

Centre for Advanced Imaging

# Comparative Oncology



Naturally occurring cancers in companion animals, such as dogs, share clinical and biological similarities to human cancers that are difficult to replicate in other model systems.

The purpose of Comparative Oncology is to make use of these cancers as models to bridge the gap between conventional preclinical models and human trials, facilitating clinical translation of new cancer drugs, devices, and imaging procedures while at the same time providing treatment to the animal.

The University of Queensland's Centre for Advanced Imaging (CAI) has established the first research program in Australia utilising Comparative Oncology.

In 2018, the program accomplished the world's first canine PET-CT scan using the radiotracer <sup>64</sup>Cu-nanomedicine; a novel nanomedicine engineered by the CAI Thurecht Group to specifically target prostate cancer.

**Image top:** Group Leader, Associate Professor Kris Thurecht, with a canine patient.

**Image below left:** PET-CT scan of a dog using the radiotracer <sup>68</sup>Ga-PSMA (prostate-specific membrane antigen).

## Australian Cancer Research Foundation – Facility for Molecular Imaging Agents in Cancer (AFMIAC)

AFMIAC brings together cutting-edge capabilities for the synthesis of novel cancer diagnostic agents and for preclinical and human imaging. The Australian Cancer Research Foundation funding has enabled the acquisition of a large bore digital PET-CT scanner for large animal and human research at CAI.

Advanced molecular imaging technologies offer an unprecedented potential to visualise the fundamental processes underlying cancer initiation, tissue invasion, metastasis and recurrence.

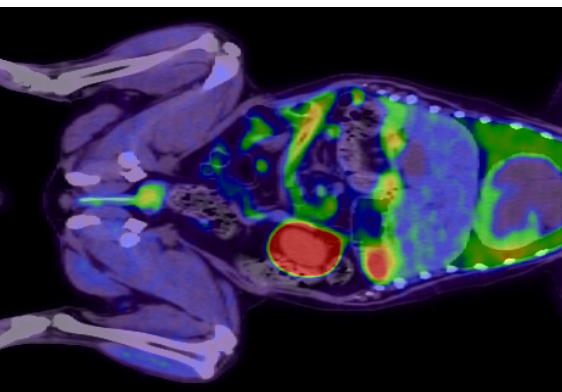
Access to CAI facilities is available on a fee for service basis; our expert staff are available to provide assistance with experimental design, optimisation, data and image analysis and interpretation.

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“In collaboration with our network of clinical veterinary practices we are able to work with companion animals for studies in Osteosarcoma; Lymphoma; Melanoma; Mast Cell Tumours; Soft Tissue Sarcoma; Prostate Cancer; and Brain Cancer.”

