

Images in IDEXX pathology report help diagnose oral epitheliotropic lymphoma

Tigger

Patient: Tigger, a 16-year-old, neutered male shih tzu.



Presenting reason: Tigger presented with a 2–3 week history of a right maxillary mass with halitosis, which was minimally responsive to cefovecin sodium and prednisone.

History: Tigger had a history of oral malignant melanoma of the left mandible diagnosed 1 year previously, which was treated with radiation therapy in combination with the melanoma vaccine. No recurrence of local disease or metastatic disease had been reported since that time. Within the previous several days, Tigger had a mild decrease in appetite with a decline in energy level.

Physical examination

Tigger was quiet, alert, and responsive on examination. Abnormalities identified included a heart murmur, a red-purple smooth mass (3 cm x 2 cm) associated with the right maxillary molars, a small erythematous dermal mass on the right neck, and firm enlarged (1 cm) bilobed mandibular lymph nodes.



Figure 1. Oral mass.

Diagnostic plan

A complete blood count (CBC), chemistry panel, chest radiographs, and fine-needle aspiration (FNA) cytology of both mandibular lymph nodes and the right neck mass were performed.

Blood work

The main abnormality on the CBC and chemistry panel was evidence of gastrointestinal bleeding, including hypoalbuminemia and increased BUN relative to creatinine. This was considered likely due to swallowing blood from the oral mass given Tigger's lack of other gastrointestinal signs.

Chest radiographs

Normal without evidence for metastatic disease.

FNA cytology of right and left mandibular lymph nodes

Interpretation was malignant round/discrete cell neoplasia with lymphoma as a top consideration, although malignant melanoma could not be ruled out given the clinical history and cytologic appearance. Additional diagnostic testing was recommended to further characterize the neoplastic population, including flow cytometry of the lymph node aspirates and biopsy with histopathology of the oral mass and/or the lymph nodes.

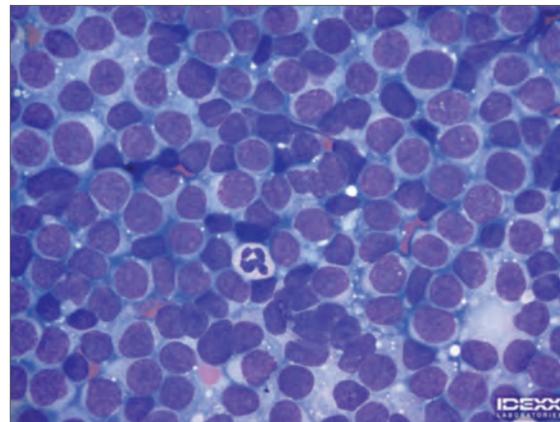


Figure 2. Cytology image.

FNA cytology of right neck skin mass

Interpretation was mild histiocytic inflammation with few mesenchymal cells, and given the low cellularity of the specimen, biopsy with histopathology was recommended, if clinically appropriate, to rule out underlying neoplasia that may not have been represented within the cytology specimen.

Consultation with IDEXX pathologist who read the cytologic specimens

The clinical presentation was strongly suspicious for oral melanoma given the gross appearance of the right maxillary mass along with the clinical history of a prior oral melanoma. In consultation with the double-boarded anatomic and clinical

pathologist that read the cytologic specimens, the pathologist reiterated that although melanoma can have a round cell appearance, the cytology was more convincing for lymphoma than for metastatic melanoma. A flow cytometry specimen of the affected lymph node was submitted since it already had been collected, but the oncologist indicated that “it was the photo in the cytology report that convinced me I should biopsy,” and a subsequent biopsy of the oral mass was performed and submitted to IDEXX Reference Laboratories.

Flow cytometry of lymph node aspirate

Flow cytometry is a test that evaluates a lymphoid population within the lymph node for cell size characteristics and for a series of cell surface markers to indicate whether the population is a mixed population or a monomorphic population with a certain pattern of cell surface marker expression. In this case, the flow cytometry findings from the mandibular lymph node specimen were diagnostic for T-cell lymphoma.



Figure 3. Flow cytometry report in IDEXX VetConnect® PLUS.

Biopsy of oral mass

The biopsy results indicated that the oral mass was epitheliotropic lymphoma, which is a subtype of T-cell lymphoma that can affect the skin and the oral cavity in dogs. This can be a slowly progressive form of lymphoma, but it can spread to involve the lymph nodes and eventually other internal organs.

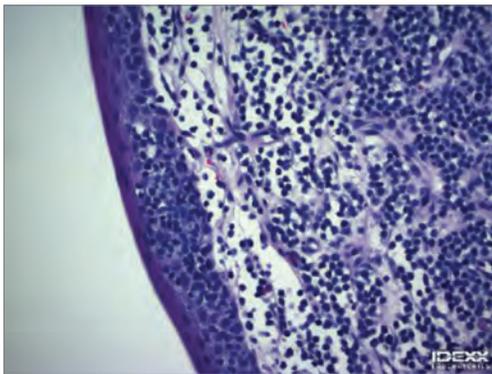


Figure 4. Biopsy image.

Based on the cytology, flow cytometry, and biopsy results, the findings were consistent with an oral epitheliotropic lymphoma, rather than the oral melanoma suspected clinically, with subsequent metastasis to the mandibular lymph nodes.

Case outcome

Tigger was referred to a radiation oncologist to follow up with radiation therapy for the oral lymphoma. A biopsy of the right neck skin mass that had been previously aspirated was performed and was also consistent with epitheliotropic lymphoma. Based on this finding along with the presence of a large abdominal mass and multiple pulmonary nodules on a CT scan, as well as Tigger’s worsening appetite, the owner elected for humane euthanasia.

Benefit of images in IDEXX pathology reports

The clinical history in this patient coupled with the clinical appearance of the oral mass were suggestive of an oral melanoma in Tigger, but the cytologic findings, and especially the images of the neoplastic cells within the cytology report, prompted the oncologist in this case to pursue further diagnostics to investigate for lymphoma. This additional diagnostic testing led to a definitive diagnosis of oral epitheliotropic lymphoma with additional cutaneous, lymph node, and potentially internal organ involvement. Images in IDEXX pathology reports, available exclusively in IDEXX VetConnect® PLUS, offer veterinarians a more comprehensive view of their results and can aid in clinical decision making. Additionally, these pathology images provide a powerful visual tool that helps communicate diagnosis and treatment options to the pet owner.



Figure 5. Pathology report in IDEXX VetConnect PLUS.

The information contained herein is intended to provide general guidance only. As with any diagnosis or treatment, you should use clinical discretion with each patient based on a complete evaluation of the patient, including history, physical presentation and complete laboratory data. With respect to any drug therapy or monitoring program, you should refer to product inserts for a complete description of dosages, indications, interactions and cautions.