TGCVS Times

ADVANCING COMPASSIONATE VETERINARY CARE

VOLUME 1, ISSUE 4 JUNE 2010

GULF COAST VETERINARY SPECIALISTS

SPECIAL POINTS OF INTEREST:

- **MCT are classified Grade I, II or III. Grade III has the most potential for metastasis**
- **Surgical excision with clean boarders is ideal. If clean boarders are not possible, additional local therapy should be considered**
- **Palladia is an oral chemotherapy drug targeting MCT and has shown promise in controlling previously unresponsive MCT disease and possibly other tumors**

Dermatology & Allergy
713.693.1188

Internal Medicine & Critical Care
713.693.1144

Diagnostic Imaging
713.693.1177

Oncology
713.693.1166

become a fan today

Canine Mast Cell Tumors

Dear Colleague,
Mast cell tumors are one of the most common skin tumors of the dog. They are classified by the pathologist according to three major grades. Grade I and II tumors are generally considered to be local tumor with a low metastatic potential while grade III tumors carry a higher metastatic potential. Additionally there are high risk sites such as the muzzle, perineum, preputial and vulvar areas that tend to have a more aggressive behavior.

Clinical Signs and Diagnosis of Mast Cell Tumors (MCT)

Mast cell tumors (MCT) can have a varied appearance with variable growth or even fluctuation in size. Boxers and Boston Terriers are known to have a breed predilection to this condition.
The first step in dealing with these tumors is to assess the overall health of the patient while looking for evidence of metastasis. Commonly recommended staging tests include: complete blood count, chemistry profile, chest x-rays, abdominal ultrasound, aspirates of the regional lymph node when possible and aspirates of the liver and spleen if abnormal.

Traditional treatment options for Mast Cell Tumors?

For grade I and II tumors without evidence of metastasis, the goal is to address the tumor locally. Surgery is preferred to achieve complete surgical margins if possible but radiation therapy can be used if complete surgical removal is not possible. Grade III tumor carry a higher metastatic potential so they not only needed to be addressed locally (surgery and/or radiation therapy) but also systemically with chemotherapy.
For dogs with high grade mast cell tumors (grade III), evidence of distance metastasis, a high risk location, or a non-resectable tumor -- chemotherapy is recommended. Traditional chemotherapy options include prednisone, vinblastine, cyclophosphamide and lomustine. Response rates range from 7% to 30%. These protocols are generally well tolerated but given the low response rate, other chemotherapy options are being explored.

New treatment options for Mast Cell Tumors?

Ninety percent of humans with aggressive systemic mastocytosis have a mutation in the Kit pathway leading researchers to investigate if dogs with mast cell tumors had a similar mutation. Approximately 9% to 30% of canine MCT have a mutation in the juxtamembrane portion of Kit allowing excessive proliferation of the mast cells. New therapies are being developed to target this mutation. By targeting this mutation the goal is to control the cancer while minimize systemic toxicity. One of these new drugs is Palladia (toceranib phosphate).

Palladia is the first veterinary approved tyrosine kinase inhibitor. This drug belongs to a subset of anti-cancer agents called small molecule inhibitors. Palladia is a novel chemotherapy agent targeting the mutant Kit pathway, but has potential activity in the VEGF and PDGF pathways thus making it antiproliferative (Kit pathway) and also potentially anti-angiogenic (VEGF and PDGF pathways). It is currently approved for dogs with non-resectable or recurrent grade II or III mast cell tumors with or without lymph node metastasis, although other tumor types may also be responsive. In dogs with a mutant kit pathway, 69% of dogs achieved a response but interestingly 36.8% of dogs without the mutation also achieved a response. This indicates that the drug's effect is mainly the kit pathway but there are also alternate pathways (such as the VEGF and PDGF pathways) that may also be resulting in response.

What can my clients expect with Palladia therapy?

Palladia is administered orally every other day at home. If a dog achieves a clinical response (the tumor stabilizes in size or gets smaller) then they will likely need to remain on this medication for the rest of their life. Although it is generally well tolerated, potential complications include bone marrow suppression and gastointestinal upset (most commonly diarrhea, although GI ulceration was also reported). Routine monitoring is recommended while on Palladia and consists of a complete blood count and chemistry profile weekly for the 1st 6 weeks then every 6 weeks thereafter to monitor for response and tolerance.

The cost will vary somewhat depending on the particular aspects of the patient's case. After one of our doctors has evaluated your client's pet, our staff will be happy to provide an estimate to your client which will reflect that patient's specific needs.

How can I refer my patients for further treatment and evaluation?

If you would like to refer a client to discuss treatment options with an oncologist, please call our Oncology team (713-693-1166). There are many treatment options available for dogs with mast cell tumors and deciding which approach is best can be tricky. We are always happy to consult with you and decide what the best treatment approach is for each individual patient.

www.gcvs.com

Celebrating 21 years of Compassionate Veterinary Care

GULF COAST VETERINARY SPECIALISTS

1111 West Loop South
Suite 120
Houston, TX 77027

To the Doctors of

Find us on Facebook

Gulf Coast Veterinary Dermatology & Allergy, Gulf Coast Veterinary Diagnostic Imaging, Gulf Coast Veterinary Internal Medicine & Critical Care and Gulf Coast Veterinary Oncology are now on Facebook