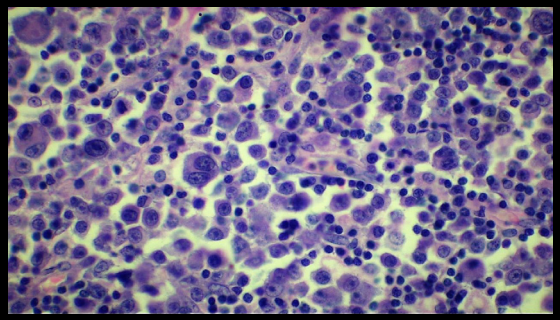
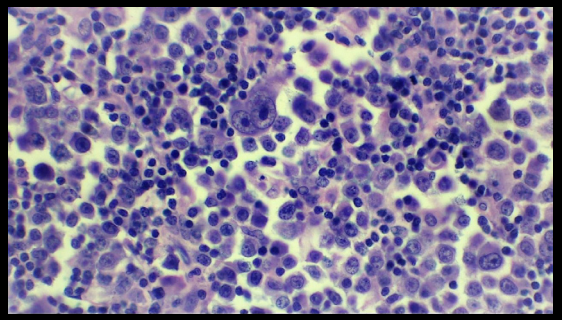
Differential diagnoses considered on morphology included: Classical Hodgkin lymphoma, high grade B-cell NHL including plasmablastic lymphoma, anaplastic large cell lymphoma, metastatic poorly differentiated carcinoma, metastatic melanoma and metastatic seminoma.

Extensive immunohistochemical work up was performed and tumor cells were found to be immunoreactive for CD138, MUM1, LCA (heterogenous expression), ALK 1 (diffuse cytoplasmic granular staining) and BCL6 while being non-immunoreactive for CK, S100, SALL4, CD30, B cell markers (CD20, PAX5, CD79a and CD19), T cell markers (CD3, CD5, CD7, CD4, CD8), tdt and cyclin D1. Ki-67 proliferation index was 50-60%.

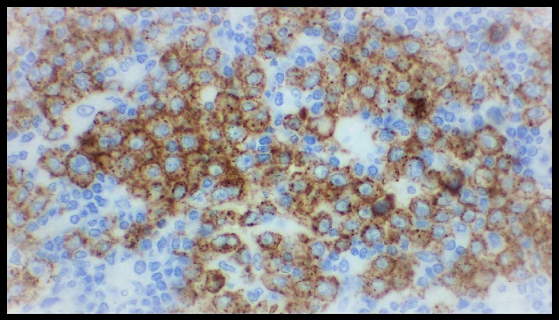
Based on distinct histologic and immunohistochemical phenotype, a diagnosis of ALK- positive large B cell lymphoma (ALK+ LBCL) was established.



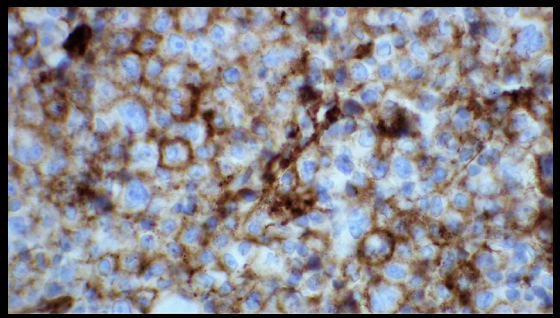
HE



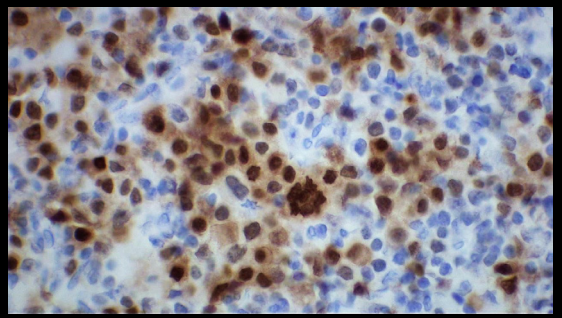
HE



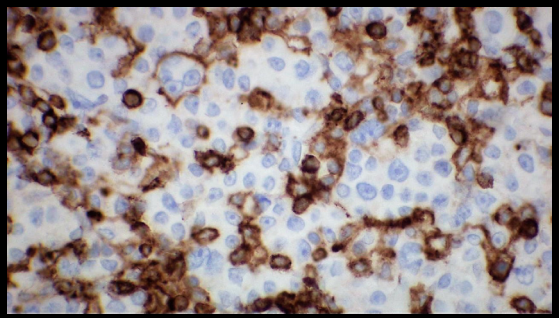
ALK1



CD138



MUM1



CD45