

Prof. Congying Xie: early screening and diagnosis, delivering happiness

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Introduction

The ancient Greek aphorism “*know thyself*” engraved on the forecourt of the Temple of Apollo epitomizes the human desire for the exploration into the unknown. In fact, never has mankind dragged their feet in understanding themselves, as in the achievements scientists have made all these years in the studies of disease and pathology.

Ere the 2017 World Conference on Lung Cancer (WCLC) journey, AME Editors were sent across China to conduct in-depth interviews with an army of distinguished experts in the field of lung cancer. Together we learned how these soldiers fought for the nation that has the largest number of patients, and how they dedicated their lives to inventing the most-advanced weapons and probing into the enemy camp. From the past, they reflect and learn from mistakes; At present, they work hard and make changes; For the future, they make plans and improvements.

May this issue take you to the innermost world of these Chinese scholars, where you can delve into their wealth of knowledge and be inspired.

“I’ve always liked doctors with their white gowns from a young age, and I think it is a sacred occupation. To heal the wounded and rescue the dying is the greatest contribution, and being able to help someone else brings me happiness. Every day on my way to work, I walk past Wenzhou’s “moral landmark”, the Hongri Pavilion, and I think to myself, look at how happy these people are about helping others.”

Prof. Congying Xie (Figure 1) is the head and leading doctor of the Department of Oncology of the First Affiliated Hospital of Wenzhou Medical University, PhD in Oncology, supervisor for Masters students. She is a board member of the Chinese Society of Clinical Oncology (CSCO), committee member of the Chinese Association of Radiation Therapy (CART), and the Chinese Association of Targeted Therapy, executive committee member of the World Association of Chinese Doctors (WACD)’s first meeting of the Chinese Radiation Therapy Oncology Group (CRTOG), member of the CRTOG lung cancer specialized committee.



Figure 1 Professor Congying Xie.

Prof. Xie is a member of the Gerontological Society of China (GSC) Geriatric Oncology special executive committee, vice chairman of the China International Exchange and Promotion Association for Medical and Healthcare (CPAM) Thoracic Cancer Division, chairman-elect of the Zhejiang Anti-Cancer Association (ZACA) Biotherapy Special Unit, the vice chairman of the Zhejiang Medical Association (ZJMA) Radiation Oncology Division, as well as that of the ZJMA’s Chemotherapy and Biotherapy Division, and the chairman of the Chinese Medical Association (CMA)’s Wenzhou Radiation Oncology Division.

Prof. Xie did her Bachelors in a time when courses specializing in oncology didn’t exist, and today she’s been in clinical oncology conscientiously for the past 2 decades. Her hard work and studies paid off in her oral presentation at WCLC, and her research won her the American Society for Radiation Oncology (ASTRO) Best Abstract Award. Her family members experienced medical problems when she was younger, and it led to her founding the “Home of Cancer Recuperation”, where cancer patients no longer need to feel



Figure 2 Congying Xie (second from right) emceeing on stage during her university days.

alone, where cancer patients who are in financial distress can receive help in treatment and medication. *“The ability to help others is something worthy of great happiness”* has always been her belief.

Congying Xie was born in Wenzhou, where the development of private industries started from, and is still leading the nation's development. Wenzhou is a city situated in Southeast Zhejiang; not only is it reputed to have some stunning and spectacular views, it has also produced some of the best business minds that have been named the “Jews of the East”. When she was about 4 or 5, her father was admitted into hospital. She stayed with her father in the hospital alongside her mother, and experienced the pain illness brought her father and their family personally. At the same time, she developed even stronger feelings for the sacred occupation of medicine, where a doctor could *“heal the wounded and rescue the dying”*. From then on, she was determined to become a doctor, instead of the path of business that her family had taken across several generations.

All along, Prof. Xie had a personality that appeared to be different from most doctors. *“I’ve always liked emceeing from a young age, and took part in emceeing programs on radio and TV when I was in university. People around me liked to tell me that I would be an emcee if I wasn’t a doctor. I was the chairperson of my class and the student council for all 5 years in university, and I was always organising debates and gala nights then. They always liked to joke around to say that I wasn’t attending to my proper duties, because the specialized courses in university were quite busy. Back then, I thought about how doctors not only required strong expertise in our scope of work, but also strong communication and organisation skills, and a positive and humorous attitude was equally important. Being an emcee really did hone my skills in these areas.”* (Figure 2)

In 1997, Prof. Xie graduated from Wenzhou Medical University (formerly known as Wenzhou Medical College) and started to do her rotations in internal medicine in the First Affiliated Hospital of Wenzhou Medical University (formerly the First Affiliated Hospital of Wenzhou Medical College). At that point of time, a course on oncology was not offered during her Bachelor study, and the hospital did not have an oncology department. The following year, the hospital founded a radiation oncology department, and Prof. Xie, predicting the unknown and challenges in the future of oncology, decided to take on the path of oncology fearlessly as she entered the radiotherapy department.

The second year after her graduation, she headed to Fudan University Shanghai Cancer Center (formerly known as Shanghai Cancer Hospital) to further her studies in radiotherapy. *“I think furthering my studies really benefited me greatly, no matter in theoretical knowledge of the system, or training in scientific research thinking. After the room rounds, everyone would do their readings alone, and the academic environment was very positive, so that left a strong impression on me. Every week they would arrange for an academic lecture; the speaker would give a brilliant presentation and the audience would have many different questions, but these speakers had a lot of professional knowledge and none of the questions would catch them out. They were very well-read on their literature and understood them thoroughly, and it was hard to not be impressed by their bank of professional knowledge. In addition, they would invite international fellows to hold lectures almost every month, proving that they placed great attention on international exchanges.”*

After that, in order to advance herself further, she went to Huazhong University of Science and Technology to complete her doctorate in Oncology, her mentor was Professor Gang Wu. *“All the mentors I met were great. When the Wuhan Union Hospital, Tongji Medical College, Huazhong University of Science and Technology first created their Cancer Center, his team consisted only of a few people, a little more than ten beds, and after years of hard work, there are now about 1,000 beds and eight sub-specialties, and was rated as the nation’s key clinical department. I learnt so much from Prof. Wu, not only rigorous professional knowledge, but also how to put together a team for discipline development.”*

In 2009, she received a sponsorship from the Wenzhou Education Fund, and became a visiting scholar at the University of Michigan in the United States, and her mentor was the renowned lung cancer expert Professor Feng-Ming (Spring) Kong, who is the first Chinese who



Figure 3 When Congying Xie (right) completed her advanced studies in University of Michigan's Cancer Center, Prof. Spring Kong presented her with a certificate.



Dear Dr. Congying Xie,

Congratulations! On behalf of the **Best of ASTRO** Program Committee, it is my pleasure to inform you that your abstract has been selected as one of the few abstracts to be discussed at the 2016 **Best of ASTRO** meeting. This meeting is being held November 11-12 at the Ritz-Carlton, Fort Lauderdale, Florida. The Best of ASTRO meeting will offer only the most relevant and highly influential abstracts from the 2016 Annual Meeting.

Figure 4 Prof. Congying Xie's research clinched ASTRO's Best Abstract Award in 2016. Kong presented her with a certificate.

obtained a postdoctoral degree in radiation oncology. *"Her awareness on communication was very strong, and that influenced me deeply. When I was in the U.S., she would bring us to participate in international forums like American Society for Radiation Oncology (ASTRO) Annual Meetings, American Society of Clinical Oncology (ASCO) Annual Meetings, World Conference on Lung Cancer (WCLC), and she asked every fellow to send in their papers. They had oral reports and poster presentations already back then, so we were more used to the flow. I initially assumed we would have a bit of a gap as compared to the international experts, but my confidence boosted after that."* (Figure 3)

"When I returned from the United States, I started to accumulate my own research and clinical data, and aimed for article contributions at international forums. I discovered that we did not pale in comparison in many areas when compared to international research." In 2016, her research on the early diagnosis of lung cancer was selected to be a WCLC oral

report, and three of her research topics were also selected for poster presentation. In the same year, her Phase-III clinical research on adjuvant radio-chemotherapy after early stage cervical cancer surgery clinched the Best Abstract Award in the ASTRO Annual Meeting. In that year, she also became the CSCO's executive member for the new term, becoming the only member on the executive board that is not from a provincial capital city (Figure 4).

Prof. Xie continued to progress in both clinic and academia, but did not limit herself to a single pattern. She put great effort in charities and the popularization of cancer therapy information. 2009 onwards, she was engaged by the China Charity Federation to be an appointed doctor with the authority to approve free medication for needy patients. She opened a charity medicine and consultation drive in the hospital so that it would be more convenient for the patients, and kick-started the founding of the hospital's "Home of Cancer Recuperation". "Many patients often feel very lonely, and we hope that the power of their family, the hospital staff, and society can come together as a community to help them defeat cancer. Patients won't feel like they're alone in this world, and that their fight against cancer is not done alone." She put great efforts into the popularization of general science: not only does she partake in health promotion during the annual Cancer Awareness Week, she also spreads scientific information via various channels such as hospitals, broadcasting stations, radios and live broadcasting platforms. *"Many people lack accurate knowledge about cancer, and are easily deceived. If we do not promote what is right, that leaves an opportunity for the incorrect to come through. Therefore, if we were to disseminate correct information, the patients will automatically block out unscientific information."* As an administrative member of the Wenzhou Science and Technology Association Sector, she has always called on the importance of developing medical popularization: *"Only when the people truly understand this discipline, will the discord between doctors and patients be reduced."*

Fearless in the face of challenges

Promotion of lung cancer early screening and diagnosis

AME: The morbidity rate of lung cancer was a lot lower in the 90s as compared to what it is today; why did you choose to move in the direction of lung cancer?
Prof. Xie: Indeed. I graduated in '97, and when I first came to the hospital, it had yet to establish an oncology department, and my Bachelor's degree did not offer a

course on oncology either. But in reality, in the 90s, the incidence of malignant tumors in people started to increase, consequently some hospitals started to found cancer centers or oncology departments. Back then, I became aware of the huge challenges and future of oncology, and I have always enjoyed doing things that were a bit more challenging. The hospital was coincidentally establishing their own oncology department, so I naturally chose the path of oncology, and entered the department. Our department only consisted of four doctors including myself then, and there were only ten beds. I soon left to further my studies as we believed that systematic professional training was pivotal; in my early days, I went to Shanghai Cancer Hospital, and then received oncology training for my masters and PhD, and then to the United States.

AME: When it comes to malignant tumors, radio-chemotherapy in lung cancer is mostly focused on intermediate/advanced stages of cancer. I can tell that you've put in a lot of effort on the early diagnosis of lung cancer, and your oral report at the 2016 World Conference of Lung Cancer was also about this topic.

Prof. Xie: That's right; a large proportion of lung cancer patients in China are already in the intermediate/advanced stages of their cancer when an accurate diagnosis is made, and they need to undergo radio-chemotherapy. Many doctors have also spent great efforts in increasing the curative effects of treatment. I looked at the survival rates of lung cancer, and the difference in 5-year survival rates between stages I, II, III and IV was extremely large: in stage I it could go up to 70–80%, and in stage IV, it may not even reach 5%. In the advanced stage, a lot of financial resources and mental capacity would be drained, but the effects less than satisfactory. However, early screening and diagnosis may bring greater cost-effectiveness than advanced stage treatment, so we placed part of our research focus on the early stages of lung cancer.

AME: The early diagnosis of lung cancer requires early screening. What do you think are some good screening methods?

Prof. Xie: The US National Lung Screening Trial (NLST) discovered that the use of low-dose helical CT (spiral CT) screening for lung cancer in the early stages will allow a 20% increase in survival rates of patients; it does not cost much and the effects are great. Later, European experts published an article that was not in favour of the spiral CT, as it could still inflict radiation injury, and its positive rate

was quite low.

We then thought about doing a blood test early screening for lung cancer, or what we call a liquid biopsy. There are currently three directions in liquid biopsy: Circulating tumor cells (CTC), circulating tumor DNA (ctDNA), and exosomes.

CTCs are cells that have shed into the vasculature or lymphatics from a primary tumor and are carried around the body in the circulation, and is the most common in the process of metastasis of tumors. CTC counts are low in the circulation; out of the cells shed from the primary tumor, only 0.01% will form metastases and enter the circulation, and less than 10 CTCs will be detected in 1 mL of blood. From detection to analysis, the standard of equipment apparatus and laboratory experiments will need to be highly stringent, therefore the cost of detecting CTC is extremely high. CTC plays a bigger role in prognosis than early diagnosis. This is because the tumor type and location dictates the possibility of detecting CTC in the blood, and CTC is difficult to detect in the early stages of tumor development. The above factors affect the use of CTC in the early diagnosis of cancer.

ctDNA is mutated DNA fragments derived from tumor cells. Currently, there has yet to be any large-scale clinical cases on the detection of ctDNA, and that's primarily due to a lack of standardized methods for detecting ctDNA, such as extraction, storage, detection, and analysis methods. Furthermore, cfDNA found in serum or plasma may contaminate ctDNA, and the further mutations of ctDNA such as degradation in the complex environment that is the circulation brings great difficulties to early diagnosis and prognosis by means of ctDNA detection. Presently, the main method of ctDNA detection is via high-throughput DNA sequencing or digital PCR. These methods incur high costs, and the lab staff need to have excellent skills, and different methods may result in slightly different analyses of the results; all these factors affect the clinical application of ctDNA detection.

Exosome is a cell-derived lipid bilayer small vesicle of 30–100 nm in diameter. Due to the protection of the lipid layer, exosome can exist in a stable state within any body fluid. As all living cells are secreting exosome at any given moment, exosome has become the research topic of early cancer diagnosis. With exosomes, we can choose to not rely on the source of tumor cells and the clinical stages of cancer, and attain what is truly early cancer diagnosis. Exosome counts are extremely high in body fluids, taking blood as an example, one can carry out the whole experiment process of

extraction, identification, and testing with less than 1 mL of whole blood, and as compared to CTC or ctDNA, which requires up to 10 mL of whole blood, exosomes have much higher sensitivity. At present stage, the challenge in the research of exosomes as a biomarker for early cancer diagnosis is in differentiating exosomes that are derived from tumors from those that are not. In current clinical research, through the set-up of various contrasts and comparisons, we do a rational selection of the imported sample information and would be able to avoid the slight lack in specificity in exosome testing. Considering the level of convenience and the costs, exosome appears to have great potential in clinical application.

During our research this time round, we extracted tumor-derived exosomes from the plasma of lung adenocarcinoma and lung squamous cell carcinoma patients, and with the concurrent use of high-throughput sequencing to carry out a gene expression profiling of non-small cell lung cancer (NSCLC) exosome microRNA. By comparing the information between clinical stage I patients and healthy volunteers, we found microRNA that had high and low specific expression for lung adenocarcinoma and lung squamous cell carcinoma respectively. We also discovered a few targets that were not reported in the microarray data. Through the analysis of gene differential expression, we found out that lung adenocarcinoma and lung squamous cell carcinoma exosome microRNA had targets that showed trends of similar expressions, and at the same time, have their own specific microRNA expressions. Through the experiments with the use of Taqman probe PCR, we were able to verify the analyzed data. We also designed three sets of detection tests for the microRNA targets we thought were more consistent. When proving with clinical samples, our microRNA detection tests discovered that NSCLC patients had very high sensitivity and specificity in the early stages. As we progressed with suspected cancer patients, we used the detection tests to differentiate the possibility of the patients suffering from either lung adenocarcinoma or lung squamous cell carcinoma. Using the last and clinical pathological diagnosis results, we attained very satisfactory levels of accuracy in the testing.

We sent our paper on this exosome research to the *Clinical Cancer Research (CCR)* journal (impact factor in 2016 was 9.619), and the whole process went rather smooth, all three peer reviewers left great reviews, and the duration from its contribution to its acceptance took only 2–3 months.

Benefit from innovative ideas and technology breakthroughs, radiotherapy and chemotherapy could also be precise

AME: Once there is a diagnosis of lung cancer, we are faced with the problem of treatment. Precision medicine is generally where we're headed, especially in the field of targeted therapy, immunotherapy, and many clinical tests have shown that the curative effects of targeted therapy may be better than that of chemotherapy. In our age of precision medicine, how do you foresee the future of radiotherapy and chemotherapy will be like?

Prof. Xie: This is an excellent question. Firstly, let's talk about radiotherapy. Initially we used to do conventional radiotherapy over a broad area, but now we have reached a stage where we have popularized precise radiotherapy and intensity modulated radiotherapy. Thanks to the development of accelerator technology, almost all our accelerators now have cone beam computed tomography (CBCT), which is a little like "radiation with eyes", aiming directly at where the tumor is. In addition, with the development of imaging technology, the radiotherapy field and target section has become smaller and more precise. Especially in terms of treatment, conventional radiotherapy treatments span over a long time, approximately 4–8 weeks. Now that Stereotactic Body Radiation Therapy (SBRT) technology is made available, the course can be completed in 3–5, or 8 sessions. I think SBRT has an important place in the future of radiotherapy.

When it comes to drug therapy, I think targeted drugs will move into the mainstream, and immunotherapy has great potential as well. I foresee chemotherapy reducing in scale. Currently the toxicity of chemotherapy drugs affects all cells, not just cancerous ones, and we are hoping for chemotherapy drugs to be reducing in scale, as that is what precision medicine really is.

However, a new possible direction for chemotherapy is in antibody-drug conjugate (ADC). It combines antibodies with the cancer-killing ability of cytotoxic drugs, and brings the cytotoxic drug to the tumor cell with help of the antibody's targeted function, so as to allow it to have its cytotoxic effect. As such, chemotherapy drugs have found themselves a new direction to develop in. In reality, this has been proposed a long time ago, but not put into effect due to limits in coupling technology, targeting ability and effectiveness. Today, however, as we develop new antibody coupling techniques, we see that the FDA has already



Figure 5 Prof. Xie (first row, sixth from the left) holding a charity consultation program during Cancer Awareness Week in collaboration with the hospital's oncology department's "Home of Cancer Recuperation".

approved of ADC chemotherapy drugs for lung and breast cancer. One idea, one philosophy, and one breakthrough in technology has "revived" chemotherapy drugs.

Working tirelessly for the future of medicine, leaving no chances for rumors

AME: Early testing, early diagnosis and precision medicine is great news to lung cancer patients, but perhaps their greatest blessing is in the tens of thousands of doctors like yourself who work relentlessly both "in front of and behind the scenes" to fight for the survival and lives of patients who have a shot at being healthy. I have seen a lot of your involvement in science popularization and promotion information about lung cancer on TV, online live broadcast platforms and many Internet media platforms. What has motivated you to work so passionately in this field?

Prof. Xie: Being a doctor, the majority of the people that I come into contact with are patients that already have an accurate diagnosis, and right now, there is a new cancer patient in every 6 minutes in China; the situation appears to be very bleak. To be honest, no doctor wishes to see so many patients; if only we can carry out proper health promotion in the early stages, we believe prevention far exceeds any of the effects of advanced stage diagnosis or treatment.

Therefore, I'm very happy to organize and involve myself in such activities. For example, during the annual Cancer Awareness Week, we work with the broadcasting station and spread awareness on lung cancer prevention to a larger audience. It's the same with the "Home of Cancer

Recuperation": it's not only there to resolve patients' problems, but also to promote and educate patients' family. Seeing as the living habits and genetic susceptibility are very similar in a family, this method can be highly effective, as the family and friends of patients can act as channels to spread correct and accurate information, and this has a wider effect than holding seminars. Many patients and their family pay great attention to their diet, and some of them cannot handle so much mental stress, so we invite nutritionists and psychologists to assist with the lectures, and the effects have been pretty good so far (Figure 5).

The city of Wenzhou does a cancer epidemiological survey annually, and because our hospital greatly represents the whole of Wenzhou's cancer condition, we produce a cancer pattern report annually on an institutional level. This report is quite pertinent and guiding, because this is data that is close to us, and can be used as a reminder to the people, effective in attracting attention to the topic of cancer.

Now that the Internet has developed, there are many more pathways made available to the people to retrieve information, but this has also provided a space for some ill-minded folk. Often, when it comes to specious news, people may find it hard to judge its accuracy, especially for cancer patients, who may not be able to make logical judgements when they're so affected. At this point of time, a doctor's professional knowledge may help many people make some relatively logical judgements. Therefore, I've always thought that a doctor should work more in popularizing science as much as they can, and to promote the correct concepts to people. I was selected as the one of the "Top 10 Outstanding Science and Technology Worker in Wenzhou" in 2016 due to my enthusiasm in science popularization.

Constantly helping out and giving consolations, setting an example and spreading happiness

AME: Oncology is a department that often faces death, and both doctors and patients need strong mental endurance. This is also a great challenge for doctor-patient communication. How do you normally communicate with your patients?

Prof. Xie: We were set up in '98, and we have been open for close to 2 decades now. We have never had a single medical conflict, and it may have been because of the characteristics of the department itself, or the locality, but I believe doctor-patient communication is extremely important. We like to say: "we treat patients sometimes, help

them always, console them constantly". Especially when it comes to cancer, the consolation bit happens all the time, particularly with patients whose time is almost up; we find that talking to them may sometimes be even more effective than treatment.

When I first started working after graduation, I liked to observe how the senior doctors communicated with their patients. Our ex-department head was someone who gained a lot of his patients' trust. I realised his mode of communication was empathy; he would put himself in his patients' shoes, and is therefore well-accepted by patients and their family. He was also very humorous and would make the patients very happy and amused. We initially had a patient who was a young English teacher, and there was close to no treatment significance for her after her diagnosis of last stage cancer. Her children and parents would be crying, her students would also be crying when they came to visit, and she would constantly be absorbed in these feelings of despair. In the end, when we went to do our rounds, we didn't really know how to face her, and didn't know what to say as words of consolation or encouragement, as there was truly little hope in her condition, and the atmosphere during our rounds was depressing. A little later, when we went for our rounds, this patient's mental condition improved significantly, and she would even joke around with us, something that surprised us all. It turns out that our ex-department head went to speak to the patient individually and told her: *"you are a teacher, a mother, and a daughter. Even though it's true that there isn't much time left, I hope that you can still be a great teacher to your students, great mother to your children, and a great daughter to your parents in your limited time, as life is important not in its duration, but in its depth."*

So regardless of whether or not it is cancer, death is something all of us will have to face, it just depends on what sort of condition we find ourselves in at the end of the road. We used to say some nice words like: "there will be hope", "you'll get better", but now we tell the patients the realistic situation, as well as how long more they have to live, but will relate it to them in a more acceptable way. For example, the ex-department head's way was not to meaninglessly console them, but to encourage them to admit and accept the truth and to face life bravely and positively. He would say it in a positive and humorous manner to make it easier for the patient to accept.

I really enjoy watching comic dialogue shows, humourists, comedies, and would use some of the jokes with my patients to infect them with laughter. I remember

someone who came for a departmental visit once said, *"I assumed everyone in the oncology department would be pulling a long face, but you are all surprisingly positive."*

AME: Are there any patients that have left a lasting impression on you?

Prof. Xie: There are a few. I think all my patients are really brave. Sometimes I'll find them singing and joking around in the ward, and even storytelling (*pingshu*), and I think, if I were to be in their position, I don't think I could have done it.

I remember I had a patient who was about 40 years old, and he was diagnosed with advanced stage colorectal cancer. He underwent palliative operation and there was a fistula in his abdomen because of his enterectomy. He was a humorous man, and he would sing in his ward, and when people came to visit, he would say: *"I'm famous now that I'm the 'Half-Waist Bridge' (Banyao Bridge literally translates to Half-Waist Bridge, a famous landmark in Wenzhou)."*

What moved me the most was that despite the patient's passing, their family members would still invite me to some of their gatherings, because we were there with them during the last moments of their lives.

I remember one winter, when a patient kept waiting for me outside my office. I thought it was a patient who was waiting to see me for consultation, but he was in fact a patient I had treated some time ago. He lived in the Wencheng Mountain area where transportation is highly inconvenient, but he travelled the whole way just to send me some sweet potatoes he grew at home. He's been doing great after treatment, and sends me invitations to attend his birthday gathering every year.

AME: Just like you've mentioned, we will all face death someday. During clinic, when patients learn of their condition, some must be really eager to undergo treatment, some may have no choice but to give up treatment, while others may have different opinions and wishes from their family members. How do you normally deal with such situations?

Prof. Xie: The discussion of death used to be a taboo, but today more and more people are talking about it. Our department also had a talk on "How to Face Death", and that was led by the head of the nursing department. She went overseas to learn about palliative care and oncology care, and we didn't expect such a crowd during the talk. It sparked a lot of fervent discussion, and I think it's a great sign that we are now able to publicly discuss this topic.

When I was a visiting fellow in the U.S., there was something that left a deep impression on me. Back then, when I was doing consultations with my mentor, normally the nurses and doctor-in-charge will notify the patients of their condition, including their average survival time. Once, after learning of his condition, a patient and his family discussed and decided collectively that he would give up on treatment, and to go travelling in his limited time. They even made a detailed record on his medical history record: *“Patient has agreed with family to give up on treatment to go travelling”* and that struck a lot of feelings in me.

I frequently face two kinds of conditions in clinic: one, patients who don't feel positive about treatment due to a myriad of factors, two, patients who insist on treatment no matter the cost. I will always suggest making the more logical choice; it's understandable that patients and their family will panic when it comes to something so huge; they may not be able to come to a decision, or may make illogical decisions. I normally speak to them some more, because as long as the patients and their family trust me, I will always provide them with my most honest personal opinion. Even though they say that doctor-patient relationships are in discord, I believe that my professional knowledge will help the patient make the most logical choice, so as long as they trust me, I'm more than happy to share my thoughts on the matter.

Of course, there are patients that have wishes that their family do not agree with. Right now, in China, a good majority of patients' family do not wish to let the patients know about their own condition, therefore family has a lot of power to make decisions when it comes to treatment. But now when we talk to them, we emphasize on notifying the patients of their condition, so that they may participate in the choice of treatment. *“You must certainly notify the patients, and respect their decisions in whether or not to undergo treatment, so that they can arrange their time properly.”*

Forging ahead with thanks to her mentors, passing on the spirit of healing the wounded and rescuing the dying

AME: Looking back on all these years, who would you say has influenced you the most?

Prof. Xie: I think the influence from all my mentors were quite strong, and I have learnt from them step-by-step.

For example, when I first went to Shanghai to study, I could feel how important academics was to them; the academic environment was very positive, and I cultivated

the habit of reading academic papers, and familiarised myself with the process of doing rounds. I became more and more influenced that when I returned from Shanghai, I started to go the library whenever I had some time. The library just so happened to be only one floor beneath our old wards. I would go there to read relevant journals and publications, especially reviews from big name authors in the field, so as to quickly understand the movements, future, and potential of the field, and it was a habit good for young doctors. I, too, learnt that from my mentors.

When I was doing my PhD, I not only gained professional knowledge from my advisor Prof. Gang Wu, but also learnt about discipline construction. A little later, when I went to the U.S., my mentor Spring Kong's emphasis on international exchange and scientific research thinking helped me greatly. Currently, I pay close attention to national and international forums such as ASCO, ASTRO and WCLC, especially hot and controversial topics. Every time I attend a conference, I like going to the area where debate is the most “heated”. Our department produces about 15–20 SCI-published articles annually, and many great ideas come from these “heated debates” in clinic. Back then, Prof. Spring Kong paid great attention to international exchange and thinking from these kinds of perspectives, and that has influenced me greatly.

It's the same with leading a team: everyone has their pros and cons, and we should look further into their merits. It's pivotal for a team to share a common goal, otherwise if we're faced with a counterforce, it'll take us twice the strength to pull this individual back. I've learnt a lot about this from our university chancellor Jia Qu: *“sprouts growing from chopsticks, sausages that walk, salted fish that turns over”*. These have become his words of wisdom, meaning to transform the impossible into something possible. Back in '97 and '98, he talked about how research is important, and is the teacher that inspired my thinking in combining clinic and research.

AME: What do you like the best out of all your titles: teacher, doctor, professor, or chairman?

Prof. Xie: Doctor. I've always liked doctors with their white gowns from a young age, and I think it is a sacred occupation. To heal the wounded and rescue the dying is the greatest contribution, and being able to help someone else brings me happiness. Every day to work, I walk past Wenzhou's “moral landmark”, the “*Hongri Pavilion*”, and I think to myself, look at how happy these people are about helping others.

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Footnote

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