



Stella Maris Clinic

Metabolic Therapies For Healthful Living



CANCER PROTOCOL AT SMC

One of the main obstacles orthodox practitioners face when dealing with cancer therapies is related to tumor cell resistance. This is mostly influenced by three main factors:

- a) Tumor DNA mutations
- b) Previous overexposure to chemotherapy and/or radiation therapy
- c) Protein coat which surrounds cancer cells (sialic acid)

Therefore, any conventional therapy would be unsuccessful in eliminating any given tumor, until we have eradicated this tumor cell resistance.



Dr. Gilberto Alvarez at work in Stella Maris Clinic.

Our metabolic approach at SMC is administered in four different fields:

- I.- Cellular Level Stabilization
- II.- Using Cancer Natural Therapies
- III.- Promoting Immune Response
- IV.- Decreasing Tumor Cell Resistance

This is one of the main reasons why we have been so successful in the treatment and prevention of cancer, accumulating a clinical experience of more than 35 years.

The meaning of Metabolic Therapy implies the use of natural weapons and a wide variety of nutritional supplements as required on each individual person in the prevention or treatment of any illness.



The Basic Program at SMC



The Basic Program involves an initial 21 day Booster Therapy, including the following :

Detoxification:

Body cleansing of unnatural substances through the digestive tract is mandatory. Better absorption and distribution of nutrients, enzymes and vitamins is required by the body for optimum functioning.

Enzyme Therapy:

Natural enzymes break down the protein shell which surrounds the cancer growth. These enzymes will also be promoting the liberation of the Tumor Necrosis Factor, Interlukin II and Interferon, as natural killers, through the macrophages.

I.V. Cocktail

Amygdalin 9 grams.
Ascorbic Acid 25-50 grams
DMSO 10 - 20 cc

This combination will be diluted in Isotonic Saline Solution slow IV drip on a daily basis. The variation of the concentration of the products depends on the patients condition.

Nutritional Guidance

It's essential in Metabolic Therapy. Certain life-style changes are recommended, especially in our eating habits, cutting down calories intake, as well as saturated fat, cholesterol, food preservatives, etc.

Stress Management

This is to help the patient reduce stress and pain through non-chemical means. In a relaxed state, the digestive system will be improved and the body will be able to use the nutrients, enzymes and energy to fight the illness and repair the body and enhance the body's Immune System.

Individualized Protocol

It will depend upon the patient's tolerance and laboratory reports. Therapy will also include antioxidants, biologic response modifiers, raw glandular products, trace minerals, hydrazine sulfate, and nutritional supplements.

Diagnostic Services

Full diagnostic services including laboratory tests, radiology, CT Scan, MRI, Ultrasound, etc. are available for complete evaluation and monitoring purposes.

Our experience with Cancer Patients has shown best results with:

Breast Cancer
Prostate Cancer
Lung Cancer
Brain Tumor
Colon Cancer
and others.



I.- CELLULAR HOMEOSTASIS

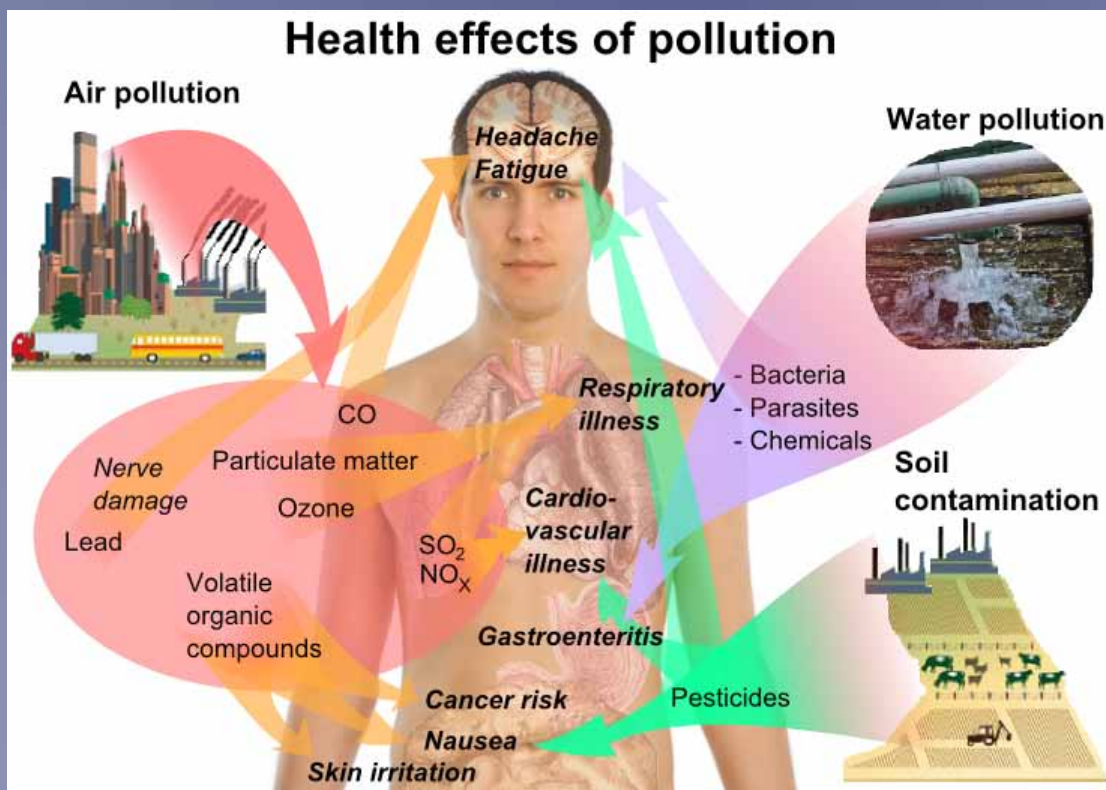
Cellular homeostasis is a condition where cells in the body are kept appropriately functioning and working as well against tumor cells. This will be accomplished through the following six lines of attack.



Detoxification

Through coffee retention enemas we are restoring the alkaline state in the small intestine, thus improving the absorption of enzymes, vitamins and nutrients.

In the mean time, we are detoxifying the liver as well as enhancing the bowel functioning. This process will be complemented with liver detoxifiers, raw vegetable juices, antioxidants, and an appropriate diet.



Antioxidants

Air pollution, food preservatives, and extreme sun exposure all contribute to an over production of oxide radicals.

Oxide radicals impair the cell from an appropriate functioning as well as weakening the body's own defenses.

It is well documented that antioxidants contribute to tumor regression.

For example, Vitamin C is a potent antioxidant which inhibits tumor growth and helps in the production of the body's own interferon. Ascorbic acid carries an anti carcinogenic effect, inhibiting the progression of carcinogenic nitrous compounds mostly present in certain foods such as bacon, smoke fish, canned pickles, and food preservatives.

These carcinogens are directly related to stomach and colon cancer.

Selenium is another antioxidant that has been shown to directly induce growth arrest and cell death in breast cancer cells.

Vitamin E is a third antioxidant restraining tumor cell growth in vitro and in vivo.



Chelation Therapy



Chelation has been around for decades. In the beginning, it was used to treat lead poisoning. With the help of innovative scientists, we were able to learn that correct treatment with chelation rids the body of unwanted toxins. Before we go on—a word of caution: Chelation should be delivered exclusively by a qualified, experienced physician. As you will soon learn, many details must be taken into account to deliver an adequate chelation therapy. At S.M.C., we have over twenty years of experience in chelation. It is an exciting option because of the vast benefits it offers.

Who should receive chelation?

Please answer this questionnaire:

- Have you received medications for long periods of time?
- Have you been told you have arthritis, diabetes, arteriosclerosis, or high blood pressure?
- Do you suffer from poor circulation or heart problems?
- Are you at risk for a stroke or have a neurological condition?
- Have you received chemotherapy or radiation?
- Do you live in a polluted environment?
- Have you been exposed to toxic elements, such as mercury, lead, or nickel?

(To answer this question, check to see if you have amalgam fillings in your mouth)

If you answered “yes” to any of these questions, or if you know someone who might be interested, please, for your health or the health of a loved one, read on.

The word chelate derives from the Greek word “chela”, which means claw. Imagine the claws of a crab as he searches for a specifically desired food. In the process of chelation, a chemical substance acts like a grip as it searches for specific toxins in the body. In chemical terms, the chelating agent possesses a negative charge and attracts substances with a positive charge. It acts like a complex molecule with a claw-like grasping for elements that become irreversibly attached to it.

In chelation therapy, EDTA (Ethylene Diamine Tetraacetic Acid) is used to remove unwanted substances from the body. One of these is ionic calcium, which is only one kind of calcium found in the body. Ionic calcium is not the healthy kind of calcium that is bound to proteins or found in bones or teeth. Ionic Calcium is abnormally deposited in the inner walls of arteries, joints, muscles, kidneys, pancreas, etc. EDTA also removes mercury, lead, and nickel.

These minerals are highly toxic to the body. Following these, EDTA will continue its search for unwanted minerals, by binding zinc, magnesium, copper, manganese, cobalt, iron and chromium, but in minor amounts.



Benefits of Chelation Therapy

Anyone interested in truly good health should consider chelation therapy. For example, a person who has received medical treatments with highly toxic methods, such as chemotherapy and radiation, would benefit from chelation.

For years, it has been known that clogged arteries contribute dramatically to diseases like high blood pressure, heart attacks and strokes; someone with high cholesterol and hardened arteries would benefit from treatment. Another good candidate would be someone interested in simply staying healthy, since chelation improves well being in a variety of ways:

- It lowers cholesterol and other fats in the bloodstream.
- Improves overall circulation.
- Improves kidney function and it destroys kidney stones.
- Heals poor circulation and normalizes blood pressure.
- Improves vision.
- Helps regulate abnormal heartbeats.
- It slows down the aging process.

The Added Benefit Of Chelation In Cancer Treatment

At SMC, chelation is offered upon request to patients with cancer. Chelation works synergistically with the treatment plan offered at SMC by improving the effectiveness of each component. First of all, it improves the detoxification process. The entire system is cleansed of impurities and arteries are unclogged.

It also allows the treatments with amygdalin,

ascorbic acid and other vitamins, enzymes, and D.M.S.O. to be transported more efficiently to all of the tissues of the body. It does this by removing

the unwanted calcium deposits on the walls of blood vessels. Calcium acts as cement in the cholesterol plaques that clog blood vessels and prevents treatments and nutrients from being delivered adequately. In general, chelation improves health (see Benefits Of Chelation Therapy).

Other Illnesses Benefited By Chelation:

This therapy has been used for decades to successfully treat various disorders, including the following:

- Hardening of the arteries (Arteriosclerosis, including coronary arteriosclerosis)
- Diseases of poor blood circulation
- Parkinson's Disease
- Neurological disorders like multiple sclerosis
- Lupus
- Neurological degenerative changes
- Diabetic complications

Getting Ready For Chelation Therapy:

Complete history, physical examination, and laboratory tests are given before starting chelation therapy, in order to evaluate the overall health status. Laboratory tests assessing the functions of the kidneys and liver are done before, during and after chelation therapy. EDTA is given intravenously in very small amounts. Usually, multiple infusions are necessary to achieve a desired effect. The length of duration between infusions depends on the person's overall condition and the purpose of the treatment.

II.- CANCER NATURAL THERAPIES

Amigdalyn (B-17 or Laetrile)

Amigdalyn is a special compound that acts directly on cancerous cells. It is extracted from the apricot kernels. The most important part of its molecular composition is hydrocyanic, an anti-cancerous compound. Beta glucosidase is an enzyme mostly present in tumor cells.

This enzyme will be breaking down the amigdalyn molecules (glucose, benzaldehyde and cyanide) triggering the action of the hydrocyanic acid (cyanide) into the cancer cell. Hence this free cyanide will be poisoning the cancer cell. Normal cells are mostly deficient on this beta glucosidase enzyme; therefore the amigdalyn will not be broken down into its molecular components.

Otherwise, normal cells contain an enzyme called rhodanese, which catalyzes the reaction and binds any free cyanide to sulfur, eventually converted to a cyanate, which is a neutral, non toxic substance passed out in the urine.



Ascorbic Acid (Vitamin C)

Vitamin C inhibits tumor growth, helps the production of interferon, and halts the progression of carcinogenic n-nitrosous compounds. These nitrosous compounds are mostly present in food preservatives, smoked fish, bacon, etc.

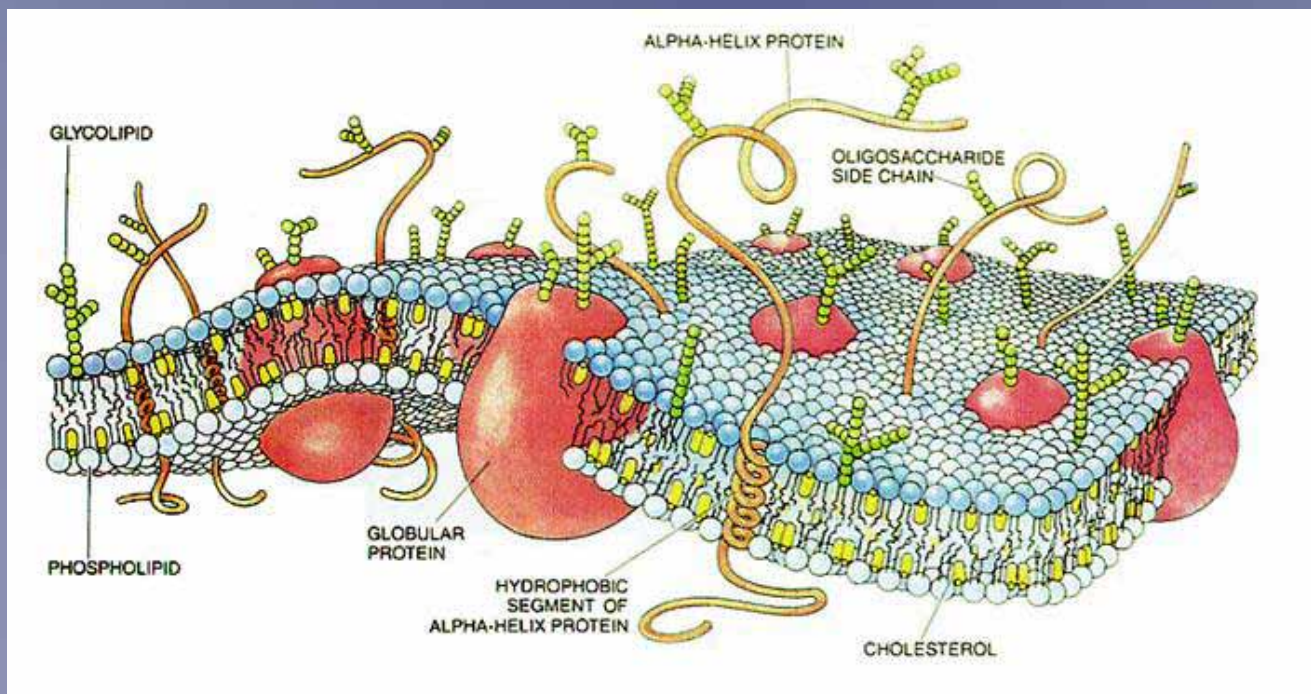
They are strongly linked to stomach and colon cancer. During the patient's booster treatments at Stella Maris Clinic, mega dosages of ascorbic acid is diluted in a solution and administered through a slow intravenous drip.



Dimethyl Sulfoxide (DMSO)

Dimethyl Sulfoxide was discovered by Dr. Alexander Zaizeff in Russia, 1866 as a very potent anti inflammatory with analgesic properties. Eventually, Dr. Stanley Jacob and Dr. Herschiller in 1966 discovered the broad therapeutic spectrum of DMSO. Among them is its role as a chelating agent as well as a catalyst of the entry of compounds across the blood brain barrier.

It is also a very potent transporter. It has the ability to carry important biologic natural weapons into the cell without altering the integrity of the cellular membranes. It is administered through a slow IV drip during the patient's booster treatment. There are no side-effects with the exception of a certain transient oyster or garlic odor.



III.- PROMOTING IMMUNE RESPONSE

Over the last two decades, medical technology has developed a group of agents whose primary site of action is the immune system collectively known as biological response modifiers (BRM). These agents now comprise a type of cancer therapy also known as immunotherapy. The immune system is an intricate biological infrastructure that distinguishes self (the tissue and organs of the body) from non-self (microorganisms, toxins, transplanted tissue and cancer cells.) Failure of the immune system to make this distinction may be responsible for autoimmune diseases. BRM therapy is the combined products of several disciplines: Biology, Genetics, Immunology, Pharmacology, Medicine, etc.

Transfer Factor

Transfer Factor (TF) are dialyzable leucocyte extracts, also known as modulators of immune response. These extracts contain several chemical species with biological activity and they can transfer cell mediated immunity from an immune donor into non-immune donor in an antigen specific manner. The transferability of cell mediated response depends upon the presence of small protein molecules called Transfer Factor.

Indications include:

- Primary or secondary immune deficiencies.
- Chronic or acute infections
- Auto immune diseases
- Breast cancer, lymphoma
- Metastatic lung cancer
- Neurological conditions
- Systemic multiple sclerosis
- Brain tumors.

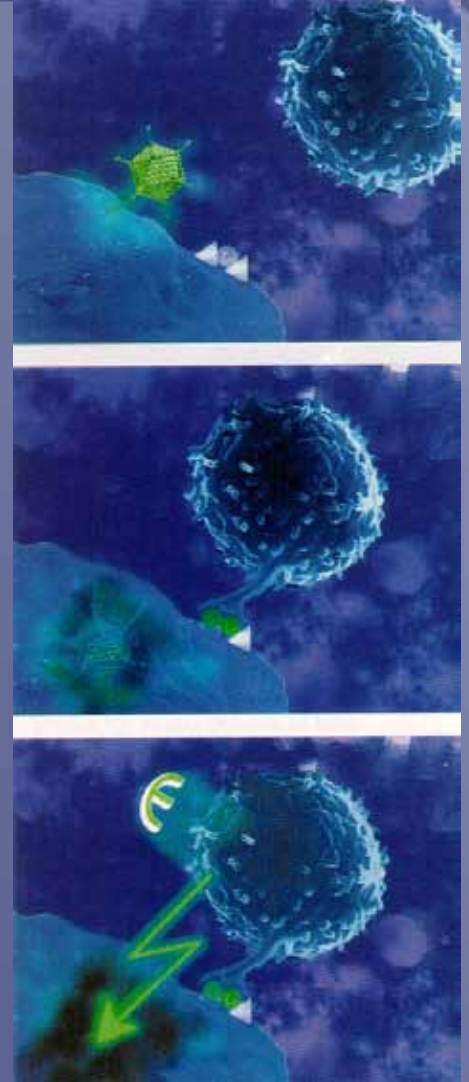
Iscador

Viscum album is a European type of mistletoe that has been used since the turn of the century in Switzerland and Germany to treat cancer and other diseases.

Scientific information has revealed that this herbal extract helps fight cancer in two basic ways. It works as immunoregulator and has anti-tumoral properties.

It causes the cancer cell to change back into a more differentiated form, thus promoting its regression.

- Regulation and augmentation of the immune response.
- Cytotoxic or cytostatic activity directed toward cancer cells.
- Inhibition of metastasis, differentiation or maturation.
- Immune regulation and immune restoration.
- Improved tolerance of normal cells to anticancer therapy.
- Direct antitumoral effects



Thymoject (thymus extract) for immunodeficiency –related diseases.

Other immunomodulators are pindavi, carnivora, anti-mycoplasma, autologous vaccine and others.

Biologic Response Modifiers

More quality of life in oncotherapy.

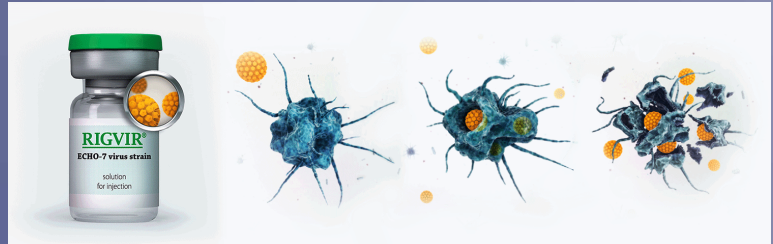
BRM's are substances that stimulate the body's response to infection and disease. The body naturally produces small amounts of these substances. Scientists can produce some of them in the laboratory in large amounts for use in treating cancer, rheumatoid arthritis and other diseases. BRMs used in biological therapies include monoclonal antibodies, interferon, interleukin-2 (IL-2), and several types of colony- stimulating factors (CSF, GM-CSF, G-CSF). Interleukin-2 and interferon are BRMs being tested for the treatment of advanced malignant melanoma. Interferon is a BRM now in use to treat hepatitis C.

Over the last two decades, medical technology has developed a group of agents whose primary site of action is the immune system. Collectively known as Biological response modifiers (BRMs), these agents now comprise the fourth type of cancer therapy. BRM therapy, also known as immunotherapy, has been widely publicized and patients in a variety of settings are asking about this new treatment modality.



RIGVIR®

The first cancer virotherapy medicine.



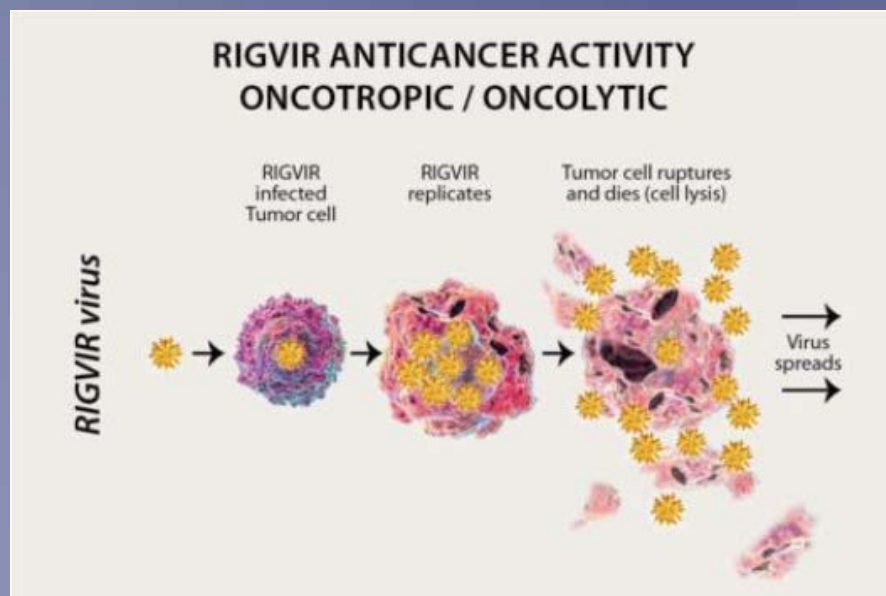
RIGVIR® is the first oncolytic virotherapy medicine that has been approved for cancer treatment and that has been introduced into medical practice.

Oncolytic virotherapy with RIGVIR® is a safe and effective cancer treatment, which improves progression time, survival and the quality of life of cancer.

RIGVIR® contains a live non-pathogenic ECHO-7 virus that has not been genetically modified.

RIGVIR® is oncotropic and oncolytic. It finds and selectively infects tumour cells. patients. RIGVIR® is well tolerated and does not cause serious adverse effects.

RIGVIR® finds and infects tumour cells. This process is called oncotropism. Subsequently, RIGVIR® replicates in tumour cells and destroys them. This process is called oncolysis. Both processes, oncotropism and oncolysis, are selective for tumour cells and healthy cells are only minimally affected, if at all.



Transfer Factor

Surgery, chemotherapy and radiotherapy, the classic pillars of oncology, remain the inevitable strategies of primary therapy. As far as survival time and absence of recurrences concerned however the results are still unsatisfactory.

Orthodox and non-orthodox and biological medicine increasingly favors various cytokines (production of good elements by the Immune system).

Up to now, the side effects have mostly predominated over the desired effects. Biologically orientated doctors increasingly employ several nonspecific immunotherapeutics, who are able to stimulate the patient's organism to increase cytokine expression.

In 1949 the Transfer Factor was discovered. It is a dialyzable leucocyte extract (DLE) from lymphocytes rupture. Once it is dialyzed with a molecular weight of <12 Koa. it will carry the ability to transfer immune response.

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These molecular compounds contain antigen dependent and antigen non-dependent molecules. Transfer factor's found within these antigen dependent molecules with a molecular weight of 3.5 to 5 Koa.

These (DLE) have been used in different bacterial, viral and fungal diseases as well as allergic conditions with good results.



Up to the present time it's mechanism of action is not well understood, nevertheless, many biologic activities such as lymphocytes (CD4) and K1-67 proliferation, increase production of IFN-g etc. have been documented

Indications:

- Metastatic Lung Cancer
- Breast Cancer
- Prostate Cancer
- Lymphoma
- Tuberculosis
- Chronic Fatigue Syndrome
- Candidiasis
- Supportive Oncotherapy (RT, QT, Cx)
- Systemic Multiple Sclerosis
- Infectious Diseases (viral, bacterial, fungus)
- Systemic Lupus Erythematosus
- Arthritis

The Benefits of European Mistletoe

At SMC, we are in a continuous quest to offer you time-proven, natural therapies that have also been researched and studied scientifically. One of these is *Viscum album*, a European kind of mistletoe that has been used since the turn of the century in Switzerland and Germany to treat cancer and other diseases. To date, scientists are finding that this herbal extract helps fight cancer in basically two ways; it works as an immunoregulator and has antitumoral properties. The importance of this herbal extract lies in its proven efficacy-and its safe profile for the patient.

The extract of *Viscum album* is available commercially under the name Iscador. This kind of mistletoe is different from the North American species. Considered a semiparasitic plant, it lives symbiotically with several tree species, including oak and pine. Laboratory studies have found at least thirty-seven components of the extract, which include alkaloids, polysaccharides, viscotoxins and lectins.

In summary, treatment with *Viscum album* produces the following benefits:

- It stimulates the immune system by increasing the number and activity of neutrophils, T-4 helper cells, and Natural Killer cells, as well as stimulating immune cell reproduction.



- It causes the cancer cell to change back into a more differentiated form, thus promoting its regression.

- It improves general well being.

Patients with cancer of the stomach, colon, lung, breast, cervix and ovary have been shown to benefit from therapy with this herbal extract. It is also recommended for people with cervical dysplasia, Crohn's disease, ulcerative colitis, papillomatosis of the bladder or colon, and HIV disease.

In addition to the laboratory and clinical evidence highlighting the benefits of *Viscum album*, its use as a therapeutic agent is considered compatible with chemotherapy and radiation, no serious toxic effects have been reported in the literature when used as directed.

Treatment with Iscador usually involves subcutaneous injections into the abdominal wall. Injections directly into the tumor, when possible, are also recommended.

As with other kinds of treatments, the treatment is adjusted according to the patient's underlying disorder and general condition. Some inflammation at the site of the injection along with an increase in body temperature may occur.

At SMC, we recommend the use of *Viscum album* as an adjunct form of therapy. We hope you consider its benefits and safe profile in your decision concerning your health or that of a loved one.

Autologous Vaccine

Certain microorganisms in human blood, body fluids, and tissues which were highly "pleomorphic," can appear in various developmental stages and in diverse forms by maintaining their characteristics. When they host terrain deteriorates, they seem to transform from primitive structures into higher cyclogenetic structures.

They appear to become pathogenic and may be causative or co-factors in the development of malignancies, various chronic degenerative diseases and immune disorders. They induce malignant changes in a high percentage of cell cultures or when transmitted into an animal host organism.

Scientists have observed that higher cyclogenetic structures can be reversed by the administration of lower cyclogenetic structures.

These microorganisms are stainable, cell wall deficient, virus-like, and pleomorphic. Since the early 1950's, German researchers developed cancer vaccines in the laboratories. They regularly and meticulously monitored the impact of these vaccines and on the general treatment on the patient by also examining live and modified-gram stained blood under the dark field microscope before, during, and after treatment. Field tests confirmed the results and showed changes of microbial forms when the blood pH changed.

Among these researchers was Dr. Franz Gerlach, Professor of the University of Vienna, who also worked at the Pasteur Institute in Paris. Dr. Gerlach was well known to cancerologists all over the world for his research on mycoplasmas and cancer.



Dr. Issels from Germany conducted research on mycoplasmas in cancer and degenerative diseases.

In a research study of thousands of mice constructed by Dr. Issels, after cell free inoculation of mycoplasmas from cancer patients under the skin of 209 albino mice which usually do not develop cancer, 90.9% of these test animals developed all types of cancer in the experiment, whereas 600 control animals which were not inoculated, only 0.83% developed cancer.

The Autologous vaccine has proven most effective. It is prepared from the patient's own blood which represents his/her unique internal microbial environment. The vaccine is customized to fulfill individual immunobiological needs.

The preparation follows a procedure that favors the development of antigenic peptides and other immunogenic compounds which act in concert to restore the body's natural defense mechanisms.

Clinical research suggests that:

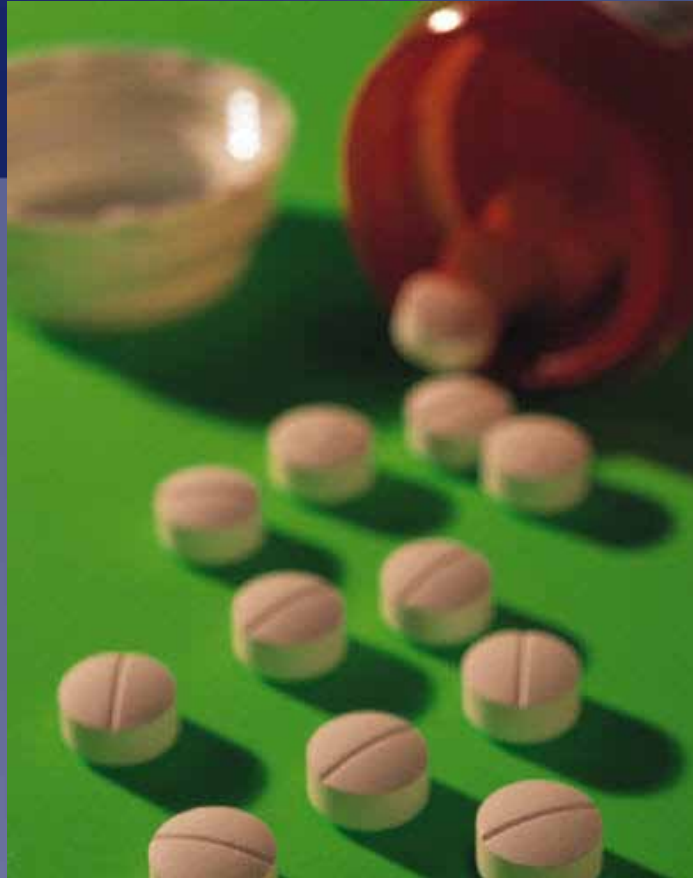
- a) The vaccine stimulates the formation and activation of T-helper cells, macrophages, and natural killer cells.
- b) As an antigen fraction of autologous mycoplasmas and mycoplasma-like organisms, it binds mycoplasma-specific antigens by cluster formation.
- c) It exposes the cancer cells to the immune system by degrading their protective mechanisms.

Clinical experience reveals that clinical administration of this vaccine has contributed to the retardation, cessation and remission of tumor growth in a variety of cancers as well as in the improvement of various immune disorders.

The vaccine is non-toxic and sterile. Since it is custom prepared from the patient's own blood, many of the systemic side-effects typically associated with other cancer treatments, are not experienced. A slight rise in temperature, fatigue, and tenderness in the tumor area are possible symptoms for a period of six to forty-eight hours after administration.

Platelets Test/Dark Field Microscopy

This has been a great diagnostic method to predict cancer, auto-immune diseases, and diabetes. The platelet test is based on the capacity of mycoplasmas (type of bacteria), to adhere to the cell's surface (in this case platelets) and to take what is needed to survive and develop. Mycoplasmas are normal flora in saliva and mucous membranes of the mouth and nose, and were once dismissed as relatively harmless.



They can also be present in the blood stream and penetrate some cells (platelets) and live as parasites of plants, insects, animals and human beings. Dr. O. Snegotska and P.W. Scheidl were the pioneers of this type of test since the 1960's. They observed through Dark Field Microscopy the platelets of several patients with cancer, arthritis, lupus, etc. and found in the platelet surface the presence of

aberrant filaments of different forms and shapes, along with presence of mycoplasma bacteria.

The study of these filaments,, particularly in the case of each patient, was compared with the platelets of healthy patients and mycoplasma bacteria was found in accordance with the development of the disease.

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Hyperthermia Program at SMC

Hyperthermia has shown to be effective in almost all cancer modalities. It can also be combined with other cancer therapies.

It increases the cellular metabolic rate, breaking down glucose to lactic acid and thus decreasing pH to very low levels. High acidity and hypoxemia also damage the vessels that nourish tumor cells, thus choking them off from blood supply. High temperatures kill cancer cells and increases potent effects of herbal and nutritional anti-cancer therapies.

It also damages the membranes, proteins, and enzymes of cancer cells making them more sensitive to other therapies.



Immunological and biological effects due to heat are accelerated emigration and migration of peripheral blood mononuclear cells, activation of effector cells, induction and secretion cytokines, and expression of heat shock proteins (HSP) which increases the antigenicity of cancer cells.

During the hyperthermia procedure, the patient is under mild sedation, continuously monitored with O2 saturation, blood pressure, pulse, ecg, and temperature. With the use of thermal probes, the information provided feeds back to the computer that controls the heat exchange unit.

Constant medical and nursing surveillance makes the procedure a safe and reliable therapeutic tool.

Hyperthermia indications:

- For patients with isolated metastasis
- Adjuvant treatment in oncology
- Malignant Lymphomas
- Immunological efficiency against tumor cells
- Thermal regulation, often disrupted by cancer, can be unblocked.
- Hepatitis C.



Chemo Sensitivity Test

These tests are performed in state of the art laboratories in Europe...

Chemo Sensitivity Analysis.

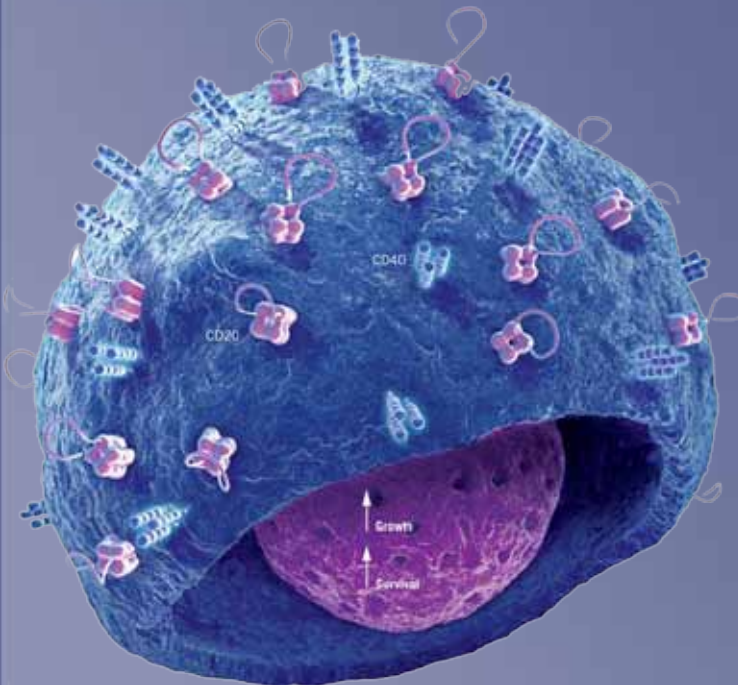
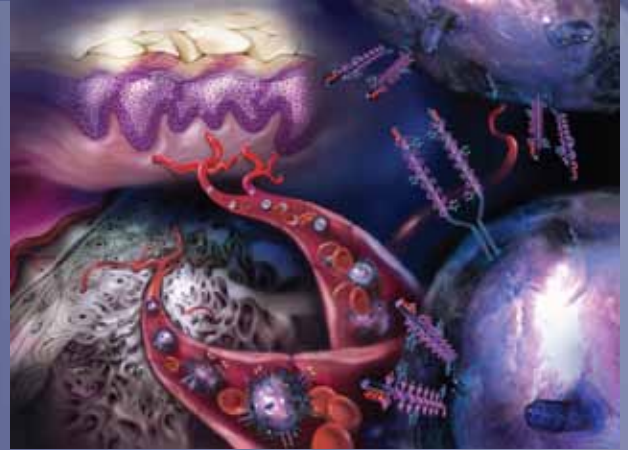
This is an analysis made from the patient's own blood or tumor specimen and to genetically analyze these cells using molecular biology techniques (micro-array PCR, RT-PCR, Southern and Northern blot, etc.) and to investigate on genes that are necessary for the expansion and the survival of the tumor while at the same time they consist targets of the chemotherapeutic compounds. Likewise the mechanisms of neo-vascularization and infiltration of the tumor, which are considered necessary for the ability of the tumor to perform metastasis, may be localized.

Conclusion: There will be a brief report at the end, where it will reveal which of the chemo drugs tested will be the most effective.

Biologic Sensitivity Analysis.

Malignant cells are isolated using Oncoquick with a membrane that isolates malignant cells from normal cells. Centrifuged at 350g for 10 min. Supernatant with Cancer cells are collected. Isolation of malignant cells from mononuclear cells by negative selection. This is followed with thirty eight cell cultures in a fetal calf serum media. In each culture of the well plate a biological modifier substance is added: H₂O₂, Ascorbic Acid, mistletoe, quercetin, indol-3-carbinol, c-statin, ukrain, polymva, co-enzyme Q10, essiac tea, IP-6, pancreaticenzymes, uncaria tormentosa, amigdaly (B-17), and other biologic therapies will be tested for sensitivity.

Conclusion: A final report will describe which of these biologic (natural) therapies will be the most effective to treat these malignant cells.



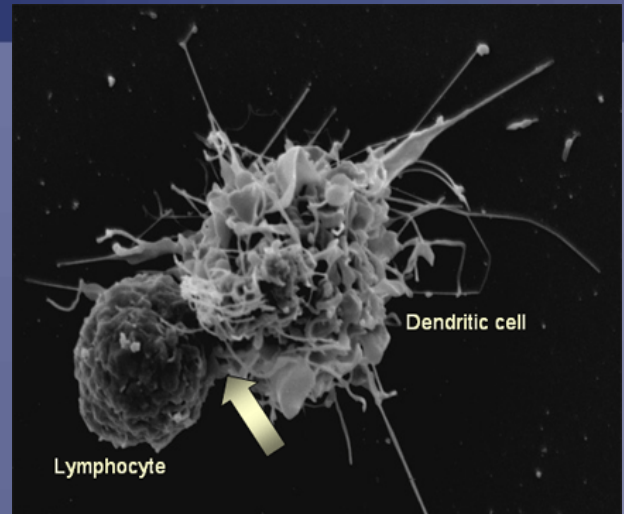
Dendritic Cells Therapy

Dendritic Cells are bone-marrow-derived professional antigen presenting cells.

Dc's have the ability to induce primary T-cell-dependent immune responses in vivo and in vitro.

This unique feature gives dendritic cells a central role in controlling immunity.

Dendritic cells are potent antigen presenting cells (APCs) that possess the ability to stimulate naïve T-cells. They comprise a system of leukocytes widely distributed in all tissues, especially in those that provide an environmental interface. Their main function is to process antigen material and present it on the surface to other cells of the immune system, thus functioning as antigen-presenting cells. They act as messengers between the innate and adaptive immunity.



Dendritic cells are present in small quantities in tissues that are in contact with the external environment, mainly the skin (where there is a specialized dendritic cell type called Langerhans cells) and the inner lining of the nose, lungs, stomach and intestines. They can also be found in an immature state in the blood. Once activated, they migrate to the lymphoid tissues where they interact with T cells and B cells to initiate and shape the adaptive immune response. At certain development stages they grow branched projections, the dendrites, that give the cell its name. However, these do not have any special relation with neurons, which also possess similar appendages. Immature dendritic cells are also called veiled cells, in which case they possess large cytoplasmic 'veils' rather than dendrites.

Characteristics of immature dendritic cells

- High intracellular MHC II in the form of MIICs

- Expression of CD1a

- Active endocytosis for certain particulates and proteins; presence of FcγR and active phagocytosis

- Deficient T cell sensitization in vitro

- Low/absent adhesive and costimulatory molecules (CD40/54/58/80/86)

- Low/absent CD25, CD83, p55, DEC-205, 2A1 antigen

- Responsive to GM-CSF, but not M-CSF and G-CSF

- Maturation inhibited by IL-10

Characteristics of mature dendritic cells

- Cell shape: Numerous processes (veils, dendrites)

- Motility: Active process formation and movement

- Antigen capture: Macrophage mannose receptor, DEC-205 receptor

- Antigen presentation: High MHC class I and II expression

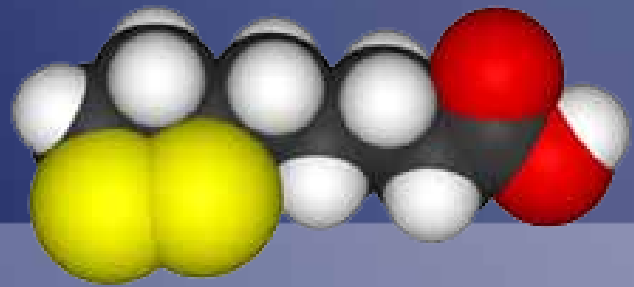
- Abundance of molecules for T cell binding and costimulation, (e.g. CD40, CD54/ICAM-1, CD58/LFA-3, CD80/B7-1 and CD86/B7-2)

- Cytokines: Abundant IL-12 production; resistance to IL-10 DC-restricted molecules: p55, CD83, S100b

- Absence of macrophage-restricted molecules and function: CD14, CD115/c-fms/M-CSF responsiveness, low CD68, myeloperoxidase and lysozyme, bulk endocytic activity (pinocytosis, phagocytosis)

- Stability: No reversion/conversion to macrophages/lymphocytes

Alpha Lipoic Acid



Alpha-lipoic acid is a naturally occurring chemical produced by every cell of the body and is essential to the chemical reactions that allow our bodies to produce energy. As a supplement, it is rapidly absorbed into the blood and the cells where it can prevent free-radical damage. It is vital for the creation of energy in every organ of the body, but as we age, we don't produce enough of it for optimal health.

Alpha-lipoic acid has been called the ideal antioxidant and is a key component in the antioxidant network. However, this compound acts as an antioxidant only when there is an excess of it and it is in the "free" state in the cells; but there is little free Alpha-lipoic acid circulating in your body, unless you take it as a supplement. Foods contain only tiny amounts of Alpha-lipoic acid.

Interestingly, research has revealed that supplemental doses of 300mg/ day of RLA/R-DHLA mixtures can improve the antioxidant and thiol status of plasma, and reduce CRP and IL-6; two markers of inflammation. The mechanisms of action of ALA and RLA are complex and poorly understood. Recent reports and recent findings indicate clinically relevant differences between RLA and rac-ALA and new light is being shed on how RLA functions as a modulator of cell signaling, enzymatic activity, gene transcription, gene expression and cellular proliferation by regulating the cellular redox status and critical energy systems.

Pro-oxidant Effects

It is now clear that many of the positive benefits of alpha-lipoic acid are the result of pro-oxidant effects. Since lipoic acid can interchange between a reduced form and an oxidized form, it displays reducing (antioxidant) and pro-oxidant properties related to dosage, half-life, and metabolism.

It is suggested that pro-oxidants produced by alpha-lipoic acid are involved in activation of insulin receptors and in elevated glucose uptake in muscle and fat cells. On the other hand, alpha-lipoic acid appears to protect the insulin-signaling cascade from oxidative stress-induced insulin resistance through its reducing capacities.

ALA and R-DHLA can effectively induce apoptosis in human colon cancer cells by a pro-oxidant mechanism that is initiated by an increased uptake of oxidizable substrates into mitochondria. The ability of ALA and/or R-DHLA to function as pro-oxidants, is determined by the type of oxidative stress and the physiological circumstances.

What makes us different...

About the staff...

In Stella Maris, qualified, experienced attention is combined with personal care to meet your individual needs. Dr. Gilberto Alvarez is a graduate of the National Autonomous University in Mexico City. He has over twenty years' experience that includes working in conjunction with Dr. Ernesto Contreras from 1977-1981, being the Medical Director at Manner Clinic for the following ten years, and then Medical Director at Stella Maris since 1993. He participated in the work of Proteolytic Enzyme Therapy in Munich, Germany with Dr. Karl Ronsberger. His experience is vast in cancer and other disorders, and in the different programs employed at the clinic.

Dr. Alvarez is a highly qualified physician; he passed the California medical boards, which makes him eligible to practice medicine in the United States. As a medical director, he is not a distant figure locked in an office; he is your attending physician. You are under his care everyday of your stay. He answers your calls and personally contacts you before and after your stay. Under the direction of Dr. Gilberto Alvarez, the staff is carefully chosen to help you in your path of recovery: from the nurse to the assisting doctors, all are more than qualified for their work and they are also caring individuals.

About the clinic...

The clinic is conveniently located 5 minutes from the United States- Mexico border, in the upscale region of Tijuana. Five-star hotels, fine restaurants, and shopping malls are within walking distance. The clinic itself is professional, personalized, and comfortable. This harmonious combination of professional services and caring atmosphere makes us different from other hospitals and clinics.

At Stella Maris, you receive the benefits of first-class care:

- Daytime treatment
- Education about nutrition and other important aspects



- Personalized attention by the doctor and his staff
- Superior quality in laboratory tests, including CBC, SMAC, tumor markers, urinalysis, etc., and X Rays, CT Scans, MRI's, bone scans, etc.
- Inpatient hospital treatment located two blocks away, with round-the-clock attention by nurses and doctors.
- Specialists' care, when necessary.

Daytime care allows you to receive treatment and to be free to explore the environment, make short trips with friends and family, or simply enjoy privacy after the day is over.

The gift of Personalized Care

Since Stella Maris began, many friendships have been formed. It may be due in part to the personalities of the staff, or to the basic underlying conviction that every individual is as important as a loved one.

Although there are no obligations ever, you may find yourself suddenly having lunch with the doctors. Maybe you befriend another family with a condition similar to your own.

These things occur spontaneously at Stella Maris. They are not forced or planned. It's part of genuinely caring for you.

Important Reasons for Choosing Stella Maris Clinic

At Stella Maris, Dr. Alvarez and his staff fully realize the stress that patients experience about being in a foreign land at such a desperate time in their lives for cancer treatment. Together, they make every effort that they possibly can to help their patients relax and get the most out of their treatment. They provide emotional support and Tender-Loving-Care to comfort and nurture their patients back to complete recovery. Dr. Alvarez has worked with doctors from Germany and other countries to bring the most effective and advanced treatment therapies to his Tijuana clinic. He has successfully treated cancer patients for over 20 years.

Here are some of the benefits you will receive from the dedicated staff at Stella Maris Clinic:

Dr. Alvarez is constantly available throughout the day and maintains a high visibility. His office is located at the treatment room for easy access and to help you feel safe. He checks on each patient everyday, answers your questions, keeps you informed, and provides lectures to explain treatment methods. If you require hospitalization, a hospital is nearby.

Dr. Alvarez is supported by an English-speaking staff who is very attentive and responsive to your needs. They provide treatment Monday through Saturday.

Ofelia, the head nurse, has been with Dr. Alvarez since 1988. Previously, she assisted him at the Manner Clinic. The Nurses's Station is located at the patient treatment area. Ofelia is extraordinary in drawing blood and in administering the i.v.'s without hurting the patients.

The kitchen staff serves healthful, organic meals and juices for breakfast and lunch daily. Every effort is made to accommodate your particular dietary needs and to satisfy your tastebuds as well. Nutritious and flavorful foods are provided to nourish you back to health.

Lodging in Tijuana is ideally located near Stella Maris at the lovely Hotel Camino Real. Patients can walk less than two blocks from the clinic to the hotel, and if you need transportation, Dr. Alvarez will arrange it. Rooms were recently remodeled and the hotel is immaculately maintained. Stella Maris patients receive a 20% discount for single or double occupancy. You have the option of eating in the cafe', or you can enjoy fine dining at the restaurant.

Hotels use filtered water in beverages and ice, and in food preparation. Hotel Lucerna provides a very restful home-away-from-home. Its easy access to the clinic saves you valuable time, energy, and wear-and-tear because you don't have to be concerned with delays typically involved in crossing the border; instead of sitting in a van, you can be comfortably resting in your lovely room.

Dr. Alvarez chose the name Stella Maris for his clinic because it means "Star of the Sea" and provides Hope for all who come here. Dr. Alvarez offers his expertise and vast professional experience in cancer treatment and welcomes any questions you may have in making your selection. He sincerely wishes you the very best for a long, healthful and joyous life.

This information is provided for you by DeLaney Gabriel, N.D., a naturopathic doctor in Sacramento, California, and is based upon personal experience and observations during her ten day visit at Stella Maris Clinic, as well as her awareness of the exceptional reputation Dr. Alvarez has earned over his career.