Comparative and Translational Oncology

Research emphasis:
Dr. Nolan’s research program is focused on improving oncologic care for human and veterinary cancer patients. His lab is currently involved in developmental radiotherapeutics (testing and development of new cancer treatment and imaging technologies in pet animals with spontaneously arising disease), and studying the cellular and molecular mechanisms that underlie development of cancer therapy-induced severe side effects – specifically, investigating causes of peripheral nerve injury and macrovascular dysfunction in large and small animal models.

Application:
- Radiation-induced late pelvic injuries
- Cancer and cancer-treatment related pain
- Light-activated cancer therapy

Collaboration potential:
- Normal tissue radiobiology
- Naturally-occurring models of cancer in pet dogs and cats
- Clinical radiation oncology applications in dogs & cats
  - Stereotactic body radiotherapy
  - Lower urinary tract malignancies

Selected publications:


http://www.ncstatevets.org/radiationoncology