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Looking to The East: Benefits of Combining Chinese and Western Medicines

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Looking to the East:

Benefits of combining Chinese and Western Medicines

Senior Project submitted to

The Division of Language and Literature

Bard College

by

Rushell A. Reid

Dedication:

With joy, pride and eternal gratitude, this project is dedicated to my parents Mechel and Russell Reid as well as my Aunts, Sonia Kerr and Simone Kerr without whom my education would have been unattainable.

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Without the blessings of The Lord God, I would not have been able to accomplish this milestone.

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Introduction:

The *Huangdi NeiJing (Yellow Emperor's Inner Cannon)* is one of China's oldest written texts. The text documents the Yellow emperor discussing the theoretical ideologies and practical methods of Chinese medicine with his pupil. According to Paul Unschuld, a scholar and translator of the ancient text, the completion of the Neijing dates between 400 BCE and 260 CE. The text defines the ideals now referred to as the "holistic" approach to medicine which include forces such as the five elements (earth, metal, fire, water and wood), yin and yang as well as the more specific effects of a person's diet and lifestyle. The forces of yin and yang are something that is observed in the physical world as "mutually dependent opposites".¹ The balance of the forces and proper management of the diet was determined to be attributed to a healthy individual whereas any imbalance resulted in sickness. Chinese medicine is based on Daoist principles that believe that everything in the universe is dependent on interconnectivity and balance.

From this early time period, the Chinese had clearly outlined systems of medical treatment. As science modernized, the medical text was revised multiple times throughout history starting with the Tang dynasty (657 A.D.)². This modernization of the Chinese medicinal text has come to include scientific studies on the benefits and use of Chinese herbs and resulted in another text *Chinese Pharmacopoeia* being printed. The studies have indicated that with Chinese herbs, conditions such as appendicitis have been treated successfully. The study of these

¹ "The Chinese Medicine Meridian System." *Academy of Classical Oriental Sciences The Chinese Medicine Meridian System Comments*. N.p., n.d. Web. 01 May 2014. <<http://www.acos.org/articles/the-chinese-medicine-meridian-system/>>.

² Quinn, Joseph R., trans. "An Overview of Traditional Herbal Medicine." Introduction. *A Barefoot Doctor's Manual*. Mayne Isle, B.C.: Cloudburst, 1977. IX-X. Print.

herbs has also allowed for various compounds which have been found to be useful being isolated and used in the production and synthesis of medication.³ Based on the same founding principles established by the Yellow Emperor, Chinese medicine in today's society encompasses the use of herbs, acupuncture, moxibustion as well as massage (acupressure) and *tai qi* to treat illness in a way that addresses the imbalance of the forces within the person's body. Chinese medicine believes that if the body is experiencing an imbalance in the basic forces, the patient will get sick and the only way to resolve the problem is to treat the whole body in order to restore balance through not just medication (herbs) but also diet and forms of exercise/ meditation (*tai qi*). If the body remains in balance, it is able to take care of itself.

Chinese medicine exemplifies similar but different views on the anatomy and physiology of the human body. The Chinese *chuang-fu* is the name given to five viscera and six bowels. The viscera include the liver, heart, spleen, lungs and the kidneys. The six bowels are the gallbladder, stomach, large and small intestines, urinary bladder and the *ōsan-chiao*. The viscera and bowels are *ōpaired-off* for example: the heart and the small intestine, and the liver with the gall bladder etc. The relationship between the components of each pair is that of up and down regulation.⁴ In each pair, the organs work together in order to increase or decrease the overall function and maintain balance. However, in the *Barefoot Doctor's Manual*, it states that *ōthe viscera or bowels that the traditional Chinese medicine practitioner refers to does not necessarily match those used by the western medicine practitioner from the standpoint of structure, location and function.*⁵ This idea that Eastern and Western medicine do not match up exactly can also be seen when

³ Quinn, Joseph R., trans. "An Overview of Traditional Herbal Medicine." Introduction. *A Barefoot Doctor's Manual*. Mayne Isle, B.C.: Cloudburst, 1977. IX-X. Print.

⁴ "Chapter 1 Section 12." *A Barefoot Doctor's Manual*. Mayne Isle, B.C.: Cloudburst, 1977. 12. Print.

⁵ "Chapter 1 Section 12." *A Barefoot Doctor's Manual*. Mayne Isle, B.C.: Cloudburst, 1977. 12. Print.

comparing the philosophical and anatomical theories of the body. One of the beliefs Chinese medicine is based upon is the presence of meridians. Meridians are defined as energy pathways that allow qi (essence of the body that flows similar to blood or bodily fluids) to flow throughout the body.⁶ These meridians indicate different connections between organs of the body and are important for acupuncturists to understand in order to access the person's qi and to re-establish balance in a sick person. Acupuncturists use these meridians as markers to indicate where needles should be placed on a person's body. However, by Western standards, although the concept of pathways that connect organs throughout the body is easily grasped as the being similar to the circulatory system, the concept of qi and meridians are not as quickly understood. This distinction might be due to the fact that Western medicine is based on the connections that are visible and can be studied under microscopes and through various scans whereas Eastern medicine's philosophical aspects like meridians (although there is proof to support their presence, they are forces and do not show up on an X-ray).

The methods doctors use to diagnose patients is also similar that of Western medicine. In order to diagnose a patient, the doctor uses five techniques to determine the source of the illness. The doctor relies on interviewing, observation, listening, touch and percussion.⁷ In the case of interviewing, the doctor aims to find out what signs and symptoms the patient has been experiencing, as well as the medical history and the history of the onset of the illness. Observation involves taking note of the patient's mood and physical condition such as

⁶ "The Chinese Medicine Meridian System." *Academy of Classical Oriental Sciences The Chinese Medicine Meridian System Comments*. N.p., n.d. Web. 01 May 2014. <<http://www.acos.org/articles/the-chinese-medicine-meridian-system/>>.

⁷ "Chapter 3 Section 1." *A Barefoot Doctor's Manual*. Mayne Isle, B.C.: Cloudburst, 1977. 19. Print.

appearance of the tongue (including its morphology and color which indicates to doctors if the patient is lacking particular nutrients). Listening involves auscultating the patient's lungs and heart and noting any abnormalities. Touch is perhaps the most sensitive and unique aspect of the diagnostic process and is a heightened skill that Western doctors are not trained to do. Touch involves pulse diagnosis as well as light massage and palpation of the thorax, abdomen and heart. Chinese medicine doctors are trained to be very sensitive to pulses and can often base their diagnosis on one of nine types of pulse (e.g. rapid, sunken, slippery). The taking of the pulse in the West is more focused on the number of beats per minute and have fewer qualities of which to take note. Finally, percussion is based on a technique which involves the right middle finger hitting the left middle finger against the patient's body in order to determine "changes in the organ based on the resonance produced by the percussion."⁸ Based on the results of these techniques doctors are able to determine the source of the patient's illness through differential diagnosis. The results indicate whether there is an excess of "cold" or "hot" which is synonymous with yin and yang. Since each organ is denoted as either yin or yang, doctors are able to narrow down their diagnosis when all the results are considered as a whole problem.

Based on the historical longevity and preservation of the fundamental principles of Chinese medicine, it has not only survived more than 2000 years (and is still being used today in China) but has also proven to be beneficial in many other parts of the world. This holistic form of treatment has even become implanted in the United States. This fact raises the question of how Chinese medicine not only survived centuries but was also able to travel across the world and set root in this country? This question is explored throughout Chapter I: Journey to the West

⁸ "Chapter 3 Section 1." *A Barefoot Doctor's Manual*. Mayne Isle, B.C.: Cloudburst, 1977. 23. Print.

and aims at explaining the origins of Chinese medicine to the west and in particular to the United States as well as the factors that influenced the level of success it has enjoyed and has been able to retain particularly in the area of acupuncture.

The indicators reveal that Chinese medicine has been flourishing in the United States and so Chapter II is aimed at discovering the role it plays in Western society. However, since there is already a conventional form of medicine present in the west, it will seek to underscore its effectiveness when used as a complement or alternative to the Western forms of medicine. It also investigates the availability and quality of Chinese medicine treatment available to the population in China, the United States, Canada and other parts of Asia as it pertains to treating cancer and its side effects and symptoms.

Chinese medicine currently plays the role of filling the gaps that Western medicine is unable to fulfill especially in the entire wellbeing of the person. With a lack of Western-style scientific research, Chinese medicine is often doubted for its credibility and effectiveness. Chapter III explores how Chinese medicine can be advantageous in treating cancer in the future with more studies and research being done. The mushrooming number of acupuncture educational facilities is indicative of the growth of Chinese medicine in the west. It will also investigate how the introduction of the internet has affected the information available to persons and how they use that access to seek treatment for the side effects of radiation and chemotherapy.

I. Chinese Medicine's Journey to the West

The introduction of Chinese medicine to the United States is believed to have happened sometime between 1882- 1883 when Ing Doc Hay emigrated with his father from Guangdong Province, China. He first arrived in Walla Walla, Washington where he would remain for four years before relocating to John Day, Oregon. During that time period, gold had been found in Oregon and many Chinese immigrants had moved there to mine the mineral. In 1887, Ing Hay and his colleague Lung On purchased a general store that was called Kam Wah Chung which had been the center of a thriving Chinese frontier community.⁹ They decided to keep the name of the community store served as both a general store and a traditional herbal outlet and operated in the original infrastructure for more than 50 years.

The little shop where Doc set up his business, not far from the Grant County Fairgrounds today, once stood at the center of one of the largest Chinatowns in the American West. It was here he gained respect as a pulse doctor and herbalist. According to the Oregon Encyclopedia, as a traditional pulse doctor he always wore a glove on his right hand and never picked anything up with it to protect his sensitivity.¹⁰ By being a good pulse diagnostician, he was able to increase his clientele beyond the Chinese immigrant population. It is not known how Chinese medicine progressed throughout the United States after Ing Hay died in Portland Oregon in 1952 in a nursing home, the place he had spent the last four years of his life. Before his passing, Doc

⁹ Lockman, Heather. "Backstories." *Heather Lockman Kam Wah Chung Comments*. N.p., 13 Jan. 2014. Web, 30 Apr. 2014.

¹⁰ Varon, Jodi. "Ing Hay ("Doc Hay") (1862-1952) | Oregon Encyclopedia - Oregon History and Culture." *Ing Hay ("Doc Hay") (1862-1952) | Oregon Encyclopedia - Oregon History and Culture*. Oregon Encyclopedia, n.d. Web. 10 Mar. 2014.

had handed his business to his nephew who had come from Montana to assist him after his friend and partner predeceased him. As the saying goes, "the rest is history". Doc's nephew closed the business after the death of his uncle and donated it to the State on the condition that the old storefront be kept as a museum. Today the Kam Wah Chung State Heritage Site still stands and is owned and operated by Oregon State Park.¹¹ One can safely assume that Chinese medicine continued to be practiced in communities throughout the United States over the next two decades. However, some believe that there was an increase in the popularity of all things Chinese when President Nixon visited China from February 21-28, 1972.

Nixon described his visit as "the week that changed the world".¹² This statement could very well be true since the President's eight-day visit to China was televised throughout America. This publicity strategy allowed the American public to see "a spectacular parade of images from China, the first they had seen in more than twenty years".¹³ This news feed allowed China to be seen globally and "sent a clear and dramatic message to everyone watching that a new relationship was being forged."¹⁴ President Nixon's trip therefore made Chinese culture visibly present in the homes of the Americans through television broadcast. It also indirectly caused the American public to be more receptive to Chinese culture. However, an article written previously by James Reston in December 1971 particularly influenced the attention being paid to

¹¹ Lockman, Heather. "Backstories." *Heather Lockman Kam Wah Chung Comments*. N.p., 13 Jan. 2014. Web, 30 Apr. 2014.

¹² "The Nixon Visit." PBS. PBS, n.d. Web. 28 Apr. 2014.

¹³ Varon, Jodi. "Ing Hay ("Doc Hay") (1862-1952) | Oregon Encyclopedia - Oregon History and Culture." *Ing Hay ("Doc Hay") (1862-1952) | Oregon Encyclopedia - Oregon History and Culture*. Oregon Encyclopedia, n.d. Web. 10 Mar. 2014.

¹⁴ Varon, Jodi. "Ing Hay ("Doc Hay") (1862-1952) | Oregon Encyclopedia - Oregon History and Culture." *Ing Hay ("Doc Hay") (1862-1952) | Oregon Encyclopedia - Oregon History and Culture*. Oregon Encyclopedia, n.d. Web. 10 Mar. 2014.

acupuncture.¹⁵ James had to undergo an emergency appendectomy while in China and acupuncture was used to alleviate his pain. His detailed report highlighted the use of acupuncture in a major American newspaper. Since Reston was a reporter who travelled with Nixon to China in 1972, more people in America became aware of the acupuncture procedure and began to consider it as an alternative for anesthesia.

On May 30, 1972, Chinese medicine made the headline "Acupuncture Is Used to Anesthetize Patient Here" in *The New York Times*. The groundbreaking incident occurred in New York City in the hospital of the Albert Einstein College of Medicine and was the first of its kind to be done in a hospital in the United States. According to reports, the patient was given anesthesia using acupuncture needles in his legs in order for doctors to perform a skin graft. The supervising anesthesiologist, Dr. Frank Z. Warren saw acupuncture being used in a demonstration at the New York State Society of Anesthesiology the December before. In the demonstration, a woman who complained of pain in her arm was given acupuncture in her shoulder joint after which she reported the pain no longer affected her. Dr. Warren mentioned that "some physicians in hospitals in the city were ready to explore the full potential of acupuncture in anesthesia."¹⁶ The article also stated that "interest in the technique as a cure-all and a pain killer mounted considerably in this country during President Nixon's journey to China in February. President Nixon's visit to China therefore gave rise to changes in the way medicine was being approached in America.

¹⁵ Reston, James. "Now, About My Operation in Peking; Now, Let Me Tell You About My Appendectomy in Peking" - *Now, About My Operation in Peking*. The New York Times, 26 July 1971. Web. 30 Apr. 2014.

¹⁶ "Acupuncture Is Used to Anesthetize a Patient Here." - *Article*. The New York Times, 30 May 1972. Web. 29 Apr. 2014.

Only a few months after the President's world impacting visit, the American doctors were including Chinese acupuncture into their Western treatment options and creating a complementary form of medicine. The fact that the article about acupuncture being used for anesthesia made the headlines in a respectable newspaper such as *The New York Times* also indicated that not only were people simply aware of Chinese culture, including the medicine it had to offer, but both the culture and the medicine were becoming mainstream. The publication of this article became a springboard for other articles to be written about Chinese medicine. Following this publication, another follow-up article was published about acupuncture. In a short amount of time, the American public had not only been exposed to images of China but soon had aspects of Chinese culture readily available to them in the United States.

Initially acupuncture was simply seen as a safer alternative to anesthesia since it did not include the use of chemical drugs but instead utilizes the pressure points that already exist in the body naturally. From the premiere of acupuncture into mainstream culture, people have been seeking it as a means to alleviate pain. Researchers have also found evidence that acupuncture does work for the relief in areas of postoperative and chemotherapy-induced nausea and vomiting, as well as postoperative dental pain, fibromyalgia, tennis elbow, and menstrual cramps. In other words, not much is known about how it works, but it seems to be beneficial. Many Western medical doctors are turning to acupuncture to help treat their patients. Acupuncture is a form of medicine that we can all use as it comes has little or no side effects, and yet a multitude of advantages. It derives from the concept in Traditional Chinese medicine that disease results from a disruption in the flow of chi [*qi*]—the body's circulating life energy— and imbalances in

the forces of yin and yang.¹⁷ Acupuncture also depends on manipulation of as many as twenty meridians and more than 2,000 acupuncture points found along them through the application of lying tiny needles or, sometimes, pressure or heat in order to deliver therapeutic effects for patients.¹⁸

In 1997, the number of people using Traditional Chinese medicine in the United States was estimated to be one million and approximately ten thousand practitioners a year were treating them. By the year 2007, the National Health Interview Survey (NHIS) indicated that 3.1 million United States adults had used acupuncture in the previous year. The survey also illustrated that 2.3 million Americans practiced the physical movement exercises of *tai qi* and 300,000 practiced *qi gong* the previous year.¹⁹ Despite the lack of a more current survey, the research studies indicate a steady increase in the number of Americans that use acupuncture or another form of Chinese medicine as an alternative or complementary form to Western medicine. Besides pain, acupuncture can also be used to alleviate nausea, vomiting, insomnia, anxiety, and fatigue. However, with an increase in the popularity and use of acupuncture, methods of standardization had to have been created in order to ensure quality medical care is being provided.

The National Certification and Commission for Acupuncture and Oriental Medicine (NCCAOM) is a nonprofit organization that was founded in 1982. The NCCAOM is currently

¹⁷ Levy, Suzanne. "How Acupuncture Works From the Perspective of Western Medicine." *Alternative Pain Therapies*. Health Magazine, 19 Apr. 2008. Web. 30 Apr. 2014.

¹⁸ Levy, Suzanne. "How Acupuncture Works From the Perspective of Western Medicine." *Alternative Pain Therapies*. Health Magazine, 19 Apr. 2008. Web. 30 Apr. 2014.

¹⁹ "Traditional Chinese Medicine: An Introduction." *NCCAM*. National Institutes of Health, n.d. Web. 29 Apr. 2014.

the only organization through which a national standard has been set for Traditional Chinese medicine practitioners. The organization "validates entry-level competency in the practice of acupuncture and Oriental medicine through professional certification"²⁰. The NCCAOM keeps a record of examination and certification scores as a means of documenting competency for a license. The NCCAOM also provides certification in forty-eight of the fifty states, including the District of Columbia. Intended practitioners can obtain certification in "Acupuncture, Chinese Herbology, Oriental Medicine and Asian Bodywork Therapy" that are accredited by the National Commission for Certification Agencies (NCCA). Upon completion of the program, persons receive a diploma from the NCCAOM which serves as an indicator to patients that each certified individual has "met national standards for the safe and competent practice of acupuncture [and Oriental Medicine] as defined by the profession." Through the NCCAOM, persons interested in becoming practitioners are able to obtain their certification. The organization also allows and requires trained practitioners to recertify as a means of ensuring their skills are maintained at the required standard and competence and that they are able to provide the best and most current approved form of care to patients. The NCCAOM also provides a public registry of certified practitioners which serves as a means of legitimizing the training and certification of the practitioners and provides a service to individuals who are interested in finding a practitioner. The registry can also function as a means of verifying someone's qualifications. When the NCCAOM registry was searched for practitioners in Bard College's 12504 zip code, the results showed a total of twelve licensed practitioners in the Red Hook/ Kingston area indicating that the practice is alive and still recognized in even an area as small as the one surrounding the school. Of the practitioners who came up in the results of the search, each was listed by first and last

²⁰"About Us Home." *NCCAOM*, NCCAOM, n.d. Web 30 Apr.2014.

name, city location, miles away from the desired zip code as well as the type of certification received, the location and contact information for each practitioner.

Education and formal training in acupuncture takes several years. Acupuncturists undergo training in a number of different areas, including acupuncture treatment, clinical acupuncture, diagnosis and evaluation, needle placement, stimulation techniques, and sterilization procedures.

In the United States, there are a number of accredited schools that can be found and they offer education and training programs in acupuncture procedures. On average, these programs usually take about four years to complete.²¹ Upon successful completion of an acupuncture program, students are awarded a Master of Science in Acupuncture. A few schools also offer advanced education and training, leading to a doctorate degree in acupuncture. To practice acupuncture in the United States, students are required to take and pass a state licensing examination.

As is expected, medical doctors and other candidates for certification in medical acupuncture (e.g., osteopathic physicians, dentists) must meet specific requirements in education, training, and experience. More importantly, they must hold a valid, unrestricted license to practice medicine; must complete at least 300 hours of education and clinical training in an acupuncture approved program by the Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM); and must have at least 2 years of experience in medical acupuncture.

²¹ *Acupuncture Courses. Education Portal*. N.p., n.d. Web. 30. Apr.2014.

Standards for medical acupuncturists are maintained by the American Board of Medical Acupuncture (ABMA). The completion of all these requirements by a physician, entitles him or her to be considered "board eligible" in acupuncture. The doctor then has two years to successfully pass an examination administered by the ABMA to achieve acupuncture certification. Thereafter, continuing medical education (CME) is strongly encouraged for all medical acupuncturists.

Throughout history, Chinese medicine has proven itself to be effective, durable and long-living. As one of the longest recorded medicines in the world, Chinese medicine boasts innumerable success case proving its effectiveness by Eastern standards. It has also proven to be portable and adaptable from place to place. It was able to immigrate to the United States engrained in the lifestyle of immigrants like Ing Hay and settle in Oregon, Washington. However, when it really began to affect society on a whole, it was well received because it was believed to be a more natural approach to medicine. There are significant benefits to using herbs/natural drugs that have the ability to alleviate symptoms such as pain and nausea as well as act as an anesthetic. If herbs needed for medication can be grown locally or even in someone's backyard, then the large cost that goes into the pharmaceutical/ drug companies could be reduced and medication would be more readily accessible to more individuals. During the early 1970's the attraction to acupuncture was due to the fact that people believed anesthesia would have significant negative side effects on patients. When the option for needles to be stuck into the body at particular points could offer the same effect, the public viewed it as the safer option of achieving anesthesia, thereby boosting the popularity of Chinese medicine altogether. Another explanation for the success of Chinese medicine could be the fact that the American society is

keen on following trends. When *New York Times* reporter James Reston wrote an article highlighting his experience with acupuncture, it caught the attention of many scholars. Reston's article compounded with the major publicity of President Nixon's visit to China may have resulted in a widespread trend of Chinese culture. Chinese acupuncture being performed in Western medicine operating rooms illustrate how much the new methods were appealing to the interests of the public. By following this trend, the number of people using acupuncture increased simply because more people heard of its uses and wanted to partake in the trend, thereby becoming Chinese medicine users and even practitioners. This willingness to integrate Chinese medicine into aspects of their daily life or simply just as medicine for treatment of illnesses resulted in Chinese medicine being used as a complement or alternative to Western medicine.

II. Chinese Medicine as CAM treatment for Cancer

Traditional Chinese medicine (TCM) is listed by many organizations including the American Cancer Society as a form of Complementary and Alternative Medicine²² (CAM) treatment.

“Complementary” is defined as non-mainstream treatment options that are used along with more orthodox treatment.²³ Similarly, “alternative” is described as treatment methods that are used instead of a more conventional option.²⁴ Based on the definitions, in America, Chinese medicine (which includes the use of herbs, acupuncture, and moxibustion) although considered to be unconventional to Western forms of medicine, can be used in conjunction with Western treatment or as a substitute. In other words, Chinese medicine as a treatment option for cancer may vary based on whether the patient is in America or in China. If Chinese medicine provides added relief when used in conjunction with Western medicine or can be used as an alternative, then what demographic of the cancer patients use it as a form of treatment and what factors affect their use?

Statistics from the National Center for Complementary and Alternative Medicine (NCCAM) indicate that in 2007 out of 23,393 people, women were more like to use CAM than men²⁵.

Based on the same population studied, the ethnicity that used CAM most was American Indian/Alaska Native with 50.3% followed by White with 43.1%, Asian with 39.9%, Black with 25.5%

²²"Complementary and Alternative Methods for Cancer Management." *Complementary and Alternative Methods for Cancer Management*. American Cancer Society, 30 June 2012. Web. 12 Nov. 2013.

²³"Complementary, Alternative, or Integrative Health: What's In a Name?" Home Page. National Center for Complementary and Alternative Medicine (NCCAM), Oct. 2008. Web. 26 Oct. 2013.

²⁴“Complementary, Alternative, or Integrative Health: What's In a Name?" Home Page. National Center for Complementary and Alternative Medicine (NCCAM), Oct. 2008. Web. 26 Oct. 2013.

²⁵ The Use of Complementary and Alternative Medicine in the United States." *Home Page*. National Center for Complementary and Alternative Medicine (NCCAM), Dec. 2008. Web. 12 Nov. 2013.

as well as Hispanic with 23.7%. The NCCAM also showed results that indicated that 44% of persons aged 50-59, 41% of those aged 60-69 and 40.1% of those aged 40-49 used CAM. The study also highlighted that individuals who had higher levels of education as well as higher levels of income were also more likely to use CAM than their less educated, lower income counterparts were.

Additionally, in a study done in the U.S. on the use of CAM by foreign born women with breast cancer, the research shows that Chinese American women were less likely to have used some sort of CAM in the past year than non-Hispanic White women. However, when Chinese American women did use CAM they were twice as likely to consult a CAM practitioner than women in other racial or ethnic groups.²⁶ The study used interviews to gather data of fifteen foreign born and fifteen U.S.- born Chinese women who were diagnosed with any stage of breast cancer within twenty-four months prior to the commencement of the study and who were not currently going through any form of treatment which included chemotherapy, radiation or surgery. In order to ensure that the women who took part in the study had not been greatly influenced by American culture and still adhered to Chinese culture, the study used women who had been in the U.S less than fifteen years. The U.S.-born group was used as a comparison to monitor the effects on treatment options based on immigration. The results showed that of the women who reported pain, they had all used some sort of CAM therapy (Chinese or non-Chinese) to alleviate that pain. The foreign-born women were less educated and had lower incomes than the U.S. born women. The foreign-born women were also more likely to refer to traditional

²⁶ Wong-Kim, Evoan, and Joseph R. Merighi. "Project MUSE - Complementary and Alternative Medicine for Pain Management in U.S. - and Foreign-Born Chinese Women with Breast Cancer." *Project MUSE - Complementary and Alternative Medicine for Pain Management in U.S. - and Foreign-Born Chinese Women with Breast Cancer*. Journal of Health Care for the Poor and Underserved, 2007. Web. 26 Oct. 2013.

Chinese medicine beliefs of balancing yin and yang or hot and cold than the U.S. born women who were more likely to use other non-Chinese forms of CAM such as yoga and meditation. Based on the results of this study it would appear that American born Chinese women were less likely to use Chinese medicine as CAM for their cancer related pain than Chinese born women. However, some women in both groups indicated that using CAM helped to alleviate their cancer related pain. Both groups of women expressed skepticism of the effectiveness of CAM as the primary cancer treatment method as well as voiced concerns about using Chinese medicine along with more conventional methods of treatment for fear of complications. One foreign born participant stated:

“I don't understand the interaction [between Western medicine and CAM] and you are not supposed to mix Western and Chinese medicine. I think the chemotherapy drugs are really strong and I don't know if it will go with Chinese herbs. So I haven't been to the herbalist for quite a while. Before I was diagnosed I used to see the Chinese herbalist. Like when I have a cold, I used to get seen by an herbalist. But the chemo drugs are just too strong and I don't know if I should be taking other stuff at the same time. During the time I was getting chemo I didn't use CAM. I will wait until the chemo drug is about 70 to 80% absorbed before I start on herbs again.”

The question raised by this patient is entirely valid as the components of Chinese herbs are not well studied and depending on which herbs are combined with chemotherapy the outcomes may be different. Another patient who was born in the United States raised other concerns about the lack of standardization in the Chinese medicine treatment. She stated:

“And there are lots of the alternative medicines such as herbs. I know a lot of people take mushroom tablets and all of this and that, right? But they have no regulation over the production of lots of the herbs. So it troubles me to ingest something that hadn't been prepared or produced in a manner where safeguards are taken. You know, you don't want other things growing inside of you because standards are so poor. There's no regulation.”

Conversely, for this patient the concern is based on the production of the herbs and the lack of regulation, by the Food and Drug Administration (FDA), for example. The FDA approval would ensure that all herbs are safe by some standard for consumption especially by patients with

cancer since while they are undergoing chemotherapy their immune systems are more susceptible to infection. Another U.S. born woman stated that:

“I think that not only Western but Eastern medicine's very good too. So I think sometimes if you know what specifically the problem is you can try CAM. Now I don't think it will work with cancer. Acupuncturists are good with pains and aches in the joints and things like that. Back pain I think an acupuncturist can helpö.

Based on the response of this participant, although she seems to have a strong belief in the abilities of CAM to treat the symptoms and side effects of cancer and side effects due to Western treatment methods, she also implies that she is unsure that Chinese medicine can be used to treat cancer itself.

Overall, Chinese women who were U.S. born were more skeptical of Chinese medicine and were more reliant on Western medicine. Conversely, the foreign-born Chinese women believed in the effectiveness of Chinese medicine but were also accepting of Western medicine and therefore more likely to use Chinese medicine as CAM. Women who were U.S. born were found to be more educated than women who were foreign-born which suggests that education plays a role in whether or not women use CAM. The higher levels of education may cause U.S. born Chinese women to regard Chinese medicine as more of old wives tales instead of effective medicine since they would have been less exposed to that form of medicine culturally and probably only heard of it through older family members. The U.S. born women were also less likely to use CAM than their un-Americanized counterparts suggesting that immigrants are more likely to trust their cultural traditions (use of Chinese medicine) than those who grew up within an Americanized (Western) culture. However, although foreign-born women are more trusting of Chinese medicine, most CAM treatments are not covered by insurance. Thus, these women find it more challenging to obtain as wide a range of CAM options as U.S. born Chinese women due

to lower incomes and poorer insurance coverage. Therefore, if immigration to the U.S. affects the way in which Chinese women feel about CAM then how do women who are living in China compare?

In Taiwan as well as in Mainland China, the use of Chinese medicine is popular and was the primary form of medicine for thousands of years before Western medicine became more widely accepted and used. In a study carried out in Taiwan (where in 2009, cancer was the leading cause of death), indicates that most patients use traditional Chinese medicine (TCM) in collaboration with Western medicine²⁷. The aim of the study was to determine what factors affect how trusting the Chinese were of TCM and how willing they were to include it in their routine. The use of TCM in Taiwanese patients with prostate cancer was reported to be 2.6%. The results of the study also indicated that in Mainland China 86% of patients with breast cancer used TCM compared to 50% of all cancer patients in Hong Kong and 47% of Chinese immigrants in Canada. Based on the persuasive statistics indicating the popularity in use of TCM, what factors influence the willingness and prevalence of TCM within the Taiwanese population? The study focused on 12 Taiwanese people who were 1) minimum of 20 years old, 2) had been diagnosed with cancer and were undergoing chemotherapy 3) had been simultaneously receiving treatment from the TCM department of the hospital 4) spoke Taiwanese or Mandarin and 5) were willing to participate in the study.

The results indicated that trust in TCM came from two main areas being cultural background and experiences with using TCM in conjunction with conventional (Western) medicine. Firstly,

²⁷ Chun-Hao Liu, Woung-Ru Tang, Hung-Ming Wang, Ko-Chen Lee, How cancer patients build trust in traditional Chinese medicine, *European Journal of Integrative Medicine*, Available online 18 September 2013, ISSN 1876-3820, <http://dx.doi.org/10.1016/j.eujim.2013.08.003>.

when asked why they believed in TCM a participant stated that TCM “was handed down by our ancestors” whereas another participant expressed “it must be good otherwise Chinese people would not have kept using it for 5000 years.” Other participants said they were willing to use TCM because their family members had used it and had good experiences with it. One participant in particular mentioned that her father was a TCM practitioner and since she grew up seeing him use it, she was more inclined to believe in its effectiveness. It is evident that participants who were more trusting of TCM were ones who were socialized in a culture that have confidence in its usefulness. Secondly, in terms of the view that the effectiveness of TCM was improved by using it in conjunction with Western medicine one participant mentioned:

“I have heard many people say TCM is effective in treating cancer, but I am not sure I believe that. If you use only TCM, resulting in misdiagnosis or poor disease control, the cancer will spread – TCM practitioners prescribe medication depending on their “feelings”; the result may not be so clear”.

This participant criticizes the unreliability of TCM in diagnoses since TCM practitioners have a different method of diagnosis (which focuses on the body as a whole system based on balance), than Western practitioners (who focus more on the individual problem). In addition, the study also indicated that patients were more willing to use TCM in conjunction with Western forms of treatment when the combination was recommended by a western doctor. The patient stated:

“[My oncologist] suggests it's better for me to combine conventional treatment with TCM – I had more trust in TCM because it's suggested by a conventional medical physician in this medical center. If the suggestion was from one of my friends, I might not trust it because my friend is not a medical doctor”.

Based on the response of this participant, Chinese patients are more inclined to follow the treatment advice of their doctors rather than their friends it is also true that coming from their medical practitioner negates the fact of quality control of the TCM production. . However, the

American Cancer Society reports that Asians in the U.S. have the lowest rates of screening for breast, cervical, prostate and colorectal cancer when compared to other races/ ethnicities with rates of recent immigrants being the lowest²⁸. If the fact that patients trust their doctors' advice is true, then why do Asian Americans have the lowest rate of screening and early detection of any other race in the United States? Is the method of treatment being offered to this ethnic group different from other ethnic groups?

In 2009, a study was carried out on fifty three physicians in New York City who treat Chinese Immigrant patients²⁹. The physicians were asked about their screening policies with regard to cancer screenings. Of the population of physicians who took part in the study, 72% reported that they followed the breast cancer guidelines for screening, 35% reported the same for cervical cancer screening and 45% for all colorectal cancer screening test. Of the participants, 68% of the physicians were satisfied with their current rates of providing screening to the Chinese immigrant population they treat. The results indicated that immigrant patients were less likely to have early screenings because it was never recommended to them by their doctor which resulted in their cancer being in late stages when finally detected. The study also indicates that the Chinese Immigrant population had been being exposed to less than standard care prior to their coming to the West from their physicians which perhaps resulted in more cases of cancer becoming fatal due to lack of proper screening and care. The question however is whether Chinese Immigrant patients accepted inadequate care because they were poorly educated and

²⁸ American Cancer Society. Cancer prevention and early detection 2006. Atlanta, GA: American Cancer Society, 2006. Available at: <http://www.cancer.org/downloads/STT/CPED2006PWSecured.pdf>.

²⁹ Aragonés, Abraham, Chau Trinh-Shevrin, and Francesca Gany. "Cancer Screening Practices among Physicians Serving Chinese Immigrants." *Journal of Health Care for the Poor and Underserved* 20.1 (2009): 64-73. *Project MUSE - Cancer Screening Practices among Physicians Serving Chinese Immigrants*. Johns Hopkins University Press. Web. 26 Oct. 2013.

thought they were in fact receiving proper care, or whether it was the level of care they could afford based on their income and insurance.

Comparatively in a study focusing on minority women in America, Korean American women were least likely to get screened for colon cancer than other Asian American women. A survey was distributed to 281 Korean American immigrants in New York metropolitan area between the ages of 50 and 88. This particular age range is of the recommended age to begin screening for colon cancer. The study indicated that 20% of the participants had done a fecal occult blood test within the past year, 35% had undergone a sigmoidoscopy within the past five years. The study indicated that some reasons Koreans had not sought out colon cancer screenings included, low income and poor insurance. However, in a study done by Solomon and McCracken, it was noted that cultural beliefs and values also played a role in deterring Asian Americans from seeking cancer screenings. Some cultural beliefs cited were "modesty, fatalism, a crisis orientation toward health care, helplessness, and use of Eastern Medicine"^{30 31}. Being an immigrant, one who is less likely to be highly educated, and have access to high incomes, results in less cancer screenings and poorer treatment methods for cancer. However, cultural beliefs as well as lack of physician persuasion also play a role in the lack of screening being done by Asian Americans on a whole. As a result immigrants are exposed to a more mediocre form of medical treatment due to their inability to compete economically with their American counterparts. Based on the Solomon and McCracken study, the use of Eastern medicine is a deterrence for patients to seek

³⁰ Tang TS, Solomon LJ, McCracken LM. Barriers to fecal occult blood testing and sigmoidoscopy among older Chinese- American women. *Cancer Pract.* 2001 Nov/Dec; 9(6): 277-682.

³¹ Tang TS, Solomon LJ, McCracken LM. Cultural barriers to mammography, clinical breast exam, and breast self- exam among Chinese- American women 60 and older. *Prev Med.* 2000 Nov;31(5):575-683.

out more advanced, conventional forms of screening and care. However, although both Eastern and Western forms of medicine have the same end purpose of rectifying illnesses of the body their methods differ.

Eastern medicine is holistic and looks at the body as one entire system whereas the ideas of Western medicine view each problem as isolated from another. In other words Eastern medicine tries to treat the problem causing the illness (e.g. preventing headaches by improving circulation around the body with the use of herbs) whereas Western medicine initially tries to treat the symptoms (instead of treating the cause of the headache, painkillers would be used to alleviate the discomfort experienced by the patient). It is widely agreed and understood that the Western approach clearly divides the health from the disease, yet the Eastern approach considers health as a balanced state versus disease as an unbalanced state. The Western approach tends to change the environment and the Eastern way is to prefer to adapt to the environment. There are numerous difficulties in comparing these two approaches. The same terminology may apply to entirely different facts, thus making it all the more difficult as a result of the teaching and learning methodologies being differently understood, and the evaluation of the treatment is often times not comparable. Another way of looking at it that Chinese medicine serves to fill in the gaps where Western medicine seems to be lacking. In other words Western forms of treatment allow for patients to get even sicker before getting better; like in the case of chemotherapy drugs causing side effect symptoms in patients. The side effects can be considered as the patient having an additional problem other than the cancer for which they were initially seeking to get treatment. Due to the difference in the views and process of diagnosis and treatment in Eastern and Western medicine, persons in the west often find it difficult to understand Eastern concepts because they tend to be difficult to translate into familiar Western concepts since the methods are entirely

different. China boasts one of the oldest world civilizations, and have used traditional Chinese medicine for years as a method of ensuring continuity, there should theoretically be benefit in the methods they use for treatment that may potentially replace or improve the comparatively more modern methods of treatment in the West. As a result of this people with cancer are willing to do anything they can to help combat the disease, manage its symptoms, and cope with the side effects of treatment. Many of them are willing to turn to complementary health approaches and so researchers are now looking into CAM and how combining Chinese herbs with chemotherapy may be a new and effective form of treating cancer. With this new drive and methodology there seems to be a wave of willing participants who will have a better hope in longevity and will want to prove its effectiveness.

III. The Benefits of Using Chinese Medicine as CAM

Chinese medicine has been used in several ways as a complement to Western treatment for cancer or its side-effects. However, there is limited research available on the chemical components and the effects of Chinese herbs, resulting in Chinese medicine being viewed with a thick lens of suspicion. One explanation for the lack of data surrounding Chinese medicine is that translating traditional Eastern practices into acceptable evidence-based Western therapies is difficult.³² This challenge may simply be due to the language barrier and the mastery of the language that would be required to accurately translate any Traditional Chinese medicine texts into English. Even with expert level language proficiency, by the act of translating a text from one language to another, there is some context and at times content lost due to the specific English word equivalent that the translator uses to define a Chinese character. Although language could greatly affect the difficulty in producing creditable research there are also other factors to consider such as the difference in manufacturing standards, clinical trials and maintaining consistent product quality which could also increase the complexity of the research that is able to be carried out. In an effort to prove the effectiveness of Chinese medicine, many researchers are now doing more experiments in a Western fashion.

One of the standard Western methods of treating cancer includes the use of chemotherapy. Chemotherapy involves the use of anti-neoplastic drugs that are delivered in measured doses to a

³² Sullivan, Richard. "Medicinal Mushrooms and Cancer Therapy: Translating a Traditional Practice into Western Medicine." *Project MUSE - Medicinal Mushrooms and Cancer Therapy: Translating a Traditional Practice into Western Medicine*. The Johns Hopkins University Press, n.d. Web. 21 Apr. 2014.

patient at regular intervals. However, one of the disadvantages is that chemotherapy treatments result not only in the killing of unhealthy cancerous cells, but also healthy cells. With fewer healthy blood cells (which also include white blood cells) the patient is thereby left with immunosuppression. This means that the patients become more susceptible to infection because their bodies do not have the necessary defense mechanisms needed to fight diseases at such a vulnerable time. However, there are studies that show that the use of a specific type of mushroom widely consumed would help chemotherapy patients significantly by helping to rebuild their immunity. In a study conducted by Cancer Research U.K. there is evidence that indicates that by purifying bioactive compounds produced in medicinal mushrooms, new anti-cancer agents may be extracted.³³ These mushrooms from China, called *reishi* (or *lingzhi*), are being produced in large quantities in green houses in order to meet the global demand. The mushrooms contain polysaccharides that show potential to help reverse the immunosuppressant effects that cancer and chemotherapy treatment has on the body. The research article further states: "Although the exact mechanism(s) of action of medicinal mushroom polysaccharides is still unclear, these compounds may up- or down-regulate various aspects of the humoral or cellular arms of the immune system." With the aspects of the immune system being better regulated, cancer patients would have increased healthy cells including vital white blood cells and would thereby have a more durable immune system than if they were left in an immunosuppressed state.

³³ Sullivan, Richard. "Project MUSE - Medicinal Mushrooms and Cancer Therapy: Translating a Traditional Practice into Western Medicine." *Project MUSE - Medicinal Mushrooms and Cancer Therapy: Translating a Traditional Practice into Western Medicine*. Johns Hopkins University Press, 2006. Web. 26 Oct. 2013.

Professor Wen Jian of Cardiff University is another researcher who is well aware of the level of doubt surrounding Chinese medicine and uses his research to try to change those views. In an interview with Futurity³⁴ an organization that provides news on university research, Jian stated:

Although a few successes, most of the traditional remedies are short of scientific explanation which has inevitably led to skepticism especially amongst traditionalists in the West [Western doctors]. As a result, we set out to test the success of a Chinese medicine and then consider how combining it alongside traditional methods like chemotherapy could result in positive outcomes for patients.³⁴

Jian makes it known that he is not only interested in proving the effectiveness and increasing the credibility of Chinese medicine, but he is hoping to improve the ways in which Chinese medicine is used as a complement to Western medicine. In his research, he analyzes the use of Chinese herbs used along with chemotherapy to attack tumors.³⁵ The herbs that were used in the study are called *Yangzheng Xiaoji* which is a combination of 14 herbs that, when used as a stand alone or in conjunction with chemotherapy on a chemical level, has the potential to block pathways causing the cancer cells to stop being produced and spread around the body. Further development and investigation of this particular combination of herbs can provide cancer patients with not only faster treatment and recovery times, but can inhibit the cancer cells that exist in the body while they are in treatment. With the inhibition of the cancer cells, the herbs would be able to stop those cells from spreading and more importantly returning. This would increase the cancer treatment success rate and lower the mortality rate, ultimately giving the patient a new lease on life even at a time when they may be feeling vulnerable by the very diagnosis of the cancer. Research by Ye et al. also investigated the migration and adhesion of

³⁴ Jones-Cardiff, Christopher. "Combine Chinese Herbs with Chemo to Treat Cancer - Futurity." *Futurity*. N.p., 30 Sept. 2013. Web. 21 Apr. 2014.

³⁵ Jiang, Wen G. et al. "Oncology Reports." *Antitumour Effects of Yangzheng Xiaoji in Human Osteosarcoma: The Pivotal Role of Focal Adhesion Kinase Signalling*. Cardiff University-Peking University School of Oncology Joint Institute, 13 July 2013. Web. 28 Oct. 2013.

cancer cells in vitro. The results of the research study indicate that the *Yangzheng Xiaoji* suppressed adhesion and migration of various cancer cells, including those of breast, prostate, lung, osteosarcoma and colorectal cancer.³⁶ Ye's research coincides with the research done by Jian in indicating that the particular combination of herbs present in *Yangzheng Xiaoji* have a positive effect on inhibiting the ability of cancer cells stick to other cells in the body as well as the ability to move to other areas of the body. Jian is one of the many researchers who is optimistic that with further research and better understanding of how the *Yangzheng Xiaoji* interacts with the body (the mechanism of the interaction); new forms of treatment for cancer will also be found.

In a study lead by Yung-Chi Cheng an oncology researcher at Yale University, another combination of herbs, *huang qin tang* has been going through clinical trials (and is about to enter Phase II for human testing) in order to test its effectiveness on helping restore gastrointestinal function in patients undergoing chemotherapy for colon cancer.³⁷ *Huang qin tang* is a four-herb mixture believed to have been discovered 1800 years ago by Chinese herbalists and is a mixture of Chinese skullcap root, Chinese licorice, Chinese date tree fruit and Chinese peony.³⁸ This herbal mixture has been documented by Chinese herbalists as medicine for treating many gastrointestinal ailments such as diarrhea, abdominal spasms, fever, headache, vomiting, nausea,

³⁶ Ye L, Ji K, Frewer N, Ji J, Jiang WG. Impact of Yangzheng Xiaoji on the adhesion and migration of human cancer cells: the role of the AKT signalling pathway. *Anticancer Res.* 2012 Jul;32(7):2537-43. PubMed PMID: 22753711.

³⁷ Wang, Shirley S. "Chinese Medicine Goes Under the Microscope." *The Wall Street Journal*. Dow Jones & Company, 2 Apr. 2012. Web. 22 Apr. 2014.

³⁸ Shwu-Huey, Liu, and Cheng Yung-Chi. "Old Formula, New Rx: The Journey of PHY906 as Cancer Adjuvant Therapy." *Old Formula, New Rx: The Journey of PHY906 as Cancer Adjuvant Therapy*. *Journal of Ethnopharmacology*, 3 Feb. 2012. Web. 23 Apr. 2014.

extreme thirst, and subcardiac distention.³⁹ Dr. Cheng became interested in *huang qin tang* (which is also known by scientists as PHY906) when he was exploring new methods of dealing with the side effects of chemotherapy. In the previous tests that have been conducted on animals, PHY906, when administered in conjunction with chemotherapy drugs shows positive results of restoring the cells of the intestines faster than when chemotherapy is administered alone. The scientists have discovered that there are 62 active ingredients that come from the four herbs that must be present in order for the drug to be effective. PHY906 holds the potential of being a multipurpose drug which would treat a wide range of gastrointestinal conditions resulting from the side effects of chemotherapy. Currently, patients who experience these side effects are made to take multiple drugs in order to treat the symptoms. If PHY906 succeeds in clinical trials, not only would it be one of few Chinese medicine drugs approved by the FDA it would also improve the credibility of Chinese medicine on a whole. Furthermore, the drug will improve patients' quality of life since the breakdown of the gastrointestinal cell wall would be repaired and the symptoms of chemotherapy side effects would also be alleviated.⁴⁰ Patients would also react better to cancer treatment as the drug would enhance the therapeutic indices of anti-neoplastic medicines⁴¹ which means making the anti-cancer drugs more effective. Patients would therefore have more controlled side effects and would be better able to tolerate more chemotherapy

³⁹ Wang, Shirley S. "Chinese Medicine Goes Under the Microscope." *The Wall Street Journal*. Dow Jones & Company, 2 Apr. 2012. Web. 22 Apr. 2014.

⁴⁰ Wang, Shirley S. "Chinese Medicine Goes Under the Microscope." *The Wall Street Journal*. Dow Jones & Company, 2 Apr. 2012. Web. 22 Apr. 2014.

⁴¹ Shwu-Huey, Liu, and Cheng Yung-Chi. "Old Formula, New Rx: The Journey of PHY906 as Cancer Adjuvant Therapy." *Old Formula, New Rx: The Journey of PHY906 as Cancer Adjuvant Therapy*. Journal of Ethnopharmacology, 3 Feb. 2012. Web. 23 Apr. 2014.

treatments or larger doses (that would otherwise be lethal) thus hastening their treatment and potentially their recovery time. PHY906 also shows no signs of compromising or counteracting the chemotherapy drugs. According to the results of Dr. Cheng's research, four groups of animals were tested in order to prove the drug's efficacy. One group was given just chemotherapy drugs (irinotecan), another group was given just PHY906, another was given a combination of chemotherapy drugs and PHY906 and the final group was given nothing as a control. Results showed that the herb and drug combination was most effective in treating cancer (since the herbs make the chemotherapy medicine more effective) and that PHY906 had no effect on the cancer when used alone. The animals that had undergone the treatment using PHY906 and irinotecan had increased gut cells, and reducing diarrhea. The irinotecan is also said to cause inflammation but the herbal medicine is able to prevent this.⁴² Other tests within the study indicated that when one of the four herbs was left out of the mixture, the effects of the drug also decreased indicating that the 62 active ingredients make for the most operational form of the drug. Part of the downside of using herbs instead of chemicals synthesized in the lab is that consistency of the plants is difficult to maintain. In order to combat this problem, Dr. Cheng started a biotechnology company that is sponsored by Yale that monitors the plant conditions in order to keep different batches of PHY906 consistent which will strengthen the chances of the drug being approved by the FDA. Furthermore, the approval may be more possible since a few years ago, the FDA eased regulations on herbal mixtures, allowing the approval of medicines that have been proved to be safe and effective, even if their individual components aren't

⁴² Callaway, Ewen. "How an 1,800-year-old Herbal Mix Heals the Gut." *Nature.com*. Nature Publishing Group, 18 Aug. 2010. Web. 24 Apr. 2014.

known.⁴³ Dr. Cheng considers the discovery of the benefits of PHY906 in treating chemotherapy side effects as a "new paradigm of drug development" that exemplifies a "typical example of West meets East". There may be more drugs and treatment options that stem from the development of PHY906 as the potential of combination treatment (Western and Eastern) could lead to an infinite number of treatment options for patients. There is still a lot of research that needs to go into understanding the chemical components and mechanisms of the herbs used in Chinese medicine but as Dr. Chen says "if it's still in use after a thousand years there must be something right".⁴⁴

Although Chinese herbs play a large role in complementary medicine, there are other modes of Chinese medicine such as moxibustion and acupuncture that have also proven to be beneficial to patients who experience a diversity of symptoms including those with cancer. The process of moxibustion entails the burning of *Artemisia vulgaris* (mugwort) as a means of producing heat therapy to stimulate acupuncture points. The burning of mugwort can also be used to regulate the "heat" in the body. Where there is cold or an excess of *yin*, the burning of mugwort next to the patient's skin, especially near an acupuncture site can affect the *qi* in the body by restoring warmth "the *yang*".⁴⁵ However, while some patients have claimed to get relief from chemotherapy side effects with moxibustion, there is no documented research by Western

⁴³ Callaway, Ewen. "How an 1,800-year-old Herbal Mix Heals the Gut." *Nature.com*. Nature Publishing Group, 18 Aug. 2010. Web. 24 Apr. 2014.

⁴⁴ Wang, Shirley S. "Chinese Medicine Goes Under the Microscope." *The Wall Street Journal*. Dow Jones & Company, 2 Apr. 2012. Web. 22 Apr. 2014.

⁴⁵ Chopra, Mona. "The Practice of Chinese Medicine: What Is Moxibustion?" *YouTube*. YouTube, 23 Apr. 2012. Web. 24 Apr. 2014.

methods and standards that support the claims of these patients.⁴⁶ There is some logic that can be applied to the effectiveness of the mugwort when viewed from a Chinese perspective. In order to create balance, there would need to be equivalent levels of *yin* and *yang*, such as hot and cold. From that perspective, a body that has too much cold would be returned to a balanced state once heat was added. There are not many clinical research studies that can explain the benefit of mugwort but until further research is done, there is no definitive way to state whether there is added benefit or patients simply experience a placebo effect. There is however more research done on the effects of using acupuncture by itself as a means to manage side effects of chemotherapy.

The United States has increasingly become more accepting of the use of acupuncture as a method of treatment for all types of ailments and several major cancer treatment hospitals have integrated it as part of their treatment methods. According to the National Institutes of Health (NIH), acupuncture is defined as "a family of procedures involving stimulation of anatomical locations on the skin by a variety of techniques."⁴⁷ It is believed that acupuncture has been practiced in America for about 200 years however it wasn't until 1996 that the US FDA approved the acupuncture needle as a medical device.⁴⁸ The growing support from the NIH in ways such as hosting an acupuncture conference in 1997 has promoted interest in research in the field.⁴⁹ There has also been federal funding for research on CAM since 1999 which encourages researchers to investigate the effects and mechanisms of Chinese medicine, including

⁴⁶ Lee, Myeong Soo, Tae-Young Choi, Ji-Eun Park, Song-Shil Lee, and Edzard Ernst. "Moxibustion for Cancer Care: A Systematic Review and Meta-analysis." *National Center for Biotechnology Information*. U.S. National Library of Medicine, 07 Apr. 2010. Web. 24 Apr. 2014.

⁴⁷ "Acupuncture." *NCCAM*. National Institutes of Health, n.d. Web. 25 Apr. 2014.

⁴⁸ "Acupuncture (PDQ®)." - *National Cancer Institute*. National Cancer Institute, n.d. Web. 27 Apr. 2014.

⁴⁹ Lu, Weidong, Elizabeth Dean-Clover, Anne Doherty-Gilman, and David S. Rosenthal. "Introduction." *National Center for Biotechnology Information*. U.S. National Library of Medicine, 27 Jan. 0006. Web. 25 Apr. 2014.

acupuncture. The National Cancer Institute also reports that the most common use of acupuncture is "symptom management."⁵⁰ Acupuncture is used to alleviate symptoms such as cancer-related pain, nausea, vomiting, weight loss, anxiety, depression, insomnia, poor appetite, constipation and diarrhea. However, there was no research available that indicated the way in which acupuncture interacted with the body.

Research now indicates that the mechanism of acupuncture affects the "neuroendocrine system" involving both the central and peripheral nervous systems.⁵¹ Since the acupuncture needles are stuck into the skin, it can be unclear to a layperson where the needle is placed anatomically leaving questions like "how far into the skin does the needle go?" However, these findings explain that acupuncture affects the nervous system (which is how pain is detected by the body) and is also why it is often recommended and used to alleviate pain. In order to get a better understanding, researchers carried out neuroimaging scans including functional magnetic resonance imaging (fMRI), positron emission tomography (PET) and electroencephalography (EEG) on patients who had undergone acupuncture. The data gathered from the scans indicate that acupuncture affects several areas of the brain including "primary [and] secondary somatosensory, anterior cingulate, prefrontal, and insular cortices, amygdala, hippocampus [and the] hypothalamus."⁵² The results further indicate that some patients experienced an increase in white blood cell count after undergoing acupuncture. As was mentioned previously, patients undergoing chemotherapy become immunosuppressed due to the effects of the drugs on their body which leaves them prone to infection. If acupuncture can help to raise a patient's white

⁵⁰ "Acupuncture." *NCCAM*. National Institutes of Health, n.d. Web. 25 Apr. 2014.

⁵¹ "Acupuncture." *NCCAM*. National Institutes of Health, n.d. Web. 25 Apr. 2014.

⁵² Lu, Weidong, Elizabeth Dean-Clover, Anne Doherty-Gilman, and David S. Rosenthal. "Introduction." *National Center for Biotechnology Information*. U.S. National Library of Medicine, 27 Jan. 2006. Web. 25 Apr. 2014.

blood cell count, it would result in that patient's immune system being better able to fight infection, leaving the patient in a healthier state.

Since both acupuncture and moxibustion have been studied in many experiments and the results indicate the effectiveness of each. It would therefore be expected that the combination of both should also be effective for relieving cancer/ chemotherapy related symptoms. The Cancer Research UK has sought to determine whether this theory is valid. The study focused on whether acupuncture and moxibustion could help relieve symptoms for people who had lymphedema as a result of treatment for breast cancer or head and neck cancer.⁵³ Lymphoedema is defined as swelling and fluid retention in the tissues caused by a compromised lymphatic system.⁵⁴ The swelling usually results in the pain and discomfort in the arms and legs mostly. The study was aimed at determining whether the acupuncture/moxibustion combination was safe for patients, and whether it improved their quality of life. The study used 35 persons who had recently completed chemotherapy 3 months prior. Of the 35 patients involved in the study, 25 had been treated for breast cancer. An acupuncturist determined the most suitable course of treatment and administered either acupuncture alone or the combination treatment for 7 weeks. It is important to note that the acupuncture needles were not placed into the site where lymphedema was present. A nurse took measurements of the arm with lymphoedema for patients with breast cancer prior to starting acupuncture treatment and after the 7 weeks ended. Similarly, the nurse did visual assessments on patients with head and neck cancer at each of their appointments. These observations confirmed that none of the patients experienced worsening of their condition. Patients reported improvement in their symptoms (which included pain, heaviness, restricted

⁵³ "A Study Looking at Acupuncture and Moxibustion to Improve Well Being and Quality of Life for People with Lymphoedema." : *Cancer Research UK : CancerHelp UK*. Cancer Research UK, n.d. Web. 27 Apr. 2014.

⁵⁴ "Lymphodema." *Wikipedia*. Wikimedia Foundation, 25 Apr. 2014. Web. 27 Apr. 2014.

movement and swelling) after treatment. Patients also reported improvement in [their] well being and activity levels.⁵⁵ Based on the study, acupuncture and acupuncture/moxibustion treatments were considered safe and able to improve the quality of life in patients. Due to an increase in the research being conducted on Chinese medicine, there is support for the function and value of the medicine as well as the indication that more research could potentially lead to greater discoveries being made to improve the lifestyle of cancer patients.

Despite all the scientific support of Chinese medicine that has been emerging over the last few years, another effective way of promoting the use of Chinese medicine in conjunction with Western medicine comes from doctors themselves. If more doctors encourage their patients to use various forms of Chinese medicine complementarily, the general well-being of the patient may improve or at the very least, the side effects could be reduced or better managed. Dr. Donald I. Abrams, former director of Clinical Programs the University of California, San Francisco Osher Center for Integrative Medicine feels that the combination of TCM and Western Medicine is one that should be fostered. In an interview he mentioned:

I refer my patients to Traditional Chinese Medicine practitioners on the staff at the Osher Center. I believe that cancer patients treated concurrently with acupuncture tend to do better. In fact, the National Institutes of Health had a consensus conference on acupuncture in 1997 and found that it was useful in treating side effects of chemotherapy, including chemotherapy associated nausea and vomiting. I think it may also be useful for increasing energy, decreasing dry mouth and relieving hormonally induced hot flashes. Traditional Chinese Medicine is all about expelling evil and supporting good. Modern western medicine is mainly about expelling evil. I think my role as an integrative oncologist is to support the good as well as expelling the evil.⁵⁶

⁵⁵ "A Study Looking at Acupuncture and Moxibustion to Improve Well Being and Quality of Life for People with Lymphoedema." : *Cancer Research UK : CancerHelp UK*. Cancer Research UK, n.d. Web. 27 Apr. 2014.

⁵⁶ Weil, Andrew. "Cancer- Treating Cancer: Integrative Medicine." *Treating With Integrative Medicine*. Weil, LLC, n.d. Web. 21 Apr. 2014.

Dr. Abrams believes in the benefit of using TCM with Western medicine in conjunction. One reason for his appreciation and support of the complementary medicine comes from the fact that he has a basic understanding of the way in which Chinese medicine operates. This understanding is fundamental to understanding the differences in the views between Chinese and Western medicines as well as the many ways in which they can supplement each other. He is able to accept that Chinese medicine approaches the body from a holistic point of view whereas Western medicine only focuses on the individual problem. Dr. Abrams seeks to ensure his patients are well not only in the cancer ridden areas of their body but also in the healthy areas as well which results in using "integrative medicine" as he states. This understanding of the Chinese views of the body and medicine can not only lead to a wider range of treatment options for patients but also affects the terminology and perception of the doctors. Dr. Abrams makes mention of "good" and "evil" which is one way of looking at the Chinese concept of balance between yin and yang. He is therefore able to formulate one compound idea of the body which not only includes the tangible pathways and organs but also incorporates the intangible pathways of *qi*.

As mentioned in the previous chapter, research shows that patients are more willing to follow the advice given to them by their doctors than that given to them by friends and family. If this is the case, then doctor and patient care have a particular progression. The cycle is such that if more doctors considered their patients holistically, they would refer them to Chinese medicine practitioners, to make more patients aware of the resources available to them as well as being more receptive to alternative forms of treatment (since it comes at the recommendation of their trusted doctor). This will result in more patients being treated for a wide range of illnesses and side effects; which in turn, not only improve their condition and health, but can also have an effect on their recovery time. Therefore, patient health and well-being can be directly linked to

how willing a doctor views the treatment of not just the specific problem such as cancer but also treat the immunosuppression resulting from chemotherapy.

It has been stated that the more educated and wealthy members of society are financially able to afford a wide range of treatment options for their conditions. With strides in the development of technology being made today, there is also an overwhelming amount of information accessible through the internet. This availability in information allows more patients to do their own research on obtainable treatment options. The new found self-efficacy that has become present in persons has resulted in more patients being able to make informed decisions and request treatment based on the results of their research and newfound knowledge. As a result of this, more patients request the use of alternative medicine as a complement or even as the sole form of treatment they receive for cancer. The NIH reports that 38% of Americans use CAM as a form of treatment.⁵⁷ This number would include celebrities such as Oprah Winfrey, Tom Cruise, Richard Gere, Gwyneth Paltrow and the late Steve Jobs who are well-known examples of those who have taken a holistic approach to their treatment as well as integrated aspects of CAM into their daily lives.

There is strong evidence to support that the use of Chinese medicine is useful as a form of treatment for cancer/ cancer related symptoms as well as other ailments. Given that in Chapter II it was determined that Asians are more trusting of Eastern medicine and U.S born Asians are more trusting of Western medicine, if more combined (Eastern and Western) treatment options were encouraged, a more transparent and affordable form of this new treatment would allow

⁵⁷ "The Use of Complementary and Alternative Medicine in the United States." *NCCAM*. National Institutes of Health, n.d. Web. 28 Apr. 2014.

persons from all ethnicities, socioeconomic backgrounds and age to use it, resulting in fewer cancer and other disease fatalities. In concordance with Dr. Abrams, if the Chinese have been using traditional medicine successfully for over 2000 years, there must be some benefit that can be adapted globally to ultimately improve the effectiveness of treatment and the quality of life for a wider range of patients.

There is much the West could learn from the East in terms of using complementary treatment approaches in order to provide patients with the most holistic care available. In China, the major hospitals offer Chinese and Western medical treatments to patients simultaneously. However, in the US small improvements are being made in a few institutions to include alternative medicine departments within these treatment facilities. Nevertheless, on a wide scale the treatment options available remain limited to Western medicine. As Wharton marketing professor Lisa Bolton mentions in her recent study, "in many countries of the world, medical pluralism is the norm, with Western and traditional medicine existing side-by-side."⁵⁸ This "medical pluralism" implies that there is an advantage to using the many forms of medicine complementarily in order to provide the most beneficial form of treatment. The fact that many countries have adopted this system of pluralism also strengthens the argument that this combination of treatment options has not only proven to be effective but also appeals to a global market. Treatment options for patients should then be able to complement each other and cohabitate. A Chinese proverb states: "He who takes medicine and neglects to diet wastes the skills of his doctors". Diet in this sense can be interpreted to mean the whole body. For example, if a patient is receiving chemotherapy

⁵⁸ "Traditional vs. Western Medicine: Which One Is Easier for Chinese Consumers to Swallow? - Knowledge@Wharton." KnowledgeWharton Traditional vs Western Medicine Which One Is Easier for Chinese Consumers to Swallow Comments. University of Pennsylvania, 7 Oct. 2007. Web. 4 Apr. 2014.

treatment for cancer, the patient may experience a loss of appetite resulting from nausea induced by the chemotherapy drugs. The patient may also become sick from an infection that occurred during their immunosuppressive state. Both of these side effects illustrate symptoms that can affect the healthy part of the patient's body that is not affected by cancer. As stated previously, these side effects can also be managed using Chinese medicine. However, with no intervention for the side effects, the patient is unable to improve in their condition and ultimately the doctor's efforts become futile because the patient continues to get sick. On the contrary, if the patient is treated with Western medicine, and also includes diet care for the whole body not just the site of illness (perhaps in the form of Chinese medicine), the efforts of the doctors are more effective and the patient's condition is more likely to improve from the holistic treatment.

Conclusion:

Traditional Chinese medicine can be traced back to over two thousands years. Many of its founding principles are derived from Daoist beliefs of interconnectedness and interdependence. In this way Chinese medicine focuses on the idea of balancing of the forces of yin and yang as well as the forces of the five elements. Chinese medicine also emphasizes the importance of treating the body as a whole organ instead of dividing it into parts and treating the parts individually. This holistic approach to medicine combined with the idea of balance causes Chinese medicine practitioners to pay close attention to the flow of qi within the body. They believe that any disease or sickness that affects an individual is due to an imbalance in their qi.

Chinese medicine emigrated and settled in the United States in Oregon in the person of Ing Hay and his nephew where they practiced Chinese Medicine and a Chinese herb dispensary from a general store in the vibrant Chinese community. It became popular in America during the early 1970s when acupuncture made the headlines on *The New York Times*. Since then people have been seeking acupuncture as the preferred option a means to alleviate pain and other diseases. Researchers however, have found evidence that acupuncture does work for the relief in some conditions including postoperative pain and menstrual cramps.

Chinese medicine practitioners are regulated by the NCCAOM is the organization through which a national standard has been set. The organization validates and trains entry-level person in the practice of acupuncture and Oriental medicine through professional certification in order to ensure that the same criteria and level of skills are standardized in the east and west.

Traditional Chinese medicine (TCM) is used primarily in the United States as a form of Complementary and Alternative Medicine. However, it was found that there are certain factors

that influence how much CAM is used. Research shows that women were more likely to use CAM than men. There is also evidence that indicates that individuals who had higher levels of education as well as higher levels of income were also more likely to use CAM than their less educated, lower income counterparts. The rich and educated have more access and dispensable income (privilege) in order to afford a variety of treatment options. There was also a distinct difference in ethnic groups as it was discovered that for Chinese American women engaged in the use of CAM, the figures doubled twice as much as women in other racial or ethnic groups. However, when compared to immigrant Chinese women, Chinese American women were less likely to use CAM. This disparity could be explained in that Chinese American women had more privilege than newly immigrated women who had limited levels of education and income by comparison. The foreign-born women were also more likely to refer to traditional Chinese medicine beliefs of balancing yin and yang or hot and cold using Chinese medicinal phrases to describe their condition. On the other hand it was also discovered that United States born women were more likely to use other non-Chinese forms of CAM such as yoga and meditation. In general, it would appear that American born Chinese women were less likely to use Chinese medicine as CAM for their cancer related pain than Chinese born women. This could probably be explained by cultural upbringing. Chinese American women grew up in an American society which houses a melting pot of beliefs. This form of upbringing would result in the women being more open minded and receptive to trying new things. On the contrary, Chinese immigrant women grew up in a more structured Chinese society and may not have had much opportunity to try things outside of their culture. Factors such as age, gender, cultural upbringing, education, and income all dictate who is more likely to use CAM.

The lack of Western-styled research also causes people in the West to be more skeptical of Chinese medicine. One reason for doubt is that the components of Chinese herbs are not well studied so many persons are skeptical about combining Eastern and Western forms of treatment because they are unsure of the possible outcomes. Upbringing also plays a role in doubt. Chinese women who were United States born were more skeptical of Chinese medicine and were more reliant on Western medicine. Conversely, the foreign-born Chinese women believed in the effectiveness of Chinese medicine but were also accepting of Western medicine and therefore more likely to use Chinese medicine as CAM. The United States born women were also less likely to use CAM than their un-Americanized counterparts suggesting that immigrants are more likely to trust their cultural traditions (use of Chinese medicine) than those who grew up within an Americanized (Western) culture. However, although foreign-born women are more trusting of Chinese medicine if their insurance does not cover it, they find it more challenging to obtain CAM treatment.

Chinese Immigrant population has a higher rate of cancer than any other immigrant population. This could be due to being exposed to a lower standard of care prior to their coming to the West. This perhaps resulted in more cases of late stage cancer being diagnosed due to lack of proper screening and care prior to coming to the United States. It is unclear whether Chinese Immigrant patients accepted inadequate care because they were poorly educated and thought they were in fact receiving proper care, or whether it was the level of care they could afford based on their income earning capacity and or insurance coverage.

Eastern medicine is holistic and looks at the body as one entire system whereas the ideas of Western medicine view each problem as isolated from another. The Western approach clearly

divides the health from the disease, yet the Eastern approach considers health as a balanced state versus disease as an unbalanced state. Chinese medicine serves to fill the gaps where Western medicine seems to be lacking. Western forms of treatment allow for patients to get worse before getting better. Traditional Chinese medicine should theoretically benefit in the methods they use for treatment that may potentially replace or improve the comparatively more modern methods of treatment in the West.

Chinese medicine is often considered less credible because of the lack of Western-style research. A part of the problem lies in the fact that there is a language barrier. There are also differences and discrepancies with manufacturing standards, clinical trials and maintaining consistent product quality. Many researchers are attempting to change the global views on Chinese medicine by increasing the research being done.

There is evidence to support the benefits of using Chinese medicine as a complement to Western medicine. Since both systems operate with similar but different views on health and the body, they are able to supplement each other. With growing support, popularity and information accessibility, the demand for alternatives to current conventional forms of treatment is constantly increasing. More research and clinical trials on the benefits and mechanisms of untapped resources of Chinese medicine will only enhance and possibly revolutionize the global medical field and more importantly improve the quality and longevity of patients' lives.

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