



# Lomustine Therapy

*Lomustine is a drug that crosses the blood brain barrier and enters the nervous system. This is an uncommon property that makes lomustine an important drug in the treatment of central nervous system lymphoma, a similar disease called Granulomatous MeningoEncephalomyelitis (GME), and brain tumors. The application of lomustine often makes patients function and feel better while allowing us to use less prednisone.*

## Response rates and timing of the response

The patient typically starts to improve in about 3 to 5 days with some taking up to 2 weeks to show a response. About 80% of the patients respond to therapy when lymphoma or GME is suspected with lower response rates for brain tumors.

## Pharmacology

Lomustine is a chemotherapy drug that binds or alkylates DNA and prevents replicating cells from surviving. The drug is metabolized by the liver. Lomustine will cause a reduction in the white blood cells, typically about 7 days after the medication is given. We advise giving the medication with food.

## Side-effects and toxicity

Side-effects, an unwanted effect of a medication, can be observed with lomustine. Organ toxicity leading to organ failure are also possible with this medication. About 15% of the time lethargy is noted in our patients on this medication. About 1% of the time fever, vomiting, diarrhea and not eating are noted. These side-effects are typically seen about 7 days after the medication is administered. At this time, there is often a predictable drop in the white blood cell count that potentially puts the patient at risk for infection. Often we will treat with a broad spectrum antibiotic to try to protect the patient from these side-effects. A complete blood cell count is often recommended about 7 days after the medication is given with particular attention being paid to the neutrophil count. The drop in this population of white cells often guides us in determining the proper dose that is used for the next round of therapy. Lomustine can cause liver or bone failure and rarely kidney disease with multiple or cumulative dosing and for this reason a biochemistry, CBC, and occasionally a urine sample are analyzed prior to giving the next dose. Denamarin is often prescribed because it has been proven to reduce the incidence of liver toxicity during lomustine therapy.

## Safety

Exposure to people and animals can occur when handling the capsules without the appropriate gloves or when handling fluids (urine, saliva, vomit) or feces. 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.

*Warning - When using Lomustine you should always use gloves and pregnant women & children should not handle this drug.*

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 lomustine 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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