

DIAGNOSTIC INSIGHTS

4th Annual Conference on Animal Diagnostics and Field Applications: Food Animal Medicine

We are excited to host this year's conference at the Hilton Garden Inn and Conference Center!

Schedule of Events - Saturday, February 7, 2015

8:00 a.m.	Registration Opens
8:50 a.m.	Welcome
9:00 a.m.	"Bluetongue and Epizootic Hemorrhagic Disease: epidemiology, control, and prevention" - Dr. Jim MacLachlan
9:45 a.m.	BREAK
10:00 a.m.	"Bluetongue and Epizootic Hemorrhagic Disease: epidemiology, control, and prevention" - Dr. Jim MacLachlan
10:45 a.m.	BREAK
11:00 a.m.	"Bluetongue and Epizootic Hemorrhagic Disease: epidemiology, control, and prevention" - Dr. Jim MacLachlan
11:30 a.m.	Lunch and Organizational Updates: USDA, KDAH, BCI, CVM, KVMA
1:00 p.m.	"Anaplasmosis Update" - Dr. Scott McVey
1:45 p.m.	BREAK
2:00 p.m.	"Anaplasmosis Update" - Dr. Scott McVey
2:45 p.m.	BREAK
3:00 p.m.	"Kansas Anaplasmosis Disease Trends and Survey Results" - Dr. Ram Raghavan and Dr. Gregg Hanzlicek
3:30 p.m.	ADJOURN

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Accredited by the American Association of Veterinary Laboratory Diagnosticians

TO SET UP AN ACCOUNT GO TO:
www.ksvdl.org/accounting-and-billing/

If you have questions about this continuing education program please call 785-532-4833, or to register, please follow the link below:

<http://www.vet.k-state.edu/education/continuing/conferences/Diagnostics/>

Ocular lymphoma: A case study:

By Dr. Jamie N. Henningson, DVM, PhD, DACVP

A globe from a 12-year-old Chihuahua with a three-week history of a cloudy eye and corneal ulcer was submitted to the KSVDL. On examination of the globe, the ciliary body and adjacent choroid were expanded by sheets of monomorphic round cells (Figure 1) consistent with neoplastic lymphocytes.

Immunohistochemistry was performed for B and T cell markers and the neoplastic cells were positive for B cell lymphoma (Figure 2). This animal had no enlarged lymph nodes or signs of illness.

Primary ocular lymphoma in dogs is rare and is primarily part of multicentric lymphoma. In cats, lymphoma is the second most common intraocular neoplasm and is usually part of the systemic disease process. However, ocular disease is often the presenting complaint and may precede signs of systemic involvement.

Not only is neoplasia a common disease that affects eyes but so are other disease processes, such as autoimmune, trauma, and infectious causes. An autoimmune disease example is uveodermatological syndrome (Vogt-Koyanagi-Harada syndrome (VKH)) in dogs, which is most often bilateral; diagnosis in one eye may help save the other eye if treatment is initiated immediately. **Ocular biopsy submission can be an important diagnostic tool for your patient and client.**

To submit eyes for biopsy they should be left intact and not incised. Surrounding soft tissue can be trimmed if it does not appear to be involved in the disease. If there is a lesion present in the soft tissues surrounding the eye, leave the soft tissues intact. Place the eye in 10% neutral buffered formalin immediately after enucleation. The eye should be fixed in a ratio of 10X formalin volume: 1 X specimen volume. The formalin: specimen sample should be placed in a liquid tight container, and then placed into another container such as Ziploc baggie or whirlpack to prevent leakage during shipping.

Including a clinical history explaining the course of disease and the lesions observed on ocular examination are important when submitting samples. Drawings of the lesion(s) location and/or clinical pictures are beneficial and appreciated.

If you have questions about submitting eyes, please don't hesitate to call Dr. Henningson at 785-532-1429 or email at henningsn@vet.k-state.edu.

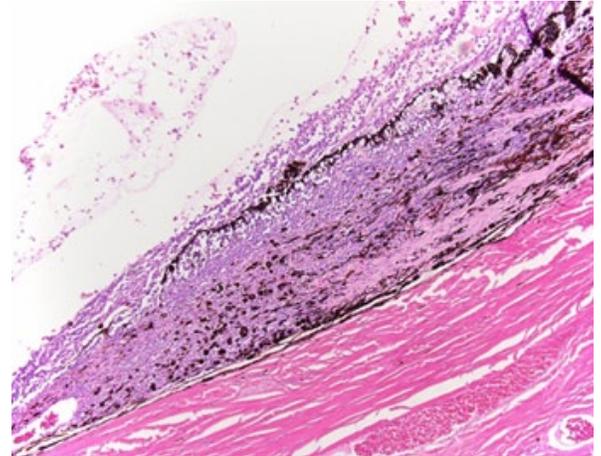


Figure 1. Eye, Lymphoma. Ciliary body and choroid expanded by monomorphic round cells that are consistent with neoplastic lymphocytes.

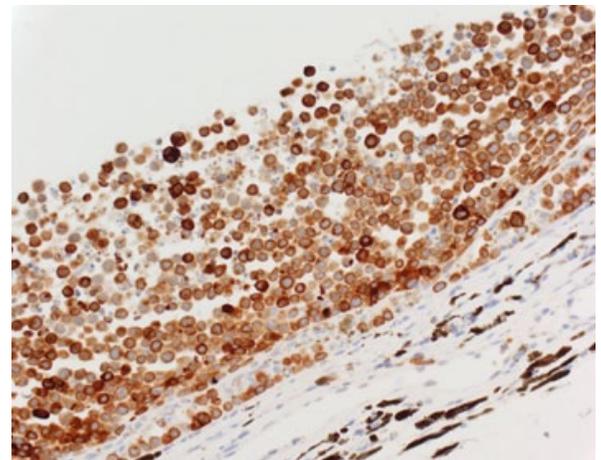


Figure 2. Positive IHC staining for CD79a, a marker for B cells, confirming B cell lymphoma.

Sample Submission for Bovine Abortions

By Dr. Gordon Andrews

We frequently receive phone calls this time of year for advice regarding what samples to submit for bovine abortions, so we are presenting this information as a reminder of the appropriate samples to collect for a thorough diagnostic workup.

Abomasal fluid: Place in a sterile tube and label. This sample is for the bacteriology abortion panel which includes aerobic culture, Brucella and Campylobacter.

Thoracic or pericardial fluid: Place in a sterile tube and label. This sample can be used for fetal serology for BVDV, Leptospirosis, Neospora, Bluetongue, and others. Fetal serology is a valid test to run only during the third trimester of pregnancy when the fetus is becoming immune competent.

Formalin fixed tissues: Place in leak proof formalin container.

These tissues are examined microscopically for lesions indicative of an infectious cause of abortion. Brain (sections of cerebrum, cerebellum, midbrain and brainstem), heart, lung, spleen, liver, kidney, adrenal glands, thyroid gland, thymus, and skeletal muscle (3 sections from different muscle groups).

Fresh tissues: Place pooled tissues in a whirlpac bag. Fresh tissues can be used for PCR testing for specific infectious agents (Leptospira, BVDV), bacterial culture, or virus isolation. Lung, liver, kidney, lymph node, spleen, heart, and thymus.

Eye or ocular fluid: Place eye in whirlpac bag, or fluid in sterile tube and label. This sample can be used for nitrate analysis if desired.

Placenta: 3-4 sections of fresh cotyledons in a separate

whirlpac bag, and 3-4 sections of cotyledons in the formalin container. The fixed tissue is examined microscopically for evidence of placentitis. The fresh tissue can be cultured or other procedures such as bacterial culture, PCR, or virus isolation can be performed if there is microscopic evidence of placentitis.

Fresh liver: Place one large sample in a separate whirlpac bag. This sample can be used for trace mineral and vitamin A analysis if nutritional deficiency is suspected as a cause of abortion or weak born calves.

This information as well as many other case specific diagnostic workups is available on the KSVDL website at: <http://www.ksvdl.org/resources/case-specific-workups/>

Watch these helpful new videos from the KSVDL

We have posted new videos on the KSVDL YouTube® channel covering the following topics:

- Alpaca Handling
<https://www.youtube.com/watch?v=-nk17LAD2mQ>
- Camelid Blood Collection
<https://www.youtube.com/watch?v=WmLOUpkSIEY>
- Bovine Rabies Sample Collection
<https://www.youtube.com/watch?v=01gXa8KkuPA>
- Packaging Tips: Blood Samples, Fresh and Fixed Tissue, and Cytology Slide
<https://www.youtube.com/watch?v=JwcsQcQshBs>

Subscribe to the KSVDL YouTube® channel:

<https://www.youtube.com/channel/UCtx-IIIXqj5PAMQYryXaRhA>



KSVDL Client Care: We are a great source of information!!

The KSVDL Client Care group serves as an integral part of our team by facilitating communication for those of you out in the field and those of us in the laboratory. All incoming requests are handled by these folks who put every effort forward to ensure timely and accurate results are possible at the completion of each accession.

Even before you package and ship your samples they are here

to answer any questions you may have about anything from submission forms to prepaid UPS shipping labels to what the cost and expected turn-a-round time is for the testing you need. They can also put you in contact with a diagnostician to assist you with more detailed questions or guidance.

You may also find them reaching out to you for follow up on accessions that have reached

the laboratory. This frequently occurs when one or two bits of information from you might assist those in the lab with proper testing or prompt resulting methods. Some specialized testing requires more detailed information than others.

Client Care is also here any follow-up questions you may have with anything from resulting methods to result interpretation.

New Tests

New Canine Diarrhea Pathogen Panel Test OPTIONS

A multiplex real-time PCR panel to identify various bacteria and viruses frequently associated with canine diarrhea cases plus a comprehensive fecal floatation is now available.

Targets: Fecal Parasites: Qualitative fecal flotation

Viral: Canine enteric coronavirus (CECoV) ; Canine parvovirus 2 (CPV2); Canine distemper virus (CDV)

Bacterial: *Salmonella* spp.; *Lawsonia* spp.; *Campylobacter jejuni*; *Clostridium perfringens* enterotoxin A; *Clostridium difficile* ToxA; *Clostridium difficile* ToxB

Sample: 2 grams of feces

Shipping: Sterile container, on cold packs, shipped for overnight delivery

Estimated turnaround time: 1-2 days

Cost: Comprehensive Diarrhea Panel: Parasite, Viral and Bacterial: \$97.00
Viral & Bacterial panel: \$87.00
Bacterial panel only: \$64.00
Viral panel only: \$32.00

Bovine Diarrhea Panel (ELISA)

Targets: Coronavirus, Rotavirus, E. coli K99, and *Cryptosporidium parvum*

Sample: 2 grams of feces

Shipping: Spill proof container on cold packs

Estimated turnaround time: 2 days

Cost: \$81.00

Each of the components of our Canine Diarrhea Panel are now available as individual tests!

Canine Distemper Virus PCR Cost: \$32.00

Canine Enteric Coronavirus PCR Cost: \$32.00

Campylobacter jejuni PCR Cost: \$32.00

Clostridium difficile Toxin A and B PCR Cost: \$40.00

Clostridium perfringens Enterotoxin A PCR Cost: \$32.00

Lawsonia intercellularis PCR Cost: \$32.00

Salmonella spp. PCR Cost: \$32.00

For more information visit our website www.ksvdl.org or contact KSVDL Client Care at 866-512-5650 or clientcare@vet.k-state.edu.

KSVDL Personnel Activities

Dr. Jamie Henningson spoke at the following meeting.

- Academy of Veterinary Consultants Winter Meeting. Dec. 9, 2014. Presentation: Bovine Clinical Cases and Pathology

Dr. Dick Hesse spoke at the following meetings.

- KSU Swine Day. Nov. 19, 2014. Presentation: PEDv update and Porcine Deltacoronavirus; Fulfilling Koch's postulates
- North American PRRS Symposium. Dec. 5 and 6, 2014. Presentation: Porcine Deltacoronavirus- Koch's Postulates Fulfilled. Epidemic Diarrhea Virus is here – ready or not

Dr. Brian Lubbers spoke at the following meeting.

- National Institute for Animal Agriculture. Antibiotic Use and Resistance: Moving Forward Through Shared Stewardship, Nov. 12-14, 2014. Presentation: Animal Agriculture and Antibiotic Resistance: What Should (and Should Not) be on the Table

Future Activities

- KSVDL (Dr. Mike Moore & Rolan Davis) will have a display at the North American Veterinary Conference, January 18-21 in Orlando, Florida.
- Dr. Gregg Hanzlicek will present Managing Neonatal Diarrhea in Beef Calves at the K-State Research and Extension Calving Management School in Manhattan (Jan. 20) and Dighton, Kansas (Jan. 21).
- KSVDL (Dr. Jen Lehr) will have a display at the Nebraska Veterinary Medical Association Conference, Jan. 22-23 in Omaha, Nebraska.
- KSVDL (Dr. Bill Fortney) will have a display at the Missouri Veterinary Medical Association Conference, Jan. 23-25 in St Charles, Missouri.
- KSVDL (Dr. Fortney) will have a display at the Oklahoma Veterinary Medical Association Conference, Jan. 29-30 in Norman, Oklahoma.
- Dr. Kelli Almes will be presenting at the Kansas Veterinary Medical Winter Meeting in McPherson, Kansas. Jan. 30, 2015. Presentation title: Diagnostic Pathology
- Drs. Fortney and Hanzlicek will be presenting a mixture of small animal and bovine subjects at the Southeast District Kansas Veterinary Medical Association meeting, Feb. 2 in Cherryvale, Kansas.
- Dr. Dick Hesse will be presenting at the University of Mityazaki, Japan, Feb. 3, 2015. Presentation: Animal Disease Prevention in USA; Swine Coronaviruses
- Drs. Ram Raghavan and Gregg Hanzlicek will be presenting at KSVDL's 4th Annual Conference on Animal Diagnostics and Field Applications, Manhattan, Kansas. Feb. 7, 2015. Presentation: Kansas Anaplasmosis Disease Trends and Survey Results

Recent KSVDL Successful Field Investigations:

- Sudden death in neonatal dairy calves
- Weak calf syndrome in a beef herd
- Johne's Risk Assessment in a goat herd

New Summary of Charges Option

You can now choose whether the Summary of Charges (typically last page of results) will accompany your accession reports. If you choose to not receive the SOC

it won't appear on any resulting method but is still viewable in the on-line results portal. To opt out of receiving the SOC or if you have additional questions

please contact Client Care at 785-532-5650, 1-866-512-5650, or clientcare@vet.k-state.edu.

Developing, Delivering Accurate, Innovative Diagnostic Services

The mission of the Kansas State Veterinary Diagnostic Laboratory (KSVDL) is to develop and deliver accurate, innovative, and timely diagnostic and consultative services to the veterinary and animal health community while providing support for teaching, training and research programs.

**1800 Denison Avenue
Manhattan, KS 66506**

**Phone: 785.532.5650
Toll Free: 866.512.5650**

Continuing Education

www.vet.ksu.edu/CE/Conference.htm

January 31, 2015

Kansas Veterinary Medical Association
Winter Meeting
McPherson Opera House
McPherson, Kansas

For more information, follow the link: www.ksvma.org/
or 785-234-0461.

February 7, 2015

4th Annual KSVDL Continuing Education
Conference
Bovine Anaplasmosis, Bluetongue, and
Enzootic Hemorrhagic Disease

Hilton Garden Inn
Manhattan, Kansas

For more information, follow the link: www.vet.k-state.edu/education/continuing/conferences/Diagnostics/registration-info.html or 785-532-4853.

March 6, 2015

Kansas State University Cattlemen's Day
Weber Arena, Kansas State University
Manhattan, Kansas

For more information contact: Dr. Dale Blasi at dblasi@k-state.edu or 785-532-5427

Test Results and Schedules

**Laboratory results available On-Line All
The Time!**

KSVDL hours:

Memorial Day: Closed Monday, May 25

Independence Day: Closed, Saturday, July 4

Labor Day: Closed; Monday, September 7

To receive this newsletter by e-mail, contact: ksvdloutreach@vet.k-state.edu.

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