

*DoveLewis*<sup>®</sup>  
**Third Thursday  
Rounds**

**May 19, 2022**

**When the Bad Gets Worse:  
Oncological Emergencies**

Presented by

*Sarah Harris, CVT, VTS (ECC)*

*DoveLewis*  
**Third Thursday  
Rounds**

# Virtual Third Thursday: Attendee FAQ's

**Do I need to create my own Zoom account to attend?**

No. You can access the webinar through the link in your confirmation email. Click the link that says, "Click Here to Join" at the time of the lecture.

**Is there someone to help if I have trouble accessing the lecture?**

Yes. Please reach us at [contact@dovelewis.org](mailto:contact@dovelewis.org) if you're experiencing difficulties joining the meeting. During the lecture, you can use the "Raise Hand" function and someone will be able to help you.

**Is attendance tracked?**

Yes. As you register for the Zoom meeting, you will be asked to enter your information. Attendance is tracked for RACE records.

**Is this lecture RACE approved?**

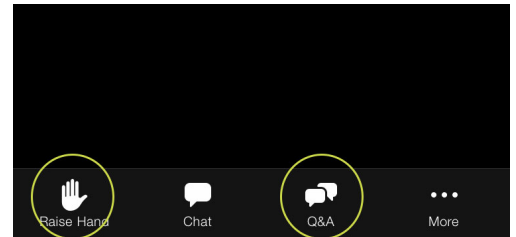
Yes. This lecture is RACE-Approved for one Interactive-Distance CE credit. You will receive an emailed certificate of attendance within one business day after the event.

**Will I be able to ask questions?**

Yes. If you have questions during the lecture, please use the Q&A function to submit your question. We will save questions for the end of the lecture.

**Will I be able to talk?**

No. All attendees will be in listen-only mode. If you have a question or need help, the Q&A or Raise Hand function.



**Will the presenter or other attendees be able to see me?**

No. All attendees will only have the capability to listen to the presenter.

**How will I get my certificate?**

You must register by using the Zoom link to prove attendance. You will receive an emailed certificate of attendance within one business day after the event.

**Do I have to answer the poll questions?**

No. The poll questions are optional, but we encourage you to try!

**Can I record the lecture?**

No. The lecture will only be recorded by DoveLewis, and will likely be available on [atdove.org](http://atdove.org) at a later date.

For more support, please email [contact@dovelewis.org](mailto:contact@dovelewis.org)



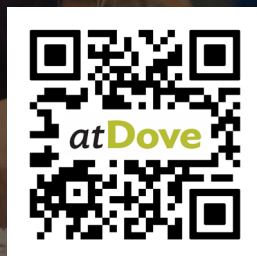


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Cancer is a common and often fatal diagnosis in veterinary medicine. However, cancer isn't the death sentence it once was. More and more owners are seeking treatment for their pets because they not only tolerate cancer treatments, but they often are able to maintain a good quality of life. This means we are likely to see and treat animals when they experience the sequela of emergencies that can occur secondary to cancer. In this lecture, a variety of oncologic emergencies will be discussed including hematologic, cardiopulmonary and extravasation emergencies, tumor lysis syndrome, and more.

## **Terminology:**

**Apoptosis:** the death of cells which occurs as a normal and controlled part of an organism's growth or development.

**Extravasation:** inadvertent leakage of injectable medication into tissue surrounding the vessel

**Myelosuppression:** a decrease in the production or number of blood cells

**Paraneoplastic Syndrome:** triggered by an immune response to a cancerous tumor. Antibodies or WBCs attack and destroy normal cells

## **Remission:**

**Complete:** all detectible cancer has disappeared

**Partial:** reduction in detectible cancer by >50%

**Stable disease:** reduction of growth in cancer that is <50% or increase of <25%

**Sepsis:** overwhelming systemic infection, potentially fatal

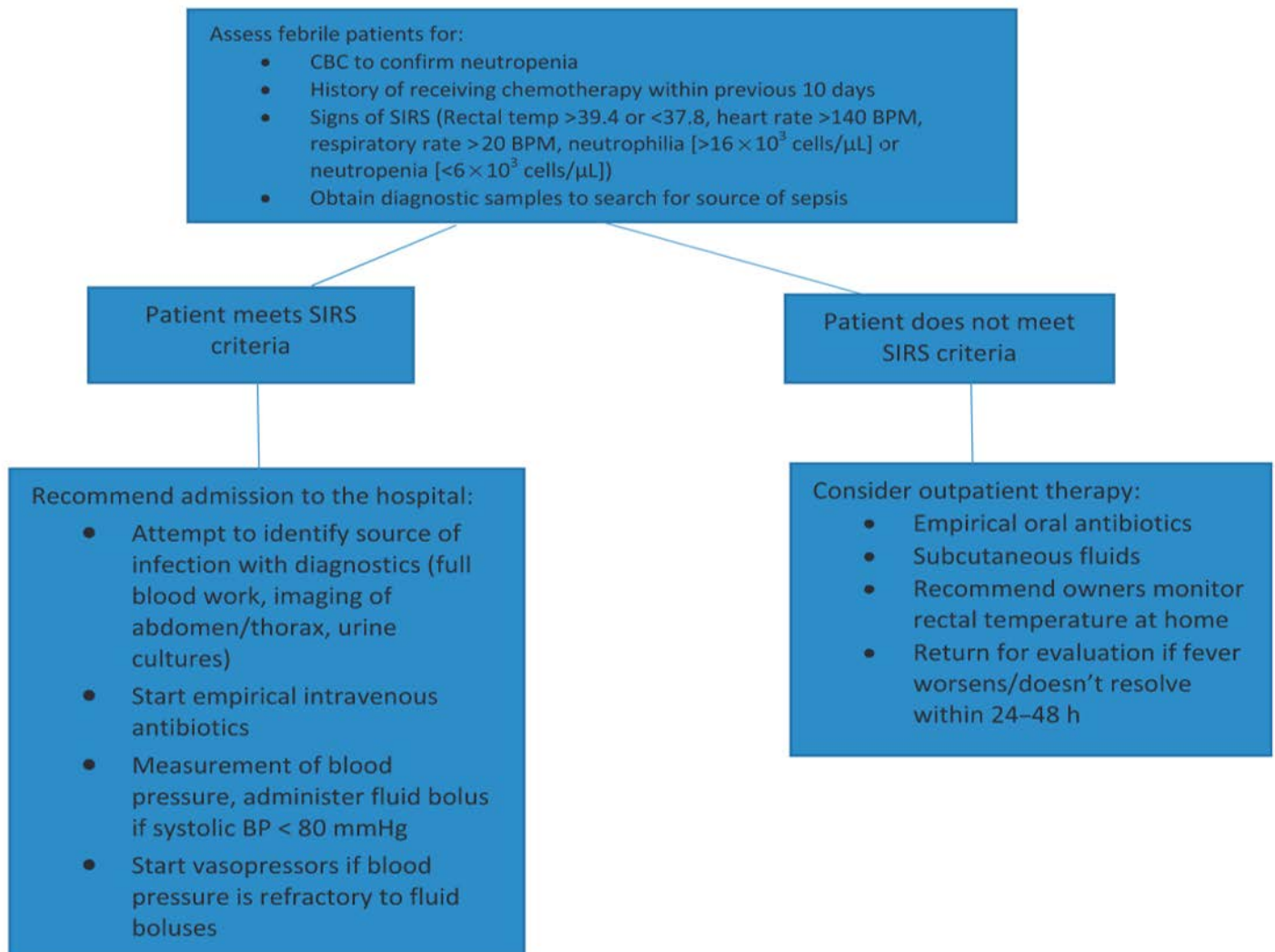
**SIRS:** a condition in which there is inflammation throughout the whole body

**Vesicant:** an intravenous medication that, if leaked into tissues, could cause pain, swelling and/or tissue damage





## Management of Febrile Neutropenia

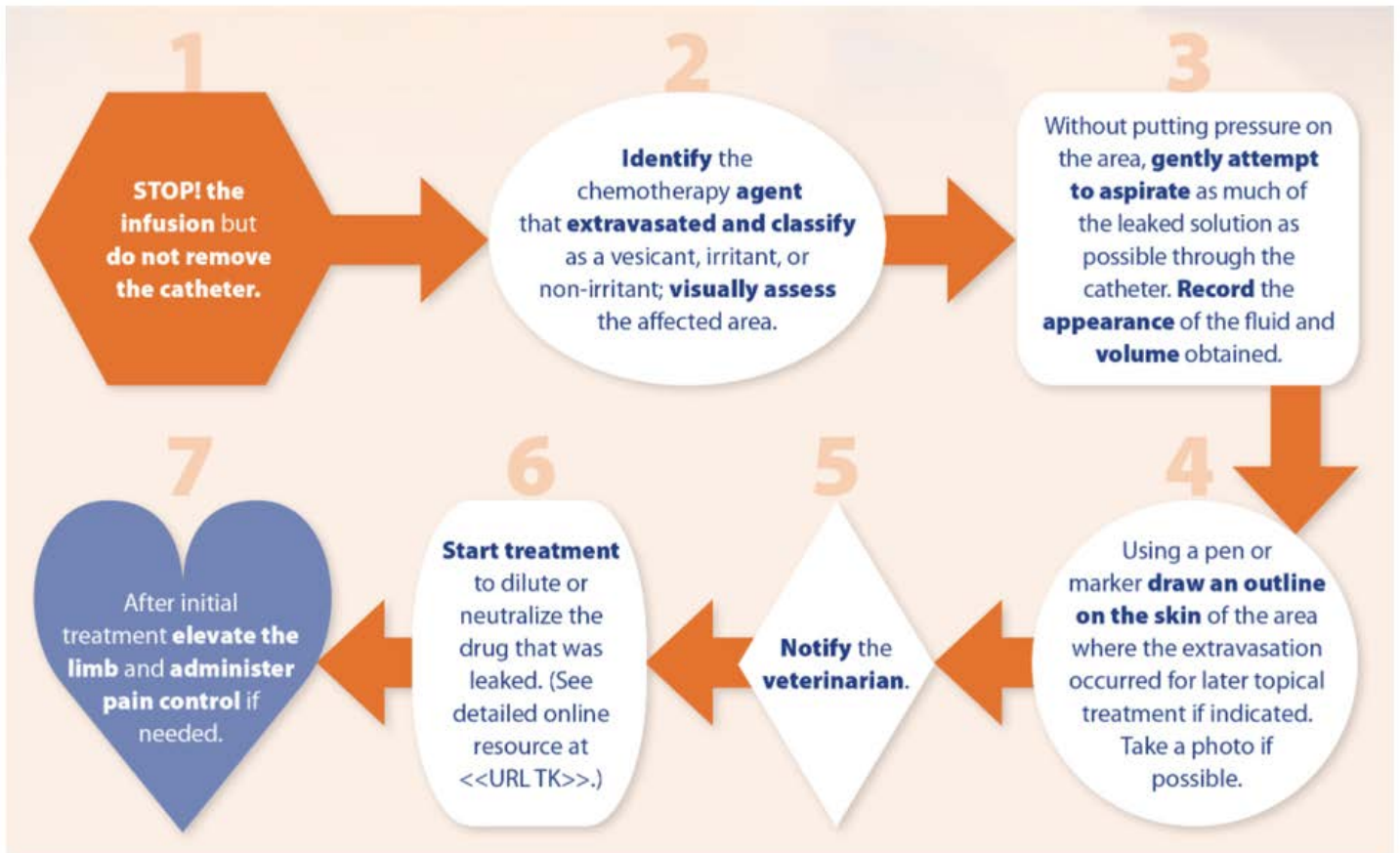


Tumielewicz, K.L., Hudak, D., Kim, J., Hunley, D.W. and Murphy, L.A. (2019), Review of oncological emergencies in small animal patients. *Vet Med Sci*, 5: 271-296. <https://doi.org/10.1002/vms3.164>





## Responding to Extravasation



Chemotherapy Extravasation Management. American Animal Hospital Association. <https://www.aaha.org/aaha-guidelines/oncology-configuration/implementation-toolkit/chemotherapy-extravasation-management/>





## Management of Extravasation

**TABLE 1. MANAGEMENT OF EXTRAVASATION**

Treatment Goal: Localize and Neutralize		Treatment Goal: Disperse and Dilute	Treatment Goal: Monitor for Mild Inflammation
<b>Vesicants</b>	<b>Irritants</b>	<b>Vesicants</b>	<b>Non-Irritants</b>
Dactinomycin*	Carboplatin*	Vinblastine <sup>§</sup>	L-Asparaginase
Docetaxel*	Cisplatin*	Vincristine <sup>§</sup>	Bleomycin
Doxorubicin†	Dacarbazine*	Vinorelbine <sup>§</sup>	Cyclophosphamide
Mitomycin <sup>‡</sup>	Fluorouracil*		Cytarabine
Mitoxantrone*	Ifosfamide*		Gemcitabine
Paclitaxel*	Melphalan*		Methotrexate
<p><b>1. Localize</b> Apply dry cold compresses for 20–30 min at a time, 4 times a day for the first 24–48 hr following extravasation.</p> <p><b>2. Neutralize</b> Use the antidote specific to the agent.</p>		<p><b>1. Disperse</b> Apply dry warm compresses for 20–30 min at a time, 4 times a day for the first 24–48 hr following extravasation.</p> <p><b>2. Dilute</b> Use the antidote specific to the agent.</p>	<p>Apply dry cold compresses for about 20–30 min, then as needed.</p>

\*No recommended antidote. †Recommended antidote: dexrazoxane or dimethyl sulfoxide (DMSO). ‡Recommended antidote: DMSO. §Recommended antidote: hyaluronidase. Adapted from [1].

Chemotherapy Extravasation Management. American Animal Hospital Association. <https://www.aaha.org/aaha-guidelines/oncology-configuration/implementation-toolkit/chemotherapy-extravasation-management/>





## SUMMARY OF CHEMOTHERAPEUTIC ANTIDOTES

<b>Chemotherapy</b>	<b>Classification of Chemotherapy</b>	<b>Antidotes</b>
Doxorubicin	Vesicant	Dexrazoxane—start ASAP, little benefit after 48 hr, or topical 90% DMSO
Vincristine	Vesicant	150 U/ml solution of hyaluronidase injected via the existing catheter
Vinblastine	Vesicant	
Carboplatin	Irritant	Topical 90% DMSO may help, and local dry cold compresses
L-asparaginase	Non-Irritant	None

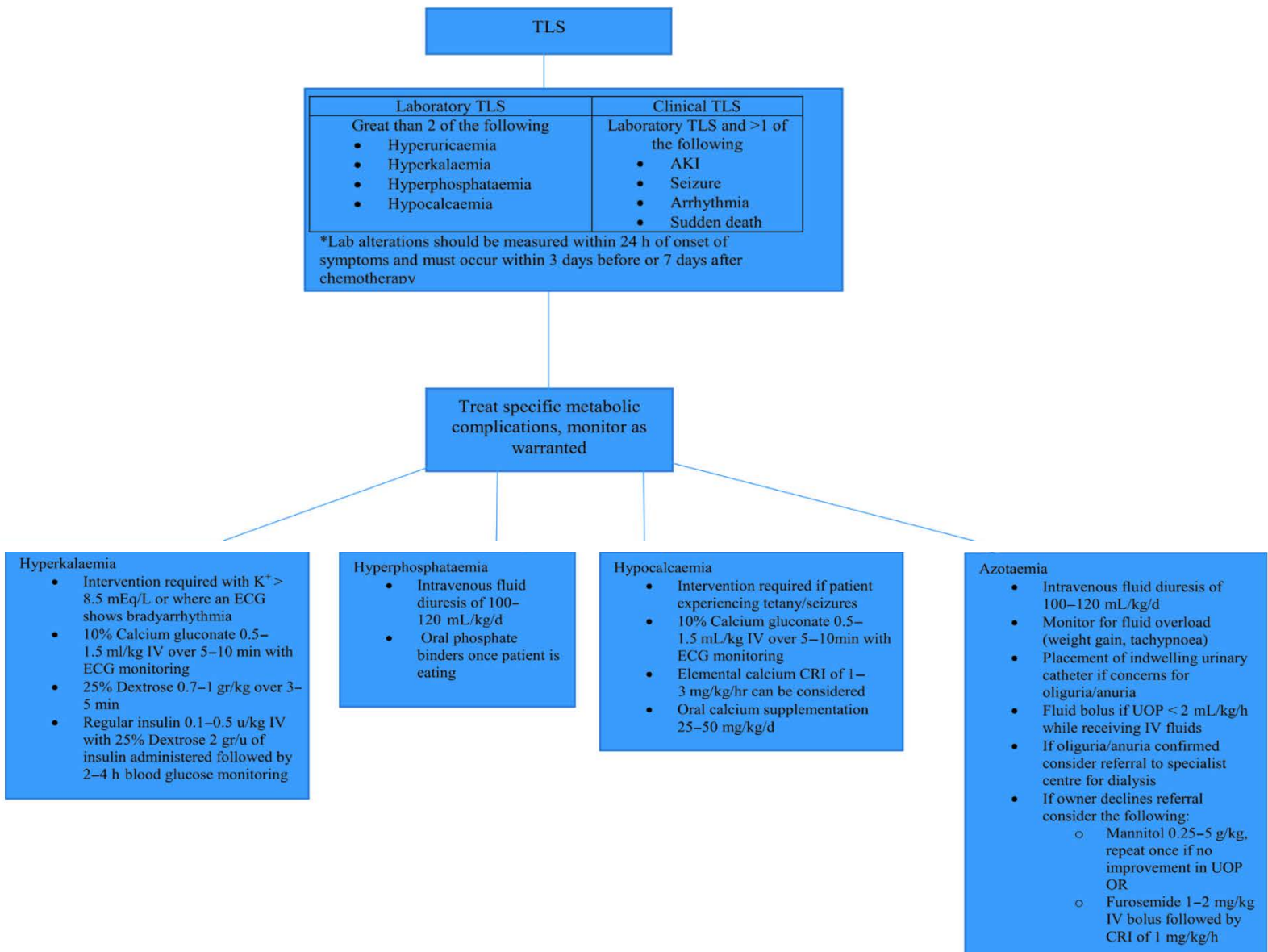
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## Tumor Lysis Syndrome



Tumielewicz, K.L., Hudak, D., Kim, J., Hunley, D.W. and Murphy, L.A. (2019), Review of oncological emergencies in small animal patients. *Vet Med Sci*, 5: 271–296. <https://doi.org/10.1002/vms3.164>





## References:

*Chemotherapy Extravasation Management. American Animal Hospital Association. <https://www.aaha.org/aaha-guidelines/oncology-configuration/implementation-toolkit/chemotherapy-extravasation-management/>*

*Mahoney, J., Oncologic Emergencies. Penn Annual Conference Proceedings 2016, [https://www.vet.upenn.edu/docs/default-source/penn-annual-conference/pac2016-proceedings/companion-animal-track-3/oncologic-emergencies--dr-mahoney.pdf?sfvrsn=345219ba\\_3](https://www.vet.upenn.edu/docs/default-source/penn-annual-conference/pac2016-proceedings/companion-animal-track-3/oncologic-emergencies--dr-mahoney.pdf?sfvrsn=345219ba_3)*

*Moore, A., Frimberger, A., Oncologic Emergencies. Oncology for Veterinary Technicians and Nurses. Wiley-Blackwell, 2010*

*Polton, G., (2014), Oncological Emergencies. World Small Animal Veterinary Association World Congress Proceedings, 2014. <https://www.vin.com/apputil/content/defaultadv1.aspx?pld=12886&catId=57094&id=7054682>*

*Tumielewicz, K.L., Hudak, D., Kim, J., Hunley, D.W. and Murphy, L.A. (2019), Review of oncological emergencies in small animal patients. Vet Med Sci, 5: 271-296. <https://doi.org/10.1002/vms3.164>*

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*My Lecture Notes*

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### ATDOVE.ORG'S NEW PODCAST HIGHLIGHTS THE HUMANS BEHIND THE ANIMALS WE CARE FOR

This past year has had a unique impact on the veterinary industry as we all have had to adjust to new protocols, increased patient counts, and more.

Our new podcast, *What We Bring*, offers an inside look at the stories and experiences of people who care for our pets. We hope you'll join us!

### ABOUT THE SHOW

When we walk onto the floor for our shift, we all bring with us our own unique stories. *What We Bring* examines the human experiences of those working in veterinary medicine, from the front desk to the O.R. Join DoveLewis Veterinary Well-Being Director Debrah Lee, LCSW, as she explores the real human stories behind the animals we care for.

We hope this podcast will shine a light on the experiences (good and bad) we bring with us to the clinic, and help move us towards greater openness and understanding as an industry. We know that not every lesson can be found in textbooks and training plans, so we're turning to each other to connect, listen, learn, and grow.



### WHERE TO FIND US

Click [here](#) to listen to the first episode where we explore imposter syndrome, client compassion, and more with emergency CVT Kara.



### MEET HOST DEBRAH LEE, LCSW

Debrah Lee, LCSW, joined the DoveLewis team in 2020 as the Veterinary Well-Being Program Director. Coming from a background in human healthcare, Debrah has long had an interest in how emotionally-demanding medical settings affect both patients and providers. Debrah brings a compassionate presence and deep appreciation for the human experiences that connect us, and she is eager to learn more from veterinary professionals about their experiences within the world of veterinary medicine.