



The Pet Oncologist

FAQs – Prednisolone and Piroxicam for Pets with Cancer



Prednisolone (or prednisone) is a corticosteroid (i.e. steroidal anti-inflammatory drug), while piroxicam is a non-steroidal anti-inflammatory drug (NSAID). Both medications have anti-inflammatory properties, but which one is best for pets with cancer?

The answer depends on the individual needs of your pet at the time. Here are some answers to some ‘Frequently Asked Questions’ about piroxicam and prednisolone.

Prednisolone

When will my vet recommend prednisolone?

Prednisolone can be used in any sick pet from cancer. Low doses can be used to reduce the inflammation associated with cancer and make sick pets feel clinically better within one to two days. Therefore, prednisolone can be used to decrease inflammation, swelling and discomfort associated with many cancers in pets (such as brain cancer).

For some cancers (such as lymphoma, leukaemia, mast cell tumours and multiple myeloma), high doses of prednisolone can potentially kill cancer cells (i.e. shrink the cancer). However, even if it works, the duration of response is often short-lived.

After a diagnosis, prednisolone can also be used to treat high blood calcium, which is a cancer-associated condition that can be life-threatening if left untreated.

Prednisolone can be used alone or in combination with many other anti-cancer treatments. However, it should not be administered concurrently with NSAIDs (such as piroxicam, firocoxib, carprofen, meloxicam), and it should not be administered on the same days as Palladia® (toceranib). Giving them together can cause life-threatening gastrointestinal ulceration.

What are the potential side effects of prednisolone?

- Lethargy (i.e. lower energy levels)
- Increased thirst and urination
- Increased appetite
- Increased panting
- Potbellied appearance
- Behavioural changes (such as excitability or agitation)
- Gastrointestinal signs (such as diarrhoea and black tarry stools)
- Increased susceptibility to infections (such as bladder or skin infections)
- Muscle wastage and weakness
- Thinning of skin and dull coat
- Hyperadrenocorticism also called 'Cushing's syndrome' (particularly with long-term use)

If side effects impact your pet's quality of life or your pet experiences gastrointestinal side effects, please contact your veterinarian as soon as possible. If your pet has been on prednisolone for more than two weeks, it is essential that you do not suddenly stop prednisolone. Prednisolone is a hormone that is normally released from the adrenal glands as part of the body's normal response to stress. Long-term administration of prednisolone can reduce the function and size of your pet's adrenal glands. If you suddenly stop prednisolone, you can make your pet sick and go into a life-threatening adrenal gland crisis.

Piroxicam

When will my vet recommend piroxicam?

Piroxicam has less potent anti-inflammatory properties than prednisolone. If your pet is sick pet from cancer and not eating, prednisolone is usually a better choice.

However, in pets with normal kidney function, there are certain cancers where piroxicam has shown anti-cancer activity and is recommended, including:

- Bladder cancer in dogs
- Prostate cancer in dogs
- Skin and nasal planum squamous cell carcinoma in dogs and cats (particularly if induced by sun exposure)
- Skin haemangiosarcoma in dogs (particularly if induced by sun exposure)
- Oral squamous cell carcinoma in dogs and cats
- Other carcinomas (such as mammary, nasal and anal gland cancer)

Piroxicam's anti-cancer effects may be due to inhibition of blood vessel growth, inhibition of cyclooxygenase-2 (COX-2) and/or modulating the immune system to recognise and kill cancer cells. Some carcinomas that do not express COX-2 may also responded to piroxicam.

Piroxicam can also provide pain relief to pets with arthritis.

Piroxicam can be used alone or in combination with many other anti-cancer treatments. However, it should not be administered concurrently with prednisolone, and it should not be administered on the same days as Palladia®. Giving them together can cause life-threatening gastrointestinal ulceration. Moreover, piroxicam should always be administered with food.

What are the potential side effects of piroxicam?

- Lethargy
- Gastrointestinal signs (such as loss of appetite, vomiting, diarrhoea and black tarry stools)
- Liver damage
- Kidney damage
- Blood clotting disorders (i.e. bruising or bleeding)

Piroxicam alone can be administered safely in **cats** with cancer long-term. Gastrointestinal side effects (primarily vomiting) is usually mild and temporary within the first month of starting treatment. Kidney and liver damage are rare. However, if it is used in combination with other forms of therapy such as radiation therapy, chemotherapy or Palladia®, it may lead to more side effects.

Piroxicam alone can be administered safely in **dogs** with cancer long-term. Occasionally it can be associated with significant gastrointestinal side effects or lead to kidney or liver damage. However, if it is used in combination with other forms of therapy such as Palladia® or metronomic cyclophosphamide and frusemide, it may lead to more side effects.

If your pet experiences any signs of illness, please contact your veterinarian as soon as possible.

Why do you recommend piroxicam and not another type of NSAID?

Piroxicam has been studied more extensively than other NSAIDs for pets with cancer, particularly carcinomas like bladder cancer and squamous cell carcinoma, so it is my NSAID of choice. There is no (or very little) data in pets with cancer to know whether meloxicam or other NSAIDs will have the same potential benefits as piroxicam. However, if your pet does not tolerate piroxicam, other NSAIDs can be considered.