Case 2:

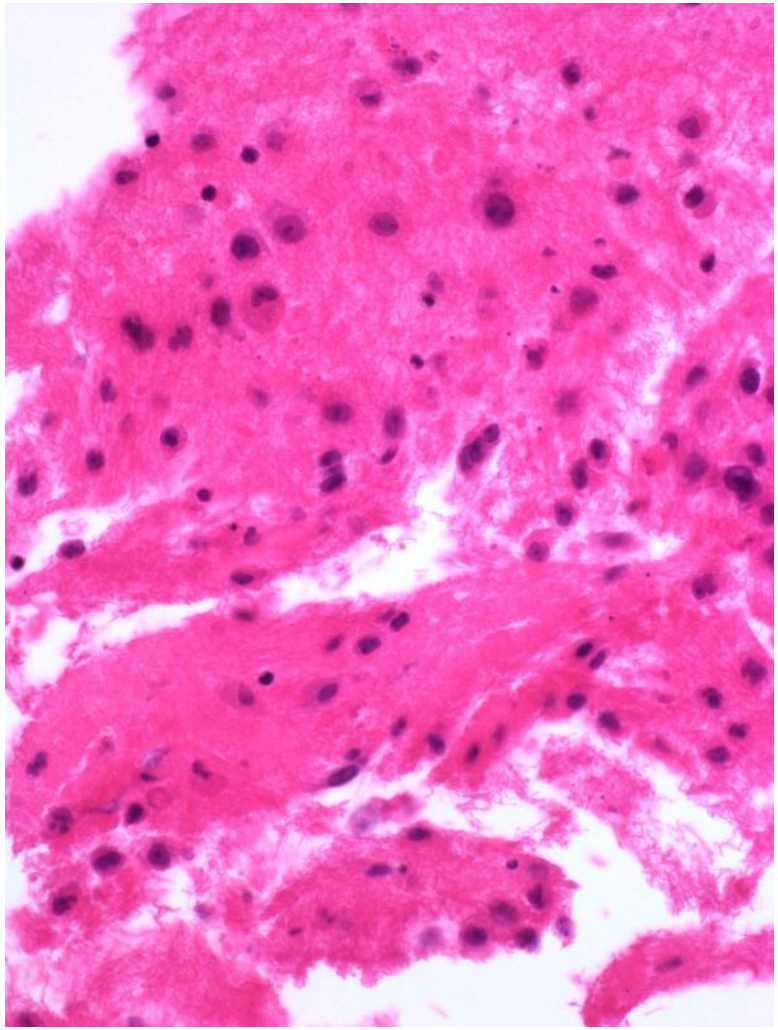
Diagnosis	
ALCL/ Suspicious for ALCL	22
Benign but exclude ALCL	2
Malignant NOS/ carcinoma	2
Benign	9
Other	3

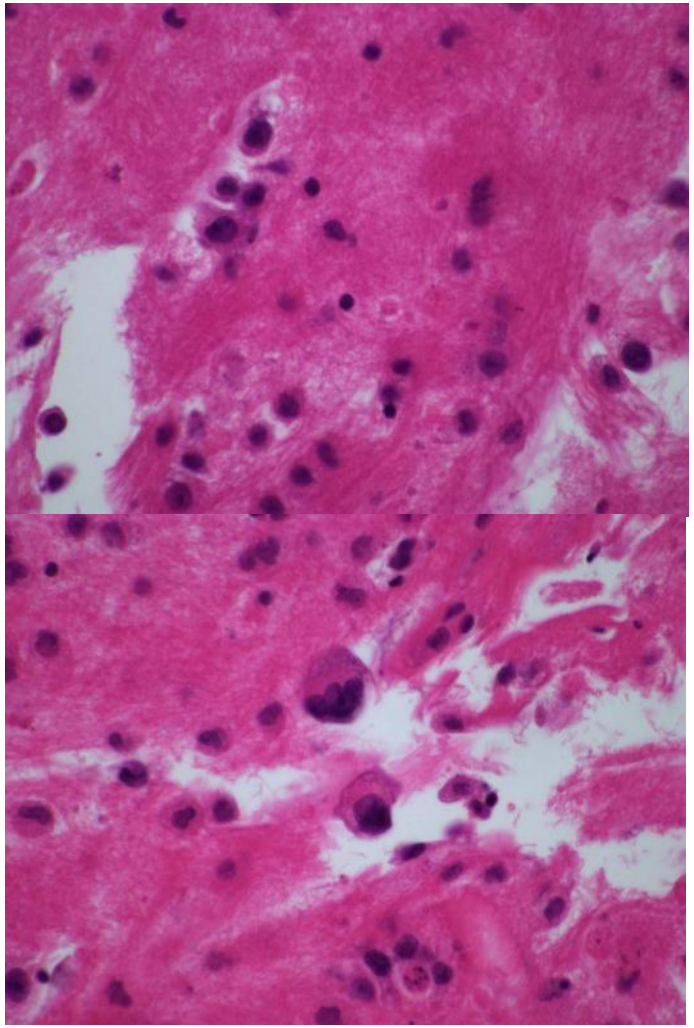
Case 2:

Clinical history:

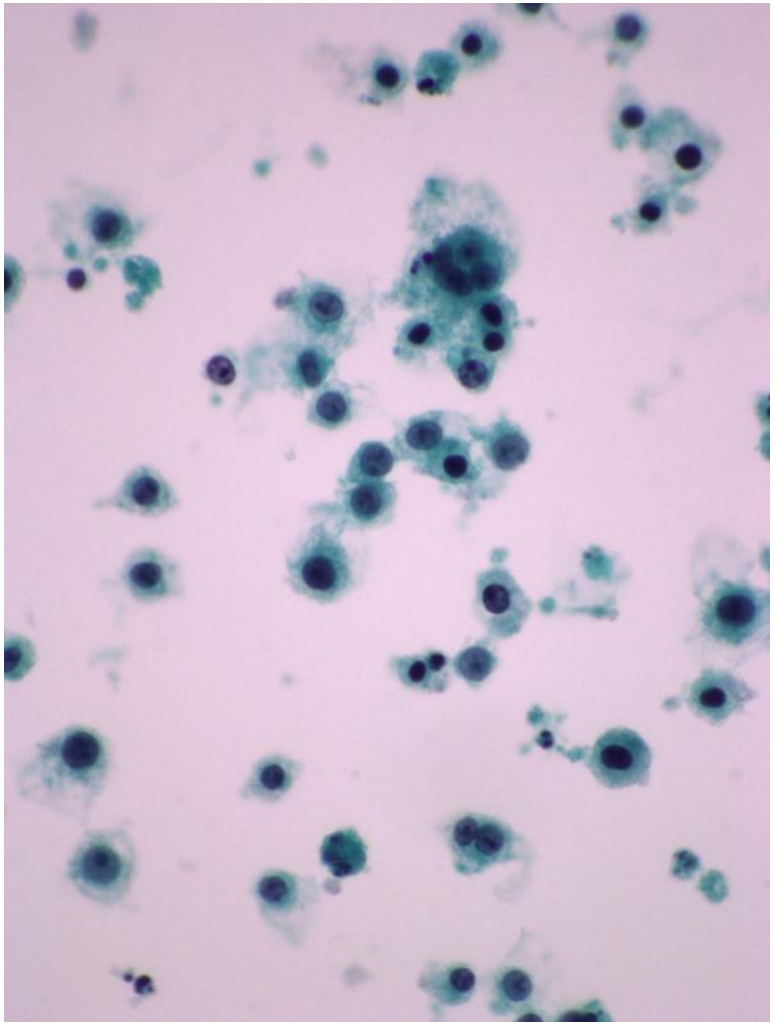
57 year old female with breast implants for 10 years. Large periprosthetic collection around ? burst implant. Exclude ALCL.

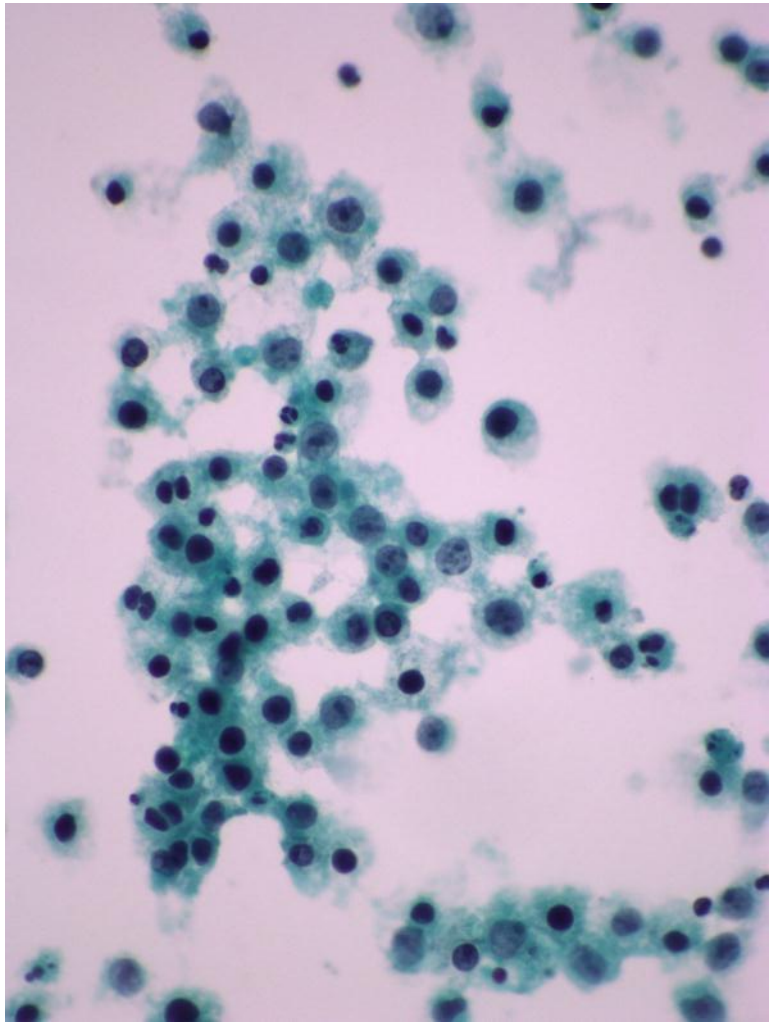
Breast seroma cytology



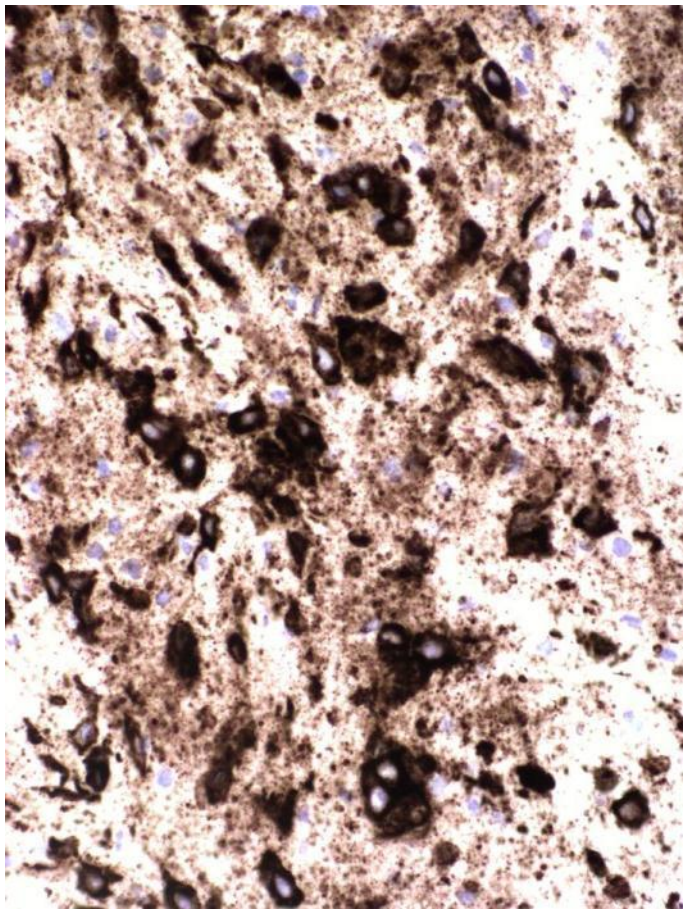


Breast seroma cytology

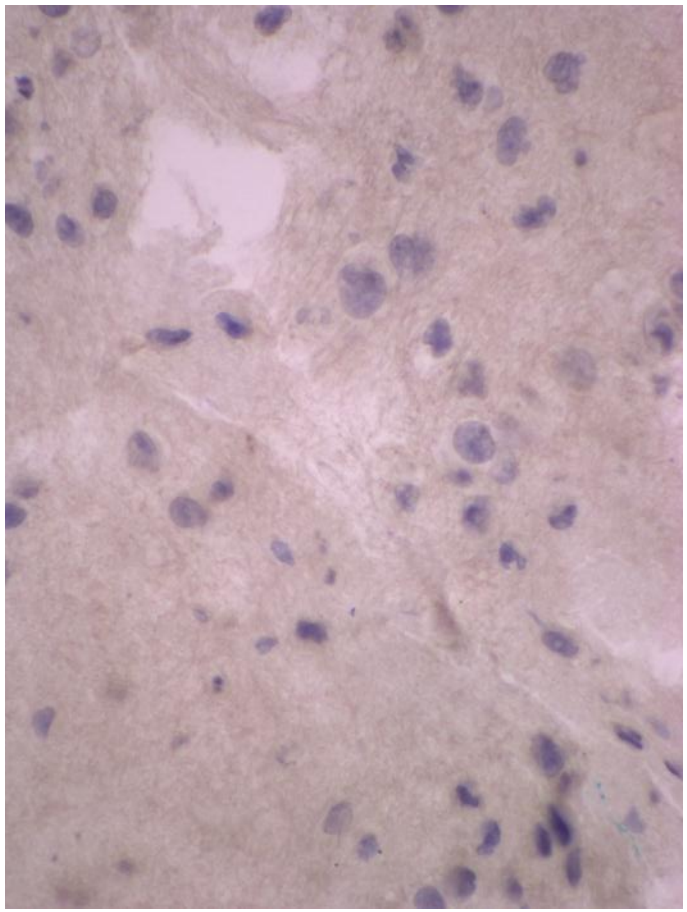




Breast seroma cytology

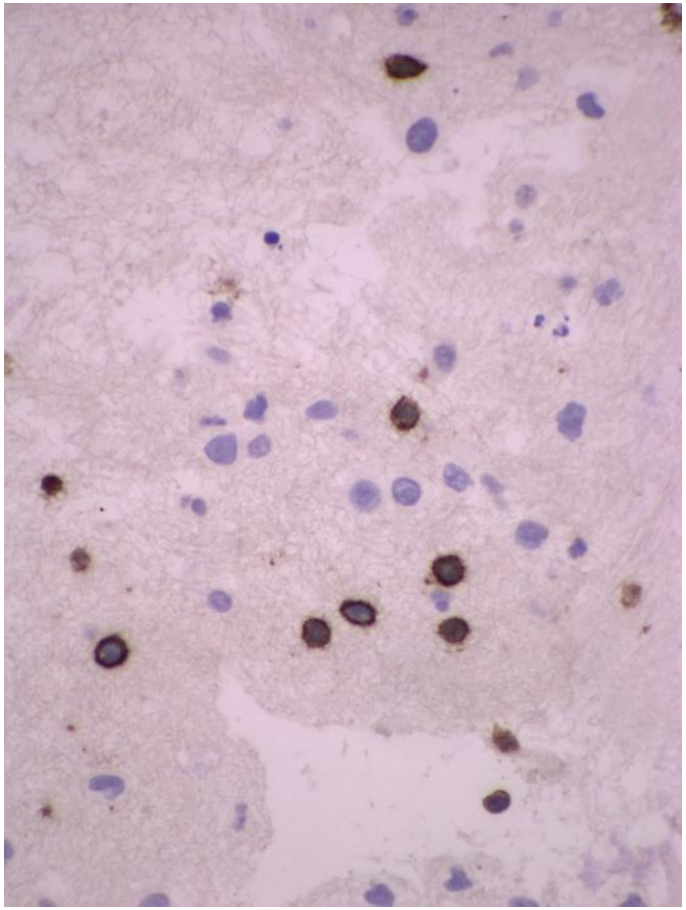


CD30

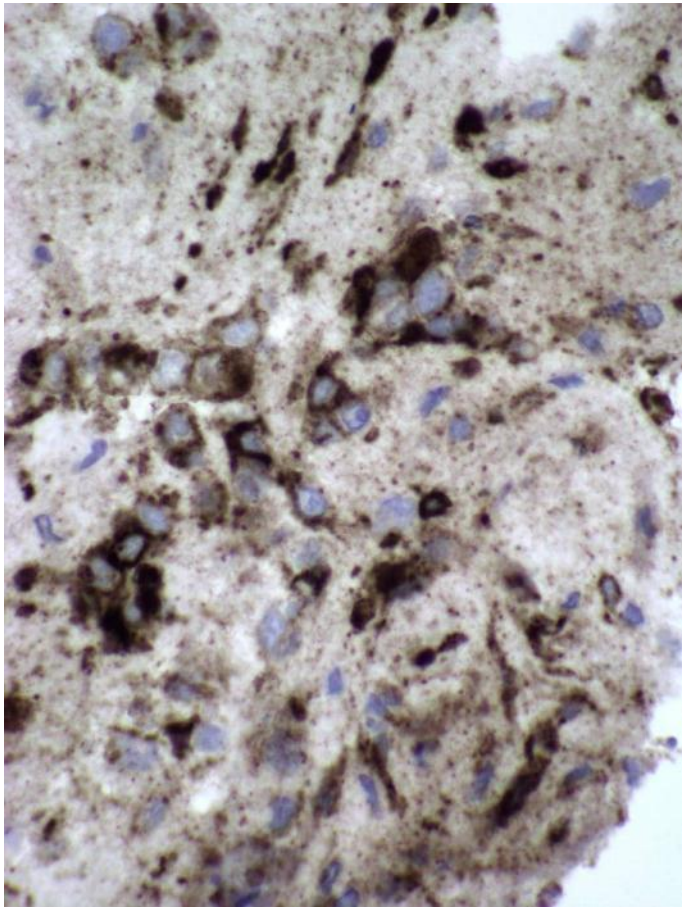


ALK

Breast seroma cytology



CD5

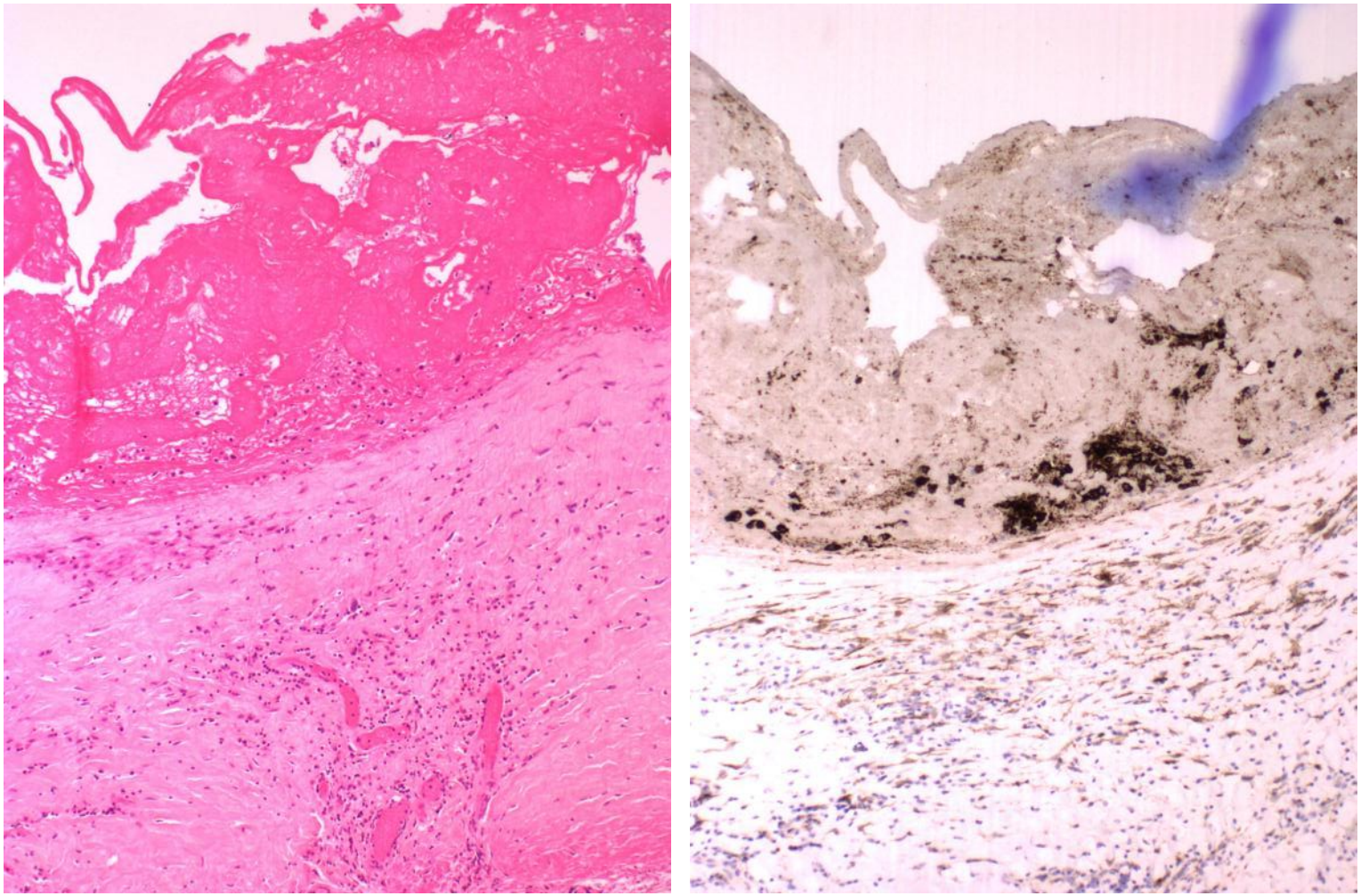


CD2

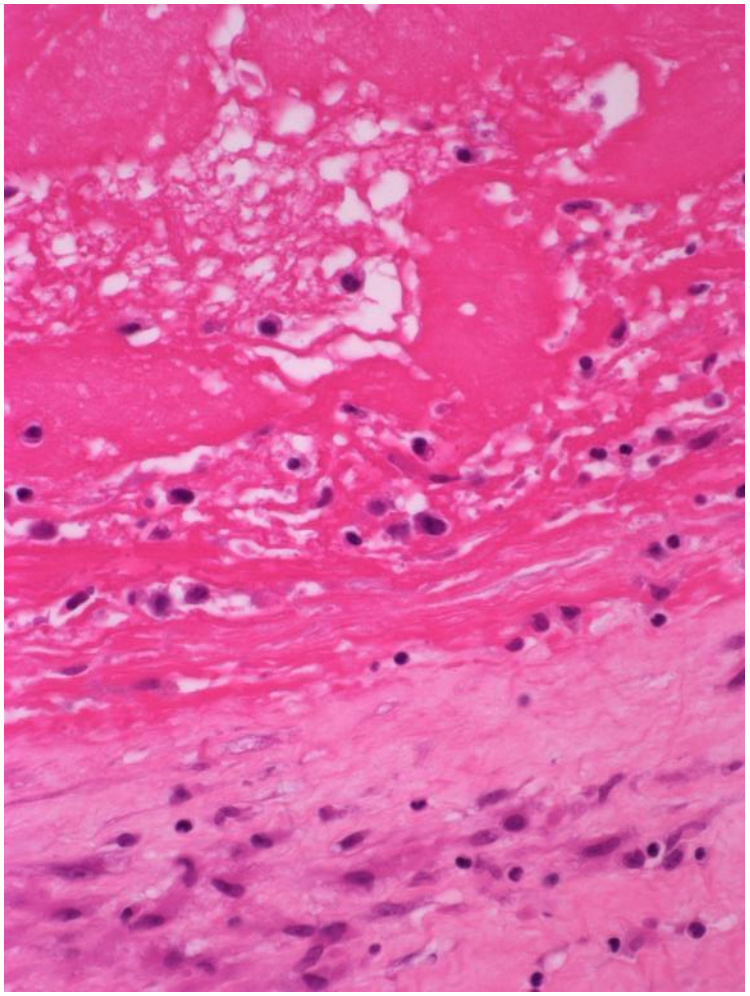
Final Diagnosis:

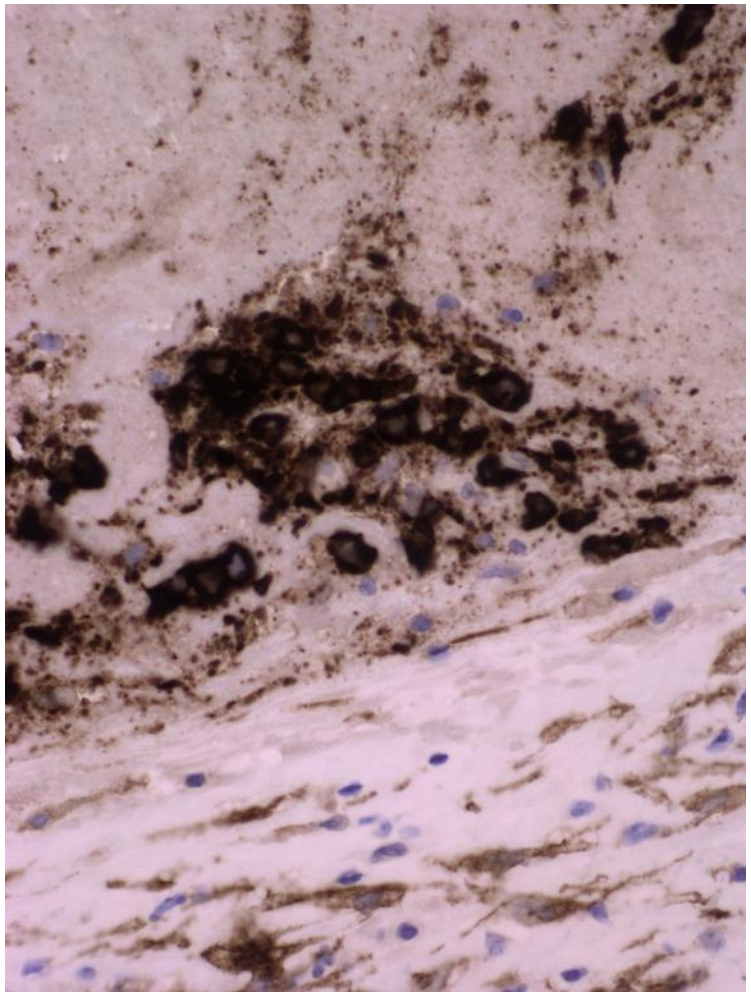
Breast Implant Associated Anaplastic Large Cell Lymphoma (BIA-ALCL)

Capsulectomy



Capsulectomy





BIA-ALCL

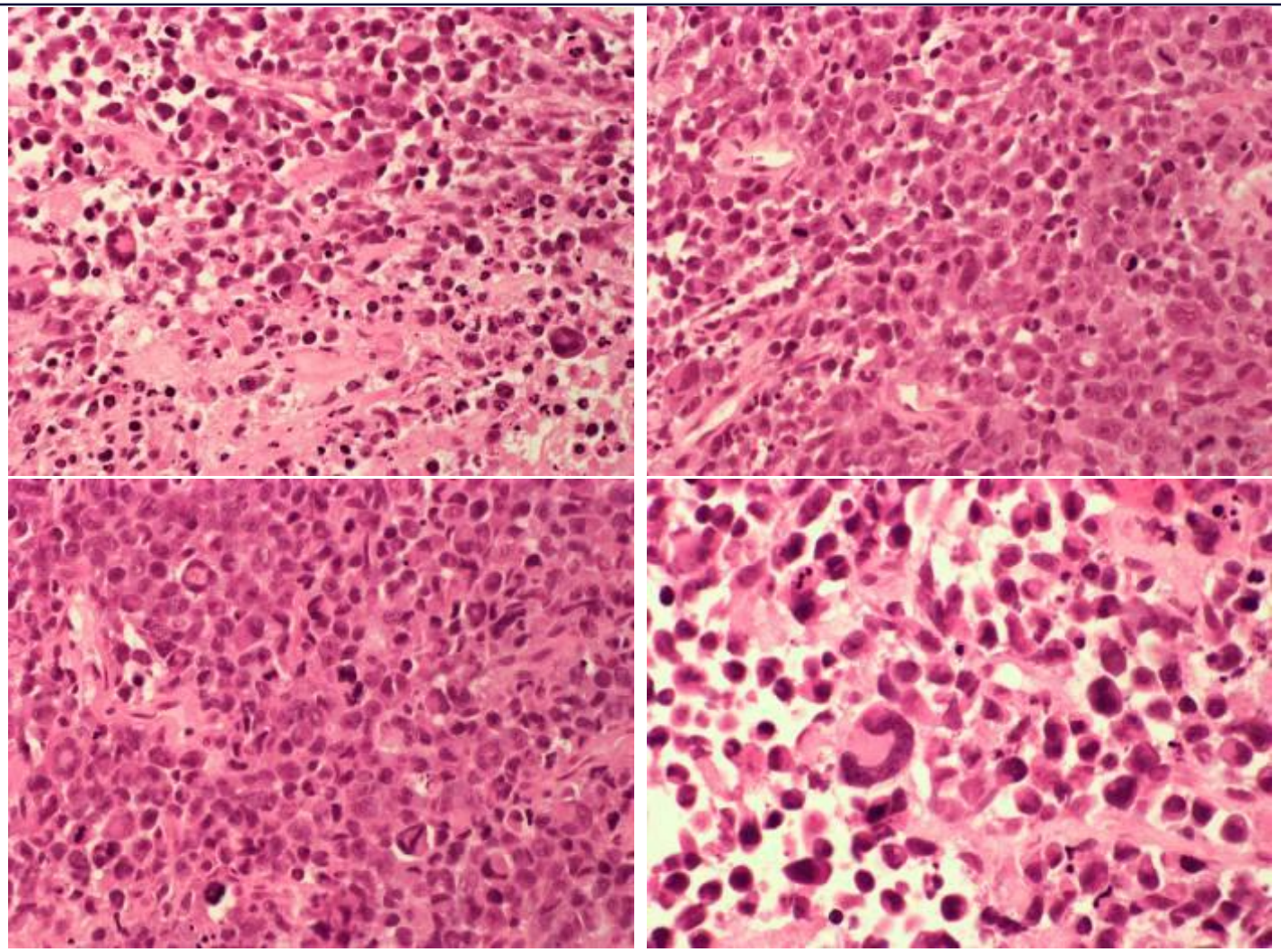
- Primary ALCL of the breast – 3/100 million/ year
- 18.2 times risk with implants but still incredibly rare – 1/500,00 women with implants
- BIA-ALCL arises within the implant capsule not the breast parenchyma
- Commonest presentation: late onset seroma causing breast swelling, average 9-10 y post procedure

Brody et al., Plast Reconst Surg 2015;153(3):695-705.

BIA-ALCL

- Majority confined to capsule or seroma fluid
- Hallmark cells – large atypical cells with horseshoe or kidney shaped nuclei
- Typically form a thin discontinuous layer along the surface of the capsule; rarely sheets or masses with geographic areas of necrosis
- Background mixed inflammatory cell infiltrate

BIA-ALCL: Morphology

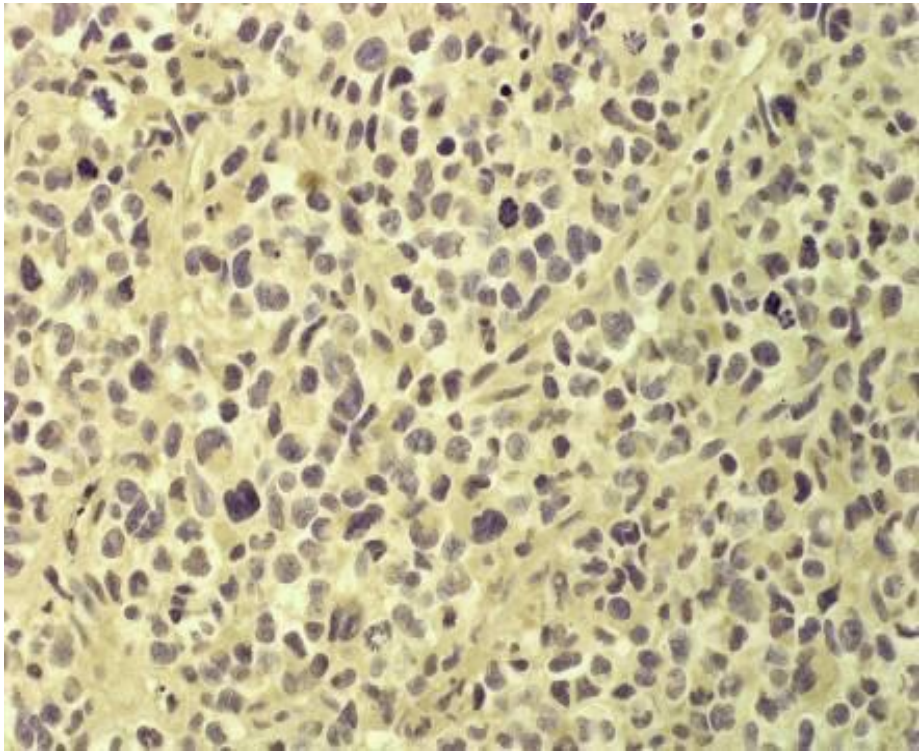


BIA-ALCL

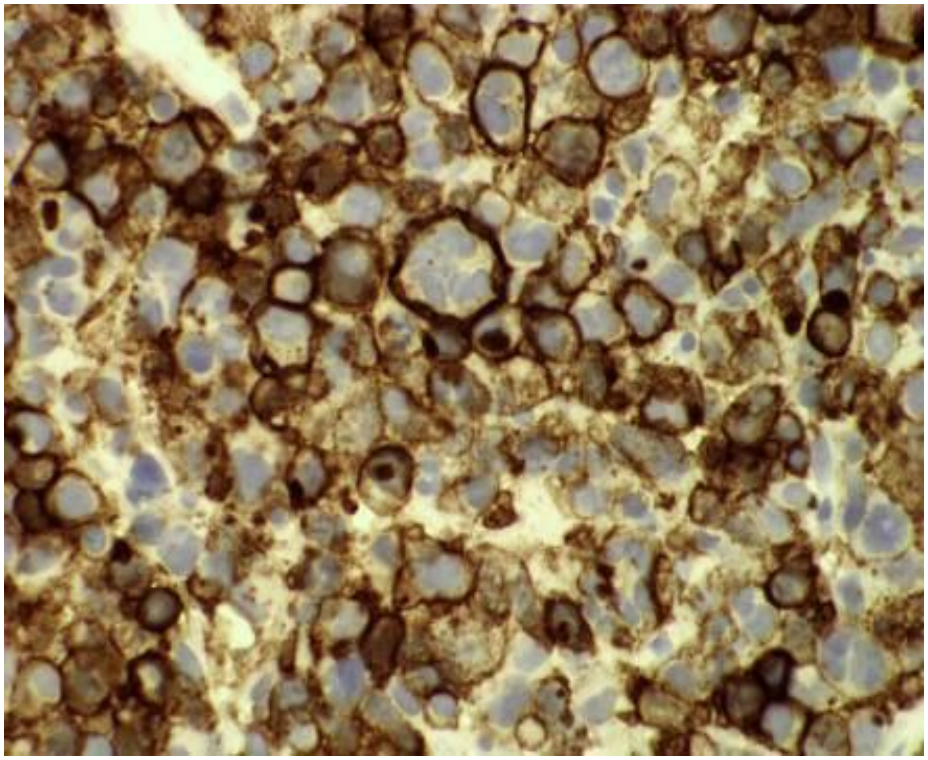
- CD30 positive, ALK negative
- Variable expression of T cell markers; CD4 (80-84%), CD43 (80-88%), CD3 (30-46%), CD2 (30%)
- CD45 positive in 36%
- Negative for CD5, CD7, CD8 and CD15
- Up to 70% positive for EMA
- Majority of tested cases show monoclonal T-cell receptor gene rearrangements

Brody et al., Plast Reconst Surg 2015;153(3):695-705.

BIA ALCL



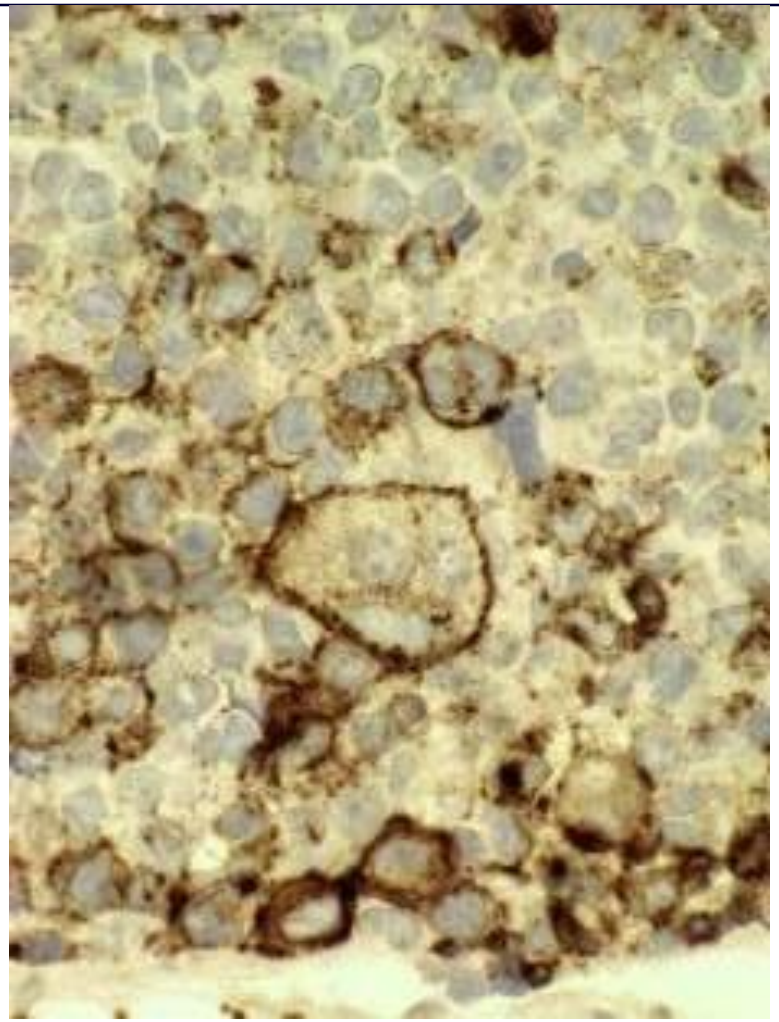
CK MNF

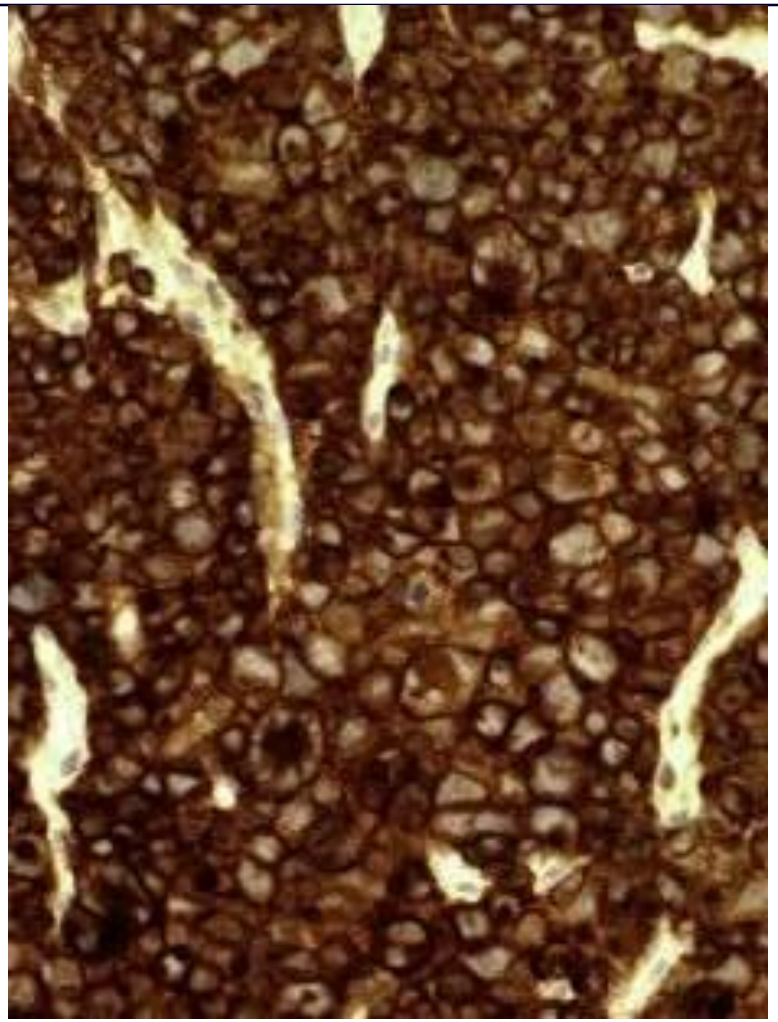


CD 45

BIA-ALCL

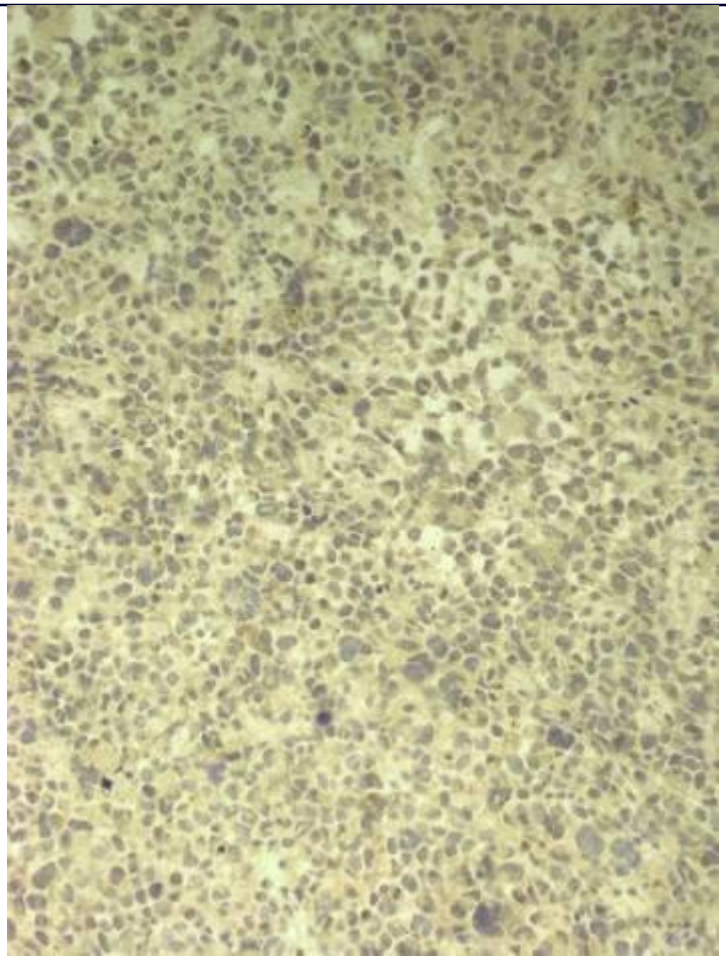
CD2



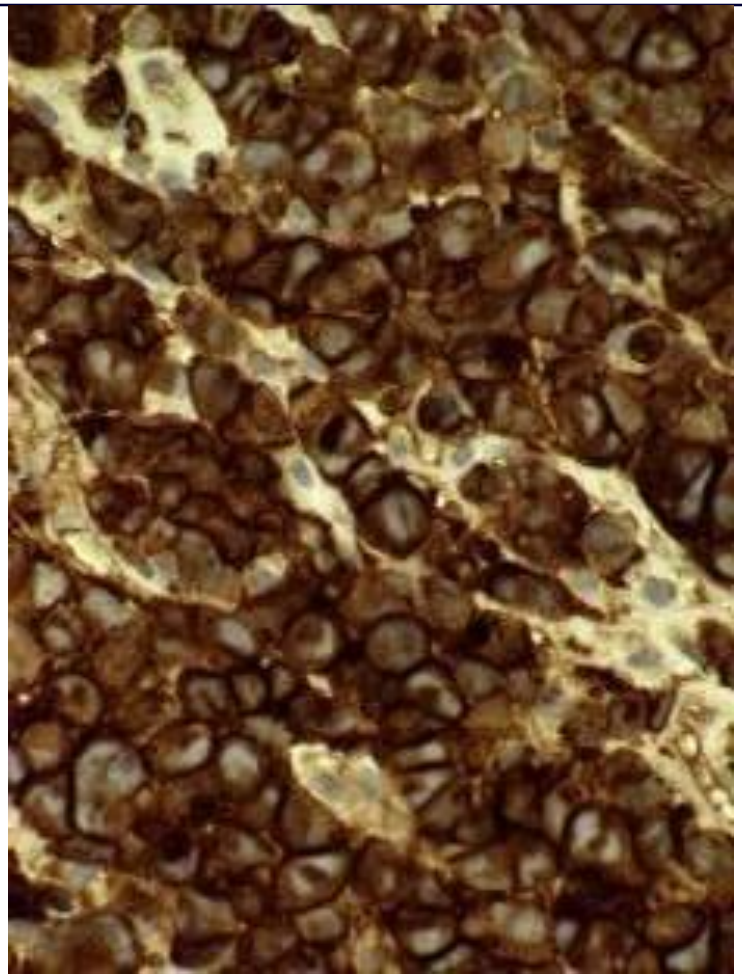


CD4

BIA-ALCL



ALK



CD 30

BIA-ALCL

- Pathogenesis
- Believed to be secondary to chronic helper T-cell activation in response to irritation by implant or subclinical infection
- Chronic low grade inflammation produces release of interferon-γ and cytokines resulting in sustained T cell proliferation
- Genetic profile similar to primary cutaneous ALCL

BIA-ALCL

- Excellent prognosis if restricted to capsule
- Recommended management is removal of implant and capsule and observe
- Patients who present with a mass / extension beyond the capsule may require more aggressive treatment with chemotherapy and / or radiotherapy

Brody et al., Plast Reconst Surg 2015;153(3):695-705.

BAPRAS Guidelines

- Where there is clinical evidence (usually late onset, rapid swelling of one breast) of potential ALCL, clinicians need to be aware that diagnosis requires fresh seroma fluid to be sent for cytological evaluation with Wright Giemsa stained smears and cell block immunohistochemistry testing for cluster of differentiation (CD) and Anaplastic Lymphoma Kinase (ALK) markers. We recommend you discuss your concerns with haematology and histopathology colleagues so that appropriate specialist diagnostic services can be involved.

Case 3:

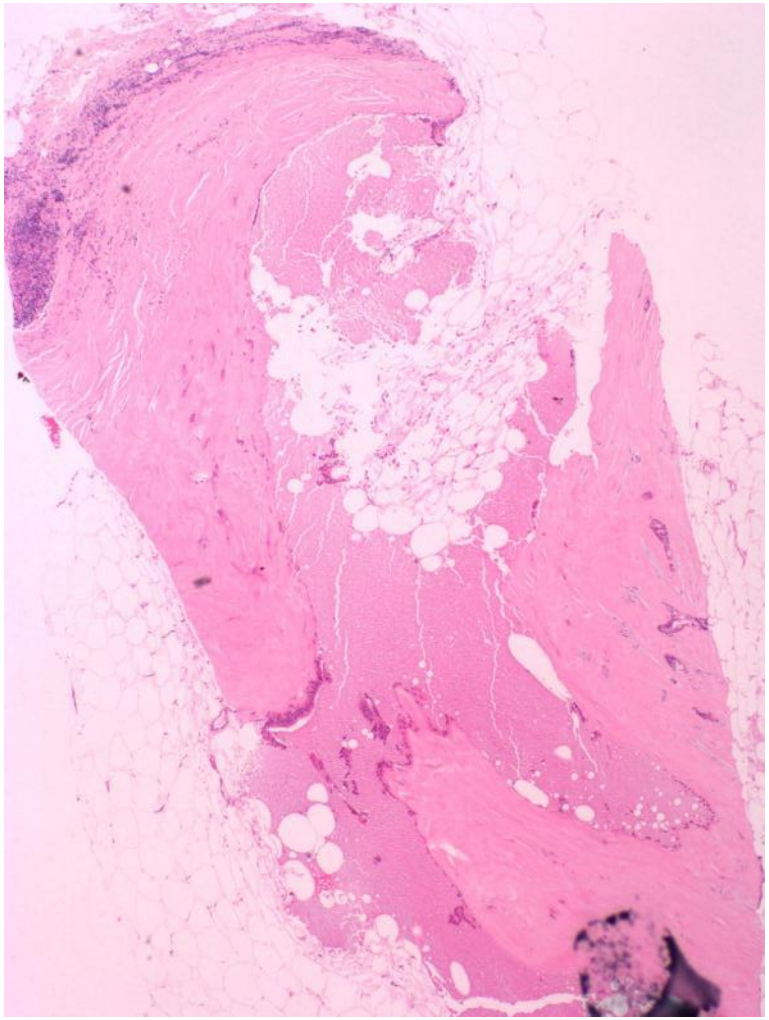
Diagnosis	
Metastatic carcinoma NOS	7
Metastatic micropapillary carcinoma breast	14
Metastatic breast other (NST, apocrine)	5
Metastatic carcinoma exclude non-breast	8
Metastatic melanoma versus carcinoma	3
Malignant	1

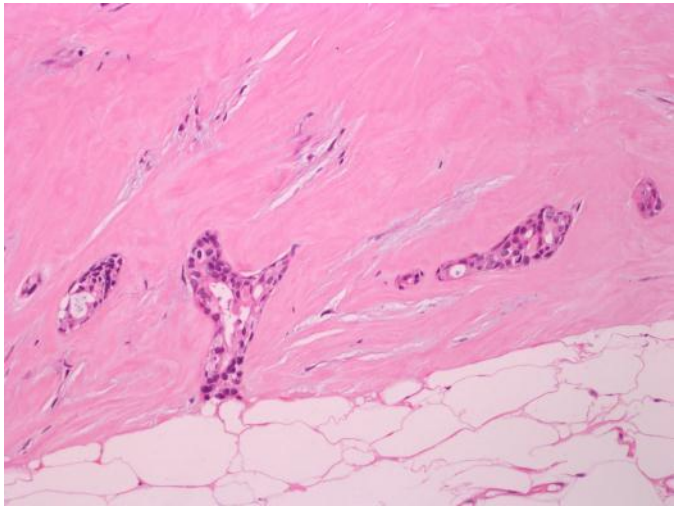
Case 3:

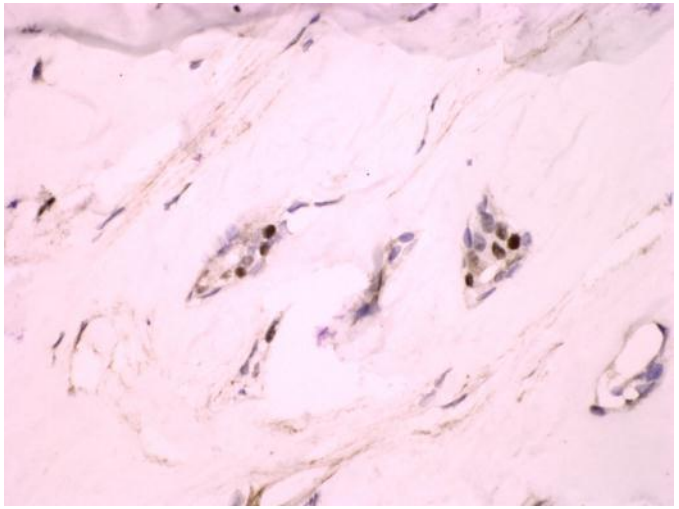
Clinical history:

63 year old female presenting with indeterminate lesion R) UOQ and abnormal axillary lymph nodes

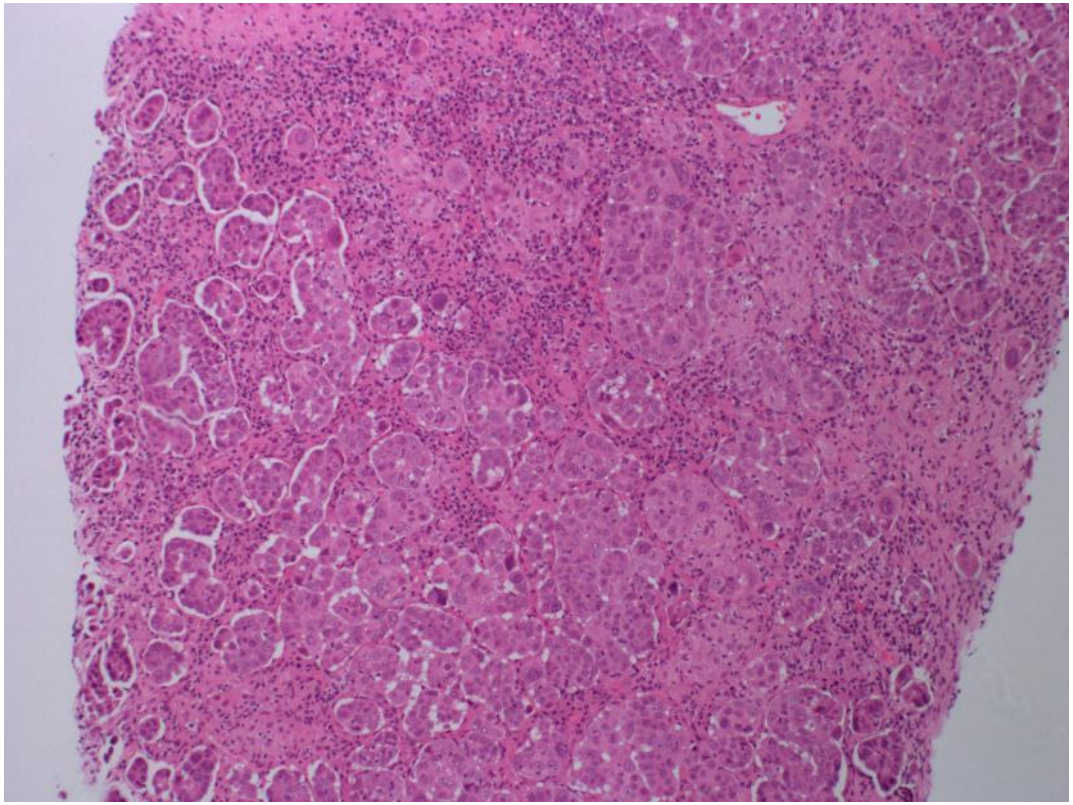
Breast biopsy

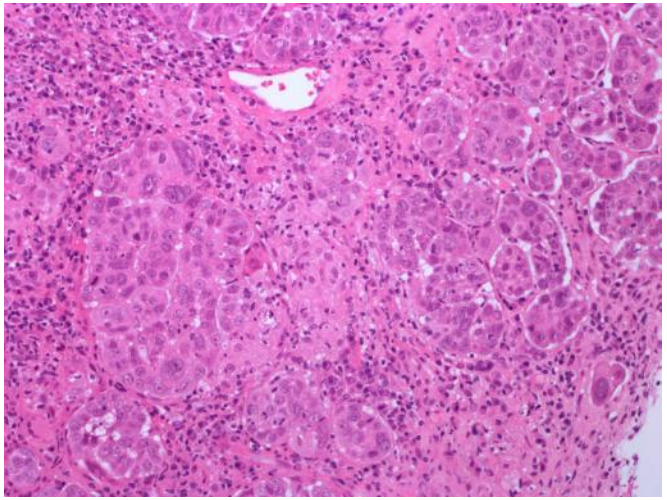


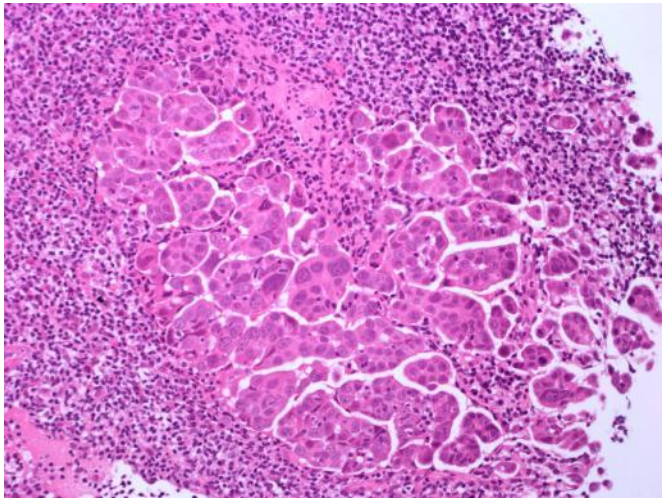




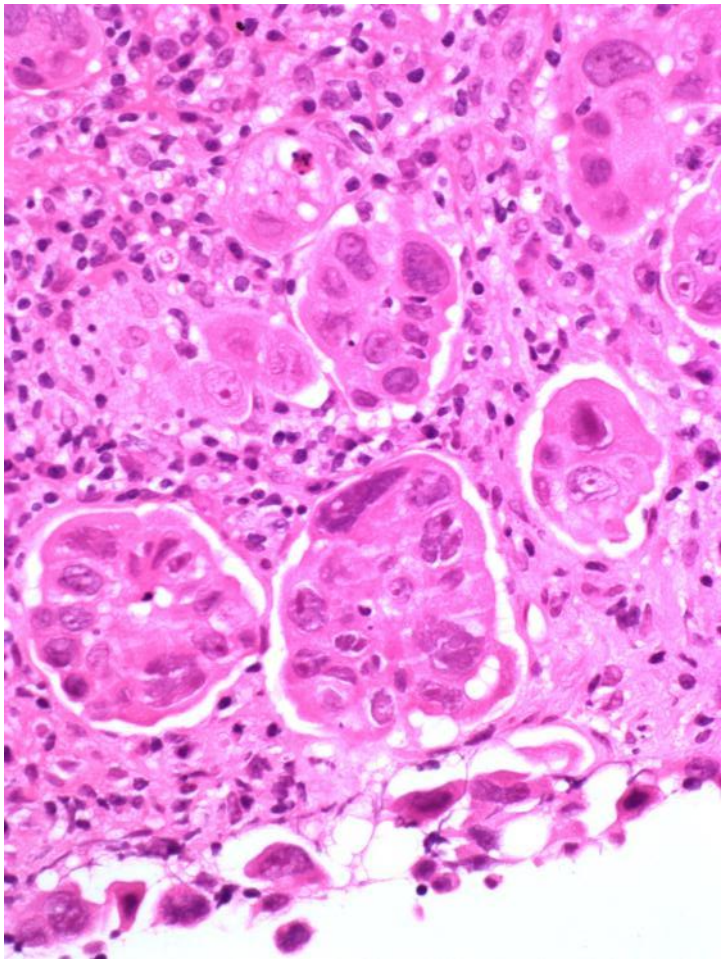
Axillary LN biopsy

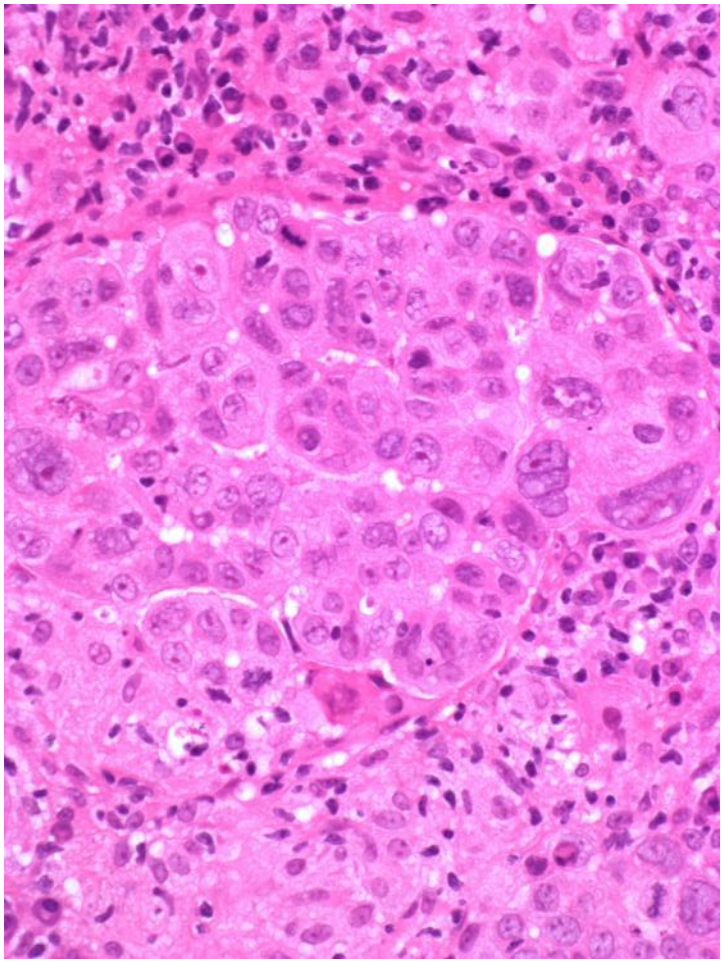






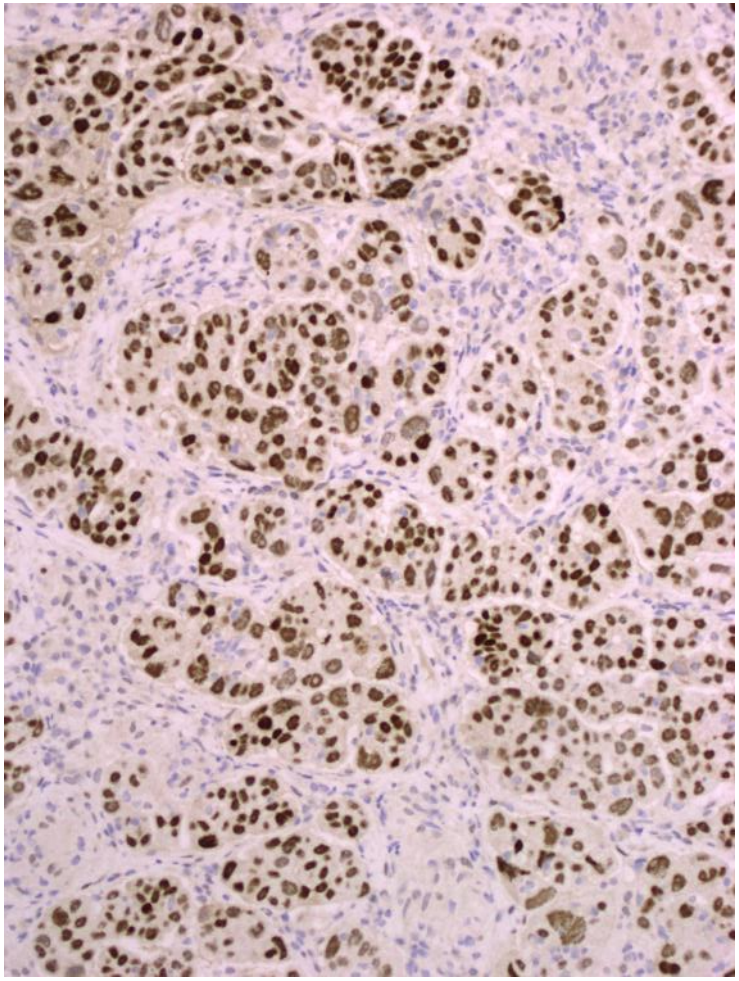
Axillary LN biopsy

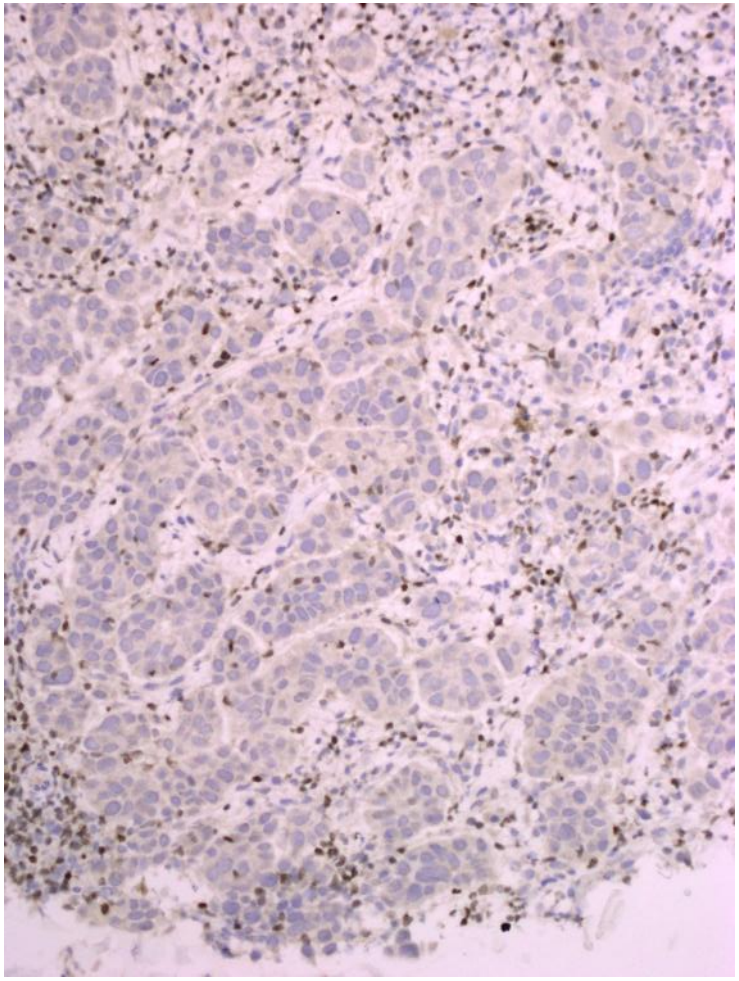




Axillary LN biopsy

ER

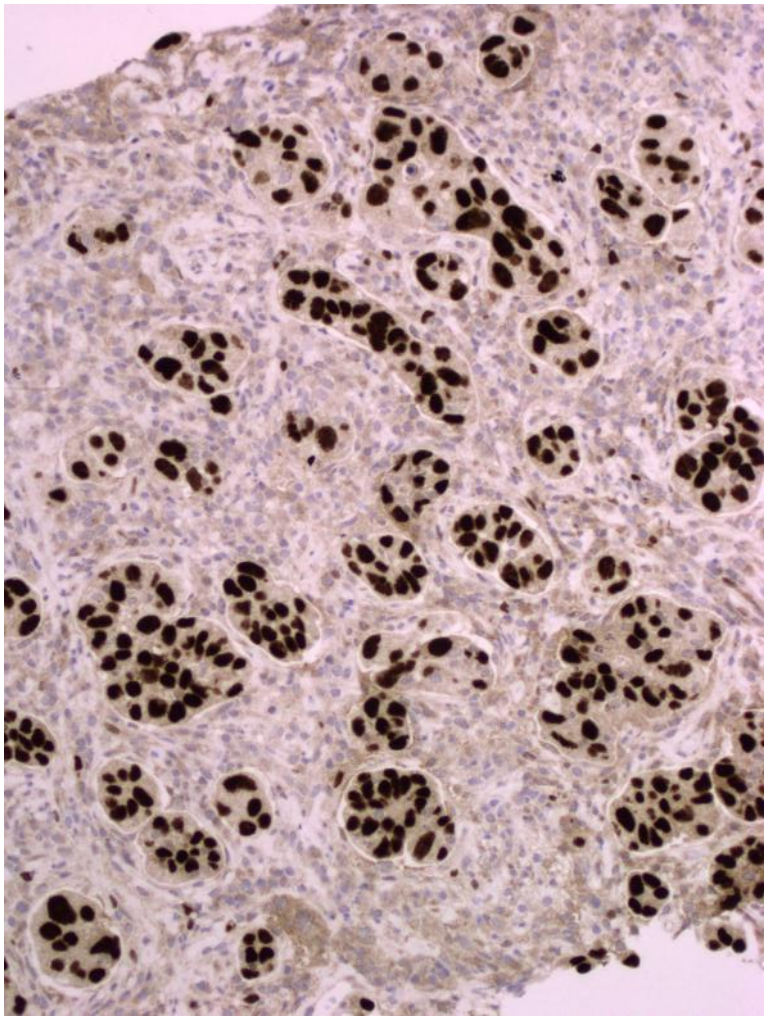


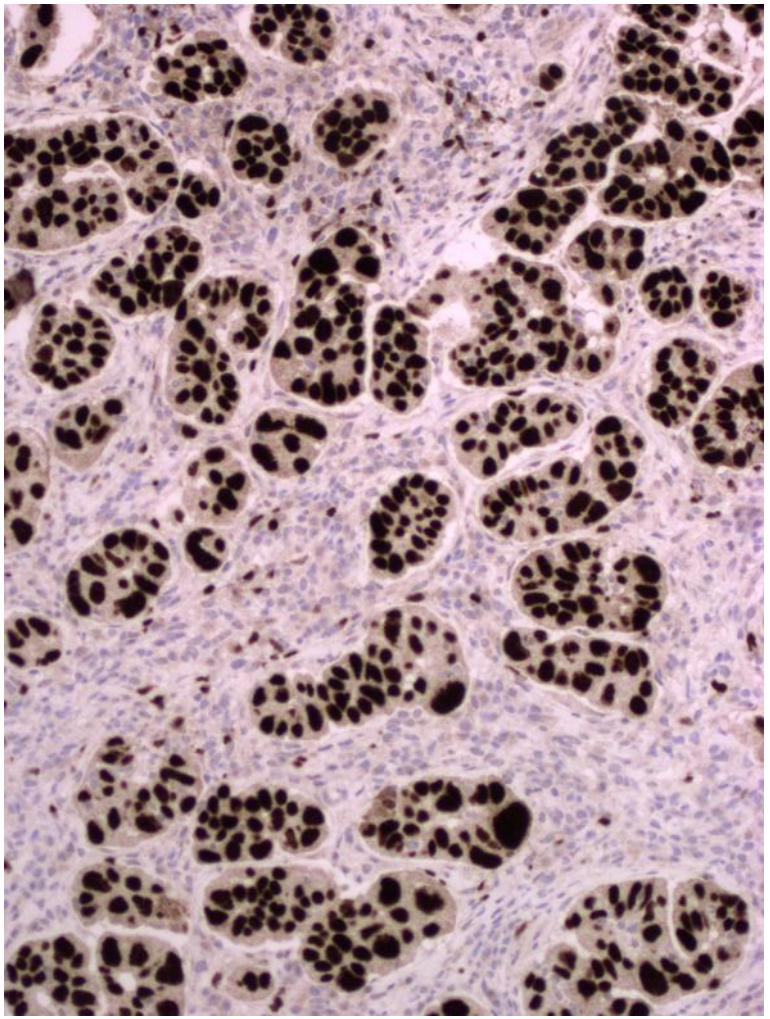


PR
HER2
GATA3

Axillary LN biopsy

WT1





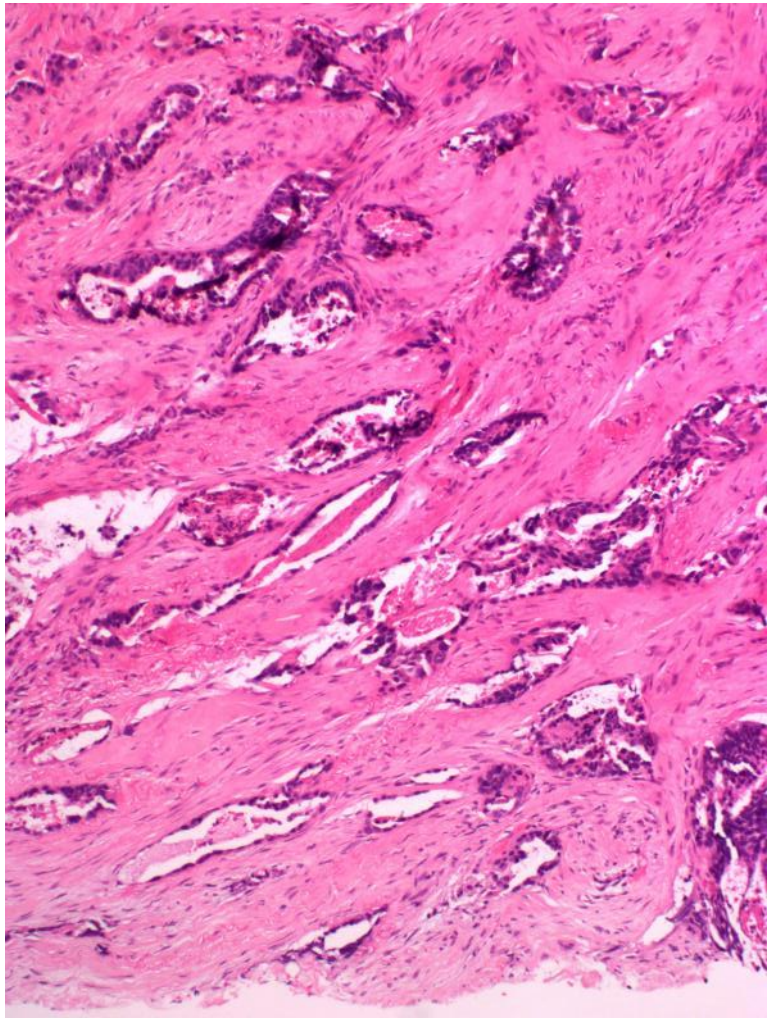
PAX 8

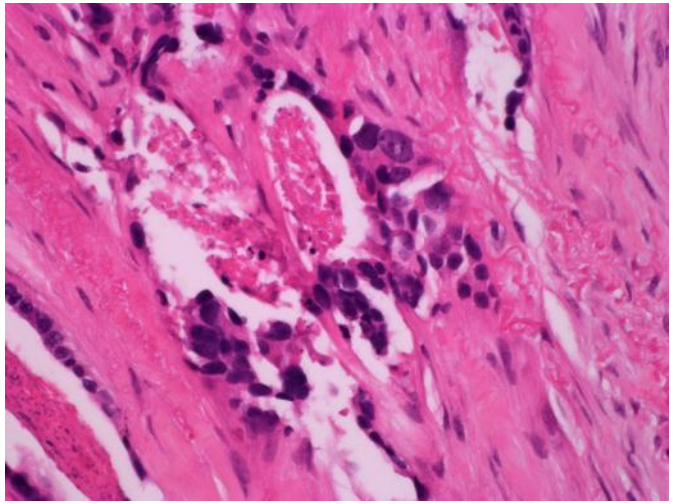
Final Diagnosis:

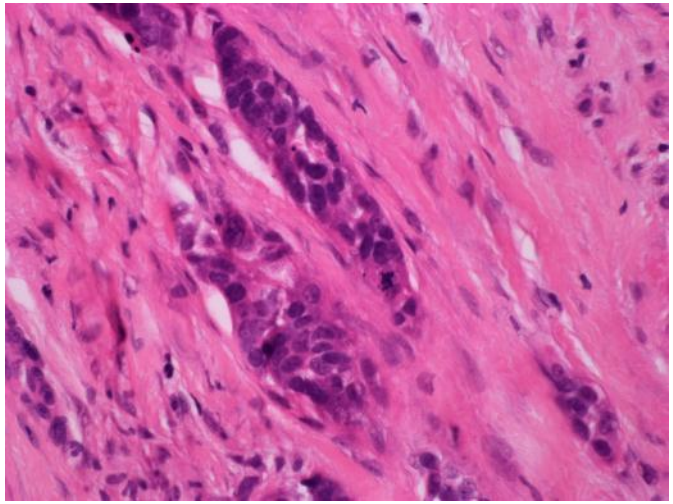
- Metastatic serous papillary carcinoma

- New information – PHx of hysterectomy and BSO in 2007 for adenocarcinoma
- CT also shows para aortic lymphadenopathy

Another case: 57 yo, RUOQ mass

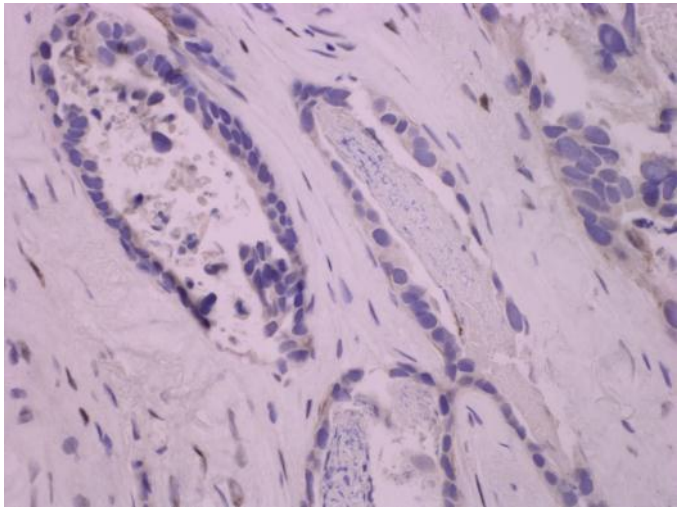


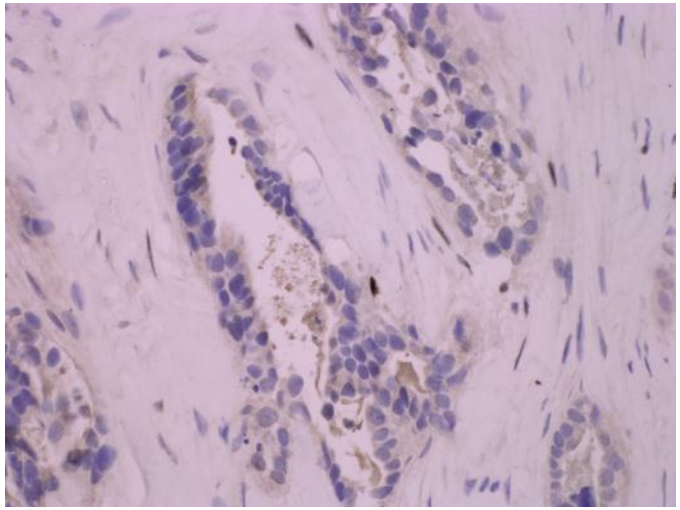




IHC

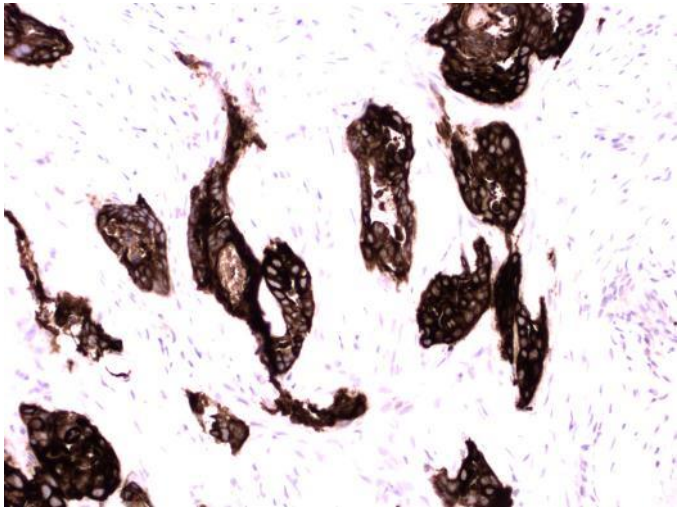
ER
PR
HER2

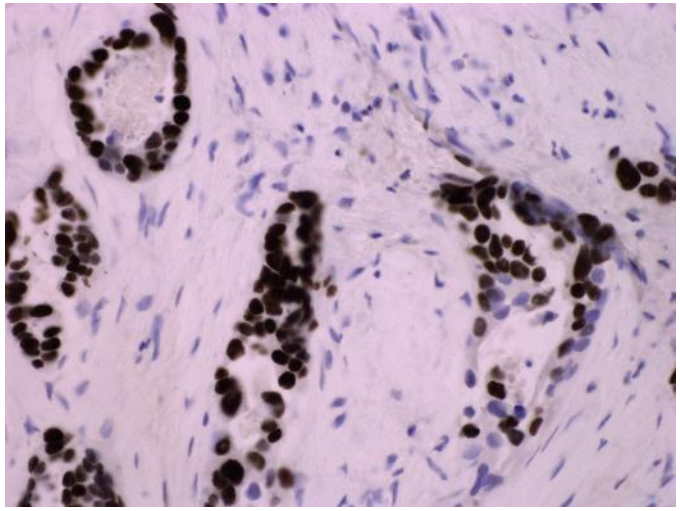




GATA3

CK7

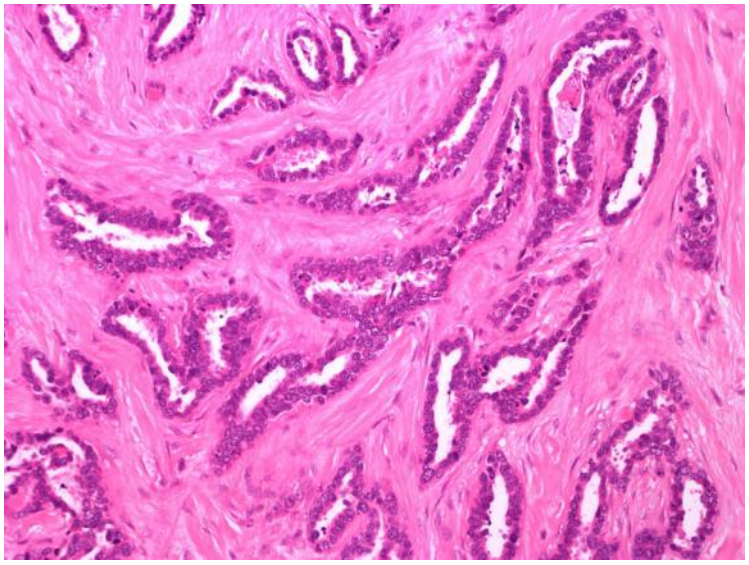


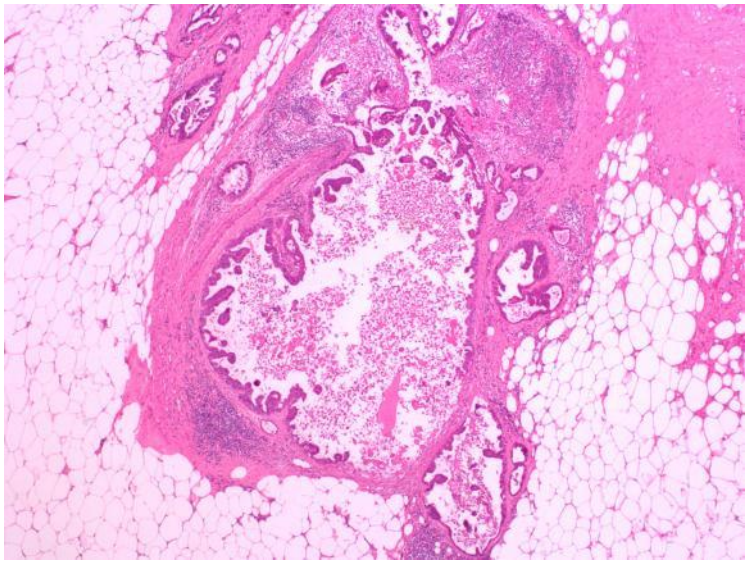


TTF1

But….

- Broader panel including napsin, thyrogobulin, WT1 negative
- CT scan showed no lung or other lesions
- Proceeded to WLE and SLN – invasive tumour with associated DCIS





Thank You