

Die Geschichte der Gerson Therapie

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Chapter Fourteen

PART FOUR

Mainstream Nutritional Science and the Unconventional Nutritional Cancer Therapies

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The Gerson Diet—A Radical Anticancer Therapy

“I see in Max Gerson one of the most eminent geniuses in medical history.”

-Albert Schweitzer

Until the advent of the macrobiotic diet, the Gerson therapy was, for many years, the best-known nutritional therapy for cancer in the United States. Today, thousands of cancer patients still practice the Gerson diet and diets based on Gerson’s regimen. The Gerson Institute in Bonita, California, directed by Charlotte Gerson, Max Gerson’s daughter, and the Gerson Clinic in Tijuana, Mexico, continue his work. Derived from a combination of scientific research and the European folk medical tradition by German physician Max B. Gerson, the therapy requires a patient to eat a raw vegetarian diet for a prolonged period. Cooked foods and some animal products may be added later. A patient drinks specific freshly prepared vegetable and fruit juices every hour, takes four types of enemas, including coffee enemas, and also consumes two to three glasses of fresh calf’s liver juice each day.¹

The Gerson regimen as currently offered in Mexico is a radical anticancer therapy in that it involves a tremendous level of personal commitment. When fully undertaken, it requires a full-time effort by a reasonably mobile and energetic person who does not have to work and who has access to the requisite fresh organic produce year-round. It works best when undertaken jointly by a cancer patient and a spouse or friend, and even then

it is close to a full-time project for both people. The psychological consequences of making and sustaining such a full-time commitment to physical recovery are potentially a significant element in recoveries associated with the Gerson program.

Patricia Spain Ward, Ph.D., a medical historian at the University of Illinois at Chicago, has outlined the history of the Gerson therapy for the Office of Technology Assessment:²

It is one of the least edifying facts of recent American medical history that the profession's leadership so long rejected as quackish the idea that nutrition affects health. Ignoring both the empirical dietary wisdom that pervaded western medicine from the pre-Christian Hippocratic era until the late nineteenth century and a persuasive body of modern research in nutritional biochemistry, the politically-minded spokesmen of organized medicine in the U.S. remained long committed to surgery and radiation as the sole acceptable treatments of cancer. .ê.ê.

The historical record shows that progress lagged especially in cancer immunotherapy—including nutrition and hyperthermia—because power over professional affiliation and publication (and hence over practice and research) rested with men who were neither scholars nor practitioners nor researchers themselves, and who were often unequipped to grasp the rapidly evolving complexities of the sciences underlying mid-twentieth-century medicine.

Nowhere is this maladaptation of professional structure to medicine's changing scientific content more tragically illustrated than in the American experience of Max B. Gerson (1881-1959), founder of the best-known nutritional treatment for cancer of the pre-macrobiotic era. A scholar's scholar and a superlative observer of clinical phenomena, Gerson was a product of the German medical education which Americans in the late 19th and early 20th centuries considered so superior to our own that all who could afford it went to Germany to perfect their training.³

Gerson's Biography

Gerson graduated from the University of Freiburg in 1909, having studied with leading specialists in internal medicine, physiological chemistry, and neurology. By 1919 he had set up a practice and had devised an effective dietary treatment for migraine, from which he himself suffered. “In 1920,” Ward reports, “while treating migraine patients by this salt-free diet, he discovered that it was also effective in lupus vulgaris (tuberculosis of the skin, then considered incurable) and, later, in arthritis as well.”⁴

His success with tuberculosis of the skin brought Gerson renown and an opportunity to test the diet with larger numbers of lupus patients at a special Bavarian government-sponsored clinic. The diet was then extended to cases of pulmonary tuberculosis as well. He served as a member of the State Board of Health in Prussia, and also as a consultant to the Prussian Ministry of Health on how to restore depleted soils for agriculture. Ward says: “When he learned that modern farming methods often rob plants of their natural mineral and vitamin riches, while increasing their sodium content, he began to think of the earth’s well-being as our own. Eventually, he began to refer to the soil, which nourishes the food we eat, as our “external metabolism.”⁵

Gerson first used his diet for cancer in 1928, when a woman with bile duct cancer that had metastasized to the liver insisted he put her on the diet, despite his reluctance to do so. The patient introduced him to a special soup which, according to German folk medical lore, Hippocrates had used for cancer, and which Gerson later adopted for his own therapy. “Having taken up this challenge against his will, with no hope of success,” reports Ward, “Gerson was astounded when his patient seemed fully recovered within six months. In quick succession he had the same good results with two patients with inoperable stomach cancer.”⁶

After the rise of Hitler, Gerson moved to Vienna where he reported the diet failed with six cancer patients, in his view as a result of poor dietary supervision at the institution where he worked. He then moved to Paris, where he reported the diet produced good results in three of seven cases. He emigrated to the United States

in 1938 and in 1939 passed the state medical boards in New York, where he continued to perfect his diet.⁷ Ward continues:

Despite the fact that he had no in-patient facility until 1946, when he opened a clinic in Nanuet, New York, Gerson managed, through his thriving Park Avenue practice and an affiliation at Gotham Hospital, to amass enough data to publish a preliminary report in 1945. He presented his rather remarkable cases modestly, concluding that he did not yet have enough evidence to say whether diet could either influence the origin of the cancer or alter the course of an established tumor. He claimed only that the diet, which he described in considerable detail, could favorably affect the patient's general condition, staving off the consequences of malignancy and making further treatment possible.⁸

The AMA did not openly attack Gerson until November, 1946, a few months after he testified in support of a Senate bill to appropriate \$100 million to bring together the world's outstanding cancer experts in order to coordinate a search for the prevention and cure of cancer.⁹

In many respects, the Senate hearing was hostile to conventional approaches to cancer therapy, and it would have been naive for anyone not to anticipate a possible reaction from the American Medical Association. Gerson presented patients of his who had failed on conventional therapies; he received a strong testimony of support from the medical director of Gotham Hospital, who also reported the results of a study which found that patients who received no treatment for cancer lived longer than conventionally treated patients; and another witness called Gerson's successes "miracles" and, as Ward reports, urged the Senators to secure their future cancer commission against control by any existing medical organization.¹⁰

Historically, this was a period in which the AMA had recently established its hegemony over American medicine. It was headed by Morris Fishbein, a pugnacious physician who was to make

himself infamous in the eyes of many advocates of unconventional cancer therapies for his attacks on Gerson, Hoxsey, and other pioneers of unconventional therapies. It is no surprise to me that Fishbein, faced with congressional hearings inimical to conventional cancer treatment and AMA hegemony, went on the attack. The details of the process by which the AMA destroyed Gerson's professional reputation have been described by Ward and others. Gerson lost his hospital affiliation and was denied malpractice insurance:

According to a 1981 publication of the Gerson Institute, headed by his daughter, Charlotte Gerson, a manuscript for a book he was writing about his therapy disappeared from his files in 1956. At the age of 75, isolated from medical colleagues and unable to find assistants, Gerson undertook the work of rewriting the entire manuscript in order to show "that there is an effective treatment of cancer, even in advanced cases." It was published in 1958 as *A Cancer Therapy: Results of Fifty Cases*. Gerson died of pneumonia the following year.¹¹

Interpreting the AMA Attack on Gerson

In evaluating this history, I come down somewhere between the interpretation offered by advocates of the Gerson therapy and that offered by the mainstream critics of Gerson. Many medical historians would agree with Ward that the rejection of nutritional approaches to health in general, and cancer in particular, is among the "least edifying facts" of recent American history. As time passes and scientific evidence supportive of the Gerson and other nutritional approaches to cancer gradually grows, Fishbein's and the AMA's attack on Gerson appears in a less and less favorable light.

On the other hand, a close reading of Ward's recounting of the history of what happened to Gerson shows that the AMA attack on Gerson was scarcely an unpredictable event. An immigrant refugee physician from Germany appears in New York and, in a few short years, opens a thriving Park Avenue practice using an

unconventional cancer therapy, opines loudly regarding the health dangers of tobacco (Philip Morris was then the Journal of the American Medical Association's main source of advertising),¹² and on top of that has the temerity to testify before Congress, showing off his recovered patients who had failed on conventional therapies. At the same hearing, others propose that \$100 million be spent to investigate apparently allied innovative approaches to cancer; Gerson's hospital chief offers testimony that no treatment at all is better than conventional treatment for cancer; and another witness warns the legislators not to let "any existing medical organizations" (a clear reference to the AMA) control their search.

Regardless of the merits of the Gerson therapy, mainstream medical opinion at that time firmly held the view that nutritional therapies had nothing to offer for cancer treatment, and to this day the evidence for decisive, positive results from Gerson therapy remains highly questionable. In contemporary studies, the Gerson program emerges as a potentially useful complement to conventional therapies. But even if, as Ward emphasizes, Gerson was modest in his testimony regarding his claims for his therapy, he allowed himself to be part of a very public critique of the medical establishment of his time, and he did not disassociate himself from testimony by others that his cases were "miracles." He and his colleagues should certainly have been aware of the enormous political risk they were taking. Nor did the AMA attack Gerson before he participated in this hearing before Congress. Prior to that time, he was allowed to develop a thriving medical practice using an alternative therapy for cancer and was affiliated with a New York hospital. The point simply is that the mythological view of some Gerson advocates that Gerson discovered a "cure" for cancer and was, as a result, made the innocent victim of an unprovoked witch-hunt by the AMA, does not stand up to scrutiny, any more than does the view of Gerson critics that he was simply a "quack" who deserved the professional assault he received.

In my view, the question of Gerson's motivations for participating in the congressional hearings could benefit from further historical inquiry. As a recent immigrant, Gerson was either naive about the politics of American medicine, or very poorly advised, or he felt that he had a great mission to accomplish to alert the American public to the potential benefit of nutritional approaches to cancer, and therefore went forward with the hearings despite full knowledge of the dangers. It is not uncommon, among some of the best-known practitioners of unconventional cancer therapies, that they have, rightly or wrongly, a sense of mission that is sometimes accompanied by a sense of personal invincibility and self-confidence that can at times appear grandiose. Nor are charismatic leaders in mainstream medicine any more exempt from these particular characteristics.

For whatever reasons, Gerson, in participating in the congressional hearings, undertook a course of action that appears, at least in retrospect, professionally suicidal. History cannot tell us what would have happened if he had quietly continued his practice, strengthened his contacts with the medical profession, and continued to publish a stream of professional reports in which he made it clear that his nutritional therapy for cancer was not a cure but deserved further evaluation as a useful adjunctive cancer treatment. Instead, he died as another martyr in the cause of alternative cancer therapies.

The Gerson Therapy

According to Gerson, in order to heal, "The body must be detoxified—activated with ionized minerals, natural food so that the essential organs can function. For healing the body brings about a kind of inflammation. That is a tremendous transformative reaction. This renders the body hypersensitive or allergic to the highest degree against abnormal or strange substances (including bacilli, cancer cells, scars, etc.). Consequently the more malignant the cells, the more effective the treatment."¹³

The critical elements in the Gerson therapy are¹⁴:

1. Salt and water management through sodium restriction and potassium supplementation.
2. High doses of micronutrients through frequent administration of raw fruit and vegetable juices.
3. Extreme fat restriction.
4. Temporary protein restriction through a basic vegetarian diet.
5. Thyroid administration.
6. Frequent coffee enemas.

Raw calf's liver juice, an iodine solution, thyroid extract, extra potassium, pancreatin, and vitamin C were later added to the regimen.¹⁵

A scholarly man, Gerson continuously explored the medical literature of his day for explanations of why, in his experience, this empirically derived nutritional treatment appeared to work to the degree that some patients achieved cures and many others had positive responses. He came to regard cancer as one of a family of degenerative illnesses in which impaired metabolism underlay the degenerative process. He believed that a number of metabolic functions were deficient in cancer patients, including the metabolism of fats, proteins, carbohydrates, vitamins, and minerals. He also believed that oxygen-supplying enzymes had been inactivated and that the vitality of intestinal bacteria had been impaired.¹⁶

Gerson believed that his therapy reversed these elements of impaired metabolism. But he also believed that, if the diet and other medications were given without active detoxification, the patient could often die from a liver overburdened by the toxins being released from the body. He placed a central significance on the health of the liver, and sought to stimulate the detoxification of the liver by prescribing coffee enemas as frequently as every 3 or 4 hours, which he believed stimulated the release of bile and

aided in the release of toxins.¹⁷ In 1978, the editors of *Physiological Chemistry and Physics* stated that “caffeine enemas cause dilation of the bile ducts, which facilitates excretion of toxic cancer breakdown products by the liver and dialysis of toxic products from blood across the colonic wall.”¹⁸ Coffee enemas, long a respected entry in the *Merck Manual*, represented to him a logical component of the detoxification process. He emphasized restoring the oxidative enzymes in the diet, since he believed cancer cells grow in the absence of oxygen and can be inhibited or destroyed by replenishing cellular oxygen supplies. He sought to supply this oxygen using fresh organic fruit and vegetable juices prepared with a stainless steel grinder and press.¹⁹

The third central element in Gerson’s effort to restore healthy metabolism was balancing potassium and sodium in the body. He believed that high- sodium, low-potassium diets contributed to tumor growth, and that high- potassium, low-sodium diets and potassium supplementation could help reverse the unhealthy balance.²⁰

Scientific Support for the Gerson Therapy

Because of the attack by the AMA, Gerson’s therapy was, for decades, considered one of the prototypical “quack” cancer therapies. But in recent years—as the nutritional research literature on cancer quietly mounted behind doors closed by professional prejudice against nutritional elements in cancer therapy—an increasing number of physicians and researchers have been asking whether Gerson may have had something to contribute after all.

In 1980, writing in the same *Journal of the American Medical Association* that had attacked Gerson, William Regelson, M.D., suggested that “we may shortly have to ask if Gerson’s low-sodium diet, with its bizarre coffee enemas and thyroid supplementation, was an approach that altered the mitotic regulating effect of intracellular sodium for occasional clinical validity in those patients with the stamina to survive it.”²¹

Similar suggestions, that a more favorable sodium-potassium ratio (such as that created by the Gerson therapy) might affect malignant mitogenesis, had been offered 9 years earlier by Clarence D. Cone, Jr., writing in the *Journal of Theoretical Biology*.²² In a series of studies, Cone found evidence that the level of electrical polarization found in the membranes of healthy cells was significantly higher than that found in the membranes in proliferating cancer cells. This “electrical transmembrane potential” can affect, among other things, the capacity of the cell to keep sodium and potassium levels in healthy relationships inside and outside the cell membranes.²² Basically, the healthy cells had a high potassium and low sodium content and high electrical polarization of their cell walls, while the cancer cells had higher sodium, lower potassium, and lower electrical polarization.

In 1983, a molecular biologist named G.N. Ling wrote an article²³ exploring the clinical implications of this emerging work and its possible theoretical substructure. In it, he explained:

The recognition of cells as the basic unit of life implies that living matter is not a continuous mass but consists of separate units. This discontinuity between the cell and its aqueous environment is selective in a subtle manner. Thus from the earliest days of biology, it was recognized that water can move in and out of the cells with relative ease. .ê.ê. It [later] became clear that the living cell membrane is not just permeable to water but is also permeable to a host of other solutes dissolved in water. The most surprising of this new revelation concerns the permeability of sugar, free amino acids, and salt, which at high strength cause sustained cell shrinkage. .ê.ê.

If the cell membrane is permeable to a particular solute, one expects that over a long period of time, this solute would reach and be maintained in the cell wall at the same concentration as that in the external medium. Yet old cells as well as young cells share the striking characteristic of maintaining the same high level of potassium and the same low level of sodium in the cell water while the aqueous environment in which these cells are

bathed contains as a rule a low level of potassium and a high level of sodium.²³

Ling went on to propose a highly technical explanation of how the relationship was maintained. This line of research was seized on by F.W. Cope, M.D., in an article entitled “A Medical Application of the Ling Association-Induction Hypothesis: The High Potassium, Low-Sodium Diet of the Gerson Cancer Therapy.”²⁴ Cope wrote:

This paper shows how modern work on cation association [i.e., the behavior of ions in a solution] and water structuring in cells supports and makes more precise some of the deductions Gerson made from his medical experiments with cancer patients. An essential component of Gerson’s cancer therapy was the use of a low sodium, high potassium diet. Indeed, he found experimentally that cancers regressed faster if large quantities of inorganic solutions of potassium were given in addition to a diet which was already high in potassium.

Gerson attempted to understand the biochemical and biophysical reasons for the observed success of low sodium and high potassium diets in the cure of cancer. He recognized the significance of this question and devoted much space in his book to correlations with known experimental facts. He observed that cancer patients always had marked degeneration of other tissues. .ê.ê. Gerson made the general deduction that a major part of the reason for the observed success of the low sodium, high potassium diets in the treatment of cancer was that they forced a correction of the generalized tissue damage .ê.ê.²⁴

Tissue damage, from any cause and in any tissues, produces a similar set of changes in tissue salt and water, which Cope called “the tissue damage syndrome.”

The most easily observed components of the tissue damage syndrome .ê.ê. are decreased cell potassium, increased cell sodium, and increased cell water (cell swelling or tissue edema). .ê.ê.

The high potassium, low sodium diet of the Gerson cancer therapy is a logical strategy for improving the health of the body tissues, of which probably all, and certainly the liver, are suffering from the tissue damage syndrome. .ê.ê.

In the damaged or partly damaged cell, the cell proteins lose all or part of the preference of their sites for associating with potassium rather than sodium. Therefore if in the environment around the cell the concentration of potassium is increased compared to sodium, the association sites are forced to accept more potassium and less sodium. .ê.ê. This tends to restore the normal configuration of the proteins. Therefore treatment with the Gerson diet to increase tissue potassium concentration and to decrease tissue sodium concentration is a logical therapy for the tissue damage syndrome in the cancer patient.²⁴

Up to this point, I have reported primarily on hypotheses concerning the molecular biology and chemistry of the Gerson diet. There is evidence from clinical research as well.

In a 1983 study published in *Cancer Research*, a Hungarian team led by Zs.-Nagy performed x-ray microanalyses of intraoperative biopsy material from human thyroid cancers, and compared these cells with normal human epithelial cells. They then compared the levels of sodium and potassium in the malignant and normal cells, and found that increasing levels of sodium in relation to potassium were associated with increasing malignancy in the human thyroid, thereby supporting Cone's theories concerning the relationship of cell membrane depolarization and rate of cell division.²⁵

Two years later, two researchers from the University of Texas M.D. Anderson Cancer Center in Houston reported that high concentrations of potassium altered the shape and the ability to grow of rat kidney cells infected with a sarcoma virus. High concentrations of potassium returned 100% of the cells to their normal structure. They also noted that other researchers

were reporting positive effects of high potassium concentrations on cellular differentiation.²⁶

A Partially Controlled Clinical Trial of a Modified Gerson Diet

The ultimate evaluation of the Gerson program must come from controlled clinical trials. Recently, an enterprising surgeon in Austria and his colleagues conducted what they admitted was a flawed controlled clinical trial using patients from their own practice who were willing to go on a modified Gerson diet.²⁷

Dr. Peter Lechner and his colleagues of the Second Surgical Department of the Landeskrankenhaus in Graz have used a modified Gerson treatment for 4 years. They exclude the liver juice, and, except in hypothyroidism, the routine thyroid supplementation. They also exclude niacin “for fear of severe bleeding complications—especially in patients with a derangement of hemostasis caused by liver metastases.”

Our patients do not take more than two coffee enemas a day, one in the morning and the other one in the afternoon not later than 5 P.M. to avoid disturbances of sleep. Four enemas a day led to colitis in three patients in the very beginning of the therapy [emphasis added].

We use the Gerson therapy not as an alternative but as an additive treatment, e.g. often combined with chemo- and/or radiation-therapies, and without exception in patients who had operations before. So diagnosis is verified at least by tissue biopsy in every single case.²⁷

The 60 patients were male and female, 23 to 74 years of age, with many types of cancer and many kinds of prior treatment. The Gerson program was given on an outpatient basis, so the level of compliance could not be carefully assessed. And Lechner warns that they have used the therapy for only 4 years: “It is commonly accepted that oncological treatments demand a period of observation, documentation and evaluation of at least five or,

better, ten years before final conclusions can be drawn.” He continues:

There is a very personal aspect, too: All our doctors are general surgeons, thus being conservatively or even skeptically minded, and none of us is an enthusiast as far as so-called alternative methods are concerned. We do watch our patients very carefully and from a rather critical point of view. For the same reason, we try to learn more about how and why the therapy might work, and we also do fundamental research work with special regard to the coffee enemas in cooperation with leading physiologists and biologists. Experiments performed in rats convinced us that two constituents of the coffee enemas lead to an enhanced production of bile. Applied rectally, these substances are absorbed into the portal venous blood and accelerate the excretion of phenacetin and some free radicals into the bile. Further data shall be published in the near future.²⁷

Lechner found that only a small percentage of their patients were willing to follow the modified but still restrictive Gerson program. Among the refusers, they sought patients whose cases were similar to the Gerson patients so they could form “pairs” for the sake of comparison. There are, as we will see, methodological problems with this procedure. They surveyed 19 pairs of women with breast cancer who had radical mastectomies, with type and stage of malignancy verified in all cases. Of six pairs of premenopausal women, all belonging to a high-risk group, one Gerson patient (GP) developed a metastasis while three non-Gerson patients (NGP) developed metastases. Of seven pairs of premenopausal women, two NGPs had local recurrence and two NGPs had metastases to the spine. Of six pairs of postmenopausal women, none have shown further signs of disease so far.

The GPs also showed markedly better tolerance for radiotherapy, and especially chemotherapy. They did not show alterations in liver or kidney function or depressions of red or white blood cell count. Chemotherapy had to be interrupted with two NGP women

because of severe depression in the blood count. Clinical side effects such as nausea, vomiting, loss of appetite and weight, and loss of hair were seen three times more frequently in the NGP group.

Among patients with liver metastases, GPs again showed “significantly increased tolerance” for chemotherapy. Lechner said this about the three pairs of patients with liver metastases: “Five of the six women are dead by now—only one, a GP, is still alive, her disease having been in a ‘no change’ state for fourteen months. Her partner died more than eight months ago. In no case did the Gerson Therapy lead to a complete remission, but the two GPs survived their partners for at least twice the time [emphasis added]. This might be an effect of the coffee enemas.”

Among four patients with metastases to the lungs, a condition that usually causes pleural effusion of fluids and a need for puncture and drainage, “the two NGPs had their hydrothorax punctured twice as frequently as the GPs. The much slower recurrence of the effusion in GPs might be a result of the strict avoidance of dietary sodium.”

Two patients had brain metastases:

The GP “recovered” for a period of three months, and most of the symptoms disappeared. CT-scan showed that peritumorous edema was reduced by more than 30%. The underlying mechanism might be the same as it is in pleural effusions. Both patients died, the GP four months later than the NGP.

Metastases to the bone are very frequently seen, and so we had 12 pairs of patients who belong to this subtype. This kind of tumor, usually treated with chemotherapy, responds only poorly to the Gerson therapy [emphasis added]. There is no significant difference between the NGP and the GP group as far as tumor size and survival are concerned. Only the quality of life seems to be better in the GP group, probably for two reasons: (1) The coffee enemas, taken twice a day, give some pain relief so that most of the GPs only need low doses of non-steroidal antirheumatics

(aspirin or other similar analgesics). They usually do not take alkaloids, so that they can lead quite an active life in spite of their disease. (2) Hypercalcemia, which can alter kidney function, does not occur in GPs, maybe as a result of the intake of more than two litres of juices per day.²⁷

Among patients with colorectal carcinoma, Lechner found no significant difference between the two groups regarding local recurrences or distant secondary metastases. "After the operation, GPs usually recover better than NGPs and seem to gain weight more easily." This observation of improved weight gain in Gerson patients is intriguing, given the concerns I have previously expressed regarding the potential for weight loss in the radical nutritional therapies.

"Patients with metastases in the liver seem to be the best responders to the Gerson therapy," Lechner found. After radical surgical resection, Lechner's patients are no longer given intravenous or intraarterial chemotherapy, "the results having been rather poor in the past." For most patients—except those opting for liver transplants—"the Gerson therapy remains the only treatment. .ê.ê. We have already surveyed eight pairs by now, ten men and six women between 32 and 74 years of age. The laboratory findings of all of them show significant differences between the GP and NGP groups." Lechner continues:

The hepatic enzyme profiles, in four patients more than four times beyond the normal range at the beginning of treatment, became completely normal in the two GPs within four months and remained so for more than one year. One of the two women had her gallbladder removed and .ê.ê. died of liver failure. The other is still leading an active life. Ultrasound and CT-scan show no growth of the metastases.

In another four pairs success was not so evident; the enzyme profiles remained high and the disease was apparently progressing. Although all these patients died within two years after operation, lifespan of the GPs was in all cases more than

double the NGPs. As described in breast cancer patients, the GPs usually needed less analgesic drugs than the NGPs and, as a result of the regularly applied enemas, none of them developed a bowel obstruction although two of them suffered from far advanced peritoneal carcinosis. Among the last four patients of this subtype there is one of the GPs who came into a complete remission and remained in this state for about half a year. .ê.ê. Among all our patients this is the only one where the Gerson therapy might have had a tumoricide effect, but we tend to interpret this as a “spontaneous remission” rather than as the result of the dietary treatment.²⁷

Lechner’s account is worthy of careful consideration. There are methodological problems with selecting the “pair” for each Gerson patient from the patient who turned down Gerson treatment. Among the GPs there may simply have been a higher motivation to live. On the other hand, Lechner has at least provided an invaluable rough estimate of the effects of a modified Gerson therapy over 4 years with 30 pairs of patients.

From his experience, Lechner found significant advantages for Gerson patients. Some lived longer. Others were healthier, had better responses to conventional therapies and fewer side effects, less pain, and better quality of life. Some of these advantages seemed directly related to the Gerson regimen. But the psychological and physical characteristics that enabled these people to undertake the regimen undoubtedly played a part in the superior results in many categories.

These findings, while significant, are a far cry from the dramatic results claimed by Gerson or claimed in his name by colleagues and admirers while he was alive and leaders of the Gerson Institute after his death. At the same time, Robert Houston has properly pointed out that Lechner did use a reduced therapy and also combined it with chemotherapy and radiation, both of which are immunosuppressive. Any immune enhancement brought about by the Gerson program itself may therefore have been compromised by its use as complementary therapy.²⁸

Claims for the Gerson Diet

The question of what Gerson claimed and what others claimed in his name is confusing. Gerson himself said different things in different places as his experience with the treatment evolved. In an early report, published in 1949, he said: “The difficulty of evaluating any therapy, especially in a disease so protean in character as cancer, is fully appreciated by us. It is too early to make any definitive statement as to the value of the Gerson Dietary Regime at this time, but we hope to be able to report a sufficient number of cases later to allow statistical analysis.”²⁹

By the time he was rewriting *A Cancer Therapy* near the end of his life, Gerson wrote: “This book has been written to indicate that there is an effective treatment for cancer, even in advanced cases.” What does that mean? If we look at Lechner’s results in Austria, it might be fair to call the Gerson therapy an “effective treatment,” just as a chemotherapy that enhances outcomes significantly over other chemotherapies may be described as an “effective treatment.” But Gerson writes those words in the context of presenting 50 cases of advanced cancer patients whom he regarded as individually “cured” by treatment. And a lecture given in 1956 was entitled, “The Cure of Advanced Cancer by Diet Therapy.” In it Gerson said: “I should like to tell you what we do to prove that this treatment really does work for cancer. Number one, the results. I think I can claim that I have, even in these far advanced cases, 50% results. The real problem arises when we cannot restore the liver.”³⁰

What does Gerson mean by “50% results” in far-advanced cases? Gerson explains: “The number of terminal cases among my patients increased to more than 90 per cent of the total, having come to me after the applied treatments had failed. .ê.ê. About 50 per cent of these cases could be improved and saved; the percentage could be higher if there were better cooperation from the family physician, the patient himself, and less resistance from the family against such a strict regime.”³¹ Gerson believed that he had accomplished a rate of cure of 50% for advanced cancers

after mainstream treatments had failed. I find this claim very difficult to believe.

There is the further question of just how strong the evidence was in the 50 cases that Gerson presented in *A Cancer Therapy* as among his best cases. Mark F. McCarty, of the McNaughton Foundation, offered the following comment:

Dr. Gerson published 50 cases which he believed best documented the success of his methods. A survey of these cases shows that many of them offer less than adequate evidence of response to the diet: recent prior treatment with standard modalities occurs in some cases; lumps or radiological findings appearing after surgical extirpation of the primary tumor are often assumed to indicate recurrence without proof; a few cases were never biopsied; and several were of tumor types that occasionally remit spontaneously. Nevertheless, barring outright deception on Gerson's part (and it was generally admitted by his opponents that Gerson was sincere), it is my impression that at least some of these cases indicate objective tumor regression in response to the Gerson methods. At a Senate Select Committee hearing on cancer research in 1945, five independent M.D.s who had personal experience with patients treated by Gerson submitted letters indicating that they had been surprised and encouraged by the results they had seen, and urged a widespread trial of the method. One of these doctors claimed that relief of severe pain was achieved in about 90% of cases. No controlled trial of Gerson's methods was ever undertaken.³²

Gar Hildenbrand, the scholarly current director of the Gerson Institute, believes that the results the Gerson Institute is getting today are analogous to those Gerson achieved. But neither he nor other long-time observers of the Gerson program suggest that they achieve anything approaching cure in 50% of advanced cancer patients.

Scientific Evaluations of the Gerson Program

In 1987, Gar Hildenbrand undertook an important and ambitious “best-case” review of patients on the Gerson program. The review was intended to focus on patients who had either had no previous conventional treatment or who had not been helped by previous conventional treatment.³³ The study was a heroic undertaking, and doubly important because it represented one of the most important efforts so far by a proponent of an alternative cancer therapy to design, fund, and carry out a major assessment of the objective benefits of the therapy. Unfortunately, the study turned out to be impossible to complete because the Gerson practitioners were relying on blind recall as to who had done well on the program, the number of “pure” cases in which neither allopathic intervention nor the natural history of the disease could possibly account for the favorable outcome was very small, complete records for patients seen over many years are very difficult and extremely expensive to get, and necessary reassessment is even more difficult and expensive. The study demonstrated the difficulties inherent in the full-scale best-case review as a prelude to controlled clinical trials or other formal evaluations.

In 1989, an objective and qualified British research team headed by Karol Sikora, Professor of Clinical Oncology at the Royal Postgraduate Medical School, University of London, visited the Gerson Clinic on behalf of a British insurance company. They observed clinic operations freely and were offered information from the files on what were considered by the clinic staff to be the best cases of the Gerson treatment. In addition to their best-case study, the researchers conducted a psychological assessment of patients currently at the clinic:

During our assessment we had free access to all the inpatients and their notes, and also a sample of notes gathered as examples of best responses. Out of a total of 3000 patients treated since 1974, 149 case histories were examined, having been selected by the Gerson Institute on the basis of replies to a postal questionnaire sent to patients over the past two years. The commonest tumours were melanoma (24), breast carcinoma (29),

colorectal cancer (21), prostate cancer (11), and lung cancer (15). .ê.ê. Of the patients responding, 27 had independent documentation of their disease status from their “conventional” physicians and thus were assessable according to standard oncological criteria [see table 14.1].³⁴

In their psychological study, the researchers found a very marked enhancement of quality of life and of pain control without the need for opiates, even in advanced cancer:

Psychological information was obtained from the patients present at the centre. .ê.ê. [A] striking feature was the high degree of control the patients felt they had over their health and, perhaps as a consequence, their high ratings for mood and confidence. Particularly intriguing were the low pain scores and analgesic requirements for all the patients, despite the presence of extensive metastatic disease in many and the fact that several had been on opioid medication previously.³⁴

In terms of tumor response to the therapy, the researchers concluded:

We could find little objective evidence of an antitumour effect from the Gerson therapy, although most patients were not assessable because of concomitant conventional therapy. However, in a few patients definite tumour regression was documented. In view of the poor prognosis of most of the patients, perhaps it is more important that there was a subjective benefit both to them and to their families. There is evidence that a “fighting spirit” response is associated with a better prognosis, and Spiegel and co-workers have shown that patients with metastatic breast carcinoma treated with psychotherapy in addition to conventional chemotherapy had a significantly improved survival. Judged in this context, the improvement in the Gerson patients’ sense of wellbeing may take on a greater importance.³⁴

The researchers pointed out that the example of the Gerson therapy did demonstrate a “way forward” for oncology practice:

“The nature of the therapy requires a positive contribution to be made by the patient to his or her health and meets a need not satisfied by conventional therapy, in which the role of the patient is essentially passive. These approaches may suggest ways forward for oncologists in the management of desperate cancer patients and their families.”³⁴

Conclusion

I undertook this extended review of the Gerson therapy for several reasons. First, the Gerson therapy is the oldest and best known of the modern Western alternative nutritional therapies for cancer, and there is more scientific information available on it than for most other nutritional treatments. Second, the complexities of evaluating the therapy, the historical and scientific issues, are similar to those raised by many other nutritional therapies. Third, in my judgment, the evaluation suggests the general range in which we might expect outcomes to be achieved with other intensive nutritional therapies.

What conclusions can we reach? I suggest that the most reasonable conclusion based on the currently available evidence, which is suggestive, but not definitive, is that the Gerson therapy sometimes enhances outcomes for patients with some types of cancer who have the stamina and the willingness to undertake it. Also, we can conclude that the Gerson therapy does not approach being a decisive cure for any type of cancer.

If adequate controlled clinical trials of the Gerson therapy are undertaken by open-minded and reasonably sympathetic researchers who have carefully studied the cancers in which Gerson therapy seems to yield the best results, I predict that the therapy will prove to be a significant adjunct to the judicious use of conventional therapies for those cancers. Further, it may also improve outcomes for some cancers where conventional treatment would bring few—if any—results. And I believe it would prove a legitimate option in some cancers where standard modalities have demonstrated only limited efficacy—in, say, 10% to 25% of cases—

but the costs in toxicity and quality of life are very high. I also predict that in controlled clinical trials, there would be a small but significantly increased number of cures, along with a wide range of increases in life expectancy and improved quality of life.

Gar Hildenbrand, current executive director of the Gerson Institute, has expressed his view that the Gerson therapy is a necessary adjunct to standard modalities. This move away from the original claims of cure is an important move toward a scientific middle ground. One day, the Gerson therapy may be recognized as being of supreme historical importance in the recovery of the nutritional component in cancer management. However, I believe it will prove to be only one version of a necessary adjunctive nutritional treatment. There are and will be other adjunctive nutritional treatments, and some may ultimately prove to be better approaches than Gerson's. I believe Max Gerson, the great pioneer of nutritional cancer therapies, the scholar's scholar, and the supreme empiricist who believed that results at the bedside were decisive, would be content to be remembered that way.

Albert Schweitzer said: "I see in Dr. Max Gerson one of the most eminent geniuses in medical history."³⁵ If one immerses oneself in Gerson's writings, the writings about him, and the scientific mystery story we have set out to unravel here, it is not difficult to see why he has inspired such admiration. He was a profoundly ethical man who helped recover for our time the great healing potential of a nutritional medicine based on the conventional scientific understanding of his time and on his own empirical experience. He sought to modernize and understand nutritional therapy in the context of a commitment to science and to his patients with cancer.

Notes and References

1 In October 1989, the Gerson Institute issued instructions to all patients to substitute carrot juice for calf's liver juice obtained from growers in the United States. This decision was based on

multiple outbreaks of bacterial infections at the Hospital de Baja California where liver juice was part of the therapy. Liver juice was added to the therapy by Gerson in 1950 in the belief that the nutritional quality of fruits and vegetables was declining due to modern farming practices. According to the Gerson Institute, the rise of modern organic farming holds out the promise of higher-quality fruits and vegetables than were available during Gerson's lifetime.

2 Patricia Spain Ward, "History of Gerson Therapy," contract report for the U.S. Congress Office of Technology Assessment (OTA), revised June 1988. This report created a storm of controversy at OTA when a staff member commented in writing that the paper seemed unduly favorable to Gerson, and proponents of alternative therapies vigorously protested the comment as evidence of bias against Gerson and against alternative therapies more generally. Rosemary Stevens, Ph.D., chair of the OTA Advisory Panel on the Unconventional Cancer Therapies Report subsequently commented at an open review session that Ward's paper was a professionally competent review of the subject.

13 Max Gerson, *A Cancer Therapy: Results of Fifty Cases* (Del Mar, CA: Totality Books, 1977), 7-10.

14 Gar Hildebrand, "Let's Set the Record Straight, Part 5—Bread, Propaganda and Circuses," *The Healing Newsletter*, The Gerson Institute, March-June 1987.

15 Max Gerson, "Effects of a Combined Dietary Regime on Patients with Malignant Tumors," *Experimental Medicine and Surgery* 7(4):299-317 (1949). Cited in U.S. Congress Office of Technology Assessment, *Unconventional Cancer Treatments* (Washington, D.C.: Government Printing Office, September 1990), 45.

16 Max Gerson, "Cancer, A Problem of Metabolism," translated from *Medizinische Klinik* 49(26):1028-32 (1954). Cited in Office of Technology Assessment, *Unconventional Cancer Treatments*, 45.

17 Max Gerson, "The Cure of Advanced Cancer by Diet Therapy: A Summary of 30 Years of Clinical Experimentation," *Physiological Chemistry and Physics* 10:449-64 (1978). Cited in Office of Technology Assessment, *Unconventional Cancer Treatments*, 45-6.

18 Freeman W. Cope, "A Medical Application of the Ling Association-Induction Hypothesis: The High Potassium, Low Sodium Diet of the Gerson Cancer Therapy," *Physiological Chemistry and Physics* 10:465-68 (1978).

19 Gerson, "The Cure of Advanced Cancer by Diet Therapy," 46.

21 William Regelson, "The 'Grand Conspiracy' Against the Cancer Cure," *Journal of the American Medical Association* 243(4):337-9 (1980).

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23 G.N. Ling, "The Association-Induction Hypothesis: A Theoretical Foundation Provided for the Possible Beneficial Effects of a Low Sodium, High Potassium Diet and other Similar Regimens in the Treatment of Patients Suffering from Debilitating Illnesses," *Agressologie* 24(7):293-302 (1983).

24 Cope, "A Medical Application of the Ling Association-Induction Hypothesis: The High Potassium, Low Sodium Diet of the Gerson Cancer Therapy," *Physiological Chemistry and Physics*, 465.

25 Imre Zs.-Nagy et al., "Correlation of Malignancy with Intracellular Na-K Ratio in Human Thyroid Tumors," *Cancer Research* 43:5395-7 (1983).

26 Chiu-Nan Lai and Frederick F. Becker, "Potassium-Induced Reverse Transformation of Cells Infected with a Temperature-Sensitive Transformation Mutant Virus," *Journal of Cellular Physiology* 125: 259-62 (1985).

27 P. Lechner, "The Role of a Modified Gerson Therapy in the Treatment of Cancer." Typescript, Second Department of Surgery, Landeskrankenhaus, Graz, Austria, 1987.

28 Robert Houston, personal correspondence with the author, 4 May 1991.

29 Max Gerson, "Effects of a Combined Dietary Regimen," *Experimental Medicine and Surgery*, 299-315 (1949).

30 Max Gerson, "The Cure of Advanced Cancer by Diet Therapy: A Summary of 30 Years of Clinical Experimentation," *Physiological Chemistry and Physics* 10:449-63 (1978).

31 Gerson, *A Cancer Therapy*, 33.

32 Mark F. McCarty, "Aldosterone and the Gerson Diet—A Speculation," *Medical Hypotheses* 7:591-7 (1981).

33 Office of Technology Assessment, *Unconventional Cancer Treatments*, 50.

34 Alison Reed, Nicholas James, and Karol Sikora, "Mexico: Juices, Coffee Enemas, and Cancer," letter to the Editor, *Lancet* 336:676-7 (September 15, 1990).

35 Gerson, *A Cancer Therapy*, cover.

http://www.coffee-enema.ca/history_gerson_therapy.htm

History of The Gerson Therapy

by Dr. Patricia Spain Ward

It is one of the least edifying facts of recent American medical history that the profession's leadership so long rejected as quackish the idea that nutrition affects health (JAMA 1946 1949, 1977; Shimkin, 1976). Ignoring both the empirical dietary wisdom that pervaded western medicine from the pre-Christian Hippocratic era until the late nineteenth century and a persuasive body of modern research in nutritional biochemistry, the politically minded spokesmen of organized medicine in the U.S. remained long committed to surgery and radiation as the sole acceptable treatments for cancer. This commitment persisted, even after sound epidemiological data showed that early detection and removal of malignant tumors did not "cure" most kinds of cancer (Crile, 1956; updated by Cairns, 1985).

The historical record shows that progress lagged especially in cancer immunotherapy - including nutrition and hyperthermia - because power over professional affiliation and publication (and hence over practice and research) rested with men who were neither scholars nor practitioners nor researchers themselves, and who were often unequipped to grasp the rapidly evolving complexities of the sciences underlying mid-twentieth-century medicine.

Nowhere is this maladaptation of professional structure to medicine's changing scientific context more tragically illustrated than in the American experience of Max B. Gerson (1881- 1959), founder of the best-known nutritional treatment for cancer of the pre-macrobiotic era. A scholar's scholar and a superlative observer of clinical phenomena, Gerson was a product of the German medical education which Americans in the late 19th and early 20th centuries considered so superior to our own that all who could afford it went to Germany to perfect their training (Bonner, 1963). As a medical graduate of the University of

Freiburg in 1909, Gerson imbibed all of the latest in scientific medicine, with the emphasis on specificity which bacteriology had brought into western medical thought in the preceding decades. Gerson subsequently worked with leading German specialists in internal medicine, in physiological chemistry, and in neurology (U.S. Congress, 1946, 98). The historical record does not tell us whether his medical education in Germany (where much of the early work in nutritional chemistry took place) included a study of diet, a subject neglected in American medical schools after the germ theory gained acceptance.

We do know that by 1919, when Gerson set up a practice in internal and nervous diseases in Bielefeld, he had devised an effective dietary treatment for the migraine headaches which frequently disabled him, despite the best efforts of his colleagues. In 1920, while treating migraine patients by this salt-free vegetarian diet, he discovered that it was also effective in lupus vulgaris (tuberculosis of the skin, then considered incurable) and, later, in arthritis as well (U.S. Congress, 1946, 98).

Trained in the theories of specific disease causation and treatment that began to dominate western medicine - for the first time in history - as bacteriological discoveries multiplied in the late nineteenth century, Gerson was at first uneasy about using a single therapy in such seemingly disparate conditions. But he was committed to the primacy of clinical evidence, which he liked to express in Kussmaul's dictum: "The result at the sick-bed is decisive" (quoted in Gerson, 1958, 212). In later years, after research began to provide explanations for Gerson's clinical observations, he quoted Churchill on the mistaken course of action he had thus avoided: "Men occasionally stumble over the truth, but most pick themselves up and hurry off as if nothing had happened" (Gerson, 1958, 212). Gerson persisted. In 1924 his success in treating tuberculosis of the skin brought an invitation from the noted thoracic surgeon, Ferdinand Sauerbruch, to test Gerson's diet in a special lupus clinic to be provided by the Bavarian government at the University of Munich.

As Sauerbruch recounts it in his autobiography, 446 patients out of 450 recovered - once he had discovered and put an end to the smuggling of sausages, cream and beer to the patients in the late afternoons (Sauerbruch, 1953, 167- 171). Later extended to pulmonary tuberculosis as well, this Gerson-Sauerbruch-Hermannsdorfer diet was widely used in Germany and became the subject of Gerson's first book in 1934 (Gerson, 1934; Hildenbrand, 1987 communication).

During the late twenties and early thirties Gerson had several experiences which informed his later thinking on diet and degenerative disease. As a member of the State Board of Health, appointed by the Prussian government, he was given extraordinary laboratory support for a clinical trial of diet in pulmonary tuberculosis. Besides the physiological parameters customarily monitored in such work, Gerson was able to track minute fluctuations in the patients' mineral metabolism and also in the chemical composition of the foods he prescribed (Gerson, 1958, 183). At this same period he served as consultant to the Prussian Ministry of Health on the best ways to restore to agricultural usefulness the exhausted soil around several major German cities (Gerson, 1958, 183). When he learned that modern farming methods often rob plant foods of their natural mineral and vitamin riches, while increasing their sodium content, he began to think of the earth's well-being as central to our own. Eventually he began to refer to the soil, which nourishes the food we eat, as our "external metabolism" (Gerson 1958, 175).

It was in 1928 that Gerson first used his diet in cancer, at the insistence of a woman who had jaundice, high fever and two small liver metastases after unsuccessful surgery for cancer of the bile duct (Gerson, 1958, 31). On the strength of reports she had heard of Gerson's work with tuberculosis, this woman insisted that he write out a diet for the treatment of her cancer. Gerson reluctantly agreed - after he obtained her signed statement that she would not hold him responsible for the outcome! As he recalled it many years later, this same patient

had him read aloud to her a chapter called "The Healing of Cancer" from a big book of about 1200 pages on folk medicine, " edited by three schoolteachers and one physician, none of them practitioners. It was from this source that Gerson first learned of the special soup which Hippocrates supposedly gave to cancer patients and which Gerson made a fixture of his cancer Therapy (Gerson, 1958, 31, 403-404; Gerson, 1978, 449-450). Having taken up this challenge against his will, with no hope of success, Gerson was astounded when his patient seemed fully recovered within six months (Gerson, 1958, 405). In quick succession he had the same good results with two patients with inoperable stomach cancer, both referred by this first patient. Late in life he continues to marvel at these apparent recoveries under his diet treatment (Gerson, 1958, 404- 405). (These notable histories, which Gerson recounted in some detail, have prompted one recent researcher to suggest the possible involvement of aldosterone as the mechanism of mineral-corticoid sensitivity in gastrointestinal tumors. See McCarty, 1981).

In Vienna, where he lived for a time after the rise of Hitler, Gerson's treatment failed in all seven patients he attempted to treat in this manner - a failure which, in later years, he attributed to inadequate dietary provisions in the sanitarium where he then worked (Gerson, 1958, 31-32, 405). In Paris, where he lived in 1935-36, the diet produced good results in three out of seven cases (Gerson, 1958, 32, 405; Gerson, 1978, 451), inspiring him to pursue such treatment further after he emigrated to the United States in 1938.

Gerson constantly sought explanations for his observations in the scientific literature, where he read widely in several languages (Gerson, 1958). In 1954, in "Cancer, a Problem of Metabolism," he credited J. Maisin (1923) and B. Fischer-Wasels (1929) with advancing physiological explanations of general predisposition toward tumor formation and abandoning the theory of cancer causation by local irritation. For the next few decades (according to Gerson's account of the evolution of cancer concepts) there was

a tendency to interpret cancer in terms of constitution and diathesis, as was done with diabetes, gout and tuberculosis. It was Caspari (Nutrition and Cancer, 1938) who turned to metabolic explanation of the kind Gerson ultimately favored (Gerson, 1954, 1). He devoted an entire chapter of his book to a review of efforts, largely by German researchers, to alter metabolism by diet (Gerson, 1958, 89-104). He found special appeal in Otto Warburg, *The Metabolism of Tumors*, (London, 1930), in G. von Bergmann's *Funktionelle Pathologie* (Berlin, 1932), and in Frederick Hoffman's massive compilation, *Cancer and Diet* (Baltimore, 1937). Gradually, out of his bedside experience and his reading, he formed a unitary theory of degenerative disease (including cancer) which rested on one of the oldest and most pervasive concepts in the history of medicine: the *vis medicatrix naturae* or healing power of nature (Neuburger, 1926 and 1944; Warner, 1978). Endlessly seeking out the latest researches and theories in physiology, biochemistry, and - increasingly - immunology, Gerson rapidly integrated these massive bodies of new detail into the larger framework of what he called "the physician within", that is, the natural powers of resistance, which we today call the immune system.

Gerson believed that cancer changes the body's normal sodium/potassium balance, already disturbed by modern diet. Thus his therapy used foods low in sodium (no salt added), high in potassium, and rich in vitamins A and C and oxidizing enzymes. He excluded fats and dairy products for the first four to six weeks, considering them dangerously burdensome to the digestion in the extremely sick patients who usually came to him only after having exhausted conventional measures. Above all it was essential for patients to eliminate excess sodium, which Gerson believed responsible for altering cellular electrochemistry in favor of cancerous growth.

There is now a great deal of research suggesting possible mechanisms for the efficacy of Gerson's high potassium/low sodium diet. As he suspected and we now know, hypokalemia

often accompanies cancer of the colon, and alterations in electrical and mineral states occur often in cancer patients (Newell, 1981, 87). Cone has furnished experimental proof of a correlation between the level of electrical potential across somatic cell membranes and the intensity of mitotic activity (Cone, 1971), a finding supported by Zs.-Nagy and his colleagues in studies so human thyroid cancer (Zs. -Nagy, 1983). Ling's association/induction hypothesis is based on laboratory studies which show that damaged cells partially return to their normal configuration in high potassium/low sodium environments (Ling, 1943), perhaps explaining the remarkable tissue repair which Gerson sometimes saw in his formerly debilitated patients (Cope, 1978). Lai has suggested that intracellular sodium and potassium levels may furnish the mechanism for regulating cellular differentiation and transformation (Lai, 1985).

To supply active oxidation enzymes and potassium-rich minerals, Gerson's patients drank hourly glasses of freshly prepared vegetable and fruit juices. As early as 1933-34, while living in Vienna, Gerson had begun giving injections of liver extract, as another means of stimulating the patient's liver (Gerson, 1958, 31-32). In later years he had patients drink two to three glasses daily of the juice of calves' liver pressed with carrots. In addition to beta-carotene/vitamin A, this would supply iron and copper, both of which affect peripheral T cell functions and other peripheral lymphocyte subpopulations (Keusch, 1983, 345- 347).

Although the AMA Council on Pharmacy and Chemistry labeled as a "false notion" the idea that diet can affect cancer, recent researchers have found that "nutritional status plays a critical role in immunological defense mechanisms at a number of important levels" (Keusch, 1983, 345) and that nutritional factors "can have profound influences on ... the development and manifestations of cancers" as well as other diseases (Good, 1982, 85). In "The Cancerostatic Effect of Vegetarian Diets" (1983), Siguel describes as the ideal way to strengthen bodily defenses

against neoplastic cells a diet similar to Gerson's: high in carbohydrates and vegetables, low in protein.

Like von Bergmann, Gerson believed that "every defense and healing power of the body depends on the capacity of the body to produce a so-called 'allergic inflammation'" - a truth long recognized by surgeons, but somehow forgotten by medicine during the heyday of microbiology. To Gerson this capacity to produce inflammation was "the decisive part of the body's 'weapon of healing power'" (Gerson, 1958, 127-28).

Noting that fluid from a normal inflammation metabolism kills cancer cells, but that blood serum does not, von Bergmann concluded that a cancer metabolism occurs when the body can no longer produce this healing inflammatory reaction (Gerson, 1958, 120- 121). Gerson agreed, but in contrast to von Bergmann and most of his contemporaries, Gerson believed it was often possible for the physician to help restore the vital power of inflammation, even in anergic patients with advanced cancer. If cancer was a degenerative disease caused by the cumulative effect of inadequate nutrition with foods grown in soils depleted by artificial fertilizers and poisoned by toxic insecticides and herbicides, doctors must respond by replenishing the entire human organism. For a condition that represented an ultimate failure of equilibrium in a poisoned metabolism, removal of tumors by surgery or radiation was merely superficial, symptomatic treatment. "Medicine," Gerson said, "must be able to adapt its therapeutic methods to the damages of the processes of our modern civilization" (Gerson, 1958, 199).

Gerson set about doing this by altering the basic diet he had used earlier in other conditions. Through meticulous observation of his patients in New York (where he passed state boards in 1939), he perfected a regimen of detoxification and diet requiring a high degree of compliance by the patient, heroic devotion by the patient's family, and close attention and frequent adjustment by the physician. His therapy aimed to detoxify the body and restore

its healing apparatus, especially the liver, the visceral nervous system, and the reticulo-mesenchymal system.

Gerson first encountered the idea of detoxication in cancer in the version of Hippocratic regimen which he read with his first cancer patient in Bielefeld in 1928 (Gerson, 1958, 404). After losing several cancer patients to hepatic coma rather than to direct effects of the disease (Gerson, 1958, 191), he realized that "The digestive tract is very much poisoned in cancer". The liver and pancreas failed to function: "nothing is active" (Gerson, 1958, 407). To stimulate the liver, he began to use [coffee enemas](#), which O.A. Meyer of Goettingen had found effective in opening the bile ducts in animals and which American surgeons in that period were using in acute adrenal insufficiency and in shock from postoperative hemorrhage and bleeding peptic ulcer (Beeson, 1980, 90, 96; Rothstein, 1987, 124). As he watched the progress of his patients, he found that he could accelerate detoxication by giving [coffee enemas](#) more frequently, with the addition of castor oil, by mouth and by rectum (Gerson, 1958, 81).

Although Gerson used caffeine enemas primarily to facilitate excretion of toxic wastes, especially from necrosing tumors, we now realize that these enemas also promoted the absorption of vitamin A, a process requiring the action of bile acids (Simone, 1943, 64). Thus the enemas that brought ridicule from Gerson's enemies actually enabled his patients to use the enormous amounts of vitamin A which his diet provided (recently estimated at about 100,000 IU daily: see Seifter, 1988). Vitamin A, in turn, plays a vital role in immune function, perhaps by causing the helper cells to induce the production of interleukin-2, or by causing killer cell precursors to activate cytotoxic mechanisms, or by causing suppressor T cells to eliminate down regulation (Keusch, 1983, 330-331).

Gerson also found that caffeine enemas greatly reduce pain, a particular boon in his regimen, which avoids the use of opiates and other painkilling drugs that might overtax the liver at a time

when its limited capacity is needed for immune functions and for eliminating the toxic products of tumor breakdown.

Although the AMA Council on Pharmacy and Chemistry labeled as a "false notion" the idea that diet can affect cancer, recent researchers have found that "nutritional status plays a critical role in immunological defense mechanisms at a number of important levels" (Keusch, 1983, 345) and that nutritional factors "can have profound influences on ... the development and manifestations of cancers" as well as other diseases (Good, 1982, 85). In "The Cancerostatic Effect of Vegetarian Diets" (1983), Siguel describes as the ideal way to strengthen bodily defenses against neoplastic cells a diet similar to Gerson's: high in carbohydrates and vegetables, low in protein.

Gerson gradually added a few medications to his diet. One of these was niacin, which he believed would help restore proper intracellular potential, raise depleted liver stores of glycogen and potassium, and aid in protein metabolism (Gerson, 1958, 32, 99-100, 209). Another was iodine, which Gerson initially used only in cases of low metabolic rates. When he found that "The best range of healing power" was a BMR of +6 to +8 (monitored by organic iodine in blood serum), and that iodine seemed to counteract the neoplastic effect of hormones, he incorporated iodine into the basic regimen, at first in the form of thyroid extract, later as inorganic Lugol's solution (iodine plus potassium iodide) (Gerson, 1958, 32, 409; U.S. Congress, 1946, 114). Several researchers have showed that thyroid raises natural resistance to infection by augmenting the power of reticuloendothelial cells and by increasing antibody formation - thus supporting Gerson's hunch that iodine was a decisive factor in the normal differentiation of cells (Lurie, 1960; Thorbecke, 1962).

Despite the fact that he had no inpatient facility until 1946, when he opened a clinic in Nanuet, New York, Gerson managed, through his thriving Park Avenue practice and an affiliation at Gotham Hospital, to amass enough data to publish a preliminary report in 1945. He presented his rather remarkable case histories

modestly, concluding that he did not yet have enough evidence to say whether diet could either influence the origin of cancer or alter the course of an established tumor. He claimed only that the diet, which he described in considerable detail, could favorably affect the patient's general condition, staving off the consequences of malignancy and making further treatment possible (Gerson, 1945).

Gerson may have struck an Establishment nerve with his statement that many physicians use surgery and/or radiation "without systematic treatment of the patient as a whole" (Gerson, 1945, 419). But it seems more likely that it was his growing success in practice, or perhaps even his opposition to tobacco, that first drew the wrath of organized medicine. (Philip Morris was then JAMA's major source of advertising revenue: see Rorty, 1939, 182 - 194).

In any case the AMA did not openly attack Gerson until November 1946, a few months after he testified in support of a Senate bill to appropriate \$100 million to bring together the world's outstanding cancer experts in order to coordinate a search for the prevention and cure of cancer. At hearings before Senator Claude Pepper's sub-committee in July 1946, Gerson demonstrated recovered patients who had come to him after conventional methods could no longer help. Dr. George Miley, medical director of the 85-bed Gotham Hospital, where Gerson had treated patients since January, 1946, gave strong supporting medical testimony (U.S. Congress, 1946).

In a surly editorial response, JAMA said it was "fortunate" that this Senate appearance received little newspaper publicity; the AMA was clearly outraged that Gerson's appearance had become the subject of a favorable radio commentary, broadcast nationwide by ABC's Raymond Gram Swing (U.S. Congress, 1946, 31-35; JAMA, 1946). The JAMA editorial focused on Gerson, even though it was not Gerson but a lay witness, immune to AMA retaliation, who had called Gerson's successes "miracles" and urged the Senators to secure their future cancer commission

against control by any existing medical organization (U.S. Congress, 1946, 96,97).

It was not Gerson, but Dr. Miley, who told the Senators that a long-term survey by a well-known and respected physician showed that those who received no cancer treatment lived longer than those who received surgery, radiation or X-ray (U.S. Congress, 1946, 117). Perhaps because Miley was a Northwestern medical graduate, an established physician licensed in four states, and a fellow of the AMA and state and county societies of Pennsylvania and New York, Morris Fishbein did not attack him personally. Instead, he limited himself to intimations of fiscal impropriety in the Robinson Foundation, which owned Miley's Gotham Hospital, and to the scandalous revelation that the director of the section on health education of this Foundation (which was promoting "an unestablished, somewhat questionable method of treating cancer") was not an M.D. at all, but a Yale University professor of economics!

Compared to Miley's testimony, Gerson's was innocent, concentrating on the histories of the patients he brought with him and on the likely mechanisms whereby his diet caused tumor regression and healing. Only under pressure from Senator Pepper did Gerson state that about 30% of those he treated showed a favorable response (U.S. Congress, 1946, 115). Nonetheless, JAMA devoted two pages to undermining Gerson's integrity (JAMA, 1946). Showing no restraint where Gerson was concerned, Fishbein, contrary to fact, alleged that successes with the Gerson-Sauerbruch-Hermannsdorfer diet "were apparently not susceptible of duplication by most other observers. " He also falsely claimed that Gerson had several times refused to supply the AMA with details of the diet. (Fishbein said he could provide them in this editorial only because "there has come to hand through a prospective patient" of Gerson a diet schedule for his treatment.) Fishbein emphasized, without comment, Gerson's caution about the use of other medications, especially

anesthetics, because they produced dangerously strong reactions in the heightened allergic state of his most responsive patients.

Fishbein attempted to tie together this strange patchwork of slurs against Gerson and against research supported by lay-dominated industrial corporations with his accustomed mastery of innuendo: "The entire performance, including the financial backing, the promotion and the scientific reports, has a peculiar effluvium which, to say the least, is distasteful and, at its worst, creates doubt and suspicion" (JAMA, 1946, 646).

Through no fault of his own, Gerson was again portrayed favorably in the news in 1947, when John Gunther, in *Death Be Not Proud*, credited Gerson with extending the life of Gunther's son during the boy's ultimately unsuccessful struggle with brain cancer. Beginning that same year the New York County Medical Society staged five "investigations" of Gerson and eventually suspended him for "advertising" his "secret" methods.

At this point Gerson's life took on a nightmare quality. The Pepper-Neely bill met defeat and, with it, the hope for coordinated cancer research free of prior restraints against investigations of anything other than "established" methods. In 1949 the AMA Council on Pharmacy and Chemistry, in a report entitled "Cancer and the Need for Facts", rehashed material from the earlier editorial, adding that the Gerson diet was "lacking in essential protein and fat" and that Gerson's concern about the dangers of anesthesia was "wholly unfounded and apparently designed to appeal to the cancer victim already fearful of a surgical operation which might offer the only effective means for eradication of the disease". Without benefit of either a literature search or new clinical or laboratory research, the Council labeled as a "false notion" the idea that "diet has any specific influence on the origin or progress of cancer". They concluded that "There is no scientific evidence whatsoever to indicate that modifications in the dietary intake of food or other nutritional essentials are of any specific value in the control of cancer" (Council on Pharmacy and Chemistry, 1949, 96). Gerson lost his hospital affiliation and

found that young doctors who wanted to assist him and learn from him could not do so, for fear of incurring Society discipline. He was denied malpractice insurance, because his therapy was not "accepted practice" (Moss, 1980, 178; Natenberg, 1959, 136).

In the early fifties Gerson submitted five case histories to the NCI, requesting an official investigation. He was told that they would need 25 cases, which he promptly supplied, with full documentation. More than a year later the NCI demanded 125 case histories, saying that the 25 they had previously requested were insufficient to justify investigation.

According to a 1981 publication of the Gerson Institute, headed by his daughter, Charlotte Gerson, a manuscript for a book he was writing about his therapy disappeared from his files in 1956 (Healing, 1981, 19) At the age of 75, isolated from medical colleagues and unable to find assistants, Gerson undertook the work of rewriting the entire manuscript in order to show "that there is an effective treatment of cancer, even in advanced cases" (Gerson, 1958, 3). It was published in 1958, as *A Cancer Therapy: Results of Fifty Cases*. Gerson died of pneumonia the following year, before finishing a second volume. His ideas have gained wide distribution through subsequent editions of his book (1975, 1977, and 1986); through a 1962 publication called *Has Dr. Max Gerson a True Cancer Cure?*, which had reportedly sold more than 250,000 copies by 1980 (Moss, 1980, 178); and through the publications and physician-training programs of the Gerson Institute in Bonita, California, and the Hospital de Baja California.

In 1980 a reformed JAMA carried a commentary called "The 'Grand Conspiracy' Against the Cancer Cure" by William Regelson of the Department of Medicine of the Medical College of Virginia. Surveying a series of "inappropriate judgments [that] have resulted in injury to good observations," Regelson said, "We may shortly have to ask if Gerson's low-sodium diet, with its bizarre [coffee enemas](#) and thyroid supplementation, was an approach that altered the mitotic regulating effect of intracellular sodium

for occasional clinical validity in those patients with the stamina to survive it" (Regelson, 1980, 338).

Disregarding such suggestions and resting its case instead on the claim that the NCI had "found no convincing evidence of effectiveness" during a review of ten Gerson cases some forty years earlier, the American Cancer Society in 1987 stated that "The Gerson method of cancer treatment is not considered a proven means of cancer treatment, and on the basis of available information, the Institute does not believe that further evaluation of this therapy is called for at this time" (American Cancer Society, February 5, 1987).

Testing is underway, however, outside of the U.S. Since 1984 a modified form of Gerson's therapy has been in use at the Second Department of Surgery of the Krankenhaus in Graz, Austria. Omitting liver juice and niacin, using thyroid only in hypothyroid patients, and limiting caffeine enemas to two per day, Peter Lechner and his colleagues, all of them surgeons, have been testing the Gerson method as an adjunct, often with chemotherapy or radiation, in 60 post-operative cancer patients, male and female, ranging in age from 23 to 74, and representing many different forms of cancer. By pairing each patient who was willing to use the Gerson method (GP) with one of similar age and condition who chose not to try it (NGP) and observing the comparative progress of the disease in the two groups over a four-year period, Lechner and his colleagues have approximated a controlled study of admittedly imperfect structure (Lechner, 1987).

Their findings show that the Gerson therapy made a notable difference in several forms of cancer. Although GPs with bone metastases had no better survival or tumor response than NGPs, their relief from pain and absence of hypercalcemia made for a better quality of life. GPs with lung metastases required fewer procedures to relieve pleural effusion. GPs with brain metastases experienced decreased edema and lived four months longer than their paired NGPs. Premenopausal and perimenopausal breast

cancer GPs tolerated conventional treatments better, with fewer side effects; showed better liver and kidney function and blood counts; and had fewer local recurrences and no metastases. Breast cancer GPs with liver metastases tolerated chemotherapy better, and one of three has been in a steady state for more than a year, while the remaining five have died. GPs with colorectal carcinoma seemed to gain weight and recover better after surgery, but showed no significant difference in incidence of secondaries or local recurrence. The best responders to date are GPs with liver metastases, with two GPs showing improved hepatic enzyme profiles compared to two NGPs; in four other pairs, although profiles remained similar, the GPs lived twice as long as the NGPs (Lechner, 1987).

It is an irony of both history and geography that the first comparative study of Max Gerson's therapy should take place at the hands of surgeons, in that part of the world which Gerson fled as a Jewish refugee half a century ago and that the results, while not so outstanding as those he seemed able to produce, are most encouraging in patients with severe damage to the liver, the organ he considered central to recovery.

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