

Paws claws and padder things



March 2023

Brush up your cytology smears

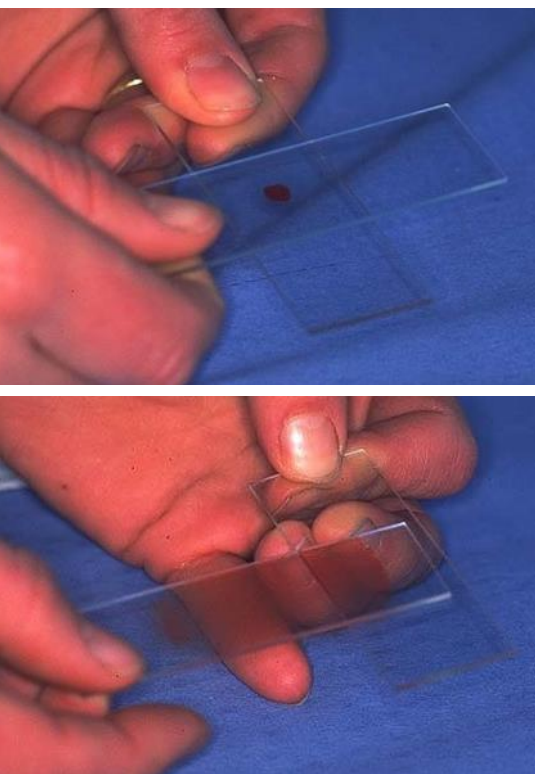
SANDY WELTAN

There are many advantages to performing cytology. It is generally quick and simple to perform with rapid results, inexpensive and minimally invasive.

Inconclusive results from non-diagnostic slides are a source of frustration for the practitioner and the pathologist. A good slide contains an adequate number of intact, appropriately stained cells in a monolayer which is representative of the lesion sampled.

Starting at sampling, only clean, dry, new slides should be used. The skin can be moistened with alcohol, but gels should be avoided. Depending on the tissue, needles should be 21-23g and syringes 3-10mL.

Figure 1. Smear preparation from fluid/FNA.



Whether to use suction or not depends on the tissue aspirated. Suction is best avoided on soft or vascular tissue. The best place to aspirate a mass is close to the margin, avoiding the necrotic centre.

Most cell damage occurs with transfer from the needle to the slide. Hold the needle close to the slide and gently expel a single drop 1-2 mm in diameter which is spread with a gentle slide on slide technique (Figure 1).

For examples of smears that result in poor cell preservation see Figure 2: left - too thick; middle - ruptured cells; right - areas too thick and ruptured cells. Smears that give good cell preservation can be found in Figure 3: top - blood smear technique, good for fluid samples; middle - see technique in Figure 1, works for most tissues; bottom - for fragile cells.

Artefacts can also result in samples that cannot be interpreted. These include exposure to heat or cold, moist slides, exposure to formalin fumes, ultrasound or other gels or ointments and keratin contamination from touching the slide surface.

For sampling mucosal surfaces and nasal cavity, a cytobrush is very useful as it is abrasive enough to sample deeper than the mucosal surface. The cytobrush is then rolled onto the slide. *Note: Cytobrushes will be available via our online store in the near future.*

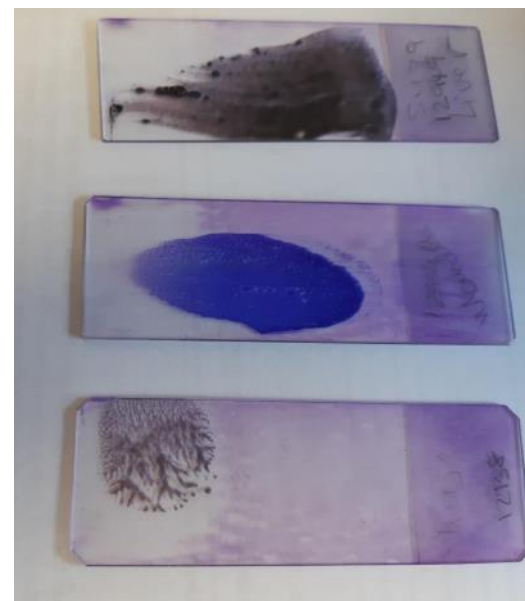
Cytology can also be performed on fluids. Please submit in EDTA or plain serum tubes (clot activating tubes are not recommended as they contain silicon, which coats cells and disrupts their morphology). Please take note

of special sampling conditions for CSF which can be found in the [Vet Handbook on our website here](#). There you will also find helpful tips for collecting other samples.

Figure 2. These smears have **poor** cell preservation:



Figure 3. These smears have **good** cell preservation:



MPI update: HPAI

New Zealand has never had a detected case of Highly Pathogenic Avian Influenza (HPAI). The risk of a HPAI virus such as H5N1 arriving here is low as New Zealand is isolated from other landmasses, is not on the flyways for any migratory waterfowl and we have strong border biosecurity.

Biosecurity New Zealand has monitoring and surveillance systems in place to ensure early detection if any HPAI virus were to arrive and we maintain close international relationships to monitor changes in avian influenza (AI) viruses around the world.

Avian influenza (AI) is a highly contagious viral disease that affects both domestic and wild birds. There are many strains and subtypes of avian influenza viruses with varying clinical sign and affecting different species with a wide range of severity. The most obvious sign of an HPAI outbreak is

sudden death in several birds., especially in poultry where mortality is close to 100%. Wild birds show variable clinical signs with swans having high mortality and mallard ducks showing very few, if any, symptoms.

In 2022, our teams investigated approximately 20 avian mortality events with all cases testing negative for HPAI.

Biosecurity New Zealand has a wildlife advisory group consisting of key wildlife veterinarians, ecologists and ornithologists from around New Zealand. This group supports our wildlife disease surveillance, contributes to our understanding bird ecology and migratory pathways and will provide input into future surveillance initiatives.

The poultry industry body (PIANZ) works with Biosecurity New Zealand and industry vets on poultry health monitoring, disease reporting and surveillance requirements. Additional population level testing is done to meet our poultry export requirements.

Other surveillance processes include a targeted AI field surveillance programme undertaken annually in co-ordination with Fish & Game New Zealand. Over 1000

ducks are sampled and tested at key locations close to migratory bird sites around the country. Our epidemiologists monitor wild birds admitted to wildlife hospitals around the country, and when relevant, perform testing for exotic diseases such as AI. This summer we have kicked off surveillance measures in partnership with wildlife rehabilitation centres.

Biosecurity New Zealand works closely with Te Papa Atawhai the Department of Conservation on any suspected exotic diseases in wild bird populations in Aotearoa. We are also in close contact with our colleagues at the Ministry of Health, due to the rare risk of human HPAI infection in those who work closely with infected birds or in environments heavily contaminated with infected bird matter.

If any HPAI was detected in animals, Biosecurity New Zealand is the lead agency and will coordinate the response. We have supported our international colleagues during outbreaks overseas and maintain close relationships.

[Found out more information here.](#)

Please report increased mortality in wild birds or farmed poultry to the Exotic Pest and Disease Hotline on 0800 80 99 66.

A new pathologist joins our flock

We are very pleased to welcome Emma Gulliver to our team of pathologists. Emma will be joining the fabulous anatomical pathologists based in our Auckland laboratory.

Emma completed her undergraduate veterinary degree at the University of Sydney in 2013. She took a gap year to travel Europe followed by 5.5 years working as a small animal clinician in Canberra, Hobart, UK and Sydney/central Australian coast. She decided she wanted to be a pathologist in her second year of university and jumped at the chance to enter the anatomical pathology residency program at Massey University in 2020.

Emma has since completed her MVSc at

Massey University, and passed the ACVP phase I examination. She is sitting the Phase II ACVP exam in 2023.

Emma's areas of interest include neoplasia, immunopathology and companion animal disease. She has completed research projects on ovine Johne's disease, causes of mortality in kiwi and avian malaria in kiwi.

She recently moved to Auckland with her partner, stepson and foster cat.

Emma can be reached on:

Emma.gulliver@gribbles.co.nz or

T: 09 574 4701



It's melanoma - and we're not kidding

LISA HULME-MOIR

We don't often receive cytology samples from farm animals but just like in dogs and cats, cytology has the potential to yield a quick diagnosis that assists with decision making, optimising animal welfare and promoting judicious use of antibiotics.

Clinical history:

A fine needle aspirate was submitted from a lesion on the nose of a 14-year-old Cashmere doe (Figure 1). The lesion had not been visible 2 weeks previously when the doe had her teeth examined, and it did not appear to be bothering her.

Laboratory testing:

On cytology, multiple large round to spindle-shaped cells containing fine black pigment were present (Figure 2). The cells were moderately pleomorphic with moderate anisocytosis and anisokaryosis, occasional giant macrocytes, binucleate cells and frequent large nucleoli. The pigment was

consistent with melanin and a diagnosis of melanoma was made.

Discussion:

Melanomas are common skin tumours in goats, particularly fibre breeds such as Angora, Pygora and Cashmere.¹ In one study of Angora goats in Queensland, melanomas were the second most common skin tumour with a prevalence of 2.2%, behind squamous cell carcinomas, which had a prevalence of 3.8%.² This predisposition has led some to propose Angora goats as a potential model for studying melanomas in humans.

The tumours most commonly occur on the dorsal surface of the ear, although other sparsely haired areas of the body with high UV exposure such as the nose or perineal area are also common locations for melanomas.

In the present case due to the old age of the doe, a palliative approach was taken with the plan to euthanase when the lesion started to impact her welfare.

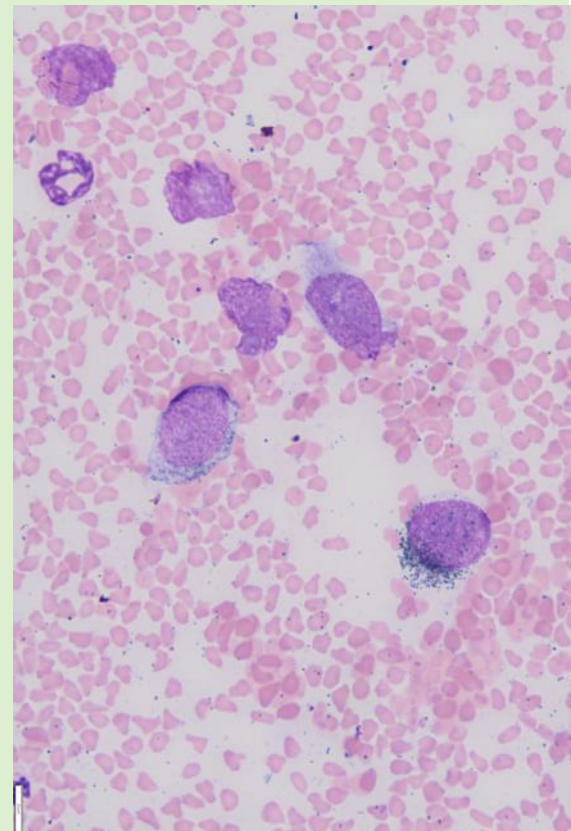


Figure 2. Fine needle aspirate from the skin mass on nose of goat. Large round to spindle-shaped cells contain fine black pigment consistent with a melanoma. Note the angular shape of the red cells in the background, which is a normal finding in goats.

Figure 1. Skin mass on the nose of a Cashmere goat



Many thanks to William Cuttance and the team at VetEnt Te Kuiti for the excellent smears and interesting case.

References:

1. Mavangira et al. Malignant melanoma of the horn base in a Pygora goat. *Journal of Veterinary Diagnostic Investigation*, 20:104-107, 2008.
2. Green et al. An animal model for human melanoma. *Photochemistry and Photobiology*, 64:577-580, 1996.

In brief

- > Our laboratories will be **closed all of the Easter long weekend**. Normal hours resume on Tuesday 11 April.
- > **View the latest facial eczema trends** via our Lab-portal or submit data any time you do pasture spore counts. [Login / register here to submit](#) or [view real-time facial eczema trends here](#) (no user account required).
- > **FECRT reporting** is now available for both sheep and cattle - [download submissions form here](#).

We need your help!

We are updating the feline and canine reference intervals for our new state-of-the-art haematology analysers. In addition, we are working on reference intervals for new assays in development and new methods for existing assays. In order to achieve these goals, we need your help.

Thank you to everyone who has already submitted samples for this study! These studies take a lot of time and effort to accomplish, but once complete will help provide you with valuable information benefitting the health of your clients.

If you would like to help by providing samples for this study, this is what you need to know.

What we require:

1x EDTA and 1x red-top tube (ideally a full 3mL red-top tube) from each healthy individual. *EDTA samples **must** be filled to the correct level in the tube.*



What you get in return:

A CBC and biochemistry screen will be provided as a baseline minimum database for your healthy patient.

Criteria for inclusion in the reference interval:

- > The animals **must** be **healthy** (e.g. staff pet, in for routine check-up, vaccination or desexing). There should be no history of even vague abnormal clinical signs.
- > Not on any medication and no history of vaccination within the last 2 weeks.
- > Not pregnant.
- > Not from an SPCA or pound (i.e. the animals need to have a known clinical history).
- > No prior history of azotaemia or previous renal injury/disease.
- > Age range: 12 months to 10 years.
- > Animals to be **fasted** prior to taking blood.
- > No sighthounds please.

Important notes:

- Please ensure animals are fasted prior to taking samples. A number of samples received to date have been lipaemic, which are unfortunately unsuitable to be included in the study due to the adverse effect of lipaemia on the red blood cell parameters.
- It is essential that the sample type and animal details comply with all the criteria above. Please do not send samples from animals that fall outside these parameters (they cannot be included in this study), and do not submit samples other than EDTA or red top tube. If the animal/samples do not comply, no free testing will be possible.
- Please only send blood samples from each animal once. We cannot use data from retesting the same animal in this study.

How you can participate:

If you're able to provide us with samples for these studies and can meet all the requirements listed above, please quote the appropriate test code below on your submission form along with a brief reason why the animal presented in clinic.

CATS ► REFCAT2020

DOGS ► REFDOG2020

We thank you in advance for your support. If you have any questions regarding this study, please contact your local laboratory on 0800 GRIBBLES.



One-stop online shop

Whether you need courier bags, blood tubes, transport media, sample pottles, shipping containers or cover slips, Gribbles Veterinary is your 'one-stop-shop'.

In order to more effectively streamline our processes and to provide you with better transparency for your consumable orders, we are phasing out the consumables order form this year and moving everyone to ordering via our online platform. Once you've registered for an online user account, placing orders is a breeze!

Here are a shopping list of reasons to make the switch:

- There is a handy link to consumables ordering on the home page of our website;
- Clear instructions are provided to register for an online user account;
- There are FAQs to cover all bases in case you get stuck or have any issues;
- In the My Account section you can view

all the details your clinic needs to know about your orders and account set-up. Plus you can view all orders placed, manage your shipping address, update your account details and edit your password;

- No payment details are required when placing orders. All charges will be processed with your end-of-month accounts;
- If required, purchase order numbers can be placed into the comments box when placing the order;
- A single user account can be set up for

all staff at the clinic to access or clinic staff can set up separate accounts, it's entirely your choice.

The hard-copy order form will no longer be available after 30 June 2023.

So the next time you want to place an order, please visit our website first and get set up:

www.gribblesvets.co.nz

We're sure you'll find it easy to use, but we're always here to help if you get need it.



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