



Pain assessment and activity tracking in dogs undergoing radiation therapy

Purpose: The purpose of this clinical trial is to assess pain and/or distress levels in dogs undergoing radiation therapy by evaluating their activity level, using a commercially available activity tracking device, and/or pressure mat analysis. This study also invites healthy dogs to participate as a control. We hypothesized that animals get less active and do not sleep well when they are in pain or distressed, and that animals reduce weight bearing from the affected leg when their leg becomes painful. We would expect that activity monitoring is an excellent tool to monitor therapeutic response and track radiation side effects allowing for an opportunity for early intervention.

Explanation:

Activity tracking: Prior to starting radiation therapy (< approximately 1 week), your dog will be fitted with a wearable activity monitor that will be mated to a proprietary app on your mobile device with information transmitted through your home Wi-Fi device. In order to set up and utilize the activity monitor, you will need to provide us with your mobile phone number and email address. This information will be kept confidential and only study personnel will have access to the information. Your dog should wear his/her collar or harness, with the activity monitor attached, at all times during study participation with the exception of when you need to charge the battery.

Pressure mat analysis at KSU: Non-invasive pressure mat analysis will be performed by your dog standing on a Tekscan pressure mat. No walking and running are involved for this analysis. Pictures or videos of the procedure may be taken.

Activity log and health questionnaire at home: We will ask you to complete the daily activity log provided by the study. Examples of event may include: visited Dog Park at 2pm for 1 hour, swam at 11am for ½ hour, no outside play due to rain and walked around City Park at 2pm only for 10 minutes due to mild limping. We will also ask you to complete a pain and behavior assessment about your dog.

Clinical Protocol: Prior to starting radiation therapy, each dog will be fitted with a wearable activity monitor and the system will be set to transmit information to KSU oncology service. Owners will be asked to complete a health questionnaire and an activity log at home. At each visit or during hospital stay pressure mat analysis will be performed daily or less frequently.

The general health examinations, pressure mat analysis, and health assessment will be repeated one to three times per week during radiation therapy, and at the time of regular post radiation therapy rechecks. Your study participation will end at the 3 month post radiation therapy recheck visit. However, you will have an option at that time to continue participating if you wish, and we will continue to collect data from the activity monitor/activity log. At each regular visit pressure mat analysis may be performed. We ask that you return the activity monitor at the end of your study participation.

Videos may be used to document and analyze gait patterns which may be used for publication.

Healthy control dogs (orthopedically sound for their age) will be weighed and undergo non-invasive pressure mat analysis on a pressure mat, and will be fitted with a wearable activity monitor for 1 month. We will ask you to complete the activity log provided by the study. Pressure mat analysis will be performed twice (initial appointment and at 1 month) by standing with 4 legs, then each of 4 legs will be held gently to record the pressure when they are standing with 3 legs to evaluate pressure shift. Your study participation will end at the 1 month recheck visit. However, you will have an option to continue participating if you wish, and we will continue to collect data from the activity monitor and/or a pressure mat. We ask that you return the activity monitor at the end of your study participation.

Eligibility:

- Dogs undergo radiation therapy as a part of their clinical cancer management.
- Healthy control dogs are also invited to participate in the study. This can be house mate of the dog participant if their activity level is comparable.

Client Compensation: This study does not provide any financial incentives for participation. Additionally, there are no fees associated with your participation in this trial. The study will cover the cost of both the activity monitor and pressure mat analysis. The owner is responsible for all costs unrelated to the study, including exam, diagnostics, and any treatments or procedures performed.

Contact Information:

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