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.

VNews

VETPATH LABORATORY SERVICES

JANUARY 2016

Diagnostic use of serum bile acids

Serum bile acids (SBA) are produced in the liver from cholesterol and assist in fat absorption from the intestinal tract.

Bile acids are stored in the gall bladder and released into the intestine with feeding. They are then absorbed in the intestine and taken up by hepatocytes to be re-excreted into the bile. This enterohepatic circulation of bile acids allows them to be used as an indicator of hepatic function. Increased concentration suggests decreased bile acid extraction from the portal blood and can also occur with cholestasis due to decreased bile acid excretion. Note that SBA measurement will not provide any further information on hepatic function in a jaundiced patient.

Testing paired SBA concentrations improves the sensitivity of the test for detection of hepatic dysfunction as the liver is challenged to extract more bile acids from the portal blood after a fatty meal.

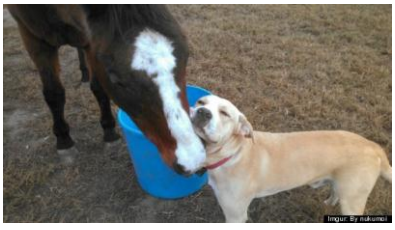
The protocol for SBA testing for small animals is:

1. Collect a baseline fasted serum sample.
2. Feed a small meal. A small amount of vegetable oil can be given if the animal is anorexic.
3. Collect a blood sample **2 hours** after feeing.

Only a small amount of food is required to cause gall bladder contraction (a few tablespoons is sufficient and less is needed for small dogs and cats). Young dogs that are suspected of having a congenital portal vascular abnormality should not be tested until after 16 weeks of age as the SBA concentration may be falsely lower in patients younger than this age.

Both lipaemia and haemolysis can interfere with SBA measurement. Lipaemia can falsely elevate the concentration and therefore an excessively fatty meal should not be fed during the test. Haemolysis can falsely decrease the concentration and so prolonged storage of the sample is not recommended. Consider separating the serum from the red blood cells if the sample may be delayed during transport.

Horses do not have gall bladders and therefore a single random SBA concentration can be measured in this species. Increased SBA concentrations are consistent with hepatobiliary disease. A mild increase in concentration can also occur with anorexia. Note that foals have slightly higher SBA concentrations compared to adults and the concentration usually approximates adult values by 6 weeks of age.



Vetpath Laboratory Services welcomes feedback on all aspects of our service from couriers to lab results. Please feel free to contact us at 9259 3666 or email enquiries@vetpath.com.au

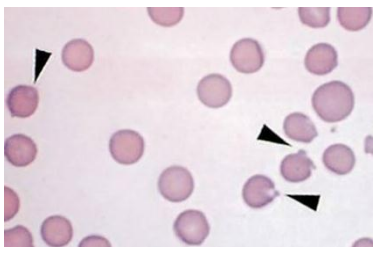
Beware the BBQ left overs

Christmas and New Year BBQs can have unfortunate results when left overs are fed to pets.

Rich fatty meats can increase the risk of pancreatitis; however onions are also a potential hazard. Raw, cooked and dehydrated onions (and garlic) can cause haemoglobin denaturation within erythrocytes, leading to formation of Heinz bodies on the surface of the cell (see arrows on the figure below). The red cells are then tagged for early removal by the spleen leading to a haemolytic anaemia.

Heinz body anaemia is a mild to often severe regenerative anaemia with many Heinz bodies seen within or on the edge of the red cells. Identification of the Heinz bodies on a Romanowsky stain such as Diff Quik can be difficult and they are best seen with a New Methylene Blue stain.

Submission of an EDTA sample for a full CBC is recommended if you suspect Heinz body anaemia in an anaemic patient.



Charging of histopathology and cytology

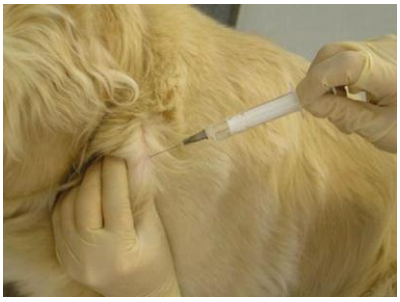
Many patients have multiple lumps and bumps that need to be aspirated or biopsied for diagnosis.

It can be difficult to determine what charging is appropriate in these situations. A standard histopathology charge is used for single lesions, or when multiple biopsies are submitted from the same site or organ (eg the intestinal tract or skin). A multi-site histopathology fee is charged when samples from more than one lesion or organ are submitted (eg post-mortem samples or multiple skin lumps).

Cytology is more difficult to accurately quote for charging. A single cytology fee is charged for the first site (up to 6 slides). Note that multiple lymph nodes are charged as a single site cytology fee. Any additional sites are charged at a reduced rate. This may not apply to each lump if they are the same diagnosis (eg multiple lipomas); however this cannot be determined until the smears are evaluated. The additional cytology fee will also apply to more smears that are submitted when the initial cytology was inconclusive.

A combined fee is charged when histopathology and cytology from the same lesion or associated tissue are submitted. For example, cytology smears can be assessed first, and the histopathology done only if the cytology is non-diagnostic. Another common time this charge is used is for histopathology of a mass and cytology of the draining lymph node. Note that cytology smears must be submitted in a SEPARATE bag to samples in formalin. The formalin fumes will render the cytology smears unusable as the stain can no longer penetrate the cells.

If you have any questions regarding fees of cytology and histopathology, please call the laboratory to speak to a pathologist on (08) 9259 3600.



NATA
NATA Accredited
Laboratory Number 14776

Vetpath Laboratory Services
RECEPTION DIRECT +61 8 9259 3600
LOCAL COURIER PICK-UPS +61 8 9259 3666
AFTER HOURS MOBILE 0418 916 436
FACSIMILE +61 8 9259 3627
EMAIL enquiries@vetpath.com.au
WEBSITE www.vetpath.com.au

VETERINARY PATHOLOGISTS
Jenny Hill BVSc (Hons) Dip ACVP
John Jardine BVSc MMedVet (Path) Dip ACVP MRCVS
Jon Meyer BVSc DVSc Dip ACVP
Jason Stayt BSc BVSc Dip ACVP
Leanne Twomey BSc BVMS (Hons) PhD Dip ACVP