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# Chronic Vomiting in Cats

micro drip study guide

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## AUS

- Easy to perform with proper equipment, training, & experience
- Comprehensive abdominal ultrasonography (AUS) detects variety of lesions
  - GIT, liver, GB, spleen, pancreas, LNs
- US-guided FNA and bx
- Diagnostic utility remains questionable
  - Leib, et al – chronic vomiting in dogs (no equivalent feline study)
    - AUS was beneficial to diagnosis in 22.5% dogs
    - Not helpful in 68.5%
    - Marginal in 9%

Because we want to evaluate all the organs, not just the gastrointestinal tract. I want to look at the pancreas. I want to look at the liver. I want to see the gallbladder. Are there lymph nodes that are enlarged? If we see a lesion that we could potentially stick a needle in or biopsy, that's important information as well. But in terms of diagnostic utility, the only thing that I have to share is experience, which I don't believe that abdominal ultrasonography generally allows one to make a definitive diagnosis.

But we have this study by Dr. Lieb at Virginia, Maryland, Regional College of Veterinary Medicine, in dogs, because there's no equivalent feline study yet to my knowledge. It was only diagnostic in less than a quarter of patients, about 23%. Not helpful in 2/3 of the patients.

I really want to highlight this because, in referral practice, we are often referred to chronic vomiting cats for abdominal ultrasound exam with the owners perceiving right or wrong that the abdominal ultrasound is going to give them answers.

And I think it's important for all of us on both sides of the proverbial clinical table, the primary care and the specialist table, that we be honest with owners and say, abdominal ultrasound in a chronic vomiting cat, if these data from cat-- from dogs are extrapolated, which I believe they are, we're not going to have a high incidence of slam dunk diagnosis following an abdominal ultrasound exam.



## AUS

### EATL type II

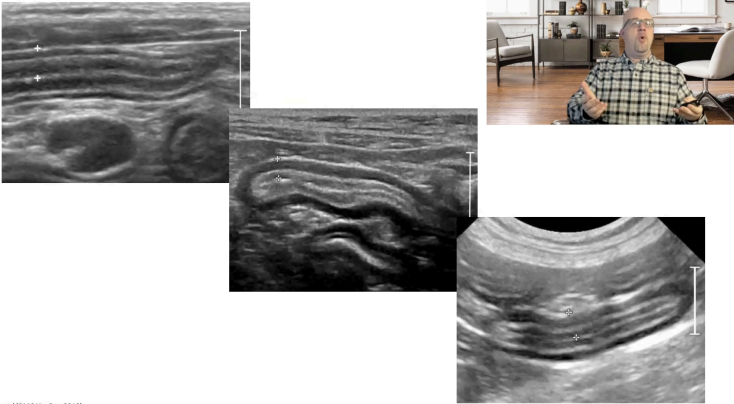
- 60-90% have abnormal AUS
- 50-70% have diffuse small intestinal thickening (e.g.: muscularis, submucosa)
- 45-80% have mesenteric lymphadenomegaly

### IBD

- 10-50% have diffuse small intestinal thickening (e.g.: mucosa)
- 15-20% have mesenteric lymphadenomegaly

And that's because, again, of all the extensive overlap. Most, the majority of cats with small cell lymphoma will have abdominal ultrasounds that are abnormal. And the majority of them are diffuse in nature. But the same changes are documented in cats with inflammatory bowel disease. When you are doing your abdominal ultrasound, please pay particular attention to that third deepest layer-- the muscularis.

Why do I think that's important? Because if I see the muscularis thickened. And I'm trying to decide, do I recommend endoscopy or do I recommend full-thickness surgical biopsies. Well, I know that I'm only going to sample the mucosa with endoscopy. I love doing endoscopy. But I really want to know about that muscularis, especially if it is thickened. So the appearance of the muscularis layer on abdominal ultrasound really could potentially influence my recommendations to an owner.



Paulin et al (JMAC Vet Res, 2018)

So what you have here in the top left is a normal intestinal tract cross-section in longitudinal section. So the deepest arrows, the deepest plus mark, is on the [? cimb. ?] Then you see that thicker hypoechoic band, which represents the mucosa. And then you see three alternating similarly sized hyperechoic, hypoxic, hyperechoic lines culminating on that last hatch mark. And those are the same mucosa, muscularis, and serosa, respectively.

But then I want you to look at the middle picture and the lower right. OK. What I hope you will see is the marked and similar thickening in that muscularis layer, that third layer, that second hypoechoic band. It's as thick, if not thicker, than the first hypoechoic band, which represents the mucosa. But even though they look very similar, the middle picture is lymphoma and the lower right is inflammatory bowel disease.

So I wish I could do an ultrasound and make a diagnosis and differentiate between these two most common causes of chronic vomiting. But so far, that is not a realistic expectation of this imaging modality.