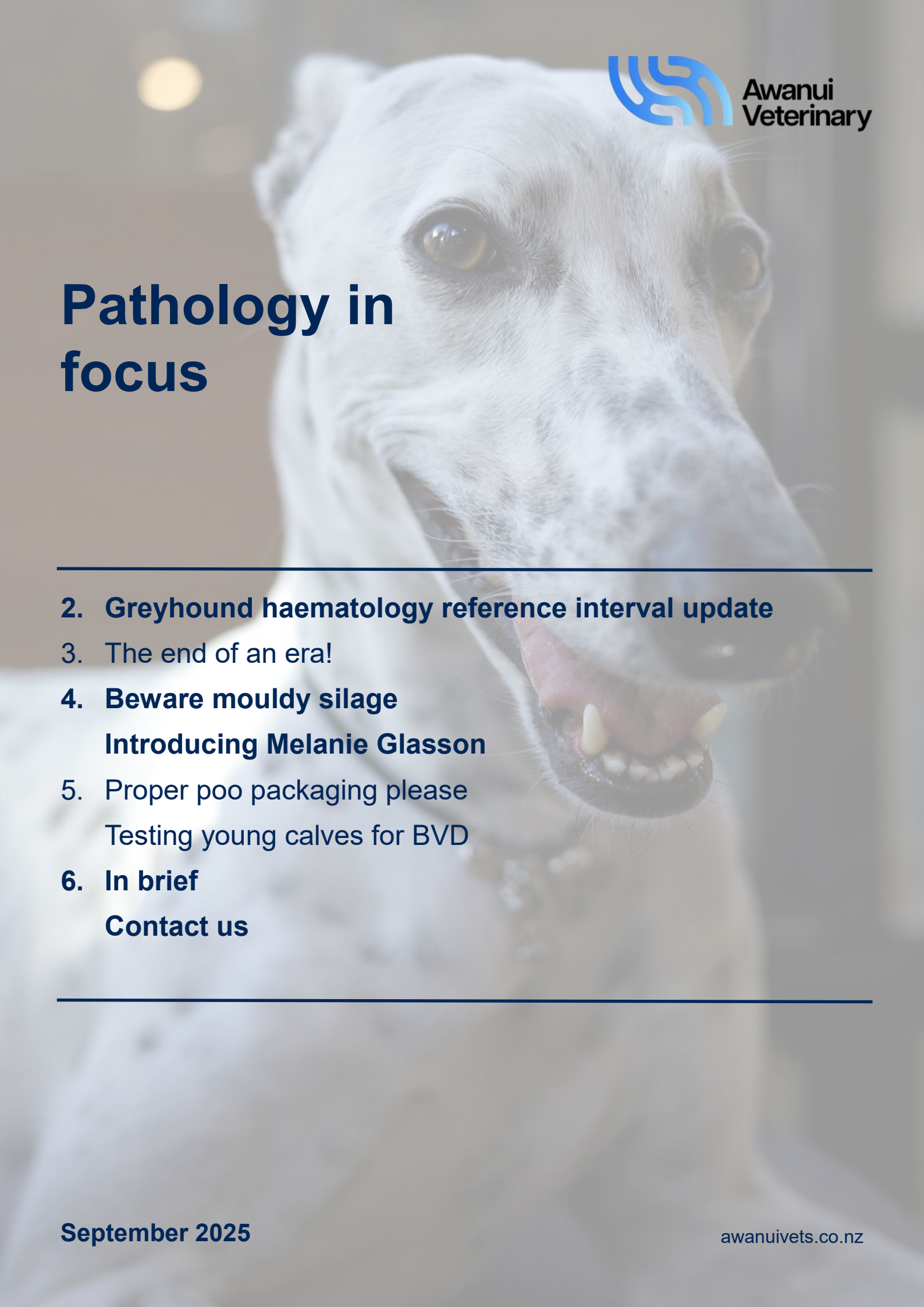


Awanui Veterinary

Pathology in focus

September 2025

awanuivets.co.nz

Greyhound haematology reference interval update

Karen Bailey

Greyhounds, like other sighthounds, have a tendency toward higher red blood cell mass, and lower white cell and platelet count when compared to other breeds.

Recently, our canine haematology reference intervals were updated based on an extensive study of local New Zealand dogs. However, Greyhounds and other sighthound breeds were excluded from this study because of these known differences. Several years ago, we completed a small study of clinically normal local New Zealand Greyhounds. This showed that values for the local population were similar to those published in overseas studies. However, a change of analysers means that results from the local study were no longer relevant for our current testing methods.

A published independently peer reviewed study involving 199 Greyhounds in the UK, using the same type of analyser as currently used at Awanui Veterinary, yielded reference intervals which are very similar to those generated from our local study, as well as from other sources (see reference). This UK-based dataset is currently considered the most reliable and relevant for Greyhound haematology using our existing methods.

As of **September 8, 2025**, Awanui Veterinary will adopt these updated Greyhound-specific reference intervals. **For most reference intervals there will be no change or very little change.**

Where the UK study did not provide specific values, standard canine reference intervals will continue to be used (indicated by *).

Although the Greyhound reference intervals can be used as a tool for interpretation with other sighthounds (e.g. Whippet, Afghan, Saluki, Lurcher) and Greyhound crossbreeds, the evidence is less robust in those breeds. Therefore, standard canine reference intervals will continue to be reported for those cases, with relevant interpretive comments added as appropriate.

Reference:

Campora C, Freeman K P, Serra M, Sacchini F. Reference intervals for Greyhounds and Lurchers using the Sysmex XT-2000iV hematology analyzer. *Veterinary Clinical Pathology*, 40:467–474, 2011.

Table 1. The updated haematology reference intervals for Greyhounds, alongside the standard canine ranges for comparison.

Test	Units	Greyhound	Standard Canine
RBC	$x10^{12}/L$	6.67 – 9.30	5.68 – 7.97
Haemoglobin	g/L	166 – 226	136 – 196
HCT/PCV	L/L	0.49 – 0.65	0.40 – 0.55
MCV	fL	65 – 77	65 – 78
MCH	pg	23 – 26	23 – 27
MCHC	g/L	320 – 360	326 – 369
Absolute Reticulocyte Count	$x10^9/L$	10.9 – 107.4 *	10.9 – 107.4
Reticulocyte %	%	0.2 – 1.5 *	0.2 – 1.5
Ret-He	pg	22.1 – 28.8 *	22.1 – 28.8
WBC	$x10^9/L$	3.6 – 8.4	4.9 – 15.6
Neutrophils (Abs)	$x10^9/L$	2.4 – 6.5	2.5 – 12.1
Lymphocytes (Abs)	$x10^9/L$	0.6 – 2.2	0.9 – 4.6
Monocytes (Abs)	$x10^9/L$	0.1 – 0.4	0.1 – 1.1
Eosinophils (Abs)	$x10^9/L$	0 – 0.4	0 – 1.7
Basophils (Abs)	$x10^9/L$	0*	0
Platelets	$x10^9/L$	89 – 237	200 – 500

The end of an era

Jo Archibald is our IT Systems and Solutions Manager and has been an integral part of our laboratory for 33 years. There's not many systems Jo doesn't have a hand in and she has touched the lives of many staff, clients and suppliers in her time with the laboratory. After over three decades in the business, Jo is retiring and is working her last day on September 12.

Jo started her career at Wallaceville (Upper Hutt) in the MPI Central Animal Health Laboratories in August 1992 and since that time has witnessed and transitioned through several changes to the business. With the change from MPI to AgriQuality, this included a move to the Palmerston North AgriQuality laboratory in 2000 which in turn became Gribbles Veterinary Pathology and now Awanui Veterinary.

Jo has really enjoyed all her years with our team in a variety of positions - while starting out as technician and then team leader of AgriQuality Serology, she has had roles as Business Development Manager, which involved clinic visits throughout the lower North Island, and at various times over the years has been the Palmerston North Laboratory Manager.

She is particularly proud of the work she has achieved in her most recent position as the IT Systems and Support Manager (2017 - 2025). This has involved Jo working with our IT programmers to create many added benefits for Awanui Veterinary and Awanui Scientific clients, and an easier life for staff in our network of laboratories.

Jo has interacted with many veterinary clinic staff (who may remember her as Jo Drake) for some of the client facing projects that she has been involved in which have included:

- BVD Portal for ordering of milk collections along with BVD cumulative reporting of the results
- Facial eczema portal for monitoring of facial eczema spore counts from around the country
- Trace element cumulative reporting and the addition of regional trends shown visually on the graphs
- eResults programme
- Lab Integration programme for the reporting of in-clinic analyser results from clinics
- Rebate programme with monthly reports for the large client groups
- Honey testing portal for Ecrotek clients.
- FECRT automated reports for checking drench resistance.
- ezyVet integration
- OOMs integration for Bovigam testing
- Food portal integration for some of our Meat and Bone Meal clients.

Internally, as well as putting her hand up to provide additional hands-on support to the team as required, Jo has been part of several improvements to our laboratory information system (CCLAS) which in turn has improved efficiencies within our network. These have included:

- The automated import of website based consumables orders and Fond Farewells invoicing into CCLAS.
- The histology block and slide labelling programme to enable digital pathology.
- Interfacing the serology plate readers and molecular Quant Studio processes with CCLAS.
- Interfacing our biochemistry and haematology analysers with CCLAS.
- Implementation of electronic invoicing (remember the good old days of stuffing invoices into envelopes?).

Jo's knowledge, expertise, in-depth knowledge of our business and especially CCLAS will be greatly missed. She has had the good fortune to have spent a couple of months training her replacement, Anagha Juvekar to confidently take over the role when Jo retires.

Jo is ready to enjoy her retirement years and plans lots of travel with husband Ross and spending time with the grandchildren.

We thank you Jo for your contributions over the years and wish you all the best for the adventures your retirement will bring.

Beware mouldy silage

Cathy Harvey

Clinical history

A dairy farm with 350 Friesian-Jersey cross cows had eight cows abort seven weeks early. The animals were being fed mouldy silage. Multiple fixed tissues were submitted along with fetal stomach contents for histopathology testing.

Laboratory testing

On histopathology of the placenta there were multifocal large areas of necrosis and haemorrhage, and numerous infiltrates of degenerate neutrophils admixed with numerous fungal hyphae (branching septate even walled). Many vessels contained degenerate neutrophils in the wall, and fibrin the lumen (vasculitis).

There were no significant findings on histopathology of the spleen, lung, skeletal muscle, heart, kidney, liver, and brain.

Aspergillus fumigatus was detected on PCR of the fetal stomach contents. *Mortierella wolfii* and *Ureaplasma diversum* were not detected.

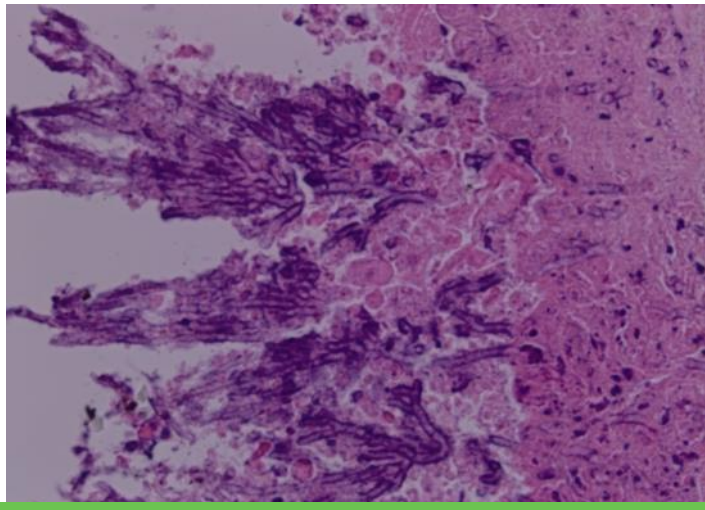
Diagnosis

The fungal placentitis is the likely the cause of abortion – from the mouldy silage.

For in-depth information on bovine abortion investigations visit our website here.

Photograph above: Formalin fixed placenta – thickened with tan areas / plaques.

Photograph below: Fungal hyphae in areas of necrosis and inflammation, H&E stain.



Introducing Melanie Glasson

- the new manager of our Christchurch laboratory

Melanie will be familiar to some of you as she as been working on the bench in the Christchurch laboratory for over 13 years.

She started as a laboratory technician and has since worked in a range of roles, including section leader for haematology and biochemistry, and most recently as 2IC to the previous laboratory manager, Daniel Westlake. Mel successfully became the new laboratory manager at the beginning of June.

Melanie says “I am known for my practical knowledge, calm approach, and focus on building a positive team environment. I enjoy supporting my colleagues and helping the lab run smoothly day to day”.

Based in Christchurch, Melanie lives with her husband, two young sons and chocolate labrador Ruby. Outside of work, she loves spending time with her family and keeping up with her energetic boys.

Proper poo packaging please!

As we approach the busy spring parasitology season, we'd like to remind all clinics to submit faecal samples in **approved, leak-proof specimen containers**.

Recently, our Palmerston North laboratory received several samples packaged in plastic bags, some of which leaked during transport (see photo). Unfortunately, this led to contamination of other samples and the cardboard courier box—posing a health risk and breaching **Land Transport regulations** for dangerous goods.

To help ensure safe and compliant sample submissions, clear, easy-to-follow packaging and transport guides are available on our website under Sample Handling. These include information on suitable containers and tubes for most test types.

Need supplies? Approved specimen containers can be ordered through our online shop. If your clinic hasn't registered yet, you can sign up for an account here. There's no need for online payment—consumables are invoiced at the end of the month along with your routine diagnostic testing.

If you're ever unsure which container to use or how to package a sample, feel free to contact your local laboratory. We're always happy to offer advice and support.

Testing young calves for BVD

Calf screening in dairy herds aims to identify and remove persistently infected (PI) animals before they can infect any pregnant cows.

An ideal time to sample calves is during tagging or disbudding. The antigen ELISA is a suitable test to use on ear notch samples for animals in this age group. PCR is a suitable test for serum or ear notch regardless of age.

PCR vs antigen ELISA – which to choose?

Tissue samples are tested in a pool by PCR, then all samples in a positive pool are individually tested by antigen ELISA.

Serum antigen ELISA is still NOT a suitable test for animals less than 35 days old due to the potential for false negative results. When serum samples are tested using PCR, the sera are pooled for PCR testing and then all samples in a positive pool are individually tested using PCR.

Benefits of PCR testing:

PCR testing is highly sensitive and will detect transiently infected animals (TI) as well as PI animals. For young calves, we recommend testing tissue samples by PCR. We use a combination of PCR (pooled samples) then antigen ELISA (on individuals in positive pools), which allows for differentiation of TI and PI animals in most cases.

Note: As there are no clear cut-off value between TI and PI animals, Awanui Veterinary always recommends retesting positive animals 4-weeks later to minimise the chances of culling a TI animal, regardless of whether the positive test is completed by PCR or antigen ELISA.

Summary of testing options:

Animal age	< 35 days	> 35 days
PCR	Serum or ear notch	Serum or ear notch
Antigen ELISA	Ear notch only	Serum or ear notch
Result type	Individual	

For further information visit our website or to discuss the best testing options for your clients, please just give us a call—0800 474 225.

In brief

- **The winner of the competition** run in conjunction with our client survey was **West Coast Vets in Greymouth.** Congratulations team! Thank you to everyone who entered the competition and submitted feedback in our survey.
- We've recently received a couple of histology samples in **paraffin oil instead of formalin**. Since bottles of colourless liquid can look similar, please ensure it is formalin you are adding to fix your samples for histology. *Please note: Formalin has a very distinctive smell, whereas paraffin is odourless.* If formalin is not used to fix samples there will be a negative impact on sample quality and we may not be able to process them. The pre-filled formalin pots available to purchase from our online store contain a blue dye to make them easier to recognise.
- In line with our value of **Manaakitanga** - We Care, Awanui Veterinary proudly supports the South Island Wildlife Hospital and the work they do. This reflects our commitment to supporting those making a meaningful impact in our communities. As a small non-profit organisation dependent on external funding, they play a critical role in caring for injured, ill, or orphaned native wildlife. Find out more about what they do here.
- **Before sending cadavers** to the laboratory for post-mortem examination, please call ahead to discuss with one of our pathologists. This will ensure that we are sufficiently resourced and the appropriate staff are available to carry out this procedure in a timely manner. Please remember that bodies are also considered diagnostic samples, so ensure packaging appropriate and contains the body sufficiently as to not leak in transit or otherwise pose a biological risk. For more information on post-mortems please visit our online veterinary handbook.

Contact us

- contacting Awanui Veterinary couldn't be easier.

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