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Answer: Diffuse large-B cell lymphoma (DLBCL)

There are over 30 different subtypes of Non-Hodgkin Lymphoma recognised within the World Health Organisation (WHO) classification and marked heterogeneity exists within subtypes.² Immunohistochemistry is used to differentiate the different types and subtypes. CD20 is the most widely used in pan-B-cell marker, whilst CD3 is the most commonly used pan-T-cell marker.³ In this case, staining was positive for CD 20 (**Panel C**) but negative for CD3 and the morphological features showed moderate to large size cell with irregular vesicular nuclei, consistent with diffuse large-B-cell lymphoma (DLBCL).

Evaluation of a neck mass include a thorough history and a detailed head and neck examination. In general, enlarged lymph node is the most common cause of neck masses encountered with infection being the most common cause of cervical lymphadenopathy. In acute inflammatory diseases, the masses tend to be soft, tender with erythematous skin whereas in chronic inflammatory diseases, the masses are often non-tender, rubbery and either mobile or matted.

Differential diagnosis of necrotic lymph nodes includes tuberculosis, Kikuchi disease, metastatic head and neck squamous cell carcinoma and lymphoma. With advanced imaging, it is now possible to visualise the complex anatomy and pathology of the neck region. Necrotic lymph node is an uncommon finding in lymphoma. A review of computed tomography scan of patients (n=68) with confirmed head and neck lymphoma reported that only one in 18 patients with Hodgkin lymphoma and three in 23 with non-Hodgkin lymphoma had necrotic lymphadenopathy.¹

Fine-needle aspiration (FNA) or biopsy may be performed but open biopsy is warranted when FNA result is inconclusive. If the mass is believed to be a metastatic lesion, a panendoscopy of the aero-digestive tract is mandatory. Serum lactate dehydrogenase (LDH) is commonly elevated in lymphoproliferative diseases. However it is not a diagnostic test for lymphoma. Elevated LDH are also seen in cases of Ewing sarcoma, testicular cancer, cardiac failure and hypothyroidism. In Non-Hodgkin Lymphoma, the serum LDH is commonly used to assess treatment response and monitors disease recurrence.

REFERENCES

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 - 2:** Jaffe ES, Harris NL, Stein H, Vardiman JW eds. World Health Organization Classification of Tumors. Pathology and Genetics of Tumors of Haematopoietic and Lymphoid Tissues. Lyon: IARC Press; 2001.
 - 3:** Higgins RA, Blankenship JE, Kinney MC. Application of immunohistochemistry in the diagnosis of non-Hodgkin and Hodgkin Lymphoma. *Arch Pathol Lab Med.* 2008; 132:441-61.
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