

College of Veterinary Medicine
Clinical Pathology Laboratory

CLINICAL ENDOCRINOLOGY SUBMISSION

Laboratory Director:

Andrea Santos, DVM, PhD, DACVP

For Test Information or Results:

Phone # (765) 494-7563 Fax # (765) 494-8640

VETERINARIAN:

Name _____

Email _____

Clinic Name _____

Email _____

Address _____

City, State ZIP _____

Phone _____

Fax _____

Date Collected _____

OWNER:

Name _____

Chart # _____

Animal _____

Species _____

Breed _____

Sex _____

DOB _____

Clinical Signs/History:

Thyroid/Other Medications:

CANINE & FELINE THYROID EVALUATION

- T4 Basal & TSH Basal
- T4 Basal
- TSH Basal
- T4 Post Pill (4-6 Hr)

MISCELLANEOUS TESTING

Canine Endogenous ACTH *see submission instructions (EDTA plasma)

Canine Progesterone
Reason for Testing:

Breeding Predicting Birth

Phenobarbital

CANINE ADRENOCORTICAL EVALUATION

- Cortisol (Baseline Level)
- Post Cortisol (1 Hh)
- Post Cortisol (2 hr)
- Other: _____

ACTH Stimulation (Synthetic ACTH)

- Pre Cortisol
- Post Cortisol (1 Hr)

Low Dose Dex Suppression

- Pre Cortisol
- Post Cortisol (4 Hr)
- Post Cortisol (8 Hr)

High Dose Dex Suppression

- Pre Cortisol
- Post Cortisol (8 Hr)

Small Animal Endocrinology Information

Interpretation of Results:

Catharine Scott-Moncrieff, DMV, M.S., Diplomate ACVIM
scottmon@purdue.edu

Collection and Shipping Information:

General Instructions: Do not send whole or clotted blood for any test. Label all tubes with the patient's name/MRN, sample type, requested test, and time of collection (if part of a specific function test). Most of our tests require serum; please send a minimum of 0.5 ml of serum for each assay requested. Use plain glass clot tubes, allow clotting at room temperature, centrifuge as soon as possible, remove serum, and refrigerate until shipment. Shipment of serum samples in plastic tubes is recommended. The use of Serum Separator Tubes is not recommended by the manufacturer due to a potential 30% positive bias for T4 and Cortisol results. All samples for measurement of Endogenous ACTH should be frozen until shipment and shipped on dry ice in an insulated container using crumpled paper or other material for insulation and protection of the samples. Samples for measurement of T4, Cortisol, and Progesterone should be sent on frozen ice packs.

Thyroid hormone protocols:

For initial evaluation of canine thyroid function, a T4 and TSH assay is recommended. For a canine TRH stimulation test 200µg of TRH should be given IV. Blood samples should be collected prior to TRH administration (for T4 and TSH) and 4 hours after TRH administration (for T4 only). An additional sample collected at 30 minutes for measurement of serum TSH may also give useful information. For a canine TSH stimulation test, human recombinant TSH should be given at a dose of 75 – 150 µg IV and samples collected prior to and 6 hours after administration for measurement of T4.

For initial evaluation of feline thyroid function a basal T4 and TSH is recommended. The protocol for a feline TSH stimulation test is similar to the dog except that the dose of TSH is 0.025 – 0.2 mg. The protocol for a feline TRH stimulation test is similar to the dog except that the dose of TRH is 0.1 mg/kg.

Thyroid Replacement: For T4 therapy, use L-thyroxine at 0.022 mg/kg q 12 to 24 hours as a starting dose and then adjust the dose using therapeutic monitoring after at least one month of therapy. The maximum starting dose should not be more than 0.8 mg per dog/dose. For therapeutic monitoring, samples should be taken pre and 4-6 hours post administration of thyroid hormone supplement (L-thyroxine). Please specify type of therapy, dose, and time post-pill. To re-evaluate thyroid function after discontinuing therapy, the patient should be off medication for at least 6 weeks.

Evaluation of the adrenal axis:

For a canine ACTH stimulation test, after collecting a resting sample for measurement of cortisol, inject 5µg/kg (up to a maximum of 250µg total dose) synthetic ACTH (cosyntropin) IV and obtain a 1-hour post ACTH sample for measurement of cortisol.

For a Low Dose Dex Suppression, after collection of a pretest sample, inject 0.01 mg/kg IV (dexamethasone in PEG or dexamethasone SP) and collect samples at 4 and 8 hours after injection.

For a High Dose Dex suppression, inject 0.1 mg/kg IV dexamethasone SP and collect a pre and 8-hour sample. The ACTH stimulation test is less sensitive but more specific for the diagnosis of hyperadrenocorticism. It is also the only test which will allow detection of iatrogenic hyperadrenocorticism. This test is also used to monitor Lysodren therapy. The low dose dexamethasone suppression test is a more sensitive but less specific test for the diagnosis of hyperadrenocorticism. This test may also allow differentiation of pituitary from adrenal dependent hyperadrenocorticism. In many cases, both tests may be necessary to confirm the diagnosis. The high dose dexamethasone suppression test is used to differentiate pituitary dependent from adrenal dependent hyperadrenocorticism.

Endogenous ACTH: Collect 3mL of whole blood into a plastic K2 EDTA tube. Centrifuge within 30 minutes of collection. Separate plasma into a plastic tube containing no additive. Freeze plasma. Plasma should arrive frozen on dry ice with next-day shipping to our lab.

Test interpretation: Reference ranges are given on the reporting forms. For further interpretation of tests please use our consulting services.

Delivery Address:

Purdue University
Clinical Pathology Laboratory
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West Lafayette, IN 47907-124