

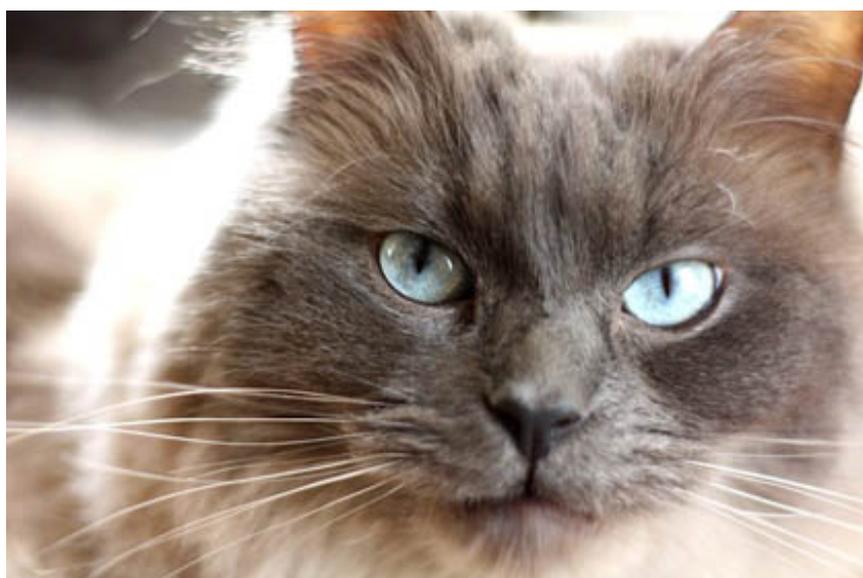
Osteosarcoma (Bone Cancer) in Cats

www.cat-world.com.au/osteosarcoma-in-cats.html

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What is osteosarcoma?

Osteosarcoma (*osteogenic sarcoma*) is an aggressive and destructive type of primary cancer which develops in the bones. It is the most common type of bone cancer in cats and accounts for 70% of bone tumours.

Cancer arises from osteoblasts or osteoclasts, which are cells that produce a matrix which builds or breaks down bone. Osteosarcoma may either be osteoblastic (bone forming) or osteolytic (bone dissolving).

Cancer is a disease in which abnormal cells divide uncontrollably and destroy body tissue. It can develop in almost any part of the body, and the types of cells which are dividing unchecked determine the type of cancer your cat has. Over time, cancer cells can spread from their original location to other parts of the body, which is known as metastasis. The original location of a cancer is *primary cancer*, but when it has spread from the original location to another part of the body (say for example a mammary tumour spreading or metastasizing to the liver or bones), it is known as *secondary cancer*.

Other types of bone cancer are:

- Fibrosarcoma – A cancer of fibrocytes, a cell in the connective tissue responsible for making collagen and extracellular matrix. This is the most common type of musculoskeletal cancer. Common areas affected are the bones of the skull and the long bones of the leg.
- Chondrosarcoma – Cancer which develops from the bone cartilage.

This cancer can occur in cats of all ages, with the mean age being 9-12 years old, there appears to be no sex predilection.

Causes:

There appears to be no predisposing cause with osteosarcoma.

Symptoms:

Osteosarcoma most commonly affects the long bones of the legs, especially the hind limbs, or the skull, but can also occur in other bones of the body too. Unlike in dogs, osteosarcoma is very slow to metastasize in cats.

Symptoms of osteosarcoma may include:

- Localised pain and swelling.
- Deformity.
- Limping.
- Limit of motion of the affected limb.
- Muscle wastage around the affected area.
- Difficulty chewing if the cancer is in the jaw.
- Fractures, these may occur when there has been little trauma to the bone or may be severe than one would normally expect.
- Nosebleed if the cancer is in the nasal bones.
- If the cancer is in the pelvis, your cat may experience difficulty defecating as the pelvis narrows.

Diagnosis:

Your veterinarian will perform a physical examination of your cat and obtain a medical history from you. He will need to run some diagnostic tests to determine if your cat has cancer and what type it is.

Common tests may include:

- X-ray of the affected bone.
- X-ray of the chest, to look for signs of cancer spreading to the chest.
- Biopsy to determine the type of cancer your cat has. *My cat's case had to go to a bird specialist veterinarian for a biopsy as my regular vet didn't have the right equipment to extract a sample from deep within the nasal cavity.*
- CAT scan is another type of x-ray which produces cross-sectional images and can be used to determine the extent of cancer and look for signs of metastasis. This may have to be performed at a specialist veterinary facility or a human hospital (as was the case with my own cat).
- MRI is another advanced form of imaging using a magnetic field and radio frequencies to produce images of the internal body.
- Routine blood work such as biochemical profile, complete blood count, and urinalysis to determine the overall health of your cat. This is particularly important for cats going into surgery.

Treatment:

Treatment depends on the location of the cancer and can be divided into two categories. Curative, which aims to cure the cat. Palliative, which aims to make your cat comfortable, and if possible, increase his lifespan, but this won't cure him. Treatment depends on the location of the tumour and if the cancer has spread to other parts of the body.

Many veterinarians will refer you to a specialist veterinary hospital to treat a cat with cancer.

Surgery

If the cancer is on a limb, surgical removal will be necessary. Cats recover remarkably well from limb amputations and can live quite happily on three legs. After surgery, your veterinarian may recommend chemotherapy and/or radiotherapy, even if cancer hasn't metastasized. The prognosis for cats with no signs of metastasis is very good.

Radiotherapy

Radiotherapy uses gamma rays, x-rays or electron beams to kill cancer cells. It can treat cancers in parts of the body where surgical removal is not possible, such as the nasal cavity.

Chemotherapy

A group of drugs which kill rapidly dividing cells (such as cancer cells), it is administered via injection into a vein. Cats tolerate chemotherapy much better than humans do, although they can still experience gastrointestinal upsets, loss of appetite and lethargy for a day or so

after treatment.

If cancer has spread, most often to the lungs, the prognosis is poor in which case palliative necessary. The goal is to make your cat as comfortable as possible. Chemotherapy or radiation therapy can slow down the growth of the tumour and painkillers can control pain.

Home care:

Chemotherapy weakens the cat's immune system, so take extra care to limit his exposure to pathogens. Keep the at indoors and feed a well-balanced diet. Keep parasite control up to date.

Follow your veterinarian's instructions and administer all medications as prescribed.

Will my cat receive treatment as an inpatient or an outpatient?

If your cat has surgery, he will need to stay at the veterinary surgery for a few days while he recovers.

Your cat will receive chemotherapy or radiotherapy as an outpatient.

A note about chemotherapy for cats:

Your cat will shed the drug in his urine for a few days after he has received chemotherapy. It is important to take care when caring for a cat receiving chemotherapy.

- Wear rubber gloves when handling litter trays (which I recommend all the time).
- Double bag all wastes, and discard in an outside bin.
- As I was pregnant at the time my cat was receiving chemotherapy, I was under strict instructions not to go near my cat's litter tray. Pregnant, lactating women and children should stay away from litter trays.
- Pregnant and lactating women should avoid handling their cat for 3-5 days after chemotherapy.

My own experience with osteosarcoma:

This is a cancer which touched me personally. My beautiful cat Eliot was diagnosed with osteosarcoma in December 2002 when I was pregnant with my first child. She passed away in July 2003, two months to the day after my daughter was born.

The cancer was in her nose and by the time a diagnosis was made (which took time, probably 2-3 weeks after the first symptoms appeared), the tumour was behind her eye. I took her to see a lovely feline specialist who said that they could operate on her, but it would mean removing her eye, and as the cancer had spread to her lungs, it would eventually kill her. We decided to spare her the surgery and treat with chemotherapy to slow the growth of the tumour. This would slow her down for a day or so afterward, but other than that, she coped very well with treatment. Cats dont lose their hair like people do.

She received 3 or 4 chemotherapy treatments, however by the fourth time, she didn't bounce back. We decided that it would be her last once and passed away 8 weeks after her final treatment.

