



# Hydroxyurea Therapy

*Hydroxyurea is a drug that crosses the blood brain barrier and enters the nervous system. This is an uncommon property and allows this medication to be an effective treatment for meningioma, the most common brain tumor in dogs and cats.*

## Response rates and timing of the response

Hydroxyurea will allow a canine patient with meningioma to live at least twice as long as and often better than if not treated with this medication. In one report, a repeat MRI demonstrated significant tumor reduction 40 days after therapy. Hydroxyurea is less commonly used in cats but likely effective.

## Pharmacology

Hydroxyurea is a chemotherapy that interferes with cell division by incorporating into the DNA at the synthesis phase. Half of the medication is excreted unchanged in the urine and the other half is metabolized by the liver and then excreted in the urine.

## Side-effects and toxicity

We have not seen side-effects in dogs who are on this medication and have used the drug very infrequently cats. The general veterinary experience is that this medication is very well tolerated. A significant reduction in the production of red blood cells, platelets or white blood cell is possible as well as hair loss, loss of the toe nails and irritation of the tongue. Typically there is an unimportant drop of the red cell mass (very mild anemia) that does not make the patient sick. A complete blood cell count within three weeks of starting therapy and then every two months is recommended but rarely demonstrates any abnormality.

## Safety

You are to wear gloves when handling any chemotherapeutic agent. Gloves should also be worn when handling any of your pet's fluids or feces or materials having been in contact with your pet's fluids or feces up to 72 hours following the last dose administration. Anytime skin contact occurs, the area should be washed immediately with soap and water.

To reduce the risk of exposure the following precautions should be taken:

- The administrator should not be pregnant or trying to get pregnant or under 16 years of age.
- The administrator should wear the gloves provided while handling the medication.

Your pet should be directed to urinate in a confined area away from other pets and neighbors for 72 hours after administration. Direct sunlight will help to degrade the chemotherapy.

Side effects of hydroxyurea are uncommon but can include bruising, lethargy, fever, poor appetite, vomiting and diarrhea. If these are noted or you have any other concerns then please call BVNS.

### Cleanup of Waste During Treatment:

If your pet vomits, regurgitates or drools excessively or urinates or defecates in the house within 72 hours of administering any chemotherapy drug, while wearing gloves please follow the instructions outlined below for cleanup recommendations:

1. If vomit – clean up food and fluid with paper towels to the point that only liquid is remaining.
2. Dilute remaining fluid (if vomit) or urine with 8-12 oz of water and absorb with paper towels.
3. Clean the area with a mixture of mild soap and water.
4. Clean the area (hardwood or carpet) with any standard cleaner.
5. Double bag all paper towels, rags, and gloves used and dispose of in the trash.



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