



Vetnostics Newsletter

February 2021

CADET® BRAF for Detection of Transitional Cell (Urothelial) Carcinoma in dogs

QML Pathology Vetnostics now offers the CADET® BRAF test for the detection of Transitional Cell (Urothelial) Carcinoma in dogs (TCC/UC). This test detects the presence of cells in the urine that are shed from a tumour and contain the mutated gene. A BRAF mutation is present in 85% of canine TCC/UC cases. A further 10% of cases have other genomic signatures detectable by a second level (BRAF-PLUS) test. This assay is performed by Antech Diagnostics Inc (USA) and requires submission of a urine sample in a specific liquid preservative medium.

More information regarding this cutting edge technology is available on our website: <http://www.vetqml.com.au/ProductsServices/ProductsServices/TestProtocols.aspx>

To order a urine CADET® BRAF test kit, please contact QML Pathology Vetnostics via vetnostics@qml.com.au

Visit our Website: vetqml.com.au



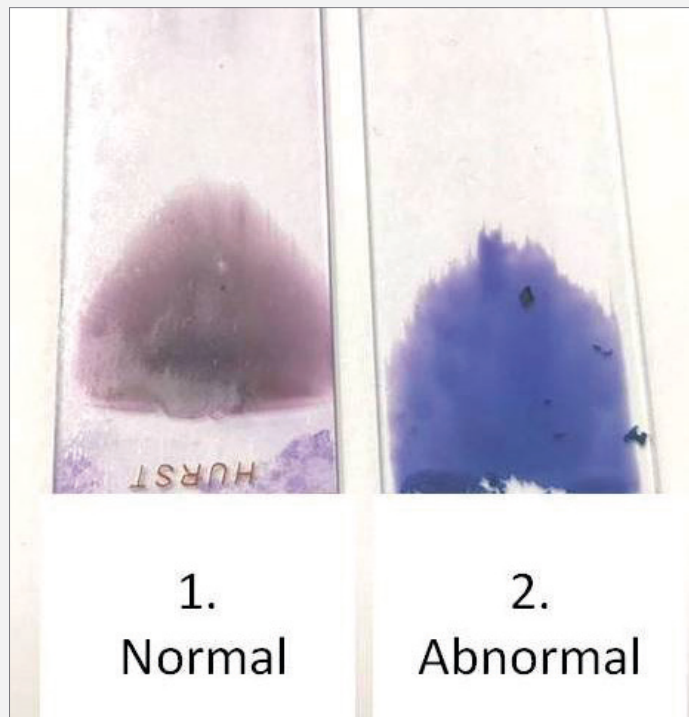
Please take some time to browse the website. We would welcome any feedback regarding additional content you would like to see added.

What is Your Diagnosis?

Refer to page 2 for the answer

The image below is of two Wright's stained canine blood films. The blood film on the left is from a healthy dog with a normal haemogram, showing a normal macroscopic blood film appearance. The smear on the right has an abnormal gross appearance:

What is the likely cause of this abnormal appearance?



The website is an excellent source of information regarding:

- tests and profiles offered
- contact details
- supply/stores requisition forms
- online results
- test protocols
- courier bookings
- previous newsletters and much more.

Treatment of FIP in cats with Remdesivir

(This is an abridged version of an article by **Dr Richard Malik DVSc PhD FACVSc FASM**. The full version of this Dr Malik's article as well as Remdesivir dosage and other treatment considerations can be found on QML Pathology Vetnostics website:

[http://www.vetqml.com.au/ProductsServices/ProductsServices/Publications/Felineinfectiousperitonitis\(FIP\)newtreatmen.aspx](http://www.vetqml.com.au/ProductsServices/ProductsServices/Publications/Felineinfectiousperitonitis(FIP)newtreatmen.aspx))

Until recently, a diagnosis of FIP was a death sentence for a feline patient. That all changed a few years ago thanks to the culmination of lifelong research into FIP by Professor Niels Pedersen at University of California Davis, who showed that the nucleoside analogue GS-441524 was effective for treating FIP. Unfortunately this human drug was not further developed for FIP treatment. To fill the void various companies started making GS-441524 and selling it as a black-market drug. Then APVMA and Australian Veterinary Boards realised what was happening and Border Force subsequently made it more difficult to import GS-441524 for veterinary use.

Ironically, the COVID-19 pandemic provided a solution. Remdesivir (GS-5734) is used to treat SARS-CoV-2 infections in human patients and was given provisional registration by the TGA in June 2020. Remdesivir is essentially GS-441524 with some extra phosphate groups added to improve intracellular penetration. As Remdesivir is a licensed human drug, it can be readily used off-label for veterinary applications such as treatment of FIP. This circumvents problems using an unlicensed drug purchased on the black market, with the associated issues of unproven efficacy, purity and consistency.

BOVA Aus has secured a reliable source of Remdesivir to formulate. Compounded Remdesivir has been trialled in in effusive and non-effusive cases of FIP, and based

on experience with over 70 cats it appears to be highly effective in treating FIP.

A key advantage of using Remdesivir for treating FIP is that the drug is already approved for human use. So you can simply write a prescription with the client's name and address, patient name and dose to be administered, and BOVA Aus can compound and provide vials usually within 24-48 hours to any veterinarian in Australia.

Veterinarians wishing to explore this option or with general questions about managing FIP can email Dr Richard Malik richard.malik@sydney.edu.au

Diagnosis of FIP is beyond the scope of this newsletter. Briefly, cats with effusive disease are most easily diagnosed by cytology and fluid analysis of body cavity effusions. Subsequent immunocytochemistry can be performed at University of Sydney (via QML Vetnostics). Dry FIP is more problematic, as usually it requires a fine needle aspirate or incisional biopsy of pyogranulomatous lesions in the liver, kidney or abdominal lymph nodes.

For cats with suspected dry FIP, 3 days of IV Remdesivir can be used as a cost-effective therapeutic trial as an alternative to biopsy of intra-abdominal structures at laparotomy, as in FIP there is usually prompt clinical improvement. Other diseases that mimic FIP (lymphocytic cholangitis, lymphoma) show no improvement with such a therapeutic trial.

What is Your Diagnosis? Answers.

Answer: Hyperproteinaemia (Hyperglobulinaemia)

The blue discolouration to the stained blood film reflects excess protein concentration within the blood and this is typically the result of severe hyperglobulinaemia. This may occur with inflammatory diseases (eg: Feline Infectious Peritonitis) or as a result of lymphoid or plasma cell

neoplasia. Blood films with a gross appearance such as this case often have globulin concentrations > 90 g/L (NB: canine serum globulin reference interval is 25 – 40 g/L)

Serum protein electrophoresis may aid in differentiating inflammatory and neoplastic (lymphoid / plasma cell neoplasia) causes of hyperglobulinaemia.

1300 VET QML

Please ONLY call your local courier/laboratory number to request sample collections or urgent stores/supplies.

For all other enquiries, please call 1300 VET QML.

