

## Healthline with Yale Cancer Center

*Hosts*

Edward Chu, MD Chief of Medical Oncology

Kenneth Miller, MD Director of Supportive Care

WTIC Newstalk 1080

### Chinese Herbal Medicine

### Guest Expert:

**Yung-chi Cheng, PhD**

*The Henry Bronson Professor of  
Pharmacology,  
Yale School of Medicine*



*Healthline with Yale Cancer Center is a weekly broadcast on WTIC Newstalk 1080*

*Sunday Mornings at 8:30*

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*This is Healthline. A joint venture of WTIC News Talk 1080 and Yale Cancer Center. Yale Cancer Center is a resource for cancer programs throughout Connecticut developing new advances in prevention, screening, diagnosis and treatment. On Healthline, you will hear from some of the leading doctors in the country. Healthline is not intended to provide medical advice. Yale Cancer Center urges you to consult with a qualified physician in your community for diagnosis and answers to your medical questions, and now, our co-hosts, oncologists Ken Miller and Ed Chu.*

Miller Good morning and welcome to Healthline. My name is Dr. Ken Miller and I am the Director of the Survivorship program at the Yale Cancer Center in New Haven. I am here in the WTIC studios with my colleague and co-host, Dr. Ed Chu, who is the Chief Adult Oncologist at the Yale Cancer Center. Good morning Ed.

Chu Good morning Ken. Healthline with the Yale Cancer Center is our way of providing you with the most up-to-date information on cancer care every Sunday at 8:30 a.m on WTIC News talk 1080. Our Healthline program features some of the nation's leading oncologists who are in the forefront of the battle to fight cancer right here in our State of Connecticut.

Miller Each week, Ed and I will be joined by different experts from the Yale Cancer Center. Together we will discuss the myths about cancer, the latest treatment available to people with cancer, and advances in clinical research. Our goal is to give help and hope to those of you facing cancer. We will answer your questions and give you the latest information on cancer. If you would like to submit questions, we would love to receive them. Please email us at [Healthline@Yale.edu](mailto:Healthline@Yale.edu).

Chu Today, our program focuses on the role of Chinese herbal medicine in cancer treatment. It's my great pleasure to introduce my good friend and colleague, Professor Tommy Cheng, who is the Henry Bronson Professor of Pharmacology at Yale University. Dr. Cheng and I work closely together as Co-directors of the Developmental Therapeutics program of the Yale Cancer Center, and Professor Chang is one of the nation's leading experts in this very interesting field of medicine. Tommy, thanks so much for being with us today on Healthline.

Cheng Thank you for having me.

Miller I want to start out with a very basic question. What is the developmental therapeutics program, and in fact, what is developmental therapeutics?

Cheng The [Developmental Therapeutics program](#) at Yale has a long tradition. It is a translational research program that brings the basic information into the clinic and takes the clinic experience back to the bench in order to facilitate and add awareness to cancer treatment.

- Chu Just to expand on that a bit, it's important for our listening audience to realize that Yale was the very first place to give a cancer drug to a patient, and I think the roots and foundation for cancer drug development are here at the Yale Cancer Center dating back to about 40 years ago. Yale has a very rich history for drug development.
- Let's go back to the roots of [Chinese medicine](#), Tommy. Obviously it has become a very, very popular topic for our cancer patients. Maybe you could just expand a little bit on that.
- Cheng Cancer is a complicated disease. Therefore, to treat cancer you have to consider that each individual patient may need special treatment. We've made a lot of advances in this area in the past 50 years, however, there is still a lot left to do clinically. So the question is where can we get it from? We can count on scientific progress, or we can go back and revisit history and learn from our experiences and incorporate it as a foundation for future medicine. Chinese medicine could offer such a possibility.
- Miller I recently read that there are different types of herbs whereas in a more traditional approach I have thought of herbal medicine in a broad way. What are the different types of herbs, and how do they differ from each other in terms of their function?
- Cheng Each different herb is composed of different chemicals and so they may have different functions. Therefore, you can't say that herbal medicines all behave the same. Although some of the herbs can have some similarity in terms of their functional activities.
- Chu I think one point to emphasize again is that Chinese herbal medicines have been used for well over 2000 years, so there is a very, very long track record, right Tommy, for using these medicines in everyday clinical practice?
- Cheng Actually, it has been used for more than 2000 years. The first description and discovery of using Chinese medicine dates all the way back to 2500 years ago.
- Chu One of the issues with Chinese herbal medicine vs. traditional Western medicine is that we are used to focusing on one active ingredient. Clearly it's very different when we are talking about a mixture of herbs.
- Cheng Yes, Chinese medicine, through thousands of years of evolution, always stressed the key point, that it is partly chemical in nature, holistic in view. The treatment and the individualization of the treatment have also been emphasized. Many of those issues should be considered as a future direction for medicine, thus the basis of future medicine to come.
- Miller We sometimes think about using either a traditional approach or using an alternative approach. People talk about herbal medicines as being an alternative. How can we combine the two, and what are some of the benefits of combining herbal medicine with others we call standard approaches?

- Cheng The two approaches actually are complementary in nature. It isn't one without the other. The question is how do you put them together in the most effective fashion for treatment of patients with disease?
- Miller I am going to ask you a question from one of our listeners. This is Bill who is writing to us from Farmington:
- Are there certain herbal remedies or vitamins that can make my cancer worse?*
- That's a worry that he has and other people might have.
- Cheng Nothing is safe, no matter if it is a vitamin or current medicine or herbal medicine. It's a matter of a dosage, it's a matter of how you use it, and those have to be taken into consideration.
- Chu This is a follow-up email from Dan who lives in Madison.
- Is it safe to purchase herbal medicines and supplements over the internet?*
- Cheng Unless the vendor is providing sufficient information in terms of quality of the material they provide and giving assurance of the quality of the material they sell, then it's not as safe.
- Miller Are there herbal medicines that may reduce the side effects of the chemotherapy that we use? I'll ask both of you. Are there certain herbs that would be useful?
- Cheng The answer is potentially "yes." We need clinical evidence to back it up. From the theoretical point of view, it is possible to achieve that.
- Chu In fact, maybe just to follow up on that, our Medical Oncology group has put together a very interesting clinical trial looking at the possibility of a Chinese herb that Professor Cheng's group has identified; it has been given a name called [PHY906](#).
- Miller I have to say that is a mouthful.
- Chu There is a Chinese name, but unfortunately I can't say it. Tommy can say the Chinese name I suspect.
- Cheng I don't want to say the Chinese name because the quality of the product from different vendors using the same Chinese name actually has very different properties. Therefore, it's not a matter of keeping it secret; it is for the safety of the patient.
- Chu The idea of this Chinese herb was to reduce the GI side effects that were commonly seen with one of our very standard chemotherapy regimens for colon cancer, and in a critical study that was done here at the Yale Cancer Center, we indeed found that this herb could reduce the nausea, vomiting, the abdominal cramps, and the diarrhea

associated with chemotherapy. So really it is a pretty significant advance. In fact, my colleagues Dr. Lee and Dr. Saif here at the Yale Cancer Center are about to embark on a follow-up study which will look not only to see whether this herb can reduce the side effects associated with chemotherapy, but whether it may also improve the clinical outcome.

Miller Which is a fascinating thought for our patients and for all of us in terms of the future.

We would like to remind our listeners to email any questions to [Healthline@yale.edu](mailto:Healthline@yale.edu). We are going to take a short break for a medical minute. Please stay tuned and learn more about Chinese herbal medicine with Dr. Tommy Cheng and Dr. Ed Chu here at WTIC and the Yale Cancer Center.

*The American Cancer Society estimates that in 2006, over 11,000 people will be diagnosed with colorectal cancer in Connecticut alone. Early detection is key. When detected early, colorectal cancer is easily treated and highly curable. Men and women over the age of 50 should have regular colonoscopies to screen for the disease. People with colorectal cancer have more hope than ever before. Each day more patients are surviving the disease due to increased access to advanced therapies and specialized care. New treatment options and surgical techniques are giving colorectal survivors more hope than they've ever had before. Clinical trials are currently underway at Yale Cancer Center, Connecticut's only federally designated comprehensive cancer center to test innovative new treatments for colorectal cancer. Patients enrolled in these trials are given access to newly available medicines that have not yet been approved by the Food & Drug administration. This has been a medical minute brought to you as a public service by Yale Cancer Center. For more information, visit our website at [YaleCancerCenter.org](http://YaleCancerCenter.org).*

Miller Welcome back to Healthline. This is Dr. Ken Miller, and I am in the WTIC studios with my co-host Dr. Ed Chu and our guest, Dr. Tommy Cheng, one of the nation's leading experts in cancer drug development and in Chinese herbal medicine. I want to welcome our listeners back as well. Please send us your questions at [Healthline@yale.edu](mailto:Healthline@yale.edu).

Chu If there is any interest in looking at what is currently going on here at the Yale Cancer Center with respect to Chinese herbal medicines and clinical trials, please go to our website, [YaleCancerCenter.org](http://YaleCancerCenter.org).

One issue, Tommy, that has been very appealing about the use of Chinese herbal medicines is that it is assumed that these remedies are completely safe, benign, have no toxicities on their own, and that they can boost the immune system. Perhaps you can elaborate a little more on each of those topics.

Cheng Chinese medicine has evolved through the years. One of the goals is for preventive purposes. In order to prevent a disease, one of the important areas to work on is to boost the immunofunction. There are several Chinese medicines that claim to be useful for that purpose. Indeed several laboratory experiments seem to support it. And a clinical trial, in a limited sense, also seems to substantiate it, though extensive clinic trials haven't been

done. So, yes, the possibility is there. There are several herbs that are very popular and claim to be useful for that purpose. Unfortunately, if you do an analysis of those products from different vendors, even those who claim the same name, the actual composition is quite different from one to another. Which of those products is better than another? Nobody knows at the moment. So I think extensive research is needed but such potential should be considered.

Chu I know that you and your laboratory group have focused a great deal of attention on this whole issue of quality control. Perhaps you can tell our listening audience what you are doing to try to make sure that there is consistency.

Cheng Given that Chinese medicine is often composed of several herbs, the chemical composition in there is quite large in the nature of chemicals. So we have no idea which chemical is biologically active. As a result, we decided to take an inclusive view, that is, try to assess as much of the chemical composition as possible in a chemical formula as well as try to assess this impact biological system as broadly as possible. And using this approach, we assess the consistency of the preparations.

Miller Typically when I have heard the name fingerprinting I picture someone taking a new job or being arrested, but the word fingerprinting is also something I have seen in your research as well. What does fingerprinting mean in this setting?

Cheng Fingerprinting is basically matching multiple parameters in a given preparation instead of one, two, or a few parameters.

Miller I want to go to an email that we have just received from Bonnie from Storrs, Connecticut. This email is for Tommy and for Ed:

*We have a lot of breast cancer in my family and other cancers as well such as ovarian cancer. Are there any herbal medicines that might decrease my risk of getting cancer?*

Cheng Well, the potential is there, but nothing has been done properly to address that issue at this time.

Chu I think one has to be cautious about all of these advertisements because clearly there are a whole host of websites on the internet that are making claims that may not actually be true. So I think one has to be very, very careful along those lines.

Miller I want to throw in my own thoughts about that too. For Bonnie and for other people as well who have a strong family history of cancer, there is a lot of information available now at Yale and elsewhere in terms of genetic counseling, and although there may be medications or herbs that you can do for your health, sometimes getting specific medical counseling can be useful as well.

Chu Just to remind our listening audience, we are here in the WTIC studios with our good friend and colleague, Professor Tommy Cheng from the Yale Cancer Center, one of the

world's leading experts in the area of Chinese herbal medicine. Again, if you have any questions, please email us at [Healthline@Yale.edu](mailto:Healthline@Yale.edu).

Miller I have a question for you. Are there any Chinese herbal medications that are FDA approved?

Cheng As of today, as far as I know, nothing has been approved. But, there are quite a few under clinical trial review at the moment.

Chu I'd like to emphasize that the [FDA](#) is looking at the research that Dr. Cheng's group is doing here at the Yale Cancer Center, along with a whole host of other investigators, to see how the quality control, the fingerprinting, and rigorous design methodology is being done. I think in many ways, Tommy's group and the Yale Cancer Center are leading the way in this very important effort.

Here in the United States and the Western world, we are used to taking medicines by pill or capsules. Clearly, dating back two to three thousand years ago, individuals didn't take Chinese herbal medicines by pill or capsules. So what is the right way of taking these medicines?

Cheng In terms of the formation concerns, in the past 20 years, Chinese medicine has advanced to the extent that capsules and tablets are now available. Whether they are behaving the same as the original is still a question that needs to be addressed. That's why evidence is needed for all of those.

Miller We are going to take a break in a minute for a survivor's story. Again we would like to remind you that Dr. Tommy Cheng from the Yale Cancer Center is with us. If you have questions for him please send emails to [Healthline@yale.edu](mailto:Healthline@yale.edu).

And now we are going to take a break, and we will be back to you in a minute. We are going to hear a survivor's story.

*A few years ago the diagnosis of cancer was a death sentence for many patients, but today thanks to advances in clinical research, we are turning the corner in the battle against cancer. There are over 10,000,000 cancer survivors now living in the United States. They are the true heroes in the war against cancer. Here's the story of a hero from Hamden.*

*Ten years ago when I was diagnosed with aplastic anemia, there was no cure. After teaching math for 35 years, I was forced to retire. Then I met Dr. Tom Duffy at the Yale Cancer Center. He told me about a new procedure called a mini-stem cell transplant. He encouraged me to put my life in the hands of Dr. Stuart Seropian, one of the few doctors in the country doing this procedure. On January 17, 2004, I had a stem cell transplant at the Yale Cancer Center. At age 70 I feel like a new man. I owe a great debt of gratitude to the terrific staff at Yale Cancer Center. They literally saved my life.*

*This survivor story has been brought to you by Yale Cancer Center.*

Miller I would like to welcome you back. This is Dr. Ken Miller, and I am in the WTIC studios with my co-host Dr. Ed Chu and our guest, Dr. Tommy Cheng, one of the nation's leading experts in cancer drug development and herbal medicine.

Tommy, I wanted to ask you about the international efforts that you are involved with to look at the role of Chinese herbal medicines.

Cheng There are many countries that have great interest in exploring the potential of Chinese medicine or herbal medicines in general. However, the research in this area needs to be upgraded. The several critical issues that need to be addressed are: 1) the quality control of the study material and the consistency of the preparation to be made; 2) credible clinical trials to substantiate the evidence in supporting the usage of those herbs; 3) information, particularly in areas of toxicity, needs to be exchanged extensively; 4) in terms of the herbal resources, no institution or country can do them all. In order to really explore this potential, collaboration is needed. So as of two years ago, we decided, based on our experience in studying Chinese medicine that we would like to share our experience with others who have common interests. For that reason, we have formed a consortium called "Globalization of Chinese Medicine" and the website is [www.TCMedicine.org](http://www.TCMedicine.org). Check out the website, it promotes the platforms for studying Chinese medicine and also herbal medicine in general.

Chu Again, I think Professor Cheng is being modest. Tommy was really the one who spearheaded this effort. Tommy chairs this global consortium, and I think it's also important to say that the group here at Yale is at the core of this entire global effort to develop Chinese herbal medicine.

Cheng This consortium now has 51 members from all over the world, and this includes top institutions from China, Hong Kong, Taiwan, Singapore, Australia, Canada, Europe, as well as the United States.

Chu Tommy, perhaps you could highlight for the listening audience some of the most exciting research that you feel is ongoing here at Yale, both in the laboratory as well as in the clinic.

Cheng About six or seven years ago, I became interested in the potential of Chinese medicine in relieving the side effects associated with cancer chemotherapy. By having this Chinese medicine to relieve the side effects, we needed to look at whether it would also compromise chemotherapeutic effects of the chemotherapeutic agent targeting the tumor. In performing animal studies, it was a surprise to us that not only does it not compromise the chemical properties of our chemotherapeutic agents of interest, it actually enhanced it against the tumor cell growth in animals.

Miller Which is an exciting possibility. We might be able to make more progress with the chemotherapy drugs that we have.

Cheng We actually took this information and went further. Together with a Yale sponsored company called [Phytoceutica](#). (Here I have to declare my conflict of interest: I am a scientific founder of the company, which is located in New Haven.) We looked to address 1) can we make this herbal medicine in a consistent manner; and 2) if we can make a consistent manner, can we show clinic evidence to support this claim. Those studies are ongoing and a clinical trial is also moving along and the Yale Cancer Center is playing a critical role in moving this through.

Chu And for those who may have missed the earlier segment, in fact, the very first clinical study that we did, working very closely with Professor Cheng's group, was looking at the ability of this herb PHY906 to reduce the GI side effects associated with Western chemotherapy. Indeed we did find that this herb could reduce nausea, vomiting, abdominal cramps, diarrhea, and the use of anti-diarrhea medications in the treatment of colorectal cancer. That study is finished. We are now about to embark on a follow-up study which will look at the same herb in combination with two different drugs that are typically used in the second line treatment of colon cancer, and our hope is that this study will be up and ready for patients within the next two or three months.

Miller For people in Connecticut and elsewhere who have colon cancer or pancreatic cancer, how would they access these trials and be able to participate?

Chu If anyone is interested in these trials at the Yale Cancer Center, please go to our website at [www.YaleCancerCenter.org](http://www.YaleCancerCenter.org). I would also encourage you to get in touch with myself, Dr. Ed Chu. I help coordinate these clinical studies.

Miller If you have questions for Dr. Tommy Cheng and Dr. Ed Chu or for us at Healthline, we encourage you to go to our website which is [YaleCancerCenter.org](http://YaleCancerCenter.org) for more information about cancer, and the resources available to you.

Before we sign off Dr. Cheng, what are the two or three most important points that you want to emphasize to our listeners?

Cheng Well, the first point is Chinese medicine offers an alternative for the treatment of cancer, but evidence is needed to support those claims. Two, nothing is safe, so toxicity needs to be carefully monitored. Three, you should recognize that herbal medicines could have a complicated interaction with the current medicines, which are being used by the patients. So those also need to be taken in consideration.

Miller Again, I want to thank Dr. Tommy Cheng for joining us on Healthline.

Chu I also would like to thank Tommy for being here in the studios. Again, I would like to repeat the website for this global international consortium for Chinese herbal medicine. It's [www.TCMedicine.org](http://www.TCMedicine.org).

Remember, tune in to WTIC News Talk 1080 every Sunday at 8:30 a.m. for Healthline with the Yale Cancer Center.

Our next program will focus on treatment advances in colon cancer, and yours truly will help lead that important discussion along with Dr. Ken Miller. Until then, this is Dr. Ed Chu

Miller and Dr. Ken Miller

Chu from the Yale Cancer Center wishing you a safe and healthy week.