



RADIATION THERAPY

What is Radiation Therapy?

Radiation therapy involves the use of ionizing radiation in the treatment of tumors. Ionizing radiation such as x and gamma rays are often used together with chemotherapy or surgery to destroy cancerous cells.

When is radiation therapy indicated?

Radiation may be the treatment of choice depending upon the tumor type and location for specific tumors. This form of treatment may attempt to be curative, or may be palliative. Radiation therapy can also be used to treat inflammatory conditions. The goal of cancer treatment is to maintain a good quality of life for as long as possible.

How does radiation therapy work?

Radiation therapy works the same on healthy tissue as it does on the abnormal tissue. The radiation causes a genetic mutation in the cells present in the irradiated volume of tissue. This mutation does not allow the affected tissue to reproduce cells at an abnormal rate. The healthy or normal tissues then regenerate and heal with time.

Radiation therapy is administered in multiple doses 3-4 days a week. Your veterinarian must refer your pet to the specialists at Santa Cruz Veterinary Hospital for staging and evaluation. A thorough physical exam and review of records, x-rays, laboratory tests and biopsy reports will be performed. Additional testing may be required to further define the extent of disease at presentation. On the first day of treatment, the specialist will work with a team of trained individuals to assist in the planning of the treatment regime.

What happens during radiation therapy?

- > Tumor Localization: Establishment of the exact location and extent of the tumor is essential for optimal treatment. Additional tests such as x-rays, ultrasound, MRI or CT scan may be required prior to treatment.
- > Treatment plan/Set-up: The treatment area will be clipped /shaved and marked to identify the area to be treated.
- > Positioning: Exact positioning and reproducibility are key in order to spare as much normal tissue as possible while still maintaining adequate tumor coverage. This is why your pet must be under general anesthesia during the treatment.
- > Time Required: The actual treatment time is generally only a few minutes each treatment day. However, preparation time, anesthesia and recovery from anesthesia can take up to 2-3 hours from start to finish.

What is the risk of general anesthesia?

For an otherwise healthy animal, the risk of complications from anesthesia is about 1 in 1,000. Depending on your pet's condition, tumor location, and/or coexisting medical problems, this risk may be slightly higher. The risks are minimized by our highly trained and competent nursing staff, the proper choice of anesthesia, and close post treatment monitoring care.

What are the side effects of Radiation Therapy?

Dogs and cats do not appear to develop the nausea and fatigue associated with human patients undergoing radiation therapy. However, some side effects may develop during the course of therapy associated with the area treated:

- > Post-treatment skin irritation at the field site (moist, red, itchy, flaky, - like a sunburn).
- > Hair loss and pigment changes which may be permanent, but are limited to the treatment area.



- > Change in appetite/sleeping patterns/urinary and bowel habits.
- > Mouth: Areas of the mouth being irradiated may develop tenderness, swelling, inflammation of mucous membranes and increased salivation, and may result in a reluctance to eat and bad breath. Dental work may be recommended to reduce the chance of long-term oral complications.
- > Eyes: Whenever possible, the eyes will be shielded from radiation. If the eyes cannot be protected because of the location and extent of the tumor, conjunctivitis, pain, discharge, or inflammation of the cornea may develop. Cataracts may develop later from exposing the lens of the eye to x and gamma rays.
- > Abdomen: Nausea, vomiting, or diarrhea may be intermittent but should be brought to the attention of the staff at Santa Cruz Veterinary Hospital.

Most side effects are temporary and will resolve within a few weeks after the completion of treatment. While receiving radiation treatment, please report to the staff any changes you notice so that we can give you specific advice on how best to manage them.

Where are the treatments done?

The treatments are done at the radiation oncology facility at the Santa Cruz Veterinary Hospital, at 2585 Soquel Drive in Santa Cruz.

What happens after the radiation therapy has been completed?

It is important for your pet to have regular follow-up visits with the Santa Cruz Veterinary Hospital specialists or your

oncology specialist, even if your pet is not experiencing any problems. The first follow-up visit will be 2-to-3 weeks after the last radiation treatment. Further follow-up will be scheduled on an as needed basis up to a full year following treatment. The tumor site will be examined carefully for evidence of tumor recurrence or post treatment complications during these follow-up visits.

How do I care for my pet during radiation therapy?

- > Do not feed your pet after midnight the night before treatment day. Your pet must have an empty stomach in order to be safely anesthetized. Water is okay to have up until the morning of the treatment day.
- > Continue normal activity as much as possible. Depending on the tumor type and location, certain restrictions may be advised.
- > Protect the treatment area. Do not allow your pet to lick, chew, or scratch the treated area.
- > Do not wash off any marks that have been applied.
- > Do not apply any creams and/or medications to the treatment area. Discontinue anti-oxidant therapies.
- > Let us know if there are any changes, problems, or concerns at any time during the course of radiation therapy.

What should I do if I have any questions or problems?

If there is an emergency and the radiation oncology service cannot be reached, please contact your primary care veterinarian or the Santa Cruz Veterinary Hospital Emergency Service at 831.475.5400 24 hours a day, 7 days a week.

THANK YOU FOR ENTRUSTING YOUR PET'S CARE TO US.