

History of the Gerson Therapy

by 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 detoxication 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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