

Reprint

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## No cancer in normal metabolism

(Results of a special therapy)

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We physicians need a theory for orientation, interpretation, and as a basis for an applied therapy. Experiments have taught, and it has been confirmed time and again, that repeated tarring of the skin first produces benign warts, so-called papillomas; renewed tarring increases stimulation of epithelial cells to form new warts. But after 6 months, the new wart formation stops along with exposure to tarring, and the previously altered cells are restored again by the biological laws of harmony in the body. The ultimate transformation into cancer cells is very different, something new. It means disordered, wild proliferation of the cells, detached and becoming independent from the rules ordering the entire body and the higher nerves centers. I believe that the cell does not decide this alone, rather it is the entire body or, even moreso, the vital organs, which first partially lose defensive strength and healing power that is later completely lost. The great, organizational capacity of the body is lost. Yamagiwa (1915) and Itchikawa (1918/21) described [1] that the tarred cancerous animals showed changes in the liver, kidneys, spleen and glands after 8 months and longer. It has been overlooked that the local irritation and skin reaction do not create the definitive conversion into cancer, but that the general above-mentioned illness occurs first after an interval, and only then comes an environment that triggers the development of cancer.

Bauer's mutation theory [2], and that of many other writers, get stuck in the local factor. Every theoretically possible irritation factor is projected onto these cells, but these only support a therapy if they have meaning. The experiments of Murphy and Sturm [3] demonstrate that the local factor is not decisive: Even though tar was rubbed

into different skin locations, 60 - 78% of the animals developed cancer of the lung. Schabad [4] removed the tar-rubbed skin before cancer could develop, and observed cancer arise in other organs; also, when Fischer-Wasel, Beck, Oberling and Raileanu [5], injected tar under the skin into the trachea or vein, cancer often formed in the ears of the animals where the metal rings to which their numbers were fastened caused chronic inflammations. New experiments are needed to show whether the cancer coincides in the beginning with conversion of the general disease, whether and to what extent it precedes it, or whether it follows it.

I believe the first cancer cell, or cells, have been forced into cancer metabolism in order to save their lives.

Therefore, I conceive of the development of cancer, briefly, in such a way that no specific factor is, but several conditions are, necessary for it: A local process, consisting of early chronically injured or not absolutely mature cells, *Aschoff's* transitional cells, where the real symptom appear later. A common factor must be added to the local process, which remains clinically undetected, which was taken far too little into account, but was decisive. My therapy is directed almost completely against this second factor, which belongs to the metabolism as a whole.

Viral infections are an exception to the theory, because they can cause almost immediate oncogenesis without latent time. In addition, their multiplication is parallel with the increase of tumor cells, and, in the end, the infection causes education of specific antibodies after surgical or radiotherapy treatment [7], and immunity, which is almost always absent in carcinoma. Such infections with cancerous tissue developments are outside the rules of ordinary cancer development.

Already Volkmann (1875) [6] and many authors after him have recognized the latent time between the first appearance of the skin damages, the tar- and paraffin wounds, and the later reorganization in cancer proper. After all, they have not grasped the final oncogenesis to be a result of general damage, and they have not ventured to create a therapy for it.

The first cancer treatment was found empirically through the study of estrogen on metabolism. As a result, researchers have switched off the sexual organs and, into the bargain, have applied the opposite hormones; but with little or only temporary success. So I gradually came to an understanding that can be stated in one sentence: Cancer cannot develop in a body with normal metabolism. Therefore, the therapy must aim as far as possible at making the metabolism normal, or at approximating the norm.

The metabolic defect is no simple specific impairment or general allergy, so it is not enough to replace missing vitamins, minerals or hormones, or omit all possible allergens, which Coca sees as the effect of my diet. What I suspect is described later. The reversion of these abnormal cells to the embryonic state was forced. Biologically, this is not so extraordinary, because severe inflammation (according to Schade [8]) can return some tissues to embryonic metabolism, particularly connective tissue and capillaries (not so readily epithelial cells), and thus produce rapidly growing proliferative tissues, but everything remains in the context of expediency. In contrast to cancer, these previously normal cells revert again to normal after they have fulfilled their special task; cancer cells never. Once a cancer cell, always a cancer cell, as all experiments [13] have shown. There must have been something abnormal about these cells before their transformation.

This idea gains further clinical significance through the observation that the more malignant cancers, such melanosarcoma, lymphosarcoma, chorionepithelioma, choriocarcinoma of pregnancy, respond most rapidly and extensively to therapy; the less malignant types react slowly, and benign tumors such as fibroids, prostatic hypertrophy, osteomas, etc., take a long time and are converted very laboriously into scar tissue with or without calcification. We may well infer that cell types deviated farthest from the norm collapse fastest and are completely absorbed, often in an almost incredibly short period of several days, the other types stepwise more slowly.

Cancer tissues, as almost all authors have uniformly found, are electrically negatively charged (HS Burr, et al [9]). Therefore, they belong to the more primitive tissues with lower differentiation, such as we find in the lower animals, and in the embryo. Theoretically, according to the teaching of

Rudolf Keller [14], they would have to be rich in sodium, chloride and water, and correspondingly poorer in potassium and the potassium group. Strangely enough, this could not be confirmed by most biologists, with the exception of Moravek [15]. We know from the fetus [12] that, with maturation, the sodium content of the major tissues decreases and the potassium content increases; half a year after birth there is potassium dominance of the vital organs. Also, for the development of the cancer, we must return to a general physical law, namely that increased sodium and iodine lead to rapid growth with little differentiation, because we find both of these components of the sodium group (Keller [11]) are especially high in the lowest living organisms, bacteria, germs and parasites. Conversely, we find that more potassium, and more minerals of the potassium group, together with a rational amount of iodine, lead to increased differentiation and slower growth, as in higher animals and humans. The potassium-rich muscles are best protected against cancer metastasis.

From clinical pathology, we learn further that cancer tends to develop where sodium chloride and water are reabsorbed in collection channels, as in the excretory ducts of breast disorders, the parotid, the submaxillary and sublingual gland, the pancreas, about 60% in the head — ampulla or papilla of Vater —, the biliary duct system of the liver, very rarely in the small intestine where no sodium is absorbed, more frequently in the colon, especially often in the sigmoid colon and rectum where most Na is absorbed, and finally in the outlets of the sweat and sebaceous glands of the skin. Regarding the kidney, one might well assume something similar.

A regression of cancer cells into normal tissue has never been observed, except in very rare observations in test-tube cultures of cancer. For treatment, therefore, it seems the most natural thing to use the metabolism of the cancer tissues to cut off their biological conditions for further life. For these purposes, several therapies are of crucial importance:

1. In the cancer tissue and its metastases: Elimination of Na, Na group (edema) (especially NaCl H<sub>2</sub>O). With the conditions withdrawn for the activity of the negative fermentative enzymes (xanthine dehydrogenase, acid phosphatase, desoxyribonucleodesaminase, ribonucleodesaminase, etc), it can be understood that the cancer cells collapse; otherwise the reductions of tumors

occurring in only days could not be understood. Simultaneously with the edema, toxins are eliminated which affect a large number of such enzymes, some of them as hydrolytic enzymes or kinases, classified as proteolytic enzymes.

2. At the outset, the surrounding tissue is likewise freed from edema and toxins — however, in contrast to the cancer cells, the positively charged potassium compounds and potassium group are restored in cells that were previously only damaged [11]. Therewith, some basics are restored for the resumption of function of the likewise positively charged oxidizing enzymes [16], namely the need for pH level and the need in the important organs of positive electric charge. In addition to the enzymes, the vitamins which frequently act as coenzymes must be restored simultaneously, along with the necessary hormones that sometimes stimulate, and sometimes suppress, the actions of the enzymes by means of the hypophysis and the adrenal system, and finally the visceral nervous system, the norm again approximated, must actively engage in and regulate many cell functions (circulation, secretion, metabolism, etc.). Thus, in the end, symmetry and harmony are produced in the function of the organs.

3. There must be enough functioning liver tissue to be there and stay there to maintain the metabolism in the main elements. This allows the previously damaged and more or less emptied liver to be replenished during the day again in order to be able to continually deliver, day and night, the necessary materials to the blood. Therefore, ample vegetable and fruit juices, and fresh calf liver juice, with abundant vitamins, enzymes, auxin [17], minerals, etc., are supplied approximately every hour throughout the day. The liver juice contains 0.16% fat, proteins 1.20%, 0.03% cholesterol, etc.

Briefly summarized, the theoretical purpose of the metabolism-cancer problem lies in the fact that, with the resolution of the edema and the decontamination of the cancer cells, one deprives the cancer cells of the condition for fermentation and, on the other hand, restores the condition for the function in the vital organs of the oxidative enzymes, which must be supplied freshly prepared for a long time. This is a heroic biological intervention, which probably reaches into every aspect of the metabolism. In the center of these therapeutic efforts stands especially the liver because a great deal of the necessary metabolic processes happen there, and

the oxidative enzymes are reactivated there (Rudolf Schoenheimer [18]). Clinical experience shows again and again that, in the far advanced cases, the liver is sacrificed most extensively for the defense and temporal preservation of the body. Since about 90% of all cases that come to me are so-called generalized cancer or endstage, with which the usual methods had been used in vain, the detoxification of the body plays the main role in the beginning of therapy. These seriously ill patients need enemas, day and night, at first every 3 - 4 hours, less later. Pain medications are no longer given. For pain, patients receive infusions of coffee and start a mixture of aspirin  $\frac{1}{3}$  gram, 50 mg niacin and vitamin C 100 mg three to four times a day. The greatest care is necessary for the removal of the poison materials accumulated in the body and, into the bargain, from poison substances freshly absorbed from collapsing tumors, or the sick people die of the so-called "coma hepaticum." Several autopsies have shown that livers enlarged with cancer nodules become incapable of this remedial task, just as those shrunken with diffuse cirrhosis of cancer. Another part of the patients with enlarged, toxic, heavily-damaged livers with numerous perceptible nodules and jaundice were still able to perform the healing; however, some of them go to ruin after a period of 8 - 16 months; the cancer plays another damaging role. One found cirrhosis with ascites, jaundice without cancer, etc. These brief data regarding the meaning of the liver and the importance of the elimination of the poisons must be sufficient here.

Case 1. Mrs. Dora Sch.-B<sup>\*</sup>), 44 years old.

Radical hysterectomy in 1939 due to multiple fibroids. In 1942, she had double vision for about 2 months, and at the same time the visual acuity was decreased in the left eye to the outside. Later she became very nervous, touchy, had attacks of melancholy and states of anxiety, headaches increased in strength, and violent discomfort started in the lower part of the lumbar spine. The ophthalmologist found active pupil reaction, pallor of the papillae, narrowing of the fine arteries and loss of vision of almost the entire right eye. Start outpatient treatment on 02/14/1946. After few months she felt fine and reduced the iodine medication and the diet therapy herself to a minimum. Her condition deteriorated rapidly in August; in September 1946 she was admitted almost unconscious on my station, back to my treatment. I succeeded

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\* Demonstrated at Berchtesgaden, October 1952.

in bringing her out of the subcomatose state with plentiful enemas and abundant juices. She recovered in a relatively short time, was discharged in September, was able to resume her full housework within 2 – 3 months and, according to the eye examination results as reported on 29 September 1946, she could read and write again and later even help take care of her husband's correspondence. It is interesting in this case that, after the collapse of 1946, the hair around the vulva, in both axillae and on both forearms and legs, was completely lost. After a year it began to grow again, and is now restored. The dull feeling in hands and fingers disappeared after about 2 years. Furthermore, it is interesting that three times she suffered a breakdown with heavy depression, every time she interrupted Lugol thyroid medication for longer than 5-6 weeks. Currently, after 7 years, she feels stronger and more eager to work than in the years after the hysterectomy.

The diagnosis of the neurologist is: Tumor of the pituitary gland, the sella turcica is enlarged by the most aggressive extension, which partially destroyed the surrounding bone. The right eye is blind and the half of the left is destroyed.

X-ray findings: The sella turcica is extraordinarily extended, the posterior lobe and the anterior and posterior clinoid process are destroyed. Over the interval, the sella remains greatly expanded. In the region of the base, there is considerable osteosclerosis with a sharp borderline. Larger sections of the anterior and posterior clinoid process are visible again (see Figure 1-3 p. 187).

Case 2. Mrs. AB, 3 years old, married, 2 children.

On 25 January 1953 abortion. Because of bleeding curettage. Three days later repeated bleeding.

On 17 February 1953 admitted to the hospital, on 23 February re-curettage.

Aschheim-Zondek test positive for blood and urine.

Microscopic diagnosis: trophoblastic elements, just as in chorionepithelioma (choriocarcinoma).

On the 4th of March, again reddish-gray fragments were discharged from the vagina. Microscopic diagnosis showed the same findings.

On the 9th April the uterus showed enlargement similar to a pregnancy of 10 weeks. Total hysterectomy was carried out on the 20th of April. She could not tolerate radiotherapy.

My treatment began on 4 May 1953.

Patient was in very poor condition, extremely depressed, with very severe, constant pain in the back and lower abdomen. In the lower right quadrant were found two small-tomatoe-sized masses, extremely painful to the touch. Liver and spleen were not increased substantially, in the abdomen no free liquid. From the vagina a moderate secretion of whitish, slimy consistency, Zondek-Aschheim in urine strongly positive, in the blood serum 1:40 positive. On the 19th of May, no more tumor could be felt. The patient was up and lively, without complaints. The earlier intestinal sluggishness cured, the patient feels fine now.

X-ray findings: On 22 May 1953 are visible a series of irregular shadows in the lateral portion of the right lower lung fields, of which a row of strip-shaped shadows extends to the hilum. On 3 June 1953 the aforementioned shadows are in part completely undetectable, and in part only partially visible (see Figures 4-7 p. 187 and 188).

Case 3. Mrs. AY, 56 years old, 5 children.

In February 1952 she noticed a swelling in the lower left hip, at the same time pain in the right shoulder and knees, simultaneous with the start of menopause. The tumor grew slowly at first, later very rapidly. 12th August it was operated. The tumor was removed to a large extent; the microscopic diagnosis, confirmed by two other pathologists, was: "malignant synovioma" (synovial sarcoma). After the operation she received 14 deep radiation treatments, which could not be continued because of minor skin burns. After recurrence of the tumor, total amputation of the left leg and the left half of the pelvis was advised, but refused by the patient.

On admission on 4 September 1952 she presented, at the left thigh just below the greater trochanter, an elongated, hard tumor mass of 10 cm in length and three fingers thick, painful to pressure. The circumference of the right thigh in this area was 51 cm, and that of the left 57½ cm. The x-ray images of the pelvis, the spine, and the lungs were negative; at the upper femur soft-tissue tumor masses are visible, nothing beyond that.

On 27 September the top half of the tumor was absorbed, and the lower half strongly reduced; gynecological examination is negative. At the end of October, the left leg was normal almost again, circumference 1/2 cm more and without growth; only the old approximately 20-cm-long scar from the operation remained sensitive. Currently, the patient feels well, is fully capable of work, and her severe familial migraine has diminished to minimal traces.

Case 4. Mr. CH, 48 years old, married, 2 children.

November 1948 he noticed uncertainty in walking, difficulty speaking, and later weakness of the left hand. He was slightly dizzy, and at the end of the day he could hardly speak. In the following months, visual disturbances occurred, and the right corner of his mouth fell. In the hospital, the diagnosis was a cerebellopontine angle tumor. On 6 April 1949 he underwent surgery. In the left internal acoustic opening was found a large hard tumor mass that was considered first to be a spindle cell sarcoma; only a part could be removed because the tumor was ingrown on a broad surface of the temporal bone. Microscopic findings: "malignant Schwannoma" of the left cerebellopontine angle. The 5th, 7th and 8th cranial nerves were found to be greatly functionally disturbed.

Beginning of my treatment on the 23rd May, 1949. Patient is almost completely unconscious; however, recovers after few days. The left eye is deviated towards the center (left sixth-nerve palsy). The left-hand corner of his mouth hanging, the tongue deviates to the right, speech impaired significantly, without articulation, very blurry. Left arm much weaker, also left leg shows stiffness and ataxia. During the next few weeks the patient improved remarkably quickly. After about 4-6 weeks, he can walk with a cane, eating normally again. After about 1½ years, he has gained his weight back; the left leg improved after about a year. The left arm and the left hand

needed about 1½-2 years to restore. The language is restored to a large extent; only after speaking for a long time does his mouth droop a bit. Equilibrium is only partially restored. Nevertheless, for about 3 years he has been able to repair automobiles and radios, to do housework, and to perform especially fine work as a watchmaker.

X-ray: Partial destruction of the front upper portion of the left temporal bone. Sella tursica enlarged throughout, front and rear markedly thinned, posterior wall partially destroyed. Front and lower wall are now clear; rear wall unchanged. Also the petrous process of the temporal bone shows no significant changes (see Figure 8-10, pp. 188 and 189).

Case 5. Mr. JA, 34 years old, married, 1 child.

March 1950 he noticed secretion and enlargement of a pigmented spot on the right shoulder blade. It was removed in March 1950 in the hospital in Juneau, Alaska. Seven months later 2 larger tumors appeared in the right armpit. On the 17th of November 1950, these were amputated together with the right arm and the entire right shoulder, in the veterans' hospital in Portland, Oregon. In July 1951, removed a node that appeared on the left chest, and shortly afterwards removed a black tumor below the left ear. All recurrences were described as "malignant melanoma". Later, a larger tumor appeared below the left ear. A second radical operation was proposed with removal of left neck muscles, requiring him to always wear a leather neck collar for the protection of the large blood vessels. This was rejected by the patient.

My treatment started on 25 October 1951. He presented a blackish shimmering mass in the upper half of the left sternoclavicular region; he complained about heavy fits of coughing which sometimes last 2-3 hours, after which he can eject, in the end, a whitish mucus mass. The x-ray of 29 October 1951 showed no pathological findings. Next to the tumor mass, one found 3 smaller glands at the front edge and two at the rear edge of the left sternocleidomastoid muscle. The whole left neck area is mid-grade swollen, red and very sensitive. After six days, the tumor was no longer palpable; the glands disappeared after 11 days. Fits of coughing resolved after some weeks, as did the nervous hyperexcitability. Patient has remained free of any recurrence so far and can pursue his normal work undisturbed.

X-ray reveals complete absence of the right shoulder and right arm. Normal lungs (see Figure 11 p. 189).

Case 6. Mrs. BA, 52 years old, married, 2 children.

1934 thyroid surgery for active Basedows (Graves).

1936 recurrence cured by doses of Lugol solution.

During menopause melancholic disturbances, improved by electric shock treatment. December 1952 she slipped and broke her right leg below the femoral neck. In the hospital, a tumor in the left breast was found with metastases in three ribs, three more in lumbar vertebral bodies, and an extensive metastasis in the right femur fracture.

My treatment started on 23 February 1953.

Patient is bedridden, has considerable pain in the lumbar region and right hip. In August she begins to walk with a cane; in September she walks around freely and takes up her housework again. The breast tumor has shrunk down to a minimal vestige. The episodes of depression are completely resolved; no complaints.

X-ray: Extensive metastatic tumor in the upper right femur with severe destruction to a fairly deep fracture.

The defect is now largely replaced by callus that has closed the fracture. The other changes (not shown here) are also improved to a great extent radiologically (see fig. 12 and 13 pages 189).

Case 7. Mr. D Th, 31 years old.

Since early childhood he had a chronic eczema and very strange, dry, thickened skin over the whole body. All possible anti-allergic treatments, including immunizations in several hospitals, were unsuccessful. End 1948 and in 1949 was assessed microscopically with a "malignant lymphoma simulating giant and follicle lymphosarcoma" and this was confirmed by several pathologists. On admission on 27 February 1949 I found a palm-sized secreting radiation burn on the right side of the neck beneath new glands, also others on the opposite side. Intensive attacks of pain in both legs, lasting for several days, and forcing him to lie in bed on his

stomach. X-ray examination showed enlargement of the upper mediastinum and soft tissue swelling in the right supraclavicular fossa. The glandular swelling disappeared in a few weeks. The mediastinal enlargement resolved in one half year, and the pain experienced in both legs — interpreted by a number of specialist doctors as funicular disturbances — after 8-10 months. Patient is thus far free of further recurrences. The skin disturbance has diminished to minor traces.

Case 8. KB, 16 years old.

March 1950, he observed a rapidly increasing right-sided cervical swelling. Microscopic examinations of 2 glands in the hospital revealed "lymphosarcoma of the Hodgkin's type". The ensuing x-ray treatment had initial success, but after its discontinuation, rapidly-growing recurrences took place on both sides of the surgical scar.

My treatment started on 15 August 1950.

The lungs were clinically and radiologically free, and remained free, of metastases. After an infection, several small glands appeared temporarily on both sides; however, they disappeared rapidly. The patient remains free from further disturbances and now studies medicine.

## Summary

Cancer is not just a local illness, but both a local one and a general process based in the metabolism.

The development of cancer — or the local symptom — occurs when previously abnormal cells with chromosomal mutations (after Boveri) are forced by pathological changes in the metabolism to live by fermentation.

The purpose of my therapy is to return the whole metabolism, as much as is possible, to the norm, primarily by diet as well as by additional medication. This therapy produces responses in more than 50% of even so-called terminal cases.

Thus, by means of the metabolism one can fulfill both tasks at once: to cut off the conditions for life of the cancer, and to return previously-normal tissues to their biological functions.

This means restoring the conditions that existed in the body prior to the development of cancer. Then the abnormal cells are suppressed again and harmless.

#### Literature

1. Yamagiwa K, Ichikawa K. (1918) Experimental Study of the pathogenesis of Carcinoma. *J Cancer Research*. 3(1).
2. Bauer KJ. Das Krebsproblem. (1925) *Die Mutationstheorie und ihre Erklärungskraft*. S. 401.
3. Murphy JB, Sturm E. (1925) Primary Lung Tumors in Mice following the Cutaneous Application of Coal Tar. *J Exper Med*. 42(5):693.
4. Schabad LM. (1930) Über operative Entfernung des experimentellen Teerkrebses und dessen Vorstufen und die Fernresultate derselben. *Ztschr f Krebsforsch*. 31:621.
5. Oberling C, Raileanu C. (1931) Proliférations papillomateuses de l'orielle du lapin provoquées par injections intratrachéales d'huile de vaseline goudronnée. *Bull Ass française- pour l'Etude du Cancer*. 20(90).
6. Volkmann R. (1875) *Beiträge zur Chirurgie*, Leipzig. 370.
7. Blümel P. (1938) *Beitr klin Chir*. 167.
8. Schade H. (1914) Organfunktion des Bindegewebes. *Zschr exp Path u Ther*. 14:1 and (1927) Qüllenphysiologie und Ödementstehung. *Erg Inn Med*. 32:425.
9. Burr HS, Smith GM, Strong LC. (1938) *Am J Cancer*. 32:240.
10. Anderson WAD. (1948) *Pathologie*. 913.
11. Keller R. (1946) The role of Potassium and Sodium Group in Biology and Medicine. *Exper Med Surg*. 4:69.
12. Schohl AT. (1939) Mineral Metabolism. 19/20 and Gerson M. (1949) Effects of a Combined Dietary Regime on Patients with Malignant Tumors. *Exper Med Surg*. 7(4) and Geldman-Gollan. (1936) *International Pediatric Congress in Rome*.
13. Oberling C. (1944) *The Riddle of Cancer*. Yale Univ Press.
14. Keller R. (1954) *Die Elektrizität in der Zelle*. Berlin; Springer.
15. Moravek V. (1939) *Acta radiol et canc boh slov*. 2(70).
16. Greenstein JP. (1947) *Biochemistry of Cancer*. Tables p 222.
17. Kollath W. (1952) *Die Ordnung unserer Nahrung*. Hippokrates-Verlag.
18. Schönheimer R. (1942) *The Dynamic State of Body Constituents*. Harvard University Press. p. 64.
19. Gerson M. (1934) *Diättherapie der Lungentuberkulose*. Franz Deuticke. S. 236 u. folg. Kurven der NaCl-Ausscheidung.
20. Boveri T. (1929) *The Origin of Malignant Tumors*. Baltimore; William & Wilkins.