



OSTEOSARCOMA

What you need to know as a pet parent



Osteosarcoma is the most common form of bone cancer in dogs. It is less common in cats. It begins in the cells that form bones and is most often found in the bones of the legs.

Pets at increased risk for this tumor type:

- ▶ Usually occurs in middle-aged or elderly dogs (age 7-10 years old), but can occur in younger dogs (1-2 years old)
- ▶ Males are typically more commonly affected than females, although this can depend on the breed



Pets at increased risk for this tumor type (continued):

- ▶ Larger breeds tend to develop this tumor type more commonly than small or medium-sized dogs
- ▶ Rottweiler, German Shepherd, Doberman Pinscher, Irish Setters are overrepresented

COMMON SYMPTOMS

- ▶ Lameness in a limb that doesn't go away
- ▶ Swelling of the affected bone
- ▶ Difficulty eating if a tumor affects the jaw
- ▶ Neurologic signs, such as seizures or a wobbly gait
- ▶ Breathing difficulties
- ▶ Loss of appetite and lethargy

DIAGNOSING & TESTING

- ▶ **Blood tests:** A blood sample is examined to assess organ function and identify irregularities, including the potential presence of concurrent diseases
- ▶ **Radiographs (X-rays):** Diagnostic imaging, often of the chest to identify whether the cancer has spread
- ▶ **CT Scan:** Diagnostic imaging to confirm whether a tumor is visible and identify its size and location
- ▶ **Biopsy/Fine Needle Aspirate:** A tissue sample is examined microscopically to confirm a diagnosis and learn more about the tumor, including its type, stage, and grade

TREATMENT OPTIONS

EVERY CANCER IS DIFFERENT.

ASK YOUR VETERINARIAN ABOUT HOW THESE OPTIONS APPLY TO YOUR PET.



Surgery is often the ideal treatment for tumors if it can achieve complete removal. Talk to your veterinarian about the risks of surgery and the likelihood of leaving any cancer cells behind.



Conventional radiation therapy can be used alone or following a surgery where some cancer cells remain. A typical treatment course consists of anywhere between 15-21 daily treatment sessions and anesthetic events.



Chemotherapy is a common cancer treatment. It is typically used to treat systemic cancers or cancers that have spread. Please consult your pet's medical oncologist/veterinarian to see if chemotherapy and bisphosphonates may be beneficial.



Palliative therapies help increase comfort, but do not treat the cancer.



Stereotactic radiation (SRS/SRT) is an advanced form of radiation therapy that is a proven standard of care in human oncology. SRS/SRT is now also available to pets:

- ▶ **Noninvasive:** Surgery-free
- ▶ **Saves healthy tissue:** Sub-millimeter accuracy, enabling precise delivery of high-dose radiation to the tumor while sparing nearby healthy tissue
- ▶ **Better experience:** Fewer, less-severe side-effects and faster recovery
- ▶ **Fewer treatments:** Just 1-3 treatments vs. 15-21 with conventional radiation therapy, an 80-95% reduction in sessions and anesthetic events

SRS/SRT TREATMENT STATS¹

- ▶ PetCure Oncology has treated more than 300 pets with Osteosarcoma, one of the most common cancers that we treat
- ▶ 97% are canine
- ▶ 64% elected SRS/SRT, while 35% chose palliative RT and less than 1% elected conventional RT
- ▶ Preliminary data suggests that dogs treated for osteosarcoma with SRS/SRT under PetCure protocols have an estimated median survival time of 537 days (~18 months)

¹ Statistics are from PetCure Oncology's treatment database as of August 6, 2020

Brooks, W. Osteosarcoma in dogs. *Veterinary Information Network*. <https://www.vin.com/veterinarypartner/default.aspx?pid=19239&id=4951687>. Published March 29, 2002. Accessed July 1, 2020.

Fruit, L. Canine osteosarcoma. *Purdue University College of Veterinary Medicine*. <https://www.adtl.purdue.edu/newsletters/2005/Fall/co.htm>. Published 2005. Accessed July 1, 2020.

Szewczyk M, Lechowski R, Zabielska K. What do we know about canine osteosarcoma treatment? *Review. Vet Res Commun*. 2015;39(1):61-67. doi:10.1007/s11259-014-9623-0. Published Online November 26, 2014. Accessed July 1, 2020.

What to expect at your PetCure Oncology visit

You have been referred to PetCure Oncology because your veterinarian suspects or has diagnosed your pet with cancer and wants you to be in the very best hands.

LET US GUIDE YOU THROUGH THE NEXT STEPS:

- ▶ Schedule an initial consult with a board-certified radiation oncologist or medical oncologist by calling the number provided to you by your veterinarian.
- ▶ Just as in human medicine, confirming the cancer diagnosis comes first. If cancer is found, we will determine its type, size, location, and stage. This may involve additional testing.
- ▶ With a clear understanding of your pet's cancer, we will present the best treatment options and help you make an informed decision.
- ▶ If you elect to move forward with treatment, your pet's first appointment will be scheduled as soon as possible.

IF STEREOTACTIC RADIATION (SRS/ SRT) IS THE CHOSEN TREATMENT:

- ▶ A custom-made immobilizer will be created specifically for your pet to ensure precise and reproducible positioning.
- ▶ A treatment-planning CT scan will provide a board-certified radiation oncologist with the information necessary to create the optimal treatment plan.
- ▶ A second board-certified radiation oncologist will review the plan, and the two will work together to ensure the best achievable balance between maximum radiation exposure to the tumor and minimum exposure to the surrounding healthy tissue.
- ▶ Recheck examinations are typically 2 weeks after the completion of radiation with your pet's radiation oncologist, medical oncologist, or referring veterinarian; most pets will be prescribed a short course of steroids to help limit or reduce any side effects.
- ▶ A follow-up CT scan 3-6 months after radiation treatment is suggested. This will reveal how well the radiation is working and will help guide future decisions about treating your pet's cancer.

Note about fasting: The treatment-planning CT and treatment sessions will require your pet to be anesthetized. To ensure patient safety, please note that your pet must be fasted prior to these appointments.

POSSIBLE SIDE EFFECTS FROM SRS/SRT FOR OSTEOSARCOMA

Normal side effects:

- ▶ Fur loss in area of radiation; grows back white
- ▶ "Sunburn" like effect at the completion of treatments

Normal side effects that warrant a call to your vet:

- ▶ Red or moist skin in the area of treatment)

Side effects that warrant an immediate call to your local PetCure Oncology center:

- ▶ Progressively worse limping
- ▶ Sudden inability to bear weight on the affected side
- ▶ Concern for a fracture due to a weakened bone

PetCure Oncology and your local veterinarian are here to help manage any side effects that may occur. If in doubt about side effects, call your local PetCure Oncology center.

If you have to take your pet to the emergency room, let us know so we can coordinate with the emergency veterinarian to ensure the best possible care.

WITH PETCURE ONCOLOGY, YOU WILL BENEFIT FROM:



Unrivaled Treatment and Delivery



Industry Leading Clinical Research



Human-Based Quality Control



Barrier-Free Collaboration



Proactive Education



Concierge-Level Service



Pioneering Innovation