

**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

## NOVEMBER 2017

### C-reactive protein

From the 1<sup>st</sup> of November, VETPATH Laboratory will be including C-reactive protein (CRP) concentration in all complete canine profiles (CP2).

CRP is an acute phase protein produced in the liver. CRP concentration increases rapidly in response to inflammation. Serum concentrations are low in healthy dogs, but increase markedly with inflammation and then decrease rapidly after resolution of the inflammation. CRP concentration can therefore be used to determine the severity of inflammatory disease, as well as to monitor response to therapy. Sex and age related differences do not occur, however other conditions that can cause increased CRP

concentration include trauma, immune-mediated disease, pregnancy, exercise and neoplasia.

We have recently validated CRP in house and have determined that the test has a diagnostic sensitivity of 77% and specificity of 94% for detecting inflammatory-related conditions. The reference range for CRP is <10 mg/L.

The CRP concentration will be included in all complete canine profiles, but can also be added on to other profiles, or requested as a stand-alone test on a serum sample. Lipaemic and markedly hemolysed samples are not suitable.



Reference: [eclinpath.com](http://eclinpath.com)

### Cytology fees

Knowing how much to charge an owner for cytology can be difficult, particularly when multiple lesions are aspirated.

Here are some helpful guidelines:

- Up to 6 slides can be submitted from a single site (more slides will be charged an additional fee).
- Additional sites will be charged at a lower rate (per site). This **may** be waived if one type of lesion is found in multiple locations (eg lipomas), however we will not know if this is the case until the slides are evaluated.
- Lymph nodes are charged as one site (up to 6 smears).
- Fluid analysis is only charged for body cavity effusions, not for fluid-filled skin masses.
- The polyarthritis screen is a single joint fluid analysis plus evaluation of smears from 6 joints.

## Snake season!

The start of summer means that there is an increased risk of snake bites in pets. Different types of snakes require different treatments, and can result in different laboratory data changes.

Tiger snake venom contains pre- and post-synaptic neurotoxins (resulting in paralysis or muscle weakness), potent pro-coagulants, and myotoxins. There are generally mild local effects at the snake bite site, including pain, mild swelling and bruising. Neurotoxic paralysis is common, with flaccid paralysis often taking several hours to develop. There is usually a large increase in the muscle leakage enzymes, including creatine kinase (CK), AST and even ALT.

Myoglobinuria and secondary renal failure may occur, as well as severe hyperkalaemia. Coagulopathy is also a feature, and may be as profound as that seen with brown snake envenomation, however, usually resolves spontaneously within 24 hours; therefore a tiger snake bite victim seen late may have apparently normal clotting function.

Brown snakes (Dugites, King Brown, Western brown snakes) have small fangs and produce only a small amount of venom,

however, this is very potent, and the venom contains powerful pre-synaptic neurotoxins, pro-coagulants, cardiotoxins and nephrotoxins. A typical brown snake bite is fairly painless, and the bite site can be very difficult to find, even in humans. The hallmark of brown snake envenomation is coagulopathy, and total defibrination can occur within 30 minutes of the bite. Platelets are not affected initially. A coagulation panel will reveal marked prolongation of PT and PTT and hypofibrinogenemia. There is no myolytic activity, with minimal increases in muscle enzymes seen biochemically.

Snake venom detection can be performed. If the bite site is found, a swab of the site is optimal, otherwise a urine sample is best. Non-specific binding with plasma proteins means that blood is not a reliable sample, and should be used only if a bite site swab or urine is unavailable. In cats a urine sample collected 4-30 hours post envenomation and in dogs <48 post envenomation is recommended. Cotton swabs may be stored dry and refrigerated, and should not be placed in wet or gel transport media. Urine and plasma/serum samples can be stored in the fridge, and not frozen.



## Submission forms

Submission forms are still being sent to VETPATH with insufficient history and test requirements.

This is particularly the case for samples submitted for culture. It is vital that we know what tissue has been sampled and what type of culture is required. The location of the lesion will often determine which antibiotic susceptibility set is used. A member of staff has to phone the submitting clinic to ask this information, which delays the processing of both this sample and the other samples in that batch. Having to do this numerous times each day in specimen reception will result in delays all areas of the lab.

Help us to help you get your results quickly and efficiently!



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