The Biological, Biochemical and Physiological Basis of The Gerson Therapy

by Nicolette Marais

in Cancer, Gerson Therapy

October 24, 2012

www.hawaiinaturopathicretreat.com[1]

[1] **Internet:** "http://www.hawaiinaturopathicretreat.com/tag/max-gerson/".

Contents

1 The need to look at the whole body - The Concept of Totality **1**

2 Objectives of the gerson therapy **2**

2.1 Oxidative metabolism - tissue damage syndrome 2

2.2 The healing inflammation 3

2.3 Heal the liver 5

2.4 The coffee enema 5

3 The immune system - protein restriction **6**

4 Pancreatic enzymes **6**

5 About Healing Advanced Cancers - Max Gerson M.D. **7**

5.1 The Cure of Advanced Cancer by Diet Therapy 7

5.1.1 Abstract 8

5.1.2 Excerpts 8

5.2 Cancer, a Problem of Metabolism 8

5.2.1 Fundamentals of cancer diet 10

5.2.2 Medication 11

5.2.3 Conclusion 12

5.2.4 References 13

1 The need to look at the whole body - The Concept of Totality

Dr. Gerson believed the cause of cancer to be the accumulation of numerous damaging factors and where there is a breakdown of the whole body, and no single approach would effect a cure. The effects of single treatments without regard for the totality of biological rules, and the underlying metabolism that supports the disease, are doomed to fail. He said:

> **"change the internal environment so the malignancy cannot survive, bring the body to a vitality to enable it to generate a healing inflammation (digestion of tumor), then eliminate the tumor products and other toxins in the body and you would see a healing."**
>
> **"What is essential is not the growth itself, or the visible symptoms: it is the damage of the whole metabolism, including the loss of defense, immunity and healing power."**

There are many single treatment approaches now, both conventional and alternative:

- Surgery

- Radiation
- Chemotherapy
- Alternative: Herbs and nutrient
- Substances that can:
  - Block angiogenesis
  - Increase NK cell activity
  - Directly anti tumor
  - Stimulate fever, etc.

In and of themselves they may be helpful, but they do not necessarily address the functioning of the whole body, the integrity of the organs, the level of defense and immunity.

2 Objectives of the gerson therapy

There are four main objectives or a four pronged approach that we are going to cover:

1. Restore and re-establish and increase the oxidative metabolism of the normal cells and tissues.
2. Initiation and support of the healing inflammation for parenteral elimination of tumor tissue.
3. Increase the detoxification capacity of the liver and the entire system to keep up with the rate of tumor breakdown.
4. Continue this process over a long enough period of time for all tumors to be absorbed and the essential organs to be restored to normal function.

We will discuss each of these and then weave it all together.

2.1 Oxidative metabolism - tissue damage syndrome

We know that disease arises when cellular metabolism is compromised. This happen from injury to cell - whatever the cause:

- poor diet,
- environmental toxins,
- viruses,
- oxygen starvation,
- autointoxication, etc.

The same response occurs in cells throughout the body.

1. Tissues lose potassium

2. Tissues accept sodium

3. Cell swells with water

4. Loss of cellular energy production

Now the environment in the cell is not conducive to manufacturing energy or making ATP. **BURNING SUGAR THROUGH OXIDATION**. Without ATP the cell dies. Protein synthesis and lipid metabolism cease. So, salt and water management was a major basis for the therapy and thru the advancement of NMRI it is shown that a cell in its diseased state will lose intracellular potassium and sodium will enter the cell. This shift in the major minerals causes inhibition of the oxidative function - dropping now into a fermentation cycle or from aerobic gycolysis to anerobic glycolysis.

Otto Warburg's research into oxidative metabolism, Nobel prize winner, theorized that cancer is a fermentative disease. Cancer cells do not use oxygen - they secrete large amount of lactic acid generated by anerobic glycolysis. This feeds back into the cycle, the burning of fuel is compromised, oxygen and potassium is rejected. (Kathryn Alexander)

Several other scientists have corroborated and studied Dr. Gerson's work and using NMRI we have conclusive evidence and validation of his work. These were Ling, Cope and Damadian. The NMRI reads tissues electronically and we are able to determine the electrical fields within the body. Dr. Gerson was aware of dynamic energies behind the chemical substances - a force which energized and gave life to tissues, minerals and chemical substances.

> **"We now know that what we have inherited is not a set of chemical substances, but a pattern of dynamic energies"**
> **"The system needs animating energies besides the pure substances"**
>
> Max Gerson

What they saw with NMRI is that throughout the cytoplasm of our cells, water is structured, it is stacked because the dynamic energies in the cells hold water in an organized pattern. E.g. Ling's work. He likens the cytoplasm of the cell to macromolecule in which an electrical current runs through and this force attracts paramagnetic ions. **WATER BECOMES STRUCTURED**. The water molecules line up - O_2 molecules face one way and **H** ions face the other way. He theorized that it was this electrical field of the cytoskeleton that governed the ionic environment of the cell and not the **Na K** pump. No energy is required other than the attractive forces at the association sites. It would take too much energy if it was a pump. More association sites for **K** are formed (20). As more **K** sites are filled more are attracted. Interactive cooperativity. As the cells water organizes, the excess **Na**, water and toxins are eliminated. Once the sodium ring around the tumor was drained, the tumor would lose its protection and defense. Can lose up to 8 gm a day of sodium in urine. ATP production increases. We have successful salt and water management of tissue damage. **IF CELLS ARE NOT ALREADY TOO DAMAGED**.

2.2 The healing inflammation

In chapter 17 of "The Healing of Cancer", Dr. Gerson starts off the chapter again with the reminder that cancer is not a specific illness, but a chronic degenerative disease develops where there is a general breakdown of the whole body. The theory of cancer, he states is a question of the defense of the mesenchyme (connective tissue). These cells are distributed all over the body, especially between all organs and tissues. It is now called the reticular endothelial system and it is a parenteral digestive

apparatus. From pathology we learn that almost every tumor is surrounded by such tissue and this system is almost inactive and paralyzed in cancer, incapable of protecting the body any longer in defense and healing.

The cancerous body is anergic (diminished reaction against an antigen) and cannot produce an active inflammatory metabolism. This system cannot function sufficiently when the entire body is poisoned and has lost the ionizing minerals of the **K** group and its electrical potential.

However, if the body could be detoxified enough to restore oxidative metabolism, then vitality could be raised enough to initiate this response.

When this response starts a site, an exudate is formed with inflammatory cells. These cells have an oxidative and digestive metabolism which causes an acidosis of the inflamed tissue and a decrease of O_2 and sugar (E producing substance). This acid formation and deficient energy substance brings about damage or destructions of inflamed tissue - a kind of swelling and degeneration. After the inflammation has killed the tumor mass, necrosis sets in - here is where the digestive power of the leukocytic enzymes digest fibrin and debris. Then a creation of new capillaries which penetrate into the mass and there is a build up of granulation tissue. This inflammatory process also produces TNF.

The fever that accompanies the healing inflammation amplifies the lymphocytic response and mobilization of WBCs, and is thought to be directly damaging to cancer cells. These flare ups involve fever, pain, redness and swelling at site of tumor or old or recent injuries. They will occur at certain intervals and are less intense as healing progresses.

Healing reactions - There are actually 3 types of healing reactions. To be technical.

Toxin reactions: toxins being pushed out of cells where they have been harbored for many years, into the blood stream. Patient feels very toxic and experience HA, nervous irritability, mental and emotional instability, depression, unable to think clearly, foul taste in mouth, odors, vivid memories from the past, food cravings, joint and muscle pain. Especially around neck and shoulders and down spine.

Detox reactions: Symptoms of discharge of toxins to the outside - mainly into the digestive tract. Skin eruptions, foul smelling dark urine, foul sweat, menses. Nausea and vomiting, hemorrhoids, diarrhea, dark stools, cold sores, orange tinge to skin.

The Healing Inflammation: Fever, pain

Artificial means to cause healing reactions are autologus vaccines, Coleys toxins. However, Dr. Gerson felt stimulating a unnatural inflammation is not the same as a spontaneously generated healing inflammation. To induce an artifical fever while neglecting the cause of disease was of no benefit.

We need to bring the body to the state where it can initiate these healing reactions as often as needed. We can only do that when the body is detoxified. Artificial stimulations could possibly beneficial after that as an added help.

Difference between allergies and the healing inflammation. When body is cleansed, the liver, etc., it is healing - not reacting to foreign and noxious substances, undigested proteins. In fact it is necessary to keep away from the patient all substances which they could react to, as the sick body will produce allergic reactions, rather than the biologically stronger healing inflammation. Also very important to avoid infectious agents, viral and bacterial, and prevent all impeding infectious or poisonous reactions, drugs and food allergies, as these will impede the healing inflammation - especially first 9 months.

2.3 Heal the liver

In chapter 22 Dr. Gerson writes that the underlying cause of cancer is from the poisoning of the of the liver. He states, "cancer is a disease of the liver". The liver is lately called the balance wheel of life - where most metabolic functions are more or less concentrated. From here other organs can be pathologically influenced and damaged or poisoned. The origin of the cancerous disease is more probable where the reactivation of the oxidizing enzymes, one of the finest developed functions of the liver is impaired.

As naturopaths, we were trained to focus heavily on the liver. We had a motto which was "when in doubt - treat the liver"

For the past 50 years we have been exposed to an ever increasing amount of environmental toxins and concurrently we are seeing an escalating incidence of cancer. Now, our genetics have not changed that much in 50 or 100 years. So, we know it is from our lifestyle and environmental exposures. So as the body becomes more toxic - the liver has a greater burden and becomes more compromised in the process of trying to clear all the exogenous as well as endogenous toxins from the body. A toxic residual accumulates - back to one of the inciting causes of tissue damage syndrome. Now, the weaker the genetics - the greater the susceptibility.

2.4 The coffee enema

The coffee enema is capable of removing circulating toxins and partial metabolites because it stimulates an enzyme system in the liver called glutathione-s-transferase. It removes electrophiles (free radicals) by stepping up this system by 700%. No other materials other than coffee are known to do this. The blood passes thru the liver every 3 mins so when the coffee is held for 15 min, it gets five passes thru the liver. In addition, the theobromine, theophylline, and the caffeine in the coffee all have physiological effects. They dilate the blood vessels and bile ducts, relax the smooth muscles and increase the flow of bile. In addition, the quart of water in the gut stimulates the visceral nervous system which stimulates peristalsis. Net effect - the flushing of toxic bile.

We know a lot more today about the detox function of the liver than in Dr. Gerson's day. We know it has two parts - Phase I and Phase II - two wash cycles so to speak. Some toxins are excreted after Phase I and others need a second wash in Phase II - they need to be conjugated with a carrier molecule. One of the most important systems of Phase II is the glutathione conjugation pathway which utilizes glutathione for the detoxification of deadly industrial toxins such as PCBs the for the breakdown of other carcinogens and xenobiotics including heavy metals.

Its activity accounts for 60% percent of the toxins excreted in the bile. There are 6 detox pathways in Phase II (glutathione conjugation, sulfation, peptide conjugation (taurine and glycine), glucoronidation, acetylation and methylation). They have the ability to back up for one another.

Back to glutathione, it can get depleted with the constant stress of excess toxins and so even stimulating with the coffee, we need a reserve of glutathione. That is where dietary nutrients are so important. Some of the foods that support are the cruciferous vegetables, flax seed oil, fresh fruits, garlic, other vegetables, onions. Supplements that do this are: CoQ10, B-12, Vitamin C - Important for patients to eat a great variety of veggies. Carotenes Niacin Milk thistle. The liver must also be able to detoxify tumor breakdown products.

3 The immune system - protein restriction

Dr. Gerson found that in cancer dietary protein stimulated tumor growth, and patients with high protein intakes could not be saved. He also noted that when he restricted dietary protein, the immune profile changed - the t-lymphocyte count went up - the branch of the immune system that fights tumors, viruses and fungi.

And he also found that restricting protein caused more sodium to be eliminated in the urine. He stopped protein for 6 to 8 weeks in order to cause **Na** to leave damaged cells and allow the edema to be absorbed. He believed that **Na** is trapped in the body with protein. Ling found this also. Excess protein creates acidity and puts extra strain on the kidneys and later the heart.

Dr. Robert Good, Director of Sloan Kettering Institute of Cancer Research, did studies with protein restriction on animal, mice and guinea pigs. Those on protein-calorie restriction, even genetically predisposed, did not develop cancer and if they had it, it regressed. Also auto-immune dz.

Current research also shows T-cell immunity is raised and serum blocking antibody is depressed. In cancer, tumor specific antibody is produced by B cells which attaches to the antigenic sites on tumor cells, covering the antigenic sites. This prevents the T-cell from having access to the tumor and destroying it.

Use cultured non fat milk products. A typical patient loses around 40 gms protein a day through entrails. Mostly replaced by vegetarian diet. Dairy protein adds 30 to 40 gms more than is required - keeps in positive nitrogen balance.

The combined protein restriction, high **K**, low **Na** regime removed the **Na** ring (edema) around the tumor improving circulation and immune activity at the site.

4 Pancreatic enzymes

In most cancer patients, digestion is poor. Also important in the parenteral digestion of tumor tissue. Amylase, trypsin and chymotrypsin are especially important in trophoblast destruction. Need large quantities to overcome anti tryptic substances produced by tumor. 25 grams of crystalline chymotrypsin necessary in a single dose to neutralize the excess chymotrypsin inhibitor in the serum of advanced cancer patients.

Here is an article:

PANCREATIC ENZYMES

Pancreatic enzymes - the body's main anti-cancer defense

The Scottish embryologist Dr. John Beard first proposed at the turn of the century that pancreatic enzymes, in addition to their digestive function, represent the body's main anti-cancer defense. Patients on the Gonzalez regimen take up to 45 grams of pancreatic enzymes a day, taken orally and spread throughout the day.

The value of enzymes in the treatment of cancer was demonstrated scientifically by Dr. Gonzales study "Evaluation of Pancreatic Proteolytic Enzyme Treatment of Adenocarcinoma of the Pancreas, With Nutrition and Detoxification Support". Nicholas James Gonzalez and Linda Lee Isaacs

Abstract

Historically, large doses of proteolytic enzymes, along with diet, nutritional supplements, and "detoxification" procedures, have been used in alternative therapies to treat all forms of cancer, without formal clinical studies to support their use.

A 2-year, unblinded, 1-treatment arm, 10-patient, pilot prospective case study was used to assess survival in patients suffering inoperable stage II-IV pancreatic adenocarcinoma treated with large doses of orally ingested pancreatic enzymes, nutritional supplements, "detoxification" procedures, and an organic diet.

From January 1993 to April 1996 in the authors' private practice, 10 patients with inoperable, biopsy-proven pancreatic adenocarcinoma were entered into the trial. After one patient dropped out, an 11th patient was added to the study (however, all 11 are considered in the data tabulation). Patients followed the treatment at home, under the supervision of the authors.

As of 12 January 1999, of 11 patients entered into the study, 9 (81%) survived one year, 5 (45%) survived two years, and at this time, 4 have survived three years. Two patients are alive and doing well: one at three years and the other at four years. These results are far above the 25% survival at one year and 10% survival at two years for all stages of pancreatic adenocarcinoma reported in the National Cancer Data Base from 1995.

This pilot study suggests that an aggressive nutritional therapy with large doses of pancreatic enzymes led to significantly increased survival over what would normally be expected for patients with inoperable pancreatic adenocarcinoma. Nutrition and Cancer, 33(2): 117-124, 1999.

5 About Healing Advanced Cancers - Max Gerson M.D.

October 19, 2012 / in Cancer, Gerson Therapy / by Nicolette Marais

Dr. Gerson showed us the path of the hero to wellness. He did not believe in incurable disease. He had tremendous faith in life. His lifetime work and dedication has been a precious tool for both patients and practitioners. From his personal experience, patients learn determination to heal, regardless of prognostics from the medical authorities. From his professional experience, doctors may learn integrity in their service to humanity. Dr. Gerson did not give up until he found the true cause of disease: toxicity and deficiency. - Maya Nicole Baylac

5.1 The Cure of Advanced Cancer by Diet Therapy

"This therapy has cured many cases of advanced cancer."

Max Gerson

Lecture from 1956 - by Max Gerson

The Cure of Advanced Cancer by Diet Therapy:

a Summary of 30 Years of Clinical Experimentation

Gerson Institute, Box 535, Imperial Beach, California 92032

(1978 Publisher's Note. This is a lecture given by Dr. Gerson in Escondido, California, in 1956. Dr. Gerson died in 1959. More complete information on his therapy for advanced cancer may be found in his book A Cancer Therapy: Results of 50 Cases, by Max Gerson, 3rd edition, 1977, Totality Books, Del Mar, CA or from his daughter Mrs. Charlotte Gerson Straus at the Gerson Institute, Box 535, Imperial Beach, CA 92032. Socioeconomic and political perspectives are discussed in the book Has Dr. Max Gerson a True Cancer Cure? by S. J. Haught, 1976, Major Books, 21335, Roscoe Blvd., Canoga Park, CA 91304. - From gerson-research.org)

5.1.1 Abstract

Thirty years of clinical experimentation has led to a successful therapy for advanced cancer. This therapy is based on the concepts (1) that cancer patients have low immuno-reactivity and generalized tissue damage, especially of the liver, and (2) that when the cancer is destroyed, toxic degradation products appear in the bloodstream which lead to coma and death from liver failure. The therapy consists of high potassium, low sodium diet, with no fats or oils, and minimal animal proteins. Juices of raw fruits and vegetables and of raw liver provide active oxidizing enzymes which facilitate rehabilitation of the liver. Iodine and niacin supplementation is used. Caffeine enemas cause dilation of bile ducts, which facilitates excretion of toxic cancer breakdown products by the liver and dialysis of toxic products from blood across the colonic wall. The therapy must be used as an integrated whole. Parts of the therapy used in isolation will not be successful. This therapy has cured many cases of advanced cancer.

5.1.2 Excerpts

" ...Finally, I had a clinic. The patients saw that also the more advanced cases and even some terminal cases, very far advanced cases, could be saved. They brought me more and more of these terminal cases. I was forced into that. On the one side, the knife of the AMA was at my throat and on my back. I had only terminal cases. If I had not saved them, my clinic would have been a death house. Some of the cases were brought on stretchers. They couldn't walk. They could no longer eat. It was very, very difficult. So, I really had to work out a treatment that could help these far advanced cases. Again, I was forced into it."

" ...The physicians, including the family doctor, all told him that he could live only 4 to 6 weeks, especially since all bones of the pelvis were full of cancer. He looked terribly ill when he came to me. His wife brought him with a nurse. He had made his last will and did not expect to live. Now we cured that. It was especially difficult. I should like to thank his wife. She prepared the treatment with the greatest devotion. She was wonderful and we could rely on her. In a family where there is real devotion in the application of this treatment, we can even save these far advanced cases. Of course, we cannot save all of them but we can save more than we sometimes even consider possible. (Question from the audience: 'How long did it take?') In the urinary bladder, it didn't take but a few weeks and there was no longer any blood and pus, nor in the stools either. But in the pelvis there were hundreds of spots, and that takes a long time because the body transforms this cancer first into so-called osteoplastic areas, not an osteolytic process which is bone reducing. With my treatment more bone is produced. The body produces more bone, and then the hypertrophic bone is transformed into normal bone tissue. Then there is no more pain. Now the patient can get around and is even the manager of a company."

"Now, for the proof of this theory. I had the idea to make an animal experiment in which we connected two rats - one cancerous rat and one healthy one. We cut them open along the side and connected a blood vessel, then sewed them together: The blood from the healthy rat circulated in the sick one day and night and cleared up the sick body. Thus we showed that with a healthy normal metabolism you can cure cancer. ..."

Read the whole Dr. Gerson lecture here or at *gerson-research.org*[2].

5.2 Cancer, a Problem of Metabolism

Here is an article from 1954, where Max Gerson draws this conclusion:

[2]**Internet:** "http://gerson-research.org/".

"Human beings have brought upon themselves the disease of cancer by their ungoverned self-indulgence, their urge for luxurious living, and increasing evils of our civilization."

Cancer, a Problem of Metabolism

by Max Gerson, M.D.

Translated from "Krebskrankheit, ein Problem das Stoffwechsels"

Medizinische Klinik No. 26, June 25, 1954, Munich, Germany

The purpose of the following article is to show, in broad outline, that cancer is not a problem of vitamins, hormones and enzymes, that it is not a problem of allergies, nor a variety of intermedial substances of metabolism or carcinogenic substances. It is not a question of some unknown virus infection and most certainly not a purely local cell problem, but an accumulation of numerous factors which proved damaging to the body and its metabolism over a long period of time.

Its cure is a basic process, embracing all the above factors and many others besides, by means of which total metabolism can be more or less re-established over a period of time.

It is generally known that in cancer, especially in advanced cases, all the various metabolic systems are impaired: the exchange of minerals, the symbiosis of intestinal bacteria, the reactivation of enzymes of oxidation, the circulation of vitamins, the breaking down of fats, proteins and to some extent carbohydrates.

All this becomes increasingly clear if we also examine serum and tissues. As evidence of the effectiveness of the metabolic therapy, a number of results are presented here, most of them advanced or hopeless cases. First the dietary problem shall be briefly described in its development and application to cancer.

J. Maisin [1], 1923, and B. Fischer-Wasels [2], 1929, were probably the first who abandoned the theory of local irritation and stressed the physiological basis of general tumor predisposition. Thereafter there was a tendency to take refuge in the old constitutional and diathetic doctrine (Reding [3]), Slosse [4], as is the case in diabetes, gout and tuberculosis. The compendium by F.L. Hoffmann [5], 1937, gives a survey of world literature on the subject. In his statistical summary in the preface (page 15) he says:

"I am fully convinced that profound dietary influences in cancer are to be looked upon as a causative factor ..."

but with reference to treatment he says (page 663): "it does not fall within my own province to make suggestions in any particular direction."

The monograph of W. Caspari [6] gives a more condensed survey and specifically turns away from local causes, more in the direction of metabolism. - A decrease in calorie-intake as a fames cura was already familiar to the ancient physicians, and is described by Cornelius Nepos [7].

Modern experimental studies on the effect of dietary restrictions have been carried out particularly by Albert Tannenbaum [8] et al., and Larsen & Heston [11]. Of Tannenbaum's conclusions the following are valuable: "as yet no tumor has been found that does not respond to a restricted diet" and: "inhibition involved both a decrease in the total number of tumors and a delay in the average time of appearance."

Freund and Kaminer [12] in 1937/38 presented practical suggestions for a special diet to be given to inoperable patients: avoidance of all animal fats and substitution of oil; in cancer patients restriction of carbohydrates, in sarcoma patients restriction of peptones; frequent enemas and, as an antiseptic, salol, menthol, and bismuth subsalycylate. They report that they had little success with inoperable patients.

Caspari and Ottensosser [13] (1932) in experiments with animals found in frequent dietary changes a functional increase of the R.E.S. - De Raadt [14] (1929/30) attempted to increase the alkalosis of the tumor with acids. Fischer-Wasels followed this conception in the main. He recommended little salt, sugar and water, no fats and, to increase acidity, he gave **HCl**, $\mathbf{NH_4Cl}$. Calc. Phosphate. Both investigators recommended the diet merely as a helpful supplementary treatment.

Of the many other dietary attempts in the treatment of cancer, most of them carried out by laymen or physicians using natural remedies, the following are worth mentioning: the old Irish yeast cure and the most recent use in Switzerland of chlorophyll or spinach juice. We have observed no basic results from the much-lauded grape cure. As the best preventive diet against cancer we may mention the Hunsa's diet of food grown by organic gardening processes [15]. These people remain healthy to an advanced age and cancer is unknown among them. On the other hand, Jesse P. Greenstein [16]. says: "preventing cancer means preventing human beings."

We believe that this brief survey will show how dietary treatment of malignant tumors has bogged down almost completely in the theoretical or experimental stage. Practical, systematic experiments with diseased human beings were almost always abandoned after a short time. (See the results of inquiries in Monatsschrift Fur Kebsbekampfung, 1936, No. 9 page 257.)

5.2.1 Fundamentals of cancer diet

The fundamentals of my cancer diet are briefly:

Forbidden items - nicotine (tobacco), salt, sharp condiments, (only fresh or dried herbs are permitted), tea, coffee, cocoa, chocolate, alcohol, white sugar, white flour, candy, ice cream, cream, cake, nuts, mushrooms, soybeans and soy products, cucumbers and pumpkins, pineapples, all berries (except red currants), water to drink. Nothing canned, bottled, sulphured, frozen, smoked, salted or bleached. No fat, no oil, no salt substitutes, no bicarbonate of soda - either in food, toothpaste or mouthwash, no hair-dyeing (relapses have occurred after hair-dyeing).

Temporarily forbidden - (during the first months, especially at the beginning of the treatment): meat, fish, eggs, butter, cheese, milk.

Cooking utensils - pressure cookers may not be used, nor saucepans or other utensils of aluminum. Stainless steel, glass, enamel, earthenware, cast iron and pewter may be used. Two machines are needed for the preparation of juices: a.) a grinder, b.) a press. Machines which grand and press the food in one process are not to be used. This eliminates the customary juicers, juice mixers, centrifuges and electrical grinders and mixers which kill most of the oxidizing enzymes.

A selected number of fruits and vegetables with the highest possible **K/Na** quotient are given. Vegetables are cooked in their own juices without additional water. Foods should be eaten raw as much as possible, especially a mixture of grated apples and carrots, which are rich in enzymes in their natural combinations. The latter are necessary for the binding and inactivation of oxygen in the intestines. If it is not inactivated, dysbacteria follows, that is the development of the bacteria of putrefaction and fermentation.

As much fruit and vegetable juices as possible are to be taken, always freshly prepared in order to preserve enzymes and vitamins. Patients are given juices every hour, the total daily amount to equal as follows:

- $2x200$ cc fresh calf's liver juice
- $4x200$ cc green leaf juice

- $5x200$ cc apple and carrot juice
- $1x200$ cc orange or grapefruit juice

All these juices are particularly rich in oxidizing enzymes, vitamins, hormones and important mineral combinations which the diseased organs cannot themselves manufacture for a long time. The large amount of liquid is of no importance because the detoxification process soon restores the circulatory mechanism and sufficiently regulates elimination. The importance of enemas is mentioned in the treatment book and in the preceding article.1 red., Oatmeal without milk but with brown sugar and fruit, is given for breakfast. Potatoes are given baked, mashed or as salad but without mayonnaise. Lemon or vinegar dressing only. The Hippocrates soup is given once or twice, and frequent servings of leafy salads and fruit salads or a combination of the two.

After six weeks the following additions: yoghurt or skimmed milk - one glass daily; pot cheese without salt or cream - one quarter or one half pound daily.

The result is as diet rich in potassium and the minerals of the **K**-group, low in sodiums and its group and rich in active vitamins, enzymes and hormones in their natural forms. At first the diet does not include animal protein, later small amounts are added, but fat and oil are kept at a minimum for a long time until recovery is complete. These restrictions are necessary primarily more to rid the damaged digestive tract of toxins, than to burden the diseased organs as little as possible. It also prepares the way for perenteral digestion of the tumor and its metastases, and later maintains the bread-down of tumor remnants, adhesions and scar masses. The digestive enzymes, pepsin, trypsin, lipase, etc. are needed for the parenteral digestion of cancer masses, and should not be used up in the ordinary digestive processes.

5.2.2 Medication

Medication for the first fortnight:

- 10% Potassium compound
- Lugols solution, half strength
- Thyroid (Armour)
- Niacin Crude Liver Extract, Lilly No. 352
- injections daily (1 cc. Equals 10 units)
- $10x4$ teaspoons in juice
- $6x3$ drops in juice
- $5x1$ grain (1 grain - 1/16 gram)
- $6x50$ mg
- 3 cc. Plus 1 cc. Vit. B-12 (30 microgr.)

After two weeks the following changes:

- 10% Potassium compound
- Lugols solution, half strength

- Thyroid (Armour)
- Niacin
- Crude Liver Extract, Lilly No. 352
- injections daily (1 cc. Equals 10 units)
- $10x2$ teaspoons in juice
- $5x2$ drops in juice
- $5x0.5$ grain (1 grain - 1/16 gram)
- $6x50$ mg. (unchanged)
- 3 cc. Plus 1 cc. Vit. B-12 (30 microgr.) (unchanged)

Diet and medication serve the purpose of restoring potassium and the minerals of the **K**-group (see Rudolf Keller) to the tissues until they are completely saturated and, conversely, of reconveying sodium and its group out of the cells and into the circulatory fluids, the connective tissues and other tissues where they naturally belong. The retentive surplus of sodium must be eliminated. It is only on this basis that further recovery of the organs can take place. In another study I have indicated that cancer develops particularly in the various organs in which sodium is physiologically reabsorbed, that is to say, stored up, as for example, in the excretory ducts of the mammal gland, in the ductus Wirsungianus of the pancreas, etc. It also develops more frequently later in life when the potassium-content of the cells is gradually lost and sodium is added, thus increasing the susceptibility of the cells to cancer. On the other hand, tissues with higher potassium-content, such as the muscles, are more protected.

Oxidation can once more predominantly function in all organs and fermentation is held back. Oxidizing enzymes, vitamins and hormones are again restored to full function and come into proper circulation. Along with the metabolism, the healing mechanism is restored. This mechanism can be activated for the cure of cancer, only if the restorative and eliminative organs for toxins and waste, especially the liver and kidneys, still function adequately.

5.2.3 Conclusion

Human beings have brought upon themselves the disease of cancer by their ungoverned self-indulgence, their urge for luxurious living, and increasing evils of our civilization. These human weaknesses, constantly stimulated by deep-seated instincts can never be eradicated. Thus cancer will be continuous and ever increasing threat to humanity.

Only a few will submit for a sufficiently long time to moderation and restrictions, and the more natural nutritive regime of the diet therapy. Few people will turn to it as a prophylactic measure. When they are ill and have no other choice, they will submit to a more natural system of living.

This is the conclusion I have drawn from my long years of practice. Discouraging though it may be, it must not prevent doctors from continuing their efforts in the direction of research and therapy.

5.2.4 References

References

[1] Maisin, J.: Le Cancer du goudron est - il simplement un cancer d'irritation locale? Compt. Rend. Contres du Cancer, 26, Strasbourg, 1923.

[2] Fischer-Wasels, B. Munch med Wschr. 1928, 53, 106. Die physiologischen Grundlagen der allgemeinen Geschwulst-disposition. Virch. Arch. 275, 723, 1929.

[3] R. Reding; Munch. Med. Wschr. 1939/41.

[4] A. Slosse u R. Reding.: Bull. Acad d. sc. Belg. 7:405 (1927); Cancer Bruxelles 4, 442 (1927).

[5] F.L. Hoffman: Cancer and Diet. William and Wilkins, Baltimore 1937.

[6] W. Caspart: Nutrition et Cancer, Herman & Co, Paris, 1938.

[7] Cornelius Nepos: vitae, Atticus, Cap. XXI, XXII.

[8] A. Tannenbaum. Am. J. Cancer 38, 335 (1940), Cancer Research 2:460, 1942.

[9] White, F.R. and al.: Nat. Cancer Inst. 5:43, 1944.

[10] Rush, H.P. and al: Cancer Research 5:431, 1945.

[11] Larsen, C.D. and W.E. Heston: J.Natl. Cancer Inst. 6:31, 1945.

[12] E. Freund u. G. Kaminer: Biochemische Grundlagen der Carcinomdispositon Springer Wien 1927. Wien. Med. Wschr. 88:33:64 (1938).

[13] W. Caspari u. f. Ottensooser: Zschr. F. Krebsforschung 38:351, 1932. F. Ottensooser: Am. J. Cancer 22, 910, 1934.

[14] D.L.E. de Raadt: Zschr. F. Krebsforsch. 30:449, 1929, 32:596, 1930.

[15] Ralph Bircher: hunsa, Das Volk, das keine Krankheit kennt (1952) Verlag Hans Huber, Bern und Stuttgart - und besonders wertvoll: Werner Kollath: Die Ordnung unserer Nahrung. Hippokrates-Verlag 1952.

[16] Jesse P. Greenstein: Biochemistry of Cancer, S. 373 (1947); Academic Press, Inc., New York.

[17] Ganzheitsbehandlung der Geschwulsterkrankungen: Prof. Dr. Wserner Zabel, Berchtesgaden, hippokrates-Verlag 1953.