

Linking nutrition to cancer outcomes

For all species, good health starts with good nutrition.

Innovative research underway at the Ontario Veterinary College will help ensure dogs and cats receive the best nutritional care while in hospital and that veterinarians will have the tools they need to help owners make healthy choices for their pets.

“The impact of nutrition on health and disease is an increasingly important area of veterinary science,” says Dr. Adronie Verbrugghe, who holds the Royal Canin Chair in Canine and Feline Clinical Nutrition.

“By paying attention to nutrition, we can delay the progression of disease and help pets live longer and improve the quality of their lives. That’s what it’s all about.”

Born and educated in Belgium, Verbrugghe is certified as a specialist in pet nutrition by the European College of Veterinary and Comparative Nutrition. During graduate and post-doctoral studies at Ghent University, her research focused on cats and carbohydrates with a special link to obesity and diabetes, and the role of nutritional supplements in treating inflammation.

At OVC, she is investigating the role of vitamin D in dogs with cancer. In humans, vitamin D deficiency is associated with a variety of cancers and may be linked with poor prognosis for cancer patients.

The mechanism by which vitamin D status alters cancer development is not fully understood, Verbrugghe says. However, it is known that many cell types have vitamin D receptors that when activated promote the growth of healthy cells and seem to inhibit the growth and spread of cancer cells.

Working with clients of the Mona Campbell Centre for Animal Cancer, Verbrugghe’s research team is looking at the relationship between vitamin D status and dietary intake of vitamin D, and comparing the vitamin D status of dogs with cancer to that of healthy dogs. They are also examining how the dogs’ suboptimal vitamin D levels affect the outcome of their cancer treatment.

“Good nutrition means good health, and good quality of life,” she says. “The results of this study may eventually lead to new perspectives for cancer prevention and treatment in dogs and perhaps people.”