

# Tips for early diagnosis for GPs & the role of POCUS

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# NEW RHEUMATOLOGY CENTRE NOW OPEN!

The Centre offers integrated pathways for diagnosis and ongoing management of complex rheumatic disease, including routine access to musculoskeletal ultrasound for diagnostic assessment and ultrasound-guided injections.

- Ireland's Largest Private Rheumatology Centre
- 7 Consultant Rheumatologists & Specialist Nurses
- Modern theatres, procedure rooms & infusion suite
- Rapid Access Patient Pathways
- Ireland's most advanced radiology centre onsite
- Onsite Immunology and Laboratory Service
- Supported by our full-service acute hospital including our physio, rehab, sports lab, pain mgmt and orthopedic services



 Beacon Hospital

[Rheumatology@beaconhospital.ie](mailto:Rheumatology@beaconhospital.ie) or 01 293 7551

## Rheumatoid arthritis and biologics



47,700 people in IRL  
Peak onset 30's

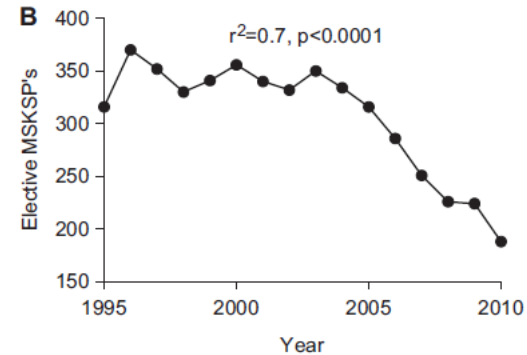
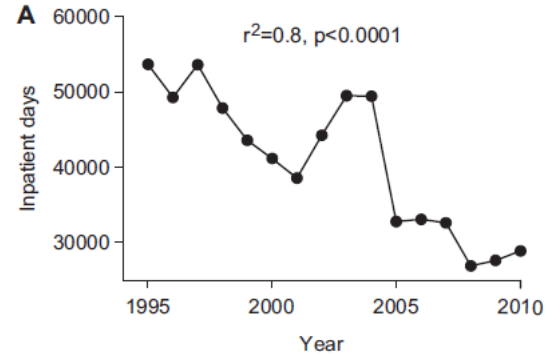


- Without treatment
- Increased mortality
- 50% UE @ 5 years



- With treatment
- Remission achievable
- 50% less admissions
- 50% less surgeries

Harty et al, Rheumatology 2015



# Rheumatology Therapies 2026 (in bold late 1990's)

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**methotrexate**, leflunomide, **hydroxychloroquine**, **sulfasalazine**, **gold**, **azathioprine**, **ciclosporin**, **cyclophosphamide**, mycophenolate, **minocycline**, **penicillamine**, tacrolimus, anakinra, infliximab, etanercept, adalimumab, golimumab, certolizumab pegol, rituximab, abatacept, tocilizumab, sarilumab, sirukumab, olokizumab, ixekizumab, guselkumab, ustekinumab, bimekizumab, mavrilimumab, tofacitinib, baricitinib, peficitinib, filgotinib, upadacitinib or fostamatinib

## **csDMARD**

– the old tablets

## **bDMARD**

– IV/SC ... TNFi, IL1i, IL6i, IL17i, IL23i, T-cell, B-cell

## **tsDMARD**

– the new tablets

# What is the downside of immunotherapy?

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## **Increased infection:**

- Serious Infection: mitigate with patient selection, monitoring, prompt treatment, vaccination (annual flu & COVID, 5 year pneumococcal, shingles > 18)
- Opportunistic (eg TB with TNFi) – pre treatment screening and Rx.
- Exacerbation (Hep B and C) – pre treatment screening and Rx.
- HSV – JAKi and steroids, Candida - IL17i

**Cancer:** ?Non Melanoma Skin Cancer (controversial) – sun protection

**MACE:** QRISK and monitor and treat lipids and BP

**Lower Intestinal Perforation (LIP):** IL-6i therapy only - exclude if diverticulitis

**VTE:** JAKi – exclude if VTE risks

### Annals of the **Rheumatic Diseases**

Safety of synthetic and biological DMARDs: a systematic literature review informing the 2019 update of the EULAR recommendations for the management of rheumatoid arthritis



# A Patient with Widespread Pains and/or Fatigue

Extremely wide differential .... Rheumatological Clues in Hx and Exam

## History

**Age**  
**Duration of Onset**  
**Arthralgia v Myalgia**

Inflammatory:

- **Morning stiffness >30 min**
- Better with movement
- Night pain

Mechanical:

- Worse with use
- Minimal stiffness

## Examination

- **Synovitis (soft swelling)**
- Warmth
- Reduced grip
- Multiple joints
- **MCP / MTP**

### Look beyond joints:

- Skin (psoriasis, rash)
- Eyes (uveitis)
- Mouth (ulcers)
- Lungs / GI



**\*Treatment response – NSAID or Steroids**

# Inflammatory Arthritis

- Rheumatoid Arthritis
- Seronegative Spondyloarthritis
  - ◆ Psoriatic Arthritis, Reactive Arthritis, Enteropathic Arthritis, Ankylosing Spondylitis, Undifferentiated
- CTD / Vasculitis
  - ◆ SLE, GPPS
- Viral
  - ◆ Parvovirus, Rubella, Hep B, C, EBV, CMV
- Bacterial
  - ◆ Gonococcus, Lyme Dis, Rheumatic Fever
- Other
  - ◆ **Gout, Osteoarthritis**
  - ◆ Sarcoidosis, HSP, Neoplasm.



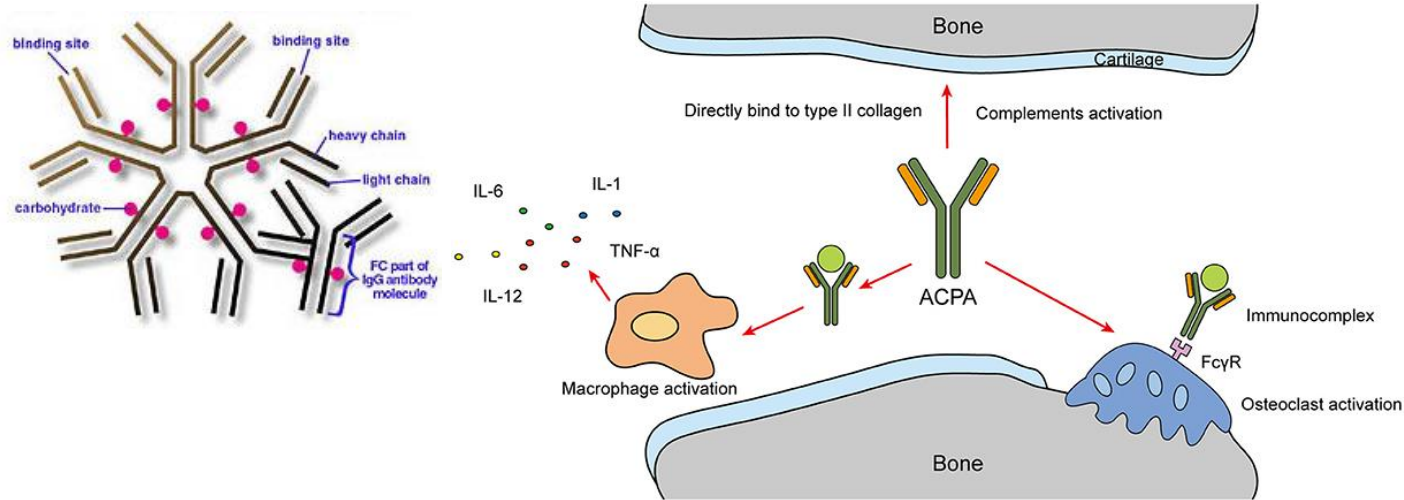
## CRP vs ESR: Which Test is helpful? ... Ideally both!

Feature	CRP (80-90% positive)	ESR (80-90% positive)
Kinetics	Rapid rise/fall	Slow rise/fall
Specificity	Higher	Low
Confounders	Minimal	Many
Monitoring	Excellent	Poor
Acute change	Reliable	Delayed
Standardisation	Good	Variable
Overall utility	High	Limited

\* Sensitivity for both reduced in Early Spondyloarthritis – 70%

\*\*ESR – Connective tissue disease, PMR & GCA, myeloma

# Rheumatoid Factor and Anti-Citrullinated Peptide Antibody (ACPA)

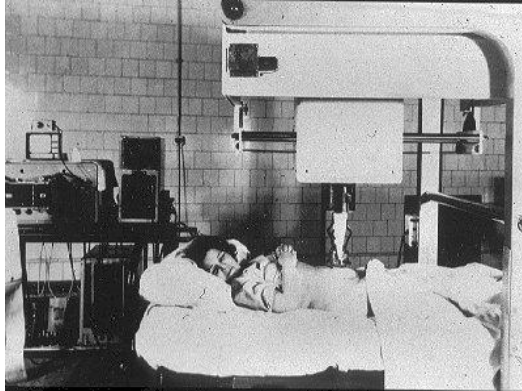


Feature	RF	ACPA
Sensitivity (RA)	70%	70%
Specificity	Low (many false +ves)	High (mod/high titre)
Prognostic value	Severe disease / Extra – articular disease	Severe Disease

# Clinical Utility of ANA Testing for Suspected Connective Tissue Disease

Scenario	Pre-test Probability	PPV (%)	NPV (%)	Order ANA?	Interpretation
Female, 20, muscle aches	1%	3.8	99.97	No	Positive ANA likely incidental
Female, 70, knee pain	0.1%	0.4	99.997	No	High false-positive rate
Male, 40, back pain	0.1%	0.4	99.997	No	Not clinically useful
Female, 25, rash + joints + fatigue	20%	49.1	99.3	Yes	Supports SLE workup
Male, 50, fatigue	0.5%	1.9	99.985	No	Poor diagnostic yield
Male, 60, ESR 40 mm/h	0.5%	1.9	99.985	No	ESR alone nonspecific

# Point Of Care UltraSound POCUS

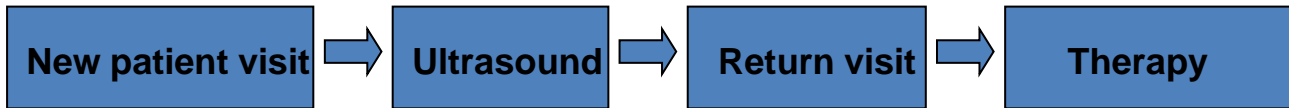


**1959**

**2026**

# Why Point Of Care UltraSound?

## *Traditional*

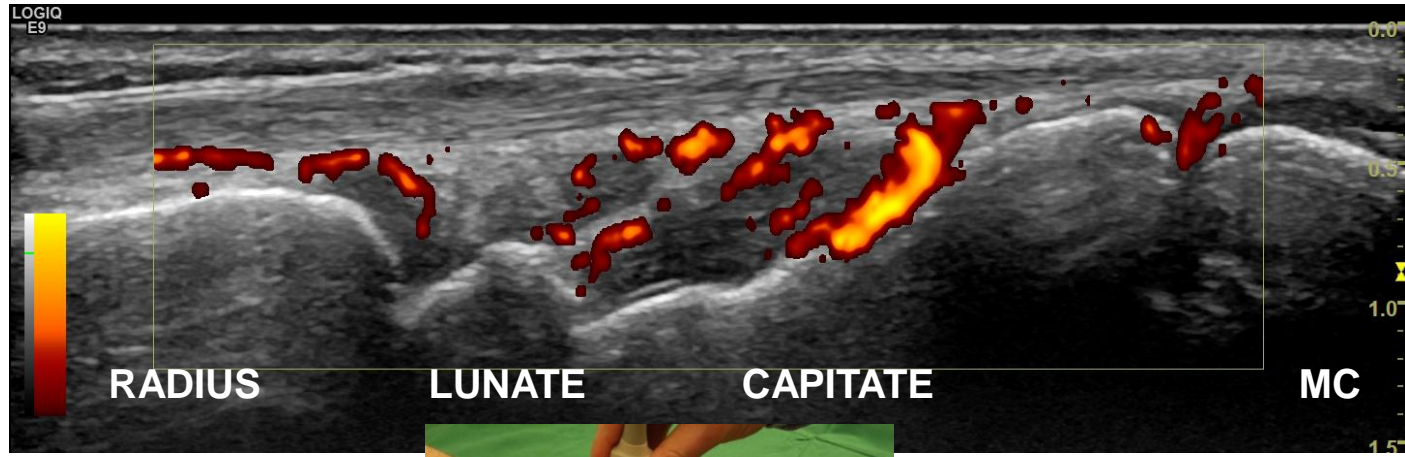


## *Innovative*

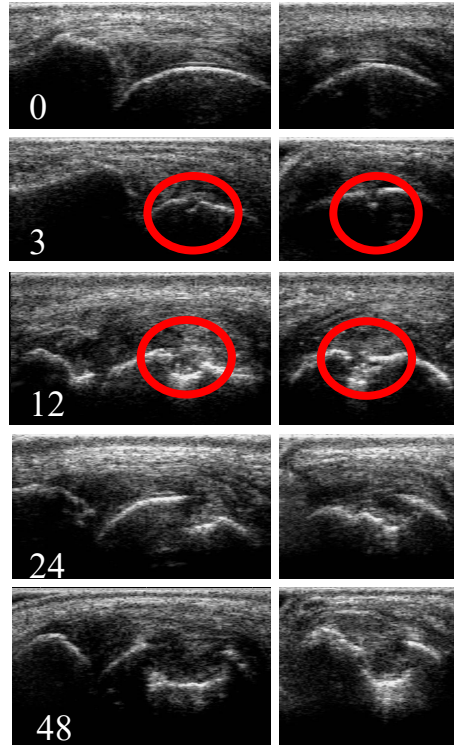


- Initial consultation is longer
- US shorter as patient already prepared
- Return consultation requires notes and patient re-evaluation
- Earlier therapy can be more effective / less time consuming
- Need to persuade insurers / employers of value

# Our initial patient: Wrist tender / limited extension



# Our initial patient: RF/ACPA negative - RA erosions diagnostic



**TOO  
LATE!**



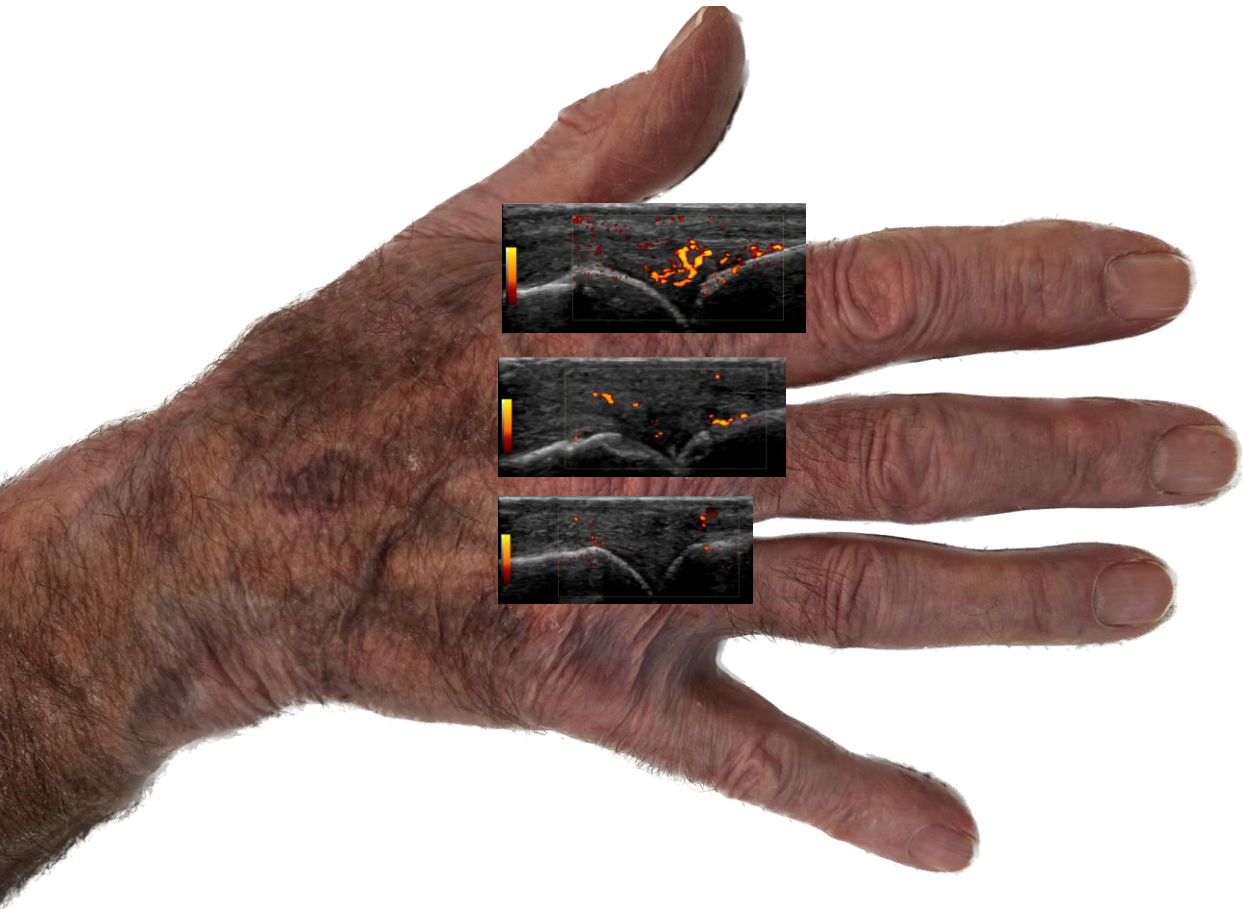
## RA on Rx – decreased hand function due to pain: ?flare

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# Active RA – add infliximab – hand function restored

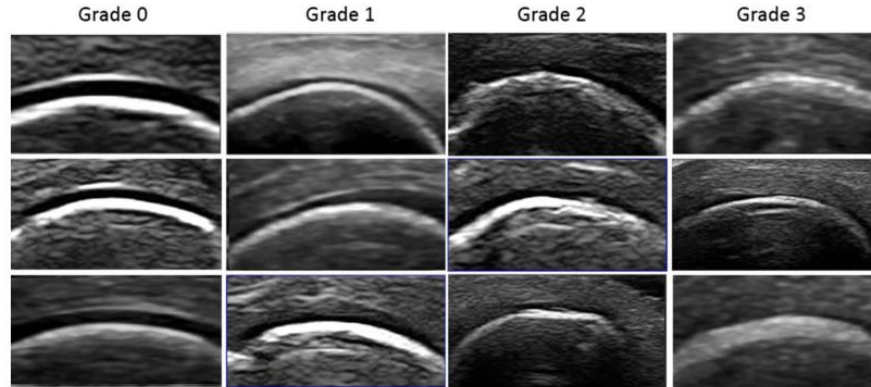
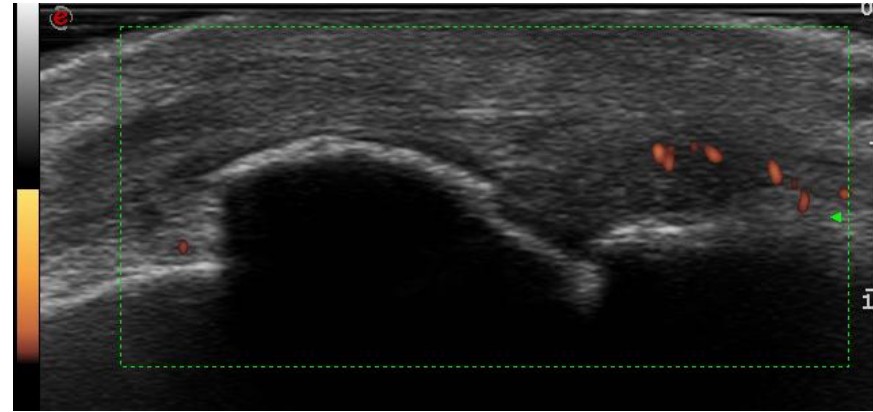
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# Same patient presentation: MCP 2,3 restricted



## Osteoarthritis: MCP 3 Osteophyte



Global ultrasound assessment of structural lesions in osteoarthritis: a reliability study by the OMERACT ultrasonography group on scoring cartilage and osteophytes in finger joints

H B Hammer,<sup>1</sup> A Iagnocco,<sup>2</sup> A Mathiessen,<sup>1</sup> E Filippucci,<sup>3</sup> F Gandjbakhch,<sup>4,5</sup> M C Kortekaas,<sup>6,7</sup> I Möller,<sup>8</sup> E Naredo,<sup>9</sup> R J Wakefield,<sup>10</sup> P Aegerter,<sup>11,12</sup> M-A D'Agostino<sup>13,14</sup>

**Figure 2** Atlas for scoring of cartilage abnormalities at metacarpo-phalangeal (MCP) joints level in hand osteoarthritis (OA), used for the website scoring.

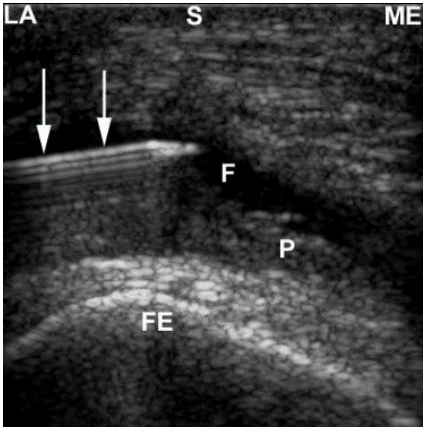
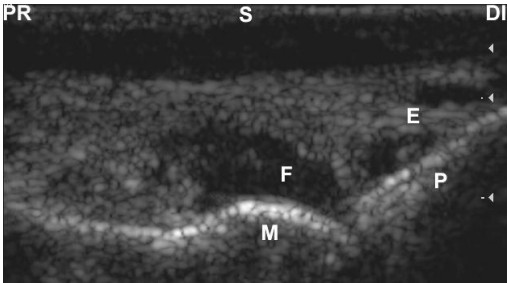


US guided injection – more accurate, less painful, less collateral damage, better outcomes



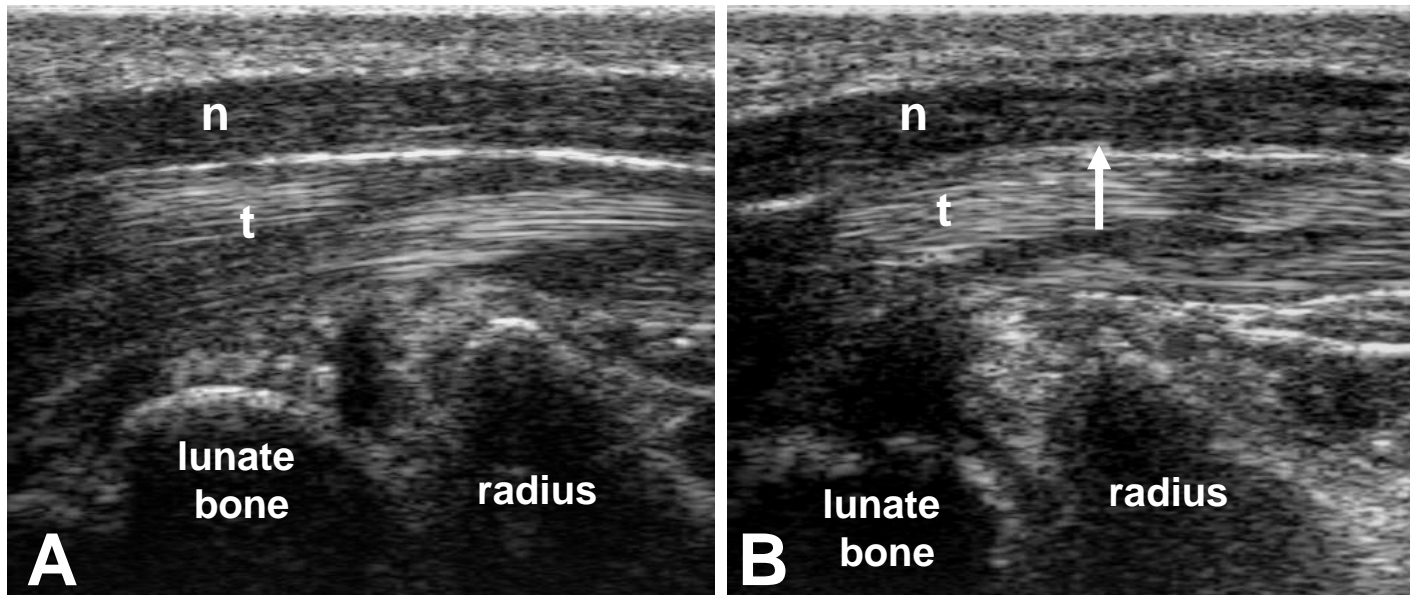
- 2-3 times more successful than clinical guided
- US guided injection of shoulder superior
- Clinical 42% v US 95% success
- Clinical in RA 66% v US 83% success

Balint, Kane 2003, Raza 2003  
Naredo 2004  
Saadeh 2005  
Cunnington, Kane 2010



# CARPAL TUNNEL SYNDROME

*Ultrasound equivalent to NCS*

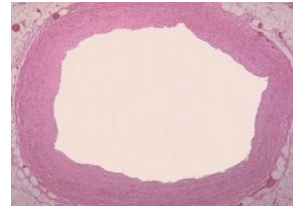
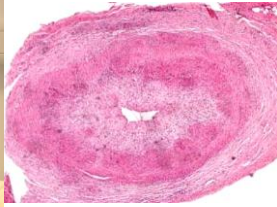
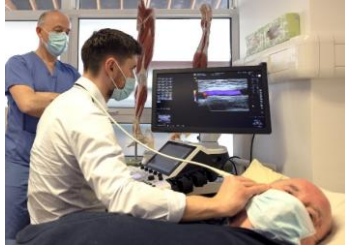


Longitudinal volar scan. Sagittal plane through the median nerve. **A.** Right side. Normal aspect.

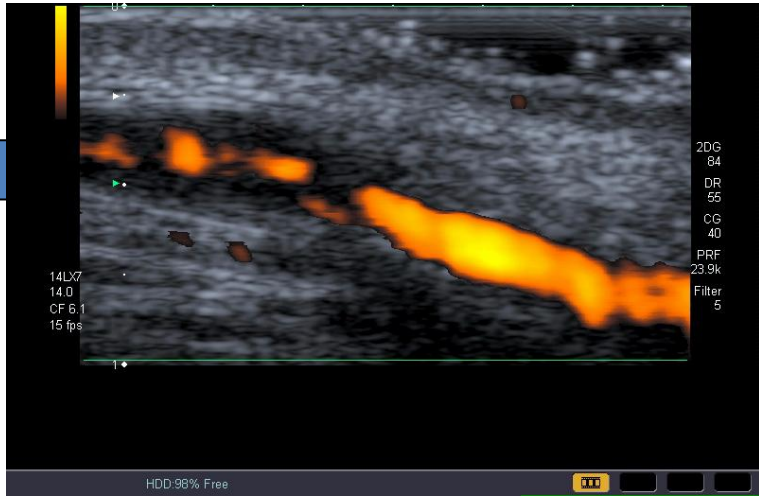
**B.** Left side. The **arrow** indicates a circumscribed thinning of the median nerve.

**n** = median nerve; **t** = finger flexor tendons.

# Ultrasound of Temporal Arteritis



Abnormal



Normal

# Point Of Care UltraSound

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- Rheumatology Standard of Care @ Beacon Hospital
- Aids rapid diagnosis of inflammatory arthritis / disease
- Future relevance to Primary Care
- US guidance of joint and soft tissue injections

# Thank you