



## HEPATIC NEOPLASIA (LIVER TUMORS) LIVER CANCER By: Dr. Erika De Papp

Hepatic Neoplasia is cancer of the liver. The words cancer, neoplasia or neoplasm, and tumor are often used interchangeably. Neoplasia in the liver may be the result of a primary liver tumor (one that originates in the liver), hemo lymphatic cancer (arising from blood cells or lymphoid tissue) that involves the liver, or metastatic cancer (cancer that has spread to the liver from other organs).

The most common form of liver cancer in dogs is metastatic disease. Primary liver cancer is rare, comprising less than two percent of all cancer seen in these species. When it does occur, the most common primary liver tumors seen in dogs and cats are hepatocellular carcinomas, which are malignant tumors that arise from the liver cells, and hepatocellular adenomas or hepatomas, which are benign tumors that arise from the liver cells.

The cause of primary liver cancer may be related to environmental factors. Exposure to carcinogens, or cancer-causing chemicals, may increase the risk of cancer development. Many chemicals are not toxic until they are metabolized by the liver. The liver serves an important role in detoxifying many substances circulating in the body. However, some of the possible carcinogens include toxins produced by fungi that are sometimes associated with spoiled pet food, food additives, certain pesticides, dyes, plants and animal tissue. Viral infections have been associated with hepatic cancer in humans. This has not been shown in dogs or cats.

Primary liver cancer is most common in pets greater than 10 years of age. There is a slightly increased risk of hepatocellular carcinoma in males compared to females.

The impact of the disease on the pet varies depending on the tumor type. Benign tumors do not spread and generally do not cause illness unless they are physically impinging on other abdominal organs, or if they rupture and bleed. Occasionally, large benign liver tumors cause hypoglycemia (low blood sugar) by probable release of insulin-like substances. Insulin is the hormone that controls sugar levels, and is normally produced by the pancreas.

### What to Watch For:

- Vomiting
- Decreased appetite
- Abdominal distension
- Pale gums
- Generalized weakness
- Increased respiratory rate
- Difficulty breathing jaundice (yellow discoloration of the skin)

Malignant tumors carry a much graver prognosis as these are aggressive disease processes and often have evidence of widespread involvement by the time of diagnosis. Just as other tumors can metastasize to the liver, primary liver tumors can metastasize to other organs. The symptoms are often vague and non-specific.

### Diagnosis:

- History and physical exam
- Complete blood count (CBC)
- Biochemical profile
- Abdominal radiographs (x-rays)
- Thoracic (chest) radiographs
- Abdominal ultrasound
- Coagulation profile (clotting tests)

### Treatment:

- Medical stabilization, which may require IV fluids and blood transfusions in certain cases
- Surgical mass removal when possible
- Chemotherapy, depending on the tumor type

### Home Care and Prevention:

- Administer all medications as prescribed by your veterinarian. Monitor your pet for abdominal distension, pale gums, extreme weakness, anorexia, vomiting or diarrhea.
- Feed a high quality pet food and provide proper storage to insure freshness of the food. Discard any food that appears to be spoiled.