

Radiation Therapy

What is radiation therapy?

Radiation therapy is a treatment for multiple tumor types that is non-surgical and non-invasive. Lloyd Veterinary Medical Center uses a state-of-the-art linear accelerator and a computerized treatment planning system to improve the localization and distribution of the radiation. A typical course of radiation therapy consists of multiple doses of radiation delivered over a period of days or weeks. Radiation is not selective about healthy or cancerous tissues, so the goal is to target as many tumor cells as possible, while avoiding damage to the normal surrounding tissues.

What types of tumors can be treated with radiation therapy?

Radiation therapy is most effective for tumors that have not spread to other sites in the body. The most commonly treated tumors include oral tumors, nasal tumors, brain tumors, spinal cord tumors, tumors of the skin (mast cell tumors, soft tissue sarcomas, injection site sarcomas), anal sac tumors, and bone tumors.

What are the goals of radiation therapy?

Depending on the type and extent of the tumor, radiation is given with one of two intents: definitive (focused on cure or long-term control) or palliative (focused on easing pain or discomfort).

Definitive radiation therapy is typically delivered over a 3-4 week period, with a small dose of radiation administered daily through the week.

Palliative radiation therapy protocols can vary and may involve one treatment given weekly or treatments given over several days in a row. Generally palliative treatments are reserved for patients with advanced disease.

However, for certain types of cancer, a newer technique called stereotactic radiation therapy can also be effective. This is a short, intensive type of radiation therapy reserved for solid tumors that cannot be removed surgically.

What are the side effects of radiation therapy?

As with any type of treatment, radiation therapy has potential side effects. Two types of side effects can occur in radiation therapy: acute (short term) and latent (long term) effects. Your oncologist will carefully go through all of the benefits and risks with you based on your pet's history, a thorough physical exam, and therapy goals.

Acute effects typically start 1-2 weeks into therapy, but subside 1-2 weeks after treatment ends. Although they can be bothersome during treatment, supportive care will be provided to make your pet more comfortable. Acute effects will heal over time.

Latent effects can manifest months to years following radiation therapy. If they occur, they typically do not heal and can cause long-term problems. Thus, our radiation protocols try to minimize the development of these effects as much as possible.

What to expect during radiation therapy?

If your pet is a candidate for radiation and you decide to go ahead with treatment, your oncologist will visit with you about how many treatments your pet will need and the side effects that you should expect. In most cases a CT scan will be needed to plan the radiation, even if your pet has had an MRI or CT scan previously. This scan is done with your pet in a customized positioning device that will be used for each future treatment. The scan is then used to develop a radiation plan for your pet's specific tumor, allowing your pet to be treated effectively with as few side effects as possible.

For each treatment your pet will need to be placed under general anesthesia. This allows exact positioning and limits movement, which could increase the chance of severe long-term side effects. Although there is always a risk any time an animal is placed under anesthesia, the anesthesia required for radiation therapy is typically very light and short acting drugs are used, so potential complications are rare. Each patient is closely monitored during and after treatment. This requirement for anesthesia is rarely, if ever, a contraindication for implementing a course of radiation therapy.

Your pet will not be radioactive during or after treatments. They can continue to interact normally with all members of the family.