



WHAT EVERY DOG OWNER SHOULD KNOW ABOUT CANCER

**An Arsenal of
Medical, Holistic and
Alternative Options**

Marc Smith, DVM
Casey Damron, DVM
Becki Baumgartner



NATCHEZ TRACE
VETERINARY SERVICES

**Copyright © 2017 Marc Smith DVM & PET | TAO Holistic
Pet Products, LLC**

All Rights Reserved

*Feel free to email, tweet, blog, and pass this e-book around the web... but please don't alter any
of its contents when you do.*

Thanks!

pettao.com

WHAT EVERY DOG OWNER SHOULD KNOW ABOUT CANCER

Dogs get cancer just like people do.

Because cancer is so common in dogs, owners must be aware of the signs and symptoms of cancer.

If discovered early, many types of dog cancer can be effectively treated, allowing your dog to continue a healthy, happy life.

Our goal is to share information with you about the different dog cancer symptoms, dog cancer treatments, and different preventative measures readily available.

Attentive owners can spot dog cancer symptoms as soon as they appear and seek veterinary help immediately.

Often, early identification of cancer marks the difference between life and death.

If your dog experiences any of the symptoms described below, you should seek veterinary care as soon as possible.

Although these symptoms are not proof of cancer, all are possible signs of cancer.

Remember, the earlier cancer is identified, the better.

Evidence of Pain

Evidence of pain or obvious limping while your dog is walking, running or playing is often a sign of arthritis, joint, or muscle issues in older dogs.

Signs of pain can also, however, be signs of bone cancer.

Changes in Bathroom Habits

Cancer can make a dog need to go to the bathroom more.

Other related signs of cancer are blood in the urine or stool.

If you notice any of these symptoms, contact your veterinarian immediately.

Lethargy or Depression

Cancer often makes dogs act more “lazy” all of a sudden. Not wanting to play or go on walks, or sleeping much more than usual can all be signs of cancer.

Coughing or Difficulty Breathing

Coughing and abnormal breathing can be caused by cancer as well as by heart disease and lung disease.

Cancer causes these symptoms when it metastasizes to the lungs.

Change in Appetite

Cancer can cause loss of appetite.

Oral, esophageal, and digestive tract tumors are the most common causes of appetite loss.

The general malaise caused by cancer can also decrease the appetite in some dogs.

Weight Loss

Cancer is one of many things that can cause your dog to lose weight.

If you notice weight loss in combination with any other symptom on this list, definitely see your vet.

Non-Healing Wounds

Cancer, infection and skin disease are all possible causes of non-healing wounds.

Your pet should see your veterinarian for any non-healing wound.

Abnormal Discharges

Cancer causes a wide variety of abnormal discharges.

If your dog suffers from any type of abnormal discharge including pus, blood, vomiting or diarrhea, see your vet immediately.

Abnormal discharges accumulating inside your dog's body can cause a distended or bloated abdomen.

Abnormal Odors

See your vet immediately if you notice foul or offensive odors emanating from your dog's mouth, ears, or elsewhere.

Foul odors can be a sign of cancer or other chronic health issues.

Lumps and Bumps

Not all lumps and tumors are cancerous, but all should be checked by your vet.

Most vets perform a needle cytology to diagnose whether or not the abnormality is a cancerous tumor or a simple lipoma (fatty non-cancerous tumor) that will not cause harm.

As we explained earlier, the above list is not definitive proof of cancer.

But any one of these symptoms is a good reason for a trip to your veterinarian!

Owners also need to know that some forms of cancer are more lethal than other forms of cancer.

For example, dog skin cancer can easily be treated by surgery, but dog lymphoma and bone cancer (osteosarcoma) can metastasize through the body very quickly and cause death.

“The Dog Cancer Survival Guide” by Demian Dressler and Susan Ettinger is an excellent resource.

We keep a copy of this book in our clinic.

The Dog Cancer Survival Guide is full of helpful information and tips for helping your dog survive cancer.

Different Types of Cancer and Associated Symptoms

In order to keep your dog healthy, you must be aware of dog cancer symptoms.

The earlier cancer is detected and treated, the better the prognosis will be for your dog.

Most dog owners will spot a lump and know it could possibly be a cancer symptom.

But what about the other types of cancer?

Symptoms of other types of cancer are often not as obvious.

Dog Bone Cancer Symptoms

Bone cancer (osteosarcoma) can affect any breed of dog, but is most common in larger breeds.

Unfortunately, this bone cancer spreads very quickly throughout the body and the prognosis is usually poor.

The signs of bone cancer may be subtle or profound and include:

- Swelling
- Lameness
- Joint pain
- Bone pain
- Fatigue
- Anorexia

Occasionally a mass or inflammation is found around the tumor area.

To determine whether or not your dog has bone cancer, your veterinarian will likely utilize x-rays, biopsies, blood tests, bone scans and CAT scans to view the area of the tumor and determine its severity.

Dog Colon Cancer Symptoms

Two types of colon cancer exist in dogs: adenocarcinoma and lymphoma/lymphosarcoma.

Adenocarcinoma is diagnosed when the tumor(s) grow from the apocrine glands located on each side of the rectum.

Lymphoma/Lymphosarcoma is diagnosed when the lymph nodes or lymphoid tissues in the gastrointestinal tract are affected.

Dog colon cancer symptoms are very similar to the symptoms of Irritable Bowel Syndrome (IBS) and Colitis.

In fact, both IBS and colitis can actually lead to colon cancer.

The signs of colon cancer include:

- Constipation
- Struggle to pass feces
- Blood in stool
- Mucus in stool
- Increased thirst
- Frequent urination
- Vomiting
- Weight loss for no apparent reason

Progressed colon cancer can also cause high fever, changes in behavior, hair loss, skin rash, and muscle weakness.

To determine whether or not your dog has colon cancer, your vet will probably perform a urinalysis, blood test, take abdominal x-rays, and possibly perform a colonoscopy and biopsy to verify the diagnosis.

Dog Liver Cancer Symptoms

The most common form of liver cancer in dogs is hepatocellular carcinoma, a malignant tumor of the epithelial cells of the liver.

Unfortunately, the outward symptoms of liver cancer usually do not appear until the disease reaches an advanced stage.

The symptoms of liver cancer are:

- Loss of appetite
- Weakness
- Lethargy
- Weight loss
- Diarrhea
- Vomiting
- Excessive thirst
- Enlarged liver
- Abdominal hemorrhage
- Jaundice

To determine whether or not your dog has liver cancer, your veterinarian will perform a thorough exam, blood work, electrolyte panel and urinalysis.

Your vet may perform a needle biopsy of the liver.

A needle biopsy involves taking fluid and cells via needle from the liver.

The sample is then sent off to a lab to be analyzed microscopically.

Dog Skin Cancer Symptoms

Many different types of skin cancer exist in dogs.

Because of this, skin cancer manifests in many different forms in dogs.

The most common type of skin cancer in dogs is Basal Cell carcinoma.

Basal cell tumors form in the deepest layer of the skin, the epithelium.

Basal Cell tumor most commonly appear in older dogs.

While 3-12% of all tumors are Basal Cell tumors, less than 10% of Basal Cell tumors are cancerous or malignant.

There are no real symptoms from the tumor alone.

Basal Cell tumors may spread to other parts of the body, including organs, which can cause serious problems.

Basal Cell tumors can be spotted fairly easily.

Basal Cell tumors usually appear as a raised, hairless masses around the head, neck or shoulders.

Your veterinarian will be able to give a certain diagnosis by taking a small sliver of the tumor and examining it.

Your veterinarian may also do a urinalysis and a count of all blood cells in the body.

Another fairly common type of skin cancer in dogs is Epidermotropic Lymphoma.

Epidermotropic lymphoma spreads through cells in the immune system.

Dogs of all ages and breeds are at risk, but older dogs have an increased chance of developing Epidermotropic lymphoma.

Symptoms include:

- Itching

- Loss of hair
- Scaly skin
- Redness of skin
- Loss of pigment
- Skin ulcers or masses, often around eyes, mouth and nose
- Lesions

Your veterinarian will do a urinalysis and a count of all blood cells in the body.

Some veterinarians take radiographs to look for tumors inside of your dog.

A biopsy of the tumor must be sent to a veterinary pathologist to confirm the diagnosis.

Dog Stomach Cancer Symptoms

Stomach cancer, known as Leiomyosarcoma, is a very uncommon condition in dogs.

Leiomyosarcoma is caused when a cancerous tumor forms in the stomach or intestinal tract.

It is an extremely painful disease that mainly affects dogs over the age of six.

On top of the undesirable effects it has in the stomach, Leiomyosarcoma has a dangerous tendency to spread throughout the body.

Symptoms include:

- Vomiting
- Weight loss
- Diarrhea
- Blood in stool
- Gas

To procure a diagnosis, your veterinarian may perform a complete physical examination, as well as a biochemistry profile, urinalysis, and complete blood count.

Other diagnostic procedures include abdominal X-rays and ultrasounds, contrast radiography, or endoscopy (a tube inserted through the esophagus to exam the stomach and intestines).

Dog Throat Cancer Symptoms

Throat Cancer, or Chondrosarcoma, describes a condition in dogs where a tumor originating in the cartilage develops in the larynx or trachea.

Chondrosarcoma is quick to spread and the prognosis is usually bleak.

Canine Throat Cancer Symptoms Include:

- Changes in voice
- Loss of bark
- Harsh, noisy breathing
- Poor exercise stamina
- Difficulty in respiration, dog may breathe with mouth open
- Loud noises while breathing
- Bluish mucous membranes
- Sudden collapse
- Difficulty ingesting food
- Inability to swallow

A diagnosis may be reached by evaluating results of any of the following:

- A complete blood cell count
- Urinalysis
- Platelet count

- Radiographs of throat and neck

Other options include imaging like MRI and CT scans or a biopsy of the tumor.

Are the Lumps and Bumps On My Dog Cancer?

As dogs age, lumps often arise on their bodies and under the skin.

All skin lumps and bumps should be examined by your veterinarian. There are several types of dog lumps and bumps, some are cancerous and some are noncancerous.

Abscess

An abscess is a painful collection of pus, usually caused by a bite or a puncture wound.

Abscesses, by definition, are non-cancerous.

But, certain types of cancer can cause abscesses.

Any abscess should be treated by your veterinarian.

Basal Cell Tumor

A Basal Cell tumor is a type of skin cancer.

Basal cell tumors are the most common type of cancer.

Luckily, Basal Cell tumors rarely metastasize or causes death.

Ceruminous Gland Adenoma

A ceruminous gland adenoma is benign tumor in the ear.

Ceruminous gland adenomas are non-cancerous.

Epidermal Inclusion Cyst

An epidermal inclusion cyst is a benign cyst usually found on the skin.

Epidermal inclusion cysts are non-cancerous.

Hematoma

A hematoma is a localized collection of blood outside of the blood vessels.

The blood is usually liquid form within the tissue.

Hematomas are non-cancerous.

Histiocytoma

A histiocytoma is a benign tumor.

Histiocytomas are caused by an overgrowth of histiocytes (immune cells).

Histiocytomas are non-cancerous.

Lipoma

A lipoma is a benign tumor composed of fatty cells found between the skin and muscle tissue.

Lipomas are non-cancerous.

Mast Cell Tumor

Mast cell tumors are the most common cutaneous tumor found in dogs.

Mast cell tumors are cancerous.

Perianal Gland Tumor

A perianal gland tumor is a tumor found near the anus of a dog.

Perianal gland tumors can be either cancerous or non-cancerous.

Sebaceous Adenoma

A sebaceous adenoma is a benign, slow growing tumor of the sebaceous gland.

Sebaceous adenomas are non-cancerous.

Skin Papilloma

A skin papilloma is a benign epithelial tumor, also known as “skin tag”.

Skin papillomas and skin tags are non-cancerous.

Soft-Tissue Sarcoma

Soft-tissue sarcomas are cancerous tumors of the soft tissues of the body.

Transmissible Venereal Tumors

Transmissible venereal tumors are sexually transmitted malignant tumors that occur on canine genitalia.

Transmissible venereal tumors cancerous.

Many photographs of dog tumors are available in books and online.

But, the only sure way to diagnose your dog’s lump or bump is to have your veterinarian send a biopsy or cytology to a lab for analysis.

Along with tumors, other signs of dog cancer are:

- Lethargy
- Unusual odors
- Weight loss
- Changes in appetite

- Respiratory problems
- Behavior changes
- Open sores
- Vomiting and diarrhea
- Pale gums

Dogs with tumors can often maintain an excellent quality of life.

There are several options available to treat tumors and lumps on a dog's body including surgery, herbal remedies, alternative treatments, and cryotherapy.

The Dog Cancer Survival Guide

There are many options available to help dogs diagnosed with cancer.

An excellent resource is *The Dog Cancer Survival Guide*, which is available for purchase at most bookstores and online.

The *Dog Cancer Survival Guide* by Dr. Damian Dressler, is an excellent resource to optimize your dog's quality of life and longevity.

The book guides you through cancer symptoms and treatments, and even shows you how to develop a custom plan for your dog's personalized cancer treatment.

The Dog Cancer Survival Guide covers surgery and more such as:

- Conventional Western veterinary treatments and how to reduce their side effects
- Surgery
- Chemotherapy
- Radiation
- Non-Conventional Therapies and Treatments
- Botanical Nutraceuticals
- Supplements
- Nutrition
- Mind-Body Medicine
- How to analyze options and develop your own plan based on
- Your dog's type of cancer
- Your dog's age
- Your financial and time budget
- Your personality
- Personal factors

Dog cancer survival rates vary depending on the type of cancer and your dog's age, health and the treatment options chosen.

By following the recommendations in the Dog Cancer Survival Guide, you can increase the odds of your dog living a longer, healthier life.

Apocaps and the Dog Cancer Diet

You can easily start treating your dog at home by following the Dog Cancer Diet and supplementing with Apocaps.

The Dog Cancer Diet

The Dog Cancer Diet is a full spectrum diet that consists of what dogs eat in their natural state in the wild.

This diet also includes several foods that can either lessen the effects of cancer on the body or actually help the body fight cancer.

Apocaps

Apocaps are a botanical supplement formulated by Dr. Damian Dressler DVM.

The main ingredients in Apocaps are luteolin, curcumin, and apigenin.

One of the main benefits of Apocaps are the supplement's ability to induce apoptosis.

Apoptosis is the natural cell death that occurs in multi-cellular organisms.

When apoptosis does not occur as it should, cancer is often the end result.

Luteolin

Luteolin is a bioflavonoid found in parsley and celery.

The benefits of luteolin are:

- Induces apoptosis in cancer cells in vitro
- Starves cancer cells by interfering with glycolysis
- Sabotages the ability of cancer cells to replicate
- Cuts off cancer cells from the blood supply

- Shuts down communication between cancer cells
- Decreases inflammation
- Boosts the effects of chemotherapy

Curcumin

Curcumin is a natural phenol that gives turmeric its yellow color.

The benefits of curcumin are:

- Helps increase apoptosis
- In higher doses is a pro-oxidant that can destroy cancer cells while leaving normal cells untouched
- Slows formation of new blood vessels in cancer cells, thus slowing metastasis
- Decreases inflammation
- Disrupts the enzymes that allow cancer cells to replicate

Apigenin

Apigenin is a bioflavonoid most commonly found in parsley, celery, and chamomile tea.

The benefits of apigenin are:

- Turns on apoptosis genes in cancer cells
- May stop cancer cells from multiplying
- Slows the making of new blood cells, making it harder for cancer cells to feed themselves or metastasize
- Reduces inflammation and replication of cancer cells
- Blocks cell-to-cell communication of cancer cells

Dog Cancer: Prevention is the Best Treatment

What is the best way to treat dog cancer?

The best way to treat dog cancer is to prevent it in the first place!

Ancient Ayurveda provides a simple theory that is a wonderful aid in preventing cancer.

The theory is called “The Land and Seed Theory”.

The Land and Seed Theory

Envision your dog’s body being “The Land”.

For example, your dog’s body is the land where you want to build your flower garden.

Now envision illness or cancer risks as being “The Seeds”.

For example, illness/cancer are the seeds you want to plant in your flower garden.

If your land is infertile enough (strong immune system), no matter how strong your seeds are, they won’t be able grow.

According to traditional Ayurveda, you can strengthen your dog’s immune system to the point that, no matter what “seed” comes along—including cancer— your dog won’t get sick.

If your environment is particularly unhealthy, your dog must be particularly strong (be “infertile soil”) to make up for the unhealthy environment.

If the seed is strong (high cancer risks) and the land is infertile (healthy immune system), yet the environment is supportive to the seeds, then the seeds just might have a chance to grow.

The worst case scenario is when the seed is good (meaning cancer risks are high), the land is fertile (low immunity), and the environment is supportive (living in a very toxic area).

In worst possible “Land and Seed” situation described above, cancer is very possible.
The good news?

You can turn this theory into an advantage!

Help your dog create a body that “Just says NO!” to sickness.

Help your dog develop a strong immune system.

Help your dog develop a pure, healthy, balanced body.

Minimize the risks in your home environment.

Help your dog develop a body that is totally inhospitable to cancer, and he/she won’t get it!

Stay on top of current research- anything that boosts the immune system creates infertile soil for cancer!

What if My Dog Already has Cancer?

If your dog already has cancer, most likely you will want to treat it.

Dog cancer treatment options and dog cancer treatment costs vary greatly depending on many different factors.

Factors include:

- What type of cancer does your dog have?
- How advanced is your dog's cancer?
- Do you want standard western treatments or alternative and holistic treatments?
- Is surgery recommended for your dog?

All of the above questions will need to be answered in order to determine the available options and costs of treatment.

There are several basic dog cancer treatment options.

Often several options are used at the same time.

The effectiveness of each option varies with each pet's individual situation.

Dog Cancer Treatment Options

Here are a few of the options available for dog cancer:

- Surgery - Surgically removing cancerous tumors and lesions
- Radiation - Using radiation (similar to X-rays) to treat cancer
- Chemotherapy - the treatment of disease by the use of chemical substances, especially the treatment of cancer by cytotoxic and other drugs.
- Immunotherapy - the prevention or treatment of disease with substances that stimulate the immune response.

- Prednisone
- Eastern Herbals
- Alternative Therapies
- Vitamin C IV
- Neoplasene/Bloodroot
- Anti-Cancer Diet

What If I Want to Try Natural Dog Cancer Treatments?

There are several natural dog cancer treatments available today.

Most natural dog cancer treatments can be used alone or in combination with chemotherapy, surgery and radiation.

The most skilled veterinarian will analyze your dog's particular situation and offer you several different options and combinations of treatments, helping you choose the one you feel is best for your dog's individual situation.

The Best Natural Dog Cancer Treatments

Here is a list of substances which serve as natural dog cancer treatments:

- Apocaps – cause apoptosis (normal cell death) that does not occur in cancer cells
- Artemisinin - causes apoptosis, can be rotated with Apocaps
- Coenzyme Q10 - helps protect the heart when using chemo drugs
- Cordyceps - helps protect the liver and kidneys when using chemo drugs
- Eastern Herbals - TCVM (Traditional Chinese Veterinary Medicine) offers several individualized herbal formulas to build the immune system and treat various types of cancer.
- Enzymes - Digestive enzymes help digest food. This mimics a “wild diet” and helps all cancer patients in general.
- Fish Oil and/or Krill Oil - helps offset the effects of inflammation in your dog's body.
- Ginger Root - helps alleviate nausea and vomiting.
- Multivitamin - this helps build the immune system of all dogs, and is especially necessary if you are feeding a home-cooked diet.

- Mushroom-derived polysaccharides: Help “turn on” and increase the activity of the body’s natural killer cells.
- Neoplasene: derived from Bloodroot. Destroys cancer cells while leaving healthy cells. Can be used with Apocaps.
- Pectin (Modified Citrus Pectin) - Helps keep cancer cells from attaching to the walls of blood vessels.
- Vitamin C IV: Slows and blocks tumor growth, boosts the immune system, can cause the death of cancer cells.

Where and How Can I Get My Dog Treated for Cancer?

When it comes to getting your dog treated for cancer, you have several options:

Your Veterinarian

Many veterinarians can perform surgery, provide chemo and treat various types of cancers in their hospitals.

Alternative/Holistic Veterinarian

A veterinarian that also practices alternative and holistic medicine can often offer additional options in treating your dog for cancer.

Dog Cancer Treatment Center

A dog cancer treatment center is a clinic designed specifically to treat dogs with cancer.

Specialty Clinic

A specialty clinic is a clinic that employs staff that specializes in different areas of veterinary medicine.

Dog Lymphoma Treatments

Lymphoma is a cancer of the lymph nodes.

If your dog is diagnosed with lymphoma, there are several treatments available.

The complete details dog lymphoma treatments will be covered in greater detail later in this article.

The Most Common Dog Lymphoma Treatments

- University of Wisconsin Chop Protocol: This is the most recommended treatment for dogs with lymphoma. This protocol utilizes cyclophosphamide, doxorubicin, vincristine, and prednisone.
- Single Agent Doxorubicin Protocol
- COP Protocol (cyclophosphamide, vincristine or Oncovin, and prednisone)
- Prednisone
- Palliative radiation
- Half body radiation
- Bone marrow transplant with total body radiation

Dog Lung Cancer Treatments

Lung cancer is fairly uncommon in dogs, but does occur.

Lung cancer occurs when carcinomas develop in the lung epithelial tissue.

Lung cancer can occur directly in the lung tissue, or in the bronchioles and airways.

Dog lung cancer is aggressive and often spreads to the lymph nodes and thoracic tissues.

The Most Common Dog Lung Cancer Treatments

- Surgical excision of the tumor(s)
 - Recommended for primary lung tumors.
 - Sometimes not possible because of location or size of tumor
- Chemotherapy
 - Sometimes used instead of surgery
 - Sometimes use in addition to surgery
- Radiation Therapy
 - Sometimes used instead of surgery
 - Sometimes use in addition to surgery
- Alternative Treatments
- Herbal Therapies

Survival times for dogs with lung cancer usually varies from two months to two years depending on the type and severity of cancer.

Dog Liver Cancer Treatments

If you are told that your dog has liver cancer, you will need to know which type of liver cancer is involved.

Three types of liver cancer exist in dogs: primary liver cancer and metastatic liver cancer.

Primary Liver Cancer

Primary liver cancer consists of single, large liver tumors.

Primary liver cancer is unlikely to spread to other parts of the body.

The prognosis is generally good for dogs with primary liver cancer.

Metastatic Liver Cancer

Metastatic liver cancer does not originate in the liver, but spreads to the liver from elsewhere in the body.

Metastatic liver cancer usually causes multiple masses in the liver.

The Most Common Dog Liver Cancer Treatments

- Surgical Excision
- Chemotherapy
- Radiation
- Medications
- Alternative Treatments

Dog Tumors

Dogs get tumors all the time.

In fact, there's a 50/50 chance that your dog will develop a tumor of some type during his or her lifetime.

Seeing a tumor on your dog can be a very scary experience. What is it? Is it CANCER?

Of course, it is very important to have all lumps and bumps on your dog checked by your vet to make sure it's not a dangerous tumor.

The good news is, roughly 80-90% of tumors are benign, non-invasive tumors and will not spread.

So... what exactly is a tumor?

Any lump, growth or swelling on our dog is defined as a tumor.

Tumors exist in many different types, and tumors have many different causes.

Tumors can be cancerous or non-cancerous.

Benign tumors are non-invasive and do not spread.

Benign tumors are non-cancerous

Malignant tumors spread and destroy surrounding tissues.

Malignant tumors are cancerous.

Different Types of Tumors

Skin Tumors

Skin Tumors are the most common type of tumor and make up almost 50% of the tumors found in dogs.

Skin tumors can be cancers or non-cancerous.

Lipomas

A lipoma is a benign tumor, often called a “fatty tumor”.

Lipomas are basically conglomerations of fat just below the skin.

Lipomas are not painful and usually are not removed unless they are located in a place where they impede the dog’s movement in some way.

Cysts

Cysts are noncancerous swellings caused by blocked hair follicles.

Basal Cell Tumors

Basal cell tumors look similar to “moles” that humans get. They are usually raised, hairless, and reddish in color.

Basal cell tumors are possibly malignant, but benign roughly 90% of the time.

Unfortunately, if malignant, basal cell tumors can spread to major organs and become fatal.

Mast Cell Tumors

Mast Cell tumors are the most serious that develop in dogs.

These tumors often first appear as bumps under the skin.

Because Mast Cell tumors often look and feel like lipomas, they are often overlooked during an examination.

Mast Cell tumors are also very difficult to remove completely, because they spread both locally and to internal organs.

Mast Cell tumors often invade the spleen, bone, liver and lymph nodes.

If left untreated, Mast Cell tumors are often fatal.

Internal Cancer Tumors

Internal cancers are common in dogs just like in humans.

Dogs can develop mast cell tumors, stomach cancer, liver cancer, and practically any type of cancer heard of in humans.

Some other serious types of cancers afflicting dogs are breast cancer, throat cancer, lung cancer, testicular cancer, and bone cancer.

What is Canine Lymphoma?

Lymphomas are types of blood cancers that develop in the lymphatic system.

Lymphoma cancer cells invade and cause the destruction of normal, healthy tissues.

The lymph nodes are the most common areas affected by lymphoma, but it can grow anywhere in the body.

The lymph nodes swell and harden when the lymphocytes within it become cancerous.

The malignant lymphocytes then travel through the lymphatic system to nearby lymph nodes, and soon all of the nodes are affected.

As the cancer progresses, the bone marrow, liver, spleen and other organs become affected.

The symptoms of dog lymphoma vary a bit depending on where the tumor is located and how far along the cancer has progressed.

The universal symptoms displayed in all types of lymphoma are weight loss, weakness, lethargy, panting, and anorexia (lack of appetite).

Blood test results performed on dogs with lymphoma often show anemia, low lymphocyte levels, a high number of neutrophils, a high number of monocytes, a low number of platelets, and high liver enzymes.

Radiographs and ultrasounds are often performed to evaluate the size of the lymph nodes and to get a better idea of the status of the disease.

Canine lymphomas are commonly diagnosed cancers in dogs and vary tremendously in their behavior.

Some progress rapidly and are acutely life-threatening, while others progress slowly and are managed as a chronic disease.

There is no real cure for lymphoma, but there are several options for treatment that can bring your dog into remission.

Your dog's lymphoma prognosis and lymphoma life expectancy vary depending on the location of the tumor(s) and how far along the cancer has progressed.

THE World Health Organization (WHO) has organized lymphoma into five different stages based on the degree of invasiveness and metastasis of the cancer in humans.

Veterinarians utilize this information when discussing lymphoma in dogs.

Canine Lymphoma Stages

These are the five different stages of canine lymphoma:

- Stage I: Cancer is restricted to a single lymph node
- Stage II: Regional lymphadenopathy - cancer is restricted to one side of the diaphragm
- Stage III: Generalized lymphadenopathy - enlargement of the lymph nodes
- Stage IV: Enlargement of the liver and spleen, also called hepatosplenomegaly, with or without lymphadenopathy
- Stage V: Bone marrow, central nervous system, or involvement of other extranodal sites.

Treating Canine Lymphoma with Chemotherapy

When a dog has lymphoma, chemotherapy is usually the best treatment option.

The most common protocol is the University of Wisconsin CHOP protocol.

The University of Wisconsin CHOP protocol has approximately a 90% response rate and usually provides dogs with 13-14 extra months of life.

The University of Wisconsin CHOP protocol usually costs \$4,000 to \$6,000.

Bone Marrow Transplant with Total Body Radiation Treatments

Bone marrow transplant is another available lymphoma treatment is available that proposedly puts dogs into full remission.

Treatment consists of a bone marrow transplant with total body radiation treatments.

To qualify for treatment, the dog must already be in remission.

The dog first undergoes chemotherapy to clear the lymphoma from the blood.

Then a medication called Neupogen is given to drive healthy stem cells into the bloodstream.

The stem cells are harvested and the dog is then given total body radiation to kill all of the lymphoma cells.

The total body radiation is so intense that the dog must be given a bone marrow transplant afterward, re-planting the healthy stem cells back into the bone marrow.

During the procedure, the dog must be kept in isolation because it has no white blood cells.

The procedure requires 2-3 weeks of hospitalization and usually runs \$17,000 plus the cost of the chemotherapy that must be done prior to the procedure.

Single-Agent Doxorubicin Protocol Prednisone

The Single-Agent Doxorubicin protocol offers a 60-80% response rate.

Prednisone

Prednisone offers a 50% response rate in making the dog feel better.

Palliative Radiation

Full-body palliative radiation eases symptoms of obstruction, shrinks lymph nodes, and shrinks lesions to improve symptoms.

Half-body radiation is yet another choice.

Half-body radiation involves treating the dog's body one half at a time, first from the middle up, then from the middle down.

If you combine half-body radiation with the UW CHOP chemo treatment, your dog will probably gain an additional five months of life.

The question, at this point, is whether or not the toxicity from the radiation and the increased cost is worth the little bit of extra time you get with your beloved pet.

If your dog has lymphoma, you will also need to make changes in his diet.

A good dog lymphoma diet can be found in *The Dog Cancer Diet*, a special report from the makers of *The Dog Cancer Survival Guide*.

Dog Skin Cancer

Skin cancer is very common in dogs.

Mast cell tumors are the most common form of canine skin cancer.

Skin cancer occurs more frequently in middle-aged to older dogs than young dogs.

Skin cancers can reside both on top of the skin or under the skin.

Benign tumors are usually grow very slowly, are non-painful, and move freely.

Malignant tumors usually grow rapidly, contain ulcers, don't heal well, and constantly ooze and bleed.

Skin cancer usually appears as a lump or bump, and may even look like a mole or a black spot on your dog's skin.

Sometimes the tumor is ulcerated, sometimes not.

The skin surrounding the tumor may be red and itchy, causing your dog to scratch and lick the affected area.

You can examine your dog for skin cancer by separating the hair with your fingers and looking closely at the skin.

Skin cancer and benign tumors often look very much alike, so it is important to have any unusual growth checked by your veterinarian as soon as you find it.

You should perform a skin check at least once a month, especially if you find a growth that needs to be monitored.

Canine Skin Cancer Symptoms

- Areas of color change
- Scaly or crusty lesions

- Tumors: new growths or a change in size and/or color of old growths
- Tumors that bleed easily
- Skin areas that do not heal
- Discharge from or swelling around a nipple
- Discoloration or lumps under the tail
- In the mouth, masses or tissue that differs from surrounding areas

If you find any of the situations listed above, contact your vet immediately.

Many types of skin cancer can be eradicated if caught early enough.

You can compare what you see with online photos, images and pictures, but for a final diagnosis a trip to the vet is needed.

Sometimes dogs with skin cancer display systemic symptoms.

Systemic symptoms vary depending on the tumor's location and how much the tumor has metastasized.

Signs of Systemic Involvement

- Loss of appetite
- Vomiting and/or bloody vomit
- Diarrhea
- Abdominal pain
- Dark or black feces
- Itchiness
- Lethargy
- Anorexia

- Irregular heart rhythm
- Irregular blood pressure
- Coughing
- Labored breathing
- Bleeding disorders
- Delayed wound healing
- Enlarged lymph nodes

For a diagnosis, your veterinarian might take a sample of the growth with a needle, which is called needle aspiration.

Or, your vet may decide to completely remove the tumor and send the biopsy to a lab for analysis.

Tumor Grades and Stages

If sent to a lab, the pathologist will label your dog's tumor with a "grade" and your veterinarian will assign a "stage" to your dog's cancer.

The grade describes how differentiated the cells are and how aggressive the cancer appears to be.

Grade 1 Tumors

Grade 1 tumors are cell differentiated and carry a good prognosis.

Usually no treatment is necessary after the tumor is surgically removed.

Grade 2 Tumors

Grade 2 tumors are moderately differentiated and sometimes complicated and difficult to predict the prognosis and treatment options.

Grade 3 Tumors

Grade 3 tumors have the poorest prognosis. Luckily, Grade 3 tumors are the most uncommon in skin cancer.

Cancer Stages

In cancer, the "stage" describes how much the cancer has already spread.

Stage 1 describes a single tumor with no signs of spreading and clean margins.

Stage 2 and Stage 3 tumors display more signs of invasion, have unclear margins, and may present as multiple tumors.

Stage 4 tumors involve systemic metastasis and have a poor prognosis.

Dog skin cancer is usually treated with surgical removal.

Other cancer therapies may be used in addition to surgery if the cancer has metastasized and become systemic.

Dog Bone Cancer

Dog bone cancer, also called osteosarcoma, is a very serious condition that can be fatal.

Osteosarcoma is very aggressive.

Osteosarcoma begins in the bones and spreads to the lungs, brain, or any number of other vital organs.

The most common starting point for bone cancer is the leg, particularly the larger leg bones.

Osteosarcoma starts in the leg 82% of the time.

The cancer then often progresses to soft tissue areas or to other bones like the mandible (jaw), spinal cord, skull or pelvis.

Dogs experience pain as a result of these tumors.

Signs of Bone Cancer

Pain, a major symptom of bone cancer, can be a sign that something is wrong.

A dog with a tumor in the leg will develop a limp that comes on very slowly over a period of weeks.

Dogs that have Cranial Osteosarcoma may have mental issues or defects.

A tumor in the jaw can cause trouble chewing, while a tumor in the spine can cause trouble walking or breathing.

A pelvic tumor may lead to the dog having trouble using the restroom as the tumor may be blocking the feces from being excreted.

Prognosis for Dogs with Bone Cancer

The prognosis for dogs with bone cancer varies depending on the type, grade, and stage.

Untreated, dogs with bone cancer have a life expectancy of 1-4 months, however, there are several treatment options that can prolong a dog's life span.

Amputation combined with other treatments can allow a dog to live for 1-2 years longer than if untreated.

If your dog has bone cancer, you will also need to make changes in his diet.

A good dog bone cancer diet can be found in the *Dog Cancer Diet*, a special report from the makers of *The Dog Cancer Survival Guide*.

Sources:

The Dog Cancer Survival Guide

Purdue University College of Veterinary Medicine

University of Florida College of Veterinary Medicine