

Oncogenesis

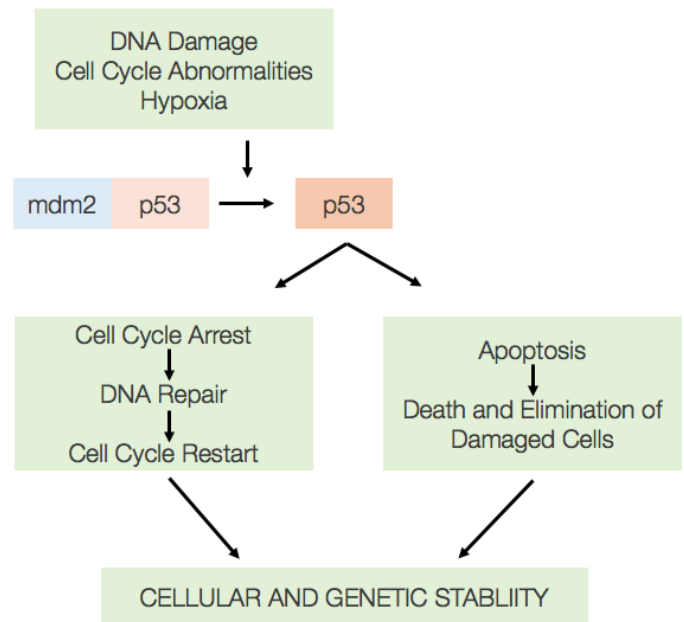
Cancer is a condition in which abnormal cells divide uncontrollably and destroy body tissues. Cell division occurs in almost all tissues to replace worn-out and damaged cells which is why cancer can occur almost everywhere in the body. Oncogenesis is a process in which normal cells are transformed into cancer cells. Oncogenesis is characterized by changes at the cellular, genetic, and epigenetic level that reprograms a cell to undergo uncontrolled cell division leading to malignant mass growths. Oncogenesis is accompanied by the accumulation of multiple mutations. Normally, both proliferation and apoptosis are tightly managed to ensure the integrity of organs and tissues. Mutations and epi-mutations in DNA which disrupt this fine balance between proliferation and apoptosis eventually leads to cancer.

The changes that occur at the cellular, genetic, and epigenetic levels are usually caused by chemical, radiation, or viral induced DNA damage that the cell fails to repair. A mutation in a single gene is not enough to cause cancer but when malignancy develops multiple mutations involving multiple genes accumulate. Tumors arise from clonal growth of cells that have incurred mutations in four classes of genes including proto-oncogenes, tumor suppressor genes, genes that regulate apoptosis, and DNA repair.

Cancer Immunity

Hundreds of cancer-associated genes have been discovered with p53 being one of the most common mutants. The p53 protein is a gene that codes for a protein that regulates the cell cycle and functions as a tumor suppressor. The p53 protein is directly involved in both growth arrest and apoptosis. DNA damage, cell cycle abnormalities, and hypoxia all can activate the p53 protein. Therefore, an abnormal p53 protein allows oncogenic cells to keep replicating which can lead to the development of cancer.

The immune defense against cancer is a T cell mediated immune response employing the CD8+ Cytotoxic T Lymphocytes (CTL) which identify and lyse the cancer that carry high antigenic mutations by initiating programmed cell death. Cancer cells can survive this immune surveillance through the development of a mechanism which effectively suppress immune responses by activating negative regulatory checkpoints that are associated with self-tolerance or by adopting features that enable them to escape detection. Two such checkpoints that have been most actively researched is the cytotoxic T-lymphocyte protein 4 (CTLA4) and programmed cell death protein 1 (PD-1). CTLA4 is a negative regulator of T cells that raise the threshold for T cell activation. PD-1 is a cell-surface receptor which is expressed by T cells which upon binding to one of two ligands, PD-L1 and PD-L2, suppresses T cell activities. Many types of cells can express PD-L1, including tumor cells and immune cells after exposure to certain interferons. The binding of PD-L1 or PD-L2 to PD-1 generates an inhibitory signal that reduces the activity of T cells. When these checkpoints are suppressed by cancer cells, T cell activation is no longer occurring and the cancer cells can bypass detection by the immune system.

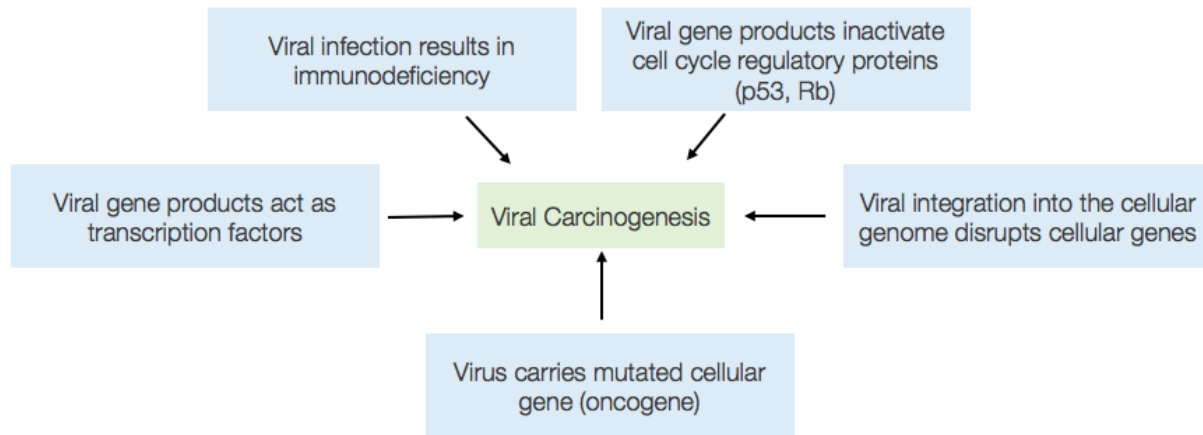


Inside the cancer tissue are special cells which have the characteristics of stem cells and are capable of expressing genes in all cell types. Cancer stem cells can self-renew, drive tumorigenesis, and metastasis by giving rise to new tumors. There are several transmembrane glycoproteins aberrantly expressed in cancer stem cells which are crucial for cancer to maintain its growth and metastasis although they are highly antigenic. MUC1 is one of such molecules. MUC1 encodes mucin, a highly glycosylated, type I transmembrane glycoprotein normally found in epithelial cells.

MUC1 glycoprotein is often found overexpressed with aberrant glycosylation or hypo-glycosylated in a variety of cancers. Its expression is critical for cancer stem cells to maintain 'stemness' to promote cancer growth, metastasis, and be resistance to drugs. There are two mechanisms that cancer stem cells employ to avoid being lysed by the T cells. It has been found that epitopes of such aberrant MUC1 protein have been coated with IgG antibodies produced by the cancer cells. Such IgG antibodies do not trigger host immune responses. By masking the critical motifs of the MUC1 molecules, the cancer cells cannot be recognized and lysed by the T cells. The secondary source of IgG antibodies is from the host immune system. Using antibodies to kill cancer is not a productive pathway because it is not strong enough to lyse the cancer stem cells. Rather, their binding to the critical motifs of the aberrant MUC1 causes interference to the T cell action.

Oncovirus

An oncovirus is a virus that can cause cancer. There are seven viruses that have been identified as an oncovirus including Hepatitis C and B virus, human papillomavirus (HPV), human T-lymphotrophic virus (HTLV-1), Merkel Cell Polyomavirus, Epstein-Barr virus (EBV), Human immunodeficiency virus (HIV), and Human herpesvirus 8 (HHV-8). In most cases, specific viruses only affect specific cells. Viruses use a variety of mechanisms to promote neoplasia (growth of abnormal tissue) through both direct and indirect mechanisms. Most of these viruses either interfere with

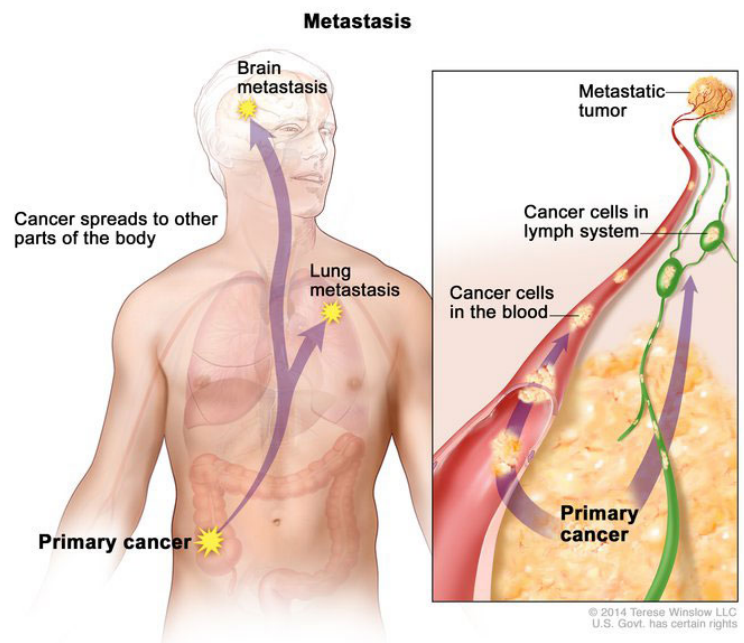


the p53 protein or are taken up by healthy cells and are copied and replicated which can integrate into the host cell genes. By integrating the viral DNA into host cell chromosomal DNA, they may cause mutations and chromosomal rearrangements that predispose the cell to cancer. The insertion of viral promoter sequences adjacent to certain host genes can lead to ectopic gene expression resulting in neoplasia.

Metastases

The majority of deaths caused by cancer are due to the metastasis of the original tumor cells to sites distant from the primary tumor. Metastasis is the process by which cancer cells migrate throughout the body.

In order for the cancer cells to move through the body, they must first rearrange their cytoskeleton and attach to the other cells and the extracellular matrix via proteins on the outside of their plasma membranes in order to move around neighboring cells. The cells can crawl until they hit a blockage which cannot be bypassed. Often this block is a thick layer of proteins and glycoproteins surrounding the tissues, called the



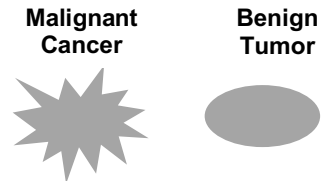
basal lamina or basement membrane. In order to cross this layer, cancer cells secrete a mixture of digestive enzymes that degrade the proteins in the basal lamina and allow them to crawl through.

The proteins secreted by cancer cells contain a group of enzymes called matrix metalloproteases (MMP). These enzymes cut through the proteins that inhibit the movement of the migrating cancer cells. Once the cells have crossed the basal lamina, they can spread through the body in several ways. They can enter the bloodstream or lymphatic system by squeezing between the cells that make up the blood or lymph vessels. Once in the blood stream or in lymphatic circulation, the cells can move through the circulatory system until they find a favorable location to re-enter the tissues. When this occurs, the cancer cells can begin to proliferate to form a new tumor.

If the cancer cells traveled through the lymphatic system, they may end up in the lymph nodes. Usually the lymph nodes near the tumor are affected. These are the nodes that have been doing most of the work to filter out or kill the cancer cells.

Lymph nodes play an important role in cancer staging, which determines the extent of cancer in the body. One of the most commonly used systems for staging cancer is the TNM system, which is based on the extent of the tumor (T), the extent spread to the lymph nodes (N), and the presence of metastasis (M). If there's no cancer found in the lymph nodes near the cancer, the N is assigned a value of 0. If nearby or distant nodes show cancer, the N is assigned a number (such as 1, 2 or 3), depending on how many nodes are affected, how much cancer is in them, how large they are, and where they are.

Tumors are typically encapsulated by a layer of fibrotic tissue. A benign tumor will grow within the fibrotic connective tissue capsule. However, malignant tumors only remain localized and encapsulated for a short period of time and quickly penetrate the connective tissue to start invade the surrounding tissue. A malignant tumor presents spikes at the surface of the tumor mass.



Tumor Necrosis Factor- α (TNF- α) is a major pro-inflammatory cytokine that are mainly secreted by macrophages. TNF- α can induce apoptosis causing cell death on a certain tumor cell line. However, cancer cells are also capable of producing TNF- α to cause inflammation of its surrounding tissues allowing the spikes to penetrate and invade surrounding tissue and metastasize to other locations.

Wellness Recommendation

The wellness recommendation for cancer includes a multi-faceted treatment protocol. In TCM terms, cancer is a condition involving a Qi deficiency, blood stasis, and excessive heat and toxin build up. The Qi deficiency refers to the poor immunity, especially the cell-mediated immunity. Blood Stasis refers to the tumor mass. Lastly, heat and toxins refer to the tissue inflammation caused by the cancer, the TNF- α , and the hosts immune response involving pro-inflammatory cytokines and antibodies. The protocol includes enhancing the Qi to boost the immunity, breaking the stasis to dissolve the tumor, and clearing the heat and toxins to reduce inflammation.

For Patients on Chemo and/or Radiation Therapy

The recommendation includes Bitter, Brown, Qi Booster, LC Balancer, Sona, Formula C, and Breez. This protocol will help restore immune function and reduce systemic inflammation. Bitter reduces inflammation and clears the pro-inflammatory cytokines and IgG produced by the cancer cells as well as the host immune system. The clearance of IgG will help improve tumor recognition by the T cells. Depending on the location of the cancer, other heat removal products may be necessary (see chart below for location specific heat clearing recommendations). Brown improves liver function to enhance innate immunity and effectively detoxify the blood. Qi Booster helps to boost energy and enhance the T cell-mediated immunity by increasing the production of CD+8 which helps to fight against the cancer cells. LC Balancer enhances systemic microcirculation to improve the quality of the interstitial fluid to aid in pain relief. Formula C, a Real Kidney Yin formula, helps strengthen the connective tissue and repair the damaged fibrotic connective tissue capsule caused by the cancer secreted enzyme. The fibrotic connective tissue capsule helps shrink the spikes of the cancer mass to control cancer growth and further metastasis. Sona and Breez enhance lymph node processing to help remove the broken-down cancer masses and cellular debris from the chemo and/or radiation therapies.

Patients can experience less fatigue, better energy, and well-being in 1-2 weeks. The protocol helps enhance the treatment results from the chemo and/or radiation therapy and reduce their side effects. However, Gold is not recommended for patients who are on chemotherapy or radiation due to the fact that Gold can trigger an immune reaction which may interfere with chemotherapy.

For Patients Not on Chemo and/or Radiation Therapy

The recommendation includes Gold in combination with Bitter, Brown, Qi Booster, LC Balancer, Sona, Formula C, and Breez. Gold helps break the stasis and cancer mass by enhancing the activation of the CD 8+ and improving its recognition of the cancer cell surface antigen to effectively launch the attack and lyse the cancer cells. Gold also helps inhibit tumor proliferation and metastasis by initiating cancer cell's apoptosis process. Gold Patches can be applied if the cancer tissue is close to the skin. Since cancer metastasis usually begins from the lymph nodes, Gold will allow the cancer cells in the lymph nodes to be lysed.

Patients should experience less fatigue, better energy, and well-being in 1-2 weeks. It may take 4-8 weeks for cancer tissue to become liquefied depending on the size of the tumor mass. Once the tumor becomes liquefied, its size will be larger than the original tumor. However, the dead cancer cells or cell debris can block the lymph node and patients may develop liquid accumulation in their lungs causing pulmonary edema. Sona and Breez helps enhance lymph node processing so that the dead cancer cells or cellular debris in the lymph nodes can be cleaned effectively. With the use of Sona and Breez, the liquefied tumor mass will be shrunk gradually. The time required to shrink the liquefied tumor completely is approximately the same as what it takes to liquefy the tumor which is 4-8 weeks.

It is recommended to continue taking the Bitter, Brown, Qi Booster, LC Balancer, and Formula C while using Gold, Sona and Breez. Depending on the location of the cancer, other heat removal products may be necessary (see chart below for location specific heat clearing recommendations).

Cancer Location	Heat Clearing Products
Lung	ClearLung
Breast	Tamo-F
Liver	Levera
Gallbladder	Gallbladder Formula
Kidney	KS
Urinary Bladder	BI
Stomach	Probiosis
Small Intestine/ Pancreas	PA
Large Intestine	WhiteHead, Silver
Colon	Hawthorne
Brain	Platinum
Blood Vessel	Enlighten
Uterus	Sissy, BI
Prostate	Tamo-M, Prostate Formula, BI
Leukemia	Leukicin A

Formulas Not Recommended for Cancer Patients

It is recommended for cancer patients to avoid warm formulas. These Yang enhancing formulas promote high levels of blood flow and nurturing effects which can lead to increased levels of inflammation causing adverse effects. Formulas to avoid include Anemic, Spring Capsule, Cellgen, M-Strong, Masculine +, MI, MayMay, 2nd Spring, Sunrise, Sympnea, Synogen, Talgia, Upcel, Vertice, Xcel Plus, and Pituitary Formula.

If patients have poor kidney function and suffer from urination retention, Xcel can be taken at 1 capsule a day.

Clear Virus and Virus Infected cells

For the types of cancer that are caused by a virus, towards the end of the cancer protocol or if the improvement plateaus, it is recommended to add in the viral infection clearing products including Woad and Woad-R, along with the location specific viral product for persistent viral infections. These formulas enhance the local cell-mediated immunity including T cells, natural killer cells, and macrophages to kill the virus-infected cells as well as the free-floating viruses. Please refer to the viral infections protocol to learn more about the required product.

GI and Kidney Support

If the patient has a poor appetite or bloating, SJ, B&B or Luminen is recommended. SJ nurtures Stomach Yin and helps for symptoms of dry or burning mouth, throat, esophagus or stomach. B&B and Luminen help descend the stomach Qi to improve gastric emptying process and intestinal contraction to alleviate burping, bloating, poor appetite, and excessive gas formation. Luminen also helps remove liver heat and the resulting digestive symptoms.

If the patient's kidney function is poor at filtering and the patient can't pass urine with symptoms of water retention, Xcel is recommended to help resume normal kidney function. The GI and kidney support may be utilized for both patients who are or are not on chemotherapy or radiation.

Selected Case Studies

Case 1: Successful Resolution of Breast Cancer

Noemi Quintanar, ND, Tuscon, Arizona

A 67-yr. old female patient was diagnosed with breast cancer 2 years ago by MRI and ultrasound. The tumor size measured at 2.9cmx2cm and it was located on the right breast. At the time, she was already using other alternative and natural treatments so the size did not grow massively. Her oncologist recommended that the patient use surgery/chemo, radiation therapy but the patient was not willing to do that. Dr. Quintanar employed a protocol of herbs from Wei Labs that included Bitter, Qi Booster, Brown, LC Balancer, Gold Patches, and Java (for some swelling). About a month in, she psychologically felt much better. There wasn't too much to report at this time. She had noticed that the area where she applied the Gold patch became more tender and it felt as if something was happening "deep within the breast." After about 4 more weeks, the Sona and Breez formulas were added onto the protocol. At this point, the tumor itself felt like it was reducing in size. Patient also reported continuing to feel good and did not have any adverse effects except for one episode of diarrhea. Dr. Quintanar believed that it was due to toxic buildup from the tumor and the body flushing it out. It was also mentioned that she previously felt reddening/inflammation in the area and it was gone at this point. About 4 weeks later, it was revealed that the patient could no longer palpate or find the tumor in the breast. She is having an ultrasound to make sure that the tumor has been completely eradicated. It's been resolved with the protocol that we started with Wei.

Case 2: Successful Resolution of Liver Cancer Symptoms

Jon Porman, DC, CCSP, RTP Gilbert, Arizona

A female patient was diagnosed with liver cancer and it was found she had two large masses on her liver; the tumor also had spread to the abdomen, lungs, and lymph nodes. She also had been having severe bowel issues including diarrhea and intermittent constipation. She had an extremely poor appetite and had been losing weight quickly. She started an herbal regimen with products from Wei Laboratories consisting of LC Balancer, Brown and Qi Booster for 3 weeks. Additionally, she began taking the B&B Capsules to enhance appetite. After 1 month of treatment she reported doing a lot better with positive results on her overall well-being and better energy. Her weight increased by 3 pounds. Her appetite was back. She then started her chemotherapy while maintaining the herbal treatment.

After 2 months of the treatment, the patient reported things were going really well. Her constipation was pretty much gone, she didn't have to take the B&B Capsules and still had an appetite, and her doctor was impressed with her white blood cell count which the doctor attributed to the Qi Booster enhancing immune function. The patient saw great results and could physically feel that tumors in her abdominal area had decreased in size. Her cancer testing

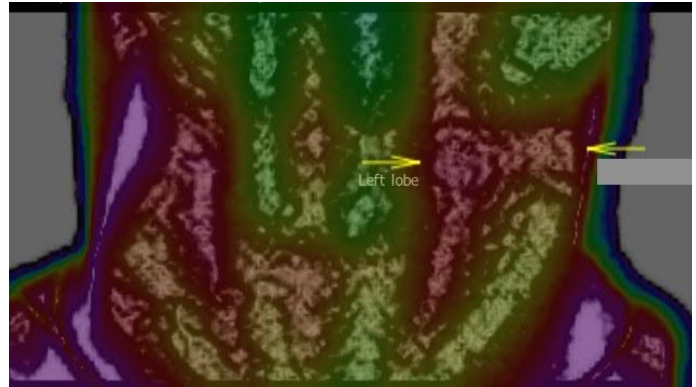
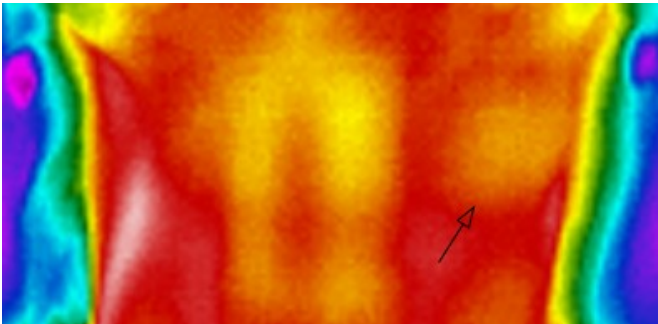
showed a dramatic improvement as cancer activity decreased as well. The doctor noted this was very unique progress.

Case 3: Successful Shrinkage of Lymph Node Tumor

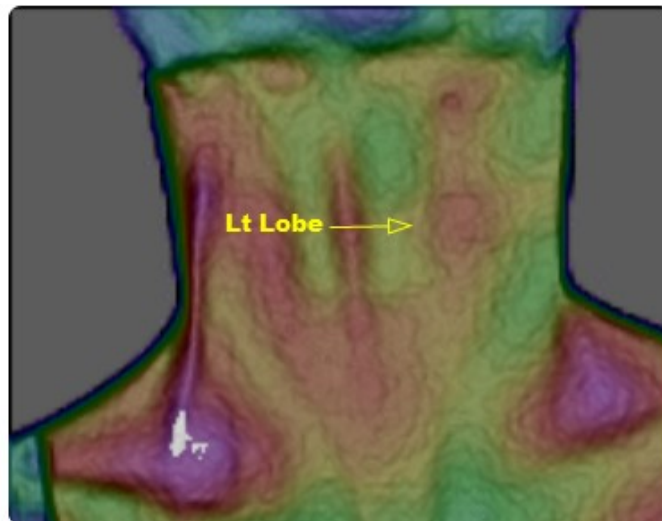
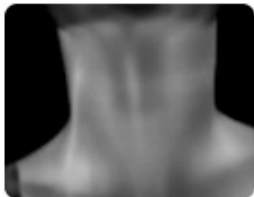
Galina Semyonova, Lac, NY

Pre-Treatment (08/02/2017):

The cancerous mass is noted in yellow on the image to the left, and the red discoloration on the right image, see arrows.



Post Treatment (11/16/2017)



The absence of yellow/red discoloration shows the mass has shrunk.

A 45-year-old female presented with severe swelling and pain on the left side of her neck. At the end of April 2017, she had a biopsy performed and was diagnosed with squamous cell carcinoma potentially due to the human papillomavirus. She did not want to have surgery or chemotherapy, instead, she wanted to go a more natural route. Her goal was to shrink her tumor and become cancer free.

The patient saw Galina in July 2017 where she received many diagnostic tests and treatments that consisted of Thermography, PEMF, Rayonex Bioresonance Therapy, and Hyperthermia. Thermography is a diagnostic technique that utilizes an infrared digital camera that takes a thermal picture to identify if there are any minor changes in the physiology of the tissue, which can help detect cancerous tumors in advance (see images above). Pulsed Electro-Magnetic Frequency Therapy specifically aids in helping with cancer patients because PEMF bombards the

cancerous cells with many negative ions, which overcharges the cells and over time disintegrates them. Rayonex Bioresonance Therapy determines the electromagnetic oscillations from the body through Vega Testing and then helps the body get back to its normal function by reinforcing healthy resonances and canceling out the insidious resonances that can harm the body. Hyperthermia is a technique that brings the bodys temperature up to 105 degrees Fahrenheit maximum over the course of 4-5 hours. This infrared heat penetrates 10 cm into your tissues and effectively helps the bodys circulation and sweating mechanism. Hyperthermia Therapy induces macrophage activation by increasing the production of granulocytes and macrophages that eat the cancer cells. The increased production of granulocytes maintains within the body for about two weeks after this four to five-hour treatment. So, for cancer patients, when hyperthermia is performed once or even twice a week it continues and elongates the macrophage activation to effectively terminate the cancerous cells and also stimulate the production of more white blood cells that aid in your bodys immune response (which is opposite from chemotherapy's goal).

In August, after working with Galinas diagnostic methods and therapies, she also recommended the use of Wei Laboratories herbal formulas that included Formula C (at full dose), large Gold patches (5 large patches every two weeks), Formula D, Gold capsules, LC Balancer, Qi Booster, Sona, Brown (all at half dose), and Breez (at a one and a half dosage).

Virucin was added two months into the treatment (at full dose) due to the fact that her cancer could have been virus-induced by the human papillomavirus. The other products were used to shrink the tumor and treat cancer. The Gold capsules and Gold patches are used to break the stasis and cancerous mass by activating the Cytotoxic T Lymphocyte (CTLs) and improving CTLs recognition of the cancer cell surface antigen to effectively launch the attack and lyse the cancer cells. Gold also helps inhibit tumor proliferation and metastasis and initiates cancer apoptosis process by regulating the Fas/FasL pathway. Sona and Breez support lymph node processing of the liquefied tumor and to prevent lymph node blockage due to an accumulation of dead cancer cells. Brown, LC Balancer and Qi Booster help restore the immune function of the body. Bitter reduces cytokines and IgG produced by cancer. Formula C decreases inflammation and increases connective tissue structure to control cancer growth. Due to the detection of *H. pylori* in the gut, Formula D was added to treatment to eliminate this infection.

After doing these products and therapies very diligently for 3 months, the patient now can report that she has no pain or discomfort in the neck area. Her tumor has also shrunk by 10 times, as seen through thermography testing (see images above). The patient has continued the products for the next two months at a lower dosage for sustained results. She said that she achieved her goal with Wei Laboratories since her tumor shrunk. Currently, she is waiting on testing that will indicate if she is cancer free.

Case 4: LC Balancer Eliminated Chemo/Radiation Therapy Side Effects

Serena Maria Bordes, ND, Lac, Boca Raton, Florida

History: An 88-year-old male patient came to my office in a much-weakened condition. He was debilitated from the chemotherapy/radiation treatment he received for stomach cancer. He was unable to eat and walk. He was forced to use a motorized chair due to his lack of strength. My immediate thought was to place this patient on LC Balancer along with acupuncture treatment to help him regain his appetite and strength.

Results: After 1 week on the LC Balancer, the patient was able to eat 2 meals per day. Following the second week on LC Balancer, the patient was able to eat three meals per day and was able to walk using his walker. I want to thank you Wei Labs for such a superior product and the relief it has brought to my patient.