

Veterinary Use of Mistletoe Extract (Mistletoe^R, Helixor^R) to Treat Cancer

What is Mistletoe?

Mistletoe is a semi-parasitic shrub that was originally introduced for the treatment of cancer in humans in the 1920's by Rudolf Steiner, the founder of anthroposophical medicine. Basically Steiner proposed that mistletoe could be used as a therapeutic agent that was capable of correcting imbalances he believed were ultimately responsible for the development of cancer. Clinically, mistletoe has been found to work equally well for the treatment of cancer in domesticated dogs and cats. In addition to direct anti-cancer effects, mistletoe can help decrease the side effects of chemotherapy and radiation, enhance immune function to help fight cancer, relieve pain associated with tumors, prolong survival times and promote a high quality of life.

Iscador and Helixor are injectable extracts of mistletoe specially formulated to treat cancer. These mistletoe preparations are formulated from the European mistletoe (*Viscus album*), that grows on the branches of a variety of host trees (apple, pine, oak). These different formulations or types of mistletoe extracts are each prescribed to treat different types of cancer.

Can Mistletoe Be Used in Combination with Conventional Cancer Therapies?

The three most frequently prescribed conventional cancer therapies are surgery, radiation therapy and chemotherapy. Mistletoe is largely used as a complementary cancer therapy in combination with conventional therapies for an integrative approach to the treatment of cancer in both humans and animals. Mistletoe is commonly used with conventional cancer therapies to prevent and decrease the adverse effects of conventional cancer therapies. In other words, mistletoe can help support the continued use of conventional drugs to fight the cancer instead of stopping treatment due to side effects. Mistletoe can be safely combined with chemotherapy and radiotherapy, before, during and after treatment. It can also be given before and after surgery to decrease development of metastatic disease and to boost immune function post-operatively.

Mistletoe can also be used as a primary cancer therapy when conventional cancer therapy is not possible due to adverse side effects, weakness of the patient and when conventional treatment has proven ineffective. Mistletoe is often combined with acupuncture and other alternative therapies (herbal medicine, nutritional therapies) for the treatment of cancer in these cases.

What Kind of Cancers Can Be Treated with Mistletoe?

Mistletoe therapy can be used to help treat most types of cancer due to its broad-spectrum anti-cancer effects, however it works best for solid tumor cancers. It is particularly useful for the treatment of lymphoma, mast cell tumor, sarcomas,

mammary cancer, bladder, gastro-intestinal, lung and liver cancer. It is often combined with conventional and other complementary therapies for an integrative approach to cancer therapy in order to achieve the best clinical results.

How Does Mistletoe Treat Cancer?

Mistletoe extracts provide a variety of anti-cancer effects. There is extensive research and clinical trials that support the safety and efficacy of mistletoe in the treatment of cancer. More in depth information can be found at the following sites: www.weleda.com. Some of the major effects include:

- Anti-tumor effects; shrinks tumors via cytotoxic mechanisms and slows their growth
- Immunomodulatory effect; enhancement of immune function, programmed triggering of tumor cell death (apoptosis), and DNA protection
- Anti-metastatic; prevents the development of metastatic disease
- Reduces the occurrence and severity of the side effects of chemotherapy and radiation therapy
- Increased survival times and reduction of cancer recurrence
- Promotes a high quality of life (increase in appetite and weight and energy)

Are There Any Side Effects Associated with Mistletoe Therapy?

Mistletoe has been used to treat cancer since the 1920's. There have been no reports of significant side effects associated with its use as a single agent or in combination with conventional cancer drugs or radiation.

How Is Mistletoe Administered?

Mistletoe is typically administered by subcutaneous injection using small gauge needles (27gauge) on a weekly basis. In some cases, the veterinarian may also inject it into specific acupuncture points. The IVC staff will give the first injections, and then the owner is taught how to do subsequent injections at home.

Alternatively if you and your pet live nearby, IVC staff can perform the injections on a weekly basis for you.

Two to three injections of Mistletoe per week are required to treat most cancers, and it is recommended that the **injections be given in the morning**. The injection site should be rotated to prevent irritation. We will show you the best sites for injection. Acupuncture points for mistletoe injection are variable and depend on a number of factors determined by the veterinarian.

Recommended subcutaneous injection sites:

- Abdominal wall
- Chest Wall
- Inner thigh

- Near the tumor
- Specific acupuncture points

What Can I Expect to See From Mistletoe Injections?

A local reaction that looks similar to a hive is to be expected during initial mistletoe therapy, and this may take several hours before the full effects are seen. After the mistletoe injection the skin site will become red, raised and slightly itchy. It is important not to let your dog or cat scratch as the injection site. Use an Elizabethan collar (e-collar) as needed. It is also possible that your animal may act lethargic and develop a mild fever; this is considered a beneficial response not an adverse effect. The local skin reaction and low-grade fever develop due to stimulation of the body's defense mechanisms. ***These reactions are temporary and are a desired effect of mistletoe therapy.*** In other words, the reaction seen after injection indicates a favorable response and means that the body is responding to treatment. We ask that you regularly monitor and record your pet's temperature in the evening (approximately 8 hours after injection) **EVERY DAY** while undergoing treatment so we can evaluate how the pet is responding to the therapy and adjust the dose of mistletoe.

It generally takes 2-3 weeks to determine the optimal dose and dosing schedule of mistletoe for your pet. Your veterinarian and IVC staff will work with you each week to determine what the optimal dose of mistletoe will be.

How Long Will My Pet Need to Be Treated with Mistletoe?

Maintenance therapy with mistletoe depends on the type and severity of cancer, the condition of the animal and other cancer therapies used. Maintenance therapy can require mistletoe injections once a week or as little as once a month. Some animals will require mistletoe therapy for life depending on the case.

It is essential that you maintain good communication with the IVC staff while your pet is undergoing mistletoe treatment in order to obtain optimal results. If you have any questions regarding the dose of mistletoe to give, the site for injection or have any other concerns, we recommend that you call the IVC at 916-454-1825 as soon as possible so that we may help you.

Estimate of Fees for Cancer Treatment Using Misteltoe Extract (Iscador-Helixor)

Price per Box of Iscador _____

Price per Box of Helixor _____

Syringes-Needles _____