

FLYER



Diagnosing Hyperthyroidism in the Geriatric Feline

Studies have shown that measurement of a single random serum T4 concentration has reliably diagnosed hyperthyroidism in 90% of afflicted cats.

Although T4 levels do fluctuate in hyperthyroid cats, the fluctuations, even at their lowest, tend to be above the reference range.

An exception to this caveat is the cat with *mild* hyperthyroidism, i.e. minimal clinical signs and slightly elevated T4. This cat may have a single serum T4 level in the normal range. In these cases, the veterinarian should not rule out hyperthyroidism based solely on one normal test result, but should instead review the case for appropriate clinical signs and a palpable thyroid nodule. If after review, the veterinarian is convinced that the cat has hyperthyroidism, a second serum T4 concentration should be determined. The timing of this determination should be days to weeks after the initial result, since thyroid hormone concentrations vary more over a period of days, rather than hours.

If the serum T4 is still non-diagnostic at this point, and other causes of the clinical signs have been ruled out, then further testing such as *free* T4 or T3 suppression testing can be pursued. Total T4 measures both the protein-bound fraction (more than 99%) and the free, unbound, active portion (< 1%). The advantage of measuring fT4 is that it is more "sensitive" than the total T4 in hyperthyroid cats. This means that if a cat has hyperthyroidism, it is more likely to have an abnormal result. However, the disadvantage is that the fT4 is less specific for hyperthyroidism. This means that cats without the disease of hyperthyroidism may also have abnormal test results.

In summary, we recommend total T4 concentrations as the first screening test for feline hyperthyroidism. If suspected cats are severely ill, and the total T4 concentrations are normal, it is unlikely that hyperthyroidism, alone, is the cause of the illness. The total and free T4 concentrations can be suppressed in animals with severe illness from other causes. In cats with mild clinical signs with serial "normal" T4 concentrations, we recommend a *free* T4 assay or T3 suppression testing.

-E. Settles, DVM, DACVIM

IMMUNOHISTOCHEMISTRY at Phoenix Central Lab

The Laboratory is pleased to announce the implementation of in-house immuno-histochemistry (IHC) as a supplement to evaluate neoplasms. Samples that are routinely submitted for diagnostic purposes can be used for this process. The turnaround time will be significantly decreased because of performance of this test in-house.

The markers that we currently have include specific markers of B-cell lymphocytes. These identify B-cell lymphomas which are the most common type of lymphoma in dogs and cats. We also have markers for T-cell origin for less common lesions. These include epitheliotropic lymphomas, a marker for macrophages for tumors such as histiocytic sarcomas, a melanocytic marker for melanocytic neoplasms, and epithelial versus mesenchymal markers to distinguish carcinomas from sarcomas.

With the advancements in therapy for a wide variety of malignancies, IHC is becoming a routine procedure, particularly with poorly-differentiated neoplasms and lymphomas.

IHC will be performed weekly as necessary. Please feel free to call anytime with questions.

-B. Murnane, DVM, PhD, DACVP

PHOENIX CENTRAL LABORATORY

Excellence in Veterinary Science



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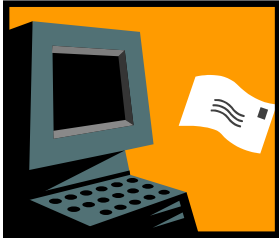
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Hyperthyroidism in the Geriatric Cat New: Immunohistochemistry
Featured Service: Internal Medicine Consults and ECGs

EDUCATION CORNER



Are we
keeping
you
posted?

Recently Released
Publications from Phoenix

If you have not received the following
Technical Bulletins, Updates, etc.,
please contact the Lab or go to our
website www.pclv.net for reprints.

Letter: Consultations/ECG's
Leptospirosis Statistics
PCLV website Resources
Leptospirosis in Western WA
Focus on Equine Medicine
Facts on Feces
Giardia and Cryptosporidium Testing
Microbiology: MIC Panel Change

Appearing here soon:
Upcoming WetLab Dates

FEATURED SERVICE

Internal Medicine

Written Consultations and ECG Interpretations

With the arrival of Dr. Elizabeth Settles, internal medicine consultations are back and better than ever.

In addition to the current phone consultation, now offered for your patient chart is a written consultation which correlates our laboratory information with your in-house lab results, as well as radiology and ultrasound findings. And, the best news: There is no charge for this service.

The service of ECG interpretation is new at Phoenix and is offered as Lead II – Interpretation and 6 Lead Interpretation. The ECG Interpretation report will include recommendations for further workup as well as medications. There is a small fee for the ECG interpretation which is detailed in the recent notice to all clients from Dr. Settles.

History forms for written internal medicine consultation and ECG interpretations are available at website www.pclv.net or by calling our Customer Service Department.

Dr. Settles is available Monday through Friday for consultation and interpretation of ECG's. Weekend requests will be generated on Monday. A turnaround time of 24 hours is the current goal. If results are needed sooner, please feel free to call the Laboratory for possible arrangements; 800-347-0043, 425-355-5252. .