

Mediastinal Mystery- unravelled at Station 7 EBUS

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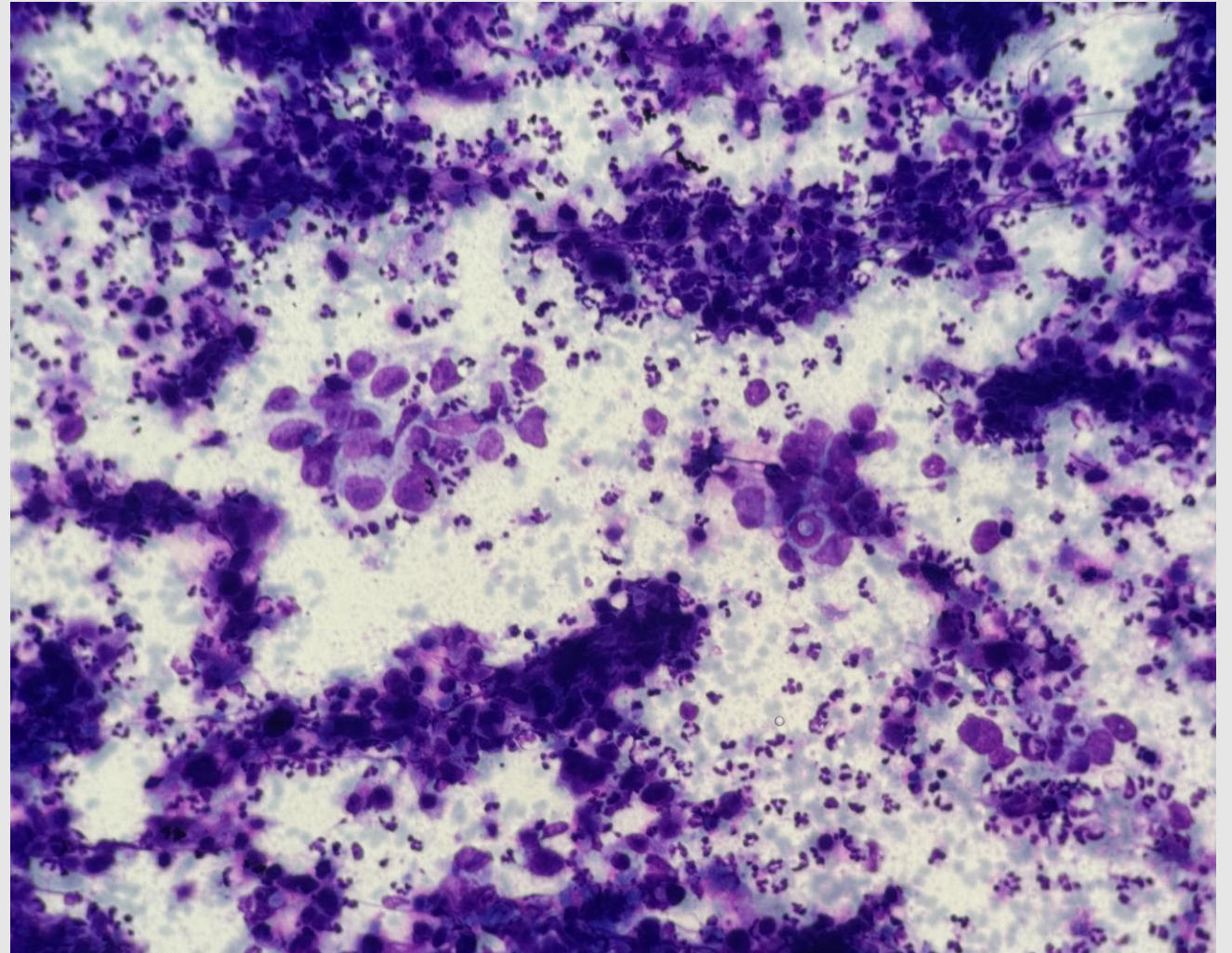
Station 7

- 23yo male who presented with cough, SOB and weight loss of 7kg.
- At EBUS ROSE, clinical details provided were:
- Pulmonary masses in the left upper lobe and right lower lobe
- Multiple abnormal enlarged mediastinal and hilar lymph nodes with probable central necrosis.
- Appearances are favoured to represent **pulmonary lymphoma**.
- Station 7 sampled

ROSE Assessment

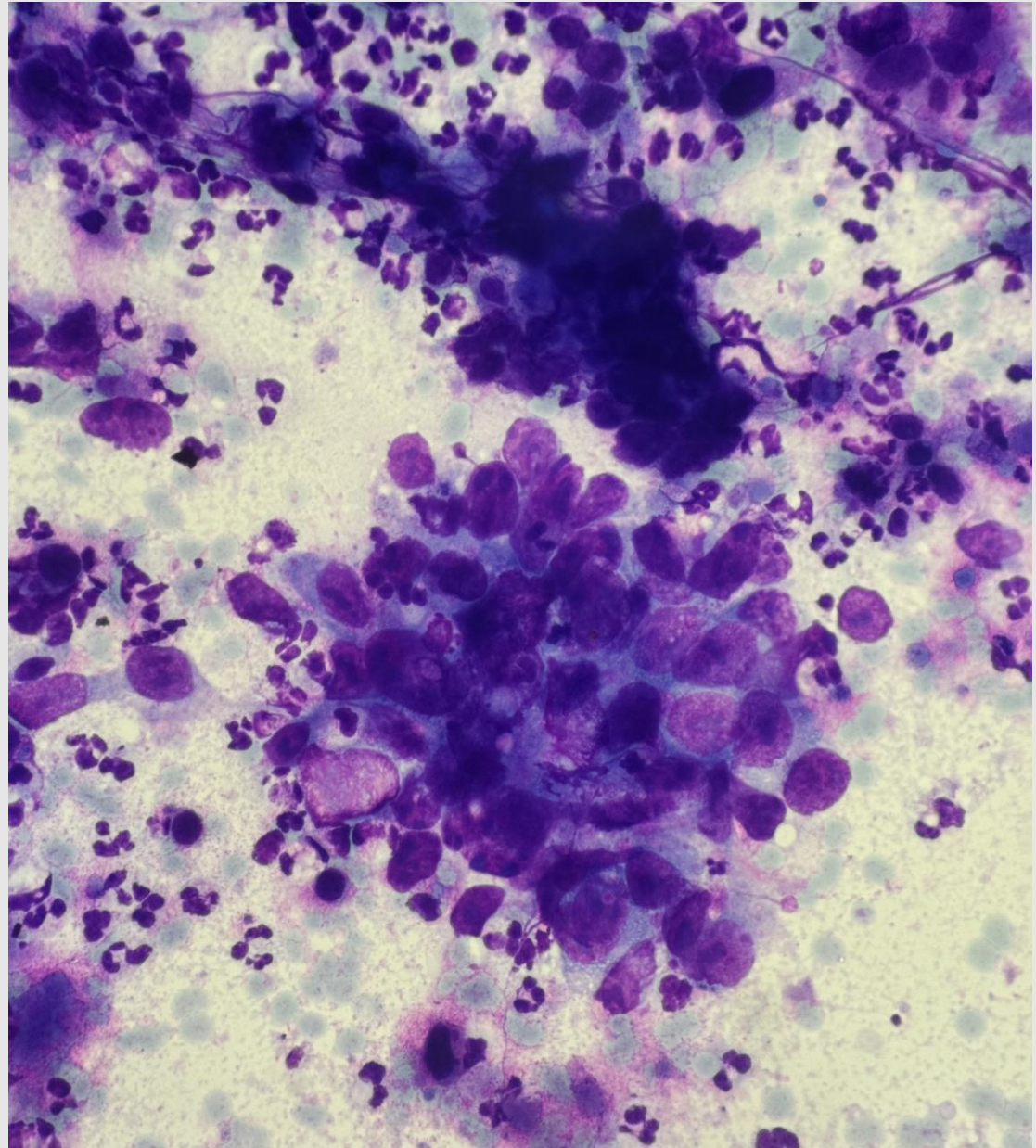
At lower power (x 20) –
Cellular direct samples

- Cohesive groups of malignant epithelioid cells
- Background of neutrophils



ROSE Assessment

- Malignant epithelioid cells - arranged in three dimensional groups with minimal cytoplasm and large irregular nuclei showing multiple prominent nucleoli (x 40)

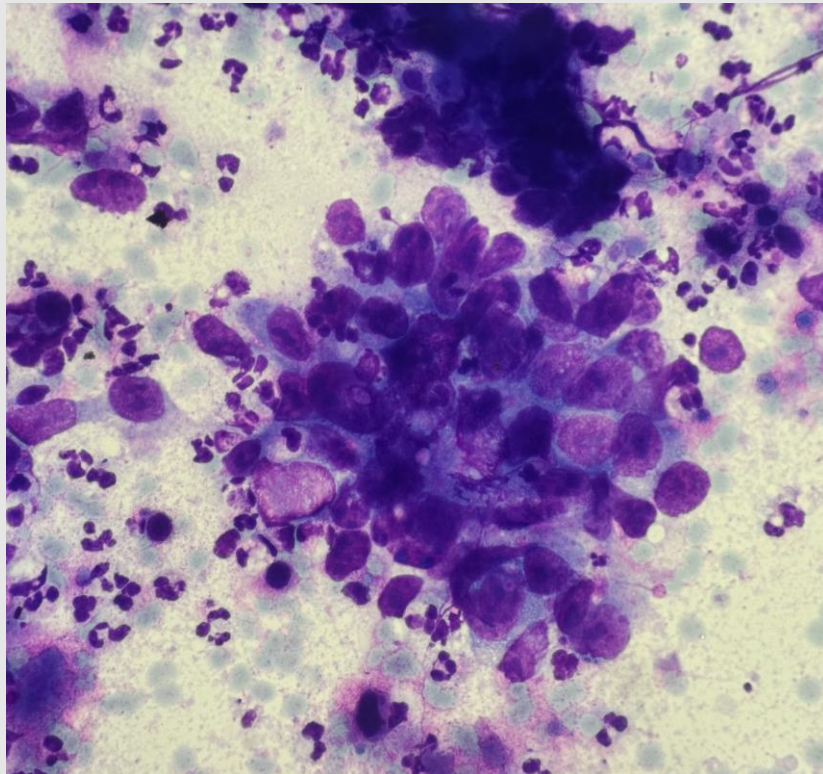


ROSE Thoughts

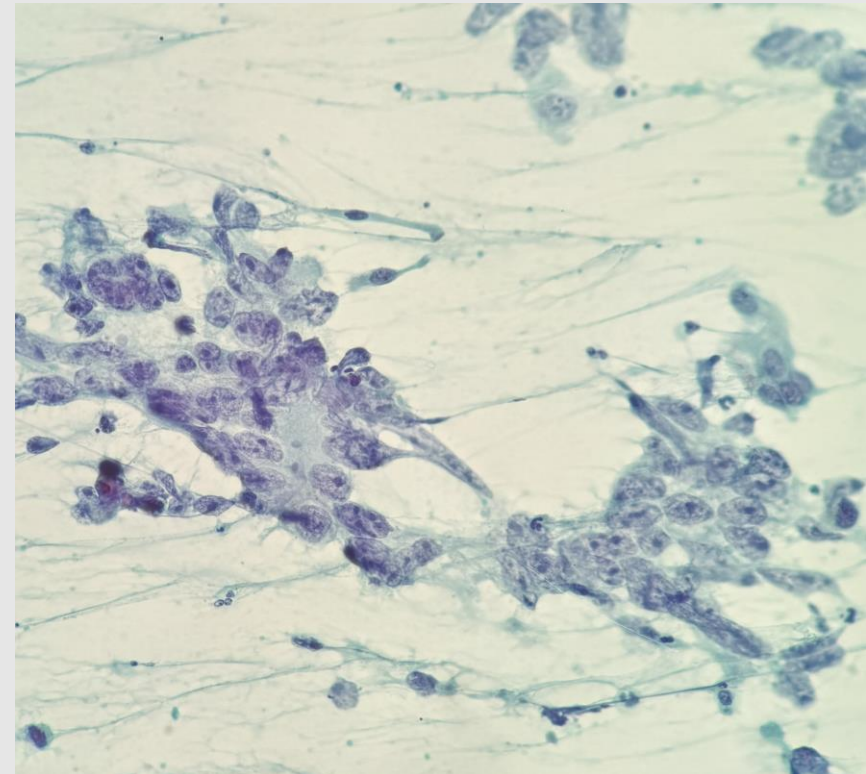
- Initial suspicion from clinicians is lymphoma, however these cells are too cohesive and look epithelial in nature.
- Feedback findings to clinicians and was told that CT Thorax revealed multiple enlarged mediastinal, hilar and retroperitoneal LN and pulmonary masses left upper lobe and right lower lobe.
- Triaged further passes into formalin for Cell block and ancillary testing.

Direct slides – Comparison

Romanowsky Stain x 40

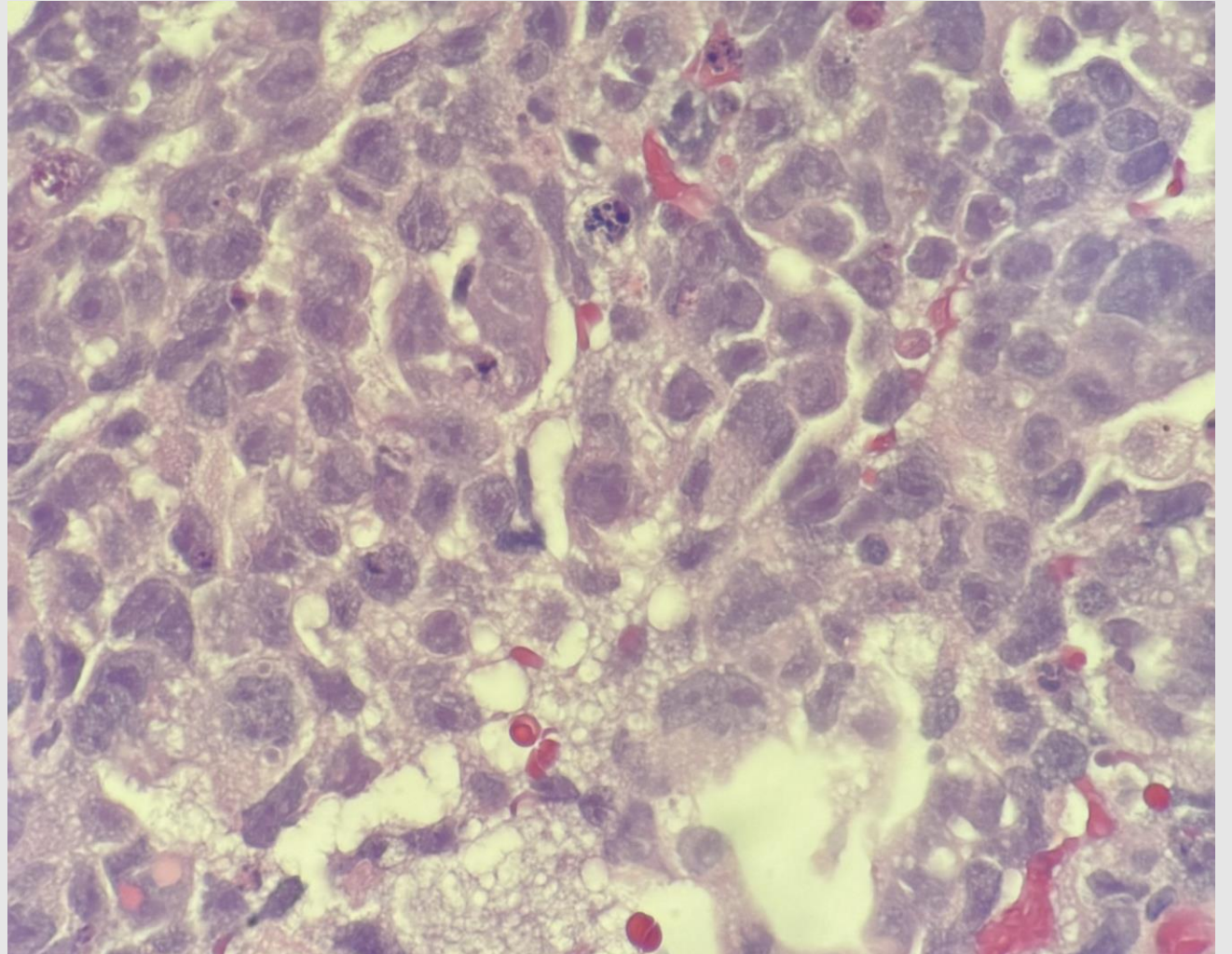


PAP stain x 40

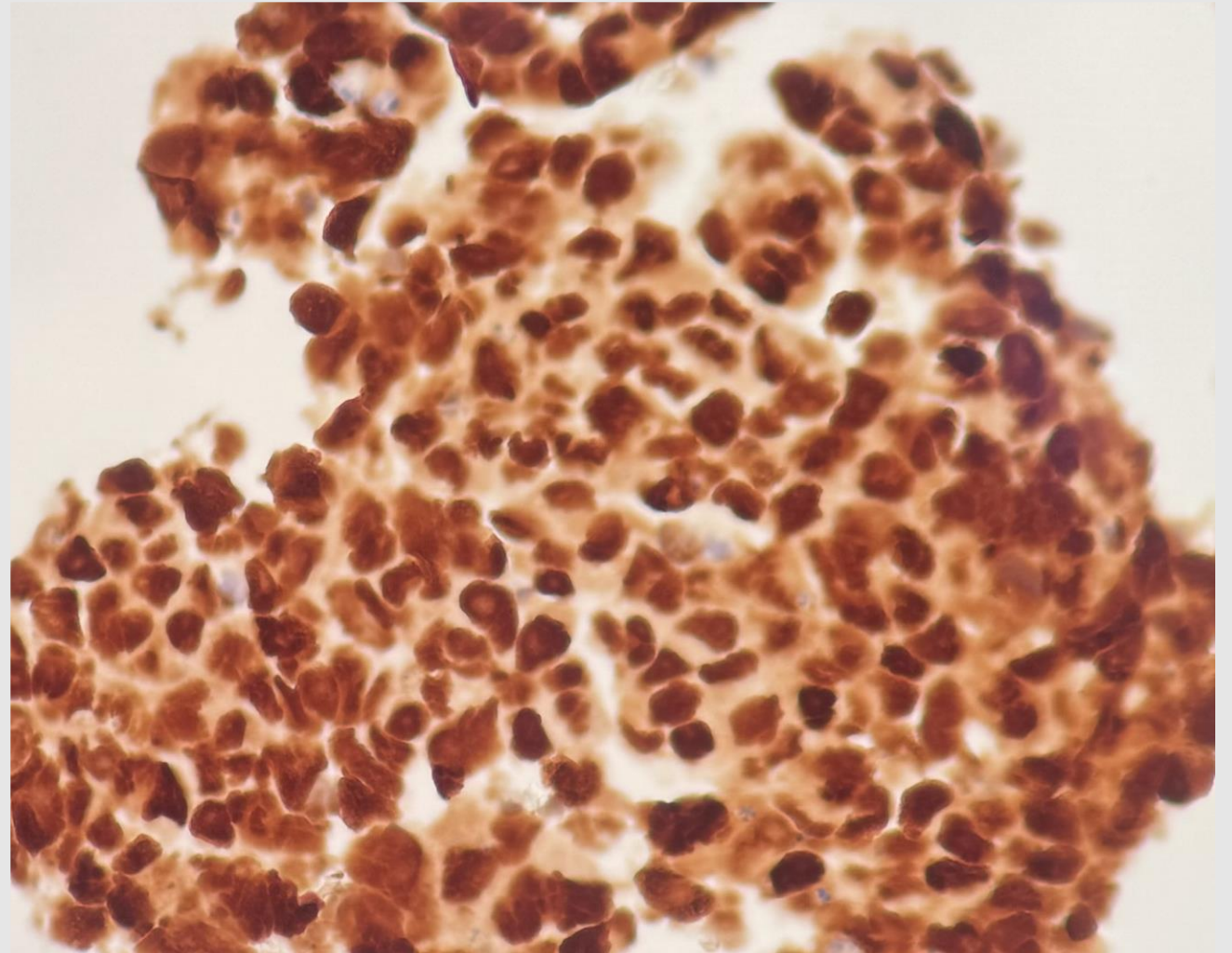


Cell Block

Similar cohort of
malignant cells on
the H&E section
from the cell
block x 40

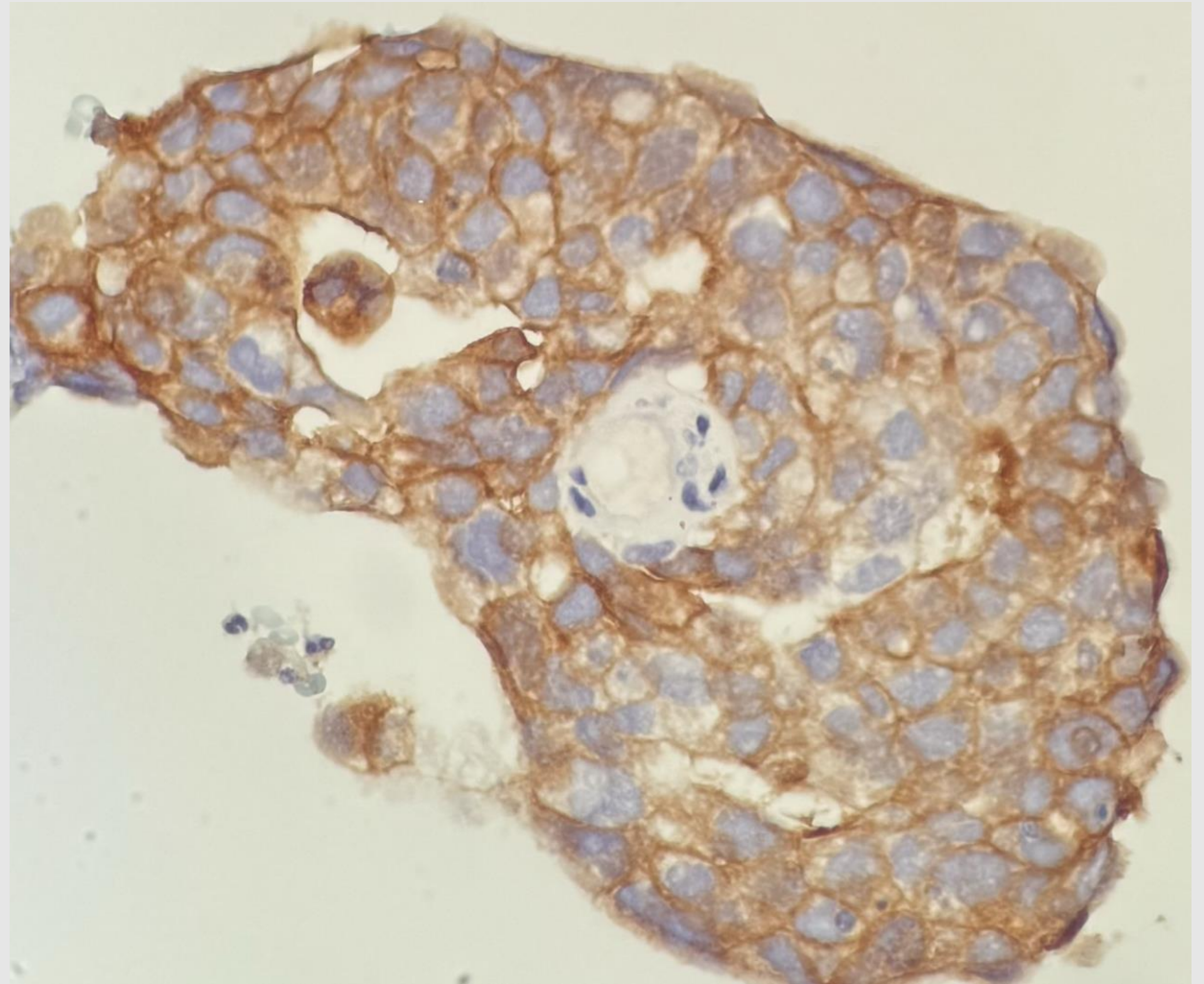


Positive
Immunocytochemistry
OCT $\frac{3}{4}$ - **Positive**
- Positive in
embryonic stem
cells and germ cells.



Positive
Immunocytochemistry
CD30 **positive**

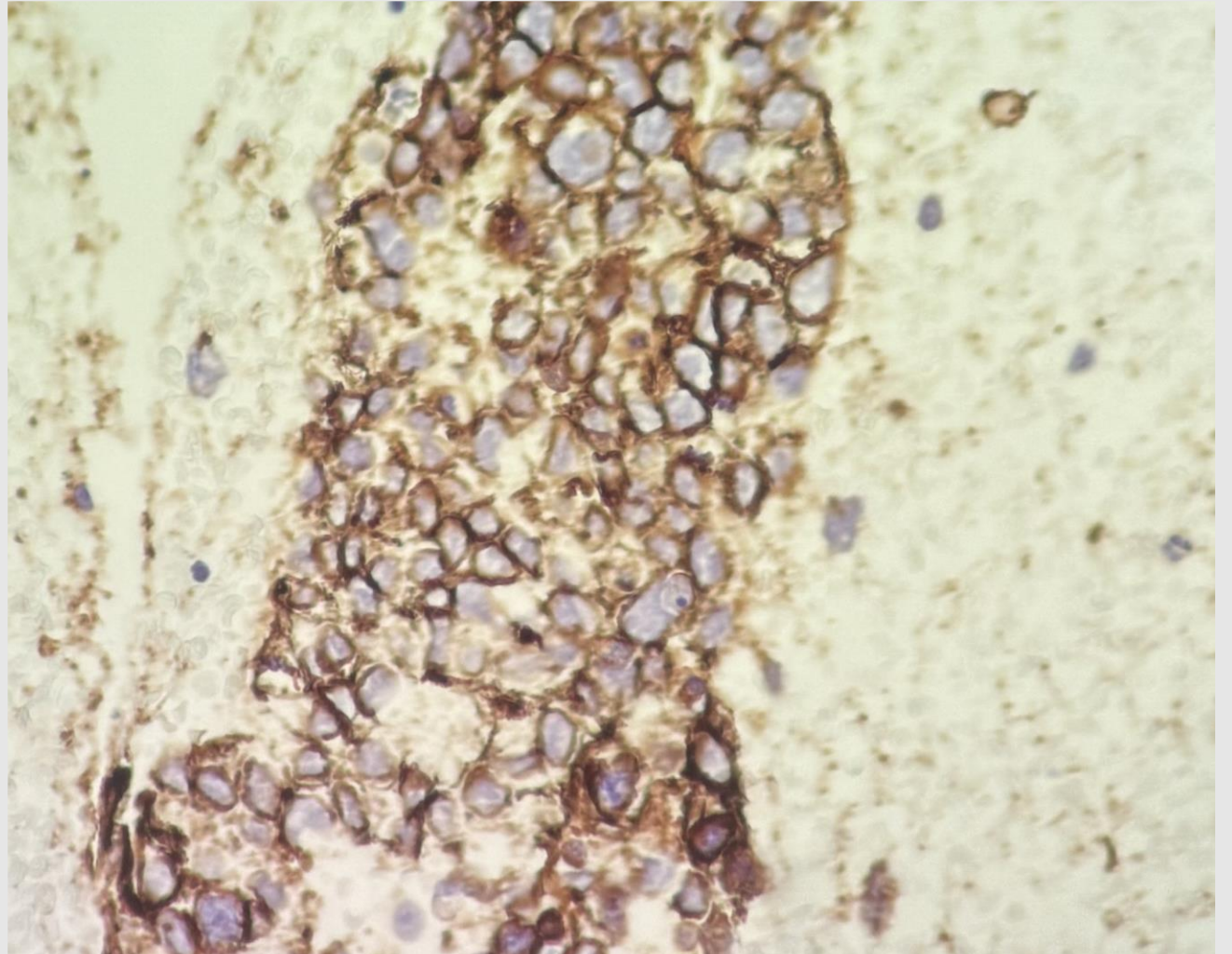
**Positivity for
CD30** supports a
diagnosis of embryonal
carcinoma within a germ
cell tumor.



Positive Immunocytochemistry

BerEP4 – **membranous
positivity**

- Ber-EP4 can sometimes be positive in embryonal carcinomas (which have epithelial features).



Negative Immunocytochemistry

- Alpha-feto protein
- Beta HCG
- EMA
- CK7
- TTF-1
- CD45
- CD20
- CD3 are negative in tumour cells.

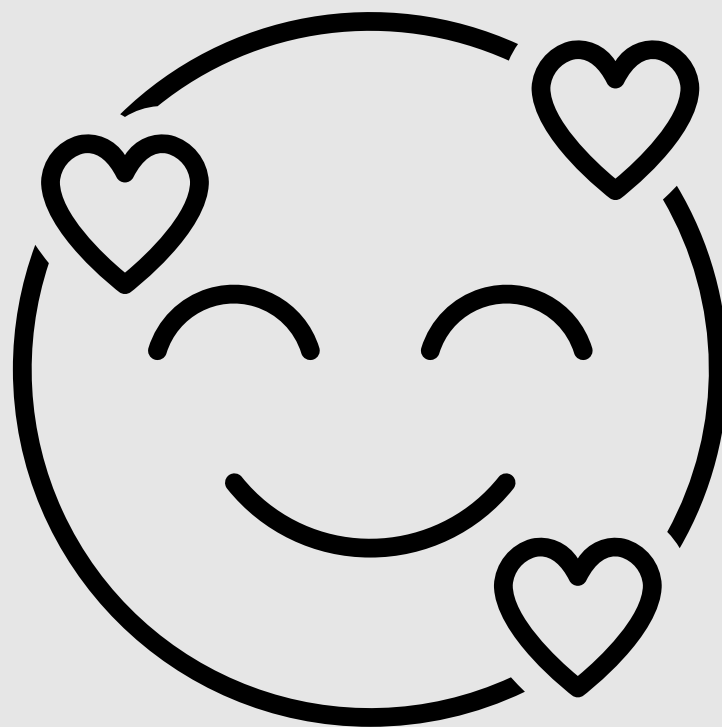
Conclusion

- EBUS of station 7 reported as metastatic embryonal carcinoma.
- Urgent referral to Urology MDT
- Blood serum showed his alpha-fetoprotein is 82, hCG 506, LDH 1676 in his blood (elevated)
- His PET-CT showed large lung metastasis and asymmetrical tracer uptake in the testes suggesting that the right testis may be the site of disease.
- Patient ordered to have ultrasound of testis which confirmed right sided abnormality. Discussed at MDT and with patient to have orchidectomy following chemotherapy.

Thoughts.....

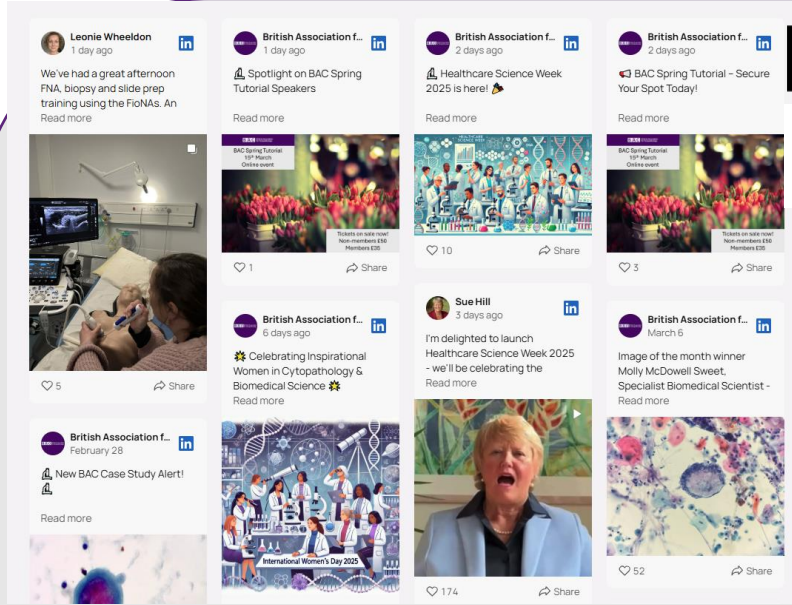
- Highlights the importance of communication between ROSE BMS and clinicians giving **real time feedback** to provide preliminary results which can be crucial for urgent clinical decision-making, especially in suspected malignancies.
- Initial impression by respiratory team is lymphoma, but material saved for cell block and ancillary testing and not used unnecessarily for flow cytometry.

ROSE BMSs do a GRAND job!!



References

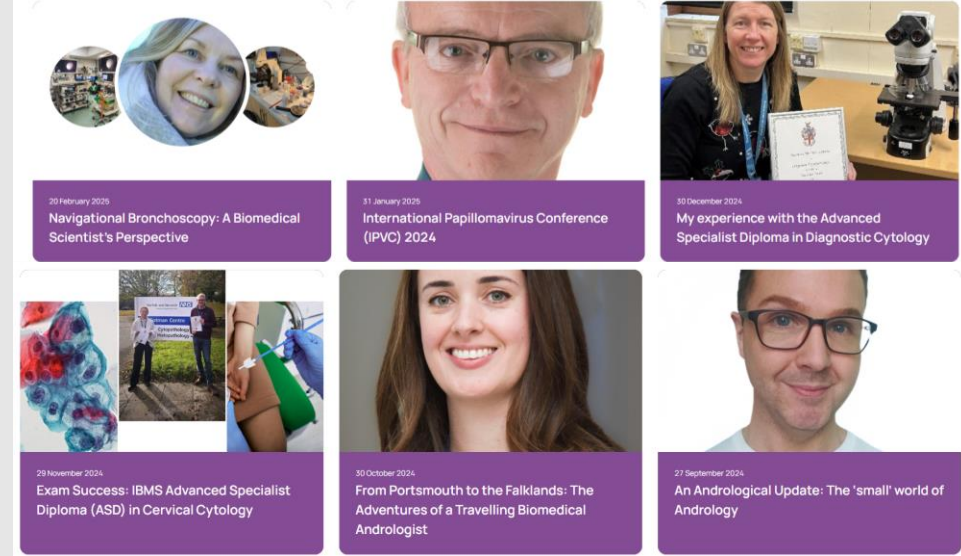
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Up & Coming Events

<div style="text-align: center;"> 30 July 2025 </div> <p>Members lunchtime slide club (July 2025) Time: 12:30 - 13:00 BAC Event</p> <p style="text-align: center; background-color: #4a4a8a; color: white; padding: 5px;">Read more</p>	<div style="text-align: center;"> 15 September 2025 </div> <p>Krankenhaus St. Elisabeth & St. Barbara Halle/Saale (Germany) 16th Annual EFCS Tutorial External Organiser</p>
<div style="text-align: center;"> 22 September 2025 </div> <p>22nd-25th September IBMS Congress 2025 BAC Event</p>	<div style="text-align: center;"> 05 November 2025 </div> <p>Bangkok, Thailand 14th Asia Pacific International Academy of Pathology Congress (AP-IAP 2025) External Organiser</p>

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SCAN

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25TH JUNE 2025

Members lunchtime slide club

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