

Introduction to CAM Therapies for Cancer

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This document is not intended to be an exhaustive treatise on origins, causes or treatments of cancer. I am not an oncologist and I do not treat cancer. I do offer supportive interventions for people with cancer. I do not make any claim to be able to rid the body of cancer but I do try to help find a state of health wherein one might have a long life despite the presence of cancer. The goal is to find a healthy, balanced state that does not allow the cancer to dominate and encourages the cancerous cells to repair themselves and become less dangerous to our health.

What is Cancer? We must first recognize that cancer is not a foreign invader. The cancerous cells originated from our own native cell population. There is debate over whether the cells originate from mature cells such as mature lung, liver or breast cells, or from immature cells closer to progenitor or stem cells. In either case the origins are from cells that were damaged by environmental agents. These carcinogenic (cancer causing) agents may have been viral or chemical or both. There is also a genetically determined susceptibility to carcinogenic influences. Thus we often see an increased risk of multiple types of cancer in several family members and increased incidence of second sites of cancer in people who had survived a first cancer.

Since these cancer cells developed in previously healthy cells we need to understand that many genetic changes had to occur over time for a healthy cell to develop traits of cancer. Basically these cells have become defective. If we recognize the defects we can use this knowledge to control the cancer. So let's explore the defects that permit previously healthy cells to now undergo rapid and unlimited reproduction; migration from the site of origin; attachment to blood vessel walls; invasion through those walls; and stimulation of new blood vessels to grow into and supply their new home. We will also explore how the cancer cells evade the healthy immune system.

Healthy cells are repeatedly subjected to oxidative damage in the form of environmental chemicals, cigarette smoke, ionizing radiation, etc. When the DNA is damaged this is called a mutation and every healthy cell has mechanisms to repair this damage. You may have heard about p53. This is one of the genes that repairs DNA and it is defective in many people who develop certain types of cancer. There are other repair genes but regardless, when a cell is significantly damaged it sends a protein, called Tumor Necrosis Factor (TNF) Binding Protein, to its surface membrane that signals the defense systems natural killer (NK) cells to destroy the damaged cell. In other words TNF Binding Protein is a message to "kill the cell." In order to evade these NK cells, the successful cancer will overproduce thousands of TNF Binding Proteins and send them into the substance around and away from the cancer to act as decoys that tie up the NK cells in a useless fight away from the cancer cells surface membrane. Dr. Rigdon Lentz has developed a filtration device that, in research protocols, specifically removes TNF Binding Protein from the plasma and results in a rapid killing of cancer cell populations. We believe that high dose digestive enzymes destroy this or other protective proteins that allow the cancer cells to evade the NK cells. To achieve results with enzyme therapies very high doses are need and they need to be taken away from food so they are absorbed into the body rather than being used to digest food. There are a number of immune stimulants, mostly from various mushrooms, that increase production of NK cells.

Healthy mature cells are programmed to divide just so many times in their entire life. This cycle is limited by the number of telomeres on the ends of each strand of DNA. Each time the cell's DNA divides one telomere is dropped off the end of the DNA. When the DNA runs out of telomeres no more reproduction is possible and eventually the cell undergoes apoptosis (naturally programmed cell suicide). Cancer cells have

a telomerase enzyme that reproduces telomeres so that there is an endless supply. Stem cells and other similar progenitor cells have this enzyme naturally and this allows Stem cells to reproduce endlessly and have a certain immortality. That is one reason some people believe that Stem cells are the source of cancer.

Healthy mature cells are all programmed to undergo apoptosis. There are a variety of substances that can be used to promote apoptosis including pharmaceuticals like digitalis, cimetidine (Tagamet) and celecoxib (Celebrex). There are many natural substances that increase apoptosis such as glycyrrhizin from licorice root, sanguinaria (blood root), vitamin K, vitamin D and selenium.

Healthy cells in solid organs do not break away from their organ. Liver cells remain in the liver, breast cells remain in the breast. Healthy cells do not wander off because they are “glued” together with a substance called cadherin. Melatonin is unique in its ability to stimulate the production of cadherin. Melatonin used in high doses may help to keep cancer cells from wandering away from their home.

But even if a healthy cell were to wander off, it would not be able to attach to any other cell unless it had a defective substance called gallactan 3 on its surface. Gallactan 3 enables the wandering cancer cell to attach to a blood vessel. But even if a cell were able to attach, it would take another defect to enable that cell to invade between the blood vessel cells (that are themselves glued together). A specially prepared form of Modified Citrus Pectin can bind to the gallactan 3 molecules and block their attachment to the blood vessel. It also blocks invasion into the new area.

Now even if the cancer was to break away, attach and invade, it would still be limited in growth potential because it has no blood supply. The successful cancer has to have the ability to stimulate angiogenesis (new blood vessel growth) to grow more than a few millimeters in size. The pharmaceutical industry is working on angiogenesis blockers but there are already some very interesting natural treatments already available. Shark cartilage was the first to claim this ability and it has been demonstrated to have some benefit if used in very high doses. Green tea also blocks angiogenesis and our friend Modified Citrus Pectin can help here too. Thalidomide became infamous for causing birth defects because of its powerful angiogenesis blockade. Thalidomide is now finding a new use in cancer treatments. Lastly, tetrathiomolybdate (TM), a modified form of molybdenum and sulfur, specifically binds copper. Since copper is essential to grow new blood vessels, removing copper will eventually shut down angiogenesis. Zinc also helps to remove excess copper.

Several therapies are aimed at helping with DNA repair. Vitamin A, vitamin D and folic acid help promote DNA repair. Dr. Stanislaw Burzynski has been developing antineoplastons that repair defective genes including the p53 gene. This antineoplaston treatment results in increased apoptosis of cancer cells. And it also can repair damaged DNA and make some of the cancer cells revert to healthy cell types. PolyMVA (palladium alpha lipoic acid) has also been used to repair defective DNA.

Some complementary therapies use knowledge of cancer cell weaknesses to kill the cells. Vitamin C was promoted by the double Nobel Prize winner, Linus Pauling as a treatment for cancer. It takes advantage of several cancer defects. Cancer cells lack the healthy ability to gain nourishment from most natural nutrients. Most of cancer’s nourishment comes from sugar and these cells have 8-18 times the normal number of insulin receptors in order to maximize their sugar uptake. This is why we must avoid sugar in our diets. Cancer cells also have defective antioxidant capabilities. They can’t absorb most of the antioxidants in food or supplements. They have an anaerobic metabolism that allows them to produce energy without needing oxygen or antioxidants. Vitamin C is concentrated in cancer cells by the same mechanism that glucose uses to enter cells, i.e. through insulin stimulation. Vitamin C, ascorbic acid, is produced in living cells from glucose and is structurally very similar. When cancer cells are looking for food, they take up Vitamin C

from the blood supply thinking it is glucose. When vitamin C is taken into a cell it is rapidly oxidized and forms peroxides that would normally be scavenged by the catalase enzyme in healthy cells. Since catalase is deficient in cancer cells, they continue to accumulate peroxides until they self-destruct.

Amygdalin (laetrile) contains cyano-benzaldehyde which in healthy cells has no effect. The cyano group combines with sulfur and forms thiocyanate and the benzaldehyde is metabolized and excreted in the urine. But in cancer cells the cyano group forms cyanide and the benzaldehyde is not metabolized and accumulates as a toxic build up. Together these help to destroy cancer cells.

Ukraine is a combination of the herbal Cheladonian majus and thiotepa (thiophosphoric acid). It acts more like conventional chemotherapies but in studies it has been found to have very little toxicity. Some say the low toxicity is why the FDA refused to approve it as a chemotherapy agent. This agent is given intravenously and must be obtained from Europe by prescription.

Other supportive therapies may include chelation therapies, oxidative therapies with peroxide or ozone, and naltrexone. Many cancer cells have an opioid (morphine-like) receptor on their cell surface that is the major growth stimulating receptor. Naltrexone in very low doses blocks the production of natural opioids and slows the growth of these cancers.

There are many more examples of interesting treatments and as I said in the beginning this is not intended to be an exhaustive treatise on complimentary cancer treatments. I hope that it is an introduction that will promote further investigation as you proceed on your path to health.

This is a small list of sites to get further information:

- CancerDecisions.com is Ralph Moss' web site and from here you can order a report specifically regarding whatever cancer type you may want to research. He will give you information about conventional and complimentary treatments and locations for alternative care. Or call 718-636-4433.
- PolyMVA.com for information on this agent
- Ukrin.com (yes that is the correct spelling for the web site) for information on Ukraine.
- CancerMed.com for information on antineoplaston therapies and the Burzynski Clinic in Texas.
- Dr-gonzalez.com for information on the studies on enzyme therapy and CancerDecisions.com for some evaluations.
- Thiomolybdate information can be tracked down through the web site www.inflitec.com/anticopper/
- CancerDecisions.com is a good site for discussions on amygdalin.
- Information about the research of Dr. Rigdon Lentz may be found at www.ultrapheresis.com.
- Vitamin C information can be found at vvy.com/healthnews/vitamin_C.html and many other sites.
- Www.Lowdosenaltrexone.org is a good site for information on the low dose Naltrexone treatment developed by Dr Bihari.
- Www.Beljanski.com for information on Beljanski therapy. This was not discussed above but this is a treatment approach that is being used by Michael Schachter, MD at www.MBSchachter.com.