New Diagnostic Panel to Accurately Differentiate Feline Intestinal Lymphoma from Inflammation

A geriatric cat presents with vomiting and diarrhea. Is it primary intestinal lymphoma, inflammatory bowel disease (IBD), or hypersensitivity? DCPAH now offers a panel of tests to distinguish between these differentials with a high degree of certainty. Microscopic analysis alone yields highly variable diagnoses, particularly when practitioners submit endoscopic samples as opposed to full-section biopsies. This panel uses an experimentally-developed diagnostic algorithm to improve diagnostic certainty, allowing practitioners to more confidently choose treatment options for the animals under their care. The feline lymphoma panel includes microscopic evaluation, immunohistochemical (IHC) phenotyping, and confirmatory PCR for lymphocyte clonality.

Microscopic evaluation of the routine formalin-fixed biopsy sample (endoscopic or full thickness) is used to screen for morphologic hallmarks of lymphoma, including marked lymphocytic infiltration of the muscularis (full thickness samples only) and epitheliotropism (nests or plaques of lymphocytes accumulating within the epithelial layer). IHC is then used to differentiate between B and T cells, also visualizing the location of T-lymphocytes in the epithelial layer and identifying heterogeneous inflammatory cell populations versus homogeneous neoplastic cell infiltrates.

The diagnosis is confirmed based on the combined interpretation of morphology and IHC results, or—if the diagnosis is inconclusive—PCR tests for T- or B-lymphocyte clonality are run as needed to differentiate neoplastic and inflammatory lymphocytes. PCR evaluations are always performed in duplicate and native as well as denatured gel electrophoresis is used to eliminate the potential for false positive results. Research indicates that the use of single PCR tests only to determine lymphocyte clonality quite commonly leads to false positive results (pseudoclones).

Histology, IHC, and PCR results interpreted in context dramatically increase diagnostic certainty in differentiating feline intestinal lymphoma from inflammation, in particular IBD. All tests can be performed on routine formalin-fixed biopsy material as well as previous biopsy submissions. Refer to our Fee Schedule or Available Tests link on our website for current pricing. For more information on the feline lymphoma panel, contact Dr. Matti Kiupel at 517-353-5275.