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Pearls for the Practitioner

Topic: The Use of Receptor Tyrosine Kinase Inhibitors in Cancer Treatment

The Animal Medical Center has created this e-mail publication to keep you informed about the latest practices in veterinary medicine and how these practices are being applied at The AMC. If you are interested in obtaining past issues of "Pearls for the Practitioner" or if you would like to be removed from this mailing list, please e-mail lynne.freeman-gassem@amcny.org.

The treatment of cancer in companion animals is an increasing component of clinical veterinary practice. Despite the fact that chemotherapy is a mainstream treatment in veterinary medicine, all the drugs veterinarians use to treat cancer in pets are approved for use in humans and used off-label when we treat cancer in animals. This situation is about to change, since FDA approval is expected in the near future for some novel anticancer agents.

Traditional cancer therapy is not targeted at cancer cells. Chemotherapy attacks all rapidly dividing cells, including normal bone marrow cells and rapidly dividing intestinal cells. The effects on normal cells are often responsible for chemotherapy adverse reactions. Radiation therapy functions similarly and all tissues in the radiation field are subject to its effects.

A new class of targeted anticancer drugs has been causing significant excitement in the human cancer field. These drugs are called receptor tyrosine kinase inhibitors or rTKIs because they target tyrosine kinase receptors. The most widely known human rTKI is imatinib or Gleevec® which has revolutionized the treatment of gastrointestinal stromal tumors and chronic myelogenous leukemia. One of the new veterinary tyrosine kinase inhibitors, toceranib phosphate (Palladia®) is a multireceptor tyrosine kinase inhibitor and targets receptors on both aberrant tumor vasculature and mutated receptors involved in cellular proliferation pathways. Mutations in the receptor tyrosine kinase known as KIT are common in canine mast cell tumors and the label indication for Palladia® is anticipated to be Grade II and III recurrent mast cell tumors, with or without lymph node metastasis. Veterinary oncologists foresee these and other novel drugs becoming part of the veterinary repertoire of anticancer agents and improving both the quality and quantity of life for our cancer patients.

Dr. Douglas Thamm from Colorado State University will highlight the use of receptor tyrosine kinase inhibitors in veterinary patients at the upcoming **Partners in Practice: Cutting Edge Cancer Care on Sunday, May 17, 2009 from 12:00-6:00 p.m.** The day will also include small group interactive sessions and a tour of AMC's recently opened linear accelerator suite. For more information please contact Dr. Ann Hohenhaus at (212) 329-8612 or view the program brochure at <http://www.amcny.org/seminar/May-17-Oncology-Seminar.pdf>.

The Oncology Team at The Animal Medical Center

At The Animal Medical Center, specialists certified by the American College of Veterinary Internal Medicine in the sub-specialty of Oncology and the American College of Veterinary Radiology in the sub-specialty of Radiation Oncology provide dedicated care for pets with cancer Monday through Saturday. We take a team approach to cancer care, collaborating with specialists in the fields of diagnostic imaging, pathology, surgery and internal medicine to create a customized plan for the care of the pets you refer to us. We have created this e-mail publication to keep you informed about the latest practices in veterinary oncology and radiation oncology and how they are being applied at The AMC.

You can reach The AMC Oncology staff by e-mail or phone:

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**TO REFER AN EMERGENCY PATIENT, PLEASE CALL:
THE AMC EMERGENCY HOTLINE (212) 329-8616.**

This line is open 24 hours a day, 7 days a week for doctors only.

To refer a case to The AMC, please call The AMC Referral Office at: (212) 329-8890.