

Shanghai International Symposium

Integrative Oncology Theory, Research, and Practice

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The Society for Integrative Oncology (SIO) held a symposium in Shanghai, China, on April 25–26, 2008. The symposium, which I attended, focused on the use of Traditional Chinese Medicine (TCM) in cancer care. There were more than 500 attendees (most of whom were Chinese), including 100 people from foreign countries such as the United States and from Europe. Clinicians, researchers, and scholars met on Chinese turf to discuss the theory, research, and practice of TCM as it pertains to oncology. This article shares a sampling of research from that conference, interviews with three distinguished experts in integrative oncology, and my commentary.

Highlights of the Symposium

Clinicians and researchers from around the world presented their data on various aspects of the use of TCM in oncology. Here are brief summaries of a few of the presentations from the symposium:

- Colleagues from West China Hospital at Sichuan University presented data from their study examining the use of TCM by 352 oncology patients in West China. Patients reported using TCM to assist healing, boost their immune systems, and increase a feeling of control in their medical treatments. These patients expressed the belief that there were fewer side-effects in TCM compared with Western medicine, and some of the patients said that they hoped for a cure with TCM treatments. Apparently, one third of respondents in this study used certain TCM therapies without the knowledge of their TCM physicians.¹
- Gary Deng, M.D., Ph.D., clinical director of the Integrative Medicine Service at Memorial Sloan-Kettering Cancer Center (MSKCC), New York City, presented a talk on “Functional Neuroimaging in Acupuncture Research” and concluded that there are increasing data available in this area that may help us understand the physiologic mechanisms behind acupuncture’s effects. Although findings are not definitive, one of the functional neuroimaging research findings is that acupuncture is associated with somatosensory areas of the nervous system and the limbic system.²
- Researchers at the East-West Cancer Center at Daejeon University, in Daejeon, South Korea, conducted a small study on the effect of meridian massage for cancer-related fatigue and found that patients with cancer who received 30-minute meridian massages five times a week for 3 weeks experienced decreased cancer-related fatigue.³
- Colleagues from the School of Dentistry and Health Sciences at Charles Sturt University, Wagga Wagga, Australia, presented a review of research examining the effects of Chinese herbal medicine on the immune system. The researchers concluded that Chinese herbal medicine may modulate inflammatory markers such as interleukin (IL)-6 and others. The researchers also noted that several herbs demonstrated specific anticancer, apoptotic, and anti-inflammatory effects, and concluded that herbs may have a role in symptom management and in the treatment of cancer.⁴
- Researchers from the Institute of Chinese Medicine at the Chinese University of Hong Kong conducted a randomized controlled clinical trial on the effects of a Chinese medicine herbal formula on the quality of life and immune system in 72 patients who had lung cancer. The scientists found that a high-dose formula group reported improved quality of life and improved emotional well-being, and had increased IL-6, compared with a low-dose formula group.⁵

- Barrie Cassileth, Ph.D., founding president of the SIO and chief of the Integrative Medicine Service at MSKCC, gave a presentation, "Principles of Quality Herbal Research," encouraging researchers with ways to improve or maintain a high quality of herbal research. Her presentation included recommendations to: standardize botanical agents to display minimal variations across batches; ensure the absence of toxicity; present definable efficacy; fractionate herbs to identify active ingredients; determine herb-herb and herb-drug interactions; and more.⁶

There were many other presentations on specific herbal formulas for cancer care, acupuncture, current research collaborations around the world, and other TCM therapies. The abstracts from this symposium are available on the SIO website (www.integrativeonc.org/).

Western Views of Traditional Chinese Medicine

I interviewed 3 presenters from the conference, each of whom are leaders in the field of integrative oncology. I asked them about the conference, their views on the role of TCM in cancer care, and future challenges regarding the use of TCM in Western culture.

Differences Between Use of TCM in China and the United States

Lorenzo Cohen, Ph.D., is president of the SIO, and is the director of the Integrative Medicine Program and chief of the section of integrative medicine in the department of palliative care and rehabilitation medicine at the University of Texas M.D. Anderson Cancer Center in Houston. Dr. Cohen recently spent 6 months in Shanghai, collaborating with colleagues from the Fudan University Cancer Hospital on research examining the role of acupuncture and *qigong* in cancer care as well as the examination of *Huachansu* (toad venom), a traditional Chinese medicine, for patients with advanced pancreatic cancer.

Jane Hart: What was the purpose of the SIO Shanghai International Symposium?

Lorenzo Cohen: There were two main purposes. The first and more-conventional purpose was to present the state of the science and field of TCM for cancer and to have people from all over the world in one forum to present existing data and research. The second purpose was for bridge-building and, it is hoped, to establish collaborations.

We wanted to present to the Chinese the level of interest in TCM from the rest of the world and present research that we are doing in the West as well as hear about their research and work. The conference helped build a world focus on medicine and developing treatments to manage and/or treat cancer. Senior leaders from the United States and China were present, including people from the National Cancer Institute and the Chinese Ministry of Science and Technology, to represent their points of view.

The Chinese have been using TCM for thousands of years to treat cancer, but it is only recently in the West that we have looked at TCM for cancer care. TCM is part of the standard of care in China, but it is a challenge for them to conduct high-quality research and build credibility. So the purpose was to profile to them some of the work that is being done outside of China and share enthusiasm about new drug treatments and explore other forms of TCM for cancer, such as acupuncture.

JH: What are some of the challenges of translating what the Chinese understand about TCM into practical realities in the American medical system?

LC: In China, a TCM physician's bread and butter is that the whole practice is founded upon unique Chinese herbal formulations that Chinese practitioners use to manage and treat disease. One doctor may have a unique modification of a traditional formula and, down the street, there may be a different physician who has a slightly different formula from the ancient tradition and who is not willing to share the ingredients of the formula because he or she would be giving away trade secrets.

Sometimes, all of the details are not shared. We need to come up with strategies on how to overcome this, and this is something that the Chinese government is working on, because we need full disclosure to understand the reality behind some of these treatments.

Then there is the bigger issue of the fact that the art behind TCM or any medicine is something that goes beyond testing drugs and the practice of medicine that is not learned in a textbook or even conveyed verbally. This is particularly true in TCM, in which the treatments that are given to patients are typically based on TCM diagnosis, which is a whole different medical system and understanding of human physiology compared to the conventional Western medicine system. And although there are fixed algorithms for different diagnoses in TCM, it is a system that we don't fully understand.

The research that we do here in the United States is not examining TCM as it is practiced in China but based more on reductionist medicine—testing this particular herb or formula for Western-based disease—not an examination of TCM as it is practiced in China. The same is true for acupuncture—we find out the Western diagnosis, such as xerostomia due to head and neck cancer, and can use specific acupuncture points to treat this condition. But when a person comes in to see a TCM doctor, he or she would use some fixed points based on the dry mouth, but also use other individualized points based on the full TCM diagnosis and, theoretically, the doctor would get better results.

How can we validate this process? In Western medicine and oncology we are embarking on personalized medicine, which is based on genetic markers and tumor-based abnormalities as detected in 1 person or another—therefore we have to establish individualized treatment research paradigms. Conventional medicine is challenged with developing large trials looking at the efficacy of individualized treatment, and this benefits the field of TCM as it has been based on individualized treatment for thousands of years.

JH: What are some other challenges in bridging the understanding of TCM between the East and the West?

LC: There is a lack of awareness in the West that there is this very complex, yet fixed, system in which traditional TCM physicians are making their treatment decisions. But if you look closely, there is reason and theory behind the practice of TCM. But it is a system that is not well-understood, and there is often controversy in China. But the same is, of course, true of our Western-based system as well. Also, there is a misconception that the Chinese don't want to have their medicine put to the test. Some people think that the TCM practitioners don't really want to test TCM, and want to make a profit and use it, but this is not the case. There is a great openness to begin investigating what they have been doing for thousands of years.

Interestingly, in the field of oncology, acupuncture is really not as integrated in China as it is in the West. Part of this has to do with the larger focus of what happens in hospitals and cancer centers and the emphasis of treating the disease. It is only recently in the West that there is an increased emphasis on treating a patient beyond the disease and focusing on symptom control, quality of life, and survivorship-based issues. So a modality like acupuncture is not there to shrink the tumor, like natural products and herbal medicine, but mainly for symptom control and quality of life. There is less emphasis on these aspects of care in China.

At the Fudan University Cancer Hospital—that treats as many people as M. D. Anderson—there is 1 acupuncturist on the staff. Acupuncture is not as widely used by the TCM doctors when the emphasis is more on targeting the tumor. The Chinese believe that acupuncture on its own is much less effective at controlling symptoms than if combined with herbal treatments, and this is their belief regardless of the symptom you are treating.

It would be rare for a person to receive acupuncture on its own in China. The American research presented at the conference was surprising to the Chinese due to the omission of the herbs and supplements that they view as primary (and acupuncture as secondary). But our research has also shown them the level of interest that we have in acupuncture, which, we believe, is a beneficial treatment in and of itself in cancer care.

JH: What are important future directions in terms of TCM and its role in oncology?

LC: The hope is that new discoveries are going to be made in medicine as a whole and in oncology in the field of natural products research. We know that the majority of chemotherapeutic agents come from natural products and we will find new products out there that will be able to be synthesized in laboratories or from natural sources.

One of the challenges is that, with some of the effective formulas, we can't pinpoint an active ingredient. It is easier to work with a specific molecule, but often there is not one active ingredient from the plant or even just one plant in a formula but rather a combination of ingredients that is necessary for

the effects on cancer growth. This makes it a real challenge for developing TCM drugs in the future. But we know that many of the active components in the plant or plants hit multiple targets in cells and it is necessary to explore these kinds of targeted therapies.

Another area to be revealed in the years to come is the basis on which TCM is founded and that is “energy” within the body that the Chinese view as the meridian-based system of energy flow. We don't fully understand why acupuncture works based on this mechanism, but we know that it goes beyond the placebo effect and the challenge is to try to understand the mechanisms of action. Without understanding the mechanisms, the skeptics will not accept it as a real form of treatment. By learning the mechanisms behind the efficacy of acupuncture, I believe we will learn something previously unknown and quite unique about human physiology.

Use of TCM in the United States

Gary Deng, M.D., Ph.D., is the clinical director of the Integrative Medicine Service at MSKCC. He is also a principal investigator or co-investigator in several basic science and clinical research projects funded by the National Institutes of Health (NIH), including the MSKCC Research Center for Botanical Immunomodulators, one of the six federally funded botanical research centers in the country. He is co-director of a National Cancer Institute (NCI)-funded Integrative Oncology Fellowship training program. Dr. Deng received his medical degree from Beijing Medical University, China.

Jane Hart: What are some things that you personally learned about TCM from the symposium?

Gary Deng: There are quite a few well-designed and conducted clinical studies and many high-level laboratory studies being done in China. I also sensed a difference in approach among Chinese TCM researchers, with the purists resisting a reductionist approach, such as isolating active constituents, while the other side was arguing that, without such an approach, TCM would never be accepted by the scientific community at large. I was also impressed by the degree of commercial support the organizers were able to enlist to sponsor the symposium. TCM is an industry in China, similar to the pharmaceutical industry here, with its marketing arm fully engaged in supporting academic conferences.

JH: What do you think the role of TCM is or should be in America as it pertains to cancer care? Do you think TCM will become more widely used in America in the future?

GD: TCM was developed over the millennia before the advent of modern science. Naturally, TCM is a mixture of jewels of wisdom from clinical experience and nonsensical myths based purely on beliefs. What we should do in America, as well as anywhere else, is to distill the wisdom and discard the myths. This will be a long process, as it takes time to tell which is which. I do think TCM will become more widely used in the U.S. as more and more data become available supporting certain therapies and disproving others.

JH: What obstacles do we face in terms of using TCM in America?**GD:** The main obstacles are:

- (1) The mainstream medical community is not very familiar with TCM. Ignorance breeds fear. Fear makes people rather err on the safe side.
- (2) Some TCM practitioners or product marketers, knowingly or unknowingly, make exaggerated claims, damaging the reputation of the whole profession.
- (3) There is a lack of research funding to generate data that guide clinical practice. On the one hand, people want evidence, which requires research. On the other hand, few financial sources are willing to do so as research is expensive and the funder doesn't have much to gain from it.

JH: Are there any particular TCM therapies that you feel particularly hopeful about in terms of future interventions for symptom management or treatment?**GD:** I think it is not a particular intervention or a particular herb, but the overall approach to health of TCM that is particularly helpful. The "art of living a healthy life"—ingrained in TCM, which includes nutrition, physical activity, attitude, et cetera, basically a way of living—is underappreciated and underutilized. Sure, it is more difficult to teach the "art" than prescribing an herb or giving acupuncture. But I think, once learned, it would benefit the patient for the rest of his or her life.*Integrating TCM into Western Oncology*

David Rosenthal, M.D., is the medical director of the Leonard P. Zakim Center for Integrative Therapies at the Dana-Farber Cancer Institute. He is also a professor of medicine at Harvard Medical School, Boston, Massachusetts; the director of Harvard University Health Services; a founding member and the past president of the SIO; and the past president of the American Cancer Society.

Jane Hart: What need do you perceive on the part of cancer patients, in particular in America, to have access to complementary therapies including TCM?**David Rosenthal:** There is a very significant need by patients to combat not only the disease symptoms but also the treatment-related symptoms. Most of the benefit of complementary and alternative medicine (CAM) and TCM is for symptomatic treatment and improved quality of life. Many of our patients had been seeking help outside of Dana-Farber for help with their symptoms. In the past, these patients have had to go from one location in the city to another. Our center is named after a person who had multiple myeloma and went all over the suburbs for Reiki, acupuncture, and massage, and these treatments helped him with pain symptoms and quality of life. He benefited and helped to bring all of these therapies under one location in our center.**JH: Do you see TCM therapies helping patients with cancer who have symptoms or actually helping to cure and/or treat cancer?****DR:** That is a big question. We don't think of acupuncture as curing cancer but rather as helping with symptoms. The big question is: "What is the role of herbs and botanicals in Western medicine?" The amount of herbs that are being used in China is incredible, and in China, it is natural to serve various teas alongside the chemotherapy. There may be synergism or antagonism in the ways these herbs work, but that is what we have to find out. TCM needs to be more integrated in cancer care in the United States, taking advantage of the already proven benefits of acupuncture, mind-body programs, and physical activity; and we need to study herbal products and the safety and effectiveness of these products.**JH: What obstacles do we face in terms of using TCM in America?****DR:** Continuing to influence the "old guard of hematology and oncology" about the value of evidence-based TCM.**JH: How do we do that?****DR:** It takes slow but steady progress. One of the things we need to do is demonstrate the benefits to them. When our center first opened, referrals came directly from patients. But then, slowly, the referrals started coming from nurses, and now, because patients are showing significant benefit, the doctors are seeing this and referring patients. We keep our center right within the walls of the cancer center so our center is visible to the nurses and physicians in the cancer center. Now folks from the gastrointestinal and breast centers, for instance, are starting to get more involved in what we offer. If you demonstrate benefit, and get people to see the benefit, and show clinicians that patients can tolerate conventional treatments better with an integrated approach, then clinicians will be interested.**JH: What does the best of integrated care look like for the patient who has cancer?****DR:** Pain treatment, palliative care, psychosocial oncology, patient and family care services, ethicists, CAM practitioners, spiritual advisors, specialty consultants, primary care and oncology physicians—all of these aspects are important in integrative oncology. You also need somebody who is a patient navigator. No one model fits all. Treatment needs to be based on each person's somatic and genetic makeup, and you can tailor a person's treatment and management and add supportive therapies to help that person with cancer—that is true integration. CAM is just part of it, and there are many different models being developed around the country.

Commentary

Dr. Rosenthal stated in his conference presentation, "Individualizing Cancer Therapy: Utilizing the Best of Eastern and Western Medicine," that the 5-year survival rate in the United States for all cancers is now up to 66% from 50% in the mid-1970s.⁷ He said this means that "we have an increasing number of cancer survivors, many of whom are struggling

with quality-of-life issues after receiving treatment with chemotherapy, surgery, and/or radiation therapy.”

The Chinese face their own struggles, as the incidence of breast and colon cancer are on the rise in their country. These trends in China, according to Dr. Rosenthal, call for the need to reevaluate risk factors such as nutrition and physical activity, and he said he suspects that an increasingly Western lifestyle is contributing to the trends.

In the United States, we have the challenge of offering truly integrated care to increasing numbers of cancer survivors and understanding how to translate the system of TCM better, in our medical system appropriately, as yet another way to focus on the whole patient.

Educating clinicians is key, as many of these practitioners do not understand basic principles or terminology related to CAM or TCM. A number of clinicians at the conference were challenging others to define *qi*. In addition, accessibility to therapies such as nutritional guidance, including the use of dietary supplements and herbs; physical activity programs; acupuncture; and massage is critical for cancer survivors' care. We await emerging evidence from increasing research on botanicals and natural products and from the fields of acupuncture and massage, but in the meantime, we should embrace what we know.

As a side note, I attended the conference and was struck by the imagery of Americans presenting their research on acupuncture to the Chinese. I thought that the equivalent of this would be similar to the Chinese coming to America to give a talk on baseball! But in fact, as Dr. Cohen stated in his interview, the Chinese were very open to the U.S. perspective, methods, and use of acupuncture in cancer care. We have much to learn from each other. The Chinese people presenting and in attendance at the conference could not have been more welcoming to us, to our ideas, and to our research. The dialogue that was begun and continues between the East and the West as a result of the conference is invaluable for understanding each others' cultures, continuing current collaborations, and forming new ones. ■

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