

Diagnosing Feline Hyperthyroidism with the Thyroid Panel 10

A common endocrine disorder that can be masked by other diseases



Protecting Animal and Human
Health through Diagnostics

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Any breed of cat, regardless of sex, can be affected by hyperthyroidism. Most often, middle-aged to geriatric cats present clinical signs of weight loss, increased appetite, increased heart rate of greater than 200 beats per minute, and increased activity. Some exhibit excessive thirst and urination, panting and diarrhea, and have an unkempt look. Hyperthyroidism may mask itself as other common diseases, like diabetes or intestinal cancer; however, diagnostic testing using the Thyroid Panel 10 offered at the Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) can aid practitioners in confirming the diagnosis of hyperthyroidism in a timely and accurate manner.

Hyperthyroidism in the feline is almost always caused by an autonomous thyroid condition. Often, a serum blood test is all that is needed to confirm the diagnosis of hyperthyroidism with elevated thyroid parameters for confirmation. Practitioners can opt to run a CBC, chemistry analysis or urinalysis to rule out other diseases. If hyperthyroidism is suspected, TVMDL suggests screening by using the Thyroid Panel 10 to aid in the diagnosis.

Practitioners can select from the thyroid panels via tvmdl.tamu.edu. However, TVMDL's Thyroid Panel 10 is recommended for the feline. The Thyroid Panel 10 is performed in the endocrinology section at TVMDL daily. Samples are accepted at both full service locations, Amarillo and College Station.

The Thyroid Panel 10 includes:

- Triiodothyronine (T3)
- Thyroxine or Total T4 (T4)
- Free T4 (FT4)

PRICE: \$30.00 with a \$6.00 accession fee.

TURNAROUND: Performed in College Station Monday-Friday, with results in 1-2 business days. If samples arrive prior to 11 a.m., results are normally available the same day and never more than one business day.

The Thyroid Panel 10 includes both T4 and FT4 in addition to T3 in order to aid in the confirmation of hyperthyroidism. It is better to have two of three tested, if not all three, to confirm elevated levels and to be confident of the diagnosis. If a veterinarian chooses only to request one of the three tests offered by the Thyroid Panel 10, there is a chance that the diagnosis may not be confirmed. One of the three tests in the Thyroid Panel 10 may be normal or high-normal in the early hyperthyroid feline patient. Selecting the Thyroid Panel 10 speeds confirmation of diagnosis for the client.

TVMDL requires a minimum of 0.5 cc of serum in order to run the Thyroid Panel 10. Most cats with a normal T3 (ranging from 0.5 to 1.5 ng/ml), a normal T4 (ranging from 1.21 to 3.61 ug/dl) and FT4 (ranging 5 to 25 pmol/L) concentrations can be considered normal at that point in time. However, it has been demonstrated that a small percentage—approximately 2percent—of animals with normal T4 concentrations have ultimately been confirmed as hyperthyroid.

In these cases, the affected cat may have few clinical signs. An FT4 by dialysis aids in confirmation of early hyperthyroid cats. The range for FT4 by dialysis in the feline is 9 to 50 pmol/L. This test requires an additional 0.5 cc of serum.

FT4

PRICE: \$12.00 with a \$6.00 accession fee.

TURNAROUND: Performed in College Station Monday-Friday, with results in one business day.

Concentrations of T4 above 5.0 ug/dl are consistent with hyperthyroidism. The most common thyroid disorders appear to be benign tumors, such as an adenoma and multinodular adenomatous goiter; however, nutrition and environment can also contribute to borderline-to-high T4 concentrations.

For more information on the Thyroid Panel 10, or TVMDL's other thyroid tests, contact the College Station laboratory at 979-845-3414, or toll free at 1-888-646-5623.

Visit tvmdl.tamu.edu for a full list of tests and services.

About TVMDL:

The Texas A&M Veterinary Medical Diagnostic Laboratory protects animal and human health through diagnostics. An agency of the Texas A&M University System, TVMDL comprises two full-service laboratories, in College Station and Amarillo, and two poultry laboratories, in Center and Gonzales.

TVMDL is among 12 core laboratories in the National Animal Health Laboratory Network, a group of state and regional laboratories designed to provide a nationwide surge testing, response, and recovery capacity in the event of an animal disease outbreak.

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