A Dull Weapon: Chemotherapy Almost Useless in Treating Advanced Organic Cancer – Provocative Theses at the Hamburg Cancer Congress

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For ten years Ulrich Abel, 38, has served the West German cancer doctors as a "number cruncher" (his own expression). This graduate mathematician and Ph.D. in epidemiology has been helping clinicians carry out their cancer investigations. His knowledge of method was in demand, and his relations with cancer experts were excellent.

This past spring, however, the Heidelberg biostatistician himself took up pen and brought out a small book with the title: *Cytostatic Therapy of Advanced Epithelial Tumors – A Critique* (Hippocrates Verlag, Stuttgart. 112 pages. 28 marks). Since that time Abel has become a Cain for many West German cancer specialists. Abel admits that in some cases "he is no longer invited to participate" in new research.

For a year this researcher, working in the Heidelberg/Mannheim Tumor Center, looked through essentially "all the literature" that deals with chemotherapy ("several thousand articles").

The findings of foreign chemotherapy researchers were perused by Abel as pertinaciously as those of West German oncologists. In addition, he sent self-addressed envelopes to 350 cancer experts and cancer centers everywhere in the world in order to track down additional anti-tumor medication research which had not yet appeared in the cancer (oncology) journals.

Abel expresses in a single word the outcome of his research: "appalling."

In the light of his year-long investigation, Abel concludes that "faith in the efficacy of chemotherapy" in the brains of many physicians is clearly a "fixed dogma" which cannot withstand the acid test of strict science.

What for this employee of the Heidelberg Tumor Center was "initially just a suspicion" became a "certainty" when he had finally put the puzzle together: the weapon of chemotherapy has remained dull in the hands of cancer fighters; even after decades of clinical application and therapeutic research the cellular poisons (cytostatics) of cancer therapy "in broad areas" of cancer therapy have "misfired."

The scientists' findings show that most kinds of cancer treatment, which are so productive of side effects, are disappointing for the patient, and for two reasons:

- Chemotherapy is incapable of extending in any appreciable way the lives of patients suffering from the most common organic cancers.
- Even the palliative effect of these medications, supposedly improving the quality of life of the patient, rests on shaky scientific ground.

The Heidelberg renegade could have been described as frivolous if his exposure of chemotherapy had not turned out to be appropriately differentiated. For nothing is harder for physicians in daily clinical practice than to dispel the inevitable fears of patients about chemotherapy. Hence the tumor researcher shrugs off reproaches made against his book by some West German cancer bigwigs, even before it had seen the light.

- Abel's verdict against the medicinal treatment of cancer is emphatically untrue for various kinds of lymph cancer. Hodgkin's Disease, leukemias, sarcomas, and testicular cancers in the male. These kinds of malignancies can be cured by chemotherapy with a high degree of probability, especially in children an undisputed success. But these are, in any case, only a very small part of the new cases of cancer diagnosed every year.
- Abel's doubts are not directed against chemotherapy when it is used in support of a curative operation in order to shrink the tumor beforehand; nor do they apply to chemotherapy used prophylactically after an operation, to prevent a relapse (as an adjuvant).

"A scientific wasteland" is how Abel describes the chemotherapy of "advanced epithelial malignancies." This group includes almost all organic cancer in which a potentially curative operation is no longer possible, because the tumor has already metastasized, or has recurred after a course of treatment (relapse). These kinds of tumors constitute at least 80% of all deaths from cancer every year.

In advanced small-cell lung cancer it is possible that cellular poisons may extend life somewhat. But the benefit is very slight – several months on the average.

And neither in breast cancer nor in stomach cancer, neither in intestinal, bladder or pancreatic cancer is this true when the case is advanced and metastasized. The low efficacy of medicinal antitumor therapy, in the view of the Heidelberg researcher, "is something of which neither the public nor the majority of practicing physicians are particularly aware."

According to Abel, chemotherapy is recognizably not in a position to appreciably prolong the lives of patients. At least, there is no conclusive scientific evidence for it. Such evidence will become available when the survival rates of patients under chemotherapy can be systematically compared with those of untreated cancer patients within the framework of controlled clinical trials.

But such a procedure has no chance of acceptance by ethics commissions made up of physicians. "One cannot leave untreated a patient whose cancer is treatable with chemotherapy," state the West German experts, Dieter Karl Hossfeld and Albrecht Pfleiderer, "just to find out if he might not survive just as long without therapy." The benefits of chemotherapy are assumed axiomatically but not proven.

Also the fact that under chemotherapy the tumor mass shrinks or temporarily disappears completely (partial or complete remission) is, in Abel's view not a good sign. For the remaining tumor cells which resist the effect of the medication sometimes grow much faster afterwards.

A connection between "response," meaning shrinking of the tumor tissue, and improved survival, which many physicians see as the justification for chemotherapy, cannot be documented in the literature. "Surprisingly often," the Heidelberg biostatistician finds, the opposite occurs: patients in whom the medicine had no effect on the tumor survive longer.

According to Abel's findings, the second axiom of chemotherapy, the palliative effects of cytostatic medicines, also rests on scientifically shaky ground.

Reliable studies, which might substantiate this belief for the majority of patients (exceptions are possible), according to Abel "are not yet to be found." The least one can say is that older research in the 1970s reached "the opposite conclusion: highly aggressive chemotherapy undertaken prematurely (in, for example, patients with lung cancer) shortened the survival time as compared with patients in whom chemotherapy was first instituted only with the onset of pain and which was conducted less aggressively.

The US FDA has yet to license a cancer remedy on the basis of improved quality of life, since no evidence in support of such a claim has yet been demonstrated.

Despite this, according to the observations of the Heidelberg scientist, tumor patients are often bombarded with cellular poisons at a time when the tumor in the body is still painless.

Some of the reasons for the "routine" use of toxic assaults on the body, Abel maintains, have to do with a diffuse "belief" of physicians in the efficacy of their therapy. Above all, badly informed physicians start with the attitude, often urged on by their desperate patients, that they should commence with an "aggressive therapy, causing many side effects" "at an early stage" and without the patient himself complaining of "substantial pain."

Behind this willingness of clinicians to fire away there is often a compulsion to conduct research. Patients who are not suffering any pain are dragged at an early stage into chemotherapy because their treatment can be conducted as part of a clinical trial; but here, in Abel's view, it is hardly possible to give the patient an "individualized therapy, oriented toward his own specific complaints."

Aggressive doses of cytostatics, moreover, meet the physician's need for legitimation. The higher the dose, the better the prospect that/the tumor will shrink under the effect of the cellular poison; hence maximal therapies often have the desired outcome. A victory over the tumor seems to have been reached when it remits partially or completely – even though ultimately this is no victory for the patient at all. States Abel, "There is not yet any perceptible tendency in medicine to refrain from trials with high doses."

The chemotherapy of advanced organic cancer is stuck in a blind alley out of which "an exit will be achieved only in small steps and not without some painful insights." Oncology, as the researcher puts it, has "up until now failed to provide an unobjectionable scientific basis for cytostatic therapy in its presently dominant form."

The thesis of the efficacy of cellular poisons, and the "overwhelming dominance of chemotherapeutic research" which it has spawned, may, in Abel's judgment, be seen in the future as one of the greatest missteps ever taken in oncology and the one with the most tragic consequences."

The change of direction which is "urgently needed" in the patient's interests runs smack up against the various structures which have been erected in the meantime. About 90% of research capacity, in Abel's view, is tied in with ongoing chemotherapeutic investigations. The earnings of the pharmaceutical industry from anti-tumor medications amount to half a billion marks every year. Many cancer researchers get up to 1,000 marks from the suppliers for each documented case they treat.

Alternative methods of treatment, such as possibly immune therapy, "scarcely make it into the running, since many physicians lack knowledge of them. "Research proposals along these lines," as Abel ascertained over and over again during his years of consulting work, hardly get a hearing in new research plans.

So the other side has a hard time getting to the table. The advocates of immunotherapeutic approaches, or of certain other unconventional anticancer methods, are generally reluctant to let their therapies be tested in comparison with chemotherapy in controlled clinical trials.

Thus certain questions whose answers would be very important for the patients remain in a scientifically gray area:

- Do chemotherapeutic techniques promise greater success in the treatment of advanced organic cancer than the less toxic immune therapies which also have fewer side effects?
- Do patients who are not treated at all come out better in the end?
- Is it sufficient if cytostatic medicines are first prescribed only when the patient's pain becomes severe?
- Can low doses of chemotherapeutic agents not basically improve the patient's outcome?

Only a "lack of scientific imagination," as Abel thinks, has hindered the clarification of these questions up to now. One of his proposed models might serve to lift the veil of secrecy: patients with advanced organic cancer who are not yet in pain from their tumor could be tested in two groups. One group would receive cytostatic agents, the other immunotherapeutic remedies. The ethical dilemma could be resolved by giving the patients in the second group chemotherapeutic agents if the onset of symptoms demands it.

Biostatistician Abel stands too close to the rational ideal of his mathematical discipline for his criticism of chemotherapy to be characterized as "advocacy of dubious therapies." He was forced into this reckoning by the dogmatic rigidity of the chemotherapists and their excessive optimism. Says Abel: "they are painting themselves into a corner."

Those who have been scolded by him have up to now given the erstwhile number cruncher short shrift. More recently, as Abel's cynicism has been more and more perceptible between the lines, oncologists Hossfeld and Pfleiderer have "ended all readiness for dialog with the author."

Perhaps there is more openness to dialog on the part of foreign tumor experts. At the Fifteenth International Cancer Congress, which opens on Thursday of this week in Hamburg with about 8,000 specialists from all over the world, the book of Cain will be available in an English translation.

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