



PALLADIA™

PALLADIA is the first FDA-approved drug for canine cancer and is licensed to treat canine mast cell tumor. PALLADIA is a tyrosine kinase inhibitor (TKI). TKIs have both antitumor and antiangiogenic properties, which means they can work against both the tumor itself and the blood vessels that supply it. Tyrosine kinase is an enzyme that binds to a receptor on the surface of a cell and causes signals to be conducted to the nucleus (the “brain” of the cell) that serve as growth factors for the cell. The primary TK PALLADIA was designed to inhibit is c-kit. However, it also can inhibit platelet-derived growth factor receptor-beta (PDGFR-b), vascular endothelial growth factor receptor-2 (VEGFR-2) as well.

PALLADIA has been shown to induce cell cycle arrest and cell death in tumor cell lines that express mutations in the c-kit receptor. In one study in patients diagnosed with mast cell tumor, 42.8% of dogs had objective responses to PALLADIA, and their tumors reduced in size by at least 30%. Twenty-one of these enjoyed a complete response, and 41 experienced a partial response to treatment. The patients with tumors that had mutations in c-kit responded better; however, patients without these mutations responded as well.

While these are new drugs, not all patients need treatment with them. Most mast cell tumors are cured with adequate surgical removal. However, there are some dogs that grow multiple masses, and some masses recur, spread, or are classified as high grade. These are patients that might need this treatment.

Prior to treatment, the recommendation is to reduce tumor burden as much as possible. That means surgically removing the bulk of disease or pre-treating with traditional chemotherapy drugs to shrink the tumor size.

While PALLADIA is administered orally at home, it is still, technically, chemotherapy. In the beginning of treatment, we still monitor with physical examinations and blood work for a time period and then every 4 to 6 weeks after that. As with all drugs, there are potential side effects. These might include low white blood cell counts, diarrhea, vomiting, lethargy, fatigue, and stomach ulceration. The role of PALLADIA in the treatment of canine mast cell tumors continues to evolve. Additionally, this medication is starting to be tried for treatment of dogs with other advanced stage tumors. As we learn more, its uses may change. But for now, PALLADIA is considered a good option – often in addition to

other treatment - for recurrent, high grade, multiple, or inoperable mast cell tumors. In terms of administration, PALLADIA is given approximately every day. It should be given with food. If side effects occur, the most important point is to STOP THE DRUG. Side effects are generally reversible. Additionally, preventive and protective medications can be dispensed to help mitigate the risks and effects of treatment. Treatment will restart after the patient has recovered and is then given less frequently and or at a lower dose.

Prednisone is frequently given on alternating days, and Pepcid AC or Prilosec are recommended to help protect the stomach from ulceration. If a patient is taking NSAIDs such as Rimadyl, Deramax, Previcox, or Piroxicam, please let us know. In combination, some of the side effects of PALLADIA can be more severe. There are also rare side effects reported such as hair loss or muscle cramping. It's best to keep a log of your pet's activity each day and notify us, should problems arise. The vast majority of patients enjoy a great quality of life on this medication, and overall owners have been pleased with their pets on it.

Finally, there have been reports of treatment responses in non-mast cell tumor cancers, such as metastatic anal sac carcinoma. In the future, it may be prescribed more frequently in addition to, or after treatment with standard chemotherapy protocols to improve quality of life and survival for our veterinary patients.

For more information about using PALLADIA in your pet, please make an appointment to speak with us.