

Vomiting and abdominal pain: Is it Pancreatitis??

In dogs, acute pancreatitis is a relatively common disorder and is a primary differential when the presenting signs are vomiting and abdominal pain. Nevertheless, confirming a diagnosis can be difficult.

In the past, total lipase has shown poor sensitivity and specificity in detecting pancreatitis, however, a newer lipase reagent (DGGR) used by veterinary laboratories is proving to have sensitivity and specificity that is equivalent to that of pancreatic specific lipase assays. DGGR is hydrolysed predominantly by pancreatic lipase which accounts for the improved performance.

Recent correlation between total and pancreatic lipase in over 100 dogs determined that all dogs with a total lipase < 100 U/L had a “Normal” Snap cPL and all dogs with a total lipase > 200 U/L had an “Abnormal” Snap cPL. Dogs with a total lipase between 100 and 200 U/L provided a mix of “Normal” and “Abnormal” results. Similarly, a study by Kook *et. al.*, (2014) found agreement with the Spec cPL at total lipase activities < 108 U/L and > 216 U/L.

The DGGR assay is less expensive and has a faster turn-around-time than Spec cPL and should be considered the first-line test. Dogs with a total lipase between 100 and 200 U/L could be further evaluated with pancreatic specific lipase.

While correlation between the tests is good, the sensitivities and specificities of both total (DGGR) and pancreatic specific lipase in determining the presence of acute pancreatic disease remain modest. That said, specificity has recently been determined to be excellent (100%) when DGGR is over 245 U/L (Goodband *et. al.*, 2018).

Summary

Confirming a diagnosis of pancreatitis remains difficult in some cases and a combination of data from the history, clinical signs, laboratory testing, ± ultrasonography must be taken into account.

References

Validation of a commercial 1,2-o-dilauryl-rac-glycero glutaric acid-(6'-methylresorufin) ester lipase assay for diagnosis of canine pancreatitis. **EL Goodband, G Serrano, F Constantino-Casas, J Archer, PJ Watson, T L Williams.** *Vet Rec Open.* 2018; 5(1): e000270.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5976104/>

Agreement of serum Spec cPL with the 1,2-O-Dilauryl-RacGlycero-3-Glutaric Acid-(6'-Methylresorufin) ester (DGGR) lipase assay and with pancreatic ultrasonography in dogs with suspected pancreatitis. **PH Kook, N Kohler, S Harnack, B Riend, CE Reusch.** *J Vet Intern Med* 2014;28:863-70