

# Canine Osteosarcoma

At Franktown Animal Clinic, we understand that a diagnosis of osteosarcoma can be overwhelming. Our team is here to support you and your pet through every step of the journey. We work closely with specialists, including veterinary oncologists and surgeons, to ensure your pet receives the best possible care. Together, we will explore the most appropriate treatment options to improve your pet's comfort and quality of life.

**What is Osteosarcoma?** Osteosarcoma is the most common type of bone cancer in dogs. It is an aggressive and malignant cancer that primarily affects the long bones, such as the legs, but can also develop in other bones. Osteosarcoma weakens the affected bone, increasing the risk of fractures and causing significant pain. While it can occur in any breed, large and giant breeds are more commonly affected.

## Signs to Watch for at Home

- Lameness or limping that does not improve
- Swelling or a firm mass on a limb
- Pain when touched or reluctance to bear weight
- Lethargy and reduced activity levels
- Loss of appetite or weight loss

If you notice any of these signs, it is important to schedule an examination as soon as possible.

**Treatment Options** The treatment plan for osteosarcoma depends on the dog's overall health, the location of the tumor, and the extent of the disease. Prior to determining the best course of treatment, several diagnostic tests should be performed, including:

- **Radiographs (X-rays)** – To evaluate the affected bone
- **Fine Needle Aspiration (FNA) or Biopsy** – To confirm the diagnosis of osteosarcoma.
- **Bloodwork (CBC and Chemistry Panel)** – To assess overall health and detect any underlying conditions.
- **Chest X-rays or CT Scan** – To check for the presence of metastatic disease in the lungs.
- **Abdominal Ultrasound** – To evaluate internal organs for any secondary complications.

Treatment options include:

- **Amputation** – Removing the affected limb can help eliminate pain and improve quality of life. Most dogs adapt well to life on three legs. Amputation is often recommended when the tumor is localized to one limb and there is no evidence of metastasis. **Possible side effects:** Risk of surgical complications such as infection, swelling, and discomfort during the healing process. Some dogs may take time to adjust to walking on three legs.
- **Limb-Sparing Surgery** – In select cases, surgery may be performed to remove the tumor while preserving limb function. This is often considered when amputation is not an ideal option due to concurrent health conditions or owner preference. **Possible side effects:** Risk of infection, delayed healing, and recurrence of the tumor at the surgical site.
- **Pain Management** – Medications such as NSAIDs, opioids, and bisphosphonates can help manage discomfort and improve quality of life. These treatments do not slow cancer progression but are essential for maintaining comfort. **Possible side effects:** NSAIDs may cause gastrointestinal upset or kidney issues, and opioids can lead to sedation or constipation.

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- **Palliative Radiation Therapy** – Helps reduce pain and inflammation in the affected area by targeting the tumor with lower doses of radiation. This does not cure the cancer but can significantly improve quality of life for several months. Palliative radiation is often recommended for dogs that are not candidates for surgery or chemotherapy. It can be combined with pain medications to provide the best comfort possible. **Possible side effects:** Mild skin irritation at the treatment site, temporary fatigue, and in rare cases, tissue damage.
- **Chemotherapy** – Often used in conjunction with surgery to help slow the spread of cancer to other areas of the body. Chemotherapy is typically well tolerated in dogs and can help extend survival time, often adding several months to a year of improved quality of life. The specific protocol used depends on the individual case and response to treatment. Common chemotherapy protocols include carboplatin, doxorubicin, or a combination of both, typically administered every 2-3 weeks over several sessions. **Possible side effects:** Gastrointestinal upset (vomiting, diarrhea), decreased appetite, temporary bone marrow suppression leading to lowered immunity, and mild lethargy.
- **Radiation Therapy** – In addition to palliative radiation, more aggressive radiation treatments may be recommended to target remaining cancer cells. This approach is often used when limb-sparing surgery has been performed. When combined with amputation and chemotherapy, survival times can range from 10-12 months on average, with some dogs living longer depending on their response to treatment. **Possible side effects:** Skin irritation, temporary fatigue, and potential inflammation of nearby tissues.
- **Zoledronate Therapy** – A bisphosphonate drug that helps strengthen bone and reduce bone pain by inhibiting bone destruction caused by the tumor. It is often used as an adjunct therapy to improve quality of life and can be combined with other treatments to slow tumor progression. Studies suggest that zoledronate may help extend survival time by several months when used alongside other treatments, although outcomes vary by individual case.
- **Possible side effects:** Mild flu-like symptoms, kidney function concerns in some dogs, and rare gastrointestinal upset.
- **Multimodal Pain Management** – A combination of pain relief strategies, including NSAIDs, opioids, gabapentin, and amantadine, can be used to manage discomfort effectively. These medications work together to target different pain pathways, providing enhanced relief for osteosarcoma patients. While this approach does not significantly extend survival time, it greatly improves the dog's quality of life by keeping them comfortable for as long as possible. **Possible side effects:** Sedation, gastrointestinal upset, and changes in appetite depending on the medications used.

**Referral to an Oncologist** If radiation or chemotherapy is recommended for your pet, we will refer you to a veterinary oncologist who specializes in advanced cancer treatments. We are here to support you and your pet through every step of this process.

### Franktown Animal Clinic

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