



HOLISTIC APPROACH TO CANCER

Cancer can be a challenging condition to cure, regardless of the chosen modality for treatment—chemotherapy, radiation, herbs, homeopathy, or Traditional Chinese Medicine (TCM). Each approach has its share of successes as well as failures, and no method is the best method for everyone. The optimal approach must consider the whole patient, including the available support and ability to reduce physical, emotional, and mental stress.

On a basic level, cancer is a disease resulting from a mutation of the normal process of cell growth in the body, replication, differentiation, and maturation. The altered process leads to unregulated cell growth and the formation of a tumor or a mass (Walters, 1993). The conventional medical approach to cancer is to localize the cancerous lesion, surgically eradicate it, irradiate any remaining mutated cells, and destroy any fast-growing cells with chemotherapy (Walters, 1993). This entire process is very suppressive to the immune system.

John Boik, in *Natural Compounds in Cancer Therapy* (2001), identified seven pro-cancer events:

- 1) Induction of genetic instability in the cancer cell.
- 2) Abnormal expression of genes to inhibit or promote growth.
- 3) Abnormal signal transduction—cancer cells are more responsive to external factors that stimulate cell activities, promote cell contact, and adhesion.
- 4) Abnormal cell-to-cell communication; cancer cells act independently of other cells.
- 5) Induction of angiogenesis, the growth of new blood vessels.
- 6) Invasion and metastasis—cancer cells invade normal tissue and spread via blood and lymph to distant locations in the body.
- 7) Immune invasion—cancer cells mask themselves from detection by the immune system.

From a holistic medical perspective, cancer is a disease in which there is uncontrolled, mutated growth, and also a susceptible immune system which is unable to recognize, respond to, and inhibit the uncontrollable cell growth (Diamond, Cowden, Goldberg, 1997). In healthy humans and animals, the immune system does this almost daily. The whole animal must be seen as a being with a particular vital or life force, personality, preferences, and home environment, not just as a cancerous lesion. The holistic approach to cancer, while using nontoxic products, addresses destruction of the mutated cellular growth (the localized lesion), modulation of the immune system susceptibility, and correction of the internal disease process.

Many factors contribute to the genesis of cancer. Some of them include sunlight, chronic electromagnetic field exposure, geopathic stress, sick-building syndrome, ionizing radiation, nuclear radiation, pesticide/herbicide residues, industrial toxins, polluted water, chlorinated water, fluoridated water, and vaccines (Diamond, 1997; Dodds, 1995). Cancer is at one end of a continuum in a breakdown of poor inner/outer communication, chronic irritation, and stress. We strongly recommend not giving vaccinations to, or using any chemicals on, an animal being treated for cancer.

At Holistic Pet Vet Clinic (HPVC) we use a multifaceted approach, striving to address the pro-cancer events, build the patient's immune system, minimize the toxic effects of cancer treatment, and address local lesions. Individual results vary because of the type or stage of cancer being treated as well as the life force of the patient. Our treatments are as aggressive as an individual animal's life force can manage.

DIET

Diet can greatly influence the outcome of any cancer treatment. Unlike healthy cells, cancer cells tend not to use complex molecules such as proteins and Omega-3 fatty acids; instead, they preferentially use simple sugars for their growth. As the cancer cells metabolize the sugars they generate lactic acid. Then the body needs to expend more energy than usual to metabolize this acid, and the animal emaciates or gets "cancer cachexia." Therefore, the proper diet for the cancer patient is low in carbohydrates, and is moderate in fats and high-quality proteins (Ogilvie, 1995).

Whole-food diets are best. Try to discontinue processed, and especially dry food, altogether because of the high grain base and the drying quality of the food. From a TCM perspective, dryness can contribute to the internal disease process. Most commercial foods use poor-quality proteins. Processing the food with high-temperature cooking destroys many essential nutrients and amino acids, such as glutamine, which are important for dealing with cancer. The more processed the food, the more the complex carbohydrates are broken down into simple sugars. It is essential to feed a fresh, whole-food diet to animals with cancer.

Increase proteins to 35%–50%. If the animal's life force and digestive system are strong, feed raw meat. Otherwise, add medium-rare to rare meats.

Decrease carbohydrates to 0%–25%. Use only complex carbohydrates. Eliminate simple sugars. Replace grain in diet with cruciferous vegetables and those high in beta-carotene. Feed cats a grain-free, potato-free diet.

Increase fiber. Add lightly steamed vegetables to the diet. Vegetables are an excellent source of fiber and add important nutritional compounds. This is a healthier way to add fiber than using husks from peanuts or seeds.

Omega-3/Omega-6 fatty acids. Try to get to 250 mg total Omega-3 per 20 lbs of body weight per day. Flax oil (for dogs) and cod liver oil (for cats and dogs) are good sources of Omega-3 fatty acids (essential polyunsaturated fats). These fats are necessary for the function of nearly every cell in the body, particularly cells of the brain, nervous system, eyes, heart, and immune system.

Cruciferous vegetables (broccoli, cabbage, cauliflower, Brussels sprouts) contain quercetin, indoles, and sulforaphane. Quercetin is a bioflavonoid from fruits and vegetables which acts as an antioxidant and antihistamine, and inhibits abnormal hormone activity. It also inhibits new-growth cancer cell signals and suppresses cancer cell division, and is good for mast cell and mammary cancer. Indoles protect cells from damage by carcinogens and help the liver inactivate estrogen-like compounds that may promote breast cancer. Sulforaphane increases the production of carcinogen-destroying enzymes, and has been shown to prevent cancer in rats. Sulforaphane is a type of isothiocyanate, a substance that may block tumor formation by

jump-starting the body's production of specific liver enzymes, which detoxify carcinogens and help flush them from the body.

Sweet potatoes, carrots, squash, tomatoes, spinach and kale. All are good sources of carotenoids such as beta-carotene. Beta-carotene, when tested alone, has shown little protective activity, but when complexed with other nutrients (i.e., when consumed naturally in foods) it has been shown to help prevent cancer of the larynx, esophagus and lungs. Tomatoes contain a carotenoid called lycopene, which gives them their red color. Lycopene helps fight uncontrolled growth of cells into tumors. Studies have shown that people who eat lots of tomatoes have a reduced risk for cancer of the colon, prostate, bladder, and pancreas.

Just as important as what goes into a diet is what needs to be omitted from the diet. **Avoid foods preserved with Ethoxyquin and BHT** as these chemicals have been shown to promote cancer. Many pet food companies keep costs down by utilizing slaughterhouse waste, legally termed as "animal or meat by-products," in their formulations. These by-products can include moldy, rancid, or spoiled processed meat, beaks, feet, feathers, roadkill, as well as tissues too severely riddled with cancer to be eaten by people. Even euthanized animals have been tracked in pet food. Most of the meat meal fed to animals contains an excess of hormones, which can contribute to the production of cancer. These hormones come from two sources: artificially produced hormones which are fed to food animals to stimulate their growth, and tissues naturally very high in hormones, such as glandular waste and the fetal tissue from pregnant cows that aren't considered fit for human consumption. Pet food is often made more palatable by adding flavor enhancers and coloring agents which are coal-tar derivatives to make the food look appealing. Sodium nitrate has been used as a red coloring agent and a preservative in pet food. When sodium nitrate is used in food it can produce nitrosamine, a powerful carcinogenic substance.

GLANDULAR SUPPORT

SP Livaplex. Supports the liver, the site of numerous metabolic functions: digestion, fat, and carbohydrate metabolism, storage of nutrients, and detoxification.

Arginex. Supports the cleansing ability of the kidneys, the primary organs responsible for eliminating metabolic waste products from the blood. The kidneys filter and remove toxins that are ingested or produced by the body.

SP Immuplex. Combines vitamins A, B12, C and E, folic acid, zinc, copper, chromium, iron, and selenium, along with glandular extracts—nutrients to support immune system health and function.

IMMUNE-ENHANCING HERBS AND SUPPLEMENTS

Transfer Factor. Transfer factors are the active ingredients in colostrum, producing natural T-lymphocytes. They are important in immune system recognition and memory, and are reported to increase natural killer T-cells. Transfer Factor stimulates T-cells to attack the tumor.

Vet-Immune Tabs or Powder. We feel this is the best immune-enhancing product available at present. It is composed of 600 mg of Transfer Factor (see above), 11 Power Mushrooms, IP-6, vitamins, minerals, and trace minerals, amino acids (L-arginine, DL-methionine, L-lysine), probiotics, essential fatty acids, MSM, choline, glucosamine, penne canniculus, boswellic acid, super oxide

dismutase, and turmeric. This is the most complete and powerful immune-support product that I have ever found.

Enhance. This is a Chinese herbal formula for immune enhancement and regulation in conjunction with disorders with chronic viral inflammation and infection. May be used continuously, but discontinue a few days if high fever. Especially useful in tumors of the lymphoreticular system; transforms masses.

Cellular Forte with IP-6 and Inositol. IP-6 is a natural substance from rice, oats, and living cells. It increases the enzyme glutathione reductase, which is responsible for detoxification of compounds in the liver. IP-6 can support the activity of NK cells. IP-6 also can inhibit cell proliferation and support normal cellular function by enhancing differentiation of malignant cells to more mature cells (often returning to normal cells). Inositol, part of the vitamin B complex, is an important catalyst in reactions involving fats and sugars. Alone, inositol has moderate anti-cancer activity. In studies with lab rats, combining IP-6 (dephosphorylation) with inositol (phosphorylation) yields 2P-3, a key molecule for cellular signal transduction and for controlling vital cell growth and differentiation.

Avemar. Avemar is an extract made from fermented wheat germ. It regulates glucose metabolism and supports immune function.

HOMEOPATHY

Homeopathy has been curative with some types of cancer, especially if diagnosed in early stages. Classical homeopathic treatment requires accurate reporting of symptoms to facilitate skillful prescribing. At HPVC we use both classical homeopathy and the more aggressive Dr. Ramakrishnan approach as one of our main ways to treat cancer directly.

Homeopathic cinnamon (6X). Can help stop bleeding.

HERBS FOR CANCER

Hoxsey/Boneset. Red clover, burdock root, and other herbs for liver cancer and bone tumors. Clears chronic congestion of lymphatics, parotid, thymus, pancreas, liver, spleen, mucous membranes. Boneset helps relieve pain. Tincture 15–35 drops of tincture in 30 cc (2 T) distilled water. Give 1–3 cc (2–5 T) every 12 hours. (Tincture alone may cause vomiting. Slowly increase dose to amount that won't cause vomiting.) One drop per pound (1 dropperful per 30 lbs) twice a day; can dilute in several tablespoons of distilled or filtered water if it causes vomiting.

Essiac Formula. A Western formula originating with a Native American herbalist from the Ojibwa tribe in Canada. Sheep sorrel, burdock root, rhubarb root, slippery elm bark, red clover. This formula clears liver, lymphatic congestion, spleen enlargement, lymph nodes. Tincture: ½ to 2-droppersful twice a day.

Cannabis (Hemp Rx). This product is a unique blend of Cannabis sativa strains, frequently referred to as hemp, designed to enhance the medical benefits of the Cannabis plant without the negative “high-inducing” capacity of THC. A high CBD medical marijuana, it helps with appetite,

pain, anxiety, and has been shown to have cancer-fighting properties. Hemp Rx is available as a tincture.

Artemisinin. Artemisinin is a derivative of Qing Hao (*Artemisia annua*, or sweet wormwood) and two synthetics, artemether, and sodium artesunate. Artemisinin traditionally has been used to treat malaria because of its chemical reaction with iron compounds, which are found in high concentration in malarial parasites. Iron also accumulates in high amounts in cancer cells. Artemisinin reacts with the iron, resulting in the release of free radicals, thereby causing oxidative stress to the cancer cells. Concurrent treatment with high doses of antioxidants can inhibit this process. Artemisinin also has hormone-balancing properties, which is excellent for breast cancer. Also used for lymphoma, lung cancer, metastasis, skin cancer. Caution: High doses of artemether can cross the blood-brain barrier and cause neural toxicity.

Neoplasene (*Sanguinaria Canadensis*, or bloodroot). Constituents include sanguinarine and berberine, both of which have anti-neoplastic (anti-cancer) properties. Bloodroot paste is used externally for skin diseases, warts, and tumors. Use caution if taken internally as it contains toxic opium-like alkaloids and can cause mucus membrane irritation. An overdose can be fatal. Do not use when pregnant or lactating. Use in animals with a strong vital force. Do not use if metastasis to lungs or if bone cancer in a limb because of necrosis in the lungs and softening of the bone in the affected limb.

Stasis Breaker. Chinese herbal formula that acts to inhibit cell mutation and tumor growth, softens hardness and clears lumps, nodules, internal abdominal masses, neoplasia. Effectiveness: in 10% the mass goes away completely, in 40% the mass shrinks, and in 90% the condition stabilizes. Sometimes it is used with a “transporter” herbal to direct it to specific areas of the body with cancer. If the animal does not have a strong constitution, use Max Formula instead.

Max Formula. Chinese herbal formula for lumps, fatty tumors, nodules, or skin masses in old or weak animals. Used for swelling or nodules of the local glands or internal organs.

Power Mushrooms. Chinese herbs with an anti-tumor effect. They build qi but do not move qi, so need to be used with a qi regulator (such as citrus peels). They enhance immune function, boost energy, and can be used as an adjunct to chemo and radiotherapy. Discontinue Cordyceps one week before or after surgery as it suppresses blood platelet aggregation (clotting). Conduc is wonderful for colon cancer—it increases both remission rate and phagocytic activity twofold. Effective with liver disease and leukemia, lymphosarcoma. Give one hour post-meal or ½ hour pre-meal.

Genesis Resources CAS Options. A synergistic blend of reishi, maitake (*Grifola frondosa*, anti-tumor activity) and shiitake mushrooms, which are immune enhancers. Reported to nutritionally assist the immune system, reduce inflammation, and stimulate natural killer and T-helper cell activity. Also contains vitamins and antioxidants to assist in the healing process.

Milk Thistle (*Silybum marianum*). Nourishes and builds liver cells; decongestant and toxin clearer; used for hepatitis, hepatic lipidosis, hepatic tumors. Dosage is 250 mg/once a day per 15 lbs. Can use for years. If used long-term, give 5 days on, 2 days off.

ANTI-ANGIOGENESIS AND OTHER SUPPORT

A primary area of cancer research involves making a product to inhibit angiogenesis—the production of new (genesis) blood vessels (angio). Angiogenesis allows the cancer mass to grow. When the mutated cell growth begins, two things happen: 1) local hypoxia to the surrounding cells, which causes them to produce excessive lactic acid and use excessive glucose, and 2) inhibition of cellular nutritional uptake. The cells surrounding the cancer are starving for food and oxygen. The body recognizes this by cellular communication and starts to send out new micro-blood vessels to the region to bring nutrients and oxygen to the cells. But this assists the cancer cells to continue to grow faster and larger. Anti-angiogenesis substances will inhibit the growth of these new blood vessels and inhibit the growth of the cancer (Boik, 2001; Diamond, 1997). Always use products like VascuStatin with an oxygenator (e.g., Gluta-DMG) so the surrounding healthy cells will be less likely to become hypoxic (low in oxygen).

Masivet. Masivet is a tyrosine kinase inhibitor that specifically targets cancer cells to inhibit proliferation and induce apoptosis. It is primarily intended for use in mast cell tumors, but has also shown promising results in osteosarcomas, hemangiosarcomas, melanomas, T-cell lymphomas, oral squamous cell carcinomas, and fibrosarcomas. Occasionally it can cause vomiting and/or diarrhea, and blood work should be monitored every few weeks to ensure that there are no problems with liver or kidney disease or low protein levels.

VascuStatin. Shark cartilage was used years ago to treat cancer. However, VascuStatin contains an extract of bindweed (*Convolvulus arvensis*), which has been shown to have a 100-times stronger anti-angiogenesis action than shark cartilage. Angiogenesis plays a critical role in the growth and spread of cancer. A blood supply is necessary for tumors to grow beyond a few millimeters in size. Tumors can cause this blood supply to form by giving off chemical signals that stimulate angiogenesis. The resulting new blood vessels “feed” growing tumors with oxygen and nutrients, allowing the cancer cells to invade nearby tissue, move throughout the body, and form new colonies of cancer cells, called metastases. VascuStatin constricts blood vessels to the tumor, so it works well on tumors that require a large blood supply, effectively reducing nutrient supply to the tumor.

Oxygenators. These products increase the oxygen levels in the bloodstream as well as increase the oxygen utilization. Cancer cells grow in a hypoxic (low oxygen) environment. If the oxygen level increases in the region of the cancer, the mutated cell growth decreases. This helps slow down the growth of the cancer and many times can place the cancer in remission. Oxygen therapy can also enhance the immune system and various enzyme systems which inhibit the growth of microorganisms and aid in the destruction of tumor cells (Diamond, 1997; Walter, 1993). One such oxygenator is listed below.

- **VetriScience Hepaticlear.** DMG in this product benefits the oxygen utilization of the body. Glutathione promotes liver detoxification of many toxin compounds, is a nutritional supplement and intracellular oxidant to support immune system function, oxygen utilization, endurance, and muscle recovery.

PectaSol-C. This citrus extract is used for cancers that metastasize (e.g., mammary cancer) or as a preventive three days before surgical biopsies which could trigger metastasis. Once digested, PectaSol-C is absorbed into the circulating bloodstream and will attach to glycoproteins on both cancer cells and healthy cells, thus blocking attachment of cancer cells to healthy tissues at new

locations. Because the circulating cancer cells are now bound to the PectaSol-C, they become easily recognized by the immune system and subsequently are eliminated.

Lymph Cleanse. Cancer masses often obstruct the flow/drainage of lymph, thereby causing painful lymphedema (swelling) and ascites (buildup of abdominal fluid). This herbal formula acts like a diuretic to reduce the swelling and ascites. An anti-inflammatory and antioxidant, it provides pain relief and sedation. It also helps increase the production of glutathione, which helps dissolve toxic substances in the liver.

Siberian Ginseng. Use after chemotherapy or radiation therapy to help restore appetite. Cinnamon + Cardamom elettaria or Cardamom + chamomile teas for nausea.

Yunnan Baiyao. This Chinese herb is highly effective in stopping bleeding.

ApoCaps. An apoptogen formula made with natural ingredients. Apoptogens help induce apoptosis, which is what scientists call “programmed cell death.” It is the way in which normal cells die to make way for the new cells needed to replenish a healthy body. Unhealthy cells which do not experience apoptosis divide over and over again without dying. They keep proliferating without undergoing natural cell death, creating a condition we call cancer.

Moringa. Moringa comes from the Moringa tree, which is native to Asia and Africa. It is packed with micronutrients, antioxidants, amino acids, vitamins, and minerals. Moringa also contains benzyl isothiocyanate—many studies have shown this chemical to have anti-cancer and chemo-protective capabilities. Moringa supports the immune system, and has been shown to be helpful in preventing cancer as well as in treating cancer by inducing apoptosis (cancer cell death).

Lemon juice. Use as a rinse for oral cancer—dilute 50:50, lemon juice and water.