

A NEW WAY TO CARE FOR PETS WITH CANCER



In an Australian-first, University of Newcastle researcher Dr Yolanda Surjan is leading a cancer treatment revolution for animals and their owners.

As a practicing radiation therapist in Australia and internationally, Dr Yolanda Surjan knows how successful radiation therapy can be in treating primary skin cancers in humans.

After learning that some veterinary clinics were using radiation therapy to treat skin cancer on animals – particularly horses – Dr Surjan had not only found her PhD topic, but started a journey to create a better, safer and kinder cancer therapy regime for pets.

Our relationship with our pets has changed significantly in recent years. According to Animal Medicines Australia, Australians spent more than \$12.2 billion on pet products and services in 2016 – an increase of over 42 percent in just three years.

During interviews with more than 100 pet owners conducted by Dr Surjan and her research team,

nine in every 10 people indicated their pet was an integral part of their family.

The problem

Like humans, our pets are living longer due to advances in medical interventions, preventive care and nutrition. This longer life expectancy comes at a cost and exposes our pets to various diseases as they age, especially cancer.

Skin cancer is the most common tumour type in dogs and horses and is in the top three most common tumours for cats. Yet, veterinary clinics around the world do not have standardised, effective treatment responses aside from surgery.

Unfortunately, surgery often leads to recurrence, disfigurement and sometimes even death for the affected animals.



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Pet owners not only have to deal with the anguish of a cancer diagnosis in their pet – they also have to consider the cost and availability of effective cancer treatment options.

Radiation therapy delivers high doses of radiation to the tumour while minimising the dose to surrounding normal tissues and organs. This treatment kills cancer cells or slows their growth by damaging their DNA.

There are only a handful of radiation therapy clinics for veterinary use in Australia, with most of them located in major cities. The time and costs involved in accessing radiation therapy, particularly for rural and regional pet owners, can be challenging.

Pet owners sometimes need to travel long distances and stay with their pets for several weeks while they undergo radiation treatment.

Not only did Dr Surjan see an opportunity to increase access to less invasive treatments for pets with a cancer diagnosis, but she also knew the therapy could be delivered over a shorter period of time.

Dr Surjan's participation in the CSIRO's ON Prime industry accelerator program helped her turn her idea for better care into a reality.

Her experience in the program enabled Dr Surjan to validate her research, develop an impact pathway, and connect with the right industry partners who supported her vision.

Commercialisation

Her collaboration with Vineyard Veterinary Hospital and Agnes Banks Equine Clinic (both located in the Hawkesbury region of NSW) led to Creatures & Co – a radiation therapy business specifically for companion pets and horses.

Creatures & Co uses radiation technology developed for humans and cleverly applies it to skin cancers in animals.

Dr Surjan and her partners developed treatment protocols that can be administered onsite and independently of large equipment typically used for external beam radiation treatment.

The program marks the first time in Australia (and potentially the world) that this type of equipment and these types of protocols have been developed for animals.

Research outcomes

Dr Surjan and her veterinary partners embarked on Phase 1 trials in April 2018 with dogs and horses.

The trials proved to be clinically successful, with no cancer recurrence in treated animals one year after completion of the trials.

Without the Creatures & Co treatment, the animals involved in the trial would have likely faced euthanasia.

The Creatures & Co team is recruiting additional pets to participate in Phase 2 trials, which will involve further data collection, analysis, and scaling to include more veterinary clinics.

Dr Surjan is creating better, safer and kinder cancer therapy for pets – one she hopes will be accessible in veterinary clinics throughout Australia in near future.

The impact journey

2016 - 2017: Dr Surjan participates in the CSIRO's ON Prime accelerator program.

Participation in the program leads to the creation of a multi-disciplinary team which is later commercialised as Creatures & Co.

2017: CSIRO awards Dr Surjan with the Breakout Female Scientist Award for her work on skin cancer treatments for pets.

2018: Dr Surjan launches Creatures & Co (initially known as RadVet) and begins collaborating with Dr Rob Zammit of Vineyard Veterinary Hospital and Dr Christine Smith of Agnes Banks Equine Clinic.

2018: Phase 1 trial begins with dogs and horses and delivers positive outcomes for the animals and their owners.

2019: Phase 2 trials planned.

To learn more about this research program contact:

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