



The Pet Oncologist

FAQs – Palladia® in Pets



Your vet just recommended Palladia® to treat your pet's cancer. What is Palladia®? What are the pros and cons? How frequent are the visits? What are the side effects? Here are some answers to some 'Frequently Asked Questions' about Palladia® in dogs & cats.

What is Palladia®?

Tyrosine kinases are cell signalling proteins that are overstimulated in cancer cells. Inhibiting these proteins with tyrosine kinase inhibitors have the potential to decrease cancer cell growth, proliferation and spread. Palladia® (toceranib) is an example of a tyrosine kinase inhibitor that can be used to treat a variety of cancers in pets. Palladia® also stimulates the immune response against cancer and suppress blood vessel growth associated with cancer. If cancer loses their blood vessel supply, it will eventually starve itself of oxygen and nutrients, and thus die. Although Palladia® is an anti-cancer medication, it is not chemotherapy, which directly results in cancer cell killing.

What are the pros and cons of Palladia®?

Palladia® is an attractive treatment option for many owners because they can administer the medication orally to their pets at home, three times a week.

However, the cons are that it has the potential to cause a variety of side effects (see further below under 'What are the side effects?'). Pet owners must alert veterinarians of any side effects (even if mild). It also needs to be administered by pet owners safely at home, and it can be an expensive option long-term, particularly in heavy dogs. Moreover, once started, it is considered life-long therapy for as long as it helps treat your pet's cancer, and because it does not necessarily always directly kill cancer cells, it can

sometimes take an average of 6-12 weeks before a response occurs. Therefore, in pets with cancer that is growing very fast, sometimes there may not be enough time to see a response to therapy.

It is important to be aware that even if the cancer does not go away but remains the same size (i.e. stable disease), this is considered a success if your pet continues to have a good quality of life.

Although Palladia® is not chemotherapy, please refer to this handout on tips on how to administer oral chemotherapy at home.

What cancers can Palladia® be used on?

Many cancers have the potential to respond to Palladia®. It can be considered in a situation where pets have unfavourable prognostic factors (such as metastasis [i.e. cancer spread]), when surgery or other forms of therapy are not possible, when pets have failed standard of care, or if owners wish to try an oral anti-cancer medication to administer to their pets at home. Sometimes Palladia® is not considered the standard of care, but it can be helpful and as a 'trial and see' approach.

In **dogs**, the main indications are as follows:

- Mast cell tumours
- Gastrointestinal stromal tumours (GISTs)
- Carcinomas such as anal sac cancer, squamous cell carcinomas, thyroid cancer, nasal cancer, bladder cancer, and bone cancer that has evidence of cancer spread to the lungs.

It can also be considered in dogs with other cancers such as insulinoma, heart tumours, adrenal tumours, liver cancer, and inflammatory mammary gland carcinoma.

In **cats**, the main indications are as follows:

- Mast cell tumours
- Carcinomas such as squamous cell carcinoma

It can also be considered in cats with other cancers such as gastrointestinal stromal tumours (GISTs) and pancreatic cancer.

Palladia® can sometimes be safely combined with other anti-cancer therapies, such as metronomic chemotherapy, radiation therapy and some conventional chemotherapy drugs.

How frequent are the visits?

When I start Palladia®, I typically recommend a recheck one to two weeks later, two weeks later, four weeks later, six weeks later, eight weeks later, then every 2-3 months after that. Each visit will usually consist of a physical examination, body weight, blood pressure, cancer measurement, blood and urine tests, to ensure pets are responding and tolerating therapy.

What are the side effects?

Most pets that receive Palladia® experience no side effects.

In **dogs**, approximately 20% to 25% experience a side effect from Palladia®, that is usually gastrointestinal signs, weight loss or less energy levels. However, uncommon side effects (such as high blood pressure, protein loss in the urine, low white blood cell count, liver damage, muscle cramping, skin pigment changes and fur loss, pancreatitis, kidney damage, heart damage, and other unexpected side effects) may occur. Most side effects (if picked up early) resolve with temporary stopping Palladia®, reducing the dose, or the addition of supportive medications. It is uncommon for a side effect to result in hospitalisation (<5%). Some dogs require dose adjustments and more frequent visits in the first month to try to get the Palladia® dose right for the individual dog.

In **cats**, approximately 20% to 70% experience a side effect from Palladia®, that is usually mild and temporary gastrointestinal signs (predominately loss of appetite) or bone marrow damage (drop in the white cell counts or platelets, which are cells involved in clotting). However, uncommon side effects (such as liver damage, kidney damage and less energy levels) may occur. Most side effects (if picked up early) resolve with temporarily stopping Palladia®, reducing the dose, or the addition of supportive care medications. It is uncommon for a side effect to result in hospitalisation (<5%). Some cats require dose adjustments and more frequent visits in the first month to try to get the Palladia® dose right for the individual cat.