

## Working to End Pediatric Sarcoma

# PET PALS



**Raising Awareness & Funding  
to support  
Translational  
Cancer Research**

**Dani's  
FOUNDATION**  
*Working to End Pediatric Sarcoma*

[www.danisfoundation.org](http://www.danisfoundation.org)

**Dani's  
FOUNDATION**

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Denver, CO 80202

## Why Translational Research?

Cancer treatments span the species and doctors and veterinarians are now collaborating together in comparative oncology studies.

- Each year about 6 million of the 65 million pet dogs in the United States will be diagnosed with spontaneous, naturally occurring cancer.
- Many of these dogs will be seen by veterinary oncologists in private practices or a teaching hospitals, using therapies similar to those used for humans, such as surgery, chemotherapy, radiation therapy and biotherapy.
- The inclusion of this huge number of dogs suffering from cancer in the study of human cancer is the essence of comparative oncology.

This pivotal field is bringing together the work of veterinary clinical oncologists with medical oncologists, the pharmaceutical industry, and academic cancer research centers. This collaboration will hopefully improve the understanding of the biology of cancer and lead to improved cancer treatment options for both dogs and humans.

Currently, spontaneous cancers in dogs are an under-used group of naturally occurring malignancies that share many features with human cancers such as osteosarcoma, prostate and breast cancers, non-Hodgkin's lymphoma, melanoma, soft tissue sarcoma, head and neck carcinoma, and virally induced lymphomas.

Comparative oncologists are presently using naturally occurring cancers to:

- Understand environmental risk factors for cancer.
- Examine genetic/familial determinants for cancer predispositions seen in some dog breeds.
- Develop and optimize novel cancer and gene imaging systems.
- Evaluate novel therapeutic strategies for a variety of cancers.
- Add biological relevance to genomic data generated from microarray and other molecular techniques.

*If we are going to beat cancer,  
we need a new path to progress.*

Pet dogs can reveal much about human cancers in part because the animals' tendency to become afflicted with the same types of malignancies that affect people. Examples abound. Osteosarcoma, the most common bone cancer of large and giant-breed dogs, closely resembles the osteosarcoma in teenagers in its skeletal location and aggressiveness. Under a microscope, cancer cells from a teenager with osteosarcoma are indistinguishable from a golden retriever's bone cancer cells.

### Advancing Cancer Therapy

Various cancer treatment studies featuring pet dogs have been successfully carried out. Some of the earliest work focused on saving the limbs of teenagers with bone cancer. Twenty-five years ago a diagnosis of osteosarcoma in a youngster meant amputation of the affected limb. Ineffective or no chemotherapy equated to death. Today limb amputation can be avoided by chiseling out the diseased bone tissue and replacing it with a bone graft and metal implant - a process partially perfected in pet dogs at the Colorado State University Animal Cancer Center. This team pioneered technical advances that reduced the likelihood of complications, such as placing bone cement in the marrow space of the bone graft. The researchers also showed that preoperative chemotherapy delivered directly into an artery could convert an inoperable tumor into an operable one. The group's work is credited with significantly increasing the percentage of teenagers who today can be cured of osteosarcoma.

### Help Dani's Foundation Fund Translational Research

Dani's Foundation recently funded a grant at the CSU Animal Cancer Center and is committed to continuing to fund future translational research/comparative oncology studies at other institutions with the intent of supporting the science that will work toward finding the cause and the cure for all forms of pediatric sarcomas. We are hopeful that you will join with us and lend your support to this effort that will advance the science that is aimed at saving the lives of both children and pet animals.

# About Dani's Foundation



Dani's Foundation was formed in memory of Dani Stell, an active, bright and social young woman who loved fashion, dancing, school and friends. She aspired to become a fashion designer after graduating from college.

Dani was 18 years old when she found a lump on her side. After six months, she was diagnosed with Ewing's Sarcoma, a rare type of cancer that typically affects children and young adults.

By the time of Dani's diagnosis, the cancer had spread to her lungs. Although she showed no outward symptoms other than the lump on her side, Dani was in critical condition at the time of her diagnosis. She was hospitalized immediately and began an aggressive schedule of treatments, including chemotherapy, radiation, surgeries and a bone marrow transplant. Dani was cancer-free for four months when doctors discovered the disease had returned, this time in her brain.

Despite more chemotherapy and radiation treatments, Dani was not victorious in beating her cancer. In April 1999, Dani Stell lost her battle with pediatric sarcoma. She was 19 years old.

Dani's Foundation was formed in memory of Dani and the countless other children and young adults who have waged battle against pediatric sarcoma. The foundation is committed to supporting the pediatric sarcoma population; educating the public on the symptoms of pediatric sarcoma with the intent of seeking earlier detection and ultimate survival; and working to raise the funding necessary that will support research that will find better treatment protocols for all pediatric cancer patients and to raise that one additional dollar that will fund the cause and the cure for Ewing's Sarcoma, Osteosarcoma and all forms of pediatric sarcomas.

To find out how you can lend your support to Dani's Foundation and the Campaign to End Pediatric Sarcoma, visit our website at [www.danisfoundation.org](http://www.danisfoundation.org) or call 303.601.1881.

*By working together WE CAN put an end to Pediatric Sarcoma!*

# Do You Know

## the Symptoms of Canine Cancer?

### Loss Of Appetite

One of the common signs of canine cancer is that the dog will lose its appetite. You will notice that the dog does not eat as it used to, and this will often result in weight loss.

### Chronic Lumps And Sores

The dog will develop swelling and sores that do not heal. Some of the swelling and sores will be in the mouth, making the teeth look unhealthy and making eating and swallowing difficult.

### Fatigue

Another sign of canine cancer is tiredness and lethargy. This may make it difficult for the dog to move, and it may sleep a lot.

### Enlarged Abdomen

In certain cancers, the dog's abdomen may become enlarged, resembling a pot belly in humans.

### Bloody Stools and Urine

Another sign of canine cancer is difficulty urinating and defecating, which may be accompanied by blood in the urine and stools.

### Symptoms of Canine Bone Cancer

**Lameness** - Meaning that your dog can no longer place his/her weight on that particular limb. They might be seen limping or licking the paw of the limb that is affected.

**Loss of Appetite** - The loss of appetite in ANY dog is a cause for concern. It might not necessarily be cancer, but it is something to be worried about!

**Weight Loss** - A direct result of loss of appetite.

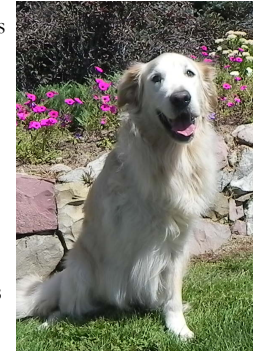
**Whimpering** - He/she may be whimpering for no apparent reason. Something to check out, definitely!

**Insomnia** - Again, not necessarily cancer but, a sure sign that something is wrong because normally dogs will sleep ANYWHERE!

If you notice any of the symptoms, consult with your veterinarian. If found early, most of these cancers can be cured with surgery, chemotherapy, radiation therapy, or a combination of the three, and early diagnosis will aid your veterinarian in delivering the best care possible.

# Mo's Story

Mo came into our family 10 years ago. As a fluffy and very energetic puppy he definitely learned at an early age how to become the ruler of his new kingdom.



In January 2011, Mo began to start favoring his right front leg. We noticed that during his walks he was not running as far and came home limping. Knowing that this was definitely not normal we took him to our veterinarian. Suggesting that it might be just his age catching up with him, she limited our walks to half as long and every other day. If this was arthritis it would make things easier for him to remain active.

After a long winter, Mo was not getting any better and by May another visit to the veterinarian was necessary. A small tumor was found on his right foreleg which resulted in the diagnosis of osteosarcoma. The journey had begun.

On June 6, 2011 Mo had his right leg amputated. The veterinarians at the Colorado State University Animal Cancer Center determined that this was his best chance for recovery.

Our visit to the ACC was ironic. As a board member of Dani's Foundation, I had just had the pleasure of touring CSU's Animal Cancer Center. Who knew that 2 weeks later I would be back - with a patient!

As I was signing the paperwork for the surgery, the intern asked if I would consider donating his tissue and tumor to the clinic for research purposes. Absolutely! If we could help others I know Mo would want to do this. Translational research was something that I had become very interested in since my previous visit to the Animal Cancer Center. This was a great opportunity for scientists to study a spontaneous canine tumor and use that information to compare to other oncology specimens.

Mo's recovery has been great! He does not seem to miss his leg and has happily resumed his daily walks. Dogs are smarter than you think. I think Mo knows that HE can make a difference in finding treatments and cures for cancer. HE wants to help and translational research is the key to success. Good Dog! Good Dog!!

YES, I would like to help Dani's Foundation to fund future translational research.

My donation of \$ \_\_\_\_\_ is enclosed.

Name \_\_\_\_\_

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Dani's Foundation, 1600 Broadway, Suite 2400, Denver, CO 80202

To make a secure online donation, go to [www.danisfoundation.org](http://www.danisfoundation.org) and click on the Donate NOW button.

**Dani's**  
FOUNDATION

*THANK YOU for your support of the campaign to end pediatric and pet sarcoma!*