

Integrative and Alternative Medicine Take Steps Forward—and Backward!

The lead article of this issue, “Insulin and Cancer,” by Dr Barry Boyd, is an important advance in the scientific rationalization of some of the basic therapeutic interventions characteristic of integrative cancer therapies: nutrition, exercise, and stress management. Boyd, a member of *ICT*'s Editorial Board, reviews the emerging data showing the powerful promotion of cancer growth by insulin and insulin-like growth factor. With the increasing and vexing problems of insulin resistance and type 2 diabetes linked to the obesity epidemic in the United States, we can expect to see increasing numbers of patients with insulin-stimulated cancers. Boyd's data strongly support and justify the typical nutritional interventions of integrative medicine, such as whole grains, vegetarian-based proteins, fish, and fish oil. He points out the impact of both exercise and stress on obesity and insulin levels and he makes a convincing case for the argument that conventional medicine's disregard of the control of insulin through nutritional measures is a major disservice to patients. Boyd's thesis promotes a position supported by those of us at *ICT*: alternative and integrative medicine have had it right for decades when it comes to nutrition. Simply put, this is an article that no integrative practitioner can afford to miss.

In publishing an article in this issue by Ralph Moss, PhD, on Cytoluminescent Therapy[®] (CLT), an alternative cancer treatment that was recently initiated in Ireland, we are taking an unusual step for a medical journal. This article is not a clinical study but rather an investigative report. Dr Moss is a well-known and widely respected figure in the world of alternative cancer therapies, a member of the *ICT* Advisory Board, the author of several books and a newsletter on various aspects of alternative cancer treatment, and director of a firm that specializes in producing reviews of relevant alternative and complementary therapies for individual patients. For the investigation published in this issue, Dr Moss was contracted by the physicians who originated CLT to correspond with patients who had undergone the treatment so that some assessment could be made of the benefits of the therapy, as well as to review the relevant literature on this and related therapies. Dr Moss is a science writer, rather than a clinical researcher; thus, his contacts with patients were restricted to relatively informal e-mail surveys of the self-reported reactions of patients who underwent

this therapy. No access to medical records was involved. A survey by a writer is not subject to review by an Institutional Review Board (IRB). Thus, the information on patients that Dr Moss is able to present is much more limited than would usually be expected in the setting of a medical journal. However, due to Dr Moss's close involvement and experience with CLT and because of a very strong indication of some serious untreated adverse effects occurring among the patients receiving this therapy, which continues to be of interest to cancer patients and is reportedly expanding into other countries, we feel the publication of this unusual article is fully justified. It is more than justified: it is an important alert to a problematic therapy that is of possible interest to many patients who are seeking out alternative cancer treatments and a portrait of a dark side of alternative medicine that we must acknowledge. While it might have been preferable to have a proper retrospective review of this therapy, done by a clinical research team under IRB supervision, in the interest of making patients and physicians aware of the potential health problems with CLT, we have chosen to publish this investigative report immediately.

You might be wondering why physicians who originated CLT asked a writer, even one as respected as Dr Moss, rather than a clinical researcher, to perform this preliminary evaluation of this new therapy. So are we. It is an unusual strategy for determining outcome data on a developing therapy. Dr Moss has, in fact, reported several rather unusual and disturbing features in the development of CLT. CLT is a variant of photodynamic therapy (PDT). It is clear that the work of T. J. Dougherty and others on PDT has resulted in a useful conventional treatment for superficial cancers or in an intraoperative setting for deep-seated tumors. CLT in contrast is used with a wide variety of internal cancers with an external light source and uses an algal extract (allegedly fairly well characterized chemically and listed as a drug in the Russian Pharmacopoeia, but without significant traditional medicine use) to effect cytotoxic activity. Apparently, because the pharmacological agent is a plant extract rather than a chemical compound and thus a “natural” agent, it was felt that there was no need to go through the phase I, II, and III studies that are typical of pharmacological drug development. Instead, CLT was simply applied to patients

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with internal tumors based on phase I and II studies of superficial cancers conducted in Russia. No agency or IRB supervision of CLT has occurred. This situation—using a conventional therapeutic technique with a plant extract rather than a chemical compound—actually resembles the drug development setting, differing from the complementary therapeutic strategies usually employed in scientifically oriented integrative medicine, such as nutrition, exercise, psychological interventions, and botanicals based on traditional medicine use, and places CLT squarely in the camp of alternative rather than integrative medicine. Based on Dr Moss's important experiential evaluation and review of the background of CLT, we strongly urge that any further development of CLT employ more standard approaches to regulatory guidelines, treatment administration, patient monitoring, and clinical evaluation.

The reader will notice the contrast between the development of CLT and an article on the scientific exploration of another former alternative cancer therapy: mistletoe. Patrick Mansky and colleagues from the US National Institutes of Health report on the design of a phase I trial of mistletoe with the cancer chemotherapeutic agent gemcitabine. Mistletoe, similar to the algal extract used in CLT, does not have a long history of traditional use in cancer. It was, rather, selected based on the principles of anthroposophic medicine by Rudolf Steiner. It has, however, been widely used in Europe and has become very popular there. The phase I study outlined by Mansky features complete pharmacokinetic and pharmacodynamic analyses of the botanical-drug combination and thorough identification, standardization, and quality control protocols for the mistletoe extract, as well as collection of safety and toxicity data expected in a phase I study. It represents the highest standard in exploration of the potentials of alternative and integrative medical strategies and is to be commended for breaking new ground in the scientific validation of botanicals used as cancer treatment adjuncts. We look forward to the expansion of protocols of this sort to other areas of integrative medicine and to a concomitant expansion of governmental and private funding to support these important but expensive efforts.

Mansky's article is just one in a collection of excellent articles from the 2003 Comprehensive Cancer Conference held in Washington, DC, under the leadership of the Center for Mind-Body Medicine. Dr

James Gordon, director of the center and a member of the Advisory Board of *ICT*, introduces these articles and provides his perspectives on this year's meeting. A second article on a botanical extract also appears in this collection. Daniel Sliva, of Clarian Health Partners and Indiana University, reviews research on the reishi mushroom, *Ganoderma lucidum*, and its potential in cancer treatment. Sophisticated analyses of the effects of reishi on various molecular targets are a particularly interesting and provocative feature of this article, as is the use of biological testing of a variety of commercially available extracts of reishi constituents. The other articles in this collection discuss "softer" targets, but not necessarily with scientifically "soft" approaches! Mary Johnson addresses an area for which we would like to see more coverage in this journal: oncology nursing and its vital role in integrative care. Dr Johnson is at St Olaf's College, where holistic nursing and complementary therapies have been part of the nursing curriculum since 1991, with obviously positive results for students in the nursing program. Joel Marcus and colleagues at Scott and White Memorial Hospital, part of the Texas A&M University system, present a conceptual model to aid clinicians in integration of hypnosis into the experience of palliative care patients. The potential of complementary and alternative medicine (CAM) techniques in palliative care is another area that cancer integrative medicine has not yet explored to any great extent, but judging from the review offered by Marcus et al, CAM techniques may have a great deal to contribute in this setting. Finally, Janice Post-White and colleagues present a study of both massage and healing touch, an energy medicine technique aimed at restoring harmony and balance. This study uses the most scientifically rigorous approach of a well-designed randomized controlled clinical trial to approach this most soft of targets, with results that are refreshing, intriguing, and encouraging.

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