

Comprehensive Cancer Care: Integrating Complementary & Alternative Therapies
The Uses of Chinese Medicine
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Presenters: Efreem Korngold, OMD; Yan A. Su, OMD, PhD; Ming Tian, MD
Commentator: Michael Hawkins, MD
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Mr. Duggan: My name is Bob Duggan. I'm with the Traditional Acupuncture Institute in Columbia, Maryland. I'm moderating this session. I've been practicing Chinese medicine for 25 years. Several others of us have studied together – Efreem, Murray, Harriet and I studied together years ago. I know the value of Chinese medicine in dealing with folks with any disease, and especially with serious illness.

It's my pleasure to introduce a colleague of those 25 years. Efreem Korngold has been practicing Chinese medicine for 25 years. After receiving his initial education in Britain and California, he pursued advanced studies in the People's Republic of China. He's coauthor with Harriet Beinfield of *Between Heaven and Earth: A Guide to Chinese Medicine*, and also the author of the *Chinese Modular Solutions Handbook for Health Professionals*. He has lectured on Chinese medicine for 20 years in hospitals, acupuncture colleges, universities and medical schools. He's currently on the faculty of the American College of Traditional Chinese Medicine in San Francisco. He maintains a practice at his clinic, Chinese Medicine Works, in San Francisco. It's my pleasure to introduce Efreem Korngold. Thank you for being with us.

Dr. Korngold: First let me say that I'm not a researcher. I'm just a humble clinician. I've worked with patients for 25 years. Increasingly in my practice, and in the practice of others who administer acupuncture and Chinese herbal medicine, more and more people with cancer are seeking our help. In my own experience, we are generally very helpful with these patients.

I feel it's my role today, since these other two gentlemen are going to present findings of research, to give an overview of the history, or at least the modern history, of the use of Chinese medicine in cancer treatment. I'll also talk a little bit about what Chinese medicine is and how it thinks about cancer, what its views on cancer are. I'll present some of the theoretical premises of Chinese medicine that inform the use of Chinese medicine, including acupuncture, herbal medicine, *Qi Gong* and diet, when used according to its own principles. I prepared a paper, which I'm not going to deliver in its entirety, but I may quote myself here and there.

In the 1960's in China, there was a resurgence of interest in the traditional medicine of China. Some of that interest was focused on the treatment of cancer. Chinese researchers and physicians looked anew at some of the age-old remedies, herbal remedies that had been in use for two millennia, herbs which have become quite popular in our own American health food stores and pharmacies. These include astragalus, ginseng, Siberian ginseng, and the ganoderma mushroom and shiitake mushroom that there is much publicity about. They discovered that when these agents were given to patients under conventional surgery, radiation and chemotherapy, not only did their health status remain good, but also their ability to recover from those treatments when they were finished, to rebound with a high quality of life, and in some cases even to live longer than other patients, became clear.

There was a name given to this type of therapy in China. It was called *Fu Zheng Gu Ben* or *Fu Zheng Pei Ben* therapy. Freely translated, *Fu Zheng* means to strengthen what is correct. *Gu Ben* means to secure the root. If we take apart the meaning of this therapy, we get an insight into the thinking of Chinese traditional medicine.

What is correct we can understand as what is the healthy process of the organism. What is it that makes us grow and develop and resist disease and recover from stress? We term that in

Chinese medicine *qi*. It's usually spelled *qi* and pronounced "chi." *Qi* is the metaphor and also the phenomenon of the power of life, the organizing power of life. In particular, the organizing principle of human life is *qi*. So *Fu Zheng* means to strengthen the *qi*, strengthen that in the body which organizes and regulates the normal healthy development, growth and maturity of each human individual.

The second part of the name is *Gu Ben* or *Pei Ben*, to secure the root. That refers to a principle of Chinese medicine that the root of all life in the body is ascribed to a functional system, an organ network, or an organ system, called the kidney. In Chinese medicine the kidney is that network of functions, or sphere of functions and organs, that is responsible for the regulation of growth, reproduction, development, and also repair and regeneration of the body. To secure the root means to strengthen the fundamental processes of regulation, regeneration and repair.

These two are complementary principles – to strengthen the *qi*, what is correct, and strengthen the root, that is, to promote the integrity, the coherence of all of the regulatory mechanisms in the body. This essentially is the basic principle of Chinese traditional medicine for the last 2,000 years, at least, and into the modern day.

On the basis of this principle, surveys and reviews of the Chinese materia medica, or pharmacopoeia, were undertaken starting in the 1960's. The materia medica now contains some 6,000 or more known and identified substances, primarily of plant origin, but also minerals and animals. There have been a couple of reviews of the Chinese literature and the world literature on pharmacological research of Chinese herbs. From what I've read recently, there probably are about 50 to 100 substances that have been identified as having antitumor, immune modulating and adaptogenic properties.

What do we mean by the term adaptogenic? This was a word that was coined by a Russian researcher named I. I. Brekhman, I believe in the 1950's. He was studying the herb that's commonly known as Siberian Ginseng. Actually, it's not a ginseng plant – it's a different species, called *eleutherococcus senticosus* – but pharmacological research showed that it contains many of the same active biochemical compounds that the ginsengs also have.

Brekhman discovered that giving this substance, this herb, either in its crude form, just powdered up and fed to rats or other animals, or purified extracts, increased the overall capacity of these animals to resist stress and disease. If they were surgically wounded experimentally, or if they were infected, or if they had tumor cells introduced into them, or if they were exposed to exhaustive physical exercise, across the board, animals that were fed this herb did significantly better in terms of their physiological ability to maintain homeostasis than control animals.

Very soon after his research became public knowledge in the Soviet Union, his findings were applied to the Russian people. We've all probably heard news stories about Siberian ginseng being part of the training programs of Russian athletes.

Recently another herb, *cordyceps sinensis*, became popularly known in the United States, particularly in athletic circles. This is a medicinal fungus that has been used for hundreds of years in China. A purified extract of this fungus was fed to Chinese women runners as part of their training program. They broke many world records. Their ability to do this was ascribed to the use of this herbal compound in their training programs. These are just two of about 100 substances that have been identified as having an effective capability in the treatment of many diseases, but cancer as well.

I want to go back to the basic principles of Chinese medicine that we just talked about. Those are that the purpose of medicine is to promote the normal function of the organism.

Inherent in that principle is the belief, or the presumption, that the organism, meaning you and me, is capable of self-healing, self-regulation, self-regeneration, self-repair and self-development. If we are able to invigorate, somehow activate the normal mechanisms that are intrinsic to every individual, we will then be able to resist illness and to overcome disease.

It's interesting to note that while the properties of these substances were emphasized as being useful in the treatment of cancer, they also seem to be useful in the treatment of immune deficiency diseases, of autoimmune diseases, of other diseases that seem to be a result of dysregulation of the organism at some fundamental level.

Clearly cancer is one of those diseases that is a result of the disturbance of some very basic life functions. This morning some of us attended the panel on the trophoblastic theory of cancer. Basically the presumption or the hypothesis is that cancer develops when normal undifferentiated cells, that are part of every organ and every tissue in the body, begin to grow without maturing. Something stimulates their growth, but something else doesn't regulate that growth and help those cells to develop into mature cells which then have a finite existence. Healthy cells die. They don't live forever, except for the germ cells. Cancer cells become immortal.

It seems to be a hypothesis that's being borne out, very excitingly so, in research that's being done right now in this country, developing antibodies to these types of cells which either kill the cell or regulate that cell's growth. The interesting parallel with Chinese medicine is that what Chinese medicine seeks to do is exactly that. It seeks to regulate the fundamental mechanisms of growth and development of the organism, from the cellular level to the spiritual level.

It's interesting, looking through the history of Chinese medicine, that back in the 5th century there was a very famous alchemist physician named Tao Hung-ching. He evaluated and annotated and rewrote the pharmacopoeia of his day, which was called the *Shen Nung pen ts'ao*, *pen ts'ao* meaning material medica. *Shen nung* is the ancient mythical Chinese demigod, or sage of medicine. He listed all the ingredients of the materia medica and classified them in three groups – the upper, the middle, and the lower group.

The herbs, the medicines that were in the lower group, the lower category, were those that were for the purpose of treating symptoms, of treating disease, of ameliorating pain and suffering. The second level were herbs that were for the purpose of helping one to express one's true nature, in other words, to make you healthy. The first category was to help the body to recover from the disease, to mitigate the symptoms, to inhibit the disease process. The second level was herbs and medicines that are used to promote health. The third level, or the upper level, were medicines for helping a person to fulfill their destiny, their purpose in life. This is called *ming* in Chinese medicine.

This shows that embedded in the theory and practice of Chinese medicine is a concept which has also been present at different times in the history of Western medicine: there is a purpose to life. Each individual comes into the world with a particular purpose, a particular mission. The mission of life is first of all to discover that purpose, that mission, and finally to fulfill it, to implement it, to actualize it. The upper class of medicines in Chinese medicine are those which assist us in fulfilling our destiny, in realizing our mission as human beings.

What's very interesting to me is that 99% of the herbal agents that have been found to be effective in the treatment of cancer come from this category of the ancient materia medica. All the herbs like the ginsengs and the medicinal mushrooms, and all of the so-called tonic herbs or

adaptogenic herbs are herbs that were classified as agents to help human beings fulfill their destiny.

Translate this now into some kind of modern Western conceptual language. That might help. I'm going to quote from a selection that I paraphrased from a lecture given by a cell biologist from U.C. Berkeley named Harry Rubin. I hope you'll be patient with me in this digression from Chinese medicine. It will bear on the theory of Chinese medicine that I've tried to elucidate. This is a man who studied the behavior of cells for 40 years.

He took a cell line called the embryonic mouse cell line. This is the cell line that was used in the 1950's to establish the oncogene hypothesis of cancer. This is an immortal cell line that's been kept alive for all these years, so he took these very same cells. These are normal, healthy mouse embryo cells. He put them in culture. Simply by manipulating what he calls the physiological constraints, which means the nutrient level in the culture dish, he was able to induce these normal cells to transform themselves into cancer cells, generation after generation after generation. This is not by the introduction of any damaged DNA. After hundreds of clonings of healthy cells that had no defects in them, simply by manipulating the environment of healthy cells, they were induced to transform into cancer cells.

Not only that, but if he were to allow these cells to reproduce for many hundreds of generations, and then to change the environment again to one in which there were adequate nutrients for cell growth, he discovered that these same cells, the very same cells that had transformed into cancer cells, transformed again back into healthy cells. This is a very interesting discovery. I bring it up because it's very parallel to the trophoblastic theory of cancer. I want to quote a little bit from his lecture.

“If you think and act as if organisms are machines, then the answer you will get is that, in fact, they are machines. There is a different way of asking questions in biology that’s perfectly scientific and legitimate, and also fits the observations. Biology is basically a dualistic science and a dualistic way of understanding.

“Any organism, by virtue of its structure and homeostatic feedback mechanisms and the three-dimensional organization of its tissues (and this is the important point) has a way of keeping cells in an orderly behavior in which the potential for heterogeneity (that is, taking unregulated forms) is very limited, unless you remove these cells from the ordering effects of the organism. Removed from the three-dimensional ordering of the organism, there is a continuous generation of heterogeneity among cells which, in fact, is the way nature works.

“If we can quickly turn normal cells into cancer cells in a laboratory culture by simply adjusting their physiological conditions over a short period of time, what happens over a long period of time? The development of cancer may go through many stages over many years, occupying half the lifetime of an organism. While it is not possible to make a direct extrapolation from cells in culture to cells in the organism, it makes one think about what conditions of constraint, or the lack thereof, induce transformation and the progression to malignancy.”

What Chinese medicine does, what herbal medicine does, what acupuncture does, and what *Qi Gong* seems to do, is to remind the body, remind the organism how to regulate itself to maintain these mechanisms for ordering, for keeping cells, removing them from isolation and bringing them back into the unified system of communication that is part of the organism of the whole. That is what makes us whole and gives us an identity. This is what Chinese medicine does.

For example, to talk a little bit about acupuncture, a famous Canadian scientist, Bruce Pomeranz, established beyond question that the mechanism of acupuncture analgesia was the activation of the endorphin system within the central nervous system. We know that the central nervous system, the brain, the spinal cord and peripheral nerves produce neuro-hormones called endorphins, which are morphine-like substances that relieve pain. They not only relieve pain, they seem to also facilitate repair and recovery.

Not only did he discover the mechanism for this, but he invented a device, an electronic machine, that stimulates the particular nerve fibers in acupuncture points in areas of the body that are rich in these fibers. He found that if patients with chronic pain who had not responded to any other conventional methods of therapy used this machine for a half an hour a day for six weeks, their pain was relieved permanently in 80% of the cases. He said, as somebody else mentioned today, that if this were a new drug put out by Pfizer or Wyeth-Erst, it would be hotter than Viagra. Get rid of your pain permanently in six weeks. But very few people have probably ever heard of this.

So what does this mean? This means that we've defined now one very important regulatory mechanism by which acupuncture affects not only localized sites in the body, not only painful areas or painful organs, but the body as a whole. He's doing research now in the area of injury, demonstrating that acupuncture also stimulates an electrical phenomenon called the current of injury. When you receive a wound, the body creates a particular kind of electrical field to promote the healing of the wound. Acupuncture activates this process. There are probably a number of mechanisms that acupuncture influences. They're all fundamental regulatory mechanisms. This is what we're talking about. This is what Chinese medicine can do. Thank you.

Dr. Duggan: Thank you, Dr. Korngold. There is a Dr. Huang on the program who is not here. I understand that he was unable to get a visa into the country. Maybe later you can say a few words about his work. I believe you are familiar with it.

Our next presenter is Dr. Yan Su. He's an assistant professor at Georgetown University Medical Center, and a Chinese medical doctor and director of the Bethesda Center for Chinese Herbs and Acupuncture. He studied and practiced Chinese medicine in China for many years before coming to the United States in 1986. He has conducted research on drug resistance and cancer for more than 15 years. He is an assistant professor at the Institute for Molecular and Human Genetics at the Lombardi Cancer Center at Georgetown. He has lectured at the National Institutes of Health at Walter Reed Army Medical Center, at many places in Beijing and in China. His talk today is entitled "Therapeutic Effects of Traditional Chinese Medicine on Chronic, Atrophic Gastritis." Dr. Su.

Dr. Su: Thank you for your introduction. I appreciate the invitation to share my work on cancer treatment and prevention with all of you. Before the presentation, I would like to very briefly tell you a couple of stories that happened in my own family related to cancer treatment and prevention. That will give you some clue to why I'm so committed and interested in cancer treatment, prevention and research.

Eleven years ago, one day my father suddenly vomited a large amount of blood. He was rushed to the hospital. They found out he had a late-stage stomach cancer. Cancer cells had already invaded the lymph nodes. He used conventional medicine and had his stomach and the surrounding nodes removed. Since then he has taken Chinese herbal medicine to improve his

immune system and the quality of his life. I'm very happy to say he is healthy today. That's one example.

Another example is my wife's father, my father-in-law. He had bladder cancer about 20 years ago. It was diagnosed and cut out. He constantly practices *Qi Gong*. He's also very healthy today. Last year he came to the United States to spend a year with us.

The incidence of esophageal cancer and gastric cancer is high in China, but it's low in the industrialized countries. In contrast, Western people have high incidence of colon cancer. The dietary factor contributes a lot to the difference.

My son will be seven years old tomorrow. He was born in this country. Three years ago, he always had a problem with his bowel movements. He doesn't like Chinese food, and likes American food. He had bowel movements on average once every two to three days, and they were very dry. He bled during the bowel movement. I was seriously worried about him, because this has not happened to any family's children in China. He's the only one who has this problem.

I found an herbal remedy for him. At the beginning he didn't want to drink it. He said it tasted awful. I told him, "You have to take it. Otherwise you will have more bleeding." He took the herbal medicine. After that, his bowel movements became regular and once a day. Some of his friends had a similar problem. I gave them similar herbal medicine, and it works.

With this story I say that we have to take care of the bowel movements of our children in order to prevent something happening to their colon later, such as cancer. Although I don't have any scientific data to say that, it is my experience.

I can go on and on about what happened with some of my friends, but I would rather show some research data.

Today the title of my talk is “Therapeutic Effects of Chinese Herbal Medicine on Chronic Atrophic Gastritis.” First, I will briefly introduce the current clinical and research aspects of chronic atrophic gastritis. Then, I’ll describe the treatment of experimental rats and patients with atrophic gastritis using traditional Chinese herbal medicine. Finally, if I have time, I will introduce very briefly the application of new technologies in this clinical research in order to facilitate the development of conventional drugs from Chinese herbal medicine.

Chronic atrophic gastritis is increasingly common with advancing age, especially in Asian people. Approximately 10-15% of patients will eventually develop gastric cancer. The symptoms include epigastric discomfort, anorexia, nausea and many other different symptoms depending on the different patients. The etiology for the disease is indeterminate. *Helicobacter pylori* is believed to be the etiology for superficial gastritis.

The histopathological characteristic of the disease is reduction of the number of the parietal cells and the chief cells in the gastric mucosa. Because of that, the thickness of the mucosa is reduced. At the same time there is inflammatory infiltration of plasma cells and lymphocytes. Some cases may also have pseudopyloric hyperplasia and intestinal metaplasia. The intestinal metaplasia is believed to be a pre-cancerous lesion.

Conventional medicine classifies the disease to type A and type B. If you look at different books, depending on who writes them, there are some other classifications. Based on the degree of the atrophy and the infection, it can be divided into mild, moderate, and severe. There is no therapeutic remedy available in conventional medicine. Many people get antibiotics to treat the *H. pylori*, but antibiotics do not help the mucosa atrophy.

In China, people have a high incidence of this disease. This slide shows the data from the industrialized countries. As you can see, from age less than 30 to over 60, the incidence of mild atrophic gastritis increases linearly as age increases.

Atrophic gastritis is believed to be a pre-cancerous lesion. Approximately 10-15% of patients will eventually develop gastric cancer. On the other hand, about 80% of patients with gastric cancer have a history of atrophic gastritis. This slide illustrates the developmental stages from normal mucosa to gastric cancer, including normal mucosa, non-atrophic gastritis, atrophic gastritis, intestinal metaplasia, dysplasia, gastric carcinoma, and metastatic cancer. Atrophic gastritis is in the middle of the development.

The atrophy may result from complex changes due to cellular differentiation, proliferation, and apoptosis under influence of the environmental factors, host factors, and local inflammatory response. It is believed that *H. pylori*, toxins, nitric acid, acetaldehyde, eating habits, genetic predisposition, immune system, endocrine system, nerve system, mood status, reactive oxygen metabolites, nitric oxide, and N-nitroso compounds all play some role in the development of atrophic gastritis. It's not clear yet whether there is a single factor that causes this disease.

If patients go to the doctor, the doctor usually recommends to see endoscopists. They look at the mucosal membrane first and then do some biopsies. These five points are the anatomical positions where an endoscopist takes biopsies for pathologists to diagnose the disease. The five points include lesser curvature of corpus (LCC), greater curvature of corpus (GCC), incisura angulatis (LA), lesser curvature of antrum (LCA), and greater curvature of antrum (GCA).

I'd like to move on to the treatment of experimental rats and patients with atrophic gastritis using traditional Chinese herbal medicine. This slide describes the diagnosis of chronic atrophic gastritis by integrated medicine (e.g. the combination of conventional medicine and traditional Chinese medicine). After the diagnosis of atrophic gastritis with clinical symptoms (including a long history of epigastric pain, discomfort, belching and anorexia), gastroendoscopy, and pathology, traditional Chinese medicine divides the disease into several different sub-types (*Zheng*). Two major sub-types, *Piwei-hsuhuan Zheng* and *Ganwei-buher Zheng*, account for more than 80% of cases.

The clinical symptoms of *Piwei-hsuhuan Zheng* include, in addition to the common symptoms, vomiting of watery fluid, preference for warmth, aggravation from cold, fatigue and weakness, loose stools, pale tongue and a deep, thready, and weak pulse. The symptoms of *Ganwei-buher Zheng* include epigastric distension, fullness, oppression, aggravation from emotional upset, thin and white coating of the tongue, and deep, taut pulse, in addition to the common symptoms.

The former is treated with *Jianpi-wenwei* Decoction, and the latter is treated with *Shugan-herwei* Decoction. Each of these decoctions contains ten different herbals in appropriate proportions. After boiling, the decoction is “tea” for the patient to drink. These two *Fangji* originally came from Dr. Jian-Xong Zhao. He has used them very effectively for more than 16 years in his clinical practice. Because of it, we decided to do some studies.

We used Wistar rats to study the therapeutic effects of this medicine with experimental atrophic gastritis. We observed exciting results summarized on this slide – the increase in mucosal thickness of rats after the treatment. I have no time to go through detailed experimental procedures. Briefly, 45 Wistar rats were divided into nine groups with various controls. Let's

focus here: normal mucosal membrane is about 250 micrometers. Here is the control group for *Piwei-hsuhuan* gastritis, taking a placebo only. The thickness is 160 micrometers. Here is the treatment group for *Piwei-hsuhuan* gastritis, with three different dosages. You can see that the treatment has successfully restored the thickness of the membrane (80-90 micron increase after the treatment, in contrast to the untreated group). Here are the *Ganwei-buher* gastritis groups; the same therapeutic effects are shown.

After we got these results, we decided to see whether the same is true in humans. We accumulated 40 patients with chronic atrophic gastritis in The First Teaching Hospital of Lanzhou Medical College for the clinical study. These 40 patients were registered as in-hospital patients. They were allowed to take only the herbal medicine to simplify analysis.

Twenty-two patients with *Piwei-hsuhuan* gastritis were treated with *Jianpi-wenwei* Decoction. Eighteen patients with *Ganwei-buher* gastritis were treated with *Shugan-herwei* Decoction. The treatment period was three months. Before and after the treatment, biopsies and pathologic diagnosis were performed for each patient. You can see here that the treatment increased, on average, 0.2 millimeter thickness of the mucosa. The increases are statistically very significant, with the p-value less than 0.01; only this group shows the p-value is less than 0.05.

This slide illustrates more about the shrinkage of the membrane. In the top panel, you can see that normal mucosa is very thick, with lots of glandular tissue. In contrast, the bottom panel shows atrophic mucosa, so thin. This diagnosis is very easy. Many dark spots are the infiltration of inflammatory cells.

This slide shows the effects of the treatment on glandular atrophy. About 70% of the patients show very good response to the treatment, and about 30% show no response.

This slide shows electron microscopy of the atrophic cells. Here you see increased space between the cells, here nuclear shrinkage, here inclusion bodies in cytoplasm, here enlargement of mitochondria. In other words, the cells undergo the death pathway.

This slide shows the therapeutic effects of the herbal medicine on hyperplasia. Out of 40 cases, not every case and not every biopsy has hyperplasia. Only some have. The treatment indicates the therapeutic effects, about 70-80% response.

This slide shows the treatment of intestinal metaplasia. Here is the data from lesser curvature of antrum and greater curvature of antrum. Here is the data from lesser curvature of corpus. The antrum shows better response to the treatment than the corpus region. But the sample size is not large enough for us to draw a conclusion.

Also, because *H. pylori* was a major factor to cause superficial gastritis, we tested whether the patients were positive or negative for *H. pylori* infection before and after the treatment. Our data on this slide shows that the treatment converted most positive patients to negative, without using any antibiotics. Patient response seems to be through increased immune system status.

We are now in the process to make that herbal tea into capsules to make it easier for patients to take.

For the remaining few minutes, I'd like to show a state-of-the-art technology, cDNA microarray or GeneChip. We can use this technology to study cancer, monitor treatment response, and develop drugs. We can label RNA from normal tissue as "green" probe and from diseased tissue as "red" probe. We can mix an equal amount of each probe and hybridize with genes on a glass slide. Here is the standard pathological glass slide. Each spot on the slide represents a unique single human gene.

After the hybridization, if a spot is green, that means the gene is turned on in the normal tissue. If a spot is red, the gene is turned on in the diseased tissue. If a spot is yellow, the gene does not change its expression in the normal and diseased tissues. This technology allows us to compare any two different cells for their gene expression status. Using this technology, we can distinguish expression patterns of genes in the normal cells from those in the diseased cells.

This slide shows an example. We compared expression patterns of more than 1,000 genes between “normal” and malignant cell lines on this slide. You can see the difference in the complex color spots. The image of every spot is digitized to numerical analysis of gene expression. It is computerized for bio-informatic analysis, including Genbank database, chromosomal mapping position, previously published basic and clinical data. All can be used to facilitate analysis of gene expression in human diseases. For example, if we find this spot (representing a particular gene) would be related to a disease, we double click on that one and, through the computer, we can find all of the data related to that spot.

This slide outlines the entire data flow process. You label mRNA from the normal and cancer cells, mixing both in equal amounts, and hybridizing to the arrayed genes. You do the comparisons bio-informatic analysis using the computer. As I mentioned previously, atrophic gastritis is a disease with changes in cellular differentiation, proliferation and apoptosis. We can use cDNA microarray technology to investigate molecular pathogenesis of the disease and to monitor molecular response to treatment with traditional Chinese herbal medicine. The study should facilitate the development of drugs.

In summary, chronic atrophic gastritis is increasingly common with advancing age in the world, especially in Asia. It is characterized pathologically by reduction of the glandular tissue and inflammatory infiltration. According to traditional Chinese medicine, *Piwei-hsuan Zheng*

and *Ganwei-buher Zheng* are two major sub-types of atrophic gastritis. Our pilot clinical study demonstrates the therapeutic effects of *Jianpi-wenwei* and *Shugan-herwei* Decoctions on both rats and patients with atrophic gastritis. I am continuously treating patients and trying to develop the decoction to capsules easy for patients to take. We can use the novel cDNA microarray technology to facilitate the development of the drug.

Finally, before taking questions, I'd like to give credit to all people who made contributions to my presentation. Two Chinese herbal *Fangji* were from Dr. Jian-Xong Zhao, who is a very famous Chinese Medical Doctor in China (Lanzhou Medical College, Gansu). Dr. Jian-Xong Zhao, Dr. Zi-Li Zhang and Dr. Ji-Kang Bu did most work at Lanzhou Medical College in China. Dr. Ping He is currently in the Department of Pathology, Washington Hospital Center. I (Dr. Yan A. Su) am at Lombardi Cancer Center, Georgetown University Medical Center. The cDNA microarray technology is from Dr. Jeffrey Trent's laboratory in National Human Genome Research Institute, National Institutes of Health.

Dr. Duggan: Thank you, Dr. Su. Thank you very much. We'll have time for questions after the last presentation.

The next speaker is Dr. Tian, also called Dr. Ming by his colleagues and patients. He received his MD degree in Medicine and Surgery from Beijing Medical University in 1969. He is a formally trained Doctor of Acupuncture and Chinese Herbal Medicine. From 1969 to 1982, Dr. Ming worked in Orthopedics/Sports Medicine and Pathology at Beijing Medical University. From 1982 to 1988, Dr. Ming finished his post-doctoral Fellowship in Bone Pathology at Johns Hopkins/Sinai Hospital. Dr. Ming also completed his Research Fellowship in Bones and Joints at the National Institutes of Health. He is a consultant to the World Health Organization and

Vice President of the World Academic Society of Medical *Qi Gong*. He has been the first Clinical Consultant for Acupuncture on medical staff to the NIH Clinical Center since 1991. Dr. Ming.

Dr. Ming: Good afternoon. If my diagnosis is correct, most audiences interested in Chinese medicine want to know what can I benefit from Chinese medicine. If I am correct, please raise your hand. Thank you. I'm going to share my clinical experience in the past 35 years, and 16 years of being in this country, including some work at NIH. I'm using acupuncture, Chinese herbal medicine and *Qi Gong* to treat patients. The whole picture from the slide show will give you a better idea how to use Chinese medicine.

This is the Great Wall. If we want to learn something from Chinese medicine, we have to learn a little bit about Chinese culture. I took these slides 15 years ago, to show it from different angles. The Great Wall was built using different materials, generation by generation. Now the picture is different. You see about 1.2 million visitors at Great Wall everyday. I don't know how they manage that. It's very crowded.

To understand the Chinese culture, the most important three things are acupuncture, herbal medicine and *Qi Gong*. Herbal medicine is the number one component of Chinese medicine. Acupuncture is number two, and *Qi Gong* is number three. They all work together.

Does anybody read Chinese? No? Okay. I can say whatever I want to say. This is the entrance of the Ministry of Health of the federal government. And this is called the Administrative Bureau for Traditional Chinese Medicine. The deputy secretary of the Ministry of Health is the number one boss for this bureau. The administrative Bureau of Traditional

Chinese Medicine is independent and also collaborating with the Ministry of Health of the Chinese government.

Traditional Chinese medicine is not called alternative medicine. It's the official medicine. If you go to China and say, "I want your herbal remedies," they say, "What? What are they talking about, herbal remedies? This is medicine." Medical practice in China integrates modern, which we call conventional, and traditional cancer therapies. Surgery, chemotherapy, radiation therapy are typical Western ones. Chinese medicine will be acupuncture, acupressure, Chinese herbal medicine, *Qi Gong*, and a special diet. Basically, this is either called remove or kill. This is a plus. They work together to get the best result.

The Chinese medicine approaches to cancer treatment are to treat a patient as a whole, including mind and body, treat patient symptoms, treat side effects due to chemotherapy, radiation, or surgery. It could reduce pain medications as pain management.

This is NIH, Building 10. In 1991, the NIH medical board of the clinical center first approved acupuncture for use at the center for NIH patients. I was lucky to become the first one. So far there is only one, in the past seven years. I treat all the patients at NIH Building 10 for all the clinics and hospitals. I got a lot of good opportunities to learn and to practice. At NIH I treat chronic pain and acute pain, peripheral neuropathy and neuralgia, osteoarthritis, rheumatoid arthritis, psoriatic arthritis, lupus, fibromyalgia, sciatica, synovitis, headache, depression and cancer.

Forty percent of my patients at NIH are cancer patients. I treat side effects of chemo and radiation, to help those patients go through other therapy with conventional treatment. I treat nausea, vomiting, hiccups and fatigue. The patients get very good results, even after the first treatment. I will mention how many treatments we need for cancer patients later. I use

acupuncture and acupressure. The main points you can use are LI 4, LI 11, GV 20, K 3, Stomach 36, Spleen 6, Spleen 10, and CV 6.

I call this formula acupuncture. My Chinese friends, other practitioners may not agree with that. “Oh, Ming, no, no, no. This is not Chinese medicine. Chinese medicine has to treat each patient using different points.” But how do you treat patients at NIH, where you talk about acupuncture to PhDs or MDs? You have to use the formula. The formula is important. Then you can use plus or minus to treat different patients if you want to do research.

For cancer treatment, I suggest 45 to 60 minutes for each treatment. It depends on the patient’s condition. At the very beginning, the patient should get less, like 20 or 30 minutes. Then you increase. There is a dose, the right dose for different patients. The practitioner should be able to figure out for any patient what kind of needles to use, how many points, which meridians, which organ system, and what is the formula acupuncture.

Three to five treatments a week seems to be too frequent. Actually it’s not. For some patients you even can treat twice a day, if you can afford it, if you have time, if you have appointments. After the first 15 times, most patients should get better around 50%. I’m talking about symptoms and also about their life quality. By 15 times we can evaluate and decide how often we can use acupuncture. I also teach patients to do acupressure by themselves, to mark those points. They can do homework and get even better results.

The number two component is Chinese herbal medicine. This is a typical Chinese recipe. You probably want to know which herb would work for cancer. A single herb may not do a good job. In Chinese medicine we use a formula. Traditionally, originally 5,000 years ago, they use this kind of pot to cook Chinese herbs. That’s a typical pot. That’s the herbal medicine. They pack it like that, beautifully.

This is the color. It doesn't look too good, pretty close to coffee. This is candy. Because they are yucky to drink, the mother always tells the son, "Drink it, my son. It's not delicious, but after that I give you candy." Chinese medicine also uses a lot of different foods as nutrition, or food supplements, for therapeutic and prevention purposes.

More than one billion Chinese people are using Chinese herbal medicine. Possibly only 50%, maybe 60% are using acupuncture. I mention that in mainland China. The stock they are using consists of about 12,000 herbs. They are documented by the Chinese government. There are roughly 650 recipes, or they call it patent medicine. For each patient they can use different recipes, plus or minus. Chinese herbal medicine indications can be therapeutic, nutritional, and preventative. They are generally considered safe and effective.

If you go to buy by yourself you have to learn a lot. You have to study. You probably want to be a PhD or MD first. Then you go to buy some Chinese herbs by yourself, if you don't have a good practitioner to give you advice. In this country, the regulations are different from China. For instance, if I write a wrong recipe for you, you bring this recipe to the Chinese pharmacist. You say you want this. The pharmacist will say, "Look. Something's wrong. Go talk to your doctor, or I'll talk to your doctor." You can't get it in a Chinese pharmacy, because for each one they have the chief make sure your recipe is correct.

But in this country, because herbs are considered a food supplement, FDA does not have a good regulation for herbs. Therefore, it's your risk. You might be lucky, or maybe have some risk. Be a little bit careful if you buy anything. But generally speaking the Chinese herbs and food are safe.

Chinese herbs used for cancer patients will be for general detoxification or to enhance the immune and endocrine system. I'll show you some slides of some herbs. I don't want you to go

buy it. I just want to give you an idea about what is generally for detoxifying and generally for enhancing the immune and hormonal system.

This is called *Bai-hua-she she-zhao* in Chinese. My Chinese is getting worse. These herbs can be used at 30 grams, even 120 grams, and boiled 30 minutes for detoxifying purpose. Number two is called *Banzhilian*. These are the basic two most effective herbs to kill cancer cells. Number three is astragalus. The Chinese name is *HwangQi*. A lot of people are using this now. It's getting more popular. It is very safe. If you use that, 30 to 60 grams or below.

This is called *Erzu*, another fruit which is very good for the immune system – 30 to 60 grams per day. Chinese ginseng or oriental ginseng. I suggest all the cancer patients use a white ginseng instead of a red one. Because they steam the red ginseng, they have too much excess of heat. Also because ginseng is getting popular now, they're trying to grow ginseng using a lot of fertilizers. Bigger is better, right? They can make big bucks. So some ginseng has excess of heat.

I suggest you use white ginseng, either from Russia, from Korea or from China. American ginseng. Has anybody tried American ginseng? Yes. They're smaller. That means they're not good. You can get very good wild ginseng even 50 years old or 100 years old, which is very good for the immune system. They work with Chinese ginseng, oriental ginseng together, to get the best result. Studies show that American ginseng, especially wild ginseng, does enhance the immune system. You usually take three to six grams a day.

DongQuai, angelica. Are people familiar with it? It's very good for anticancer, and also for the immune system. White peony root, called *Baishao*, can also be used for anticancer. This is what I call ruby fruit, *GoQi*, which is from North China. They're very delicious. You can cook with anything you want. They can be used at 30 to 45 grams per day. This is called *Yi-Yi*

Ren, or, in English, Job's tears. I don't know who gave this name. It's interesting. It's delicious, too. It can be used for detoxifying any patient, either for cancer or flu.

Third, I want to mention *Qi Gong*. Dr. David Eisenberg went to China in 1982 to investigate Chinese medicine. He wrote a book. Actually he went there with Dr. Herbert Benson, who is also a speaker here. His book mentioned rehabilitation exercise and *Qi Gong* in ancient China. They took this picture in the early morning, five to six o'clock. If you go to *Zheng shan* park, near *TianAnMen* Square, you see people who suffer from cancer or heart conditions go there to practice *Qi Gong*. They prefer to practice *Qi Gong* close to evergreen trees. Those trees are about 1,000 years old.

There are more than 4,000 different *Qi Gong* forms. You just need one. You don't want to try 4,000. If you can practice one, it will be good enough. This is Guolin. He created a Guolin anticancer *Qi Gong* in China, which gets very popular for cancer patients.

Some *Qi Gong* masters are able to direct their external *qi* to the patient. That's another part of *Qi Gong*, as a therapeutic treatment. This needs special skill. Not everybody can do it. The important thing is that there is such a kind of *qi*. I did not quite understand before 1982. I did a lot of investigation as a World Health Organization advisor on traditional medicine, called alternative medicine here.

I went to China and spent three months to follow all the *Qi Gong* masters and say, "Show me. Show me, without touching me. I feel your energy. Very interesting. Let me set up several experiments for you, and you do that. Can you show me?" My behavior was typical of a Western-trained doctor. However, this is a very important treatment. Medical *Qi Gong* can be highly recommended for cancer patients.

I teach patients at my clinic and NIH patients to learn *Qi Gong* when they receive acupuncture. It's not that difficult. You learn about five times and you will be able to do it by yourself. You don't even want to read too much. There are so many books, you get confused. You want to learn very basic one, two, three to start. Then you get benefits this afternoon. Teaching patients *Qi Gong* will be very important.

As a practitioner, I want to tell you that a trained or experienced practitioner should be able to feel the patient's *qi*. If a patient suffers from very bad cancer, and you feel their hands, you feel heavy and achy and cold. When the patient's getting better you can feel his *qi* level getting better and better. That needs a lot of scientific work. But as a practitioner I've developed this. I could feel *qi* 10 years ago. In addition to Western and traditional Chinese medical diagnosis, the *Qi Gong* diagnosis also is very important, to know the whole picture.

I suggest cancer patients do *Qi Gong* at least twice, for 30 to 40 minutes. Is that too long? That is not long enough. If you want to only try 10 minutes, you won't help too much. You need at least 30 minutes. Forty-five minutes is even better. If you stand there, or you sit there, 45 minutes makes a big difference. You can do it once a day or twice a day.

A lot of acupuncturists, as they're treating patients, automatically send *qi* to patients. They're the connection, touching or without touching. Some people call this energy medicine. I think in the future more scientists will be interested in doing some study to show, what is *qi*? What is external *qi*? This will bring more information, just like acupuncture just proved. It was finally formally recognized by NIH last year. Two years ago, FDA recognized acupuncture needles as no more investigational, no more experimental. In the future, I think herbal medicine and *Qi Gong* will be formally recognized.

This is my last picture to share with you. There is a long, long way to go to understand Chinese medicine. I only know a little bit, honestly. I like to share this knowledge with you continually. Thank you.

Dr. Duggan: Dr. Ming, thank you. It's a long way since the conferences we did in Baltimore in the middle 80's, that we have these approvals and that this conference is occurring.

Dr. Ming: That was 1982.

Dr. Duggan: 1982 in Baltimore.

Dr. Ming: The first time I met you.

Dr. Duggan: I was glad we did this together at this time. I'm thinking, as the past three speakers have spoken, of three or four individuals who I treated this past week, each of whom would have the label of cancer. I'm struck that each of them, after just a few weeks of treatment, in addition to whatever else is going on, would speak of recovering their own inner sense of themselves, an inner healing ability to match whatever therapy they're using. The key power for me clinically, working with individuals, is to watch them recover a brightness, a shine in their eyes, a movement and an ability to join the healing therapies that are made available to them.

I'd now like to introduce Dr. Michael Hawkins to comment on these presentations. Dr. Hawkins is associate professor in the Department of Medicine, Division of Hematology Oncology at Georgetown University. He obtained his MD at the University of Virginia School

of Medicine and trained in Internal Medicine and Medical Oncology at the University of Wisconsin, where he joined the faculty in 1982. He left Wisconsin in 1984 to become head of the Biologics Evaluation Section at the National Cancer Institute and became chief of the Investigational Drug Branch (IDB) in 1988. He joined the faculty at Georgetown University in 1992. Dr. Hawkins.

Dr. Hawkins: Thank you. I'm serving as a commentator here. I'm going to comment mostly from my perspective as a medical oncologist, rather than as a cancer researcher. I'm in charge of new drug development at the Lombardi Cancer Center also, and have a fairly open mind as far as where new treatments can come from. I'm going to talk about some of the research issues associated with developing new treatments tomorrow. Today I'd like to talk in terms of being a traditionally trained medical oncologist, and react to some of the presentations that you've heard here.

About a week ago, in my clinic, I was seeing a patient who nine years ago developed a malignant melanoma of his right leg. It was a fairly superficial lesion, but it had a little bit of depth to it. He had that removed, and had no further evidence of a problem until a few months ago. He noticed a lymph node in his right groin, which was biopsied and proved to be recurrent malignant melanoma.

We went over the traditional Western treatment approaches that are in the textbooks, etc., in the literature. Then I asked him what, if anything, unusual was happening over the last six months or so that he could think of. He was about a 45-50 year old Caucasian male. His response surprised me a little bit. He said, "Well, you know, doc, I knew this was coming. I knew something bad was going to happen." He had been working very hard, and he was getting

extremely stressed out. He was trying to be in four different places at once, those kinds of things.

He was divorced. I asked, “How long have you been divorced?” He said, “I got divorced about nine years ago, right when my melanoma was diagnosed.” I said, “What was going on there? Why did you get divorced?” He said, “Well, just some things. Me and my wife just weren’t getting along.” I said, “Was there an element of overwork involved at that time as well?” He said, “Yes. Actually that was sort of the major reason.”

I was thinking about that patient when I was getting ready to be here today. I don’t think Efreem had the time to touch on this in his talk, but Chinese medicine views cancer as representing a state of terminal emptiness, stagnation, or alienation. In a lot of the patients I see, and if you take a look at our society in general, there’s a lot of that going on. A lot of that is self-generated, because we’re all so wrapped up in our jobs and our daily activities.

Even the things we do for relaxation we do incredibly intensely. We get out of work, go straight to the airport, get on a plane, fly to the ski resort, go like crazy for three days, get back on the plane, come back to work, that kind of thing. We say, “Gee, I had a good vacation.”

The idea of restoring your *qi* is a very real issue. It touches home to me in my practice as a Western trained oncologist. I see a lot of that going on. We don’t use that term. We don’t use the term vital energy. We sometimes use the term soul. But we don’t think of it in those terms. A lot of that is going on.

One of the questions I had for the panelists, reflecting on that, is that we’ve talked about herbal approaches to restoring balance, things like acupuncture, *Qi Gong*. In Western society, certainly, we place a lot of importance on counseling. That’s what we would traditionally do when we get a patient who is running all over the place, stressed out. We tell them they need to

go see a psychiatrist, or a counselor, or something like that. Is there a comparable component in the Chinese medicine system? Who does that? Do you have stress counselors?

Dr. Korngold: I'd like to share a story on that very point. I recently attended a workshop with a very venerable Chinese doctor, Dr. John Shen, who is one of the elders of our community in this country in Chinese medicine. He told a very instructive tale about a patient.

A woman came to him experiencing unremitting uterine bleeding due to an unknown cause. She had had a series of surgical procedures to try to stop the bleeding. It didn't stop, so she came to Dr. Shen, who is a traditional Chinese doctor. He talked to her, looked at her, examined her and felt her pulse. After his examination, he said, "Well, I think I can help you. But first I have to do a test." The patient said, "What is the test?" He said, "I'd like you to go home and I'd like you to stay in bed for two weeks." She was shocked. She said, "No way. I am an attorney. I'm very busy, and I want to get pregnant. There's just no way I can do that."

Dr. Shen sat back, looked at her, and said, "I don't think I can help you." She was shocked a second time, and said, "How can you say that you won't help me?" He said, "It's not that I don't want to help you, but until I see the results of the test, I can't decide what to do. The problem is this: your condition could be due to the surgical intervention, or it could simply be due to your condition of health. That's why I need you to go home and rest for two weeks."

She finally agreed. She went home and stayed in bed for two weeks. At the end of two weeks the bleeding stopped. After that she came back. He gave her herbs and acupuncture, and she became pregnant. She had been unable to get pregnant up until that time. She was a 38-year-old woman.

Dr. Shen said the lesson of this is about medicine in general. You can be a very good herbalist, acupuncturist or surgeon, but the medicine only works if the person is willing to take care of her own life. This is an essential morality story in Chinese medicine. It doesn't matter how good the practitioner is unless the practitioner can involve the patient in becoming motivated to take care of his or her own life, to do the things that are going to make the medicine work. That's very much a part of the tradition of Chinese medicine.

Dr. Ming: My impression is in Chinese medicine they treat patients differently. At chapter one, in any medical school, you have to be a nice person first. In this country, the Western medical doctor's training also will teach you care of patient, but not all of them, except you. You're a good model, at least.

In this situation, the healing power is limited. It's just like more business. You fix my car, I pay you. That's it. That's total loss to the spirit. I think originally American-trained physicians did care. A lot of people love their patients, and their patients love them. But that's not the situation if we break this balance. There is a very good spirit between doctors and patients, but if we lose this balance, we create a lot of problems. We lessen our healing power.

You mention stress in the office. I see roughly 45 to 60 patients a day, and we don't have stress. We have some patients here. I design my office according to the five elements, yin and yang. There is a big fish tank over there. When you open the door, you see the fish. You see the water. That's the hormonal system. That's the immune system. That belongs to kidney. Water is so important. Then people say, "Oh, I feel so peaceful." Patients stay there and then have a treatment. The most important thing is, how can we pick up the good spirit, to bring the healing power for patients? Patients are very smart. I think sometimes they are smarter than

doctors. They can make a diagnosis for us. You are a good doctor, or you are not a good doctor, very simply. Am I correct?

Dr. Hawkins: Bob, did you have anything you wanted to comment on?

Dr. Duggan: I thought your question was very interesting. In the West, I think of *qi* related to the humors. We invented counseling when we separated the humors into mind and body. How many readers of Freud in the original would say he was talking about *qi*? It's an interesting question, that when you separate mind and body, counseling suddenly appears as separate, rather than unified.

Dr. Hawkins: The other thought I had along these lines was that I was a little surprised, Dr. Ming, that chronic fatigue syndrome was not on the list of conditions that could be treated with acupuncture.

Dr. Ming: That was at the NIH clinical center. NIH patients have all the tough problems. Those patients who failed to respond to the conventional treatment were then referred to me, so I got all the challenging cases. I was called the "last hope doctor."

Dr. Hawkins: Do you view the chronic fatigue syndrome, though, as a *qi* depletion type of syndrome? In your experience, how has that responded to Chinese medicine approaches?

Dr. Su: That's a very good and critical question. Chronic fatigue happens very frequently. It's not rare. Once in a while everybody feels fatigue. That's one kind. Another kind, more serious, is that some people always feel fatigue or weakness. As the earlier speaker mentioned, we divide traditional Chinese medicine into different categories. There's a whole category of herbal medicines called *Buqi* herbs, *Buxue* herbs, *Buyin* herbs, and *Buyang* herbs, to take care of chronic fatigue. We frequently use these herbal medicines for cancer patients in combination with conventional medicine before and after surgery. Most cancer patients with chronic fatigue symptoms can be treated with traditional Chinese herbal medicine.

Results are usually very obvious. One specific example was developed at Lanzhou Medical College. We have used herbal medicine called *Fuzheng-buxue Chongji* on more than 200 cancer patients in China. Our preliminary data indicated that the patients' situation improved a lot. We are working on the detailed analysis of the data.

Two years ago, we gave this herbal tea to a patient with uterus myoma in the DC area. We told her, "Please check with your conventional medical doctor about your entire body and make a copy of the results for us. We'd like to give you this herbal medicine we have already tried on over 200 cancer patients. We'd like to let you use it if you are willing to be involved with this." It's purely herbal, including about 10 herbal mixtures. It was two boxes, 12 packages in each box. After treating her, we asked her to please go have all of the same index parameters checked again. The results showed a significant difference.

This is only a single case in the U.S. That's why, when James Gordon asked me to present something related to cancer, instead of chronic atrophic gastritis, I said, "I'd like to present something we already have scientific data on." I hope to share our data on cancer treatment in the next meeting.

Dr. Hawkins: I want to follow up on that, Dr. Su. The thought that I had when you gave your presentation was that we don't see enough of randomized trial data. We all sense that there's something here about these treatments. But it's very hard for us to know exactly to what degree they work, or how to compare them with other treatments. The conduct of the randomized trial, or a definitive trial, to make that known clearly is very important. You did a really good job with that.

Finally, the other comment that I had was with respect to the acupuncture work. From a medical oncologist's standpoint, the degree to which acupuncture could be used to relieve chemotherapy-associated nausea and vomiting is certainly attractive. For that to happen on a practical basis, and for it to become very widely accepted, it seems to me that it would have to be something that the patient could do potentially at home, rather than having to come back to the doctor's office each time to get the treatment. Right now we have anti-nausea medications that the patient takes at home. Is it possible, once a patient has gone through some acupuncture and you've established where the right points are, that treatment could then somehow be done at home, either by the patient themselves or by a partner?

Dr. Ming: That's right, in that most acupuncture can be taught to patients or patients' relatives. They can do acupressure, and also self-acupressure. But there is a difference between acupuncture and acupressure. Acupressure is much milder. It may not work effectively. You don't know how much you push, how long, or the exact point. You need good training. I understand in this country the acupuncture training license requires 2,700 hours. Am I correct, Bob? That means a very serious training.

For instance, Sen. Harkin mentioned that his brother was treated by me at NIH Clinical Center. That was yesterday morning. I wasn't here. It was a very simple case. His brother got very severe hiccups. For 48 hours at NIH they tried their best, used all the medicine. All the doctors were standing there. Hiccups, hiccups, like this. Nobody could stop them. They called me and said, "Ming, come over, emergency." I said, "Sure." I went there. I said, "Why are you people so serious?" They said, "Well, the situation is complicated. Ming, you've got to do your miracle. We need your miracle."

I made a diagnosis. According to Chinese medicine, this cancer condition goes up. The bad *qi* goes up, so you need three points. One in the hand, another two in the legs, so three meridians, six needles. After ten minutes the patient felt better. After 25 minutes he said, "Doctors, leave me alone. I want to go to sleep." That was the first time to treat hiccups. All acupuncturists can do the job. Not just me. I was there.

Dr. Hawkins: Yes, but you're dodging my question.

Dr. Korngold: I have a comment on your question, which is that Chinese medicine isn't like Western medicine. First of all, we have to recognize that. The degree to which we try to reshape it into forms that are familiar to use in conventional medicine may or not be successful. Part of the result of that is that people lose faith in the efficacy of Chinese medicine. They say, "Oh well, it doesn't work. We tried to give somebody something to do at home, and it doesn't work. Chinese medicine doesn't work." In areas of the world where Chinese medicine is an equal part of the medical care system, there is accessibility that is not available here. There are outpatient clinics, inpatient hospitals and many offices. It's easy to get treatment.

Bruce Pomeranz found in his research on acupuncture that the more you do it, the better the effects, and the longer lasting the effects. An example is treating patients in my own practice for nausea and other adverse side effects of chemotherapy and radiation. Once a person can be helped with regular and frequent acupuncture to ameliorate those symptoms, once that threshold has been reached, then home remedies – homework, as Dr. Ming put it – are effective.

The problem with research in Chinese medicine is that we can't necessarily use the traditional research criteria and research models to totally evaluate the usefulness of Chinese medicine. We have to develop more flexible ways of evaluating it and utilizing it. The more entrée that Chinese medicine can have into the established institutions of care, like at the NIH, where Dr. Ming Tian is treating patients, the more there can be a cross-fertilization between two comprehensive and complementary medical paradigms.

Dr. Ming is the only individual involved in determining the efficacy of Chinese medicine under the auspices of NIH. I wouldn't call that a reasonable method of evaluation. If there were Dr. Mings in 50 institutes across the country with unlimited access to cancer patients who wanted their care, then we would acquire much better information about the utility of acupuncture or *Qi Gong* under those conditions.

Dr. Hawkins: But if a patient was treated by you with acupuncture and got good, consistent relief from the nausea and vomiting following chemotherapy, then do you believe that you could train either the patient or a caregiver, a partner, to do that in the home setting?

Dr. Korngold: Yes. I have actually trained patients and their caregivers to deliver acupuncture at home. It's very effective.

Dr. Ming: You teach patients to do acupuncture?

Dr. Korngold: Absolutely.

Dr. Ming: You didn't get a legal problem? I'm surprised.

Dr. Korngold: They never sued me.

Dr. Hawkins: You're allowed to do a lot of things in the privacy of your own home.

Dr. Ming: You are from California.

Dr. Korngold: Yes, I'm from California.

Dr. Su: I don't agree that a patient should practice acupuncture at home by herself or himself. One of the specific characteristics of Chinese medicine is that each individual patient is different, and each disease process may be different, too. In other words, the disease process can be divided into many stages, and each stage requires different treatment. All treatments come with either different medicine or different acupuncture points. If one identifies the few points that worked for a patient today, those points may not work on the same case in the next week or next month. The diseases are changing, and the treatment points or acupuncture points should be changed, too.

Dr. Hawkins: It was a question that generated more discussion and more divergent views than I would have anticipated. It was a good question in that regard. Knowing the way Western medicine is economically managed these days, if acupuncture is well accepted, you're going to find a lot of pressure to be able to do some kind of home approach eventually. We do an amazing number of things at home now, that were totally unheard of or unthought of just a few years ago. Those are all of my comments. Thank you.

Dr. Duggan: Thank you, Dr. Hawkins. I have two quick comments on that. One is that there's a physician who I taught to do some home treatment with his wife, an elderly couple. Long after the pain has gone, she is getting daily foot massages from her physician husband. That's been going on now for several years. The other story related to the legal issues is that when my daughter was born in Maryland in 1977, I asked about using acupuncture in the delivery room instead of anesthetic. It had to go up the chain of command in the hospital, as to whether we would be allowed to do this, and all the malpractice issues. The answer came that how married couples show affection to one another is none of the hospital's business. There are very creative solutions to these issues.

We have about ten minutes for questions from the audience, and there's a mic there. Please direct your question to one of the panelists.

Participant: I don't know which of the panel to direct this to, so I would accept guidance from any or all of you. The malpractice situation in all of these integrative or alternative therapies continues to trouble me greatly with the voracious legal climate that we live in. What

if we're using herbal medicine and an individual has an untoward event, a stroke or something occurs, because we're dealing with maybe a high-risk, sick population anyway? How does one respond in a court of law to the plaintiff's attorney when he asks you, "Sir, is this medication approved by the FDA?" The answer has to be no, and that's pretty much prima facie evidence of culpability. We don't have much defense against that simple little question.

Dr. Hawkins: It's not that black and white. In medical oncology, we use a number of drugs off-label all the time that are not approved for a specific malignancy. You can rely on the literature to support the use of a drug that's given off-label. You could use the same kind of thing for the concern that you've got. I don't want to minimize the issue, but it's not as paralyzing as you are afraid that it is. You do what you think is in the best interests of the patient. Generally, from a Western standpoint, we've got adequate documentation to justify why we're doing something.

Dr. Korngold: The Chinese medicine community in this country has licensing standards for herbal medicine. Those represent a standard of common practice. I want to make one more comment, which is that there have been a negligible amount of malpractice suits against practitioners of Chinese medicine in the United States since licensure began in the early 70's. Very very few. Usually not for medical reasons.

Dr. Duggan: I believe also that malpractice is much less when the patient/practitioner relationship is very clear. That's a major factor in lawsuits. Can we move on to the next question?

Participant: The general question relates to what you raised, which is the Westernization of Chinese medicine, and to what extent can the active ingredients be extracted and concentrated and treated as pills. The specific question goes to a product that comes from China, serrapeptase. The silkworm, when it wants to get out of the silk cocoon, secretes this. It's a proteolytic enzyme. It dissolves the silk.

In a particular case, a patient with cancer had a consult for spinal cord compression. They determined that it was actually an arachnoid cyst. Therefore, they didn't treat it. Subsequently she took serrapeptase as a nonsteroidal antiinflammatory drug, and particularly for the pleural effusion that accompanied her breast cancer. She finds this to be very helpful. It was very interesting, because arachnoid cyst is a chronic, long-standing problem, 20 years. It involves a three-month recovery and operation. Next time she had an MRI done, the arachnoid cyst had gone away. This proteolytic enzyme had gone in and dissolved enough of the protein within the cyst that it actually relieved the pressure on the spinal cord. Could you comment on the general question and the specific please?

Dr. Korngold: I'm not familiar with that agent. In the 70's at M.D. Anderson Hospital, some of the early research on astragalus as a treatment for people with cancer showed that there wasn't a significant difference in efficacy between using the crude extract of the herb and a purified extract of the polysaccharide fractions that were thought to be the active compounds in restoring immune competence of the T cells of cancer patients undergoing chemotherapy and radiation.

That's another point. The evaluation of complex substances is a big problem for Western research. Chinese medicine as it has been practiced, and still is practiced, according to the traditions, relies not only on the use of single agents, which by themselves contain thousands of chemical compounds, but on polypharmacy, which is the combination of agents. Very rarely are single agents used to treat disease. This is an enormous challenge for Western-style investigation.

My second comment is that there is absolutely no reason why Western pharmacology cannot and probably will use the repertory of Chinese agents as sources for new drugs. But this is not Chinese medicine. This is Western medicine. This is using something that's part of the Chinese pharmacopoeia as a source for developing new Western pharmaceutical drugs.

Participant: This question is probably along the same vein of the Western fear of Chinese medicine. A lot of patients are told by their oncologists, "You can do whatever you want, but on the day before, the day during and the day after chemotherapy, you stop taking everything, because we don't know what the interactions are going to be between whatever you're taking and this." Can somebody comment on that, please?

Dr. Ming: First of all, NIH patients are also using herbs. They just don't tell their physicians. The physicians are like this. "I don't know anything about that. Take my medicine, whatever you do." It's going to be a problem, then, to have to go into the issue. Just like FDA. It's going to be a very big issue in the coming 25, even 50 years, to figure out what combination with Chinese medicine and Western medicine. Chinese medicine is a plus. It's beneficial. It's

not a replacement of Western medicine. If you or anybody has a cancer problem, go see the physician first. You need early diagnosis. You need to know exactly what you suffer from. You need a biopsy, and then you know what chemo, what radiation, what's your choice? You get your best choice from Western medicine.

At the same time you say, "I have symptoms. I want to enhance my immune system. I want to do this." Some patients of mine say, "Look, Ming. I trust you. I don't want to take chemo. I don't want to do this." I say, "Wait a minute. You have to tell me what you suffer from." I'd be glad to work with your, any physician. Usually we have four or five family physicians work together.

Next, when you go to the food store to buy anything, there are two things to make sure. One, is it extract or just ground into powder? There is a big difference. This is my specialty. I want to let you know that. If you use 100 grams of raw herbs, how much extract could you get, if you boil, using the pharmaceutical? Can anybody make a guess? You don't know, so you are totally fooled. Why? Because they don't tell you from how many raw herbs. Generally, it is 12 to 25%. It depends on each herb.

Then they tell you to take one capsule a day; that will work. Do you believe that? No. Because if you need 10 grams of wild ginseng, then you need at least 2.5 grams of the extract, which means five capsules a day. A lot of food stores fool around. They don't do it purposely. They don't know. You should know if it's the extract or the herbs. That's very important. Also, always get advice from your traditional medical doctor or acupuncturist. If they do know Chinese herbs, ask them, to get the best.

Participant: Otherwise, don't say a thing.

Dr. Su: I would like to make a brief comment on that. I don't think that it is safe for a patient to buy and take Chinese herbal medicine without consulting a Chinese medical doctor. In China we call it herbal medicine, not just herbals. Herbal medicine can help patients and can hurt patients too. As Dr. Tian previously mentioned, in China, if you go to the drugstore to buy herbal medicine without a prescription, depending on what kind of herbals you buy, they won't sell it to you. It's controlled.

The second question relates to the previous question. Here there is some Western medicine and traditional conventional Chinese medicine. There's some acceptance of the conceptual related to that. That's probably why the conventional medical doctors say, "During this process, don't take any others."

In China, this period of history already passed. Today in China there is coexistence of three kinds of doctors. One kind purely practices conventional medicine. Another kind of doctor practices purely traditional Chinese medicine, as we talked a lot about today. There's a third group of medical doctors who practice both. We call them integrative medical doctors. When they first see the patients, they know they're going to diagnose you with conventional medicine and then treat you with both conventional medicine and Chinese medicine. There's no conflict there. Here it's a matter of time. As time moves along, sooner or later that will be changed.

Participant: I have an important question, briefly. With the literature on the hepatotoxicity of Chinese herbs, do you have a list of the ones that are definitely hepatotoxic?

Dr. Duggan: A lot of that work is beginning to happen. I don't know if either of you wants to comment.

Dr. Ming: FDA is supposed to give you that information, not us. We have all kinds of reports. They pick up more than 1,000 different herbs. They don't do anything on it. They just stay there and hear your report. I'm toxic with these Chinese herbs. Then they go investigate. We need a scientific study for that.

Dr. Duggan: There is a report published in California on that. I want to thank the audience for the sophistication of the questions that have emerged. This could not have happened 10 years ago, and certainly not 25 years ago, when we first started this conversation in this country. I want to thank the panelists for very fine presentations and for informing us. Thank you.