November 9, 2012

**A Call to Veterinary Specialists for Enrollment in a Canine Clinical Study:**

**CIRCULATING 25-HYDROXYVITAMIN D LEVELS IN DOGS WITH CANCER**

VDI is collaborating with leading veterinary universities to advance the research in the field of oncology. As a practicing veterinary specialist, you are invited to participate in our latest clinical study and enroll newly diagnosed canine cancer cases you are managing.

An evolving model of vitamin D and its impact on health is redefining serum vitamin D levels needed to reduce the risk for cancer and other serious diseases in dogs.

A growing body of evidence supports the understanding that low levels of 25(OH)D are associated with a variety of cancers and other serious diseases in dogs:


- Mean 25VitD was significantly lower in dogs with ARF and CRF (34 and 52 ng/mL respectively) than control dogs (107 ng/mL). 1,25VitD was not significantly different.

- Median 25VitD was significantly lower in dogs with lymphoma, primary hyperparathyroidism and CRF (41, 36, and 27 ng/ml respectively) than control dogs (123 ng/ml). 1,25 VitD was not significantly different.

Hypovitaminosis D in dogs with inflammatory bowel disease and hypoalbuminaemia – (Gow AG, et al, J Small Anim Pract, 2011)

- Median 25VitD was significantly lower in dogs with IBD and hypoalbuminaemia than control dogs (median values not provided). 1,25 VitD was not significantly different.

Cross-sectional study to investigate the association between vitamin D status and cutaneous mast cell tumours in Labrador retrievers – (Wakshlag JJ, et al, Br J Nutr, 2011)

- Mean 25VitD was significantly lower in dogs with MCT (42 ng/ml) than control dogs (48 ng/ml).

Circulating 25-hydroxyvitamin D levels in dogs – correlation with health and cancer risk – (Selting K, VCS presentation, 2012)

- Median 25VitD was significantly lower in dogs with cancer of various types (49 ng/mL) than control dogs (69 ng/ml ). Relative risk of cancer increased as 25VitD concentrations decreased (P<0.0001).

<table>
<thead>
<tr>
<th>25(OH)D</th>
<th>Relative Risk</th>
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<tbody>
<tr>
<td>&lt; 40 ng/ml</td>
<td>3.5</td>
</tr>
<tr>
<td>&lt; 60 ng/ml</td>
<td>1.9</td>
</tr>
<tr>
<td>&lt; 85 ng/ml</td>
<td>1.3</td>
</tr>
<tr>
<td>&lt; 100 ng/ml</td>
<td>1.1</td>
</tr>
<tr>
<td>&gt;100 ng/ml</td>
<td>0.3 (benefit)</td>
</tr>
</tbody>
</table>

- Sufficient 25VitD to provide cellular health is 100-120 ng/ml.

The objective of this study is to examine 25(OH)D levels in dogs with tumors of various types to help further the understanding of vitamin D’s role in the development of cancer. Enclosed with this letter is the study enrollment / sample submission form. Please note that the backside of the form lists the full description of the study.

Given the growing awareness of vitamin D’s impact on health, VDI now has a fully validated canine 25(OH)D send-out blood test. Please contact VDI to obtain pricing and order information should you wish to measure 25(OH)D levels on cases not enrolled in this study.

We look forward to your participation in this clinical study. Together we can accelerate the level of understanding on the interaction of vitamin D and cancer in dogs.