

EUS of station 7... ummm?

Leonie Wheeldon

Consultant Biomedical Scientist

Royal Cornwall Hospital

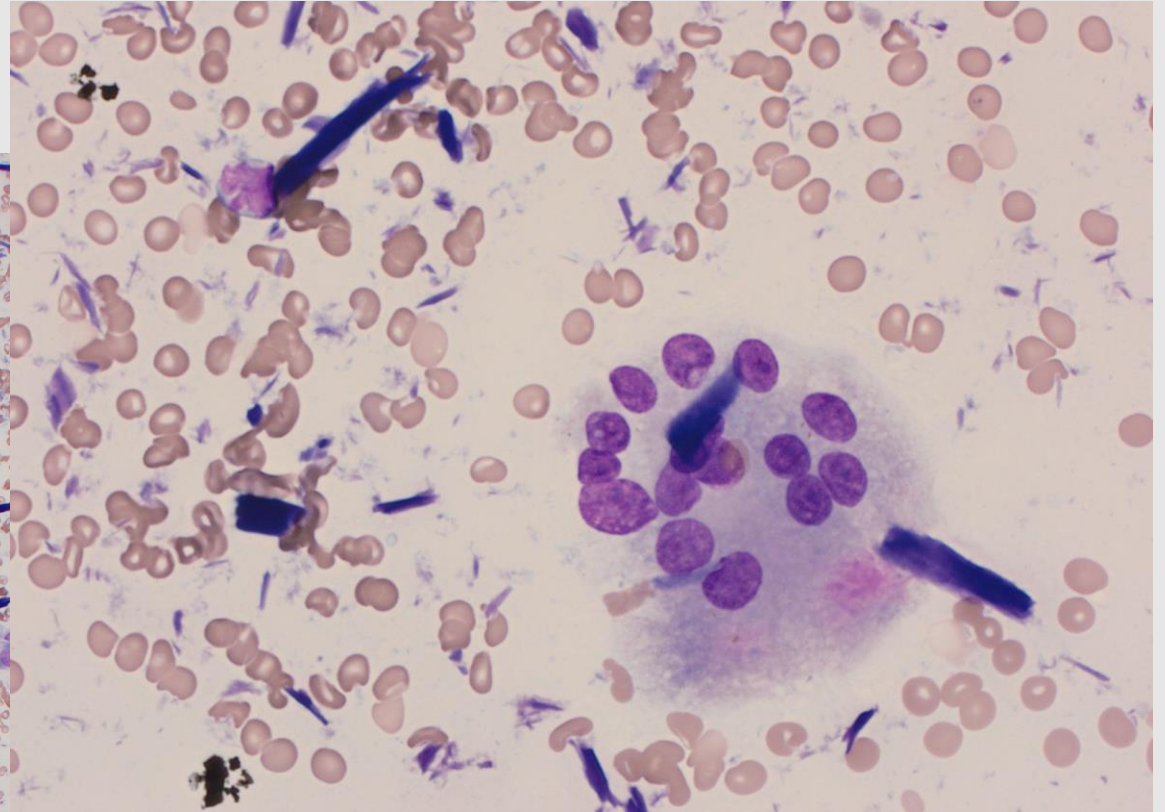
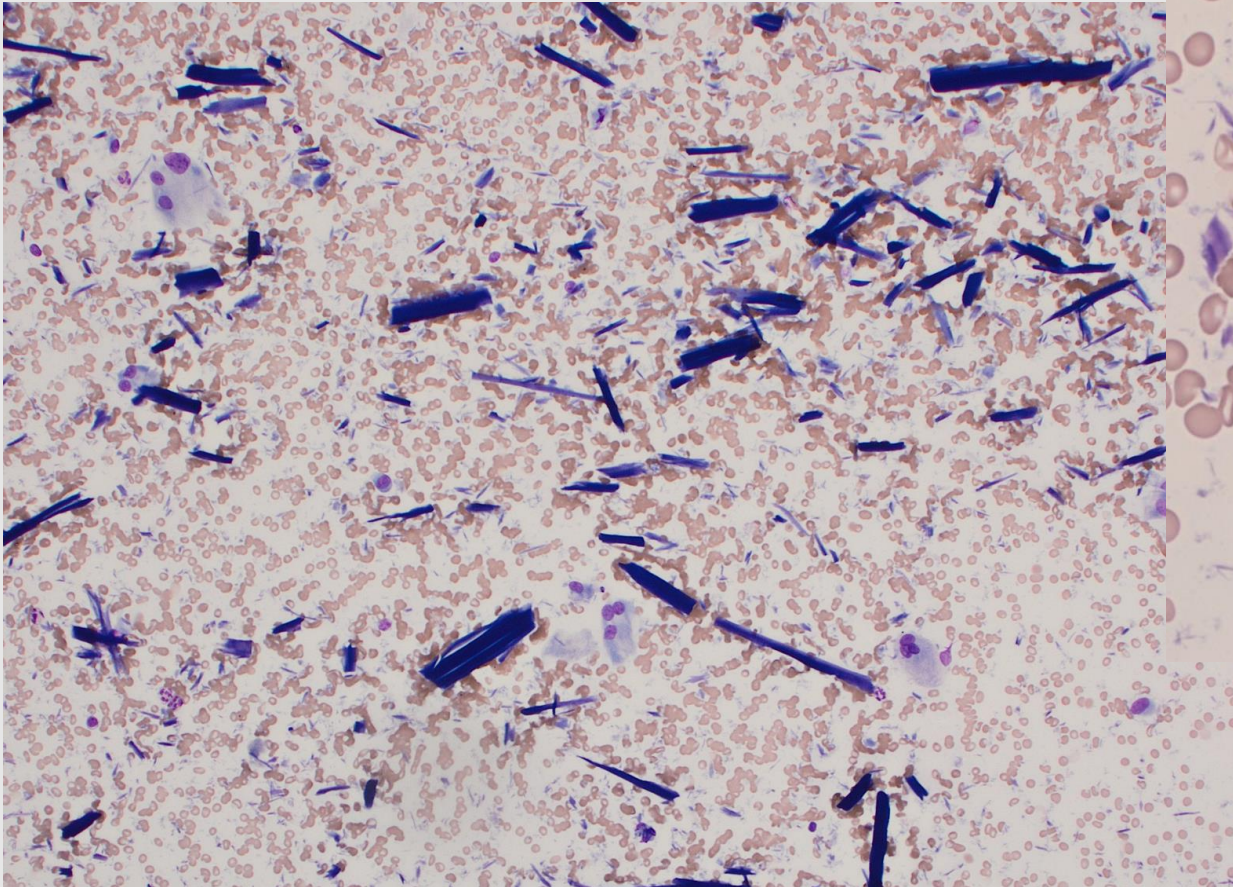
Clinical information

- Female 72 years old
- Previous right lower lobe lung excision for T2N0 adenocarcinoma
- EGFR mutation L858R
- Pulmonary angiogram 3 months post-surgery showed a moderate large right sided effusion and subcarinal lymphadenopathy that was not present on the preoperative imaging.
- Booked for Endoscopic Ultrasound (EUS) to check for recurrence with intention for treatment with Osimertinib if disease recurrence detected.

Endoscopic ultrasound (EUS)

- Sampling of station 7

Rapid on-site evaluation slides





ROSE thoughts..

- Not recurrence, but is it representative?
- Are they in the node? no evidence of node sampling
- Are these amylase crystals? If so, why would they be there?
- Giant cells?.. Some kind of inflammatory response?

ROSE thoughts.....

- Is it representative? Are they in the node? no evidence of node sampling.

Communications with clinician performing procedure – He confirmed that he was in station 7.

Performed a repeat pass to see if the same content was present.

2nd pass contained similar material and regarded as representative sampling

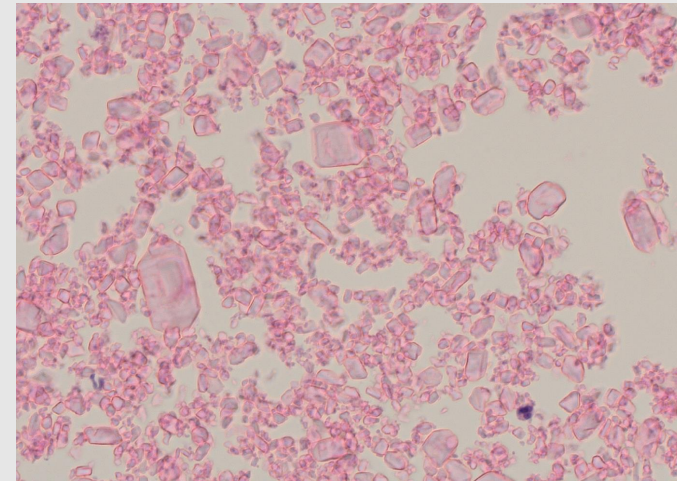
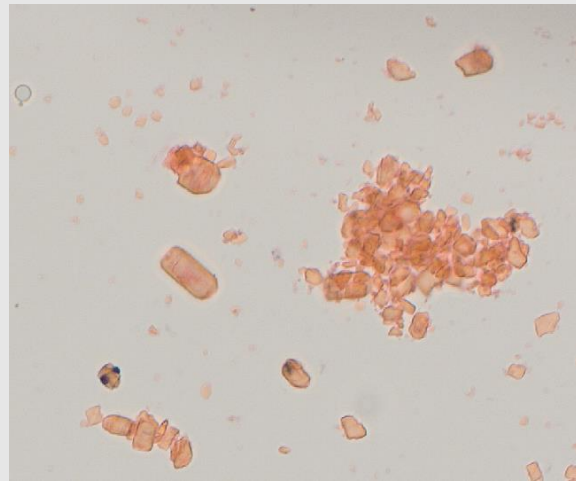
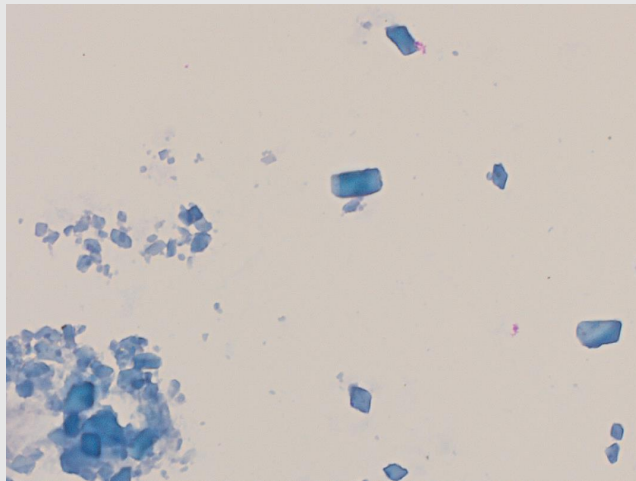
ROSE thoughts.....

Are these amylase crystals? Why would they be there?

Aliquot sent for biochemical analysis for crystalloids base on ROSE impression

Amylase crystalloids can be seen more often in FNAs of benign lesions in the salivary glands such as sialadenitis

- Non-birefringent
- Rectangular, rod-shaped, rhomboid crystals with parallel sides
- Stain blue in Romanowsky, Orange in PAP and Pink on H&E



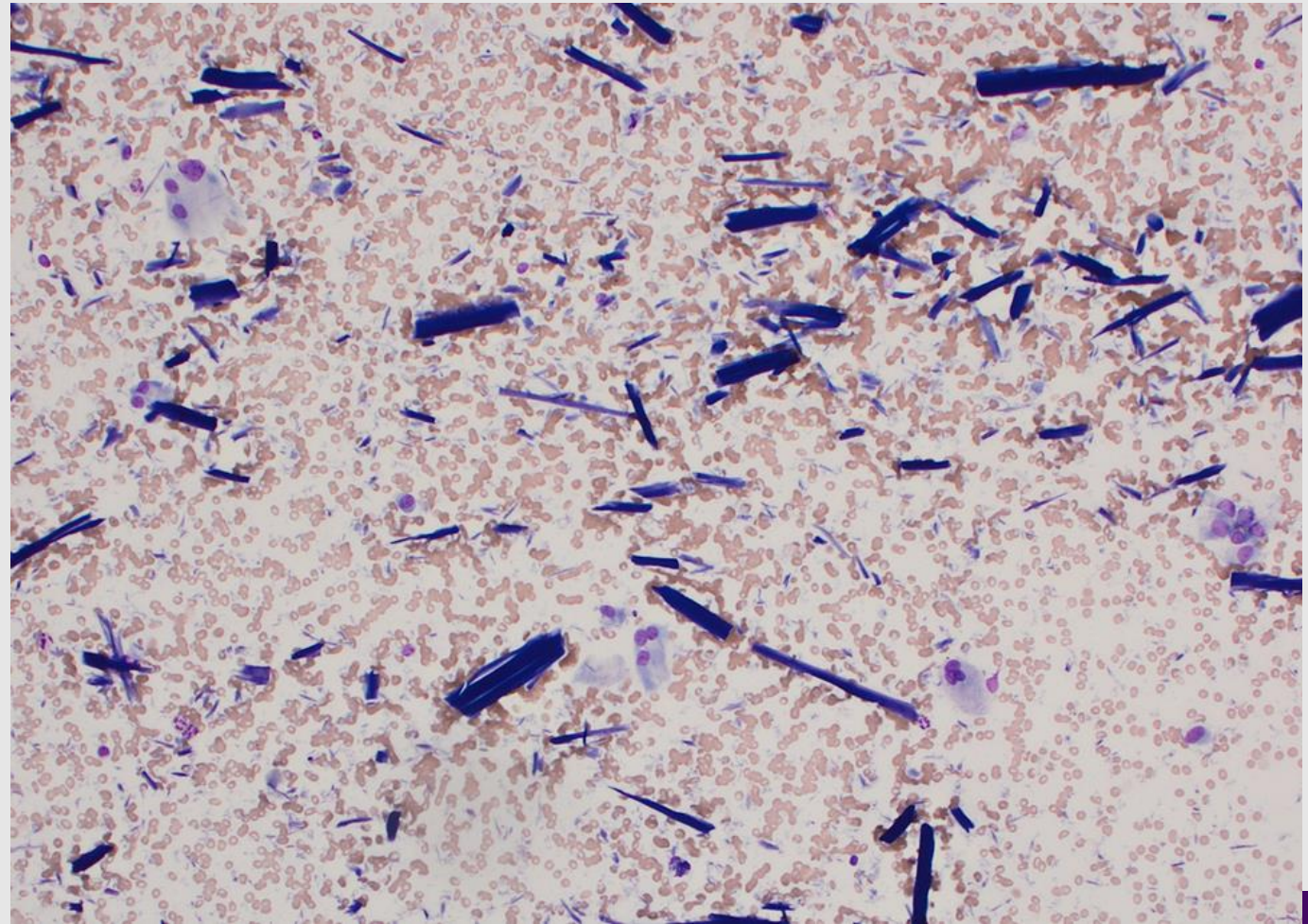
ROSE thoughts.....

Are these amylase crystals?

Amylase in salivary gland

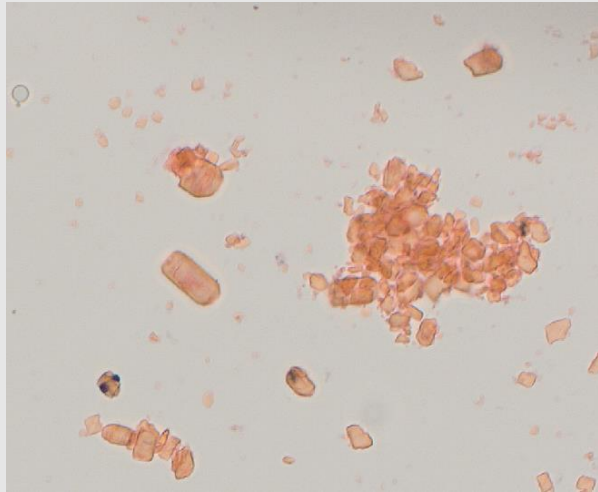


EUS sample

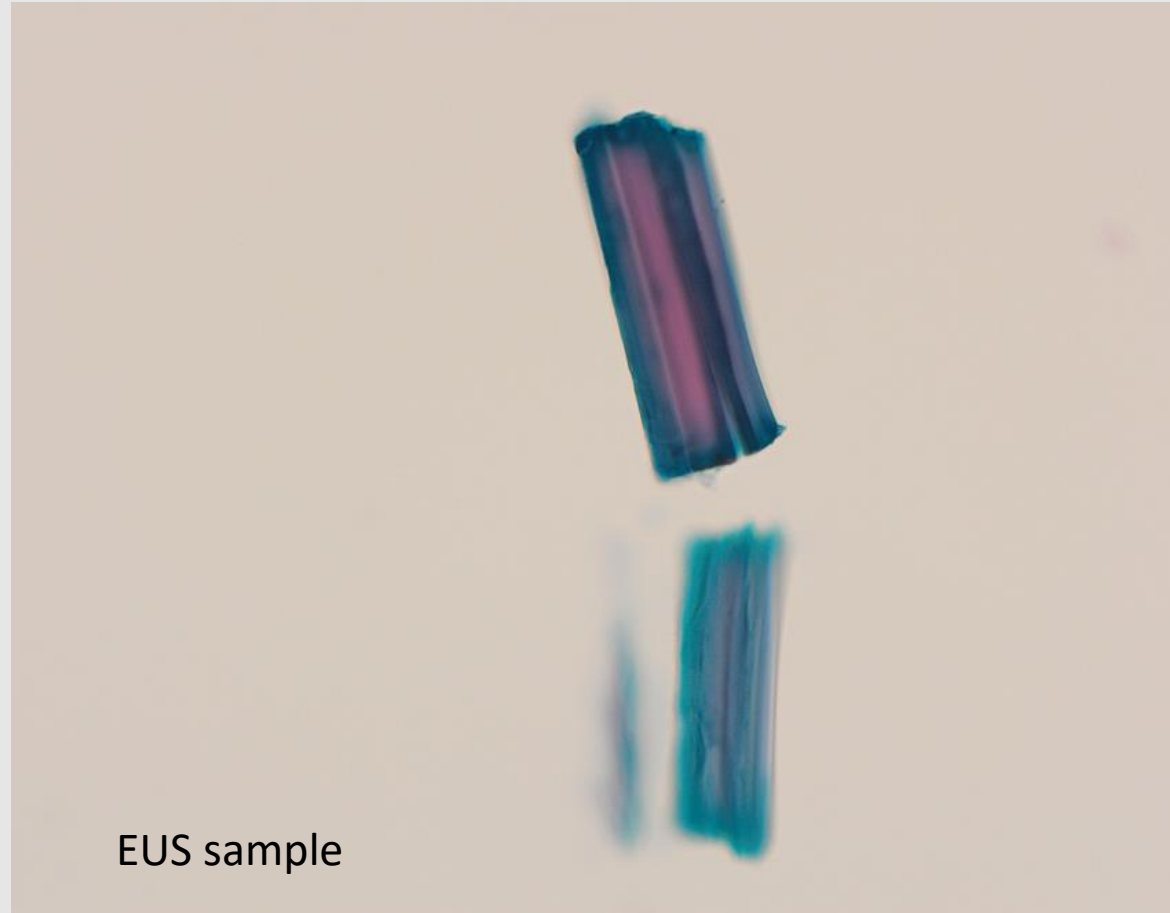


PAP

Are these amylase crystals?



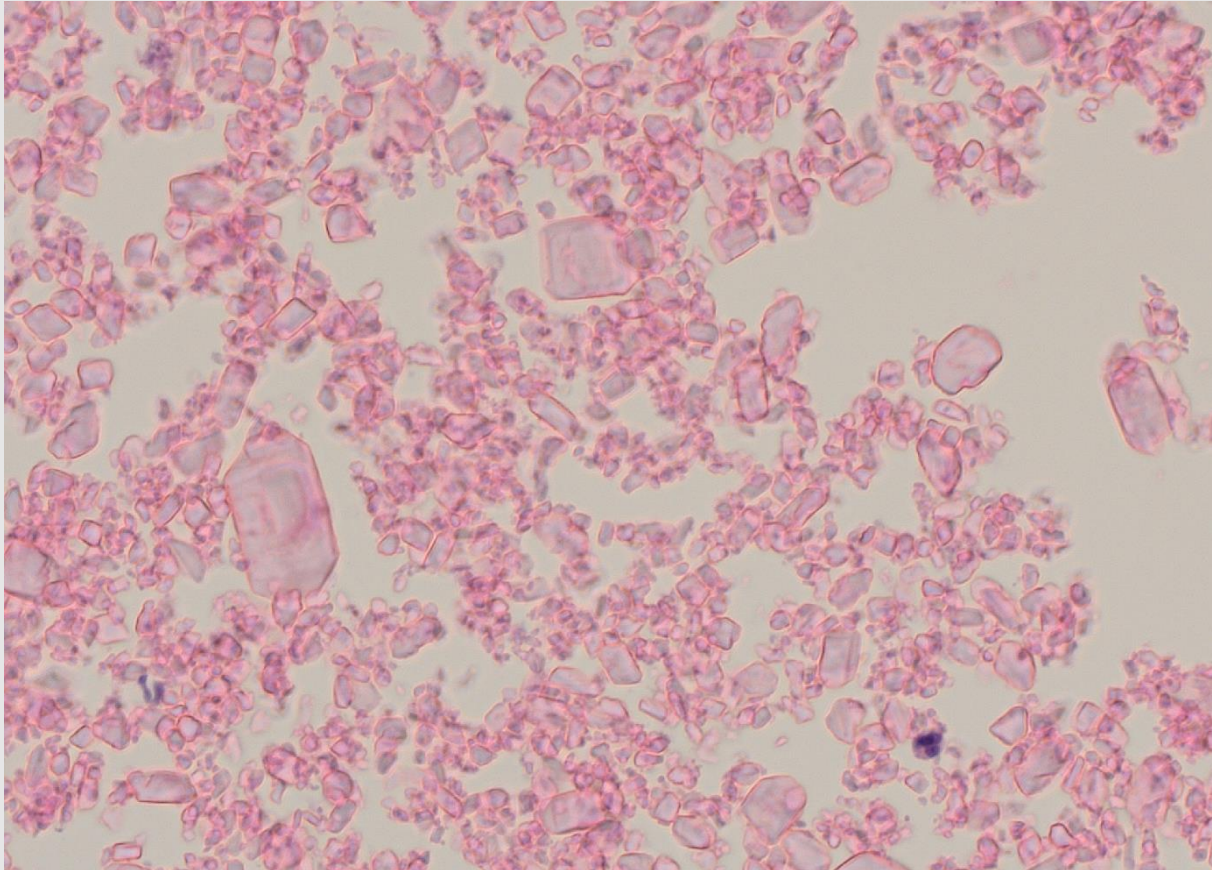
Amylase in salivary gland



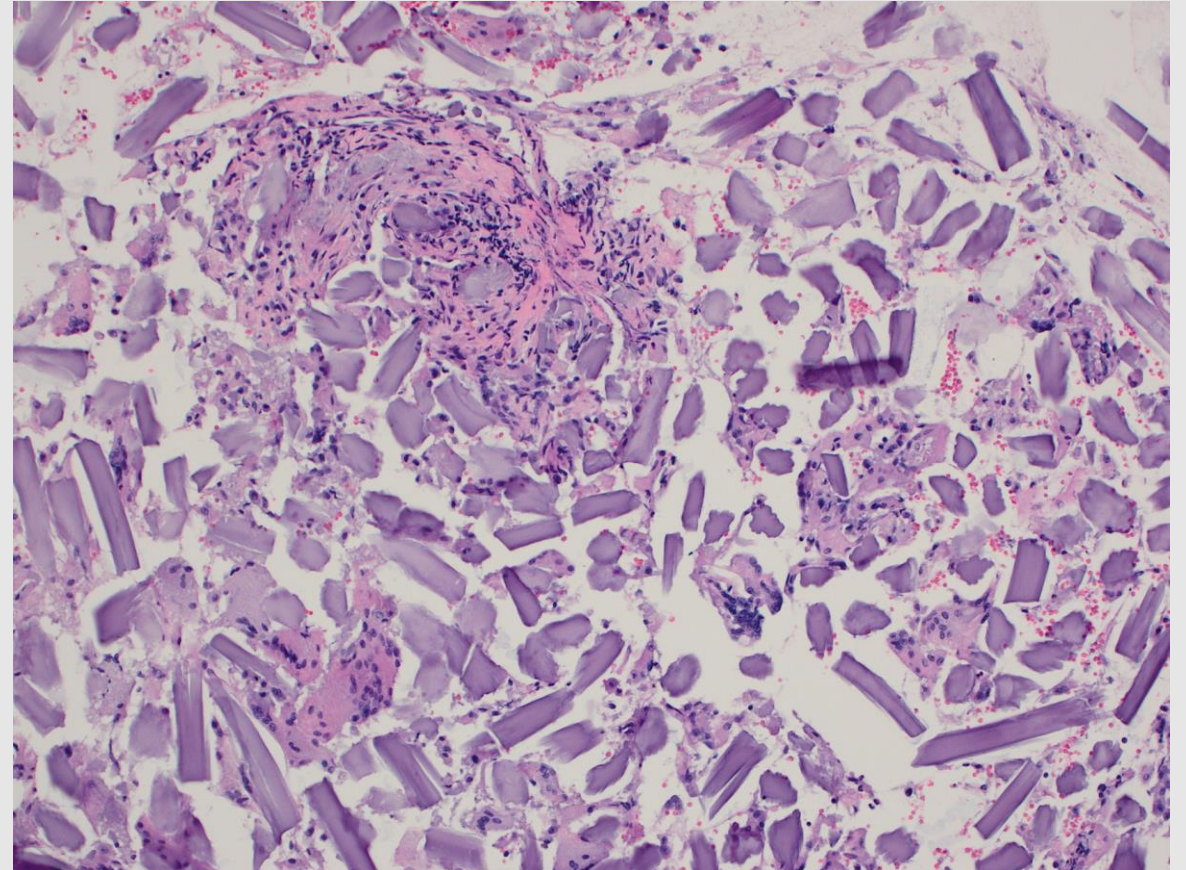
EUS sample

Cell block H&E

Are these amylase crystals?



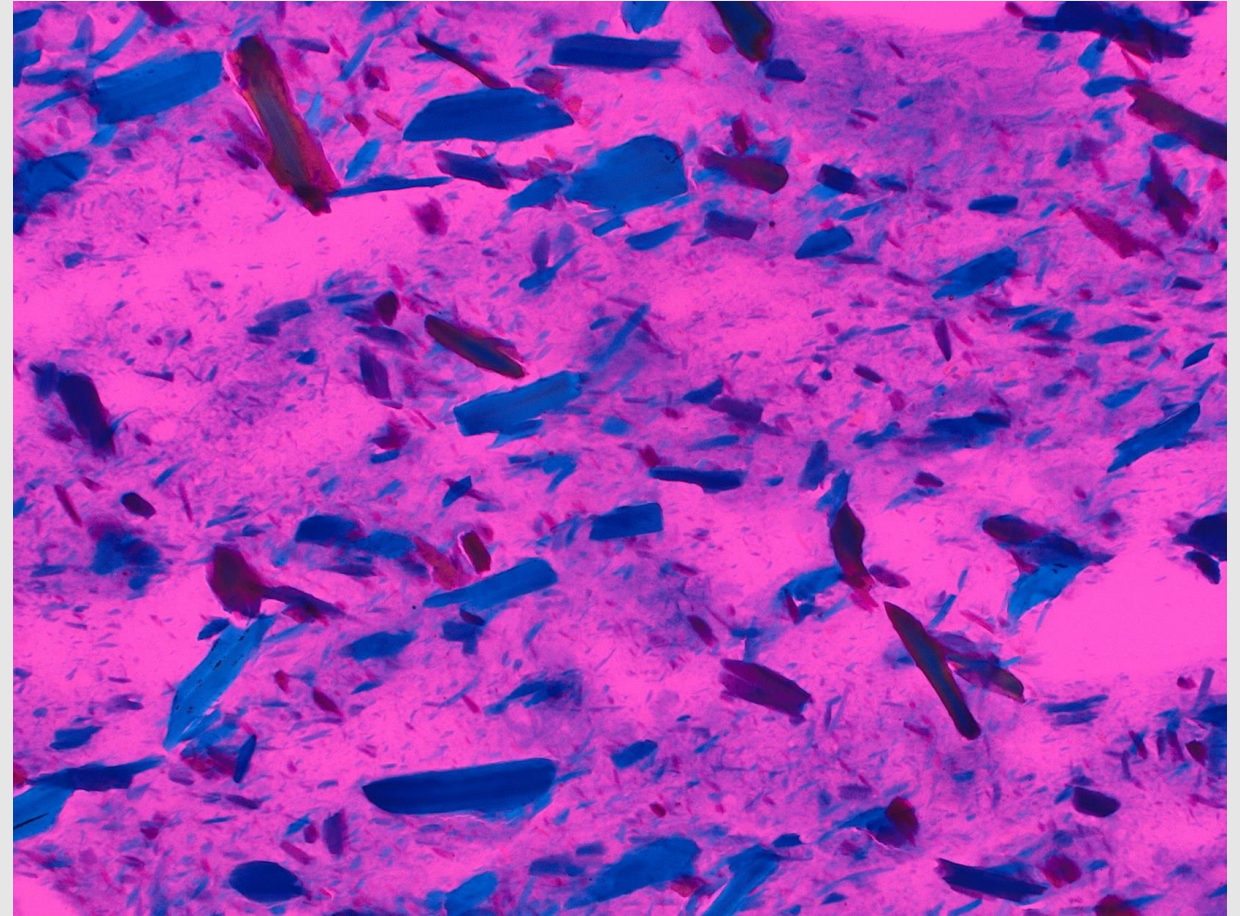
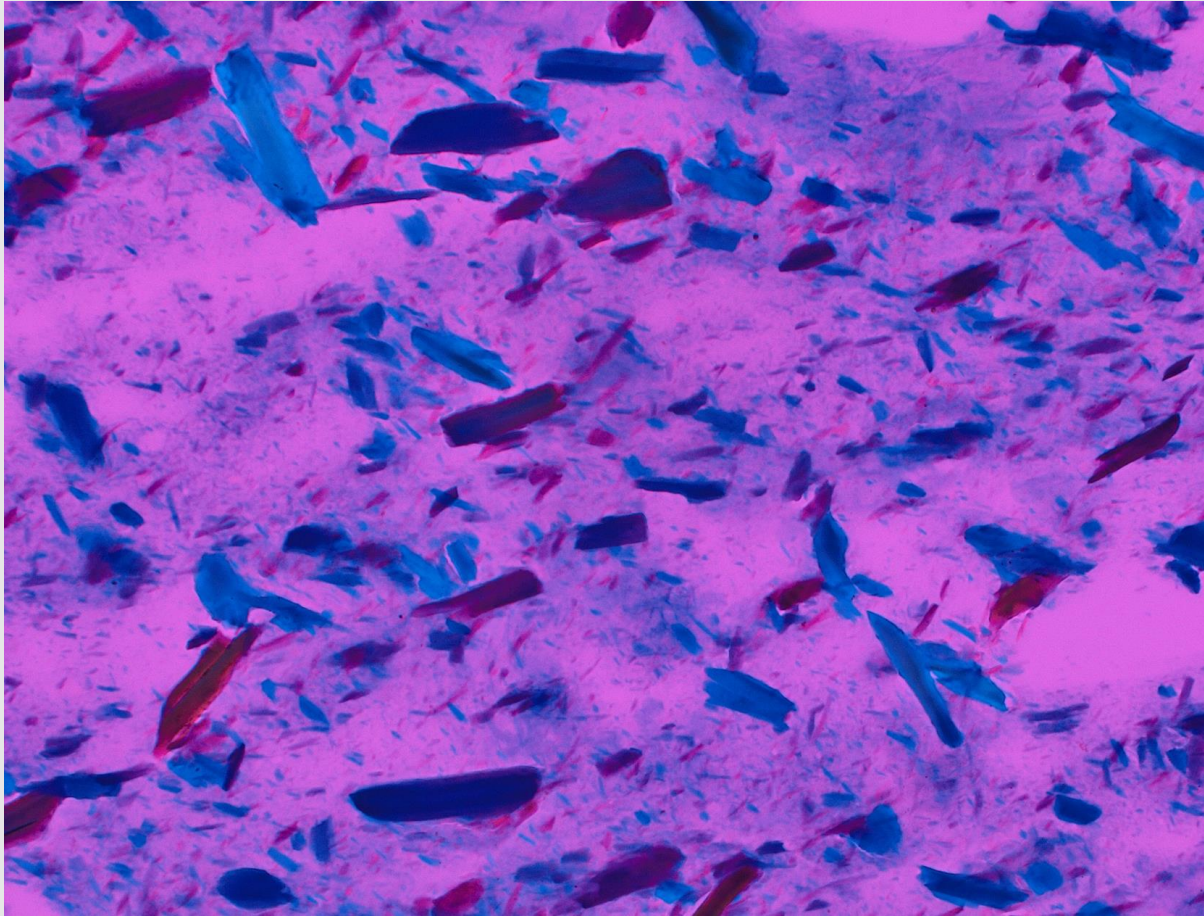
Amylase in salivary gland



EUS sample

Birefringence

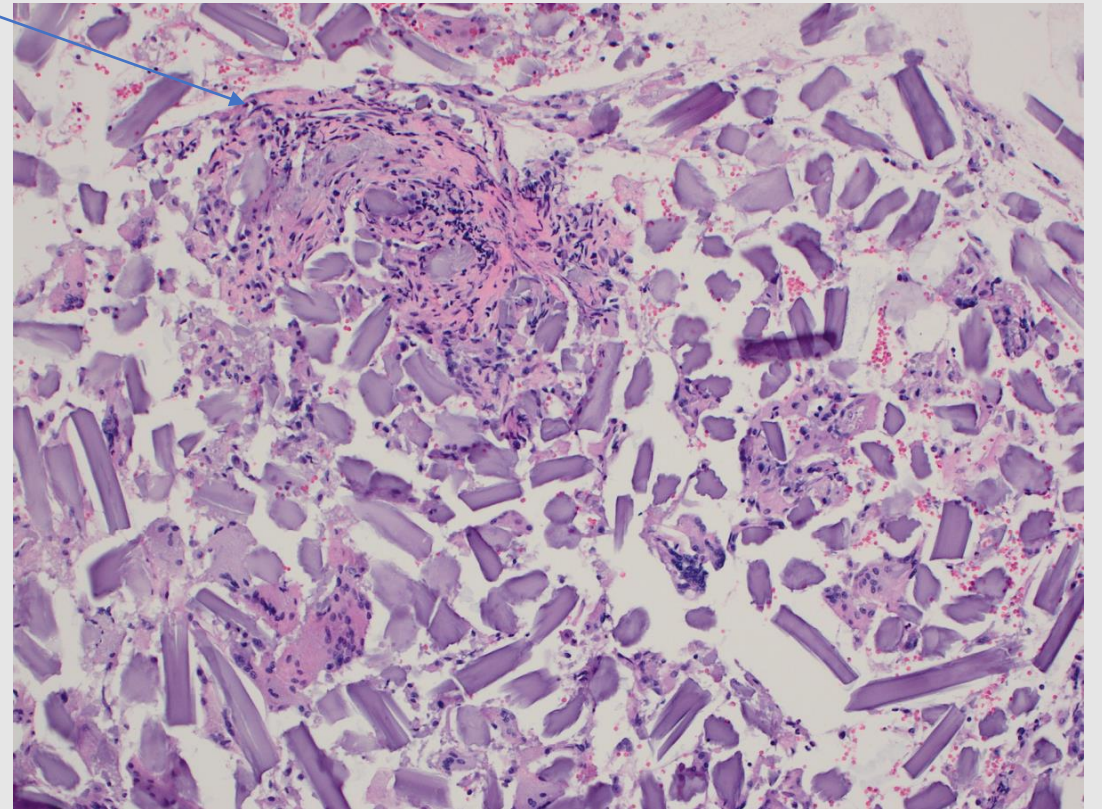
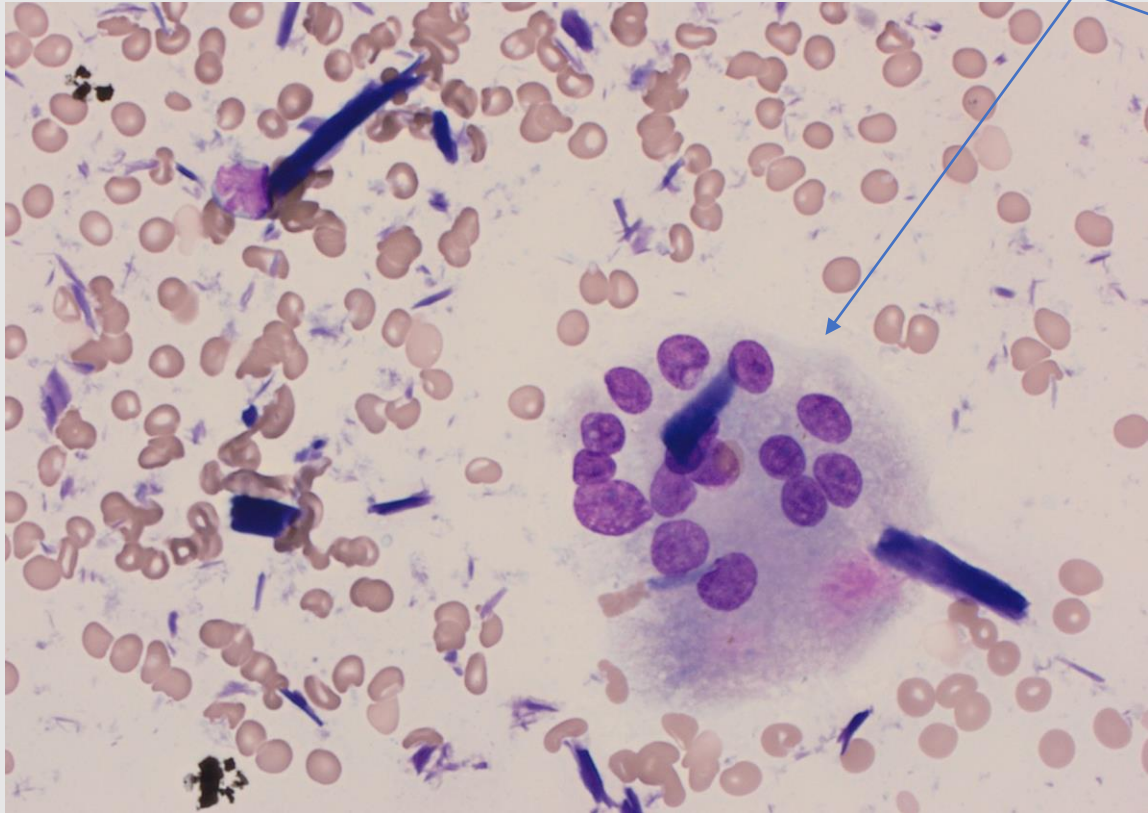
EUS sample shows birefringence. Amylase does not birefringe



Morphologically these are not amylase crystals
Biochemistry amylase was also low (10 ui/L)

But what about the Giant cells?

Florid giant cell reaction



Could this be a foreign body – type giant cell reaction?

Summary

- The important thing to note is this is not recurrence
- BAC experts were consulted to see if they had seen anything like this before – Consensus was foreign body reaction and surgical sutures
- Discussed at MDT - was station 7 near the surgical sutures? MDT confirmed it was.
- Conclusion : Most likely foreign body-type giant cell immune response to surgical sutures – Post operative suture granuloma.
- Reported infrequently in the literature – Suture granuloma being a late risk complication in 2% of thyroidectomies but can occur anywhere in the body. Present as a mass clinically mistaken for recurrence [3]

References

- Bayrak BY, Vural Ç, Paksoy N. Amylase crystalloids in fine needle aspiration cytology of parotid gland: A diagnostic challenge. Cytojournal. 2015 Jun 23;12:12. doi: 10.4103/1742-6413.159233. PMID: 26170893; PMCID: PMC4485357.
- Amylase crystalloids case report - <https://www.mdpub.net/fulltext/172-1548243195.pdf>
- Post thyroidectomy suture granuloma: A cytological diagnosis [https://www.jcdr.net/articles/PDF/2890/27-%205366 PF1\(M\) E\(C\) F\(T\) PF1\(M\) PF1\(T\) FA\(T\) PF1\(PP\) u\(PP\) %20PF2\(PR\).pdf](https://www.jcdr.net/articles/PDF/2890/27-%205366%20PF1(M)%20E(C)%20F(T)%20PF1(M)%20PF1(T)%20FA(T)%20PF1(PP)%20u(PP)%20PF2(PR).pdf)