

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

AUGUST 2017

Welcome Dr Audra Walsh

Dr. Audra Walsh, BVMS, Diplomate ACVP has joined the pathology staff at VETPATH in July. Audra received her BVMS from Murdoch University in 2010. After completion she spent a year in a rotating small animal internship in Brisbane where she gained invaluable clinical experience in medicine, surgery, diagnostic imaging and theriogenology. In 2012 Audra accepted a position as a resident in anatomic pathology at the University of Pennsylvania. After completion of her three year residency she went on to become board certified in veterinary anatomic pathology in October 2015.

Since becoming board certified, Audra has worked in a commercial diagnostic laboratory and most recently as a lecturer and diagnostician in the College of Veterinary Medicine

at Murdoch University. Despite leaving Murdoch University, Audra continues to be involved in residency training and was awarded adjunct senior lecturer status. Audra's main interests include ocular pathology, osteopathology, infectious diseases, oncopathology and lab animal pathology.

In addition to diagnostic work, Audra enjoys scientific collaboration and is interested in improving veterinary mental health. In Audra's spare time she enjoys playing volleyball, hiking, cycling, outdoor activities and live music.

AMH in pocket pets

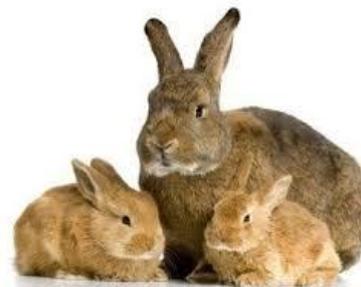
Anti-Mullerian Hormone has become the go-to test for identification of gonadal tissue in both male and female patients.

AMH is produced by the Sertoli cells in the testes and granulosa

cells in the ovary. This hormone is consistently found in post-pubescent male and female animals, and is not affected by stage of oestrus. AMH concentration is also now the preferred test for screening of mares with granulosa cell tumours.

VETPATH has validated the AMH assay for dogs, cats and horses and there is a clear distinction between entire and de-sexed animals. We suspect that this observation will allow us to confidently screen other species for the presence of ovarian and testicular tissue.

AMH measurement is performed on a serum (red top) sample. Approximately 1ml of whole blood is required.



The effect of BCS on clinical pathology data

Reference ranges for CBC and biochemistry data are generally created for a particular species, and do not generally take factors such as breed or age into consideration.

Obesity is an increasingly common problem in domestic animals, and has the potential to influence routine haematological and biochemical data. Obesity can cause a chronic low grade inflammatory response and result in an increased risk factor for a variety of conditions including endocrine disease, musculoskeletal disorders, some cancers and hypertension.

A recent study published in *Veterinary Clinical Pathology* compared the CBC and biochemistry results of clinically healthy adult dogs categorized into two groups based on body condition score (BCS). The control group had a BCS between 4 and 6, and the overweight/obese group that had a BCS over of 7 or higher. A total of 356 dogs (240 in the control group and 116 in the overweight group) were included in the study once they were determined to be healthy and had no haematological or biochemical abnormalities due to

underlying pathology. A variety of ages and breeds were represented.

The overweight dogs had higher total leukocyte counts compared to the control group due to higher neutrophil counts and slightly higher monocyte counts. The total protein, albumin and globulin concentrations were also higher in the overweight group compared to the control animals. The leukocyte changes may be due to chronic inflammation or stress, and the protein changes likely represent variations in hydration status and antigenic stimulation.

Several biochemical differences were found between the two groups, and have been attributed to a decreased serum water fraction associated with dehydration in the overweight group. These changes included elevated sodium, albumin, calcium, and anion gap. Paradoxically, the chloride concentration was decreased in the overweight group (despite the presence of increased sodium concentration), due to an uncertain mechanism.

While the differences in CBC and biochemistry results for the control and overweight groups are mild and likely of minimal diagnostic significance, the study highlights the presence of individual factors that can influence interpretation of clinical pathology data. Weight-specific reference intervals are not currently available, and it

may be worth adding body condition score to the list of factors that may affect a patient's CBC and biochemistry results.

Reference: Radakovich LB et al. *Veterinary Clinical Pathology* 2017 46/2: 221-226.



CORRECTION: July VNews

The last issue of VNews contained an error in the article "Is a positive really a positive?" The text should read: Intestinal excretion of parvovirus after vaccination is a well-recognized phenomenon, and therefore a positive parvovirus PCR result in a recently vaccinated patient **does NOT** confirm infection.



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