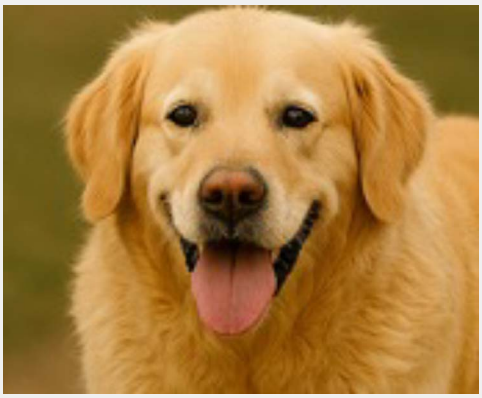
Early detection of lymphoma during wellness screening

Case summary[1]

+ Two clinically well senior dogs identified with lymphoma during routine wellness screening using IDEXX Cancer Dx™ testing.
+ Follow-up diagnostics confirmed multicentric lymphoma in both cases.
+ Early detection enabled timely oncology referral and owner decision-making.



Annie, 10-year-old, spayed female golden retriever

Ruger, 10-year-old, neutered male Australian shepherd

History

Annie and Ruger presented to their respective veterinarians for routine senior wellness visits. Both dogs had unremarkable medical histories other than Annie having a history of chronic stable asthma.

Physical examination

Both patients were bright, alert, and responsive with normal vital parameters. Annie's chronic mild asthma was stable, and she was moderately overweight. Neither dog had palpable lymphadenopathy or clinical abnormalities suggestive of lymphoma or other signs of cancer.

Diagnostic plan

Routine senior wellness panels, including CBC, comprehensive chemistry, IDEXX SDMA testing as well as IDEXX Cancer Dx testing were performed at the reference lab. Both veterinarians included IDEXX Cancer Dx testing as part of proactive wellness screening in at-risk dogs.*

Diagnostic review

IDEXX Cancer Dx testing returned results consistent with lymphoma with indeterminate phenotypes in both dogs, despite lack of clinical signs. These unexpected findings prompted focused follow-up discussions with the owners.

IDEXX Cancer Dx testing

Hematology/chemistry

Annie's chemistry showed a moderate elevation of SDMA, indicating decreased glomerular filtration rate (GFR). Her CBC showed mild anemia and slight monocytosis.

Ruger's chemistry and CBC were within normal limits.

Both veterinarians discussed next steps with the owners of Annie and Ruger. The options provided were the following:

+ Monitor at home for clinical signs with a recheck in 4–8 weeks
+ Pursue additional diagnostics

Follow-up diagnostics

Annie

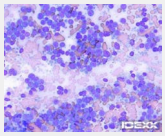
Annie's owners elected to schedule imaging to include thoracic radiographs and an abdominal ultrasound. Three-view thoracic radiographs revealed mild bronchiolar pattern, which was consistent with asthma, but there were no metastatic changes. Abdominal ultrasound identified mild splenomegaly with mixed echogenicity. Fine needle aspirate of the spleen confirmed intermediate-to-large cell lymphoma. Diagnosis: Stage IV, substage a multicentric lymphoma.

Ruger

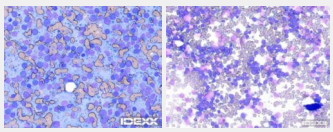
Ruger's owners proceeded with three-view thoracic radiographs and an abdominal ultrasound. Radiographs were unremarkable, and the abdominal ultrasound revealed mesenteric lymphadenopathy, which prompted sampling of more accessible normal-sized peripheral lymph nodes. Cytology of a submandibular lymph node supported lymphoma, and polymerase chain reaction for antigen receptor rearrangement (PARR) testing identified clonal immunoglobulin gene rearrangement consistent with B-cell lymphoma. Diagnosis: Stage III, substage a multicentric lymphoma.

Cytology

Annie

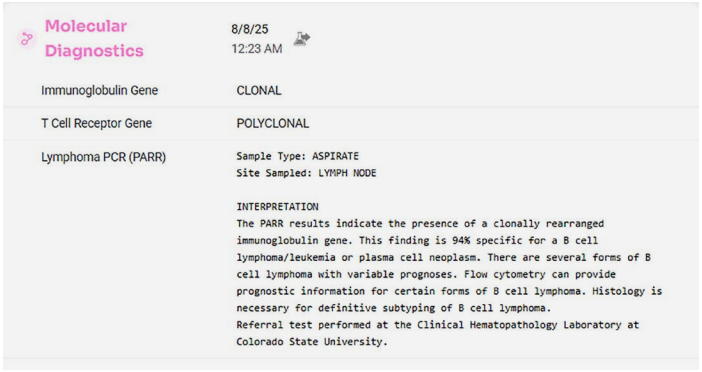
Images	
Cytology source:	SPLEEN
Clinical history:	Lymphoma screen positive; abdominal lymphadenopathy, reactive mesentery and splenic and liver changes consistent with LSA; Liver samples were lower quality—splenic sample submitted for review
Pathology report:	INTERPRETATION: Lymphoma

Ruger

Images	
Cytology source:	LYMPH_NODE_SUBM
Clinical history:	IDEXX Cancer Dx lymphoma—resample to determine if bilateral or unilateral and run PARR
Cytology source 2:	LYMPH_NODE_SUBM
Clinical history 2:	IDEXX Cancer Dx lymphoma—resample to determine if bilateral or unilateral and run PARR
Pathology report:	INTERPRETATION: Lymphoma—intermediate large cell type

Molecular diagnostics

Ruger



Molecular Diagnostics

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Immunoglobulin Gene	CLONAL
T Cell Receptor Gene	POLYCLONAL
Lymphoma PCR (PARR)	Sample Type: ASPIRATE Site Sampled: LYMPH NODE INTERPRETATION The PARR results indicate the presence of a clonally rearranged immunoglobulin gene. This finding is 94% specific for a B cell lymphoma/leukemia or plasma cell neoplasm. There are several forms of B cell lymphoma with variable prognoses. Flow cytometry can provide prognostic information for certain forms of B cell lymphoma. Histology is necessary for definitive subtyping of B cell lymphoma. Referral test performed at the Clinical Hematopathology Laboratory at Colorado State University.

Diagnosis

Both dogs were diagnosed with multicentric lymphoma, and each diagnosis was confirmed through a combination of imaging, cytology, and molecular testing. Despite normal clinical presentations, IDEXX Cancer Dx testing enabled accurate, early identification of disease.

Treatment

Both patients were referred to veterinary oncology services, where advanced treatment options were discussed. Owners in each case expressed appreciation for early detection, which allowed them more time to consider therapeutic pathways before clinical decline occurred.

Discussion

The role of IDEXX Cancer Dx testing in early detection and preventive care.

Lymphoma is the most common hematopoietic malignancy in dogs, with diffuse large cell lymphoma being the most frequently diagnosed subtype.[2] Traditionally, diagnosis occurs after clinical signs, such as generalized lymphadenopathy, become apparent and often at advanced stages of disease. This delay limits therapeutic options and may compromise outcomes. Conventional diagnostic methods—palpation, cytology, and imaging—are effective but rely on visible or palpable abnormalities, which may not be present in early disease and may not be indicated in dogs presenting for routine wellness examinations.

IDEXX Cancer Dx testing addresses this gap by leveraging circulating biomarkers to detect lymphoma before clinical signs emerge. As a blood-based assay, it avoids limitations associated with tissue sampling and specimen quality, delivering strong diagnostic performance with a specificity of 99% and sensitivity of 79%.[3] In these cases, both dogs were clinically normal, yet IDEXX Cancer Dx testing identified a lymphoma signal that prompted timely follow-up diagnostics and confirmed multicentric lymphoma. This early detection allowed owners to make informed decisions and pursue oncology referrals before clinical decline occurred.

Beyond its diagnostic utility, IDEXX Cancer Dx testing represents a significant advancement in preventive care. Integrating this test into routine wellness screening for at-risk dogs* transforms a standard visit into an opportunity for early investigation and intervention. Key preventive benefits include the following:

+ Early detection: Occult lymphoma can be identified months before clinical manifestation, enabling proactive management.
+ Guided follow-up: Positive results direct targeted imaging, cytology, and molecular testing, streamlining diagnostic workflows.
+ Enhanced client communication: Early findings foster informed discussions, improving compliance and emotional preparedness.
+ Improved outcomes: Timely referral and treatment planning increase the likelihood of successful therapy and quality-of-life preservation.

By incorporating IDEXX Cancer Dx testing into wellness protocols, veterinarians elevate the standard of care, offering clients reassurance and pets the best chance for long-term health. These cases illustrate how preventive diagnostics can shift the paradigm from reactive treatment to proactive disease management, reinforcing the value of early detection in veterinary oncology.

The clinical signs and diagnosis of the cases presented here are specific to these patients. Diagnostic and treatment decisions are the responsibility of the attending veterinarian.

*At-risk dogs include all dogs ≥ 7 years old and high-risk breeds ≥ 4 years old.

References

1. Connell D, Nascimento A, Helm Z, Michael H. Early detection of lymphoma by IDEXX Cancer Dx testing in 7 cases. Poster presented at: Veterinary Cancer Society Annual Conference; September 25–27, 2025; Salt Lake City, UT.
2. Vail DM, Pinkerton M, Young KM. Hematopoietic tumors. In: Vail DM, Thamm DH, Liptak JM, eds. *Withrow & MacEwen's Small Animal Clinical Oncology.* 6th ed. Saunders; 2020:688–772. doi:10.1016/B978-0-323-59496-7.00033-5
3. Data on file at IDEXX Laboratories, Inc. Westbrook, Maine USA: Data based on testing performed at IDEXX Reference Laboratories in North America between November 1, 2024, and December 6, 2024. *Analysis Report: IDEXX Cancer Dx Validation, 100282* [008_CancerDx-Validation-Report-2.Rmd].