

Owner Handout

Palladia

PALLADIA (toceranib phosphate) is a tyrosine kinase inhibitor (TKI) used in the treatment of a variety of different cancer types in animals. In contrast to traditional chemotherapy, which kills all rapidly dividing cells, Palladia is a targeted therapy that inhibits specific receptors on the surface of cancer cells and nearby blood vessels. Thus, Palladia may inhibit tumor growth through direct effects on the cancer cells as well as associated blood vessels.

What type of tumors are treated with Palladia?

Palladia is currently licensed by the FDA for treatment of canine mast cell tumors (MCT). At The Ohio State University, Palladia is used as a first-line treatment for dogs with MCTs that exhibit a mutation in a gene called *KIT*. It may also be used in dogs that have failed other therapies, have large tumors that cannot be surgically removed or are concurrently receiving radiation therapy as part of their treatment plan.

In addition to MCT, clinical benefit of Palladia has been reported in a wide variety of tumor types in dogs.

These include:

- Nasal carcinoma
- Squamous cell carcinoma of the head and neck
- Anal sac adenocarcinoma
- Metastatic osteosarcoma
- Thyroid carcinoma
- Neuroendocrine tumors
- Mammary gland tumors
- Bladder tumors

There is currently limited published literature on the benefit of Palladia in cats with cancer. However, it may be an appropriate treatment option for some cats.

How is Palladia administered?

Palladia is an oral medication that is administered at home three times a week or every other day. There are three different tablet sizes: 10 mg, 15 mg and 50 mg. Depending on your pet's prescribed dose, several different tablet sizes may need to be given together.

Although not a chemotherapy drug in the traditional sense, it is still important to take appropriate precautions when administering Palladia tablets. Tablets should not be broken or crushed, and latex gloves should always be worn when handling the tablets. Palladia tablets can be given in a Pill Pocket or food.

What monitoring will my pet need during treatment?

Your pet will be rechecked two weeks after starting therapy, at which point an exam and blood work (complete blood count) will be performed. After that re-check, evaluations are recommended every four to six weeks. At these evaluations we will perform the following diagnostics to ensure your pet is tolerating Palladia well and that it is safe to continue therapy;

- Physical examination
- Complete Blood Count (CBC)
- Biochemistry profile
- Urinalysis (UA)
- +/- Urine Protein: Creatinine Ratio (UPC), blood pressure (performed at every other visit)

How long will my pet be on Palladia?

There is not a defined period of time that a patient will be prescribed Palladia once treatment is initiated. In general, treatment is continued as long as Palladia is controlling the cancer and your pet is tolerating treatment. In addition to the tests outlined above, other tests may be recommended to better assess response to treatment. These may include chest x-rays, abdominal ultrasound or occasionally a CT scan. These tests may be performed every two to four months, depending on what type of cancer is being treated and how long your pet has been receiving treatment.



Palladia owner handout - continued

What side effects might occur with Palladia?

- Gastrointestinal:** The most commonly reported side effects are diarrhea and a decreased appetite, although nausea, vomiting and/or weight loss can occur. In most cases, these side effects are mild and can be treated successfully at home with supportive medications. A **drug holiday** (skipping one or more doses) may also be recommended by your pet's veterinarian.

To help prevent the development of gastrointestinal side effects, your pet's veterinarian may recommend administration of a daily antacid (omeprazole, famotidine), which can be purchased over the counter. In addition, anti-vomiting (maropitant, ondansetron) or anti-diarrheal medications (metronidazole, loperamide) may also be prescribed. You will be given clear instructions on when and how to administer these drugs.

It is very important that you STOP Palladia administration if you observe any of the above signs and contact Ohio State as soon as possible (614-292-3551). Continued administration, despite the development of side effects, may cause more severe symptoms that can become life threatening.
- Bone Marrow:** Palladia may cause a decrease in white blood cells, including neutrophils (neutropenia), platelets (thrombocytopenia) or red blood cells (anemia). In most cases, you will not notice any changes in your pet. During therapy, regular blood work will be performed to monitor your pet's bone marrow for these changes. If any abnormalities are detected, a drug holiday may be recommended. Once these abnormalities have resolved, therapy may be restarted at a reduced dose or altered administration schedule.
- Protein Losing Nephropathy (PLN):** Palladia can cause damage to the kidney, which may result in excessive protein loss in the urine. Although you may not note any changes in your pet, regular monitoring with a urinalysis and urine protein to creatinine ratio (UPC) is needed to monitor for protein loss in the urine. Without appropriate monitoring and treatment, a PLN can cause severe damage to the kidneys.
- Hypertension (high blood pressure):** Elevated blood pressure may occur concurrently with protein loss in the urine. Consequences of high blood pressure include damage to the eye (resulting in altered vision or blindness), kidneys or heart. In most cases, elevated blood pressure can be controlled with the addition of medications such as Enalapril and/or Amlodipine. Your pet's blood pressure will be closely monitored throughout treatment.
- Other:** A variety of other side effects have been reported, but rarely occur. These may include muscle cramping, pancreatitis and liver toxicity.

