

## Radiation Therapy FAQ

### How does radiation therapy work?

Radiation fights cancer by interacting with strands of DNA in cells, causing breakages that make the cell unable to replicate. When the damaged cell tries to divide, it collapses and is cleared away by the body. This includes tumor cells as well as normal cells. However, because many tumor cells are rapidly dividing, they are often more sensitive to the effects of radiation compared to normal cells. In addition, normal cells are usually more efficient at repairing damage from radiation than tumor cells. The goal of radiation therapy is to try to utilize these differences to destroy the tumor while minimizing damage to the normal tissues.

### How can SRT be completed in just 1-5 sessions when traditional radiation therapy takes 15-20 sessions?

Because stereotactic radiation therapy (SRT) is so much more precise than traditional radiation therapy, a higher dose of radiation can be delivered to a target in few treatments. With traditional radiation therapy, the dose must be fractionated, or divided into many treatment sessions, in order to minimize the radiation exposure to the surrounding healthy tissue. The millimeter precision of SRT allows for increased damage to cancerous tumors and also helps spare the healthy tissue that surrounds that tumor.

### What happens at each treatment appointment?

Your pet will receive a thorough physical examination at each visit. If you notice any changes in your pet's condition (vomiting, diarrhea, lethargy, etc.) it is important to notify the veterinary technician or radiation therapist. Your pet will need to be placed under general anesthesia to make sure that he or she is perfectly still for treatment, so your pet will need to have food taken away the night before each treatment. Giving your pet water is fine, but no food. Total anesthesia time is usually less than 20 minutes. The actual treatment time, when radiation is being delivered is less than 5 minutes, but set-up prior to the actual treatment takes several minutes. If you bring your pet in for treatment, they will be ready to go home early afternoon.

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

### Will my pet be "groggy" after treatment?

The anesthesia that we use in radiation therapy is very light and short-acting. We don't need to use sedatives or tranquilizers for these patients. Sedatives and tranquilizers are what lead to the "anesthesia hangover", so our patients do not have these lasting effects. Following each treatment at Lloyd Veterinary Medical Center, our patients are wide awake and ready to go home and experience a normal day.

### What kind of pets can receive radiation therapy?

Lloyd Veterinary Medical Center's state-of-the-art machinery is equipped to handle any pet that weighs 400 pounds or less. While we primarily treat dogs and cats, any animal weighing less than 400 pounds can be considered for treatment at Iowa State University College of Veterinary Medicine.

### How much does radiation therapy cost?

Each pet's treatment is different, but the cost can range anywhere from \$1,500 to \$8,000 depending on the course of treatment and the factors of each individual case. SRT falls on the higher end of that scale, while other options such as palliative care fall on the lower end. We will provide you with a written cost estimate for any treatments you are considering so you can make an informed decision that is right for your family.