The Society of Integrative Oncology recently published an article titled "Integrative Oncology Practices Guidelines," (263KB .pdf) written by a team of doctors from the Memorial Sloan-Kettering Cancer Center (New York), the MD Anderson Cancer Center (Houston, Texas), and the Society of Integrative Oncology Executive Committee (New Jersey) and others (2007; 5[2]: 65-68). As a private researcher and innovative doctor known throughout the world, I have been involved with cancer research for more than 35 years, and I am simply mad about this article and feel that it requires some appropriate correction, which will probably speak on behalf of hundreds of Complementary and Alternative Medicine (CAM) doctors, naturopaths, and many others.

The article in question is divided into sections and begins with the authors' definition of what they call the uses of "complementary" and "alternative" therapies. According to them, Integrative Oncology is limited to "safe methods," such as massage, acupuncture, exercise, yoga, and other mind-body techniques. These safe methods are presented as complementary therapies that have been integrated into mainstream care and are considered helpful in symptom control.

The authors of the article claim that there has been little evidence to date to show that any CAM therapies can suppress or cure diseases in a clinical setting. We may call this "scientific myopia," which is probably a deep-seated paradigm based on the conception that natural molecules are ineffective compared to toxic drugs. Toxic therapy has become a dogma of medical science (Der Siegel, October 2004), and any significant results obtained with or without surgery and/or chemotherapy including eliminating the tumor and bone metastasis or decreasing tumor markers (or survival expansion) is absolutely denied and considered either a result of the mainstream therapy or a "spontaneous cure."
The Failure of Oncology

According to a statement made in 2005 by Dr. Pierquin, a French authority in cancerology at the Hospital Henri Mondor, Creteil, France, "chemotherapy [needs] to be far more effective in all cancer diseases." Chemotherapy is recommended in five percent of cancer cases. In ten percent of cancer cases, it may give results, and in 85% of cancer cases, its use is questionable.

Prof. Ben L. Pfeifer, MD, PhD is a professor of cancerology (Switzerland) who has been working and teaching cancerology in the United States for 20 years, as well as serving as an advisor at the Office of Technology Assessment (OTA) on CAM therapies. He stressed that oncology has failed to meet the expectations of curing cancer. In Europe, there are now many voices coming from state researchers and universities doubting the value of chemotherapy concerning life survival and quality of life.  

1 Chemotherapy for patients in an advanced stage has no effect on the survival rate, and palliative therapy is effective in two to six percent of all cases. Relapses are still too high, and complete remission or cures remain a rare event.

Basically, an anticancer drug is found to cause a definitive response if it creates 50% (or more) shrinkage of measurable tumors for one or two months or even extends lives. Clinical trials usually measure the percentage of the response rate together with the median survival, depending on the different anticancer drugs used alone or in combination with others. Chemotherapy may reduce the tumor size, but we cannot expect cures. Even so, many patients are considered in "complete remission" (CR), which, in fact, does not always reflect the real condition of the patient. Oncologists make the mistake of concentrating only on some parameters, not on the patient's general status. As we have observed from hospital records, a relapse may occur in a period as short as three months.

Other examples demonstrate the total helplessness and incapacity of oncology to help patients who are absolutely refractory to chemotherapy after a so-called "complete remission." A report from a British hospital about a cancer patient (who eventually came to me) says that "there are no current open trials in the UK for which he is suitable at present, and we do not feel there is any further conventional therapy he (the patient) could tolerate or which is likely to achieve another remission, etc…" Who is responsible for this situation? And what about
suggesting some alternative therapies? This doesn't make sense when apparently experienced academic doctors should do everything in their power for patients and at least attempt some other therapies. But it makes sense when it comes from oncologists with financial interest from pharmaceutical industries paying to prescribe dubious drugs, no matter the consequence (Ralph Moss, Townsend Letter. August/Sept 2007).

Today, because of demand, pharmaceutical labs frantically put new anticancer drugs on the market, and therefore, the Food and Drug Administration (FDA) is usually very fast to license new drugs without full clinical trials on their efficiency and safety. Often, tests are still inconclusive, according to Steven Hirdifield MD, an FDA cancer expert who mentioned that many studies done in oncology are incomplete (Oncology Times. Sept. 2007). No wonder many approved drugs are far from safe and may even be carcinogenic or mutagenic. Toxic drug effects – including serious damage to the liver, heart, kidney – affect 80% of patients and are sometimes deadly to patients.

Nevertheless, cancer drugs can be largely promoted as any regular pharmaceutical medication – without medical ethics. This has been the case with Herceptin, which was presented years ago as a "significant medical breakthrough," as if it were something never seen before in cancer therapy and with virtually no side effects.

The bad news is that, on the contrary, Herceptin can cause a truckload of toxic adverse and dangerous effects, including coma, anaphylactic shock, edema, acute pulmonary, peripheral angioedema, cardiomiopathy, pancreatitis, hepatic failure, leukemia, neuropathy, pulmonary fibrosis, anorexia, and progression of neoplasia.

Herceptin has been associated with disabling cardiac failure, death, and mural thrombosis leading to stroke (FDA 2003). The risk of cardiac failure is augmented with Adriamycin as chemotherapy and, especially, with radiotherapy. Herceptin's dangers are unbelievable, particularly when compared to dietary supplementation or even herbal medicine. Almost a bad joke, Herceptin is promoted as "rebuilding hope" and "prolong[ing] life." Why aren't the interactions of cancer drugs themselves discussed as well as the consequences of chemotherapy? Cancer patients rarely die from the disease itself, but rather from the treatment.
Am I dreaming! The reason that massage has been examined as an integrative–safe-method, as Frank Wiewel mentioned recently in Townsend Letter, "is to see if dying cancer patients feel better." Frankly speaking, cancer patients expect more from medicine than to feel better while dying. For many cancer patients, this politic of conventional treatment too often leads patients to a dead-end-street. However, we can show that cancer patients who don't respond to chemotherapy and experience chemotherapy's additional toxic side effects may improve under our therapy from significant regression of bone metastasis and decreasing antigen tumor markers.\(^5\)

According to the article's authors, the goals of diet, dietary supplements, and herbal products, and/or alternative therapies, including high doses of vitamin C, shark cartilage, hydrazine sulphate, antineoplastons, mistheloe, Pau d'Arco, laetrile, Bi Bella therapy, etc. are often unrealistic and unmet. Apparently, alternative therapies have shown no evidence for safety and efficacy, and some may even shorten survival rate. For over three decades, we have suffered attacks over the insufficiency of alternative therapies, not to say "quackery," but now these therapies supposedly shorten survival? This is new to me.

In Europe, we use some very efficient alternative treatments available in several reputable clinics and private oncology centers. Take Ukrain, for instance, a natural chemotherapeutic agent\(^6,8\) that has even been investigated by the National Cancer Institute (USA) for its antineoplastic effects on 60 different human cancer cell lines that demonstrate a growth inhibition between 50 to 100% and reduction of cell mass.\(^9\) Ukrain is backed with impressive scientific reports that are far from unrealistic.

While each of these therapies (or others) is not 100% efficient, and some like Pau d'Arco are probably ineffective in therapeutic applications, they have been useful and more efficient in a combination therapy, and they have increased patients' rate of survival, even in advanced cases. This is particularly true for Ukrain\(^8,9\) and liquid cartilage extract (LCE), which has strong antiangiogenic properties and which we have now used for over 14 years.\(^10,11\)

In my experience, LCE does not shorten survival rate; on the contrary, many of our cancer patients benefited from survival extension, including, as I mentioned, in
advanced cases. Many of our cancer patients now enjoy ten- to 14-year remissions with good healthy conditions. LCE (Neovastat) has been proven to be safe, even over long-term, with signs of efficacy. And several tests demonstrated increased survival in NSLCC patients refractory to standard therapy (stage II-III). These are the kinds of results obtained in our clinic.

A Caucasian woman with a large infiltrated neoplastic tumor of 6 x 5 cm at the uterus and extensive infiltration to iliac-pelvic ganglions, peritoneum, and rectum wall has been followed during four months on treatment of LCE, Ukrain, and MGn3 (functional food) simultaneously with chemotherapy. The result is impressive, and new scans show total regression of the tumor, including infiltrative lesions in such ways that the patient does not need radiation as was first expected. One can imagine the astonishment of the team of doctors at the hospital. We simply demonstrated the strong effectiveness of a combination therapy in synergy with chemotherapy.

**Chemotherapy and Antioxidants**

In our clinical practice, we have used antioxidant compounds for many years to work in a synergistic way with chemotherapy, obtaining excellent results, including a decrease in resistant tumors. Many doctors, on the contrary, object to people taking antioxidants simultaneously with chemotherapy or radiation. They have been wrongly informed or base their judgment on some hypothesis (Labriola 1998) and ignore the scientific evidence that antioxidants protect the cancer cells from the damaging effects of free radicals generated by toxic drugs, or they believe that it may interact with drugs to decrease the effectiveness of the treatment. Indeed, the Society of Integrative Oncology article categorically maintains that antioxidants and high doses of antioxidants during cytotoxic treatment can be problematic since it may decrease the potential of the treatment.

It is strange that the article's authors follow only one hypothesis to condemn the use of antioxidants and miss hundreds of references that, contrary to their statements, show that antioxidants protect from the damaging effects of chemotherapy without interfering in the efficacy. This is simply illogical and irrational. We help chemotherapy/radiation to be more efficient, and, quite often, cancer patients improve more quickly from blood and chemical parameters and experience a decrease and/or elimination of secondary tumors with a better quality
These results should not be surprising since growing evidence demonstrates that antioxidants are beneficial in improving the effectiveness of chemotherapy. Many tests in vitro (animal studies) show the positive effects of antioxidants such as vitamins C and E, beta-carotene, and melatonin. These antioxidants actually enhance the effects of chemotherapeutic agents compared to doxorubicin, cisplatine, 5 fluorouracil, and bleomycin. Dr. Prasad, a radiation researcher, showed that vitamin C added to X-rays increases the building of cancer cells, and similar results were seen in Belgium without additional harm to the patients.

Four studies of patients with advanced ovarian cancer have revealed positive interactions with glutathione and chemotherapy regimens, resulting in overall better patient outcomes and an improved quality of life. Other studies showed that high, but not toxic, levels of vitamin C may enhance the effects of chemotherapeutic agents such as doxorubicin and cisplatin, as well as paclitaxel, 5 fluorouracil, and bleomycin. In addition, antioxidants provide protection to healthy tissues from chemotherapeutic agents such as cisplatin or doxorubicin, which lead to toxic side effects of chemotherapy. Those toxic side effects can be reduced in 57-70% of patients. Antioxidants improve patients' quality of life, which is most significant, since 80% of cancer patients suffer from toxic adverse effects. One patient with ovarian cancer doing five hours of chemotherapy at each session was protected with high-dose antioxidants and did not suffer from adverse toxic effects. After three months, the tumor marker CA15.3 decreased from 103 U/ml to 8.94 U/ml, illustrating that antioxidants do protect and increase the effectiveness of chemotherapy.

Antioxidants are our antidote against excessive oxidation in the body, but they also serve a dual role, since, at the same time, they act as prooxidants that affect the tumor cell growth. Antioxidants may also balance free radical activity to control cell behavior, cell signaling pathways, and tumor growth.

It occurred to me that most doctors have poor knowledge about oxidative stress and cancer and know little too about how oxidative stress can clinically influence tumor growth. As a result, these doctors have a poor idea of the wide field of therapeutic applications concerning antioxidants, including within pathologies of
cancer. Normally healthy cells absorb only a minute's worth of the antioxidants they need, and healthy ones have an intact antioxidant enzyme defense against an excess of free radicals. Cancer cells poor in SOD and catalase may absorb higher doses of antioxidants, which causes them to become toxic, increasing the synergistic effects of radiation and chemotherapy.\textsuperscript{25}

Thus, the Society of Integrative Oncology article supports the idea that high doses of antioxidants can be problematic during chemotherapy, a conclusion in total contradiction with many new lines of research. Growing evidence demonstrates that high doses of multiple antioxidants are essential ingredients in improving the efficacy of standard cancer therapy.\textsuperscript{26} Radiation treatment\textsuperscript{27} and anticancer drugs reduces inherent antioxidants, inducing oxidative stress and thus increasing the disease progression. New research supports the fact that antioxidants, vitamins, and some phytochemicals selectively induce apoptosis in cancer cells, but not in normal cells, and they prevent angiogenesis and metastatic spread, therefore increasing the effectiveness of chemotherapy.

There are several other reasons to use antioxidants during chemotherapy. For instance, chemotherapy is an immunosuppressive, which increases susceptibility to cancer metastasis and infection. Healthy immune cells may be restored by antioxidants\textsuperscript{28} including immunostimulants extracted from modified arabinoxylan rice bran as M Gn-3,\textsuperscript{29} which, over the long term, has demonstrated no signs of toxicity and an increased survival rate.\textsuperscript{30}

There is, of course, the question of which antioxidant supplementation to use – the quality and the dosage. Synthetic antioxidants are to be banished from clinical practices or clinical trials, and single antioxidants may not be effective. In fact, single antioxidants can be harmful among high-risk populations in which some people may already have precancerous or cancerous lesions not clinically detected (Prasad 2001), while antioxidants in combination are more effective in limiting tumor cell growth. In our clinical work, we use our own developed formula, which is a low-molecular antioxidant compound made from modified vegetables and seed and has great efficiency in therapeutic applications\textsuperscript{31-32} and anticancer therapy.

We always need to use high doses of multiple antioxidants, as low doses of individual antioxidants can stimulate the growth of cancer cells in culture, which is
true for both vitamin C and beta-carotene. This is likely one of the reasons why clinical trials developed to observe some possible benefits of beta-carotene in preventing lung cancer in current smokers apparently failed.\textsuperscript{33} An interesting fact to remember is that beta-carotene is efficient only in a rich oxygen ground, which is not the case for smokers. A clinical trial with SOD enzymes would have been more appropriate, since SOD is the main antioxidant defense in lungs and links with lung cancer. The authors of the article mentioned this particular test and took advantage to explain that some supplements may do more harm than good, but no reference was made about the quality and dosage used in this clinical trial. First, synthetic beta-carotene has no efficiency over natural beta-carotene.\textsuperscript{34} As explained before, low doses may be harmful among the high-risk population, although that conclusion requires more proof.

The French government study (SUVIMAX), which was conducted from 1944 to 2004, involved 13,017 volunteers and demonstrated that cocktails of antioxidants have real beneficial effects in reducing the risk of cancer (31%), and decreasing mortality from all diseases by 37%. The result is in clear contradiction with speculations declaring antioxidants useless in benefiting our health. (For more information, visit www.mag.Pluspharmacie.com/pagelibre001047F.html.) (Aug. 2008: Bad link: Visit http://www.mag-pluspharmacie.com )

**Conclusion**

The conclusions reached in the Society of Integrative Oncology article are not really based on scientific evidence or on studies of various clinical trials or experimentations; instead the article’s authors use hypotheses to support and/or condemn the practice of alternative therapies. The article is based on negative opinions and ignores many positive references that demonstrate the benefits of high doses of vitamin C and especially high doses of antioxidants during chemotherapy. The authors display a total lack of knowledge concerning the implications of oxidative stress that may influence the effectiveness of chemotherapy, since persistent oxidative stress in cancer may be considered as a bad prognostic. It is difficult to believe the article of Labriola, D. and Livingston, R. is included in a scientific journal (Oncology) and referred in this article as a reference to deny the use of antioxidants. The Oncology article makes no mention of nutrition as support to chemotherapy, necessary since laboratory tests may monitor decreasing vitamins, minerals, and antioxidant levels in blood plasma after
chemotherapy.

What about mentioning immune defense and immune cell activity? Does Integrative Oncology fail to admit the importance of the immune system and the fact that strengthened immune cells decrease with chemotherapy? Where are examples of clinical cases supported by hospital check-ups, scans, or blood parameters that show chemotherapy-alone is better than chemotherapy combined with nutrition, antioxidants, functional foods, and/or some anticancer non-toxic molecules? To show that, in some cases, mainstream treatments combined with nutrition, antioxidants, and/or anticancer non-toxic molecules increase the effectiveness of chemotherapy with quicker results and remission, a positive step would be to visit a reputable European clinic of CAM therapy, study medical records, study cancer cases treated for one to four years, speak to patients, and at least admit that alternative therapies may be useful and, in some cases, offer extraordinary results.

We understand that oncologists do not like to hear about the effectiveness of other treatments because it may raise questions about their own deeply rooted theory and paradigm of toxic drugs, but obviously there is a failure in the perspective to cure cancer. Cancer patients cannot wait another 15 or 20 years for a possible cure. When President Nixon declared the war on cancer, a cure for cancer was projected by 1976. That timeline was extended to 2000, and now, apparently, the cure will arrive by 2015. I hardly believe people today will buy these types of stories. It is time to demonstrate a more open mind and a more open view on cancer and not to spend time on arguments, criticism, denial, or even the ridiculing of alternative therapies as I see done in *Lancet*. It does not show professional ethics or even respect for other systems that are not well understood, but are likely to be efficient.

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**Notes**

5. Serge Jurasunas. A case where combination of natural compound was effective in a metastatic breast cancer.
13. . Combination chemotherapy plus radiation therapy with or without AE 941 in treating patients with stage III NSCLC that cannot be removed by surgery. *Clinical Trials Gov.* 1-09-2006.


32. Anti-inflammatory and COX 2 inhibitory property of Anoxe. Bioactive Natural Products Lab.