

Don't forget the bigger picture

Wherever it may lead

BMUS 2024

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Date: December 2024

Challenges and barriers in MSK ultrasound

The aim of this presentation is to highlight the diagnostic challenges encountered when a soft tissue mass is in an unusual location.

It highlights the complexities of coexisting conditions, which may not be initially apparent .

The role of ultrasound in identifying and managing lesions.

67-year-old male attends from his GP , June 23

Clinical History

Painful lump on the back of the left leg for 5 days , similar swelling on the right side.

Firm diffuse irregular lump attached to the left Achilles approx. 2-3 cm in diameter. Slightly tender.

Us Left Achilles ? Cause for lump

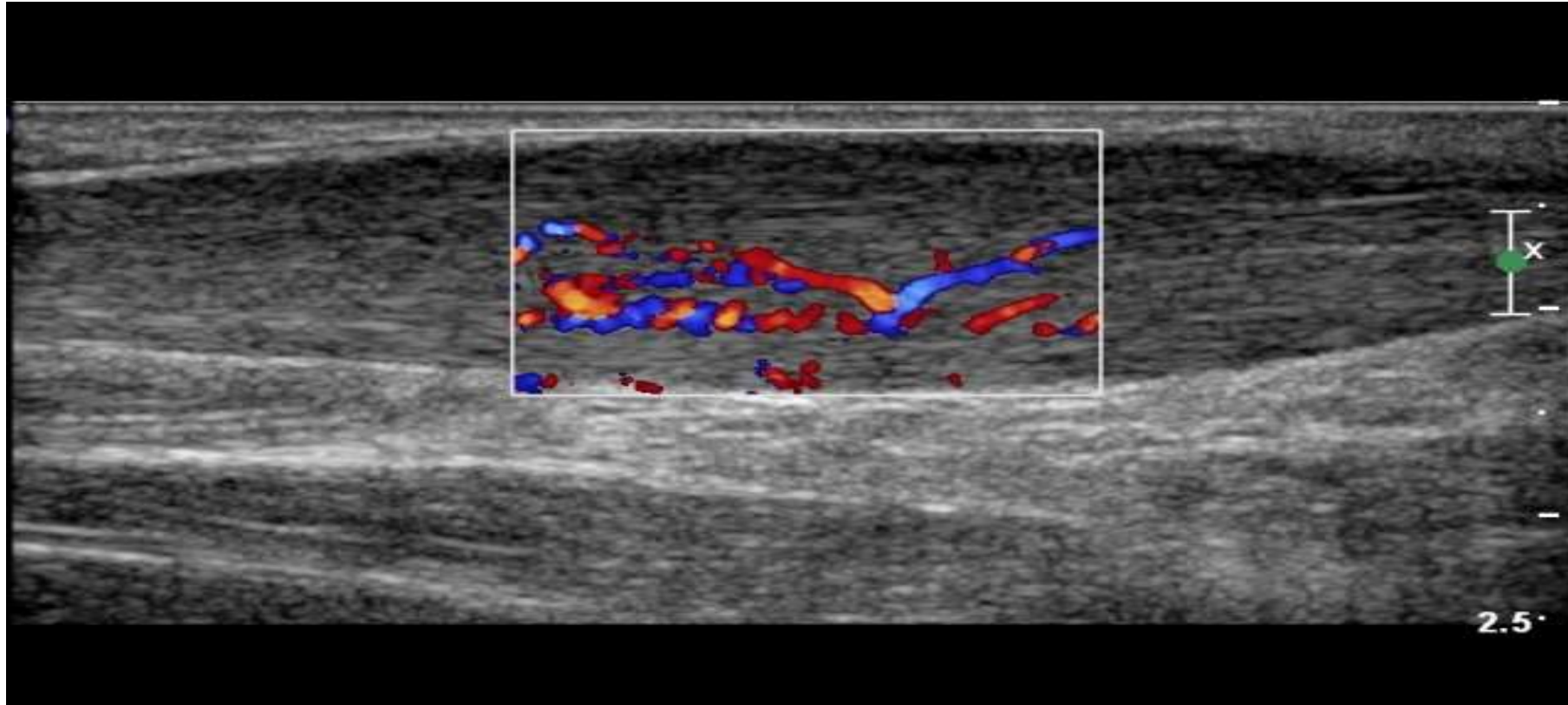
Largest tendon in the body

Originates from the gastrocnemius and the Soleus muscles

Inserts onto the calcaneum

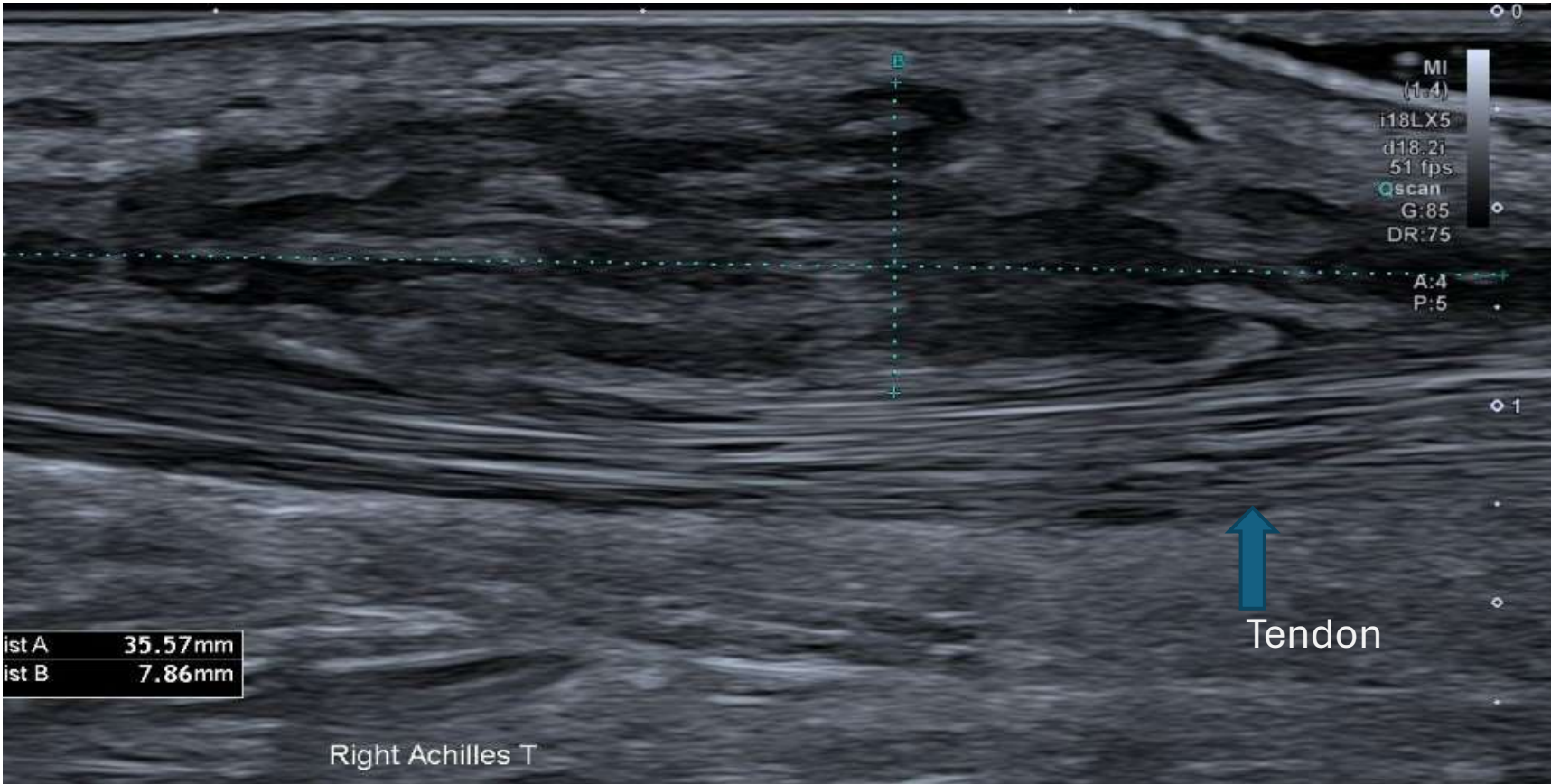


WHAT I EXPECTED

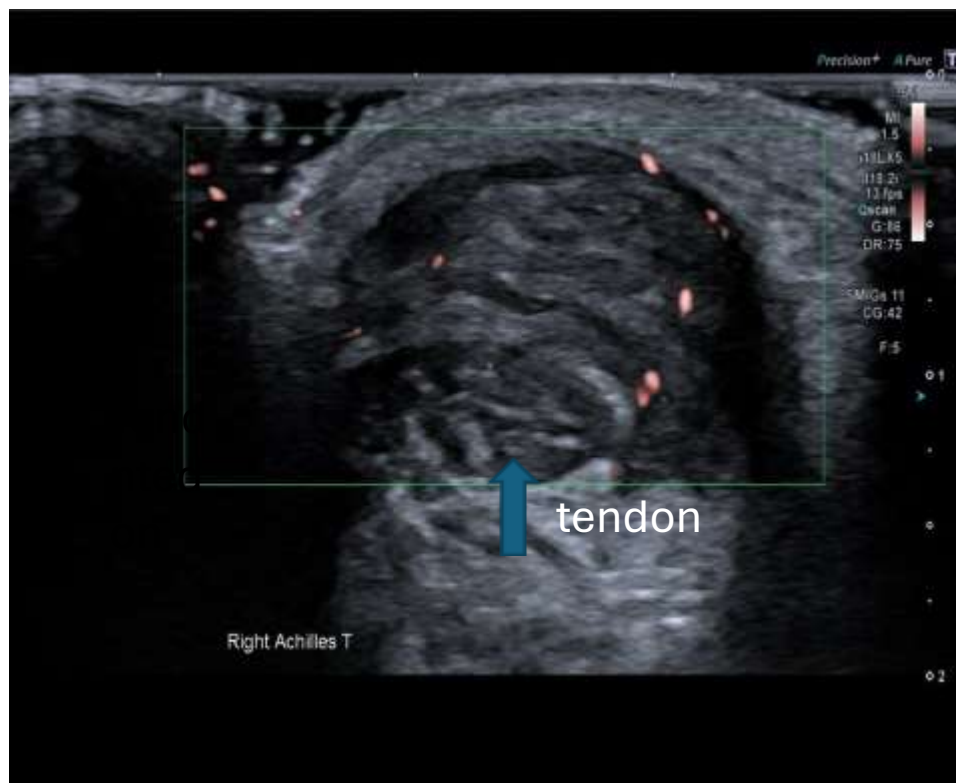


Longitudinal view of Achilles

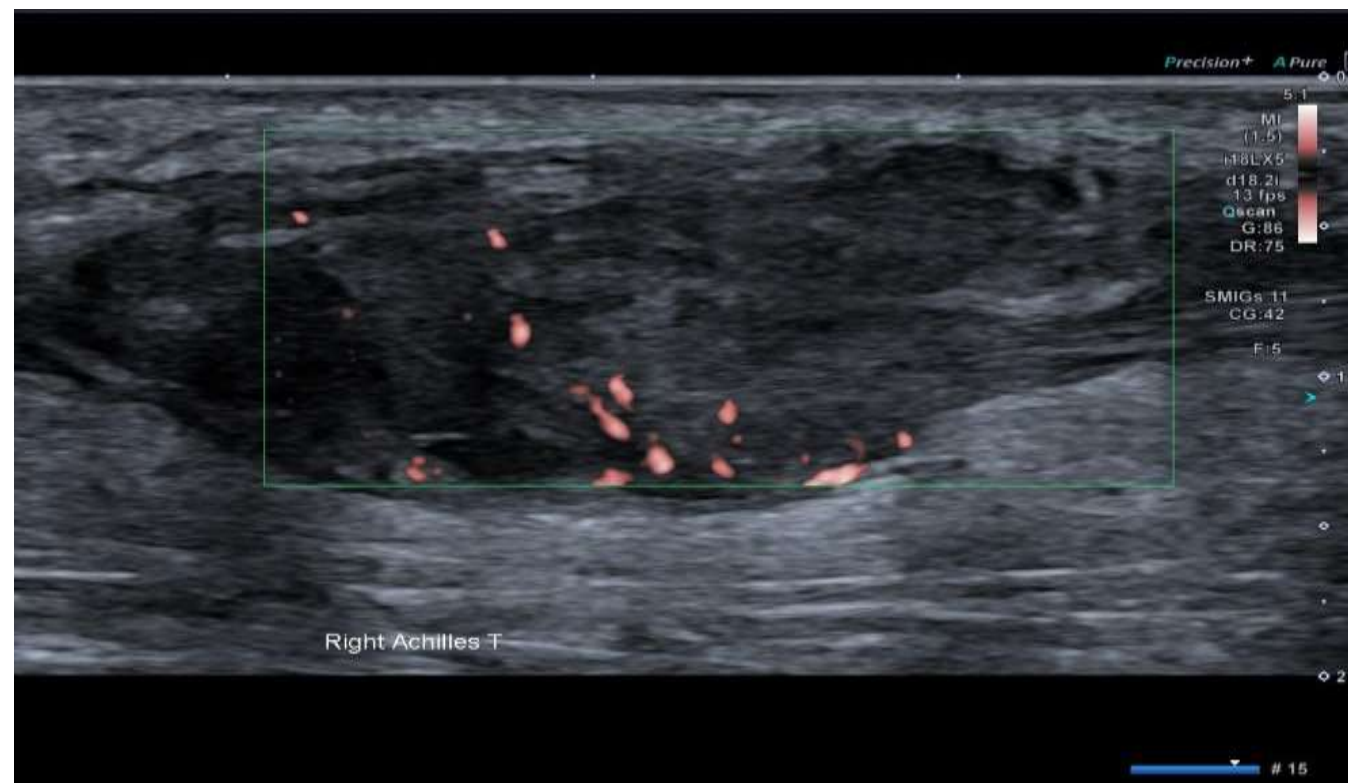
WHAT I SAW



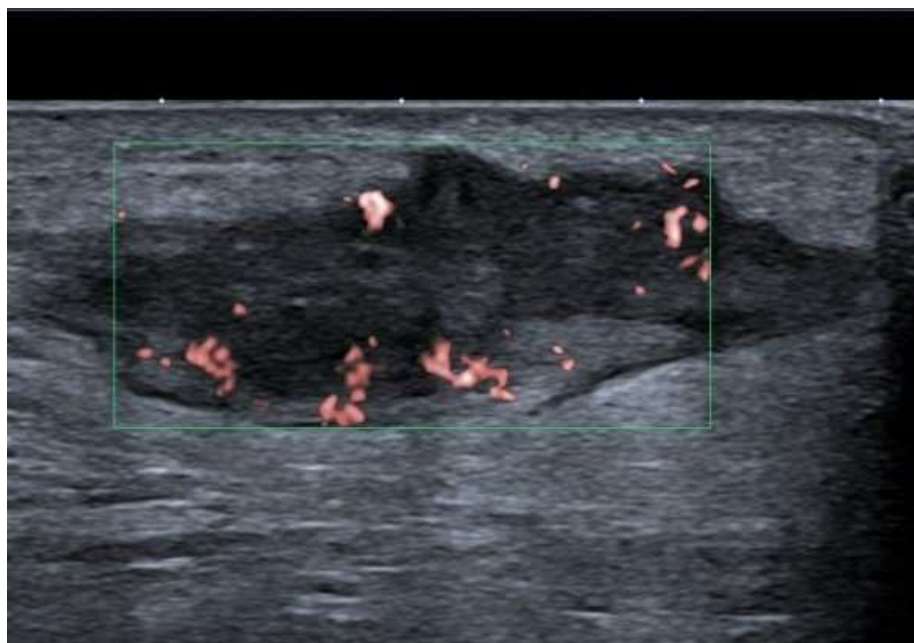
Transverse Achilles tendon



Longitudinal

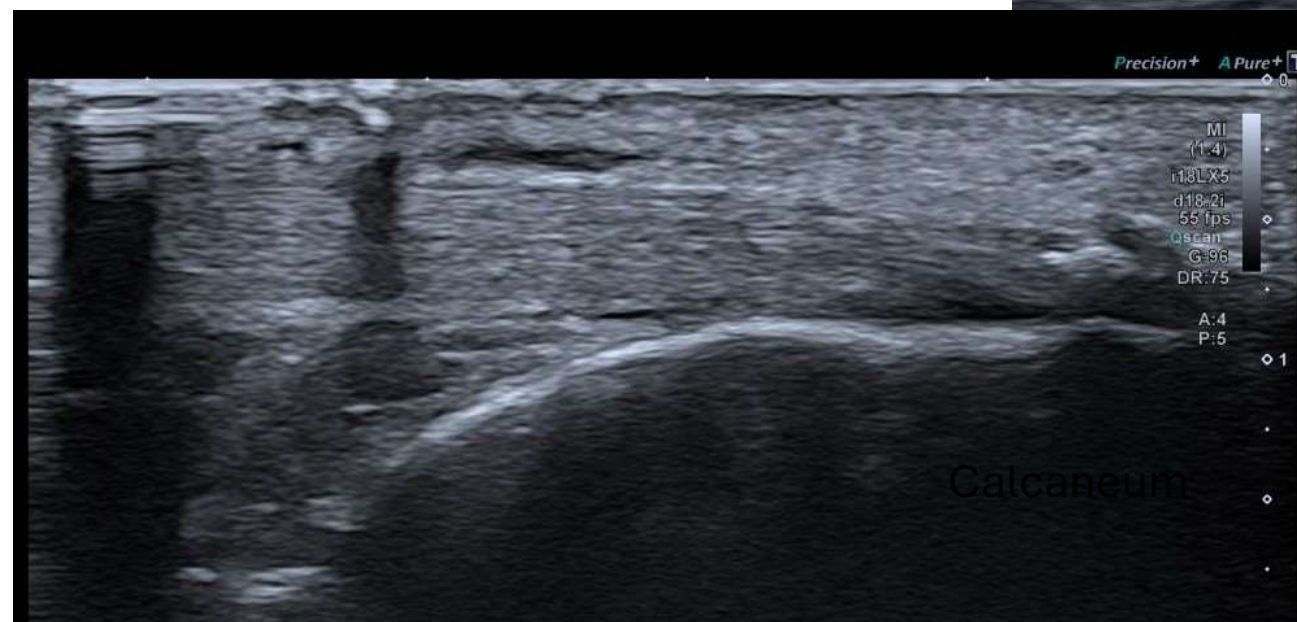


Longitudinal

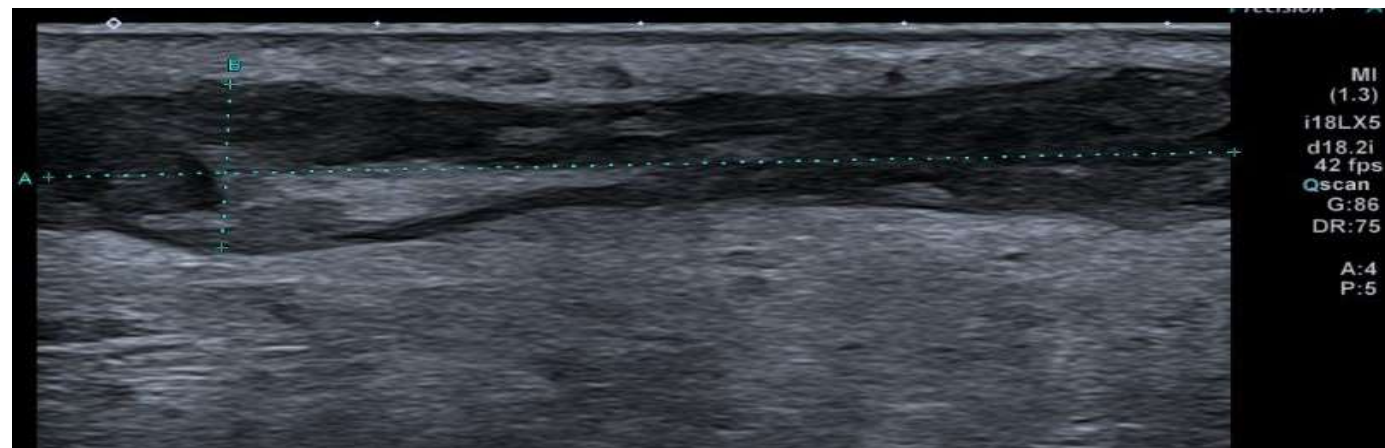
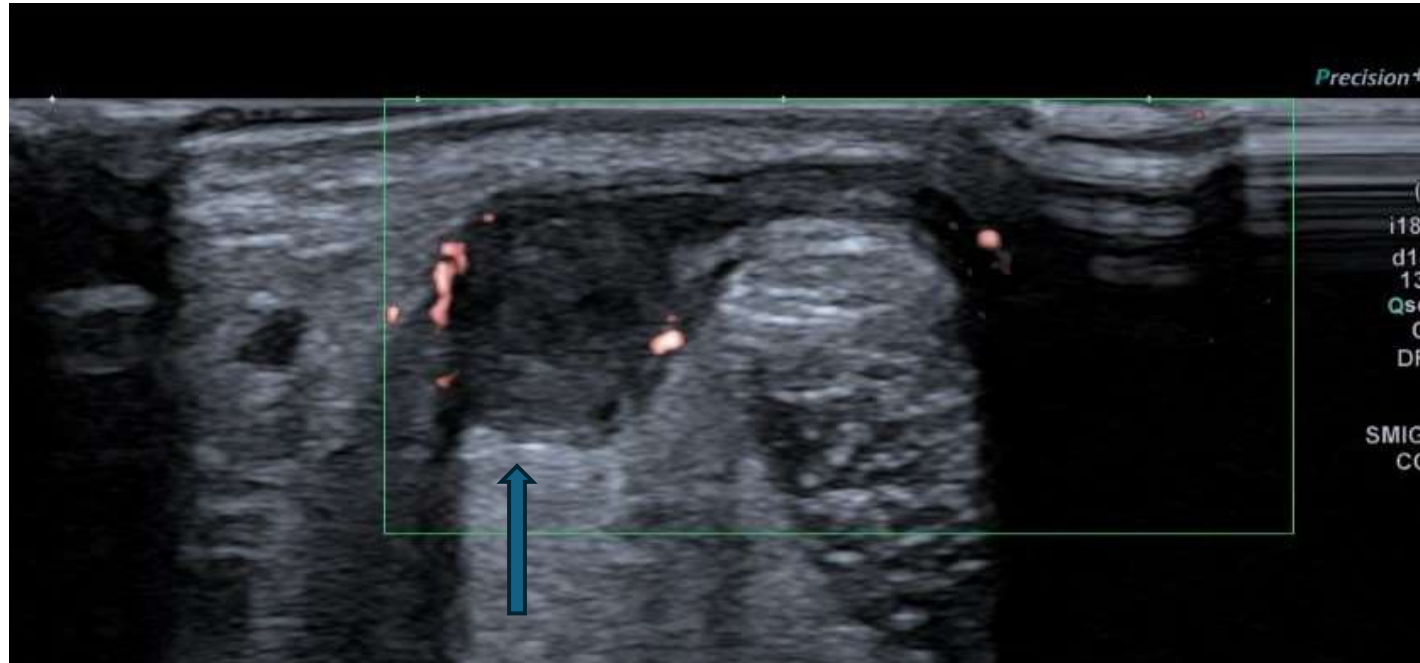


Transverse

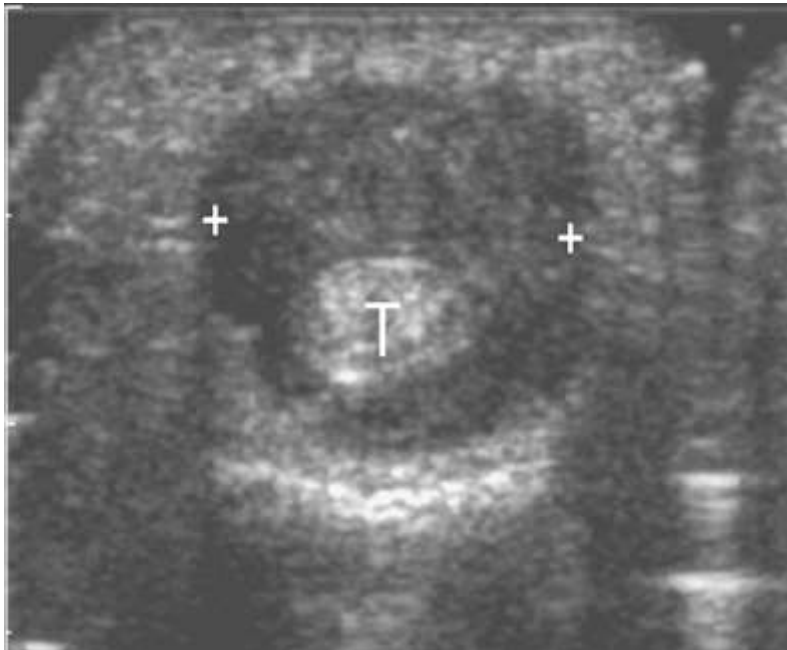
Achilles insertion



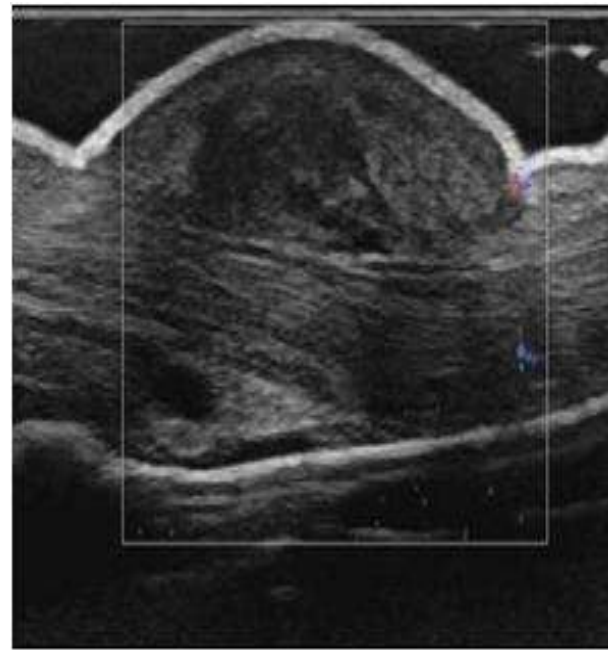
LEFT ACHILLES



- Giant Cell Tumor



- Rheumatoid Nodule



- Xanthoma



Some irregularity to the borders of the soft tissue lesion

Presence of vascularity

Fast growing

As he was leaving , he mentioned several surgeries for melanoma

The swelling on the posterior aspect of the right ankle corresponds to a large heterogenous soft mass that extends along the length of the Right Achilles and wraps along onto the medial aspect of the tendon . The mass has poorly defined borders and contains vascularity measuring approximately 35 x 11 x 25mm .

On dynamic examination it appears to be tethered to the paratenon.

The underlying Achilles tendon appears unremarkable, except for mild spurring present at the calcaneum.

A similar but smaller swelling is noted on the left side .

It is difficult to be sure what exactly these masses are , but the appearances are similar to those seen in a GCT.

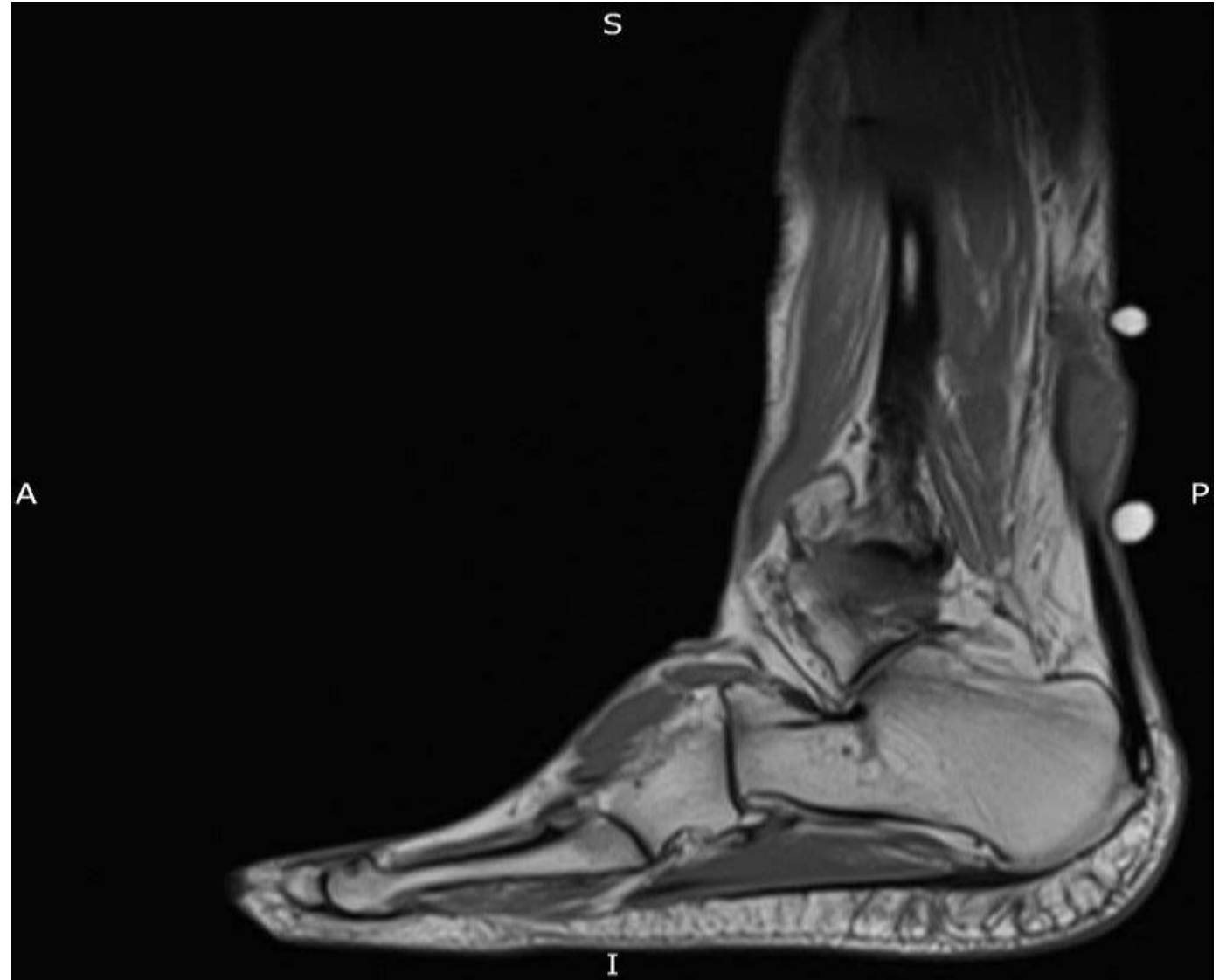
The patient informed us as he was leaving Previous HX of melanoma with surgeries and so a sinister cause cannot be excluded .

The patient needs urgent further referral .

Patient referred to tertiary center

MRI: Supported a soft tissue mass superficial to the Achilles tendon, extending for 5cm . Differentials included GCT and Gout

Ultrasound guided biopsy performed



- Isolated Rheumatoid Nodule.
Despite no prior Hx of RA

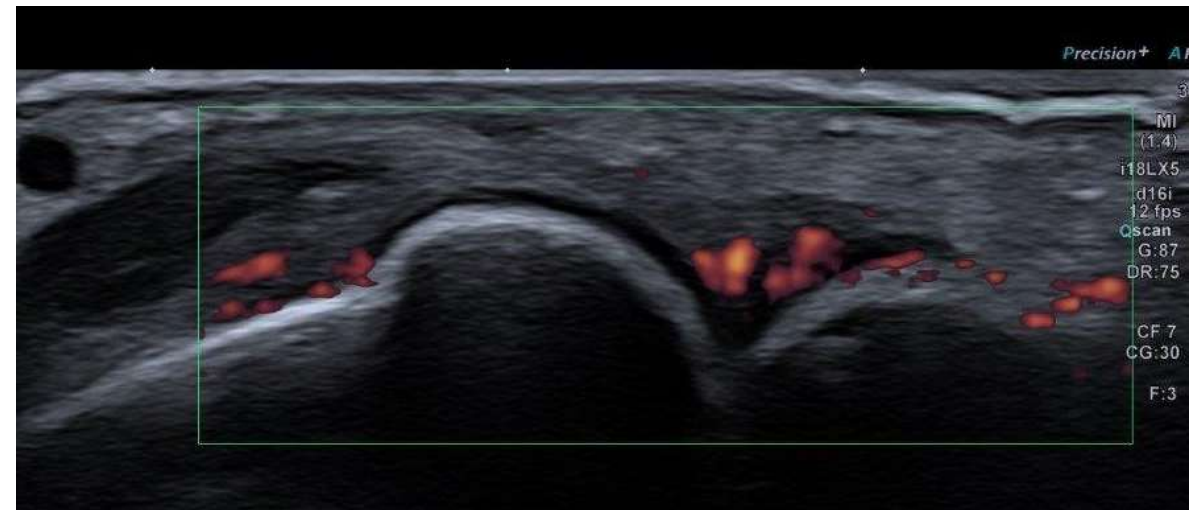
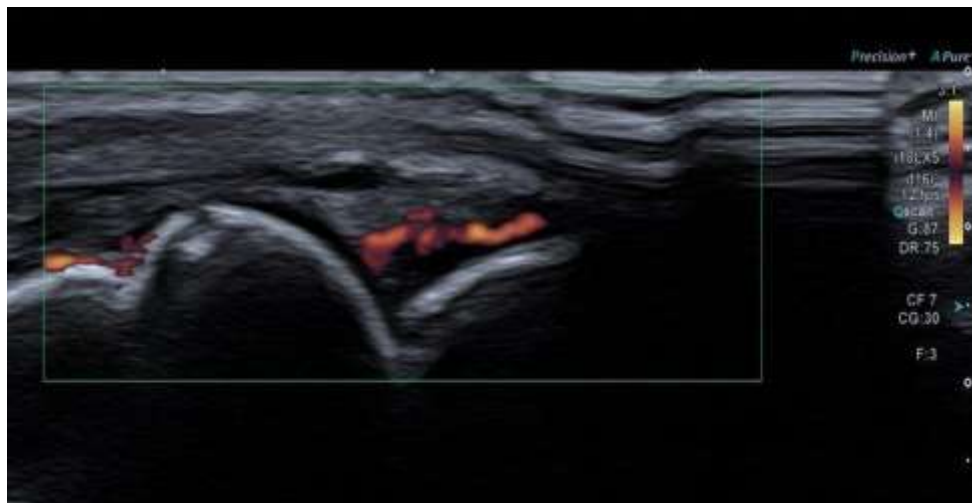


Conservative approach with regular monitoring.

Patient referred back to GP , to organise Rheumatology referral.

Patient to referred to Rheumatology Nov23.

Now has swelling of the wrists and MCP joints, High inflammatory markers



In this case, did the Hx of melanoma lead me down the incorrect path ?

I discounted a Rheumatoid nodule , because there was no systemic RA

Imaging but also histology essential



Q&A

1. James, W. D., Berger, T. G., & Elston, D. M. (2016).** Andrews' Diseases of the Skin: Clinical Dermatology (12th ed.). Elsevier.
- Overview of rheumatoid nodules and their clinical presentation.
2. Gandjbakhch, F., Aubert, O., & Meyer, O. (2014).** "Imaging for the Diagnosis of Rheumatoid Arthritis." **Joint Bone Spine, 81(3), 196-202.**
- Discusses the use of sonography and MRI in diagnosing rheumatoid arthritis and related nodules.
3. Langner, I., Deml, R., Eyerich, K., & Eyerich, S. (2018).** "Cutaneous Metastases of Malignant Melanoma: A Review of the Literature." **Dermatology Research and Practice, 2018, 1238023.**
- Details the presentation and diagnosis of melanoma metastases, emphasizing the differential diagnosis process.
4. McGonagle, D., & Tan, A. L. (2008).** "Imaging the Achilles Tendon in Psoriatic Arthritis and Ankylosing Spondylitis." **Journal of Rheumatology, 35(3), 443-446.**
- Discusses the role of imaging in diagnosing tendon-related conditions in inflammatory diseases, including rheumatoid nodules.
5. Alonso-Ruiz, A., & Rosas, J. (2019).** "The Role of Rheumatoid Nodules in Rheumatoid Arthritis." **Rheumatic Disease Clinics of North America, 45(3), 359-370.**
- A detailed review of the pathogenesis, clinical significance, and treatment of rheumatoid nodules.
6. Fitzpatrick, T. B., & Wolff, K. (2008).** Fitzpatrick's Dermatology in General Medicine (7th ed.). McGraw-Hill.
- Comprehensive dermatology reference covering the management of melanoma and related conditions.
7. Wakefield, R. J., & D'Agostino, M. A. (2010).** "Role of Ultrasound Imaging in Rheumatoid Arthritis." **Best Practice & Research Clinical Rheumatology, 24(5), 615-627.**
- Focuses on the application of ultrasound in the assessment of rheumatoid arthritis and its manifestations.
8. Spicer, Paul J. MD; Broussard, Gerald MD; Beaman, Francesca MD Isolated Rheumatoid Nodule of the Achilles.
[InformationUltrasound Quarterly 32\(2\):p 187-190, June 2016.](#)