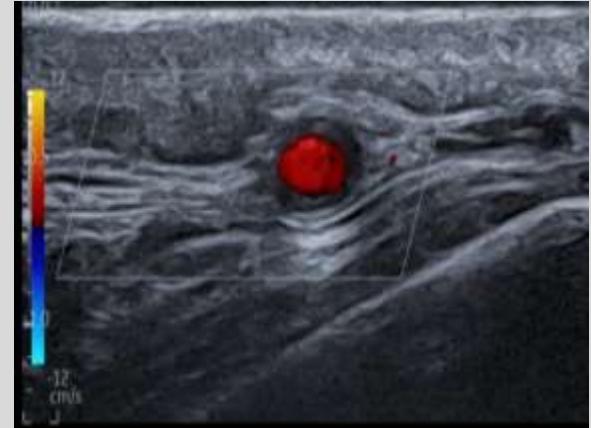


# Giant Cell Arteritis (GCA) Ultrasound - A first year service experience

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Midlands Partnership University NHS Foundation Trust

# Points to consider

- Review of GCA
- Why assess GCA with ultrasound
- The scan and ultrasound appearances of GCA
- The training process for gaining competency
- Results of a first year service evaluation



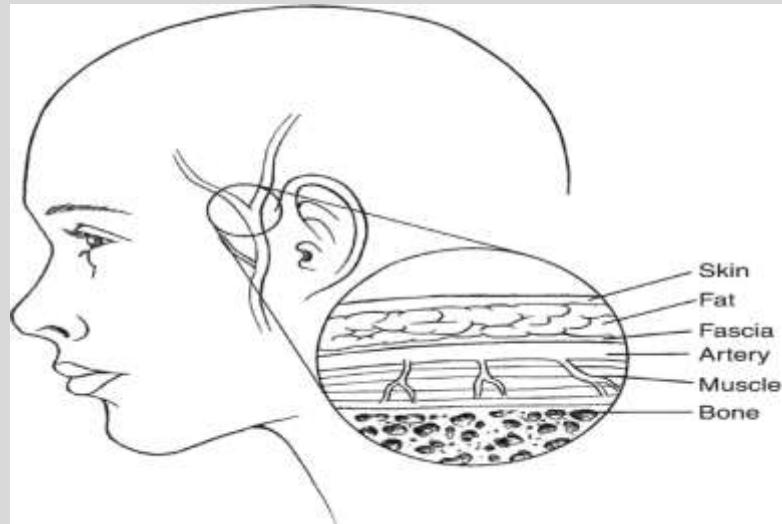
# GCA - What is it?



- Most common form of systemic vasculitis in adults
- Symptoms include, headache, jaw pain and flu-like symptoms
- Can cause blindness or stroke
- A suspected diagnosis of GCA is considered a medical emergency

# Why assess GCA with ultrasound ?

- Temporal artery biopsy - Gold Standard
- MRI, CT, PET and Ultrasound used
- Steroids can reduce signs of GCA on imaging

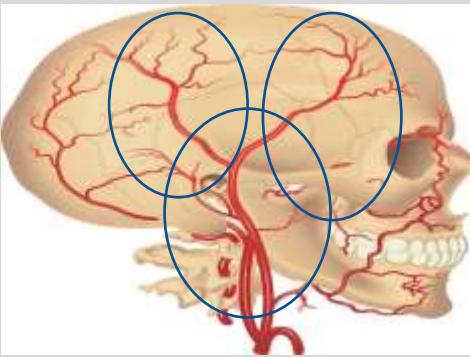


The British Society of Rheumatology (BSR) and the European League against Rheumatism (EULAR) both now recommend Ultrasound as a first line investigation for GCA

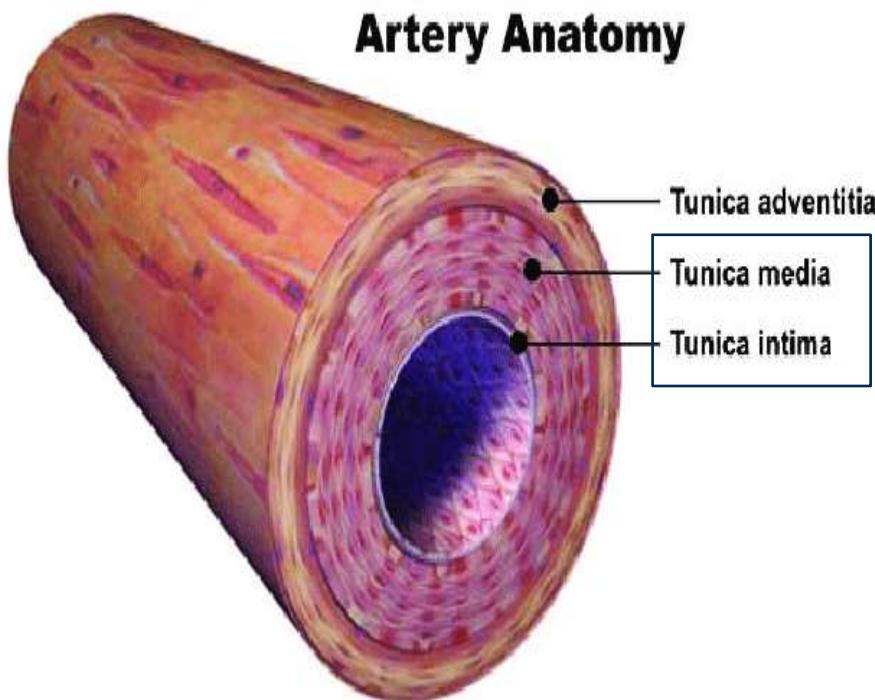
# GCA ultrasound scan

## Common temporal artery, parietal and frontal branches

- Assess branches in both transverse and longitudinal
- Use B mode and Doppler to identify the vessel, show patency and assists in demonstrating the wall thickness – the Intima–media thickness (IMT)
- For frontal and parietal branches, also compress the vessel



### Artery Anatomy



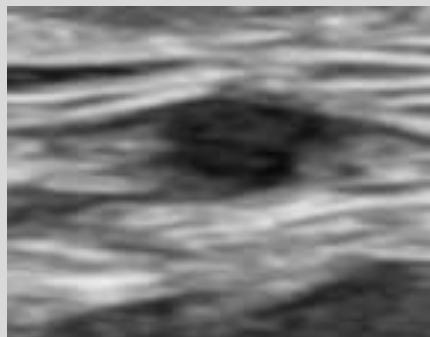
## Assess axillary arteries

- Patients arm over their head
- Start at level of humeral head
- Assess vessels in both transverse and longitudinal

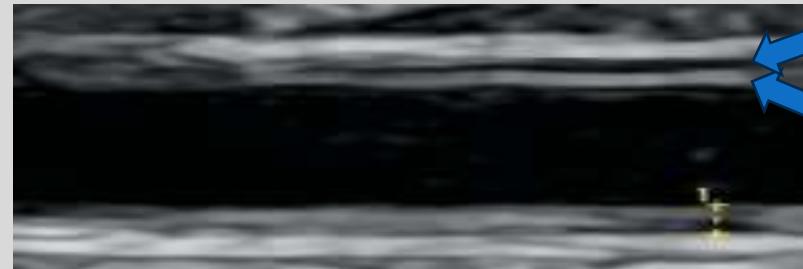


# Normal ultrasound appearances

B mode

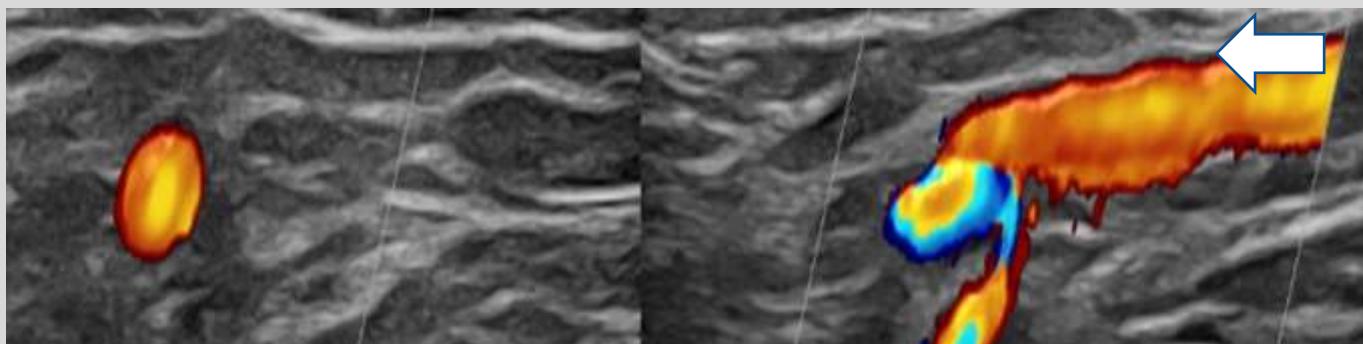


Media

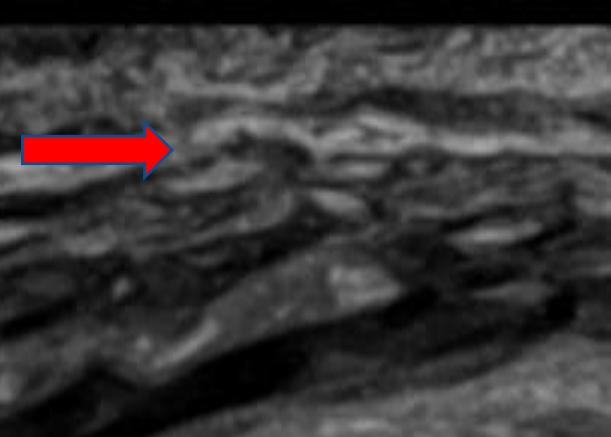
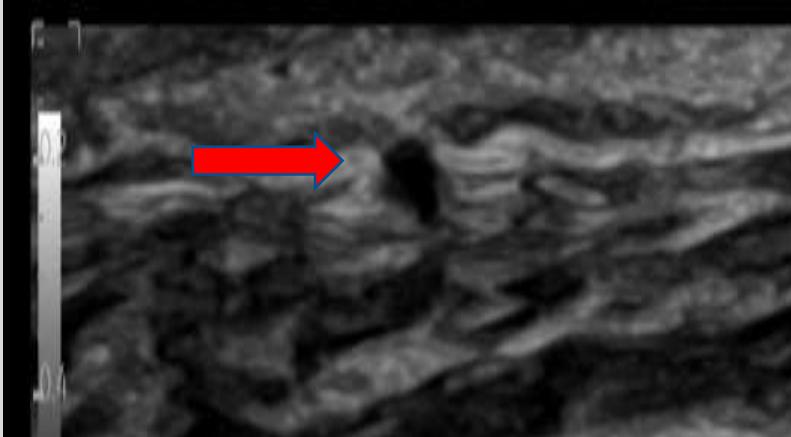


Intima

Doppler

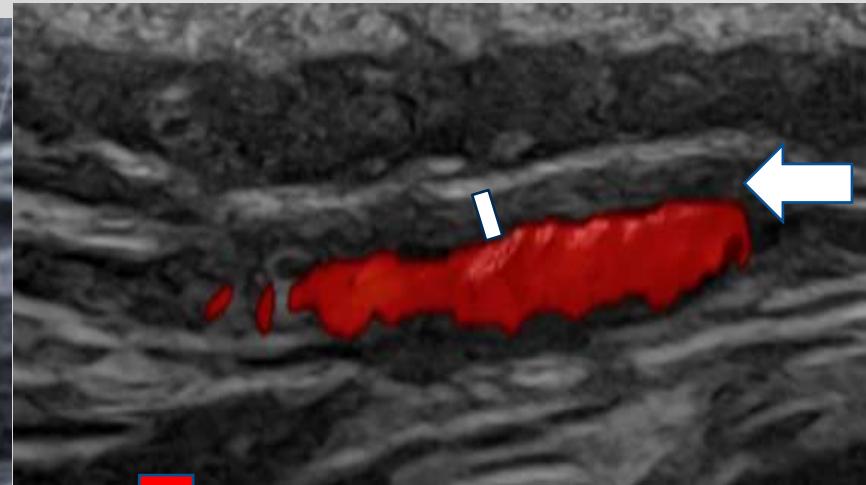
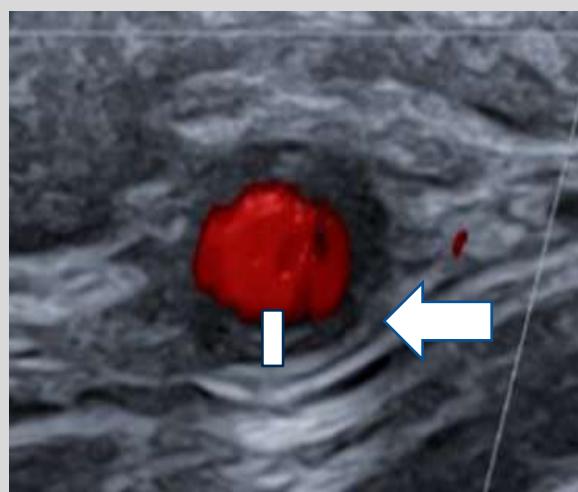


Compression

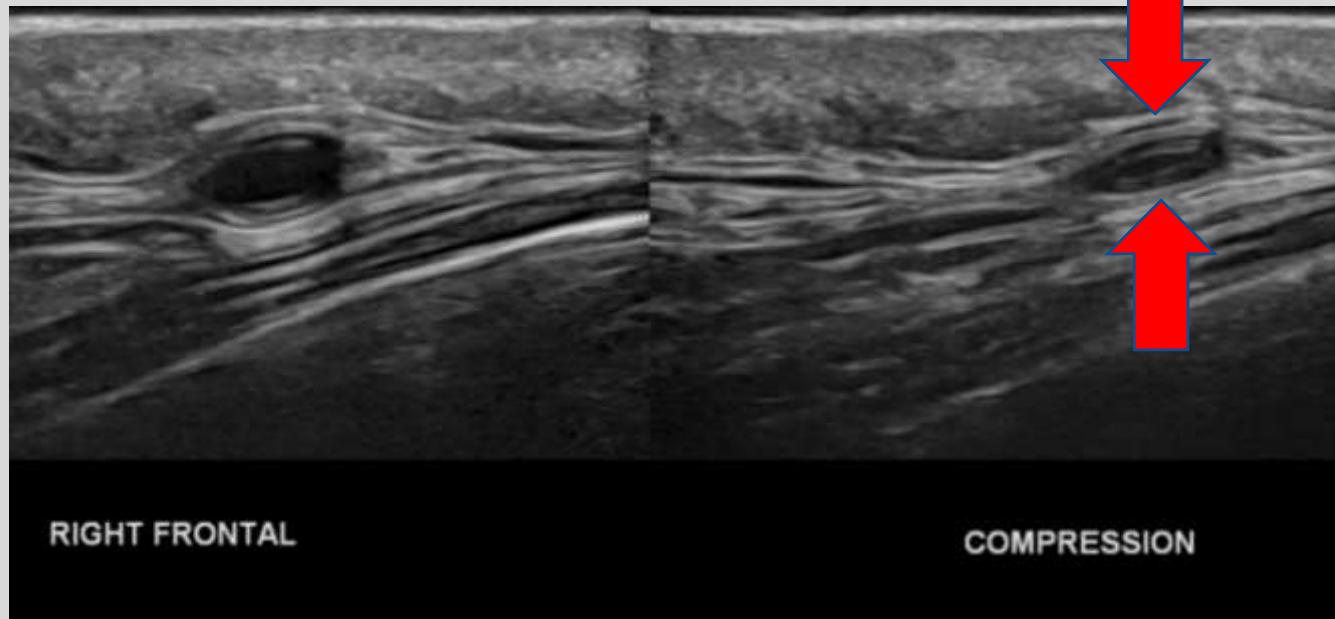


# Ultrasound appearances of GCA

Halo sign



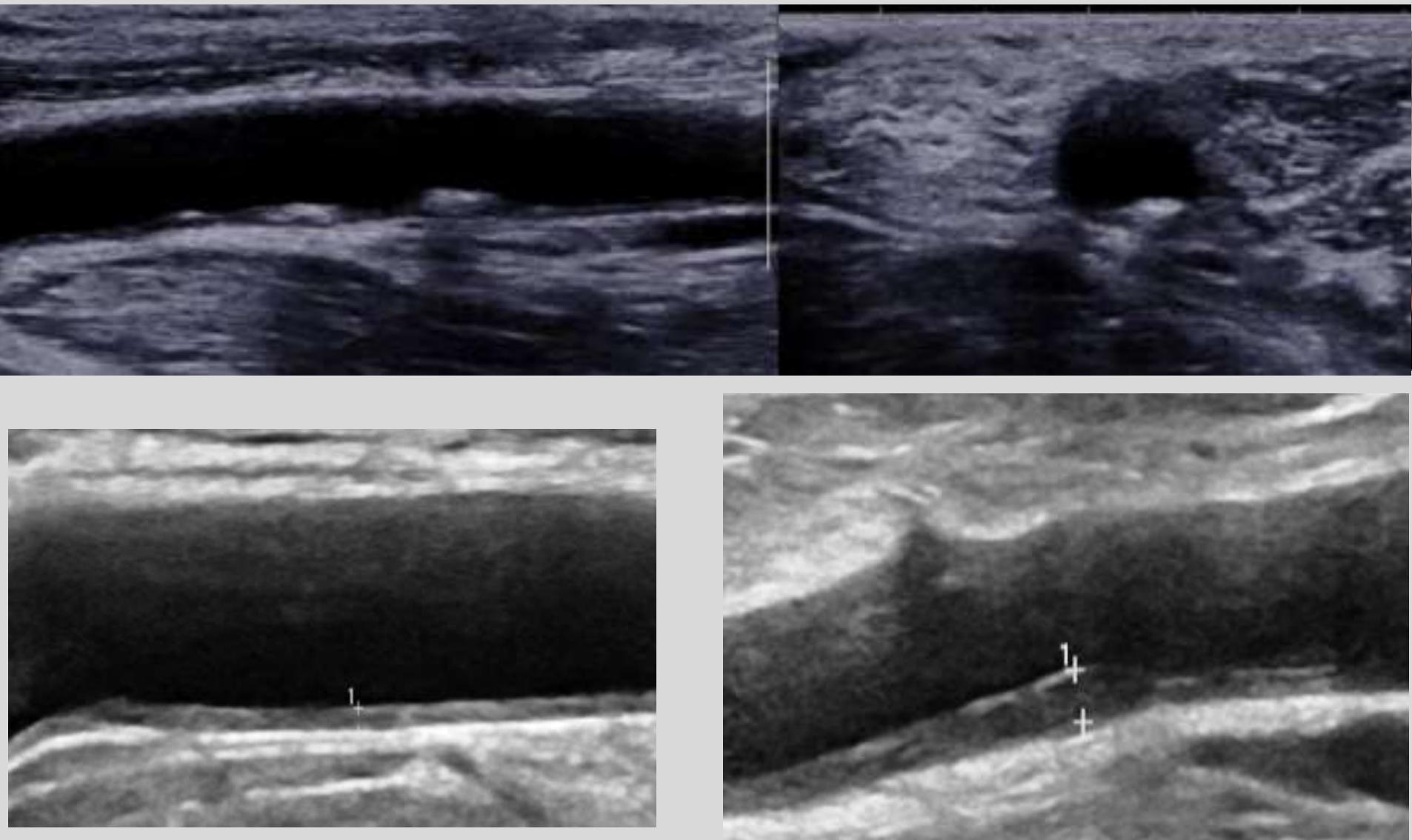
Compression sign



RIGHT FRONTAL

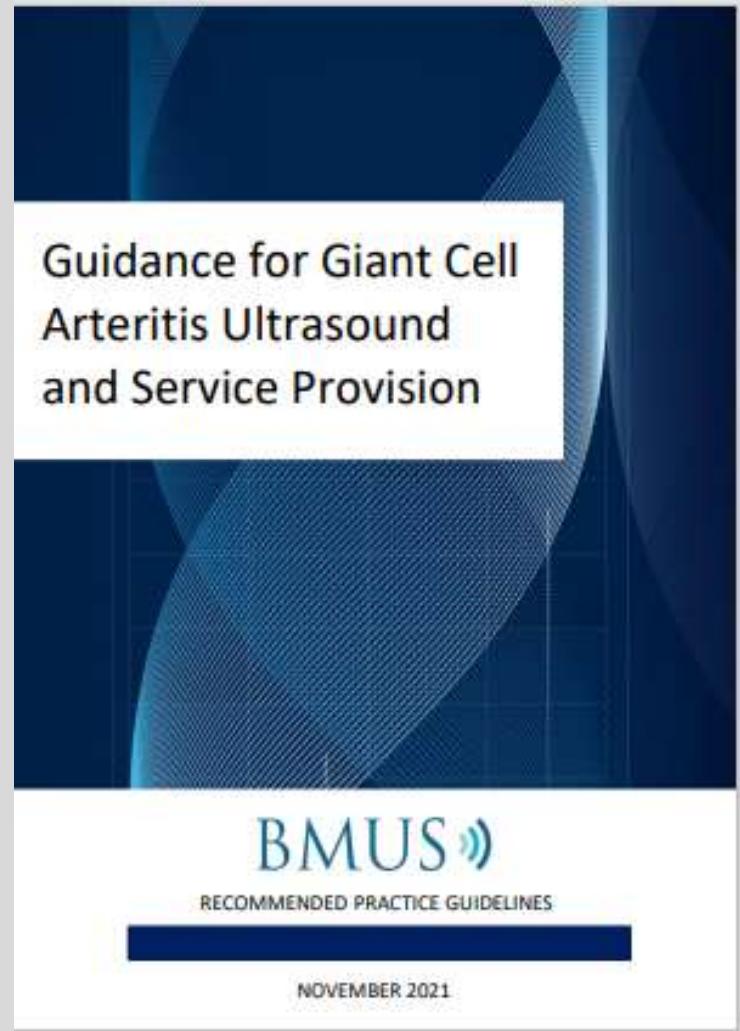
COMPRESSION

# Normal and GCA axillary artery ultrasound



# GCA ultrasound- training process

- Departmental guidelines
- In-house training / mentorship
- Remote mentoring
- Reporting templates
- Study days
- Audit



# MPFT NHS Foundation Trust GCA Ultrasound Service Evaluation

- 133 patients were scanned for GCA between April 2023 and August 2024
- 35 patient (26%) were positive, and 98 patients were (74%) negative
- 95% of all scans were performed within 7 days of referral
- 77% of positive scans and 59% of negative scans were performed within 3 days of referral
- Plan to re audit as we have increased our capacity to scan GCA three days in the week.



# GCA ultrasound service recommendations

- A robust referral system in place
- Specific and detailed GCA ultrasound scan request templates
- Good communication channels / team effort
- Urgent GCA slots imbedded into the clinic sessions
- Thoroughly trained Sonographers
- Work to guidelines that mirror those of the BMUS guidance
- GCA ultrasound MDT established



The End

Thanks for listening