



## **The prevalence of ultrasonographic gastrointestinal wall changes in dogs with acute pancreatitis - a retrospective study (2012-2020).**

Joshua Hardwick<sup>1,2</sup>, Jennifer Reeve<sup>1</sup>, Elizabeth Reeve<sup>3</sup>, Melanie Hezzell<sup>1</sup>

<sup>1</sup>University of Bristol, Bristol, United Kingdom. <sup>2</sup>Langford Vets Small Animal Referral Hospital, Bristol, United Kingdom. <sup>3</sup>Highcroft Veterinary Referrals, Bristol, United Kingdom

### **Objectives**

To describe the prevalence of ultrasonographic gastrointestinal wall changes in a cohort of dogs with acute pancreatitis (AP) and, secondarily, to evaluate for an association between the presence of gastrointestinal wall changes and clinical or clinicopathological variables.

### **Methods**

Retrospective search of clinical records to identify dogs with AP. Clinical variables, clinicopathological variables and ultrasonographic findings were reported using descriptive statistics. A binary logistic regression model was used to evaluate for associations between the presence of gastrointestinal wall changes and clinical or clinicopathological variables.

### **Results**

66 dogs with AP were included in the study. 47% of dogs (n=31) had ultrasonographic gastrointestinal wall changes. Changes were most prevalent in the duodenum; identified in 71% (n=22) of the dogs with gastrointestinal wall changes. Of dogs with gastrointestinal wall changes, 74.2% (n=23) had wall thickening, 61.3% (n=19) had abnormal wall layering, and 35.5% (n=11) had wall corrugation. In the multivariable binary logistic regression model, only heart rate remained an independent predictor of ultrasonographic gastrointestinal wall changes ( $P=0.023$ ).

### **Statement (conclusions)**

Ultrasonographic gastrointestinal wall changes in this cohort of dogs with AP were common. Increased heart rate was the only independent predictor of gastrointestinal wall changes, which might imply more severe disease, but further studies would be required to elucidate whether ultrasonographic gastrointestinal wall changes reflect disease severity in dogs with AP.