

Case of the Month- September 2018

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Consultant (RGCI & RC)

- A 38-year-old female presented with c/o lump in left breast 4 months and weight loss of 4Kg over last 8-months
- O/E : 2 x2 cm lump palpated in UOQ, firm, mobile and non-tender.

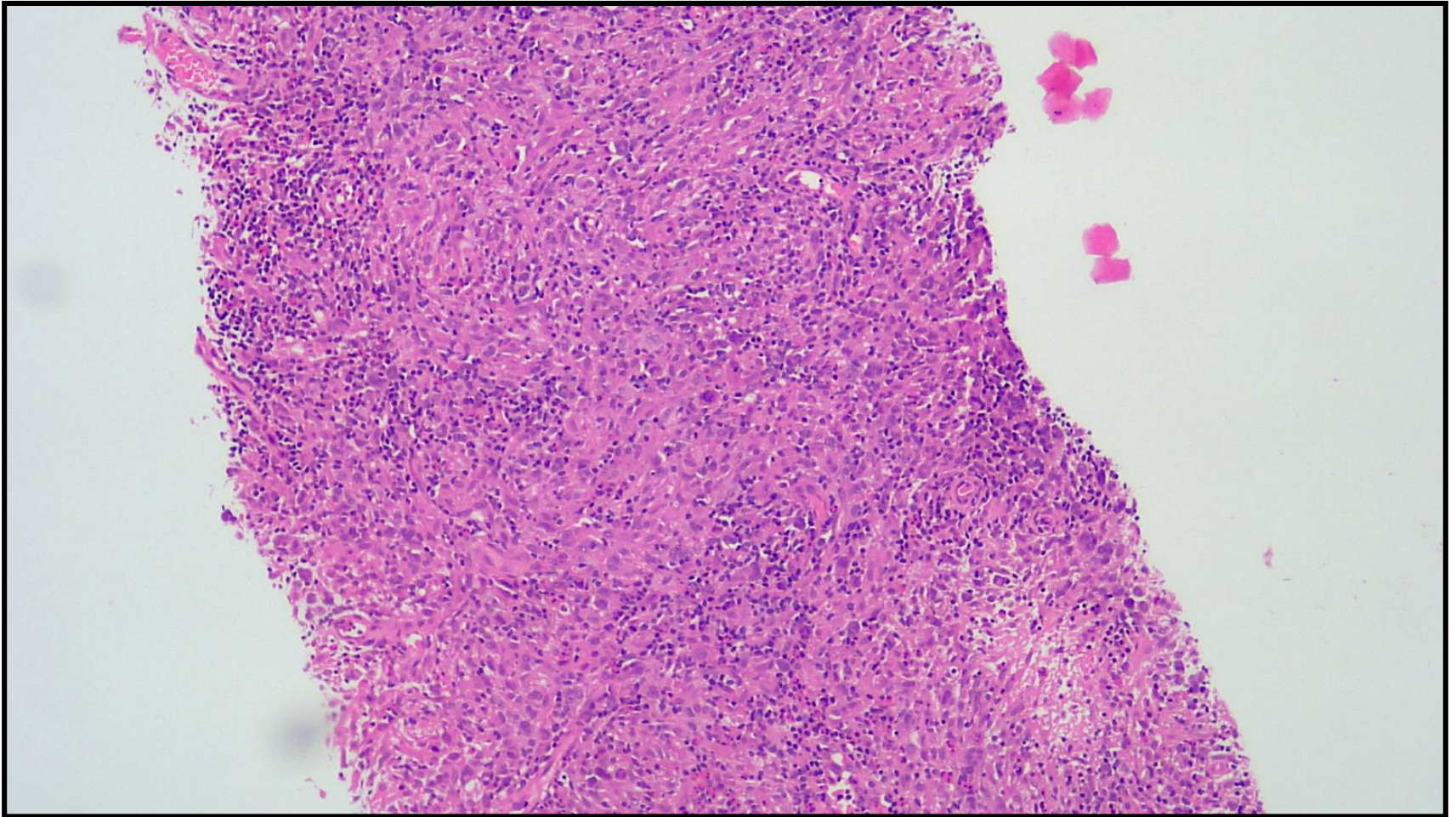
USG findings:

- Left breast: 20 x 15mm, hypoechoic lesion in UOQ with well defined margins.
- Another hypoechoic lesion measuring 26 x 11mm in left axillary region seen
- Rt. breast: 30 x 13mm, hypoechoic lesion in UOQ with well defined margins

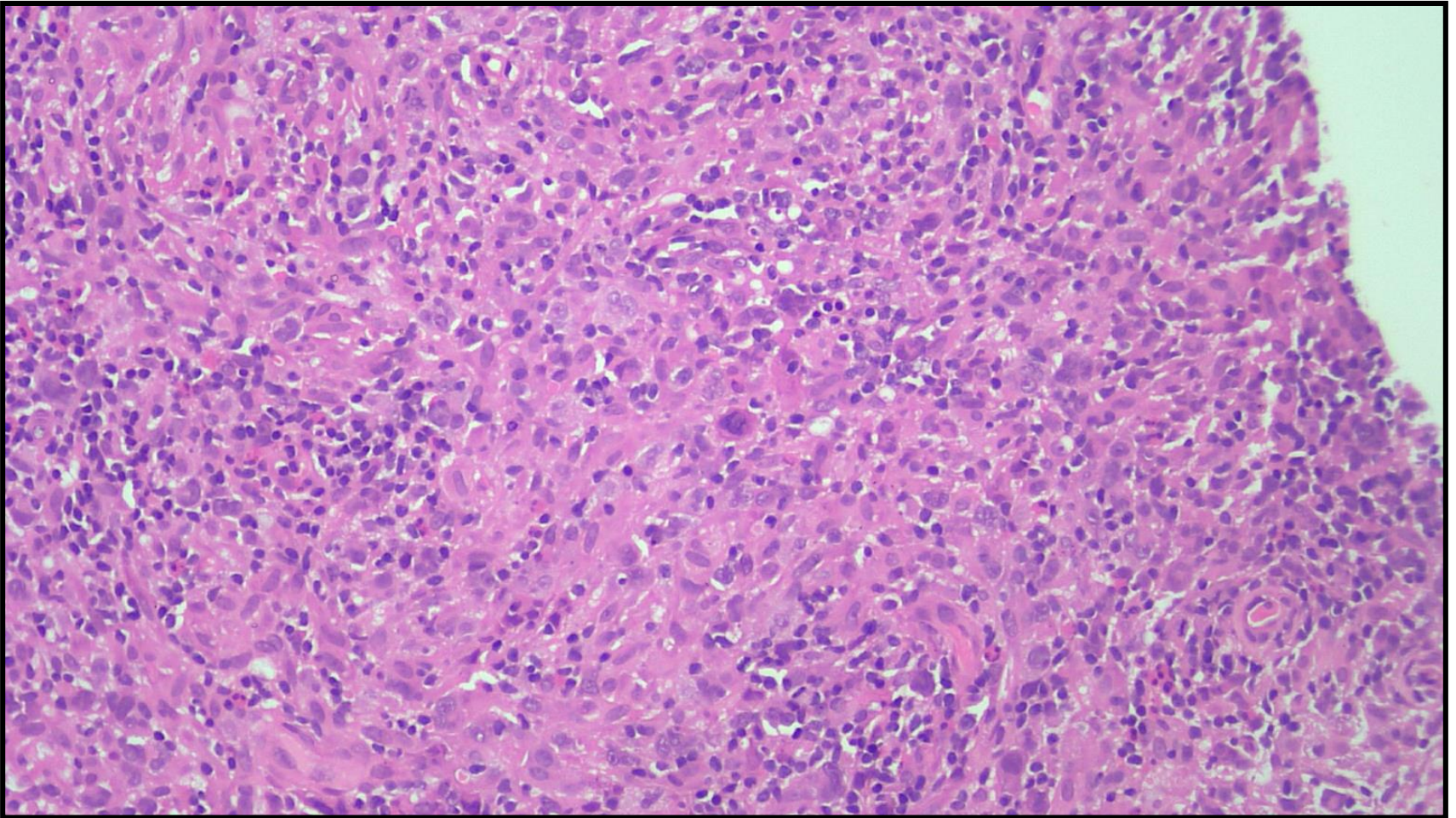
Tru-Cut biopsy

- Tru-cut biopsy performed on Bilateral Breast lumps.
- Histopathology of Rt. Breast Lump: Fibroadenosis
- Histopathology of Lt. Breast Lump: shows polymorphous population of neoplastic cells with numerous scattered monolobated to polylobated large tumor cells

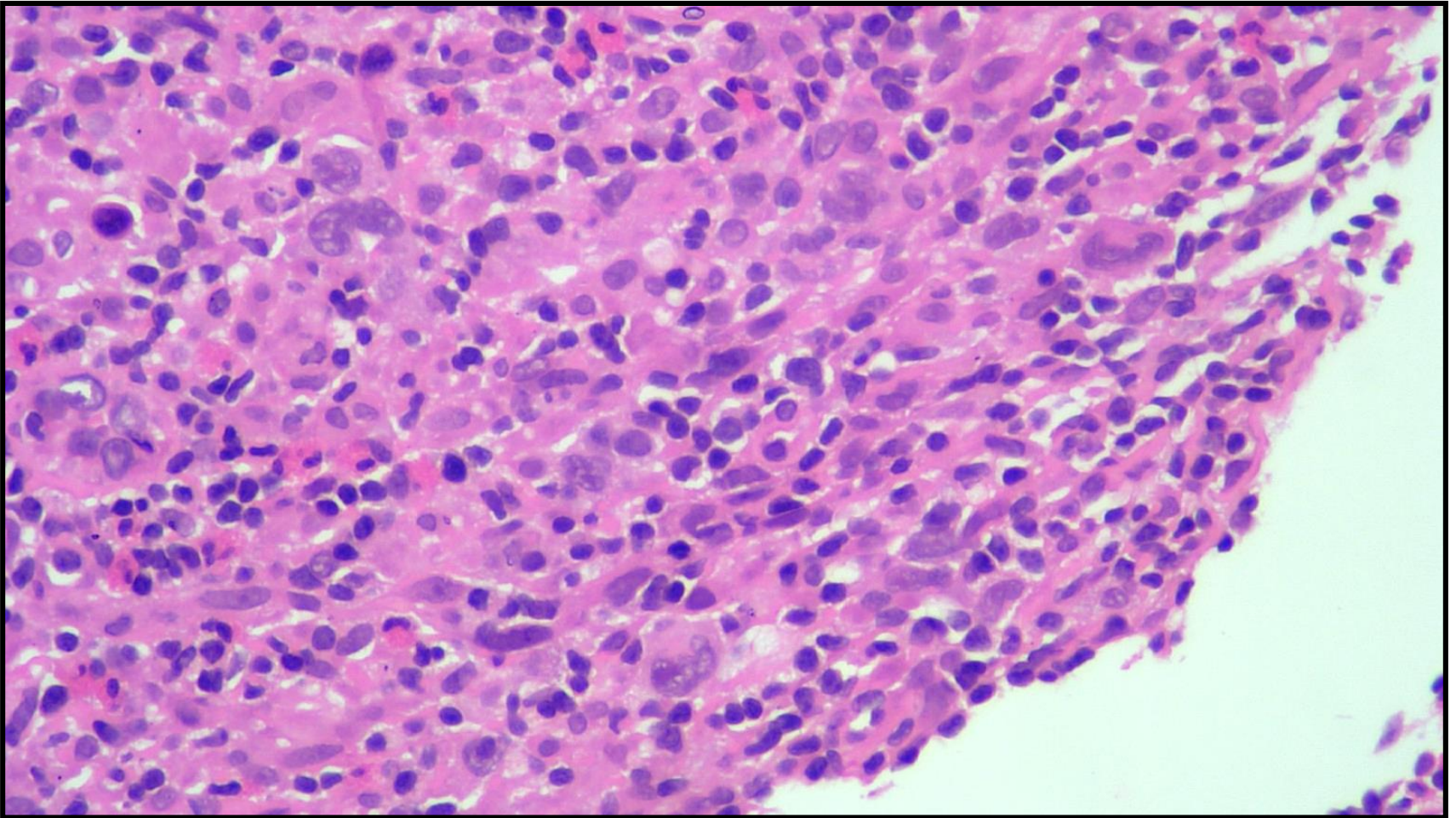
Tru-Cut biopsy: Left Breast(H&E; 40x)



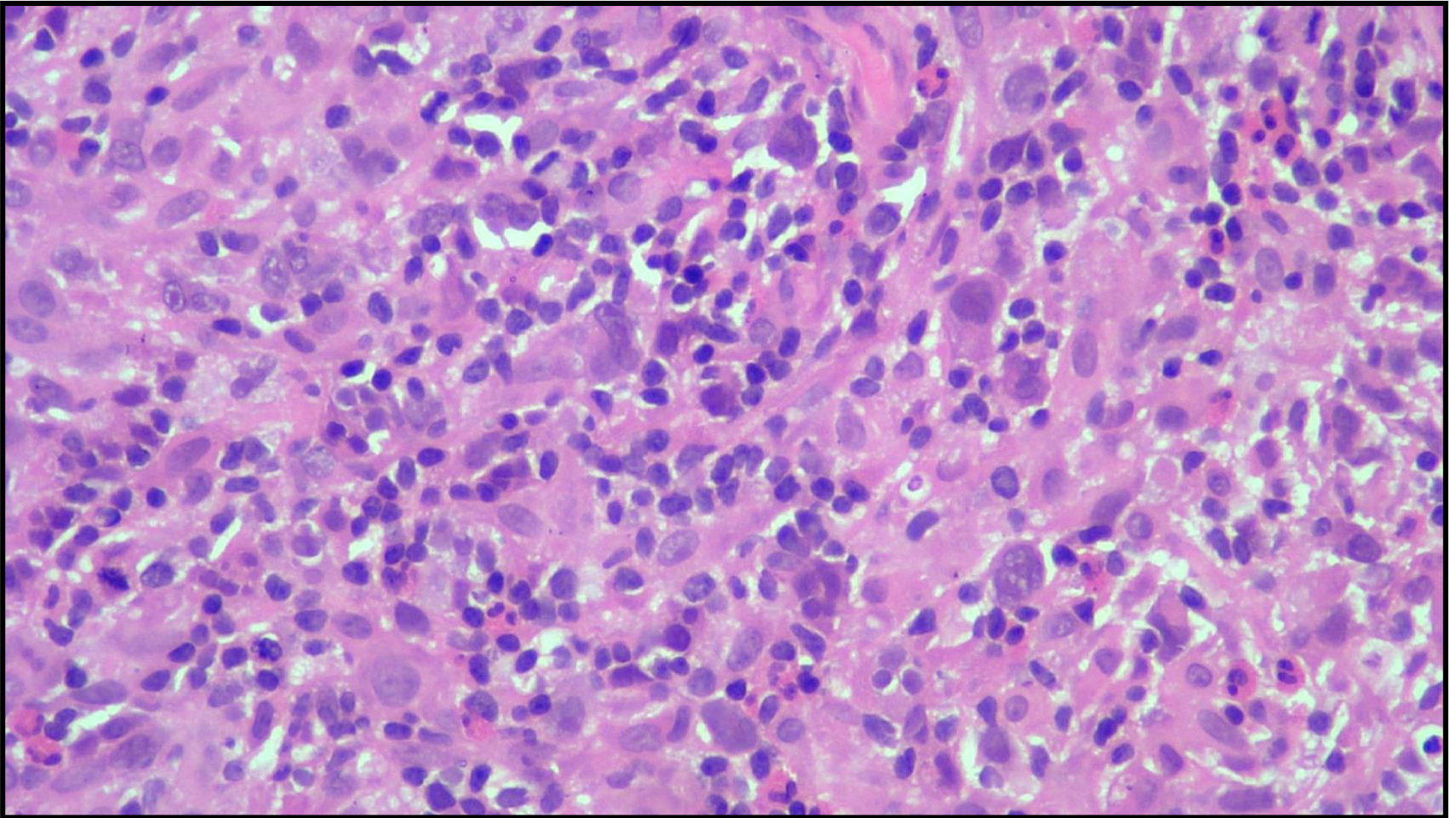
(H&E; 100x)



(H&E; 400x)



(H&E; 400x)



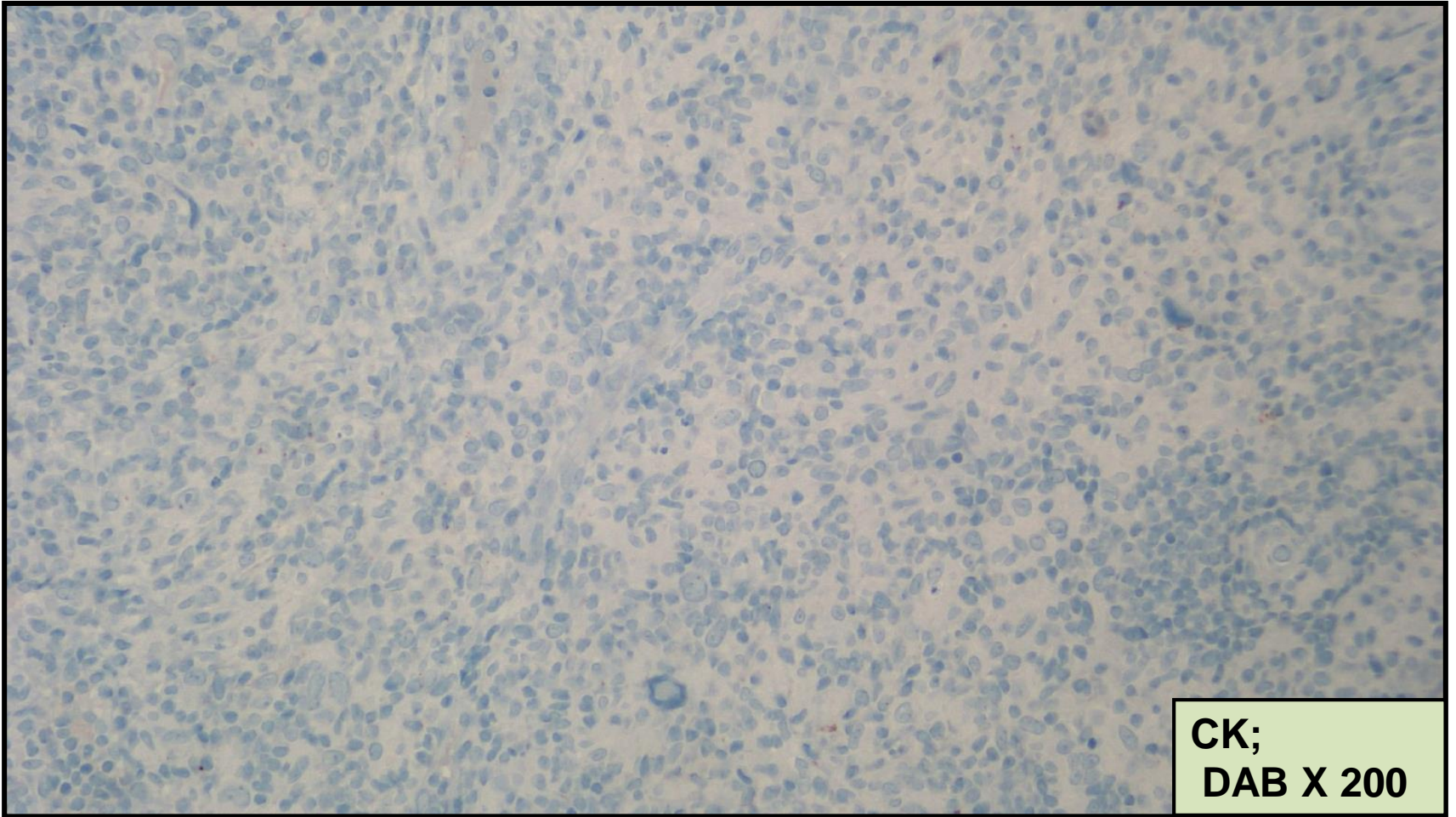
Summarizing the Histopathological findings

- Numerous scattered and few aggregates of large neoplastic cells with monolobated to polylobated nuclei, having vesicular chromatin and prominent nucleoli
- Background shows polymorphous population of cells comprising of histiocytes, lymphocytes and few eosinophils
- No native breast parenchymal structure identified.

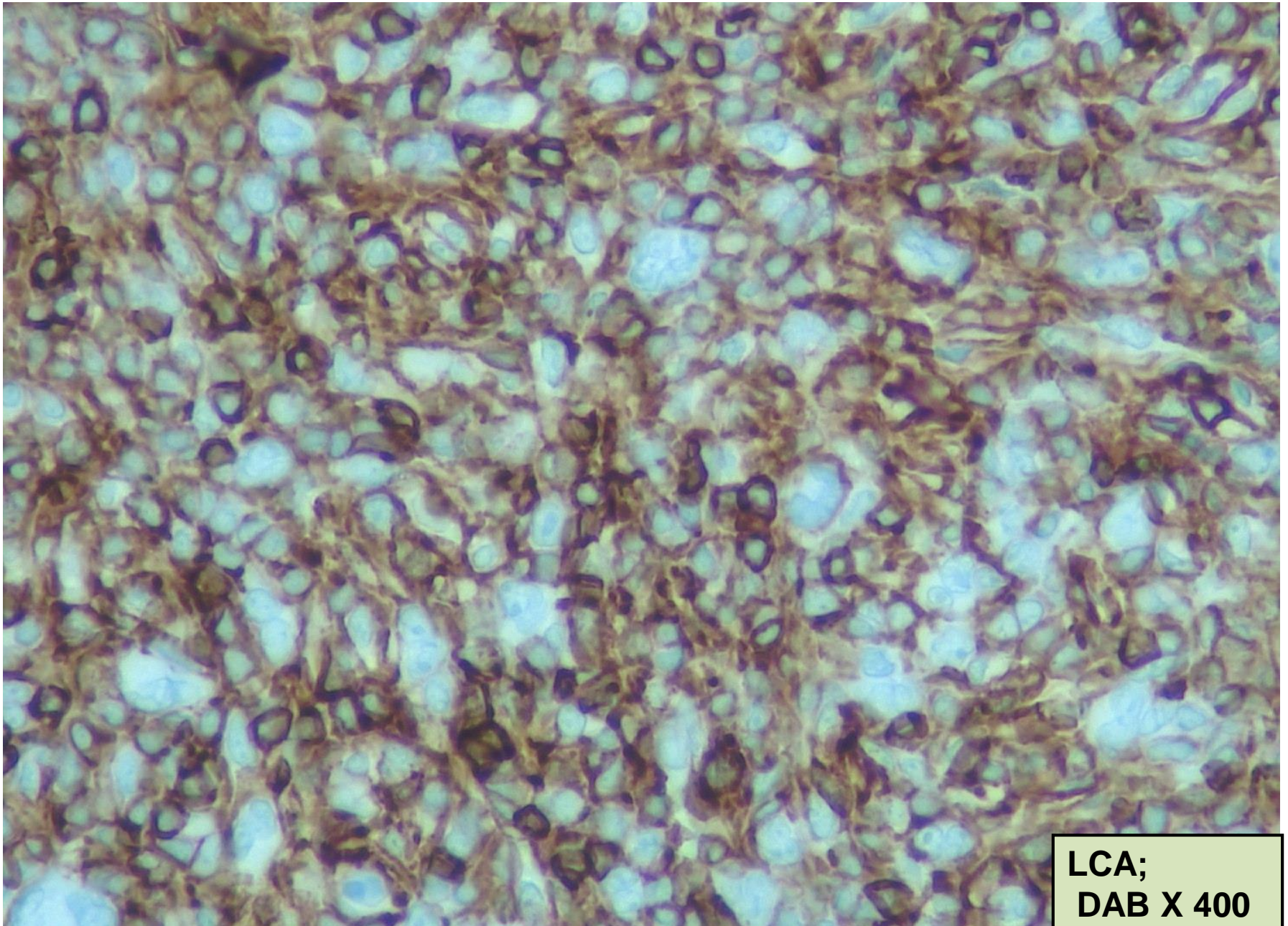
Histomorphological DD

- Hematolymphoid Malignancy favouring Hodgkins Lymphoma
- Metaplastic carcinoma
- Histiocytic tumor

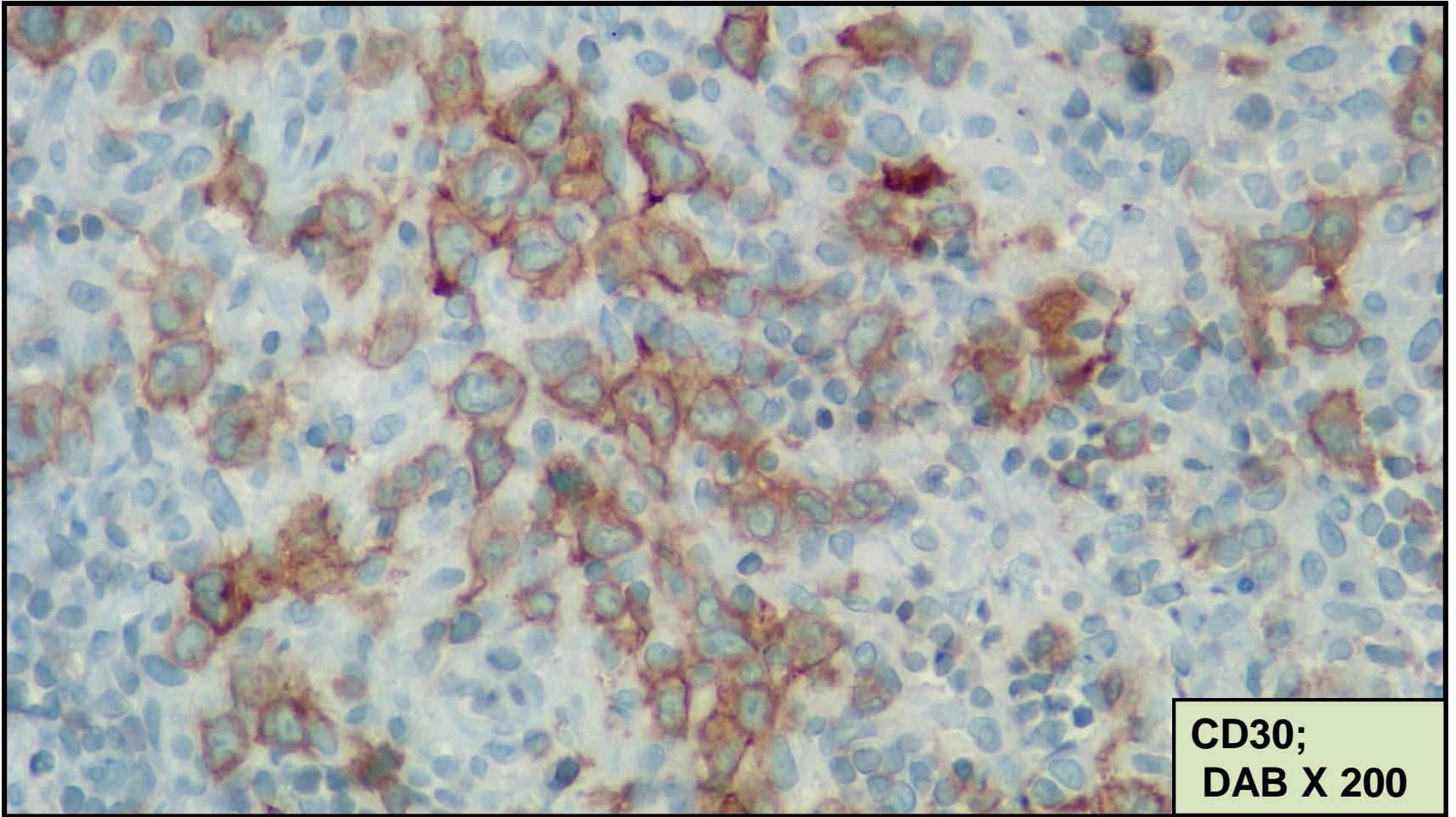
Subsequent IHC was performed



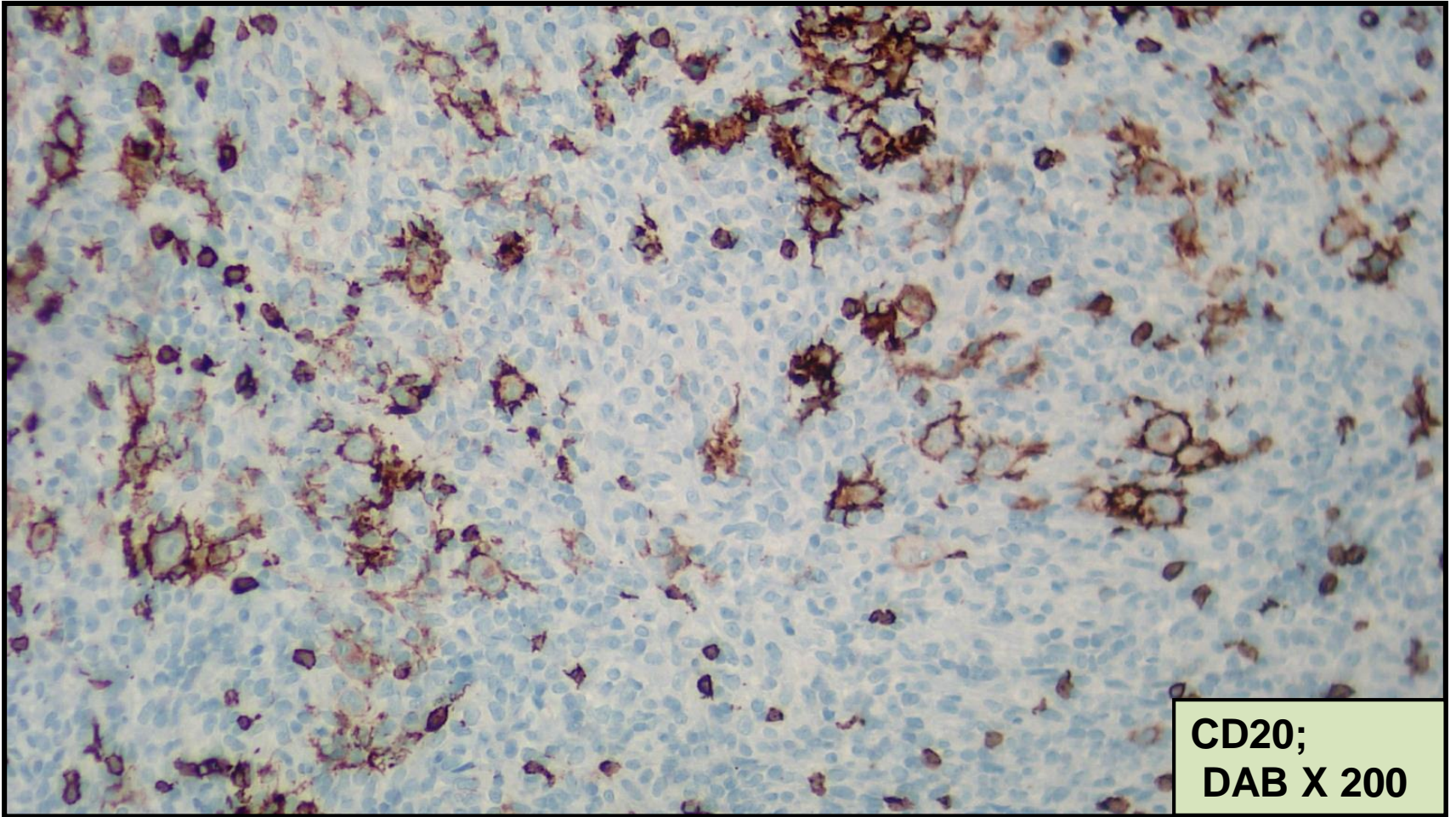
**CK;
DAB X 200**



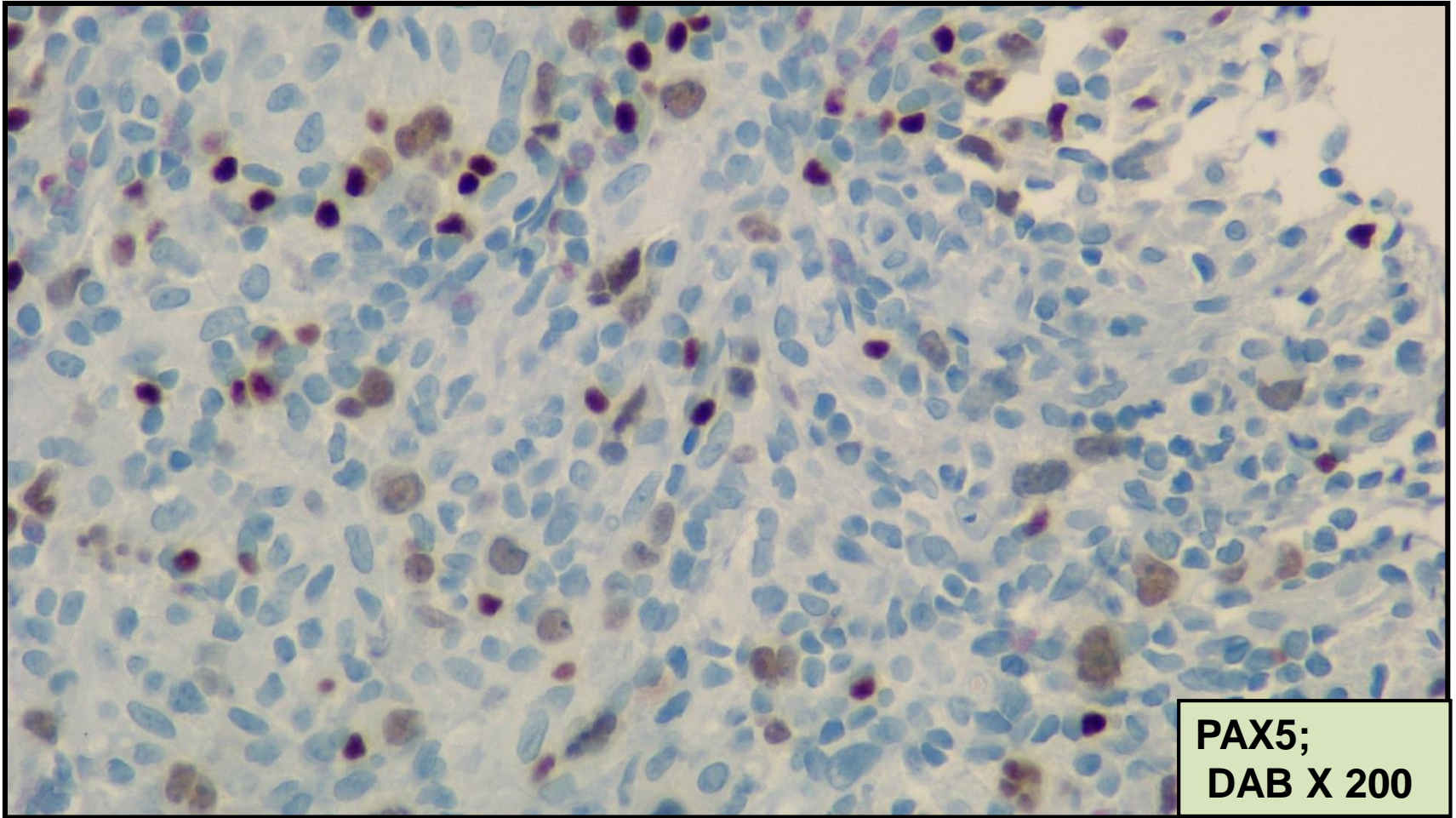
**LCA;
DAB X 400**



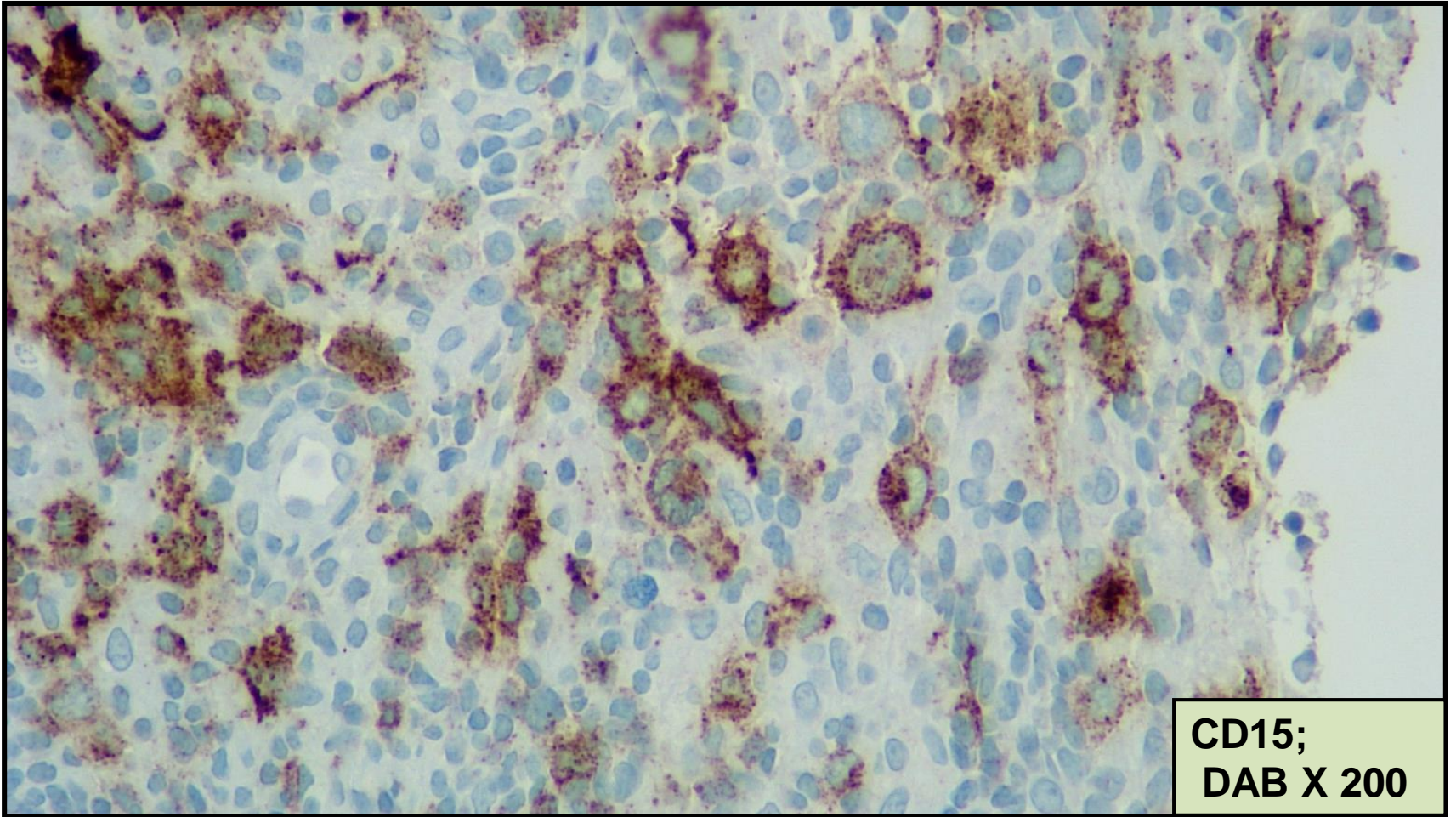
**CD30;
DAB X 200**



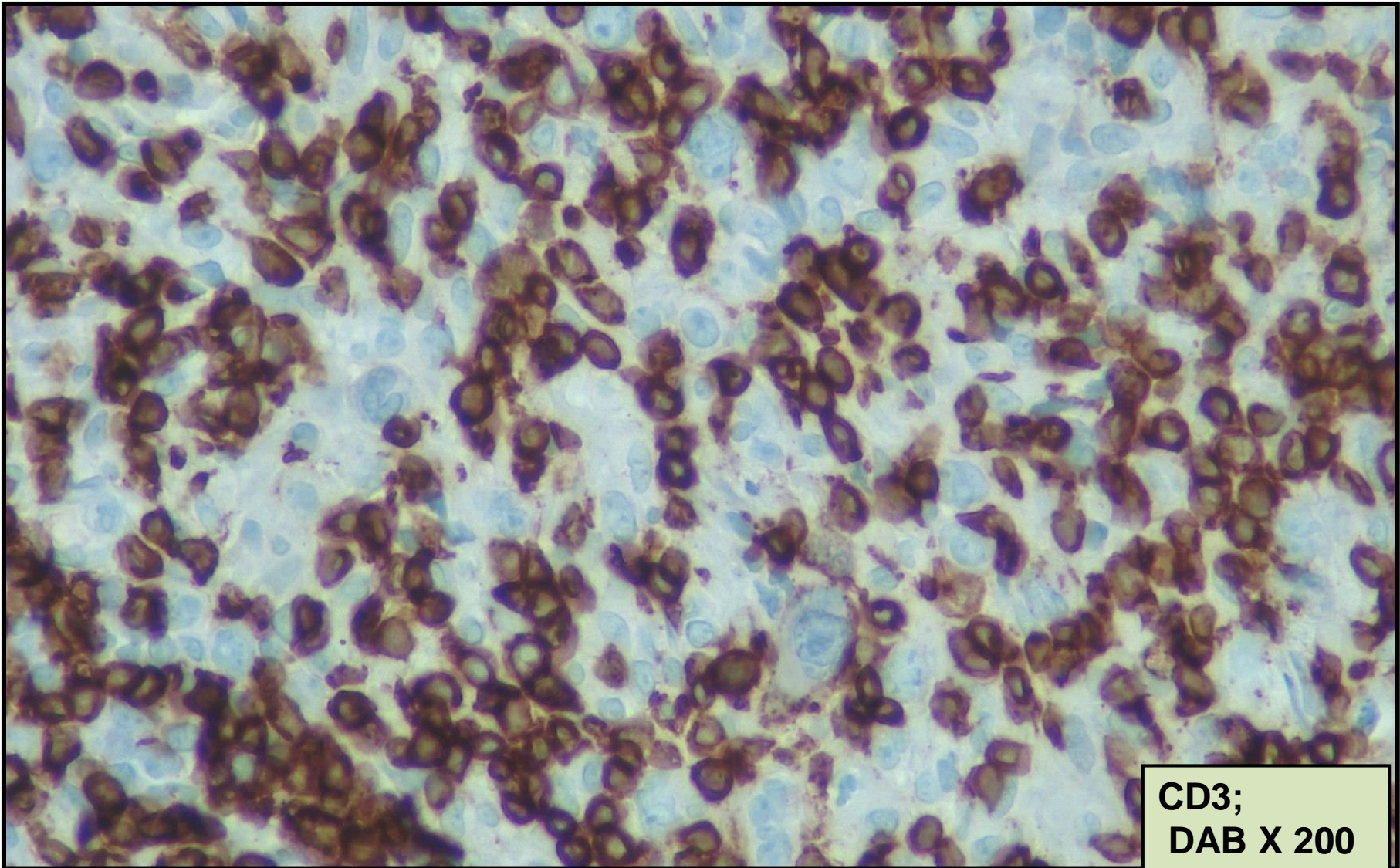
**CD20;
DAB X 200**



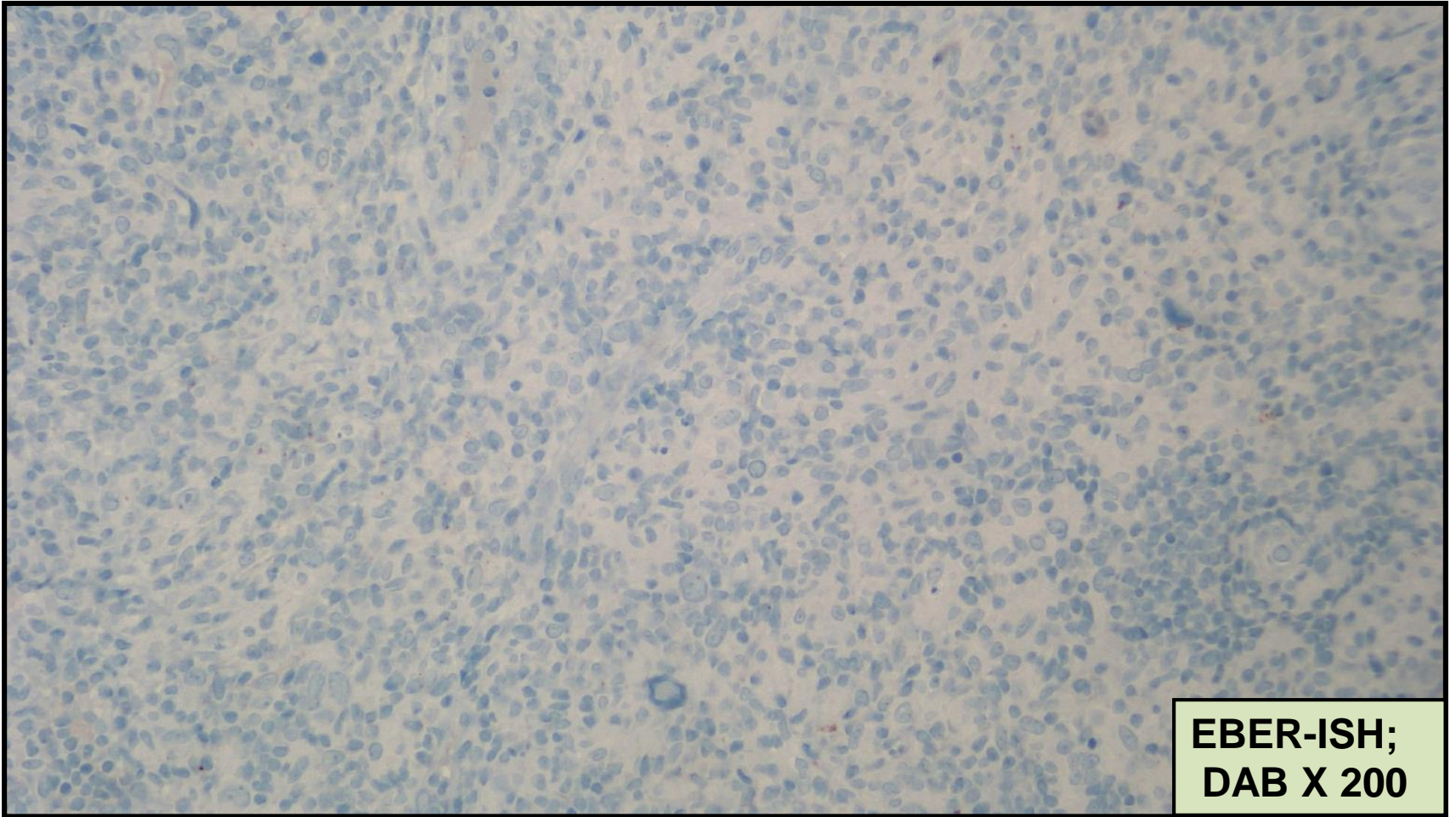
**PAX5;
DAB X 200**



**CD15;
DAB X 200**



**CD3;
DAB X 200**



**EBER-ISH;
DAB X 200**

Summarizing IHC Findings in Tumor cells

Positive markers	Negative markers
CD30	CK
CD20	CD45
CD15	BCL6
PAX5 (WEAK)	CD3
	EBER

Diagnosis

- Classical Hodgkins Lymphoma, Presenting as Left breast Lump
- Clinikoradiologic correlation was advised to rule out the possibility of Primary Breast Lymphoma (PBL) and staging.

Subsequent PET-CT Scan

- Left breast: Metabolically active soft tissue lesion in UOQ – 2.1x1.4cm, SUV max 8.8
- Multiple metabolically active supradiaphragmatic lymphnodes including cervical, mediastinal, axillary, pectoral, internal mammary group of lymph nodes
- Extranodal metabolically active pleural deposits and lytic/sclerotic lesion in sternum (Non-contiguous spread)
- No other metabolically active disease elsewhere.

Final Impression and Staging

- **Classical Hodgkins Lymphoma** presenting as left breast lump under evaluation
- In view of widespread disease, possibility of PBL was ruled out
- Stage: IVB, E
- Treatment Plan: 6 cycles of ABVD with interim evaluation by PET-CT after 2 cycles

Discussion

- This case has been presented because of its rarity as the primary presentation at this site (breast).
- The microscopic diagnosis of CHL at this site may be challenging and requiring a comprehensive IHC panel for the accurate diagnosis.
- As per literature, primary breast lymphoma (PBL) comprise 0.5% of primary malignant tumor of breast and almost all cases are NHL
- CHL of breast is exceedingly rare

Diagnostic criteria for primary breast lymphoma (PBL)

- **Wiseman and Liao** originally defined specific criteria for the diagnosis of PBL :
 - The clinical site of presentation is the breast
 - A history of previous lymphoma or evidence of widespread disease are absent at diagnosis.
 - Lymphoma is demonstrated with close association to breast tissue in the pathologic specimen.
 - Ipsilateral lymph nodes may be involved if they develop simultaneously with the primary breast tumor.
- This definition of PBL comprises only tumors that are stage I (lymphoma limited to the breast) and stage II (lymphoma limited to the breast and axillary lymph nodes), excluding those tumors that may have originated at nonbreast sites.

- Our case although had breast as primary presentation, PET-CT revealed widespread disease, excluding PBL as final diagnosis
- The chemotherapy regimen does not differ for Hodgkins lymphoma based on primary sites
- However, awareness of the rare sites of extranodal primary presentation in CHL is essential , due to its distinct therapeutic implications