

# Preliminary Clinical Field Evaluations on Liver Enzyme Levels in Dogs given Vetri-Liver Canine

**Background:** Elevated liver enzyme levels found in dogs as a result of the manifestation of chronic, sub-acute and non-specific reactive processes, may be an indicator of liver stress or disease. Tests have shown that conditions such as hepatitis, jaundice, cirrhosis, infections, drug induced hepatopathy and metastatic diseases may give rise to elevated enzyme levels. Liver enzymes that are typically included in serum biochemistry profiles are Alanine Aminotransferase (ALT), Alkaline Phosphatase (ALP), Gama-glutamyltransferase (GGT), and Aspartate Aminotransferase (AST).

**RESULTS OF CASE HISTORIES:** Six dogs were put on Vetri-Liver Canine after tests showed elevation in one or more of the enzymes given above. The results of these cases are outlined below.

## 1. “Baxter” - 10 year old Rottweiler mix, 90 lbs

Pre-anesthesia bloodwork showed signs of liver damage (surgery was to remove growth on toe). Ultrasound identified mass on liver. Administered Vetri-Liver Canine, antibiotics, and Ursodiol for three weeks. Owner reports dog’s quality of life has improved, more playful with other dogs in the household.

	Initial	After 3 weeks on Vetri-Liver Canine	Reference Range
Alkaline Phosphatase (U/L)	878	634	5-131
ALT (SGPT) (U/L)	2015	222	12-118
GGTP (U/L)	24	10	59-895
Cholesterol (mg/dL)	368	276	1-12
AST (UL)	149	20	15-66

## 2. “Hannah” - 8 year old Australian Shepherd

Initial bloodwork indicated signs of liver damage. Administered Denosyl® for 60 days, bloodwork indicated little change in liver function. Administered Vetri-Liver Canine for 60 days, bloodwork returned to normal.

	Initial	After 60 Days on Denosyl®	Followed by 60 days on Vetri-Liver Canine	Reference Range
ALT (SGPT) (U/L)	159	130	62	12-118

## 3. “Athena” - 7 year old Labrador Retriever

Initial blood work indicated signs of liver damage. Administered Vetri-Liver Canine for 6 weeks.

	Initial	After 6 weeks on Vetri-Liver Canine	Reference Range
Alkaline Phosphatase (U/L)	959	693	5-131
ALT (SGPT) (U/L)	366	251	12-118

#### 4. “Ollie” - Geriatric Canine

Initial bloodwork indicated signs of liver damage. Administered Vetri-Liver Canine for approximately 1 month.

	Initial	After 30 Days on Vetri-Liver Canine	Reference Range
Alkaline Phosphatase (U/L)	419	116	10-100
ALT (SGPT) (U/L)	313	114	23-212

#### 5. “Jasmine” - 11 year old Cocker Spaniel Mix

Initial evaluation showed enlarged liver and elevated alkaline phosphatase. After 3 months on Denamarin®, level of alkaline phosphatase was found to be 1071 U/L. Owner switched to Vetri-Liver Canine and tested enzyme levels again after additional 3 months.

	Initial	After 3 Months on Denamarin	Followed by 2.5 Months on Vetri-Liver Canine	Reference Range
Alkaline Phosphatase (U/L)	825	1071	745	23-212

#### 6. “Annie” - 3 year old spayed Female Boxer Mix

Brought in to clinic for vomiting and lethargy. Chem screen showed elevated enzymes and dog was put on SAMe (125mg SID). Blood enzyme not much improved after 30 days and SAMe was discontinued. Annie was put on Vetri-Liver Canine and blood levels were checked 30 and 60 days post administration.

	Initial	After 30 Days on SAMe	After 30 Days on Vetri-Liver Canine	After 60 Days on Vetri-Liver Canine	Reference Range
Alkaline Phosphatase (U/L)	376	459	162	124	10-84
ALT (SGPT) (U/L)	89	188	Normal	Normal	5-65
AST (U/L)	80		Normal	Normal	16-60

**Summary:** The results of these six case histories on dogs after being on Vetri-Liver Canine show a significant drop in the elevated liver enzyme levels. These downward trends indicate the potential benefit of Vetri-Liver Canine in supporting the liver function and health of dogs during times of liver damage.



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As Vetri-Liver Canine is an animal health product, we do not purport to cure, mitigate, treat or prevent any disease. The test results in these field evaluations were provided by individual veterinarians who voluntarily chose to use this product for their patients.