 **Learning By Doing: How  
Interactive Scenarios Help  
Students Develop into  
Confident, Proficient Team  
Members on Day One.**

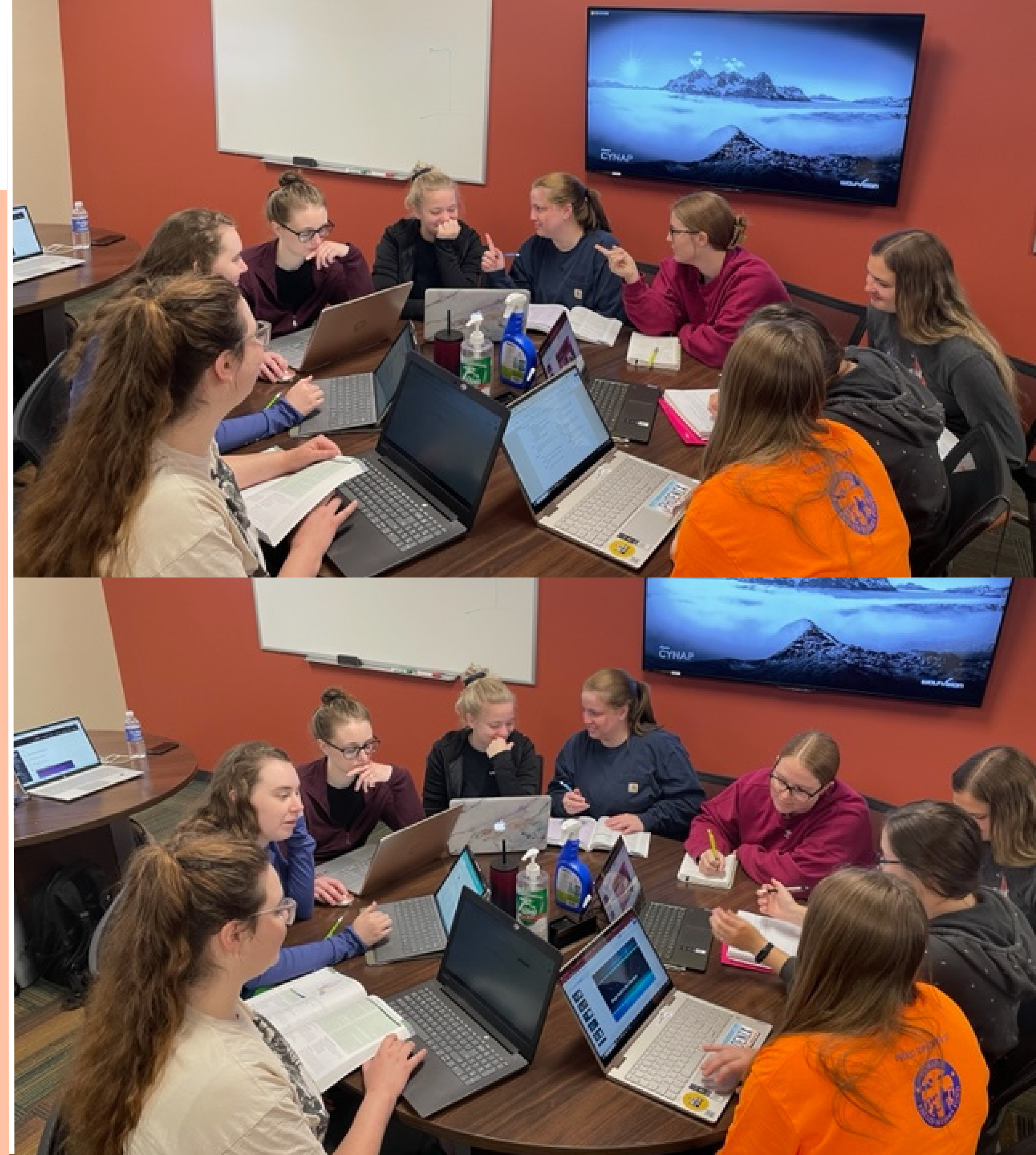
**-Denise Savel, CVT**

**Gateway Technical College**



# Real-Life Scenario

First Year students were given a real-life scenario that we are commonly presented with in a veterinary clinic.



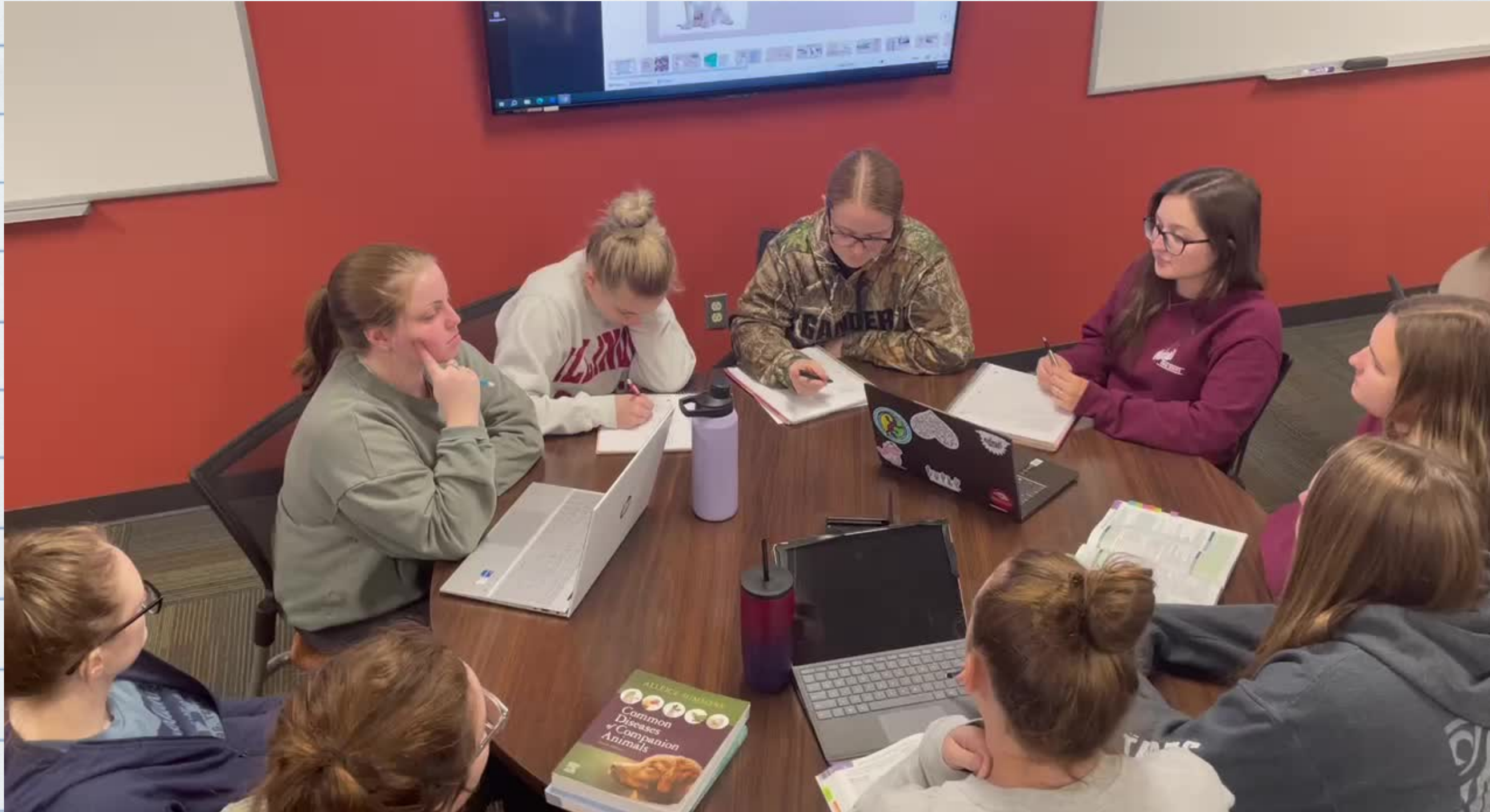
# Wesley, 3 months, F/I Golden Retriever



## Owner states the following:

- 1 Vomiting & diarrhea for 3 days
- 2 Lethargic, sleeping all day
- 3 Has not eaten anything for 36 hours, not drinking water
- 4 Straining the last couple of hours to defecate, with blood in the stool
- 5 Up to date on vaccines

# Students discuss the case...



# History Results

- \*Got from a breeder at 9 weeks**
- \*Eats Puppy Pro plan 3c. daily**
- \*Has free roam in a fenced-in yard**
- \*Taking heartworm and flea/tick meds**
- \*No other pets in the household**
- \*Not sure if they got into anything, but she likes to chew**
- \*Dewormed by breeder at 10w.**
- \*Urinating fine until yesterday, only urinated twice**

# Physical Exam Results

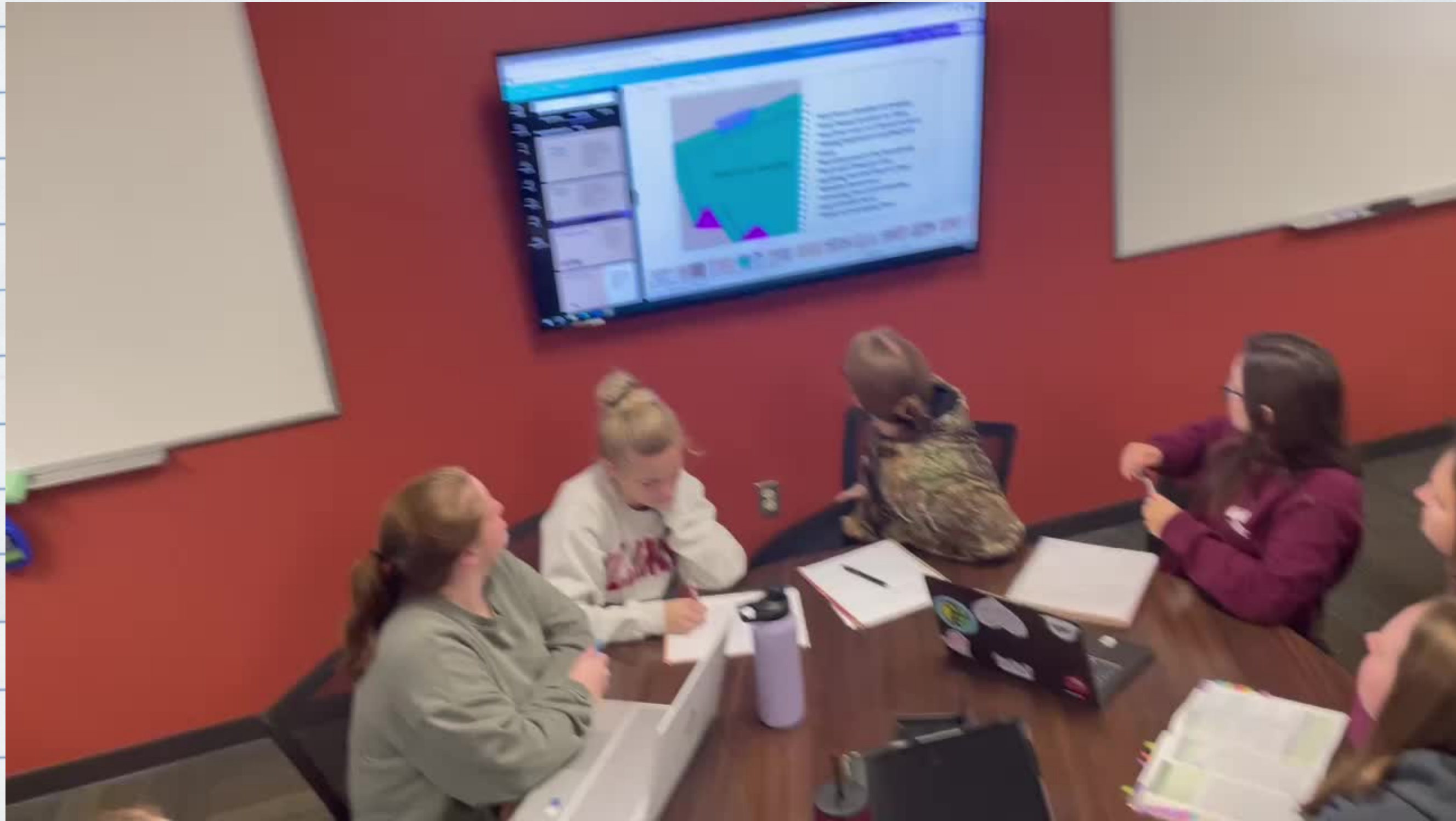


- T=102.0 P=123 bpm R=40rpm
- MM: light pink & tacky CRT: 3 seconds

- Tenting of skin
- Tender abdomen on palpation

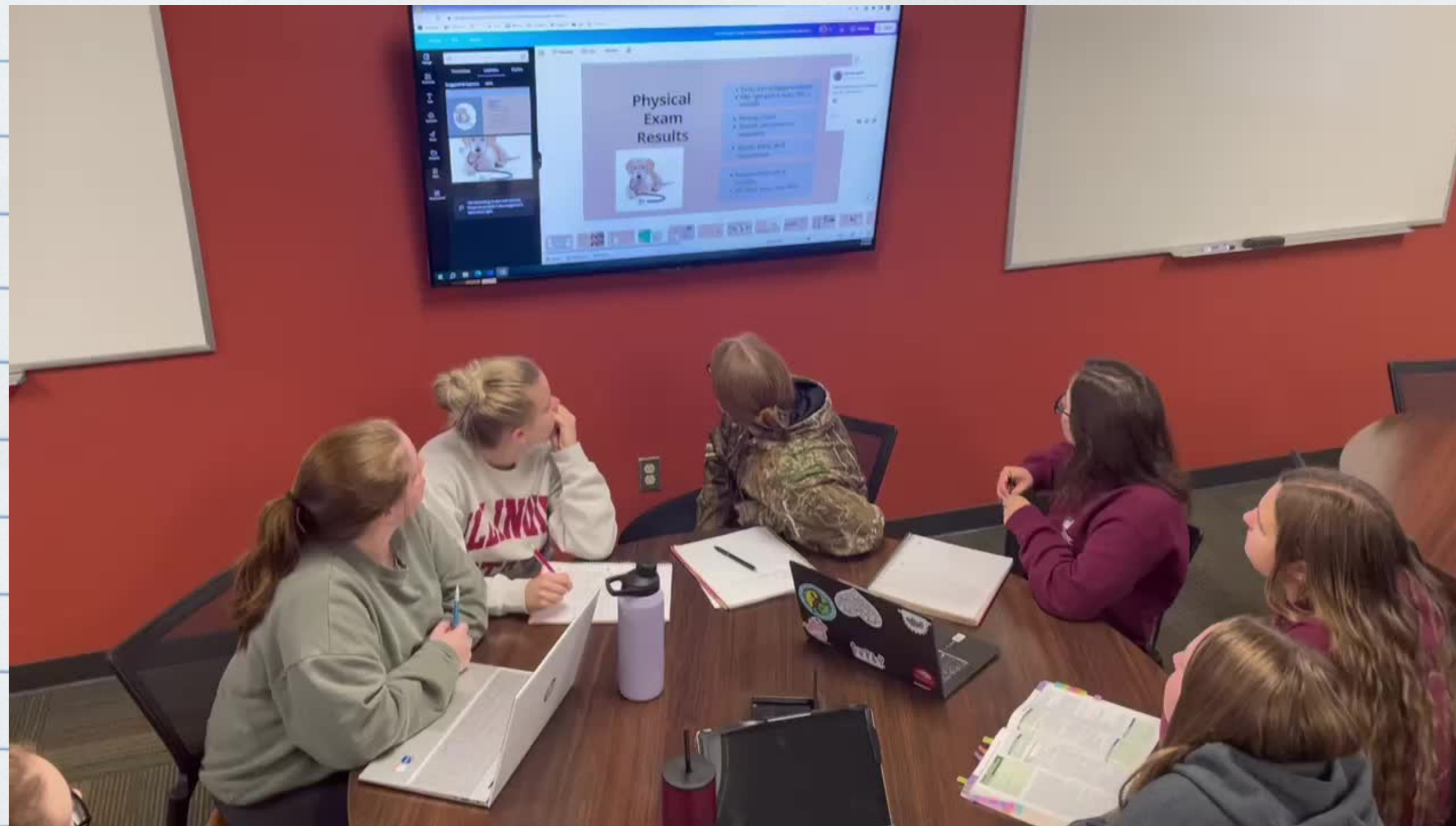
- Quiet, alert, and responsive

- Rectum area red & swollen
- All other areas are WNL



**Students discuss PE & history results ...**

# What are the next steps and why?





**1**

**PCV/ TS**

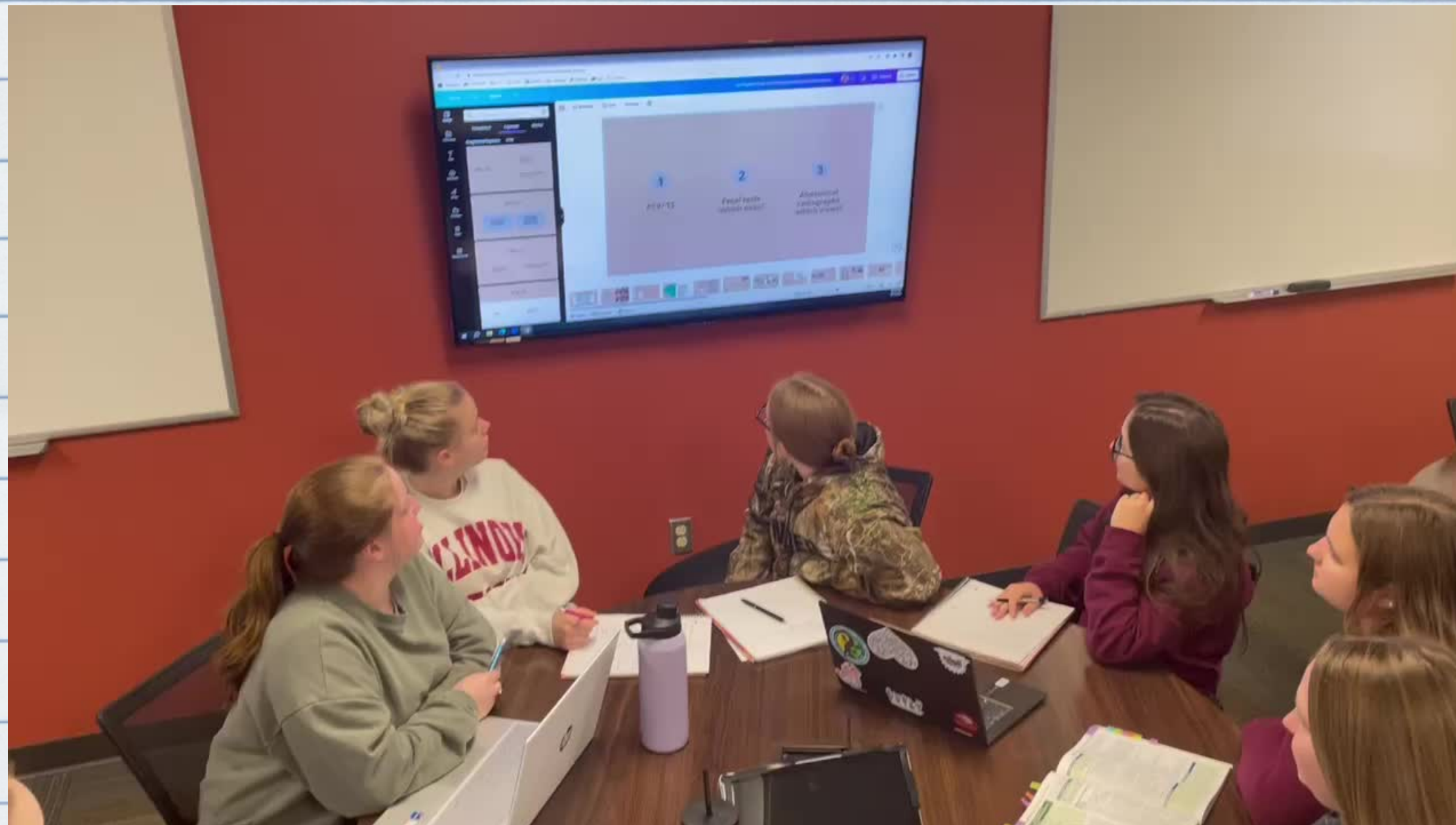
**2**

**Fecal tests  
-which ones?**

**3**

**Abdominal  
radiographs  
-which views?**

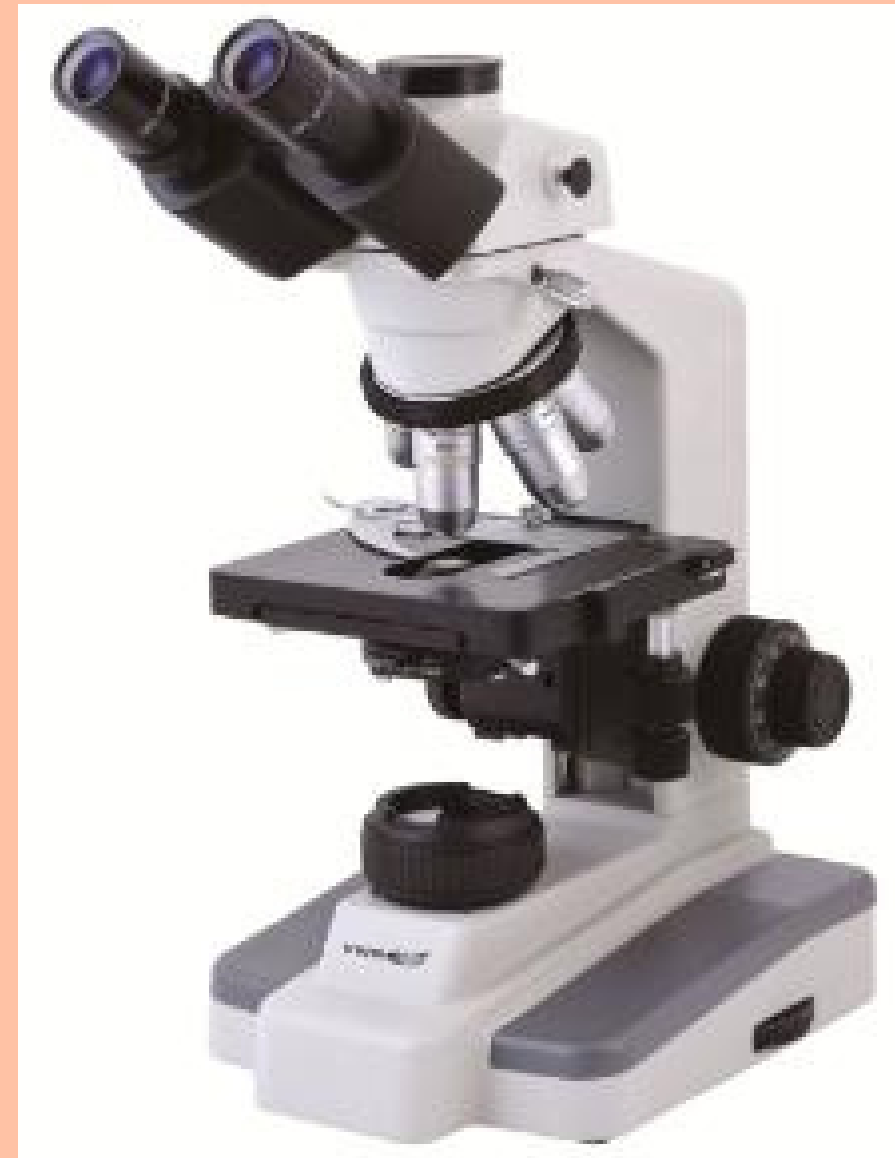
# What tests should be run and why?



# Results...



PCV=62%  
T.S.= 8.2g/dl



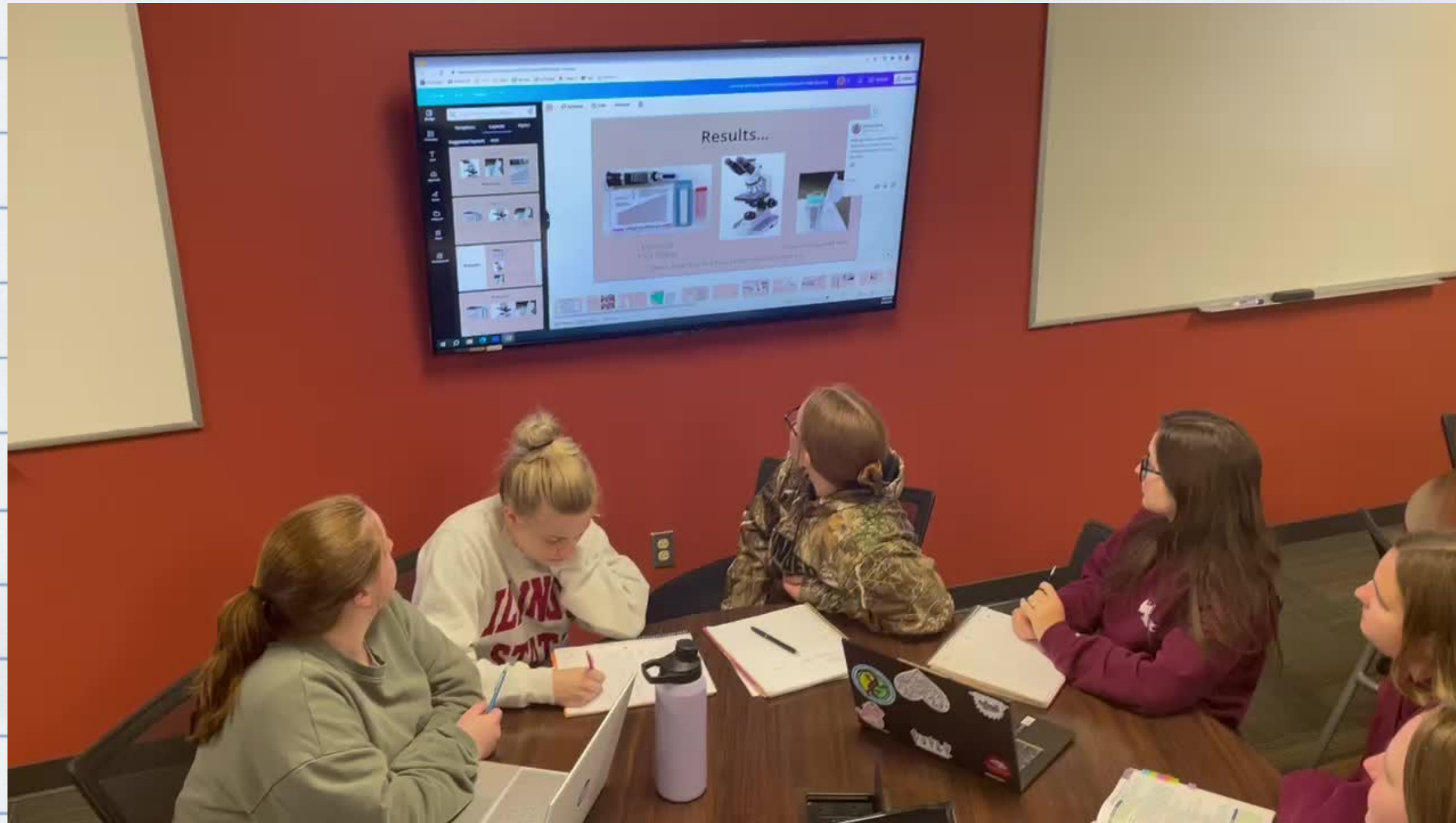
Stool=No parasites seen

Direct, Fecal float and fecal centrifuge tests were ran.



# Idexx Parvo test Results

Negative for Parvo



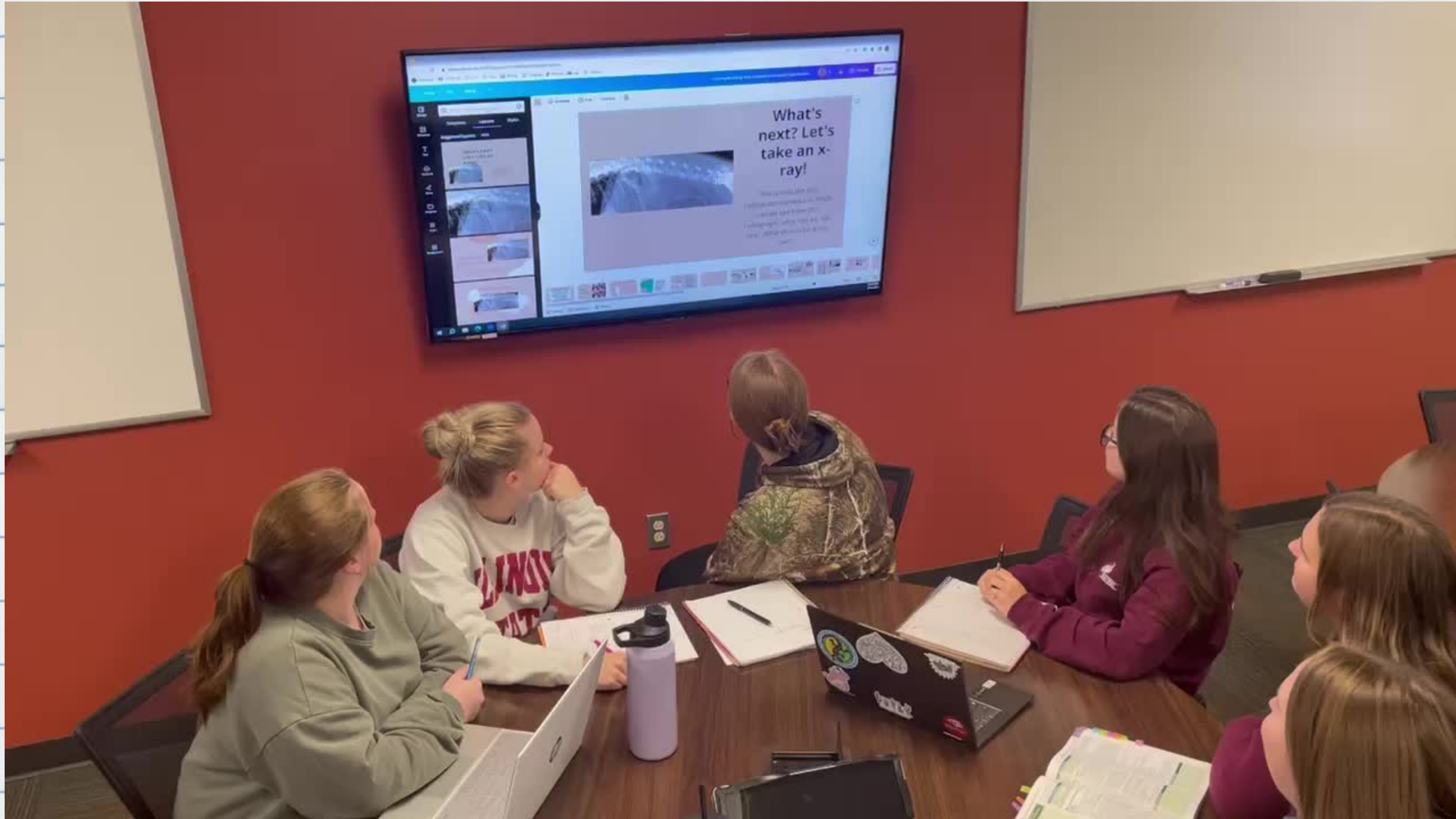
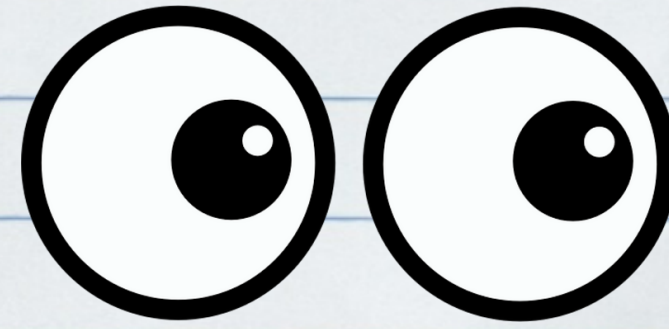
Discussing test results, what do they mean? What can we conclude from them?

# What's next? Let's take an x-ray!

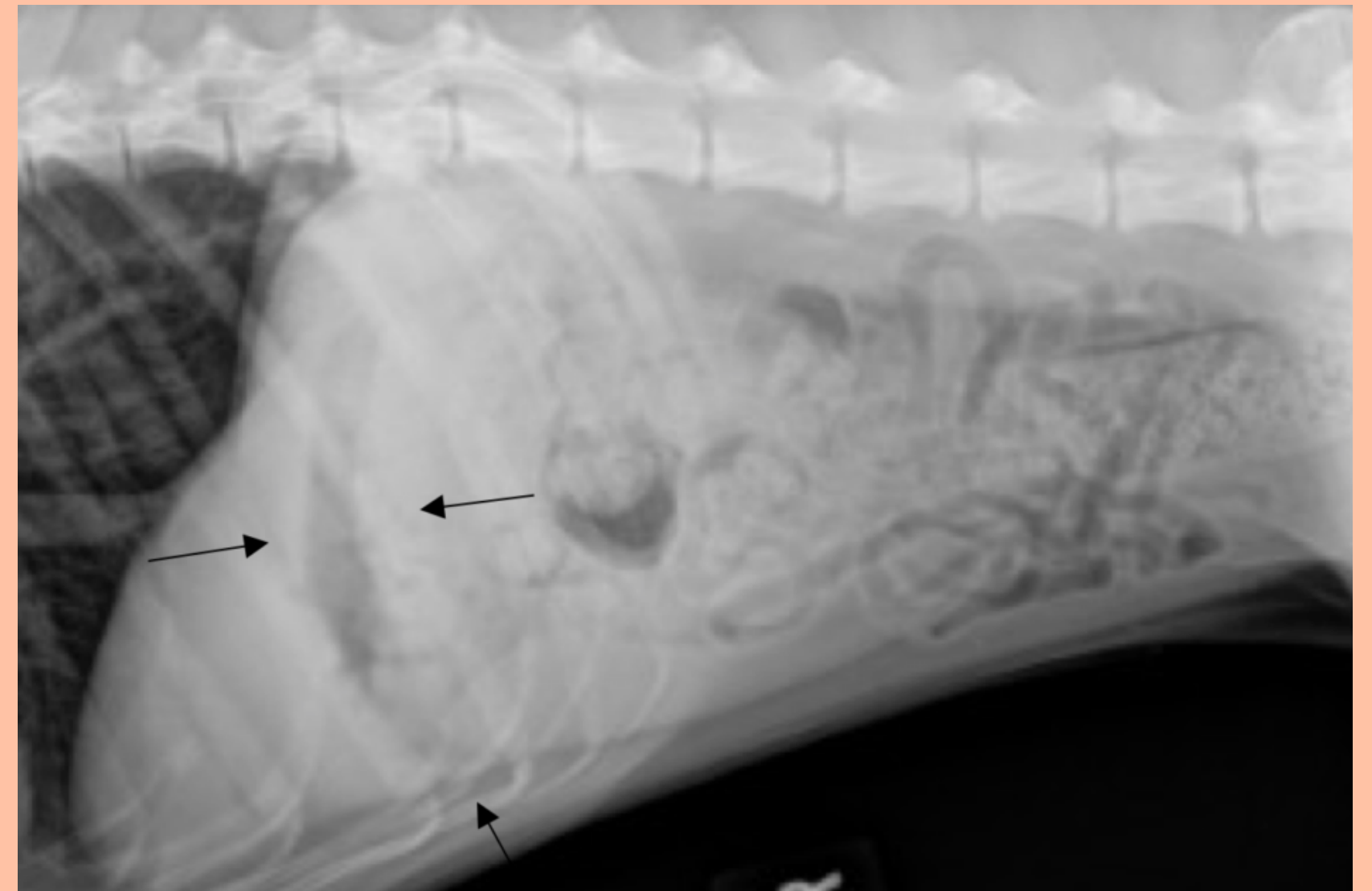
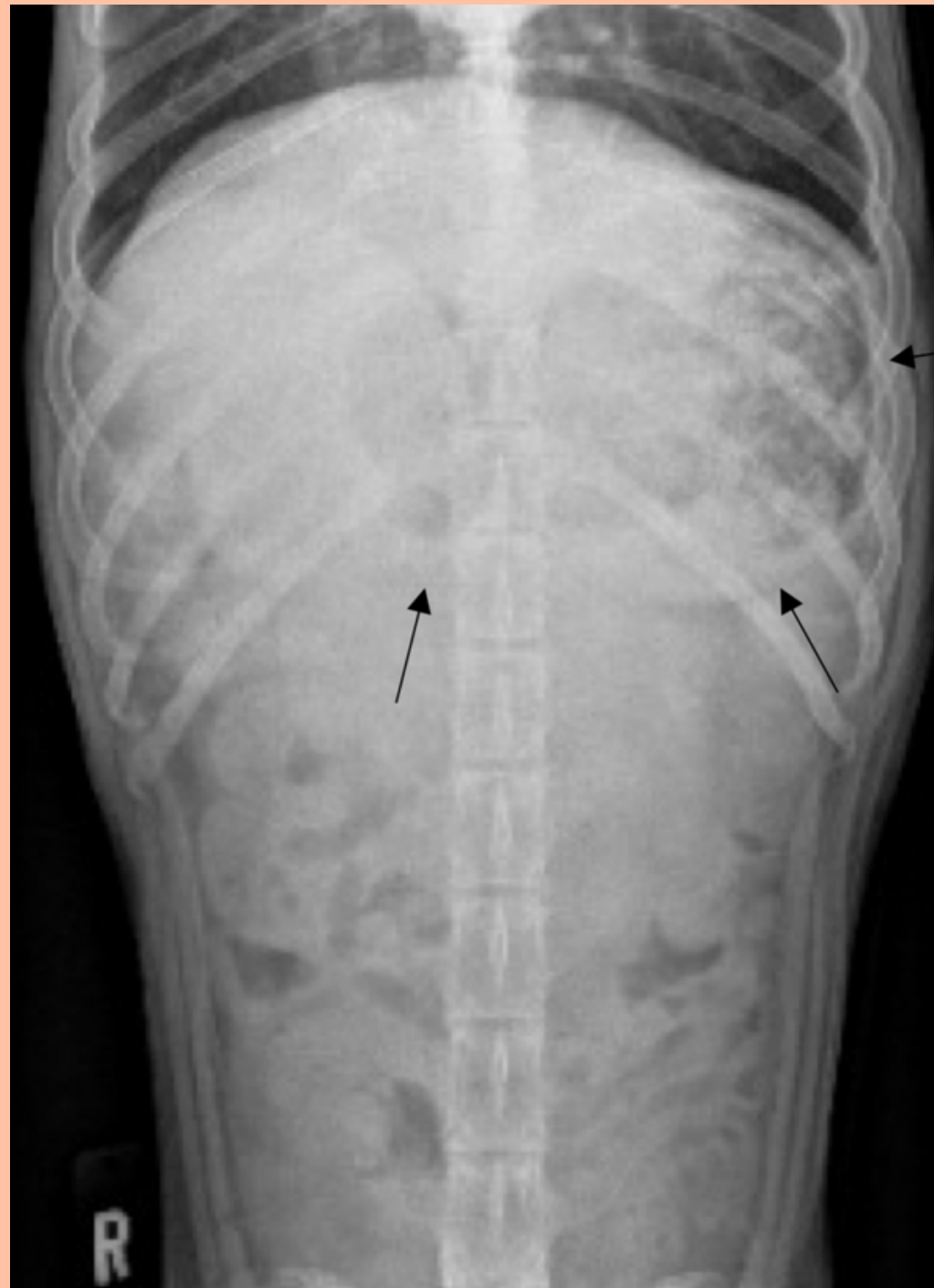


This is how the first radiograph turned out. What can we see from this radiograph, what can we not see? What should be done next?

Lets review this first X-ray...



# Good Abdominal Radiographs?

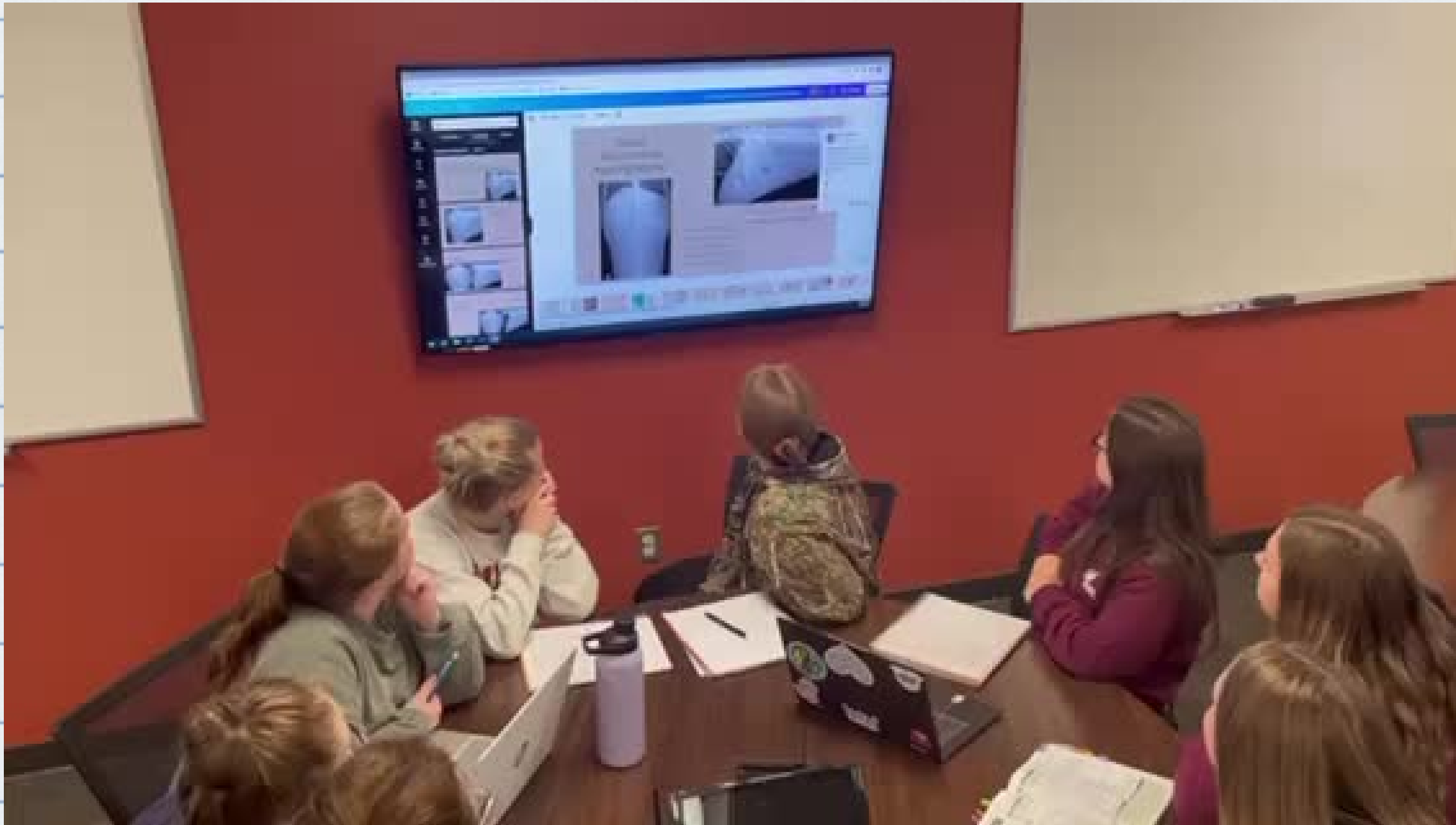


What makes this or does not make this a good diagnostic radiograph? What are the arrows pointing at?

What makes this a good diagnostic radiograph?



# X-ray discussion



# What would be our treatment for this puppy? (What could we get prepared for the doctor?)

- IV fluids for 24 hours
- Medications (ex: Cerenia)
- Deworm
- Rest

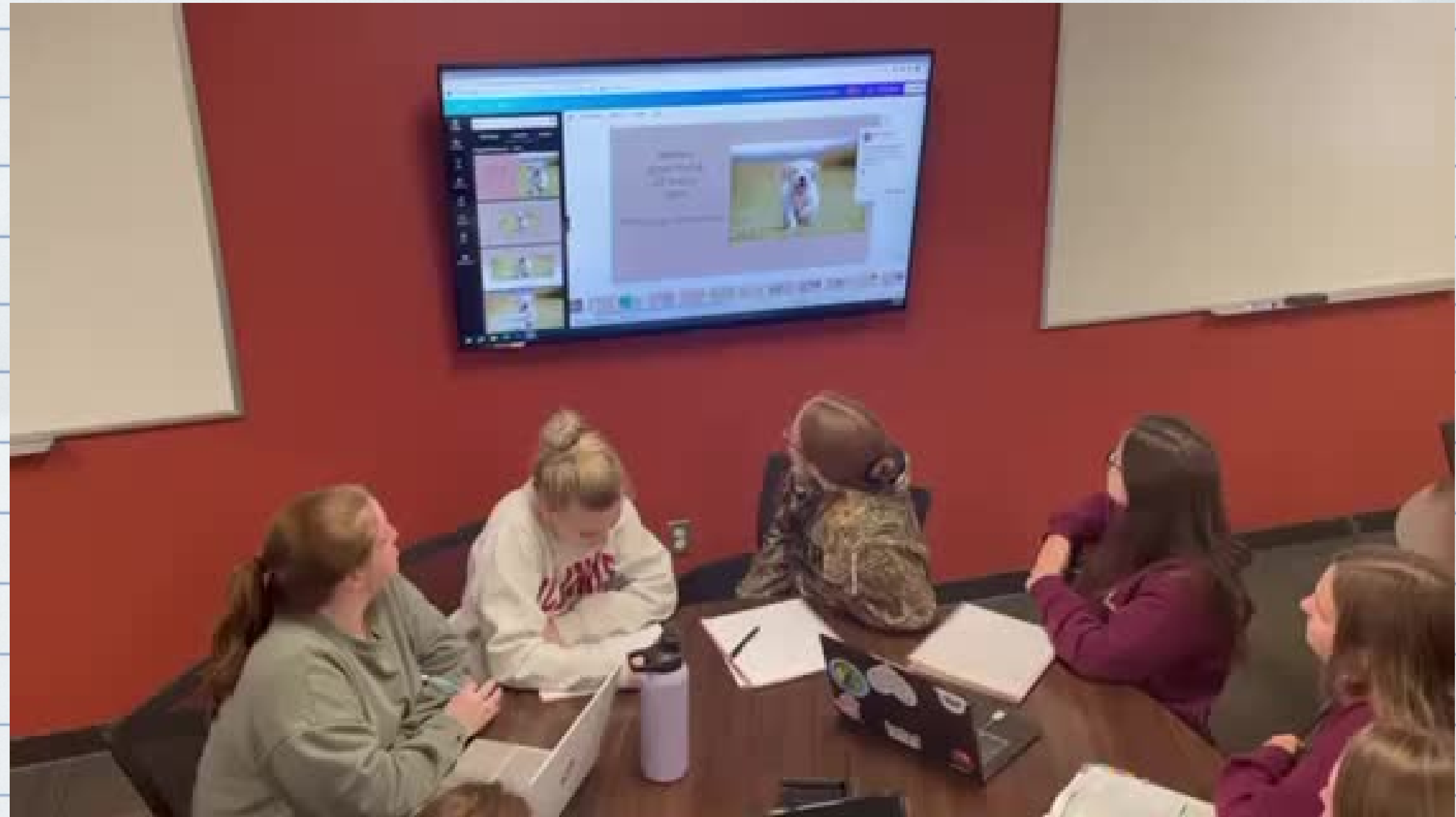


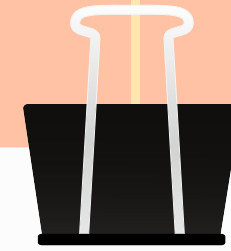
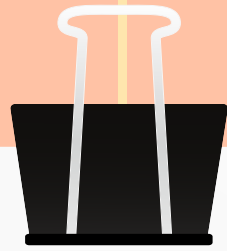
Wesley  
goes home  
24 hours  
later

\*Discharge instructions



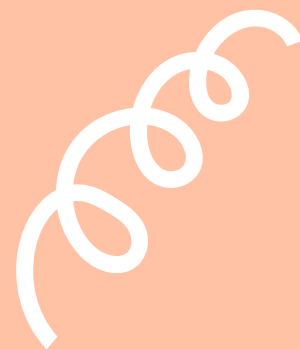
# The students final decisions...





## Critical Thinking In Veterinary Medicine

Critical thinkers exhibit habits of the mind. It brings in confidence, contextual perspective, creativity, flexibility, inquisitiveness, intellectual integrity, intuitions, open-mindedness, perseverance, and reflection. Teaching this concept early on will help the student apply these skills and put them into action!



- **Identify the problem**
- **Gather Data**
- **Identify possible answers**
- **Evaluate the results**



# Critical Thinking

- **Adapt to new situations**
- **Vital Skill**
- **Can be multidimensional**
- **Helps with rapid decision making**
- **Benefiting from lessons previously learned**

# Ways to Teach Critical Thinking ●●●

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\*The lecture Method -The teacher has the knowledge and they transmit it to the students

\*The demonstrative method- The teacher demonstrates the concept, then students apply and repeat the steps, and test the process.

\*The interrogative method- Questioning is the principal. Students' answers lead the discussion with feedback.



**\*The active method-**  
action is the starting  
point, knowledge has to  
be constructed.

Students are more  
proactive and  
independent.

**\*The experimental  
method-** Learning in  
real-life conditions.

**\*The heuristic  
method-** students'  
imagination helps guide  
them toward new  
discoveries





# Teaching Methods

**1**

**Not all students  
learn the same  
way**

**2**

**Feedback**

**3**

**Asking  
Questions, Giving  
scenarios**

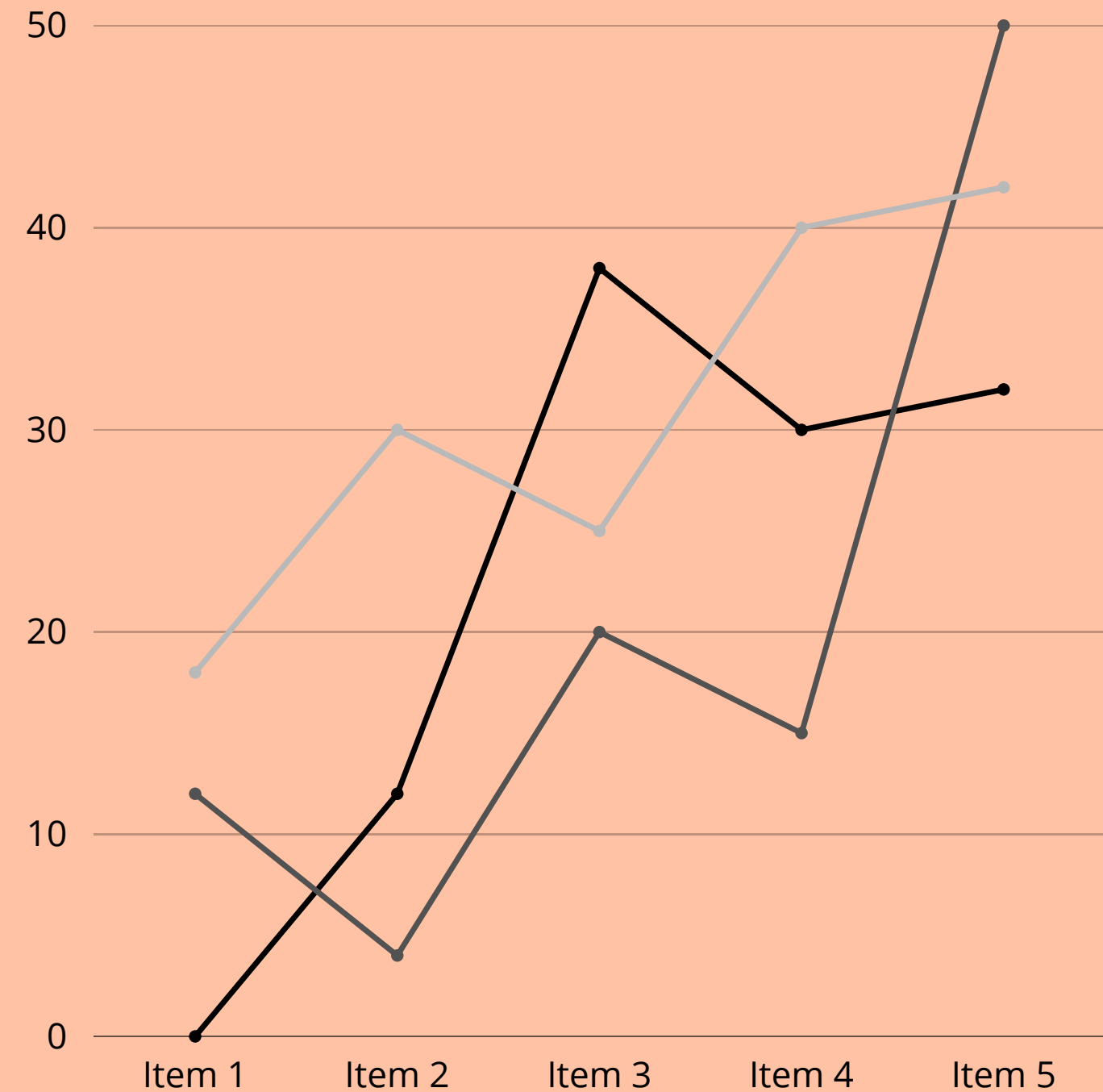


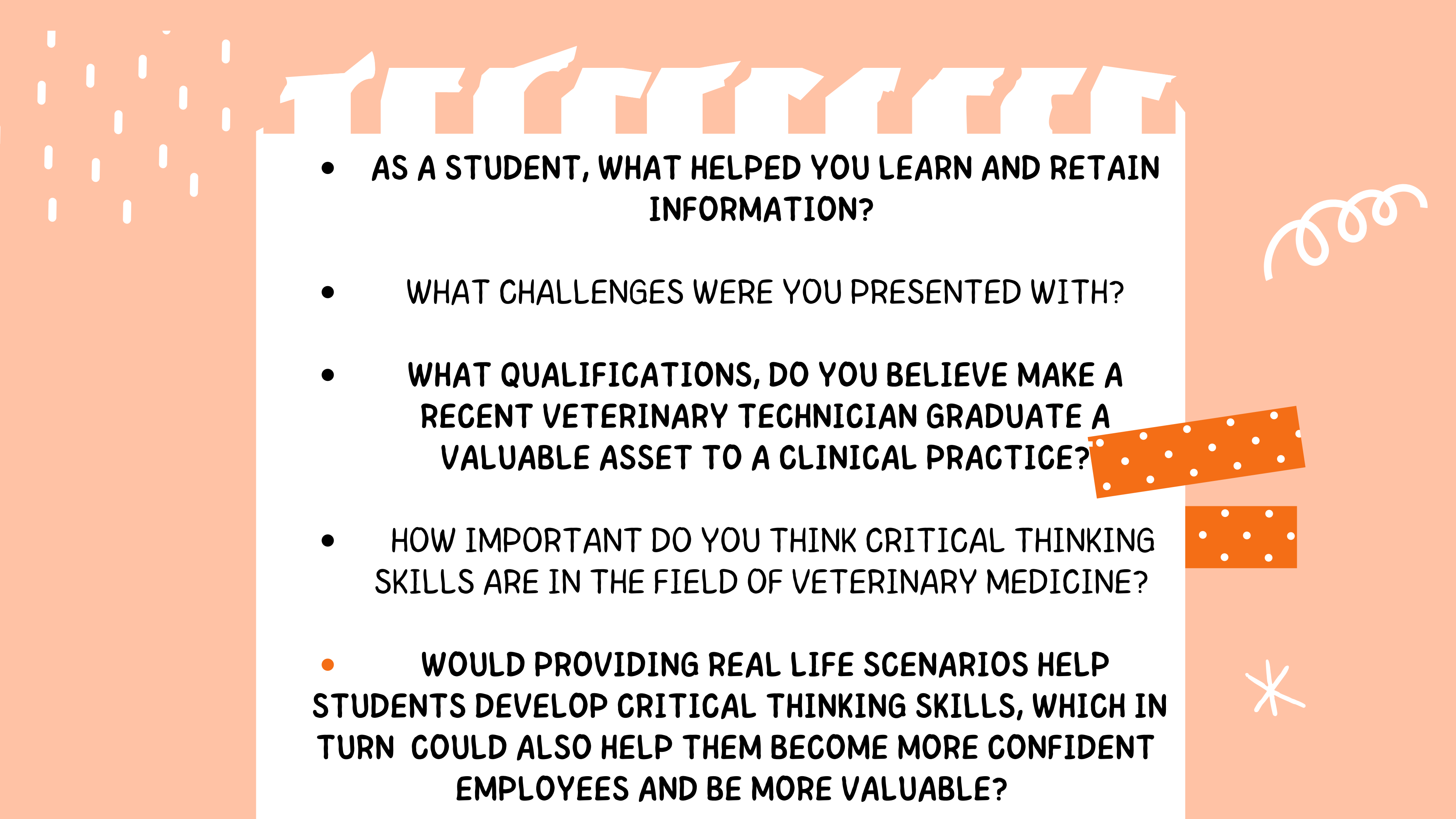
# Educational Survey.

**-Data from previous VT graduates, DVM's, & current students**

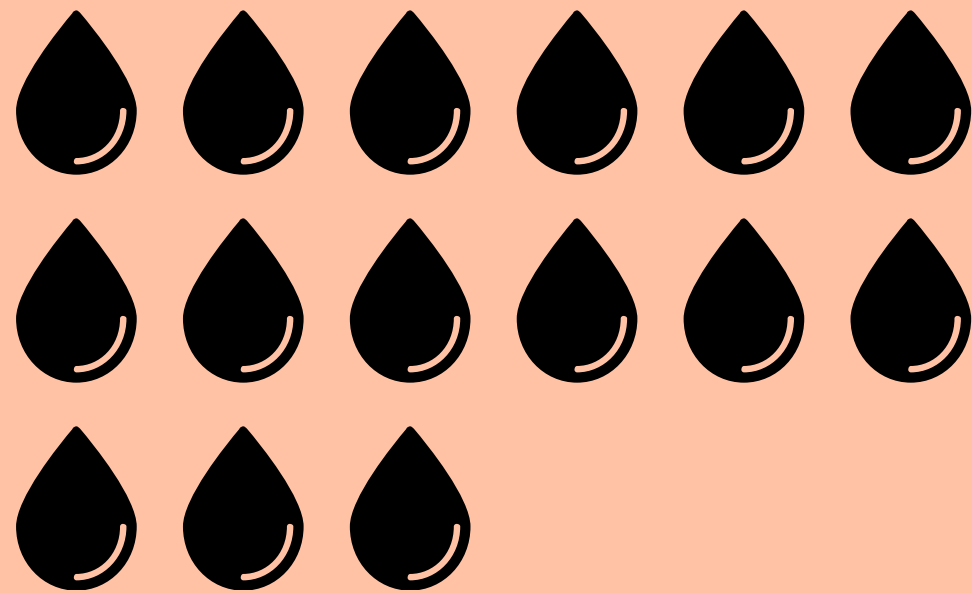
25 Surveys were sent out  
and 15 replied.

Some questions included:



- 
- **AS A STUDENT, WHAT HELPED YOU LEARN AND RETAIN INFORMATION?**
  - **WHAT CHALLENGES WERE YOU PRESENTED WITH?**
  - **WHAT QUALIFICATIONS, DO YOU BELIEVE MAKE A RECENT VETERINARY TECHNICIAN GRADUATE A VALUABLE ASSET TO A CLINICAL PRACTICE?**
  - **HOW IMPORTANT DO YOU THINK CRITICAL THINKING SKILLS ARE IN THE FIELD OF VETERINARY MEDICINE?**
  - **WOULD PROVIDING REAL LIFE SCENARIOS HELP STUDENTS DEVELOP CRITICAL THINKING SKILLS, WHICH IN TURN COULD ALSO HELP THEM BECOME MORE CONFIDENT EMPLOYEES AND BE MORE VALUABLE?**

# Results



**15 out of 15**

State Critical thinking is extremely important and should be taught to students in multiple ways



**12 out of 12**

Students that stated great qualifications of a valuable technician include: being knowledgeable, hungry to learn, confidence in themselves, great communication skills and being able to critically think.

**As a student, what helped you learn and retain information needed to pass your classes successfully?**



**1**

Repetition and hands-on experience

**2**

Being shown multiple methods helps

**3**

Hands-on Lab to give real-life settings

**4**

Quizlet & Flashcards

**5**

Taking videos of essential skills being performed to watch over and over

**“ Critical thinking skills, problem-solving skills, strong math background, a complete understanding of the job requirements, and the ability to adapt quickly. -Steve Fox, DVM**

If you are a Veterinarian, what qualifications do you believe make a recent veterinary technician graduate a valuable asset to clinical practice?

“

**Giving real-life scenarios would help develop critical thinking skills because the more we are exposed to information the more likely it is to stick. By using real-life situations we don't only learn about the signs, symptoms, causes, and treatment but also learn what we can expect to do in our real job. The more we are exposed to it the more confident we will be in ourselves.**

Morgan R. - 1st year student, Graduates

May 2024





# Group Engagement Activity

## Groups:

1. Veterinary Technician Student (1 year completed)
2. New Veterinary Technician Graduate
3. Seasoned Licensed Veterinary Technician

# The Scenario: Arnold, 12 yr. M/N Golden Retriever



- 1 Anorexic for 3 days
- 2 Distended abdomen
- 3 Very lethargic the last 48 hours
- 4 Weak, hard time breathing
- 5 Up to date on vaccines

# PHYSICAL EXAM RESULTS

**1**

- T=102.3
- P= 180 bpm
- R=24/labored
- MM=Pale pink
- CRT-4 sec

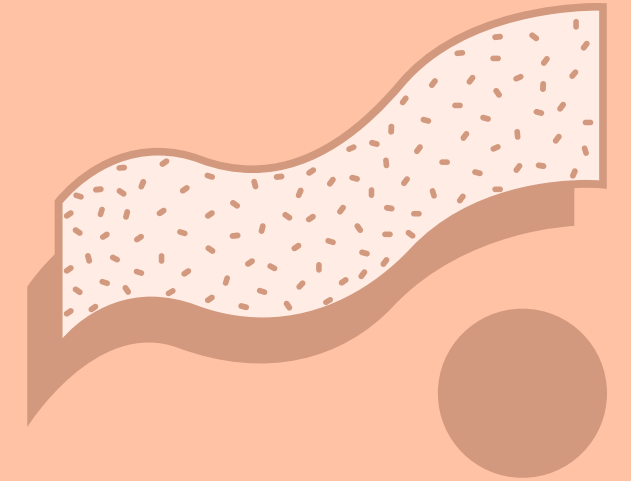
**2**

- Weakness/  
Unable to stand
- Cold to the touch

**3**

- Bloating abdomen
- Sublingual lymph nodes are swollen, palpable

# History Results

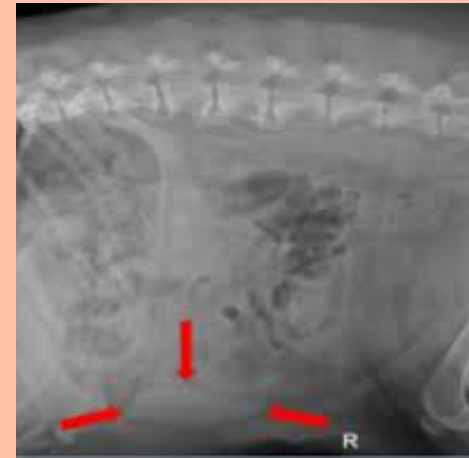


- \*O states he was fine and acting normal 3 days ago
- \*Vomiting.
- \*Weight loss over the last 3 months.

- \*Has not gotten into anything
- \*No change in food
- \*Sleeping more, having a hard time getting around the house

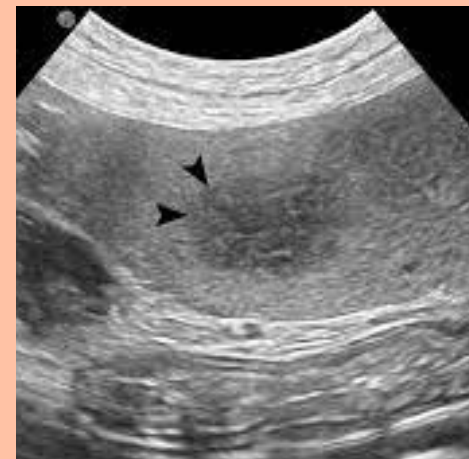
- \*Has arthritis and is currently on Carprofen & Glucosamine
- \*BW 6 months prior showed elevated ALT

# Diagnostic Tests



## Radiographs

The spleen was enlarged on radiographs.



## Ultrasound

Ultrasound confirmed an enlarged spleen with mass.

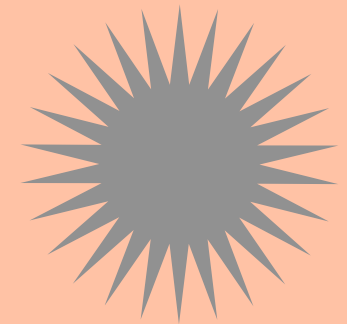


## Blood work

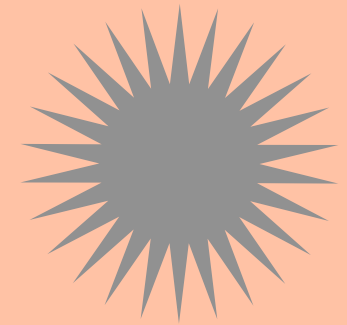
Blood work resulted in responsive anemia.

# Treatment Options Of Suspected Diagnosis

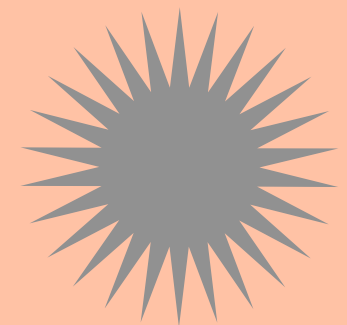
## What could be the outcomes of each one?



**Monitor & Symptomatic Treatment**



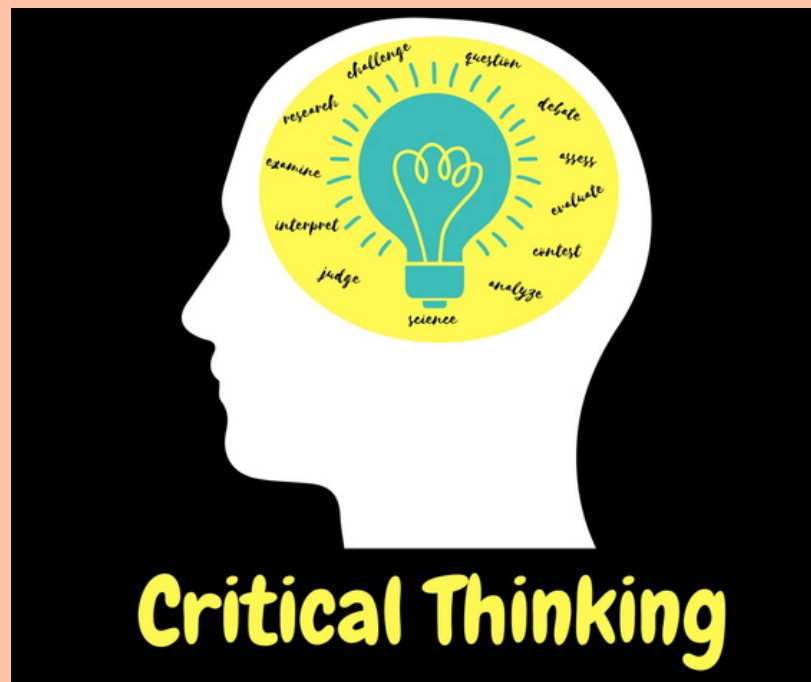
**Surgery**



**Euthanasia or other**



**How did we come to these conclusions? Do we think critical thinking comes into play? What other ideas do we have to create great technicians that are valuable, sought after, and confident?**



**Stimulates curiosity**



**Helps  
Communication**



**Enhances problem  
solving skills**

# Resources

Veterinary Partner

Today's Veterinary  
Nurse

Teaching methods

AVMA

Vet girl on  
the run

Google

Survey.

Medvedforpets

Results