

Vetpath is a specialist veterinary laboratory dedicated to providing our clients with the finest laboratory diagnostic service. A team of veterinary pathologists and medical scientists with extensive experience in veterinary diagnostic pathology forms the core of the Vetpath team.

VN News

MARCH 2014

ACTH stimulation tests

Vetpath receives a large number of blood samples for a variety of endocrine tests including T4, cortisol, ACTH and progesterone concentrations.

Interpretation of endocrine tests is much more accurate when done in conjunction with all the available information for that patient. This includes age, the current clinical signs and any relevant medication history including. Reference to other testing such as a blood profile and urinalysis can also be useful.

While T4 and a low dose dexamethasone suppression test can be interpreted with minimal information, an ACTH stimulation test cannot be interpreted without relevant clinical history. This is because the ACTH stimulation test is

used in a number of clinical situations including:

1. Diagnosis of hyperadrenocorticism (both spontaneous and iatrogenic).
2. Diagnosis of hypoadrenocorticism.
3. Monitoring of treatment for hyperadrenocorticism.

Making the correct diagnosis can be difficult if the reason for testing is not known. If you are screening for one adrenal disorder and end up diagnosing another, you are likely on the wrong track. We can also provide a target cortisol reference range for medical treatment of hyperadrenocorticism if we know which drug is being administered.

We appreciate that you often have minimal time to fill in the submission form before the sample is collected by our couriers. But, making this information available will assist the pathologist in providing a more meaningful and helpful interpretation.

Help us to help you!

Canine thyroid panel

Diagnosis of canine hypothyroidism can be challenging. Concurrent illness and some medications can significantly affect interpretation of the total T4 concentration.

Vetpath has created the canine thyroid panel to group together the most useful tests for **diagnosis** of hypothyroidism in a single economical panel. These tests include PCV, cholesterol, total T4, free T4 and TSH concentrations. Using a panel of multiple tests gives the clinician as much information about the thyroid gland as possible.

This panel is not used for **monitoring** of hypothyroid patients. A total T4 concentration taken immediately before or 4 – 6 hours after medication is sufficient for this purpose.



Sensitivity panels

Vetpath has a variety of sensitivity panels for bacterial cultures. Which set is used is dependent on a number of factors including species, site and what bacterial species is grown.

Having a standard set for a particular site for each species of animal allows us to get through the large volume of work we receive each day. The sensitivity disks are pre-loaded into a sterile automated stamp and are placed directly onto the culture plate quickly and with minimal possibility of contamination.



This automated process is used for all routine cultures. If any bacterial growth needs to be tested against a particular antibiotic, this needs to be stated on the submission form **at the time of submission**. Additional sensitivities (even just one) after reporting of the standard sensitivity set will incur an extra fee as another culture plate has to be set up. This extra fee is based on the number of bacterial species cultured (each species requires one plate).

Sensitivity panels are occasionally changed depending on the availability of certain drugs. One set that has recently changed is the **ocular sensitivity set**. The set will now include the following drugs: ofloxacin, chloramphenicol, cloxacillin, fusidic acid, gentamycin, neomycin, polymixin B, soframycin (framycetin) and tetracycline. Bacitracin has been replaced by the ofloxacin sensitivity disc in this panel. Bacitracin is often present in preparations containing neomycin and polymixin B, and therefore this sensitivity is redundant.

If you have any questions regarding sensitivity testing and the different panels we use, please contact the laboratory (08) 9259 3600 to speak with a pathologist.

Blood smears

The value of blood smear evaluation as part of a complete blood count cannot be overstated.

Every CBC completed at Vetpath has a smear evaluation performed by a pathologist. Assessment of the blood smear provides valuable information including cell density and morphology. However, a delay in processing of the blood sample can cause significant changes in erythrocyte morphology, even after a few

hours. This is of particular concern in anaemic patients, where erythrocyte morphology is used to help clarify the cause of the anaemia.

Preparing fresh smears after venepuncture is the best method of ensuring blood cells are well preserved. Smear preparation takes practice (see figure below), but is worth the effort. Ideally, the smear should not be too thick, and should contain a monolayer with an adjacent feathered edge. If made well, the blood smear will provide useful information. Note that freshly made smears are evaluated as part of the CBC at no extra cost.

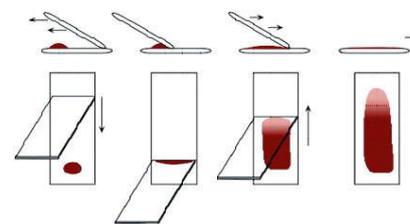


Figure: Blood smear preparation.

(Source: http://www.geocities.ws/mtjaved_uaf/systemic.htm)



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