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Enable early detection for the most common cancers.

Nu.Q[®] Vet Cancer Test clinical reference guide



Canine cancer is incredibly common.



Approximately 1 in 4 dogs in the U.S. will be diagnosed with cancer in their lifetime.¹





6 million dogs in the U.S. are diagnosed with cancer each year.²

Cancer is the leading cause of death in adult dogs.³

For many cancers, patients aren't diagnosed until the later stages and clinical signs are present. These types of situations often lead to poorer outcomes and lower survival rates.



Some of the canine cancers that veterinarians encounter:

- + Lymphoma up to 24% of all new canine cancers are lymphoma⁴
- + Hemangiosarcoma malignant tumors derived from the cells lining blood
- + Osteosarcoma most common primary bone tumor, accounts for 85% of all skeletal tumors and are quite aggressive⁴
- + Mast cell tumors most common skin tumors in dogs⁴
- + Malignant melanoma most commonly occurs on the skin, in the mouth, and on the toenails
- + Histiocytic sarcoma an uncommon, but especially aggressive cancer

Cancer risk in dogs is greatly shaped by two factors: age and breed.

Studies show that the risk of cancer increases with age.⁵



The average age of dogs diagnosed with cancer.⁵

Cancer screenings are recommended for all dogs over the age of 7 as well as younger dogs ages 4 and older with an increased risk of cancer in these breeds:

- + Labrador retriever
- + French bulldog
- + Golden retriever
- + German shepherd
- + Beagle
- + Rottweiler
- + Boxer
- + Pembroke Welsh corgi

- + Great Dane
- + Miniature schnauzer
- + Siberian husky
- + Bernese mountain dog
- + Mastiff
- + Irish wolfhound
- + Flat-coated retriever
- + Scottish wolfhound



Decrease the possibility of illness going undetected by expanding your preventive care offering.

Preventive care allows veterinarians to catch health issues earlier and help pets live healthy lives. With comprehensive diagnostics from IDEXX, you can get a deeper medical insight into your patients' health.

However, when it comes to cancer detection, the diagnosis often comes too late in the game. Until now, there has been no easy, affordable screening test that could be integrated into a wellness offering.



Nu.Q[®] Vet Cancer Test

An accessible and affordable solution for early cancer detection.

Help detect cancer as an additional component of your IDEXX Preventive Care diagnostics for all dogs over 7 years old and as early as 4 years old for breeds with increased risk of cancer.



How it works.

A nucleosome is a bead-like structure comprised of DNA coiling around a histone protein core. When cells die, nucleosomes are released into the blood. The Nu.Q[®] Vet Cancer Test is an enzymelinked immunosorbent assay (ELISA) containing a capture antibody directed at histone 3.1 and a nucleosome detection antibody. By measuring circulating nucleosomes, the Nu.Q[®] Vet Cancer Test can identify patients who may have cancer.

Conditions that result in increased circulating nucleosome concentration:

- + Cancer
- + Sepsis*
- + Trauma*
- + Immune-mediated disease*
- + Systemic Inflammation*
- + Patients not fasted a minimum of 4 hours before blood specimen collection*

*If these conditions are suspected, screening is not recommended

Conditions that DO NOT result in increased circulating nucleosome concentration:

- + Chronic inflammatory conditions
- + Systemic inflammation being treated medically and not "flaring"
- + Hypothyroidism
- + Renal disease
- + Osteoarthritis
- + Mild/moderate pyoderma

In a peer-reviewed, published validation study, the Nu.Q[®] Vet Cancer Test detected **49.8% of all cancers researched and 76% of systemic cancers at 97% specificity.**⁹

Overall detection rate of 7 common canine cancers:6



Nu.Q® Vet Cancer Test clinical workflow

THE VISIT

TEST AND RESULTS

< 50 ng/mL

Retest as part of next wellness visit or sooner if clinical signs develop

Canine wellness visit

- + Patient history
- + Physical exam
- Preventive care diagnostics
 CBC, chemistry profile with IDEXX SDMA testing, IDEXX 4Dx[®] Plus Test, Fecal Dx[®] antigen testing (with or without additional diagnostics based on patient demographic)

Additional cancer diagnostics desired due to the following:

+ Dog more than 7 years old

- + At-risk breed
- + Dog owner preference

Nu.Q[®] Vet Cancer Test

Moderate risk for cancer

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50-80 ng/mL

Low risk for cancer

animals. If clinical suspicion

of cancer exists. additional

hay represent early-stage cancer of cancers with low levels of circulating nucleosomes. Ensure patient was fasted for a minumum of 4 hours before specimen was collected. Collect new fasted specimen if necessary. If clinical suspicion of cancer exists, additional diagnostics should be used to establish a definitive diagnosis of cancer.

If patient is clinically healthy, retest in 1 month

High risk for cancer > 80 ng/mL

Consistent with nucleosome concentrations found in common canine cancers, including lymphoma and hemangioscarcoma. Increased nucleosome concentrations identity patients who may have cancer. However, additional diagnostics should be pursued to establish a definitive diagnosis of cancer.

NEXT STEP

Investigate suspected cancer

+ Repeat physical exam

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- + Review CBC/chemistry profile/ urinalysis
- + 3-view chest radiographs
- + Abdominal ultrasound
- + Other diagnostics if indicated (endoscopy, MRI, CT, etc.)

Diagnose and characterize cancer

Collect specimens for pathology testing.

Follow these steps to ensure accuracy in specimen processing.



Patient must fast for a minimum of 4 hours prior to blood collection.



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Centrifuge the specimen within 60 minutes of collection (1,600 x g for 10 minutes).



Store the specimen in a refrigerator until submission, and ship it with a cold pack to IDEXX Reference Laboratories using your clinic's routine submission method.



(5)

Draw 2–5 mL of blood from peripheral vein.

Transfer spun plasma specimen to a nonadditive tube (be careful to not disturb buffy coat).



View results in VetConnect® PLUS alongside preventive care diagnostics for a holistic view of a patient's health.

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Immediately fill lavender-top tube (LTT; EDTA) with the blood specimen.

Run alongside IDEXX Preventive Care Simple Start profiles and other wellness profiles.

Nu.Q[®] Vet Cancer Test (test code 8993)

For cancer, this may include one or more of the following: 3-view chest radiographs, ultrasonography, computed tomography, MRI, or endoscopy. Appropriate specimens should be collected for pathology testing to achieve a definitive cancer diagnosis.

Get the support you need when there's no time to waste.

Diagnosing cancer can be difficult, but the expanded cancer offering at IDEXX Reference Laboratories can help.

The cancer diagnostics test and service menu at IDEXX Reference Laboratories can help identify cancer, understand personalized genetic markers, and determine diagnostics for therapy management and monitoring.



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Personalized guidance from diagnosis to treatment.

Get the support that you need from the largest global network of veterinary pathologists and medical consultants at IDEXX Reference Laboratories:

- + Clinical support for routine and complex pathology cases
- + Easy access to your case's pathologist by phone and email, and consistency with a dedicated pathologist from start to finish
- + Education on when and which diagnostics are best for personalized medicine
- + Evaluation of surgical margins
- + Internal case review and collaboration
- + Comments about biological behavior and etiology
- + Cytology interpretation from a board-certified clinical pathologist in 2 hours or less, 24/7/365, with IDEXX Digital Cytology™*

Expand your pathology insights with VetConnect PLUS

Everything you need for faster, effective clinical decisions all in one place:

- + High-resolution digital images of your cytology and biopsy cases included at no charge, exclusively with VetConnect[®] PLUS
- + Access to each patient's comprehensive diagnostic information (CBC, chemistry profile, urinalysis, digital radiography) in one place for a holistic view in VetConnect PLUS



Our comprehensive diagnostic portfolio gives you clarity.

The cancer diagnostics test and service menu gives you the answers you need, when you need them:

Cancer identification

- + Digital cytology*
- + Priority cytology
- + Priority biopsy
- + Bone Marrow Cytology and Biopsy with Microscopic Description (test code 6070)

Cancer characterization

- + Mast cell tumor prognostic panel
- + Immunocytochemical staining as recommended by pathology
- + Immunohistochemistry as recommended by pathology
- + Lymphoma clonality (PARR)

Genomic test for treatment selection suggestions FidoCure® DNA Sequencing Panel Add-on to Biopsy (test code 8978)

Treatment monitoring

- + Cancer Baseline Profile with Urinalysis (test code 8975)
- + Cancer Baseline Profile and SediVue Dx® Urinalysis⁺ (test code 8975S)
- + Chemotherapy Recheck Profile (test code 8976)
- + Chemotherapy Recheck Profile with Urinalysis (test code 8977)



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IDEXX

One IDEXX Drive Westbrook, ME 04092 United States

> idexx.com/nuqresources

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