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The following thoughts about malignomas in youth and old age might be helpful acquiring a basic understanding of the anthroposophical way of looking at health and illness. The taking into account of man's time structure is of fundamental importance for this understanding. In view of the polar relationship between youth and age, let's make the following things clear to ourselves again in connection with Dr. Dumke's previous remarks.(1)

One can only understand the organic processes of the embryonic period and childhood from an anthroposophical point of view if one knows that they are primarily an expression of man's etheric body. The etheric body is an invisible force organization which permeates the entire physical body and gives it specific vital attributes. The etheric body cannot be directly investigated by natural scientific means but only by the spiritual scientific ones which Rudolf Steiner has described in detail.(2)(3) However, the purely vegetative phenomena of reproduction, growth, development, and maturation which we perceive in the physical body right down to molecular processes, are a scientifically graspable manifestation of the intense growth and developmental activity of the etheric body or life body. At the youth pole of a lifetime the main task of this life body is to build up the inherited physical body in accordance with the soul and spirit of the human being who is beginning his life. And later on in life the phenomena of maintenance, regeneration, healing of wounds, and immunological defense processes are an expression of the life forces which are present in man until death.(4) The etheric body keeps man young and healthy; this is the internal physician in man, of which Paracelsus spoke.

On the other hand, one can only understand aging processes if one considers that man not only unfolds a vegetative life like the plant, but he has a conscious soul life similar to that of the animals, and also a self-conscious spiritual life which only human beings possess. Man is not an accidentally created organization of inorganic substances, but he is a four membered being consisting of a physical body, etheric body, astral body (soul) and ego (spirit).(4)(5)

In trying to understand aging processes in man, it is very important to realize that the consciousness arising in the soul, and the spirit's self-consciousness, both unfold on the basis of destructive and not constructive organic processes.(6) This comes to expression in many biological facts of which we will mention a few.

In the evolution of the animal kingdom, an increasing capacity for consciousness is accompanied by a corresponding decrease in the capacity to regenerate the organism. In contrast to the more highly developed mam-

mals, amphibians can regenerate entire limbs. Also note the enormous difference in regenerating power which is possessed by the brain tissues serving higher consciousness versus the tissues of the liver or the bone marrow, etc., which serve the central life functions. It is well known that the capacity for consciousness is directly connected with catabolic processes in the nerve tissue; therefore excitative transmitter substances are called "excitotoxins," which continually destroy the nerves, although their effect is also continuously compensated for by the nourishment provided by the blood stream.

In the course of a lifetime not only the vitality of the organs subserving higher consciousness is suppressed, but also the organs serving the central, vital functions develop hindrances and impairments which have an inner connection with the conscious functions which are emerging parallel to them. An example of this is puberty, in which the development of the sexual organs and overall growth come to an end while the new feelings connected with sexual life appear, as does the capacity for conceptual abstraction.

Behind this is the fact that at puberty certain functions of the astral body, which were previously needed for the shaping of the corresponding organic structures, become free for the purely psychological and spiritual activity of consciousness. Towards the end of life these conscious functions become relatively more important than the primarily vital activities.

One can see how sharply the central vital functions deteriorate in the course of this overall development through the example of the immune system; at an advanced age, the capacity to produce new lymphocytes is reduced by about 50%. The immune-competent activity of the T- and B-lymphocytes and other cells also declines.(7) Significantly enough, this degenerative process begins at puberty, and as everyone knows, it becomes outwardly manifest in the involution of the thymus.

These vitalization and devitalization phenomena which occur in a lawful time structure are an expression of the different relationships which man's four members have with each other in the course of a normal lifetime.(4) The etheric body which builds up the physical body predominates in youth, then there is a relatively good equilibrium between vitalization and devitalization in middle age, and in old age the conscious activity proceeding from the astral body and ego predominate in the organism, together with destructive processes.

We will need these ideas about youth and old age in order to understand neoplastic processes from an anthroposophical point of view. For instance, look at the recent research on oncogenes and antioncogenes. You know that H. Varmus and M. Bishop were awarded a Noble Prize for medicine in 1989 for the discovery published in 1976 that oncogenes are originally normal genes which are present in every cell, and if they are activated in these cells they have completely normal functions.(8) Which functions are these?

The more one learns about oncogenes, or rather about their healthy predecessors the proto-oncogenes, the clearer it becomes that these genes encode proteins which ordinarily are important in the growth and cell division processes of embryonic, youthful or regenerating tissues, either directly as growth factors secreted by the cell, or indirectly as receptor, transmitter, or effector proteins in cell membranes, cytoplasm, or nuclei for the so-called transmission of information in the induction of growth and in cell-division processes.(9)

These genes can be altered in tumors, through point mutations etc., and can therefore secrete faulty growth proteins. But so-called oncogenes are not necessarily always defective. For instance, they are completely normal in tumors like retinoblastomas, and in these they function just as normally as during the embryonic period, but the brake for their activity is missing. This brake consists of the so-called antiocogenes or their genetic products.(10) The gene products are proteins and in normal, distinct cells they hinder the growth genes or the so-called proto-oncogenes from functioning. For in adulthood what was normal in the embryonic or childhood phase of the cell has to be slowed down. Thus from a molecular, biological point of view a tumor's activity is a pathological retrogression to the material and functional vital processes occurring during the embryonic period and childhood. This becomes physically manifest in cell products like carcinoembryonic antigens (CEA) and alpha-feto protein (AFP); morphologically it becomes manifest in the corresponding youthful forms of dedifferentiated tumor cells.

This natural scientific description is equivalent to what Rudolf Steiner said about the development of tumors from an anthroposophical spiritual scientific point of view, namely, that cancer arises through an excessive, pathological activity of etheric formative forces, which are normally active in the growth and developmental phase in the child's organism, or in the regeneration phase.(11)(12) These etheric forces become concentrated or congested at a place in the physical body which they cannot subordinate to their activity. What looks like a new formation is in reality this congestion of etheric forces which become emancipated from the rest of the organism's regulated, etheric activities.(13)

It would lead too far here to describe how the etheric body interacts with the physical body. We will only mention that this interaction occurs through the fluid form of organic matter (14), and that proteins play an important part in this (15). Thus life only develops in fluid milieus and all vital functions are regulated by proteins (enzymes).

If one thinks about this in connection with a certain experimental fact, it will explain what was said previously about the locally emancipated activity of the etheric body from the standpoint of natural science. Folkmann described the following experimental observations in Nature (16): a normal cell develops as usual through a hypertrophic, but still benign, reversible in-

intermediate stage into the malignant, no longer reversible form of a cancer cell. This cell begins to activate certain proto-oncogenes which encode a particular protein while the cell is still in the hypertrophic and benign stage. This protein is an angiogenetic growth factor which spreads out in the environment of the cell concerned and which induces the capillaries in the area to grow towards the hypertrophic cell. Only now is this cell transformed into the malignant, no longer reversible form.

These highly interesting observations indicate the following:

- (1.) The proto-oncogenic activation occurred in a benign cell and not in a malignant one.
- (2.) Thereby a local system arises and the growth factors of the hypertrophic cell work on the surrounding capillaries in such a way that they begin to grow towards the hypertrophic cell.
- (3.) What happens within this benign system in the way of growth processes and capillary sprouting, etc., is the same thing which happens in the embryo, or in the growth and regeneration process in the healing of a wound. Thus this is a completely healthy and youthful process.
- (4.) Insofar as the local growth is emancipated from the host's overall system, however, a disease exists. For a special orientation is forced upon the capillaries in the environment with respect to their previous orientation.
- (5.) Thus the neoplastic potential of the transformed central cell is not the cause, but the result, of this vital process which is "healthy" in itself, but which is nevertheless already emancipated.

From the viewpoint of natural science one can see that the cancer which becomes manifest is a result of an anachronism or of a youthful process at the wrong time and place. Thus there is a complete agreement and a mutual complementation here and in the descriptions of natural science and anthroposophically oriented spiritual science.

Cancer is a good example of one of the polar types of disease which Steiner and Wegman describe in their book *Fundamentals of Therapy*. One of these arises if the etheric body, which otherwise brings about self-healing, is working relatively too strongly on growth and development in any particular area. Then one has a "continuation of the healthy processes above and beyond what is appropriate for the organism." (17) Cancer fits in this category. It is pathological youth process and a misguided growth and development.

The other form of disease "occurs if the soul and spirit penetrate so deeply into the organism, that the self healing, (brought about by the etheric body), can either not occur at all, or only slowly." (16) In this case there is a predominance of destructive processes which normally and necessarily are only connected with consciousness processes and old age processes. This is pathological aging and excessive catabolism.

As said before, tumor formation is always "excessive youthfulness" at the wrong place and time. But this concentrated excess of vital forces becomes manifest differently in childhood and old age, and this is the reason for the different character of malignomas in youth and old age. In childhood the etheric body is more active than the other members. One can get an idea of the intensity of this activity if one looks at the assimilation of fluids into the fluid metabolism, because this is dependent on the etheric body. A newborn child drinks the equivalent of what would be about 3-1/2 gals a day for an adult.

This vitalization through the etheric body which stands entirely in the foreground, has to be sufficiently permeated by the astral body and the ego-organization, for during the growth phase the organism has to be made into an instrument for the soul and spirit of the individual human being. The maturation and the differentiation of the various tissues is based on this permeation.(19) If for any reason the astral body and the ego-organization don't penetrate deeply enough into the etheric and physical bodies, the development of the corresponding cells remains incomplete, or it retrogresses so that the embryonic cell character is maintained. If there is emancipated and excessive activity of etheric forces freed from permeation by astral body and ego-organization at this point, a malignoma arises, whose morphology and dynamics are an expression of youthful etheric activity. This is precisely the situation in the characteristic spectrum of children's tumors; 40-49% of all children's tumor's are acute leukemias and lymphomas, about 30% constitute the so-called embryonic tumors which mainly consist of still undifferentiated tissues (neuroblastomas, nephroblastomas, embryonic sarcomas, retinoblastomas, bone and liver tumors, etc.) and 13-20% are central nervous system tumors.(20) The morphological picture, consistency, and the intensive growth dynamics of all these tumor groups have the indicated embryonic or youthful and vital characteristics in a very marked way, i.e., rapid growth, a high ratio of proliferating cells, a short tumor-doubling time and a corresponding morphology.(21)

Beginning with puberty, and on towards old age the tumor situation becomes quite different. Here 80% of all malignomas are solid, epithelial tumors which arise through various dedifferentiation of already mature tissues (21). What one sees outwardly as normally differentiated embryonic and adult cell forms is based inwardly on an adequate permeation of the physical and etheric bodies by the astral body and ego-organization. Thereby the purely vegetative forces are held within the bounds which make a free life of soul and spirit possible. During the transformation to malignancy these controls fail and the vegetative forces burst forth excessively. But they don't immediately have the same malignant potential which the youthful malignancies have. For etheric forces gradually become used up with in-

creasing age (which is one reason for our limited life span), and the dedifferentiation occurs to a lesser extent. The more the emancipated tissue withdraws from differentiating impulses, the more it falls back into the embryonic stage and its corresponding dynamics. This is especially true of tumors in those tissues and organs in which vital functions ordinarily predominate over soul and spiritual functions and in which the etheric body therefore has to retain its youthful, functional state during its entire life. Typical tumors which still act young in old people are acute leukemias, lymphomas, and certain gonadal tumors. From this point of view one can also speak of a youthful type of tumor in adults. Therefore, one can not only speak of the malignomas of youth and old age, but one can make a somewhat more differentiated polar division into youthful and old types of tumors.

This classification proves to be relevant for therapy. For if one surveys all the therapeutic results in oncology in this century one becomes aware of a distinct polarity. First there are the types of tumors which we characterized as youthful ones, and which include acute lymphomas, etc. in older people. Cytostatic chemotherapy and radiotherapy work upon these groups of tumors and these have been used successfully in many cases in the last 20 years.

Then there are the solid epithelial tumors of adults, which constitute 80% of all adult tumors. Here chemotherapy has not proven to be very successful in terms of survival times. It's true that remissions have been reported here but some people state flatly that this kind of therapy does not bring about an increased survival time in these groups of tumors. For example, see Abel's extensive review which he wrote at the Heidelberg Tumor Center in 1989. (99)

Our experience with anthroposophical mistletoe therapy has so far shown the opposite; with a few exceptions, mistletoe therapy has had little effect on youthful tumor types in the acute stage. Whereas, a survival time lengthening effect has been reported for adults with solid tumors in a large number of studies on breast cancer, non-small cell bronchial cancer, malignant melanomas, stomach cancer, colon and rectal tumors, and on liver metastases of solid tumors. You will find the most recent and most extensive analysis of the 46 existing clinical studies with mistletoe preparations in Helmut Kiene's dissertation which came out in Herdecke in 1989 (23). Why do chemotherapy, radiation and mistletoe therapy have such different effects on these polar groups of tumors?

Chemotherapy has toxic effects on precisely those kinds of tissues which are responsible for the organism's nutritive, vegetative, reproductive and regenerative functions, or on the ones in which the upbuilding effect of the etheric body predominates. Chemotherapy and radiation interfere with and inhibit the vitalizing activity of the etheric body on the physical body up to

extreme toxicity. As we saw, the upbuilding vitalization process is also hindered and regularly interrupted by toxins in normal life. But this occurs through inner toxins and not outer ones, and they are connected with the regulated, conscious activity of the soul and spirit and with the hindering of the corresponding life functions. This controlled inner hindering of vitality is missing in tumors. In the latter, one has to try to not only hinder the unrestrained vitality but to destroy it with outer toxic substances.

Looked at in this way, toxic tumor therapy corresponds to an artificial aging or death process which counteracts the excessively tumorous youthful process. In order to exemplify this general observation in more detail, just think of how old a young person looks after chemotherapy.

Mistletoe, however, has quite a different effect and even the opposite one. This plant was recommended for cancer therapy by R. Steiner on the basis of his spiritual scientific knowledge about life processes in living nature (24). The unusual biological characteristics of mistletoe are the outer expression of its special vital activities. One of these characteristics is its special time structure. The ever-green half-parasitic mistletoe blossoms in the winter when the rest of the plant world is resting. It develops a kind of counter rhythm to the outer vegetative rhythms in the plant kingdom.(25) The special activity of its etheric organization does not only become manifest in its vegetative rhythm, but also in the particular substances it creates. If these mistletoe substances are injected into a patient, they induce a kind of counter rhythm or counter activity in the patient's etheric body by virtue of the connection which they have with the life rhythms indicated. In the tumor patient the etheric body of the overall organism is not able to get in harmony with the particular vital activity at the emancipated location. It is true that the tumor itself is an overflowing youth process, but the overall organism lacks the corresponding youth, and therefore its youthful forces have to be strengthened by mistletoe. The mistletoe substances serve to stimulate the overall etheric body, so that the latter can penetrate the site in question.(13) Through this reactivated life the organism can activate processes which are aimed at getting rid of the life which has become foreign. This should occur physiologically through the inflammatory or immunological system, which is responsible for tumor defense.(26) Immunologic investigations of Iscador® have shown in many different ways that this activation of immunologic factors against the tumor, which is postulated on the basis of anthroposophical knowledge, actually occurs.(27-32) Through the clinical experience already mentioned, we know that mistletoe therapy is especially effective for what we call the old age type of malignancies.

Thus we have a polar confrontation of a therapeutic aging process with the youthful type of tumor and of a therapeutic youth process with the adult type of tumor.

In this discussion about malignomas, we have only looked at the largest polarity in the human time structure, namely youth and old age. But we have seen that this polarity has its foundations in man's overall constitution, and that it can only really be understood if one looks upon man as a physical, living, ensouled and spiritual being within this overall constitution. This then can bring about a better understanding of what is known about health, illness, and therapy from a molecular and biological point of view.

#### BIBLIOGRAPHY

1. Dumke, K.: Anthroposophische Grundlagen für eine medizinische Lehre der Zeitgestalten beim Menschen. Lecture 6-9-1990.
2. Steiner, R.: Science of Knowing (GA 2) (1886), Mercury Press, Spring Valley, NY.
3. Steiner, R.: Knowledge of Higher Worlds and its Attainment (GA10) (1904/05), Anthroposophic Press, Spring Valley, NY.
4. Steiner, R., Wegman, I.: Fundamentals of Therapy (GA 27) (1925), Anthroposophic Press, NY.
5. Steiner, R.: Theosophy (GA 9) (1904), Anthroposophic Press, NY.
6. op.cit. Lit. 4 (GA 27), Chap.II.
7. Osness, W.H.: Biological Aspects of the Ageing Process in: Berghorn, F.J. (Ed.): The Dynamics of Ageing. Westview Press, Boulder Colorado 1989, p. 51.
8. Hofer, I.: Nobel price for medicine: Krebsgene im Erbgut normaler Zellen. Spektrum der Wissenschaft, 1986, 12: 16-18.
9. Diggelmann, H.: Le rôle des oncogènes dans la croissance cellulaire et la cancérogenèse. Schweiz. Med. Wschr. 1989 (119) 47:1686-1687.
10. Weinberg, R.A.: Anti-Onkogene, Spektrum der Wissenschaft, 1988,11: 92-99.
11. Steiner, R.: Physiology and Therapeutics (GA 314) (1920, 1922-24). Lecture from 108-1920. Mercury Press, NY, 1986.
12. op.cit. Lit. 4.
13. Steiner, R.: Spiritual Science and Medicine (GA 312) (1920). Lecture from 4-2-1920.
14. Steiner, R.: Meditative Betrachtungen and Anleitungen zur Vertiefung der Heilkunst (GA 316), Dornach/Schweiz 1967, Lecture of Jan. 2,1924.
15. op.cit. Lit.4, Chap..IX.
16. Folkman, J., et al.: Induction of Angiogenesis during the transition from hyperplasia to neoplasia. Nature 1989, 339:58-61.
17. op.cit. Lit.4, p. 17.
18. op.cit. Lit.4, p. 16.
19. op.cit. Lit.4, Chap. XV.

20. Havers, W.: Maligne Erkrankungen bei Kindern, MD-GBK (Mitteilungsdienst der Ges. für die Bekämpfung der Krebskrankheit, Nordrhein-Westfalen), 1985, 47: 3-9.
21. Harms, D., Schmidt, D.: Maligne (solide) Tumoren bei Kindern - pathologische Anatomie. MD-GBK (1985),47:11-18.
22. Abel, U.: Cytostatic Therapy of Advanced Epithelial Tumors: A Critique, Hippocrates Verlag, Stuttgart, 1991.
23. Kiene, H.: Klinische Studien zur Misteltherapie der Krebserkrankung. Eine kritische Würdigung. Dissertation 1989, Witten/Herdecke.
24. Daems, W.F.: Ita Wegman and das erste Mistelpräparat ISCAR zur Krebsbehandlung. In: Leroi, R. (Hrsg.): Misteltherapie, Stuttgart 1987.
25. Zeller, O.: Die Jahresrhythmik der Laubholzmistel *Viscum album*. Beitr. Erw. Heilkunst 29 (6),185-201 (1976).
26. op.cit. Lit. 11, Lecture of Oct. 27,1922.
27. Hajto, T., Lanzrein, C.: Natural Killer and Antibody-Dependent Cell-Mediated Cytotoxicity Activities and Large Granular Lymphocyte Frequencies in *Viscum album* Treated Breast Cancer Patients. Oncology 43: 93-97 (1986).
28. Hajto, T., Hostanska, K.: An Investigation of the Ability of *Viscum album*-Activated Granulocytes to regulate Natural Killer Cells in vivo. Clin. Tri. J. 23 (6): 345-358 (1986).
29. Hajto, T.: Immunomodulatory Effects of Iscador: A *Viscum album* Preparation. Oncology 43 (1), 51-65 (1986).
30. Hajto, T.: Aktuelle Resultate aus dem Immunologic-Labor der Lukas Klinik. In: Leroi, R. (Hrsg.): Misteltherapie, Stuttgart 1987.
31. Hajto, T., Hostanska, K., Gabius, H.J.: Modulatory Potency of the B-Galactosidespecific Lectin from Mistletoe Extract (IsCADOR) on the Host Defense System in vivo in Rabbits and Patients. Canc. Res. 49, 4803-4808,1989.
32. Hajto, T., Hostanska, K., Gabius, H.J.: Zytokine als Lektin-induzierte Mediatoren in der Misteltherapie. Therapeutikon 4 (3), 136-145, 1990