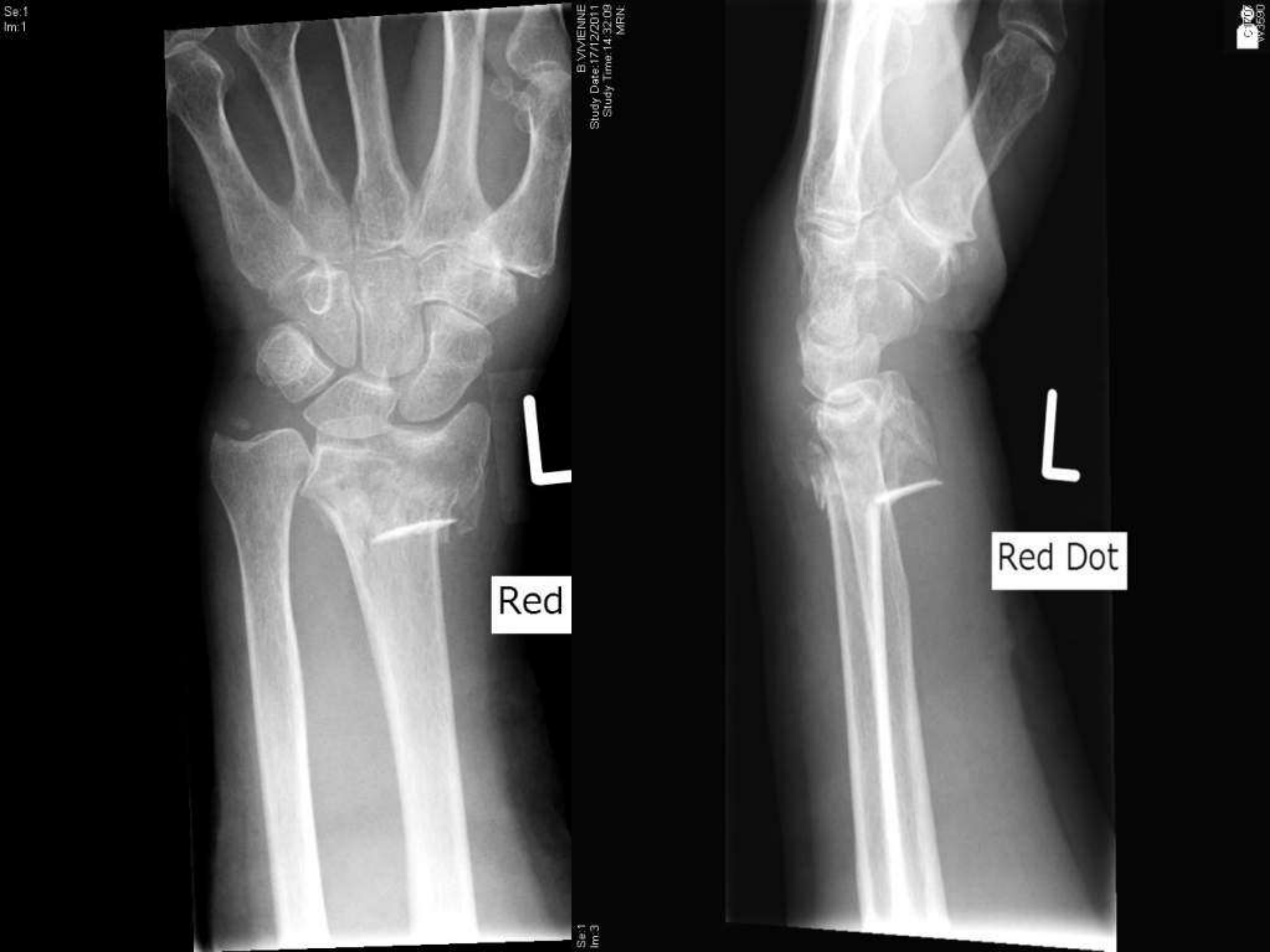
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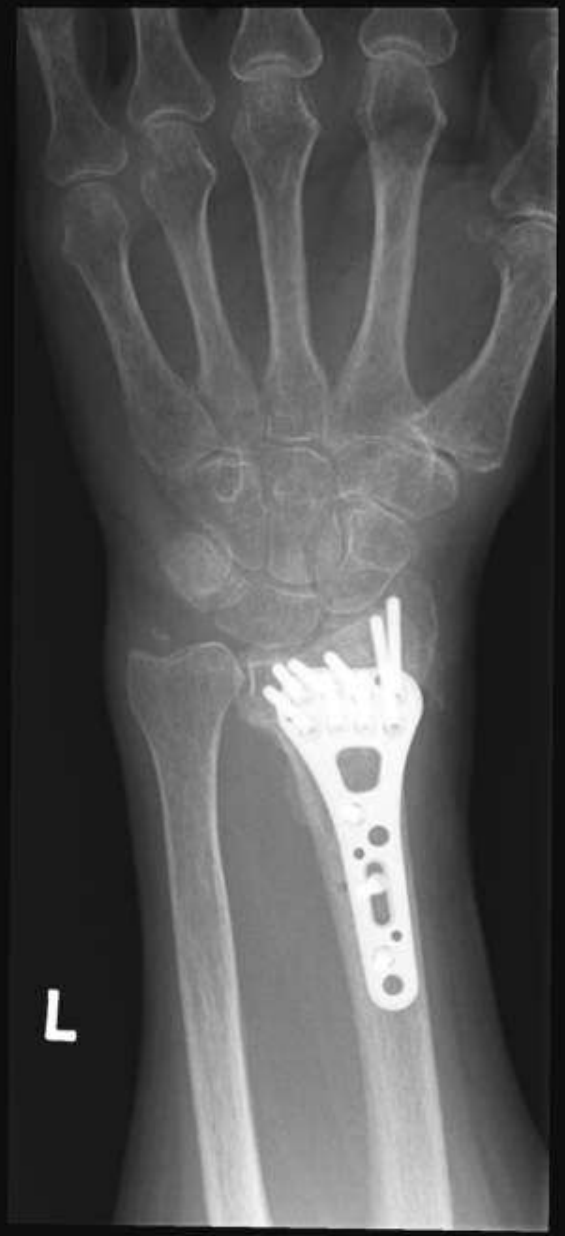
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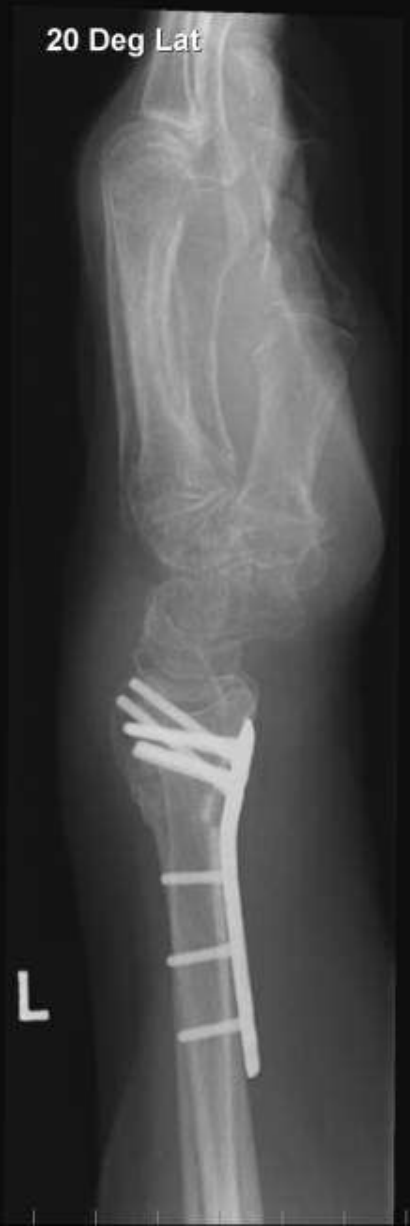
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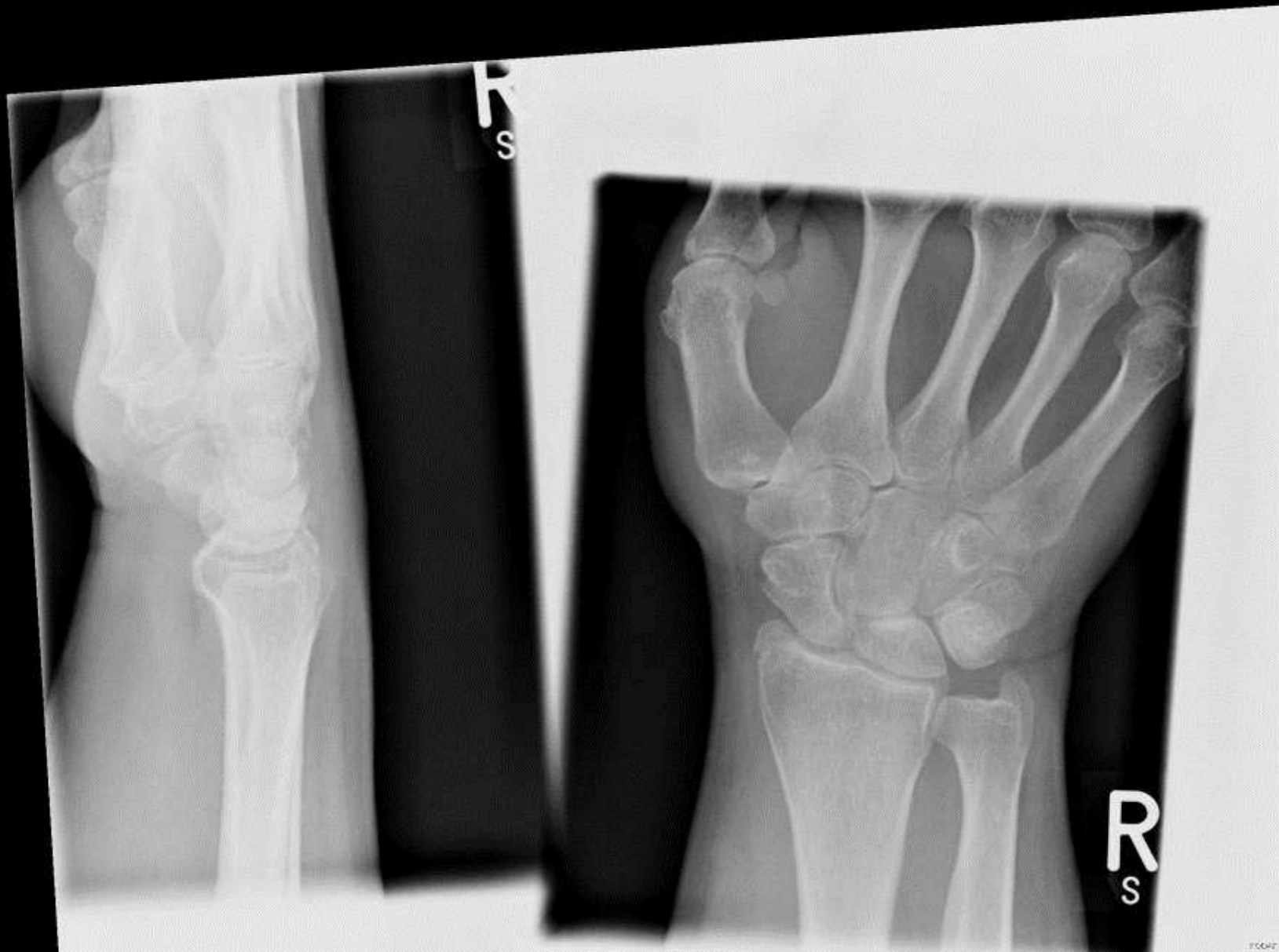
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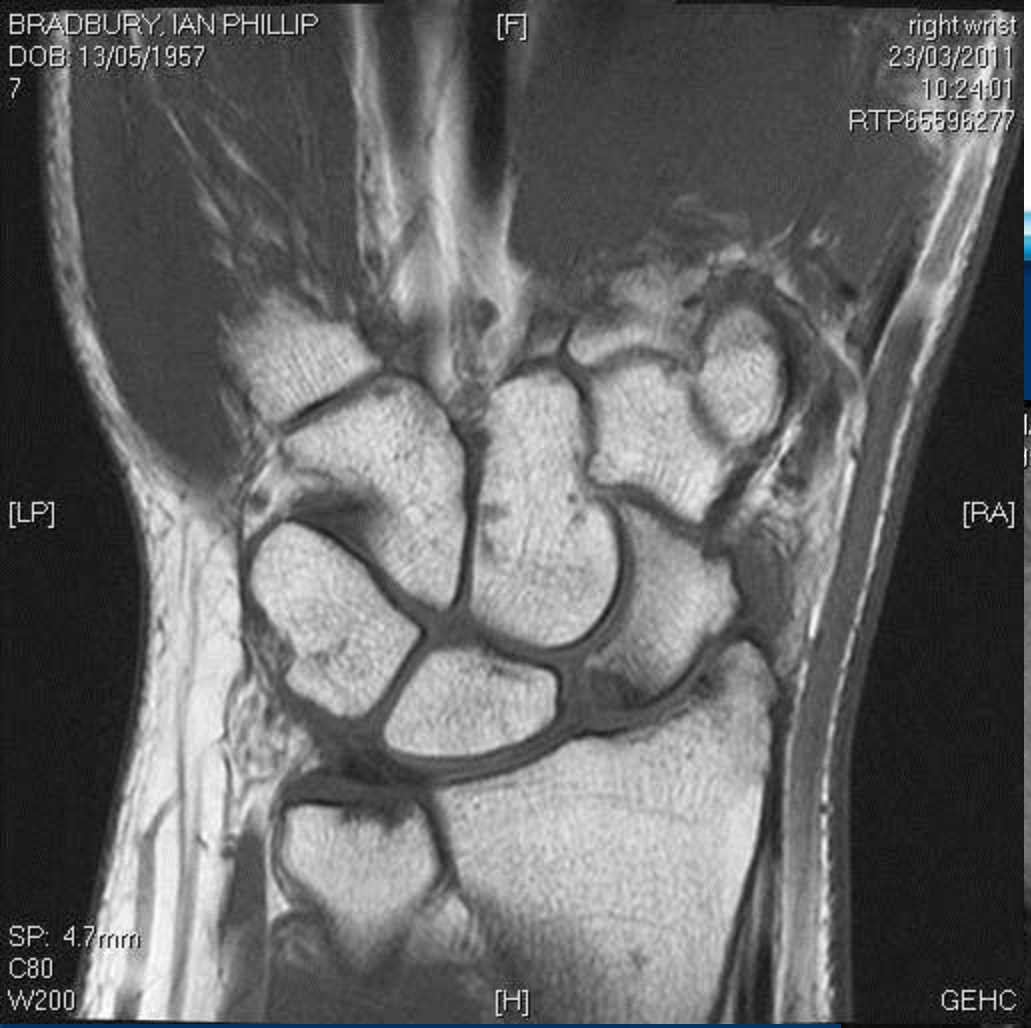
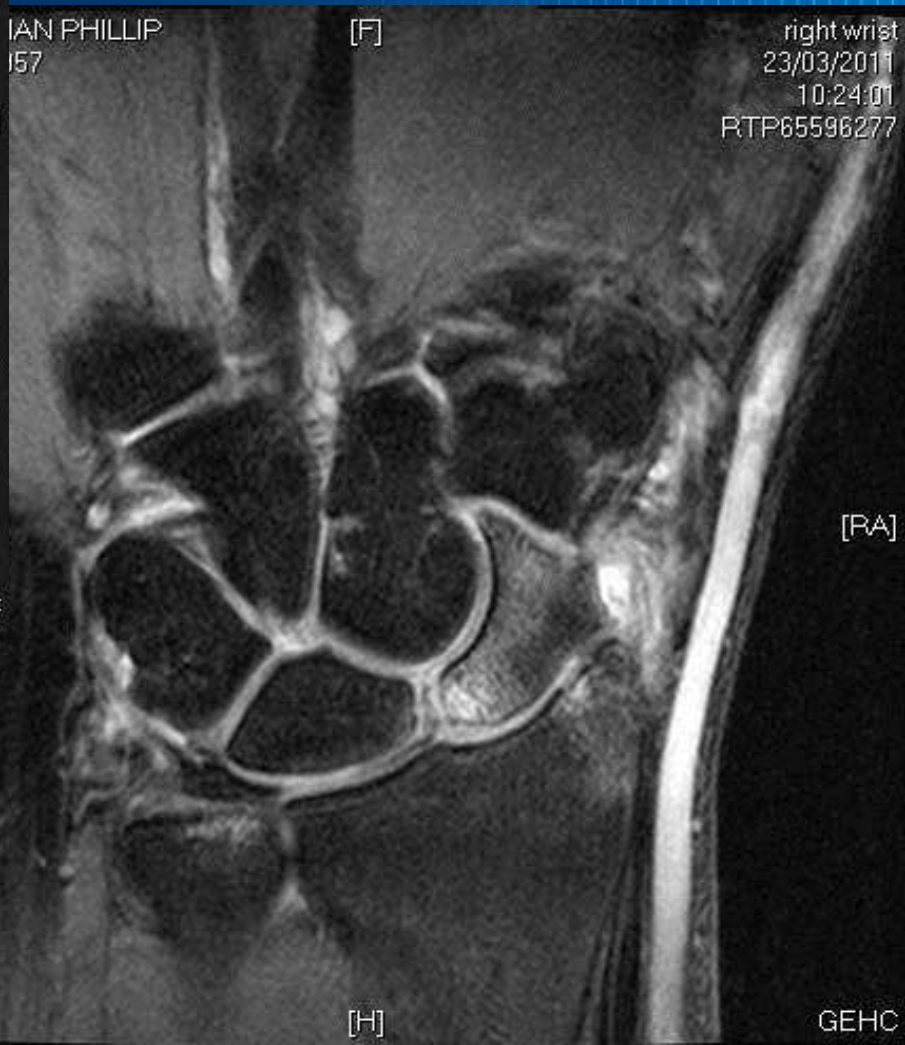
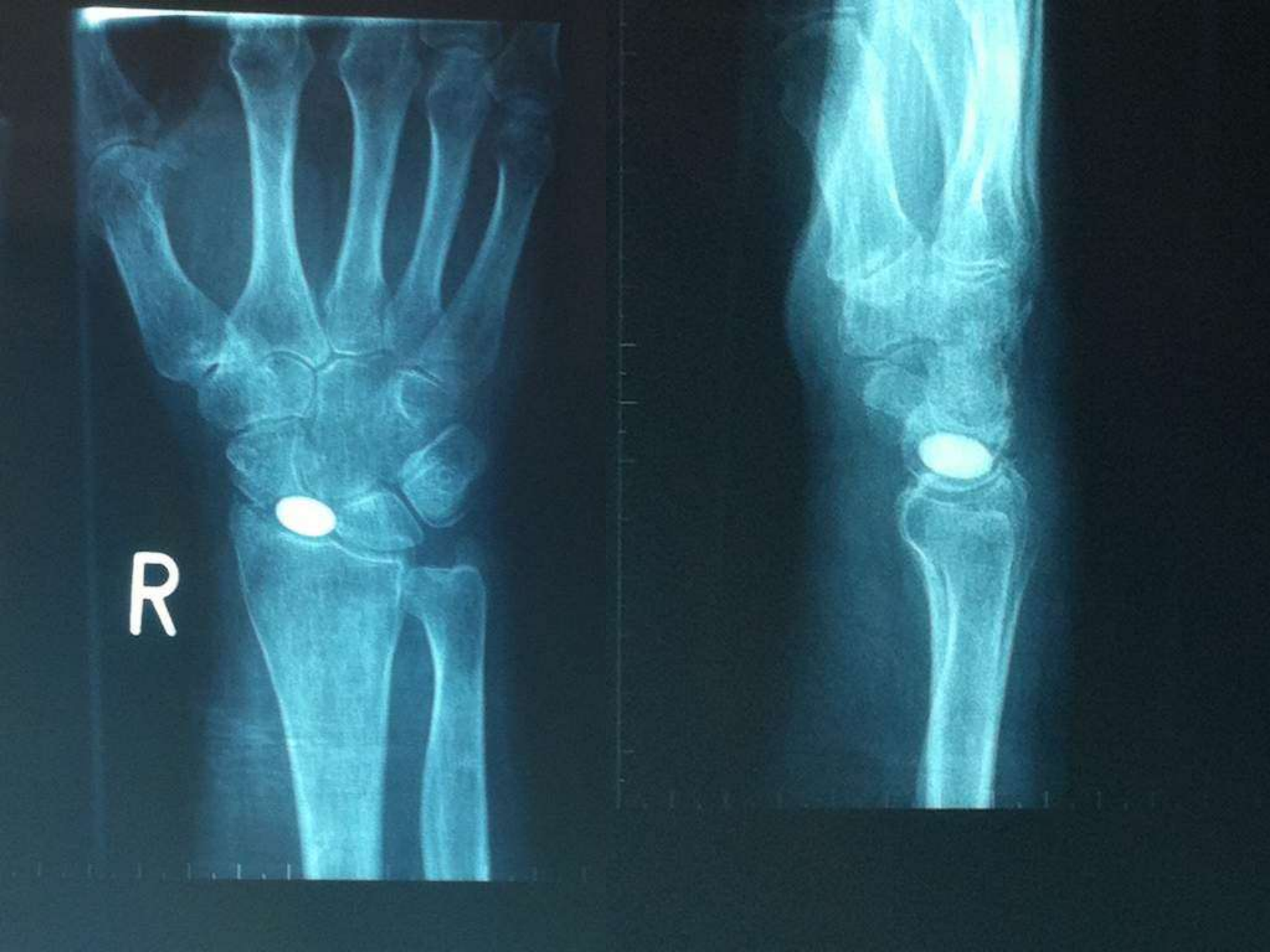


People caring for people

RAMSAY HEALTH CARE

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Historical options for thumb arthritis

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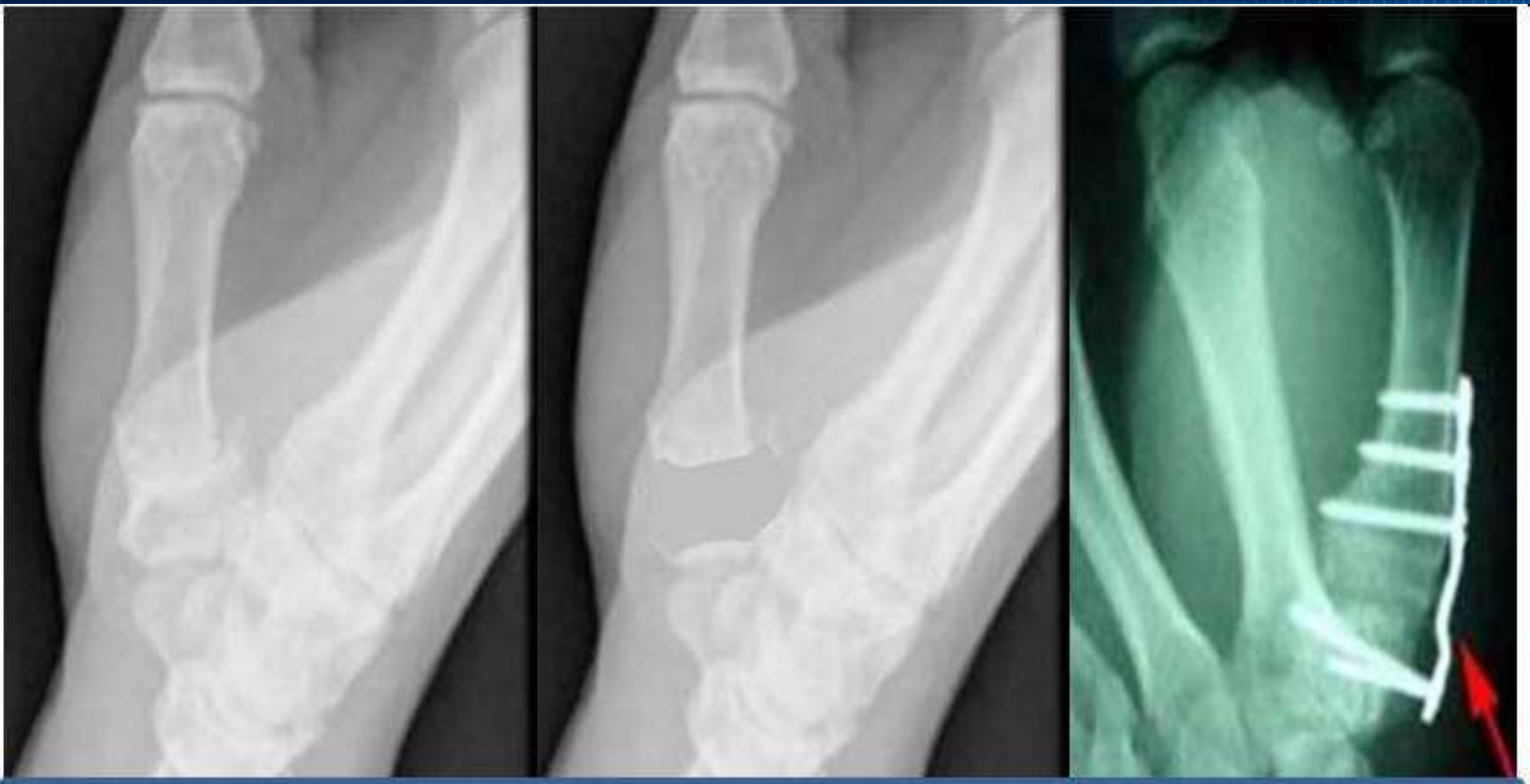
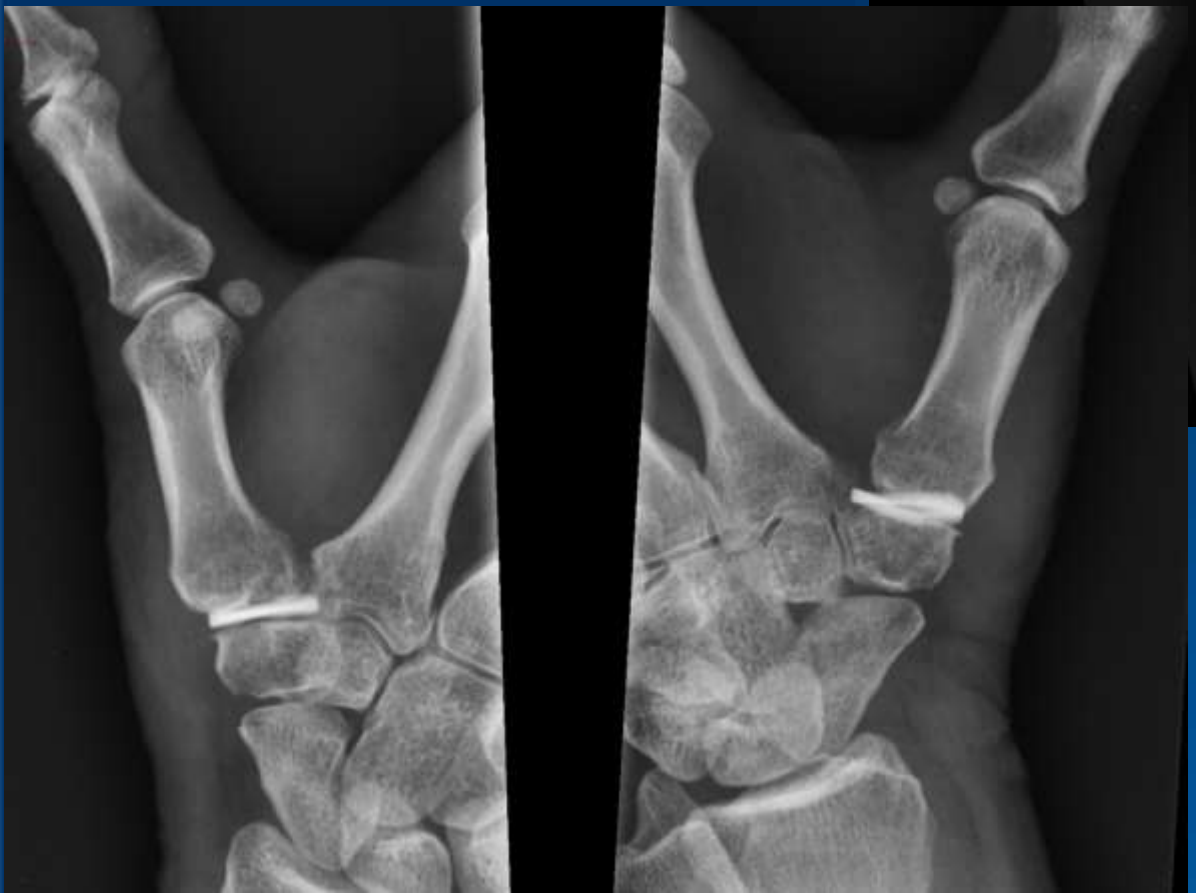


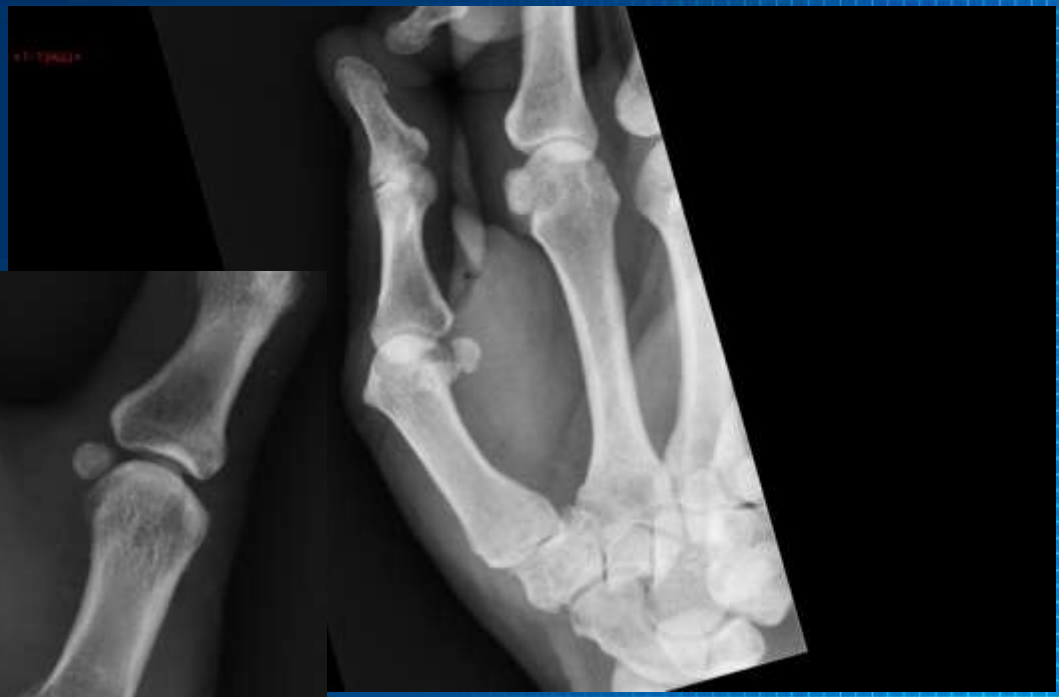
Arthritis Trapeziumectomy Fusion.

Other options

Carpo-Metacarpal Interposition Implant

"Pyrocardan"



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