

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

JANUARY 2014

Dial before you dig.....

.....or bleed, aspirate or biopsy! Inconclusive results are a common frustration in pathology. Giving some thought to what disease process you are suspecting and how you are going to achieve confirmation will greatly improve your success rate with pathology.

Vetpath has five friendly pathologists who are happy to discuss your cases with you, particularly in the initial diagnostic stages. A quick chat may avoid unnecessary and commonly low yield tests and help you determine a successful diagnostic plan for your case.

Some examples of low-yield biopsies include chronic, treated

skin disease, chronic rhinitis or stomatitis, and tru-cut biopsies of the liver and kidney. Discussion of these cases with a histopathologist is advised to help identify the best diagnostic test for your case.

Cytology can also be frustratingly non-diagnostic in a number of situations; particularly with conditions that require tissue architecture for a diagnosis. Mammary neoplasia, focal splenic masses and many hepatic conditions are examples of lesions that rely on architectural assessment for diagnosis. Also keep in mind how any potential delay in processing may affect fluid samples such as lung washes and body cavity effusions. Significant cell lysis will prevent meaningful assessment of these samples.

If in doubt, call the lab and ask. We are happy to help!

Reference:

http://www.histovet.com/PDFs/HIS_TenWorstBiopsies.pdf

AMH in cats

The anti-Müllerian Hormone (AMH) assay was developed at Vetpath in November 2013.

Initially just for canine samples, the assay is now available for cats. AMH is only produced by gonadal tissue in sexually mature animals. It is therefore highly effective in differentiating between sexually intact and neutered animals of both sexes. AMH will be an especially useful, non-invasive way of identifying ovarian remnant syndrome in cats as it is not affected by the stage of the oestrus cycle the cat is currently in.

The assay requires 3mL of blood in a plain tube. Samples should reach the lab within 3 days of collection as AMH concentrations gradually increase with sample aging. The turnaround time is 2 days and the test is performed Monday to Friday.

Monitoring chronic renal disease

Chronic kidney disease (CKD) is a common medical condition in dogs and particularly older cats. It has been reported that more than 30% of cats over 15 years of age are affected and that the cause in the majority of cases remains unknown.

The International Renal Interest Society (IRIS) provides a staging system for the management of dogs and cats with CKD. The staging system is based on fasting creatinine levels, used as a marker of GFR, in patients with stable CKD. Further subcategories within the staging system are defined using blood pressure and urine protein: creatinine ratio.

Inorganic phosphorus is an important component of living cells and is essential in the structural properties of mammalian tissues such as bone and teeth. Phosphorus homeostasis is dynamic with interplay between dietary intake,

exchanged between bone and extracellular storage pools, and excretion through the kidneys. The regulation of phosphorus within the body is incompletely understood but is linked with that of calcium. Both minerals are subject to control by hormones such as parathyroid hormone (PTH) and calcitriol. In the failing kidney there is decreased GFR which leads to retention of various substances including phosphorus. Hyperphosphataemia in dogs and cats with CKD is associated with decreased survival and significant morbidity. A mainstay strategy in managing CKD in dogs and cats is by controlling hyperphosphataemia primarily through dietary manipulation. Use of phosphate binders within the GIT may also be employed in some cases. Because of the importance of serum phosphorus levels in the pathophysiology of CKD, it has been recommended that targets for serum phosphorus be established for each IRIS stage that can be monitored as part of patient management (see table below).

Vetpath offers a range of cost-effective panels including the Renal Monitoring Panel. This abbreviated range of tests includes PCV, urea, creatinine,

potassium, phosphorus and urine specific gravity that can be used in monitoring patients with CKD. Patients can be staged according to the IRIS classification scheme and serum phosphate levels monitored to see whether within the corresponding target range. Further tests such as urine sediment and urine protein: creatinine ratio can be added for an additional fee.

References:

1. The role of phosphorus in the pathophysiology of chronic kidney disease. R.F Geddes, N.C. Finch, et al. Journal of Veterinary Emergency and Critical Care 23 (2) 2013 pp 122-133
2. www.iris-kidney.com



IRIS stage	Creatinine ($\mu\text{mol/L}$)		Target phosphorus (mmol/L)	
	Dogs	Cats	Dogs	Cats
1	< 125	< 140	N/A	
2	125 - 179	140 - 249	0.81 - 1.45	
3	180 - 439	250 - 439	0.81 - 1.61	



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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
Mary McConnell BVSc Grad.Dip.Clin.Path PhD
Jon Meyer BVSc DvSc Dip ACVP
Leanne Twomey BSc BVMS (Hons) PhD Dip ACVP

Welcome to our new-look newsletter
brought to you by the team of veterinary pathologists
and medical scientists with extensive experience in
veterinary diagnostic pathology.

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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